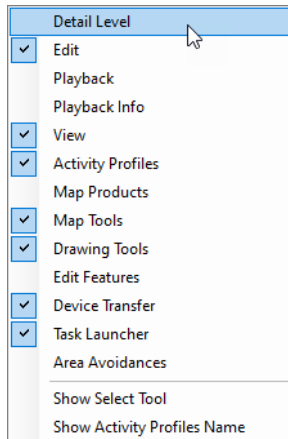


Setting up Base Camp

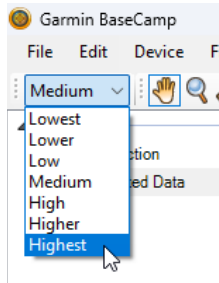
We can now run Base Camp for the first times. Here, I'm just using the Windows search feature to find and run the application.

We first need to set some options in Base Camp to have easy access to the tools we need.

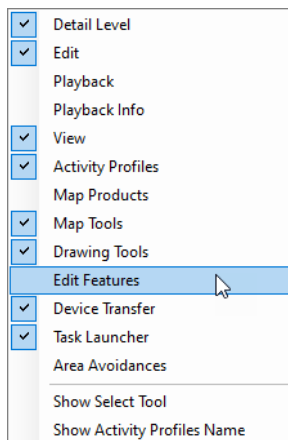
Right click in the toolbar area to see the toolbar configuration menu. Select the Detail Level menu.



The detail level dropdown menu will appear on the left side of the toolbar. Use it to select the highest detail.

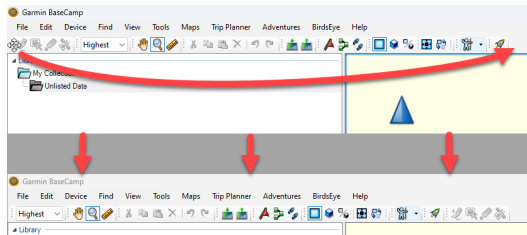


Right click in the toolbar area again and select Edit Features.

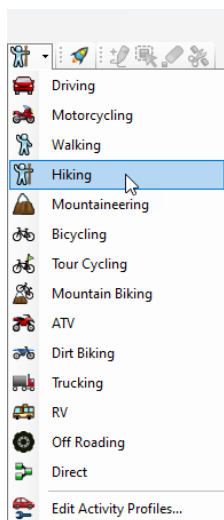


The edit features are used in route planning to insert, move, and delete stops. They are grayed out unless actively working on route planning and editing.

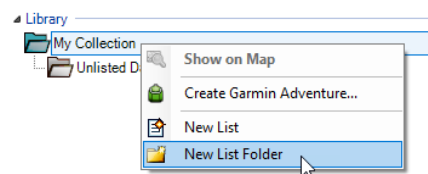
The edit feature tools initially appears on the left of the toolbar but I like to have them on the right side as to me it just makes more sense. Just drag and drop these tools to the right side of the toolbar or wherever you prefer them.



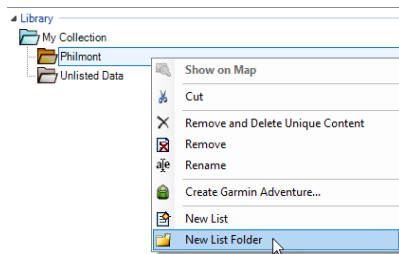
We need to do is ensure that the Activity mode is set to Hiking. This can be done from the toolbar by clicking on the activity dropdown and selecting the Hiking activity. An icon for the current activity mode is displayed on the activity dropdown. If a hiker with a walking stick is not shown on the activity dropdown, use the dropdown to select the hiker activity.



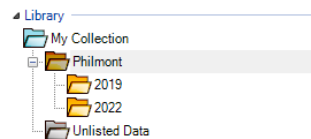
Next, right click on the “My Collection” folder in the Library pane and create a new folder to hold your Philmont planning routes. Name the folder “Philmont”.



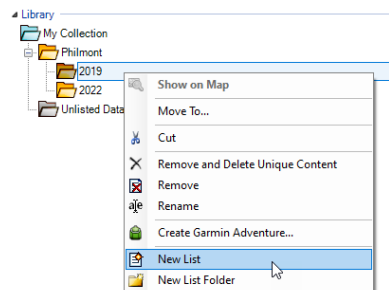
If you attend Philmont multiple times, consider creating a subfolder for each year.



