

The Many Uses of GTFS Data

Opening the Door to Transit and Multimodal Applications

Florida Transportation Data Symposium
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What is GTFS?

- GTFS = General Transit Feed Specification
- Created in 2005 by Google and TriMet
- Now a de facto standard, it is the most popularly-used data format to describe fixed-route transit services in the world
- More than 200 transit agencies in the U.S. provide public GTFS data
- CSV files describe geo-spatial, schedule, fare, and service calendar information.
- Active, evolving standard



The full Spec is at
<https://developers.google.com/transit/gtfs/reference>

Producing and Disseminating GTFS Data

See following resources for best practices:

- 2013 APTA TransiTech
 - "Many Uses of GTFS Data"
 - <http://bit.ly/Z8VWJZ>
 - "Open Transit Data - A Developer's Perspective"
 - <http://bit.ly/TransiTech-Open-Transit-Data>
- Web-based Trip Planning Options for Transit Agencies
 - Report - <http://bit.ly/SunRail-Trip-Planning>
 - Webinar - <http://bit.ly/TripPlannerOptionsWebcast>
- Why Open Data is Important to Developers
 - Webinar - <http://bit.ly/CUTRWebcastOpenTransitData>

Florida GTFS Data

- Broward County Transit*
- Manatee County Area Transit*
- Martin County Public Transit
- Palm Tran
- Polk County Transit Services
- SFRTA/Tri-Rail*
- Space Coast Area Transit*
- Votran
- Regional Transit System (Gainesville)
- Lakeland*
- Miami Dade Transit*
- Central Florida Regional Transit Authority (Lynx)
- Florida Department of Transportation (SunRail)
- Pinellas Suncoast Transit Authority*
- Hillsborough Area Regional Transit*
- Sumter County Transit
- Winter Haven Area Transit
- More?

* Verified open data

Concluding thoughts

Open data facilitates innovation



"The old limits of what unmanaged and unpaid groups can do are no longer in operation; the difficulties that kept self-assembled groups from working together are shrinking, meaning that the number and kinds of things groups can get done without financial motivation or managerial oversight are growing."
— Clay Shirky, *Here Comes Everybody*



Understand applications and benefits

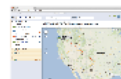
Trip planning and maps



Google Maps
google.com/maps



OpenTripPlanner
bike, walk, transit, and drive
www.opentripplanner.org



rome2rio.com
plane, train, bus, and drive



Parkio
rideshare, vanpool, corporate shuttles / parkio.com

Mobile applications



RouteShout



Embark

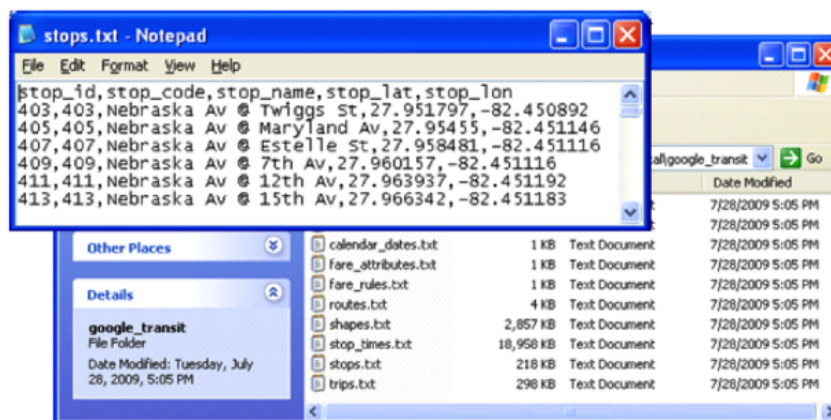


The Transit App

Over the long-term, open data

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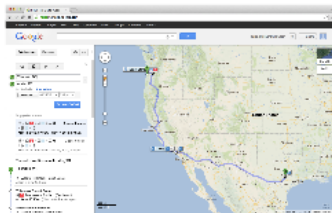
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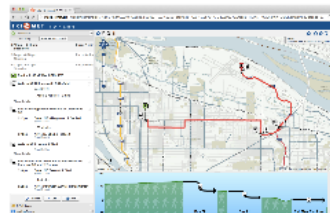
Understand applications and benefits

