

## Geo Fence Live

### -User Guide-

#### Abstract:

Geo Fence Live is a web based application designed to allow users to map gps coordinates within virtual boundaries. The purpose of this application is to enable the tracking of various resources represented by their coordinates. Users can add, delete, or edit both the location of resources and the boundaries which contain resources. Resources are assigned statuses, and when a resource's status changes, a notification will be sent out to alert the user. These status changes are also shown in the user interface, contained in an event log. The ability to create new boundaries is limited to a form which requires formatted gps coordinates/ coordinate arrays. However, the platform does contain an early stage tool which can draw polygons and coordinates by hand. This feature will be introduced at a time to be determined.

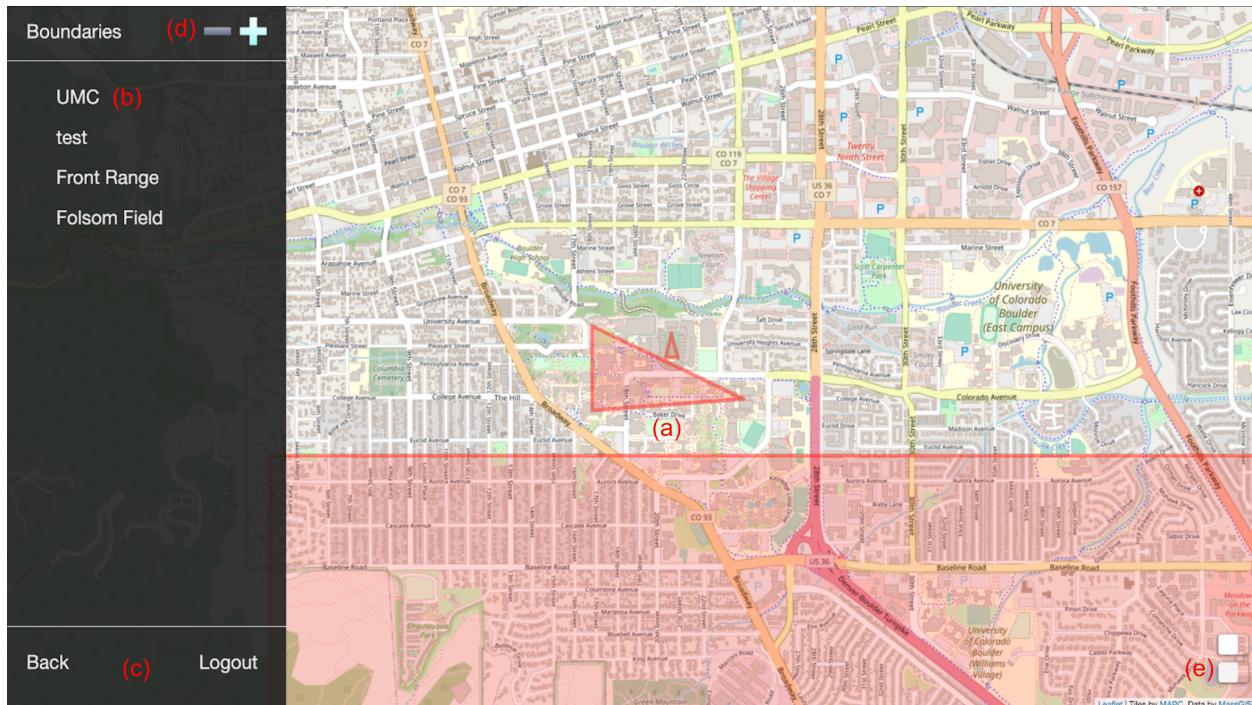
The Geo Fence Live project has many potential applications, which could benefit a variety of different users. The primary focus of the developers is to enable construction managers to plot their tools, materials, personnel, vehicles, etc. in a virtual space, which allows them to make informed decisions and stay organized. Aside from construction, industries like agriculture, military, law enforcement and shipping could benefit from this tool. The current generalized state of the platform shows the potential for how the project could be specialized to meet the needs of specific users as the development process continues.

*Note: At the time this document was created, the edit and delete functionalities were not complete. This may change by the time of review, but it should be known that these features, as well as the login feature, and the draw feature are not fully implemented due to time constraints.*

## Walkthrough:

1. To access the website proceed to the following url:  
<https://main.d1482i33jrmwwx.amplifyapp.com/boundaries.html>
2. Process as a guest to login (the user login system is not fully functional)
3. Boundaries (Figure 1):
  - The page you will see once you login will display all of the boundaries that exist currently on the map as red polygons(a).
  - You will also see all of the boundaries listed by name in the navigation bar(b).
  - At any time you may click the logout button or back button to navigate back to the front page or between boundaries, zones, and resources, respectively(c). This is displayed on all pages.
  - In the navigation bar heading, you will notice an add and delete button(d). Both of these buttons will enable pop ups which will prompt you to either enter information to define a new boundary, or choose a boundary to be removed.
  - *In the bottom right corner of the page you will see two buttons(e). The top button allows for boundaries to be hand drawn on the map, although this feature is not complete and will not create a boundary in the database.*

