

LCLS-II	Baseline Change Request (BCR)	BCR No. CS-060	LEVEL 3
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ORIGINATOR: Ed Daly	PHONE: 757-269-7721	DATE: 30-Aug-17
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CHANGE TITLE: **LERF as Additional CM Testing Facility**

BCR JUSTIFICATION:	<input checked="" type="checkbox"/> Budget/Scope Addition <input type="checkbox"/> Budget Transfer <input type="checkbox"/> Other <input type="checkbox"/> Budget/Scope Reduction <input checked="" type="checkbox"/> Schedule/Milestone Change <input checked="" type="checkbox"/> Risk Mitigation -	LCLS CryoMod-011, LCLS Cryomod-029
<p>The current plan is to test cryomodules at each partner lab with no planned re-test. Each lab has one test facility which can accommodate one cryomodule's testing at a time. This BCR adds scope for an additional testing facility at JLAB to allow for more testing cycles and to address potential cryomodule delivery delays associated with unplanned test facility downtime, unplanned re-testing of reworked CMs, and supply chain delays associated with cavity deliveries.</p>		

COM Types effected by this BCR: TEC OPC PED LLP R&D Preps Spares

Control Account / Description	Thru FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Current Baseline	3,649,893	2,693,910	891,610	1,367,375	0	0	0	8,602,787
1.04.06.15 Infrastructure	3,649,893	2,693,910	891,610	1,367,375	0	0		
Proposed Baseline	3,649,893	2,693,910	1,002,155	3,883,703	669,392	360,307	0	12,259,361
1.04.06.15 Infrastructure	3,649,893	2,693,910	1,002,155	3,883,703	669,392	360,307		
Total Increase / (Decrease) to Baseline	0	0	110,546	2,516,329	669,392	360,307	0	3,656,574
Total Increase / (Decrease) to Contingency								(3,656,574)
Total TPC Change								0

WBS/WBS/Milestone Dictionary or Level 1-3 Milestones (any change to Milestone Dates or WBS/Milestone Dictionary):

No milestones will be affected. The WBS dictionary will be changed.

SCHEDULE (any impact on schedule, critical path(s) and adjoining systems?):

No impact to schedule or adjoining systems. This BCR adds activities for the described effort.

TECHNICAL (any impact on KPP, GRD, PRD Parameters and system capabilities?):

No impact to KPP, GRD, PRD Parameters and system capabilities.

INTEGRATION (any impact on associated and adjoining systems?):

No impact on associated and adjoining systems.

Impact of NOT Approving or Delaying Approval of this Request (Alternatives considered and options available):

Third Cryomodule test stand would not be available to mitigate schedule risk.

LCLS-II	Baseline Change Request (BCR)	BCR No. CS-060	LEVEL 3
Approval Authorizations			
	NAME	SIGNATURE	DATE
LEVEL 1			
Director, Office of Science		N/A	
LEVEL 2			
DOE Federal Project Director /Deputy Federal Project Director	H. Lee/H. Joma	N/A	
LEVEL 3			
Project Director	J. Galayda	<i>J Galayda</i>	8/31/17
LEVEL 4			
System Manager			
Project Management	M.Reichanadter	N/A	
Electron Systems	J. Chan	N/A	
Photon Systems	M. Rowen	N/A	
Cryo Systems	M. Ross	<i>M Ross</i>	8/31/2017
Conventional Facilities	B. Law	N/A	
OPC	D. Schulz	N/A	
CAM	E. Daly	<i>emailed approval attached</i>	8/30/17
Compliance			
Project Controls	J. Chaffin		
Finance	J. Cardoso		
ES&H			
Others:			
The approval of this BCR serves as the authorization for work to proceed on the scope identified on this BCR.			

Boysen, Tanya K.

