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SUPPLEMENTARY

PARK PLANNING REPORT

PROPOSED SAUGUS IRON WORKS NATIONAL HISTORIC SITE



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SUPPLEMENTARY
PARK PLANNING REPORT
PROPOSED SAUGUS IRON WORKS NATIONAL HISTORIC SITE

ESSEX COUNTY, MASSACHUSETTS

Prepared by

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NORTHEAST REGIONAL OFFICE, NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

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INTRODUCTION

The purpose of this report is to supplement the Area Investigation Report prepared by the Northeast Regional Office staff in September 1963 and to supply the information requested in the Advisory Board's resolution quoted below:

The Advisory Board on National Parks, Historic Sites, Buildings, and Monuments, at its 49th meeting, November 4-6, 1963, Big Bend National Park, Texas, recommends the Saugus Iron Works as eligible for Registered National Historic Landmark Status. It further recommends that the site be included in the National Park System provided problems involving water supply, boundary revision, and other practical considerations can be resolved.

Additional field studies have been made since September 1963 and these studies provided the sources of information used in this report.

Participants in the additional field studies were Harry L. Smith, Park Planner, Nathan B. Golub, Regional Chief, Division of Maintenance, Northeast Regional Office and Frederick Ley, Landscape Architect, Eastern Office, Design and Construction.

CONCLUSIONS

The initial and subsequent studies of the Saugus Iron Works including its historical background and other practical considerations, verifies that the site is suitable and feasible to be incorporated into the National Park System.

RECOMMENDATIONS

1. The area under consideration be established as a unit of the National Park System as the Saugus Iron Works National Historic Site.
2. The area of the historic site include those parcels of land as depicted on Drawing No. NHS-SI-7100, dated May 28, 1964.
3. The authorizing legislation contain a section that is permissive for the site to be extended to include the Charcoal Pit and Collection Basin provided archeological investigation verifies their exact location.
4. Administrative functions for the historic site be provided through the coordinated National Park Service program for historical properties in Boston and vicinity.

SIGNIFICANCE

It has been determined that the Saugus Iron Works merits recognition as a nationally significant historic site. The significance and historical evaluation of the site are contained in the Area Investigation Report of 1963. Following the Advisory Board's recommendation in November 1963, the site was declared a National Historic Landmark and a plaque and certificate attesting to this fact were presented to the First Iron Works Association, Inc. on June 20, 1964.

PROPOSED BOUNDARIES

The nucleus of the proposal is the 8 + or - acres owned by the First Iron Works Association and which they have indicated a willingness to donate to

the Federal Government. This acreage contains the original site of the early colonial iron works and a modest buffer zone along both banks of the Saugus River and some small parcels across Central Street on the west side of the proposal. To augment the existing buffer zone and to provide additional interpretive sites plus space for visitor facilities, the following boundary suggestions are made.

1. Request the City to vacate the street areas labeled "A" and "E" on Drawing No. NHS-SI-7100. Note, area "E" is an undeveloped portion of Riverbank Road and the area is presently fenced along the proposed boundary. The vacating of these areas would unify isolated parcels of the proposed site and provide usable space for visitor facilities.

2. Area "B" should be acquired because these two contemporary structures occupy the highest point of elevation in the proposal and are obvious intrusions into the historic scene.

3. Area "C" should only be acquired provided investigation verifies the exact location and interpretive importance of the Charcoal Pit and the Collection Basin (the latter not shown on map).

4. Area "D" is small, isolated and contains no historical features, therefore, it is recommended that the Association dispose of this parcel before making any transfer of properties to the Federal Government.

Because the proposal is located in a highly built-up residential section of Saugus only a minimum area has been recommended for the historic site.

PHYSICAL FACILITIES AND COSTS OF OPERATION

The information contained in this section was prepared by Regional Chief of Maintenance, Nathan B. Golub.