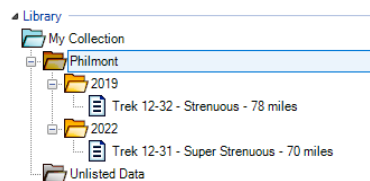
We'll be using itineraries from 2019 and 2022 in this tutorial.



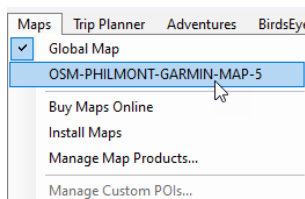
We next need to create a list to hold our routes. You can create a new list each day to hold that day's route or create one list to hold routes for all days. I prefer the latter as it makes it easier to explore multiple itineraries. Right click on a folder to create a list.



We will be creating routes for the itineraries show below.

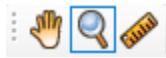


Finally, it is time to display the PHILMONT-OSM-GARMIN-MAP. Select it from the Maps menu.


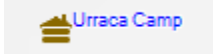


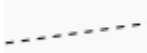
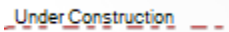


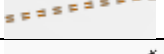

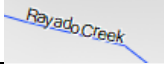
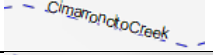
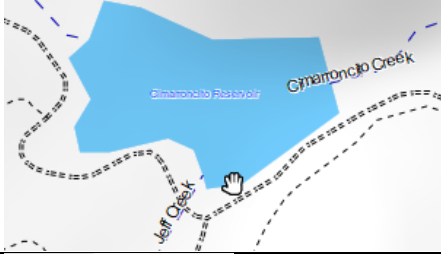




The map will be displayed. Select the Hand tool or use the arrow buttons to move the map around for a look. Use the Zoom tool or use the mouse wheel to zoom in or out. The mouse wheel is most

convenient as it can be used when the Hand tool is selected. The Ruler tool can be used for measuring straight-line distances.



The map rendering uses a similar legend to the Philmont maps as shown in the table below.

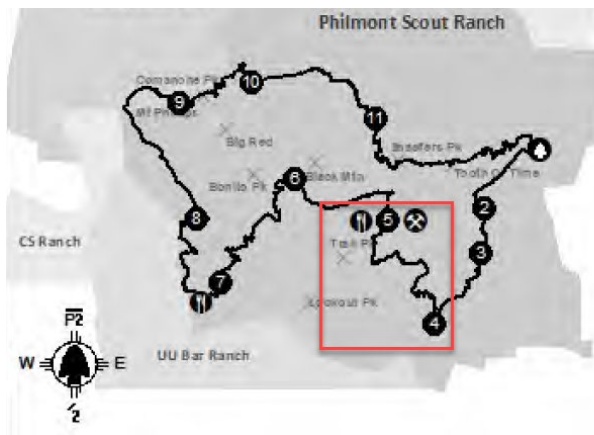
| Feature | Description |
|---|---|
|  | Trail camps are displayed using a tent icon. |
|  | Staffed camps are displayed using a cabin icon. |
|  | Buildings are shown traditionally in black and if the building has been named in Open Street Maps, the name will appear on the building when zoomed. Note: Building shapes may appear distorted due to compression to decrease the size of the map file. |
|  | Red Roof Inns are shown non-traditionally as a red building. When searching for POIs, they are named "RRI". |
|  | Trail |
|  | Trail under constructions. These are the only labeled trails to reinforce they may not be open to travel. |
|  | 4WD track (black = = :) |
|  | Emergency use track (brown = = :) |
|  | Out of Service track (brown = = =) |
|  | Fences including stock pens. Note that not all fences are mapped. |
|  | Streams and rivers with year-round water flow. If the stream or river has a name the name is also displayed. |
|  | Intermittent streams (blue dashes - - -) |
|  | Bodies of water are shown in blue (blue hashing for intermittent bodies of water). |
|  | Springs, improved water sources, and windmills. Note not all water sources have been mapped in OSM and water sources change. Please rely on the Philmont maps and the water boards in Logistics. |

| | |
|---|--|
|  | Cliffs with the arrows pointing downhill. The south trail squeezing between the cliffs of Uracca Mesa is shown here. |
|---|--|

