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CONTEMPORARY INSTITUTE FOR THE ARTS

TULSA UNION DEPOT

PROGRAM

Contemporary Institute for the Arts

Tulsa ,Oklahoma

PROGRAM

Richard Dunham

This report is submitted in partial fulfillment of the requirements for the Master's Degree in Architecture at Oklahoma State University.

ACKNOWLEDGEMENTS

I wish to thank Bob Heatly for his guidance in completion of this thesis, and I would like to thank the whole faculty and the Head of the School for the enriching experience while attending the School of Architecture at Oklahoma State University.

I wish to thank the Williams Corporation for their cooperation in the completion and learning experience that was so helpful to the development of this project.

Special thanks to my wife Lynne for her patience, perseverance and absolute flawless typing.

CONTENTS

INTRODUCTION

THE INSTITUTE

The project begins with the Union Depot as a historic structure on the northern leading edge of the Central Business District. The historic shell is a vital part in the start of the redevelopment of old town. Tulsa's downtown district is in need of cultural lease to revitalize and spearhead the growth and return of people to the downtown district.

The concept and programming for the structure is to reuse it as a Contemporary Institute for the Arts. The new use is directed toward the professional artist and public joining together to form an Art Co-op. The historic shell is ripe for the reuse of an art complex as a place of learning and exchange of ideas.

The Institute will facilitate instruction, collaboration and exhibition of the contemporary arts. The facility will house a community theatre, library, public gallery and instructional studios. The concept of the institute is to enrich the community and create a beginning and example of adaptive reuse that fits this historic structure.

PROGRAM PROCESS

This program report results from the gathering of data, the establishing of goals and their validity by testing concepts, the determination of needs and the statement of the problem or the essence. The programming systems used are discussed at length in Problem Seeking An Architectural Programming Primer by William Pena.

THE CLIENT

The client for the Union Depot is Williams Realty Corporation as a developer client in speculative development. The Williams Corporation is interested in developing an economically feasible entity that will support and enhance the new Williams Center. The corporation would like the development of this project to encourage future expansion to the north of the Williams Tower.

ECONOMIC FEASIBILITY

The Williams Corporation deals primarily at the corporation level of realty development. Their primary interest is in the project's economic feasibility without competing with the existing Forum. They feel that retail specialty shops should be on a limited scope because of the economics of the existing structure. The client feels that if the northern part of Tulsa CBD were developed into office/residential it would in turn establish an economic structure in which the Forum and Union Depot could co-exist.

INFORMATION GROUPS

Williams Corporation -
Carol Wyant
Williams Center
38th Floor
Tulsa, Oklahoma, Ph. 918-587-8383

Urban Design Group
Jack McSorley
320 So. Boston Avenue
Suite 500
Tulsa, Oklahoma, Ph. 918-582-6377

TMAPC (Tulsa Metro Area Planning Commission)
Wayne Alberti, Department Director
Merlle Wilmota, Zoning and Restrictions

Dale McKinney, Emeritus Professor of Art
521 N. Monroe
Stillwater, Oklahoma

ORGANIZATION OF REPORT

This report is organized into two main parts. The first part, the program, consists of six subdivisions:

- GOALS
- FACTS
- CONCEPTS
- NEEDS
- PROBLEM STATEMENT

This standard format is based on the five programmatic steps, which are the first five subdivisions here, along with an appendix containing some detailed data, with a short glossary of some words and terms used in the program report.

The second part of this report is to be made up of drawings, diagrams, and supporting calculations for a design solution for the Contemporary Institute for the Arts Project. This second portion is to be completed at the end of the Spring, 1981, academic semester, and may be incorporated with the program portion of the report, or may exist as a separate volume.

GOALS

MISSION

Design and integrate the Contemporary Institute for the Arts within the TULSA UNION DEPOT historic structure. This building's new function will facilitate the community by creating an environment (A PLACE TO CREATE) in the urban fabric to enrich and enhance the social and intellectual interaction between the artist's community and public.

GOALS

GOAL

The end towards which effort is directed; suggests something attained by prolonged effort and searching.

PROJECT GOALS

Objectives established by the client working with the architect. These goals are a synthesis from considerations of FUNCTION, FORM, ECONOMY and TIME.

FUNCTION

MAXIMUM NUMBER

To maximize an environment conducive to interaction, there will be a controlled enrollment of 300 students.

INDIVIDUAL IDENTITY

Flexibility and boundaries which each student can physically exist in will help foster identity within the mass of Students of ART.

CHARACTER

Identity of different studios is important for establishment of a sense of place within the whole institute and individual studios.

FUNCTION

PUBLIC SPACE

To enhance the visual perception of the Union Depot by developing an outdoor public space that will surround the historic building.

ENVIRONMENT

To develop Tulsa Union Depot as the leading edge of Tulsa's CBD on the north side. Its role and the surrounding sites are to help establish a new edge beyond the Williams Center.

ENTRANCE INTERFACE

To develop the Depot as an entry and beginning experience in relation to the Old Town and the commercial redevelopment north of the Central Business District.

FUNCTION

SECURITY

The Institute should allow the students flexible use of the studios while maintaining certain security zones of high priority within the Institute.

ENCOUNTERS

To facilitate the interaction of students that will inherently create spontaneity and discipline that is conducive to the fine arts.

SITE

The Institute must respond to climatic features of the site.

Shadow patterns must be addressed within the urban fabric of the site.

Maintain the existing easement line along First Street, Boston Avenue and Cincinnati.

FUNCTION

INTERACTION/PRIVACY

Interaction in the studios is essential to the success of the project. The different disciplines' interaction and organization both horizontally and vertically are important to the individual student's growth. Privacy and territory should be established for individual students by flexible open studios.

HIERARCHY

To demonstrate a concern for student's needs while integrating architectural and structural design concepts, building systems and principles of energy consciousness.

FORM

CENTRALIZED

Centralized high activity areas (Gallery/Exhibit) for ease of pedestrian access.

PRIORITY

Provide specific areas for social interaction and relaxation.

RELATIONSHIPS

Compliment or contrast the existing architecture and axes with materials, forms and masses.

ECONOMY

Minimize operating and building cost.

TIME

Provide the Institute with the flexibility to grow in the future as adjacent sites become available. With the growth of other functions, the Institute will make a stronger impact on the Central Business District and the community that will develop north of this district.

FACTS

FACILITY REQUIREMENTS

The facility is to provide a complete educational and working environment for graphics, sculpture, ceramics and textile arts promoting a sense of the community interest these endeavors imply.

USERS

300 students and faculty members using the building are deeply committed to their work and spend many hours in the institute studios.

STAFF

The staff for the facility, including both teaching faculty and administrative faculty, are very much involved in the activities and are the central element in program planning. The use of office areas is restricted to business hours and office spaces must be easily secured.

PUBLIC

Guests and visitors are encouraged to become involved with art at the institute, especially in the cafe and gallery areas. Studios and work spaces should not be open to general circulation, but should be visually assessible from within and outside the building.

HISTORY

TULSA UNION DEPOT

The Tulsa Union Depot was built during the Great Depression. The construction was stimulated under two New Deal Agencies, The Public Works Administration (PWA) and the Works Progress Administration.

The PWA Art Deco is a transitional architecture. This transitional architecture incorporates elements of the Zigzag Art Deco of the 20's and the Streamline Art Deco of the 30's. These buildings in this style are characterized by their monumentality. Their size and bulk convey an image of strength, solidity and permanence, a sign of reassurance to the Public.

The Depot is classical in symmetry in this style of the Zigzag 20's. The principal entrance to the building is emphasized with an occasional suggestion of an entablature and cornice. The use of ornament in relief sculpture, murals and mosaics is traditional. The ornament often illustrates the building's function. Symbols of nature and of the machine are combined and the common laborer is often glorified in the ornamentation.

The PWA style was more severe than the earlier Zigzag Style and the ornamentation and building material relied less on the use of color. Horizontal features were adopted from the International Style and the occasional use of curved corners suggested the Streamline. Windows were often placed together to give the impression of a horizontal band.

HISTORY

TULSA UNION DEPOT

The buildings are an interesting combination of the Zigzag and the horizontal emphasis of the Streamline. The Tulsa Union Depot is an example of this style.

The Station was originally planned to be three or four stories in height and was to cost more than a million dollars. The building that was eventually built comprised just two floors and a mezzanine. There was a track or ground level service floor and a main floor at the viaduct level. The floors were separated by the mezzanine which provided facilities for Red Caps and "colored train porters."

The monumental Union Depot, its stripped classicism, massing and its impressive bulk is an example of PWA moderne. A Frisco Railroad official wrote at the time the building was designed, "In formulating the scheme it was the aim of the designer to emphasize the functions of the building with a frank expression of a modern problem, making no attempt to follow any traditional or historical style.

SITE ANALYSIS

CONTEXT

Contextually the site is on the northern edge of the Central Business District of Tulsa. The building and site are surrounded by blited light industrial/ warehouse structures to the north (Old Town). The Williams Center and Forum is directly south which intersects the axis and views to downtown.

VICINITY LAND USE

The site has air rights over the railroad tracks and rights to build under Boston Avenue. Directly south on the site is a parking lot which is for development. To the west is a 5-story pre-cast concrete parking garage. The 52-story Williams Center is directly Southwest of the existing Union Depot. To the north is Old Town which is primarily light industrial/warehouse with 2 to 6 story brick and stone structures prime for redevelopment with the Depot.

VIEWS FROM/TO SITE

The axial view down Boston Avenue on the west side of the Depot looking north towards Old Town is the best view. To the north looking from the building you will see the railroad tracks and a grove of trees with light industrial beyond. Looking to the east from the colored people's loggia Cincinnati has been levelled and is being rebuilt for street improvements. The Forum and Williams Center are southwest of the Depot, which creates a barrier to the downtown mall by being perpendicular to the natural axis of circulation.

The site is highly visible from the street fabric surrounding the Depot.

SITE CONFIGURATION

The site drops 10 ft. from 1st Street to the front of the Depot, while Boston on the west side is 12 ft. above Fifth Street creating a viaduct underneath. The site is 320 ft. square with adjoining air rights over the railroad tracks.

TOPOGRAPHY and CATCHMENT

The highest point on the site is First Street to the south at 710 feet. Then the site slopes down to the north at 698 feet. The Depot has viaducts and they are at their highest point 718 feet at the west loggia entrance to the Depot. On the east side the viaduct has been removed by the city leaving a canopy at 718 feet, eight feet above First Street. Catch basins and floor drains exist in the structure.

EXISTING STRUCTURES

The Tulsa Union Depot is the existing historic structure which is being reused. The structure's construction is of flat plate slabs on steel columns encased by concrete. The construction of the Depot is the typical methodology of that period of history. Structurally the building is sound.

BUILDABLE AREA

Except for the easement restrictions the project is buildable in and around the existing historic structure.

ACCESSIBILITY

The Depot site is readily accessible by the Williams Center with the pedestrian bridge being planned for Boston Avenue also. The accessibility to the south beyond the Williams Center is limited by the physical presence of the Forum which terminates the downtown mall and limits pedestrian access to the Depot site.

WALKING DISTANCES

Boston Avenue is planned to be a pedestrian bridge to link the Williams Center and Old Town for pedestrian use only.

TRAFFIC VOLUME

To the south is First Street and its traffic flow is one way to the west with high volume traffic. The future plan for Cincinnati is an entry to the central business district from Highway 244. This impact of heavy traffic on Cincinnati will mean the structure will have to be isolated from noise and vibrations created by traffic.

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2 Closer view of the Tulsa Union Depot.

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B. Detail of Turrots (art deco).
C. Interior view of concourse on the north side of building.

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A. South facade at basement level.
B. East facade looking towards the Williams Tower.

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A. North facade view from the Boston viaduct.
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C. An interior view of the concourse at track level.

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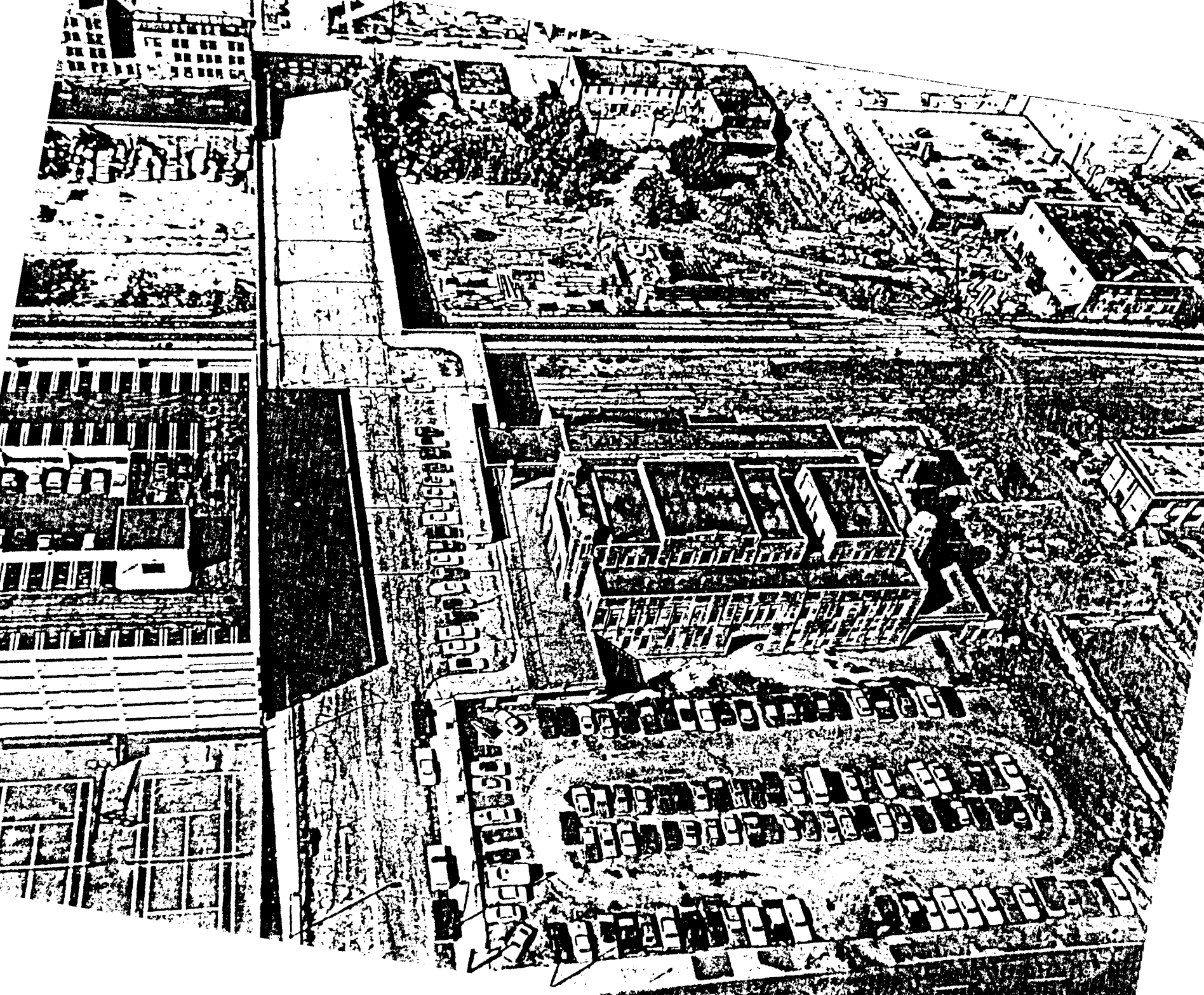
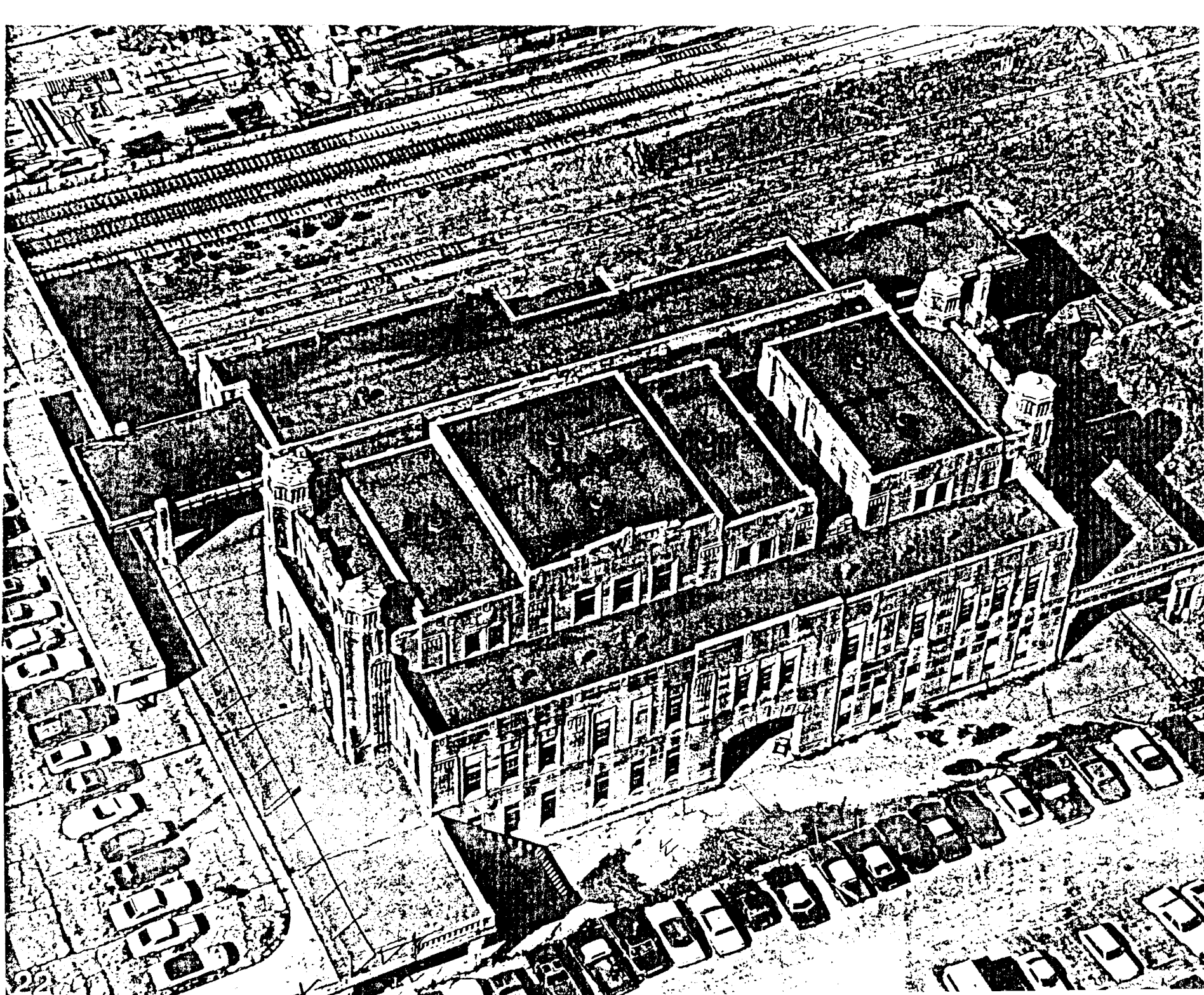
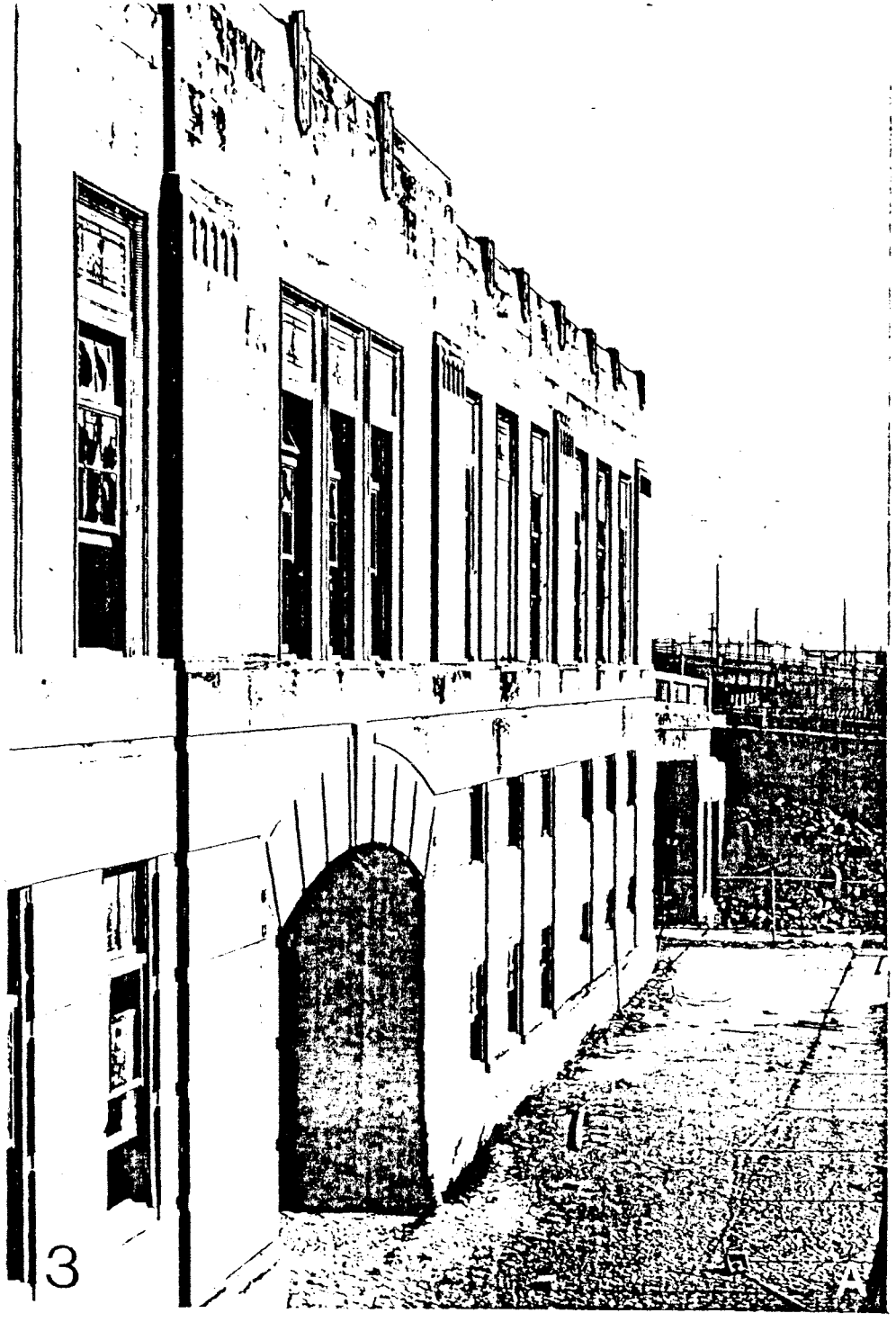
B. Interior view looking into the waiting room.
C. View of parking to the south of the Depot.

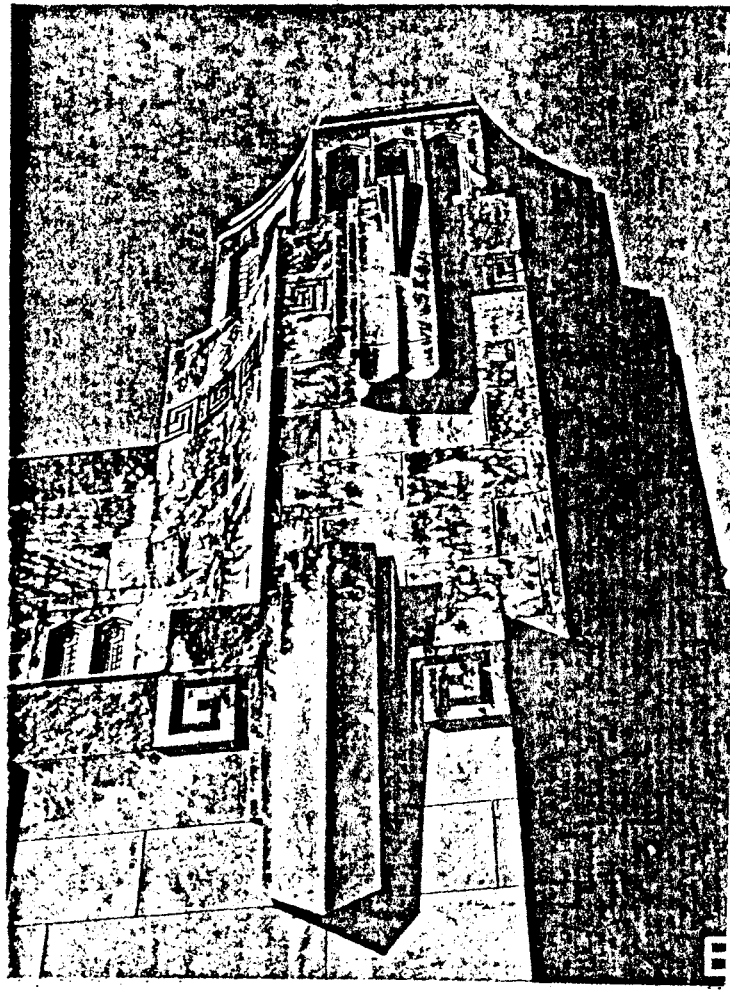
9
A. Detail of Depot ornamentation.