Water Supply

Source: Metropolitan Water Supply. This is a state agency which furnishes water to the local Saugus Water Company.

Cost: The Saugus Iron Works Restoration was originally billed @ \$500 annually. This has been abated to \$10 annually, a form of local subsidy to a local historic group.

If the National Park Service operates this site, we feel that this subsidy will be withdrawn and a realistic estimate of \$1,000 annually should be made.

This supply will meet all requirements of the site including operation of 7 water wheels. No data on consumption is available. Based upon 9,000 visitors in 1963 we estimate 100,000 gallons annual consumption (May to October season). If we operate on full yearly basis, we must estimate accordingly. The wheels would probably not be used during freezing weather.

No plans of the utilities were available at the site but we were informed that the Architect's office does have them.

Sewage Disposal

The present comfort stations are located in the rear of the Ironmaster's House. It provides 2 urinals, 2 water closets, 2 lavatories for the men and 2 water closets and 2 lavatories for the women. Disposal is made through a septic tank and seepage pit on the site. It is reported to have functioned well since its installation. Plans available at Architect's office.

Electricity

Available from Lynn Electric Company as is gas which is used to heat the office located in the Ironmaster's House. All required voltages are available from the service lines in the streets surrounding the area.

Costs:	Street lights	\$14.50 month
	Electric service	35.00 month
	Gas service	45.00 month (approximately 9 mos.)

Fire Protection

An ADT system is located in the Ironmaster's House. This is connected to the Salem ADT office and the Saugus Fire Station.

Cost: \$1,500 per year includes a monthly inspection. Three 6" fire hydrants, a part of the city system, are located within 200 feet of the site and in strategic locations.

Security

A night watchman is employed at \$50 per week from 4:00 p.m. to 12:00 p.m. on a 5-day basis. Town police are available on call.

Maintenance Staff

One permanent employee @ \$75.00 per week in winter, \$85.00 per week in summer; one seasonal employee @ \$75.00 per week.

Both men also assist in interpretation of the site. This requires one hour per day during the week days (2 half-hour tours) and 4 hours on week-ends (4 half-hour tours each Saturday and Sunday). Since both men participate, 12 hours per week are used on other than maintenance work. This, of course, would probably be changed if administered by the National Park Service.

Roads and Trails

The approximately 1,500 feet of trails are surfaced mostly with broken and screened slag secured on the site. A few of the more important trails are surfaced with fine gravel. The present condition is fair. Some of the trails through the site are too steep for safe visitor use due to the existing loose surface material. Either the trails will require regrading or resurfacing if the Service operates the area.

Parking Area

Two small areas are in use, one being partially reserved for buses. The automobile area is a gravel surface and requires constant raking. This should be surfaced with a bituminous material. The bus parking area is

an old street surface which now required resurfacing. The present area will accommodate perhaps 20 cars.

The buildings and their condition are as follows:

Ironmaster's House - (A wood frame house - original sections from 1640's) Present condition fair but on verge of costly maintenance. Windows and openings are loose. This building is closed in winter except for office room in rear. We recommend it ~~remain~~ closed in winter since heating under present conditions would be impossible. All openings should also be winter sealed. Has good structural frame. We suspect it may need termite prevention treatment. Our opinions of the house's period furnishings are inexpert but they undoubtedly are valuable. Their proper maintenance would be an important item in the budget, though not costly.

Forge - Timber frame open building - Excellent condition. Has 4 water wheels (overshot and undershot). Requires surveillance, particularly those sections subjected to alternate wetting and drying such as flumes, wheels. All wood should receive frequent treatment with preservative where necessary as should the following "open" mill buildings.

Furnace - Stone and timber structure - Excellent condition.

Slitting and Rolling Mill - Open frame building - 2 overshot wheels - Excellent condition.

Charging Bridge - Wood frame - good condition - needs preservative.

Foot Bridges (3) - Wood frame - fair condition - needs preservative.

