



USA Track & Field/ Road Running Technical Council

Measurement News

Spring 2006 Issue 131

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*Participants in the 2005 Freihofer's Run for Women 5 km find a cooling mist after the race,
provided by the Albany Fire Department - Photo by Fateague Fotos*



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USA Track & Field/ Road Running Technical Council

Measurement News

Spring 2006 Issue 131

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ABOUT MEASUREMENT NEWS:

Measurement News (MN) is the journal of the **USA Track & Field/Road Running Technical Council** (USATF/RRTC). *MN* maintains its important role for ALL concerned parties to communicate and discuss matters affecting our sport at all levels, including race walking, road racing, track & field, records, finish line timing, and road course certification.

MN continues to assist in the *RRTC's Mission* to make all aspects of road course measurement for *USATF* certification as good as it can be. There is a long standing tradition that “**no cows are sacred**” within the pages of *MN*. All submissions are welcomed, your opinions, ideas, and suggestions will always be given space.

MN is published quarterly, Spring, Summer, Fall, and Winter. *RRTC* Officers, Regional Certifiers, *USATF* Representatives, Course Measurers, and *AIMS/IAAF* Officials and measurers will receive a *free online Subscription*. All parties are equally invited to contribute and participate in the dialogue.

Electronic copy or clean typed material and photos are always welcomed.

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Complete information about USATF/RRTC, visit: <http://www.usatf.org/events/courses/certification/>.





Editor's Note **Kevin P. Lucas**

It was June of **1986** when I first had the opportunity to publish **Measurement News** (MN). The last issue I published was in January **1988**. It is nice to be back and this time as **Editor** and **Online Publisher**. Over the last few months since I volunteered and was appointed, I have heard from many of you saying **MN** is a meaningful communication for the **RRTC** and course measurement community. I agree with you, **MN** is a significant means for us each to participate in the ongoing dialogue discussing matters affecting our sport at all levels, including race walking, road racing, track & field, records, finish line timing, and road course certification.

It is my expectation the few format changes will enhance your reading of **MN**. One very important change has been making **MN** only available online. The online version makes pretty good sense, there is no cost in hard copies and postage for distribution. Your anticipated comments, suggestions, contributions, and ideas for improvement will always be welcomed here. Please freely send me your comments and concerns. Anyone wishing to head-up a particular writing project or write a column, let's talk about it. **MN** really does belong to each of us.

I have to thank the many contributors who have made this first issue possible. **Bob Baumel**, who works mostly behind the scenes as our **RRTC Secretary** and **Webmaster**, makes it possible for each of you to view and download a copy of **MN**. **Bob** also submitted his **Secretary's Report** on page 9-10. **Gene Newman** and **Paul Hronjak** have each written reports for their respective posts and will be future fixtures of **MN**, read pages 7-8. **Gary Westerfield**, **USATF Long Island Association President**, has happily agreed to write a regular column for **MN** on race walking, as our resident expert on the subject, read pages 11-13. Long time friend of the **RRTC**, **Bernie Conway**, **AIMS-IAAF Measurement Administrator for the Americas**, will also be writing a regular column about **AIMS-IAAF**, read pages 33-34.

Also have to thank long time publisher and editor of **MN**, **Pete Riegel**, for his constant support and contribution. Hope **Pete** enjoys this new issue of **MN**. **Pete** submitted a report on his recent **IAAF Measurement Seminar** in Puerto Rico, read pages 25-32. Thanks to **Ken Skinner** and the management team for the **Freiehofer's Run for Women**, for their article on the history of a road course, read page 14-16. Thank you too the good people at the **USATF Adirondack Association** for placing the first of four ads in the new **MN**, page 2. The history of a road course will be a regular feature in **MN**. Thank you to our own **Scott Hubbard**, **Regional Certifier for Michigan**, who has kindly given **MN** permission to reprint his most recent article written for **Runner's World** magazine, read page 37.

Must also say a warm thank you to the newer **RRTC** family members for subjecting themselves to an **MN** interview of introduction. **Stu Riegel**, **Jane Parks**, **Justin Kuo**, **Matthew Studholme**, **Don Garrett**, **Jim Gilmer**, and **Tom LaBlonde** interviews and photos can be read on pages 18-23. **MN** will be doing introduction/profile interviews as a regular feature talking to established **Regional Certifiers** in the course of the next few issues. An extra thank you goes to **Stu Riegel** for compiling and submitting the **New Entries Certified Course List**, read pages 46-51.

Finally, I want to say thank you **Neville Wood**, our new **Validations Chair**, for his talented and detailed work described in his report on **Tire Pressure as a Means of Continuously Monitoring Wheel Calibration Factor** in the **RRTC Bicycle Method for Course Measurement**, found on pages 38-45. It is this type of dedicated work for the improvement of course measurement that is the solid core of **MN** and the **RRTC**. Innovations in course measurement are always welcomed here.

Kevin P. Lucas



Chairman's Comments

Gene Newman

Thank you to those who nominated and supported me for new **RRTC Chairman**. Words are not enough to thank **Mike Wickiser** for his trust in me. *Mike's shoes are going to be hard to fill, but I will do my best. My hope is to keep the RRTC something we all can be proud of.*

Special thanks to **Jim Gerweck** for his work over the years as Editor of Measurement News. *Jim will be missed in this capacity, fortunately he has accepted my old position as Vice Chair. This new role will keep Jim as a vital part of our organization.*

My first task as Chair was to get our **RRTC** organized for the upcoming year. One important change is the Vice Chairs are no longer called East or West, however their responsibilities will be sub-divided the same as always. There are some new council job titles, please take note on page 5.

There have been a few recent changes made for various state certifiers, the new appointments are: **Jim Gilmer** for NY, who replaces **Amy Morss**, **Don Garrett** for OK, who replaces **Bob Baumel**, **Tom LaBlonde** for UT, who replaces **Dave Poppers**, and **Jane Parks** for CT, who replaces **Paul Hronjak**. A goal for **RRTC** is to get as many new people actively involved as possible, read page 17, *Meet the New Certifiers and Course Registrar*. **Bob Baumel** remains with us as Secretary and Webmaster, **Dave Poppers** continues as CO Certifier, and **Paul Hronjak** carries on as NC Certifier and Vice Chair. We will miss **Amy Morss** as NY Certifier, she did a remarkable job. Our hope that **Amy** continues to measure courses and stays active with us in the years to come. Thank you to **Amy** for the many years of service.

One of my goals as new chair is to have more measurement clinics throughout the *United States*. **Mike Wickiser** has volunteered to be the person to head up these clinics. At this point in time we are aiming for two locations with more in the works, one in the East and one in West.

Thank you **Stu Riegel**, **Pete Riegel's** eldest son, for volunteering to take over as the new Course Registrar. **Stu** began his new role in mid January, maintaining the course list by scanning course maps with the addition of Measurement Certificates.

Ongoing communications are important to the **RRTC**, we have two significant ways for this to occur:
First, there is **Measurement News (MN)** - **Kevin Lucas** has volunteered to be our new Editor. *MN* will remain an important source of information for all of us. **Kevin** at the helm, he plans to have four regular issues of *MN* per year.
Second, there is the **RRTC Course Measurement Bulletin Board** - **Pete Riegel** is the moderator. I encourage readers of *MN* to check out what is happening by going online, sign up as a member, and join the discussion. The URL is: <http://measure.infopop.cc/eve/up>. Finally, there is always a third option, I can be reached via e-mail at: newmangc@cox.net

Looking forward to a rewarding Year!

Best to all,

Gene Newman



Eastern Vice Chairman's Report

Paul Hronjak

Measurement activity in **2005** was down **5%** east of the Mississippi, which was primarily due to a **41 %** decrease in the number of calibration courses submitted. Race courses submitted were only down less than **2.5%**. In **2005** there were **863** new certificates issued with the following breakdown:

2005	2004
Race courses - 769	Race courses - 788
Calibration courses - 39	Calibration courses - 66
Renewals - 40	Renewals - 33
<u>Replacement certificates - 15</u>	<u>Replacement certificates - 23</u>
Total - 863	Total - 910

We expect a continued decline in the number of course renewals, which will be eliminated completely after **2011**.

Personnel changes were significant in **2005** with four new State Certifiers appointed in the East. One of these changes was prompted by the retirement of **Amy Morss** after many years of service as NY State Certifier, she will be greatly missed. Amy is replaced by **Jim Gilmer** who lives in the Albany, NY area.

In a concentrated effort to get more "new blood" in the RRTC hierarchy, **Justin Kuo** took over MA from **Ray Nelson**, who remains RI Certifier. **Matthew Studholme** took over HI, KY, ND, and SD from **Pete Riegel** and WV from **Bob Thurston**, and **Jane Parks** took over CT from **Paul Hronjak**, who remains NC Certifier.

Of course the biggest personnel change was at the top where **Mike Wickiser** retired as Chairman and was replaced by Western Vice Chairman, **Gene Newman**, formerly NJ Certifier. Gene was replaced as Western Vice Chairman by **Jim Gerweck**. The Course Registrar position, formerly held by Mike, was given to **Stu Riegel**, Pete Riegel's son.

One other area of change was the appointment of **Neville Wood** as Validations Chairman. Neville replaced me after I had taken over for **Doug Loeffler**. I had never really gotten the job done because of various job and health related issues.

The biggest issue with submitted applications for certification continues to be the quality of course maps. **PLEASE** make sure that all course street names are shown on your maps and that information has not been cut off in the copying process. Maps should have **AT LEAST** a one half inch border all around. This is important because of the scanning process being done by **Stu Riegel** when all maps are submitted to the **USATF Certified Course Search** data base.

From now on I would like to have all measurers submit their e-mail addresses with their certification applications. Certifiers, please include the measurer's e-mail address on the line following their phone number. The certifier's e-mail address should always be on the final *Measurement Certificate* along with their address and phone number under the signature line. The reason for including e-mail addresses is that there have been a couple of instances lately when I had to make numerous phone calls when one blanket e-mail would of accomplished the same thing.

Thank you for your cooperation.

Best regards,
Paul Hronjak



News from USATF Road Running Technical Council

Bob Baumel, Secretary

Gene Newman chosen as RRTC Chairman; Jim Gerweck is Vice-Chair West

2006-01-04: *Fred Finke* announced on January 3rd that he and *USATF* President **Bill Roe** have chosen **Gene Newman** as the new *RRTC* Chair. *Gene* has served as *RRTC* Vice-Chair West since his appointment to that position at the 2004 *RRTC* meeting. He is also currently the Certifier for Arizona, after previously serving as Certifier for New Jersey and Delaware. He has successfully resolved conflicts in both Arizona and Washington State, so is well qualified to be the new *RRTC* Chairman at this time.

Gene's first act as Chairman was to appoint **Jim Gerweck** as the new Vice-Chair West. *Jim* has served as the Certifier for Indiana. He initiated *RRTC's MNForum* e-mail communications forum in 1997 and has been its moderator since that time. He has also been the editor of [Measurement News](#), *RRTC's* hard-copy newsletter, since November 2002. *Gene* stated that he was impressed with *Jim's* knowledge about all aspects of measuring and *RRTC*.

As one more personnel change, **Jim Gerweck** has stepped down as editor of [Measurement News](#), and **Kevin Lucas** will take on that task. The *MNForum* e-mail list has been discontinued, as it is felt that **Pete Riegel's** [Course Measurement Bulletin Board](#) has taken over the role of providing an electronic communications forum for issues involving course measurement and certification.

Possible Restructuring Among Items Discussed at RRTC Meeting in Jacksonville

2005-12-03: A proposal by **Kevin Lucas** that would massively restructure *RRTC* and the *USATF* Course Certification program was the major topic at the *RRTC Meeting* on Dec 3, 2005 at the *USATF Annual Meeting* in Jacksonville, FL. Discussion on this topic was led by **Fred Finke**, Chair of the *USATF Long Distance Running Division*. Prior to this *RRTC* meeting, it had already been decided to table *Kevin's* proposal for next year, but the issue was discussed in order to air opinions. It is now *Kevin's* responsibility to reformulate his proposal for consideration at next year's Convention. **Mike Wickiser** announced that he is resigning from his positions as both *RRTC* Chairman and Course Registrar. To fill the Chairman position, *Fred Finke* asked people to recommend candidates that *Fred* could nominate for approval by *USATF* President *Bill Roe* (*USATF* bylaws specify that the *RRTC* Chair be named by the President). A final decision is expected early in 2006. To fill the Course Registrar position, **Stuart Riegel**, son of long-time measurer *Pete Riegel*, had already volunteered prior to the meeting, and was easily approved. *Mike* will transfer his files to *Stu*, who will take over the Course Registrar duties at the end of *January 2006*.

It was reported that **Neville Wood** is now the *RRTC* Validations Chair, having been appointed shortly before this meeting to replace **Paul Hronjak**, who had been overwhelmed by work duties and unable to oversee the Validations program. *Paul* remains the *RRTC* Vice-Chair East.

RRTC Webmaster **Bob Baumel** reported that most content from *RRTC's* separate website at www.rrtc.net has been ported to the central *USATF* website. *Bob* now maintains the [Course Certification](#) and [RRTC Committee](#) areas on the *USATF* site. Meanwhile, the easily remembered URL www.rrtc.net remains available as a handy set of links for finding information about Course Certification and *RRTC* (most of which now resides on the *USATF* site).

Please note the entire Meeting Minutes can be read at the [Course Measurement Bulletin Board](#).



Some of the people at Jacksonville RRTC meeting. Standing, left to right: Gary Corbitt, Kevin Lucas, Ron Pate, Mike Wickiser, Bob Baumel, Tom Riegel, David Katz, Pete Riegel, Gene Newman, Don Shepan (Norm Brand is seated in front).



The USATF website offers a variety of resources for Race Directors, including:

- Certified Course Maps
- Course Certification Information
- Event Sanctioning & Insurance Information
- USATF Championship Bid Information
- Competition Rules
- Tips on Organizing Competitions
- Comprehensive Online Calendar

To access all of this, and more, visit:

www.usatf.org/groups/EventDirectors/

And be sure to add your event to USATF's calendar:

www.usatf.org/calendars/mgmt/

(this is a free service)



Designing a 5 Kilometer Race Walk Course Gary Westerfield, Long Island Association President

Let us suppose you have been asked by the director of a new race walk competition in your **USATF** association to help measure and certify a proposed 5 kilometer **race walk only** road course for your *Association Championship*. You have measured and prepared documents to certify numerous 5 kilometer road **running** courses. You have just agreed to do it. Measuring a 5 km is a simple enough task. Yet, how do you measure a *race walk* course? Hey, walkers just have a definition of race walking to adhere to. What could be so different than your average run course? A lot, if you do it right.



*2005 UBS Financial Services USA Team Trials
Women's 20 km Pan American Race Walking Cup,
Hauppauge, NY in April 3, 2005*

This column will help you to get it right.

I have been measuring and submitting documents for certification of race walking courses for over twenty years. As a former race walker, and now a coach, as well as a member of the **IAAF Panel of Race Walk Judges (Level II)**, I have gained some insight to share regarding measuring race walk courses. The methodology and protocol for measuring a walking course remains the same as in any road course measurement. It must satisfy the review of a state certifier, and when national records are set, the re-measurement and approval of course validation. Yet, race walk course measurement has some crucial differences, which are dictated by the rules of race walking and how race walking events are conducted.

There are essentially two principal issues that **must** be addressed when setting up a race walk course: the size and design of the course. A 5 km race walk course may **not** be a single 5 km circuit on any type of surface, up and down hills, like a road running course.

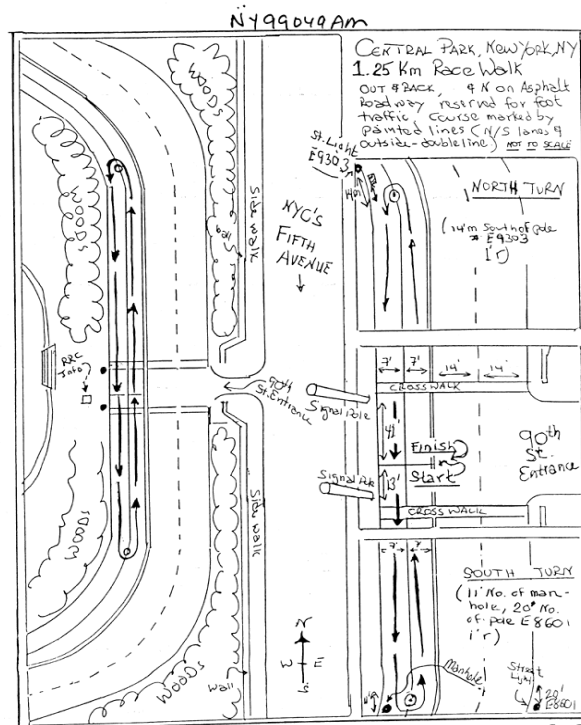
Course size is limited by race walking rules. **IAAF Rules** mandate courses no longer than 2.5 km and no shorter than 2 km. That's easy then, a 2 lap or 2 ½ lap course would work for a 5 km. A check of **USATF Rules** complicates the matter.

USATF Rules would allow a course like this for a 10 km, but not for a 5 km. Like the **IAAF**, race walking events 10 km and longer in the *United States* may **not** be held on courses larger than 2.5 kilometers. In the *USA*, there is no minimum. In fact,

USATF Rules mandate smaller courses for events less than 10 km. For events less than 10 km, the course may **not** be larger than 1.25 km. A 5 km race walk then must be at least 4 circuits on the same loop. Why? It is felt, that the judges of race walking must be given as many opportunities as possible to observe walkers for adherence to the definition of walking. The course may be smaller, such as 5 times 1 kilometer, or even less. How small is too small? A 5 km race walk is practically an all out sprint for walkers. Unless the course is an oval, the walkers would prefer to negotiate the fewest number of turns possible. Ideally, if you can make a 1.25 km loop work, do it. The competitors will appreciate it. A multiple circuit event also enables contestants to view the **Race Walk Disqualification Posting Board** throughout the race. (The board is usually set up 100 meters before the common start finish line.)