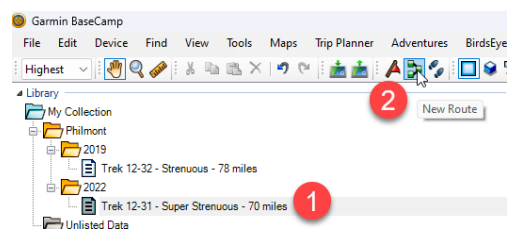
Creating a Route

We will start by creating a leg of Trek 12-31 for 2022 as shown in the planning guide. Specifically, the leg between Abreu (Day 4) and Miners Park (Day 5). Your challenge is to replicate this route in Base Camp. On this day, the itinerary includes a stop at Crater Lake for tie making and crosscut saws program before heading to Miners Park for rock climbing and rappelling with 1,558 feet of elevation over 8.1 miles. We will be able to check the elevation and distance in Base Camp.

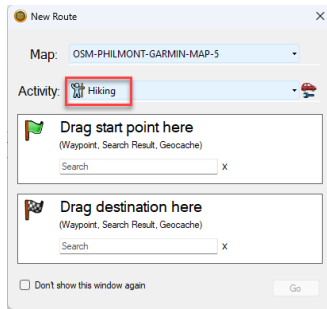
| | | | | | |
|---|--------------------------|-----|--------|--------|--|
| 4 | ABREU ^s | 4.0 | 607' | 1,380' | Sunrise Hike @ Inspiration Point; New Mexican Homestead, Cantina, Mexican Dinner |
| 5 | MINERS PARK ^s | 8.1 | 1,558' | 812' | Tie Making & Crosscut Saws @ Crater Lake; Rockclimbing & Rappelling |



Select this trek list and then the New Route tool.



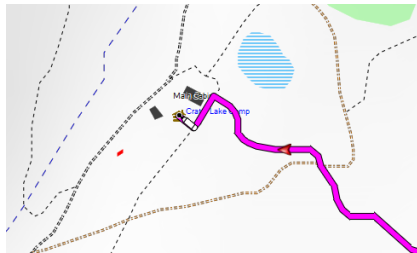
The New Route window will open. Ensure the Activity is set to Hiking and move this window off to the side.



Use the hand tool and zoom to Abreu in the South country. Note the cursor has turned into a pencil. Select the cabin at Abreu.



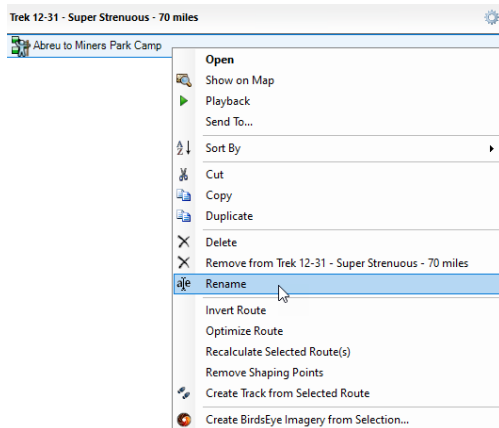
Now use the zoom and the arrow keys to zoom in on Crater Lake. I find it easiest to use the mouse wheel zoom way out, move the cursor over Crater Lake, and then use the mouse wheel to zoom in. A stretchy line will follow the cursor from Abreu. Base Camp will automatically create a route between the two camps which we will refine later.



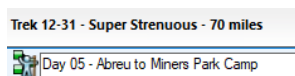
Repeat the steps above to add Miners Park as the next destination. You can close the New Route window to get it out of the way. To prevent inadvertently creating additional route stops, select the Hand tool from the toolbar.



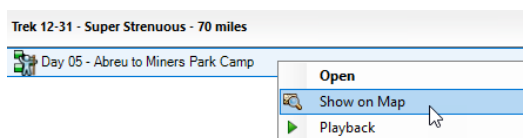
In the left-hand pane, you can see Base Camp automatically created a name for this route. Right click on the name Base Camp assigned to give it a better name.



I like to use the trek day and start/end destinations in the name (zero pad the day for 12-day treks so the routes properly sort).

