



Sanctioning
Course Design
Course Measurement and Certification

**So, what should I get out of
this?**

Objectives for today

Objectives for today...

- Understand the difference between USATF ***SANCTIONING*** and USATF ***CERTIFICATION***
- Understand the benefits of USATF sanctioning
- An introduction to some of the principles of course design
- An overview of the measurement process- so if you don't choose to measure your course yourself, you'll have a feel for what the measurer should be doing, and how he or she will do it

Sanctioning vs. Certification

- A USATF sanction is an official designation issued by USATF, through a local Association, which approves and licenses the holding of a competitive track & field, long distance running or race walking event in the United States.
- A USATF certified course is one that is measured in accordance with USATF methods and procedures



SANCTIONING

Advantages of Sanctioning

- Increased Prestige
- Liability Insurance
- Medical Insurance for Athletes
- Calendar Promotion
- Only Performances in Sanctioned Events are eligible for Record Consideration

For more on USATF sanctioning...

- Call USATF Illinois at 630-512-0727
- www.usatfillinois.org
- www.usatf.org

Course Design Objectives

The best race courses are:

- Safe
- Simple
- Aesthetically pleasing
- Accurate

Safety

Things to consider when designing a safe course

- Traffic and side streets
- Effect on businesses, churches, public buildings, etc.
- Condition and width of running surfaces
- Interaction of runners with each other
- Start and finish configuration

Random thoughts on Safety:

- Avoid poorly maintained and uneven surfaces as much as possible.
- Avoid sharp turns- and ANY turns in the first and last 200 meters of the course
- Minimize vehicle traffic on the course
- Keep runners from crossing paths- or running into each other
- Consult the appropriate officials as early as possible.

Keeping it simple...

- Turns
- Lane restrictions
- Turnarounds and Loops
- Start and Finish configuration
- Course capacity

Some thoughts on not making it harder than it has to be...

- Keep turns to an absolute minimum. Avoid sharp turns and turnarounds.
- Avoid criss-crosses and confusing loop patterns.
- A course that's easy to measure is most likely easier to run and to administer.
- Use existing barriers. Temporary barriers are headaches.
- Consult your timing company when configuring your start and finish areas.
- Design your course for more participants than you expect.

Course Aesthetics

- Appropriate Elevation Changes
- Attractive Environment
- Logistics that work
- Spectator friendly if possible

Designing an Attractive Course

- Choose a route with attractive and interesting scenery.
- Design your course so as to generate community support.
- Don't add unnecessary hills to your course, but...
- Don't make your course boring just so it will be flat and fast.
- Consider designing your course so that it isn't difficult for spectators to see the runners at at least one point between the start and the finish.

Course Accuracy

- Measured correctly
- Run as measured

An accurate course...

- Is USATF Certified.
- Has splits marked at every mile, and metric splits at least every 5 kilometers.
- Is measured the way it will be run.
- Keeps record qualification guidelines in mind:
 - ✓ No more than 30 percent start to finish separation
 - ✓ Drop cannot exceed more than one meter per kilometer
 - ✓ Don't ruin your course just to make it record-eligible
 - ✓ If your course isn't record-eligible, include that fact in your publicity materials.



COURSE MEASUREMENT and CERTIFICATION

Measurement Myths

...what you might have heard about
course measurement...

Measurement Myths

- 1. Course measurement is time-consuming
- REALITY: An experienced measurer can measure and document a 5K course in a morning.

Measurement Myths

- 2. Course measurement is complicated.
- REALITY: There's nothing here more complicated here than addition, subtraction, multiplication, and division. You measure the course by riding the bike, then fill out the forms, draw the map, and send it all to the certifier.

Measurement Myths

- 3. Course Measurement is expensive.
- REALITY: You can probably have a 5K course measured by an experienced measurer for \$250 or less. If you want to measure the course yourself, that's about what a Jones counter and steel tape will cost you.

