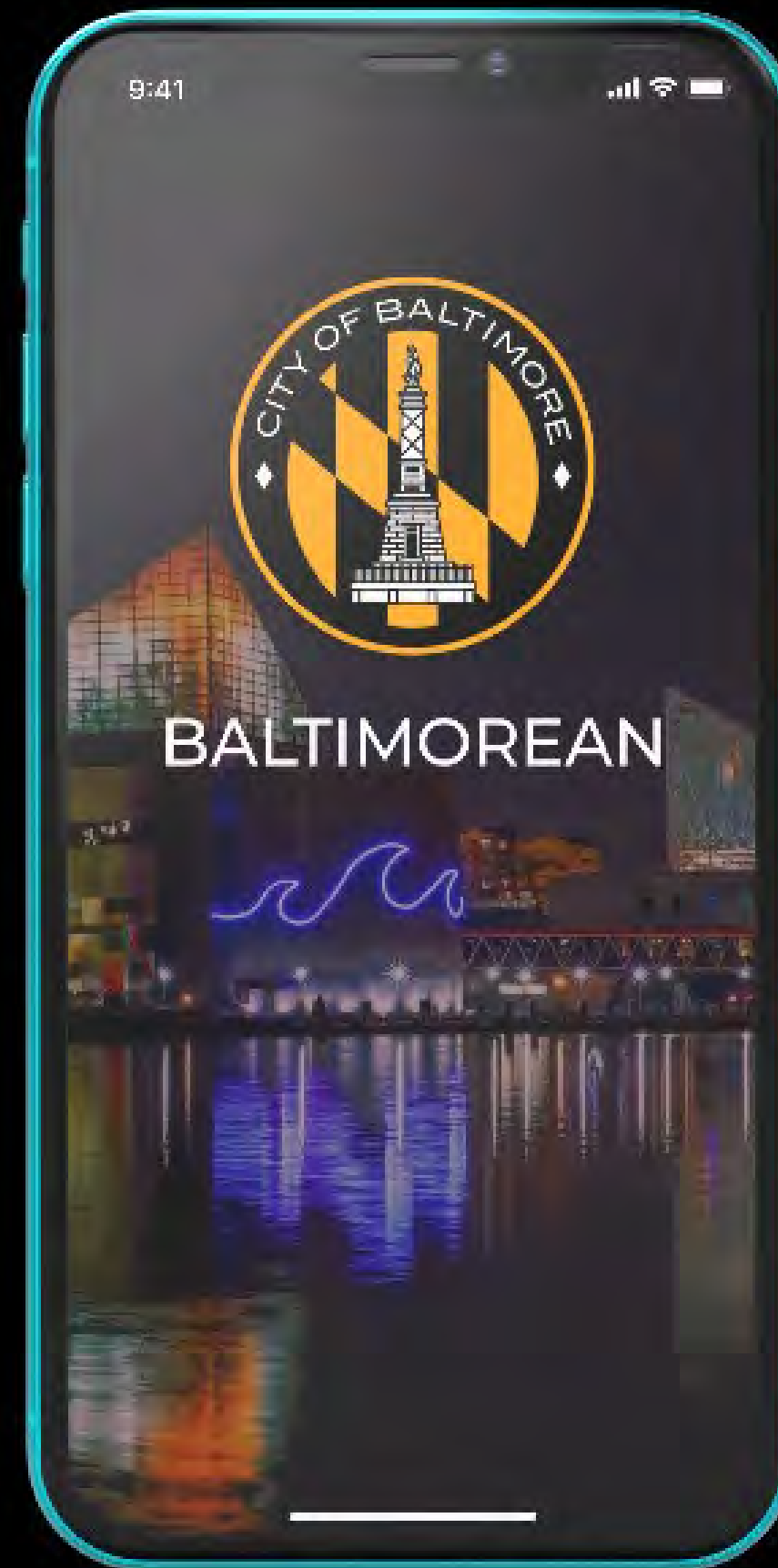


Baltimorean

Building a Companion App
for the City of Baltimore



SOLA AWOJODU • ICM 517 • 2021

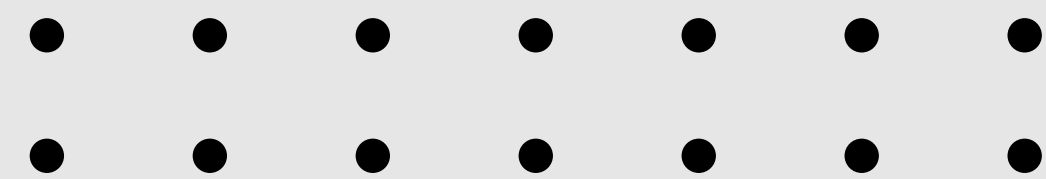
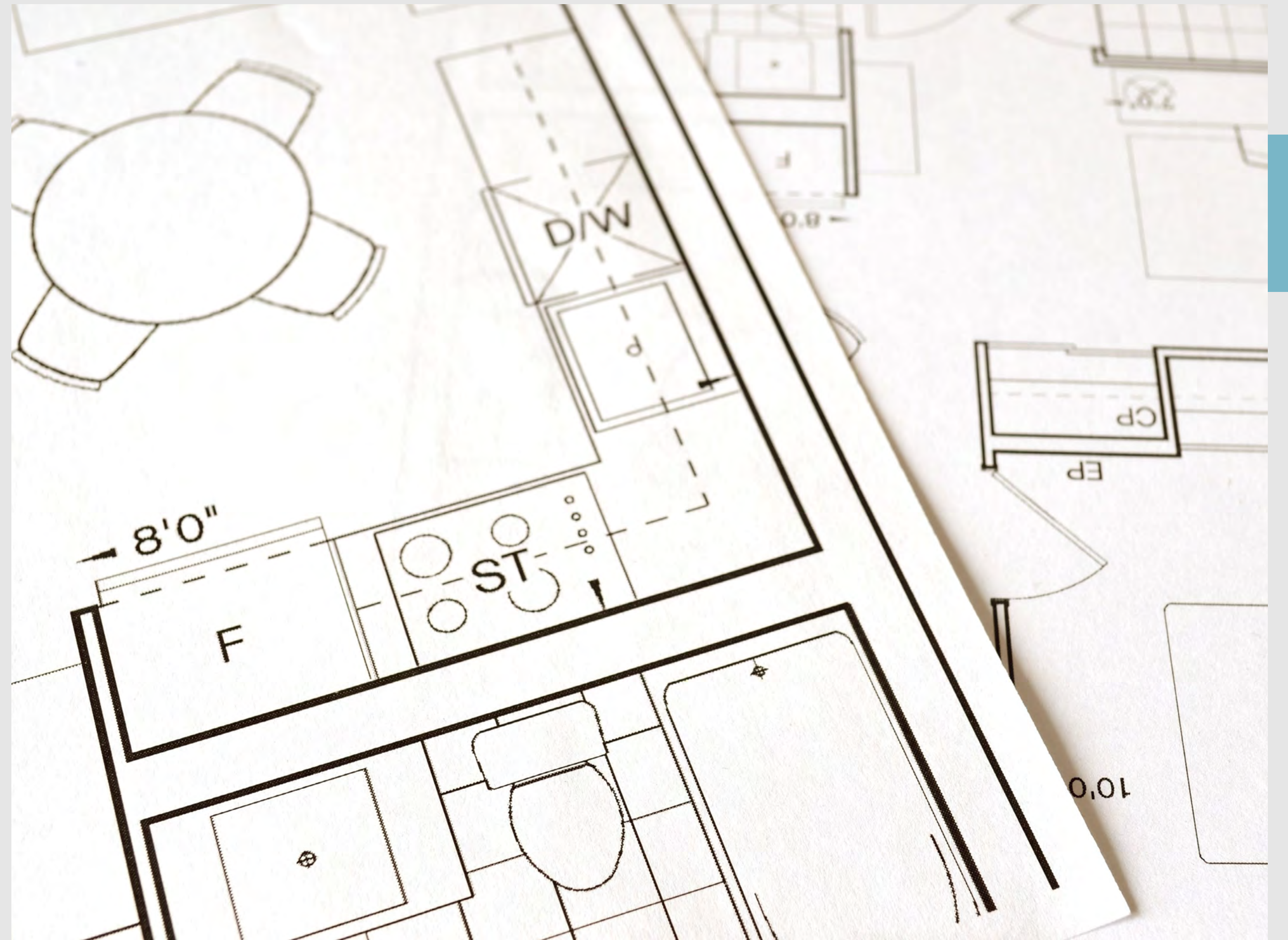
Contents

SITE MAP: CITY OF BALTIMORE	3
COMPANION APP: CITY OF BALTIMORE.....	7
BALTIMOREAN.....	10
BALTIMOREAN APP PAPER PROTOTYPES.....	20
BALTIMOREAN APP USABILITY TESTING	30
BALTIMOREAN APP HIGH FIDELITY PROTOTYPE.....	41

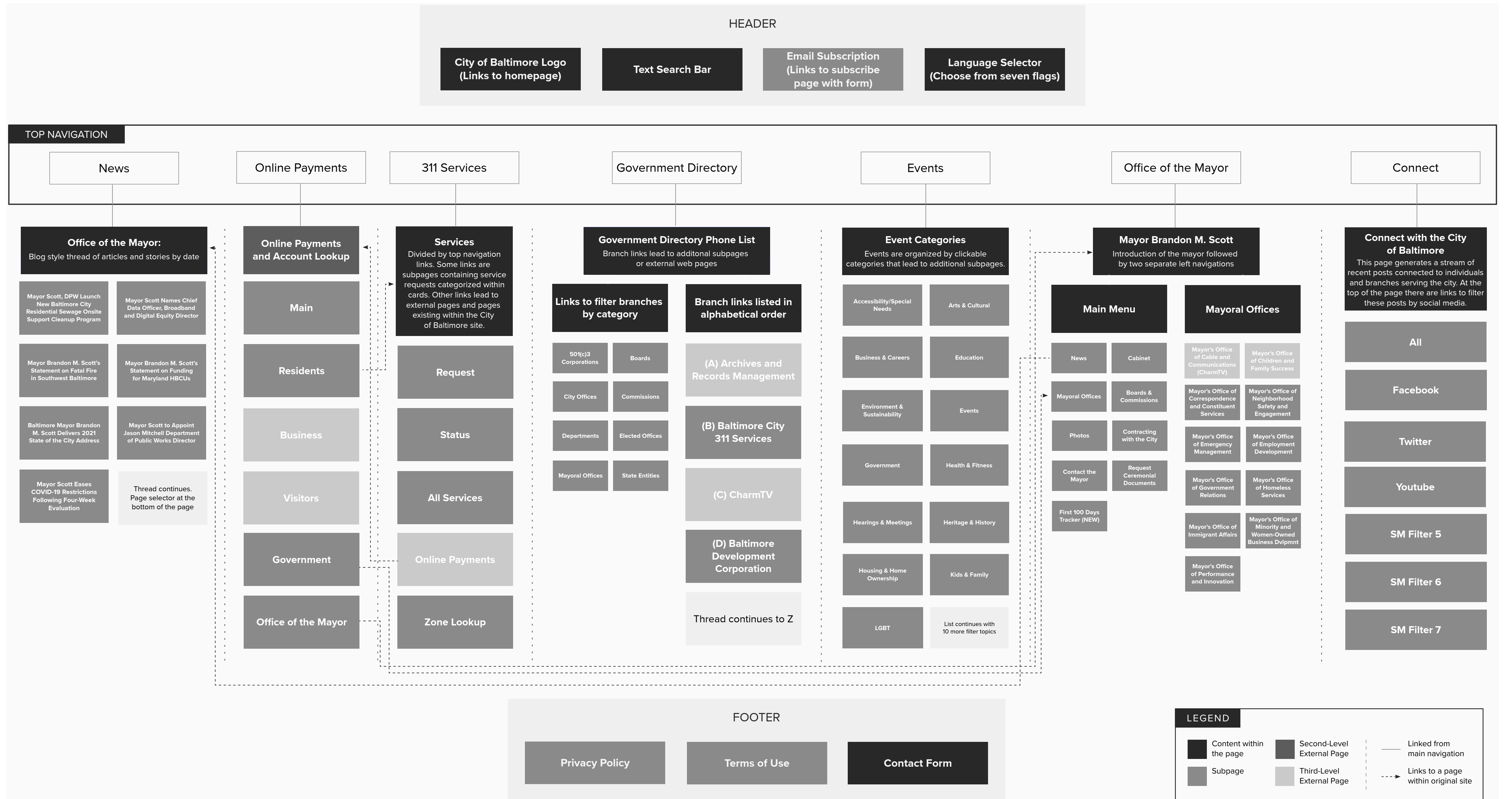


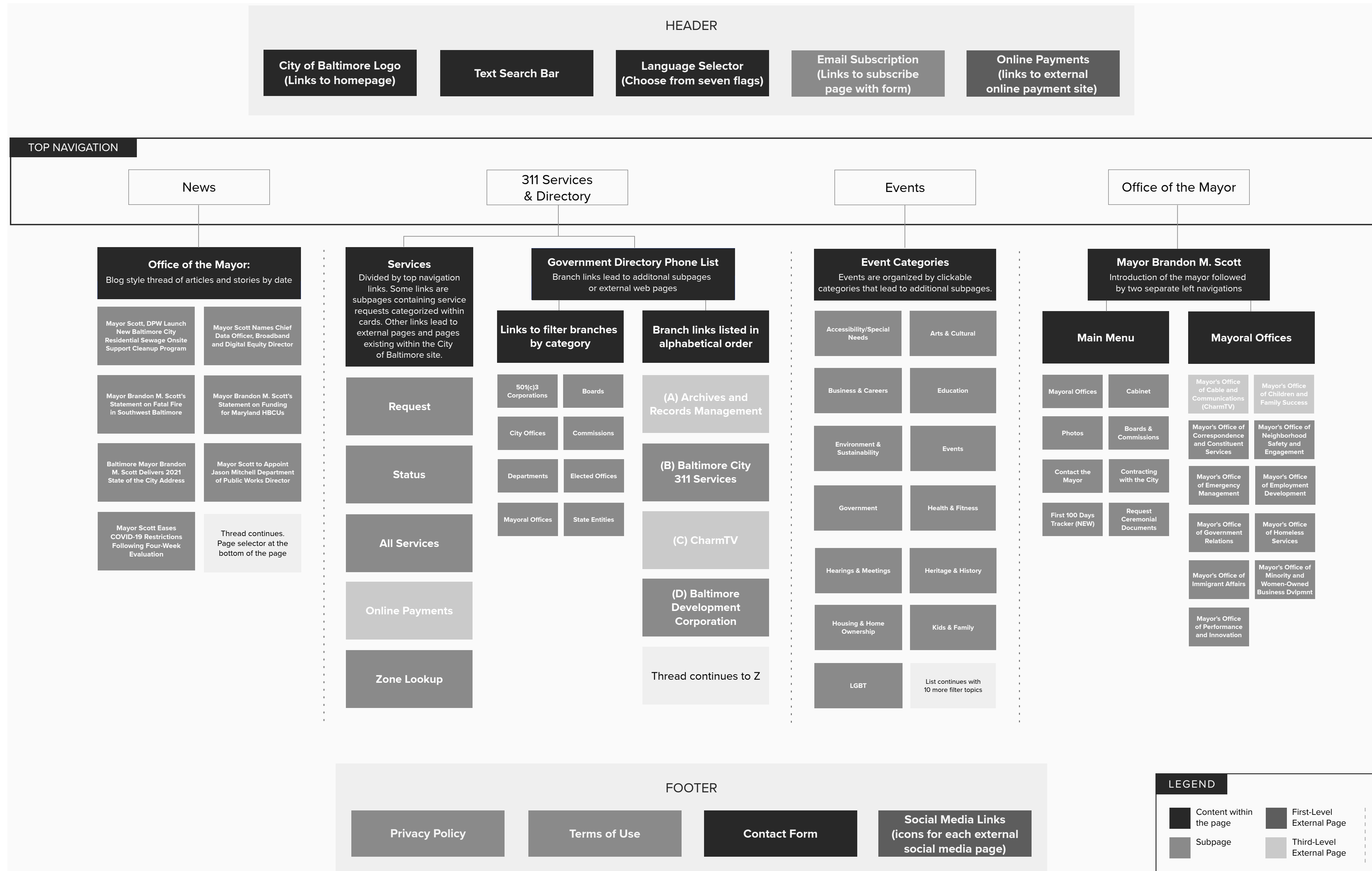
Site Map: City of Baltimore

Week 2



Baltimorecity.gov Current Site Map





Site Map Conclusion

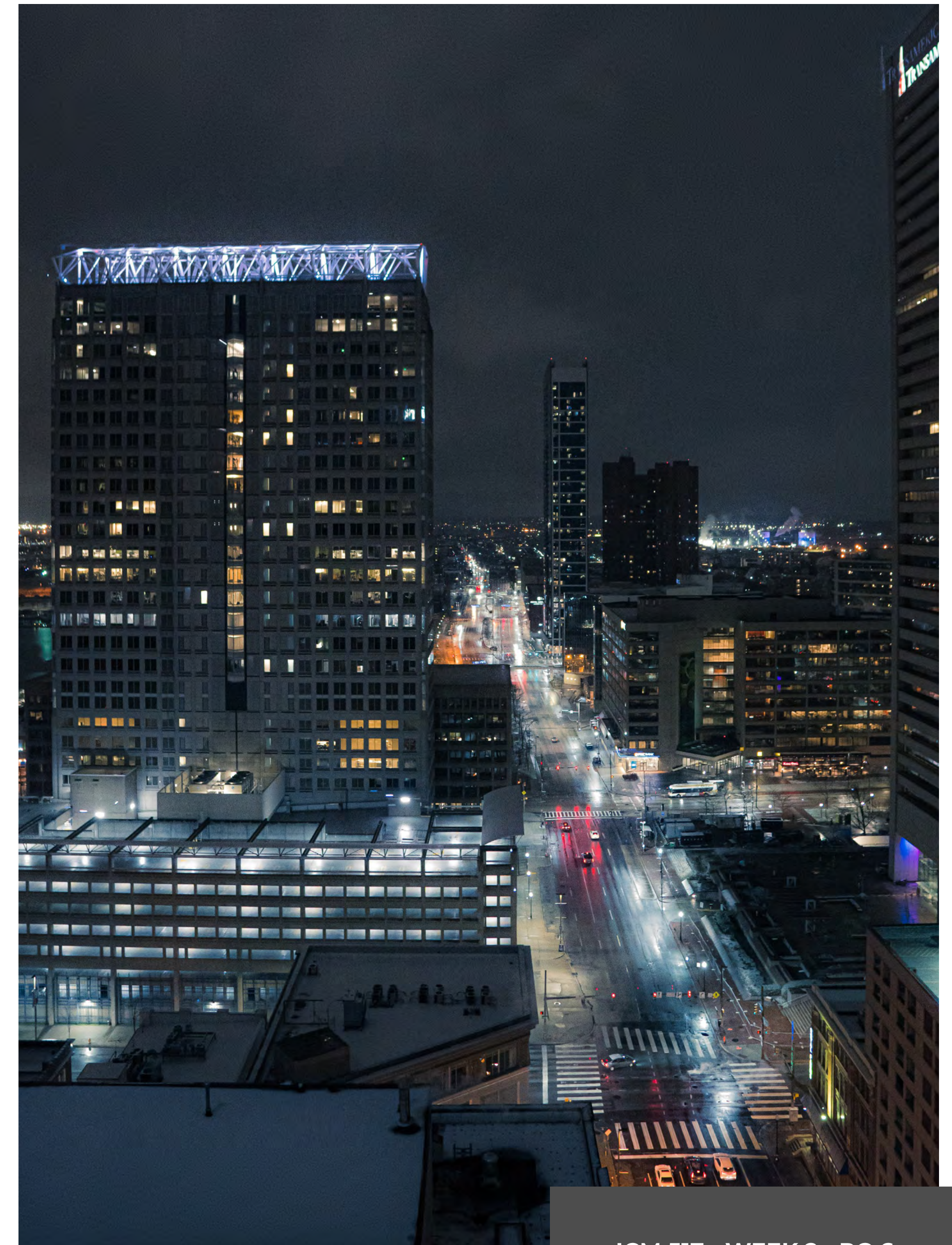
After familiarizing myself with the City of Baltimore's current site IA, I rearranged some of the site's content to create a more manageable structure and flow.

I limited some of the redundancy within the site by moving "Online Payments" to the header. "Online Payments" is important for the users of the site to access, but felt awkwardly placed in the top navigation. I decided to move "Online Payments" to the header since it links to an external website. That way, it's one of the first things users see but does not disrupt the flow of the top navigation content. Considering its importance, I maintained "Online Payments" within the services page, just in case users miss it in the site header.

Additionally, I kept "News" in the top navigation of the site, but removed it from the "Office of the Mayor" page because I believe it is significant enough to stand alone. Each "News" subpage and article clearly communicate that the articles are published by the office of the mayor.

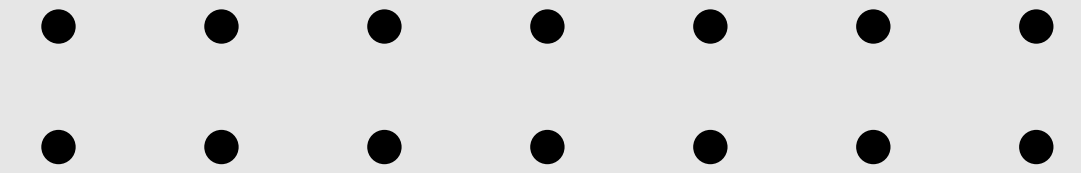
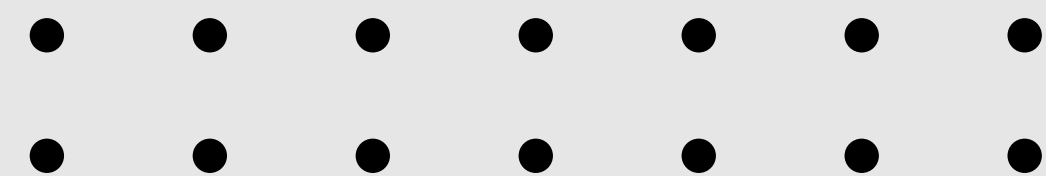
To group similar content categories and limit the number of pages in the top navigation, I decided to combine "311 Services" and "Directory" into one page that eventually divides into two subpages. Furthermore, I removed the "Connect" page entirely, replacing it with social media links placed in the site's footer.

Altogether, my goal in developing a new Information Architecture was to limit the redundancy within the City of Baltimore's website, solidify the purpose of each top navigation page, eliminate unnecessary pages and paths, and make navigating the site a smoother experience.



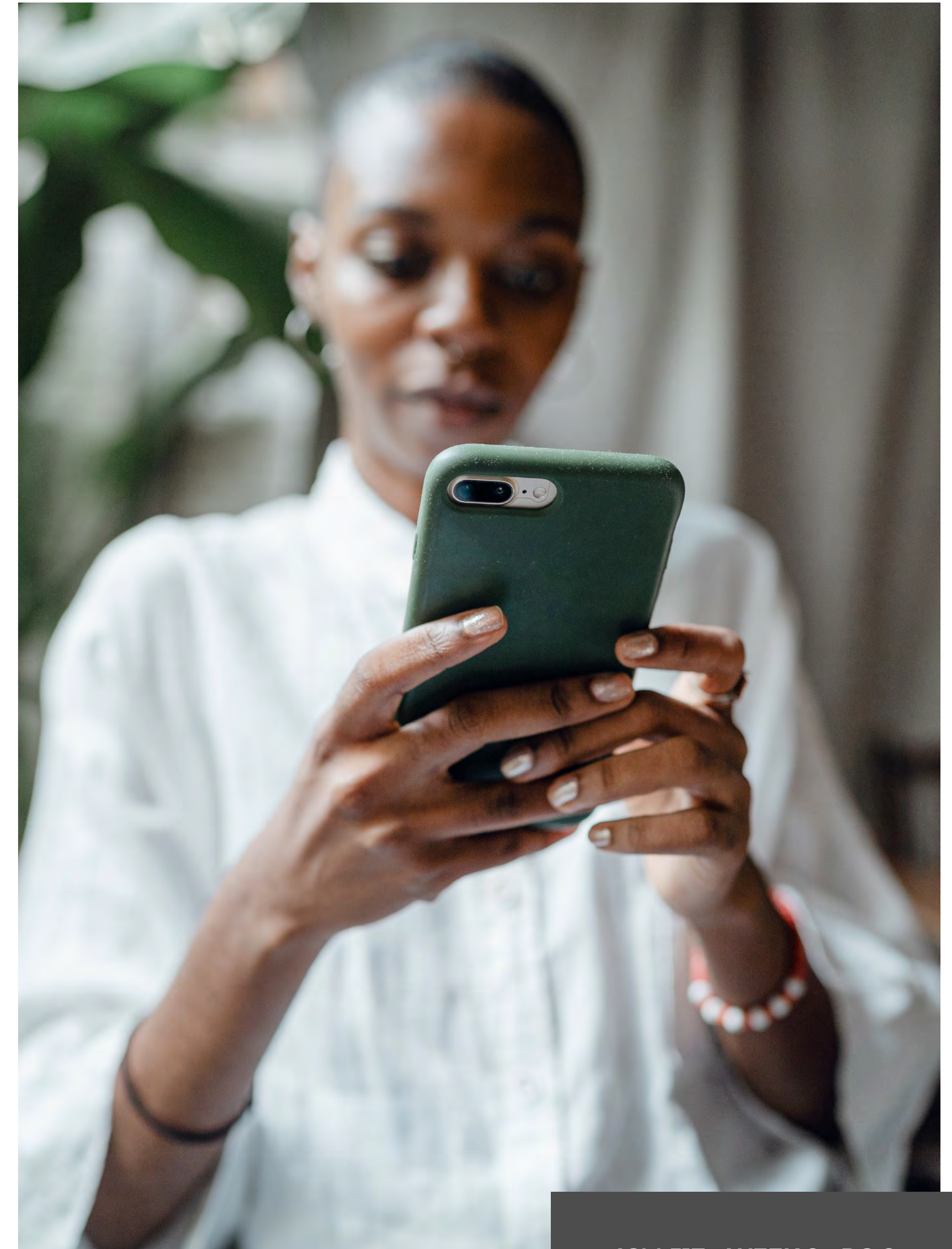
Companion App: City of Baltimore

Week 2



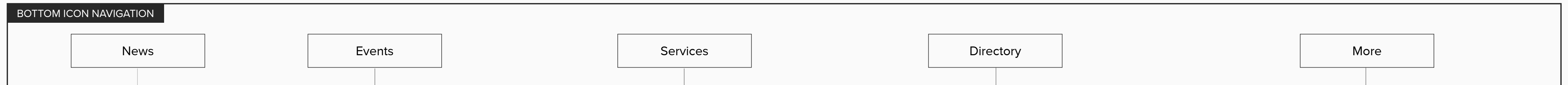
Companion App: The Goal

This app would focus on the services and resources offered by the City of Baltimore. The goal of the app is to keep users in the loop, providing them with easy access to the city's latest news and upcoming events. The app would also allow residents to access the city's directory, submit and review service requests, and make online payments conveniently.



Baltimorecity.gov Companion App

Welcome Splash Screen



Latest News
This screen would contain a scrollable thread 7 of the most recent news stories. Users would have the option to search for a specific story, load more posts within the current month, or visit the Baltimore City news online page for more stories.

Search Stories
Mayor Scott, DPW Launch New Baltimore City Residential Sewage Onsite Support Cleanup Program

Mayor Scott Names Chief Data Officer, Broadband and Digital Equity Director

Mayor Brandon M. Scott's Statement on Fatal Fire in Southwest Baltimore

Mayor Brandon M. Scott's Statement on Funding for Maryland HBCUs

Baltimore Mayor Brandon M. Scott Delivers 2021 State of the City Address

Mayor Scott to Appoint Jason Mitchell Department of Public Works Director

Mayor Scott Eases COVID-19 Restrictions Following Four-Week Evaluation

Load More Stories from this Month

View More News Online

Events
This screen has the option to generate a calendar housing all events by month or sort upcoming events by category

Calendar

Events by Category

Account Login Dialog

311 Services
This screen is organized by cards that lead to subscreens. Some subscreens would have subsequent login dialog boxes

Request

Status

All Services

Zone Lookup

Account Login Dialog

Government Directory
This screen is organized by cards to filter branches by category

All Branches

501(c)3 Corporations

Boards

City Offices

Commissions

Departments

Elected Offices

Mayoral Offices

State Entities

Additional Resources
This screen houses additional resources for users organized by cards

View More Online

About Page

About the Mayor

Contact Information

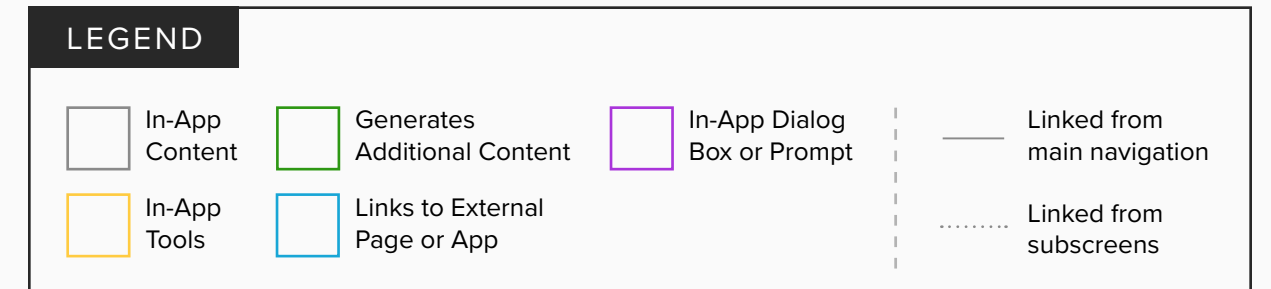
Opens External Social Media Apps or Webpages

Social Media Icons

Connect with Baltimore

App Survey

Generates Quick In-App Survey



Baltimorean Overview

PURPOSE

This app would focus on the services and resources offered by the City of Baltimore. The goal is to keep residents in the loop, providing them with easy access to the city's latest news and upcoming events. The app would also allow residents to access the city's directory, submit and review service requests, and make online payments conveniently.

FUNCTIONS

- Make online payments
- View Baltimore's most recent news stories
- Find local event information
- Submit or view the status of a service request
- Gain more information about the Mayor
- Connect with the city through social media
- View directory information concerning each branch of the city's government



Baltimorean Audience & Needs

TARGET AUDIENCE

Baltimorean's target audience would include all Baltimore residents, especially those familiar with the city website. Residents who frequently visit Baltimore's site would benefit from an app that gives them easy access to information and resources without having to peruse the city's site.

USER NEEDS

Baltimorean will meet the following resident needs:

- Residents will be more informed about city happenings
- Residents will feel more connected with their community and the city
- Residents will browse relevant city-related content in a more manageable way
- Residents will be able to make payments and submit requests more conveniently



INFORMATION ARCHITECTURE

Welcome Splash Screen

HEADER ON EVERY SCREEN

City of Baltimore Logo

Text Search Bar

Language Selector
(Choose from seven flags)

Make an Online Payment
(Links to payment site)

BOTTOM ICON NAVIGATION

News

Events

Services

Directory

More

Latest News

This screen would contain a scrollable thread 7 of the most recent news stories. Users would have the option to search for a specific story, load more posts within the current month, or visit the Baltimore City news online page for more stories.

Search Stories

Mayor Scott, DPW Launch New Baltimore City Residential Sewage Onsite Support Cleanup Program

Mayor Scott Names Chief Data Officer, Broadband and Digital Equity Director

Mayor Brandon M. Scott's Statement on Fatal Fire in Southwest Baltimore

Mayor Brandon M. Scott's Statement on Funding for Maryland HBCUs

Baltimore Mayor Brandon M. Scott Delivers 2021 State of the City Address

Mayor Scott to Appoint Jason Mitchell Department of Public Works Director

Mayor Scott Eases COVID-19 Restrictions Following Four-Week Evaluation

Load More Stories from this Month

View More News Online

Events

This screen has the option to generate a calendar housing all events by month or sort upcoming events by category

Calendar

Events by Category

311 Services

This screen is organized by cards that lead to subscreens. Some subscreens would have subsequent login dialog boxes

Request

Status

All Services

Zone Lookup

Account Login Dialog

Account Login Dialog

Government Directory

This screen is organized by cards to filter branches by category

All Branches

501(c)3 Corporations

Boards

City Offices

Commissions

Departments

Elected Offices

Mayoral Offices

State Entities

Additional Resources

This screen houses additional resources for users organized by cards

View More Online

About Page

About the Mayor

Contact Information

Opens External Social Media Apps or Webpages

Social Media Icons

Connect with Baltimore

App Survey

Generates Quick In-App Survey

LEGEND

- In-App Content
- Generates Additional Content
- In-App Dialog Box or Prompt
- In-App Tools
- Links to External Page or App
- Linked from main navigation
- Linked from subscreens

Baltimorean Stories & Scenarios

USER STORIES

STORY 1

As a business owner within the City of Baltimore, I want to find more information about the local government's current small business initiatives so that I can grow my organization's reach and make use of the resources available to me.

STORY 2

As a long-term resident, I would like to submit a service request for a pothole on a driving route I frequent so that I can ensure that my community remains safe and well kept.

STORY 3

As a local artist, I want to find upcoming art-related events so that I can network and connect with other creative professionals in my city.



Baltimorean Stories & Scenarios

USER SCENARIOS

SCENARIO 1



As an entrepreneur, Rachel works hard and smart. She started her business from the ground up, but as her company has grown, so

have the opportunities for small business investments, programs, and more. Rachel wants to stay up to date with the latest news concerning small businesses within the city of Baltimore. Since she is so busy, she wants to quickly access the most recent small business-related articles published by the city and save them for reference later. Rachel is looking for results. She does not want to waste time sifting through tons of news that is not relevant to her.

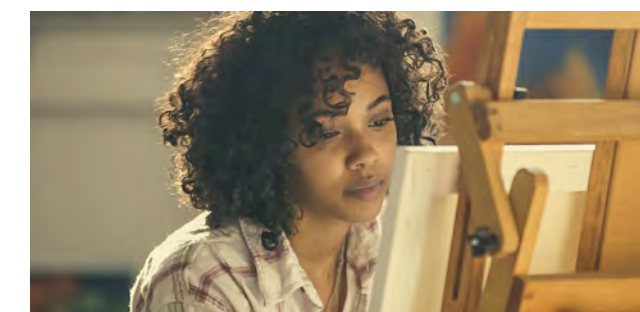
SCENARIO 2



Mr. Johnson has lived in Baltimore city for over 20 years. He is a creature of habit, commuting to work using the same

route, buying his groceries at one specific place, and purchasing his favorite magazine once a month from the corner store down the block. Mr. Johnson is a creature of habit. If something feels different about the places he frequents, it does not take him long to notice. He loves Baltimore and cares about its growth and development. He wants to bring neighborhood issues, like the deep pothole developing on the main road he takes to work, to the attention of city officials quickly so Baltimore can continue flourishing. He plans to submit service requests while on the go and monitoring them to ensure they are fulfilled.

SCENARIO 3

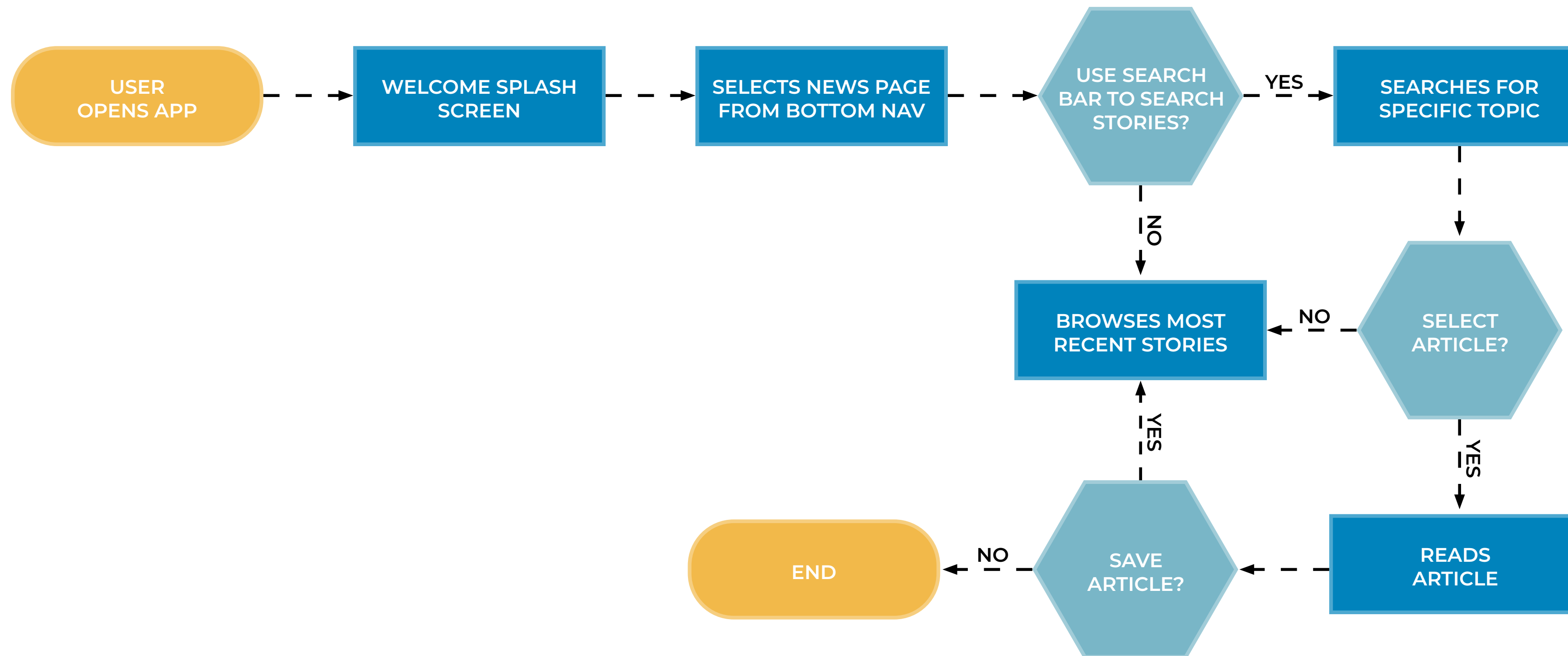


Savannah is a recent graduate and a local artist seeking a community. She wants to become more connected to Baltimore city's art community.

