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KANSAS CITY MUSEUM OF HISTORY AND SCIENCE 3218 GLADSTONE BOULEVARD KANSAS CITY, MISSOURI 64123

GREGG F. STOCK

July 13, 1973

Senator Claiborne Pell, Chairman Special Subcommittee on Arts and Humanities Room 4230, U.S. Senate Washington, D.C. 20510

Dear Senator Pell:

Information regarding the Kansas City Museum of History and Science and its programs and plans is enclosed. We are hopeful that you will find it helpful in your determinations related to your proposed Museum Service Act S 796. Additional copies of this report have been sent under separate cover.

We have included one copy of a portion of the Lawrence-Leiter & Company study made for our museum for your personal and private use.

Thank you for your leadership and interest in furthering the effectiveness of museums in the United States.

Legg J Stock

PLANNING IMPLEMENTATION OF MUSEUM IMPROVEMENT



PLANNING IMPLEMENTATION OF MUSEUM IMPROVEMENT
KANSAS CITY MUSEUM OF HISTORY AND SCIENCE

FEBRUARY, 1969

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I. SUMMARY OF RECOMMENDATIONS

THE PURPOSE OF THIS SECTION OF THE REPORT IS TO BRIEFLY PRESENT THE OPINIONS AND RECOMMENDATIONS OF THE CONSULTANT, SO THAT THE READER CAN OBTAIN AN OVER-ALL VIEW OF THE RECOMMENDED COURSE OF ACTION. THE BODY OF THE REPORT AND THE APPENDED EXHIBITS EXPLAIN THE REASONS FOR THESE RECOMMENDATIONS AND DISCUSS ALTERNATIVE POSSIBILITIES.

A. INTRODUCTION

THIS STUDY OUTLINES A TEN-YEAR PROGRAM DIRECTED TO DEVELOPMENT OF A MUSEUM IN KANSAS CITY THAT WILL MEET THE EXTRA-EDUCATIONAL REQUIREMENTS OF THE KANSAS CITY AREA, AND FULFILL THE SECONDARY FUNCTION OF EXTENDING KANSAS CITY'S INFLUENCE AND MARKET. IT IS PLANNED THAT THE MUSEUM WILL FULFILL THE FULL RANGE OF EXTRA-EDUCATIONAL FUNCTIONS PERFORMED BY MOST MAJOR MUSEUMS, AND WILL EXHIBIT IN HISTORY, NATURAL SCIENCES, HUMAN SCIENCES, PHYSICAL AND SPACE SCIENCES, AND INDUSTRY.

B. LOCATION

TO BE READILY ACCESSIBLE TO ALL RESIDENTS OF THE URBAN AREA AND VISITORS TO THE CITY, THE MUSEUM SHOULD BE LOGATED CLOSE TO, BUT NOT IN, THE CENTRAL BUSINESS DISTRICT. IT MUST BE READILY ACCESSIBLE VIA THE MAJOR TRAFFIC ARTERIES. A MAJOR MUSEUM IN SUCH A LOGATION MAY BE EXPECTED TO ATTRACT ATTENDANCE IN EXCESS OF A MILLION-AND-A-HALF PER YEAR. BEGAUSE KANSAS CITY, MISSOURI, PROVIDES A MAJOR PART OF MUSEUM FUNDING, IT MUST BE WITHIN THE CITY LIMITS. A NUMBER OF SITES MEETING THESE CRITERIA HAVE BEEN INVESTIGATED.

C. SPACE REQUIRED

A FULL-SCALE MUSEUM MEETING THE REQUIREMENTS OF KANSAS CITY AT AN OPTIMUM LEVEL WILL REQUIRE 500,000 SQUARE FEET, WITH AN ADDITIONAL 100,000 SQUARE FEET REQUIRED FOR SPECIAL USES SOME TIME IN THE FUTURE. SPACE CRITERIA FOR THE MUSEUM HAVE BEEN BASED ON THE OPINIONS OF MUSEUM DIRECTORS AND INSPECTION OF OTHER MUSEUMS. IN OUR OPINION, THE OPTIMUM SPACE REQUIRED FOR A MUSEUM IN KANSAS CITY IS AS FOLLOWS:

OPTIMUM SPACE REQUIREMENTS

	S	QUARE FEET	
AREA	EXHIBIT SPACE	SUPPORT SPACE	TOTAL
SPECIAL EXHIBIT & SUPPORT SPACE SPACE SCIENCE & PLANETARIUM PHYSICAL SCIENCES CAPITALISTIC ECONOMIC SYSTEM NATURAL SCIENCES HUMAN SCIENCES HISTORY	4,000 59,000 38,500 33,000 67,700 56,500 27,500	59,500 31,450 19,250 16,500 33,800 28,250 16,000	63,500 90,450 57,750 49,500 101,500 84,750 43,500
Totals	286,200	204,750	490,950
Future Needs (Aquarium, Climatron, Historical Village, Botanical Gardens)	77,500	35,000	112,500

SUITABLE SPACE FOR THE PLANETARIUM GAN ONLY BE OBTAINED EFFECTIVELY BY NEW CONSTRUCTION. THE LONG HOME AND THE LIBERTY MEMORIAL ARE BETTER SUITED AS MUSEUMS OF HISTORY THAN FOR OTHER MUSEUM PURPOSES. THUS, SPACE MIGHT BE USED AS FOLLOWS:

SPACE UTILIZATION BY SITE

	SQUARE FEET			
SITE	EXHIBIT SPACE	SUPPORT SPACE	31,500 12,000 90,450 357,000	
LONG HOME - HISTORY LIBERTY MEMORIAL - MILITARY HISTORY PLANETARIUM Main Museum	19,500 8,000 59,000 199,700	12,000 4,000 31,450 157,300		
Totals	286,200	204,750	490,950	

D. SITE RECOMMENDATIONS

ALTHOUGH IT IS NOT DEFINITELY KNOWN WHETHER ANY OF THE EXISTING SITES WILL BECOME AVAILABLE, PRELIMINARY INVESTIGATIONS AND DISCUSSIONS ARE ENCOURAGING. ASSUMING AVAILABILITY, IT IS OUR OPINION:

- 1. THAT A PLANETARIUM AND SPACE SCIENCES CENTER SHOULD BE CONSTRUCTED IN PENN VALLEY PARK.
- 2. THAT THE MUSEUM SHOULD ASSUME RESPONSIBILITY FOR OPERATION OF THE LIBERTY MEMORIAL AND INSTALL A MUSEUM OF MILITARY HISTORY, AND SHOULD RESTORE THE LONG HOME AS A MUSEUM OF LOCAL AND AMERICAN HISTORY.
- 3. That the Main Museum be Located Underground Beneath Penn Valley Park.

THE UNION STATION IS NOT A SUITABLE LOCATION; IN OUR OPINION, BECAUSE OF PROBABLE REMODELING COSTS, OPERATING COSTS OF SUCH A STRUCTURE; AND POOR UTILITY OF SPACE ONCE THE FIRST FLOOR AREA HAS BEEN FILLED.

A CAVE FAGILITY CAN BE SPECIFICALLY DESIGNED FOR MUSEUM USE, AND CAN BE MADE AVAILABLE AT UNUSUALLY LOW COST. WE ARE TOLD THAT FINISHED CAVE SPACE CAN BE MADE AVAILABLE FOR A MAXIMUM OF \$7.50 PER SQUARE FOOT PLUS APPROXIMATELY 40¢ PER SQUARE FOOT FOR ANNUAL OPERATING COSTS. THIS UNUSUALLY LOW COST FOR ADEQUATE SPACE FOR PRESENT AND FUTURE NEEDS, ALL ON ONE LEVEL, IS UNUSUALLY ATTRACTIVE IN THAT FUNDS THAT MIGHT BE REQUIRED FOR CONSTRUCTION AND REMODELING CAN BE DEVOTED TO PROGRAMS AND EXHIBITS. COMPARABLE NEW SPACE ON THE SURFACE WOULD COST BETWEEN \$25.00 AND \$30.00 PER SQUARE FOOT AND OVER \$1.00 TO OPERATE.

A CAVE LOCATION IS NOT LIKELY TO BE SUITABLE FOR THE PLANETARIUM AND SPACE SCIENCES GENTER; BUT, PROPERLY DESIGNED, A PLANETARIUM AND SPACE SCIENCES CENTER ON THE SURFACE OF PENN VALLEY PARK CAN BECOME THE MAIN ENTRY TO A MAJOR UNDERGROUND MUSEUM. OTHER ENTRANCES MIGHT

BE PROVIDED AT THE LIBERTY MEMORIAL OR ELSEWHERE.

THIS APPROACH WOULD PERMIT THE CITY TO MAINTAIN THE UNIQUE ADVANTAGES OF A MAJOR PARK CLOSE TO THE DOWNTOWN AREA; AND SIMULTANEOUSLY PROVIDE FOR THE MUSEUM NEEDS OF THE CITY IN AN IDEAL LOCATION.

A COMPARISON OF COSTS FOR THESE SITES FOR \$50,000 SQUARE FEET (EXCLUDING THE LONG HOME AND LIBERTY MEMORIAL) ILLUSTRATES THE RELATIVE DIFFERENCES.

	RECOMMENDED CONFIGURATION	UNDER = GROUND	Union Station	NEW STRUCTURE
CONSTRUCT OR REMODEL	\$6,919,000	\$3,375,000	\$6,750,000 + site location	\$13,500,000

E. PROGRAM COSTS

The approach we recommend is much less costly than what might be expected for a full-scale museum. Costs can be projected with considerable accuracy on the basis of figures obtained from the new Milwaukee
Public Museum where the final building construction was completed in
1963, and the last exhibit will be completed in 1972. We recommend a
10-year program of Museum building. Beyond this 10-year period, attention can be directed to an aquarium, climatron, botanical gardens, and
an historical village. During the 10-year period, a complete Museum
can be installed in Kansas City that will provide program and exhibits
in each of the museum areas to which space has been allocated in Exhibit
1.

THE INITIAL COST FOR THE MUSEUM ENTRY WAY, PLANETARIUM, AND SPACE SCIENCES CENTER, INCLUDING THE NECESSARY VERTICAL TRANSPORTATION, WILL COST IN THE NEIGHBORHOOD OF \$6,000,000 TO COMPLETE. THE 10-YEAR PLAN IS PREDICATED ON DEVELOPING EXHIBITS IN 28,000 FEET EACH YEAR, WHICH WILL ALSO INVOLVE COMPLETION OF 22,000 FEET OF SUPPORT SPACE. THIS TOTAL OF 50,000 FEET PER YEAR CAN BE MADE AVAILABLE IN A CAVE LOCATION ON AN AS-REQUIRED BASIS.

Thus, an expenditure for underground space of \$375,000 per year will, in seven years, provide for the total needs of the Main Museum. Approximately \$900,000 per year will be required for exhibit fabrication during the 10-year period and, during the same period, operating costs will increase from the present requirement of \$300,000 per year to \$1,098,000. These figures are explained more explicitly in Exhibits 111 and 1V.

F. MUSEUM PROGRAM

ALTHOUGH IT WILL BE NECESSARY TO MAINTAIN MUSEUM PROGRAMS DURING THE 10-YEAR PLAN, IT IS SUGGESTED THAT ACTIVITIES BE LIMITED TO THOSE NECES-SARY TO MAINTAIN OR IMPROVE MUSEUM IMAGE, AND THOSE WHICH ARE PROFITABLE. THE COSTS OUTLINED ARE PREDICATED ON MUSEUM EMPLOYEES PERFORMING VIRTUALLY

100% OF THE EXHIBIT FABRICATION PROCESS.

G. ACTION PLANNED

THE FIRST STEPS IN UNDERTAKING RECOMMENDED IMPROVEMENT PROGRAMS INVOLVE ARRANGING FOR THE NECESSARY FUNDING AND DEVELOPMENT OF DETAILED
PLANS. THE DIRECTOR REPORTS THAT THE CITY IS CONSIDERING A PORTION
OF THE MUSEUM'S CAPITAL IMPROVEMENT NEEDS AS PART OF THE FORTHCOMING
BOND PROGRAM. IT IS LIKELY THAT FEDERAL PLANNING GRANTS CAN BE OBTAINED TO PURSUE PLANNING. THE PARK DEPARTMENT SHOULD BE REQUESTED
TO MAKE THE SITES AVAILABLE, AND NEGOTIATION SHOULD BE ENTERED INTO
FOR GAVE DESIGN AND EXCAVATION. IN THIS REGARD, IT IS PROBABLE THAT
ADVANTAGEOUS ARRANGEMENTS CAN BE MADE TO OBTAIN CAVE SPACE AT AN EVEN
LOWER COST, AND PERHAPS TO MAKE ARRANGEMENTS FOR RENTAL INCOME FROM
CAVE SPACE NOT REQUIRED BY THE MUSEUM.

MUSEUM DESIGN ASSOCIATES, AN ARCHITECTURAL GROUP FORMED TO WORK WITH THE MUSEUM, SHOULD BE ASKED TO DEVELOP CONCEPTUAL SKETCHES FOR USE IN MUSEUM PROMOTION AND FUND-RAISING. ONCE PARK DEPARTMENT APPROVAL IS OBTAINED, SURVEY WORK SHOULD BE UNDERTAKEN AS REQUIRED FOR CAVE. PLANNING. MUSEUM PERSONNEL SHOULD DEVELOP A MASTER PLAN OF EXHIBIT CONTENT AND EXHIBIT LOCATION. AS SOON AS REASONABLE ASSURANCE IS RECEIVED THAT FUNDING WILL BECOME AVAILABLE, THE RECOMMENDED MUSEUM STAFFING PLAN SHOULD BE ADOPTED AND RECRUITING SHOULD BEGIN FOR THOSE MEMBERS OF THE FABRICATION TEAM WHO WILL DO THE DETAILED PLANNING. SIMILARLY, MUSEUM DESIGN ASSOCIATES SHOULD BE ASKED TO DEVELOP DETAILED PLANS FOR THE SPACE SCIENCES CENTER AND ENTRY WAY.

II. STUDY OBJECTIVES

THIS REPORT SUMMARIZES THE RESULTS OF THE SECOND PHASE OF IMPROVEMENT PLANNING FOR THE KANSAS CITY MUSEUM OF HISTORY AND SCIENCE. IT IS DIRECTED TO THE ULTIMATE ATTAINMENT OF THE MUSEUM GOALS ESTABLISHED BY THE MUSEUM BOARD AT THEIR MEETING OF SEPTEMBER 12, 1968.

INVESTIGATION AND ANALYSIS HAVE BEEN CONDUCTED TO DEFINE A COURSE OF ACTION THAT WILL RESULT IN A MUSEUM THAT WILL MEET THE EXTRA-EDUCATIONAL AND TOURIST NEEDS OF THE COMMUNITY. PARTICULAR ATTENTION HAS BEEN DIRECTED TO:

- A. DETERMINING WHICH OF THE IDENTIFIED NEEDS CAN BE FEASIBLY MET IN TERMS.

 OF BUDGET, MANPOWER, FACILITIES, AND VALUE TO THE COMMUNITY.
- B. ESTABLISHMENT OF PRIORITIES FOR VARIOUS FAGETS OF THE TOTAL RECOMMENDED PROGRAM BASED ON IMPORTANCE TO THE COMMUNITY (DEGREE OF NEED), PROBABLE COST, PRACTICALITY OF ACCOMPLISHMENT, AND TIME REQUIRED FOR ACCOMPLISHMENT.
- C. DEVELOPMENT OF A REALISTIC WORK PLAN FOR AGGOMPLISHING EACH IMPROVE-
- D. DESIGN OF AN ORGANIZATION STRUCTURE AND MANPOWER PLAN FOR THE MUSEUM
 THAT WILL PROVIDE FOR AN EFFECTIVE COMPLETION OF PROJECTED IMPROVEMENTS

AS WELL AS MAINTAINING DAY-TO-DAY SERVICE TO THE COMMUNITY.

E. PREPARATION OF A MASTER SCHEDULE TO GUIDE ACCOMPLISHMENT OF THE OVER-ALL PROGRAM; AND PROVIDE A MEANS FOR EVALUATING PROGRESS AND PERFORMANCE.

