



# CITY OF SACRAMENTO

## DEPARTMENT OF ENGINEERING

915 I STREET SACRAMENTO, CALIFORNIA 95814  
CITY HALL ROOM 207 TELEPHONE (916) 449-5281

F/Ref.  
C.C. 1950

R. H. PARKER  
CITY ENGINEER  
J. F. VAROZZA  
ASSISTANT CITY ENGINEER

June 12, 1980

City Council  
Sacramento, California

Honorable Members in Session:

SUBJECT: MEMORIAL AUDITORIUM RENOVATION  
Rehabilitation Program Report

APPROVED  
BY THE CITY COUNCIL

JUN 17 1980

OFFICE OF THE  
CITY CLERK

*Refer to  
Bud/Fin &  
p+ed Comm*

SUMMARY:

The enclosed report prepared by the Consultant, along with the attached supplemental report prepared by Staff, are submitted for information and review. A formal presentation of this material will be made to the Council on June 24, 1980.

BACKGROUND:

In August, 1979, the consultant firm of Angello-Vitiello-Niiya-Ryan, Inc., was selected to investigate, collect, and identify existing data in order to prepare a program report on the Rehabilitation of the Memorial Auditorium. This report, which includes phasing recommendations, has been completed and reviewed with City Staff. City departmental recommendations have been incorporated.

The Consultant's report recommends two alternate Construction Programs, one consisting of a single phase, and the second consisting of three phases which group the work into logically related sequences.

The supplemental staff report outlines a time schedule for accomplishment of the work based on projected available funding options.

FINANCIAL:

Attached Charts No. 1 through 9 are estimated project costs for accomplishing the Memorial Auditorium Renovation in either one single phase or in three phases as recommended by the Consultant.

Although the most economical approach would be to accomplish the work in a single phase, obtaining the total required funding of \$7,014,900 prior to July 1981 seems to be impractical, realizing the scarcity of funding sources.

Therefore, staff has translated the three-phase construction program into two alternate time schedules (attached), based on the following funding options:

Option A: Assume utilization of Transient Occupancy (T.O.) Tax Revenue, as it becomes available, as the sole source of funding.  
Project Time: 7 years  
Project Cost: \$11,474,000.00

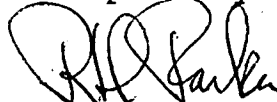
Option B: Assume utilization of T. O. Tax Revenue, supplemented by other funding sources at critical target dates to minimize delays. Other funding sources would be reimbursed by T. O. Tax Revenue after completion of construction.  
Project Time: 4 years  
Project Cost: \$ 9,461,000.00

Because of the shortened project time, Option B would be approximately \$2,000,000.00 less than Option A, as well as permitting earlier reuse of the building and earlier generation of revenue from the facility. The additional three years of revenue gained could exceed \$500,000.00.

RECOMMENDATION:

It is recommended that the enclosed reports be reviewed prior to the Architect's presentation to Council on June 24, 1980.

Respectfully Submitted,

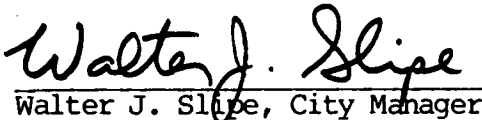


R. H. PARKER  
City Engineer



SAM J. BURNS  
Community Center General Manager

Recommendation Approved:

  
Walter J. Slife, City Manager

RHP:SJB:RDH

Attachments

June 17, 1980  
District No. 1

THE UNITED STATES OF AMERICA  
DEPARTMENT OF JUSTICE  
FEDERAL BUREAU OF INVESTIGATION  
WASHINGTON, D. C. 20535

MEMORANDUM FOR THE DIRECTOR  
SUBJECT: [Illegible]

1. [Illegible]

2. [Illegible]

3. [Illegible]

4. [Illegible]

5. [Illegible]

6. [Illegible]

7. [Illegible]

June 11, 1980  
 Chart No. 1  
 cc 1950

ESTIMATED PROJECT COST  
 MEMORIAL AUDITORIUM RENOVATION  
 SINGLE PHASE CONSTRUCTION

ENGINEERING

Architect's Fee	\$ 567,000
Day Labor (Quality Assurance)	28,000
Contingencies	5,000
Administration	<u>308,300</u>

Sub-Total \$ 908,300

CONSTRUCTION

Construction Contract	\$ 5,592,000
Contingencies (C.O.)	336,000
Art in Public Places (2%)	118,600
Test and Inspection	<u>60,000</u>

Sub-Total \$6,106,600

TOTAL ESTIMATED PHASE I COST \$ 7,014,900\*

\* 1%/mo. escalation to mid-point of construction (February, 1982)

+ +

SOURCE OF FUNDS (PROJECTED)

|                   |                                 |                  |
|-------------------|---------------------------------|------------------|
| 80/81 (June 1981) | Transient Occupancy Tax Revenue | \$1,300 000      |
| 81/82 (June 1982) | " "                             | 1,600 000        |
| 82/83 (June 1983) | " "                             | 1,900,000        |
| 83/84 (June 1984) | " "                             | 2,200,000        |
| 84/85 (June 1985) | " "                             | 2,500,000        |
| 85/86 (June 1986) | " "                             | <u>2,900,000</u> |

TOTAL FUNDS (PROJECTED) \$12,400,000

June 11, 1980  
Chart No. 2  
cc 1950

ESTIMATED PROJECT COST  
MEMORIAL AUDITORIUM RENOVATION  
PHASE I CONSTRUCTION OF 3 PHASES  
( OPTION A )

ENGINEERING

|                               |                |            |
|-------------------------------|----------------|------------|
| Architect's Fee               | \$ 340,000     |            |
| Day Labor (Quality Assurance) | 24,000         |            |
| Contingencies                 | 2,400          |            |
| Administration                | <u>148,600</u> |            |
| Sub-Total                     |                | \$ 515,000 |

CONSTRUCTION

|                           |               |                    |
|---------------------------|---------------|--------------------|
| Construction Contract     | \$2,686,000   |                    |
| Contingencies (C.O.)      | 160,000       |                    |
| Art in Public Places (2%) | 57,000        |                    |
| Test and Inspection       | <u>25,000</u> |                    |
| Sub-Total                 |               | <u>\$2,928,000</u> |

TOTAL ESTIMATED PHASE I COST \$3,443,000\*

\* 1%/mo. escalation to mid-point of construction (April, 1984)

+ +

SOURCE OF FUNDS (PROJECTED)

|                   |                                 |                  |
|-------------------|---------------------------------|------------------|
| 80/81 (June 1981) | Transient Occupancy Tax Revenue | \$1,300,000      |
| 81/82 (June 1982) | " " " "                         | 1,600,000        |
| 82/83 (June 1983) | " " " "                         | 1,900,000        |
| 83/84 (June 1984) | " " " "                         | 2,200,000        |
| 84/85 (June 1985) | " " " "                         | 2,500,000        |
| 85/86 (June 1986) | " " " "                         | <u>2,900,000</u> |

TOTAL FUNDS (PROJECTED) \$12,400,000

June 11, 1980  
Chart No. 3  
cc 1950

ESTIMATED PROJECT COST  
MEMORIAL AUDITORIUM RENOVATION  
PHASE II CONSTRUCTION OF 3 PHASES  
( OPTION A )

ENGINEERING

|                               |                |            |
|-------------------------------|----------------|------------|
| Architect's Fee               | \$ 220,000     |            |
| Day Labor (Quality Assurance) | 18,000         |            |
| Contingencies                 | 2,000          |            |
| Administration                | <u>217,000</u> |            |
| Sub-Total                     |                | \$ 457,000 |

CONSTRUCTION

|                           |               |                    |
|---------------------------|---------------|--------------------|
| Construction Contract     | \$4,764,000   |                    |
| Contingencies (C.O.)      | 280,000       |                    |
| Art in Public Places (2%) | 95,000        |                    |
| Test and Inspection       | <u>35,000</u> |                    |
| Sub-Total                 |               | <u>\$5,174,000</u> |

TOTAL ESTIMATED PHASE II COST \$ 5,631,000\*

\* 1%/mo. escalation to mid-point of construction (December, 1985)

+ +

SOURCE OF FUNDS (PROJECTED)

|                   |                                 |                  |
|-------------------|---------------------------------|------------------|
| 80/81 (June 1981) | Transient Occupancy Tax Revenue | \$1,300,000      |
| 81/82 (June 1982) | " " " "                         | 1,600,000        |
| 82/83 (June 1983) | " " " "                         | 1,900,000        |
| 83/84 (June 1984) | " " " "                         | 2,200,000        |
| 84/85 (June 1985) | " " " "                         | 2,500,000        |
| 85/86 (June 1986) | " " " "                         | <u>2,900,000</u> |

TOTAL FUNDS (PROJECTED) \$12,400,000

June 11, 1980  
 Chart No. 4  
 cc 1950

ESTIMATED PROJECT COST  
 MEMORIAL AUDITORIUM RENOVATION  
 PHASE III CONSTRUCTION OF 3 PHASES  
 ( OPTION A )

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ENGINEERING

|                               |               |            |
|-------------------------------|---------------|------------|
| Architect's Fee               | \$ 85,000     |            |
| Day Labor (Quality Assurance) | 12,000        |            |
| Contingencies                 | 2,000         |            |
| Administration                | <u>91,000</u> |            |
| Sub-Total                     |               | \$ 190,000 |

CONSTRUCTION

|                           |               |                    |
|---------------------------|---------------|--------------------|
| Construction Contract     | \$2,029,000   |                    |
| Contingencies (C.O.)      | 122,000       |                    |
| Art in Public Places (2%) | 43,000        |                    |
| Test and Inspection       | <u>16,000</u> |                    |
| Sub-Total                 |               | <u>\$2,210,000</u> |

TOTAL ESTIMATED PHASE III COST \$ 2,400,000\*

\* 1%/mo. escalation to mid-point of construction (January, 1987)

+ +

SOURCE OF FUNDS (PROJECTED)

|                   |                                 |                  |
|-------------------|---------------------------------|------------------|
| 80/81 (June 1981) | Transient Occupancy Tax Revenue | \$1,300,000      |
| 81/82 (June 1982) | " " "                           | 1,600,000        |
| 82/83 (June 1983) | " " "                           | 1,900,000        |
| 83/84 (June 1984) | " " "                           | 2,200,000        |
| 84/85 (June 1985) | " " "                           | 2,500,000        |
| 85/86 (June 1986) | " " "                           | <u>2,900,000</u> |

TOTAL FUNDS (PROJECTED) \$12,400,000

June 11, 1980  
 Chart No. 5  
 cc 1950

ESTIMATED PROJECT COST  
 MEMORIAL AUDITORIUM RENOVATION  
 RECAP OF PHASES I-III  
 ( OPTION A )

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A. PHASE I CONSTRUCTION

|                              |                  |
|------------------------------|------------------|
| Engineering & Administration | \$ 515,000       |
| Construction                 | <u>2,928,000</u> |

|           |              |
|-----------|--------------|
| Sub-Total | \$ 3,443,000 |
|-----------|--------------|

B. PHASE II CONSTRUCTION

|                              |                  |
|------------------------------|------------------|
| Engineering & Administration | \$ 457,000       |
| Construction                 | <u>5,174,000</u> |

|           |              |
|-----------|--------------|
| Sub-Total | \$ 5,631,000 |
|-----------|--------------|

C. PHASE III CONSTRUCTION

|                              |                  |
|------------------------------|------------------|
| Engineering & Administration | \$ 190,000       |
| Construction                 | <u>2,210,000</u> |

|           |                     |
|-----------|---------------------|
| Sub-Total | <u>\$ 2,400,000</u> |
|-----------|---------------------|

TOTAL ESTIMATED PROJECT COST

\$11,474,000

+ +

SOURCE OF FUNDS (PROJECTED)

|                   |                                 |                  |
|-------------------|---------------------------------|------------------|
| 80/81 (June 1981) | Transient Occupancy Tax Revenue | \$1,300,000      |
| 81/82 (June 1982) | "                               | 1,600,000        |
| 82/83 (June 1983) | "                               | 1,900,000        |
| 83/84 (June 1984) | "                               | 2,200,000        |
| 84/85 (June 1985) | "                               | 2,500,000        |
| 85/86 (June 1986) | "                               | <u>2,900,000</u> |

TOTAL FUNDS (PROJECTED)

\$12,400,000



ESTIMATED PROJECT COST

MEMORIAL AUDITORIUM RENOVATION

PHASE I CONSTRUCTION OF 3 PHASES  
( OPTION B )

---

ENGINEERING

|                               |                |
|-------------------------------|----------------|
| Architect's Fee               | \$ 340,000     |
| Day Labor (Quality Assurance) | 24,000         |
| Contingencies                 | 2,400          |
| Administration                | <u>121,600</u> |

Sub-Total \$ 488,000

CONSTRUCTION

|                           |               |
|---------------------------|---------------|
| Construction Contract     | \$2,208,000   |
| Contingencies (C.O.)      | 132,000       |
| Art in Public Places (2%) | 47,000        |
| Test and Inspection       | <u>25,000</u> |

Sub-Total \$2,412,000

TOTAL ESTIMATED PHASE I COST \$ 2,900,000\*

\* 1%/mo. escalation to mid-point of construction (February, 1982)

+ +

SOURCE OF FUNDS (PROJECTED)

|                   |                                 |                  |
|-------------------|---------------------------------|------------------|
| 80/81 (June 1981) | Transient Occupancy Tax Revenue | \$1,300,000      |
| 81/82 (June 1982) | " "                             | 1,600,000        |
| 82/83 (June 1983) | " "                             | 1,900,000        |
| 83/84 (June 1984) | " "                             | 2,200,000        |
| 84/85 (June 1985) | " "                             | 2,500,000        |
| 85/86 (June 1986) | " "                             | <u>2,900,000</u> |

TOTAL FUNDS (PROJECTED) \$12,400,000

June 11, 1980  
Chart No. 7  
cc 1950

ESTIMATED PROJECT COST  
MEMORIAL AUDITORIUM RENOVATION  
PHASE II CONSTRUCTION OF 3 PHASES  
( OPTION B )

ENGINEERING

|                               |                |            |
|-------------------------------|----------------|------------|
| Architect's Fee               | \$ 220,000     |            |
| Day Labor (Quality Assurance) | 18,000         |            |
| Contingencies                 | 2,000          |            |
| Administration                | <u>209,000</u> |            |
| Sub-Total                     |                | \$ 449,000 |

CONSTRUCTION

|                           |               |                     |
|---------------------------|---------------|---------------------|
| Construction Contract     | \$3,788,000   |                     |
| Contingencies (C.O.)      | 227,000       |                     |
| Art in Public Places (2%) | 80,000        |                     |
| Test and Inspection       | <u>35,000</u> |                     |
| Sub-Total                 |               | <u>\$ 4,130,000</u> |

TOTAL ESTIMATED PHASE II COST \$ 4,579,000\*

\* 1%/mo. escalation to mid-point of construction (February, 1983)

+ +

SOURCE OF FUNDS (PROJECTED)

|                   |                                 |                  |
|-------------------|---------------------------------|------------------|
| 80/81 (June 1981) | Transient Occupancy Tax Revenue | \$1,300,000      |
| 81/82 (June 1982) | "                               | 1,600,000        |
| 82/83 (June 1983) | "                               | 1,900,000        |
| 83/84 (June 1984) | "                               | 2,200,000        |
| 84/85 (June 1985) | "                               | 2,500,000        |
| 85/86 (June 1986) | "                               | <u>2,900,000</u> |

TOTAL FUNDS (PROJECTED) \$12,400,000

June 11, 1980  
Chart No. 8  
cc 1950

ESTIMATED PROJECT COST  
MEMORIAL AUDITORIUM RENOVATION  
PHASE III CONSTRUCTION OF 3 PHASES  
( OPTION B )

---

ENGINEERING

|                               |               |            |
|-------------------------------|---------------|------------|
| Architect's Fee               | \$ 85,000     |            |
| Day Labor (Quality Assurance) | 12,000        |            |
| Contingencies                 | 2,000         |            |
| Administration                | <u>91,000</u> |            |
| Sub-Total                     |               | \$ 190,000 |

CONSTRUCTION

|                           |               |                     |
|---------------------------|---------------|---------------------|
| Construction Contract     | \$ 1,642,000  |                     |
| Contingencies (C.O.)      | 99,000        |                     |
| Art in Public Places (2%) | 35,000        |                     |
| Test and Inspection       | <u>16,000</u> |                     |
| Sub-Total                 |               | <u>\$ 1,792,000</u> |

TOTAL ESTIMATED PHASE III COST \$ 1,982,000\*

\* 1%/mo. escalation to mid-point of construction (January, 1984)

+ +

SOURCE OF FUNDS (PROJECTED)

|                   |                                 |                  |
|-------------------|---------------------------------|------------------|
| 80/81 (June 1981) | Transient Occupancy Tax Revenue | \$1,300,000      |
| 81/82 (June 1982) | " " " "                         | 1,600,000        |
| 82/83 (June 1983) | " " " "                         | 1,900,000        |
| 83/84 (June 1984) | " " " "                         | 2,200,000        |
| 84/85 (June 1985) | " " " "                         | 2,500,000        |
| 85/86 (June 1986) | " " " "                         | <u>2,900,000</u> |

TOTAL FUNDS (PROJECTED) \$12,400,000

ESTIMATED PROJECT COST  
MEMORIAL AUDITORIUM RENOVATION  
RECAP OF PHASES I-III  
( OPTION B )

---

A. PHASE I CONSTRUCTION

|                              |                  |              |
|------------------------------|------------------|--------------|
| Engineering & Administration | \$ 488,000       |              |
| Construction                 | <u>2,412,000</u> |              |
| Sub-Total                    |                  | \$ 2,900,000 |

B. PHASE II CONSTRUCTION

|                              |                  |              |
|------------------------------|------------------|--------------|
| Engineering & Administration | \$ 449,000       |              |
| Construction                 | <u>4,130,000</u> |              |
| Sub-Total                    |                  | \$ 4,579,000 |

C. PHASE III CONSTRUCTION

|                              |                  |                     |
|------------------------------|------------------|---------------------|
| Engineering & Administration | \$ 190,000       |                     |
| Construction                 | <u>1,792,000</u> |                     |
| Sub-Total                    |                  | <u>\$ 1,982,000</u> |

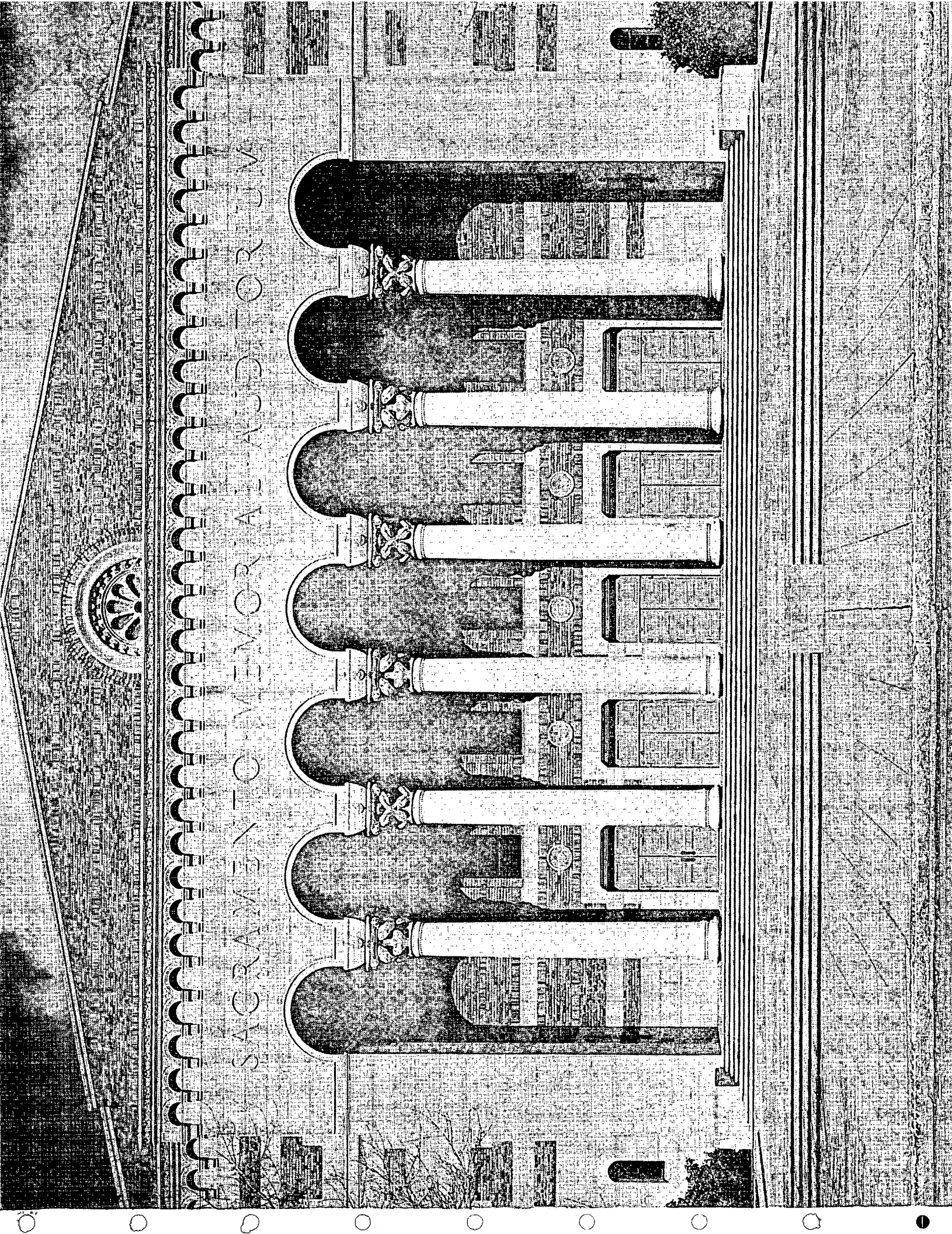
TOTAL ESTIMATED PROJECT COST \$ 9,461,000

+ +

SOURCE OF FUNDS (PROJECTED)

|                   |                                 |                  |
|-------------------|---------------------------------|------------------|
| 80/81 (June 1981) | Transient Occupancy Tax Revenue | \$1,300,000      |
| 81/82 (June 1982) | " "                             | 1,600,000        |
| 82/83 (June 1983) | " "                             | 1,900,000        |
| 83/84 (June 1984) | " "                             | 2,200,000        |
| 84/85 (June 1985) | " "                             | 2,500,000        |
| 85/86 (June 1986) | " "                             | <u>2,900,000</u> |

TOTAL FUNDS (PROJECTED) \$12,400,000



SACRAMENTO MEMORIAL AUDITORIUM



**SACRAMENTO  
MEMORIAL  
AUDITORIUM**

**A  
REHABILITATION  
PROGRAM**

PEOPLE

PROJECT CLIENT

City of Sacramento

PROJECT TEAM

Angello-Vitiello-Niyya-Ryan, Inc.  
Herbert Y. Niyya - Principle Architect  
Kelly Reynolds - Project Architect

PROJECT CONSULTANTS

Bolt, Beranek and Newman  
Architectural and Engineering Acoustics

Landry and Bogan  
Theatre Consultants

Marr-Shaffer Associates  
Structural Engineers

Sanford-Alessi-Rios Associates  
Mechanical Engineers

Harry Yee and Associates  
Electrical Engineers



**SUMMARY**



## SUMMARY

### A. INTRODUCTION:

The Sacramento Memorial Auditorium, completed in 1926, has served the City and its inhabitants for over 50 years. As can be expected in any building of this vintage, its functional requirements have changed and, more importantly, the equipment and support systems have become obsolete.