Trip planning and maps



Google Maps

google.com/transit

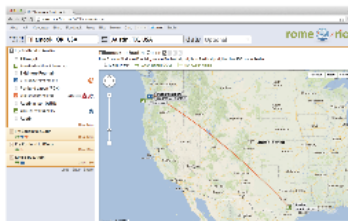


OpenTripPlanner

bike, walk, transit, and drive

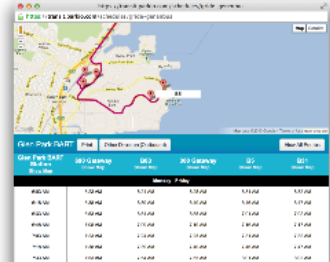


www.opentripplanner.org

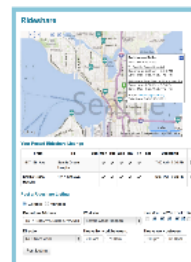


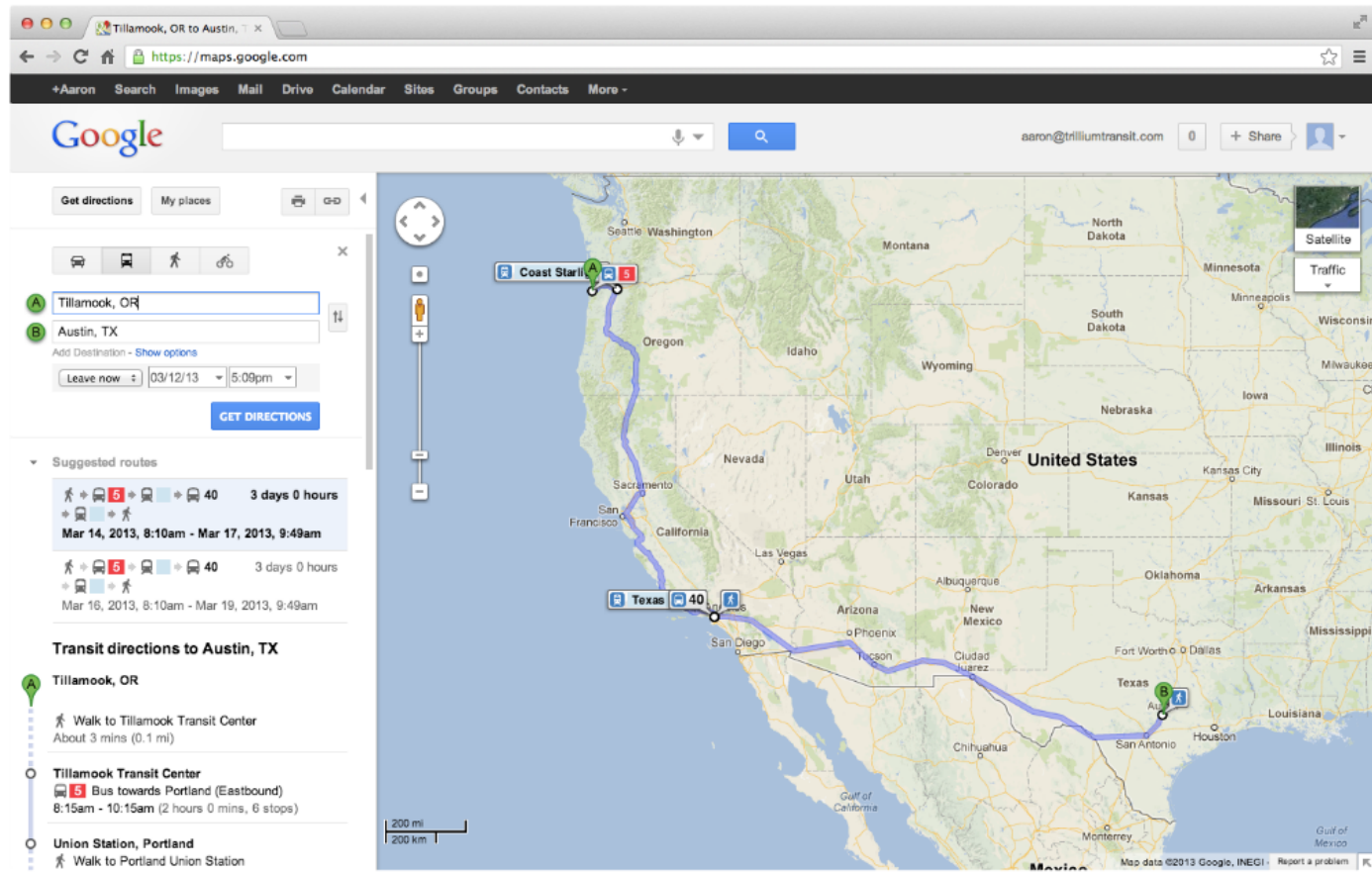
rome2rio.com

plane, train, bus, and drive



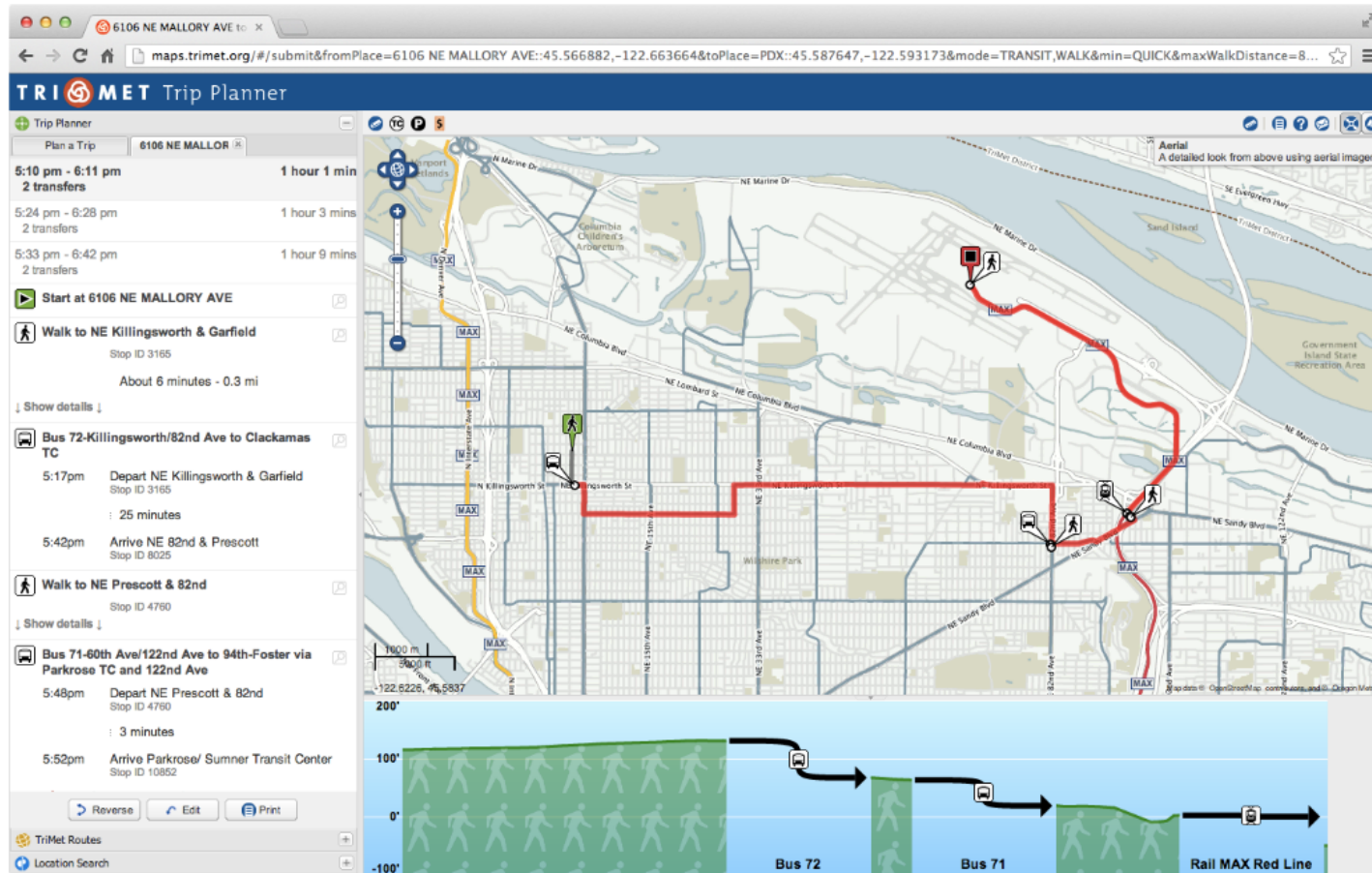
Parkio





Google Maps

google.com/transit



OpenTripPlanner

bike, walk, transit, and drive



Home

OpenTripPlanner

Note: this wiki is targeted primarily at the OTP development community. For general information about the project, please visit opentripplanner.com

OpenTripPlanner (OTP) is an open source multi-modal trip planner, which runs on Linux, Windows, or potentially any platform with a Java virtual machine. OTP is released under the [LGPL](#). As of Summer 2012, the code is under active development, with a variety of [working demos](#) from around the world.

Latest Project Updates:

- Portland's TriMet relaunched its [official trip planner](#), now powered by OTP, on August 6, 2012, following a successful 10-month beta run. Read [more about the project](#), and see also TriMet's 2009-2011 [OTP Final Report](#).
- [BikePlanner.org](#) and [CiBi.me](#) launch in Washington DC and New York City, respectively, showcasing OTP's support for real-time [bike rental](#) trip planning as well as a new mobile-friendly, [Leaflet](#)-based UI.
- See schedule/notes for our [Weekly Check-In Discussions](#), held Thursdays at 1:30pm EDT (13:30 GMT-4)
- For information about the OTP Workshop held in Portland, OR on July 13-15, 2011, see [2011 OTP Workshop](#)



OpenTripPlanner

www.opentripplanner.org

rome2rio

Single hop
Multi hop

Tillamook, OR, USA

Austin, TX, USA

date Optional

A Fly Portland to Austin

- Tillamook
- 2hrs 04min line 5 bus, 4 times a day
- Skidmore Fountain
- 31min tram, every 5 minutes
- Portland airport (PDX)
- 3hrs 55min flight, non-stop
- Austin airport (AUS)
- 22min line 100 bus, hourly
- Austin

10hrs 14min

B Fly Seattle to Austin

15hrs 13min

C Fly Portland to Waco

15hrs 29min

D Line 5 bus, train

2days 18hrs

Load Save Share

Tillamook to Austin. Option A B C D

Line 5 bus to Skidmore Fountain, tram to Portland airport, fly to Austin airport, then line 100 bus to Austin.

10 hrs 14 min 0.454 tonnes CO₂e 154 Austin hotels

Transport Road Satellite

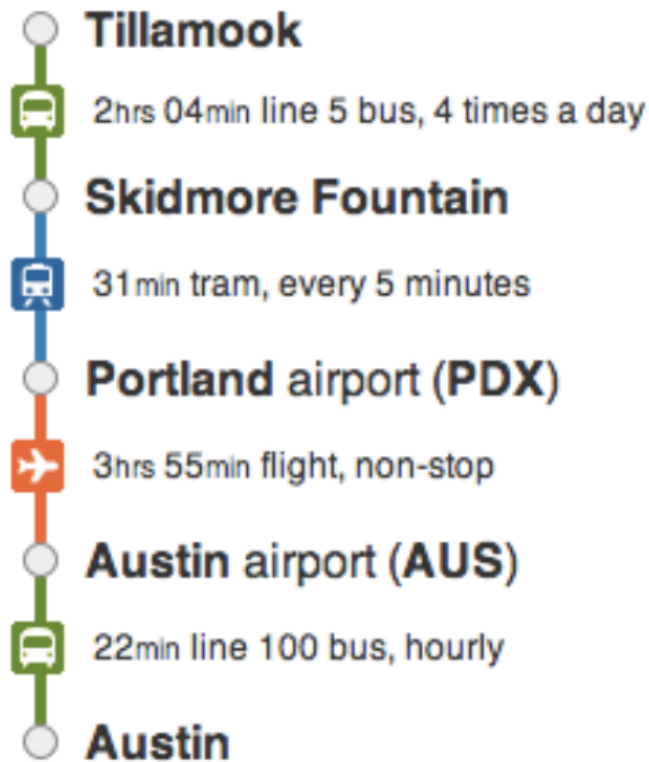
Google 200 km 200 mi

Map data ©2013 Google, INEGI - Terms of Use

rome2rio.com

plane, train, bus, and drive

A Fly Portland to Austin



10hrs 14min

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15hrs 13min

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15hrs 29min

D Line 5 bus, train



2days 18hrs

Tillamook to Austin

Line 5 bus to Skidmore Fo

🕒 10 hrs 14 min



https://transit.parkio.com/schedules/gride-genenbus

https://transit.parkio.com/schedules/gride-genenbus

Map Satellite

Glen Park BART Print Other Direction (Outbound) View All Routes

Glen Park BART Station Show Map	690 Gateway Show Map	B83 Show Map	300 Gateway Show Map	B5 Show Map	B31 Show Map
Monday - Friday					
6:03 AM	6:23 AM	6:24 AM	6:25 AM	6:31 AM	6:32 AM
6:18 AM	6:38 AM	6:39 AM	6:40 AM	6:46 AM	6:47 AM
6:33 AM	6:53 AM	6:54 AM	6:55 AM	7:01 AM	7:02 AM
6:48 AM	7:08 AM	7:09 AM	7:10 AM	7:16 AM	7:17 AM
7:03 AM	7:23 AM	7:24 AM	7:25 AM	7:31 AM	7:32 AM
7:18 AM	7:38 AM	7:39 AM	7:40 AM	7:46 AM	7:47 AM
7:33 AM	7:53 AM	7:54 AM	7:55 AM	8:01 AM	8:02 AM

Rideshare

Dr. Miranda Bailey
2650 8th Ave West
To Seattle Grace Hospital
Departing: 5:00 AM - 5:30 AM
Days: Mon, Tue, Wed, Thu, Fri
Returning from Seattle Grace Hospital
Departing: 6:00 PM - 6:30 PM
Days: Mon, Tue, Wed, Thu, Fri
Email: miranda@SCH.org
Telephone: 206-555-5522

Your Posted Rideshare Listings

From	To	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Departing
1517 12th Ave	Seattle Grace Hospital		✓	✓	✓	✓	✓		7:00 AM - 7:30 AM
Seattle Grace Hospital	1517 12th Ave		✓	✓	✓	✓	✓		6:00 PM - 6:30 PM

Post a Rideshare Listing

☒ Carpool ☐ Vanpool

Departure Address: 1517 12th Ave, Seattle, WA 981
Worksite: Seattle Grace Hospital
Sun Mon Tue Wed Thu Fri Sat
☐ ☒ ☒ ☒ ☒ ☒ ☐

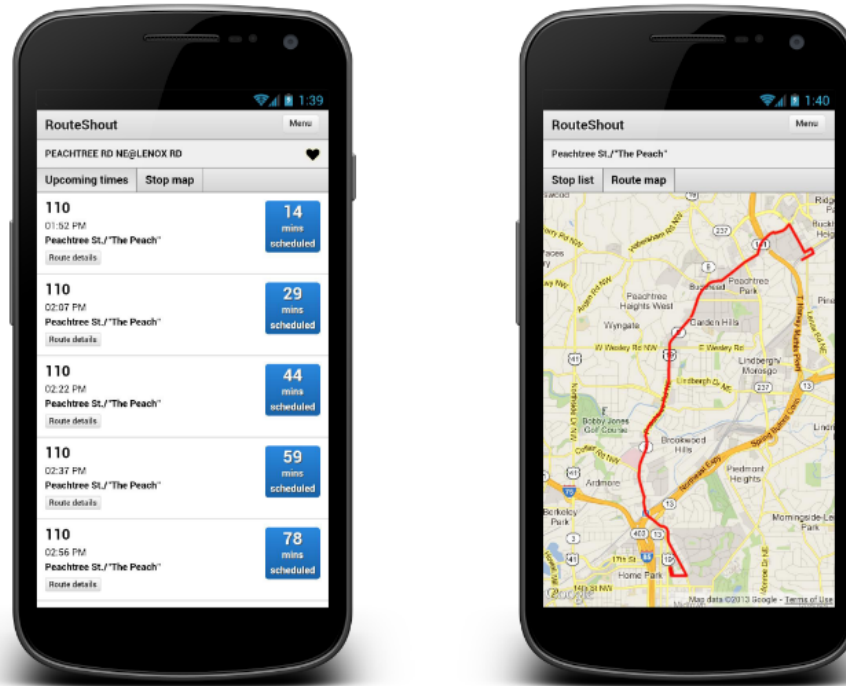
Direction: To & from work
I leave for work between: 7:00am - 7:30am
I leave work between: 6:00pm - 6:30pm

