

# Measurement News



January 2000

Issue #99



Mike Sandford (L) and Mike Tomlins at the measurement of the Flora London Marathon, 1998. Photo by John Disley

## MEASUREMENT NEWS

#99 - January 2000

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### PASSING THE BATON - RRTC CHAIRMAN SOUGHT

This announcement was made at the RRTC meeting at the USATF convention and was repeated in MNForum, December 5.

Please respond before January 30.

I've been the RRTC Chairman since April 1986, and have taken satisfaction from the job. However, there comes a time to step aside and allow natural succession to take place. Accordingly, it's my goal to find a new chairman and recommend to Pat Rico, USATF President, that she appoint my successor. I hope the change will take effect at the time of our next USATF annual meeting.

I intend to continue to measure and publish *Measurement News*, and spend more time on the purely technical aspects of measurement rather than the administrative.

The new Chairman must possess the following characteristics, in my view:

- 1) An enthusiasm and desire to do the job.
- 2) Ability to do the job.

Candidates are sought. If you believe yourself to be qualified, please write to me. All correspondence will remain confidential. I will post nothing of progress on MNForum, except in the most general terms.

Any opinions on how I should do this are welcome. I will respond on an individual basis to all.

### David Katz is new Finish Line Chair - Will Prepare Pamphlet on Race Requirements

1999-12-03: After remaining vacant for a year since Ryan Lappa resigned, the position of RRTC Finish Line Chair has been filled by **David Katz**, who operates the Finish Line Road Race Technicians service in Port Washington, New York. David volunteered during the RRTC meeting at the USATF Convention, as we were discussing whether to launch a major effort to overhaul the RRTC Finish Line Book, similar to our project this past year which produced our Online Course Measurement Book. David asserted that our Finish Line book is rather antiquated (e.g., it contains nothing on Chip Timing), and probably not worth revising. On the other hand, it will be worthwhile to write a short pamphlet describing the requirements for any road race that obtains a USATF sanction. David will prepare this pamphlet with help from **Jim Gerweck**. (From RRTC web page - "Late Breaking News")

### Enhancements Planned for Course Measurement Video and Online Measurement Manual

1999-12-03: RRTC Western Vice-Chair **Tom McBrayer** announced during the USATF Convention in Los Angeles that he will remake our Course Measurement Video. Our current version was prepared by Tom around 7 or 8 years ago. Tom intends to modernize this video and produce it more professionally. RRTC has budgeted \$1500 for production of the new video. In addition, **Bob Baumel**, webmaster of this site, announced several planned enhancements for the Online Measurement Manual. We will produce a "single-download" PDF (Adobe Portable Document Format) version of the book, for those who prefer a version optimized for printing instead of on-screen viewing. Other possible enhancements include PDF application forms that can be filled out on the computer, and a new chapter devoted to certification of **tracks** for LDR events. To enable some of these enhancements, Bob has purchased the current Adobe Acrobat software.



Road Running Technical Council  
USA Track & Field

recognized by



# Measurement Certificate

Name of the course \_\_\_\_\_ Distance \_\_\_\_\_

Location (state) \_\_\_\_\_ (city) \_\_\_\_\_

Type of course: road race  calibration  track  Configuration \_\_\_\_\_

Type of surface: paved \_\_\_\_\_% dirt \_\_\_\_\_% gravel \_\_\_\_\_% grass \_\_\_\_\_% track \_\_\_\_\_%

Altitude (meters/feet above sea level) Start \_\_\_\_\_ Finish \_\_\_\_\_ Highest \_\_\_\_\_ Lowest \_\_\_\_\_

Straight line distance between start & finish \_\_\_\_\_ Drop \_\_\_\_\_ m/km Separation \_\_\_\_\_%

Measured by (name, address, & phone) \_\_\_\_\_

Race contact (name, address, & phone) \_\_\_\_\_

Measuring methods: bicycle  steel tape  electronic distance meter

Number of measurements of entire course: \_\_\_\_\_ Date(s) when course measured: \_\_\_\_\_

Race date: \_\_\_\_\_ Course paperwork submission date: \_\_\_\_\_

Difference between two best measurements of the course: \_\_\_\_\_ Certification code: \_\_\_\_\_

Replaces \_\_\_\_\_ (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 remeasurement may be required to be performed by a member of the Road Running Technical Council. If such a remeasurement shows the course to be short, then all pending records will be rejected and the course certification will be cancelled.

**Automatic Expiration** — This certification automatically expires ten years after date of issue, although it may be renewed for additional ten-year periods upon testimony to RRTC that the course is still in use, and has not been altered, and that all key points (start, finish, turn-around points, cone positions, etc.) described on the attached map can still be located precisely.

**AS NATIONALLY CERTIFIED BY:**

\_\_\_\_\_ Date: \_\_\_\_\_

## MEASUREMENT CERTIFICATE REVISED

Ron Scardera brought this up at the USATF convention. As many packets of measurement data are sent by fax or email, rather than by conventional mail, it's time to change the wording.

We presently use: "Course Paperwork Postmark Date."

The new wording is: "Course Paperwork Submission Date."

It is no big trick to change the wording on the certificate if you have an electronic copy in whatever word-processing program you use. For those who do not use the electronic forms, you will find a revised form in this issue of *Measurement News*.

## 1989 COURSES HAVE NOW EXPIRED

All courses certified before 1990 have now expired, and are no longer considered as certified unless renewal application is made. The current course list has had the status of the 1989 courses changed to "X" to reflect their expiration.

## COVER PHOTOS SOUGHT

Your Editor is getting hard up for photos to use on the cover. Please send Pete some photos! All will be scanned and returned immediately.

16-Dec-99 VALIDATIONS											
Validations Pending											
Pass/Fail	Date of Event	Date of Validation	Course Name	Course ID	Measurer	Validator	Type	Advertised Distance	Nominal Distance	Measured Distance	Percent Difference
	20-Mar-99		Bull Run 2K	VA97042RT	Thurston		RW	2,000 m	2,000 m		
	22-Oct-97		Juniper Valley Park	NY94003DB	Brannen		LDR	100 mi	1,1982 mi		
	17-May-98		Mayfest	CA98022RS	Scardera		RW	15,000 m	1703.26 m		
	18-Jan-97		Jed Smith Ultra	CA97004KY	Young		LDR	50,000 m			
	15-Nov-98		Clarksburg Country Run 30Km	CA87015CW	Wisser		LDR	30,000 M	30,000 m		
	26-Apr-98		Sallie Mae 10 K	DC09001DK	Katz		LDR	10,000 m	10,000 m		
	22-May-99		Bedford Rotary 12 K	NH89004BT	Teschek		LDR	12,000 m	12,000 m		
	28-Sep-99		Portland Marathon	OR93005LB	Barrett		LDR	42,195 m	42,195 m		
	7-Sep-98		Pacific Sun 10 K	CA98013TK	Knight		LDR	10,000 m	10,000 m		
	6-Apr-97		Fifty Plus 8KM	CA97026RS	Carpenter		LDR	8000 m	8000 m		
	26-Jun-99		USATF 20K RW	OR99008LB	Zemper	Barrett	RW	20,000 m	1000 m		
	4-Oct-98		Thundering Herd 12 K	NY98030AM	Felix		LDR	12,000 m	12,000 m		
	16-Jun-98		Memorial Run 50Km	NJ96017DB	Brannen		LDR	50,000 m	5,000 m		
Validations Completed											
Fail	27-Nov-97	6-Jun-99	Hyatt Turkey Trot	NC97062PH	White	Hronjak	LDR	8,000 m	8,000 m	7995.5 m	-0.055
ceed	28-Mar-98	N.A.	Bull Run 2K	VA97042RT	Thurston		RW	2,000 m	2,000 m	record sproded	
V	20-Feb-99	9-Oct-99	Outback Distance Classic 12 Km	FL99007DL	Ward	Loeffler	LDR	12,000 m	12,000 m	12,047.06 m	0.39
V	17-May-98	10-Nov-99	Inland Empire 15K	CA98022RS	Scardera	Loeffler	RW	15,000 m	1703+ m	1706.47 m	0.25
V	14-Sep-97	10-Oct-99	Nat. Heritage Corridor	IL96052JV	Hinde	Wight	LDR	25,000 m	25,000 m	25,048 m	0.19
V	24-Oct-99	22-Aug-99	LaSalle Bank Chicago Marathon	IL99043JV	Hinde	Wight	LDR	42,195 m	42,195 m	42239 m	0.1
fail	27-Nov-97	6-Nov-99	Run to Feed the Hungry	CA95037CW	Moore	Young	LDR	10,000 m	10,000 m	9,941.1 m	-0.59
pass	25-Oct-97	10-Oct-99	Tulsa Run	OK94041BB	LaFayette	Baumel	LDR	15,000 m	15,000 m	15,013.37 m	0.089
V	5-Apr-98	6-Nov-99	Wins Racewalk	CA98013RS	Scott	Young	RW	25,000 m	1250 m	1252.9 m	0.23
V	23-May-98	20-Oct-99	Benchmark Blast 30Km	CA98002RL	Letson	Scardera	LDR	30,000 m	10000 m	30031 m	0.108
pass	14-Nov-98	10-Oct-94	Mission Bay 25Km*****	CA96005RL	Letson	Scardera	LDR	25,000 m	25,000 m		
			***** Course is identical to CA88067RS which was validated on 10/25/94								
pass	14-Nov-98	6-Nov-99	Helen Klein 50Km	CA98041RS	Scott	Young	LDR	50,000 m	50,000 m	50,043.4 m	0.09
pass		28-Aug-99	Pittsburgh Marathon	PA97009WB	Grollman	Group	LDR	42,195 m	42,195 m	42,216.8 m	0.05
pass	13-Feb-99	21-Aug-92	Gasparilla 15 K	FL92001WN	Nicole	Loeffler	LDR	15,000 m	15,000 m	15,010.80	0.072
pass	7-Sep-98	5-Sep-93	New Haven 20K	CT91001WN	Guido	Nicoll	LDR	20,000 m	20,000 m	20,014 m	0.07
	8-Aug-08		Joe Kleinerman 12 hr	NY98001DB							
	6-Sep-99	4-Dec-99	Park Forrest 10 Mile	IL99037JV	Hinde	Wickiser	LDR	10 miles	10 miles	9,994 miles	-0.05
Fail	20-Mar-99	12-Dec-99	Shamrock Sportsfest 8 km	VA99009RT	Corzatt	Wickiser	LDR	8,000 m	8,000 m	7,925 m	-0.08