In this era of limited resources and economic constraints, the City of Sacramento wished to explore the possibilities of rehabilitating the structure to once again serve as a viable income producer. The City of Sacramento contracted the architectural firm of Angello-Vitiello-Niyya-Ryan, Inc. and their professional consultants to delineate a program of rehabilitation.

### B. FINDINGS:

Through record searches, interviews, site and facility inspections, the auditorium was found to be deficient in a number of areas; of primary concern were those areas affecting patron and facility employee life safety. As examples: exiting procedures from the balconys are inadequate, too few exit doors exist, the facility requires a fire sprinkler system and some electrical circuitry is faulty or unprotected.

These specific sited examples, if required to be brought up to today's building code standards, would in all probability destroy most of the building's historical fabric (through reconstruction and additions) and its income producing capabilities (due to the loss of at least 25% of its existing fixed seating capacity - from 4,223 to 3,167).

### C. RECOMMENDATIONS:

During interviews with City departmental directors, specifically Building and Fire, the concept of less than complete code compliance was addressed. Alternate life safety measures were discussed which would preserve the architectural integrity of the Memorial Auditorium and yet guarantee a reasonable degree of life safety. The recommended code variances agreed upon in committee meetings with City staff are:

1. Provide a full and complete automatic fire sprinkler system in lieu of removing all combustibile construction materials.
2. Increase the width of the four major interior corner staircases, from the balcony level to street level, in lieu of widening the cross aisle and rows in the balconys.

This concept of variances in the building code is consistant with that of other municipalities which have adopted historic structures sections within their building codes. It is ours, our consultants, and

the City staff's opinion that the City of Sacramento adopt these code variances for rehabilitative work done to the Memorial Auditorium.

D. CONSTRUCTION RECOMMENDATIONS:

There are two alternatives available to the City regarding rehabilitative construction work:

1. A single, one phase total construction program.
2. A series of phased construction programs.

FROM THE STANDPOINT OF EFFICIENCY, UNSTABLE BUILDING CONSTRUCTION COSTS, INFLATION, AND TO MINIMIZE THE AUDITORIUM'S SHUTDOWN TIME, WE RECOMMEND ALTERNATE ONE - A SINGLE PHASE CONSTRUCTION PROGRAM.

On the following pages is a recapitulation of the estimated construction costs for both Alternates One and Two . . . . .

\*ALTERNATE ONE - SINGLE CONSTRUCTION PROGRAM

ESTIMATE:

|  |                     |                     |
|--|---------------------|---------------------|
| 1. Architectural . . . . .   | 1.94 million        |                     |
| 2. Structural . . . . .  | 0.38 million        |                     |
| 3. Mechanical . . . . .  | 1.49 million        |                     |
| 4. Electrical . . . . .  | 0.29 million        |                     |
| 5. Theatrical . . . . .  | 0.49 million        |                     |
| 6. Acoustical . . . . .  | <u>0.07 million</u> |                     |
| **Subtotal. . . . .  |                     | 4.66 million.       |
| Contingency (6%) . . . . .   | 0.28 million        |                     |
| Escalation at 1%/Month to Construction<br>Mid-Point (21%). . . . . | <u>0.98 million</u> |                     |
| Subtotal. . . . .  |                     | 1.26 million        |
| ***Revenue Loss (6-81 to 9-82) . . . . .                           |                     | <u>0.15 million</u> |
| TOTAL. . . . .   |                     | 6.07 million        |

\*Does not include professional fees.  
 \*\*Current dollars (first quarter, 1980).  
 \*\*\*Convention Center staff projection (see Part Three).

\*ALTERNATE TWO - THREE PHASED CONSTRUCTION PROGRAMS

A. ESTIMATE, PHASE ONE:

|   |                     |                     |
|---|---------------------|---------------------|
| 1. Architectural . . . . .  | 0.98 million        |                     |
| 2. Structural . . . . .   | 0.28 million        |                     |
| 3. Mechanical . . . . .   | 0.2 million         |                     |
| 4. Electrical . . . . .   | 0.18 million        |                     |
| 5. Theatrical . . . . .   | <u>0.2 million</u>  |                     |
| **Subtotal . . . . .  |                     | 1.84 million        |
| Contingency (6%) . . . . .  | 0.11 million        |                     |
| Escalation at 1%/Month to Construction<br>Mid-Point (18%) . . . . . | <u>0.33 million</u> |                     |
| Subtotal . . . . .  |                     | 0.44 million        |
| Revenue Loss (6-81 to 5-82) . . . . .                               |                     | <u>0.15 million</u> |
| TOTAL, PHASE ONE . . . . .  |                     | 2.43 million        |

B. ESTIMATE, PHASE TWO:

|   |                     |                     |
|---|---------------------|---------------------|
| 1. Architectural . . . . .  | 0.88 million        |                     |
| 2. Structural . . . . .   | 0.13 million        |                     |
| 3. Mechanical . . . . .   | 1.5 million         |                     |
| 4. Electrical . . . . .   | 0.17 million        |                     |
| 5. Theatrical . . . . .   | 0.15 million        |                     |
| 6. Acoustical . . . . .   | <u>0.04 million</u> |                     |
| **Subtotal . . . . .  |                     | 2.87 million        |
| Contingency (6%) . . . . .  | 0.17 million        |                     |
| Escalation at 1%/Month to Construction<br>Mid-Point (5%) . . . . .              | 0.14 million        |                     |
| Inflation at 1%/Month to Beginning of<br>Phase Two Construction (23%) . . . . . | <u>0.66 million</u> |                     |
| Subtotal . . . . .  |                     | 0.97 million        |
| Revenue Loss (5-82 to 3-83) . . . . .   |                     | <u>0.12 million</u> |
| TOTAL, PHASE TWO . . . . .  |                     | 3.96 million        |

\*Does not include professional fees.  
 \*\*Current dollars (first quarter, 1980).

C. ESTIMATE, PHASE THREE:

|                            |                     |
|----------------------------|---------------------|
| 1. Architectural . . . . . | 0.62 million        |
| 2. Structural . . . . .    | 0.12 million        |
| 3. Mechanical . . . . .    | 0.09 million        |
| 4. Electrical . . . . .    | 0.08 million        |
| 5. Theatrical . . . . .    | 0.18 million        |
| 6. Acoustical . . . . .    | <u>0.05 million</u> |

\*\*Subtotal. . . . . 1.14 million

|  |                     |
|--|---------------------|
| Contingency (6%) . . . . .   | 0.07 million        |
| Escalation at 1%/Month Mid-Point (4%) . . . . .                                  | 0.05 million        |
| Inflation at 1%/Month to Beginning<br>of Phase Three Construction (31%). . . . . | <u>0.35 million</u> |

Subtotal. . . . . 0.47 million

Revenue Loss (3-83 to 9-83). . . . . 0.08 million

TOTAL, PHASE THREE . . . . . 1.69 million

SUMMATION OF ALTERNATE TWO-PHASED PROGRAM

|                      |                     |
|----------------------|---------------------|
| PHASE ONE. . . . .   | 2.43 million        |
| PHASE TWO. . . . .   | 3.96 million        |
| PHASE THREE. . . . . | <u>1.69 million</u> |

TOTAL, ALTERNATE TWO . . . . . 8.08 million

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**INTRODUCTION**

**BACKGROUND**

**PROGRAM METHODOLOGY**

**ACKNOWLEDGEMENTS**

## I. BACKGROUND

In February 1979 the City of Sacramento initiated a search for professional architectural services with regard to the rehabilitation of the Memorial Auditorium.

At the end of an approximate two month selection process, the firm of Angello-Vitiello-Niiya-Ryan, Inc. was selected and a formal contract executed on August 13, 1979.

During the selection process the City identified numerous existing deficiencies within the facility which had to be addressed. Some of these deficiencies are:

1. Exiting
2. Fire Sprinklers
3. Seating
4. Restrooms
5. Electrical and Lighting Loads
6. Stage Grid and Fly
7. Acoustics and Sound Reinforcement
8. Concessions
9. Event Loading/Unloading Access

The City required the architectural team and their professional consultants to develop a comprehensive program for the Memorial Auditorium's rehabilitation.

## II. PROGRAM METHODOLOGY

We at Angello-Vitiello-Niiya-Ryan, Inc. (AVNR) working in conjunction with staff of City Engineering, Architecture/Engineering Section, developed a series of "tasks" eventually leading

to this program. A listing of each of the tasks and an explanation of what each was to accomplish follows:

### A. TASK ONE - ORGANIZATION:

1. Meet with various City of Sacramento departmental staff members; set up parameters for the work to be covered, including a time frame; present this schedule to the City.

### B. TASK TWO - DATA COLLECTION AND ANALYSIS:

1. Review all existing documents, concepts, proposals and reports.
2. Determine the historic, physical, operations and circulation implications of the facility. Areas of analysis, for example, were:
  - a. Code compliance, including exiting
  - b. Fire safety
  - c. Identification of immediate hazards
  - d. Efficiency of the facility maintenance program
  - e. Facility energy usage
  - f. Structural, mechanical, electrical, theatrical and acoustics systems
3. Interview those individuals directly associated with the facility's operation, including licensees, employees, event producers and City staff.

C. TASK THREE - CONCEPT DEVELOPMENT:

1. Identify and establish priorities of users and event types, including those events not defined as performance.
2. Identify production and audience requirements relating to event types.
3. Identify deficiencies in the operation and manpower usage at the facility.
4. Identify those improvements required for audience comfort, circulation and safety.
5. Identify event production disruptions associated with the implementation of improvements.
6. Identify equipment manufacture and delivery lead times.
7. Identify traffic deficiencies and suggest improvements.
8. Provide budget construction estimates.
9. Identify construction phases and prepare a schedule for their implementation.

D. TASK FOUR - FINAL PROGRAM REPORT:

1. Provide background information.

2. Recommend rehabilitation priorities, their phasing and interfacing.
3. Develop and evaluate construction phasing time line.
4. Develop an estimate of construction costs relating to the particular construction phases.

Beginning on the following pages is the information, in graphic and narrative form, obtained through interviews and investigation as well as our program recommendations.

III. ACKNOWLEDGEMENTS

To the many people who contributed their time and expertise in the preparation of this program, we wish to express our appreciation and extend to them the recognition they deserve.

City of Sacramento:

|                 |                                    |
|-----------------|------------------------------------|
| Ron Parker      | - Department of Engineering        |
| Dave Darms      | - Department of Engineering        |
| Michael Sweeney | - Department of Engineering        |
| Tim Sullivan    | - Department of Building           |
| Ray Charles     | - Department of Fire               |
| Les Frink       | - Department of Traffic            |
| Leonard Johnson | - Department of Traffic            |
| Dave Spease     | - Department of Community Services |
| Reginald Young  | - Department of Sanitation         |

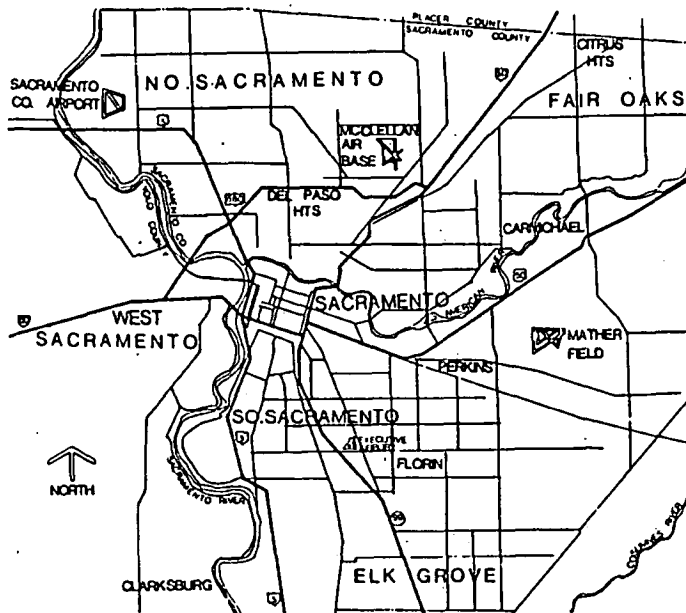
Sacramento Community/Convention Center:

Sam Burns  
Leonard Zerilli  
Frank Puccinelli

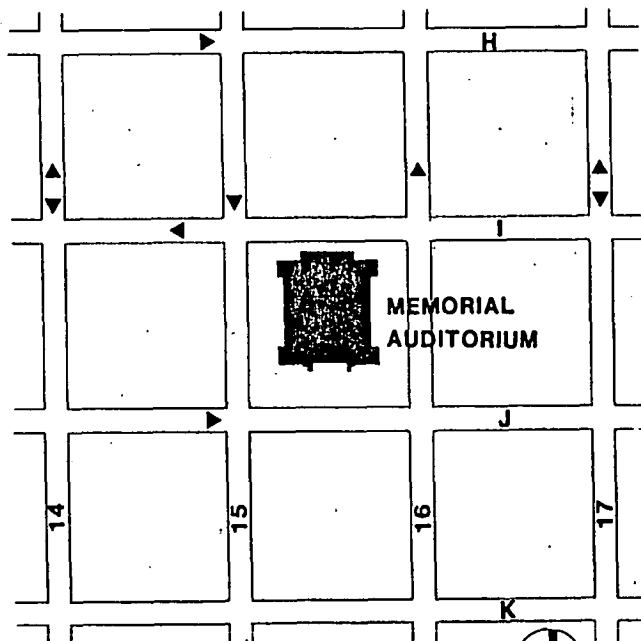
**PART ONE**

**EXISTING SITE ANALYSIS.**

**EXISTING FACILITY ANALYSIS**



**LOCATION MAP**



**STREET MAP**

**I. EXISTING SITE ANALYSIS**

**A. SITE DESCRIPTION:**

The Sacramento Memorial Auditorium is centrally located within the community's central business district bounded on the north by "I" Street, one-way west; on the south by "J" Street, one-way east; on the west by 15th Street, one-way south; and on the east by 16th Street, one-way north. These four streets are major surface arterial collectors in the city.

Within the bounds of these streets the site is approximately 420 feet (15th and 16th Streets) and 401 feet ("I" and "J" Streets) long or nearly 4 acres in area. The Memorial Auditorium has a first floor land coverage area of slightly greater than one acre; 48,600 square feet.

On this and the next page is an assessment of the auditorium site:

**1. LOADING:**

The most obvious deficiency of the site/complex is the dock loading doors to the stage which affront "I" Street. The ramping driveways to the basement are too narrow and steep for modern vehicular use. Event production loading/unloading to the stage as well as refuse removal and concessionaire off-loading cannot be done without disrupting two or more lanes of



STAGE DELIVERY DOORS AT 11 STREET. PROPOSED WORK WOULD PROVIDE AN ON-STREET TRUCK DOCK AND EFFICIENTLY ELIMINATE VEHICULAR AND PEDESTRIAN HAZARDS.

traffic along "I" Street. A 16th Street on-site dock at the stage would relieve the "I" Street traffic problems as well as provide an area for waste removal and concessionaire deliveries. (See Appendix, Diagram One.)

2. PASSENGER DROP-OFF AND PICK-UP:

Currently the site has no on-site passenger loading zones. The "J" Street curb is designated as a passenger zone. With the surrounding streets being one-way and no curbside parking, the existing passenger zone along "J" Street is working adequately. The City Police believe traffic and passenger movements during an event are handled satisfactorily without further needs for upgrading.

3. ROAD SHOW PARKING:

There is no provision for members of road shows (i.e., circus, ice follies and rock concerts) to park their private trailers and vans on-site. Presently, the curbs along 15th, 16th and "I" Streets serve this function. This parking condition invariably blocks existing accessways to the stage, refuse storage and the basement. Granted, some problems will be alleviated with the construction of a new on-site truck dock at the stage but the basic problem of too many private vehicles around the auditorium is still unaddressed.

Provisions for these vehicles, on-site, would be detrimental to the historical image of the auditorium, not to mention the loss of large amounts of landscaping for concrete or asphalt surfaces. We, therefore, recommend the city and Convention Center adopt strict regulations for areas at which the road personnel may park. Within a two block radius of the auditorium there are no fewer than two parking structures with 1,045 spaces and 8 surface lots with 730 total spaces. We feel arrangements can be made to accommodate the road vehicles for the reasonably short time they are playing the Memorial Auditorium.

4. SITE LIGHTING:

Pole lighting occurs along all four perimeter streets as well as a minimum of building security lights. The building security lighting needs to be updated with more fixtures located around the complex. In any case color-corrected fixtures must be used to help with police visual identifications.

5. LANDSCAPING:

The existing landscaping is full and mature. For the most part it has been well maintained and healthy. To aid the police in their security watch of the complex, it is suggested low-growing shrubs be placed at the building's exterior walls with little,



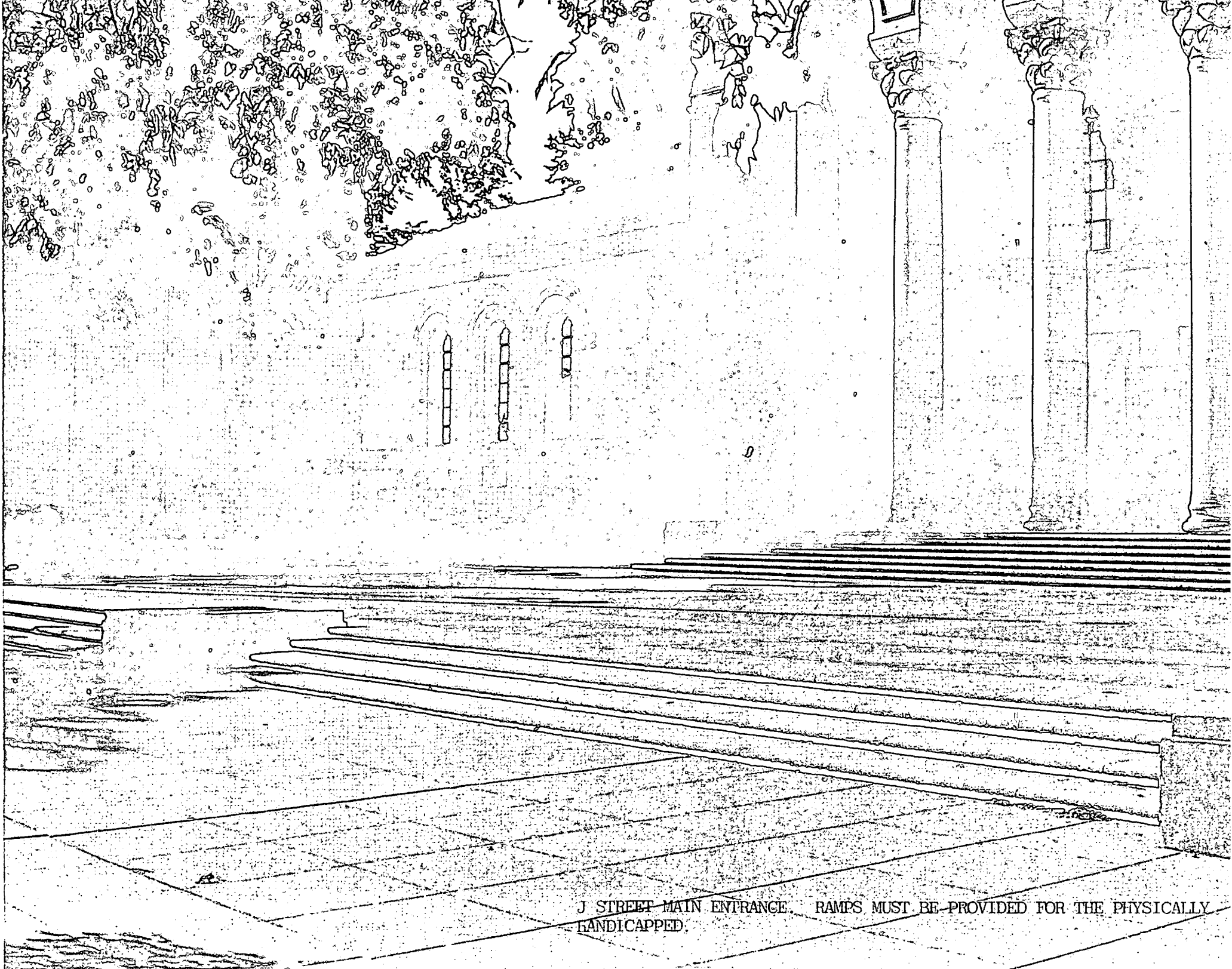
if any, plant material at exterior low windows. It is suggested that the antiquated manual landscape sprinkler system be converted to an electronically controlled system and the unpaved strip between curb and sidewalk be filled with concrete, leaving open squares for new trees.