She is interested in upcoming art events in the city in which she can hopefully share her work and network with other local creative professionals. Savannah wants to get information about all of Baltimore's upcoming art events and exhibitions. She desires to find these events quickly and conveniently, register, and add them to her calendar. She needs to stay informed because attending these events will result in many things. Savannah will be inspired and encouraged, and hopefully, she will develop connections and find opportunities to showcase her work.

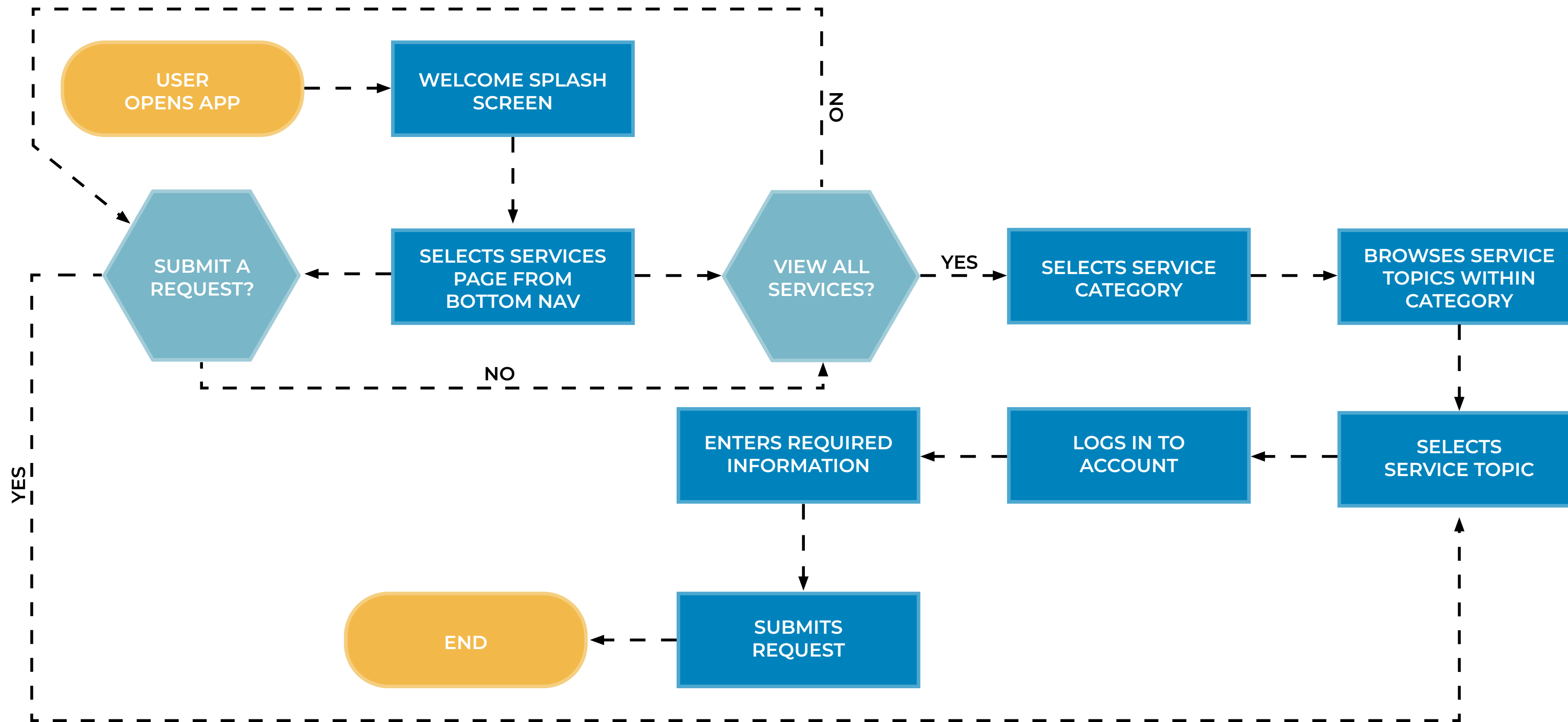
USER STORY 1

As a business owner within the City of Baltimore, I want to find more information about the local government's current small business initiatives so that I can grow my organization's reach and make use of the resources available to me.



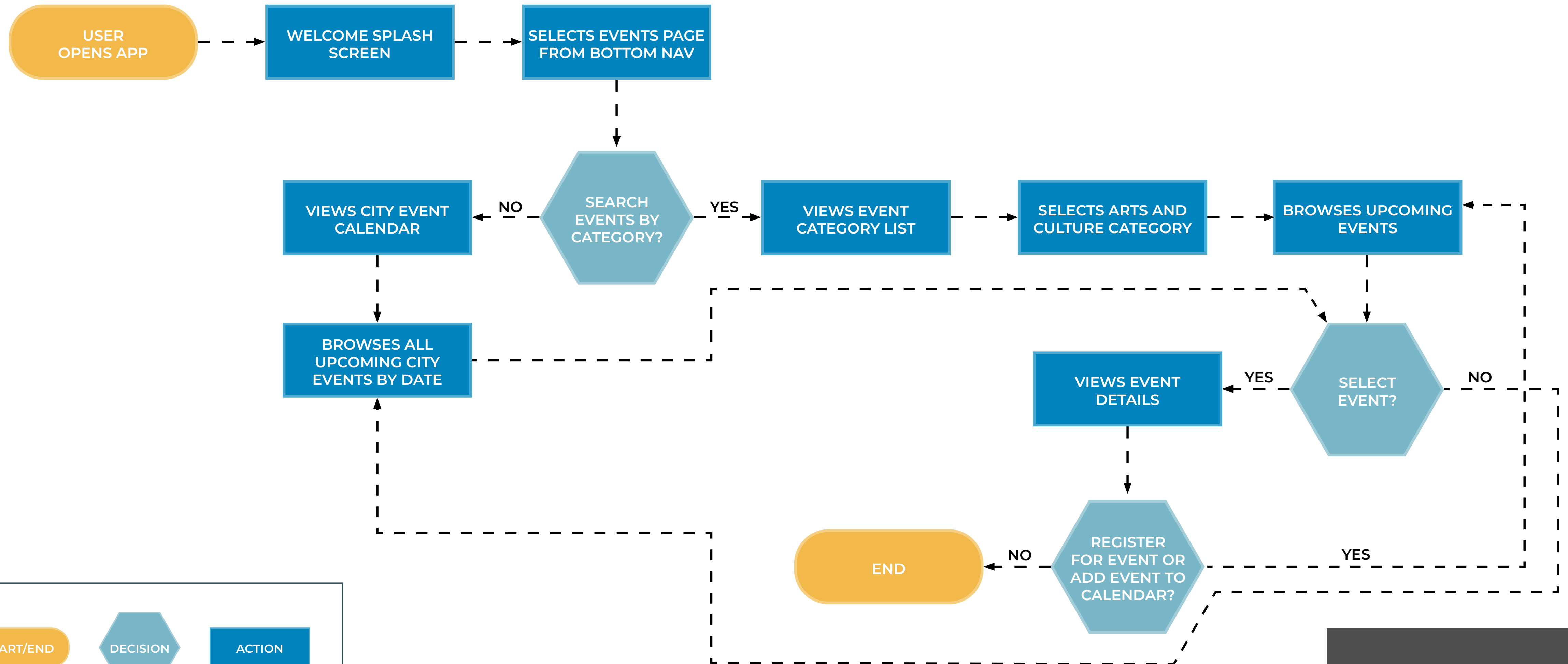
USER STORY 2

As a long-term resident, I would like to submit a service request for a pothole on a driving route I frequent so that I can ensure that my community remains safe and well kept.



USER STORY 3

As a local artist, I want to find upcoming art-related events so that I can network and connect with other creative professionals in my city.



Baltimorean App Paper Prototypes

Week 4



-
-
-
-
-
-
-
-

-
-
-
-
-
-
-
-

Project Overview

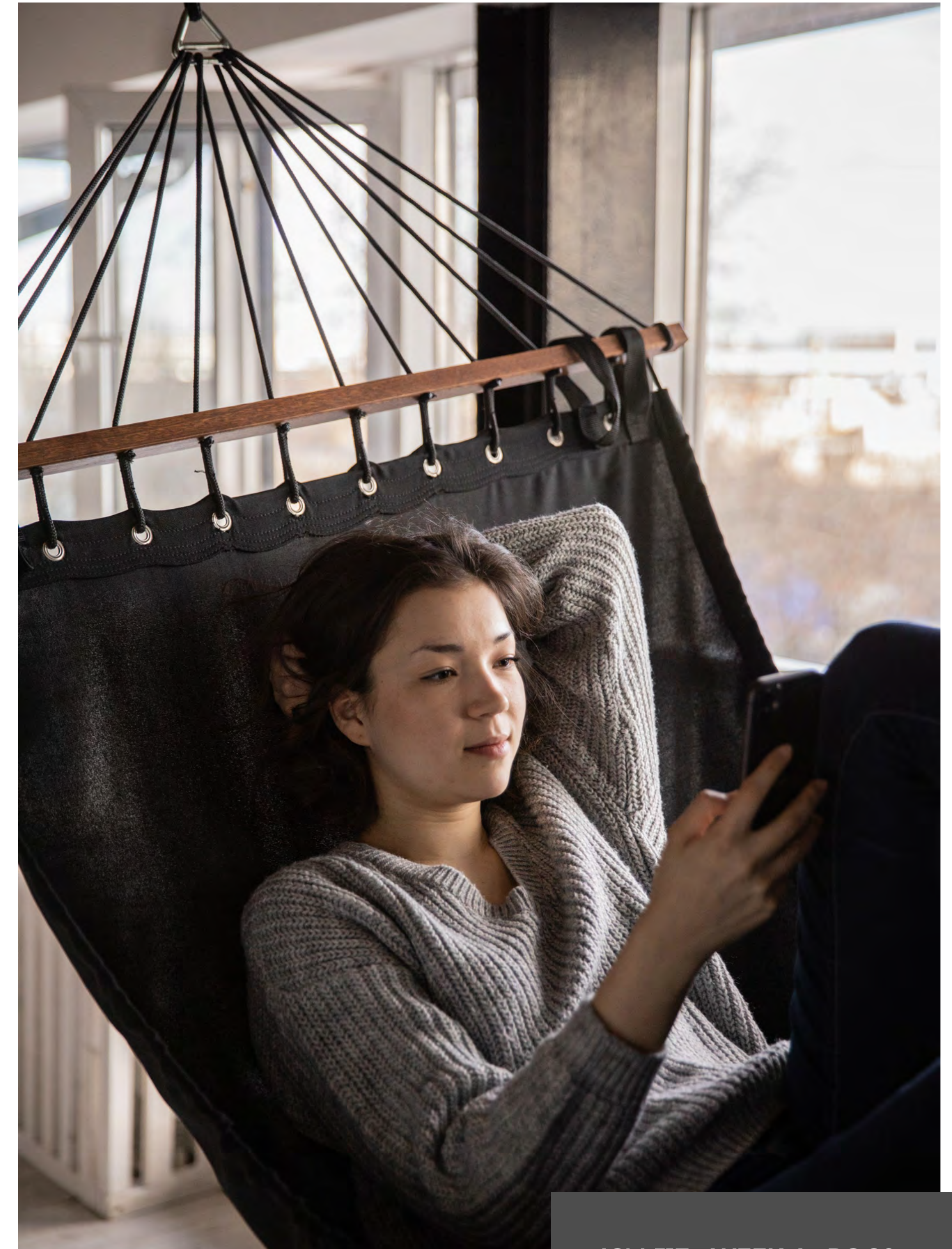
ABOUT THE APP

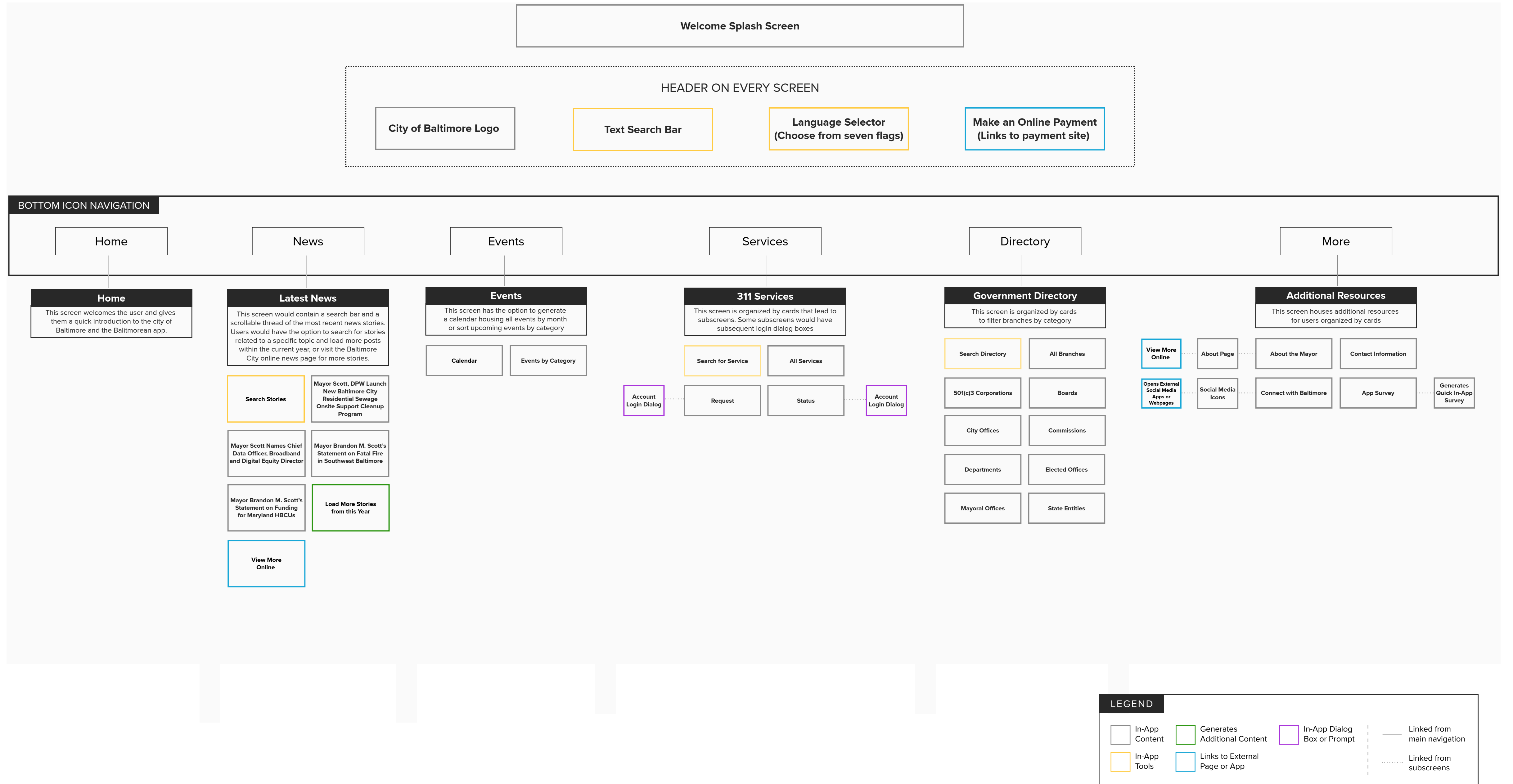
Baltimorean is a companion app, created to accompany the City of Baltimore website. This app would focus on the services and resources offered by the city. The goal of the app is to keep users in the loop, providing them with easy access to the city's latest news and upcoming events. The app would also allow residents to access the city's directory, submit and review service requests, and make online payments conveniently.

PAPER PROTOTYPING FOR BALTIMOREAN

The following flows will be displayed through paper prototyping:

- Finding Relevant Articles
- Submitting a Service Request
- Finding a Local Event





Finding Relevant Articles

Splash screen appears when user opens app



- Interactive buttons/fields
- User's selection
- Overlaid dialog box

Top navigation on all pages

City logo

Language selector

Make a payment

Search app

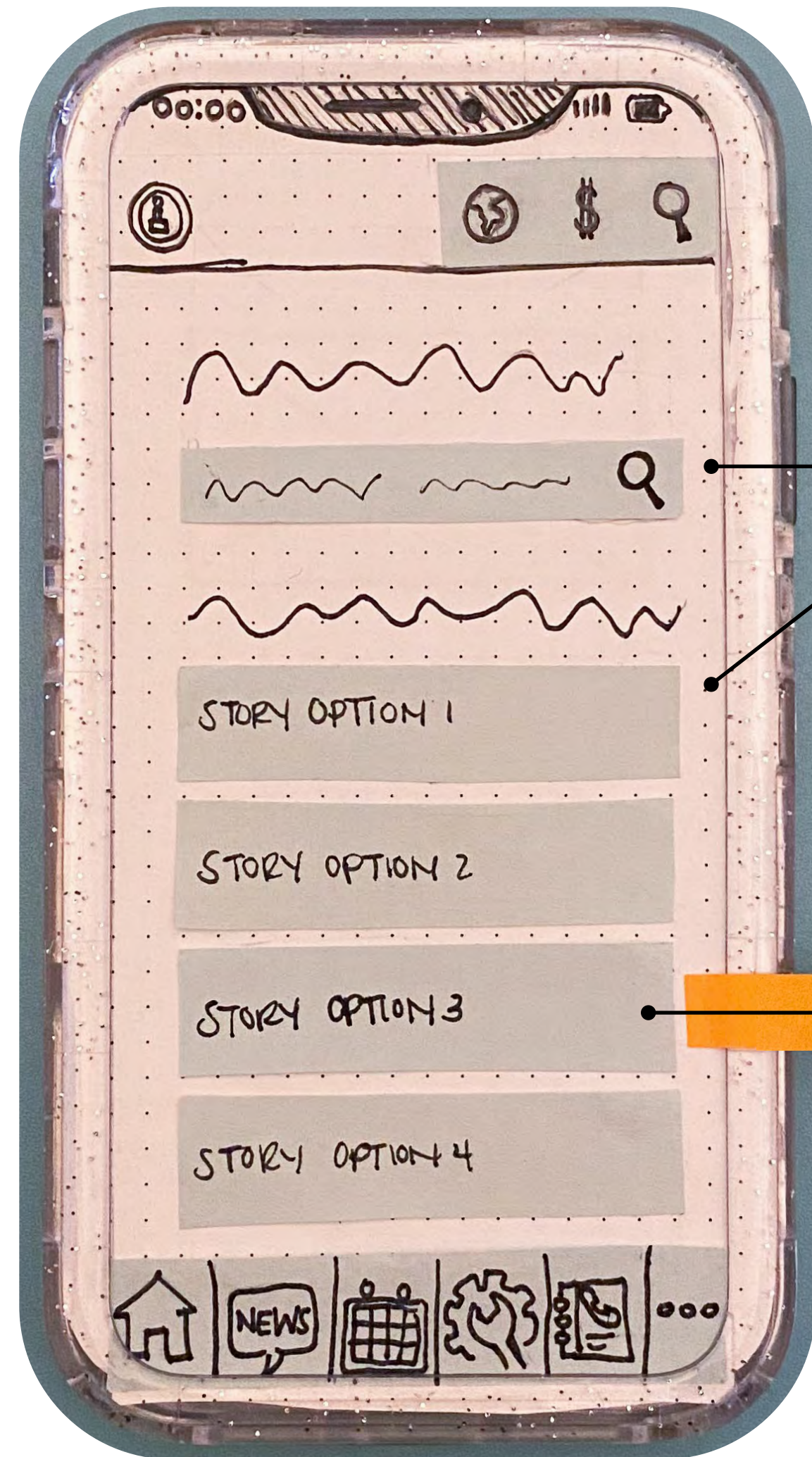
The home page serves as a welcome, including a photo and a brief introduction to the app

Bottom navigation on all pages includes icons representing "Home," "News," "Events," "Services," "Directory," and "More."

User selects "News" from bottom navigation



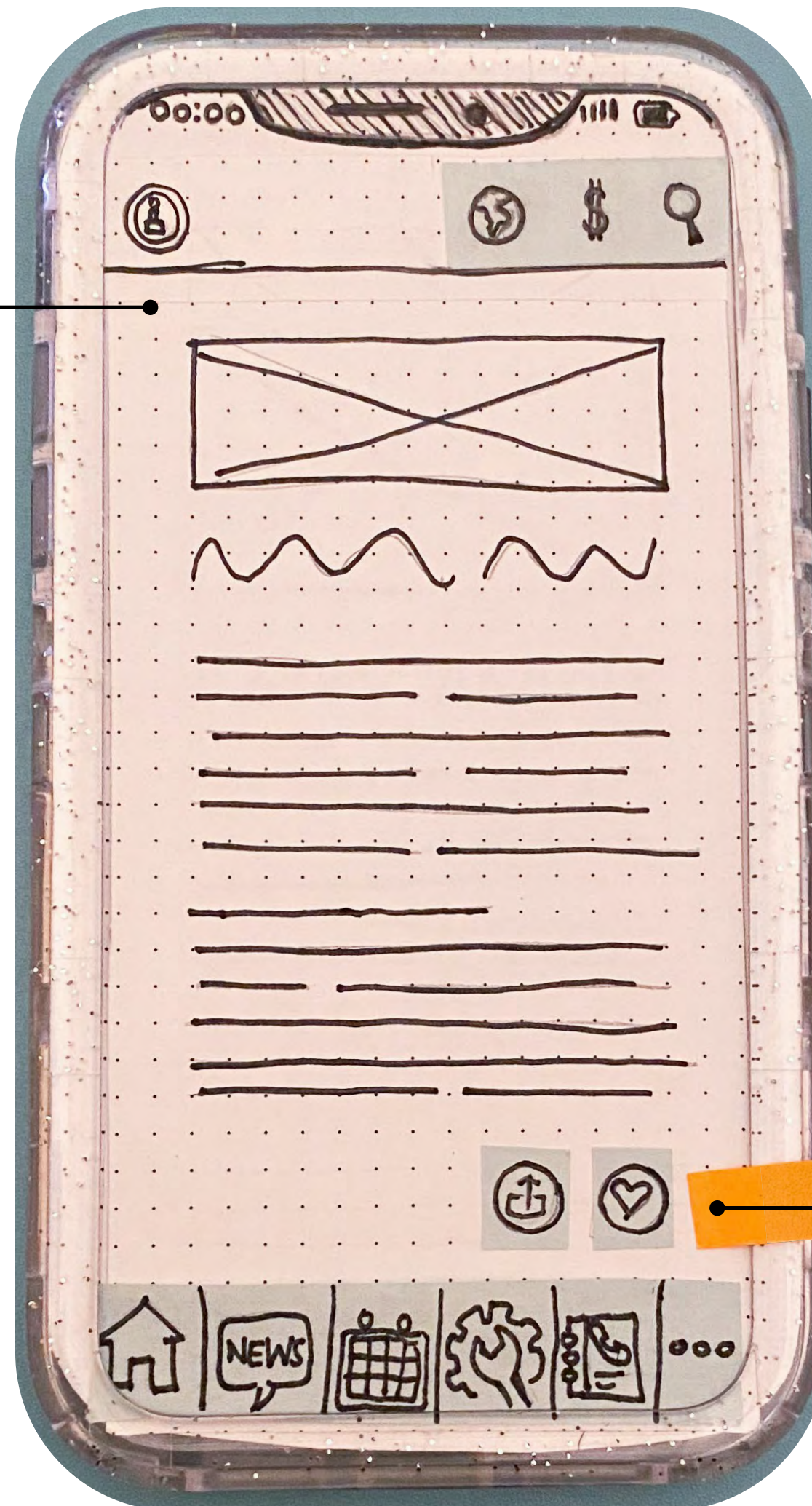
Finding Relevant Articles



Once an article is selected, the user is able to read the full article

"News" page contains search bar to locate articles related to a specific topic. The user can also browse a handful of the city's most recent articles

User selects recent article that meets their personal interests



User is notified when the article has been saved successfully

Given options to share or save the article, the user chooses to save the article

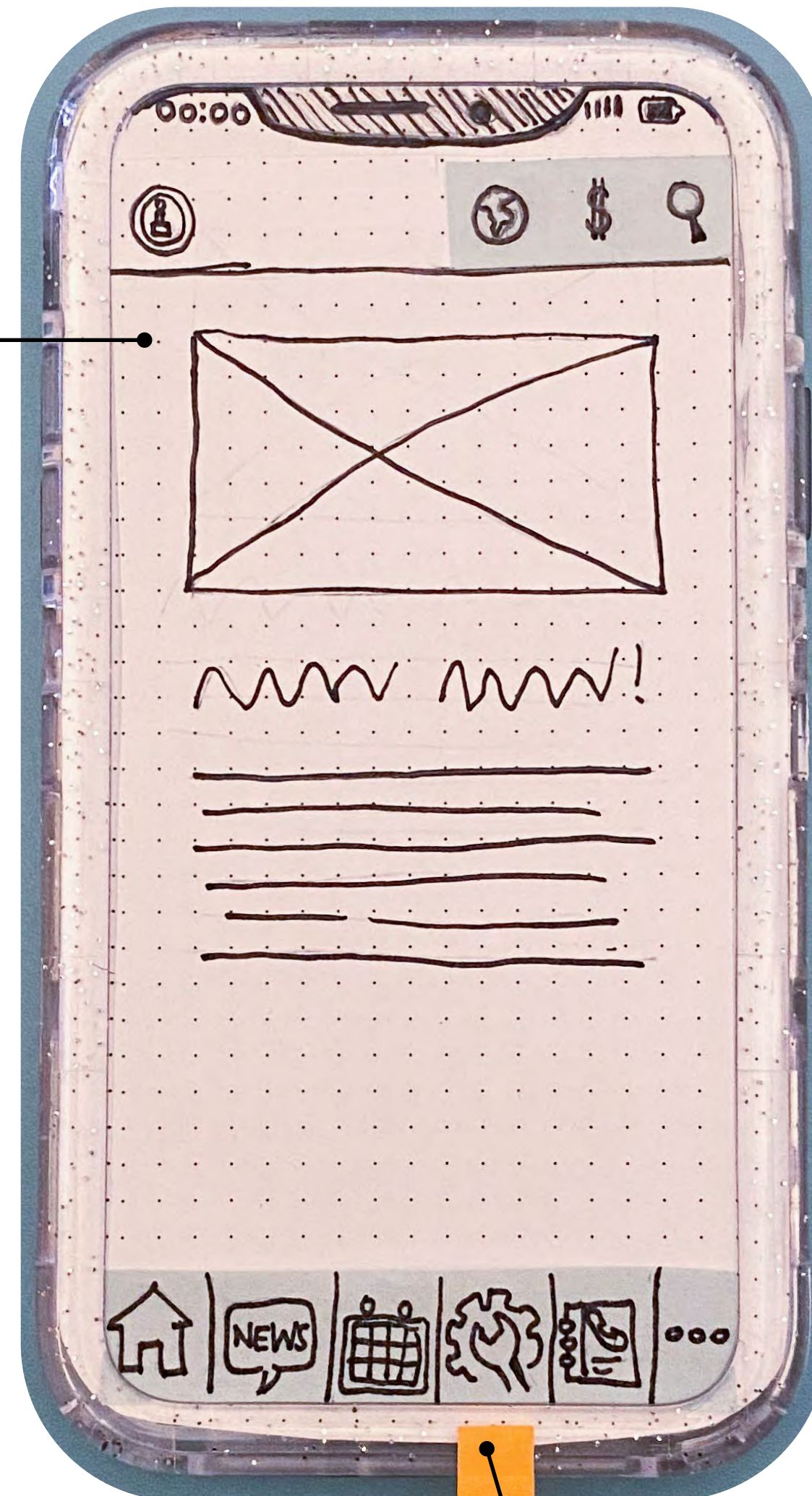


Submitting a Service Request

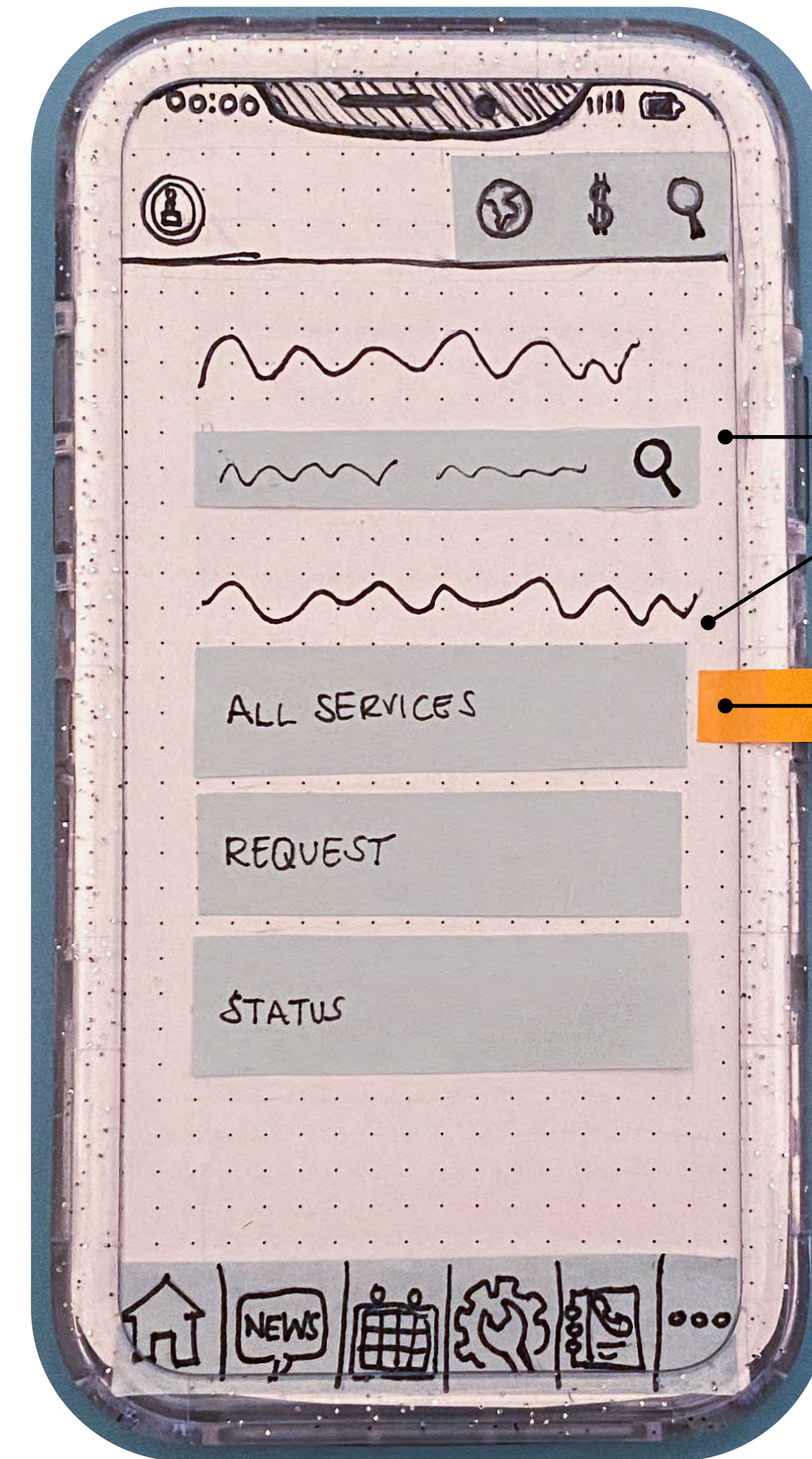


Home page

Splash screen appears when user opens app



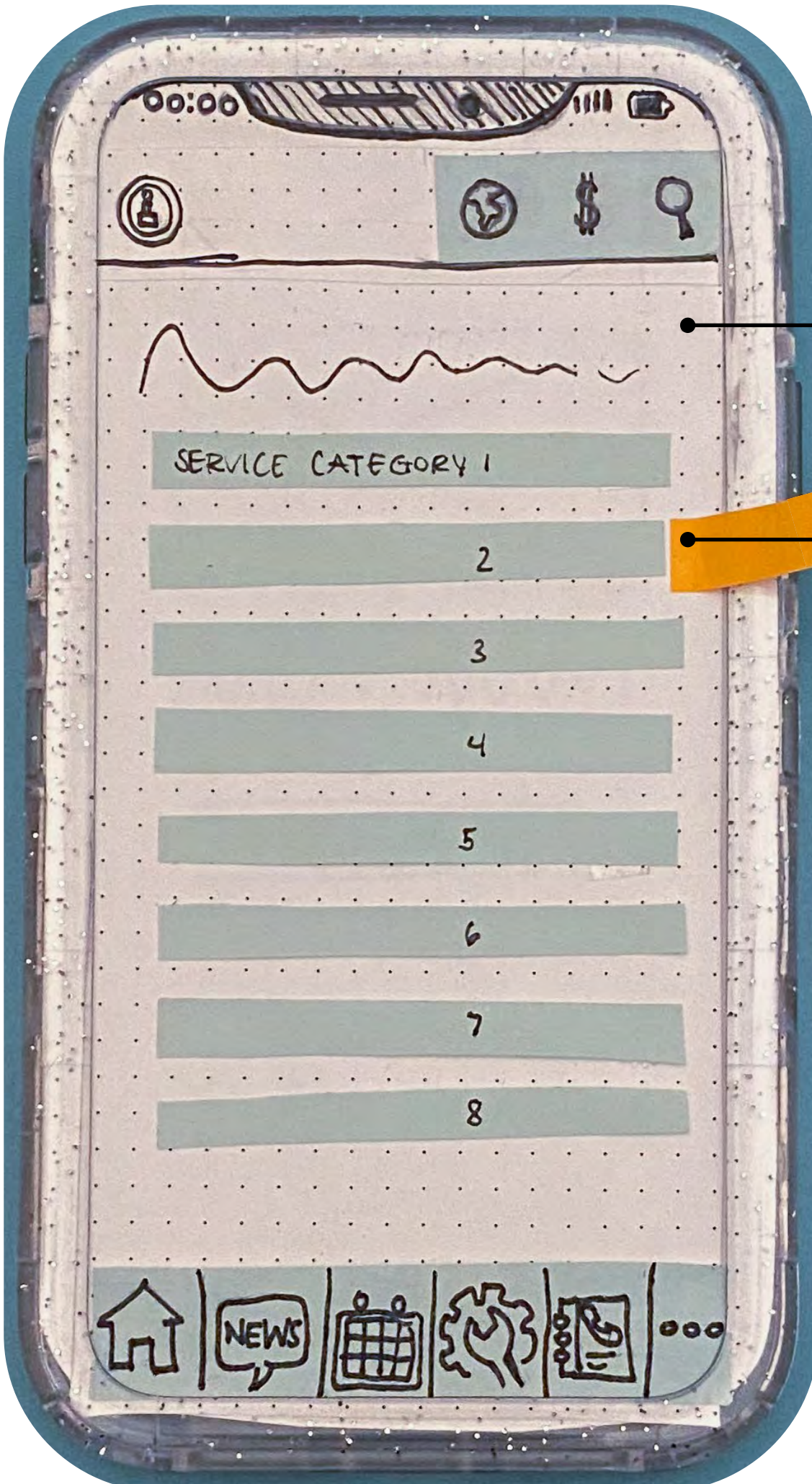
User selects "Services" from bottom navigation



"Services" page contains search bar to find specific services. The user can also browse all services, begin a service request, or check the status of a previously requested service