## FELIX CICHOCKI IS DYING

posted on MNForum December 17, 1999 by Pete Riegel

On December 15 I received a message from Mary Ann Cichocki informing me that Felix, who has been battling liver cancer for the last 18 months, has exhausted all medical options and moved to a hospice. His death is expected within a short time.

I knew little of Felix outside our narrow world of course measurement. We met in 1986 when I was in Phoenix on a marathon measurement. Felix helped. It was a hot ride - around 100F. He followed me around with a pickup truck full of an iced tea/lemonade concoction that I drank by the quart. According to Felix, it's known in Phoenix as an "Arnie Palmer."

In 1994 we held a measurement seminar in Phoenix. Felix and Mary Ann, being local, handled all the point work. They scouted out a wonderful traffic-free measurement venue in the newly-paved and deserted streets of a housing development about to be built. They also found us a delightful and affordable hotel nearby. Those who came to the seminar met Felix and liked him. After the measurement work was done, Felix led a group on a hike to the top of Camelback Mountain, and arranged for a large get-together for the whole group in a western-style restaurant in his home town of Carefree.

Felix has been measuring since at least 1983, and has measured 97 courses, the last, the Tucson Marathon, in October this year. He became the Arizona certifier in 1987, and certified 162 courses since then. Arizona runners are greatly in his debt. I very much enjoyed working with him during those years.

A big, tall, ruggedly handsome man with silver hair and a fine smile, Felix is a guy you have to like, and I do, a lot. The news of his imminent death is saddening, not just for Felix but for Mary Ann, his wife of 41 years.

I'm out of words. This is really rotten news.

### Responses to the above:

#### From Wayne & Sally Nicoll:

Sally and I are shocked and saddened by the news of Felix's medical condition. During the time we knew him I was VC East and Sal was the Validations Chair. Felix has always been one of our favorite persons in the measurement community. (His last name is pronounced like "sea hockey".) We passed up the measurement seminar the Cichockis hosted in Phoenix and now we regret that decision. We never had enough time to really know him. Felix is, as Pete described, a big, rugged, handsome westerner who lived in truly western style. His nearest neighbor was over a mile away from his ranch. At the Convention held in Phoenix, Bob Baumel and I worked with Felix on a local course he needed help with and we truly enjoyed the camaraderie and Felix's knowledge of local history. Our love and prayers go out to Felix and the family.

#### From Tom McBrayer:

A note about Felix. Just last week Felix called me. He was working on sorting out the results of a recent race and wanted some help. I had heard he had cancer and wasn't in good shape. He said, "I don't expect to be around in two months." Nevertheless, he really wanted to get these results straightened out. He e-mailed me the data but it had some serious problems. I called him back and gave him some suggestions. He sounded terrible. I told him he shouldn't be working on but should be getting some rest. He agreed and said he would tackle it the next day!

#### From Alan Jones:

I met Felix just once. It was at a TAC meeting in Washington DC. As Pete said, you couldn't help but like the guy.

There's just too much of this cancer stuff around. I've got a good friend who has prostate cancer, his wife has ovarian cancer and their married daughter with a young child has breast cancer!

#### From Jennifer Aviles:

Pete, thank you for posting the very sad news about Felix. I sent a note to Mary Ann. I am so saddened by the news. I hope he is able to let go now and pass peacefully into the next life.

**Minutes — Road Running Technical Council  
USATF 1999 National Convention — Los Angeles, CA**

**1st Meeting — Thursday, December 2, 1999**

**Attending:** Bob Baumel, John Boyle, Jim Gerweck, Sharon Good, Norm Green, Phil Greenwald, Finn S Hansen, Basil Honikman, David Katz, Jim Knoedel, AC Linnerud, Mary Anne McBrayer, Tom McBrayer, Al Morris, Ron Pate, Pete Riegel, Ron Scardera, Don Shepan, Larry Smithee

The meeting was called to order by Chairman Pete Riegel at 16:05. All present introduced themselves. Pete sent regards from his wife Joan (RRTC Registrar) who was recovering from surgery and therefore decided not to attend this year's Convention.

**Officers' Reports**

The following two officers weren't present at the meeting, but sent these abbreviated reports for inclusion in the Minutes:

**Course Registrar, Joan Riegel:** Joan asked that her regards be presented to all, and reports that she had received, listed and filed 1085 certificates this year by Convention time, which is about the same rate as the last decade or so. Normal flow rate of certified courses is 1100 to 1200 courses per year.

**Validations Chairman, Doug Loeffler:** Doug reported that 17 courses have been validated this year to date, with 12 courses remaining pending.

**Other Business**

**Succession and Backup:** Pete would like 2000 to be his last year as Chairman. He invites potential replacements to volunteer by personal and private communications to Pete. Qualifications are: (1) Desire to do the job; (2) Competence to do it. David Katz commended Pete on his fairness and ability to keep people in the fold, and said these should be the primary requirements for the job. David also commented on Ted Corbitt's remarkable job in establishing the certification program. Mary Anne McBrayer asked whether the Chairman and Registrar jobs are necessarily linked. Pete said it's valuable for the Chairman to have all the certificates at hand, so it is indeed helpful if the Chairman can also do the registrar job or has a spouse who can do it. Aside from the issue of finding a new Chairman, Pete urged all other RRTC officers and certifiers to think about how they would go about finding replacements for themselves.

**Feedback on Effectiveness:** Pete said we get little feedback on how good a job we're doing. He assumes that if nobody is complaining, there isn't a problem. Several others agreed that if something was wrong we'd hear about it. Jim Knoedel asked how many new measurers we've gotten recently. Pete replied that about 50 people every year measure for the first time.

**Temperature Correction in Validations?** Remarking on Mike Sandford's work reported in MNForum and *Measurement News*, Pete said it represents a significant advance in understanding. Based on this work, Pete suggested allowing temperature-corrected constants in calculations for validation measurements, which would provide an additional chance of survival in borderline cases. Discussion ensued on various other aspects of Mike's work: different kinds of tires, smooth vs. rough surfaces, larger vs. average constant. Look for more discussion in MNForum.

