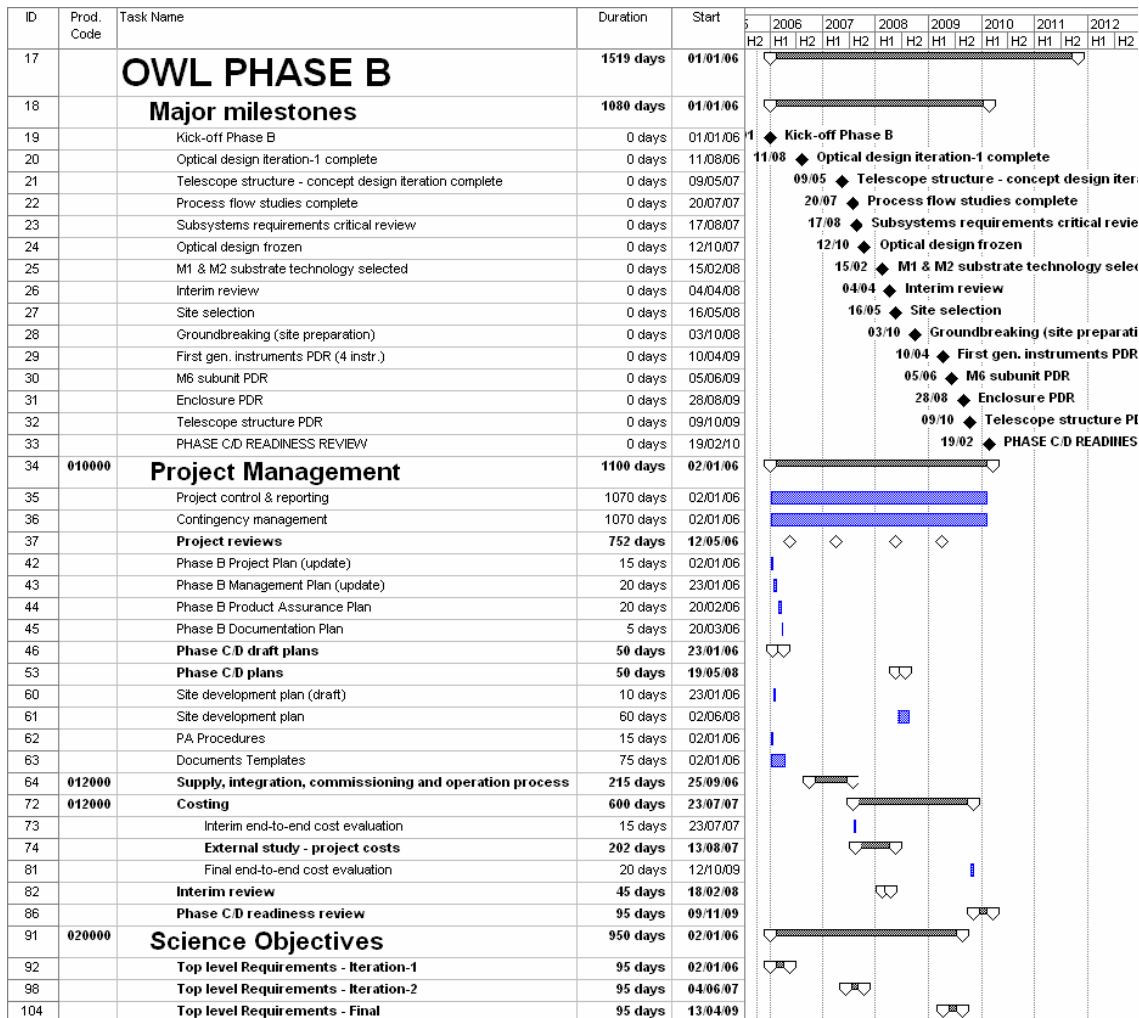
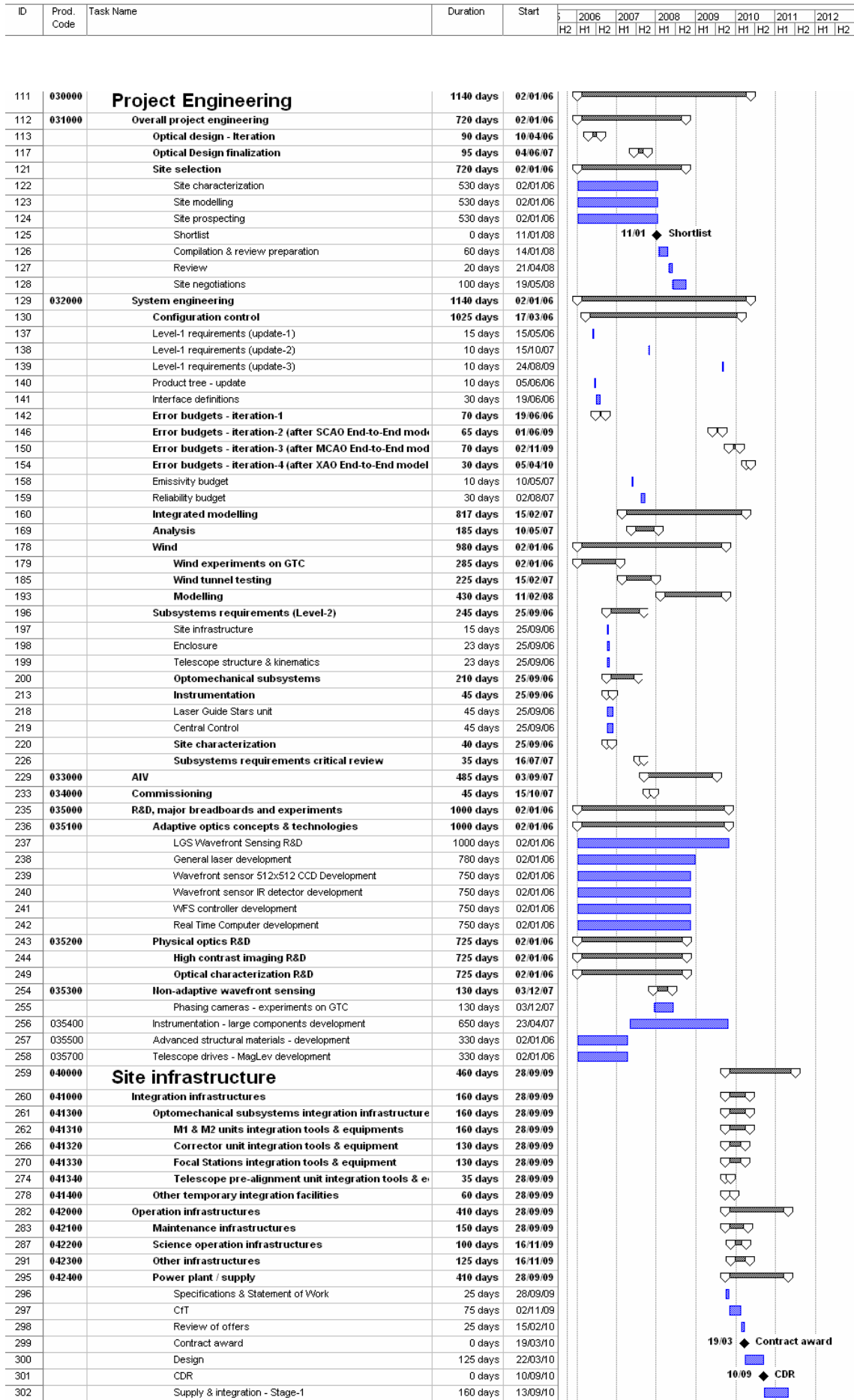
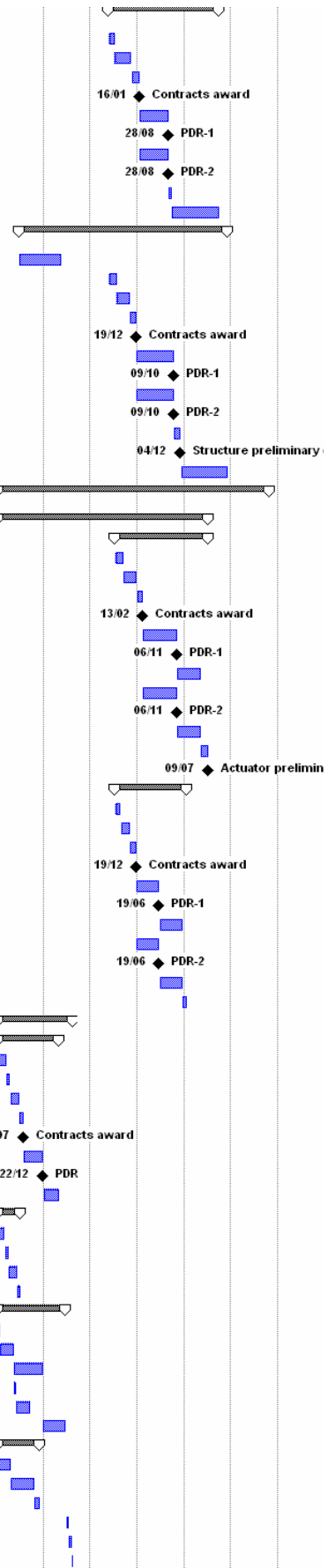


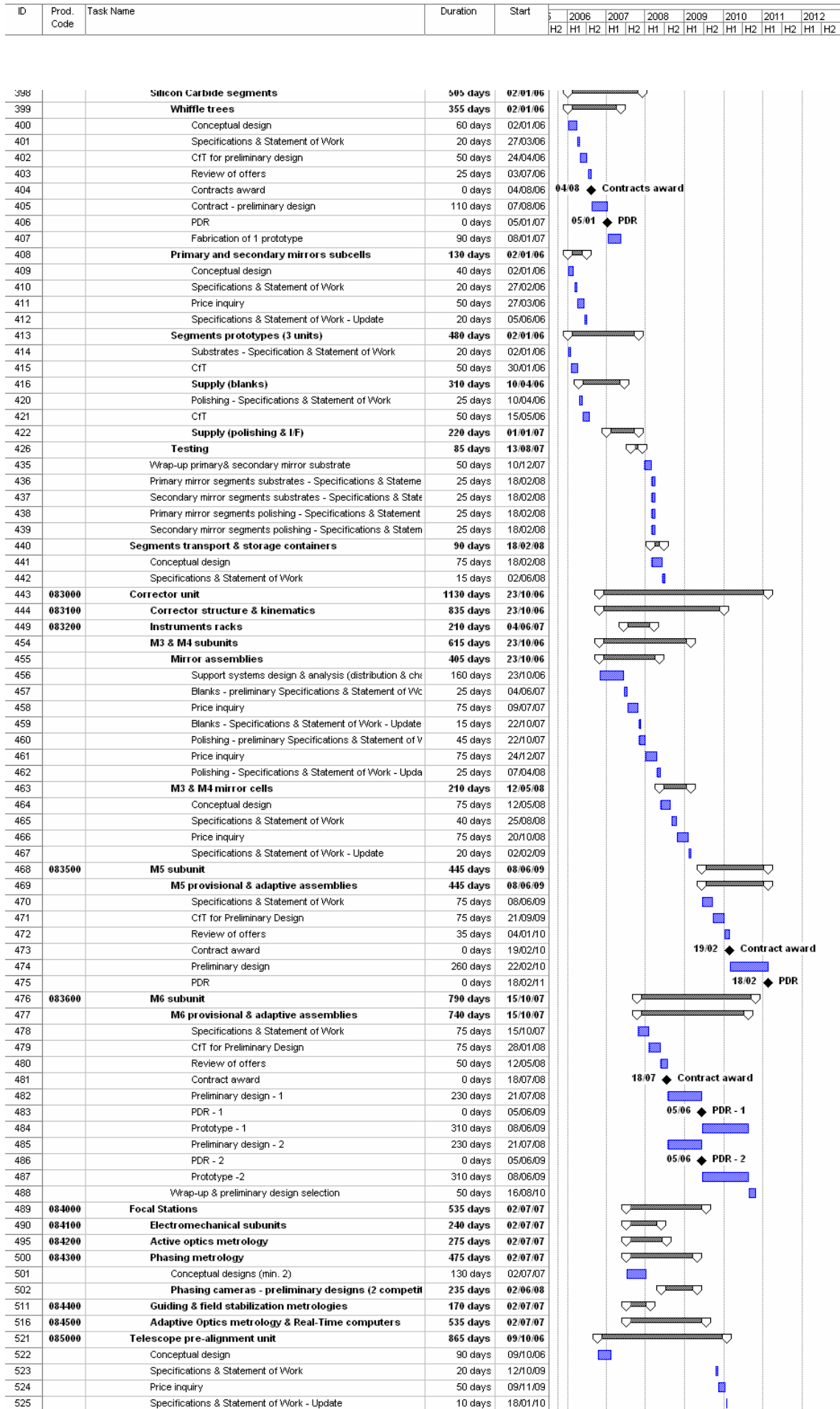
Appendix 4. Phase B Schedule estimate





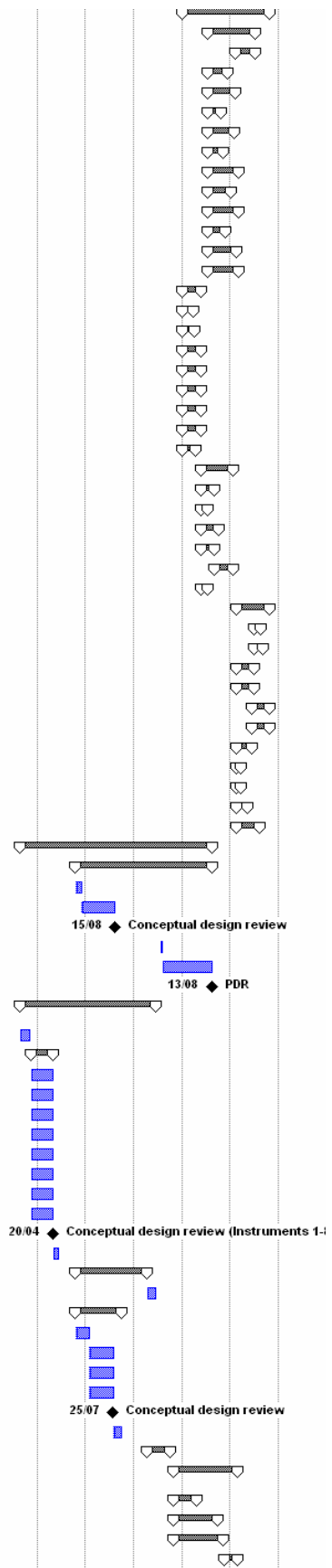
ID	Prod. Code	Task Name	Duration	Start	Schedule													
					2006		2007		2008		2009		2010		2011		2012	
					H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
318	050000	Enclosure	615 days	19/05/08														
319		Specifications & statement of work	30 days	19/05/08														
320		CfT for preliminary design	100 days	30/06/08														
321		Review of offers	45 days	17/11/08														
322		Contracts award	0 days	16/01/09														
323		Contract-1 - preliminary design	160 days	19/01/09														
324		PDR-1	0 days	28/08/09														
325		Contract-2 - preliminary design	160 days	19/01/09														
326		PDR-2	0 days	28/08/09														
327		Preliminary design selection	20 days	31/08/09														
328		Final design	260 days	28/09/09														
329	070000	Telescope structure & kinematics (1162 days	22/06/06														
330		Conceptual design iteration	230 days	22/06/06														
331		Specifications & Statement of Work	45 days	19/05/08														
332		CfT for preliminary design incl. covers, foundations, diagnostics, me	75 days	21/07/08														
333		Review of offers	35 days	03/11/08														
334		Contracts award	0 days	19/12/08														
335		Contract-1 - preliminary design	210 days	22/12/08														
336		PDR-1	0 days	09/10/09														
337		Contract-2 - preliminary design	210 days	22/12/08														
338		PDR-2	0 days	09/10/09														
339		Preliminary design selection	40 days	12/10/09														
340		Structure preliminary design selected	0 days	04/12/09														
341		Final design	260 days	07/12/09														
342	080000	Optomechanical subsystems	1519 days	02/01/06														
