

The Book of HURT



A.D. 2012

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At a Glance

Date / Location

- Saturday, January 14, 2012 (06:00) – Sunday, January 15, 2012 (18:00).
- Mountains above the city of Honolulu (island of O‘ahu, state of Hawai‘i).

Event Overview

- 100 miles over 5 laps (partial out and backs) in a semi-tropical rain forest.
- 24,500 feet of cumulative elevation gain (and 24,500 feet of cumulative loss) over the course of 100 miles.
- 99% single-track trails, 1% asphalt.
- Moderately packed soil, generously interspersed with roots, rocks, puddles, and mud wallows.
- Narrow trails passing through forest, along exposed ridges, and past vertical embankments.
- 20 stream crossings (four per lap).
- Three aid stations per lap.
- 36-hour time limit.

Race Entry

Sign-up

All interested runners must complete the race application and submit payment at ultrasignup.com. Runners must be at least 18 years of age to enter. The application form and credit card payment will be tendered electronically, but credit cards will not be charged until after the lottery is conducted and runners are chosen. Once the credit card has been charged, the runner is deemed an entrant in the event.

Selection Criteria / Entrant List

A total of 125 runners will be selected for this event including:

- The male and female winners of the prior year's HURT 100 (assuming they have completed an application, submitted payment, and met the deadlines applicable to all runners).
- Up to three entrants with no 100-mile race finishes.
- Up to three entrants with no prior HURT 100 starts.

The remaining entrants will be chosen via a weighted lottery. Kukui nuts (i.e., points) will be awarded to each entrant based upon responses to questions posed on the electronic application form. Applicants with more kukui nuts have a greater chance of being selected for the event.

The list of entrants will be announced on the HURT website as soon as the selection process is complete. Based upon the number of applications received in prior years, this is expected to occur before 08/08/2011.

Runner bib numbers will be posted on 01/05/2012.

Waiting List

After 125 entrants have been selected, the drawing will be continued in order to create a ranked waiting list of applicants.

If an entry slot becomes available, the first runner on the wait list will be notified by e-mail. The recipient of an invitation has three days to accept by replying to the e-mail AND completing a new web registration for the HURT 100, by the date and time specified in the e-mail. If no reply is received, the invitation will be revoked, and the next available wait-listed runner will be notified by means of the described process.

The wait list will be active, and new runners invited, through 11/15/2011.

Refunds / Withdrawal

As a courtesy to fellow participants and race organizers, runners should immediately notify the [Race Admission Director](#) of a decision to withdraw from the event.

Runners are eligible for a refund of \$100 if both of the following conditions are met *on or before 11/15/2011*: a notice of intent to withdraw from the event is sent to the [Race Admission Director](#) AND a wait-listed runner accepts the vacated spot.

After 11/15/2011, there will be no refund of entry fees under any circumstances.

Transfers / Deferment

Accepted runners cannot transfer entries to other individuals. Entries and entry fees cannot be deferred or rolled over to a future year.

Cancellation of Event

This event is held on public land, under the management of the [Department of Land and Natural Resources](#). As a result, [Race Directors](#) do not have the final say as to whether or not the event will be held. Refunds of entry fees cannot be made if the event is cancelled.

Event Details

Introduction

The H.U.R.T. Trail 100-Mile Endurance Run, referred to hereafter as the “HURT 100”, is a very difficult event designed for the adventurous and well-prepared ultrarunner. It is conducted on trails within the jurisdiction of the State of Hawai‘i [Department of Land and Natural Resources](#) (DLNR), Division of Forestry and Wildlife, [Nā Ala Hele](#) program. Nā Ala Hele has turned traces of pig trails through the rain forest into people-friendly, single-track paths. The event organizers are very grateful for the staff’s untiring year-round commitment to trail maintenance for all users, and help in preparing for this annual event.

Course Setting / Conditions

Climate

Temperature

Average Maximum for Honolulu in January – 80.0° Fahrenheit

Average Minimum for Honolulu in January – 65.8° Fahrenheit

Extreme Daily High for Honolulu in January – 88.0° Fahrenheit

Extreme Daily Low for Honolulu in January – 52.0° Fahrenheit

Precipitation

Monthly Mean for Honolulu in January – 3.34 inches

One-Day Maximum for Honolulu in January – 6.40 inches

These measurements were gathered from a weather station at the Honolulu airport (HNL), and do not apply with precision to the rain forest. Participants should expect lower daytime highs and nighttime lows, especially on the exposed sections of Mānoa Cliff and Nu‘uanu ridge. Precipitation is higher in the rain forest than in the urban areas of Honolulu, and can fall in huge quantities over a brief span of time. Regardless of rain, high relative humidity should be expected.

Illumination

All times are expressed in 24-hour format and refer to January 14, 2012.

Sunlight

- Sunrise – 07:11
- Sunset – 18:09

Civil Twilight

- Dawn – 06:48
- Dusk – 18:33

Moonlight

- Moon Phase – 72% illuminated
- Moonrise – 23:47
- Moonset – 10:55

The dense canopy covering much of the course leads to effectively shorter daylight hours. Participants should anticipate needing artificial [light](#) for longer than indicated by the times listed above.

Altitude / Elevation Change

Over the 100-mile course, the [elevation](#) ranges from 300 to 1,900 feet. The total cumulative elevation gain is roughly 24,500 feet. For the technically inclined, the GPS sampling interval for this calculation was about 100m.

Terrain

The HURT 100 course consists almost exclusively of technical, single-track trail on surfaces that include roots, rocks, and soil in a wide range of conditions, from sun-baked clay to mud of varying depth. Sudden hairpin turns and steep inclines of up to approximately two miles in length are a common occurrence. Very few sections of the course can be run with a consistent stride for more than several hundred yards at a time.

