# 1

# nd Empire 511: Bernardino and Riverside Counties, fornia



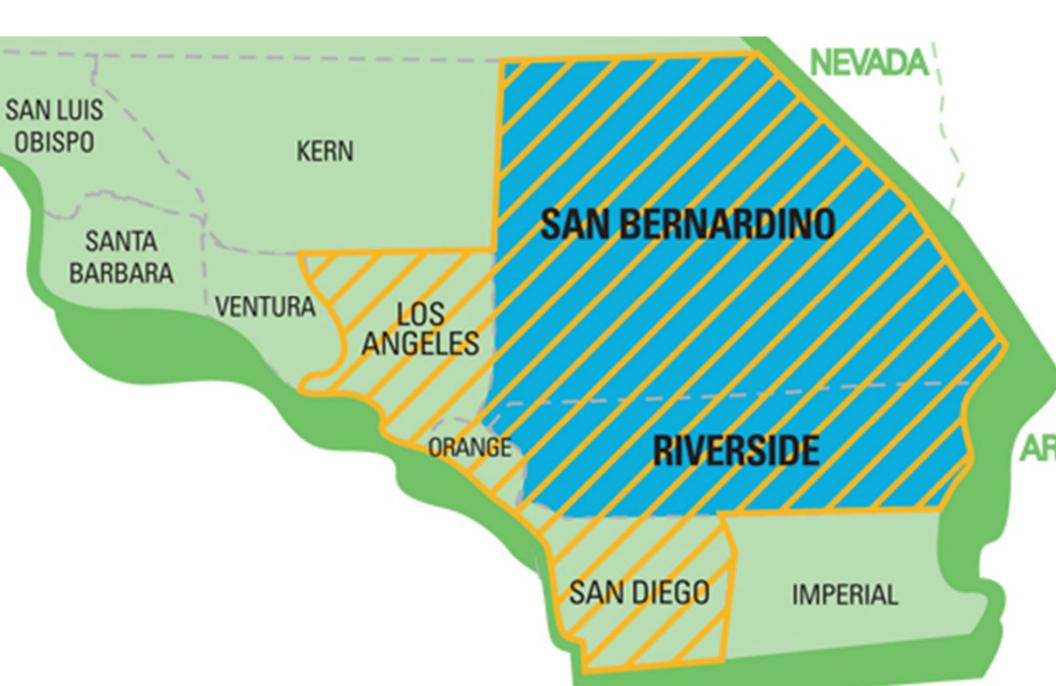


# overview

# GOALS:

- Provide information to help motorists pla avoid congestion: either by adjusting trav route, or by putting off an unnecessary ti
- Reduce congestion: Shift drive alone travel to transit and

# Geographic context



# uded in ogle Maps

- Corona Cruiser
- Palo Verde Valley Transit

# <u>Authority</u>

- SunLine Transit Agency (a participate)
- Riverside Transit Agency
- San Bernardino County
  - Omnitrans
  - Barstow Area Transit
  - Mountain Area Regional Transit Authority
  - Morongo Basin Transit Authority
  - Needles Area Tranist
  - Victor Valley Transit Auth

## matrix

|  | Website<br>(ie511.org) | Phone (51   |
|--|------------------------|---|
| insit trip planner   | Google Transit         | Calls are forwa<br>to individua<br>operators.               |
| eal-time traffic<br>information<br>San Diego, Orange, L.A.,<br>erside, San Bernardino<br>counties) | Yes                    | Yes: Personal<br>response usi<br>interactive vo<br>response |
| Rideshare  | Yes                    | Calls are fielde  |

# Usage stats

- 50,000-70,000 calls per month
- 25,000 visitors to ie511.org per month
  - Approximately 5,000 visitors are using mobile devices. They are presented with a mobile version of the website.

# Description of the second seco

- Search engine optimization
- Radio
- Print
- Billboards (previously, but have been phase out)
- Il cities and transit agencies link to 511.org
- 6 freeway signs installed with Caltrans, inc

# nsit?

y?

