WayFinder User Manual

AbleLink Smart Living Technologies, LLC

August 28, 2019

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Chapter 1

Introduction

1.1 Overview

Welcome to *WayFinder*, a GPS (global positioning system) supported multimedia software application that operates on GPS-enabled *Android* and *Apple* devices to provide personalized directions for foot and vehicle navigation, including above ground fixed route transit systems. *WayFinder* is different from typical GPS devices in that it provides an interface for creating specific foot or bus travel directions using text, recorded audio instructions and picture cues that are activated via GPS location to prompt a user through route navigation. The *WayFinder* system can operate independent of municipal transit system GPS tools, so no coordination or programming cooperation from local transit agencies is necessary.

WayFinder is SMART ready and operates with routes created according to the SMART WayFinding Specification. SMART stands for Specialized Media for Assisting Route Travel. Visit www.ablelinksmarttravel.com for more information on SMART.

To create instructions for a new travel route, someone walks or rides the route while using *WayFinder's* **Route Builder** utility to set GPS waypoints and record associated instructions such as "This is not your stop, stay on the bus" or "You are getting close to the mall, so its time to pull the cord to ring the bell." Pictures of landmarks can also be obtained within the app to aid in travel training, and instructional messages can be re-recorded later during editing if desired. Behavior support prompts can also be included, such as "Don't forget your backpack when you get off the bus." Once a route has been created, *WayFinder* can then be used to support independent travel on the route by following the GPS-generated audio and picture based instructions. *WayFinder* can retain any number of sets

of foot or vehicle travel instructions at a given time.

1.2 WayFinder Features

Some of the features in *WayFinder* include:

- options for signal range and travel speed to optimize for walking or vehicle travel;
- ability to create personalized travel instructions for foot or vehicular (e.g., bus, light rail) travel;
- "Route Preview" feature that allows users to walk through the waypoints, images and audio prompts without having to travel the route;
- unique **"Not-Your-Stop" Waypoint** option that only plays if the bus actually stops at a bus stop;
- audio, picture and text-based prompts for travel instructions;
- option for device to vibrate when GPS waypoints are activated along a route (device must be equipped with vibration technology);
- option to preview the next waypoint in a route;
- option to only display routes which start within the user's immediate vicinity;
- **Route Status** indicator that shows the relative position on a travel route during playback;
- ability to receive periodic email messages with location information to track a traveler's progress when traveling;
- off-route detection and notification features;
- ability for a traveler to easily request help from a caregiver within the WayFinder app;
- ability for a traveler to easily send an "I'm okay" message from within WayFinder
- ability to edit routes including options to re-record audio instructions, remap **Waypoints**, or to add/delete **Waypoints**;

- option to purchase or use a cloud-based **Public** or **Agency SMART Route Library** to upload, download, and share routes that have been created;
- and more!

1.3 What's in this User's Guide

Chapter 2: Installation and Start-up

Chapter 2 describes installing *WayFinder*, and gives special instructions for starting the application the first time.

Chapter 3: Setting Options and Features in *WayFinder*

This chapter provides instructions for using the various options and features in *WayFinder Settings* utility.

Chapter 4: Creating and Editing Travel Routes in *WayFinder*

Chapter 4 describes how to create foot or vehicle travel routes using *WayFinder's Route Builder* module, as well as how to edit existing routes.

Chapter 5: Using SMART Route Libraries and Cloud Settings

Chapter 5 contains information on the option to purchase and use an **Agency** or **Public SMART Route Library** and the cloud settings tools.

Chapter 6: Using *WayFinder* to Support Independent Travel

Chapter 5 contains step-by-step instructions for using *WayFinder* to support walking, bus or other vehicle travel. Section 6.1 includes important information to help promote safe community travel.

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Chapter 2

Installation and Start-up

2.1 Overview

This chapter is designed to assist with the proper installation of the *WayFinder* software on your *Android* or *Apple* hardware unit. If *WayFinder* was purchased along with a device from AbleLink, it has already been pre-installed.

2.2 System Requirements

WayFinder has been developed to run on any *Android* smart phone or tablet computer running Jelly Bean (OS 4.2) or newer and that has GPS capability. However, the Marshmallow 6.0+ OS is preferable. For Apple devices iOS 9.0 or better is required. Hardware devices do not require a calling plan or data plan unless the notification and tracking features are going to be used. Field testing has shown that performance can vary from device to device, depending largely on the quality of the GPS technology in the device.

2.3 Install Procedures

If *WayFinder* was purchased along with a hardware device from AbleLink, the software has been pre-installed and is ready to go. However, the unit will need to be plugged in to regain the charge lost during shipping. If the software alone was purchased to install on a hardware device that you already own, use the system's app store icon or the device's browser to navigate to the download site provided at the point of sale, and download the **WayFinder.apk** file. Tap on the .apk file

after it has downloaded and follow the instructions on-screen to complete the install.

2.4 Starting WayFinder and the Main Menu

2.4.1 Starting WayFinder

Once installed, *WayFinder* can be launched by tapping the *WayFinder* icon on the device screen. It may be helpful to locate application icons such as *WayFinder's* to a place that is appropriately convenient and accessible to the end user.

2.4.2 The Main Menu

The first time *WayFinder* is started, a screen called the **Main Menu** appears. This screen shows the routes that have been created and are available to be used for navigation support. When first launched, this screen will be mostly blank because no routes have yet been created. An example showing the screen with three routes available is shown in Figure 2.1. The **Main Menu** on most smart phone screens will display up to three routes at a time; when more than three routes are available, swipe upwards on the screen to scroll to additional routes.

2.4.3 Other Items on the Main Menu

- This icon indicates that *WayFinder* does not have an adequate GPS signal. It may take a moment to connect when first starting WayFinder, and keep in mind that GPS technologies generally need access to three satellites to get a good signal. GPS is not designed to work indoors, or below ground level, in most cases.

- When *WayFinder* has a good GPS signal, the above icon will change to this one to indicate the system is ready for use. The more 'waves' emanating out of the icon, the stronger the signal.

- This icon is used to access the **Route Builder** utility. To use it, TAP

Figure 2.1: WayFinder's Main Menu display with three routes showing

AND HOLD the button for about five seconds. Audible feedback is provided when the icon is first touched, and again after holding for five seconds when **Route Builder** opens.

- This button is used to access the *WayFinder Settings* module where the appearance and operation of various features can be adjusted. To use it, TAP AND HOLD the button for about five seconds. Audible feedback is provided when the icon is first touched, and again after holding for five seconds when *WayFinder Settings* opens.

2.5 If the Battery Loses Power

If the device loses power completely, just recharge it and routes and option settings will continue to be available. The only exception would be if the device loses power and shuts down while changing settings or in the middle of route building; only any unsaved changes will be lost.

2.6 Data Backup

We recommend that you make regular backups of your device to alleviate potential data loss. Backup procedures may vary depending on the device you are using, but the instructions below are typical of *Android* devices.

To backup routes created in *WayFinder*, connect it to a laptop or other computer via a USB cable (not provided with all devices). On the computer, navigate to the *Android* device and open the **AbleLink** folder, then the **WayFinder** folder, and finally the **Export** folder. Each route is represented by a folder in the **Export** folder, and will have a folder name consisting of many numbers. Copy each folder to the desired location on the computer you are using to back up the routes. To re-install a route, simply reverse the procedure to copy the route folder back into the **AbleLink**/**WayFinder**/**Import** folder.

2.7 Data Restore

To re-install one or more routes, simply reverse the procedure described in the previous Section 2.6 to copy the route folder back into the **AbleLink**/**WayFinder**/**Import** folder.

2.8 Technical Support

Visit the Support section on our website[1] (click on **View Support** to access User Manuals, the Learning Library and Frequently Asked Questions). If you can't find an answer for your question, AbleLink Smart Living Technologies Tech Support can be contacted any of the following ways:

- Email: support@ablelinktech.com (preferred)
- Phone: 719-592-0347 (follow prompts for Technical Support)
- Fax: 719-592-0348

In the correspondence please include the following:

- contact person's name and organization

[1] www.ablelinktech.com

- number where contact person can be reached
- contact person's e-mail address
- the AbleLink Smart Living Technologies product in question (software and version)
- the type and model of the device and Operating System version the software is running on, if applicable
- a full description of the problem (including any error messages received)

Live support is generally available from 9:00 am to 4:00 pm, Mountain Standard Time, Monday-Friday.

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Chapter 3

Setting Options and Features in WayFinder's Settings Module

This section provides instructions on using *WayFinder's Settings* utility. It provides access to options and features that can be set to optimize the system to meet the unique needs of different travelers and travel situations. The first section repeats the Chapter 2 narrative on what happens the first time you launch the system. Subsequent sections describe the system's *General Settings, Builder Settings, Route Settings and Cloud Settings*. For more information on playing back travel routes once they have been created, see Chapter 6.

3.1 Starting WayFinder for the First Time

NOTE: The following Sections are repeated from Chapter 2.

The first time *WayFinder* is started, a screen called the **Main Menu** appears. this screen shows the routes that have been created and are available to be used for navigation support. When first launched, this screen will be mostly blank because no routes have yet been created. An example showing the screen with three routes available is shown in Figure 3.1. The **Main Menu** will display up to three routes at a time; when more than three routes are available, swipe upwards on the screen to scroll to additional routes.

Figure 3.1: WayFinder's Main Menu display with three routes showing

3.1.1 Other Items on the Main Menu

- This icon indicates that *WayFinder* does not have an adequate GPS signal. It may take a moment to connect when first starting *WayFinder*, and keep in mind that GPS technologies generally need access to three satellites to get a good signal. GPS is not designed to work indoors in most cases.

- When *WayFinder* has a good GPS signal, the above icon will change to this one to indicate the system is ready for use. The more 'waves' emanating out in the icon, the stronger the signal.

- This icon is used to access the **Route Builder** utility. To use it, TAP AND HOLD the button for about five seconds. Audible feedback is provided when the icon is first touched, and again after holding for five seconds when **Route Builder** opens.

- This button is used to access the *WayFinder Settings* module where the appearance and operation of various features can be adjusted. To use it, TAP AND HOLD the button for about five seconds. Audible feedback is provided when the icon is first touched, and again after holding for five seconds when *WayFinder Settings* opens.