There are a total of twenty [stream crossings](#). Mānoa Stream and Nuʻuanu Stream are each crossed twice per lap at locations close to the [Paradise Park and Nuʻuanu Aid Stations](#), respectively.

Fauna

Wild pigs roam the trails and are most active at sunrise and sunset. Although they tend to avoid humans, they are temperamental and have dangerous tusks. When encountering a pig, especially a sow with piglets, trail users should avoid sudden or aggressive movements.

Mosquitoes can be present in the moister areas of the course alongside stream crossings and at some aid stations, especially when there is little air movement. Race participants and crew may want to pack appropriate clothing and / or repellent.

Leptospirosis bacteria are prevalent in freshwater streams and ponds found in Hawaiʻi. Drinking stream water without proper treatment is not recommended.

Race Logistics

Course Markings

Please see [Course Description](#) for details on course marking.

Aid Stations

There are three aid stations spaced from 5.2 to 7.4 miles apart: Hawai'i Nature Center (hereafter "[Nature Center](#)"), [Paradise Park](#), and [Nu'uuanu](#). All aid stations will be stocked with bottled water, an electrolyte drink, and carbonated beverages. Hot and cold food will be available, with vegetarian options in each category. Food items will include the traditional fare that is provided at most 100-mile runs, as well as a local variation of the standard theme. Runners will be responsible for their own gels, energy bars, electrolyte supplements, medications (e.g., anti-inflammatory products), personal hygiene products (e.g., sunscreen, lip balm), and typical first aid items (e.g., band-aids, blister treatment). Those with strict dietary requirements or special medical conditions are advised to pack needed items in personal drop bags.

Drop Bags

Runners may have personal supplies at any of the three aid stations. Each aid station will be visited five times, so attention to resource planning is important. Due to space limitations and to facilitate handling, the size of drop bags is limited, as detailed in [Rules](#).

After the event, race personnel will transfer drop bags from the peripheral aid stations ([Paradise Park](#), [Nu'uuanu](#)) back to the [Nature Center](#) Start / Finish. Participants are responsible for gathering their drop bags following the event *by 18:15 on Sunday, January 15*. Any items not collected by then will be donated, recycled, or discarded.

Pacers / Crews

The HURT 100 is a competitive race for some, a running event for others, but an independent challenge and personal test of fortitude for all. A pacer is a safety companion during the latter part of the event only, not a way to gain advantage over fellow runners. *Runners need to be able to carry necessary supplies and maintain forward progress independently, from start to finish.* Note: The ultrarunning community in Hawai'i is relatively small, and pacers may be hard to find locally.

A similar sentiment applies to crews, which are also considered non-essential as ample and regular support is provided by aid station personnel.

Awards

Awards (belt buckles, finisher shirts) for all 100-mile finishers will be given immediately at the time of race completion. Additionally, the first three finishers of each gender will receive event-specific trophies at a ceremony during the [Post-Race Banquet](#). Runners unable to attend the banquet should note that awards will not be mailed and must be collected locally.

A prize of \$500.00 will be given for any new course record established in the HURT 100. The current records are 20:11 (male) and 24:06 (female).

Parking

[Nature Center](#): Parking at the Nature Center (Start / Finish) and environs is limited; carpooling and arranging rides are recommended. Participants who wish to park at the Nature Center must do so in the gravel parking area below the gate to the Nature Center, or along Makiki Heights Drive. The [DLNR](#) has advised race planners that only necessary traffic will be allowed to pass through the front gate after hours (typically sunset to sunrise), as the park needs to be secured. On race day, a parking attendant will direct drivers prior to the start. Note: There are several private homes along the roadway leading to the Nature Center. Travel and noise (e.g., closing of car doors and trunks, conversations) should be kept to the absolute minimum, especially during nighttime and early morning hours.

[Paradise Park](#): The Paradise Park grounds, including the parking lot, are private property. A \$5 parking fee (subject to change) applies per day. Free street parking is available around the end of Mānoa Road, 5 – 10 minutes by foot from the aid station. *Parking at this aid station will not be allowed until after 09:00 on Saturday.*

[Nuʻuanu](#): There is no parking lot at the Nuʻuanu Aid Station. Nuʻuanu Pali Drive is a narrow road adjacent to the aid station that offers extremely limited parking and is poorly lit at night. Visitors are asked to park at least 100 yards from the trailhead, so as not to interfere with access to the aid station.

All Locations: Trailheads are notorious for vehicle break-ins. Participants are strongly encouraged not to leave valuables in their cars.

Photography

No professional photographers are contracted for this event. However, many spectators who take pictures share them through the [HURT 100 website](#) by contacting the [Webmaster](#). The best places to see a runner and capture photographs are near [aid stations](#). Spectators who wish to take pictures on the course are asked to exercise caution and respect the environment.

Lodging

For assistance with lodging, participants may contact the [Hawai'i Visitors and Convention Bureau - Hawai'i Tourism Authority](#).

Safety / Medical Concerns

Participants have voluntarily entered an event which requires a significant amount of mental and physical preparation. In addition, the race involves inherent risks ranging from the known (e.g., terrain, 100-mile course) to the unknown (e.g., "acts of God"). Runners and pacers should ensure adequate medical coverage in the event of mishap during this event.

Medical Personnel

Although event personnel will make all efforts to provide aid within their capabilities, professionally trained medical staff will not be available to take care of participants. Each aid station is located within a 5-mile radius of a major medical center. In case of emergency, race personnel will contact local first responders for assistance.

Cell Phone Coverage

Cell phone coverage is available on parts of the course but can range erratically from adequate coverage to none at all. Quality and reception will also vary among cellular phone carriers. Carrying a whistle is recommended for both runners and pacers.