Pier and Bulkhead - Wood frame, fair condition. Bulkhead in fair shape - Piles and decking of pier beginning to fail.

Warehouse - Small frame structure - good condition.

Temporary Museum - (Non-historic) - This building is a relocated structure. Wood frame with asbestos shingle roof. This structure is in fair condition but is a truly "temporary" structure. It is heated with small gas heaters. The exhibits are very interesting. One section of the museum containing large exhibits has an old oiled mill type wood floor which seems particularly appropriate for such a site.

Contact Station - Small frame shed type structure. This is in fair condition, and will require painting soon.

Tidal Basin - Located in pier area. This basin is filled with sediment and requires a dredging to restore its interpretive value.

Maintenance Building (Work Shed) - Non-historic. This building is well located and removed from visitor view. It is in deplorable condition however and should be completely rebuilt. The shop facilities are non-existent and new equipment would be required.

Private Residence - Non-historic. A two-story unoccupied wood frame (and garage) building located just west of entrance gate. This is in bad condition and should be demolished. It would serve no purpose and is intrusive.

Private Residence - two-story frame house located approximately 150' southeast of entrance gate. This is now occupied under a life tenancy lease. Exterior condition indicates that considerable work would be required if the Service were to utilize this building as a quarters.

Grounds

The small grounds area is maintained as an informal lawn with a few scattered trees. It presents a pleasant landscaped plot surrounded on three sides by city streets. It is irrigated and well maintained. The spraying program was discontinued this year due to a fund shortage. The fertilizer program is, however, in effect. The good grounds appearance reflects the attention of the maintenance force. Approximately \$200 annually is expended on fertilizer.

Picnic Area

A very small picnic area is located across the Saugus River near the Work Shed. It has no facilities as required by the National Park Service and Public Health Service and is inconvenient for maintenance and operation. We recommend its discontinuance should the Service ever operate the area.

Equipment

Most of the area's equipment is grounds maintenance machinery. It consists of three lawn mowers, a fertilizer spreader and one snow blower, all in various stages of repair. Most of these will probably require replacement.

General

A 4' high galvanized steel chainlink fence surrounds the site. It is in poor condition and rather unsightly. Its low height nullifies its security value and its only accomplished purpose appears to be as a property boundary marker. This fence should be removed and a replacement should be carefully studied. In addition to security, the solution will depend on such factors as the continuance of admission fees, parking problems, acquisition of adjoining property.

We had occasion to participate and observe the interpretation of this site to large mixed groups. It appeared to impress them as it did us. This was a truly alive demonstration of an old steel mill operation. Water flowed, wheels spun, ~~hearth~~ fires roared, sparks flew and hammers resounded. All the sounds, smells and sights of the real operation were reproduced leaving a vivid impression with the visitor.

The estimate for the operation and maintenance of this site under National Park Service administration follows. It is based upon a year-round operation which would exclude interpretation of the Ironmaster's House during the winter and operation of the water wheels for approximately 4 or 5 months. It also assumes that all facilities will be in A-1 condition at commencement of routine operations.

Personnel

Maintenanceman	\$5,000	
Seasonal .5 MY	2,500	
	Total	\$ 7,500

Operations

Water	\$1,000	
Electricity and Gas	1,500	
Telephone	500	
Supplies and Materials	3,500	
(Includes charcoal for forge demonstration)		
Total		\$ 6,500

Maintenance

Roads and Trails and Grounds	\$1,000	
Buildings and Structures	4,000	
Total		<u>5,000</u>
GRAND TOTAL		\$19,000*

* This total is incorporated in the summary of estimated costs for the first five years.

INTERPRETATION

The information contained in this section was prepared by Regional Chief of Interpretation and Visitor Services, Frank Barnes.

