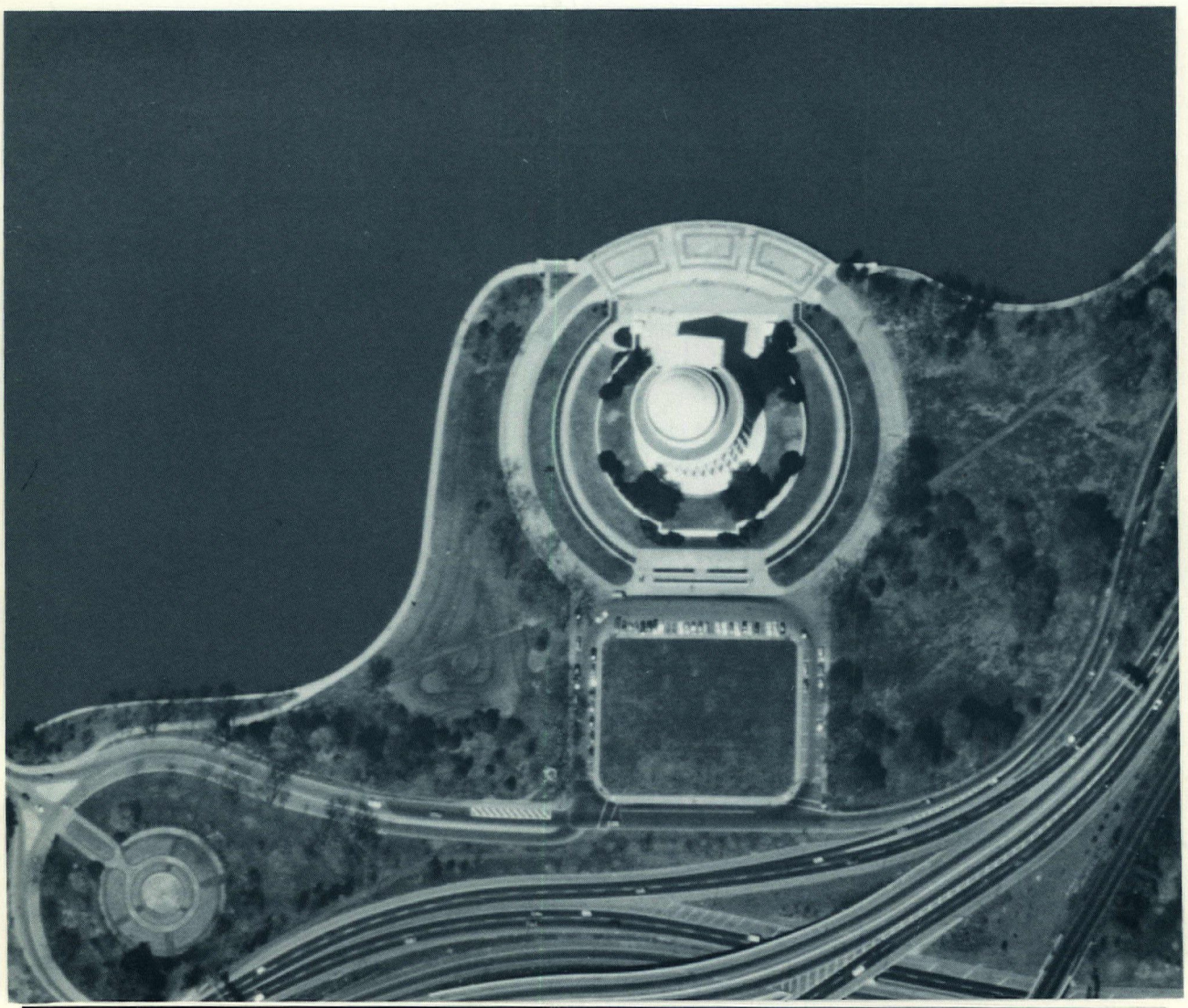
Landscape Overview



THOMAS JEFFERSON MEMORIAL

Washington, D.C.

Landscape Overview

May 1996

Thomas Jefferson Memorial

Washington, D.C.

United States Department of the Interior • National Park Service • Denver Service Center

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1. EXECUTIVE SUMMARY

This study is one component of the preservation of the Lincoln and Jefferson Memorials. It deals specifically with the landscape surrounding the Jefferson Memorial and those transition areas between the building and the landscape, such as the sidewalks, steps and plaza. In order to address these issues, it is necessary to study the landscape in its widest context; hence the need to investigate the evolution of the site from a marshland to the location of an internationally renowned memorial. The next step after this report, which is specifically for the Lincoln/Jefferson project, is to include these report findings in a Cultural Landscape Inventory, using sections of this report as basic research. A Cultural Landscape Inventory is used to identify and evaluate the significance of historic landscape elements.

The upcoming work on the steps, which have become misaligned, and plaza, which is in a state of serious disrepair, has been temporarily suspended until the completion of this landscape overview study.

Other studies and reports have dealt with the numerous aspects of the building. The firm of Einhorn Yaffee Prescott (Architecture and Engineering, P.C.) was commissioned in 1992 to compile a report "Specific Tests and Evaluations of the Stylobate Mall." The stylobate mall is the grassed terrace that rings the base of the memorial, and the report covers the landscape, drainage and sheet piling in this area. This study encompasses the area between the Inlet and Outlet Bridge, East Basin Drive and the Tidal Basin (see map below). Adjacent areas, such as parts of West and East Potomac Park, will be included when they directly affect the project area, and when dealing with the issues of views, access and historical development.

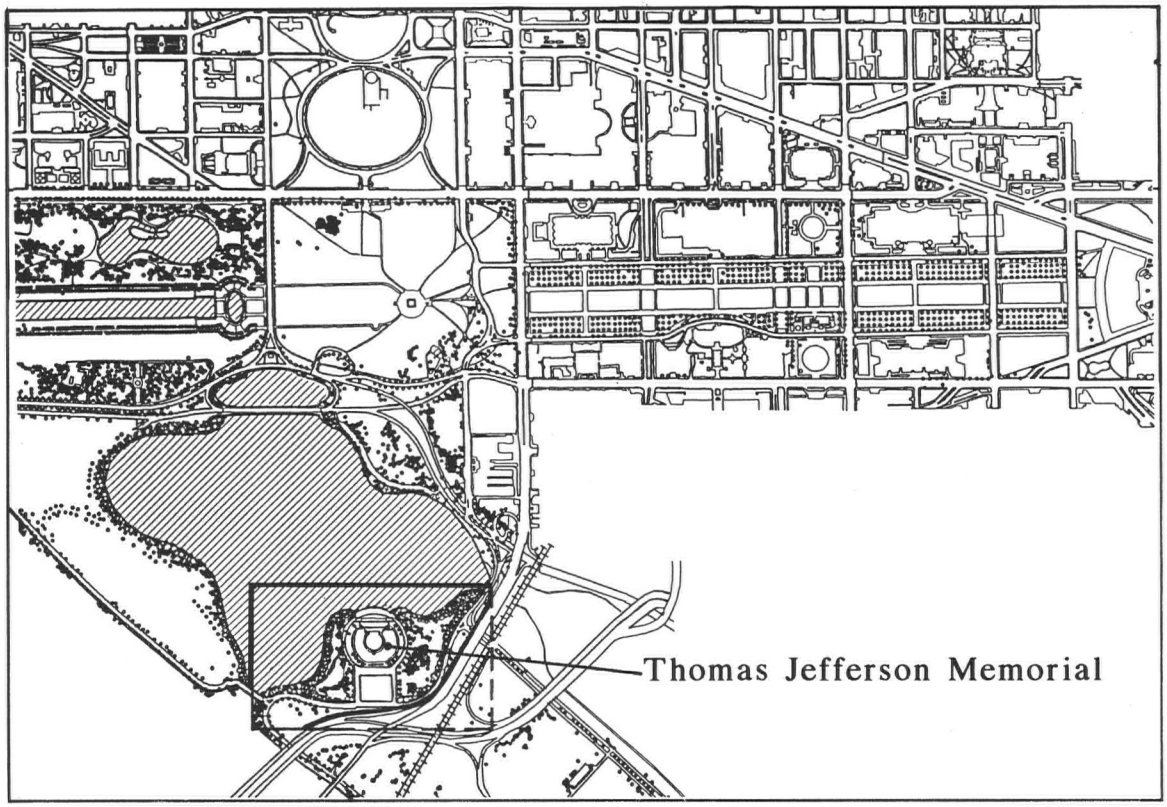


Figure 1 - Vicinity Map

Thomas Jefferson was the third president of the United States and statesman who was renowned for pursuing policies of moderation and his writing of the "Summary View of the rights of British America." This is now regarded as the prelude to the Declaration of Independence. Ground was broken for the Thomas Jefferson Memorial in 1938 and dedicated five years later in 1943.

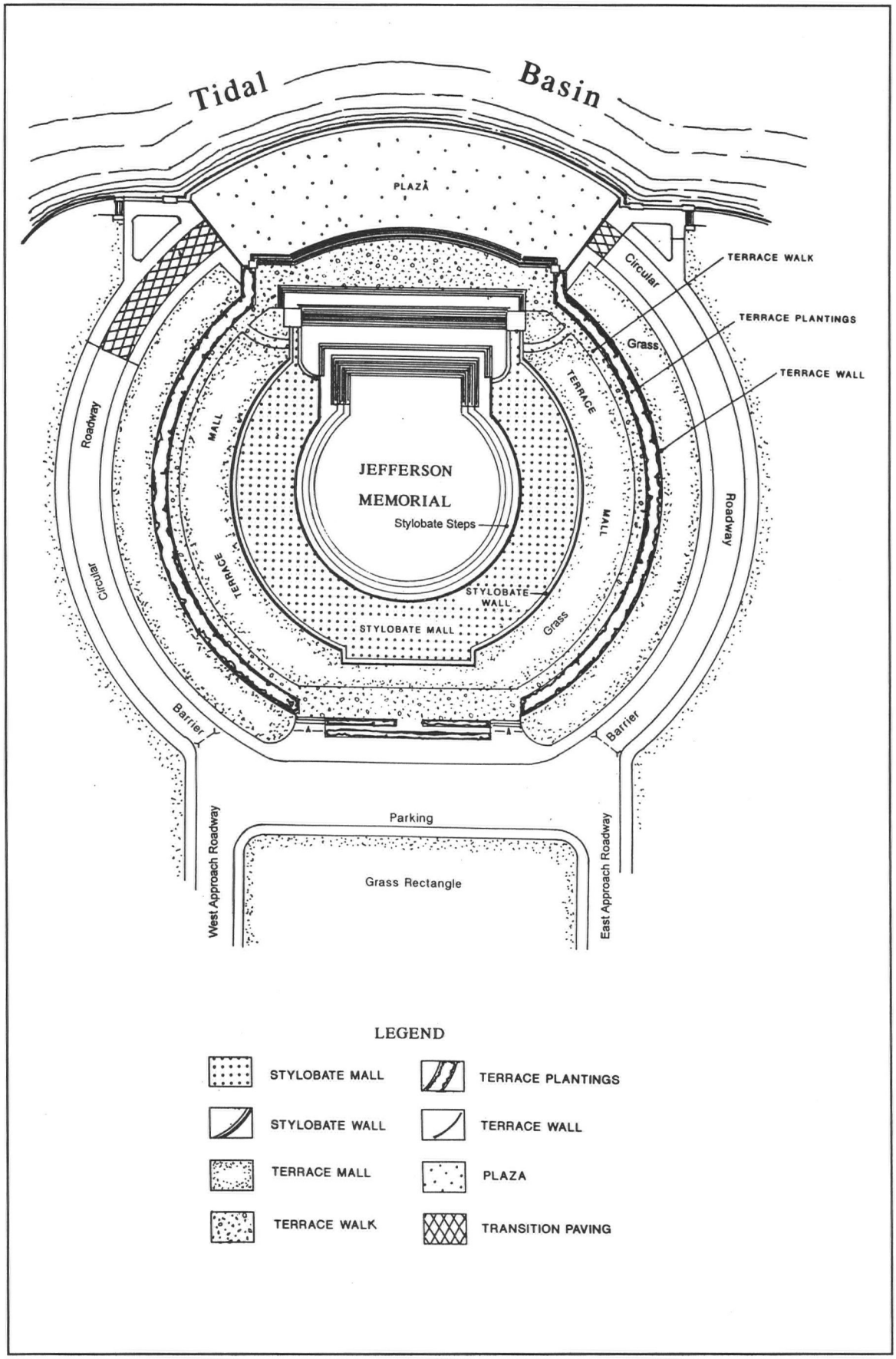


Figure 2 - Location Plan

2. SITE HISTORY NARRATIVE

The Site History covers three phases, namely: 2.1. The site prior to memorial construction, 2.2. Site planning, design and construction and 2.3. Post construction to the present day. Aspects of the present day condition are covered in more detail in the Analysis and Evaluation section.

2.1. THE SITE PRIOR TO MEMORIAL CONSTRUCTION

2.1.1. 1790-1900

The site for the capital city of Washington, D.C. was chosen by the Congress at their meeting in Philadelphia in 1791. It was to be fourteen miles from George Washington's home at Mount Vernon, at the confluence of the Potomac and Anacostia Rivers. Most of the land was covered by dense forests, flood plain and rural farmland, with three towns forming a triangle around the relatively flat area where the rivers converged.

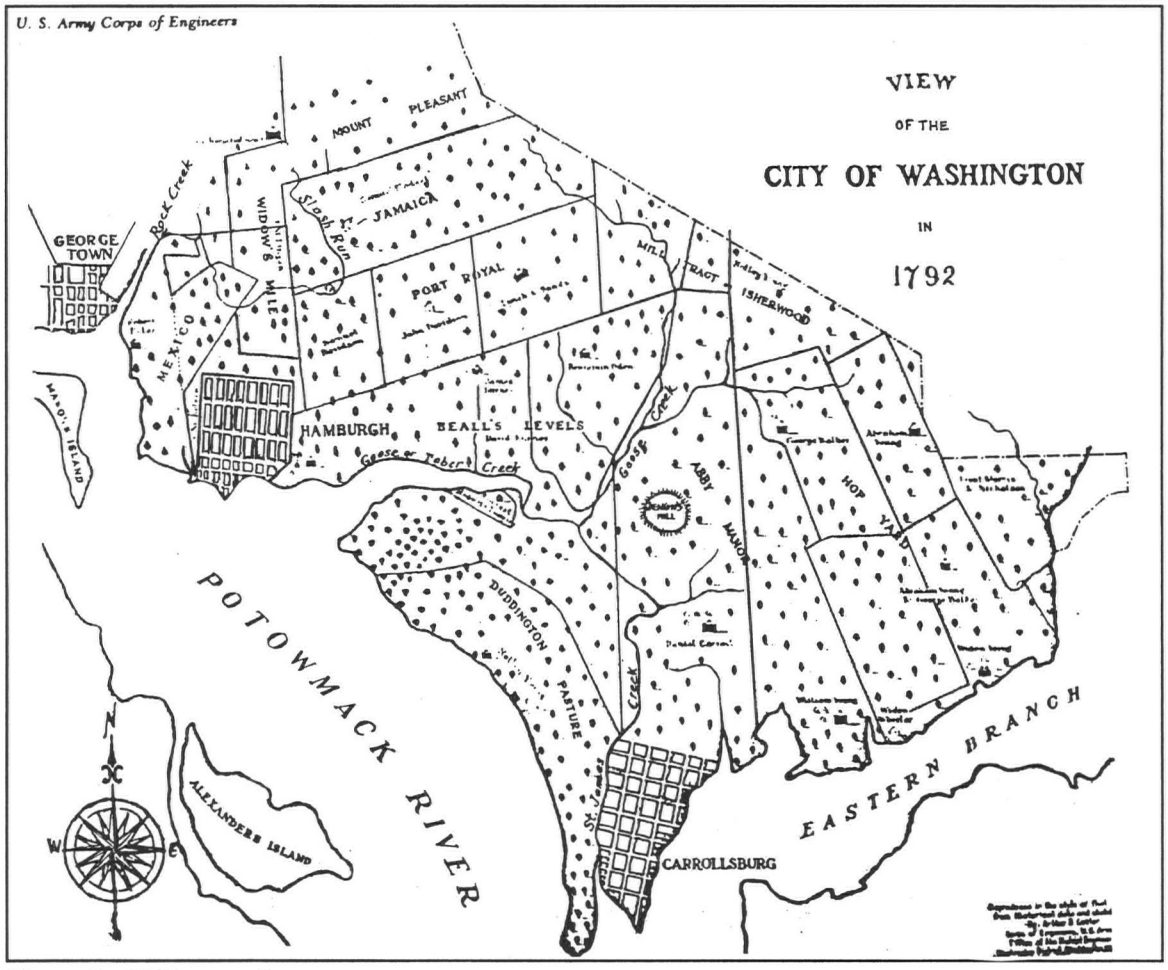


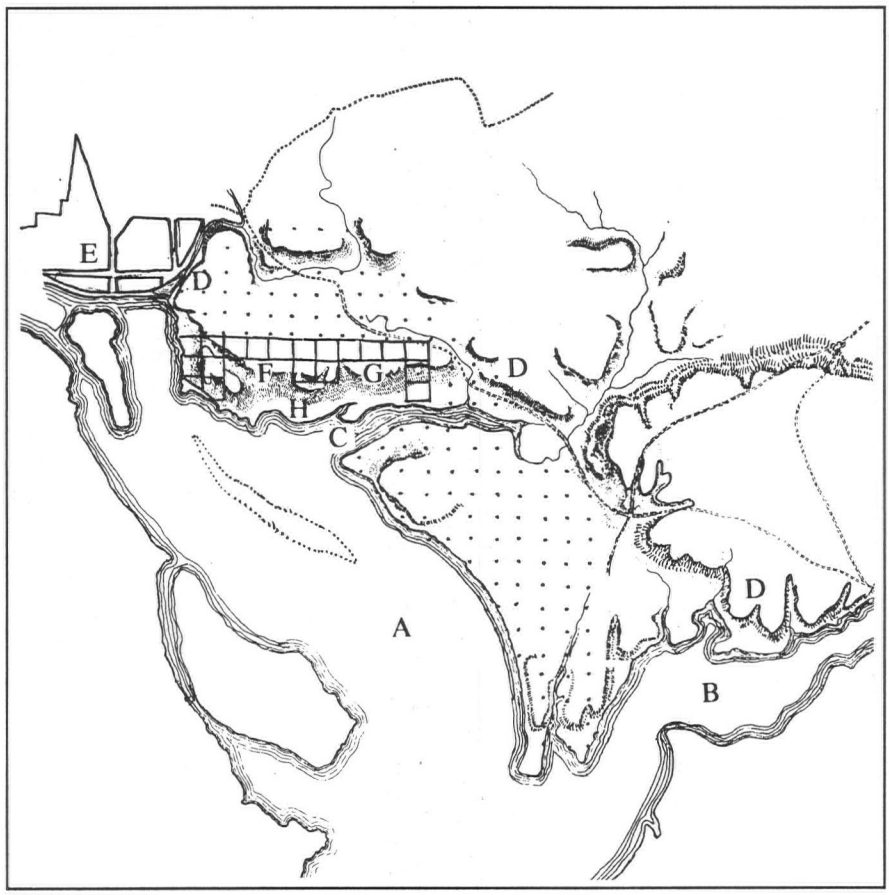
Figure 3 - 1792 map of area.
The property owners of the federal city in 1791. The map, drawn in 1952 by Arthur B. Cutter of the Army Corps of Engineers, is based on original research and map of 1874 by Dr. N Toner.

Responsibility for the design of the new city was given to Secretary of State Thomas Jefferson, together with two other city commissioners. Jefferson travelled widely in Europe to study the relevant shape of cities. His own first sketch shows his approach to urban planning along the unimproved shoreline of the river. The President's house and the Capitol were located on the higher ground, linked by promenades, giving them views down the Potomac river.

The engagement of a professional town planner became a necessity and George Washington chose the French engineer officer, Pierre Charles L'Enfant. L'Enfant's plan shows his intended changes to the rivers edge and the positioning of important elements on axis in the central mall area commanding views over the Potomac to the west and south.

George Washington envisioned that the new city would develop as a major port with associated river commerce, and both the C&O (1828) and Washington canals (1815) were built to this end.

Since the early history of Washington, D.C., siltation of the Potomac River had been a common occurrence. Debris from upstream was carried and deposited in the shallower tidal areas around the developing city. With the deforestation, and increase of farming activities upstream, came an increase of silt deposits. Building projects, grading of streets and an increasing population of the city also increased deposits into the river to such an extent that parts of the river were impassable for commerce. As early as 1833,



KEY

A Potomac River

B Anacostia River

C Tiber River

D Escarpment

E Georgetown

F President's House

G Capitol

H Public Land

Figure 4 - Interpretation of Jefferson's sketch of Washington area

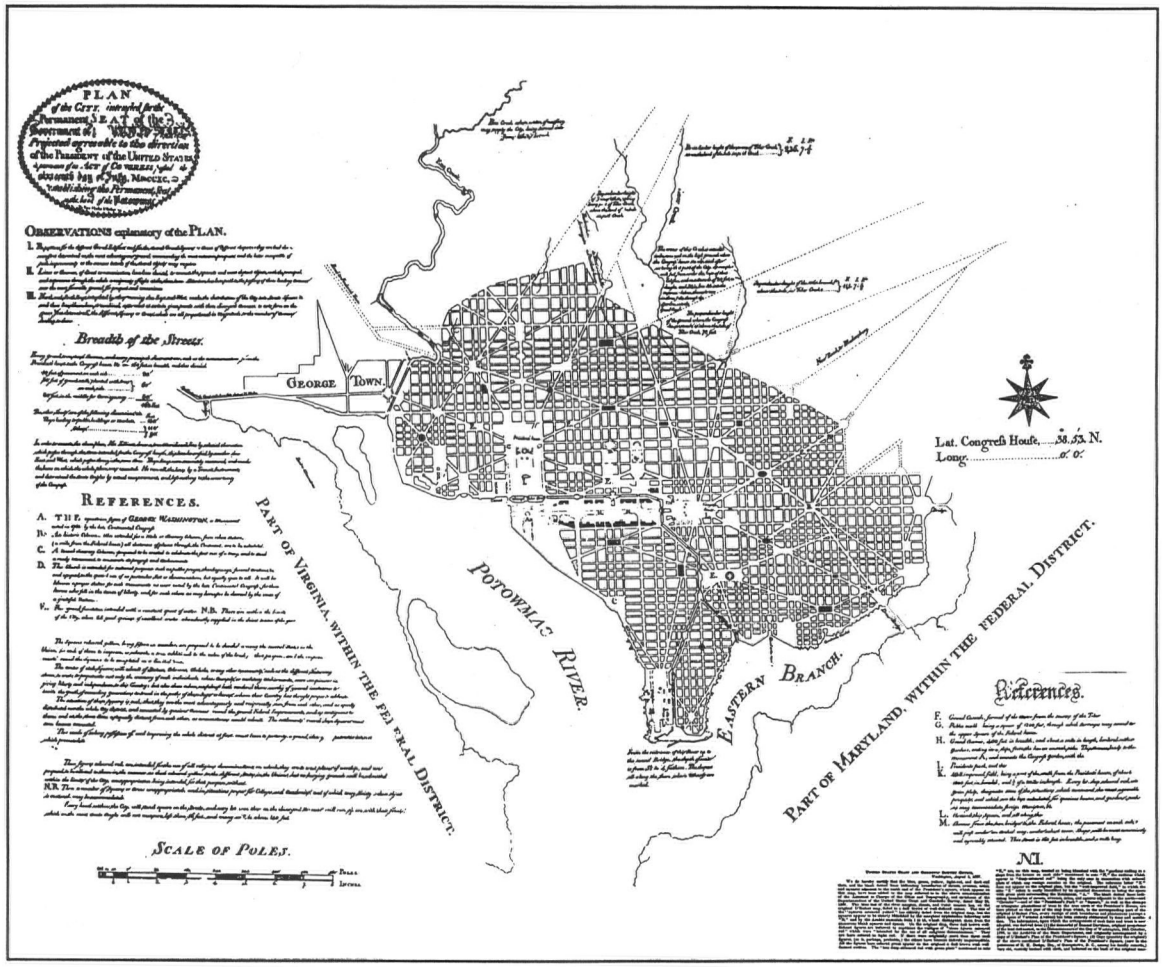


Figure 5 - Plan for Washington, D. C. by Pierre Charles L'Enfant: 1791

engineers proposed to remove the silt by dredging the river, and in 1857, civil engineer Alfred Landon Rives submitted plans to reclaim 166 acres of mudflats near the 'Long Bridge.' This was the first bridge to have been built across the river in this area, and was completed in 1809 occupying the same position as today's 14th St. Bridge. In order to help relieve the strain on Long Bridge, Congress decided to build a second bridge, seventy-five feet downstream. The area between the bridges became so silted that it became known as "Potomac Flats", supporting a number of salt water grass species. In 1875 Mr. T. Abert, from the Army Corp of Engineers, took on the problem of how to manage the river. He proposed to fill in Potomac Flats using the arisings from the dredging operations, both reclaiming land and making the water navigable again. This work was continued by career Army officer, Major Hains, who replaced Abert in 1882. In his nine years of tenure, Hains completed the majority of dredging and reclamation. The area of reclaimed land totaled 600 acres in all, and was several feet above high tide and flood level. Two separate tracts of land were created, the most southerly stretching approximately two miles long and parallel to the old shoreline of the Potomac River, now known as East Potomac Park (see figure 6). The other, to the west of the Washington Monument, separated Constitution Avenue, once B Street, from the water's edge.

Between the new island and the old shoreline lay the newly deepened channel, providing access to wharves and docks. To the north, the other fill area extended nearly a mile westward from the old water line which had reached almost to the foot of the Washington Monument. Hains had directed that between these two areas there should be a tidal basin, separated from the river and the channel by two sets of gates. This design allowed water to enter the basin at high tide through an opening from the Potomac. When the tide began to fall, water seeking to drain from the basin would force the inlet gates to shut and the outlet gate onto the Washington Channel to open, thus flushing it with relatively clean water with each change of tide.

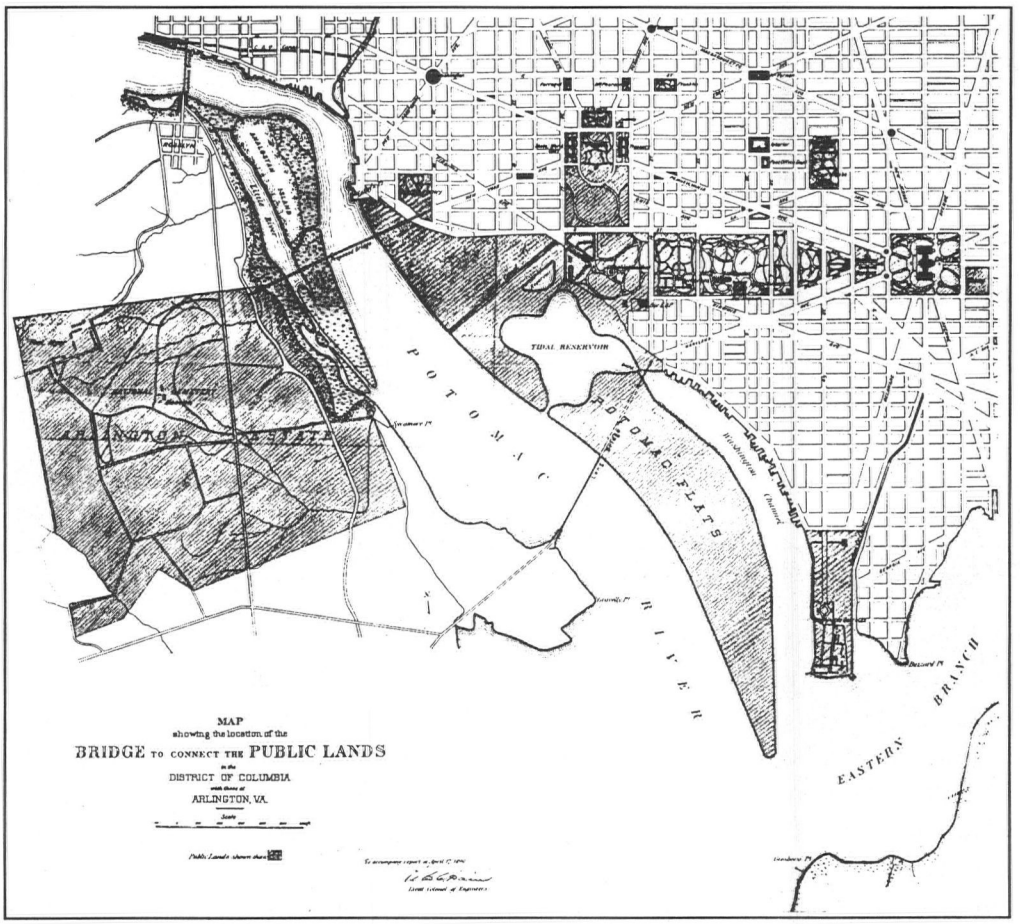


Figure 6 -Plan of 1890 shows reclaimed land, referred to as Potomac Flats

The fertility of the deposits which was to become East Potomac Park caused a rapid growth of vegetation and, in 1893, Hains' replacement, Major E. L. B. Davis, advocated the areas development as a public park. Major Davis said:

> *The improvement has now reached a stage where some attention needs to be given to the maintenance and preservation of the reservation. The rich soil, of which the greater part of the reclaimed land is composed, induces and fosters a rapid growth of high weeds, willows, and other trees and underbrush, which, in the summer season*

especially, render access to the various parts of the work quite difficult. This growth should be cleared up each year, until the reservation is ready to be laid out, graded, and sown with grass seed.[1]

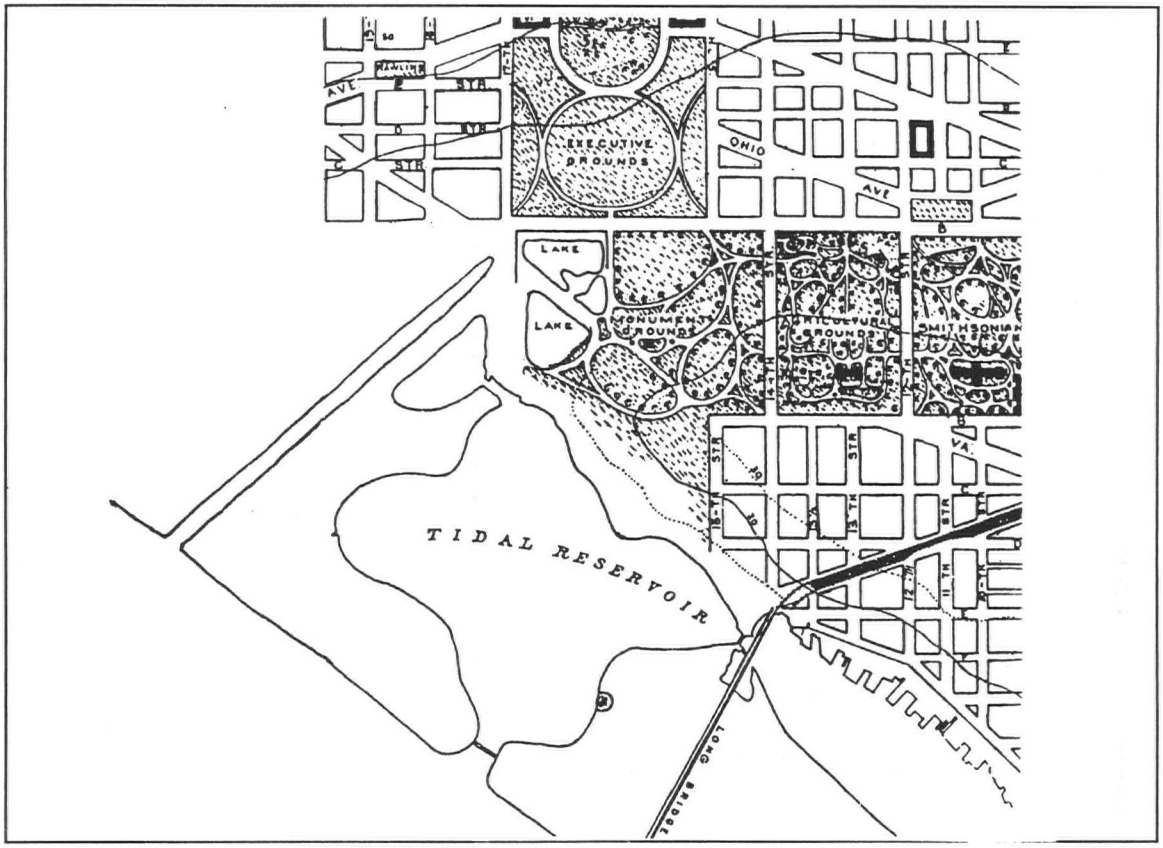


Figure 7 - Tidal reservoir in 1900

Note the structure located on the southeast corner, possibly an early bathing pavilion

Despite the wishes of many people who wanted the land sold for private use, Congress finally passed Senate Bill No. 3,307 on March 3, 1897, which established the area of the Tidal Basin and former flats as a public park for the recreation and pleasure of the people. Work continued on raising the level of the land and, in 1901, thirty-one acres were transferred to the Office of Public Buildings and Grounds, which organized the clearance of natural vegetation and graded the site, giving it a more tamed and controlled "park like" appearance. They raised the Tidal Basin revetment wall, and built a forty-foot wide drive of tarmacadam (layers of compacted crushed stone sprayed with tar, then rolled) along the east side of the reservoir.

More funds were appropriated for improvements to the area in 1901, and between 1906 and 1908, a riverside drive was constructed from the foot of Seventeenth Street, northwest around

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[1]Gorden Chapell, *Historic Resource Study, East and West Potomac Parks: A History.* Denver, Colorado, U.S. Dept of the Interior, National Parks Service, 1973. p.30.

the Tidal Basin to the inlet, and from the inlet north along the edge of the Potomac to 26th Street.

A boat landing station was erected in the northwest corner of the Tidal Basin, and cinder footpaths and bridle paths were laid out near the roadway. The drive was provided with brick gutters, drains, and catch-basins, and lined with 313 trees, primarily elms. By 1907 the entire perimeter of the Tidal Basin was accessible to the public who used the area for walking, driving and horseback riding (see figure 9, Map of West Potomac Park, 1909).

The railroad bridge, authorized by Congress in 1901 and built by the Baltimore and Potomac Railroad Co., originally known as Long Bridge, replaced the one situated to the northernmost point of East Potomac Park. At the same time the Secretary of War was authorized to build a highway bridge to the north of the Railroad bridge. Both bridges were perceived as being unsightly, and were screened with trees making them less visible from the park.

> *In 1909 the problem of screening the unsightly railroad and highway bridges was addressed by planting forty-four poplars near the Inlet Bridge to screen the portion of the highway bridge visible from the park, and thirty-one poplars near the railroad bridge.*[2]

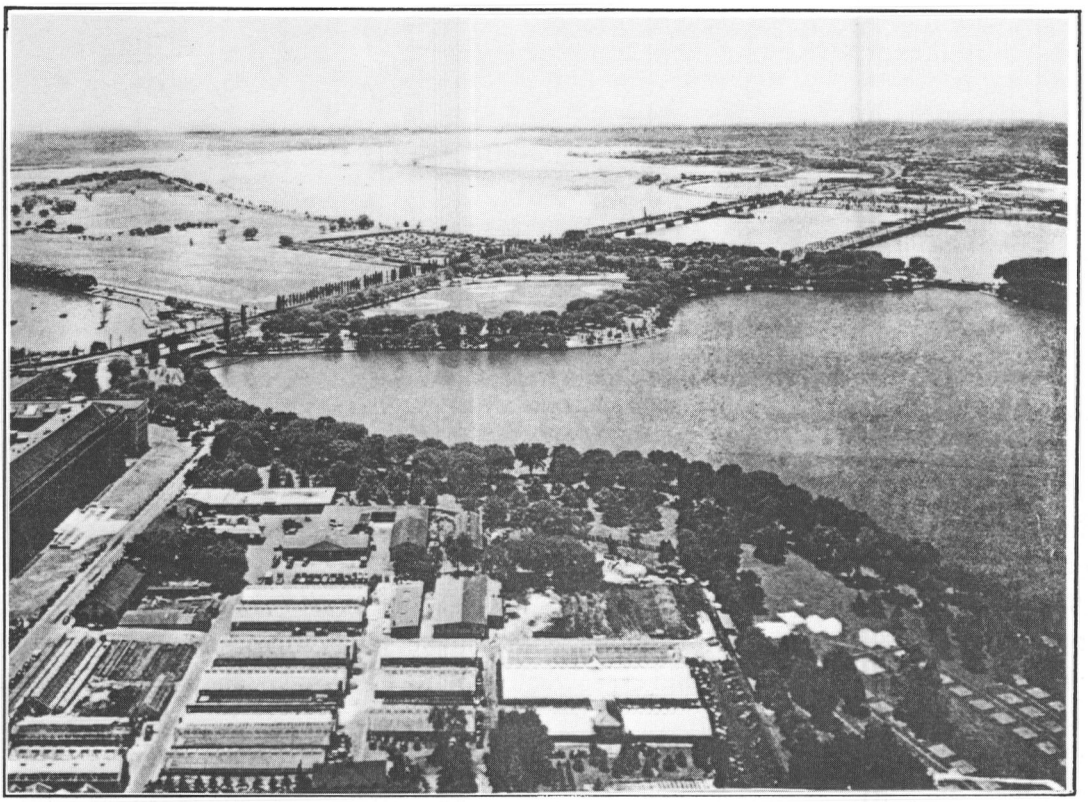


Figure 8 - Aerial View circa 1930.

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[2]Historic Structures Report: Tidal Basin, Inlet Bridge, Washington, D.C., Kresscox Associates 1986, p 45.

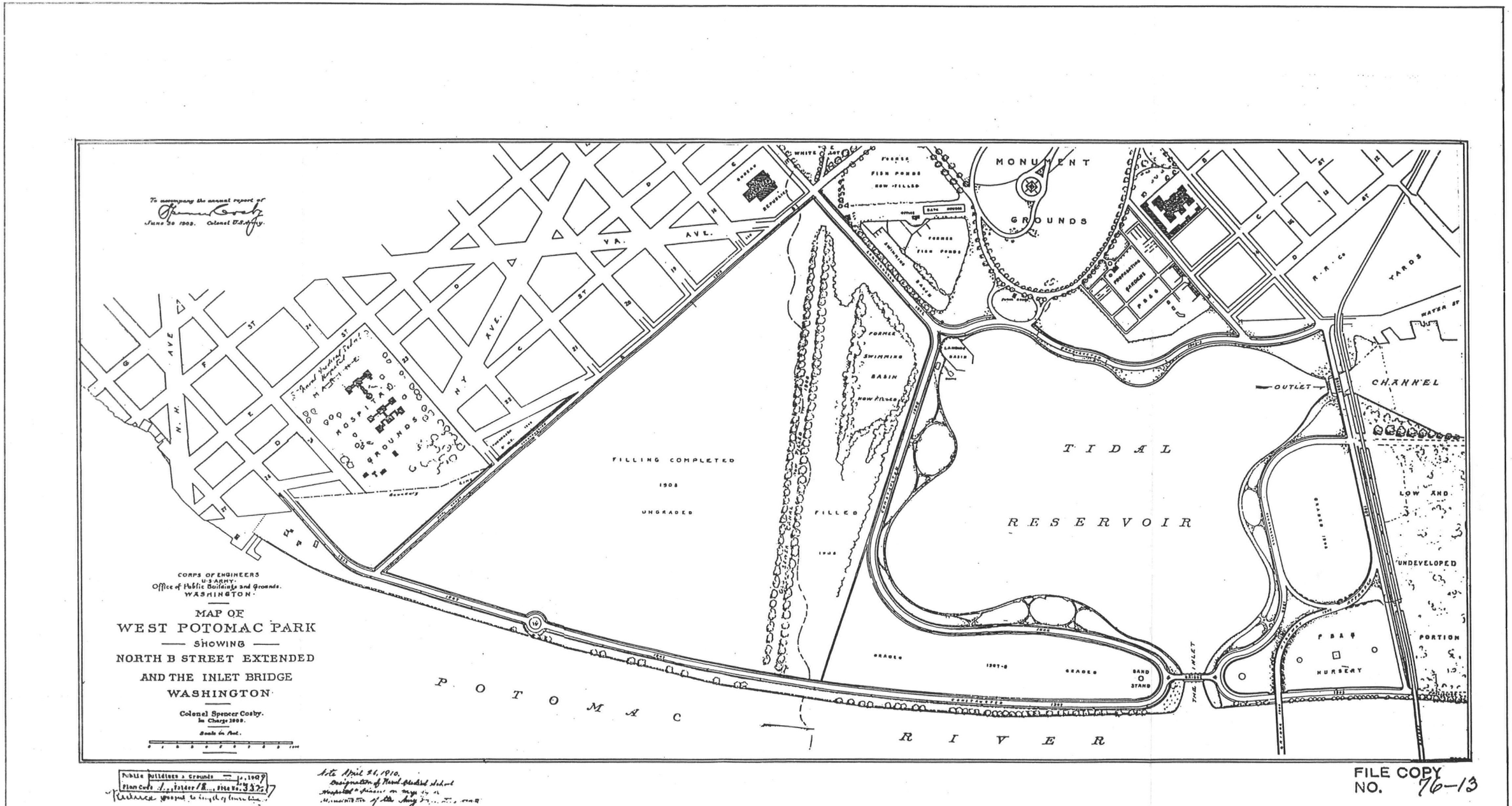


Figure 9 - Map of West Potomac Park in 1909

George Brown, landscape gardener from the Office of Public Buildings and Grounds, gave several suggestions for more satisfactory screening plants, in recognition of the fact that preservation of views would become more important as East and West Potomac Parks continued to be developed and used. Among his recommendations were poplars, tulip trees, ash, oriental planes, American elms, sweet gum, American linden and maples.[3]

Approach roads at either end of the Inlet bridge were built early in 1910. Included in the construction package were 181 flowering shrubs and three trees which were planted on the western approach, and 365 flowering shrubs on the eastern approach. Fifty-three willow trees were added to those along the Potomac riverfront.

The cherry trees, for which the area is probably most well known, were donated to the city by the Mayor of Tokyo in 1911 and planted in 1912. A total of 3,020 were planted in West Potomac Park in three locations: the Tidal Basin, East Potomac Park and the Washington Monument grounds.



Figure 8a- Aerial View circa 1914.

[3]Ibid. p 45.

2.1.2. THE McMILLAN COMMISSION

After 1830, strict adherence to the L'Enfant plan had been abandoned. The Washington Monument had been built off center from the White House's north-south axis, and the reconstructed Capitol rose above the mall which had become congested and spatially incoherent. By this time, the river's edge had been finally determined, by the dredging and reclamation works, and lay remote from the mall which it had previously adjoined. In 1901, the McMillan Commission was appointed to study the layout of the city and develop a comprehensive plan for the Mall area, including Potomac Park.

The two diagrammatic plans, L'Enfant's and McMillan's, are shown for comparison. The layout of the Mall had been converted from a composition with views to an infinite landscape south and west (see L'Enfant Plan, figure 10), to one enclosed by buildings with the five cardinal sites regulating the central layout and order. (See figure 11 for list of five sites.)

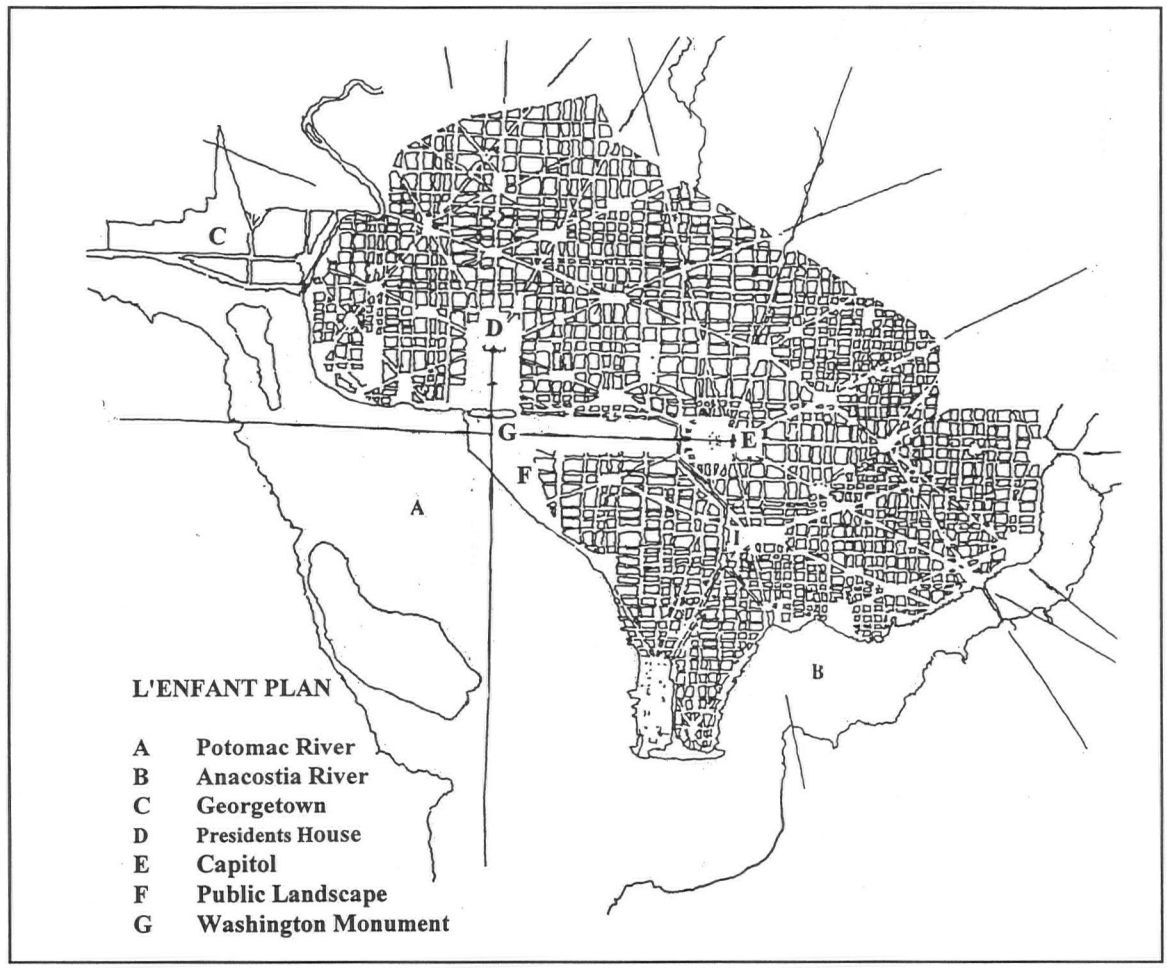


Figure 10 - L'Enfant Plan

Although the McMillan Plan was never followed in its entirety, the specification of the north-south axis terminating in an, as yet, unspecified monument site on the south shore of the Tidal Basin inevitably held great significance in the choice of a site for the Jefferson Memorial, thirty years later.

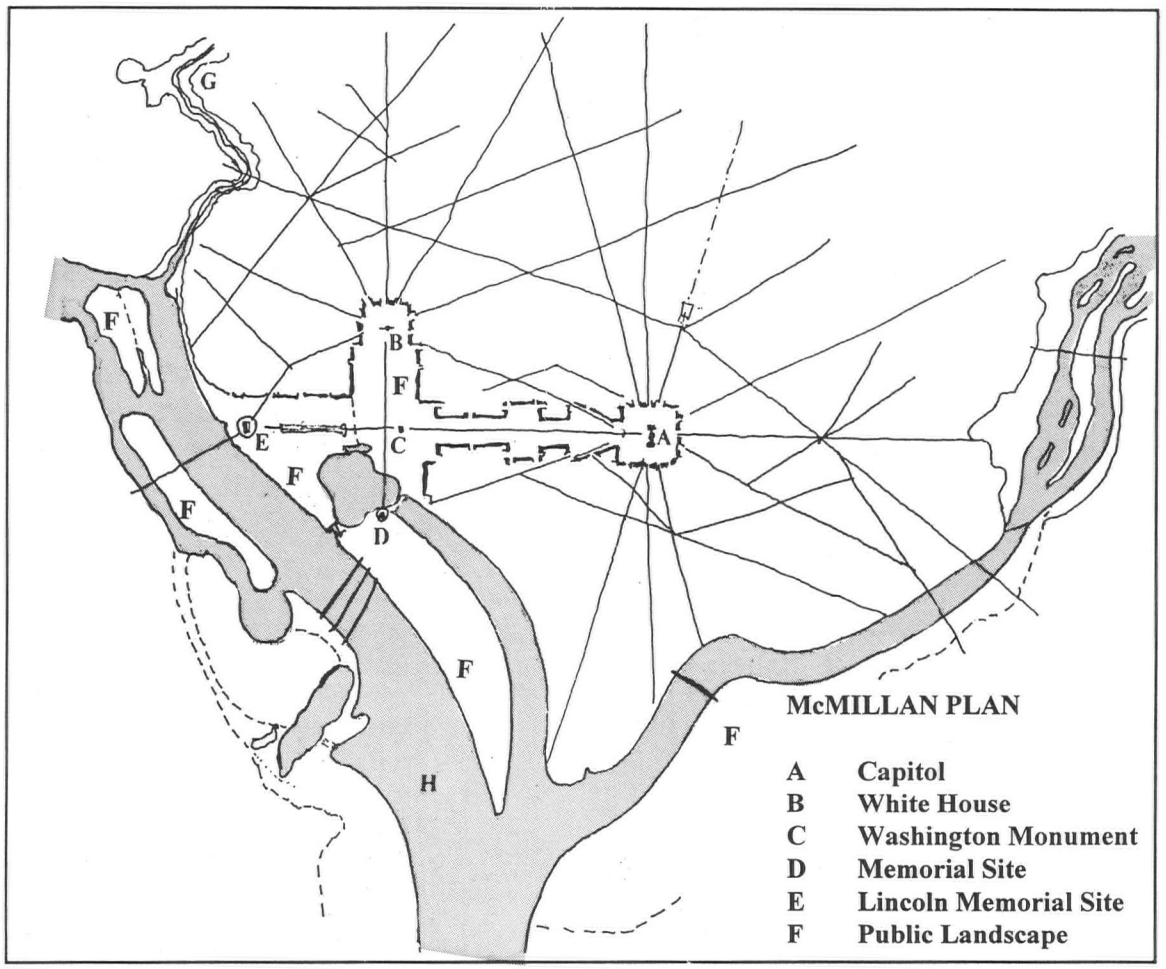


Figure 11 - McMillan Plan

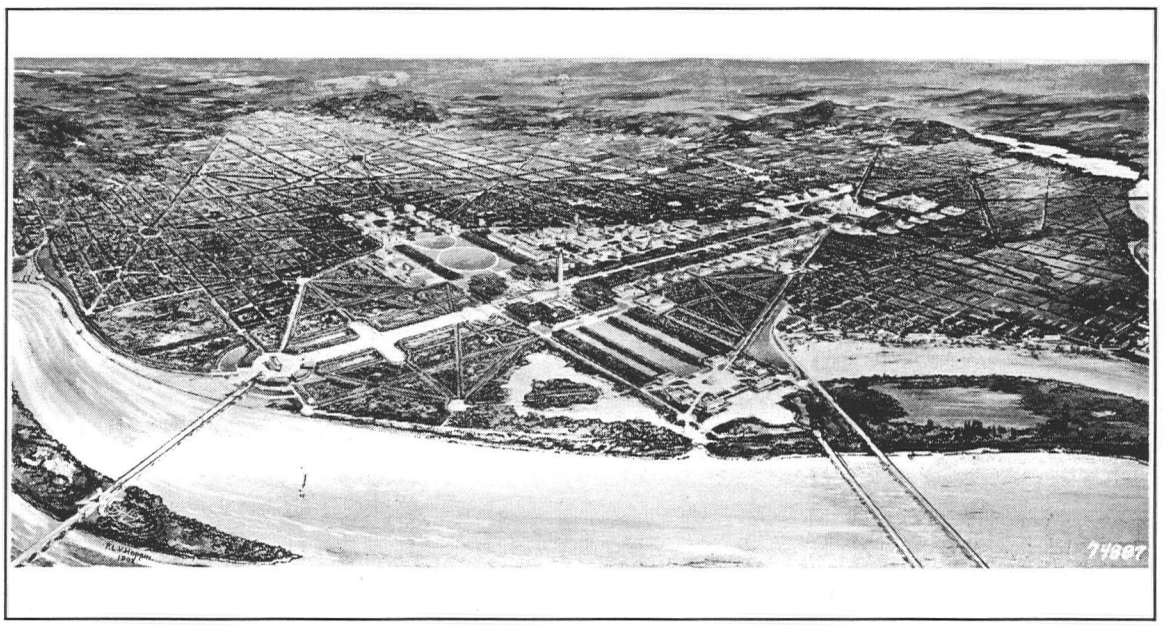


Figure 12 - Perspective Sketch of the McMillan Proposal, 1901

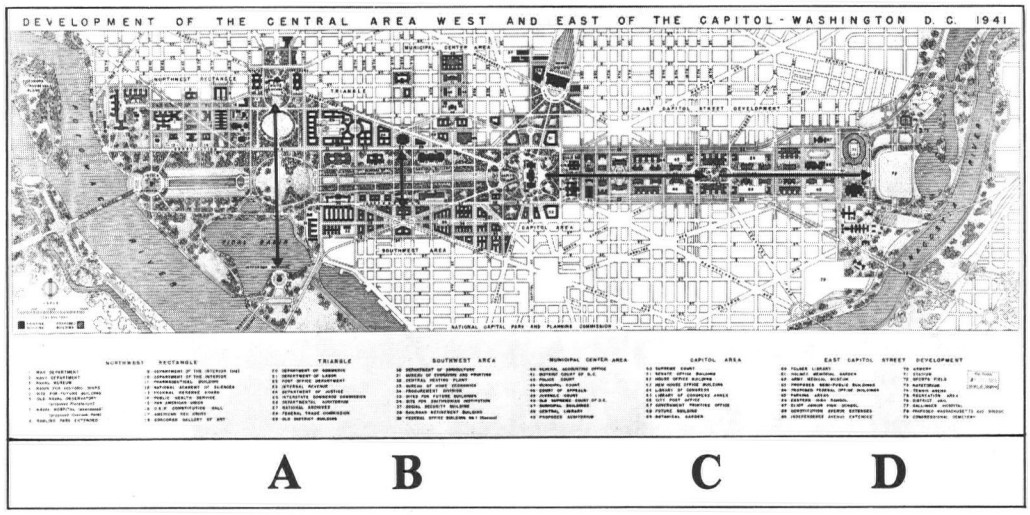
2.2. SITE PLANNING, DESIGN AND CONSTRUCTION 1935-43

2.2.1. EARLY CONSTRUCTION

On January 7, 1926, the 69th Congress in the House of Representatives introduced a resolution to authorize the erection of a memorial to Thomas Jefferson, the third president of the United States. Congress passed a Joint Resolution on June 26, 1934, establishing the:

> *Thomas Jefferson Memorial Commission, for the purpose of considering and formulating plans for designing and constructing a permanent memorial in the city of Washington, District of Columbia. Said Commission shall be composed of twelve commissioners as follows: Three persons to be appointed by the President of the United States, three Senators by the President of the Senate, three members of the House of Representatives, and three members of the Thomas Jefferson Memorial Foundation, Incorporated, to be selected by such foundation.*[4]

The original bill went so far as to state the exact location of the memorial which was destined for the intersection of Constitution and Pennsylvania Avenues, in front of the National Archives Building.



