

**CHAPTER 1 – GENERAL**

1.1	PURPOSE AND SCOPE.....	1-1
1.1.1	Purpose .....	1-1
1.1.2	Scope .....	1-1
1.2	REQUIREMENTS .....	1-1
1.2.1	General .....	1-1
1.2.2	Safety, Accuracy and Currency .....	1-1
1.2.3	Title.....	1-2
	Figure 1.1 Title Label.....	1-2
1.2.4	Areas of Coverage .....	1-2
	Table 1.1 U.S. Corner Coordinates - IFR Enroute High Altitude .....	1-2
	Table 1.2 (AK) Corner Coordinates - IFR Enroute High Altitude .....	1-3
	Table 1.3 (AK) Seattle Inset Chart .....	1-3
1.2.5	Scales .....	1-4
1.2.6	Central Meridians .....	1-4
1.2.7	Projections .....	1-4
1.2.8	Colors .....	1-4
1.2.9	Symbolization.....	1-4
1.2.10	Type Styles .....	1-4

**CHAPTER 2 – FORMAT AND LAYOUT**

2.1	FORMAT AND LAYOUT.....	2-1
2.1.1	Format.....	2-1
2.1.2	Layout.....	2-1
2.1.3	Chart Image Area .....	2-1
	Table 2.1 Chart Image Area Dimensions.....	2-1

**CHAPTER 3 – CONTENT**

3.1	GENERAL.....	3-1
3.1.1	Mileage .....	3-1
3.1.2	Bearings and Radials .....	3-1
3.1.3	Boxes .....	3-1
3.1.4	Time Zones.....	3-1
	Figure 3.1 Application of Double Dagger - Examples .....	3-1
3.1.5	Chart Notes.....	3-1
3.1.6	Geographical Coordinates .....	3-2
3.1.7	Elevations .....	3-2

3.2	PLACEMENT OF DATA .....	3-2
3.2.1	Text.....	3-2
3.2.2	Symbols .....	3-2
3.2.3	Portrayal of Collocated Linear Features.....	3-2
3.3	TITLE PANEL INFORMATION .....	3-3
3.3.1	Foreign Airspace Warning Note.....	3-3
	Figure 3.2 Foreign Airspace Warning Note .....	3-3
3.3.2	Chart Identification Area .....	3-3
3.3.2.1	Chart Idents .....	3-4
	Figure 3.3 Chart Idents .....	3-4
3.3.2.2	Arrowheads .....	3-4
3.3.2.3	Panel Identifications.....	3-4
3.3.2.4	Chart Scales.....	3-4
3.3.3	Title Area.....	3-5
3.3.3.1	Chart Title .....	3-5
	Figure 3.4 Chart Title Format.....	3-5
3.3.3.2	Altitude Note.....	3-5
	Figure 3.5 Altitude Note.....	3-5
3.3.3.3	Effective Dates and Times Note .....	3-5
	Figure 3.6 Effective Dates and Times Note .....	3-5
3.3.3.4	NOTAM Note .....	3-5
	Figure 3.7 NOTAM Note .....	3-5
3.3.3.5	Safety Alerts and Charting Notices Note.....	3-5
3.3.3.6	Corrections, Comments and/or Procurement Note .....	3-6
3.3.4	Chart Identification Labels .....	3-6
	Figure 3.8 Chart Identification Labels.....	3-6
3.3.4.1	Chart Idents .....	3-6
3.3.4.2	Chart Effective Date.....	3-6
3.3.4.3	Area of Coverage .....	3-6
3.3.5	FAA Logo/Banner .....	3-6
	Figure 3.9 FAA Logo/Banner.....	3-6
3.3.6	Chart Index .....	3-7
	Figure 3.10 Chart Indexing - U.S. ....	3-7
	Figure 3.11 Chart Indexing - Alaska .....	3-7
3.3.6.1	Land and Water Areas.....	3-7
3.3.6.2	International Boundaries .....	3-8
3.3.6.3	Low Altitude Chart Coverage .....	3-8
3.3.6.4	High Altitude Chart Coverage .....	3-8

