

Lab 4 – ParkODU User Manual

Team Gold

CS 411

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Version 1

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1. Introduction

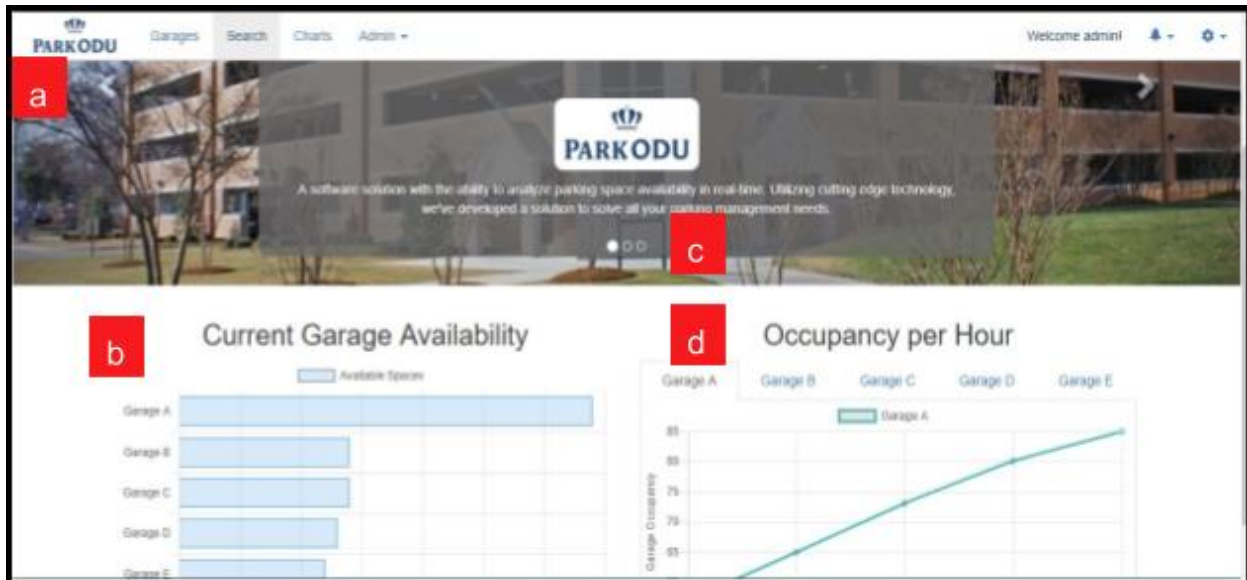
Welcome to ParkODU, a software solution developed by ODU's Team Gold with the ability to analyze and display parking space availability in real time. The current state of ODU parking demands a more efficient method to utilize existing infrastructure. We make that possible by giving the driver the tools they need to find the best parking location and by giving administrators the tools they need to help keep everyone up to date. In this manual we guide you through using these tools on our website, namely:

- a. Home
- b. Navigation Bar
- c. Garage Details
- d. Search and Navigation
- e. Charts
- f. Events
- g. Register
- h. Login
- i. User Preferences
- j. Admin Settings

A troubleshooting sections follows the description of these components. We conclude with a glossary of terms.

2. Home

Welcome to ParkODU! Here is our home page. It features some useful information and navigational tools to move around the website.



- a. Navigation Bar** - This is where you can navigate through the main sections of ParkODU.
- b. Carousel** - This cycles through whatever photos and information we want to share. Right now, it tells you a little about ParkODU.
- c. Current Garage Availability Chart** - This is a quick way for you to see what garages have the most space available.
- d. Occupancy per Hour Charts** - This is a quick way to see the occupancy of all the garages by the hour.

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3. Navigation Bar

The navigation bar is found at the top of the screen. The various words and icons you see placed along this bar will take you to different sections of the website when clicked. The navigation bar is slightly different depending on what permissions you have. In other words, it looks different if you are not logged in (anonymous), logged into a user account (user), or logged into an admin account (admin).

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3.1. Anonymous

This is what the navigation bar looks like for anonymous users.



- a. **ParkODU Logo** - This element is the name of our website and is the first button on the navigation bar from the left. Click it to return to the home page.
- b. **Garages** - This tab is found to the right of the logo. This is where you click if you want to view garage details such as current occupancy or the floor plan, but are not interested in conducting an advanced search.
- c. **Search** - This tab is found to the right of the Garages tab. Click here to conduct an advanced search for the best parking location.
- d. **Charts** - This tab is found to the right of the Search tab. Click here to view charts built from historical data.
- e. **Events Notification** - This is the first tab on the navigation bar from the right. It is a bell shaped icon that will sometimes have a number in a red circle next to it, representing the number of unviewed event notifications. Click this icon to view events that might affect parking.
- f. **Register** - This tab is found to the left of the Event Notification bell icon. Click here to register an account with ParkODU to access the additional features found in the User Settings section (section 10) of this user manual.
- g. **Login** - This tab is found to the left of Register. Once you have a registered account, click here to login.

3.2. User

Once you log in as a user you will be able to see an extra settings element on the navigation bar to the far right. Represented by a cog icon, it has two options on its dropdown menu:

My Account and Logout.



- a. **My Account** - This is the first option on the dropdown menu when you click the settings icon. Click here to edit your account and set default search options.
- b. **Logout** - This is the second option on the dropdown menu when you click the settings icon. Click here to logout of your account.

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3.3. Admin

Once you log in as an admin you will be able to see an extra Admin tab on the navigation bar that is located to the right of the Charts tab. This element has three areas on its dropdown menu: Configurations, Account Management, and Notification System.

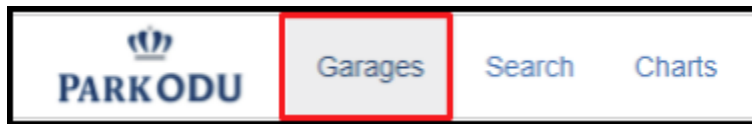


- a. **Configurations** - This section of the dropdown menu includes a listing of parking objects in the ParkODU database. Click on any of these to add, edit, or delete objects of that type.
- b. **Account management** - This section of the dropdown menu includes all account management tools. Click here to add, edit, or delete accounts. This is also where you want to go if you need to reset someone's password for them.
- c. **Notification system** - This section of the dropdown menu includes all notification tools. Click here to add, edit, or delete event notifications.
- d. **Statistics** - This section of the dropdown menu includes statistics of all the floors in each garage. Click here to if you want to see the statistics of all the floors.

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4. Garage Details

The Garages menu item on the top navigation bar directs you to a landing page where you are presented with a table of all the garages at Old Dominion University and their respective available space counts and occupancy rates shown in real-time. This module allows you to traverse down to view the details of a floor within a garage.



4.1. Garages

Clicking on the garages tab in the navigation bar will take you to the Garages page.

The image shows the 'GARAGES' landing page. At the top is the PARKODU logo and the word 'GARAGES' in a large, bold, serif font. Below this is a table with three columns: 'Garage', 'Available Spaces', and 'Occupancy Rate'. Each column header has a small red square with a white letter (a, b, c) to its left. The table contains five rows of data, each representing a different garage.

a Garage	b Available Spaces	c Occupancy Rate
Garage A: Elkhorn Avenue	34	94.75%
Garage B: 43rd Street	14	97.84%
Garage C: Constant Center South	14	98.27%
Garage D: Constant Center North	13	98.4%
Garage E: 49th Street Stadium	12	98.52%

- a. Garage** - Displays the garage names as a hyperlink that navigates you to the Garage details page for that garage.
- b. Available Spaces** - The current total available parking spaces for each garage.
- c. Occupancy Rate** - The current occupancy rate of the garage. (This is the percentage of spaces which are occupied).

4.2. Floors

Clicking on the name of a garage will take you to this page.

GARAGE A: ELKHORN AVENUE

Total Available Spaces 34
Total Spaces 648
Occupancy Rate 94.75%

Description Located at the corner of 43rd Street and Elkhorn Avenue. The garage is zoned for meter parking and commuter students. There are meter spaces located on 1st and 2nd levels that are controlled by multi-space meters located at the pedestrian exit in the northeast corner of the facility. When parking in a metered space, you must pay the pay station before leaving the garage as soon as you park your vehicle. Each parking space is individually numbered. Enter the space number at the multi-space meter when you pay.

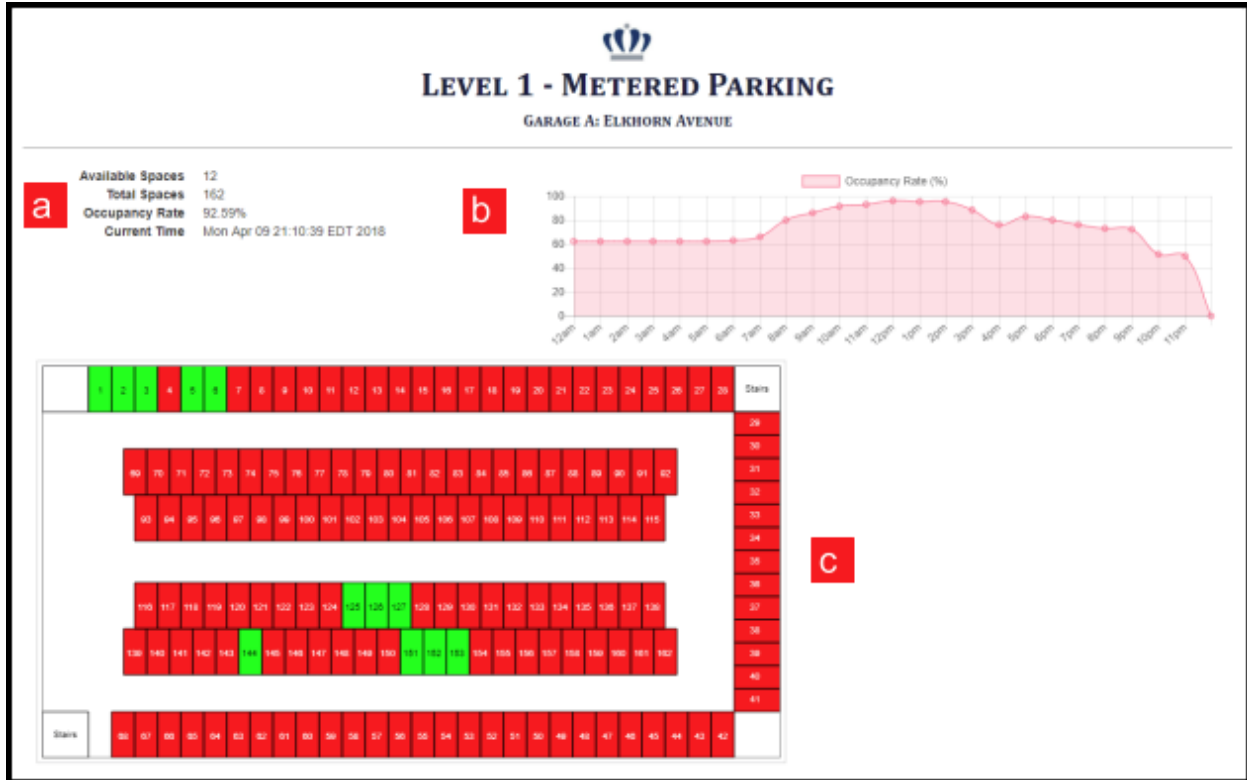
b Floor	c Description	d Available Spaces	e Occupancy Rate
Level 1	Metered Parking	12	92.59%
Level 2	Commuter / Commuter Parking	13	91.90%
Level 3	Commuter Parking	3	88.15%
Level 4	Commuter Parking	6	96.3%

- a. Details** - Displays the total available spaces, total spaces, occupancy rate, and a detailed description about the garage.
- b. Floor** - Displays the level number as a hyperlink that navigates you to the Floor details page.
- c. Description** - The parking space types at the respective level.
- d. Available Spaces** - The total number of available parking spaces at the respective level.
- e. Occupancy Rate** - The current occupancy rate at the respective level.

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4.3. Floor Details

Clicking on a floor will take you to this page.



- a. **Floor Details** - Displays the total available spaces for the floor, total spaces, current occupancy rate, and the datetime the page was accessed/refreshed.
- b. **Chart** - A historical occupancy chart that displays a 24-hour occupancy rate trend for the current weekday.
- c. **Floor Plan** - Displays an interactive floor plan that allows you to see the exact location of available spaces within the current floor.

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5. Search and Navigation

The search menu option on the top navigation bar directs you to a page that allows them to submit a form to give parking results based on input parameters defined within this form.



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5.1. Search

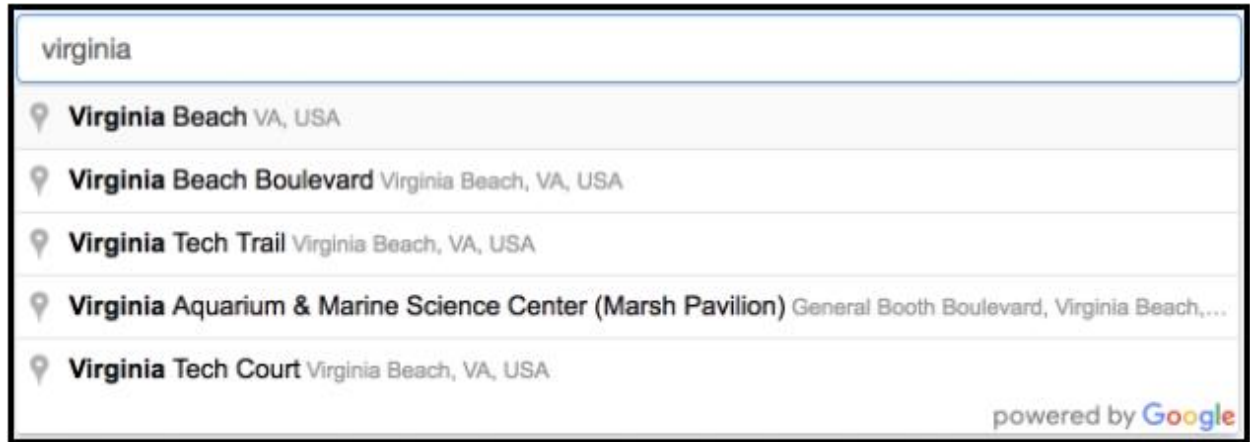
Upon selecting the search menu option, the page below will be displayed.

The screenshot shows a web interface titled "SEARCH" with a crown icon. The form includes the following elements:

- Starting Location:** A text input field with the placeholder "Enter your starting address". A red box labeled "a" is positioned to the right of the input field.
- Permit Types:** A list of radio button options: Commuter, Evening, Faculty, Metered, Motorcycle, and Perimeter. A red box labeled "b" is positioned to the right of the "Faculty" option.
- Space Types:** A list of radio button options: Disability, Motorcycle, Normal, and Reserved. A red box labeled "c" is positioned to the right of the "Motorcycle" option.
- Minimum Available Spaces:** A text input field containing the number "0". A red box labeled "d" is positioned to the right of the input field, and another red box labeled "e" is positioned to the right of the entire form section.
- Destination Building:** A dropdown menu with "Alfriend Chemistry Building" selected. A red box labeled "f" is positioned to the left of the dropdown.
- Buttons:** At the bottom, there are three buttons: a red button labeled "f", a blue button labeled "Search", and a blue button labeled "Reset". A red box labeled "g" is positioned to the right of the "Reset" button.

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- a. Starting Location** - This element is shown at the top of the entry form for the search page and allows you to enter a starting address. A valid starting address must be given for the search to work properly. Validation of a correct address entry will be displayed below the entry box. This option is required to submit the form. This box features autocomplete from Google Maps as shown below.