III. SCOPE AND METHOD OF STUDY

THE STUDY PLAN DEVELOPED AT THE OUTSET OF THIS ASSIGNMENT HAS BEEN MODIFIED DURING THE COURSE OF STUDY. FINDINGS INDICATED THE ADVISABILITY
OF A CHANGE IN APPROACH TO DEVELOP MORE REALISTIC IMPROVEMENT RECOMMENDATIONS. AS EACH VARIATION FROM THE ORIGINAL PLAN APPEARED TO OFFER
ADVANTAGE, THESE CHANGES WERE REVIEWED WITH THE MUSEUM DIRECTOR. FOR
EXAMPLE, THE PROBABLE AVAILABILITY OF TWO SPECIFIC ALTERNATE SITES,
BOTH MEETING LOCATION AND SIZE CRITERIA, HAS PERMITTED PLANNING TO BE
MORE SPECIFIC. STUDY WORK, HOWEVER, WAS DELAYED FOR A TIME WHILE PROBABLE
AVAILABILITY WAS INVESTIGATED.

- A. THE INVESTIGATION AND RESEARCH ON WHICH RECOMMENDATIONS ARE PREDICATED WERE DEVELOPED OVER A PERIOD OF APPROXIMATELY A YEAR. DURING THIS TIME, POTENTIAL SITES WERE INVESTIGATED, THE DIRECTORS OF OTHER MUSEUMS WERE INTERVIEWED EITHER AT THEIR MUSEUM OR AT THE ANNUAL CONVENTION OF THE AMERICAN ASSOCIATION OF MUSEUMS. TWO VISITS WERE MADE TO THE MILWAUKEE MUSEUM TO EXAMINE EXHIBIT FABRICATION, PLANNING AND SCHEDULING, AND TO OBTAIN ACTUAL FABRICATION COSTS.
- B. AN ORGANIZATION MANUAL WAS DEVELOPED FOR THE MUSEUM AS A GUIDE FOR CURRENT OPERATIONS, AND AS A POINT OF DEPARTURE FOR PROJECTING FUTURE ORGANIZATIONAL NEEDS.
- C. A BUDGETING METHOD WAS DEVELOPED AND A PRELIMINARY BUDGET OUTLINED TO PROVIDE A BASIS FOR IMMEDIATE AND LONG-RANGE BUDGET PLANNING.
- D. DURING THE COURSE OF THE ASSIGNMENT, INFORMAL WRITTEN AND ORAL PROGRESS REPORTS WERE MADE TO THE MUSEUM DIRECTOR AND THE CHAIRMAN OF THE PLANNING COMMITTEE.

IV. MUSEUM GOALS, OBJECTIVES, AND POLICY

AT A MEETING ON SEPTEMBER 12, 1968, THE BOARD OF GOVERNORS APPROVED THE RECOMMENDATIONS OF THE PLANNING COMMITTEE, ADOPTING THE COMMITTEE'S PRE-LIMINARY REPORT SUBMITTED ON JULY 15. APPROVAL AUTHORIZED SPECIFIC SHORT-RANGE PROGRAMS, IDENTIFIED THE MUSEUM AREAS TO BE CONSIDERED FOR INCLUSION IN THE MUSEUM BEING PLANNED, AND AUTHORIZED THE PLANNING COMMITTEE TO PRO-CEED WITH PLANNING FOR A MAJOR MUSEUM FACILITY. THIS DECISION PROVIDED THE BACKGROUND FOR DEFINITION OF RECOMMENDED GOALS, OBJECTIVES, AND POLICIES.

A. AREAS OF MUSEUM SPECIALTY

EACH OF THE AREAS OF MUSEUM SPECIALTY OUTLINED IN THE PLANNING COMMITTEE'S REPORT HAS BEEN EVALUATED TO PROJECT THE AMOUNT OF EXHIBIT SPACE REQUIRED, THE AMOUNT OF SUPPORT SPACE REQUIRED, THE PROBABLE LOCATION

IN TERMS OF ADJACENT DEPARTMENTS, AND UNUSUAL COST CHARACTERISTICS. THESE DEPARTMENTS ARE IDENTIFIED ALONG WITH SPACE CRITERIA IN EXHIBIT 1.

B. SITE SELECTION

VARIOUS SITES AND BUILDINGS HAVE BEEN INVESTIGATED, AND THOSE APPEARING TO MEET THE SPACE NEEDS OF THE MUSEUM HAVE BEEN EVALUATED IN TERMS OF CONSTRUCTION, EXHIBIT, AND OPERATING COSTS, AS WELL AS DEGREE OF PUBLIC ACCEPTANCE. AMONG THESE HAVE BEEN THE UNION STATION, SURFACE SPACE IN PENN VALLEY PARK, UNDERGROUND SPACE IN PENN VALLEY PARK, RESTORATION OF THE LONG HOME, THE KAW RIVER BLUFF, AND THE LIBERTY MEMORIAL. CURSORY CONSIDERATION HAS BEEN GIVEN NEIGHBORHOOD MUSEUMS AND THE LINE CREEK ARCHAEOLOGICAL SITE.

C. SHORT-RANGE GOALS

Museum personnel have continued to pursue the identified short-range goals in public education, promotion, and publicity. The consultant has not been involved in these activities. However, it is reported that the Junior League has undertaken responsibility for supporting the resource center, a benefit has been held to support the mobile planetarium, a regular radio program has been undertaken, and the Museum has had good press and has begun a regular Museum publication. Special exhibits have been arranged, the most important being the current NASA exhibit at the Ward Parkway Shopping Center.

D. LIBERTY MEMORIAL

ALTHOUGH THE BOARD CONCURRED WITH THE PLANNING COMMITTEE'S RECOMMENDATION IN REGARD TO THE LIBERTY MEMORIAL, IT APPEARS APPROPRIATE TO GIVE FURTHER CONSIDERATION TO THIS SUBJECT. THE CITY DOES NOT HAVE THE TECHNICAL CAPABILITY TO OPERATE THE MEMORIAL EFFECTIVELY, AND SINCE THE MUSEUM DOES, IT IS QUITE LOGICAL THAT THE MUSEUM SHOULD UNDERTAKE THIS RESPONSIBILITY. BECAUSE IT IS LIKELY THAT THE PARK DEPARTMENT WILL PLAY A MAJOR ROLE IN THE MUSEUM'S FUTURE PLANS, WE WOULD RECOMMEND CAREFUL RECONSIDERATION OF THEIR REQUEST REGARDING THE LIBERTY MEMORIAL.

É. CULTURAL AND ECONOMIC CONTRIBUTION TO THE COMMUNITY

- 1. The Museum has continued to expand its services in meeting the extra-educational needs of the community in its work in radio, its publication, off-premises exhibits, continued school tours, and the like. It is our opinion that if the recommended program of Museum improvement is undertaken, no new educational programs should be started unless they directly contribute to the public image or fund-raising capability of the Museum. It is our opinion that both the talents and available budget of the Museum should be directed toward the 10-year improvement program, and that other. Programs which might delay facilities improvement or limit success should be deferred.
- 2. In our opinion, the economic contribution of a major museum to our

GOMMUNITY CAN EQUAL OR EXCEED THE COMBINED CONTRIBUTION OF PROFESSIONAL FOOTBALL AND PROFESSIONAL BASEBALL. IN 1962, THE ANNUAL ATTENDANCE AT MUSEUMS EXCEEDED 200,000,000, OR MUSEUM ATTENDANCE EQUALED THE NATIONAL POPULATION. ATTENDANCE AT MUSEUMS HAS CONTINUED TO ACCELERATE. OF 3,443 MUSEUMS IN THE COUNTRY, 1,964 REPORTED TOTAL ATTENDANCE AS FOLLOWS:

1957 122,000,000 1962 185,000,000 1967 (Est.) 283,000,000 1972 (Est.) 432,000,000
--

Source: A STATISTICAL SURVEY OF MUSEUMS, AMERICAN ASSOCIATION OF MUSEUMS, 1965.

On the basis of these figures, and allowing for the non-reporting museums, it seems logical that there will be approximately two museum attendances each year for every man, woman, and child in the country. Quite logically then, Kansas City might reasonably project the total museum attendance at about 3,600,000 based on the population of its market area (1,800,000). A combined general, science, history, anthropology, and archaeology museum may be expected to draw 55% of this total, or 2,000,000 visitors.

ANOTHER APPROACH TO ATTENDANCE PROJECTION CAN BE MADE UTILIZING ATTENDANCE AT THE NELSON GALLERY AS A BASE. IN THE TABLE BELOW, THE AVERAGE ATTENDANCE PER MUSEUM FACILITY, BY TYPE, IS SHOWN FOR THE YEAR 1962. ATTENDANCE AT THE NELSON GALLERY FOR 1967 WAS REPORTED TO BE 350,000, OR 3.43 TIMES AS MANY PEOPLE ATTENDED THE GALLERY AS ATTENDED THE TYPICAL ART MUSEUM IN 1962. Thus, IT IS REASONABLE TO EXPECT THAT ATTENDANCE AT MUSEUMS OF VARIOUS TYPES IN KANSAS CITY WOULD BE 3.43 TIMES THE AVERAGE ATTENDANCE PER FACILITY SHOWN IN THE TABLE. BY MULTIPLYING AVERAGE ATTENDANCE FOR THE VARIOUS TYPES OF FACILITIES THAT WILL COMPRISE THE KANSAS CITY MUSEUM OF HISTORY AND SCIENCE, WE FIND THAT A TOTAL ATTENDANCE OF 3,100,000 CAN BE EXPECTED.

Using the same logic, 200 attendance in Kansas City for 1967 was 1,029,000, or 2.88 times the attendance at the average 200 facility. By means of a similar calculation, the total projected attendance at the Kansas City Museum would be 2,600,000.

TYPE OF FACILITY	AVERAGE ATTENDANCE PER_FACILITY (1962)	ESTIMATED PRO RATA TO NELSON GALLERY
GENERAL MUSEUMS LIVE MUSEUMS (ZOO) SCIENCE MUSEUMS LIBRARY WITH SPECIAL COLLECTIONS ART MUSEUMS ANTHROPOLOGY AND ARCHAEOLOGY CHILDREN'S MUSEUMS HISTORY MUSEUMS HISTORIC BUILDINGS & RESTORATIONS RELATED ORGANIZATIONS	577,000 36% 357,000 22% 197,000 12% 140,000 9% 102,000 6% 78,000 5% 67,000 4% 53,000 3% 37,000 2% 6,000 0	1,980,000 670,000 265,000 185,000
·	1,613,000	3,100,000

ALTHOUGH THE LOGIC IS SOUND, WE TEND TO QUESTION THE RESULT OF 3,100,000 ANNUAL ATTENDANCE. WE DO BELIEVE A PROJECTION OF BETWEEN 1,500,000 AND 2,000,000 IS REALISTIC. THE MILWAUKEE PUBLIC MUSEUM, AN UNFINISHED GENERAL MUSEUM, HAS AN ANNUAL ATTENDANCE OF APPROXIMATELY 800,000 IN A DOWNTOWN LOCATION. THE CITY OF MILWAUKEE IS COMPARABLE IN POPULATION TO KANSAS CITY, BUT HAS A MUCH SMALLER DRAWING AREA WITH MAJOR MUSEUM COMPETITION IN CHICAGO, ONLY 90 MILES AWAY.

IF A BALL TEAM THAT MAY DRAW 1,000,000 IS WORTH \$10,000,000 PLUS THE COST OF A STADIUM, WHAT IS A MUSEUM WORTH THAT DRAWS AT LEAST 1,500,000 AND, ADDITIONALLY, CONTRIBUTES TO THE CULTURAL WELFARE OF THE COMMUNITY?

V. FACILITIES REQUIRED

IN GENERAL, THE SPACE REQUIRED FOR A MUSEUM MUST BE ACCESSIBLE TO THE PUBLIC, HIGHLY VISIBLE, AND SUITABLE FOR HOUSING EXHIBITS AND CONDUCTING THE PROGRAMS OF THE MUSEUM. THUS, A DISCUSSION OF FACILITIES MUST DEAL WITH THE AMOUNT OF SPACE NEEDED, ITS LOCATION IN THE COMMUNITY, THE TYPE OF SPACE REQUIRED, AND ITS GOST.

A. SPACE REQUIRED

In general, the amount of space required is unrelated to either attenbance or the size of the community. It tends rather to be a function of cost and type of museum. The earlier study of extra-educational needs and follow-up investigation in the course of this study identified curatorial departments in which the Museum should exhibit. Each of the areas was examined to determine the optimum exhibit space required to make an effective exhibit presentation in each curatorial department or area. The amount of support space allocated to each curatorial department has been based on examination of other museums. A complete presentation of space needs by department and purpose is presented as Exhibit 1 OF THIS REPORT. WE SUGGEST THAT A CURSORY EXAMINATION BE MADE BEFORE READING FURTHER.

THE TOTAL SPACE REQUIRED FOR AN EFFECTIVE MUSEUM SUITABLE FOR KANSAS CITY IS APPROXIMATELY 500,000 SQUARE FEET. THIS REPORT OUTLINES A 10-YEAR PLAN IN WHICH APPROXIMATELY 50,000 SQUARE FEET OF SPACE WILL BE DEVELOPED PER YEAR INCLUDING 28,000 SQUARE FEET OF EXHIBIT SPACE TO BE OPENED TO THE PUBLIC EACH YEAR.

AT THE CONCLUSION OF THIS 10-YEAR PROGRAM, IT IS ANTICIPATED THAT FURTHER ATTENTION MAY BE DIRECTED TO SUCH AREAS OF MUSEUM ACTIVITY AS AN AQUARIUM, CLIMATRON, BOTANICAL GARDENS, OR HISTORICAL VILLAGE. THESE ARE NOT INCLUDED WITHIN THE SCOPE OF THIS REPORT.

B. LOCATION AND SITE

THE USEFULNESS OF A MUSEUM TO A COMMUNITY DEPENDS ON ITS READY AGGESSI= BILITY TO RESIDENTS OF THE COMMUNITY, AND TO VISITORS OUTSIDE THE COMP MUNITY. ÎT MUST BE PLACED ÎN A LOGATION THAT IS EASILY ACCESSIBLE VIA MAJOR TRAFFIC ARTERIES, AND ON A SITE WHICH PROVIDES ADEQUATE PARKING. BEYOND THIS, GOST FOR BOTH LAND AND STRUCTURE BECOMES A MAJOR CONSIDERA-TION INASMUCH AS A MUSEUM SHOULD DIRECT AS MUCH OF ITS RESOURCES AS POSSIBLE TOWARD EXHIBITS AND PROGRAMS. IN EVALUATING POTENTIAL LOCA-TIONS AND SITES IN KANSAS CITY, THESE CRITERIA WERE CONSIDERED, ALTHOUGH IT SHOULD NOT BE ASSUMED THAT ALL POTENTIAL SITES HAVE BEEN INVESTIGATED. Penn Vallēy Park mēets thēsē critēriā, and although its availability is NOT ASSURED, IT SEEMS REASONABLE TO EXPECT THAT IF IT DOES BECOME AVAILA-BLE, NO SITE COST WILL BE INVOLVED. THE UNION STATION, ON THE OTHER HAND, IS A FACILITY WHICH MIGHT BE ADAPTED TO MUSEUM USE, ALTHOUGH AT THIS POINT IT APPEARS THAT THE PROBABLE REMODELING COST, WHEN COMBINED WITH PURCHASE PRICE AND OPERATING COSTS, WOULD MAKE THE STATION A POOR CHOICE.

DURING THE COURSE OF THIS STUDY, ATTENTION HAS BEEN DIRECTED TO THE ADVISABILITY OF MULTIPLE LOCATIONS, AND IT APPEARS THAT AT LEAST TO SOME EXTENT THIS SHOULD BE FOLLOWED. THE PRESENT SITE AND THE LIBERTY MEMORIAL HAVE BEEN DEVELOPED AS MUSEUM FACILITIES, AND SHOULD CONTINUE TO BE USED AS SUCH. THE PRESENT SITE IS SUITABLE AS A MUSEUM OF LOCAL AND AMERICAN HISTORY, AND ULTIMATELY A REPLICA OF EARLY KANSAS CITY MIGHT BE BUILT IN THE VIGINITY. THE MUSEUM HAS BEEN ASKED BY THE CITY TO UNDERTAKE OPERATING RESPONSIBILITY FOR THE LIBERTY MEMORIAL. INASMUGH AS THE MUSEUM HAS THE TECHNICAL CAPABILITY TO OPERATE IT EFFECTIVELY, IT SEEMS PROPER AND LOGICAL THAT THE SITE SHOULD ALSO BECOME A PART OF THE MUSEUM COMPLEX.