As already well-recognized in its prior operation, restored Saugus cannot "speak" for itself. It comes alive only through "on the spot" verbal presentation--live or automated--and through operating demonstrations of its component parts, notably the forge and the waterwheels. Even then, integrated meaning and perspective must be given the "parts" of the whole through a visitor facility, preferably at the entrance to the complex. Herein Saugus would be set in historical perspective as the first well-sustained integrated iron works operation in the Thirteen Colonies; the suggestive

17th century (Puritan) prototype of the modern iron or steel plant, even a symbolic forerunner of American "big business."

The National Park Service need seek only to improve existing arrangements. To this end, the existing small entrance station and inadequate museum structure need to be scrapped in favor of an attractively (even interpretively) designed entrance-interpretational facility out by the expanded parking lot visualized for the junction of Pleasant and Central Streets. Here a fine documentary movie would introduce the visitor to Saugus and the site, highlighted by panel interpretive exhibits, displays of original objects and models, etc.,; "see-do" information would be available and sales souvenirs; guided tours could be arranged as desired, or electronic equivalents thereof. Guided tours would be supplemented by fixed-spot interpretation as manpower is available, and by audio stations at key locations, supplemented by discreetly placed interpretive signs and trailside panels. The guided tour seems a "must" for this complicated technological story to insure maximum visitor understanding. An interpretive attendant will have to be stationed in the Ironmaster's House, as much from the protection standpoint as for interpretive reasons. Completion and restoration of the physical scene (landscaping and clearing river area at dock, for example)--even to the point of acquiring charcoal pit and the water collecting basin for the waterwheels is necessary to the visitor understanding of the whole story.

Staffing should include a resident Curator-Historian, steeped in direct knowledge of the area and its resources--in addition to trained guides, summer-seasonally augmented. One permanent Guide and 2 man-years of seasonal interpretive employees.

PRELIMINARY DEVELOPMENT STUDY

If the area is authorized to be added to the National Park System, the final site planning will be made after approval of a master plan and all development considerations resolved.

The following information contained in this section was prepared by Landscape Architect, Frederick Ley.

This small area under study includes approximately 8 acres along the banks of the Saugus River, 6 acres on the west side, 2 acres on the east side. The perimeter of these lands is broken by streets and residences. The historic site is situated in a very concentrated residential development, creating primary problems of access and control and adverse factors of environment and setting for the excellent facilities which exist.

The reconstructions are striking examples of early colonial industry, from this layman's impression, dramatically and tastefully operated by well-informed guides using the action of the foundry equipment, re-creating the historic process with fire, bellows, hammers, water wheels, etc. A temporary museum completes, effectively and simply, the story with audio-visual aids and artifacts.

The visitor use considerations of this limited site will not be easily solved. The scale of the site and structures is small. The existing unpaved 20-car parking area and trails are inadequate on peak-use weekends; tour buses and overflow cars park on the residential streets. The small contact-sales structure and temporary museum are not suitable for year-round use, the site now closes in the fall, reopening each spring.

As an alternative to the existing pattern of visitor access, consideration should be given to relocate the visitor service functions on the east side of the river. Here the site conditions are more favorable, and the initial view of the foundry grouping across the stream is most striking and comprehensive. This will require bringing the visitor across the stream to the west side of the foundry for the proper sequence in the story of iron making. This could be accomplished by an east river bank trail with a low foot bridge connecting to the existing west side trails, advantageously creating a loop operation adding to the effective presentation of the site.

Central and Saville Streets are the only streets of sufficient width for approach to the site, presently carrying two lanes of traffic and curb parking allowances. The Association's Boundary Plan indicates city rights-of-way remaining within the site where roads have been obliterated or terminated. As development will fall within these easements, these incumbrances should be cleared.

The Association's available land purchase to the west of Central Street has resulted in fragmented parcels for historic advantage. These properties will be difficult to manage but will provide a partial screening zone along the residential perimeter. Additional acquisition of housing properties to complete this perimeter zone could not be justified on this reason, with the exception of the one intruding residence parcel in the northeast corner of the site. This is essential, as it is situated on the highest elevation of the grounds. Other existing inholdings are life tenure and will soon pass from occupancy.