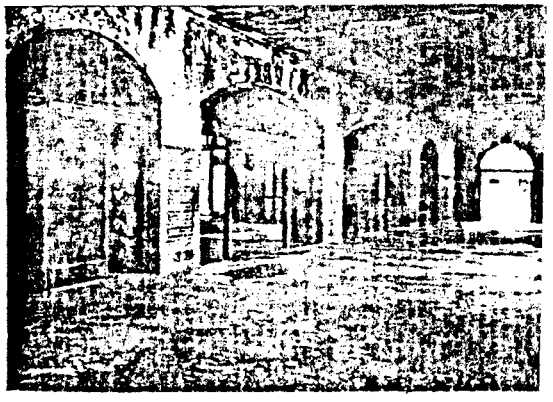
20
B. View looking at Old Town from Boston.
C. View looking north from the viaduct concourse in the Depot.

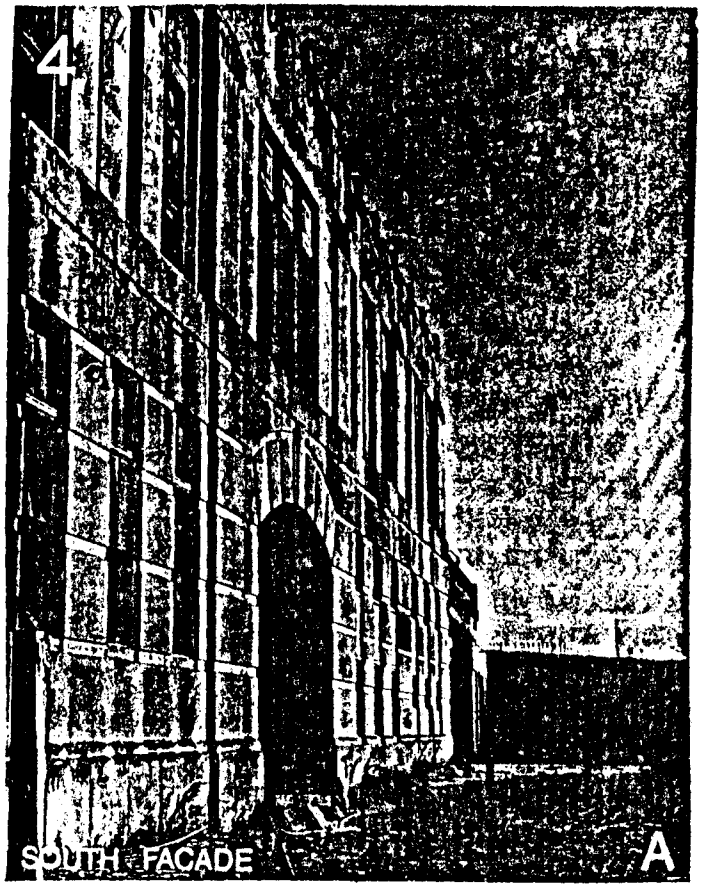








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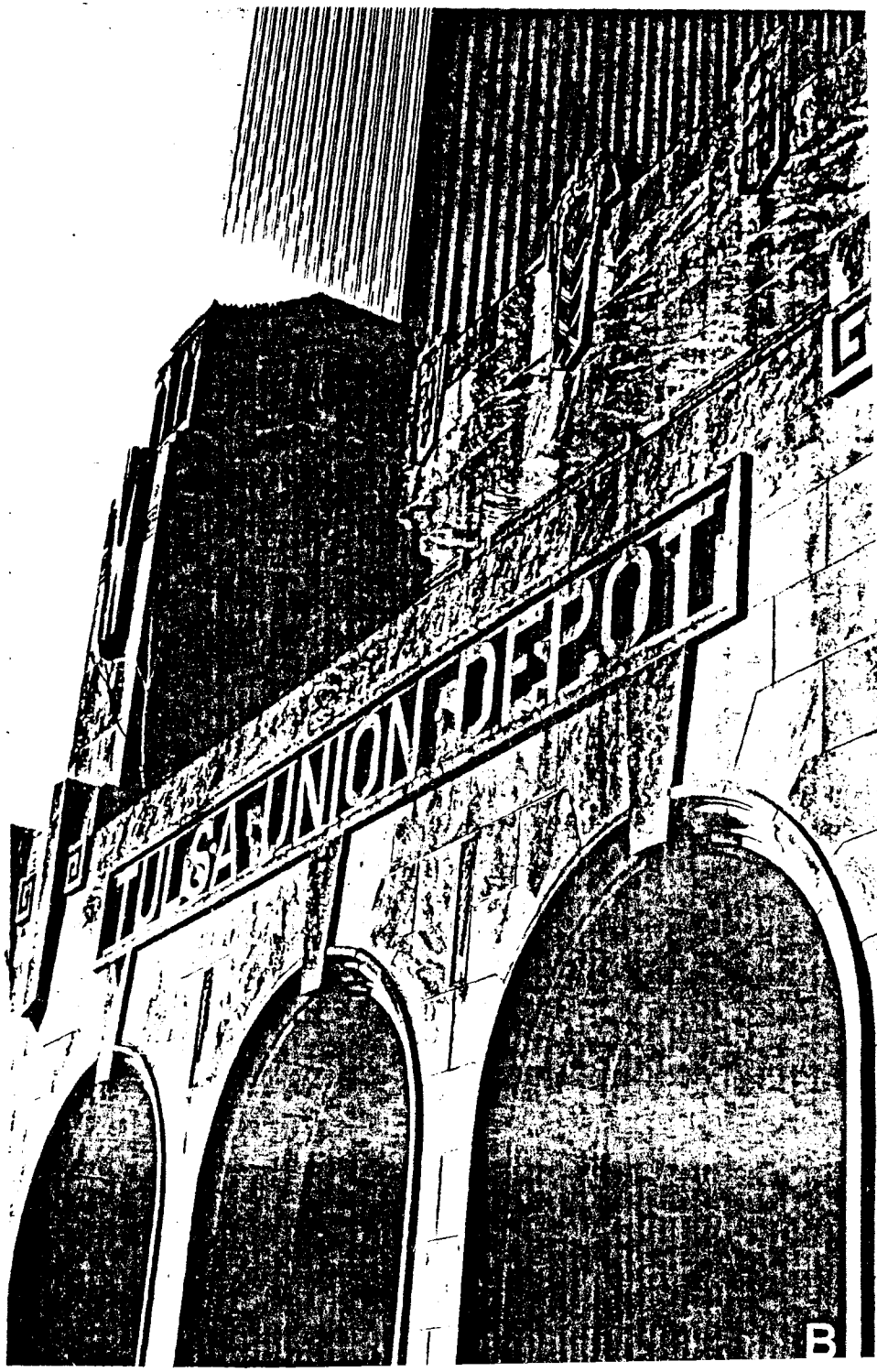
SOUTH FACADE
A


TULSA UNION DEPOT
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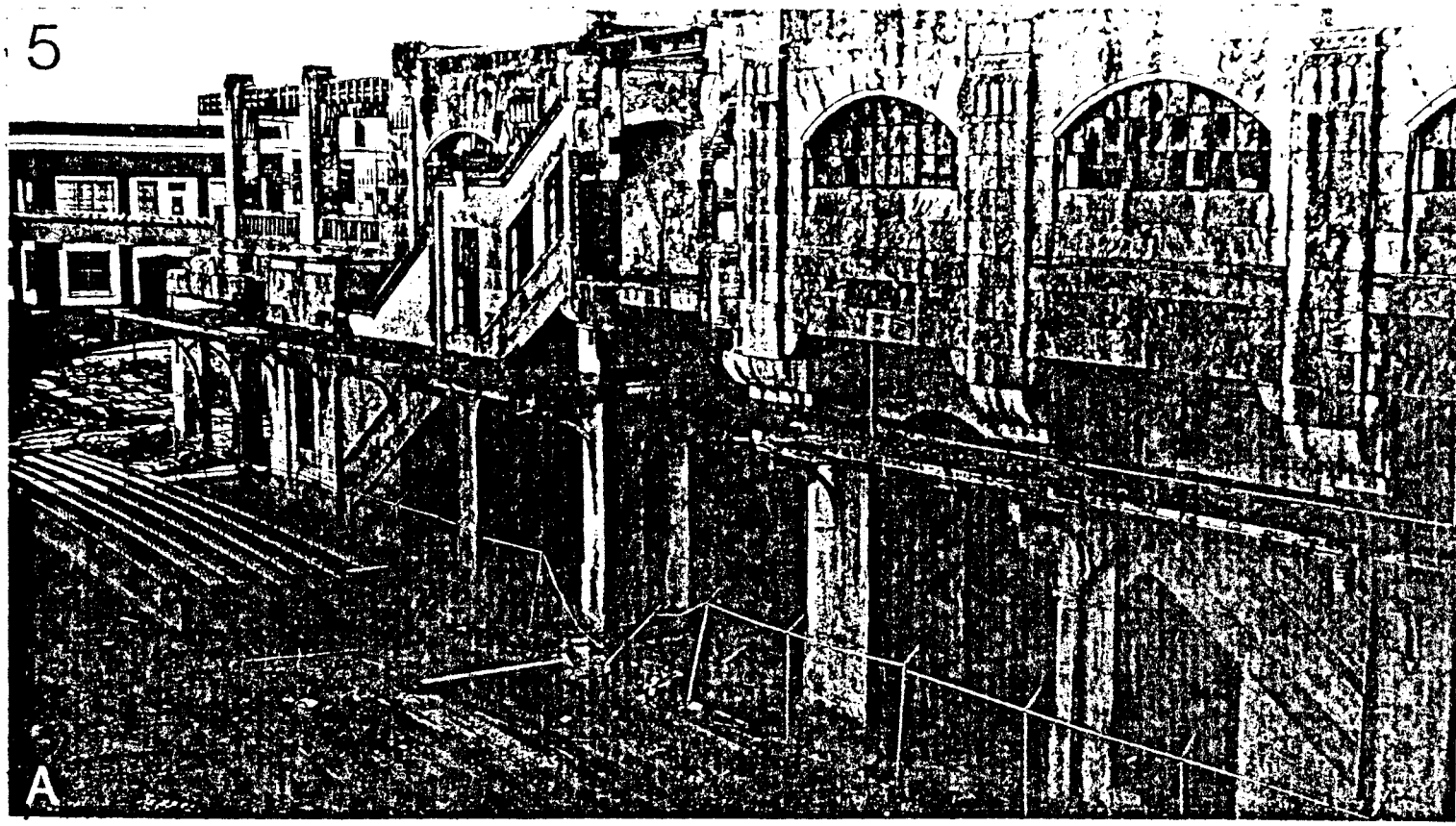
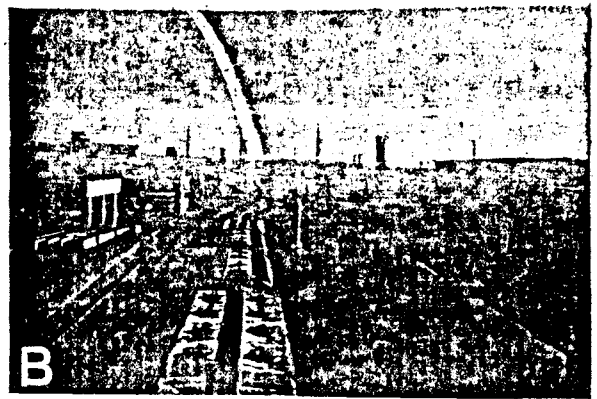
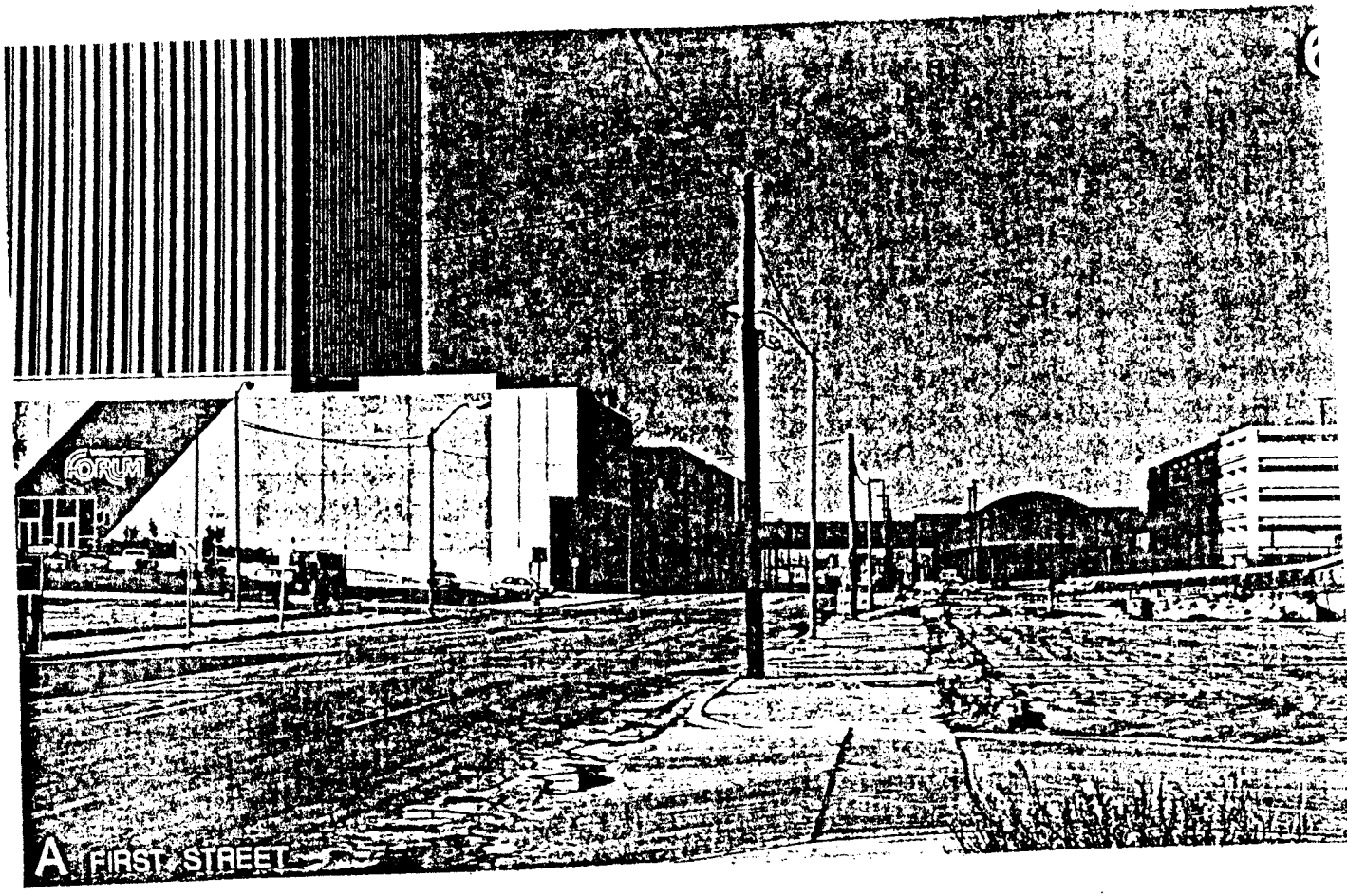
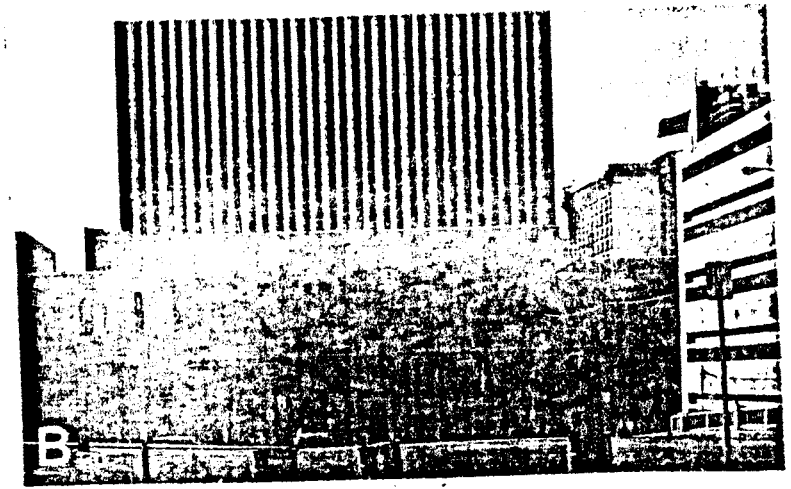
5






FORUM
A FIRST STREET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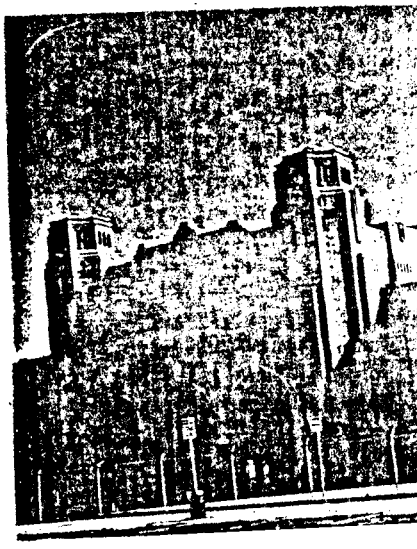

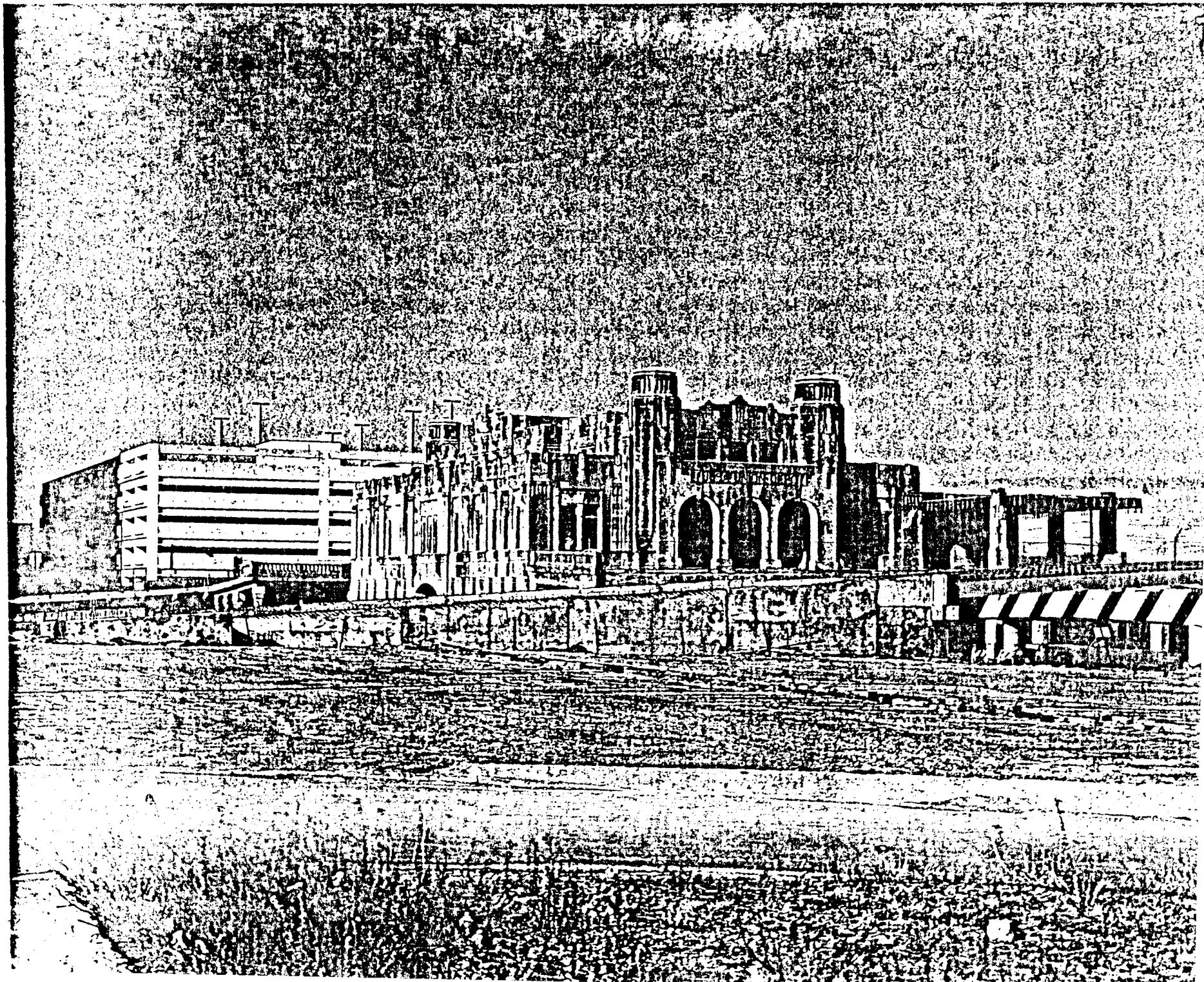

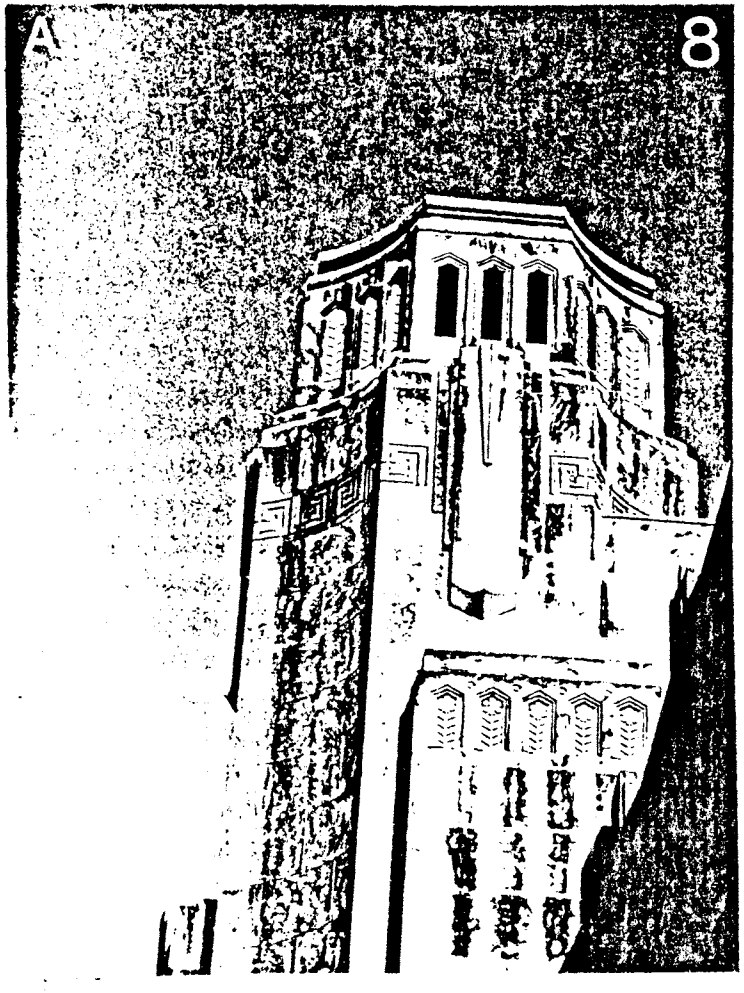
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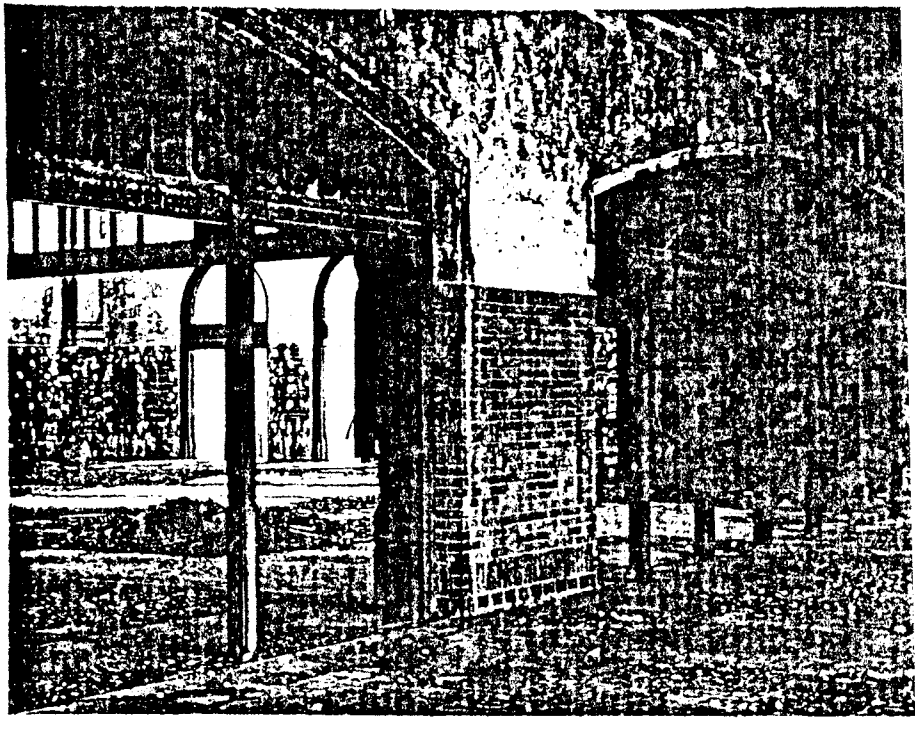


