

Attachment J-01
Integrated Crew Transportation System (CTS)
Requirements

Requirements Documents

The documents listed in Table J01-1, *Commercial Crew Transportation Capability (CCtCap) Applicable Documents*, are applicable for this contract and provide the Crew Transportation System (CTS) requirements for the International Space Station (ISS) Design Reference Mission (DRM). Documents listed as applicable within the documents in Table J01-1 are also applicable documents for this contract. In addition, documents listed as reference within the documents in Table J01-1 are also reference documents for this contract, except for CCT-PLN-1120, *Crew Transportation Technical Management Processes*. Although CCT-PLN-1120 is listed as a reference document in CCT-REQ-1130, *ISS Crew Transportation and Services Requirements Document*, it is considered an applicable document for the contract. The applicable and reference documents are available at <http://commercialcrew.nasa.gov/>.

For the documents listed in Table J01-1, *Commercial Crew Transportation Capability (CCtCap) Applicable Documents*, the term “Commercial Provider” shall be construed to mean “Contractor.”

CCT-REQ-1130 Sections 4.0 through 4.3 establish verification requirements for the design requirements established in Section 3.0. NASA recognizes numerous methods exist to verify compliance to requirements and encourages the formulation of innovative verification requirements that satisfy the overall verification objectives. Once a specific contractor’s verification plan is approved by NASA, the content of the plan will supersede the specific verification statements in section 4.3 of CCT-REQ-1130 and will be considered approved tailoring of the associated requirement.

Table J01-1: Commercial Crew Transportation Capability (CCtCap) Applicable Documents

Document Number	Revision	Document Title
CCT-PLN-1100	B-1	Crew Transportation Plan
CCT-DRM-1110	Basic-1	Crew Transportation System Design Reference Missions
CCT-PLN-1120	C	Crew Transportation Technical Management Processes
CCT-REQ-1130	C	ISS Crew Transportation and Services Requirements Document
CCT-STD-1140	A-1	Crew Transportation Standards and Processes Criteria
CCT-STD-1150	A-1	Crew Transportation Operations Standards
SSP 50808	E plus DCN 0135B, 0146A, 0149, 0151, 0152, 0153	International Space Station (ISS) to Commercial Orbital Transportation Services (COTS) Interface Requirements Document (IRD)

Variances and Alternate Standards, as described in Table J01-2a1 – Approved Alternate Standards, Table J01-2a2 – Approved Variances, Table J01-2b – Conditionally Approved Variances, Table J01-2c – Partially Approved Alternate Standards Approved Areas that were approved by NASA as part of Certification Products Contract (CPC) shall be incorporated as appendices to affected applicable documents.

The following table lists the Alternate Standards that were approved by NASA as part of Certification Products Contract (CPC) and are incorporated as appendices to the affected applicable documents.

Table J01-2a1 – Approved Alternate Standards

Document Number	Alternate Standard	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2a1 – Approved Alternate Standards - continued

Document Number	Alternate Standard	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2a1 – Approved Alternate Standards - continued

Document Number	Alternate Standard	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2a1 – Approved Alternate Standards - continued

Document Number	Alternate Standard	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2a1 – Approved Alternate Standards - continued

Document Number	Alternate Standard	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2a1 – Approved Alternate Standards - continued

Document Number	Alternate Standard	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

The following table lists the Variances that were approved by NASA as part of Certification Products Contract (CPC) and are incorporated as appendices to the affected applicable documents.

Table J01-2a2 – Approved Variances

Document Number	Variance Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

The following table lists the Variances that were conditionally approved by NASA as part of Certification Products Contract (CPC) and are incorporated as appendices to the affected applicable documents. The table includes approval of all with the exception of items in the column labelled "Condition."

Table J01-2b – Conditionally Approved Variances

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	Condition
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

The following table lists the Alternate Standards that were dispositioned partially approved by NASA as part of Certification Products Contract (CPC) and are incorporated as appendices to the affected applicable documents. The table includes approval of all with the exception of the items in the column labelled “All Areas Approved Except for ...”.

Table J01-2c – Partially Approved Alternate Standards Approved Areas

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
11000-97-014 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
HLS-BCPC- [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Table J01-2c – Partially Approved Alternate Standards Approved Areas – continued

Document Number	Title	CCT-REQ-1130 Requirement	SSP 50808 Requirement	Disposition Letter Filename	All Areas Approved Except for ...
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]