THE PARK DEPARTMENT IS ALSO CONCERNED WITH ITS "LINE CREEK" ARCHAEOLOGICAL EXCAVATION. THIS AGAIN FALLS WITHIN THE TECHNICAL CAPABILITY OF THE MUSEUM. FOR BOTH LINE CREEK AND THE MEMORIAL, BUDGET CONSIDERATIONS PRECLUDE IMMEDIATE ASSUMPTION OF OPERATING RESPONSIBILITY, BUT BOTH SHOULD
BE ENCOMPASSED IN PLANS FOR THE FUTURE.

IT IS ALSO POSSIBLE THAT NEIGHBORHOOD MUSEUMS WILL BE FUNDED FEDERALLY, WHICH WILL EXTEND THE MUSEUM EVEN FARTHER AFIELD.

IN SPITE OF THESE LOGICAL EXTENSIONS OF THE MUSEUM'S OPERATION TO VARIOUS LOGATIONS, IT IS HIGHLY DESIRABLE THAT THE MUSEUM REMAIN AS CENTRALIZED AS POSSIBLE. EACH ADDITIONAL LOCATION MAY BE EXPECTED TO INGREASE COSTS AND GREATE ADMINISTRATIVE AND GURATORIAL DEMANDS. ALTHOUGH IT IS HIGHLY DESIRABLE THAT THE MUSEUM SERVE THE ENTIRE COMMUNITY INCLUDING JOHNSON COUNTY AND WYANDOTTE COUNTY, IT IS NOT PRACTICAL TO OPERATE A SEPARATE FACILITY IN EVERY POLITICAL SUBDIVISION IN THE URBAN AREA. ALTERNATIVE LOCATIONS AT WHICH ADEQUATE SPACE CAN BE PROVIDED INCLUDE:

1. UNION STATION

THE STATION IS PRESENTLY OWNED BY THE TERMINAL RAILWAY COMPANY. THERE IS NO ASSURANCE THAT THE TERMINAL RAILWAY COMPANY WILL MAKE THE STATION AVAILABLE FOR MUSEUM USE AT A REASONABLE PRICE, AND EVEN SO, THE SPACE WOULD NOT BE CONSIDERED IDEAL. TO BECOME A FIRST CLASS MUSEUM FACILITY, THE STATION WOULD REQUIRE EXTENSIVE REMODELING, WHICH MIGHT RUN AS HIGH AS THE COST OF NEW CONSTRUC-TION. A REASONABLE ESTIMATE FOR SPACE REMODELING MIGHT BE \$15.00 PER FOOT, TO WHICH MUST BE ADDED THE PURCHASE PRICE. FOR EXAMPLE, IF THE PURCHASE PRICE AMOUNTED TO THE EQUIVALENT OF \$3,500,000, THE TOTAL COST FOR MUSEUM SPACE WOULD BE ABOUT \$25.00 PER FOOT; AND IT IS OUR OPINION THAT A NEW BUILDING SUPERIOR TO THE STATION GOULD BE CONSTRUCTED ON CITY GROUND FOR THIS AMOUNT. THE STATION POSES PROBLEMS OF INFLEXIBILITY, INADEQUATE SPACE ON THE STREET LEVEL FLOOR, LACK OF AIR CONDITIONING, AND A REQUIREMENT FOR MAJOR REMODĒLING. WE DO NOT BĒLIĒVĒ THĒ ŠTATION SHOULD BE CONSIDĒRED FURTHER IF UNDERGROUND SPACE CAN BE MADE AVAILABLE.

2. New Structure

A NEW STRUCTURE OF ADEQUATE SIZE AND COMPARABLE IN QUALITY TO THE MUSEUM IN MILWAUKEE COULD BE CONSTRUCTED FOR APPROXIMATELY \$30.00 PER SQUARE FOOT, EXCLUSIVE OF SITE. A FACILITY OF THE NECESSARY SIZE WOULD COST IN THE VICINITY OF \$13,500,000 FOR CONSTRUCTION ALONE. A LESS EXPENSIVE ALTERNATIVE WOULD PERMIT CONSTRUCTION SAVINGS TO BE DEVOTED TO EXHIBITS AND MUSEUM PROGRAMS. ALSO, IT WOULD PROBABLY BE IMPRACTICAL AND, IN THE LONG RUN, MORE COSTLY TO UNDERTAKE CONSTRUCTION ON A PIECEMEAL BASIS. THIRTEEN-AND-A-HALF MILLION DOLLARS WOULD HAVE TO BE RAISED BY BONDS OR OTHER MEANS BEFORE CONSTRUCTION COULD BE STARTED.

3. AN UNDERGROUND FACILITY

IT IS A VIRTUAL CERTAINTY THAT LIMESTONE STRATA BENEATH PENN VALLEY PARK IS SUITABLE FOR MINING AND CONSTRUCTION OF A CAVE SIMILAR TO THOSE EXISTING IN MANY OTHER PLACES IN THE KANSAS CITY AREA. SUCH SPACE CAN BE EXCAVATED AND FINISHED FOR APPROXIMATELY \$7.50 PER FOOT. THIS IS ONE-FOURTH THE COST OF SURFACE CONSTRUCTION, AND PROBABLY ABOUT HALF THE GOST OF MAJOR REMODELING IN AN EXISTING. STRUCTURE. SUCH SPACE IS EMINENTLY SUITABLE FOR USE BY THE MUSEUM FOR A NUMBER OF REASONS. THE ONLY POSSIBLE DRAWBACK MAY REVOLVE AROUND THE NECESSITY TO DO ADDITIONAL EXCAVATION TO PROVIDE ADEQUATE CEILING HEIGHT FOR CERTAIN EXHIBITS. ONLY A SURVEY CAN MAKE GERTAIN

THE DEGREE TO WHICH THIS MAY BE A DISADVANTAGE. OPERATING COSTS IN AN UNDERGROUND FACILITY MAY BE EXPECTED TO BE AROUND 40¢ PER SQUARE FOOT, COMPARED TO ROUGHLY \$1.00 PER SQUARE FOOT IN A SURFACE FACILITY. OPERATING COSTS IN THE UNION STATION COULD BE EVEN HIGHER. UNDERGROUND SPACE CAN BE HIGHLY FLEXIBLE AND OFFERS EXCELLENT PROTECTION TO ARTIFACTS. THERE IS NO DANGER OF FIRE AND OVER-ALL SECURITY IS IMPROVED. THE SPACE MAY BE READILY EXPANDED AT LOW GOST. THE LACK OF WINDOWS IS NO PROBLEM INASMUCH AS VERY FEW MUSEUMS HAVE WINDOWS, AND MANY OF THOSE THAT DO COVER THEM UP TO PERMIT PROPER CONTROL OF LIGHT IN EXHIBIT AREAS.

A MOST ATTRACTIVE OFFER WAS MADE BY ONE SOURCE IN THE COURSE OF INVESTIGATION OF UNDERGROUND FAGILITIES. IN EFFECT, THE OFFER INVOLVED PROVISION OF SPACE AT NO COST, EXCEPT FOR OPERATING GOSTS, IN EXCHANGE FOR PERMISSION TO EXCAVATE AND OPERATE ADDITIONAL SPACE UNDER A LONG-TERM LEASE. AFTER A PERIOD OF TIME, THE LEASE MIGHT BE EXPECTED TO PROVIDE REVENUE TO THE MUSEUM OF THE PARK DEPARTMENT.

4. RECOMMENDED COURSE OF ACTION

IT IS OUR OPINION THAT APPROXIMATELY 100,000 SQUARE FEET OF SURFACE CONSTRUCTION, AND 350,000 SQUARE FEET OF UNDERGROUND SPACE, BE GOMBINED WITH REMODELED SPACE IN THE LONG HOME AND THE LIBERTY MEMORIAL TO PROVIDE FOR THE TOTAL MUSEUM COMPLEX. THE PLANETARIUM DOME COULD NOT BE EFFECTIVELY HOUSED IN AN UNDERGROUND LOCATION, AND AN UNDERGROUND OBSERVATORY IS UNWORKABLE. ANY UNDERGROUND FACILITY WILL REQUIRE ENTRY WAY CONSTRUCTION, AND A PLANETARIUM-OBSERVATORY-SPACE SCIENCES GENTER COULD ALSO PROVIDE LOBBY, ELEVATOR, AND SALES DESK FACILITIES. COMPLETE WITH EXHIBITS AND INSTRUMENTATION, SUCH A SURFACE FACILITY COULD HOUSE A PLANETARIUM SEATING 400. WE ESTIMATE CONSTRUCTION COSTS AT APPROXIMATELY \$3,492,000, VERTICAL TRANSPORTATION AT \$200,000, AND INSTRUMENTATION, EXHIBITS, FURNITURE, AND FIXTURES AT \$2,319,000. THUS, THE TOTAL COST SHOULD RUN IN THE VICINITY OF \$5,900,000 TO \$6,000,000.

THREE HUNDRED AND FIFTY THOUSAND SQUARE FEET OF UNDERGROUND SPACE COULD BECOME AVAILABLE ON AN AS-REQUIRED BASIS FOR A MAXIMUM OF \$2,600,000, AND IT IS ENTIRELY POSSIBLE THAT THE SPACE COULD BE-COME AVAILABLE TO THE MUSEUM AT NO COST AT ALL.

THE COST OF REMODELING THE LONG HOME DEPENDS ON THE DEGREE OF RESTORATION, AND DONE PROPERLY, THESE COSTS COULD EASILY EXCEED THAT OF NEW CONSTRUCTION. COMPLETE RESTORATION WAS ESTIMATED AT \$4,400,000 BY ONE EXPERIENCED ARCHITECT. WE ESTIMATED REMODELING COSTS FOR THE LONG HOME AT APPROXIMATELY \$472,500, AND LIBERTY MEMORIAL REMODELING WAS SIMILARLY ESTIMATED AT \$180,000 ON THE BASIS OF \$15.00 PER SQUARE FOOT, WHICH SHOULD PROVIDE ADEQUATE REMODELING BUT NOT RESTORATION. THUS, THE TOTAL CONSTRUCTION COST INVOLVED IN MEETING THE MUSEUM'S NEEDS WILL BE ABOUT \$7,000,000 (IN 1971 DOLLARS) UNDER THIS ALTERNATIVE.

C. CONSTRUCTION GUIDELINES

FROM OUR OBSERVATION OF OTHER MUSEUMS, WE BELIEVE THE FOLLOWING GENERAL GUIDELINES MAY BE HELPFUL IN PLANNING.

1. EXHIBIT SPACES

EXHIBIT SPACES SHOULD BE PREPARED BY THE CONTRACTOR IN AN UNFINISHED CONDITION. FINISHING WILL BE DONE IN CONJUNCTION WITH EXHIBIT FABRICATION. IN MILWAUKEE, EXHIBIT AREAS WERE DELIVERED TO THE MUSEUM WITH CONGRETE FLOORS, WALLS, AND CEILING. ROUGH ELECTRICAL FACILITIES WERE BROUGHT INTO THE SPACE TO PROVICE WORK LIGHT. THE AIR HANDLING SYSTEM WAS COMPLETELY DUCTED, WHICH HAS PROVED TO BE A MISTAKE SINCE SUBSTANTIAL REMODELING OF THE DUGT WORK HAS BEEN NECESSARY AS THE EXHIBITS HAVE BEEN COMPLETED. IT IS OUR OPINION, THEREFORE, THAT ELECTRICAL DISTRIBUTION ON THE FLOOR, LIGHTING, CONVENIENCE OUTLETS, EXHIBIT LIGHTING, SUSPENDED CEILING, PAINTING AND FLOOR COVERING CAN ONLY BE DONE EFFECTIVELY IN CONJUNCTION WITH EXHIBIT FABRICATION. THIS WILL BE TRUE WHETHER THE WORK IS PERFORMED BY MUSEUM PERSONNEL OR OUTSIDE CONTRACTORS.

2. SUPPORT SPACE

SUPPORT SPACE, AS WE HAVE DEFINED IT, INCLUDES ALL THAT SPACE NOT DEVOTED TO EXHIBITS. INCLUDED ARE STORAGE AREAS, PUBLIC AREAS, CLASSROOM AND AUDITORIUM SPACE, OFFICE SPACE, WORK SPACE FOR LABS AND WORKSHOPS, LIBRARY, AND EQUIPMENT ROOMS. SUPPORT SPACE IN A MUSEUM OF THIS SIZE APPEARS TO REQUIRE ABOUT 40% OF TOTAL SPACE. FURTHER STUDY MAY INDICATE THE NEED FOR A SLIGHTLY HIGHER ALLOWANCE.

3. STANDARDS USED IN ESTIMATING

IN MAKING THE OVER-ALL ESTIMATES OF COST INCLUDED IN THIS REPORT, THE FOLLOWING STANDARDS WERE USED.

Based on Milwaukee costs projected forward until 1971, exhibit FABRICATION IS ESTIMATED AT \$35.00 PER SQUARE FOOT INCLUDING FLOOR COVERING, GLAZING, PAINTING, SUSPENDED CEILING, LIGHTING, AND THE LIKE. IT INCLUDES SOME ALLOWANCE FOR THE PROCUREMENT OF ARTIFACTS, AND COMPLETE FABRICATION OF EXHIBITS BY THE MU-SEUM'S OWN GREW. OTHER INTERVIEWS INDICATED SQUARE FOOT COSTS THAT VARIED CONSIDERABLY, PARTICULARLY WHEN EXHIBITS WERE DE-SIGNED AND FABRICATED ON A CONTRACT BASIS. FOR EXAMPLE, AT THE CHICAGO MUSEUM OF SCIENCE AND INDUSTRY, WHERE ALL EXHIBITS ARE DESIGNED AND CONSTRUCTED BY CONTRACTORS, COSTS RANGED FROM \$65.00 per square foot to \$100.00 per square foot. At the Cin-CINNATI MUSEUM, A COST OF \$45.00 PER SQUARE FOOT WAS INCURRED ON PHYSICAL SCIENCE EXHIBITS WITH WORK BEING SHARED BY OUTSIDE CONTRACTORS. THE DIRECTOR OF MUSEUM SALES FOR THE KEWAUNEE. COMPANY ESTIMATES AN AVERAGE COST OF \$50.00 TO \$55.00 PER SQUARE FOOT ON A CONTRACT BASIS. IT IS APPARENT FROM THIS VARIANCE THAŤ A GREAT DEÁL DEPENDŞ ON MUŞEUM DEŞIĞN, PROPER BUDGETARY CONTROL, AND INTERNAL FABRICATION OF EXHIBITS.

B. THE CONSTRUCTION COST OF SUPPORT SPACE HAS BEEN ESTIMATED IN THE CONVENTIONAL MANNER. THE PER SQUARE FOOT AND OTHER UNIT COSTS USED IN PREPARING ESTIMATES ARE SHOWN IN THE FOLLOWING TABLE. ALL COSTS HAVE BEEN PROJECTED TO 1971, ALTHOUGH UNIT COSTS SHOWN IN THE TABLE WERE DEVELOPED IN 1968. A 5% ESCALATION FACTOR HAS BEEN USED. NO PROVISION HAS BEEN MADE FOR PARKING, ALTHOUGH IT IS ESTIMATED THAT PARKING SPACE SHOULD BE PROVIDED FOR APPROXIMATELY 500 AUTOMOBILES AT ABOUT 300 SQUARE FEET PER AUTOMOBILE.

