Appendix A to Attachment J-03, Milestone Acceptance Criteria and Payment Schedule

1.0 INTRODUCTION

The Milestone Acceptance Criteria and Payment Schedule provided in Section 3.0 details all the milestones, reviews and/or payment events which mark progress towards completion of CLIN 001 activities and is provided in response to and supports:

Section	Description
B.3	Design, Development, Test and Evaluation (DDTE) / Certification (Core Contract) (CLIN 001)
G.8	Submission of Invoices for Payment
H.31	Interim Performance-Based Milestone Payments (Applicable to CLIN 001)
I.11	52.232-32 Performance-Based Payments (Apr 2012) (Deviation), (Applicable to Interim Performance-Based Payments Events)
L.21	Instructions for Milestones, Milestone Acceptance Criteria and Payment Schedule (Applicable to CLIN 001)
Attachment J-03, Section 3.2	Performance Work Statement
Attachment J-03, Appendix A	Milestone Acceptance Criteria and Payment Schedule

2.0 MILESTONE REVIEW PLAN (DRD 101)

The Contractor shall utilize the Milestone Review Plan (MRP), DRD 101, to describe for each mandatory Government and Contractor proposed payment milestone and interim review for CLIN 001 defined in Section 3.0 the following:

- the review process
- schedule
- location
- deliverables
- delivery dates
- method and timing by which data will be made available to NASA
- document review requirements
- presentation meetings
- pre-boards
- other logistics-related information

In advance of the each milestone, the Contractor shall collaborate with NASA to detail the mutually agreed to readiness indicators (also known as entrance criteria) and acceptance criteria (also called exit or success criteria) for that milestone/review in the MRP document. At a minimum, the team shall draw from the following requirements set and any other tools available at that time to refine and tailor the entrance and exit criteria to the specific milestone/review/event:

a) CCT-PLN-1120, Crew Transportation Technical Management Processes Document, Appendix H, CCP Milestone Review Data

b) This document, Appendix A to Attachment J-03, Milestone Acceptance Criteria and Payment Schedule

c) Applicable milestone/interim review Data Package DRD Data Requirements section (CBR-DRD 102, DCR-DRD 103, FTRR,-DRD 104, ORR-DRD 105, and CR-DRD 106)

d) NASA Systems Engineering Processes and Requirements, NPR 7123.1A

The Contractor shall submit the MRP detailing the agreed to specifics for the next milestone review(s) / event(s) to allow sufficient time for NASA approval of the MRP. The MRP shall be updated in accordance with the MRP submittal schedule provided in the MRP (reference DCC1-00773-01 Milestone Review Plan, Table 1.3-1). Once NASA approves the MRP, the plan shall supersede the associated contract milestone review requirements in (a) above, and will be considered tailoring of those requirements.

3.0 MILESTONE ACCEPTANCE CRITERIA AND PAYMENT SCHEDULE

The Milestone Acceptance Criteria and Payment Schedule includes mandatory Government milestones, readiness and success criteria provided by the Government in RFP Attachment J-03 and is supplemented with additional Contractor defined interim payment milestones/events.

The following legend is used to easily recognize the milestones, reviews and events.

Legend:
Mandatory Government Interim Milestone
Contractor Proposed Interim Milestone
Mandatory Government Delivery Milestone
IAW = in accordance with

Certification Baseline Review (CBR) Interim Milestone **(As proposed, interim NASA milestone in support of DCR)** **DCR Interim Milestone 01A.1**	**Planned Start Date and Completion Date (mo/yr):** **Sep - Oct/2014** **No Final RID Board**	**Amount:** (b) (4)

Objective:

At a NASA and Contractor co-chaired Certification Baseline Review (CBR) completed within ninety (90) days of contract start, the Contractor shall:

a) Identify the Baseline requirements, including the allocation to the Elements and Subsystems of the CTS, incorporating the results of NASA's guidance provided under Certification Products Contract (CPC) (if applicable), which meet NASA's requirements defined in CCT-REQ-1130, ISS Crew Transportation and Services Requirements Document and SSP 50808, International Space Station (ISS) to Commercial Orbital Transportation Services (COTS) Interface Requirements Document.

b) Identify the current Crew Transportation System (CTS) design baseline.

c) Document management plans and products incorporating the results of NASA's disposition provided under Certification Products Contract (CPC) (if applicable), to meet requirements in the CCT-PLN-1120, Crew Transportation Technical Management Processes.

d) Define the plan and schedule to complete Design, Development, Test, and Evaluation (DDTE) and certification for the CTS design, production, and operations.

e) Define top safety, technical, cost and schedule risks based on most current CTS design. (Att J-03 PWS Apx A)

Indicators of Milestone Readiness: (Att J-03 PWS Apx A)	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
The Contractor has completed the following and provided to NASA:		
a) The requirements, including the allocation to the Elements and Subsystems of the CTS, incorporating the results of NASA's disposition under CPC (if applicable) which meet NASA's requirements defined in CCT-REQ-1130 and SSP 50808 including but not limited to:	Data to be transmitted via DRD 102	Aug/2014

Certification Baseline Review (CBR) Interim Milestone **(As proposed, interim NASA milestone in support of DCR)** **DCR Interim Milestone 01A.1**	**Planned Start Date and Completion Date (mo/yr):** **Sep - Oct/2014** **No Final RID Board**	**Amount:** (b) (4)
1) Documentation of previously approved variances and alternate standards incorporated or tailored in requirements.	Data to be transmitted via DRD 102	Aug/2014
2) Provide joint ISS integration products (Interface Control Documents (ICDs), Joint Integrated Verification Test Plan (JiVTP), Bi-lateral Data Exchange Agreement List and Schedule (BDEALS), Bi-lateral Hardware Software Exchange Agreement List and Schedule (BHSEALS)) identified in SSP 50964, Visiting Vehicle ISS Integration Plan..	Data to be transmitted via DRD 102	Aug/2014
b) Documentation of the current CTS design baseline as defined in DRD 102 Certification Baseline Review (CBR) Data Package.	Data to be transmitted via DRD 102	Aug/2014
c) The management plans and products as defined in DRD 102 Certification Baseline Review (CBR) Data Package.	Data to be transmitted via DRD 102	Aug/2014
d) The DRD 108 Verification and Validation (V&V) Plan.	Data to be transmitted via DRD 108	Aug/2014
e) The DRD 107 Certification Plan.	Data to be transmitted via DRD 107	Aug/2014
f) The DRD 002 Integrated Master Plan and Integrated Master Schedule for CTS Certification activities.	Data to be transmitted via DRD 002	Aug/2014

Certification Baseline Review (CBR) Interim Milestone **(As proposed, interim NASA milestone in support of DCR)** **DCR Interim Milestone 01A.1**	**Planned Start Date and Completion Date (mo/yr):** **Sep - Oct/2014** **No Final RID Board**	**Amount:** (b) (4)
g) An assessment of the top safety, technical, cost, and schedule risks to CTS Certification, and documentation of the approach to manage and accept risk with CTS Certification	Data to be transmitted via DRD 102	Aug/2014
h) DRD 001 Insight Implementation Plan and documentation of the organizational interaction and personnel interfaces to achieve the objectives of the Insight Implementation Plan and Insight Clause.	Data to be transmitted via DRD 001	Aug/2014
i) DRD 101 Milestone Review Plan.	Data to be transmitted via DRD 101	Aug/2014
j) DRD 109 Flight Test Plan.	Data to be transmitted via DRD 109	Aug/2014
Acceptance Criteria: (Att J-03 PWS Apx A)		
a) Requirements are baselined and controlled. The allocation of requirements to the CTS design baseline is complete.	Data dispositioned to the level required per DRD 102	
1) Requirements are traceable to CCT-REQ-1130 and SSP 50808.	Data dispositioned to the level required per DRD 102	
2) Variances and alternate standards have been incorporated and appropriately tailored into the Contractor's requirements.	Data dispositioned to the level required per DRD 102	
3) Technical coordination is complete for joint ISS integration products (ICDs, JiVTP, BDEALS, BHSEALS) identified in SSP 50964, and products are ready for ISS to baseline post CBR review.	Data dispositioned to the level required per DRD 102	

Certification Baseline Review (CBR) Interim Milestone **(As proposed, interim NASA milestone in support of DCR)** **DCR Interim Milestone 01A.1**	**Planned Start Date and Completion Date (mo/yr):** **Sep - Oct/2014** **No Final RID Board**	**Amount:** [redacted] (b) (4)
4) The Concept of Operations has been baselined.	Data dispositioned to the level required per DRD 102	
5) The CTS design definition products identified in the DRD 102 Certification Baseline Review (CBR) Data Package identify the current design baseline.	Data dispositioned to the level required per DRD 102	
6) Integrated vehicle performance and design margin is appropriate and supports completion of development.	Data dispositioned to the level required per DRD 102	
7) Management plans and products identified in the DRD 102 Certification Baseline Review (CBR) Data Package are in place, controlled and are being implemented. The plans and products identified in the CBR Data Package as type 2 have been approved.	Data dispositioned to the level required per DRD 102	
8) The DRD 108 V&V Plan has been Baselined.	Data dispositioned per DRD 108	
9) The DRD 107 Certification Plan has been Baselined.	Data dispositioned per DRD 107	
10) An DRD 002 Integrated Master Plan and Integrated Master Schedule (IMP/IMS) is baselined.	Data dispositioned per DRD 002	
11) The top safety, technical, cost and schedule risks are identified, assessed, mitigation plans identified and clearly documented in BORIS. Risk & Opportunity Management plan is released to effectively manage the risks.	Data dispositioned to the level required per DRD 102	

