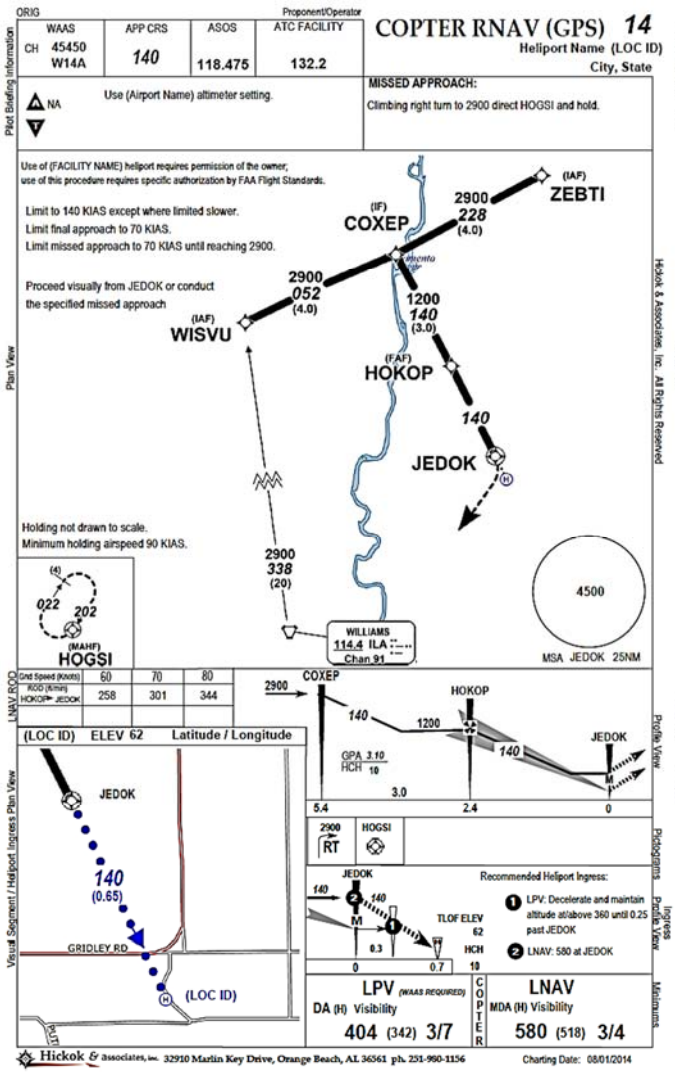
INTRODUCTION: Hickok & Associates provides approach and departure charts for the Helicopter Instrument Flight Procedures (IFPs) developed by the company. This **Revision 2** legend provides charting information for IFPs developed by Hickok & Associates using its proprietary, FAA-approved, Advanced Helicopter Instrument Procedure (AHIP) criteria.

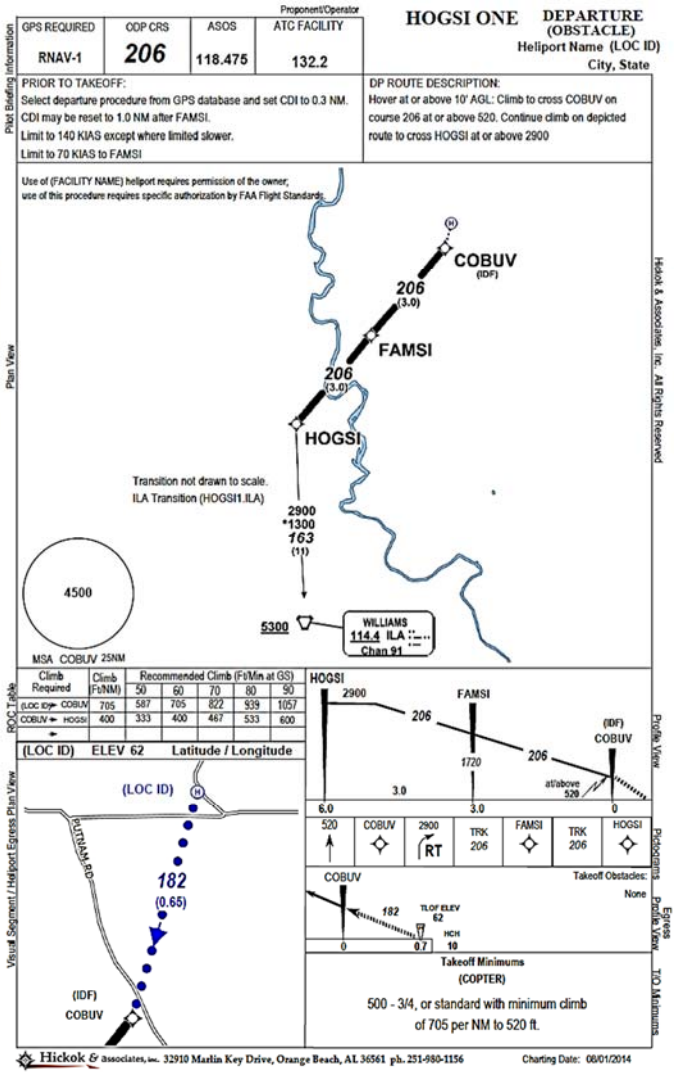
Charting features were originated by Hickok & Associates to provide information to pilots using the company's IFPs and are unique to the company's AHIP criteria. The charting format is proprietary and all rights are reserved by the company. Hickok & Associate's approves the use of this charting legend by the company's customers and/or its customer's operator's as a supplement to their training manual and for conducting pilot training.

The company's charting format may be revised in the future; please submit comments or suggestions to Hickok & Associates at email hickok@hickokgpsifr.com or ph. 251-980-1156 for consideration in future revisions.

NOTICE: If a difference exists between what is presented in this charting format and a Federal Aviation Rule (FAR) or FAA Advisory Circular, an operator's FAA-approved operations specifications or training manual, or a letter of authorization or letter of agreement between an operator and FAA, those FAA-approved documents shall always take precedent.