- 3.3.6.5 Prominent Cities..... 3-8
- 3.3.6.6 Time Zone Boundaries and International Dateline ..... 3-8
- 3.3.6.7 Wall Planning Chart Instructions (Airplane Silhouettes) ..... 3-8
  - Figure 3.12 Registration Guide Marks (Airplane Silhouettes)/Wall Planning Instructions .....3-9
- 3.3.7 Interagency Air Committee (IAC) Credit Note..... 3-9
  - Figure 3.13 IAC Credit Note.....3-9
- 3.3.8 QR Code ..... 3-9
- 3.3.9 Bar Codes ..... 3-9
  - Figure 3.14 Bar Codes.....3-9
- 3.4 LEGEND PANEL INFORMATION ..... 3-10
  - 3.4.1 Chart Identification Area ..... 3-10
    - 3.4.1.1 Chart Idents ..... 3-10
    - 3.4.1.2 Arrowheads ..... 3-10
    - 3.4.1.3 Panel Identification ..... 3-10
    - 3.4.1.4 Chart Scales..... 3-11
  - 3.4.2 Title Area..... 3-11
    - 3.4.2.1 Chart Title ..... 3-11
    - 3.4.2.2 Altitude Note..... 3-11
    - 3.4.2.3 Horizontal Datum Note ..... 3-11
      - Figure 3.15 Horizontal Datum Note.....3-11
  - 3.4.3 Chart Legend ..... 3-11
    - Table 3.1 Chart Legend Title Headings.....3-11
  - 3.4.4 Cruising Altitudes..... 3-12
    - Figure 3.16 Cruising Altitude Diagrams - U.S. ....3-12
- 3.5 TABULATED DATA AREA ..... 3-12
  - 3.5.1 Special Use Airspace (SUA) Tabulation..... 3-13
    - Figure 3.17 Special Use Airspace (SUA) Tabulation .....3-13
    - 3.5.1.1 Number Column..... 3-13
    - 3.5.1.2 Effective Altitude Column..... 3-13
    - 3.5.1.3 Time Used Column ..... 3-13
    - 3.5.1.4 Controlling Agency/Air Ground (A/G) Column..... 3-14
    - 3.5.1.5 Panel Column..... 3-14
- 3.6 MARGIN INFORMATION ..... 3-14
  - 3.6.1 Bar Scale..... 3-14
    - 3.6.1.1 Placement ..... 3-14

3.6.1.2	Increments and Labels .....	3-15
	Figure 3.18 Bar Scale Increments and Labels - U.S.....	3-15
	Figure 3.19 (AK) Bar Scale Increments and Labels.....	3-15
3.6.1.3	Chart Scale .....	3-15
3.6.1.4	Nautical Mile Text .....	3-15
3.6.2	Panel/Fold Identification .....	3-16
	Figure 3.20 U.S. & AK Bottom of Chart Panel Identification .....	3-16
	Figure 3.21 (AK) - Top of Chart Panel Identification .....	3-16
3.6.3	Chart Idents .....	3-16
	Figure 3.22 Chart Idents - Placement .....	3-16
3.6.4	Routes Extending Past the Chart Neatline.....	3-16
	Figure 3.23 Routes Past Neat Line - Unnamed Mileage Break or CNF .....	3-17
3.6.4.1	Internal Chart Boundaries .....	3-17
	Table 3.2 International Boundary Next Point Information .....	3-17
	Figure 3.24 Routes Past Chart Boundary - Internal - VHF/UHF LF/MF Routes .....	3-18
	Figure 3.25 Routes Past Chart Boundary - Internal - RNAV Routes.....	3-18
	Figure 3.26 Routes Past Chart Boundary - Internal - Joint Route.....	3-19
3.6.4.2	External Chart Boundaries .....	3-19
	Table 3.3 External Boundary Next Point Information .....	3-19
	Figure 3.27 Routes Past Chart Boundary - External - VHF/UHF LF/MF .....	3-20
	Figure 3.28 Routes Past Chart Boundary - External - Russia .....	3-20
	Figure 3.29 Routes Past Chart Boundary - External - RNAV.....	3-20
	Figure 3.30 Routes Past Chart Boundary - External - Joint .....	3-21
3.6.4.3	Placement of Next Point Information .....	3-21
3.6.4.3.1	Internal Boundary Next Point Information.....	3-21
	Figure 3.31 Placement of Next Point Information - Internal.....	3-21
3.6.4.3.2	External Boundary Next Point Information.....	3-21
	Figure 3.32 Placement of Next Point Information - External.....	3-22
3.6.5	Margin Notes for Adjoining/Overlapping Charts.....	3-22
	Figure 3.33 Margin Notes for Adjoining/Overlapping Charts .....	3-22
	Figure 3.34 (AK) Margin Notes for Adjoining/Overlapping Charts.....	3-23
3.6.6	Chart Effective Date .....	3-23
	Figure 3.35 Chart Effective Date.....	3-23
3.7	CHART DETAIL .....	3-23
3.7.1	Projection.....	3-24
3.7.1.1	General .....	3-24
	Figure 3.36 Projection Lines .....	3-24
3.7.1.2	Latitude .....	3-24
3.7.1.3	Longitude .....	3-25
	Figure 3.37 Latitude and Longitude Increments and Labels.....	3-25