Certification Baseline Review (CBR) Interim Milestone **(As proposed, interim NASA milestone in support of DCR)** **DCR Interim Milestone 01A.1**	**Planned Start Date and Completion Date (mo/yr):** **Sep - Oct/2014** **No Final RID Board**	**Amount:** (b) (4)
12) DRD 001 Insight Implementation Plan has been approved. The organizational interaction and personnel interfaces to achieve the objectives of the Insight Implementation Plan and Insight Clause have been documented.	Data dispositioned per DRD 001	
13) DRD 101 Milestone Review Plan in accordance with the Data Requirement List (DRL) and DRD has been approved.	Data dispositioned per DRD 101 MRP	
14) DRD 109 Flight Test Plan in accordance with the DRL and DRD has been approved.	Data dispositioned per DRD 109	
15) A plan and schedule have been defined for the resolution of all actions and open items resulting from the CBR. All To be Determined (TBD) and To be Resolved (TBR) items are clearly identified with acceptable plans and schedules for their disposition.		

Ground Segment Critical Design Review (CDR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.2**	**Planned Start Date and Completion Date (mo/yr):** **CMO CDR: Oct/2014** **Grnd Sys CDR: Oct/2014** **Combined Final RID Board Nov/2014**	**Amount:** (b) (4)

Objective:

Contractor chaired. Perform (1) a Critical Design Review (CDR) of Crew & Mission Operations systems designs and processes for Mission Operations, Training Systems and Processes and Cargo Integration Processes; (2) a CDR of Ground Systems used for spacecraft AI&T, Space-to-Ground Comm, Landing and CM recovery ground systems; and (3) review of VAC-1 execution plan and schedule.

a) Baseline tailored requirements, incorporating the results of NASA's guidance provided under CPC (if applicable), which meet NASA's requirements;

b) Baseline most current CTS CMO design;

c) Baseline Ground systems designs for AI&T, Space-to-Ground communications and post landing CM recovery, present summary updates to launch site facilities and pre-flight systems designs;

d) Define schedule; and

e) Define top safety, technical, cost and schedule risks.

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
For CMO CDR the Contractor has completed the following:		
a) Tailored requirements incorporating the results of NASA's guidance under CPC (if applicable) which meet NASA's requirements defined in CCT-STD-1150 Crew Transportation Operations Standards	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
b) Mission Operations Plan, Train and Fly CDR technical work products for both hardware and software system elements for Mission Planning and Analysis, Flight Training, Flight Operations, Crew and Cargo Integration and Missions Systems have been made available to include:	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014

Ground Segment Critical Design Review (CDR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.2**	**Planned Start Date and Completion Date (mo/yr):** **CMO CDR: Oct/2014** **Grnd Sys CDR: Oct/2014** **Combined Final RID Board Nov/2014**	**Amount:** [redacted] (b) (4)
1) Product specifications for each hardware and software configuration item	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
2) Fabrication, Assembly, integration and test plans and procedures	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
3) Interface control documents	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
4) Operations limits and constraints	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
5) Technical resource utilization estimates and margins	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
6) Command and telemetry lists	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
7) Verification and Validation plan(s)	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
8) Software design document(s) including interface design document(s)	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
9) Training documentation (e.g. plans, curriculum, schedules)	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
10) Safety analyses	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
11) Certification plans and requirements (as needed)	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014

Ground Segment Critical Design Review (CDR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.2**	**Planned Start Date and Completion Date (mo/yr):** **CMO CDR: Oct/2014** **Grnd Sys CDR: Oct/2014** **Combined Final RID Board Nov/2014**	**Amount:** (b) (4)
c) CMO schedule elements as part of the Integration Master Schedule (DRD 002) for CTS Certification activities.	Data to be provided at meeting IAW DRD 002	Oct/2014
d) An assessment of the top safety, technical, cost, and schedule risks to CMO and documentation of the approach to manage and accept risks.	Data to be provided at meeting IAW DRD 101 MRP Appendix B	Oct/2014
For Ground Systems CDR the Contractor has completed the following:		
a) Tailored requirements incorporating the results of NASA's guidance under CPC (if applicable) which meet NASA's requirements defined in CCT-REQ-1130.	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
b) CDR technical work products for both hardware and software system elements for Ground Systems used for spacecraft AI&T, Space-to-Ground Communication, Landing and CM recovery ground systems have been made available to include:	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
1) Updated baselined documents, as required	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
2) Product specifications for each hardware and software configuration item	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
3) Spacecraft Fabrication, Assembly, integration and test plans and procedures	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
4) Interface control documents	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014

Ground Segment Critical Design Review (CDR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.2**	**Planned Start Date and Completion Date (mo/yr):** **CMO CDR: Oct/2014** **Grnd Sys CDR: Oct/2014** **Combined Final RID Board Nov/2014**	**Amount:** [redacted] (b) (4)
5) Operations limits and constraints	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
6) Technical resource utilization estimates and margins	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
7) Command and telemetry lists	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
8) Verification and Validation plan(s)	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
9) Software design document(s) including interface design document(s)	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
10) Safety analyses	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
11) Certification plans and requirements (as needed)	Data to be transmitted IAW DRD 101 MRP Appendix B	Sep/2014
c) Ground Systems schedule elements as part of the Integration Master Schedule (DRD 002) for CTS Certification activities.	Data to be transmitted IAW DRD 002	Oct/2014
d) An assessment of the top safety, technical, cost, and schedule risks to Ground Systems and documentation of the approach to manage and accept risks.	Data to be provided at meeting IAW DRD 101 MRP Appendix B	Oct/2014
Draft VAC-1 execution plan and schedule provided.	Data to be provided at meeting IAW DRD 101 MRP Appendix B	Oct/2014

Ground Segment Critical Design Review (CDR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.2**	**Planned Start Date and Completion Date (mo/yr):** **CMO CDR: Oct/2014** **Grnd Sys CDR: Oct/2014** **Combined Final RID Board Nov/2014**	**Amount:** (b) (4)
Acceptance Criteria:		
a) For both CMO and Ground Systems CDRs the following apply:	Data dispositioned to the level required per DRD 101 MRP Appendix B	
1) Top-level requirements are agreed upon, finalized, stated clearly and consistent with the final design	Data dispositioned to the level required per DRD 101 MRP Appendix B	
2) The flow down of verifiable requirements is complete and proper or, if not, an adequate plan exists for timely resolution of open items. Requirements are traceable to mission goals and objectives.	Data dispositioned to the level required per DRD 101 MRP Appendix B	
3) The final design is expected to meet the requirements at an acceptable level of risk	Data dispositioned to the level required per DRD 101 MRP Appendix B	
4) Definition of technical interfaces are consistent with the overall technical maturity and provides an acceptable level of risk	Data dispositioned to the level required per DRD 101 MRP Appendix B	
5) Adequate technical margins exist with respect to the TPMs or, if not, an adequate plan exists for timely resolution of open items	Data dispositioned to the level required per DRD 101 MRP Appendix B	
6) Project risks are understood and have been assess, and plans, a process, and resources exist to effectively manage them	Data dispositioned to the level required per DRD 101 MRP Appendix B	
7) The operational concept is technically sound, incorporates human factors considerations (as appropriate) and includes flow down of requirements for its execution	Data dispositioned to the level required per DRD 101 MRP Appendix B	

Ground Segment Critical Design Review (CDR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.2**	**Planned Start Date and Completion Date (mo/yr):** **CMO CDR: Oct/2014** **Grnd Sys CDR: Oct/2014** **Combined Final RID Board Nov/2014**	**Amount:** (b) (4)
8) Completion of review per Milestone Review Plan (DRD 101)	Data dispositioned to the level required per DRD 101 MRP Appendix B	
b) VAC-1 plan and schedule reviewed. VAC products provide integrated assessment of system performance against applicable CCTS requirements and are consistent with the V&V plan. Schedule inter-dependencies are correctly identified. Risks to execution are identified and mitigation plans documented.	Data dispositioned to the level required per DRD 101 MRP Appendix B	

Phase II Safety Review - Part B (Integrated System) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.3**	**Planned Start Date and Completion Date (mo/yr):** **Dec/2014** **No Final RID Board**	**Amount:** (b) (4)

Objective:

(b) (4). Prepare and conduct a Phase II Safety Review of the integrated Contractor CCTS system for CDR level requirements, system architecture and design, and associated safety products to assess conformance with CCTS Certification process (based on CDR maturity level). Focus is to review updates to hazard reports/analyses including cause identification, development of controls and specific safety verification methods. Review status of open actions from Phase II Part A review on CST-100 safety products.

