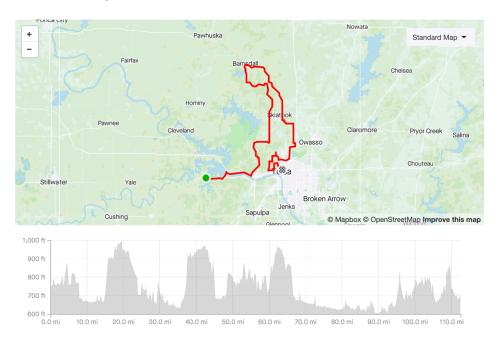
IM Tulsa Bike Course Breakdown

Course Overview

Let me start off with a couple of disclaimers. First, I am not a professional cyclist/ triathlete. I am an age grouper doing my first ironman, so please be gracious. I grew up on the course so I know some of the roads very well and I have now driven and ridden every section, most of them multiple times, and I wanted to provide a resource for those who haven't yet had a chance to ride the course. If it is helpful to you, great. If not, just toss it and move on. Second, there are two small stretches of the course that Strava won't guite let me map exactly because they are on expressways, which I assume will have a coned lane on race day. I did my best to approximate the closest distance and elevation profile on those two stretches that are both around a mile in section 6. Lastly, this is a free resource that you are free to share with anyone you like. That said, I will offer a tiny commercial...if you are interested, I lead an organization called Discipletrek that leads faith based adventure tours around the world and we have some pretty cool adventures planned (assuming we can travel again someday), such as a Kilimanjaro expedition, Everest Base Camp, Patagonia treks, etc. You can follow my social media (@_jimmyshaw) or check out our website www.discipletrek.org for more info. OK, let's get to the course breakdown.



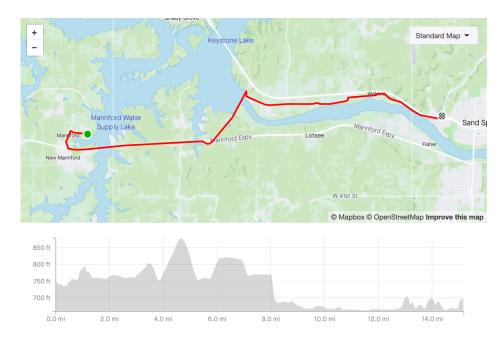
The big picture summary of the Tulsa course is this—There is a surprising amount of elevation throughout the course and there are several sections of very rough roads. This is a challenging course in perfect conditions, and perfect conditions are rare in May in Oklahoma.

It is a pretty safe assumption to expect a moderate to strong south wind on race day. I would anticipate 10-15mph, but 20+ is possible and in my view, anything less than 10 is cause for celebration. I should mention that we do get north winds in much of the year, but rarely in May. In my view, the course is considerably more manageable in a north wind that will help on second half of the course, but I wrote this breakdown with an expectation of south winds.

Heat and humidity are also likely to be a factor. It is rarely oppressive in late May, but if you are not used to either/both, they can really take it out of you. There will absolutely be DNF's on the bike course from people who fail to pace themselves and stay hydrated.

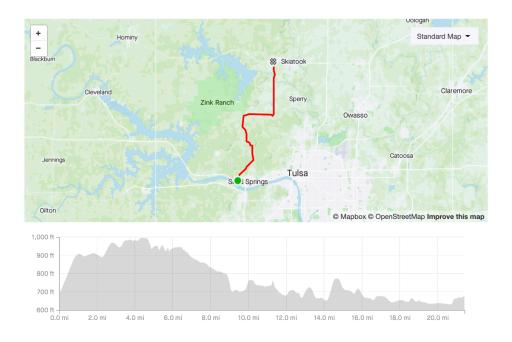
Since the course is point to point, it offers a pretty great tour of northeastern Oklahoma. You will see for miles as you ride the ridges of the Osage Hills. You will pass two beautiful lakes, dozens of ranches with cattle and horses, gorgeous homes on rolling hills, and you will ride through a few lengthy stretches of both urban and rural poverty. I have broken down the course into 6 sections, each somewhere between 15 and 21 miles. I find each section to be pretty unique both in terms of the terrain and the general environment you will be traversing. I have attached a screenshot of each section with a few thoughts about each.