[Post Listing](#)

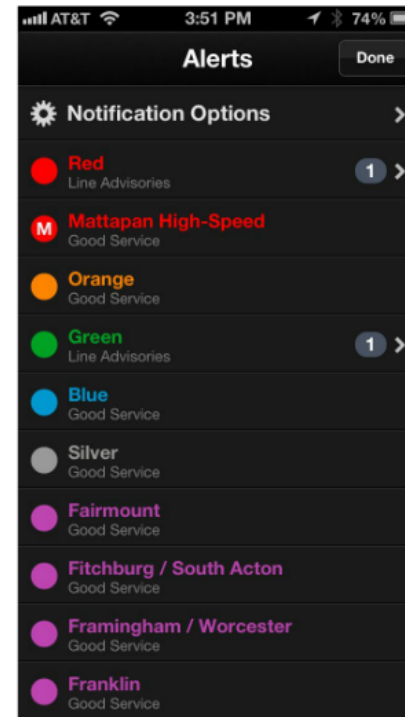
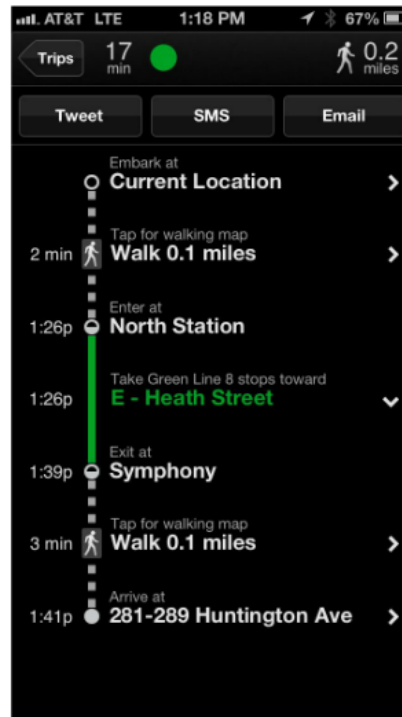
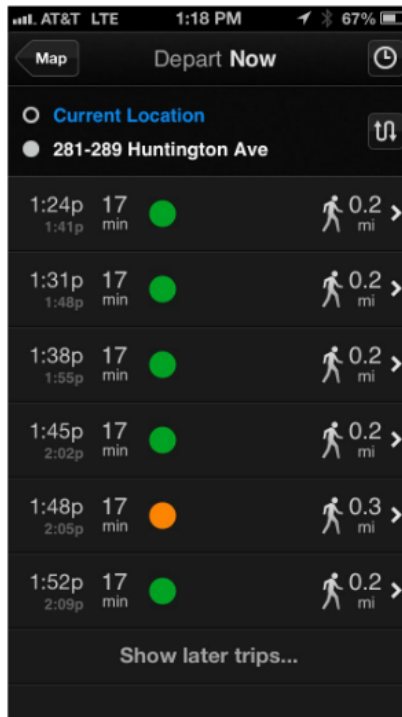
Parkio

rideshare, vanpool, corporate shuttles / parkio.com

Mobile applications

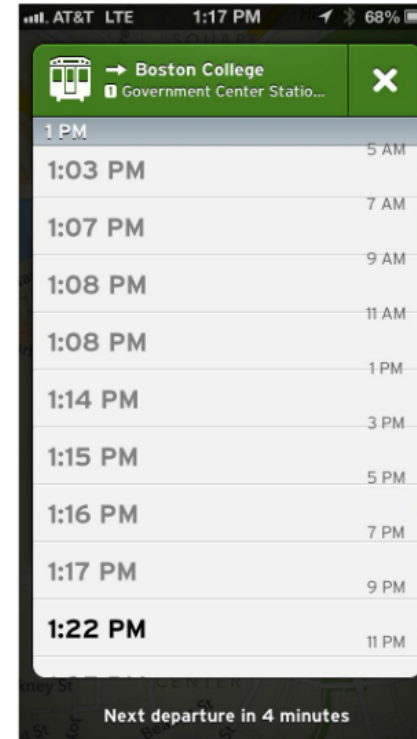
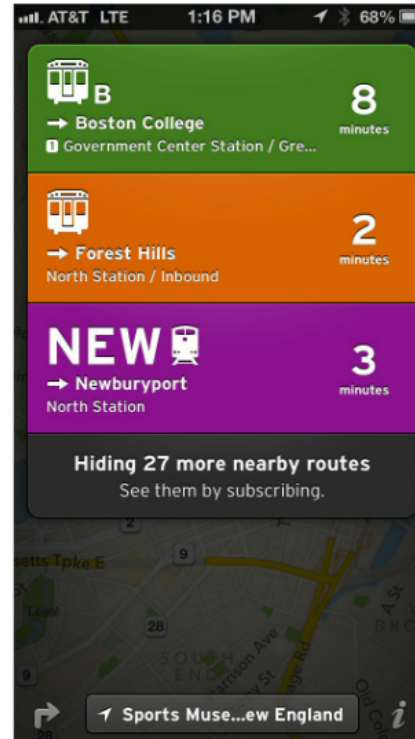
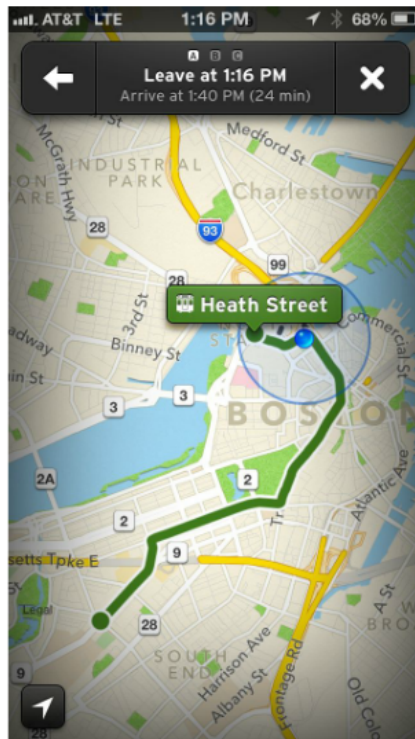


RouteShout
schedules & maps
www.routeshout.com



Embark

trip planner, arrival estimates, service quality
www.letsembark.com



The Transit App

trip planner, arrival estimates

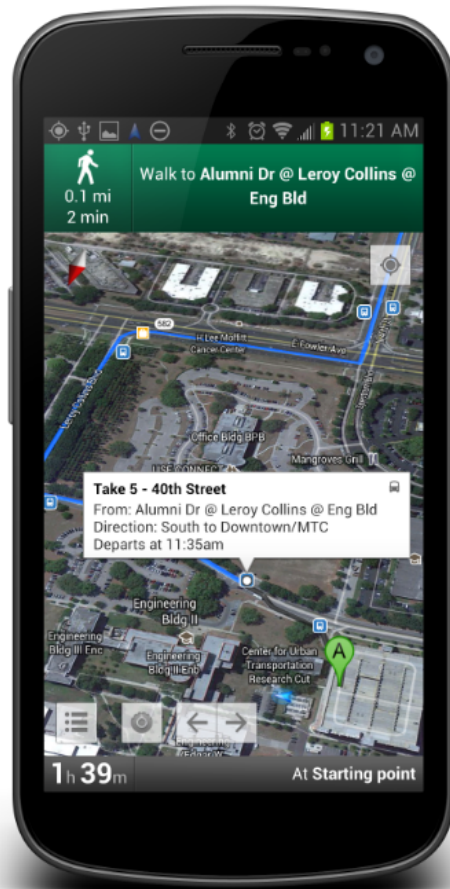
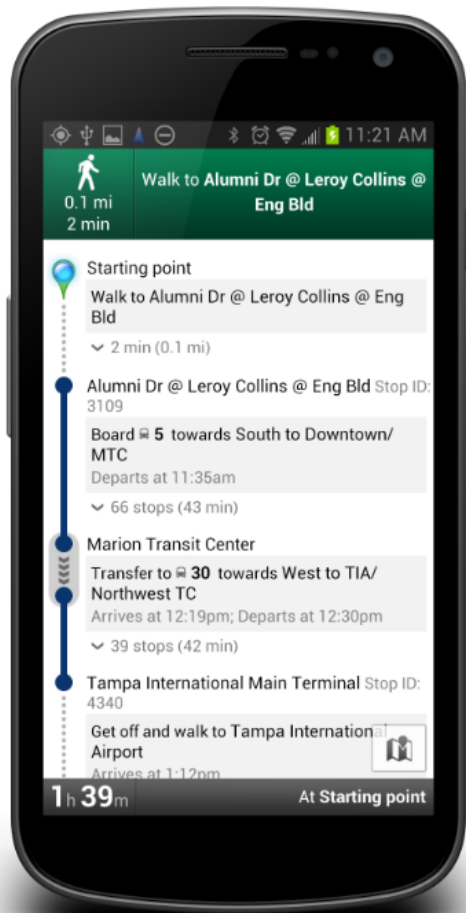
www.thetransitapp.com

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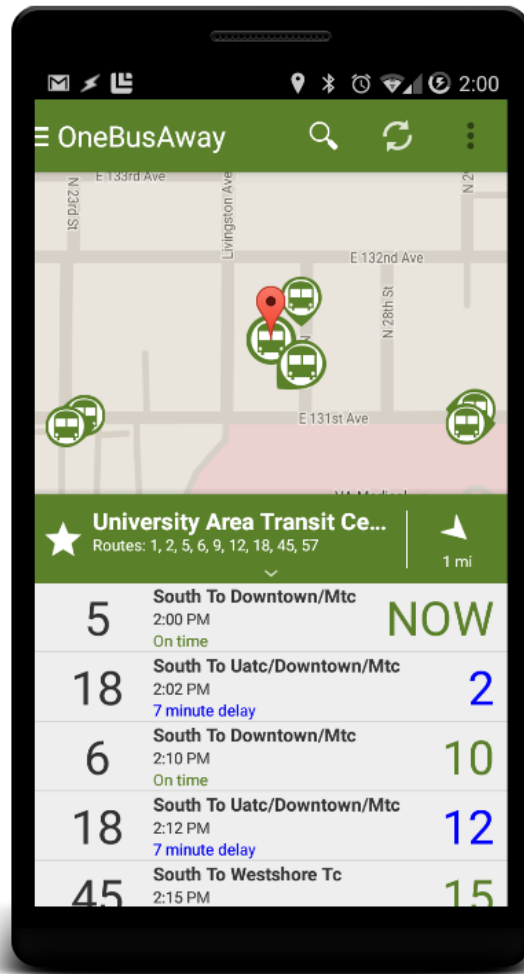
Moovit

crowdsourced real-time & overcrowding information
moovitapp.com



Google Maps for mobile

trip planner, arrival estimates + other Google Maps features
www.google.com/mobile/maps