3.2 Using WayFinder's Settings and Options

3.2.1 WayFinder Settings

Once installed, *WayFinder* can be launched by tapping the *WayFinder* icon. It may be helpful to locate application icons such as *WayFinder's* to a place that is appropriately convenient and accessible to the end user. The first time *WayFinder* is started the **Main Menu** appears and is blank; as new routes are created, they will be displayed here. Whether or not routes have already been created, a series of settings are available to select features and adjust when and where *WayFinder* reacts to GPS location-based notifications. When *WayFinder Settings* first opens, the *General Settings* screen is displayed as shown on the left in Figure 3.2. Tapping on the **Settings Option icon** ( ) provides access to the other *WayFinder Settings* options, including *Builder Settings, Route Settings* and *Cloud Settings*, which are described in subsequent sections.

To access the *WayFinder Settings* screen, launch *WayFinder* and TAP AND HOLD the **Settings button** ( ) for about five seconds; you will hear a sound when the icon is first touched, and another sound will play after five seconds when the *WayFinder Settings/General Settings* screen opens. To access *Builder Settings, Route Settings* and *Cloud Settings* options, tap the **Settings Options** ( ) icon.

3.2.2 General Settings

- **Local Routes Only**–When this option is checked (i.e., turned on), *WayFinder* will only display routes on the **Main Menu** that are accessible from the

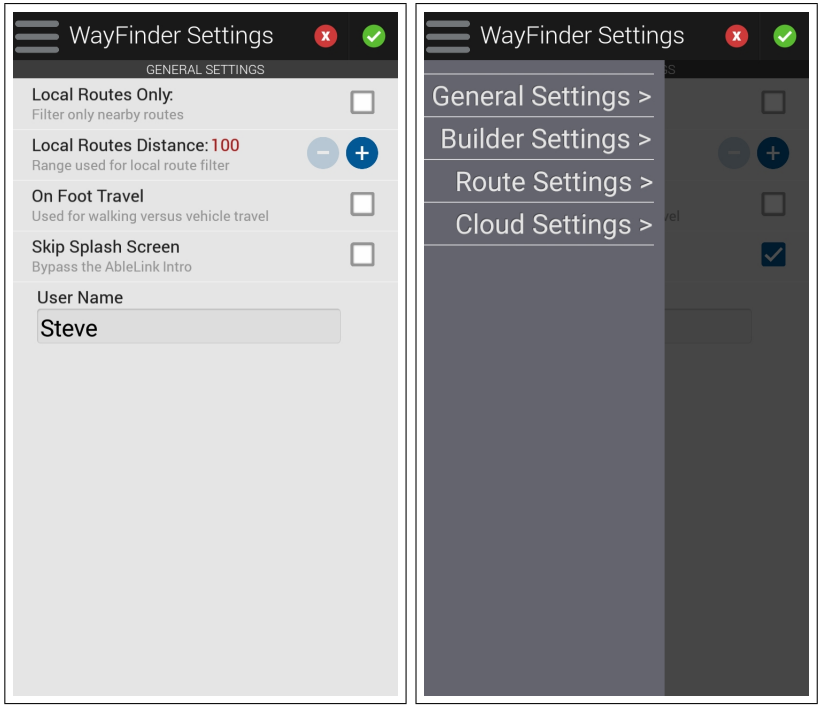

Figure 3.2: WayFinder's General Settings display after tapping-and-holding the Settings button (left); tapping on the Settings Options icon provides access to the Builder, Route and Cloud Settings (right)

user's current location. In other words, it will not display routes which cannot be started from the user's current location. For example, when this feature is on and a user leaves home for work, only the route to work will be displayed on the **Main Menu** (along with other routes that start from the same bus stop); conversely when work is over, only the route back to home would be displayed from the work bus stop.

- **Local Routes Distance**–This option works in conjunction with the **Local Routes Only** option. When the **Local Routes Only** setting is checked (or turned on), the **Main Menu** will only show routes that start within the immediate vicinity of the *WayFinder* system. This feature is designed to help reduce confusion or the possibility of launching the wrong route instructions by hiding those routes that do not begin nearby. **Local Route Distance**, therefore, indicates how close the user must be to the starting waypoint of a route for it to show up on the **Main Menu.**

- **On Foot Travel**–When this option is checked (i.e., turned on), *WayFinder*

will automatically default to GPS settings that are optimized for the slower travel speed of walking. Regardless of this setting *WayFinder* will still work for walking or vehicle travel, but this option can be used when foot travel is the predominant mode in which *WayFinder* is being used.

- **Skip Splash Screen**–When this option is checked (i.e., turned on), upon startup the system will skip the introductory splash screen and musical interlude and go directly to the **Main Menu** showing the list of available routes.
- **Name**–An optional field is provided to enter the name of the primary end user; this is used in the email notifications to identify the user sending the message, such as "Dan says "I'm OK" or "Dan says "Please Contact Me".

3.2.3 Builder Settings

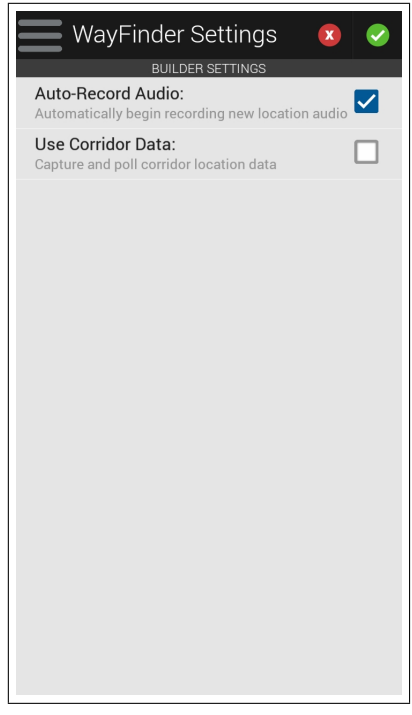

Figure 3.3: WayFinder's Builder Settings display

- **Auto-Record Audio–**This option only involves the sequence of creating a new route or editing existing waypoints while using the **Route Editor**.

When it is checked (i.e., turned on), each time a new waypoint is created during route creation (by selecting either the **Add First Location** or the **Add Another** button in the **Route Editor**), the voice recorder automatically begins recording instructions on what to do at that waypoint. The person creating the route must start speaking right away and then tap the **Stop** button to end the recording. Each message can still be re-recorded if needed. Alternatively, if this feature is off, the person creating the new route will need to tap the **Record** button prior to speaking the instructions for that waypoint, and then tap the **Stop** button to end the recording. This feature is offered as an efficiency during route creation.

- **Use Corridor Data–**When this feature is turned on (checked), *WayFinder* will periodically record the GPS location along a route. This feature must be on and the route must be traveled once for the **Off Route Notification** feature to work. The waypoints recorded by the **Use Corridor Data** feature are used by the system to detect when the user has gotten off route so that notifications can be sent to a caregiver; note this **Use Corridor Data** is also used to detect and notify when a user has gotten back on route. This feature is turned on by default when the system is purchased.

3.2.4 Route Playback Settings

- **In Range Distance**–This setting indicates the radius of the circle (in feet) that *WayFinder* must be in before it will launch GPS-based location instructions. In other words, if the **In Range Distance** is set at 20 feet, *WayFinder* will launch audio and picture-based information when it is within a circle with a 20 foot radius (or 40 foot diameter) of where the waypoint was originally set. The smaller the **In Range Distance**, the more the user must be precisely within the GPS waypoint circle to activate the instructions for that waypoint. So if it appears that *WayFinder* is not launching some waypoint instructions, just increase this setting. If *WayFinder* is launching too soon at waypoints, decrease this setting. Tap the **Plus Icon** ( ) to increase the **In Range Distance** by five feet at a time, or tap the **Minus Icon** ( ) to decrease the range by five feet at a time. If the **Minus Icon** is faded out (), it means the setting is already at it lowest point.

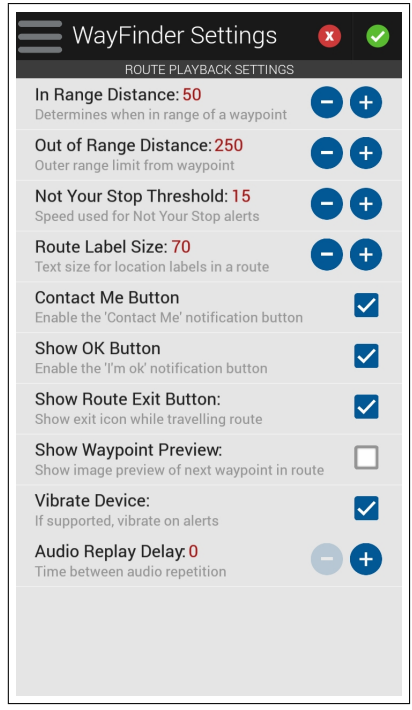

Figure 3.4: WayFinder's Route Playback Settings display

- **Out of Range Distance**–This setting indicates the point at which *WayFinder* will move out of range of a waypoint and therefore will automatically stop playing the waypoint message and stop displaying the corresponding image when the unit moves out of the **Out of Range Distance**, and *WayFinder* will return to the In Route travel display. This saves the user from having to tap the **OK** button to manually stop the instructions from playing after passing through a waypoint. Some users may prefer to manually tap the **OK** button to indicate they have passed a waypoint, while others may prefer for waypoints to automatically be dismissed. Tap the **Plus Icon** ( ) to increase the **Out of Range Distance** by five feet at a time, or tap the **Minus Icon** ( ) to decrease the range by five feet at a time. If the **Minus Icon** is faded out ( ), it means the setting is already at it's lowest point.
- **Not-Your-Stop Threshold**–When building a route, *WayFinder* includes the ability to easily create **Not-Your-Stop** waypoints. For example, if a fixed

route bus stops at a bus stop that is not a final destination or transfer point, a **Not-Your-Stop** waypoint automatically cues the user that "This is not your stop. Do not get off the bus here." However, this could be confusing in situations where a bus does not stop at a bus stop because no person is waiting to get on and no one already on the bus has signaled for a stop. Therefore, *WayFinder* has been programmed to ignore **Not-Your-Stop** waypoints when it detects that the bus continues past one of these waypoints without stopping (or slowing down enough). Therefore, the **Not-Your-Stop Threshold** indicates the threshold speed that determines whether the **Not-Your-Stop** message will be played or not. For example, if the **Not-Your-Stop** threshold is set at 10 mph, the message will only play at **Not-Your-Stop** waypoints when the bus has slowed to 10 mph or slower; conversely, the message will not play if the bus does not slow down to below 10 mph.