Section 1—Keystone to HWY97 (Miles 1-15)



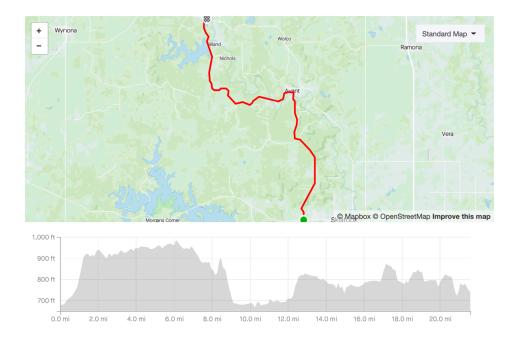
Leaving T1 you will make a pretty small climb out of the Keystone basin across a railroad crossing (pretty smooth) and up to HWY 51. My guess is that they will cone off a lane of the highway, but even if not, this section of road has a nice wide shoulder for the first several miles. It does have rumble strips just outside the white line that you will definitely want to avoid. At about mile 4 you have your first slow steady climb (maxing around 4%) and it has a nice glide off the other side. At around 5.7 you will exit off of HWY 51 with a steady climb to take the overpass and make your way toward Keystone dam. There is a pretty quick downhill just before the dam and great views from atop the dam. Watch out for wind here, since you are completely exposed. Immediately after crossing the dam, there is a very sharp almost 180 degree turn with a very steep descent (12%) that takes you down below the dam. There is an immediate left turn at the bottom of this short hill that places you on Wekiwa Road. This stretch is kind of emblematic of the course as a whole. You slowly and steadily build elevation and then lose it all at once in very steep very fast sections that don't really afford you any time for recovery. As of the time I am writing this, they have still not repaved all of Wekiwa Road, though there is talk of this being done before race day. I am sure it will make it's way to the Facebook groups if it is actually done between now and then, but I am not counting on it. The first few miles of Wekiwa road are in very rough shape. Pick your lines carefully, but expect a bumpy stretch. At about mile 12.7, you make your way on to brand new pavement, which you will certainly welcome. The down side is you will make a few small rolling climbs (maxing at 5%, but mostly 2%) to finish this section. I think this 2 mile stretch to finish this section is one of my favorite of the course. There are nice views of the river and smooth fun rollers, but buckle up...the first big climb is next.

Section 2—HWY97 to Javine Hill (Miles 15-36)



Despite the long climb at the start, you are likely to average your fastest speeds on this section. It begins with the first of the three extended climbs on the course. This climb is long and steady. It begins with a 1 mile long (mostly 4-5%) steady climb that turns into a section of undulating stretches of rollers and flats before another steady climb to the highest point of the course around mile 19.5. This hill can feel like it takes forever, but be patient. There is relief coming on the north side of the hill. Despite the pain of a 4 mile sustained climb, there are awesome views on this section. In places it seems like you can see forever. After you crest the top of the hill, the course will start to feel a bit rundown and rural, but you will barely notice because this is one of the best opportunities of the course to make up time. It is very fast, though curvy in places, down the north side of the hill. The quick section will end abruptly with a very short, but steep climb (6.6%) to the stop sign at Rock School Road. You will make a right on Rock School Road and begin a 4 miles jog back to the east. This section is bumpy in places, but nowhere near as bumpy as Wekiwa Road. There are some nice homes on open pasture here and you will pass your first of a many herds of cattle. You will intersect N 52nd St and turn back to the north onto a pretty punchy (>7%) half mile climb. This is also a very beautiful section as you can now see a good distance across the plains. The next 6-7 miles coming down the hill and across the plains to close this section are also guite fast. They are pretty exposed and mostly flat, so with a south wind you can make up a little bit of time without too much power output.