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
The following technical products are available:		
a) Hazard Reports reflecting the final equipment design and operations, and documented the status and results of all completed hazard verification work.	Data to be transmitted IAW DRD 101 MRP Appendix C	Oct/2014
b) Hazard Reports shall be signed by the responsible safety and engineering managers or a representative where applicable before submittal.	Data to be transmitted IAW DRD 101 MRP Appendix C	Oct/2014
c) All open hazard verifications are listed on a safety verification tracking log.	Data to be transmitted IAW DRD 101 MRP Appendix C	Oct/2014
d) Final overview description of the design and operations of the hardware being addressed in the review to assist in understanding hazards.	Data to be transmitted IAW DRD 101 MRP Appendix C	Oct/2014
e) Identification and resolution of open safety items and noncompliances.	Data to be transmitted IAW DRD 101 MRP Appendix C	Oct/2014
f) Closure of action items assigned during previous Safety Review(s).	Data to be provided at meeting IAW DRD 101 MRP Appendix C	Dec/2014

Phase II Safety Review - Part B (Integrated System) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.3**	**Planned Start Date and Completion Date (mo/yr):** **Dec/2014** **No Final RID Board**	**Amount:** (b) (4)
Acceptance Criteria:		
a) Hazard Reports have been completed such that: all hazards and hazard causes have been identified; hazard controls have been defined and specific safety verification methods have been documented. Contractor approval for flight of Hazard Reports.	Data dispositioned to the level required per DRD 101 MRP Appendix C	
b) Open standard safety verification items are documented on the safety verification tracking log. Note: This log allows the safety review panel to sign the Hazard Reports indicating completion of the safety analyses, but with the understanding that approval for flight or corresponding ground operations will be withheld until all applicable verification activity is complete.	Data dispositioned to the level required per DRD 101 MRP Appendix C	
c) Noncompliances have been approved for flight or have a documented resolution plan with scheduled closeout prior to DCR or FRR.	Data dispositioned to the level required per DRD 101 MRP Appendix C	
d) Completion of review per Milestone Review Plan (DRD 101).	Data dispositioned to the level required per DRD 101 MRP Appendix C	

Delta Integrated Critical Design Review (I-CDR) **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.4**	**Planned Start Date and Completion Date (mo/yr):** **Jan/2015** **Final RID Board** **Jan/2015**	**Amount:** (b) (4)

Objective:

A NASA and Contractor Co-Chaired Review.
The Contractor shall prepare and conduct a Delta I-CDR reviewing the baseline design established and reviewed during the I-CDR (during CCiCap) and any additional design content to demonstrate that the integrated design across Launch Segment, Spacecraft Segment and Ground Segment including hardware, software, facilities, support equipment and plans satisfy CCTS System level, Segment level and module level requirements. The contractor will provide closed RIDs and Actions and status of all open RIDs and Actions from the I-CDR and any segment and subsystem CDRs since the I-CDR. The Delta I-CDR demonstrates that the design maturity is appropriate to proceed to assembly, integration and test activities.

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) At least 90 days prior to the review, the MRP has been updated to include all details of the delta I-CDR and has been submitted to NASA for approval	Data to be transmitted IAW DRD 101 MRP Appendix V	Oct/2014
b) CDR Agenda and charge to the board have been agreed to by Boeing Program Management and Review Chair	Data to be transmitted IAW DRD 101 MRP Appendix V	Dec/2014

Delta Integrated Critical Design Review (I-CDR) **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.4**	**Planned Start Date and Completion Date (mo/yr):** **Jan/2015** **Final RID Board** **Jan/2015**	**Amount:** (b) (4)
(b) (4)		

Delta Integrated Critical Design Review (I-CDR) **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.4**	**Planned Start Date and Completion Date (mo/yr):** **Jan/2015** **Final RID Board** **Jan/2015**	**Amount:** (b) (4)
Acceptance Criteria:		
(b) (4)		

Delta Integrated Critical Design Review (I-CDR) **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.4**	**Planned Start Date and Completion Date (mo/yr):** **Jan/2015** **Final RID Board** **Jan/2015**	**Amount:** (b) (4)
(b) (4)		

Qualification Test Vehicle (QTV) Production Readiness Review (PRR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.5**	**Planned Start Date and Completion Date (mo/yr):** **Mar/2015** **No Final RID Board**	**Amount:** (b) (4)

Objective:

[redacted]

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) The significant production engineering problems encountered during development are resolved.	Data to be transmitted IAW DRD 101 MRP Appendix D	Mar/2015
b) The design documentation is adequate to support production.	Data to be transmitted IAW DRD 101 MRP Appendix D	Mar/2015
c) The production plans, procedures and preparation are adequate to begin fabrication.	Data to be transmitted IAW DRD 101 MRP Appendix D	Mar/2015
d) The production-enabling products and adequate resources are available, have been allocated, and are ready to support end product production.	Data to be transmitted IAW DRD 101 MRP Appendix D	Mar/2015

Acceptance Criteria:

[redacted]

(b) (4)

[redacted]

Qualification Test Vehicle (QTV) Production Readiness Review (PRR) Interim Milestone (As proposed, interim Contractor milestone in support of DCR) DCR Interim Milestone 01A.5	Planned Start Date and Completion Date (mo/yr): Mar/2015 No Final RID Board	Amount: (b) (4)
(b) (4)		

Qualification Test Vehicle (QTV) Production Readiness Review (PRR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.5**	**Planned Start Date and Completion Date (mo/yr):** **Mar/2015** **No Final RID Board**	**Amount:** [redacted] (b) (4)
(b) (4)		

STA Test Readiness Review (TRR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.6**	**Planned Start Date and Completion Date (mo/yr):** **Apr/2015** **No Final RID Board**	**Amount:** [redacted] (b) (4)

Objective:

(b) (4) [redacted]. Conduct a Test Readiness Review (TRR) to ensure readiness to start testing of the STA. Verify all requirements changes are complete, verify test article as-built configuration, test procedures are complete and approved, facilities and support equipment readiness to support test (including any required software), all personnel supporting test have complete required training and review of test based hazards to ensure proper controls are incorporated into the test design and test procedures.

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) The test objectives are clearly defined and documented, and all of the test plans, procedures, environments, and configuration end items support those objectives.	Data to be transmitted IAW DRD 101 MRP Appendix E	Mar/2015
b) Configuration of the system under test has been defined and agreed to. Interfaces have been placed under configuration management or have been defined in accordance with an agreed to plan, and a version description document has been made available.	Data to be transmitted IAW DRD 101 MRP Appendix E	Mar/2015
c) Applicable functional, unit-level, subsystem, system, and qualification testing has been conducted successfully.	Data to be transmitted IAW DRD 101 MRP Appendix E	Mar/2015
d) TRR-specific materials such as test plans, test cases, and procedures are available.	Data to be transmitted IAW DRD 101 MRP Appendix E	Mar/2015
e) Known system discrepancies have been identified and disposed in accordance with agreed-upon plan.	Data to be transmitted IAW DRD 101 MRP Appendix E	Mar/2015
f) Previous design review success criteria and key issues have been satisfied in accordance with an agreed-upon plan.	Data to be transmitted IAW DRD 101 MRP Appendix E	Mar/2015

STA Test Readiness Review (TRR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.6**	**Planned Start Date and Completion Date (mo/yr):** **Apr/2015** **No Final RID Board**	**Amount:** (b) (4)
g) Required test personnel are certified (including a designated test director) and facilities, test articles, test instrumentation, and other test enabling products have been identified, calibration current for expected duration of test, facilities and data acquisition systems capabilities satisfy test requirements, and are available to support required tests.	Data to be transmitted IAW DRD 101 MRP Appendix E	Mar/2015
h) Roles and responsibilities of all test participants are defined and agreed to.	Data to be transmitted IAW DRD 101 MRP Appendix E	Mar/2015
i) Test contingency planning has been accomplished, and all personnel have been trained.	Data to be transmitted IAW DRD 101 MRP Appendix E	Mar/2015
(b) (4)		

STA Test Readiness Review (TRR) Interim Milestone (As proposed, interim Contractor milestone in support of DCR) DCR Interim Milestone 01A.6	Planned Start Date and Completion Date (mo/yr): Apr/2015 No Final RID Board	Amount: [redacted] (b) (4)
(b) (4) [redacted]		

CCCS Activation/Validation Tests Complete Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.7**	**Planned Start Date and Completion Date (mo/yr):** **Jul/2015** **No Final RID Board**	**Amount:** (b) (4)
Objective:		
(b) (4)		

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) Completed execution of CCCS activation test per approved test procedure.		
b) Review test results, discrepancy reports and test deviations	Data to be transmitted IAW DRD 101 MRP Appendix F	Jul/2015
Acceptance Criteria:		
a) Completion of post test data review and acceptance of discrepancies and deviations.	Data dispositioned to the level required per DRD 101 MRP Appendix F	
b) Test results support the certification plan with a disposition of remaining or open items from the test.	Data dispositioned to the level required per DRD 101 MRP Appendix F	
c) Preparation of quick-look summary test briefing to document test results.	Data dispositioned to the level required per DRD 101 MRP Appendix F	

QTV Integrated Readiness Review (IRR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.8**	**Planned Start Date and Completion Date (mo/yr):** **Aug/2015** **No Final RID Board**	**Amount:** (b) (4)

Objective:

(b) (4) . Conduct an Integrated Readiness Review for the QTV to ensure test hardware, test plans, procedures, facilities, support equipment and any required test support software are progressing in development to support planned test activities. The review will evaluate test plans and draft procedures against test objectives and requirements, test hardware build and delivery status, test equipment and facility build-up, validation and preparations are progressing, a review of identified test hazards and associated controls, and, training requirements have been identified and planned for all critical personnel.

