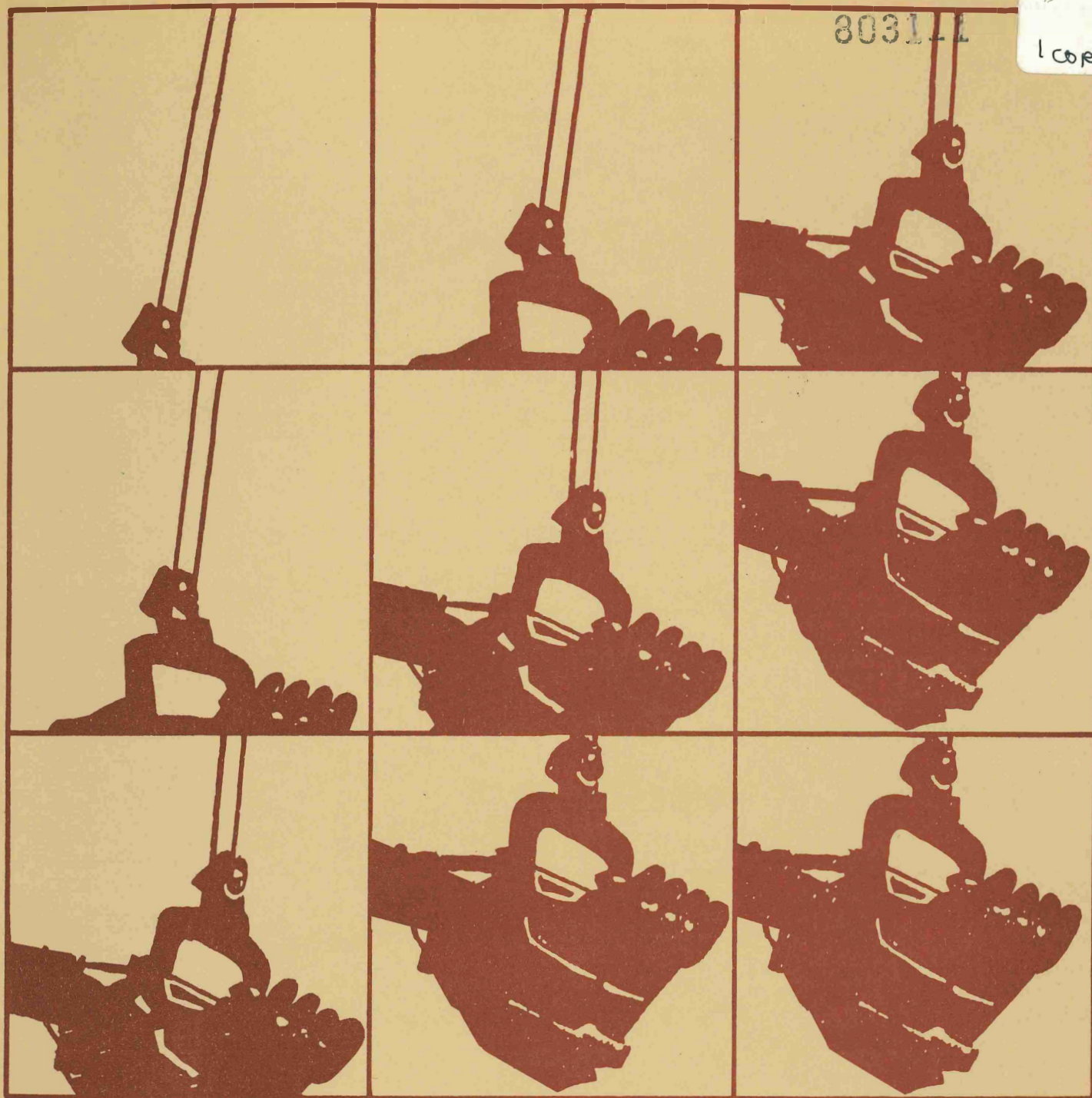


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Iron Range Interpretative Center

Analysis and Recommendations for
Traffic Patterns
Exhibition Revisions
Graphic Standards

Consultant's Report to Iron Range
Resources & Rehabilitation Bd

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joseph a. wetzel associates | inc.

ANALYSIS AND RECOMMENDATIONS FOR TRAFFIC PATTERNS, EXHIBITION
REVISIONS, GRAPHIC STANDARDS

Iron Range Interpretative Center
Chisholm, Minnesota

April 1980

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INTRODUCTION

This report contains an analysis and recommendations for visitor traffic patterns, exhibition revisions and other physical building revisions, and a graphic standards system for the Iron Range Interpretative Center.

These recommendations have been made necessary by the rapid expansion of the Center from its initial size and original purpose at its opening in 1977. The expansion to date is comprised of three additional supporting facilities:

- The Geology Hall, open fall 1979
- The Ethnic Arts Center, open fall 1980
- The Research Center, open fall 1980

The purpose of the recommendations is to define those changes that will ultimately result in improved facility function and enhanced visitor experience.

TRAFFIC PATTERNS

An analysis of existing traffic patterns at the Interpretative Center has been made with these resultant recommendations:

The prime criterion for traffic pattern control is to maintain one entrance to the Center with one ticketing/admission point.

The existing entrance should remain as the single entrance to the Center. The existing admission desk area should be revised and a new Orientation exhibit designed and installed. A description of these changes is contained in the "Exhibition Revisions" section of this report.

A separate entrance will be used for the Research Center. This entrance will be used primarily by users of the Research Center and not by visitors to the Interpretative Center.

There is the possibility of visitors avoiding the admission charge by entering via the connecting bridge. This situation should be regulated in one of two ways. By giving clip-on buttons at the admission desk for the visitor to wear, scofflaws can thereby be spotted and dealt with summarily. The admission button system facilitates special situations when other entrances to the building may be open, such as Minnesota Ethnic Days. The admissions button also exists as a small souvenir and advertisement.

The alternative solution is to assume that non-paying visitors will represent a miniscule fraction of overall attendance and are not of concern. Signs can also be located at alternative entrance points to the Center informing the visitor that there is an admission fee and to please pay at the front desk.

The physical layout of the expanded Center is potentially confusing to the first-time visitor. The choices available must be made very clear and presented in a straight-forward manner.

Information on how to use the Center and a description of content should be available in three ways:

1. A proper Orientation exhibit located in the lobby;

2. A printed brochure of content and directions, and
3. Clear verbal instructions available from staff members.

(See page 5, #5, for a description of these modes.)

The basic traffic flow plan will now comprise two main routes for the two basic visitor types:

1. Visitors who wish to see the entire facility or only the Iron Range History section.
2. Visitors who wish to see only the Geology Hall and/or the Ethnic Arts Center.

It is of key importance that these two routes be indicated as clearly as possible using a physical "trail" to follow that is augmented with directional signs.

(See page 6, #6 and #7 for a description of this route marking system.)

Other items that are related to traffic flow and are described in other sections of this booklet are:

- Geology Hall sign, page 11, #21B
- Architecture exhibit, page 14, #32
- Geology Hall entrance, page 15, #35
- Labor and Organizing exhibit, page 16, #36
- Directional signage to the Taconite exhibits, page 17, #39
- Taconite exhibits, page 18, #40
- Taconite exhibits floor diagram, page 18, #41
- Theater entrance signs, page 20, #45
- Activity monitors, page 21, #46

EXHIBITION REVISIONS FOR THE IRON RANGE INTERPRETATIVE CENTER

These recommendations are made in compliance with the request by the Iron Range Resources and Rehabilitation Commission to delineate physical changes or revisions to the Iron Range Interpretative Center.

The changes listed are based on two primary reasons:

1. Changes or revisions made necessary by the addition of new functions and areas to the Iron Range Interpretative Center, such as the Geology Hall and the Ethnic Arts Center.
2. Modifications to existing exhibits at the Iron Range Interpretative Center for the purpose of enhancing and improving their function and ultimate visitor experience.