A	**Site Chosen**
B	**Mall**
C	**South Axis of Capitol at Lincoln Park**
D	**Near Anacostia River**

Figure 13 - Plan of Alternative Sites

[4]73rd Congress Public Resolution-No. 49 H. J. Res 371

In 1936, on June the 3rd, Congress granted the Commission complete power to decide upon the location of the memorial. The original archives site, chosen earlier by Congress, was deemed too small by President Roosevelt for such an important monument. Six other locations were subsequently considered by the commission, as described in a report by Mr. G. Clarke and William Partridge, (April 9, 1937) consultants to the commission. The most favored of these involved the creation of an island for the memorial, in the middle of the Tidal Basin. Although this site was not ultimately chosen, it did establish the importance of having the memorial on axis with the White House, and relating to the other points designated in the L'Enfant Plan, and as expressed in the McMillan Commission Plan of 1901. Frederick Law Olmsted, Jr. (a noted landscape architect from Boston and son of the famous Frederick Law Olmsted, Sr.), wrote a report in 1935 to the Thomas Jefferson Memorial Commission about the choice of sites. On the south axis site, he stressed the importance of its visual relationship with the other axial compositions, namely the east-west one from the Lincoln Memorial to the Capitol, and the north-south one, from the White House to the Washington Monument grounds.

John Russell Pope was the architect chosen by the commission in 1935. He had previously designed the National Archives building, and Constitution Hall, both situated in Washington, D.C. He was an architect from the Beaux-Arts School, and he therefore used classical architectural styles. He made several proposals for the memorial, including the scheme for the south axis site previously referred to. The ambitious scheme constituted a formal treatment to the Tidal Basin and the area north of it, calling for the construction of

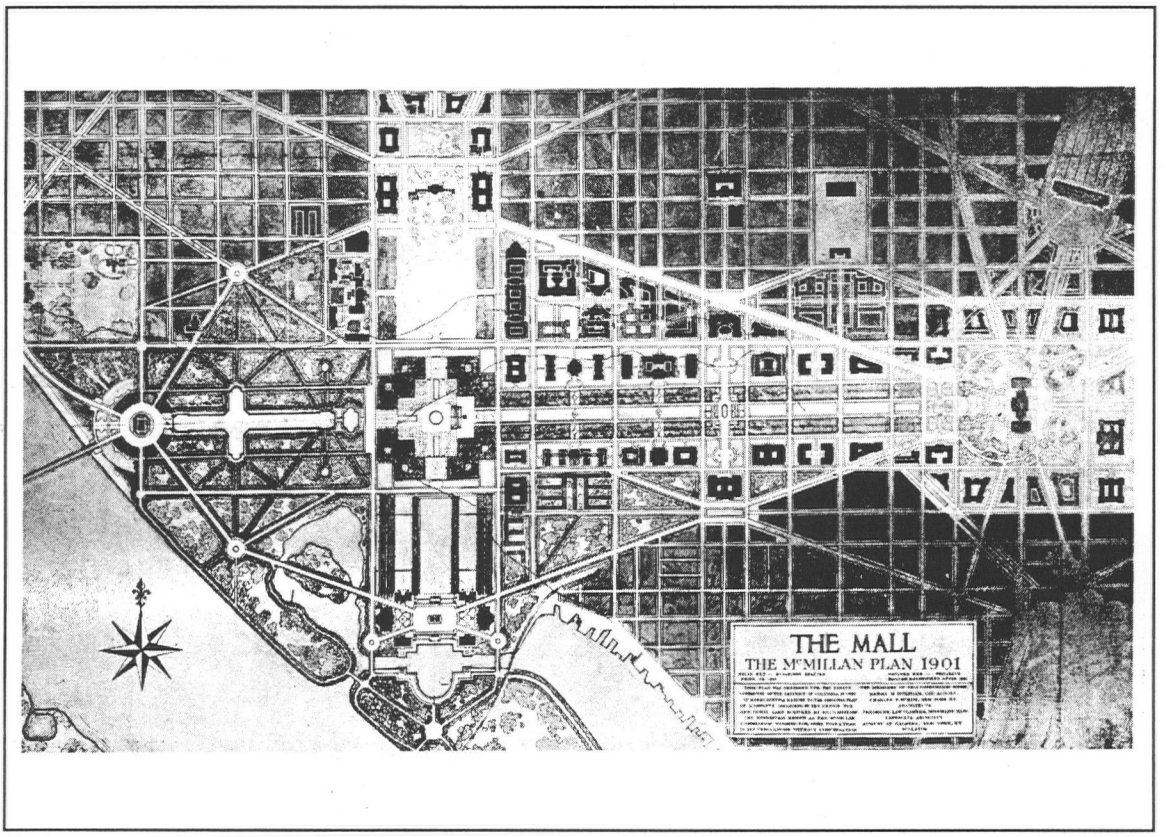


Figure 14 - McMillan Plan Showing Formal Treatment of the Tidal Basin and its relationship with other Monuments, 1901

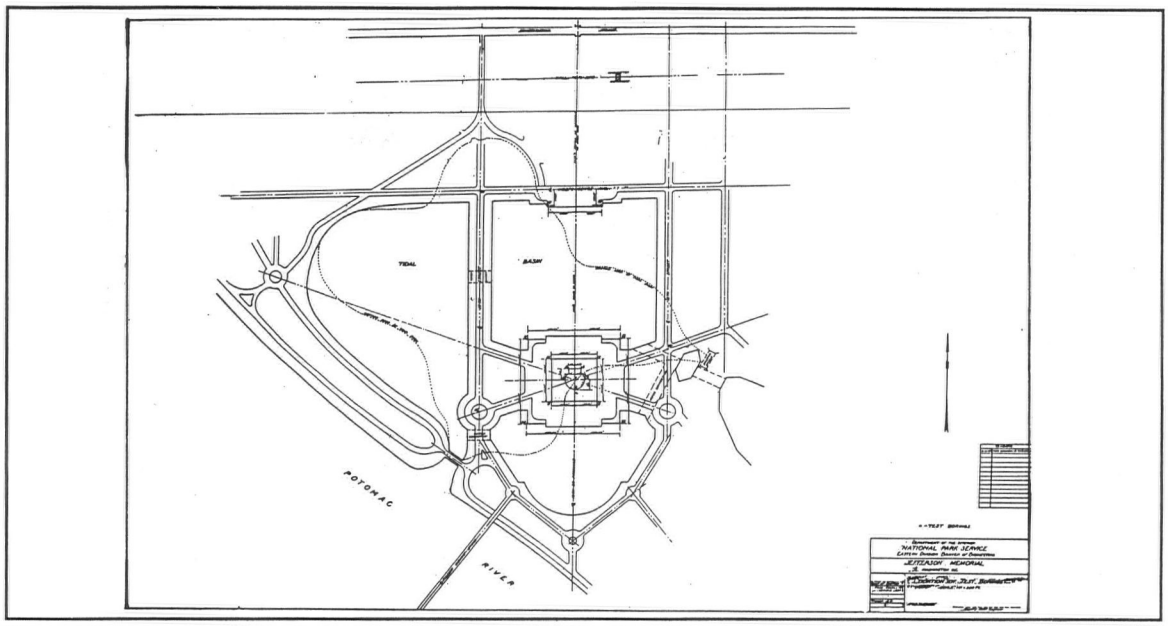


Figure 15 - Plan to Show Location of Borings for Proposed Formal Island Plaza

a large plaza-type island in the center of the basin. This proposal, (see figure 14 Formal plan for Tidal Basin), met with much criticism which was highlighted in a report to the memorial commission by Henry V. Hubbard, a respected landscape architect. The criticism was due to the proposals inevitable high cost, the interference with the flushing activities of the basin, the loss of land and vegetation from East Potomac Park and the over bearing scale of the proposed development. Frederick Law Olmsted, Jr. also urged the commission to abandon this particular scheme in a telegram message of April 27, 1937:

> *The Jefferson Memorial with its terraces as now designed would be so stupendous in appearance that in my opinion an adequate setting could probably never be created in the Tidal Basin location hemmed in by Bureau of Engraving and printing and by railroad and highway embankments and bridges. Other vitally important problems as yet unsolved and possibly insoluble are involved in its relations to surroundings including Washington and Lincoln Memorials. Unless and until successful solutions for these unsolved problems are found and embodied in feasible and approved plans for the reconstruction of the surrounding park any precipitate commitment to building the latter as now designed would be a leap in the dark with failure more likely than success.*[5]

By 1937, after consultation with both the Commission of Fine Arts and the National Capital Park and Planning Commission[6], the memorial commission had adopted a resolution which modified the plan with regard, in particular, to the proposed location of the memorial:

---

[5]Telegram to Harlean James, American Planning and Civic Association from Frederick Law Olmsted Jr. April 22 1937.

[6]Note name change: 1924-National Capital Park Commmission,1926-National Capital Park and Planning Commission, 1952-National Capital Planning Commission.

It places the memorial on the south bank of the Tidal Basin, diminishing the expense of the memorial and its setting, preserving and improving the present traffic approach to the Highway Bridge. The site on the south bank of the Tidal Basin, on a line south through the White House, has been regarded ever since 1901 as the proper site for a memorial of major importance. In relation to the Washington Monument, it gives the Jefferson Memorial a position in the south similar to the position of the Lincoln Memorial on the west, and completes the great central plan of the city, in which the Capitol and the White House occupy the other two cardinal points on the east and north of the Monument. From the Washington Monument grounds the Jefferson Memorial will be seen across the Tidal Basin, which will retain its irregular outline and natural beauty and in which the memorial and the cherry trees flanking it will be mirrored.[7]

In order for the Thomas Jefferson Memorial to be exactly aligned on the north-south axis, and be located on the water's edge, it was necessary to fill in a section of the southeasterly corner of the Tidal Basin and slightly realign the sea wall in a "cut and fill" exercise as depicted in this National Capital Parks and Planning Commission drawing (see figure 16).

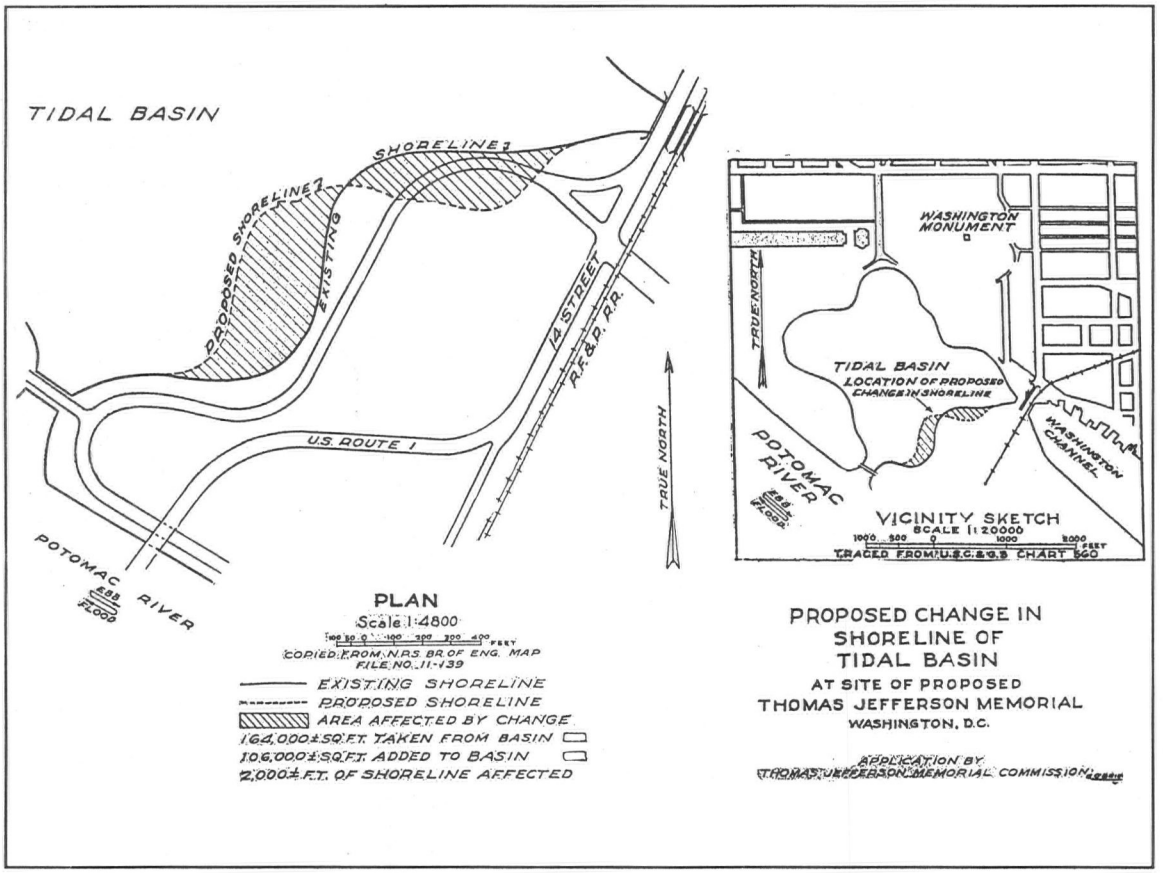


Figure 16 -Sea Wall Realignment Plan.

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[7]Report of the Thomas Jefferson Memorial Commission to 75th Congress 3rd Session House of Representatives, Document Number 699.May 31st, 1938

Pope's "Pantheon" design, inspired by the Pantheon in Rome, was finally accepted by the memorial commission on March 29, 1938.

> *Thomas Jefferson himself had considered this to be the perfect model of a circular building and this simple classical form with its low dome had inspired his rotunda design at the University of Virginia and his home at Monticello. In presenting his plans to the memorial commission, Pope explained that:*
>
> *'Immediate consideration is given to the evidence of Jefferson's aesthetic leanings as shown in works executed under his direction and also in his writings and drawings. Two forms of the classic type of building seem to have met with his approbation. The great prototypes of these forms are probably best illustrated by the Pantheon in Rome and the Villa Rotunda near Vicenza.'*
>
> *Pope added a circular Ionic peristyle and a portico to the basic circular structure.*[8]
>
> *'The four entrances stand open to the colonnade, symbolizing Jefferson's ideals that "life, liberty, and the pursuit of happiness" are the rights of all men.*[9]

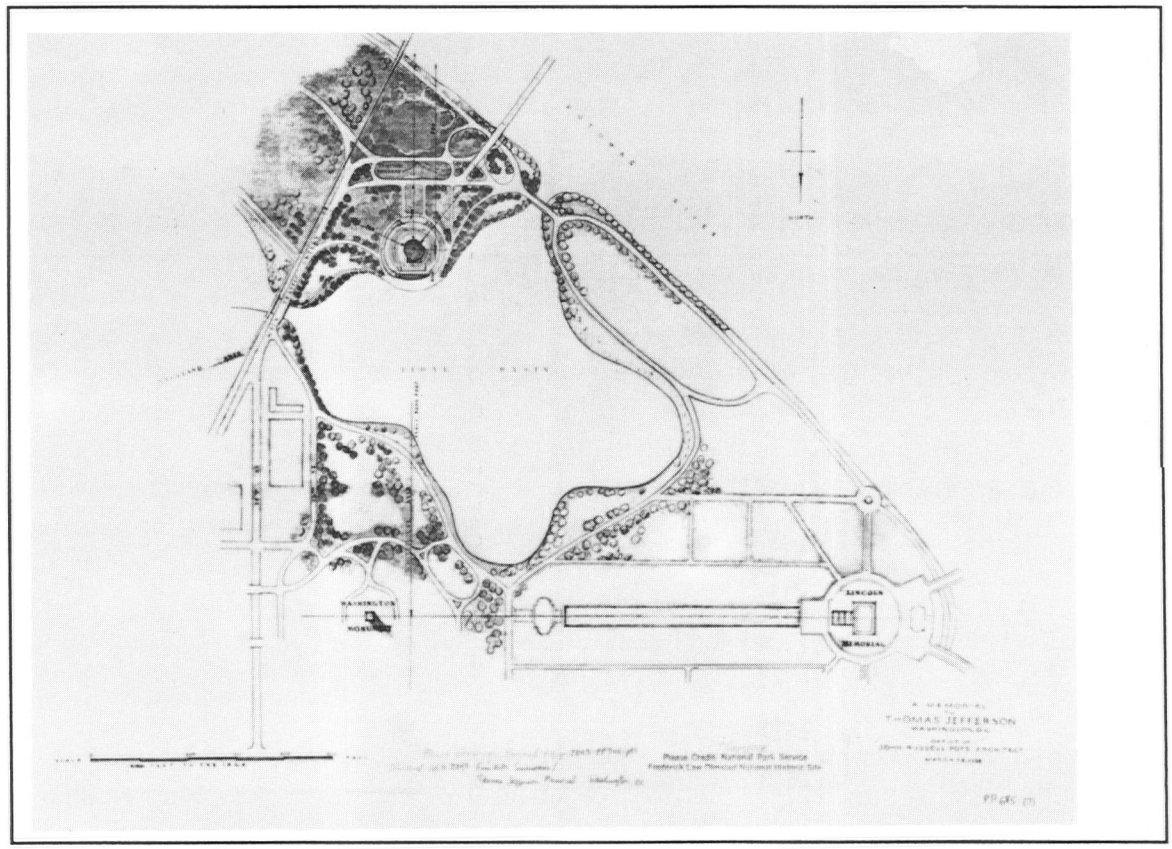


Figure 17 - Plan, March 29, 1938

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[8]Yonkers, Tessica Anne. Shrine of Freedom , Thomas Jefferson Memorial. Springfield, VA: ARK Printing and Graphics, 1983. p 20.

[9]Ibid. p. 1

Following Pope's death in 1937, his associates Otto R. Eggers and Daniel P. Higgins took over his office. They continued with the work, despite protests that their appointment had been undemocratic and therefore "un-Jeffersonian," and a competition should be held to choose Pope's successor.

The drawings that follow are from the Eggers and Higgins office and show the accepted design for the memorial.

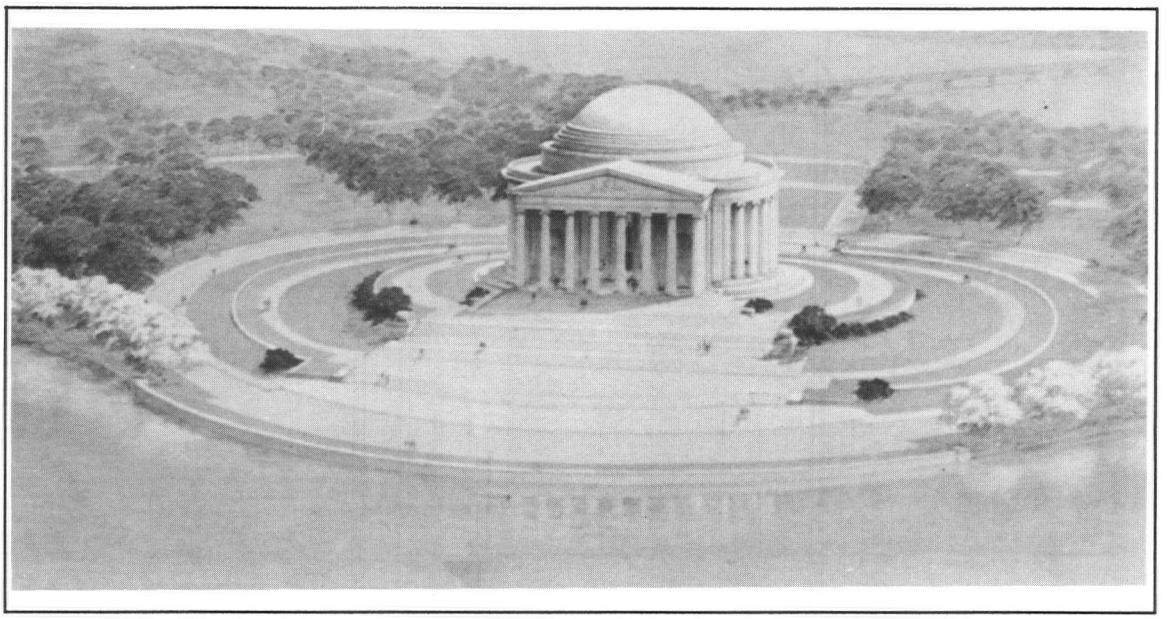


Figure 18 -The Final and Successful Proposal, as seen from the north. March 28 1938.

Frederick Law Olmsted, Jr. was officially appointed as landscape architect for the project on October 18, 1938. Thirty-seven years previously he had been involved in designing and planning the wider area of the Mall and the rest of the Capital, while serving on the McMillan Commission. Much of the work on the Jefferson project, however, was carried out by H. V. Hubbard, another respected landscape architect, who worked for Olmsted's office.

The general plan showing layout and massing of foliage from the Olmsted office is on plan No. N.P.S. 76-402, PPJ 716, Oct. 10, 1938, revised Nov. 1938.

In order for work to commence on site, a number of cherry trees which were located near the edge of the Tidal Basin had to be removed. Such an act proved extremely controversial, as this area of West Potomac Park had become famous for its much loved trees. Several women's groups organized petitions against their removal, while others took more direct action and chained themselves to trees, preventing the work force from continuing.

In an attempt to quiet the press and dispel rumors that 600 trees were going to be lost, the National Park Service advised the Thomas Jefferson Memorial Commission of the somewhat smaller number of trees actually involved:

> *Cherry trees within the circle of 600 feet diameter which will include the area occupied by the Memorial proper and surrounding roads:*
>
> *46 cherry trees to be moved*
>
> *35 cherry trees to be cut*
>
> *Cherry trees outside the circle which will be affected by the change in shoreline of the Tidal Basin to conform to the Olmsted Landscape plan approved by the Fine Arts, Parks and Planning and Jefferson Memorial Commissions:*
>
> *37 cherry trees to be moved*
>
> *53 cherry trees to be cut*
>
> *Summation: This will make a total of 88 cherry trees to be cut and 83 cherry trees to be moved when the entire landscape plan is carried out.*[10]

This information was passed on to President Roosevelt who, at a press conference, sought to appease widespread public opposition to the proposed location of the monument, and allow construction to proceed.

A ground breaking ceremony took place on December 15, 1938 at 2:30 p.m., after all the necessary trees had been cleared from the area of construction, at the request of the President.

---

[10]Memorandum for the president, from Stuart G. Gibboney, acting Chairman; Thomas Jefferson Memorial Commission, November 15, 1938.

The memorial commission's report, dated December 19, 1938, states Olmsted's proposed general landscape plan as being complete and awaiting approval. This plan although not actually specified as to its number is presumably plan No. 716, and is shown on figure 20. The memorial commission report goes on to say that 10,000 cubic yards of fill had been delivered to the site with the intention of filling in a portion of the Tidal Basin to the west of the memorial site to enable construction to progress. Alterations to the shore line are dipicted in figure 19.

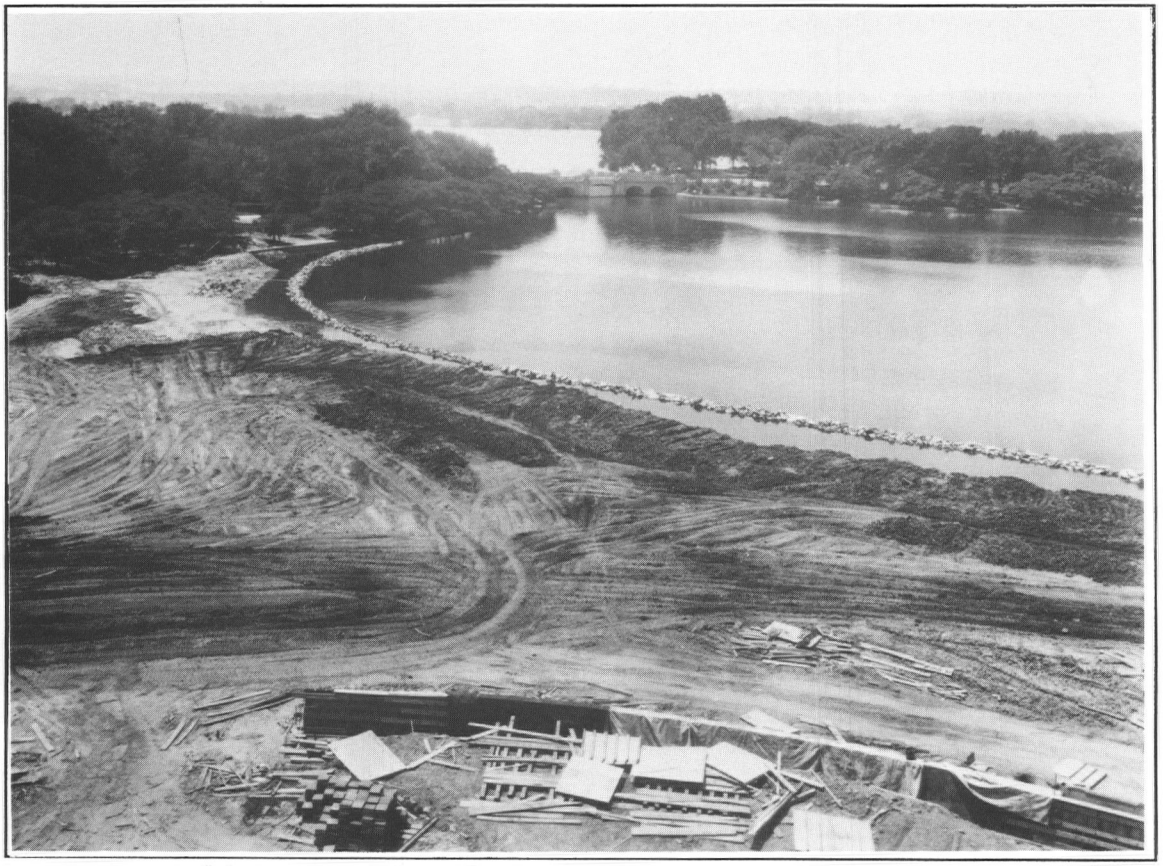


Figure 19 -East of the Memorial Site, Filling in Behind the Rip-Rap Wall. July 1941.

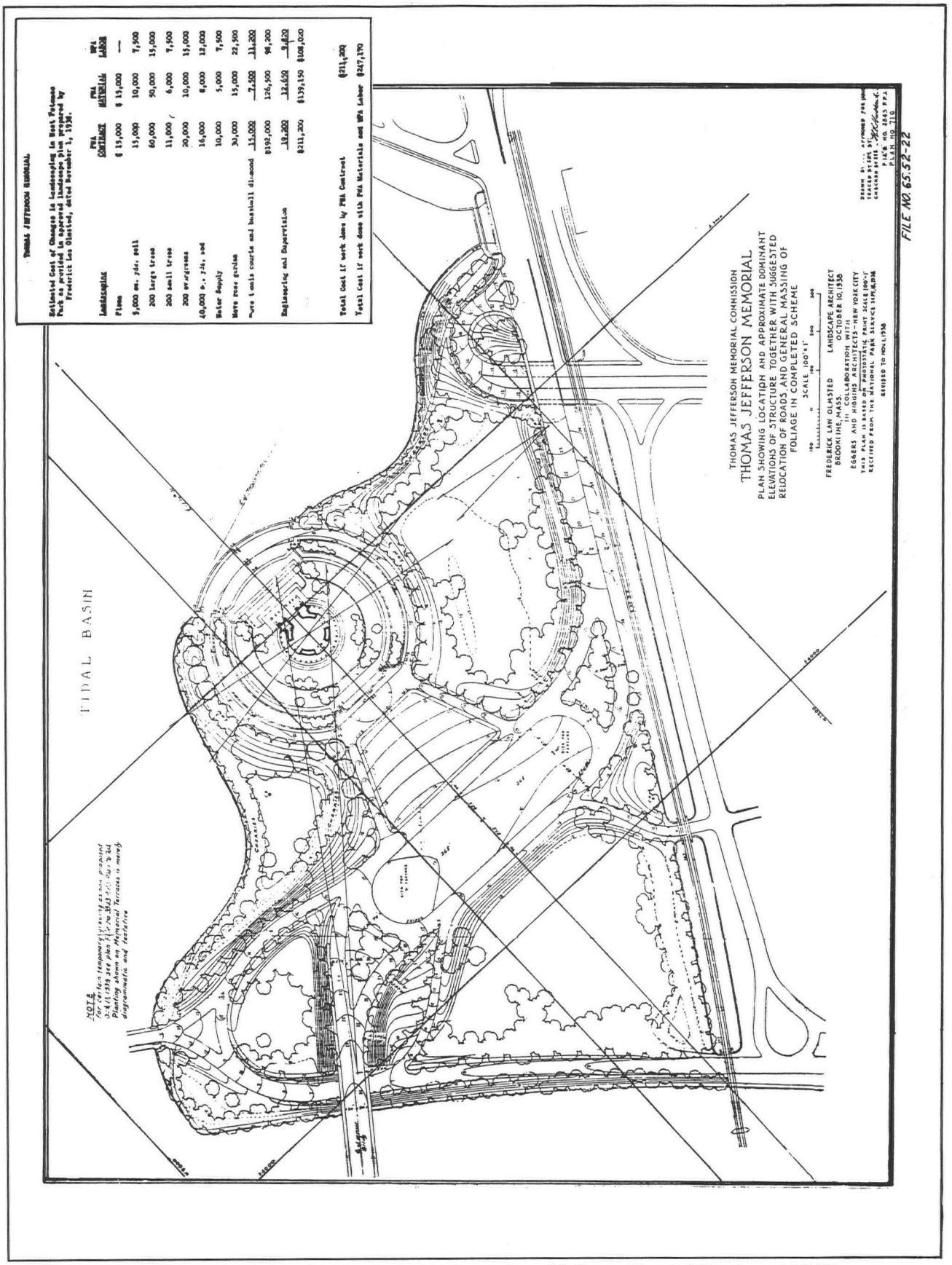


Figure 20 -P.P.J. 716. general plan showing layout and massing of foliage. Olmsted Brothers 11/1/38.

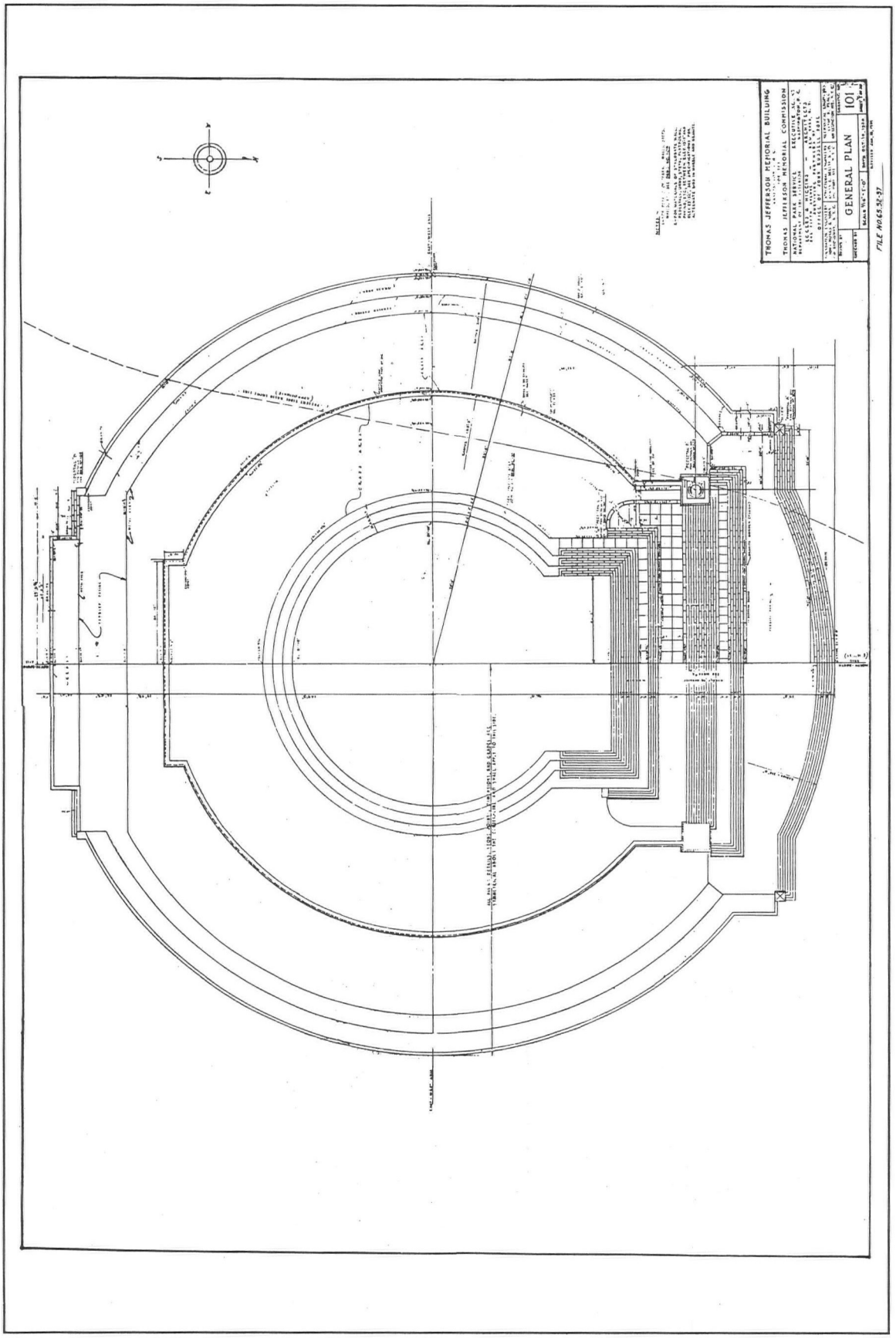
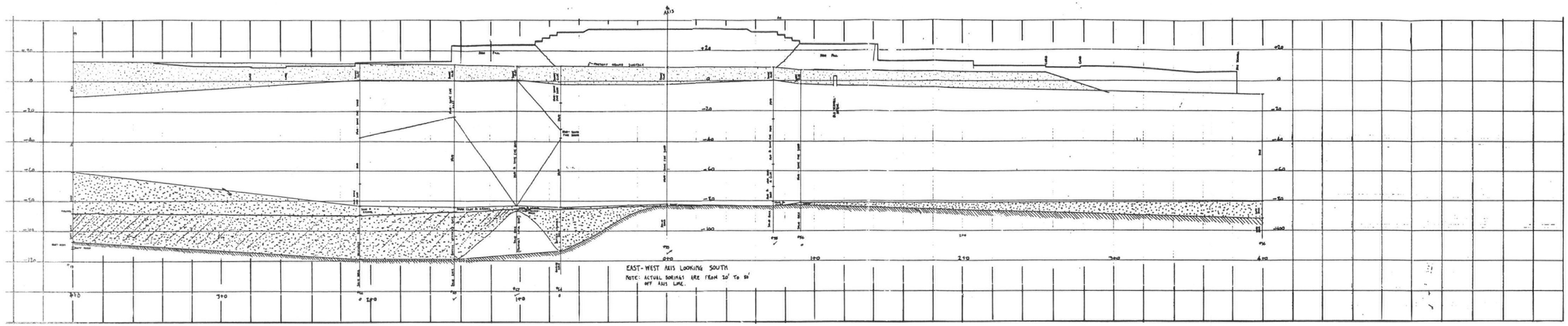


Figure 21 -P.P.J. 730. General plan. Layout of Plaza Steps; Eggers and Higgins, December 1938.



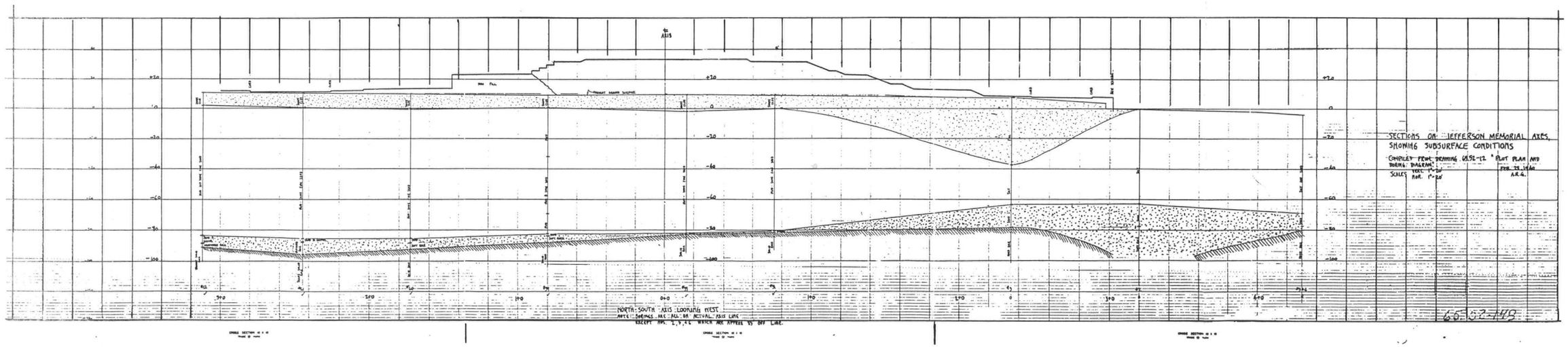


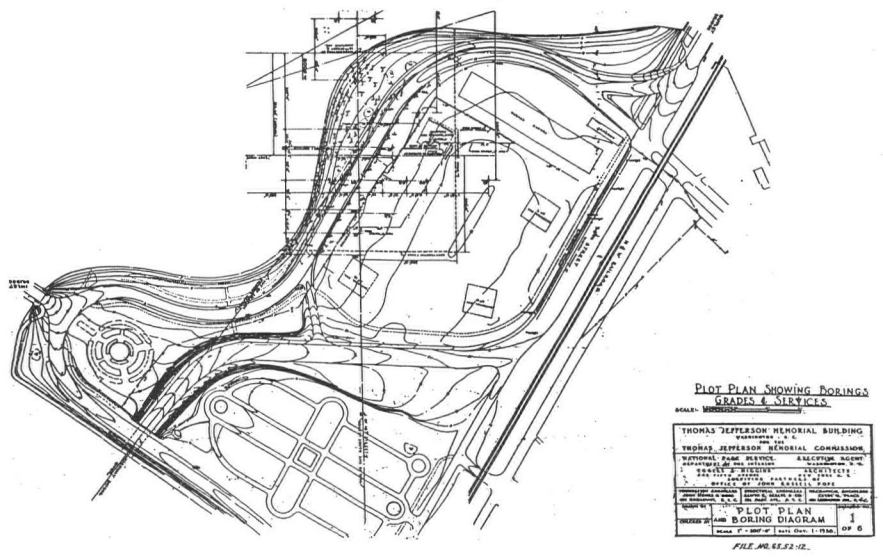
Figure 22 - 65-52-148. Subsurface Conditions, February 28, 1940.

During 1939, piles continued to be driven down into the bedrock for the superstructure of the monument. It was reported that there were difficulties in driving the caissons vertically, due to the presence of rotten rock which was overlying the hard rock. As a result extra piles had to be added. (Thomas Jefferson Memorial report of April 1939.) (See figure 20, page 22, Subsurface conditions.) This was later reported to have been a contributory cause of the structural failures which occurred post construction, leading to the Storch Engineers study in 1965 and subsequent stabilization works.

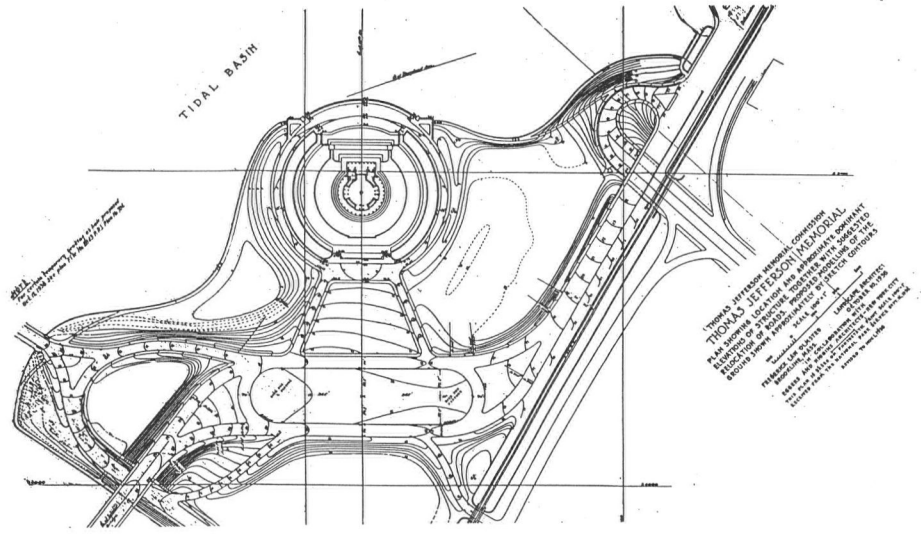
Storch Engineers (New Jersey) was a company contracted to the National Park Service in 1965 to undertake a study into the causes of the subsidence around the memorial and make recommendations as to its treatment. Their study was entitled "Rehabilitation of Peripheral Approaches and Appurtenant Structures" and will be referred to later in this report.

Negotiations continued between Olmsted and the Thomas Jefferson Memorial Commission with regards to his entering into a contract to undertake the detailed plans for the area in Potomac Park from the Tidal Basin to the railroad embankment. This was signed in June 1939, following the issuing of the National Park Service topographical survey of the area to Olmsted.

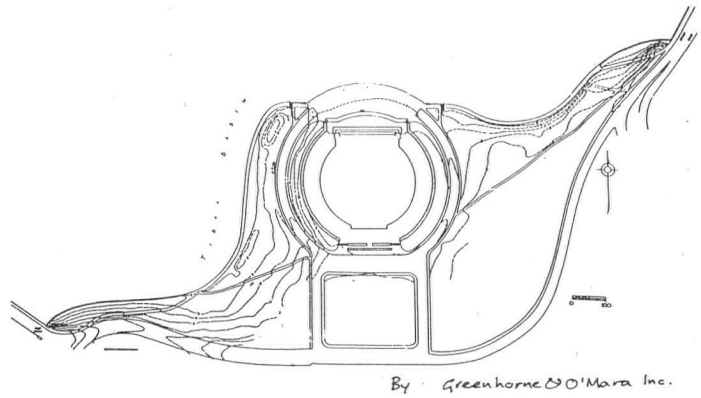
The illustrations (figure 22) show the extent of the ground modelling/grading which was undertaken in conjunction with the construction of the memorial, when compared with the survey of the site today.



SURVEY, 1938



OLMSTED'S DESIGN



1988 SURVEY

Figure 23 - Pre-memorial site survey, proposed ground modelling and contours as described in 1988 survey.

Cost estimates were prepared by the the Olmsted brothers for the realignment of the Sea Wall, new roads, walks and landscaping in West Potomac Park as depicted in his landscape plan, dated October 10, 1939.

Estimated cost of Changes in Realignment of Sea Wall, New Roads, Walks, etc., and Landscaping in West Potomac Park as provided in the approved landscape plan prepared by Frederick Law Olmsted, dated October 10, 1939.[11]

New Sea Wall:	Unit Price	Cost
66,000 cu. yds. excavation	0.35	$23,100.00
8,200 tons rip rap	6.00	49,200.00
2,500 tons rip rap	15.00	37,500.00
1,700 cu.yds. gravel behind wall	3.00	5,100.00
140 concrete piles	200.00	28,000.00
4,500 cu. ft. granite	8.00	36,000.00
500 cu.yds. concrete	18.00	9,000.00
Road Arrangement No 2.		
7,800 sq. yds. new road	2.25	17,550.00
5,000 lin. ft. gutter adjacent to granite curb	1.20	6,000.00
450 lin. ft. cement curb and gutter	1.70	765.00
5,000 lin. ft. granite curb	3.50	17,500.00
5,600 sq. yds. scrubbed surface walk	5.00	28,000.00
500 sq. yds. mortar finish walk	2.75	1,375.00
2,200 sq. yds bituminous walk	2.25	4,950.00
2,200 lin. ft. drains	1.50	3,300.00
18 catch basins	30.00	540.00
20 street lights	150.00	3,000.00

[11]Memorandum from Chief, Survey and Construction Division, National Park Service to Mr. Strawaer - (T. J. M. C.) October 12, 1939

Landscaping Plans		
4,000 cu yds. topsoil	2.00	8,000.00
60 large trees	300.00	18,000.00
100 small trees	55.00	5,500.00
100 evergreens	100.00	10,000.00
20,000 sq. yds. sod	0.30	6,000.00
40,000 sq. yds. seeding	0.10	4,000.00
Move tennis court and baseball diamond		12,000.00
	Total	**340,000.00**

2.2.2. DEVELOPMENT OF PLANTING PLANS

In 1939, it was decided by the National Park Service that the landscape surrounding the memorial should be divided into five separate areas for the organization of the construction and planting, as depicted by the following figure.

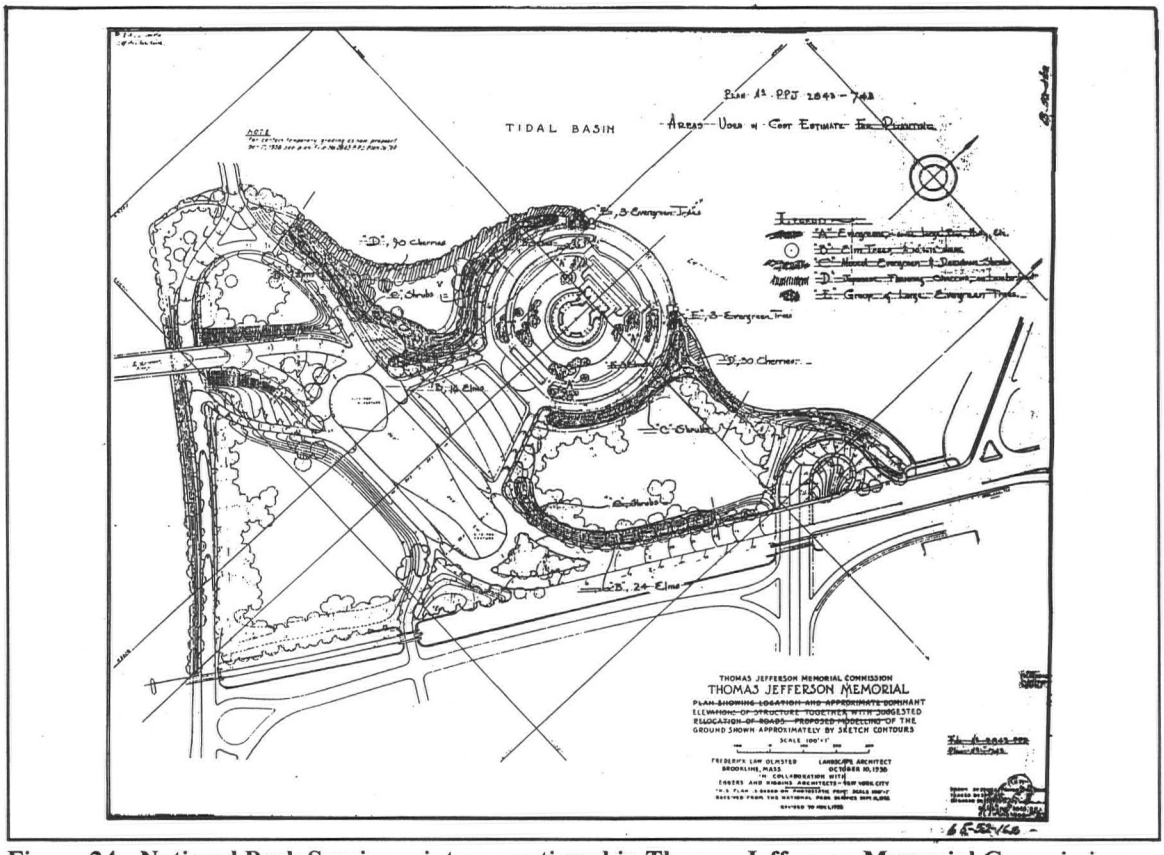


Figure 24 - National Park Service print as mentioned in Thomas Jefferson Memorial Commission report of January 1939.

By February 7, 1941, Olmsted had completed both detailed planting plans, No. 758, *Planting Outside the Circular Roadway* (Dated Dec.1940) and No. 770, *Planting Inside Circular Roadway* (see figures 25 &26), together with associated planting lists, describing planting both the inside and outside of the circular drive surrounding the memorial. Both were criticized by all parties, the Commission of Fine Arts, the National Capital Parks and Planning Commission and the Thomas Jefferson Memorial Commission, as being too complicated and too fussy, and using too many different species for the scale of the project for which they were designed. Perhaps the intention behind including this diversity of plants into the scheme was to draw attention to those species which would have been featured in a garden at Jefferson's home in Virginia, and possibly to celebrate his skills as a botanist and plant collector.

Gilmore D. Clarke, Chairman for the Commission of Fine Arts, wrote of part of the scheme:

> *The scheme for the areas outside of the Memorial circular drive* [plan No 758] *contains, in the opinion of the writer, too many different varieties of plant material, which will result in a scheme too gardenesque, too detailed, and comprising plants too small in character to be in proper scale with the environs. The writer believes that all areas outside of the outer drive should be planted with trees and grass only, including major and minor trees, the latter being cherry trees in accordance with the express wishes of the President. Trees in this large scale composition would serve to create a more permanent treatment, and one in better scale with the memorial. Limiting the planting of these areas as in the manner suggested would appear to create a more quiet and more dignified planting composition, in character with the building and, quite incidentally, make for a much simpler problem of maintenance, an important consideration in a public park where great crowds gather.*[12]

Clarke goes on to cite the road layout (see Figure 20) proposed to the south of the memorial as *"inadequate, and in character inappropriate"* and suggests further investigations into the subject:

> *In view of the contemplated changes with respect to the rearrangement of park drives, incident to the construction of the Fourteenth Street and Maine Avenue grade crossing separation structures, the Commission advise that further study be given to the problem of circulation in the vicinity of the Jefferson Memorial, outside of the circular drive, including the two diagonal roads connecting this drive with the present park road passing south of the memorial. The commission consider the proposed scheme inadequate and in character inappropriate.*
>
> *The whole problem of parking automobiles in the vicinity of the Jefferson Memorial appears to require further study, and in this connection, the commission would be*

---

[12]Letter to N. Drury, Director of the National Park Service, from Gilmore Clarke, Chairman, Commission of Fine Arts. March 4, 1941.

pleased to discuss this matter with your representatives at such time as may be appropriate in the circumstances.[13]

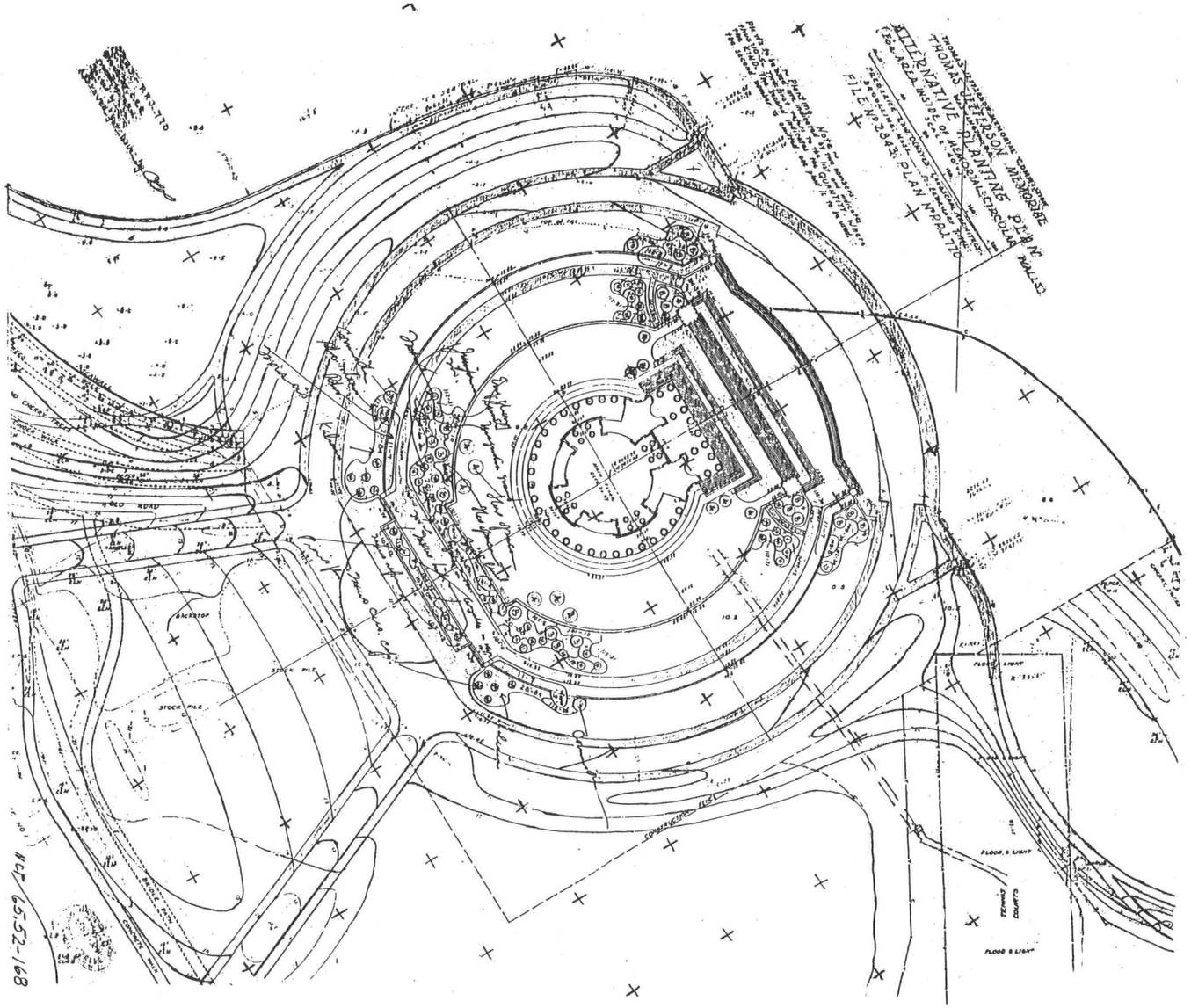


Figure 25 - P. P. J. 770. Planting plan for Area Inside of Memorial Circular Walls, Olmsted Brothers, February 7, 1941.

[13]Ibid.