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) Integration plans have been completed and released, draft procedures are available for review	Data to be transmitted IAW DRD 101 MRP Appendix G	Jul/2015
b) Segments and/or components are available for integration.	Data to be transmitted IAW DRD 101 MRP Appendix G	Jul/2015
c) Mechanical and electrical interfaces have been verified against the interface control documentation.	Data to be transmitted IAW DRD 101 MRP Appendix G	Jul/2015
d) Applicable functional, unit-level, subsystem, and qualification testing have been conducted successfully or planned to support test schedule.	Data to be transmitted IAW DRD 101 MRP Appendix G	Jul/2015
(b) (4)		
f) Support personnel trained has been identified and planned to support assembly and test activities.	Data to be transmitted IAW DRD 101 MRP Appendix G	Jul/2015
g) Handling and safety requirements have been documented.	Data to be transmitted IAW DRD 101 MRP Appendix G	Jul/2015

QTV Integrated Readiness Review (IRR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.8**	**Planned Start Date and Completion Date (mo/yr):** **Aug/2015** **No Final RID Board**	**Amount:** (b) (4)
(b) (4)		
j) Quality control organization is ready to support integration effort.	Data to be transmitted IAW DRD 101 MRP Appendix G	Jul/2015
Acceptance Criteria:		
(b) (4)		

FSW Demonstration Nominal Launch, Docking and De-Orbit Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.9**	**Planned Start Date and Completion Date (mo/yr):** **Oct/2015** **No Final RID Board**	**Amount:** [redacted] (b) (4)
Objective:		
[redacted] (b) (4)		

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) Test Plan has been developed consisting of key objectives, auxiliary objectives, configuration of unit under test, test conditions and environment, differences between baselines design configuration and test (if applicable), and definition of information in quick-look report and approved by Boeing Program Management.	Data to be transmitted IAW DRD 101 MRP Appendix H	Sep/2015
b) Required demonstration personnel are certified and facilities, units under test (including software version) and other demonstration enabling products have been identified, are ready and available to support the demonstration.	Data to be transmitted IAW DRD 101 MRP Appendix H	Sep/2015
Acceptance Criteria:		
a) Completion of test per approved test plan.	Data dispositioned to the level required per DRD 101 MRP Appendix H	
b) Presentation of quick-look summary results briefing and demonstration results.	Data dispositioned to the level required per DRD 101 MRP Appendix H	

OFT Configuration Performance & Weight Status Report (CPWSR) Review Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.10**	**Planned Start Date and Completion Date (mo/yr):** **Dec/2015** **No Final RID Board**	**Amount:** (b) (4)
Objective:		
(b) (4)		

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) Definition of LV and spacecraft configuration for the OFT mission, including preliminary (predicted) mass properties and preliminary ascent trajectories	Data to be transmitted IAW DRD 101 MRP Appendix I	Nov/2015
b) Completion of analyses and documentation of performance margins for OFT mission	Data to be transmitted IAW DRD 101 MRP Appendix I	Nov/2015
Acceptance Criteria:		
(b) (4)		

MCC Integrated Simulation System Acceptance Review (SAR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.11**	**Planned Start Date and Completion Date (mo/yr):** **Jan/2016** **No Final RID Board**	**Amount:** (b) (4)
Objective:		
(b) (4) Evaluate summary of Primary Mission Control Center (MCC) system validation test results, anomalies and open work plan needed to achieve operational readiness to support training and integrated simulations.		
Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
(b) (4)		

MCC Integrated Simulation System Acceptance Review (SAR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.11**	**Planned Start Date and Completion Date (mo/yr):** **Jan/2016** **No Final RID Board**	**Amount:** (b) (4)
Acceptance Criteria:		
(b) (4)		

QTV Test Readiness Review (TRR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.12**	**Planned Start Date and Completion Date (mo/yr):** **Apr/2016** **No Final RID Board**	**Amount:** [redacted] (b) (4)

Objective:

[redacted] (b) (4) Conduct a Test Readiness Review (TRR) to ensure readiness to start testing of the QTV Testing. Verify all requirements changes are complete, verify test article as-built configuration, test procedures are complete and approved, facilities and support equipment readiness to support test (including any required software), all personnel supporting test have complete required training and review of test based hazards to ensure proper controls are incorporated into the test design and test procedures.

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) The test objectives are clearly defined and documented, and all of the test plans, procedures, environments, and configuration of the end items support those objectives.	Data to be transmitted IAW DRD 101 MRP Appendix K	Apr/2016
b) Configuration of the system under test has been defined and agreed to. Interfaces have been placed under configuration management or have been defined in accordance with an agreed to plan, and a version description document has been made available.	Data to be transmitted IAW DRD 101 MRP Appendix K	Apr/2016
c) Applicable functional, unit-level, subsystem, system, and qualification testing has been conducted successfully.	Data to be transmitted IAW DRD 101 MRP Appendix K	Apr/2016
d) TRR-specific materials such as test plans, test cases, and procedures are available.	Data to be transmitted IAW DRD 101 MRP Appendix K	Apr/2016
e) Known system discrepancies have been identified and disposed in accordance with agreed-upon plan.	Data to be transmitted IAW DRD 101 MRP Appendix K	Apr/2016
f) Previous design review success criteria and key issues have been satisfied in accordance with an agreed-upon plan.	Data to be transmitted IAW DRD 101 MRP Appendix K	Apr/2016

QTV Test Readiness Review (TRR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.12**	**Planned Start Date and Completion Date (mo/yr):** **Apr/2016** **No Final RID Board**	**Amount:** [redacted] (b) (4)
g) Required test personnel are certified (including a designated test director), and facilities, test articles, test instrumentation, and other test enabling products have been identified, calibration current for expected duration of test, facilities and data acquisition systems capability satisfy test requirements, and are available to support required tests.	Data to be transmitted IAW DRD 101 MRP Appendix K	Apr/2016
h) Roles and responsibilities of all test participants are defined and agreed to.	Data to be transmitted IAW DRD 101 MRP Appendix K	Apr/2016
i) Test contingency planning has been accomplished, and all personnel have been trained.	Data to be transmitted IAW DRD 101 MRP Appendix K	Apr/2016
Acceptance Criteria:		
a) Adequate test plans are completed and approved for the system under test.	Data dispositioned to the level required per DRD 101 MRP Appendix K	
b) Adequate identification and coordination of required test resources are completed.	Data dispositioned to the level required per DRD 101 MRP Appendix K	
c) Previous component, subsystem, and system test results form a satisfactory basis for proceeding into planned tests.	Data dispositioned to the level required per DRD 101 MRP Appendix K	
d) Risk level is identified and accepted by program / competency leadership are required	Data dispositioned to the level required per DRD 101 MRP Appendix K	
e) Plans to capture any lessons learned from the test program are documented.	Data dispositioned to the level required per DRD 101 MRP Appendix K	

QTV Test Readiness Review (TRR) Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.12**	**Planned Start Date and Completion Date (mo/yr):** **Apr/2016** **No Final RID Board**	**Amount:** (b) (4)
f) The test objectives have been clearly defined and documented, and the review of all the test plans, as well as the procedures, environments, and configuration of the end items, provides a reasonable expectation that objectives can be met.	Data dispositioned to the level required per DRD 101 MRP Appendix K	
g) The test cases have been reviewed and analyzed for expected results, and the results are consistent with the test plans and objectives.	Data dispositioned to the level required per DRD 101 MRP Appendix K	
h) Test personnel have received appropriate training in test operation and safety procedures.	Data dispositioned to the level required per DRD 101 MRP Appendix K	
i) Open actions are identified, corrective actions defined and scheduled, and constraints are in-place to ensure all required actions are implemented prior to the first applicable work activity.	Data dispositioned to the level required per DRD 101 MRP Appendix K	

Integrated Parachute System Drop Tests 1 & 2 Complete Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.13**	**Planned Start Date and Completion Date (mo/yr):** **Jun/2016** **No Final RID Board**	**Amount:** (b) (4)
Objective:		
(b) (4)		