Accidents

If a runner gets hurt on the trail, s/he should stay put, keep warm, and remember that this is a multiple-lap, out and back course. Other runners or the [HURT Patrol](#) will direct event personnel to the incident location or assist in another manner. Similarly, if a runner gets lost, s/he should stay on the trail and wait. Wandering aimlessly, especially at night, reduces the chance of being found.

Dehydration

One of the most common medical problems for endurance athletes is dehydration. This is especially relevant for the HURT 100 as conditions on the course can be hot and humid. Each runner is solely responsible for monitoring his / her hydration level; race officials will not be weighing participants. Runners should leave each aid station with a minimum of 32 ounces of water, with 64 ounces being highly recommended.

Hypothermia

Hypothermia may pose a threat at night, especially if it has rained, as temperatures can drop below 60 degrees Fahrenheit. Sections of the course along ridges and cliffs, including [Mānoa Cliff Trail](#) and [Nu'uanu Trail](#), are extremely exposed and can be very windy and wet.

Road Crossings

On each lap, runners have to make [two road crossings](#). One of them involves following a narrow road for approximately 100 yards. Runners must use extreme caution when running across or along roadways.

Crossing roads safely is solely the responsibility of the runner.

Terrain

Participants will be running on technical trails where footing is adequate at best. If it rains (which is common), there can be an abundance of mud. Depending upon conditions, a rope may be placed along the steepest section of Nu'uanu ridge just below [Bien's Bench](#). Attention to the terrain underfoot and directly ahead is critical in this event. Some trails are located adjacent to cliffs with extreme drop-offs.

Of the two [stream crossings](#), one is short and non-technical, involving a wire grate not far from the [Paradise Park Aid Station](#). The other is technical, and requires runners to cross [Nu'uanu Stream](#) on scattered and slippery rocks, near the [Nu'uanu Aid Station](#). Runners may get wet feet when crossing this stream. If the water level is high, the course may be rerouted. Runners will be notified of any course changes at the [Pre-Race Briefing](#).

Lighting

As no part of the course (except for the aid stations) is lit, and very little starlight or moonlight penetrates the forest canopy, race participants will need artificial light at night. Runners (and pacers) are reminded that [daylight](#) hours are shorter in the forest than in the open. Participants should carry backup batteries and lights, and keep extras in drop bags. *Aid stations are not stocked with batteries for runners to use.*

Hiking Poles

Poles are permitted on the course. However, for the safety of all involved, those with poles should yield the trail to other runners.

Headphones

Use of any device that impairs the senses, including headphones, is discouraged for safety reasons. Runners wearing headphones are asked to remove them when approaching, passing through, and exiting aid stations to facilitate communication with event personnel.

Noise

Use of bells and other devices emitting sound is discouraged out of respect for other trail users seeking a wilderness experience.

Rules

I. Introduction

HURT 100 Rules are designed with the following goals in mind:

- A. The safety, enjoyment, and well-being of everyone involved in the race, including runners, pacers, crews, volunteers, neighbors, race personnel, spectators, and others using the trails (“the public”).
- B. The staging of a fair and sportsmanlike event that is solely based upon individual effort.

Failure to comply with rules and procedures may result in disqualification of Runner. Depending upon the severity of the offense, Runner can be disqualified for this race and future HURT-sponsored events. Additionally, [Race Directors](#) may refine, generate, or reinterpret a rule at any time if doing so is deemed necessary to promote goals A and B. At all times, the intent and spirit of the rules will govern how they are implemented and enforced by race officials (e.g., [Race Directors](#), [HURT Patrol](#), [Aid Station Captains](#)). By attending this event as Runner, Pacer, or Crew, each participant acknowledges and agrees with this sentiment.

II. All Participants

- A. Courteous behavior and sportsmanlike conduct are expected at all times.
- B. Sharing the trail: *HURT 100 participants do not have exclusive use of the trails*. These paths are well used by the public. Caution should be exercised when approaching casual hikers (and their pets). Runners should warn others of their approach and, when in doubt, yield.
- C. HURT 100 participants do not have exclusive use of public toilets or other conveniences (e.g., drinking fountains) at the [Nature Center](#). These facilities should be used with care, keeping in mind that they are a resource shared with hikers and other members of the public.
- D. Mālama ‘āina (care for the land).
 - 1. The rain forest is fragile and subject to damage simply by being trod upon. Runners and pacers are expected to stay on the trail at all times.
 - 2. Littering on the course is grounds for immediate disqualification. Littering is contrary to land use ethics and affects HURT’s ability to hold future events. Note: Dropping waste (including aid station cups) twenty yards, or more, from any aid station is considered littering.
 - 3. The HURT 100 course lies within watershed areas that supply a significant amount of potable water for residents of O’ahu. Participants should use the restrooms available at the Nature Center (Start / Finish), and the portable toilets at Paradise Park and Nu’uanu.
- E. Muling is not permitted. Runner must carry all his / her supplies between aid stations, at all times.
- F. Runner's lighting system is to be used for personal illumination of the trail only. Pacer may not deploy lighting systems to illuminate the trail for Runner except temporarily in case of an emergency.

- G. Short-roping of Runner, by tether or connected body parts, is not permitted. Runner must complete the course under his or her own power without being pulled, pushed, balanced, towed, carried, supported, or physically guided over the course.
- H. Stashing of supplies is not permitted *at any time or place* on the course. This includes leaving water bottles on out and back sections of the course, even during the event itself (a form of littering).
- I. Aid from Crew or Pacer may ONLY be given at official [aid stations](#).
- J. Crew and Pacer may not retrieve bottles from Runner for filling *until within the confines of the aid station*.
- K. Aid station resources and supplies are intended for runners and pacers. In the unlikely event of a shortage, runners have priority.
- L. Smoking is not permitted on the trail or at aid stations. Smoking is strongly discouraged at any location where runners, pacers, crews, and race personnel congregate.
- M. Consumption of alcoholic beverages and illegal substances on any part of the course is prohibited.
- N. Dogs are not allowed anywhere on the course, and their presence is discouraged around aid stations for safety and sanitary reasons. Dogs brought to the event must be under control and leashed at all times.
- O. All participants must obey City and County of Honolulu regulations, with special attention to those that involve parking and driving.