Measurement Myths

- 4. Nobody's going to set a record at my race, anyway...
- REALITY: You may be right- but your participants now expect your course to be the correct length- and all of the intermediate points to be the right distance from the start, finish, and each other. What about age-group records?

Measurement Myths

- 5. Certified Courses are LONG.
- REALITY: Maybe. It's true that USATF requires a short course prevention factor (SCPF) to be added to each course. The SCPF *usually* compensates for potential errors in the measurement process that tend to yield a short course.

Measurement Myths

- 6. A measuring wheel is just as good.
- REALITY: NO, IT ISN'T. Measuring wheels are calibrated only once- at the factory- and seldom if ever again. As they wear, they get smaller, making them measure short. They're also susceptible to spinning when they bump- also causing them to measure short. And walking behind one is SLOW.

Measurement Myths

- 7. Only a certifier can measure a course for certification
- REALITY: In the USA, ANYONE can measure a course. The measurement must be in accordance with USATF procedures and the application submitted on USATF's forms. The state certifier reviews the application and issues the certificate.

The Calibrated Bicycle Method

Used to measure race courses in the
USA- and most of the world.

What do you need?

- Bicycle
- Jones Counter
- Steel Measuring Tape
- Lumber crayon or chalk
- Calculator
- Masking tape
- Paint
- Hammer
- Nails
- Pencil
- Notebook

Measurement Steps

- Lay out calibration course
- Calibrate bicycle
- Measure race course twice
- Re-calibrate bicycle
- Document course
- Complete forms and draw course map
- Submit to certifier

The Calibration Course

Must be:

- Straight
- Paved
- As flat as possible
- At least 300 meters in length

Best results are achieved with calibration course located close to the race course

The Calibration Course

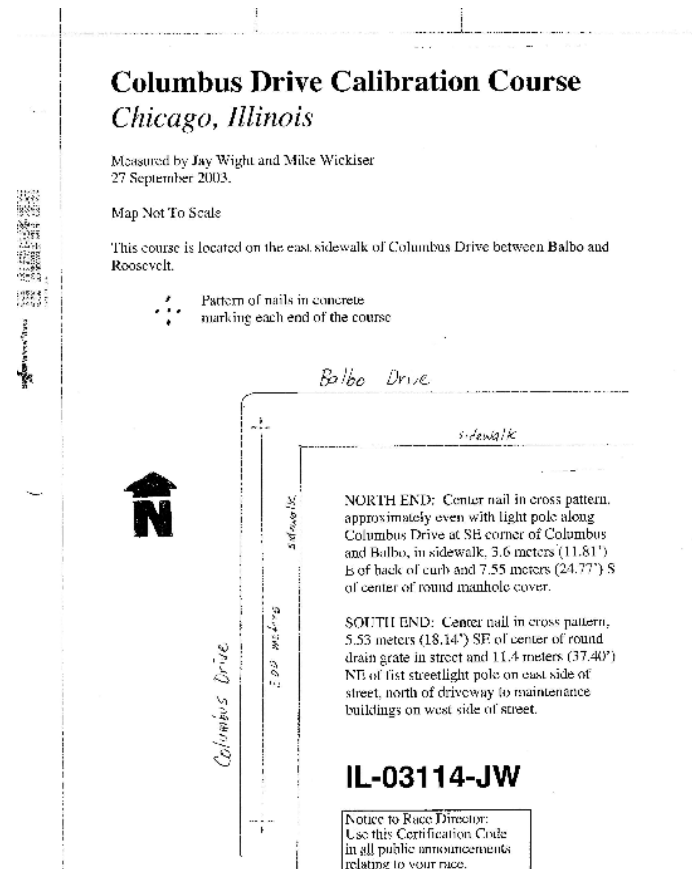
May be measured with:

- Steel measuring tape
- Electronic distance measurement (EDM) equipment

If using tape, measure the course twice, and **AVERAGE** the measurements

The Calibration Course

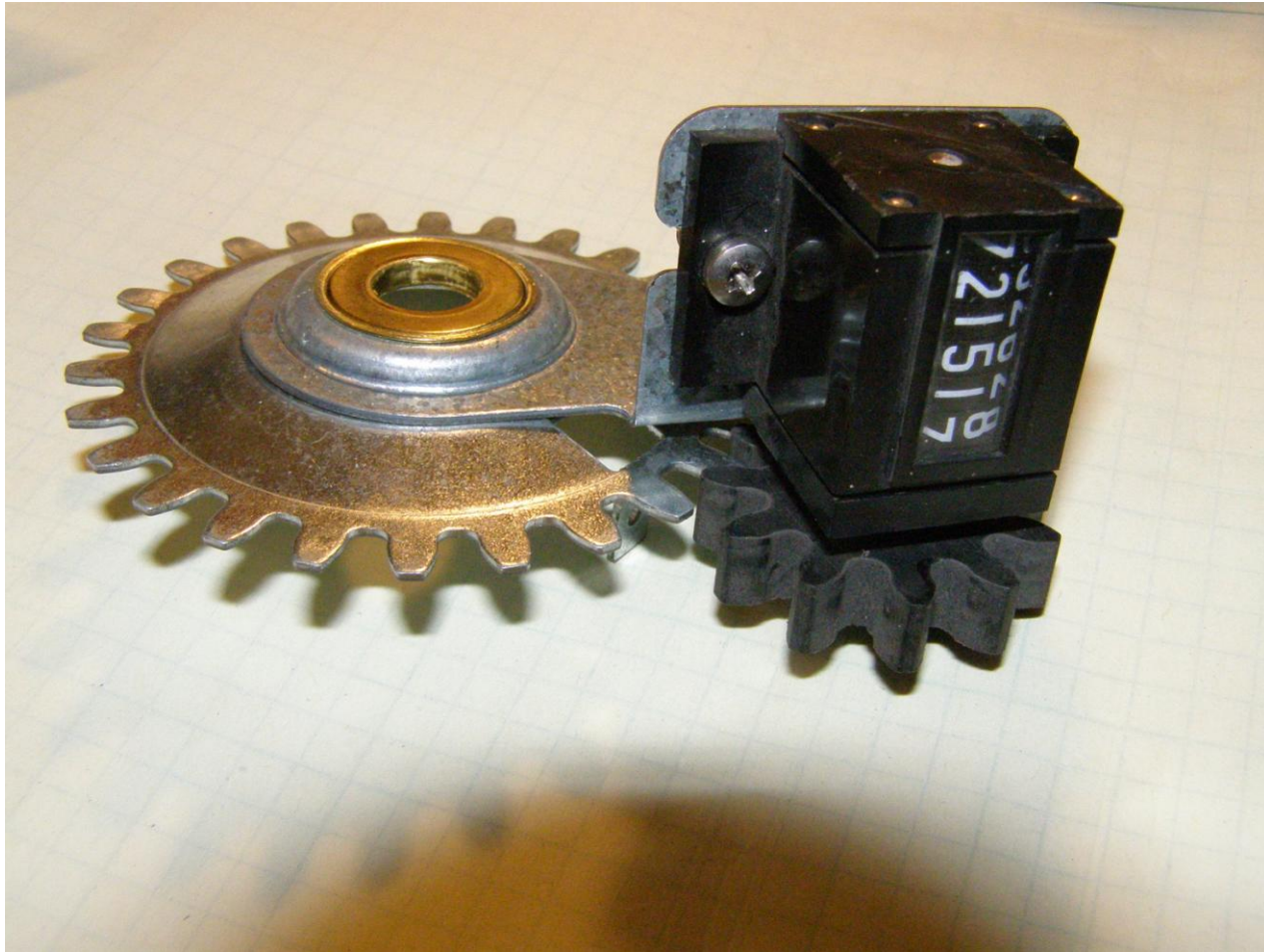
- A certified calibration course can be used to measure many courses
- The map on the right is of one of the calibration courses used to measure the Chicago Marathon course



Calibrating the Bicycle

- Install the Jones Counter on the front hub of the bicycle

The Jones Counter



Mounted on the bicycle...