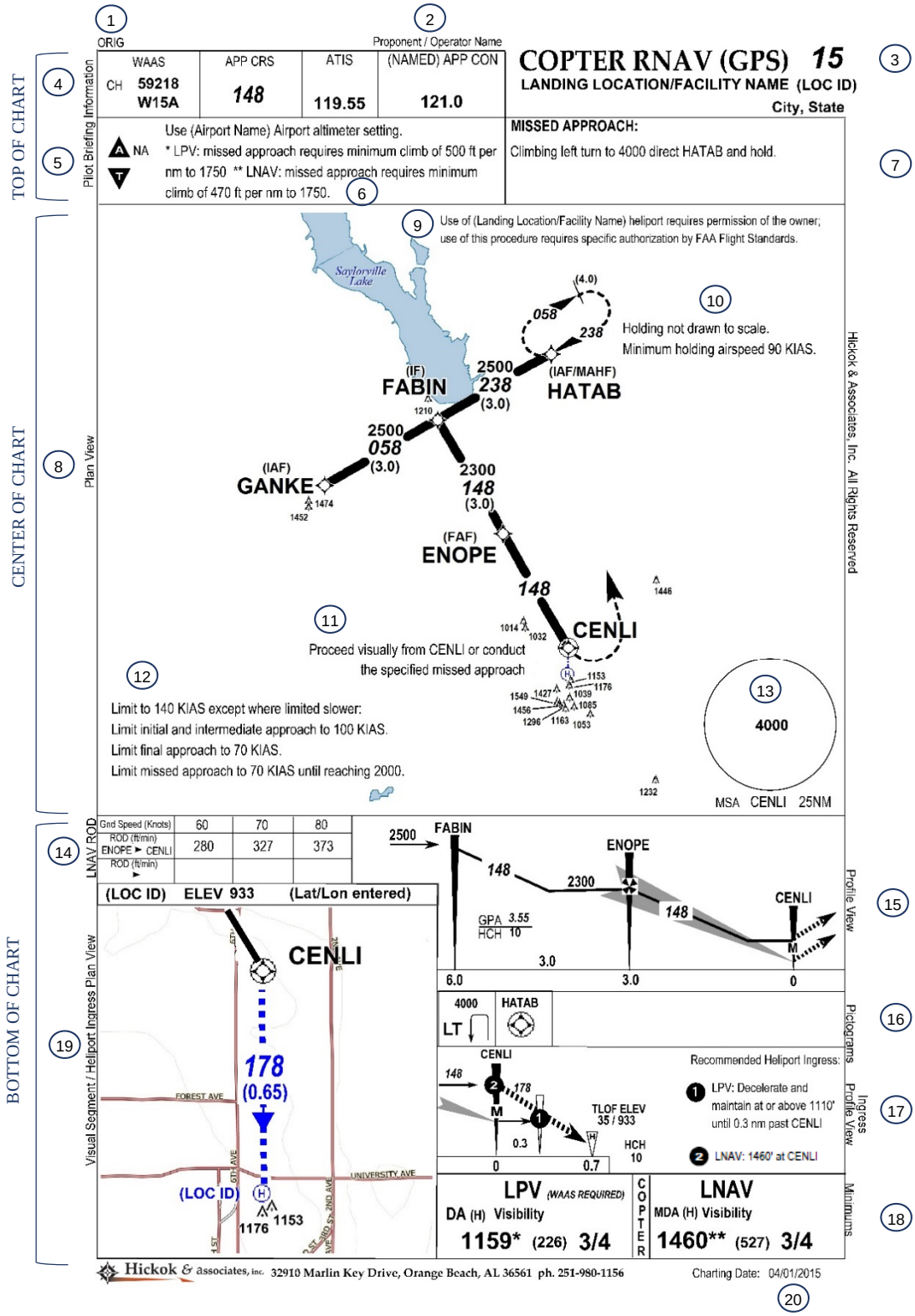


Example Approach Chart



Example Departure Chart

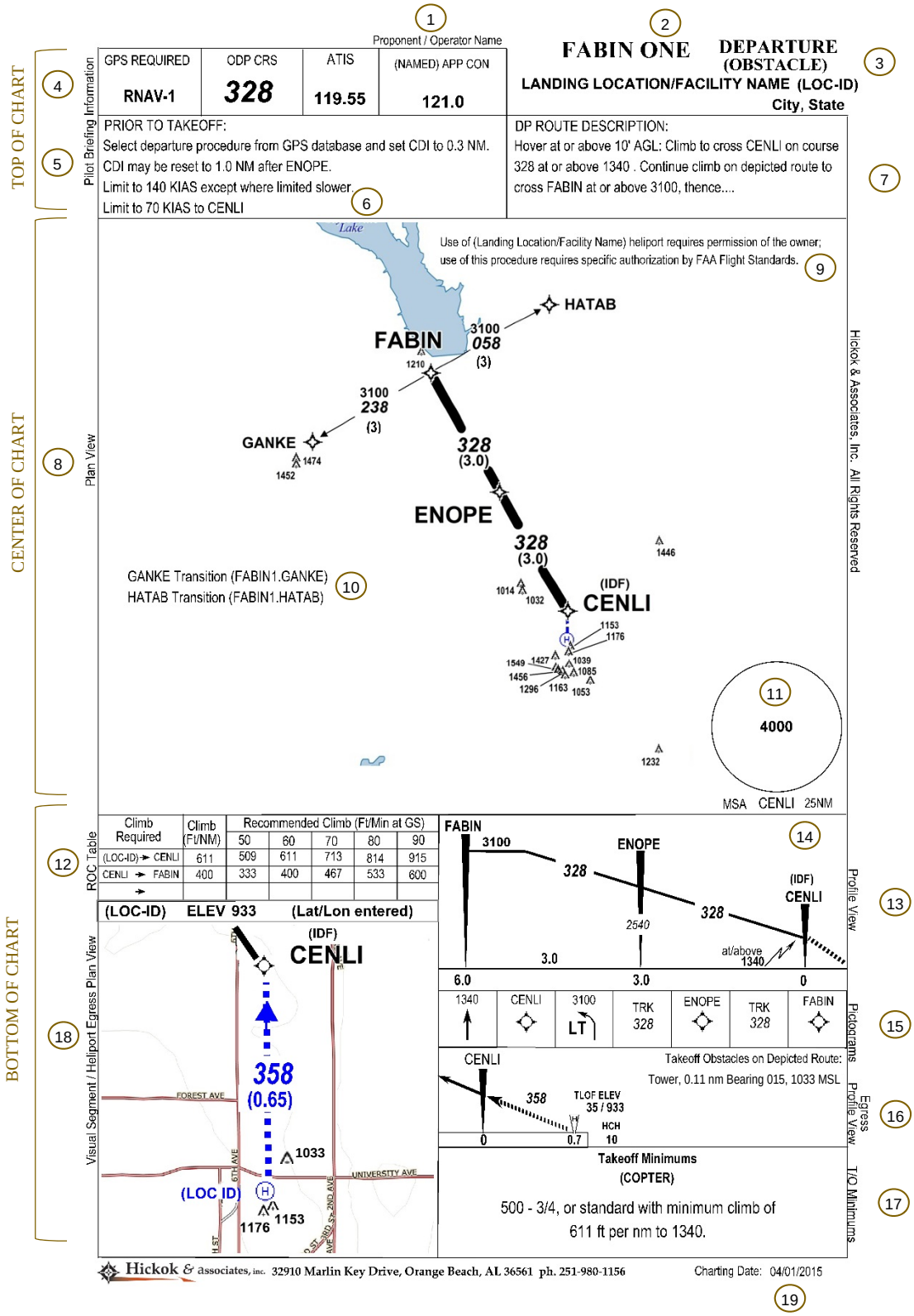
The Basic Approach Chart Format



Basic Approach Chart Legend

1	Denotes if Original or Amended; e.g. ORIG, AMDT 1, ORIG-A, etc. *Note. This relates to the approved source documentation*
2	Identifies the Proponent/Operator Hickok & Associates has authorized to use the chart.
3	Procedure name and location: e.g. Copter RNAV (GPS)… followed by either the *full* final approach course when only LNAV minimums are published, or; followed by the *rounded* final approach course when WAAS LPV minimums are provided. *Note. Rounding the final approach course is required for CRC reminder calculations of FAS Data Blocks for WAAS LPV procedures.* Landing location/facility name (e.g. Hospital Hometown USA), Location Identifier (e.g. FAA Form 5010 LOC-ID), City and State.
4	Pilot Briefing Information (top row) provides WAAS information *(Note. NA entered if only LNAV minimums are provided)*, final approach course, weather/altimeter source frequency, and ATC facility and frequency.
5	Pilot Briefing Information Box identifies use as an alternate, if special takeoff minimums apply, the altimeter source, and backup altimeter source if primary is not on **Service-A** and adjustments to minimums when backup altimeter is used. *Note. When an altimeter source is on Service-A, ATC has access to the latest report and can provide it to the pilot if unable to receive over the radio. Likewise, an operator's flight dispatch center has access to the latest report for Service-A facilities at http://www.faa.gov/air_traffic/weather/asos/ wherein Service-A facilities are denoted in blue font and when selected the latest weather report and altimeter setting can be opened on the internet..*
6	Special items for pilot actions or information are entered in the Pilot Briefing Information Box. Typical notes pertain to missed approach required minimum climbs or other notes when useful or necessary. *Note: Asterisks are used to identify the line of minimums or applicable charted information.*
7	Missed approach instructions may be relatively simple or may include route missed approach segments to holding.
8	The Plan View will always provide the *Terminal Segments* from initial approach fix/fixes (IAF) to the missed approach point (MAP). Variations of graphical depictions are used depending on scalability and placement within the plan view. Graphical depictions might include: feeder segments or feeder segment insert boxes; missed approach route segments or missed approach route insert boxes; holding patterns depicted within the terminal drawing or missed approach holding insert boxes, or; other graphical depictions. The terminal segment graphics are produced in a georeferenced program and are *proportionally scaled*. When graphical depictions are added to the plan view that are not per the proportional scale of the terminal segments either a note will be placed with the depiction stating it is not to scale (e.g. Feeder segments not to scale), or a common symbol that denotes only a portion of a segment is depicted (e.g. a broken segment… which will always infer that segment is not to scale). *Note. When the approach procedure is part of a helicopter IFR network (e.g. a network of approach and departure procedures interconnected using feeder and transition segments) the use of a front/back chart may be used. An example of the front/back chart is also provided in this legend.*
9	Receiving permission for the use of the heliport is the responsibility of the proponent and performed during the development of the procedure. Use of the IFP is approved by the operator's FSDO. This note is required by FAA on Special Copter IFPs and is not typically the pilot's responsibility.
10	Holding is not drawn to scale due to the size of holding patterns, but, the note is added in keeping with noting all graphical items that are not proportionally scaled. The maximum airspeed note is required by FAA on Special Copter IFPs.
11	All procedures will be noted to *proceed visually* or *proceed VFR* from the MAP or execute the specified missed approach. When the visual segment assessment has been satisfied, but, the lighting at the heliport failed the night evaluation, an IFP may be noted to *proceed visually*… and a second note to *"Proceed VFR at night"* also located in the plan view.
12	The maximum indicated airspeed for any segment (e.g. feeders, terminal segments, missed approach, and holding) is 140 KIAS. If the maximum *designed* airspeed for a segment is limited it is noted.
13	The Minimum Sector Altitude (MSA) is the lowest altitude which provides a minimum clearance of 1,000 ft above all objects located within 25 NM radius centered on the MAP.
14	Rate Of Descent table only applies to LNAV. Top row always begins at the Final Approach Fix (FAF) and ends either at the MAP or stepdown fix; when a stepdown fix is included the bottom row begins at the stepdown fix and ends at the MAP or left blank when there is not a stepdown fix used.
15	Profile view. *Note. See Example Profile Views, Notes, and Symbols page for examples of profile views used.*
16	Pictograms provide icon presentation of the missed approach sequence. *Note. See Example Profile Views, Notes, and Symbols page for pictogram symbols used.*
17	The Ingress Profile View was originated by Hickok & Associates to provide information to the pilot pertinent to the IFP design associated with the descent to landing. *Note. See Example Profile Views, Notes, and Symbols page for ingress profile views used.*
18	Approach minimums will include the LPV DA and LNAV MDA, the Height Above Landing (HAL) for proceed visually IFPs or the Height Above Surface (HAS) for proceed VFR IFPs, and the visibility in statute miles.
19	The Visual Segment/Heliport Ingress Plan View ("Sketchbox") was originated by Hickok & Associates to provide details for the visual segment and transition to landing for proceed visually IFPs and VFR maneuver area for proceed VFR IFPs. The Sketchbox provides the course and distance from the MAP to the landing location, the designed ground track for curving visual segments, and is overlaid on a map with major landmarks, navigational features, and obstacles, to provide basic situational information to the pilot. The header of the Sketchbox provides the elevation and latitude/longitude of the landing location,
20	The date the chart was produced. *Note. Charts remains effective unless changed; if changed a new chart with that date supersedes the previous chart.*