From: Edward Daly <edaly@jlab.org>
Sent: Wednesday, August 30, 2017 2:32 PM
To: Boysen, Tanya K.
Cc: Phillip Kessler; Eden Evans
Subject: Re: BCR CS-060 for Approval (LERF) - L3

Dear Tanya,
I approve.
Thanks,
Ed

----- Original Message -----

From: "Tanya K. Boysen" <tkb@slac.stanford.edu>
To: "Edward Daly" <edaly@jlab.org>
Cc: "Phillip Kessler" <pkessler@jlab.org>, "Eden Evans" <eaevans@jlab.org>
Sent: Wednesday, August 30, 2017 5:29:51 PM
Subject: BCR CS-060 for Approval (LERF) - L3

Dear Ed,

Attached please find the BCR form (including cost attachments) and the schedule attachments for the subject-line BCR. Please review, and if you agree with it, reply at your earliest convenience with your approval.

Let me know if you have any questions.

Thank you,

Tanya

Tanya Boysen
SLAC, MS 52
(650) 926-3878
tkb@slac.stanford.edu

LCLS II Spend Plan by Month at CA Level (impacted)

Control Account	Cost Set	2/28/2017	3/31/2017	4/30/2017	5/31/2017	6/30/2017	7/31/2017	8/31/2017	9/30/2017	10/31/2017	11/30/2017	12/31/2017	1/31/2018
Grand Total													
	BCWS	-	30,418	51,223	51,789	36,730	5,412	-	-	775	917	846	1,208
	BCR_IMPA	-	30,418	51,223	51,789	36,730	5,412	86,538	24,007	107,587	40,843	106,057	617,041
Increase/ (Decrease) to Baseline		0	0	0	0	0	0	86,538	24,007	106,813	39,927	105,211	615,833

LCLS II Spend Plan by Month at CA Level (impacted)

Control Account	Cost Set	2/28/2018	3/31/2018	4/30/2018	5/31/2018	6/30/2018	7/31/2018	8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	3/31/2019
Grand Total															
	BCWS	117,960	1,329	1,269	1,329	1,269	1,153,263	69,477	17,733	-	-	-	-	-	-
	BCR_IMPA	1,002,504	175,899	74,535	5,330	3,894	1,324,008	291,894	134,111	37,380	4,769	3,338	100,420	80,912	25,115
Increase/ (Decrease) to Baseline		884,543	174,569	73,266	4,001	2,625	170,745	222,417	116,378	37,380	4,769	3,338	100,420	80,912	25,115

LCLS II Spend Plan by Month at CA Level (impacted)

Control Account	Cost Set	4/30/2019	5/31/2019	6/30/2019	7/31/2019	8/31/2019	9/30/2019	10/31/2019	11/30/2019	12/31/2019	1/31/2020	Grand Total
Grand Total												
	BCWS	-	-	-	-	-	-	-	-	-	-	8,602,787
	BCR_IMPA	47,014	106,810	55,363	24,107	92,172	91,992	79,375	172,841	79,790	28,302	12,259,361
Increase/ (Decrease) to Baseline		47,014	106,810	55,363	24,107	92,172	91,992	79,375	172,841	79,790	28,302	3,656,574