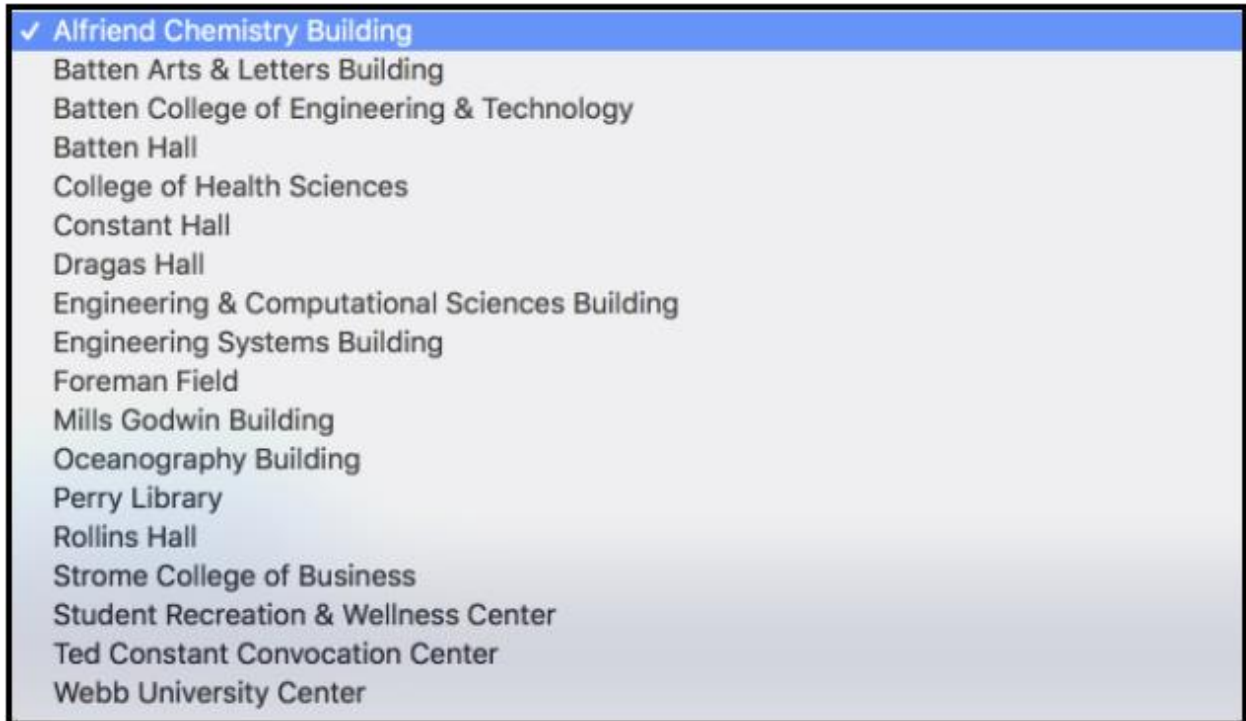
The image shows a search input field with the text "virginia" entered. Below the input field, a dropdown list of location suggestions is displayed, each preceded by a location pin icon. The suggestions are:

- Virginia Beach VA, USA
- Virginia Beach Boulevard Virginia Beach, VA, USA
- Virginia Tech Trail Virginia Beach, VA, USA
- Virginia Aquarium & Marine Science Center (Marsh Pavilion) General Booth Boulevard, Virginia Beach,...
- Virginia Tech Court Virginia Beach, VA, USA

The text "powered by Google" is visible in the bottom right corner of the dropdown menu.

- b. Permit Types** - This element is shown below the starting location entry box and allows you to select all permit types in which you are interested to define as search parameters for displaying results. You may select multiple permit types. Correct selection shows a check in the box to the left of the selected permit type. This option is not required and applies no filter for the results if no options are selected.
- c. Space Types** - This element is shown below the permit types checkbox entry and allows you to select all space types in which you are interested to define as search parameter for displaying results. You may select multiple space types. Correct selections show a check in the box to the left of the selected space type. This option is not required and applies no filter for the results if no options are selected.

- d. **Minimum Available Spaces** - This element is shown below the space types checkbox entry and allows you to specify the minimum spaces a garage must have to be considered an applicable result given their metrics. The option is not required and defaults to 0.
- e. **Destination Building** - This element is shown below the minimum available spaces entry box and allows you to specify the destination building you prefer.



- f. **Search** - This element is shown below the destination building entry selection and allows you to submit the form based on the filters you have inputted. Correct submission will direct you to the search results page
- g. **Reset** - This element is shown to the right of the submission element and allows you to reset the search form to its default settings as show at first entry to the page. All previous entries will be removed and you must re-enter your desired filters before submitting the form.

Options within the search page can automatically be selected given that you have logged in and settings within user settings have been defined. A more detailed description of these settings is listed within Section 10, User Settings.

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5.2. Search Results

Upon submittal of the search entry form, you will see a list of results.

SEARCH RESULTS

Starting Address Virginia Beach, VA, USA a
 Permit Types
 Destination Building Alfriend Chemistry Building i

d e i New Search

j	b Garage	c Available Spaces	d Starting Address to Garage (Driving)		e Garage to Destination Building (Walking)		f Total Distance	g Total Travel Time	h Arrival Time
			Distance	Travel Time	Distance	Travel Time			
Navigate	Garage D: Constant Center North	674	21.1 mi	32.7 min	0.2 mi	3.3 min	21.2 mi	36.0 min	09:02 PM
Navigate	Garage C: Constant Center South	689	20.9 mi	32.2 min	0.2 mi	4.4 min	21.1 mi	36.6 min	09:03 PM
Navigate	Garage E: 49th Street Stadium	664	21.3 mi	33.6 min	0.3 mi	5.6 min	21.6 mi	39.2 min	09:06 PM
Navigate	Garage B: 43rd Street	539	21.2 mi	33.3 min	0.4 mi	8.7 min	21.6 mi	42.0 min	09:08 PM
Navigate	Garage A: Elkhorn Avenue	544	21.2 mi	33.3 min	0.4 mi	8.7 min	21.6 mi	42.0 min	09:08 PM

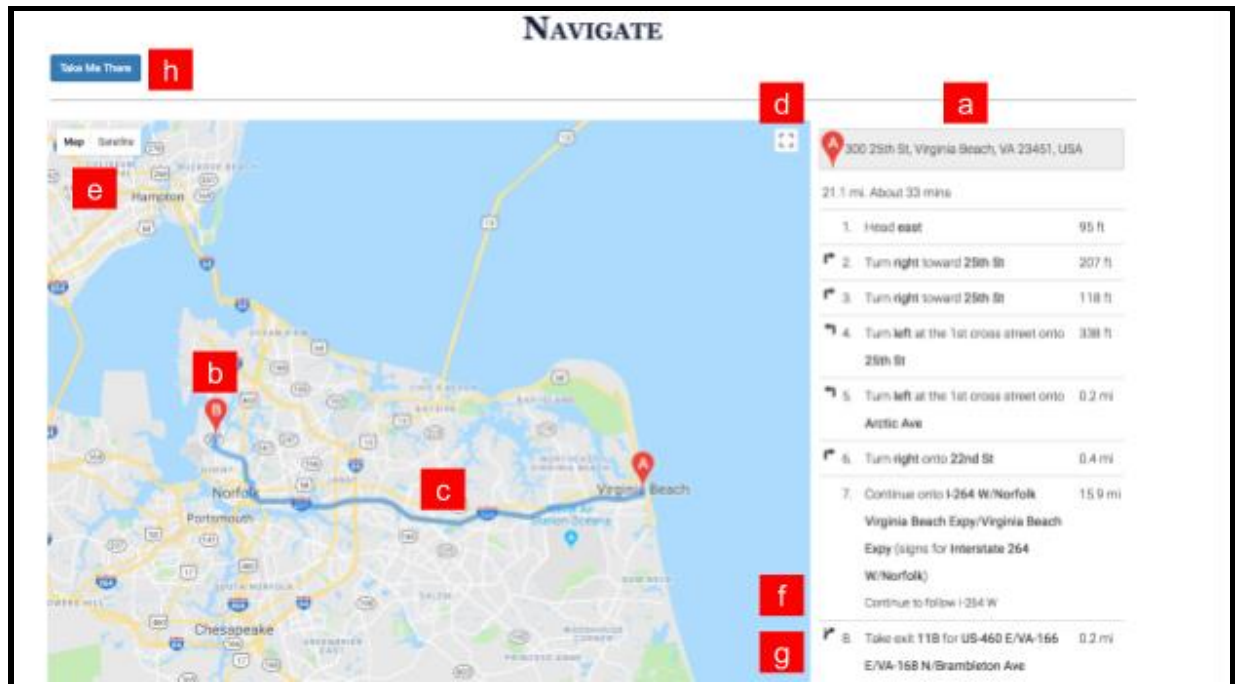
- a. **Info** - This element details the filters that were defined in the search form from the previous page.
- b. **Garage** - This element of the table within search results lists garages based on the earliest arrival time given in element h, the arrival time column.
- c. **Available Spaces** - This element of the table within search results shows the current amount of available spaces per garage.
- d. **Starting Address to Garage (Driving)**
 - i. **Distance** - This element of the table shows the calculated driving distance to a specific garage originating from the specified starting location.
 - ii. **Travel Time** - This element of the table shows the calculated driving time to a specific garage originating from the specified starting location.
- e. **Garage to Destination Building (Walking)**

- i. Distance** - This element of the table shows the calculated walking distance to the building selected within the search form from a specific garage.
- ii. Travel Time** - This element of the table shows the calculated walking time to the building selected within the search form from a specific garage.
- f. Total Distance** - This element of the table shows the total calculated distance between driving and walking time to reach the desired building per selection within the search form from the previous page.
- g. Total Travel Time** - This element of the table shows the total calculated time between driving and walking time to reach the desired building per selection within the search form from the previous page.
- h. Arrival Time** - This element of the table shows the time of arrival to your desired destination specified within the search form from the previous page.
- i. New Search** - This element will direct you to the search page to start over entering new filters based on desired results.
- j. Navigate** - This element will direct you to the navigate page based on the garage chosen within the results table.

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5.3. Navigate

Upon clicking the Navigate element of the previous page per a specific garage, you will be directed to the page below.



- a. **Directions** - This element shows the steps you must take to get to your desired destination.
- b. **Waypoints** - These elements show the starting point (Waypoint A) and the destination point (Waypoint B)
- c. **Route** - This element shows the route shown within the directions. The route is draggable and the directions depicted on the right while change in accordance to the route selected.
- d. **Fullscreen** - This element will enlarge the map to fullscreen mode.
- e. **Map/Satellite** - This element will toggle the view of the map between map and satellite mode.
- f. **Zoom** - This element will change the zoom of the map by either zoom in or zoom out.

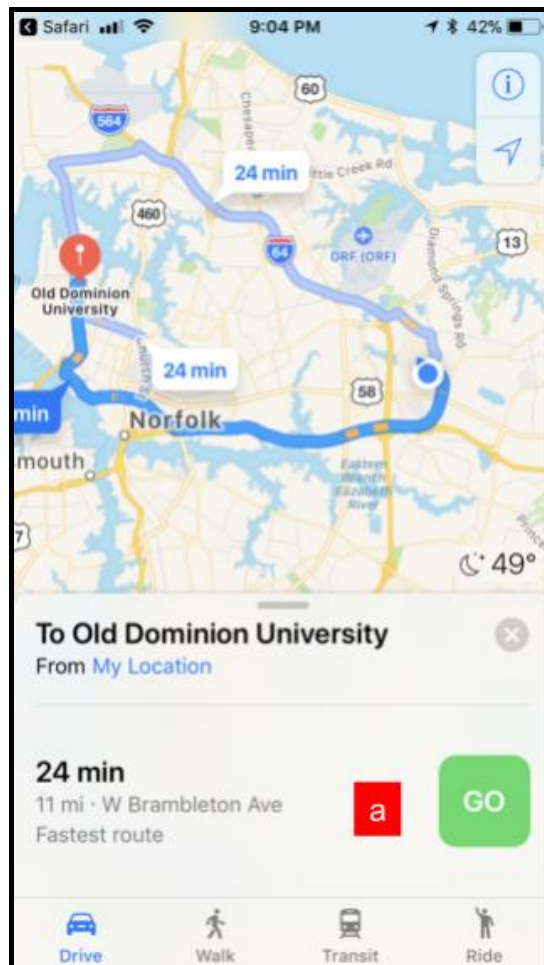
- g. Street View** - This element allows you to choose a street view for the location selected. You have the option to move around the location while in street view mode.
- h. Take Me There** - This element allows you to use Google Maps to navigate to your desired destination based on your current location via mobile device.

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5.4. Google Maps

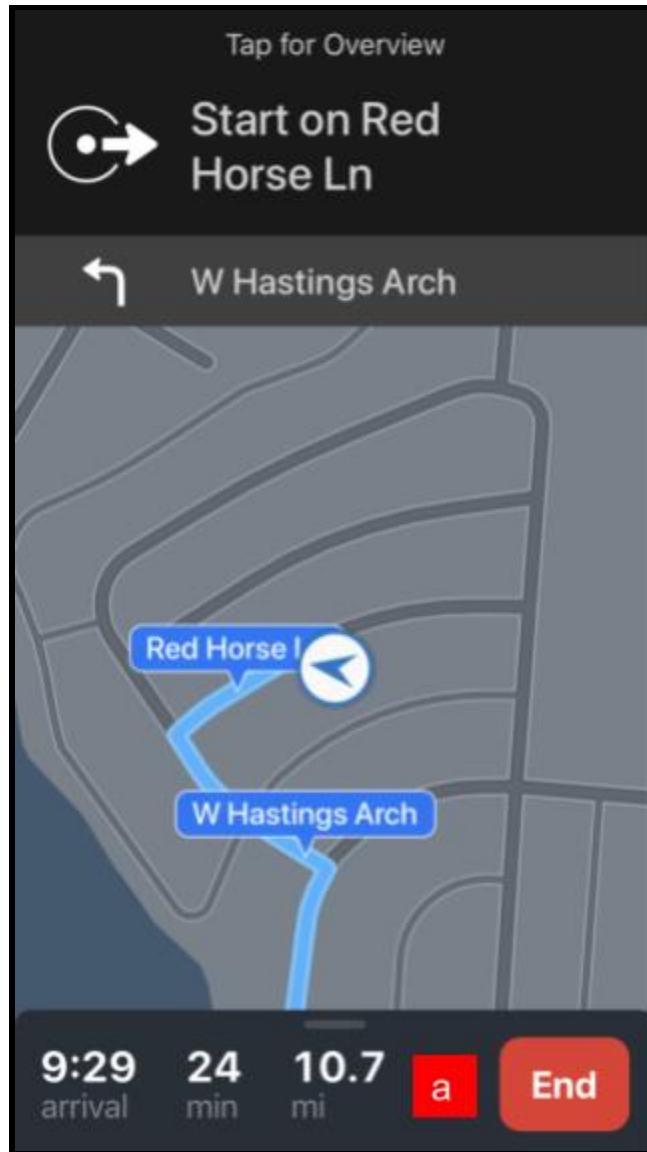
If you do not already own the Google Maps application installed on your phone, you will receive a prompt to download it. Once you have installed the application, you will be directed to the screen below. Views may differ between each device. For further details, please visit documentation for Google Maps via <https://www.google.com/maps/about/>

This is the view you will encounter after selecting the “Take Me There” button, however at this point you have left the ParkODU application. This example uses the Safari browser.



a. **Go** - This button will start the navigation within Google Maps.

This is the view you will encounter after selecting the “Go” button, however at this point you have left the ParkODU application. This example uses the Safari browser.



- a. **End** - This button will end the navigation within Google Maps.

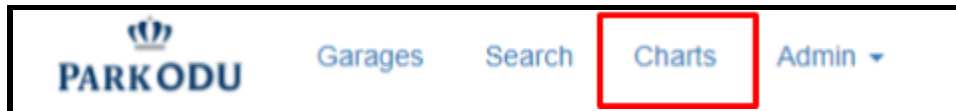
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6. Charts

The Charts page is where you can view historical data about a garage. This is where you can do things like view garage occupancy this time last year or compare two different garages on a date.

Keep in mind that you can only go back as far as ParkODU has been actively collecting data.

You'll know if there is no data, because ParkODU will generate a blank chart.