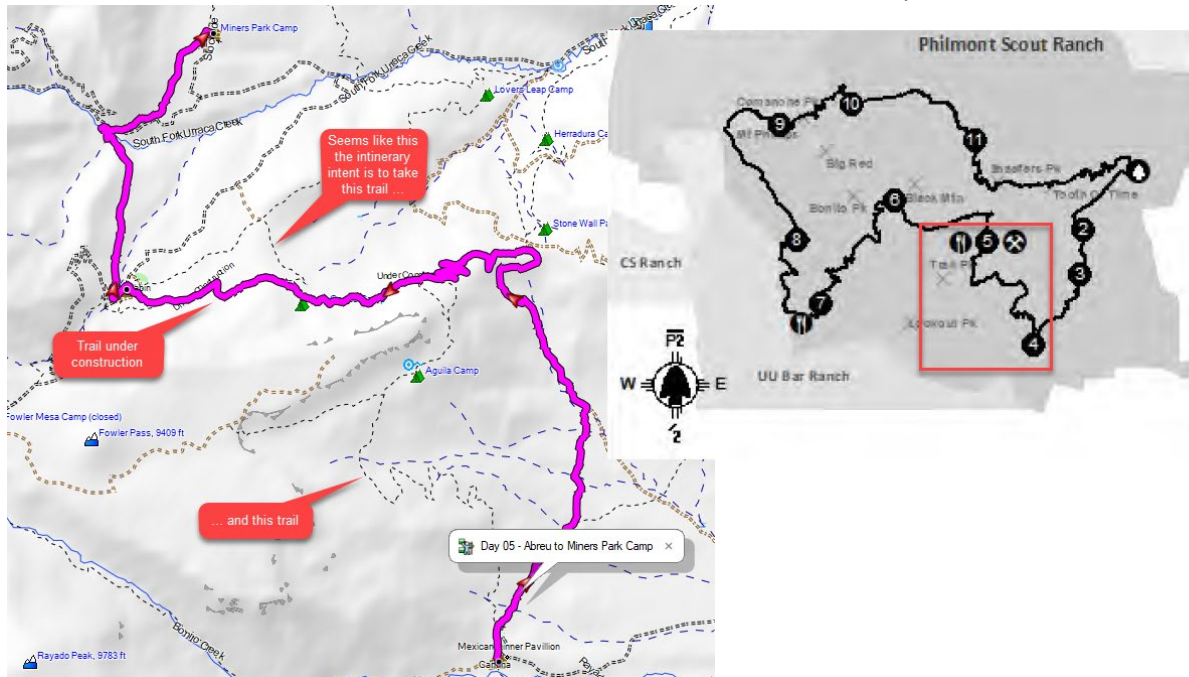


Let's see how Base Camp did. Right click on the route name and select Show on Map to see the complete route.

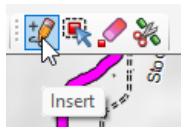


Auto-routing only considers distance and may route on undesirable road and tracks. Comparing the autoroute to the itinerary we can see the shape of the route between Crater Lake and Miners Park looks pretty close. However, the route between Abreu and Crater Lake does not look the same and the

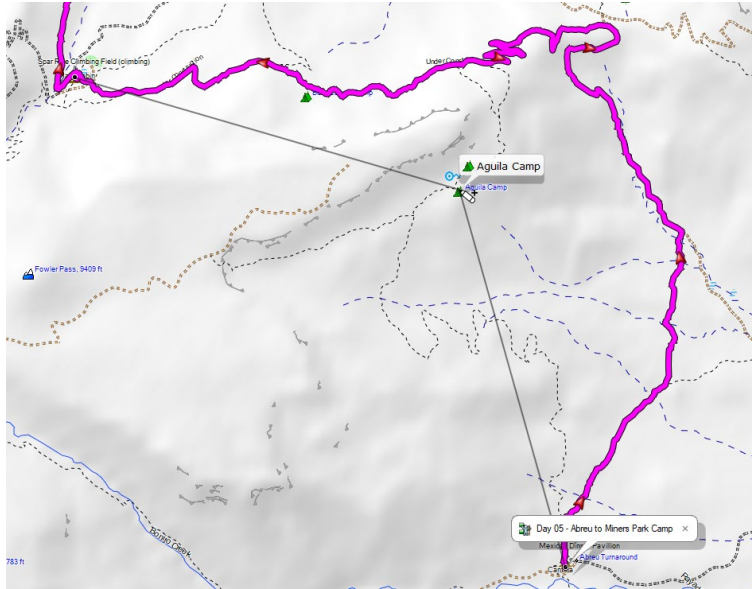
autoroute took us onto a trail under construction between Bear Caves Camp and Crater Lake.