The changes or revisions contained herein are keyed by number designation (in parentheses) to floor plans X1 and X2 which accompany this report.

1. Any audiovisual hardware to be used in the Ethnic Arts Center, including videotaping hardware, should be compatible with, complement, but not duplicate unnecessarily, and preferably be on the same maintenance or service contract with any existing hardware in the Center or planned hardware for the new Library and Archives.
2. Any recommendation or change that affects or interfaces with the existing architecture should be reviewed and approved by Architectural Resources, Inc., with regard to function, design integration with the existing architecture, and planned facility change or expansion.
3. Outside identification. All outside identification should be implemented in accordance with a designed graphic standards system and function to identify the facility to the visitor from the highway to parking lot to building entrance.
4. Admission desk. The existing admission desk (4) should be removed and a new combination admission and shop sales desk designed out of materials more complementary to the lobby interior such as natural wood. Refer to the floor plan for the recommended location (4A). A dual purpose desk will save valuable space in the lobby and provide a common location for two functions with cash handling requirements. A traffic control rail to funnel incoming traffic past the admissions desk should be installed (4B). The design of this rail and the choice of materials should be made with all existing interior architectural details in mind. The purpose of this traffic control device would be to create two lanes of traffic, one in-coming, one out-going.

The windows in the shop should be fitted with venetian blinds (4C) that are finished in the window trim and color similar to the existing blinds on the door in the administration office.

5. Orientation exhibit. An Orientation exhibit should be located in the approximate vicinity of the present lobby desk (see location on plan). The purpose of the Orientation exhibit should be to welcome the visitor to the Iron Range Interpretative Center, to

orient the visitor to the physical space he is entering (a "You Are Here"), to present the visitor with what facilities are available and where to find them and how to use them (how to make the best use of their visitation time), and the location of convenience facilities (rest rooms, snacks, etc.).

The existing curved Welcome panel should be the vehicle for this information. An additional curved panel of the same profile and thickness should be suspended several inches above and separated from the present panel. This would contain the Welcome statement and be of the same dimension as the present Welcome statement.

6. Routes to exhibit areas. Clear routes to each of the main areas of the Center must be provided for the visitor. A minimum of two routes must be marked. One, from the lobby to the start of the Mining exhibits on the observation platform, and a second from the lobby to the Geology Hall and the Ethnic Arts Center. A route to the Research Library should not be necessary because of its separate entrance and intended use by repeat visitors.

The clearest way to define these routes is to suspend colored "leaders" from overhead that lead from the lobby to the areas in question. For example, a line of orange would lead from the orientation panel down the corridor and out onto the observation platform with the accompanying message "Follow the orange line to the Mining exhibits." Similarly, a line of blue would lead down the stairs and through the Saloon section of the exhibits below to the Geology Hall and the Ethnic Arts Center.

The color of the line should be illuminated neon. The neon should be dimmed to brightness of a proper level in the area it occupies.

7. Additional written instructions should be added to the existing chevron panels. "This way to the Mining exhibits" should be silkscreened in the appropriate color and location to the chevron panel on the right

hand side of the lobby (7). An additional, curved, chevron panel (7A) should be added to the corner between the Oral History Library and the librarian's office. This panel should have a repeat of the above message. The large S-curved panel nearest the stairwell (7B) should be moved two feet further away from the stairwell. This will provide a more ample opening (7C) for people on the way to the Geology Hall and the Ethnic Arts Center, and it will serve to block unwanted traffic into the Taconite area. A repeat of "This way to the Mining exhibits" should be silkscreened on the side of this panel that would be on the visitor's left when walking from the lobby to the observation platform (7D).

A sign with the message "This way to the Geology Hall and the Ethnic Arts Center" should be located on the stairwell rail facing the visitor walking down the right hand lobby aisle and the wall between the rest rooms on the lower level (7E). The size of the sign must be carefully considered, large enough to be significant but not too large so to obscure the passage in back of it. A large, hands-on mineral specimen, such as a piece of quartz, should be mounted in front of this sign and between existing wooden rails (7F). A small, enclosed display case should also be located here next to the mineral specimens and contain some of the ethnic items such as Ukranian dyed eggs, hand-made dolls, etc. (7G).

Lobby lighting. The lighting in the lobby should be modified to provide more dramatic focus on the items that are important for the visitor to notice and distinguish in the lobby. The overhead, fluorescent lighting should be replaced with incandescent spotlights that put light where it is needed, and do not generally flood the area. Items requiring more specific focus through careful lighting are: the admissions desk, the Orientation exhibit panel, directional signage and copy, the Geology Hall and Ethnic Arts Center display samples, and intended visitor walkways and stairs. The present fluorescent lighting gives good overall lighting, but cannot be focused on any of the elements in the lobby necessary for visitor orientation and instruction.

8. Oral History Library. A plaque to identify the Oral History Library should be located next to the door opening (8A) so that the room is identified when the door is open.

A wooden rail of the same material, size and finish should be designed and installed in the Oral History Library (8B).

It should be a multi-purpose unit that holds the audio jacks with proper identification, acts as a chair rail and contains some small graphic or photographic interpretive material that augments the audio programs.

*Seems to
have been
done*

The portrait located in the area leading to the "bridge" (8C) should be relocated to the Oral History Library.

9. Upper level walkway to observation deck. A series of small, rail-mounted signs should be added to the walkway and serve to introduce the visitor more specifically to the Iron Range Mining story. These should be located on both sides and contain a running message a la Burma Shave signs.
10. Flags and banners. The flags and banners hanging above the Immigration Tunnel should be relocated to more dynamic positions. Additional flags of varying sizes should also be added to make the display visually more exciting and active. Careful positioning is required to not interfere with the visitor's view to the outside.

11. Geological Process exhibit. Large target panels that correspond to the cased soil and ore specimens in the display cases should be mounted in the appropriate locations on the far wall of the open pit (11). Two telescopes that would allow the visitor a closer look into the pit should be added to the wood rail with the display cases (11A). Location of the telescopes and the target panels is critical and locations should permit clear, unobstructed views for the visitor. A step for children may be necessary if the wood railing is used to mount the telescopes. Careful detailing of the mounting hardware is necessary to coordinate it visually with existing display hardware.
12. Stairwell. Color and graphic panels should be added to the stairwell (12) along with directional copy to escort the visitor from the upper level to the lower level.
13. Range model. Two telescopes (13) should be located on free-standing floor mounts near the window rail to permit viewing through the third windows from the left and right side. The mounts should be detailed to coordinate with existing exhibit hardware in such a way and with the remaining structures at the Glen Location on the opposite side of open pit.
14. Lower level map graphic panel (located on elevator shaft). A clear index of the content of this panel should be added along with an explanation of the location of the ore bodies, the orange #3 and small orange dots.
15. Indians, Explorers and Settlers. The area dealing with native Americans should be expanded to include the story of prehistoric Indian miners in the area that mined ochre and copper.

Generally, in this entire area, more hands-on artifacts should be added to the existing exhibits to fill the space with more interesting and exciting collection material that will enable the visitor to relate more directly to the experience of this era (15A).

The Longyear exhibit section needs more "propping," for example, trees, brush, and foliage. The Longyear shack itself is too "neat" and not rough or workman-like enough (15B). The Longyear audio program should be activated by a rearlit push button (15C).

16. Immigration Tunnel. A "fanny rest" should be added to the back wall of the first audiovisual presentation to allow visitors the opportunity to rest momentarily while watching the presentation. Several plaster "immigrants" could be added at various spots, such as around the screen (16A).
17. The present graphic panel of Minnesota immigration should be replaced with a panel dealing with immigration specifically to the Iron Range.
18. Baggage Room. The ceiling lighting and color and intensity should be changed by using colored gels and neutral density filter sleeves that fit over the existing fluorescent fixtures.