The Basic Departure Chart Format



Basic Departure Chart Legend

1	Identifies the Proponent/Operator Hickok & Associates has authorized to use the chart.
2	Procedure name and location. *Note. ONE is equivalent to ORIG used on approach charts and amended departures are thereafter sequentially number as TWO, THREE, etc. and relate to the approved source documentation.* Landing location/facility name (e.g. Hospital Hometown USA), Location Identifier (e.g. FAA Form 5010 LOC-ID), City and State.
3	(OBSTACLE) identifies the procedure as an Obstacle Departure Procedure (ODP).
4	Pilot Briefing Information (top row) identifies that navigation specification required (e.g. GPS required… RNAV-1, RNP-0.3, etc.), provides the ODP course, weather/altimeter source frequency, and ATC facility and frequency.
5	Pilot Briefing Information Box provides the pilot with required items to be perform prior to takeoff and information pertaining to the ODP.
6	The maximum indicated airspeed for any segment (e.g. departure and transitions) is 140 KIAS. If the maximum *designed* airspeed for a segment is limited it is noted. *Note. Typically the airspeed notes for ODPs will be in the Pilot Briefing Information Box, but, may also be placed in the plan view.*
7	DP ROUTE DESCRIPTION describes the ODP *textually* from takeoff to the departure fix. When transitions are provided the DP DESCRIPTION will include *thence….* and graphical depictions of the transitions are provided. *Note. See item 8 for the locations transitions may be graphically presented.*
8	The Plan View will always provide the *Departure Segments* from the takeoff location to the last fix in the departure procedure and may also include graphical depictions of transition segments, or transition segment insert boxes, depending on scalability and placement options. The departure segment graphics are produced in a georeferenced program and are *proportionally scaled*. When graphical transitions are included in the plan view that are not per the proportional scale of the terminal segments either a note will be placed with the depiction stating it is not to scale, or a common symbol that denotes only a portion of a segment is depicted (e.g. a broken segment… which will always infer that segment is not to scale). *Note. When the departure procedure is part of a helicopter IFR network (e.g. a network of approach and departure procedures interconnected using feeder and transition segments) the use of a front/back chart may be used. An example of the front/back chart is also provided in this legend.*
9	Receiving permission for the use of the heliport is the responsibility of the proponent and performed during the development of the procedure. Use of the IFP is approved by the operator's FSDO. This note is required by FAA on Special Copter IFPs and is not typically the pilot's responsibility.
10	When transitions are provided the transition name/s and identification is provided.
11	The Minimum Sector Altitude (MSA) is the lowest altitude which provides a minimum clearance of 1,000 ft above all objects located within 25 NM radius centered on the Initial Departure Fix (IDF).
12	The Rate Of Climb table provides the designed climb gradient in feet per nm and conversions for required rate of climb in feet per minute at airspeeds from the takeoff location to the IDF, and from the IDF to the last fix in the departure procedure. *Note. Hickok & Associates criteria provide a Visual Climb Area ("VCA") which is the same area as the visual segment area associated with approach procedures. As a general description… the VCA originates at a hover at the takeoff location and ends at the IDF crossing altitude at the IDF, and may also be referred to as a visual segment.*
13	Profile view. *Note. See Example Profile Views, Notes, and Symbols page for examples of profile views used.*
14	If the climb gradient required past the IDF exceeds 400 feet per nm a note is located in the profile view: "Required Climb greater than 400 ft/nm"
15	Pictograms provide icon presentation of the ODP sequence from the takeoff location to the last fix in the departure procedure. *Note. See Example Profile Views, Notes, and Symbols page for pictogram symbols used..*
16	The Egress Profile View was originated by Hickok & Associates to provide information pertaining with the takeoff and climb to the IDF. Takeoff obstacles are charted or None is entered in the Egress Profile View. *Note. See Example Profile Views, Notes, and Symbols page for ingress profile views used.* When there are Takeoff Obstacles in the VCA they are listed in the Egress Profile View and provide: obstacle identification (e.g. Bldg., Tower, Power Lines, etc.), distance in hundredth of nautical mile and magnetic bearing from the takeoff location, and MSL height of the obstacle.
17	Takeoff minimums: A ceiling that is based on the IDF crossing altitude rounded to the next 100-foot interval, and visibility in statute miles that is equal to the horizontal distance between the landing location and IDF, is published on all departures to provide takeoff minimums that afford the pilot the opportunity to visually acquire and avoid any obstructions from takeoff and climbing to cross the IDF at the IDF crossing altitude: example: 500 – 3/4. When the VCA has been assessed for obstacle clearance *standard departure minimums* also may be charted with the ceiling and visibility minimums and will provide the operational requirements to use standard takeoff minimums: example: 500-3/4, or standard with a minimum climb of 611 ft per nm to 1340. *Note. It is the pilot's responsibility to determine if the aircraft performance meets the required climb to use standard takeoff minimums when provided, or whether the charted ceiling and visibility is required for the visual transition from takeoff to cross the IDF at the IDF crossing altitude. If only the ceiling and visibility are charted standard takeoff minimums are not authorized and the charted ceiling and visibility takeoff minimums are required.*
18	The Visual Segment/Heliport Egress Plan View ("Sketchbox") was originated by Hickok & Associates to provide details for the visual segment/VCA and transition from the takeoff location to the IDF. The Sketchbox provides the course and distance from the takeoff location to the IDF, the designed ground track for curving visual segments, and is overlaid on a map with major landmarks, navigational features, and obstacles, to provide basic situational information to the pilot. The header of the Sketchbox provides the elevation and latitude/longitude of the landing location,
19	The date the chart was produced. *Note. Charts remains effective unless changed; if changed a new chart with that date supersedes the previous chart.*

Example Profile Views, Notes, and Symbols

(Appendix A - Examples of typical charting symbols and use)

MISC. SYMBOLS, ICONS, and INFORMATION

CODED WAYPOINT

CODED or UNCODED WAYPOINT (typically coded as step down fix (SDF) symbol and used for heliport with "H" overlaid)

APPROACH WITH VERTICAL GUIDANCE

GLIDEPATH ANGLE

GPA 3.55
HCH 10

HELIPORT CROSSING HEIGHT

FINAL APPROACH FIX

MISSED APPROACH POINT

M

PICTOGRAMS used for Approach and Departure Charts
(Waypoint Names, Altitudes, and Course are only illustrative examples)

CENLI	1340 RT	1340 RT	2500 RT	1340 LT	1340 LT	2500 LT	1340	TRK 328	FABIN
Flyby Waypoint	Right Turn < 45 degree	Right Turn > 45 degree	Right Turn > 90 degree	Left Turn < 45 degree	Left Turn > 45 degree	Left Turn > 90 degree	Climb to	Track Course	Flyover Waypoint

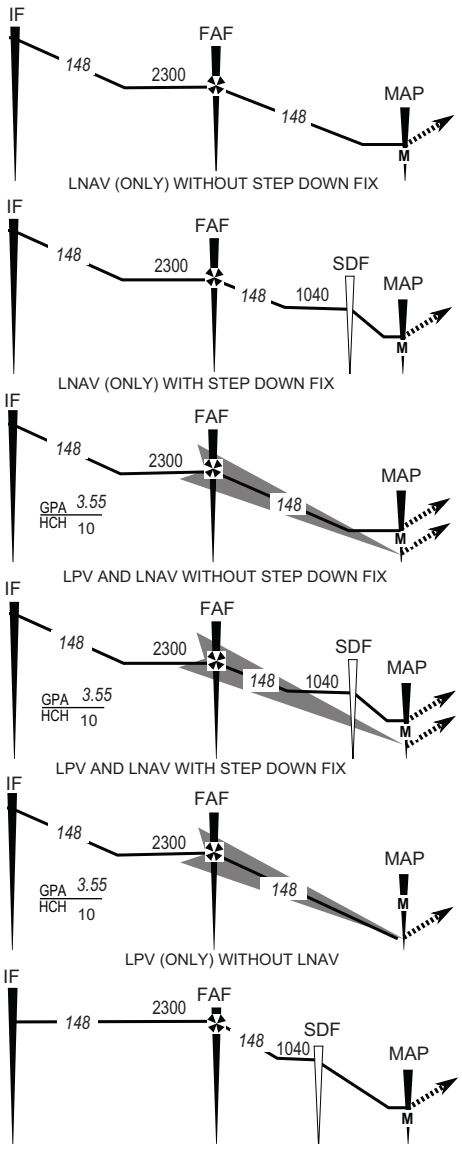
Helicopter WAAS LPV v. traditional vertically guided procedures
1. the LPV GPA is not coincidental with the LNAV angle from FAF to MAP.
2. the MAP is the point for both LNAV and LPV approaches where the pilot must be able to proceed visual from or execute missed approach.
3. the MAP serves as a decision point for LPV procedures; if above Glide Path at MAP execute missed approach versus continuing descent past the MAP to the DA.