343		Primary and secondary mirror segments subunits	1180 days	02/01/06														
344		Active supports	520 days	14/07/08														
345		Specifications & Statement of Work	45 days	14/07/08														
346		CfT for preliminary design	75 days	15/09/08														
347		Review of offers	35 days	29/12/08														
348		Contracts award	0 days	13/02/09														
349		Contract-1 - preliminary design	190 days	16/02/09														
350		PDR-1	0 days	06/11/09														
351		Prototype-1 fabrication & testing (2x3 units)	130 days	09/11/09														
352		Contract-2 - preliminary design	190 days	16/02/09														
353		PDR-2	0 days	06/11/09														
354		Prototype-2 fabrication & testing (2x3 units)	130 days	09/11/09														
355		Preliminary design selection	45 days	10/05/10														
356		Actuator preliminary design selected	0 days	09/07/10														
357		Local metrology assembly	400 days	14/07/08														
358		Specifications & Statement of Work	30 days	14/07/08														
359		CfT for preliminary design	50 days	25/08/08														
360		Review of offers	35 days	03/11/08														
361		Contracts award	0 days	19/12/08														
362		Contract-1 - preliminary design	130 days	22/12/08														
363		PDR-1	0 days	19/06/09														
364		Prototype-1 fabrication & testing (6 units)	130 days	22/06/09														
365		Contract-2 - preliminary design	130 days	22/12/08														
366		PDR-2	0 days	19/06/09														
367		Prototype-2 fabrication & testing (6 units)	130 days	22/06/09														
368		Preliminary design selection	25 days	21/12/09														
369		Glass/ceramic segments	420 days	02/01/06														
370		Whiffle trees	345 days	02/01/06														
371		Conceptual design	50 days	02/01/06														
372		Specifications & Statement of Work	20 days	13/03/06														
373		CfT for preliminary design	50 days	10/04/06														