ESTIMATED COSTS
FINISHING CONSTRUCTION, FIXTURE, & FURNISHING

Cost	
WIRING 1.20 1.20 1.20 LIGHTING, OUTLET .80 .80 HÉATING, A/C 1.80 2.00 2.00 2.00 CEILING 1.00 1.00 FLOOR COVERING .50 .50 FINISHING COST 3.00 4.00 5.50 5.50 (PER SQ. FT.) EXHIBIT COST 32.00	IM
LIGHTING, OUTLET80 .80 .80 HEATING, A/C 1.80 2.00 2.00 2.00 CEILING 1.00 1.00 FLOOR COVERING50 .50 FINISHING COST 3.00 4.00 5.50 5.50 (PER SQ. FT.) EXHIBIT COST 32.00	
(PER SQ. FT.) EXHIBIT COST 32.00 == ==	 -
EXHIBIT COST 32.00 == ==	
I LPER SQ. FT. J.	
FURNISH, FIXTURE 8.00/RUN FT. 3.00 50.00/8 sq. Cost (\$0. FT.)	. ĒŤ.
Total Square Feet 286,200 139,500 5,000 10,600)
Finish Costs (\$) 858,600 558,220 27,500 58,300 Exhibit Costs (\$) 9,158,400)
Costs (\$) == 372,136 15,000 66,250 TOTAL COST/AREA 10,017,000 930,340 42,500 124,550))
COST OFFICE LABORATORY LIBRARY EQUIPMENT 1 SPACE BENCH SPACE ROOM	:
WIRING 1.20 1.20 1.20 LIGHTING, OUTLET .80 .80 .80 HEATING, A/C 2.00 2.00 2.00 CEILING 1.00 1.00 FLOOR COVERING .50 .50	
FINISHING COST 5.50 4.00 5.50 2.00 (PER SQ. FT.)	4.
EXHIBIT COST (PER SQ. FT.)	
Furnish, Fixture 500/person 500/person 10.00/run ft. 17.50 Cost (sq. ft.) (59) (19) (3 sq. ft.)	
TOTAL SQUARE FEET 9,600 20,000 5,000 15,000	
FINISH Costs (\$) 53,800 80,000 27,500 30,000 Exhibit Costs (\$)	•
FURNISH, FIXTURE	
Costs (\$) 28,500 9,500 166,670 262,500 TOTAL COST/AREA 82,300 89,500 194,170 292,500	

VI. EXHIBIT FABRICATION

IT IS OBVIOUS TO ANYONE WHO HAS VISITED MUSEUMS THAT EXHIBITS VARY FROM MUSEUM TO MUSEUM AND FROM ONE AREA OF CURATORIAL SPECIALTY TO ANOTHER. OUR INVESTIGATION INDICATES, HOWEVER, THAT FOR PLANNING AND ESTIMATING PURPOSES, ONE AREA CAN BE TREATED MUCH AS ANOTHER.

IN PLANETARIUMS AND OBSERVATORIES, INSTRUMENT GOSTS ARE HIGH; HOWEVER, THIS APPEARS TO BE OFFSET BY THE LOWER COST OF SEATING SPACE. IN SOME AREAS, EXHIBITS ARE IN PURCHASED CASES, AND IN OTHERS, EXHIBITS ARE IN FABRICATED DIORAMAS. COSTS APPEAR TO BE COMPARABLE ALTHOUGH THE AREAS HAVING EXHIBITS IN CASES DO NOT APPEAR TO REQUERE AS LONG TO INSTALL. IN THESE AREAS, LOW EXHIBIT FIGURES MAY BE MISLEADING INASMUCH AS MORE GEILING, FLOOR GOVERING, LIGHTING, AND WALL TREATMENT ARE REQUIRED.

A. EXHIBIT COMPONENTS

CONVENTIONALLY, EXHIBITS REQUIRE CERTAIN COMPONENTS, ALTHOUGH ALL NEED NOT EXIST FOR ANY GIVEN EXHIBIT. AMONG THESE ARE FLOOR SPACE, HOUSING (WHICH MAY BE A DIORAMA SHELL, STAND, OR CASE), LIGHTING, CEILING, AIR HANDLING, PAINTING AND FLOOR GOVERING, AND, IN PREPARATION OF THE EXHIBIT PROPER, SUCH CONSIDERATIONS AS BACKGROUND PAINTING, SIGNS, SPECIAL EFFECTS, SPECIAL LIGHTING, FLOOR GROUND PREPARATION, ARTIFACT PREPARATION, ARTIFACT COLLECTION, GLAZING, AND THE LIKE.

IN A MAJOR UNDERTAKING SUCH AS THAT BEING PROJECTED FOR THE KANSAS CITY MUSEUM, A SKILLED CREW SHOULD BE HIRED AND TRAINED TO PERFORM THE PLANNING, CONSTRUCTION, AND FABRICATION STEPS OF EXHIBIT PREPARATION. IN OUR OPINION, THE CHIEF CURATORS SHOULD BE HIRED AT THE OUTSET SO THAT THEY MAY BE INVOLVED IN THE PLANNING OF THE AREAS FOR WHICH THEY WILL BE RESPONSIBLE. THE MILWAUKEE MUSEUM IS NOT DEPARTMENTALIZED, AND THERE, FOR EXAMPLE, ALL CURATORS COULD CONCEIVABLY PARTICIPATE IN PLANNING THE SAME EXHIBIT.

B. MUSEUM PLANNING

THE FIRST STEP IN EXHIBIT FABRICATION MUST BE TAKEN BY THE MUSEUM DIRECTOR AND HIS STAFF AS SOON AS THE AMOUNT AND GENERAL CONFIGURATION OF SPACE TO BE AVAILABLE IS KNOWN. THE DIRECTOR AND HIS STAFF MUST ALLOGATE SPACE BY CURATORIAL DEPARTMENT AND, WITHIN THESE DEPARTMENTS, ASSIST THE CURATORS IN DEVELOPING A DEPARTMENTAL CONCEPT AND, WITHIN THAT, A CONCEPT FOR EACH EXHIBIT. IT SEEMS THAT THIS IS DONE BEST IN TEXT FORM, SUPPORTED BY APPROPRIATE FREE-HAND SKETCHES. FOR EACH DEPARTMENT, AND FOR EACH EXHIBIT WITHIN THE DEPARTMENT, A MASTER PLAN SHOULD BE DEVELOPED IN A PATTERN SIMILAR TO THE FOLLOWING:

- 1. EDUCATIONAL PURPOSE OF THE DEPARTMENT OR EXHIBIT.
- 2. EDUCATIONAL MESSAGE OR TEACHING UNIT.
- 3. ARTIFACTS OR PRINCIPAL EXHIBIT COMPONENTS TO BE USED.
- 4. Signs and/or sound effects and lighting.
- 5. RELATED MATERIALS.
- 6. SPACE REQUIRED.
- 7. Cost Estimate.
- B. Sketch

- 9. MAN HOUR ESTIMATE BY JOB CLASSIFICATION.
- 10. Special requirements or effects.
- 11. SKETCH OF THE EXHIBIT

THESE EXHIBIT PLANS SHOULD BE ASSEMBLED IN NOTEBOOK FORM WITH REGAPS AND LAYOUTS BY CURATORIAL DEPARTMENT AND FOR THE TOTAL MUSEUM. IT SHOULD BE RECOGNIZED THAT FINAL DETAILED PLANNING MUST BE DONE IMMEDIATELY PRIOR TO FABRICATION AND THAT CHANGES IN PLAN WILL BE MADE FROM DAY TO DAY. HOWEVER, ONLY WITH A REASONABLY ACCURATE MASTER PLAN CAN COSTS BE ESTIMATED AND PROGRESS CONTROLLED. INSOFAR AS POSSIBLE, IT SHOULD BE COMPLETED DURING THE PERIOD WHEN ARCHITECTS ARE PREPARING CONSTRUCTION DRAWINGS, SINCE THE MASTER PLAN WILL IN SOME INSTANCES AFFECT ARCHITECTURAL DECISIONS.

C. EXHIBIT TEAMS

THE PLANS AND ESTEMATES MAKING UP THE 10-YEAR PROGRAM ARE BASED ON THE USE OF TWO PROJECT TEAMS MADE UP OF SPECIALISTS IN PLANNING, CONSTRUC-TION, AND FABRICATION. IT IS ANTIGIPATED THAT ONE TEAM WILL SPECIALIZE IN THE PHYSICAL SCIENCES; WHILE THE OTHER WILL SPECIALIZE IN THE LIFE SCIÈNCES. ALTHOUGH WE BELIEVE THAT THE PHYSICAL SCIENCES AND LIFE SCI-ENCES BELONG IN THE SAME MUSEUM FACILITY, FROM BOTH A FABRICATION AND AN OPERATING STANDPOINT THEY MAY BE CONSIDERED DIFFERENT MUSEUMS. SCIENTISTS INVOLVED WILL NOT READILY INTERCHANGE BETWEEN THE LIFE SCI-ENGES AND PHYSICAL SCIENCES. FOR THIS REASON, WE FEEL THAT TWO PROJECT TEAMS CAN WORK EFFECTIVELY, EAGH IN ITS OWN MUSEUM AREA. CURATORS WILL BE RESPONSIBLE FOR WORKING WITH WHAT WE HAVE CHOSEN TO GALL EXHIBIT DESIGN ENGINEERS (OR MUSEUM PLANNERS) AND PERHAPS A CONSULTING EDUCA-TOR IN DEVELOPING DEPARTMENTAL AND EXHIBIT CONCEPTS AND DETAILED PLANS. THE GURATOR WILL BE RESPONSIBLE FOR "STORY LINE," SCIENTIFIC ACCURACY, AND COLLECTION AND PREPARATION OF ARTIFACTS AND OTHER MATERIALS TO BE EXHIBITED. HE WILL COOPERATE WITH THE EDUCATOR AND MUSEUM DIRECTOR IN DEVELOPING THE "STORY LINE," SIGNS, AND SUPPORTING WRITTEN MATERIAL. THE EXHIBIT DESIGN ENGINEER WILL BE RESPONSIBLE FOR PLANNING AN EXHIBIT THAT WILL ACHIEVE THE DESIRED EDUCATIONAL IMPACT WITHIN THE PROJECT BUD-GET. WITH THE SENIOR ARTIST OF THE PROJECT TEAM AND THE CURATOR. THE DESIGNER WILL ASSURE HIMSELF THAT BOTH THE AESTHETIC AND SCIENTIFIC VALUES CONFORM TO MUSEUM STANDARDS. AS PLANNING IS COMPLETED AND APPROVED BY THE MUSEUM DIRECTOR, CONSTRUCTION OF EXHIBIT FABRICATION SHOULD BE SCHEDULED.

D. EXHIBIT CONSTRUCTION

EXHIBIT CONSTRUCTION INVOLVES COMPLÉTION OF THOSE ACTIVITIES NECESSARY TO PREPARE EXHIBIT SPACE FOR THE ARTIST-PREPARATORS. CONVENTIONALLY, SUCH WORK MAY BE EXPECTED TO INCLUDE CARPENTRY, PLASTERING, PAINTING, GLAZING, ÉLÉCTRICAL WORK, CEILING INSTALLATION, DUCT WORK, AND THE LIKE. IT MAY ALSO INCLUDE THE PROCUREMENT OR FABRICATION OF CASES.

E. EXHIBIT FABRICATION

EXHIBIT FABRICATION MAY START AS SOON AS PLANNING IS COMPLETE. IT IN-VOLVES THE SELECTION AND PROCUREMENT OF ARTIFACTS, PREPARATION AND RESTORATION OR ARTIFACTS, PREPARATION OF SIGNS AND OTHER VISUAL AND AUDIO AIDS, PROCUREMENT OF NEGESSARY SPECIAL EQUIPMENT OR EFFECTS; AND AFTER THE CONSTRUCTION PHASE IS COMPLETE, IT INVOLVES THE STEPS OF PAINTING IN BACKGROUNDS, PREPARING FOREGROUNDS, INSTALLING ARTIFACTS, PUTTING UP SIGNS, AND THE LIKE.

F. FINAL CONSTRUCTION

TOWARD THE END OF EXHIBIT FABRICATION, A BRIEF FINAL CONSTRUCTION STEP IS NORMAL. IT MAY INVOLVE SUCH CONSTRUCTION ACTIVITIES AS GLAZING, FINAL PAINTING, INSTALLATION OF FLOOR COVERING, AND PUTTING UP COVER PLATES, DIFFUSERS, AND THE LIKE.

G. FABRICATION PRIORITIES

IT IS ESTIMATED THAT 28,000 SQUARE FEET OF EXHIBIT SPACE CAN BE OPENED EACH YEAR, 14,000 SQUARE FEET BY EACH PROJECT TEAM. TENTATIVE PRIORITIES AND TIME SCHEDULES ARE SHOWN ON EXHIBIT II, DEPARTEMENTAL INSTALLATION SCHEDULE. TIME REQUIREMENTS ARE BASED SOLELY ON SQUARE FEET, AND THE SEQUENCE IS ESTABLISHED TENTATIVELY ON THE BASIS OF THE MUSEUM DIRECTOR'S OPINIONS AS TO DEPARTMENTAL LOCATION. IN THIS WAY, NEW SECTIONS OF THE MUSEUM CAN BE OPENED TO THE PUBLIC WITH RELATIVE FREQUENCY WHICH SHOULD ASSIST IN MAINTAINING A HIGH DEGREE OF PUBLIC AWARENESS OF THE MUSEUM PROGRAM.

H. FABRICATION COSTS

IT IS ESTIMATED THAT \$35.00 PER SQUARE FOOT WILL BE REQUIRED TO COM-PLETE ALL "AVERAGE" EXHIBIT SPACE. ONLY A MODEST ALLOWANCE HAS BEEN PROVIDED FOR PROGUREMENT OF ARTIFACTS, A COST FACTOR WHICH IS COM-PLETELY UNPREDICTABLE. IT SHOULD BE NOTED, HOWEVER, THAT A MUSEUM "COLLECTS" CONTINUOUSLY, AND CONTINUOUSLY IMPROVES AND UPGRADES EX-HIBITS. FOR THIS REASON, WE DO NOT BELLEVE THAT THE BUDGETED AMOUNT IS UNREALISTICALLY LOW, PARTICULARLY IN VIEW OF THE MUSEUM'S EXISTING COLLECTIONS. DURING INTERVIEWS, IT WAS INDICATED THAT EARMARKED CON-TRIBUTIONS WERE FAIRLY COMMON, AND THAT ONCE A COLLECTING NEED WAS IDENTIFIED FOR WHICH NO BUDGET WAS AVAILABLE, THERE WOULD BE REASONABLE EXPECTATION OF A SPECIFIC GIFT FOR THE PURPOSE.

VII. ORGANIZATION PLAN

Successful day-to-day operation and attainment of the short and long-Range goals are completely dependent on a well-planned organization staffed with qualified personnel. Study shows that from 60% to 70% of a museum operating budget is typically spent on payroll. For this reason, Museum success is dependent not only on funds availability, but also by having experienced people properly motivated and assigned to perform the right tasks. Regod-nizing this, a considerable part of the consultant's attention has been directed to planning an effective operating organization and projecting the manpower needs necessary to effectively execute the 10-year program of improvement.

A. MUSEUM STAFFING

THE MUSEUM ORGANIZATION MANUAL (EXHIBIT VII) WAS PREPARED BY MEANS OF INTERVIEWS WITH MUSEUM PERSONNEL. BASED ON THIS STUDY, A RECOMMENDED ORGANIZATION STRUCTURE WAS DEVELOPED SUITABLE FOR THE FUTURE NEEDS OF THE MUSEUM, AND READILY ADAPTABLE TO MEET THE LONG-RANGE NEEDS. IT IS RECOMMENDED THAT THE MUSEUM ORGANIZATION BE DIVIDED INTO THREE DIVISIONS AT THE PRESENT TIME.

- 1. THE MUSEUM OPERATIONS DIVISION HAS FULL RESPONSIBILITY FOR THE DAY-TO-DAY OPERATION OF THE PRESENT FACILITY.
- 2. THE ADMINISTRATION DIVISION HAS RESPONSIBILITY FOR ALL ADMINISTRATIVE MATTERS, COORDINATION OF VOLUNTEER ACTIVITY, MEMBERSHIP AND PUBLIC RELATIONS, AND PERSONNEL MANAGEMENT. THIS ADMINISTRATION DIVISION SHOULD ULTIMATELY HAVE OVER-ALL RESPONSIBILITY FOR THESE MATTERS AT ALL MUSEUM LOCATIONS.
- 3. THE PROGRAMS AND PLANNING DIVISION IS DESIGNED TO UNDERTAKE FULL RESPONSIBILITY FOR ALL IMPROVEMENT PROJECTS TO BE UNDERTAKEN BY THE MUSEUM. NOTE THAT THE SCIENCE FAIR, WHICH IS A RECURRING PROGRAM, IS CURRENTLY ASSIGNED IN THIS DIVISION. IN THE FUTURE IT IS SUGGESTED THAT THIS BE REASSIGNED TO THE EDUCATION DEPARTMENT.