LCLSII Current Baseline for August 2017 BCRs				LCLSII - BCR schedule layout												30-Aug-17 14:24											
Activity ID	Activity Name	BCR#	Planned Duration	Var - BL Proj Duration	Start	Finish	BL Project Start	BL Project Finish	Var - BL Proj Finish Date	Planned Lbr Units	Planned NL Units	BL Project Lbr Units	BL Project NL Units	Var - BL Proj Lbr Units	Var - BL Proj NL Units	Total Float	FY2016		FY2017		FY2018		FY2019		FY2020		
																	F	F	F	F	F	F	F	F	F	F	
Total			610	-610	07-Aug-17	27-Jan-20				17118	2722350	0	0	-17118	-2722350	570											
LCLS 2-AUG17 BCR LCLSII Current Baseline for August 2017 BCRs																											
LCLS 2-AUG17 BCR.1 LCLS II Project - ACD, PED, Construction, R&D, Spares and Commissioning																											
LCLS 2-AUG17 BCR.1.04 Cryogenic Systems																											
LCLS 2-AUG17 BCR.1.04.06 Cryomodule - JLAB																											
LCLS 2-AUG17 BCR.1.04.06.15 Infrastructure																											
LCLS 2-AUG17 BCR.1.04.06.15.01 Infrastructure Design																											
CM_ID_150	Define Stands, ETC to be removed	CS-060	40	-40	07-Aug-17	02-Oct-17				16	0	0	0	-16	0	570											
CM_ID_160	Evaluate Test Configuration	CS-060	40	-40	07-Aug-17	02-Oct-17				200	0	0	0	-200	0	570											
CM_ID_165	Design/Engineering of New End Cans	CS-060	20	-20	07-Aug-17	01-Sep-17				320	0	0	0	-320	0	588											
CM_ID_170	Design Wave Guides	CS-060	20	-20	07-Aug-17	01-Sep-17				360	0	0	0	-360	0	570											
CM_ID_180	Conduct Final Design Review of New Hardware	CS-060	2	-2	05-Sep-17	06-Sep-17				0	0	0	0	0	0	588											
CM_ID_190	COMP: LERF New Hardware FDR	CS-060	0	0		06-Sep-17				0	0	0	0	0	0	588											
CM_ID_200	Evaluate Vault Operational Envelope to include Safety	CS-060	10	-10	15-Feb-18	28-Feb-18				0	0	0	0	0	0	672											
CM_ID_210	Conduct Testing Readiness Review	CS-060	2	-2	01-Mar-18	02-Mar-18				0	0	0	0	0	0	672											
CM_ID_220	COMP: Testing Readiness Review	CS-060	0	0		02-Mar-18				0	0	0	0	0	0	672											
CM_ID_300	Project Oversight	CS-060	610	-610	07-Aug-17	27-Jan-20				384	0	0	0	-384	0	570											
LCLS 2-AUG17 BCR.1.04.06.15.02 Infrastructure Procurements																											
CM_IP_91110	RQN: Wave Guide Connections	CS-060	1	-1	03-Oct-17	03-Oct-17				0	184000	0	0	0	-184000	570											
CM_IP_91115	Prepare Award Documents	CS-060	5	-5	04-Oct-17	10-Oct-17				80	0	0	0	-80	0	630											
CM_IP_91120	AWARD: Wave Guide Connections	CS-060	1	-1	11-Oct-17	11-Oct-17				0	184000	0	0	0	-184000	630											
CM_IP_91130	Vendor Effort Fabricate Wave Guide Connections	CS-060	60	-60	12-Oct-17	16-Jan-18				0	0	0	0	0	0	630											
CM_IP_91140	ACCEPT: Wave Guide Connections	CS-060	1	-1	17-Jan-18	17-Jan-18				0	184000	0	0	0	-184000	630											
CM_IP_91190	RQN: Two Sets Cryomodule End Caps	CS-060	1	-1	03-Oct-17	03-Oct-17				0	234200	0	0	0	-234200	632											
CM_IP_91195	Prepare Award Documents	CS-060	5	-5	04-Oct-17	10-Oct-17				80	0	0	0	-80	0	632											
CM_IP_91200	AWARD: Two Sets Cryomodule End Caps	CS-060	1	-1	11-Oct-17	11-Oct-17				0	234200	0	0	0	-234200	632											
CM_IP_91210	Vendor Effort Fabricate Two Sets of Cryomodule End Caps	CS-060	80	-80	12-Oct-17	13-Feb-18				0	0	0	0	0	0	632											
CM_IP_91220	ACCEPT: Two Sets Cryomodule End Caps	CS-060	1	-1	14-Feb-18	14-Feb-18				0	234200	0	0	0	-234200	632											
CM_IP_91230	RQN: Four Sets of Cryomodule Stands	CS-060	1	-1	03-Oct-17	03-Oct-17				0	40000	0	0	0	-40000	648											
CM_IP_91240	Prepare Award Documents	CS-060	5	-5	04-Oct-17	10-Oct-17				8	0	0	0	-8	0	648											
CM_IP_91250	AWARD: Four Sets of Cryomodule Stands	CS-060	1	-1	11-Oct-17	11-Oct-17				0	40000	0	0	0	-40000	648											
CM_IP_91260	Vendor Effort Fabricate Four Sets of Cryomodule Stands	CS-060	38	-38	12-Oct-17	06-Dec-17				0	0	0	0	0	0	648											
CM_IP_91270	ACCEPT: Four Sets of Cryomodule Stands	CS-060	1	-1	07-Dec-17	07-Dec-17				0	40000	0	0	0	-40000	648											
CM_IP_91330	RQN: AC Power Upgrade	CS-060	1	-1	03-Oct-17	03-Oct-17				0	100000	0	0	0	-100000	672											
CM_IP_91340	Prepare Award Documents	CS-060	5	-5	04-Oct-17	10-Oct-17				80	0	0	0	-80	0	672											
CM_IP_91350	AWARD: AC Power Upgrade	CS-060	1	-1	11-Oct-17	11-Oct-17				0	100000	0	0	0	-100000	672											
CM_IP_91360	Vendor Effort Perform AC Power Upgrade	CS-060	50	-50	12-Oct-17	22-Dec-17				0	0	0	0	0	0	672											
CM_IP_91370	ACCEPT: AC Power Upgrade	CS-060	1	-1	02-Jan-18	02-Jan-18				0	100000	0	0	0	-100000	672											
CM_IP_91380	RQN: Additional sets of Bayonet Boxes and End Cans to Support additional testing	CS-060	1	-1	03-Oct-17	03-Oct-17				0	175000	0	0	0	-175000	787											
CM_IP_91390	Prepare Award Documents	CS-060	5	-5	04-Oct-17	10-Oct-17				104	0	0	0	-104	0	787											
CM_IP_91400	AWARD: Additional sets of Bayonet Boxes and End Cans	CS-060	1	-1	11-Oct-17	11-Oct-17				0	175000	0	0	0	-175000	787											
CM_IP_91410	Vendor Effort Additional sets of Bayonet Boxes and End Cans	CS-060	80	-80	12-Oct-17	13-Feb-18				0	0	0	0	0	0	787											
CM_IP_91420	ACCEPT: Additional sets of Bayonet Boxes and End Cans	CS-060	1	-1	14-Feb-18	14-Feb-18				0	175000	0	0	0	-175000	787											
LCLS 2-AUG17 BCR.1.04.06.15.03 Infrastructure Installation and Commissioning																											
			570	-570	03-Oct-17	27-Jan-20				15486	522750	0	0	-15486	-522750	570											