The audio program in this area should be removed from the external speakers. It should be incorporated into one or two period telephones that should be added to this room as listening posts (18A) with rearlit "push to activate" buttons. More artifacts should be put on display using the trunk and baggage containers as display cases (18B). Quotes from immigrants should be silkscreened on the mirrored walls (18C).
19. The American Dream. This area should be re-lit to become more inviting (19). Period train waiting room details can be added such as benches, light fixtures, and signage (19A).
20. The doorway and window immediately opposite the Mining Camp vignette and adjacent to the old Geology exhibit should be fitted with solid panels painted to match the trim.

21. Geology exhibit. The existing cases with geological specimens and the accompanying display rail signs should be changed to interpret new subject matter. The new material should expand the current exhibit on Mining by reusing the existing cases' and signs to illustrate the various types of ore on the Range and how it was formed. This area should use actual specimens to show the formation of iron ore from taconite. Four to six samples would allow the visitor to see how the commercial grade ore has been created through natural weathering processes. Each sample would be a cube of about 18 inches or be enclosed in one of the existing cases. Labels would describe various steps in the process. The samples to be described are:

1. pure, solid sample of taconite;
2. oxidized sample of taconite;
3. samples in which some and then most of the quartz has been leached out; and,
4. the collapsed, concentrated iron ore.

A new overhead sign should be added to clearly identify this area on mining (21A). It is recommended that one of the existing signs hanging in the area be rescreened with new artwork and copy and be used for this purpose (e.g., the sign entitled "One-half Mile Down").

A sign should be added to inform the people about the new Geology Hall and its location (21B).

22. Camps and Locations exhibit. The existing barrier rail for the camp and location vignette should be repainted to match the color and finish of the type used to support the Seven Iron Men exhibit.

The push button controls that activate the audio programs should be changed to rearlit push buttons.

Two of the overhead signs for "Locations" on the far right should be removed.

The audio program for the Camps and Locations exhibit should be redone to incorporate more realistic ethnic accents and artifacts and specific, historically accurate references to the dialogue (22B).

23. Underground Mining exhibit. Mining equipment and tools should be added to the outside entrance of the underground mine (23). These should be located with the intent to "color" the area by making it look like more of a work site and to provide more collection items that the visitor can touch and feel.

The three red panels hung overhead on underground mining should be removed.

The graphic panel inside the underground mine has an incorrect entry referring to "stope" which should be corrected (23A). The overhead, fluorescent lighting on this panel should be removed and the panel lit from a framing spotlight(s) located above the entrance doorway in the corner farthest from the panel. This will eliminate reflections and glare on the panel.

The lighting on the underground miner cutouts should be modified to affect the same purpose. Period lighting fixtures such as carbide lamps could be used as the housing for the necessary theatrical lights and colored gels required for this (23B).

24. Blasting exhibit. The entire rail section with the existing Blasting exhibit should be relocated and moved directly next to the entrance of the underground mine along the same wall against which it is presently located (24).

Appropriate artifacts that are examples of tools mentioned in the copy should be displayed in conjunction with this exhibit (24A). The four existing overhead panels should be relocated to work properly with the new location of the exhibit. They should be hung at a 45° angle to the wall.

25. Transportation (People) exhibit. The existing three kiosks (Rail, Bus, Stagecoach) should be relocated to the existing exhibit area on Crafts (25) which itself will be relocated to the Ethnic Arts Center. The three kiosks should be placed to become part of a coherent, single exhibit area on Transportation that is subdivided into two sections: Transportation of Ore, and Transportation of People. The existing signs that accompany the kiosk should be lowered and placed closer to the wheels that the visitor turns. Simple instructional copy should be added to each of these

that instructs the visitor to "Turn the wheel and see. . ."

Any accompanying existing transportation signage should be relocated accordingly.

26. Towns and Locations exhibit (new exhibit). A new exhibit on towns and locations should be created from the rail and pieces currently used on the upper level to tell the story of the natural environment, specifically the Continental Divide model, copper-nickel panel, water panel, forest panel, wildlife and accompanying signage.

The existing exhibit on Celebrations on the lower level should be removed reusing whatever graphic panels that can be appropriately relocated in the new Ethnic Arts Center (26A).

The existing rail section and exhibit cases for the Natural Environment exhibit should be relocated so that the long side of the "L" is placed along the outside of the Location house wall in the same line as the current Transportation (People) kiosks (26).

The existing, rotating cases from the Natural Environment exhibit can be reused in their existing form as semi-permanent or changing exhibits which use speech to focus on the story of an individual town or location on the Range (26B). The rotating capability of the cases could be used to incorporate a visitor interactive guessing game ("Can you find your street or house in this picture? Answers on the other side."), or one side of a panel might contain the story of a town or location, and the opposite side contain an up-close look at a specific family or person in the town.

The existing case on the Continental Divide may be able to be modified using the same model with the addition of colored lights that could be a visitor-activated guessing game discussing the story of the move of towns and locations on the Range (26C).

27. All of the audio programs should be carefully re-evaluated to determine the proper audio level for each program.
28. Ore Transportation exhibit. A scale model Great Lakes oil carrier ship in an appropriate case with interpretive copy should be added to this section. The visitor should also be referred to visit the Canal Park Marine Museum in Duluth.

29. Crafts exhibit. The existing exhibit on crafts (rear-projected audiovisual unit with quilt panels) should be dismantled and removed from its present location. The components, including the audiovisual software, should be reused where possible in the Ethnic Arts Center area.
30. Lumbering exhibit. Log marks or brands should be hammered into the ends of some of the logs in the log stack. A variety of branding tools should be displayed in conjunction with these brands. Spot-lighting should be revised in this area to highlight its new material and carefully aimed to highlight existing copy panel (30A).
31. General Store exhibit (new exhibit). The present Celebration area should be dismantled, including the kitchen demonstration section, and the appropriate pieces reused where possible in the Ethnic Arts Center area (31A).

The vacated area should be outfitted, styled and propped to exist as a period Iron Range General Store (31). The exterior walls for the General Store would screen off the adjacent Towns and Locations exhibit previously mentioned. The interior of the General Store would be richly filled with appropriate artifacts including dry goods and apparel. The apparel section could be adjacent to a small, period photographer's alcove which would enable visitors to try on hats or period costumes and buy a photo of themselves as a sepia-toned print. This would be volunteer-staffed. The General Store, on the opposite side, would also contain a small operating post office, also volunteer-staffed. The post office could sell period picture postcards and Interpretative Center postcards.

32. Architecture exhibit. Some of the existing graphic panels should be repositioned to provide a more direct route from the stairwell to the Geology Hall and Ethnic Arts Center. This will also serve to provide a clearer path through the existing History exhibit areas and facilitate reading the information on the reverse side of the panels.

33. Frontier town exhibit (saloon). A copy panel should explain the wood road section of floor immediately prior to entering the saloon/education exhibit area.

The interior of the Saloon should be augmented with more artifacts wherever possible (33A). Additional sculptural figures could be added to the Saloon. For example, a bartender figure: when approached by the visitor, a proximity switch could trigger an audio program containing some period anecdotes.

34. Developing Urbanization (new exhibit). The area that the visitor encounters after leaving the Saloon should be developed into a new exhibit that is designed to draw the visitor's attention to this area around the corner. It could interpret the development of urbanization on the Range and incorporate another appropriate period vignette such as a barbershop interior, sections from a bank or lawyer's office, or perhaps a church with a fire-and-brimstone preacher in the middle of an oration against the evils and vices associated with the Saloon the visitor has just left.

35. Entrance to Geology Hall. A proper entrance for the Geology Hall and the Ethnic Arts Center area must be developed. The existing panels on "Labor and Organizing" should be relocated to positions further down the hall in which they are presently located and the present space outside of the Geology hall left open and clear. We would recommend that some occasional seating be located in this area for the visitor who wishes to pause and rest.

The doorway to the Geology Hall should be enclosed with a mullion-less, floor-to-ceiling architectural glass partition (35A). The doorway should be kept on the right hand half of the total opening as one faces into the Geology Hall.