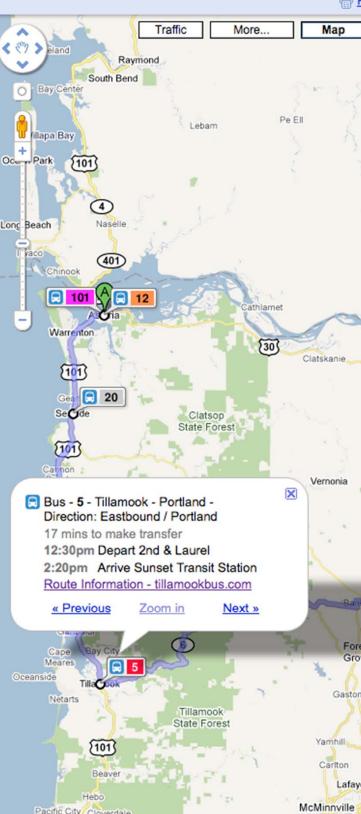
v to icipate?

itations for I providers

king the st of ogle Transit GTFS

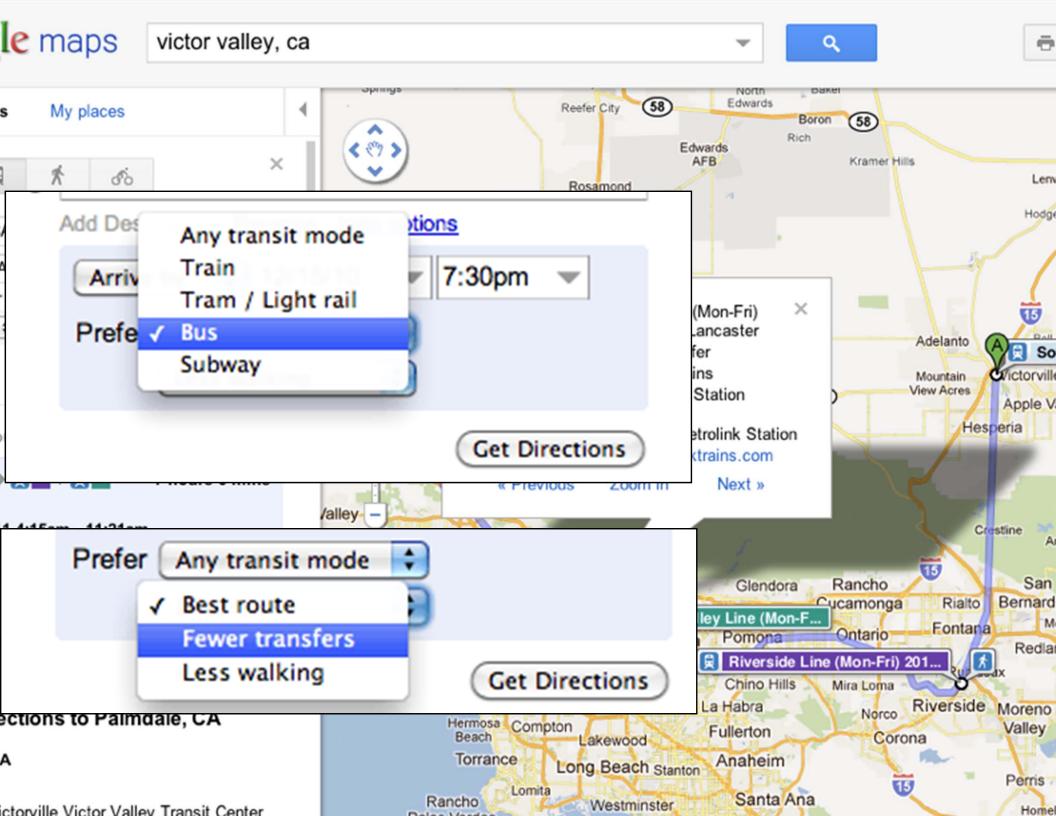
| A     | Astoria, C  | R   |   | 2        |
|-------|---|---|---|----------|
| B     | pdx   |   |   | -        |
|       | Add Destin  | ation - Hide options  |   |          |
|       | <ul> <li>Depa</li> </ul>  | art at OArrive by   |   |          |
|       | 10/23/0   | 09 🛄 at 7am   |   |          |
|       |   |   |   |          |
|       | By public   | transit 🛟   | Get Directions  |          |
| Als   | o availab   | le: 🖾 <u>By car</u>   |   |          |
| Fran  | nsit dire   | ctions to Portlan   | dInternational  | _        |
|       |   | rtland, OR 97218  |   |          |
|       |   |   |   |          |
|       | uggested  |   |   |          |
|       | 6am - 3:29<br>urs 13 min  |   |   |          |
| ••    |   | •   | e 🕺 🖌   | ·        |
|       | 3am - 3:29  |   |   |          |
| 6 hoi | urs 11 mins   |   |   |          |
|       |   | 9:16am - 3:29pm   |   |          |
| Oct   | 24, 2009  |   |   |          |
|       | 24, 2009<br>urs 13 mins   |   |   |          |
|       |   |   |   |          |
|       |   |   |   |          |
|       | urs 13 mins   | )R  |   |          |
| 6 hor | urs 13 mins<br>Astoria, C   | DR<br>\$17  | .80 ( <u>vs. \$56.52 drivin</u>   | )<br>    |
| 6 hor | Astoria, C<br>owing Trip  | DR<br>\$17<br>1 Travel time<br>enior Center   |   | )<br>    |
| 6 hor | urs 13 mins<br>Astoria, C<br>owing <b>Trip</b>  | OR<br>\$17<br>1 Travel time<br>enior Center<br>hin  | .80 ( <u>vs. \$56.52 drivin</u>   | )<br>    |
| Sho   | Astoria, C<br>wing Trip<br>Walk to S<br>About 1 m<br>H Show   | OR<br>\$17<br>1 Travel time<br>enior Center<br>hin  | .80 ( <u>vs. \$56.52 drivin</u><br>about 6 hours 13 m                           | )<br>    |