- **Route Label Size–**This option can be used to adjust the size of the descriptive on-screen text when waypoints activate along a travel route. Larger text can be beneficial to users with impaired vision, while smaller text may allow non-reading users to focus on the associated waypoint image instead of the text. If this setting is not modified, *WayFinder* will dynamically change the size of the text based upon the available space. Thus, longer text descriptions will be presented in a smaller font size to help fit the text into the available space.

- **Contact Button**–When this feature is checked (i.e., turned on) a **Contact** button will appear on the screen during travel. If this **Contact** button is tapped and held for a few seconds, a screen will appear showing the **Please Contact Me** and **I Am OK** buttons. Selecting the **Please Contact Me** button will send an email to the address indicated in the **Notifications** field with a message that the user needs to be contacted (e.g., by phone) along with a Google Maps link of the user's current location. This feature is provided for users who may need quick and easy access to help or reassurance while traveling. If the **I Am OK** button is tapped, an email message will be sent with "(User name) says I'm OK" in the subject line and the name of the travel route in the message.

- **Show OK Button**–When this feature is checked (i.e., turned on) a **Contact** button will appear on the screen during travel. If this **Contact** button is tapped and held for a few seconds, a screen will appear showing the **I Am OK** button. Selecting the **I Am OK** button will send an email to the address

indicated in the **Notifications** field with a message that the user is okay along with a Google Maps link of the user's current location. This feature is provided for users who may want to provide reassurance to a family member, travel trainer or care giver that the user is okay. If the **Please Contact Me** button and **I Am OK** button are both turned on, both buttons will appear when the **Contact** button is tapped and held for a few seconds during travel.

- **Show Route Exit Button–**When this feature is checked (i.e., turned on), an **Exit** button will be available during route playback. The **Exit** button can be used to abort a set of route instructions at any point during route playback and return to the **Main Menu**. This feature is generally provided for testing route instructions; if left on it allows the user to abort a set of trip instructions mid-trip and therefore potentially causing navigation problems. It is generally advised that during travel travel the **Exit** button be turned off.

- **Show Waypoint Preview**–When this option is checked (i.e., turned on), as soon as one waypoint has been passed *WayFinder* will immediately show a slightly faded picture for the next waypoint on the route (if one was provided during route creation) as a cue to the user as to what to be looking for. The audio instructions for the next waypoint will not play until that waypoint has been reached and at that time, the image will be presented in full color. This is provided as a user preference, as some people may want to be on the lookout for the next waypoint and others may prefer to wait until the waypoint is reached to view the image. This feature should be used consistently (on or off on all routes) with each individual end user so as not to provide unnecessary confusion.

- **Vibrate Device**–When this feature is checked (i.e., turned on) the hardware unit that *WayFinder* is running on will also vibrate (if it is equipped with vibration capabilities) at waypoints during route playback (along with playing the audio instructions and displaying a picture if one was provided during route setup). This feature is designed to provide tactile feedback to users who may be easily distracted or when in a loud environment and ear buds are not being used.

- **Audio Replay Delay–**During route playback when the audio message for a waypoint is set to repeat, this feature sets the number of seconds in between each message replay.

3.2.5 Cloud Settings

A brief description of the options available on the **Cloud Settings** screen is provided below. See Chapter 5 for more information.

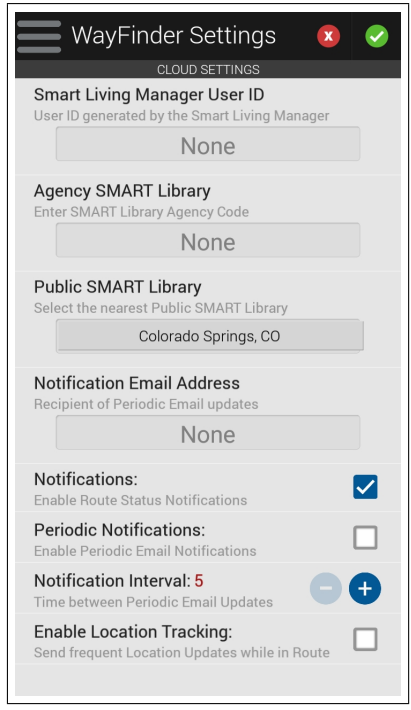

Figure 3.5: WayFinder's Cloud Settings display

- **Smart Living Manager User ID–**This field is RESERVED for future development.

- **Agency SMART Library–**Agencies may purchase a private cloud-based library service that allows them to upload and share travel routes among users. Routes can be downloaded and edited or used as-is without having to re-create the entire route. See Chapter 5 or contact AbleLink for more information.

- **Public SMART Library–**Cities or other municipal jurisdictions may purchase a public cloud-based library service to enable access to travel routes for its citizens. Routes can be downloaded and edited or used as-is without having to re-create the entire route. Tap on the field to see if there is

a **Public SMART Library** for your location or contact AbleLink for more information. Also, see Chapter 5 for more information.

- **Notification Email Address–**One or more email addresses can be entered in this field that will receive notification email regarding the travel status of the user when the **Notifications** and/or **Periodic Notifications** features are turned on. Use a comma to separate multiple email address entered into this field.

- **Notifications–**If this feature is checked (i.e., turned on) and one or more email addresses are correctly entered into the **Notification Email Address** field, *WayFinder* will automatically send email notifications to that address 1) when the **Start** button is tapped when using a *WayFinder* route, 2) if and when a route that has been started is aborted by the end user, and 3) when a route has been completed as indicated by the user tapping the **Done** button at the end of a route. Additionally, a notification email will be sent if the system detects the user is off route, and when the user is back on route (Contact AbleLink for more information on the off route feature). The email notifications will include the time, date and nature of the notification, the device it was sent from, and a *Google Maps* link that, when opened, shows the location of the *WayFinder* device at the time the notification was sent.

- **Periodic Notifications–**When this feature is checked (i.e., turned on) an email notification will automatically be sent to the address indicated in the **Notification Email Address** field during travel at the frequency indicated in the **Notification Interval** setting (see below).

- **Notification Interval**–When the **Periodic Notifications** option is turned on, this setting indicates how frequently (in minutes) email notifications will be sent during travel.

- **Enable Location Tracking**–When this feature is checked (i.e., turned on) location update email notifications will be sent during travel. This feature is provided for users who may be less experienced with public transportation to provide periodic location information to a care giver during travel.

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Chapter 4

Creating Travel Routes in WayFinder

This chapter provides complete instructions on how to set up new travel route instructions in *WayFinder's* **Route Builder** module, and how to edit previously created travel routes.

4.1 Overview–Please Read!

Travel routes in *WayFinder* are usually designed to provide directions for walking, driving or using public transit (e.g., city buses) as a support for independent travel. Instructions for travel routes are created in *WayFinder*'s **Route Builder** utility and involve traveling the route and setting waypoints, recording audio instructions, adding text descriptions and optionally taking pictures of landmarks, bus stops and other important places along the way. Waypoint setting, recording of audio instructions, adding text descriptions and taking pictures are all done within **Route Builder**, and routes can also be edited/changed later on as needed. Pictures can be obtained using the smart phone or tablet that *WayFinder* is running on (recommended), or via an external digital camera and transferred to the *WayFinder* unit for integration into the route instructions.

Once an initial route has been created, **Route Builder's Edit** features can be used later to refine audio messages, digital photos, and even waypoint locations if desired. For example, *WayFinder* provides default images depicting a moving bus, a hand pulling a ring-the-bell cord, etc., but these can be replaced by actual photos of the traveler while on the bus, or pictures of landmarks along the route. Similarly, audio recordings can be re-recorded with improved wording or to

eliminate the background noise that may be present when creating a route while traveling in a vehicle. The following sections provide step-by-step instructions and other information to help you get the most out of *WayFinder*.

4.1.1 Accessing Route Builder and the Route List

Before beginning the route building process, you will need to know both the route and the needs and abilities of the end user who will be using *WayFinder* to navigate the route. You will also need to be at the starting point for the route, which may be the user's front door or the bus stop where the user boards a bus. Building a route with *WayFinder's* **Route Builder** utility involves physically traveling the route from beginning to end (by either walking, riding a bus, or as a passenger in a personal vehicle that is following the travel route) while setting GPS waypoints, recording audio instructions and taking pictures if desired.

1. To access the **Route Builder** utility, launch *WayFinder* and TAP AND HOLD the **Route Builder** button ( ) on the **Main Menu** screen for about five seconds; you will hear a sound when the icon is first touched, and another sound will play after five seconds when the **Route Builder** screen opens.

2. **Route Builder** opens to the **Route List** screen, shown in Figure 4.1. This screen shows the list of routes that are currently available for use on the device (if any), along with a **New** button at the bottom of the screen. Note that if a route on the **Route List** is highlighted (that is, selected), the **Delete, Preview** and **Edit** buttons also become available. (The **Share** button only becomes available if *WayFinder* is being used in conjunction with an **Agency** or **Public SMART Library** service and if the route is not already in the assigned **Library**; contact AbleLink for more information.)

3. The up and down arrow buttons ( )at the bottom of the screen can be used to change the order of where the selected route will appear on the **Main Menu**. This allows more frequently used routes to be displayed at the top of the **Main Menu** and therefore immediately visible when *WayFinder* is first launched.

4. Along the top of the **Route List** display are a series of icons. The first icon ( ) shows the current strength of the GPS signal. A red cross

across the icon indicates no signal, and the number of waves emanating from the icon show the relative strength of the signal; the more waves, the stronger the signal. New routes should not be created when the GPS signal strength shows No Signal ( ). Wait until the signal strength is strong before creating a new route.

5. The **Download Routes** icon ( ) can be used to download additional travel routes that may have been stored in a web-based **Agency** or **Public SMART Route Librar**y. See Chapter 5 or contact AbleLink for information on using **SMART Route Libraries**.