- 3.7.1.4 (AK) Alaska ..... 3-25
  - 3.7.1.4.1 (AK) General ..... 3-25
  - 3.7.1.4.2 (AK) Latitude..... 3-25
  - 3.7.1.4.3 (AK) Longitude..... 3-26
    - Figure 3.38 (AK) Latitude and Longitude Increments and Labels ..... 3-26
  - 3.7.1.4.4 (AK) Seattle Inset Chart ..... 3-26
- 3.7.2 Base Detail..... 3-26
  - 3.7.2.1 Shoreline ..... 3-26
    - Figure 3.39 Shoreline ..... 3-26
  - 3.7.2.2 International Boundary ..... 3-27
    - Figure 3.40 International Boundary Lines ..... 3-27
  - 3.7.2.3 (AK) United States/Russia Maritime Boundary ..... 3-27
    - Figure 3.41 United States/Russian Maritime Boundary ..... 3-27
  - 3.7.2.4 Time Zones ..... 3-27
    - Figure 3.42 Time Zones ..... 3-27
  - 3.7.2.5 International Date Line ..... 3-28
    - Figure 3.43 International Date Line ..... 3-28
  - 3.7.2.6 Lines of Equal Magnetic Variation (Isogonic Lines)..... 3-28
    - Figure 3.44 Lines of Equal Magnetic Variation (Isogonic Lines) ..... 3-28
  - 3.7.2.7 Registration Guide Marks for Wall Chart Assembly..... 3-28
    - Figure 3.45 Registration Guide Mark (Airplane Silhouette) ..... 3-29
- 3.7.3 Airports..... 3-29
  - 3.7.3.1 Charting Criteria ..... 3-29
  - 3.7.3.2 Airport Symbology ..... 3-29
    - Figure 3.46 Airport Classification/Symbology ..... 3-29
    - Figure 3.47 IAP Airport Symbology..... 3-30
  - 3.7.3.3 Airport Data Block..... 3-30
    - Figure 3.48 Airport Data Block ..... 3-30
  - 3.7.3.3.1 Minimum Operational Network (MON) Airport Designator ..... 3-30
    - Figure 3.49 MON Airport Designator ..... 3-30
  - 3.7.3.3.2 Associated City Name(s) ..... 3-30
    - Figure 3.50 Associated City Names ..... 3-31
  - 3.7.3.3.3 Airport Names..... 3-31
    - Figure 3.51 Airport Names..... 3-31
  - 3.7.3.3.4 Airport Identifiers ..... 3-31
    - Figure 3.52 Airport Identifiers ..... 3-31
  - 3.7.3.3.5 (AK) Alaska Airport Information ..... 3-31
    - Figure 3.53 (AK) Airports on (AK) H-1/H-2 & Seattle Inset ..... 3-31
    - Figure 3.54 (AK) - Soft Surface Runway designator ..... 3-32
- 3.7.4 Radio Aids to Navigation (NAVAIDs) ..... 3-33