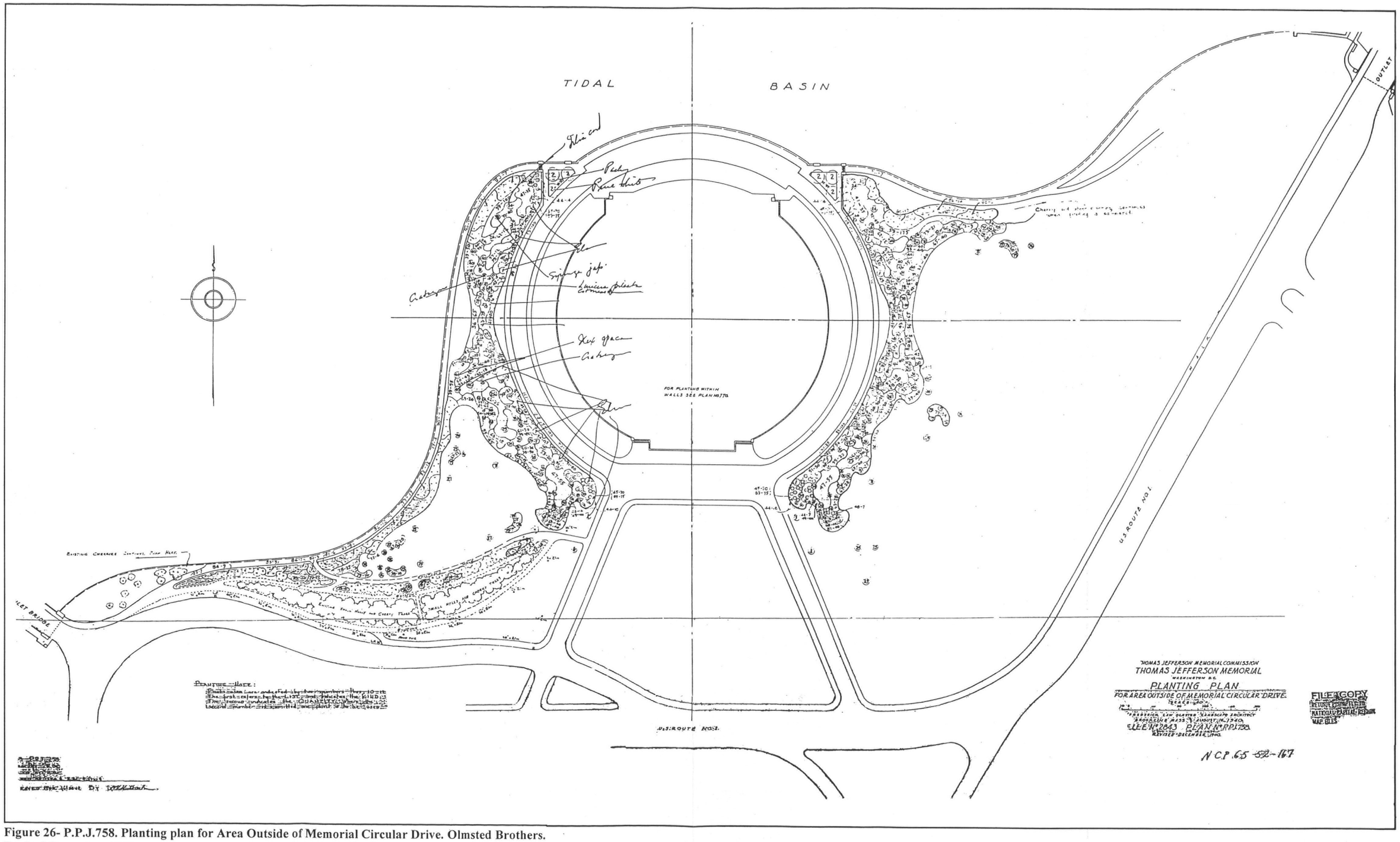


Figure 26- P.P.J.758. Planting plan for Area Outside of Memorial Circular Drive. Olmsted Brothers. Revised December 1940.

While the differences of opinion with regard to the planting plans continued, work progressed with the construction of the memorial. The Thomas Jefferson Memorial Report for June 1941 states that the memorial project was 97.7% complete and listed activities which have been carried out that month, concerning the landscape, as follows:

6. The pouring of 4,500 sq. ft. of concrete pavement at the front of the memorial.

7. The installing of tile lines for lawn drains between the terrace and Stylobate walls.

8. Earth filling and grading....[14]

The proposed layout of the lawn and road area to the south of the memorial was further changed by the Olmsted office, in August 1941 as can be seen in plan 778, (figure 27). The converging roads, criticized previously by Clarke (Commission of Fine Arts) as being "inappropriate," had been substituted with parallel roads. These were subsequently approved by Eggers and Higgins in their letter to Olmsted of August 1941. They did not, however, approve of Olmsted's new proposal to extend the line of trees east and west of the "approach roads," across the line of Route 1, towards the shore of the Potomac. Their reasoning behind this appeared to be that:

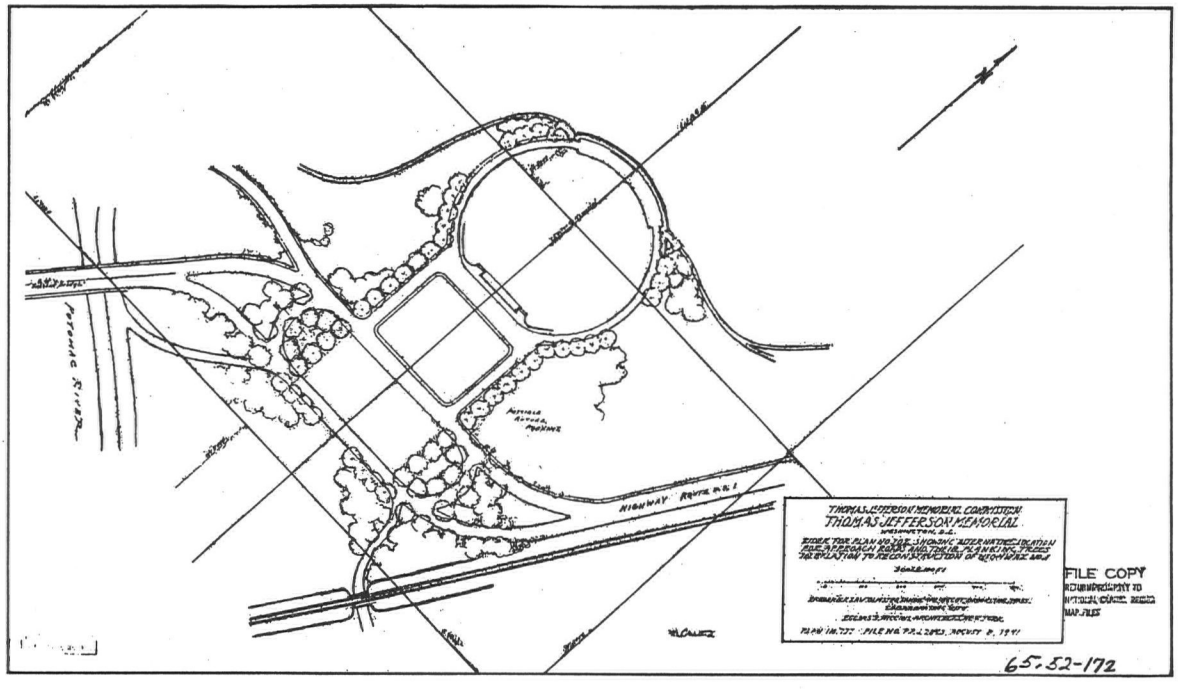


Figure 27-Plan No P.P.J. 778. Rider for plan No 702, Showing alternative location for approach roads and their flanking trees.

[14]Report of the Thomas Jefferson Memorial Commission for the month of June, 1941.

> *The setting for the Jefferson Memorial should remain informal, unlike the Lincoln, and long rows of trees should be avoided.*

Furthermore, it is mentioned, that:

> *It is desirable to keep fairly narrow vistas of the Memorial in every case but the main one on the North.*[15]

Olmsted's reasoning behind his desire to have the lines of flanking trees was to link the southern axial space created by the trees, to the tree flanked circular space surrounding the monument. He made the point that:

> *The previous studies for such a rectangular treatment have made the space unpleasantly short in proportion to its width, a difficulty in large part overcome in the present plan by extending the flanking tree masses straight across the future dual highway and returning them across its southern axis (through which opening it would be possible in the remote future, if the obstruction of the railroad bridge is ever removed, to obtain from the memorial a long, narrow, axial view down the Potomac River).*[16]

So it seems that Olmsted's proposal to make the grass area to the south rectangular, by his realignment of the approach roads, is dependant upon extending the space visually, by planting long lines of trees, across the physical barrier of the road (see figure 27). The extended tree lines never occurred, however, but the ones adjacent to the outer edge of the roads did, together with the rectangular grass area, created by the newly approved parallel roads.

---

[15]Letter to F. L. Olmsted from Eggers and Higgins, New York, August 21, 1941.

[16]Letter to Mr A.A. Demaray, Acting Director, National Park Service and Acting Executive Officer, Thomas Jefferson Memorial Commission from F. L. Olmsted, Jr., August 8, 1941.

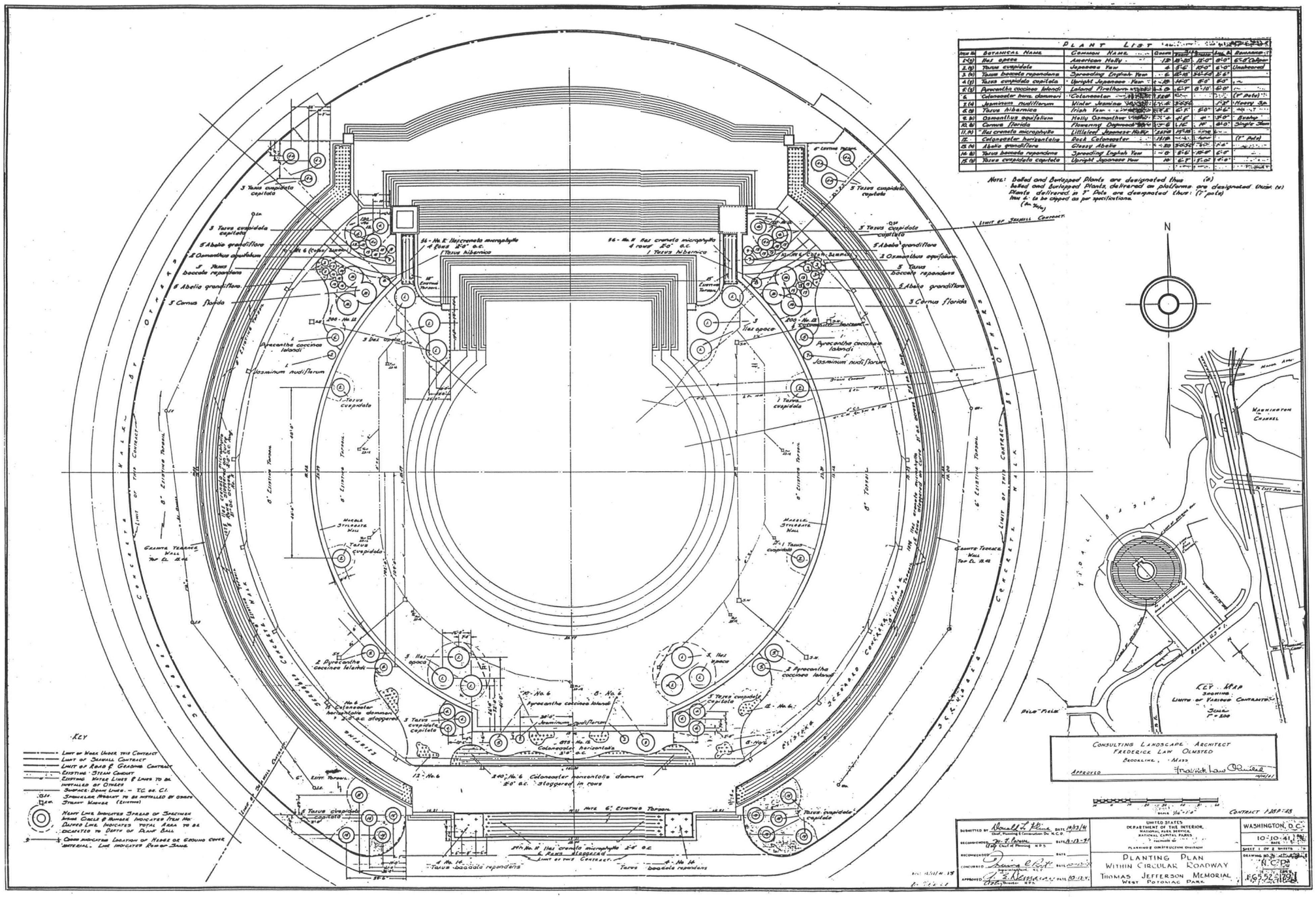


Figure 28-N.P.S. No 65-52-179. Planting Plan within Circular roadway. Olmsted Brothers. 10/10/41.

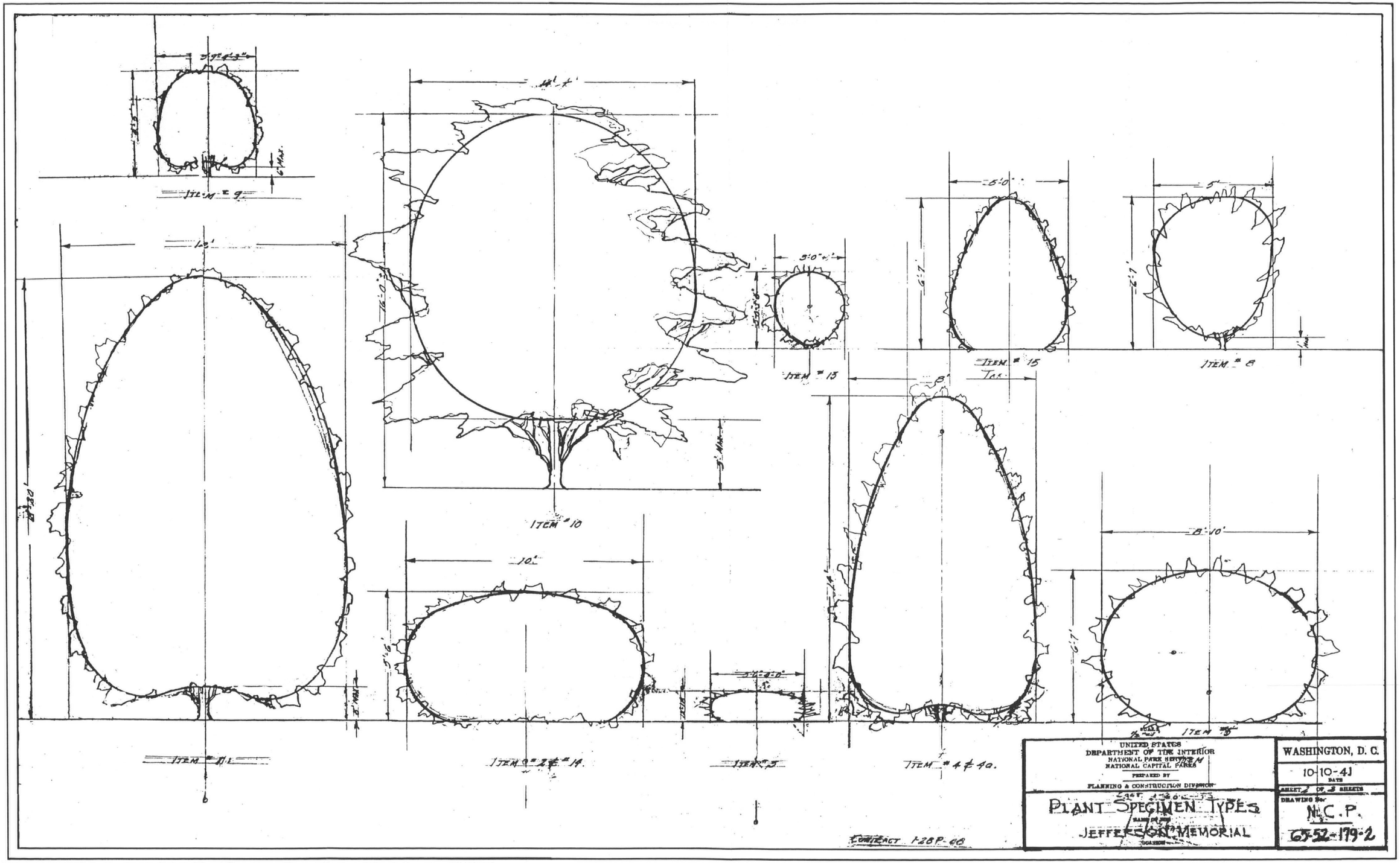


Figure 29-N.P.S. No 65-52-179-2. Plant Specimen Types. National Park Service. 10/10/41.

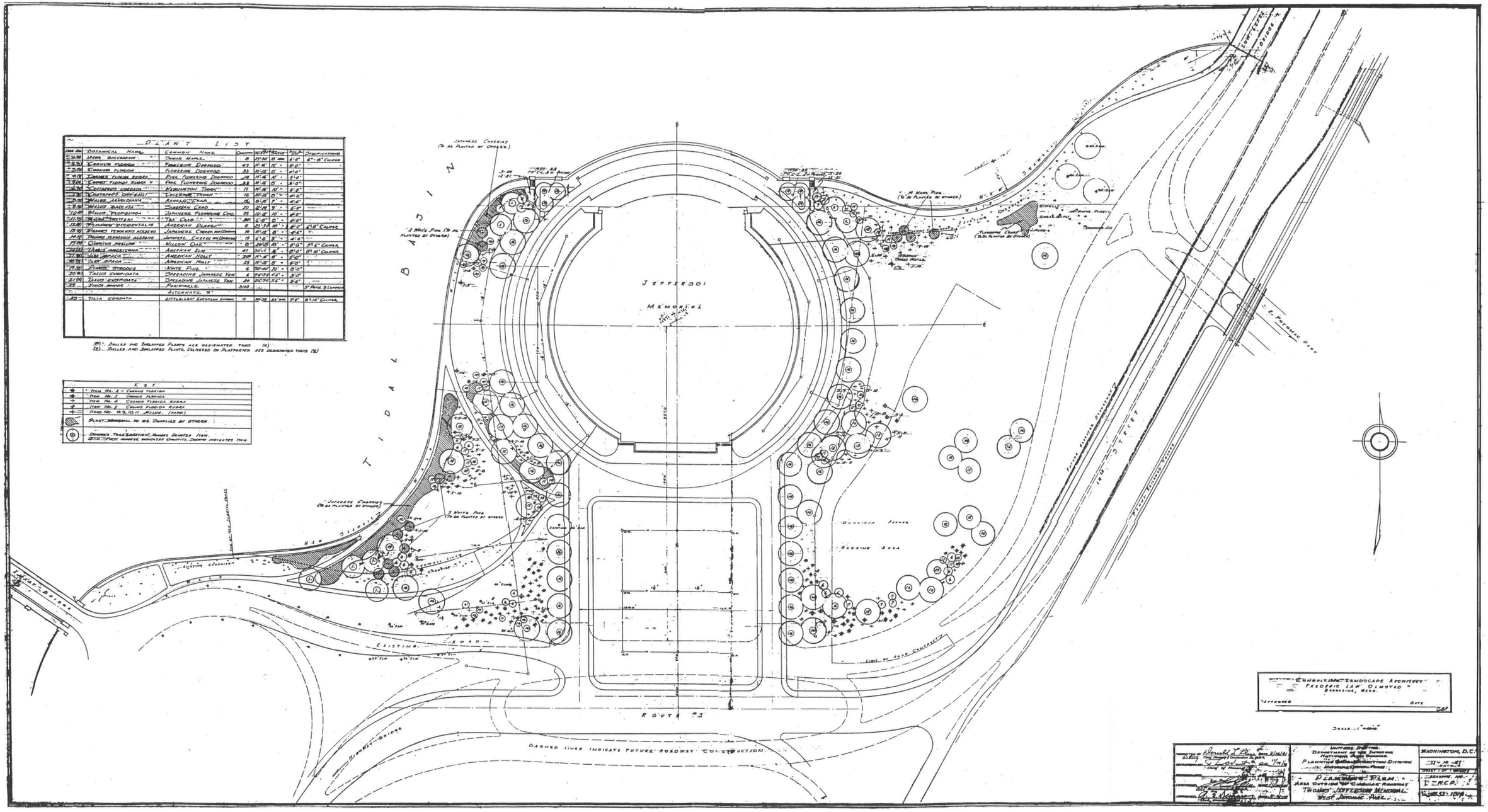


Figure 30 - N.P.S. No 65-52-181a. Planting Plan Outside of Circular Roadway. Olmsted Brothers. November 14, 1941.

2.2.3. ACCEPTED PLANTING SCHEMES

By October 1941, another planting plan concerning the area within the circular roadway was received from the Olmsted office and finally approved by the various commissions. This was a much simpler design than the previous gardenesque schemes, using only thirteen, mainly evergreen, species. This presumably satisfied the Commission of Fine Arts who had deemed the earlier plans "too fussy" and too difficult to maintain in a place where large crowds gather. Indeed, the simple use of evergreens around classical structures set in the landscape had been widely practiced in Europe since the eighteenth century, and probably seemed more appropriate in this setting, appealing to the Commission of Fine Arts' classical tastes. Conifers had also been widely used throughout history in memorial plantings, and cemeteries. (See figures 28, 29 & 30. Plan No 179 sheets 1 & 2 and 181a.)

The planting plan (figure 30, No.181a) for the area outside the circular road differed from the previously rejected scheme in that Olmsted omitted the colorful shrubberies and restricted the planting to a limited choice of trees, shrubs and groundcover plants. This was apparently not a satisfactory solution, as far as he was concerned. In correspondence with the National Park Service Olmsted wrote of the newly accepted planting plans:

> *As to the use of shrubbery outside of the circular drive in view of the undoubted desirability of minimizing the amount of maintenance work required for keeping the surroundings of the memorial in first class condition, and in view of defensible differences in opinion as to the most desirable aesthetic effects, I have agreed with the Chairman of the Commission of Fine Arts on the expediency of omitting from the planting outside of the circle all except the trees, provided that the soil is so prepared that shrubs may later be added if, as, and when it shall later appear that the trees alone (within the areas in the previous plans called for shrubbery also) are in fact insufficient to produce a satisfactory effect.*

Once the landscape plans were approved by all parties concerned, their implementation proceeded. The New England Tree Expert Company was successful in securing the landscaping contract for the area within the circular roadway, submitting a bid $10,000 less than the next lowest bid. The Olmsted office was not in agreement with the award of the contract as decried in a letter to the memorial commission from the National Park Service:

> *A representative of this Office and also a representative of Olmsted's office have inspected the planting material bid on and our representative indicates that the material is well suited for the planting. The representative of Olmsted's office agrees with this viewpoint, but it is believed that he is not agreeable to the award of the contract to the low bidder, basing his opinion on his judgement with reference to what the work should cost.*[17]

---

[17]Letter from F.F. Gillen, Superintendent, National Park Service, to Mr. Stuart G. Gibboney, Chairman, Jefferson Memorial Commission, November 12, 1941.

The exact form of the plant material specified was drawn on a plan called *Plant Specimen Types.* (See figure 29, National Park Service drawing of October 10, 1941, dwg No 65-52-179-2.)

There is no apparent evidence of any maintenance schedules for the area, as to the intended shapes or forms of the planting, with the exception of the drawing below, showing the planting at maturity. This illustration seems to include the more complicated shrub planting, as described in the rejected plans, figures 25 & 26, (Drawing No.s 758 & 770). Indeed it was dated June 30, 1941 - before Olmsted had submitted his final plans.

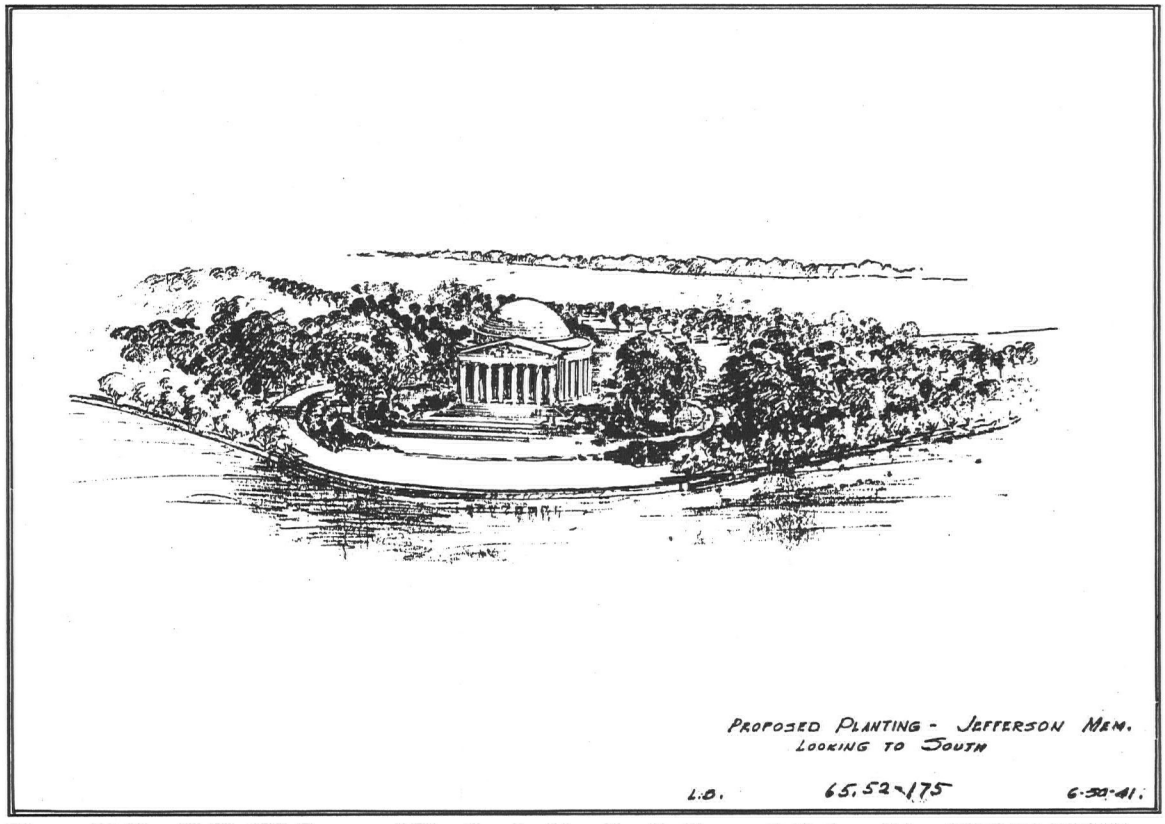


Figure 31-No. 65-52-175. Proposed Planting looking South. Drawn L.B. (possibly of N.P.S.) 6/30/41.

Once the area immediately surrounding the monument within the circular roadway was planted, it received criticisms from the National Park Service, the Thomas Jefferson Memorial Commission, and Eggers and Higgins for appearing "too thin." It subsequently had to be bulked up with additional plant material before the official dedication. Originally, the scheme had no pine trees adjacent to the building, but after the criticism from Eggers and Higgins with regard to the sparsity of the foliage the plans were revised. The additional planting is indicated by figure 32, plan # 65-52-178, 'Additional Planting', which shows the four groups of three additional white pines *(Pinus strobus)* and some minor rearrangement of the other shrub planting. Correspondence from Eggers and Higgins, on this matter, states:

> *The planting gives one the impression of having been spread pretty thin over a large area. I know that funds for this part of the work were particularly limited but it*

> *disturbs me that even what we were able to buy is thin and scrawny and evidently not doing well. My particular case in point are the hollies at either side of the steps on the upper stylobate. I wanted a good heavy mass in this location. Instead the pines at the edge of the water tend to accentuate the thinness of the foliage of the groups of hollies....*[18]

Olmsted was reluctant to thicken up the planting, as described by the letter from the National Park Service of July 20, 1942:

> *We agree with the criticism offered by Mr. Eggers in reference to the planting between the Stylobate wall and the Memorial proper. We believe that the selection of this material was unfortunate for this location, and we have made several attempts to get Mr. Olmsted to agree to thicken it up in order to form a denser mass, but Mr. Olmsted was not agreeable.*[19]

At this time Olmsted was suffering a period of ill health, and convalescing from an operation. He apologized for the fact that the planting was looking so thin. Subsequently he did agree to thicken up the planting, following consensus of opinion from all the other parties concerned, that this was necessary. As well as the additional pines on the Stylobate Mall, some holly trees were replaced and added, and some rearrangement of the planting on the terrace was determined. See figure 32, Drawing No. NPS 65-52-178, which shows the rearrangements. It is not clear whether the additional plant material requested by the architects was purely for making the memorial planting look "mature" for dedication or whether they actually wanted the eventual impact of the large trees on the stylobate mall close to the building.

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[18]Letter to the Olmsted Brothers from Otto R. Eggers , Eggers and Higgins, July 14, 1942

[19]Letter to Stuart G. Gibbony of the Thomas Jefferson Memorial Commission from F. F. Gillen, Sr. Asst. Superintendent of National Capital Parks -Central of the National Park Service; July 20th 1942

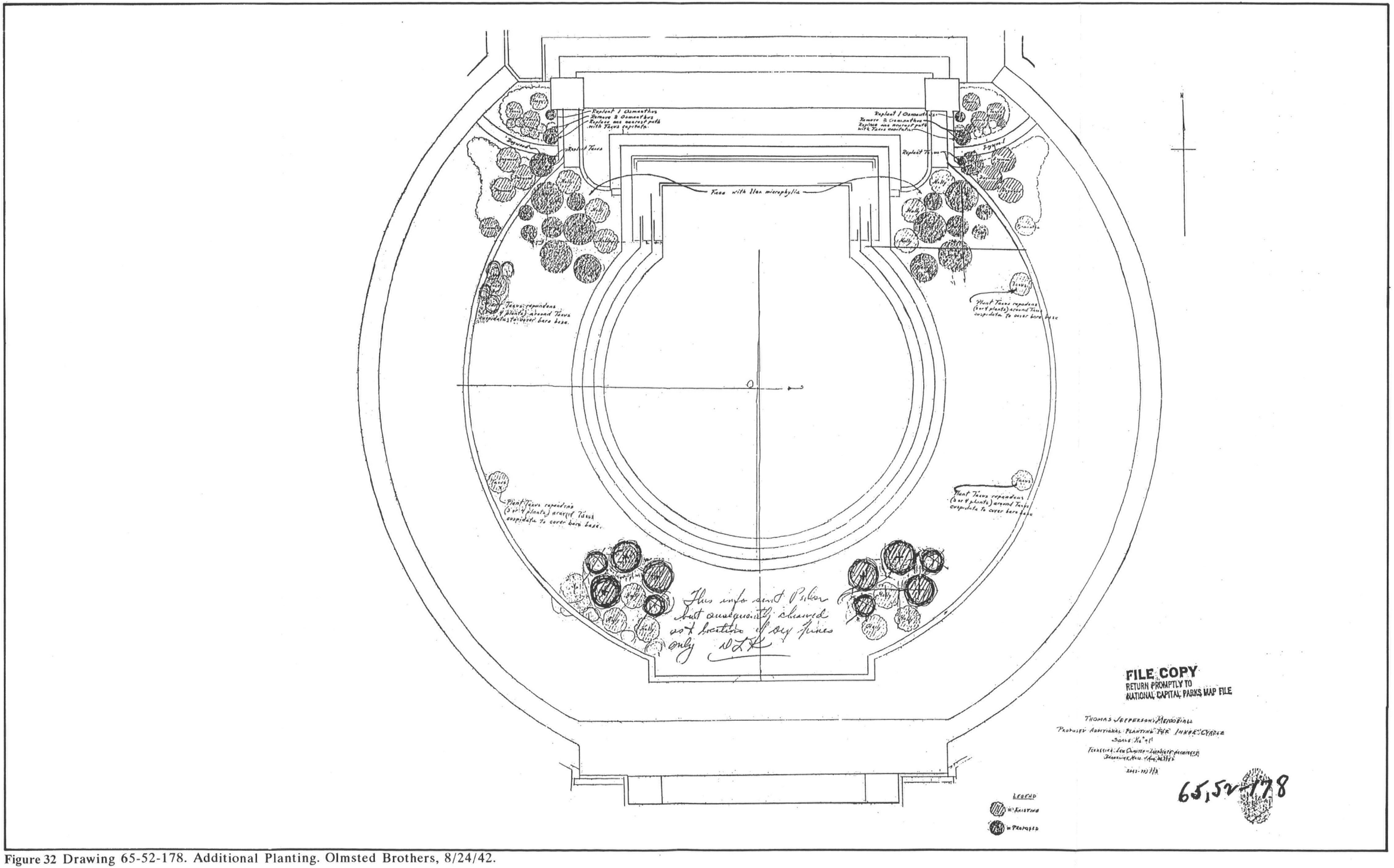


Figure 32 Drawing 65-52-178. Additional Planting. Olmsted Brothers, 8/24/42.

The contract for the planting work in the area outside the circular roadway was carried out by H. L. Frost and Higgins Co. The progress of planting work was described in the Commission's report for May, 1942:

> *The following items of work were under way:*
>
> *Landscaping inside the circular roadway, including the planting of 1800 small cotoneasters, and 30 yew and thorn trees on the lower terrace and roadway levels, 2,600 small leafed Japanese hollies on the lower terrace inside the granite wall.*
>
> *Landscaping outside the circular roadway, including the planting of dogwoods, thorns, crabapple and a sprinkling of maples, hollies, lindens and oaks, 47 large American elms, 11 planes. Periwinkle ground cover planted in the two triangular spaces adjacent to the East and West ends of the Granite sea wall.*
>
> *Fine grading and seeding of vista strip on the West area of the monument and the panel to the south of the monument.*
>
> *Planting of cherry trees by the National Park Service.*[20]

[20]Thomas Jefferson Memorial Commission, Monthly report for May, 1942.

2.2.4. ROAD, DRAINAGE AND SIDEWALK DESIGN

Drainage of the circular roadway was also the subject of discussion and correspondence at the time of the memorials construction. Olmsted was in favor of sloping the encircling roadway away from the monument, so there would only have to be catch basins on the outer edge of the circular roadway, but the Thomas Jefferson Memorial Commission had other ideas. Anticipating the settlement problems, they thought it preferable to play safe and shape the road asymmetrically in profile, incorporating drainage on both sides of the road. They would not, therefore, be subsequently faced with the drainage problem if the initially higher inner side of the road settled below the level of the drains on the outside. This was particularly important in the area on the Tidal Basin side of the memorial as this was all new fill material.

Settlement had always been an important consideration since the start of the memorial's construction and has had major impact on its on the design/history eversince. The construction of the roadways and sidewalks to facilitate "jacking up" is one indication of how this phenomenon was expected and how it was intended to be overcome. The concern for settlement was documented in a letter to the Olmsted office from the Thomas Jefferson Memorial Commission:

> *Regarding the additional catch basins on the inside edge of the circular road and the asymmetrical crowning of this road as now proposed, it is the feeling of the National Park Service that this offers a more practical solution as we all are aware that the roadway pavement is bound to settle and as a matter of fact, is designed to anticipate jacking up when settlement would be sufficient to warrant re-jacking the roadway slabs, additional catch basins will insure adequate drainage no matter which way the settlement occurs. If the roads were all drained to the outside, as originally suggested by your office, in case greater settlement occurred at the inside curb, no means would be available for draining. This was felt to be particularly important in the 40 foot section of the roadway on the basin side of the Memorial.*[21]

"Jacking up" is a method of combatting settlement problems by raising the level of the pavement or roadway, by injecting grout under pressure beneath it. It is limited in its application to raising relatively small elevations. There must be lateral confinement underneath the surface to contain the semi-liquid material used in order for this operation to prove successful.

Treatment of the sidewalks, roads and curbs with respect to the choice of materials to be used was discussed in correspondence between the National Park Service and Gilmore Clarke of the Commission of Fine Arts in August, 1941.

The original intention was to use granite for the curbs of the encircling road, but because they were $10,000 more expensive than concrete, the latter was used instead.

---

[21]Letter from Newton B. Drury, Director and Executive officer, T.J.M.C. to the Olmsted Brothers, August 21, 1941.

Similar budgetary restrictions were to apply to the approach walks both east and west of the memorial. It would have been cheaper to surface them in "straight concrete" but following complaints from the Commission of Fine Arts, it was agreed they would be surfaced in "black top" as they thought this was "less glaring and therefore more aesthetically pleasing."

The plan showing the construction of the sidewalks and catch basins, draining the road to the Tidal Basin is shown in figures 34 and 35.

The road encircling the memorial is documented as being for "occasional use only,"[22] hence its width of only twenty-four feet, narrower than other roads to stop people from parking all around the edge. In his letter dated August 8,1941 Olmsted writes:

> *...attention is drawn to two other details on the blueprint (marked preliminary) of sheet 1 of the working drawings prepared in the Planning and Construction Division, which differ substantially from my grading study and which I failed to notice when I first examined the print last Saturday. One detail is the reduction in width of the approach roads from 27 to 24 feet, the width of 27 feet for these roads was adopted on my plan on the basis of a suggestion by Mr. Whitehead, agreed by Mr. Hubbard and others, that these roads should be wide enough to permit one row of parallel parking and two free lanes, whereas the circular road is deliberately made impracticable for any parking at any time.*[23]

Although the circular road was designed to be impracticable for parking at any time, this proved to be an unsuccessful solution, as can be seen by the necessity for the traffic control barrier in figure 33.

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[22]National Captal Parks and Planning Commission, meeting Sept. 29, 1938.

[23]Letter from F. L. Olmsted to Mr A. E. Demaray, N.P.S, August 8, 1941.

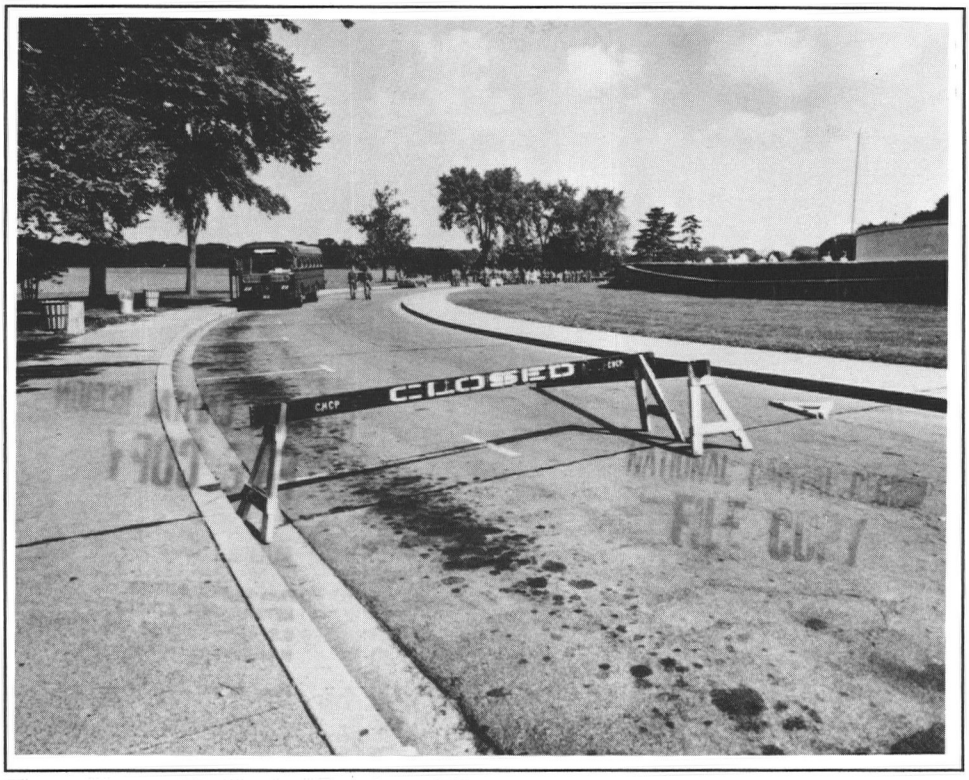


Figure 33 - Traffic Control Barrier, 1963.

The Commission report of May 1942 informs us that the majority of the building and landscape work had been completed:

> *The placing of asphalt surfacing on the concrete road base, the laying of scrubbed surface sidewalk, the installing of drainage and water lines, and the placing and grading of topsoil on areas adjacent to the roadways....Seawall construction by Potts and Callahan was completed.*[24]

2.2.5. SEAWALL

The sea wall, extending southwesterly to the Inlet Bridge, had to be realigned, both vertically and horizontally, by adding a course of stone and six inch concrete coping to bring it to its design elevation. Following this, the blacktop walkway was constructed alongside it, leading to the inlet and outlet bridges. It was completed in September, 1942. (See figures 38 &39. Plan No. 754, 755, July 1940. Realignment of Seawall at Tidal Basin.)

[24]Thomas Jefferson Memorial Commission report, May 1942.



Figure 34-Looking North-east, Showing 'Cut' Area. October 4, 1940.

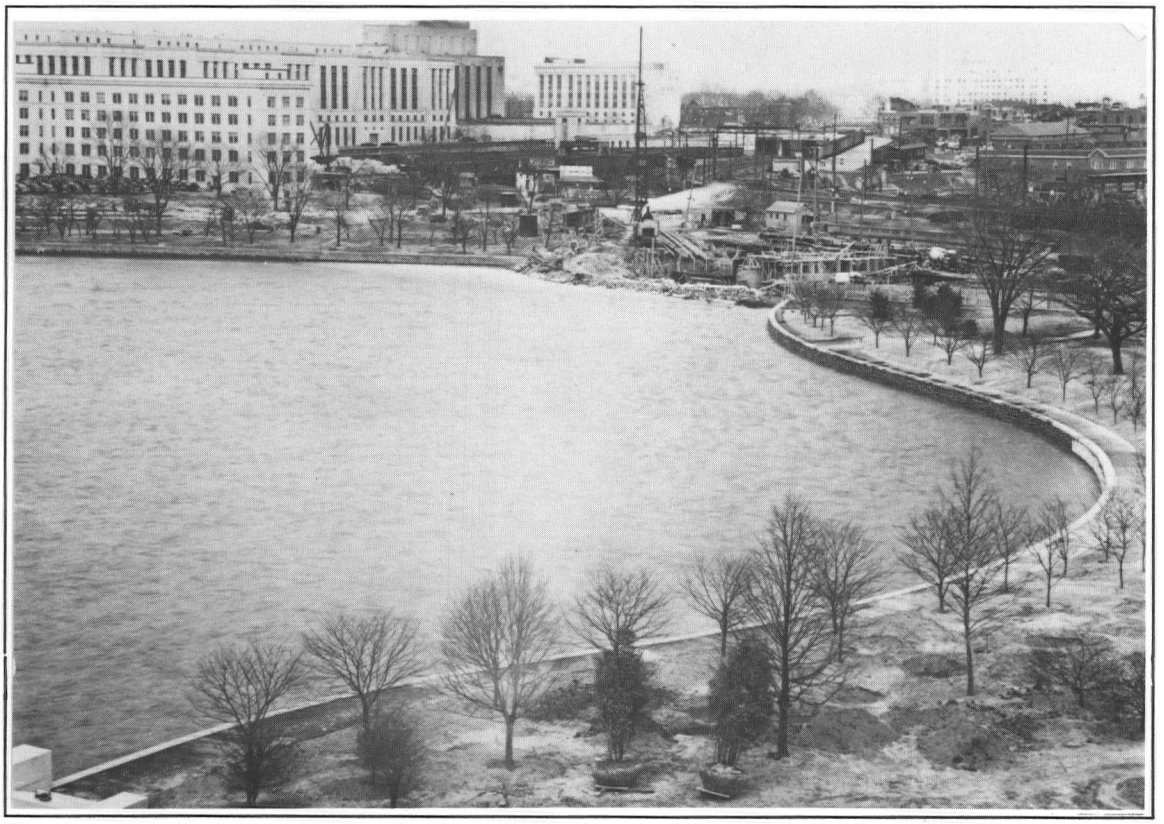


Figure 35-Finished Sidewalk and Outlet Bridge Construction. March, 1942.

2.2.6. DEDICATION

The Jefferson Memorial was dedicated at 12:00 noon on Tuesday, April 13,1943, on the 200th anniversary of Jefferson's birth.

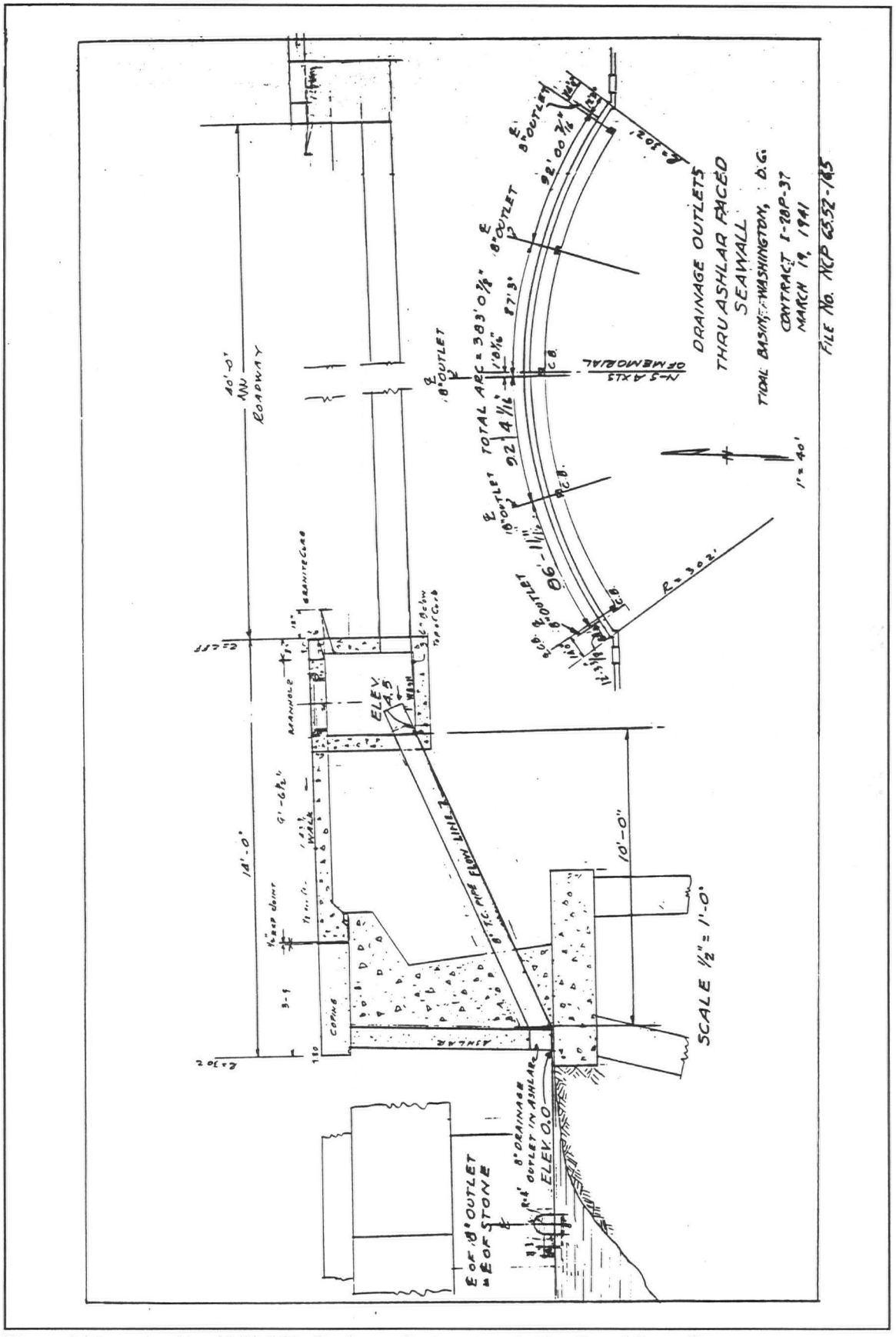


Figure 36-Drawing No. 65-52-165. Drainage Outlets thru Ashlar Faced Seawall.

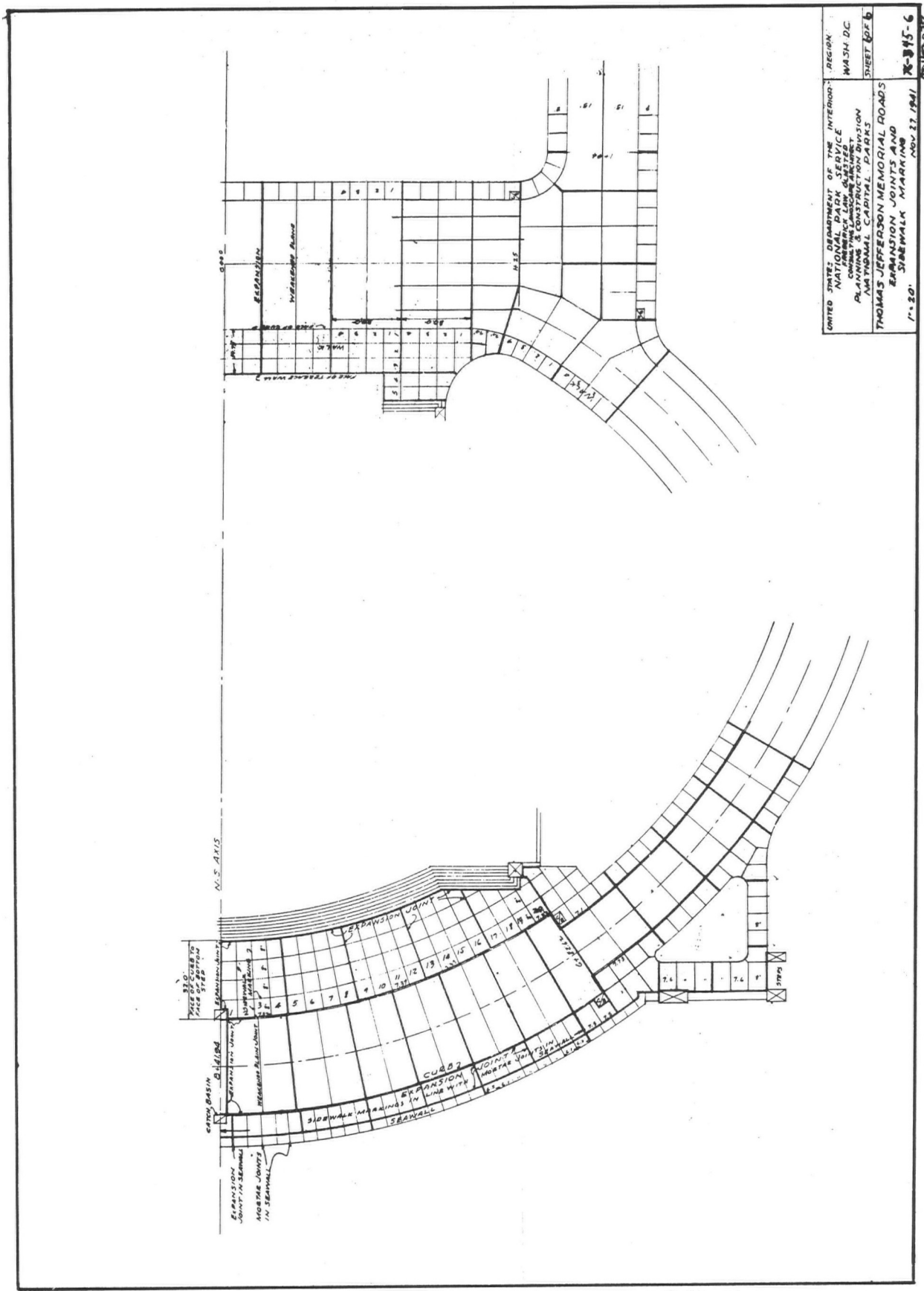


Figure 37 - Drawing No. 76-345-6 (801/80238). Expansion Joints and Sidewalk Marking.

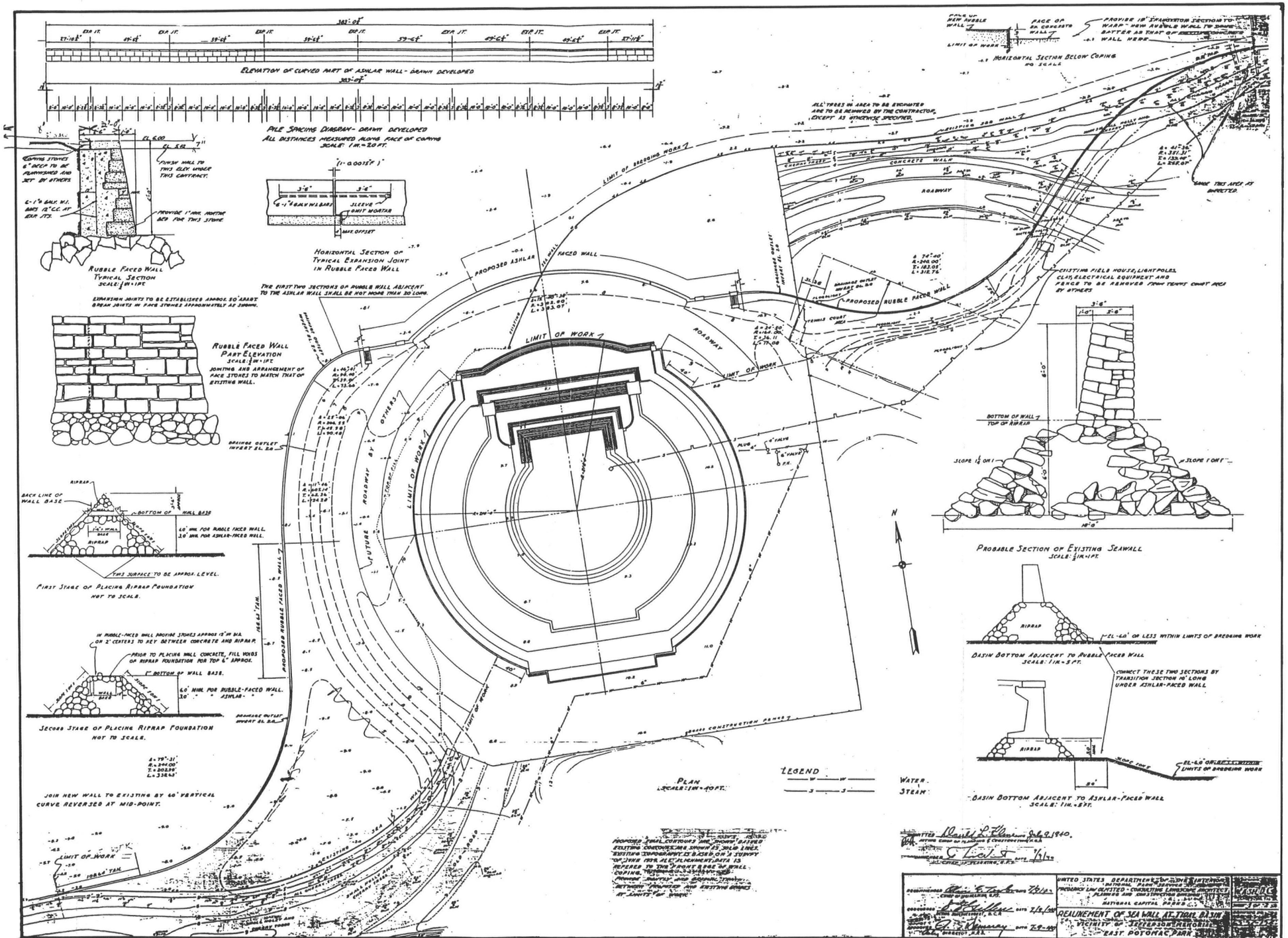


Figure 38 - Drawing 65-52-154, Realignment of Seawall at Tidal Basin. Olmsted Brothers. July 9, 1940.