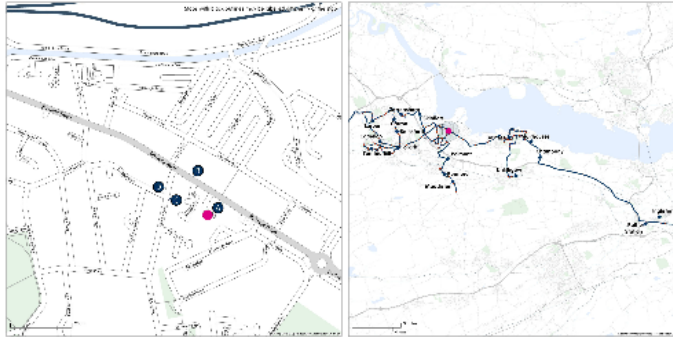
OneBusAway

s features

open-source, real-time arrival info
onebusaway.org

Timetable & maps creation

Grangemouth Refinery



Route finder

Route	Towards
3	Tamfourhill Grangemouth - Falkirk - Tamfourhill
H3	Denny Grangemouth - Skinfats - Camronshore - Larbert - Denny
	Maddiston Grangemouth - Polmont - Brightons - Runcford - Maddiston
4	Camelon Grangemouth - Falkirk - Camelon
4A	Camelon Grangemouth - Falkirk - Camelon
6A	Larbert Grangemouth - Falkirk - Bainford - Camon - Stenhousemuir - Larbert
	Linlithgow Bo'ness - Linlithgow
6B	Bo'ness Bo'ness
	Falkirk Grangemouth - Falkirk

Route

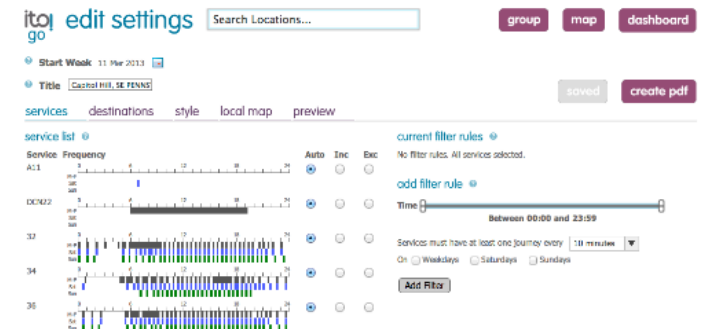
Route	Towards
X19	Edinburgh Bo'ness - Muirhouses - Champany - Ratho - Station - Ingliston - Gogar - Maybury - Corstorphine - Roseburn - Haymarket - West End - Edinburgh
	Larbert Grangemouth - Falkirk - Camelon - Larbert
67	Larbert Bo'ness - Grangemouth - Falkirk - Bainford - Camon - Stenhousemuir - Larbert
76	Falkirk Bo'ness - Grangemouth - Falkirk

Destination finder

Destination	Route	Stops
B		
Bainford	6A, 67	
Bo'ness	6A, 6B, X19, 67, 76	
Brightons	H3	

Destination

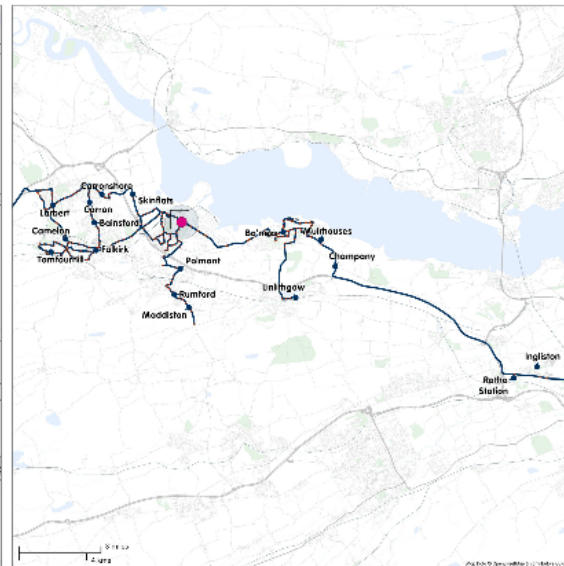
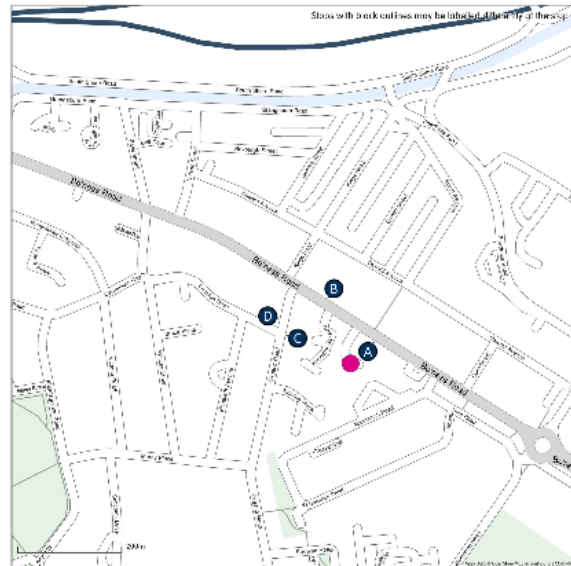
Destination	Route	Stops
C		
Camelon	4, 4A, X19	
Camron	6A, 67	
Camronshore	H3	
Champany	X19	
Corstorphine	X19	
D		
Denny	H3	
E		
Edinburgh	X19	
F		
Falkirk	3, 4, 4A, 6A, 6B, X19, 67, 76	
G		
Gogar	X19	
H		
Haymarket	X19	
I		
Ingliston	X19	
L		
Larbert	H3, 6A, X19, 67	
Linlithgow	6A	
M		
Maddiston	H3	
Maybury	X19	
Muirhouses	X19	
P		
Polmont	H3	
R		
Ratho Station	X19	
Roseburn	X19	
Runcford	H3	
S		
Skinfats	H3	
Stenhousemuir	6A, 67	
T		
Tamfourhill	3	
W		
West End	X19	



ITO Go

timetables, maps, and destination tables
itoworld.com/static/go.html

Grangemouth Refinery



Route finder

Route	Towards
3	Tamfourhill Grangemouth - Falkirk - Tamfourhill
H3	Denny Grangemouth - Skinflats - Carronshore - Larbert - Denny
	Maddiston Grangemouth - Polmont - Brightons - Rumford - Maddiston
4	Camelon Grangemouth - Falkirk - Camelon
4A	Camelon Grangemouth - Falkirk - Camelon
6A	Larbert Grangemouth - Falkirk - Bainsford - Carron - Stenhousemuir - Larbert
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6B	Bo'ness Bo'ness
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Destination finder

Destination	Route	Stops
B		
Bainsford	6A, 67	A
Bo'ness	6A, 6B, X19, 67, 76	B
Brightons	H3	C

Destination	Route	Stops
C		
Camelon	4, 4A	D
	X19	A
Carron	6A, 67	A
Carronshore	H3	D
Champany	X19	B
Corstorphine	X19	B
D		
Denny	H3	D
E		
Edinburgh	X19	B
F		
Falkirk	3, 4, 4A, 6A, 6B, X19, 67, 76	C, D, A
G		
Gogar	X19	B
H		
Haymarket	X19	B
I		
Ingliston	X19	B

Destination	Route	Stops
L		
Larbert	H3, 6A, X19, 67	D, A
	6A	B
Linlithgow		
M		
Maddiston	H3	C
Maybury	X19	B
Muirhouses	X19	B
P		
Polmont	H3	C
R		
Ratho Station	X19	B
Roseburn	X19	B
Rumford	H3	C
S		
Skinflats	H3	D
	H3	D
Stenhousemuir	6A, 67	A
T		
Tamfourhill	3	C
W		
West End	X19	B