| Sho   | Astoria, C<br>owing Trip<br>Walk to S<br>About 1 m<br>Show of<br>Bus - 12 -<br>Transit Ce                           | OR<br>\$17<br>•1 Travel time<br>enior Center<br>hin<br>details<br>• Orange Crab Route -<br>enter                                | 2.80 ( <u>vs. \$56.52 drivin</u><br>about 6 hours 13 m<br>Direction: Astoria    | )<br>ins |
| Sho   | Astoria, C<br>owing Trip<br>Walk to S<br>About 1 m<br>Show of<br>Bus - 12 -<br>Transit Ce                           | OR<br>\$17<br>1 Travel time<br>enior Center<br>nin<br>details<br>Orange Crab Route -<br>enter<br>un by Sunset Empire Trained    | 2.80 ( <u>vs. \$56.52 drivin</u><br>about 6 hours 13 m<br>Direction: Astoria    | )<br>ins |
| Sho   | Astoria, C<br>owing Trip<br>Walk to S<br>About 1 m<br>Show of<br>Bus - 12 -<br>Transit Ce<br>Service ru             | DR<br>\$17<br>1 Travel time<br>enior Center<br>nin<br>details<br>Orange Crab Route -<br>enter<br>un by Sunset Empire Tr<br>6406 | 2.80 ( <u>vs. \$56.52 drivin</u><br>e: about 6 hours 13 m<br>Direction: Astoria | )<br>ins |
| Sho   | Astoria, C<br>owing Trip<br>Walk to S<br>About 1 m<br>Show 1<br>Bus - 12 -<br>Transit Ce<br>Service ru<br>(800)776- | DR<br>\$17<br>1 Travel time<br>enior Center<br>nin<br>details<br>Orange Crab Route -<br>enter<br>un by Sunset Empire Tr<br>6406 | 2.80 ( <u>vs. \$56.52 drivin</u><br>e: about 6 hours 13 m<br>Direction: Astoria | )<br>ins |

Transit Center



# Why Google Transit?

- Offered excellent value: trip planning functions at a fraction of the cost of alternatives
- Major providers already participated: Omnitrans, Riverside Transit Agency, Metrolink, L.A. Metro
- Coordinated travel information and itineraries without laborious integration



## <u>Google</u> sit?

- cipating
- ng the most ogle sit

- and maps are unfamiliar/ha to-use
- Google Transit is a familiar format for public transportat information
- Most Americans on the web
- Plans inter-agency itinerarie
- Shows transit as an alternation of the second second



tep 3



TRIGMET

See where it takes you.