6. The last icon ( ) is used to close **Route Builder** and return to the **Main Menu**.

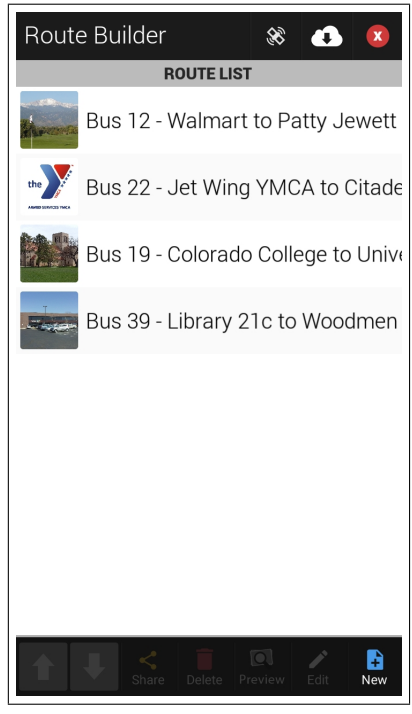

Figure 4.1: The Route List screen in WayFinder's Route Builder utility

4.2 Creating a New Travel Route

Note on creating waypoints for travel routes: Consider the nature of the travel route when determining the best place to set waypoints. For example, on a walking route a waypoint can be set at or near a corner for example to instruct the traveler to "Turn left here next to the big red house" because foot travel is fairly slow. Conversely, when creating a travel route waypoints may need to be set earlier to allow the traveler time to respond to an instruction such as "You are getting close to the mall so it's time to pull the cord to ring the bell." Testing has shown that you can also drive a personal vehicle while following a public transit route to successfully create a route that can then be used to support travel on the bus itself, but you may want to be sure that all **Not-Your-Stops** are accounted for if that feature is being used (buses frequently bypass potential bus stops if no customers are waiting, but the **Not-Your-Stop** waypoint will only fire if the bus actually stops; *WayFinder* will ignore the **Not-Your-Stop** waypoint if the bus does not stop.)

1. If you have not already done so, start *WayFinder* and launch the **Route Builder** utility by TAPPING AND HOLDING the **Route Builder** button ( ) for about five seconds; you will hear a sound when the icon is first touched, and another sound will play after five seconds when the **Route Builder** screen opens.

2. On the **Route List** screen in **Route Builder**, tap the **New** button (note that the other buttons on the bottom of the screen are grayed out; they will become active if a route is highlighted on the list). **Route Builder** moves to a display for entering information to help identify the route on the **Main Menu** screen as shown in Figure 4.2. Note that **Route Builder** will automatically capture the current GPS waypoint location and use that location for the **Local Routes Only** feature to know when you are in the vicinity of a **Local Route** (See Section 3.2 for more information on the **Local Routes Only** feature). Therefore, when building a new route you should be at the location where the route will start; alternatively, the starting point of the route can be changed later in **Edit Route** mode by using the **Capture GPS Location** button to reset the starting waypoint.

3. Tap in the text box under **Route Title**; the on-screen keypad will pop up so a name for the route can be entered such as is shown in the screen on the

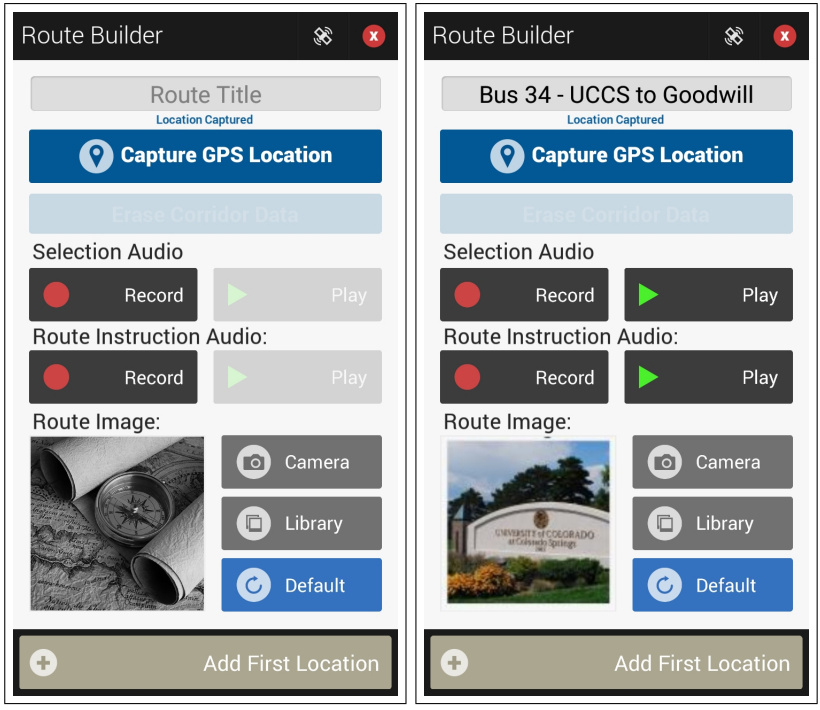

Figure 4.2: Route Builder display before (left) and after (right) entering a new Route Title, Selection Audio, Route Instruction Audio and Route Image

right in Figure 4.2. This title will be displayed under the **Route Image** on the **Main Menu** as shown in Figure 3.1.

4. **Selection Audio** is a feature designed to help end users who may not be able to read well to choose the correct route from the **Main Menu**. When a route on the **Main Menu** is first tapped, this **Selection Audio** plays to help identify the button. The end user then taps the button a second time to launch the route. Therefore, tap the **Record** button and record a message such as "Tap here again to get the instructions for traveling on Bus 34 from UCCS to Goodwill." If a **Selection Audio** is not recorded, a default message will play instead stating "Tap one more time to open this route."

5. The **Route Instruction Audio** provides the opportunity to record an informational message prior to starting route navigation. It plays immediately after a route has been launched. Tap the **Record** button and record a message such as "These are your directions for taking Bus 34 from UCCS to Goodwill. Press the Start button to begin." This message can therefore confirm that the user has selected the desired route, and also reminds

the user to tap the **Start** button to begin navigation. If no **Route Instruction Audio** is recorded, a default message will play instead stating "Please press the Start button to begin your route."

6. The **Route Image** is the picture that is displayed on the **Main Menu** (Figure 3.1) and is useful in helping the end user to find and select the correct route. It may be a picture of the start or end point of the route, or any picture which is meaningful to the end user. There are three options to assign a **Route Image**. The most common is to tap the **Camera** button and take a picture with the device's built-in camera while you are at the starting location; with this option, you can also re-take the picture as many times as needed. Another alternative is to tap the **Library** button, which provides access to selecting a picture that is already on the device. The third option allows you to use the **Default** image provided automatically by *WayFinder*. Only one **Default** image is available for the **Main Menu** image, but for subsequent waypoints tapping the **Default** button cycles through several common clip art images (for example one showing a hand pulling a bus cord for waypoints designed to notify a bus driver of the rider's intent to exit at the next stop.)

7. Next, you may begin to start adding waypoints and instructions for the route. Make sure you are in the location that you want to use as the starting point for the route (e.g., beginning bus stop, end user's front door) and tap the **Add First Location** button; this is usually the same general location that is captured in Step 2 above. *WayFinder* moves to the display on the left in Figure 4.3 and will immediately capture the GPS waypoint at that location. (Note in Figure 4.3 on the left at the top of the screen shot, *WayFinder* has noted "Location Captured at 11:25 AM", indicating when the waypoint was automatically captured). At this point it is also important to keep in mind that if the option to **Auto-Record Audio** is turned on in *WayFinder Settings* (see Section 3.2.3), the audio recorder will start recording immediately so be prepared to record the description for the waypoint (such as "OK, Get on the bus and find a seat behind the driver"). If you would rather manually start the recording by tapping the **Record** button, turn off the **Auto-Record Audio** feature. If the **Auto-Record Audio** option is turned off, tap the **Record** button (shown on the right in Figure 4.3), speak the instructions for that waypoint, and then tap **Stop**. The screen shot on the left in Figure 4.3 shows the display while the system is recording, with the **Stop** button waiting to be tapped; the screen shot on the right shows the display after the **Location Audio** has been recorded.

The **Location Audio** message can be reviewed by pressing the **Play** button; to re-record the **Location Audio**, just press **Record** again and the new message will overwrite the old one.

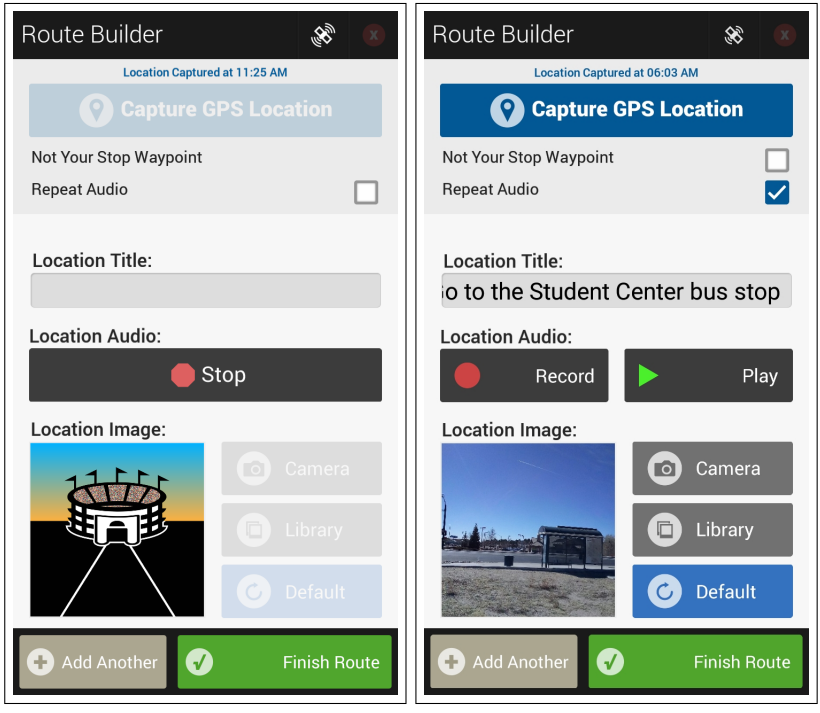

Figure 4.3: Route Builder display before (left) and after (right) adding information on a new waypoint location

8. After tapping the **Add First Location Button** in Step 7 and capturing the current GPS waypoint, type in a **Location Title** such as the one shown on the right in Figure 4.3. If you have not yet done so, or to re-record the audio instructions for this waypoint, tap the **Record** button to speak the instructions and then tap **Stop**. The message will play back automatically for a quality check, and can be listened to as many times as desired by tapping the **Play** button. Audio instructions can be re-recorded as needed and will overwrite the previously recorded instruction. Additionally, audio recordings can also be changed at a later time via *WayFinder's* **Edit** route features.