②



Central Park 1.25 km Race Walk, New York City, NY
NY99040AM

Having the course *USATF Certified* at the circuit distance rather than at the race distance will also take less time to measure, allowing the measurer the opportunity to pass cost savings on to the race director, or to make a greater profit for himself. When measuring and preparing documents for longer races on multiple loop circuits, what you charge is an ethical decision, although a 5 kilometer fee is certainly appropriate for a race walk course to be conducted on a course of 1.25 km or less. The additional planning and calculations needed to make the course work justifies the 5 km fee. I personally would not charge a 20 km fee for a 1 km circuit.

The second concern is in matters of course layout and design. Race Walking courses may be on any configuration of a loop. They should be on relatively flat and paved surfaces.

The course, which will be judged for adherence to legal race walking form, should be on pavement only. Grass and rough surfaces are **not** suitable for race walking contests, as race walkers might lose form or trip on uneven terrain as they swing their lead leg low to the ground to avoid loss of contact. Race walk courses should **not** include steep hills, which will make contestants break form going up or down. Weaker race walkers may tend to creep up hill like a runner if the up hill is too steep and they may lose contact or flex their knees like runners to negotiate steep down hills.

The ideal course design is to have an out-and-back route on a boulevard with a median, or on a wide roadway, in which a loop is set up using wide turns and separate lanes for counter-clockwise competition. A wide roadway would have to be coned to keep the contestants separate. A boulevard with a median, limits the amount of coning necessary to separate the lanes, however, it is not often a cut through will exist to allow turning to go in the opposite direction. Route circuits of an area, e.g., a neighborhood, or around a block may be used; however, keep in mind more judges will be needed to adequately monitor the fairness of walking. Up to **nine race walk judges** may be used on a road course, with six being the minimum. For out-and-back boulevard type courses the minimum of **six race walk judges** is more than adequate for a 1.25 km course. The out-and-back design of the course allows the judges to have judging sectors on both sides of the circuit. In addition, an out-and-back course design allows the contestants to view their competitors at each turn or on opposite sides of the course, whereas a single around-the-block configuration does not.

It is often necessary to combine both types of design. Often times, a small around-the-block type of loop, set up in or around a parking lot is added to a boulevard out-and-back type loop in order to get a circuit that evenly divides into the advertised race distance. For matters of practical application, where other events might be staged on the course, the course should be a circuit that evenly divides into the advertised race distance, avoiding a separate start or finish segment. It does not have to be, but then lap times are almost meaningless to all involved. Of course, you may have an event that starts and finishes on a track and will have to be measured separately. This will be discussed in a later column.

Race walking courses should **not** be laid out using point to point measurements, e.g. a 625 meter straight-a-way, so that out and back is 1.25 km. Such a course would most likely employ a single turning point at each end, without separate coming and going lanes. On such a course, competitors would have to yield the right of way to oncoming contestants. The matter would be further compounded if the course is not straight and turns or tangents have to be negotiated between approaching contestants. A single turning point at each end, would most likely utilize a “*hair pin turn*,” forcing race walkers to “*stop on a dime*” to change direction. Such turns would invariably force many to alter their technique to a bent-knee shuffle around the turn, subjecting them to possible disqualification. If a single but wide roadway is used, where separate lanes are to be set up, the turns should be laid out in a “*tear-drop*” configuration, wide enough in radius so that the walkers do not have to slow down to negotiate it.

In the *Summer Issue* of **Measurement News**, we will describe how to plan and measure a wide back-and-forth “*boulevard*” type roadway course. Until then, think of how you would alter a 625 meter straight line measurement to accommodate a 1.25 km course with separate coming-and-going lanes and wide turns, designed in a way that the athletes in your local association 5 km race walk championship will be afforded the opportunity to race fast while demonstrating adherence to the definition of race walking.



*Gary Westerfield making announcements
prior to a race walking event.*

The History of a Road Course - The Freihofer's Run for Women

Ken Skinner, Course Director



2005 Freihofer's Run for Women 5 km start.

THE FREIHOFFER'S RUN FOR WOMEN: TWENTY-SEVEN YEARS OF TWEAKING, IMPROVES A CHAMPIONSHIP CALIBER RACE COURSE

Since its inception in 1979, the *Freihofer's Run for Women* contested in Albany, New York's capital has mirrored the evolution of women's distance running in the US. Throughout its twenty-seven years of existence, the same sponsor, the *Freihofer Baking Company* has become synonymous with women's running and their on-going commitment to the event has played no small part in stimulating the growth of women's distance running throughout the *United States*. As the race grew from an initial 500 finishers to today's 3,500+ registrants, the race organizers have had to regularly adjust the course to accommodate the increasing size of the field. This article reflects those course changes and the challenges faced by its measurers in order to facilitate those changes.

1979-88

In the first ten years of the *Freihofer's Run for Women*, the 10 km distance was the featured race with an accompanying 5 km fun run. In nine of the first ten years, the 10 km was designated the *USA Championship* by the national governing body, the *Amateur Athletic Union (AAU)*, *The Athletics Congress (TAC-USA)*, and *USA Track and Field (USATF)*. With that designation and the events significant prize purse, the race attracted the female road racing greats of that time-*Judi St. Hiliare, Nancy Conz, Jane Welzel, Lynn Jennings, Betty Springs Giger, Francie Larrieu-Smith, Patti Sue Plumber, Lisa Weidenbach*, and many others. In those early years, the event was conducted in April, which meant very unpredictable weather. In 1985, the race date was changed to mid-May and then, to accommodate the racing schedules of many of the nation's elite distance runners, settled into the Saturday after *Memorial Day* as its date.

From the beginning, the race organizers wanted to feature two prominent landmarks in the *City of Albany*: the *Empire State Plaza* (the complex of state office buildings located between the state capital and the *NYS Museum* in downtown Albany) and beautiful *Washington Park* located west of the plaza. Two main streets-*Washington* and *Madison Avenues* - run on either side of the plaza and were used as the primary running route connecting the plaza and the park. The start/finish has always been located on or near the plaza with the race route heading west from the plaza, through *Washington Park*, either coming or going or both, then to a cross street where runners looped back to finish.



3 time Freihofer's Run for Women winner, Marla Ruyan of Oregon. Marla has run 15:26 in 2002, 15:24 in 2003, and 15:25 in 2004.

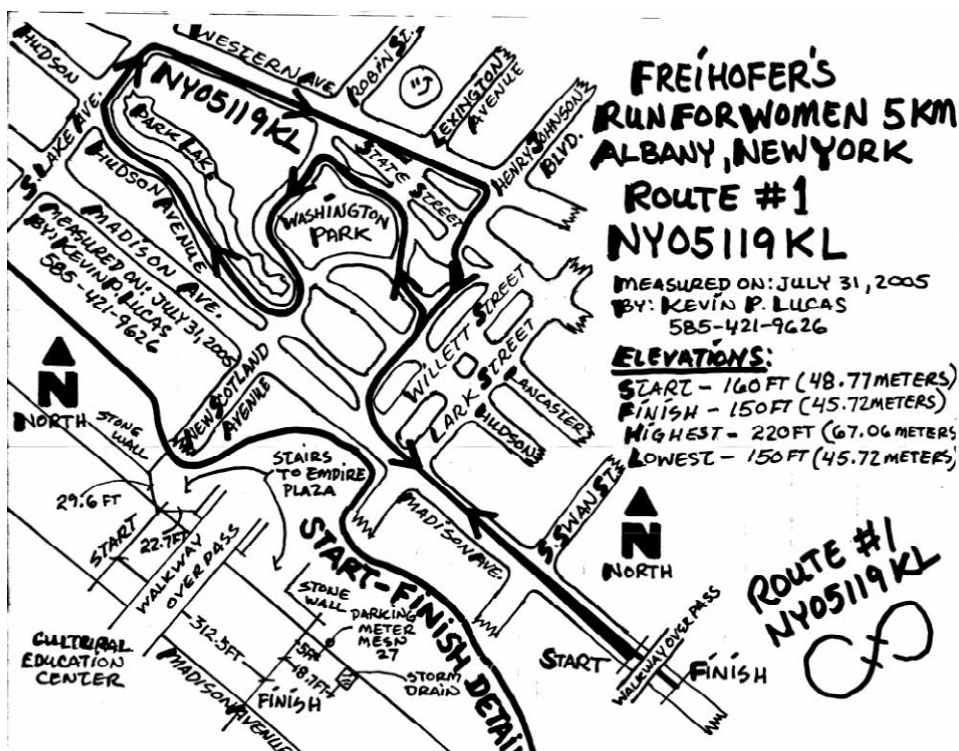
The first three years of the race, **1979-81**, found the start/finish lines on the plaza itself. In **1982**, when current race director **George Regan** took charge, the start of the race was moved off the plaza to *Madison Avenue* while the finish was relocated to *State Street*, the street immediately adjacent to the plaza on its north side. This move required the course to be lengthened. The additional distance was facilitated by looping the runners one block further west. That street, *Homestead Avenue*, was much narrower than the previous which resulted in poor sight lines. The **1983** event saw torrential rains and a vehicle backing out of a driveway on *Homestead* bumped into the lead runner and eventual race winner, **Regina Joyce of Ireland**, causing organizers to once again rethink the course layout. The following year, **1984**, the *State Street* finish was moved to coincide with the *Madison Avenue* start allowing the course to move off *Homestead* and consolidate both start and finish, resulting in operational efficiencies and a more spectator friendly course. The start/finish of the event has stayed on *Madison Avenue* to present day. **Note:** The *L'eggs Mini Marathon 10 km*, in New York City's *Central Park*, was awarded and hosted the *USA 10 km Women's National Championship* in **1989**, with the *Freihofer's* event being awarded and hosting the *USA 5 km Women's National Championship*.

Start/Finish line issues

One of the measurement issues that entered the mix with the move to *Madison Avenue* was complying with the net elevation regulation and its one meter per kilometer drop rule. For the courses used from **1979 to 1983**, the net elevation loss didn't present a problem however with the move from *State* to *Madison* and the elimination of the *Homestead Avenue* loop length needed to be added. The added length was obtained by moving the start and finish further downhill on *Madison*, however this presented the potential for an elevation loss between the start/finish so measurers had to be careful to comply with the elevation rule. The ten meter allowance, for the 10 km, did not pose a problem but was exceeded in the 5 km, as the 5 km was a "fun run" records were not applied. However, when the championship designation was moved to the 5 km, in **1989**, it exceeded the allowable by several meters, measurers had to pay close attention to the net elevation loss and this posed a real challenge.

1989-present

In **1989**, and for all the years, with the exception of **1991** and **1992**, until **2005**, the *Freihofer's* hosted the *USA 5 km Championship*. The 10 km was run as a fun run until it was dropped in **1991**. In **1992**, the number of finishers was over 1700 and gradually increased, over the next 15 years, to over 3,200 in **2005**. Throughout these fifteen years, the race



course has essentially remained the same, as follows: The separation between the start and finish has been approximately 350 feet, with the finish located behind (east) the start. The minimal separation is what keeps the elevation loss under the allowable five meters. The participants start uphill on *Madison Avenue* to the first entrance to *Washington Park*. They run on the inner park roadways, around a pond, exiting the park on the west end onto *Lake Avenue* which runs north/south parallel to the park. The participants run north on *Lake Avenue* to *Washington Avenue*, turn east onto *Washington* and re-enter the park at *Sprague Place* just after the two mile mark. Here the participants run the front part of the course backward through the park back onto *Madison Avenue* heading east, for the ½ mile downhill, to the finish on *Madison* at the *Empire State Plaza*.

Freihofer's Run for Women 5 km, Albany, NY
 NY05119KL

Although the 5 km course hasn't changed dramatically since '89, slight adjustments are always needed within the park, due to regular park improvements. One constant challenge to race organizers, as the number of participants grow, is an overlap, for approximately 300 meters, at *Sprague* where the front runners re-entered the park and the recreational runners are still progressing in the opposite direction. The slower participants are moved off the narrow inner park roadway to make room for the lead entourage of vehicles preceding the front runners. The park road is too narrow, approximately 35 feet at this section, to separate the outbound runners from the lead vehicle entourage and the inbound leaders. This problem has been addressed for **2006** with the overlap being almost entirely eliminated due to a significant course change, which will be discussed later.



2004, Colleen De Reuck, of Colorado, in her first year in the master's division, grabbed the headlines with her 3rd place 15:47 finish. In doing so she destroyed Ruth Wysocki's 16:06 set at Freihofer's in 1997 and, just for good measure, a pending 15:55 world record set by Russia's Firaya Sultanova-Zhdanova in 2003.
Photo by PhotoRun.net

Measuring the section of the race course through *Washington Park* has always been a challenge due to parked cars and the winding narrow roads throughout the park. Parked cars are there throughout the day and in the evening. This requires measurers to carefully ride appropriate tangents as well initiating dismount maneuvers in order to negotiate around parked cars.

In the early years of the 5 km championship course, because the start and finish lines needed to be separated to accommodate the numbers of runners and facilitate day of race finish area setup, two major cone lines were needed in the park; first, where the runners loop around the east end of the pond and second, upon exiting the park onto *Madison Avenue*, on their way back to the finish. This became a continuing challenge, to make sure the cone lines were properly placed on the PK nail line called for in the course measurement certificate. To complicate matters, the cone line, for runners exiting the park, could not be set until all the outbound participants passed this point on their way into the park. The cone line around the pond became a major problem in **1996** when it was not set up (the course marshals were told it was not needed) and *Lynn Jennings* raced, to what was thought to be at the time, an *American and course record time*. However upon validation the course failed by several meters. Re-measurements eventually eliminated both traffic cone lines by moving the start line closer to the finish.

One major issue still needing resolution was the previously-described runner overlap problem. After evaluating the best way to adjust the course, in **July 2005**, to solve this problem, the course was measured, with two different options presented. These options were reviewed by the race committee and the *Albany Police* and the option, adopted in

February 2006, has the runners re-entering the park at a different point, further east than the current entry point, allowing the recreational runners to clear the portion of the course prior to the arrival of the lead entourage. The new section, utilizing *Western Avenue* and *Henry Johnson Boulevard*, is tree-lined, offering more shade, and is astatically more appealing, than the old section of *Washington Avenue*, which was removed. This change was facilitated by moving both the start and finish lines further to the east and closer together. The net elevation requirements will become less of an issue since the section of the course, between the start and finish, is flatter and shorter. The only potential problem will be if the participants, lining up at the start, overflow into the finish area, this will be watched closely at the **2006** edition of the race.

So there you have it. The course changes on this championship course have been many over its history but have all been necessary and initiated to ensure that the event participants have a safe and satisfying experience running one of the most beautiful and challenging race courses in the country at the **28th Annual Freihofer's Run for Women 5 km**.



Meet the New Certifiers and Course Registrar Kevin P. Lucas, Editor

Stu Riegel, Course Registrar: At 41 yrs old, **Pete Riegel's** eldest son, is married to wife, **Bonnie**, who is a successful e-published romance writer. **Stu** holds a Bachelor's degree from the **Ohio University** in Journalism, self-educated engineer, President, owner and chief engineer of **Goatworks Racing Products LLC** (radio-control truck chassis and accessory parts). You can find **Stu** most days working at **HobbyTown USA** in the RC department.

As you can guess, **Stu's** passion is building radio controlled scale model vehicles, he is the inventor of the brushless rock crawler. **Stu** has Collaborated with several manufacturers developing specialty RC products.



"I've ridden along with **Pete** on a couple of short courses and done a back-up or secondary measurement on those. No courses are credited to me, but I am somewhat familiar with the procedures.", **Stu** tells us.

While settling in as course registrar, **Stu** says, "Given a bit of time I'm sure I'll pick it up." **Stu** wants to continue the high standards of record-keeping and protect the integrity of the records for the future.



2003 USATF New Jersey Grand Prix Awards Banquet, Jane is receiving her 10th consecutive age-group award from Roger Price, New Jersey Association Master's Chairman.

Jane Parks, Connecticut Regional Certifier: **Jane** tells **MN**, "I am honored and thrilled to be given the opportunity to be Connecticut's new Regional Certifier, which will allow me to expand my knowledge of the fine art and science of course measurement." **Jane** comes to her new post highly qualified with a BS in Math from **Carnegie-Mellon University** and a MS in Engineering and Operations Research from **Southern Methodist University**. Over the years **Jane** has worked as a Systems Engineer and now does Program Management full-time and event consulting part-time. There is even time for her to teach mathematics and statistics at the local community college as an adjunct professor. To top it off, in **2005**, **Jane** measured an astounding 36 courses in NJ and 2 in NY.

Jane says, "I love to run, bike, and ride horses." As an avid racer, **Jane** has won her age group division in the **USATF-NJ Grand Prix Series** for an amazing 12 consecutive years. "Don't know if I will try for 13, said **Jane**. **Jane** is a competitor running many of the courses she has measured and has a clear understanding of the importance of an accurate course.

It was **Dan Brannen**, former NJ Regional Certifier, who first suggested **Jane** give road course measuring a try and help fill the need in NJ. **Jane's** introduction to measuring with **Dan** was riding as the second measurer for a marathon course on a very long, cold, windy, and misty day. She says, "I can't remember a more miserable ride, but it gave me some insight into measuring." This past year **Jane** measured a 5 km course at **Rikers Island Maximum Security Prison**, complete with police escort. "The police stopped all the traffic on the only bridge to **Rikers Island** right at shift change just so I could complete my measurements. Measuring does have its moments", **Jane** told us.

Over the last two years, other NJ measurers, and especially **Larry Baldasari**, NJ Regional Certifier, have all been helpful to **Jane**. **Jane** is a 12 year member of **USATF-NJ** and an active supporter by volunteering at association races. Being Connecticut State Certifier will allow **Jane** another avenue to help support the programs of the **USATF**.





Justin Kuo, Massachusetts Regional Certifier: At a 4th of July race walk in Dedham, MA, *Justin* would meet and later in **1991** marry his wife **Carol**. With a couple of days learning a little Russian, *Justin* tells us, “We flew to *Russia* in **1994** and adopted five children who were in separate orphanages near *Moscow*, but from the same family.” The 3 boys and 2 girls were ages 2 to 9 and none spoke very much English, except for *Pepsi* and *MacDonald’s*. The proud parents now have the eldest two in college and the third will be starting in the fall.