In September 1963, Area Investigation Report on the Ironworks, prepared by the Northeast Regional Office, presents an excellent evaluation of the site in terms of historic importance and feasibility considerations. On the enclosed sketch recommendations for development have been shown. The site's small size and location, within a high density housing area of difficult vehicular circulation, limits the visitor development to modest consideration. The site is vulnerable, however, to high visitation, being 10 miles north of downtown Boston via U.S. Route No. 1 and $\frac{1}{4}$ mile walk from the town center of Saugus.

COSTS OF THE PROPOSAL

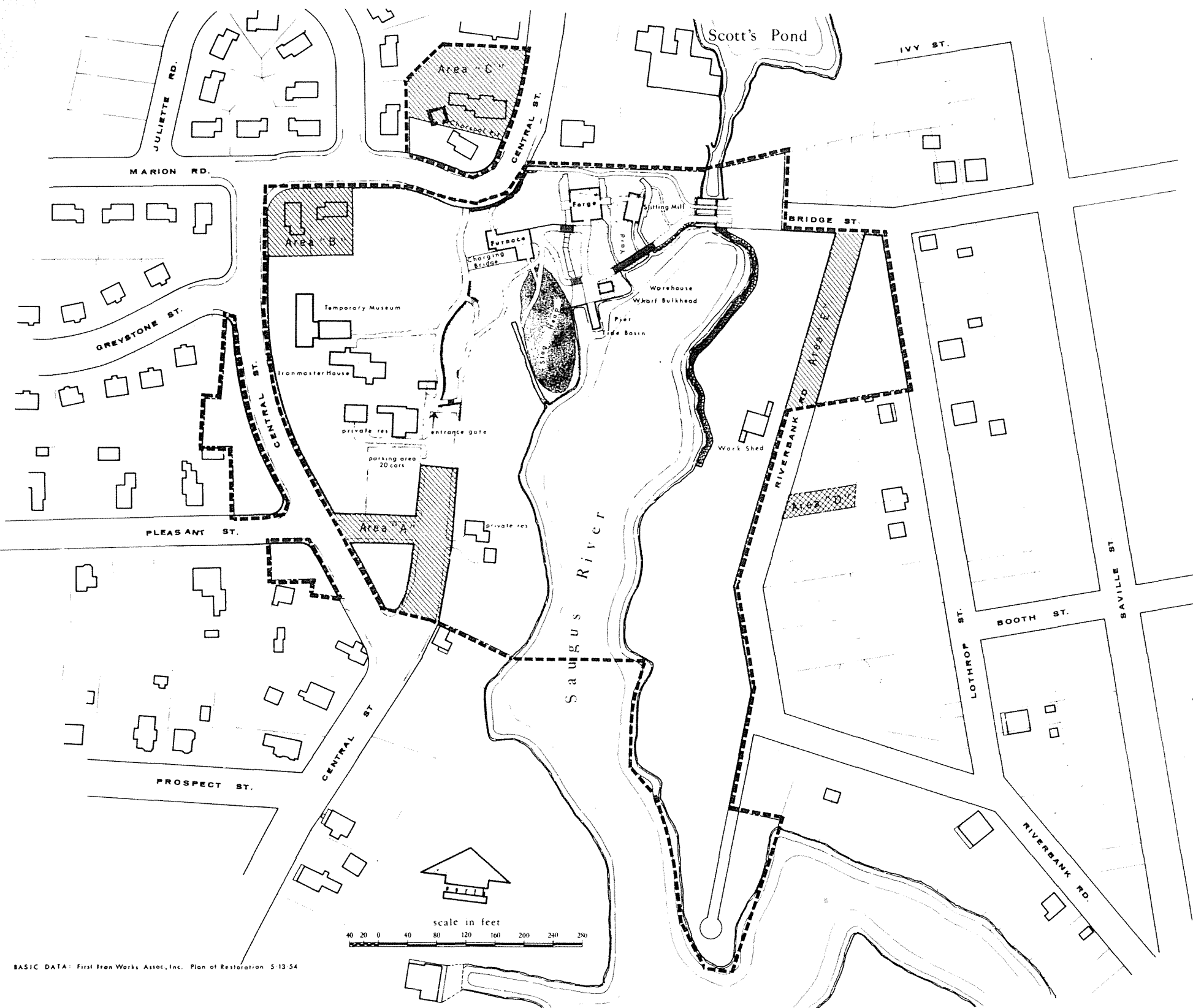
The following summary of estimated costs are for the first five years of operations after the historic site is authorized. These estimates are based on the facilities required, the staffing of the park,

