

United States Coast Guard Engineering Logistics Center



Engineering Changes

Engineering Change References

- Electronics Manual
COMDTINST M10550.25 (series)
Chapter 6.2.8
- Naval Engineering Manual
COMDTINST M9000.6(series)
Chapter 041



Scope

- **Engineering Changes are used by the Coast Guard to administer the configuration management process.**



Intent

- Changes to cutters and boats which initially seem to be minor and simple, often accumulate to negatively impact and undermine existing configuration management and logistics support efforts.



Intent

- Due to the high cost of modifying platforms, only Engineering Changes necessary to meet operational commitments, to correct critical safety problems, or which result in significant cost savings are likely to be approved.



Intent

- Resources used to accomplish Engineering Changes typically reduce funding available for maintenance. Many change requests have merit, but limited funding and lack of a clear, positive benefit to cost ratio across a cutter or boat class may prevent approval.



Engineering Change Process

- All Engineering Changes shall be initiated through the submission of an Engineering Change Request (ECR).
- ECRs may originate at any organizational level.
- The process is completed in four phases: Concept, Validation, Development, and Deployment.



System Engineering Change

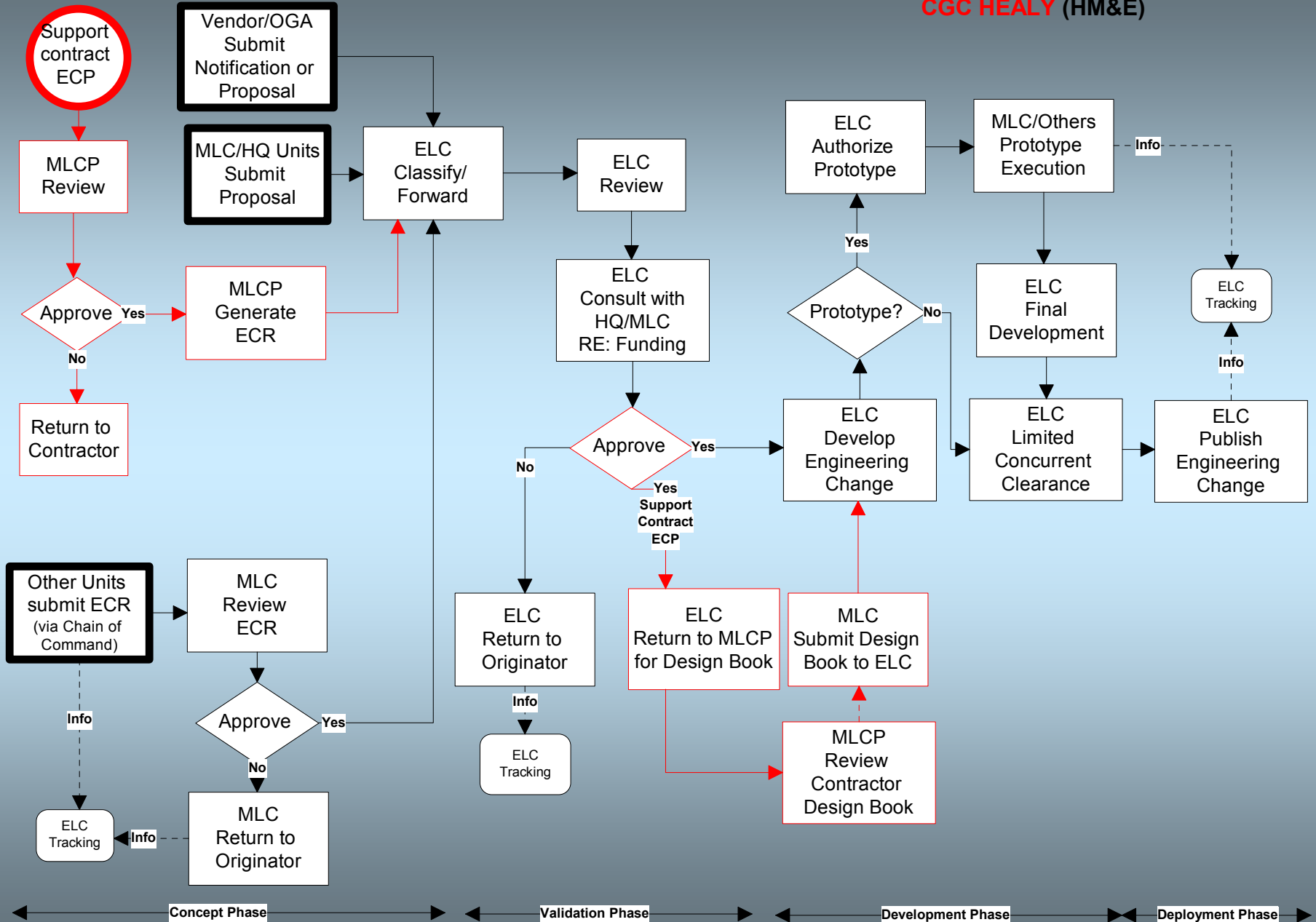
- A change to any system, part, component, or subassembly that is documented on an Allowance Parts List (APL).
- A change to an approved system software, fluid, or paint system.
- A form, fit or functional change to a closure or fitting.
- Damage control classification change.



