

DESIGN CRITERIA REPORT
FOR THE
CAFETERIA - AUDITORIUM - SHOP DINING ROOM

REPORT TO STANFORD LINEAR ACCELERATOR CENTER - ABA NO. 77
STANFORD UNIVERSITY SUBCONTRACT S-136
UNDER AEC CONTRACT AT(04-3)-400

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INTRODUCTION

This report presents the design criteria for performing the Title I design of the Cafeteria-Auditorium-Shop Dining Room.

Included are criteria for the following items of work:

GENERAL - BASIS FOR DESIGN

ARCHITECTURAL

STRUCTURAL

MECHANICAL

COMMUNICATIONS

SITE DEVELOPMENT

GENERAL - BASIS FOR DESIGN

The Cafeteria-Auditorium buildings are treated architecturally and functionally as a single unit, joined by an outdoor lobby, with single toilet facilities, located in the Auditorium building, serving both buildings.

The Cafeteria is sized to accommodate 120 "fair weather" occupants @ 15 s.f./person and 150 "foul weather" occupants @ 12 s.f./person. X

(An outdoor dining area accommodating approximately 100 people is planned for the future under a separate budget).

The serving area is of the "scramble" type and is visibly separated from the dining room. The kitchen is sized proportionally to the dining room. Dining and kitchen equipment are not within the scope of this project.

The Auditorium is sized to accommodate 300 people,

Included within the auditorium area proper is a demonstration area with storage space at sides, a control-projection room and two translator booths. The balance of the building comprises a lobby and public sanitary facilities sized for 400 persons. Seating and operating equipment are not within the scope of this project.

The Cafeteria and Auditorium are connected by an outdoor lobby which serves to integrate the two buildings and provide weather protection as well as providing space for temporary displays.

The Shop Dining Room is sized to accommodate 100 people @ 10 s.f./ person. Food service is to be provided by automatic vending machines (not part of this project). No sanitary facilities are provided.

Exterior landscape architectural treatment, including entrance walks and stairs, planting boxes, screen wall and can wash are not within the scope of this project.

ARCHITECTURAL

Design

The architectural design incorporates elements of the approved architectural vocabulary for all buildings in the project.

Cafeteria:

- Ceiling - Acoustical treatment and exposed wood decking.
- Flooring - Concrete with floor hardener.

Auditorium:

- Ceiling - Acoustical treatment.
- Flooring - Concrete with floor hardener.
- Walls - Acoustical treatment with wood paneling.

Adjacent Facilities: (Lobby, toilets, storage)

- Ceiling - Exposed decking--storage, gypboard elsewhere.
- Flooring - Concrete, limited ceramic tile in toilet rooms.
- Partitions - Wood studs with 5/8" gypboard, ceramic tile wainscot in toilet rooms.

Shop Dining Room:

No special treatment.

check back

No special treatment

Building Data

Cafeteria:

Dining	1800 s.f.
Serving	600 s.f.
Kitchen	<u>1200 s.f.</u>
 TOTAL	 3600 s.f.

Auditorium:

Seating area, translator booths, control room, storage area & stage	4500 s.f.
Lobby	600 s.f.
Toilets, corridors	<u>900 s.f.</u>
 TOTAL	 6000 s.f.

Outdoor

Outdoor Lobby

(Between Cafeteria and Auditorium) 2100 s.f.

Shop Dining Room: 1000 s.f.

STRUCTURAL

The Cafeteria will be constructed of concrete foundations, structural masonry columns supporting a wood beam and girder system covered with T & G wood planking plus a plywood surface. Shear walls will be provided as required.

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The Auditorium proper will be constructed of concrete foundations, reinforced masonry walls and steel roof framing supporting a metal deck.

The Shop Dining Room will be constructed of concrete foundations, steel frame, and metal decking.

MECHANICAL

Cafeteria Ventilation

Dining Room and Serving Areas will be ventilated by operable sash and perimeter heated. Kitchen and dishwashing areas, toilets and storage will be exhaust ventilated. Kitchen exhaust will be by a range hood with grease filters. Air flow will be from the Dining Room to the kitchen, so as to minimize odors in the eating and serving areas. Hot water for heating will be provided from the central system by extending the existing distribution system.