BOSTON

B
BOSTON

A

FRISCO

UNION DEPOT AS BUILT DRAWINGS

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39 WEST ELEVATION
40 NORTH ELEVATION
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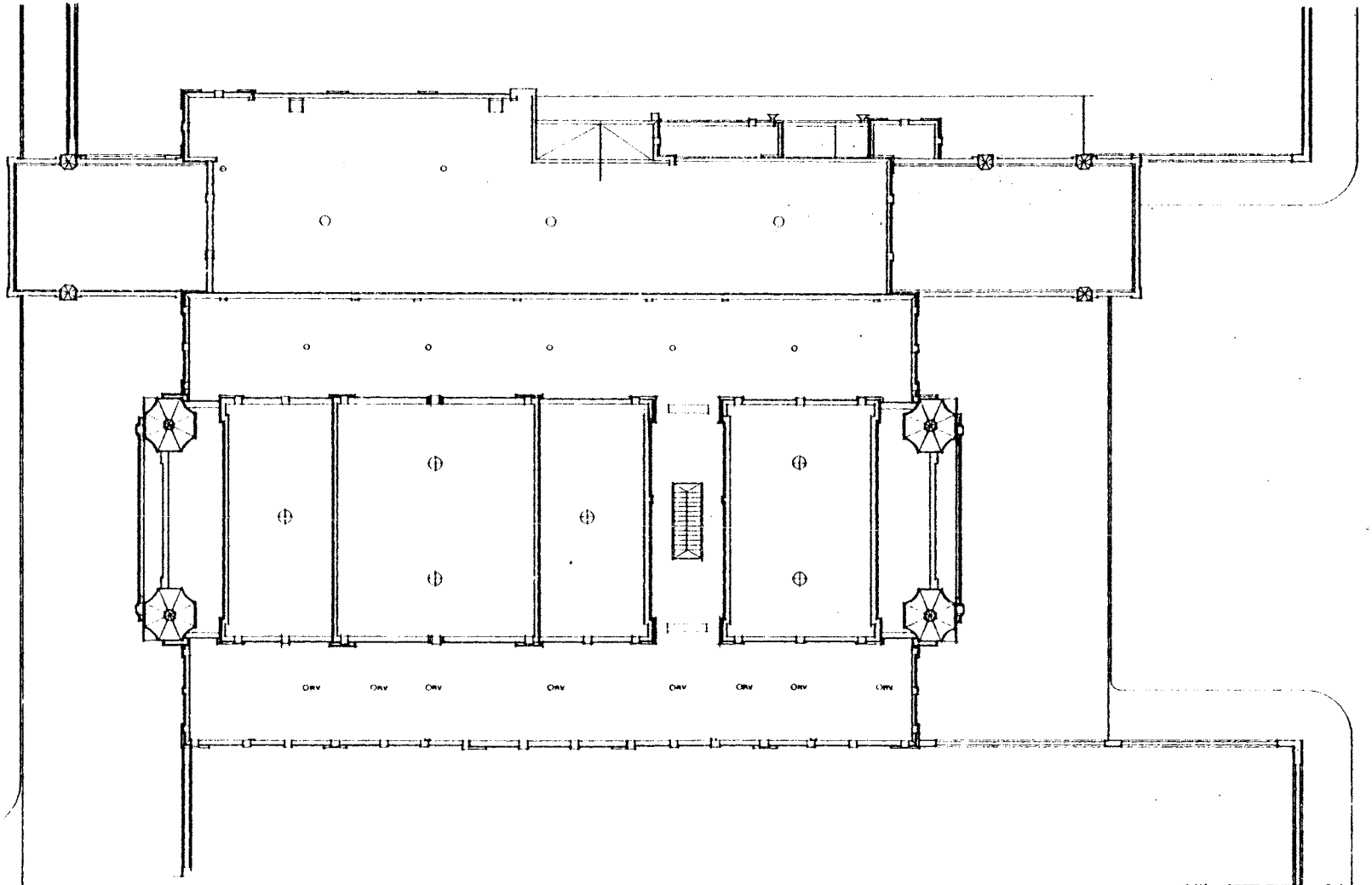

ROOF LEVEL PLAN

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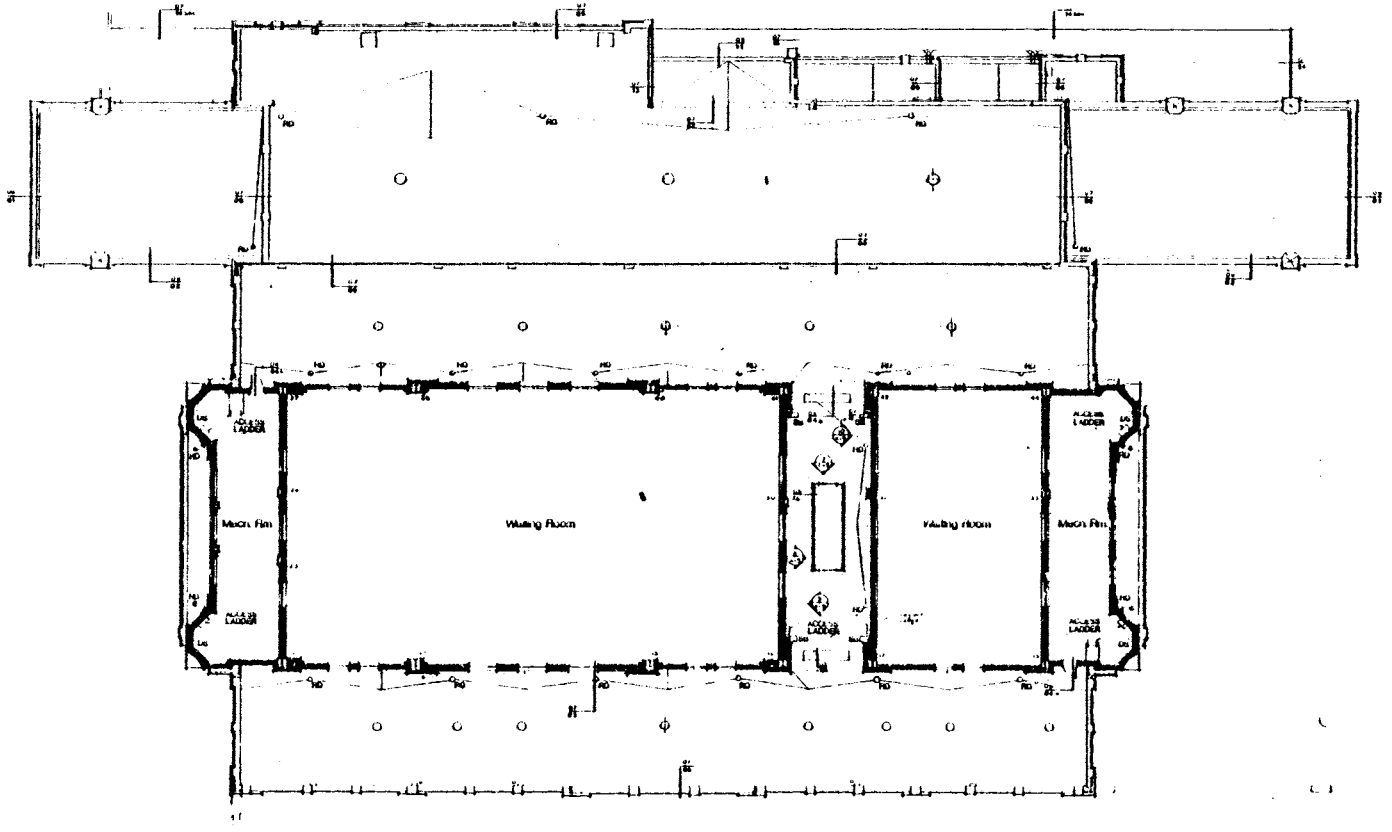
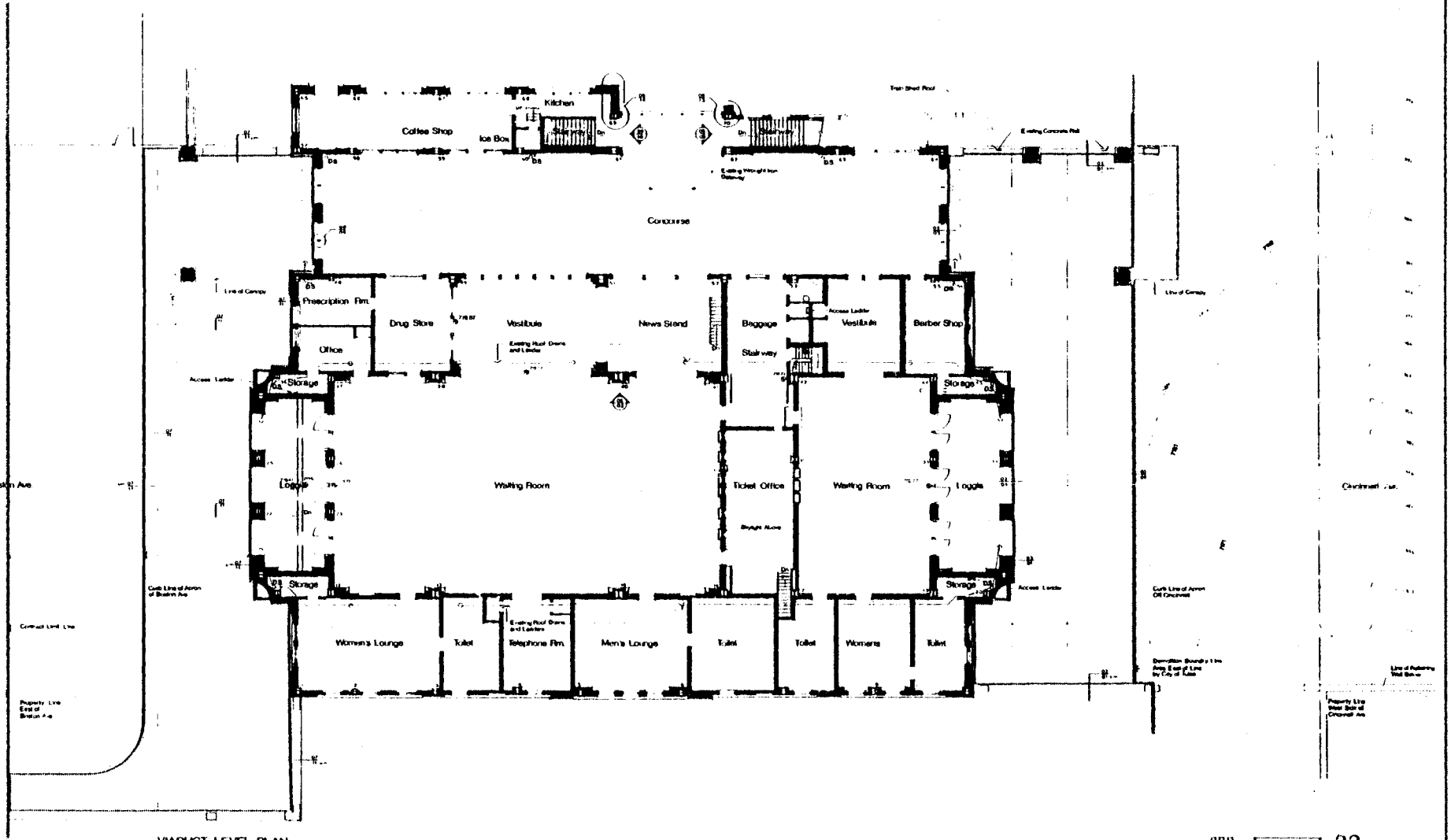
TULSA UNION DEPOT
TULSA OKLA

NORTH



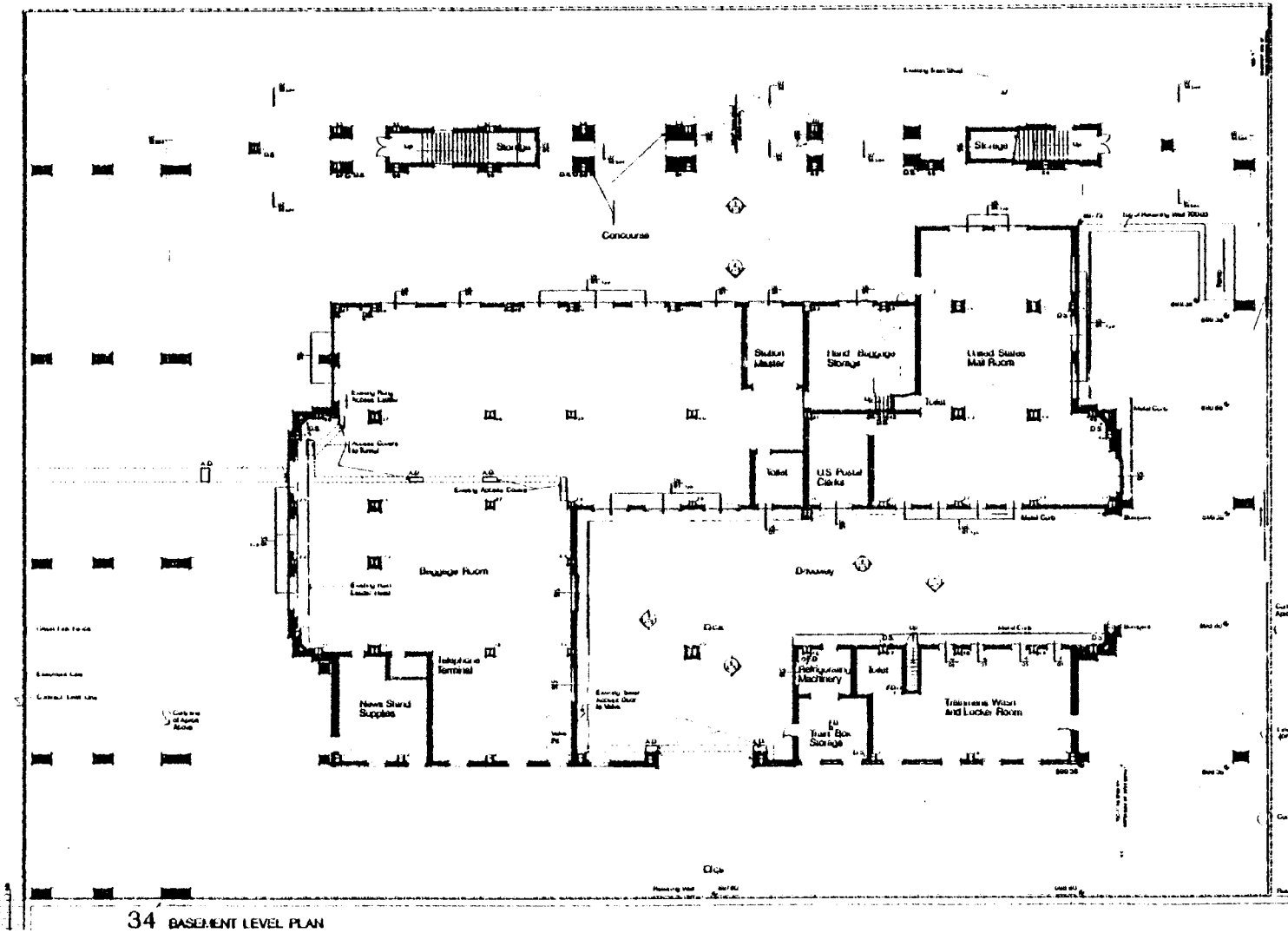
32 UPPER LEVEL PLAN

TULSA UNION DEPOT
TULSA, OKLA.



VIADUCT LEVEL PLAN

TU.SA.UNION DEPOT
TU.SA.OKLA.



34 BASEMENT LEVEL PLAN

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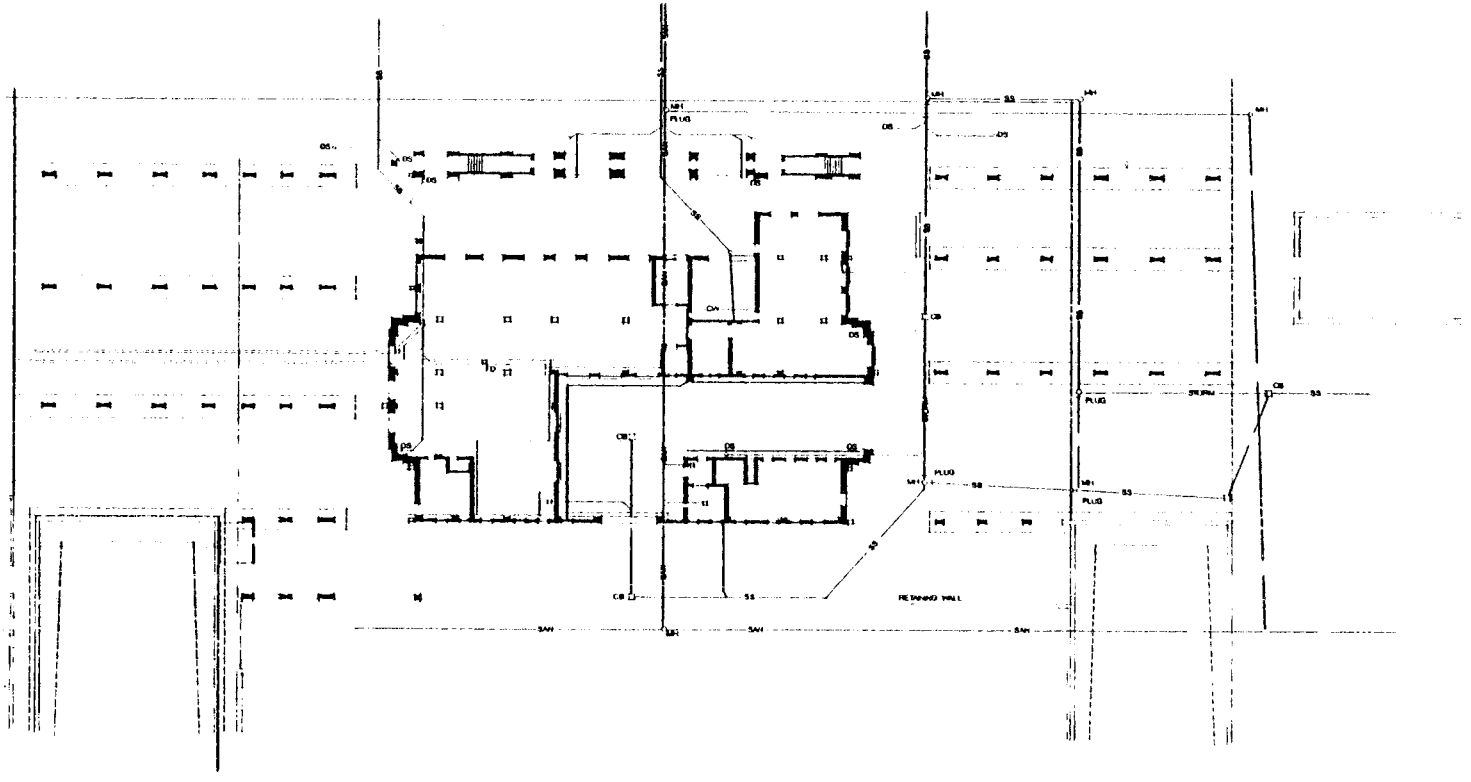
TULSA UNION DEPOT
TULSA, OKLA.



SITE PLAN (existing condition)

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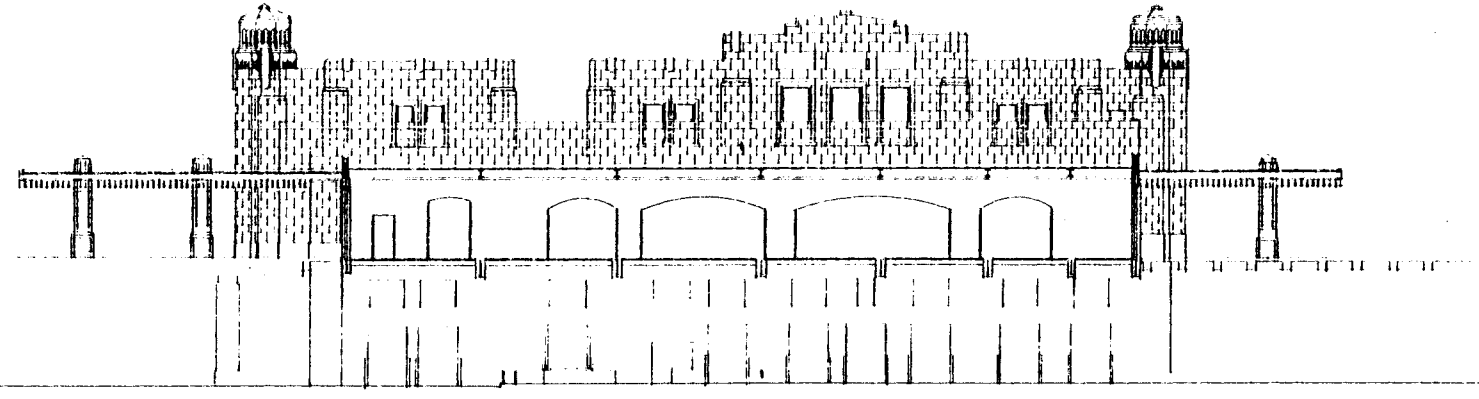
TULSA UNION DEPOT
TULSA, OKLA. NORTH



SECTION aa

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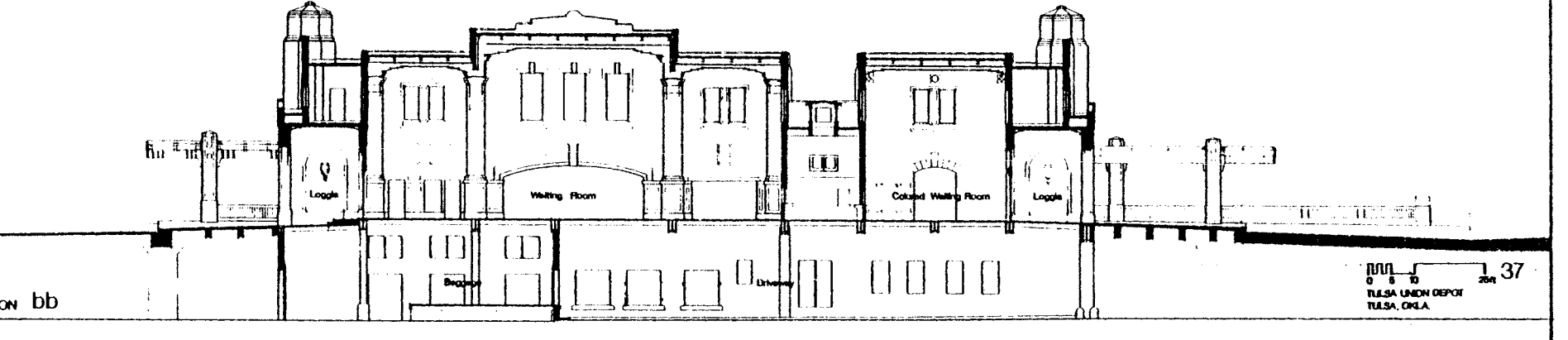
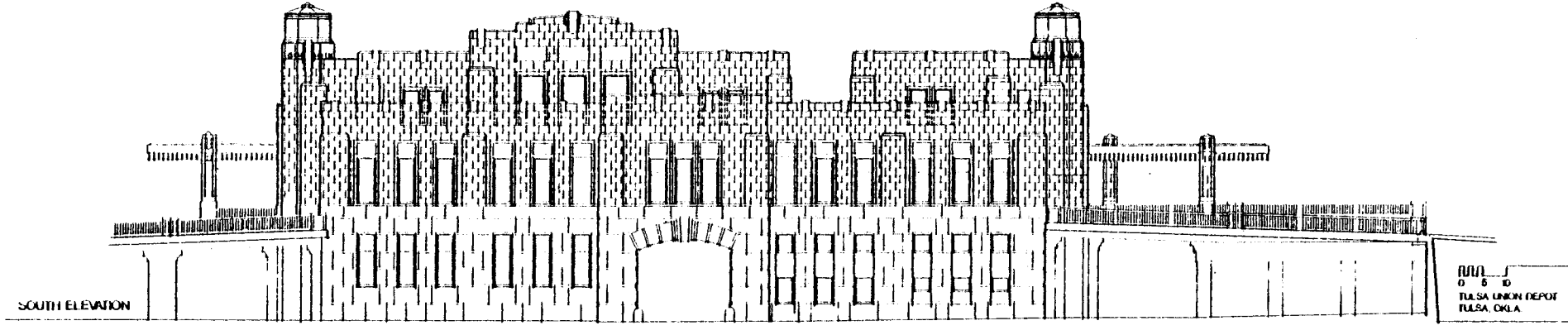
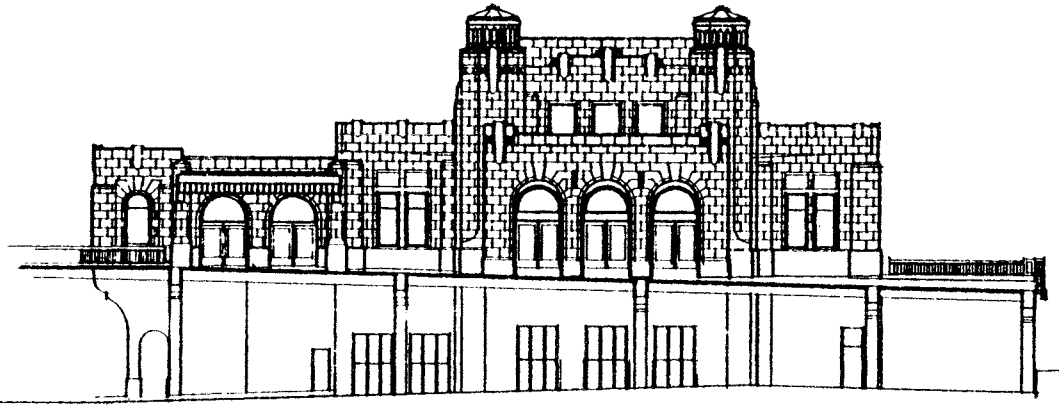
TULSA UNION DEPOT
TULSA, OKLA.


