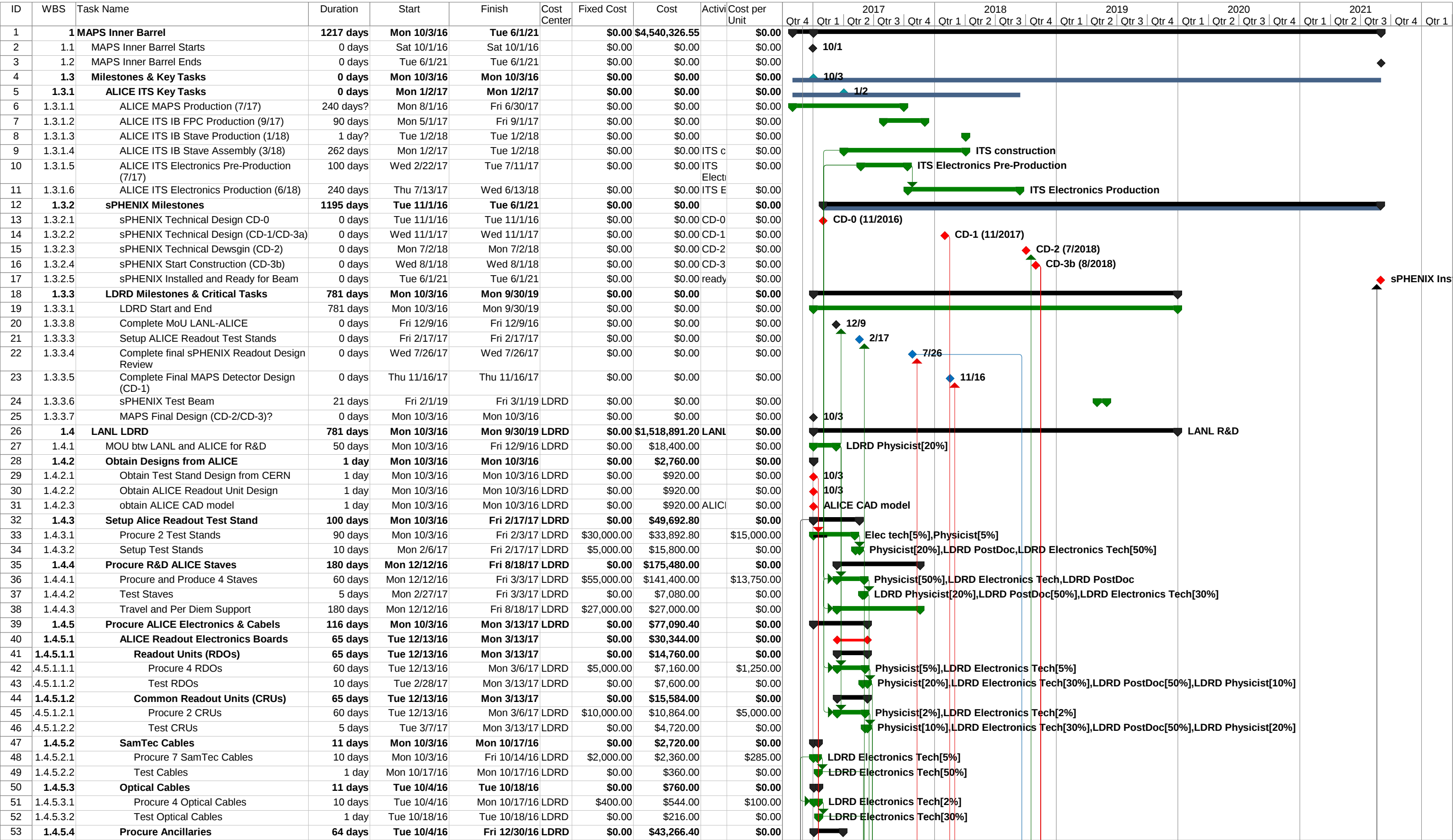




ID	WBS	Task Name	Duration	Start	Finish	Cost Center	Fixed Cost	Cost	Activi	Cost per Unit	2017										2018				2019				2020				2021																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
											Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4

ID	WBS	Task Name	Duration	Start	Finish	Cost Center	Fixed Cost	Cost	Activi	Cost per Unit	2017 2018 2019 2020 2021																					
106	1.4.14	Detector Optimizaation and Physics Simulations (CD-1)	300 days	Mon 10/3/16	Fri 11/24/17		\$0.00	\$384,000.00		\$0.00	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
107	1.4.15	Test Beam Operation	187 days	Fri 1/11/19	Mon 9/30/19	LDRD	\$0.00	\$96,260.00		\$0.00																						
108	1.4.15.1	Shipping/Transport	10 days	Fri 1/11/19	Thu 1/24/19	LDRD	\$10,000.00	\$11,440.00		\$0.00																						
109	1.4.15.2	Setup	5 days	Fri 1/25/19	Thu 1/31/19	LDRD		\$6,320.00		\$0.00																						
110	1.4.15.3	Operations	20 days	Fri 2/1/19	Thu 2/28/19	LDRD		\$12,800.00		\$0.00																						
111	1.4.15.4	Test Beam Data Analysis & Publication	152 days	Fri 3/1/19	Mon 9/30/19			\$65,700.00		\$0.00																						
112	1.5	sPHENIX Project	1217 days?	Mon 10/3/16	Tue 6/1/21		\$0.00	\$3,021,435.35		\$0.00																						
113	1.5.1	sPHENIX Project Management	1217 days	Mon 10/3/16	Tue 6/1/21		\$0.00	\$94,507.35	sPHE	\$0.00																						
114	1.5.1.1	Level 3 Project Manager	1217 days	Mon 10/3/16	Tue 6/1/21		\$0.00	\$0.00		\$0.00																						
115	1.5.1.2	Mechanical Liason Engineer	1217 days	Mon 10/3/16	Tue 6/1/21		\$0.00	\$43,734.11		\$0.00																						
116	1.5.1.3	Electronics Liason Engineer	1217 days	Mon 10/3/16	Tue 6/1/21		\$0.00	\$50,773.24		\$0.00																						
117	1.5.2	sPHENIX Mechanics Integration	289 days	Thu 11/2/17	Tue 12/11/18		\$0.00	\$222,294.40		\$0.00																						
118	1.5.2.1	Stave Support Frame & Global Interface to sPHENIX	115 days	Thu 11/2/17	Wed 4/11/18		\$0.00	\$111,138.40		\$0.00																						
119	1.5.2.1.1	initial design (modify ALICE)	30 days	Thu 11/2/17	Wed 12/13/17		\$0.00	\$20,512.80		\$0.00																						
120	1.5.2.1.2	prototype	60 days	Thu 12/14/17	Wed 3/7/18		\$50,000.00	\$73,356.80		\$0.00																						
121	1.5.2.1.3	test	10 days	Thu 3/8/18	Wed 3/21/18		\$0.00	\$6,488.00		\$0.00																						