6. HANDICAPPED INGRESS/EGRESS:

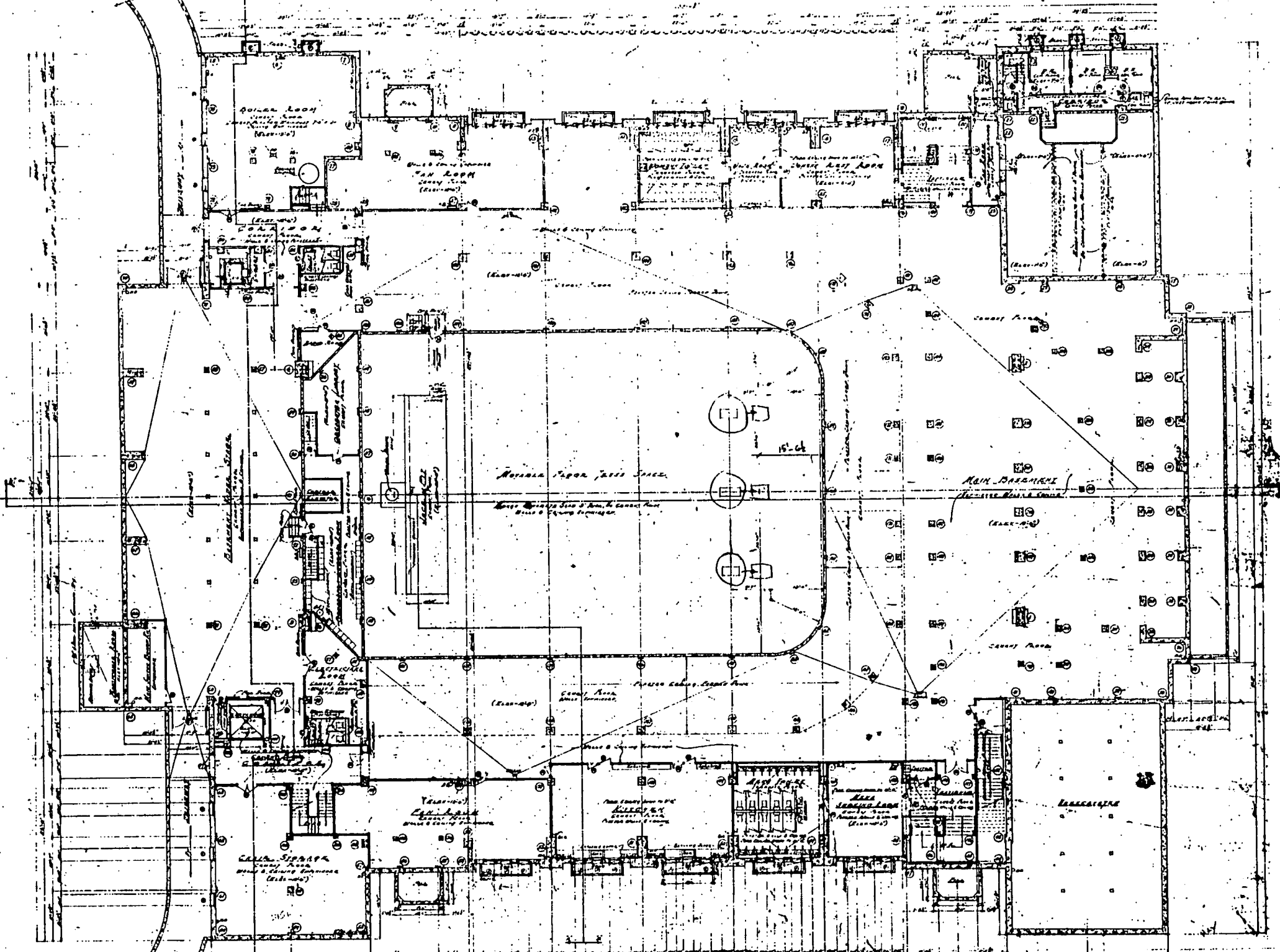
Handicapped curb cuts occur at each of the four street intersections. The only means of building entry for the handicapped confined to a wheelchair is through an entry in the building's southwest corner (adjacent to the Memorial Hall leading to the main foyer). All 15th and 16th Street exits should be accessible to the handicapped. Due to the nature of the ticketing process prior to most events, a ramp system at the main entry on "J" Street to the main floor foyer is required.

The following floor plans and sections of the Memorial Auditorium are intended to be used in conjunction with the existing facility analysis, which follows beginning on Page 6 . . . .

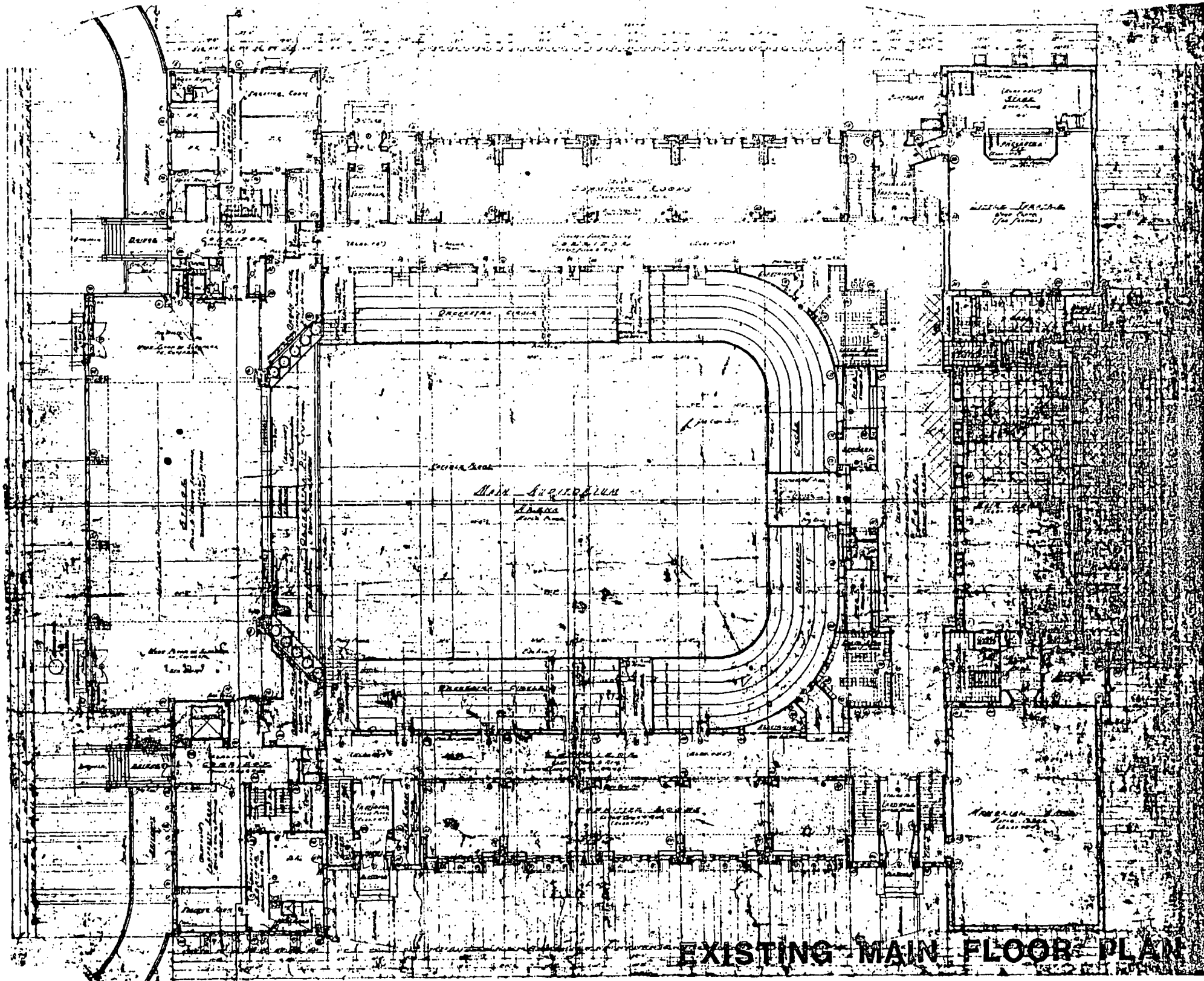
Following the plans and building sections is a diagram indicating locations of various key terms, which will be used throughout the remaining sections of this program.



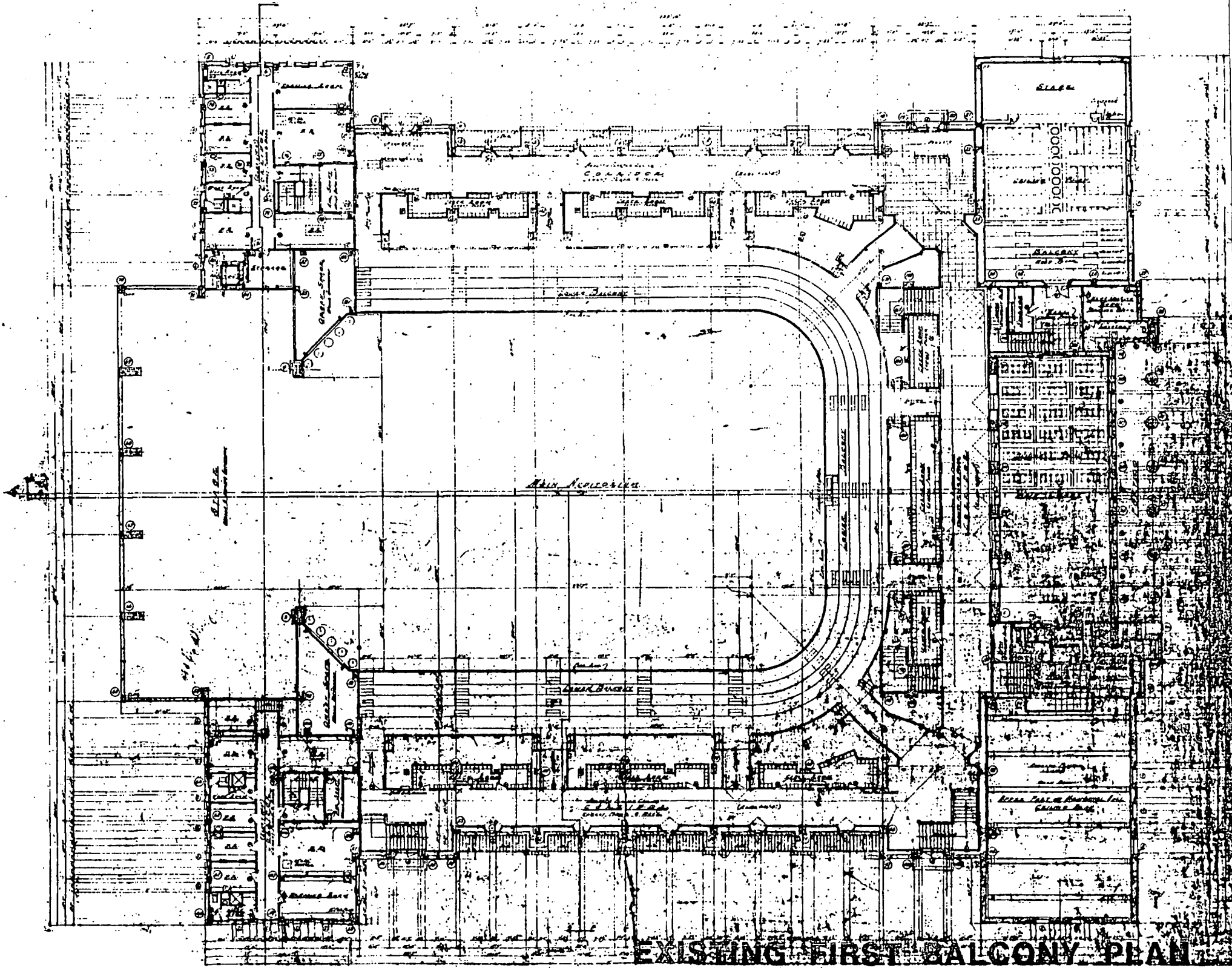
J STREET MAIN ENTRANCE. RAMPS MUST BE PROVIDED FOR THE PHYSICALLY HANDICAPPED.



**EXISTING BASEMENT FLOOR PLAN**

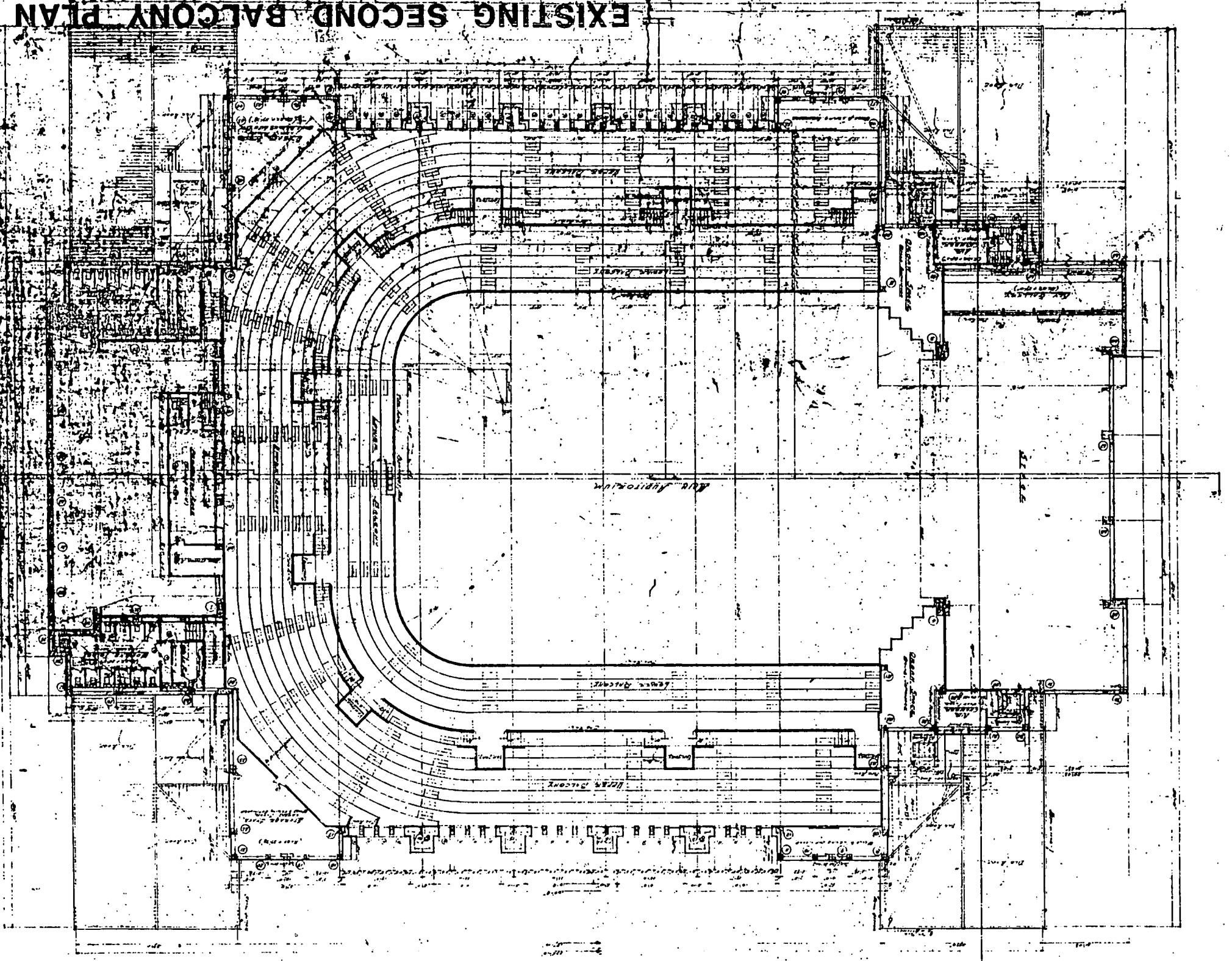


EXISTING MAIN FLOOR PLAN

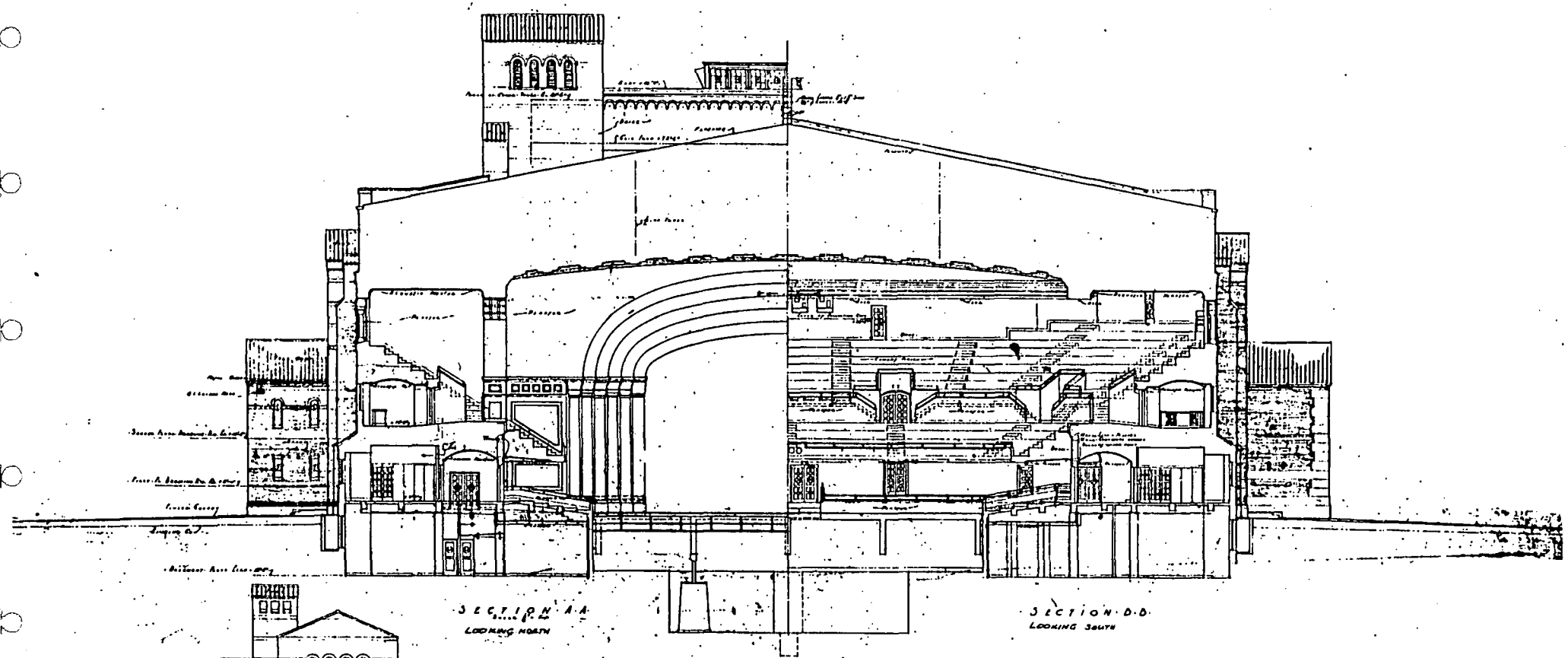


EXISTING FIRST BALCONY PLAN

# EXISTING SECOND BALCONY PLAN

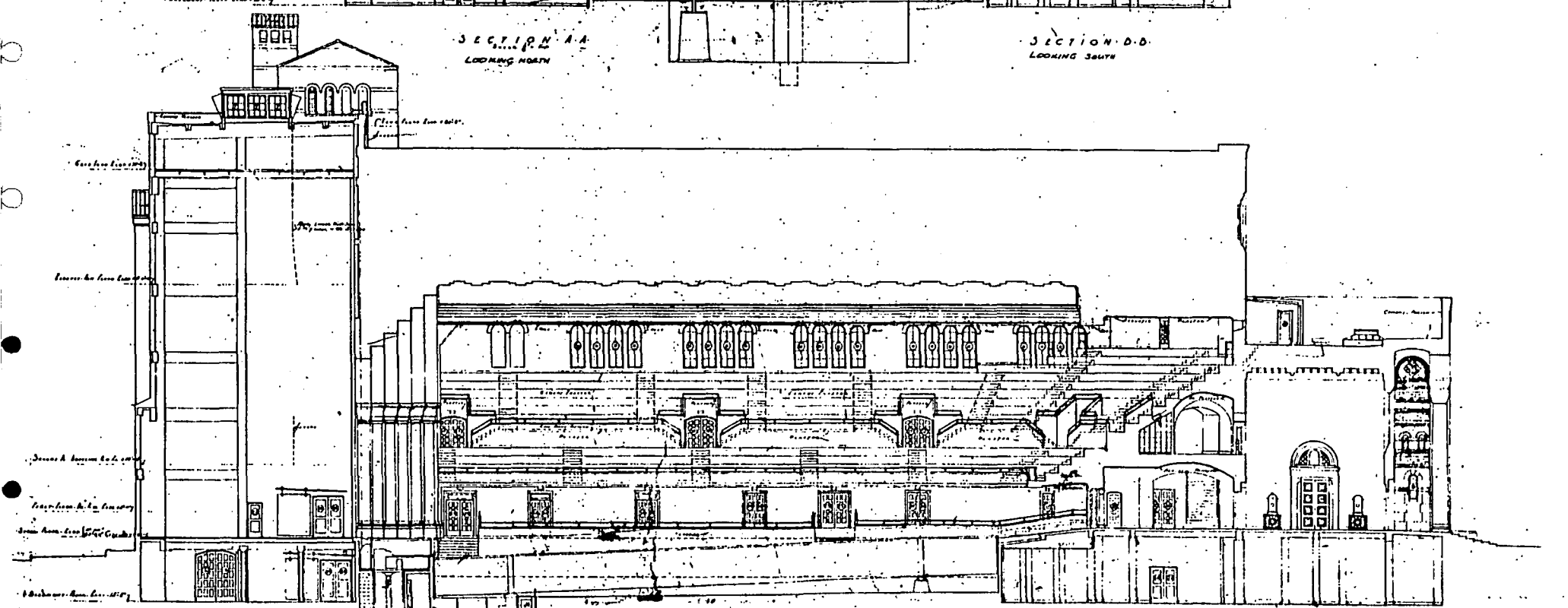




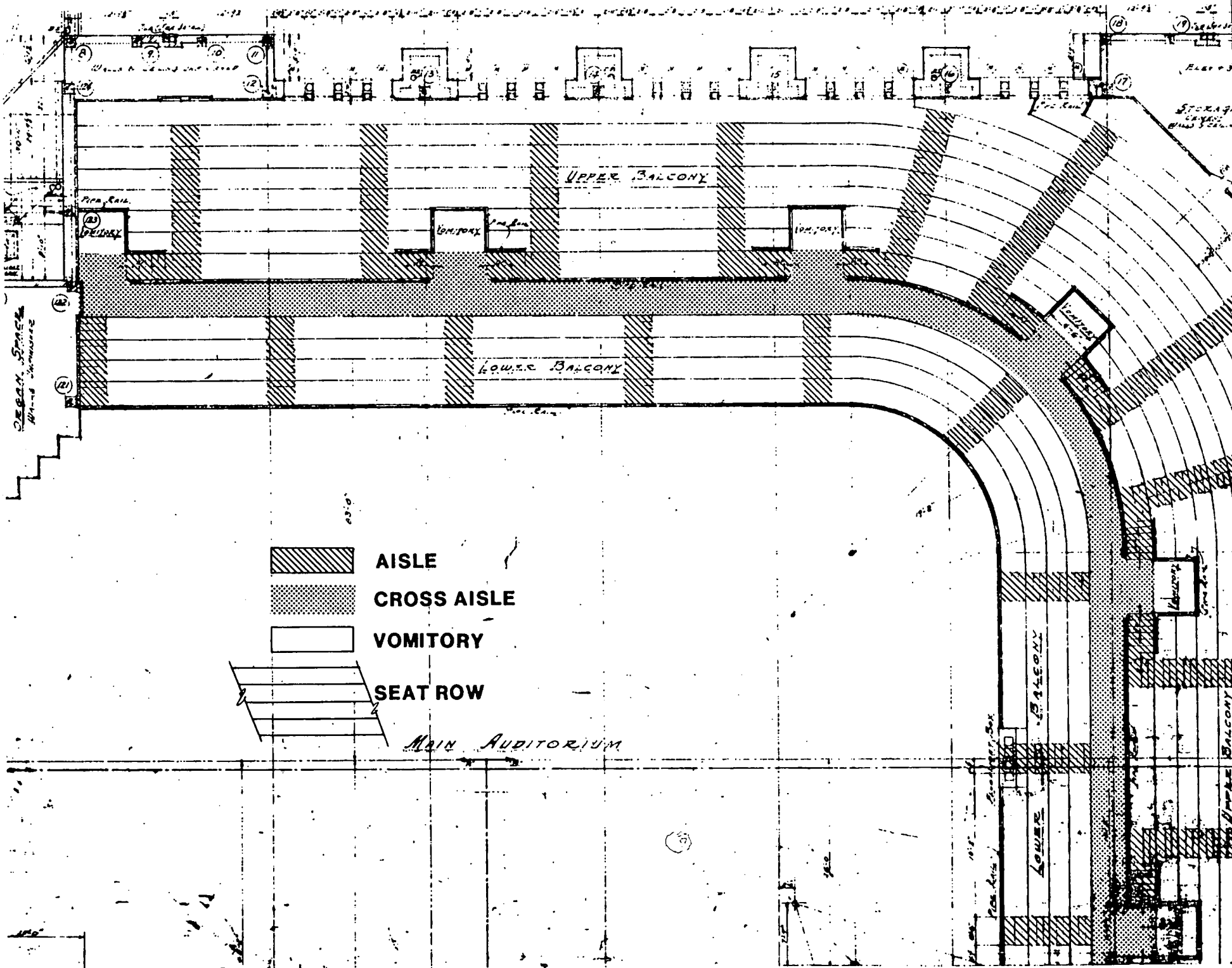




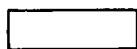
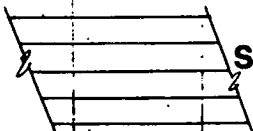
SECTION A-A  
LOOKING NORTH