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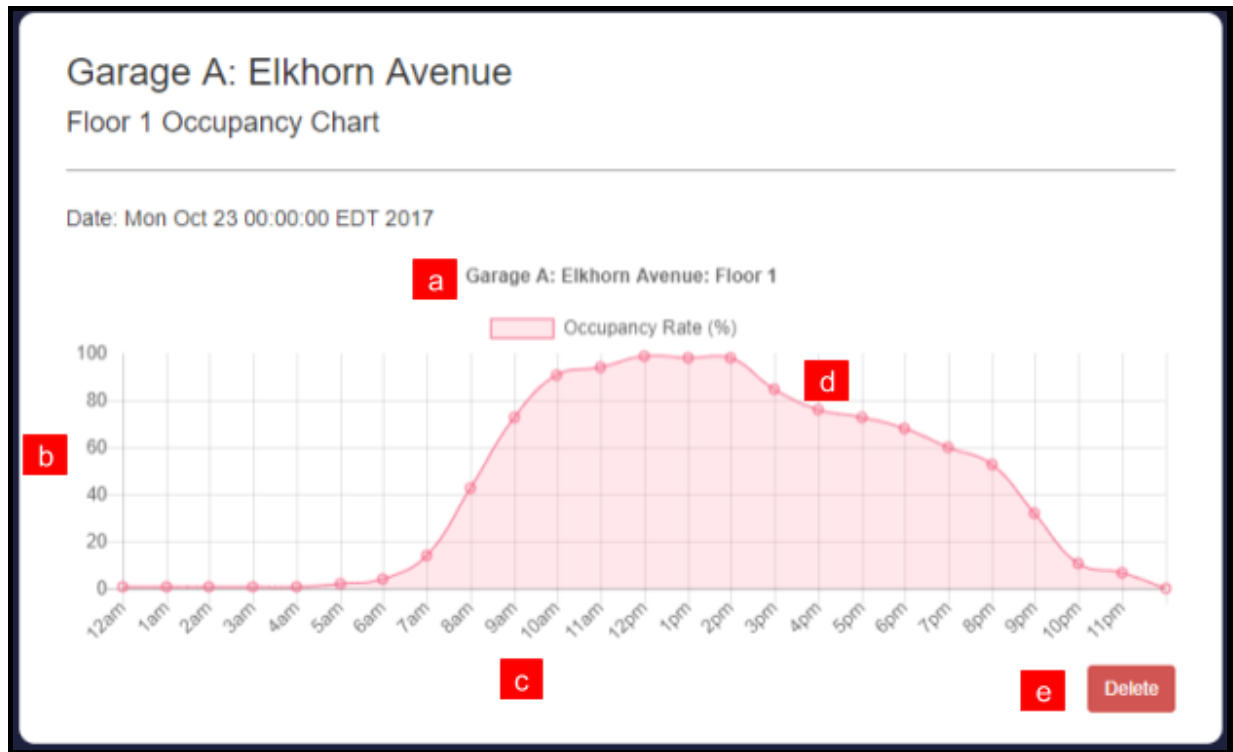
This is the page you will see after selecting charts from the navigation bar.

The screenshot shows the 'OCCUPANCY CHARTS' interface. At the top center is a crown icon above the title 'OCCUPANCY CHARTS'. Below the title is a horizontal line. Underneath the line are three input fields: a dropdown menu labeled 'Garage' with the value 'Garage A: Elkhorn Avenue', a text box labeled 'Floor Number' with the value '1', and a text box labeled 'Date' with the value '10/23/2017'. Below these fields are two buttons: a blue 'Create' button and a blue 'Reset' button. Red lettered boxes (a, b, c, d, e) are placed to the left of the labels and buttons to indicate specific points of interest.

- a. **Garage** - From this dropdown menu select which garage you wish to inspect.
- b. **Floor** - Enter the floor number here.
- c. **Date** - Select the date from which you wish to view the occupancy data. You can enter the date manually or select the date from a calendar by clicking the dropdown arrow on the far right of the text box.
- d. **Create** - Clicking this button creates a chart based on the values you currently have in the above three fields.
- e. **Reset** - Clicking this button resets the fields to default values.

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A chart is generated when you click the Create button.



- a. **Title** - This is the name of the garage in the ParkODU database.
- b. **Capacity (y-axis)** - This is the percentage of spaces filled, from 0 to 100%.
- c. **Time (x-axis)** - This is the time of the day from 12am to 11:59pm.
- d. **Datapoint** - You can hover over a data point to view the exact capacity and time.
- e. **Delete** - This button removes the graph from the page.

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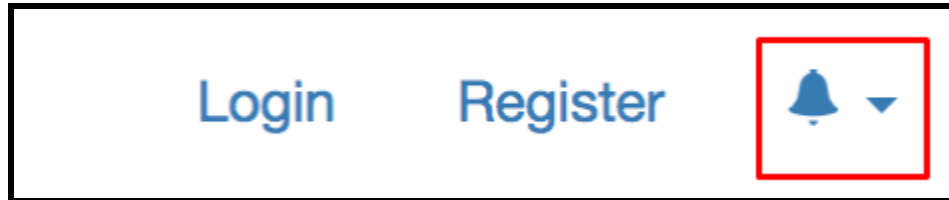
You can create multiple charts on the same page for easy comparisons! Here you can see an old chart from October 23, 2017 on the left from 12:00am - 11:59pm compared to a new chart from April 9, 2018 with data from 2pm-11:59pm.



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7. Events

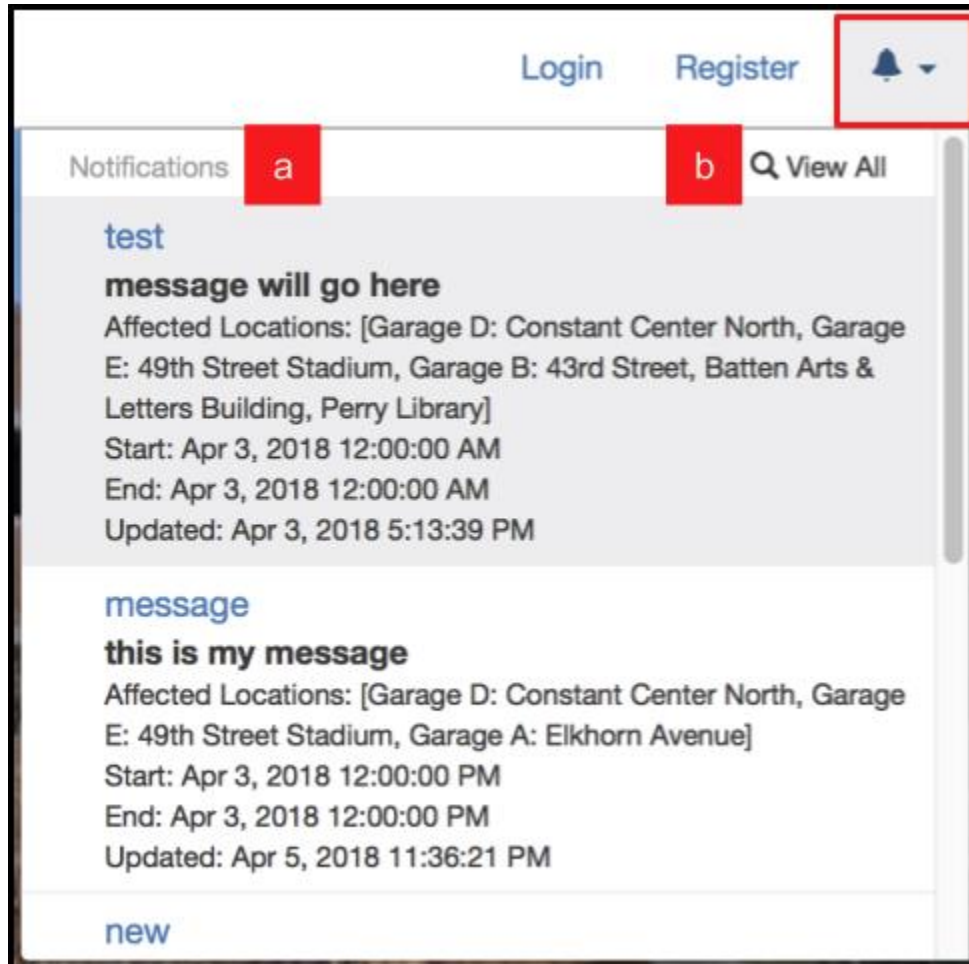
Events are a way for parking administrators to keep you up to date. They can be found in the top right of the screen and are represented by a bell icon. The icon also shows the number of unread, new notifications in a red circle.



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7.1. Events Popup

If you click the Event bell it will open the Events available to view.



- a. **Notifications** - This is where recent notifications are listed. Each notification comes with the following information from top to bottom: title, description, affected locations, start date and time, end date and time, and last updated.
- b. **View All** - This is the element under the bell icon that will redirect you to a list of all the events.

7.2. View All Events

Clicking on view all will take you to this page.

The screenshot shows a web interface titled "EVENTS" with a crown icon above the title. Below the title is a table with four columns. Red boxes labeled 'a', 'b', 'c', and 'd' are placed above the column headers: 'a' above 'Name', 'b' above 'Message', 'c' above 'Affected Locations', and 'd' above 'Event Tags'. The table contains one row of data with the following values:

a Name	b Message	c Affected Locations	d Event Tags
test	message will go here	Garage D: Constant Center North Garage E: 49th Street Stadium Garage B: 43rd Street Batten Arts & Letters Building Perry Library	football game

- a. **Name** - The name of the event is found in this column.
- b. **Message** - The message, often a description of the event, is found in this column.
- c. **Affected Locations** - A list of buildings or garages that will be affected by the event is found in this column.
- d. **Event Tags** - A list of words that describe the event is found in this column. Tags allow you to better identify the event.

8. Register

On this page you can register an account with ParkODU to access the additional features found in the User Settings section (section 10) of this user manual. All information other than the password entered on the Register page is viewable by the account's creator and all admins.



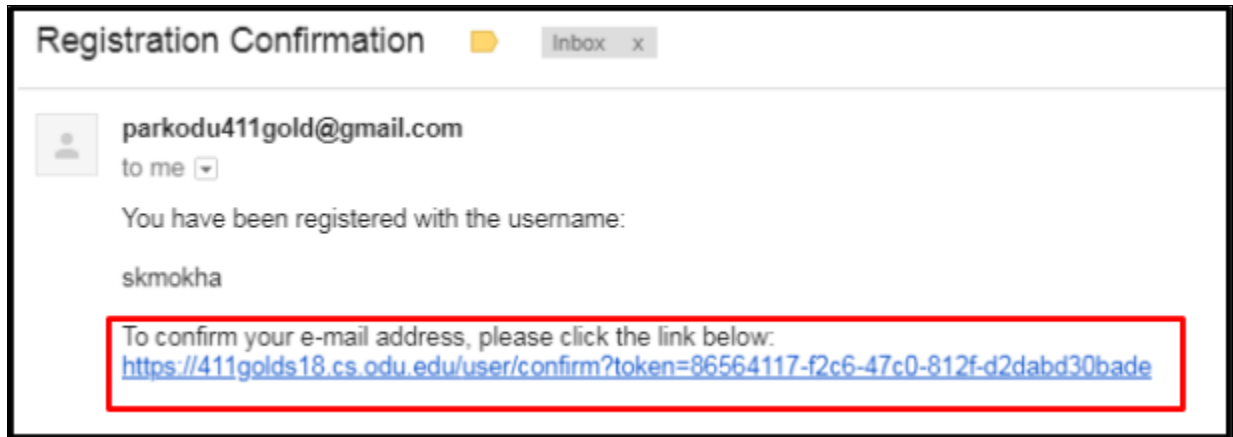
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This is the page you will see after selecting the “Register” tab on the navigation bar.

The screenshot shows the ParkODU registration page. At the top center is the ParkODU logo, which consists of a crown icon above the text "PARKODU". Below the logo are six input fields, each with a red letter label on the left side. The first field is labeled 'a' and contains the text "First Name". The second field is labeled 'b' and contains the text "Last Name". The third field is labeled 'c' and contains the text "Email Address". The fourth field is labeled 'd' and contains the text "username". The fifth field is labeled 'e' and contains the text "Password". The sixth field is labeled 'f' and is a blue button with the text "Register".

- a. **First Name** - Enter your first name here.
- b. **Last Name** - Enter your last name here.
- c. **Email Address** - Enter a valid email address that you have access to here. A confirmation link will be sent to this email that must be clicked to activate your account.
- d. **Username** - Enter an easy to remember username, for example your first name initial followed by your last name. You will need this to login.
- e. **Password** - Enter a password that you can remember, but is not easy to guess. Try using symbols, upper and lowercase letters, and/or turning your password into a phrase if you are worried it is too weak. You will need this password to login.
- f. **Register** - Once you have entered valid information in the above fields, this button will be highlighted and will be available for the user to click. Skipped or invalid sections will be

marked with a red X. Once you click on register a confirmation email will be sent to the email address you provided while registering.



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9. Login

The Login page is where you can enter your account information to login to ParkODU. You must register an account first to login. If you have not registered, see section 8 to learn how to register your account. Both users and admins use the same login page.



The screenshot shows the ParkODU login interface. At the top center is the ParkODU logo, which consists of a crown icon above the text "PARKODU". Below the logo are three input fields. The first field is labeled 'a' and contains the text "username". The second field is labeled 'b' and contains the text "Password". The third field is a blue button labeled 'c' with the text "Login".

- a. **Username** - Enter your Username.
- b. **Password** - Enter your password. It will only be displayed as black dots on your screen as you type it, so type carefully.
- c. **Login** - Once you have entered your information, click the Login button. Without entering any information, you will not be able to login and will get a “Please fill out this field” error.

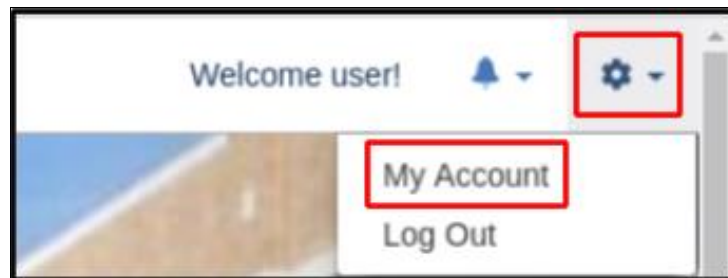
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10. User Settings

You can access the user settings page by clicking on the gear icon at the top right corner of the screen and then clicking “My Account”. There are two main sections on the user settings page.

The first section is “Profile”, which allows you to edit your account information. The second section is “Default Search Options”, which allows you to save the default search parameters.

These features are available for both administrators and users.



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Selecting the “My Account” option will take you to this page.

USER SETTINGS

PROFILE

First Name
Lil Edit

Last Name
Uzi Edit

Username
user Edit

E-mail Address
user@odu.edu Edit

Reset Password

DEFAULT SEARCH OPTIONS

Starting Address
3400 Big Bethel Road, Yorktown, VA, USA

Preferred Permit Types

- Commuter
- Evening
- Faculty
- Metered
- Motorcycle
- Perimeter

Preferred Space Types

- Disability
- Motorcycle
- Normal
- Reserved

Destination Building
Webb University Center

Submit Reset

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10.1. Profile Selection

The profile section contains five components: First Name, Last Name, Username, Email Address, and Reset Password. The first thing you may notice in the Profile section is that you are not able to edit your information at first. To prevent accidental changes, you are required to unlock each text field by clicking Edit next to the text field you want to change. Once you click Edit, the button will change to “Lock”. Once you have finished changing the information in the text field, you can lock it back by clicking the “Lock” button.

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The screenshot shows a user profile page with the following elements:

- First Name:** Input field containing "Lil", with a red square labeled "a" above it and a red square labeled "1" at the end of the field.
- Last Name:** Input field containing "Uzi", with a red square labeled "b" above it and a red square labeled "2" at the end of the field.
- Username:** Input field containing "user", with a red square labeled "c" above it and a red square labeled "3" at the end of the field.
- E-mail Address:** Input field containing "user@odu.edu", with a red square labeled "d" above it and a red square labeled "4" at the end of the field.
- Reset Password:** An orange button with a red square labeled "e" next to it.

- a. **First Name** - Update your first name. Unlock this field for editing by clicking 1.
- b. **Last Name** - Update your last name. Unlock this field for editing by clicking 2.
- c. **Username** - Update your username. Unlock this field for editing by clicking 3.

You will be required to log out and log back on after updating your username.

- d. **Email Address** - Update your email address. Unlock this field for editing by clicking 4.
- e. **Reset Password** - Click this button to reset your password.