- Define Stands, ETC to be removed
- Evaluate Test Configuration
- Design/Engineering of New End Cans
- Design Wave Guides
- Conduct Final Design Review of New Hardware
- ◆ COMP: LERF New Hardware FDR
- Evaluate Vault Operational Envelope
- Conduct Testing Readiness Review
- ◆ COMP: Testing Readiness Review
- Project Oversight
- RQN: Wave Guide Connections
- Prepare Award Documents
- AWARD: Wave Guide Connections
- Vendor Effort Fabricate Wave Guide Connections
- ACCEPT: Wave Guide Connections
- RQN: Two Sets Cryomodule End Caps
- Prepare Award Documents
- AWARD: Two Sets Cryomodule End Caps
- Vendor Effort Fabricate Two Sets of Cryomodule End Caps
- ACCEPT: Two Sets Cryomodule End Caps
- RQN: Four Sets of Cryomodule Stands
- Prepare Award Documents
- AWARD: Four Sets of Cryomodule Stands
- Vendor Effort Fabricate Four Sets of Cryomodule Stands
- ACCEPT: Four Sets of Cryomodule Stands
- RQN: AC Power Upgrade
- Prepare Award Documents
- AWARD: AC Power Upgrade
- Vendor Effort Perform AC Power Upgrade
- ACCEPT: AC Power Upgrade
- RQN: Additional sets of Bayonet Boxes and End Cans to Support additional testing
- Prepare Award Documents
- AWARD: Additional sets of Bayonet Boxes and End Cans
- Vendor Effort Additional sets of Bayonet Boxes and End Cans
- ACCEPT: Additional sets of Bayonet Boxes and End Cans

