

TOURISM IN ICELAND: PHASE TWO

VOLUME TWO, BOOK THREE

NATURAL HISTORY DISPLAY  
NETWORK

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## I. THE CONCEPT

The Phase I report on tourism in Iceland quite accurately noted the need for greater information about geological and historical subjects for foreign and local tourists. Thus, museum facilities for the earth sciences and natural history were recommended as part of the original Iceland Cultural Complex.

A number of factors have led to the proposal for the establishment of a Natural History Display Network, as opposed to the more staid, traditional museum concept;

- Although the only practical place for new museum structures of the traditional sort is Reykjavik (in view of the local market especially), the capital already has the National Museum and the Museum of Natural Science. These two already devote much of their space to displays on history and geology in Iceland.
- The typical museum is a far less compelling way to present the geological and geophysical resources of Iceland than a visit to the glaciers, geysers and volcanoes themselves.
- Conversely, visitors to the most important geological and historical sites in Iceland find no information or explanation of the significance of what they see.
- Consequently, few areas outside Reykjavik have had a share of the benefits from foreign tourist travel to Iceland.

It is the aim of the natural history display network to remedy these diverse deficiencies with a series of regional "mini-museums."

## II. THE SITES AND DEVELOPMENT SCHEME

The mini-museum idea is designed to place a series of smaller display centers on-site at the points of historical and geological interest in Iceland. The aim of constructing new museum buildings in Reykjavik would have been to show foreign visitors the remarkable and unique aspects of Iceland, to impart some understanding of those aspects, and to encourage visitors to stay and enjoy a deeper understanding of the country, and to return to Iceland. All these aims are better met by an approach which abandons the idea of the museum as a building and allows Iceland itself to be the museum.

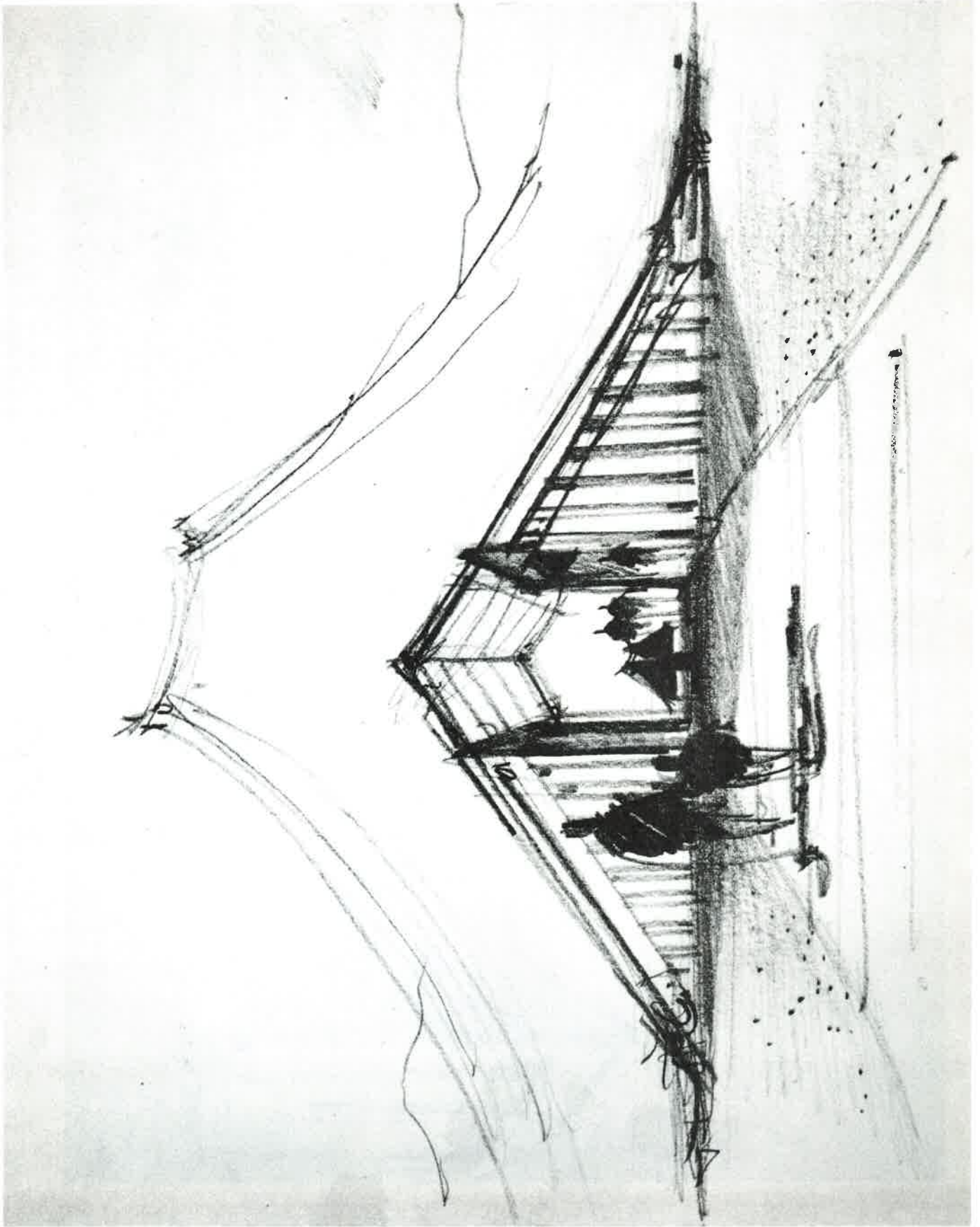
We are thus proposing a network of many modest structures, housing displays or working models, which are placed at the sites of interest themselves. The structures might be located not just at attractions with visual impact (like Geysir or the Myvatn geothermal area) but also at less obvious places, such as the Landeyjar saga sites. It is remarkable that the sites of Iceland's most famous literary/historical events are almost completely unmarked.