Note: Bold Blocks are the entry points into the process

Systems Engineering Change Process

CGC HEALY (HM&E)



Platform Engineering Change

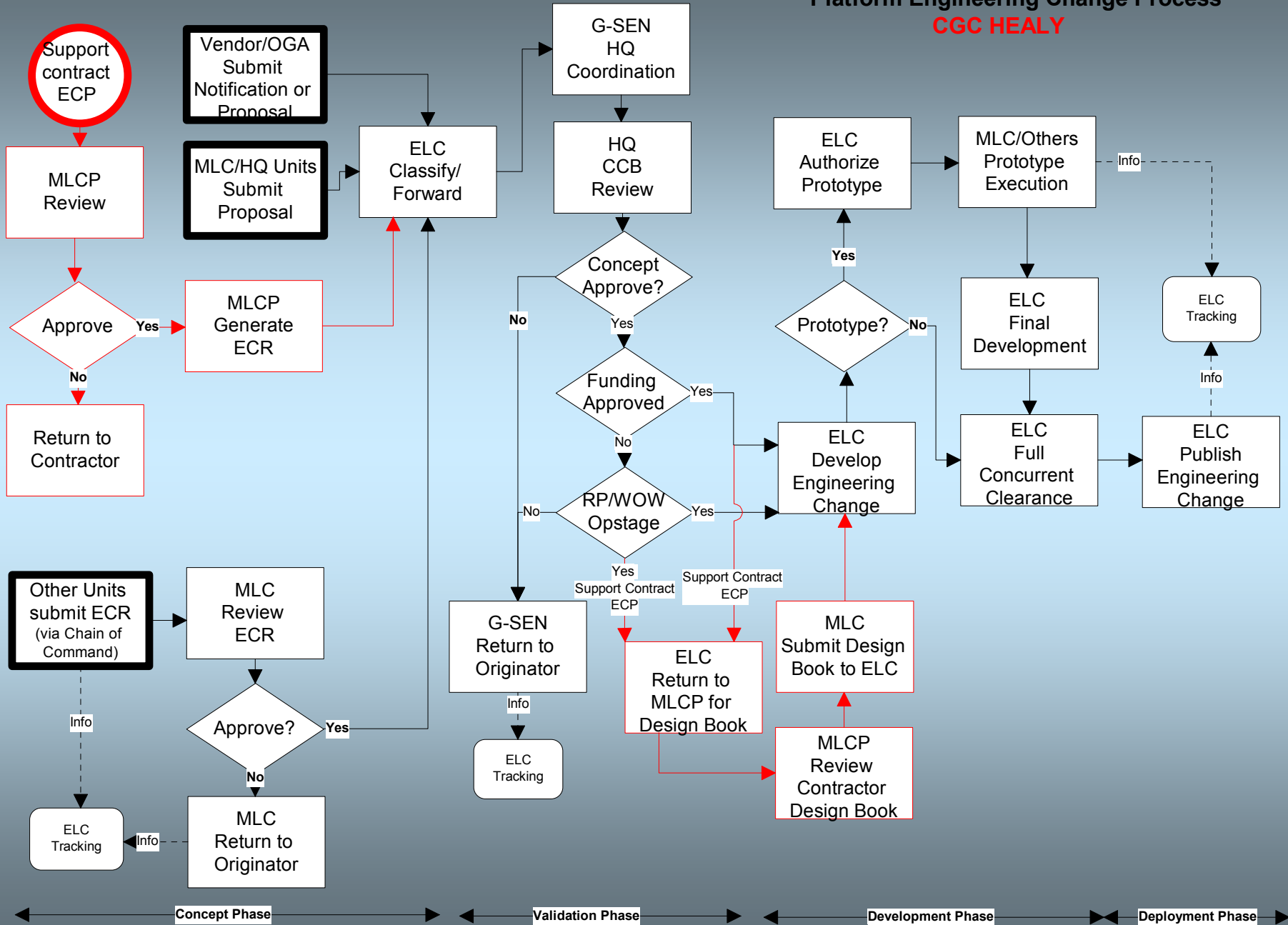
- Creates a change in KG greater than 0.001
- Add/remove more than 1/20 of 1% of the full load displacement.
- Changes to hull structure, space allocations, water tight integrity or compartmentation.
- Changes to mission characteristics or capability.