III. Runners

- A. *Runner is responsible for knowing ALL rules and procedures.*
- B. Runner is responsible for the actions of his / her Pacer(s) and Crew. Any rule transgression by Runner or associated Pacer and Crew can be grounds for either immediate or post-run disqualification.
- C. Runner must pick up run number and bag on Friday at the [Mandatory Runner Registration](#).
- D. Runner must [check in](#) on race morning prior to starting the race in order to be an official participant.
- E. [Drop Bags](#)
 - 1. Runner's collection of personal supplies at any one aid station must not exceed the following dimensions: 18" high, 18" wide, and 24" long.
 - 2. Drop bags are to be brought to the event start ([Nature Center](#)) on Saturday morning at 05:15 as described in the [Event Schedule](#).
 - 3. *In order to be accepted, bags must be clearly marked with three items on a waterproof label:*
 - Location: [Paradise Park, Nu'uuanu, or Nature Center](#) (i.e., Start / Finish)
 - Runner name
 - [Runner bib number](#)
- F. While accepting supplies on rare occasions from a fellow Runner is tolerated, multiple such instances may be interpreted as muling.

- G. *No course cutting.* Runner must follow the marked course at all times. If Runner departs from the official course, Runner must return to the point of departure on foot before continuing onward.
- H. Artificial systems devised to cool Runner (cooling vests or similar), are not allowed to be used or worn while forward progress is being made.
- I. If Runner undergoes an infusion of intramuscular / intravenous / subcutaneous fluids of any type (except for prescription medication) during the race, immediate disqualification will occur.
- J. Race officials reserve the right to remove runners from the course who are deemed incapable of continuing safely.
- K. Runner must check in and out of every aid station for reasons of safety and time keeping / tracking.
- L. Runners dropping out during the event must inform a race official. If Runner retires without doing so and fails to show up at the next aid station, officials may notify Honolulu Fire Department Search and Rescue specialists. Runner may be held responsible for the cost of a frivolous search and rescue operation.
- M. **Cut-off times** will be strictly enforced. Runner must not continue on after exceeding a cut-off time. Race staff will make every attempt to shuttle Runner back to the Start / Finish (**Nature Center**) if this occurs.

IV. Pacers

- A. *Pacer must review and be familiar with ALL rules and procedures.*
- B. Pacer may start accompanying Runner after 60 miles, or starting at 17:00 on Saturday.
- C. Pacer must start pacing duty at one of the three **aid stations**.
- D. Pacer will not be assigned a bib number and will not be tracked.
- E. Only one pacer is allowed to accompany a runner at a time.
- F. Pacer may only receive aid at the three official **aid stations**.
- G. Pacer may assist Runner in the aid station but may not enter the checkpoint ahead of Runner or depart after Runner for this purpose.
- H. If Pacer falls out of visual distance from Runner for longer than dictated by the course, Runner may continue on without Pacer, but Pacer must exit the course at the next aid station.

V. Crews

- A. *Crew must review and be familiar with ALL rules and procedures.*
- B. Crew members may not use supplies provided at aid stations, including food.
- C. Crew may only **park** in authorized areas.
- D. *Crew may only support Runner and Pacer within 100 yards of an official **aid station**, excluding the race course itself.*
- E. On Saturday, crews are not allowed at the **Paradise Park Aid Station** before 09:00 to avoid crowding.

Personnel / Contact Information / Roles

Event Personnel

Race Directors	John Salmonson (Race Day) PJ Salmonson (Permits, Community Relations) Jeff Huff (Logistics, Race Admission)
Start / Finish Line Coordinator	John Salmonson
Nature Center Aid Station Captains	John Salmonson, PJ Salmonson
Nu‘uanu Aid Station Captains	Freddy Halmes, Joani McLaughlin
Paradise Park Aid Station Captains	Jan McGriff, Julie Takishima
Trail Marking Coordinator	Don Fallis
Publicity Coordinator	Don Fallis
Medical Coordinator	Joel Jenkins
Volunteer Coordinator	PJ Salmonson
Patrol Coordinators	Harald Ebeling, AJ Tauber
Awards Committee	PJ Salmonson, Cheryl Loomis
Webmaster	Bob McAllaster (hurt100trailrace.com)
Race Registrar	Mark Gilligan (ultrasignup)
Race Book Editors	AJ Tauber, Harald Ebeling

Contact Information

Huff, Jeff	jhuff@hawaii.rr.com
McAllaster, Bob	kailuamac@yahoo.com
Salmonson, John	john@j-bmarketing.com
Salmonson, PJ	hurtpals@aol.com

Role Definitions

HURT Patrol

Patrols will be on the course to monitor progress of runners, assist during emergency situations, assess course conditions, refresh course markings, and prevent / report rules violations. Members of the HURT Patrol serve as extensions of the race directorate. As such, they are authorized to warn runners, pacers, and crews of any violations and advise them to correct transgressions.

Aid Station Captain

Aid Station Captains plan and organize aid stations, as well as supervise their setup and disassembly. During the event, they direct volunteers and oversee operations related to runner support and safety. Aid Station Captains serve as an extension of the race directorate. As such, they are authorized to warn runners, pacers, and crews of any violations and advise them to correct transgressions.

Event Schedule

Note: There is no pre-race meal.