The overhead neon direction route marker to the Geology Hall should terminate here by becoming a large, bold neon sign of the same color identifying the Geology Hall. The sign should be located on the glass, to the left side of the doorway (35B).

If a second color of neon has been used to identify

the route to the Ethnic Arts Center, this line of color should penetrate the glass partition and continue through the Geology Hall into the Ethnic Arts Center beyond.

A similar glass partition and door should be located at the opposite end of the Geology Hall and divide it from the Ethnic Arts Center area. Frameless, glass doors should be installed that swing in directions according to local fire codes. Each set of doors should have locks to permit these areas of the Center to be locked as needed.

36. Labor and Organizing exhibit. The introductory panel, "Organizing Labor," should be removed from its present location. The headline and subhead copy should be utilized on a new introductory panel suspended overhead and spanning the hall on architectural grid line #4 (36). The size and height of the sign and copy should be selected to clearly identify this section of the Mining History exhibit to the visitor, differentiated from the Geology Hall and Ethnic Arts Center.

The "Good Jobs" photo panel should be removed from its present location (36A). There is no room available to reuse this panel. With the addition of the appropriate copy and information it may be possible to reuse this as an advertisement for the Center that could be located in a mall or similar high traffic public place.

The "Mesabi and Mass Labor" panel, the "Production Abuse Organization" panel, and the smaller, curved panel between these two should be relocated along the same wall to new positions between architectural grid lines 4 and 5 (36B). The "Production Abuse Organization" panels should be mounted so that they can be hinged and swung away from the wall easily to provide access to the electrical panels in back of this position (36C).

The "One Day's Pay" panel and vignette with desk and paymaster, should be relocated to the alcove on the opposite side of the hall between architectural grid lines 5 and 6 (36D). This new location would be immediately next to the "One Day's Work" vignette and opposite the miners-with-arms-linked sculptures.

The "Working Conditions" panel should be removed from its present position (36E). There is no room to reuse this panel. The copy from this panel could be rescreened onto the existing "One Day's Work" panel (36F).

The existing vignette entitled "The Company," currently located between architectural grid lines 5 and 6, opposite the miner figure sculptures, should be relocated to the next alcove (36G) between architectural grid lines 6 and 7. The position of the curved panels and the two sculptural figures should be positioned to keep them in as close proximity to the miner figure sculptures as possible.

The existing miner figure sculptures should be repositioned in a counterclockwise position (as viewed from above) to be located midway between the "One Day's Pay" and "The Company" vignettes (36H).

37. World War I exhibit. The two soldier sculptures and the two smaller carpeted berms should be relocated to a new position on the other side of the corner they are presently in, and be situated in front of the large steel American flag panel (37). The "World War I: Iron Boom" panel should be relocated to the position immediately to the right of the American flag panel and serve as the background for the kneeling soldier figures (37A).

The "Patriotism and Citizenship" panel should be relocated to the other side of the flagpole for the American flag panel and curve from the flagpole across the window opening (37B).

38. World War II exhibit. The camouflage painted areas in and around the World War II theater should be repainted to be more representative of actual camouflage patterns and colors.
39. Directional signage to the Taconite exhibits. Directional instructions from the lobby above to the Geology Hall and the Ethnic Arts Center and directional copy from the exhibits below to the Taconite exhibits on the upper level should be added to the rear side of the existing curved welcome panel in the stairwell. This information should be placed to be clearly visible to visitors using the stairs in either direction.

Directional instructions to the Taconite exhibit area should be located on the inside surface of the large S-shaped partition panel at the top of the stairs (39A). This copy should direct the visitor from the stair landing to the left into the Taconite exhibit area.

40. Taconite exhibits. A new introduction panel should be designed for the entrance to the Taconite exhibit area (40). It should be located around building column at grid F-6 and be of the same design motif, dimensions, and details as the existing columns in the Taconite area. The purpose of this new column will be to clearly identify the Taconite area from the lobby. It should also serve to explain the total layout and meaning of the Taconite exhibit, and should be a "You Are Here" plan of the Taconite exhibit floor layout and content. It should, in essence, act as a proper orientation to the Taconite exhibit.

Light control blinds should be added to most of the windows in this first floor area to prevent light intrusion from outside daylight (40A). It is recommended that venetian blinds be used that will integrate well with the existing architectural window details for this purpose. The color and detailing of these blinds is an important consideration and care must be taken in their selection. The window opening between grid lines E and F should remain open and the present seating retained (40B). The windows between grid lines B, C, D and E should be covered. The windows on the adjacent wall between grid lines 4, 5, 6 and 7 should also be covered with blinds (40A).

41. A floor diagram "path" (41) should be incorporated into the floor of the Taconite exhibits and lead in proper sequence from column to column. This should be done using cut in carpet sections of a contrasting color and similar thickness, weave, and texture.

Human figure sculptures and artifacts (41A) should be added to complement and augment the existing Taconite exhibits. These figures and their gestures and accompanying artifacts should be selected to amplify the specific subject matter of each segment of the Taconite story.

42. Iron Arcade exhibits. The hanging banners surrounding the Iron Arcade exhibits should be reversed so that

the solid color sides are hung away from the Iron Arcade exhibits and the graphic figures face into the exhibit area.

The Iron Arcade exhibit should be expanded and exhibits added to it. A careful evaluation of the existing exhibits should be made to determine which additional exhibits would be best. A proper mix of challenge and activity levels must be the criteria for this selection. For example, the existing Ore Loading Race exhibit is an excellent example of a proper level of activity, challenge and feedback for adult and child alike. Examples of suggested additional exhibits for this area include: the previously designed Pinball/Iron Bonanza exhibit (42A) (note: if maintenance cost is a significant factor for the pinball machine, a coin-operated slot should be incorporated and proceeds used to maintain the exhibit); The previously designed "Drive a Truck" exhibit (42B). A computer-based exhibit using a color monitor could have a visitor-interactive program written that would actively challenge the visitor to the proper use of iron and steel (42C). A variety of programs could be incorporated into such an exhibit. Several monitors could be located in the area vacated by the present exhibits on the Natural Environment. These monitors could face two directions: one direction related to the Iron Arcade, and the opposite direction related to programs on the environment and weather. An excellent example of an existing program that could be incorporated and related to the environment is a program on fighting forest fires currently used by the Ontario Science Center.

Existing exhibits in the Iron Arcade that are not functioning correctly should be modified to do so: the Magnetic Choice exhibit should allow the visitor to visually see the iron that is picked up when the magnet is activated. The Flexibility exhibit with the spinning steel cable and strobe light should be repaired and modified to enable the visitor to clearly see, "freeze" or move the position of the cable. The "Musical Steel" exhibit should be adjusted so that each of the keys gives a clear note when rung by the visitor.

43. Weather Station exhibit. The existing Weather Station exhibit (43) should be relocated to the new bridge between the Center and the Research Library and look

out over the landscape to the rear of the Center. It should relate to the actual weather outside. The weather instrumentation should be upgraded to whatever standards are required for the Center to function as a legitimate weather-readout station. This would enable the name of the Center to be used in local weather broadcasts. ("The temperature at the Iron Range Interpretative Center today is. . .")

The story of the weather and its extremes in the region should be expanded. The weather is a continual source of human communication and interaction and the exhibit should take advantage of human anecdotes such as local yarns and tales about the weather and its effects on people and the region. Artifacts or specimens that give testimony to the severity of the weather can be displayed here (for example, a section of frozen "exploded" tree trunk). The overall intent here should be to humanize the story and relate it in terms the visitor can understand.

44. Environment exhibit. The present Environment exhibit should be relocated so it does not impede access into the theater or traffic flow between the Center and the Research Library.
45. Theater identification. Entrances to the theater should be clearly identified to the visitor. These signs should be located to be visible when the doors are opened or closed.
46. Iron Range Center activity monitors. TV monitors will be located in several locations throughout the Center to inform visitors of the status of current programs and activities. Hanging yokes, mounting devices or cases for the monitors should be taken into careful consideration and designed as part of the existing exhibit hardware system. Specific locations for these monitors should also be carefully considered. Each of the monitors should be accompanied by a "You Are Here" map since there will be the need to refer visitors to different areas of the Center when different programs are taking place. The design and detailing of these maps should be designed to be an integral part of the existing exhibit hardware and graphic design system. A list of approximate monitor/map locations follows:
 - a. Tourism information area adjacent to the Taconite exhibits area and the lobby.