Auditorium Air Conditioning

The auditorium will be air conditioned. Control room, translator booths, lobby, storage and toilet areas will be ventilated with air from the auditorium.

Plumbing

Domestic water and sanitary sewer connections will be extended to existing mains. A grease trap will be provided for the kitchen waste line. Plumbing fixtures will be of a type suitable for office structures. Drain, gas and domestic water connections will be provided for kitchen equipment. Hot domestic water for the cafeteria will be provided at 200°F and 140°F for kitchen and domestic use by a hot water converter system, utilizing hot water from the central heating system. Hot domestic water for the auditorium rest rooms will be supplied by an electric water heater.

Fire Protection

The fire protection systems will be designed to meet SLAC requirements and the standards of the National Bureau of Fire Underwriters. The systems will be the wet type and will provide complete coverage of the building areas.

Heating

The Shop Dining Room will be mechanically heated, and ventilated by operable sash. A hose bib will be provided for clean-up. Floor drains will be provided as well as drain provisions for vending machines.

ELECTRICAL

Cafeteria

Electrical Service:

The electrical service will be brought underground from Central Laboratory Substation. Power will be at 420/277 volt, 3-phase, 4-wire.

Lighting Levels will be as follows:

Dining Room	50 F.C.
Kitchen, Service, Dishwasher	70 F.C.
Can Wash	Special
All Other	25 F.C.

Power Requirements:

Lighting	18 KVA
Receptacles	9 KVA
H & V	26 KVA
Electric Heat	<u>30 KVA</u>
TOTAL	83 KVA

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Auditorium

Electrical Service:

The electrical service will be brought underground from the Central

Spelling Laboratory Substation. Power will be at 480/277 volt, 3-phase, 4-wire.

Lighting Levels will be as follows:

Main Hall	70 F.C. w/provisions for dimming
Control, Translation, Museum	70 S.C.
Lobby	50 F.C. w/provisions for switching off portions for less F.C.
All Other	25 F.C.

Power Requirements:

Lighting	30 KVA
Receptacles	9 KVA
H & V	<u>26 KVA</u>
TOTAL	65 KVA

Special Lighting:

No provisions for special lighting such as border, foot or spot have been included.

Shop Dining Room

Electrical Service:

The electrical service will be from the Fabrication Building motor control center. Power will be at 480 V, 3-phase.

Lighting level will be at 30 F.C.

Power Requirements:

Lighting	3 KVA
Receptacles	<u>28 KVA</u>
TOTAL	31 KVA

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COMMUNICATIONS

Cafeteria

Fire Protection:

An automatic water sprinkler system will be installed throughout. Also, an alarm system and hand extinguishers (provided under another contract).

Communications System:

The project telephone switchboard is in the Administration and Engineering Building.

Telephone outlets will be located for administrative use with special attention given to the location of pay phones for public use. A minimum amount of conduit (only) will be provided for future public address and intercom systems.

Service:

	<u>Site Utilities Off-Site Location</u>	<u>Direction of On-Site Supply</u>
Telephone	Utility trench running north and south, west of building	West
Fire Alarm	Utility trench running north and south, west of building	West

Auditorium

Fire Protection:

An automatic water sprinkler system will be installed throughout. Also, an alarm system, hose racks, and hand extinguishers (provided under another contract).

Communications System:

The project telephone switchboard is in the Administration and Engineering Building.

The telephone outlets will be located for administrative use with special attention given to the location of pay phones for public use.

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Conduit (only) will be provided for future television use.

In-floor conduit will be provided at each end of each row of seats for future communication extensions for each seat.

<u>Service:</u>	<u>Site Utilities Off-Site Location</u>	<u>Direction of On-Site Supply</u>
Telephone	Duct Bank running north and south, west of building	West
Fire Alarm	Duct Bank running north and south, west of building.	West

Shops Dining

No communications service to be provided. Hand extinguishers will be provided under another contract.

SITE DEVELOPMENT

Auditorium-Cafeteria Building

Requires Topsoil stripping and a small amount of grading work.

As plans develop, it may be necessary to do some tree trimming.

The Service Road to the cafeteria will be paved and have A. C. dikes along the edges.

Roof Drainage:

Roof Drainage will be drained on the surface to natural drainage ways.