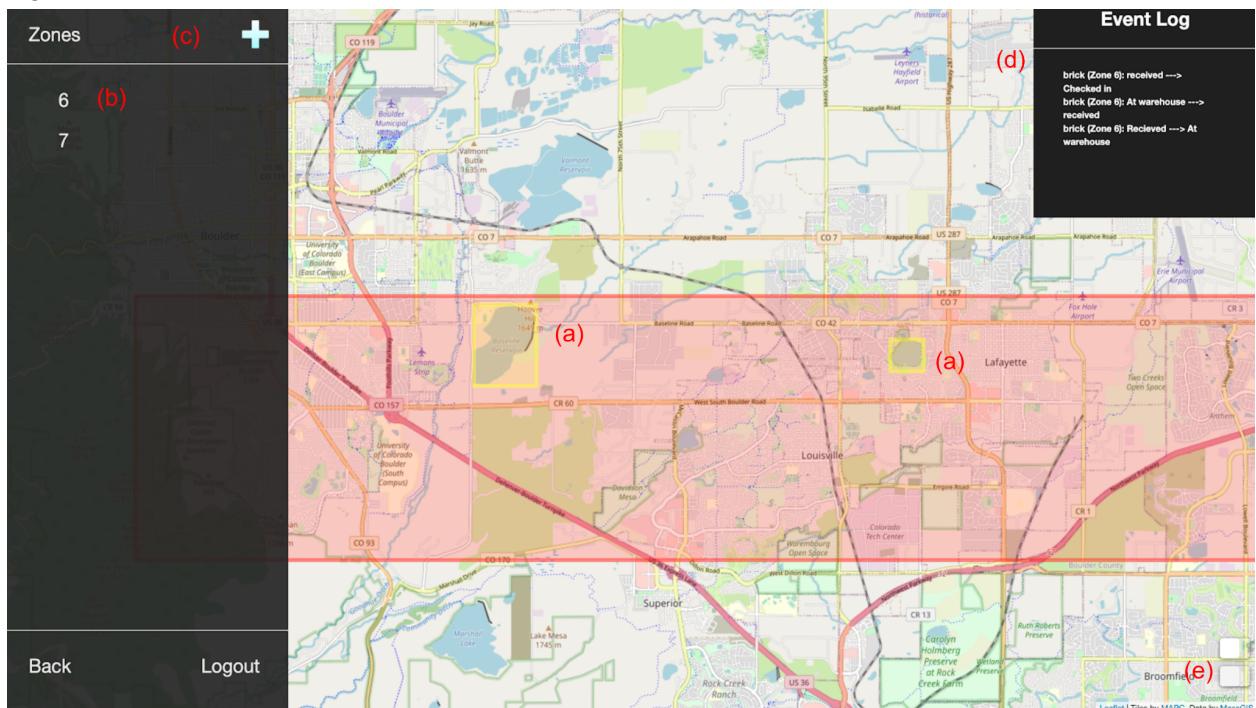
Figure 1



#### 4. Zones (Figure 2):

- The page you will see when you click on a boundary will show all of the zones within that boundary as yellow polygons(a).
- You will also see all of the boundary's zones listed by id in the navigation bar(b).
- The navigation bar heading once again shows an add and delete button(c). These now will apply to zones.
- In the upper right hand corner, you will now see an event log(d). This feature will populate with all of the resources in the boundary which have had changes to their status. The resource name, its zone id, its previous status and its new status will be displayed, in that order.
- *In the bottom right corner of the page you will see two buttons(e). The top button allows for zones to be hand drawn on the map, although this feature is not complete and will not create a zone in the database.*

Figure 2



## 5. Resources (Figure 3):

- The page you will see when you click on a zone will show all of the resources within that zone as blue markers(a).
- You will also see all of the zone's resources listed by name in the navigation bar(b).
- The navigation bar heading once again shows an add and delete button(c). These now will apply to resources.
- In the upper right hand corner, you will still see the event log(d). This will now populate with all of the updates to the status of the resources in the selected zone. The resource name, its previous status and its new status will be displayed, in that order.
- When a resource is selected, a pop up will appear in which you can edit the coordinates of the selected resource(e). When the status is changed, it will be updated in the event log, and an sns notification will be sent.
- *In the bottom right corner of the page you will see two buttons(f). The top button allows for resources to be hand drawn on the map, although this feature is not complete and will not create a resource in the database.*

Figure 3