SECTION D-D  
LOOKING SOUTH



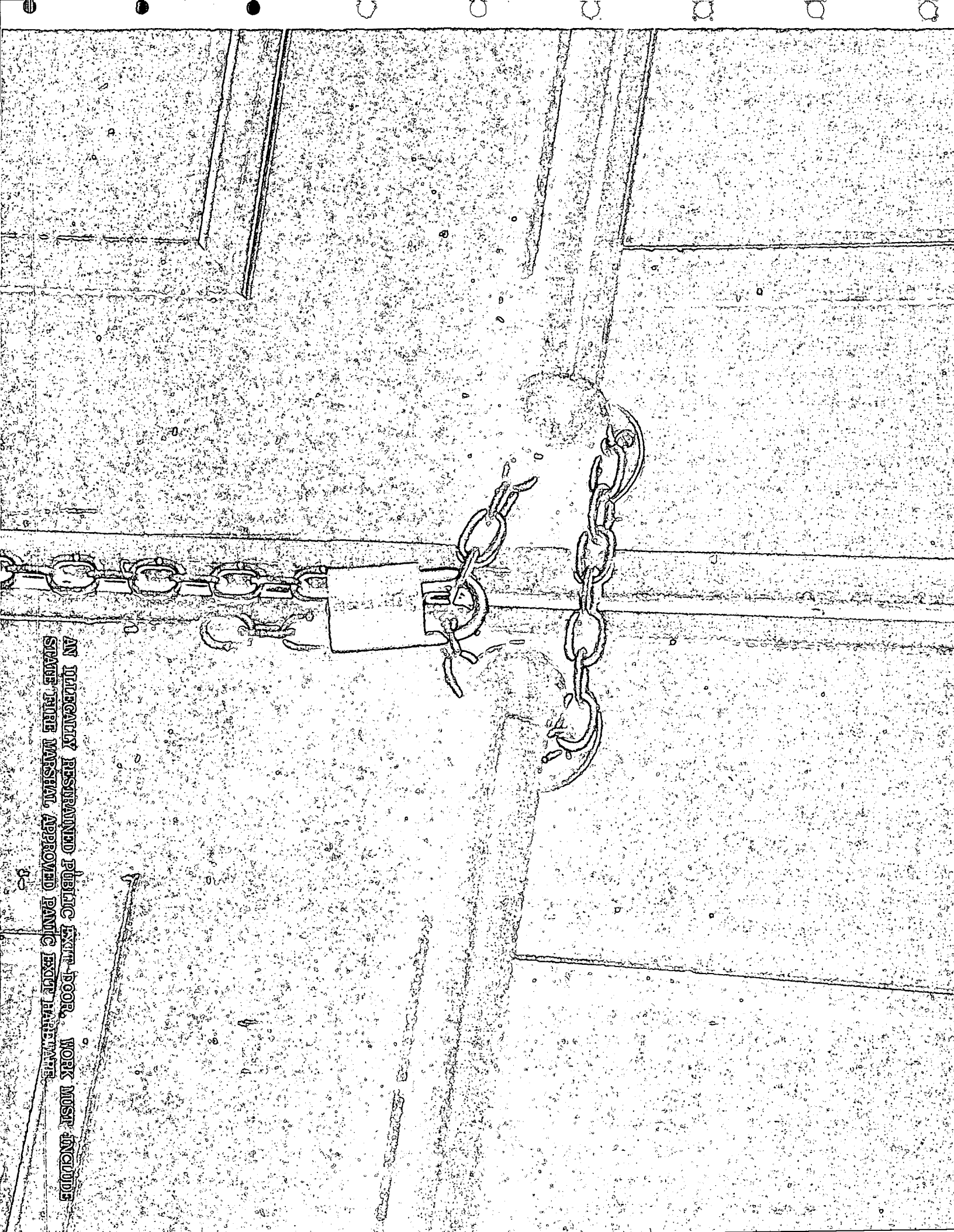
EXISTING BUILDING SECTIONS



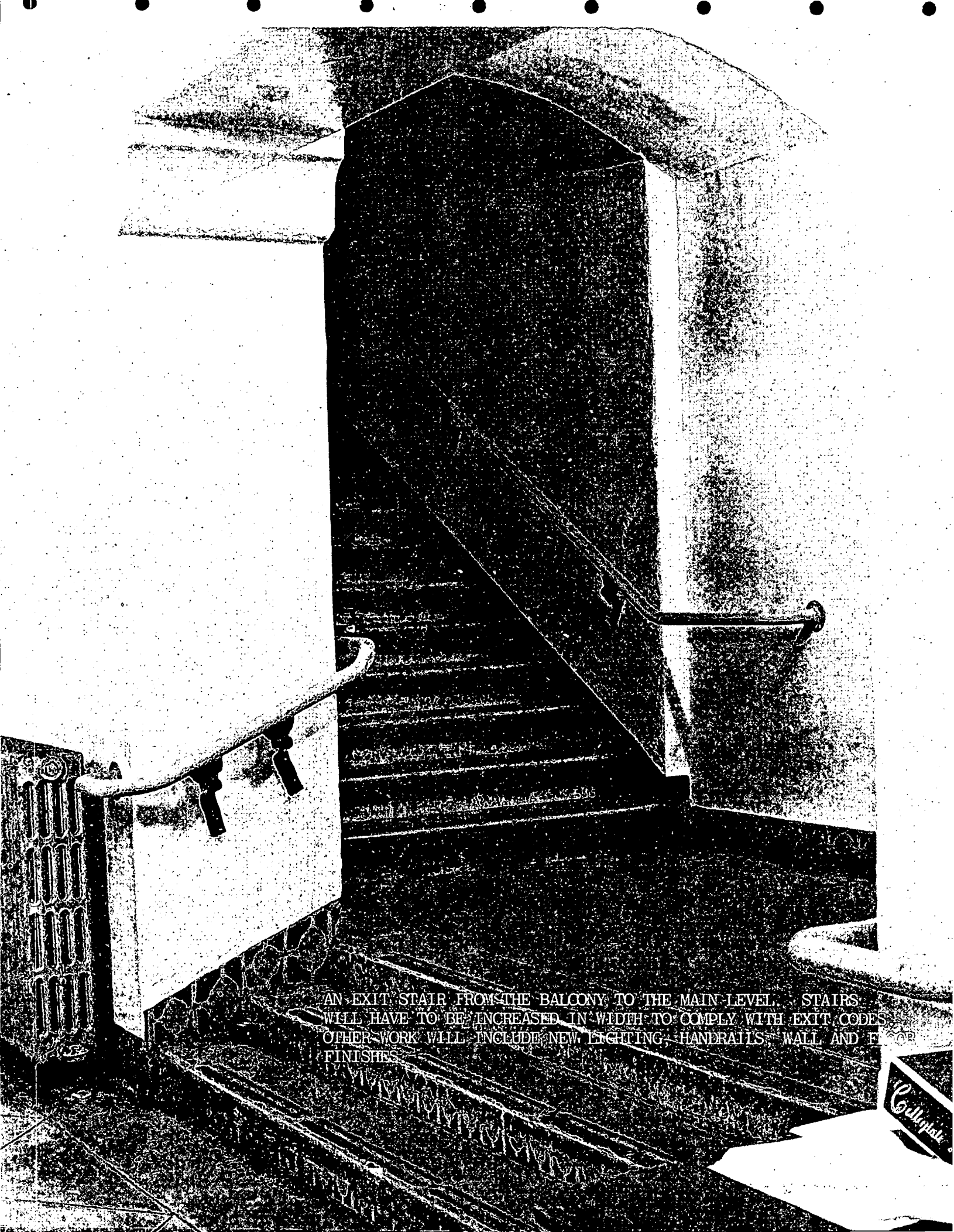
-  AISLE
-  CROSS AISLE
-  VOMITORY
-  SEAT ROW

MAIN AUDITORIUM





AN ILLEGALLY RESTRAINED PUBLIC EXITE DOOR. YORK MUST INCLUDE  
STATE FIRE MARSHAL, APPROVED PANIC EXITE HARDWARE

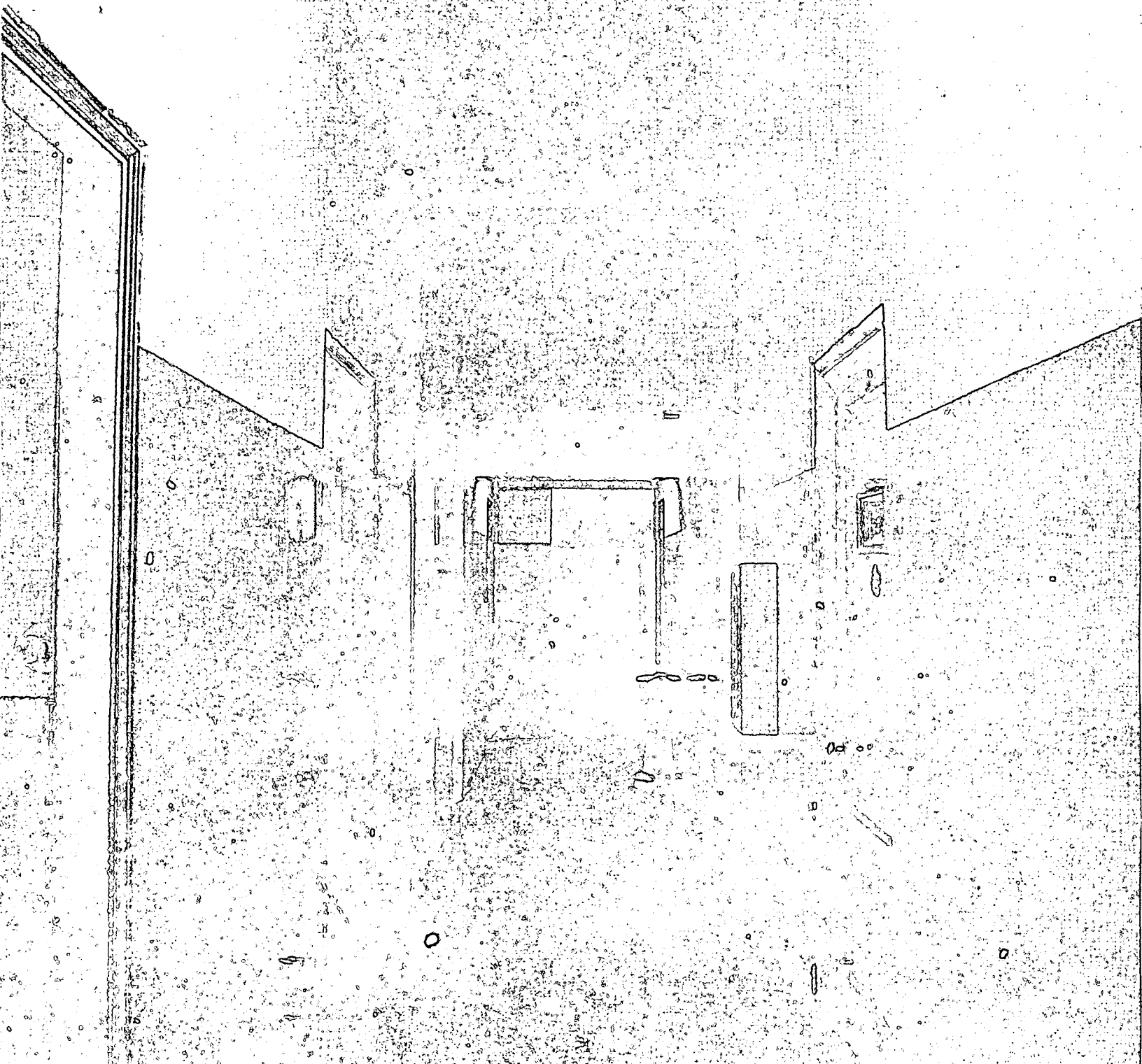


AN EXIT STAIR FROM THE BALCONY TO THE MAIN LEVEL. STAIRS  
WILL HAVE TO BE INCREASED IN WIDTH TO COMPLY WITH EXIT CODES.  
OTHER WORK WILL INCLUDE NEW LIGHTING, HANDRAILS, WALL AND FLOOR  
FINISHES.

Calligrafe

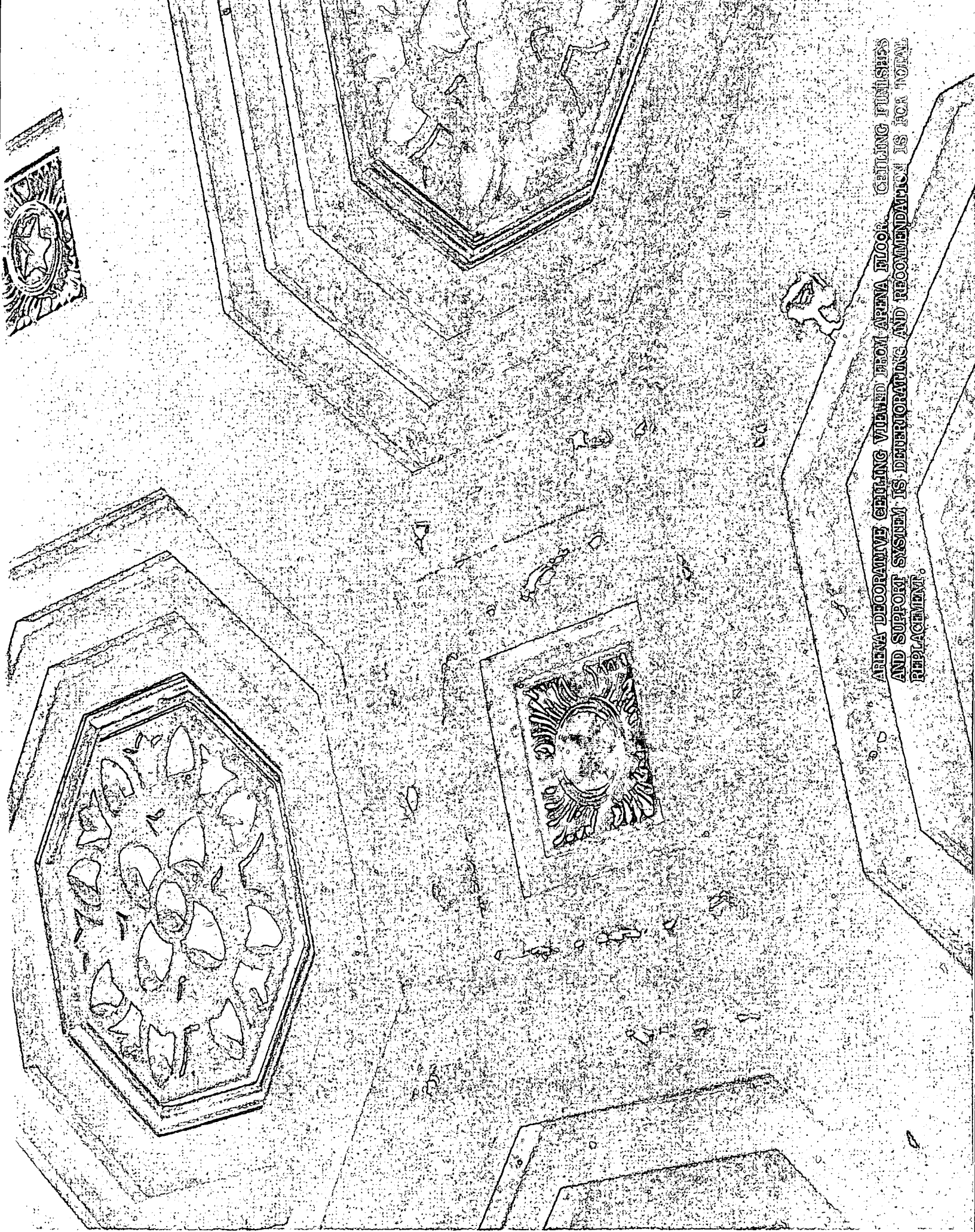


AN AISLE TO THE SEATS OF THE SECOND BALCONY. WORK WOULD INCLUDE THE REMOVAL OF THE AISLE LENGTH BEYOND TWENTY FEET, THE PROVISION OF AISLE LIGHTING AND HAND RAILS (BOTH INTEGRAL WITH THE NEW PROPOSED SEATS).

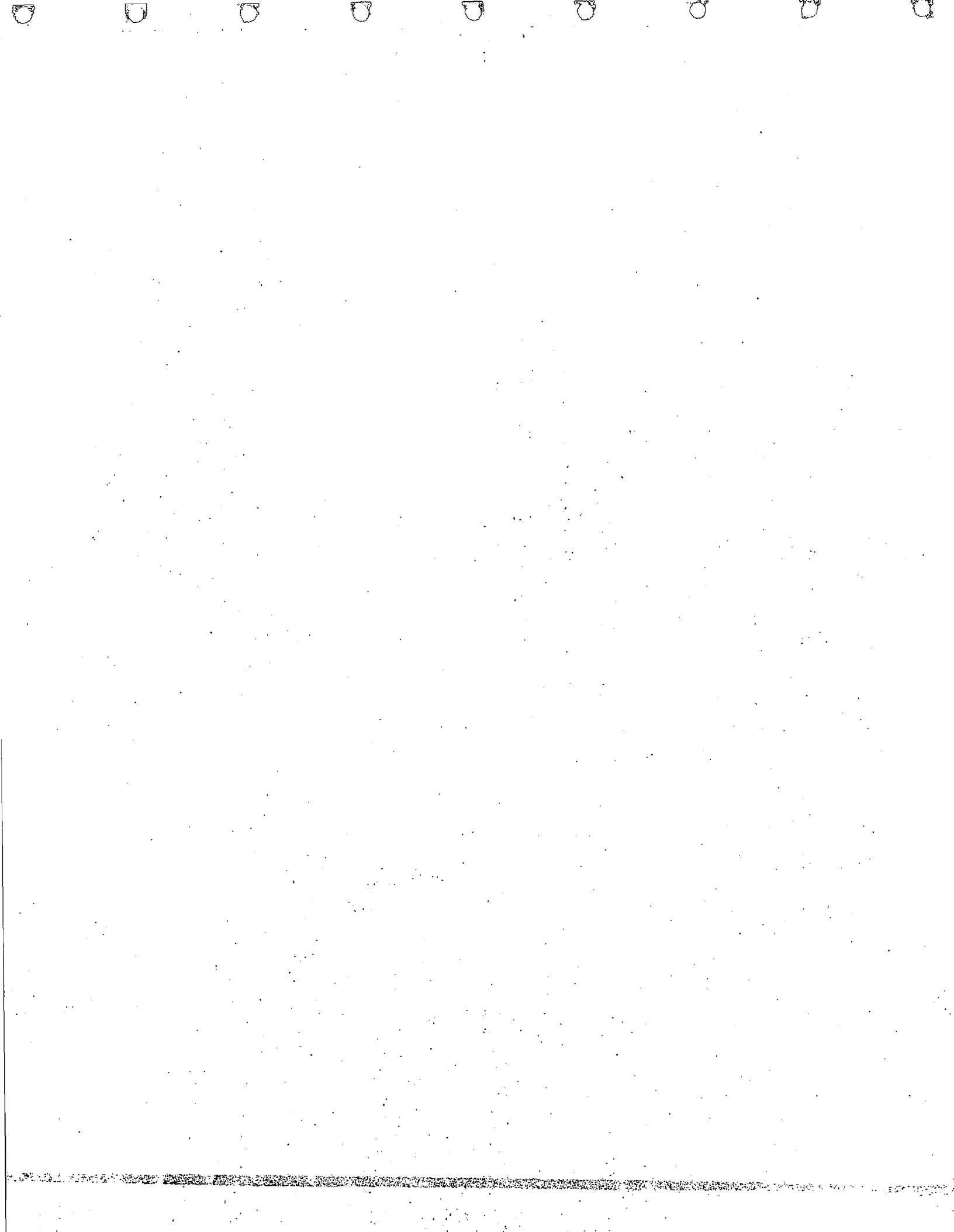


A TYPICAL EXISTING CORRIDOR AT THE BACKSTAGE DRESSING ROOMS. PROPOSED WORK WOULD INCLUDE NEW LIGHTING, FLOOR COVERING AND PAINTING.

