

~~CONFIDENTIAL~~ATTACHMENT 6BASELINE SYSTEM CONFIGURATIONS

1.0 INTRODUCTION

The purpose of this attachment is to define two EOI System baseline configurations to be utilized in Phase I System Definition studies. The two configurations are to be given equal emphasis, studied in equal detail, and provided equivalent figures of merit for contractor selection of preferred designs for each. A preliminary design is to be developed for each configuration based on the characteristics provided in this document for all system segments - the I/S, R/S, R/F, O/F and P/F. It is intended that these preliminary designs will provide a basis for Program Office selection of the design to be used in Phase II System Definition detailed design studies.

System Configuration A is characterized by a nadir GSD of 8 inches, and System Configuration B by a nadir GSD of 18 inches. System Functional Requirements for each are contained in Attachment 1, and programmatic guidance is provided in Attachment 7. The system characteristics defined in the following sections are to be refined (or revised with substantiation) by the contractor in the course of the Phase I studies. However, the following constraints shall apply:

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GROUP 1
Excluded from automatic
downgrading and
declassification

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a) the primary mirror diameter shall be

b) a shall be used

c) the data rate shall not exceed

d) the solid-state chip design shall be as defined

in Section 3.3.

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Configuration A

Configuration B

2.0 OVERALL SYSTEM

2.1 Characteristics

Coverage	Daily Sino Soviet plus technical intelligence	Daily Sino Soviet
Processed Imagery	<input type="text"/>	
GSD (Best Nadir):	<input type="text"/>	N.A.
Tech. Intell.	12"	18"
Strategic Intell.		
S/N	5:1	5:1
Δ B (Scene)	400 Ft. L.	400 Ft. L.
Data Transmission	<input type="text"/> double-hop	<input type="text"/> Sino Soviet or near-real-time with recorder
Image Quantity:	<input type="text"/>	
Frames per day max.	<input type="text"/>	

2.2 Segments

Imaging Satellites	<input type="text"/>	<input type="text"/>
Relay Satellites	2	Optional *

*1 Sync w/recorder, 2 Sync/no recorder, or 1 Polar

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Configuration A

Configuration B

Receiving Facility

Operations Facility

Processing Facility



2.3 Launch Vehicles

Imaging Satellite

Titan IIID

Titan IIID

Relay Satellite

Titan IIIC

Titan IIIC (Sync) or
Titan IIIB - Agena
(Polar)

2.4 Launch Facilities

Imaging Satellite

WTR

WTR

Relay Satellite

ETR

ETR (Sync) or
WTR (Polar)

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Configuration A

Configuration B

3.0 IMAGING SATELLITE

3.1 General

Termination

Controlled impact de-orbit

Controlled impact de-orbit

Operating Altitude

188 - 420 n. mi.

200 n. mi.

Orbit:

Type

Optional

Circular

Inclination

Approx. Sun. Sync.

Approx. Sun Sync.

Recorder

Failure Mode

Coverage Gaps

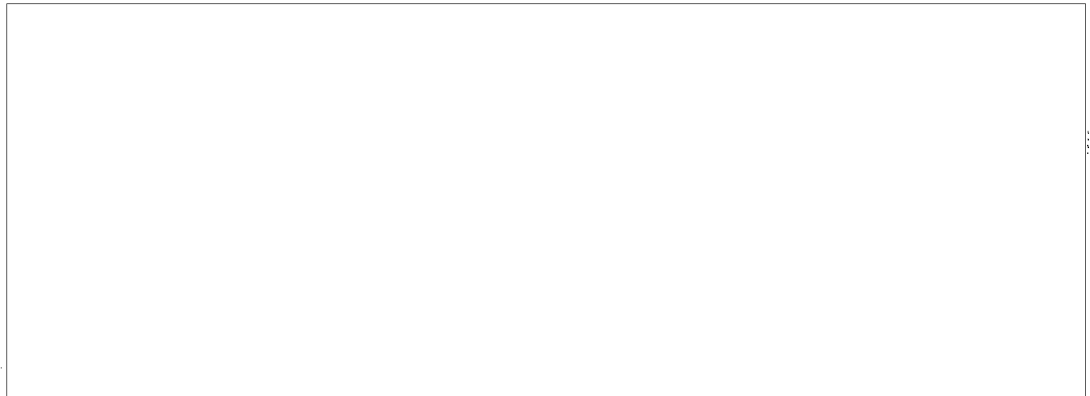
3.2 Optical Subsystem

System Type

Primary Diameter

Overall F No.

Focal Length



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25X1

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Configuration A

Configuration B

4.0 RELAY SATELLITES

Lifetime:

Useful Operating

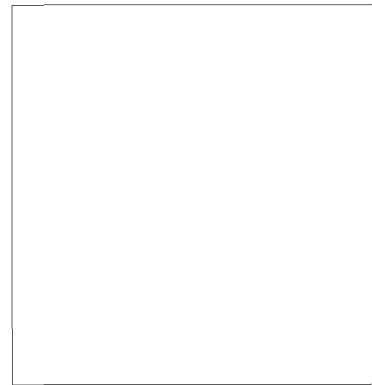
Design Life

Reliability

Orbit:

Altitude

Maneuverability



Interchange position and return

Optional

Optional

Optional



Interchange position and return if applicable

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25X1
~~RESTRICTED~~

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Configuration A

Configuration B

5.0 RECEIVING FACILITY

Recording

Yes

No

Receive Data Rate

Data Link to O/F

Cable

None

Security

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Configuration A

Configuration B

6.0 OPERATIONS FACILITY

Telemetry

Display-process-evaluate
continuously

Display-process-evaluate
as required

Tracking

Update 6 to 12 hours. Both
Relay Satellite and Imaging
Satellite

Update 6 to 12 hours.
Both Relay Satellite
and Imaging Satellite

Command

Load for preplanned program
Insert priorities as required

Load for preplanned program
Insert priorities as
required.

Control

Position Imaging Satellites
and Relay Net

Position Imaging
Satellites and Relay Net

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Configuration A

Configuration B

7.0 PROCESSING FACILITY

On-Line Processing Rate

Input Data rate

Input Data rate

Transfer Function Compensation

Maximum

Minimum

Off-Line Special Processing

Yes

No

Recording

Magnetic Tape

Magnetic Tape

Write-Out Device

Laser/Film

Laser/Film

Storage Capacity:

Temporary

3000 frames

3000 frames

Archival

150,000 frames

None

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