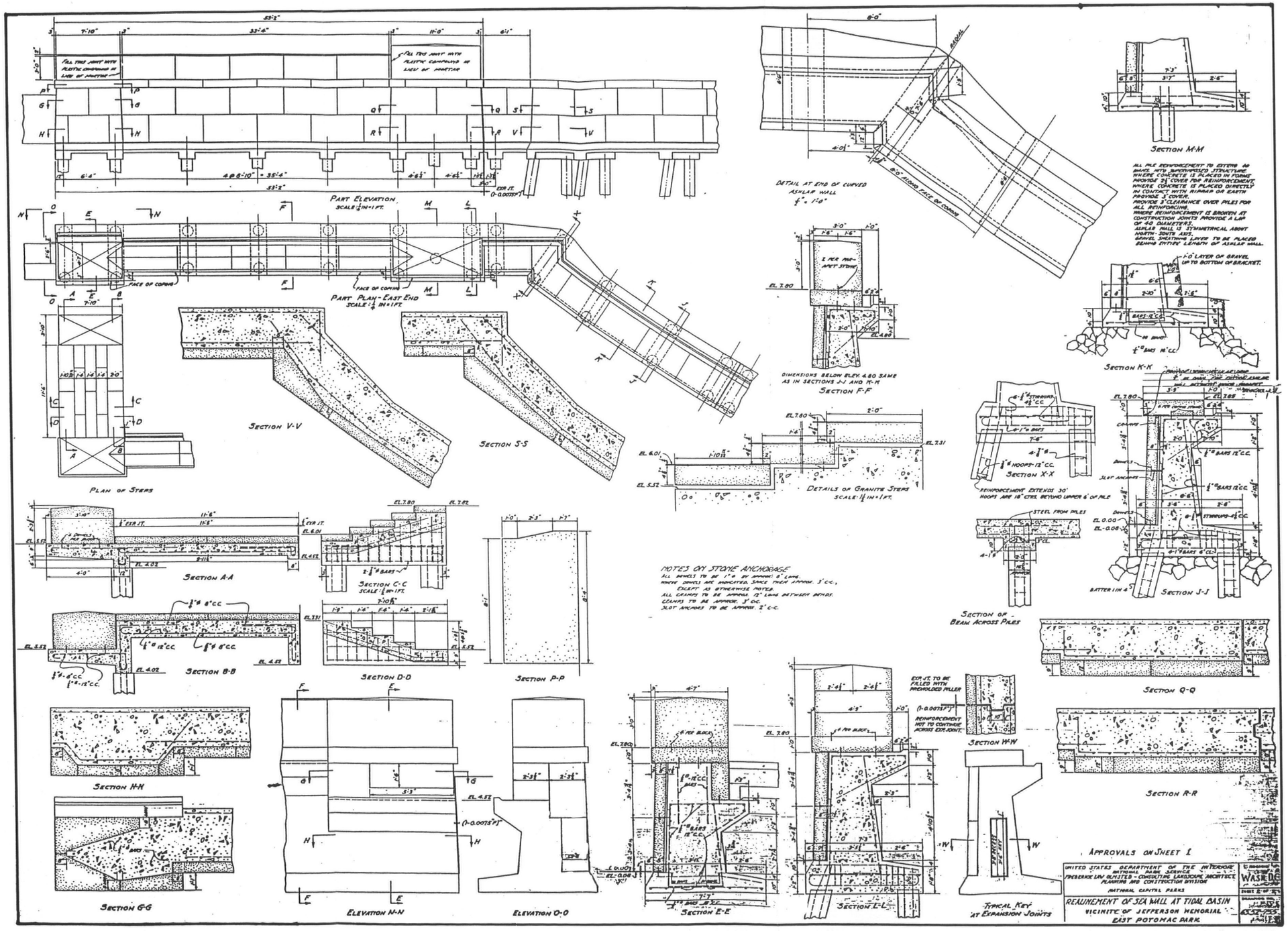


Figure 39- Drawing 65-52-155, Realignment of Seawall at Tidal Basin. Olmsted Brothers. July 9, 1940.

2.3. POST CONSTRUCTION/DEDICATION-PRESENT DAY, 1943-95

2.3.1. VISTA

A vista between the Lincoln and Jefferson Memorials was the subject of discussion between the various interested parties, namely the Commission of Fine Arts, the Thomas Jefferson Memorial Commission and Eggers and Higgins, in January, 1943. This vista was opened up by the pruning of trees at the end of January, enabling the visitor a narrow view of one memorial from the other. It was intended that this should be further opened up to improve the vista; this is described further in the "Views and Vista" section of the *Analysis and Evaluation* section of this report.

2.3.2. SETTLEMENT

Settlement has proved to be a major problem ever since construction was completed. Since that time, the National Park Service began a program of periodic surveys and inspections. Details of these findings are documented in the Storch Engineers (New Jersey) report of 1965, and the Einhorn Yaffee Prescott (Washington, D.C.) report of 1992 on the *Evaluation and Recommendations for the Stylobate Mall.*

The main marble steps are reported to have been reset first by the National Park Service in 1943, the first in a series of repairs and reconstructions up to the present day. By 1965, settlement of the adjacent roadway and side walks of up to three feet had occurred and led to the commissioning of the "Storch Report," by the National Park Service which, due to the complexity of the problem, took five years to complete.

The Storch Report quotes the following settlements, among many, as being significant in terms of the structure and appearance of the landscape:

> *...By 1951, settlement of the fill adjacent to the NW corner of the main approach steps had caused severe cracking of the sidewalk between the roadway and the main Memorial approach steps.*
>
> *...Due to settlement of fill adjacent to the main steps and at the southerly approach to the terrace steps, wooden steps were placed on the settled ground*
>
> *...bituminous concrete was used to fill opened sidewalk joints....*
>
> *The maintenance department made use of mud-jacking techniques in attempts to raise portions of the peripheral roadway, the adjacent sidewalk, the terrace walk and portions of the walk adjacent to the Tidal Basin.*[25]

---

[25]Study and report for Rehabilitation of Peripheral Approaches and Appurtenant Structures, Thomas Jefferson Memorial; Storch Engineers, March 31, 1965, pIV-8.

Some of the other areas of settlement are illustrated here by the photographs which are taken from the Storch Report:



Figure 40 - Storch Report Photograph No. 26 Terrace Wall and Peripheral Roadway, West Axis Showing Settlement, 1965.

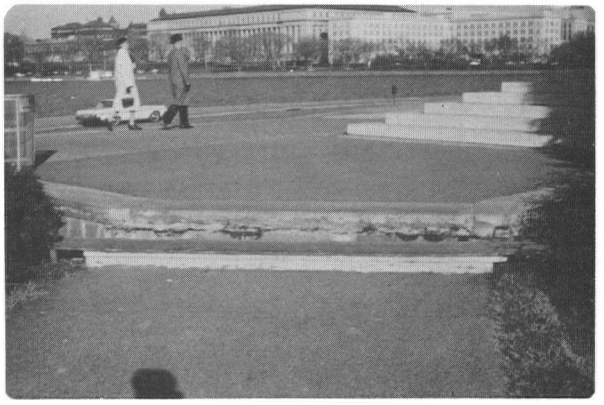


Figure 41 - Storch Report Photograph No. 19, Terrace Walk, West End of Main Steps Showing Settlement.

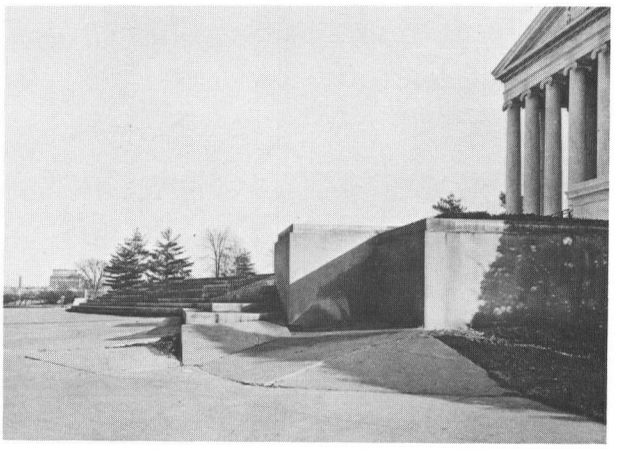


Figure 42 - Storch Report Photograph No. 22, Main Steps, Northwest Corner Showing Cracked Sidewalk.

Various solutions to the problems briefly outlined above are described in the Storch report, sections VIII and IX, RECOMMENDATIONS FOR REHABILITATION. These recommendations preceded the most significant change in the landscape - departing from Olmsted's original design Two major developments occurred to this end, namely the replacement of the roadway adjacent to the Tidal Basin with a plaza, and a replanting scheme around the memorial.

2.3.3. CONSOLIDATION & CONSTRUCTION SINCE 1965

2.3.3.1. Plaza, roads and sidewalk (See figure 44, general plan of works)

The memorial was closed in October 1969 in order to carry out the stabilization program which, as well as installing concrete reinforcing struts to arrest the subsidence, included the re-construction of sidewalks, re-building the terrace walk, and substantial planting and grading. The peripheral roadway at the Tidal Basin and some of the curbs and sidewalks were replaced, using a lightweight, expanded slag sub-base in place of the previous one, to reduce subsequent compaction. Previously, a heavy sub-base had been used which had compacted the underlying silty clay. Steps at the north side, which had been steadily shifting since their construction, were re-set back to their original position. The sub-structure was modified to stabilize the memorial and the newly designed plaza to the north was 'floated' by means of a concrete slab. This slab was supported by a viaduct-like system of supporting and horizontal reinforced concrete beams.

Most prominently visible in this package of renovations was the replacement of the roadway on the Tidal Basin side of the memorial with a multicolored exposed aggregate and colored concrete plaza. It was completed on December 16, 1970. (See figure 43.)

The levels of this area were considerably altered in that the new plaza adjacent to the seawall has a higher finished grade than its predecessor. This alteration in levels between the old existing road and the new plaza, meant that the remaining approach roads to the new plaza, shown in the plan, (see figure 56), had to be ramped upwards toward the plaza in order for them to meet. Obviously this higher level makes for better drainage of the plaza as the run-off falls in the direction of the Tidal Basin and to the catch basins at the east and west of the plaza in the road. This does mean, however, that the smooth curve of the circular road around the memorial was lost.

The plans and details on the following pages are from the Storch Report and demonstrate the design and construction, existing today, which was carried out to rectify the subsidence.

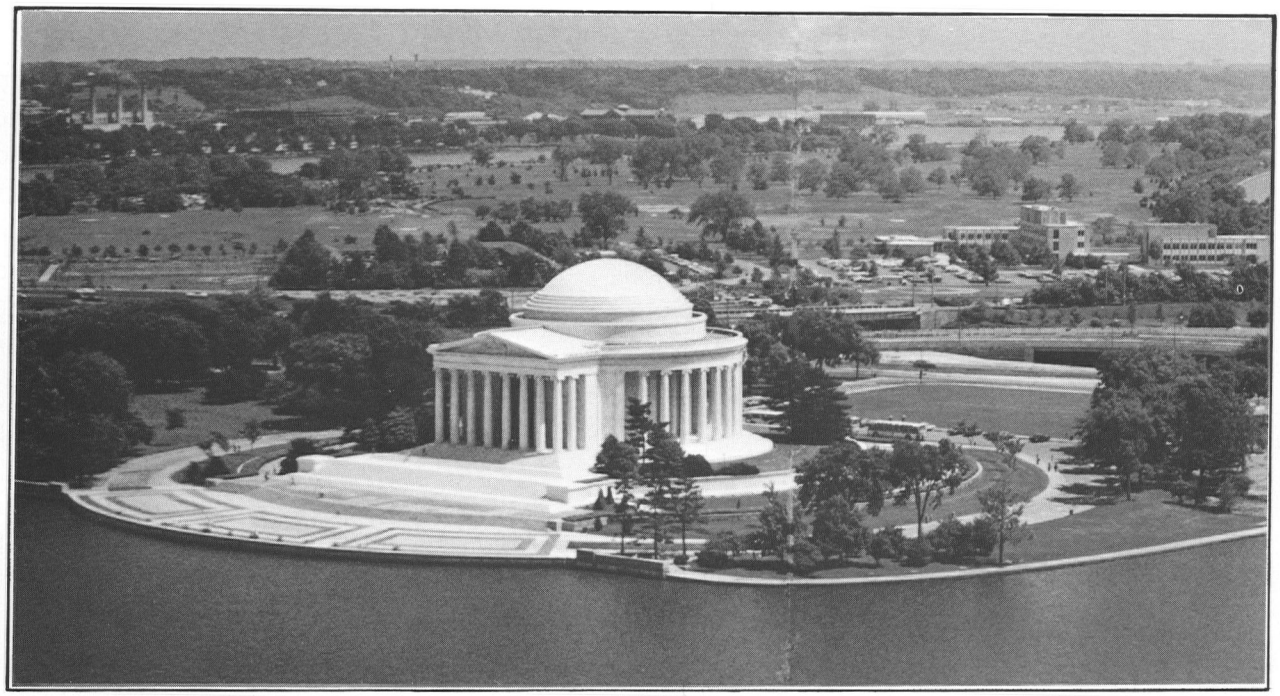


Figure 43 - View of Plaza as Constructed, 1970.

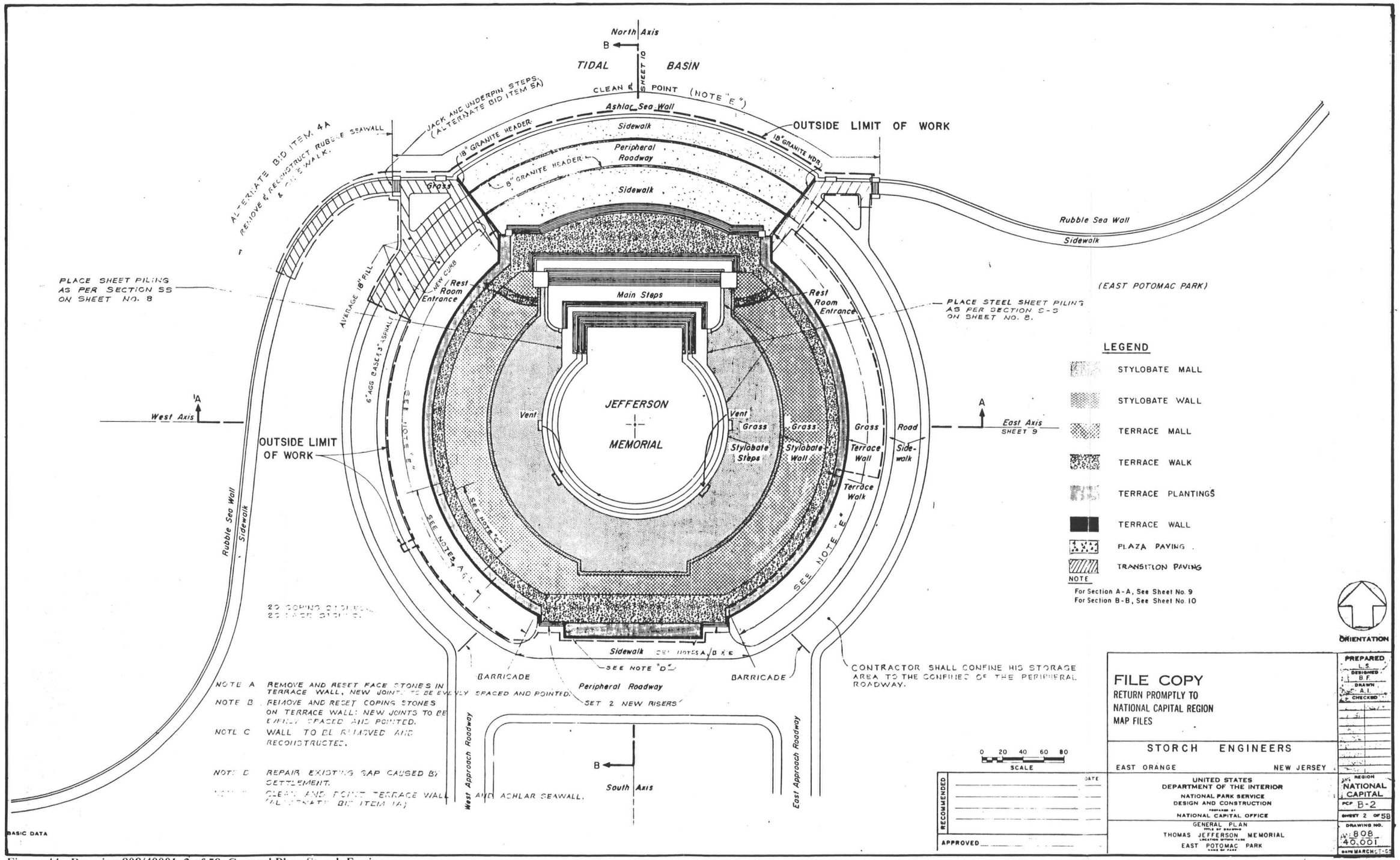


Figure 44 - Drawing 808/40001, 2 of 58, General Plan, Storch Engineers

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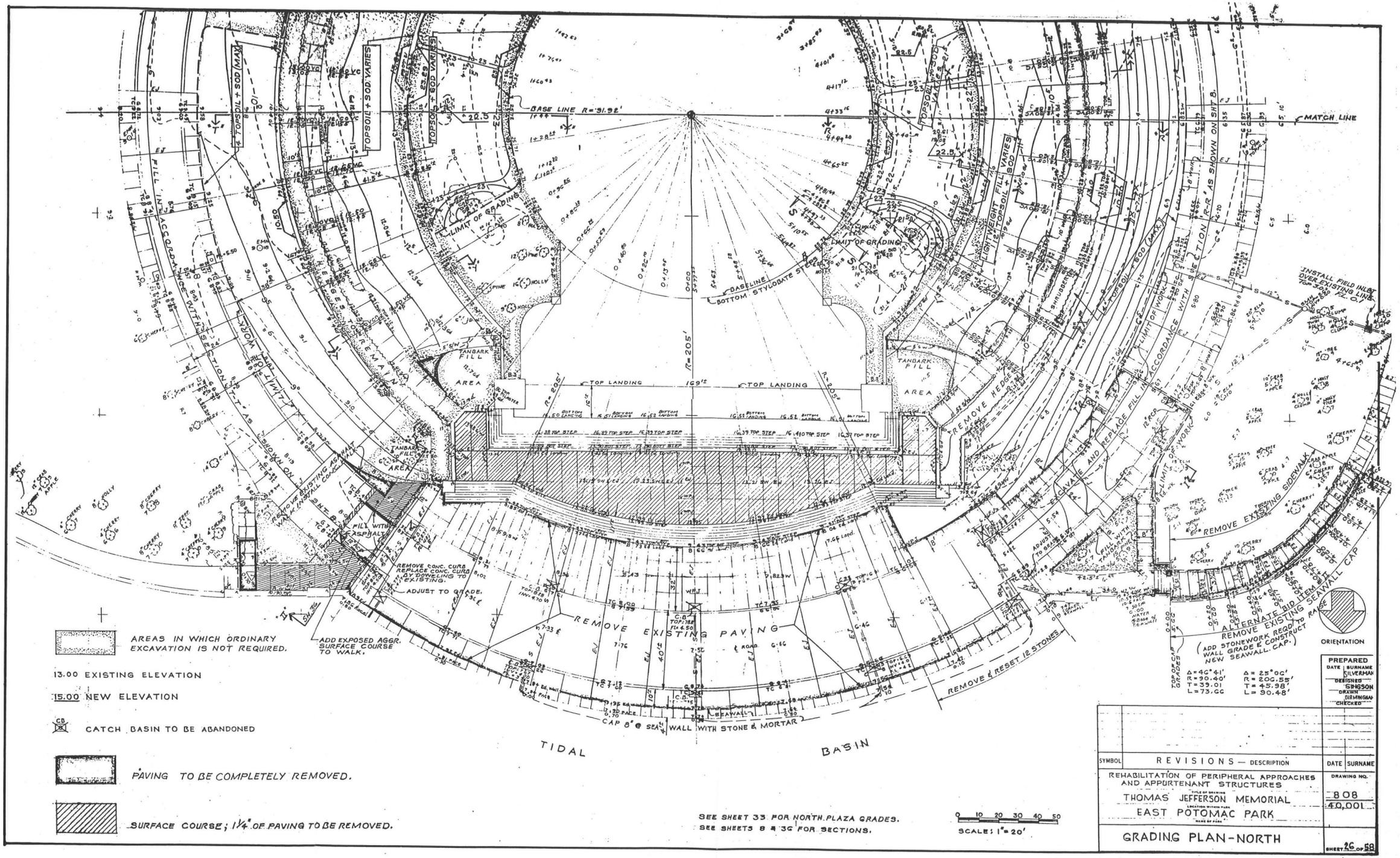


Figure 45 - Drawing 808/40001, 26 of 58, Grading Plan North, Storch Engineers

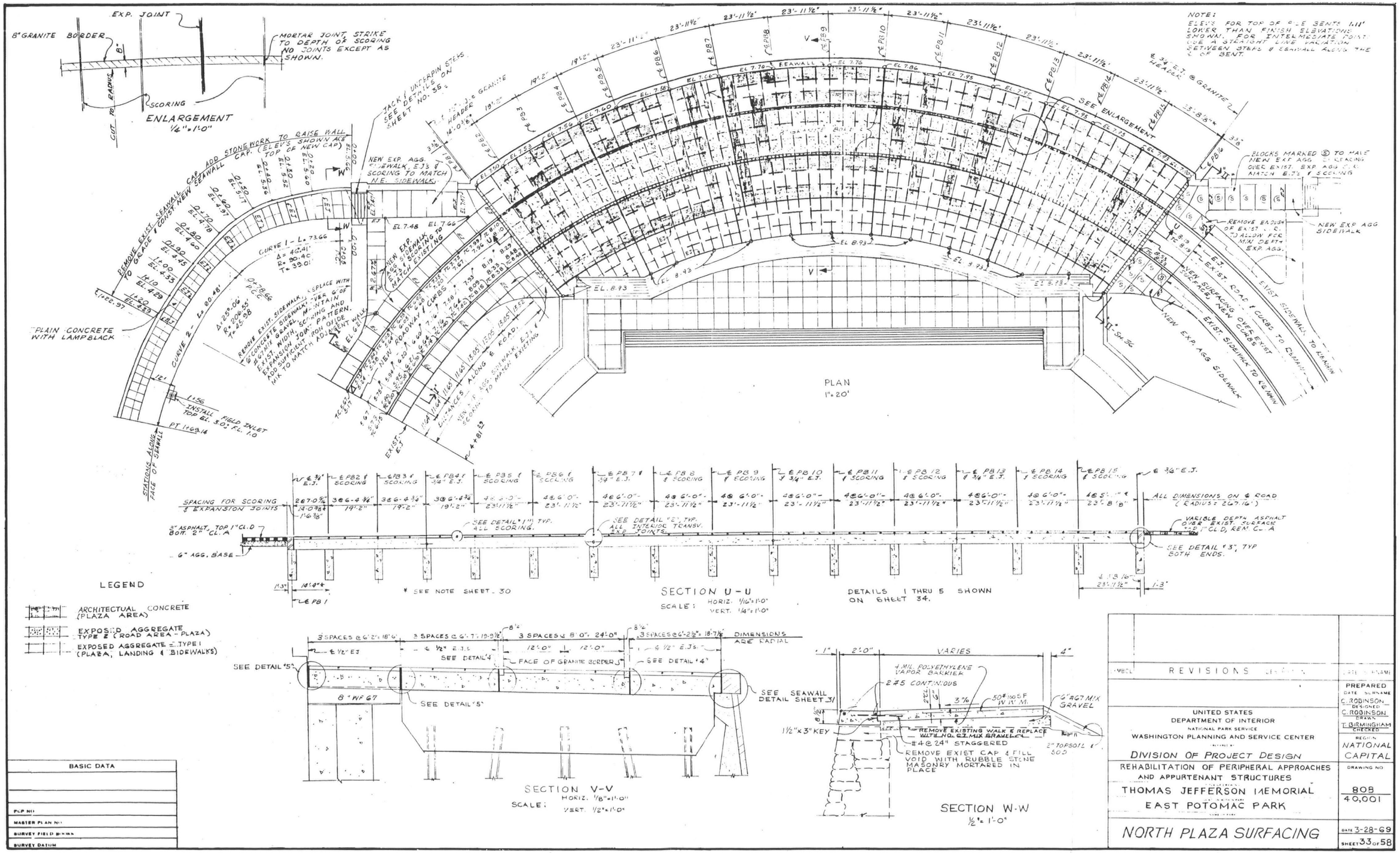


Figure 46 - Drawing 808/40001, 33 of 58, North Plaza Surfacing, Storch Engineers

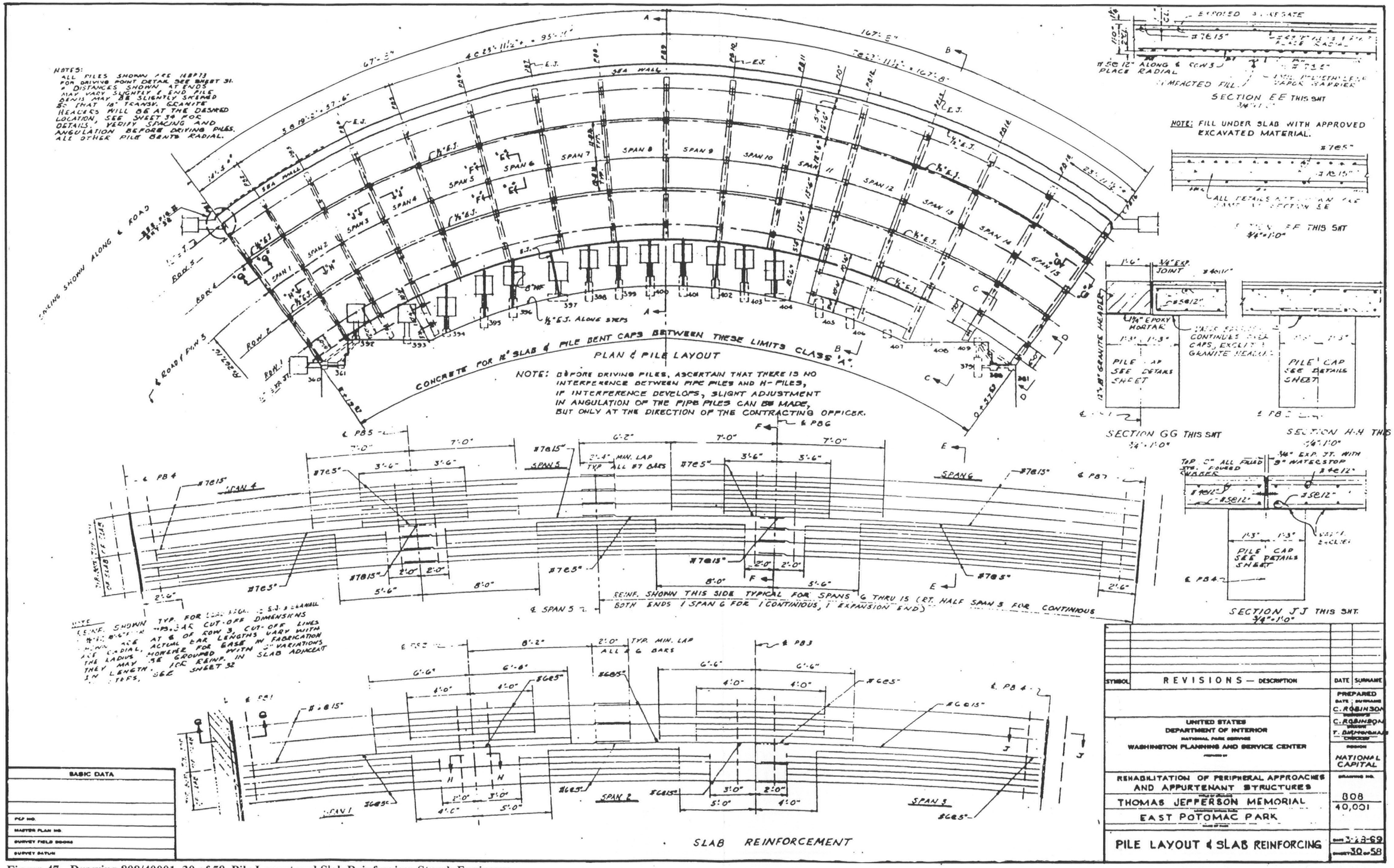
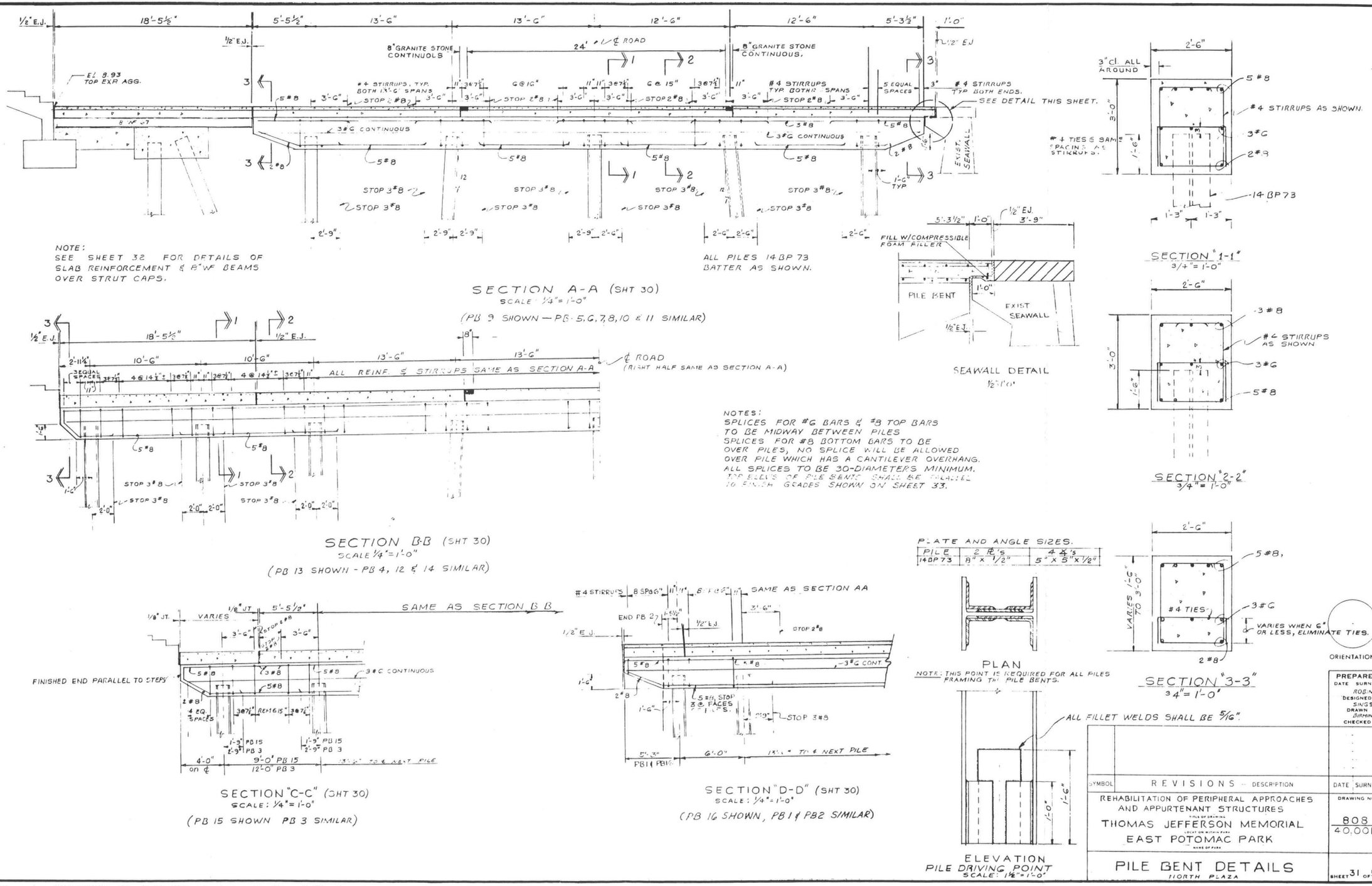


Figure 47 - Drawing 808/40001, 30 of 58, Pile Layout and Slab Reinforcing, Storch Engineers



NOTE:
SEE SHEET 32 FOR DETAILS OF SLAB REINFORCEMENT & B'WF BEAMS OVER STRUT CAPS.

ALL PILES 14BP73 BATTER AS SHOWN.

SECTION A-A (SHT 30)
SCALE: ¼"=1'-0"
(PB 9 SHOWN — PB 5, 6, 7, 8, 10 & 11 SIMILAR)

SEAWALL DETAIL
½"=1'-0"

SECTION "1-1"
3/4"=1'-0"

SECTION "2-2"
3/4"=1'-0"

SECTION BB (SHT 30)
SCALE ¼"=1'-0"
(PB 13 SHOWN - PB 4, 12 & 14 SIMILAR)

NOTES:
SPLICES FOR #6 BARS & #8 TOP BARS TO BE MIDWAY BETWEEN PILES
SPLICES FOR #8 BOTTOM BARS TO BE OVER PILES, NO SPLICE WILL BE ALLOWED OVER PILE WHICH HAS A CANTILEVER OVERHANG.
ALL SPLICES TO BE 30-DIAMETERS MINIMUM.
TOP ELEVS OF PILE BENTS SHALL BE PARALLEL TO FINISH GRADES SHOWN ON SHEET 33.

SECTION "C-C" (SHT 30)
SCALE: ¼"=1'-0"
(PB 15 SHOWN PB 3 SIMILAR)

SECTION "D-D" (SHT 30)
SCALE: ¼"=1'-0"
(PB 16 SHOWN, PB 1 & PB 2 SIMILAR)

PLATE AND ANGLE SIZES.

PILE	2 ℄'s	4 ℄'s
14BP73	8" x 1/2"	5" x 5" x 1/2"

PLAN

NOTE: THIS POINT IS REQUIRED FOR ALL PILES FRAMING THE PILE BENTS.

ELEVATION
PILE DRIVING POINT
SCALE: 1½"=1'-0"

SECTION "3-3"
3/4"=1'-0"

ORIENTATION

PREPARED
DATE SURNAME
ROBINSON
DESIGNED
SINGSON
DRAWN
BIRMINGHAM
CHECKED

SYMBOL	REVISIONS — DESCRIPTION	DATE	SURNAME

REHABILITATION OF PERIPHERAL APPROACHES AND APPURTENANT STRUCTURES
TITLE OF DRAWING
THOMAS JEFFERSON MEMORIAL
LOCATION WITHIN PARK
EAST POTOMAC PARK
NAME OF PARK

PILE BENT DETAILS
NORTH PLAZA

DRAWING NO
808
40.001

SHEET 31 OF 58

Figure 48 - Drawing 808/40001, 31 of 58, Pile Bent Details, Storch Engineers

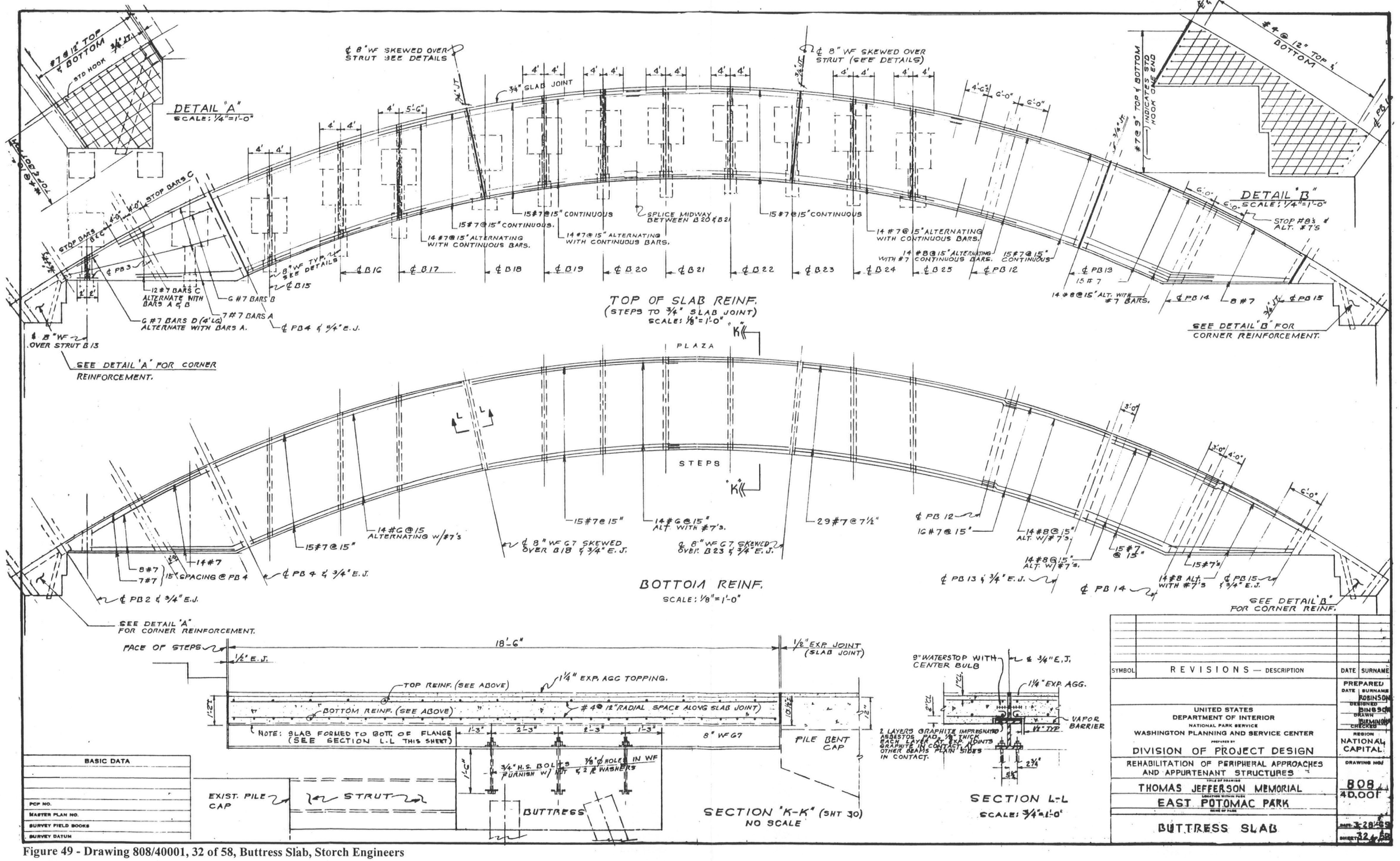


Figure 49 - Drawing 808/40001, 32 of 58, Buttress Slab, Storch Engineers

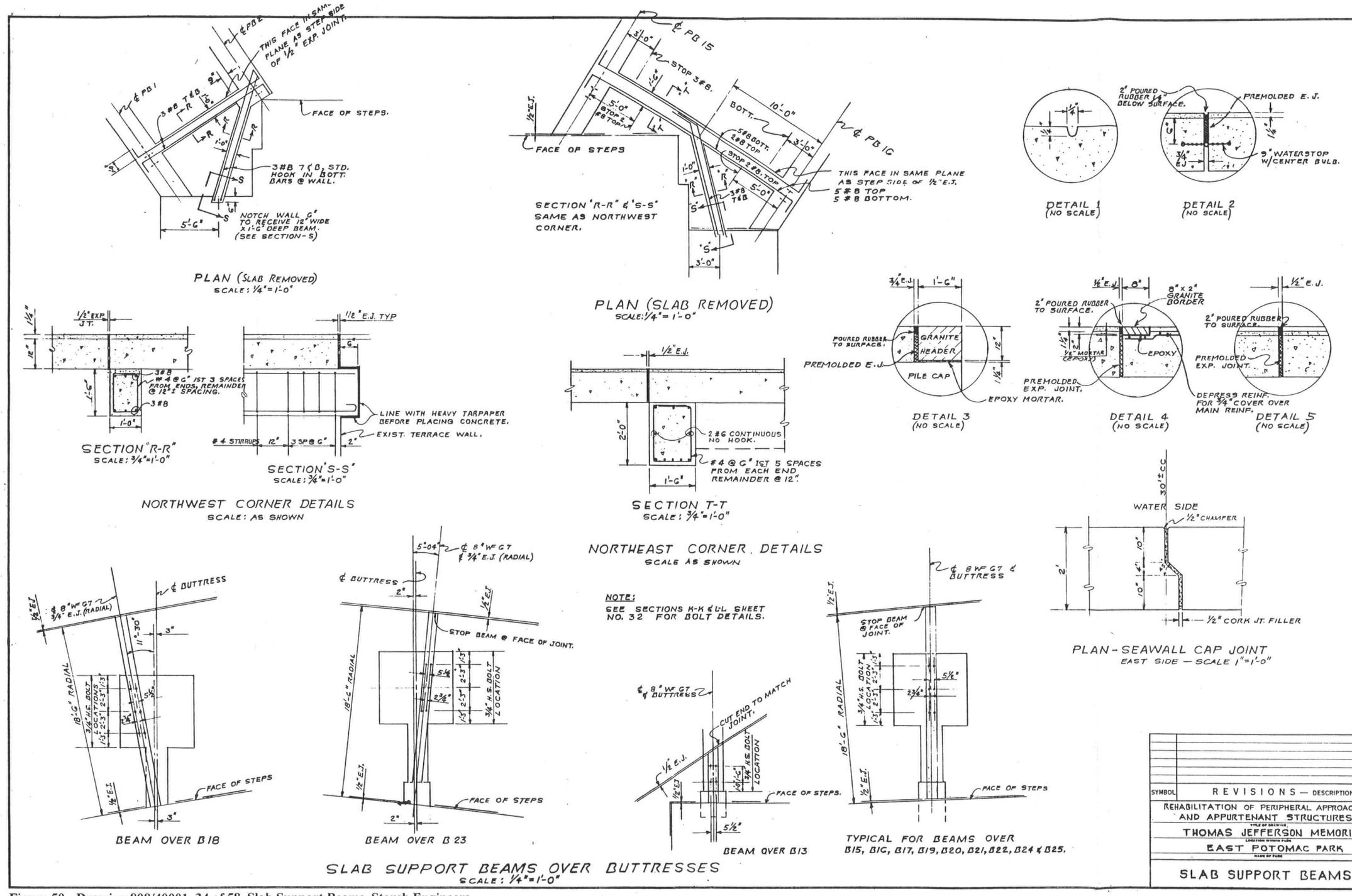


Figure 50 - Drawing 808/40001, 34 of 58, Slab Support Beams, Storch Engineers

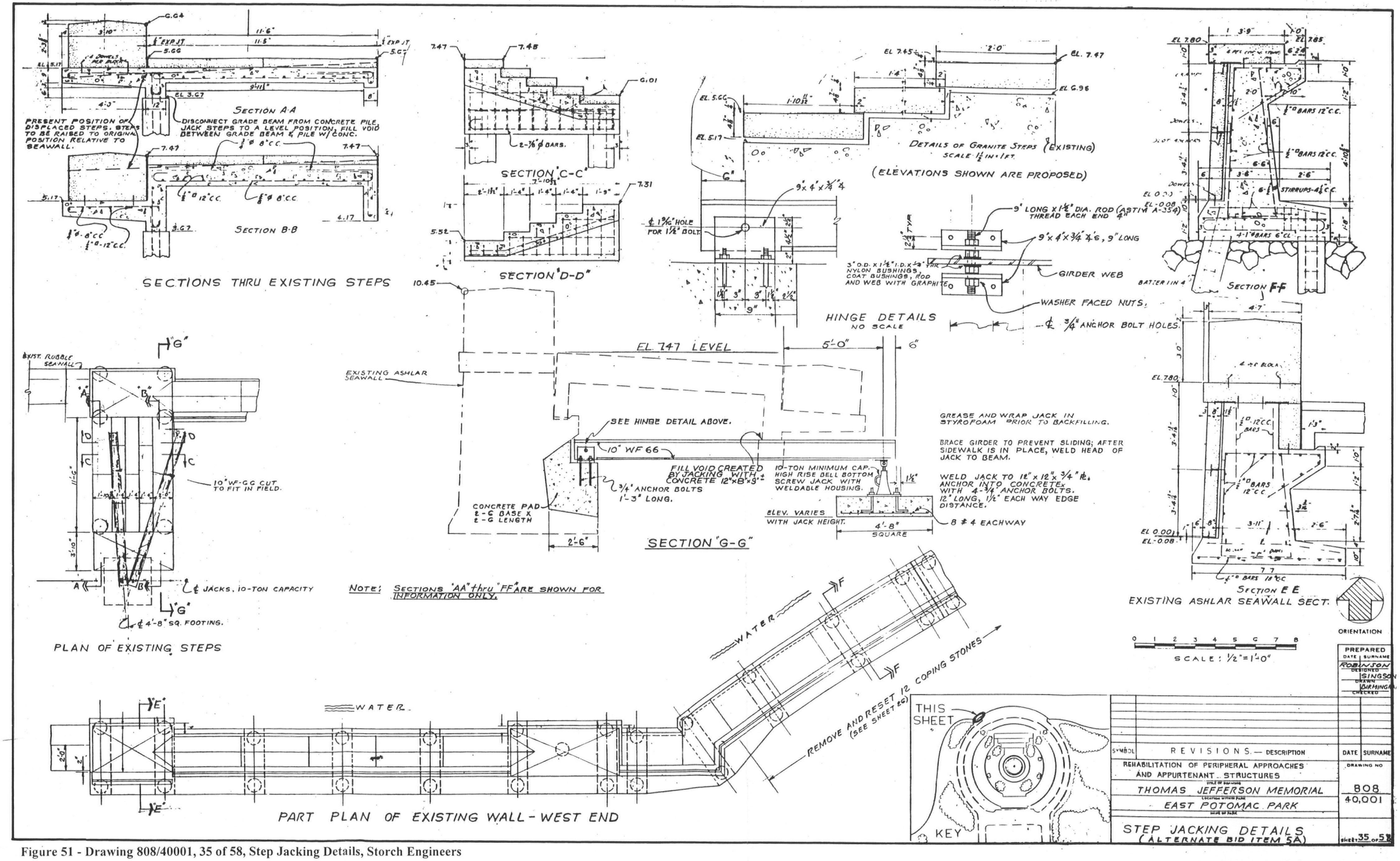


Figure 51 - Drawing 808/40001, 35 of 58, Step Jacking Details, Storch Engineers

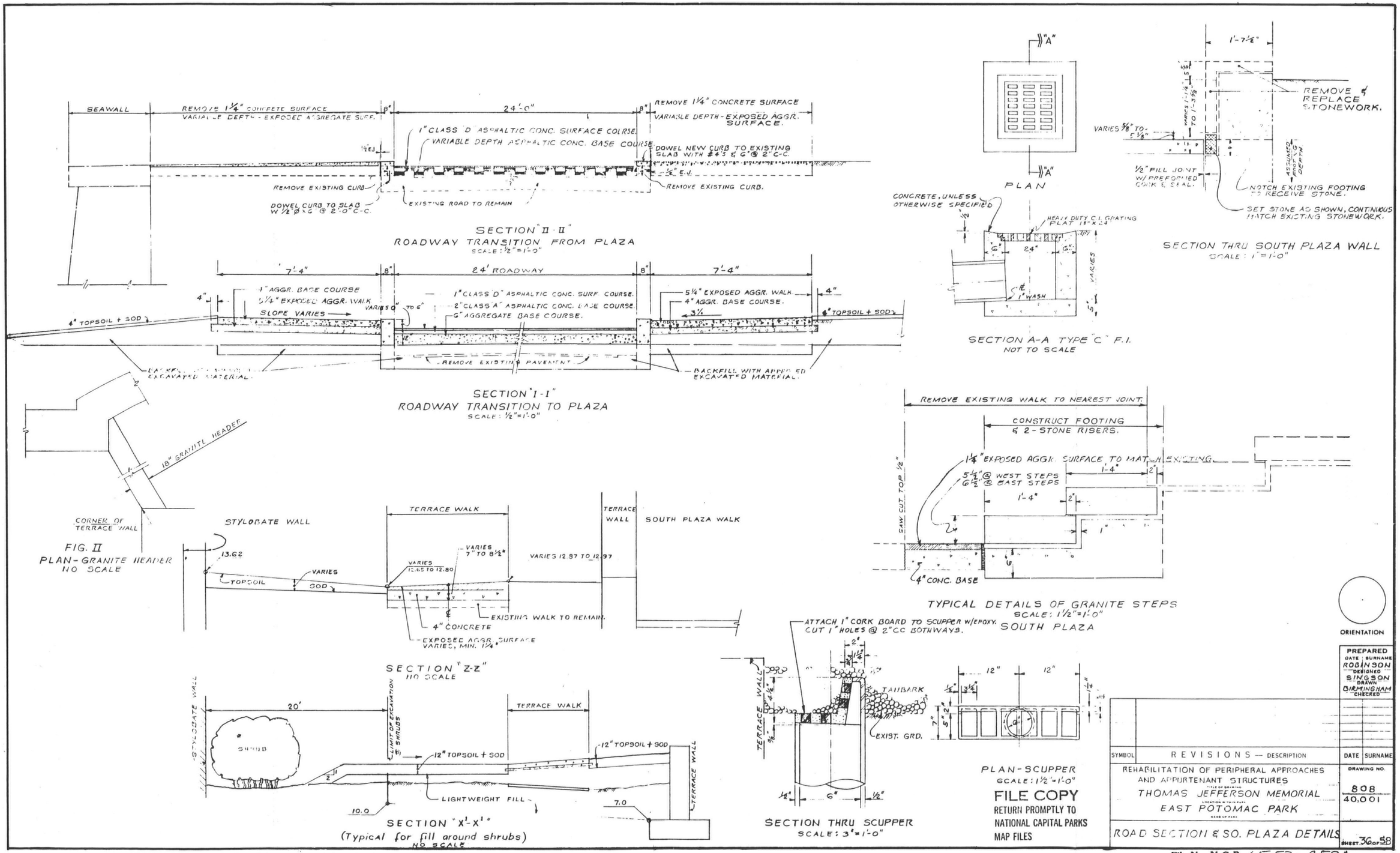


Figure 52 - Drawing 808/40001, 36 of 58, Road Section and South Plaza Details, Storch Engineers

File No. N.C.P. 65-52-253A

808/40001
6 of 9

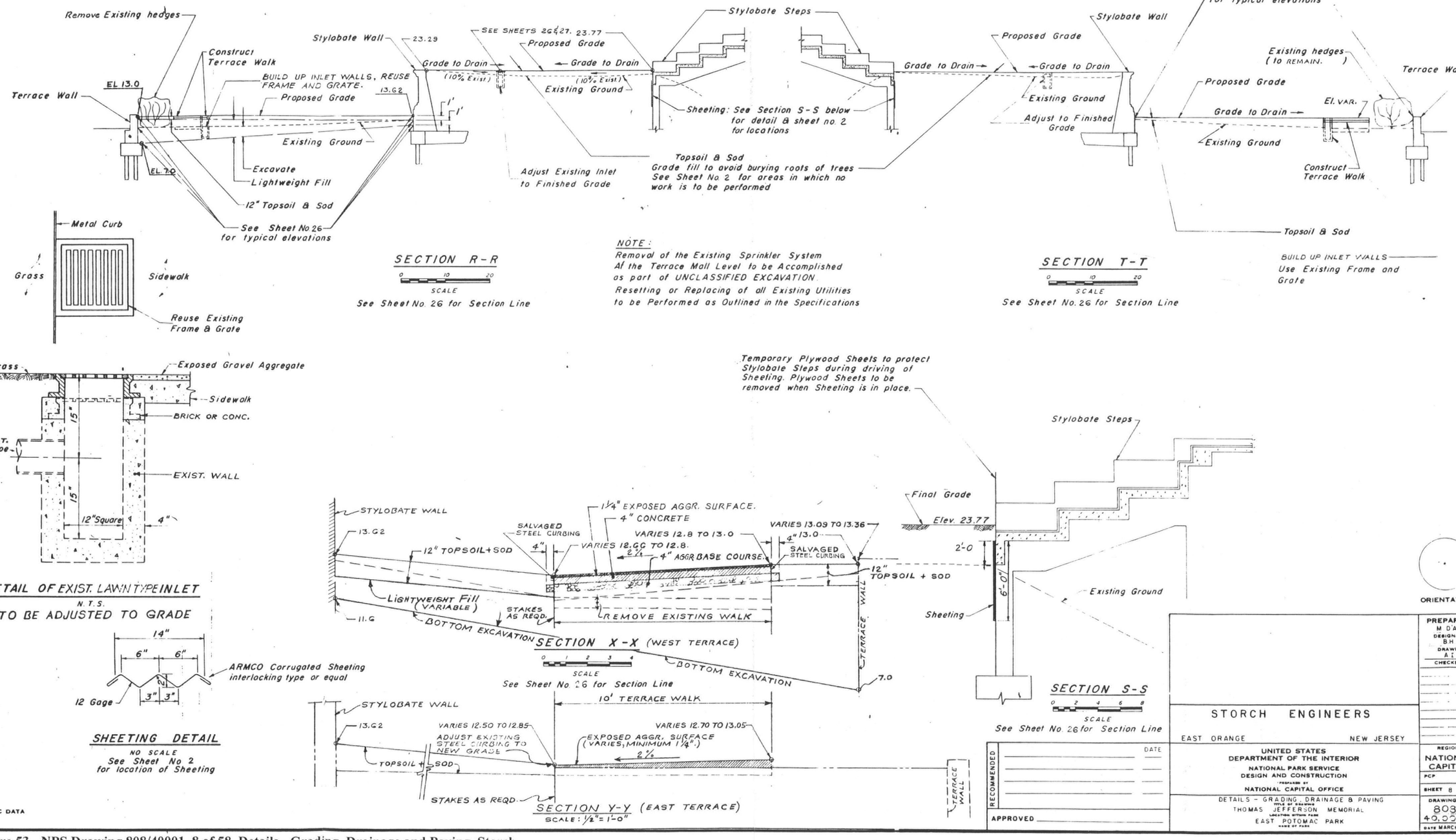


Figure 53 - NPS Drawing 808/40001, 8 of 58, Details - Grading, Drainage and Paving, Storch Engineers