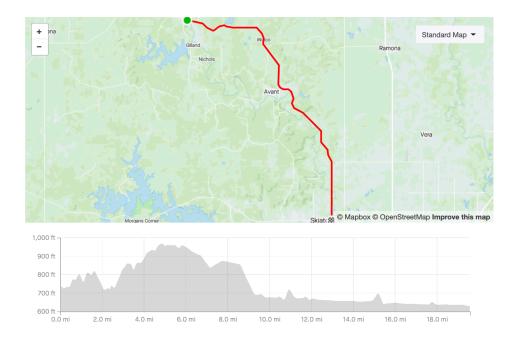
Section 3—Javine Hill to Barnsdall (Miles 36-57)



This section begins with the second major climb up Javine Hill. The main portion of the climb is 1.4 miles long and maxes out a little over 9% though the majority of it is closer to 5-6%. At this moment, there are a couple of sections of the hill that are under construction so there are two or three loose patches of gravel. I suspect this will be solved by race day, but you should look out for them if you come early to ride the course. You will see them in plenty of time, since you are likely to be moving pretty slow up the incline. I have not had any trouble riding through them. The hill has a little bit of a false summit at the end with one more short 4% push before you are truly on top. The next four miles are mostly flat with occasional rollers and a small amount of overall elevation gain. There is one more short but steep (8%) climb before making a very sharp 3 mile descent into the town of Avant. The downhill stretch into Avant is easily the fastest stretch on the whole course. Just to test it, I went from dead stop at the top to north of 40mph with no pedaling. You will make your first of several crossings of Bird Creek as you enter the little town of Avant (population ~275). You make a left turn after the bridge and make your way out of town on a county road. It is pretty easy riding for the first couple of miles after Avant. You cross another bridge over Bird Creek and then you will have another half mile climb that has a steep section or two (8%). As you are finishing this climb, there are a couple of loose dogs that I have seen every time I have ridden the course. Hopefully they will not be loose on race day, but if you ride the course before hand, you should absolutely be prepared to deal with them. Expecting them on my last ride, I sprayed them with my water bottle and had no incident. After the climb, you will have about four miles of pretty great riding through rural Osage County. By this point, you are pretty far away from civilization, so with the exception of the occasional truck passing you, you will see far more animals than

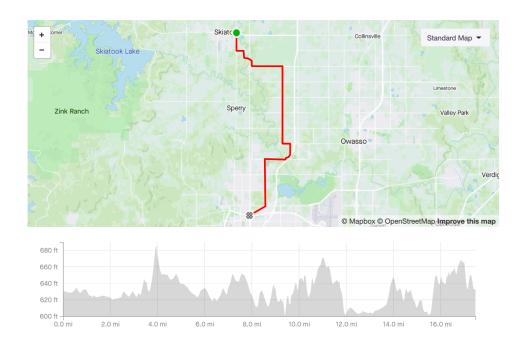
people. You will come to what looks like an intersection with gravel road veering off to the left and the pavement heading to the right. You will turn right and make two relatively short climbs (first one is about 6% and the second is 3%) as you head towards Birch Lake. Birch is a beautiful lake, but pay attention to the crosswinds as you head across the dam. After crossing the dam, you will finish this section with one more very fast descent followed by a tough .25 mile climb (7%) that will take you into the town of Barnsdall (which happens to be my home town). If you happen to ride the course before race day, there is a great little burger place called Hatfield's in what used to be a gas station on your left as you make the curve right before heading out of town. I park my bike inside the restaurant and enjoy a half way point burger on my long rides.

Section 4—Barnsdall to HWY20 (Miles 57-77)



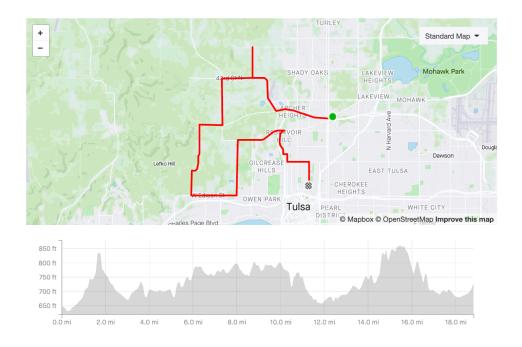
Section 4 begins with a 5 mile steady, but curvy climb out of Barnsdall past wild horses and cattle to Wolco (which is not really a place...a couple of families live here, but it does show up on some maps). This is the last of the three major sustained climbing sections on the course. It is not nearly as steep as many of the climbs on the course, but it is the longest section of sustained climbing. This undulating and curvy stretch is very fun to ride, but if you come to ride the course beforehand, I would caution you about riding this section alone. There is zero shoulder and though Barnsdall is a small town, this is the major road into town and it is heavily trafficked with few places for impatient motorists to pass you. I have been passed frustratingly close (probably by someone I grew up with) each time I have ridden this section. It is a bit of a good news/ bad news situation when you finish the climb in Wolco. The good news is that you won't be doing any real climbing again for the next 30 miles. The bad news is that you will now be atop a hillside with almost zero tree cover and you will be completely exposed to the wind. The road widens and makes its way downhill for the next four miles, passing just outside of Avant (about 1 mile east of where you were on the outbound section). Once you pass Avant, you will be back in tree cover riding along mostly flat roads through the Bird Creek flood plains. This is a very beautiful section with plenty of shade. There will be moments that it feels like you are riding through a tree tunnel, which will hopefully give you a bit of reprieve from the winds. This section finishes at the intersection of HWY 11 and HWY 20 on the eastern edge of Skiatook.

