

2013 Week 4: Portola Valley Hills

Introduction

This week is automatically timed using GPS data provided by riders. We don't use Strava's timing algorithms, which are too crude and result in excessive errors. Instead we use our own. Segments are delineated by lines rather than points. Timing is done by segment. Segments between points are timed, but only the critical segments have timings applied directly to the overall time. Segments connecting the top of one climb to the bottom of the next have generous time budgets. Only if the time budget is exceeded is the difference applied to the overall time.

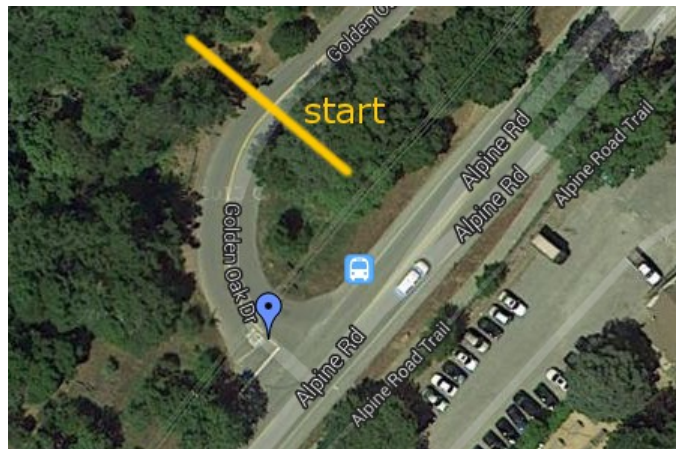
The path a segment is traversed isn't considered, but for the critical segments, the shortest path is up a steep hill. For the segments connecting one hill to the next there's a recommended route which should be the shortest. There's also "pre-start" segments which are quite short, with 10-second time budgets, which are designed to assure riders approach a hill from the correct direction, for example to avoid riders making left turns across busy streets to gain momentum before a climb.

What follows are maps showing the precise location of the start and finish points for the critical points on the course. We should have chalk marks at these locations provided by volunteers. But the chalk marks are not definitive, and GPS has some degree of error, so use the chalk lines only as guidance.

Climb 1: Golden Oak (E)

Start:

The start of the first climb is the end of the hairpin corner at the start of the easternmost intersection of Golden Oak with Alpine Road, across from the Alpine Inn and Arastradero Road. You'll want to approach this from the east, making it a right-hand turn. The blue point is where the start line was originally defined, but that was too tricky to pick up with GPS, so it was moved to the yellow line. You must obviously cross the line from west to east. Only your final line crossing will count, so don't worry about warm-ups. Just make sure you return to Alpine Road, then approach the climb from the east, before beginning your actual effort. This line has been tested against beta-test ride data. However, if there's any issues with particular rides, we'll work it out.



Check-point:

There's a check-point approximately mid-way up the climb, at this big house. This is just to make sure you're riding the climb from the correct side.



Finish:

The finish of the climb is at our favorite climb finish point, Peak Lane. The finish is far enough from the intersection to allow you to stop if necessary. You'll be continuing straight here, descending Golden Oak's other side to Alpine Road. Pay attention to the descent, as you'll climb it later in the ride as climb #5.



Climb 2: Joaquin

Start:

The start of Joaquin is approximately half the distance to the first right hand turn after the T-intersection with Alpine Road, at the first road sign to the left (looking back towards Alpine, it says “Alpine Closed to the Left”). This is to provide a buffer for GPS errors, but also reduces the incentive for any crazy approaches to the climb. You've got plenty of space to come up to speed from the intersection.



Finish:

The finish is the last driveway before Old Spanish Trail. You're going to take a left here, but if you've got some momentum you might want to turn right onto Old Spanish Trail and then U-turn. The route you take to the next climb, Hillbrook, is non-critical, so if you prefer the alternate route taking Spanish Trail to the right, feel free to take that instead. You have plenty of time, 25 minutes, to get to Hillbrook.



Climb 3: Hillbrook

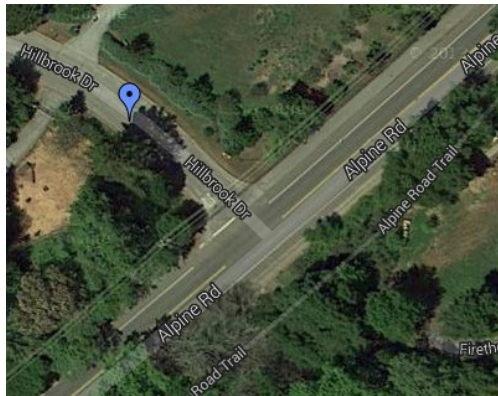
Pre-Start:

You've got 15 seconds to get from the pre-start to the start. This is to check that you're coming at the hill from the correct direction. If you over-shoot the turn and come back from the wrong direction, or descended Alpine to reach this one instead of taking Los Trancos, you'll want to come at it from the east again rather than turn left directly onto Hillbrook:



Start:

After a right turn on Hillbrook from Alpine, the timing starts at the tail end of the trees.



Finish:

The finish the leading edge of the driveway before the turn to the final straight to Sausal.