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) Test Plan has been developed consisting of key objectives, auxiliary objectives, configuration of unit under test, test conditions and environment, differences between baselines design configuration and test (if applicable), and definition of information in quick-look report and approved by Boeing Program Management.	Data to be transmitted IAW DRD 101 MRP Appendix L	Jun/2016
Acceptance Criteria:		
a) Completion of test per approved test plan.	Data dispositioned to the level required per DRD 101 MRP Appendix L	
b) Preparation of quick-look summary test briefing to document test results.	Data dispositioned to the level required per DRD 101 MRP Appendix L	

SM Hot Fire Launch Abort Test Complete Interim Milestone **(As proposed, interim Contractor milestone in support of DCR)** **DCR Interim Milestone 01A.14**	**Planned Start Date and Completion Date (mo/yr):** **Sep/2016** **No Final RID Board**	**Amount:** (b) (4)
Objective:		
[redacted] (b) (4)		

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) Test Plan has been developed consisting of key objectives, auxiliary objectives, configuration of unit under test, test conditions and environment, differences between baselines design configuration and test (if applicable), and definition of information in quick-look report and approved by Boeing Program Management.	Data to be transmitted IAW DRD 101 MRP Appendix N	Sep/2016
Acceptance Criteria:		
a) Completion of test per approved test plan.	Data dispositioned to the level required per DRD 101 MRP Appendix N	
b) Preparation of quick-look summary test briefing to document test results.	Data dispositioned to the level required per DRD 101 MRP Appendix N	

ISS Design Certification Review (DCR) Delivery Milestone **(As proposed, NASA Delivery milestone)** **DCR Delivery Milestone 01A**	**Planned Start Date and Completion Date (mo/yr):** **Nov/2016** **Final RID Board Nov/2016**	**Amount:** (b) (4)

Objective:

DCR acceptance criteria shall be met prior to any crewed test flights.
At a NASA and Contractor co-chaired DCR, the Contractor shall:

a) Demonstrate that the Crew Transportation System (CTS) and operations meet all applicable requirements (exceptions must be preapproved by the Commercial Crew Program/ISS Program (CCP/ISSP)), as defined in CCT-REQ-1130, ISS Crew Transportation and Services Requirements Document, and SSP 50808, ISS to Commercial Orbital Transportation Services (COTS) Interface Requirements Document (IRD) in order to meet the ISS Design Reference Mission (DRM) within CCT-DRM-1110, CTS DRM.

   1) Exceptions will be prepared and submitted to CCP/ISSP for approval for each open and partially completed VCN

b) Provide evidence that it has met all applicable requirements (exceptions must be preapproved by the CCP/ISSP) through the implementation of its baselined management and certification plans and processes required in CCT-PLN-1120, Crew Transportation Technical Management Processes.

c) Demonstrate schedule performance in accordance with the DRD 002 Integrated Master Plan and Integrated Master Schedule.

d) Define top safety, technical, cost, and schedule risks. (Att J-03 PWS Apx A)

Indicators of Milestone Readiness: (Att J-03 PWS Apx A)	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
The Contractor has completed the following and provided to NASA:		
a) The DRD 103 Design Certification Review Data Package.	Data to be transmitted IAW DRD 103	Oct/2016
b) The DRD 112 Certification Data Package including but not limited to:	Data to be transmitted IAW DRD 112	Oct/2016

ISS Design Certification Review (DCR) Delivery Milestone **(As proposed, NASA Delivery milestone)** **DCR Delivery Milestone 01A**	**Planned Start Date and Completion Date (mo/yr):** **Nov/2016** **Final RID Board Nov/2016**	**Amount:** [redacted] (b) (4)
1) All DRD 111 Verification Closure Notices (VCNs) demonstrating that the CTS requirements have been met. (All VCNs shall be closed unless exceptions are preapproved by the CCP/ISSP).	Data to be transmitted IAW DRD 111	Oct/2016
a) Open and partially completed VCNs submitted as exceptions will document a plan to complete open work, estimated completion dates, and risk to program milestones between ISS DCR and CFT FTRR.		

ISS Design Certification Review (DCR) Delivery Milestone **(As proposed, NASA Delivery milestone)** **DCR Delivery Milestone 01A**	**Planned Start Date and Completion Date (mo/yr):** **Nov/2016** **Final RID Board Nov/2016**	**Amount:** [redacted] (b) (4)
2) The hazard analysis and DRD 110 Hazard Reports have been approved by NASA.	Data to be transmitted IAW DRD 110	Oct/2016
c) All management and certification plans and processes required in CCT-PLN-1120 have been completed.	Data to be transmitted IAW DRD 103	Oct/2016
d) ISS Integration per SSP 50964, Visiting Vehicle ISS Integration Plan, including the Flight Operations Review and the ISS Phase III Safety Review have been completed. Forward work is scheduled and approved by NASA.	Data to be transmitted IAW DRD 103	Oct/2016
e) The DRD 002 Integrated Master Plan and Integrated Master Schedule.	Data to be transmitted IAW DRD 002	Oct/2016
f) The DRD 113 Range Safety Data Documentation.	Data to be transmitted IAW DRD 113	Oct/2016
g) The DRD 203 Vehicle Interface Definition Document (IDD).	Data to be transmitted IAW DRD 203	Oct/2016
h) An assessment of the top safety risks and documentation of the management and acceptance of risk including, but not limited to:		Oct/2016
1) Most recent results of the Probabilistic Safety Analysis (PSA) that identify the integrated safety and mission assurance risk of the baseline design, and individually identifies top risk contributors.	Data to be transmitted IAW DRD 103	Oct/2016
2) An assessment of crew survival capability of the baseline design in accordance with CCT-PLN-1120.	Data to be transmitted IAW DRD 103	Oct/2016
i) The top programmatic risks have been identified and assessed.	Data to be transmitted IAW DRD 103	Oct/2016

ISS Design Certification Review (DCR) Delivery Milestone **(As proposed, NASA Delivery milestone)** **DCR Delivery Milestone 01A**	**Planned Start Date and Completion Date (mo/yr):** **Nov/2016** **Final RID Board Nov/2016**	**Amount:** [redacted] (b) (4)
j) Documentation substantiating all Review Item Dispositions (RIDs) and actions from design reviews, verification reviews, and Certification Baseline Review (CBR) are closed or opened items are dispositioned with rationale for acceptance and updated plans for closure.	Data to be transmitted IAW DRD 103	Oct/2016
Acceptance Criteria: (Att J-03 PWS Apx A)		
a) The DRD 112 Certification Data Package has been approved by NASA.	Data dispositioned per DRD 112	
1) All applicable DRD 111 VCNs have been approved by NASA. (All VCNs relevant to crewed flight test will be approved by NASA with acceptable open work).	Data dispositioned per DRD 111	
2) The design provides crew survival capability.	Data dispositioned to the level required per DRD 103	
3) Operational limits and constraints have been implemented and verified.	Data dispositioned to the level required per DRD 103	
4) Operational roles and procedures have been defined for crew, mission team and mission management.	Data dispositioned to the level required per DRD 103	
b) An DRD 002 Integrated Master Plan and Integrated Master Schedule has been approved.	Data dispositioned per DRD 002	
c) The top safety risks are identified, assessed, and clearly communicated. Plans, processes, and appropriate resources necessary to effectively manage the risks are in place.	Data dispositioned to the level required per DRD 103	

ISS Design Certification Review (DCR) Delivery Milestone **(As proposed, NASA Delivery milestone)** **DCR Delivery Milestone 01A**	**Planned Start Date and Completion Date (mo/yr):** **Nov/2016** **Final RID Board Nov/2016**	**Amount:** (b) (4)
1) Major risks to crew safety and mission success have been identified, quantified, and integrated in a PSA.	Data dispositioned to the level required per DRD 103	
2) Risk mitigation strategies associated with the CTS design baseline, cost and schedule have been identified and agreed upon by NASA.	Data dispositioned to the level required per DRD 103	
d) The top programmatic risks have been identified. Plans, processes, and appropriate resources necessary to effectively manage the risks are in place.	Data dispositioned to the level required per DRD 103	
e) All RIDs and actions from design reviews, verification reviews and CBR are closed. All To Be Determined (TBD) and To Be Resolved (TBR) items are clearly identified with acceptable plans and schedules for their disposition and have been submitted.		
f) A plan and schedule have been defined for the resolution of all actions and open items resulting from the DCR. All TBD and TBR items are clearly identified with acceptable plans and schedules for their disposition.		