- b. Lower level seating area outside of the restrooms.
 - c. Ethnic Arts Center Identification/Welcome panel (bottom of the ramp past the Geology Hall).
 - d. Ethnic Arts Center kitchen area (bottom of the ramp near the doors).
47. An interpretive iron mining playground should be planned, designed and implemented, and integrated into a proper landscaping program at the the front of the Center. The existing basic concepts developed by Wetzel Associates should be utilized as the starting point for this program. This should be planned as an outside version of the Iron Arcade with the same care given to level of challenge, interaction and feedback to the visitor.

PRIORITIES FOR REVISIONS

The realities of cost and time make it necessary to prioritize the physical revisions to the Center and its exhibitions.

The priority system is divided into three levels based on a combination of immediacy of need and cost. This system is:

- these were 3 major facilities expansion*
- Priority "A": An item that is immediately necessary for the successful operation of the Center. Most of these are the result of the expansion of the original facility to include the Geology Hall, the Ethnic Arts Center and the Research Center. Estimated costs to implement these changes are included with these items and also included in the Ethnic Arts Center Program Recommendations capital budget.
 - Priority "B": An item that will greatly improve the function of the Center, but is not absolutely necessary to permit the three new expansion facilities to operate successfully. No estimates have been provided for these or Priority "B" items since they are not included in the current capital budget. Rapidly escalating costs for labor and material require that these items be estimated at the time deemed necessary to implement them.
 - Priority "C": An item that will enhance the function of the Center and add to total visitor experience and enjoyment, but is not as critical as a Priority "B" item.

The list of priorities is as follows: (Numbers are keyed to the Exhibition Revisions section and floorplans X1 and X2.)

<u>PRIORITY "A" ITEMS</u>		<u>ESTIMATED COST</u>
3	Outside identification	\$10,000
4A	Admissions desk	2,500
4B	Traffic control rail	400
4C	Shop venetian blinds	400
5	Orientation exhibit (not including activity monitor)	18,000
6	Neonroute markers (3 colors, 630, total including installation)	8,500

PRIORITY "A" ITEMS (continued) ESTIMATED COST

7, 7A	Directional signage and related	\$ 1,700
-7D		
7E-7G	Directional signage and related	1,200
20	Lower level door/window panels	200
27	Evaluate, adjust all audio program sound levels	staff
21B	Geology Hall Identification sign	300
32	Architecture Exhibit	300
35A	Geology Hall Doorway (2)	15,000
35B	Geology Hall neon sign	700
36	Mining exhibits Introduction panel	600
36A	Removal	staff
36B	Relocation	staff
36C	Mounting and hardware	300
36D	Relocation	staff
36E	Removal	staff
36F	Silkscreened copy	300
36G	Relocation	staff
36H	Relocation	staff
37	Relocation and modify berms	staff
37A,B	Relocation	staff
39,39A	Directional signage	500
46	Add activity monitors, maps (4) (does not include video hardware,software)	8,000

TOTAL PRIORITY "A" ITEMS	<u>\$68,900</u>
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PRIORITY "B" ITEMS

15C	Longyear audio rearlit push button
18	Baggage Room lighting
18A	Baggage Room telephone audio
18B	Add artifacts
18C	Add immigrant quotes
19	Re-light area
19A	Add period train waiting room details
21	Change Geology exhibit and signs
21A	New overhead sign
22	Paint Camp and Locations railing
	Add rearlit push buttons
	Remove two overhead signs
22B	Revise Camp and Locations audio and artifacts
23	Add Underground Mining artifacts
	Remove three red overhead panels
23A	Correct "stope" on graphic panel

PRIORITY "B" ITEMS (continued)

- 23B Revise lighting
- 24 Relocate Blasting exhibit
- 24A Relocate overhead signs, add artifacts
- 25 Relocate Transportation exhibit
- Lower copy panels
- Add instructional copy
- 26, Add new Towns and Locations exhibit
- 26B, }
26C }
- 26A Relocate sections of Celebration exhibit
- 28 Add ship model to exhibit
- 29 Relocate, reuse Crafts exhibit
- 30 Add log brands and artifacts
- 30A Adjust lighting
- 31 Add new General Store exhibit
- 31A Relocate, reuse Kitchen exhibit
- 33 Add woodblock road copy
- 40 Add new Taconite introduction
- 40A Add venetian blinds to windows
- 41 Add Taconite floor diagram
- 42 Reverse hanging banners
- Revise Flexibility and Musical Steel exhibit
- 43 Revise, relocate Weather exhibit
- 44 Relocate Environment exhibit
- 45 Add Theater signs