Loggia
Waiting Room
Colored Waiting Room
Loggia
Baggage
Driveway
0 5 10 25ft
TULSA UNION DEPOT
TULSA, OKLA.

ON bb


SOUTH ELEVATION
0 5 10
TULSA UNION DEPOT
TULSA, OKLA.



EST ELEVATION

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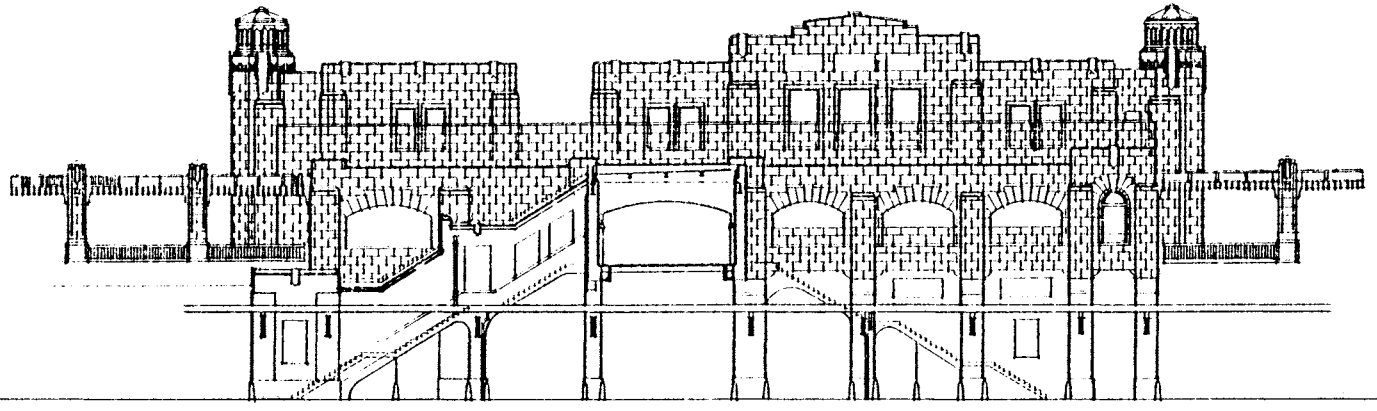
TULSA UNION DEPOT
TULSA, OKLA.

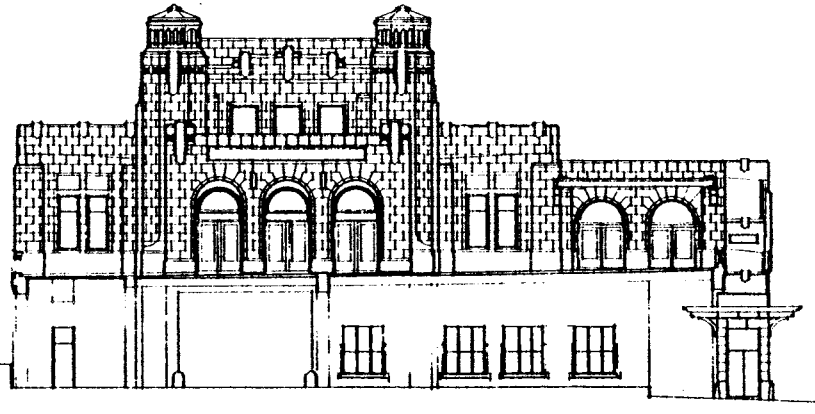


NORTH ELEVATION

0 5 10 20ft

TULSA UNION DEPOT
TULSA, OKLA.

T ELEVATION

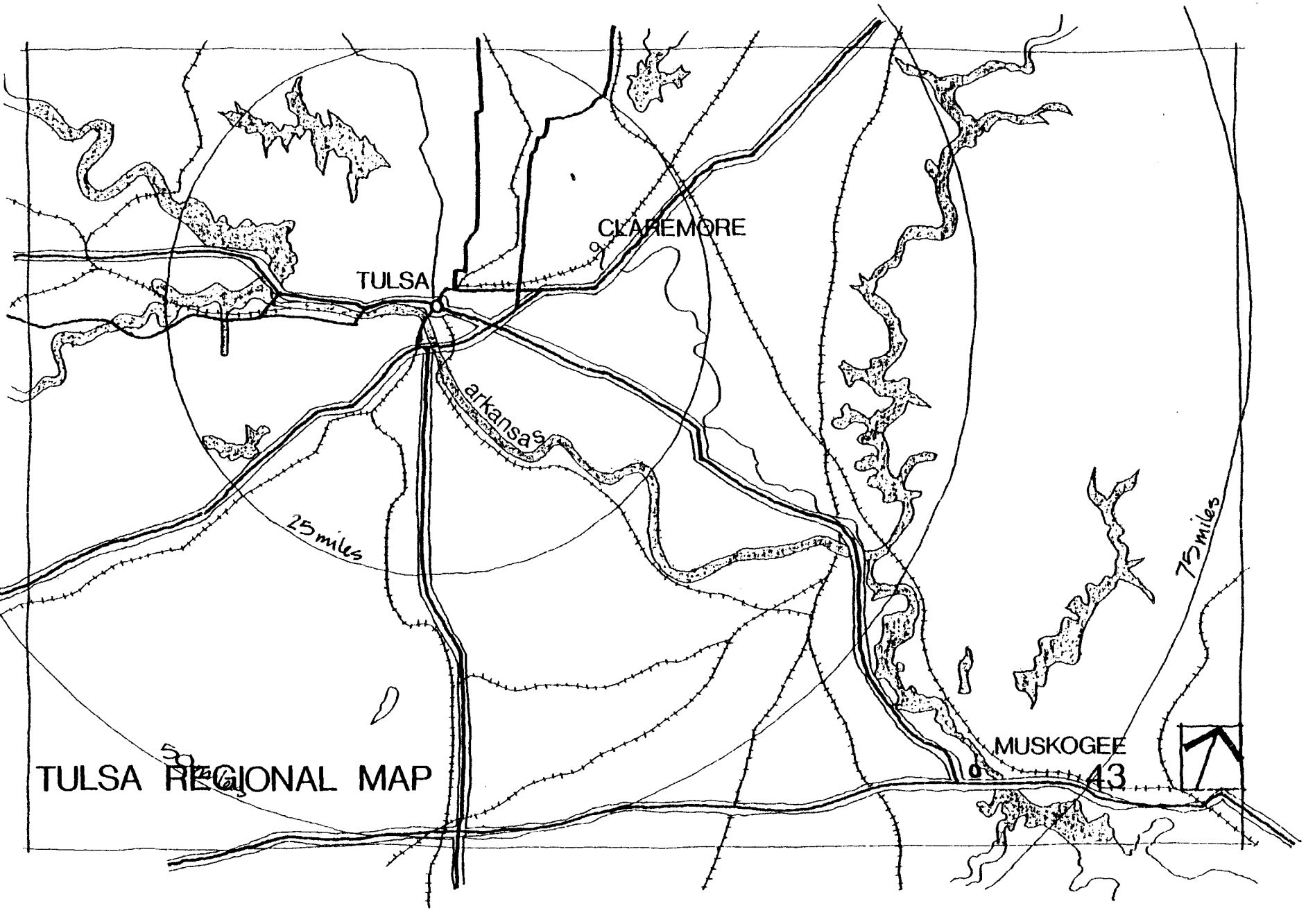


0 5 10 25ft.

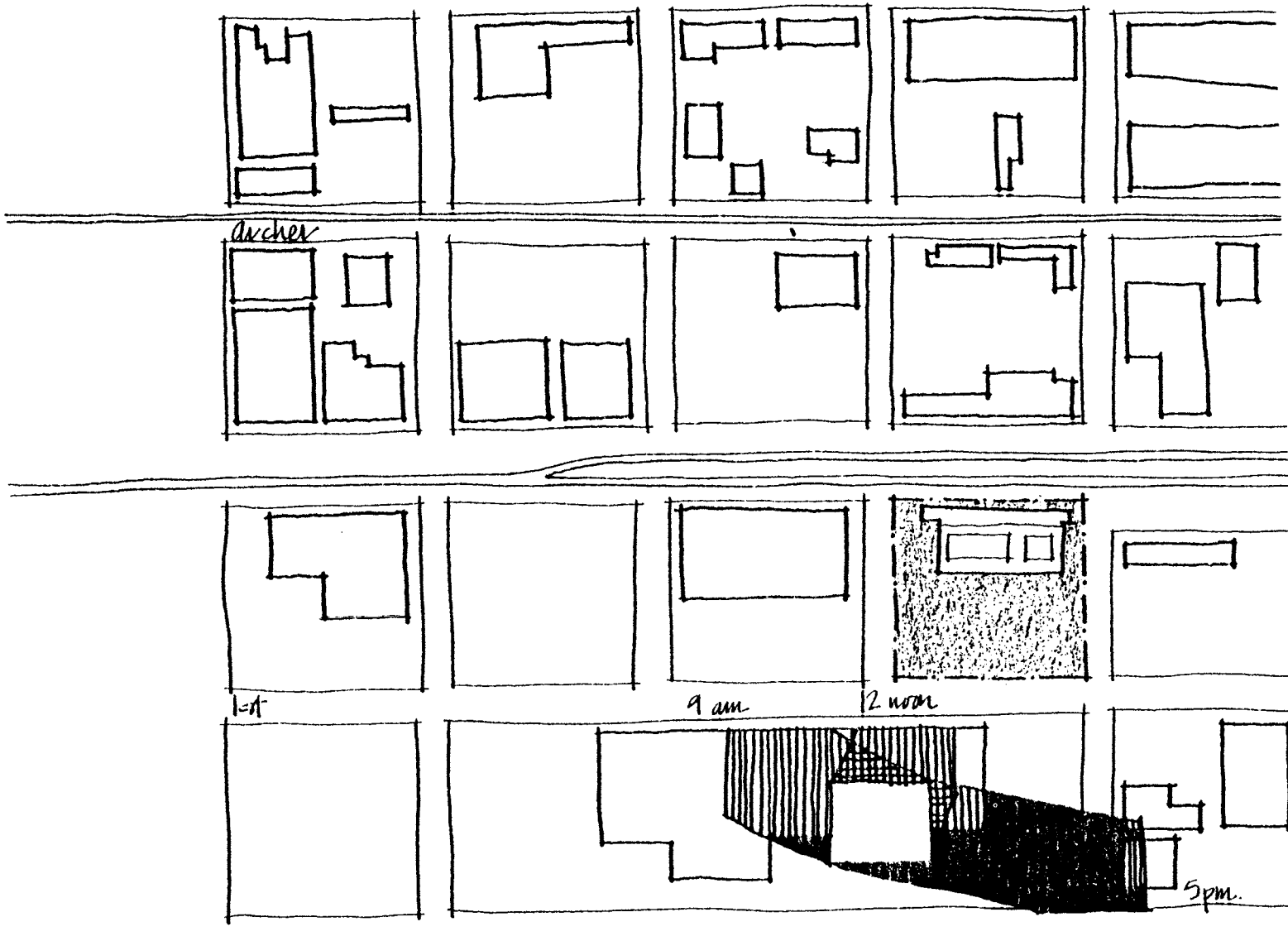
TULSA UNION DEPOT
TULSA, OKLA.

DIAGRAMS

SITE DATA



TULSA REGIONAL MAP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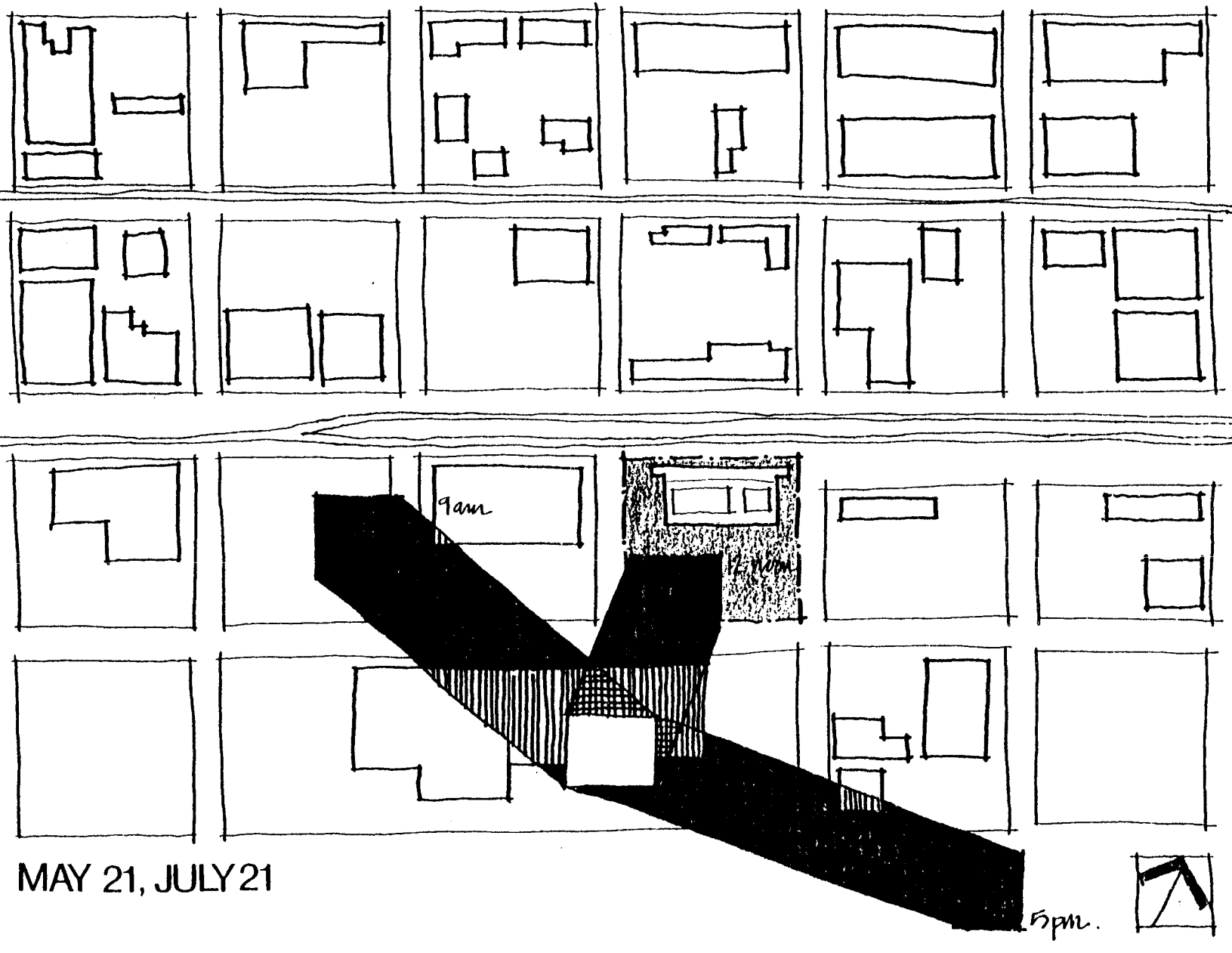
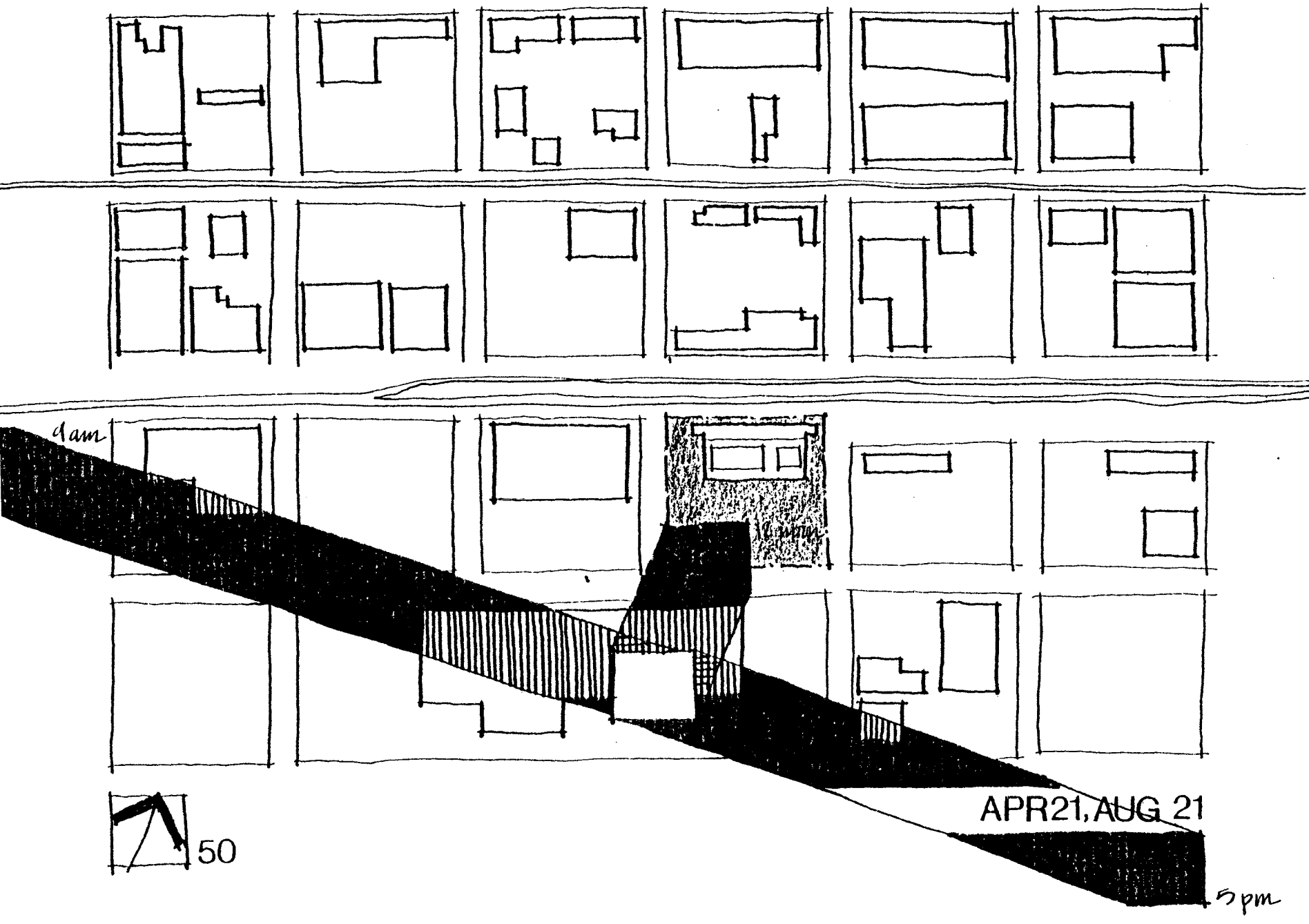
9 am
12 noon
5pm.