122	1.5.2.1.4	final design	15 days	Thu 3/22/18	Wed 4/11/18		\$0.00	\$10,780.80		\$0.00																						
123	1.5.2.2	Cooling System	25 days	Wed 8/1/18	Tue 9/4/18		\$0.00	\$37,268.80		\$0.00																						
124	1.5.2.2.1	Design (modify ALICE)	10 days	Wed 8/1/18	Tue 8/14/18		\$0.00	\$7,187.20		\$0.00																						
125	1.5.2.2.2	Mock up Testing	10 days	Wed 8/15/18	Tue 8/28/18		\$20,000.00	\$26,488.00		\$0.00																						
126	1.5.2.2.3	Final Desgin of Cooling System	5 days	Wed 8/29/18	Tue 9/4/18		\$0.00	\$3,593.60		\$0.00																						
127	1.5.2.3	Safety Systems	70 days	Wed 9/5/18	Tue 12/11/18		\$0.00	\$45,171.20		\$0.00																						
128	1.5.2.3.1	review sensors & interlocks	10 days	Wed 9/5/18	Tue 9/18/18		\$0.00	\$3,597.60		\$0.00																						
129	1.5.2.3.2	electrical interlock design	30 days	Wed 9/19/18	Tue 10/30/18		\$10,000.00	\$20,792.80		\$0.00																						
130	1.5.2.3.3	cooling interlocks design	30 days	Wed 10/31/18	Tue 12/11/18		\$10,000.00	\$20,780.80		\$0.00																						
131	1.5.2.4	Stave Assembly Tooling	45 days	Thu 4/12/18	Wed 6/13/18		\$0.00	\$28,716.00		\$0.00																						
132	1.5.2.4.1	design	10 days	Thu 4/12/18	Wed 4/25/18		\$0.00	\$7,187.20		\$0.00																						
133	1.5.2.4.2	prototype	30 days	Thu 4/26/18	Wed 6/6/18		\$10,000.00	\$19,732.00		\$0.00																						
134	1.5.2.4.3	final jig design	5 days	Thu 6/7/18	Wed 6/13/18		\$0.00	\$1,796.80		\$0.00																						
135	1.5.3	Mechanics Final Design Review	12 days	Thu 6/14/18	Fri 6/29/18		\$0.00	\$5,031.04		\$0.00																						
136	1.5.3.1	Mechanics Final Design Review	1 day	Thu 6/14/18	Thu 6/14/18		\$0.00	\$718.72		\$0.00																						
137	1.5.3.2	Incorporate Review Comments	10 days	Fri 6/15/18	Thu 6/28/18		\$0.00	\$3,593.60		\$0.00																						
138	1.5.3.3	Complete Final Mechanical Design	1 day	Fri 6/29/18	Fri 6/29/18		\$0.00	\$718.72		\$0.00																						
139	1.5.4	MAPS Inner Barrel Review (CD-2/3)	12 days	Mon 7/2/18	Tue 7/17/18		\$0.00	\$10,062.08		\$0.00																						
140	1.5.4.1	MAPS Final Design Review	1 day	Mon 7/2/18	Mon 7/2/18		\$0.00	\$1,437.44		\$0.00																						
141	1.5.4.2	Incorporate Review Comments	10 days	Tue 7/3/18	Mon 7/16/18		\$0.00	\$7,187.20		\$0.00																						
142	1.5.4.3	Complete Final Design (CD-2)	1 day	Tue 7/17/18	Tue 7/17/18		\$0.00	\$1,437.44		\$0.00																						