TLOF ELEV 933 HCH 10

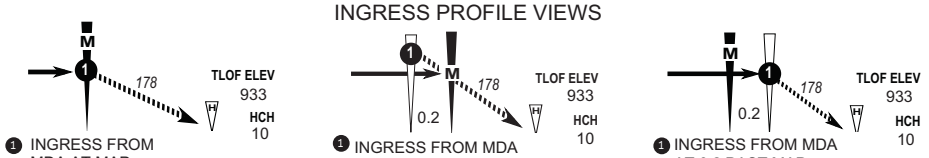
HELIPORT TLOF ELEVATION
One number entered signifies a ground level heliport; Two numbers entered signifies an elevated heliport; the left number is the heliport height AGL and the right number is the heliport elevation MSL.

TLOF ELEV 35 / 933 HCH 10

APPROACH PROFILE VIEWS



INGRESS PROFILE VIEWS



❶ INGRESS FROM MDA AT MAP

❶ INGRESS FROM MDA AT 0.2 PRIOR TO MAP

❶ INGRESS FROM MDA AT 0.2 PAST MAP

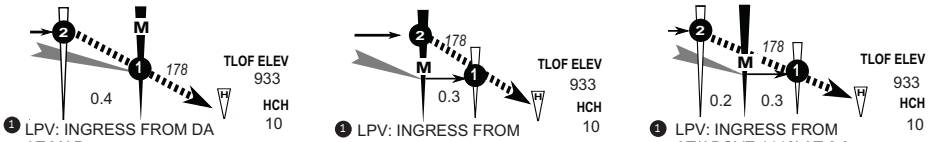
(1) When only one set of minimums are provided (LPV or LNAV) ❶ is used as the recommended ingress point.

(2) When both LPV and LNAV minimums are provided ❶ is used as the LPV and ❷ is used as the LNAV ingress point.

(3) LNAV-Only: an Along Track Distance (ATD) point may be charted "prior" to the MAP at the recommended ingress point. The pilot must be able to proceed visually from the ATD or continue to the MAP and proceed visually or conduct the specified missed approach.

(4) LPV and LNAV: an ATD may be located "past" the MAP at the recommended ingress point. For LNAV minimums the published altitude to be maintained to the ATD will be the MDA. For LPV minimums the published altitude to be maintained to the ATD is the DA minus 50 ft rounded up to the next higher 10 foot interval and allows for height loss associated with a DA.

(5) Obstacle protection is provided past the MAP for the level surface (MAP to ATD) and for the visual segment as charted.



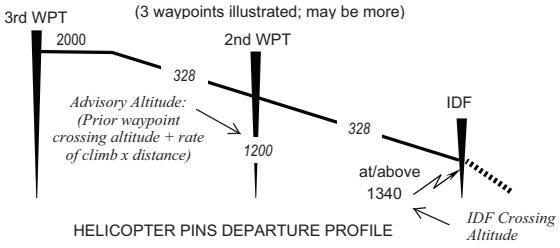
❶ LPV: INGRESS FROM DA AT MAP
❷ LNAV: INGRESS FROM MDA AT 0.4 PRIOR TO MAP

❶ LPV: INGRESS FROM AT/ABOVE 1110' AT 0.3 PAST MAP
❷ LNAV: INGRESS FROM MDA AT MAP

❶ LPV: INGRESS FROM AT/ABOVE 1110' AT 0.3 PAST MAP
❷ LNAV: INGRESS FROM MDA AT 0.2 PRIOR TO MAP

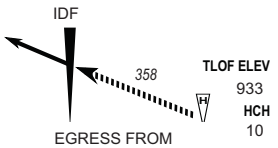
DEPARTURE PROFILE VIEW

(3 waypoints illustrated; may be more)



HELICOPTER PINS DEPARTURE PROFILE

EGRESS PROFILE VIEW



EGRESS FROM HELIPORT TO IDF

APPROACH MINIMUMS BLOCK

LPV (WAAS REQUIRED)			COPTER	LNAV		
DA (H)	Visibility			MDA (H)	Visibility	
1159*	(226)	3/4		1460**	(527)	3/4
Decision Altitude	HAL or HAS	Visibility Minimums		Minimum Descent Altitude	HAL or HAS	Visibility Minimums

Minimums

HAS = Height Above Surface within 5,000' of MAP at DA/MDA and is associated with PinS Proceed VFR.

HAL = Height Above Landing at DA/MDA and is associated with PinS proceed visually.

TAKE OFF MINIMUMS BLOCK

Note. See Basic Departure Chart Legend item 17.

Takeoff Minimums (COPTER)
500 - 3/4

T/O Minimums

Ceiling and Visibility

Takeoff Minimums (COPTER)
500 - 3/4, or standard with minimum climb of 611 ft per nm to 1340.

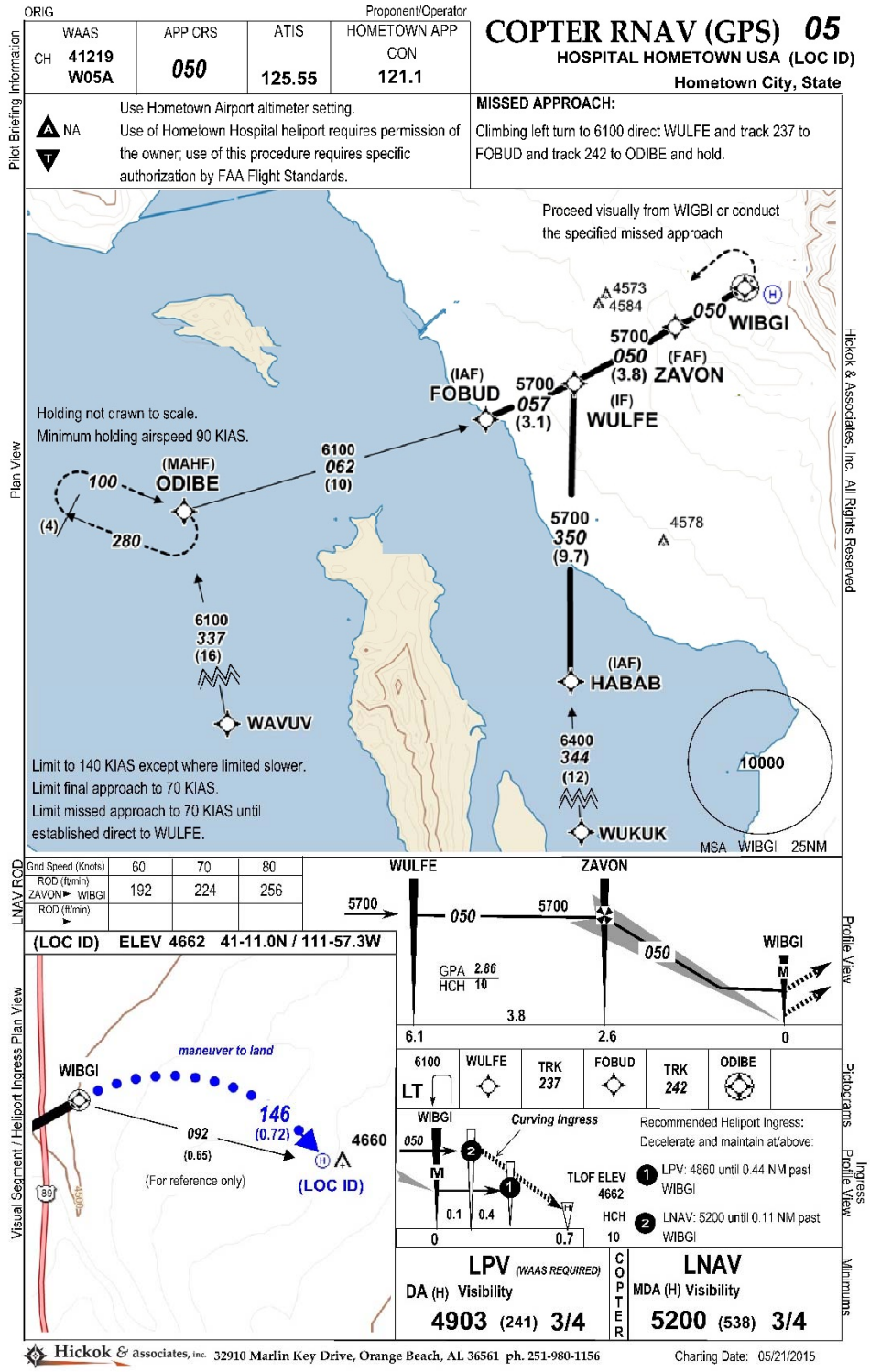
T/O Minimums

Ceiling and Visibility or Standard Minimums

Helicopter Instrument Approach and Departure Charts

(Appendix B - Example Charts)