Walks and Paths shown on the plans are not considered for construction at this time.

Patio Areas are not considered a part of the civil work, but a part of the architectural work.

A Retaining Wall may be needed as a part of the Screen Wall north of the cafeteria service area.

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Utility WorkWater:

Domestic water and fire protection water will be provided to each of the two buildings. An 8" main will be built along the south side of the Loop Road and will terminate at a fire hydrant near the Loop Road north of the Auditorium.

Domestic water pipe will be 3" and fire protection mains will be 6" and will include post indicators and valves.

Natural Gas:

A 3" line has been constructed to the north end of the existing concrete utility trench and is meant to serve the cafeteria with the required "firm" gas. This line will be continued along the trench to a point nearest the Cafeteria and then a 2" line underground to the Cafeteria Building.

A separate meter will have to be placed at the existing gas meter pad.

Sanitary Sewers:

A line from the rest rooms in the Auditorium wing south to the Cafeteria kitchen is necessary but will be a part of the building plumbing.

The construction under civil work will include a 6" line from the kitchen end of the cafeteria due west to existing manhole No. 9, The east side of manhole No. 9 will be altered to receive this 6" line.

Shop Dining

There should be little need for site preparation beyond that required for footings and cleanup to leave the site with the desired appearance. This will be part of the architectural work.

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The outdoor eating area and paths are not part of this project. ^{are not part of this project.}

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Utilities:

The Water and Sewer Service will be a part of the building contract in that the main lines are readily available.

An Existing Post Indicator may have to be relocated to avoid conflict with the building as now planned, and consideration in the design of the building will be made to accommodate an existing electrical manhole as well as other existing underground utilities in the area to be occupied by the building.

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COST ESTIMATE

<u>Acct. No.</u>	<u>Description</u>	<u>Cost</u>	<u>Total Cost</u>
542	Cafeteria 3600 s.f. @ 23.00 (excludes dining & kitchen equipment)	\$ 82,800 (1)	
543	Auditorium 6000 s.f. @ 19.50 (no museum, mech. in roof)	116,800 (2)	
	Outdoor Lobby 2100 s.f. @ 4.00	8,400 (3)	
542	Shop Dining 1000 s.f. @ 12.00	12,000 (4)	
			<u>\$220,000</u>

Departures from Criteria

- (1) Criteria area - 3000 s.f.
- (2) Criteria area - 6100 s.f. (including museum, mechanical room)
- (3) Not in Criteria
- (4) Criteria area - 1500 s.f.

410	Site Preparation	2,500
440	Parking, Paving, etc.	7,000
430	Landscaping	1,000
601	Telephone (Audit. \$500, Cafeteria \$300)	800
603	Communications (Audit. \$900, Cafeteria \$700)	1,600
521	Fire Alarm (Audit. \$500, Cafeteria \$3000)	3,500
631	Gas	2,200
651	Sanitary Sewer	1,100
662	Hot Water	4,400
664	Chilled Water	4,400
671	Domestic Water	6,500

TOTAL

\$ 35,000

~~TOTAL PROJECT~~

\$255,000

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DESIGN AND CONSTRUCTION SCHEDULE

Criteria	31 31 July 1963	X
Criteria Approval	29 Aug. 1963	
Title I - Preliminary Draft	11 Nov. 1963	
Title I - Review of Draft by SLAC & AEC	16 Dec. 1963	
Title I - Report Submittal	31 Dec. 1963	
Title I - Review & Approval by SLAC & AEC	22 Jan. 1964	
Title II - 50% Submittal	31 Mar. 1964	
Title II - 90% Submittal	26 May 1964	
Title II - Review and Approval	15 June 1964	
Title II - Revised and Ready for Bid	7 July 1964	
Bidding Period	6 Aug. 1964	
Notice to Proceed	3 Sept 1964	
Construction Completed	3 May 1965	

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LIST OF DRAWINGS

Auditorium-Cafeteria Building

Site Plan	SKA-07143-A
Floor Plan	SKA-07123-A
Elevations	SKA-07133-A
Elevations	SKA-07133-B

Shop Complex Dining Room

Site Plan	(See above)
Floor Plan	SKA-07093-A
Elevations	SKA-07093-B

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