Date	Time	Event ¹	Location
Friday, January 13	14:00 – 15:00	Mandatory Runner Registration	Nature Center
“	14:30 – 15:00	Mandatory Pre-Race Briefing	“
Saturday, January 14	05:15	Mandatory Runner Check-in	“
“	“	Drop Bag Collection	“
“	06:00	Race Start	“
Sunday, January 15	18:00	Race End	“
Monday, January 16	17:00 – 21:00	Post-Race Banquet	Mid Pacific Country Club

¹ See following text for description of event listed

Mandatory Runner Registration: Runners are to pick up bib numbers and bags. [Parking](#) in the lot at the Nature Center is limited; participants are advised to carpool and / or arrive early. Runners should not bring [drop bags](#) to any of the events scheduled for Friday (they will only be collected on Saturday morning).

Mandatory Pre-Race Briefing: Distribution of information including logistics / course updates, safety, and other topics, in addition to an optional question and answer session. The briefing will be held in a small pavilion, adjacent to a lawn used as an overflow area. Participants may wish to bring sun protection, fluids, insect repellent, and a folding chair or beach towel for comfort.

Mandatory Runner Check-in: Runners need to check in prior to entering the race in order to be officially recognized. Times will only be kept for official runners.

Drop Bag Collection: The official and only occasion that [drop bags](#) are collected for distribution to the Paradise Park and Nu'uuanu [aid stations](#).

Post-Race Banquet: No-host, buffet-style dinner with awards ceremony, and ample opportunity for mingling. Tickets can be purchased online when registering for the race; a limited number of tickets *may* be available at the Pre-Race Briefing. Food includes vegetarian options, and drinks are available through a no-host bar. Attire is best described as sporty casual.

Cut-off Times / Aid Station Closures

Runners are allotted 36 hours to finish the 100-mile event, from 06:00 on Saturday, January 14 to 18:00 on Sunday, January 15. Cut-off times pertain to the fifth lap (Miles 80-100). Runners must *check out of* each aid station by the time listed in the chart below or drop out of the race. Checked-out runners returning to aid stations after the listed times must exit the race or face disqualification. In general, aid stations close fifteen minutes after the cut-off times.

Date	Time	Event	Location	Mile "Marker"
Saturday, January 14	06:00	Course Start / Opening	Nature Center	0
Sunday, January 15	11:00	Cut-off #1	"	80
"	13:30	Cut-off #2	Paradise Park	87
"	13:45	Aid Station Closure	"	-
"	15:30	Cut-off #3	Nu'uanu	92.5
"	15:45	Aid Station Closure	"	-
"	18:00	Course Finish / Closure	Nature Center	100
"	18:15	Aid Station Closure	"	-

Course Description

The HURT 100 course consists of five identical 20-mile laps on trails connecting the Mānoa, Makiki, and Nuʻuanu Valleys. A leg of this lap is defined as the connection between any two aid stations.

The route is marked with surveyor's tape in three different colors (white, lime green, and orange), one for each of the three legs. On out and back sections of the course, runners will encounter ribbons in two different colors. Blue tape indicates shortcuts and trails that are not part of the course.

A brief description of the ordered sequence of trails that make up the HURT 100 course is given in the following table; prominent natural or man-made landmarks are mentioned too.

Trail Sequence Table

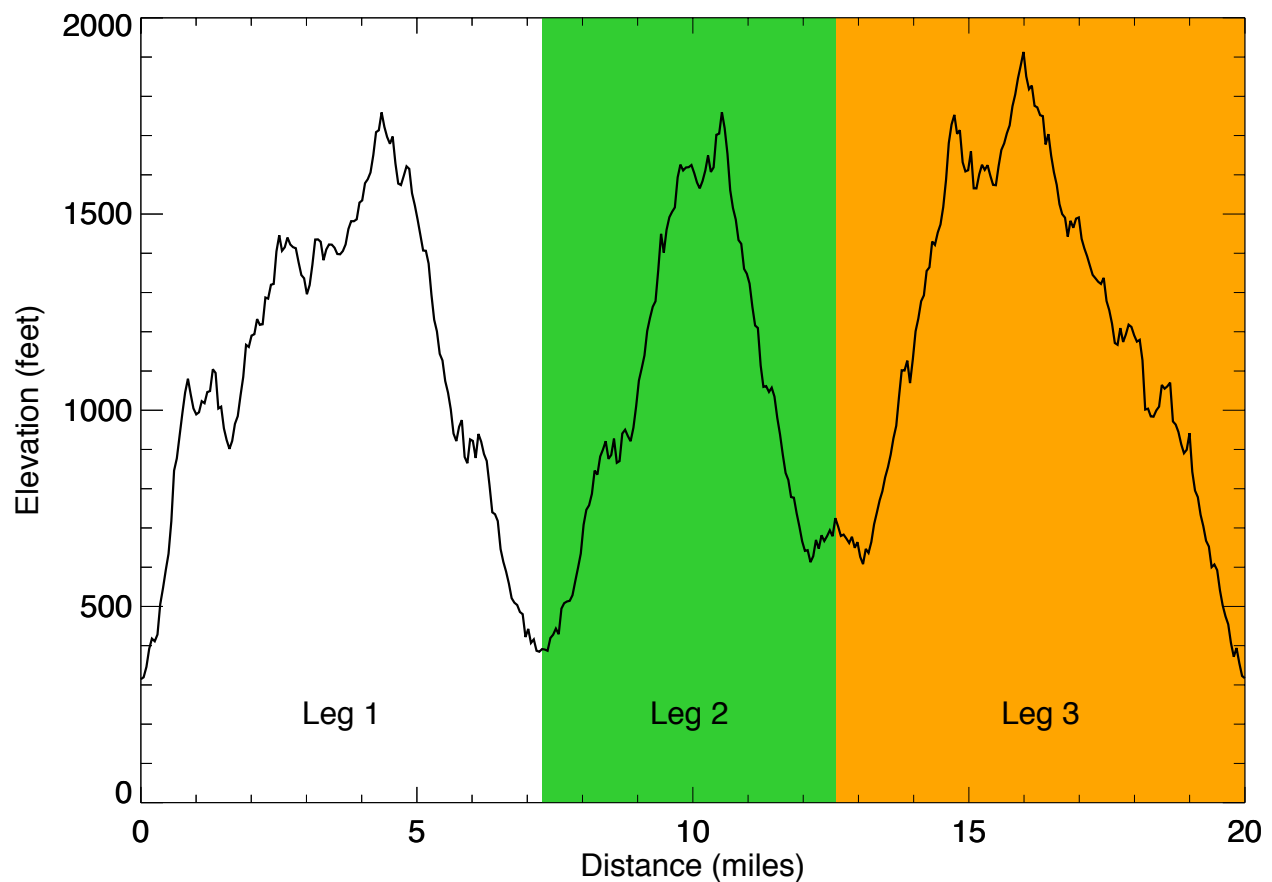
Leg #1 White Tape Nature Center to Paradise Park	Leg #2 Lime Green Tape Paradise Park to Nu'uaniu	Leg #3 Orange Tape Nu'uaniu to Nature Center
Nature Center Aid Station	Paradise Park Aid Station	Nu'uaniu Aid Station
(Across bridge onto) Maunalaha Trail	(Straight on short paved section to) Mānoa Falls Trail	(Straight and across) Nu'uaniu Stream
(Straight and down) Makiki Valley Trail	(Left and up) 'Aihualama Trail [Mānoa Falls just ahead]	(Right onto) Judd Trail
(Straight past Kanealole Trail junction / then right onto) Nahuina Trail	(Left onto) Pauoa Flats Trail	(Right and up) Nu'uaniu Trail [Bien's Bench is at the top of Nu'uaniu ridge]
(Across road and right, along short section of) Tantalus Drive	(Right onto) Nu'uaniu Trail [Bien's Bench is at the top of Nu'uaniu ridge]	(Right onto) Pauoa Flats Trail
(Left onto) Kalāwahine Trail	(Left onto) Judd Trail	(Straight and up, onto) Mānoa Cliff Trail [through two gates]
(Right and up) Mānoa Cliff Trail	(Left and across) Nu'uaniu Stream	(Straight across Round Top Drive onto) Moleka Trail
(Left onto) Pauoa Flats Trail	(Straight to) Nu'uaniu Aid Station	(Right onto) Makiki Valley Trail (then right again to continue on) Makiki Valley Trail
(Right onto) 'Aihualama Trail		(Left and down) Kanealole Trail
(Right and down) Mānoa Falls Trail [Mānoa Falls just to the left]		(Right and down) Maunalaha Trail
(Straight on short paved section to) Paradise Park Aid Station		(Across bridge to) Nature Center Aid Station