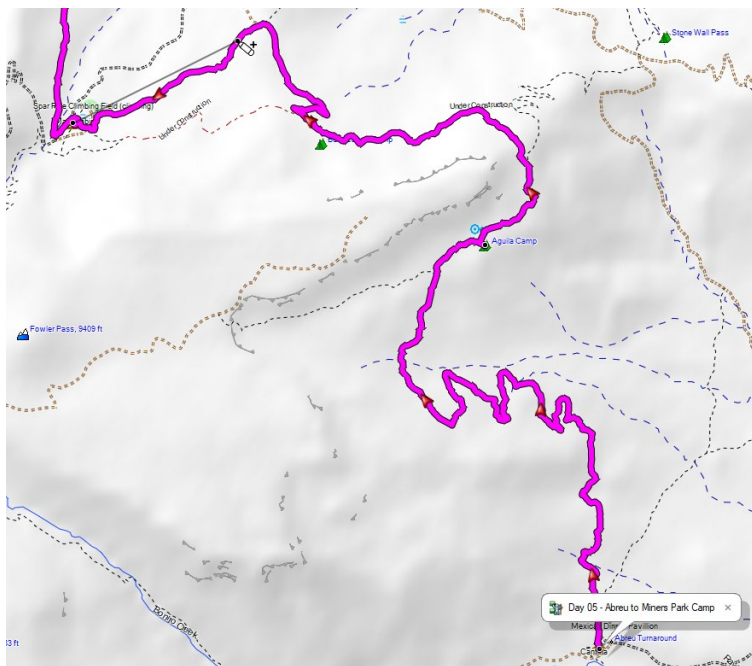
Let's fix the route by routing the first leg through the Aquila Camp. Click the Hand tool on the track to select it. When selected, the Edit Features tools are available for use (no longer grayed out). Select the Insert tool from the Edit Features toolbar. The cursor will turn into a pencil.



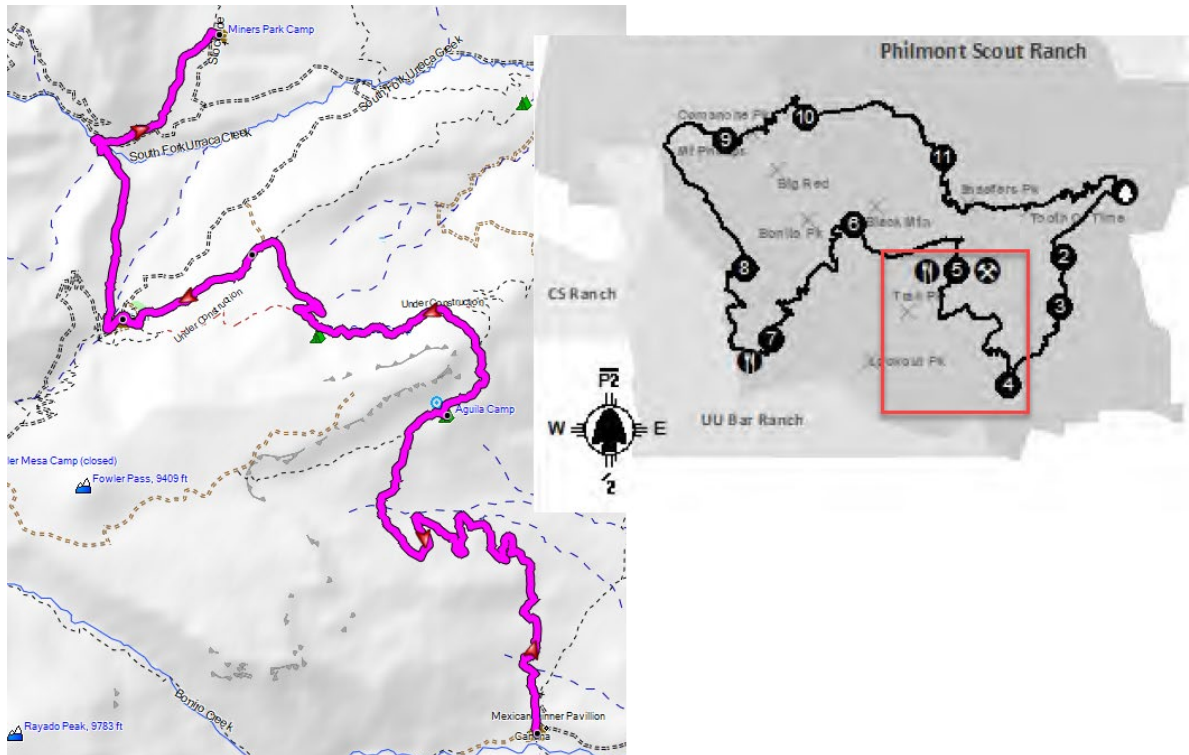
Move the pencil close to the track between Abreu and Crater Lake. A line will appear between Abreu and Crater Lake. Click the left mouse button to select this route leg to insert a stop. A rubber will appear between the destinations and move with the pencil tool. Move the pencil tool to Aquila Camp and click.