THE PROGRAMS AND PLANNING DIVISION SHOULD UNDERTAKE FULL RESPONSIBILITY FOR THE LONG-RANGE DEVELOPMENT PROGRAM. FROM EXAMINATION OF
THE CHART, IT WILL BE NOTED THAT THE SAME NAME APPEARS IN MORE THAN
ONE PLACE. AS THE ORGANIZATION GROWS, MULTIPLE ASSIGNMENTS SHOULD
BE RELINQUISHED, ONE BY ONE, UNTIL EACH PERSON HAS RESPONSIBILITY FOR
A SINGLE JOB. DEVELOPMENT OF AN ORGANIZATION STRUCTURE UTILIZING
THIS "TWO-HAT" PRINCIPLE PERMITS PROVISION OF A STRUCTURE THAT WILL
PROVIDE FOR CONSIDERABLE FUTURE GROWTH.

NOTE ALSO THAT THERE ARE SEVERAL WORK ASSIGNMENTS IN WHICH TWO NAMES APPEAR. THE EXECUTIVE DIRECTOR SHOULD CORRECT THIS SITUATION AS QUICKLY AS POSSIBLE INASMUCH AS THE DUPLICATION OF LEADERSHIP WILL CREATE CONFUSION AND INEFFECTIVE SUPERVISION. THE MULTIPLICITY OF ASSIGNMENTS NOW PREVENT THE EXECUTIVE DIRECTOR AND THE MUSEUM DIRECTOR FROM PERFORMING AS EFFECTIVELY AS THEY CAN.

B. JOB DESCRIPTIONS

THE ORGANIZATION MANUAL CONTAINS JOB DESCRIPTIONS FOR EACH WORK ASSIGNMENT IN THE CURRENT ORGANIZATION. THESE WERE PREPARED BY MEANS OF INTERVIEWS WITH PRESENT EMPLOYEES AND REVIEW WITH MUSEUM EXECUTIVES. ADDITIONAL DESCRIPTIONS SHOULD BE PREPARED AS THE MUSEUM ORGANIZATION EXPANDS AND ENTERS INTO THE 10-YEAR IMPROVEMENT PROGRAM. THE NEEDED DESCRIPTIONS CAN BE IDENTIFIED BY EXAMINATION OF THE JOB TITLES ON THE PAYROLL PROJECTION (EXHIBIT 111). THE ORGANIZATION MANUAL HAS BEEN PUBLISHED AND IS AVAILABLE FOR THE GUIDANGE OF ALL PERSONNEL AT THE MUSEUM.

C. Sources of Manpower

AS THE LO-YEAR IMPROVEMENT PROGRAM IS UNDERTAKEN, ADDITIONAL MANPOWER MUST BE RECRUITED. IT APPEARS THAT MOST OF THE NECESSARY WORK
WILL BE UNDERTAKEN BY THE PROFESSIONAL AND LAY EMPLOYEES OF THE MUSEUM. IN ANY PROGRAM OF LONG DURATION, IT IS NORMALLY ADVANTAGEOUS
TO BUILD A COMPETENT STAFF RATHER THAN TO USE CONSULTANTS OR CONTRACTORS. CERTAINLY, CONSULTANTS SHOULD BE AVAILABLE TO THE EXECUTIVE
DIRECTOR TO PROVIDE COUNSEL IN SPECIALIZED FIELDS FOR WHICH A QUALIFIED FULL-TIME EMPLOYEE CANNOT BE JUSTIFIED. THE SAME IS TRUE OF
CONTRACTORS. IT IS CRITICAL THAT COMMITMENT BE MADE TO THE TOTAL PROGRAM AT THE OUTSET, SO THAT COMPETENT STAFF GAN BE RECRUITED AND
DEVELOPED.

À FOURTH SOURCE OF AVAILABLE TALENT IS VOLUNTEERS. MUSEUMS TODAY TEND TO MAKE EXTENSIVE USE OF VOLUNTEERS, BUT ONLY RARELY DO THE VOLUNTEERS BECOME AN EFFECTIVE PART OF THE WORKING ORGANIZATION. IT IS OUR SUGGESTION THAT GIVEN PROPER ORGANIZATION, RESPONSIBILITY, AND LEADERSHIP, VOLUNTEERS CAN PROVIDE A WORTHWHILE LABOR CONTRIBUTION AND A LEVEL OF TALENT NOT GENERALLY AVAILABLE TO MUSEUMS. THIS DEPENDS ON A SOUND LINE ORGANIZATION HEADED BY A VOLUNTEER WELL-QUALIFIED FOR LEADERSHIP, AND WITH THE AUTHORITY TO "HIRE AND FIRE" VOLUNTEERS. MOST MUSEUM DIRECTORS INTERVIEWED INDICATED THAT VOLUNTEERS ARE OF LITTLE VALUE IN ASSIGNMENTS WHERE MEETING DEADLINES OR OBTAINING RESULTS ARE ESSENTIAL. THE MUSEUM DIRECTORS WHO DISAGREED SAID THAT VOLUNTEERS IN THEIR ORGANIZATION WERE IMMEDIATELY RELIEVED OF RESPONSIBILITY IN THE EVENT OF NON-PERFORMANCE. THUS, WE BELIEVE VOLUNTEERS CAN BE AN EFFEC-TIVE PART OF THE IMPROVEMENT TEAM IF THEY ARE PART OF A WELL-DEFINED VOLUNTEER ORGANIZATION STRUCTURE, ASSIGNED RESPONSIBILITY FOR TRULY WORTHWHILE PARTS OF THE IMPROVEMENT PROGRAM, AND HELD COMPLETELY ACCOUNTABLE FOR SOUND RESULTS.

D. PROJECT ORGANIZATION

THE MUSEUM PAYROLL PROJECTION (EXHIBIT 111) SPECIFIES BY JOB TITLE THE PROJECTED MANPOWER REQUIREMENTS NEGESSARY TO MAINTAIN DAY-TO-DAY OPERATIONS AND COMPLETE THE 10-YEAR IMPROVEMENT PROGRAM. NOTE THAT THE FIRST COLUMN INDICATES THE PRESENT STAFFING AND PAYROLL LEVEL. IN COLUMNS TO THE RIGHT HAVE BEEN INDICATED YEAR 1, YEAR 2, YEAR 3, ETC. SPECIFIC YEARS HAVE NOT BEEN IDENTIFIED BECAUSE AT THE MOMENT THE QUESTION OF FUNDING HAS NOT BEEN RESOLVED, AND THERE IS NO WAY TO IDENTIFY WHEN THE 10-YEAR IMPROVEMENT PROGRAM WILL BEGIN. NOTE THAT WHEN BUDGETED PAYROLL IS CARRIED FORWARD TO THE BUDGET PROJECTION (EXHIBIT IV), THE BOTTOM LINE INDICATES A PAYROLL INCREASE ALLOWANCE BY CALENDAR YEAR, WHICH WHEN APPLIED TO THE APPROPRIATE PAYROLL COLUMN, WILL PROVIDE ADE-QUATELY FOR BOTH INFLATION AND SALARY INCREASES.

IN OUR OPINION, THE PROJECT PLANNING AND CONSTRUCTION TEAMS SHOULD BE HIRED AT THE OUTSET OF THE PROGRAM AND MAINTAINED AT A CONSTANT LEVEL UNTIL THE 10-YEAR IMPROVEMENT PROGRAM IS COMPLETED. KEY CURATORIAL STAFF SHOULD BE HIRED EVEN EARLIER SO THAT THEY MAY PARTICIPATE IN THE PRELIMINARY PHASES OF PLANNING. NOTE THAT THE CURATORIAL DIVISION WILL REMAIN A PART OF THE PROJECT ACTIVITY UNTIL EACH CURATORIAL DEPARTMENT IS TURNED OVER TO DAY-TO-DAY OPERATION. FOR BUDGETING PURPOSES, IT HAS

BEEN ASSUMED THAT ONE-HALF OF THE CURATORIAL STAFF WILL BE INVOLVED IN PROJECT WORK AT ALL TIMES DURING THE IMPROVEMENT PROGRAM. ORGANI-ZATION OF THE INDIVIDUAL TEAMS WAS DISCUSSED EARLIER IN THIS REPORT.

VIII. BUDGETING

Budgeting has been approached in much the same way as organization planning. In the course of the study, a budgeting technique was developed based on the current needs of the Museum. It is included with this report as Exhibit VIII. The "object budgeting" technique was adapted to meet the current needs of the Museum with the view to applying this same technique to future needs. Note that the costs and "earmarked" income related to a specific project or program were segregated from all other costs. Thus, for example, income, payroll, expenses, and capital expenditures for the mobile planetarium are segregated from all others. Thus, activities pertaining to the mobile planetarium, or any other program or project activity, can be evaluated in terms of income, cost, allocation of resources, and benefits of the specific project. Decisions can be made intelligently regarding the allocation of available funds among the worthwhile projects the Museum may consider undertaking. We suggest that this budgeting approach be used on an annual basis, and that a similar approach be adopted for long-range planning.

THE LONG-RANGE MUSEUM BUDGET PROJECTION IS BASED ON PRESENT STAFFING, THE STAFFING LEVELS OF OTHER LARGER MUSEUMS, AND THE OPERATING EXPENSES OF OTHER MUSEUMS. THE PROJECTION OF IMPROVEMENT COSTS IS BASED ON THE COSTS INCURRED BY THE MILWAUKEE PUBLIC MUSEUM IN THE COURSE OF THEIR DEVELOPMENT PROGRAM. WITH MINOR MODIFICATIONS, THE PROJECT TEAM CURRENTLY WORKING ON EXHIBITS IN THE MILWAUKEE MUSEUM WAS USED AS A MODEL FOR TEAM PLANNING IN THE LONG-RANGE IMPROVEMENT PROGRAM. THE MILWAUKEE TEAM AT THE PRESENT TIME IS COM-PLETING EXHIBITS IN ABOUT 14,000 SQUARE FEET OF EXHIBIT SPACE PER YEAR. Quite Logically, two similar teams could complete 28,000 square feet per YEAR; 14,000 IN LIFE SCIENCES, AND 14,000 IN THE PHYSICAL SCIENCES. MA-TERIALS, EQUIPMENT, SUBCONTRACTS, AND ARTIFACTS ARE BUDGETED ON THE BASIS OF MILWAUKEE EXPENDITURES. THOSE WHO ARE TO BE INVOLVED IN PLANNING AND EXHIBIT FABRICATION SHOULD MAKE AN EXTENDED VISIT TO THE MILWAUKEE PUBLIC MUSEUM TO OBSERVE METHODS AND ORGANIZATION AND TO OBTAIN FURTHER BACKGROUND FOR PLANNING AND COST ESTIMATING. NOTE THAT THE PROJECTED EXHIBIT FABRICA-TION COST IS A CONSTANT \$900,000 PER YEAR INCLUDING PAYROLL AND ALL OTHER RELATED COSTS THROUGHOUT THE 10-YEAR PERIOD. TO THIS MUST BE ADDED MUSEUM OPERATING COSTS WHICH WILL INCREASE FROM THE PRESENT APPROXIMATE \$200,000 TO ABOUT \$1,000,000 DURING THE 10-YEAR PERIOD. FOR CASH FLOW PLANNING, CONSTRUCTION COSTS MUST ALSO BE INCLUDED IN THE YEAR EXPENDED, AND ALLOWANCES MUST BE MADE FOR THE CONTINUING EFFECT OF INFLATION (SEE EXHIBIT IV).

IN SUMMARY, WE BELIEVE THIS BUDGETING APPROACH AND THE INCLUDED ESTIMATES TO BE GENERALLY REALISTIC AND PERHAPS SLIGHTLY CONSERVATIVE. READERS SHOULD RECOGNIZE THAT THE BASIS OF SUCH ESTIMATES WAS THE PERFORMANCE OF OTHERS IN A DIFFERENT PERIOD OF TIME, AND THAT NO PLANNING OF PHYSICAL PLANT HAS BEEN DONE BEYOND DETERMINATION OF THE AMOUNT OF SPACE NEEDED. AS SOON AS A SPECIFIC SITE HAS BEEN SELECTED, AND QUALIFIED ARCHITECTS HAVE DEVELOPED A PRELIMINARY CONCEPT, THE ESTIMATE OF SPACE COSTS SHOULD BE REVIEWED. IN OUR OPINION, THE PROJECTED COST OF EXHIBITS IS ATTAINABLE, BUT THIS, TOO, SHOULD

BE REVIEWED AFTER THE MASTER MUSEUM PLAN HAS BEEN COMPLETED. THE PAYROLL PROJECTION IS, IN OUR OPINION, ACCURATE ENOUGH FOR PLANNING PURPOSES.

BUDGET ADJUSTMENTS SHOULD BE MADE FOR ANY ADDITIONAL SPECIAL SHORT-RANGE OR LONG-RANGE PROJECTS TO BE UNDERTAKEN DURING THE COURSE OF THIS IMPROVEMENT PROGRAM. FOR BUDGETING PURPOSES, IT WAS ASSUMED THAT NO FUNDS WOULD BE DEVOTED TO SPECIAL PROJECTS DURING THE 10-YEAR IMPROVEMENT PROGRAM.

IX. FUNDING

Consideration of funding is beyond the scope of this study. It seems inappropriate, however, to discuss a major improvement program without a cursory examination of how it might be financed. Currently, approximately 80% of the Museum's operating income is supplied by the City Museum Tax. The balance is supplied by admission fees paid by school districts, memberships and donations, return on investments, and admissions and other fees. Current operating income is about \$320,000, exclusive of special grants. This represents about one-third of the annual operating budget that will be required to sustain the completed Museum complex. In addition, provision must be made for the one-time costs of construction and exhibit fabrication.

A. AVAILABLE Sources

IN A 1962 SURVEY OF MUSEUMS, 2,021 MUSEUMS REPORTED THAT THEY RECEIVED FUNDS FROM THE FOLLOWING SOURCES.

Source	REPORTS INCOME FROM:	Over Half of Income From:*
JOURCE	I ROM.	INCOME TROM:
STATE GOVERNMENT	19%	20%
ENDOWMENTS	24%	13%
Admissions	24%	13% 12%
FEDERAL GOVERNMENT	10%	11%
Membership	38%	10%
COUNTY	12%	8%
CONTRIBUTIONS	38% 12% 32% 12%	8% 7% 6% 4% 3% 2% 1%
CITY GOVERNMENT	12 <i>%</i>	6%
EVENT ADMISSIONS	13%	4%
FOUNDATIONS	10%	3%
CORFORATION CONTRIBUTIONS	9%	3%
Sales Desk Income	26%	2%
TUITION	8%	1%
MUSEUM PUBLICATIONS	10% 9% 26% 8% 6%	0 %
*24% REPORT THAT NO SINGLE		·

We know that certain museums have received extensive planning grants, including a new museum in the railroad station in Cincinnati which has received \$900,000 in federal planning grants. The Museum Director or a consultant should be asked to investigate grant availability and to determine how applications are to be prepared and submitted. "Grantsman-

SHIP" IS A RELATIVELY COMPLEX PROCESS, AND IT IS SUGGESTED THAT THIS SHOULD BE A MAJOR FUNCTION OF THE EXECUTIVE DIRECTOR. THE FEDERAL GOVERNMENT PREPARES RESOURCE MATERIAL ON GRANT AVAILABILITY, AND THE GOVERNMENTAL MANAGEMENT INSTITUTE PRESENTS A SEMINAR ON "GRANTSMANSHIP."