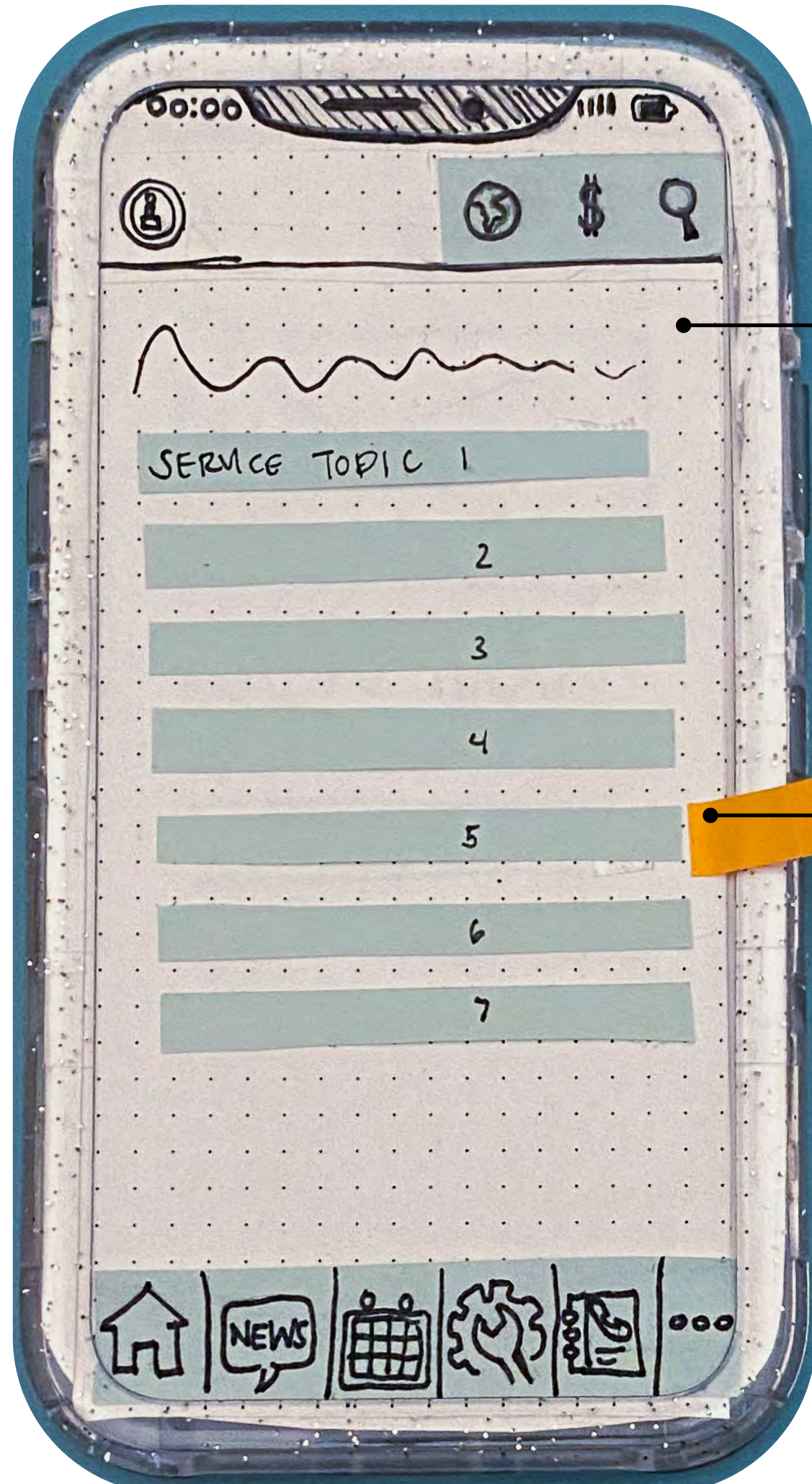
User selects all services

Submitting a Service Request



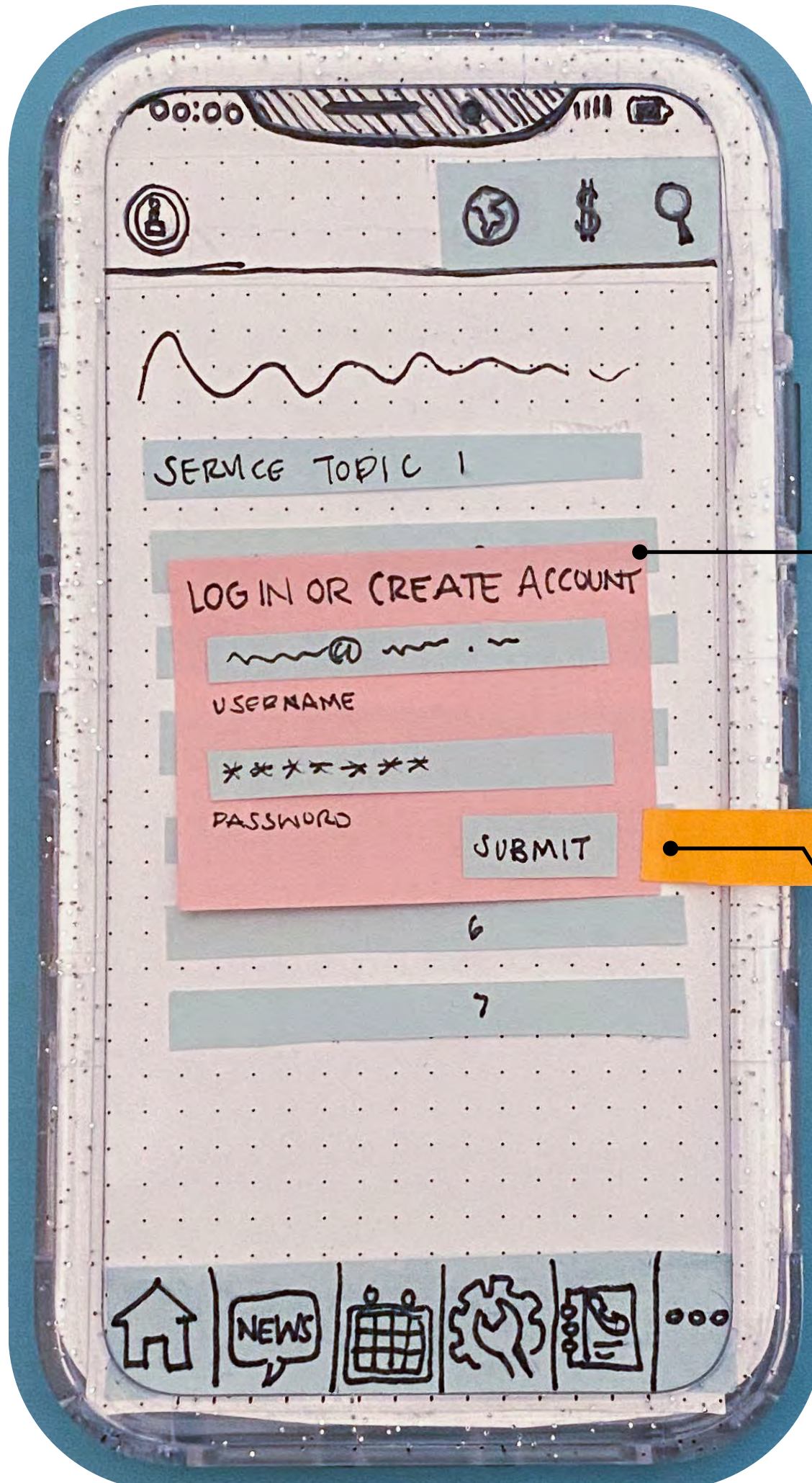
User views a list of service categories

User selects a category related to their desired request



User views a list of service topics within the category selected

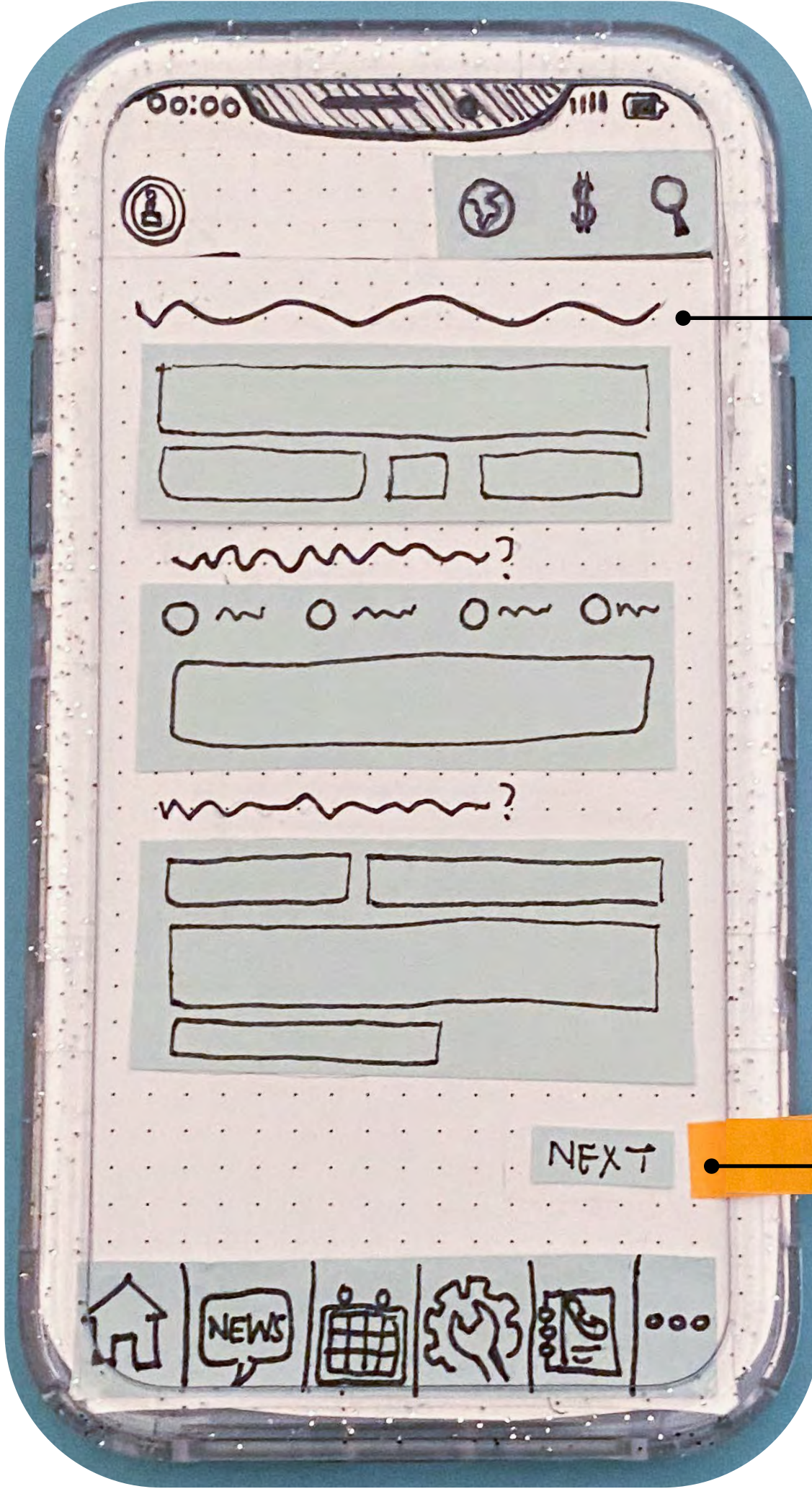
User selects their desired service topic



User is prompted to log in or create an account

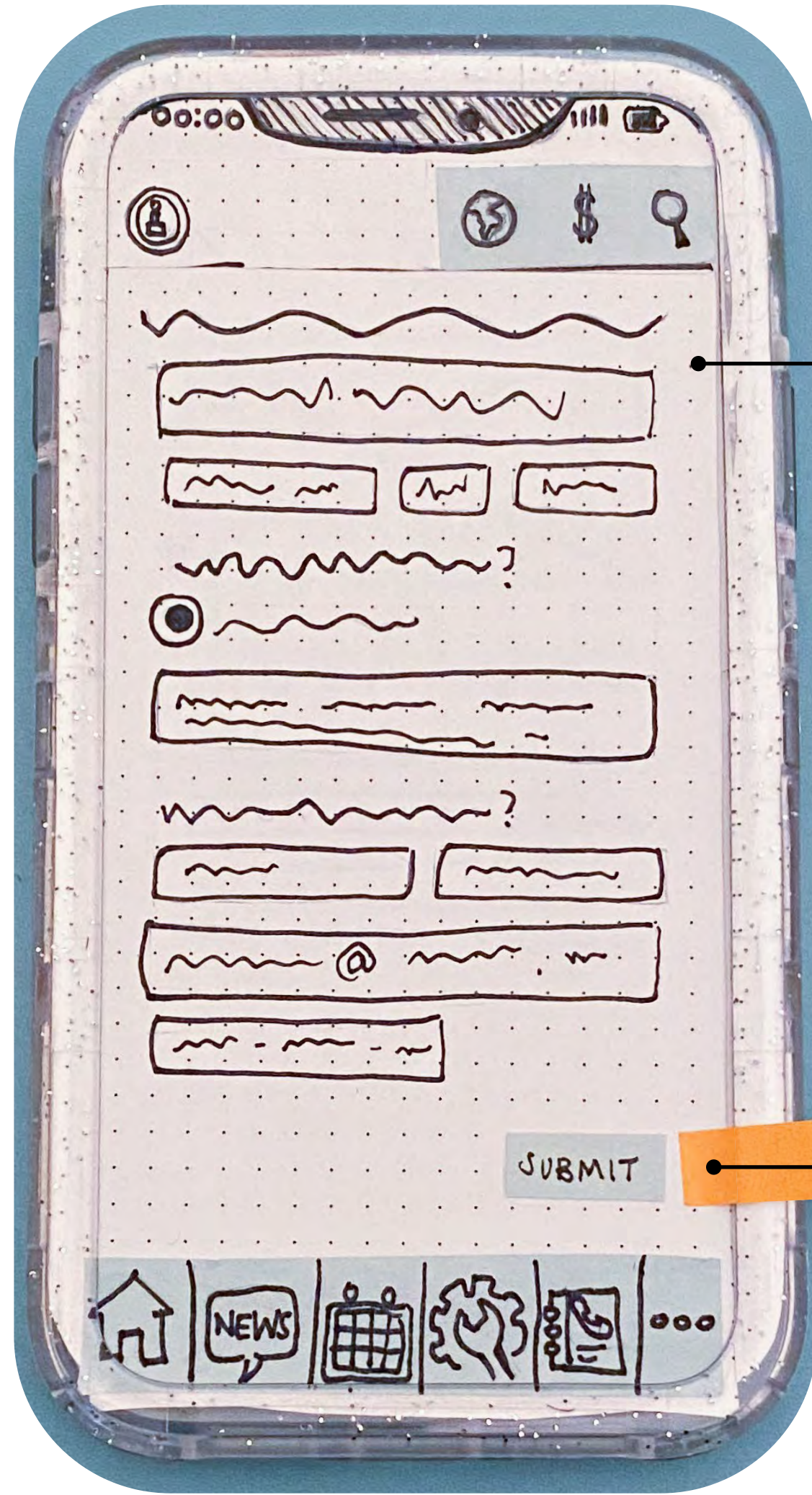
User adds info into text fields and submits

Submitting a Service Request



Selecting a service generates a form requesting service-related information from the user

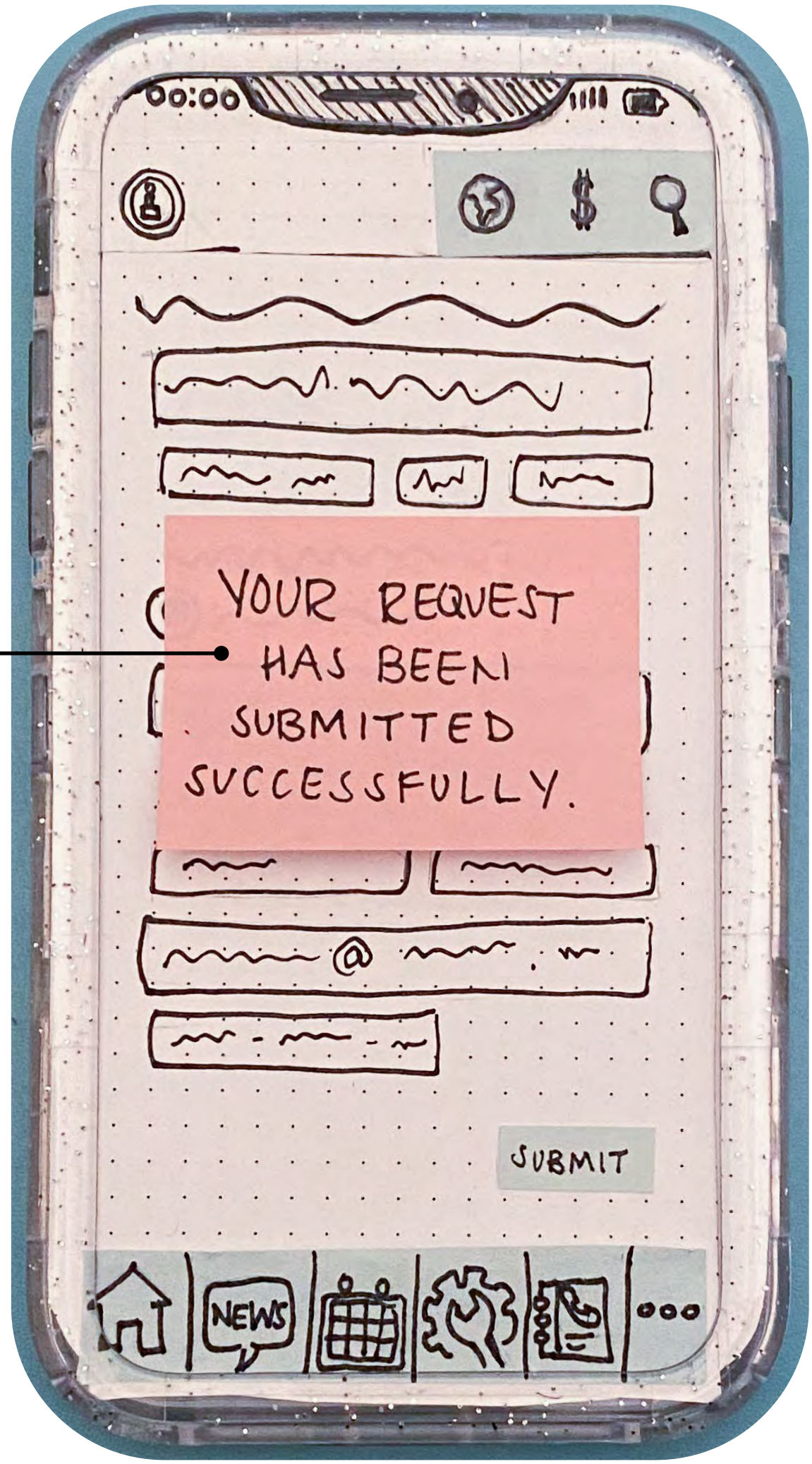
User enters information and clicks next



User is able to review the information they provided

User is notified when the request has been submitted successfully

After reviewing, the user submits the request

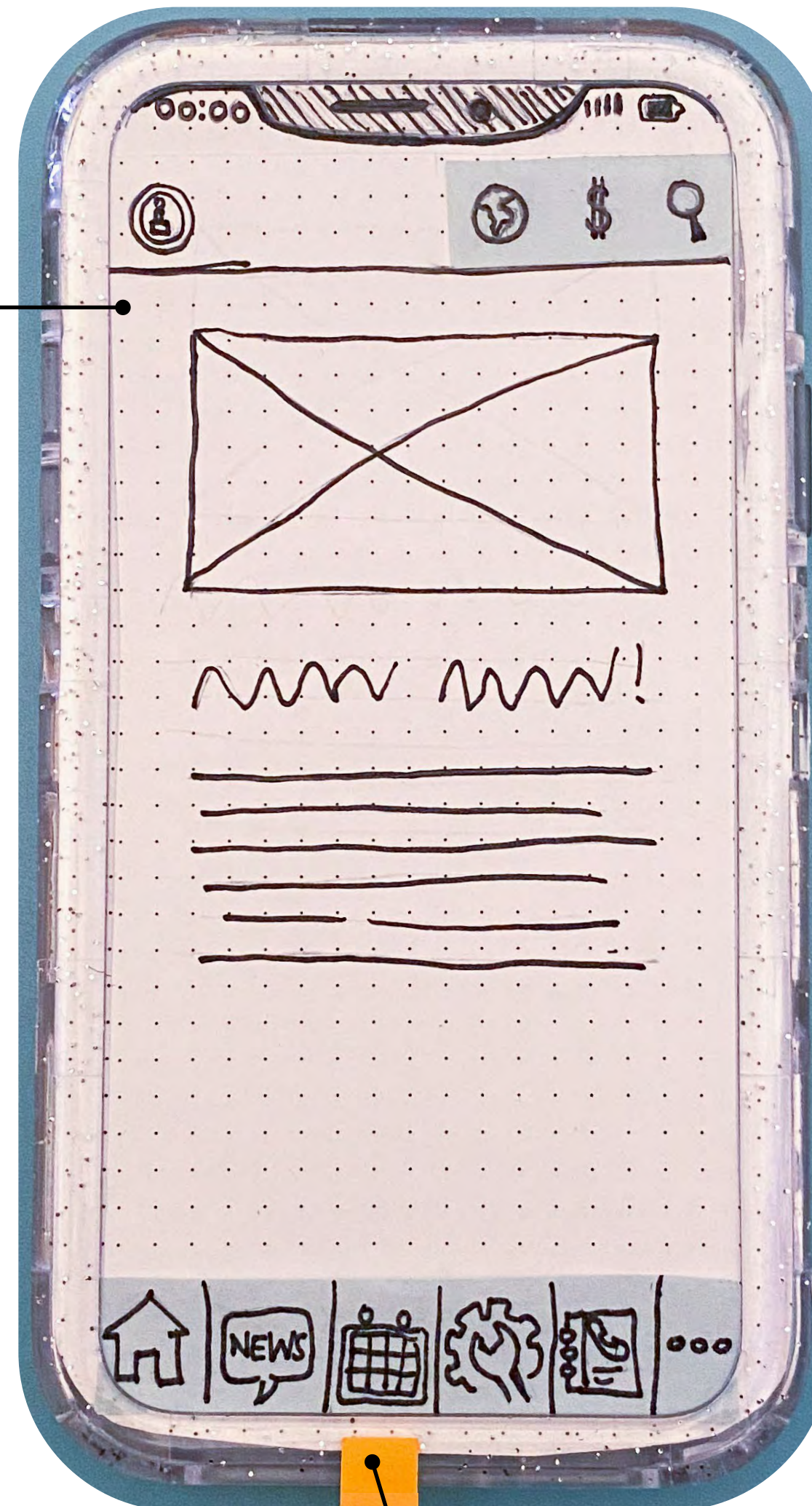


Finding a Local Event

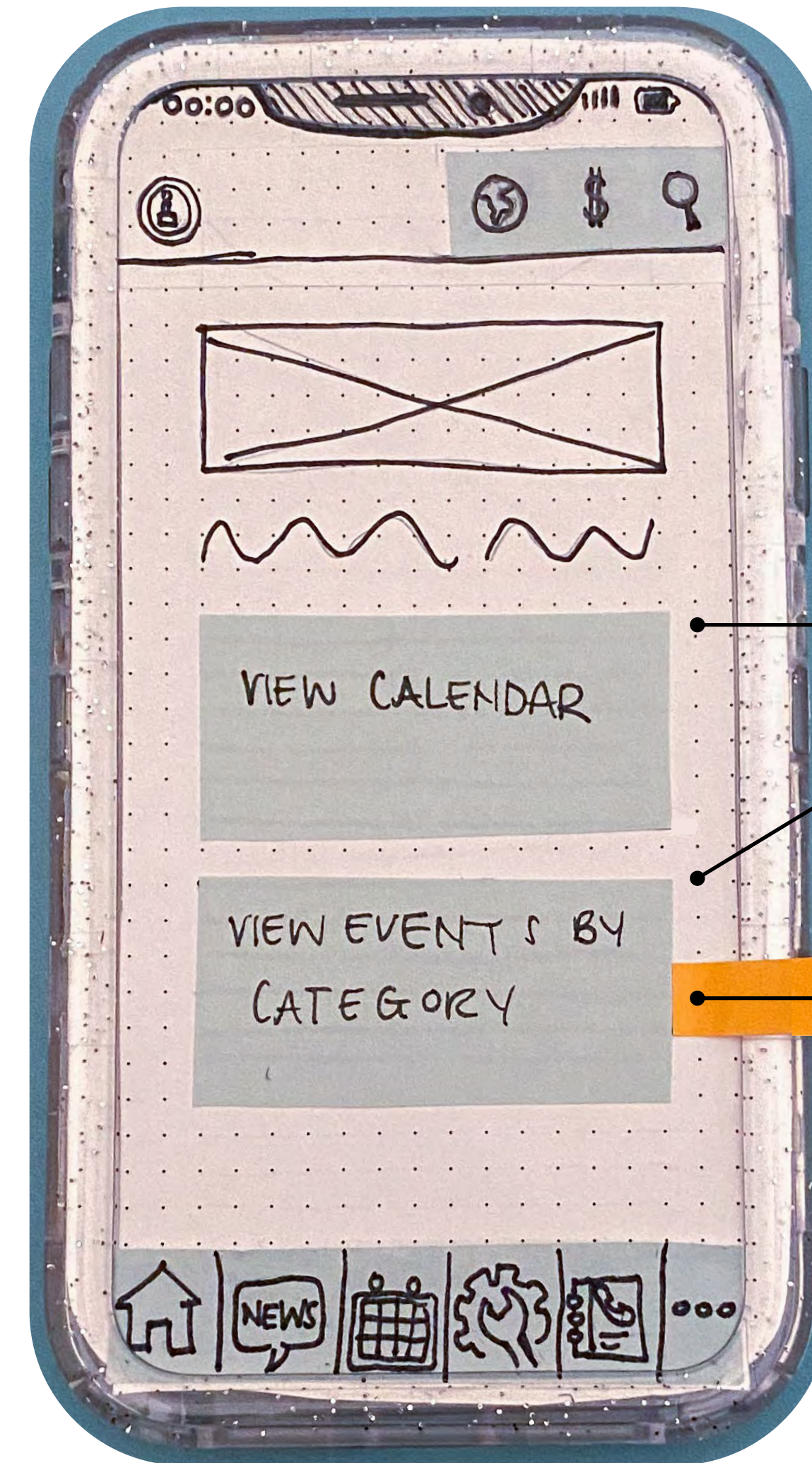


Splash screen appears when user opens app

Home page



User selects "Events" from bottom navigation

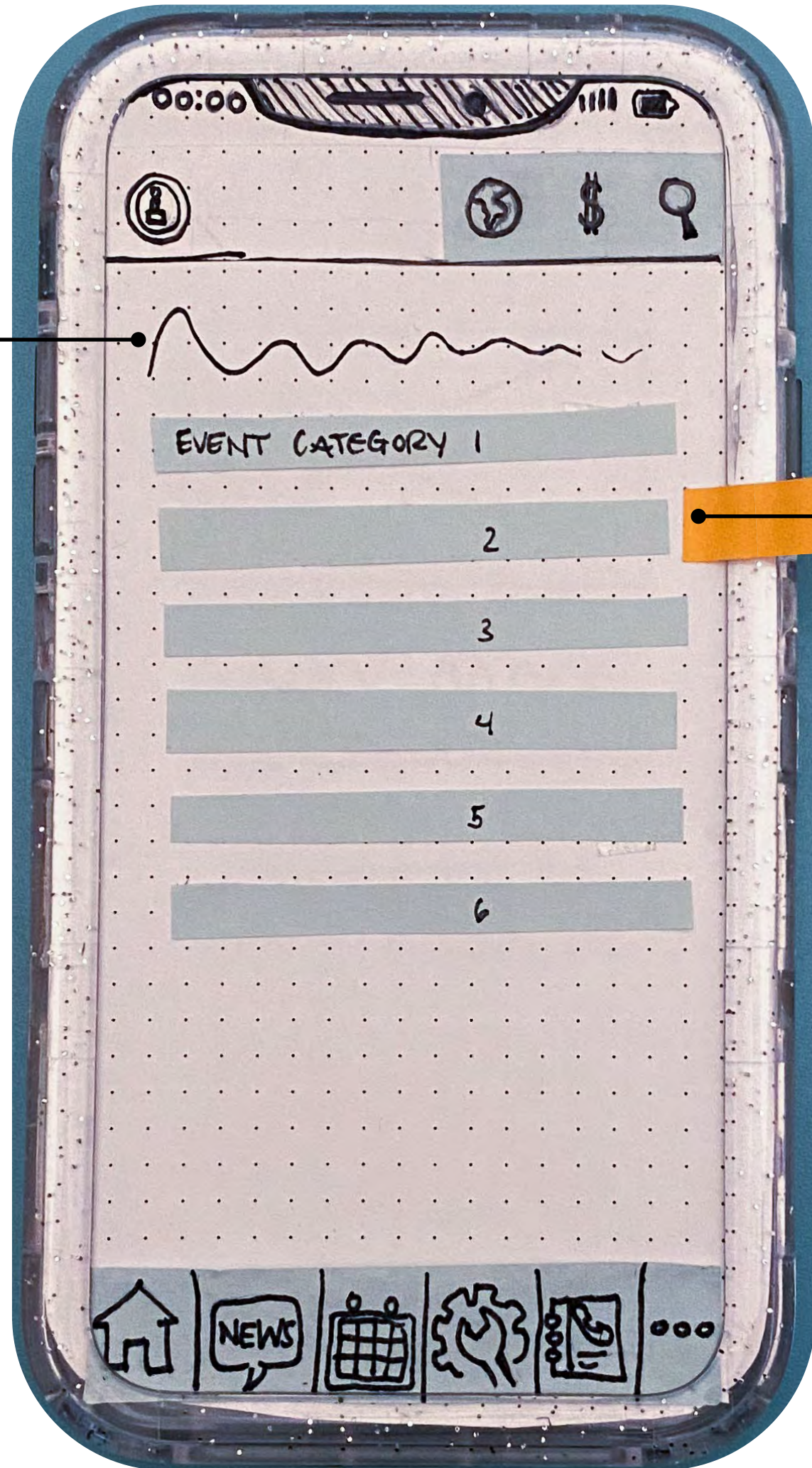


On the "Events" page, the user has the option to view the city's calendar of all upcoming events or view upcoming events within a specific category

User chooses to view event categories

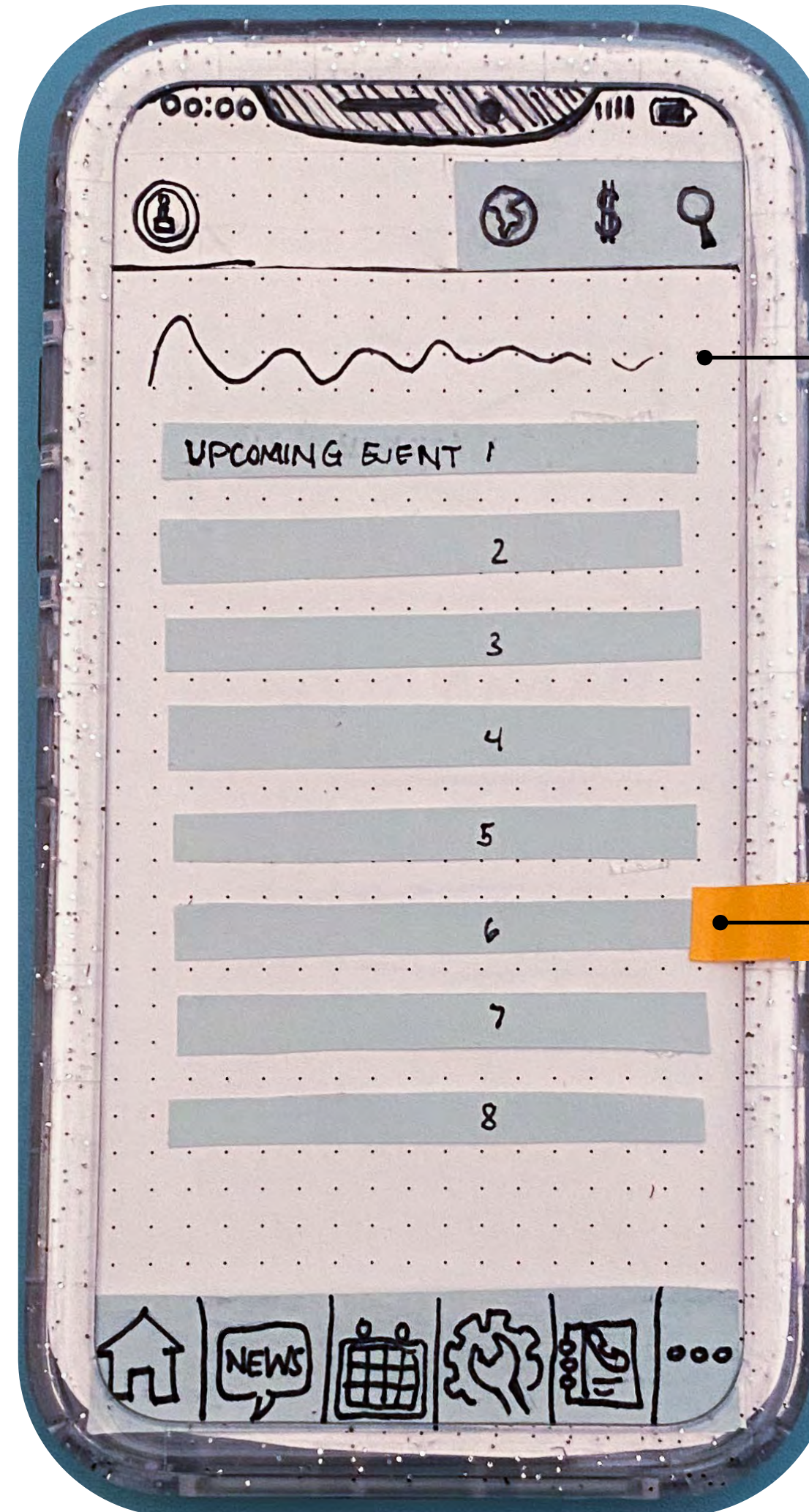
Finding a Local Event

User is given six categories to filter upcoming events by



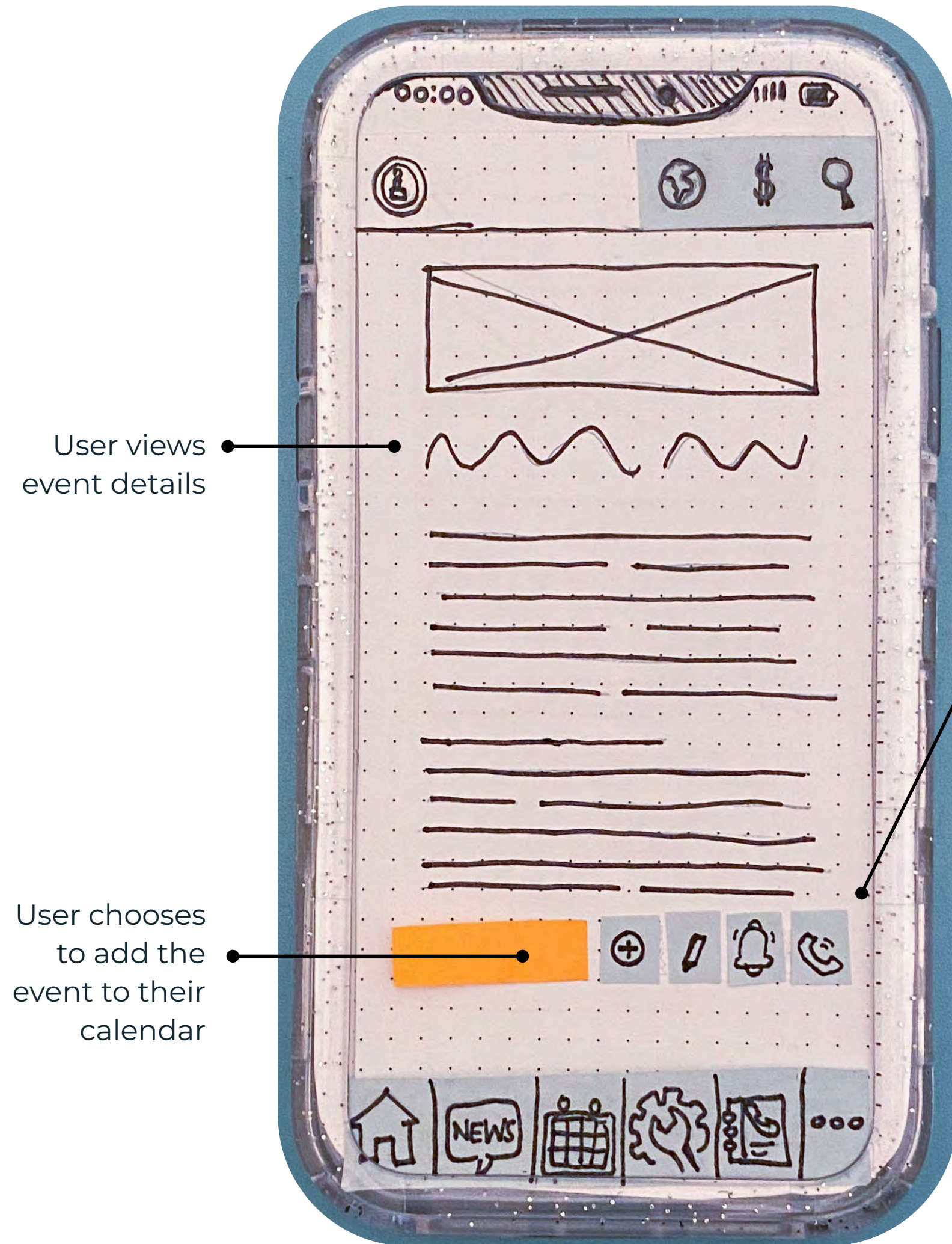
User selects a category that interests them