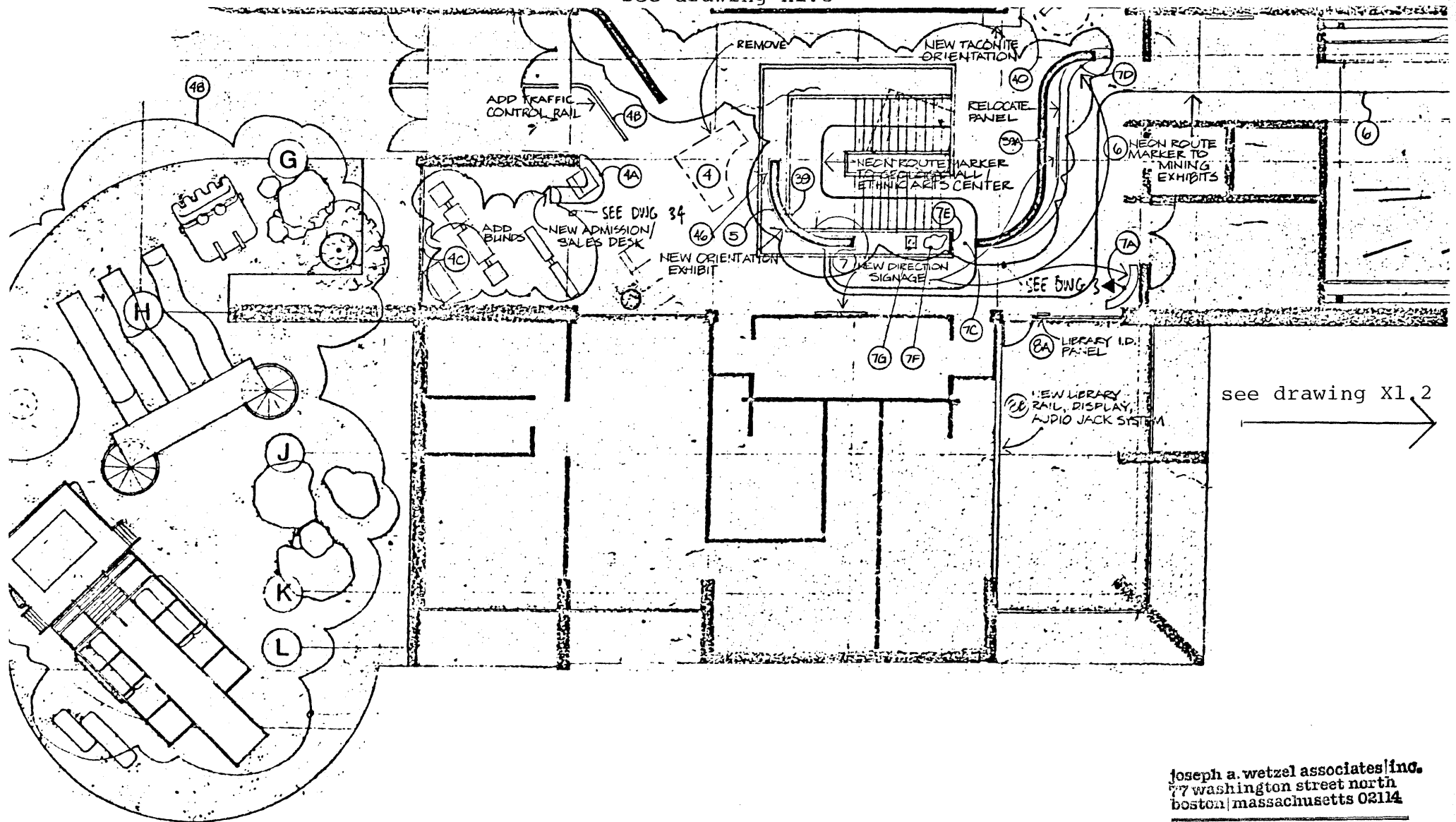
PRIORITY "C" ITEMS

- 9 Add observation deck walkway signs
- 10 Add and reposition flags and banners
- 11 Add target panels to pit wall
- 11A Add telescopes to Geological Process exhibit
- 12 Add stairwell graphics
- 13 Add telescopes to Range Model exhibit
- 14 Revise lower level map graphic panel
- 15 Add new Native American exhibit
- 15A,B Add artifacts, props to Longyear exhibit
- 16 Add "fanny rest" to Immigration Tunnel
- 16A Add immigrant sculptures
- 17 Revise Minnesota Immigration panel
- 33A Add Saloon artifacts, sculptures
- 34 Add new Urbanization exhibit
- 38 Repaint camouflage

PRIORITY "C" ITEMS (continued)

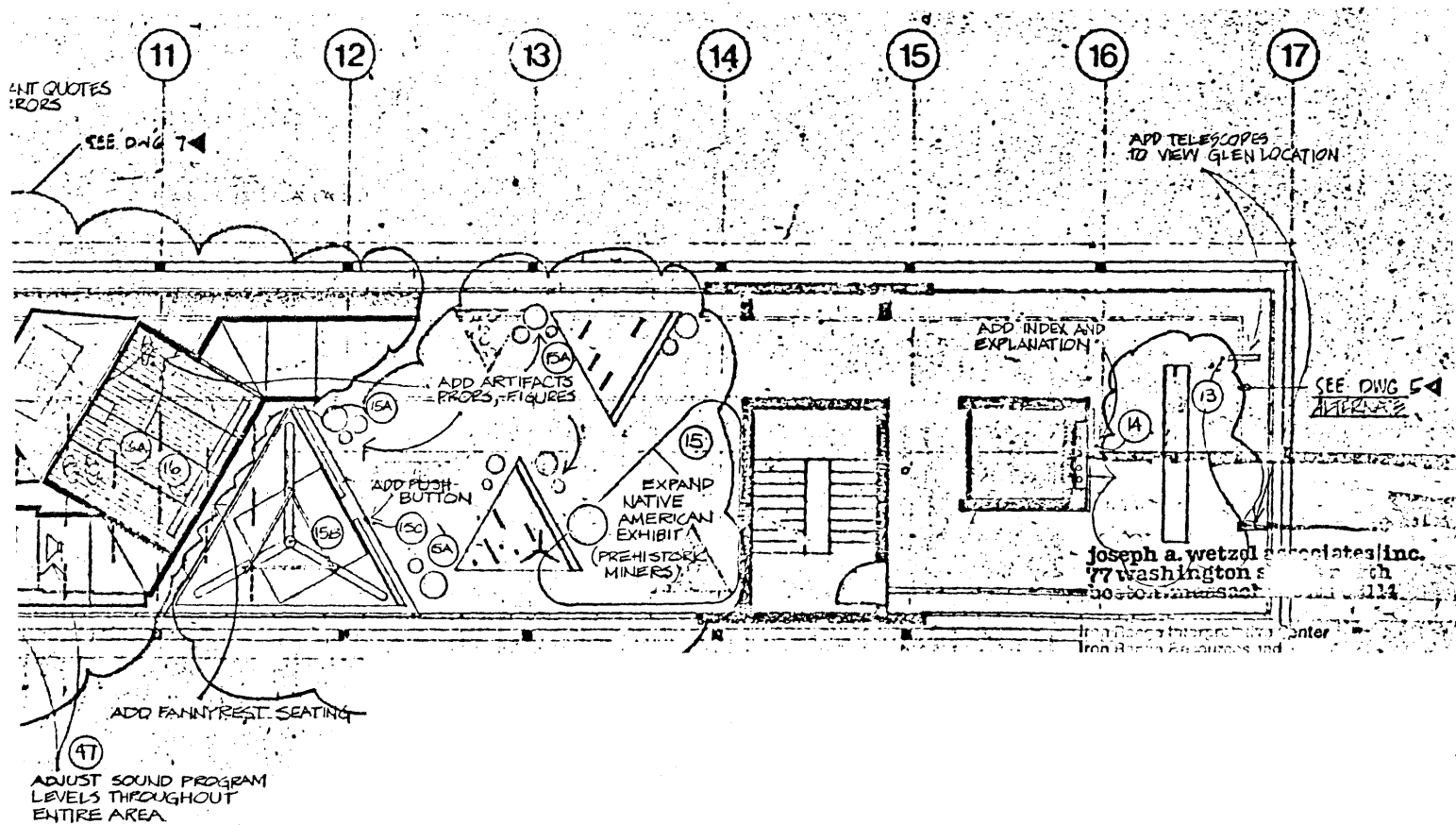
- 41A Add sculptures, artifacts to Taconite exhibit
- 42A Add new Pinball exhibit
- 42B Add "Drive a Truck" exhibit
- 42C Add computer-based exhibits to
Iron Arcade and Environment

see drawing X1.3



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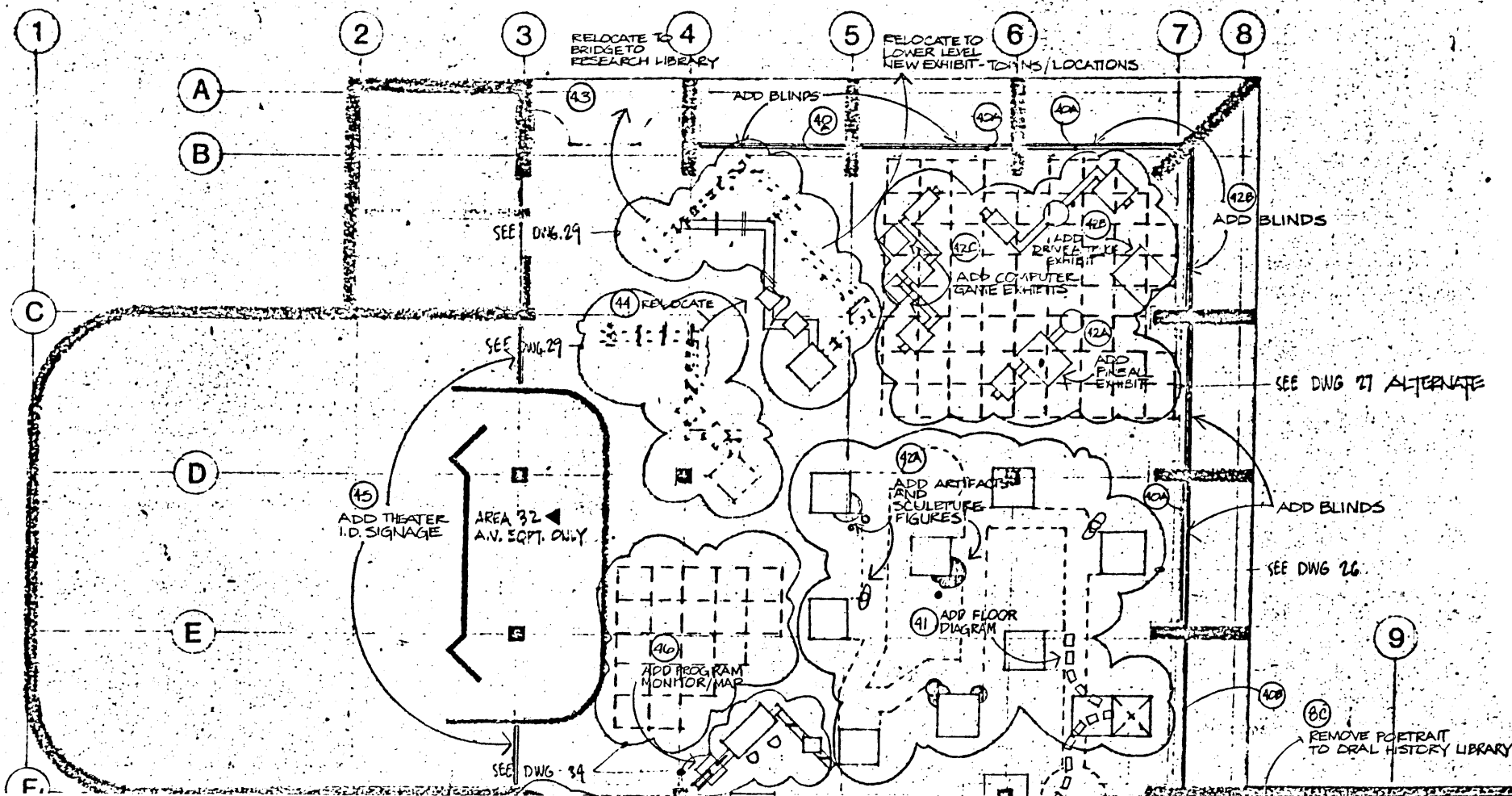
floor plan X1.1