9. Two other options are available near the top of the screens in Figure 4.3. The **Not Your Stop Waypoint** feature can be used to easily create bus

stop waypoints along the route that will only play for the end user if the bus actually stops at that bus stop. When a bus stops at a **Not Your Stop Waypoint**, a message will automatically play stating "This is not your stop. Do not get off the bus here", or alternatively you can record a more personalized message. If the bus bypasses the **Not Your Stop Waypoint** without stopping (that is, because no one is waiting to get on or off the bus at that stop), *WayFinder* will ignore the waypoint and the message will not play. Note that the **Not Your Stop Waypoint** feature is not available for the first waypoint on a route. The second feature is **Repeat Audio** which, when checked, causes the audio instruction for that waypoint to play repeatedly during route playback until the user taps a **Stop** button on the playback screen or until the bus travels out of the waypoint zone. The number of seconds between each repeated audio message can be set in *WayFinder's* **Route Playback Settings** (see 3.2.4). The **Repeat Audio** feature is designed to provide extra prompting for users who may be easily distracted or that benefit from manually stopping the audio playback, and should be used consistently (either on or off) with each end user to support interface familiarity.

10. When the first waypoint is completed, proceed to the location for the next waypoint and tap the **Add Another** button. This will again automatically capture the GPS location for the new waypoint and the process of adding a **Location Title**, recording instructions, and taking/selecting a picture is repeated. Keep in mind the **Not Your Stop Waypoint** and **Repeat Audio** options for use at subsequent waypoints as appropriate.

11. Continue to add waypoints by proceeding to each subsequent waypoint on the route where a GPS-based prompt is desired and repeat the procedure in Steps 8-9. Keep in mind waypoints can include other landmarks, information or behavioral reinforcement if desired as well; examples may include "You are now going by Grace Church", "You are doing great, you are about half way to Goodwill", "If you are feeling nervous, remember to practice your calming strategies" or "Make sure you keep your money in your wallet until you get to the bowling alley."

12. When approaching the final destination waypoint during a bus trip, include a waypoint to prompt the user to pull the cord, ring the bell or otherwise notify the bus driver that they will be getting off. For example, "You are almost to the bus stop for your Goodwill, so pull the cord now and get ready to get off the bus." When assigning a picture to a waypoint such as

this, *WayFinder* provides an image to use by scrolling through the **Default** images ( ). Make sure there are no other bus stops between this waypoint and the final destination waypoint.

13. When you arrive at the final destination waypoint, tap the **Add Another** button and add a **Location Title**, audio instructions (e.g., "You are now at your Goodwill. Make sure you have your backpack and get off the bus now"), and a picture if desired. When finished, be sure to tap the **Finish Route** button to indicate the end of the route. A confirmation dialog will appear asking if you are sure you want to finish the route; tap **Yes** to finish the route or **No** to return to the route building sequence.

14. If **Yes** is tapped to finish the route, *WayFinder* will return to the **Location List** showing the list of waypoints that were set for the route. Additional waypoints can still be added if desired by tapping **New**, or tap the red 'x' ( ) **Exit** button in the upper right corner to return to the **Route List** in **Route Builder** with the newly created route showing at the bottom of the list as shown in Figure 4.4. Tapping on the new route to highlight it enables the arrow buttons at the bottom of the screen, which can be used to move the new route up or down on the list. This will affect where the new route appears on the **Main Menu**; for example, the new route can be moved to the top of the list to appear as the first route at the top of the list on the **Main Menu**.

15. Note the **Preview** icon (

) at the bottom of the screen in Figure 4.4; tapping on this icon will initiate a **Preview** of the route that was just built, or any route that is highlighted on the list. The **Preview** allows you to click through the route while listening to the audio messages and reviewing the pictures associated with each waypoint, but does not require you to actually travel the route or provide a test of waypoint location accuracy (see Step 17 for reviewing waypoint accuracy).

16. When ready, tap the red 'x' ( ) **Exit** button on the **Route List** to return to the **Main Menu** with the new route available for use.

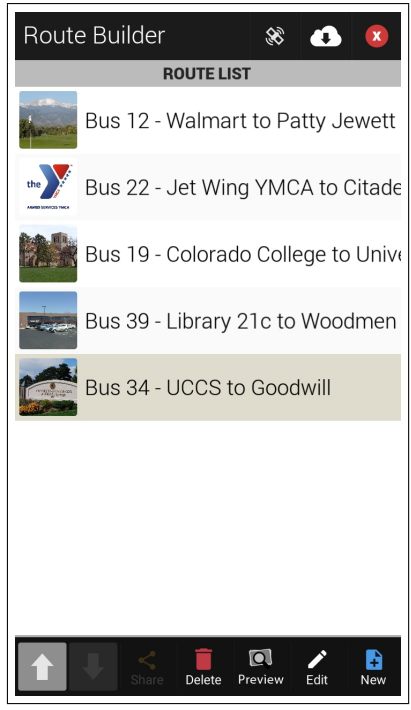

Figure 4.4: Route List display in Route Builder with new route showing

17. **It is important to remember to always test the new route one or more times by traveling the route while playing back the newly created route instructions on WayFinder to make sure GPS waypoints are launching at the desired locations.** It is also strongly recommended that a travel trainer travel a bus route with an end user for unfamiliar routes to observe and make sure they are able to successfully use *WayFinder* to travel the route independently. Based upon this test run, you may want to use *WayFinder's* **Edit** route features (described in the next section) to adjust prompts or waypoints. Also remember that if you need to reset the GPS location for a waypoint, you must travel to the desired location first.

4.3 Editing a Travel Route

This section describes the steps for editing *WayFinder* travel routes that have already been created and saved in **Route Builder**. The most common reasons

for editing routes is to re-record audio instructions to add detail or eliminate environmental noise, or to replace digital pictures associated with each waypoint. These types of edits can be made from anywhere; *WayFinder* does not need to be on the travel route to change audio or pictures.

Another less common type of edit may be in adding additional GPS waypoints or remapping existing waypoints if they do not seem to be activating at the desired location. For this type of editing, *WayFinder* needs to be at the desired location on the route to allow a waypoint to be remapped.

4.3.1 Editing Existing Routes

1. If you have not already done so, start *WayFinder* and launch the **Route Builder** utility by TAPPING AND HOLDING the **Route Builder** button ( ) for about five seconds; you will hear a sound when the icon is first touched, and another sound will play after five seconds when the **Route Builder** screen opens.

2. **Route Builder** opens to the **Route List** screen, shown in Figure 4.5. This screen shows the list of routes that have already been built (if any), along with a **New** button at the bottom of the screen. Tap on the route on the **Route List** that you would like to edit; the **Edit**, **Delete and Preview** buttons will also become available.

3. With the route you wish to edit selected, tap the **Edit** button. The **Route Builder** screen opens in **Editor** mode, shown on the left in Figure 4.6.

4. Use the controls on the **Edit** screen to change the **Route Title**, re-record the **Selection** or **Route Instruction** audios, or change the **Route Image**.

5. The **Erase Corridor Data** button will be grayed out if no **Corridor Data** has been captured for the route. If **Corridor Data** has been captured previously, you can delete the **Corridor Data** in preparation for recapturing new **Corridor Data** by pressing the **Erase Corridor Data** button.

6. If you wish to edit individual GPS waypoint locations, or the audio instructions or pictures associated with a specific waypoint, tap the **Edit Locations** button. The display moves to the **Location List** screen shown on the right in Figure 4.6. Or, if you are done editing, tap the **Save Route** button and then the **Exit** button ( ).

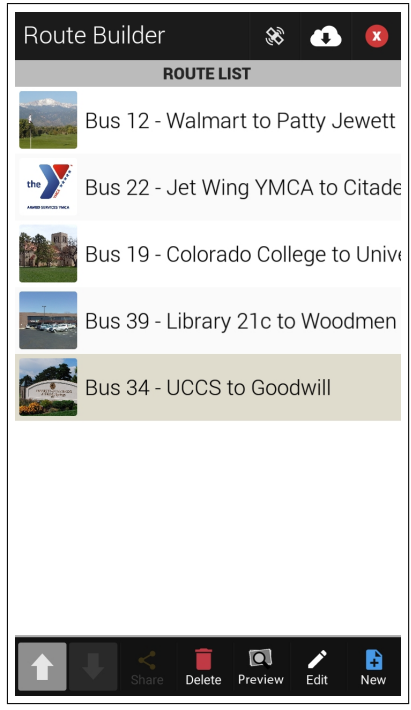

Figure 4.5: The Route List display in Route Builder

7. When editing individual waypoint locations, the **Location List** display provides access to the complete set of waypoint editing tools. Tapping on a waypoint on the list plays the audio message currently associated with that waypoint, and all button options on the bottom of the screen become available. The purpose of each button is explained below. As always, when you are done with activity on any screen in **Route Builder**, tap the **Exit** button ( ) to return to the previous screen or to exit **Route Builder** and return to the **Main Menu**.

    - **Up One Arrow button**–The arrow buttons can be used to change the order of waypoints on the **Location List**. Tap on the waypoint you would like to move, and then use the up or down arrows to move it on the list.
    - **Down One Arrow button**–The arrow buttons can be used to change the order of waypoints on the **Location List**. Tap on the waypoint you would like to move, and then use the up or down arrows to move it on the list.

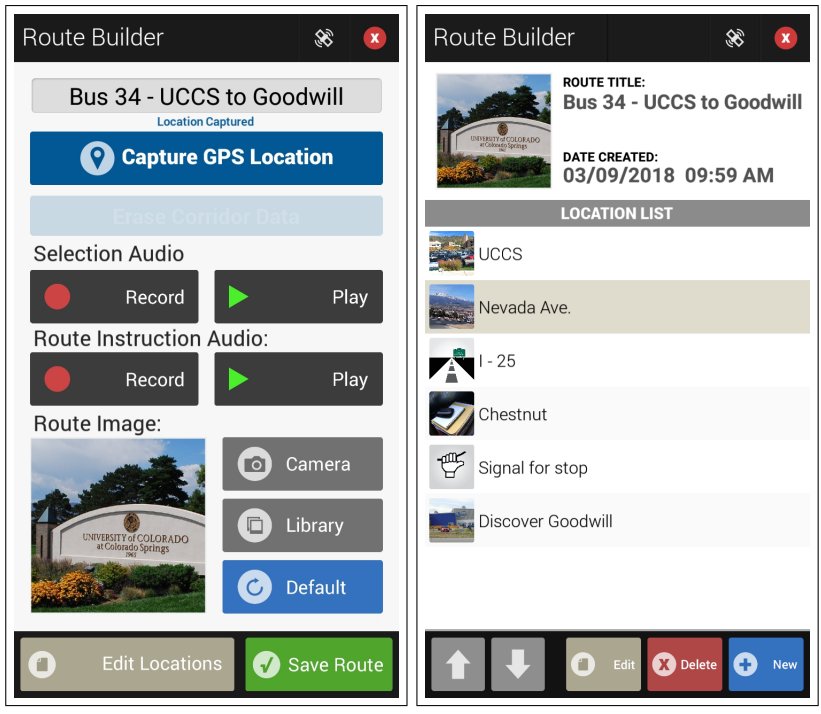

Figure 4.6: The Edit screens in Route Builder

- **Edit button**–Tapping this button will open the screen (see Figure 4.7) where the currently selected waypoint can be edited. If you want to change the GPS waypoint location, make sure you are at the desired geographic location and tap the **Capture GPS Location** button on the waypoint editing screen. You can also change the **Location Title**, **Location Audio**, and **Location Image** just as you did when adding waypoints to a new route, or turn the **Repeat Audio** and **Not Your Stop Waypoint** features on or off. Tap **Save This Location** when done editing to return to the **Location List** screen.
- **Delete button**–Tapping the delete button begins the process of deleting the currently selected waypoint. A confirmation dialog will appear asking if you are sure you want to completely remove the selected waypoint and all information related to it.
- **Add Another button**–Tapping this button will add a new waypoint immediately after the currently selected waypoint. Remember that you would need to be on-site at the desired waypoint location so that the correct GPS waypoint location will be set. You can also add a text

description, audio message and a digital picture just as when adding waypoints while building a new route.

