SUPPLEMENT 5-C

TIMELINE ANALYSIS SHEETS

The timeline analysis sheet (TLS) adds detail to defining durations of various functions. It defines concurrency, overlapping, and sequential relationships of functions and tasks. It identifies time critical functions that directly affect system availability, operating time, and maintenance downtime. It is used to identify specific time-related design requirements.

The TLS includes purpose of function and the detailed performance characteristics, criticality of function, and design constraints. It identifies both quantitative and qualitative performance requirements. Initial resource requirements are identified.

Figure 5-8 shows an example of a TLS. The time required to perform function 3.1 and its subfunctions are presented on a bar chart showing how the timelines relate. (Function numbers match the FFBD.)

Function 3.1 Establish and maintain vehicle readiness from 35 hrs to 2 hrs prior to launch.

Function		Hours
Number	Name	30 25 20 15 10 5 4 3 2
3.1.1	Provide ground power	
3.1.2	Provide vehicle air conditioning	
3.1.3	Install and connect batteries	2.5
3.1.4	Install ordnance	7.5
3.1.5	Perform stray voltage checks and connect ordnance	2.6
3.1.6	Load fuel tanks	7.5
3.1.7	Load oxidizer tanks	7.5
3.1.8	Activate guidance system	2.5
3.1.9	Establish propulsion flight pressure	1.0
3.1.10	Telemetry system “on”	2.5

Figure 5-8. Time Analysis Sheet