OFT Flight Operations Review (FOR) Interim Milestone **(As proposed, interim Contractor milestone in support of CR)** **CR Interim Milestone 01B.1**	**Planned Start Date and Completion Date (mo/yr):** **Aug/2016** **No Final RID Board**	**Amount:** (b) (4)
Objective:		
(b) (4) Conduct readiness review of CCTS CMO element for readiness to support the OFT. This is a precursor to the OFT FTRR. The objective of the FOR is to evaluate and baseline flight operations products to ensure the safe and accurate implementation of mission requirements.		
Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
(b) (4)		
(b) (4)		

OFT Flight Operations Review (FOR) Interim Milestone **(As proposed, interim Contractor milestone in support of CR)** **CR Interim Milestone 01B.1**	**Planned Start Date and Completion Date (mo/yr):** **Aug/2016** **No Final RID Board**	**Amount:** (b) (4)
(b) (4)		
Acceptance Criteria:		
a) Flight operations products are baselined and/or dispositioned; open work items have defined plans to support closure for final work product delivery prior to FTRR.	Data dispositioned to the level required per DRD 101 MRP Appendix M	

Spacecraft Servicing Operational Readiness Review (ORR) Interim Milestone **(As proposed, interim Contractor milestone in support of CR)** **CR Interim Milestone 01B.2**	**Planned Start Date and Completion Date (mo/yr):** **Nov/2016** **No Final RID Board**	**Amount:** (b) (4)
Objective:		
(b) (4)		

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) Propellant fueling and servicing equipment is ready for servicing	Data to be transmitted IAW DRD 101 MRP Appendix P	
b) Propellant fueling and servicing procedures ready	Data to be transmitted IAW DRD 101 MRP Appendix P	Oct/2016
c) Contingency plans documented	Data to be transmitted IAW DRD 101 MRP Appendix P	Oct/2016
d) Servicing facilities and equipment validation tests complete	Data to be transmitted IAW DRD 101 MRP Appendix P	Nov/2016
Acceptance Criteria:		
a) Plans, processes, resources and personnel are in place and baselined and ready for execution. Anomalies from validation test have been reviewed, dispositioned and required corrective actions are planned prior to CST-100 servicing.	Data dispositioned to the level required per DRD 101 MRP Appendix P	

Pad Abort Test Complete Interim Milestone **(As proposed, interim Contractor milestone in support of CR)** **CR Interim Milestone 01B.3**	**Planned Start Date and Completion Date (mo/yr):** **Dec/2016** **No Final RID Board**	**Amount:** (b) (4)
Objective:		
(b) (4) . Review of quick look report on completion of Pad Abort Test (PA + 2 weeks)		

Indicators of Milestone Readiness:	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
a) Test Plan has been developed consisting of key objectives, auxiliary objectives, configuration of unit under test, test conditions and environment, differences between baselines design configuration and test (if applicable), and definition of information in quick-look report and approved by Boeing Program Management.	Data to be transmitted IAW DRD 101 MRP Appendix Q	Nov/2016
b) Completion of test per approved test plan.	Data to be transmitted per DRD 101 MRP Appendix Q	
Acceptance Criteria:		
a) Presentation of quick-look summary test briefing and test results.	Data dispositioned to the level required per DRD 101 MRP Appendix Q	

Orbital Flight Test (OFT) Flight Test Readiness Review (FTRR) Interim Milestone **(As proposed, interim NASA milestone in support of CR)** **CR Interim Milestone 01B.4**	**Planned Start Date and Completion Date (mo/yr):** **Jan/2017** **No Final RID Board**	**Amount:** (b) (4)

Objective:

Contractor and NASA co-chaired. Contractor shall conduct an FTRR that demonstrates readiness to conduct an uncrewed Orbital Flight Test and defines a risk baseline for flight test activities. (Att J-03 PWS Apx A)

Indicators of Milestone Readiness: (Att J-03 PWS Apx A)	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
The Contractor has completed the following and provided to NASA:		
a) All data and documentation identified in CCT-PLN-1120, Crew Transportation Technical Management Processes, Appendix F, CTS FRR Milestone Data, as the DRD 104 FTRR Data Package.	Data to be transmitted IAW DRD 104	Jan/2017
1) Approval of any new, open or changes to applicable DRD 111 Verification Closure Notices (VCNs), DRD 110 Hazard Reports, and DRD 112 Certification Data Package.	Data to be transmitted IAW DRD 110, 111, and 112	Jan/2017
2) Documentation that all acceptance, checkout and integration testing has been completed.	Data to be transmitted IAW DRD 104	Jan/2017
3) Documentation of flight specific products.	Data to be transmitted IAW DRD 104	Jan/2017
4) Documentation that the launch site, Range, recovery and tracking and data support resources have committed to launch.	Data to be transmitted IAW DRD 104	Jan/2017
5) Documentation that landing site recovery support and resources have committed to landing.	Data to be transmitted IAW DRD 104	Jan/2017

Orbital Flight Test (OFT) Flight Test Readiness Review (FTRR) Interim Milestone **(As proposed, interim NASA milestone in support of CR)** **CR Interim Milestone 01B.4**	**Planned Start Date and Completion Date (mo/yr):** **Jan/2017** **No Final RID Board**	**Amount:** (b) (4)
6) Documentation that all operational supporting and enabling capabilities (e.g., facilities, equipment, documents, updated databases) necessary for nominal and contingency operations have been tested and delivered/installed at the site(s) necessary to support operations.	Data to be transmitted IAW DRD 104	Jan/2017
7) Documentation that plans, processes, procedures and training for nominal and contingency operations for the Crew Transportation System (CTS) have been completed to support operations.	Data to be transmitted IAW DRD 104	Jan/2017
8) Documentation that systems hardware, software, personnel, processes and procedures are in place to support operations.	Data to be transmitted IAW DRD 104	Jan/2017
b) The Contractor, its subcontractors, suppliers and team members have provided flight readiness endorsements demonstrating that they have met requirements in accordance with the Contractor's management processes.	Data to be transmitted IAW DRD 104	Jan/2017
c) International Space Station (ISS) Stage Operational Readiness Review (SORR) has been completed and the ISS is ready to accept the Visiting Vehicle.	Data to be transmitted IAW DRD 104	Jan/2017
1) Documentation of residual mission risks and related analyses for acceptance.	Data to be transmitted IAW DRD 104	Jan/2017
d) All open actions from Design Certification review (DCR) and SORR have been closed.	Data to be transmitted IAW DRD 104	Jan/2017
Acceptance Criteria: (Att J-03 PWS Apx A)		
a) The DRD 104 FTRR Data Package has been presented and accepted by NASA.	Data dispositioned to the level required per DRD 104	

Orbital Flight Test (OFT) Flight Test Readiness Review (FTRR) Interim Milestone **(As proposed, interim NASA milestone in support of CR)** **CR Interim Milestone 01B.4**	**Planned Start Date and Completion Date (mo/yr):** **Jan/2017** **No Final RID Board**	**Amount:** (b) (4)
b) All changes, modifications and anomalies since DCR have been resolved and resolutions have been accepted by NASA	Data dispositioned to the level required per DRD 104	
c) Mission management team, crew, and mission support team have been identified, have been trained, and are in place.	Data dispositioned to the level required per DRD 104	
d) The plan and schedule of preplanned forward work has been accepted by NASA.	Data dispositioned to the level required per DRD 104	
e) Any open work or constraints to launch are identified and closeout plans and schedules are in place and supportable.	Data dispositioned to the level required per DRD 104	
f) NASA has accepted the flight specific products.	Data dispositioned to the level required per DRD 104	
g) Launch Site, Range, and recovery support organizations have committed to launch.	Data dispositioned to the level required per DRD 104	
h) Landing site support and resources have committed to landing.	Data dispositioned to the level required per DRD 104	
i) NASA has accepted residual flight test risks.	Data dispositioned to the level required per DRD 104	

CFT DCR Interim Milestone **(As proposed, interim Contractor milestone in support of CR)** **CR Interim Milestone 01B.5**	**Planned Start Date and Completion Date (mo/yr):** **Mar/2017** **Final RID Board Mar/2017**	**Amount:** (b) (4)
Objective:		
As part of the CFT FTRR process the contractor shall conduct a CFT DCR prior to the crewed test flight. The contractor shall conduct the CFT DCR in the same manner as the ISS DCR and deliver data as described in DRD 103 (DCR Data Package), DRD 110 (Hazards Reports), DRD 111 (Verification Closure Notices) and DRD 112 (Certification Data Package). The purpose of the NASA and Contractor co-chaired CFT DCR is to review the final system qualification performance and associated analyses to support VCN closures that were exceptions at the ISS DCR and review all open actions from the previous ISS DCR.		