Course Map

An overview of the HURT 100 course can be found on the following pages, where the outline of the three legs of the course as well as relevant landmarks are shown overlaid on the Nā Ala Hele trail map. A more accurate rendering of the course based on GPS data can be accessed online through [Google Maps](#) as well as in the form of a [KMZ file](#) to be opened with [Google Earth](#). Note that the locations and intersections of Nā Ala Hele trails as shown in Google Maps are significantly inaccurate as of July 05, 2011.

Runner should print the course map and carry it during the event. Course maps are not provided.

The elevation profile for one lap of the HURT 100 course is shown below.



Leg 1: Nature Center to Paradise Park

Leg 2: Paradise Park to Nu'uau

Leg 3: Nu'uau to Nature Center

HONOLULU MAUKA TRAIL SYSTEM

2. Kaneohe Trail 0.7 mi / 1.1 km
3. Maunaloa Trail 0.7 mi / 1.1 km
4. Nahuana Trail 0.75 mi / 1.2 km
5. Makiki Valley Trail 1.1 mi / 1.7 km
7. Moleka Trail 0.75 mi / 1.2 km
8. Manoa Cliff Trail 3.4 mi / 5.5 km
10. Pauoa Flats Trail 0.75 mi / 1.2 km
11. Nuuanu Trail 1.5 mi / 2.4 km
12. Judd Trail 0.75 mi / 1.2 km
13. Aihualama Trail 1.3 mi / 2.1 km
14. Manoa Falls Trail 0.8 mi / 1.3 km