MAY 21, JULY 21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APR21, AUG 21
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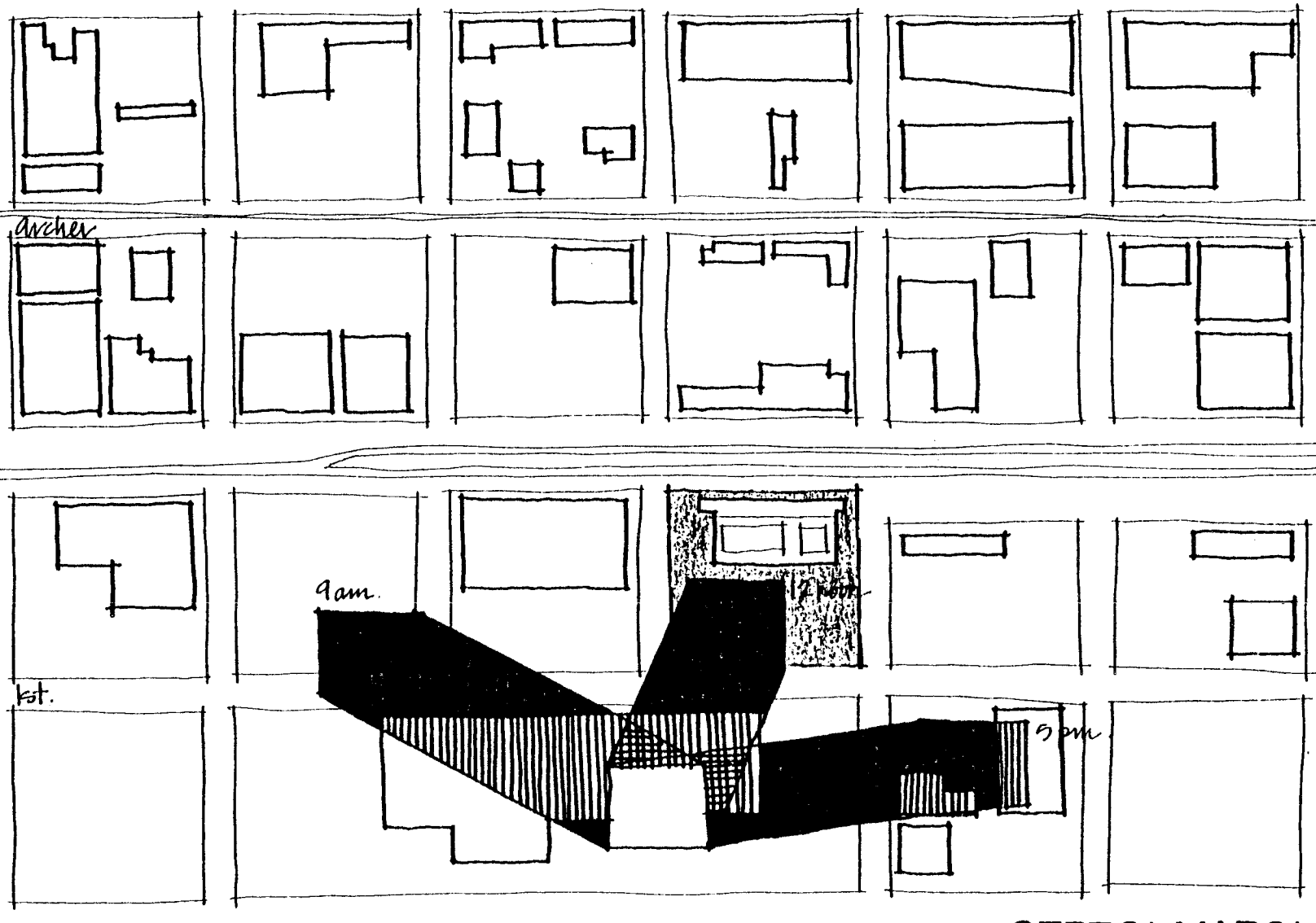
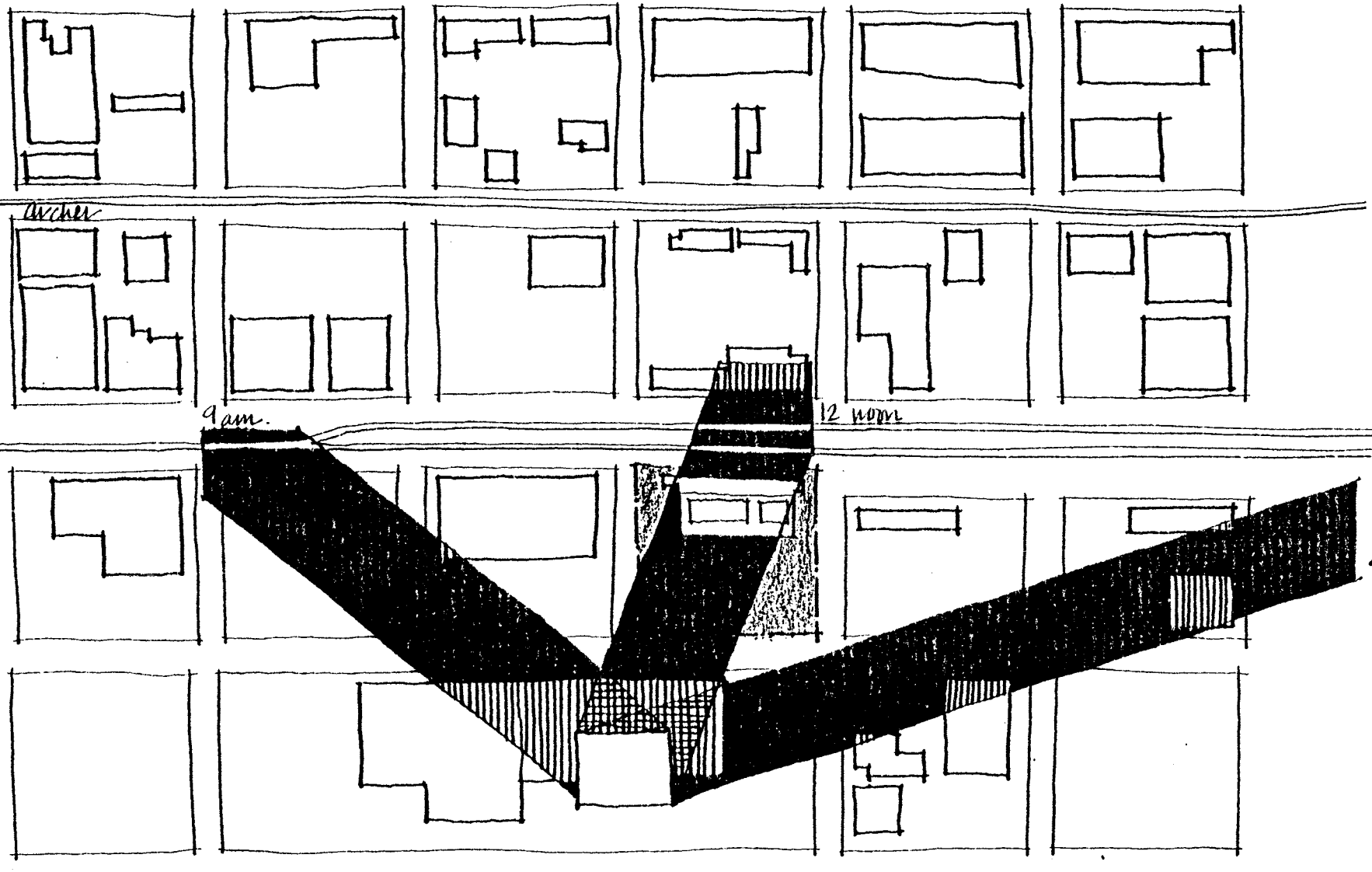
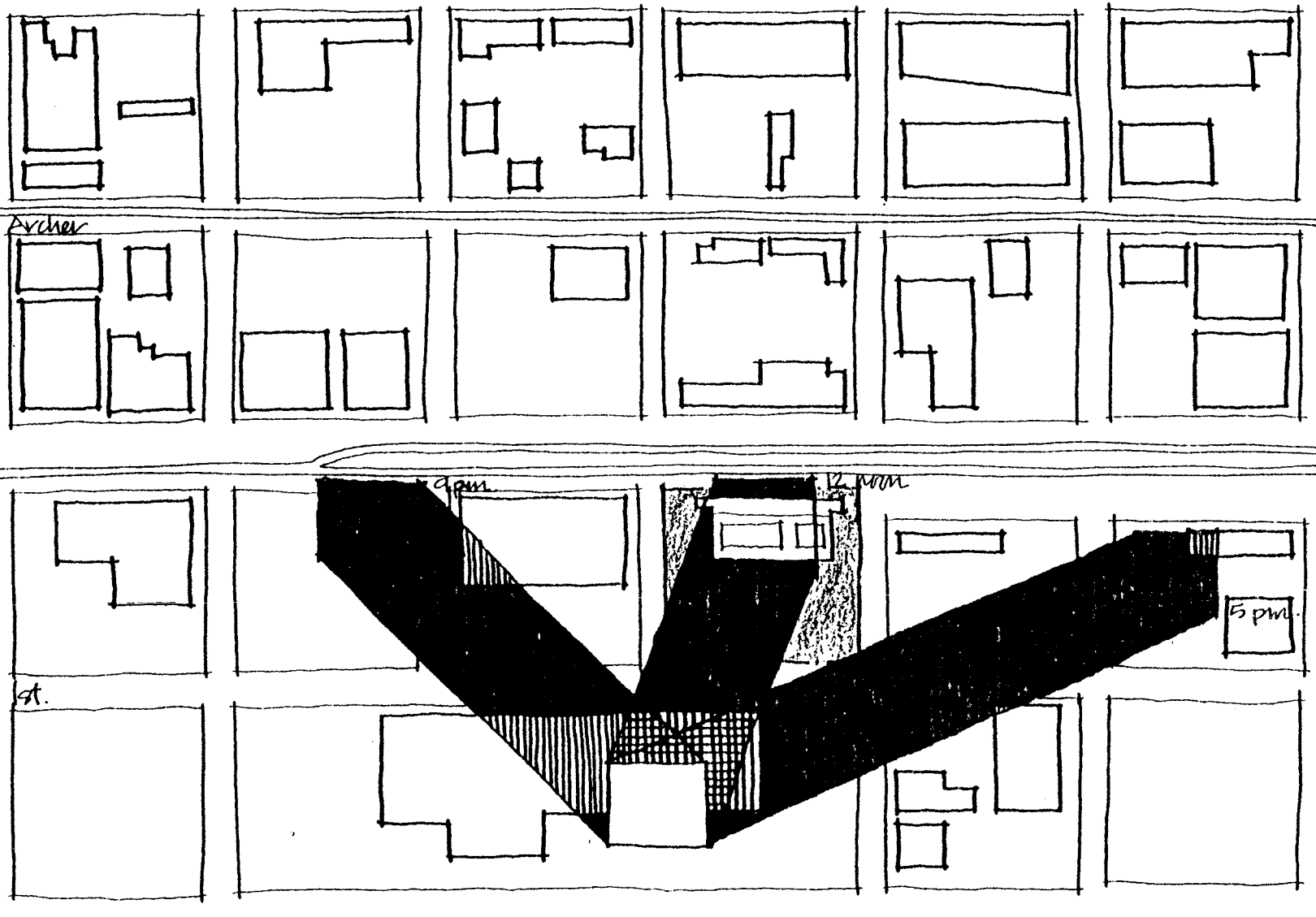
5pm



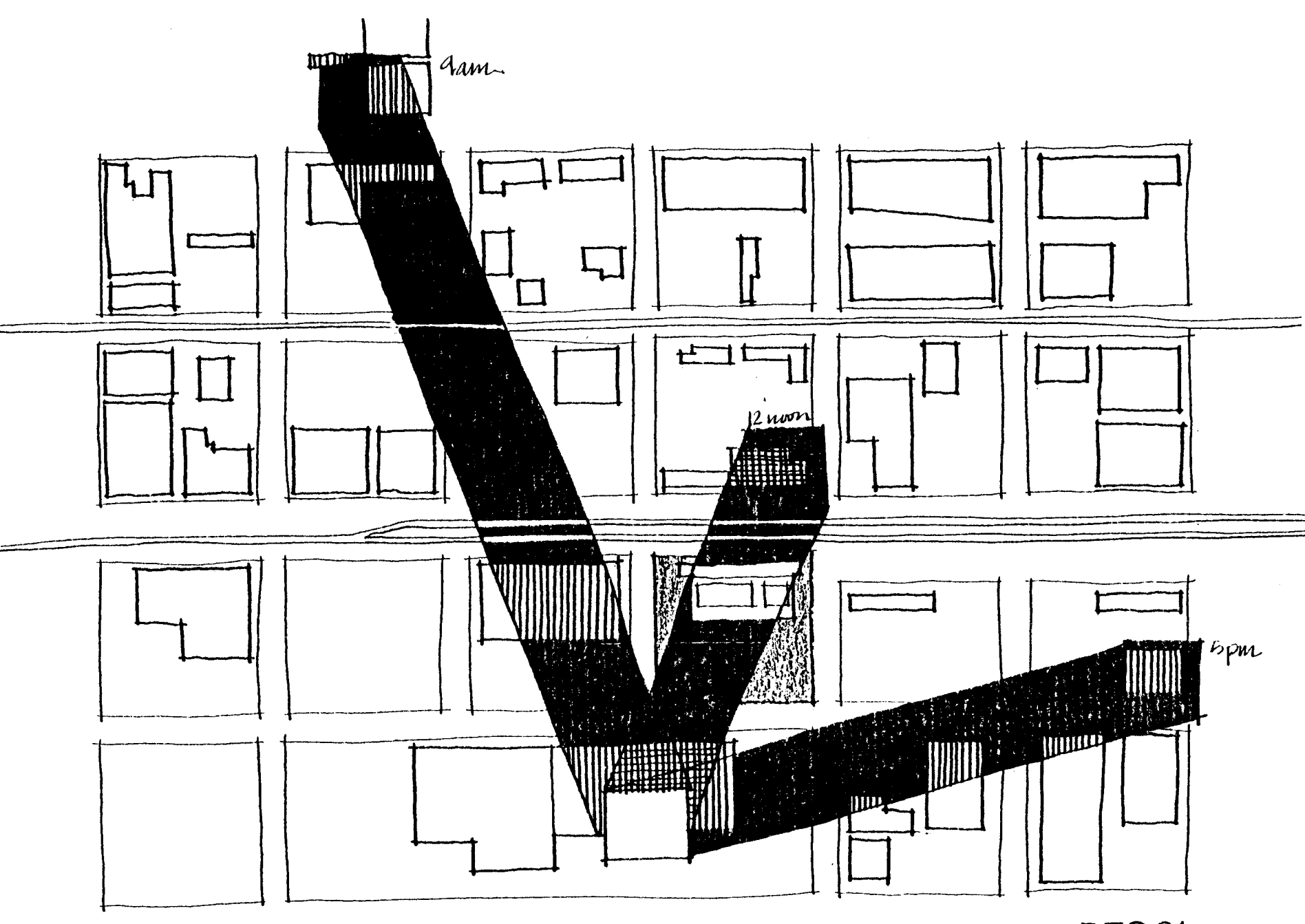
SEPT 21, MAR21

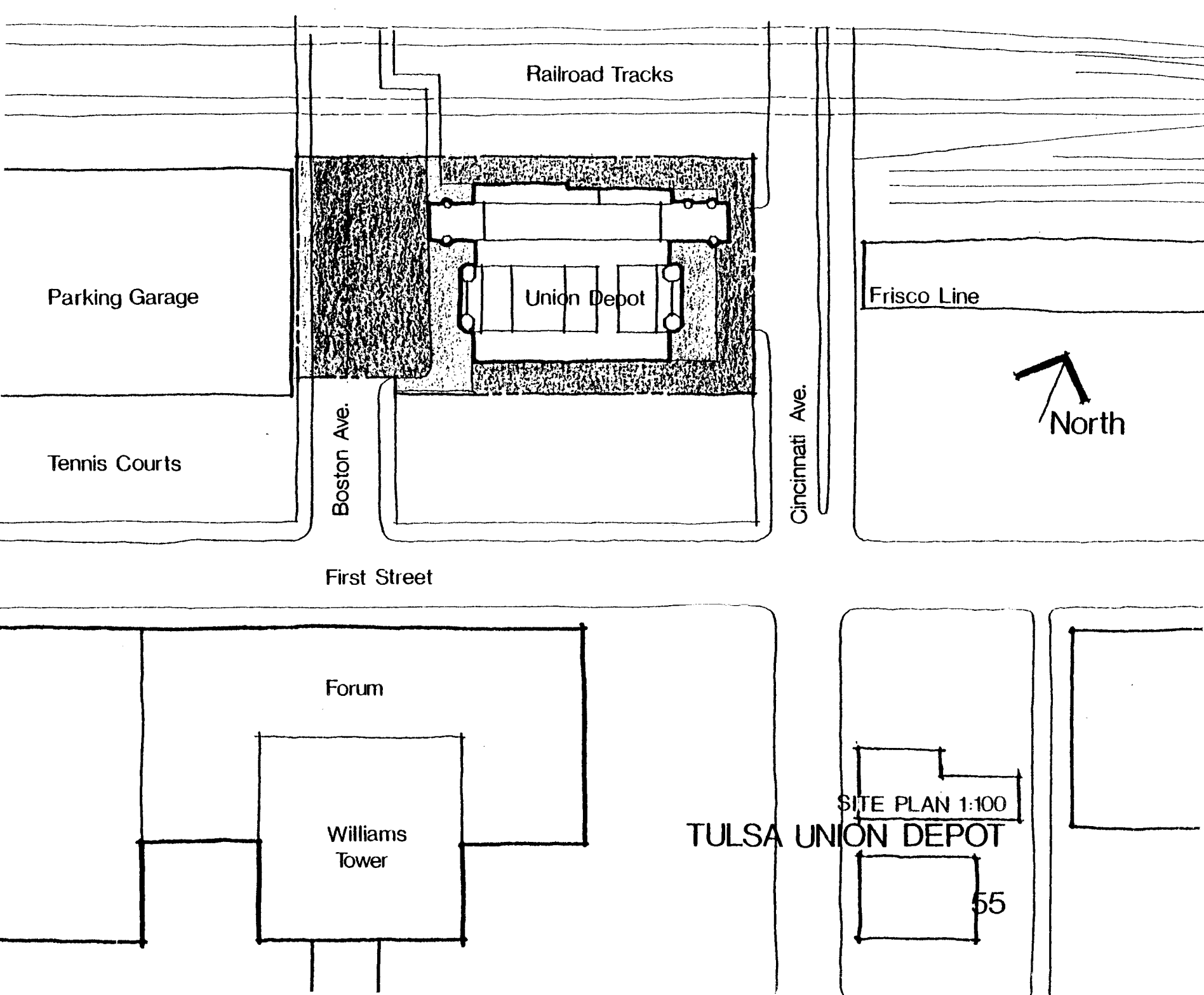


FEB 21 OCT 21



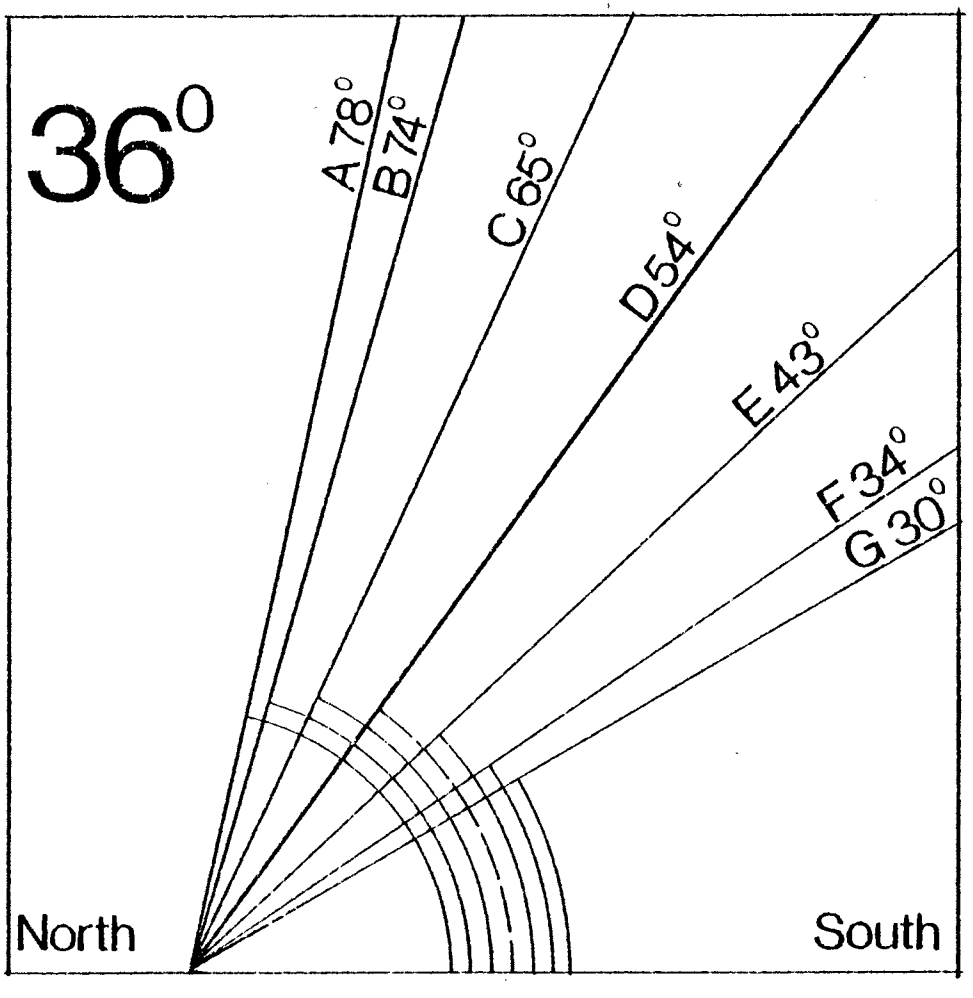
JAN 21, NOV 21


9am
12 noon
5pm
DEC 21

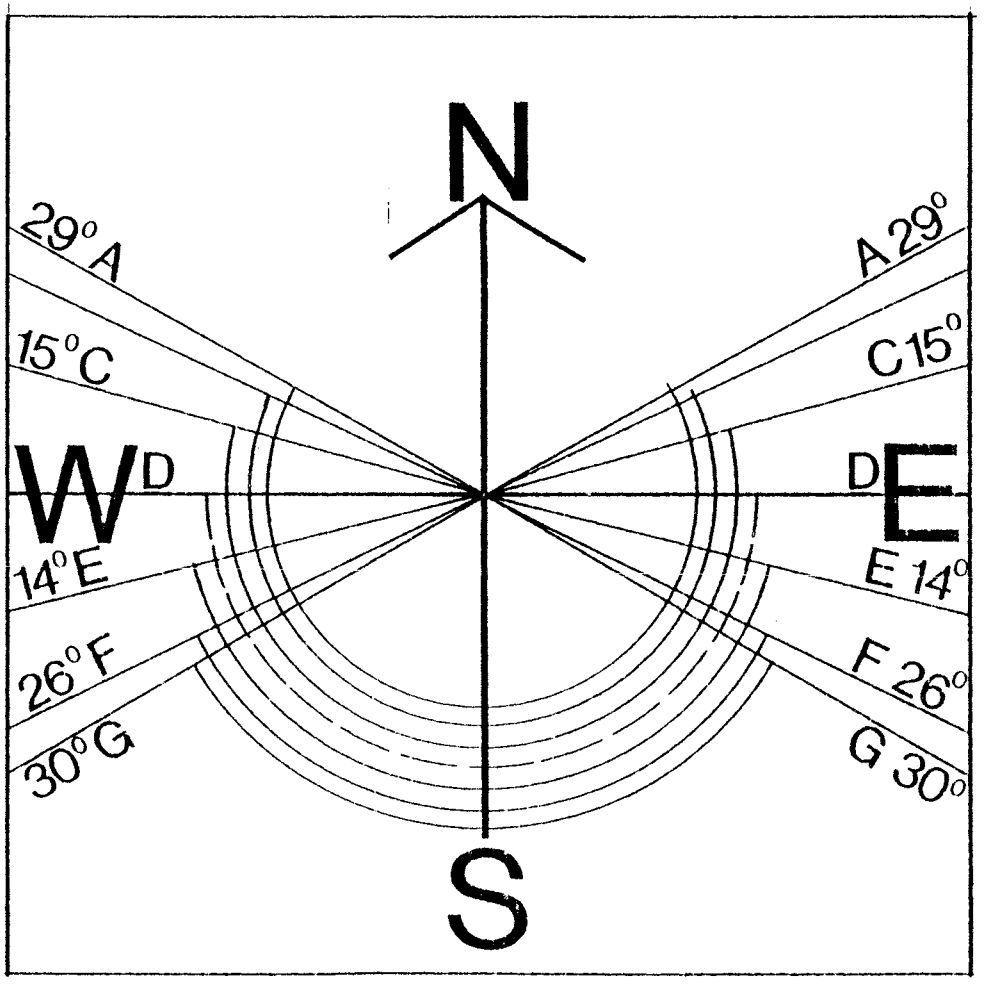

Railroad Tracks
Parking Garage
Union Depot
Frisco Line
North
Tennis Courts
Boston Ave.
Cincinnati Ave.
First Street
Forum
Williams
Tower
SITE PLAN 1:100
TULSA UNION DEPOT
55

SOLAR ANGLES

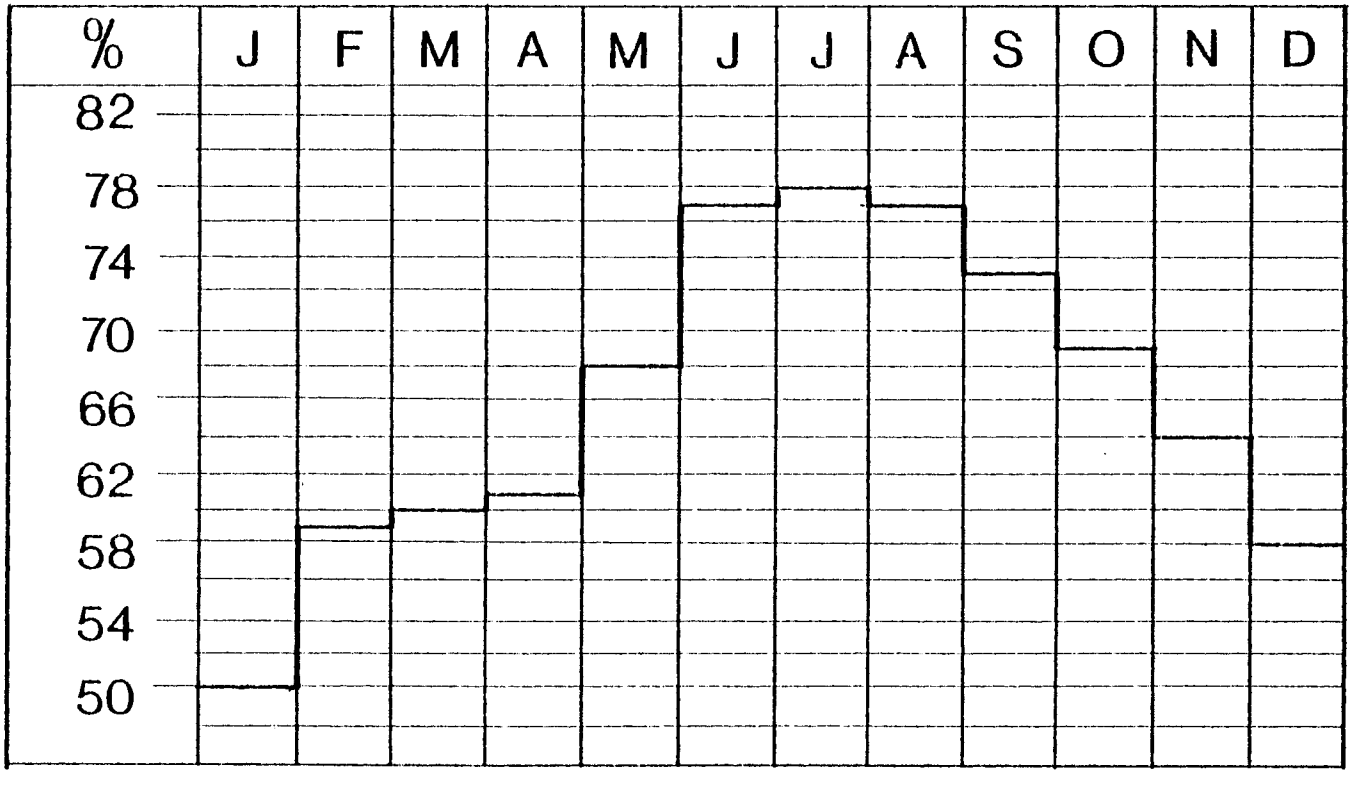
A June 22
B May 22 - July 22
C Apr 22 - Aug 22
D Mar 22 - Sept 22
E Feb 22 - Oct 22
F Jan 22 - Nov 22
G Dec 22