IT APPEARS THAT THE ONLY LOGICAL SOURCE FOR CONSTRUCTION FUNDS IN THE AMOUNT REQUIRED IS LOCAL GOVERNMENT, AND THAT THE ONLY WAY INITIAL CONSTRUCTION COSTS CAN BE REALISTICALLY UNDERWRITTEN IS A BOND ISSUE. IT IS OUR UNDERSTANDING THAT THE DIRECTOR IS CURRENTLY PURSUING THIS MATTER WITH THE CITY OF KANSAS CITY, MISSOURI. GREATER KANSAS CITY'S UNIQUE POLITICAL CLIMATE MAKES IT DIFFICULT FOR ALL PARTS OF THE URBAN AREA TO SHARE THE COST OF MUSEUM DEVELOPMENT THROUGH GOVERNMENTAL SUPPORT. A CITY IN TWO STATES, SEVEN COUNTIES, AND INNUMERABLE CITY GOVERNMENTS MUST, BY ITS NATURE, LACK THE COHESIVENESS TO PURSUE A PROJECT OF THIS KIND ON A JOINT BASIS. FOR THIS REASON, ONE POLITICAL SUBDIVISION, PREFERABLY THE LARGEST AND MOST WEALTHY, MUST UNDERTAKE RESPONSIBILITY FOR STARTING A PROJECT OF THIS KIND.

ONCE GOALS ARE ATTAINED, THE COST OF MUSEUM OPERATION MAY BE SPREAD OVER A LARGER BASE BY A NUMBER OF DEVICES. THE OBVIOUS ONE THAT HAS OCCURRED TO MOST IS THE EARNINGS TAX. CURRENTLY, THE KANSAS CITY, MISSOURI, SCHOOL DISTRICT AND OTHERS PAY FOR STUDENTS WHO ATTEND IN GROUPS UNDER SCHOOL AUSPICES AT THE RATE OF 80¢ PER STUDENT. A FINE MUSEUM IN A CONVENIENT LOCATION COULD EXPEGT SIMILAR REVENUE FROM ADDITIONAL SCHOOL DISTRICTS.

ALTHOUGH MOST MUSEUM DIRECTORS FEEL THAT AN ADMISSION IS INAPPROPRIATE, THE SPECIAL CIRCUMSTANCES PRESENT IN KANSAS CITY MAKE AN ADMISSION CHARGE APPEAR BOTH REALISTIC AND DESIRABLE. VISITORS FROM OUT-OF-TOWN WHO MUST SPEND MONEY TO COME TO THE CITY WILL NOT BE DISCOURAGED BY A REASONABLE CHARGE. PEOPLE FROM NON-SUPPORTING POLITICAL SUBDIVISIONS MAY BE EXPECTED TO PAY ADMISSION OR JOIN THE MUSEUM ASSOCIATION. RESIDENTS OF KANSAS CITY COULD BE ADMITTED BY LIBRARY CARD, IF IT WAS FELT THAT THESE RESIDENTS ALREADY PROVIDE ADEQUATE SUPPORT. IN OUR OPINION, AN ADMISSION CHARGE TO THE MUSEUM PROPER OR TO SPECIAL EXHIBITS IS A REALISTIC ANSWER TO THE SPECIAL PROBLEMS FACED BY A MUSEUM IN A KANSAS CITY LOCATION. IF ATTENDANCE PROJECTIONS ARE REASONABLY ACCURATE, IT APPEARS THAT AN ADMISSION CHARGE COULD MEET A MAJOR PART OF THE MUSEUM SEUM'S OPERATING NEEDS ONCE A MAJOR PART OF THE NEW MUSEUM CAN BE OPENED TO THE PUBLIC. IN THE PRECEDING TABLE, IT SHOULD BE NOTED THAT 12% OF MUSEUMS OBTAIN OVER HALF OF THEIR BUDGET FROM ADMISSION CHARGES.

IF A BOND ISSUE CAN PROVIDE FOR THE INITIAL CONSTRUCTION NEEDS, A FEDERAL GRANT CAN BE OBTAINED FOR PLANNING, AND ADMISSIONS AND THE EXISTING TAX CAN COVER OPERATING COSTS; THE REMAINING FUNDING CONSIDERATIONS ARE THE COST OF CONSTRUCTING ADDITIONAL SPACE UNDERGROUND AND THE COST OF EXHIBIT FABRICATION. BASED ON PRELIMINARY DISCUSSIONS WITH ONE PERSON EXTENSIVELY EXPERIENCED IN THE UNDERGROUND EXCAVATION FIELD, IT APPEARS THAT IF THERE ARE NO LEGAL DIFFICULTIES AND THE BOARD APPROVES, THE SPACE CAN BECOME AVAILABLE TO THE MUSEUM AT VIRTUALLY NO COST. THE REMAINING \$900,000 PER YEAR FOR EXHIBIT FABRICATION MAY, OF NECESSITY, BECOME THE RESPONSIBILITY OF THE MUSEUM MEMBERSHIP ORGANIZATION AND INDIVIDUAL AND CORPORATE DONORS OR CONTRIBUTORS. IN THIS AREA IT IS POSSIBLE THAT SPECIFIC GRANTS CAN BE OBTAINED FROM CHARITABLE TRUSTS OR FOUNDATIONS WITH

SPECIFIC INTERESTS. SURELY INDUSTRY, WHICH HAS CONTRIBUTED HEAVILY TO EXHIBITS IN OTHER MUSEUMS; CAN BE EXPECTED TO PLAY A SUBSTANTIAL ROLE, PARTICULARLY IN THE AREAS OF PHYSICAL SCIENCES AND INDUSTRY.

A CASH REQUIREMENTS CHART HAS BEEN DEVELOPED ON THE BASIS OF BUDGET PROJECTIONS AND IS APPENDED AS EXHIBIT IV. THROUGHOUT THIS REPORT WE HAVE DISCUSSED A 10-YEAR IMPROVEMENT PROGRAM. IN TRUTH WE ARE TALKING ABOUT A \$24,000,000 IMPROVEMENT PROGRAM WHICH CAN BE UNDERTAKEN AS RAPIDLY AS FUNDS BECOME AVAILABLE OR IN A CALENDAR PERIOD OF ABOUT 10 YEARS. IN OTHER WORDS, A 10-YEAR IMPROVEMENT PROGRAM IS REALISTIC ONLY IF FUNDS BECOME AVAILABLE. IF FUNDS BECOME AVAILABLE MORE SLOWLY AND COMMITMENT HAS BEEN MADE TO THE TOTAL PROGRAM, THE ULTIMATE OUTCOME MAY BE MUCH THE SAME, THOUGH DELAYED. IF IT APPEARS GOMPLETELY UNREALISTIC TO OBTAIN THE NEEDED FUNDS, THE SCOPE OF THE PROGRAM OUTLINE SHOULD BE CURTATLED. ANY CURTAILMENT, HOWEVER, WOULD FALL SHORT OF MEETING THE NEEDS OF THE CITY.

B. Public Relations, Public Education, Public Information

IN THE STUDY CONDUCTED BY LAWRENCE-LEITER & COMPANY COMPLETED IN DECEMBER, 1967, CONSIDERABLE DISCUSSION REVOLVED ABOUT THE PRESENT IMAGE OF THE KANSAS CITY MUSEUM OF HISTORY AND SCIENCE. DURING THE YEAR SINCE THAT REPORT WAS PREPARED, THE MUSEUM HAS MADE REAL PROGRESS IN IMPROVING ITS IMAGE. FRONTIERS IS NOW REGULARLY PUBLISHED, AND THE MUSEUM HAS RECEIVED EXTENSIVE FAVORABLE PRESS. SHORT-RANGE PROGRAMS ARE BÉING PURSUED THAT WILL GIVE THE MUSEUM EVEN FURTHER EXPOSURE. AND SPECIAL EXHIBITS ARE BEING PLACED IN DIFFERENT AREAS OF THE COMMUNITY. An effective Public Relations Committee has been formed made up entirely OF PEOPLE EXPERIENCED IN THE FIELD. THE CONSULTANT'S INITIAL REPORT IN-DICATED THE NEED TO ASSIGN "NUMBER ONE PRIORITY" TO THIS PROGRAM, AND THE BOARD OF GOVERNORS AUTHORIZED THE ASSIGNMENT OF FIRST PRIORITY TO PUBLIC RELATIONS, PUBLIC INFORMATION, AND PUBLIC EDUCATION. ULTIMATELY THE SUCCESS OF THE LONG-RANGE MUSEUM PROGRAM WILL DEPEND ON THE SUCCESS OF THE PUBLIC RELATIONS PROGRAM IN ESTABLISHING A PROPER IMAGE OF THE MUSEUM IN THE COMMUNITY.

X. IMPLEMENTATION

THIS STUDY HAS BEEN DIRECTED TO DETERMINING:

WHAT KIND OF MUSEUM DOES THE CITY NEED?
WHERE SHOULD IT BE?
WHEN CAN IT BE STARTED AND COMPLETED?
HOW MUCH WILL IT COST?
WHAT WILL IT DO FOR THE COMMUNITY EDUCATIONALLY?
WHAT WILL IT DO FOR THE COMMUNITY FINANCIALLY?

THIS REPORT ATTEMPTS TO ANSWER THESE QUESTIONS. WITH THE EXCEPTION OF THE QUESTION, "HOW WILL WE PAY FOR IT?", THE CONSULTANT IS CONFIDENT IT IS A REALISTIC PROJECTION. ONE OTHER QUESTION REMAINS, WHICH IS, "WHAT DO WE DO NEXT?"

A. DEVELOPMENT OF A FUNDING PLAN

IDENTIFICATION OF SOURCES OF FUNDS TO MEET ONE-TIME AND RECURRING FINANCIAL NEEDS SHOULD BE COMMENCED AT ONCE. THIS SHOULD INVOLVE INVESTIGATION OF ALL POSSIBLE SOURCES OF FUNDS, THE AMOUNTS THAT MIGHT BE OBTAINED FROM EACH, AND DETERMINATION OF THE METHOD BY WHICH SUCH FUNDS MIGHT BE OBTAINED. FOR EXAMPLE, THE MUSEUM DIRECTOR IS CURRENTLY WORKING WITH THE CITY TO DETERMINE WHAT KIND OF ONE-TIME SUPPORT MAY BE DERIVED FROM A CITY BOND ISSUE. AT THE SAME TIME, CONTINUATION OF THE MUSEUM TAX MUST BE ASSURED, AND A POSSIBLE INCREASE SHOULD BE INVESTIGATED. SOURCES OF FEDERAL FUNDS SHOULD BE EXPLORED. PLANS SHOULD BE DEVELOPED FOR INCREASING MUSEUM ASSOCIATION MEMBERSHIP AND DEVELOPING MEMBER GROUPS IN ALL PARTS OF THE COMMUNITY. INVESTIGATION OF THE NEEDS AND WISHES OF ALL SCHOOL DISTRICTS IN THE KANSAS CITY MARKET AREA SHOULD BE DETERMINED ALONG WITH WHAT FUNDS EACH MIGHT CONTRIBUTE TOWARD MUSEUM SUPPORT OF THE SCHOOL'S PROGRAMS. ALL AVENUES SHOULD BE PURSUED AND A REALISTIC FUNDING PLAN DEVELOPED.

B. SITE

THE NECESSARY SITE SHOULD BE OBTAINED. THE RECOMMENDATIONS IN THIS REPORT ARE BASED ON THE "POSSIBLE AVAILABILITY" OF A PENN VALLEY PARK LOCATION. THIS SHOULD BE PURSUED WITH THE PARK DEPARTMENT TO OBTAIN A FIRM COMMITMENT, AND IF THIS CANNOT BE DONE, AN ALTERNATE SITE SHOULD BE INVESTIGATED AND OBTAINED.

C. ARCHITECTURAL CONCEPT

Assuming site availability, Museum Design Associates should be asked to develop an architectural concept suitable for the Kansas City Museum. If an underground location is approved by the Park Department, it is recommended that the architects be instructed to work with those already interested in the underground site, or with others equally Qualified.

D. MASTER EXHIBIT PLAN

THE MUSEUM DIRECTOR AND HIS STAFF SHOULD DEVELOP A MASTER EXHIBIT PLAN SHOWING THE LOCATION OF VARIOUS CURATORIAL DEPARTMENTS, AND OF THE SPECIFIC EXHIBITS WITHIN EACH DEPARTMENT. THE DEVELOPMENT OF THIS PLAN IS DISCUSSED IN DETAIL ELSEWHERE IN THE REPORT.

E. FINAL COMMITMENT

AT SOME POINT THE BOARD OF GOVERNORS MUST MAKE A FINAL COMMITMENT TO THE OUTLINED PROGRAM. ANY COMMITMENT INVOLVES A DEGREE OF RISK AND UNCERTAINTY. THE STUDIES COMPLETED IN THE PAST AND PLANNED FOR THE IMMEDIATE FUTURE ARE DESIGNED TO REDUCE THE DEGREE OF UNCERTAINTY. AT THE TIME THE BOARD OF GOVERNORS IS PRESENTED WITH A FUNDING PLAN, A SITE COMMITMENT, AN ARCHITECTURAL CONCEPT, A MASTER EXHIBIT PLAN, AND A REVISED BUDGET PROJECTION, THEY SHOULD BE ASKED TO MAKE A FINAL COMMITMENT TO THE TOTAL MUSEUM CONCEPT AND THE 10-YEAR IMPROVEMENT PROGRAM. THIS IS THE "POINT OF NO RETURN" FROM WHICH THE PROGRAM SHOULD PROCEED AS PLANNED WITH NO SUBSEQUENT DOUBTS AS TO THE PROPRIETY OF THE PLANS ADOPTED.

IMMEDIATELY AFTER FINAL COMMITMENT BY THE BOARD, THE MUSEUM DIRECTOR

SHOULD PROCEED WITH THE FUNDING PROGRAM, DEVELOPMENT OF WORKING DRAWINGS, AND STAFF RECRUITING. HAVING DONE THESE THINGS, THERE SHOULD BE NO CONSIDERATION OF TURNING BACK, OR MAJOR ALTERATIONS IN PLANS.

* * * *

LAWRENCE-LEITER & COMPANY WAS PLEASED TO HAVE BEEN SELECTED AGAIN TO WORK WITH THE KANSAS CITY MUSEUM OF HISTORY AND SCIENCE ON A CHALLENGING AND WORTHWHILE ASSIGNMENT. WE APPRECIATE THE CONFIDENCE SHOWN IN OUR FIRM, AND THE EXCELLENT COOPERATION OF MR. JOHNSON AND ALL OF HIS PEOPLE IN THIS JOINT ENDEAVOR. WE TRUST THAT THIS REPORT WILL PROVIDE A BASIS FOR DEVELOPING THE KIND OF FACILITY OUR CITY NEEDS.