The structures themselves should be unobtrusive, forming a natural part of the landscape wherever they are erected. As illustrated in the sketches in Figures III-1 and III-2, one design approach might utilize the familiar forms and materials of the Icelandic landscape, such as the old Icelandic sod houses with their low gables rising from the ground. The shelters need not be large: 40-50 square meters would be adequate to provide a single space for written materials, drawings, photographs or models. Storage rooms or toilets could be added where needed. In some locations, even simpler markers might suffice to convey information about a specific site.

The design graphic in Figure III-3 following the sketches shows how each mini-museum might consist of one, two, three or four display sections, depending on the space required to adequately present and explain the site in question. (The sketches represent a two- and a three-section structure.) Needless to say, this also leaves planners with a good deal of flexibility as to costs.

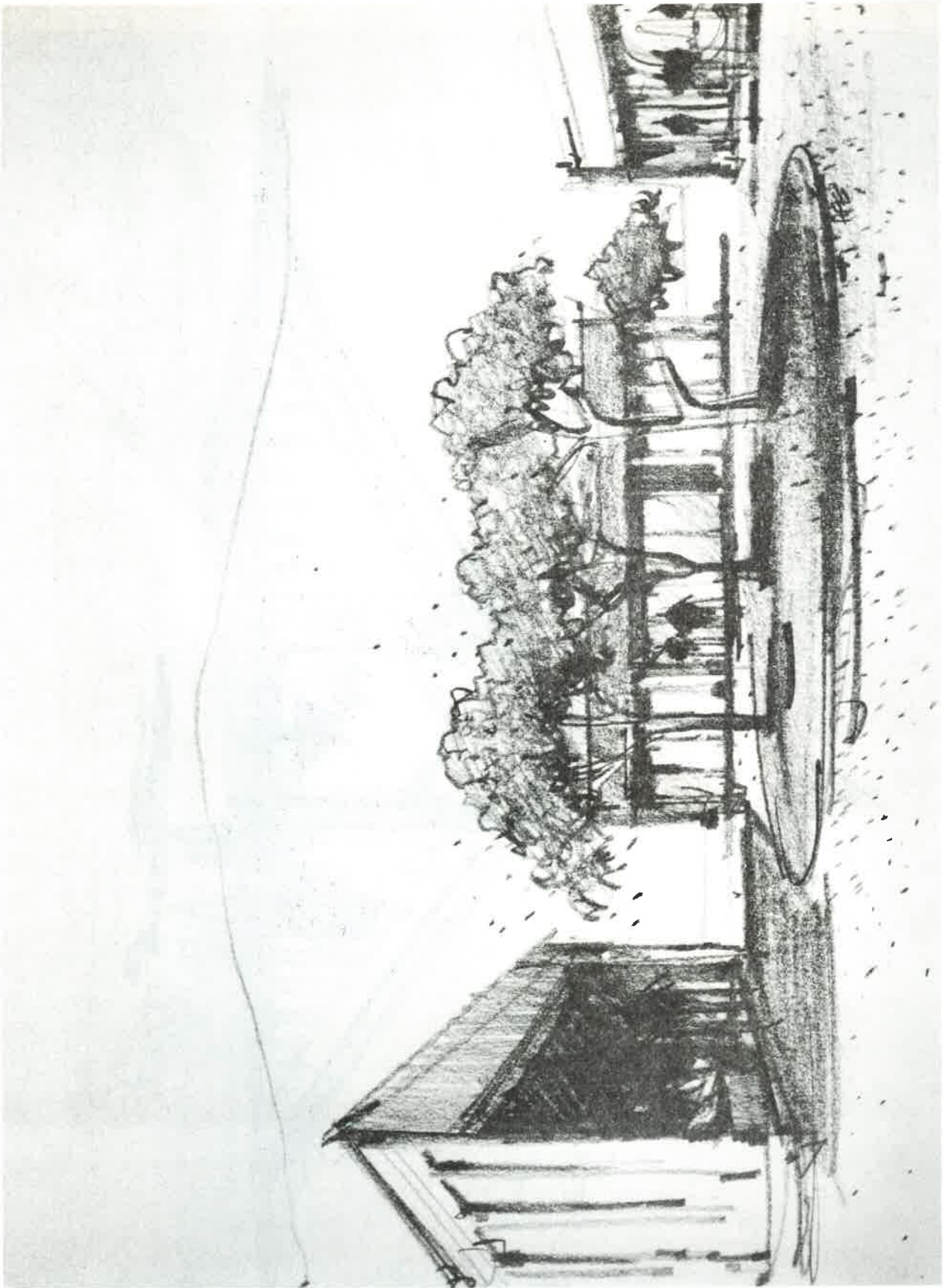
FIGURE III-1

NATURAL HISTORY DISPLAY NETWORK: SKETCH A



III-3

FIGURE III-2  
NATURAL HISTORY DISPLAY NETWORK: SKETCH B



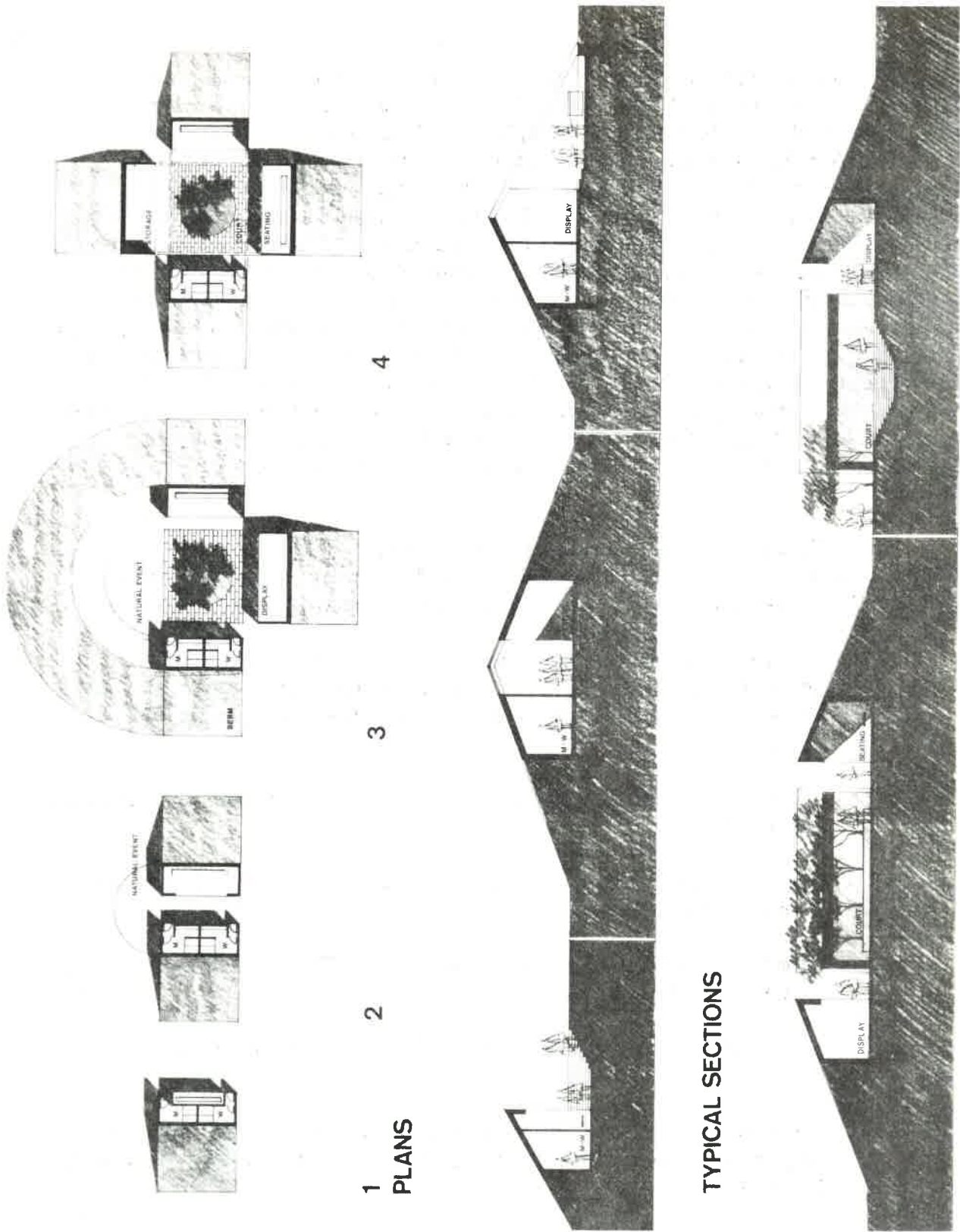


FIGURE III-3  
 NATURAL HISTORY DISPLAY NETWORK  
 PLANS AND SECTIONS