SUN PATH

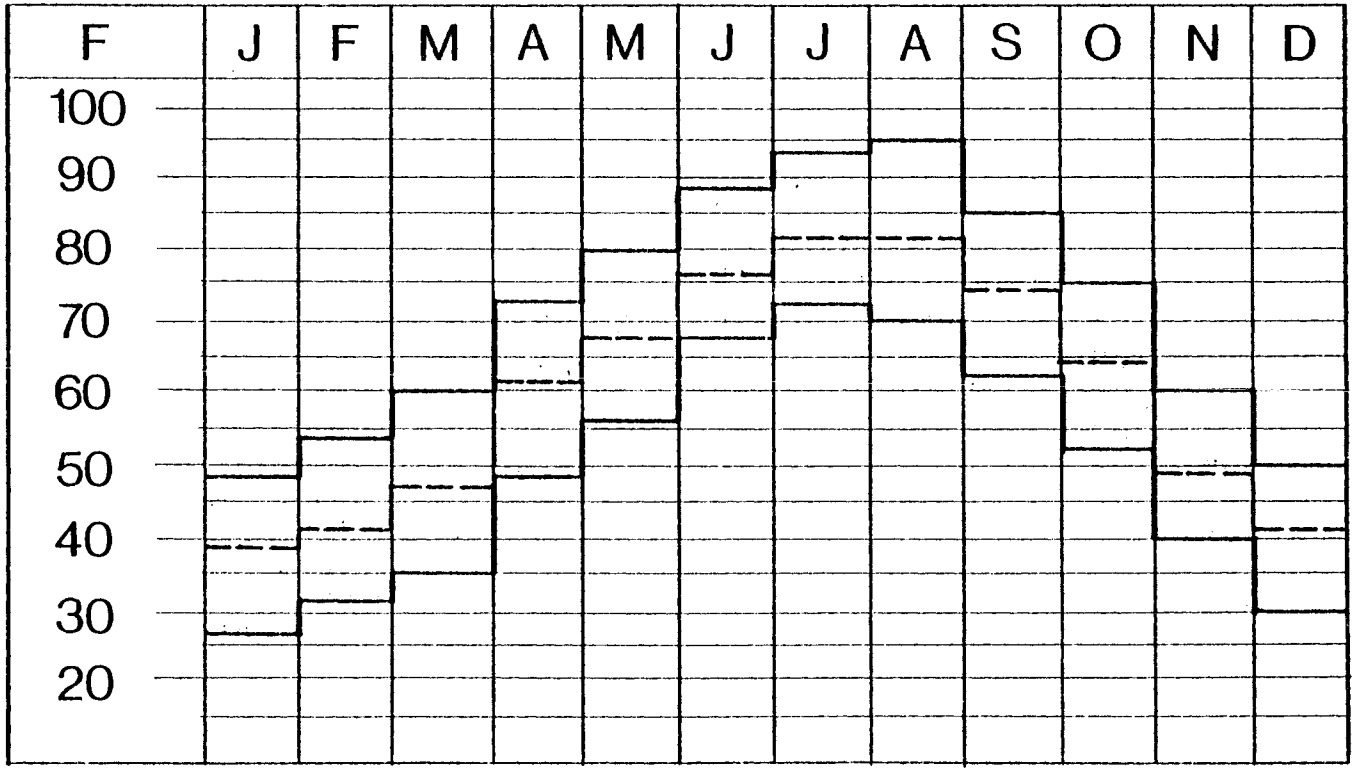


SUNSHINE



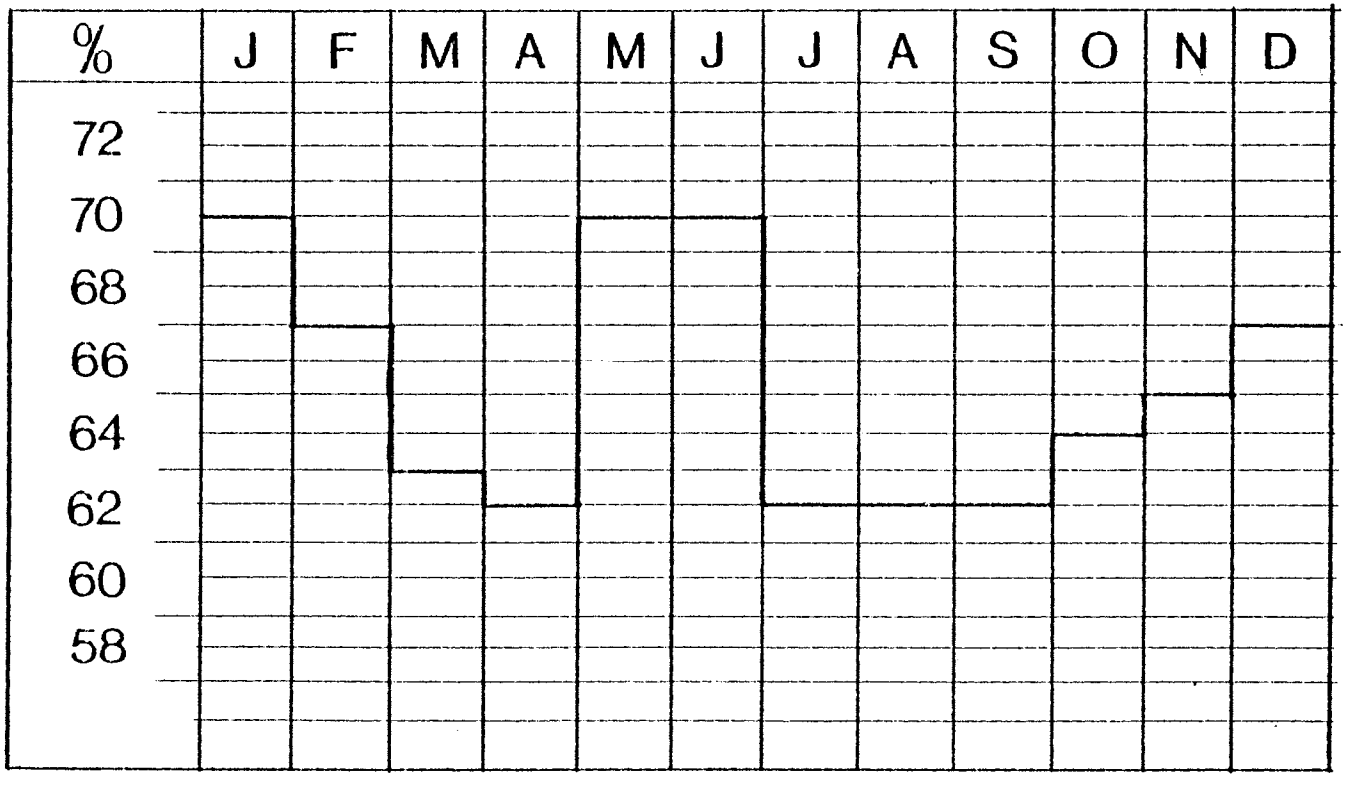
Source: Weather Atlas of the United States

AVERAGE DAILY TEMPERATURES



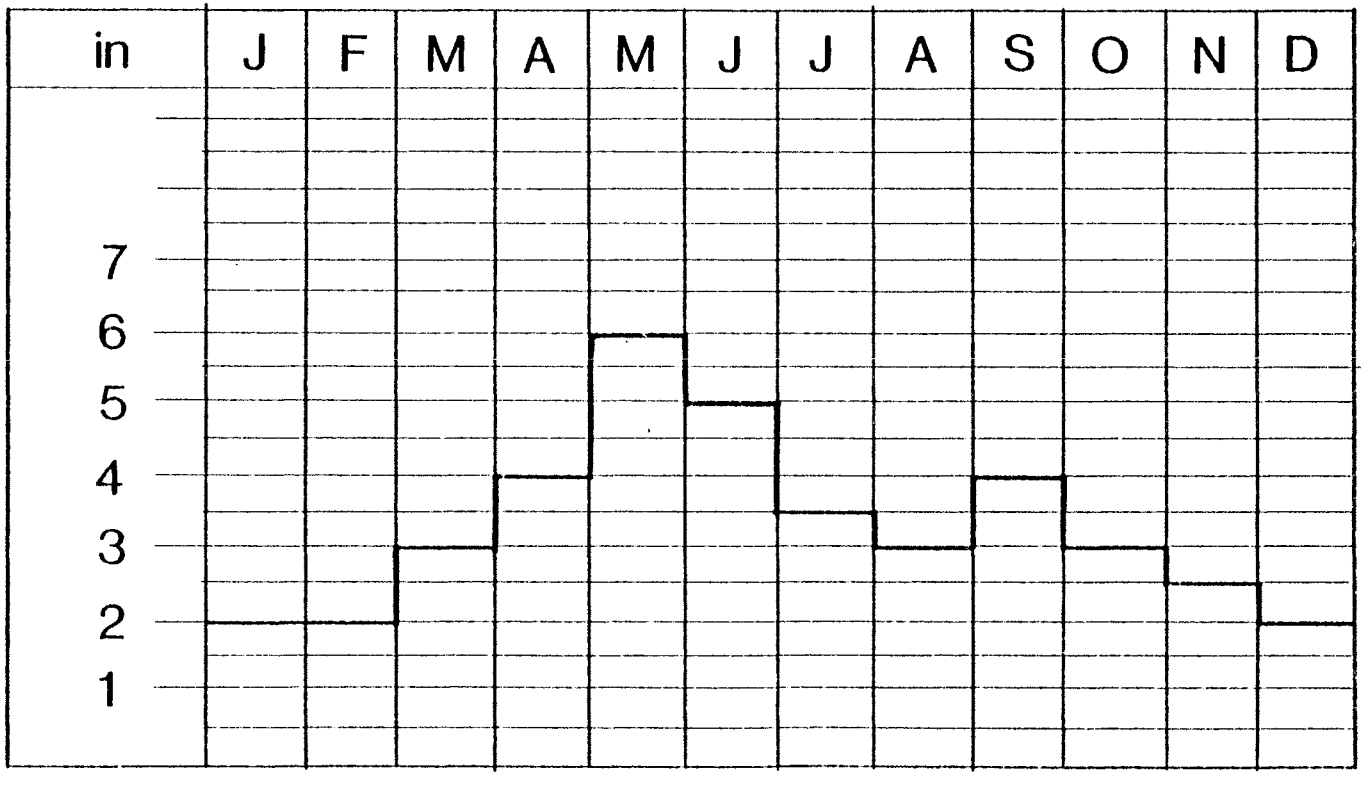
Source: Weather Atlas of the United States

MEAN RELATIVE HUMIDITY



Source: Weather Atlas of the United States

AVERAGE PRECIPITATION



Source: Weather Atlas of the United States

CLIMATE DATA

Design Temperature for Tulsa, Oklahoma:

Winter	Design	Dry-Bulb
	99%	97.5%
	8	13

Summer	Design	Dry-Bulb	
	1%	2.5%	5%
	100	96	93

	Design	Wet-Bulb	
	1%	2.5%	5%
	77	76	75

Summer mean daily range is 24 degrees.

Source: ASHRAE 1977 Fundamentals Handbook

RESOURCE

- ASHRAE Fundamentals Handbook
- ASHRAE Systems Handbook
- ASHRAE Equipment Handbook
- McGuinness/Stein. Mechanical and Electrical Equipment for Buildings
- Stein. Architecture and Energy
- Olgyay. Design with Climate
- Kron/Slesin. High Tech

CODES

Applicable codes include the 1967 National Building Code and the NFPA 101 (Life Safety Code).

CONCEPTS

CONCEPTS

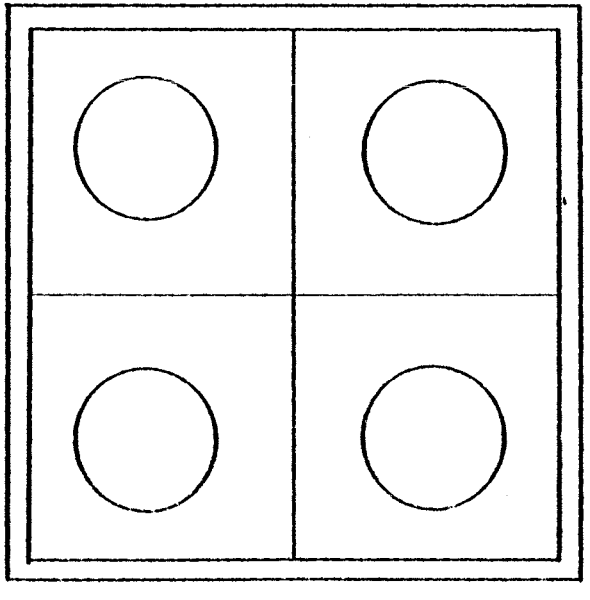
Something conceived in the mind; idea, notion.

PROGRAMMATIC CONCEPTS

Programmatic concepts refer to ideas intended mainly as functional and organizational solutions to the clients own performance problems. They are general or abstract ideas generalized from particular instances.

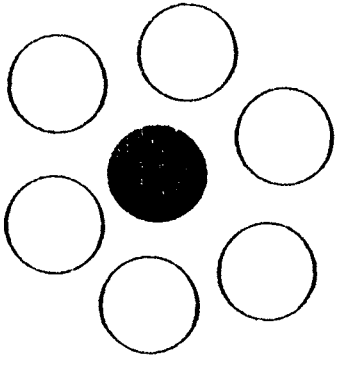
ACTIVITY GROUPING

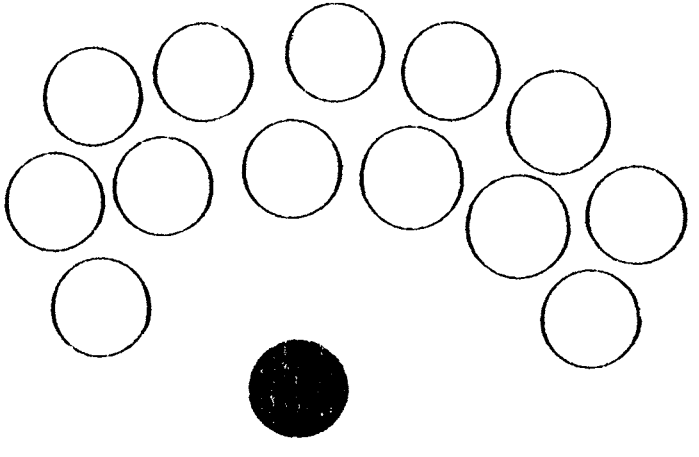
Allow for audio and visual privacy in compartmentalized spaces.



PEOPLE GROUPING

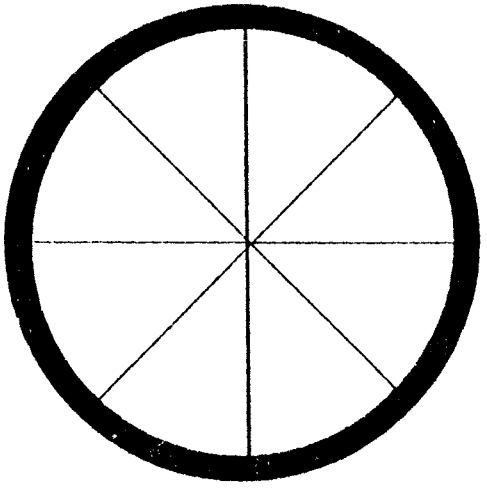
Control the number of students per class within the studios. Allow for smaller and larger groups to coexist in the same studio.





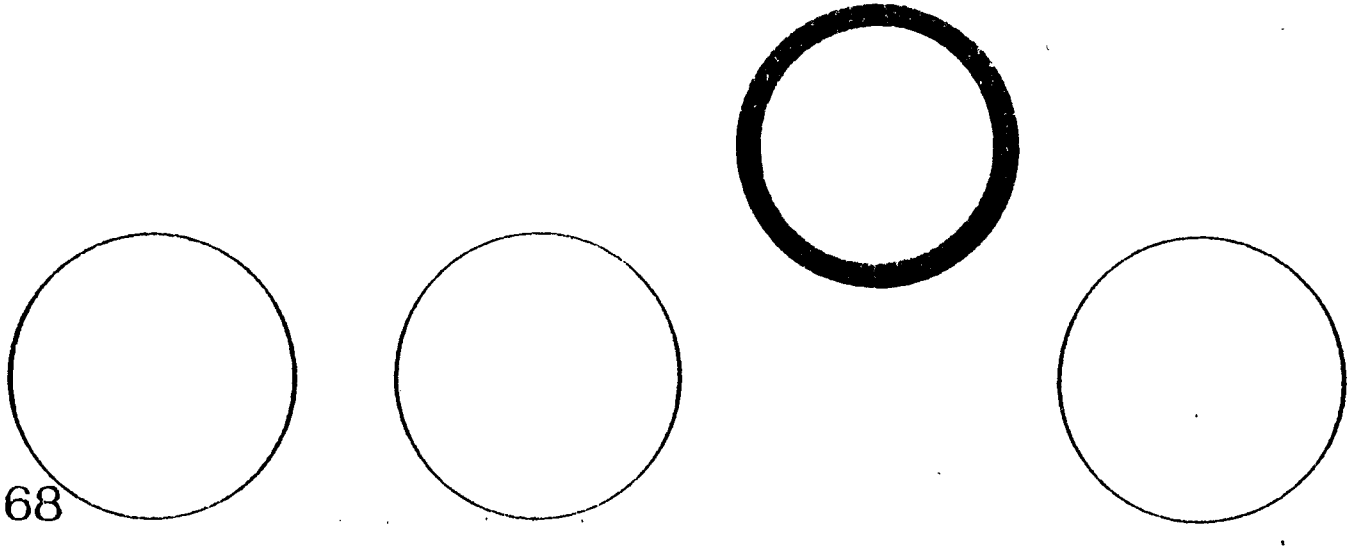
SERVICE GROUPING

Centralize major service activities. Branch out to other areas. Each clean-up area can be shared between two similar studios.



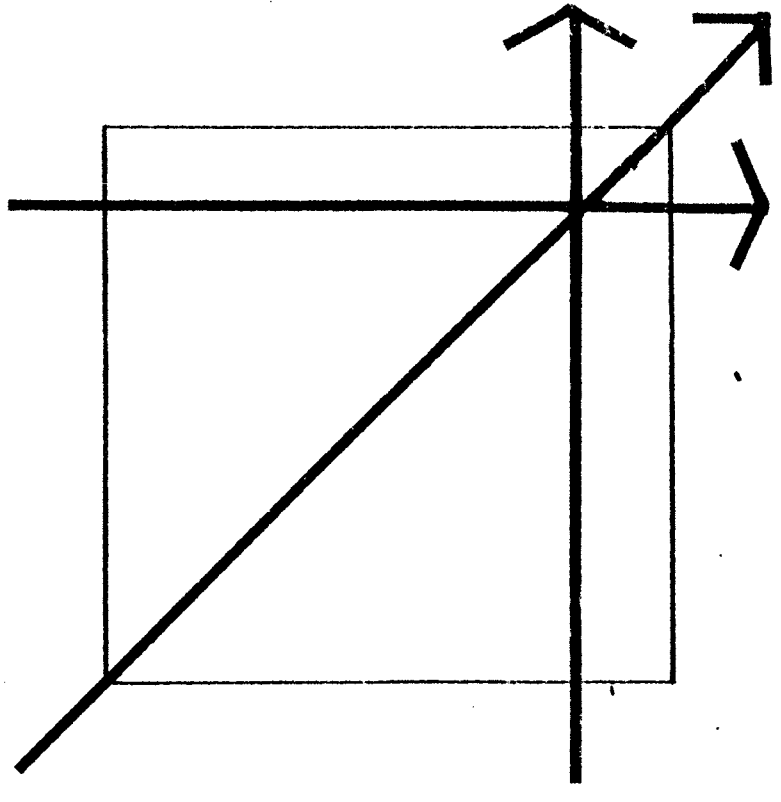
PRIORITY

Arrange spaces and activities to suit functional relationships, but consider site and climate characteristics while integrating daylighting.



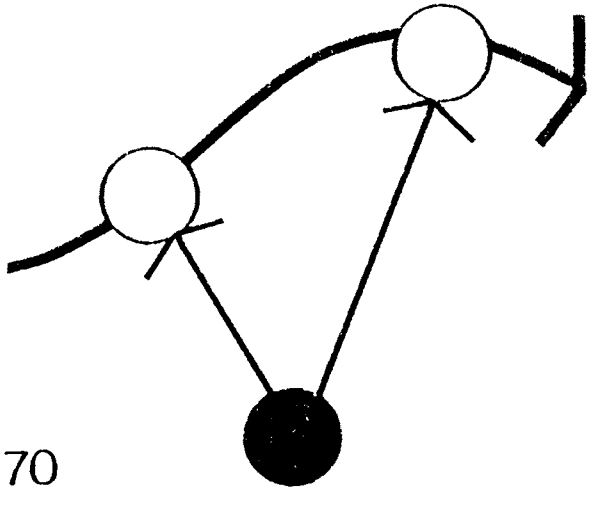
MIXED FLOW

The provision for change or planned encounters fosters communication among students.



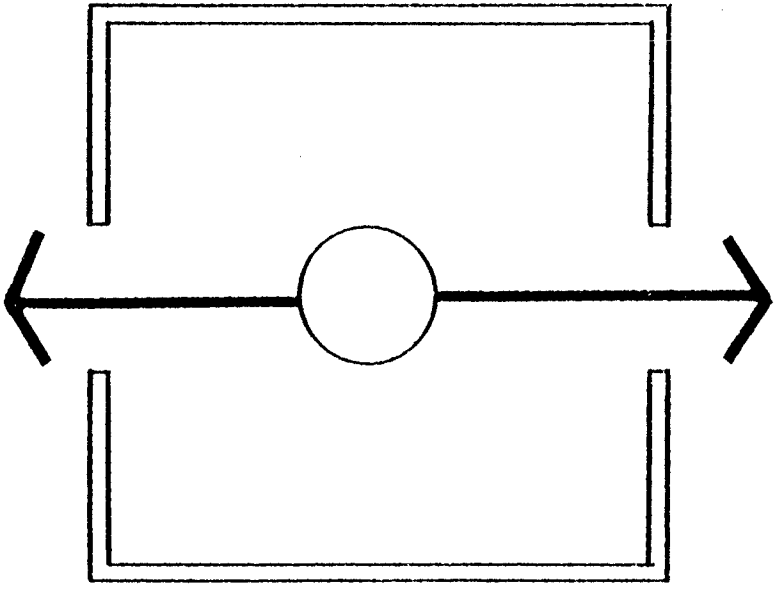
SEQUENTIAL FLOW

The progression of events within some studios must be carefully planned to provide optimum operation.



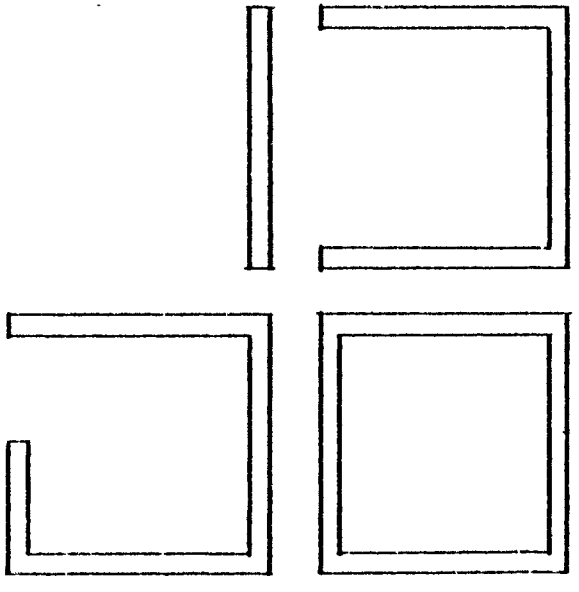
SAFETY CONTROL

Upgrade the existing structure to comply with all code requirements of egress, fire protection, etc.



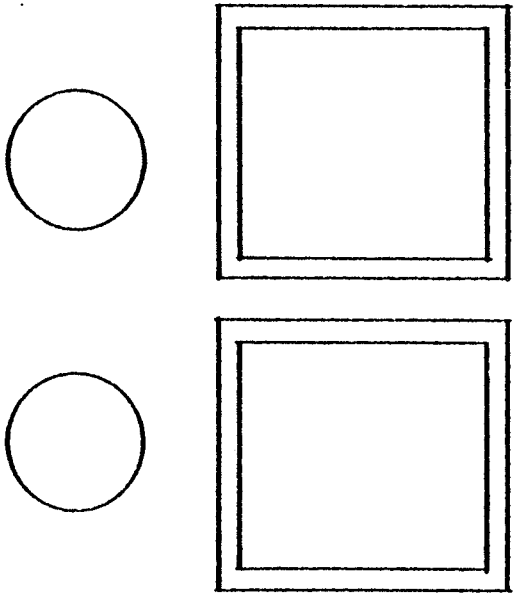
SECURITY CONTROL

Provide for individual security control for the various spaces to allow flexibility among specific functions.