Example Approach Chart - standard 1 page chart

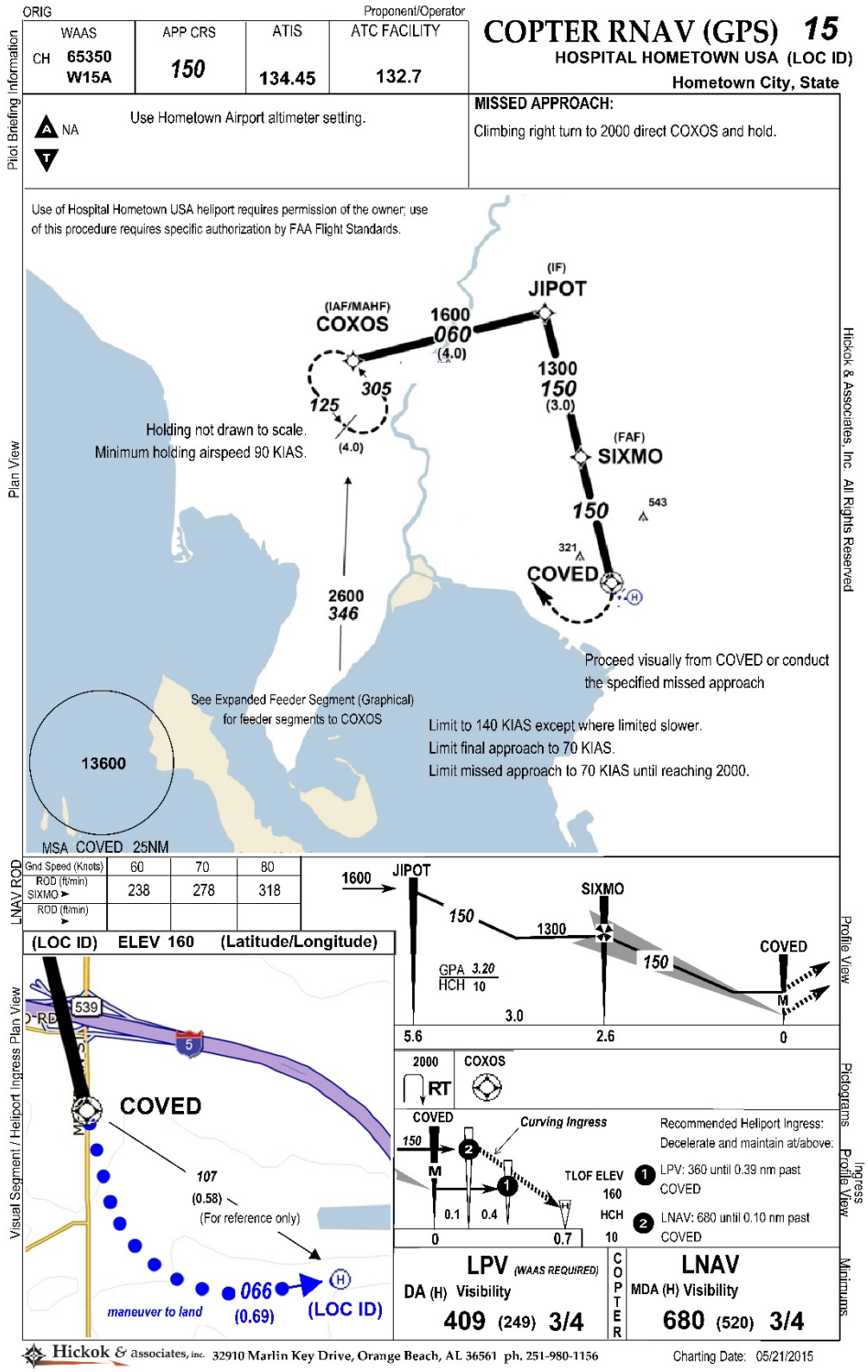


1	Illustrates feeder segments provided on plan view: feeder segments WUKK – HABAB and WAVUV-ODIBE not drawn to scale as indicated by symbol and one feeder ODIBE - FOBUD is to proportional scale as illustrated by <u>not</u> having the symbol .
2	Illustrates charting features associated with curved visual segment: bearing and distance from MAP to landing location provided for reference only; designed curved visual segment flight path and heading to align with curved ingress area and flight path distance charted.

Helicopter Instrument Approach and Departure Charts

(Appendix B - Example Charts)

Example Approach Chart - front (pg. 1) of 2 page chart



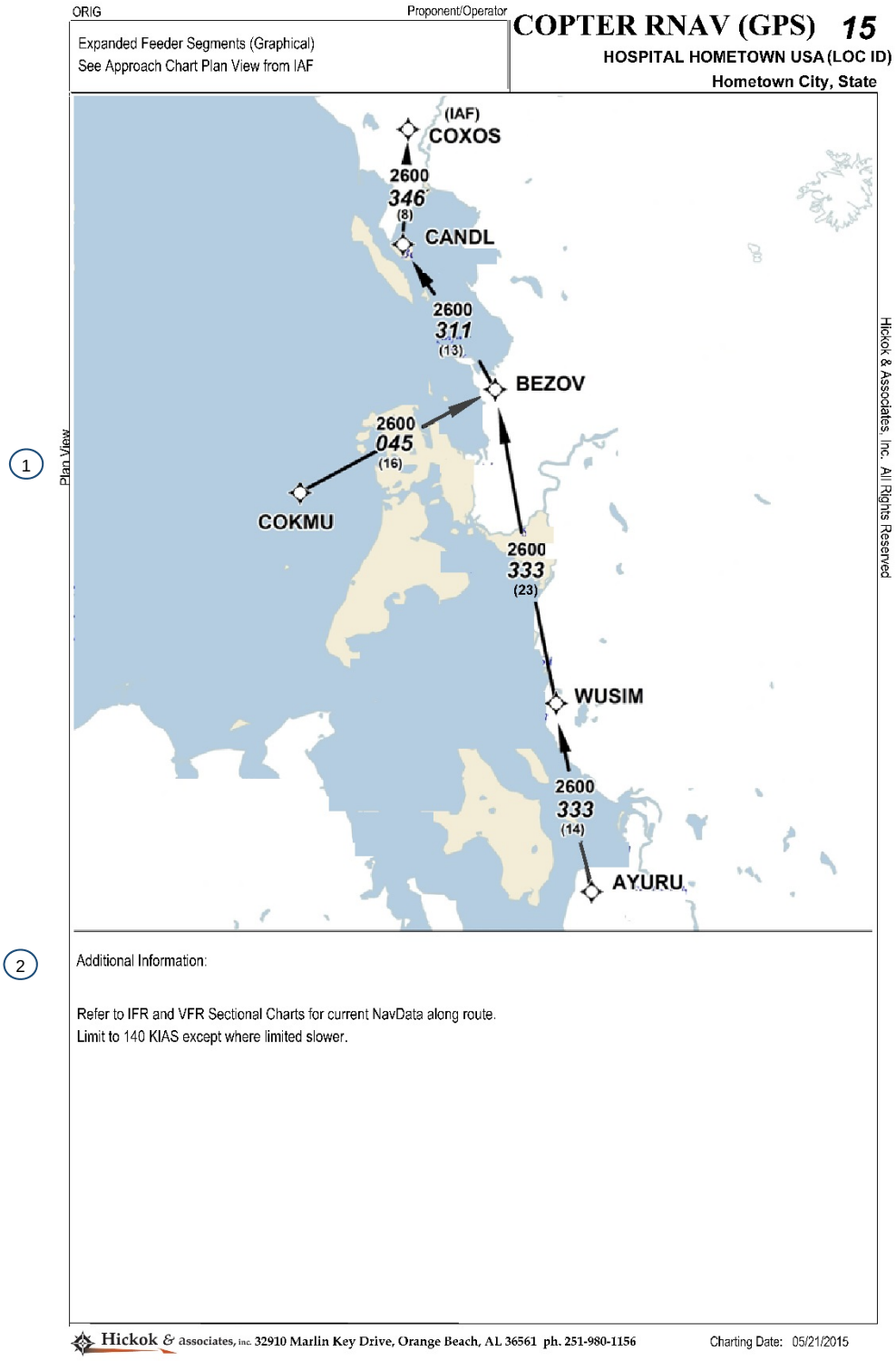
1

1	Illustrates when a note is used on Plan View to direct pilot to feeder segments on chart back (pg. 2) when 2 page chart provided.