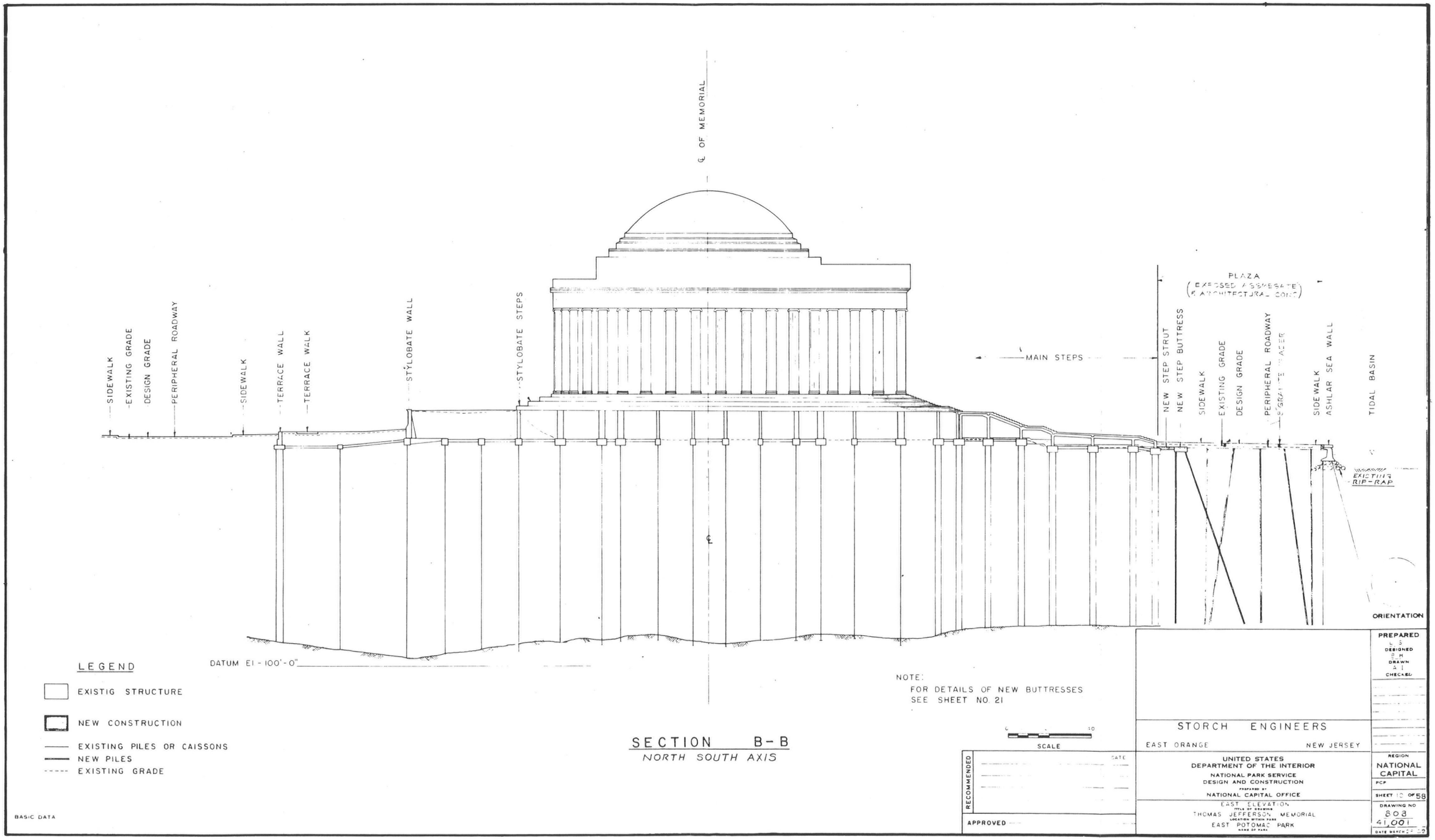
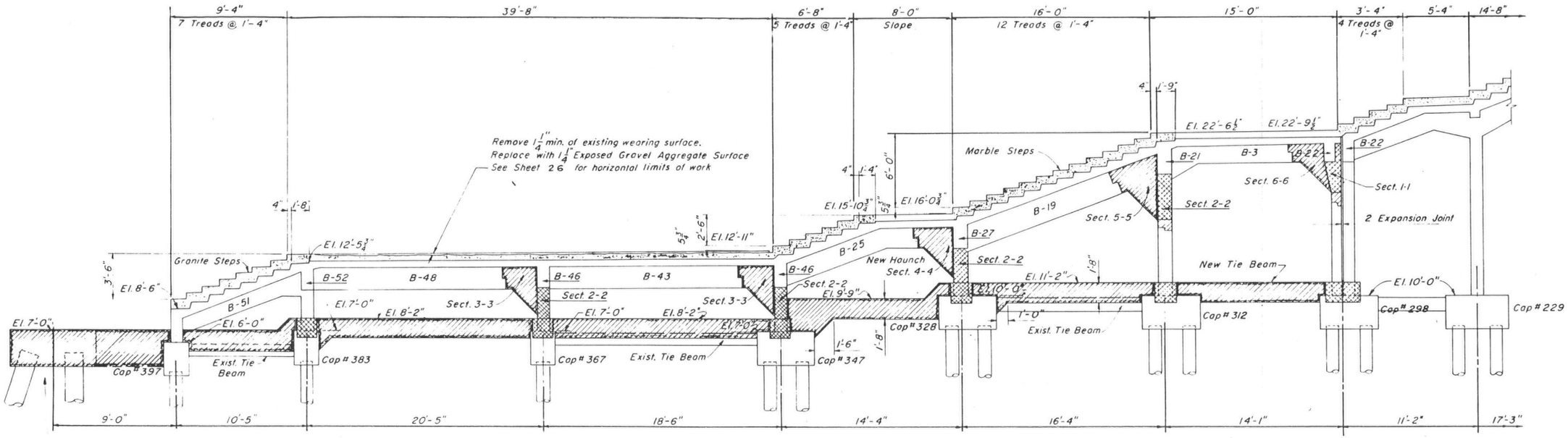
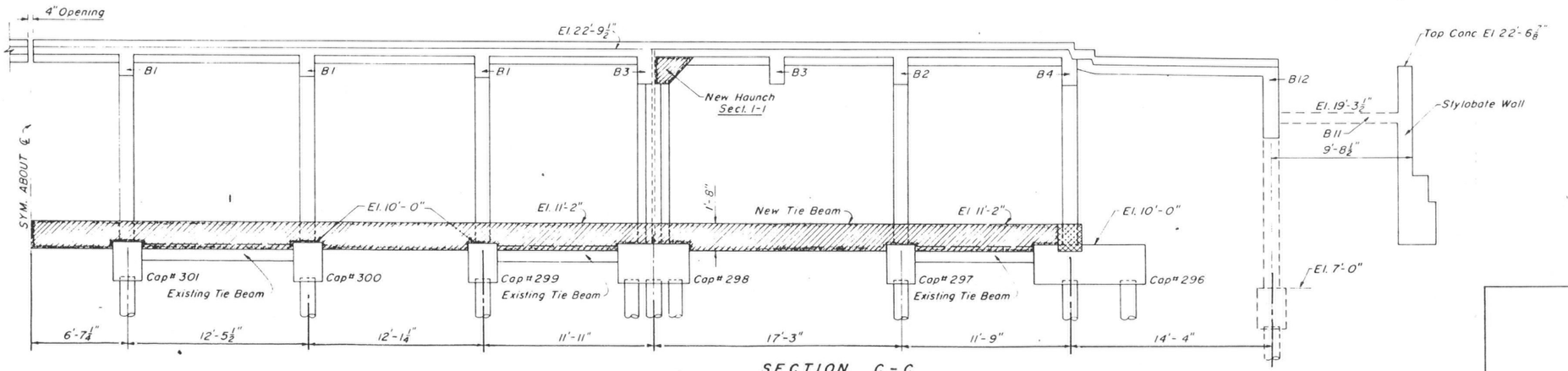


Figure 54 - Drawing 808/40001, 10 of 58, East Elevation, Storch Engineers



SECTION D-D



SECTION C-C

NOTES

For plan see Sheet No 16
For Haunch details see Sheet No 24
For new Tie Beams see Sheet Nos. 14 & 15

LEGEND

- EXISTING STRUCTURE
- NEW CONSTRUCTION
- EXISTING STEPS
- B-43 EXISTING BEAMS - STRUCTURAL SLAB

BASIC DATA

ORIENTATION

SCALE 0 2 4 6 8

RECOMMENDED — DATE

APPROVED

PREPARED L. S.
DESIGNED B. H.
DRAWN A. I.
CHECKED

STORCH ENGINEERS
EAST ORANGE NEW JERSEY

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DESIGN AND CONSTRUCTION
PREPARED BY
NATIONAL CAPITAL OFFICE

MAIN STEPS - SECTIONS
TITLE OF DRAWING
THOMAS JEFFERSON MEMORIAL
LOCATION WITHIN PARK
EAST POTOMAC PARK
NAME OF PARK

REGION NATIONAL CAPITAL
PCP
SHEET 17 OF 58
DRAWING NO. 808 / 40,001
DATE MARCH 28-59

Figure 55 - Drawing 808/40001, 17 of 58, Main Steps - Sections, Storch Engineers

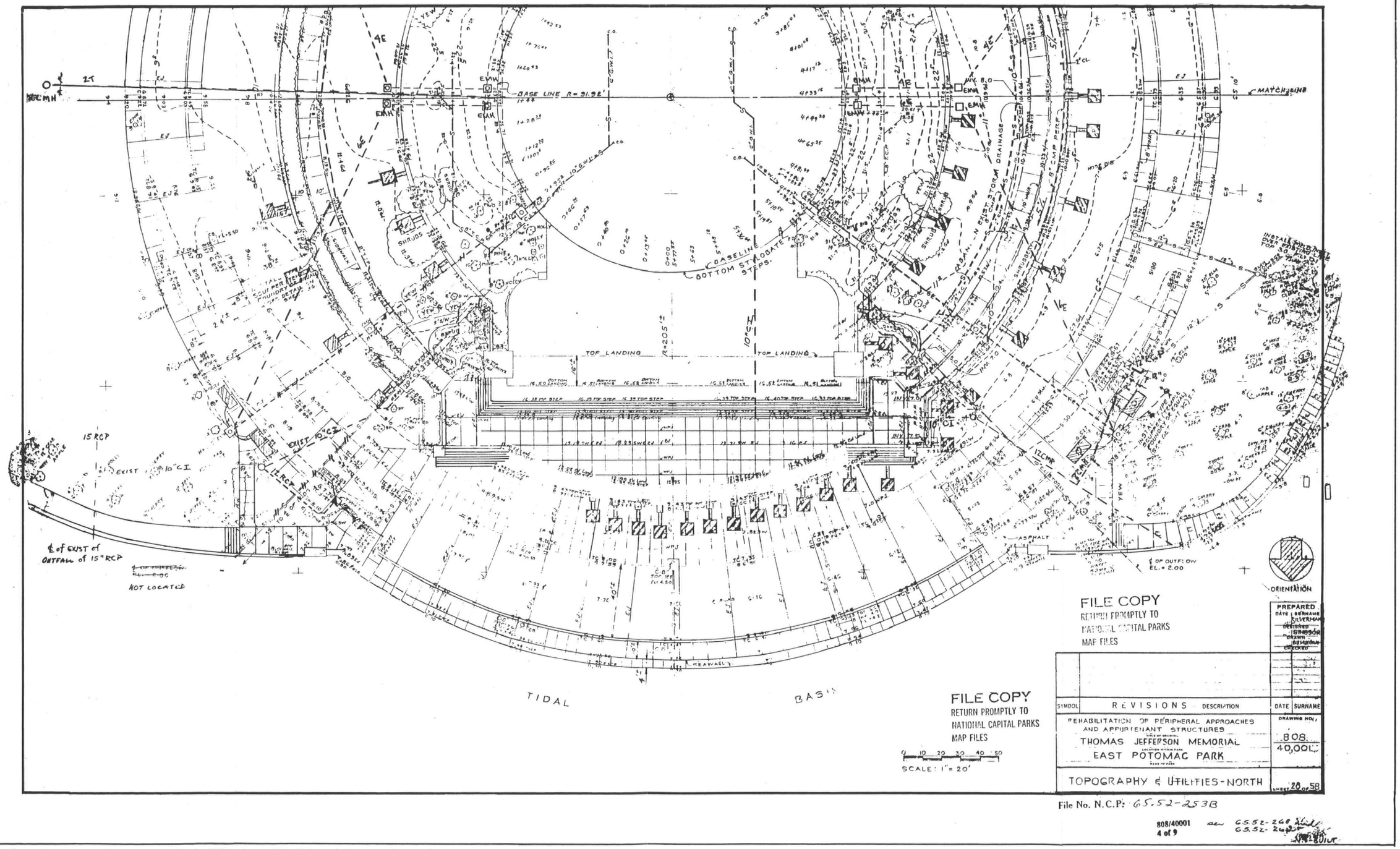


Figure 56 - Drawing 808/40001, 28 of 58, Rehabilitation of Peripheral Approaches and Appurtenant Structures

2.3.3.2. Landscaping Planting

Figure 57 (NPS plan 65-52-243) shows the location of the trees and shrubs as existing in November 1964. The *Taxus baccata repandens* (spreading yew) located in the north-east quadrant of the stylobate mall, present in the original plans is shown to be missing in 1964. Also no longer present by 1964 appear to be *Abelia grandiflora* (glossy Abelia), previously existing at the north of the terrace walk. To the south of the memorial the cotoneasters have gone, as have some of the *Jasminium nudiflorens* (winter flowering Jasmines).

Grassed areas around the memorial, (see figure 49, Grading plan, North plaza, N.P.S dwg No. 808/40001, 26/58), which had undergone settlement, were filled to meet the level of the peripheral roadway bringing them back to their original design grade. Some of the Japanese Hollies *(Ilex crenata microphylla)* on the terraced walk were replaced in kind after the beds were filled with a lightweight fill. Levels on the stylobate mall were also brought to grade with supplementary fill. Topsoil was distributed in the grassed areas and limited amounts of cambark were placed in the shrub beds.

After completion of the majority of the work in September 1970, the memorial was re-opened to the public.

2.3.3.3. 1970-1990

The seventies saw two major landscape projects carried out at the Jefferson Memorial - additional planting and the installation of an automatic irrigation system. The addition of several *Taxus cuspidata 'Nana'* on the stylobate mall and the planting of fourteen *Zelkova* in 1972 by the National Park Service, added weight to the existing plantings. (See figure 58.) The planting design, although a departure from Olmsted's original scheme, still respected the original narrow vistas to the east and west. Over time the yews had eventually grown to such an extent that they interfered with the openness of the original planting. The yews also hung over the edge of the stylobate wall which caused potential staining and deterioration of the marble.

2.3.3.4. Irrigation

An automatic irrigation system was installed in 1972 to the stylobate mall, in addition to the original "street washer" system which had been installed in 1941. The street washer system is described in the Einhorn Yaffee Prescott report *'Jefferson Memorial - Specific Tests and Evaluations of Stylobate Mall.'* It consists of quick coupler valves for hose bib connections installed at grade in the stylobate and terrace mall area. Its purpose was to provide a source of water for hand irrigation by hose. The 1972 system was replaced in 1993. (See plan # 808/40002-A, 1/71, in the Einhorn Yaffee Prescott report, 'Jefferson Memorial Specific Tests and Evaluations of Stylobate Mall,1992.') An irrigation system was installed in the grass rectangle to the south of the memorial in 1985. It apparently does not function effectively.

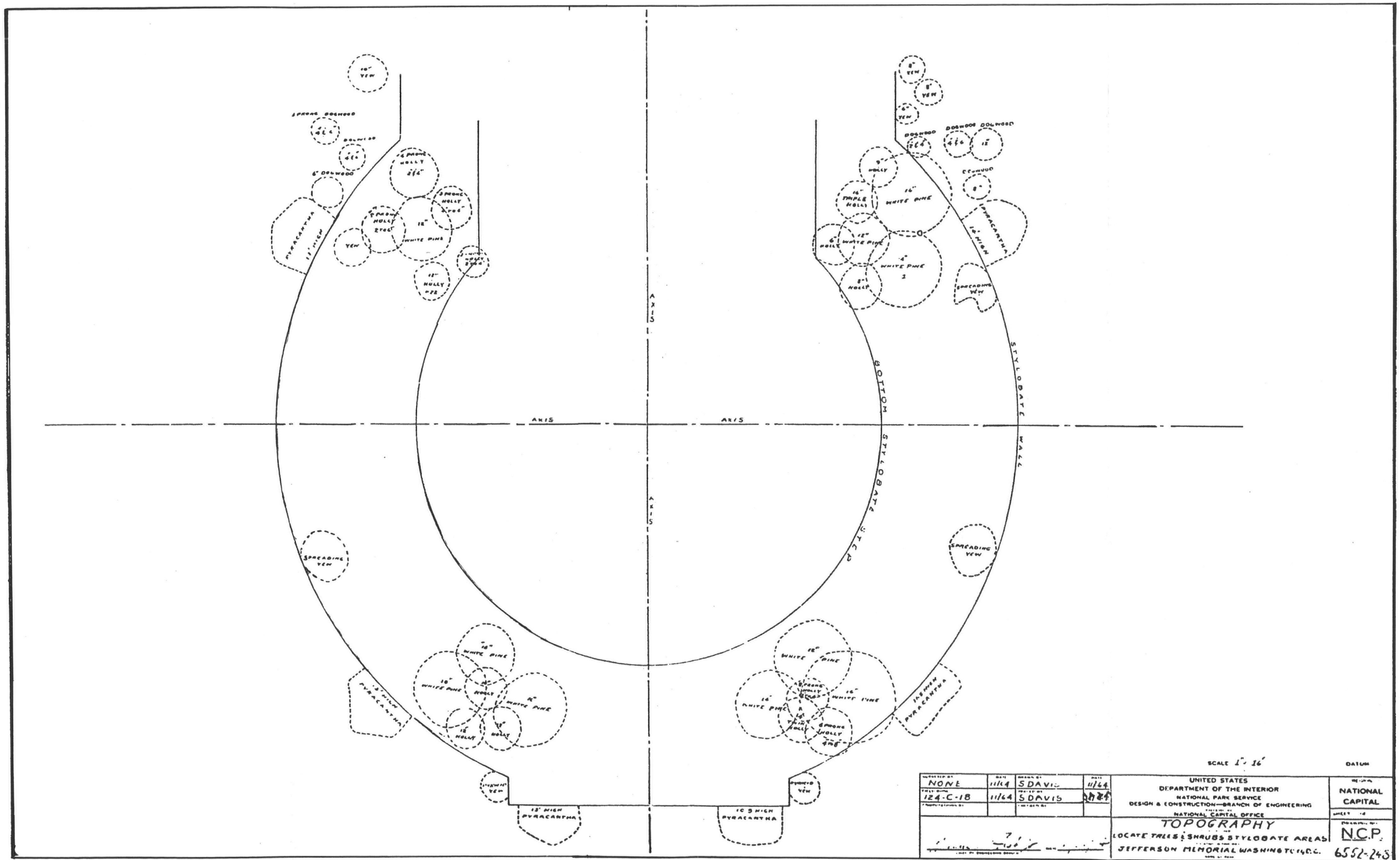


Figure 57 - Drawing 65-52-243, Location of Trees and Shrubs, Stylobate Areas, National Park Service, November 1964

2.3.3.5. 1986 Planting

In 1986, three thousand eight hundred and six *Ilex glabra compacta* plants which made up the hedge on the terrace mall were replaced with an equal number of *Ilex glabra 'Shamrock.'* See figure No.90 in the Vegetation section of the *Analysis and Evaluation.*

Three original white pines were removed around this time, and replaced with six foot high specimens.

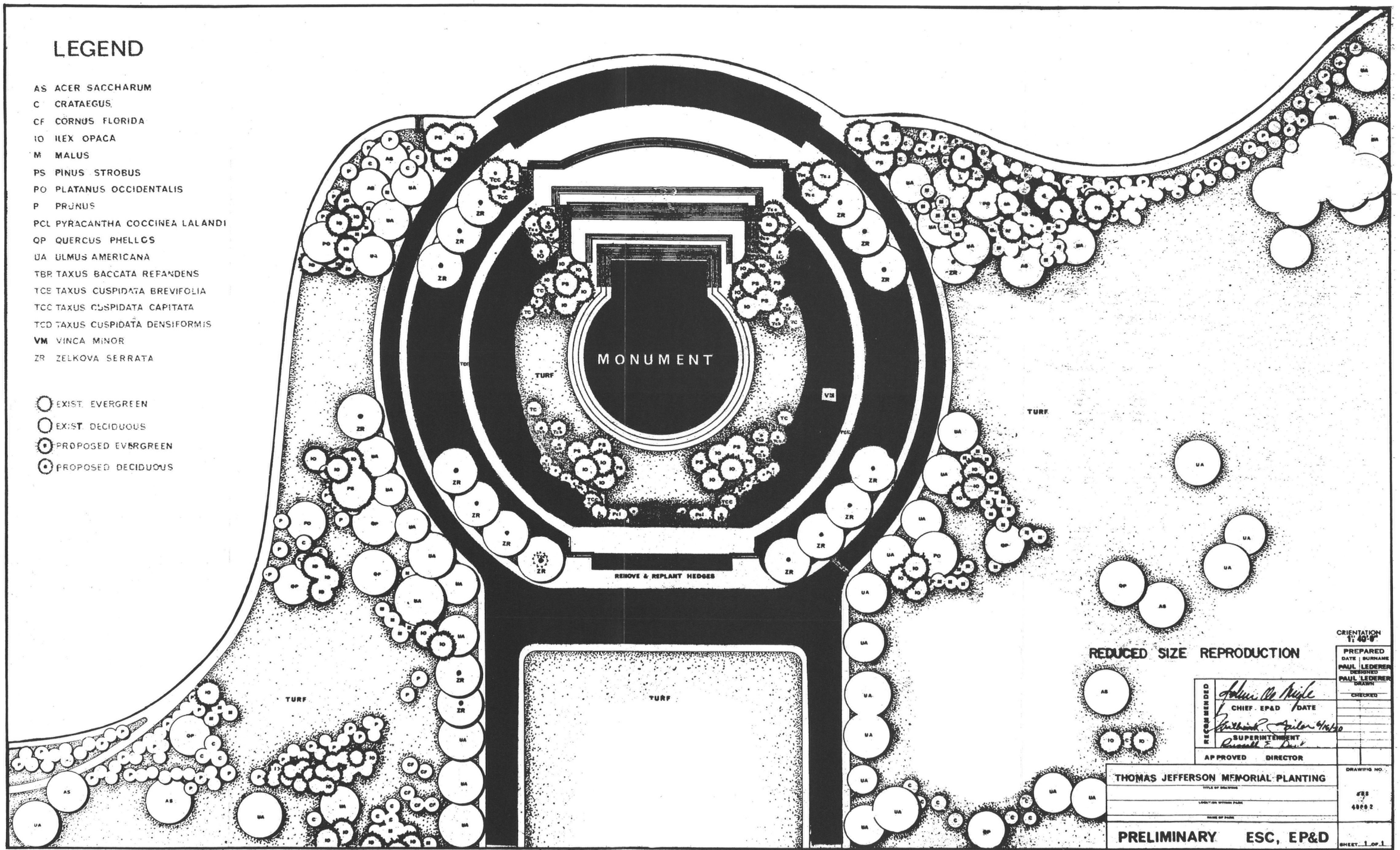


Figure 58 - Thomas Jefferson Memorial, Planting, National Park Service, June 16, 1970

2.3.3.6. Stylobate Mall Restoration-1993

The stylobate mall consists of the grassed elevated terrace that rings the base of the memorial. In 1993, the stylobate mall restoration returned the planting in this area back to the original "as-built" design, as the first stage of landscape restoration. Einhorn Yaffee Prescott (Architecture and Engineering) worked with thier consultants, Stephenson and Good (Washington, D.C.), on a study of the stylobate mall planting. Their survey and proposals are shown. The work was executed in 1993, and included the addition of a replacement irrigation system, documented in the Einhorn Yaffee Prescott report of 1992.

Unbuilt Proposals

There was a proposal to build a pool on the south side of Thomas Jefferson Memorial in 1968 as part of the White House 'Beatification' efforts (see attached minutes). The Commission of Fine Arts had no objections to the proposal in concept.

07/31/95 14:41 ☎202 504 2195 COMM FINE ARTS

MINUTES OF THE MEETING OF THE COMMISSION OF FINE ARTS
HELD IN WASHINGTON, D.C.

I. CONVENE, ROOM 7000, INTERIOR DEPARTMENT BUILDING

A regular monthly meeting of the Commission of Fine Arts was held in its office in the Interior Department Building on February 20, 1968. The members met, pursuant to notice, in executive session at 10:15 a.m. with William Walton, Chairman, presiding.

Present were: William Walton
Gordon Bunshaft
Theodore Roszak
Aline Saarinen
Chloethiel Woodard Smith
John Walker

Staff: Charles H. Atherton, Secretary
Donald B. Myer, Asst. Secy
Nancea Black, Research Analyst
Myra Younker, Editor

NCPC: Donald Jackson

Recorder: Arnold Cohn

II. ADMINISTRATION

1. Dates of Next Meeting

Tuesday - Wednesday, 19-20 March 1968 were approved. Tuesday-Wednesday, 16-17 April were tentatively selected for the following month.

2. Approval of Minutes of January 1968 Meeting

Approved unanimously.

3. Budget Hearings Fiscal 1969

The Secretary reported that Budget Hearings were scheduled for March 8th and 11th before the Senate and House Appropriation Sub-Committees.

4. Design of Medals (Added)

Mr. Walker reported on a discussion of designs of medals with the Secretary of the Treasury who favors the Commission's idea of establishing a design procedure similar to that used by the Post Office Dept. for designing stamps. Based on that method, a Citizens Committee on Medals, appointed by the Secretary, could suggest both subject and artist for the medal and then review the design. The Secretary would have the final decision. Mr. Walker suggested that the design of all currency also be considered.

The members agreed to draft procedures for the design of medals and currency, subject to the approval of the Secretary of the Treasury.

5. Jefferson Memorial, Pool and Fountain (Added)

The Chairman explained that a pool with jets was proposed for the south side of the Jefferson Memorial. Funds had been donated for the project through White House "Beautification" efforts. The Commission's advice was requested.

The members had no objection to the concept, but suggested Farragut Square or Judiciary Square be considered as alternate and more appropriate sites.

The project was submitted informally.

III. LEGISLATION

H.R. 15083-2/5/68-Mr.McMillan-90thC

To encourage and assist private industry to provide needed new parking facilities, employment opportunities, and housing units, and a strengthened and expanded tax base in the District of Columbia, and for other purposes, pursuant to skyline studies for the National Capital Planning Commission in 1964, and parking studies for the Bureau of the Budget to provide needed parking facilities in the District of Columbia.
EXHIBIT A

The Secretary stated that the proposed legislation included raising the possible height of buildings to 230 feet and the FAR ratio to 20. Private enterprise would be permitted to build parking facilities on Federal property under the direction of the Redevelopment Land Agency.

The members opposed the bill which they considered poorly conceived, overly inclusive and sadly negligent of the values of Washington's skyline traditions.

IV. SUBMISSIONS-REVIEWS

The Secretary presented and reviewed the following projects.

1. D.C. Government, Department of Licenses and Inspections

a. American Institute of Architects Headquarters Building - Revised Design by Mitchell and Giurgola, architects.

Sketches submitted indicated a lowering of height to 70 feet. The facade had horizontal window bands on the upper floors and solid

2

3. ANALYSIS & EVALUATION

3.1. SPATIAL ORGANIZATION

3.1.1. SPATIAL ARRANGEMENT WITHIN NATIONAL MALL

As mentioned in the *Site History* section of this report, the Jefferson Memorial occupies the fifth and last of the cardinal sites as detailed in the McMillan Plan of 1901. Two great axes were laid down in the L'Enfant plan of 1791 which ran southward from the White House and east from the Capitol culminating at the Potomac River. These axes became the focus for the McMillan Commission's plan as it pinpointed the last of the cardinal points, on the north-south axis, as being the site for a future memorial, thus completing the five point composition for the city center. (See figure 11, McMillan plan for the Capital City.)

On a more local scale, the memorial is situated on the south bank of the Tidal Basin at the north-west corner of East Potomac Park. The expanse of the open water the memorial overlooks emphasizes the distance between it and the other elements of the city, giving the memorial a feeling of openness and informality, far removed from the rigidity of the axial location in which it is actually sited. Unfortunately, despite its close proximity to the river, the same park-like setting is not experienced on the south side of the memorial due to the proximity of Route 395, a multi-lane highway. This not only blocks the visual link with the river but creates a physical barrier to the open access of East Potomac Park.

3.1.2. SPATIAL ARRANGMENT WITHIN MEMORIAL GROUNDS

Within the memorial grounds themselves, the composition of the immediate ground plan becomes less rigid the further the distance from the memorial. The surrounding architectural plantings of shrubs and trees within the circular roadway (terrace mall hedge and the encircling colonnade of Zelkova trees), together with the rectangle of grass, give way to the informal parkland composition of trees set in grass.

The original circular composition of the memorial's immediate landscape with regard to the surrounding road, was changed with the addition of the 1970s plaza, with its patterning and color unharmonious with the building and the rest of the layout. Its addition does not appear to be linked with the existing, historic fabric of the landscape, neither delineating the edge of the Tidal Basin, as the old sidewalk did, nor respecting the shape or form of the memorial. The detailing of the junction between the roadway and sidewalk, and the plaza makes for an abrupt and therefore unsympathetic detail, emphasizing the different materials being used. The plaza was however approved by both the Commission of Fine Arts and National Capital Planning Commission

The transition of levels between the plaza and the old encircling asphalt road further detract from the smooth curve around the memorial that had previously existed.

In terms of how people use this space, the 70s plaza makes for an improvement over the original roadway. It became entirely available for pedestrians as vehicular use was prohibited.

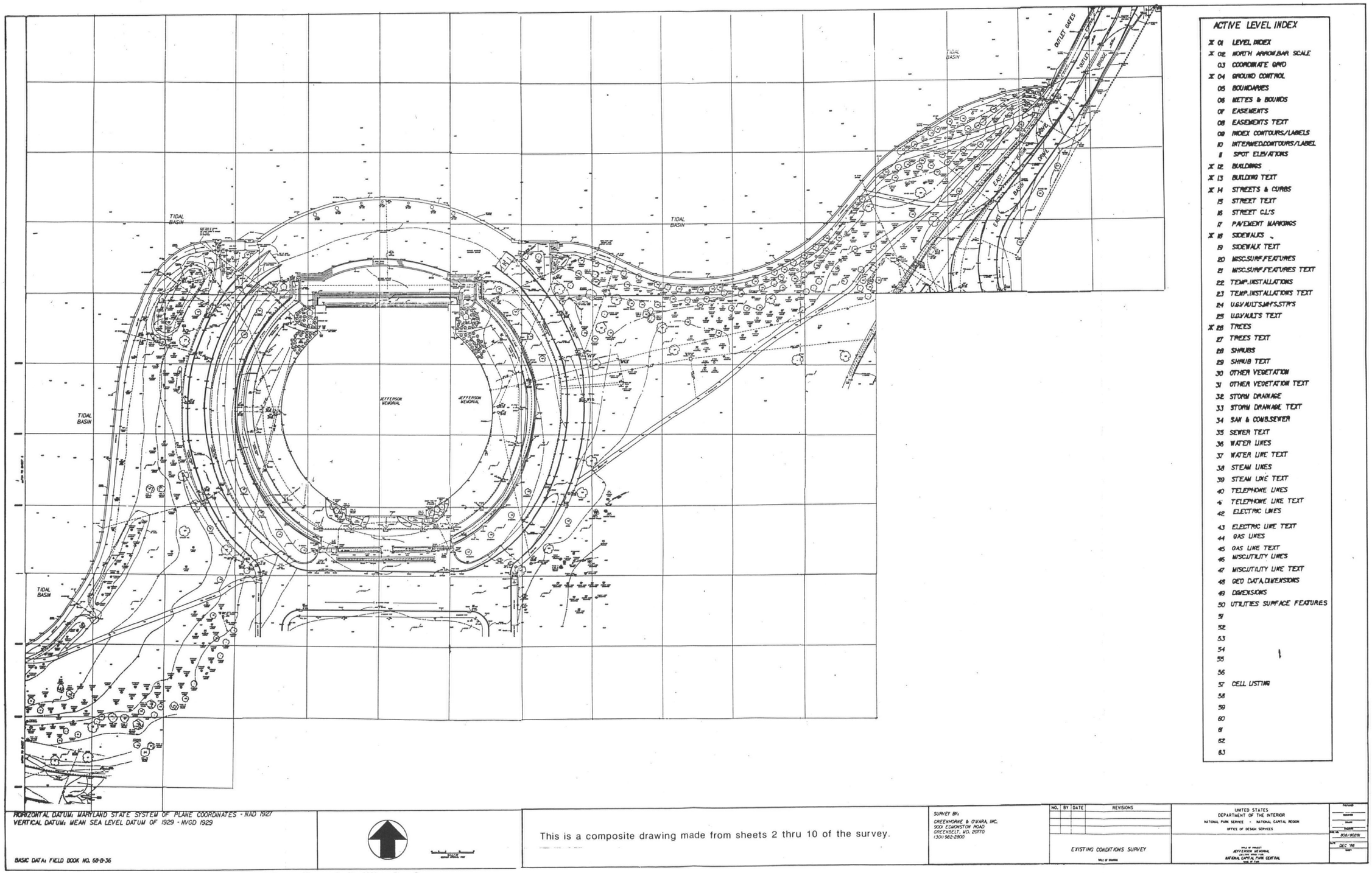


Figure 59 - 1988 Survey - Greenhorne and O Mara, Greenbelt, Maryland

3.2. RESPONSE TO NATURAL ENVIRONMENT

The Jefferson Memorial is situated within a completely engineered landscape, as a result of manipulation of the natural environment. The artful restructuring was originally carried out for purely practical reasons, namely the control of silt to enable the passage of river transport. Later this was modified to satisfy aesthetic considerations in the formation of the memorial site. The silt that was dredged created the new river's edge and what was ultimately to become East and West Potomac Parks and the setting for the Thomas Jefferson Memorial.

The sort of species which would have grown on the banks and the flood plain of the Potomac before reclamation would have included, Salix, bull rush, Scirpus, cats tail, lizard's tail, wild rice and other aquatic and bog plants. None of these plants exist in the vicintiy today, due to the hard edge of the Tidal Basin wall and depth of water. Many of these species do exist, however, on the banks of the Anacostia River at the Kenilworth Aquatic gardens.

3.3. TOPOGRAPHY

East Potomac Park is primarily flat, with the exception of minor grading around roads and to facilitate draining of the memorial site.

The illustrations in Figure 23 show the changes in topography, before and after the memorial was built.

The difference in the ground levels from the time when the memorial was constructed to the present day, due to the settlement problems, can be observed in the changes in contours from the Olmsted plans, the Storch Engineers report (see topography plan 28 of 58 - figure 56) and subsequent grading plan, and the 1988 Survey by Greenhorne & O Mara, Greenbelt, Maryland (see figure 59).

3.4. LAND USE

The Native Americans of the lower Potomac Valley who would have inhabited this area are described by Dr. Stephen R. Potter in his book *Commoners, Tribute and Chiefs, the Development of the Algonquian Culture in the Potomac Valley.* He explains that the term Algonquian culture is a:

> *...form of shorthand to denote the native groups of the lower Potomac Valley who probably spoke mutually understandable variants of Eastern Algonquian and shared similar cultural patterns.*[26]

The Native Americans utilized the area, then part of "Tuber Creek" as shown in the 1792 map (figure 3, 1792 plan), in a number of ways. Due to its marshy topography, occupation would have been restricted to the higher ground, such as that later chosen for the site of the Washington Monument. Their use of the marshy land depended very much on the season. Tiber Creek, originally named Goose or Tuber Creek was appropriately named, since the estuary served as a stopping point for migratory waterfowl and the marshes supported many plant tubers.

> *Edible wild roots called tuckahoe, were gathered in the marshlands from June through August....By late October and November, waterfowl, once again were taken in greater numbers. (Smith 1986a:41-43, 1986b:152; Turner 1972:71)*[26]

> *Waterfowl are said to have included 'swans, cranes, geese, ducks, and mallards.'* [27]

Use of the higher ground by:

> *...semisedentary agriculturalists is unlikely since the soils in the area are hard silty clays lensed with silty sand. These soils are not conducive to slash and burn subsistence cultivation. Prehistoric use of the area would most likely have focused on exploitation of waterfowl and marsh plants; activities that would have resulted in short term hunting/gathering sites.*[28]

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[1]Commoners, Tribute and Chiefs. The Development of Algonquian Culture in the Potomac Valley; Stephen R. Potter (University Press of Virginia,1993) p 3

[2]Ibid. p 42.

[3]Ibid. p 41

[4]Memorandum to Chief Historic Services, National Capital Region from Stephen Potter, Regional Archeologist, National Capital Region; Feb. 8, 1983

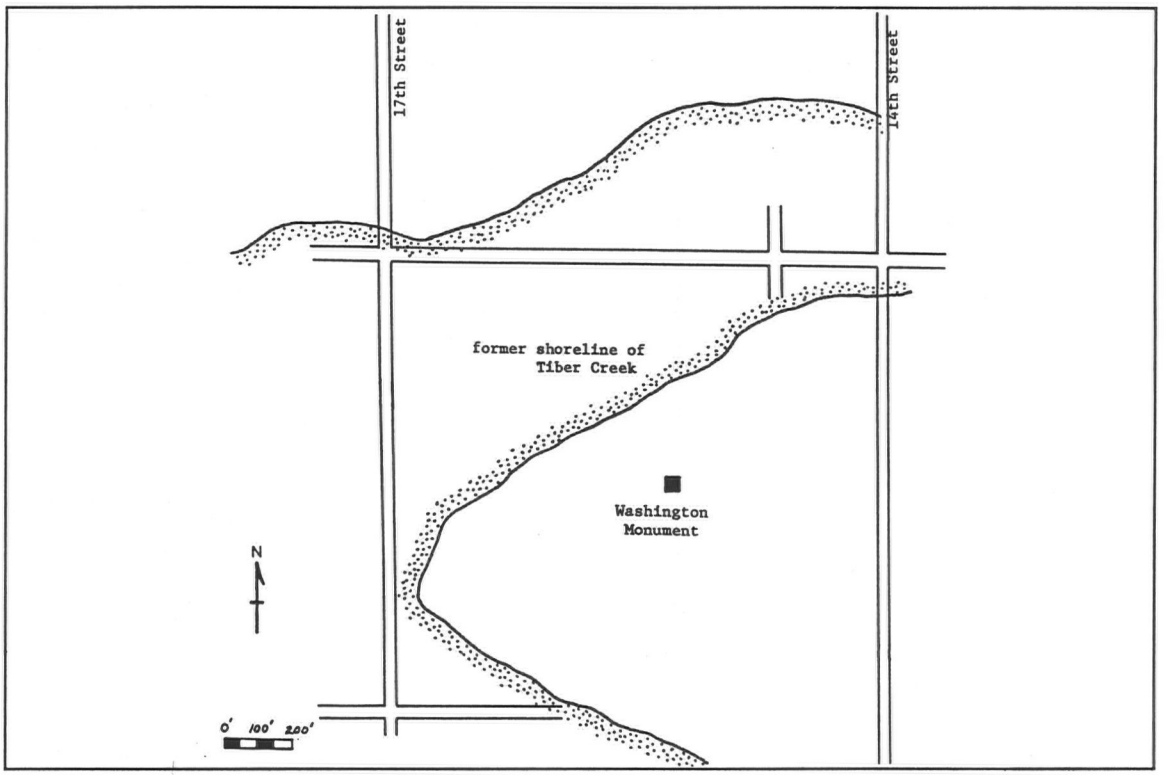


Figure 60 - Shoreline of Tiber Creek, ***The Effect of the Proposed Development Concept Plan for the Washington Monument on Potential Archeological Resources, S. Potter, 1983.***

With the growth of Washington and removal of forest from the surrounding area, the Potomac became silted to such an extent that dredging became necessary. River transport became channelled as the land increased when the silt was removed from the river bed and dumped at the edge. After dredging was completed sufficiently to enable river activities to continue, the newly created land was left to become overgrown with native vegetation. In total, 739 acres of land was reclaimed from the river to the south of the Washington Monument grounds. Despite claims from private business that it should be sold off for development, the United States Congress passed Senate Bill 3,037 on March 3, 1897 which established that the entire area, including the Tidal Basin, formerly known as Potomac Flats, should become a public park. With increased access around the newly reclaimed land, the public started to use the area for recreation, especially in the form of riding, driving and parading around the newly created Tidal Basin. A boating hut provided additional recreational opportunities, and areas for swimming, such as the bathing beach adjacent to the future memorial site, became popular, as did fishing.

Swimming in the Tidal Basin continued until about 1925 when it was stopped by the newly merged Office of Public Buildings and Grounds and Office of Public Parks of the National Capital. The reason for this was twofold. Firstly, because of the health risks caused by the debris which floated in the Tidal Basin through the Inlet Bridge and secondly, due to the racist policies which limited the use of the beach to whites only. Rather than allow access



Figure 61 - Swimming 'Beach' on the site of the Jefferson Memorial

to the beach for everyone, it was closed and returned to its former condition, a natural waters edge without sand. The liquid chlorine plant which was situated under the Inlet Bridge, supposedly to make the water safe, was now not necessary.

In 1928, after the swimming was gone, a new boathouse with public rest rooms was built at the end of 17th Street. Immediately before construction of the memorial, the site was occupied by baseball fields and tennis courts, see figure17 - 1938 survey and figure 8 - aerial circa 1930.

3.4.1. POST MEMORIAL LAND USE - CULTURAL ACTIVITIES - FESTIVALS, ETC, - TOURISM

Since construction, the memorial and its surroundings are regularly used for festivals, public events, ceremonies, and, it is, of course, the destination for thousands of tourists visiting the Capital City. It ranks third among the monuments in terms of popularity; as many as two million visitors pass through the structure each year. During the summer months U.S. Military bands used to give free concerts at the Memorial, using the plaza as a stage and the steps for seating. This no longer occurs but small groups still play there on occasion. Wreath laying ceremonies are held annually on April 13th, the anniversary of Jefferson's birth.

The Annual Cherry Blossom Festival and Japanese Lantern lighting have been held at the site since long before the memorial was erected and continue to prove a highlight in the calendar of events. The lantern is located just off Independence Avenue.

Fish Day, another popular event, now organized by the National Park Service, attracts several hundred children who spend a day in mid-June on the banks of the Tidal Basin learning how to fish.



Figure 62 - Fish Day, 1951

The memorial grounds host many other less widely advertised events. Informal running races are regularly held on Wednesdays, organized by various groups of workers in the city.



Figure 63 - A Regular Wednesday Midday Running Race

3.5. VIEWS AND VISTAS

Vistas and views are described separately in this section. Views are classified as being whatever can be seen from a certain place. Vistas are more specifically defined, being consciously designed channelled views culminating in a specific point or building.

3.5.1. VISTAS - TO AND FROM THE MEMORIAL

The initial inspiration for the dominant axial arrangement of the buildings of primary importance around the Mall (and therefore the formal vistas between them) was first conceived by L'Enfant in his 1791 plan of the Capital City. The Renaissance and Baroque style of European cities inspired his design, as the two great central axes were formed to look south and west across the Potomac.

The gradual departure from his plan in the following years brought about the necessity to employ a refreshed look at the city center, in order that it may regain some cohesive structure.

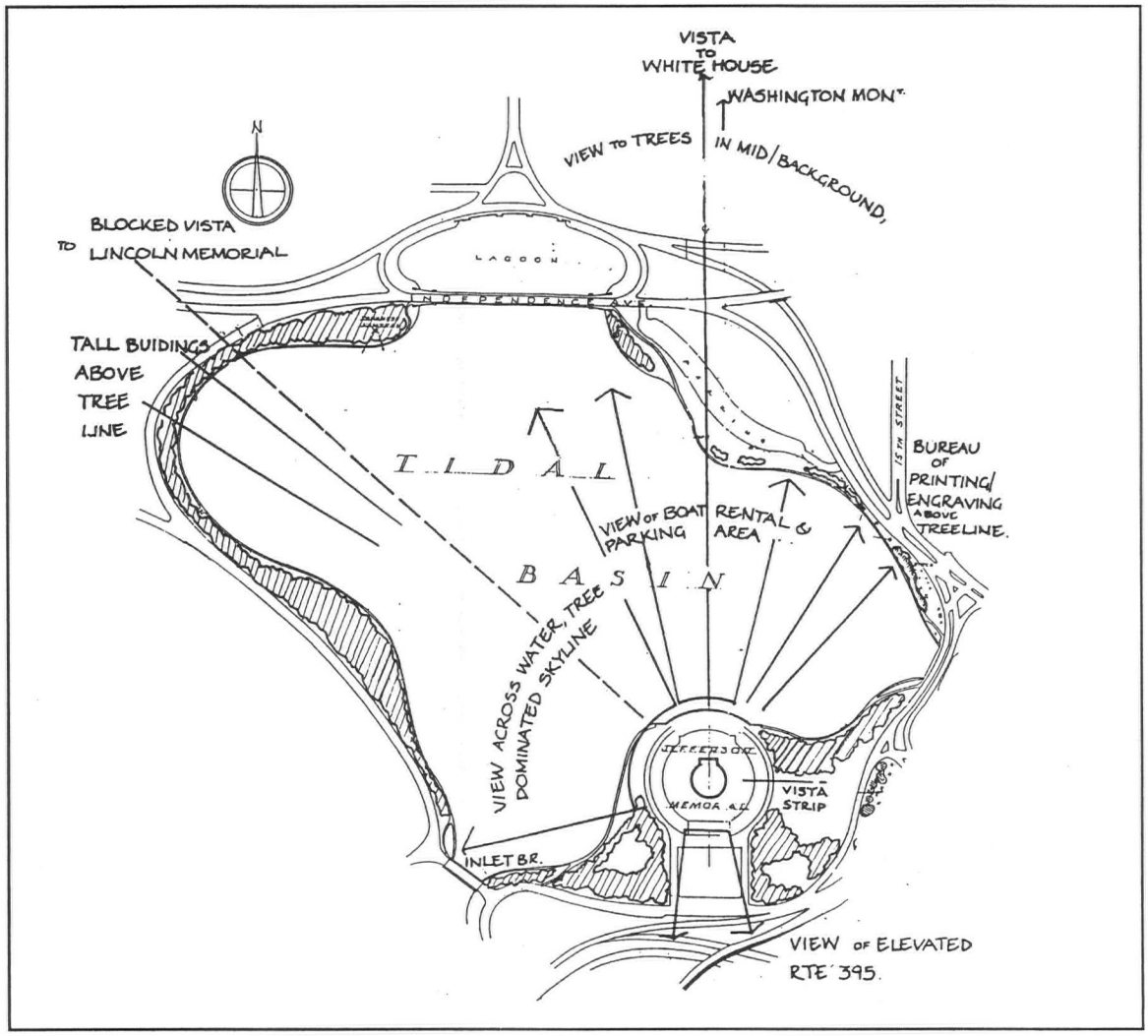


Figure 64 - Vistas and Views, 1995

The departure from the L'Enfant plan, together with the newly created lands reclaimed from the dredging of the river, gave the McMillan Commission of 1901 the scope to redesign the central area, reinforcing the axes and the vistas. Its plan displayed a confident architectural approach with the familiar five point composition regulating the formal linkage and views of these cardinal points. The perspective view shows the intended views between them, despite the southernmost still being a vacant plot of land.

Once the site for the Jefferson Memorial was chosen, there was never any question about its visual relationship with the White House. In fact, President Roosevelt ordered trees to be cut down so his view of the memorial would be better. The visual relationship between the Lincoln and Jefferson Memorials was discussed by the Thomas Jefferson Memorial Commission and the Commission of Fine Arts in January 1943, as is briefly documented in the *Site History Narrative* section of this report. The subject of such a vista was raised long before then, as can be seen by Olmsted's observations to the National Capital Park and Planning Commission in July 1935. He writes:

> *Any monument of great national importance placed on the axis of the White House south of the Washington Monument grounds will have great aesthetic significance and impressiveness only if it is visually related, in an aesthetical satisfactory way, and very strongly and obviously, to the two great axial compositions already largely developed, (a) on the east-west axis through the Capitol, the Washington Monument and the Lincoln Memorial, and (b) on the north-south axis, from the White House to the Washington Monument grounds.*
>
> *Without such effective visual relationship directly and strongly impressive upon people moving about on the ground, the mere fact that a great monument happened to occupy a position on the mathematical projection of the White House axis would have only an abstract symbolic significance of relationship with little esthetic importance except perhaps as seen from the air or the top of the Washington Monument.*[29]

As previously mentioned in the report, the vista was opened up to the Lincoln Memorial following detailed discussion as to the line of the vista - whether it should run from portico to portico, as favored by F. F. Gillen of the National Park Service, or from the center of the mass of the two buildings as favored by Fiske Kimball of the Commission of Fine Arts. Kimball arguments were from a design purist's standpoint rather than the practicality of the visual effect as seen through the casual visitor's eye. He said:

> *I must say that I would consider the vista line should be from the center of the Jefferson Memorial to the center of the Lincoln Memorial, instead of in accordance with the alternative suggestion. The mass of each of these buildings will always be more important than any particular point on their facades. Here we have two buildings, each inscribed in a circle, and I do not well see how the vista should*

---

[5]Memorandum Report by Frederick Law Olmsted on Proposed Sites for a Memorial to Thomas Jefferson in the National Capital. July 22, 1935

> *follow any other line than a radius of that circle. Certainly this is the case with every similar formal vista abroad, and is already the case with other vistas leading to the Lincoln Memorial.*[30]

Further correspondence between the commissions, the National Park Service and Eggers and Higgins, highlights the compromise that both effects should be achieved by a gradual widening of the opening to this effect. Furthermore, it was agreed that so long as the north shore of the Tidal Basin remained informal, the borders of the vista, at least near the shore of the Tidal Basin, should be of irregular outline.

Today the Lincoln Memorial is barely visible from the Jefferson Memorial. In summer the top of the Lincoln Memorial can be seen above the trees, if you know where to look. The view is slightly more apparent in the winter but not at all obvious. (See Figure 65 Tree planting and vistas around Jefferson Memorial grounds.)

The vista to the White House is clearly visible from the steps of the Jefferson. Similarly, Jefferson's statue is clearly visible from the White House.

[30] Letter from Fiske Kimball, Commission of Fine Arts, to F. F. Gillen, National Park Service, January 14,1943.

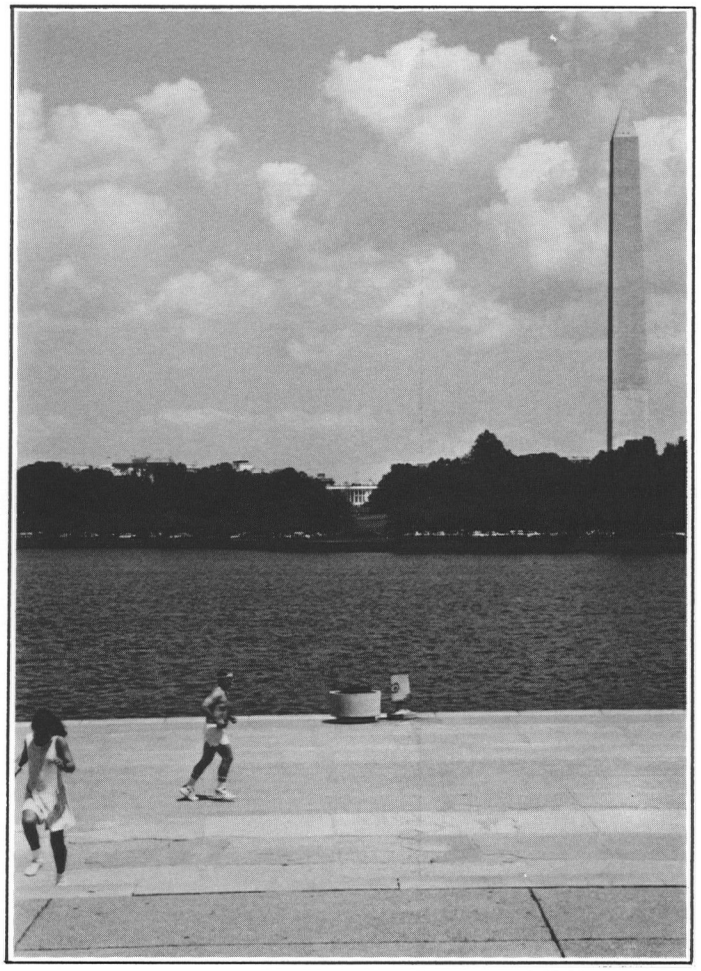


Figure 65 - Vista Towards the White House, 1995

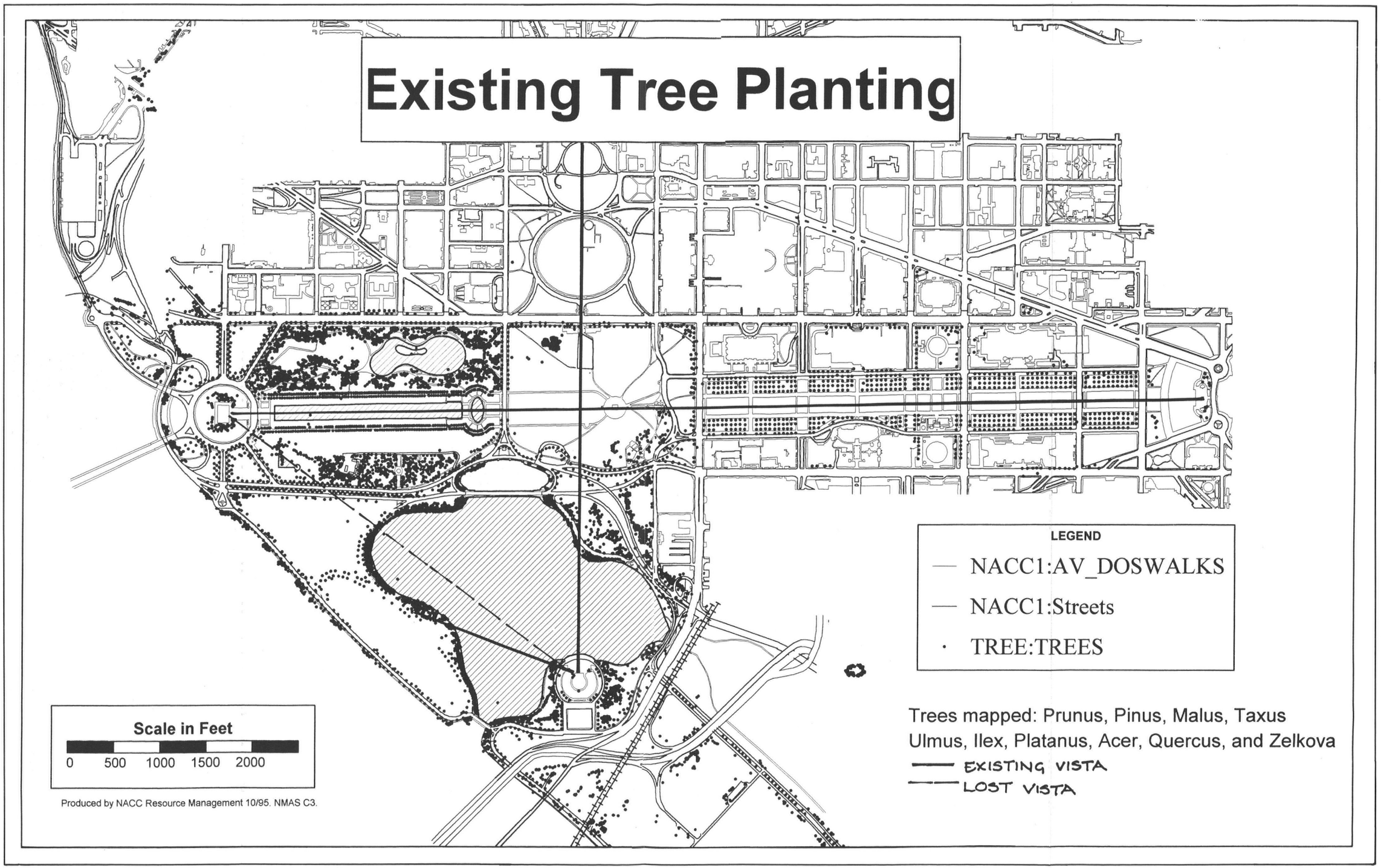


Figure 66 - Existing Tree Planting and Vistas around the Jefferson Memorial Grounds, 1995

3.5.2. VIEWS OF THE MEMORIAL FROM SURROUNDING AREA

The construction of the Franklin Delano Roosevelt Memorial in West Potomac Park and the removal of selected trees will create another framed view of the Jefferson Memorial from the bank of the Tidal Basin. This vista, too, was part of the McMillan Plan, and will be realized in 1997, when the project is due for completion. (See figure 65, Existing tree planting & Vistas)

Figure 69 'Cherry Tree Additions' 1954 is included in this section as it refers to the vista towards the Jefferson from the west. In 'detail B' it states:

> *It is believed that this vista serves no useful purpose and that a continuous line of cherry blossom along the edge of the Basin is most important. No tall trees should be permitted in this space.*

There are some flowering crab and cherry trees in this vicinity today, but the narrow vista towards the west of the memorial is still maintained.

The vista strip looking towards the east side of the memorial is also apparent. The chain link fence in the following photographs is temporary, and due for removal in the fall of 1995.