Contour Interval: 40 feet

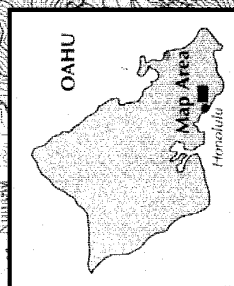
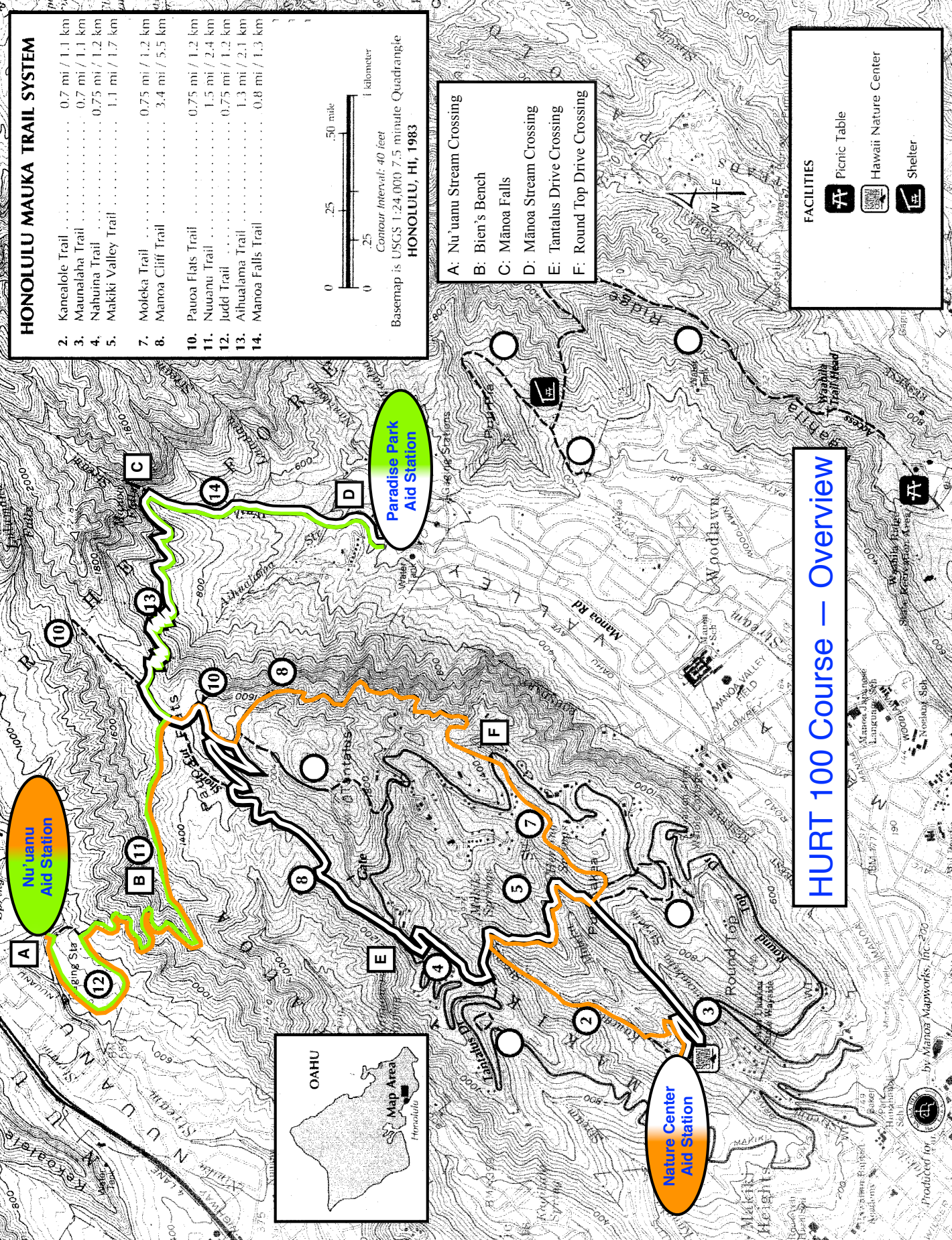
Basemap is USGS 1:24,000 7.5 minute Quadrangle
HONOLULU, HI, 1983

- A: Nu'uanu Stream Crossing
B: Bien's Bench
C: Mānoa Falls
D: Mānoa Stream Crossing
E: Tantalus Drive Crossing
F: Round Top Drive Crossing

FACILITIES

- Picnic Table
- Hawaii Nature Center
- Shelter

HURT 100 Course – Overview



Nature Center
Aid Station

Paradise Park
Aid Station

Nu'uanu
Aid Station

HONOLULU MAUKA TRAIL SYSTEM

2. Kaneohe Trail 0.7 mi / 1.1 km
3. Maunalaha Trail 0.7 mi / 1.1 km
4. Nahuina Trail 0.75 mi / 1.2 km
5. Makiki Valley Trail 1.1 mi / 1.7 km
7. Moleka Trail 0.75 mi / 1.2 km
8. Manoa Cliff Trail 3.4 mi / 5.5 km
10. Pauoa Flats Trail 0.75 mi / 1.2 km
11. Nuuanu Trail 1.5 mi / 2.4 km
12. Judd Trail 0.75 mi / 1.2 km
13. Aihualama Trail 1.3 mi / 2.1 km
14. Manoa Falls Trail 0.8 mi / 1.3 km



Contour Interval: 40 feet

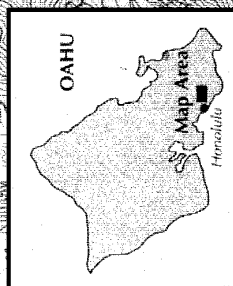
Basemap is USGS 1:24,000 7.5 minute Quadrangle
HONOLULU, HI, 1983

- A: Nu'uanu Stream Crossing
B: Bien's Bench
C: Mānoa Falls
D: Mānoa Stream Crossing
E: Tantalus Drive Crossing
F: Round Top Drive Crossing

FACILITIES

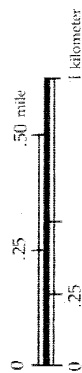
- Picnic Table
 Hawaii Nature Center
 Shelter

HURT 100 Course — Leg 1



HONOLULU MAUKA TRAIL SYSTEM

2. Kaneohe Trail 0.7 mi / 1.1 km
3. Maunalaha Trail 0.7 mi / 1.1 km
4. Nahuina Trail 0.75 mi / 1.2 km
5. Makiki Valley Trail 1.1 mi / 1.7 km
7. Moleka Trail 0.75 mi / 1.2 km
8. Manoa Cliff Trail 3.4 mi / 5.5 km
10. Pauoa Flats Trail 0.75 mi / 1.2 km
11. Nuuanu Trail 1.5 mi / 2.4 km
12. Judd Trail 0.75 mi / 1.2 km
13. Aihualama Trail 1.3 mi / 2.1 km
14. Manoa Falls Trail 0.8 mi / 1.3 km