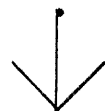
see drawing X1.1

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floor plan X1.2

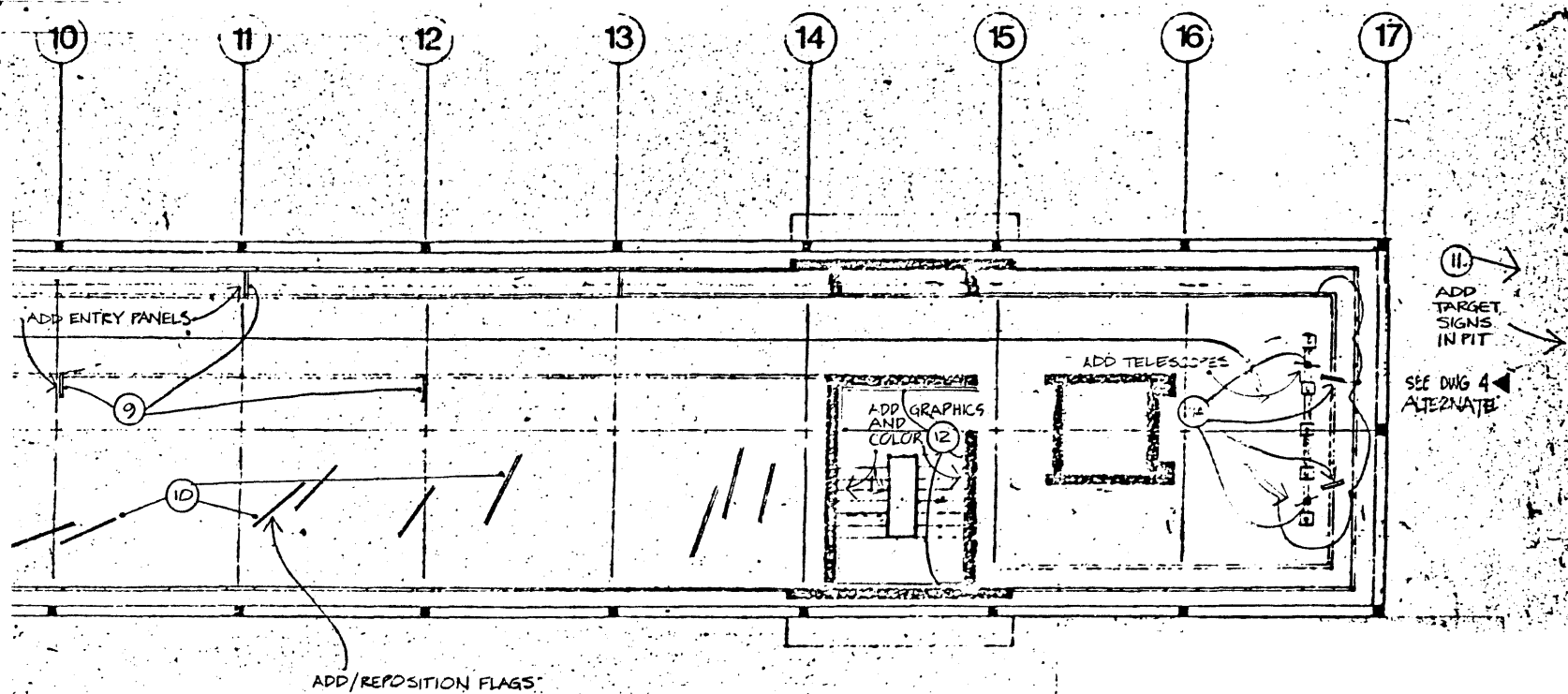


see drawing X1.1



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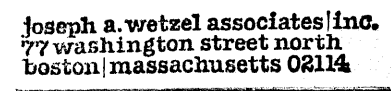
floor plan X1.3