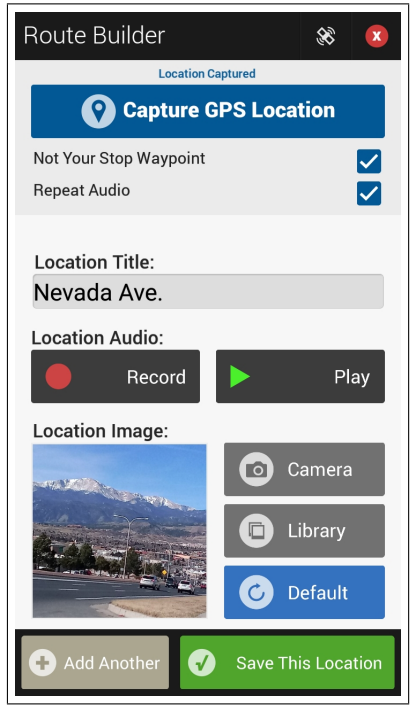

Figure 4.7: Waypoint Editor screen used to edit a specific waypoint

Chapter 5

Using SMART Route Libraries and Cloud Settings

This chapter provides information on using web-based **SMART Route Libraries** and *WayFinder's* **Cloud Settings**. Read below for more information on these advanced purchase options.

5.1 Overview–Please Read!

SMART Route Libraries are locally-available, cloud-based repositories of stored travel routes that can be downloaded to *WayFinder* and then used directly to support travel or edited to provide more personalized support for independent travel. The availability of a **SMART Route Library** in your area is dependent upon whether or not your local municipal or agency transportation system has purchased and developed routes for your geographic area. For more information on whether or not a **SMART Route Library** is available in your area, contact support@ablelinktech.com.

There are two kinds of **SMART Route Libraries:**

- The **Agency SMART Route Library** is a private library service that an agency has purchased from AbleLink for storing travel routes that have been made specifically for that agency's use. Primarily, routes will be contributed to that library from the agency's web-based **SMART Route Builder** program. When an **Agency Code** is entered into *WayFinder* (provided by AbleLink), users will be able to connect to this private library from within *WayFinder* to download these private route instructions. Routes in the **Agency SMART Route Library** will often be specific to individuals and

include info that is not appropriate for a public library, such as a routes for individuals that starts at their residence and takes them to work.

- The **Public SMART Route Library** is a collection of routes for a geographical area, usually for a local public transit system such as in storing bus and light rail routes. These will contain no person-specific information and can be downloaded to *WayFinder* and used as-is, or modified to meet the needs of a specific traveler. Once they are downloaded and modified, they will not be able to be uploaded to the **Public SMART Route Library** again. Edited public routes will be able to be uploaded to an agency's private library if the agency has purchased one.

5.2 Using Public SMART Route Libraries

The availability of a **Public SMART Route Library** in your area depends on whether or not your local transportation agency has purchased and developed one for your geographic area; contact support@ablelinktech.com to see if one exists where you live. The following subsection provides information on how to set up *WayFinder* to access a Public SMART Route Library.

5.2.1 Accessing a Public SMART Route Library

1. From the **Main Menu**, TAP AND HOLD the Settings button ( ) for about five seconds; you will hear a sound when the icon is first touched, and another sound will play after five seconds when the *WayFinder* **General Settings** screen opens (left in Figure 5.1).

2. On the *WayFinder* **General Settings** screen, tap the **Settings Options** icon ( ) and then tap **Cloud Settings** to open the **Cloud Settings** screen as shown in the right in Figure 5.1.

- Note: The following information is repeated for convenience from Chapter 3.

- **Smart Living Manager User ID**–This field is RESERVED for future development.

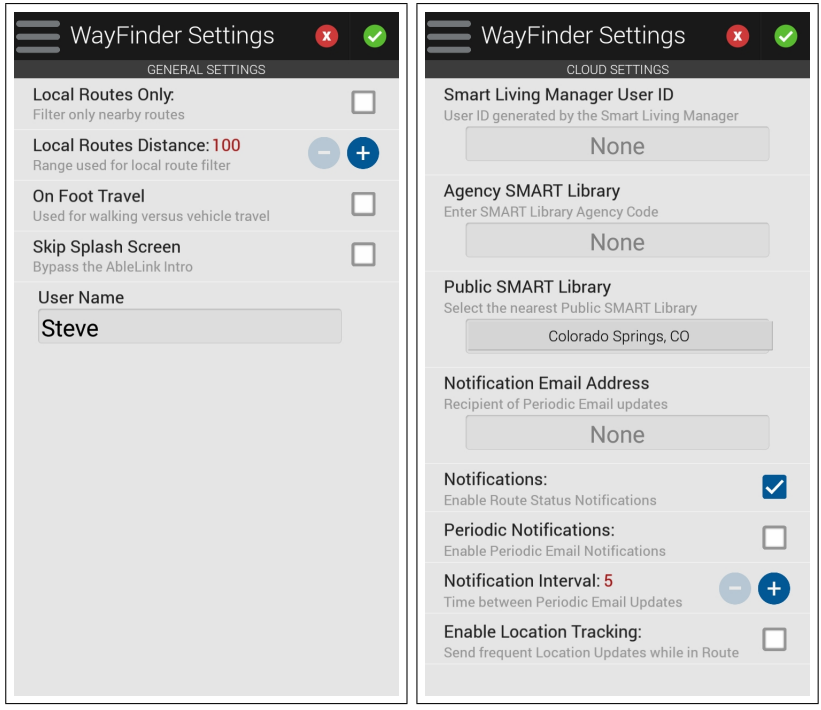

Figure 5.1: WayFinder's General Settings display after tapping-and-holding the Settings button (left); the Cloud Settings display after tapping the Setting Options and selecting Cloud Settings (right)

- **Agency SMART Route Library–**Agencies may purchase a private cloud-based library that allows them to upload and share travel routes among users. Routes can be downloaded and edited or used as-is without having to re-create the entire route. Contact AbleLink for more information or to purchase an **Agency SMART Route Library**.

- **Public SMART Route Library–**Cities or other municipal jurisdictions may purchase a public cloud-based library to enable access to travel routes for its citizens. Routes can be downloaded and edited or used as-is without having to re-create the entire route. Tap on the field to see if there is a **Public SMART Route Library** for your location or contact AbleLink for more information.

- **Notification Email Address–**An email address can be entered in this field that will receive notification email regarding the travel status of the user when the **Notifications** and/or **Periodic Notifications** features are turned on.

- **Notifications–**If this feature is checked (i.e., turned on) and one or more email addresses are correctly entered into the **Notification Email Address** field, *WayFinder* will automatically send email notifications to that address 1) when the **Start** button is tapped when using a *WayFinder* route, 2) if and when a route that has been started is aborted by the end user, and 3) when a route has been completed as indicated by the user tapping the **Done** button at the end of a route. Additionally, a notification email will be sent if the system detects the user is off route, and when the user is back on route (Contact AbleLink for more information on the off route tracking feature.) The email notifications will include the time, date and nature of the notification, the device it was sent from, and a *Google Maps* link that, when opened, shows the location of the *WayFinder* device at the time the notification was sent.

- **Periodic Notifications–**When this feature is checked (i.e., turned on) an email notification will automatically be sent to the address indicated in the **Notification Email Address** field during travel at the frequency indicated in the **Notification Interval** setting (see below).

- **Notification Interval**–When the **Periodic Notifications** option is turned on, this setting indicates how frequently (in minutes) email notifications will be sent during travel.

- **Enable Location Tracking**–When this feature is checked (i.e., turned on) location update email notifications will be sent during travel. This feature is provided for users who may be less experienced with public transportation to provide periodic location information to a care giver during travel.

5.2.2 Downloading Public SMART Library Routes to WayFinder

1. Note that not all locations will have a **Public SMART Route Library** available; if your city is not listed in the **Public SMART Route Library** field, contact AbleLink for more information.

2. Once you have set up *WayFinder* to access your local **Public SMART Route Library** as described in Section 5.2.1, tap the **Checkmark** ( ) icon to save your settings. The display will return to the **Main Menu**. On the **Main Menu**, TAP AND HOLD the **Route Builder** button ( ) for about

five seconds; you will hear a sound when the icon is first touched, and another sound will play after five seconds when the **Route Builder** screen opens.

3. **Route Builder** opens to the **Route List** screen, shown in Figure 4.1. TAP AND HOLD THE **Download** button ( ) to open the **Public SMART Route Library** of public routes from your local public library as shown on the left in Figure 5.2.