3.7.4.1	Charting Criteria .....	3-33
3.7.4.2	NAVAID Symbology .....	3-33
	Figure 3.55 NAVAID Types & Symbology.....	3-33
3.7.4.2.1	NAVAID Standard Service Volume (SSV).....	3-34
	Figure 3.56 NAVAID SSV and Route Use .....	3-34
3.7.4.3	NAVAID Compulsory & Non-Compulsory Reporting Symbology.....	3-34
	Figure 3.57 NAVAID Symbols with Compulsory and Non-Compulsory Reporting .....	3-34
3.7.4.4	NAVAID North Arrow .....	3-34
	Figure 3.58 NAVAID North Arrow Orientation.....	3-34
3.7.4.5	Compass Roses .....	3-35
	Figure 3.59 Compass Roses .....	3-35
3.7.4.6	NAVAID Identification Boxes .....	3-35
3.7.4.6.1	General.....	3-35
	Figure 3.60 NAVAID Identification Boxes and Associated Pointer.....	3-35
3.7.4.6.2	Y Mode Channel.....	3-36
	Figure 3.61 (Y) Mode Channel.....	3-36
3.7.4.6.3	No Voice, Part Time and on Request Frequencies .....	3-36
	Figure 3.62 NAVAIDs - No voice, Part Time & On Request Frequencies.....	3-36
3.7.4.6.4	Geographic Coordinates .....	3-36
	Figure 3.63 NAVAIDs - Coordinates.....	3-36
3.7.4.6.5	Standard Service Volume Classifications (SSV).....	3-37
	Figure 3.64 NAVAIDs - Standard Service Volume .....	3-37
3.7.4.6.6	Abnormal Status .....	3-37
	Figure 3.65 NAVAIDs - Abnormal Status .....	3-37
3.7.4.7	NAVAID Types .....	3-37
3.7.4.7.1	VHF Omnidirectional Range Station (VOR).....	3-37
	Figure 3.66 VOR .....	3-37
3.7.4.7.2	VHF Omnidirectional Range Station and Distance Measuring Equipment (VOR/DME).....	3-38
	Figure 3.67 VOR/DME .....	3-38
3.7.4.7.3	Tactical Air Navigation (TACAN).....	3-38
	Figure 3.68 TACAN .....	3-38
3.7.4.7.4	VHF Omnidirectional Range – Tactical Air Navigation (VORTAC).....	3-38
	Figure 3.69 VORTAC .....	3-38
3.7.4.7.5	Distance Measuring Equipment (DME) .....	3-39
	Figure 3.70 DME .....	3-39
3.7.4.7.6	Non-Directional Radio Beacons (NDB).....	3-39
	Figure 3.71 NDB .....	3-39