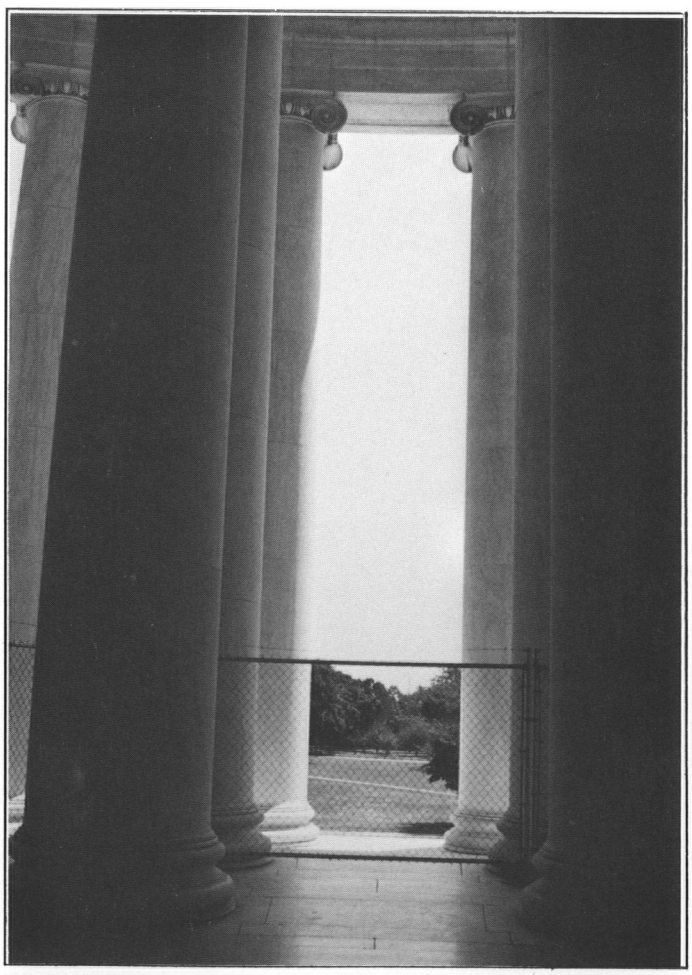


Figure 67-Vista Strip looking East from the memorial



Figure 68-Looking West from Inside Memorial



Figure 69-Looking South from Inside Memorial, 1995

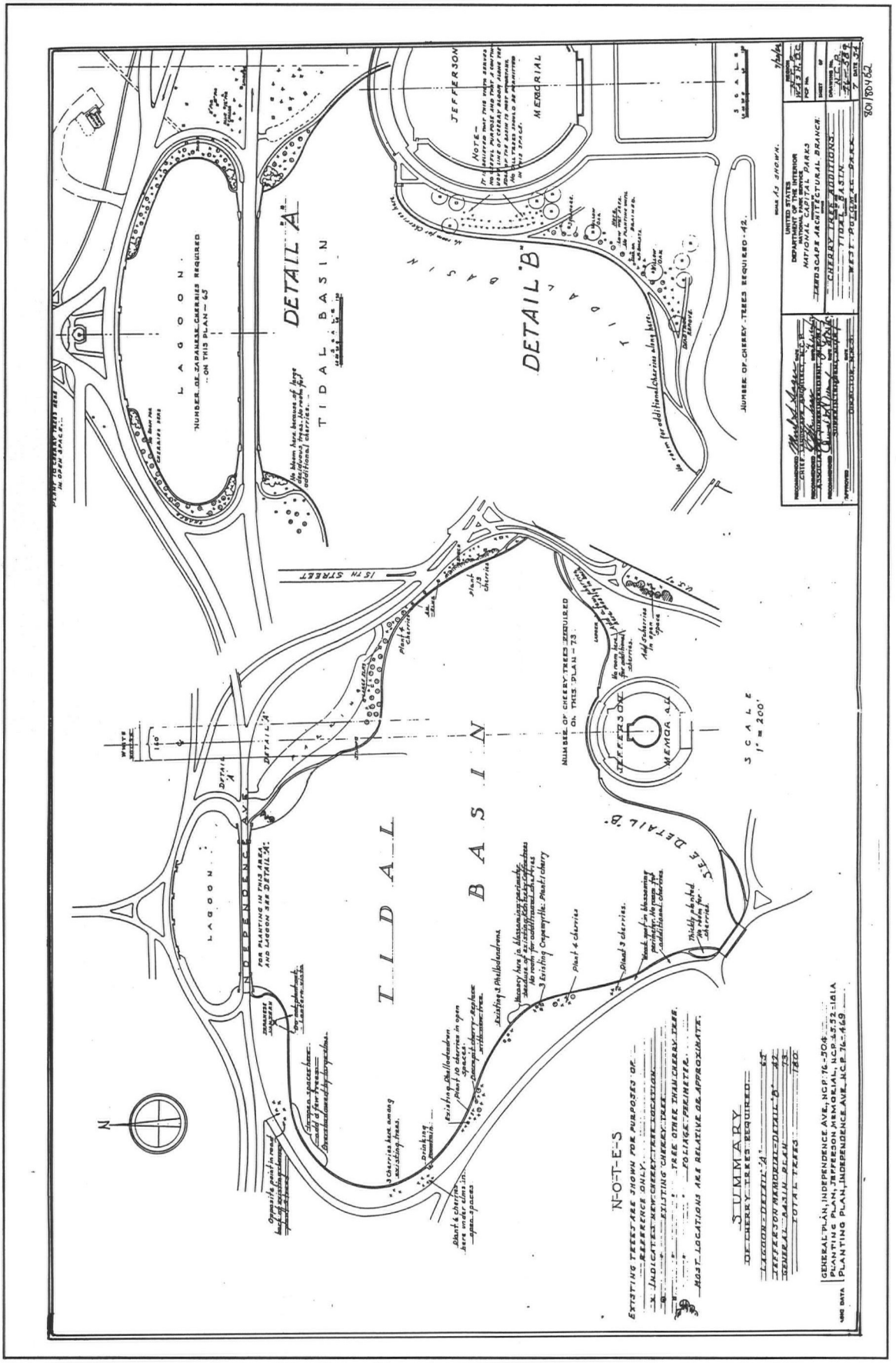


Figure 70-Drawing No. 65-52-589. Cherry Tree Additions. National Park Service. July 1954.

VIEWS



Figure 71-Aerial View Looking Southwest, 1950.

Olmsted's desire to create a long open view towards the Potomac on the south side of the Memorial, as documented in his letter to the Thomas Jefferson Memorial Commission dated August 8, 1941, was clearly unrealizable even then due to the obstruction of the railroad bridge, present in its current form since 1901. The view was, however, of fairly open parkland towards the bridge as can be seen in the accompanying photo from the 1950s.

Now dominating the southerly aspect from the memorial is the elevated Interstate 395, which leads up to the 14th Street Bridge. This considerably foreshortens the original view southward, and the noise and sight of the traffic has a seriously deleterious effect on the visitor enjoyment of the memorial. The intrusion of the road is intensified when standing higher up inside the memorial, or on the stylobate mall. The road is not particularly well screened with trees which could go some way in alleviating this problem.

The rectangular grassed area immediately south of the memorial is similarly dominated by the presence of the automobile. Parking to the rear of the memorial was part of the original plan. This visual intrusion, therefore, seems inevitable when considering that the design was

conceived before the 'golden age of the automobile' when the car was not seen as a problem as it is today. Surely this, before any interruption by the railroad bridge, would have made Olmsted's ideals of pastoral views towards the Potomac slightly less romantic.

The open view across the Tidal Basin to the north has not changed dramatically since the 1940s in terms of structural changes to the landscape. However, the view due north is interrupted by an unscreened parking lot opposite the plaza along the north edge of the Tidal Basin. While this parking area has been in existence since construction, the increase in car numbers using the space and the modern day preference for brightly colored vehicles has made it a conspicuous intrusion in an otherwise pleasant and uncluttered view across the water.



Figure 72-View South from Terrace Mall, 1995.



Figure 73-View of memorial from Grass Rectangle, 1995

3.6. ACCESS & CIRCULATION

3.6.1. ACCESS

Access to the memorial is predominantly by road, either by car, bus or Tourmobile (a commercial sightseeing operation on contract to the National Park Service). Due to the fact that public transportation is limited, visitors arriving on foot are far fewer. The nearest Metro station is the Smithsonian stop, a good fifteen minutes away. In the heat of summer all but the most enthusiastic visitors are put off walking this distance. There is no Metro bus service to the memorial (or if there is it is a very well kept secret). For the majority of visitors who arrive by road, the first impressions of the memorial are the grass rectangle and the parking lot. The walking visitor has a much more pleasant approach to the memorial, almost always coming over the outlet bridge and around the east of the Tidal Basin.

The construction of the Franklin Delano Roosevelt (F.D.R) Memorial will affect the pedestrian circulation of this area. It is quite likely that people may visit the Lincoln Memorial, the F.D.R Memorial and then the Jefferson Memorial on foot. The F.D.R Memorial will create a link between the other two memorials as they will all be within walking distance from each other. Some form of effective pedestrian road crossings should be considered in this vicinity to encourage pedestrian traffic and reduce reliance on vehicular transport.

The Tourmobile is well used. It is, at present, the only non-pedestrian form of transportation that the car-less visitor has. Bus tours to the memorial are numerous especially during the school year with visiting school trips.

The issue of parking has been under discussion since the memorial was being built. Olmsted's plan, No. 778 (figure 27), showed a future area for parking, and the same area to the east of the grass rectangle was replanned in 1943 and 1949 by the National Capital Parks and Planning Commission and approved by the National Park Service. (See figure 77, plan No. 65-52-230.)

3.6.2. CIRCULATION

The Memorial was made accessible to people with disabilities in 1975 as part of a project to commemorate America's bicentennial. The ramp at the south was constructed in between two planters, and an elevator installed.

Originally visitors accessed restrooms through the east and west basement doors. The east bathroom is now abandoned and all facilities are located through the west basement door. This focused the majority of visitor services to the west side. A ramp was constructed in place of the west side steps to make the new toilet facilities accessible. The plans for this work are included. (See figure 77-82. Alterations to accommodate the physically disabled, construction dwgs. No. 808 41.002a- sheets 2, L3, L4, L5.)

Although these ramps provide access to the memorial, they do not meet current standards for accessibility, the Americans with Disabilities Act of 1990 or the Uniform Federal Accessbility Standards. Many disabled visitors head straight around to the north of the memorial without realizing that access is only from the southern ramps. The National Park Service is currently revising these areas in order to meet the standards.

The main steps at the north, which are seriously out of alignment in places, are a tripping hazard and need to be rectified as soon as possible. Asphalt paths which avoid the steps east and west of the plaza, adjacent to the Tidal Basin, have been put in as a temporary measure towards accessibility and need to be reassessed. Most visitors arrive at the memorial from the south. The majority then walk up the steps and around the west side to the north and into the memorial itself, usually stopping to admire the vista towards the White House. Visitors make good use of the main steps and stylobate mall (when open - it is currently fenced off due to construction activity) for sitting and picnicking, while schools and parties of students use them as informal amphitheaters and outdoor classrooms. The plaza is not utilized by the tourist to a great extent other than to walk across to the Tidal Basin and take a look into the water. This area is used in the main by group activities such as the regular Wednesday runs which start from the plaza.

Despite the "No Entry" signs and metal gates (see figure 74) at the south side of the memorial, vehicles are often parked on the plaza, usually National Park Service vehicles, delivery vans, and Park Police cars and motorcycles (see figure 75). While this is obviously necessary to a certain extent, drivers need to be dissuaded from parking there for long periods. The metal gates are unfortunate in that they are rather municipal in style and



Figure 74 - Metal Gates at the south side of the Memorial

detract from the attempt to make the circular roadway visually pedestrian friendly. The different materials used at the north plaza adjacent to the Tidal Basin and the remaining original circular roadway break up the original circulation definition, which was once emphasized by the single continuous circle of the road (see figure 76).



Figure 75 - Vehicle parked on Plaza

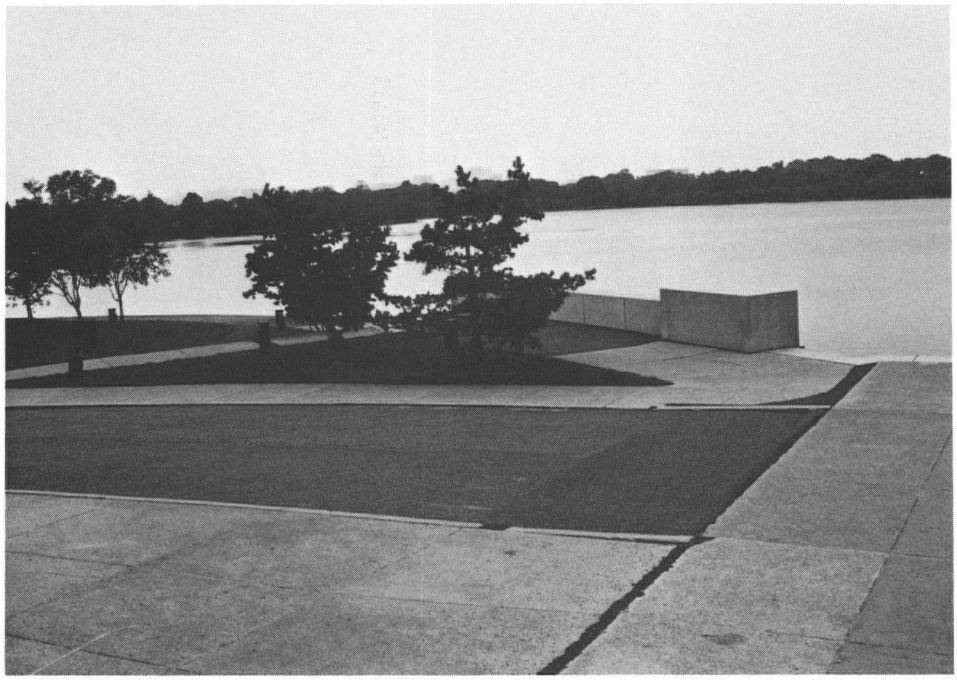
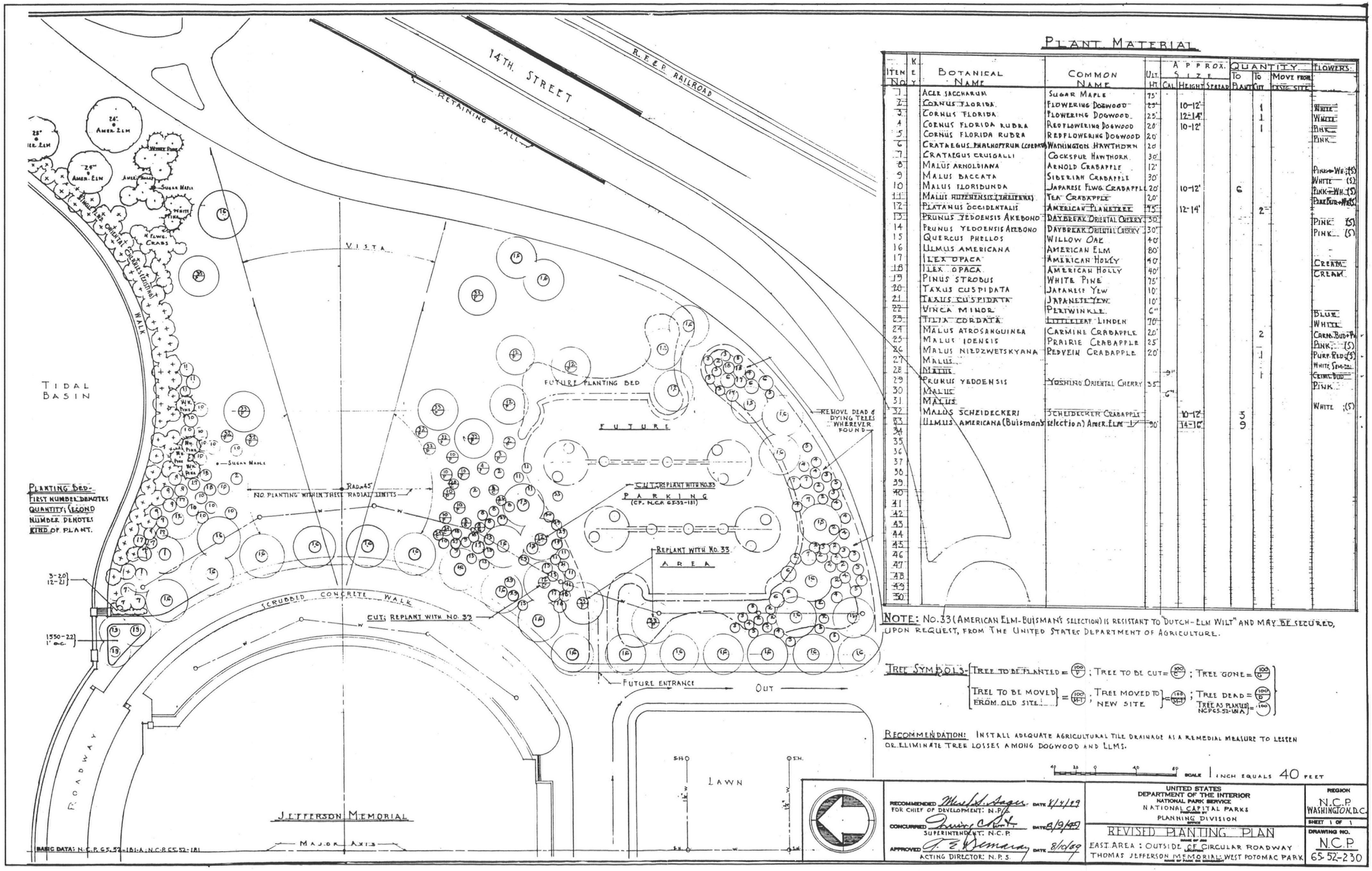


Figure 76 - Different Materials used at the north Plaza

Visitors regularly visit the refreshment kiosk to the southwest of the memorial, often while waiting for the Tourmobile. The nearby rectangle of grass remains fairly much a dead space, being rarely used other than as a foreground setting for the memorial. It was populated in the summer of 1995 by one lonely T-shirt seller; the subject of a court battle in the attempt by the National Park Service to rid the area of vendors. Most visitors choose to go and sit under the trees and admire the views across the Tidal Basin and escape the heat from the summer's sun and the constant noise and sight of the cars to the south.



PLANT MATERIAL

ITEM No.	KEY	BOTANICAL NAME	COMMON NAME	ULT. HT.	APPROX. SIZE CAL.	APPROX. SIZE HEIGHT	APPROX. SIZE SPREAD	QUANTITY To PLANT	QUANTITY To CUT	QUANTITY MOVE FROM EXISTG. SITE	FLOWERS
1		ACER SACCHARUM	SUGAR MAPLE	75'							
2		CORNUS FLORIDA	FLOWERING DOGWOOD	25'		10-12'			1		WHITE
3		CORNUS FLORIDA	FLOWERING DOGWOOD	25'		12-14'			1		WHITE
4		CORNUS FLORIDA RUBRA	REDFLOWERING DOGWOOD	20'		10-12'			1		PINK
5		CORNUS FLORIDA RUBRA	REDFLOWERING DOGWOOD	20'							PINK
6		CRATAEGUS PHAENOPYRUM (LOEBNER)	WASHINGTON HAWTHORN	20							
7		CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN	30'							
8		MALUS ARNOLDIANA	ARNOLD CRABAPPLE	12'							
9		MALUS BACCATA	SIBERIAN CRABAPPLE	30'							PINK-WH. (5)
10		MALUS FLORIBUNDA	JAPANESE FLWG. CRABAPPLE	20'		10-12'		6			WHITE (5)
11		MALUS HUPEHENSIS (THEIFERA)	TEA CRABAPPLE	20'							PINK-WH. (5)
12		PLATANUS OCCIDENTALIS	AMERICAN PLANETREE	75'		12-14'			2		PINK-PURP.-WHITE
13		PRUNUS YEDOENSIS AKEBONO	DAYBREAK ORIENTAL CHERRY	30'							PINK (5)
14		PRUNUS YEDOENSIS AKEBONO	DAYBREAK ORIENTAL CHERRY	30'							PINK (5)
15		QUERCUS PHELLOS	WILLOW OAK	40'							
16		ULMUS AMERICANA	AMERICAN ELM	80'							
17		ILEX OPACA	AMERICAN HOLLY	40'							
18		ILEX OPACA	AMERICAN HOLLY	40'							CREAM
19		PINUS STROBUS	WHITE PINE	75'							CREAM
20		TAXUS CUSPIDATA	JAPANESE YEW	10'							
21		TAXUS CUSPIDATA	JAPANESE YEW	10'							
22		VINCA MINOR	PERIWINKLE	6"							
23		TILIA CORDATA	LITTLELEAF LINDEN	70'							BLUE
24		MALUS ATROSANGUINEA	CARMINE CRABAPPLE	20'							WHITE
25		MALUS IOENSIS	PRAIRIE CRABAPPLE	25'					2		CARM. BUD-PK
26		MALUS NIEDZWETSKYANA	REDVEIN CRABAPPLE	20'							PINK (5)
27		MALUS							1		PURP. RED (5)
28		MALUS			9"						WHITE SEMI-DBL.
29		PRUNUS YEDOENSIS	YOSHINO ORIENTAL CHERRY	35'					1		CERISE BUD
30		MALUS			6"						PINK
31		MALUS									
32		MALUS SCHEIDECKERI	SCHEIDECKER CRABAPPLE			10-12'		5			WHITE (5)
33		ULMUS AMERICANA (Buisman's selection)	AMER. ELM	90'		14-16'		9			
34											
35											
36											
37											
38											
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40											
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NOTE: No. 33 (AMERICAN ELM-BUISMAN'S selection) IS RESISTANT TO "DUTCH-ELM WILT" AND MAY BE SECURED, UPON REQUEST, FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE.

TREE SYMBOLS- [TREE TO BE PLANTED = (100 P); TREE TO BE CUT = (100 C); TREE GONE = (100 G)] [TREE TO BE MOVED FROM OLD SITE = (100 M-T); TREE MOVED TO NEW SITE = (100 M-T); TREE DEAD = (100 D); TREE AS PLANTED N.C.P. 65-52-181 A = (100)]

RECOMMENDATION: INSTALL ADEQUATE AGRICULTURAL TILE DRAINAGE AS A REMEDIAL MEASURE TO LESSEN OR ELIMINATE TREE LOSSES AMONG DOGWOOD AND ELMS.

SCALE 1 INCH EQUALS 40 FEET

RECOMMENDED FOR CHIEF OF DEVELOPMENT: N.P.S. — DATE 8/4/49
CONCURRED — SUPERINTENDENT: N.C.P. — DATE 8/3/49
APPROVED — ACTING DIRECTOR: N.P.S. — DATE 8/6/49

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
PLANNING DIVISION

REVISED PLANTING PLAN
EAST AREA: OUTSIDE OF CIRCULAR ROADWAY
THOMAS JEFFERSON MEMORIAL; WEST POTOMAC PARK

REGION N.C.P. WASHINGTON, D.C.
SHEET 1 OF 1
DRAWING NO. N.C.P. 65-52-230

Figure 77-Drawing No. 65-52-230. Revised Planting Plan, East Area. National Park Service. 1949.

NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR

JEFFERSON MEMORIAL
ALTERATIONS TO ACCOMODATE THE PHYSICALLY HANDICAPPED

CONSTRUCTION DRAWINGS

JOSEPH G MERZ MARY L MERZ ARCHITECTS
GLEIT OLENEK & ASSOCIATES ENGINEERS
A E BYE & ASSOCIATES LANDSCAPE ARCHITECTS

ARCHITECTURAL

1 TITLE SHEET
2 SOUTH PLAZA AND RAMPS
3 EXISTING TERRACE AND STYLOBATE PLANS
4 EXISTING BASEMENT FRAMING PLANS
5 EXISTING MAIN FLOOR FRAMING PLANS
6 MISCELLANEOUS EXISTING CONDITIONS
7 REFERENCE PLAN - LOWER LEVEL
8 LOWER LEVEL PLAN
9 BASEMENT DEMOLITION AND NEW PLAN
10 MAIN FLOOR DEMOLITION PLAN
11 MAIN FLOOR PLAN
12 SECTION A-A
13 SECTION A-A CONT'D., SECTIONS B-B, C-C
14 SECTION D-D
15 SECTIONS E-E, F-F, G-G
16 REFLECTED CEILING PLANS
17 DOOR SCHEDULE, DOOR DETAILS
18 ELEVATOR AND LADDER DETAILS
19 FINISH SCHEDULE AND DETAILS
20 DISLAY PANEL DETAILS, ROLL-DOWN GRILLE
21 LARGE DRUM DETAILS
22 SMALL DRUM DETAILS
23 CONTROL AREA DETAILS
24 CONTROL AREA DETAILS
25 POWDER ROOM DETAILS
26 HANDRAIL, SEATING ALCOVE DETAILS
27 FIRE STAIR - LOWER LEVEL TO BASEMENT
28 FIRE STAIR - MAIN FLOOR TO BASEMENT
29 WATERPROOFING DETAILS

LANDSCAPE

1 OVERALL EXISTING PLAN
2 OVERALL NEW PLAN
3 EXISTING PLAN - SOUTH PLAZA
4 NEW PLAN - SOUTH PLAZA
5 EXISTING CONDITIONS AT LOWER LEVEL
6 NEW PLAN AT LOWER LEVEL

STRUCTURAL

1 DEMOLITION AND FOUNDATION RECONSTRUCTION
2 PART LOWER LEVEL FRAMING PLAN
3 PART LOWER LEVEL FRAMING PLAN, DETAILS
4 DEMOLITION AND NEW WORK DETAILS - LOWER LEVEL
5 ROOF FRAMING OVER LOWER LEVEL, ETC.
6 BASEMENT, MAIN FLOOR, TOILET ROOF DEMOLITION
7 MAIN FLOOR AND BASEMENT FRAMING, NEW
8 NEW BASEMENT AND ROOF DETAILS
9 DEMOLITION AND NEW WORK AT WOMEN'S TOILET
10 TERRACE WALL DEMOLITION, NEW WALLS AND RAMP

PLUMBING

1 LOWER LEVEL
2 BASEMENT
3 MAIN FLOOR
4 RISER DIAGRAMS

HEATING AND VENTILATING

1 LOWER LEVEL
2 BASEMENT
3 MAIN FLOOR DUCT DEMOLITION PLAN
4 MAIN FLOOR
5 SECTIONS AND DETAILS
6 SECTIONS AND DETAILS

ELECTRICAL

1 LOWER LEVEL
2 LOWER LEVEL, POWER AND MISCELLANEOUS
3 BASEMENT
4 MAIN FLOOR
5 SCHEDULES, DIAGRAMS, AND DETAILS

SYMBOLS

CONCRETE
BRICK
STONE
PLACED FILL
RIGID INSULATION
BATT INSULATION
SEE SHEET NO 8 FOR GAP RELATIONS
EL. 314.5 SPOT ELEVATION, NEW GRADE ELEVATION
(EL 314.5) SPOT ELEVATION EXISTING GRADE ELEVATION
V.I.F. VERIFY IN FIELD
DETAIL 4, ELVS NO. 22

HALF-SIZE REPRODUCTION

NOTES:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT THE JOB SITE PRIOR TO SUBMITTING BID. COMPLETE DRAWINGS OF THE EXISTING STRUCTURE FOR THE CONTRACTOR EVALUATION ARE ON FILE AT THE NATIONAL ARCHIVES AND ARE AVAILABLE UPON REQUEST FROM THE NATIONAL PARK SERVICE, 1100 L STREET N.W. WASHINGTON D.C.

THIS DRAWING HAS BEEN PREPARED IN COMPLIANCE WITH SCHEMATIC DESIGN DRAWING NO. 808/41,002 APPROVED BY J.A. TOWNSLEY ACTG DIR. NCP ON 7-30-74 TITLE: DATE	CONSTRUCTION DRAWINGS UNITED STATES DEPARTMENT OF THE INTERIOR	TITLE OF DRAWING JEFFERSON MEMORIAL ALTERATIONS TO ACCOMODATE THE PHYSICALLY HANDICAPPED LOCATION WITHIN PARK WEST POTOMAC PARK NAME OF PARK NATIONAL CAPITAL PARKS WEST	PROJECT NO. 3400-0025A DRAWING NO 808 41,002A SHEET 1 DATE

Figure 78-Drawing No. 808.41002a. Alterations to Accommodate the Physically Handicapped. A. E. Bye, landscape architects. July 30, 1975.

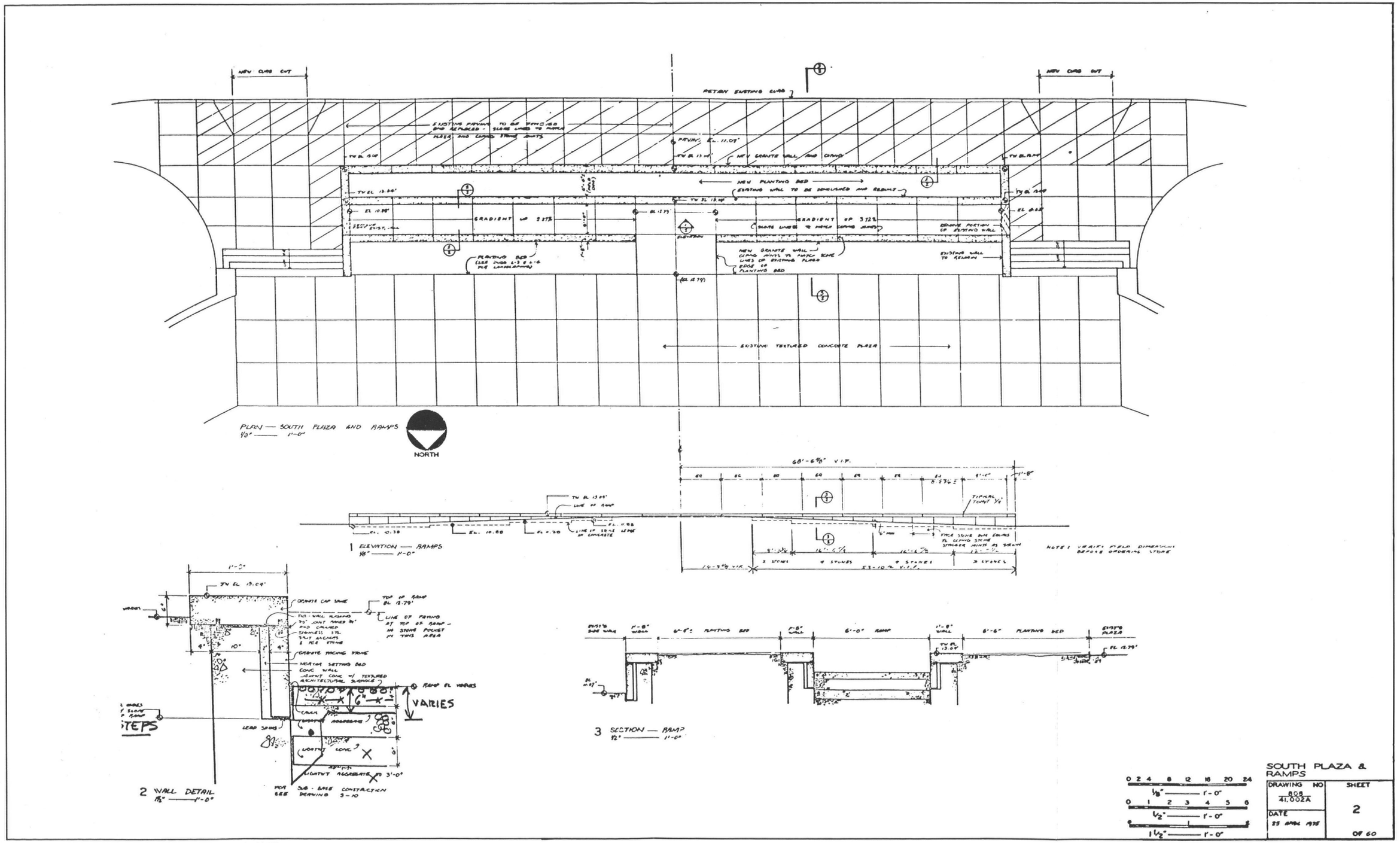


Figure 79-South Plaza and Ramps. April 24, 1975.

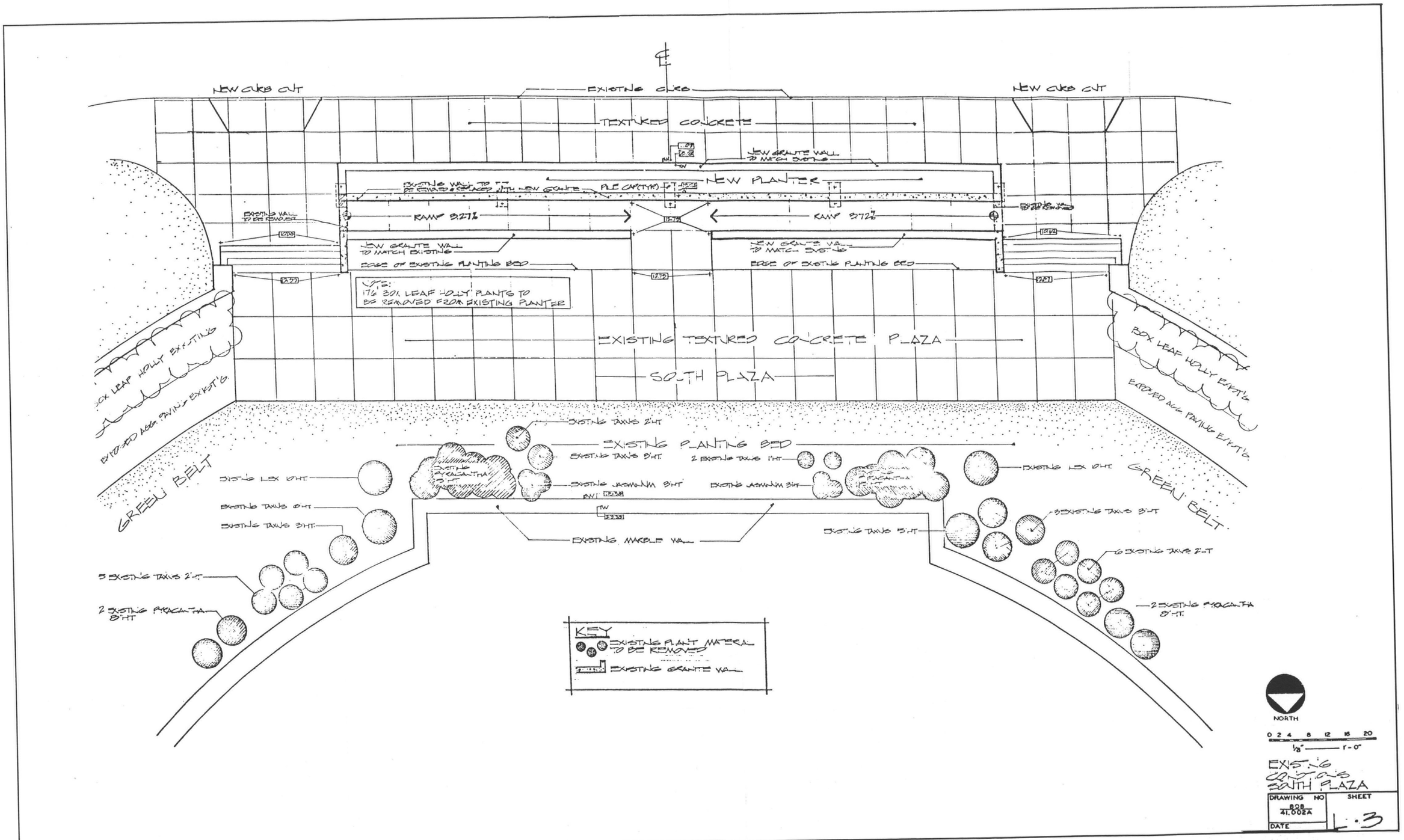
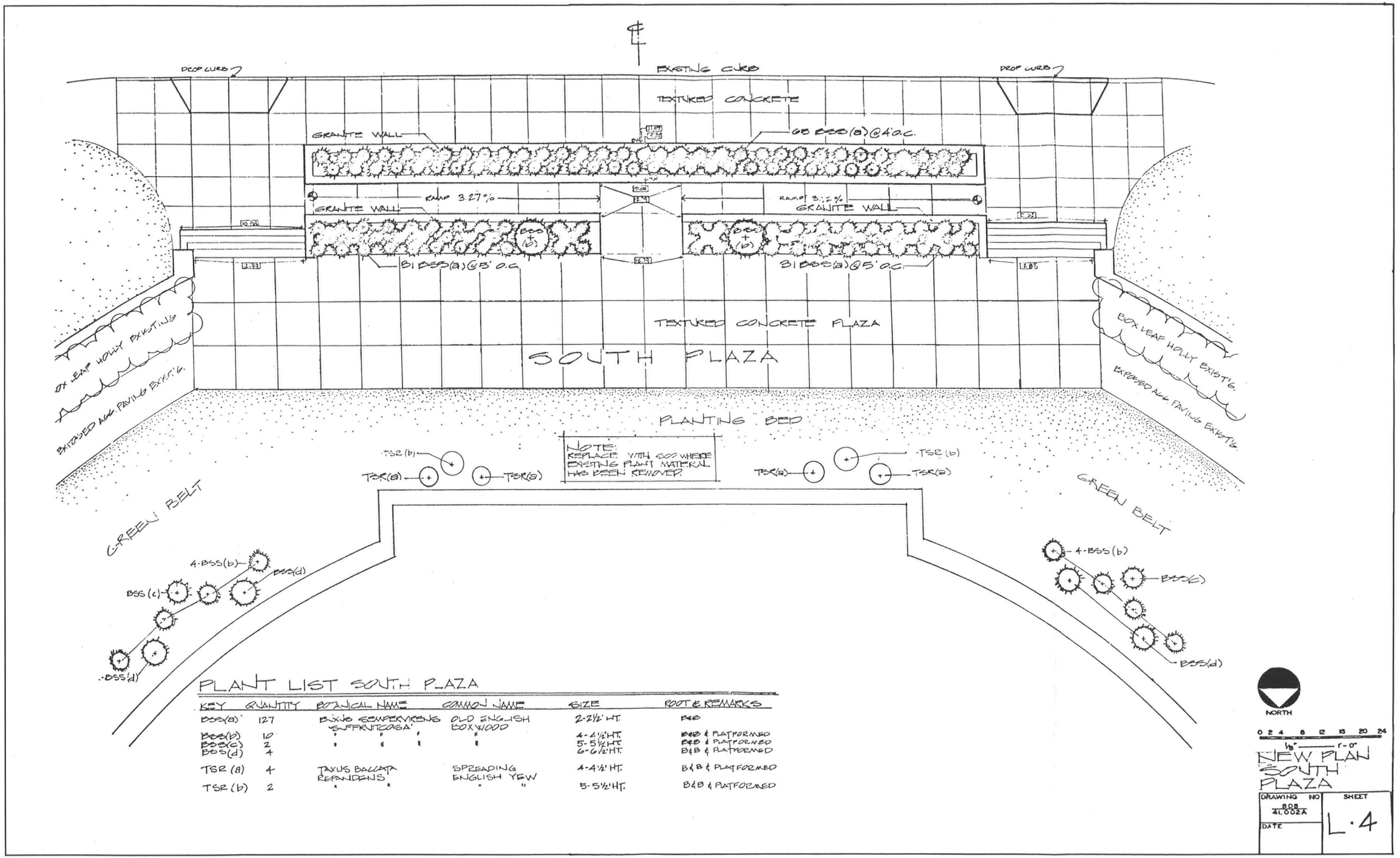


Figure 80-Existing Conditions, South Plaza. April 24, 1975



PLANT LIST SOUTH PLAZA

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT & REMARKS
BSS(a)	127	BUXUS SEMPERVIRENS 'SUFFRUTICOSA'	OLD ENGLISH BOXWOOD	2-2½' HT.	B&B
BSS(b)	10	" "	"	4-4½' HT.	B&B & PLATFORMED
BSS(c)	2	" "	"	5-5½' HT.	B&B & PLATFORMED
BSS(d)	4			6-6½' HT.	B&B & PLATFORMED
TSR (a)	4	TAXUS BACCATA REPANDENS	SPREADING ENGLISH YEW	4-4½' HT.	B&B & PLATFORMED
TSR (b)	2	" "	" "	5-5½' HT.	B&B & PLATFORMED

Figure 81-New Plan South Plaza. April 24, 1975.

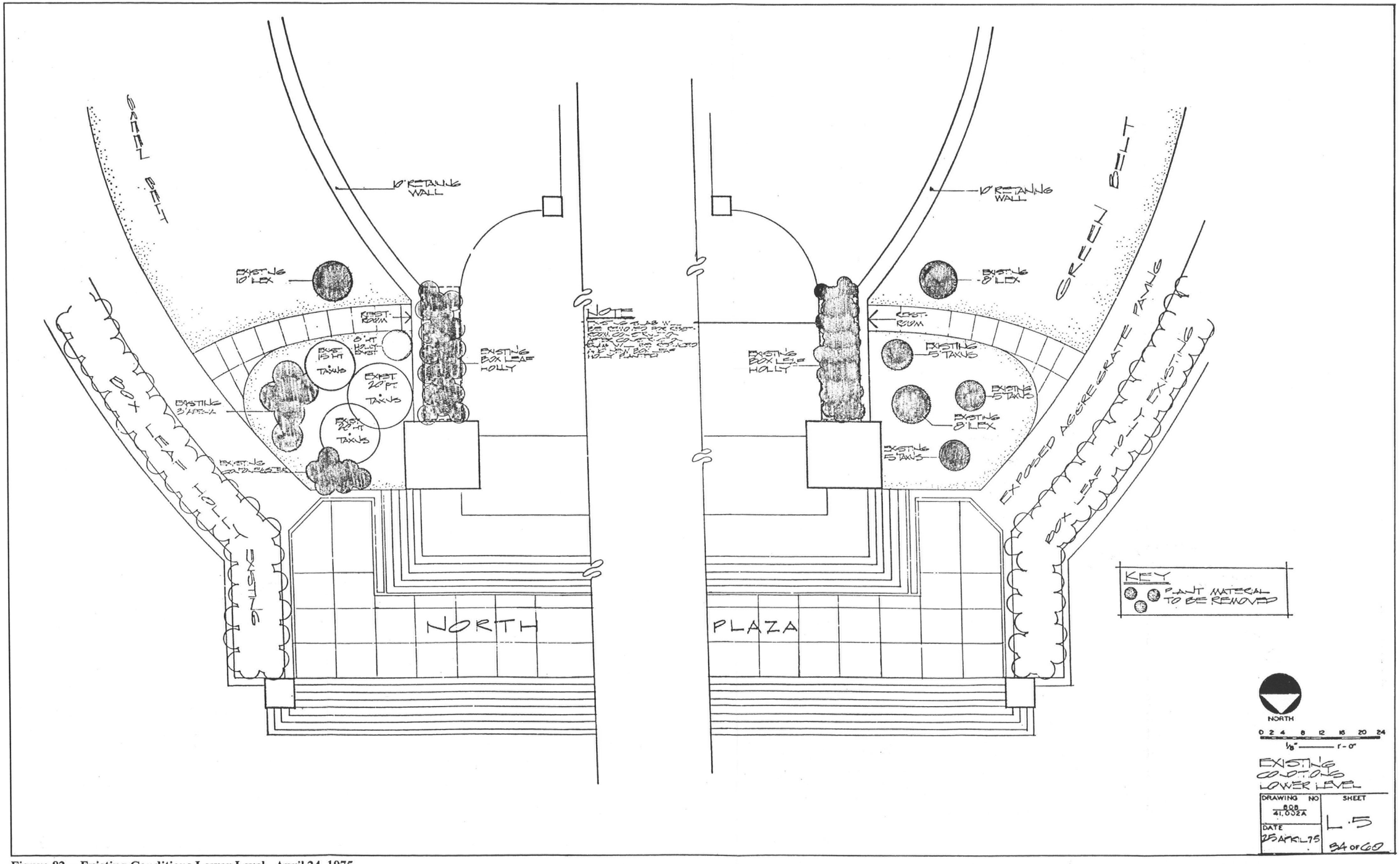


Figure 82 - Existing Conditions Lower Level. April 24, 1975.

3.7. VEGETATION

After reclamation and before the memorial was built, the area of newly created parkland was planted, amongst other trees, with Japanese Cherry trees set in grass. These were planted on the site in 1912 when the Mayor of Tokyo presented two thousand cherry trees to the city. They have subsequently been planted in the area to the present day.

3.7.1. CHANGES TO THE ORIGINAL PLANTING DESIGN SINCE CONSTRUCTION

The planting around the memorial today no longer reflects what was specified in the original plans although some of it, namely that on the stylobate mall, has been restored. This restoration was based on the 1942 additions to Olmsted's original planting plan, (figure 28 & 32. P. P. J. No. 178 & 179), which included the pine trees on the stylobate mall to correct the original "thin planting" for which Olmsted was criticized.

The original planting was described using two plans, one showing planting inside the circular roadway, the other showing planting outside. These can be compared with today's survey to see how the originals have changed. (See figures 28 & 29, planting plans No. 181a, 179; sheet 1, and figure 85 - 89, survey of today's vegetation.)

The major designed change in the planting in the memorial's immediate vicinity occurred in the 1970s, when additional Yews (*Taxus cuspidata 'Nana'*) were planted on the stylobate mall. See figure 58, Thomas Jefferson Memorial planting 6/16/70. The ring of Zelkovas was planted inside the circular road, where none existed originally. These have grown to maturity and have become an accepted part of the landscape. In a record of Olmsted's visit to F. F. Gillen of the Commission of Fine Arts Olmsted notes the following points regarding the planting in this vicinity:

> *Kline had some sketches of planting masses showing some large (deciduous) trees on the lower circular terrace, I didn't discuss planting much, but remarked that the more I studied it the more I was inclined to keep large trees at a considerable distance from the memorial. It is not the kind of thing to nestle among large trees - the columns being only 41 feet tall, trees as big as the comparatively young elms near it would mask much of it in too many important views if not kept at a greater distance than in Kline's sketches.*[7]

The additional yews were the focus of the landscape restoration work which took place in 1993, as part of the stylobate mall repairs. This involved the removal of the historically incorrect planting which restricted the established vistas, especially those east and west. Original yews which suffered greatly from the level changes due to the repeated bringing in of fill over the years to combat settlement, were removed and replaced. Due to the replacement of a collapsed storm sewer, an original white pine and a holly located to the east of the main steps were removed and replaced. This work is shown in figures 85-89, stylobate mall repairs NACC 758c, July 27,1993, Landscape removals and replanting plans.

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[7]Olmsted's site visit notes. July 24, 1941.

Today, some of the original "as-built" planting remains historically correct in terms of species and location. Much has been lost, however; generally the flowering shrubs and tree species, namely the *Abelia grandiflora, Cornus florida* (dogwood), *Jasminium nudiflorum* (Winterflowered dogwood) and the *Osmanthus aquifolium* which were planted on the lower terrace. In their place are several yews and a few hollies. Many of the yews have grown to such an extent that they have to be pruned severely to keep them back from the paths. This makes the yews look like a formal clipped hedge on the path side and a plant in its natural form on the other. To the south of the Memorial, the *Cotoneaster horizontalis* and the *Cotoneaster horizontalis dammeri* have been lost leaving *Taxus cuspidata capitata* and *Pyracantha coccinea* remaining. The original periwinkle *(Vinca minor)*, which was planted beneath the groups of three pines at the north of the memorial, was replaced with grass fairly early on in the memorial's history.

In 1986 the *Ilex glabra compacta* hedge along the terrace walk was replaced with *Ilex glabra* 'Shamrock' which exists today. While these plants are generally in good condition, their form is becoming less compact and with further growth will probably start to look 'leggy', making for a less dense hedge. Careful consideration should be given to the choice of variety or Cultivar when the time comes for their replacement. (See figure 90, 1986 planting plan.)

Figure 80 shows in bold, existing plants which are historically correct from the original plans of the planting within the circular roadway. Figure 94 shows the trees existing today which were planted or were already there at the time the memorial was built.

The elm trees, which were existing to the south west of the memorial at the time of construction, were the victims of regrading which took place in that area to raise the ground levels. The photographs below show the attempts made to construct tree wells around their trunks to alleviate the effects of the change in levels.

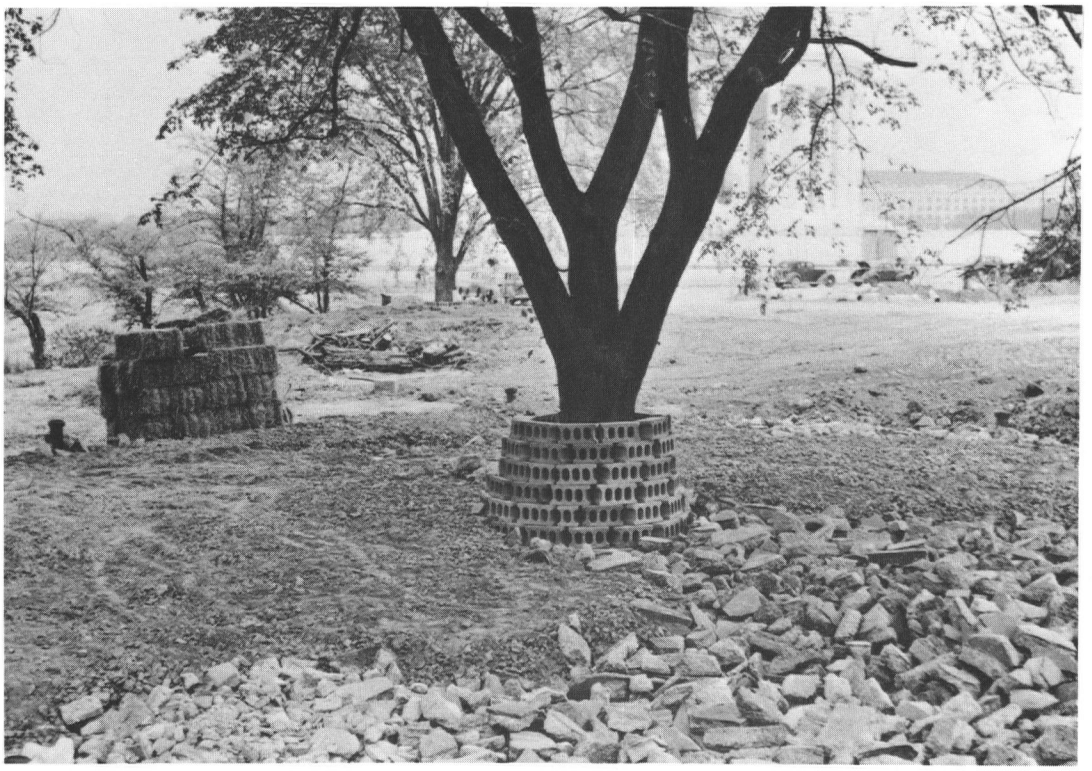


Figure 83 - Before and after fill completed around elm. National Park Service. 1941.



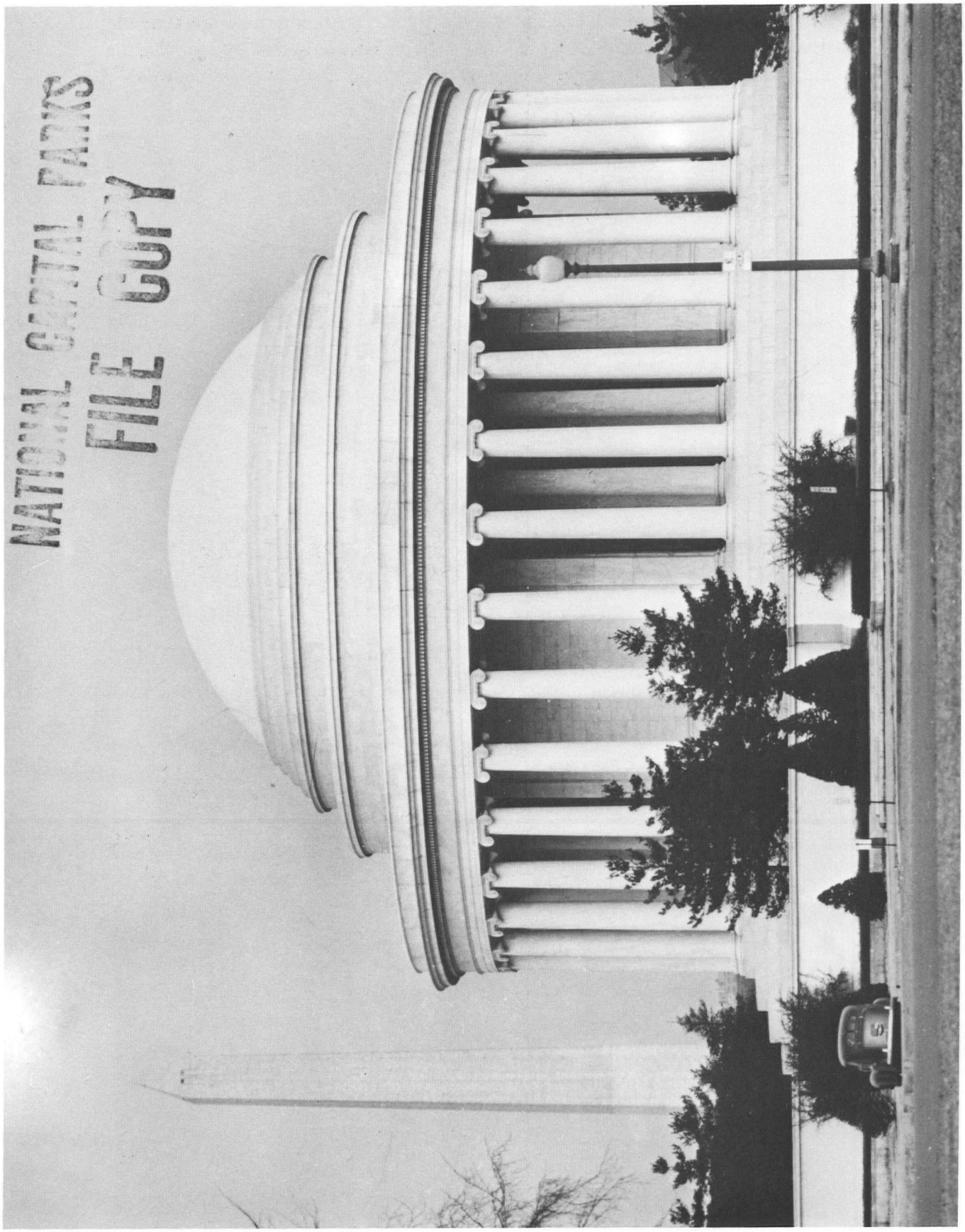
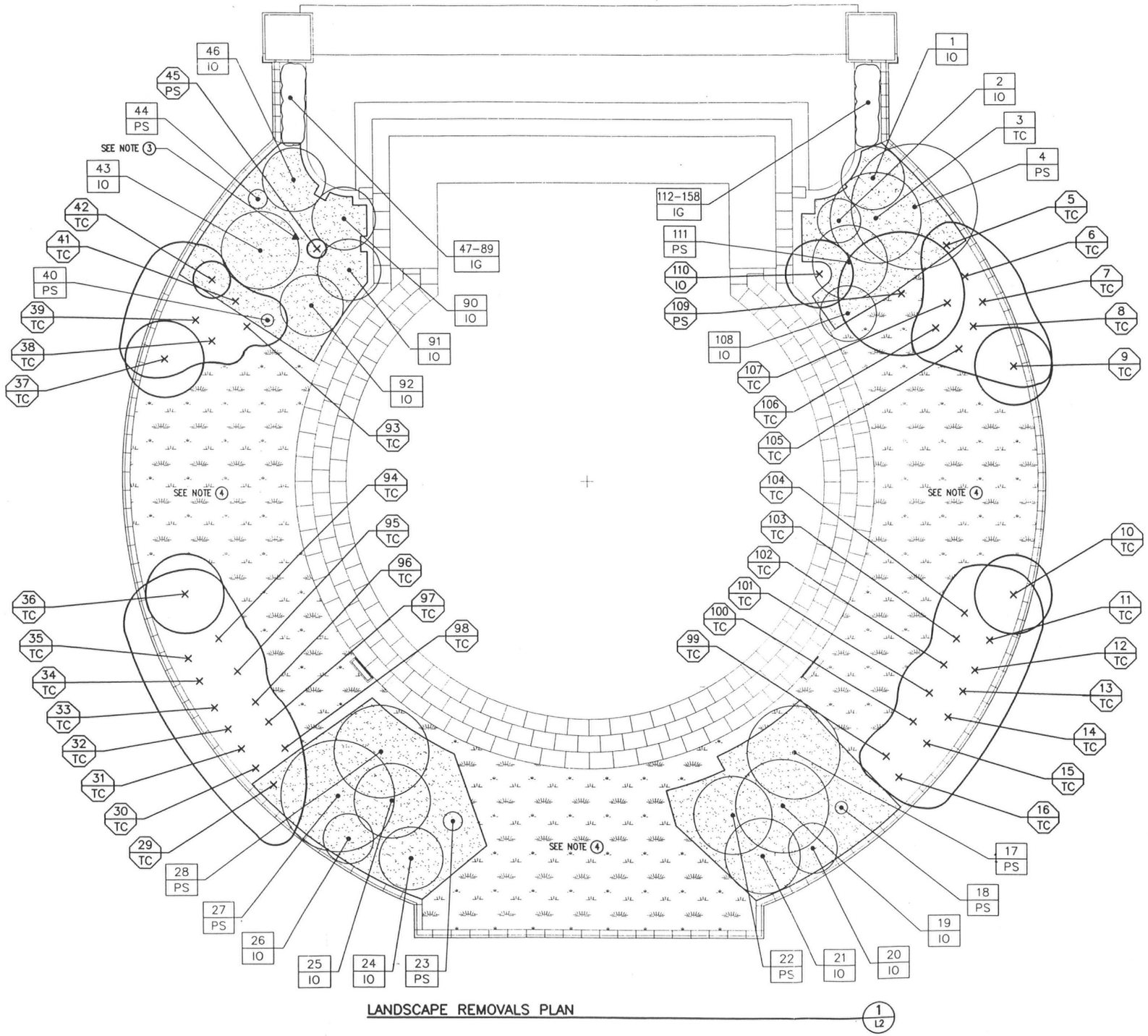


Figure 84 - Planting to the South, 1948. Showing Pyracantha, Hollies and Cotoneaster.



