1 Run exploring a SLAM map

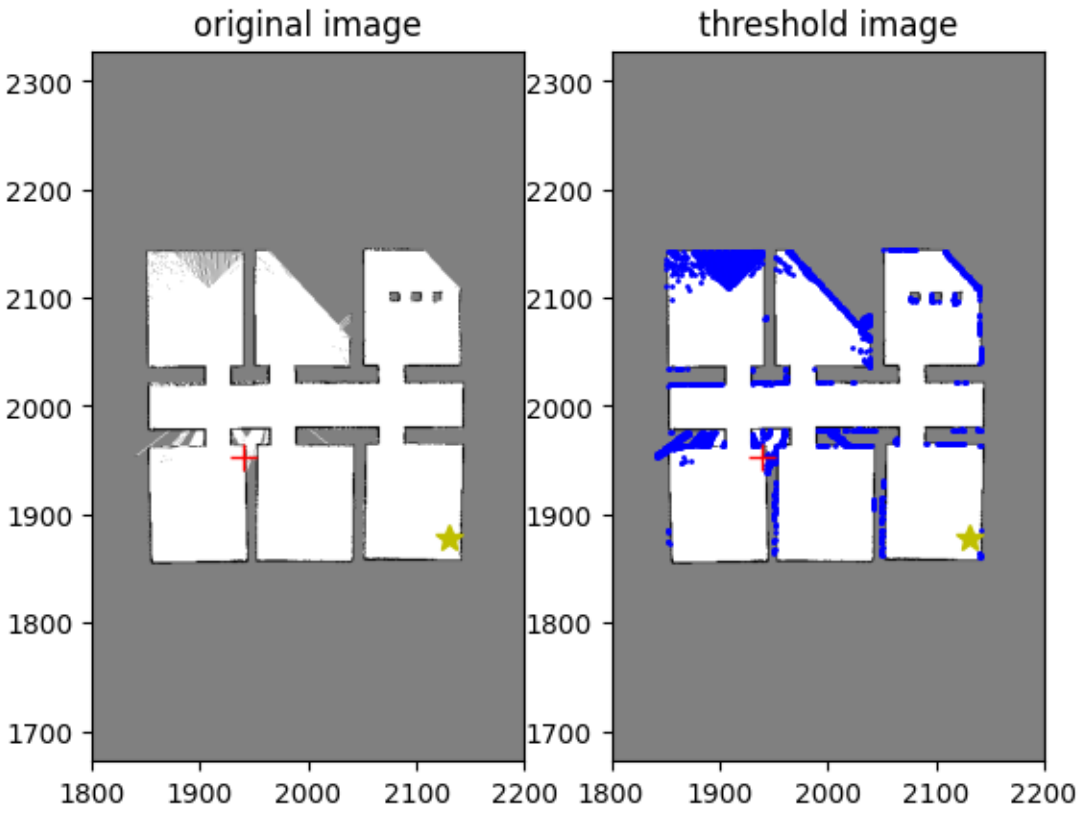
In [4]:
```
from path_planning import convert_image, dijkstra, open_image, plot_with_path
from exploring import find_all_possible_goals, find_best_point, plot_with_explore_points, find_
```

In [49]:
```
# You can use map or initial
im, im_thresh = open_image("map.pgm")

# Split into two pieces - find all of the points that are adjacent to an unknown area and a vi
#    Then pick the best one
all_unseen = find_all_possible_goals(im_thresh)

robot_start_loc = (1940, 1953)
best_unseen = find_best_point(im_thresh, all_unseen, robot_loc=robot_start_loc)

# Note: This can be a little slow (it's drawing a lot of little points)
plot_with_explore_points(im_thresh, zoom=0.1, robot_loc=robot_start_loc, explore_points=all_uns
```



2 Run waypoint generation on a pretend SLAM map

Note: This code assumes you have the previous problem completed

In [50]:
```
#best_unseen = (2100, 1953)
path = dijkstra(im_thresh, robot_start_loc, best_unseen)
waypoints = find_waypoints(im_thresh, path)
plot_with_path(im, im_thresh, zoom=0.1, robot_loc=robot_start_loc, goal_loc=best_unseen, path=
print(f"Waypoints has {len(waypoints)} points of {len(path)}")
```

```
Waypoints has 14 points of 269
```