To Jantzen Beach

Jantzen Ber Main Stop/1 Stop ID 302

5:50

6:11

6:31

5:46

7:02

7:17

7:34 7:50

8:06

8:20

8:36

11:08

11:23

11:40

11:55

12:10

12:25

12:40

12:55

1:27

N Lombard Interstate Stop ID 3507

5:41

6:01

621

6:35

6:52

7:07

7.24

7:40

7:55

8:10

8,25

- --

10:57

11:12

11:28

11:43

11:58

12:13

12:28

12:43

12:58

1:14

6-Martin Luther King Jr Blvd

NE Grand & Pacific Step ID 2175

5:25

5:45

6:05

6:20

6:35

6:50

7:05

7:20

7:35

7:50

8:06

10:35 10:50

1:05

5-20

*\_*0

2:05

12:20

12:35

12:50

NE M L King Alberta Stop ID 5690

5:33

5:53

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6.58

7:14

7:30

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51:31

\$1:46

12:01

12:16

12:31

12:46

1:02

Weekday

SW 18h & Columbia Stop ID 11

5:12

5:32

5:52

6:06

6:21

6:36

6:51

7:06

7:19

7:34

7:48

step 5

10:19

10:34

10:49

11:04

11:18

11:33

11:48

12:03

12:18

12:33

(transfer

SW Columbi between Sh 250 210 ID 1279

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6:10

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6.55

7:09

724

7:39

7.63

10.21

10.54

11:00

th,

11.5.

12:03

12:23

12:38

### TRI 🌀 MET

See where it takes you.

### 15-Belmont

| Weekday  |  |                                    |                                     | To Portla                           | and C                 |
|--|--|------------------------------------|-------------------------------------|-------------------------------------|-----------------------|
| NE Sandy &<br>Parkrose<br>Transit Center<br>Stop ID 5050 | SE 102nd &<br>Washington<br>Stop ID 6629 | SE Stark &<br>62mJ<br>Stop ID 5499 | SE Reimont &<br>(oth<br>Stop ID 451 | SE Reimont &<br>Sith<br>Sito ID 426 | SE Morrison &<br>12th |
| 4)41<br>5:07   | 4:52<br>5:18                             | 5:01<br>5:27                       | 6:07<br>6:33                        | 5:11<br>5:37                        | 51<br>52              |
| 521  | 5:32                                     | 5:41                               | 5:47                                | 5.51                                | 51                    |
| 5:35   | 5:45                                     | 5.56                               | 6.02                                | 6.06                                | 6.1                   |
| 5:50   | 6:01                                     | 6:11                               | 6:17                                | 6.21                                | 6.2                   |
| 50.0   | 6:13                                     | 6.23                               | 6:29                                | 6.34                                | 60                    |
|  |  | Y6:30                              | 6.55                                | C 51                                | 5                     |
| 6:13   | 624                                      | 6:34                               | 6,60                                |                                     |                       |
|  | _  | Y6:40                              | 6.46 (                              | STA                                 |                       |
| 6.25   | 6:35                                     | 6:46                               | 6.62                                | JLU                                 |                       |
|  | -  | Y6:51                              | 6.57                                | 7.02                                | - 23                  |
| 6:35   | 6:45                                     | 6.56<br>Y7.00                      | 7.02                                | 1                                   |                       |
| _  | _  | 17:04                              |                                     | Trar                                | 1S                    |
| 6:45   | 6:58                                     | 7.08                               |                                     | ci cai                              |                       |
| -  |  | Y7:13                              | 2.20                                | • 7.25                              |                       |
| 6:57   | 7:09                                     | 7:19                               | tim                                 | nna                                 | n                     |
|  |  | Y7 25                              |                                     | IIIIQ                               |                       |
| 7:08   | 7:20                                     | 7.30                               |                                     | 2.44                                |                       |
| -  |  | Y7:36                              | 7:43                                | 7:49                                |                       |
| 7:19   | 7:31                                     | 7:45                               | 7:48                                | 7.64                                |                       |
|  |  | Y7:47                              | 7.54                                | 8:00                                |                       |
| 7:31   | 7)43                                     | 7.53                               | 8.00                                | 8.06                                |                       |
| 7:41   | 7:53                                     | 77.59<br>8.03                      | 8:05<br>8:10                        | 8:12                                |                       |
|  |  |                                    |                                     |                                     | —                     |
| _  | _  | Y8:10<br>Y8:15                     | 8:17<br>8:22                        | 8 22<br>8 27                        | в.                    |
| 7:57   | 8:09                                     | 8:19                               | 8 26                                | 8.31                                | 80                    |
|  | -  | Y8 25                              | 8.33                                | 8 39                                | 8.4                   |
| 8:11   | 8:23                                     | 8.33                               | 8:40                                | 8.4                                 |                       |
|  | -  | Y8:41                              | 8:48                                |                                     |                       |
| 8:25   | 8:38                                     | 8:48                               | 8.55                                |                                     |                       |
| _  | _  | Y8:55                              | 9.02                                | 9.07                                | 9:1                   |
| 0.45   | 0.40                                     | 0.01                               | 0.00                                | A 44                                | 2.4                   |