While the subsequent sections on feasibility and financing concentrate on the construction of the mini-museums such as described here, it should be noted that the simplicity of design and construction will allow for future modification and extrapolation at little cost. In particular, it is likely that the success of the mini-museum network will create demands for simple hostels and accommodations near the sites of the museums, so that hikers and back-packers can spend several days doing the tour. In this case, regional authorities will find it very inexpensive to add to selected museums a basic "sanitation core" (sinks, showers and so forth) and huts where a bed can be rented or sleeping bags tossed for the night. This is essentially the concept already in use on a much greater scale at the Akureyri ski area, and its extension to the museum tours would not be complicated. Depending on the demand, these small hostels could be open during the peak months only, or during other times of the year. A small price will suffice to cover operating expenses of the hostels.

The following is a list of some of the unique Icelandic geological, geophysical and historical features that could form the subject matter for the mini-museum network, with a partial list of possible sites:

- The mid-Atlantic ridge and its relationship to Icelandic volcanology. Continental drift and plate tectonics. Possible locations: The Reykjanes Peninsula, the Thingvellir rift zone.
- Fossils and shells. Possible locations: Tjornes, Brjanslaekur, Selurdalur.
- Unique Icelandic geology and minerals. Possible locations: Djupivogur, and many other locations in Iceland.
- Glaciers, glaciation, and the Ice Age. Possible locations: Solheimar, Thorsmork, etc.
- Volcanoes. Possible locations: Thorsja (near Hekla), Myvatn, etc.
- Geothermal activity, natural steam and hot water, and its implications for practical use. Possible locations: Krisuvik, Myvatn.
- Geysers and related phenomena. Possible location: Haukadalur.

- Lava flows as related to volcanology and to land building, emphasizing the flora of Iceland. Possible locations: Reykjanes Peninsula, many other locations possible.
- Saga history. Possible locations: Landeyjar, Stong.
- Iceland before 864: early visitors. Possible locations: Djupivogur (Papey), Husavik.
- Reforestration and the change in nature of the Icelandic landscape over the centuries. Possible location: Hallormsstadur.
- The fauna of Iceland, particularly Iceland's relationship to migratory birds. Possible location: Myvatn.

The style of presentation in the individual "mini-museums" must not be staid or passive, but must present material related to each location in a dramatic form. The visitor will be fascinated to learn what makes a volcano erupt, or how a geyser works, and to understand more about Iceland's culture and landscape.