User views a list of upcoming events related to their topic of interest



User selects an event

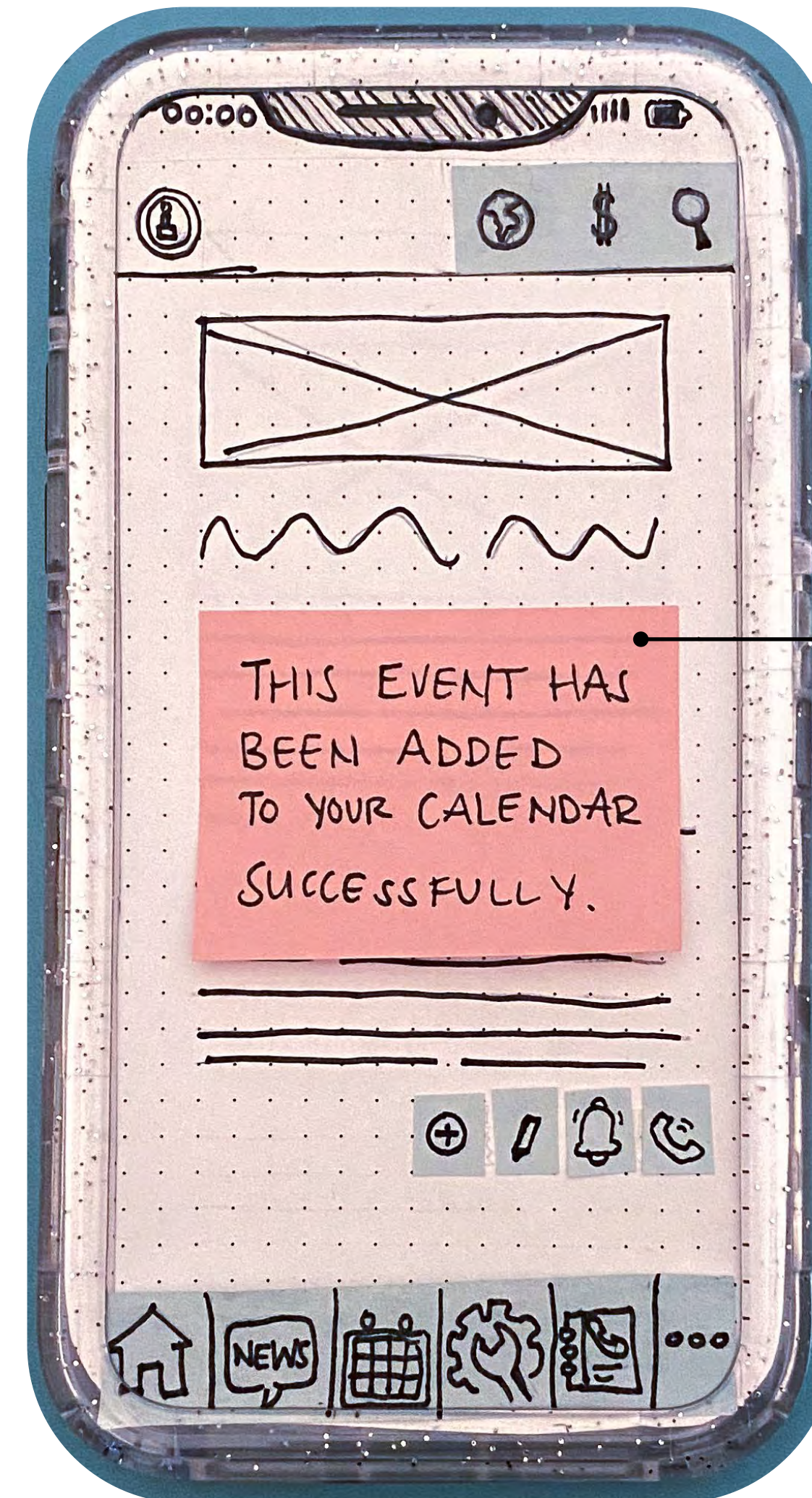
Finding a Local Event



User views event details

User chooses to add the event to their calendar

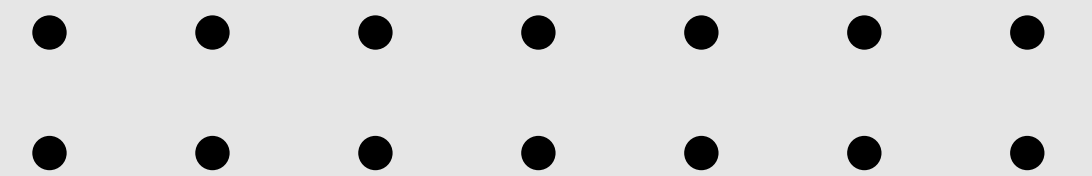
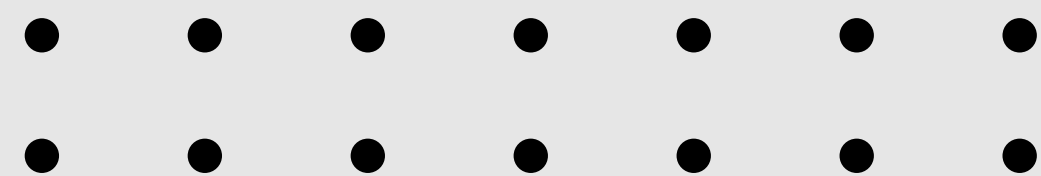
User is given the option to add the event to their calendar, register for the event, receive notifications, or contact the event organizer for more information



User is notified when the event has been added to their calendar successfully

Baltimorean App Usability Testing

Week 5



Project Overview

ABOUT THE APP

Baltimorean is a companion app, created to accompany the City of Baltimore website. This app would focus on the services and resources offered by the city. The goal of the app is to keep users in the loop, providing them with easy access to the city's latest news and upcoming events. The app would also allow residents to access the city's directory, submit and review service requests, and make online payments conveniently.

ABOUT THE USABILITY TEST

The Baltimorean app was brought to life using the Prototype on Paper app and web platform. This user test was designed to observe how users interact with Baltimorean. Two user testing sessions were completed with two participants. During the test, users completed three different tasks while explaining their thought processes out loud. Results of each session highlighted app features that were effective as well as problem areas within the app and gave insight into each user's overall experience.

[View Usability Test Session 1](#)

[View Usability Test Session 2](#)



Usability Test Script

Hi, _____. My name is Sola, and I'm going to walk you through this session today.

Before we begin, I have some information for you, and I'm going to read it to make sure that I cover everything.

You are probably aware that I am asking people to try using an app I have been working on, called Baltimorean. As a designer, I am asking people to try using the app to see whether it works as intended. The session should take no longer than 35 minutes, however, you are free to take as much time as you need to complete your tasks.

The first thing I want to make clear right away is that we're testing the app, not you. You can't do anything wrong here. In fact, this is probably the one place today where you don't have to worry about making mistakes.

As you use the app, I ask that you try to think out loud as much as possible. Try to say what you're looking at, what you're trying to do, and what you're thinking. This will help me and my process tremendously.

I would like to see how you would go about completing the tasks on your own, so if you have any questions, I would be happy to try and answer after we complete the tasks. However, if you get stuck at any point, feel free to stop and ask for help. And if you need to take a break at any point, just let me know.

Also, please don't worry that you're going to hurt my feelings. I'm doing this to make improvements to the app, so I need to hear your honest reactions.

With your permission to use the recording feature within zoom for this session, I will record what happens on the screen and our conversation during testing. The recording will be used to help me to improve the app. Also, this information will be shared with my professor, and my fellow students enrolled in my UX course at Quinnipiac University.

Could you kindly accept these conditions?

Wait for tester's audible response.

Begin recording upon approval.

Do you have any questions so far? OK.

Before we look at the site, I would like to ask you a few quick questions.

- *First, what's your occupation? What do you do all day?*
- *Now, roughly how many hours a week (or day) altogether—just a ballpark estimate— would you say you spend using the Internet, including web browsing and email, at work and at home?*
- *What kind of mobile devices do you utilize regularly to access the internet, such as a smartphone or tablet? What are the brands of these devices?*
- *Do you think you use mobile devices more than your desktop or laptop or vice versa? Or is your use of mobile devices equal to your use of your desktop?*
- *What mobile apps do you think you utilize the most? This could include apps you have downloaded or apps native to your device?*
- *Do you have any favorite apps?*

OK, great. Thank you! We're done with the questions, and we can start doing things.

Send link to Baltimorean prototype using zoom chat feature.

In the chat, I'll send you a link to the app I mentioned earlier. When you get this, open up the link and feel free to close any other tabs, browsers, or programs. When you're ready, please share your screen.

Ask the following for splash and home screens.

Feel free to look at this screen and give me your first impressions. Feel free to express anything and everything that may come to mind.

- *How does it make you feel? What are you thinking the app is for? Who may use it? What do you think you can do with the app?*

Usability Test Script

Awesome, thank you! I'm now going to give you specific tasks to complete within the app. I will read aloud what you should do. If you need me to repeat the task prompt again, don't hesitate to ask. Remember to think and process your task and steps out loud so that I can take note of your observations and experience.

Read Task Prompt 1.

Alright, we can move onto the second task. You can feel free to return to the home page or jump right into the next task.

Read Task Prompt 2.

Thank you. We can now move onto the final task.

Read Task Prompt 3.

Great! You have completed all tasks. That was very helpful. Thank you.

Before I let you go, do you have any questions or comments? You can speak on your experience, any specific features, things you find helpful, things that may not work well, areas where you may have been confused, general questions about the app, and so on.

What worked well for you? What do you think could be improved?

Before we finish up here, any last thoughts or questions?

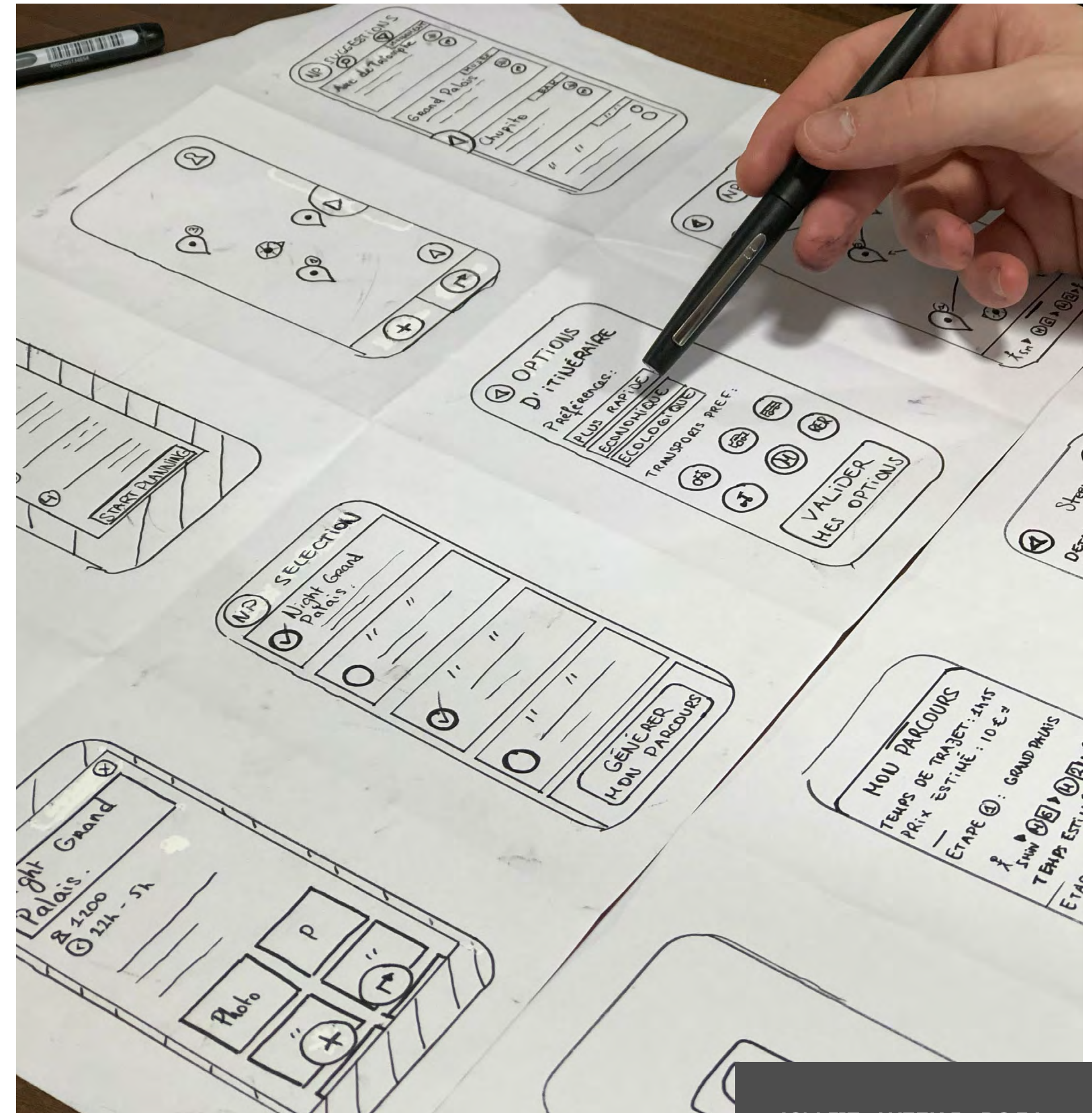
Okay, thank you so much for taking the time to participate in this session. I really appreciate your feedback and input and I hope you enjoy the rest of your day!

End recording.



Task Prompts

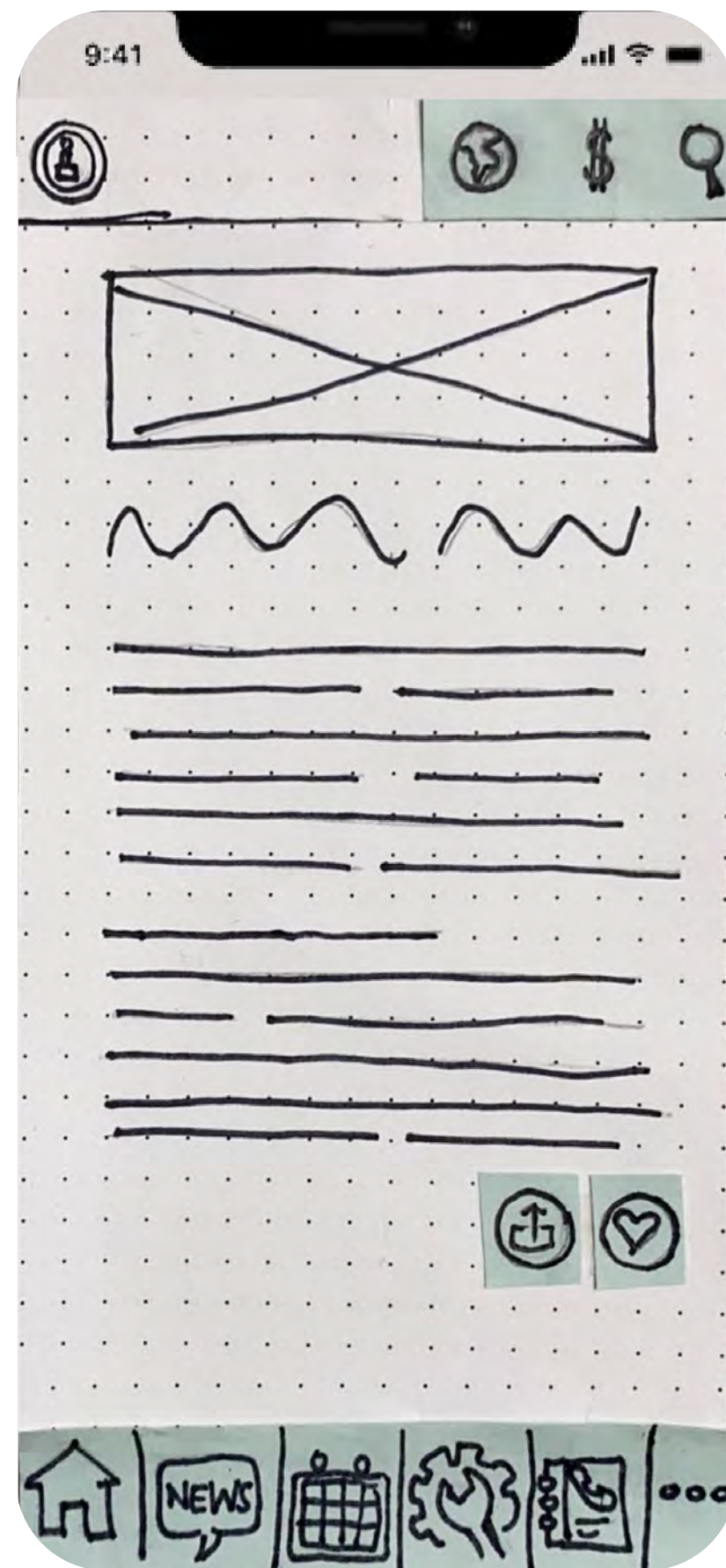
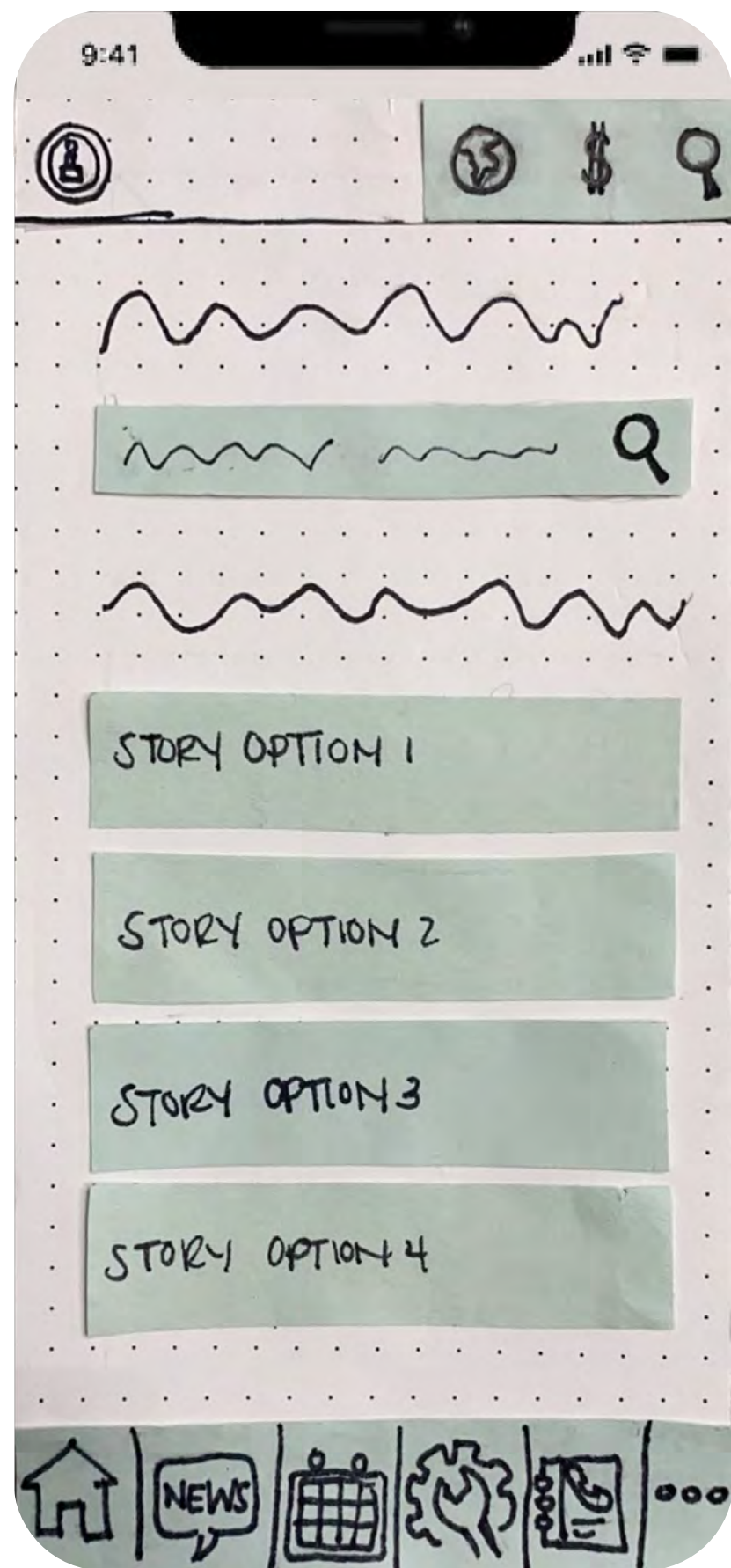
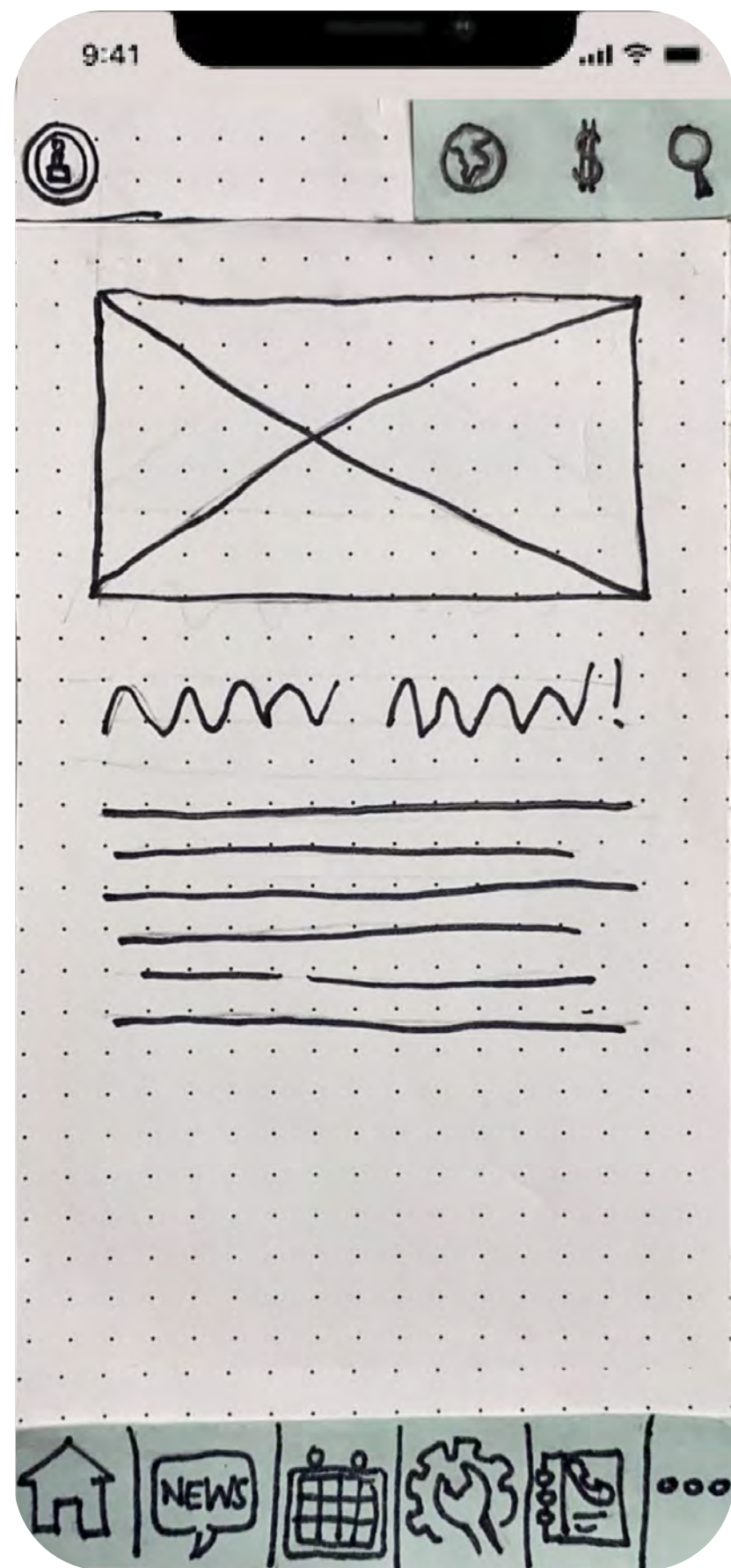
- » **Task 1:** You would like to read one of the most recent news articles published by the City of Baltimore. After reading the story, favorite or save it for later reference.
- » **Task 2:** You have noticed a pothole developing on a road you frequently use. You would like to view all services and notify the city by submitting a service request.
- » **Task 3:** You would like to view upcoming events within a specific event category. Once you find an event you are interested in, add it to your calendar.



Prototype Screens: Task 1

The full version of the Baltimorean prototype can be found [here](#).

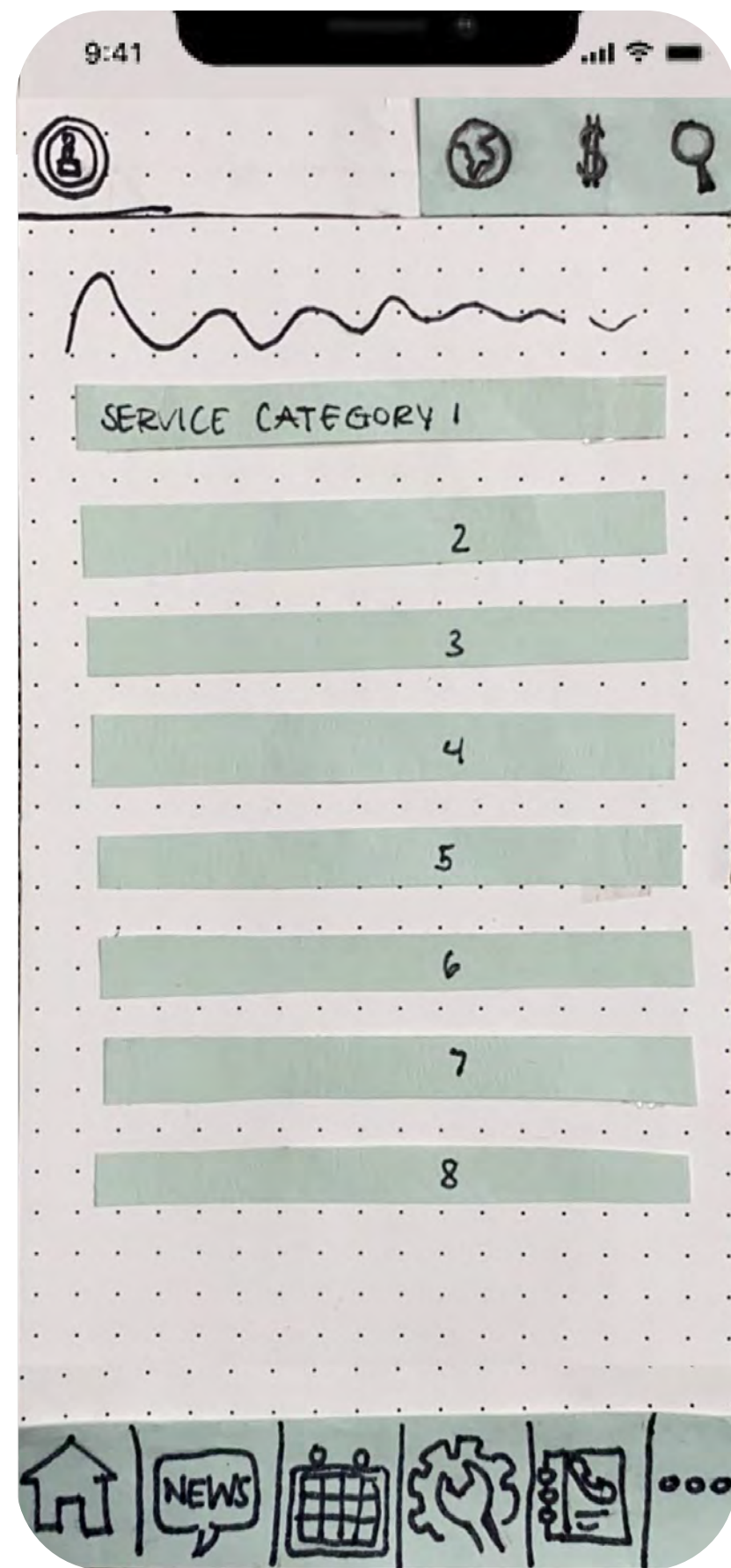
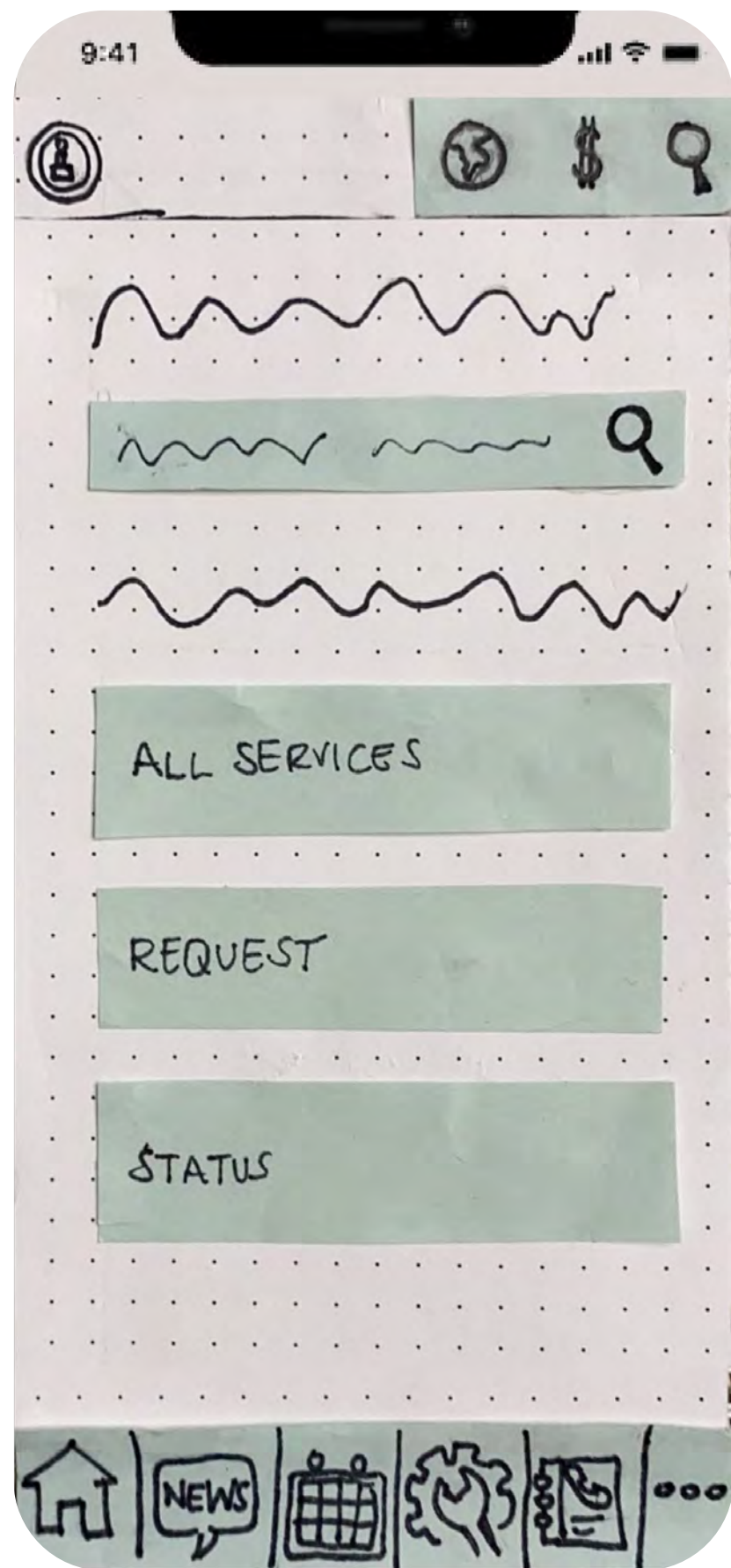
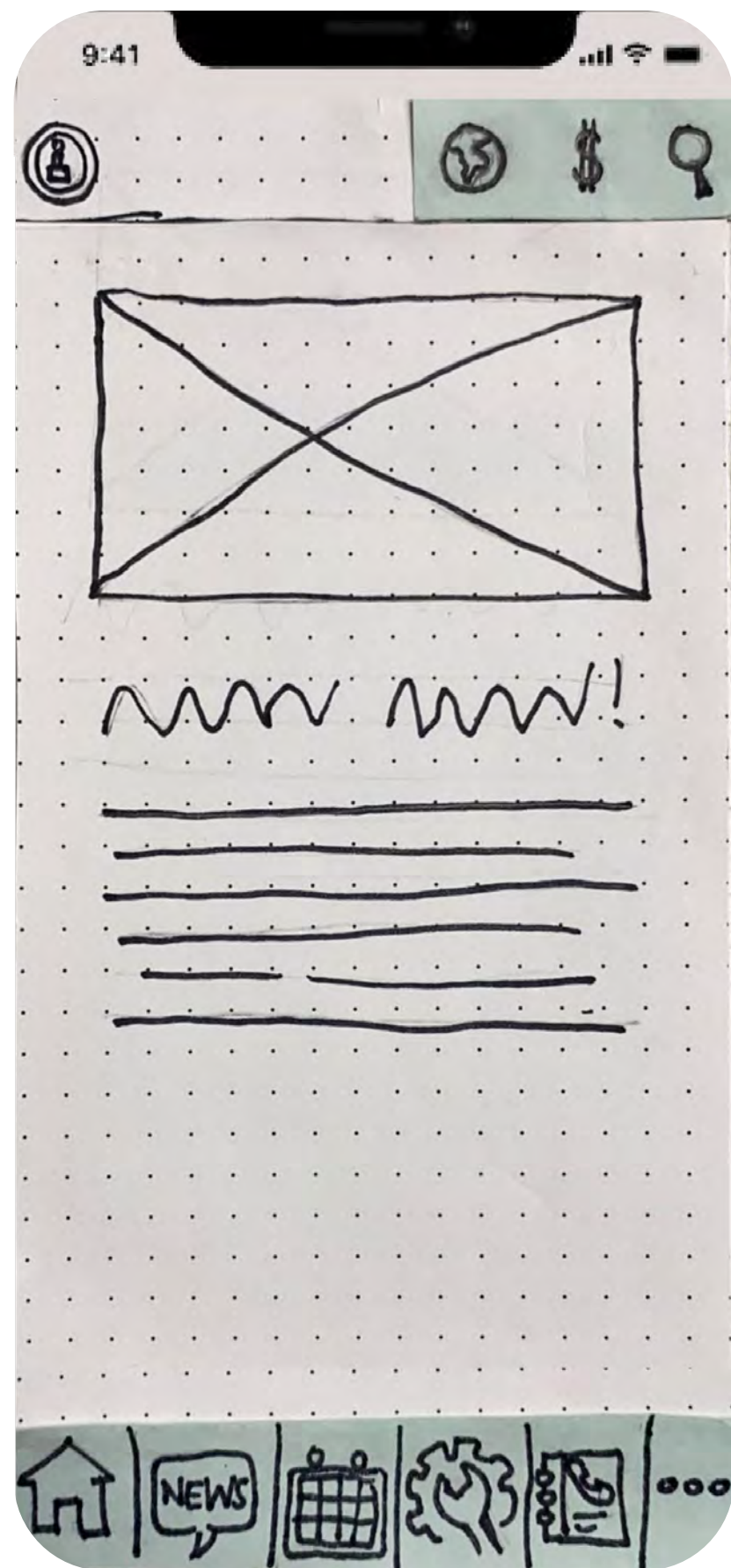
- » **Task 1:** You would like to read one of the most recent news articles published by the City of Baltimore. After reading the story, favorite or save it for later reference.



Prototype Screens: Task 2

The full version of the Baltimorean prototype can be found [here](#).