ito edit go

Start Week 11

Title Capitol H

services des

service list

Service Frequency

A11

0

Mon

Tue

Wed

Thu

Fri

Sat

Sun

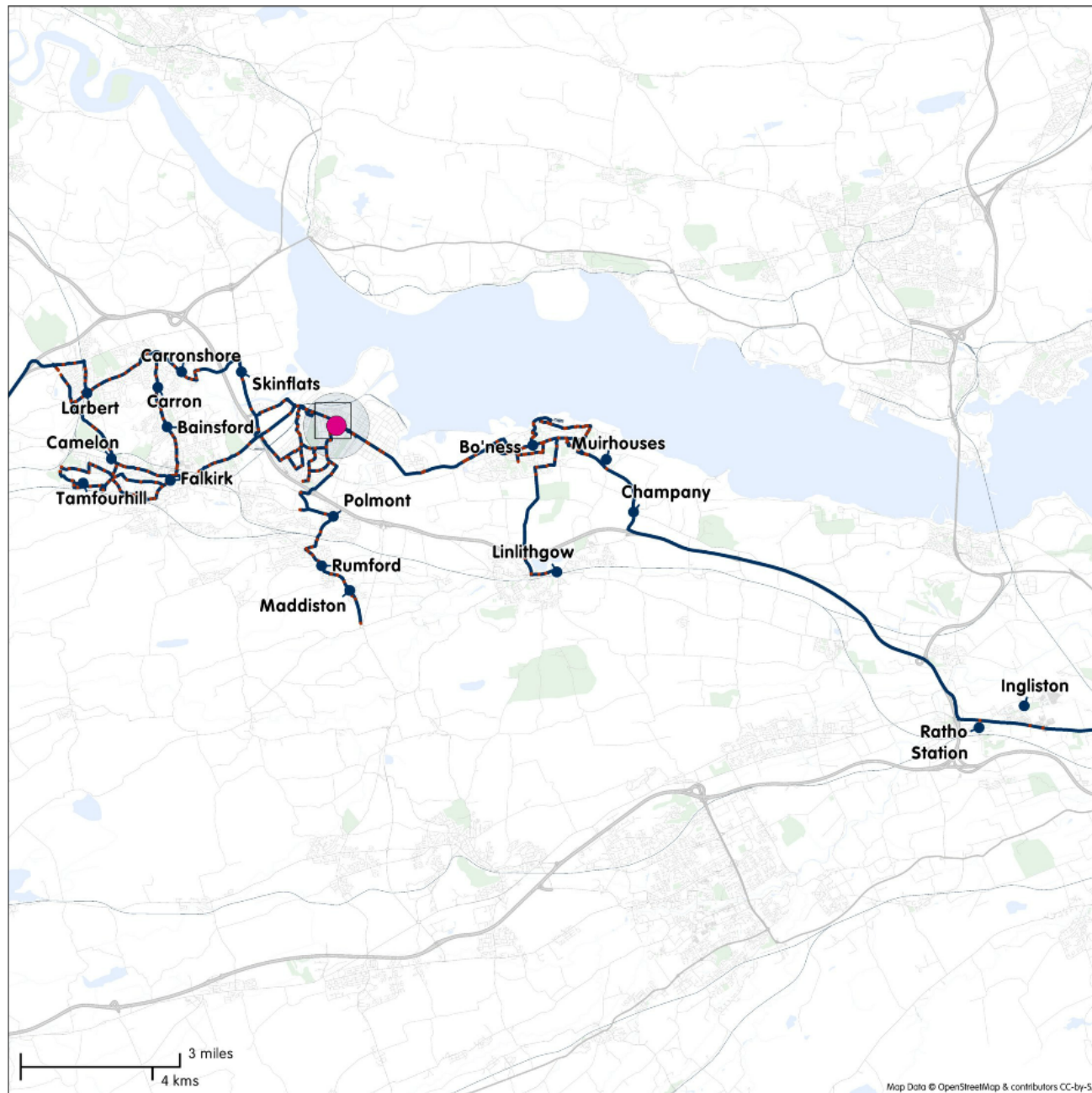
32

34

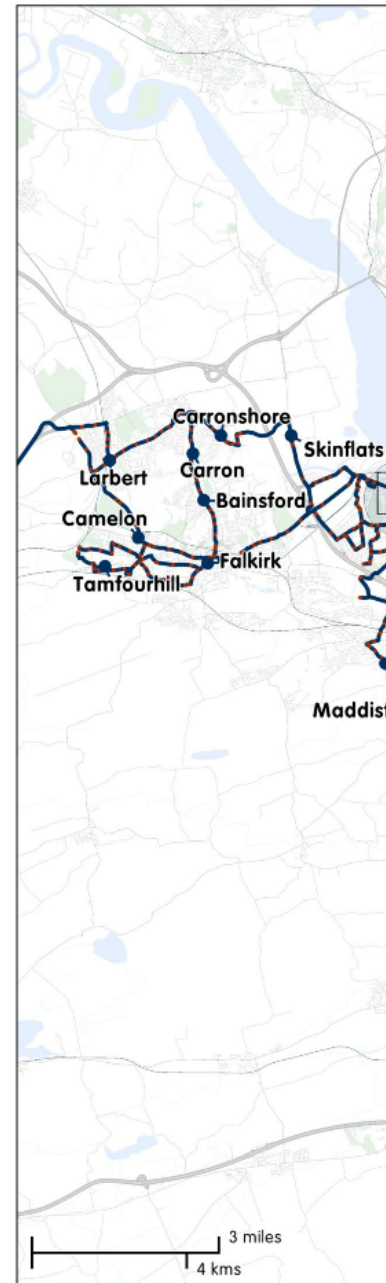
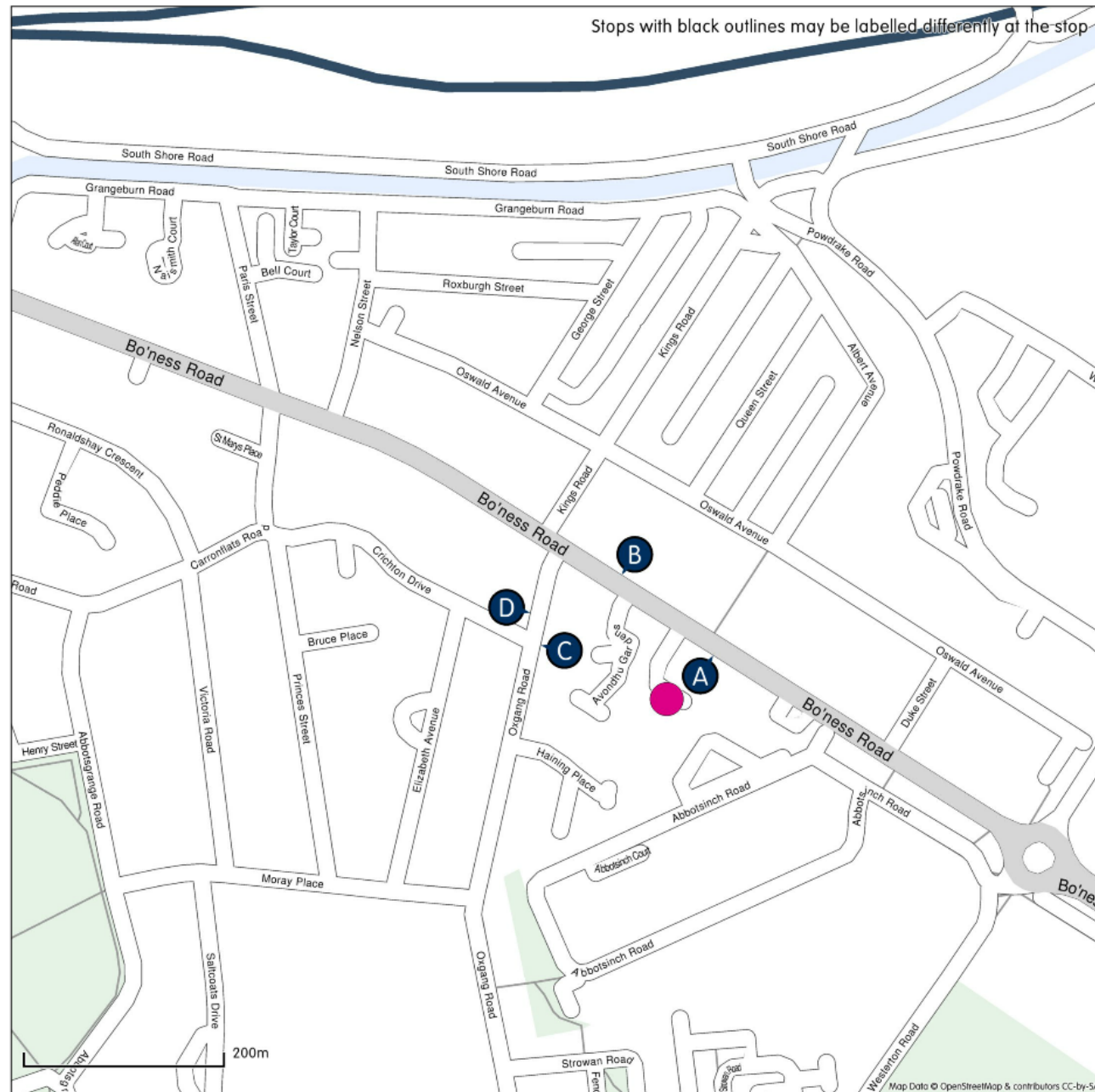
36

inery

be labelled differently at the stop



Grangemouth Refinery





edit settings

Search Locations...

group

map

dashboard

Start Week 11 Mar 2013

Title Capitol Hill, SE PENNS

saved

create pdf

services destinations style local map preview

service list

Service	Frequency	Auto	Inc	Exc
A11		☒	☐	☐
DCN22		☒	☐	☐
32		☒	☐	☐
34		☒	☐	☐
36		☒	☐	☐

current filter rules

No filter rules. All services selected.

add filter rule

Time Between 00:00 and 23:59

Services must have at least one journey every 10 minutes

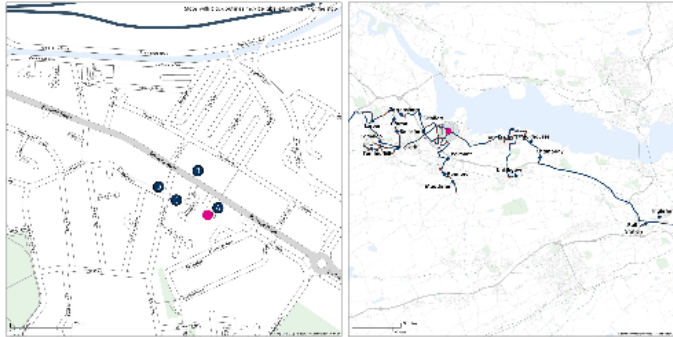
On ☐ Weekdays ☐ Saturdays ☐ Sundays

Add Filter



Timetable & maps creation

Grangemouth Refinery



Route finder

Route	Towards
3	Tamfourhill Grangemouth - Falkirk - Tamfourhill
H3	Denny Grangemouth - Skinfats - Stenhousemuir - Larbert - Denny
	Maddiston Grangemouth - Polmont - Brightons - Runcorn - Maddiston
4	Camelon Grangemouth - Falkirk - Camelon
4A	Camelon Grangemouth - Falkirk - Camelon
6A	Larbert Grangemouth - Falkirk - Bainford - Camon - Stenhousemuir - Larbert
	Linlithgow Bo'ness - Linlithgow
6B	Bo'ness Bo'ness
	Falkirk Grangemouth - Falkirk

Route

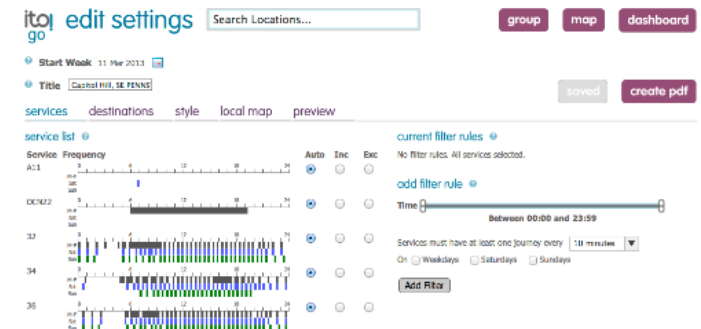
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	Larbert Grangemouth - Falkirk - Camelon - Larbert
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76	Falkirk Bo'ness - Grangemouth - Falkirk

Destination finder

Destination	Route	Stops
B	Bainford	6A, 67
	Bo'ness	6A, 6B, X19, 67, 76
	Brightons	H3