It should be noted that the kinds of displays contemplated for this network would not in any way conflict with the existing provincial collections of the National Museum, or with the branch museum collections related to the Museum of Natural History. These collections are located in various towns and villages in Iceland and are devoted to artifacts of importance to the local culture or to local natural history. These existing provincial museums display objects such as farm implements and fishing boats from the nineteenth century. In the case of Glaumbaer, a farmstead has been beautifully preserved. The tourism-oriented network proposed here differs in that it would provide information about and involvement with a specific event, at the very site of that event. The shelters would not contain collections of articles, but would have simple and direct means of conveying information and a sense of uniqueness and excitement about Iceland's land and culture.

Finally, the mini-museum concept should be envisioned as a regional network of attractions that together present an ensemble summarizing the district's geological and historical background. Tourists will more readily quit the confines of Reykjavik for other regions of Iceland the more there is to see and do elsewhere. While a single museum may not suffice to depict the cultural and historical richness of

the various regions of Iceland, a series --or network of several of these-- not only gives promise of filling the tourist's time for a day or two, but also offers the possibility of reaching a true understanding of the variety of Iceland.

Glancing at the map in Figure III-4 on the following page, which locates the several sites mentioned as possible locations for mini-museums, one discerns how readily the natural history display concept lends itself to development on a regional scale. In particular, it is apparent how these sites fall in well-defined geographical units: southwestern, south-central, eastern and northern Iceland are each represented. It is emphasized that this is only a partial listing of potential sites: the total number would depend on cost factors as well as the willingness of local and regional groups to build and administer the museums.