Climb 4: Cervantes

Start:

Riding along Cervantes to the east, start just past the T-intersection with Kiowa Court.



Finish:

The finish is just before Peak Lane. You'll turn right at Peak.



Climb 5: Golden Oak (W)

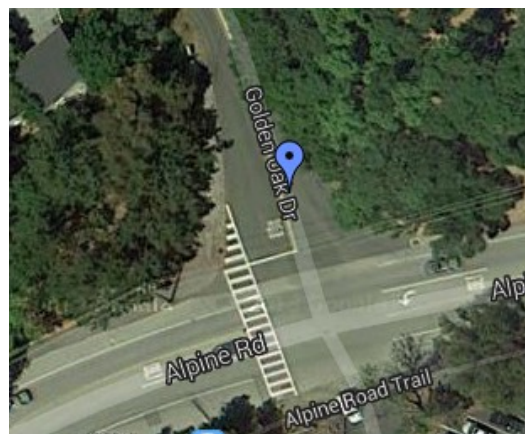
Pre-Start:

We want you to hit Golden Oak (W) from the east: a right hand turn, not a left, from Alpine. So there's a "pre-start" check-point here. You have 15 seconds to get from the pre-start to the start: plenty of time. If you initially miss the turn, or if you descended Alpine from Juoquin to get here, loop around onto Alpine, then take the right onto Golden Oak, rather than a direct left.



Start:

The start is right around the corner. You have ten seconds to reach the start from the pre-start.



Check-point:

There is a check-point on Golden Oak at Toro. Note you're on the right side of the road here, riding north, so there's essentially no conflict, but if you are delayed at any intersection you might want to turn around and start the climb over. The scoring code can handle this. Just be sure to start again going through the pre-start:



Finish:

The finish is approaching Peak Lane from the south. This is the third and final climb to finish at Peak Lane. There's a buffer to allow stopping in case of traffic conflict. You'll turn left onto Peak. If you've got momentum, feel free to over-shoot then U-turn and turn onto Peak from the opposite side. There's plenty of time (45 minutes) to reach the next climb, Summit Springs.

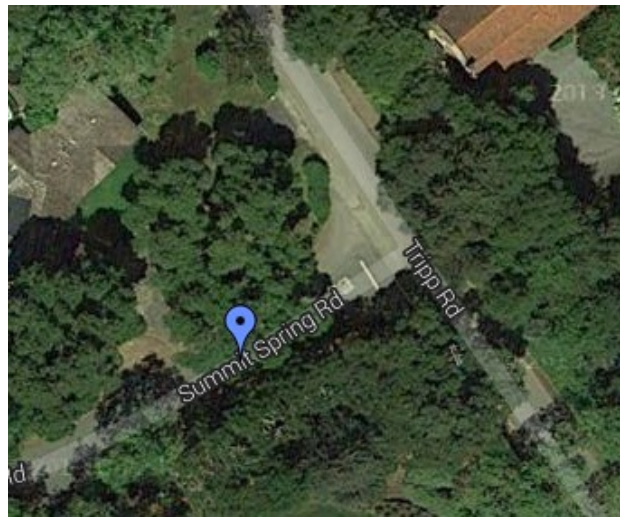


Climb 6: Summit Springs

It's a long ride from Golden Oak to Summit Springs. This seems like a detriment, but it's actually a benefit as the spin will help flush the lactic acid from the previous efforts and get you ready for this climb, which has arguably the steepest grades of any paved climb in the region. After what has preceded this, you'll savor every pedal stroke: you've got 45 minutes, which is plenty of time.

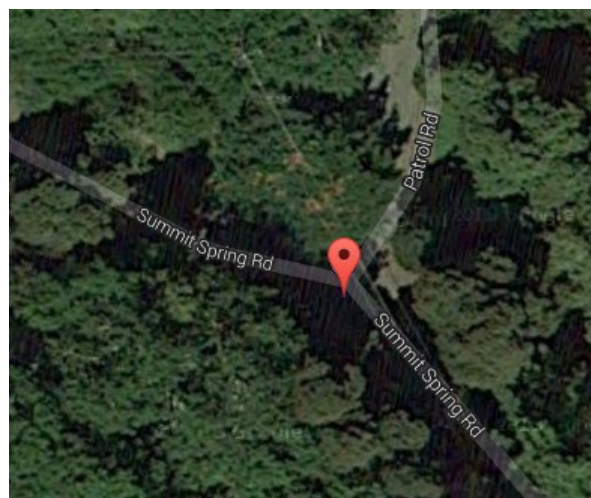
Start:

The start is soon after the left from Tripp on Summit Springs. You've got good line-of-sight ahead before the left, so wait for it to be clear of cars before making the left. Also check that no traffic is waiting to come from Summit Springs onto Tripp.



Intermediate Check:

There's an intermediate time point @ Patrol Road. This is where it gets really hard. If you have issues with car traffic at Patrol Road and feel the need to restart the climb and thus exceed your 45 minute budget from Cerventes, let Low-Key know (djconnel@yahoo.com) and we'll adjust your time. We don't want anyone violating right-of-way of other road users. Fortunately, traffic here is very light.