■ Remaining Level of Effort
 ■ Actual Level of Effort
 ■ Critical Remaining...
■ Project Baseline Bar
 ■ Actual Work
 ■ Remaining Work

LCLSII Current Baseline for August 2017 BCRs				LCLSII - BCR schedule layout												30-Aug-17 14:26											
Activity ID	Activity Name	BCR#	Planned Duration	Var - BL Proj Duration	Start	Finish	BL Project Start	BL Project Finish	Var - BL Proj Finish Date	Planned Lbr Units	Planned NL Units	BL Project Lbr Units	BL Project NL Units	Var - BL Proj Lbr Units	Var - BL Proj NL Units	Total Float	FY2016		FY2017		FY2018		FY2019		FY2020		
																	F	F	F	F	F	F	F	F	F	F	
Total			610	-610	07-Aug-17	27-Jan-20				17118	2722350	0	0	-17118	-2722350	570											
LCLS 2-AUG17 BCR	LCLSII Current Baseline for August 2017 BCRs		610	-610	07-Aug-17	27-Jan-20				17118	2722350	0	0	-17118	-2722350	570											
LCLS 2-AUG17 BCR.1	LCLS II Project - ACD, PED, Construction, R&D, Spares and Commissioning		610	-610	07-Aug-17	27-Jan-20				17118	2722350	0	0	-17118	-2722350	570											
LCLS 2-AUG17 BCR.1.04	Cryogenic Systems		610	-610	07-Aug-17	27-Jan-20				17118	2722350	0	0	-17118	-2722350	570											
LCLS 2-AUG17 BCR.1.04.06	Cryomodule - JLAB		610	-610	07-Aug-17	27-Jan-20				17118	2722350	0	0	-17118	-2722350	570											
LCLS 2-AUG17 BCR.1.04.06.15	Infrastructure		610	-610	07-Aug-17	27-Jan-20				17118	2722350	0	0	-17118	-2722350	570											
LCLS 2-AUG17 BCR.1.04.06.15.01	Infrastructure Design		610	-610	07-Aug-17	27-Jan-20				1280	0	0	0	-1280	0	570											
ALL-BOE Item ID: L-104061501	Infra Des		610	-610	07-Aug-17	27-Jan-20				1280	0	0	0	-1280	0	570											
CM_ID_150	Define Stands, ETC to be removed	CS-060	40	-40	07-Aug-17	02-Oct-17				16	0	0	0	-16	0	570											
CM_ID_160	Evaluate Test Configuration	CS-060	40	-40	07-Aug-17	02-Oct-17				200	0	0	0	-200	0	570											
CM_ID_165	Design/Engineering of New End Cans	CS-060	20	-20	07-Aug-17	01-Sep-17				320	0	0	0	-320	0	588											
CM_ID_170	Design Wave Guides	CS-060	20	-20	07-Aug-17	01-Sep-17				360	0	0	0	-360	0	570											
CM_ID_300	Project Oversight	CS-060	610	-610	07-Aug-17	27-Jan-20				384	0	0	0	-384	0	570											
No ALL-BOE Item ID			120	-120	05-Sep-17	02-Mar-18				0	0	0	0	0	0	672											
CM_ID_180	Conduct Final Design Review of New Hardware	CS-060	2	-2	05-Sep-17	06-Sep-17				0	0	0	0	0	0	588											
CM_ID_190	COMP: LERF New Hardware FDR	CS-060	0	0		06-Sep-17				0	0	0	0	0	0	588											
CM_ID_200	Evaluate Vault Operational Envelope to include Safety	CS-060	10	-10	15-Feb-18	28-Feb-18				0	0	0	0	0	0	672											
CM_ID_210	Conduct Testing Readiness Review	CS-060	2	-2	01-Mar-18	02-Mar-18				0	0	0	0	0	0	672											
CM_ID_220	COMP: Testing Readiness Review	CS-060	0	0		02-Mar-18				0	0	0	0	0	0	672											
LCLS 2-AUG17 BCR.1.04.06.15.02	Infrastructure Procurements		88	-88	03-Oct-17	14-Feb-18				352	2199600	0	0	-352	-2199600	787											
ALL-BOE Item ID: L-104061502	Infra Procure		5	-5	04-Oct-17	10-Oct-17				352	0	0	0	-352	0	787											
CM_IP_91115	Prepare Award Documents	CS-060	5	-5	04-Oct-17	10-Oct-17				80	0	0	0	-80	0	630											
CM_IP_91195	Prepare Award Documents	CS-060	5	-5	04-Oct-17	10-Oct-17				80	0	0	0	-80	0	632											