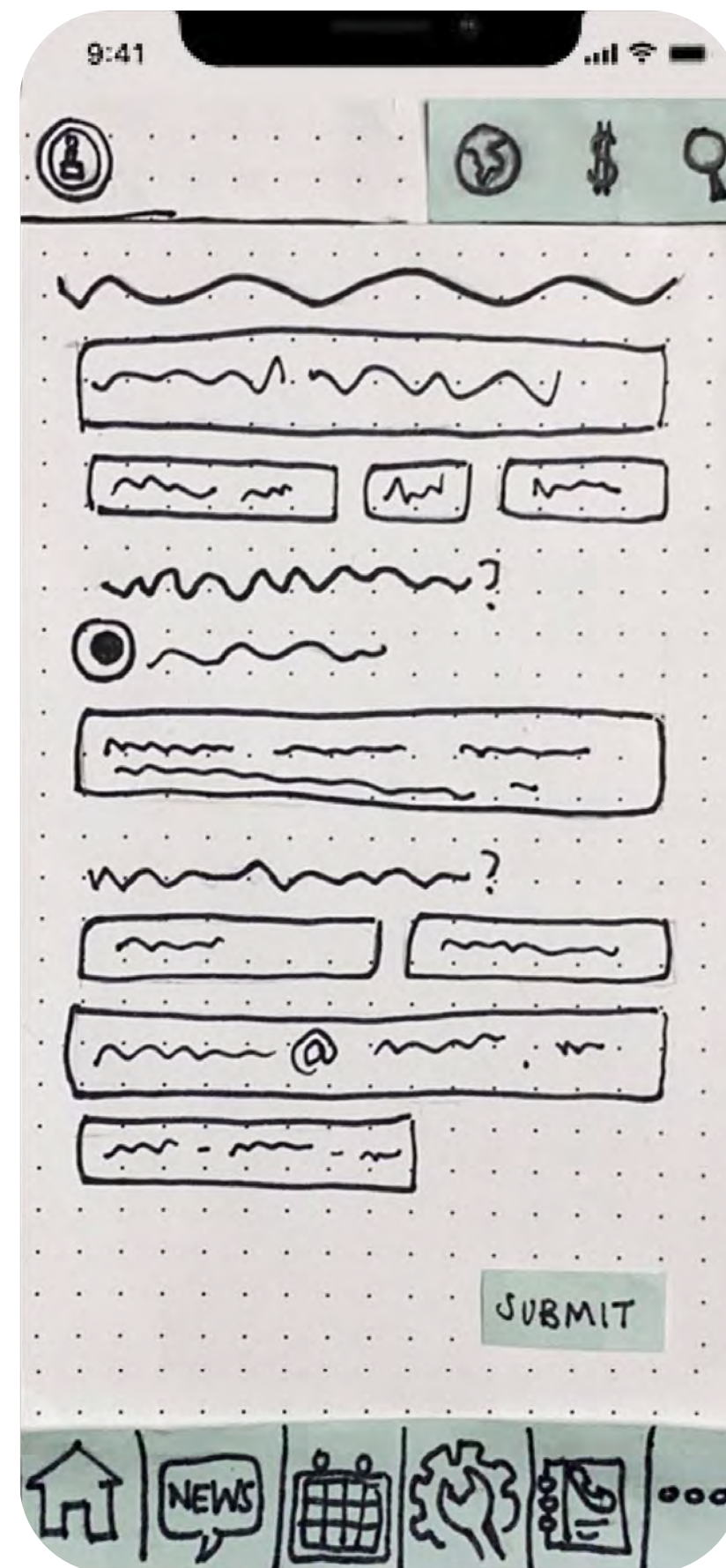
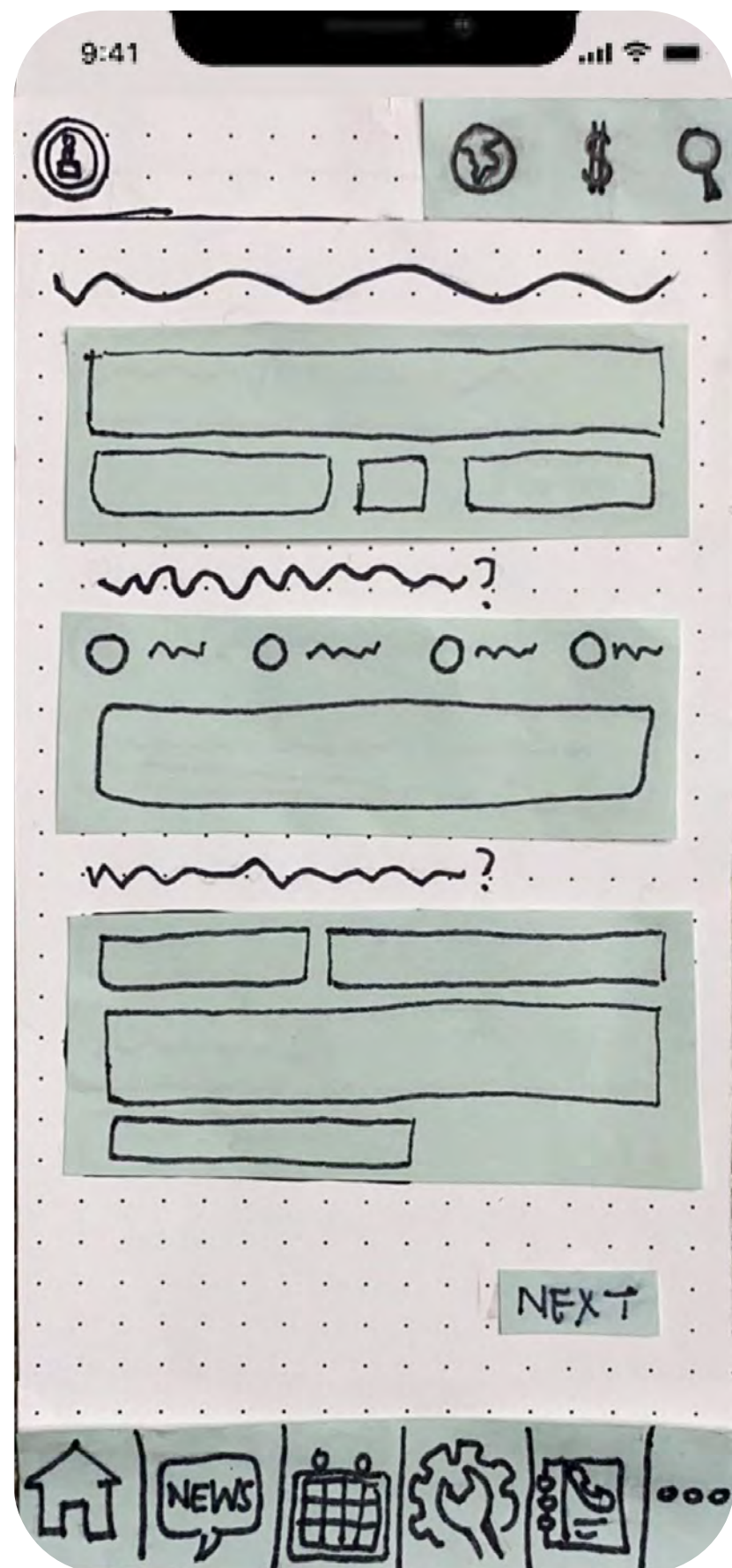
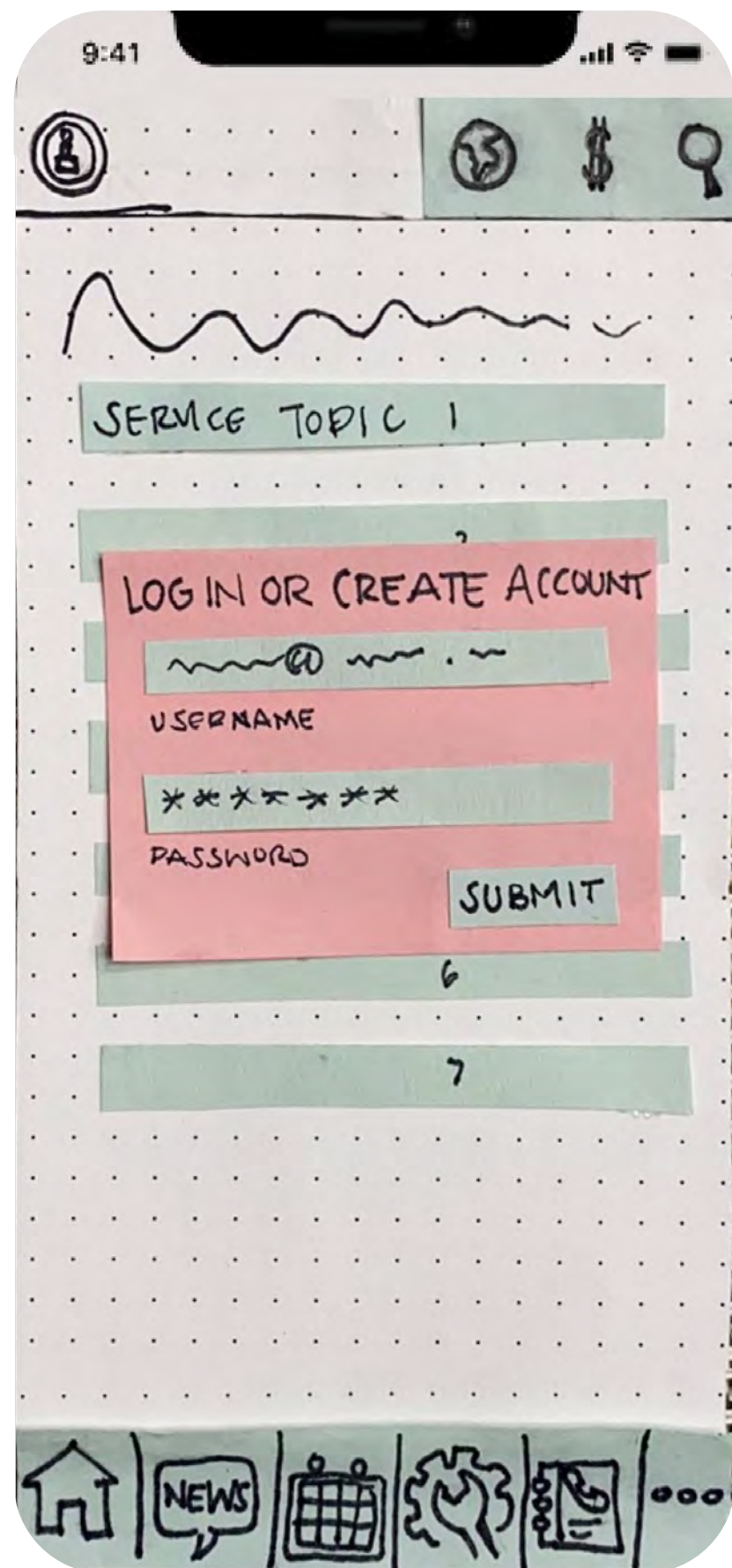
- » **Task 2:** You have noticed a pothole developing on a road you frequently use. You would like to view all services and notify the city by submitting a service request.



Prototype Screens: Task 2

The full version of the Baltimorean prototype can be found [here](#).

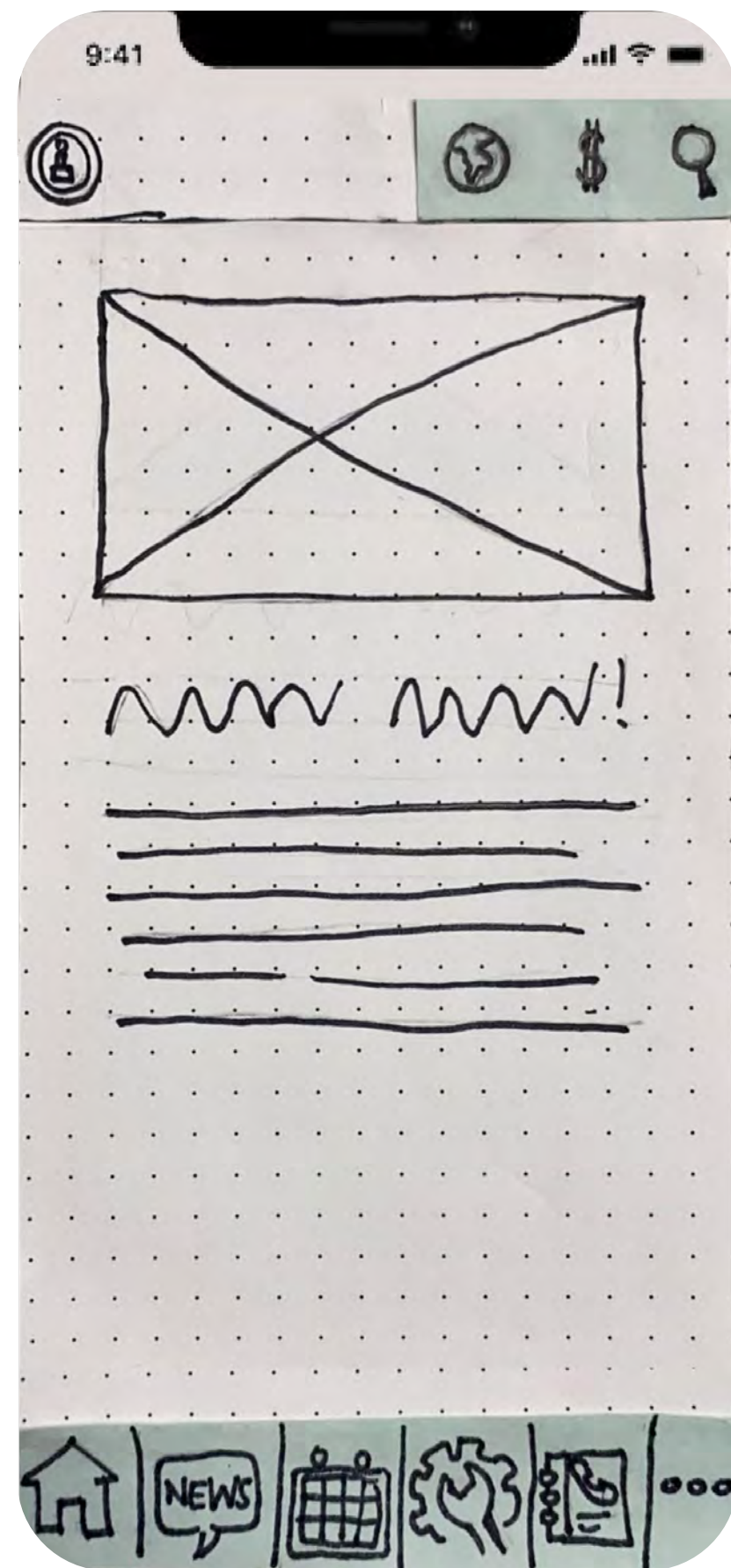
- » **Task 2:** You have noticed a pothole developing on a road you frequently use. You would like to view all services and notify the city by submitting a service request.



Prototype Screens: Task 3

The full version of the Baltimorean prototype can be found [here](#).

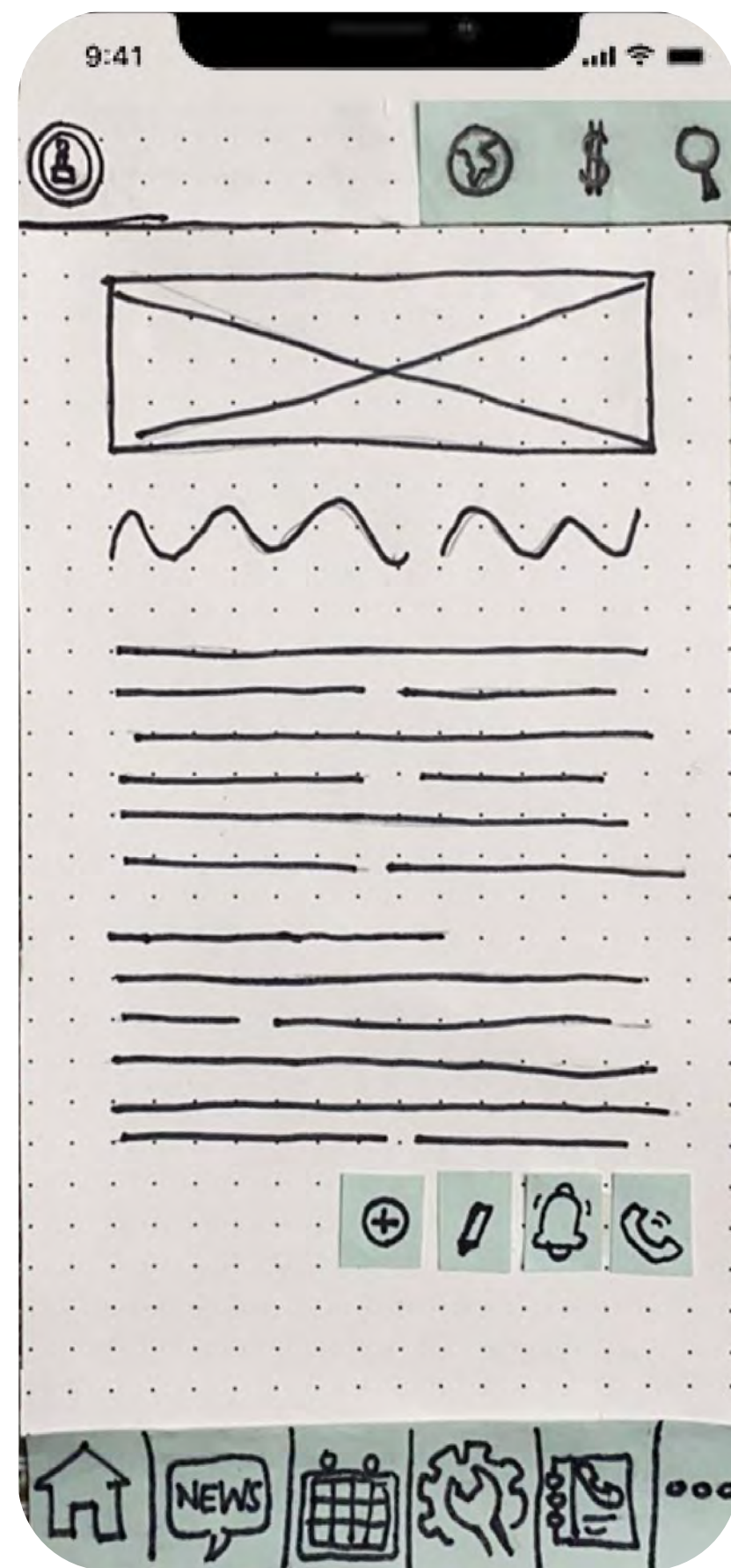
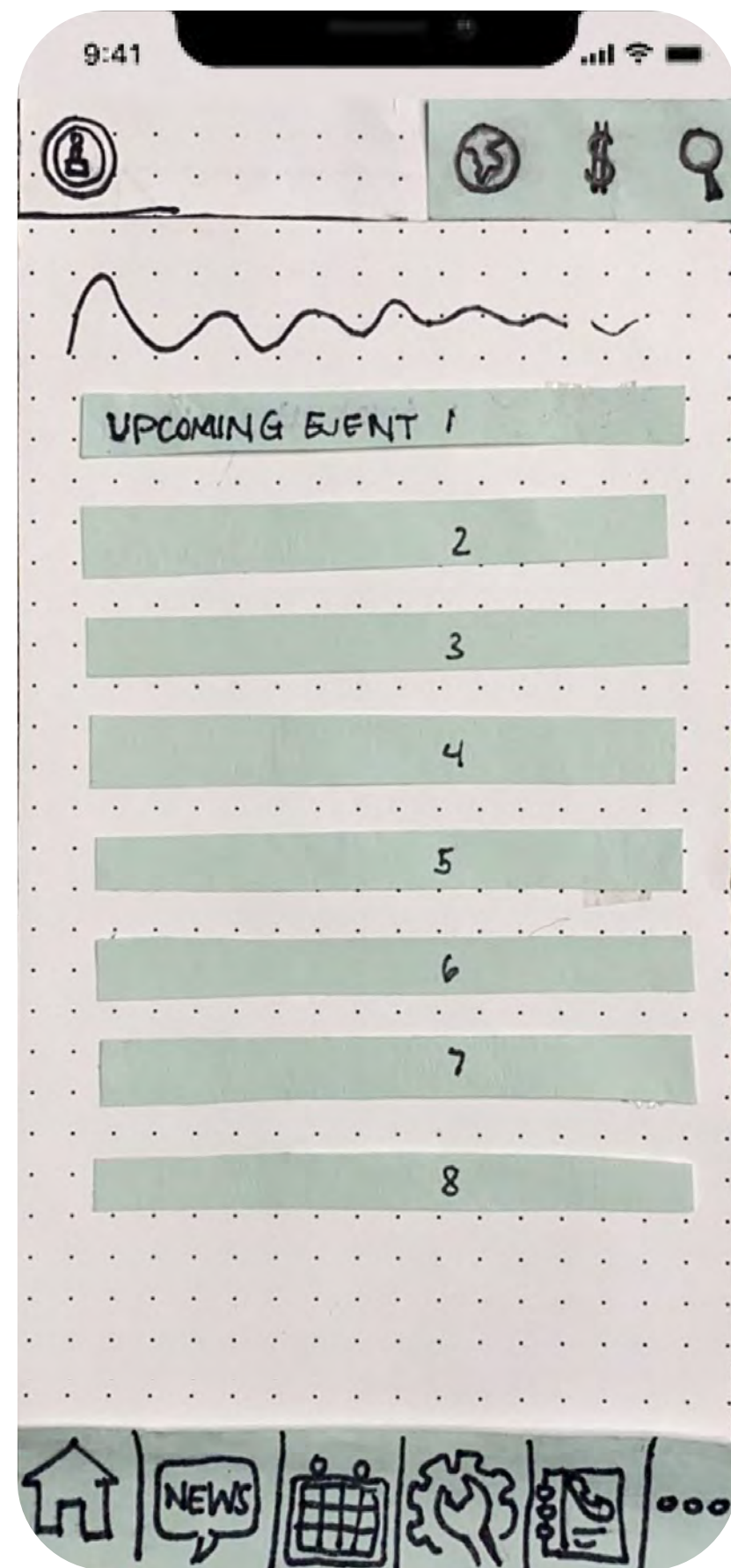
- » **Task 3:** You would like to view upcoming events within a specific event category. Once you find an event you are interested in, add it to your calendar.



Prototype Screens: Task 3

The full version of the Baltimorean prototype can be found [here](#).

- » **Task 3:** You would like to view upcoming events within a specific event category. Once you find an event you are interested in, add it to your calendar.



Summary of Findings

The usability test sessions gave great insight into what works well within the Baltimorean app and what needs revising. Both participants mentioned that the app was very straightforward and clear.

The following potential problem areas were highlighted during user testing sessions:

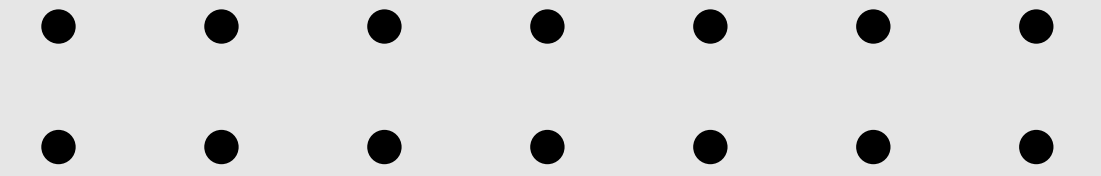
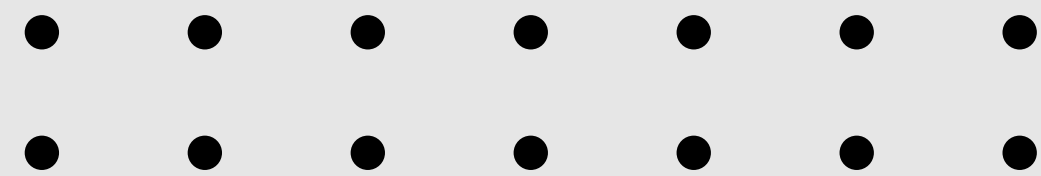
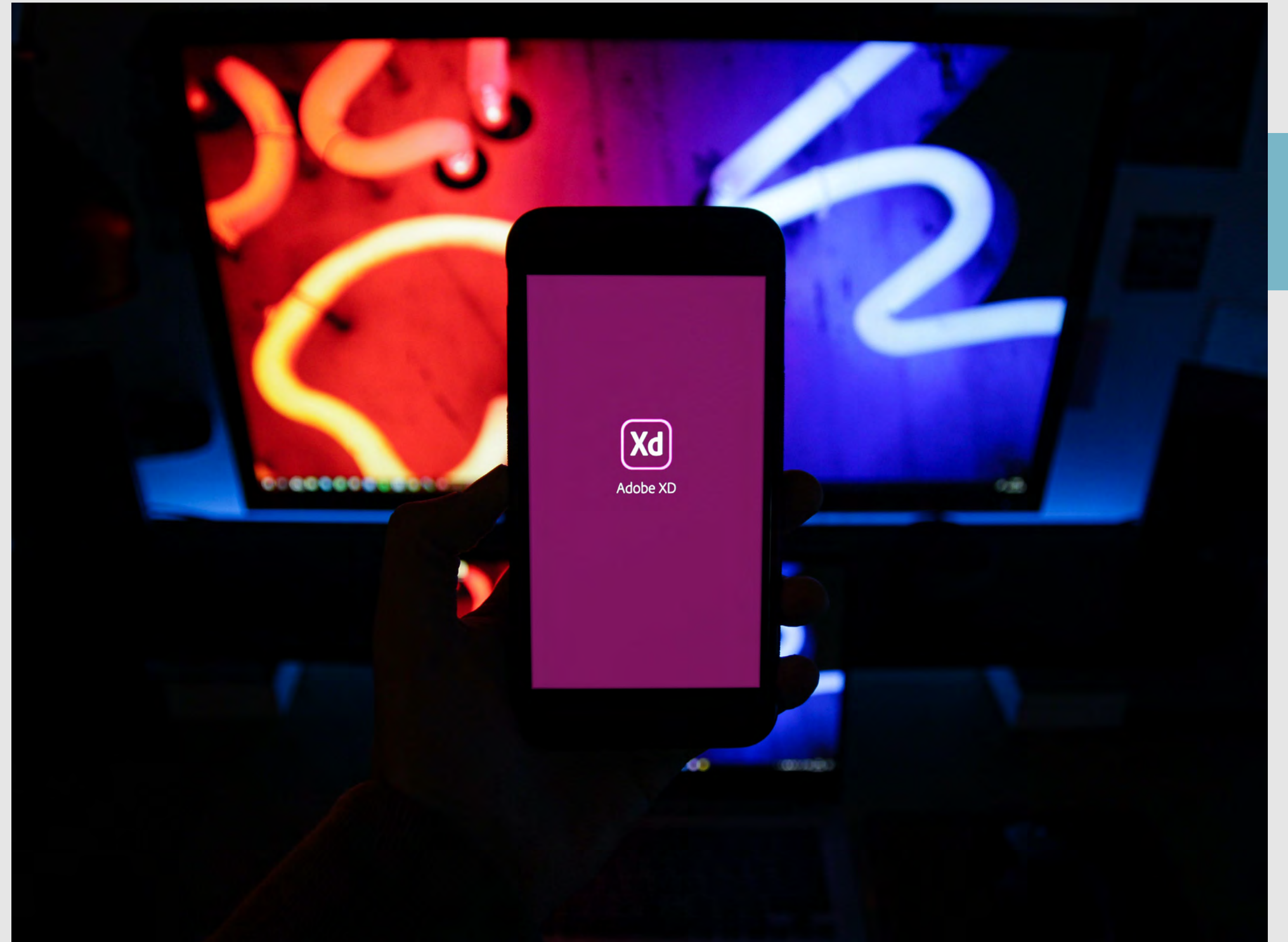
- The app needs a back button in case users want to return to a previous step within their journey.
- The icons on the event pages should be revisited to represent and communicate “add to calendar,” “register,” “turn on notifications,” and “contact event planner” more clearly.
- The language selector and online payment icons need to be substituted with other icons or text. Language selection can possibly take place on a screen before the app’s home screen.
- The “more” page may not be necessary because users can access more information on Baltimore city’s website. Additionally, the bottom icon navigation feels more solid and direct with five icons.
- On the “services” page, “all services” can be read as “view all services by category.” Options on the “services” page can be labeled with descriptions for clarity. Pages within “services” could also use description blurbs so users are aware of what they are viewing and what options they have.

Altogether, users were able to utilize the app and perform tasks seamlessly, finding what they were looking for quickly. They stated that the bottom icon navigation worked well and the app was easy to navigate.



Baltimorean App High Fidelity Prototype

Weeks 6 & 7



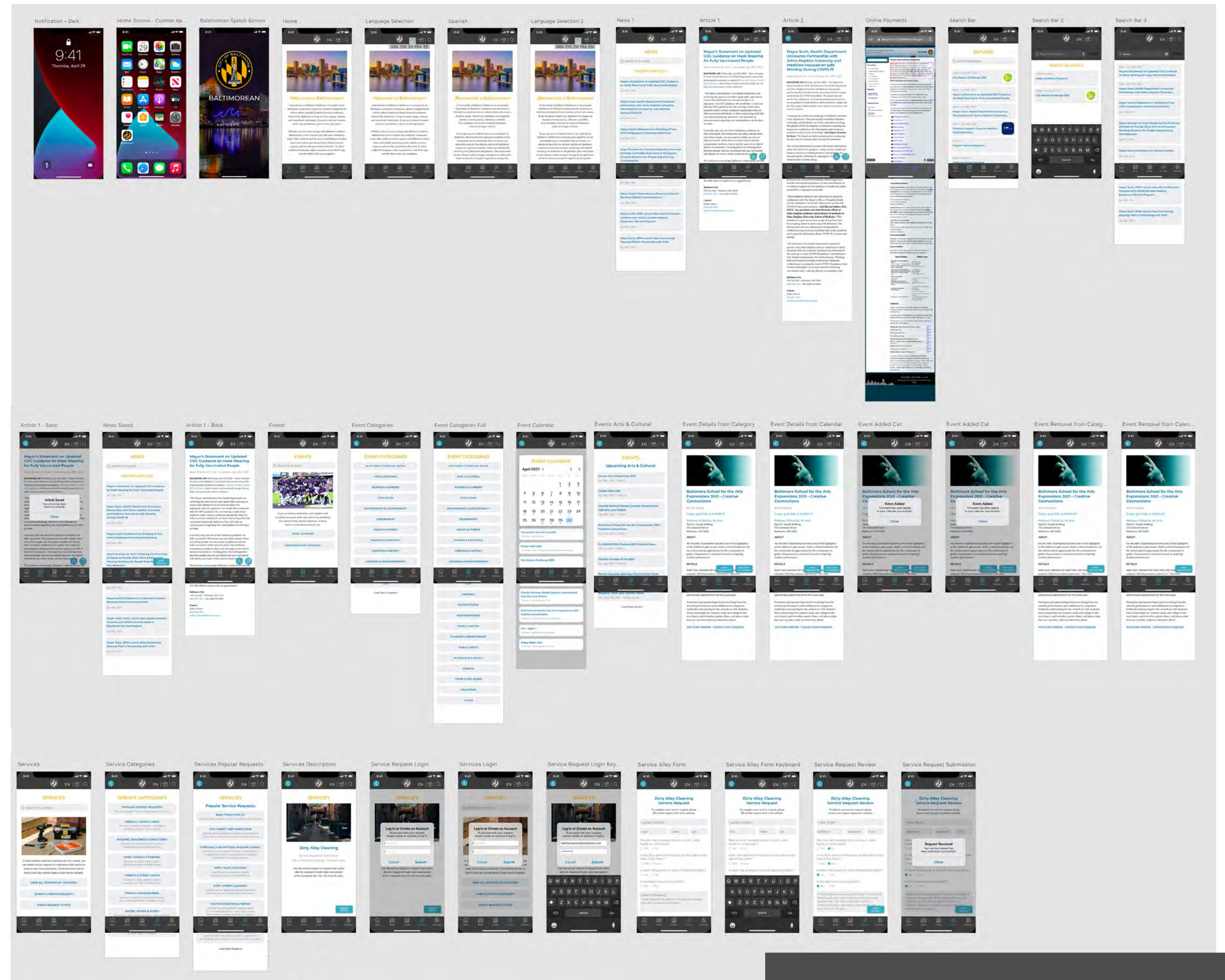
Prototyping Tools

ADOBE XD

Generally, I use Adobe's Creative Cloud software to accomplish my daily tasks as a graphic designer, both professionally and personally. In the past few months, I have become more familiar with Adobe XD. Though I have mostly worked on prototyping websites, this project presented the perfect opportunity to grow my skills and experience in the program. I utilized Adobe XD to create my Baltimorean high-fidelity prototype.

While referencing my work from week 5, I created each screen using XD's design feature. I linked the pages together and added interaction into the app using XD's prototyping feature. As I progressed, to test the functionality of my app and gauge my choices regarding the interface, I previewed using XD's desktop preview feature as well as the XD app on my phone. Once my screens were complete, I used XD to screen record a user journey through the app, exploring all the pages I created and features I added.

[View Baltimorean XD Prototype](#)



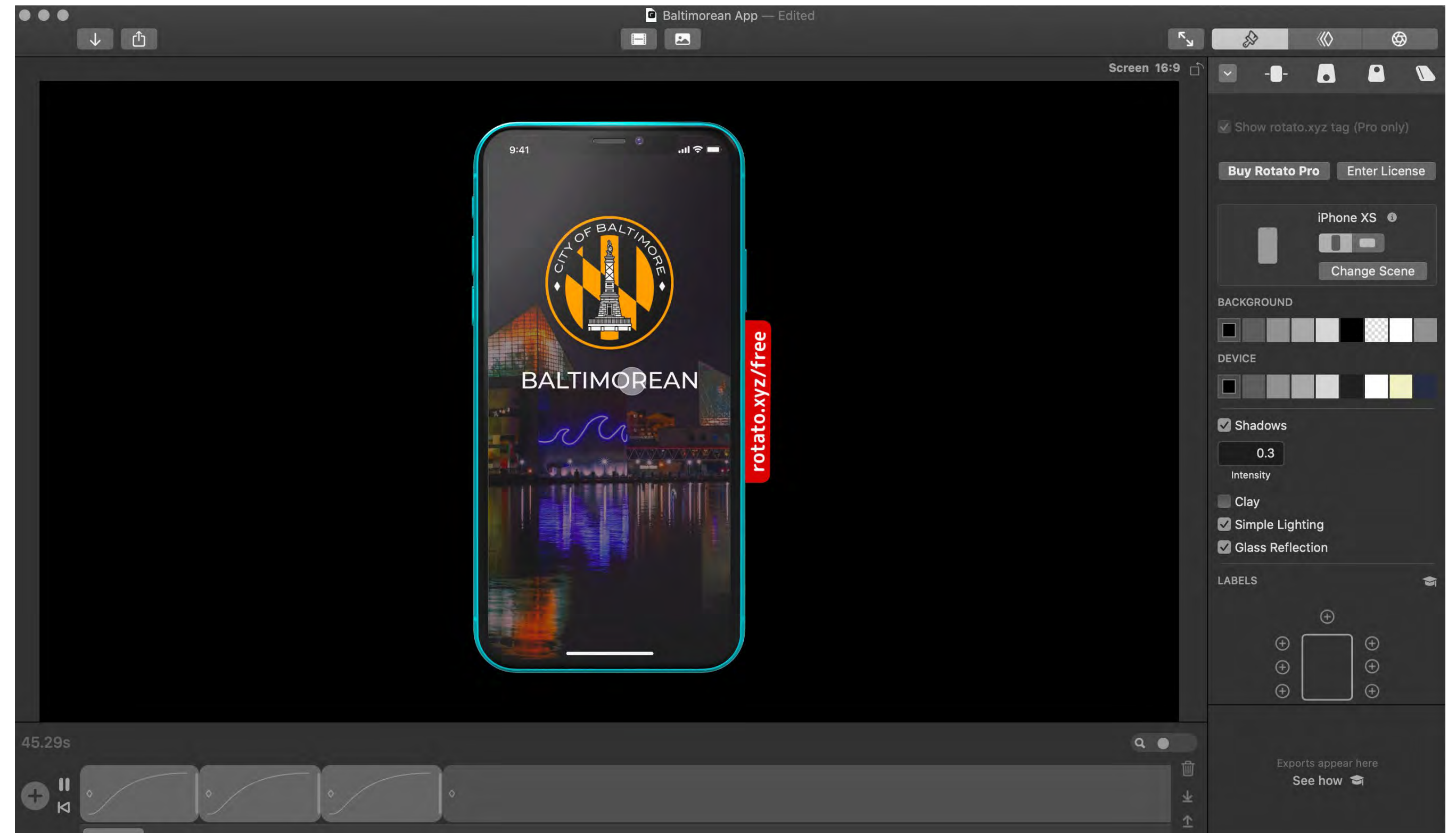
Prototyping Tools

ROTATO

Although XD provides great previews via the desktop and an external device, this program does not have a feature for viewing the prototype within a device mockup. I used Rotato to complete my prototype.

Rotato is a virtual mockup software that allows users to bring their designs to life. You can upload photos, videos, and audio to your device mockup, customize your device, and add in a few animations to make your product fun and engaging. I uploaded my XD screen recording to Rotato to give my app a realistic feel and complete my prototype.