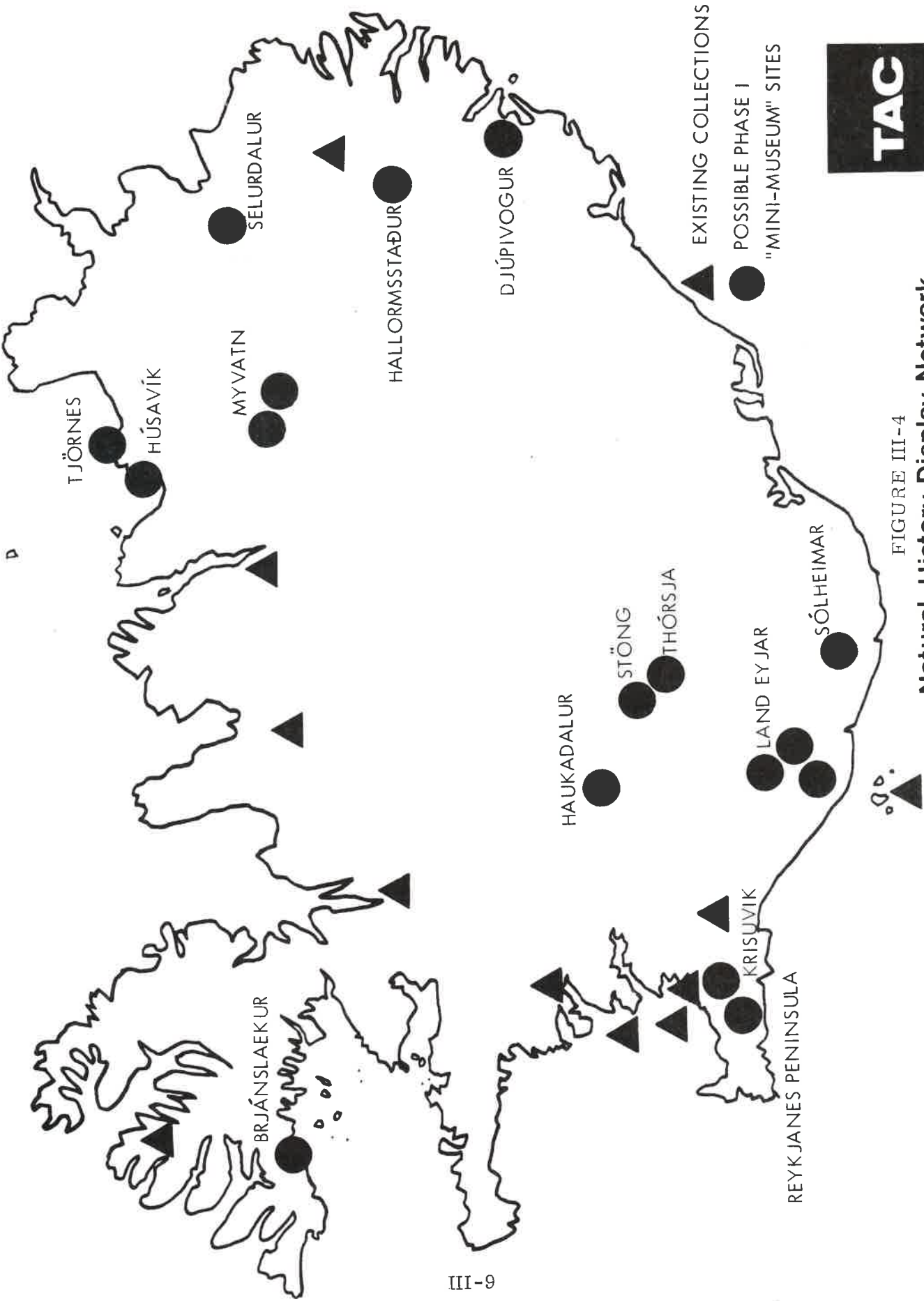


FIGURE III-4  
**Natural History Display Network**  
 EXISTING COLLECTIONS AND POSSIBLE SITES

### III. FINANCIAL FEASIBILITY

In order to establish the financial potential of the "mini-museum" concept, we have developed a prototype self-guided circle tour for visitors to Akureyri, Husavik, and the Myvatn area in northern Iceland. This tour gives an idea, first, of how regions of Iceland might establish their own museum network, and second, how to estimate its costs. The tour used as an example here would originate (and terminate) in Akureyri, where the visitor would receive a map and literature providing brief descriptions of all points of interest on the tour route. The route itself would be marked by attractive road signs (using a common design motif to distinguish the tour route) placed at critical intersections, and would cover between 350 and 400 km. of principal or secondary roads suitable for all types of motor vehicle traffic.<sup>1/</sup> As shown on the map in Figure III-5 the tour would include stops at "mini-museum" displays (structures or from one to four sides, with each side constituting large display panels) at eight suggested sites of natural and/or historical significance:

- (1) Akureyri. Here, the museum might double as a small tourist bureau and visitor center.
- (2) The Godafoss waterfall at Fossholl (perhaps with an optional side trip to the Grenjadarstadir folk museum 9 km. north of Laugar).
- (3) The Skutustadir pseudocraters on the southern end of Lake Myvatn.
- (4) Dimmuborgir (The Black Castles) on the eastern shore of Lake Myvatn. Here, displays could be designed to explain the formation of the lava rocks, caves, and canyons, as well as to point out the various species of wildlife indigenous to the area (the Valabjarg falcon's nest and the breeding grounds on Sluttnes).
- (5) The Jokulsa river gorges.
- (6) The Asbyrgi rock and natural park area (with a possible excursion to the Hljodaklettur echoing rocks).

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<sup>1/</sup> The absence of road signs and markers now makes driving in Iceland a difficult proposition for the foreign tourist, and their role in any regional tourism planning should not be downplayed.



FIGURE III-5

NATURAL HISTORY DISPLAY NETWORK  
PROTOTYPE CIRCLE TOUR FOR  
NORTHERN ICELAND

- (7) The shell fossil layers in the cliffs at Hallbjarnarstadir, near Tjornes.
- (8) On Husavikurfjall mountain above Husavik, with displays depicting the story of Gardar Svavarsson's winter, and a guide to scenery and sites within view from the mountain.

It should be noted that at present there is nothing at any of these sites to indicate to the visitor their importance or significance.

During the summer months (mid-May through mid-September), each mini-museum display center would be manned by a knowledgeable Icelander --perhaps a university student--who would be available to greet visitors, to answer their questions, and, in the larger (four-section) displays structures, to sell books, postcards, slides, and other small gift items. These same individuals would also be responsible for routine maintenance chores at the end of each day. To help cover payroll and maintenance expenses, we propose that each visitor be asked to purchase a \$2.00 ticket when he or she begins the tour in Akureyri. For the price of this ticket, he would receive a map, explanatory literature, a tour button admitting him to each display center, and discounts on items sold at each mini-museum.