step 7



# **Result of Florida stud**

Almost half of participants were una to correctly identify bus times using the tabular schedules.

Design Elements of Effective Transit Information Materials,

National Center for Transit Research at the Univers South Florida

(http://www.nctr.usf.edu/pdf/527-12.pdf)

**sit?**Google sit provides amiliar at for public portation nation

internet activity for Americans is to "searc for a map or driving directions," (87%) behind only email and using search engines.

Google - MAPQUEST : YAHOO! LOCAL

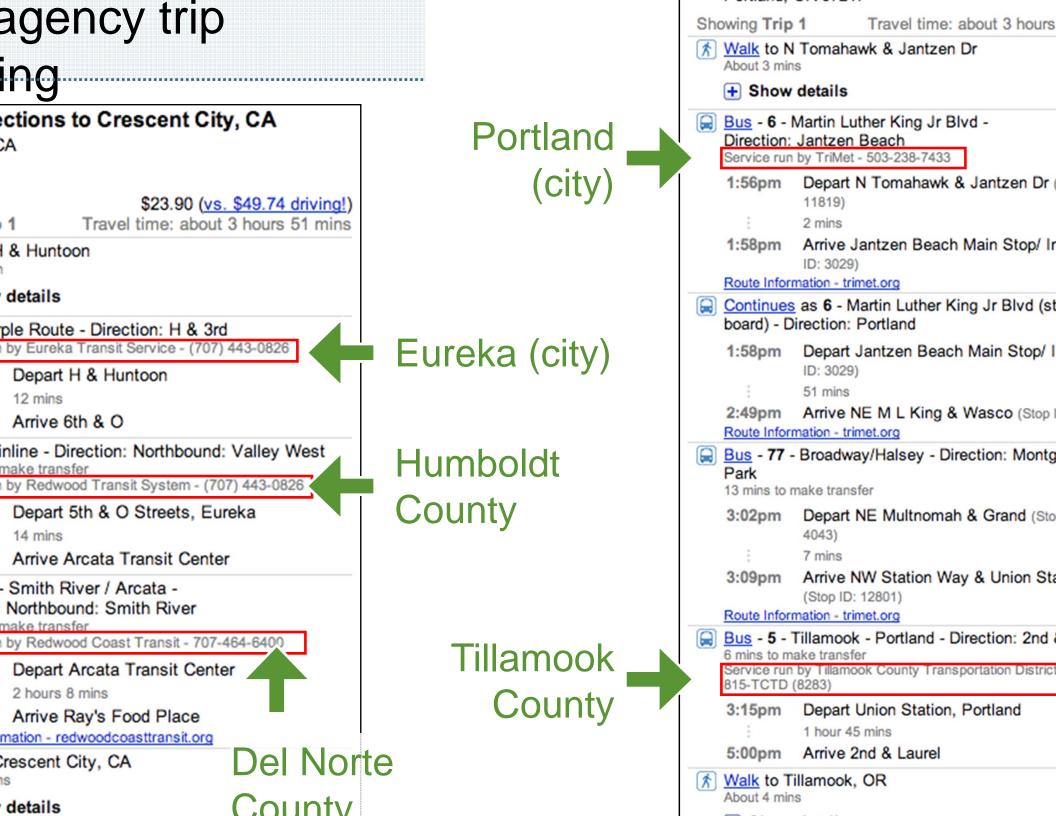
Source: Pew Internet & American Life Project, (<u>http://www.pewinternet.org/pdfs/PIP\_Internet\_and\_</u> \_Life.pdf)