[View Baltimorean Final High Fidelity Prototype Walkthrough](#)

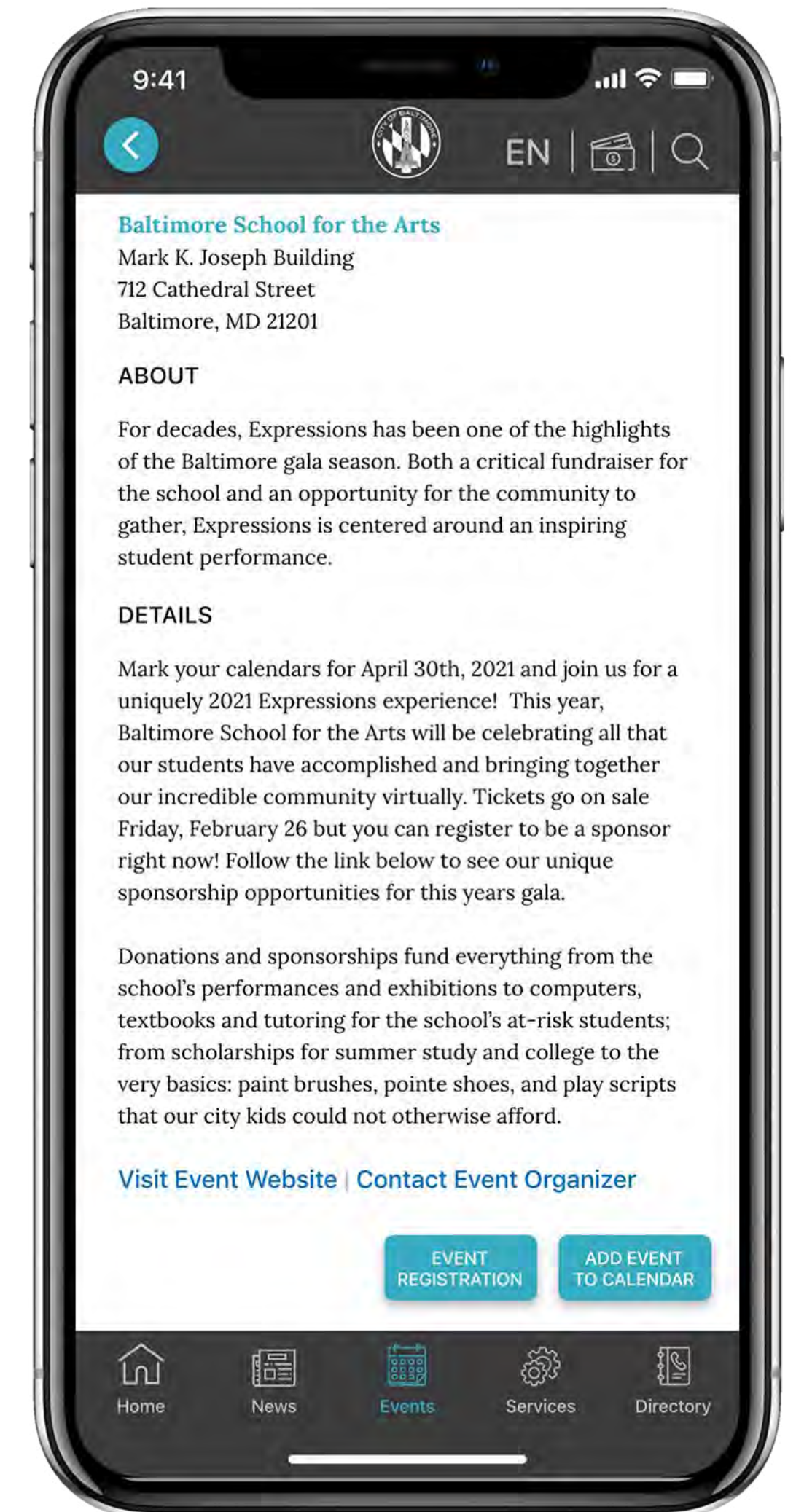


App Revisions

While designing my prototype, I considered my findings from usability testing highly. I made sure to pair text with the bottom navigation icons to mitigate confusion. Furthermore, some of the elements that were previously icons became buttons or links with written-out text. In the top navigation, I chose to represent the language selector with an abbreviation instead of an icon. I also incorporated a back button within the app so users can return to previous app screens without having to start their journey over.

To simplify the app, I removed the “more” page entirely. Similarly, I expounded upon some text and limited some text within the app for clarity’s sake.

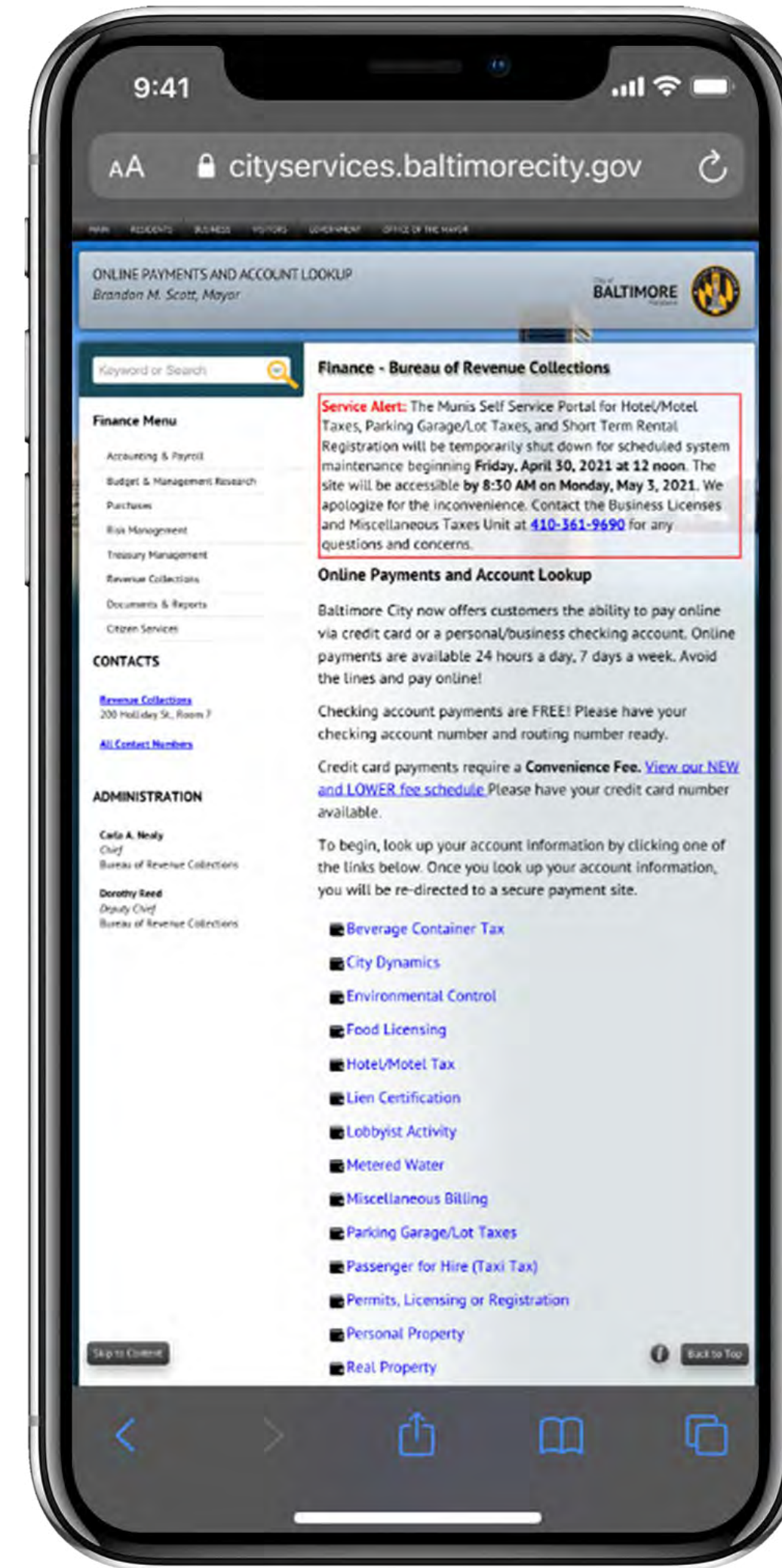
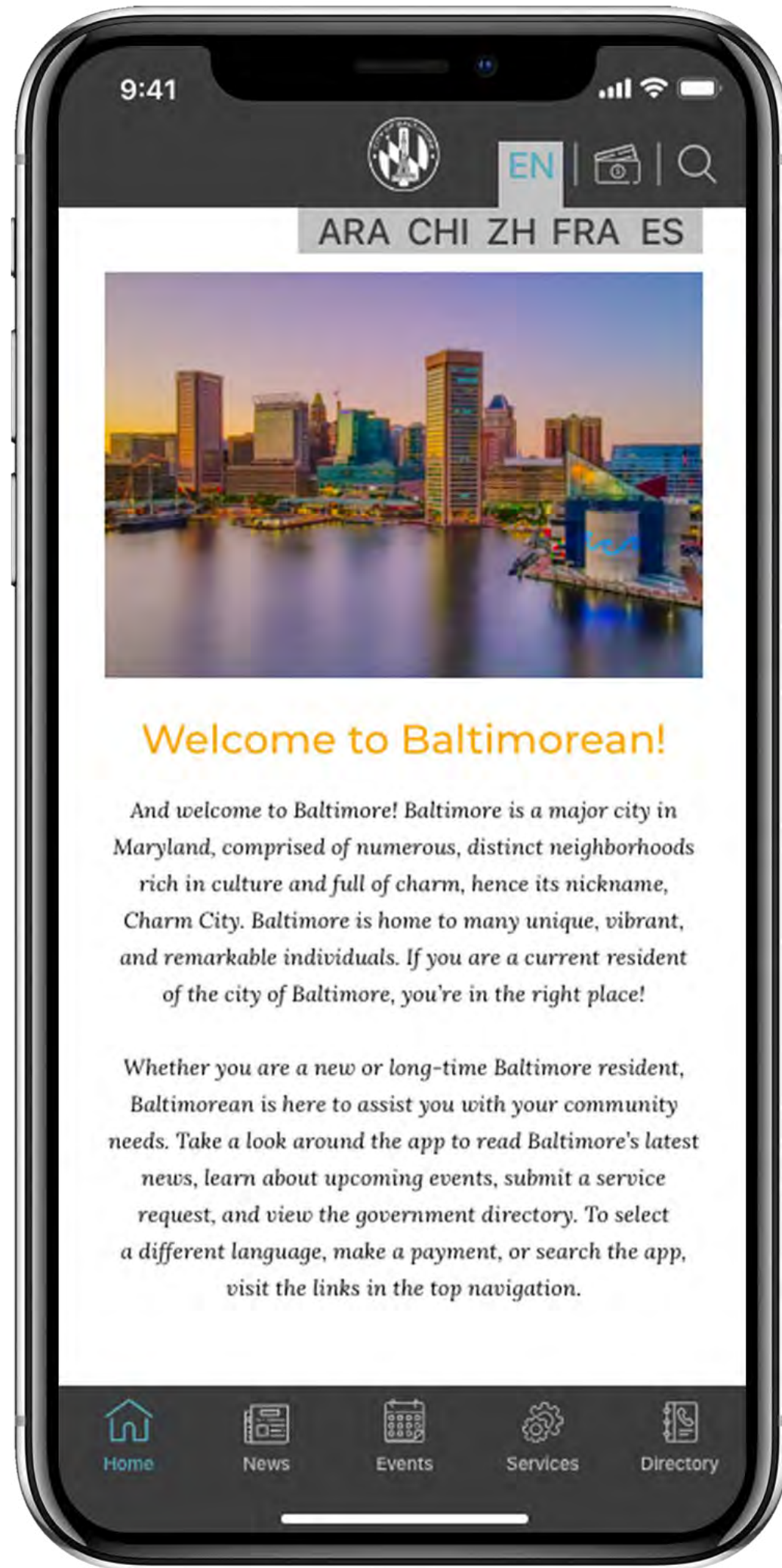
Overall, I chose to maintain a simplistic approach to Baltimorean’s design. Not too many photos, but just enough. not too many colors, but just enough. Not too many typefaces, features, transitions, etc., but just enough for the user to be able to accomplish their goal in a convenient and timely manner. Design-wise, I followed one of Baltimore’s brand guides, [found online](#), to keep myself structured.



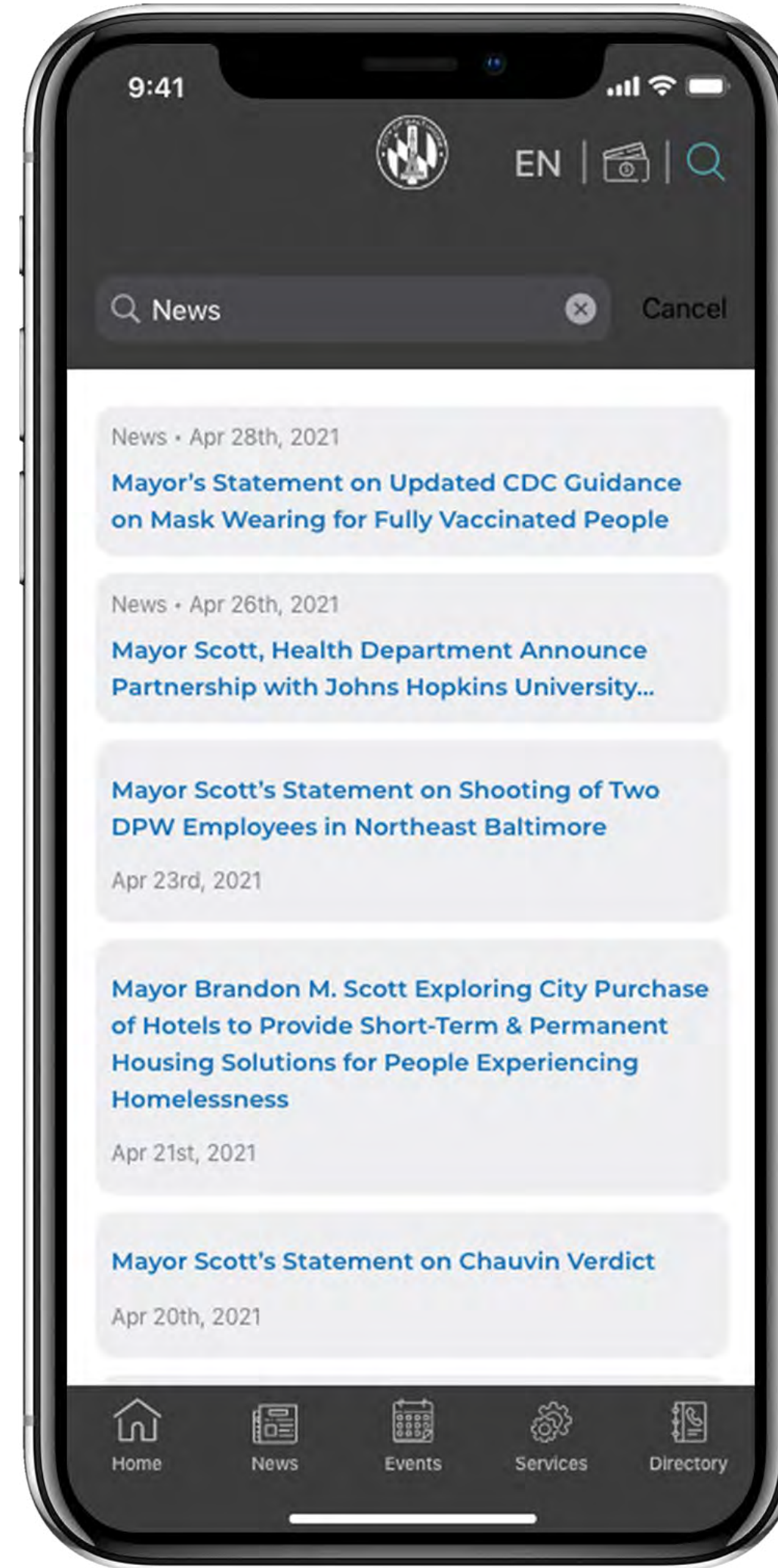
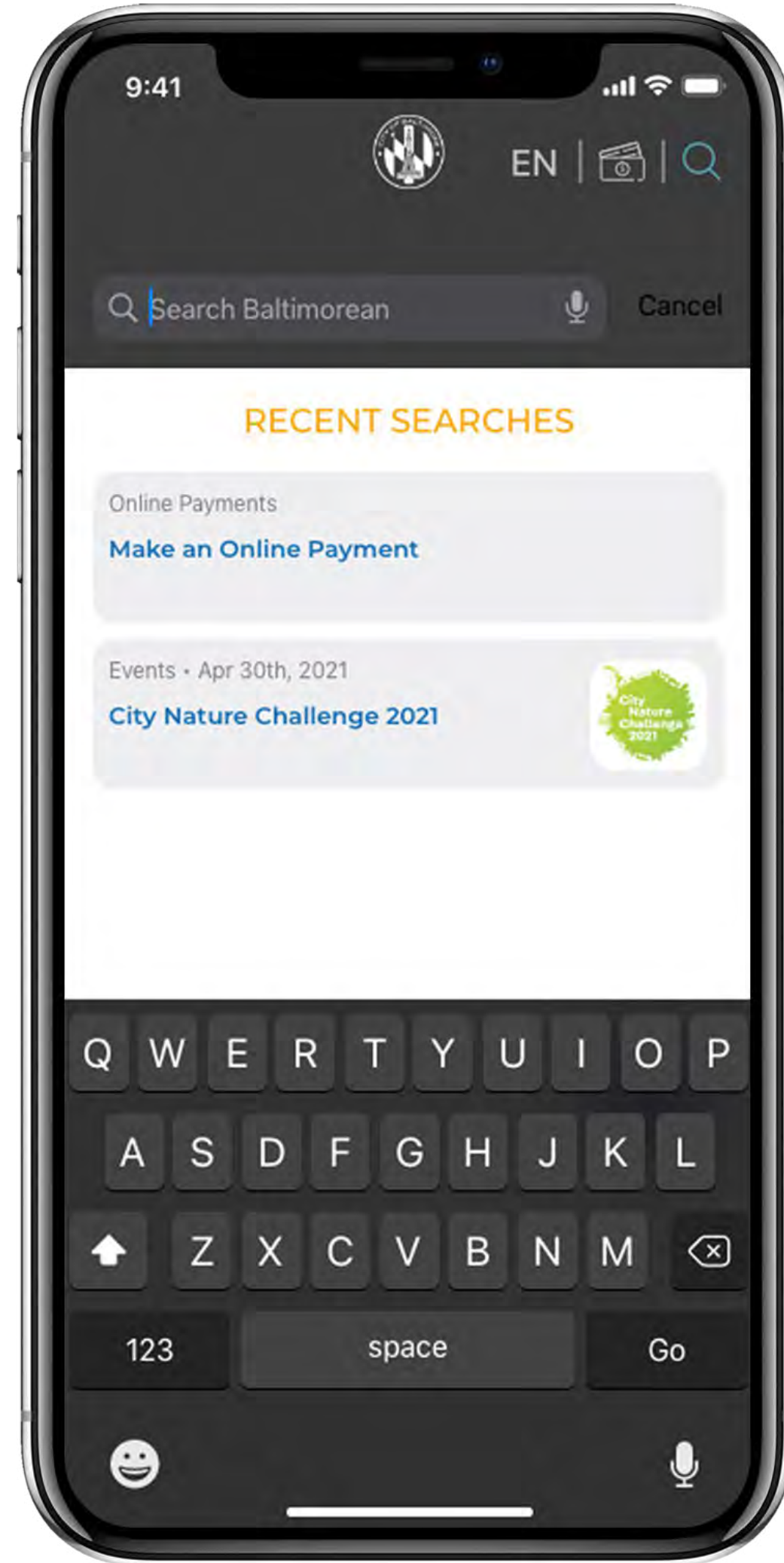
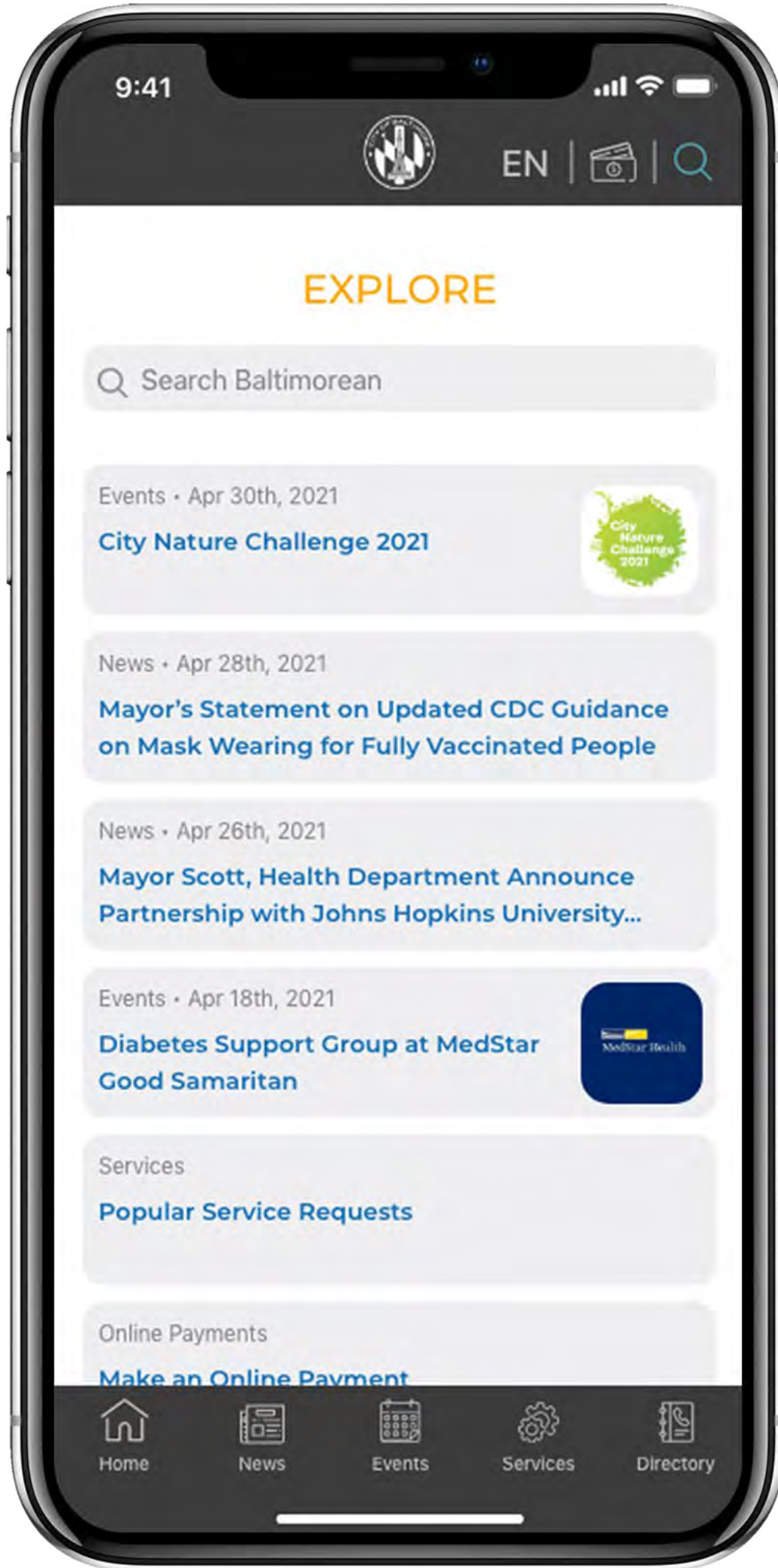
Screen Captures: Start



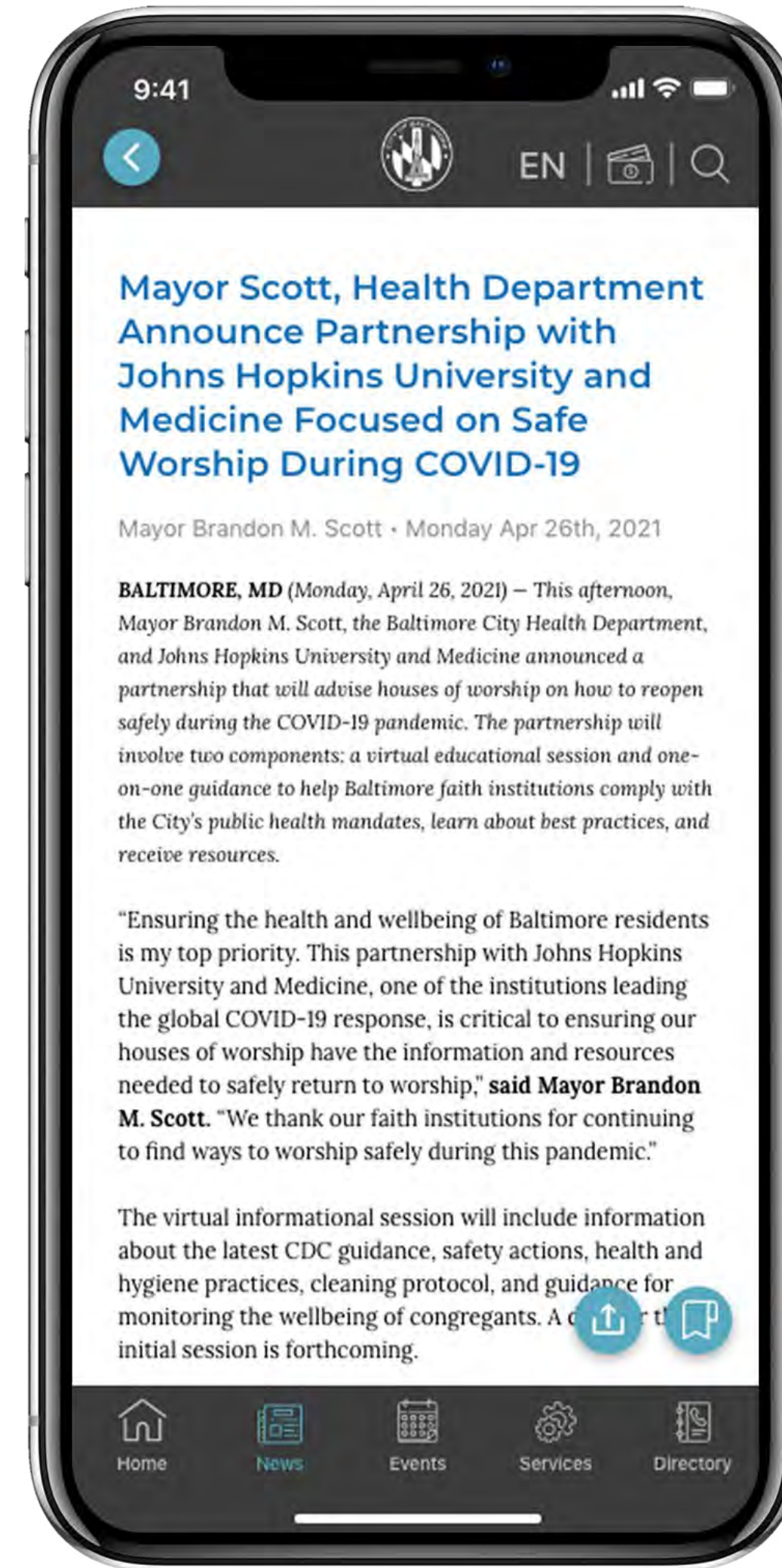
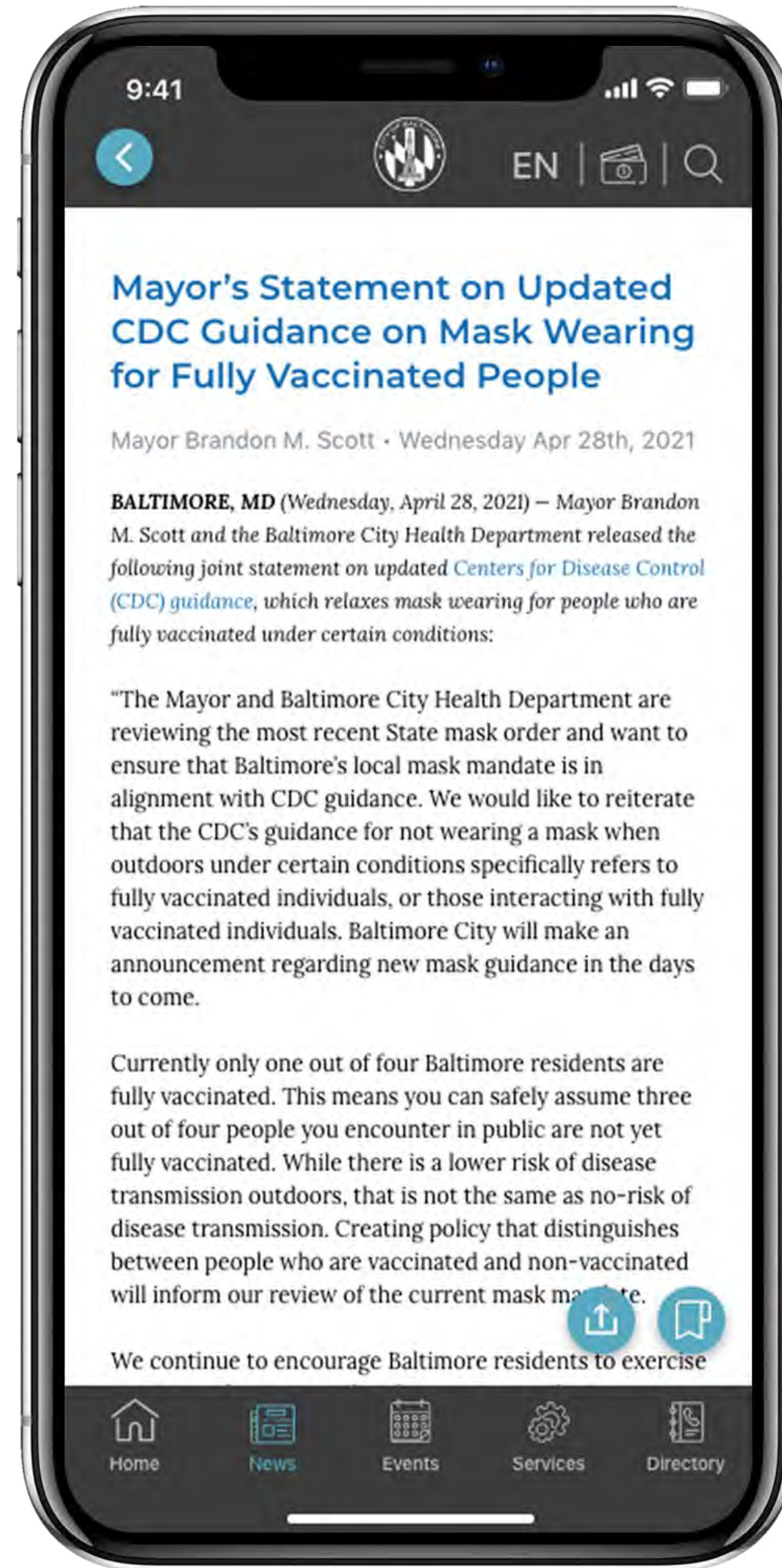
Screen Captures: Top Navigation



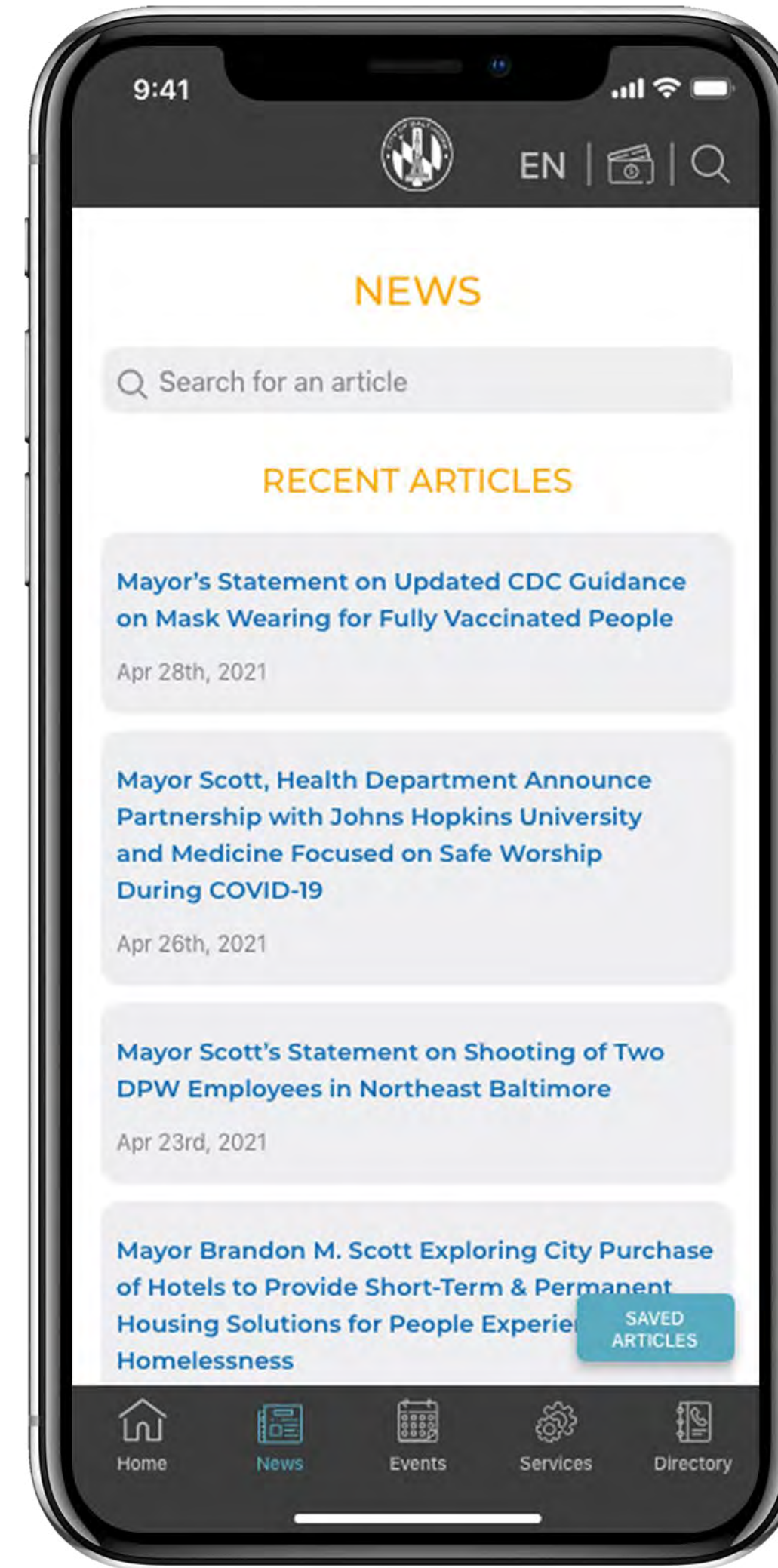
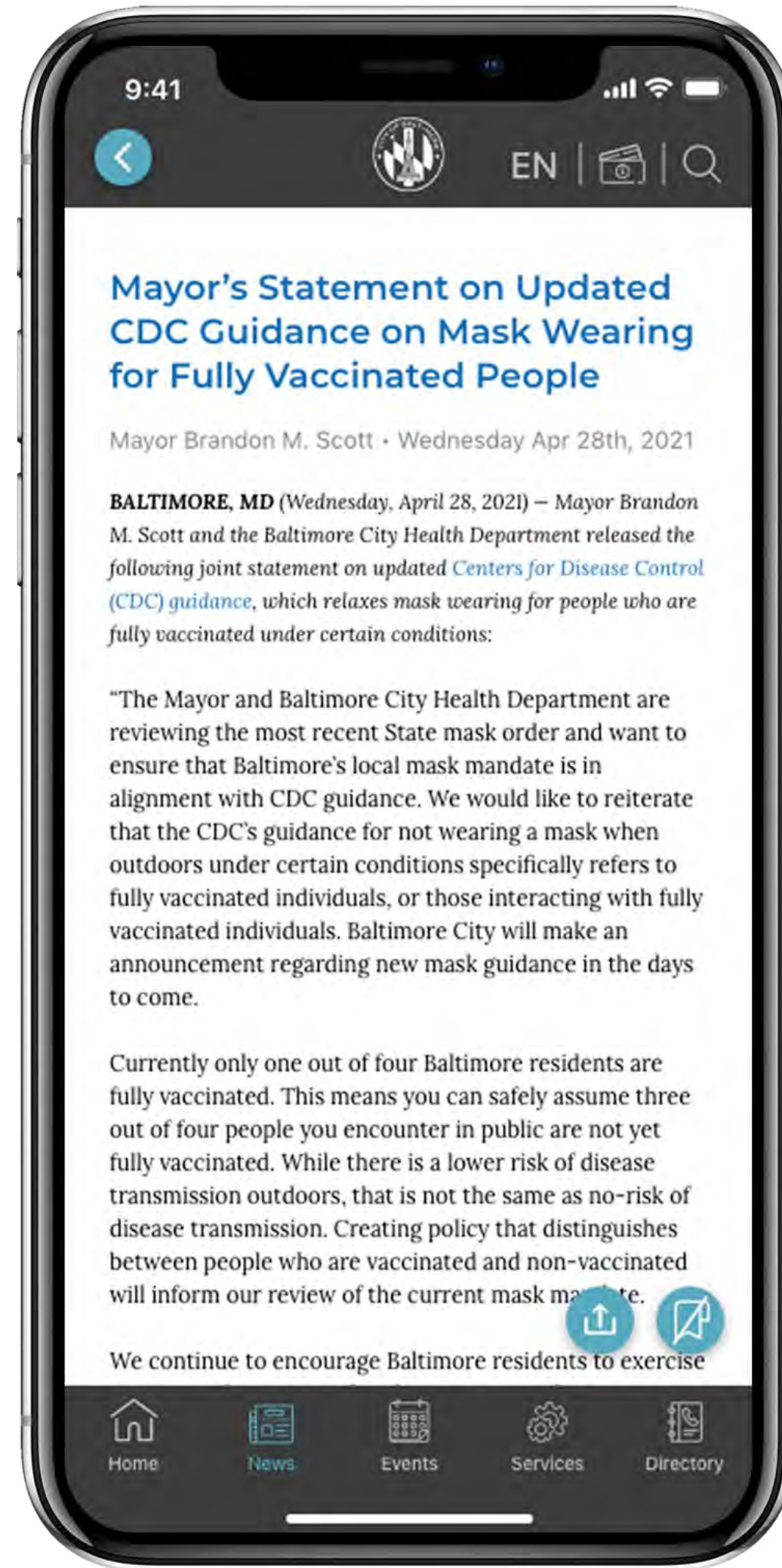
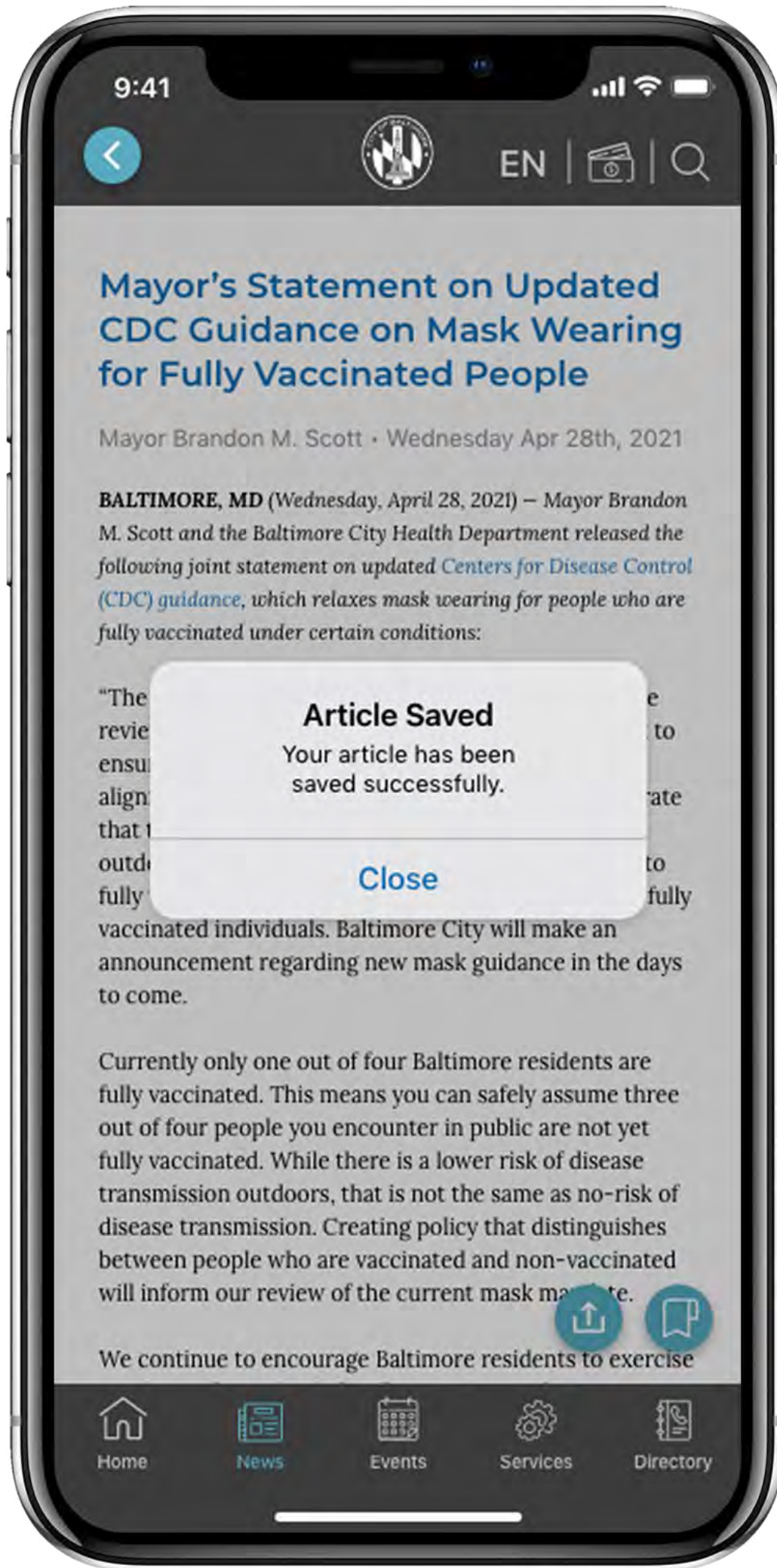
Screen Captures: App Search