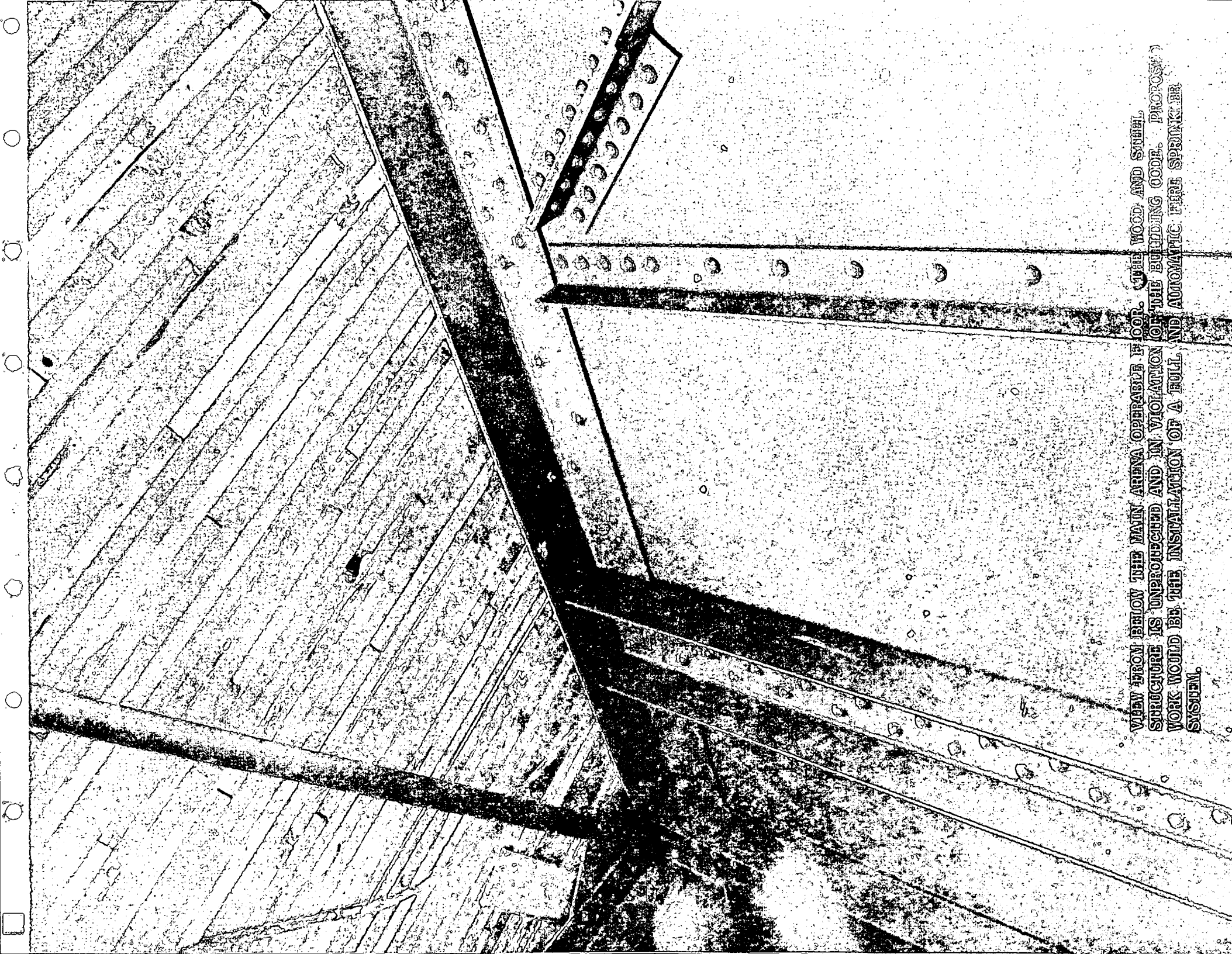




ARENA DECORATIVE CEILING VIEWED FROM ARENA FLOOR. CEILING FINISHES  
AND SUPPORT SYSTEM IS DETERIORATING AND RECOMMENDATION IS FOR TOTAL  
REPLACEMENT.



ARENA GRINDING WHEELS FROM AMERIC CANNINGS  
HAPLAO THE CHINDING. PROPOSED WORK IS TO REMOVE

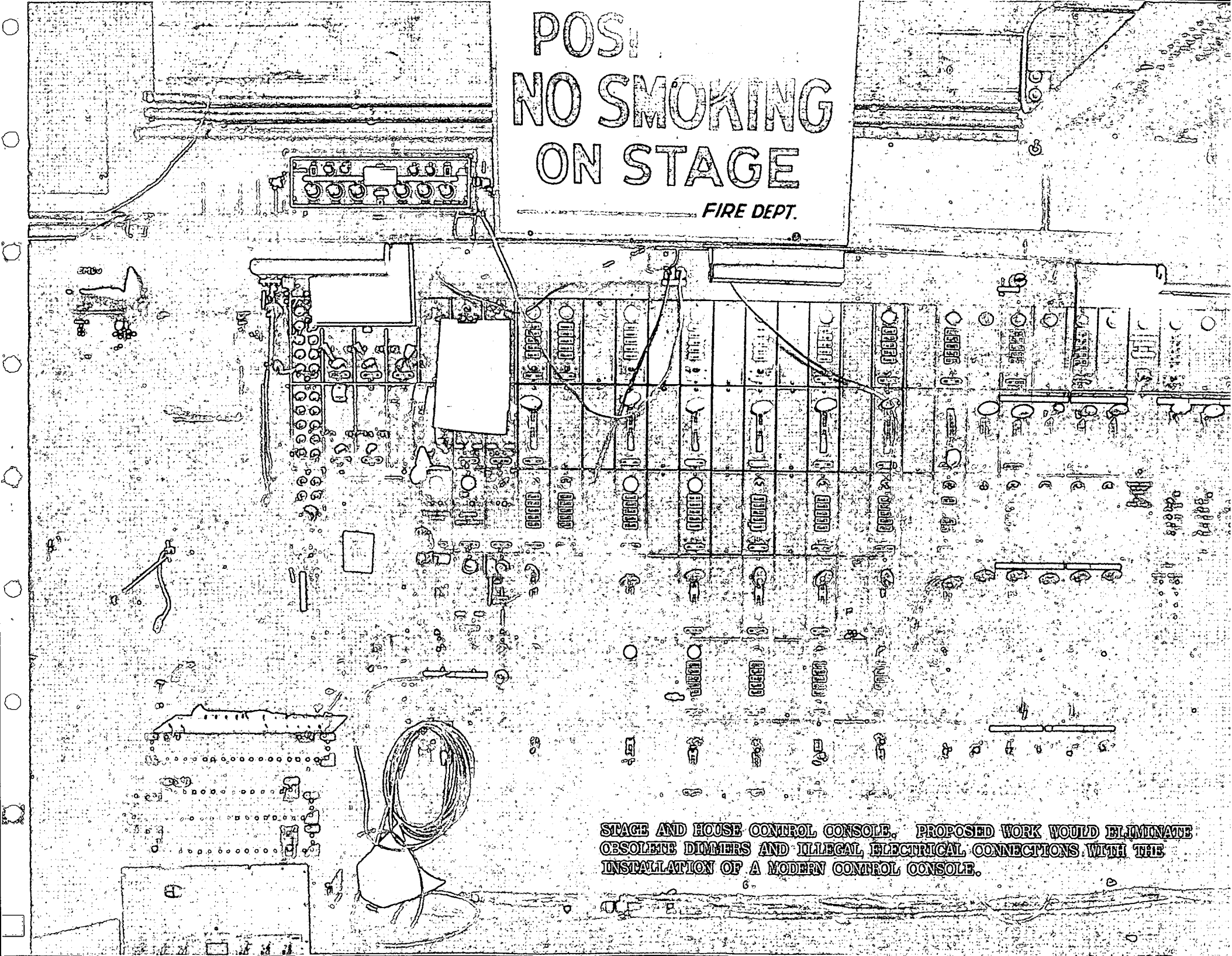


VIEW FROM BELOW THE MAIN ARENA OPERABLE FLOOR. THE WOOD AND STEEL STRUCTURE IS UNPROTECTED AND IN VIOLATION OF THE BUILDING CODE. PROPOSED WORK WOULD BE THE INSTALLATION OF A FULL AND AUTOMATIC FIRE SPRINKLER SYSTEM.

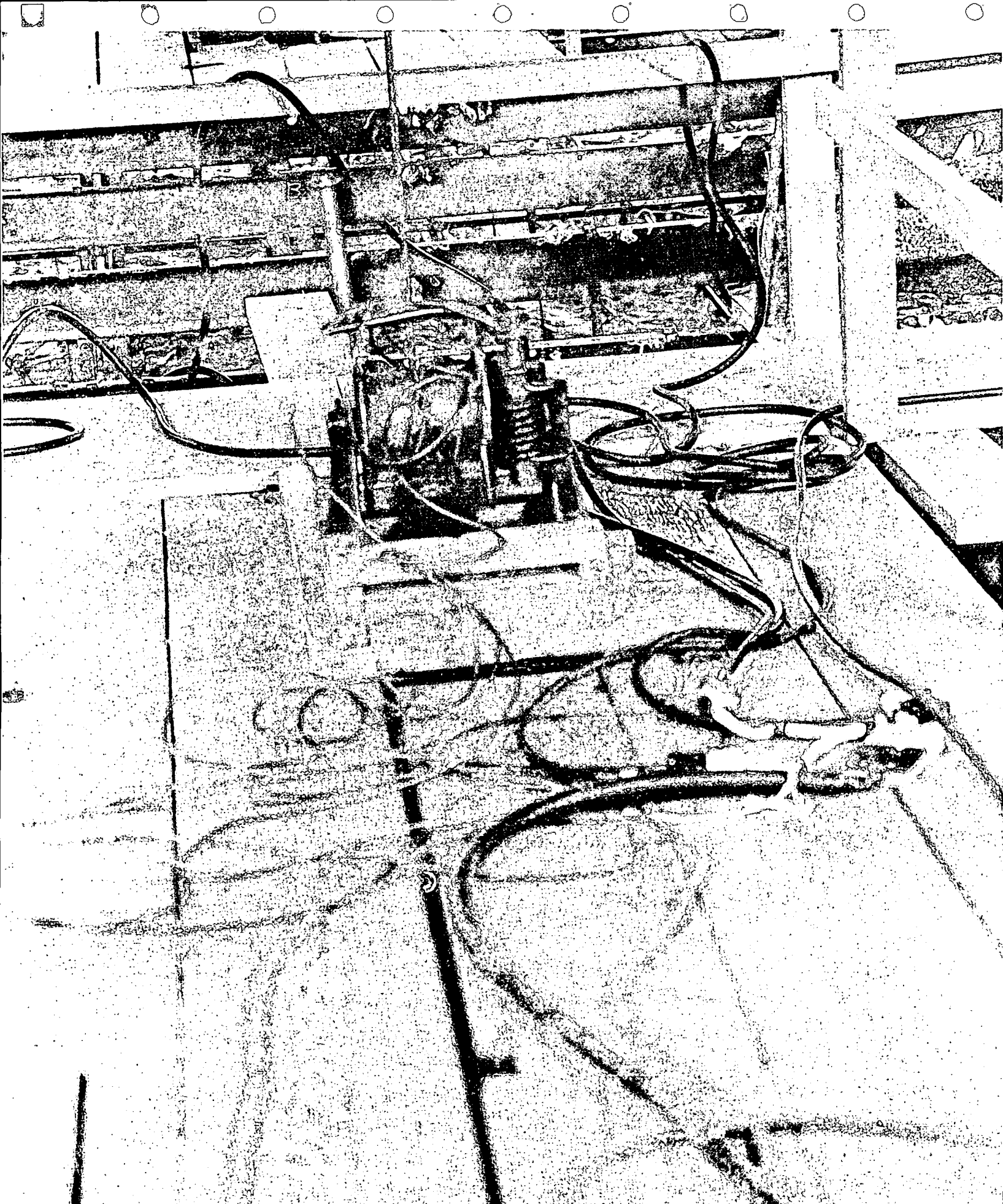


POST  
NO SMOKING  
ON STAGE

FIRE DEPT.



STAGE AND HOUSE CONTROL CONSOLE. PROPOSED WORK WOULD ELIMINATE  
OBSOLETE DIMMERS AND ILLEGAL ELECTRICAL CONNECTIONS WITH THE  
INSTALLATION OF A MODERN CONTROL CONSOLE.



IMPROPER ELECTRICAL CONNECTIONS IN THE ATTIC OVER THE MAIN ARENA.  
WORK HERE MUST INCLUDE THE TOTAL REDESIGN OF CONDUITS, RUNS, JUNCTION  
BOXES AND LIGHT FIXTURE CONNECTIONS.

## II. EXISTING FACILITY ANALYSIS

### A. FACILITY DESCRIPTION:

The Sacramento Memorial Auditorium, completed in 1926, is a non-reinforced brick masonry structure with a concrete beam/column bay system enclosing three major floor levels; two above and one below grade.

The first level, at assumed elevation -10.0 feet (street level at 0.0 feet), is the basement. It is currently used as a stage equipment and storage space but also houses the mechanical boiler room. The basement has access to the main arena operable floor truss cavity but should not be considered usable floor space. The basement is approximately 40,400 square feet.

The second level, the main floor at elevation +5.0 feet (elevation +1.0 feet for stage events), is an open multi-use arena floor with a fixed seat 'dress circle' of 843 seats.

This level relates directly to the surrounding street levels and patron circulation. From "J" Street users proceed through the entry portico, lobby and foyer to the main arena floor. Within the lobby are entrances to the Memorial Hall and the Little Theatre (seating + 290). Ticket box offices are also located in the lobby along with two

concessionaire booths. Vertical circulation to the first and second balcony levels is by stairs only, through the foyer. An interior peripheral hall circulation system around the main floor houses the community rooms, public toilet rooms, storage space, actor's dressing rooms and property rooms. The stage itself is located opposite the foyer beyond the main floor arena. Vertical circulation between basement stage and main floor (if truss is in its fully elevated position) is by freight elevator. This entire second level is approximately 48,600 square feet.

The third level, grouped collectively, is the first and second balconys at elevation +17.9 feet and +31.0 feet respectively. These levels have approximately 2,380 fixed seats and ring the main floor below on three sides, with an area of approximately 42,400 square feet. The summation of the fixed seats in the balconys and dress circle is 4,223 seats. The first balcony has an interior peripheral corridor "feeding" the seating areas and the ancillary spaces below the sloped seat cavities of the second balcony above. The remainder of this level is concessionaire booths, public toilet rooms, follow spot and projection rooms, dressing rooms, equipment and utility rooms, mechanical shafts and the pipe organ chamber. Over the stage at elevations above +31.0 feet occurs the wood gridiron and fly.

The interior has varying amounts of ornate plaster work in the public spaces, Memorial Hall and Little Theatre. The main arena ceiling is a suspended, highly detailed plaster.

B. APPLICABLE REGULATING CODES:

The major regulating codes affecting the Memorial Auditorium are:

1. Uniform Building, Plumbing, Mechanical and Electrical Codes - 1976, as modified by the City of Sacramento.
2. City of Sacramento, Department of Fire.
3. Standards for Historic Preservation Projects, United States Department of the Interior.
4. California Administrative Code - Title 24, Part 8; State Historic Building Code.
5. Department of Industrial Relations, Division of Industrial Safety.
6. American Standard Specifications for Making Buildings and Facilities Accessible and Usable by the Physically Handicapped - ANSI A117.1 - 1961 (R 1971).
7. Sacramento County Health Department Regulations.

8. American National Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks - ANSI A17.1 - 1971.

C. MAJOR COMPONENT DISCUSSION:

On this and the following pages is a discussion and evaluation of each of the major component systems within the Memorial Auditorium.

1. ARCHITECTURAL:

The discussion and evaluation within the architectural component will be dealt with as three categories:  
a. those modifications required to fully comply with existing building code regulations; b. those modifications necessary to extend the serviceable life of the Memorial Auditorium; and c. evaluation.

The Memorial Auditorium, analyzed using the current building code regulations, is a non-conforming, type A-1 assembly occupancy. Glaring code deficiencies occur throughout the facility.

a. Building Code Modifications:

- i. Provide a full, automatic sprinkler system throughout all areas of the auditorium including the stage, grid-iron and fly, main arena

and attic, area below the arena operable floor, basement, dressing rooms storage areas, Little Theatre and Memorial Hall.

- ii. Eliminate all combustible construction materials. This includes the stage wood gridiron, catwalks and exposed structural steel framing.
- iii. Eliminate all exiting deficiencies. They are numerous and are as follows:
  - Increase total basement exit width from 23 feet, existing, to 27 feet.
  - Increase total first (main) floor exit width from 62 feet 6 inches, existing, to 79 feet.
  - Increase total balcony exit width from 36 feet, existing, to 48 feet.

- Increase the size of all exit doors to 3 feet wide and 6 feet 8 inches high minimum.
- Eliminate excess length of all the balcony aisles exceeding the 20 foot maximum deadend length.
- Increase all the first and second balcony aisle widths from 3 feet 6 inches, existing, to 4 feet.
- Increase the balcony cross aisle width from 4 feet 6 inches, existing, to 10 feet.
- Increase each vomitory exit width from 6 feet 6 inches, existing, to 10 feet.
- Increase balcony row width from 2 feet 8 inches, existing, to 3 feet.
- Increase the number of main exit doors (facing "J" Street) from five pairs at 5 feet 8 inches wide each to seven pairs at 6 feet 2 inches wide each.

- Provide second exit from the balcony of the Little Theatre.
- Provide step illumination at the aisles of the balconys and dress circle.
- Provide illuminated exit signage, including an emergency back-up power supply.
- Provide panic type hardware at all exit doors.
- Provide handrails on each side of all stairs serving as exits.
- Provide an intermediate handrail at all exit stairs exceeding 7 feet 4 inches in width.
- Provide handrails on each side of all balcony aisles.
- Eliminate all non-complying ramp slopes and stair tread and riser dimensions.

- iv. Provide handicapped toilet facilities at the main floor.
- v. Provide code required number of toilets, urinals, lavatories and drinking fountains.
- vi. Provide ingress/egress access to the facility for the physically handicapped.

b. Serviceable-Life Modifications:

- i. Provide new off-street loading dock/service drive to the stage area.
- ii. Clean and seal exterior brick masonry as required.
- iii. Repair and replace cornice and flashings as required.
- iv. Refinish interior wall surfaces.
- v. Replace stage and main arena hardwood floors.
- vi. Repair and replace public area floors.
- vii. Repair and/or replace fixed seating.

- viii. Repair and refinish main arena ceiling.
- ix. Provide freight elevator to balcony levels and basement.
- x. Replace theatrical draperies.
- xi. Provide water to balcony levels.
- xii. Repair exterior scupper/drain systems.
- xiii. Refurbish dressing rooms.
- xiv. Relocate and refurbish concessionaire facilities.
- xv. Restructure ticketing/box office facilities.
- xvi. Provide standardized graphics (advertising, seat designation, etc.).

c. Evaluation:

A perusal of the building code modifications list brings to light how complex a program of full code compliance may be. The three major code issues are:

- i. THE WIDENING OF THE BALCONY CROSS AISLE TO 10 FEET;
- ii. THE WIDENING OF EACH BALCONY CROSS AND DRESS CIRCLE SEATING ROW TO 3 FEET; and
- iii. THE REMOVAL OF ALL COMBUSTIBLE CONSTRUCTION MATERIALS.

These three issues most seriously affect the usability of the auditorium. Compliance with the first two will necessitate the loss of at least 25% of the balcony and dress circle fixed seats.

DURING OUR TASK TWO INTERVIEWS WITH CITY DEPARTMENTAL DIRECTORS, SPECIFICALLY MR. SULLIVAN AND MR. CHARLES OF BUILDING AND FIRE, RESPECTIVELY, THE CONCEPT OF ADOPTING A PROGRAM OF LESS THAN TOTAL CODE COMPLIANCE WAS ADDRESSED. ALTERNATE LIFE SAFETY MEASURES WERE DISCUSSED WHICH WOULD STILL PRESERVE THE ARCHITECTURAL INTEGRITY OF THE MEMORIAL AUDITORIUM. THOSE PROPOSED VARIANCES ARE:

i. IN LIEU OF THE REMOVAL AND/OR FIRE RETARDANT TREATMENT OF ALL COMBUSTIBLE CONSTRUCTION MATERIALS A FULL AND COMPLETE AUTOMATIC FIRE SPRINKLER SYSTEM WOULD BE INSTALLED THROUGHOUT ALL SPACES AND AREAS WITHIN THE AUDITORIUM.

ii. IN LIEU OF WIDENING THE BALCONY CROSS AISLE, VOMITORIES AND SEAT ROWS, THE FOUR INTERIOR CORNER STAIRS TO THE MAIN LEVEL WOULD BE ENLARGED. IN CONJUNCTION, AN EFFECTIVE EXIT GRAPHICS PROGRAM WOULD ALSO BE DESIGNED TO AID PATRON EXIT PATTERNS.

IT IS OURS, OUR CONSULTANTS AND CITY STAFF OPINIONS THAT THE CITY OF SACRAMENTO ADOPT THE AFOREMENTIONED BUILDING CODE VARIANCES FOR THE REHABILITATION OF THE MEMORIAL AUDITORIUM.

THIS CONCEPT OF EMBRACING VARIANCES TO THE STATE AND CITY BUILDING CODES IS CONSISTANT WITH THAT OF OTHER MUNICIPALITIES WHICH HAVE MODIFIED THEIR OWN CODES, WITH THE INCLUSION OF HISTORIC STRUCTURES SECTIONS. AN EXAMPLE OF A GUIDE FOR CODE MODIFICATIONS IS THE DEPARTMENT OF INTERIOR - STANDARDS FOR HISTORIC PRESERVATION PROJECTS (AS THE MEMORIAL AUDITORIUM IS NOW INCLUDED ON THE NATIONAL REGISTER OF HISTORIC PLACES).



2. STRUCTURAL:

a. Exterior Brick Walls:

i. Discussion:

The exterior walls are of unreinforced brick masonry. These walls are supported vertically and laterally by the concrete beam and column system that exists throughout all the exterior walls, to support intermediate floors and roof. Brick walls are in essence "in-fill" non-bearing panels between concrete columns and beams. Structural plans indicate the brick is well tied to columns and beams.

ii. Evaluation:

Brick masonry work as it exists today is in extremely good condition, having strong cement mortar with no cracks or deterioration present in the brick work. While the brick is not required for vertical load carrying purposes, it is

obvious that all lateral force in the building due to seismic and wind loads must be carried by the exterior brick acting as shear walls. Openings in these walls are generally located such that there are no slender brick piers.