**Online Measurement Book:** Bob Baumel led discussion about the online Course Measurement manual and future work. Our online manual became available on the RRTC web site at <http://users.hit.net/~bobbau/rrtc/> in June, 1999. Currently, it consists of a set of web pages, except for the application forms which are in PDF format. Some have requested a single-download version or hard-copy distribution. Bob has bought a copy of current Adobe Acrobat software and will experiment with producing a PDF version, but notes that it will almost certainly be a big file (at least about a megabyte). Pete has commented that he could make up a hard-copy version and distribute it at lower cost than Indianapolis. Bob mentioned that maintenance of multiple versions (e.g., web pages and PDF) may be problematic. As a possible enhancement to our manual, Bob said he would like to add a chapter on RRTC certification of Tracks. Several agreed that this is a good idea. Pete conducted a rough survey: Nearly all present have some form of Internet access; 9 of 15 with Internet access have looked at the online book and 6 have printed it. Bob mentioned the possibility of PDF application forms that can be filled out on the computer (based on Acrobat 4.0 software), and also said he would try doing this for the Certificate. Ron Scardera described his Certificate blank which includes 2 changes compared with our standard one.

**New Finish Line Book (& New Finish Line Chairman):** This discussion had been prompted by a suggestion from Jim Gerweck to put our Finish Line book online as we've already done for the Course Measurement manual. David Katz said the existing Finish Line book is antiquated (e.g., no discussion of chip timing) and not worth revising. Finn Hansen said the book does contain essential information on estimating peak arrival rate as a function of race distance. Mary Anne McBrayer asked the key question: Who are we trying to serve with this book? After much discussion, it was agreed to write a small pamphlet containing the essential information needed by any road race obtaining a USATF sanction. **David Katz** agreed to fill the office of Finish Line Chair, which had been empty since Ryan Lamppa resigned last year. David will head the project of preparing the new pamphlet, with help from Jim Gerweck.

**Jim Gerweck Running Times article:** Jim has written an article on course measurement and certification entitled "The Measure of a Race" which has just appeared in the Jan/Feb 2000 issue of *Running Times*. Copies of the magazine were passed around. We expect this article to provide some welcome publicity for RRTC and course certification.

**Tom McBrayer – Several Items:** Tom commented on three issues:

- Starting Commands in Road Races: Starting commands must be appropriate to avoid false starts. No countdowns and *never* use "On your marks," "Set," "Go." A reasonable choice is "On your marks," followed by the gun or horn. Be especially prepared when you have a celebrity starter.
- Requirements for Course Maps: Tom reminded us that course maps must always say whether an unrestricted SPR was followed, and should identify the town where the course is located, as well as the certification number. David Katz suggested that certifiers may wish to add a standard box containing race name, certification number, and town. Meanwhile, Pete noted that certifiers need to prepare a good-looking certificate to go with the map.
- Updating the Course Measurement Video: Tom is remaking the measurement video that he originally prepared in around 1991 or 1992. For the new version, he has hired a professional camera person (Last Lap Productions) and RRTC has budgeted \$1500 for the project. He expects to sell the new video for \$7.50 per copy, which is the same price as the old one.

**Is Measurement News a Dinosaur?** Pete is having some misgivings about our hard-copy journal *Measurement News*. With the advent of online MNForum, people aren't submitting as much

material for MN, and Pete is often reduced to copying MNForum material for inclusion in MN. At the same time, the printed publication provides a vehicle for longer, meatier articles such as Mike Sandford's work. MN is sent to many measurers around the world, under the auspices of IAAF, which is good, but sometimes frustrating to Pete because most of these recipients never respond in any way. It was noted that online MNForum has only about 70–80 subscribers, while hard-copy MN reaches about 3 times as many people.

**Online Course Maps:** At last year's meeting, Lance Phegley announced a project to post RRTC course maps online via his *Runner Triathlete News* website at [www.runnertriathletenews.com](http://www.runnertriathletenews.com). Pete said he tried to inform Lance of the magnitude of the task of posting every certification map (some 18 000 courses in our files). Tom explained that *Runner Triathlete News* is a regional publication covering a 5-state area, but is also part of a larger network of regional publications called *The Running Network*. Tom has been feeding maps to Lance for RTN's 5-state area. The intended plan is that *The Running Network* will carry on the plan nationally. Pete expressed concern that some maps are really poor looking. Tom said posting maps on the web might shame measurers into producing better maps. [Note: As these Minutes are prepared, the RTN website includes 223 maps and the program still appears to be limited to the original 5-state area.]

The meeting was adjourned at 18:15.

## 2nd Meeting — Friday, December 3, 1999

**Attending:** Bob Baumel, Jim Gerweck, Sharon Good, Finn S. Hansen, Justin Kuo, AC Linnerud, Mary Anne McBrayer, Tom McBrayer, Pete Riegel, Ron Scardera

Pete called the meeting to order at 15:10. The primary business of this 2nd meeting was to announce results and present awards for the annual RRTC Measurement-By-Pacing contest (the 13th such contest since we began holding them at the 1987 Convention). The floor was turned over to California certifier Ron Scardera.

**Measurement Contest:** Ron had laid out a remarkably well documented contest course which included sidewalks on either side of Avenue of the Stars and a walkway crossing over that street (This course included stairways but the rules clearly specified that the stairs were *not* to be part of the measured distance). Carole Langenbach had the 2nd best measurement but wasn't present at this meeting, so wasn't eligible to receive an award. Therefore, Pete Riegel received the 3rd place award (a finger bell suitable for use on a bicycle) and Tom McBrayer won the 2nd place award (a combination thermometer and compass). Bob Baumel was awarded 1st place and given a book of Top Ten lists of the Millennium. In addition to these contest awards, Ron presented a miniature "Oscar" to Pete Riegel for "best performance as a committee chair."

**Other Business:** Finn Hansen announced his retirement as Utah certifier; he is being replaced by Larry Smithee. Pete reported that Canada now has a certification program similar to ours, with Bernie Conway as head certifier. Discussion continued on several other topics, including the pre-validation measurements conducted this past year for the 2000 Olympic Trials marathons, and status of world road records (There's still no such thing as world road running records, but we are hopeful that IAAF will revisit that question). The meeting was adjourned at 16:05.

*Minutes prepared by Bob Baumel, RRTC Secretary*



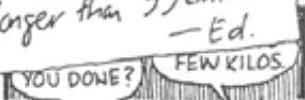
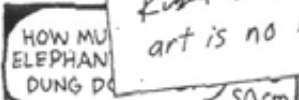
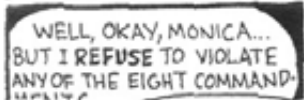
TOM THE DANCING BUG

"TOM THE DANCING BUG"

by RUBEN BOLLING

gal? pt? km? in? cl? ft? mi? lbs? A? dnt? **Hey, America! ENOUGH CONFUSION!**

HOW MANY TIMES MUST AMERICA'S CURRENT HODGEPODGE MIXTURE OF METRIC AND ENGLISH CUSTOMARY MEASUREMENTS CAUSE HOPELESS CONFUSION BEFORE WE REALIZE THAT UNLESS WE SETTLE ON ONE SYSTEM, DISASTROUS MIS-UNDERSTANDINGS WILL CONTINUE?!



*Ruben - please make sure finished art is no longer than 33 cm. - Ed.*

RUBEN BOLLING

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Finn S. Hansen  
6850 Maverick Circle  
Salt Lake City, UT 84121-3302  
(801) 943-4680  
finnsh@cs.com

Peter Riegel  
Chairman, RRTC

Dear Peter:

Please accept this letter as my resignation as the Certifier for Utah effective Decemeber 31, 1999. I have enjoyed working with you and all the other Certifiers. In some ways I will miss the work. My interests have changed over the years and since my back surgery I have not done any measurements. I would like to recommend Larry Smithee as my replacement. Larry is very interested in the work and has been doing a very nice job. I am more than willing to "mentor" him for a while until he gets his feet on the ground.

Thanks for the good times.