- 3.7.4.7.7 Non-Directional Radio Beacons & Distance Measuring Equipment (NDB/DME) ..... 3-39
  - Figure 3.72 NDB/DME ..... 3-39
- 3.7.4.7.8 Marine Radio Beacons..... 3-39
- 3.7.5 Flight Service Stations (FSS) & Remote Communication Outlets (RCOs)..... 3-39
  - 3.7.5.1 Frequencies ..... 3-40
    - Figure 3.73 FSS Frequencies ..... 3-40
  - 3.7.5.2 FSS Associated with a NAVAID..... 3-40
    - Figure 3.74 FSS Associated with the NAVAID ..... 3-40
  - 3.7.5.3 FSS Not Associated with a NAVAID..... 3-41
    - Figure 3.75 FSS Not Associated with a NAVAID ..... 3-41
  - 3.7.5.4 Part-time FSS ..... 3-41
    - Figure 3.76 Part-time FSS..... 3-41
  - 3.7.5.5 RCO Associated with NAVAIDs ..... 3-41
    - Figure 3.77 RCOs Associated with a NAVAID ..... 3-41
  - 3.7.5.6 RCO Not Associated with a NAVAID ..... 3-42
    - Figure 3.78 RCOs Not Associated with a NAVAID ..... 3-42
- 3.7.6 Automated Weather Broadcast System ..... 3-42
  - 3.7.6.1 Automated Weather Broadcast Service Associated with a NAVAID ..... 3-42
    - Figure 3.79 Automated Weather Broadcast Systems..... 3-42
    - Figure 3.80 Automated Weather Broadcast System Associated with a NAVAID..... 3-42
- 3.7.7 Airspace Information ..... 3-42
  - 3.7.7.1 General Air Traffic Service (ATS) Area Information ..... 3-43
    - Figure 3.81 General Air Traffic Service (ATS) Area Information - U.S..... 3-43
    - Figure 3.82 General Air Traffic Service (ATS) Area Information - Foreign ..... 3-43
  - 3.7.7.2 Airspace Notes ..... 3-43
    - 3.7.7.2.1 United States Airspace Notes ..... 3-43
      - Figure 3.83 U.S. Airspace Note ..... 3-43
    - 3.7.7.2.2 Foreign Airspace Notes - Canada ..... 3-44
      - Figure 3.84 Canadian Current Source Note ..... 3-44
      - Figure 3.85 Canadian Airspace Classification Note ..... 3-44
      - Figure 3.86 Canadian Southern Control Area Note ..... 3-44
      - Figure 3.87 Cruising Altitude Diagram - Canada ..... 3-44
    - 3.7.7.2.3 Foreign Airspace Notes - Mexico ..... 3-45
      - Figure 3.88 Mexican Airspace Notes ..... 3-45
      - Figure 3.89 Mexican “Report to FAA” Note ..... 3-45
      - Figure 3.90 Cruising Altitude Note -Mexico ..... 3-45
    - 3.7.7.2.4 Foreign Airspace Notes - All Excluding Canada..... 3-45
      - Figure 3.91 Foreign Airspace Notes - DoD Users ..... 3-45
    - 3.7.7.2.5 Foreign Airspace Notes - Havana FIR..... 3-45
      - Figure 3.92 Foreign Airspace Notes - Havana FIR..... 3-45

3.7.7.2.6	Other Miscellaneous Airspace Notes.....	3-46
	Figure 3.93 Miscellaneous Airspace Notes - Examples .....	3-46
3.7.7.3	Airspace & Airspace Boundaries.....	3-46
3.7.7.3.1	Collocated Liner Features.....	3-46
3.7.7.3.2	Controlled Airspace .....	3-46
3.7.7.3.3	Uncontrolled and Unclassified Airspace .....	3-46
	Figure 3.94 Uncontrolled/Unclassified Airspace.....	3-46
3.7.7.3.4	Air Defense Identification Zones (ADIZ) and Defense Areas .....	3-47
	Figure 3.95 ADIZ Boundaries .....	3-47
	Figure 3.96 Defense Area Examples .....	3-47
	Figure 3.97 Adjoining ADIZ Boundaries.....	3-47
	Figure 3.98 FIR Boundary Coincides with the Boundary of an ADIZ .....	3-48
3.7.7.3.5	Control Areas (CTA), Upper Control Areas (UTA) and Oceanic Control Areas (OCA) .....	3-48
	Figure 3.99 CTA, UTA and OCA Boundaries .....	3-48
	Figure 3.100 CTA, UTA, or OCA Vertical Limits.....	3-48
	Figure 3.101 CTA/FIR Boundaries .....	3-48
3.7.7.3.6	Flight Information Regions (FIR) and Upper Information Regions (UIR) .....	3-48
	Figure 3.102 FIR and UIR Boundaries.....	3-48
	Figure 3.103 Overlying FIR and UIR Areas .....	3-49
	Figure 3.104 Adjoining FIR and UIR Areas .....	3-49
3.7.7.3.7	Air Route Traffic Control Center (ARTCC), Area Control Center (ACC) and Remote Center Air/Ground (RCAG) .....	3-49
	Figure 3.105 ARTCC Boundary.....	3-49
	Figure 3.106 ARTCC Boundary with CPDLC Identification .....	3-49
	Figure 3.107 ARTCC Boundaries Collocated with Other Linear Symbols .....	3-50
	Figure 3.108 Remote Communications A/G .....	3-50
3.7.7.3.8	Continental Control Boundary (U.S.).....	3-51
	Figure 3.109 U.S. - Continental Control Boundary.....	3-51
	Figure 3.110 U.S. - Continental Control Boundary - Example .....	3-51
3.7.7.3.9	Offshore Airspace Areas.....	3-51
	Figure 3.111 Offshore Airspace Areas .....	3-51
	Figure 3.112 Offshore Airspace Areas - Vertical Limits.....	3-51
	Figure 3.113 Offshore Control Areas - Bearing/Radial Line .....	3-52
3.7.7.3.10	Special Use Airspace .....	3-52
	Figure 3.114 SUA Boundaries.....	3-52
	Figure 3.115 SUA U.S.....	3-52
	Figure 3.116 SUA Canada.....	3-53
	Figure 3.117 SUA Internal Boundaries .....	3-53
	Figure 3.118 SUA Boundaries - Small Areas.....	3-53
	Figure 3.119 SUA Exclusion Area and Notes .....	3-53