operating costs, and the acquisition of lands. However, all costs will be subject to further refinements after detailed site planning and facility design is undertaken.

Consolidated Five Years Totals

Management and Protection	\$141,880
Maintenance and Rehabilitation	95,000
Construction	400,500
*Acquisition of Lands and Property	<u>100,000</u>
Total	\$737,380

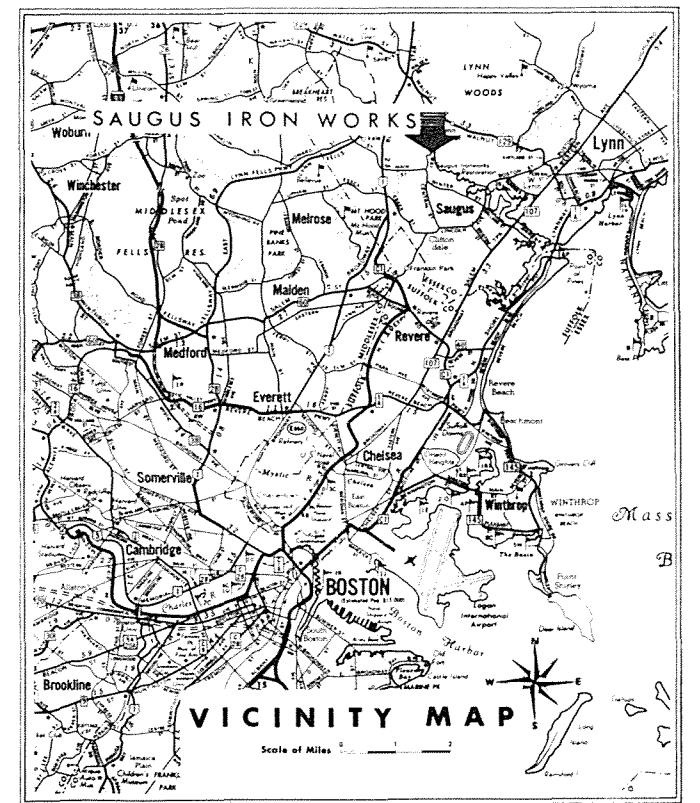
*It is anticipated that all of the property owned by the First Iron Works Association will be donated to the Federal Government. The above amount is for lands and property not owned by the Association.