The Uniform Building Code does not allow unreinforced brick acting as shear walls in our seismic zone, but the City code provides for the use of such brick walls if they pass core tests and the stresses are sufficiently low.

b. Floors:

i. Discussion:

Floors including the balconys are all concrete beam and slab construction, with the exception of the stage floor and the single story wings at the front of the building, which are of wood joists with wood beams and column supports. Plans indicate reinforcing for the concrete is well engineered, providing for continuity over supports, etc. The concrete members

show a normal amount of cracking due to shrinkage. Structural wood joists and beams are in good condition with no sign of deterioration.

ii. Evaluation:

Calculations indicate that the live load stresses put upon the arena floor are acceptable by current codes. The stage falls below allowable loading in only one structural bay. The reinforcing of the stage floor can be easily accomplished.

c. Roof:

i. Discussion:

Roof structure over the main auditorium is of steel trusses and purlins with straight wood sheathing. All bays are braced laterally with steel rods and are capable of carrying lateral forces to the walls. Timber trusses and wood purlins make up the roof over the front side wings.

ii. Evaluation:

All roof members and columns appear to be adequately designed. It is our opinion that they are adequate for code imposed loading.

d. Stage Grid:

i. Discussion:

The present structural framing of the grid above the stage is of wood beams suspended by hanger rods to the steel roof beams above, with light wood framing spanning between beams.

ii. Evaluation:

Most of the members in this grid would comply with the code requirement of 75 psf loading, but some of the lighter lattice work on top would not. The wood members are generally in good condition with the exception of a very few, which could be replaced on an individual basis.

e. Hollow Tile Partitions:

materials to fit code requirements for such floor loading.

i. Discussion:

Many of the interior partitions are constructed of hollow clay tile, particularly in the basement and at the stage end of the building.

ii. Evaluation:

They are in good condition with no cracks to speak of, but the brittle nature of their construction makes them a hazard in a moderate to severe earthquake.

f. Orchestra Pit Covers:

i. Discussion:

This is a rather unwieldy system of wood panels and under-designed posts and beams below.

ii. Evaluation:

It should be completely redesigned with lighter

3. MECHANICAL:

a. Heating, Ventilating and Air Conditioning:

i. Discussion:

The existing system for the main auditorium consists of two large supply fans, steam coils and air distribution ducts located in the basement. Two existing exhaust fans are located in the attic which are not interlocked to the supply fans. Sixteen direct expansion air conditioning units are located in the attic to cool the main floor only. The condensing units are located on the roof with interconnecting refrigeration piping and controls.

The existing Little Theatre is air conditioned by a direct expansion refrigeration system and gas-fired furnaces.

The rest of the heated areas of the building are heated by steam radiators, while some areas including the basement do not have any heating or ventilation. Steam is generated by a large gas-fired boiler, vacuum return pump and controls.

The following corrections should be made to the building HVAC system in order to meet present-day codes:

- All areas of the building customarily used by human beings and all dressing rooms shall be provided with ventilating.
- Some portions of the existing air distribution system use the building walls for ducts. The walls must be one-hour rated; however, most of the walls do not have the one-hour rating and must be repaired or replaced.
- Some ducts pass through fire-rated walls without fire dampers. Fire dampers must be installed.

- The large fan systems require smoke purge and smoke detector capability.
- The basement requires a smoke purge system.
- The boiler room combustion air louver must be increased in size.
- The toilet exhaust system does not have sufficient capacity.
- The stage requires an automatic smoke ventilator.

ii. Evaluation:

The existing heating, ventilating and air conditioning systems are antiquated and generally do not conform to present-day code. The existing system serving the main auditorium should be modified as follows:

- A new chilled water cooling system should be integrated into the existing heating

only system. The existing split system refrigeration should be removed.

- A new air distribution system should be installed to properly distribute air throughout the area it serves. In particular, the air distribution system serving the balcony areas should be changed to remove the mushroom supply air devices located beneath the seats. These mushroom supplies have been a constant clean-up problem for the maintenance personnel and have added many hours of manpower and maintenance costs throughout the years. In addition, the location of these suppliers is a very poor method of distributing air for proper temperature controls.

- iii. A new pneumatic temperature control system should be installed including new controls for economizer cycles, smoke purge, and controls related to energy conservation. The existing

system is obsolete and not repairable due to unavailability of parts. In addition, provisions should be made to integrate the building temperature control system to the existing Central Supervisory Control System located in the Convention Center.

iv. The existing Babbit bearings and fan and motor drives and motors on the basement supply fans should be replaced with new V-belt drives, motors, and California Code guards.

v. The existing heating, ventilating and air conditioning systems for the Little Theatre should be modified by removing the existing direct expansion cooling coils and gas-fired furnaces and installing a new steam heating and chilled water cooling system. The existing control system should be replaced with a new pneumatic system.

vi. All areas of the building should be provided with adequate heating, cooling, and ventilation. The existing radiators should be removed and new air handling units and air distribution ducts installed.

vii. The existing boiler should be repiped into sections in order to obtain modular control and back-up capability in case of failure of one section. The existing steam and condensate return lines should be replaced with new piping because of general deterioration and corrosion of the existing piping. A new cold water make-up and control system should be installed on the existing vacuum condensate return system. Approximately 100 steam traps require replacement because parts are unavailable. The boiler requires chemical treatment.

b. Plumbing:

i. Discussion:

The existing plumbing system consists of various

plumbing fixtures and water heaters located throughout the building, sewer, water, and storm drain piping, sump pumps, and sewage ejectors.

The code modifications relating to the building's plumbing are:

- A natural gas line runs through an air plenum and must be removed to outside the plenum.
- A backflow prevention device is required on the cold water make-up to the boiler.
- Modify the sump pump discharge line connection to the gravity line.

ii. Evaluation:

New plumbing fixtures and piping should be installed to replace the existing antiquated and improperly located fixtures, including those required for the handicapped. Some areas of the building, such as in the dressing rooms,

janitors' rooms, and attic, do not have required plumbing. The existing sewage pumps require modification including installation of an automatic alternating switch, high water alarm, as well as a safer method of servicing. Area drains should be installed in 15 areas to prevent water flooding back into the basement. The sewage pump discharge pipe connection to the gravity line should be modified to a proper connection. The existing gasoline tank serving the emergency generator should be modified to prevent fuel or fuel vapors from entering the building.

The existing shower should be repaired to stop leaks. A new basement drain system should be installed to replace the existing inadequate system. The existing main cold water valve should be replaced with a new valve. Plumbing should be installed at new concession booths and in the basement for a catering kitchen.

The existing manually controlled lawn irrigation system should be converted to an automatic system to irrigate during the early morning hours rather than in the daytime hours. This will not only save personnel time and money, but conserve water.

c. Fire Protection:

i. Discussion:

The system consists of wet and dry standpipes, valves, hoses, and piping. There are no fire sprinklers in the building. There is an adequate exterior fire protection system.

Code deficiencies in the fire protection system are:

- The basement, grid-iron and areas behind the proscenium walls require fire sprinklers.

- The existing wet standpipe system does not comply with code.

- The existing dry standpipe system does not comply with code with regard to locations and height of valves above floor. The codes do not require a dry standpipe for this building. However, if they are retained, modification will be required to meet present-day code.

ii. Evaluation:

New fire sprinkler systems will be required for certain portions of the building, however, the installation of a new system for the entire building is recommended especially in view of the fact that trade-offs could be made for present building code deficiencies.

d. Title 24:

i. Discussion:

The building is a certified historical structure which does not comply with portions



of California Administrative Code Title 24 "Energy Conservation Standards for Non-Residential Buildings." Although not required to conform, every effort should be made to make the building as energy conserving as possible.

4. ELECTRICAL:

a. Main Switchboard:

i. Discussion:

The main switchboard manufactured by the Westinghouse Electric Co. in 1962 is rated at 3,000 amperes, 208/120 volts, 3 phase, 4 wires. It is a NEMA Class 3 structure with rear and front accessibility and individually mounted molded case type circuit breakers. The highest maximum demand recorded by the utility company is 400 kw. (9/20/79). Based on an assumed power factor of .87, the maximum current demand is 1,277 amperes. The current circuit breakers have become obsolete and replacement breakers and parts have been a problem and can be procured only through special orders and limited suppliers.

The secondary busses are exposed when rear panels are removed. Phenolic isolation barriers should

be installed to comply with the State Electrical Safety Orders. A plywood cover at the rear of the switchboard provides access to a set of 800 amperes connecting lugs for use of road shows. This is a hazardous situation and contrary to code requirements. Removal of the rear panels for cable connection exposes personnel, who are not usually qualified electricians to energized busses in the switchboard.

A grounding electrode connection is incorrectly made to the switchboard neutral bus and ground bus.

Feeder circuit breakers IDP and IBP handles are 1 inch above the 6 foot 6 inch maximum height permitted by code.

ii. Evaluation:

- Replace the obsolete current circuit breakers.
- Modify buss covers to prevent unauthorized personnel from making connections.

- Complete the grounding electrode connection.
- Correct the height of feeder circuit breakers IDP and IBP handles.

b. Road Show Connections:

i. Discussion:

The primary sources of power for road shows are supplied through three circuits. The first power source is a 400 ampere, single phase, 3 wire circuit terminated in a fusible disconnect switch mounted on the wall behind the stage dimmer panel. Constant connections have damaged the connecting lugs. The second road show power source is an 800 ampere, 3 phase, 4 wire circuit connected to three cable terminating lugs located at the rear and bottom of the main switchboard. The Ice Capades Show is the primary user of this power source for their ice making compressors. The third and final power source is a 400

ampere, 3 phase circuit terminated in a fusible disconnect and located in the basement adjacent to the main power panel.

ii. Evaluation:

- Provide power connections for the road shows; 1-400 and 1-800 ampere, 3 phase circuit at stage left and right on the back wall.
- Provide a power source at the rear of the main auditorium floor for electrical and sound boards.

c. Distribution and Lighting Panelboards:

i. Discussion:

The majority of the distribution and lighting panelboards are an anti-qualified fuse/switch type. Replacement parts are no longer available and it is doubtful if these switches can meet the present-day short circuit stresses. A fairly new distribution panel located in the attic is installed

such that the operating handles of the circuit breakers are not reachable by personnel standing on the catwalk.

ii. Evaluation:

- Replace all existing, antiquated distribution and lighting panelboards.
- Relocate the distribution panel in the attic so as to be accessible by maintenance personnel.

d. Emergency Power System:

i. Discussion:

The emergency power is supplied by a gasoline engine driven generator rated at 43.5KVA, .8 p.f., 208/120v, 3 phase, 4 wire system. The output is connected through a 200 amperes transfer switch to a panelboard. An "arm" switch was installed in the emergency control circuit to preclude the start-up of the generator during non-performance days. This switch could

inadvertently be left open during performances.

Some of the emergency circuits appear to feed through existing lighting panelboards to a separately mounted fused switch. This would be a violation of National Electrical Code (NEC) 373-8. Although the building occupancy type does not require an emergency power system in accordance with UBC, NFPA 101 Life Safety Code, however requires emergency lighting in all places of assembly and their means of egress. NEC 700-17 requires that emergency circuit wiring "be kept entirely independent of all other wiring and equipment shall not enter the same raceway, cable box or cabinet with other wiring."

ii. Evaluation:

- Eliminate the transfer "arm" switch at the emergency generator.
- Replace the complete emergency lighting system including the raceways.

- Evaluate the existing generator for ampacity and the possible change to different fuel systems (other than existing gasoline fuel).
- Provide an electric battery powered generator for emergency lighting.

e. Lighting:

i. Discussion:

The general lighting in the main auditorium, dress circle, balconys, dressing rooms, Memorial Hall, and lobby consist of incandescent lighting fixtures. The corridors, restrooms, basement and attic are illuminated with fluorescent lighting fixtures. The incandescent light fixtures have been a constant source of maintenance problems because of accessibility and short lamp life. The sport events lighting is an area that will require a considerable amount of attention. The auditorium was not originally designed to include the multitude of

events that currently take place. The various sport events include boxing, wrestling, basketball, tennis and roller derby. A special crew is required to provide illumination for each event by suspending light beam structures or "bell lights" from the roof structure through ceiling openings. The set-up and disassembly time is extremely long. For example, an arena event such as tennis requires 10 man-days to suspend the lighting fixture support pipes, install, focus and aim the fixtures and make all the power connections. It requires 4 man-days to disassemble and remove all of the equipment. The lighting fixtures are 2,000W tungsten halogen type floods suspended at approximately 31 feet above the floor. The illumination of the court is not uniform and the area behind the baseline did not have sufficient illumination levels. The house lights above the second balcony have been modified so that they can be serviced from the top. Details of the modification

should be examined to determine adequacy.

The aisles in the second balcony requires illumination. The steepness and lack of illumination on the aisles create a very hazardous situation.

ii. Evaluation:

- Replace the fluorescent fixtures in the public areas with units which are more in character with the facility.
- Include diode circuitry at the arena incandescent chandeliers to extend lamp life.
- Redesign arena lighting to incorporate various flexible production type lighting systems.
- Install aisle lights at the balconys and dress circle fixed seats.
- Dressing room make-up lamps must be equipped with lamp guards.

- Replace and/or redesign light fixtures with energy efficient units.

f. Power Pockets, Receptacles, Motor Starters and Disconnects:

i.. Discussion:

The power pockets are used to supply power to the follow spots in the balcony. These devices do not have provisions for ground connections and are obsolete and hazardous to use. Many duplex receptacles are the non-groundable type. Starters for the supply air handlers are manual type and obsolete.

ii. Evaluation:

- Replace power pocket connections with twist-lock plug-in connectors.
- Replace all receptacles with groundable types.
- Replace all motor starters and disconnects.

D. ACOUSTICAL:

1. BACKGROUND NOISE:

a. Discussion:

The most obvious acoustical characteristic of the auditorium is background noise. With all building mechanical systems turned off, the facility itself is quiet enough for concert performance; but intruding noise due to traffic, sirens, occasional aircraft, etc. is a serious problem that must be corrected. With the various cycles of the air conditioning system on, the background noise would be acceptable for sports events (assuming a good sound amplification system) and rock concerts, but totally unacceptable for serious music listening. Sources of noise created within the facility are the clatter of wooden seats and activity in the concourses that are immediately adjacent to audience seating.

Interior finishes are chiefly sound-reflecting, with the exception of a substantial area of moderately absorptive seats and a thin layer of cellulose fiber board on the outer

part of the ceiling. Generally, this is not satisfactory for either reverberation control or for control of echoes (long-delayed reflections) from distant corners of the auditorium.

b. Evaluation:

- i. "Mask" the interior of the auditorium from outside and equipment noise (i.e., provide vestibules, weatherstripping, window shutters).
- ii. Integrate sound absorbing materials into wall, ceiling and seating design.

2. SOUND AMPLIFICATION:

a. Discussion:

The existing sound amplification system is inadequate in two respects: it does not provide satisfactory "coverage" with adequate sound level over the audience seating area, and it is not adequate in level and frequency range for most of the program material it is required to accommodate. While it may not be reasonable to expect "rock" music capabilities, the auditorium requires a considerable upgrading in sound system quality.

b. Evaluation:

- i. Design and integrate a modern, flexible sound amplification system into the auditorium.



E. THEATRICAL:

1. STAGE AND BACKSTAGE:

a. Evaluation:

- i. Increase the load capacity of portions of the grid.
- ii. Reduce height of loading gallery.
- iii. Provide truck dock entrance to stage.
- iv. Provide spaces for equipment storage.
- v. Provide a 'green room' and quick-change rooms at stage level.

2. THEATRICAL EQUIPMENT:

a. Evaluation:

- i. Replace draperies, including the fire curtain.
- ii. Provide front lighting for forestage and first entrance.
- iii. Replace dimmer board.

- iv. Provide production interphone, house telephone, booth monitors and talk-back systems.

3. LITTLE THEATRE:

a. Evaluation:

- i. Provide all equipment in Little Theatre per Item 2, above.
- ii. Replace existing fixed wood seating.

**PART TWO**

**EVENT PRIORITY**

**AUDIENCE, PERFORMANCE**

**AND FACILITY OPERATIONS**

**REQUIREMENTS**

**TRAFFIC AND SERVICE**

**REQUIREMENTS**

## I. EVENT PRIORITY

### A. INTRODUCTION:

The priority given to different event types when allocating resources in the rehabilitation programming should be determined by:

1. The extent to which the auditorium is or can be made suitable for the event.
2. The availability of more suitable facilities elsewhere, particularly in the Community Center.
3. The relative popularity and profitability of the event.
4. Special local considerations (as in the case of the community college which decides to build a campus auditorium as a summer home for the symphony).

In approaching this project, we emphasized the need for an agreement about what the rehabilitated auditorium was to do. Leonard Zerilli's remarks at the meeting of September 11 simplified this part of the study, as it became apparent that management's goals were based on the first three criteria and that there were no special interests lurking in the wings. We were told that all the types of touring events they consider feasible, have already played the auditorium; that he

believed it would be a waste of resources to fully equip the facility for in-house stage production; and that symphony, opera and drama, if they use the auditorium, would benefit from improvements made for other events. Properly serving symphony, opera and drama would require enormous expenditures, and even then the auditorium would be less suitable for them than the Community Center Theatre.

The relative future profitability and popularity of event types among those we are trying to accommodate is not entirely predictable. It depends on, among other things, how successfully the rehabilitation meets their requirements.

### B. HIGH PRIORITY EVENTS:

1. TOURING ATTRACTIONS ON STAGE SUCH AS ROCK CONCERTS, MUSICAL COMEDY, AND HEADLINER SHOWS.
2. FAMILY ATTRACTIONS SUCH AS ICE CAPADES AND CIRCUS.
3. SPORTS EVENTS SUCH AS BOXING AND WRESTLING IN A CENTRAL RING, TENNIS AND BASKETBALL ON THE ARENA FLOOR, and perhaps Roller Derby and similar events where special equipment (the track, in this case) tours with the attraction.
4. INTERACTIVE MEETINGS (CONVENTIONS) - This event, in all probability will become high priority due to the real

likelihood that a multipurpose arena will be built within the city. The Memorial Auditorium, in this case, will revert to convention activities to maintain its credibility as an income producer.

C. LOW PRIORITY EVENTS:

The remaining targeted events get the working label "low priority," but they account for a large number of event days and a very significant proportion of the gross income the auditorium needs. Targeted events having low priority (in the allocation of resources) include these non-performance events:

1. SINGLE-ENDED MEETINGS: High School graduations and religious revivals.
2. BALLROOM EVENTS: Senior Citizens' Ball.

And these performance events:

1. SYMPHONY, OPERA, DRAMA: Because their needs cannot be reasonably met.

In the first category of non-performance events above, the label low priority is given because their respective needs are modest and in fact many of them will be met in provisions to other events.

Beginning with the following section, on the next page, we will list our recommended solutions to the specific deficient areas within the Memorial Auditorium. All the deficient areas and our recommendations are wholly based on the needs of high priority events, immediately preceding.

II. AUDIENCE, PERFORMANCE AND FACILITY OPERATIONS REQUIREMENTS

A. INTRODUCTION:

The special audience and facility operations requirements are grouped in one broad category while the performance requirements will be addressed separately: touring, arena and stage events and a general "all events" section (for those event types not easily categorized).

B. AUDIENCE REQUIREMENTS:

1. CORRECT EXITING FROM BALCONY LEVELS TO MAIN LEVEL:

a. Recommendation:

As we have already stated in Part One, Existing Facility Analysis, we recommend the City adopt a policy of less than total code compliance, in effect develop a code program which will provide a reasonable degree of compliance without major disruption to the auditorium's historical fabric. To comply with the exiting requirements, as we recommend them, the following must be accomplished:

- i. Increase each aisle of the first balcony from 3 feet 6 inches to 3 feet 9 inches. This entails the loss of approximately 19 seats.
- ii. Increase each aisle of the second balcony from 3 feet 6 inches to 4 feet. A loss of approximately 86 seats would be incurred.
- iii. Eliminate the excess length of aisle beyond the code maximum of 20 feet. Approximately 98 seats would be lost.
- iv. Provide aisle step lights.
- v. Provide aisle handrails.
- vi. Increase the width of each of the four major interior corner staircases from 6 feet to 9 feet.

2. SEATING AREAS:

a. Deficiencies:

The fixed seating at the dress circle and balconys is a combination of floor and riser mounted units. The dress circle and first balcony have upholstered seats and backs, while the second balcony seats are wood.

The seats are all old (the last major work done was on the dress circle units, in the late 1950's) and a maintenance nuisance.

b. Recommendation:

We feel three alternative schemes are available:

- i. Scheme One: Completely remove all existing seating and replace it with new molded plastic, riser mounted units.

- ii. Scheme Two: Move all upholstered seats in the dress circle to the second balcony; move all the upholstered seats in the first balcony to the second balcony; install new upholstered seats, plastic back, riser mounted seats in the first balcony and dress circle. All seat mounts then would be riser type.

- iii. Scheme Three: Rehabilitate seating in the dress circle and first balcony to include cleaning of seat fabric and painting/repair of the riser mount and install new riser mount brackets for the existing seating at the first balcony; install new riser mounts and molded plastic seats at the second balcony.

Molded plastic seating is recommended because of its obvious durability and ease of cleaning. The probable increase of touring type events (i.e. rock concerts) necessitates a strong, maintenance free type of seating. Our recommendation is Scheme One.

The remaining seating area includes those portable units used on the arena floor. These chairs are heavy and in medium to poor condition. The options available are to refurbish these chairs or purchase new lightweight stacking chairs. We recommend the purchase of the new chairs.

3. ARENA CEILING:

a. Deficiencies:

Our review of the existing facility has brought to light this potentially hazardous condition. The ceiling is an ornate, suspended plaster which, due to extreme hard use (operations and road show personnel walking on and cutting holes through it for production events) and rock concerts (high decibel vibrations) have caused it to deteriorate to a point of possible failure.

b. Recommendation:

Four alternate schemes have been developed:

- i. One: Leave the existing ceiling intact; reinforcing it with suspension wires set within the existing plaster using epoxy.
- ii. Two: Leave the existing ceiling intact; reinforce it using an epoxy injection procedure--spray the epoxy over the entire surface exposed in the attic.
- iii. Three: Remove the existing ceiling and replace it with an exact replica, also of plaster.
- iv. Four: Remove the existing ceiling and replace it with an exact replica in fiberglass.

Our recommendation is to use Alternative Four. The ceiling must be flexible enough to accommodate cut-outs for pre-set lights, winches, etc. To use Alternate Two would greatly reduce this required flexibility. Alternate One will not guarantee a safe ceiling structure. The existing plaster has deteriorated greatly and the epoxy suspension inserts are only as good as the surrounding plaster matrix. In effect, large

pieces of plaster could break away between the suspension inserts. Alternatives Three and Four are basically the same, but the Alternate Three system is heavy, cumbersome to erect and most importantly, susceptible to the same deterioration as in the existing ceiling.

4. TOILET FACILITIES:

a. Deficiencies:

Currently provisions for the handicapped are non-existent and no facilities are on the main auditorium level. Existing antiquated toilets are only in the basement and balcony.

b. Recommendation:

Provide new additional toilets at both the main and balcony level toilets. Toilet facilities on the main level would be designed for use by the handicapped, while facilities at the balcony and basement levels would not. Possible locations for the toilet facilities at the balcony are a new level over the Memorial Hall (ticket windows and convention meeting rooms taking the main floor space)

or where some dressing rooms exist now at the building's northeast corner.