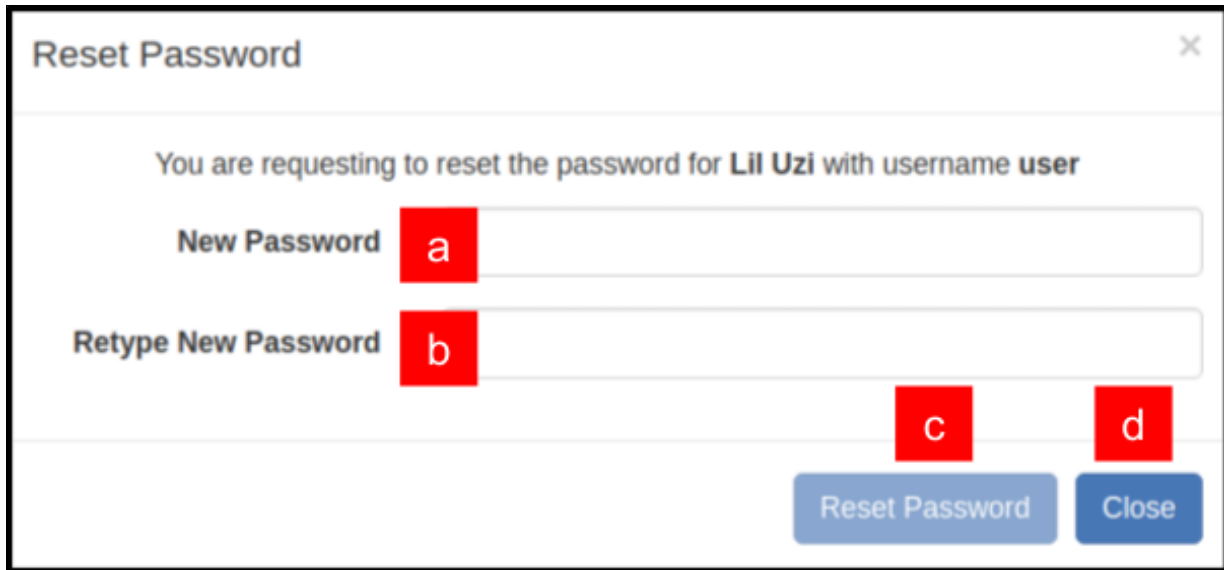
See **Password Reset** on the next page for detailed information about password reset.

ATTENTION: You must click the “Submit” button at the bottom of the page to save all information. See **Default Search Options** for more information.

[This space intentionally left blank.]

10.2. Reset Password

You will see this pop-up box upon clicking “Reset Password” on the main user settings page.



Reset Password

You are requesting to reset the password for Lil Uzi with username user

New Password **a**

Retype New Password **b**

c **d**

Reset Password Close

- a. **New Password** - Enter the new password.
- b. **Retype New Password** - Confirm the new password.
- c. **Reset Password** - After you have entered a new password and you successfully confirmed it, this button will be enabled. You can click this button to finalize the password reset.
- d. **Close** - Click this button to cancel the password reset and keep your current password.

ATTENTION: The new password is saved when you click “Reset Password.” You are not required to click the “Submit” button on the main user settings page for password resets.

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10.3. Default Search Options

The “Default Search Options” section allows you to save search options. These options will be selected automatically when you conduct a search.

DEFAULT SEARCH OPTIONS

Starting Address **a**

3400 Big Bethel Road, Yorktown, VA, USA

Preferred Permit Types

- Commuter
- Evening
- Faculty **b**
- Metered
- Motorcycle
- Perimeter

Preferred Space Types

- Disability
- Motorcycle
- Normal **c**
- Reserved

Destination Building **d**

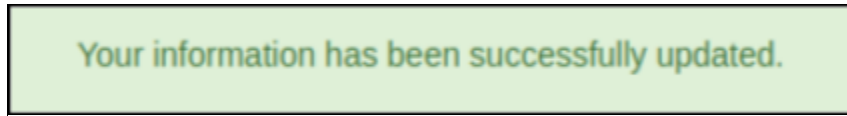
Webb University Center

e **f**

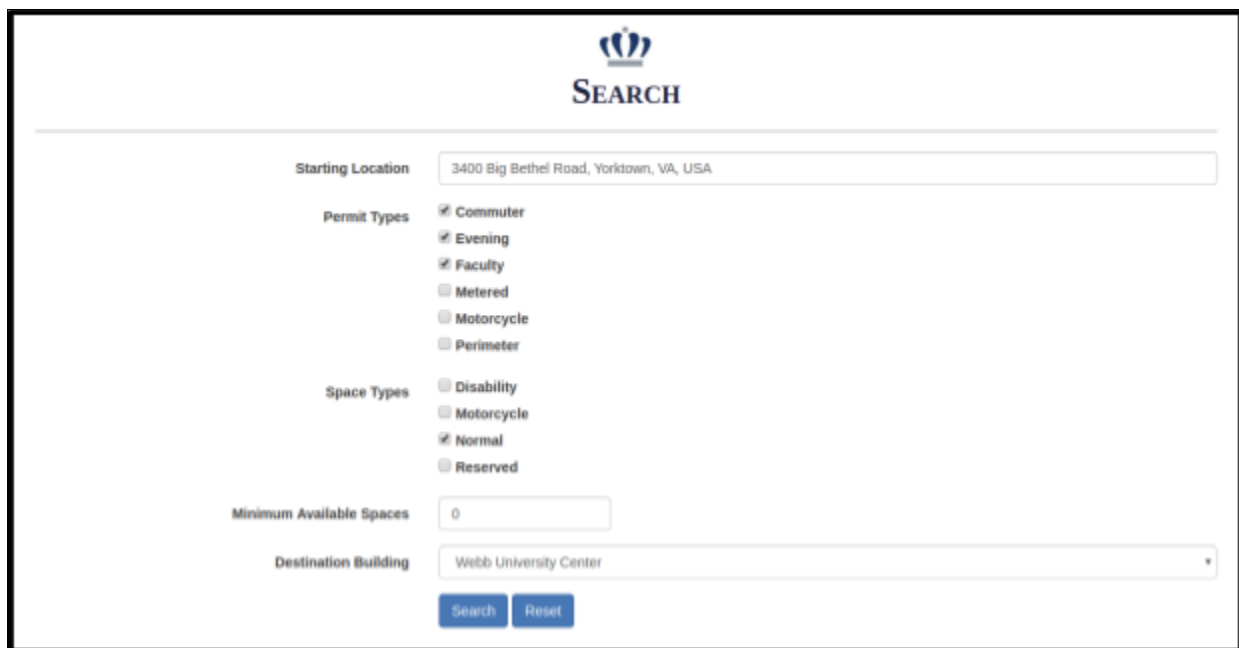
Submit Reset

- a. Starting Address** - Enter the starting address. This text field will display known addresses in a dropdown menu based on your input while you are typing. Make sure to select the address from the dropdown menu.
- b. Preferred Permit Types** - Select your preferred parking permits.
- c. Preferred Space Types** - Select your preferred space types.
- d. Destination Building** - Select the destination building.
- e. Submit** - Click this button to save all your information and search parameters.
- f. Reset** - Click this button to discard any changes you made to this form.

ATTENTION: Once you click the “Submit” button, you will see a confirmation.



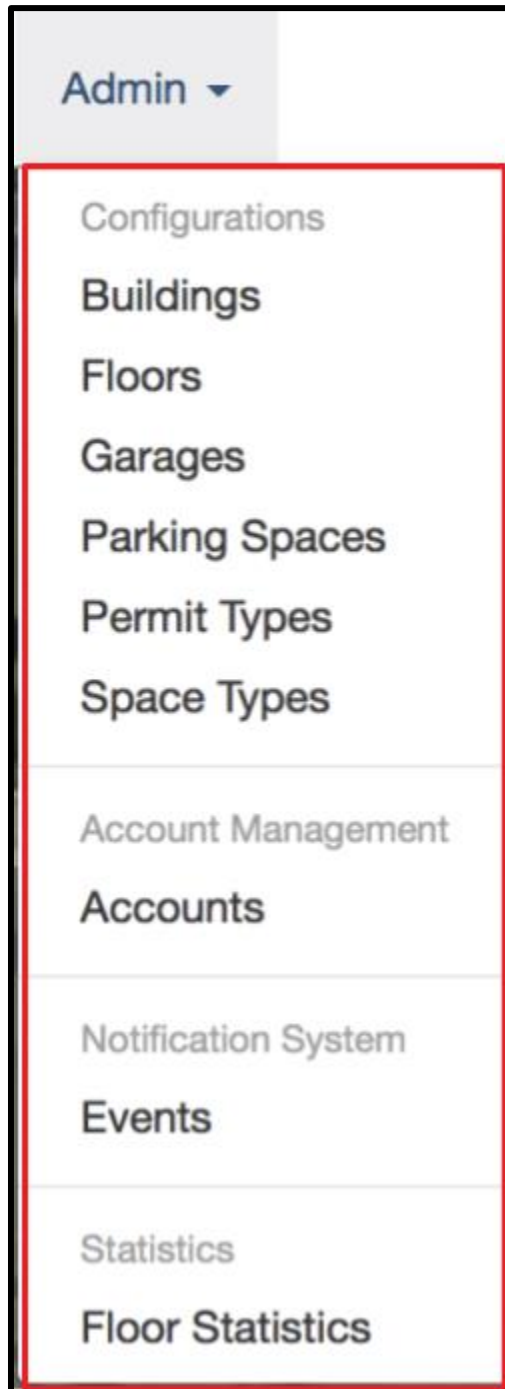
The search parameters that you specified in the “Default Search Options” are automatically set when you open the garage search page as shown below.

A screenshot of a web application interface titled "SEARCH" with a crown icon above the title. The interface contains several search parameters: "Starting Location" with a text input field containing "3400 Big Bethel Road, Yorktown, VA, USA"; "Permit Types" with a list of checkboxes where "Commuter", "Evening", and "Faculty" are checked, and "Metered", "Motorcycle", and "Perimeter" are unchecked; "Space Types" with a list of checkboxes where "Normal" is checked, and "Disability", "Motorcycle", and "Reserved" are unchecked; "Minimum Available Spaces" with a text input field containing "0"; and "Destination Building" with a dropdown menu showing "Webb University Center". At the bottom of the form are two blue buttons labeled "Search" and "Reset".

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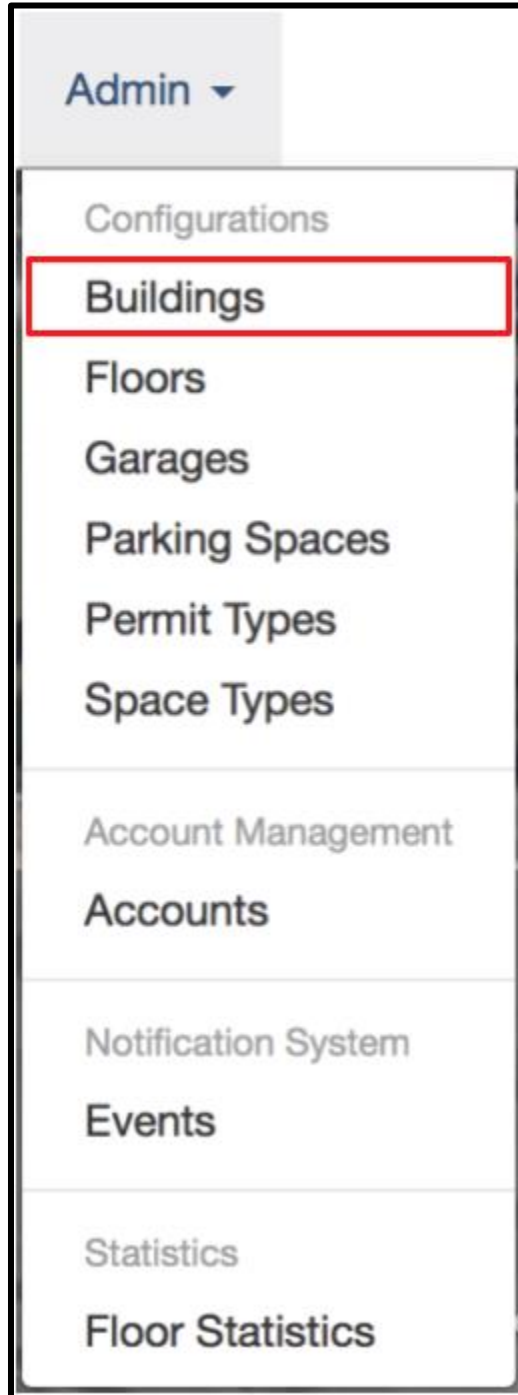
11. Admin Settings

You can access the admin settings by clicking the “Admin” tab on the navigation bar. A dropdown menu will appear. Selecting one of these items will take you to the appropriate suite of tools. The following sections detail the tools in each menu item.



11.1. Building Configurations

This is the first listed item in the configuration section of the Admin dropdown menu. It is used to create, edit or delete buildings.



Selecting “Buildings” from the admin dropdown menu will take you to the building settings page.

Name	Address	Actions
Alfriend Chemistry Building		Edit Delete
Batten Arts & Letters Building		Edit Delete
Batten College of Engineering & Technology		Edit Delete
Batten Hall		Edit Delete
College of Health Sciences		Edit Delete

- a. **Name** - The name of the Building.
- b. **Address** - The building address.
- c. **Actions** - This is where clickable actions are stored for Buildings.
 - i. **Edit** - Click on the Edit button next to the Building you wish to edit.
 - ii. **Delete** - Click on the Delete button next to the Building you want to delete. A warning message will pop up.
- d. **Create** - Click on the Create button to create a Building.

11.1.1. Create Building

Clicking on “Create” takes you to the Create University Building page.

The screenshot shows a web form titled "CREATE UNIVERSITY BUILDING" with a crown icon at the top. The form contains the following fields and buttons:

- a** Name: A text input field with the placeholder "Building Name".
- b** Description: A text area with the placeholder "Enter a description for the building.".
- c** Address: A text input field with the placeholder "Enter the building address".
- d** Latitude: A text input field.
- e** Longitude: A text input field.
- f** Submit: A blue button.
- g** Reset: A blue button.
- h** Back: A blue button.

- a. **Name** - Enter new building name.
- b. **Description** - Enter a new description of the building.
- c. **Address** - Enter building address
- d. **Latitude** - enter latitude
- e. **Longitude** - enter longitude
- f. **Submit** - Click submit to save this building.
- g. **Reset** - Click reset to rewrite everything.
- h. **Back** - Click back to go back to the building settings page.

[This space intentionally left blank.]

11.1.2. Edit Building

Clicking on “Edit” takes you to the Edit University Building page.

The screenshot shows a web form titled "EDIT UNIVERSITY BUILDING" with a crown icon above the title. The form contains the following fields and buttons:

- Name:** A text input field containing "Alfriend Chemistry Building". A red box labeled 'a' is positioned to the left of this field.
- Description:** A text area with the placeholder text "Enter a description for the building.". A red box labeled 'b' is positioned to the left of this field.
- Address:** A text input field with the placeholder text "Enter the building address". A red box labeled 'c' is positioned to the left of this field.
- Latitude:** A text input field containing the value "36.885349". A red box labeled 'd' is positioned to the left of this field.
- Longitude:** A text input field containing the value "-76.305022". A red box labeled 'e' is positioned to the left of this field.
- Buttons:** Three blue buttons labeled "Submit", "Reset", and "Back" are located at the bottom of the form. Red boxes labeled 'f', 'g', and 'h' are positioned below the "Submit", "Reset", and "Back" buttons, respectively.

- a. **Name** - Enter building name.
- b. **Description** - Enter a description of the building.
- c. **Address** - Enter building address
- d. **Latitude** - enter latitude
- e. **Longitude** - enter longitude
- f. **Submit** - Click submit to save this building.
- g. **Reset** - Click reset to rewrite everything.
- h. **Back** - Click back to go back to the building settings page.

11.1.3. Delete Building

Clicking on “Delete” pops up a warning asking if you are sure you want to delete the building.

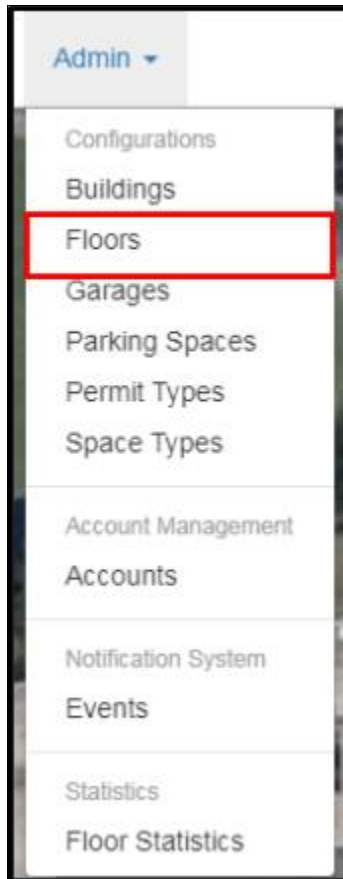


- a. **Delete** - Click on Delete if you wish to delete the building.
- b. **Close** - Click on Close if you do not wish to delete the building.