# **sit?**Most icans use

ternet

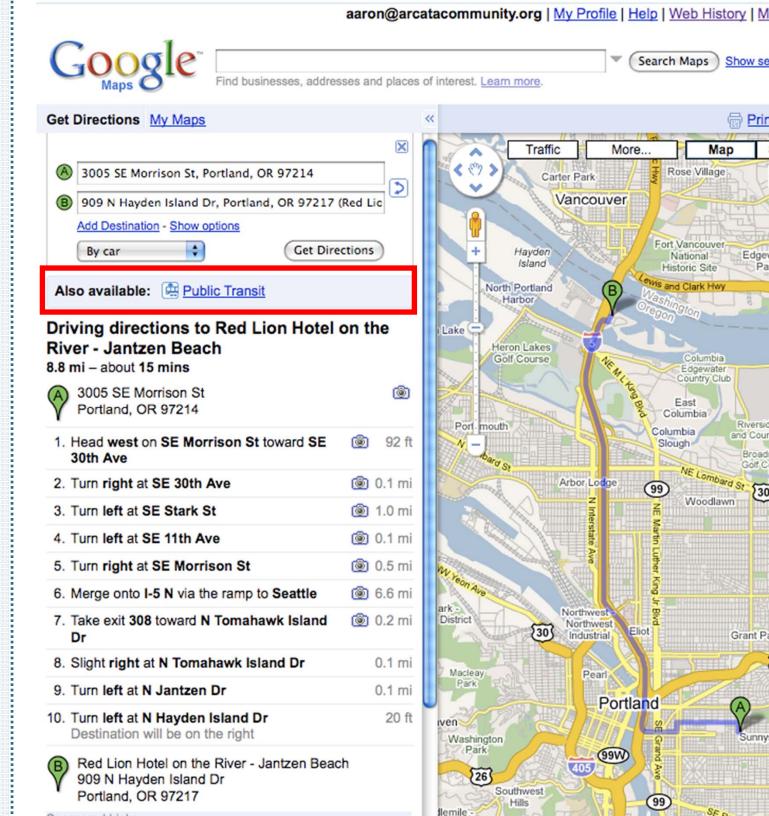
# the web

- 73% of all Americans are intusers
- 63% of of people in rural area
- 53% of < \$30k/year income households
- 71% of 50-64 year olds
- 88% of 18-29 year olds