374		Review of offers	25 days	19/06/06														
375		Contracts award	0 days	21/07/06														
376		Contract - preliminary design	110 days	24/07/06														
377		PDR	0 days	22/12/06														
378		Fabrication of 1 prototype	90 days	25/12/06														
379		Primary and secondary mirrors subcells	130 days	02/01/06														
380		Conceptual design	40 days	02/01/06														
381		Specifications & Statement of Work	20 days	27/02/06														
382		Price inquiry	50 days	27/03/06														
383		Specifications & Statement of Work - Update	20 days	05/06/06														
384		Segment prototype (1 unit)	380 days	02/01/06														
385		Substrate - Specification & Statement of Work	15 days	02/01/06														
386		CfT	75 days	23/01/06														
387		Supply (blank)	160 days	08/05/06														
388		Polishing - Specifications & Statement of Work	15 days	08/05/06														
389		CfT	75 days	29/05/06														
390		Supply (polishing & IF)	130 days	18/12/06														
391		Test frame	235 days	02/01/06														
392		Design	75 days	02/01/06														
393		Fabrication	130 days	17/04/06														
394		Integration	30 days	16/10/06														
395		Segment prototype integration	15 days	18/06/07														
396		Testing	20 days	09/07/07														
397		De-integration & readying for SIC segments	5 days	06/08/07														





Phase B Schedule estimate

ID	Prod. Code	Task Name	Duration	Start														
					2006		2007		2008		2009		2010		2011		2012	
					H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
526	089000	Optomechanical subsystems maintenance facilities	474 days	04/01/10														
527	089100	M1 & M2 offline maintenance facility	260 days	12/07/10														
528	089110	Segments clean room	110 days	07/02/11														
533	089120	Segments washing & coating tanks	110 days	12/07/10														
538	089130	Segments carts and transporters	150 days	12/07/10														