4. The **Public SMART Route Library** for your area may contain a series of route categories, often organized by geographic areas such as the example on the left of Figure 5.2; in this example, a single category of routes called Mountain Metro Routes is provided. Tapping on categories may lead to more nested route categories, but will eventually lead to a **Public Route List** such as on the right in Figure 5.2

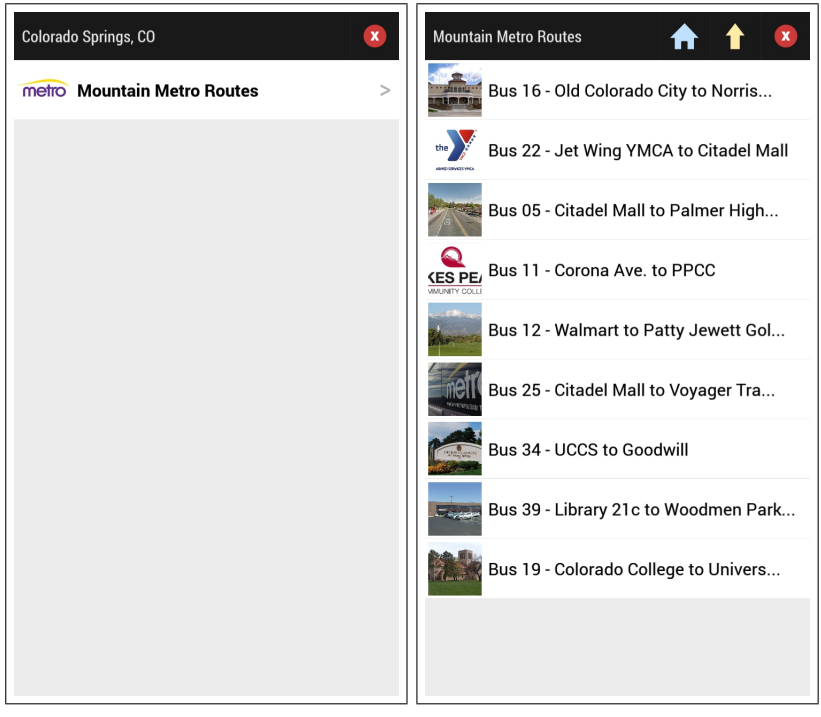

Figure 5.2: The Route List display in the Route Builder Editor

5. Tapping the **Arrow** icon on the top of the screen moves the display up one level in the route categorization scheme; tapping the **Home** icon moves the

display back to the top level of the **Public SMART Route Library**.

6. Tapping on a route in a **Public Route List** moves to the display such as shown on the left in Figure 5.3. To download the route to *WayFinder*, tap the **Download** button. A wait screen will be displayed while the route is downloaded; depending on the size of the route, this may take a while. When the download is complete, the system returns to the download screen but now the **Download** button is grayed out to indicate the route has been downloaded. Tap the red close button ( ) to return to the **Route Builder Route List** display, with the newly downloaded route showing at the bottom of the **Route List** as shown on the right in Figure 5.3. If desired, tap on the newly downloaded route and use the Arrow buttons at the bottom of the screen to move the new route to the preferred location on the **Route List**. Tap the red close button ( ) again to return to the **Main Menu**. The newly downloaded route will be available for use on the **Main Menu**.

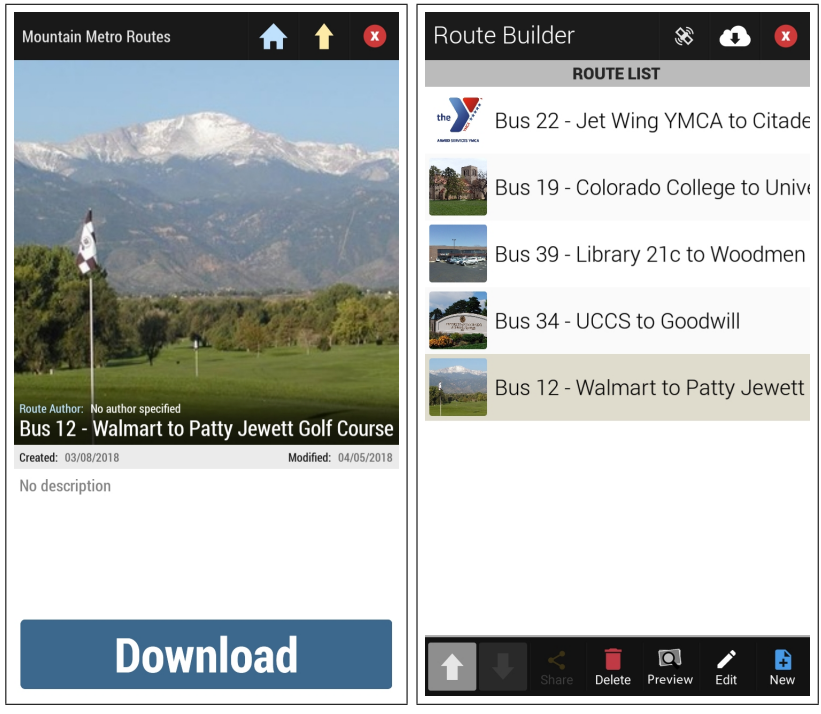

Figure 5.3: The route download interface (left) and the Route List displaying a newly downloaded route at the top (right).

Chapter 6

Using WayFinder to Support Independent Travel

This chapter provides information and instructions for playing back *WayFinder* travel instructions to support independent vehicular or foot travel. It describes what travelers can expect from *WayFinder* when traveling on routes that have been created in the **Route Builder** module–see Chapter 4 for instructions on creating travel routes.

6.1 Important Safeguards on Using WayFinder

While *WayFinder* can be a valuable support for more independent transportation, keep in mind it is technology and as such it can fail. Batteries can run out, GPS signals can get lost, software/hardware combinations can unpredictably shut down, email messages can be delayed, or *WayFinder* could inadvertently be shut down by the user. Please keep in mind these safeguards when using *WayFinder*:

- Users must be sufficiently trained on using the device, which will likely require a trainer or companion providing one-on-one support while navigating a travel route one or more times; this will vary from user to user.
- *WayFinder* should never be used for emergency transportation.
- Always be sure the system has a sufficient battery charge before each use.
- *WayFinder* users should have self-rescue skills such as the ability to seek assistance via a mobile phone if needed.

- Use the **Enable Location Tracking** feature (see Section 3.2.5 for more information) if needed to enable user location tracking during travel. Contact AbleLink for more information on the Tracking Service.
- Back up plans should always be in place to assist travelers in the cases of user error or *WayFinder* malfunction. For example, a family member or friend may be designated as a back up ride if needed, or travelers may be provided extra cash and the phone number of a trusted taxi or ride share company.
- *WayFinder* users should have the social, safety and community awareness skills needed for safe independent travel on public transit systems.

6.2 Starting WayFinder

Once installed, *WayFinder* can be launched by tapping the *WayFinder* icon on the device screen. Keep in mind that operating systems allow you to locate application icons such as *WayFinder's* to a place that is appropriately convenient and accessible to the end user. *WayFinder* opens to the **Main Menu** display, where all routes that have been created are displayed and available for use to support independent travel.

6.3 Review of the Main Menu

The first time *WayFinder* is started, a screen called the **Main Menu** appears. This screen shows the routes that have been created and are available to be used for navigation support. When first launched, this screen will be mostly blank because no routes have yet been created. An example showing the screen with three routes showing is seen in Figure 6.1. The **Main Menu** will display up to three routes at a time; when more than three routes are available, swipe upwards on the screen to scroll to additional routes.

6.3.1 Other Items on the Main Menu

- This icon indicates that *WayFinder* does not have an adequate GPS signal. It may take a moment to connect when first starting *WayFinder*, and keep in mind that GPS technologies generally need access to three

Figure 6.1: WayFinder's Main Menu display with three routes showing

satellites to get a good signal. GPS is not designed to work indoors in most cases.

- When *WayFinder* has a good GPS signal, the above icon will change to this one to indicate the system is ready for use. The more 'waves' emanating out in the icon, the stronger the signal.

- This icon is used to access the **Route Builder** utility. To use it, TAP AND HOLD the button for about five seconds. Audible feedback is provided when the icon is first touched, and again after holding for five seconds when **Route Builder** opens.

- This button is used to access the *WayFinder Settings* module where the appearance and operation of various features can be adjusted. To use it, TAP AND HOLD the button for about five seconds. Audible feedback is

provided when the icon is first touched, and again after holding for five seconds when *WayFinder Settings* opens. See Chapter 3 for more information on using *Settings*.

6.4 Using WayFinder for Travel Support

WayFinder opens to the **Main Menu**, shown in Figure 6.2. The **Main Menu** displays the icons or pictures representing the travel routes that have been set up on the system; if more than three routes are available, users can swipe upwards on the screen to see those routes that are lower on the list.

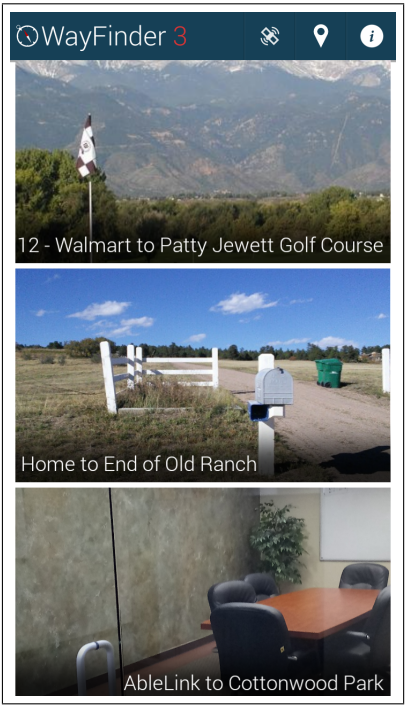

Figure 6.2: Example of the Main Menu in WayFinder

The following instructions provide a walk through of *WayFinder's* interface for playing back travel routes using a sample route.

1. To begin, go to the beginning point for the route that will be traveled and then tap on the route's picture or icon on the **Main Menu**. Remember, if several routes have been created in *WayFinder*, you can set it so that the

only routes that appear on the **Main Menu** are those that can be started from the user's current location at any point in time; see the **Local Routes Only** option in Section 3.2.2 for more information. This setting will hide routes that do not start at the current location and will only display routes that begin in the immediate vicinity of the *WayFinder* device. (Note that travel routes cannot be traveled backwards; if instructions for a return trip are needed, they must be created as a new route.)

2. When a route is first tapped on the **Main Menu**, the **Selection Audio** message plays (such as "These are the instructions for getting to work; tap one more time to launch this route"; see Step 4 in Section 4.2 for more information) plays to assist the user with making sure he or she is selecting the correct route. A second consecutive tap on the route will launch the route instruction sequence as shown on the left in Figure 6.3. The **Route Instruction Audio** will play (such as "Here are the instructions for getting to work; tap the Start button to begin"; See Step 5 in 4.2 for more information). If the **Notifications** feature is being used, an automated message will also be sent to the designated email address upon route start up (see Section 3.2.5 for more information on using **Notifications**).