143	1.5.5	Productions	534 days?	Thu 6/14/18	Tue 6/30/20		\$0.00	\$2,480,486.24	Prod	\$0.00																						
144	1.5.5.1	Full Pre-Production-Mechnical System Mock Up Test	90 days	Thu 6/14/18	Wed 10/17/18		\$50,000.00	\$92,132.96		\$0.00																						
145	1.5.5.2	Procurements	180 days?	Wed 8/1/18	Tue 4/9/19		\$0.00	\$2,221,231.20		\$0.00																						
146	1.5.5.2.1	CERN Procuments	180 days?	Wed 8/1/18	Tue 4/9/19		\$0.00	\$1,095,341.12		\$0.00																						
147	.5.5.2.1.1	Produce 68 Inner Staves	180 days	Wed 8/1/18	Tue 4/9/19		\$440,000.00	\$556,784.00		\$6,500.00																						
148	.5.5.2.1.2	Stave Production Full Cost Recovery	180 days	Wed 8/1/18	Tue 4/9/19		\$500,000.00	\$500,000.00		\$7,353.00																						
149	.5.5.2.1.3	Other ITS/CERN items	120 days	Wed 8/1/18	Tue 1/15/19		\$10,000.00	\$11,557.12		\$0.00																						
150	.5.5.2.1.4	Travel and Per Diem at CERN	180 days?	Wed 8/1/18	Tue 4/9/19		\$27,000.00	\$27,000.00		\$0.00																						
151	1.5.5.2.2	Procure 68 Readout / FEM Units	100 days	Wed 8/1/18	Tue 12/18/18		\$322,000.00	\$334,976.00		\$4,700.00																						
152	1.5.5.2.3	Procure Optical Links 68	60 days	Thu 8/2/18	Wed 10/24/18		\$42,200.00	\$42,978.56		\$620.00																						
153	1.5.5.2.4	Procure 34 Common Readout Units	100 days	Fri 8/3/18	Thu 12/20/18		\$181,700.00	\$182,997.60		\$5,300.00																						
154	1.5.5.2.5	Procure 100 SamTec Cables	60 days	Mon 8/6/18	Fri 10/26/18		\$27,000.00	\$27,778.56		\$270.00																						
155	1.5.5.2.6	Procure Ancillary Materials (LVPS and cables etc)	100 days	Tue 8/7/18	Mon 12/24/18		\$60,000.00	\$61,297.60		\$0.00																						
156	1.5.5.2.7	Procure Cooling Plant	100 days	Wed 8/1/18	Tue 12/18/18		\$117,000.00	\$118,297.60		\$0.00																						

ID	WBS	Task Name	Duration	Start	Finish	Cost Center	Fixed Cost	Cost	Active	Cost per Unit	2017					2018				2019				2020				2021				
											Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
157	1.5.5.2.8	Procure Assembly Fixtures & Jigs	60 days	Thu 8/2/18	Wed 10/24/18		\$100,000.00	\$100,778.56		\$0.00																						
158	1.5.5.2.9	Procure End Wheels	100 days	Fri 8/3/18	Thu 12/20/18		\$34,000.00	\$35,297.60		\$0.00																						
159	1.5.5.2.10	Procure Cylindrical Structural Shells	100 days	Mon 8/6/18	Fri 12/21/18		\$11,000.00	\$12,297.60		\$0.00																						