Helicopter Instrument Approach and Departure Charts

(Appendix B - Example Charts)

Example Approach Chart - back (pg. 2) of 2 page chart

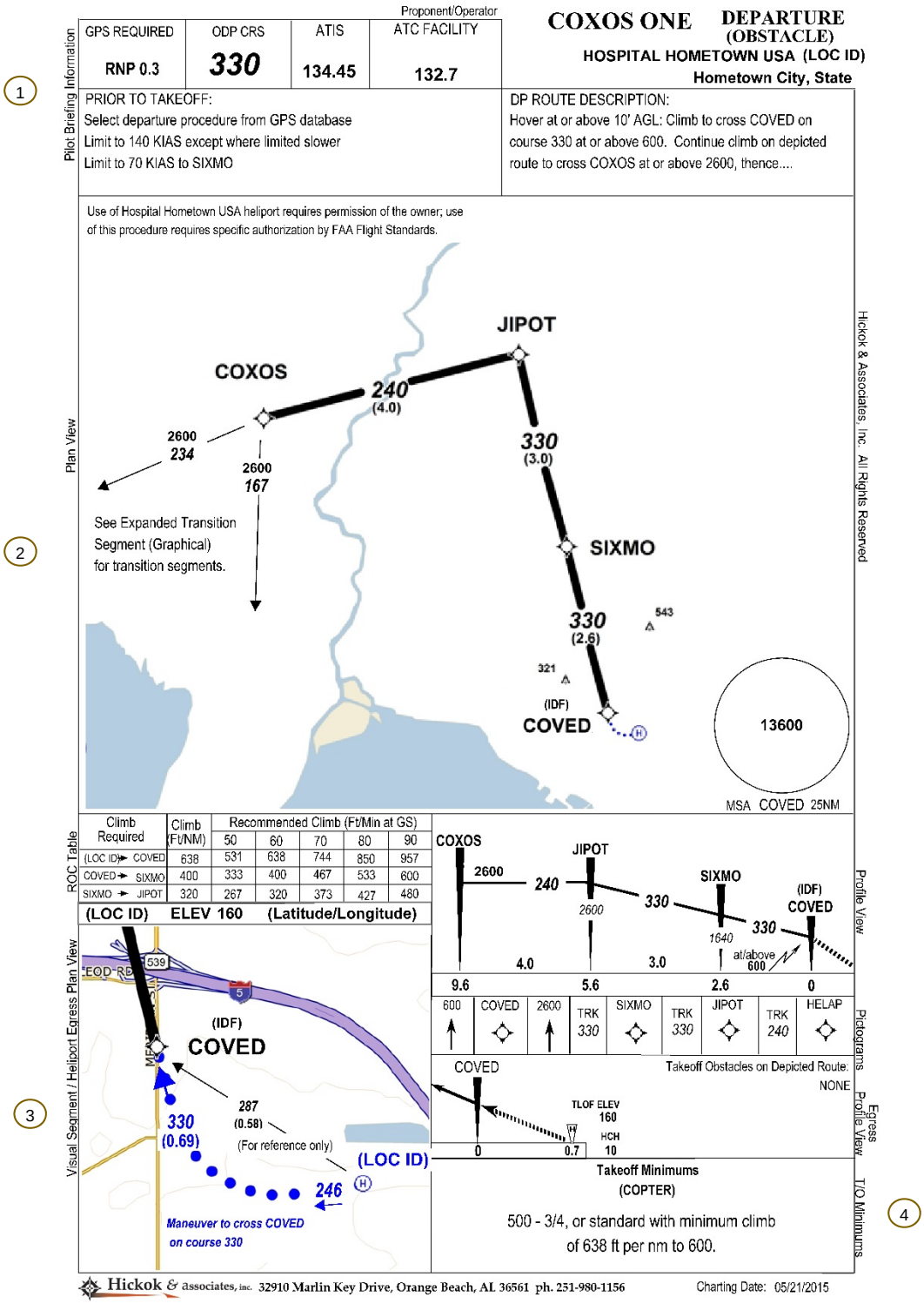


1	Illustrates feeder segments provided in proportional scale on chart back (pg. 2 of 2 page chart).
2	The Additional Information section is where specific instructions or information pertaining to the feeder segments will be located. The note to "Refer to IFR and VFR Section Charts for current Nav/Data along route" is a common note used… Hickok & Associates charts are not reproduced per cycles, and remain active and usable until an amendment to the procedure is required. IFR and VFR Sectionals are updated per cycles by FAA and Jeppesen, and should be referred to for the most current information relative to the flight track.

Helicopter Instrument Approach and Departure Charts

(Appendix B - Example Charts)

Example Departure Chart - front (pg. 1) of 2 page chart

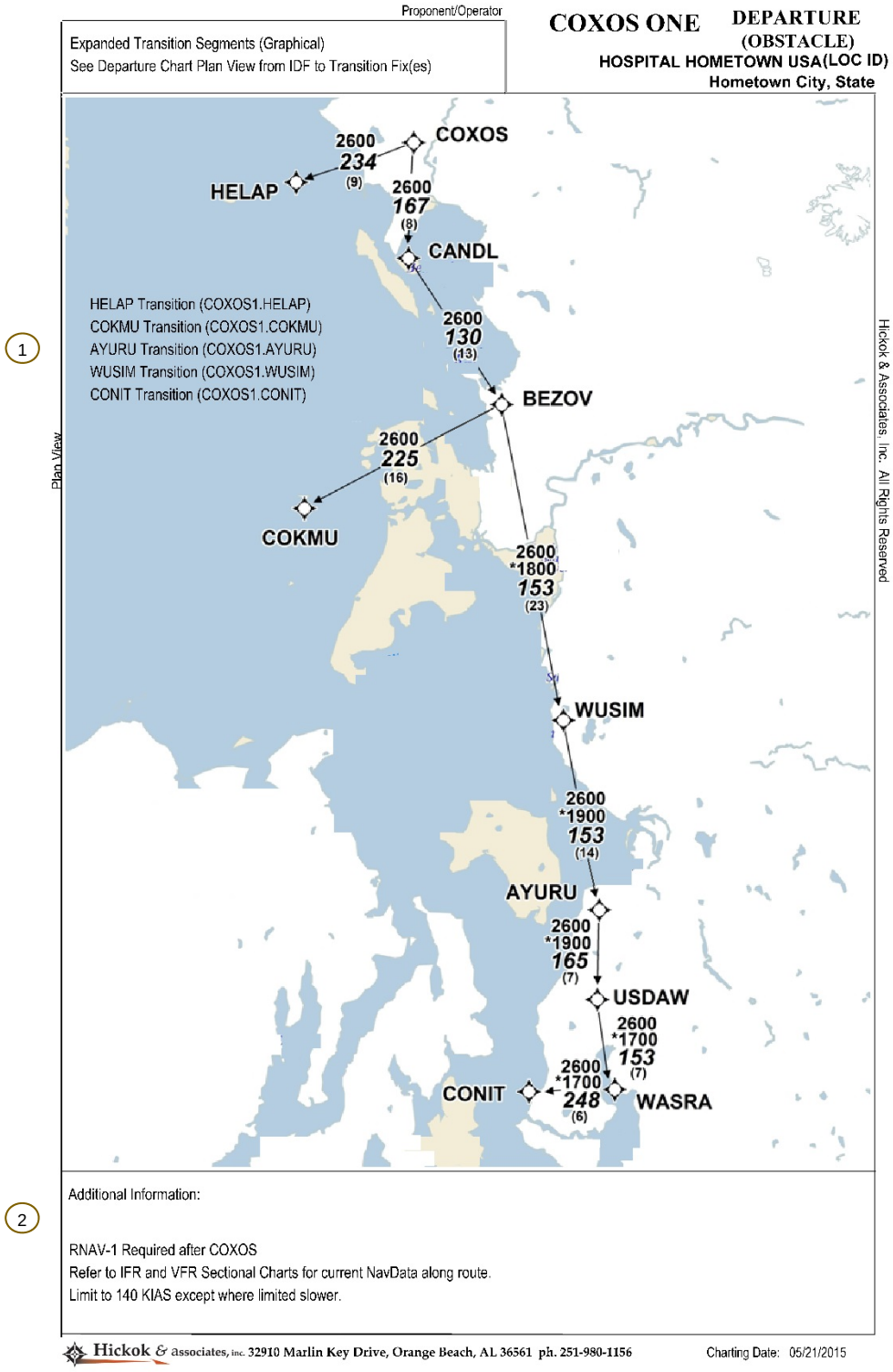


1	Illustrates when a NavSpec RNP 0.3 used and wording change in Prior To Takeoff of Pilot Briefing Section…. CDI setting notes not required.
2	Illustrates when a note is used on Plan View to direct pilot to transition segments on chart back (pg. 2) when 2 page chart provided.
3	Illustrates charting features associated with curved visual climb area (VCA) to the IDF: bearing and distance from landing location direct to IDF provided for reference only; designed curved VCA flight path and heading to cross IDF and flight path distance charted.
4	Illustrates takeoff minimums where the VCA is assessed and clear…. ceiling and visibility provided, and standard takeoff minimums and the operational requirements (e.g. climb performance) are also provided. See ball note 17 in Basic Departure Chart Legend for more…..

