4.1.1 LUNAR PLANNING CHART (LOC) SERIES
(Published by ACIC)

Lunar Planning Chart LOC-1
1st Edition, May 1971
Scale: 1:2,750,000
Projection: Mercator
Limits: 40°N-S, 40°W-140°W
Size: 41.5 x 44.5 in.

Lunar Planning Chart LOC-2
1st Edition, May 1971
Scale: 1:2,750,000
Projection: Mercator
Limits: 40°N-S, 50°E-50°W
Size: 41.5 x 44.5 in.

Lunar Planning Chart LOC-3
1st Edition, May 1971
Scale: 1:2,750,000
Projection: Mercator
Limits: 40° N-S, 40°E-140°E
Size: 41.5 x 44.5 in.

Lunar Planning Chart LOC-4
1st Edition, May 1971
Scale: 1:2,750,000
Projection: Mercator
Limits: 40°N-S, 130°E-130°W
Size: 41.5 x 44.5 in.

Lunar Planning Chart LOC-2 (obsolete)
1st Edition, July 1969
Scale: 1:2,500,000
Projection: Mercator
Limits: 25°N-S, 50°E-50°W
Size: 28.5 x 49 in.

Lunar Planning Chart LOC-3 (obsolete)
1st Edition, July 1969
Scale: 1:2,500,000
Projection: Mercator
Limits: 25°N-S, 40°E-140°E
Size: 28.5 x 49 in.

Lunar Planning Chart LOC-4 (obsolete)
1st Edition, July 1969
Scale: 1:2,500,000
Projection: Mercator
Limits: 25°N-S, 130°
Size: 28.5 x 49 in.

The LOC planning series was designed to satisfy the following requirements:

1. To cover the Apollo area of interest.
2. To provide increased density of feature detail than shown on the 1:5,000,000 LMP series.
3. To show all primary and secondary approved IAU names.
4. To serve as a common base for the various Apollo mission charts.

Compilation of the LOCs was initiated in 1968 based upon Lunar Orbiter photography flown in 1966-67, supplemented by Hasselblad coverage from Apollo Missions 8 and 10. Earthbased telescopic full moon photographs were used as source for albedo patterns and ray structure. Details from LAC charts were also used to the extent of their coverage.

The ACIC Selenodetic System (1965), supplemented by the Apollo Zone Triangulation (1969), was the primary control basis for the lunar earthside areas. The Positional Reference System (1969) was used for control of lunar limb and farside regions.

The compilation procedure required the mosaicking of rectified orbiter photography to a control plot. This resulted in a controlled photo base from which lunar relief was portrayed by airbrush techniques using an assumed east lighting. The final charts were lithographed in colors of brown, blue and black.

The original LOCs, published in July 1969, were limited to 25°N-S latitude and only three charts were completed. Numbers were used to designate lunar farside features since IAU names for this area were not approved until a year later. Prior to initiating production on the last chart in this series, LOC-1, it was decided to extend the latitude coverage to 40°N-S. Work was then directed toward adding another 15°N-S to the existing charts and producing LOC-1. However, after extending the latitude limits to 40°N-S, the scale had to be reduced to 1:2,750,000 because of press size limitations.

The revised LOCs, including the new LOC-1, were published in May 1971. The litho colors are the same as the original LOCs; however, the shaded relief was enhanced by the duotone process. This series of charts is the best available lunar coverage at this scale. Also, it is the only chart series with complete up-to-date nomenclature.

In support of Apollo missions, the LOCs were used as a base for the Lunar Orbital Science Flight Chart, scale 1:2,750,000, the Apollo Lunar Orbit Chart, scale 1:11,000,000, and the Apollo Photographic Index Map, scale 1:5,000,000.

Area coverage of these map sheets is reflected in Map Indexes I(2) and II(2).