When *Justin* isn’t at his “real” job as a computer specialist at **Meditech**, you can often find him working all women’s and men’s track meets as an Administrative Assistance at **Massachusetts Institute of Technology**, operating the **FinishLynx** automatic timing system. He has been an **USATF Official Race Walk Judge** since **1991**. “I enjoyed the technical side and became a **FinishLynx** and **FieldLynx** operator. Last year, I learned to use the **LaserLynx** and measured **Erin Gilreath’s** American Record Hammer Throw.”, *Justin* said. **1990** *Justin* first got involved with the **USATF New England Association** and became a **Board Member** and **Race Walk Chair**. **1999**, *Justin* took on the task of association’s **Webmaster** and has maintained their site ever since.

Justin has been a **USATF** member since **1987** and has regularly attended **USATF Annual Meetings**. *Justin* was asked to take over the position of record keeper for men’s and women’s race walk from **Steve Vaitones**. In January **2005**, *Justin* was asked to be the **USATF Records Chairman**, replacing **Basil Honikman**. *Justin* says, “I have been working with the records keepers and the **USATF** national office to maintain accurate and timely information on the **USATF** website and to publish the records.”

As an avid race walker, *Justin* is a founding member of the **NEW ENGLAND WALKERS (NEW)**, which is organized to promote walking as recreation, as healthful exercise, and as a competitive sport. *Justin* became the “aide-de-camp” for **NEW** and has directed several national race walk events. As a competitor, *Justin* placed 4th in **39:11** on **February 20, 2006** at the **Kathy & Ken Hayden 3.8 Mile, Race-Walk 6 km**, held at **D.W. Field Park**, Brockton MA



Ready to ride on a cold day,
with bright reflective jacket.

Enjoying the technical end of things brought *Justin* into road course measurement in **1988**. His first course measurement was a hilly 5 km loop in Acton, MA, after reading the *Course Measurement Manual*. Later, *Justin* would meet his course measurement mentor, **Wayne Nicoll**. Fellow race walker, **Wayne** and wife, **Sally**, had then just recently moved to New Hampshire. Following in **Wayne’s** footsteps was **Ray Nelson**, who took over **Wayne’s** position as certifier. *Justin* tells us, “**Ray** has given me many time saving tips and suggestions that I use regularly while measuring.”

With his eye sight not what it used to be, seeing the digits of the counter was getting little more difficult, a few years ago *Justin* treated himself and purchased **Jones/Oerth/Lacroix Counter** from **Laurent Lacroix** of Canada. *Justin* more recently purchased a cyclocomputer and magnets, but hasn’t marked his front wheel rim yet to try **Neville Wood’s Cyclocomputer Measuring Method**. “I plan on trying it but I don’t think it will replace the more forgiving and simple JO counters.” “My GPS allows me to track the course and to view the upcoming turns and split locations. It helps me find the shortest or fastest way home.”, said *Justin*.



Justin’s bike set up: Jones/Oerth/Lacroix Counter mounted on the headset, Garmin eTrex Vista GPS device, protégé 9.0, and measurement note clip.

Tom LaBlonde, Jr. , Utah Regional Certifier: *Tom* likes to quote **Woody Allen** who is attributed to saying “90% of life is just showing up”. *Tom* has “shown up” more than a few times in his life. Early on as a marathon volunteer for his running club, then later recruited into course measuring and as an **USATF Arizona Association LDR Athlete Representative** . It was **Mike Sheedy**, Arizona Association’s previous LDR Chair, who really peeked *Tom*’s interest in course measuring. *Tom* says, “He (*Mike*) spoke of how technical it was, and that a person had to be very mathematical, able to draw maps, and have enough athletic ability to ride a bike in a straight line.” Naturally, *Tom* purchased the **Course Measurement Manual** the very next day. *Tom* studied the manual as he did when studying to get his master's degree in International Business and Finance from **Thunderbird, The Gavin School of International Business** in Glendale, Arizona.

As a custom home builder, with his own company, **LaBlonde Homes LTD**, measurements and numbers are a big part of *Tom*’s everyday life. “I design and hand draw all the plans for the homes I build prior to turning them over to my CADD draftsman for the final set.” “Now I had a venture that combined the knowledge and skill from the very two things that define who I am...running and building.”, *Tom* tells MN.

Soon enough after waiting until the temperature was near 68 degrees, *Tom* and his very patient wife, **Kimbire**, could be found measuring a calibration course out in front of their house. The **LaBlondes** live in an exclusive home development where the average age of the residents approaches seventy. *Tom* says, “It was quite a comical sight for neighbors and our two young daughters, **Paige** and **Phoebe**, watching as **Kimbire** and I went down the street and back , yelling "pull" and "mark" “ "What are those **LaBlonde**’s up to now!" *Tom* drew a course map and sent it off to **Felix Chicocki**, AZ state certifier at the time.

Felix called *Tom*, telling him to add more measurement detail to his calibration course map and to place a backup nail at the back of the road curb. With his calibration course set, *Tom* started by measuring club running routes. “I measured every course we had, marking some right down to every eighth mile. I even laid out a marathon course - “*The Bandit Marathon*”.



Tom’s 10 year old daughter, **Paige**, **Tom LaBlonde**, and two-time Olympic Gold Medalist, **Haile Gebrselassie** at the recent **P.F. Chang’s Rock N’ Roll Half Marathon** where **Gebrselassie** set a new World Record mark for half marathon and 20 km.

Soon *Tom* would get a telephone call from the local **YMCA** wanting their 5 km course measured for **USATF** certification. Feeling he had done everything correctly with the course measurement, *Tom* checked and rechecked the application, drew a great map, and mailed it. **Felix.Chicocki** telephoned *Tom* in a few days requesting they ride the course together. *Tom* says, **Felix** gave me a very good “how to” lesson that day and more lessons followed.” Every measurement I did, **Felix** mentored me along way. “Every course **Felix** did, I was right there learning from the master.”

Tom tells us, “**USATF** certified courses are not a big concern for race promoters in Arizona. Raising money for charities is more the norm. **USATF** means nothing to the exercise enthusiast out for a Sunday 5 or 10 km.” As the current **LDR Chairman**, *Tom* has found it very frustrating trying to educate the running public to the important connection between road races and **USATF**.

“As a parent who has children running track I see the influence **USATF** has on track and the difference it makes in the lives of athletes who participate.” “With a little insight from **Kimbire**, we came up with an idea to help change a few minds about **USATF** at road races by hosting one mile fun runs for kids”, *Tom* said. *Tom* argues evidence of children’s natural love to running was seen at this year’s **P.F. Chang’s Rock n Roll Marathon** when his daughter and over 2400 young athletes ran one mile fun run. The kids finished under the very same banner two-time Olympic Gold Medalist, **Haile Gebrselassie** did to set a few new World Records.

Tom takes a great deal of pride in *Haile Gebrselassie's* records, he pre-validated the course. "Although it took me two times to get it right, **Neville Wood** requesting a second time, getting it right was the only thing that mattered.", Tom says. From the moment **Gene Newman** asked Tom to validate the course, until the measurement data was calculated, a recurring thought kept going around in his head, "Don't let this man run for nothing." Tom was relieved when the course passed. Tom said, "As a course measurer, there could be no finer moment."



Jim Smith, Don Garrett, and Teo White setting at race clock for one of DG Productions 70 races.

Don Garrett, Oklahoma Regional Certifier: Don is married with 4 children and 1 grandson. After getting a BS degree from the **University of Central Oklahoma**, Don has worked at **Halliburton** for 34 years in sales and management. Don served as a board member of **USAT South Mid-West Region** for 4 years. Currently, Don is on the board of the **Oklahoma City Running Club** and has been a **USATF** member for 7 years.

"I quit smoking and started running in **1983**, running lead to bike riding and swimming, and eventually triathlons." "I love everything about training, competing and the healthy lifestyle.", Don says. **1989**, Don ran his first of 15 marathons at the **New York City Marathon**, running **4:20:00**. Competing in a few ultra events, Don then participated in 3 half **Ironman** competitions. While preparing for another marathon in **1998**, Don was unable to finish a 14 mile run due to extreme knee pain. A broken patella from 20 years earlier had caused his knee to exhibit arthritic-like symptoms.

Surgery was unsuccessful and attempts to resume running left Don barely able to walk. Don says, "Giving up running was difficult, but necessary."

To maintain contact with running friends, Don started timing and managing races. As a 5 year race director veteran who always paid for timing services, "I thought it would not be hard to do it myself. I was so naive it was funny.", Don tells MN. Next, he ordered a copy of **Alan Jones' Runscore Software** and the rest is history. Don still sends the first race he scored a sponsorship donation to make amends. **2005, DG Productions** worked 70 races and now use the **Champion Chip Timing System**.

Don said, "Thanks to the efforts of **Glen LaFarlette** and **Joe McDaniel**, Oklahoma races are nearly 100% run on **USATF** certified courses." "Yet, it seems there are always a number of new events each year needing a course **USATF** certified." Assisting these new races to measure and certify their course is how Don got involved with measuring. With help from **Ken Hardwick** and 80 year old, **Jim Smith**, "My first course was 80 miles from home and took 3 trips to get it right.", Don says. **Jim Smith**, could ride a bike with the best of them and drew some great maps, but recently health problems have sidelined him, so Don has been measuring alone recently.

Over the years Don has measured 100 courses and submitted them to **Bob Baumel**, OK state certifier. Bob taught Don the importance of detail. "Close just doesn't work with Bob. Do it right or do it over.", Don said. Don now has a regular 4-5 course measurement waiting list, which has developed slowly over the last 8 years.



DG Productions typical finish line setup.



Matthew Studholme, Hawaii, Kentucky, North Dakota, South Dakota, and West Virginia Regional Certifier:

Matthew claims a true “multi-national family”, “I’m Welsh, my wife **Maria** is Swedish, my daughter is *English*, and my son is *American*.” The Studholme family has been living in the US since the end of **1993** after moving here for a job assignment. The original plan was to spend 2 - 3 years here, but 2 - 3 years has become 4 - 5 and so on, now 12 years



plus. *Matthew* maintains a *Green Card* to live and work in the US with an outlook to apply for dual *British / US Citizenship* later this year. The Studholmes have lived in southwest Virginia, Abingdon, since moving to the US, about 20 miles from the Tennessee state line with a wonderful view of the beautiful **Appalachian Mountains**. *Matthew* says, “The rolling countryside here is very reminiscent of where I grew up in Wales.”

Before coming to the US, *Matthew* gained his bachelor's degree in Chemistry and studied for a masters in Polymer Engineering at schools in the **UK**. Currently, *Matthew* works for a synthetic fiber spinning company in research and development and has 17 patents with several more pending.

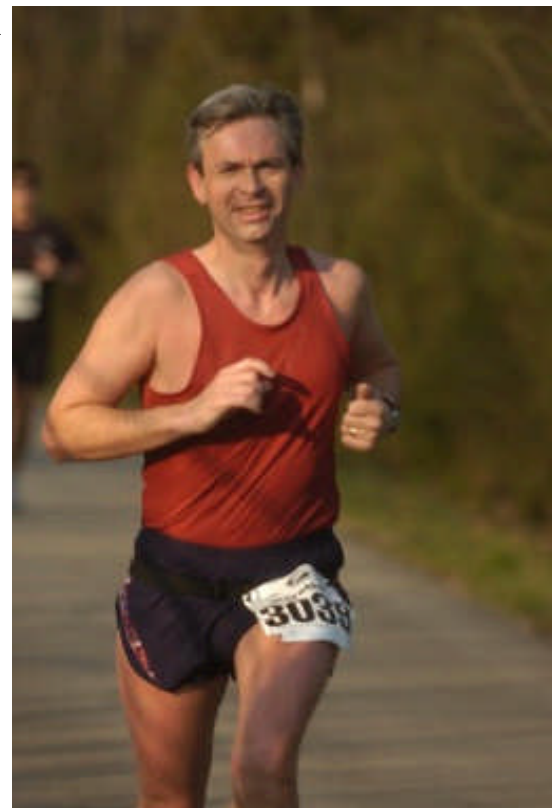
Beyond course measurement, *Matthew's* main interests are running and soccer, as a coach. “I don't have time for much else outside of other family commitments. My wife is fortunately also a runner, so she's understanding of my running interests.”, *Matthew* told us. Proudly, *Matthew* says, in the fall my daughter started running cross-country and hopes to run track this spring. “My son plays on a successful

competitive (traveling) football team, oops I guess I mean soccer, I help with coaching.”

As a veteran of several marathons, *Matthew* realizes that the recovery period after running a marathon is getting longer and longer with each passing year. The new focus is on competing in shorter races. An active board member of **State of Franklin Track Club**, *Matthew* set up and maintains the club's results database and coordinates the annual competition based on age-graded performances in 23 races all run on *USATF* Certified courses.

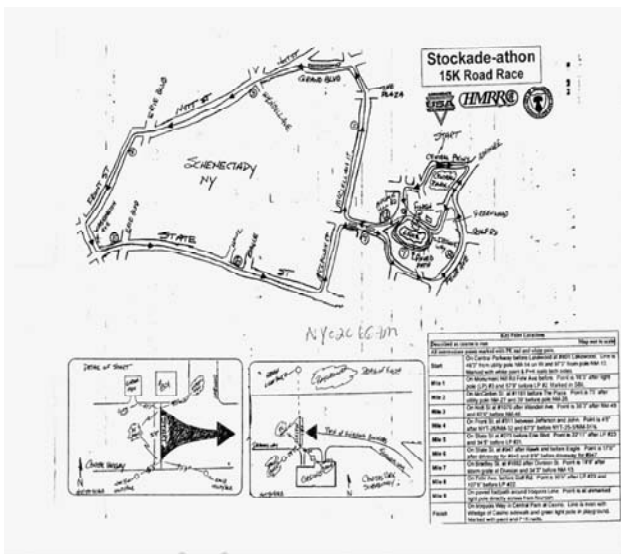
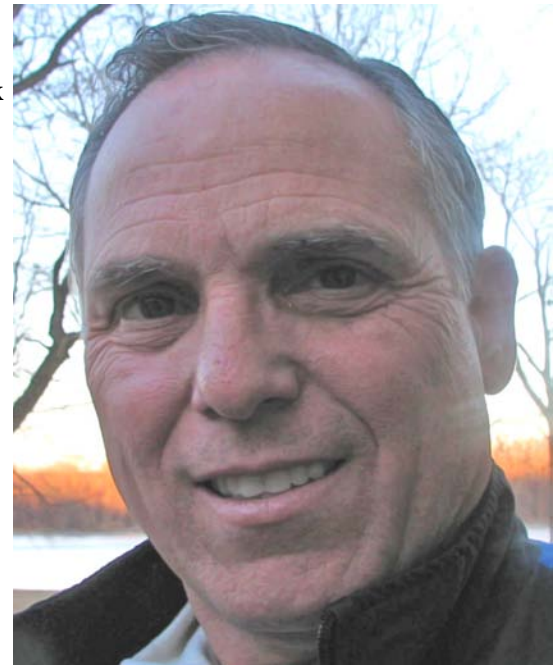
Back in the early ‘80’s *Matthew* did a little course measuring back home in the **UK**, but it wasn’t until 3 years ago when a local measurer moved out of the area did he start measuring again. The local running community supports a large number of *USATF* Certified courses, which have been measured and maintained by *Matthew* or **Dave Rogers**, TN state certifier. *Dave* and *Matthew* share the same running club. “We have reached the stage locally where runners automatically assume that they are running on a *USATF* Certified course.” The majority of *Matthew's* course measurements are split between Virginia and Tennessee. “**Bob Thurston**, VA state certifier, and *Dave* (Rogers) have been my main measuring mentors.” “I really enjoy measuring, particularly getting to go and becoming intimate with places I would never even dream of visiting otherwise.”, *Matthew* tells *MN*. The area's biggest race is the **Crazy 8's** in Kingsport, TN, which boasts the current *Men's and Women's 8 km World Records*. “The race director, **Hank Brown**, wants to have the course changed this year; I'm sure both *Dave* and I will be involved with the re-measurement.”

So far in **2006**, *Matthew* has measured 2 marathons, 2 half marathons, an 8 km, and an one mile. The **Shamrock Sportsfest Marathon** in Virginia Beach, VA and **Kentucky Derby Festival Marathon** in Louisville, KY, which have taken a lot of his spare time and coupled with extensive traveling for work has kept *Matthew* busy. “For the first time this year, The *Kentucky Derby Festival Marathon* course goes through the **Churchill Downs** track, the home of the **Kentucky Derby**, which is pretty cool.”, says *Matthew*.



Matthew doing what he loves, running in last year's Knoxville Marathon, finishing in 3:31:26.

At a course measurement clinic connected to the validation for the ***Freihofer's Run for Women*** in August **1996**, **Wayne Nicoll** and **Mike Wickiser** introduced *Jim* to measuring. *Jim* says, "I participated in the validation procedure that ultimately disallowed the record run. Looking back, this initiation was a remarkable lesson in what is arguably the most critical function of the measurement process." "This experience anchored in my mind the necessity of repeatedly perfecting the measurement rituals we perform to ensure runners run *no less than* the required distance." Over the years, with the guidance of **Amy Morss**, NY State Certifier, *Jim* would learn the finer points of course measurement. *Amy* required clear course maps and plenty of detail on the application. "...many of us have appreciated her (*Amy*) skillful contributions and many generous years of service to **RRTC**. She left some "big wheels" to fill, and I'll do my utmost to maintain her high standards.", said *Jim*.

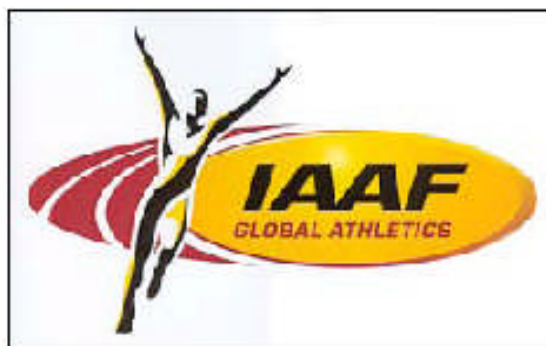


committee, and was an officer. Currently, *Jim* assists in the **GHI Workforce Team Challenge** and is director of the **US Marine Corps Half-Marathon**, which is held in conjunction with the *HMRRC's* fall marathon.