3. When the user taps the **Start** button as shown below on the left in Figure 6.3, the display turns to the "traveling" display shown on the right in Figure 6.3. This image is always displayed in between waypoints while the bus (or person on foot) is moving.

4. When the next waypoint is reached, *WayFinder* displays the image that was assigned to that waypoint and plays the audio instructions recorded for that waypoint. It may also vibrate if the vibrate option is turned on (see **Vibrate Device** in Section 3.2.4 for more information). The audio instruction may also continue to repeat until the user presses the **OK** button if the **Repeat Audio** feature is turned on (see Step 9 in Section 4.2) or until *WayFinder* moves out of the GPS zone for the waypoint, at which point it will return to the "traveling" display.

5. The process in Step 4 above continues to repeat for each waypoint on the route. If **Not Your Stop Waypoints** were created on the route, they will only activate if the bus stops at the waypoint; otherwise *WayFinder* will ignore them so as not to confuse the end user. See Step 9 in Section 4.2 for more information on **Not Your Stop Waypoints**.

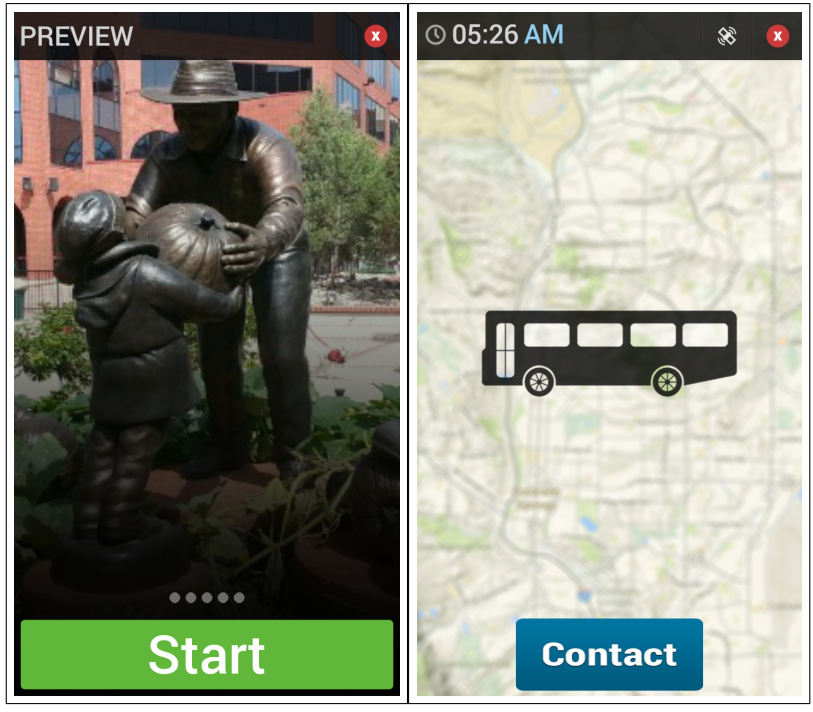

Figure 6.3: WayFinder route playback display at the start of route and during travel

6. If the **Contact Me** feature is turned on (See Section 3.2.4), a button labeled **Contact** will appear at the bottom of the "traveling" display as shown on the left in Figure 6.4. If this **Contact** button is tapped and held for a few seconds, the screen on the right in Figure 6.4 will appear showing the **Please Contact Me** and **I Am OK** buttons. Selecting the **Please Contact Me** button will send an email to the address indicated in the **Notifications** field with a message "(User name) says Please Contact Me" in the subject line and the name of the travel route in the message. This feature is provided for users who may need quick and easy access to help or reassurance while traveling. If the **I Am OK** button is tapped, an email message will be sent with "(User name) says I'm OK" in the subject line and the name of the travel route in the message.

1. Note also that displaying the **Exit** button ( ) during route playback is optional (see Section 3.2.4 for instructions on how to turn the **Exit** button

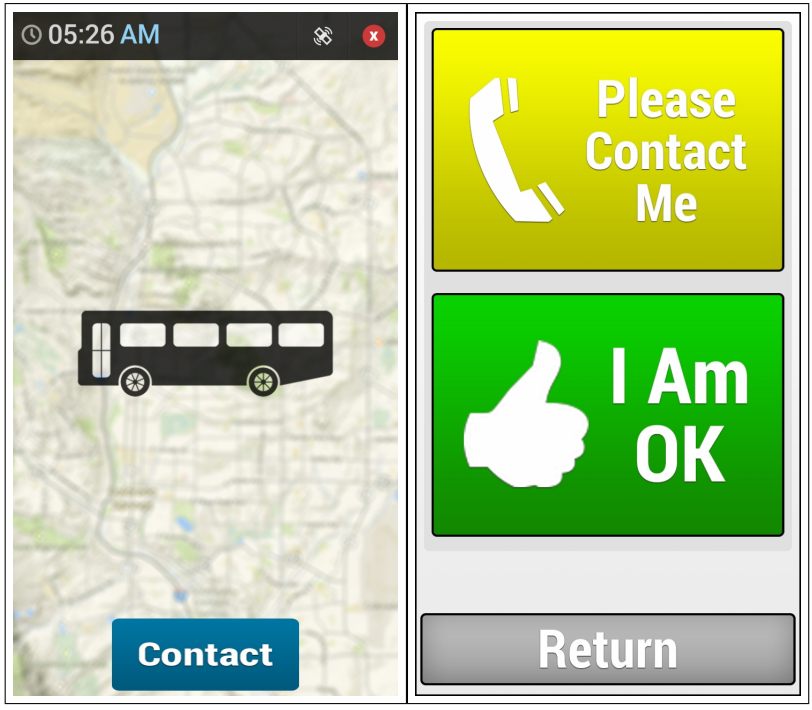

Figure 6.4: WayFinder route playback display at the start of route and during travel

on or off). If the **Exit** button is tapped during route playback, a confirmation dialog is presented and if **Yes** is selected *WayFinder* will exit back to the **Main Menu**. If a route is restarted after exiting, *WayFinder* will pick up the route again at the next waypoint and resume travel instructions. However, if there is potential for a user to inadvertently exit a travel route in this way, it is advisable to hide the **Exit** button during route playback. If a route is aborted in the middle of travel and the **Notifications** feature is being used, an automated message will be sent to the designated email address (see Section 3.2.5 for more information on using **Notifications**).

2. If the GPS signal is temporarily lost, *WayFinder* will pick up route playback where ever the user is along the route as soon as the signal returns. Contact AbleLink Support (support@ablelinktech.com) for recommendations on devices that performed best during field testing.

3. If a user gets off-route, as in a bus detouring around a construction zone, *WayFinder* will send a **Notification** to the designated email address if that feature is activated. When the bus returns to the planned route, *WayFinder*

will send another **Notification** that the user is back on route and will pick the route back up and resume operation.

4. During route playback, note a series of dots near the middle bottom of the screen below the waypoint text but above the **Ok** button in Figure 6.5. The number of dots relates to the number of waypoints on a given route; those that have already been passed are colored in green, while the yet-to-be encountered waypoints are still grayed out.

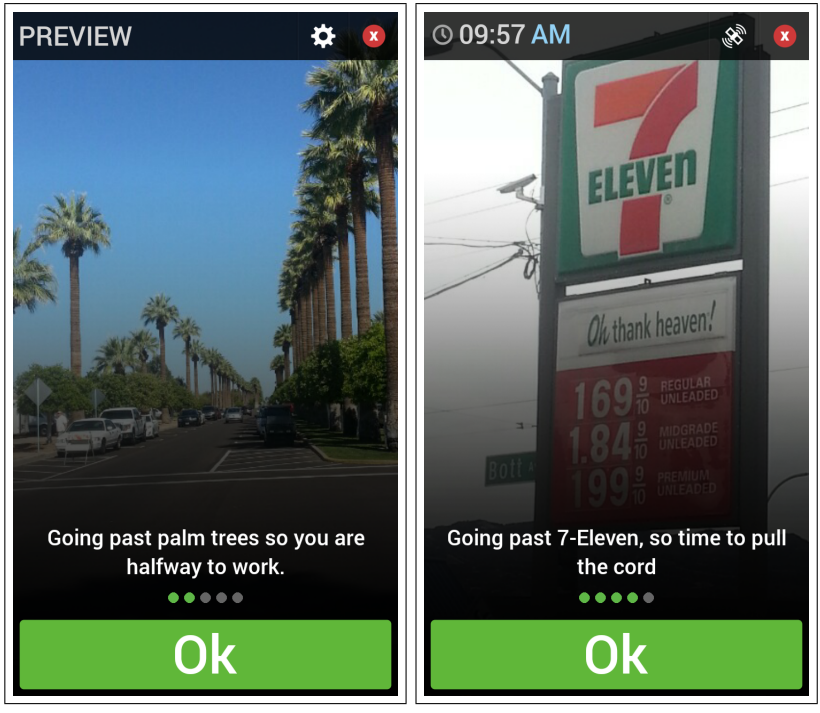

Figure 6.5: Examples of WayFinder waypoint displays during route playback

5. When the final destination waypoint is reached, it is displayed as a typical waypoint except the **OK** button turns into a **Done** button (Figure 6.6). When the **Done** button is tapped, the display returns to the **Main Menu** and an automated message is sent to the designated email address if the **Notifications** feature is being used, informing the recipient that the destination has been reached and the time it was reached, as well as a *Google Map* link showing the location of the *WayFinder* device at the time the message was sent (see Section 3.2.5 for more information on using **Notifications**).

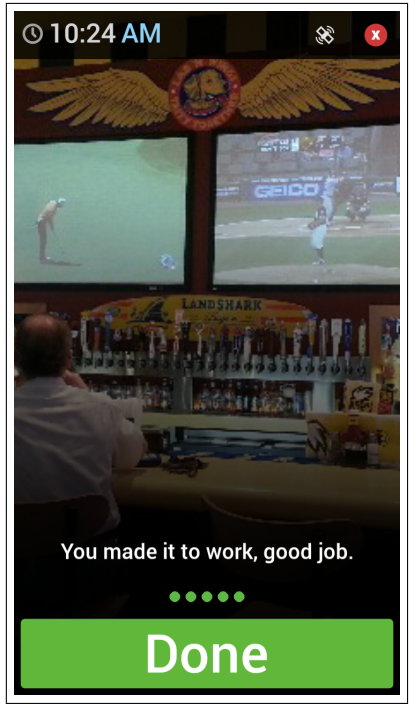

Figure 6.6: The WayFinder route playback display at the completion of a route.