Base Camp will recalculate the route to go through Aguila Camp. This let now looks more like the map shown in the Philmont itinerary. Move the pencil tool to a point over the trail that goes around the trail under construction and click to insert another “stop”.



Select the Hand tool to avoid inadvertently inserting additional stops. Use the hand tool to examine the route to ensure it routes on trails vice tracks when there is a trail alternative. Note the route in Base Camp now more closely resembles the Philmont itinerary map.



Let's check the distance and altitude change calculated by Base Camp. Use the left mouse button to double click on the route name in the left panel or on the track itself. This will open the map details window with several tabs to examine the route. Select the More Options checkbox to see distance and elevation information.

Day 05 - Abreu to Miners Park Camp

Properties Route Directions Route Options Graph Notes References

Day 05 - Abreu to Miners Park Camp Hiking Magenta

Summary

| Points | | Course | Elevation | |
|-------------|--------|--------------------------|--------------|------------------|
| Points: | 17 | Course: 335.5° true | Min: 7198 ft | Ascent: 2339 ft |
| Via Points: | 5 | Moving Time: 2 h, 47 min | Max: 8434 ft | Descent: 1573 ft |
| Distance: | 8.2 mi | Total Time: 2 h, 47 min | Avg: 8130 ft | |

| Symbol | Via Point Name | Distance | Time | Total Distance | Total Time | Course | Position | Elevation | Ascent | Descent |
|--------|--|----------|------------|----------------|-------------|----------------------------|----------------------------|-----------|---------|---------|
| • | Abreu Depart: 11/26/2022 1:37 PM | | | | | N36° 22.723' W105° 00.947' | 7198 ft | | | |
| • | Aquila Camp Arrive: 2:44 PM | 3.27 mi | 1 h, 7 min | 3.3 mi | 1 h, 7 min | 118.5° true | N36° 23.954' W105° 01.381' | 8285 ft | 1363 ft | 276 ft |
| • | footway (won't alert) Arrive: 3:28 PM | 2.17 mi | 44 min | 5.4 mi | 1 h, 51 min | 218.8° true | N36° 24.576' W105° 02.322' | 8205 ft | 1818 ft | 810 ft |
| • | Crater Lake Camp1 Arrive: 3:43 PM | 0.76 mi | 15 min | 6.2 mi | 2 h, 6 min | 308.8° true | N36° 24.326' W105° 02.946' | 8404 ft | 2063 ft | 857 ft |
| • | Miners Park Camp Arrive: 4:24 PM | 2.04 mi | 41 min | 8.2 mi | 2 h, 47 min | 114.5° true | N36° 25.428' W105° 02.480' | 7964 ft | 2339 ft | 1573 ft |