LANDSCAPE REMOVALS PLAN 1 L2

LANDSCAPE REMOVALS PLAN LEGEND

- EXISTING PLANT WHICH IS TO REMAIN
- EXISTING STUMP TO BE REMOVED
- REMOVE EXISTING PLANT, INCLUDING STUMP AND ALL ROOTS 2" DIAMETER. REMOVE & DISPOSE OF ALL GRINDINGS AND B EXCAVATION WITH TOPSOIL.
- ROOT PROTECTION ZONE. SEE PLAN 1 SUB SHEET L1 FOR

KEY CALLOUT – EXISTING PLANT TO REMAIN

1 / TC — PLANT IDENTIFICATION NUMBER / PLANT SPECIES KEY

KEY CALLOUT – EXISTING PLANT TO TO BE REMOVED

1 / TC — PLANT IDENTIFICATION NUMBER / PLANT SPECIES KEY

- EXISTING LAWN TO BE REMOVED PRIOR TO GRADING

LANDSCAPE REMOVALS PLAN NOTES

GENERAL NOTES

1.) SEE SCHEDULE 1 SUB SHEET L3 FOR LANDSCAPE REMOVALS SCHEDULE.

2.) LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO REMOVING PLANT MAT ROOTS. SEE PLAN 1 SUB SHEET C1 FOR LOCATION OF EXISTING UTILITIES. SEE SECTION 02071 FOR REQUIREMENTS REGARDING EXISTING UTILITIES IN THE VICIN PLANT MATERIALS AND ROOTS TO BE REMOVED.

KEYED NOTES

(3) GRIND EXISTING STUMP AND ROOTS.

(4) REMOVE EXISTING LAWN TO BE REMOVED PRIOR TO GRADING.

STATE OF MARYLAND — No. 612 — LANDSCAPE ARCHITECT

IF DRAWING IS REDUCED, USE ONLY THE GRAPHIC SCALE

16 0 16 32

SCALE OF FEET

DESIGNED: BJS	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
DRAWN: GLJ	L2	LANDSCAPE REMOVALS PLAN	808 41,008
TECH. REVIEW: BS			PKG. NO. NACC 758C — SHEET 24 OF 30
DATE: 6/93			

Figure 85- Drawing No. 808/41008, 24 of 30, Stylobate Mall Repairs, NACC 758c, Landscape Removals Plan, Stephenson and Good, July 27, 1993.

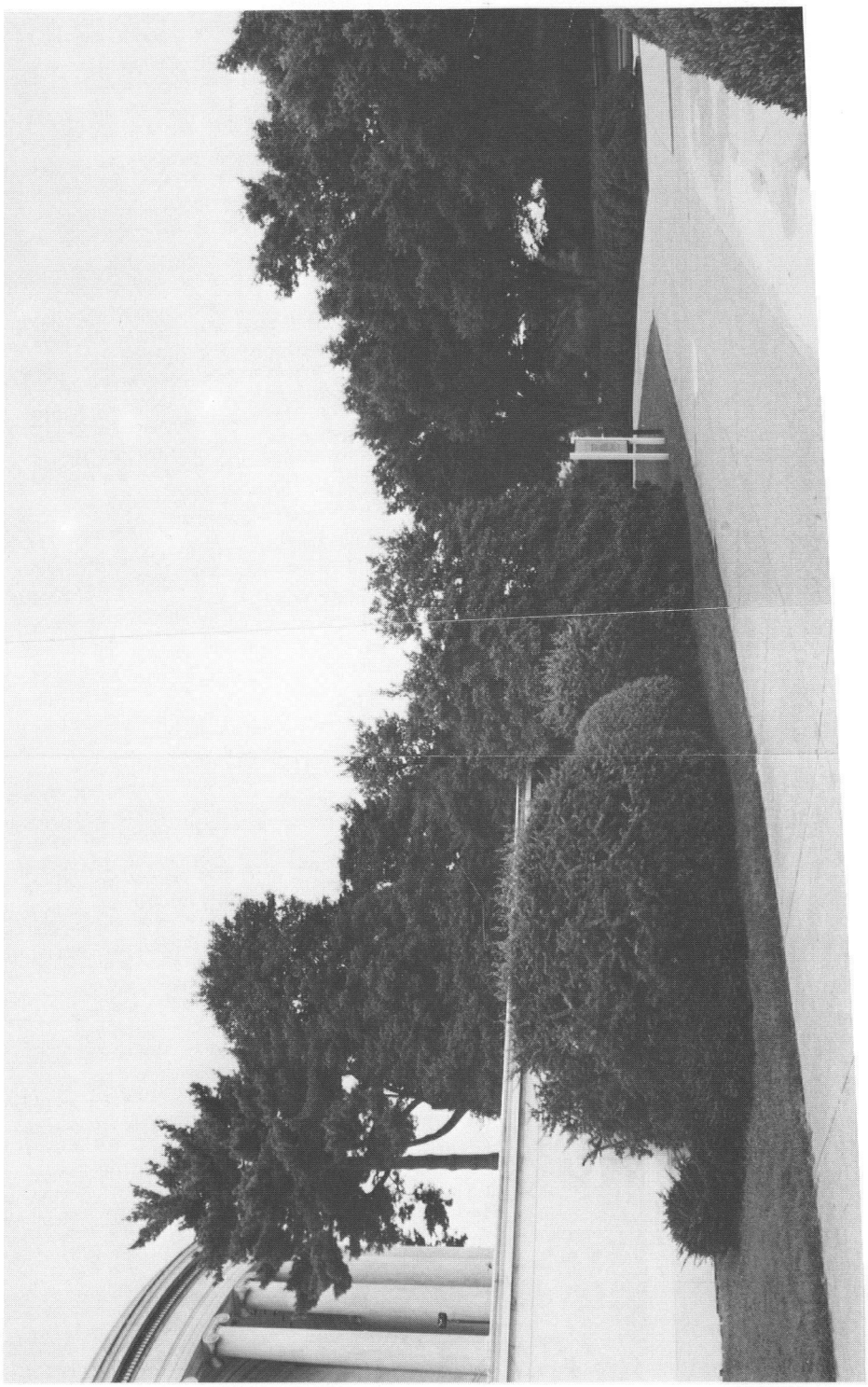


Figure 86- Planting to the South, 1995.

NPS NO	ID NO	KEY	SPECIES	CALIPER/ DBH	HEIGHT	SPREAD	WORK REQUIRED
V520	1	IO	ILEX OPACA	12.5"	30'-0"	20'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V521	2	IO	ILEX OPACA	22.5"	36'-0"	14'-0"	PROTECT AS SPECIFIED IN SECTION 02116
-	3	TC	TAXUS CUSPIDATA	-	15'-0"	29'-0"	PROTECT AS SPECIFIED IN SECTOIN 02116
V522	4	PS	PINUS STROBUS	24"	69'-0"	40'-0"	PROTECT AS SPECIFIED IN SECTION 02116
-	5	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	6	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	7	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	8	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	9	TC	TAXUS CUSPIDATA	-	11'-0"	25'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	10	TC	TAXUS CUSPIDATA	-	14'-0"	25'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	11	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	12	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	13	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	14	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	15	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	16	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V527	17	PS	PINUS STROBUS	19.5"	64'-0"	30'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V528	18	PS	PINUS STROBUS	4"	8'-0"	4'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V529	19	IO	ILEX OPACA	24"	28'-0"	16'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V530	20	IO	ILEX OPACA	24.5"	22'-0"	16'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V531	21	IO	ILEX OPACA	20"	35'-0"	24'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V532	22	PS	PINUS STROBUS	17.75"	51'-0"	25'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V307	23	PS	PINUS STROBUS	4"	12'-0"	6'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V533	24	IO	ILEX OPACA	14"	31'-0"	20'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V534	25	IO	ILEX OPACA	14"	32'-0"	24'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V535	26	IO	ILEX OPACA	14"	30'-0"	16'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V536	27	PS	PINUS STROBUS	24"	55'-0"	36'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V537	28	PS	PINUS STROBUS	20"	55'-0"	30'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V393	29	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V388	30	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	31	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	32	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	33	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	34	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	35	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	36	TC	TAXUS CUSPIDATA	-	14'-0"	25'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V370->V376	37	TC	TAXUS CUSPIDATA	-	14'-0"	25'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V370	38	TC	TAXUS CUSPIDATA	-	6'-0"	10'-0" TO 12'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V368	39	TC	TAXUS CUSPIDATA	-	6'-0"	10'-0" TO 12'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V306	40	PS	PINUS STROBUS	4"	10'-0"	4'-0"	PROTECT AS SPECIFIED IN SECTION 02116

NPS NO	ID NO	KEY	SPECIES	CALIPER/ DBH	HEIGHT	SPREAD	WORK REQUIRED
V371	41	TC	TAXUS CUSPIDATA	-	6'-0"	10'-0" TO 12'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V367	42	TC	TAXUS CUSPIDATA	-	12'-0" TO 15'-0"	10'-0" TO 12'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V366	43	IO	ILEX OPACA	27"	26'-0"	15'-0"	PROTECT AS SPECIFIED IN SECTION 02116
-	44	PS	PINUS STROBUS	4"	12'-0"	6'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V538	45	PS	PINUS STROBUS	4"	12'-0"	6'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V362	46	IO	ILEX OPACA	30"	24'-0"	20'-0"	PROTECT AS SPECIFIED IN SECTION 02116
-	47-89	IG	ILEX GLABRA	-	3'-0"	18"	PROTECT AS SPECIFIED IN SECTION 02116
-	90	IO	ILEX OPACA	24"	26'-0"	20'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V364	91	IO	ILEX OPACA	12"	28'-0"	20'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V365	92	IO	ILEX OPACA	20"	28'-0"	10'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V369	93	TC	TAXUS CUSPIDATA	-	6'-0"	10'-0" TO 12'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V360	94	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	95	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	96	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V386	97	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V391	98	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	99	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	100	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	101	TC	TAXUS CUSPIDATA	-	10'-0" TO 12'-0"	15'-0" TO 18'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	102	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	103	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	104	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	105	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	106	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
-	107	TC	TAXUS CUSPIDATA	-	8'-0" TO 10'-0"	12'-0" TO 15'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V525	108	IO	ILEX OPACA	23"	40'-0"	18'-0"	PROTECT AS SPECIFIED IN SECTION 02116
V526	109	PS	PINUS STROBUS	20"	60'-0"	40'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V523	110	IO	ILEX OPACA	18"	32'-0"	22'-0"	REMOVE AS SPECIFIED IN SECTION 02071
V524	111	PS	PINUS STROBUS	20"	60'-0"	24'-0"	PROTECT AS SPECIFIED IN SECTION 02116
-	112-158	IG	ILEX GLABRA	-	3'-0"	18"	PROTECT AS SPECIFIED IN SECTION 02116

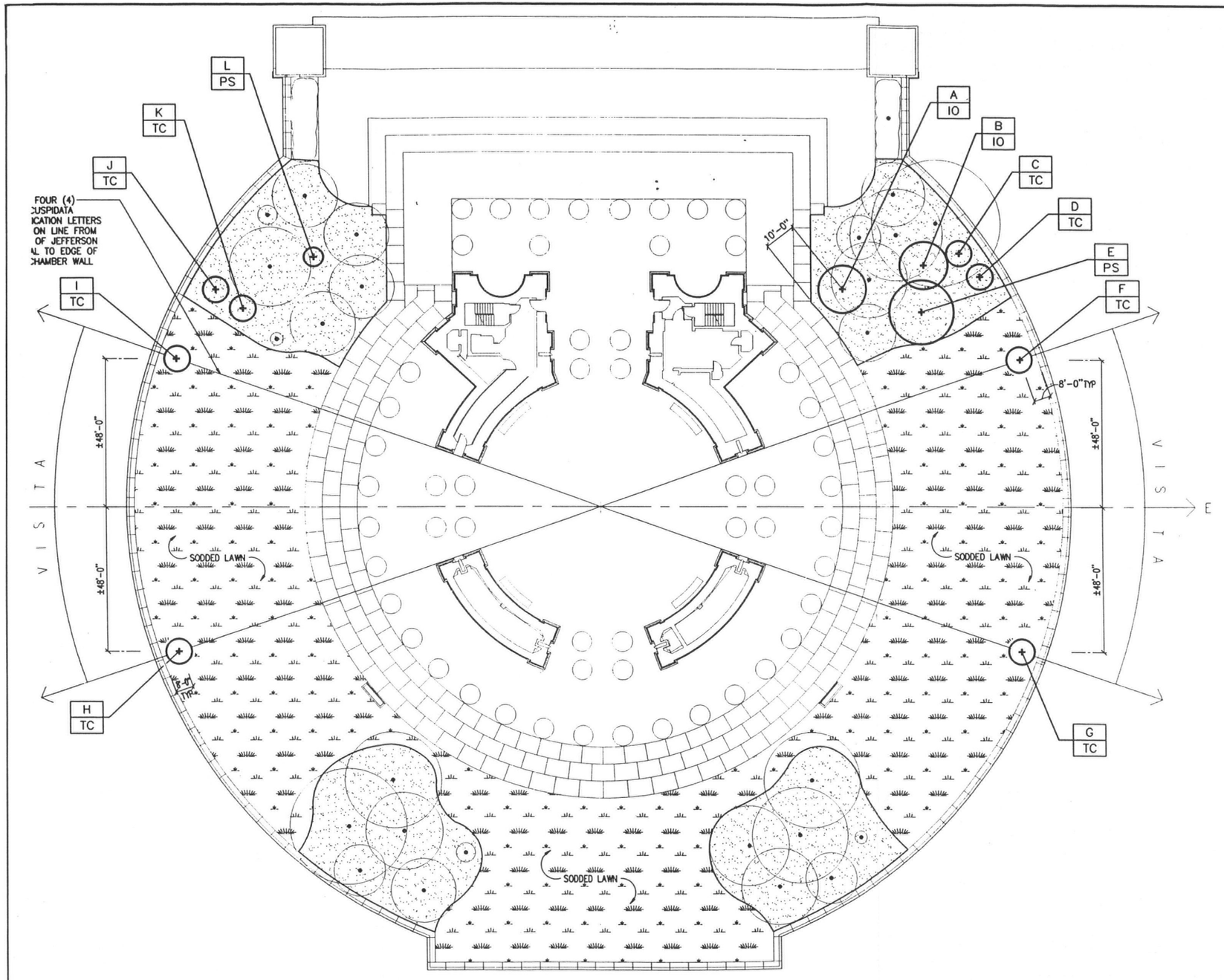
EXISTING PLANTING SCHEDULE AND WORK REQUIRED

1 / L2

STATE OF MARYLAND — No. 612 — LANDSCAPE ARCHITECT

DESIGNED: BJS DRAWN: GLJ TECH. REVIEW: BS DATE: 6/93	SUB SHEET NO. L3	TITLE OF SHEET: LANDSCAPE REMOVALS AND PROTECTION SCHEDULE	DRAWING NO. 808 / 41,008 PKG. NO. NACC 758C SHEET 25 OF 30

Figure 87 - Drawing No. 808/41008, 25 of 30, NACC 758c, Stylobate Mall Repairs, Landscape Removals and Protection Schedule, Stephenson and Good, July 27, 1993.



PLANTING PLAN (NEW AND EXISTING) 1/L5

PLANTING PLAN LEGEND

- EXISTING PLANT TO REMAIN
- NEW PLANT
- NEW 4" PINE NEEDLE MULCH
- NEW SODDED LAWN

PLANTING PLAN NOTES

1. SEE SCHEDULE 3 SUB SHEET L6
2. SEE PLAN 1 SUB SHEET A1 FOR ADDITIONAL PLANTINGS

STATE OF MARYLAND — BRIAN J. STEPHENSON — No. 612 — REGISTERED LANDSCAPE ARCHITECT

IF DRAWING IS REDUCED,
USE ONLY THE GRAPHIC SCALE

16 0 16 32
SCALE OF FEET

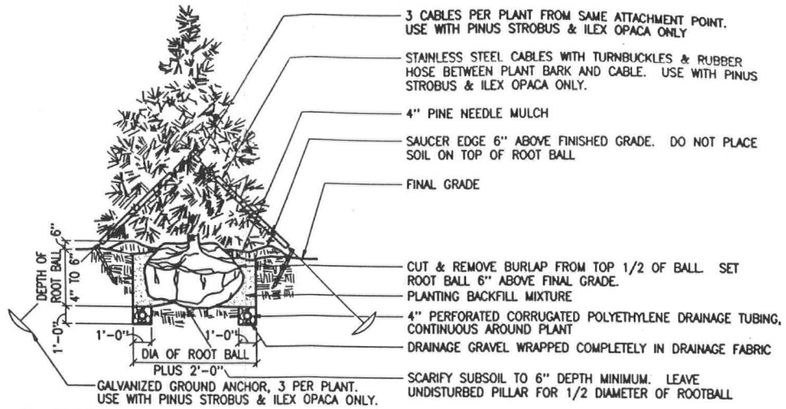
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
BJS	L5	PLANTING PLAN (NEW AND EXISTING)	808 / 41,008
DRAWN: GLJ			PKG. NO. NACC 758C
TECH. REVIEW: BS			SHEET 27 OF 30
DATE: 6/93			

Figure 88 - Drawing No. 808/41008, 27 of 30, Stylobate Mall Repairs, NACC 758c, Planting Plan, Stephenson and Good, July 27, 1993.

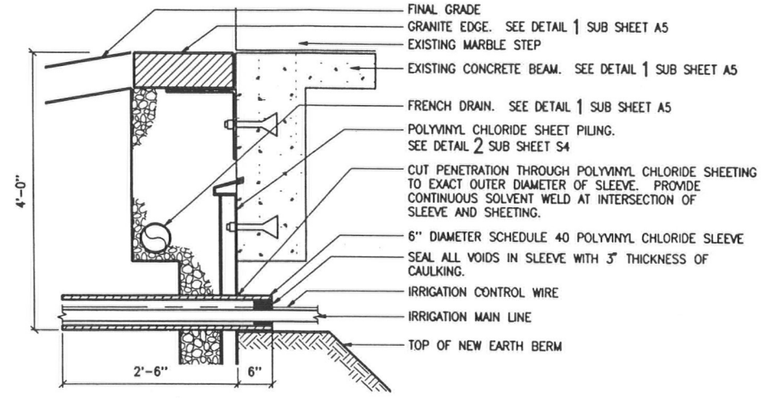
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	SPREAD	ROOT	REMARKS
		TREES & SHRUBS						
IO	1	ILEX OPACA	AMERICAN HOLLY	6–8"	14'–0" TO 16'–0"	10'–6"	B&B – 46" DIA	SINGLE STEM, UNSHEARED SPECIMEN, MALE PLANT, BRANCHED TO GROUND
IO	1	ILEX OPACA	AMERICAN HOLLY	6–8"	14'–0" TO 16'–0"	10'–6"	B&B – 46" DIA	SINGLE STEM, UNSHEARED SPECIMEN, BRANCHED TO GROUND
TC	1	TAXUS CUSPIDATA	JAPANESE YEW	–	6'–0"	10'–0"	B&B – 6'–0" DIA	UNSHEARED SPECIMENS, BRANCHED TO GROUND
TC	1	TAXUS CUSPIDATA	JAPANESE YEW	–	6'–0"	10'–0"	B&B – 6'–0" DIA	UNSHEARED SPECIMENS, BRANCHED TO GROUND
PS	1	PINUS STROBUS	EASTERN WHITE PINE	–	16'–0" TO 18'–0"	11'–0"	B&B – 50" DIA	UNSHEARED SPECIMENS, BRANCHED TO GROUND
TC	1	TAXUS CUSPIDATA	JAPANESE YEW	–	6'–0"	10'–0"	B&B – 6'–0" DIA	UNSHEARED SPECIMENS, BRANCHED TO GROUND
TC	1	TAXUS CUSPIDATA	JAPANESE YEW	–	6'–0"	10'–0"	B&B – 6'–0" DIA	UNSHEARED SPECIMENS, BRANCHED TO GROUND
TC	1	TAXUS CUSPIDATA	JAPANESE YEW	–	6'–0"	10'–0"	B&B – 6'–0" DIA	UNSHEARED SPECIMENS, BRANCHED TO GROUND
TC	1	TAXUS CUSPIDATA	JAPANESE YEW	–	6'–0"	10'–0"	B&B – 6'–0" DIA	UNSHEARED SPECIMENS, BRANCHED TO GROUND
TC	1	TAXUS CUSPIDATA	JAPANESE YEW	–	6'–0"	10'–0"	B&B – 6'–0" DIA	UNSHEARED SPECIMENS, BRANCHED TO GROUND
PS	1	PINUS STROBUS	EASTERN WHITE PINE	–	16'–0" TO 18'–0"	11'–0"	B&B – 50" DIA	UNSHEARED SPECIMENS, BRANCHED TO GROUND
IG	50	ILEX GLABRA	INKBERRY	–	30" TO 36"	–	B&B – 14" DIA	SEE DETAIL 1 SUB SHEET A1

ALL PLANT MATERIAL SHALL BE HAND DUG AND DRUM LACED. SEE SPECIFICATION SECTION 02950 FOR ADDITIONAL INFORMATION.

STRUCTION PLANTING SCHEDULE 3/L6



EVERGREEN PLANTING AT STYLOBATE MALL 1/L6
SCALE: NOT TO SCALE



TYPICAL POLYVINYL CHLORIDE SLEEVE FOR IRRIGATION PIPING 2/L6
SCALE: (A)

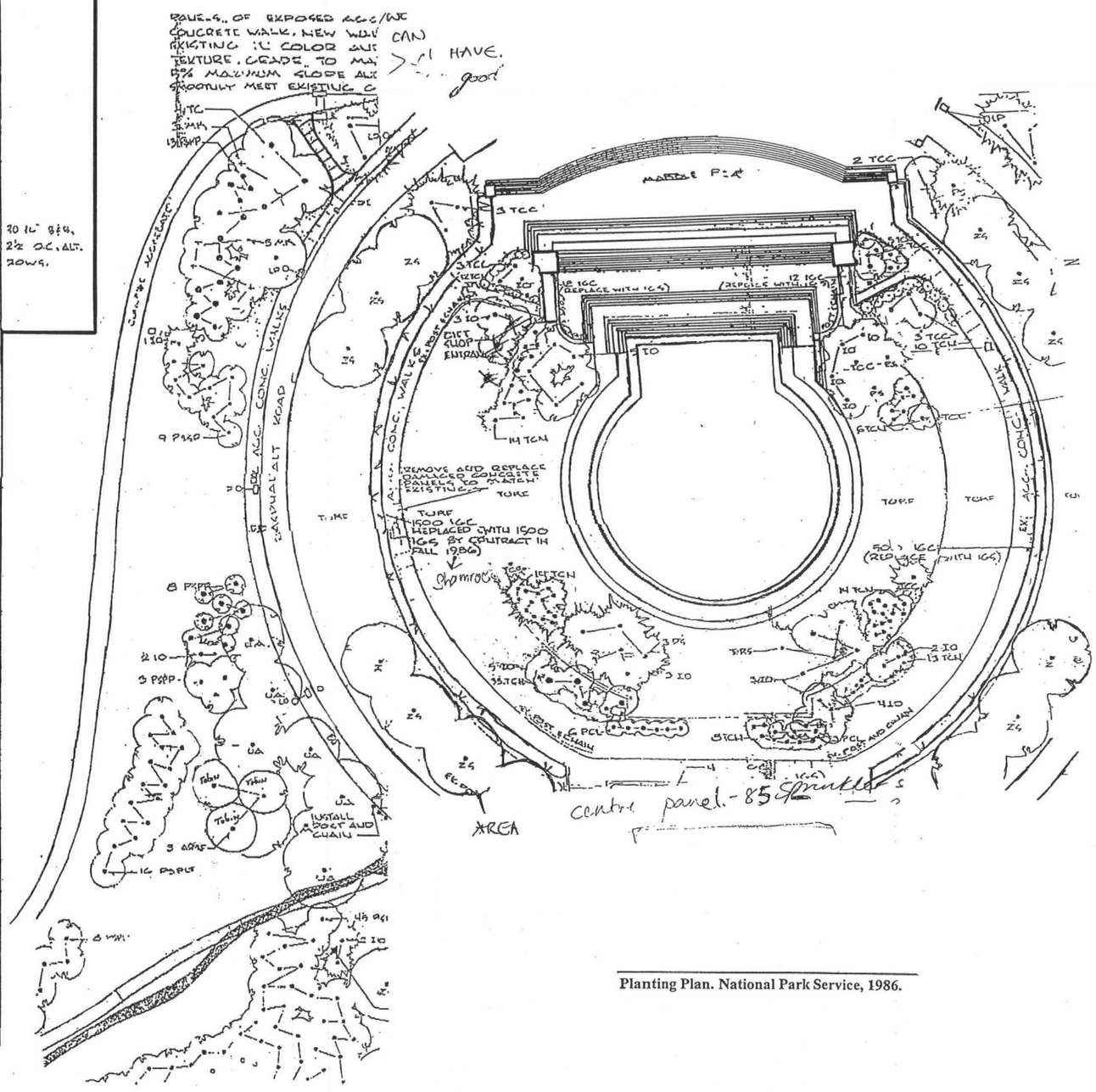
STATE OF HAWAII — No. 817 — REGISTERED LANDSCAPE ARCHITECT

IF DRAWING IS REDUCED, USE ONLY THE GRAPHIC SCALE
SCALE (A) 1 0 1 2
SCALE OF FEET

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
BJS	L6	PLANTING SCHEDULES & MISCELLANEOUS DETAILS	808 / 41,008
DRAWN: GLJ			PKG. NO. NACC 758C —
TECH. REVIEW: BS			SHEET 28 OF 30
DATE: 6/93			

Figure 89 - Drawing No. 808/41008, 28 of 30, Stylobate Mall Repairs, NACC 758c, Planting Schedules and Miscellaneous Details.

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANT. EXIST.	QUAN. ADDED	DESCRIPTION
AFAF	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	3		
AS	ACER SACCHARUM	SUGAR MAPLE	3		
C	CRATAEGUS SPP.	HAWTHORNE	4		
IGC	ILEX GLABRA COMPACTA	COMPACT INKBERRY	3856		
IGS	ILEX GLABRA 'SHAMROCK'	SHAMROCK HOLLY		3856	30 IN. BTB. 2½ O.C. ALT. ROWS.
IO	ILEX OPACA	AMERICAN HOLLY	58		
M	MALUS SPECIES	CRABAPPLES	22		
MR	MALUS 'RADIANT'	RADIANT CRABAPPLE	2		
PO	PLATANUS OCCIDENTALIS	SYCAMORE	2		
PS	PINUS STROBUS	WHITE PINE	17		
PYCP	PRUNUS YEDOENSIS	YOSHINO FLOWERING CHERRY	217		
PCL	PYRACANTHA COCCINEA LALANDI	LALAND FIRETHORN	9		
QP	QUERCUS PHELLOS	WILLOW OAK	2		
TC	TILIA CORDATA	LITTLE LEAF LINDEN	4		
TCC	TAXUS CUSPIDATA 'CAPITATA'	UPRIGHT JAPANESE YEW	12		
TCH	TAXUS CUSPIDATA 'HALLII'	DWARF JAPANESE YEW	144		
UA	ULMUS AMERICANA	AMERICAN ELM	25		
Z	ZELKOVA	JAPANESE			



Planting Plan. National Park Service, 1986.

Figure 90 -Planting Plan. National Park Service, 1986.

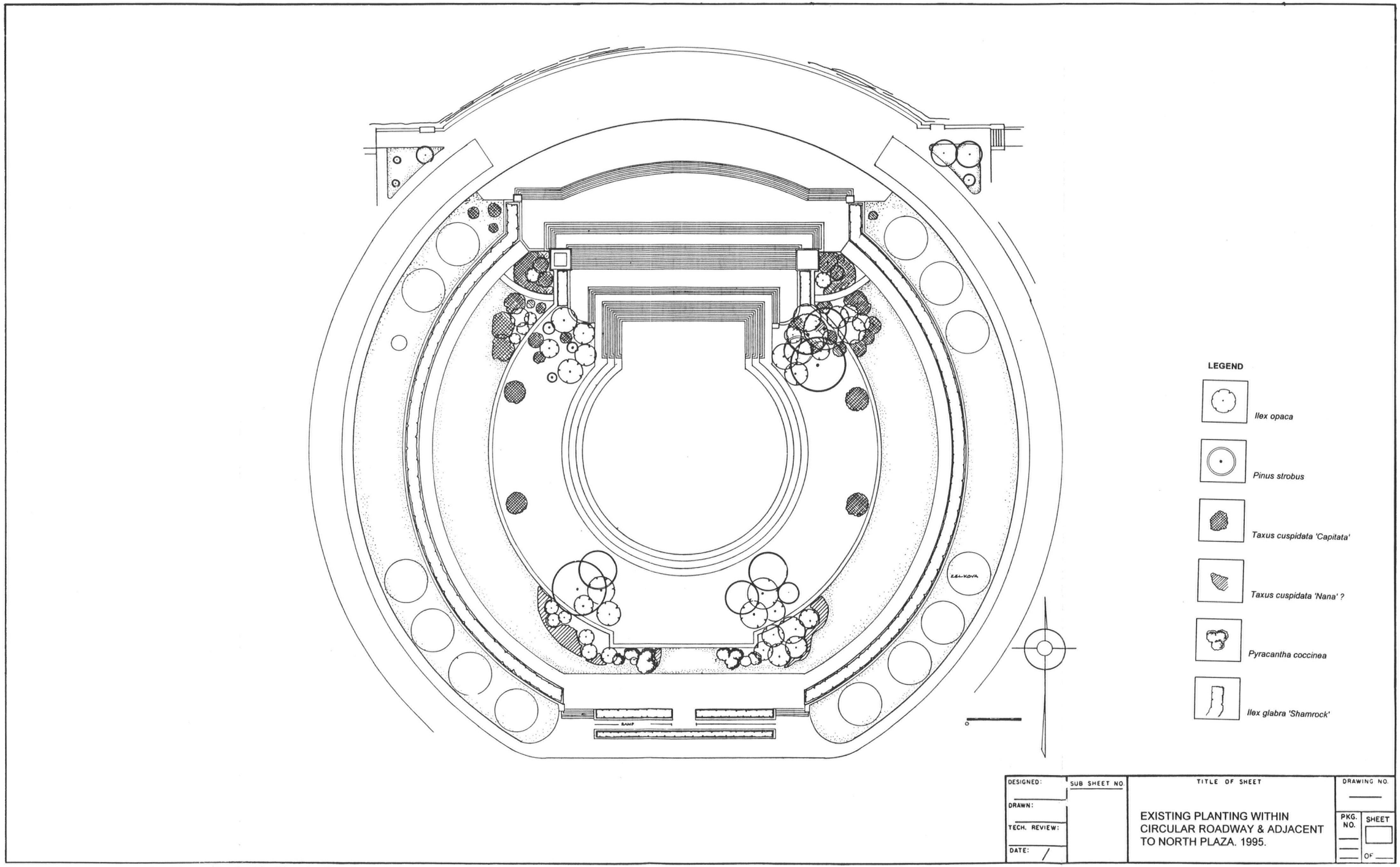


Figure 91-Survey of Existing Vegetation Inside Circular Roadway, 1995.

JEFFERSON MEMORIAL

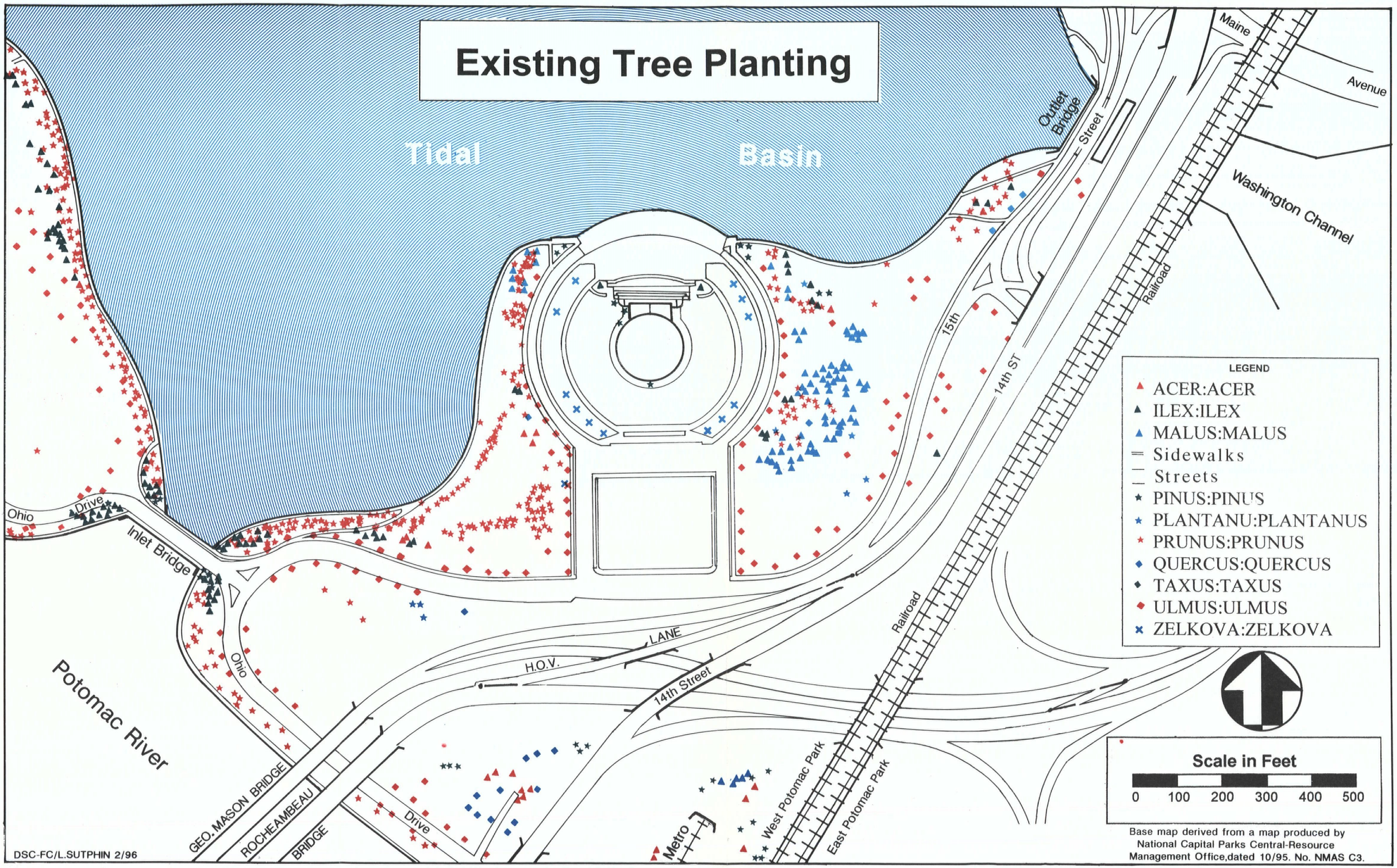


Figure 92-Survey of Existing Trees, 1995.

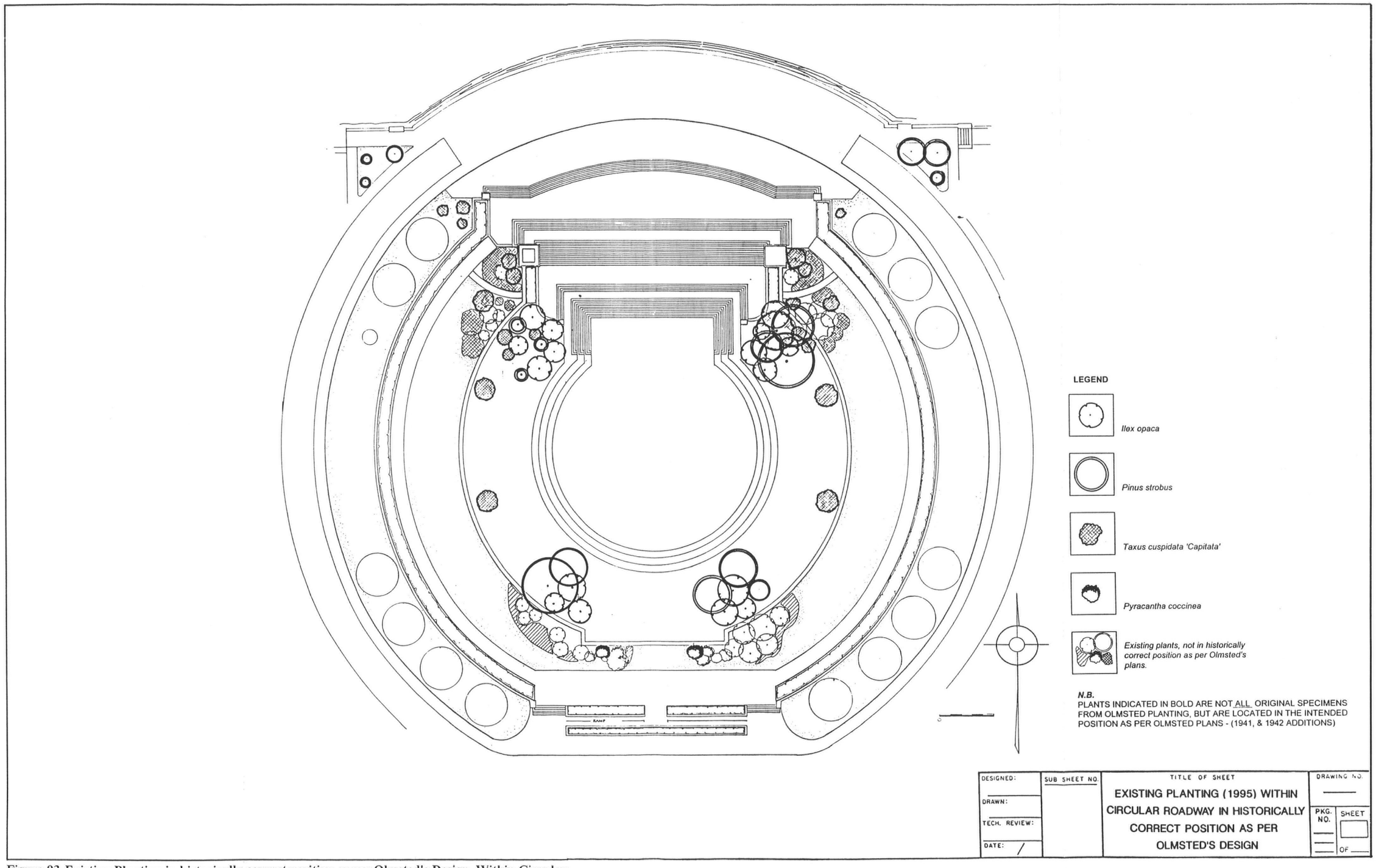


Figure 93-Existing Planting in historically correct position as per Olmsted's Design, Within Circular Roadway, 1995.

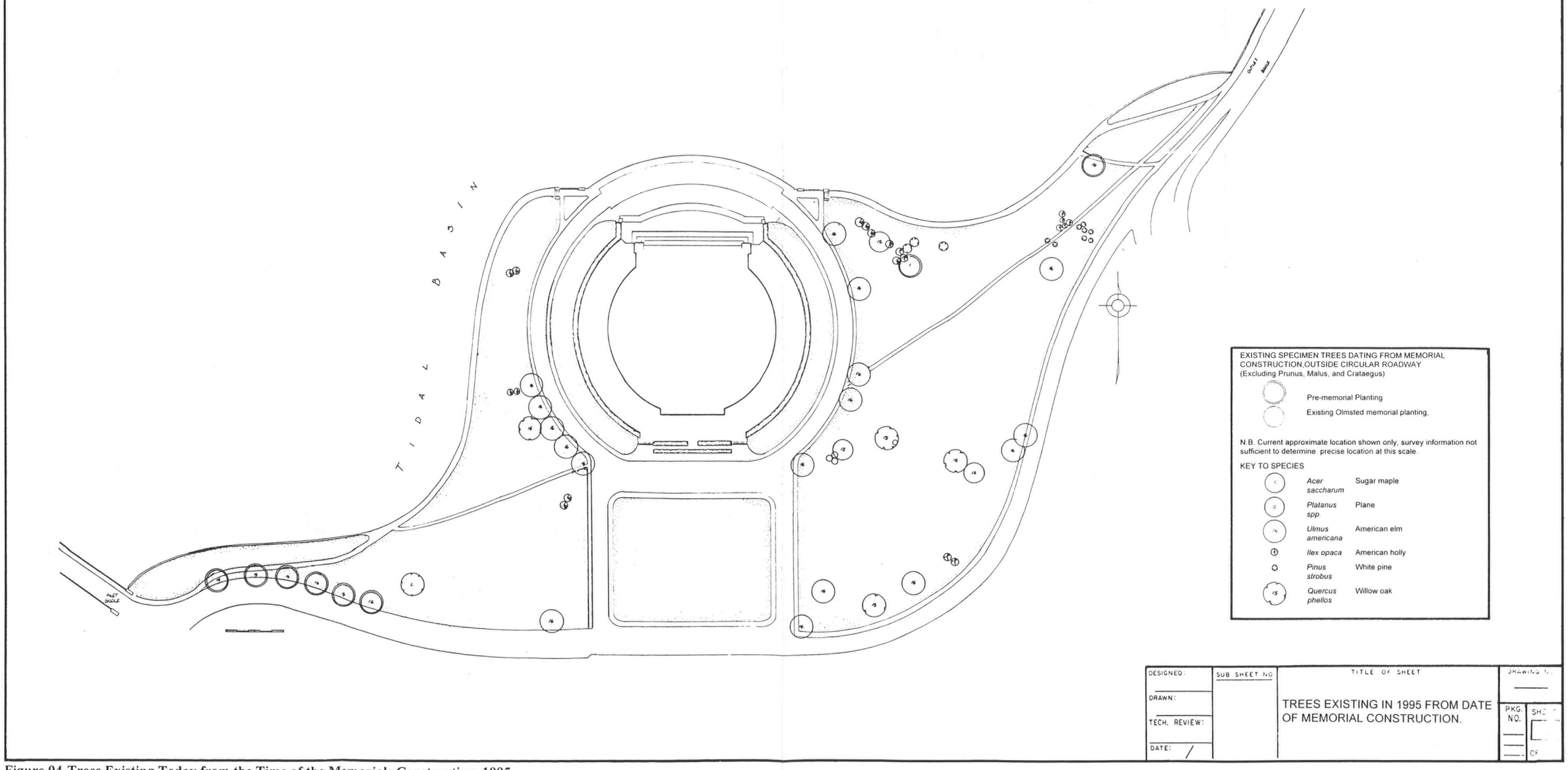


Figure 94-Trees Existing Today from the Time of the Memorials Construction, 1995.

3.8. STRUCTURES

The only other structure in the immediate vicinity of the study area is a "tent-roofed" refreshment kiosk at the south side. This is similar in design to other kiosks used throughout the monumental core for refreshments, information, tourmobile sales, souvenirs, etc..



Figure 95-Refreshment Kiosk, 1995.

3.9. SMALL SCALE FEATURES - SITE FURNITURE

3.9.1. STREETSCAPE MANUAL

The roads around the Jefferson Memorial are designated "Park Roads and Drives", as classified in the Interagency Initiative for National Mall Road Improvement program's "Streetscape Manual," produced in August 1992. This classification states that:

> *These roadways provide direct access to the open spaces, parks, monuments, memorials and museums in the area. The character of the streetscape should generally reflect park-like qualities and landscaping related to the surroundings.*[33]

3.9.2.GENERAL

Various styles of site furniture existon the site today. They vary in age and condition and detract from the appearance and setting of the Jefferson Memorial. Different components within the general landscape setting appear to have been added in a piecemeal fashion to suit the immediate needs of the time, rather than fit into a structured management plan or approach for the area. The treatment of the roadway around the rectangular grassed area to the south of the memorial is outlined in the Streetscape Manual, but does not deal with the Jefferson site as a whole. Except for the lighting which can be seen in figure 84 there is no specific mention of site furniture in the original designs for the landscape.

3.9.2.1. Trash Receptacles

Many of the trash receptacles are of different styles and shabby, in particular, the wire basket type would look more in keeping in an unused parking lot than the third most visited of the Nation's memorials. Tulip-type trash and recycling receptacles occupy the immediate vicinity of the memorial, whereas the wire basket (parking lot type) is distributed around the rest of the site. The tulip-type trash receptacle is standard for all downtown parks and streetscape areas. It could, however, be perceived as unfortunate that the area immediately adjacent to the memorial has been designated for park style receptacles, given its formality and classical style. Yet another style of receptacle is located on the north plaza steps. (See figure 96 & 97. Different trash receptacles at the Thomas Jefferson Memorial.)

3.9.2.2. Planters

The concrete planters on the plaza at the edge of the Tidal Basin are of differing sizes and contain conifers whose growth has been stunted by their containers. The planted appear to have been put there after the 1970s repairs and subsequently left, giving an impression of site furniture from a date not in keeping with the rest of the site's design.

They were originally added for two reasons:

---

[33]Streetscape Manual, Architectural and Engineering sub group. August 1992.

1. To define the edge of the seawall and discourage people from stepping off it.

2. To provide color in seasonal floral displays. Unfortunately, the surviving shrubs do not fulfill this intention. If they are to remain they should be replaced.

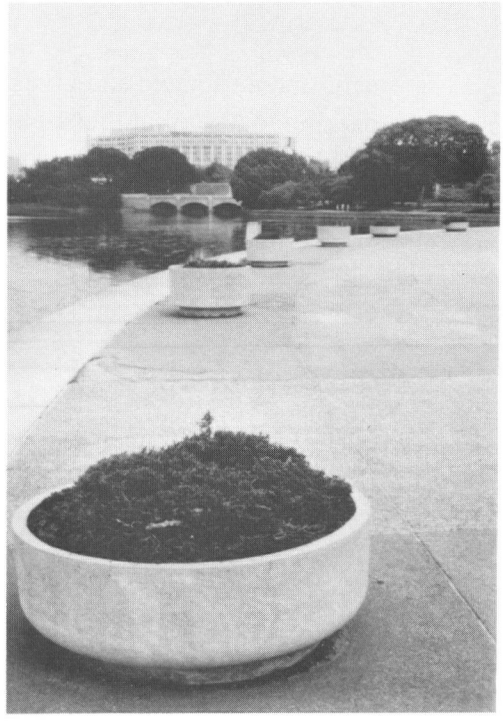
3.9.2.3. Lighting

Some of the street lighting appears to be 'Washington globe' as described in the Streetscape Manual pg. 13, N1.

3.9.2.4. Signage

Signage too, seems uncoordinated and gives the area a cluttered appearance, especially when arriving at the parking lot. Parking restriction signs are placed at close intervals around the grass rectangle making them appear over prolific (see figure 96). The Streetscape Manual states that this issue will be the subject of a separate study, therefore it is not addressed in the manual.





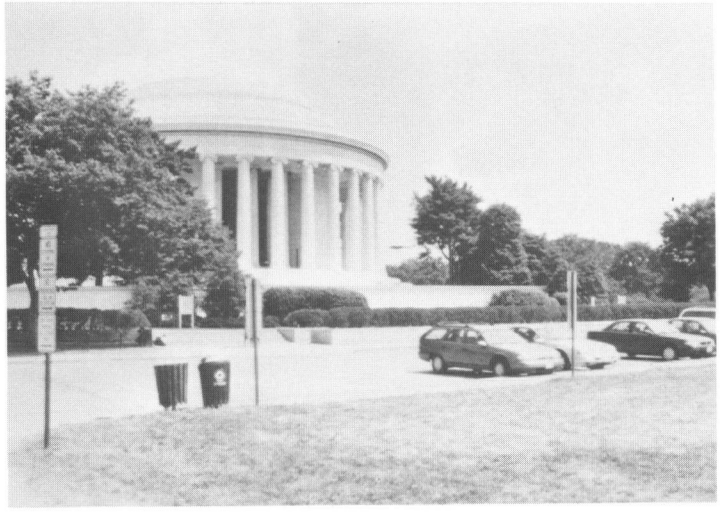


Figure 96 - Wire Basket Receptacles, abundant Parking Signs, and 70s concrete planters,1995.



Figure 97 - Third Style of Trash Can on Memorial Steps

3.9.2.5. Barriers/Fencing

Grass erosion adjacent to the paths is apparent and obviously a problem. The location of the post and chain barriers is unfortunate in that they are set back just enough from the path to allow the visitor to wander onto the edges and therefore cause wear.

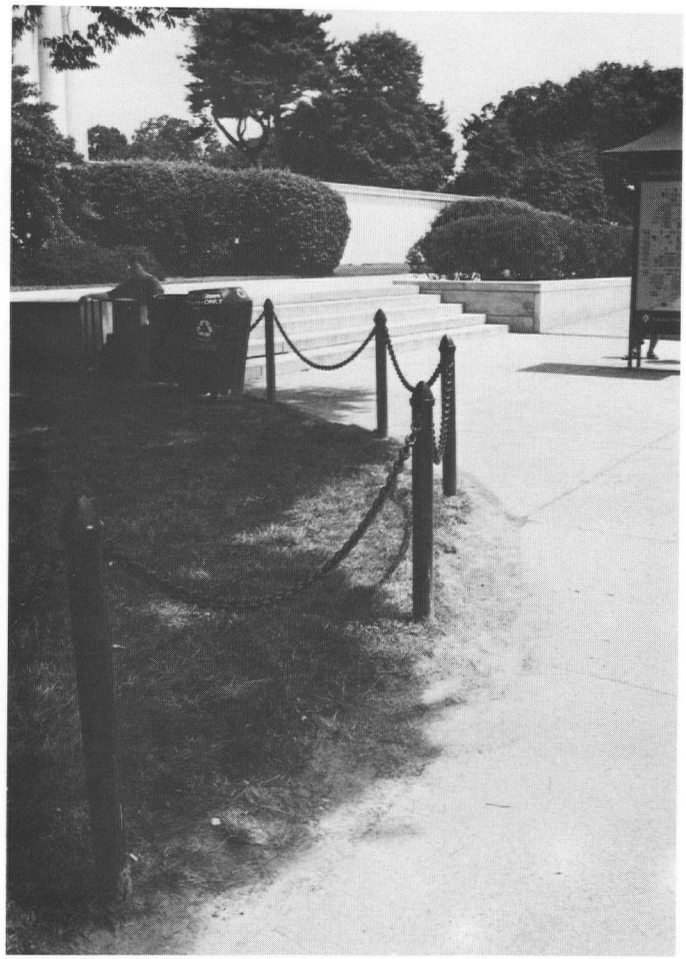


Figure 98-Grass Erosion to the South, 1995

The area of grass on the terrace mall has a "temporary" picket iron and rope barrier. This obviously goes a long way in preventing people from wandering on to the grass but does not enhance the appearance of the memorial.

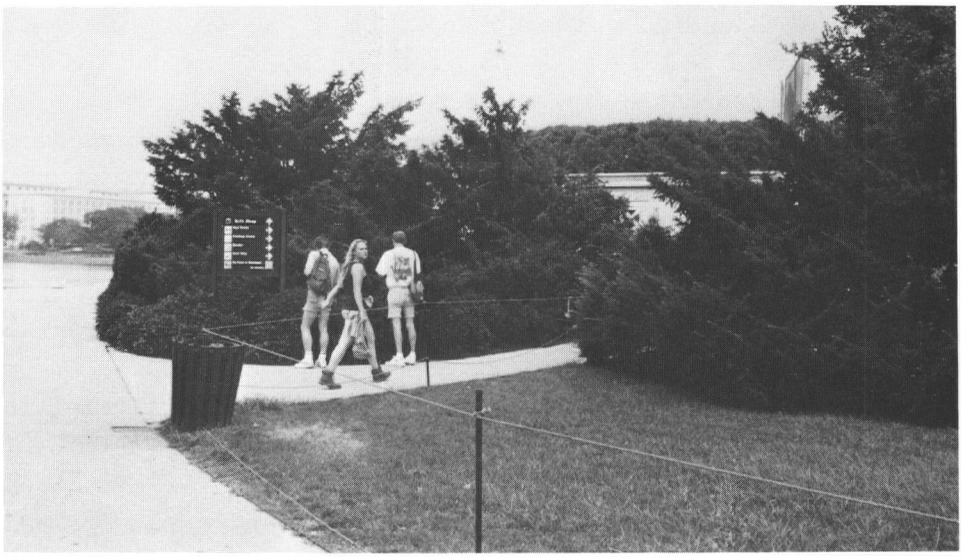


Figure 99-Temporary Picket Fencing on Terrace Walk

3.10. HARD SURFACES

3.10.1. THE WIDER STUDY AREA

Surfacing material differs around the study area. The sidewalks are comprised of a mixture of exposed aggregate, smooth concrete and tarmac/asphalt. (See figure 102, Existing Path Surfaces) The approach path adjacent to the Tidal Basin on the west side is made up of sections of asphat and concrete; the one to the east is largely asphalt. Exposed aggregate concrete is used in the immediate vicinity of the memorial and on the sidewalks of the circular road as it was in the original design. The sidewalks at the parallel roads are surfaced in asphalt.

Both concrete and asphalt repairs are prolific all over the site, on the approach paths and sidewalks and surfaces within the terraces and plazas of the memorial. The variety of surfacing materials makes for a patchwork effect of different colors and textures, detracting significantly from the landscape setting and therefore the grandeur of the memorial itself. Original surfacing materials and path layout across the site are shown on figure 101.