Finish:

The finish is tricky because it's a dead-end and GPS errors could lead to a failure to cross it. Fortunately in preliminary testing no such problems were observed: the GPS signal at the top of Summit Springs is good. But to provide some margin the finish is a bit earlier than would be preferred: at the first of two driveways on the right, soon after the exit of the final turn. You'll want to peak your effort a bit early as a result, but just to guard against potential GPS errors, ride it all the way to the end of the paved road. You are finished with the ride!



Appendix: course definition code

The following is the Perl code snippet which defines this course. The actual data structure contains definitions for multiple courses over multiple years, but I retain only the portion applicable to this course:

```
# Courses are defined by a series of line segments, a center point and a vector to the right-hand boundary,
# with the left-hand boundary assumed to be the reflection of the right-hand boundary.
# coordinates are expressed as lat,lng pairs.
# The length of the finish line can be conveniently expanded by specifying a factor greater than 1.
# The vector from the center to the line boundaries will be expanded by this factor.
#
# elements in course point:
# 1. center point
# 2. point along right-hand direction
# 3. distance to right-hand boundary (optional)
# 4. flag to whether this is a mandatory checkpoint (optional)
# 5. minimum time to traverse segment (subtrated from time for segment, min 0)
#
%courses =
(
  2013 =>
  {
    #
    # Portola Valley Short Hills
    #
    4 =>
    [
      #
      # Climb 1: Golden Oak (E)
      #
      # 0: Golden Oak (E): beginning
      # old point: [ [37.38220, -122.19452], [37.38244, -122.19421] ],
      [ [37.382498, -122.194532], [37.382400, -122.194371] ],
      # 1: Golden Oak (E): midway
      [ [37.38504, -122.19861], [37.38550, -122.19801] ],
      # 2: Golden Oak (E): Peak
      [ [37.38625, -122.20362], [37.38655, -122.20402] ],
      #
      # Climb 2: Joaquin
      #
      # 3: start
      [ [37.34296, -122.20435], [37.34310, -122.20300], undef, $mandatory, "1:00:00" ],
      # 4: finish
      [ [37.34487, -122.20188], [37.34424, -122.20221] ],
      #
      # Climb 3: Hillbrook
      #
      # 5: pre-start
      [ [37.375441, -122.202457], [37.375788, -122.202585], undef, $mandatory, "0:25:00"],
      # 6: start
      [ [37.37552, -122.20285], [37.37602, -122.20209], undef, $mandatory, "0:00:15"],
      # 7: finish
      # old: [ [37.37893, -122.20665], [37.37856, -122.20531] ],
      [ [ 37.378388, -122.206660], [37.378502, -122.206170] ],
      #
      # Climb 4: Cervantes
      #
      # 8: start
      [ [37.38492, -122.21119], [37.38445, -122.21015], undef, $mandatory, "0:10:00"],
      # 9: finish
      [ [37.38668, -122.20531], [37.38589, -122.20471] ],
      #
      # Climb 5: Golden Oak (W)
      #
      # 10: Golden Oak (W): pre-start
      [ [37.377283, -122.199180], [37.377545, -122.199183], undef, $mandatory, "0:10:00"],
      # 11: Golden Oak (W): start
      [ [37.37740, -122.19948], [37.37751, -122.19877], undef, $mandatory, "0:00:15"],
```

```

# 12: Golden Oak (W): Toro
[ [37.38298, -122.20439], [37.38330, -122.20358]],

# 13: Golden Oak (W): Peak
[ [37.38591, -122.20390], [37.38568, -122.20299]],

#
# Climb 6: Summit Springs
#

# 14: start @ Tripp
[ [37.42451, -122.27385], [37.42572, -122.27489], undef, $mandatory, "0:45:00"],

# 15: Patrol Road (before final segment)
[ [37.42511, -122.27861], [37.42605, -122.27766] ],

# 16: finish
[ [37.42506, -122.28160], [37.42600, -122.28282] ],
],
},
);

```

Splits are then defined as follows. These are reported for informational purpose only.

```

%course_splits =
(
2013 =>
{
#
# Portola Valley Hills
#
4 =>
[
[0, 2], # 1: Golden Oak (E): full
[0, 1], # 2: Golden Oak (E): pt 1
[1, 2], # 3: Golden Oak (E): pt 2
[3, 4], # 4: Joaquin
[5, 6], # 5: Hillbrook
[7, 8], # 6: Cervantes
[9, 11], # 7: Golden Oak (W): full
[9, 10], # 8: Golden Oak (W): to Toro
[10, 11], # 9: Golden Oak (W): from Toro
[12, 14], # 10: Summit Springs: full
[12, 13], # 11: Summit Springs: to Patrol
[13, 14], # 12: Summit Springs: from Patrol
[2, 3], # 13: Golden Oak to Joaquin
[4, 5], # 14: Joaquin to Hillbrook
[6, 7], # 15: Hillbrook to Cervantes
[8, 9], # 16: Cervantes to Golden Oak
[11, 12], # 17: Golden Oak to Summit Springs
],
}
);

```