543	089140	Segments support stands (emergency support)	75 days	12/07/10														
546	089150	Segments racks	145 days	12/07/10														
551	089160	Segments storage facility	85 days	12/07/10														
556	089200	M1 & M2 in-situ maintenance devices	170 days	12/07/10														
557	089210	M1 in-situ cleaning robot	130 days	12/07/10														
562	089220	M1 segment assembly in-situ handling robot	170 days	12/07/10														
567	089230	M1 cover in-situ cart holder	100 days	12/07/10														
572	089240	M2 in-situ cleaning device	160 days	12/07/10														
577	089250	M2 segment assembly in-situ handling tool	170 days	12/07/10														
582	089300	Corrector maintenance facility	100 days	04/01/10														
583	089310	Corrector maintenance hall	60 days	04/01/10														
586	089320	Corrector transporters	65 days	04/01/10														
589	089330	M3 & M4 subunits extractor	100 days	04/01/10														
592	089340	M3 & M4 subunits transporters	100 days	04/01/10														
595	089350	M5 subunit extractor	100 days	04/01/10														
598	089360	M5 subunit transporters	100 days	04/01/10														
601	089370	M6 subunit extractor	100 days	04/01/10														
604	089380	M6 subunit transporters	75 days	04/01/10														
607	089400	M3 & M4 assemblies maintenance facility	175 days	24/05/10														
608	089410	M3 & M4 assemblies maintenance hall	75 days	24/05/10														
611	089420	M3 & M4 clean room	40 days	24/05/10														
614	089430	M3 & M4 assemblies lifting device	100 days	24/05/10														
617	089440	8-m class washing & coating tanks	75 days	24/05/10														
620		M3 & M4 mirror assemblies washing & coating cart	100 days	06/09/10														
623		M3 & M4 mirror assemblies support stands (emer.	40 days	24/05/10														
626	089500	M5 & M6 assemblies maintenance facility	179 days	21/02/11														