160	1.5.5.2.11	Procure Detector Half Barrels	100 days	Tue 8/7/18	Mon 12/24/18		\$13,000.00	\$14,297.60		\$0.00																						
161	1.5.5.2.12	Procure Service Half Barrels	100 days	Wed 8/8/18	Tue 12/25/18		\$120,000.00	\$121,297.60		\$0.00																						
162	1.5.5.2.13	Procure Detector and Service Half Barrels	100 days	Thu 8/9/18	Wed 12/26/18		\$21,000.00	\$22,297.60		\$0.00																						
163	1.5.5.2.14	Procure Two Half Support Structures	100 days	Fri 8/10/18	Thu 12/27/18		\$50,000.00	\$51,297.60		\$0.00																						
164	1.5.5.3	Assembly and Testing at BNL	400 days	Wed 12/19/18	Tue 6/30/20		\$0.00	\$167,122.08		\$0.00																						
165	1.5.5.3.1	Test Production FEMS, e-Links, CRU, LV, optical links	60 days	Tue 12/25/18	Mon 3/18/19		\$0.00	\$11,678.40		\$0.00																						
166	1.5.5.3.2	Test Cooling System	20 days	Wed 12/19/18	Tue 1/15/19		\$0.00	\$6,488.00		\$0.00																						
167	1.5.5.3.3	Stave Receipt Inspection	10 days	Wed 4/10/19	Tue 4/23/19		\$0.00	\$1,297.60		\$0.00																						
168	1.5.5.3.4	Individual Stave Readout Test	70 days	Wed 4/24/19	Tue 7/30/19		\$0.00	\$9,083.20		\$0.00																						
169	1.5.5.3.5	Metrology on Stave Assemblies	70 days	Wed 7/31/19	Tue 11/5/19		\$0.00	\$32,770.08		\$0.00																						
170	1.5.5.3.6	Assemble full Ladders into Half support	100 days	Wed 11/6/19	Tue 3/24/20		\$0.00	\$20,761.60		\$0.00																						
171	1.5.5.3.7	Metrology on Final Assembly	10 days	Wed 3/25/20	Tue 4/7/20		\$0.00	\$7,187.20		\$0.00																						
172	1.5.5.3.8	Half detector Assembly Readout and Cooling Test	60 days	Wed 4/8/20	Tue 6/30/20		\$0.00	\$77,856.00		\$0.00																						
173	1.5.6	Installation	131 days	Wed 7/1/20	Wed 12/30/20		\$0.00	\$209,054.24		\$0.00																						
174	1.5.6.1	Installation Prep	10 days	Wed 7/1/20	Tue 7/14/20		\$0.00	\$12,976.00		\$0.00																						
175	1.5.6.2	Installation Review	1 day	Wed 7/15/20	Wed 7/15/20		\$0.00	\$1,438.24		\$0.00																						
176	1.5.6.3	Installation	60 days	Thu 7/16/20	Wed 10/7/20		\$0.00	\$155,712.00		\$0.00																						
177	1.5.6.4	Commissioning	60 days	Thu 10/8/20	Wed 12/30/20		\$0.00	\$38,928.00		\$0.00																						
178	1.5.7	Ready for beam	0 days	Wed 12/30/20	Wed 12/30/20		\$0.00	\$0.00		\$0.00																						