Early **1990's** the *Adirondack Association* gained two active members, first *Elaine*, she directing the **USATF National Race Walk Championships**, and *Jim* soon followed. *Jim* is chair of the association's road race technical committee. As chair, *Jim* has a new appreciation for the importance of coordinating efforts between the association and running clubs. *Jim* says, "I believe there is much that regional associations can and should do to encourage and promote quality measurement, and to increase an awareness of the value of course certifications among their constituent member clubs."

As a member of the **Hudson Mohawk Road Runners Club** (HMRRC), *Jim* has held various positions. *Jim* helped found and directed the club's annual summer trail run, chaired the race

As the new NY State Certifier, *Jim* wants to visit the other four NY state *USATF* associations and meet with running clubs to get a pulse on what should be done to help improve road course certification. Along with *Mike Wickiser*, *Jim* hopes to host a measurement seminar, inviting groups statewide. “All in all, this is a very exciting time to be involved in the technical aspects of road running.” “I look forward to meeting and sharing ideas with many more readers of *MN*, which, thanks to the new editorial direction of **Kevin Lucas**, continues to be the premier magazine dedicated to technical aspects of road race measurement.”, *Jim* says in closing.



INTERNATIONAL ROAD COURSE MEASUREMENT SEMINAR

---- PUERTO RICO ----

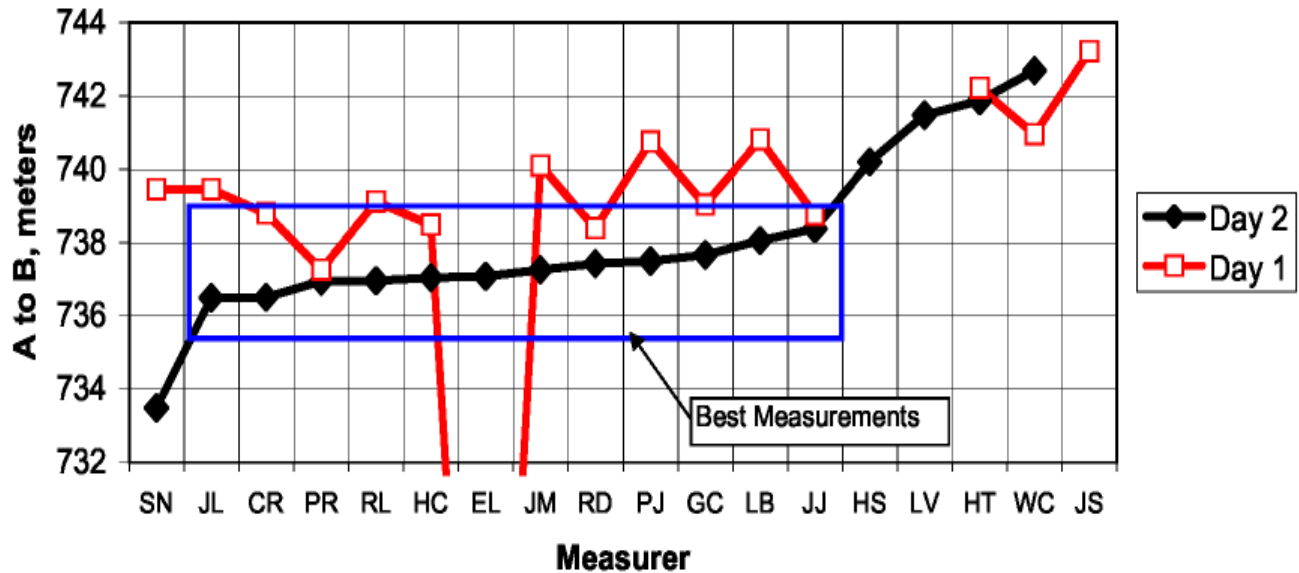
Parque Julia de Burgos
Carolina (San Juan)
February 4 & 5, 2006



*Standing from Left to Right: Heriberto Cosme, Renan Lopez de Azua, Pedro J. Davila, Hector Sanabria, Jose Llenin, Julio Juan Figueroa, Jose A. Melendez, Santos Negron, Rafael Diaz, Luis Berrios, Julio Soto, Eugenio Lopez and William Candelario.
Seated from Left to Right: Peter Riegel, Carlos Rodriguez, Linda Velez, Gerardo Cerra and Heriberto Torres.*

RESULTS OF ALL MEASUREMENTS OF THE TEST COURSE - Measurement Results in Meters

Comparison of Day 1 & Day 2



Measurer	ID	Meters Day 2	Meters Day 1	Contact Information
Santos Negron Vargas	SN	733.49	739.44	787-562-5403
Jose A. Llenin	JL	736.50	739.45	jllenin@gmail.com
Carlos J. Rodriguez	CR	736.51	738.79	carlos_rodriguez@vernixeng.com
Peter S. Riegel	PR	736.95	737.25	riegelpete@aol.com
Renan Lopez de Azua	RL	736.96	739.11	Renan@rlda.com
Heriberto Cosme Rivera	HC	737.04	738.49	Jungo20@PRTC.net
Eugenio Lopez Encarnacion	EL	737.08	714.05	Rockerita_182@hotmail.com
Jose A. Melendez Melendez	JM	737.26	740.09	jammsurvey@yahoo.com
Rafael Diaz Ramos	RD	737.42	738.39	rafaeldiaz@ciaprrmail.org
Pedro J. David Colon	PJ	737.49	740.75	PJDCInc@coqui.net
Gerardo R. Cerra Ortiz	GC	737.66	739.03	Gerardocerra2@yahoo.com
Luis J. Berrios Montes	LB	738.05	740.81	lberrios@prtc.net
Julio Juan Figueroa Carrillo	JJ	738.37	738.76	jjfc@coqui.net
Hector M. Sanabria Valentin	HS	740.19		hmsvcm@prtc.net
Linda L. Velez	LV	741.47		velezl@uprm.edu
Heriberto Torres Figueroa	HT	741.86	742.21	htorres1@choicecable.net
William Candelario Nazario	WC	742.69	740.95	WilliamCandelarioNazario@ciaprrmail.org
Jorge Soto Colon	JS		743.21	sotopr02@aol .com



IAAF INTERNATIONAL MEASUREMENT SEMINAR

*** San Juan, Puerto Rico ***

February 4 & 5, 2006

Organization of the Seminar

In 2005 I was contacted by *Amadeo Francis*, IAAF Vice President. He asked whether I was free to conduct a measurement seminar in February. I responded with an enthusiastic “yes.” *Amadeo* put me in touch with *Linda Velez*, PLS, PE, President, *Instituto de Agrimensores del Colegio de Ingenieros y Agrimensores de Puerto Rico (CIAPR)*, who was responsible for the general organization of the seminar. *Linda* contacted surveyors from all parts of Puerto Rico, and 17 came to the seminar.

The Venue

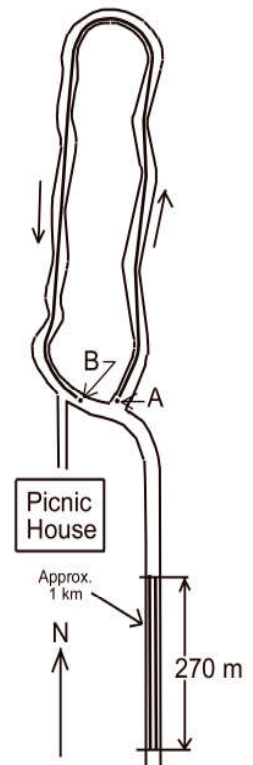
The seminar was held at the *Parque Julia de Burgos* in Carolina, a suburb of San Juan. The park contains about 1.7 km of bike paths, with a large picnic house conveniently located for use as a classroom. The test course was approximately 740 meters in length, with a 270 meter straight portion available nearby for the layout of a calibration course.

Preliminary Preparation

Before the seminar a general outline of the work and a statement of requirements was sent to *Linda*. When I arrived everything was ready. Each student had use of a bicycle and a Jones counter. I came to the venue the afternoon before the seminar to make decisions regarding how it could best be used.

Conduct of the Seminar

Day 1 – Saturday, February 4 – Everybody came to the picnic house, arriving from 8 to 9 AM. Jones counters were mounted to the bicycles. Breakfast was provided by CIAPR. I was introduced, made some preliminary remarks, and explained that we would first lay out a calibration course. Since all of the students were professional surveyors I did not feel it necessary to explain the use of the steel tape.



Nailing End Points of Calibration Course

We left the classroom and went south on the bike path. I asked the students to lay out two parallel calibration courses on the path. I wanted to have parallel calibration courses so that we would have one-way traffic on each calibration course. I explained that in normal measurement a single calibration course was generally used. Only 270 meters was laid out because that was all that was available in a straight line. I explained that this length was suited to the venue and for instruction, but that 300 meters was the minimum acceptable for real-world measurements.

Once the calibration courses had been marked with a PK survey nail at each end, we returned to the classroom.

I explained that I would demonstrate the procedure of pre-calibration, measurement, and post-calibration, and then I would ask them to do the same thing. With students observing, I measured the distance between two points, A and B, on the bike path north of the classroom, and continued on from B to lay out a 1 km point. I explained to the students that each one should establish their own position of 1 km, and that later we would take a photograph of everybody standing on their mark. This gives people a good idea of how measurements can vary.



Taping the calibration course



Calibrating the bicycles



Measurers at their 1 km Marks

When I was finished with my measurement, the students assembled at the calibration course and began their measurement work. I went to the classroom and did my calculations. I posted my calculations and results on an easel so all could read them and see what I did.

Students took several hours measuring and calculating. Lunch was brought to the classroom at mid-day, and everybody enjoyed the meal.

As each measurer completed his work, he was asked to write his result on the easel. I had the shortest measurement, as I expected, and I explained how adherence to the *Shortest Possible Route* (SPR) was the way to get similar results. I collected all the data sheets for use in preparing this report.

During this time I was approached by *Luis J. Barrios Montes*. He explained that he could not balance on a bicycle, so he had one of the other students ride the bike while he did the calculations. He wondered whether this was acceptable. I explained that the bicycle riding was part of the measurement process. He asked whether it was all right for him to bring a tricycle the next day to use as a measurement bicycle. I said OK, bring it. I thought it was not as good as a bicycle, but with care it should enable him to get his own data.

Day 2 – Sunday, February 5 – We again met at the classroom. Breakfast was served. Luis had brought a brand-new tricycle, and it was admired by all the students. I explained that today would be easier, as now we all had experience. I said that today we would make multiple rides of distance A-B, and that each measurer could make as many rides as he wished, and use the best one as official. I explained that the measurements would improve as the course became more familiar. I walked my bike along part of the course to demonstrate the SPR, explaining about 30 cm clearance from edges, and tangents between bends in the path.



Luis J. Berrios Montes with his tricycle

The mood this day was much less nervous than on Saturday. The measurers were more sure of themselves, and the measurement results showed a great improvement. The spirit of competitiveness was present, and people appeared to be taking pleasure in the exercise.

Luis' tricycle was also used by *Linda Velez*, who took time away from supervising the seminar to actually measuring the route.

With measuring done, we went to the classroom and calculated results. Each measurer again posted results on the easel, and compared them with yesterday's results. All but two showed significant improvement of the first day's measurement, indicating that they had a better understanding of how to follow the *Shortest Possible Route*.

After lunch we enjoyed free-flowing discussions of various measurement topics, followed by a closing ceremony and presentation of certificates attesting that the participants had earned IAAF "C" level measurement status.

Discussion of Results

Results of the measurements are presented in this report. Included are:

1. List of measurers
2. Measurement results from day 1
3. Measurement results from day 2

On return home, I used the data provided by each measurer to correctly calculate the course length, using a computer. Sometimes the computer value does not agree with the length calculated by the measurer. In these cases, either the student or I made a mistake. Some common mistakes were:

- Loose riding – failure to follow the *Shortest Possible Route*
- Transposing numbers or incorrect reporting
- Rounding off calibration figures prematurely
- Incorrect calculation of calibration figures
- Incorrect calculation of distances
- Incorrect data submitted to me at the seminar

Each student should study his numbers, and compare them with the computer calculations. Where there is a difference, checking will discover the reason.

What was the length of the course? – No one can say with certainty, but my estimate is about 737 meters. There is no clearly-defined way to calculate course length when many measurements exist. One method is to throw away the obvious outliers and use the median measurement of the rest. This is generally reliable. Other methods have been proposed, but ultimately some judgment must be used.

Most of the measurers had numbers in reasonable agreement with the above. The rest will improve with more practice. **In only one day we saw an enormous improvement – more riding practice will certainly improve each measurer's riding.**

The test course was almost entirely curved, with one 180 degree turn. As a result, measurements had more variation than would be the case if there had been more straight parts. The students did well to get their results.

All students have now learned the most important part of course measurement – the riding of a tight, correct line, following the *Shortest Possible Route*. All the calculation in the world cannot correct the results of a bad ride. The students are ready for more measurement work. And all are now officially proclaimed as IAAF Measurers, grade “C.”

Upgrading from “C” to “B”

Students are encouraged to submit measurements for certification. Material should be submitted to *Pedro Zapata*, USATF Road Course Certifier, Puerto Rico (pzapata@ptmpr.com). If all is correct, he will issue a *USA Track & Field* Certificate of Accuracy for the course. After a student has successfully applied for and been granted 4 or 5 USATF certificates, I will recommend them for upgrading to “B” level.

A Personal Note

I had a wonderful time conducting this seminar. All of the students were enthusiastic and eager to learn, and many perceptive questions were asked. This is a good sign – an inquiring mind will learn quickly. The improvement between day 1 and day 2 was impressive. I was very happy to see it. I am confident that as the measurers work they will improve. In several cases, little improvement is possible, as results showed they are already well along.

All students are invited to correspond with me in Spanish. Although I cannot speak it well, I can understand the written word. I will answer all questions in English and Spanish.

My thanks to *Linda Velez*, without whose work this seminar would not have happened. I would have hated to miss it.



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IAAF “A” Measurer
IAAF Measurement Instructor
February 8, 2006

Copies of this report sent by email to:

All Seminar Participants
Pierre Weiss, IAAF
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Dave Cundy
Jean-Francois Delasalle
John Disley
Hugh Jones – AIMS Secretary
Pedro Zapata
Amadeo Francis
Gene Newman

PUERTO RICO MEASUREMENT SEMINAR - DAY 1 ACTIVITY - 4 FEBRUARY 2006

Parque Julia de Burgos - Carolina, PR

Calibration course = 270.00 metres

Participants rode the course, obtaining the following counter readings:

RAW MEASUREMENT COUNTS FOR ALL PARTICIPANTS - DATA SUBMITTED BY STUDENTS

Messurer	PJ	GC	WC	SN	JS	RL	HC	JJ	CR	HT	JL	LB	JM	HS	RD	EL	PR
Precal 1	3235.5	3225.5	3136	3154.5	3184	3218.5	3165.5	3168	3128.5	?	3124	3147.8	3152	3243	3229.5	3247	3204.5
Precal 2	3230	3225	3134	3155.5	3187	3218.5	3165	3168	3130.5	?	3124	3149.7	3150	3243.5	3227.5	3232	3202
Precal 3	3230.5	3222.5	3135	3154.5	3182.5	3218.5	3165	3166	3130	3130	3125	3148.5	3150	3235	3229	3223	3202.5
Precal 4	3231.5	3225	3132	3156.5	3183.5	3219.5	3166.5	3157	3127.5	3131	3124	3149	3151	3238	3232.75	3240	3203
Point A	94937.5	66825	94211	44387	58740	3134	32601	28600	39224	47101	126923	26080	17307	154016	97610	141708	59700
Point B	103807	75660.5	100818	53036.5	67509	11956	41264.5	38247	47750	55711	136491	34728.5	25951	162945	106452.8	150264	68451
1 km	106916.1	75779.5	105931.4	56084.79	70545.3	15056	44396.8	41305	109666	58764	136506	37752.5	no data	166023	109583.8	153683.4	71574
Postal 1	3226.5	3224	3131	3153	3179	3217.5	3163	3157	3124	no data	3125	3150.9	3151	no data	3231.5	3222	3200.5
Postal 2	3225.5	3224.5	3131	3156	3179.5	3221	3161.5	3156	3124	no data	3128	3148.6	3149.5	no data	3229.5	3237	3200.5
Postal 3	3228.5	3226.5	3133	3154.5	3182.5	3220.5	3164	3158	3128.5	3128	3126	3149	3150.9	no data	3230	3222	3201
Postal 4	3229.4	3225	3134	3156.5	3182	3222	3164	3157	3126.5	3127	3127	3148	3148.6	no data	3232	3233	3199
Student Calculated A-B, meters	740.637	739.79	740.66	739.47	742.52	739.99	738.49	738.28	738.29	741.53	739.71	740.83	no data	743.75	738.76	no data	737.25

RESULTS AS CALCULATED BY PETE RIEGEL FOR THIS REPORT. ABOVE DATA WAS USED IN THESE CALCULATIONS

Messurer	PJ	GC	WC	SN	JS	RL	HC	JJ	CR	HT	JL	LB	JM	HS	RD	EL	PR
Precal 4-ride average, counts	3231.875	3224.5	3134.25	3155.25	3184.25	3218.75	3165.5	3157.25	3129.125	3130.5	3124.25	3148.75	3150.75	3239.875	3229.688	3235.5	3203
Postal 4-ride average, counts	3227.475	3225	3132.25	3155	3180.75	3220.25	3163.125	3157	3125.75	3127.5	3126.5	3149.125	3150	3230.75	3228.5	3200.25	
Precal constant, counts per metre (includes 1.001)	11.98188	11.95454	11.61924	11.69780	11.80531	11.93322	11.73580	11.70521	11.80094	11.60604	11.59287	11.67370	11.68111	12.01154	11.97377	11.99532	11.87483
Postal constant, counts per metre (includes 1.001)	11.96556	11.95639	11.61253	11.69687	11.79234	11.93878	11.72699	11.70429	11.68643	11.69492	11.59121	11.67509	11.67833		11.97771	11.96936	11.86463
Day's constant (average) counts per metre	11.97372	11.95546	11.61623	11.69733	11.79882	11.93600	11.73140	11.70475	11.69468	11.60048	11.59704	11.67439	11.67972		11.97574	11.96234	11.86973
Precal 4-ride variation, counts	5.5	3	4	2	4.5	1	1.5	2	3	1	1	1.9	2	8.5	5.25	24	2.5
Postal 4-ride variation, counts	3.9	2.5	3	3.5	3.5	4.5	2.5	2	4.5	1	3	2.9	2.4	0	2.5	15	2
A-B by computer, meters	740.75	739.03	740.95	739.44	743.21	739.11	738.49	738.76	738.79	742.21	739.45	740.81	740.09		738.39	714.05	737.25
A-B by Student, meters	740.64	739.79	740.66	739.47	742.52	739.99	738.49	738.28	738.29	741.53	739.71	740.83	no data	743.75	738.76	no data	737.25

Bicycle check of calibration course by Pete - How many 30 m tape lengths were used? Some thought 8, some thought 9

begin 30 m
end 30 m

From Pete's precalibration rides:

3203 counts for unknown length

8, 997191 or, 9 tape lengths!