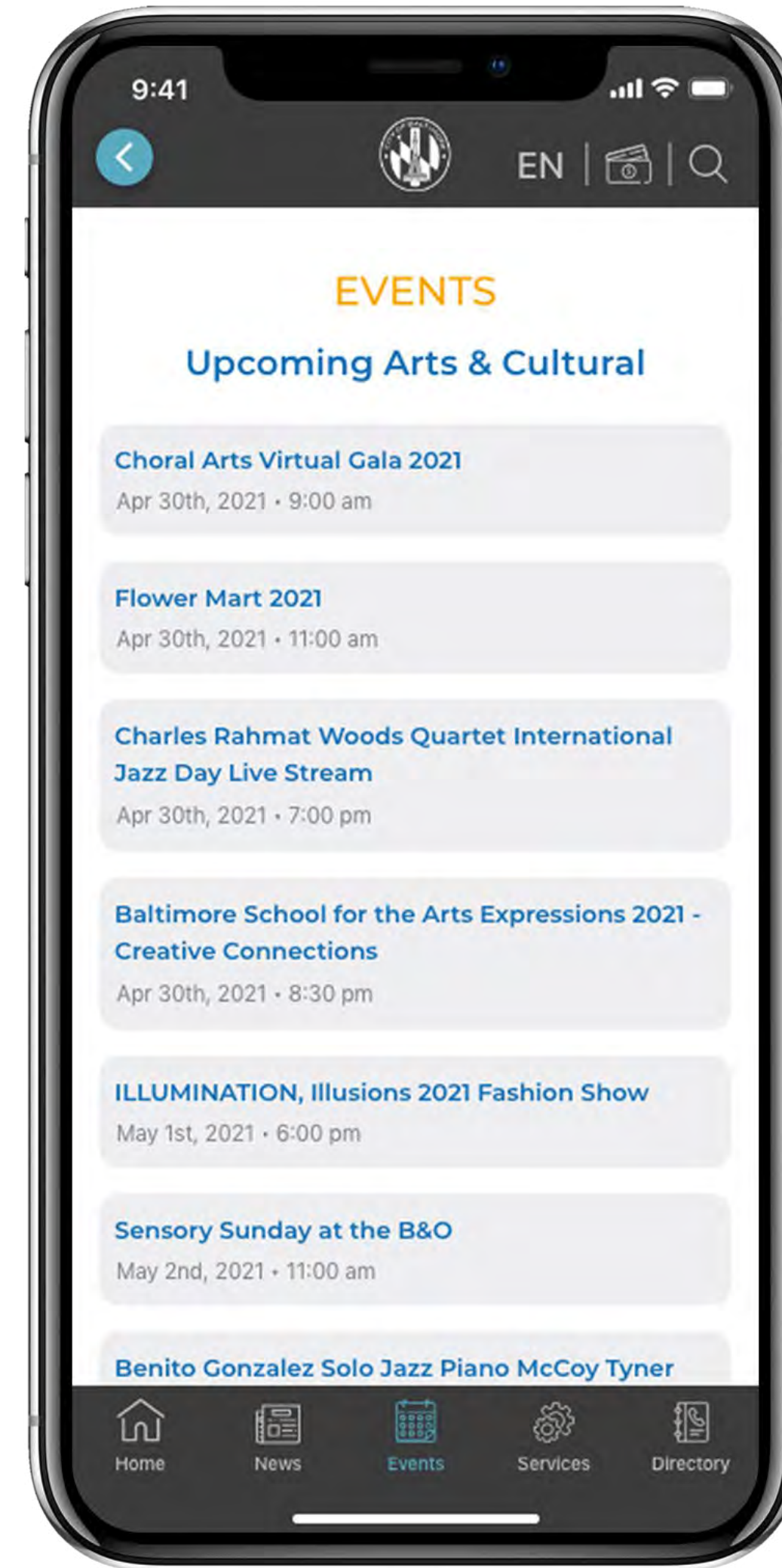
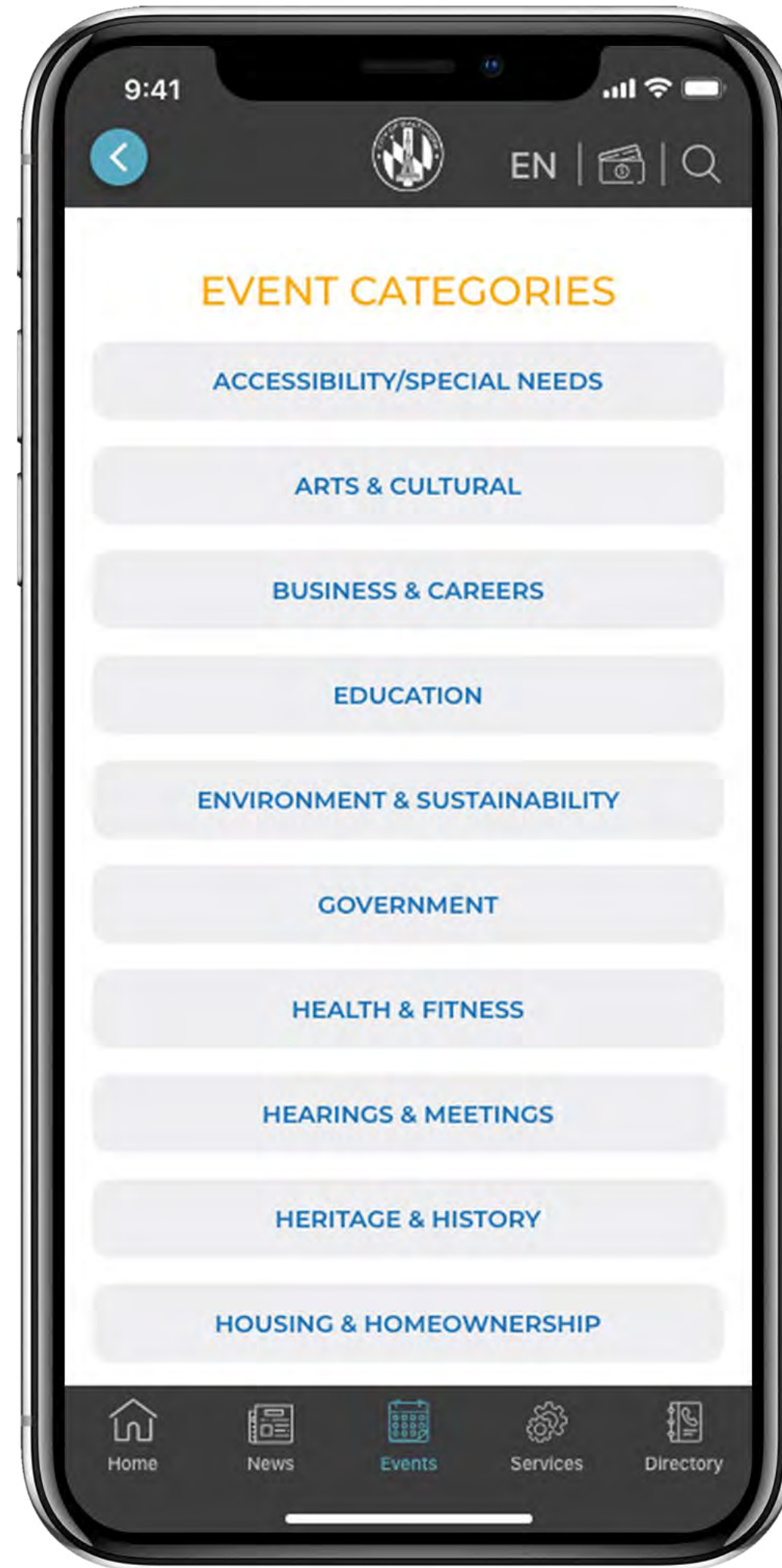
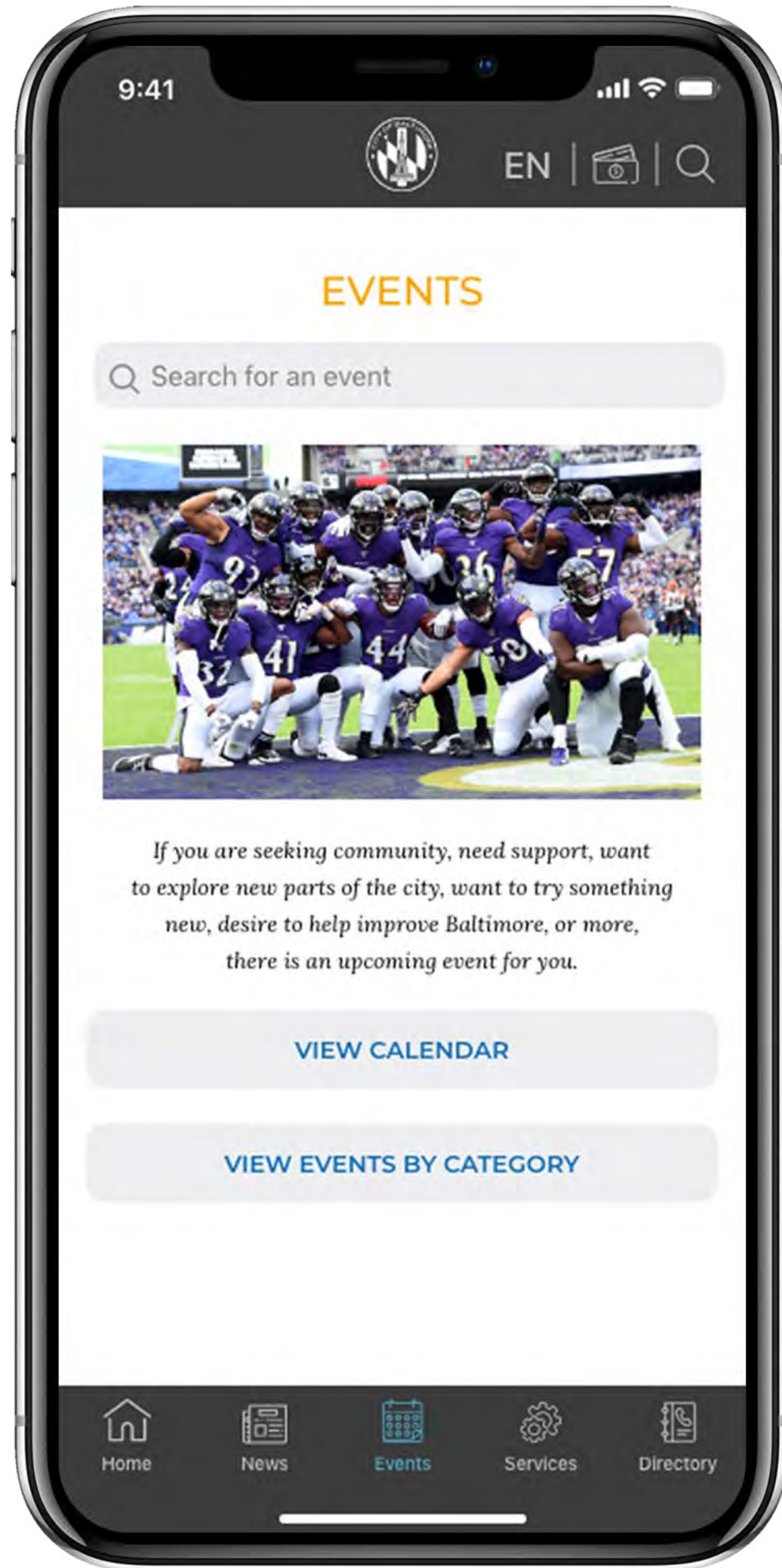
Screen Captures: News



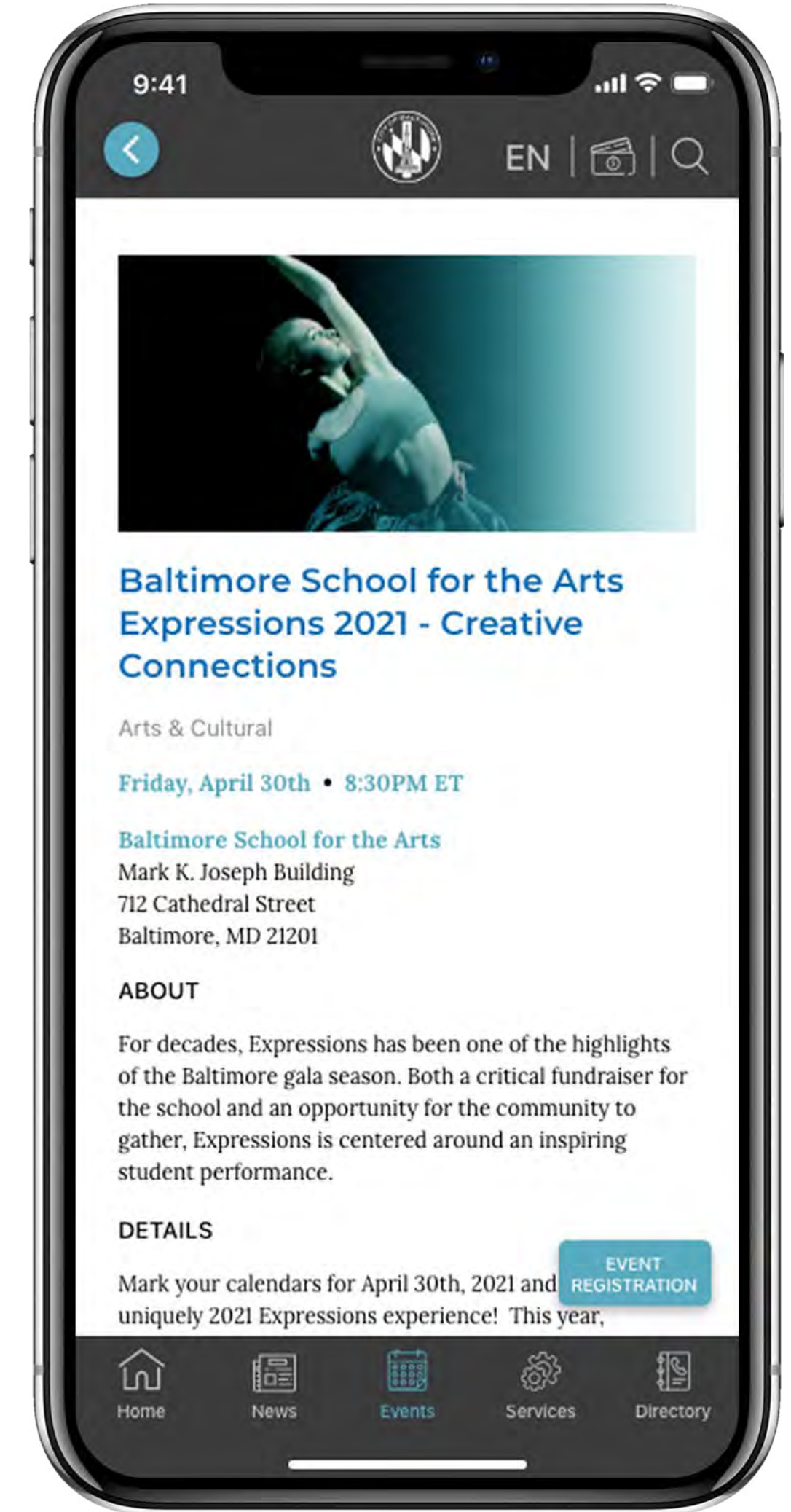
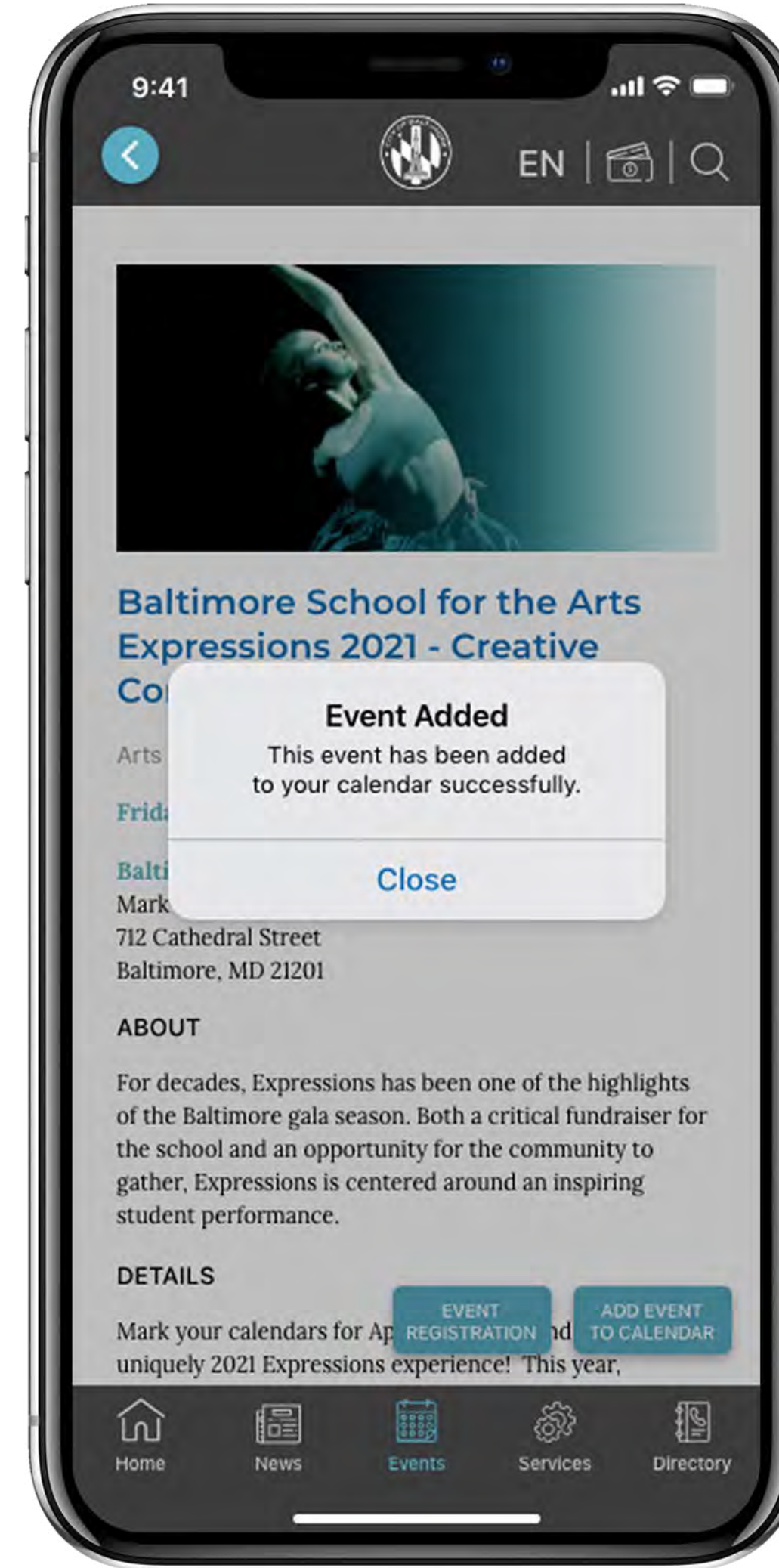
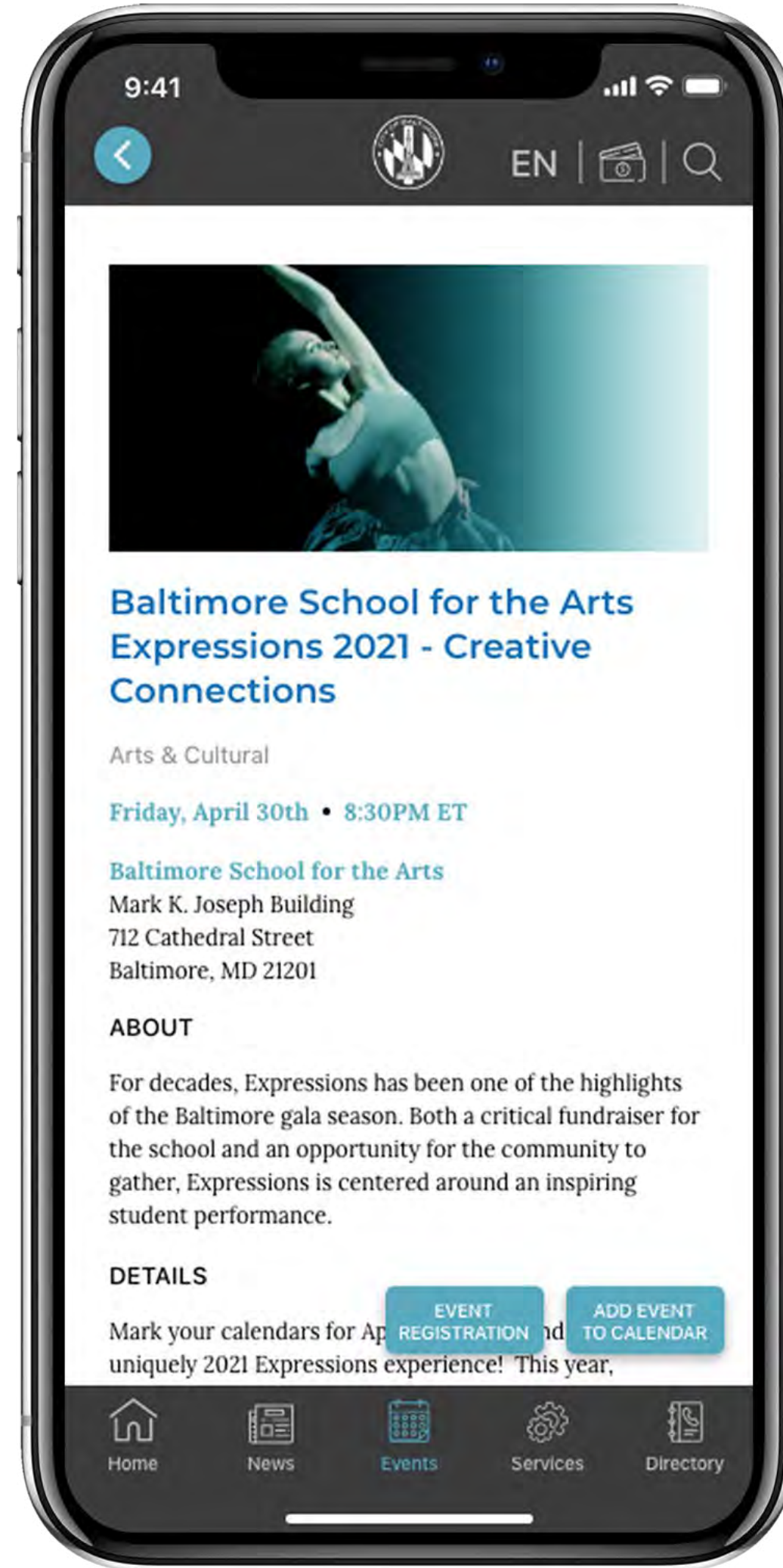
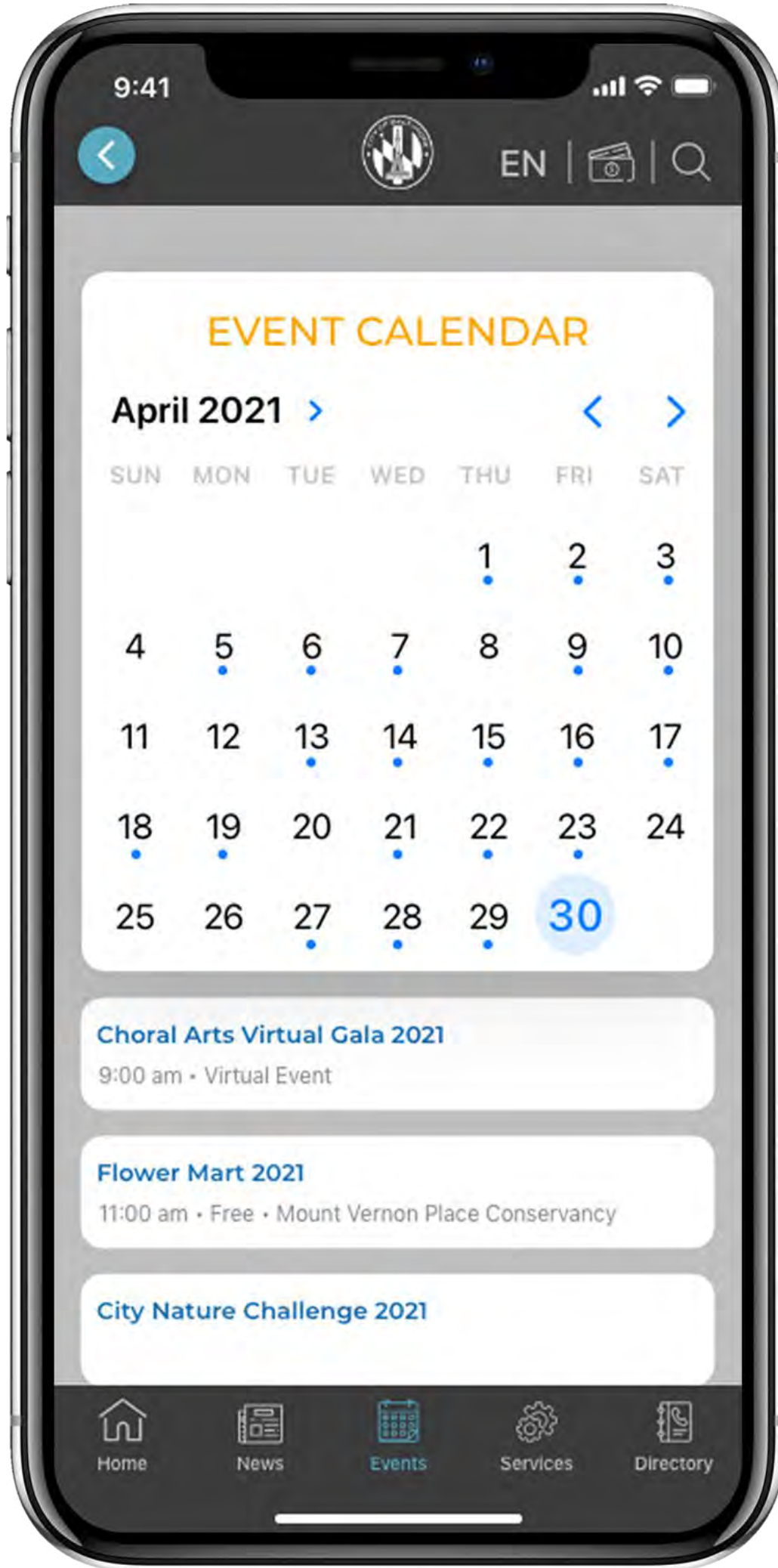
Screen Captures: News



