

FACILITIES PLAN

for

6 February 1959

LUNAR SIMULATOR

P. A. USAF Misc. #18

The Facilities Plan for the Lunar Simulator is proposed to be completed in three of the four phases.

PHASE I

Phase I (a) will be the development of preliminary drawings and design criteria.

Phase I (b) will be the development and completion of detailed construction drawings and specifications based on information developed in Phase I (a).

PHASE II

No facility items are required.

PHASE III

Construct the foundations, inner sphere, support building and the utility corridor complete with the necessary utilities. Supply the necessary equipment to make this portion of the facility functional.

FOUNDATIONS

Reinforced concrete 55'-0" diameter x 4'-0" thick with the perimeter raised 1'-5" high and 4'-6" wide.

PLASTIC SHEET

Surround concrete and adhere to the base of the exterior metal sphere to provide a vacuum seal.

INNER SPHERE

A 32'-0" diameter steel ball supported by steel ring girder on four (4) steel legs.

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ELEVATOR

A 6'-0" diameter shaft in center of sphere from grade to top of ball, housing a 4'-0" square elevator.

FLOORS

Three metal decks spaced approximately 8-1/2 ft apart, supported by radial spaced structural members from ring girders on the elevator shaft.

SUPPORT BUILDING

A one-story concrete block structure of approximately 5000 sq ft, Bay size 20' x 25'.

AIR CONDITIONING

✓ Entire Support Building.

Inner Sphere - if required.

UTILITY CORRIDOR and AIR LOCK

A steel, covered passageway connecting the support building with the elevator shaft in the inner sphere. A portion of the corridor will be sealed off to form an air lock and decompression chamber.

EQUIPMENT

Vacuum pumps

✓ Lockers

UTILITIES

✓ Road

✓ Parking Area

✓ Fencing

✓ Security Guard Station

Telephones

Electricity

Domestic Water

Sanitary Waste Disposal

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PHASE IV

Phase IV consists of the construction of the outer sphere over the inner sphere and installation of the remainder of the required supporting equipment.

OUTER SPHERE

The outer sphere is a portion of a sphere made of 1/4" steel plate over a framework of structural steel beams. A bottom flange inside and out will be anchored to the reinforced concrete foundation.


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FACILITIES ESTIMATE

for

LUNAR SIMULATOR

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PHASE I (a)		None
PHASE I (b)	A & E Fee	\$ 26,000
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		\$ 26,000
PHASE II		None
PHASE III	Foundations & Inner Sphere	\$ 92,363
	Mechanical & Electrical in Sphere	19,000
	Support Building	120,123
	Utilities from Supply to Lab Site	114,388
	Equipment	20,000
	Equipment Installation	10,000
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		\$ 375,874
PHASE IV	Construct Outer Sphere	77,908
	Equipment	8,000
	Equipment Installation	6,000
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		\$ 91,908
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	TOTAL ESTIMATED COST	\$ 493,782


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