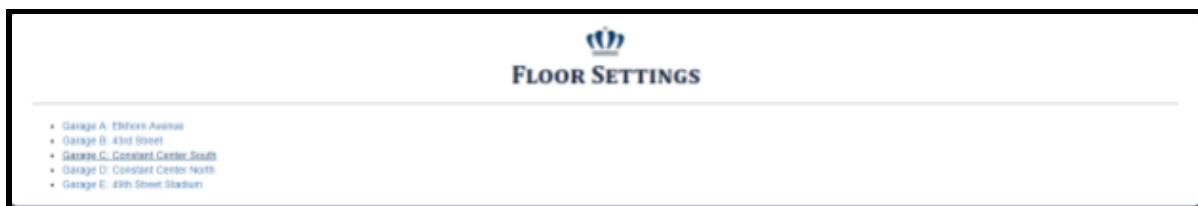
[This section intentionally left blank.]

11.2. Floor Configurations

This is the second listed item in the configuration section of the Admin dropdown menu. It is used to create, edit or delete garage floors.



When you click on Floors, it will direct you to a page which has all the garages listed and a hyperlink link attached to each garage that will take you to the floor setting page of that garage.



11.2.1. Create Floor

When you click on a garage, you will see a page with a table of the floors for that garage.

The screenshot shows a web interface for 'GARAGE A: ELKHORN AVENUE'. At the top right, there are 'Create' and 'Refresh' buttons. Below them is a table with four columns: 'Name', 'Description', 'Last Updated', and 'Actions'. The table contains four rows of data. Red callout boxes 'a' through 'f' point to various elements: 'a' points to the 'Name' column header, 'b' to the 'Description' column header, 'c' to the 'Last Updated' column header, 'd' to the 'Actions' column header, 'e' to the 'Create' button, 'f' to the 'Refresh' button, 'i' to the 'Edit' button in the first row, and 'ii' to the 'Delete' button in the second row.

Name	Description	Last Updated	Actions
1	Metered Parking	Thu Apr 12 10:34:00 EDT 2018	Edit Delete
2	Commuter / Commuter Parking	Thu Apr 12 10:34:00 EDT 2018	Edit Delete
3	Commuter Parking	Thu Apr 12 10:34:00 EDT 2018	Edit Delete
4	Commuter Parking	Thu Apr 12 10:34:00 EDT 2018	Edit Delete

- a. **Name** - This section tells you the floor numbers of the garage.
- b. **Description** - This section describes each floors of the garage you selected.
- c. **Last Updated** -This section tells you when that floor was last updated in the system.
- d. **Actions** - This is where clickable actions are stored for Garages.
 - i. **Edit** - Click on the Edit button next to the floor if you wish to edit it.
 - ii. **Delete** - Click on the Delete button next to the floor if you wish to delete it.
- e. **Create** - Click on the Create button on the top right corner if you wish to create it.
- f. **Refresh** - Click on the Refresh button on the top right corner if you wish to Refresh it.

[This space intentionally left blank.]

11.2.2. Edit Floor

On the Edit Floor page, you can edit the floor of a garage.

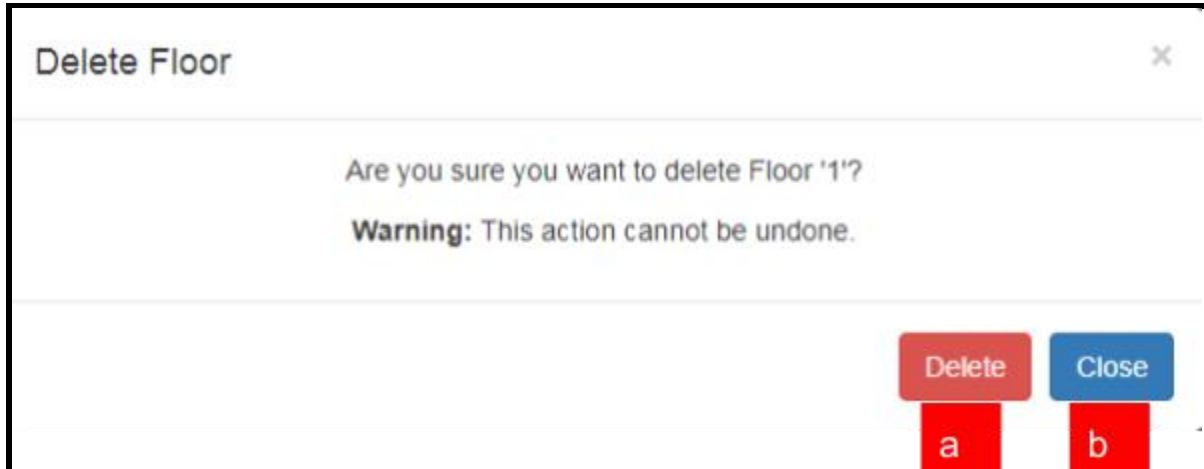
The screenshot shows the 'EDIT FLOOR' interface. At the top center is a crown icon above the text 'EDIT FLOOR'. Below this is a horizontal line. The form consists of three input fields: 'Number' (containing '1'), 'Description' (containing 'Metered Parking'), and 'Total Spaces' (containing '163'). At the bottom of the form are three buttons: 'Submit', 'Reset', and 'Back'. Red boxes with letters 'a' through 'f' are overlaid on the form to indicate specific elements: 'a' is on the Number field, 'b' is on the Description field, 'c' is on the Total Spaces field, 'd' is on the Submit button, 'e' is on the Reset button, and 'f' is on the Back button.

- a. **Number** - Enter the new number for the floor.
- b. **Description** - Enter a new description of the floor.
- c. **Total Spaces** - Enter the new total number of spaces on this floor.
- d. **Submit** - Click submit to save this floor.
- e. **Reset** - Click reset if you wish to rewrite everything.
- f. **Back** - Click back if you wish to go back to the list of floor page.

[This space intentionally left blank.]

11.2.3. Delete Floor

Click on the delete button next to the floor you want to delete. A warning will pop up.

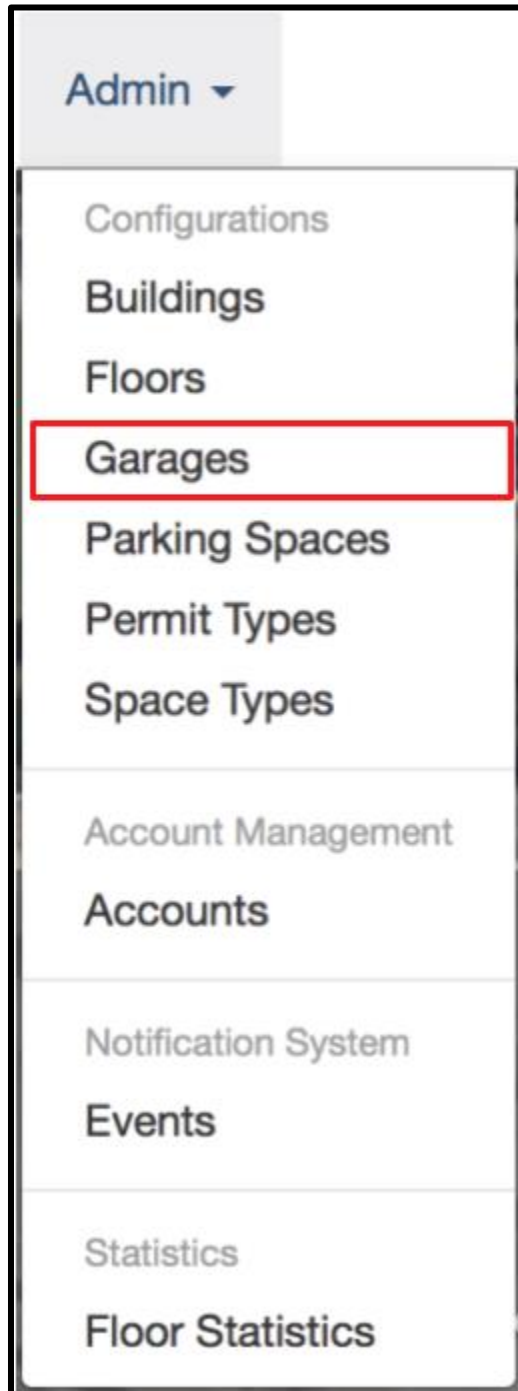


- a. **Delete** - Click on Delete if you wish to delete the floor.
- b. **Close** - Click on Close if you do not wish to delete the floor.


[This space intentionally left blank.]

11.3. Garage Configurations

Garages is the third listed item in the configuration section of the Admin dropdown menu. It is used to create, edit, or delete garages.



When you click Garages, you will see a table of garages.


GARAGE SETTINGS

Name a	Last Updated b	Actions c
Garage A: Elkhorn Avenue	Tue Apr 10 15:37:00 EDT 2018	Edit Delete
Garage B: 43rd Street	Tue Apr 10 15:37:00 EDT 2018	i Edit Delete ii
Garage C: Constant Center South	Tue Apr 10 15:37:00 EDT 2018	Edit Delete
Garage D: Constant Center North	Tue Apr 10 15:37:00 EDT 2018	Edit Delete
Garage E: 49th Street Stadium	Tue Apr 10 15:37:00 EDT 2018	Edit Delete

d
Create

- a. Name** - The name of the Garage.
- b. Last Updated** - The last time this Garage was edited.
- c. Actions** - This is where clickable actions are stored for Garages.
 - i. Edit** - Click on the Edit button next to the garage you wish to edit it.
 - ii. Delete** - Click on the Delete button next to the garage you want to delete. A warning message will pop up.
- d. Create** - Click on the Create button to create a garage.

[This space intentionally left blank.]

11.3.1. Create Garage

When you click on the Create button, you will be taken to the Create Garage page. On the Create Garage page, you can create a new garage.

The screenshot shows a web form titled "CREATE GARAGE" with a crown icon. The form contains the following fields and buttons:

- a Name**: A text input field labeled "Garage Name".
- b Description**: A text area labeled "Enter a description for the garage.".
- c Height Description**: A text input field labeled "For example, 7ft clearance.".
- d Address**: A text input field labeled "Enter the garage address".
- e Latitude**: A text input field.
- f Longitude**: A text input field.
- g Submit**: A blue button.
- h Reset**: A blue button.
- i Back**: A blue button.

- a. Name** - Enter the name of the garage you are creating.
- b. Description** - Enter a description of all properties of the garage.
- c. Height Description** - Enter the height clearance of the garage.
- d. Address** - Enter the address of the garage. This field has autocomplete from Google Maps.
- e. Latitude** - This field is automatically generated by the given address.
- f. Longitude** - This field is automatically generated by the given address.
- g. Submit** - Click Submit to save and create the garage.
- h. Reset** - Click Reset to undo all changes.
- i. Back** - Click Back to return to Garage Settings page.

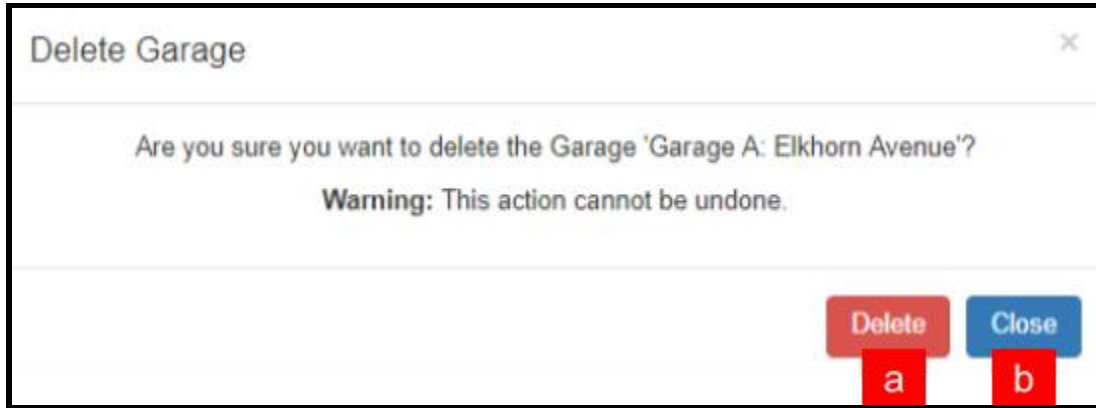
11.3.2. Edit Garage

When you click on the Edit button you will be taken to the Edit Garage page. On the Edit Garage page, you can edit a garage.

- a. **Name** - Enter the new name of the garage you are creating.
- b. **Description** - Enter a new description of all properties of the garage.
- c. **Height Description** - Enter the new height clearance of the garage.
- d. **Address** - Enter the new address of the garage. This field has autocomplete from Google Maps.
- e. **Latitude** - This field is automatically generated by the given address.
- f. **Longitude** - This field is automatically generated by the given address.
- g. **Submit** - Click Submit to save and add modifications of the garage.
- h. **Reset** - Click Reset to undo all changes.
- i. **Back** - Click Back to return to Garage Settings page.

11.3.3. Delete Garage

Click on the delete button next to the garage you want to delete. A warning will pop up.

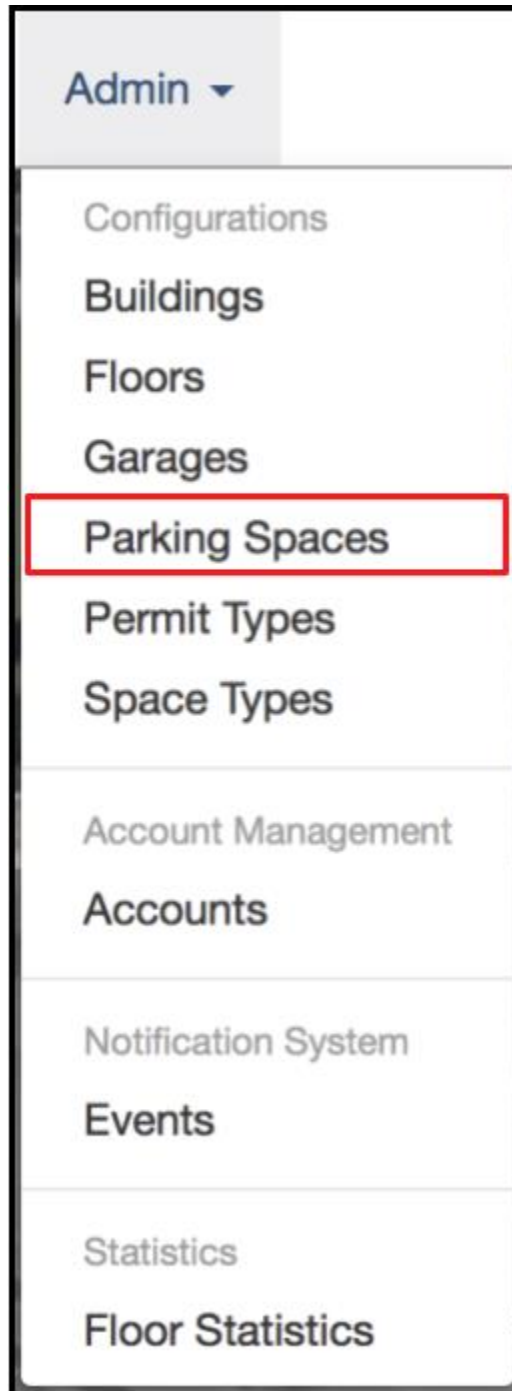


- a. **Delete** - Click on Delete if you wish to delete the garage.
- b. **Close** - Click on Close if you do not wish to delete the garage.

[This space intentionally left blank.]

11.4. Parking Space Configurations

Parking Spaces is the fourth listed item in the configuration section of the Admin dropdown menu. It is used to create, edit, or delete Parking Spaces.



Selecting “Parking Spaces” from the admin dropdown menu will take you to the parking space settings page.



[This space intentionally left blank.]

Selecting a floor of a garage will take you to a page with all the parking spaces. From here you can view and edit all parking spaces on that floor of that garage.