PUERTO RICO MEASUREMENT SEMINAR - DAY 2 ACTIVITY - 5 FEBRUARY 2006

Parque Julia de Burgos - Carolina, PR

Calibration course = 270.00 metres

Participants rode the course, obtaining the following counter readings:

RAW MEASUREMENT COUNTS FOR ALL PARTICIPANTS - DATA SUBMITTED BY STUDENTS

Measurer	PJ	GC	WC	SN	JS	RL	HC	LJ	CR	HT	JL	LB	JM	HS	RD	EL	PR	LV
Precal 1	3237.5	3224.5	3132	3158	3183	3218	3144.5	3155	3129.5	3132.5	3129	3440	3149	3236.5	3236.8	3236	3203.5	3439
Precal 2	3238	3224.5	3135	3157	3183.5	3222	3142.5	3156.5	3129	3133	3128	3443	3150	3239.5	3232.7	3233	3205	3439.5
Precal 3	3238.4	3229	3134	3158	3183.5	3220	3144.5	3154.5	3129.5	3136	3128	3439	3150	3243	3232	3232	3204	3437.5
Precal 4	3235	3225	3134	3157	3183.5	3222.5	3144	3157.5	3128	3130	3129	3438	3152.6	3240	3233.3	3234	3203	3437
Point A-B (1)	8860	8824.5	8645	8587.5	8766	8803	8800	8842	8545.5	8629	8555	9403.6	8617	8889.5	8847.8	8835	8754.5	9517
Point A-B (2)	8852.9	8822	8625.5	8842.5			8599	8844.5	8548	8629	8546	9407.3	8611.5	8893	8849.2	8839	8752	9502
Point A-B (3)	8843.6	8823	8641	8843.5			8596.5	8846	8543.5	8641	8541	9409.6	8609.5	8889	8843.8	8844		9451.5
Point A-B (4)	8857.5	8825.5	8632	8642			8591	8838.5	8548	8613	8543	9405.5	8611	8902	8842.5	8834		9512
Point A-B (5)										8621.5								
Postal 1	3230.9	3224	3130.5	3158.5	no data	3222	3144.5	3155	3135	3124	3125	3433.5	3149.5	3237.5	3234.5	3229	3203	3437.5
Postal 2	3233	3227	3133.5	3158.5	no data	3225	3142.5	3156.5	3126	3133	3134	3435	3151	3242	3234.5	3231	3203	3439.5
Postal 3	3230	3226	3130.5	3157.5	no data	3223	3146	3154	3126	3131.5	3126	3434.5	3148	3236	3234.5	3233	3202.5	3438
Postal 4	3233	3226.5	3131.5	3158	no data	3223	3143.5	3156.5	3128	3132.5	3125	3436	3148.5	3239.1	3237.5	3234	3202.5	3438
Student Calculated A-B, meters	737.49	737.68	742.67	738.14	742.75	737.5	736.98	no data	736.52	741.85	735.5	738.03	737.29	740.19	737.44	737.82	736.95	741.42

RESULTS AS CALCULATED BY PETE RIEGEL FOR THIS REPORT. ABOVE DATA WAS USED IN THESE CALCULATIONS

Measurer	PJ	GC	WC	SN	JS	RL	HC	LJ	CR	HT	JL	LB	JM	HS	RD	EL	PR	LV
Precal 4-ride average, counts	3237.225	3225.75	3133.75	3157.5	3183.375	3220.625	3143.875	3156.875	3129	3132.875	3128.5	3440	3150.4	3239.75	3233.45	3233.75	3203.875	3438.25
Postal 4-ride average, counts	3231.775	3225.875	3131.5	3158.375		3223.25	3144.125	3155.5	3128.75	3130.25	3127.5	3434.75	3149.25	3238.65	3235.25	3231.75	3202.75	3438.25
Precal constant, counts per meter (includes 1.001)	12.00171	11.95917	11.61808	11.70814	11.80207	11.94017	11.65563	11.70071	11.60048	11.61484	11.59662	12.75348	11.67962	12.0107	11.98772	11.98863	11.67807	12.74699
Postal constant, counts per meter (includes 1.001)	11.98132	11.95963	11.60975	11.70938		11.94390	11.65655	11.69872	11.59955	11.60511	11.59492	12.73402	11.67555	12.00700	11.98439	11.98141	11.67380	12.74699
Day's constant (average) counts per metre	11.99152	11.95940	11.61392	11.70776		11.94503	11.65609	11.69942	11.60001	11.60998	11.59677	12.74375	11.67768	12.00603	11.99105	11.98512	11.67598	12.74699
Precal 4-ride variation, counts	3.4	4.5	3	1	0.5	4.5	2	3	1.5	5	9	5	3.6	6.5	3.8	4	2	2.5
Postal 4-ride variation, counts	3	3	3	1.5		3	3.5	2.5	9	9	9	2.5	3	6	3	5	0.5	2
Calculated values of A-B	738.86	737.67	744.37	733.49		736.96	737.81	738.67	736.68	743.24	737.71	738.37	737.90	740.23	737.87	737.16	737.16	746.61
	738.26	737.66	742.69	738.19		737.73	737.73	738.88	736.90	743.24	736.93	738.19	737.43	740.53	737.98	737.50	736.95	745.43
	737.49	737.75	744.02	738.27		737.51	737.51	739.01	736.51	744.27	736.50	738.29	737.26	740.19	737.53	737.91		741.47
	738.65	737.96	743.25	738.14		737.04	737.04	738.37	736.90	741.86	736.67	738.05	737.39	741.28	737.42	737.08		746.22
										742.59								
Best measurement A-B, meters	737.49	737.66	742.69	733.49		736.96	737.04	738.37	736.51	741.85	736.50	738.05	737.26	740.19	737.42	737.08	736.95	741.47
Best as calculated by student, meters	737.49	737.68	742.67	738.14		737.5	736.98		736.52	741.85	735.5	738.03	737.29	740.19	737.44	737.82	736.95	741.42
Difference	0.00	-0.03	0.02	-4.65		-0.54	0.06		-0.01	0.01	0.00	0.02	-0.03	0.00	-0.02	-0.74	0.00	0.05



The USATF/RRTC and AIMS/IAAF Connection **Bernie Conway, AIMS-IAAF Measurement** **Administrator for the Americas**

*F*irst I would like to wish **Kevin Lucas** good luck with taking over as editor of *Measurement News*. *MN* has always been an important information source for me to keep up-to-date with course measuring in the *USA*. As the *AIMS-IAAF Measurement Administrator for the Americas*, I would like to reciprocate by writing a regular column showing the interface between *AIMS-IAAF* and the *RRTC*. In future issues of *MN* I will write about the difference between *A, B, and C Class* of *AIMS-IAAF* Measurer and list the *USA* races that are *AIMS* or *IAAF* races and list their respective course measurers. For this first issue I have decided to provide a little background on how I was introduced to course measuring to where I am today.

All the way back in **1971** I decided to take up running as a method of controlling my weight and keeping healthy. About **1975** my local home town running club, the *London Pacers*, gained a new member from the states, **Bob Baumel**. *Bob* would become the most influential motivator for me to first get involved with road course measuring.



Bernie's wife, Mary and son, Michael, at the 2005 ING Ottawa Marathon. Bernie had just finished running the 10 km in 56:02.

Bob Baumel moved to the London area from New York City and worked as Laboratory Demonstrator at the *University of Western Ontario* while working on his PhD in Physics. During his time in London, *Bob* set up a series of fun runs of various distances in the park where the *Springbank International Road Races* are held. *Bob* also started to do some measuring for local races. In '79 or '80 I was invited by *Bob* to learn how to measure a local race, *The Ailsa Craig 10 km*. We only had one *Jones Counter* between us, so I ran while *Bob* measured. Later in **1981** *Bob* would leave London, Ontario for a new job as a Research Geophysicist with *Conoco Philips* in Oklahoma.

1982, *Bob Baumel* was now the Oklahoma Certifier, re-connected with me to let me know that **Ted Corbitt** had introduced new standards of

measurement, which included the 0.1% SCPF and a SPR of 30 cm. *Bob* asked me to re-measure the 5 km *Springbank Park* loop, which I finally got it right after a number of tries and a great deal of long distance coaching. I still have the TAC Measurement Certificate from that course signed by *Bob* on **December 19, 1983** as Regional Certifier and on **December 31, 1983** it was Nationally Certified by *Ted Corbitt*.

My first Ontario, Canada certified measurement was for a 10 km in St. Thomas where I taught chemistry and physics for 33 years before my retirement in **June, 2004**. Except for the 5 km *Springbank Park* race course I had my courses certified by the *OTFA (Ontario Track and Field Assoc.)* until **1989** when certification was discontinued. I continued measuring, but in order to obtain a course certification I would contact *Bob Baumel*. This is when *Bob* introduced me to **Pete Riegel**, the second most influential motivator for my involvement in road course certification. *Pete* agreed to certify my courses and along the way gave me many pointers to improve my measuring and map making skills, which I am very grateful.

In **1990** I attended the *TAC/IAAF Measurement Seminar* put on by *Pete Riegel* and **John Disley** in Columbus, Ohio, (see the group photo below). That year I was pleased to be appointed an *AIMS-IAAF Grade A measurer* in **1990** and later received the distinction of *Final Signatory* for the *USATF* in **1992**. Have always looked forward to group measurements. Helping measure and validate the *U.S. Olympic Trials* marathon courses, **1991** in Columbus, Ohio, **1999** in Pittsburgh, Pennsylvania, and **2003** in Birmingham, Alabama were each a great thrill. I was also privileged to assist in the validation of the marathon and race walk courses for the **1996 Olympics** in Atlanta, Georgia. In **1999** I was again honoured to validate the *Pan-Am Games* marathon and race walk courses in Winnipeg, Manitoba.

2001 I was appointed by *Athletics Canada/Run Canada* with the major task to set up a course measuring certification system. With permission from *Pete Riegel*, who was then Chairman of the *USATF-RRTC*, I copied the certification model used in the United States. Later in **2001** I attended the group validation of the *IAAF World Track and Field Championships* marathon and race walk courses in Edmonton, Alberta and was named as the Competition Delegate for the marathon and race walk events when *Pete Riegel* was not able to attend. When *Pete* retired in **2003** as *AIMS-IAAF Measurement Administrator for the Americas*, he recommended me as his replacement. Following interviews by the members of the *IAAF/AIMS*, I was officially appointed to that position, which I proudly hold today.

Until the next issue,

Bernie Conway



1990 TAC/IAAF Measurement Seminar, West Jefferson, Ohio, June 16-17, 1990.

Back Row from left to right: Scott Hubbard, Mike Wickiser, George Tillson, Jay Wight, Bob Thurston, Doug Loeffler, Wayne Nicoll, David Fish.

Front Row from left to right: John Disley, Sally Nicoll, Tom McBrayer, Joan Riegel, Bernie Conway, Bob Baumel, Tom Knight, Hannah Fish-Morss, Amy Morss, Pete Riegel.

For further information, please visit:

Run Canada Course Measurement at: <http://www.coursemeasurement.ca/>

AIMS at: <http://www.aims-association.org/>

IAAF at: <http://www.iaaf.org/>

Athletics Canada at: <http://www.athleticscanada.com/>

U.S. Track Delegation Tours Akron Courses: **Committee Seeks Site for 2008 Olympic Marathon Trials** **Paula Schleis, The Akron Beacon Journal, Ohio**

Feb. 15--New York has a lot to offer. As do Boston and Minneapolis.

So in a pitch Tuesday to become one of two cities to host the **2008 U.S. Olympic Marathon Trials**, Akron race organizers argued that the event here would be a star attraction whereas in the other larger cities it would get lost among many other activities.

Akron is the third of four cities to be toured by **USA Track & Field** representatives, who will select which two cities will host the women's and men's qualifying races.

The notion that Akron would best appreciate the honor of hosting an *Olympic* trial appeared to hit home with some on the site selection committee.

"In a place like Akron, this would be a very special event," said **Elizabeth Phillips**, who helped pioneer women's long-distance running in the 1970s.

Phillips, a Cleveland native who lives in New York, served as the referee for the first women's *Olympic Marathon* in 1984.

Her fellow visiting committee members were:

-- **Jim Estes**, who came here in 2002 as coach of the U.S. national team participating in the relay race of the first **Road Runner Akron Marathon**.

-- **Scott Strand**, a marathon runner from Birmingham, Ala., who was making his first trip to Northeast Ohio.

-- **Kim Keenan Kirkpatrick**, a New Jersey native who graduated from *Kent State University* in 1989.

-- **Creigh Kelley** of Denver, who served as the announcer for the first *Road Runner Marathon*.

Four *USATF* members and two of their Akron hosts kicked off a very busy Tuesday with a 6:30 a.m. run downtown, following a 6.2-mile loop proposed as part of the course.

By 10:30 a.m., the entire committee, more hosts and several media representatives hopped aboard a bus for a 2 and a ½-hour tour of the entire route.

Visit to Stan Hywet

A police escort led the way to **Stan Hywet Hall & Gardens**, where the race would start.

Curator **Mark Heppner** quickly briefed the committee about the estate of **Goodyear** co-founder **F.A. Seiberling** and the lodge where **Alcoholics Anonymous** was founded, then led them to a basement auditorium where the runners could hang out before the race.

Outside, *USATF* member **Kelley** wondered aloud if the gate leading out of **Stan Hywet** was large enough to accommodate a rush of runners without forcing them into an uncomfortable funnel. But his colleagues suggested the 100 to 200 runners could take their time filtering through the gate since it was just the start of the 26-mile race.

After leaving **Stan Hywet**, the committee was driven along two alternatives for the opening seven-mile leg of the course. The first was chosen for its scenic beauty, weaving through Akron's historic **Portage Path/Merriman Road Neighborhood**. The shaded streets and residential housing would also offer some protection from the elements during the **April 12, 2008**, run.

As the bus turned off Merriman onto Eaton Avenue, local race organizer **Bret Trier** noted with a chuckle: "You can see we're missing the train tracks." That was a lesson learned during the first *Road Runner* marathon, when a train cut off some of the runners.

The second course option featured a long sweep west on Exchange then back toward downtown via Market. It offers a wider running path and longer sight lines, but Akron host **Steve Marks** was almost apologetic as the bus began the long, steady ascent on Market between Elmwood and Portage Path.

"This is a controversial alternative," he said, but his concerns were quickly dismissed by the *USATF's Phillips* and *Kirkpatrick*. "You don't want a grueling hill, but you do want a course that's rolling," *Phillips* said.



Akron course designer Dave Hunter talks Tuesday with USA Track & Field representative Elizabeth Phillips on a bus tour of a marathon route.



USA Track & Field representative Kim Keenan Kirkpatrick listens to Akron host Steven Marks while they travel Tuesday (2/14/06) along a proposed route for the 2008 U.S. Olympic Marathon Trials.

Ups and downs

Some runners do better on descents, some shine on the climb, and "you want to provide the better runners with the opportunity to break away from competitors," she said. Strand, the only competitive athlete among the visitors, said he thought his peers would prefer the residential course. "It's early in the race when you still feel like looking around and taking it in," he said, unlike later in the race when fatigued racers aren't paying attention to the scenery. At Market and Main, the bus was met by the first of three groups of race fans cheering and waving signs. Marks identified them as **Summa Health System** employees and members of the **Summit Athletic Runners Club**. Then the committee proceeded along a "criterium loop" that would be repeated three times by the runners. The course traveled south along Main, then returned north along High Street before crossing the **All-America Bridge**, circling a block

near **St. Thomas Hospital**, then returning to Main and Market.

The downtown loop was designed to be "benign," with little elevation change, race organizers explained.

The USATF's Kelley said he recognized that the course would definitely be faster than the 2002 Road Runner event he attended.

"That was a great route for citizen athletes," he said. But for Olympic runners, a course needs to be fast enough to meet or exceed USATF qualifying times. Currently, the standard is 2 hours and 15 minutes for men, 2 hours and 32 minutes for women.

Kelley and Strand both said they thought the course looked fast enough, but Estes wasn't so sure, saying it looked "a little more challenging" than he'd like.

The bus made a final stop at **Canal Park**, where committee members walked down to the baseball field for a look at the proposed finish line.

David Hunter, lead designer of the course, pointed out that runners could slip out through the dugout to avoid fans after the race.

Tuesday's visitors will share their observations with the full committee. Then the women will select a site for their trials, and the men will do the same.

Akron's destiny?

The winning cities will be announced in mid-April, but those who believe in fate may take to heart one story told during the bus ride.

USATF representative Kirkpatrick, who once toured **Stan Hywet** and took home a refrigerator magnet, recalled how a couple of months ago her 4-year-old son had picked up the magnet and asked what it was.