Sincerely,



Finn will be missed. Since 1985 as Utah certifier, Finn measured 71 courses and certified 118. He continues to be active in USATF as an official. He was chosen to work the 1996 Olympic Games in Atlanta, something all officials want to do but only the most competent get the chance.

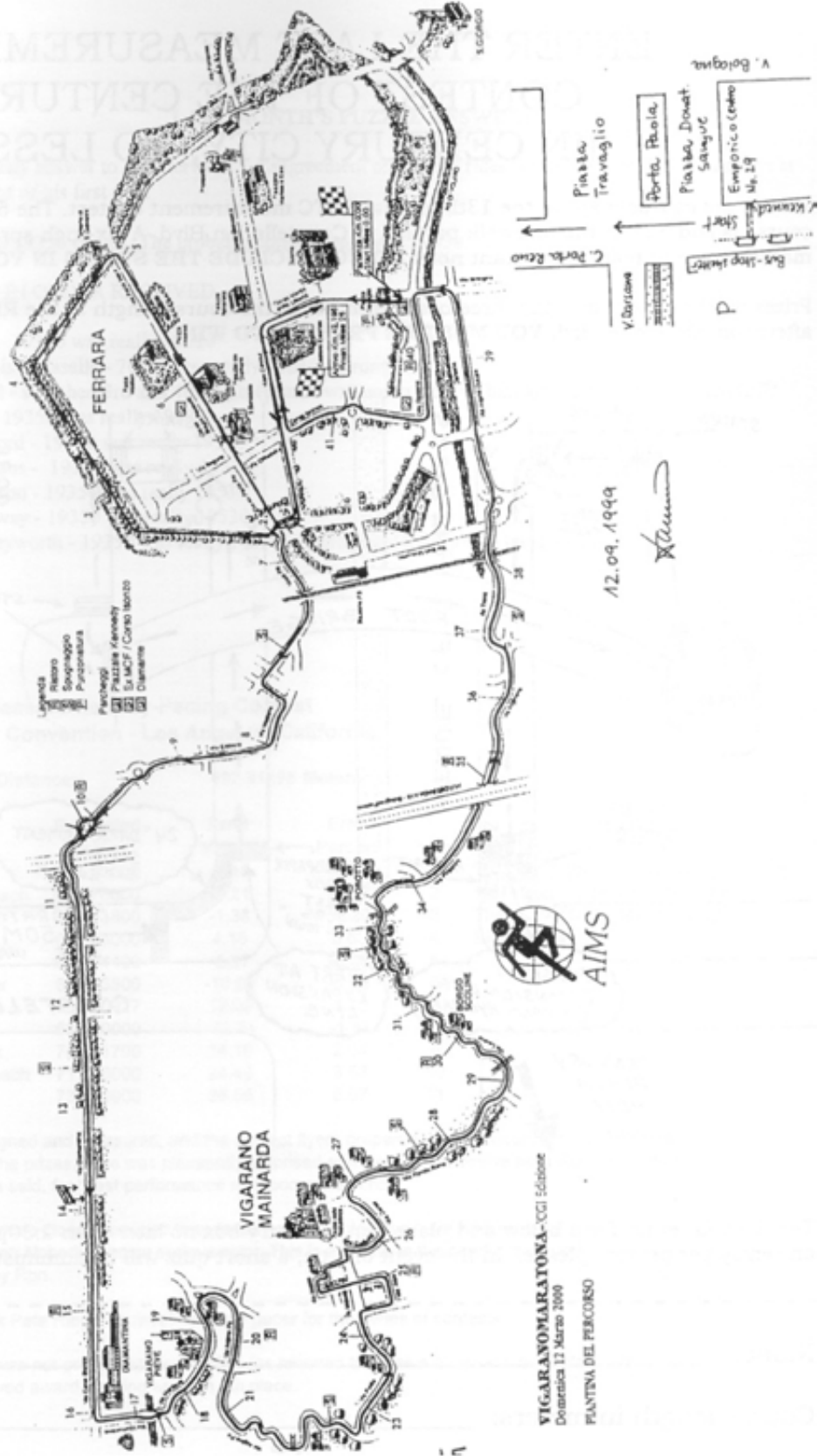
Those who attended the USATF annual meetings always looked forward to seeing Finn there. He's a fine guy. It's been a pleasure to have him with us.

Finn's replacement, Larry Smithee, is a fast runner, having posted a 21:03 in 1998 at the Alta Peruvian Lodge 8k.

Finn, thank you.



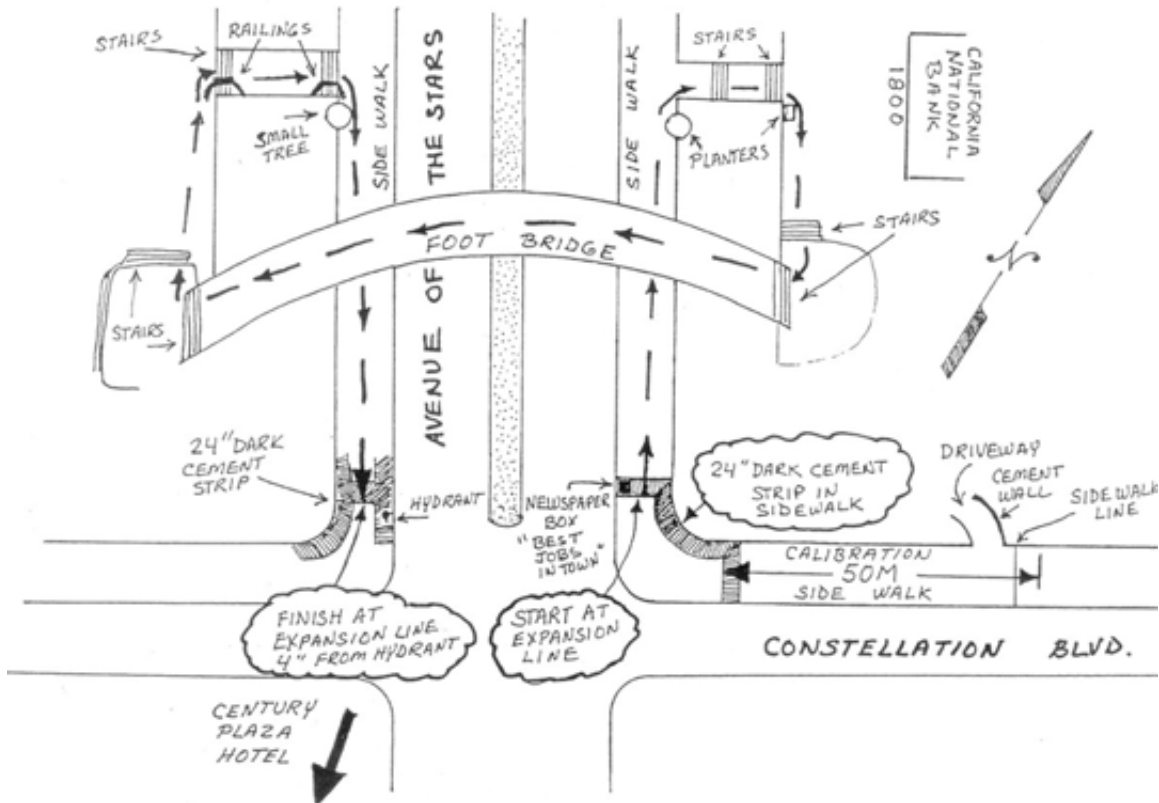
Map of the Month  
 by Dieter Damm  
 Submitted by Jean-Francois Delasalle



# ENTER THE LAST MEASUREMENT CONTEST OF THE CENTURY (IN CENTURY CITY, NO LESS)

Here is the course map for the 13th annual RRTC measurement contest. The 50-meter calibration course is laid out on the sidewalk parallel to Constellation Blvd. A six-inch spray-painted green line marks each end point. Important note: **DO NOT INCLUDE THE STAIRS IN YOUR MEASUREMENT!**

Prizes will be awarded to the three best estimates of the course length at the RRTC meeting on Friday afternoon, December 3rd. **YOU MUST BE PRESENT TO WIN!**



Tear off your entry form below and place it in the entry box no later than 2:30pm on Friday. Only one entry per person, please! In the event of a tie, a short quiz will be administered.