627	089510	M5 & M6 assemblies maintenance hall	35 days	04/07/11														
630	089520	M5 & M6 clean room	45 days	04/07/11														
633	089530	M5 mirror assembly lifting device	95 days	21/02/11														
636	089540	M6 mirror assembly lifting device	95 days	21/02/11														
639	089550	M5 assembly washing & coating cart	95 days	17/06/11														
642	089560	M6 assembly washing & coating cart	95 days	17/06/11														
645	089570	4-m class washing & coating tanks	84 days	21/02/11														
648	089580	M5 mirror assembly support stand (emergency su	25 days	21/02/11														
651	089590	M6 mirror assembly support stand (emergency su	25 days	21/02/11														
654	089600	Corrector in-situ cleaning devices	60 days	21/02/11														
657	089700	Focal Stations maintenance facility	125 days	21/02/11														
660	090000	Instrumentation	1045 days	14/08/06														
661	091000	Technical instrumentation	740 days	15/10/07														
662		Specifications	30 days	15/10/07														
663		Conceptual design	190 days	26/11/07														
664		Conceptual design review	0 days	15/08/08														
665		Update of specifications	15 days	20/07/09														
666		Preliminary design	265 days	10/08/09														
667		PDR	0 days	13/08/10														
668	092000	Science instrumentation	745 days	14/08/06														
669		Call for proposals	60 days	14/08/06														
670		Conceptual designs (8 candidates)	120 days	06/11/06														
671		Conceptual design Instrument 1	120 days	06/11/06														
672		Conceptual design Instrument 2	120 days	06/11/06														
673		Conceptual design Instrument 3	120 days	06/11/06														
674		Conceptual design Instrument 4	120 days	06/11/06														
675		Conceptual design Instrument 5	120 days	06/11/06														
676		Conceptual design Instrument 6	120 days	06/11/06														
677		Conceptual design Instrument 7	120 days	06/11/06														