It was the first time in a long time Kirkpatrick had given it any thought.

That very night, she picked up her copy of Akron's application to learn that **Stan Hywet** was the proposed starting gate.

Paula Schleis can be reached at 330-996-3741 or pschleis@thebeaconjournal.com

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Editor's Note: What ever cities are selected to host the 2008 Olympic Marathon Men's and Women's Trials, Akron, NYC, Boston, or Minneapolis, the course measurements should provide ideal opportunities for measurers to gather together to meet, measure, and validate these two courses. These types of important course measurements presents the RRTC the challenge to demonstrate just how important course measurement certification and pre-race validation process are to the sport of road racing.



The Complete Racer **Scott Hubbard, Runner's World**

Scott Hubbard is the Regional Certifier for Michigan and columnist for *Michigan Runner* magazine. The only racing he does these days is on a bike in the relative cocoon of the peloton.
Photo by John Brabbs, RunMichigan.com

"Assistance to athletes, 1. Except as provided in road races and long distance walking events, during the progress of an event a competitor who has received any assistance whatsoever from any other person may be disqualified by the referee. 'Assistance' is the conveying of advice, information or direct help to an athlete by any means, including a technical device. It also includes pacing in running and walking events by persons not participating in the event, by competitors lapped or about to be lapped. It does not mean participation of an officially designated pacesetter in the race. Note 1. Pacesetting by a person entered in an event for that purpose is permitted, provided such pacesetter starts in the event."--USATF Rules of Competition, #144.

Pacers may be legal but I don't like the practice, at all. Call me a purist, tilting against record-thirsty fans and event organizers, but I like the dynamics of a race where questions of pace judgment, nerve, tactics and reacting to the moment are central to the outcome. There is something inherently honest, even noble, about competition minus performance-enhancing aids like pacesetters. Paced races are artificial competitions and lack for real struggle and unaffected human drama, two basic tenets of sports.

I realize that fast times and records turn heads, generate excitement and stir up media exposure, all generally positive effects. These results are well and good but pale in my estimation for races where place is paramount, time an ancillary outcome. I especially like championship races at all levels, where everybody is looking out for themselves and times are byproducts, not the only aim. I also admire the **Boston Marathon** as it's always been pacer-free and the legion of other road, track and cross-country races held sans pacer assistance.

I don't begrudge those hired to pace, those that benefit, or the most famous of pacesetting epics, **Roger Bannister's** first sub-4 minute mile. If the rules are right or officials are okay with race conduct, it's silly of me not to acknowledge paceset records as legitimate. But it doesn't mean I have to hold them in the same regard as, say, a world record **51:49 Crim 10 mile** in **1989** by **Cathy O'Brien**, where she sped away from the field on her own.

Before **Paula Radcliffe** ran her **London Marathon WR 2:15** in **2003**, **IAAF** officials disregarded the assistance rule requiring participants to be entered in the race; there were male pacesetters in the all-women's field. Having men in an all-women's field distorts interpretation of the rules. *London* will have them again this April, circumventing the rule by saying they'll mesh the pacesetters' finishing times with the rest of the men.

And what do we do about runners following non-designated pacers? Behind the hired help are often many times more runners being led by friends, teammates, spouses and organized pace groups. The answer is simple and vexing; all pacing is okay, it seems, because it's an impossible situation to easily police.

In **2002**, *Crim* director **Sherlynn Everly** reduced the amount of **Asmae Leghzaoui's** prize money because it appeared on video she received "extra help" from her pacesetting husband. Not all races have the benefit of video or enough officials to monitor pacesetting close enough to determine whether a "rabbit" is turning to paced runners and asking what their favorite movie is or to convey information about their competition 100 meters back.

Interestingly, some paced runners say later they didn't benefit from their hired assistants. This may be, but it won't deter those seeking help or who want to offer the legal boost. Others, in support of pacing, try to downplay the practice by saying those paced "still have to cover the distance on their own feet." Paced runners may have to use their own feet, but they aren't doing their own thinking. Following isn't thinking--it turns races into time trials, an easier way to fast times. I prefer races that engage the whole person.

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TIRE PRESSURE AS A MEANS OF CONTINUOUSLY MONITORING WHEEL CALIBRATION FACTOR IN THE RRTC BICYCLE METHOD FOR COURSE MEASUREMENT

NEVILLE WOOD, Validations Chairman

20 FEB 06

Introduction

The wheel calibration factor (e.g. rev/km) in the **RRTC Bicycle Method** for course measurement can be derived as an average of pre-calibration and post-calibration rides over a calibration course. Since the factor obviously decreases with temperature, for this to work well the temperature during course measurement should be the average of the temperature for the calibration measurements, but unfortunately this is rarely the case. The situation is particularly bad when the calibration course is distant from the race course, and often where adjustment of the course is mandated after a post-calibration, a measurer has to try to arrange for this over the telephone. A measurer can ameliorate matters by finding a suitable location and setting up a temporary calibration course near the race course, but even if he operates in Ohio where such sites are presumably plentiful, this involves a lot of extra work and the finding of an assistant. The main value of a post-calibration measurement would seem to be not for the calibration factor, but for its ability to detect a major leak in the tire. It does so though too late to salvage a day's work.

Mike Sanford in the *UK* has attempted to determine the calibration factor during measurement on the race course by taking the temperature at frequent intervals. The factor is derived from the previously determined relationship with temperature for the tire after correction for deflation. The relationship is derived by determining calibration factors on a calibration course at different temperatures over a period of five days. Tire pressure is not adjusted during the five days so a correction must be applied for deflation. The deflation itself is measured through the calibration factor over a period of several days by correcting results to a standard temperature and is expressed as the change in the factor per day. All this of course is too complicated for most measurers, and is particularly impractical in the *US* where unlike in the *UK* the mandate is for at least two determinations of the course.

I intuitively felt that the only significant effect of temperature on the calibration factor might be through its effect on the tire pressure and use of pressure might yield a more practical method of monitoring factor changes. Research in this direction has been discouraged in the past by the lack of accurate pressure gauges for the bicycle tire. **Peter Riegel** tried to use a commercial gauge to get data on the tire pressures of measurers at an **Olympic Trials** course, but gave up the attempt as hopeless because the gauge spilled so much air as to render measurements meaningless. Therefore a first task in my investigation was the devising of suitable gauges.



Materials

Gauges were ordered from the **Gauge Distributing Co.** (getagauge.com) with the following description:

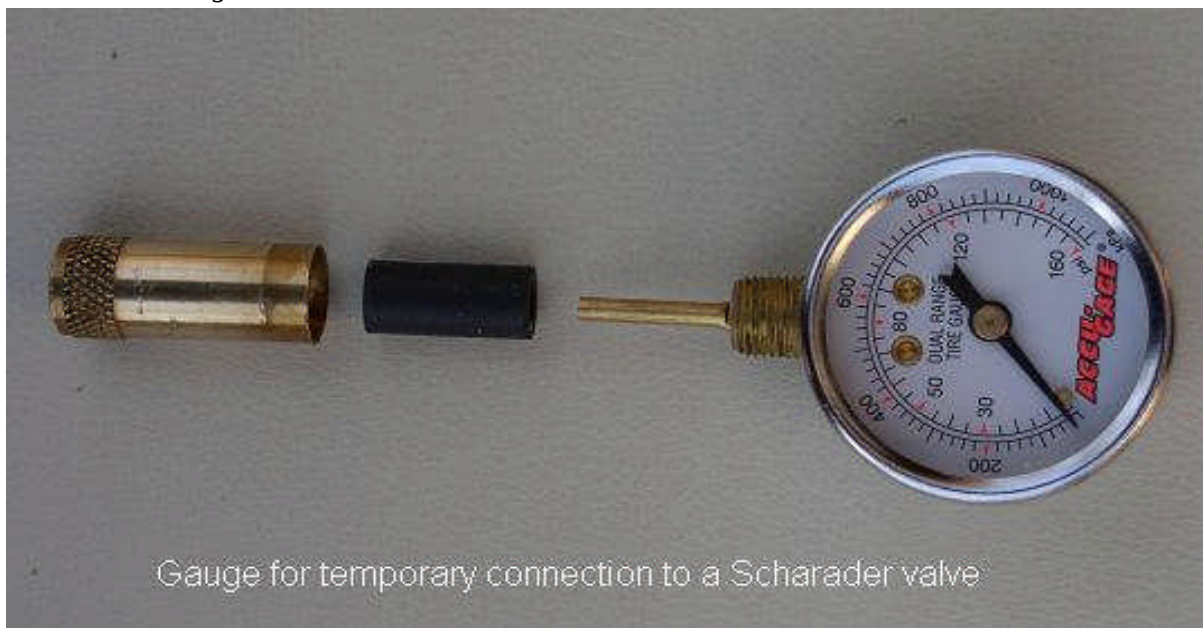
K160X Accu-gage 1-1/2" 160 psi gauge with straight chuck and without epoxy glue on threads

A photograph is shown later in this report. These we made to my own specification, but as the company generously does not charge for customization, the cost was only \$8 each.

- I purchased metal tire valve caps of a suitable dimension from **Pep Boys**.
- I had on hand *Presta* valve stem nuts and neoprene tubing (9.5 mm O.D. x 5.0 mm I.D.).
- Tools shown below were made from an old *Presta* valve and an old automobile *Schrader* valve.

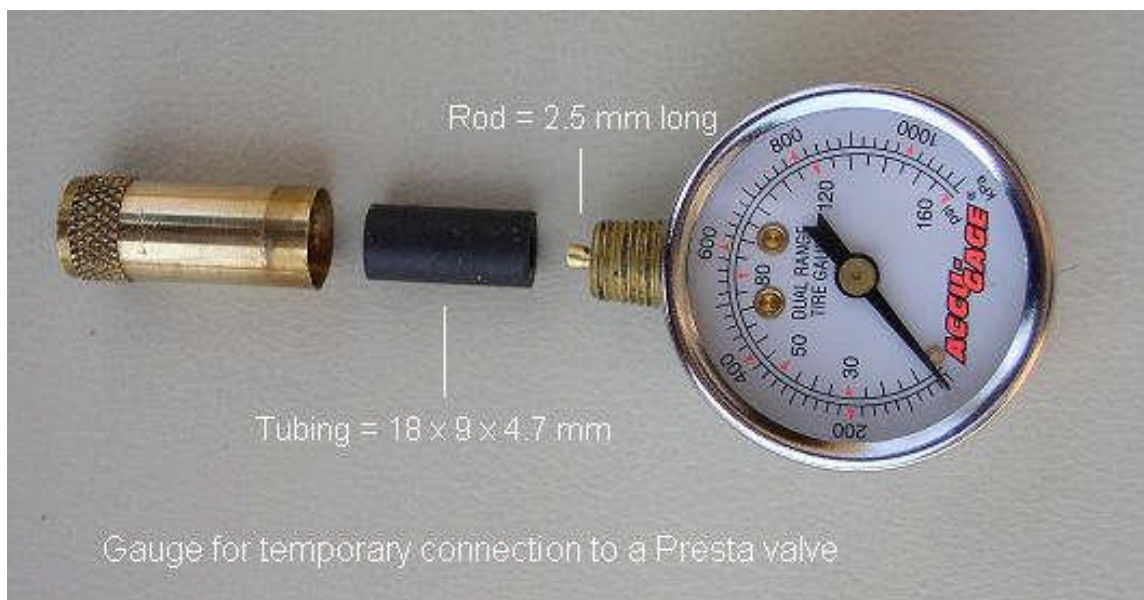
Gauges

1. Push-on Schrader Gauge



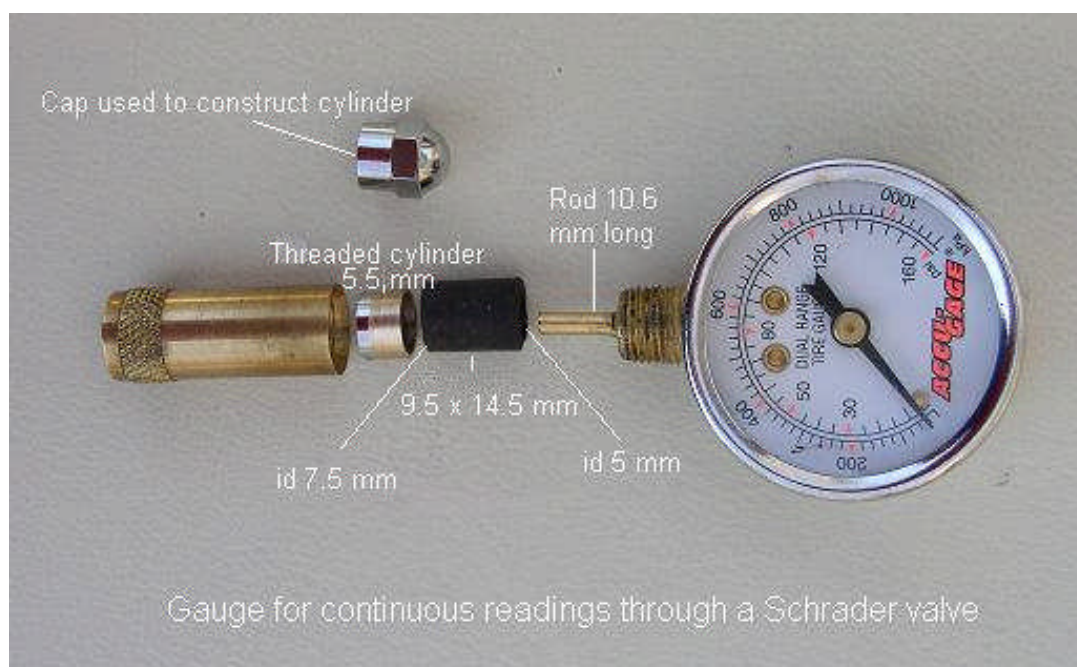
As described under “Materials” this gauge (K160X) can be purchased directly from the **Gauge Distributing Co.** using my specifications. As the gauge is pushed onto the valve the internal rubber tube makes an excellent seal with the top of the valve tube before the brass rod opens the valve. After the reading is taken, the reverse takes place as the gauge is

2. Push-on Presta Gauge



This gauge is easily constructed from the K160X by cutting down the neoprene tubing down from a length of 19.0 mm to 18.0 mm and the brass rod to 2.5 mm. To take a reading, the tiny nut on the *Presta* valve is screwed back as far as possible, and the gauge pushed onto the valve stem. Again the tubing fully seals the gauge onto the side of the valve stem before opening the valve and it is not difficult to get identical consecutive readings. It helps to put a little grease on the stem and if the stem is a thread-less one.

3. Screw-on Schrader Gauge



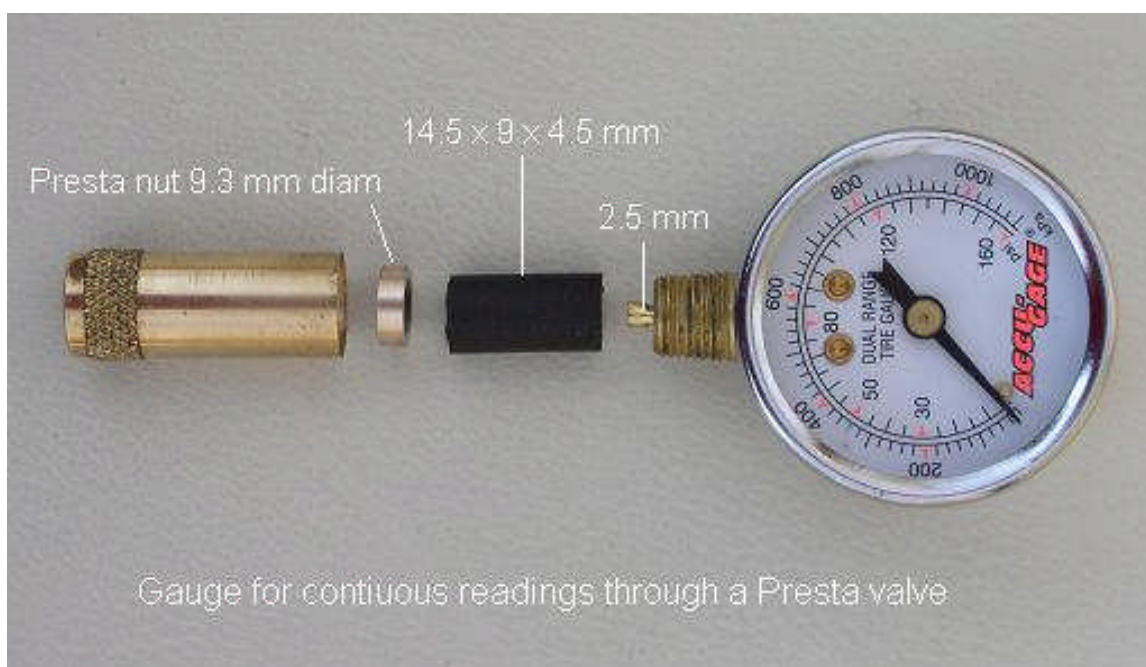
To make the threaded cylinder for this gauge, the valve cap was screwed onto the end of the *Schrader* tool and the other end of the tool fixed into the chuck of a drill. The cap was then ground down by rotating it at high speed over first a coarse file and then a fine one until when inserted into the large brass cylinder of the gauge it was a very tight fit. The ends of the cap were then filed down until the cap was 5.5 mm long. Finally the cap was screwed onto the tool again and driven to the bottom of the large brass cylinder.

The neoprene rubber cylinder was constructed from the tubing I had on hand rather than from that supplied with the gauges and was a little harder. One end was honed out with a cone-shaped grinding tool used in a high-speed *Dremel* tool until the id at that end was 7.5 mm.

Before screwing the gauge onto the *Schrader* valve a little grease is first applied. The gauge screws easily onto the valve until about half a turn before the pressure registers, when turning becomes stiff. The gauge is screwed on for further fraction of a turn. During these last stages of mounting, the valve stem will have to be held with a pair of grips.