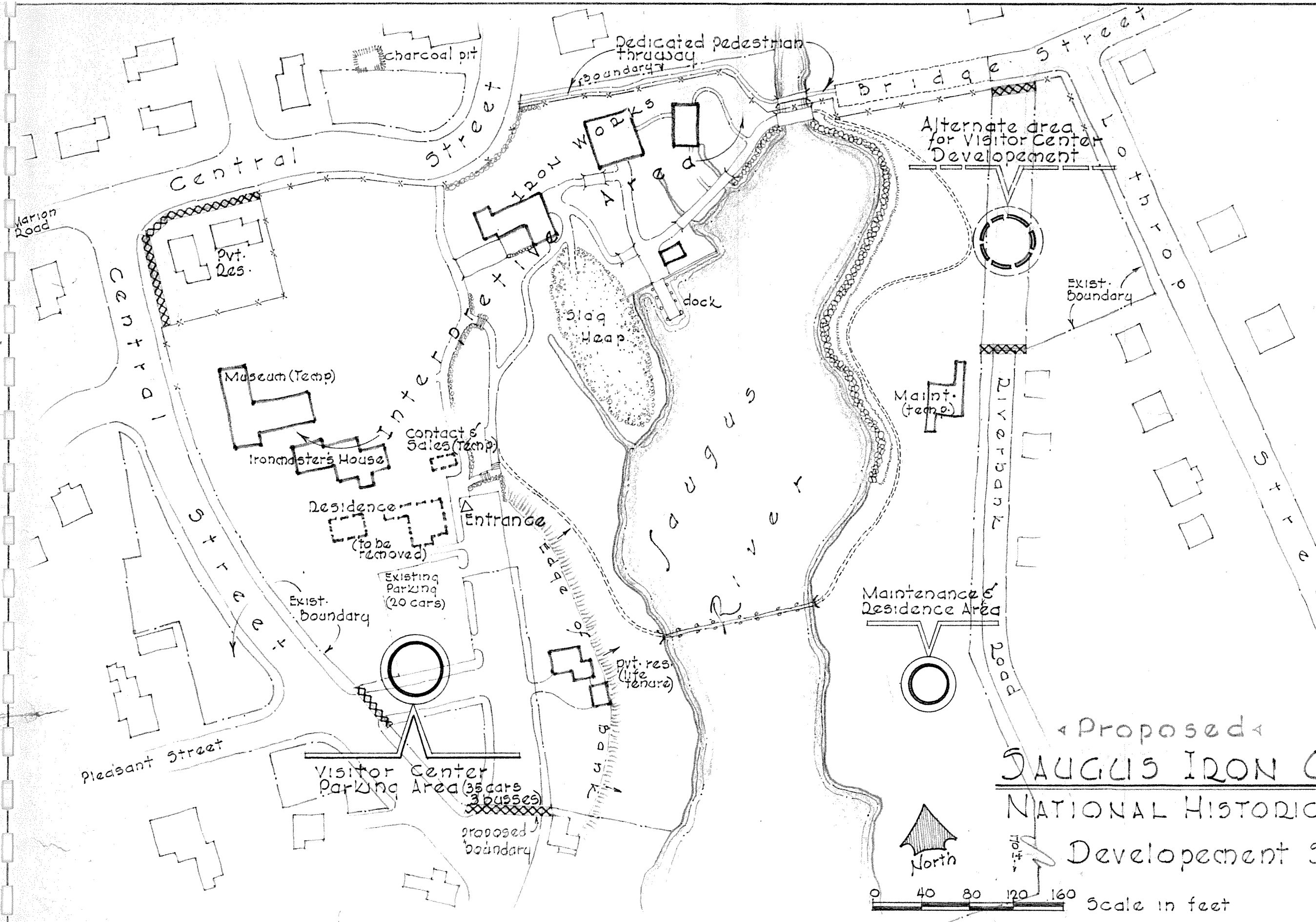
BASIC DATA: First Iron Works Assoc., Inc. Plan of Restoration 5-13-54

L E G E N D

- Special Additions
- Suggested Deletion
- Proposed Boundary
- First Iron Works Assoc. Prop.



RECOMMENDED		DATE	MARK	DESCRIPTION OF REVISION	OR
APPROVED				UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE DIVISION OF NATIONAL PARK SYSTEM STUDIES PREPARED BY NORTHEAST REGION BOUNDARY & EXISTING CONDITIONS MAP ENTIRE AREA PROPOSED SAUGUS IRON WORKS NATIONAL HISTORIC SITE	NO PC SH DI N 7 DAT



Proposed
SAUGUS IRON WORKS
NATIONAL HISTORIC
Development



0 40 80 120 160 Scale in feet