Calibrating the Bicycle

- Install the Jones Counter on the front hub of the bicycle
- Start riding at one end of the calibration course
- Turn around at the other end and ride back
- At least two rides in each direction
- Determine your constant by averaging the counts from your rides

Measuring the Course

- Calculate the course length in counts:
constant (counts/meter) x length (meters)
- Begin measuring at either the start or the finish
- Follow the SHORTEST POSSIBLE ROUTE (SPR)
- Mark intermediate splits as you go

The Shortest Possible Route

- Defined as " the shortest possible route a runner can take and not be disqualified"
- Measure no more than 30 cm (1') from the curb or the side of the road

Measuring The Course

- Measure the course twice
- Measurements must be within .08% of each other (4 meters in 5 km)
- Course length is the SHORTER of the two measured lengths
- Re-calibrate after you have two measurements that are within the required tolerance

Measuring the Course

- Recalculate course length, if necessary
- Adjust course length with steel tape, if necessary, preferably at start, finish, or turnaround point

Documenting the Measurement

- Complete the USATF Forms: “Application for Certification of a Road Course” (2 pages), “Bicycle Calibration Data Sheet”, “Course Measurement Data Sheet”
- Permanently mark Start, Finish, and any Turnaround Points
- Mark intermediate split points if desired.
- Document locations of all points with measurements to nearby landmarks.

Drawing the Course Map


- Must give the name of the course, city, and state
- Must show and identify every street, path, etc. that the course follows
- Must include descriptions of Start, finish, and Turnaround points- points that “define the course”
- Must be 8.5” x 11”, one color, suitable for copying, scanning, and posting on USATF.org
- The goal of the process is that someone who is unfamiliar with the course could locate and run the course using only the course map

Sending the Application to the Certifier


- May be sent by mail, fax, or as a scanned attachment to an e-mail note.
- **MUST** be sent **BEFORE** the date of the event (postmarked if mailed)
- Certifier's fee is \$25 per course
- No fee for calibration courses

The Measurement Certificate

- Front side has contact information for race director and measurer
- Other information includes elevations, start to finish distance
- Also dates course measured and date documents submitted



**Road Running Technical Council
USA Track & Field
Measurement Certificate**



Name of the course: Alpine Races 5K Distance: 5000 meters
 Location (state): Illinois (city): Lake Zurich
 Type of course: road race calibration track Configuration: Out- Loop- Back
 Type of surface: paved 100 % dirt _____ % gravel _____ % grass _____ % track _____ %
 Altitude (feet above sea level) Start 850 Finish 850 Highest 885 Lowest 845
 Straight line distance between start & finish 15 meters Drop zero m/km Separation 0.3 m
 Measured by (name, address, & phone) Jay Wright 4556 Opal Drive
Hoffman Estates, IL 60192-1185 (847) 359-4598 jaywright@earthlink.net
 Race contact (name, address, & phone) Louis Baigorria 1250 Eric Lane
Lake Zurich, Illinois 60047 (847) 540-9434
 Measuring Methods: bicycle steel tape electronic distance meter
 Number of measurements of entire course: two Date(s) when course measured: June 9, 2007
 Race date: September 9, 2007 Course paperwork submission date: June 12, 2007
 Difference between two best measurements of the course: 0.73 meters Certification code: IL-07045-JW
 Replaces IL-06087-JW (if applicable)

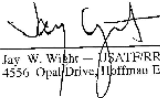
Notice to Race Director
 Use this Certification Code in all public announcements relating to your race.

Be It Officially Noted That

Based on examination of data provided by the above named measurer, the course described above and in the map attached is hereby certified as reasonably accurate in measurement according to the standards adopted by the Road Running Technical Council. If any changes are made to the course, this certification becomes void, and the course must then be recertified.