Helicopter Instrument Approach and Departure Charts

(Appendix B - Example Charts)

Example Departure Chart - back (pg. 2) of 2 page chart

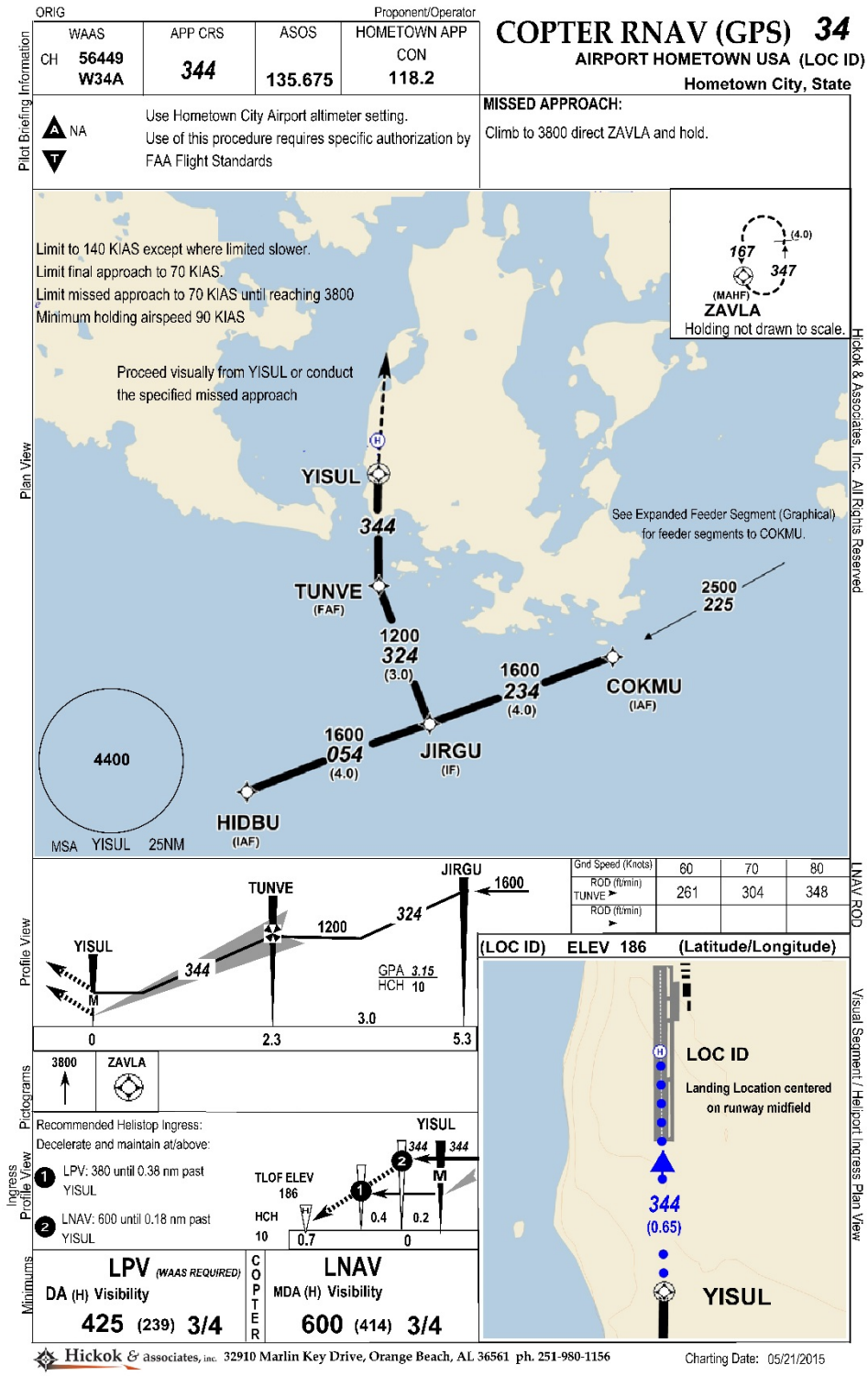


1	Illustrates transition provided in proportional scale on chart back (pg. 2) when 2 page chart provided. Transition names provided with graphical depictions of transitions.
2	Additional Information section is where specific instructions or information pertaining to the transitions will be located. Illustrates when other than RNAV-1 published on Chart front (pg. 1) NavSpec for transitions provided on Chart back (pg. 2) when 2 page chart provided.

Helicopter Instrument Approach and Departure Charts

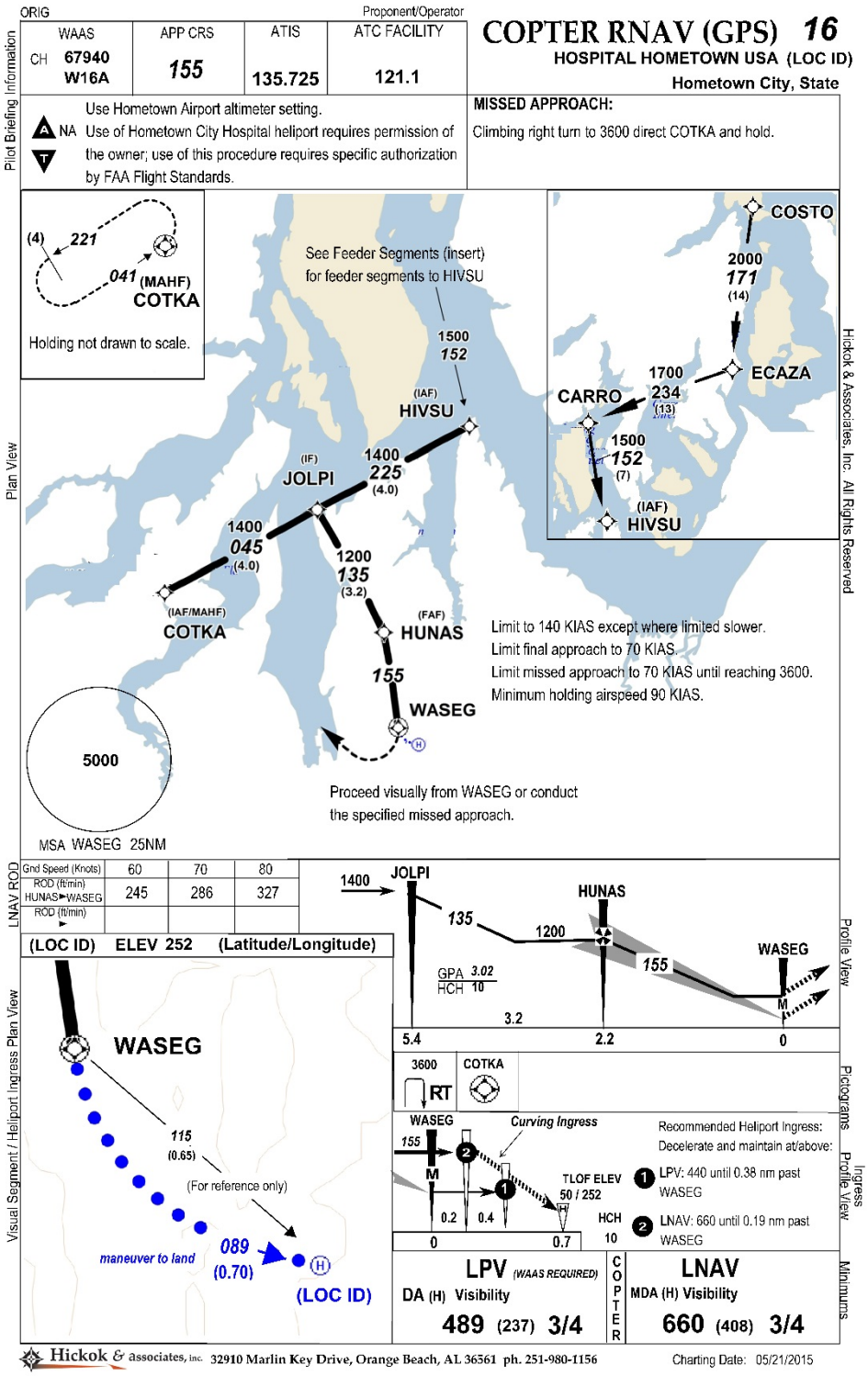
(Appendix B - Example Charts)

Example Approach Chart - front (pg. 1) of 2 page chart



1	Illustrates optional placement of "Use" note (see ball note 9 in Basic Approach Chart Legend) within the Pilot Briefing Information; Illustrates when IFP is to a public use airport, only the portion of the "Use" note pertaining to FAA AFS approval to use the procedure is charted.
2	Illustrates approach to a runway: the landing location can be located anywhere along an instrument or non-instrument runway, on a taxiway, or ramp at an airport, that meets the physical characteristics as a VFR heliport (e.g. FATO, TLOF, Safety Area dimensions are satisfied). The landing location does not have to be marked as a heliport (e.g. the heliport international symbol is charted in the Sketchbox only to illustrate location for the pilot).