4. Screw-on Presta Gauge



To adjust the diameter of the *Presta* nut to fit the brass cylinder it was screwed onto the end of the *Presta* tool to a point at which a burr prevented further rotation. The other end of the tool was fixed into the chuck of a drill, which was rotated at high speed over first a coarse file and then a fine one until when the nut was inserted into the large brass cylinder of the gauge, it was a very tight fit. Finally the nut was driven to the bottom of the cylinder.

To mount the gauge first coat the threaded valve stem with a little grease. Screw on the gauge until pressure registers and then for about one more turn. This requires only a very light touch and anything heavier means something is wrong. If the valve is bent, a little air will be lost in taking the gauge on and off but this normally is of no importance. The gauge may be taped to the spokes to prevent vibration and rotation.



Results

1. New Gauge

Previously (<http://home.earthlink.net/~caverhall/pressandcalib.htm>) I described a push-on *Presta* and a screw-on Schrader gauge for accurately determining tire pressure, and the present report describes new *Presta* and Schrader gauges with both types of connection.

I have ridden over 100 miles with the screw-on *Presta* attached to the wheel with no problems and no noticeable effect on bicycle handling. I have not had as much experience with the screw-on *Schrader*, but it should be even more rugged. It suffers from the disadvantage though that a pair of grips are needed to hold the valve during the last turn of installation.

2. Pressure Coefficient

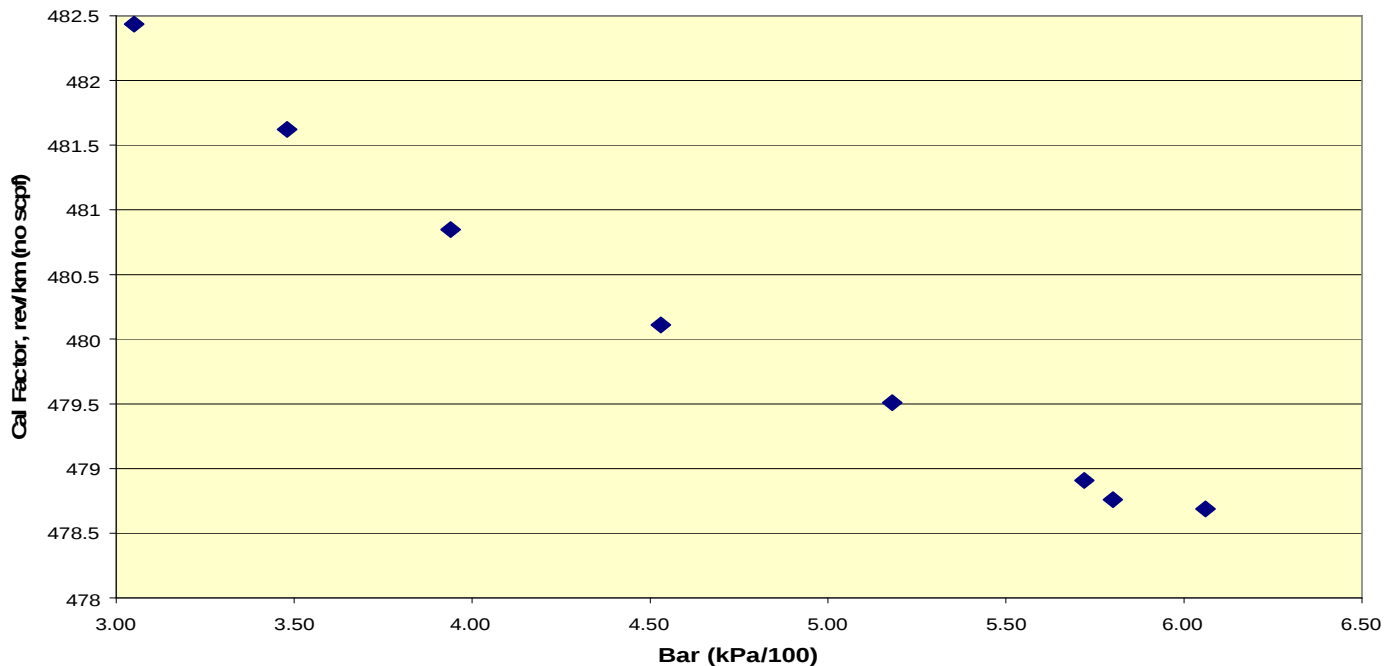
In an **April-05** report (<http://home.earthlink.net/~caverhall/pressandcalib.htm>) I established that there is a linear relationship between tire pressure and circumference that is not significantly affected by temperature. One tire, (*Hutchinson Carbon Comp 700 x 23*), mostly over a pressure range of 80-115 psi or 5.52-7.93 bar (after allowing for a gauge zero error of 10psi) showed a pressure coefficient of 0.211 mm of circum /psi (-0.0070 rev/km/kPa).

The present work gives further results from the *Hutchinson* tire using the screw-on *Presta* gauge as shown in the table below:

Date	Press, bar kPa/100	Cal fac, rev/km (no scpf)
11/5/2005	7.40	477.509
	6.01	478.469
	4.95	479.662
	3.90	480.862
11/7/2005	6.06	478.688
	5.80	478.762
	5.72	478.910
	5.18	479.508
	4.53	480.109
	3.94	480.848
	3.48	481.621
	3.05	482.434

A plot of the data from 11/7/05 is shown below:

Cal Factor vs Tire Press 11/7/05

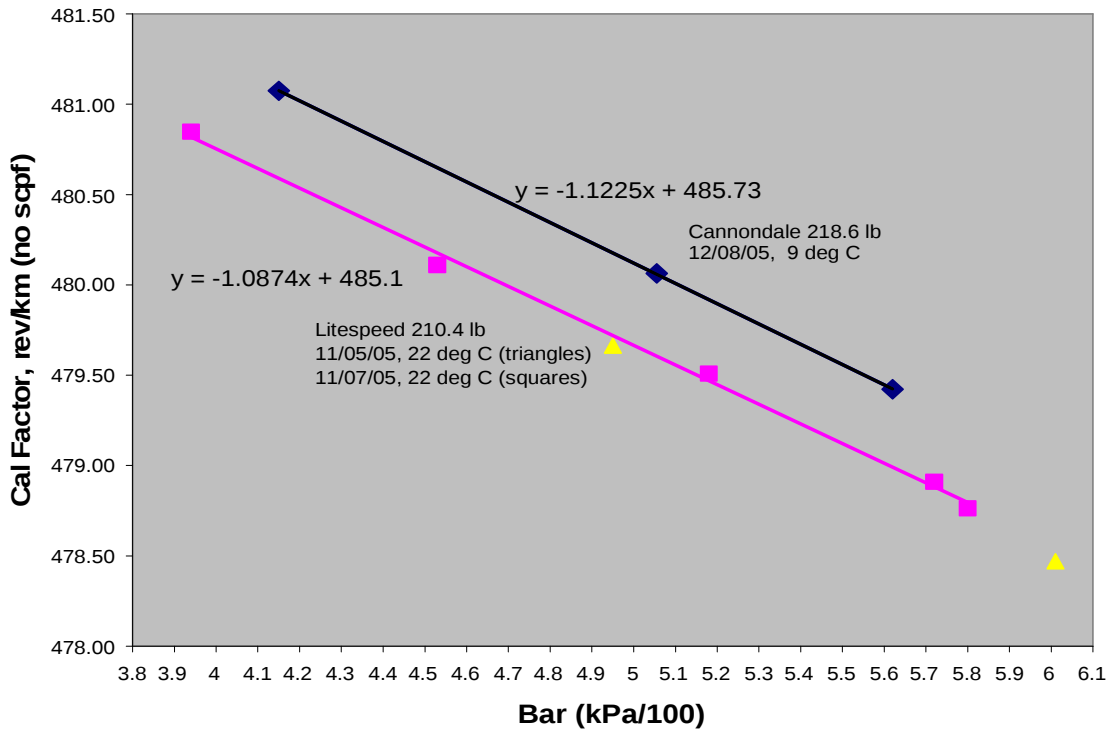


Although a decent straight line may be drawn through all the plotted points, better lines can be drawn through the points below 4 bar, those in the range of 4-5.72 bar, and those at and above 5.72 bar. Moreover the slopes of the lines decrease going to higher pressures. Clearly in going to higher pressures, the pressure coefficient becomes slightly less negative.

When data from the above table in range of 3.94-6.01 bar is plotted as shown below (red squares and yellow triangles) a very nice straight line is obtained with a slope or pressure coefficient of -1.087 rev/km/bar (-0.01087 rev/km/kPa). This is higher than the value obtained in **April** (0.0070 rev/km/kPa), but that was obtained at higher pressures. If one calculates the coefficient from data obtained at the two highest pressures in the above table, agreement is excellent:

$$(477.509-4778.469)/(7.40-6.01) = -0.0069$$

CAL FACTOR AS A FUNCTION OF TIRE PRESS



While obtaining the above data using my *Litespeed* bicycle, I became aware that the handlebars had started to become spongy and tightening the bolts on the stem had no effect. I at first thought of postponing disassembly to locate the problem until after an upcoming long validation trip to the NE, but luckily I changed my mind. To my horror I found that the steering tube on my \$350 carbon fiber forks had cracked halfway through. Although I negotiated with the manufacturer to get a \$130-replacement, I had to turn to my *Cannondale* in the meantime. The first calibration with the *Cannondale* using the same front wheel that I had used with the *Litespeed* is shown below and the data are plotted above as blue stars. Note the shift in the plot from that of the *Litespeed*, which I attribute mainly to the fact that the loaded *Cannondale* was 8.2 lb heavier than the *Litespeed*.

Cannondale 12/8/05

Bar	Calib fac, rev/km
5.620	479.42
5.055	480.06
4.150	481.07

More importantly though the slope of the plot or the pressure coefficient was almost exactly the same. Weight evidently does not affect the coefficient. The pressure coefficient would seem to be highly suited to course measurement, because in the same pressure range it probably does not change significantly for the life of the tire, with temperature, or with bicycle total weight.

Application of Tire-Pressure Monitoring to Course Measurement

There are obviously many ways to apply the concept of pressure monitoring to race course measurement. The simplest is to adjust pressure at the start of course measuring to that used in the calibration. This is probably more appropriate with the push-on gauges than with the screw-ons. An average pressure during measurement differing by less than 10 kPa from that of the calibration can probably be ignored. For instance a coefficient of $-0.011 \text{ rev/km/kPa}$ is equivalent to $-0.011 \times 100 / 479.75 = -0.00229 \text{ \%/kPa}$ so that an average difference of 10 kPa on a 5 km course would be equivalent to only 1.145 m.

The most accurate method involves use of the pressure coefficient, which can be determined quite simply and is probably good for years. It can then be applied with very simple calculations. For instance pressure can be read at the start and end of a 5-km measurement. These readings are averaged, the calibration pressure subtracted, and the result multiplied by the coefficient expressed as rev/5 km/kPa to give the course correction in rev. Similarly, for a 25-km measurement pressure can be read at intervals of 5 km. At the end, the amounts that the average pressure differs from the calibration pressure for each 5 km are added with regard to sign, and the result multiplied by rev/5 km/kPa to give the overall correction in rev.

Of course, whatever method is chosen, the post-calibration is redundant. An example of a 5-km measurement is as follows. A measurer has a new tire and wishes to certify a 5-km course. At an average pressure of 471 kPa he determines the calibration factor is 481.01 rev/km (with scpf). He adjusts pressure and finds that at an average of 560 kPa the factor is 480.03 rev/km. Therefore the pressure coefficient is $(480.03 - 481.01) / (560 - 471) = -0.0110 \text{ rev/km/kPa}$. He makes no further pressure adjustments but finds that at the first measurement of the course, pressure has risen to 580 kPa at the start and 590 kPa at the finish. He makes a correction of $25 \times -0.0110 \times 5 = -1.37 \text{ rev}$ to his finish point. At 590 kPa the calibration factor is 479.70 ($480.03 - 30 \times 0.011$). In his second measurement he marks the splits, and because pressure is 590 kPa at the start, he uses 479.70 rev/km to calculate their position. At the finish, pressure is still at 590 kPa and the finish point is 0.30 rev short of that in his first measurement. He therefore uses the finish point from his first measurement as the certified finish.

Advantages of Tire Pressure Monitoring

1. Improved accuracy.
2. Post-calibration not needed.
3. A temporary calibration course does not have to be set up.
4. Frequent recalibration rides during course measurement not needed.
5. Return to the race site to make adjustments in the measurements not needed.
6. Early alert of a slow leak in the tire so no wasted efforts.
7. Temperature measurements not needed.
8. Easier scheduling of measurements (e.g. do not have to get back for post-calibration before dark and rapid drop in temperature).
9. Calculations usually simplified.
10. Tire puncture during measurement just a minor problem.



USATF/RRTC CERTIFIED COURSE LIST
New Course Entries, January - February 2006

DISTANCE	COURSE ID	STA	LOCATION	COURSE/RACE NAME	m/km DROP	pct SEP	MEASURER	REPLACES
5 km	AL 05024	A	Killen	Killen Founder's Day 5k	0.4	2.84	D Michael	
1 mi	AL 05025	A	Killen	Killen Founder's Day 1 Mile	1.9	7.95	D Michael	
5 km	AL 05035	A	Callman	The CRMC Spring Break 5k	0.1	2	R Melanson	
5 km	AL 05036	A	Tuscaloosa	TTC Turkey Trot 5k	0	0	R Carroll	AL 99003 RH
2 mi	AL 05037	A	Northport	Northport Levee 2 Mile	0	75	R Carroll	
5 km	AL 05038	A	Northport	Rabbit Run Spring Course 5k	0	0.8	R Carroll	
8 km	AL 05039	A	Mountain Brook	Village to Village 8k	0.5	2.1	R Melanson	
5 km	AL 05050	A	Dauphin Island	Battle Of Mobile Bay Alternative Course	0	1	L Mattics	
10 km	AL 06001	A	Mobile	The Azalea Trail Run 10k	0	5.5	L Mattics	AL 86007 WN
5 km	AL 06002	A	Birmingham	BE&K 5K	2.4	1.8	R Melanson	AL 05002 JD
5 km	AL 06003	A	Daphne	SEEDS 5K	1.1	6.4	J Bowie	
1 mi	AL 06004	A	Daphne	SEEDS 1 Mile Fun Run	10	96.6	J Bowie	
21.0975 km	AZ 05019	A	Phoenix	PF Chang's 1/2MAR Challenge	0.62	39.1	J Galope	
20 km	AZ 05020	A	Phoenix	PF Chang's 20k WR Challenge	0.65	45.2	J Galope	
5 km	AZ 06001	A	Sedona	Sedona Marathon 5k	-0.6	17.4	A Siefert	
21.0975 km	AZ 06002	A	Sedona	Sedona Marathon Half Marthon	-0.15	4.1	A Siefert	
42.195 km	AZ 06003	A	Sedona	Sedona Marathon	-0.08	2.1	A Siefert	
15 km	AZ 06004	A	Phoenix/Tempe	PF Chang's 15k WR Challenge	0.86	51.7	J Galope	
10 mi	AZ 06005	A	Phoenix/Tempe	PF Chang's 10 Mile WR Challenge	0.86	48.1	J Galope	
20 km	AZ 06006	A	Phoenix/Tempe	PF Chang's 20k	0.62	39.1	J Galope	AZ 05020 GAN
20 km	AZ 06006	A	Phoenix/Tempe	PF Chang's 20k WR Challenge	0.65	41.2	J Galope	AZ 05020 GAN
21.0975 km	AZ 06007	A	Phoenix/Tempe	PF Chang's Half Marathon	0.62	39.1	J Galope	AZ 05019 GAN
21.0975 km	AZ 06007	A	Phoenix/Tempe	PF Chang's Half-Marathon WR Challenge	0.62	39.1	T LaBlonde	AZ 05019 GAN
5 km	CA 05049	A	Irvine	2006 Orange County 5km	0	6	R Scardera	CA 04041 RS
42.195 km	CA 05050	A	Newport Beach	Orange County Marathon	0	28	R Scardera	CA 04043 RS
21.0975 km	CA 05051	A	Newport Beach	Orange County Half Marathon	0	55.7	R Scardera	CA 04040 RS
2 km	CA 06001	A	Chula Vista	Marina Parkway 2km Loop	0	0	R Scardera	CA 02008 RS
42.2 Cal	CA 06002	A	Huntington Beach	2006 Pacific Shoreline Marathon Temp Course	0	0	R Scardera	CA 05005 RS
5 km	CA 06003	A	Long Beach	Long Beach Towne Center Calibration Course	0	100	J Anderson	
	CA 06004	A	Cerritos	Orange Curtain 5km Loop	0	100	J Anderson	
21.1 km	CO 06001	A	Denver	Plate River Trail	1.8	76	A Lind	CO 05003 DP
5 km	CO 06002	A	Denver	Iron Girl 5k	0	1	D Russell	
5 mi	CO 06003	A	Denver	Iron Girl 5 mile	0	1	D Russell	
42.195 km	FL 05001	A	Sarasota	Sarasota Marathon	0	0.17	K Lucas	
21.0975 Cal	FL 05002	A	Sarasota	Sarasota Half Marathon	0	0.34	K Lucas	
	FL 05003	A	Sarasota	Bay Shore Rd. 1000 ft.	0	100	K Lucas	