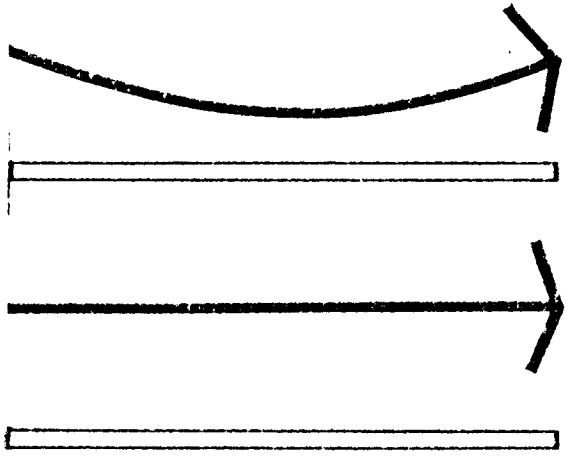
RELATIONSHIPS

Group like activities together and activities which share specific functions adjacent to each other.



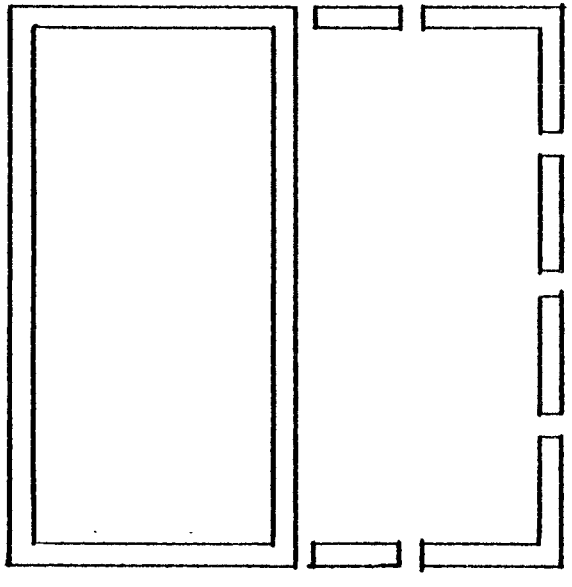
SEPARATED FLOW

Regulation and control of visual and physical access to the various spaces is essential. Pedestrian, service and vehicular circulation should be separate and clearly defined.



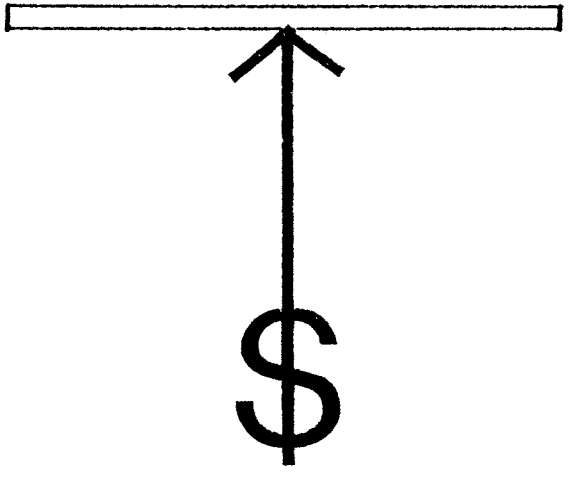
PHASING

Revitalize the Tulsa Union Depot within the future plans to redevelop Old Town north of the Depot.



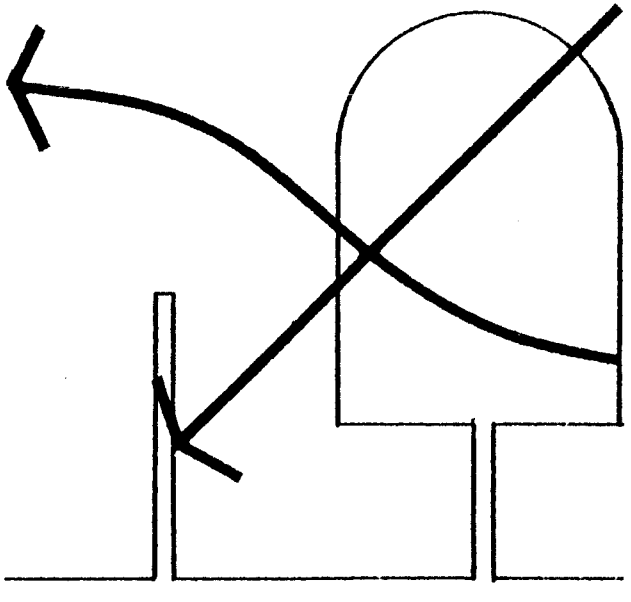
COST CONTROLS

Conceptually study material choices and construction methodology.



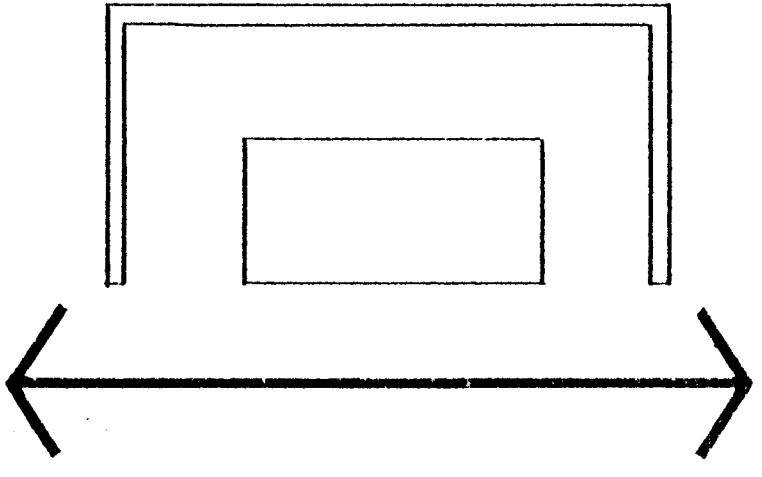
ENERGY CONSERVATION

Investigate utilization of passive solar concepts within the building, and consider utilization of natural lighting, ventilation.



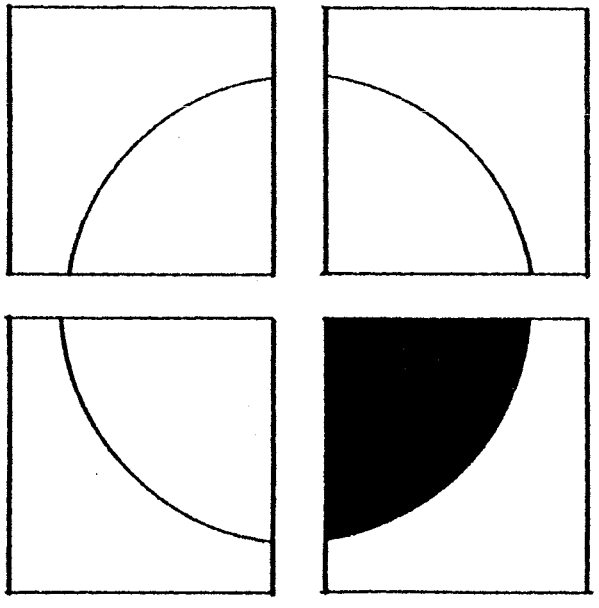
SITE CIRCULATION

Improve and upgrade existing pedestrian circulation to/from the site as well as on-site circulation.



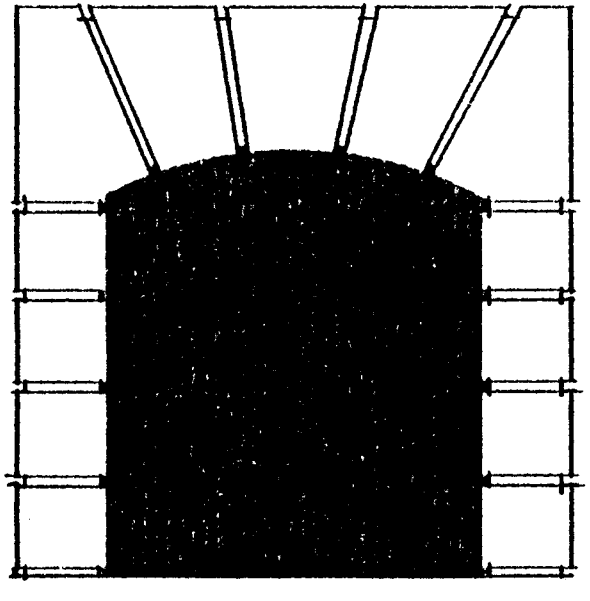
ORIENTATION

A point of reference within the building will prevent discomfort and loss of life.



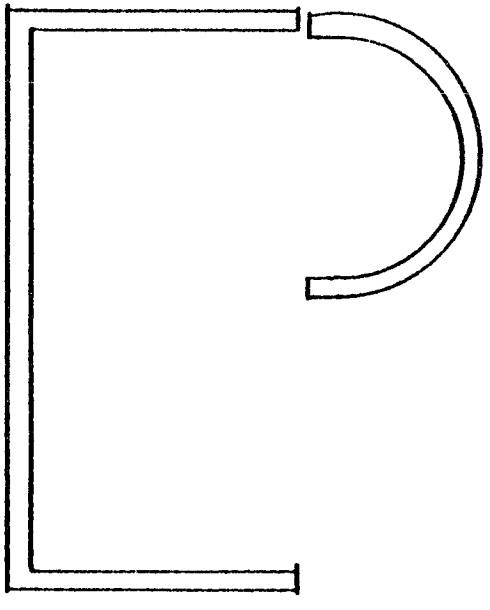
PRESERVATION

Retain and restore the building's exterior to the original intent as closely as possible and retain significant interior details and forms.



FLEXIBILITY

Provide flexible spaces that can grow and change with individual needs.



NEEDS

SPACE REQUIREMENTS

Major area requirements for the Contemporary Institute of the Arts include the following:

Departmental Areas include the director and his staff that operate the financial organization and management of the Institute.

The library is essential to the Institute's growth and learning experience that it has to offer to the students and faculty.

The Gallery/Exhibit is the major access to the public and the visual image perceived by the public, so the outdoor exhibit must be highly visible and accessible. The outdoor exhibit can lead or link into the indoor exhibit and the community theatre.

The cafe is an integral part of the exposure and attraction that the Institute has to offer to the public. Ideally the cafe must be accessible from the Boston pedestrian bridge.

Studios are the learning vehicle and physical environment in which the students and faculty exchange ideas and concepts.

Work Areas are specifically tied with studios that have additional area requirements for equipment.

NEEDS

SPACE REQUIREMENTS

General Shared Areas are very important to the success of the studios and the interaction that will take place in these areas.

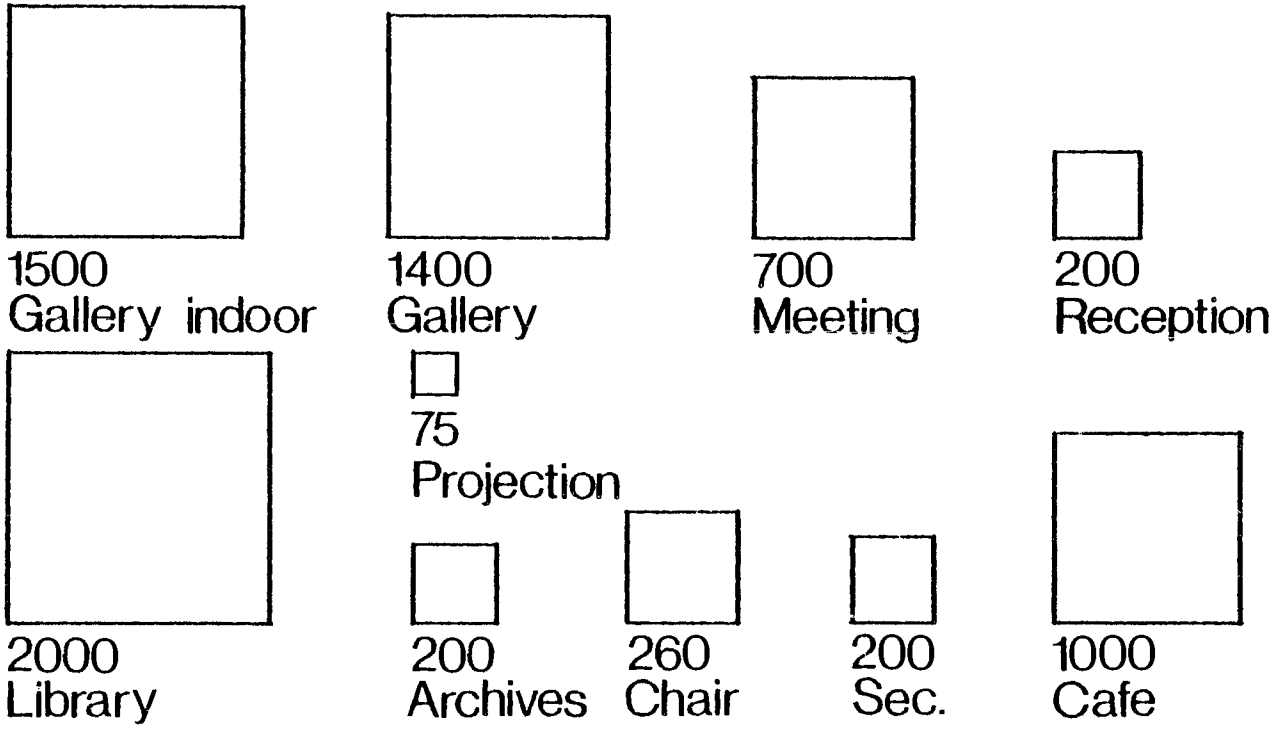
Clean-Up/Storage areas should be linked directly to the studios. There should be no physical barriers.

Faculty Offices/Studios should be their own private place for study and instruction. These areas should be linked together with other faculty and should be separated from the students for reasons of privacy.

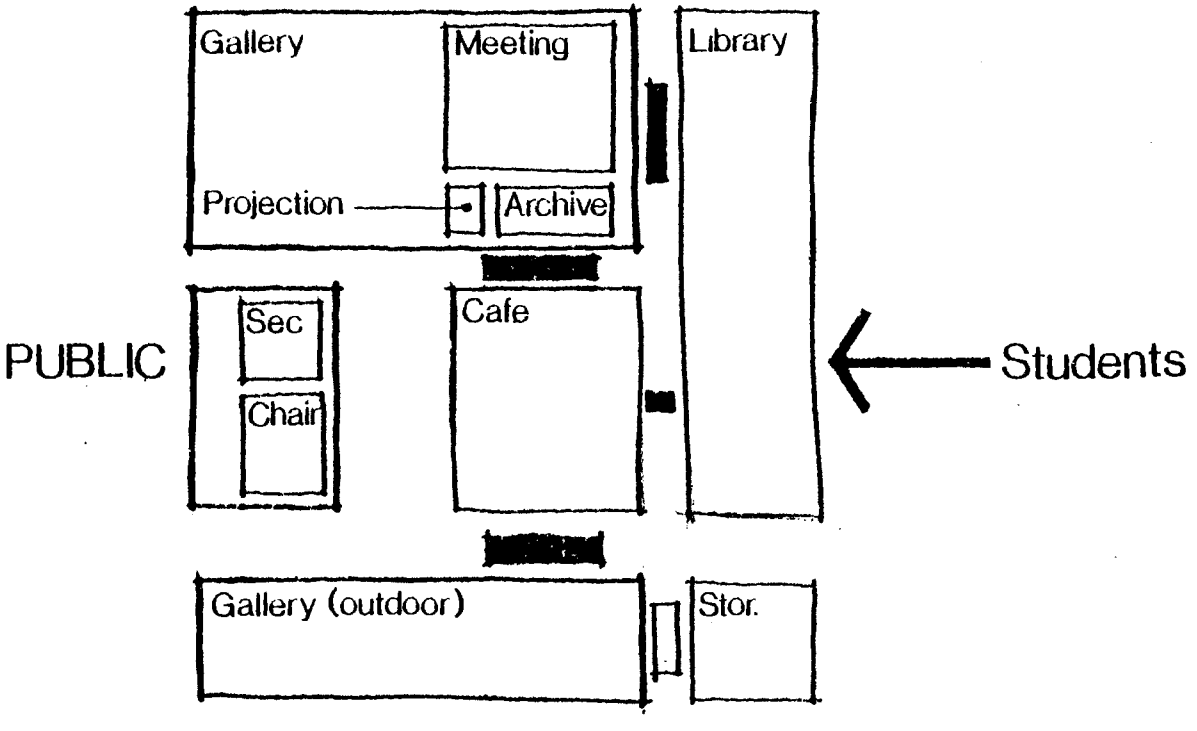
Departmental Areas

Components	Approximate net area
Gallery (indoor)	1500
Gallery (outdoor)	1400
Meeting	700
Reception	200
Library	2000
Archives	200
Projection Room	75
Cafe	1000
Chairperson	260
Secretary	200
Departmental Areas	7435 s.f.

DEPARTMENTAL AREAS



DEPARTMENTAL RELATIONSHIPS



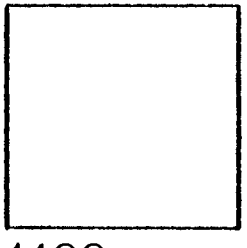
Painting Studios

Components		Approximate net area
Studios (2)	1400 ea.	2800
Faculty (4)	175 ea.	700
General Shared Areas		1000
Painting Studios		4500 s.f.

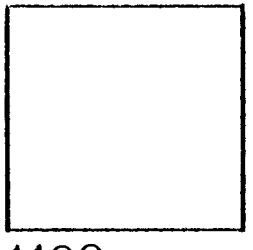
Drawing and Graphics

Components		Approximate net area
Studios (2)	1400 ea.	2800
B&W Photo Lab.		300
Type Set		350
Clean-Up/Storage		350
Faculty		175
Drawing and Graphics		3975 s.f.

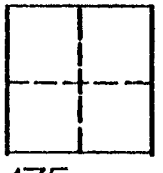
PAINTING STUDIOS



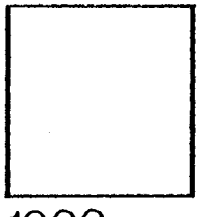
1400
Studio



1400
Studio

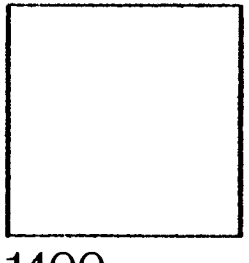


175 ea.
Faculty

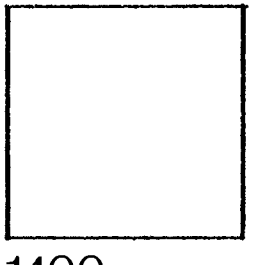


1000
Gen. Area

DRAWING and GRAPHICS



1400
Studio



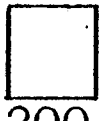
1400
Studio

Faculty

175

350
Clean Up

Photo Lab

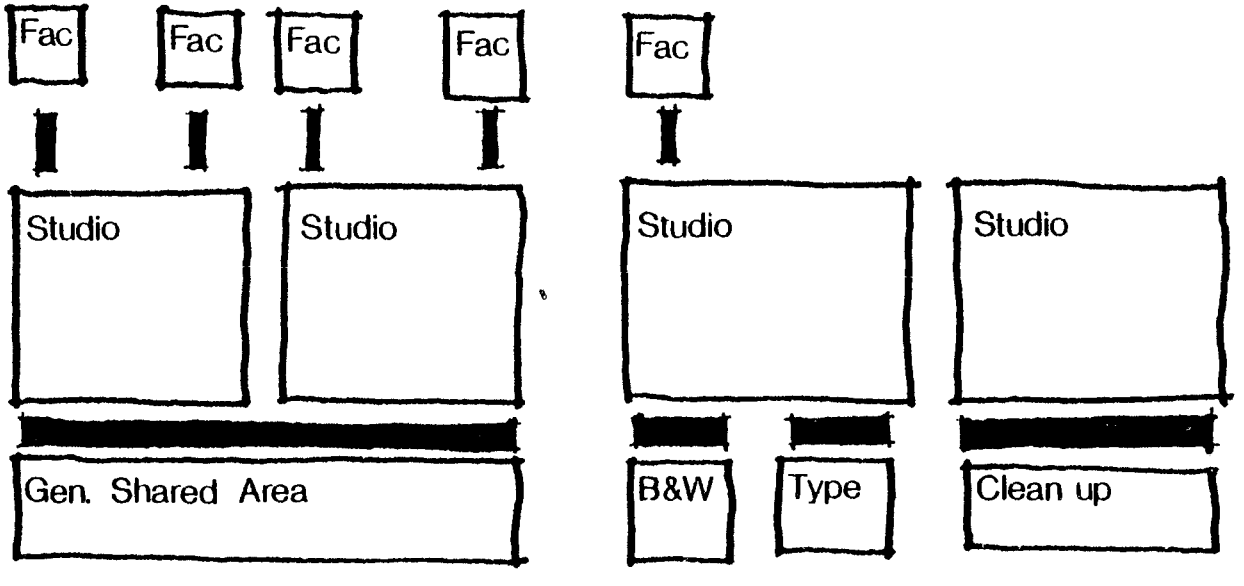


300

350
Type Set

PAINTING

DRAWING/GRAPHICS



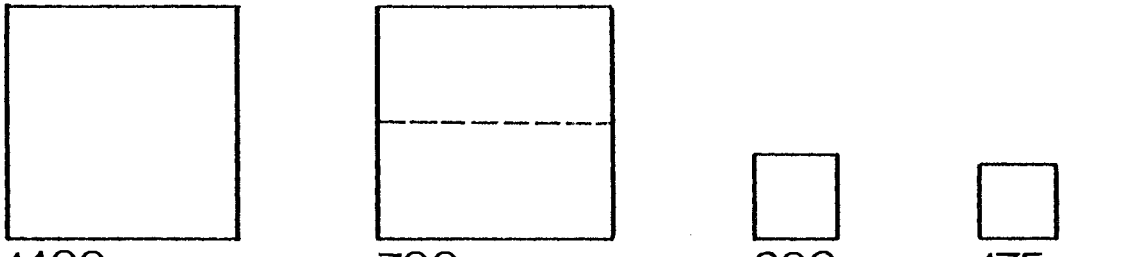
Printmaking

Components		Approximate net area
Studio		1400
Work Areas (2)	700 ea.	1400
Clean-Up/Storage		200
Faculty		175
Printmaking		3175 s.f.

Serigraphy

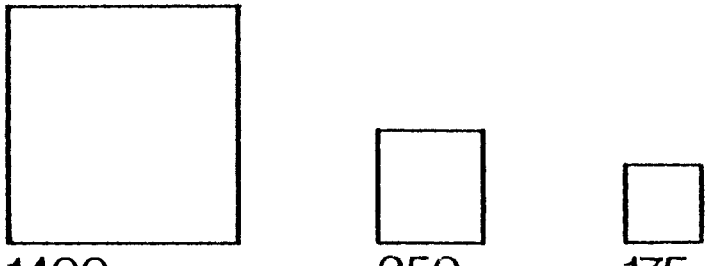
Components	Approximate net area
Studio	1400
Clean-Up/Storage	350
Faculty	175
Serigraphy	1925 s.f.

PRINTMAKING



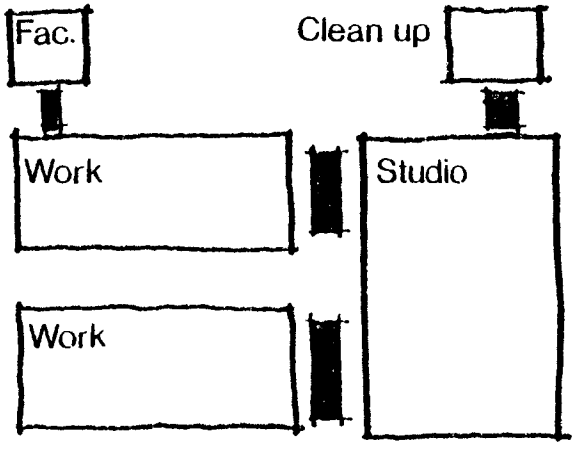
1400 Studio
700 ea. Work Area
200 Clean Up
175 Faculty

SERIGRAPHY

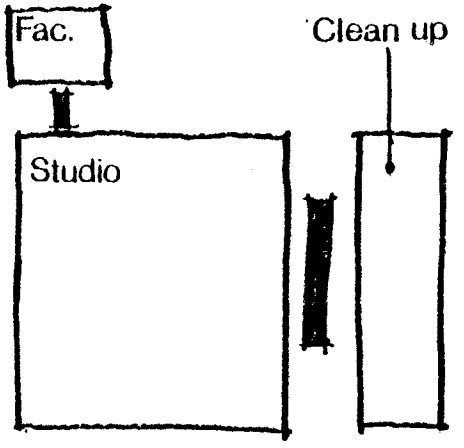


1400 Studio
350 Clean Up
175 Faculty

PRINTMAKING



SERIGRAPHY



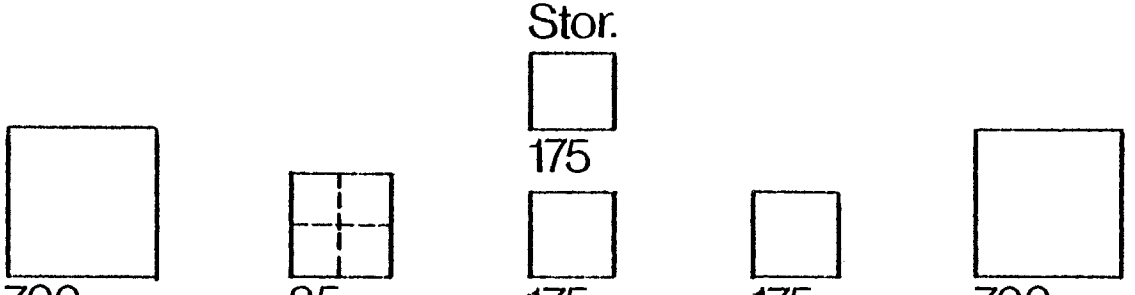
Photography

Components		Approximate net area
Black and White Darkroom		700
Individual Black & White Darkroom (4)	85 ea.	340
Color Darkroom		175
Set Up		700
Storage		175
Faculty		175
Photography		2265 s.f.