Name: \_\_\_\_\_

Course length in meters: \_\_\_\_\_

## LAST MONTH'S PUZZLE ANSWERS

The most likely answer to Jim Gerweck's disagreement on his two rides was a transposition of numbers at the start point of his first ride.

Jim recorded 19350 counts. The probable correct count was 19530.

### ANSWERS IN ORDER RECEIVED

Pete Riegel - 19350 was really 19530  
Jean-Francois Delasalle - 76236 was really 76036 - wrong!  
Bob Baumel - switched 3rd and 4th digits (puzzle was not in front of him at time of writing) **WINNER!**  
Bill Glauz - 19350 was really 19530  
Mike Sandford - 19350 was really 19530  
Roger Gibbons - 19350 was really 19530  
Ray Thompson - 19350 was really 19530  
Bernie Conway - 19350 was really 19530  
Malcolm Heyworth - 19350 was really 19530 - (also proposed another transposition)

### 1999 Measurement-by-Pacing Contest USATF Convention - Los Angeles, California

Official Distance: 692.91495 Meters

		Estimated Meters	Error Meters	Error Percent	Place	Prize
Bob	Baumel	691.73000	-1.18	-0.17	1	"Top Ten Best for the Millennium" Book
Carole	Langenbach	691.70000	-1.21	-0.18	2	No Prize - Carole was not present!
Tom	McBrayer	691.53800	-1.38	-0.20	3	Thermometer/Compass & Clapstick
Pete	Riegel	697.06000	4.15	0.60	4	Bicycle Bell
Don	Shepan	686.94400	-5.97	-0.86	5	
Mary Anne	McBrayer	681.93500	-10.98	-1.58	6	
Justin	Kuo	705.00927	12.09	1.75	7	
David	Coyne	680.20000	-12.71	-1.83	8	
Jim	Gerweck	707.01700	14.10	2.04	9	
Bob	Langenbach	717.40000	24.49	3.53	10	
Sharon	Good	731.50000	38.59	5.57	11	

The course was designed and measured, and the contest flyers prepared, by Ron Scardera, California certifier. Ron also presented the prizes. Pete was pleasantly surprised and touched to receive from Ron a miniature Oscar, awarded, Ron said, for "best performance as a committee chair."

Overall results were more closely grouped than for any other contest we have had, ranging from 1.8 to 5.6 percent. Nobody made a serious error. This is a tribute to the careful measurement and documentation by Ron.

Bob Baumel overtook Pete Riegel as most accurate pacer for the series of contests.

Carole Langenbach was not present at the meeting (as required to receive an award, by contest rules), so Pete got an undeserved award, moving up from 4th place.

PERCENT ERROR RECORDED IN RRTC PACING CONTESTS

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Average	
Wayne	Armbrust							1.15	1.86	1.74	-1.44			0.83	
Bob	Baumel	0.07		-3.03	-0.91	2.63	-0.72	-1.03	-1.18	-0.52	0.29	2.63	2.26	-0.17	0.03
Marcia	Baumel	0.02				4.37								2.19	
Andy	Beach					-5.36	-2.42			-4.54				-4.11	
Ken	Bernard										-4.82			-4.82	
Michael	Bianchard						1.14							1.14	
Bob	Boal				27.76	-0.19	-4.33	1.72	2.75					5.54	
Haig	Bohegian				6.72									6.72	
Norm	Brand	41.61	8.07	0.80	-0.90	9.56	-24.63	-4.00	-6.84	1.44		3.29		2.84	
Dan	Brannen		-0.21											-0.21	
Margaret	Brooke	-6.52												-6.52	
Nick	Brooke	-6.61												-6.61	
Jim	Brown			0.36					-0.48					-0.06	
Frances	Chids					10.46				-27.34				-8.44	
Felix	Cichocki	2.14	0.76	6.51	0.99			-1.89						1.70	
Sai	Corrallo							-11.38	-10.11	-1.67				-7.72	
David	Coyne												-1.83	-1.83	
Robert	DeCelle				187.61									187.61	
John	Dunaway			4.58										4.58	
Jim	Gerweck											25.95	2.04	13.99	
Miriam	Gomez		-3.86											-3.86	
Sharon	Good							3.13		15.90			5.57	8.20	
Barb	Grass					-1.11	12.17	-0.60						3.49	
Bill	Grass					-0.83	-3.73	-2.57			-3.13	-0.06	-0.94	-1.88	
Dave	Gwyn	-3.33		4.91	0.65	1.86	-10.20	0.63	4.55	-6.82	4.69	-91.41		-9.45	
Ben	Hablutzel	-3.05												-3.05	
Finn	Hansen	3.31	4.16	-1.02	4.28		-0.07	-1.04	2.05	2.75	1.46			1.77	
Bob	Harrison								-0.83	1.26				0.21	
Walter	High						-3.34							-3.34	
Basil	Honikman			5.67	-1.22	-29.89	-0.17	1.35	2.52	-0.06				-3.11	
Linda	Honikman							3.28						3.28	
Bard	Horton			-0.47										-0.47	
Paul	Hronjak								0.64					0.64	
Jim	Jacobs				28.14									28.14	
Alan	Jones			0.01	1.27									0.64	
Claire	Jones				0.09									0.09	
Bill	Keestling					22.29								22.29	
Bill	Kehoe											1.10		1.10	
Tom	Knight	1.50												1.50	
Carol	Kuo					0.72		0.34	0.03	-0.61	3.08			0.71	
Justin	Kuo			17.14	-1.61	0.07	-2.85	40.21	-1.09	0.16	1.43	6.00	-0.51	1.75	5.52
Bob	Langenbach	-0.66		3.50		-0.93	0.33	0.42	-0.52	13.55	-3.21	3.91	1.08	3.53	1.91
Carole	Langenbach						1.76		-2.23	1.06		-1.12	-0.18	-0.14	
Mel	Lemon							157.85						157.85	
Tom	Mayda				-0.21									-0.21	
Mary Anne	McBrayer	-2.91	0.14	4.06	-1.69	0.61	2.54	2.40			3.69		-1.58	0.81	
Tom	McBrayer	-3.66	-2.38	-1.48	-0.90	3.07	-0.43	0.52		-1.53	1.34	4.10	-0.69	-0.20	-0.19
G	Mercator										-0.70			-0.70	
Dick	Mochrie						-6.11	2.13						-1.99	
Wayne	Nicoll	-1.11		-10.34	0.54	-2.55		1.32	-1.26	0.10				-1.90	
Ron	Pate				-7.62									-7.62	
Bob	Rauch											36.38		36.38	
Rick	Recker	-0.79	-2.22	-0.17	-1.96									-1.29	
Joan	Riegel	1.74	-3.35	-1.40	2.28			-1.17			13.65	-4.38		1.05	
Pete	Riegel	-1.00	0.95	0.08	-0.52	-1.25	-0.39	0.13	-0.99	1.16	-1.03	3.50	-0.46	0.60	0.06
Bruce	Robinson							4.00						4.00	
Ron	Scandera									-4.52				-4.52	
Larry	Schloss			2.07										2.07	
Don	Shepan							-0.82		2.75	67.39	-1.19	-0.86	13.45	
Jim	Skelly							0.15						0.15	
Jim	Smith	0.86												0.86	
Christine	Steele						-1.83							-1.83	
Phil	Stewart							6.48						6.48	
Stephen	Tabb	0.62												0.62	
Bob	Thurston		0.84											0.84	
George	Tilson							-1.65	2.43					0.39	
Peter	Torres, Jr.				33.21									33.21	
David	Troy					18.38								18.38	
Steve	Vatoneis									-5.57				-5.57	
George	Vernosky				27.30	-1.49	-4.68	1.31	0.50					4.59	
Karen	Wickiser				-1.53		-5.02			0.19				-2.12	
Mike	Wickiser			2.49	0.22	-0.86	2.36	0.00	0.98	2.39				1.08	
Ric	Wilson											-2.92		-2.92	