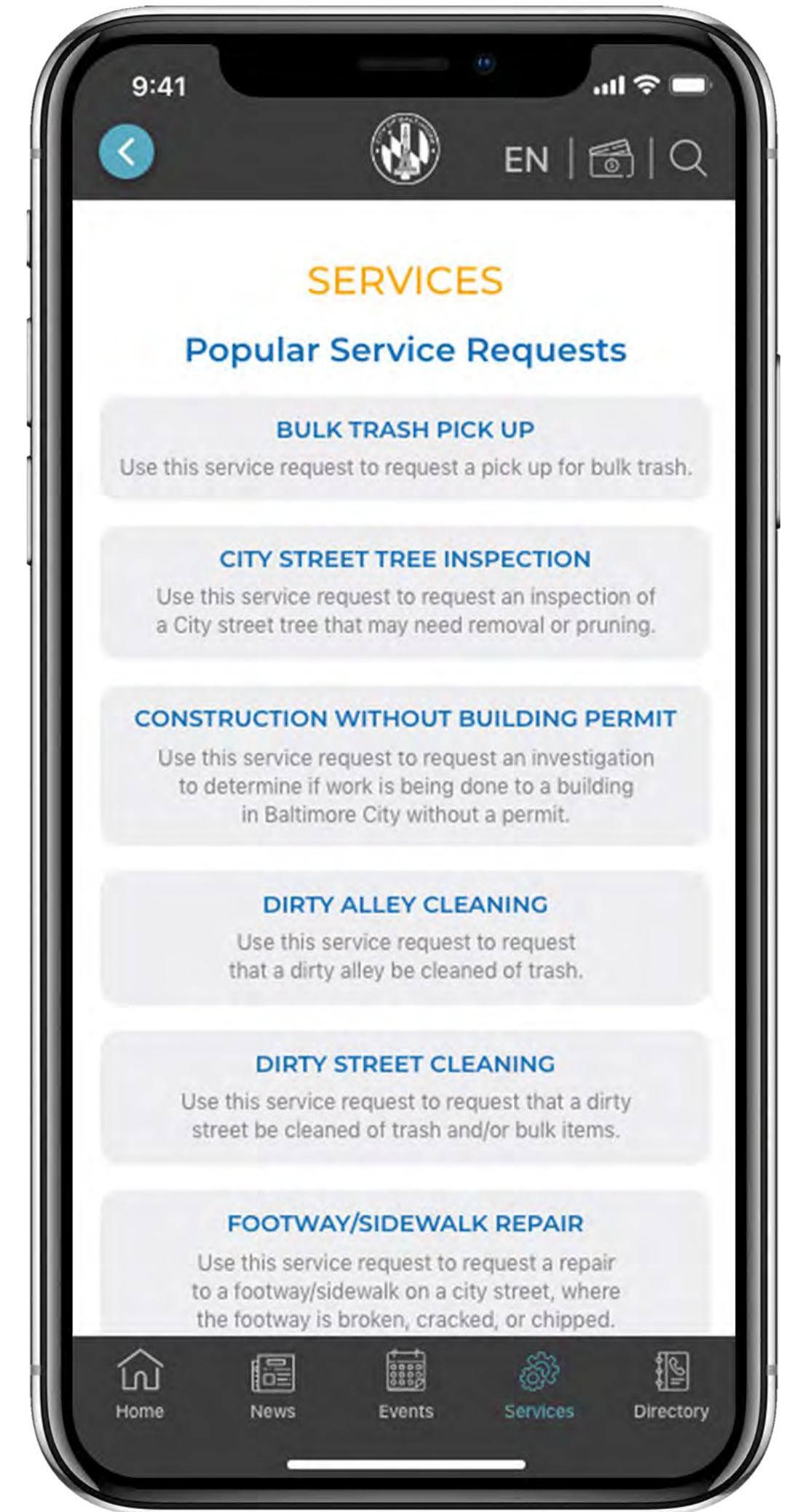
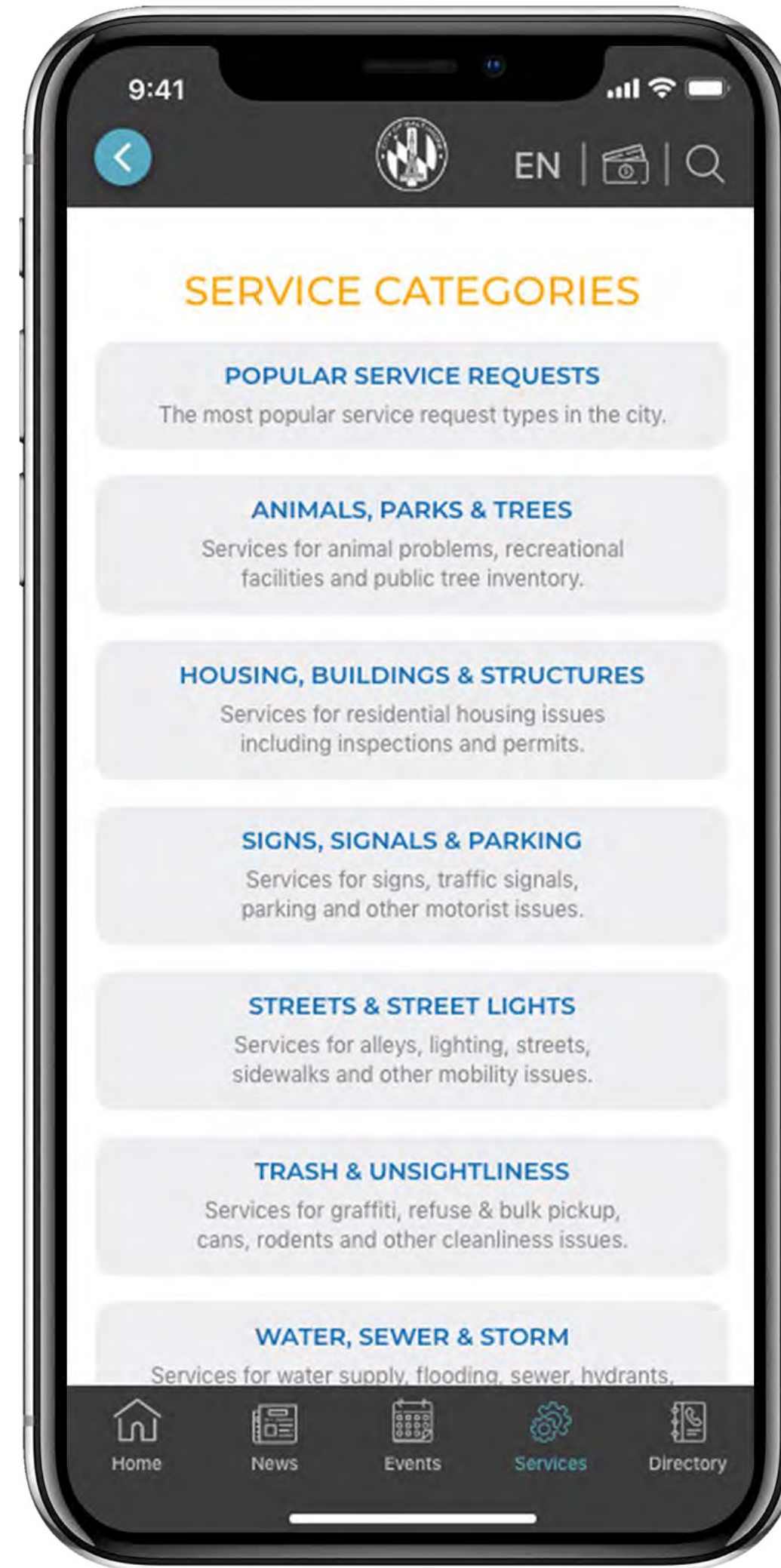
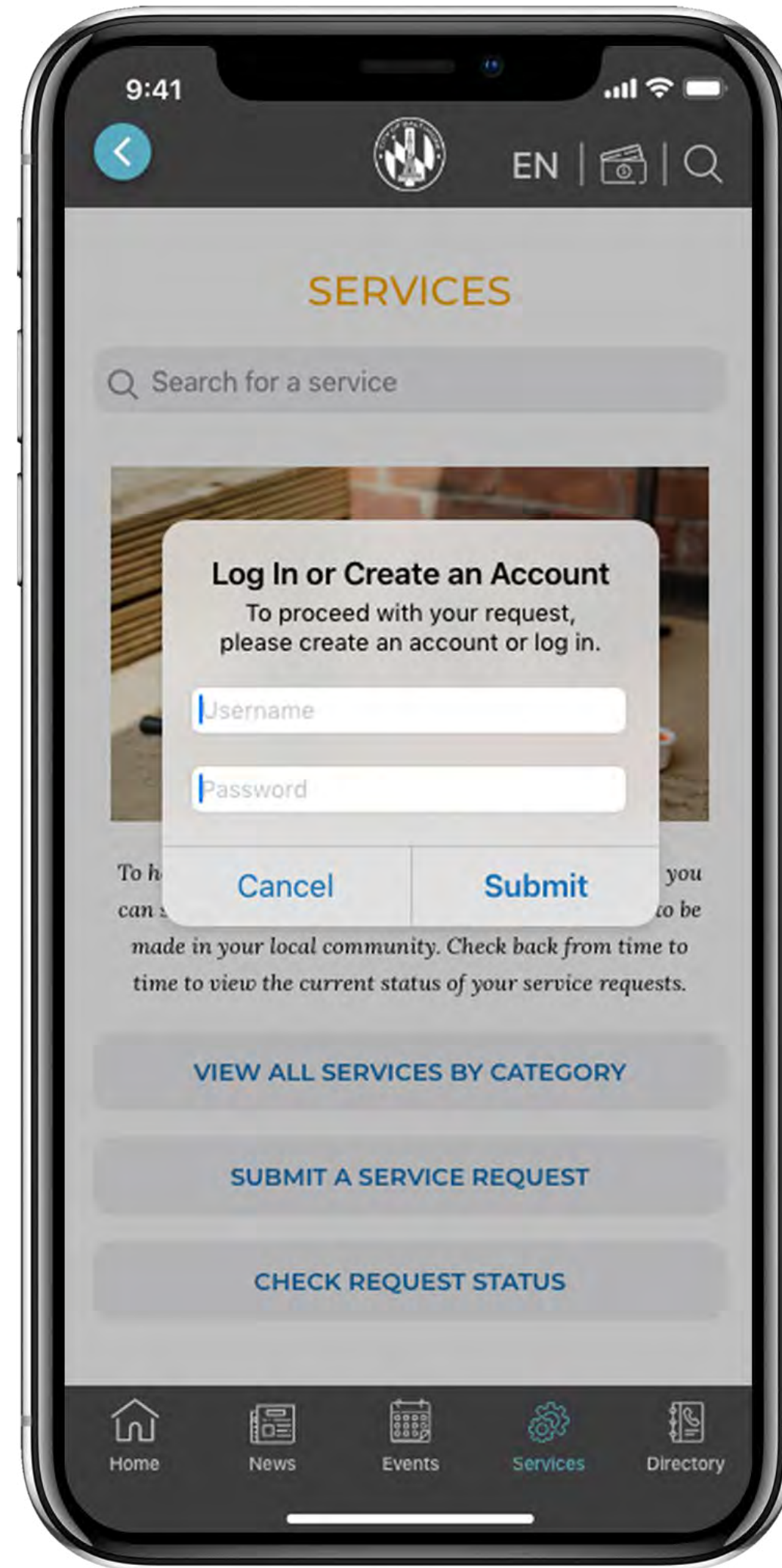
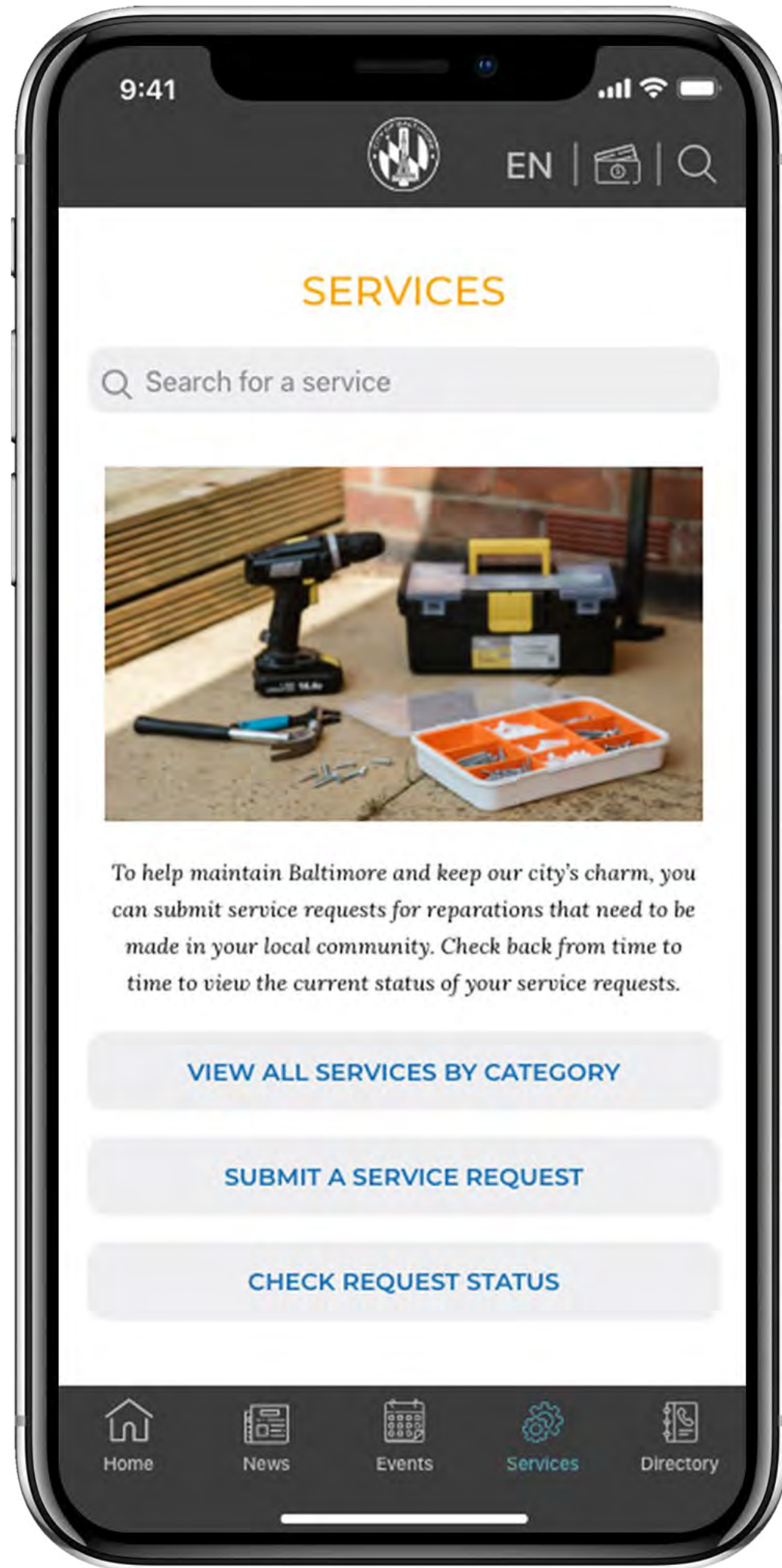
Screen Captures: Events



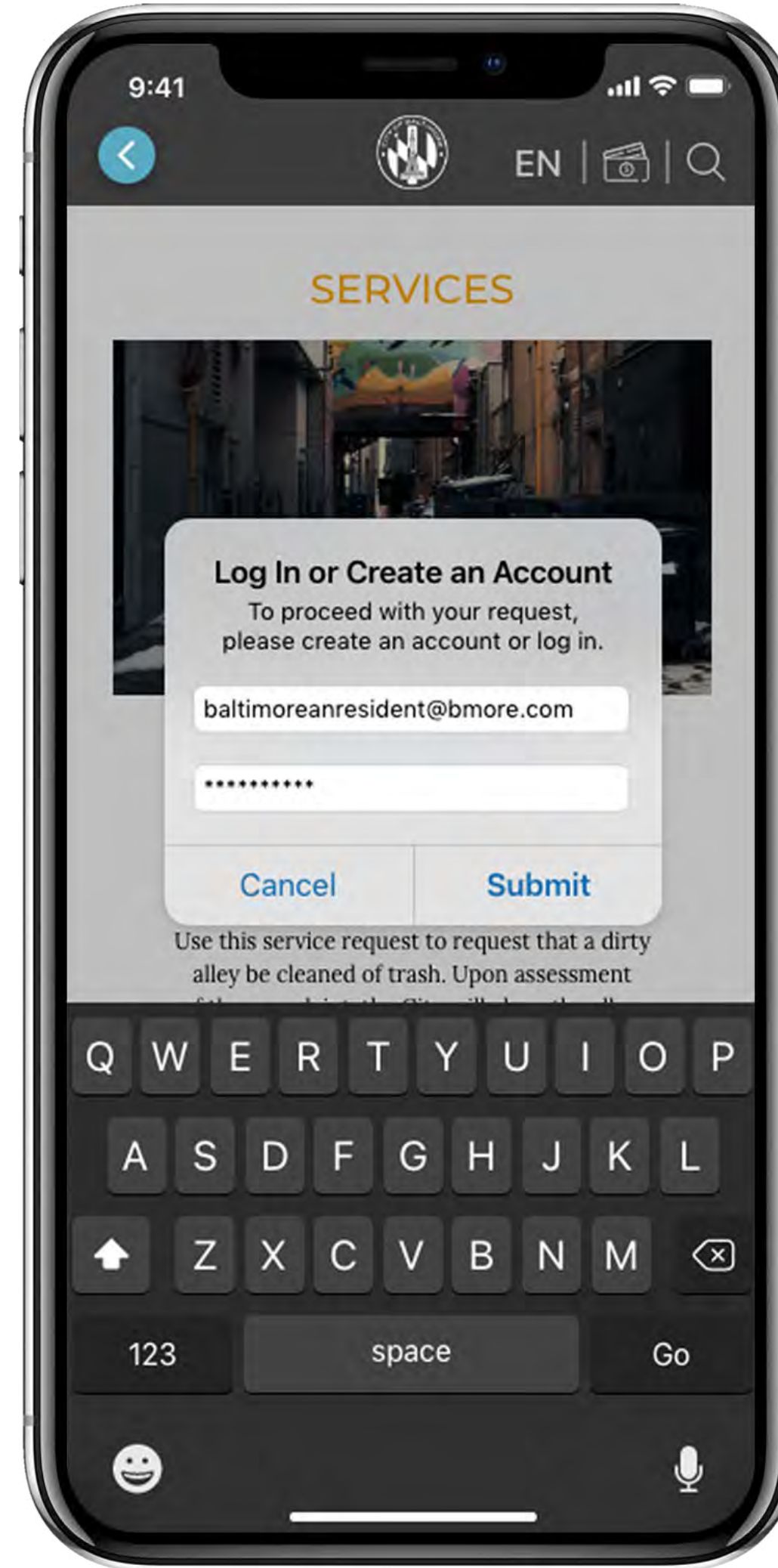
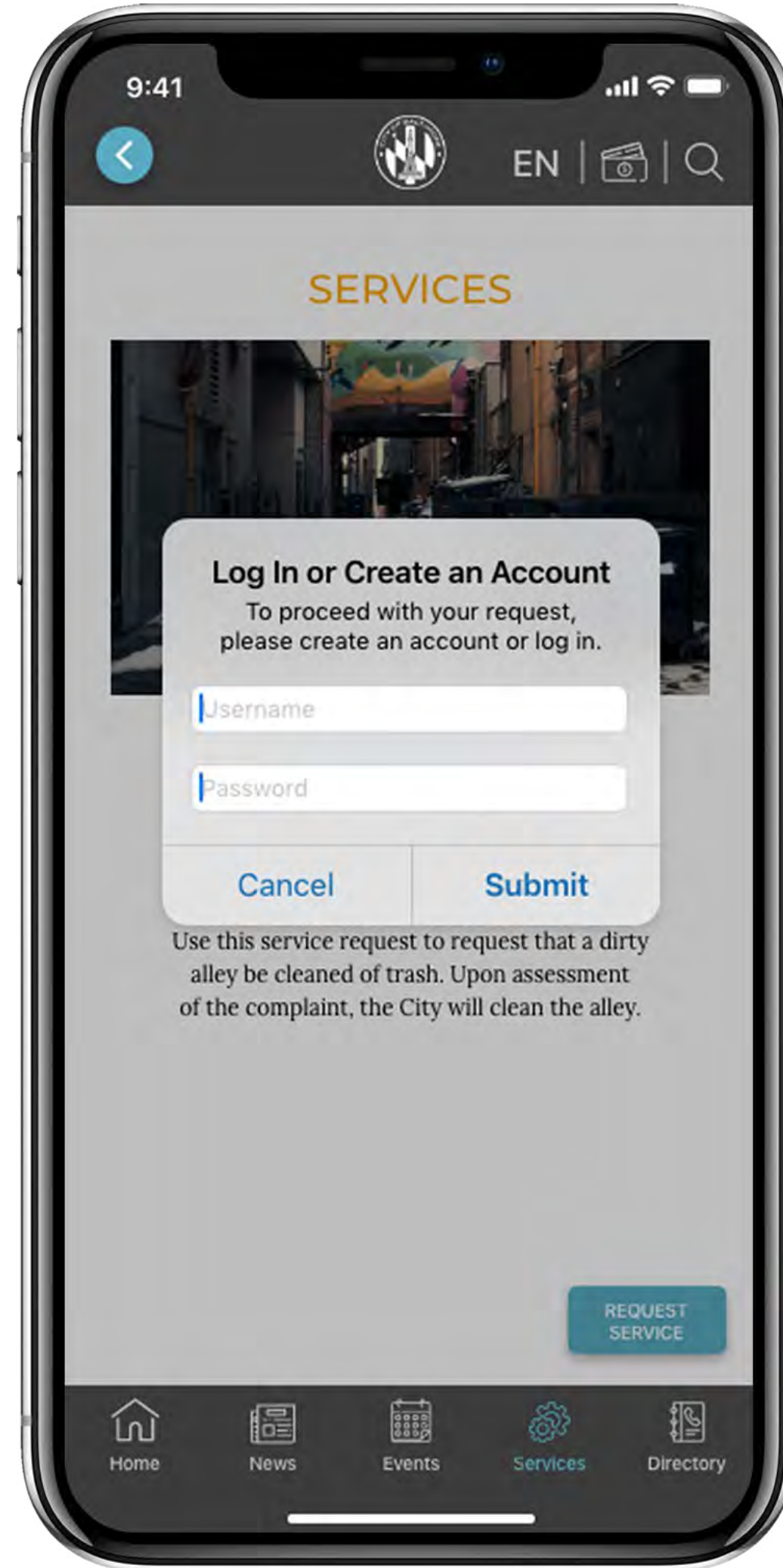
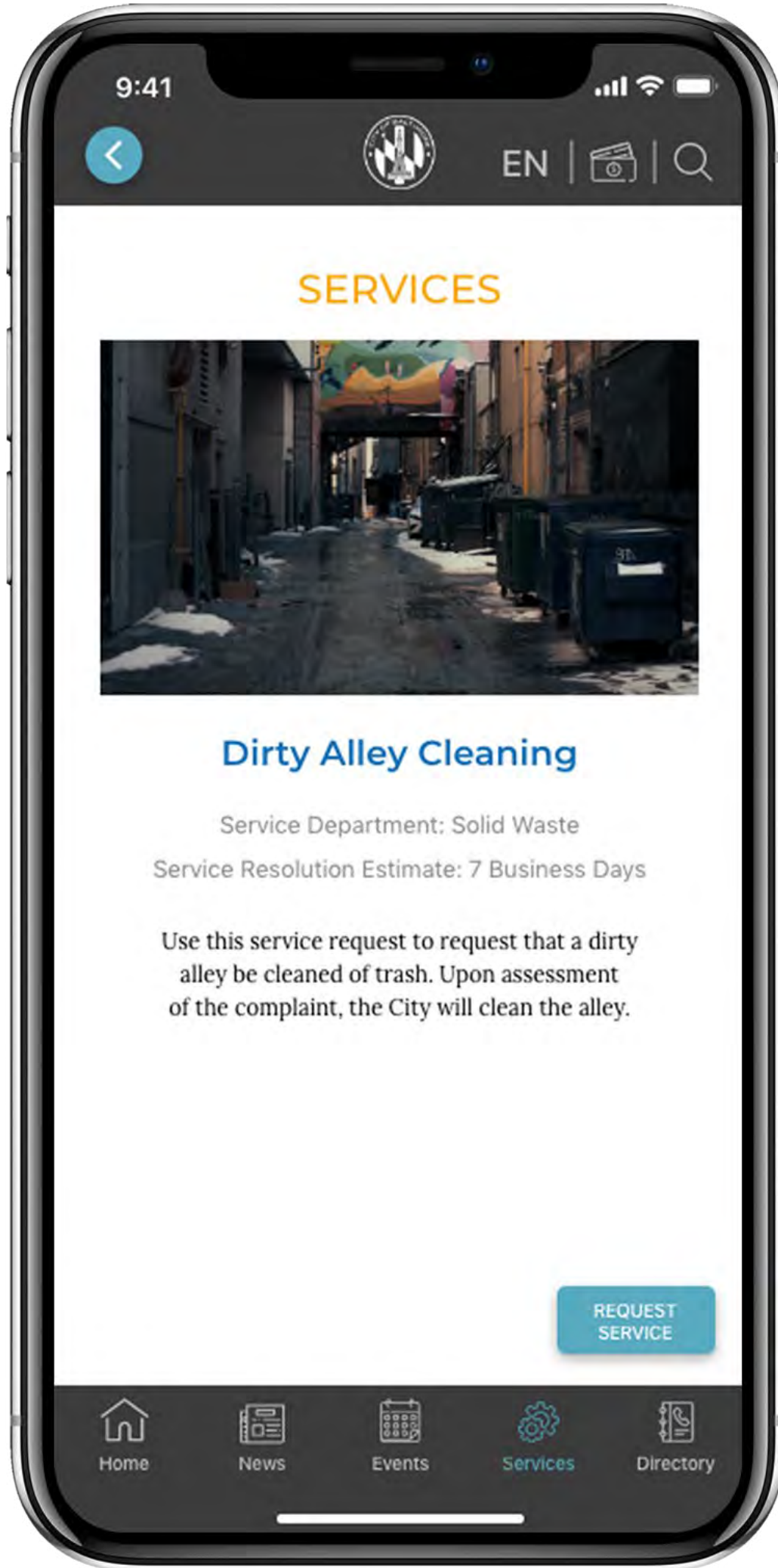
Screen Captures: Events



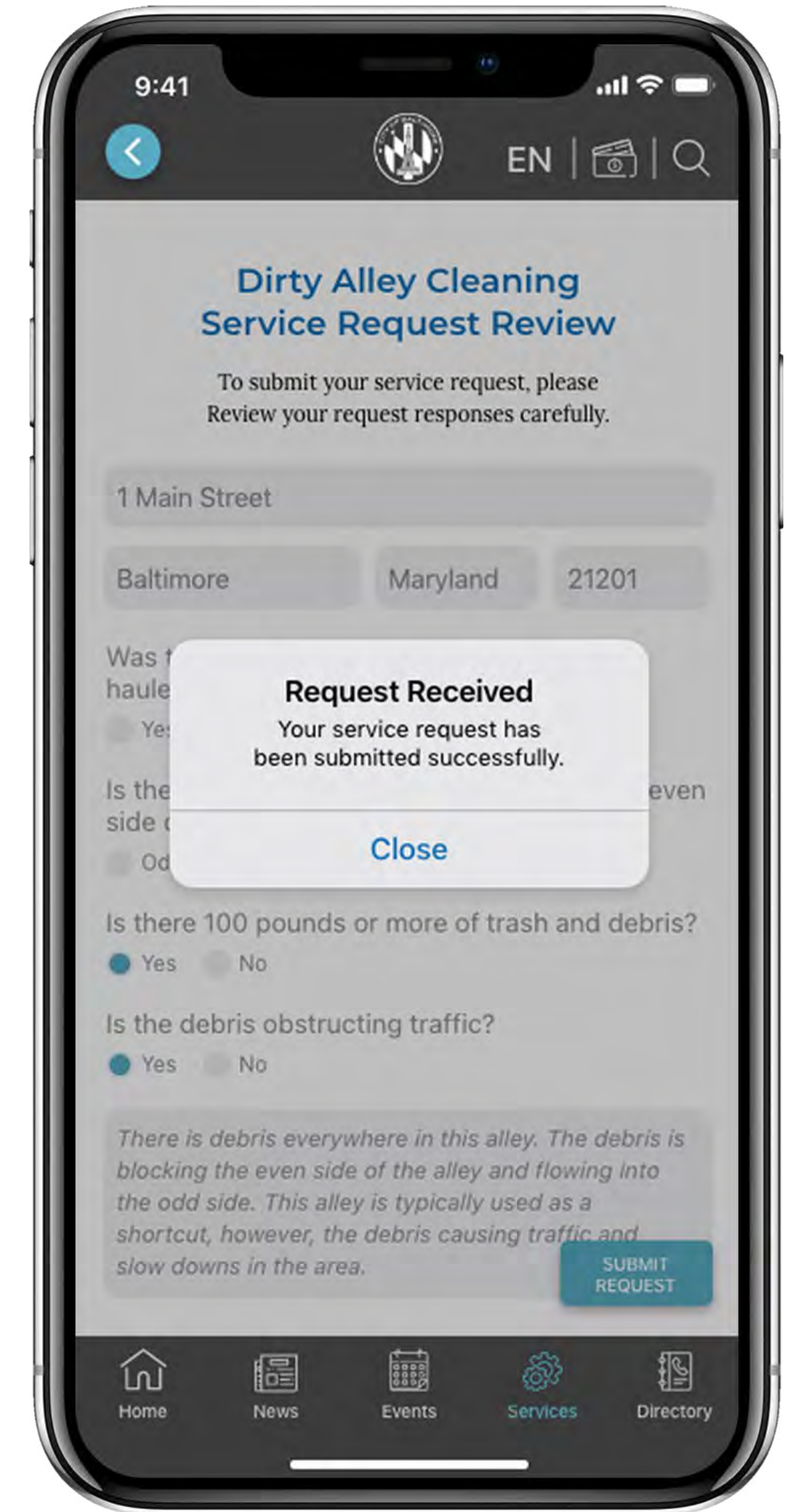
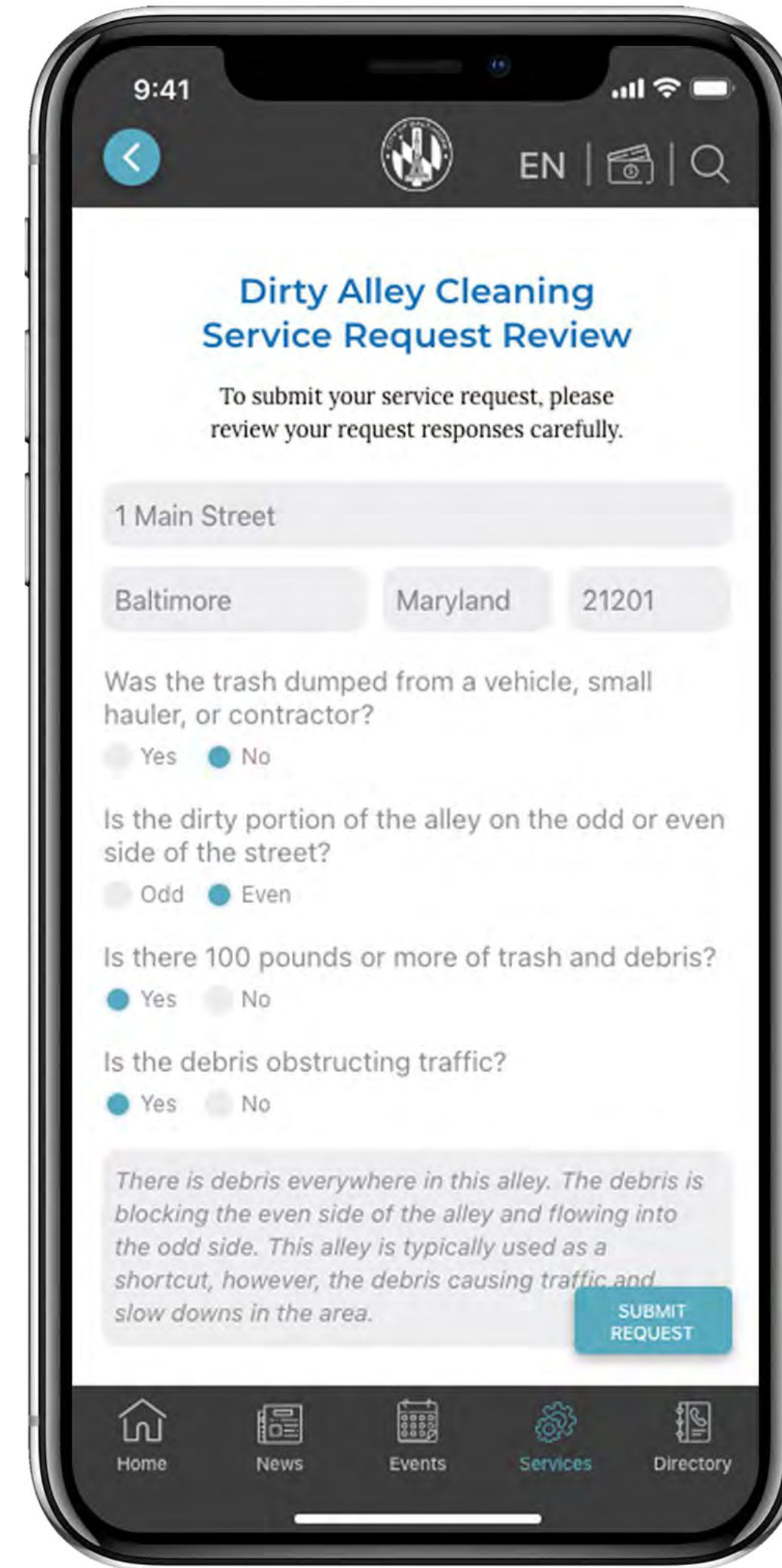
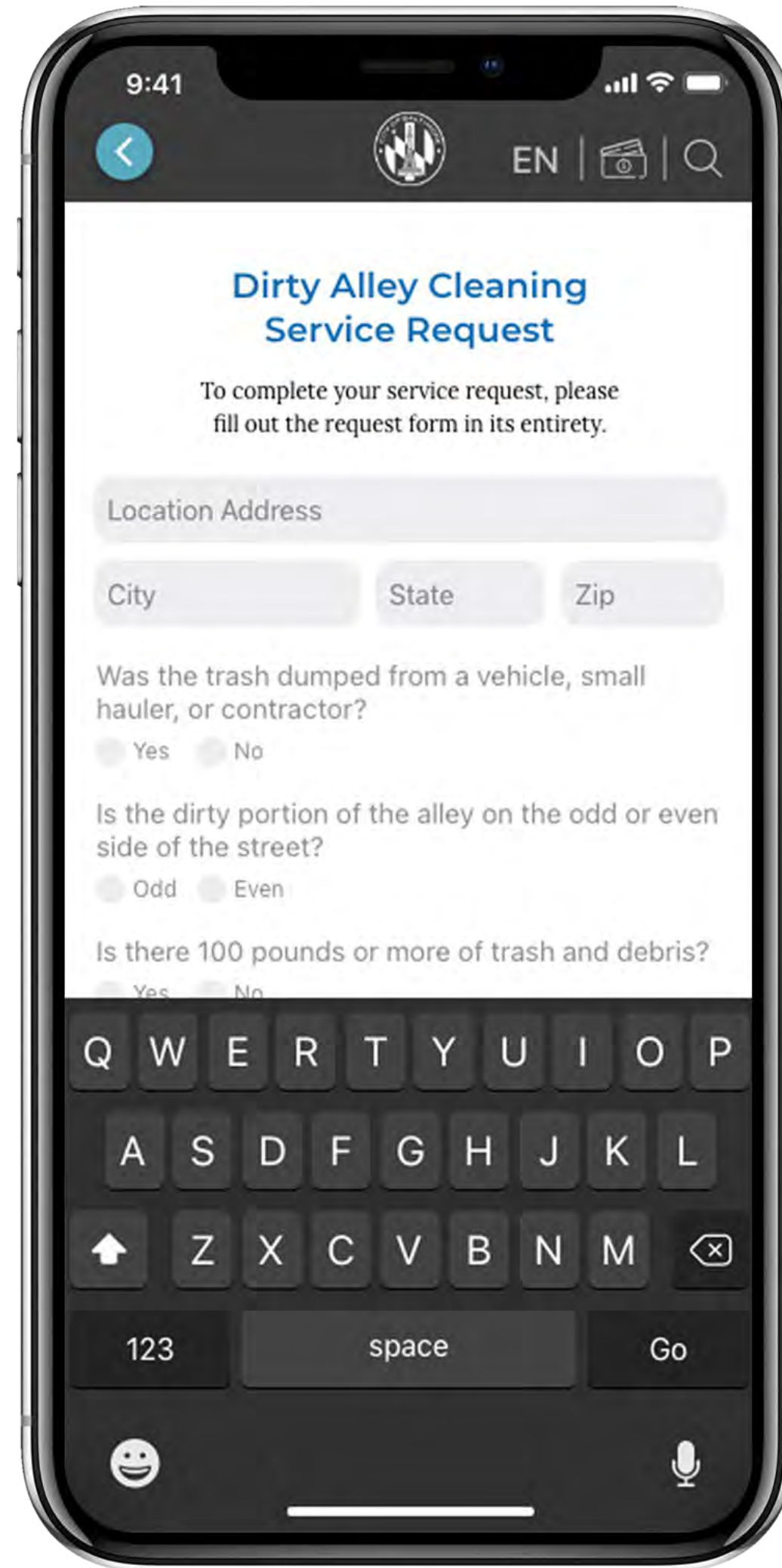
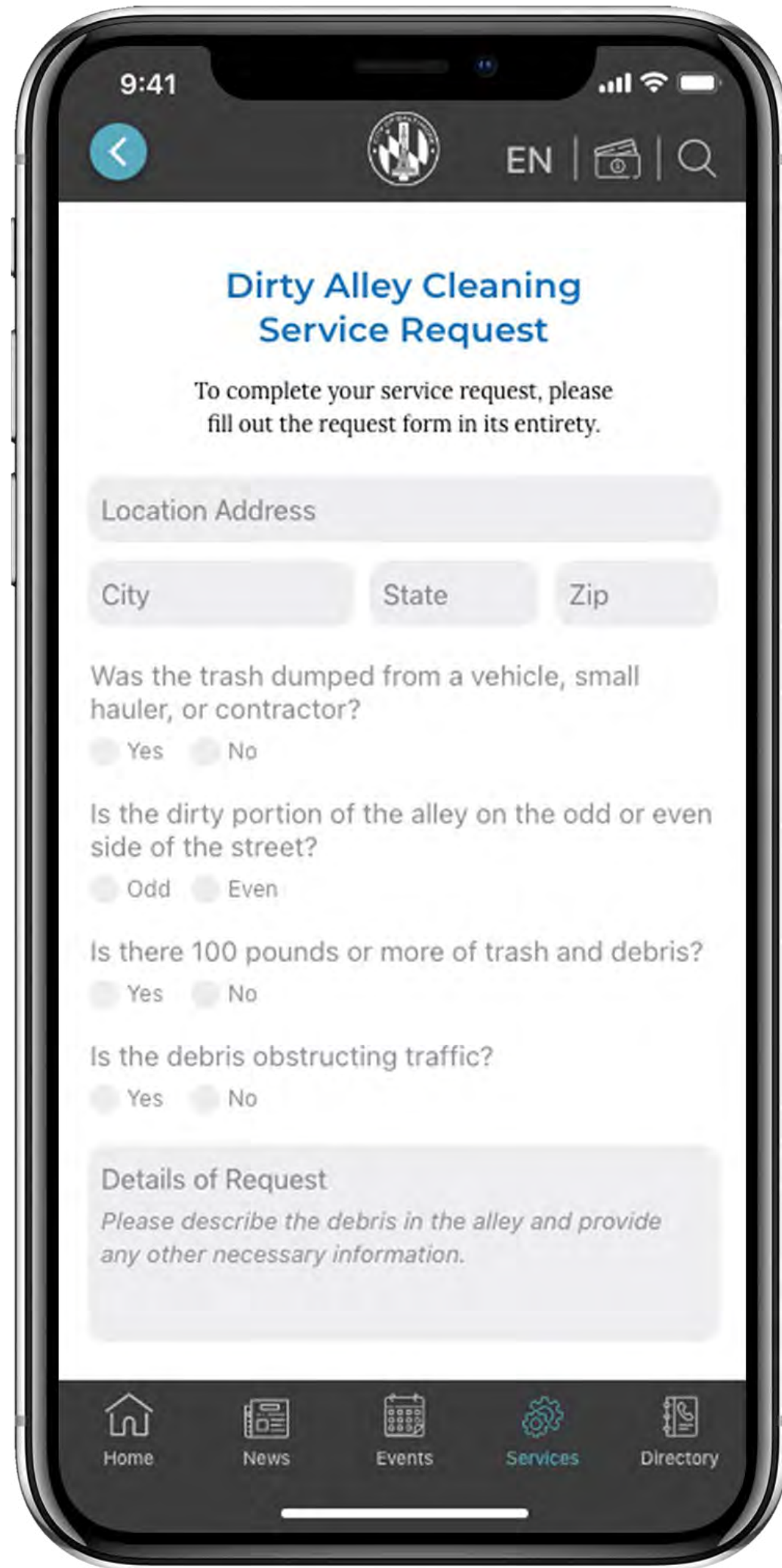
Screen Captures: Services



Screen Captures: Services



Screen Captures: Services



Final Thoughts

The process of crafting a companion app to accompany a complicated, confusing, and slightly disorganized city or town website is no small feat, especially when a companion app has never been created for that city. User experience design seeks to unearth user's needs and find viable solutions for those needs.

This Ideation, Prototyping, and Testing course taught me how to do just that: Ideate, Prototype, and Test. Through this project, I was able to gain first-hand experience on iterate aspects and stages of Design Thinking. Although I did not foresee how beneficial a companion app would be for Baltimore City's website, I now understand that this app would be a great tool for Baltimore's residents. Instead of spending time searching the city's website endlessly, an app like Baltimorean would allow users to find what they are seeking swiftly, especially when on the go.

Altogether, I loved the process of building Baltimorean from the ground up. I enjoyed exploring and experimenting with various steps, techniques, strategies, and practices all with one goal in mind: meeting the user's needs. I have great respect for UX professionals tasked with making complicated products, services, and features more simple, accessible, and enjoyable.