The following summary of capital requirements and projected operating results for a natural history display network is based on the prototype tour outlined above. For simplicity's sake, we have assumed that the network will include five two-section and three four-section structures, each built in an identical fashion to resemble a typical sod house (as illustrated in the previous section).

We should like to emphasize that this prototype is an arbitrary model which can be adapted to a greater or smaller number of "mini-museum" locations, of varying size (two-, three-, and four-sections) in northern Iceland, as well as in other regions of the country. Also, certain features of the prototype are strictly optional, such as the proposed staffing arrangement and revenue base. A possible alternative, for example, would be for the national or local governments to operate each center as a tourist service free of any charge to the visitor, and thereby encourage local entrepreneurs to develop revenue-generating facilities - gift shops, restaurants, even overnight accommodations - nearby.

A. Capital Requirements

Exhibit III-1 shows a breakdown of the estimated \$960,000 in capital investment that will be required to construct and equip the eight "mini-museum" display centers in the prototype. It should be noted that this total is exclusive of land costs, which will vary considerably depending on ownership and location of the site.

Site improvements, including landscaping, grading, and sewage disposal, should run around \$15,000 for each of the five smaller (two-section) centers, and \$20,000 for the three larger (four-section) ones. It is assumed that all sites will be located close enough to existing roads so as not to necessitate any major development of access routes.

A total of \$440,000 has been allocated for building construction, including toilet facilities, and \$225,000 for equipment - display cases, exhibit materials, and road signs. Design and supervision fees, calculated at ten percent of construction and furnishing costs, add \$80,000 to the amount of capital required. Another \$80,000 has been reserved for contingencies, which may include the installation of electric utility hookups or generators where necessary.

EXHIBIT III-1

NATURAL HISTORY DISPLAY NETWORK: PROTOTYPE  
CAPITAL REQUIREMENTS

|                                      |                                  |                |
|--------------------------------------|----------------------------------|----------------|
| SITE IMPROVEMENTS                    |                                  | \$ 135,000     |
| CONSTRUCTION                         |                                  | 440,000        |
| EQUIPMENT                            |                                  |                |
|                                      | Display Cases/Exhibit Materials  | \$ 220,000     |
|                                      | Road Signs (20 @ \$250 per sign) | <u>5,000</u>   |
|                                      |                                  | <u>225,000</u> |
| TOTAL CONSTRUCTION & FURNISHING COST |                                  | \$ 800,000     |
| DESIGN & SUPERVISION @ 10 percent    |                                  | 80,000         |
| CONTINGENCY @ 10 percent             |                                  | <u>80,000</u>  |
| TOTAL CAPITAL REQUIRED               |                                  | \$ 960,000     |

Source: The Architects Collaborative & Checchi and Company estimates, 1975.



The Exhibit III-2 below itemizes unit costs for each size of display structure proposed in our design program. By multiplying total costs per size by the number of units of each size desired, and then adding a small additional amount for road signs, it is possible to arrive at capital requirements for all varieties of display center networks, however large or small. For example, a network including three small and one medium-size components could be developed for about \$400,000, whereas a more grandiose one - say five small, four medium, and three large components - would run around \$1.5 million. In this way, interested parties - including Iceland's local governments - are provided with a range of options from which to select those that best suit their region's natural and historical assets, their pocketbooks, and their interests in tourism development.

EXHIBIT III-2

1/  
UNIT COSTS OF "MINI-MUSEUM" DISPLAY CENTERS, BY SIZE

|                        | Two-Section<br>(small) | Three-Section<br>(medium) | Four-Section<br>(large) |
|------------------------|------------------------|---------------------------|-------------------------|
| Site Improvements      | \$ 15,000              | \$ 18,000                 | \$ 20,000               |
| Construction           | 40,000                 | 60,000                    | 80,000                  |
| Equipment              | 20,000                 | 30,000                    | 40,000                  |
| Design and Supervision | 7,500                  | 10,800                    | 14,000                  |
| Contingency            | <u>7,500</u>           | <u>10,800</u>             | <u>14,000</u>           |
| Total Capital Costs    | \$ 90,000              | \$129,600                 | \$168,000               |

1/ Exclusive of Road Signs.

Source: The Architects Collaborative and Checchi and Company estimates, 1975.