Contestants	18	11	18	26	22	22	18	25	19	19	17	10	11
Median	-0.72	0.76	0.58	-0.06	0.42	-1.83	0.47	0.15	0.19	0.29	3.50	-0.49	-1.58
Average	1.14	0.73	1.68	11.54	1.50	-2.45	2.31	6.24	0.65	-1.28	8.38	-5.86	0.79
Std Deviation	10.46	3.28	5.57	37.57	9.68	6.49	9.63	31.78	4.37	7.88	17.74	28.04	2.26
High	41.61	8.07	17.14	187.61	22.29	12.17	40.21	157.85	13.55	15.90	67.39	25.95	5.57
Low	-6.61	-3.86	-10.34	-7.62	-29.89	-24.63	-4.00	-11.38	-10.11	-27.34	-4.82	-91.41	-1.83



## USA Track & Field

Road Running Technical Council  
Bob Baumel, Oklahoma Certifier  
<http://users.hit.net/~bobbau/rrtc/>

129 Warwick Road  
Ponca City, OK 74601  
580-765-0050 (home)  
580-767-5792 (work)  
bobbau@horizon.hit.net

1999-11-07

Douglas L. Loeffler  
USATF/RRTC Validations Chairman  
1399 W. Royal Palm Rd.  
Boca Raton, FL 33486

### Narrative Report of Tulsa Run Validation

I validated the Tulsa Run 15 km course (OK-94041-BB) on 1999 Oct 10 and obtained a distance of 15 013.37 m, which definitely "passes" the validation. The basic sequence of events was:

- Drove to Tulsa at around noon on Sat, 1999 Oct 09.
- Taped calibration course with Joe McDaniel.
- Drove course with Joe McDaniel & discussed riding strategy.
- Spent evening at downtown Doubletree hotel (thanks to Larry Jacobs).
- Measured course with Glen Lafarlette early morning Sun, 1999 Oct 10.
- Did calculations and discussed results with Glen & Coneil Lafarlette.
- Returned to hotel to shower and have breakfast.
- Visited with Joe & Jeannie McDaniel, then returned to Ponca City.

#### Details of Measuring Activity:

Upon arriving in Tulsa on Saturday afternoon, shortly after 13:00, I met Joe McDaniel at the calibration course (which is just a few blocks east of Glen Lafarlette's house). We taped the course once, starting at 13:40 and finishing at 14:15, at a pavement temperature of 27 °C. Our raw taped distance was  $10 \times 60 \text{ m} + 43.54 \text{ m} = 643.54 \text{ m}$ . The temperature correction factor, based on 27 °C temperature, was:

$$1.0000000 + [0.0000116 \times (27 - 20)] = 1.0000812$$

Therefore, temperature corrected measured distance was:

$$1.0000812 \times 643.54 \text{ m} = 643.59 \text{ m}.$$

At around this time, I met briefly with Glen but he was very busy and didn't have time to talk. He did inform me that he had set out flags at several split points where we may wish to take readings during our ride, namely, the 3 km (12 km) split, 5 km (10 km) split, and halfway (turnaround) point. I left my bike with Glen & Coneil in order to avoid bringing it to my hotel room.

Then Joe gave me a driving tour of the race course. I was already quite familiar with this course, as I had run it many times myself. However, it was helpful to review the curves on Riverside Drive and, especially, the transition between Riverside Drive and Boulder Ave (via Boulder Park Drive) which can be tricky to follow when it isn't blocked off to traffic as it would be on race day. We decided it might be reasonable to begin measuring at the 2 km (13 km) split mark (located just north of this transition area), in order to ride the Riverside Drive portion of the course as early as possible, before traffic builds up too heavily (To the locals, Riverside Drive has become known as "Riverside Dragstrip").

When Joe and I reached the Start/Finish area, I wanted to check the documentation distances shown on the map but, unfortunately, I hadn't thought to take a tape measure on this course tour that Joe gave me in his car (My tapes were still in my own car parked by the calibration course).

Shortly after 15:00, Joe had to go home to be with family guests. He brought me back to the calibration course, where my car was still parked, and left me on my own. I drove to the Riverside–Boulder transition area and examined it until I felt thoroughly familiar with that part of the course. While there, I added extra paint at the 2 km (13 km) split, assuming we would begin measuring there as Joe and I had discussed (But, ultimately, I decided **not** to make use of this particular split mark during the validation ride).

Then I checked documentation distances at the Start/Finish area. The Finish is described on the map as 31.18 m south of south curb of 4th St, and also 0.3 m south of first building on west side. I found the 2nd statement to be very accurate, but obtained a 20 cm difference for the 1st description; i.e., I found the marked Finish to be 31.38 m south of the south curb of 4th St. Similarly, the map describes the Start as 31.48 m north of north curb of 3rd St. I found the marked Start to be 31.30 m north of north curb of 3rd St.

Here, my taped distances possess considerable uncertainty. I was attempting one-man taping, using my 60 m tape with no good way to fix the end of the tape that I wasn't holding. So, this wasn't exactly precision taping! Also, there is some ambiguity in descriptions such as "north curb of 3rd St" – e.g., does this refer to the portion of 3rd Street east or west of Boulder (in case they don't line up exactly)? I checked the Finish by measuring along west edge of Boston, and the Start by measuring along east edge of Boulder. I realized later that I should have checked the Start on the west edge of Boulder because that's where the SPR lies, as is shown correctly on the map.

Overall, I think it's pretty good that I verified all of the documentation distances for Start and Finish to within 20 cm.

I checked into the downtown Doubletree hotel, where the Oklahoma Association of USATF had reserved a luxury suite for me (with help from Larry Jacobs who is a member of the Tulsa Run organization and also a Manager at that hotel). I actually had dinner with Larry in the hotel restaurant. This was a good meal with pleasant conversation although, as Larry was the Manager on Duty, he was repeatedly called away as we ate!

In spite of my deluxe hotel accommodations, I didn't sleep well that night, due to concerns about the safety of riding on "Riverside Dragstrip" the next morning. The greatest danger would be on the portion of Riverside north of about 32nd St, where there is no median and we'd have to measure using the road's entire four-lane width, which would sometimes require riding directly into oncoming traffic. South of 32nd St, Riverside Drive has a median—and runners are kept right of this median—so we could measure that entire segment in the legal traffic direction, which would still require many lane changes in order to ride tangents within the two lanes to the right of the median, but I figured that our planned vehicular escort would provide adequate safety for such maneuvers.

While turning this over in my head, I eventually realized that the entire 3 km segment from the 1 km (14 km) split to the 4 km (11 km) split is a whole-road SPR which is exactly the same whether heading northbound or southbound; therefore, this interval didn't need to be ridden in both directions. I decided to measure it only in the northbound direction (from 11 km split to 14 km split in direction of running), in order to ride the exit ramp from Riverside Drive to



Boulder Park Drive in the legal traffic direction. (Riding this segment in the other direction would require heading directly into the traffic exiting from Riverside.)

On Sunday morning, I left the hotel slightly earlier than originally planned (perhaps at around 04:45) and proceeded first to the 1 km (14 km) split point, where I touched up the paint marks (These marks were in the intersection of Boulder and 12th Street, where they had almost completely worn away since last year's race). We would need to take counter readings at this point according to my revised measuring plan.

I met Glen and Coneil at their house at 05:30 as we had arranged. Glen and I calibrated our bikes. Then at about 06:00 we were joined by Joe McDaniel and the four of us (Glen, Coneil, Joe and myself) drove to the 4 km (11 km) mark, where I had decided to begin the measurement. This mark is close to 31st St, about a block north of the portion of Riverside Drive that has a median. This split still had lots of paint remaining from last year's race.

Starting southbound from the 4 km mark, we rode the southern (counter-clockwise) loop, where runners keep right of the median. We took readings at the 5 km, 7.5 km, and 10 km marks, and then returned to the 11 km (same as 4 km) mark. We rode in a little convoy: Glen and I were both on bicycles (I stayed behind Glen because he was more familiar with the course). We had a lead vehicle (driven by Joe) ahead of the two cyclists and a trailing vehicle (driven by Coneil) behind the cyclists. Both vehicles sported flashing yellow lights on top and markings on the side saying "Glen's Road Race Service."