Number	Permit Type	Space Type	Available	Last Updated	Actions
1	Metered	Normal	<input checked="" type="checkbox"/>	Mon Nov 13 11:58:09 EST 2017	Delete
2	Metered	Normal	<input checked="" type="checkbox"/>	Mon Nov 13 11:58:09 EST 2017	Delete
3	Metered	Normal	<input checked="" type="checkbox"/>	Mon Nov 13 11:58:10 EST 2017	Delete
4	Metered	Normal	<input type="checkbox"/>		Delete
5	Metered	Normal	<input checked="" type="checkbox"/>	Mon Nov 13 11:59:49 EST 2017	Delete

- a. **Number** - The space number. You can click here to edit it.
- b. **Permit Type** – The Permit Type required to park in this space. Clicking here will display a dropdown of Permit Types to which you can change the space.
- c. **Space Type** - The Space Type required to park in this space. Clicking here will display a dropdown of Space Types to which you can change the space.
- d. **Available** – Shows if a space is available; blue/slid to the right means it is available and grey/slid to the left means that it is not. Click to change availability of that space.
- e. **Last Updated** - Shows when a space was last modified.
- f. **Actions** - Clickable actions for parking spaces
 - i. **Delete** – Click to delete the parking space.
- g. **Create** – Click to create a new parking space.
- h. **Reload** – Click to refresh the page.

11.4.1. Create Parking Space

Clicking “Create” from here takes you to the Create Parking Space page.



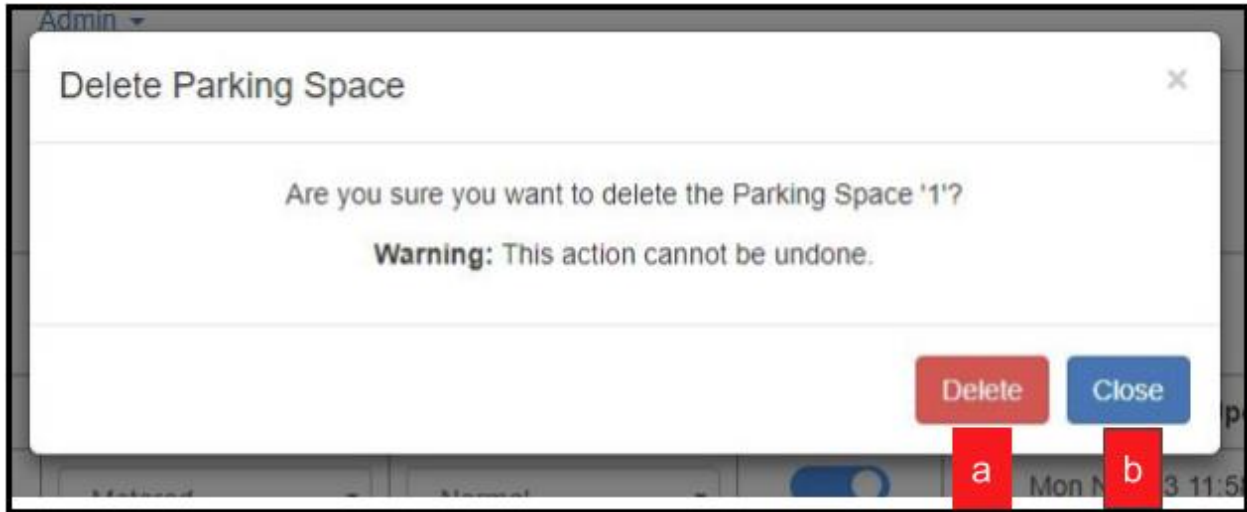
The screenshot shows a web form titled "CREATE PARKING SPACE" with a crown icon above the title. The form contains three input fields: a text box for "Number", a dropdown menu for "Permit Type" (currently showing "Commuter"), and another dropdown menu for "Space Type" (currently showing "Disability"). Below these fields are three buttons: "Submit", "Reset", and "Back". Red callout boxes with letters 'a' through 'f' are placed over the form: 'a' is over the Number input, 'b' is over the Permit Type dropdown, 'c' is over the Space Type dropdown, 'd' is over the Submit button, 'e' is over the Reset button, and 'f' is over the Back button.

- a. **Number** - Give the new parking space a numerical value.
- b. **Permit Type** - Select permit type.
- c. **Space Type** - Select space type.
- d. **Submit** - Click to create new parking space.
- e. **Reset** - Click to rewrite everything.
- f. **Back** - Click to go back to the previous page.

[This space intentionally left blank.]

11.4.2. Delete Parking Space

Clicking on “delete” pops up a warning asking if you are sure you want to delete the associated parking space.

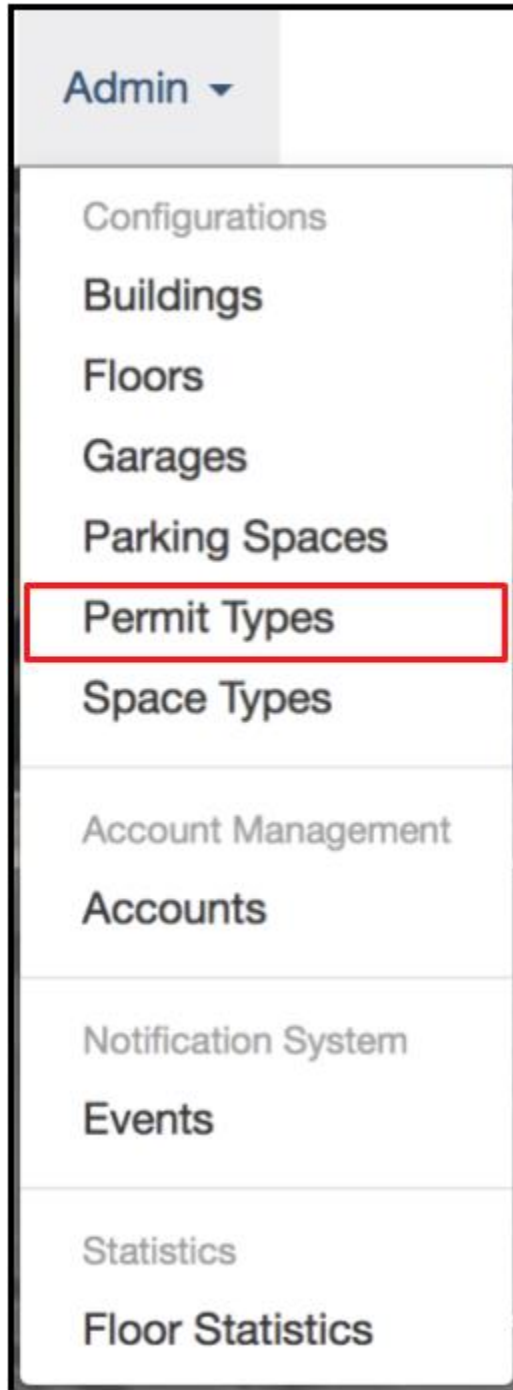


- a. Delete - Click on Delete if you wish to delete the parking space.
- b. Close - Click on Close if you do not wish to delete the parking space.

[This space intentionally left blank.]

11.5. Permit Type Configurations

Permit Types is the fifth listed item in the configuration section of the Admin dropdown menu. It is used to create, edit, or delete permit types.



Parking Permit a	Description b	Actions c
Commuter	General student parking permit available to commuters only	d e i Delete
Evening	Affordable option for commuters who only need to park on campus after 3:45PM	Delete
Faculty	ODU Faculty / Staff	Delete
Metered	Metered Parking provides short term parking in high-demand locations at \$0.50/15 minutes	Delete
Motorcycle	Includes scooters & mopeds with state license plates	Delete
Perimeter	Great value for commuters who don't mind a longer walk to save money	Delete

- a. Parking Permit** – The type of permit
- b. Description** - Brief details of permit type
- c. Actions** - This is where clickable actions are stored for Permit Types.
 - i. Delete** - Click on the Delete button next to the permit you want to delete. A warning message will pop up.
- d. Create** - Click on the Create button to create a permit.
- e. Reload** - Click on the Reload button to refresh Parking permits page and view updated information.

[This space intentionally left blank.]

11.5.1. Create Permit Type

On the Create Permit Type page, you can create a permit type.

- a. **Permit Name** - Enter the name of the permit you are creating.
- b. **Permit Description** - Enter the description of the permit you are creating.
- c. **Submit** - Click Submit to save and create the permit.
- d. **Reset** - Click Reset to undo all changes.
- e. **Back** - Click Back to return to Configure Parking Permits page.

[This space intentionally left blank.]

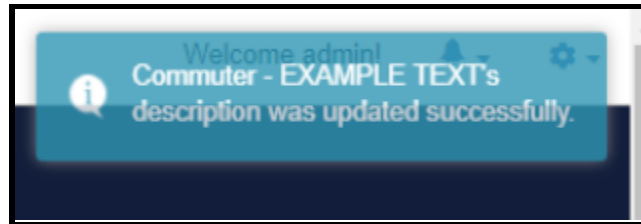
11.5.2. Edit Permit Type

On the Configuration Permit Page, you can edit Parking Permit and Description.

Parking Permit a	Description b
Commuter - EXAMPLE TEXT	General student parking permit available to commuters only - EXAMPLE TEXT

- a. **Parking Permit** - Type the new name of the Permit Type.
- b. **Description** - Type the new description of the Permit Type.

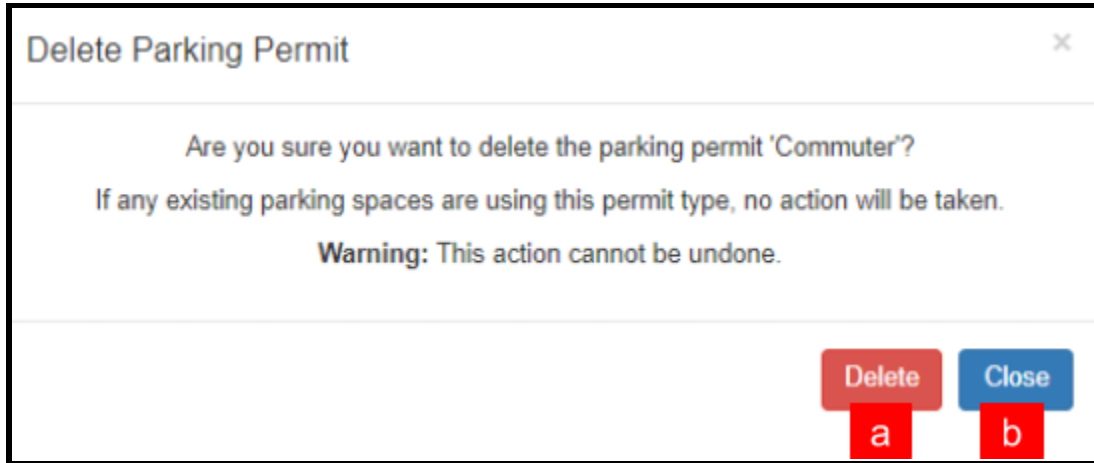
When completed, a notification will appear to indicate success or failure.



[This space intentionally left blank.]

11.5.3. Delete Permit Type

Click on the delete button next to the Permit Type you want to delete. A warning will pop up.

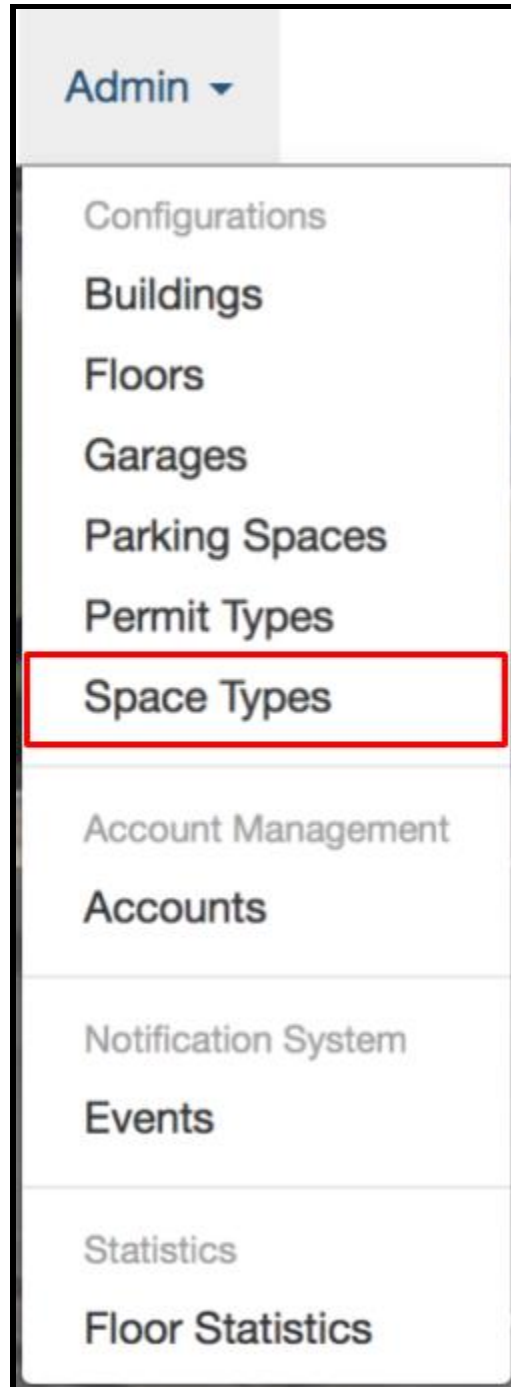


- a. **Delete** - Click on Delete if you wish to delete the Permit Type.
- b. **Close** - Click on Close if you do not wish to delete the Permit Type.

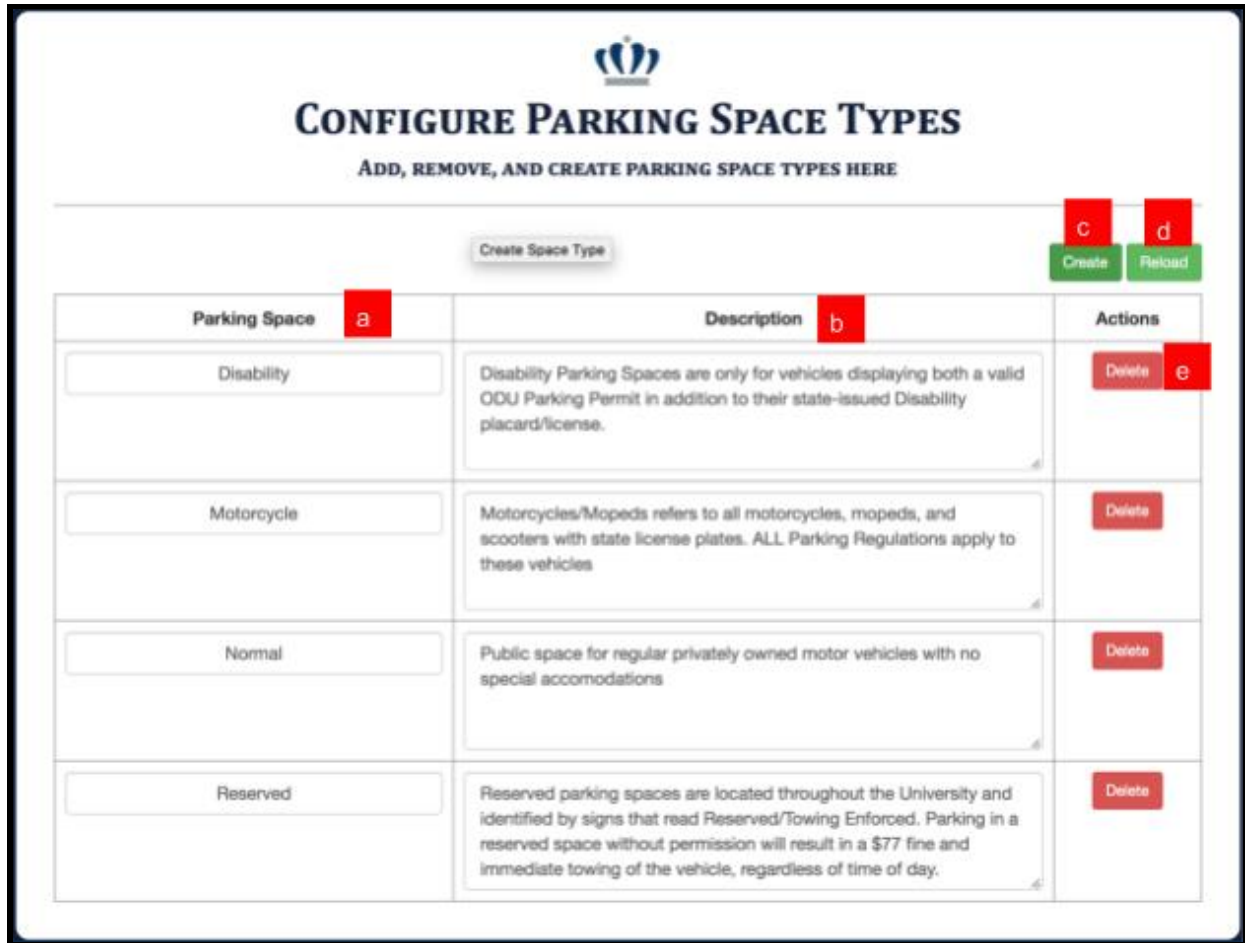
[This space intentionally left blank.]