5. TICKETING/BOX OFFICE:

a. Deficiencies:

Currently management staff has no modern box office facilities at the auditorium. A 'satellite' box office with new ticket windows is required. The existing four ticket windows, in the main lobby, are obsolete, small, lack security against robbery, have no inter-window communications and cause patron circulation problems.

b. Recommendation:

We propose the City undertake a feasibility study to determine if the present box office at the Community Center Theatre can be enlarged to accommodate the growing staff, storage and equipment requirements.

Independently, the audience requirements upon the ticketing facilities at the Memorial Auditorium will require extensive redesign. Even with an expanded box office at its present location at the Community Center, the auditorium will require a minimum



of three exterior windows to handle event ticket sales and will-call. Provisions will have to be made for a secure money counting room with a safe and alternative spaces for event promotion and security personnel. We propose to convert a portion of the Memorial Hall to handle these functions.

6. CONCESSIONS:

a. Deficiencies:

The existing concessions are small, lack equipment and electrical outlets and are located adjacent to major exit points which bottlenecks patron circulation.

b. Recommendation:

Provide new concessionaire booths, including equipment, flexible electrical hook-ups and an effective graphics program. The concessions must be obvious to the patron yet not a direct cause of circulation congestion. We propose the relocation of the main level concessions to the middle of the east and west corridors, adjacent and north of new exits to 15th and 16th Streets. At the balcony level the concessions will be located in the east, west and south corridors, occupying space currently designated for coat checking.

C. PERFORMANCE REQUIREMENTS:

1. TOURING PERFORMANCE REQUIREMENTS:

a. Truck Dock:

Develop a stage-level dock entrance for at least one truck, backed up to the stage and off the street. The upstage left corner (auditorium's northeast corner) is our recommended position. This dock area would also serve City refuse collection. The development of this on-site truck dock necessitates the filling of the existing northeast ramp driveway to the basement and the sealing of its door. The remaining ramp in the northwest corner will remain to service the basement directly from the outside. (See Appendix, Diagram One.)

b. Company Switch:

Provide a new company switch as part of an integrated stage and general lighting design. The connection outlets should be 1-400 ampere and 1-800 ampere.

c. Freight Elevator:

Replace the existing freight elevator with a modern, larger one in the same place, with

stops at the basement, stage and balcony. Also provide a second freight elevator adjacent to the truck entrance dock which would service the above described levels. This second elevator is more strategically placed in relation to the on-off loading functions and would not interfere, to as great a degree, with stage event rehearsals. The enlargement of the old incinerator shaft may meet the requirements.

2. ARENA PERFORMANCE REQUIREMENTS:

a. Lighting:

Install a new lighting system incorporating:

- i. General high-intensity lighting for the arena.
- ii. Dimmer control of the existing chandeliers.
- iii. Switchable and/or patchable down lighting for specific areas.
- iv. A rigged frame for ring lighting. We now think this should break down into four trusses and store in the basement. The pieces could be spot-rigged anywhere high-level short-throw lighting is

needed. Winches and feeder cables would be permanently installed above the ceiling at its normal position.

- v. New panelboards and feeders.

b. Follow-Spot Platforms:

We recommend the provision of two permanent follow-spot platforms and power receptacles placed at the auditorium's southeast and southwest corners in the balcony. These platforms can be located in the balcony seat rows which must be abandoned where the aisles exceed the 20 feet maximum deadend limit.

c. Scoreboard:

Provide a suspended scoreboard and integral sound amplification speaker cluster at arena center. Ideally, this unit would fly into the arena attic when not in use.

d. Flexible Rigging:

Provide support locations in the arena attic for spot line rigging, through the suspended, decorative plaster ceiling for casual decorations, special handings and lighting. We also

recommend power receptacles be placed at the rigging supports for portable winches. Also a direct requirement of the flexible rigging is to completely rebuild and reposition the attic catwalks to better service the majority of expected event types.

3. STAGE PERFORMANCE REQUIREMENTS:

a. Front Lighting:

Install (as part of a coordinated performance lighting control and distribution system) permanent front lighting above arena ceiling, capable of being preset to light the forestage and first entrance. Provide road board intercept plugs for these circuits. Provide stage lighting circuits in drop boxes for stage battens. Provide lighting instruments for basic lighting.

b. Miscellaneous:

A number of items are grouped within this section and are:

- i. Remove the existing foot-light trough and install new stage flooring.
- ii. Provide a new set of curtains and drapes, including a fire curtain.

- iii. Install new running and work lights.
- iv. Move the loading gallery to the proper height for loading arbors.
- v. Increase the load capacity of grid and headbeam, strengthen the locking rail and provide portable winches to pull down arbors for loading at the stage floor.

4. 'ALL EVENT' PERFORMANCE REQUIREMENTS:

a. Orchestra Pit Covers:

Remove the existing pit covers support beams and columns and install a new portable, free-standing forestage structure independent of the movable arena floor.

In conjunction with this work, also provide a portable riser platform at the stage which will allow arena floor events to have spectator seating full around. When not in use, the platform will stack against the stage back wall.

b. House Communications:

Provide a house telephone, public telephones, production interphone, stage monitor/paging and booth/lobby monitor talkback systems. Also provide a public area notification system (i.e. "end of intermission").

c. Classical Pipe Organ:

Our recommendation, along with that of Mr. Jim Hodges of the Sierra Chapter, American Theatre Organ Society, is to restore the existing Estey organ to full and proper recital condition. The Organ Society has kept in constant touch with the management staff of the Convention Center and has voluntarily examined the organ, its console and pipes and has found it to be in remarkably good condition. Mr. Hodges is pursuing the possibilities of Federal Grant monies to restore the organ, but in any case, we recommend the City take up negotiations with the Organ Society and staff to determine all possible ways of funding its restoration.

d. Sound Amplification System:

Our recommendation is to provide a system for adequate speech reinforcement. As we have prioritized the event types, the major touring attractions (rock concerts, ice capades, etc.) provide their own sound system, and the remaining types have minimal acoustical requirements. One additional recommendation directly related to the auditorium's improved acoustical properties is that of controlling exterior noise. We recommend all exterior doors and windows be fitted with weatherstripping.

e. Little Theatre:

Upgrade the Little Theatre including seating, HVAC lighting, stage rigging and provision for toilet facilities. The toilet facilities would include handicapped units on the main floor level with the non-handicapped facilities created from the currently unexcavated basement below the theatre.

f. Memorial Hall:

Redesign the Memorial Hall to function as convention meeting rooms and a satellite box office when events are produced at the auditorium. Provide a minimum of three exterior wall ticket windows.

g. Basement:

Reconfigure the basement to include public meeting and conference rooms. This would entail new partitioning, HVAC systems, lighting and electrical. The publicly used area would be approximately 20,000 square feet. The remaining basement area (+28,000 S.F.) would be used for mechanical and electrical equipment rooms, event equipment storage, a workshop and a kitchen. Early meetings with event coordinators at the Convention Center brought to light the need for a catering kitchen facility. Besides the needs of an independent caterer, the touring event employees require cooking facilities. We recommend the design of a

kitchen facility including an oven, range, refrigerator, sink and warmers within the basement. Mechanical systems such as exhaust fans and fire suppressants and appropriate electrical service connections must also be included.

D. FACILITY OPERATIONS REQUIREMENTS:

1. INTRODUCTION:

This section deals specifically with those requirements of the maintenance operations aspects of the Memorial Auditorium.

2. CLEANUP:

Remove the mushroom ventilators under the seats. Provide well planned custodial and equipment spaces throughout the main, balcony and publicly occupied basement levels; select finishes with maintenance in mind.

3. REFUSE CONTAINMENT:

Provide a refuse compaction and storage unit, on site, adjacent to the truck dock entrance. Along with the refuse unit, a freight elevator must be in close proximity and serve all publicly occupied levels to aid in refuse removal after events.

4. MECHANICAL SYSTEMS:

New mechanical systems will reduce maintenance manpower requirements for the facility while high maintenance costs for the building are due primarily to antiquated equipment, piping, temperature controls,

plumbing fixtures and the present methods of air distribution. Each of these systems should either be replaced with new equipment or modified to reduce maintenance costs. The operation of the mechanical systems will be greatly simplified by installing a fully automatic temperature control system. This system shall have the capability of controlling all equipment from a central temperature control system.

5. EVENT LIGHTING:

Provide "pushbutton" presets for the most common setups, with easily erected special equipment to handle all predictable special events. Provide catwalk access, rigging, etc. to reduce set-up time, maintenance and relamping. Provide proper company connections with overcurrent protection.

6. SPECIAL SET-UPS (RING SPORTS):

Designate storage space (basement) and movement patterns for efficient use of air casters; upgrade the existing freight elevator and install a new freight elevator, as previously described, and special equipment as required.

7. STAGE AND ARENA FLOORS:

Both the stage and arena wood flooring is badly deteriorated. We recommend the stage floor receive a layer of particle board overlayment and the arena floor be completely redone with new hardwood.



### III. TRAFFIC AND SERVICE REQUIREMENTS

#### A. INTRODUCTION:

As we surveyed the traffic situations around the periphery of the Memorial Auditorium, a number of obvious shortcomings were immediately recognizable.

#### B. DEFICIENCIES:

1. All bounding streets are one-way directional (which reduces the number of possible working alternatives).
2. The streets are all major surface arterial connectors (touring events with tractor/trailer rigs using these streets only increase congestion).
3. The proximity of the loading doors to "I" Street as well as their location in the stage rear wall.
4. The total inability to use the originally designed service drive ramps to the basement level.
5. Within the building, at the stage, two major elements occur. Both the existing freight elevator and the counterweight system for the stage gridiron are located at stage right (northwest stage corner).

Considering these site and building interior constraints, we propose the following:

#### C. RECOMMENDATIONS:

1. Leave the existing freight elevator in its current location (install a new elevator here, per our recommendations previously discussed).
2. Rework arbor winches (located with counterweight system) and leave counterweight system in its current position.
3. Provide a new off-street single truck dock entrance, including dock leveler and overhead door at the stage left wall (stage northeast corner). Entry to the dock would be via 16th Street. A docked truck would be completely off both 16th and "I" Streets and would parallel "I" Street.
4. Off-loaded trucks would either parallel park on the 15th, 16th, or "I" Street curbs or somewhere in the vicinity as they are currently doing.
5. The touring shows (i.e. Ice Capades) would have the ability to park one truck in the loading drive, off all streets, to serve their specific requirements at the stage.

6. A second freight elevator would be constructed inside the building, immediately adjacent to the dock. Vertical travel would include stops at the basement, stage and balcony. This adjacency factor would eliminate any disruption to stage event production and rehearsal when loading and unloading is done by personnel other than company oriented (i.e. concessionaires, trash, building maintenance).
7. A trash compactor and storage unit would be placed within the service drive area. City refuse trucks will be able to load and unload off the streets and return to the traffic lanes without backing into them. A freight elevator at the dock door area proves again to be efficient because building maintenance personnel will be able to load from the basement and balcony levels and drop-off directly at the compactor unit.

**PART THREE**

**PRIORITY RECOMMENDATIONS  
CONSTRUCTION PHASING  
RECOMMENDATIONS**

I. PRIORITY RECOMMENDATIONS

A. PRIORITY CATEGORIES:

We recommend rehabilitation construction based upon the following six priority categories:

1. LIFE SAFETY:

THOSE DEFICIENCIES DIRECTLY RELATING TO PATRON AND FACILITY EMPLOYEE SAFE USAGE OF THE AUDITORIUM.

2. MAINTENANCE OPERATIONS:

THOSE DEFICIENCIES WHICH PREVENT EFFICIENT USE OF MANPOWER, MANHOURS AND MATERIALS IN THE MAINTENANCE OPERATIONS OF THE FACILITY.

3. EVENT PRODUCTION:

THOSE DEFICIENCIES WHICH PREVENT EFFICIENT, PROFESSIONAL AND SAFE EVENT PRODUCTION.

4. AUDIENCE COMFORT:

THOSE DEFICIENCIES WHICH PREVENT THE FULL SENSORY APPRECIATION OF AN EVENT.

5. MANAGERIAL OPERATIONS:

THOSE DEFICIENCIES WHICH PREVENT THE CONVENTION CENTER MANAGEMENT AND STAFF FROM UTILIZING THE AUDITORIUM TO ITS FULL POTENTIAL.

6. BUILDING AESTHETICS:

THOSE DEFICIENCIES WHICH HAVE DIMINISHED THE VISUAL AESTHETICS OF THE FACILITY.

B. DEFICIENCY RECAPITULATION:

Following is the recapitulation of specific deficiencies within each of the priority categories from which will develop our recommendations for construction priorities.

The following notation: (CODE), where it occurs, means that the item is a building code deficiency.

1. LIFE SAFETY:

- a. Construct truck and van loading dock.
- b. Perform recommended work required to make the auditorium's exiting reasonably conform with the Uniform Building Code. This would include widening the balcony aisles and eliminating excess aisle length over 20 feet, widening each of the corner stairs, providing new east and west exits, providing approved exit hardware on all exit doors, providing dress circle and balcony aisle step lights and handrails and providing illuminated exit signage with an auxiliary emergency lighting system. (CODE)

- c. Install a full automatic fire sprinkler system throughout the auditorium. (CODE)
- d. Replace the arena decorative plaster ceiling.
- e. Remove all existing hollow tile partitioning in areas that will be occupied by the public. (CODE)
- f. Perform all work required by the National Electrical Code at the auditorium's main switchboard. (CODE)
- g. Correct all electrical grounding deficiencies. (CODE)
- h. Strengthen portions of the stage. (CODE)

2. MAINTENANCE OPERATIONS:

- a. Remove ventilation mushrooms at the fixed seating areas (necessitates the HVAC system's rehabilitation).
- b. Provide riser mounts at all fixed seat areas.
- c. Provide wet closets for janitorial equipment at all levels of the arena.

- d. Provide removeable forestage and stage riser platform.
- e. Provide freight elevators with stops at all levels.
- f. Provide refuse compaction and storage unit.
- g. Standardize lighting fixtures with energy efficient units where possible.
- h. Provide, above arena ceiling, full system of catwalks and rigging positions.
- i. Provide workshop in the basement for repairs.
- j. Construct new toilet room facilities (including handi-capped). (CODE)
- k. Provide code approved accesses to roof and roof equipment. (CODE)
- l. Provide modern, stacking chairs for use on the arena floor.
- m. Re-key the auditorium to conform with that of the Community Center.
- n. Interface the Delta 2000 with the auditorium.

o. Replace obsolete electrical distribution and lighting panelboards. (CODE)

p. Replace all branch circuit and feeder wiring. (CODE)

3. EVENT PRODUCTION:

a. Provide production connections (company switch).

b. Provide master control console and interhouse communications.

c. Provide stage and arena pre-set lighting.

d. Provide dimmer banks.

e. Provide arena rigging and rebuild fly and gridiron at the stage.

f. Refurbish dressing rooms. (CODE)

g. Provide sound reinforcement system.

h. Provide specialized sporting event lighting and scoreboard.

i. Refurbish the existing Estey pipe organ.

j. Provide acoustical treatments.

4. AUDIENCE COMFORT:

a. Provide handicapped with means of egress and ingress to main level of arena. (CODE)

b. Provide new, larger, more modern concessions.

5. MANAGERIAL OPERATIONS:

a. Convert the Memorial Hall into a satellite box office and convention meeting rooms.

b. Provide a catering kitchen in the basement.

6. BUILDING AESTHETICS:

a. Redecorate the public spaces, including painting, repairs, restoration of all surfaces.

b. Wash and clean the exterior masonry.

c. Upgrade site lighting.

d. Design a new automatic landscape irrigation system, redesign and plant new lawn surfaces and plant materials; pave between curb and sidewalk leaving open tree wells.

## II. CONSTRUCTION PHASING RECOMMENDATIONS

### A. INTRODUCTION:

The methodology used to develop the construction recommendations was determinant upon:

1. Primary and secondary relationships of each deficient area (i.e. what areas were or were not interdependent on any other).
2. Construction time, including lead time (that required to order and fabricate equipment) and down time (that time when systems are inoperative due to construction).
3. Estimates of construction costs.
4. These basic assumptions:
  - i. Primary expenditures will be for the major life safety deficiencies.
  - ii. Work will begin after October, 1980 (to allow the Convention Center to honor their commitment to the Ice Capades Show).
  - iii. Major construction items will be done together and as soon as possible to minimize the auditorium's down time and revenue loss.

Charts graphically depicting Items 1 and 3 above can be found in the Appendix (Diagrams Two and Three), immediately following this section.

The matrix of area relationships (Appendix, Diagram Two) reinforces the fact that many of the areas of work interface at primary or secondary levels. A consideration then is whether or not lesser priority work should also be undertaken with mandated work to avoid costly backtracking and repeated facility shutdowns.

Mr. Zerilli, Assistant Manager of the Community/Convention Center, has projected the Memorial Auditorium's net revenue loss for the period of October 1980 to September 1981 (the earliest time frame possible for construction) at \$150,000. This net loss assumes that at least 50% of the auditorium's scheduled events, for this time period, would be incorporated into the Community Center schedule. Obviously this revenue loss could be much greater if scheduled events could not be relocated or a series of construction phases was opted for; the repercussions being extended periods of event production disruption, psychological damage to patron attendance (i.e. continued obvious construction upheaval may detract from patron usage) and possible permanent loss of some annual touring events (i.e. the touring productions could contract with other cities in our immediate locale or even eliminate this stop in their schedules).

From the standpoint of efficiency, unstable building construction costs, inflation and to keep the auditorium's shutdown period to a minimum, we highly recommend a single construction phase requiring the complete closure of the auditorium.

**B. RECOMMENDATIONS:**

AS ALREADY STATED, WE FEEL THE OPTIMUM RECOMMENDATION TO BE ONE SINGLE CONSTRUCTION PHASE, ACCOMPLISHING ALL REHABILITATION WORK.

If this recommendation can not be accepted, we then, only as an alternative, recommend a multi-phase construction schedule.

Following are our recommendations:

- One: Single Construction Phase.
- Two: Multi-Phase Construction.



1. SINGLE CONSTRUCTION PHASE:

a. Construction Schedule:

Our construction time line is based upon the following critical dates and assumptions (refer to the time line diagram which follows):

i. BY MAY 30, 1980:

Authorization from the City of Sacramento to proceed.

ii. JUNE 1 TO NOVEMBER 1, 1980:

Produce schematics and design development drawings and receive City inter-departmental approvals.

iii. NOVEMBER 1, 1980 TO APRIL 1, 1981:

Complete contract documents.

iv. APRIL 1 TO MAY 15, 1981:

Final City inter-departmental review and approval.

v. MAY 15 TO JUNE 15, 1981:

Project bid period.

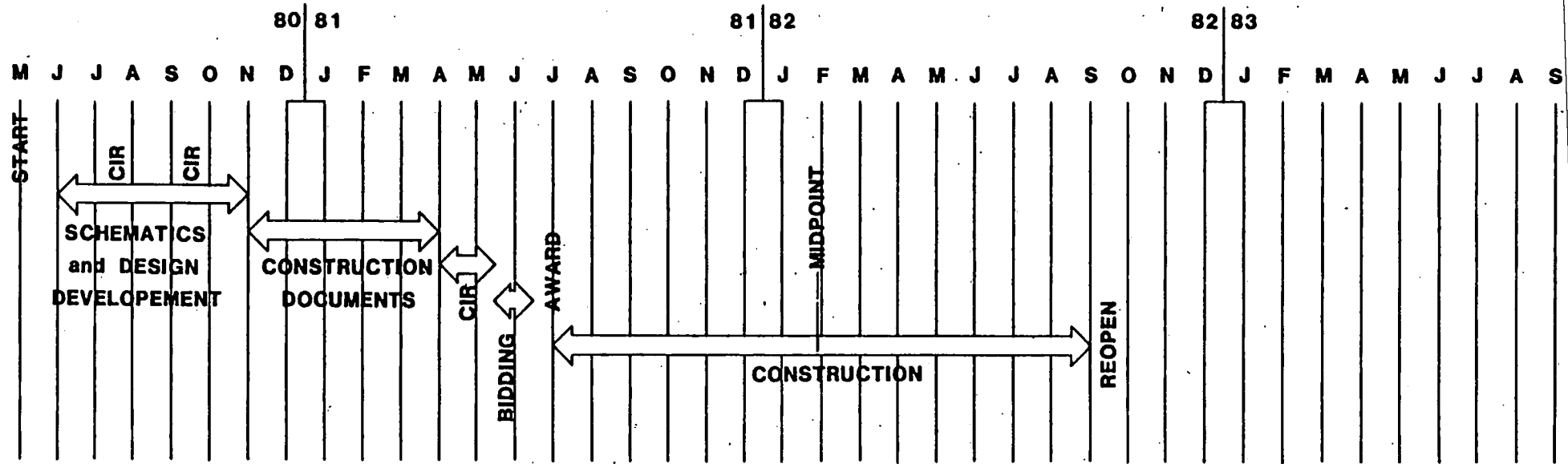
vi. BY JUNE 30, 1981:

Award a construction contract.

vii. BY SEPTEMBER 1, 1982:

Complete work and re-open the Memorial Auditorium.

ALTERNATE OF  
SINGLE PHASE CONSTRUCTION PROGRAM



CIR- CITY INTERDEPARTMENTAL REVIEW

\*ALTERNATE ONE - SINGLE CONSTRUCTION PROGRAM

ESTIMATE:

|  |                     |                     |
|--|---------------------|---------------------|
| 1. Architectural . . . . .   | 1.94 million        |                     |
| 2. Structural . . . . .  | 0.38 million        |                     |
| 3. Mechanical . . . . .  | 1.49 million        |                     |
| 4. Electrical . . . . .  | 0.29 million        |                     |
| 5. Theatrical . . . . .  | 0.49 million        |                     |
| 6. Acoustical . . . . .  | <u>0.07 million</u> |                     |
| **Subtotal. . . . .  |                     | 4.66 million        |
| Contingency (6%) . . . . .   | 0.28 million        |                     |
| Escalation at 1%/Month to Construction<br>Mid-Point (21%). . . . . | <u>0.98 million</u> |                     |
| Subtotal. . . . .  |                     | 1.26 million        |
| ***Revenue Loss (6-81 to 9-82) . . . . .                           |                     | <u>0.15 million</u> |
| TOTAL. . . . .   |                     | 6.07 million        |

\*Does not include professional fees.

\*\*Current dollars (first quarter, 1980).

\*\*\*Convention Center staff projection (see Part Three).

2. MULTI-PHASE CONSTRUCTION:

a. Construction Schedule:

Obviously, because of the phased construction concept, the construction time line and critical dates are more difficult to identify and maintain. In any case, we recommend the following (refer to the time line diagrams which follow):

PHASE ONE:

- i. BY MAY 30, 1980:  
Receive authorization from the City of Sacramento to proceed.
- ii. JUNE 1 TO NOVEMBER 1, 1980:  
Produce schematics and design development drawings and receive City inter-departmental review and approval (for all phases).
- iii. NOVEMBER 1, 1980 TO FEBRUARY 15, 1981:  
Produce contract documents - Phase One.