ŘESPECTFULLY SUBMITTED,

LAWRENCE-LEITER & COMPANY

By John Leiter

EXHIBIT I DEPARTMENTAL SPACE REQUIREMENTS

RECOMMENDED ADMINISTRATIVE SUPPORT SPACE

AREA	PROPOSED Site	EXHIBIT MINIMUM	SPACE OPTIMUM	SUPPORT _SPACE_
SPECIAL EXHIBIT HALL (SPACE) SPECIAL EXHIBIT HALL (NAT'L SCI.) SPECIAL EXHIBIT HALL (PHYS.SCI.) SPECIAL EXHIBIT HALL (SOC. SCI.) GENERAL ÖFFIGE AREA AUDITORIUM CLASSROOMS (SPACE) CLASSROOMS (NATURAL SCIENCE) CLASSROOMS (PHYSICAL SCIENCE) CLASSROOMS (SOCIAL SCIENCE) CLASSROOMS (SOCIAL SCIENCE) EDUCATORS' OFFICES EDUCATORS' OFFICES (NATURAL SCI.) EDUCATORS' OFFICES (SOCIAL SCI.) LIBRARY (MAIN) LOBBY & SALES DESK (SPACE) LOBBY & SALES DESK (NAT'L. SCI.) LOBBY & SALES DESK (SOCIAL SCI.) LOBBY & SALES DESK (SOCIAL SCI.) DEVELOPMENT OFFICE FOOD SERVICE AREA T.V., AUDIO AND PHOTOGRAPHY DOCK AREA PAINT SHOP CARPENTER SHOP ART STUDIO EQUIPMENT & MACHINERY (HEATING, ETC.) PRINTERS	SPACE SCIENCE CENTER MAIN MUSEUM MAIN MUSEUM LONG HOME MAIN MUSEUM MAIN MUSEUM SPACE SCIENCE CENTER MAIN MUSEUM LONG HÖME SPACE SCIENCE CENTER MAIN MUSEUM MAIN MUSEUM MAIN MUSEUM MAIN MUSEUM SPACE SCIENCE CENTER MAIN MUSEUM	1,000 1,000 1,000 500	2,000 2,000 2,000 1,000	7,000 6,000 1,200 1,200 1,200 1,200 1,200 500 500 500 500 1,250
	्राच्या प्रशास्त्र चाच्या च	3,500	7,000	65,200

RECOMMENDED DEPARTMENTAL SPACE UTILIZATION

	AREA	PROPOSED SITE	E xhibi <u>Minimum</u>	T SPACE OPTIMUM	SUPPORT SPAGE
SP/	ACE SCIENCES				
Α.	Astronomy	SPACE SCIENCE CENTER	7,000	15,000	7,500
₿.	SPACE SCIENCES	SPAGE SÖLENGE ČENTER	8,000	20,000	10,000
Ċ.	Planétar i um:	SPACE SCIENCE CENTER	3,000	8,000	4,000
Ď.	ÓBSÉRVATÓRY	SPACE SCIENCE CENTER	2,000	7,000	3,500
			20,000	50,000	25,000
PH	SICAL_SCIENCES				
A.	MATHEMATICS 1. MENSURATION 2. COMPUTERS 3. HOROLOGY	Main Museum	1,500 1,500 1,500	3,000 4,000 3,000	1,500 2,000 1,500
в.	Physics	Main Museum	2,000	4,000	2,000
C	CHEMISTRY	Main Museum	1,500	3,000	1,500
D.	EARTH SCIENCES 1. GEOLOGY, MINEROLOGY AND EARTH HISTORY 2. GEO-PHYSICS 3. OCEANOGRAPHY 4. CONSERVATION-INORGANIC (RESOURCES) 5. PETROLOGY	Máin Múseum	1,500 1,000 2,000 1,500 1,500	3,000 2,500 10,000 3,000 3,000	1,500 1,250 5,000 1,500
Ε.	GEOGRAPHY 1. CARTOGRAPHY 2. METEOROLOGY	SPACE SCIENCE CENTER	1,000 1,000	3,000	1,500 2,000
		·	17.500	45.500	22.750

	<u>Arēa</u>	PROPOSED SITE	Exhibi Minimum	T SPACE OPTIMUM	SUPPORT SPACE
CAP	ITALISTIC ECONOMIC SYSTEM				
Α.	ECONOMIC HISTORY	MAIN MÚSEUM	1,500	3,000	1,500
В	MONEY & FINANCE	MAIN MUSEUM	1,500	3,000	1,500
С.	AGRI-BUSINESS	MAIN MUSEUM	1,500	3,000	1,500
Ď.	TRANSPORTATION & DISTRIBUTION	Main Museum	1,500	3,000	1,500
E.	ÚTILITIËS & TRANSMISSION	MAIN MUSEUM	1,500	3,000	1,500
F.	MINING & METALURGY	MAIN MUSEUM	1,500	3,000	1,,500
G.	WOOD AND WOOD PRODUCTS	MAIN MUSEUM	1,500	3,000	1,500
Н.	TEXTILES & THE NEEDLE TRADES	Math Museum	1,500	3,000	1,500
١.	DESIGN & CONSTRUCTION	MAIN MUSEUM	1,500	3,000	1,500
J.	GRAPHIC ARTS	MAIN MUSEUM	1,000	3,000	1,500
κ.	INDUSTRIAL DESIGN	Main Museum	8 00	1,600	800
L.	ARCHITECTURE	Main Museum	700	1,400	700
			16,000	33,000	16,500

AREA	PROPOSED SITE	Exhibi Minimum	T SPACE OPTIMUM	SUPPORT SPAGE
NATURAL SCIENCES				
A. BIOLOGY (INTRODUCTION) Main Muşeum	1,000	1,500	750
1. ORGANIC EVOLUTION 2. PALEONTOLOGY-BOTAN 3. BOTANY 4. VERTEBRATE-PALEO. 5. ZOOLOGY 6. ICTHYOLOGY 7. HERPETOLOGY 8. ORNITHOLOGY 9. MAMMALOGY 10. FOSSIL INVERTEBRAT 11. MICROBIOLOGY 12. MARINE BIOLOGY 13. CONSERVATION-ORGAN	EŜ	800 1,500 2,000 2,000 3,000 1,500 1,000 1,000 1,000 1,000 1,000 1,000	1,200 3,000 4,000 6,000 7,500 1,500 2,000 2,000 2,500 2,500 2,500 2,500 3,000	600 1,500 2,000 3,000 3,700 2,500 1,000 1,000 1,250 1,250 1,250 1,250 1,500
		27,800	67,700	33,800

]		AREA	PROPOSED SITE	Ехнів <u>Мінімим</u>	IT SPACE OPTIMUM	SUPPORT SPAGE
) .	HUM	MAN_SCIENCES				
	- A:	ANTHROPOLOGY 1. ARCHAEOLOGY 2. ENTHNOLOGY	Main Museum	2,500 2,500	6,000 6,000	3,000 3,000
İ	в.	PHILOSOPHY & RELIGION	MAIN MUSEUM	500	2,500	1,250
j	¢.	Period Costumes	Main Müseum	2,500	5,000	2,500
	Ď.	COMMUNICATIONS	MAIN MUSEUM	2,000	5,000	2,500
Î	Ε.	"Health" Sciences 1. Comparative Anatomy 2. Medicine, General 3. Physiology 4. Genetics	Main Museum	3,000 3,000 2,000 2,000	6,000 6,000 4,000 4,000	3,000 3,000 2,000 2,000
,	F,	Psychology	MAIN MUSEUM	1,500	3,000	1,500
	G.	Sociology	MAIN MUSEUM	1,500	3,000	1,500
	Ħ.	RECREATION 1. Music	Main Museum	2,000 500	5,000 1,000	2,500 500
) .	HIS	STORY		25,500	56,500	28,250
	Α.	WORLD HISTORY	LONG HOME	1,000	5,000	<u>2,500</u>
	В.	AMERICAN HISTORY	Long Home	1,000	5,000	2,500
ì	c.	POLITICAL HISTORY	LONG HOME	1,000	2,500	1,250
	D.	MILITARY	LIBERTY MEMORIAL	1,000	8,000	4,000
Ì	Ē.	LOCAL HISTORY	Long Home	1,000	6,000	3,000
	F.	HISTORICAL VILLAGE	SITE UNDETERMINED	2,000	10,000	5,000
				7,000	<u>3</u> 6 ,5 00	18,250
	Вот	JARIUM TANICAL GARDENS (OUTDOOR) MATRON	SITE UNDETERMINED SITE UNDETERMINED SITE UNDETERMINED	20,000 20,000 20,000	22,500 22,500 22,500	10,000 10,000 10,000
				60,000	67,500	30,000

YEAR I YEAR 2 YEAR 3 **AREA** SPACE SCIENCES PLANETARIUM SPACE SCIENCES OBSERVATORIES ASTRONOMY PHYSICAL SCIENCES PHYSICS -- CHEMISTRY MATHEMATICS EARTH SCIENCES OCEANOGRAPHY MINEROLOGY -- GEOPHYSICS CONSERVATION RESOURCES -- PETROLOGY CARTOGRAPHY -- METEROLOGY CAPITALISTIC ECONOMIC SYSTEM ECONOMIC HISTORY -- MONEY, FINANCE AGRI-BUSINESS-TRANSPORTATION UTILITIES -- MINING, METALLURGY WOOD -- TEXTILES DESIGN--GRAPHIC ARTS INDUSTRIAL DESIGN--ARCHITECTURE HISTORY WORLD AMERICAN LOCAL MILITARY POLITICAL HISTORICAL VILLAGE NATURAL SCIENCES INTRO. BIOLOGY -- ORGANIC EVOLUTION -- PALEO. BOTANY BOTANY **ICTHY**OLOGY VERTEBRATE -- PALEONTOLOGY ZOOLOGY HERPETOLOGY -- ORNITHOLOGY MAMMALOGY FOSSIL INVERTEBRATES MICROBIOLOGY -- MARINE BIOLOGY CONCHOLOGY -- ENTOMOLOGY ORGANIC CONSERVATION HUMAN SCIENCES ARCHAEOLOGY ENTHNOLOGY COMMUNICATIONS PHILOSOPHY-RELIGION--COSTUMES COMPARATIVE ANATOMY PHYSIOLOGY MEDICINE GENETICS PSYCHOLOGY -- SOCIOLOGY RECREATION -- MUSIC **LEGEND** PLANNING

CONSTRUCTION

EXHIBIT FABRICATION

YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YÉAŘ 10	YEAR II	
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KANSAS CITY MUSEUM - MANPOWER AND PAYROLL PROJECTIONS

PERSONNEL	1970	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11
EXECUTIVE DIVISION EXECUTIVE DIRECTOR ASSISTANT DIRECTOR SECRETARY PROJECT DIRECTOR	22,000 15,000 9,000 9,600	22,000 15,000 9,000	22,000 15,000 9,000	22,000 15,000 9,000	22,000 15,000 9,000	22,000 15,000 9,000	22,000 15,000 9,000	22,000 15,000 9,000	22,000 15,000 9,000	22,000 15,000 9,000	22,000 15,000 9,000	22,000 15,000 9,000 15,000
Administration Division Office Manager Accountant Accounting Clerk Purchasing Agent Personnel Manager Membership Coordinator Volunteer Coordinator Public Relations Director Publications Editor	7,500 5,000 9,500	7,500 5,000 7,500 7,500 9,500 7,500 9,000	8,000 7,500 5,000 7,500 7,500 9,500 7,500 9,000	8,000 7,500 5,000 7,500 7,500 9,500 7,500 9,000 8,000	8,000 7,500 5,000 7,500 7,500 9,500 7,500 9,000 8,000	8,000 7,500 5,000 7,500 7,500 9,500 7,500 9,000 8,000	8,000 7,500. 5,000 7,500 7,500 9,500 7,500 9,000 8,000	8,000 7,500 5,000 7,500 7,500 9,500 7,500 9,000 8,000	8,000 7,500 5,000 7,500 7,500 9,500 7,500 9,000 8,000	8,000 7,500 5,000 7,500 7,500 9,500 7,500 9,000 8,000	8,000 7,500 5,000 7,500 7,500 9,500 7,500 9,000 8,000	8,000 7,500 5,000 7,500 7,500 9,500 7,500 9,000 8,000
Museum News Publicist Museum Photographer Membership Secretary Administrative Assistant Clerk Steno (4) Clerk Typist (2) Student Aides (2) Printer Food Service (2)	4,500 4,500(1)	5,000 4,500 9,000(2) 4,000(1) 2,000(1) 8,000	5,000 4,500 9,000(2) 4,000(1) 2,000(1) 8,000	5,000 4,500 13,500(3) 4,000(1) 4,000(2) 8,000 4,000(1)	5,000 4,500 13,500(3) 4,000(1) 4,000(2) 8,000 4,000(1)	5,000 4,500 13,500(3) 4,000(1) 4,000(2) 8,000 8,000(2)	5,000 4,500 13,500(3) 4,000(1) 4,000(2) 8,000 8,000(2)	5,000 4,500 13,500(3) 4,000(1) 4,000(2) 8,000 8,000(2)	5,000 4,500 13,500(3) 4,000(1) 4,000(2) 8,000 8,000(2)	5,000 4,500 5,000 18,000(4) 8,000(2) 4,000(2) 8,000 8,000(2)	5,000 4,500 5,000 18,000(4) 8,000(2) 4,000(2) 8,000 8,000(2)	5,000 4,500 5,000 18,000(4) 8,000(2) 4,000(2) 8,000 8,000(2)
EDUCATION DIVISION MUSEUM EDUCATOR EDUCATORS (5) SECRETARY CLERK STENO STUDENT AIDE TAXIDERMISTS (3)	18,000(3) 5,000	10,000 30,000(5) 5,000 6,000(1)	10,000 30,000(5) 5,000 6,000(1)	10,000 30,000(5) 5,000 6,000(1)	10,000 30,000(5) 5,000 6,000(1)	10,000 30,000(5) 5,000 6,000(1)	10,000 30,000(5) 5,000 6,000(1)	10,000 30,000(5) 5,000 6,000(1)	10,000 30,000(5) 5,000	10,000 30,000(5) 5,000 18,000(3)	10,000 30,000(5) 5,000 4,500 2,000 18,000(3)	10,000 30,000(5) 5,000 4,500 2,000 18,000(3)

KANSAS CITY MUSEUM _ MANPOWER AND PAYROLL PROJECTIONS

PERSONNEL	1970	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11
CPERATIONS DIVISION CHIEF GUARD MUSEUM GUARD (31) CUSTODIAL SUPERVISOR CUSTODIANS (21) CHIEF-CONSTR. & MAIN. BLDG. MAIN. SUPR. MAIN. MECH. (4) HEAT & VENT MECH. PAINTER SALES DESK MGR. SALES DESK CLERK (2) STUDENT AIDES (2) CHIEF TECH. (YR. 11) CARPENTER (YR. 11)	4,500 24,000(6) 10,000(3) 5,500 5,500	4,500 24,000(6) 10,000(3) 5,500 5,500 7,000(1) 4,500 4,000(2)	4,500 32,000(8) 4,000 10,000(3) 5,500 5,500 7,000(1) 4,500 4,000(2)	4,500 40,000(10) 4,000 17,000(5) 5,500 7,000(1) 7,000 4,500 4,000(2)	4,500 52,000(13) 4,000 24,000(7) 5,500 5,500 14,000(2) 7,000 7,000(1) 4,500 4,000(2)	4,500 60,000(15) 4,000 31,000(9) 5,500 5,500 14,000(2) 7,000 7,000(1) 4,500 4,000(2)	4,500 72,000(18) 4,000 41,000(12) 5,500 14,000(2) 7,000 7,000(1) 4,500 4,000(1) 4,000(2)	4,500 80,000(20) 4,000 48,000(14) 5,500 5,500 14,000(2) 7,000 7,000(1) 4,500 .4,000(1) 4,000(2)	4,500 92,000(23) 4,000 55,000(16) 5,500 21,000(3) 7,000 7,000(1) 4,500 4,000(1) 4,000(2)	4,000	4,500 116,000(29) 4,000 69,000(20) 5,500 5,500 21,000(3) 7,000 7,000(1) 4,500 8,000(2) 4,000(2)	4,500 124,000(31) 4,000 72,506(21) 5,500 5,500 28,000(4) 7,000 7,000(1) 4,500 8,000(2) 4,000(2) 8,500(1) 8,500(1)
CURATORIAL DIVISION SENIOR CURATOR CURATOR OF COSTUMES CURATORS (20) REGISTRAR (3) LIBRARIAN STUDENT AIDES (2) ARTISTS (YR. 11)	8,000 24,000(3) 4,500(1) 6,000	8,000 40,000(5) 9,000(2) 6,000 4,000(2)	8,000 56,000(7) 9,000(2) 6,000 4,000(2)	8,000 72,000(9) 9,000(2) 6,000 4,000(2)	10,000 8,000 88,000(11) 9,000(2) 6,000 4,000(2)	10,000 8,000 104,000(13) 9,000(2) 6,000 4,000(2)	10,000 8,000 120,000(15) 9,000(2) 6,000 4,000(2)	10,000 8,000 136,000(17) 13,500(3) 6,000 4,000(2)	10,000 8,000 144,000(18) 13,500(3) 6,000 4,000(2)	10,000 8,000 160,000(20) 13,500(3) 6,000 4,000(2)	10,000 8,000 160,000(20) 13,500(3) 6,000 4,000(2)	10,000 8,000 160,000(20) 13,500(3) 6,000 4,000(2)
PROJECTS_PLANNING_ CONSTRUCTION MUSEUM PLANNER EXHIBIT PLAN ASST. ARTISTS_PREP. (32) CARPENTERS (16) PAINTER (3) UNIVERSAL MECH. (3) GENERAL LABORERS (3) CHIEF TECHNICIAN	5,000 · 8,500	12,000 8,000 224,000 128,000 24,000 24,000 16,000 8,500	12,000 8,000 224,000 128,000 24,000 24,000 16,000 8,500	12,000 8,000 224,000 128,000 24,000 24,000 16,000 8,500	12,000 8,000 224,000 128,000 24,000 24,000 16,000 8,500	12,000 8,000 224,000 128,000 24,000 24,000 16,000 8,500	12,000 8,000 224,000 128,000 24,000 24,000 16,000 8,500	12,000 8,000 224,000 128,000 24,000 24,000 16,000 8,500	12,000 8,000 224,000 128,000 24,000 24,000 16,000 8,500	12,000 8,000 224,000 128,000 24,000 24,000 16,000 8,500	12,000 8,000 224,000 128,000 24,000 24,000 16,000 8,500	
Totals_Payroll (000) Personnel	220 34	760 112	796 118	852 129	911 139	946 146	988 155	1,024 162	1,070 171	1,128 183	1,154 190	773 139

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EXHIBIT V IDENTIFICATION OF MUSEUM PROGRAM STEPS

DAY-TO-DAY OPERATIONS

- I. CURATORIAL PROGRAM
 - A. CURRENT PROGRAMS TO OPERATIONS.
- II. PUBLICATION PROGRAM TECHNICAL
 - A. CURRENT PROGRAMS TO OPERATIONS.
- III. EXPEDITION PROGRAM
 - A. CURRENT PROGRAMS TO OPERATIONS.
- IV. VISITOR PROGRAM
 - A. CURRENT PROGRAMS TO OPERATIONS.
- V. EDUCATION PROGRAM
 - A. CURRENT PROGRAMS TO OPERATIONS.
- VI. SCIENCE FAIR
 - A. CURRENT PROGRAMS TO OPERATIONS.
- VII. LECTURE PROGRAM
 - A. CURRENT PROGRAMS TO OPERATIONS.