678		Conceptual design Instrument 8	120 days	06/11/06														
679		Conceptual design review (Instruments 1-8)	0 days	20/04/07														
680		Feedback analysis (telescope design)	30 days	23/04/07														
681		Instruments preliminary designs (4 instruments)	390 days	15/10/07														
686		Selection of first 2 instruments	50 days	13/04/09														
687	093000	Post-focal AO units	255 days	15/10/07														
688		Draft specifications	75 days	15/10/07														
689		Conceptual design - 1	130 days	28/01/08														
690		Conceptual design - 2	130 days	28/01/08														
691		Conceptual design - 3	130 days	28/01/08														
692		Conceptual design review	0 days	25/07/08														
693		Specifications & Statement of Work	50 days	28/07/08														
694	099000	Instruments maintenance facility	125 days	13/04/09														
697	100000	Laser Guide Stars Subsystem	345 days	02/11/09														
698	101000	Laser units	125 days	02/11/09														
701	102000	Beam propagation units	240 days	02/11/09														
707	103000	Control & metrology units	270 days	02/11/09														
713	109000	LGS maintenance facility	75 days	15/11/10														



ID	Prod. Code	Task Name	Duration	Start													
					2006		2007		2008		2009		2010		2011		2012
					H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2

715	110000	Central Control	150 days	21/02/11
716	111000	Central Control environment	100 days	21/02/11
719	112000	IT Systems	140 days	21/02/11
724	119000	Central control maintenance facility - definition	10 days	05/09/11
725	120000	Site characterization	665 days	19/05/08
726	121000	Weather stations	110 days	19/05/08
730	122000	Turbulence monitoring units	135 days	19/05/08
734	123000	Sky monitoring units	135 days	19/05/08
738	124000	Operational forecast units (R&D)	530 days	24/11/08
739	129000	Site characterization maintenance facility	10 days	24/11/08