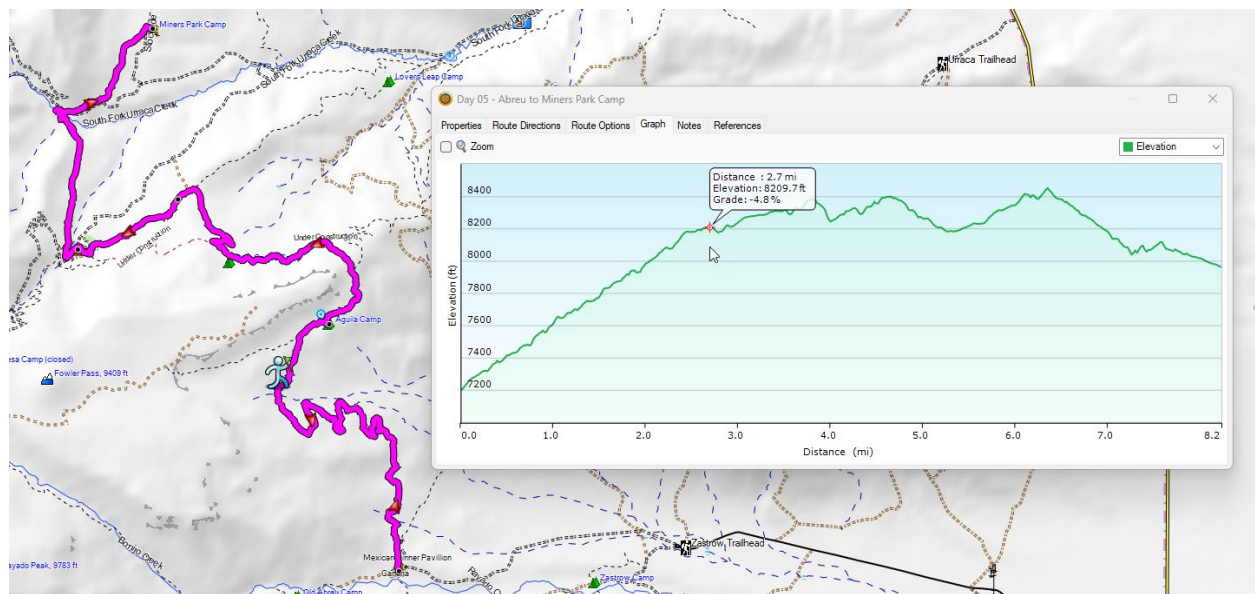
☐ Center Map ☒ More Info Recalculate Optimize Invert Create Track Print...

If we compare the distances (8.2 miles vice 8.1 miles), we can see the Base Camp calculated distance is close to Philmont provided distance. Distance accuracy is dependent upon the number of points used in the map to mark the trail. The more points the more accurate the distance calculation. The Philmont

tracks and trails in Open Street Maps generally use lots of points particularly around curves and bends resulting in greater trail rendering and accuracy.

If we compare the elevation gain (2,339 feet vice 1,558 feet), the Base Camp calculated elevation gain is 50% more than the Philmont provided. Again, the number of points used in the map make a difference. The most likely reason for the difference is that Base Camp is including what are fondly referred to by Rangers as PUDs – Pointless Ups and Downs. Philmont likely uses a coarser elevation calculation that leaves out all the elevation changes attributable to PUDs.

Finally, select the Graph tab to see an elevation profile. The elevation graph works in conjunction with the route by moving the mouse cursor over the elevation profile and seeing the corresponding point on the route marked by the stick figure.



That's hit. Check out the Garmin web site and YouTube for more tutorials on using Base Camp.

Exercise

Philmont 2019 itinerary 12-32 side hikes Baldy from Ewells Park. It includes a food pickup and program in Baldy Town, the Baldy climb, and a descent down the backside to French Henry for more program before returning to Ewells Park. The trouble with this route is that a crew would have to wait until the commissary opens for food pickup and schedule program resulting in starting the Baldy ascent until mid-morning. Such a late start increases the chances for weather to blow in causing the crew to abort the ascent.

Use Base Camp to create the prescribed itinerary up the south face of Baldy after food pickup and program. Then explore the alternative of climbing Baldy first to ensure beating the weather. There are two alternatives:

1. Climb and descend using the southern trail, pick up food and program in Baldy Town, then head over to French Henry for program.

2. Take the trail from Baldy Town to Copper Park, climb the much nicer switchback trail approaching Baldy from the North, descend to Baldy Town for food and program, and then head over to French Henry for program.

While both alternatives require longer distances, the timing – and energy saved on the switchbacks – just might be worth it to accomplish that day's busy schedule and still be more than likely to make the Baldy ascent before weather hits.

| | | | |
|----|-------------|---|------------|
| 9 | Ewells Park | Mountain Man Rendezvous, Tomahawks @ Miranda; Trail Camp | |
| 10 | Ewells Park | Climb Baldy Mountain; Gold Panning, Blacksmithing, Mine Tour @ French Henry | Baldy Town |