3.7.7.3.11	Special Flight Rules Areas (SFRAs) .....	3-54
Figure 3.120	Special Flight Rules (SFRA) and Associated Note .....	3-54
3.7.8	Routes .....	3-54
3.7.8.1	General .....	3-54
Figure 3.121	Route Centerline Depiction .....	3-54
Figure 3.122	Supplementary Route Notes .....	3-55
3.7.8.2	Route Types .....	3-55
3.7.8.2.1	Jet Routes .....	3-55
Figure 3.123	Jet Routes .....	3-55
3.7.8.2.2	Air Traffic Service (ATS) Routes .....	3-55
Figure 3.124	Air Traffic Service Routes .....	3-55
3.7.8.2.3	Oceanic, Atlantic and Bahamas Routes .....	3-55
Figure 3.125	Oceanic, Atlantic and Bahamas Routes .....	3-56
3.7.8.2.4	“Q” (RNAV) Routes .....	3-56
Figure 3.126	“Q” RNAV Routes .....	3-56
Figure 3.127	“Q” RNAV Routes Limited to GNSS Operations .....	3-56
3.7.8.2.5	Gulf of Mexico “Q” (RNAV) Routes .....	3-56
Figure 3.128	Gulf of Mexico “Q” RNAV Routes .....	3-56
3.7.8.2.6	(AK) VOR/DME RNAV Routes .....	3-56
Figure 3.129	(AK) -VOR/DME RNAV Routes .....	3-56
3.7.8.2.7	Tracks (Canada) .....	3-57
Figure 3.130	Tracks (Canada) .....	3-57
3.7.8.2.8	Unusable Route Segments .....	3-57
Figure 3.131	Unusable Route Segments .....	3-57
Figure 3.132	Coincident Routes with Unusable Segment .....	3-58
3.7.8.2.9	Substitute Routes .....	3-58
Figure 3.133	Substitute Route Symbol .....	3-58
Figure 3.134	Substitute Routes Not Coincident .....	3-58
Figure 3.135	Substitute Routes Coincident .....	3-59
3.7.8.3	Route Data .....	3-59
3.7.8.3.1	General .....	3-59
3.7.8.3.2	Identification .....	3-59
Figure 3.136	Route Identifications .....	3-60
Figure 3.137	Route Identification - Congested Areas .....	3-60
Figure 3.138	Coincidental Routes of the Same Classification .....	3-60
3.7.8.3.3	Single Direction Routes .....	3-61
Figure 3.139	Single Directional Routes .....	3-61