Indicators of Milestone Readiness: (Att J-03 PWS Apx A)	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
The Contractor has completed the following and provided to NASA updates since ISS DCR for the following:		
j) The DRD 103 Design Certification Review Data Package.	Data to be transmitted IAW DRD 103	Feb/2017
k) The DRD 112 Certification Data Package including but not limited to:	Data to be transmitted IAW DRD 112	Feb/2017

CFT DCR Interim Milestone **(As proposed, interim Contractor milestone in support of CR)** **CR Interim Milestone 01B.5**	**Planned Start Date and Completion Date (mo/yr):** **Mar/2017** **Final RID Board Mar/2017**	**Amount:** (b) (4)
2) All DRD 111 Verification Closure Notices (VCNs) demonstrating that the CTS requirements have been met. (All VCNs shall be closed unless exceptions are preapproved by the CCP/ISSP).	Data to be transmitted IAW DRD 111	Feb/2017
b) Open and partially completed VCNs submitted as exceptions will document a plan to complete open work, estimated completion dates, and risk to program milestones between ISS DCR and CFT FTRR.		
3) The hazard analysis and DRD 110 Hazard Reports have been approved by NASA.	Data to be transmitted IAW DRD 110	Feb/2017
l) All management and certification plans and processes required in CCT-PLN-1120 have been completed.	Data to be transmitted IAW DRD 103	Feb/2017
m) ISS Integration per SSP 50964, Visiting Vehicle ISS Integration Plan, including the Flight Operations Review and the ISS Phase III Safety Review have been completed. Forward work is scheduled and approved by NASA.	Data to be transmitted IAW DRD 103	Feb/2017
n) The DRD 002 Integrated Master Plan and Integrated Master Schedule.	Data to be transmitted IAW DRD 002	Feb/2017
o) The DRD 113 Range Safety Data Documentation.	Data to be transmitted IAW DRD 113	Feb/2017
p) The DRD 203 Vehicle Interface Definition Document (IDD).	Data to be transmitted IAW DRD 203	Feb/2017

CFT DCR Interim Milestone **(As proposed, interim Contractor milestone in support of CR)** **CR Interim Milestone 01B.5**	**Planned Start Date and Completion Date (mo/yr):** **Mar/2017** **Final RID Board Mar/2017**	**Amount:** (b) (4)
q) An assessment of the top safety risks and documentation of the management and acceptance of risk including, but not limited to:		Feb/2017
4) Most recent results of the Probabilistic Safety Analysis (PSA) that identify the integrated safety and mission assurance risk of the baseline design, and individually identifies top risk contributors.	Data to be transmitted IAW DRD 103	Feb/2017
5) An assessment of crew survival capability of the baseline design in accordance with CCT-PLN-1120.	Data to be transmitted IAW DRD 103	Feb/2017
r) The top programmatic risks have been identified and assessed.	Data to be transmitted IAW DRD 103	Feb/2017
s) Documentation substantiating all Review Item Dispositions (RIDs) and actions from design reviews, verification reviews, and Certification Baseline Review (CBR) are closed or opened items are dispositioned with rationale for acceptance and updated plans for closure.	Data to be transmitted IAW DRD 103	Feb/2017
Acceptance Criteria: (Att J-03 PWS Apx A)		
t) The DRD 112 Certification Data Package has been approved by NASA.	Data dispositioned per DRD 112	
6) All applicable DRD 111 VCNs have been approved by NASA. (All VCNs relevant to crewed flight test will be approved by NASA with acceptable open work).	Data dispositioned per DRD 111	
7) The design provides crew survival capability.	Data dispositioned to the level required per DRD 103	
8) Operational limits and constraints have been implemented and verified.	Data dispositioned to the level required per DRD 103	

CFT DCR Interim Milestone **(As proposed, interim Contractor milestone in support of CR)** **CR Interim Milestone 01B.5**	**Planned Start Date and Completion Date (mo/yr):** **Mar/2017** **Final RID Board Mar/2017**	**Amount:** (b) (4)
9) Operational roles and procedures have been defined for crew, mission team and mission management.	Data dispositioned to the level required per DRD 103	
u) An DRD 002 Integrated Master Plan and Integrated Master Schedule has been approved.	Data dispositioned per DRD 002	
v) The top safety risks are identified, assessed, and clearly communicated. Plans, processes, and appropriate resources necessary to effectively manage the risks are in place.	Data dispositioned to the level required per DRD 103	
10) Major risks to crew safety and mission success have been identified, quantified, and integrated in a PSA.	Data dispositioned to the level required per DRD 103	
11) Risk mitigation strategies associated with the CTS design baseline, cost and schedule have been identified and agreed upon by NASA.	Data dispositioned to the level required per DRD 103	
w) The top programmatic risks have been identified. Plans, processes, and appropriate resources necessary to effectively manage the risks are in place.	Data dispositioned to the level required per DRD 103	
x) All RIDs and actions from design reviews, verification reviews and CBR are closed. All To Be Determined (TBD) and To Be Resolved (TBR) items are clearly identified with acceptable plans and schedules for their disposition and have been submitted.		
y) A plan and schedule have been defined for the resolution of all actions and open items resulting from the DCR. All TBD and TBR items are clearly identified with acceptable plans and schedules for their disposition.		

Crewed Flight Test (CFT) Flight Test Readiness Review (FTRR) Interim Milestone **(As proposed, interim NASA milestone in support of CR)** **CR Interim Milestone 01B.6**	**Planned Start Date and Completion Date (mo/yr):** **Apr/2017** **No Final RID Board**	**Amount:** (b) (4)
Objective:		
Contractor and NASA co-chaired. For each crewed flight test(s), the Contractor shall conduct an FTRR that demonstrates readiness to conduct a crewed flight test and defines a risk baseline for crewed flight test activities. (Att J-03 PWS Apx A)		

Indicators of Milestone Readiness: (Att J-03 PWS Apx A)	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
The Contractor has completed the following and provided to NASA:		
a) All data and documentation identified in CCT-PLN-1120, Crew Transportation Technical Management Processes, Appendix F, CTS FRR Milestone Data, as the DRD 104 FTRR Data Package.	Data to be transmitted IAW DRD 104	Apr/2017
1) Approval of any new, open or changes to applicable DRD 111 Verification Closure Notices (VCNs), DRD 110 Hazard Reports, and DRD 112 Certification Data Package.	Data to be transmitted IAW DRD 110, 111 and 112	Apr/2017
2) Documentation that all acceptance, checkout and integration testing has been completed.	Data to be transmitted IAW DRD 104	Apr/2017
3) Documentation of flight specific products.	Data to be transmitted IAW DRD 104	Apr/2017
4) Documentation that the launch site, Range, recovery and tracking and data support resources have committed to launch.	Data to be transmitted IAW DRD 104	Apr/2017
5) Documentation that landing site recovery support and resources have committed to landing.	Data to be transmitted IAW DRD 104	Apr/2017

Crewed Flight Test (CFT) Flight Test Readiness Review (FTRR) Interim Milestone **(As proposed, interim NASA milestone in support of CR)** **CR Interim Milestone 01B.6**	**Planned Start Date and Completion Date (mo/yr):** **Apr/2017** **No Final RID Board**	**Amount:** [redacted] (b) (4)
6) Documentation that all operational supporting and enabling capabilities (e.g., facilities, equipment, documents, updated databases) necessary for nominal and contingency operations have been tested and delivered/installed at the site(s) necessary to support operations.	Data to be transmitted IAW DRD 104	Apr/2017
7) Documentation that plans, processes, procedures and training for nominal and contingency operations for the Crew Transportation System (CTS) have been completed to support operations.	Data to be transmitted IAW DRD 104	Apr/2017
8) Documentation that systems hardware, software, personnel, processes and procedures are in place to support operations.	Data to be transmitted IAW DRD 104	Apr/2017
b) The Contractor, its subcontractors, suppliers and team members have provided flight readiness endorsements demonstrating that they have met requirements in accordance with the Contractor's management processes.	Data to be transmitted IAW DRD 104	Apr/2017
c) International Space Station (ISS) Stage Operational Readiness Review (SORR) has been completed and the ISS is ready to accept the Visiting Vehicle and crew for flight tests to ISS.	Data to be transmitted IAW DRD 104	Apr/2017
1) Documentation of residual mission risks and related analyses for acceptance.	Data to be transmitted IAW DRD 104	Apr/2017
d) All open actions from Design Certification review (DCR) and SORR have been closed.	Data to be transmitted IAW DRD 104	Apr/2017
e) Conduct CFT DCR	Data to be transmitted IAW DRD 103	
Acceptance Criteria: (Att J-03 PWS Apx A)		
a) The DRD 104 FTRR Data Package has been presented and accepted by NASA.	Data dispositioned to the level required per DRD 104	

Crewed Flight Test (CFT) Flight Test Readiness Review (FTRR) Interim Milestone **(As proposed, interim NASA milestone in support of CR)** **CR Interim Milestone 01B.6**	**Planned Start Date and Completion Date (mo/yr):** **Apr/2017** **No Final RID Board**	**Amount:** [redacted] (b) (4)
b) All changes, modifications and anomalies since DCR have been resolved and resolutions have been accepted by NASA	Data dispositioned to the level required per DRD 104	
c) Mission management team, crew, and mission support team have been identified, have been trained, and are in place.	Data dispositioned to the level required per DRD 104	
d) The plan and schedule of preplanned forward work has been accepted by NASA.	Data dispositioned to the level required per DRD 104	
e) Any open work or constraints to launch are identified and closeout plans and schedules are in place and supportable.	Data dispositioned to the level required per DRD 104	
f) NASA has accepted the flight specific products.	Data dispositioned to the level required per DRD 104	
g) Launch Site, Range, and recovery support organizations have committed to launch.	Data dispositioned to the level required per DRD 104	
h) Landing site support and resources have committed to landing.	Data dispositioned to the level required per DRD 104	
i) NASA has accepted residual flight test risks.	Data dispositioned to the level required per DRD 104	

Operational Readiness Review (ORR) Interim Milestone **(As proposed, interim NASA milestone in support of CR)** **CR Interim Milestone 01B.7**	**Planned Start Date and Completion Date (mo/yr):** **Jul/2017** **Final RID Board Jul/2017**	**Amount:** (b) (4)

Objective:

At a NASA and Contractor co-chaired Operations Readiness Review (ORR), the Contractor shall demonstrate that the actual Crew Transportation System (CTS) system characteristics and the procedures used in operations reflect the deployed state of the CTS. The ORR evaluates all project and support (flight and ground) hardware, software, personnel, and procedures to ensure flight and associated ground systems are in compliance with program requirements and constraints.