3.10.2. TRANSITION ROADWAY/PLAZA GRADES

Due to the continual settlement since the memorial's construction, sections of the circular roadway are at a considerably lower grade than the main plaza. In order for the plaza to meet the circular road transition section a "transition section" had to be constructed at the time of the plaza construction as can be seen in figure 103, "1995 Existing surfaces around Memorial."

3.10.3. PLAZA (See figures 107.)

The northern plaza is in a serious state of disrepair and in desperate need of total replacement with appropriate paving materials and design which respect the architecture, scale and materials of the memorial. Installed in 1970, it was described by the National Park Service as follows:

> *The most prominent visible portion of the renovation is a multicolored plaza at the base of the front steps. This replaced the macadam road, curbing, gutters, sidewalk and small concrete plaza. Future planning calls for the prohibition of vehicles from driving around the memorial. With the new landscape design there is no curb, sidewalk, wall or railing marking the boundary between the plaza and the Tidal Basin. The contractor completed his contract on December 16, 1970.*[34]

[34]National Park Service, Annual Report. December, 1970

3.10.4. VEHICLES (See figures 75.)

Despite the 1970s attempts at prohibiting vehicles from being driven around the memorial, vehicles are often parked on the plaza adjacent to the Tidal Basin. It is unlikely, however, that without the use of bollards this will be prevented. The circular road also gives visitors the impression that vehicular access to the north of the memorial is possible.

3.10.5. MATERIALS

The material used for the 70s plaza appears incongruous in relation to those used in the construction of the rest of the memorial. While there was no expense spared in the choice of the original building materials used in the construction of the memorial itself, the budget for the landscaping works was limited even in the original design. The use of concrete curbs instead of granite is indicative of this. The replacement of the original roadway with the plaza, as it exists today, also looks as if it was primarily a functional design option, the choice of materials having been restricted by financial constraint.

3.10.6. ENTRANCE STEPS (See figures 105)

The entrance steps are out of alignment and in need of attention. See the rreference in "Preservation and Restoration of the Jefferson Memorial - Phase I Report, Feb 1990," page 9, figure structural section.

3.10.7. STEPS TO NORTH-EAST AND WEST OF PLAZA (See figures 106.)

The two sets of steps alongside the Tidal Basin leading to the plaza area are also out of alignment due to settlement and constitute a tripping hazard.

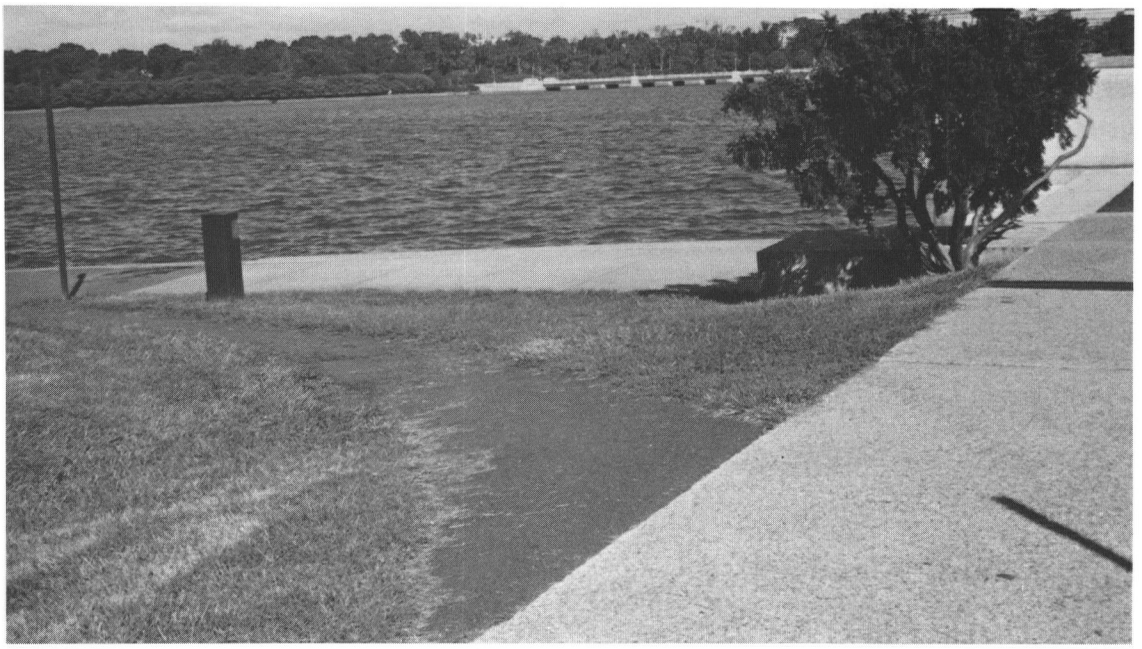


Figure 100 - 'Temporary' Asphalt Ramp

As mentioned previously in the *Access and Circulation* section of this report, the temporary asphalt ramps which by-pass these two sets of steps do not conform to the Americans with Disabilities Act of 1990 or the Uniform Federal Accessibility Standards and the issue should be reassessed. Changes in grade at the junction between these paths and steps to the west are as much as three inches.



Figure 101 - Change of Level at Ramp/Steps adjacent to Tidal Basin, west of Memorial

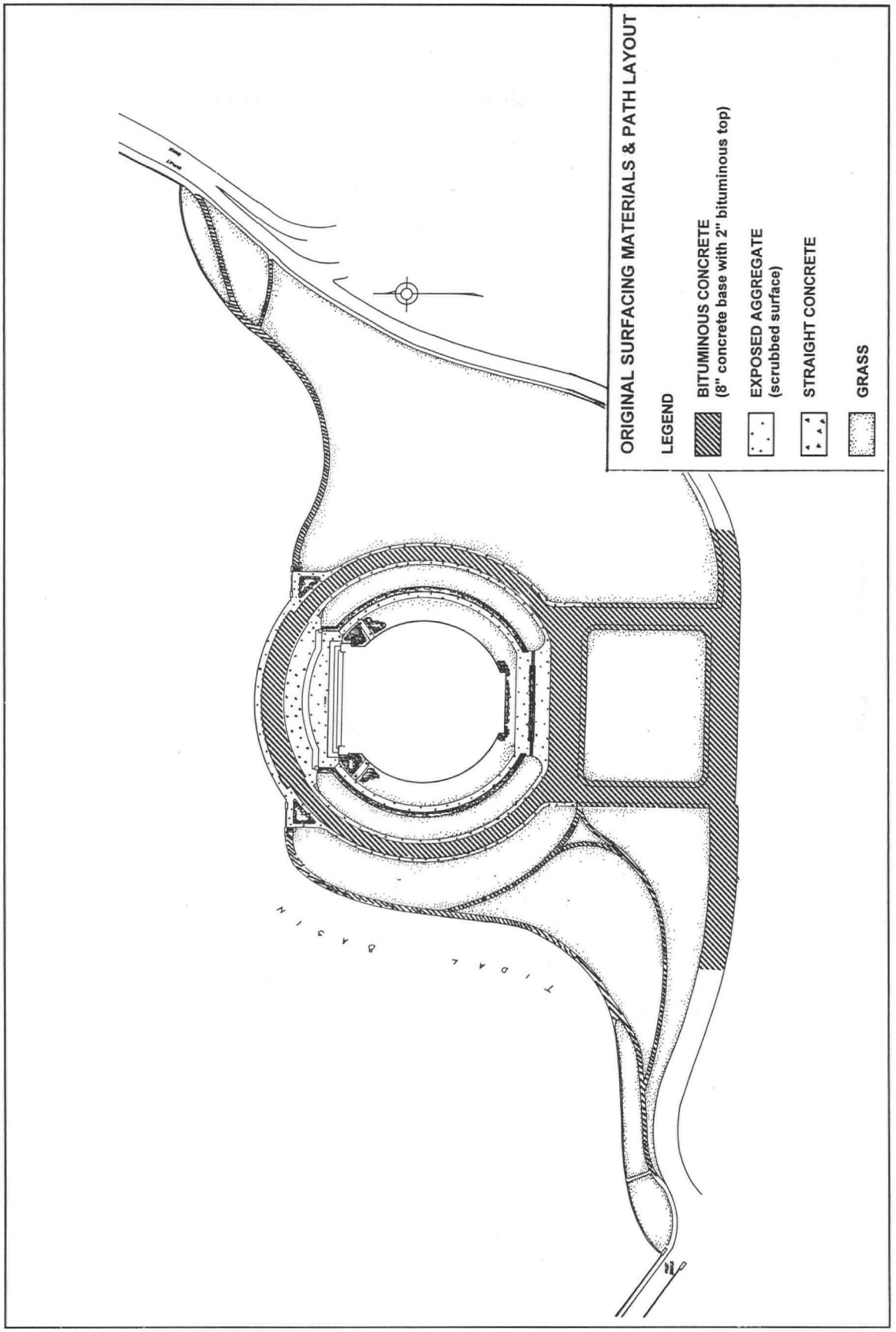


Figure 102 - Original Path Layout Surfacing Materials.

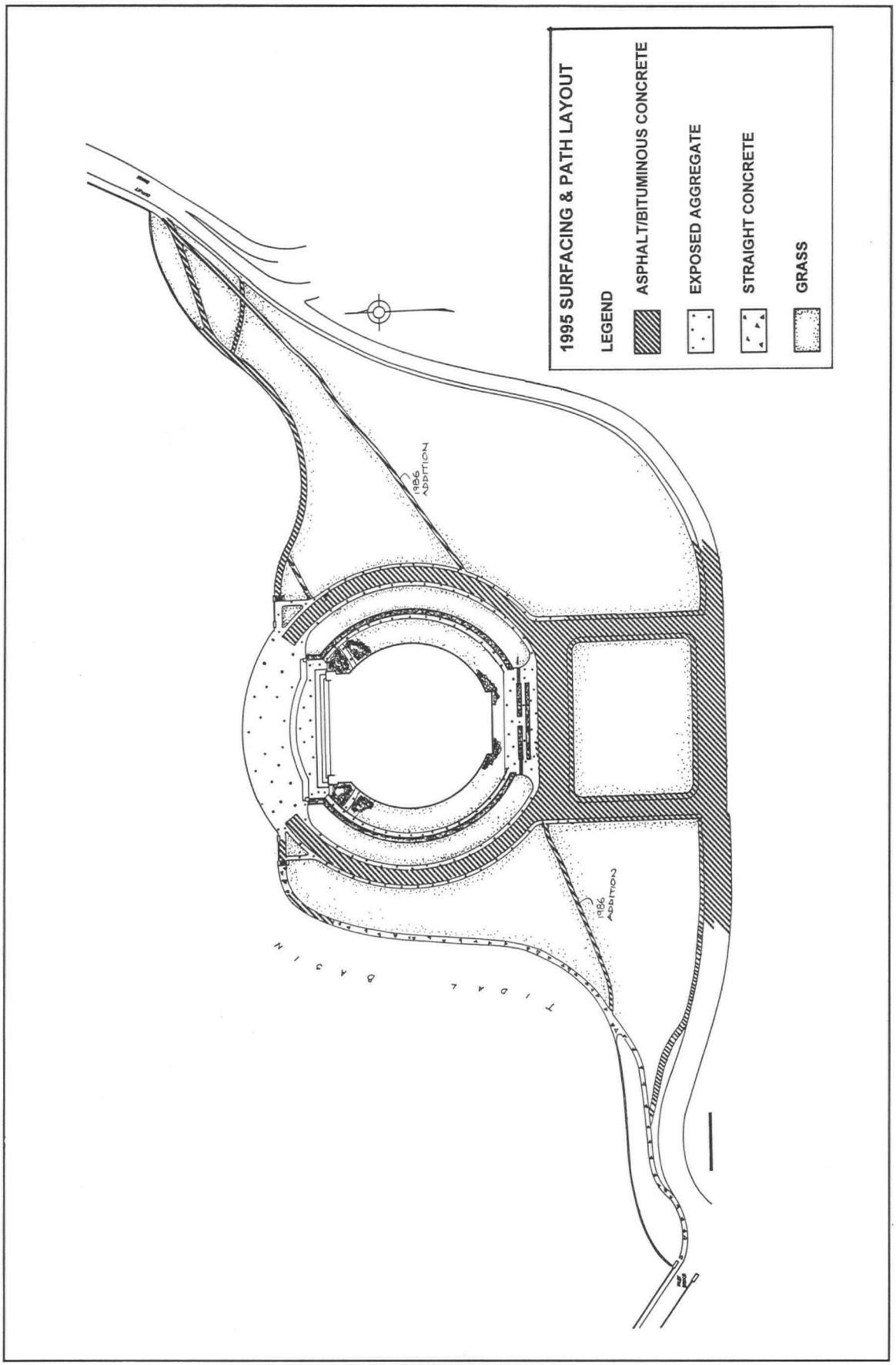


Figure 103-Existing Path/Surfacing Materials Plan. 1995.

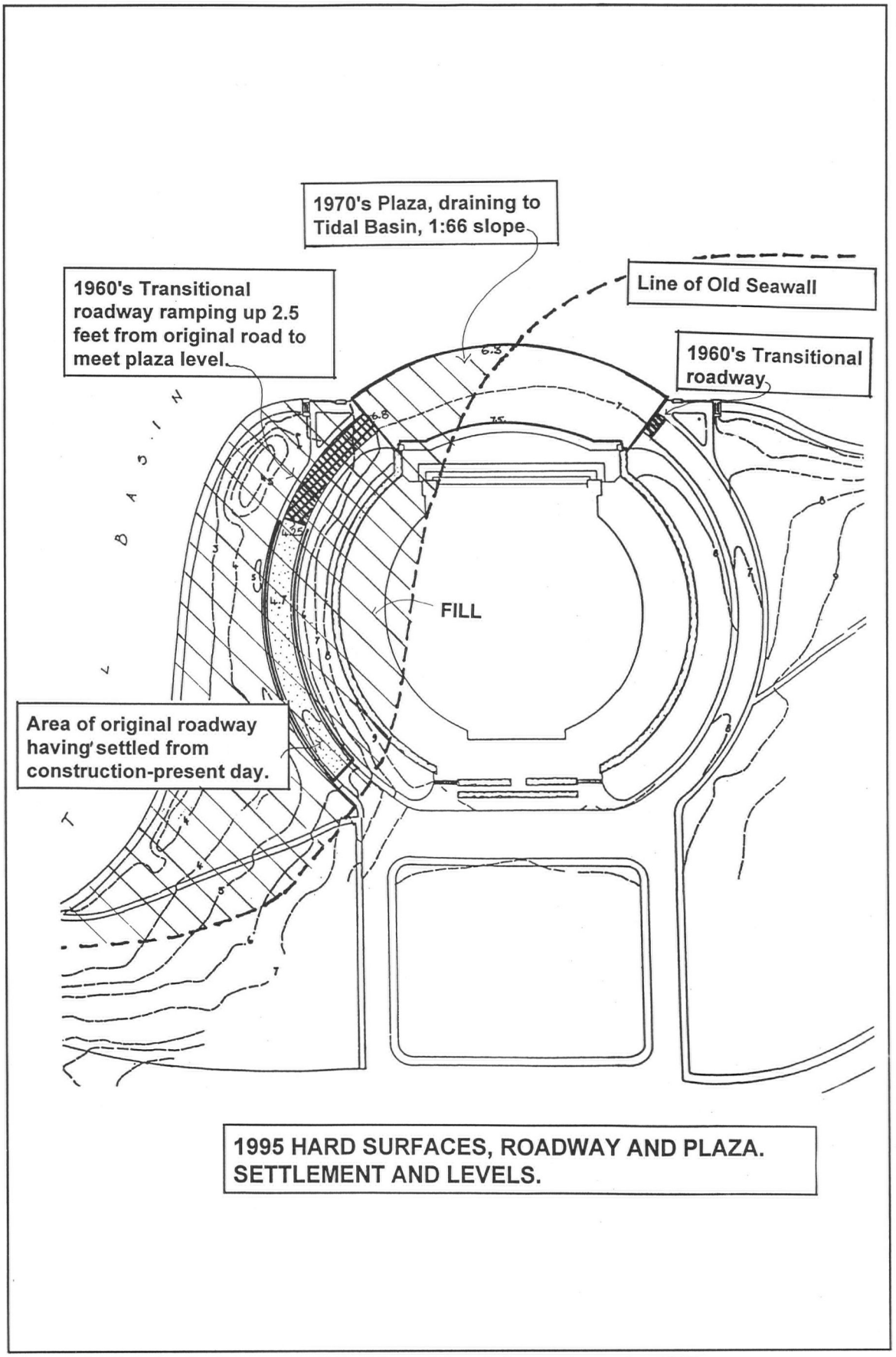


Figure 104-Existing Surfaces around the Memorial and changes in grade. 1995.

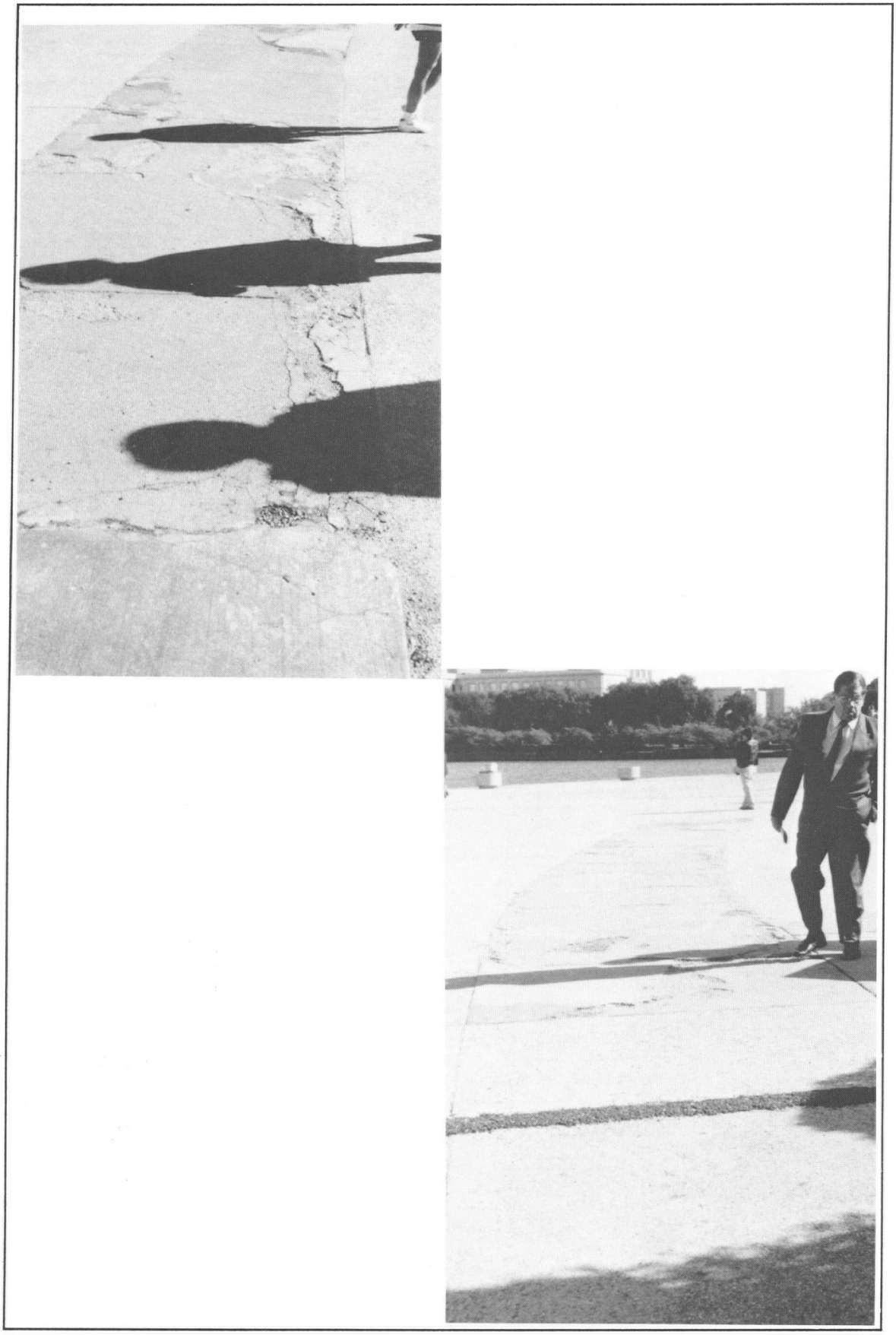


Figure 105-North Plaza, Showing Spalling of Concrete, Deteriorated Surface causing Tripping Hazard.



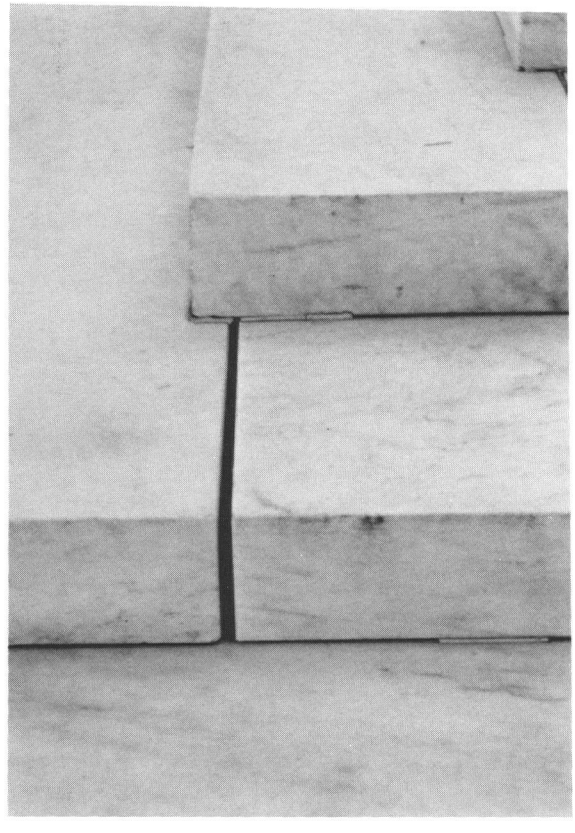
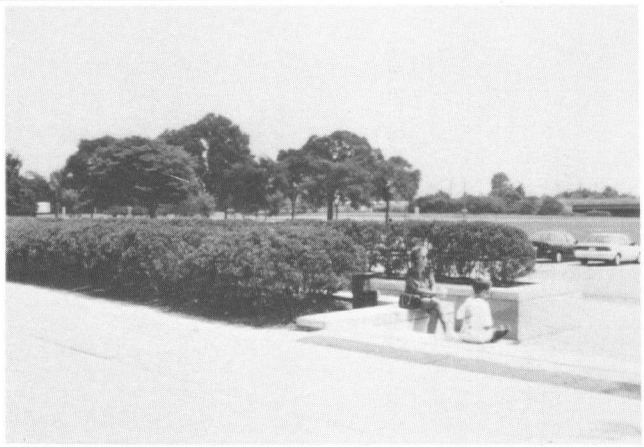


Figure 106-Misaligned Steps causing Tripping Hazard. 1995.





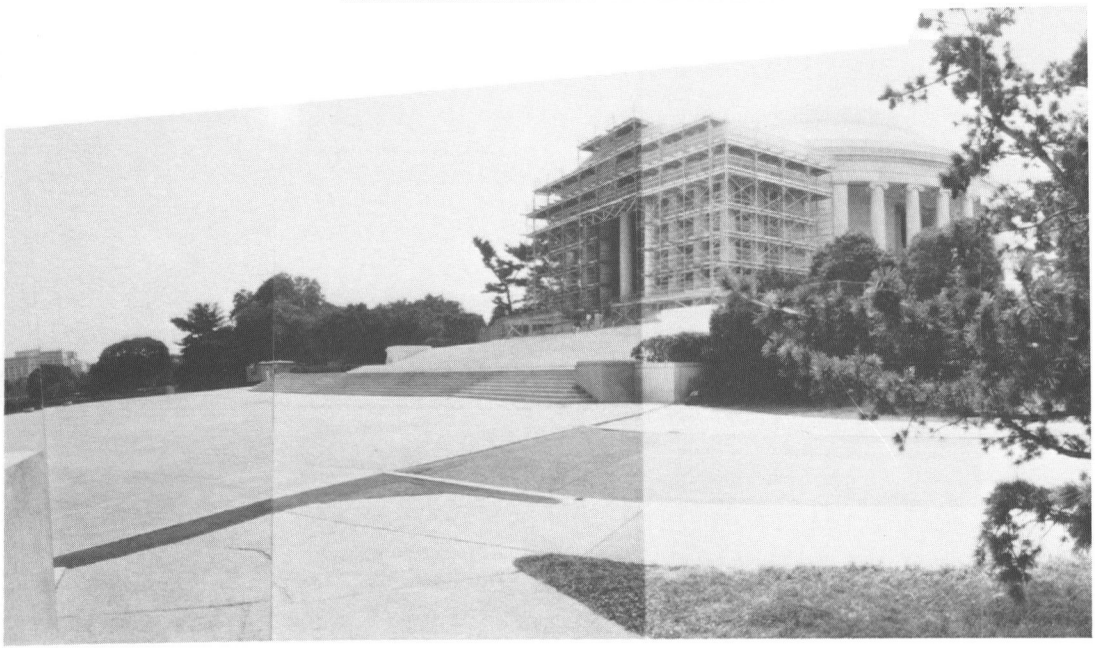


Figure 107-Changes in Surfacing, level changes, asphalt repairs.



Figure 108 - Changes in Surfacing, disintegrating curbs. 1995.

4. OPTIONS FOR RESTORATION/RECONSTRUCTION

This section discusses the possibilities with regard to the design and subsequent reconstruction or restoration of both the plaza/road surfacing and the planting surrounding the memorial. Both depend on the preservation philosophy that the National Park Service adopts with regard to each, and are dealt with separately.

4.1. PLAZA

Options for the design of the plaza and its subsequent renewal depend on the preservation philosophy of the National Park Service. There are several alternatives, three of which include:

1. Returning to the historic 1940s design which involves reintroducing the circular roadway to the north plaza.

2. Taking the historic 1940s design concept and modifying it to satisfy modern standards. This might incorporate materials which are more appropriate for modern pedestrian use and for the aesthetics of the site.

3. Rebuilding the plaza as per the 70s design, as it is today. This option defines the plaza as a separate entity from the circular road, departing from the original design concept.

4. Taking the unbuilt-design solution offered by Eggers and Higgins in 1939 and turning the roadway surrounding the memorial into a broad pedestrian walkway, negating the need for sidewalks. This walkway would culminate in the plaza to the north.

The sketches on the following pages show the existing roadway plaza from the east and then alternatives for paving.

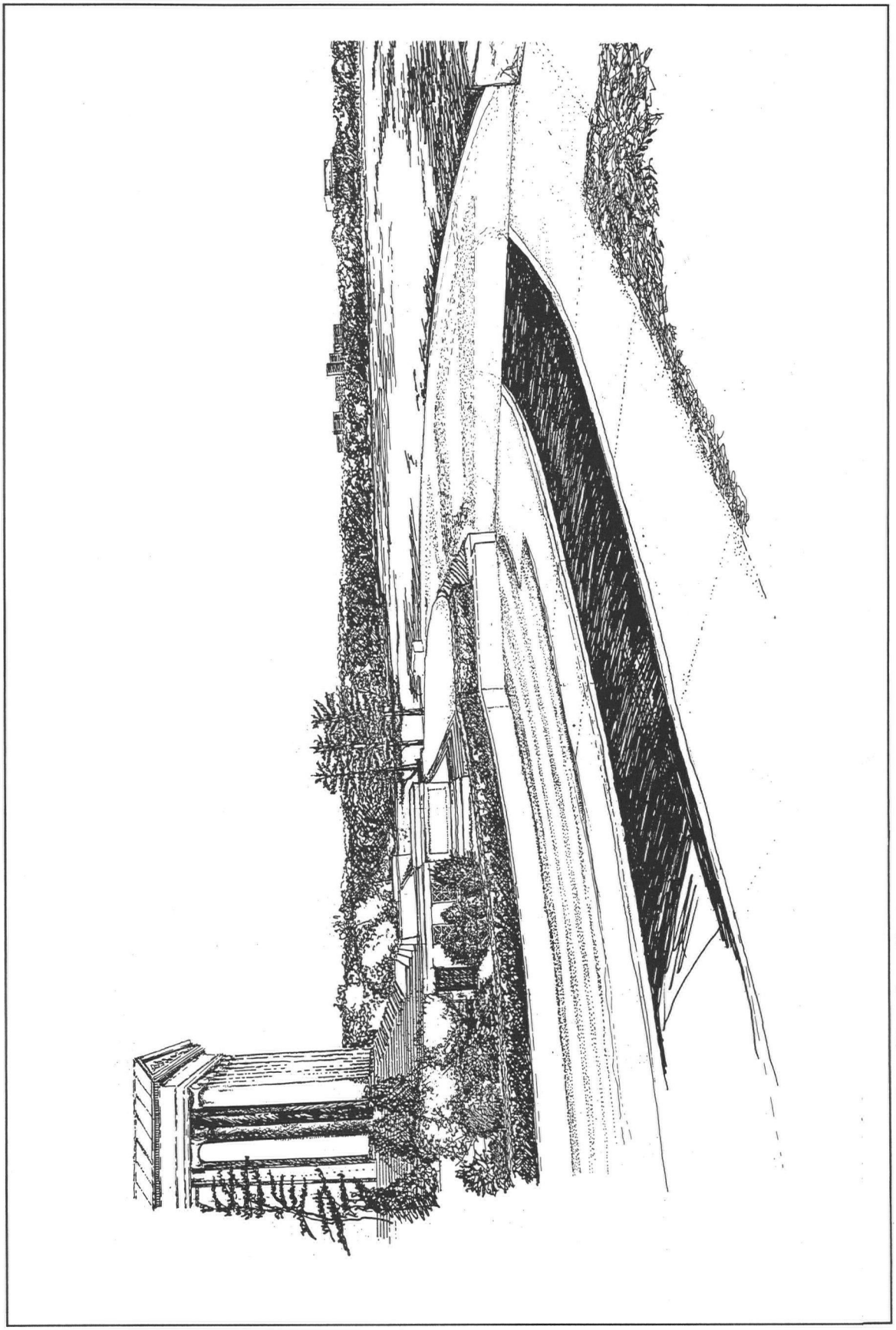


Figure 109 - Existing Roadway Plaza from East

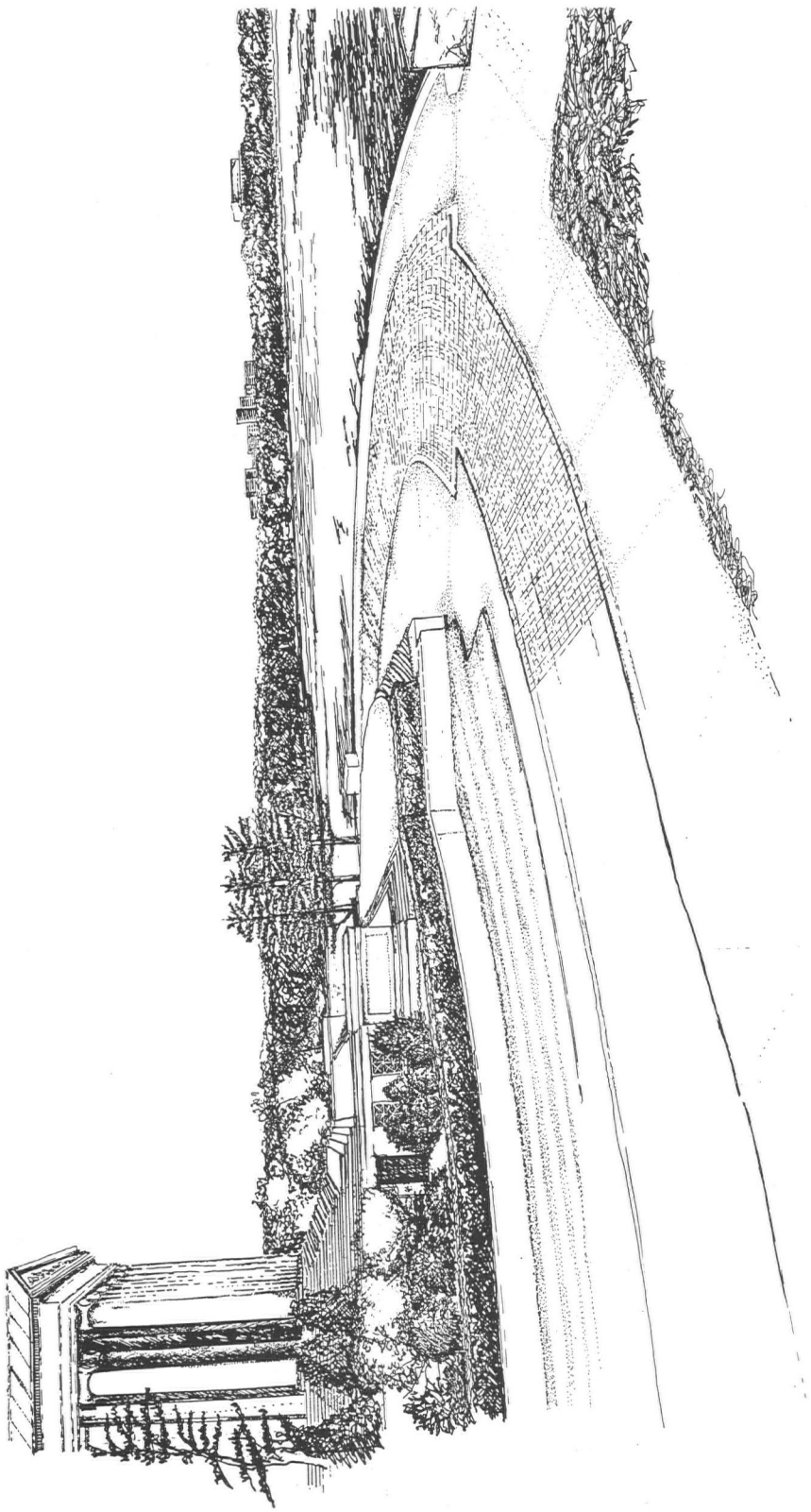


Figure 110 - Original Road Layout using Small Unit Pavers - No Curb

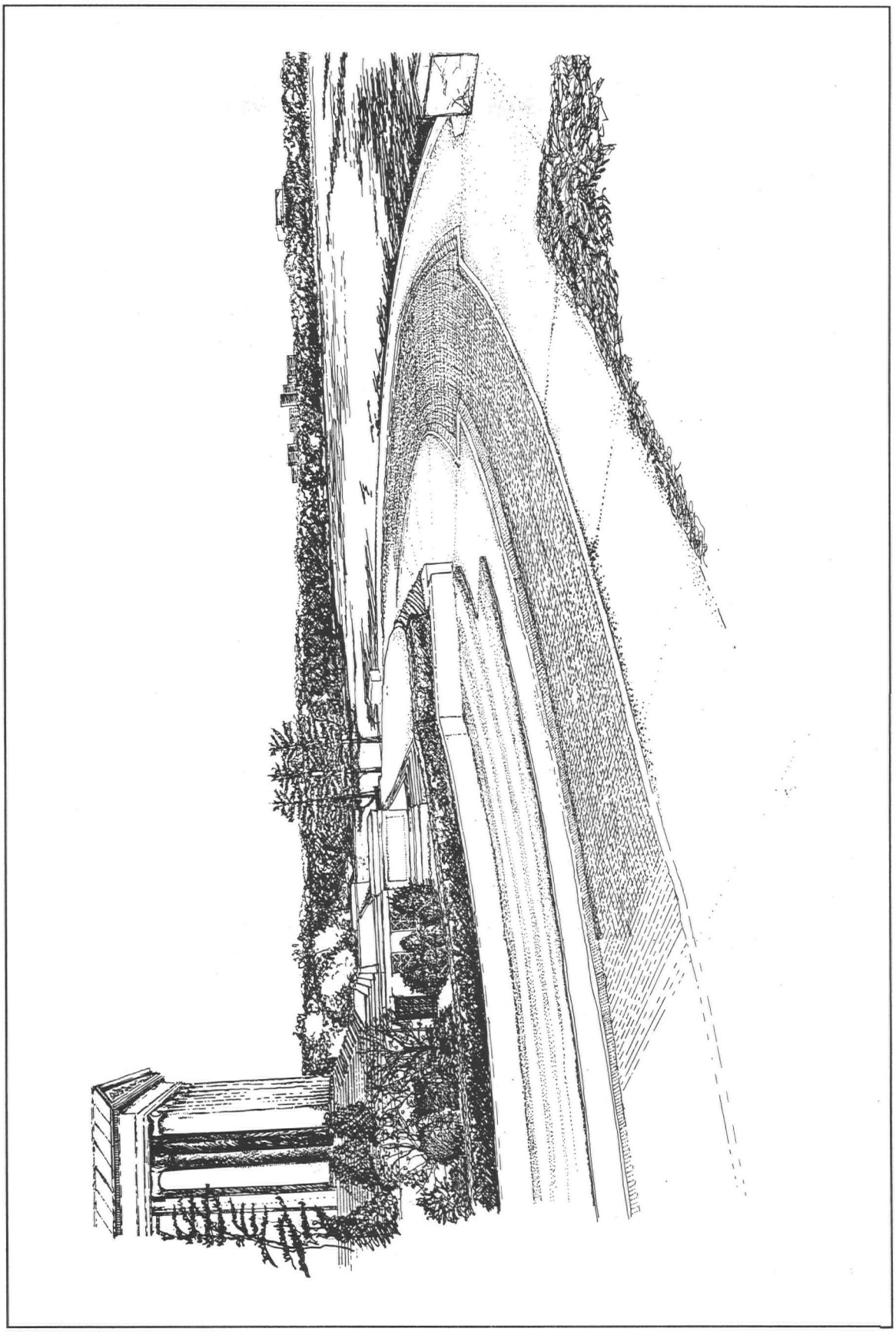


Figure 111 - Original Road Layout using Small Unit Pavers and Curb

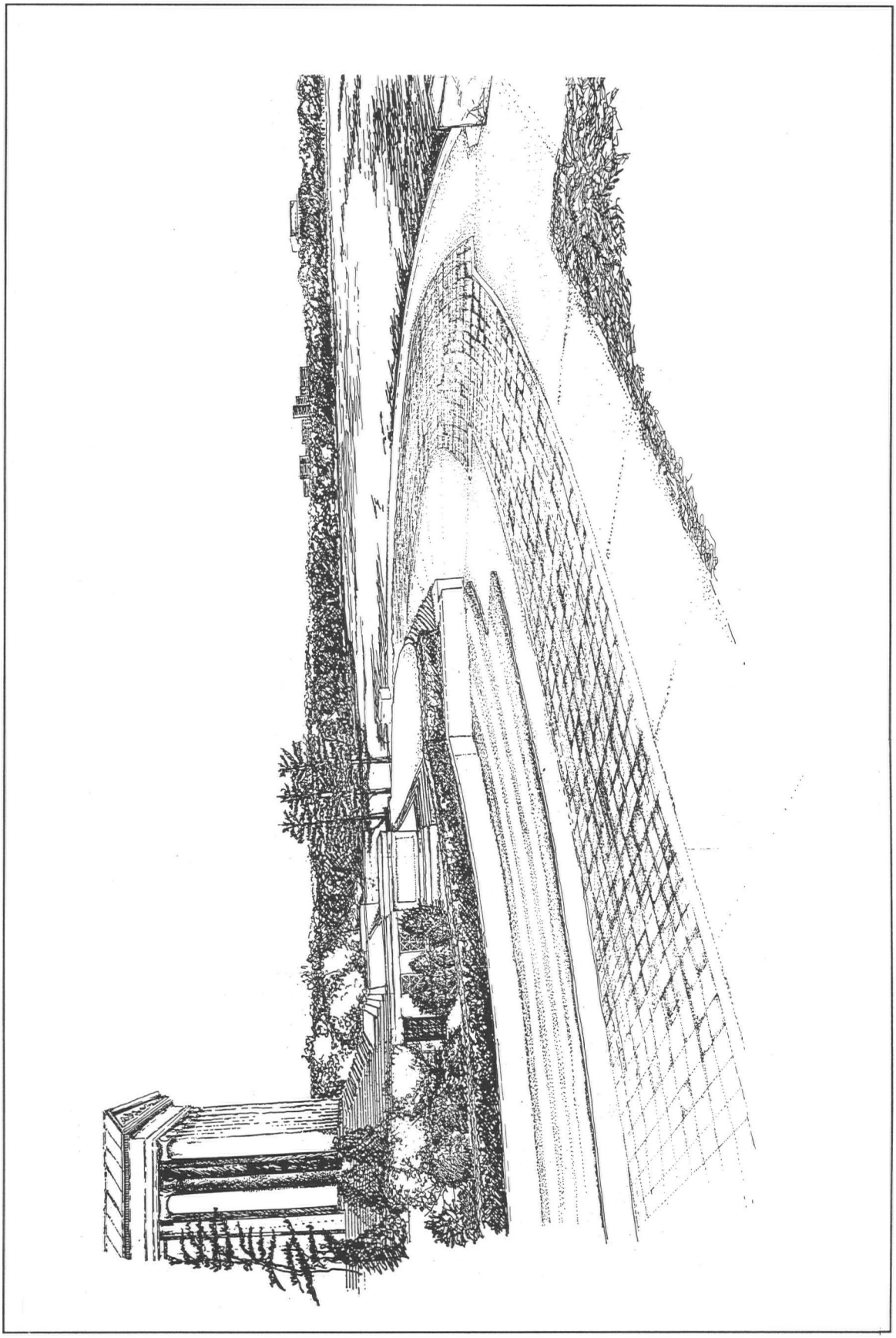


Figure 112 - Large Unit Paving, Following Original Road Layout

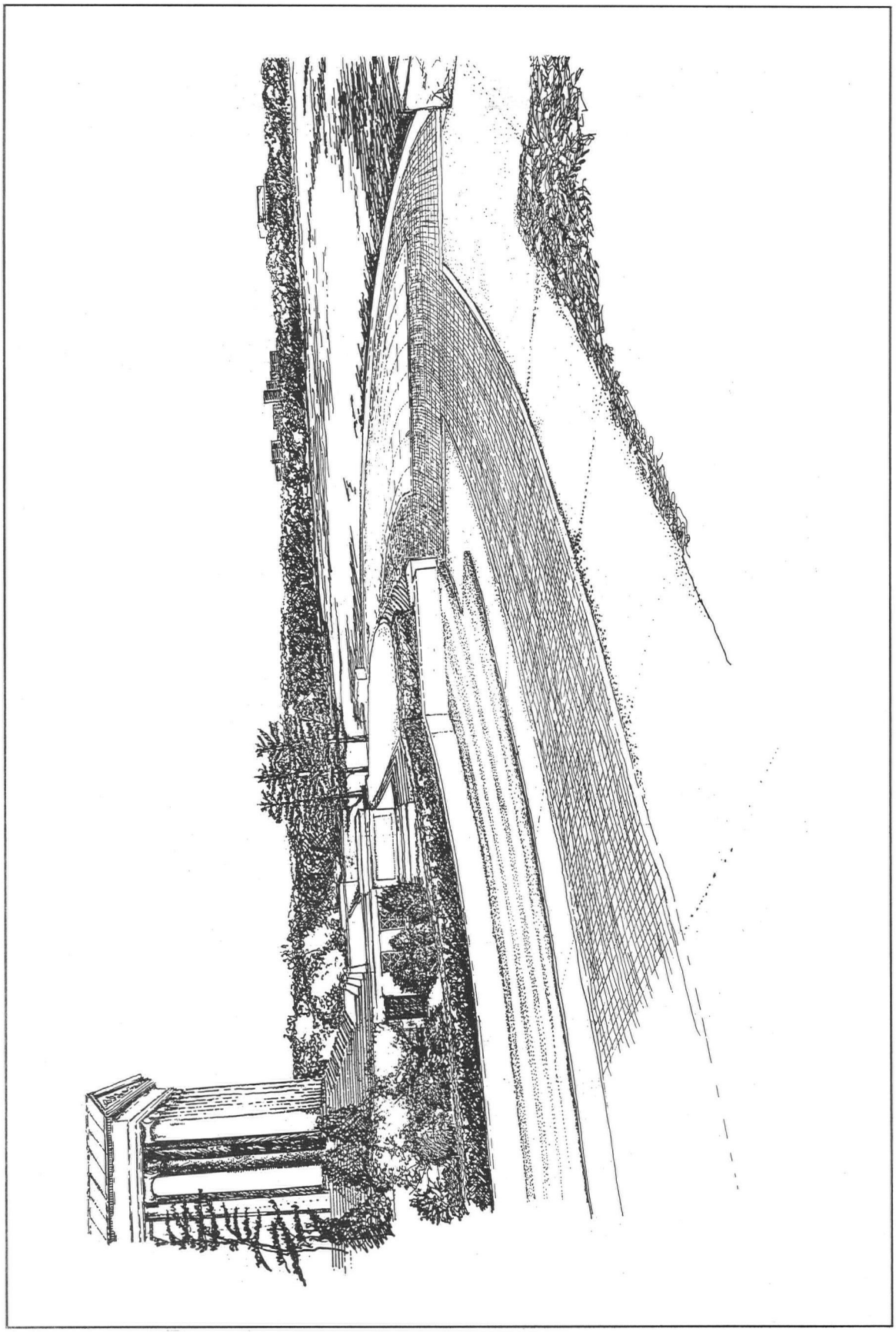


Figure 113 - Paved Road and Plaza, Combined

4.1.1. CONSIDERATIONS

There are many considerations to take into account in any new design, some of which will affect the design and subsequent appearance of the plaza and road. These include change of levels, considerations with regard to drainage design, choice and colors of materials and the maintenance requirements for the area.

4.1.2. MATERIALS

The classic style of the memorial is not reflected in the current choice of materials as used in the plaza of today. While the clean colors of the memorial's natural materials enhance the formality of this building style, the colored concrete used in the insert pattern of the modern plaza is a distraction from its form and the spirit in which the building was conceived.

No historical precedent for the current plaza paving pattern was found during the research for this report, although it was approved by both the Commission of Fine Arts and the National Capital Planning Commission prior to construction.

As the memorial is visibly constructed entirely out of natural stone, it seems unfortunate that the landscaping surrounding it should comprise anything less. The cheaper, man-made materials, asphalt, concrete and exposed aggregate, used in the landscape are of a less permanent quality and durability. They do not, therefore, give the landscape the impression of stability and lasting which the memorial itself possesses. In any new design, the materials chosen should match the quality or integrity of those used in the memorial itself. They will need to resolve the formal role of the memorial, linking it to the surroundings with its wider, more informal use. The colors to be used should be simple and in keeping with those used in the memorial, without distinctive or complicated pattern design, which competes with the memorial's form or grandeur.

It must be decided whether to keep the flat plane of the existing plaza, draining into the Tidal Basin and linking with the rest of the circular 'road' by using similar materials and a smooth progression of levels or, whether to also respect the original design in terms of the differing levels inevitably created by sidewalks and roadway. This option does not have to replicate the original levels precisely but could, by a less significant change, reflect the original theme. Consideration with regards to this decision on any change in surface levels in the vicinity of the waters edge, must be given to prevent it constituting a tripping hazard or producing a barrier to site accessibility. The design solution would, therefore, have to address this issue and ensure that this is not a potential problem.

Making the road accessible to only pedestrians was obviously the desirable thing to do in the 70s and while many people may have fond memories of driving around the memorial, it is doubtful that anyone would reverse the decision of closing the encircling road to traffic. Similarly, with the loss of the traffic there would not seem to be much desire to replace the original asphalt surface. This material can be regarded as the functional constituent of a purely vehicular situation, not considered to be in the domain of the pedestrian, and therefore is out of place in a modern pedestrian plaza or open space.

A letter from Eggers and Higgins dated August 25, 1939 to the Olmsted Brothers stated the following:

> *We also suggest for your consideration the elimination of the sidewalks on either side of the roadway hitherto shown. You will remember that the National Parks and Planning Commission objected to automobile driving around the front of the memorial except on very special occasions. This roadway now becomes a broad walk way, without the necessity of additional sidewalks.*

This early scheme to incorporate a broad walkway around the memorial, as opposed to a road, shows that the concept of making the entire area for the pedestrian is not new - it also solves potential problems or answers controversy with regard to level changes between roads and sidewalks.

The settlement around the memorial over the years has meant that the remaining asphalt road is at a lower level than it originally was. The difference in levels between it and the new plaza present both a tripping hazard and an unsightly condition. The circular composition of the building with its circular terraces was once respected by the old roadway. This is now lost, partly due to this change in levels, making the curve around the memorial look imperfect or distorted, and partly due to the difference in materials used in the road and the plaza, emphasizing the difference between the two. The 70s plaza drains into the Tidal Basin, negating the need for catch basins in this area, while the roadway is drained using an underground system.

In any reconstruction package for this area, to treat the plaza independently from the rest of the circular roadway would not resolve the problems mentioned with regard to the level change and the consequential effect on the appearance of the surfacing. A detailed survey is required to ascertain the current levels and how (if) these can be modified to ensure a smooth transition from the south around to the north of the memorial. A suitable and sympathetic drainage design will also need to be incorporated.

The superstructure (See fig 46-56) supporting the existing plaza may prove problematic in accommodating a new wearing coarse of any depth, while retaining the existing finished level of the plaza as it is now. The existing construction drawings show a 1&1/4 inch layer of exposed aggregate/concrete surface, laid on top of the concrete slab bedded on a 1/2 inch of an epoxy/mortar bed. This existing construction may prove significant in the design of any new plaza as the new surface would have to be accommodated within the limits of the thickness of the existing (relatively shallow) surface -- in order for the finished grade not to be significantly raised from that which it is at present. Once the existing levels have been surveyed, it will be possible to ascertain whether this is a limiting factor with regards to finished or design grades within the area of the existing plaza, or whether there are any limitations on the possible choice of materials available.

4.2. PLANTING

There are several options available with regard to the treatment of the planting surrounding the memorial. This decision, similarly, depends on the preservation philosophy of the National Park Service, and their decision as to whether, and how far, they want to return to a historically "correct" design solution. Modern change of use at the site may affect this decision. Possible options are considered for three different areas of the site. These are the two designed areas, inside and outside the circular roadway, and the area visible from, but outside, the study area.

4.2.1. PLANTING INSIDE THE CIRCULAR ROADWAY

4.2.1.1. Options

1. Returning to the original "as-built" planting scheme, as per Olmsted's accepted design, including the 1942 additions/changes to correct the initial "thin "planting (see figure 28 & 32).

2. Retaining (and replanting where necessary following construction works) the present "architectural," mainly coniferous planting, often associated with classical structures, without the flowering shrubs which Olmsted specified in the scheme, which was finally planted.

4.2.1.2. Considerations

The planting around the Jefferson Memorial proved to be a contentious issue between the architects, Eggers and Higgins, and Olmsted, Jr. the landscape architect, both during the proposals stage and after the planting was initially completed. The architects favored simple planting using mainly evergreens, while Olmsted's early horticultural and gardenesque schemes were thought by him to be more appropriate for the memorial to Jefferson. His earliest scheme was whittled down until a compromise between the two extremes from either party was reached.

The debates have continued to the present day. As planting has reached, or indeed approaches maturity in a designed landscape, the question is always raised as how best to conserve the appearance of a mature planting scheme while maintaining the validity and concept of the original design.

Projects such as the 1993 stylobate mall work have given the National Park Service the opportunity to question the landscape in that specific area and make decisions on how best to manage it for the future. Original planting on the stylobate mall has remained fairly intact, and is generally in good health, despite the circumstances in which it has been growing, namely root restrictions, constant level changes and temperamental irrigation systems. The plants which gave rise to the greatest concern with regard to the stylobate mall restoration were as in any mature scheme, the most visibly prominent - the trees. The decision was taken to retain the white pines from the original scheme until such time when they became too big for their location (some argue that time has come already) or they started to show

signs of ill health. All the other original plantings were retained where possible and replaced or replanted when it had to be removed for the repairs to the stylobate mall to take place. It could be argued that, in the case of the white pines, they never were part of Olmsted's original design, being added on to the original scheme to bulk up the "thin planting" and provide a "good heavy mass" as requested by the architects prior to dedication. However, they are today an integral part of the "as-built" designed historic landscape.

The rest of the planting in the immediate vicinity of the memorial, within the circular roadway, has not been so fortunate in terms of survival, as per Olmsted's original "as-built" design. The diversity of species has been lost as discussed in the "planting" section of *Analysis and Evaluation* section of this report. Original plants have been replaced with plants of different Genus and/or species. The planting now looks more "architectural" in style, being predominantly yew trees often associated with the planting around classical structures. It is now far removed from the more horticultural scheme with its limited variety of plants as designed and eventually planted by Olmsted. It should be noted, however, that the shrubs/plants missing from the originally planted scheme are, with the exception of the dogwoods, still all evergreens.

The National Park Service has already restored the "as built" designed historic planting on the stylobate mall to its original scheme. Given that, it would appear strange if the decision was taken to do otherwise with the remainder of the planting. Therefore, the remaining planting could be reconstructed per Olmsted's "as built" layout. This opportunity could be realized in stages, following a more detailed survey of the health and condition of the existing planting. Decisions could then be made as to whether some of the individual plants should be retained. Historically incorrect specimens could be replaced with selected shrub massing as originally planted. By using semi-mature plants, the reconstructed scheme could be realized with a feeling of maturity.

While the ring of Zelkova trees were not part of the original planting, the vistas to the east and west are not obscured and their existence does not detract from the immediate scheme that Olmsted envisaged -- to an extent where they should be considered for removal. Conversely, they should be left to live their natural lives but not be replanted to allow the open setting immediately surrounding the memorial to be returned, as discussed by Olmsted (Second footnote 7).

Settlement, probably where the 1960s additional buttressing was put in, has occurred on the ground level surrounding the memorial. This has caused a "radial ridging" or an undulating surface in the grassed area encircling the terrace mall and should be addressed in any long term plans for the area.

4.2.2. AREA OUTSIDE THE CIRCULAR ROAD

The planting in the area outside the circular road has been consistently added to since the land was reclaimed from the river, utilized as a public park and, subsequently, in the years since the memorial was built. The feel of parkland trees or individual specimens set in grass has been maintained throughout this time, while individual species have been changed. A regular tree planting and maintenance program is in operation which ensures that the overall area is well kept with an interesting diversity of tree species. This appears to be in keeping with the spirit of Olmsted's plan, despite the fact that his desire to see shrubberies in this area was never realized.

4.2.3. WIDER LANDSCAPE

The wider area, i.e. that outside the boundaries of the historic plan, also needs to be addressed as it has considerable effect on the setting of the memorial. This is especially significant with regard to the area at the south, with the traffic noise and the view of Route 395.

The possibilities and limitations in terms of screening road layout, earth mounding and planting require an in-depth study, which go beyond the scope of this report. It should be noted, however, that the view of the memorial from Interstate 395 is now an important feature, as the memorial serves as a landmark of arrival in downtown Washington, D.C..

4.2.4. GENERAL CONSIDERATIONS

Visitor perception and enjoyment of the site is an important consideration regarding landscape restoration or conservation. While many visitors will probably not pay much attention to who actually designed the landscape scheme, or read much into its historical significance, many appreciate the inclusion and presence of flowering shrubs and plants in a location such as this, and may gain more enjoyment from their visit because of it.

Frederick Law Olmsted Jr. was an eminent and respected landscape architect of the period in which the memorial was conceived and the earlier part of the twentieth century. Olmsted's design celebrated Jefferson's skills and interest in botany by the diversity of plants Olmsted used and was also reflective of a twentieth century western trend in planting flowering shrubs in park settings, as his father had popularized before him. Given this, and the fact that his latest, simplified and approved "as built" scheme is fully documented by plans, it would be a lost opportunity if, as part of this wider restoration project, the historic "as built" landscape for the area around the memorial could not be reinstated.

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all the people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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