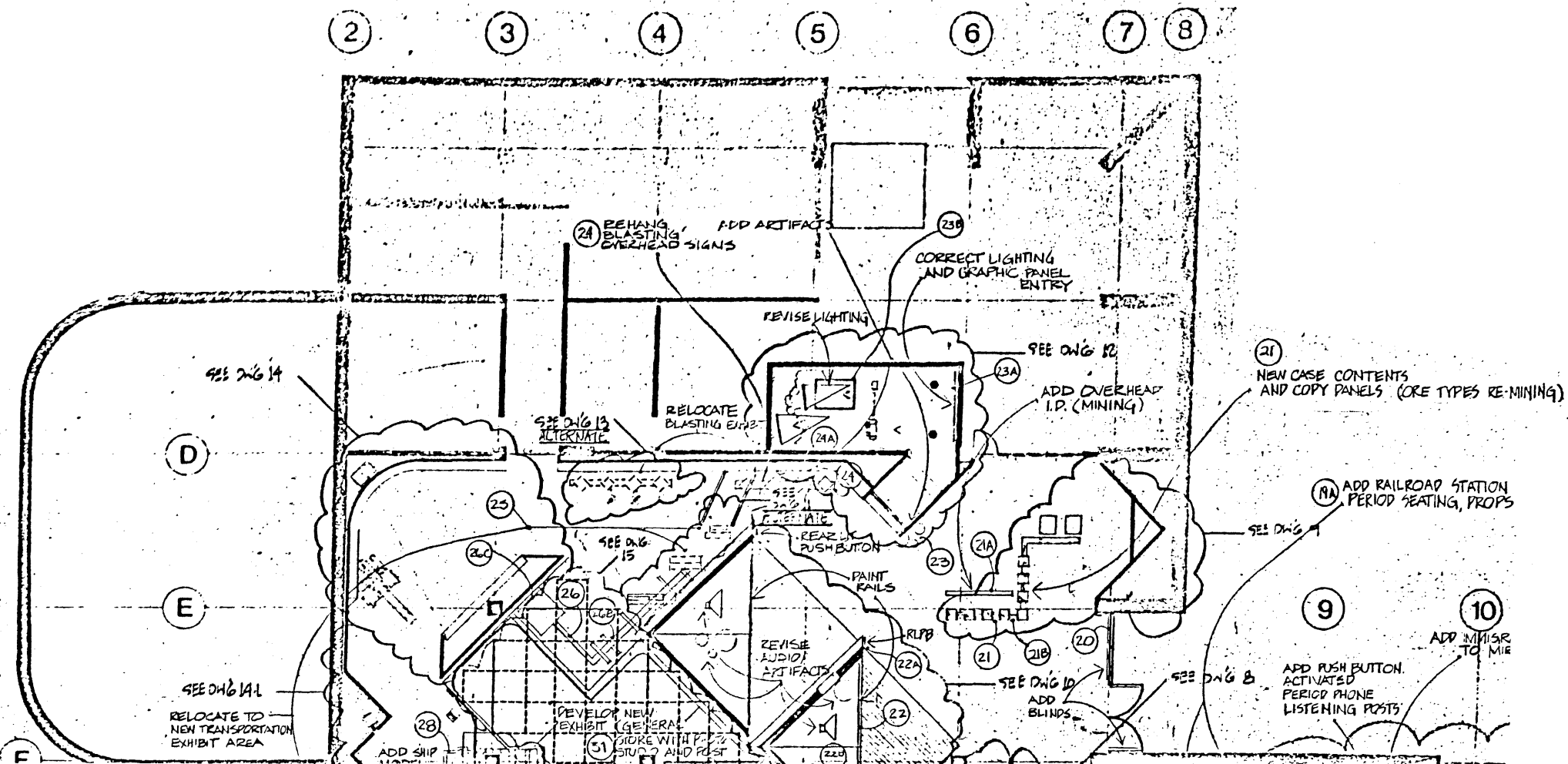
see drawing X2.2

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floor plan X2.1



floor plan x2.2



see drawing X2.2

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floor plan X2.3

GRAPHIC STANDARDS

It has been determined that a comprehensive graphic identification or graphic standards system is necessary for the Iron Range Interpretative Center. The expansion of the facility into a more complex series of related sub-facilities and its need to advertise and promote itself are the primary reasons for establishing this system.

A proper graphic standards system will provide for the development of both a symbol or logo and a typeface to identify the facility. It will also provide for a system of applications or uses of these items to guarantee that they will not be misused or misapplied.

A graphic standards system for the Iron Range Interpretative Center should contain:

1. Design items:

A symbol for the Iron Range Interpretative Center

A symbol for the Ethnic Arts Center

A symbol for the Geology Hall

A symbol for the Research Center

A symbol for the Performing Arts Center

A typeface for all of the above

2. Applications and uses such as:

Stationery and business cards

Program literature

Interpretative Exhibit Program

Traveling Exhibit Program

Building identification

Vehicle identification

Directional signage

Highway signage

3. Advertising program:

Billboards, direct mail, newspaper, television and other media use

4. Product program:

T-shirts, baseball caps, bumper stickers, decals, memorabilia, craft products, catalog and other gift shop items.

Symbol

The prime criteria for a successful symbol are legibility and meaning. The symbol should be clearly recognizable when printed in one color either postage stamp or billboard size.

The Iron Range Interpretative Center symbol of the shovel bucket should be refined slightly to be readily identifiable. The use of the square border is important.

The Ethnic Arts Center symbol is intended to represent an item that is decidedly "ethnic" and "crafted" as opposed to machine produced. It is a "multi-cultural" symbol and could represent a range of cultures from Native American to Anglo European. The symbol is symmetrical and can be used in either one color or a combination of colors. It should be used to identify any products that are sold under the auspices of the Ethnic Arts Center.

The Iron Range Interpretative Center symbol should be used as the "parent" or umbrella symbol for the entire facility with any other symbols used as members of the same family but always subordinate to the Iron Range Interpretative Center symbol. The use of separate symbols for each of the supporting facilities should be consistent with the amount of autonomy and individual identification appropriate to the facility. A square symbol format should always be used.

It is recommended that each facility always be identified with the words "Iron Range," e.g.:

Iron Range Interpretative Center

Iron Range Ethnic Arts Center

Iron Range Geology Hall

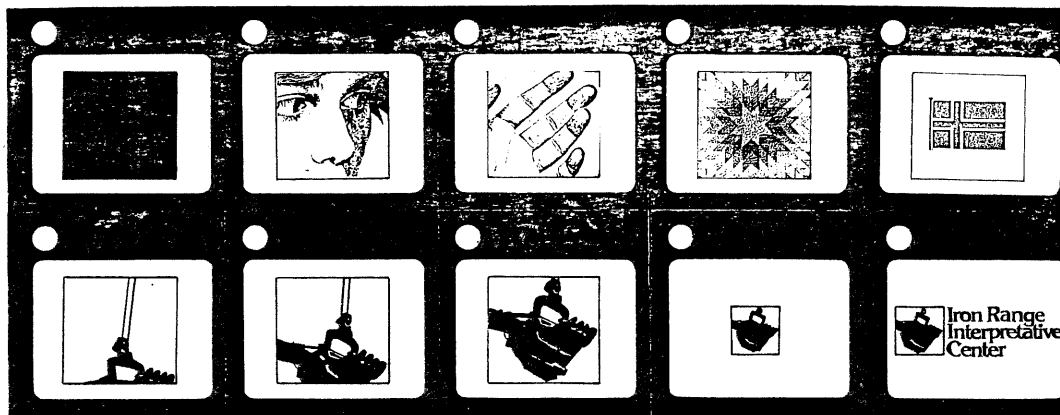
Iron Range Research Center

Iron Range Performing Arts Center.

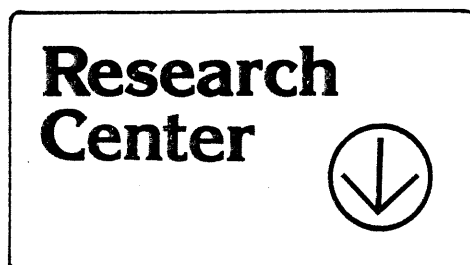


Iron Range Interpretative Center

Graphic Identity

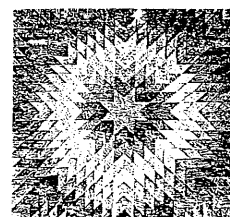


Media Applications, Television



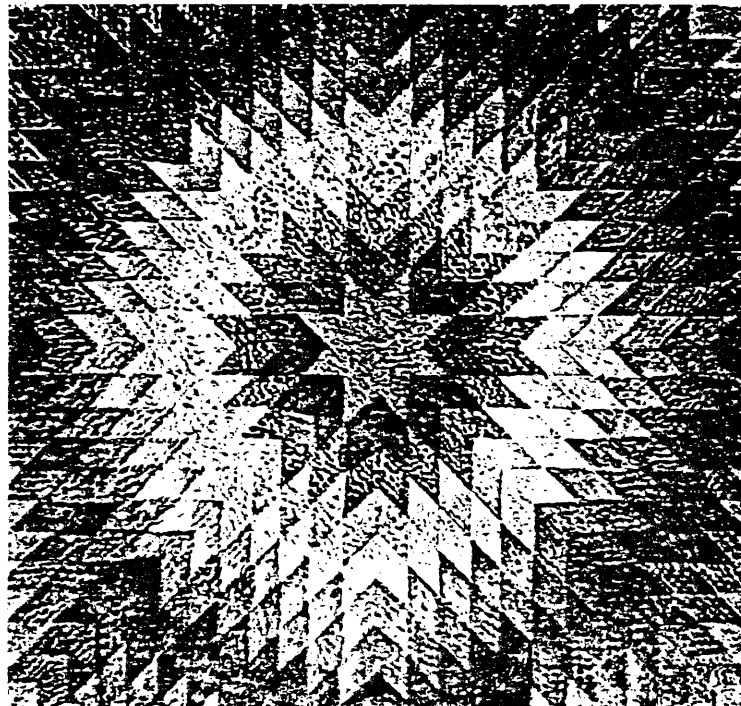
Directional Signage, Exhibit Areas & Facilities

Ethnic Arts Center



Iron Range
Interpretative
Center

Ethnic Arts Center



Iron Range Ethnic Arts Center symbol