SHORT-RANGE PROGRAM

1. ACCESSION, CATALOGUE AND INVENTORY

- A. CURRENT PROGRAM EXPANDED.
- B. AGGESSION PROGRAM TO OPERATIONS.

II. ENLARGE SALES DESK

- A. GENERAL PLANNING NODE.
- B. NEW SALES DESK TO OPERATIONS.

III. MOBILE PLANETARIUM

- A. GENERAL PLANNING NODE.
- B. PLANETARIUM DESIGNED.
- C. PLANETARIUM COMPONENT PURCHASED.
- D. PLANETARIUM ASSEMBLED.
- E. SERVICE PUBLICIZED.
- F. SCHEDULING PERFORMED.
- G. MOBILE PLANETARIUM TO OPERATIONS.

IV. ADULT EDUCATION

- A. CURRENT PROGRAM EXPANDED.
- B. GENERAL PLANNING NODE.
 - 1. MARKET TEST--DETERMINE INTEREST LEVEL.
 - 2. SENTOR CITIZEN PLAN.
- C. SUBJECTS SELECTED.
- D. LEGTURES PREPARED.
- E. SERVICE PUBLICIZED.
- F. ADULT EDUCATION TO OPERATIONS.

V. LIBERTY MEMORIAL

- A. GENERAL PLANNING NODE.
- B. CONTRACT NEGOTIATED WITH CITY.
- C. ARCHITECTS SCREENED.
- D. ARCHITECTS SELECTED.
- E. GENERAL DEVELOP FACILITY NODE.
- F. GENERAL DEPARTMENT INSTALLATION NODE.
- G. SERVICE PUBLICIZED.
- H. LIBERTY MEMORIAL RESPONSIBILITY TO OPERATIONS.

VI. HISTORY HALL DIORAMAS

- A. GENERAL PLANNING NODE.
- B. SUBJECTS SELECTED.
- C. ARTIFACTS SELECTED.
- D. EXHIBIT ASSEMBLED.
- E. LOCATION SELECTED.
- F. SCHEDULE DETERMINED.
- G. EXHIBITS INSTALLED.
- H. SERVICE PUBLICIZED.
- I. HISTORY HALL DIORAMAS TO OPERATIONS.

VII. PLAN RESOURCE CENTER

- A. GENERAL PLANNING NODE.
- B. SUBJECTS AND CIRRICULUM SELECTED.
- C. SPECIALIZATION AREA CHOSEN.
- D. ARTIFACTS SELECTED.
- E. LECTURE PREPARED.
- F. EXHIBIT ASSEMBLED.
- G. CATALOGUE ASSEMBLED.
- H. CATALOGUE PRINTED.
- 1. SERVICE PUBLICIZED.
- J. RESOURCE CENTER TO OPERATIONS.

VIII. TEMPORARY EXHIBITS

- A. ARRANGE FOR LOAN OF EXHIBITS.
- B. DETERMINE SPACE COSTS, \$.
- C. DETERMINE AVAILABILITY.
- D. DETERMINE MANPOWER.
- E. PLAN SECURITY ARRANGEMENTS.
- F. ARRANGE SPACE.
- G. FABRICATE OR RECEIVE EXHIBITS
- H. SERVICE PUBLICIZED.
- I. PLANS FOR RETURN TO SOURCE MUSEUM.
- J. PROJECT COMPLETE.

IX. COMMERCIAL, EDUCATIONAL T.V., RADIO PROGRAM

- A. GENERAL PLANNING NODE.
- B. COMMITMENT FROM STATIONS.
- C. SCHOOL BOARD APPROVAL.
- D. CONTRACTS NEGOTIATED.
- E. DONATIONS OF TIME FROM COMMERCIAL STATION.
- F. SUBJECTS SELECTED.
- G. LECTURES PREPARED.
- H. Tours PREPARED.
- I. TAPE PRODUCED.
- J. SERVICE PUBLICIZED.
- K. ON-GOING T.V., RADIO TO OPERATIONS.

X. TRAVELING EXHIBIT PROGRAM

- A. GENERAL PLANNING NODE.
- B. OTHER MUSEUM SOLICITED.
- C. ARTIFACTS SELECTED.
- D. EXHIBIT ASSEMBLED.
- E. LOCATIONS SELECTED.
- F. Schedule determined.
- G. EXHIBITS INSTALLED.
- H. SERVICE PUBLICIZED.
- 1. EXHIBITS ROTATED.
- J. EXHIBITS TO STORAGE.
- K. EXHIBITS RETURNED TO MUSEUMS.
- L. EXHIBITS TO PERMANENT MUSEUM.
- M. EXHIBITS TO OPERATIONS.

PUBLIC RELATIONS AND DEVELOPMENT PROGRAM

I. DEVELOPMENT COMMITTEE

A. MEMBERSHIP DRIVE

- 1. GENERAL PLANNING NODE.
 - A. RENEWAL CAMPAIGN.
 - B. NEW MEMBER CAMPAIGN.
- DETERMINE FUNDS AVAILABLE, ALL SOURCES.

B. LOBBYING AND TAX SUPPORT

- 1. DETERMINE AVAILABILITY.
- 2. GENERAL PUBLIC RELATIONS NODE.
- 3. DETERMINE FUNDS AVAILABLE, ALL SOURCES.

C. TRUST, ENDOWMENTS, FOUNDATIONS

- 1. IDENTIFY ALL ELEMENTS.
- 2. INVOLVEMENT OF GIVIC LEADERS.

D. PUBLIC BOND CAMPAIGN

- 1. CITY APPROVAL.
- 2. INVOLVEMENT OF GIVIC LEADERS.
- 3. GENERAL PUBLIC RELATIONS NODE.
- 4. DETERMINE FUNDS AVAILABLE, ALL SOURCES.

E. FEDERAL SUPPORT

- 1. DETERMINE AVAILABILITY.
- 2. GRANT REQUESTS PREPARED.
- 3. GENERAL PUBLIC RELATIONS NODE.
- 4. DETERMINE FUNDS AVAILABLE, ALL SOURCES.

F. PRIVATE, BUSINESS SOLICITATIONS

- 1. OVERVIEW DEVELOPED.
- 2. FUND-RAISING ORGANIZATION FORMED.
- INVOLVEMENT OF CIVIC LEADERS.
- 4. PLAN FOR INDUSTRIAL CORPORATION INTERESTS.
- 5. PLAN INDUSTRIAL EXHIBITS.
- GENERAL PUBLIC RELATIONS NODE.
- DETERMINE FUNDS AVAILABLE, ALL SOURCES.

G. EDUCATIONAL SUPPORT

- 1. GENERAL PLANNING NODE.
- 2. PARTICIPATING SCHOOL DISTRICTS IDENTIFIED.
- 3. DEGREE OF FINANCIAL SUPPORT ESTABLISHED.
- 4. PLANNED WITH EDUCATORS.
- 5. PROGRAMS PREPARED.
 6. PROGRAMS PRICED.
- PROGRAMS PUBLICIZED.
- 8. DETERMINE FUNDS AVAILABLE, ALL SOURCES.

H. DETERMINE FUNDS AVAILABLE, ALL SOURCES

- 1. OPERATING BUDGET ALLOCATED.
- 2. SHORT-RANGE BUDGET ALLOGATED.
- 3. PUBLIC RELATIONS AND DEVELOPMENT BUDGET ALLOCATED.
- LONG-RANGE BUDGET ALLOCATED.
- 5. BUDGETARY CONTROLS ESTABLISHED.

II. PUBLIC RELATIONS COMMITTEE

A. NEWS RELEASES

- 1. GENERAL PUBLIC RELATIONS NODE.
- 2. CONTINUING PUBLIC RELATIONS PROGRAM.
- 3. PUBLIC RELATIONS PROGRAM TO OPERATIONS.

B. PERIODICAL PUBLICATION

- 1. GENERAL PLANNING NODE.
- 2. DETERMINATION OF POLICY.
- 3. SELECTION OF EDITOR.
- 4. ARRANGEMENT FOR PUBLISHING.
- CONTINUING PUBLIC RELATIONS PROGRAM.
- PUBLIC RELATIONS PROGRAM TO OPERATIONS.

C. MUSEUM SPEAKERS BUREAU

- 1. GENERAL PLANNING NODE.
- 2. SUBJECTS SELECTED.
- 3. LEGTURES PREPARED. 4. MATERIALS AND VISUAL AIDS PREPARED.
- MATERIALS PRINTED.
- SERVICE PUBLICIZED.
- 7. GROUPS SELECTED. 8. CONTINUING PUBLIC CONTINUING PUBLIC RELATIONS PROGRAM.
- PUBLIC RELATIONS PROGRAM TO OPERATIONS.

LONG-RANGE PROGRAM

1. DETERMINE LOCATION CRITERIA

- A. DETERMINE ACCESSIBILITY TO POPULACE.
- B. DETERMINE AREAS OF SPECIALIZATION.
- C. DÉTERMINE SPACE RÉQUIREMENTS FOR EXHIBITS -- IDEAL.
- D. DETERMINE SPAGE REQUIREMENTS FOR SUPPORT -- IDEAL.
- E. DETERMINE COMPLEXITY OF EXHIBITS.
- F. DETERMINE COMPLEXITY AND COSTS OF COLLECTIONS AND EXHIBITS.

II. INVESTIGATE POSSIBLE SITES

- A. UNION STATION
- B. CAVE
- C. OTHER
 - 1. DETERMINE ACQUISITION COST.
 - 2. DETERMINE STAFFING NEEDS -- IDEAL.
 - 3. DETERMINE AREA OF SPECIALIZATION PRIORITY.
 - 4. DETERMINE OPERATING COST BY AREA OF SPECIALIZATION.
 - 5. DETERMINE IDEAL COSTS AND TIMING.
 - 6. DETERMINE MAINTENANCE COSTS OF FACILITY.
- D. MAINTAIN UTILITY OF EXISTING SPACE.

III. SELECT SITE

A. Assume Union Station/or Cave

- 1. NEGOTIATE CONTRACT.
- 2. ESTABLISH PRELIMINARY PLAN.
 - A. TIME ESTIMATED.
 - B. COST ESTIMATED
 - C. MANPOWER ESTIMATED.
 - D. PRELIMINARY ARCHITECT RENDERING.
- 3. ARCHITECT EVALUATION:
- 4. DETERMINE AVAILABLE FUNDS.
- 5. ESTABLISH DETAILED PLAN OF ACTION.
 - A. TIME REQUIRED.
 - B. MANPOWER REQUIRED.
 - C. MANPOWER RECRUITED.
- 6. SCREEN AND SELECT ARCHITECTS.
- Construction planning.
- O. CONSTRUCT AND REMODEL.
- 9. DEVELOP EXHIBIT PLAN.
- 10. PURCHASE MATERIALS.
- 11. COLLECT ARTIFACTS.
- 12. ASSEMBLE EXHIBITS.
- 13. INSTALL EXHIBITS.
- 14. GENERAL PUBLIC RELATIONS NODE.
- 15. MUSEUM AREA OF SPECIALIZATION TO OPERATIONS.

B. OTHER FACILITIES

- 1. NEGOTIATE FOR LAND PURCHASE.
- 2. ESTABLISH PRELIMINARY PLAN.
 - A. TIME ESTIMATED.
 - B. COST ESTIMATED.
 - C. MANPOWER ESTIMATED.
- 3. DETERMINE AVAILABLE FUNDS.
- 4. ESTABLISH DETAILED PLAN OF ACTION.
 - A. TIME REQUIRED.
 - B. MANPOWER REQUIRED.
 - C. MANPOWER RECRUITED.
- 5. Screen and select architects.
- 6. CONSTRUCTION PLANNING.
- 7. DETERMINE HALL PRIORITIES.
- 8. CONSTRUCT HALLS.
- 9. DEVELOP EXHIBIT PLANS.
- 10. PURCHASE ARTIFACTS.
- 11. COLLECT ARTIFACTS.
- 12. ASSEMBLE EXHIBITS.
- 13. INSTALL EXHIBITS.
- 14. GENERAL PUBLIC RELATIONS NODE.
- 15. MUSEUM AREA OF SPECIALIZATION TO OPERATIONS.

IV. DEVELOP MASTER MUSEUM PLAN

A. PLANETARIUM

- 1. GENERAL PLANNING NODE.
- 2. PLANETARIUM DESIGNED.
- 3. PLANEYARTUM COMPONENTS PURCHASED.
- 4. PLANETARIUM ASSEMBLED.
- 5. PLANETARIUM INSTALLED.
- 6. GENERAL DEPARTMENT INSTALLATION IN SPACE SCIENCES CENTER.
- 7. PLANETARIUM TO OPERATIONS.

B. SPACE SCIENCES CENTER

- 1. GENERAL PLANNING NODE.
- 2. NEGOTIATE FOR SITE.
- 3. Screen and select architects.
- 4. CONSTRUCTION PLANNING.
- 5. CONSTRUCT SPACE CENTER.
- 6. DEVELOP EXHIBIT PLANS.
- 7. NEGOTIATE N. A. S. A. CONTRACT.
- 8. GENERAL DEPARTMENT INSTALLATION.
- 9. SPACE SCIENCES GENTER TO OPERATIONS.

C. ACQUARIUM

- 1. GENERAL PLANNING NODE.
- 2. SELECT AND NEGOTIATE FOR SITE.
- 3. GENERAL DEPARTMENT INSTALLATION.
- 4. MUSEUM AREA OR SPECIALIZATION TO OPERATIONS.

D. BOTANICAL GARDENS

- 1. GENERAL PLANNING NODE.
- 2. SELECT AND NEGOTIATE FOR SITE.
- 3. GENERAL DEPARTMENT INSTALLATION.
- 4. MUSEUM AREA OR SPECIALIZATION TO OPERATIONS.

E. CLIMATRON

- 1. GENERAL PLANNING NODE.
- 2. SELECT AND NEGOTIATE FOR SITE.
- 3. GÉNERAL DEPARTMENT INSTALLATION.
- 4. MUSEUM AREA OR SPECIALIZATION TO OPERATIONS.

F. MUSEUM OF HISTORY

- 1. GENERAL PLANNING NODE.
- 2. SELECT AND NEGOTIATE FOR SITE.
- 3. GENERAL DEPARTMENT INSTALLATION.
 4. MUSEUM AREA OR SPECIALIZATION TO OPERATIONS.