3.7.8.3.4	Radials and Bearing .....	3-61
	Figure 3.140 Radials and Bearings .....	3-61
	Figure 3.141 Radials & Bearings From Fixes Located on ATS, Oceanic and Bahamas Routes .....	3-62
	Figure 3.142 Unusable Radial or Bearing Value.....	3-62
3.7.8.3.5	Magnetic Reference Bearings .....	3-62
	Figure 3.143 RNAV Q Route Magnetic Reference Bearings.....	3-62
	Figure 3.144 (AK) VOR/DME RNAV Route Waypoints & Changeover Points .....	3-62
3.7.8.3.6	Minimum Enroute Altitudes (MEA), Maximum Authorized Altitudes (MAA) and Flight Levels (FL) .....	3-63
	Figure 3.145 MEAs and MAAs.....	3-63
	Figure 3.146 MEAs for GNSS RNAV .....	3-63
	Figure 3.147 MEA for DME/DME and DME/DME/IRU.....	3-63
	Figure 3.148 Altitude Changes Along a Route - “T” Symbol.....	3-63
3.7.8.3.7	MEA GAP.....	3-64
	Figure 3.149 MEA GAP .....	3-64
3.7.8.3.8	Minimum Crossing Altitudes (MCA) and Minimum Turning Altitudes (MTA) .....	3-64
	Figure 3.150 MCA/MTA Flag Symbol .....	3-64
	Figure 3.151 Minimum Crossing Altitudes (MCA) .....	3-65
	Figure 3.152 Minimum Turning Altitude (MTA) .....	3-65
	Figure 3.153 Minimum Crossing Altitudes (MCA) & Minimum Turning Altitude (MTA).....	3-65
3.7.8.3.9	Mileage Distances .....	3-65
	Figure 3.154 Segment Mileages .....	3-66
	Figure 3.155 Box Mileages.....	3-66
	Figure 3.156 Box Mileages - Coincidental Routes & “TO” Notes .....	3-67
	Figure 3.157 Mileage Breaks/Intersections .....	3-67
3.7.8.3.10	Changeover Points (COP).....	3-67
	Figure 3.158 Changeover Points (COP) .....	3-67
	Figure 3.159 Alaskan VOR/DME RNAV Changeover Points.....	3-68
	Figure 3.160 COP “TO” Note .....	3-68
3.7.9	Navigational and Procedural Information .....	3-68
3.7.9.1	Fixes .....	3-68
3.7.9.1.1	Operational Notes .....	3-68
	Figure 3.161 Operational Notes.....	3-68
3.7.9.1.2	Flyover Symbology.....	3-68
	Figure 3.162 Flyover Symbology .....	3-68
3.7.9.1.3	Radio Intersections and DME Fixes .....	3-69
	Figure 3.163 Radio Fixes.....	3-69
	Figure 3.164 Offshore Radio Fix Without Makeup.....	3-69
	Figure 3.165 Radio Fix Geographic Coordinates .....	3-69
	Figure 3.166 Non DME Radio Fix Makeups.....	3-70

Figure 3.167 DME Radio Fix Makeups .....3-70

Figure 3.168 DME Boats.....3-70

Figure 3.169 NAVAIDs Used for Fix Makeup .....3-71

Figure 3.170 Radio Fix Makeups for Offshore Fixes .....3-71

Figure 3.171 Magnetic Radial/Bearing Values .....3-71

Figure 3.172 Facility Locator Boats.....3-72

Figure 3.173 Facility Locator Boats “Shutdown” .....3-72

Figure 3.174 Facility Locator Boats in Congested Areas .....3-72

3.7.9.1.4 Waypoints ..... 3-73

Figure 3.175 RNAV Waypoints - Compulsory & Noncompulsory .....3-73

Figure 3.176 Waypoints - Not Part of Route & Beyond U.S. Cont. Control  
Boundary .....3-73