As I hoped, our lead and trailing vehicles provided adequate safety for riding tangents, as long as we could stay within the two lanes in the legal driving direction. After completing the southern loop and continuing northbound on Riverside north of 32nd St, there were two stretches where the SPR took us all the way to the west edge, facing oncoming traffic. On these occasions, our escorting vehicles did *not* cross the center-line to face oncoming traffic with us. Instead, Glen and I were on our own, and simply had to wait until it was safe to ride across the oncoming traffic lanes.

The 4 km (11 km) split mark was, in fact, one place where the SPR lies on the west edge of Riverside. We had initially been riding legally with traffic when we began measuring southbound from this point. However, we were facing traffic when we returned to this point heading northbound.

Continuing northbound from the 11 km (4 km) split mark, we made one more stop to take counter readings—at the 12 km (3 km) split mark which Glen had previously flagged for us—before reaching the exit from Riverside to Boulder Park Drive.

Exiting from Riverside produced a great sense of relief (We survived Riverside Dragstrip!), as traffic on the remaining city streets was far lighter. Most of our riding on Riverside had been done in darkness. It was just starting to get light as we left Riverside.

We continued measuring northbound to the 14 km (1 km) mark at 12th St, where I had added paint earlier that morning. From there, we measured onward to the Finish. Then we returned to the 14 km (1 km) split mark and measured northward to the Start (We chose this direction because most of this stretch of Boulder is one-way northbound).

We had finished all the course riding. Joe returned to his home. Glen & Coneil and I drove back to their house. Glen and I recalibrated our bikes. Then we did calculations and were pleased to

find that the course clearly passed validation, and that Glen's and my measurements were in excellent agreement—within about half a meter.

All the work was now done. I returned to my hotel room to freshen up and have breakfast. Before leaving Tulsa, I drove over to Joe's house and visited for a while with Joe and his wife Jeannie.

### **Discussion of Results**

In spite of the traffic on Riverside Drive, we had excellent measuring conditions and, largely with the help of our escorting vehicle drivers, were able to ride a very accurate SPR. In addition, as the entire measurement was conducted during early morning before the day could heat up, temperature was nearly constant, and there was little calibration change. I think we obtained high-quality data, as indicated by the agreement between Glen's and my measurements: I obtained 15 013.37 m while Glen obtained 15 012.83 m. He had the slightly tighter measurement, but the difference was so small as to be practically insignificant.

Two other factors that affected our results were the assumed length of the calibration course, and some very minor construction which had taken place since the course was certified in 1994.

I've calculated using the calibration course length as checked by Joe's and my tape measurement (643.59 m) instead of its originally certified length (643.64 m), which makes the calculated race course length about 1.2 m shorter than if we use the originally certified calibration course length.

The map of this calibration course defines it between "inside edges;" i.e., between the southern edge of the expansion seam at the northern end of the course, and northern edge of expansion seam at southern end of the course. This is how Joe and I taped it, and how Glen and I calibrated our bikes for this validation. However, Glen informed me that when routinely calibrating on this course, he and Coneil would normally ride between the *centers* of the expansion seams instead of their inside edges; thus, the distance they actually used for calibrating was probably very close to the certified length of 643.64 m.

But here, I've assumed that Joe's and my tape measurement was more accurate than the originally certified calibration course length—which isn't necessarily true. Actually, the 5 cm discrepancy (about 1 part in 12 800) was entirely within the range of expected differences between steel tape measurements. In fact, the US Government standard for steel tape accuracy is 1 part in 12 000.

I'm not sure whether we have a clear standard for calculating in such cases. For example, instead of using the checked calibration course length, I suppose I might have said that we verified the calibration course within expected steel taping accuracy, and then calculated using the originally certified calibration course length. Either way, the race course clearly passes validation.

Regarding construction, Glen told me that the Skelly Drive overpass area, a short distance north of the turnaround, was modified slightly by construction a few years ago. The road was widened, which slightly shortened the available SPR in one direction (northbound, I believe). As accurately as Glen could determine, the shortening was only about half a meter.

I'm not sure whether this construction occurred before or after the 1997 race. But, clearly, the course passes validation either way. If the construction occurred before the 1997 race, then the course available to those runners was the same as we measured in the present validation. If the construction was after the 1997 race, then the course available to those runners was a tiny bit *longer* than measured in this validation.

## Epilogue: Recertification of race course & calibration course

According to an RRTC policy established at the 1997 USATF Convention (and the subject of some criticism recently in the online Measurement News Forum) a course that passes validation but with less than the full 0.1 % Short Course Prevention Factor may be considered "prevalidated" for future races if its length is extended to include the full SCPF. In this case, as the validated distance was 15 013.37 m, it could presumably be considered prevalidated if it is extended by only 1.63 m. Unfortunately, I hadn't checked this policy before my trip to Tulsa on Oct 9-10, so I didn't inform Glen and Coneil about it at the time of validation (or for several weeks afterward).

The Tulsa Run organizers would not, in any case, have been interested in such an adjustment to the existing course (OK-94041-BB) because they were planning a more substantial change for the 1999 race, as the Tulsa Police were unhappy with the existing Start and Finish locations and wanted them moved. I knew prior to this validation that they wanted a course change and, in fact, I had hoped that I could prevalidate the new course at the same time as I validated the old one. Unfortunately, that wasn't possible because details of the new course hadn't been finalized at the time of my validation; therefore, no new course existed yet to be checked at that time.

On 1999 Oct 23 (about 2 weeks after my validation and one week before the 1999 race), Glen and Coneil sent me an application to certify the new Tulsa Run course. However, as I still hadn't informed them of our prevalidation policy (adjustment to full SCPF according to the validation result), all they had done was an adjustment to OK-94041-BB which would have kept its length exactly the same; specifically, they had moved its Start 85 m southward and its Finish 85 m northward. Then I informed Glen of the prevalidation policy. Moreover, we decided that because some (admittedly minor) construction had taken place in the Skelly Drive area, the exact course certified in 1994 no longer existed; therefore, we should make use of *both* of the measurements made on 1999 Oct 10, and the correct adjustment would be to add 2.17 m based on Glen's measurement, instead of the 1.63 m figure derived from my measurement. Glen decided to apply this 2.17 m adjustment at the starting line.

On 1999 Oct 27 (three days before the 1999 race), Glen and Coneil sent me a revised course map including this 2.17 m adjustment. I have certified this new course as OK-99026-BB and have included a copy of its certificate in this report. Relative to OK-94041-BB, the net adjustment was to move the Start 82.83 m southward, and the Finish 85 m northward. This new course cannot be considered prevalidated, as it includes substantial taped segments that I haven't checked. However, if the course does need validation, all I would need to do is check these Start and Finish adjustments. There would be no need to re-ride the course.

Unfortunately, the new Tulsa Run course no longer possesses the property of outgoing splits lining up exactly with the returning splits. Thankfully, they will continue to call only kilometer splits, even though the new course will require about twice as many split callers as the old one.

The calibration course used for this validation (OK-89003-BB) is now 10 years old, so it will need to be renewed to remain certified past the end of this year. However, we now have a new measurement, performed by Joe McDaniel and myself on 1999 Oct 09, indicating it to be 5 cm shorter than the length originally certified. Glen has told me that he is now using this slightly shorter length when using this calibration course. This doesn't seem entirely proper, considering that Joe and I taped the course only *once*. It would have been simpler if we taped it twice, so we'd have data to actually recertify it. Under these circumstances, I think the best solution is for Glen

and Coneil to do another tape measurement of this course themselves. Then, combining it with the data obtained by Joe and myself, we'll have enough data to write a genuine recertification for this calibration course.

Incidentally, the certified length of calibration course OK-89003-BB (643.64 m) appears in our Course Measurement manual in the chapter "Laying Out a Calibration Course" in the text: "In this case, you'll have an odd-distance calibration course such as 643.64 meters" (see either the 1989 hard-copy edition or new online version of the manual). That's because I wrote that part of the book, and I apparently wrote it shortly after issuing the certification for course OK-89003-BB. I don't expect to change this text in the book, even though this calibration course may soon be recertified with a slightly different length!

Similarly, the map of Tulsa Run course OK-94041-BB is currently in the online Course Measurement manual, in the section of Appendix C that displays course map examples. But I don't expect to change this example in the book, even though the Tulsa Run course has now been recertified (OK-99026-BB). In fact, one point illustrated by that example is the alignment of outgoing and returning splits, which is no longer true for the new course. I have, nevertheless, scanned the map of the new course, which may be viewed online at <http://users.hit.net/~bobbau/coursemaps/>. I have also asked Lance Phegley to update this map in his collection at <http://www.runnertriathletenews.com/> but he hasn't responded yet at the time of this writing.