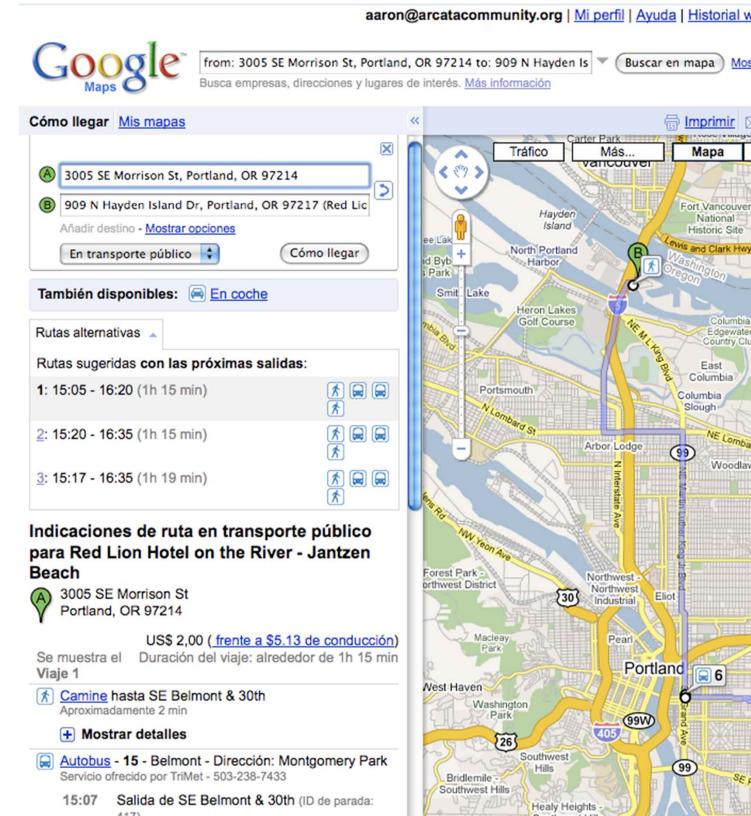


| Travel time: about 6 hours 13 mins   | walking              | Inter-agency trip  |
|--|----------------------|--|
| r Center   |                      |  |
| ils  | Sunset               | planning   |
| ange Crab Route - Direction: Astoria   |                      | · •  |
| r<br>/ Sunset Empire Transportation District -<br>6                          | Empire               |  |
| epart Senior Center  | Transportation       |  |
| mins   | District             |  |
| rive Astoria Transit Center  |                      | Light rail - MAX Red Line - Direction: A                               |
| nk Salmon Route - Direction: Astoria   | A transfor           | 8 mins to make transfer<br>Service run by TriMet - 503-238-7433        |
| r<br>ke transfer   | transfer TriMet      |  |
| epart Astoria Transit Center   | duration             | 2:28pm Depart Sunset Transit Cen<br>9969)                              |
| mins   |                      | 58 mins  |
| rive Avenue A(Northbound)  |                      | 3:26pm Arrive Portland Int'l Airport                                   |
| ey Sea Gull Route - Direction: Seaside                                       |                      | (Stop ID: 10579)   |
| te transfer  | route timetable link | Route Information - trimet.org   |
| epart Avenue A(Southbound)   |                      | Walk to Portland International Airport<br>About 3 mins                 |
| hour 4 mins  |                      |  |
| rrive Manzanita  |                      | + Show details   |
| mook - Manzanita/Cannon Beach -<br>ithbound / Tillamook                      | Tillamook            | Portland International Airport<br>Portland, OR 97218                   |
| <pre>ike transfer / Tillamook County Transportation District TD (8283)</pre> |                      | Sponsored Links  |
| Depart Manzanita   | Transportation       | Portland Airport Hotels<br>Portland Airport Hotel Reservations         |
| 5 mins   | •                    | Low Price Guarantee 800-916-8592                                       |
| rrive 2nd & Laurel   | District             | www.Hotels-For-Everyone.com  |
| ation - tillamookbus.com   | -                    | Oregon   |
| mook - Portland - Direction: Eastbound /                                     |                      | Local agonov information:  |
| ake transfer   |                      | Local agency information:<br>Contains more information on fares, sched |
| Jonart 2nd & Laural  |                      | advisorios   |

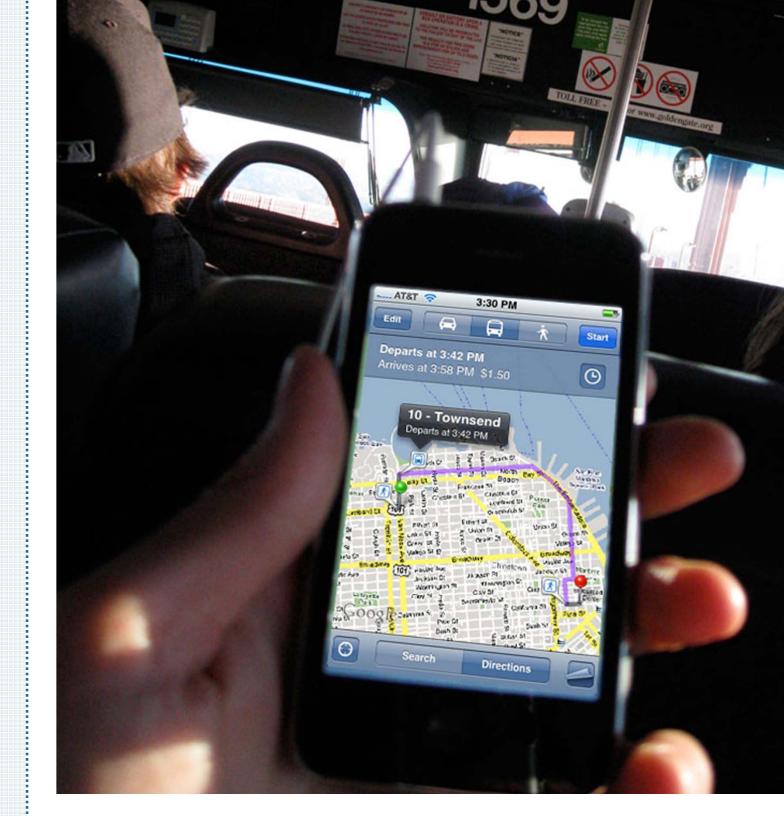
sit?Shows t as an ative to g elers who therwise r think of it or visit website will he transit 7