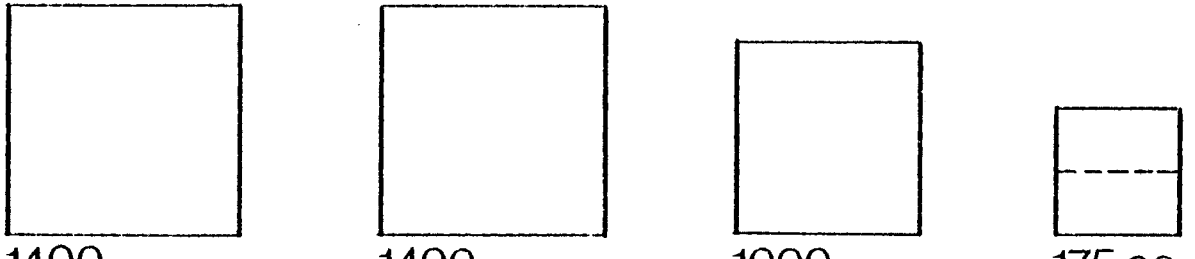
Sculpture

Components		Approximate net area
Studios (2)	1400 ea.	2800
General Shared Area		1000
Faculty (2)	175 ea.	350
Sculpture		4150 s.f.

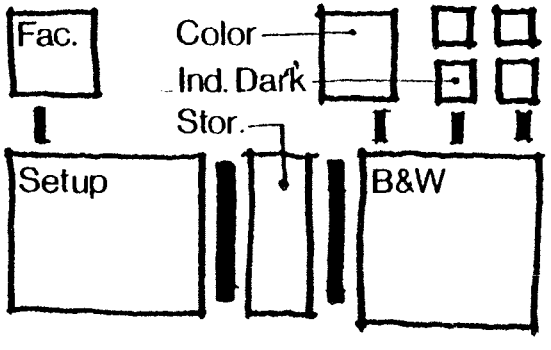
PHOTOGRAPHY



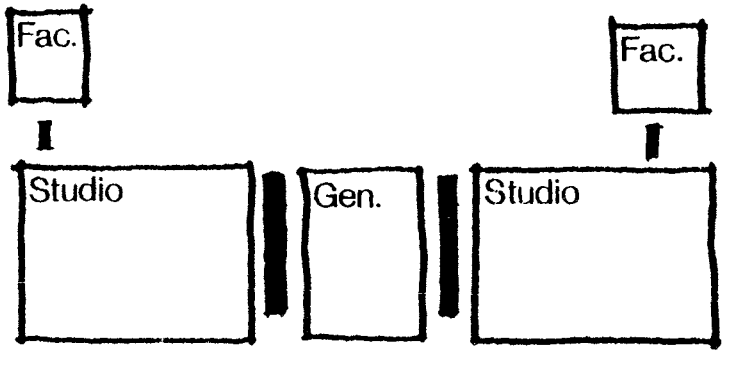
SCULPTURE



PHOTOGRAPHY



SCULPTURE



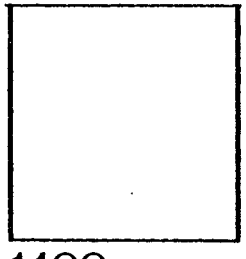
Weaving and Textile

Components	Approximate net area
Studio	1400
General Shared Area	350
Clean-Up/Storage	350
Faculty	175
Weaving and Textile	2275 s.f.

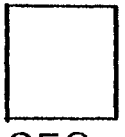
Jewelry and Enamel

Components	Approximate net area
Jewelry	700
Enamel	700
General Shared Area	700
Faculty	175
Jewelry and Enamel	2975 s.f.

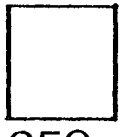
WEAVING and TEXTILE



1400
Studio



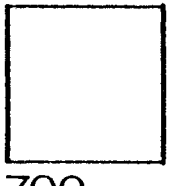
350
Gen. Area



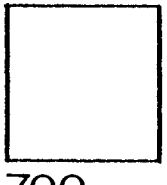
350
Clean Up

175
Faculty

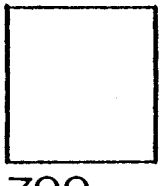
JEWELRY and ENAMELS



700
Jewelry



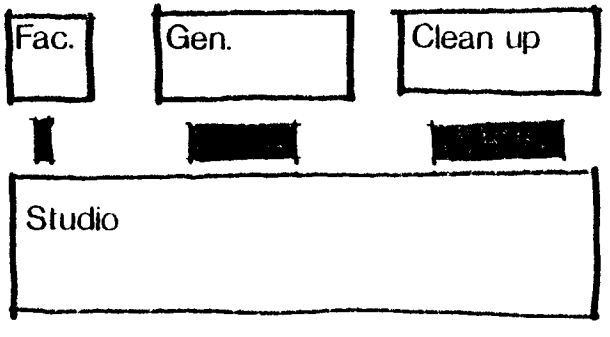
700
Enamel



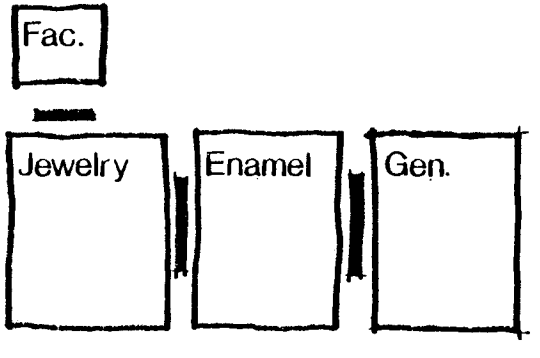
700
Gen. Area

175
Faculty

WEAVING/TEXTILE



JEWELRY/ENAMELS



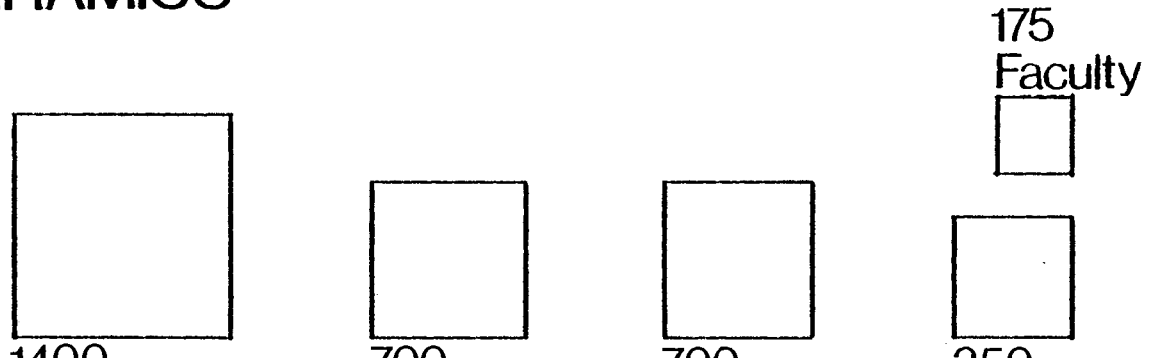
Ceramics

Components		Approximate net area
Throwing		1400
Glazing		700
Kiln		700
Clay		350
Faculty		175
Ceramics		3225 s.f.

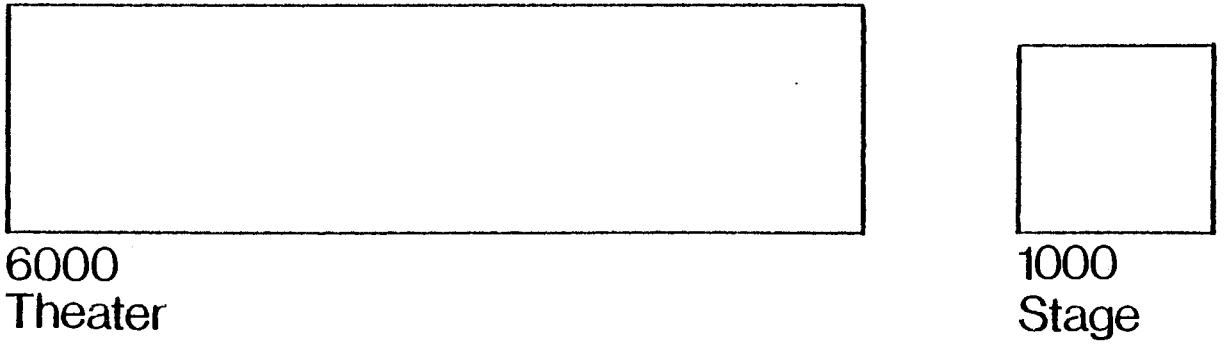
Theatre

Components		Approximate net area
Theatre		6000
Stage		1000
Work Area		1000
Prop Storage		400
Dressing		400
Toilets (2)	150 ea.	300
Public Toilets (2)	150 ea.	300
Theatre		9400 s.f.

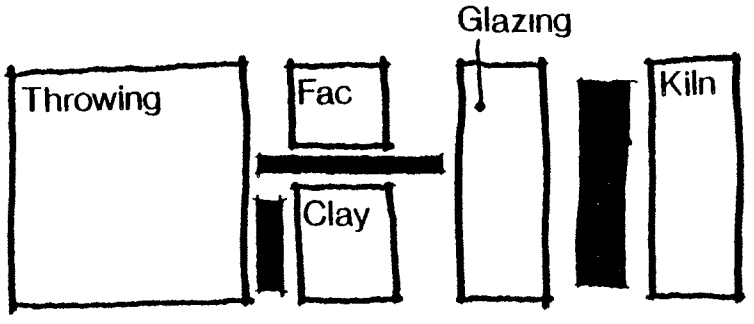
CERAMICS



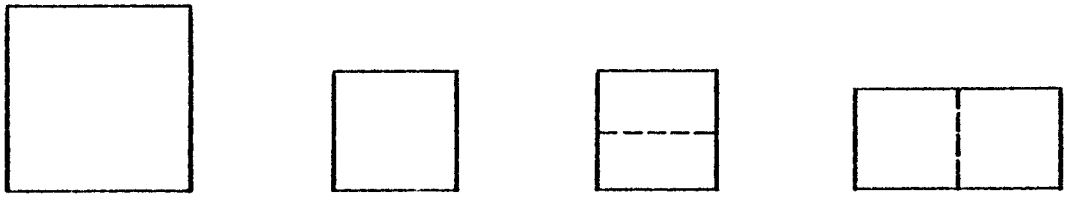
THEATER



CERAMICS



THEATER



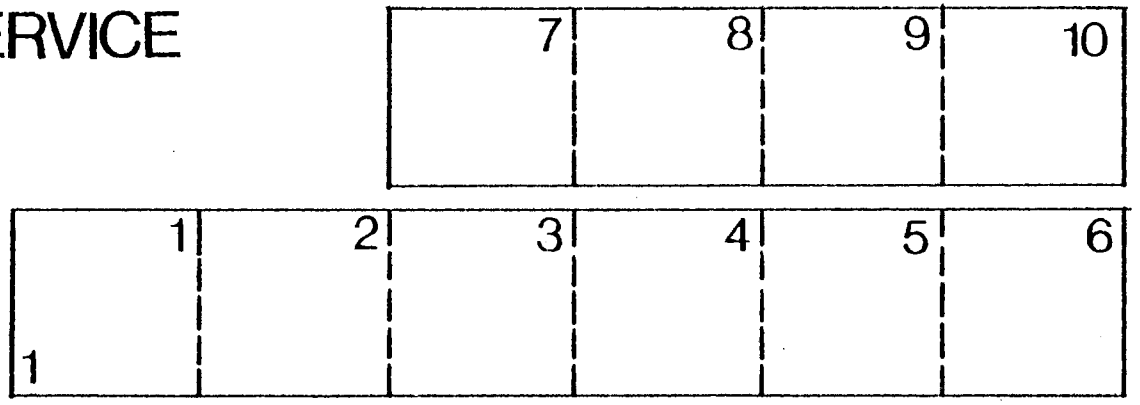
1000
Work Area

400
Prop. Stor.

400
Dressing

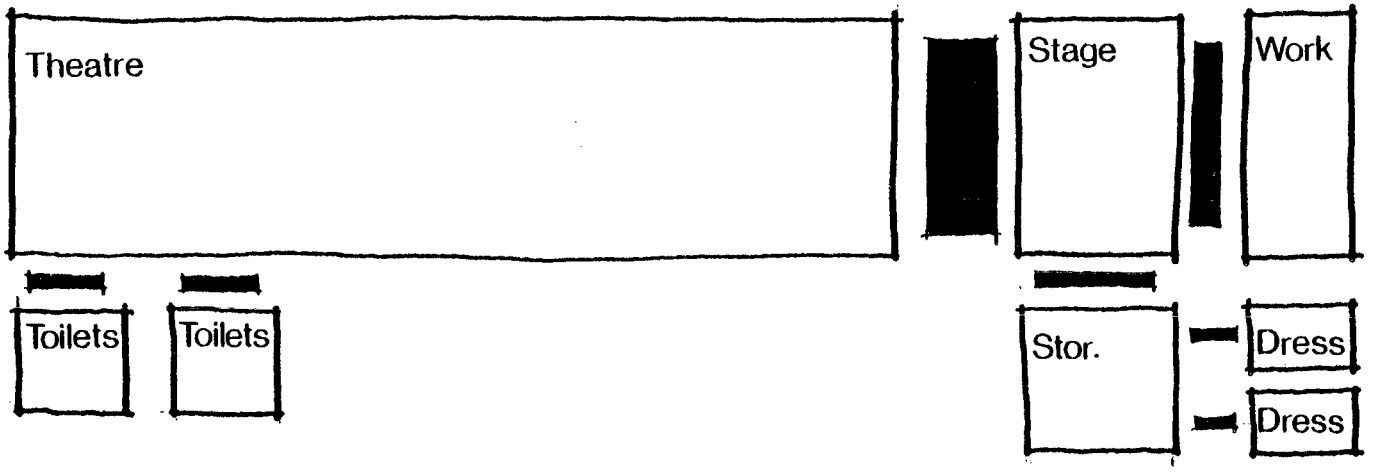
150 ea.
Toilets

SERVICE



1000 ea.
Mer., Storage and Toilets (Support Areas)

THEATRE



Total Building Area

Departmental Components	Approximate net area
Departmental Areas	7435
Painting Studios	4500
Drawing and Graphics	3975
Printmaking	3175
Serigraphy	1925
Weaving/Textile	2275
Jewelry/Enamels	2975
Photography	2265
Sculpture	4150
Ceramic	3225
Theatre	9400
Net Total	45300 s.f.
Service (25% of building area)	11325 s.f.
Total Building Area	56625 s.f.

PROBLEM STATEMENT

PROBLEM STATEMENT

A description of the critical conditions and design premises which become the starting point for Schematic Design.

DESIGN PREMISE

A specific condition leading to general design directive.

DESIGN CRITERIA

The problem statements in terms of design premises are used as standards to judge a design solution.

FUNCTION

The facility is for the study of the arts and growth of awareness by the community. The facility should be open at all times.

The facility must foster quality and pride for the students to interact in a proper manner.

FORM

The existing form and historic structure must be maintained and integrated into the new Contemporary Institute for the Arts.

Natural Daylighting should be a major consideration in the design and must be reflected in the form.

ECONOMY

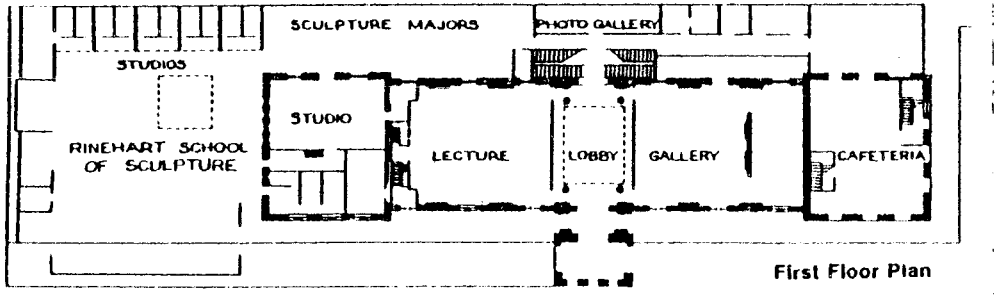
Materials and finishes should be considered for their effect on minimizing maintenance costs as well as minimizing energy costs of their manufacture and transportation.

APPENDIX

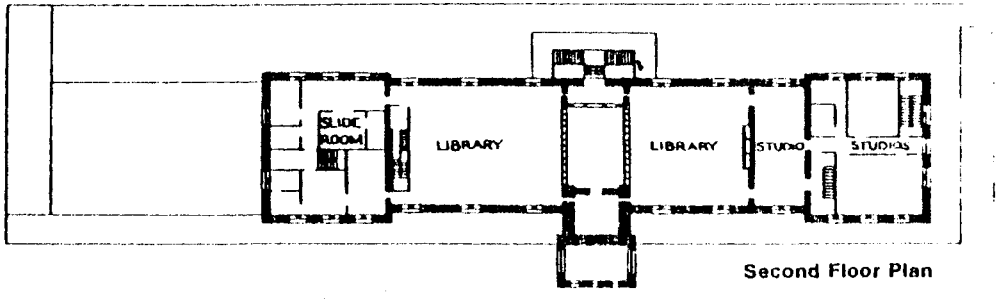
EVALUATION OF SIMILAR PROJECTS

An interesting example of adaptive reuse of a historic railroad station is in Baltimore, the Maryland Institute - College of Arts. The art school concept for the train station is one of the most successful adaptive reuse.

The conceptual organization of the Art School is very simple with a major entrance lobby feeding into a gallery and lecture spaces with cafeteria and main studios adjoining. The second level functions as a library/archives with studios. The third level is also studios. The school houses public gallery/ cafeteria and studio/library.

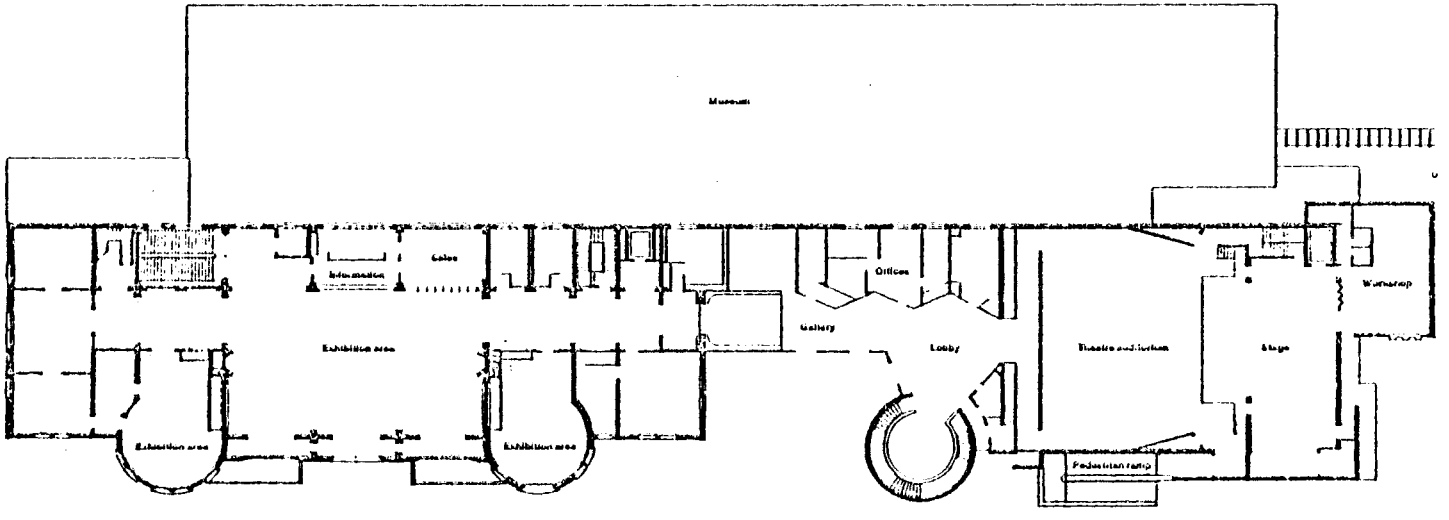


First Floor Plan



Second Floor Plan

The restoration and addition to the Duluth Union Depot is a very simple linear space with the left half of the building housing arts and cultural groups, and the right half being used for the performing arts. This is an example of specific groups reusing the depot to promote public awareness for the arts.



Restored Duluth Union Depot (left half) houses arts and cultural groups. Construction has started on the Performing Arts Building (right half).

COST ESTIMATION METHOD

First establish total net area of the project, then arrive at a reasonable efficiency ratio and the total gross area.

Building Cost --

Net area ÷ efficiency ratio = gross area
Gross area X unit cost = building cost

These are the efficiency ratios as listed by Problem Seeking by William Pena.

Administration	55/45%
Studios	60/40%
Library/Galleries	45/30%
Composite	55/45%

The construction quality level is represented by a unit cost per gross square foot. The unit cost includes architectural, structural, electrical, plumbing and mechanical work, which does not include site development, demolition and fixed equipment. Due to the level of high quality construction cost and to maintain low energy costs, the building's unit cost is estimated at $45/50 per square foot.

Net area ÷ .5 = 113,250 sq. ft.

113,250 X 50 = 5,662,500

Fixed equipment cost is estimated at 10% of total building costs.

5,662,500 X .10 = $566,250

Site development costs are estimated as a percentage of the building cost. This development includes site demolition, site preparation, sidewalks and terraces, walls, utilities, landscaping and lighting.

Site Demolition	5% of building cost
Site Preparation	2%
Sidewalks and Terraces	1%
Walls and Screens	.5%
Utilities	1%
Landscape	1%
Lighting	1.5%
TOTAL	12% or $679,500

The total construction cost would be the sum of the estimated building cost, fixed equipment cost and the site development cost:

$5,662,500	Estimated building cost
566,250	Fixed equipment cost
679,500	Site development
$6,815,250	TOTAL ESTIMATED COST

GLOSSARY

Architectural Programming: A process leading to the statement of an architectural problem and the requirements to be met in offering a solution. Programming is part of a complete series of operations leading to the occupancy of a completed building: (1) Programming, (2) Schematic Design, (3) Design Development, (4) Construction Documents, (5) Bidding, and (6) Construction.

Analysis: Separation or breaking up of a whole into its fundamental elements or component parts.

Research: Critical and exhaustive investigation or experimentation having for its aim the discovery of new facts and their correct interpretation.

Function: How the design product will work to do the job it is supposed to do: the performance.

Form: In programming, form refers to what you will see and feel, avoiding the suggestion of a particular design solution.

Economy: The efficient and sparing use of the means available for the end proposed. Implies an interest in achieving maximum results from the initial budget and the maximum cost-effectiveness of the operating and life cycle costs.

Time: Deals with the influence of history, the inevitability of change from the present and with projections into the future.

Goal: The end toward which effort is directed. Suggests something attained only by prolonged effort. Project goals are concerned with product.

Policy: A definite course of action selected from among alternatives and in the light of given conditions to guide and determine present and future decision.

Mission: A task or function assigned or undertaken. A mission statement of an organization simply explains the reason for its existence.

Information: Knowledge obtained from investigation, study or instruction.

Fact: Information presented as having objective reality, truth.

Data: Factual material used as a basis for reasoning, discussion or decision.

User Characteristics: Those physical, social, emotional and intellectual qualities which typify the users and affect their behavior patterns. Common characteristics including age, sex, social class, nationality, intellectual ability.

Concept: Something conceived in the mind; idea, notion.

Programmatic Concepts: Ideas intended mainly as functional and organizational solutions to the client's own performance problems. They are general or abstract ideas generalized from particular instances.

Design Concepts: Ideas intended as physical solutions to the client's architectural problems.

Needs: Requirements; something necessary; an indispensible or essential thing or quality.

Space Requirement: Detailed listing of the amounts of each type of space designated for a specific purpose.

Building Cost: Includes all costs of construction within five feet of the building line; all items required by codes.

Fixed Equipment: Includes all equipment items which may be installed before completion of the building and which are a part of the construction contract, such as food service equipment, fixed seating, security equipment, fixed lighting, etc.

Site Development: Includes all work required which lies within the site boundary and five feet from the edge of the building, i.e., grading and fill, fencing, roads and parking, utilities, landscape development, walks, site lighting, street furniture, and site graphics.

Total Construction: This represents the total budget for construction.

Problem Statement: A description of the critical conditions and design premises which become the starting point for Schematic Design.