Figure 3.177 (AK) VOR/DME Waypoints - Compulsory & Noncompulsory .....3-73

Figure 3.178 (AK) VOR/DME RNAV Waypoints Identification Data .....3-73

Figure 3.179 (AK) VOR/DME RNAV Collocated with NAVAID .....3-74

Figure 3.180 National Reference System (NRS) Waypoints .....3-74

3.7.9.1.5 Computer Navigation Fixes (CNF)..... 3-74

Figure 3.181 Computer Navigation Fixes (CNF).....3-74

3.7.9.2 Minimum Reception Altitudes (MRA) ..... 3-74

Figure 3.182 Minimum Reception Altitudes (MRA).....3-74

3.7.9.3 Holding Patterns..... 3-74

3.7.9.3.1 NAVAID Based Holding Patterns ..... 3-75

Figure 3.183 NAVAID Based Holding Patterns .....3-75

Figure 3.184 NAVAID Based-Off Route Holding Patterns - VHF/UHF & LF/MF .....3-75

3.7.9.3.2 RNAV Based Holding Patterns ..... 3-75

Figure 3.185 RNAV Holding Patterns .....3-75

3.7.10 Transitional Information..... 3-76

Figure 3.186 Transitional Information .....3-76

3.7.11 (AK) Seattle Inset ..... 3-76

Figure 3.187(AK) Seattle Inset Area Coverage .....3-76

**Appendix 1** Enroute Chart Area of Coverage - U.S..... A-1

**Appendix 2** Enroute Chart Area of Coverage - AK..... A-2

**Appendix 3** Chart Layout - U.S. H-1, H-3 ..... A-3

**Appendix 4** Chart Layout - U.S. H-2 ..... A-4

**Appendix 5** Chart Layout - U.S. H-4 ..... A-5

**Appendix 6** Chart Layout - U.S. H-5, H-7, H-9..... A-6

**Appendix 7** Chart Layout - U.S. H-6, H-8, H-10..... A-7

**Appendix 8** Chart Layout - U.S. H-11 ..... A-8

**Appendix 9** Chart Layout - U.S. H-12 ..... A-9

**Appendix 10** (AK) Chart Layout - AK H-1 ..... A-10

<b>Appendix 11</b>	(AK) Chart Layout - AK H-2 .....	A-11
<b>Appendix 12</b>	Sample Enroute title Panels - U.S. & Alaska .....	A-12
<b>Appendix 13</b>	Chart Identification and Title Area - U.S. & Alaska.....	A-13
<b>Appendix 14</b>	Corrections, Comment, Procurement - U.S. & Alaska.....	A-15
<b>Appendix 15</b>	Chart Identification Labels - U.S. & Alaska .....	A-16
<b>Appendix 16</b>	Chart Indexing .....	A-18
<b>Appendix 17</b>	Bar Codes .....	A-21
<b>Appendix 18</b>	Tabulated Data Area - Special Use Airspace .....	A-22
<b>Appendix 19</b>	Legend Panel Information - General - U.S. & Alaska .....	A-24
<b>Appendix 20</b>	Margin Information .....	A-25
<b>Appendix 21</b>	Projection Type and Symbol Specifications.....	A-27
<b>Appendix 22</b>	Base Detail Type & Symbol Specifications .....	A-28
<b>Appendix 23</b>	Airport Information Type & Symbol Specifications.....	A-29
<b>Appendix 24</b>	NAVAIDs - North Arrows and Compass Roses .....	A-30
<b>Appendix 25</b>	NAVAID Identification Boxes.....	A-31
<b>Appendix 26</b>	FSS/RCO Type & Symbol Specifications.....	A-32
<b>Appendix 27</b>	Automated Weather Broadcast System Type & Symbol Specifications.....	A-33
<b>Appendix 28</b>	Airspace Information type & Symbol Specifications.....	A-34
<b>Appendix 29</b>	Routes - Types.....	A-37
<b>Appendix 30</b>	Routes - Data .....	A-38
<b>Appendix 31</b>	Navigational & Procedural Information.....	A-40