11.6. Space Type Configurations

This is the sixth listed item on the Admin dropdown menu. It allows you to create, edit, or delete Space Types.



When you click on Space Types, it will direct you to a page that lists all the Parking Space Types. You are provided with the functionality to create, edit, or delete a Space Type. You edit the Space Type on this same page.



- a. Parking Space** - This is the type of the parking space. You can edit it.
- b. Description** -The description of the Parking Space Type. You can edit it.
- c. Create** - Click the Create button to create a new space type.
- d. Reload** - Click Reload to refresh the spaces loaded on the page.
- e. Delete** - Click the Delete button to delete a parking space type.

11.6.1. Create Space Type

When you click “Create” you are taken to the Create Space Type page.

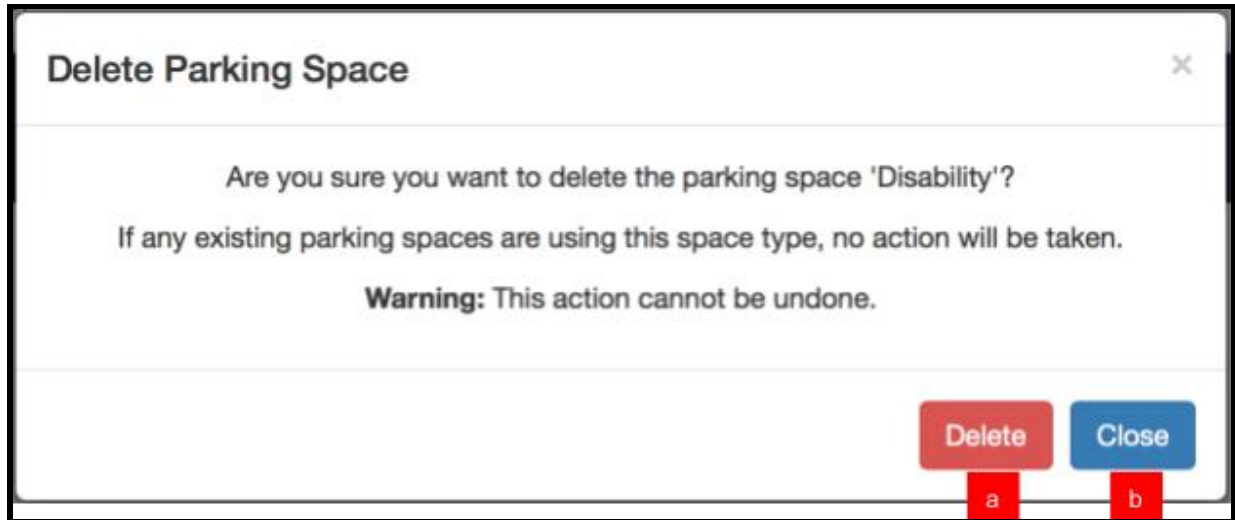
The screenshot shows a web form titled "CREATE SPACE TYPE" with a crown icon above the title. Below the title is a horizontal line. The form contains two input fields: "Space Name" and "Space Description". Below these fields are three buttons: "Submit", "Reset", and "Back". Red boxes with letters 'a' through 'e' are placed over the form elements: 'a' is over the "Space Name" label, 'b' is over the "Space Description" label, 'c' is over the "Submit" button, 'd' is over the "Reset" button, and 'e' is over the "Back" button.

- a. **Space Name:** Enter the name of the space you are creating
- b. **Space Description:** Enter the description of the the space type you are creating
- c. **Submit** - Click submit to save and create the space type
- d. **Reset** - Click Reset to undo all changes.
- e. **Back** - Click Back to return to Configure Parking Space Types page

[This space intentionally left blank.]

11.6.3. Delete Space Type

When you click “Delete” a warning will pop up.

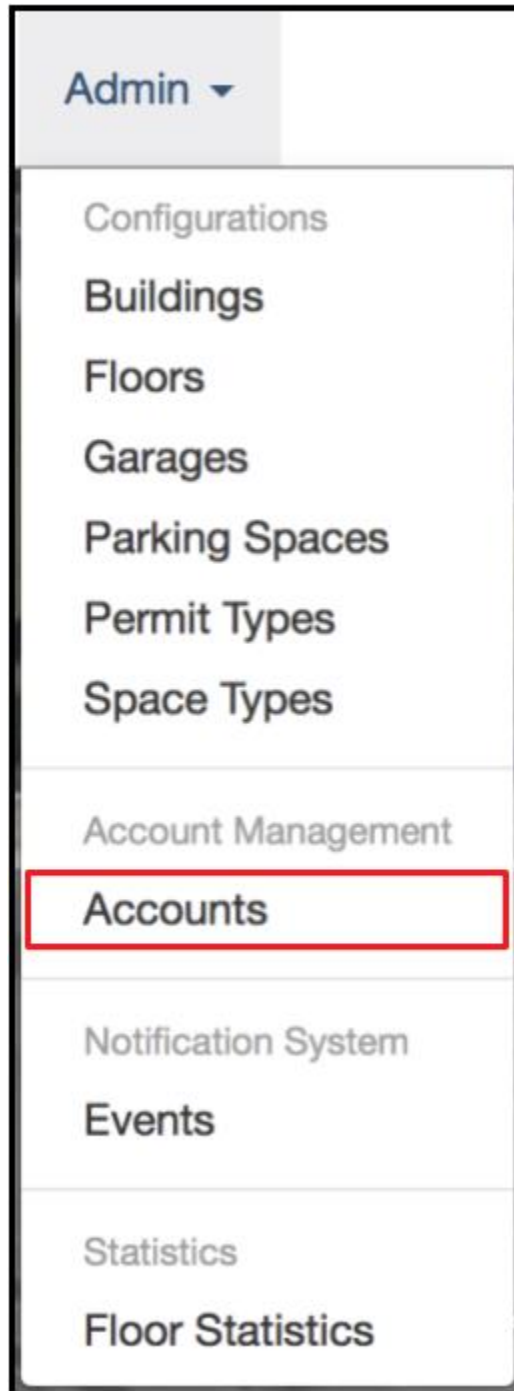


- a. **Delete** - Click Delete if you wish to delete it permanently.
- b. **Close** - Click on Close if you do not wish to delete.

[This space intentionally left blank.]

11.7. Account Management

Accounts is the first listed item in the account management section of the Admin dropdown menu. It is used to edit, delete, or create users and reset passwords.



When you click Accounts, you will see a table of user accounts.

The screenshot shows a web interface titled "ACCOUNT MANAGEMENT" with a table of user accounts. The table has the following columns: First Name, Last Name, Email, Username, Permissions, Enabled, Status, and Actions. The "Enabled" column contains 'Y' (Yes) for all users, and the "Status" column contains "Offline" for all users. The "Actions" column contains three buttons: "Edit", "Delete", and "Reset Password". A "Create" button is located at the top right of the table. Red boxes with letters a-i are placed over the table to indicate the meaning of each column and action.

First Name	Last Name	Email	Username	Permissions	Enabled	Status	Actions
Adriana	Morris	adm@odu.edu	adm	{USER_ADMIN}	Y	Offline	Edit Delete Reset Password
Bob	Ross	bob@odm.com	admin2	{USER_ADMIN}	Y	Offline	Edit Delete Reset Password
Liz	Ull	ull@odu.edu	user	{USER}	Y	Offline	Edit Delete Reset Password
Michael	Park	mpark@odu.edu	mpark	{USER_ADMIN}	Y	Offline	Edit Delete Reset Password
Michael	Park	mpark004@odu.edu	mpark004	{USER}	Y	Offline	Edit Delete Reset Password
Treney	Turner	turn@odm.com	admin3	{USER_ADMIN}	Y	Offline	Edit Delete Reset Password
Paul	Stevenson	pstevenson@odu.edu	stevenson	{USER}	Y	Offline	Edit Delete Reset Password

- a. **First Name** - Provided first name of user
- b. **Last Name** - Provided last name of user
- c. **Email** - Provided email for user
- d. **Username** - Provided username given for user
- e. **Permissions** - Options listed are: USER or ADMIN
- f. **Enabled** - Options listed are: Y(Yes - marked green) or N(No - unmarked green)
- g. **Status** - Options listed are: Offline (marked green) or Online (unmarked green)
- h. **Actions** - This is where clickable actions are stored for User Accounts.
 - i. **Edit** - Click on the Edit button next to the user account you wish to edit to edit it.
 - ii. **Delete** - Click on the Delete button next to the user account you want to delete. A warning message will pop up.
 - iii. **Reset Password** - Click on the Reset Password button next to the user account you wish to reset password.
- i. **Create** - Click on the Create button to create user.

[This space intentionally left blank.]

If you click “Reset Password” this page will appear.

Reset Password

You are requesting to reset the password for **Adriana Munoz** with username **admin**

a New Password

b Retype New Password

c Reset Password **d** Close

- a. **New Password** - Enter new password for selected user.
- b. **Retype New Password** - Retype password entered in New Password for selected user.
- c. **Reset Password** - Click Reset Password to save new password.
- d. **Close** - Click Close if you do not wish to reset user password.

11.7.1. Create User

On the Create User page, you can create a new user account.



The screenshot shows a web form titled "CREATE USER" with a crown icon above the title. The form contains the following elements:

- a** First Name: Text input field.
- b** Last Name: Text input field.
- c** Email: Text input field.
- d** Username: Text input field.
- e** Password: Text input field.
- f** Enabled: Dropdown menu with "false" selected.
- g** Permissions: Admin
- h** Submit: Blue button.
- i** Reset: Blue button.
- j** Back: Blue button.

- a. First Name** - Enter the first name of the user you are creating.
- b. Last Name** - Enter the last name of the user you are creating.
- c. Email** - Enter the email address of the user you are creating.
- d. Username** - Enter desired username of the user you are creating.
- e. Password** - Enter desired password for the user you are creating.
- f. Enabled** - Select true to enable account or false to disable the account for user you are creating.
- g. Permissions** - Check the box if the created user is an admin, if not leave the box unchecked.
- h. Submit** - Click Submit to save and create the user account.
- i. Reset** - Click Reset to undo all changes.
- j. Back** - Click Back to return to Account Management page.

11.7.2. Edit User

On the Edit User page, you can edit a user account.

The screenshot shows the 'EDIT USER' page with the following fields and controls:

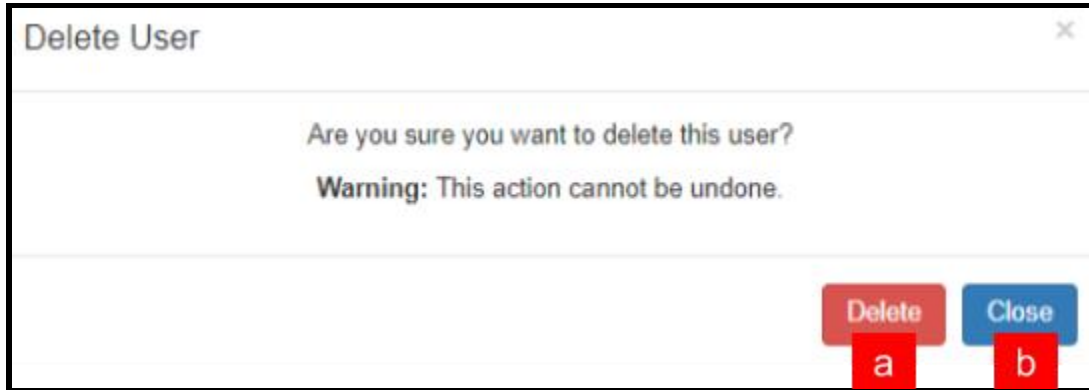
- a** First Name: Text input field containing 'Adriana'.
- b** Last Name: Text input field containing 'Munoz'.
- c** Email: Text input field containing 'test@odu.edu'.
- d** Username: Text input field containing 'admin' (disabled).
- e** Enabled: Dropdown menu with 'true' selected.
- f** Permissions: Checkboxes with 'Admin' checked.
- g** Submit: Blue button.
- h** Reset: Blue button.
- i** Back: Blue button.

- a. First Name** - Edit listed first name of user by entering modified first name.
- b. Last Name** - Edit listed last name of user by entering modified last name.
- c. Email** - Edit listed email of user by entering modified email.
- d. Username** - Field cannot be modified.
- e. Enabled** - Edit the enabled field by changing listed option from the dropdown menu provided.
- f. Permissions** - Edit the permissions field by checking or unchecking the admin checkbox.
- g. Submit** - Click Submit to save and add modifications the user account.
- h. Reset** - Click Reset to undo all changes.
- i. Back** - Click Back to return to Account Management page.

[This space intentionally left blank.]

11.7.3. Delete User

Click on the delete button next to the user account you want to delete. A warning will pop up.

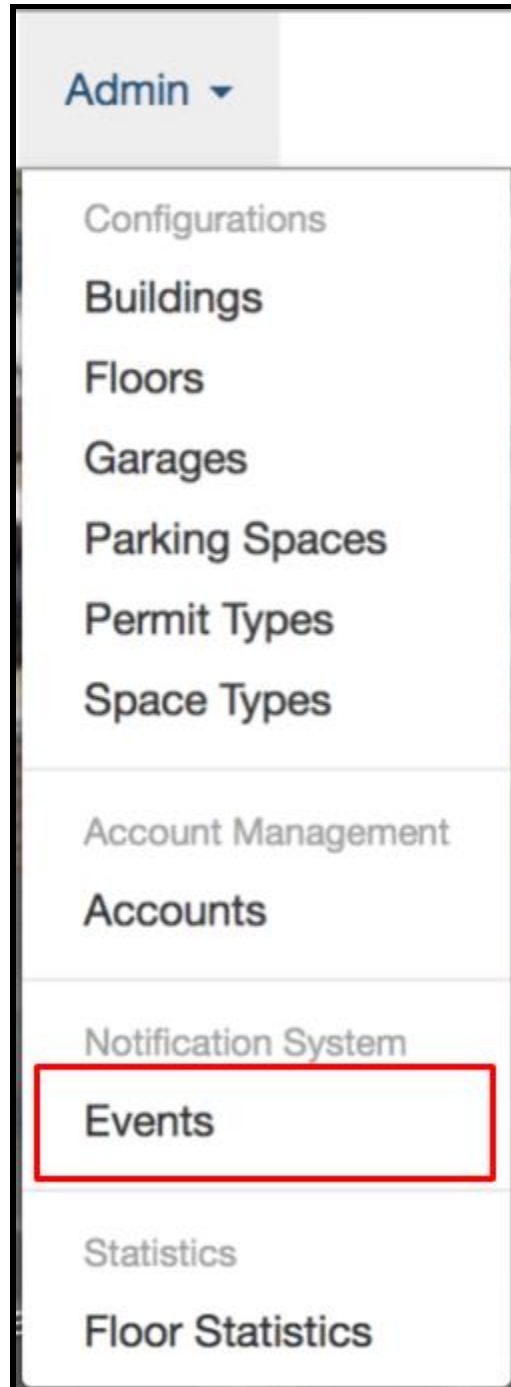


- a. **Delete** - Click on Delete if you wish to delete the user account.
- b. **Close** - Click on Close if you do not wish to delete the user account.

[This space intentionally left blank.]

11.8. Event Notification System

Events is listed item in the Notification System section of the Admin dropdown menu. It is used to create, edit, or delete an Event.



If the you click “Events” under Notification System it will open the Event Settings page.