CM_IP_91240	Prepare Award Documents	CS-060	5	-5	04-Oct-17	10-Oct-17				8	0	0	0	-8	0	648											
CM_IP_91340	Prepare Award Documents	CS-060	5	-5	04-Oct-17	10-Oct-17				80	0	0	0	-80	0	672											
CM_IP_91390	Prepare Award Documents	CS-060	5	-5	04-Oct-17	10-Oct-17				104	0	0	0	-104	0	787											
ALL-BOE Item ID: N-104061502	Infra Procure M&S		43	-43	07-Dec-17	14-Feb-18				0	733200	0	0	0	-733200	787											
CM_IP_91140	ACCEPT: Wave Guide Connections	CS-060	1	-1	17-Jan-18	17-Jan-18				0	184000	0	0	0	-184000	630											
CM_IP_91220	ACCEPT: Two Sets Cryomodule End Caps	CS-060	1	-1	14-Feb-18	14-Feb-18				0	234200	0	0	0	-234200	632											
CM_IP_91270	ACCEPT: Four Sets of Cryomodule Stands	CS-060	1	-1	07-Dec-17	07-Dec-17				0	40000	0	0	0	-40000	648											
CM_IP_91370	ACCEPT: AC Power Upgrade	CS-060	1	-1	02-Jan-18	02-Jan-18				0	100000	0	0	0	-100000	672											
CM_IP_91420	ACCEPT: Additional sets of Bayonet Boxes and End Cans	CS-060	1	-1	14-Feb-18	14-Feb-18				0	175000	0	0	0	-175000	787											
No ALL-BOE Item ID			87	-87	03-Oct-17	13-Feb-18				0	1466400	0	0	0	-1466400	787											
CM_IP_91110	RQN: Wave Guide Connections	CS-060	1	-1	03-Oct-17	03-Oct-17				0	184000	0	0	0	-184000	570											
CM_IP_91120	AWARD: Wave Guide Connections	CS-060	1	-1	11-Oct-17	11-Oct-17				0	184000	0	0	0	-184000	630											
CM_IP_91130	Vendor Effort Fabricate Wave Guide Connections	CS-060	60	-60	12-Oct-17	16-Jan-18				0	0	0	0	0	0	630											
CM_IP_91190	RQN: Two Sets Cryomodule End Caps	CS-060	1	-1	03-Oct-17	03-Oct-17				0	234200	0	0	0	-234200	632											
CM_IP_91200	AWARD: Two Sets Cryomodule End Caps	CS-060	1	-1	11-Oct-17	11-Oct-17				0	234200	0	0	0	-234200	632											
CM_IP_91210	Vendor Effort Fabricate Two Sets of Cryomodule End Caps	CS-060	80	-80	12-Oct-17	13-Feb-18				0	0	0	0	0	0	632											
CM_IP_91230	RQN: Four Sets of Cryomodule Stands	CS-060	1	-1	03-Oct-17	03-Oct-17				0	40000	0	0	0	-40000	648											
CM_IP_91250	AWARD: Four Sets of Cryomodule Stands	CS-060	1	-1	11-Oct-17	11-Oct-17				0	40000	0	0	0	-40000	648											
CM_IP_91260	Vendor Effort Fabricate Four Sets of Cryomodule Stands	CS-060	38	-38	12-Oct-17	06-Dec-17				0	0	0	0	0	0	648											
CM_IP_91330	RQN: AC Power Upgrade	CS-060	1	-1	03-Oct-17	03-Oct-17				0	100000	0	0	0	-100000	672											
CM_IP_91350	AWARD: AC Power Upgrade	CS-060	1	-1	11-Oct-17	11-Oct-17				0	100000	0	0	0	-100000	672											
CM_IP_91360	Vendor Effort Perform AC Power Upgrade	CS-060	50	-50	12-Oct-17	22-Dec-17				0	0	0	0	0	0	672											
CM_IP_91380	RQN: Additional sets of Bayonet Boxes and End Cans to Support additional testing	CS-060	1	-1	03-Oct-17	03-Oct-17				0	175000	0	0	0	-175000	787											
CM_IP_91400	AWARD: Additional sets of Bayonet Boxes and End Cans	CS-060	1	-1	11-Oct-17	11-Oct-17				0	175000	0	0	0	-175000	787											
CM_IP_91410	Vendor Effort Additional sets of Bayonet Boxes and End Cans	CS-060	80	-80	12-Oct-17	13-Feb-18				0	0	0	0	0	0	787											
LCLS 2-AUG17 BCR.1.04.06.15.03	Infrastructure Installation and Commissioning		570	-570	03-Oct-17	27-Jan-20				15486	522750	0	0	-15486	-522750	570											
ALL-BOE Item ID: L-104061503	Infra Install/Comm		570	-570	03-Oct-17	27-Jan-20				15486	241950	0	0	-15486	-241950	570											