Validation of Course — In the event a National Open Record is set on this course, or at the discretion of USA Track & Field, a validation re-measurement may be required to be performed by a member of the Road Running Technical Council. If such a re-measurement shows the course to be short, then all pending records will be rejected and the course certification will be cancelled.

This certification expires on December 31 in the year 2 0 1 7

AS NATIONALLY CERTIFIED BY:
 Date: June 12, 2007
 Jay W. Wright — RRCA/RRRTC National Certifier
 4556 Opal Drive, Hoffman Estates, IL 60192-1185 (847) 359-4598 jaywright@earthlink.net

The Measurement Certificate

Alpine Races 5K Lake Zurich, Illinois

Measured by Jay Wight- Hoffman Estates, Illinois 9 June 2007

Map Not To Scale

START: Mag Nail, NE edge Whitney in Paulus Park, 61.9' E of streetlight pole by skateboard park.

1 MILE: N edge, West main street, 80.7' W of fire hydrant just NW of intersection of W. Main Street and Park.

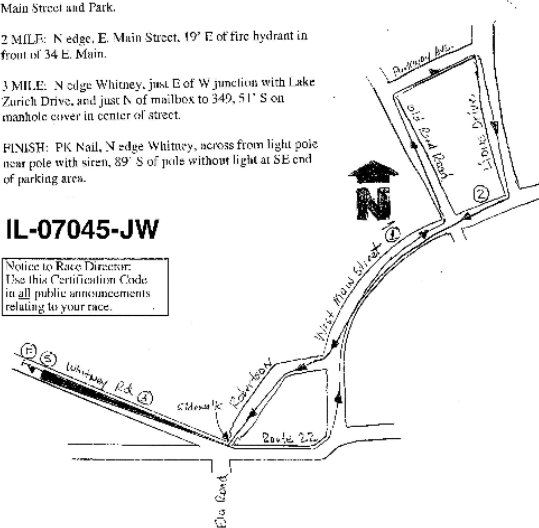
2 MILE: N edge, E. Main Street, 19' E of fire hydrant in front of 34 E. Main.

3 MILE: N edge Whitney, just E of W junction with Lake Zurich Drive, and just N of mailbox to 349, 51' S on manhole cover in center of street.

FINISH: PK Nail, N edge Whitney, across from light pole near pole with street, 89' S of pole without light at SE end of parking area.

IL-07045-JW

Notice to Race Director:
Use this Certification Code
in all public announcements
relating to your race.



- The reverse side of the USATF Measurement Certificate is the course map
- Includes name of course, city and state
- Must describe the start, finish, and turnaround points- either verbally or with a detailed sketch

From Design To Measurement

**Doing your homework so your
measurement will go as
smoothly as possible...**

Doing Your Homework

- Start with the basics- desired start and finish locations, course length, etc.
- Plot the course out on a map. Computer applications are perfect for this- Google, Map My Run, USATF America's Running Routes, etc.
- Leave some slack in case things don't turn out quite like the computer says they will.
- Give the course a test run- foot, bike, car, whatever works for you.
- Consult with the local officials
- Repeat as necessary.
- Once you have a course you like, that you think is the right length, and you have the approvals you need, schedule your measurement.

GPS

My GPS says your course is LONG!

Why it probably isn't...

My GPS says your course is LONG!

- Consumer grade GPS only pinpoints location within 5 to 10 meters
- Wrist-mounted GPS isn't as accurate as larger models
- GPS is unreliable when it can't pick up satellites- like in wooded areas, or around tall buildings

My GPS says your course is LONG!

- Surveyor-grade GPS is more accurate than consumer grade- but it's expensive, and requires a surveyor to operate it
- THE CALIBRATED BICYCLE METHOD IS MORE ACCURATE THAN THE GPS UNITS YOUR RUNNERS USE!

Thank You!

- Phone: 847-359-4598
- E-mail: jaywight@icloud.com
- USATF website:
<http://www.usatf.org/events/courses/certification/>