Destination

Destination	Route	Stops
C	4, 4A, X19, 6A, 67	
Camelon		
Camon		
Camonshore	H3	
Champany	X19	
Corstorphine	X19	
D	Denny	H3
E	Edinburgh	X19
F		
	3, 4, 4A, 6A, 6B, X19, 67, 76	
Falkirk		
G	Gogar	X19
H	Haymarket	X19
I	Ingliston	X19
L	Larbert	H3, 6A, X19, 67
Linlithgow		6A
M	Maddiston	H3
Maybury	X19	
Muirhouses	X19	
P	Polmont	H3
R	Ratho Station	X19
Roseburn	X19	
Rumford	H3	
S	Skinfats	H3
Stenhousemuir		H3, 6A, 67
T	Tamfourhill	3
W	West End	X19



ITO Go

timetables, maps, and destination tables
itoworld.com/static/go.html

StaRT 10-Express Service Modesto/Turlock

Weekday										Turlock	
Golden State & Center (KFC) Stop ID 10387	Golden State & Del's Ln Stop ID 10389	Fulkerth (Wal-Mart) Stop ID 10391	9th & K st (Double Tree) Stop ID 10393	College & Morris Stop ID 10395	Monte Vista & Countryside Stop ID 10379	Monte Vista & Del's Ln (CSUS) Stop ID 10381	Geer & Minnesota (SaveMart) Stop ID 10383	Golden State & Geer (Big 5) Stop ID 10385	Golden State & W. Main (Central Park) Stop ID 10386		
6:45	6:47	6:51	7:12	7:17	6:24	6:27	6:30	6:34	6:37		
7:10	7:12	7:16	7:38	7:43	6:49	6:52	6:55	6:59	7:02		
8:10	8:12	8:16	8:39	8:44	7:49	7:52	7:55	7:59	8:02		
9:25	9:27	9:31	9:55	10:00	9:04	9:07	9:10	9:14	9:17		
10:55	10:57	11:01	11:25	11:30	10:34	10:37	10:40	10:44	10:47		
12:25	12:27	12:31	12:55	1:00	1:34	1:37	1:40	1:44	1:47		
1:55	1:57	2:01	2:25	2:30	3:04	3:07	3:10	3:14	3:17		
3:35	3:37	3:41	4:07	4:12	4:34	4:37	4:40	4:44	4:47		
5:00	5:02	5:06	5:30	5:35	5:34	5:37	5:40	5:44	5:47		
5:55	5:57	6:01	—	—	6:09	6:12	6:15	6:19	6:22		
6:30	6:32	6:36	—	—	—	—	—	—	6:27		

TimeTable Publisher: COMPARE

http://localhost:8080/ttpub/timetable.compare?method=COOG&submit=update+page&subr...

TimeTable Publisher: PRINT TimeTable Publisher: COMPARE

• [Home | Configure | Compare | Print | Test | View | Vertical View] ≈ [Early Schedule Data (ES) | Stop Level Data (TRANS) | Mock Data | Google Feed Spec Data] •

☐ single pdf (proofing) ☐ bypass configurations ☒ update page

Service Date (on / after): 11-5-2008

2nd Service Date (to compare): 1-1-2007

Time Buffer (in minutes): 3

Bear Transit - UC Berkeley Shuttle -- A Line >>
 Bear Transit - UC Berkeley Shuttle -- C Line >>
 Bear Transit - UC Berkeley Shuttle -- D Line >>
 Bear Transit - UC Berkeley Shuttle -- E Line >>
 Bear Transit - UC Berkeley Shuttle -- H Line >>
 Bear Transit - UC Berkeley Shuttle -- N Line >>
 Bear Transit - UC Berkeley Shuttle -- P Line >>
 Bear Transit - UC Berkeley Shuttle -- R Line >>

Route	Timepoint Diff	Stop Time Diff
104-A Line (Weekday - Inbound)	no change in timepoints	no change of stop times
104-A Line (Weekday - Outbound)	no change in timepoints	no change of stop times
104-A Line (Saturday - Inbound)	no change in timepoints	no change of stop times
104-A Line (Saturday - Outbound)	no change in timepoints	no change of stop times
104-A Line (Sunday - Inbound)	no change in timepoints	no change of stop times
104-A Line (Sunday - Outbound)	no change in timepoints	no change of stop times

TimeTable Publisher

open-source software to proof and create PDF and HTML timetables
 timetablepublisher.org

StaRT 10-Express Service Modesto/Turlock

Weekday

Turlock

Golden State & Center (KFC) Stop ID 10387	Golden State & Del's Ln Stop ID 10389	Fulkerth (Wal-Mart) Stop ID 10391	9th & K st (Double Tree) Stop ID 10393	College & Morris Stop ID 10395	Monte Vista & Countryside Stop ID 10379	Monte Vista & Del's Ln. (CSUS) Stop ID 10381	Geer & Minnesota (SaveMart) Stop ID 10383	Golden State & Geer (Big 5) Stop ID 10385	Golden State & W. Main (Central Park) Stop ID 10386
—	—	—	—	—	6:24	6:27	6:30	6:34	6:37
6:45	6:47	6:51	7:12	7:17	—	—	—	—	6:42
—	—	—	—	—	6:49	6:52	6:55	6:59	7:02
7:10	7:12	7:16	7:38	7:43	—	—	—	—	7:07
—	—	—	—	—	7:49	7:52	7:55	7:59	8:02
8:10	8:12	8:16	8:39	8:44	—	—	—	—	8:07
—	—	—	—	—	9:04	9:07	9:10	9:14	9:17
9:25	9:27	9:31	9:55	10:00	—	—	—	—	9:22
—	—	—	—	—	10:34	10:37	10:40	10:44	10:47
10:55	10:57	11:01	11:25	11:30	—	—	—	—	10:52
—	—	—	—	—	12:04	12:07	12:10	12:14	12:17
12:25	12:27	12:31	12:55	1:00	—	—	—	—	12:22
—	—	—	—	—	1:34	1:37	1:40	1:44	1:47
1:55	1:57	2:01	2:25	2:30	—	—	—	—	1:52
—	—	—	—	—	3:04	3:07	3:10	3:14	3:17
3:35	3:37	3:41	4:07	4:12	—	—	—	—	3:32
—	—	—	—	—	4:34	4:37	4:40	4:44	4:47
5:00	5:02	5:06	5:30	5:35	—	—	—	—	4:57
—	—	—	—	—	5:34	5:37	5:40	5:44	5:47
5:55	5:57	6:01	—	—	—	—	—	—	5:52
—	—	—	—	—	6:09	6:12	6:15	6:19	6:22
6:30	6:32	6:36	—	—	—	—	—	—	6:27

• [[Home](#) | [Configure](#) | **[Compare](#)** | [Print](#) | [Test](#) | [View](#) | [Vertical View](#)] ≈ [[Early Schedule Data \(ES\)](#) | [Stop Level Data \(TRANS\)](#) | [Mock Data](#) | [Google Feed Spec Data](#)] •

☐ single pdf (proofing) ☐ bypass configurations ☒ update page

Service Date (on / after): [select](#)

2nd Service Date (to compare): [select](#)

Time Buffer (in minutes):

Bear Transit - UC Berkeley Shuttle -- A Line
Bear Transit - UC Berkeley Shuttle -- C Line
Bear Transit - UC Berkeley Shuttle -- D Line
Bear Transit - UC Berkeley Shuttle -- E Line
Bear Transit - UC Berkeley Shuttle -- H Line
Bear Transit - UC Berkeley Shuttle -- N Line
Bear Transit - UC Berkeley Shuttle -- P Line
Bear Transit - UC Berkeley Shuttle -- R Line

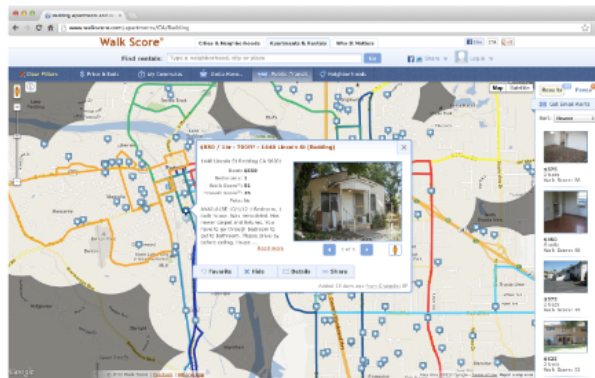
>>
All >>
<<
All <<

Route	Timepoint Diff	Stop Time Diff
104-A Line (Weekday - Inbound)	no change in timepoints	no change of stop times
104-A Line (Weekday - Outbound)	no change in timepoints	no change of stop times
104-A Line (Saturday - Inbound)	no change in timepoints	no change of stop times
104-A Line (Saturday - Outbound)	no change in timepoints	no change of stop times
104-A Line (Sunday - Inbound)	no change in timepoints	no change of stop times
104-A Line (Sunday - Outbound)	no change in timepoints	no change of stop times

IT O GO

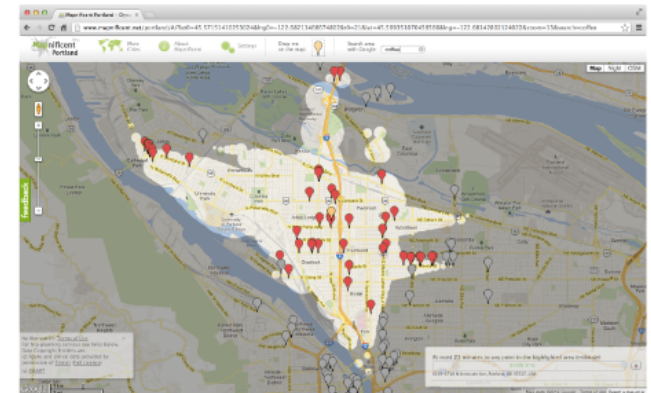
timetables, maps, and destination tables
itoworld.com/static/go.html

Visualization / contexts



Walk Score

Apartment Search
www.walkscore.com



Mapnificent

How far can you go us
<http://www.mapnificent.com>

Accessibility

Find rentals:

Type a neighborhood, city or place

Go

Share

Log in

Clear Filters

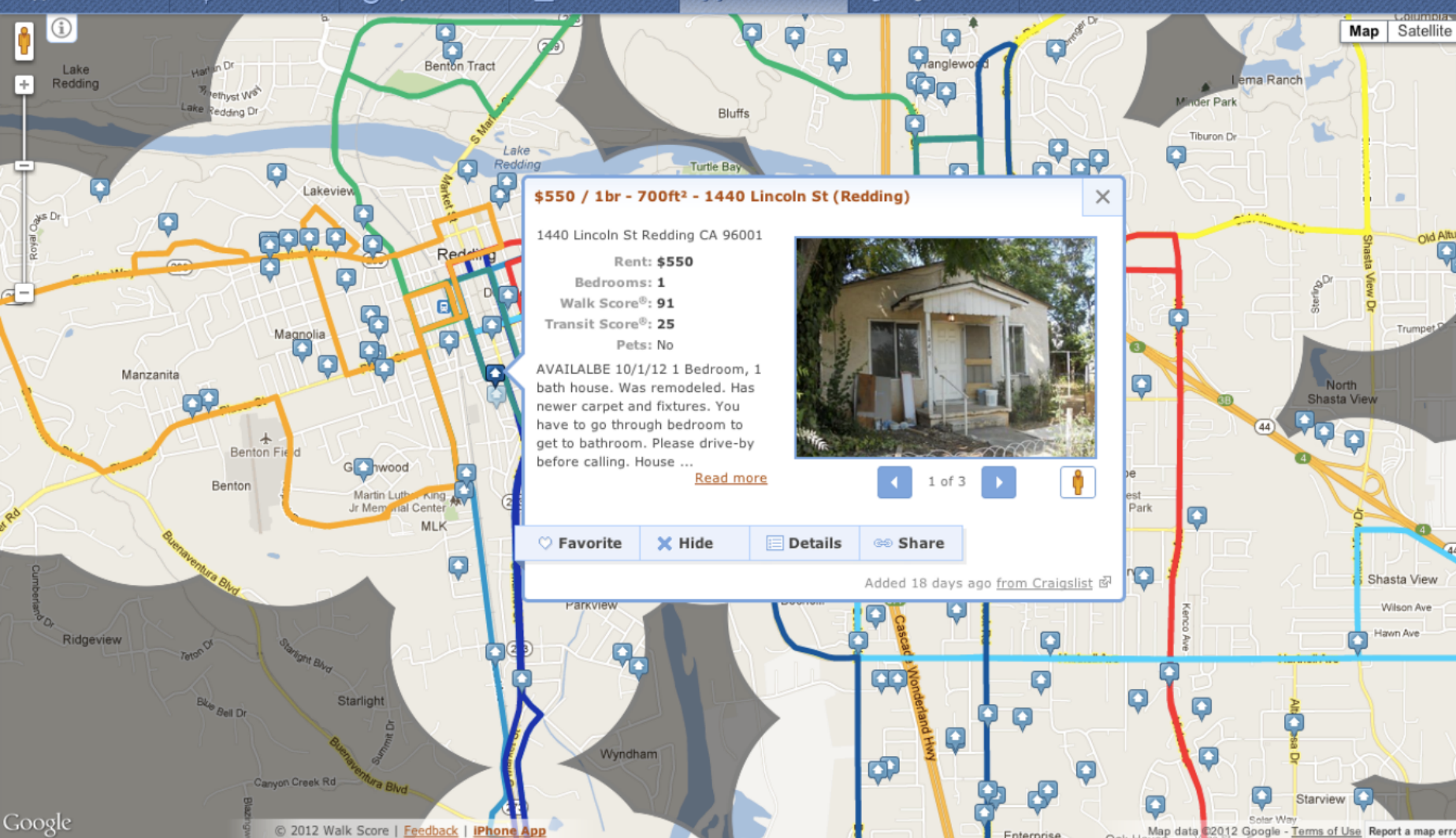
Price & Beds

My Commutes

Gotta Have...

Public Transit

Neighborhoods



\$550 / 1br - 700ft² - 1440 Lincoln St (Redding)

1440 Lincoln St Redding CA 96001

Rent: **\$550**

Bedrooms: **1**

Walk Score®: **91**

Transit Score®: **25**

Pets: No

AVAILALBE 10/1/12 1 Bedroom, 1 bath house. Was remodeled. Has newer carpet and fixtures. You have to go through bedroom to get to bathroom. Please drive-by before calling. House ...

[Read more](#)



1 of 3

Favorite

Hide

Details

Share

Added 18 days ago from Craigslist

Results 163 Faves 0

Get Email Alerts

Sort: Newest



\$575
2 beds
Walk Score: 66



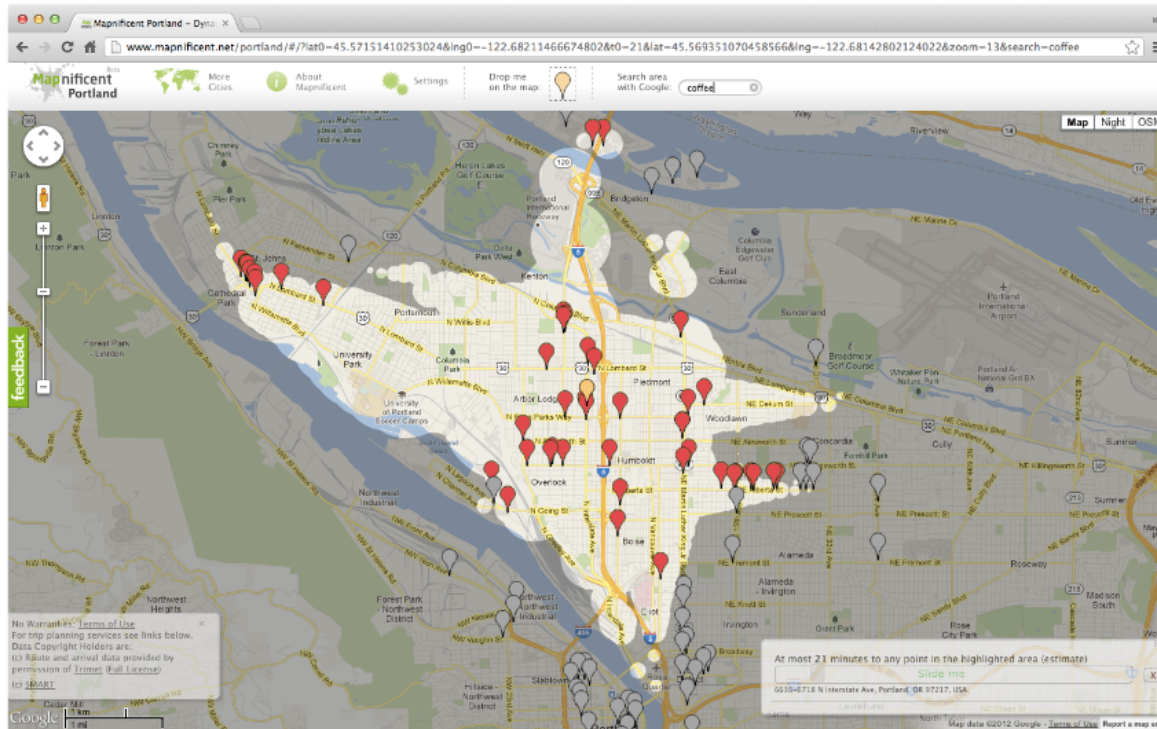
\$450
Studio
Walk Score: 88



\$575
2 beds
Walk Score: 78



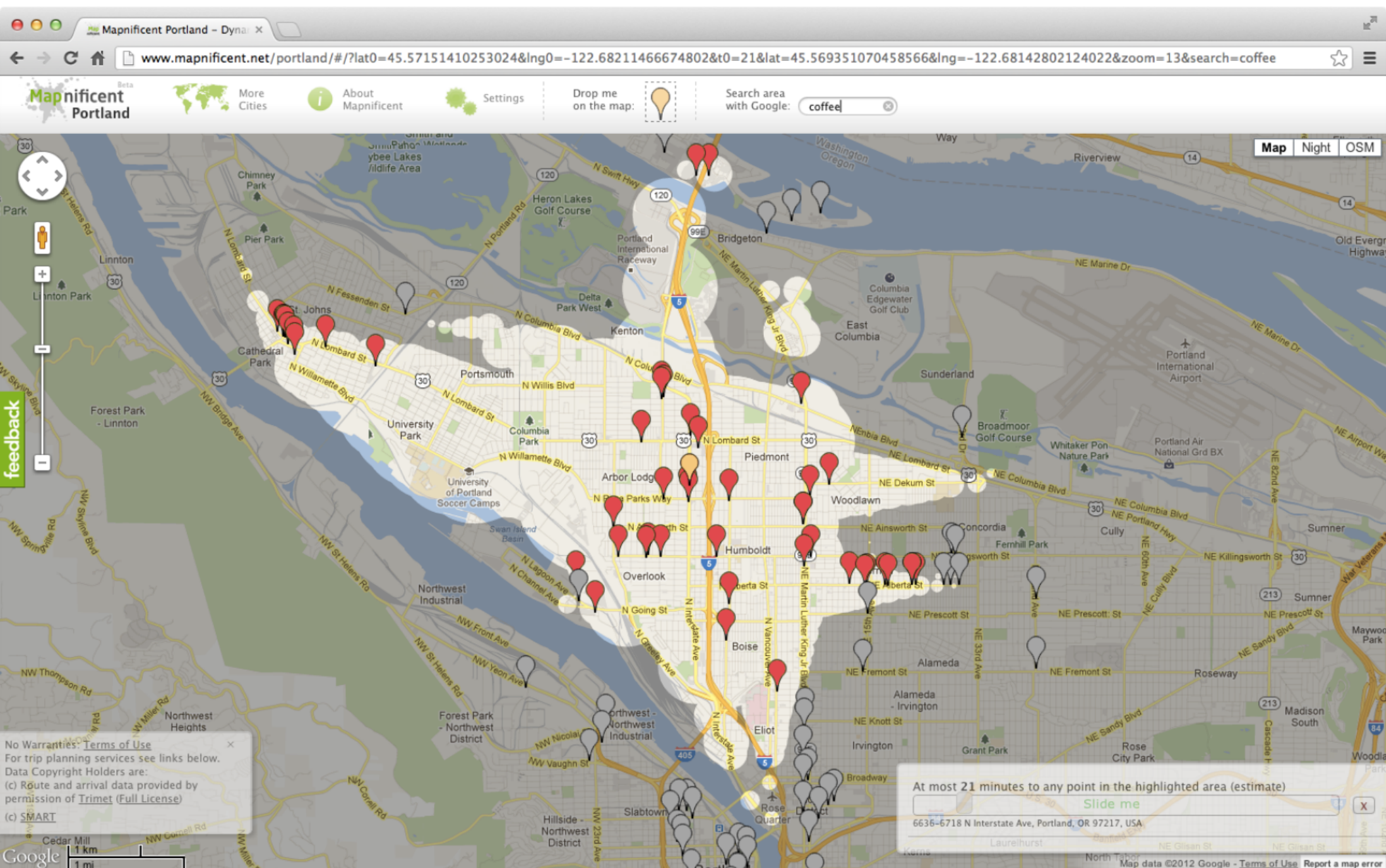
\$625
2 beds
Walk Score: 51



Mapnificent

How far can you go using transit?