Note: Bold Blocks are the entry points into the process

Platform Engineering Change Process

CGC HEALY



Prototype

- A full scale installation to evaluate the usefulness and effectiveness of an Engineering Change and/or to develop or modify installation specifications.



Do's of ECRs

- Do complete **top section** of the ECR form and **forward an advance copy** to the ELC when you send originals to your Group, District or MLC.
- Do furnish **as much information as possible** like **cost, maintenance savings, drawings, or digital pictures early.**
- Do check on your servicing MLC. Check if the ELC assigned a **DARTS tracking casefile number.**
- Do call on your Platform Manager at ELC(015)



ELC Web Site

<http://cgweb.elcbalt.uscg.mil>



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| ● 175/225 PMP | ● EC Status (DARTS) database | ● Lifecycle Management Plans | ● OPNAV 4790/CK |
| ● 41' UTB PMS Cards | ● ELC Supply Advisories | ● M4410.5 manual | ● Over the Horizon Boats Proj |
| ● 44' MLB Support | ● ELCLOG Newsletter | ● Mandatory Turn-In Program | ● PMS cards |
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| ● 87 WPB PMS Support | ● Elex Nomenclature Request | ● MICA Update | ● ROD/QDR Status Report |
| ● ATON & General Stores | ● Engineering Changes | ● Milstrip Ordering Proc | ● Standard Drawing Borders |
| ● BOSS NSN Listing | ● ESWS Database | ● MPCMS | ● Support Gram - ELEX |
| ● CG Fuel Testing Program | ● Excess Property | ● Naval Arch Feedback | ● Support Gram - HM&E |
| ● CMP | ● FCCSWin Program | ● NE-TIMS | |
| ● Damage Control & Firefighting | ● Information request | ● NIIN Changes for Project | |
| ● CGPMS Feedback Form | ● Customer Survey | ● Points of Contact at ELC | ● Telephone Directory |

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|---|---|--|---|
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Wednesday, Mar 17, 2004 2:00pm

Engineering Changes

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420 WAGB
399 WAGB
140 WTGB
65 WYTL

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Last modified: March 17, 2004 09:57 AM [\[ECR Form\]](#) [\[ELC Home\]](#)

14008



420 WAGB Engineering Changes Web Page

Wednesday, Mar 17, 2004 2:01pm

Engineering Changes in pdf Format

Questions and comments about 420 WAGB Engineering Changes, please contact CWO2 Geoffrey Sahlin at 410-762-6497 or send Email request to:

sahlin@elcbalt.uscg.mil

Questions or Comments above this site, please contact ELC Webmaster at 410-762-6552 or 410-762-6573 or send Email to: [ELC webmaster](#)

Last updated: March 09, 2004 08:34 AM 00130

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Wednesday, Mar 17, 2004 2:11pm

LC BALTIMORE ENGINEERING CHANGES STATUS (DARTS) DATABASE

This database provides status information for all Engineering Changes. Select the type of report and click on the Run Query button. To print the report, ensure you set your printer to print in Landscape format.

Select which status and parameters you want the report for.

DARTS - Open Cases (Funded)	Platform Type <input type="text" value="WAGB-420"/>	<input type="button" value="Run Query"/>
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DARTS - Pending Cases (Not Funded)	Platform Type <input type="text" value="Select a Platform Type"/>	<input type="button" value="Run Query"/>
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DARTS -Completed Cases (EC numbers on Closed Cases are		
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Engineering Changes (DARTS) Open Status Report as of Thursday, Mar 18, 2004 7:55am

ELC Casefile #	ECR	Title	Originator	Request Date	Current Status Date	Current Location	Current Status	Change Type	Top Ten FY	Milestone Query
GB-420-02-010	True	Removal of Towing Bitt	NESU Seattle	11/22/2002	1/2/2003	ELC(015)	Gathering technical documentation for Engineering Change development	P	FY04	Milestone Rpt
GB-420-04-001	True	AN/UPX-28 to AN/UPX-118 Upgrade	ETCM Harold, CG-642	12/17/2003	2/3/2004	G-SEN	Referred to configuration control board	P	ELEX	Milestone Rpt
GB-420-04-004	True	Automatic Identification System	LT Manning, C2CEN	1/30/2004	3/3/2004	ELC(016)	Referred to configuration control board	S	ELEX	Milestone Rpt
GB-420-04-007	True	Position and Orientation System Marine Vessels	LJtg Kawamoto, CGC Healy	2/17/2004	3/17/2004	ELC(015)	Referred to configuration control board	P	ELEX	Milestone Rpt

Total count

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Summary

- ECR – Platform and Systems Engineering Change Request
- Exclusionary areas of chapter 041
- Two distinct process flowcharts
- Logistics Management and Configuration Management
- Prototyping
- Documentation, record-keeping, and feedback reporting





Questions?