Example Approach Chart – standard 1 page chart with feeder segments insert



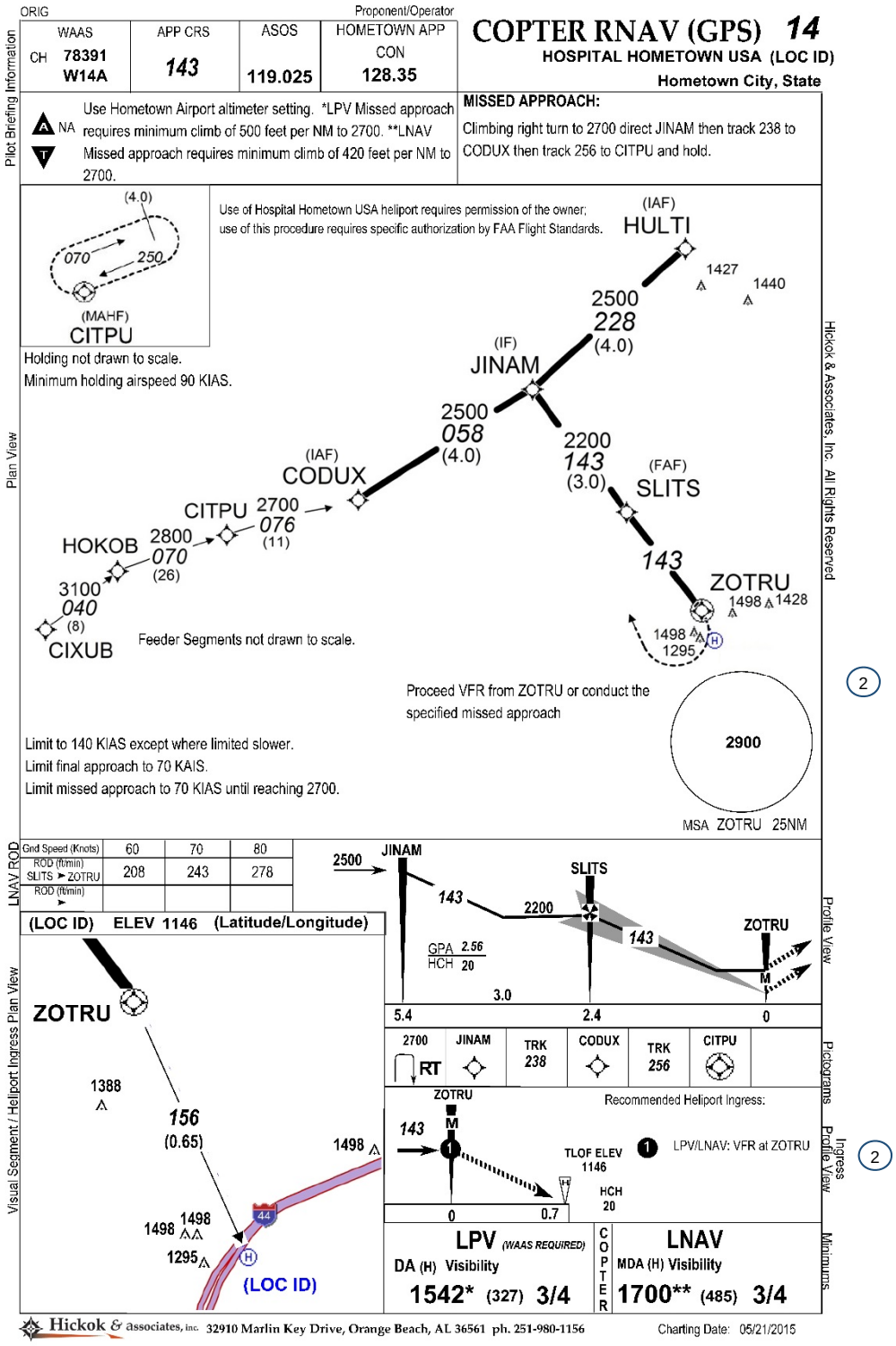
1

1 Illustrates note to See Feeder Segments (insert) and feeder segments provided in proportional scale within a feeder segment insert box in Plan View.

Helicopter Instrument Approach and Departure Charts

(Appendix B - Example Charts)

Example Approach Chart - standard 1 page chart

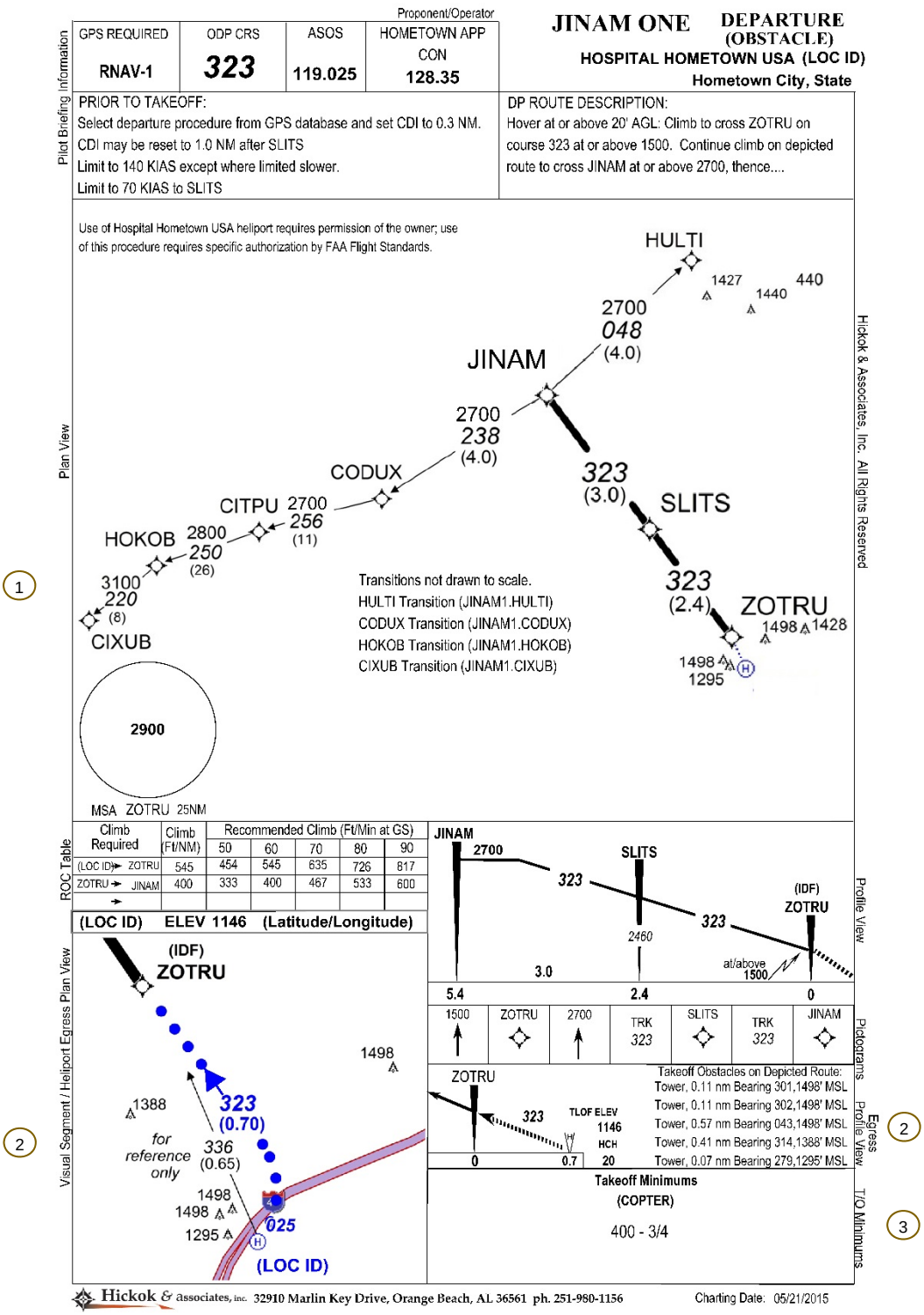


1	Illustrates feeder segments in Plan View and when note is used "Feeder Segments not drawn to scale" in lieu of using symbol ⩘.
2	Illustrates charting in Plan View, Ingress Profile View, and Sketchbox for a Proceed VFR procedure: Sketchbox only provides course/distance from MAP to heliport for reference…. does not provide a proceed visually flight path (e.g. dotted blue visual segment flight path information not provided).

Helicopter Instrument Approach and Departure Charts

(Appendix B - Example Charts)

Example Departure Chart - standard 1 page chart format



1	Illustrates Transition segments in Plan View and when note is used "Transitions not drawn to scale" in lieu of using symbol ⩘. The transiton names are also provided.
2	Illustrates charting of takeoff obstacles both graphically in Sketchbox and textually in Egress Profile View and recommended takeoff, and; flight path for visual transition to IDF in Sketchbox.
3	Illustrates takeoff minimums where the charted ceiling and visibility are required and standard takeoff minimums are not provided/not authorized.