EVENT SETTINGS

a	b	c	d	e	f	g	h	i
Name	Message	Updated	Tags	Affected Locations	Start Date/Time	End Date/Time	Actions	
Football Game	This is a long message that will be displayed as a notification item. This message is the longest message in the world. Everyone attending the football game should be notified that there is a football game going on.	2018-04-10T20:05:41.301-04:00		Garage D: Constant Center North	2018-04-04T10:00	2018-05-05T11:00	<div data-bbox="1312 415 1365 443" style="background-color: green; color: white; padding: 2px;">Create</div> <div data-bbox="1312 520 1349 548" style="background-color: blue; color: white; padding: 2px;">Edit</div> <div data-bbox="1312 554 1349 581" style="background-color: red; color: white; padding: 2px;">Delete</div>	
message	this is my message	2018-04-05T23:36:21.382-04:00	test	Garage D: Constant Center North Garage E: 49th Street Stadium Garage A: Elkhorn Avenue	2018-04-03T12:00	2018-04-03T12:00	<div data-bbox="1312 625 1349 653" style="background-color: blue; color: white; padding: 2px;">Edit</div> <div data-bbox="1312 659 1349 686" style="background-color: red; color: white; padding: 2px;">Delete</div>	
new	boom	2018-04-04T00:30:04.642-04:00		Garage D: Constant Center North Garage B: 43rd Street	2018-04-04T00:00	2018-04-04T00:00	<div data-bbox="1312 869 1349 896" style="background-color: blue; color: white; padding: 2px;">Edit</div> <div data-bbox="1312 903 1349 930" style="background-color: red; color: white; padding: 2px;">Delete</div>	

- a. **Name** - This is name of the event.
- b. **Message** - This is the description of the event.
- c. **Updated** - This is when the event was last updated.
- d. **Tags**- This is the event tags section.
- e. **Affected Locations** - This shows a list of the garages affected by an event.
- f. **Start Date/Time** - This is the time and date that the event starts.
- g. **End Date/Time** - This is the time and date that the event ends.
- h. **Create** - Click this button to create and event.
- i. **Actions** - This is where clickable actions are stored for Events.
 - i. **Edit** - Click this button to edit the event.
 - ii. **Delete** - Click this button to delete the event.

11.8.1. Create Event

If you click the Create button it will direct you to this page.

The screenshot shows a web form titled "CREATE EVENT" with a crown icon above the title. The form is enclosed in a dark blue border. It contains the following fields and labels:

- a Name**: A text input field with the placeholder "Enter the name of the event."
- b Message**: A text area with the placeholder "Message that will be displayed for an event."
- c Locations Affected**: A text input field with the placeholder "Location..."
- d Event Starts**: A text input field with the placeholder "When the event will start."
- e Event Ends**: A text input field with the placeholder "When the event will end."
- f Tags**: A text input field with the placeholder "Enter tags associated with the event."

At the bottom of the form are three buttons: "Submit", "Reset", and "Back".

- a. **Name** - Enter the name of the event.
- b. **Message** - Enter the description of the event.
- c. **Locations Affected** - Enter the locations and buildings that will be affected.
- d. **Event Starts** - Enter the start time/date.
- e. **Event Ends** - Enter the end time/date.
- f. **Tags** - Enter key words associated with the event.

11.8.2. Edit Event

If you click the Edit button you will be directed to this page.

The screenshot shows a web form titled "EDIT EVENT" with a crown icon above the title. The form is enclosed in a dark blue border. It contains the following fields and controls:

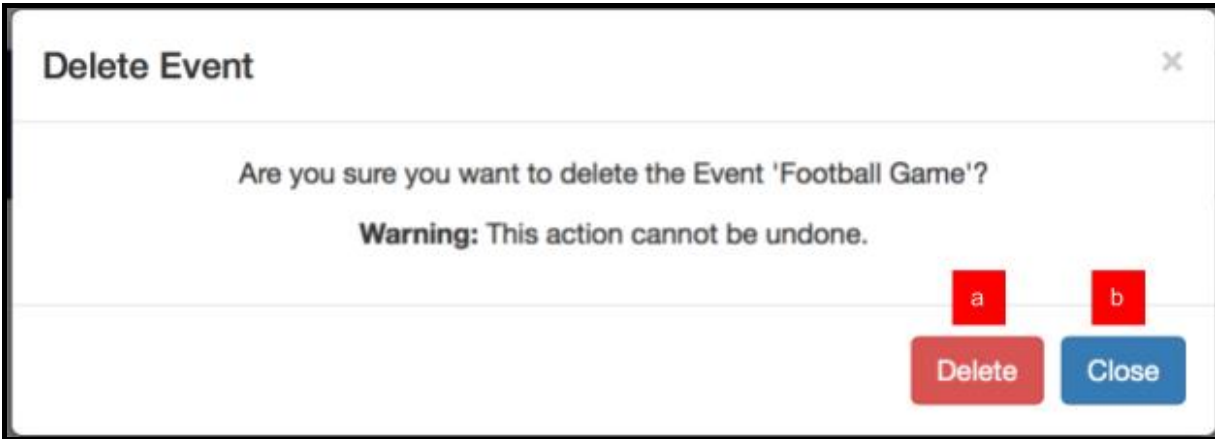
- a Name:** A text input field containing "Football Game".
- b Message:** A text area containing a long message: "This is a long message that will be displayed as a notification item. This message is the longest message in the world. Everyone attending the football game should be notified that there is a football game going on." There is a small 'x' icon in the bottom right corner of the text area.
- c Locations Affected:** A text input field containing "Garage D: Constant Center North" with a small 'x' icon to its right.
- d Event Starts:** A text input field containing "2018-04-04T10:00".
- e Event Ends:** A text input field containing "2018-05-05T11:00".
- f Tags:** A text input field with the placeholder text "Enter tags associated with the event.".

At the bottom of the form are three buttons: "Submit", "Reset", and "Back".

- a. **Name** - Edit the name of the event.
- b. **Message** - Edit the description of the event.
- c. **Locations Affected** - Edit the locations and buildings that will be affected.
- d. **Event Starts** - Edit the start time/date.
- e. **Event Ends** - Edit the end time/date.
- f. **Tags** - Edit keywords associated with the event.

11.8.3. Delete Event

Click on the delete button next to the event you want to delete. A warning will pop up.

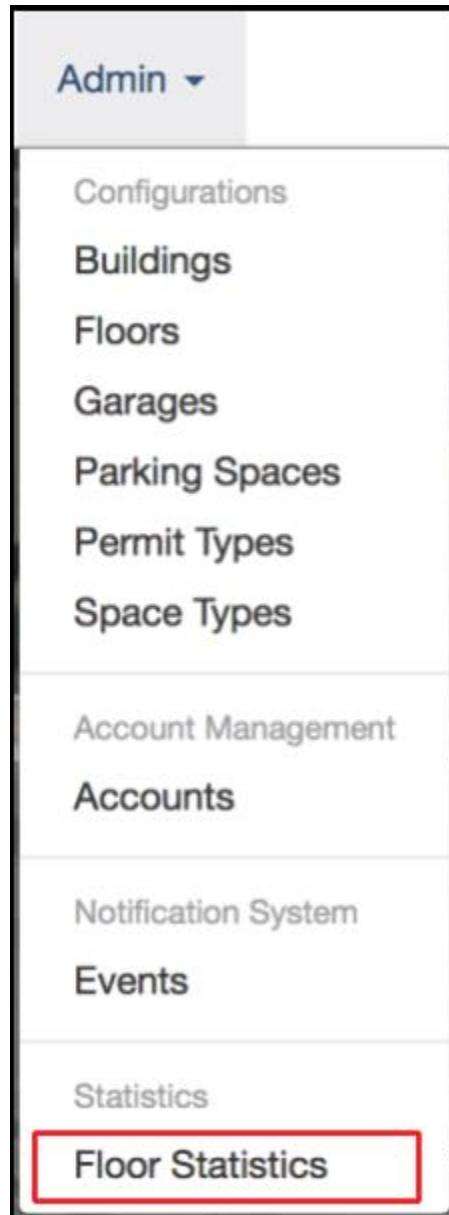


- a. **Delete** - Click on Delete if you wish to delete the event.
- b. **Close** - Click on Close if you do not wish to delete the event.

[This space intentionally left blank.]

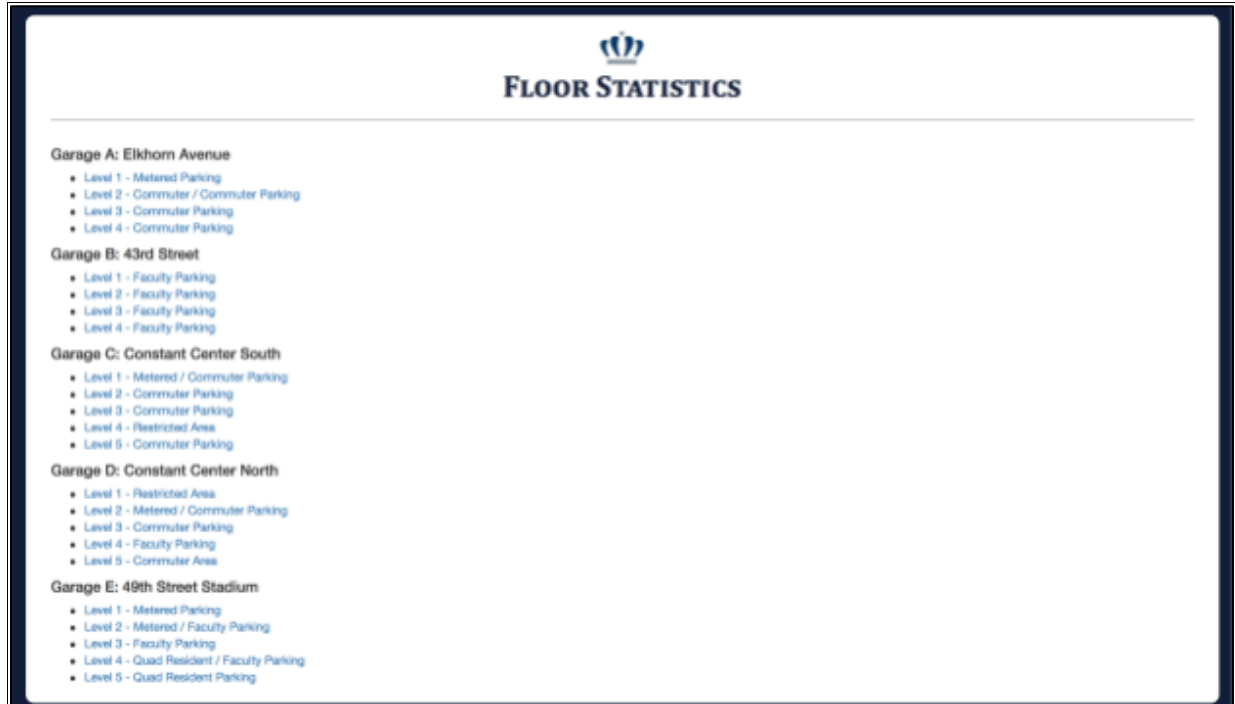
11.9. Floor Statistics

This element is under the admin tab under Floor Statistics. It is used for you to view a list of the garages and floors. You will be able to click and view individual statistics of each floor. The statistics include the capacity, timestamp, garage name and floor name.



[This space intentionally left blank.]

If you click the “Floor Statistics” menu item you will be redirected to the floor statistics page.



[This space intentionally left blank.]

Clicking on one of the floors will take you to this page. This page lists the garages with links of each floor along with the type of parking available on that floor. After clicking Garage A: Metered Parking, for example a table will be generated on the next page showing the


GARAGE A: ELKHORN AVENUE

a Floor	b Description	c Capacity	d Timestamp
1	Metered Parking	92.59%	Fri Apr 13 04:37:30 EDT 2018
1	Metered Parking	92.59%	Thu Apr 12 20:20:25 EDT 2018
1	Metered Parking	92.59%	Thu Apr 12 15:59:59 EDT 2018
1	Metered Parking	92.59%	Thu Apr 12 15:29:59 EDT 2018
1	Metered Parking	92.59%	Thu Apr 12 14:59:59 EDT 2018
1	Metered Parking	92.59%	Thu Apr 12 14:44:59 EDT 2018
1	Metered Parking	92.59%	Thu Apr 12 14:30:00 EDT 2018
1	Metered Parking	92.59%	Thu Apr 12 13:55:09 EDT 2018
1	Metered Parking	92.59%	Thu Apr 12 03:22:47 EDT 2018
1	Metered Parking	92.59%	Thu Apr 12 02:00:12 EDT 2018
1	Metered Parking	92.59%	Wed Apr 11 23:20:00 EDT 2018
1	Metered Parking	92.59%	Tue Apr 10 17:02:11 EDT 2018
1	Metered Parking	92.59%	Tue Apr 10 14:15:00 EDT 2018

- a. **Floor** - The floor of the garage for the statistics shown
- b. **Description** - The description of the garage for the statistics shown
- c. **Capacity** - The capacity of the Garage for the statistics shown
- d. **Timestamp** - The timestamp of the Garage for the statistics shown

12. Troubleshooting

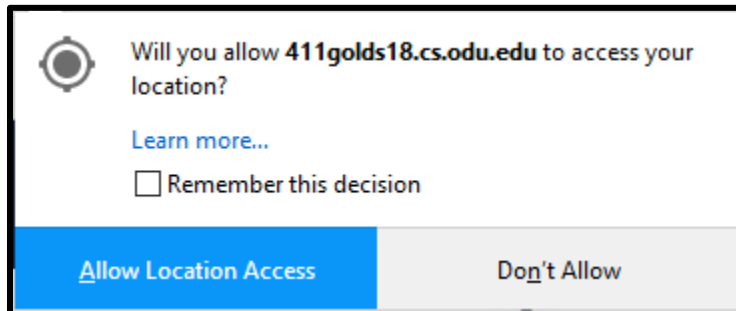
We hope nothing goes wrong when you are using ParkODU, but if it does perhaps one of these tips will be of assistance.

12.1. Browser Choice

ParkODU should work on Internet Explorer, Mozilla Firefox, Google Chrome, Opera, and Safari. We personally recommend using either Mozilla Firefox or Google Chrome. If a web page is not functioning properly for you, you should first make sure your browser is up to date. If it is then try a different browser.

12.2. Enable Location Sharing

Location sharing looks something like this.



This is very helpful in ensuring the address you enter on the Search page is valid. Please check your browsers documentation for how to enable location sharing if this option does not pop up when you first use ParkODU.

[This space intentionally left blank.]

12.3. Check your Internet Connection

Please verify that your device is connected to the internet. The easiest way to check for internet connectivity is to open a web browser and go to any frequently visited public websites such as <https://www.google.com>. If you can reach the public website, it means your device is connected to the internet.

If your device is still unable to reach the ParkODU website after verifying the internet connectivity, please verify the URL for ParkODU. As another step of troubleshooting, please try visiting ParkODU on a different device. If the URL is correct and multiple devices are unable to reach the ParkODU website, it may indicate an issue with ParkODU web server. Please contact CS Root for further assistance.

[This space intentionally left blank.]

13. Glossary

Administrator/Admin - a special user with access to additional tools for user account and space management

Agile - a methodology that anticipates the need for flexibility and applies a level of pragmatism into the delivery of the finished product

Best Garage - the closest garage to the destination building with the specified minimum number of available spaces

Driver - anyone who drives and parks at ODU

Driver Entry Rate - the number of vehicles entering the garage each minute

Driver Exit Rate - the number of vehicles exiting the garage each minute

Event - an occasion which affects garage and/or space availability

Garage Rate - Driver Entry Rate - Driver Exit Rate (a positive number denotes that the garage is filling up)

Operating Hours - 7:00AM - 10:00PM

Permit - a physical decal that specifies in which spaces the vehicle is allowed to park

Predictions - a guess based on current and historical data about garage space availability

Real-time - current time

Reconfigurable - software-based creation, deletion, or editing of spaces, floors, and garages

Rush Hours - 7:45AM - 9:00AM, 12:00PM - 1:00PM, 3:00PM - 4:30PM

Sensor - any device which indicates to the software whether a space is occupied or not

Signage - signs that indicate the number of available spaces

Statistical Analysis - the ability to use sample data to form predictions

User - an entity using ParkODU

Vehicle Detection Technology - any device which indicates to the software that a vehicle has entered a specified area