Contour Interval: 40 feet

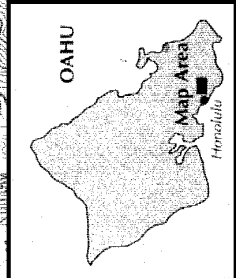
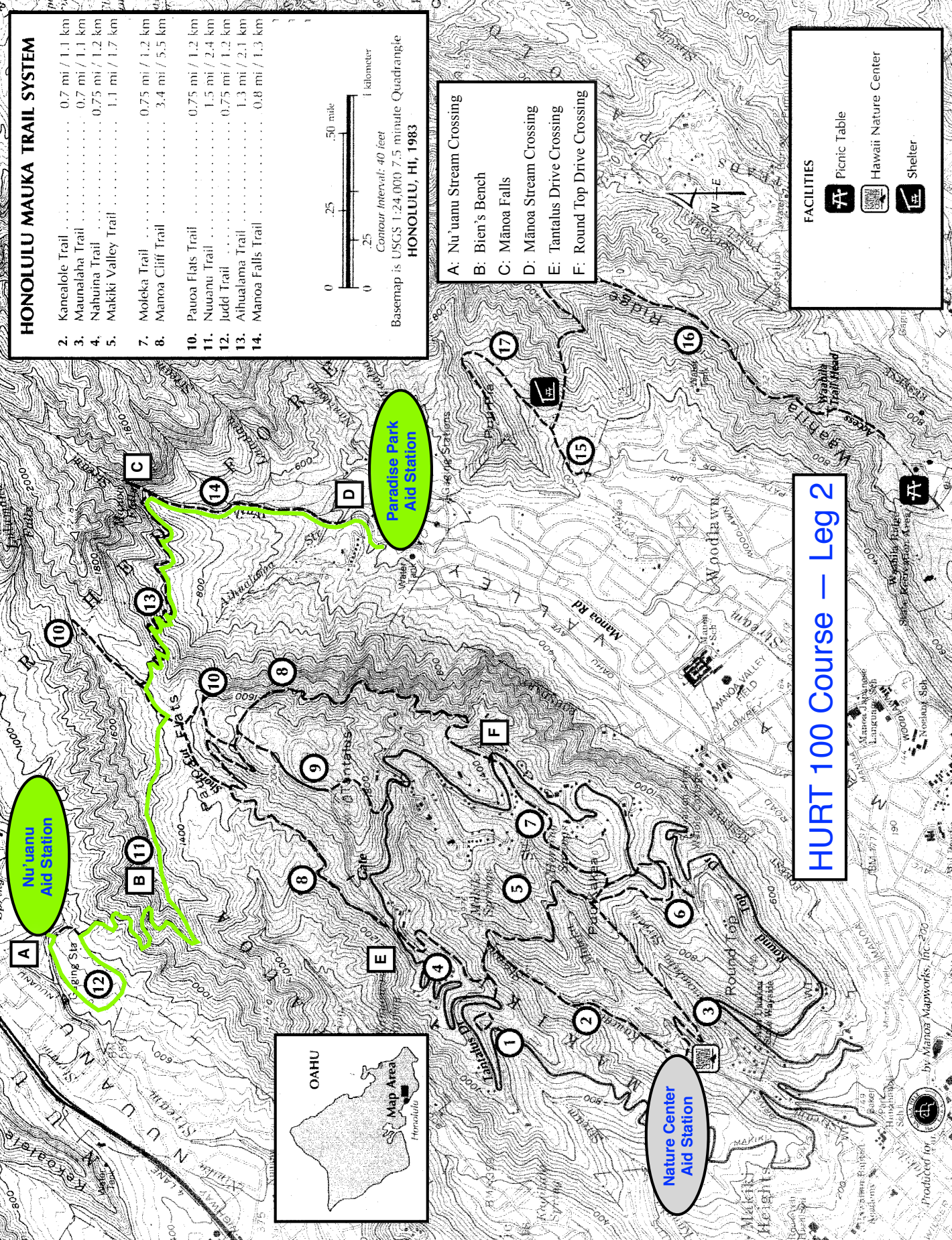
Basemap is USGS 1:24,000 7.5 minute Quadrangle
HONOLULU, HI, 1983

- A: Nu'uanu Stream Crossing
B: Bien's Bench
C: Mānoa Falls
D: Mānoa Stream Crossing
E: Tantalus Drive Crossing
F: Round Top Drive Crossing

FACILITIES

- Picnic Table
- Hawaii Nature Center
- Shelter

HURT 100 Course — Leg 2



HONOLULU MAUKA TRAIL SYSTEM

2. Kaneohe Trail 0.7 mi / 1.1 km
3. Maunaloa Trail 0.7 mi / 1.1 km
4. Nahuia Trail 0.75 mi / 1.2 km
5. Makiki Valley Trail 1.1 mi / 1.7 km
7. Moleka Trail 0.75 mi / 1.2 km
8. Manoa Cliff Trail 3.4 mi / 5.5 km
10. Pauoa Flats Trail 0.75 mi / 1.2 km
11. Nuuanu Trail 1.5 mi / 2.4 km
12. Judd Trail 0.75 mi / 1.2 km
13. Aihualama Trail 1.3 mi / 2.1 km
14. Manoa Falls Trail 0.8 mi / 1.3 km



Contour Interval: 40 feet

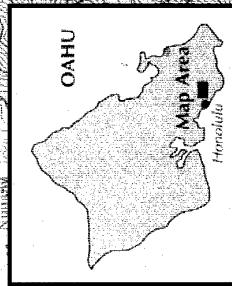
Basemap is USGS 1:24,000 7.5 minute Quadrangle
HONOLULU, HI, 1983

- A: Nu'uanu Stream Crossing
B: Bien's Bench
C: Mānoa Falls
D: Mānoa Stream Crossing
E: Tantalus Drive Crossing
F: Round Top Drive Crossing

FACILITIES

- Picnic Table
- Hawaii Nature Center
- Shelter

HURT 100 Course — Leg 3



**Paradise Park
Aid Station**

**Nature Center
Aid Station**