## B. Operating Results

Estimated annual operating results for the Natural History Display Network prototype in a typical year are summarized in Exhibit III-3. Projected revenues are calculated on the premise that the tour will attract 10,000 paying participants per year, 5,000 of which will be foreign tourists,<sup>1/</sup> and the balance Icelandic residents, including school-children. Further, it is expected that 50 percent of these visitors will purchase books or souvenirs at one of the gift shops, with an average expenditure of \$2.00 per purchase.

The largest operating expense will be the \$18,000 payroll, which provides for a guide/manager to be stationed at each of the eight "mini-museums" full-time during the four-month summer season at an average salary (including fringe benefits) of \$550 per month.<sup>2/</sup> The cost of sales in the gift shops has been estimated at 50 percent of receipts, to allow for a standard 100 percent retail markup. The \$5,000 allocated to repairs and maintenance is intended to cover wage and travel expenses for a part-time employee to check each center once a week on a year round basis (weather and roads permitting), plus costs for repair materials. \$5,000 has also been budgeted for supplies (maps, tour buttons, miscellaneous cleaning items), \$2,000 for advertising and promotion, \$1,000 for utilities (primarily electricity), and \$5,000 for insurance, legal, and audit. Total operating expenses are estimated at \$41,000 which, when subtracted from the \$30,000 in total revenues, gives an annual operating deficit of just \$11,000. As shown in the exhibit, losses after taking depreciation on site improvements, buildings, and equipment comes to a little more than \$75,000 per year. Depreciation charges are calculated by the straight-line method over average periods of useful life.

It can readily be seen that annual operating losses for the tour network would increase from \$11,000 to \$41,000 with the exclusion of the prototype's revenue-generating features. On the other hand, it might then be possible to reduce personnel to one or two staff at the larger centers, leaving the smaller ones unmanned. Savings would also be realized by eliminating one or more of the museum sites from the program,

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<sup>1/</sup> This estimate is based on the fact that Iceland has been receiving close to 15,000 extended stay tourists per year in recent years (see Checchi & Company, *Tourism in Iceland*, Vol. I, Table 14, "An Estimate of the Structure of Tourism," p. 59). It is considered reasonable to assume that one-third of this total can be attracted to visit Akureyri and take the self-guided tour.

<sup>2/</sup> Non-museum-related employees at the Akureyri Tourist Bureau are not included in this total.

EXHIBIT III- 3

NATURAL HISTORY DISPLAY NETWORK: PROTOTYPE  
OPERATING STATEMENT

|  |               |               |
|--|---------------|---------------|
| REVENUES                                       |               |               |
| Admissions                                     | \$20,000      |               |
| Gift Shop Receipts                             | <u>10,000</u> |               |
| Total Revenues                                 |               | \$30,000      |
| EXPENSES                                       |               |               |
| Payroll  | 18,000        |               |
| Cost of Goods Sold                             | 5,000         |               |
| Repairs and Maintenance                        | 5,000         |               |
| Supplies                                       | 5,000         |               |
| Advertising and Promotion                      | 2,000         |               |
| Utilities                                      | 1,000         |               |
| Insurance                                      | <u>5,000</u>  |               |
| Total Expenses                                 |               | <u>41,000</u> |
| OPERATING PROFIT (LOSS)                        |               | (\$11,000)    |
| Less Depreciation: <sup>1/</sup>               |               |               |
| Site Improvements<br>(\$148,500 over 15 years) | 9,900         |               |
| Construction<br>(\$484,000 over 25 years)      | 19,360        |               |
| Equipment<br>(\$247,500 over 7 years)          | <u>35,357</u> | <u>64,617</u> |
| PROFIT (LOSS) AFTER<br>DEPRECIATION            |               | (\$75,617)    |

<sup>1/</sup> The base value of each class of assets includes a pro rata share of the design and supervision fees.

Source: Checchi and Company estimates, 1975.

at least until the initial development can prove itself a success. Allowing for certain central (or fixed) costs for the network in its entirety, it is estimated that each individual site can be operated at an average cost of approximately \$4,000 per year.

The very modest \$11,000 in actual subsidies needed demonstrates the advantages of the decentralized mini-museum network over the more traditional museum concept, which normally requires far greater operating subsidies. The ability to develop the network in stages should make the idea even more attractive. Finally, let us note that this is a concept that will have as much or even more appeal to the local market as to foreigners, justifying even further the modest operating losses entailed.