An ORR occurs upon successful completion of the crewed test flight to International Space Station (ISS). Upon meeting the ORR Acceptance Criteria defined below, NASA will accept operations readiness of the system for Post Certification Missions (PCMs). (Att J-03 PWS Apx A)

Indicators of Milestone Readiness: (Att J-03 PWS Apx A)	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
The Contractor has completed the following and provided to NASA:		
a) The DRD 105 Operations Readiness Review (ORR) Data Package.	Data to be transmitted IAW DRD 105	Jun/2017
b) Any updates to the DRD 112 Certification Data Package.	Data to be transmitted IAW DRD 112	Jun/2017
c) Any new, open or changed DRD 111 Verification Closure Notices (VCNs) and DRD 110 Hazard Reports.	Data to be transmitted IAW DRD 110 and 111	Jun/2017
d) Approval of closure of action items from Flight Test Readiness Review(s) (FTRR(s)), Design Certification Review(s) (DCR(s)) and previous reviews.	Data to be transmitted IAW DRD 105	Jun/2017
e) Documentation substantiating that all validation testing has been completed.	Data to be transmitted IAW DRD 105	Jun/2017
f) Documentation providing evidence that failures and anomalies have been resolved and the results incorporated.	Data to be transmitted IAW DRD 105	Jun/2017

Operational Readiness Review (ORR) Interim Milestone **(As proposed, interim NASA milestone in support of CR)** **CR Interim Milestone 01B.7**	**Planned Start Date and Completion Date (mo/yr):** **Jul/2017** **Final RID Board Jul/2017**	**Amount:** [redacted] (b) (4)
g) Documentation that all operational supporting and enabling capabilities (e.g., facilities, equipment, documents, updated databases) necessary for nominal and contingency operations have been tested and delivered/installed at the site(s) necessary to support recurring operations.	Data to be transmitted IAW DRD 105	Jun/2017
h) Documentation that plans, procedures and training for nominal and contingency operations for the CTS have been completed to support recurring operations.	Data to be transmitted IAW DRD 105	Jun/2017
i) Documentation that systems hardware, software, personnel, and procedures are in place to support recurring operations.	Data to be transmitted IAW DRD 105	Jun/2017
j) An assessment of the top safety risks and documentation of the management and acceptance of risk including but not limited to:		Jun/2017
1) Most recent results of the Probabilistic Safety Analysis (PSA) that identify the integrated safety and mission assurance risk of the baseline design, and individually identifies top risk contributors.	Data to be transmitted IAW DRD 105	Jun/2017
2) An assessment of crew survival capability of the baseline design in accordance with CCT-PLN-1120, Crew Transportation Technical Management Processes.	Data to be transmitted IAW DRD 105	Jun/2017
k) The top programmatic risks have been identified and assessed.	Data to be transmitted IAW DRD 105	Jun/2017
l) Documentation substantiating all Review Item Dispositions (RIDs) and actions from design reviews, verification reviews, DCR(s), and FTRR(s) are closed.	Data to be transmitted IAW DRD 105	Jun/2017

Operational Readiness Review (ORR) Interim Milestone **(As proposed, interim NASA milestone in support of CR)** **CR Interim Milestone 01B.7**	**Planned Start Date and Completion Date (mo/yr):** **Jul/2017** **Final RID Board Jul/2017**	**Amount:** [redacted] (b) (4)
Acceptance Criteria: (Att J-03 PWS Apx A)		
a) The CTS, including any enabling products, is determined to be ready to be placed in a recurring operations status.		
1) NASA has approved the updated DRD 112 Certification Data Package including any remaining open DRD 111 Verification Closure Notices and DRD 110 Hazard Reports.	Data dispositioned per DRD 110, 111 and 112	
2) NASA has approved closure of action items from DCR and previous reviews.	Data dispositioned per DRD 105	
3) NASA has accepted documentation as evidence that all validation testing has been completed.	Data dispositioned per DRD 105	
4) NASA has accepted documentation as evidence that failures and anomalies have been resolved and the results incorporated.	Data dispositioned per DRD 105	
5) NASA has accepted documentation that all operational supporting and enabling capabilities (e.g., facilities, equipment, documents, updated databases) necessary for nominal and contingency operations have been tested and delivered/installed at the site(s) necessary to support sustaining operations.	Data dispositioned per DRD 105	
6) NASA has accepted documentation that all plans, procedures and training for nominal and contingency operations for the CTS have been completed to support sustaining operations.	Data dispositioned per DRD 105	
7) NASA has accepted documentation that systems hardware, software, personnel, and procedures are in place to support operations.	Data dispositioned per DRD 105	

Operational Readiness Review (ORR) Interim Milestone **(As proposed, interim NASA milestone in support of CR)** **CR Interim Milestone 01B.7**	**Planned Start Date and Completion Date (mo/yr):** **Jul/2017** **Final RID Board Jul/2017**	**Amount:** (b) (4)
b) The top safety risks for Post Certification Missions are identified, assessed, and clearly communicated. Plans, processes, and appropriate resources necessary to effectively manage the risks are in place.	Data dispositioned per DRD 105	
c) Major risks to crew safety and mission success have been identified, quantified, and integrated in a PSA.	Data dispositioned per DRD 105	
1) Risk mitigation strategies associated with the CTS design baseline, cost and schedule have been identified and agreed upon by NASA.	Data dispositioned per DRD 105	
2) The top programmatic risks have been identified. Plans, processes, and appropriate resources necessary to effectively manage the risks are in place.	Data dispositioned per DRD 105	
d) A plan and schedule have been defined for the resolution of all actions and open items resulting from the ORR. All To be Determined (TBD) and To be Resolved (TBR) items are clearly identified with acceptable plans and schedules for their disposition.	Data dispositioned per DRD 105	

Certification Review (CR) Delivery Milestone **(As proposed, NASA Delivery milestone)** **CR Delivery Milestone 01B**	**Planned Start Date and Completion Date (mo/yr):** **Aug/2017** **Final RID Board Aug/2017**	**Amount:** (b) (4)
Objective:		
At a NASA chaired review, the Contractor shall provide evidence that the CTS has met all NASA requirements identified in Attachment J-01, Integrated Crew Transportation System (CTS) Requirements. The Contractor shall also provide documentation of the crew safety and mission assurance risks associated with the CTS. (Att J-03 PWS Apx A)		

Indicators of Milestone Readiness: (Att J-03 PWS Apx A)	**Data / DRDs to be provided:**	**Delivery of Data/DRDs (mo/yr)**
The Contractor has completed the following and provided to NASA:		
a) The DRD 106 Certification Review Milestone Data Package	Data to be transmitted IAW DRD 106	Jun/2017
b) The DRD 112 Certification Data Package.	Data to be transmitted IAW DRD 112	Jun/2017
c) Documentation of results from all flight tests, Operations Readiness Review (ORR), production acceptance testing and closure of any open requirements from Design Certification Review(s) (DCR(s)).	Data to be transmitted IAW DRD 106	Jun/2017 update Jul/2017
d) An assessment of the top safety risks and documentation of the management and acceptance of risk including but not limited to:	Data to be transmitted IAW DRD 106	Jun/2017
e) Most recent results of the Probabilistic Safety Analysis (PSA) that identify the integrated safety and mission assurance risk of the baseline design, and individually identifies top risk contributors.	Data to be transmitted IAW DRD 106	Jun/2017
f) An assessment of crew survival capability of the baseline design.	Data to be transmitted IAW DRD 106	Jun/2017

Certification Review (CR) Delivery Milestone **(As proposed, NASA Delivery milestone)** **CR Delivery Milestone 01B**	**Planned Start Date and Completion Date (mo/yr):** **Aug/2017** **Final RID Board Aug/2017**	**Amount:** (b) (4)
g) The top programmatic risks have been identified and assessed.	Data to be transmitted IAW DRD 106	Jun/2017
h) Documentation substantiating all Review Item Dispositions (RIDs) and actions from design reviews, verification reviews, DCR(s), Flight Test Readiness Review(s) (FTRR(s)) and ORR are closed.	Data to be transmitted IAW DRD 106	Jun/2017
Acceptance Criteria: (Att J-03 PWS Apx A)		
a) CTS Certification recommendation has been approved including DRD 112 Certification Data Package.	Data dispositioned per DRD 112	
b) Results from risk assessment have been accepted by NASA.	Data dispositioned per DRD 106	
c) Closure of all open actions from previous reviews have been approved by NASA or NASA approval of closure plan prior to applicable PCM milestone	Data dispositioned per DRD 106	