- iv. FEBRUARY 15 TO APRIL 1, 1981:

City inter-departmental review and approval - Phase One.

- v. APRIL 1 TO MAY 1, 1981:

Bid period - Phase One.

- vi. BY MAY 30, 1981:

Award Phase One construction contract.

- vii. JUNE 1, 1981:

Close the Memorial Auditorium and begin Phase One.

- viii. BY JUNE 1, 1982:

Complete Phase One.

PHASE TWO:

- i. MAY 1 TO AUGUST 1, 1981:

Produce contract documents - Phase Two.

- ii. AUGUST 1 TO SEPTEMBER 15, 1981:

City inter-departmental review and approval - Phase Two.

- Bidding will have to be postponed until Phase One is near completion.

iii. APRIL 1 TO MAY 1, 1982:

Bid period - Phase Two.

iv. BY JUNE 1, 1982:

Award Phase Two construction contract.

v. MARCH 1, 1983:

Complete Phase Two work.

PHASE THREE:

i. OCTOBER 1 TO DECEMBER 1, 1981:

Produce contract documents - Phase Three.

ii. DECEMBER 1, 1981 TO JANUARY 15, 1982:

City inter-departmental review and approval - Phase Three.

- As in Phase Two, bidding must be postponed until Phase Two is near completion.

iii. JANUARY 1 TO FEBRUARY 1, 1983:

Bid period - Phase Three.

iv. BY MARCH 1, 1983:

Award Phase Three construction contract.

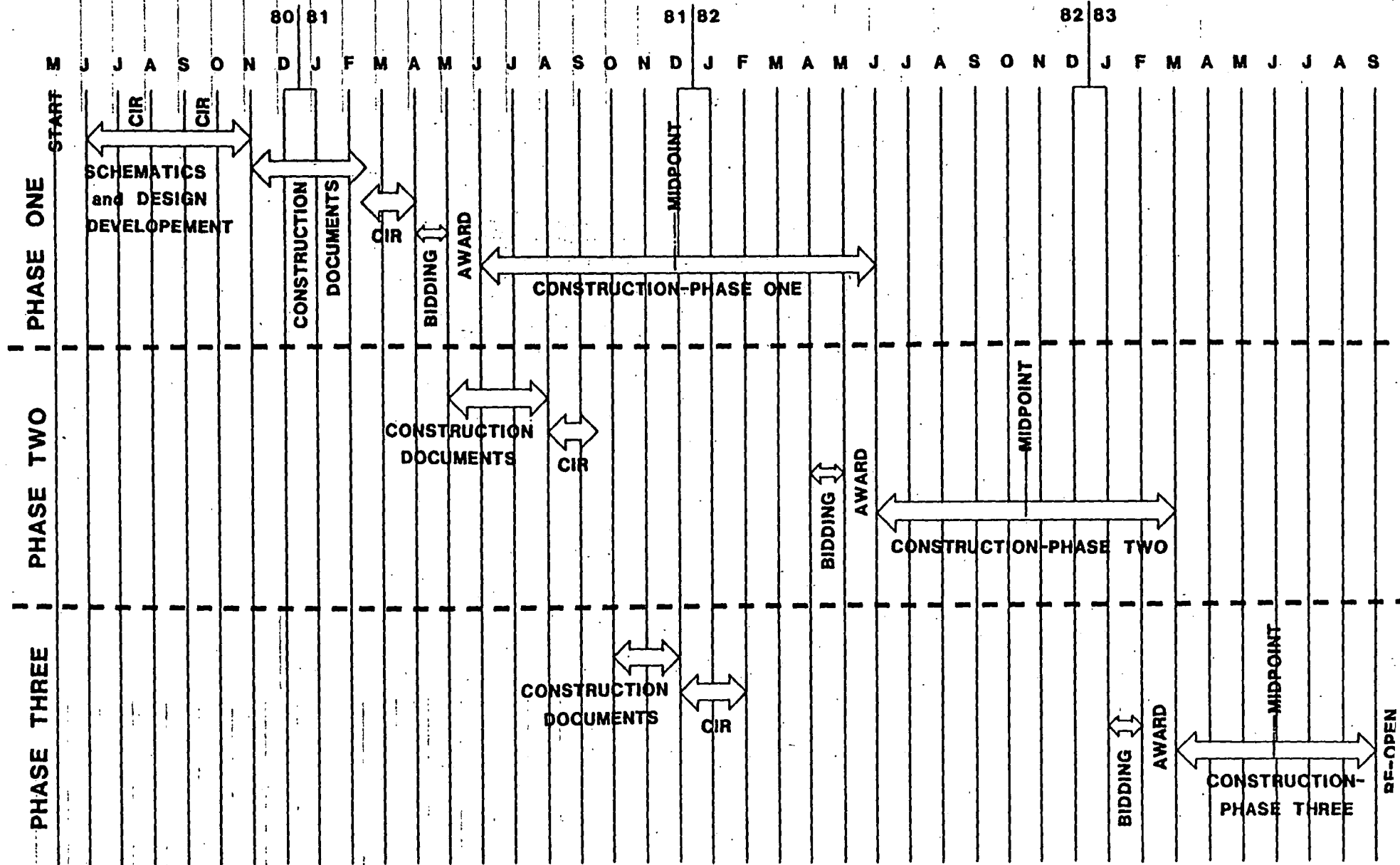
v. BY SEPTEMBER 1, 1983:

Complete Phase Three construction and re-open the Memorial Auditorium.

b. Phased Construction Estimates:

Again, because of the phased nature of the construction program, specific work areas within each component system (i.e. architectural, structural) will be listed with costs to identify that work done within each phase.

# MULTI-PHASE CONSTRUCTION PROGRAM



CIR- CITY INTERDEPARTMENTAL REVIEW

PHASE ONE CONSTRUCTION

i. ARCHITECTURAL:

|   |                    |
|---|--------------------|
| - Correct exit deficiencies   | .2 million         |
| - Replace arena ceiling   | .5 million         |
| - Begin replacement of hollow tile partitions with steel studs and gypsum board | .04 million        |
| - Install new freight elevator in existing modified shaft                       | .08 million        |
| - Truck dock, drive and door  | .04 million        |
| - Refuse compaction and storage unit  | .01 million        |
| - Handicapped access  | .07 million        |
| - Forestage and stage riser platform  | <u>.04 million</u> |

Subtotal .98 million

ii. STRUCTURAL:

|   |                    |
|---|--------------------|
| - Begin removal of hollow tile partitions | .06 million        |
| - Strengthen stage                        | .003 million       |
| - Extend existing freight elevator shaft  | .05 million        |
| - Truck dock, drive and door              | .06 million        |
| - Arena attic catwalks                    | .04 million        |
| - Arena rigging                           | .04 million        |
| - Forestage and stage riser platform      | <u>.02 million</u> |

Subtotal .28 million

iii. MECHANICAL:

|                                   |                   |
|-----------------------------------|-------------------|
| - Automatic fire sprinkler system | <u>.2 million</u> |
|-----------------------------------|-------------------|

Subtotal .2 million

iv. ELECTRICAL:

- Main switchboard deficiencies .004 million
- Begin correcting wiring ground deficiencies .02 million
- Begin new distribution and lighting panels .02 million
- Begin circuit and feeder wiring .03 million
- Company switch .005 million
- Rough in for dimmer power, house lighting, arena lighting, dimmed chandeliers, sound, communications, scoreboard, winches and special lighting .1 million

Subtotal .18 million

v. THEATRICAL:

- Company switch .01 million
- Dimmed power and rough-ins .04 million
- Arena attic rigging .1 million
- Arena pre-set lighting and rigging .05 million

Subtotal .2 million

Subtotal (i-v) . . . . . 1.84 million

Contingency (6%) .11 million  
 Escalation at 1%/Month to mid-point of construction (18%) .33 million

Subtotal .44 million  
.15 million

Facility revenue loss (6-81 to 5-82)

TOTAL PHASE ONE . . . . . 2.43 million



PHASE TWO CONSTRUCTION

i. ARCHITECTURAL:

- Continue replacement of hollow tile partitions with steel studs and gypsum board .03 million
- New fixed seats at dress circle and balconys .27 million
- New janitor closets .04 million
- Begin dressing room remodel .07 million
- Begin basement conversion to meeting rooms, storage and equipment spaces .15 million
- Remodel concessions .07 million
- Remodel pipe organ chamber .02 million
- Complete hardware re-keying and exit doors .03 million
- Begin refurbishment of public spaces .12 million
- Re-do stage and arena hardwood floors .08 million

Subtotal .88 million

ii. STRUCTURAL:

- Continue removal of hollow tile partitions .05 million
- Begin second freight elevator shaft .08 million

Subtotal .13 million

iii. MECHANICAL:

- Remove ventilation mushrooms and construct new HVAC system 1.41 million
- Plumbing for new janitor spaces .02 million
- Begin plumbing for new toilets .07 million

Subtotal 1.5 million

iv. ELECTRICAL:

- Continue light fixture relamping .03 million
- Rough-in for second freight elevator .015 million
- Rough-in for basement conversions (meeting rooms, kitchen, equipment storage) .03 million
- Concessions .015 million
- Continue performance lighting rough-ins .03 million
- Rough-in site lighting .02 million
- Continue circuit/feeder wiring .015 million
- Continue new distribution and lighting panels wiring .015 million

Subtotal .17 million

v. THEATRICAL:

- Complete performance lighting, master controls, house communications, dimmer console, stage gridiron, fly and arbors, draperies .15 million

Subtotal .15 million

vi. ACOUSTICAL:

- Complete sound system .04 million

Subtotal .04 million

Subtotal (i-vi) . . . . . 2.87 million

Contingency (6%) .17 million

Escalation at 1%/Month to mid-point of construction (5%) .14 million

Inflation at 1%/Month to beginning of Phase Two  
Construction (23%) .66 million

Subtotal .97 million

Facility revenue loss (5-82 to 3-83) .12 million

TOTAL PHASE TWO . . . . . 3.96 million

PHASE THREE CONSTRUCTION

i. ARCHITECTURAL:

- Complete replacement of hollow tile partitioning .03 million
- Complete dressing room remodel .07 million
- Complete second freight elevator .08 million
- Complete refurbishment of toilets, public spaces, basement,  
Little Theatre and Memorial Hall .25 million
- Clean exterior masonry .09 million
- Complete landscape planting .03 million
- New arena floor portable seating .07 million

Subtotal .62 million

ii. STRUCTURAL:

- Complete removal of hollow tile partitions .02 million
- Complete conversion of Memorial Hall and basement .1 million

Subtotal .12 million

iii. MECHANICAL:

- Complete plumbing to new toilets .02 million
- Complete landscape irrigation .07 million

Subtotal .09 million

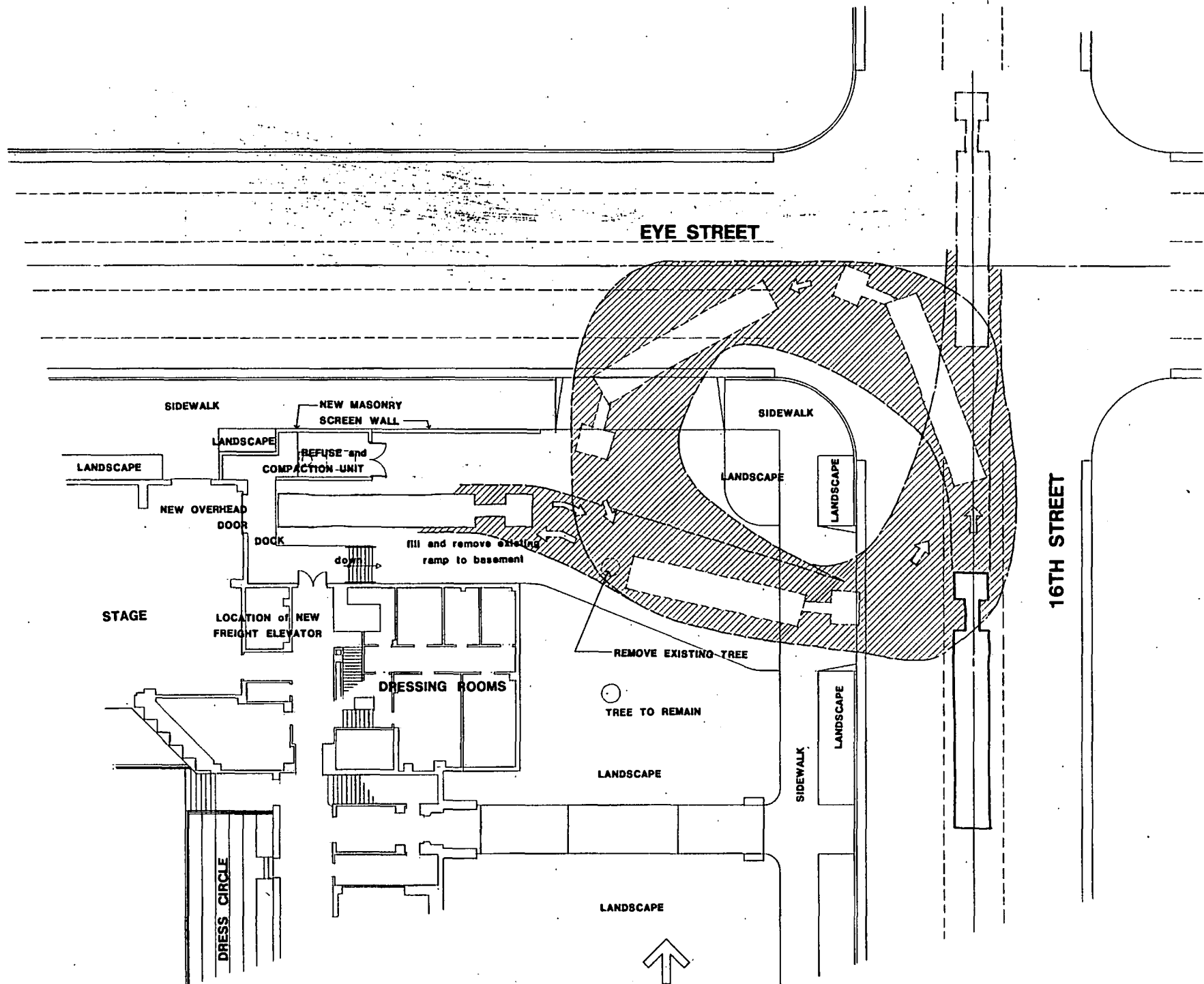
vi. ELECTRICAL:

- Complete circuit/feeder wiring, light fixture  
relamping, site lighting .02 million
- Complete conversions of Memorial Hall, Little  
Theatre and basement .06 million

Subtotal .08 million

|   |                            |                    |
|---|----------------------------|--------------------|
| v. THEATRICAL:  |                            |                    |
| - Refurbish Little Theatre (seats, draperies, lighting)                 |                            | <u>.18 million</u> |
|   | Subtotal                   | .18 million        |
| vi. ACOUSTICAL:   |                            |                    |
| - Complete acoustical treatments  |                            | <u>.05 million</u> |
|   | Subtotal                   | .05 million        |
| Subtotal (i-vi) . . . . .   |                            | 1.14 million       |
| Contingency (6%)  |                            | .07 million        |
| Escalation at 1%/Month to mid-point of construction (4%)                |                            | .05 million        |
| Inflation at 1%/Month to beginning of Phase Three<br>construction (31%) |                            | <u>.35 million</u> |
|   | Subtotal                   | .47 million        |
| Facility revenue loss (3-83 to 9-83)                                    |                            | <u>.08 million</u> |
|   | TOTAL PHASE THREE. . . . . | 1.69 million       |
| TOTAL COST, MULTI-PHASE CONSTRUCTION PROGRAM. . . . .                   |                            | 8.08 MILLION       |

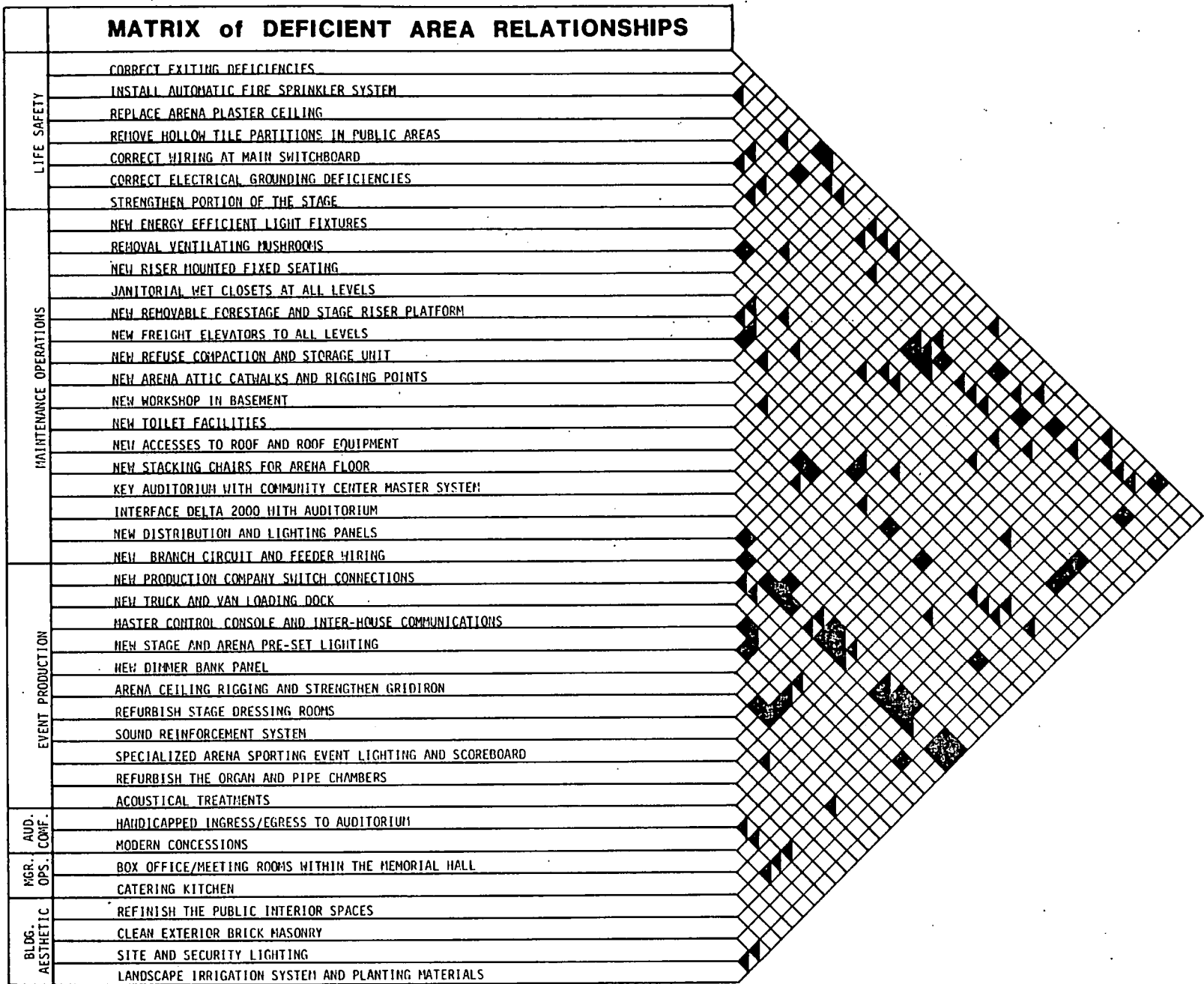
**APPENDIX**






**DIAGRAM ONE**

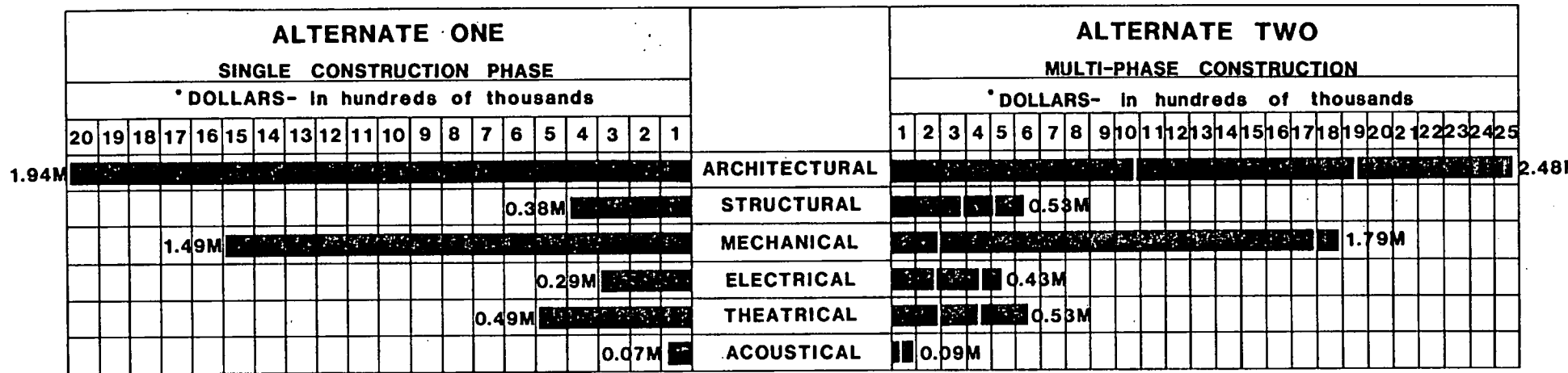


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-  WORK AREAS HAVE PRIMARY INTER-RELATIONSHIP (I.E.: WORK MUST BE UNDERTAKEN SIMULTANEOUSLY OR COMPLETED BEFORE ANOTHER CAN BEGIN)
-  WORK AREAS INTERFACE, BUT TO A LESSER DEGREE THAN PRIMARY
-  NO DIRECT RELATIONSHIPS

**DIAGRAM TWO**



█ INDICATES BEGINNING OR END OF PHASES  
 \* CURRENT DOLLARS

DIAGRAM THREE





# CITY OF SACRAMENTO

## OFFICE OF THE CITY CLERK

915 I STREET  
CITY HALL ROOM 203

SACRAMENTO, CALIFORNIA 95814  
TELEPHONE (916) 449-5428

LORRAINE MAGANA  
CITY CLERK

### MEMORANDUM

TO: BUDGET AND FINANCE COMMITTEE  
PLANNING AND COMMUNITY DEVELOPMENT COMMITTEE

FROM: ANNE MASON, DEPUTY CITY CLERK *AM*

SUBJECT: REFERRAL OF ITEM 38, COUNCIL AGENDA OF JUNE 17, 1980

Pursuant to Council action the following matter was referred to your committee for report and recommendation:

Memorial Auditorium Renovation

cc: City Manager  
Architectural Engineering  
City Engineer