- Define Stands, ETC to be removed
- Evaluate Test Configuration
- Design/Engineering of New End Cans
- Design Wave Guides
- Project
- Conduct Final Design Review of New Hardware
- ◆ COMP: LERF New Hardware FDR
- Evaluate Vault Operational Envelope
- Conduct Testing Readiness Review
- ◆ COMP: Testing Readiness Review
- Prepare Award Documents
- Prepare Award Documents
- Prepare Award Documents
- Prepare Award Documents
- Prepare Award Documents
- ACCEPT: Wave Guide Connections
- ACCEPT: Two Sets Cryomodule End Caps
- ACCEPT: Four Sets of Cryomodule Stands
- ACCEPT: AC Power Upgrade
- ACCEPT: Additional sets of Bayonet Boxes and End Cans
- RQN: Wave Guide Connections
- AWARD: Wave Guide Connections
- Vendor Effort Fabricate Wave Guide Connections
- RQN: Two Sets Cryomodule End Caps
- AWARD: Two Sets Cryomodule End Caps
- Vendor Effort Fabricate Two Sets of Cryomodule End Caps
- RQN: Four Sets of Cryomodule Stands
- AWARD: Four Sets of Cryomodule Stands
- Vendor Effort Fabricate Four Sets of Cryomodule Stands
- RQN: AC Power Upgrade
- AWARD: AC Power Upgrade
- Vendor Effort Perform AC Power Upgrade
- RQN: Additional sets of Bayonet Boxes and End Cans to Support additional testing
- AWARD: Additional sets of Bayonet Boxes and End Cans
- Vendor Effort Additional sets of Bayonet Boxes and End Cans

■ Remaining Level of Effort ■ Actual Level of Effort ■ Critical Remaining...
■ Project Baseline Bar ■ Actual Work ■ Remaining Work