Section 5—HWY20 to Gilcrease Expressway (Miles 77-94)



Section 5 is the flattest section of the whole course (notice that the elevation profile only spans 80 ft on this section), but it traverses mostly open prairie with little shade and almost no shelter from the wind. After passing through the HWY 20 intersection. you will make a left turn off of the highway and wind your way a few miles to the east before turning south on Harvard Ave. Once you start to the south, it is a pretty straight shot for 5 miles. Harvard will cross 4 intersections, one each mile, and you should use caution at each intersection. Each road that Harvard crosses is a bit bigger than Harvard, so you kind of ramp up and down before and after each one, and all of these are a little bumpy. I found myself getting kind of frustrated at having to slow down and then work to regain my speed after each intersection, and this is especially true when riding straight into a headwind. The course makes another left turn back to the east at 76th St. before making a pretty quick right turn back to the south on Pittsburg Ave. This is absolutely without question the worst stretch of road on the whole course. It is barely rideable. Take your time and pick your line carefully. Some of the people who try to speed through this section will definitely find themselves repairing flats. Fortunately, this stretch is only about a half mile or so. You will know the worst of it is behind you as you turn back to the west along 66th St. You will ride 66th St. for 1.5 miles as you pass O'Brien Park and then turn back south on Lewis. This section passes through a pretty run down part of town, and it does have a few rolling hills, especially right before you turn right on Mohawk (6%) and head west toward the Gilcrease Expressway.

Section 6—Gilcrease Expressway to T2 (Miles 94-112)



In my opinion; this is the most difficult section of the course. It is not just that it is the last section and you are certain to be on dead legs, but this section is drawn in such a way as to intentionally add elevation to the overall course. It begins with a 1.5 mile steady climb on the Gilcrease Expressway, which terminates at a stoplight. It is quite a steep climb immediately after the light (my Strava map shows it as 18%, but I drove it again today and it is definitely not that steep...more like 8 or 9%). You will make a right turn to the north on Osage Avenue. It is a little bumpy for the first half mile and then you will begin a very smooth and fast downhill 1 mile stretch past the tiny airfield on your right. As the road banks back to the west it also starts to pick up elevation again before making the right turn for the guick out and back on 25th W Avenue. This out and back was undoubtedly included to make the overall mileage right, so I get why it is there, but it is drawn in such a way that you have to go up and over a small hill then turn around and immediately do them again in reverse before making a sharp right at a stop sign at the bottom of the hill back on 43rd St. N. The road continues climbing steadily for one mile before making a sharp descent to another stop sign where you will be turning left. The next 1.5 miles is a steady climb back to the south before turning right on 31st St. N. This is a very fun stretch that is wide open and looks a bit like a roller coaster as it rides up and down for the next 2 miles before descending sharply to yet another stop sign at the bottom of a hill (I hate stop signs at the bottom of hills which force you to ride the brakes, but they are everywhere on this course) to turn back to the east on Edison road. The 1.5 miles on Edison is a net downhill, but the road is pretty rough. The course makes a left turn on 33rd W Avenue and begins another steady almost two mile climb (4%) past Central High School towards Apache St. After turning onto Apache St. you will be facing the steepest climb on the whole course.

Though it is only about .25 mile long, Strava lists this climb at 13.3% and it is every bit of that. I imagine there will be many people walking their bikes up this hill on race day. There is one more quick descent and climb, both pretty steep, but then you can finally relax because you will be done climbing for the day. You make a right turn on the Tisdale Expressway for what will be a very fast mile back down the hill before exiting on Pine and covering the last 1.5 miles of relatively flat terrain back into T2.