To conclude this report, I would like to thank everybody who was involved with this validation, especially Glen and Coneil Lafarlette and Joe McDaniel who participated in the measuring, the Oklahoma Association of USATF who paid for my hotel accommodations in Tulsa, and Larry Jacobs who helped make that hotel stay as pleasant as possible.

Sincerely,

Bob Baumel

CC: Glen & Coneil Lafarlette, Joe McDaniel, Jack Wing, Pete Riegel, Tom McBrayer

Encl: Standard Validation Report form  
RRIC form listing potential records  
Certificates for OK-94041-BB, OK-89003-BB, OK-99026-BB  
Data & Calculations for Baumel's & Lafarlette's rides.



Road Running Technical Council  
USA Track & Field  
Measurement Certificate



recognized by

Name of the course Tulsa Run '94 Distance 15 km

Location (state) OK, (city) Tulsa

Type of course: road race  cross country  calibration  track  Configuration: out/back

Type of surface: paved 100 % dirt 0 % gravel 0 % grass 0 % track 0 %

Altitude (meters above sea level) Start 221 m Finish 226 m Highest 226 m Lowest 191 m

Straight line distance between start & finish approx. 315 m Drop -0.33 m/km Separation 2.1 %

Measured by (name, address, & phone) Glen and Conell Lafarlette, 263 E 45th Place,  
Tulsa OK 74105-4403 (918) 744-0339

Race contact (name, address, & phone) Stan Noil, 2626 E 35th,  
Tulsa OK 74105 (918) 743-4126

Measuring Method: bicycle  steel tape  electronic distance meter

Number of measurements of entire course: 2 Date(s) when course measured: 3 Jul 88 ; 29 Jul 89  
16 Aug 1994

Race date: 29 Oct 1994 Course paperwork postmark date: 25 Aug 1994

Difference between two best measurements of the course: 4.5 meters Certification code: OK-94041-BB

Replaces \_\_\_\_\_ (if applicable)

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

Be It Officially Noted That

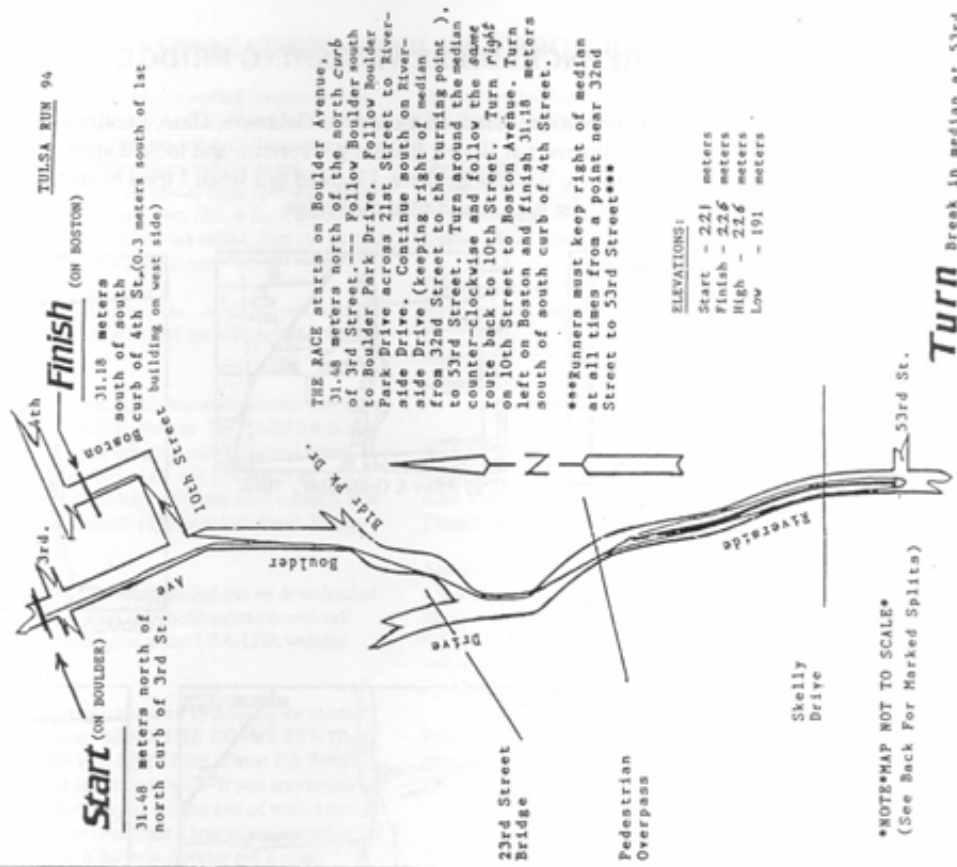
Based on examination of data provided by the above named measurer, the course described above and in the map attached is hereby certified as reasonably accurate in measurement according to the standards adopted by the Road Running Technical Council. If any changes are made to the course, this certification 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 remeasurement may be required to be performed by a member of the Road Running Technical Council. If such a remeasurement shows the course to be short, then all pending records will be rejected and the course certification will be cancelled.

Automatic Expiration — This certification automatically expires ten years after date of issue, although it may be renewed for additional ten-year periods upon testimony to RRTC that the course is still in use, and has not been altered, and that all key points (start, finish, turn-around points, cone positions, etc.) described on the attached map can still be located precisely.

AS NATIONALLY CERTIFIED BY:

Robert T. Baumeel Date: 31 Aug 1994  
Bob Baumeel — USA Track & Field National Certifier  
129 Warwick Rd, Ponca City, OK 74601 (405) 765-0050



**Turn**  
Break in median at 53rd  
Street just south of  
Skelly Drive.  
= 7.5 km Split!

ELEVATIONS:  
Start - 221 meters  
Finish - 226 meters  
High - 226 meters  
Low - 191 meters

NOTE: MAP NOT TO SCALE\*  
(See Back For Marked Splits)

THE RACE starts on Boulder Avenue, 31.48 meters north of the north curb of 3rd Street. -- Follow Boulder south to Boulder Park Drive. Follow Boulder Park Drive across 21st Street to Riverside Drive. Continue south on Riverside Drive (keeping right of median from 32nd Street to the turning point), to 53rd Street. Turn around the median counter-clockwise and follow the same route back to 10th Street. Turn right on 10th Street to Boston Avenue. Turn left on Boston and finish 31.18 meters south of south curb of 4th Street.

\*\*\*Runners must keep right of median at all times from a point near 32nd Street to 53rd Street\*\*\*

## THE INCREDIBLE VANISHING BRIDGE

While driving north on Olentangy River Road, on the way to Delaware, Ohio, I noticed an old bridge pier sticking up from the middle of the river at Winter Road. I got curious, and looked at some maps. I recall that 10 or 15 years ago there used to be a bridge there. I learned this when I tried to cross it one day and a barrier was in place. Now the barrier is gone and so is the bridge



Delaware County Engineer



Ohio Atlas & Gazetteer - 1995



TopoUSA 2.0



USGS map from Terrain Navigator v3.1, last revised 1973



Mapquest



Street Atlas USA version 6.0

I found that some of my maps showed a bridge, and some did not. To expand my search, I posted a request on MNForum. Here are the results. It seems the mapmakers need time to catch up.

Information Source	Bridge?	Person
Mapquest website	No	Baumel, Riegel
Delorme Street Atlas USA version 7.0	No	Nelson
Delorme Map 'n Go	No	Nelson
Personal observation (December 1999)	No	Riegel
Delaware County Engineer's map (1998)	No	Riegel
Precision Mapping Streets 3.0	Yes	Chaney
Toposcout-Maptech edition 1.0 (USGS Maps)	Yes	Riegel
Delorme Street Atlas USA version 6.0	Yes	Riegel
Delorme TopoUSA 2.0	Yes	Riegel, Gerweck
Microsoft Map	Yes	Roberts
Ohio Atlas & Gazetteer by Delorme (1995)	Yes	Riegel