<http://www.mapnificent.net/>



Accessibility

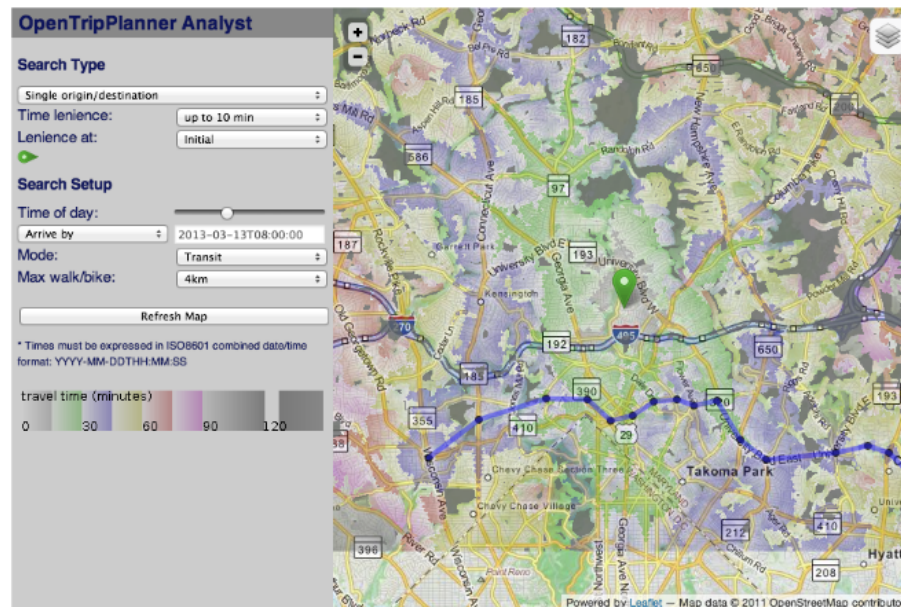


BrailleNote

www.senderogroup.com



Planning / analysis



OpenTripPlanner Analyst Extension
analyst.opentripplanner.org

OpenTripPlanner Analyst

Search Type

Single origin/destination

Time lenience:

up to 10 min

Lenience at:

Initial



Search Setup

Time of day:

Arrive by

2013-03-13T08:00:00

Mode:

Transit

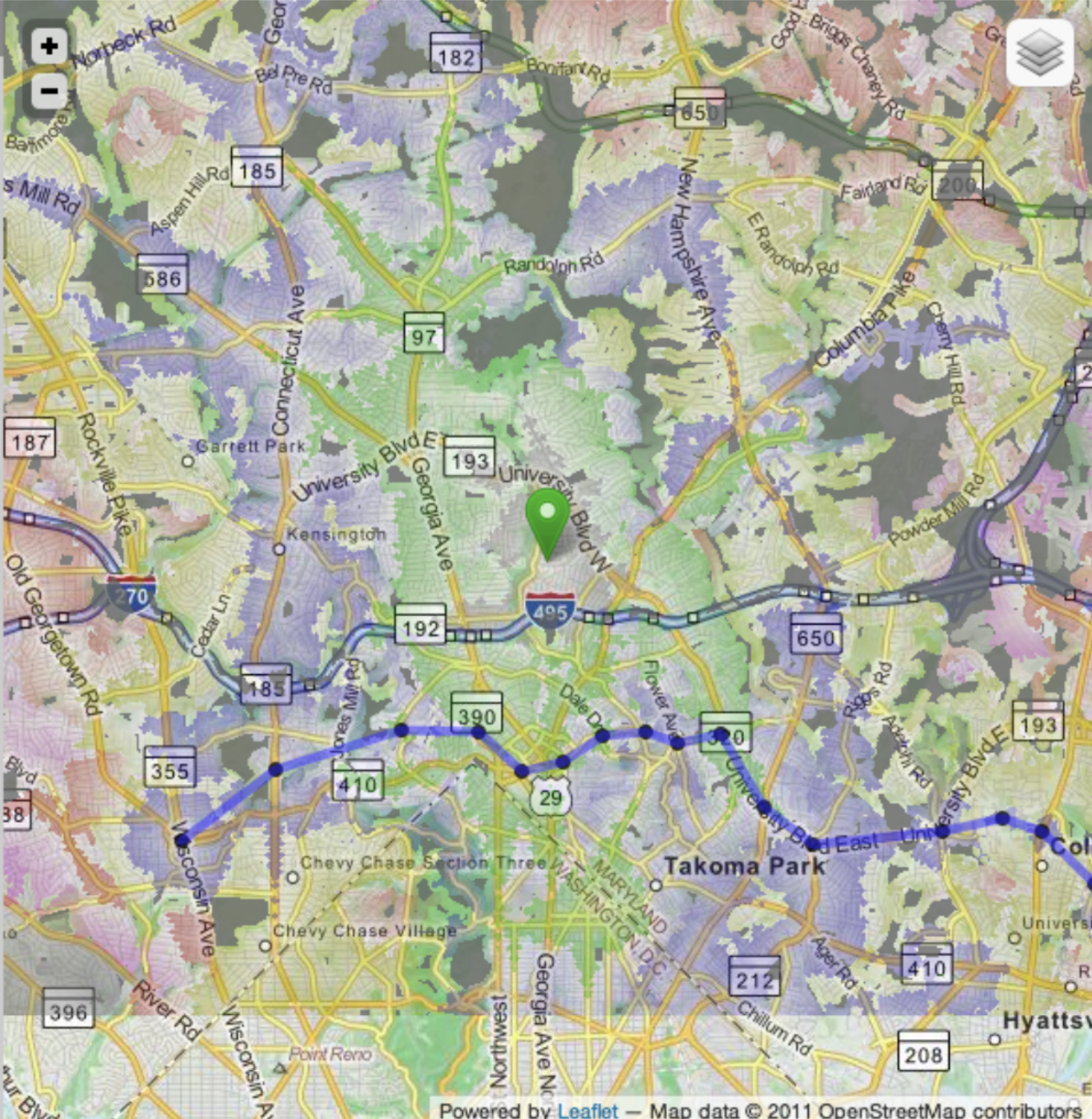
Max walk/bike:

4km

Refresh Map

* Times must be expressed in ISO8601 combined date/time format: YYYY-MM-DDTHH:MM:SS

travel time (minutes)

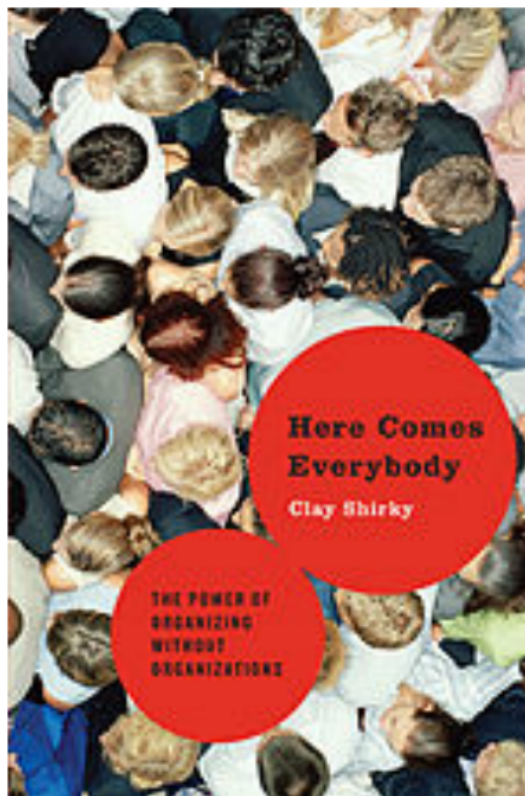


Powered by [Leaflet](#) — Map data © 2011 OpenStreetMap contributors

Concluding thoughts

Open data facilitates innovation

Open data facilitates innovation



“The old limits of what unmanaged and unpaid groups can do are no longer in operation; the difficulties that kept self-assembled groups from working together are shrinking, meaning that the number and kinds of things groups can get done without financial motivation or managerial oversight are growing.”

– Clay Shirky,
Here Comes Everybody





Over the long-term, open data reduces IT burdens on agencies, allows focus on core business

We're small and we can't provide every customized solution people ask for.... making the data available is something that we're very familiar with so that developers can develop the tools themselves. It's like having an army of developers available to us.

— Tim McHugh,
CTO of Portland's TriMet

3rd Party Apps May Not Fill All Needs

- Agencies may need to supplement with own GTFS-based services
- Open-source software is key enabler
 - OpenTripPlanner (OpenTripPlanner.org) - Multimodal trip planning
 - OneBusAway (OneBusAway.org) - Real-time info

Additional resources

Transit Developers Group
<http://bit.ly/transit-developers>

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THE MANY USES OF GTFS DATA –
OPENING THE DOOR TO TRANSIT AND MULTIMODAL APPLICATIONS

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Abstract

The General Transit Feed Specification, or GTFS, has become the most popular world-wide data format to describe fixed-route transit services. Many transit agencies have created and published GTFS data with the primary purpose being integration with Google Maps. However, GTFS data can power many other different types of transit and multimodal software applications, including multimodal trip planning, timetable creation, mobile apps, visualization, accessibility, analysis tools for planning, real-time information, and interactive voice response (IVR). This paper provides an overview of the many opportunities available for transit and intermodal agencies to leverage open GTFS data and provide many new types of information services to the public or their internal operations with little to no cost to the agency. For transit agencies without open data, this paper will inform decisions on prioritizing and justifying investments in open data initiatives. For agencies that already provide open access to GTFS data, this paper will assist the agency in maximizing their investment in GTFS data by providing resources on how to access many new types of applications. Departments of Transportation, Metropolitan Planning Organizations, and other intermodal agencies will also benefit from this paper by learning the state of the art in transit information dissemination, which can power new state-of-the-art intermodal applications. This paper also provides a summary of industry best-practices that an agency can follow when deciding to create and share an open GTFS data feed to maximize exposure to new applications. Feedback and lessons learned by several agencies that have opened their GTFS data to the general public are also included in this paper.

"The Many Uses of GTFS Data"

S. Barbeau, A. Antrim

bit.ly/uses-of-gtfs

bit.ly/ITSPaper-ManyUsesGTFS

This presentation:
bit.ly/FLDataGTFS

The Many Uses of GTFS Data

Opening the Door to Transit and Multimodal Applications

Florida Transportation Data Symposium
October 2014, Orlando, Florida

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