USATF/RRTC CERTIFIED COURSE LIST
New Course Entries, January - February 2006

DISTANCE	COURSE ID	STA	LOCATION	COURSE/RACE NAME	m/km DRO	pct	SEP	MEASURER	REPLACES
10 km	FL 05046	DL	A Tampa	Iron Girl 10k	0	3.5	A Johnson		
5 km	FL 05047	DL	A Tampa	Iron Girl 5k	0	7	A Johnson		
5 km	FL 05048	DL	A Miami Beach	Police Chief's Convention 5k	0	1.8	D Matuszak		
5 km	FL 05049	DL	A N. Miami Beach	Hannukah 5k	0	2.4	G Witkowski		
5 km	FL 05050	DL	A Daytona Beach	Daytona 5k	0	1.1	J Smith		
5 km	FL 05051	DL	A Rosemary Beach	Trek for the Coast 5k	0	0.4	B McGuire		
10 km	FL 05052	DL	A Rosemary Beach	Trek for the Coast 10k	0	0.4	B McGuire		
5 km	FL 05053	DL	A Tampa	Lightning Reindeer Run 5k	0	0.3	A Johnson		
5 km	FL 05054	DL	A St. Petersburg Beach	St. Pete Beach Classic 5k	0	4	A Johnson		
5 km	FL 05055	DL	A West Palm Beach	Race for Faith 5k	0	4	D Loeffler		
5 km	FL 05056	DL	A Palmetto Bay	Holiday Run 5k	0	4.9	S Gray		
5 km	FL 05057	DL	A Ft. Lauderdale	Maroone Rotary 5k	0	4.9	G Witkowski	FL 03050	DL
5 km	FL 05058	DL	A Pensacola	YMCA Jingle Bell 5K	0	0	M Bowen		
10 km	FL 05059	DL	A St. Petersburg Beach	St. Pete Beach Classic 10k	0	2	A Johnson	FL 04081	
5 km	GA 05017	WC	A Albany	Jingle Bell Jog 5k	0	1.4	B McGuire		
10 km	GA 05018	WC	A Albany	Jingle Bell Jog 10k	-0.01	1.7	B McGuire		
10 km	GA 06001	WC	A Morrow	Freedom Run	0.8	4.3	S Daniel		
5 km	HI 06001	MS	A Honolulu	Passion for Perfection 5 km	0	1.1	R Pate		
5 km	IL 05105	JW	A Downers Grove	Thanksgiving Day 5k	0	2	J Wight	IL 04099	JW
5 km	IL 05106	JW	A Oakbrook Terrace	Oakbrook Terrace Park District	0	5.4	W Rasmussen	IL 02009	JW
5 km	IL 05107	JW	A Batavia	Fox Trot	0	0.5	N Marquez	IL 04128	JW
21.0975 km	IL 05108	JW	A Saint Charles	Great Western Half Marathon	0	0.5	W Rasmussen		
Cal	IN 05017	MW	A Warsaw	Smith Street 2200 ft Calibration	0	100	M Skipper		
42.195 km	IN 05018	MW	A Warsaw	Lake City Marathon	0	0.3	M Skipper	IN 04014	MW
30 km	LA 06001	JF	A Destrehan	Louisiana 30K	0	0	C George	LA 00001	ETM
42.196 km	LA 06002	JF	A New Orleans	Mardi Gras Marathon	0	0.5	C Wolverson	LA 03001	JF
5 km	MD 04006	JS	A Rockville	Rockville 5k	0	2.2	J Sissala	MD 02007	JS
5 km	ME 05010	RF	A Cumberland	Safe Passage 5k Run and Walk	0	4	D Pride		





USATF/RRTC CERTIFIED COURSE LIST
New Entries, January - February 2006

DISTANCE	COURSE ID	ST	LOCATION	COURSE/RACE NAME	m/km		DROP	SEP	MEASURER		REPLACES	
					pct							
42.195	MI 05018	RN	A	Boston Marathon			3.23	91	R	Nelson	MA	00002 RN
7.7847	MI 05035	SH	A	Royal Oak Thursday Run			0	0.02	M	Neal		
Cal	MI 05036	SH	A	Royal Oak			0	100	M	Neal		
1	MI 05037	SH	A	Rochester			15	100	M	Neal		
21.0975	MI 05038	SH	A	Dearborn Heights			0	0	K	Mendelis		
6	MI 05039	SH	A	Washington			0	1	M	Neal		
Cal	MI 05040	SH	A	Washington			0	100	M	Neal		
10	MI 05041	SH	A	Dearborn Heights			0	0	K	Mendelis		
5	MN 05046	RR	A	Turkey Run			0.6	5	E	Paulson		
5	MN 05047	RR	A	Arena 5k			0	0.2	B	Leininger		
5	MN 05048	RR	A	Tender Hearts			2.2	10.2	E	Paulson		
2	MN 05045	RR	A	Midtown 2k Race Walk			0	0	B	Leasure		
5	MO 05048	BG	A	Turkey Trot 5k			0	0	B	Hoover		
5	MO 05049	BG	A	Turkey Trot 5k			1	3.7	C	Crowson		
5	MO 06001	BG	A	Legacy Park 2006 5K			0	1.2	B	Taylor		
8	NC 05059	PH	A	Lakeside Classic 8k			0	2	F	Guy		
5	NC 05065	PH	A	Coastal Women's Shelter 5k			0	2	P	Hronjak		
42.195	NC 05066	PH	A	Thunder Road Marathon			0.44	2.7	T	Rhodes		
21.0975	NC 05067	PH	A	Thunder Road Half Marathon			0.44	2.7	T	Rhodes		
5	NC 05101	NW	A	5k Reindeer Run			0	0	N	Wood		
Cal	NC 05102	NW	A	Macon Road 300 meters			0	100	N	Wood		
5	NC 06001	PH	A	APEX CLUB SPRING FLING			0	1	P	Hronjak		
Cal	NH 05015	RF	A	Quincy Rd. 1000 ft.			0	100	R	Fitzpatrick		
5	NH 05016	RF	A	Hampton Rotary Seafood Fest			0	0.4	R	Fitzpatrick	NH	95019 WN
5	NH 05017	RF	A	Plymouth PemiYouth			0.61	1.2	R	Fitzpatrick		
20	NJ 05003	LMB	A	Newark Distance Classic 20K			0	0.35	J	Parks		
5	NJ 01100	GAN	A	Parvin State Park			0	20.6	R	Zuest	DE	01003 GAN
5	NJ 05060	LMB	A	FCCF Loantaka Park 5k			0	0	P	Hess		
5	NJ 06001	LMB	A	Cadwalader Park 5K			-0.61	1.71	L	Baldasari		





USATF/RRTC CERTIFIED COURSE LIST
New Course Entries, January - February 2006

DISTANCE	COURSE ID	STA	LOCATION	COURSE/RACE NAME	m/km		DROP	SEP	MEASURER	REPLACES
						pct				
5	NY 05050	AM	A Albany	First Night Albany Last Run 5k	0.6	0.7	J Gilmer			
5	NY 05052	AM	A East Aurora	Bunny Hop	0.06	0.5	J Grandits			
Cal	NY 05053	AM	A Sayville	Benson Ave. 1000 ft.	0	100	D Michel			
10	NY 05054	AM	A New York	NYRRC 10k 102nd St.	0	2.6	P Hes s			NY 01001 AM
1.25	NY 05137	KL	A Niagara Falls	Niagara Falls Race Walks	0	0	K Lucas			NY 05011 AM
5	NY 05049	AM	A Westhampton	Westhampton Beach 5K	0	6	G Westerfield			
50	NY 06001	AM	A Lloyd Neck	Caumsett Park 50k	-0.01	1.4	G Westerfield			
15	NY 06001	JG	A New York	NYCRR 15K Marathon Finish	0.2	4.3	P Hes s			
Cal	NY 06002	AM	A Middletown	Waywayanda Calibration Course	100	W	Norton			
5	NY 06002	JG	A Buffalo	Botanical Gardens 5k Run & Fun Walk	2.44	10.4	B Laskowski			
5	NY 06003	AM	A Pine City	Burgert Van Kuren Memorial 5k Run	0.3	2.8	S Nichols			
5	NY 06100	KL	A Perinton	Parkinson's Canal Run 5k	-1.53	9.34	K Lucas			
5	OH 06001	PR	A Upper Arlington	Upper Arlington 5 Mile	0	0	P Riegel			OH 84011 PR
21.0975	OK 06001	BB	A Jenks	Aquarium Half Marathon	0.1	3.3	G Lafarlette			
5	OK 06002	BB	A Tulsa	Get Fit Tulsa 5 km	0	0	G Lafarlette			
8	OK 06003	BB	A Oklahoma City	Run for Your Life	0	0	D Garrett			
1	OK 06004	DG	A Muskogee	Muskogee Mile	1.86	25	G Lafarlette			
5	OK 06005	DG	A Edmond	Frigid Five	0.25	5	B Reid			
5	PA 05016	WB	A Howard	Bald Eagle State Park 5k	0.24	1.7	G Dillon			
5	PA 06001	WB	A Valley Forge	Valley Forge Revolutionary	3.26	4.73	W Belleville			
8	PA 06002	WB	A Philadelphia	Fighting Irish 5k	0	0.03	W Belleville			
10	RI 05009	RN	A North Kingstown	Quonset Hut 10 Miler	0	0.5	R Nelson			
5	RI 06001	RN	A East Providence	Bradley Hospital 5K	0.61	2.74	R Nelson			
5	RI 06002	RN	A Narragansett	Rhode Island State Police 5K Foot Pursuit	0	0.24	R Nelson			RI 97001 RN
5	RI 06003	RN	A Narragansett	Super 5K	0	2.5	R Nelson			
8	SC 05037	BS	A Conway	Rivertown Reindeer Run	0	80.5	D White			
12	SC 05038	BS	A Walhalla	Walhalla Eagle	0.42	0.65	W Terry			
10	SC 05039	BS	A Charleston	Cooper River Bridge Run	-0.1	54.9	M Desrosiers			SC 03012 BS
5	SC 05040	BS	A Irmo	Going the Extra Mile	0	0.1	S Blake			
8	SC 05041	BS	A Columbia	BGCM Turkey Day Run	0.75	1.9	S Blake			
5	SC 06004	BS	A Greenville	Greenville Track Club Runfest	0.4	3.4	J Roberts			
1	SC 06005	BS	A Greenville	Main Street Mile	15	66.3	J Roberts			

USATF/RRTC CERTIFIED COURSE LIST
New Course Entries, January - February 2006

DISTANCE	COURSE ID	STA	LOCATION	COURSE/RACE NAME	m/km	pct	DROP	SEP	MEAS- URER	REPLACES
42.2	km SC 06001 BS	A	Myrtle Beach	Myrtle Beach Marathon	0	0.95	D	White	SC 05005	BS
21.1	km SC 06002 BS	A	Myrtle Beach	Myrtle Beach Half Marathon	0	1.9	D	White	SC 03003	BS
5	km SC 06003 BS	A	Greer	Run The Verne 5k	-0.4	4.68	J	Roberts		
5	km SC 06006 BS	A	Clemson	Clemson 5K	0	0.46	J	Davis		
21.0975	km SC 06007 BS	A	Clemson	Clemson Half Marathon	0	0.12	J	Davis		
1	mi TN 05005 MS	A	Jonesborough	Dasher Dash Mile	0	0	M	Studholme	TN 04034	DJR
5	km TN 05006 MS	A	Jonesborough	Jingle Bell 5k	0	0	M	Studholme	TN 04032	DJR
21.0975	km TN 05039 DJR	A	Memphis	St. Jude Half Marathon	0.43	1.44	R	McClarey		
42.195	km TN 05040 DJR	A	Memphis	St. Jude Memphis Marathon	0.22	0.72	R	McClarey		
5	km TN 05041 DJR	A	Clarksville	Jingle Bell Jog 5k	0	3.41	T	de Paulis		
5	km TN 06001 DJR	A	Murfreesboro	Springfest 2006 5k	0	0	T	de Paulis		
21.0975	km TX 05026 JF	A	Austin	Freescale Austin 1/2 Marathon	2.37	75.8	J	Ferguson		
42.195	km TX 05027 JF	A	Austin	Freescale Austin Marathon	3	75.8	J	Ferguson		
20	mi TX 05028 JF	A	Round Rock	RunTex 20 Miler	0	0	J	Ferguson		
10	mi TX 05029 JF	A	Round Rock	RunTex 1- Miler	0	0.62	J	Ferguson		
42.195	km TX 05113 ETM	A	Houston	Chevron Houston Marathon II	0	0.5	E	McBrayer	TX 04072	ETM
21.0975	km TX 05113 ETM	A	Houston	Aramco Houston 1/2 Marathon	0	1.5	E	McBrayer	TX 04071	ETM
5	km TX 05114 ETM	A	Houston	Teachers Fund Run	0	12.2	E	McBrayer		
5	km TX 05115 ETM	A	Houston	Houston Press/Smart Financial	0	4.8	E	McBrayer	TX 04108	ETM
5	km TX 05008 WG	A	Harlingen	Just Du It Duathlon	0	0	B	Grass		
10	km TX 05009 WG	A	Port Isabel	Annual Longest Causeway Run	0	52	B	Grass	TX 04016	WG
20	mi TX 05030 JF	A	Round Rock	RunTex 20 Miler	0	0	J	Ferguson	TX 05028	JF
10	mi TX 05031 JF	A	Round Rock	RunTex 10 Miler	0	3.1	J	Ferguson	TX 05029	JF
5	mi TX 05116 ETM	A	Houston	Park To Park 5 Mile Run	0.25	64	E	McBrayer		
5	km TX 06001 JF	A	Austin	Ash Dash 5K	0	0	J	Ferguson	TX 05010	JF
5	km TX 06001 ETM	A	Addison	Rotary Resolution Run 5 K	0	1.1	K	Ashby		
10	km TX 06002 ETM	A	Addison	Rotary Resolution Run 10 K	0	0.5	K	Ashby		
5	km TX 06003 ETM	A	Houston	Run for the Rose 2006	2.2	7	E	McBrayer	TX 05030	ETM
5	km TX 06004 ETM	A	Houston	Lookin' Good 2006	0	2.4	E	McBrayer	TX 96040	ETM
10	km TX 06005 ETM	A	Houston	Lookin' Good 2006	0	1.2	E	McBrayer		
5	km TX 06006 ETM	A	El Paso	Race for the Cure Biggs Field	0	3.2	K	Uecker	TX 98007	ETM
Cal	TX 06007 ETM	A	El Paso	Biggs Field Cal Course	0	100	K	Uecker		
5	km VT 05002 RF	A	Burlington	GMAA Turkey Trot 5k	0	0	S	Eustis		
5	km VT 05003 RT	A	Burlington	First Run 5k	-0.91	2.01	S	Eustis		





USATF/RRTC CERTIFIED COURSE LIST

New Course Entries, January - February 2006

DISTANCE	COURSE ID	STA	LOCATION	COURSE/RACE NAME	m/km	pct	DROP	SEP	MEASURER	REPLACES
42.195	WI 05056	JW	A	Madison	0.34	5.21	T	Aten	WI 04063	JW
21.0975	WI 05057	JW	A	Madison	0.68	10.4	T	Aten	WI 04064	JW
10	WI 05109	JW	A	Belleville	0	0.1	T	Aten		
5	WI 05110	JW	A	Belleville	0	0.2	T	Aten		
10	WI 05111	JW	A	Fitchburg	0	3	T	Aten	WI 04121	JW

Renewed Courses, January - February 2006

DISTANCE	COURSE ID	STA	LOCATION	COURSE/RACE NAME	m/km	pct	DROP	SEP	MEASURER	REPLACES
10	AL 96008	JD	A06	Birmingham	0.15	8.2	R	Melanson		
10	CA 95002	RS	A05	Redondo Beach	0	1.75	R	Scardera		
5	CA 96001	RS	A05	Redondo Beach	0	0.4	R	Scardera		
5	IL 95022	JW	A05	Roselle	0.79	4	J	Wight		
5	NY 95029	AM	A06	Webster	0	0	G	Tillson		
8	NY 96001	AM	A05	Buffalo	0	1.1	J	Grandits		
10	OH 94007	PR	A05	Columbus	0.4	2	P	Riegel		
4	OH 95040	PR	A06	Alum Creek State Park	0	0	P	Riegel		
5	SC 88029	BS	A05	Charleston	0	4.1	C	Magera		
15	TN 94015	RH	A05	Townsend	0	0.07	A	Morgan		
10	TN 95004	RH	A05	Lenoir City	0	0	A	Morgan		
5	TN 95005	RH	A05	Knoxville	0	0	A	Morgan		
5	TN 95017	RH	A05	Nashville	0.65	4.97	S	Lorber		





USA TRACK & FIELD ROAD RUNNING TECHNICAL COUNCIL REGIONAL CERTIFIERS

REGIONAL CERTIFIERS - Contact the following people for USATF Road Course Certification Information. Certifiers for each state provide referrals to experienced measurers for hire in your local area or expert guidance on how to measure a course for USATF certification.

AK - Frederic Wilson - 2420 Glenwood Street - Anchorage, AK 99508	907-279-2773	uphere@alaska.net
AL - John DeHaye - 824 Annlau Avenue SE - Huntsville, AL 35802-2607	256-881-9326	jjdehaye@yahoo.com
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AZ - Gene Newman - 920 N Night Heron Drive - Green Valley, AZ 85614-6104	520-648-3353	newmangc@cox.net
CA - Ron Scardera - 5660 Valley Oak Drive - Los Angeles, CA 90068	323-467-7750	rscar@pacbell.net
CO - Dave Poppers - 5938 S Franklin Street - Centennial, CO 80121-2426	303-795-9743	d.pop@comcast.net
CT - Jane Parks - 5 W Lake Boulevard - Morristown, NJ 07960-5073	973-644-0084	janehp3@msn.com
DC - Robert Thurston - 13 Kennedy Street NE - Washington, DC 20011-2423	202-726-1518	Thurret@aol.com
DE - Larry Baldasari - 3448 Nottingham Way - Hamilton Square, NJ 08690-2614	609-890-8343	larsurf@aol.com
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OH - Peter Riegel - 3354 Kirkham Road - Columbus, OH 43221-1368	614-451-5617	Riegelpete@aol.com
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OR - Lee Barrett - 3027 NE 20th Avenue - Portland, OR 97212	503-284-2809	cudapdx@comcast.net
PA - Bill Belleville - 2902 Morris Road - Ardmore, PA 19003-1809	610-649-4278	Wjbellevil@aol.com
RI - Ray Nelson - 49 Weber Avenue - Warwick, RI 02886-4519	401-737-2416	ride6887@ride.ri.net
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SD - Matthew Studholme - 452 Brookhill Drive - Abington, VA 24210-2202	276-492-1181	studies@earthlink.net
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FOREIGN - Peter Riegel - 3354 Kirkham Road - Columbus, OH 43221-1368	614-451-5617	Riegelpete@aol.com

CERTIFIERS - Please check this listing to be sure we have your correct contact data, send any updates to Kevin P. Lucas.



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