# <u>sit?</u>Interfac welve ages



**sit?**Availabl mobile es like oid phones, es and berries



## **sit?**Transit ation re on bid devices

## 1.1 mi

(Stop S)

Hyde Park Corner (Stop N)

Knightsbridge Station Harrods (S KC)

Brompton Square (Stop KU)

Victoria and Albert Museum (Sto

South Kensington (Stop S)

Get off and walk to Natural Histo Museum, Natural History Muse Cromwell Road, London SW7 5, United Kingdom

Arrives at 12:13pm

🕑 2 min (0.1 mi)

1. Walking directions (beta): Ucaution.

Head northeast on Thurlod

Google sit?

# <u>cipating</u>

ng the most ogle sit





route agency.

Participation is free.

However, agencies nee provide valid schedule in the Google Transit F Specification (GTFS).



Agencies must agree the Google Transit

m's Schedule is vailable publish naintain le Transit

nation

QuickTime<sup>™</sup> and a Animation decompressor are needed to see this picture.

### /are fits

|      | Your browser must allow cookies in order to log in. |      |
|------|---|------|
|      | Email Address: aaron@arcatacommunity.org            |      |
|      | Password: ••••••                                    |      |
| lo s | Login   | o in |

# or manage

• N

- Software updates happen automatically
- Software is updated to take advantage of changes and additions to the General Transi Feed Specification (GTFS)
- Support to choician can can the

## ations of gle Transit ural iders

ervice able age

# contains little useful informat

Sorry, we don't have transit schedule data for a trip from Redding, CA to Susanville, CA at the time and date you specified.

Get driving directions from Redding, CA to Susanville, CA.

# ations of gle Transit ural iders

ervice able age

# thorough approach:

Sorry, we don't have transit schedule dat for a trip from Redding, CA to Susanville at the time and date you specified.

The Google Maps trip planner currently includes service schedules for these agen in this area:

Redding Area Bus Authority (website li: (530) 241-2877

Sage Stage (website link), 530-233-641
 Plumas Transit (website link), 530-283

You can also try:

Search businesses and organizations for "Transportation" in this area

Get driving directions from Redding, C. Susanville, CA.

# ations of gle Transit ural ders

- andonse style
- ces are
- ult/impossib
- represent

routes are not possible to include in Google Transit

 Google Transit does not show flags such as "must phone agency" or "must coordinate with driver" in t planner for demandresponse style service.

ations of gle Transit ural ders

num ng distance tion walking distance for the Google Transit trip planner rural areas, **travelers walk drive farther** than 4 miles access transit.



## ations of gle Transit ural iders

### ions

# community through Google Transit Support Group and GTFS changes group

### Welcome to the Google Transit Partner Support Discussion Group!

A private community where public transportation agencies, operators, and other data providers working with Google can ask questions and exchange knowledge about how to best structure their data. If you'd like to find out just what Google Help groups are and how they work, please check out our group charter and the guick start guide.

Google employees, known as "Google Transit Guides," will be popping in from time to time to post announcements, share tips, and answer questions.

When reporting a problem with a feed please provide the URL of your feed so that other people can take a look and help you. If you don't have a <u>a file upload site</u>. It is helpful to include your agency id (often city-region-countrycode, ie portland-or-us) too.

### » Before getting started, have you checked:

Google Transit Partner FAQs? | Google Transit Feed Specifications? | Google Transit Best Practices ?



#### **Tips and Tricks**

Useful hints and recipes for implementing some features on Google Transit. Please check our <u>FAQs</u> before posting.

### Troubleshooting

For help resolving technical or feed iss Transit. Note: the best way to report a is by <u>filling out this form</u>. Please also c <u>Issues page</u> before posting.

Search b

#### Announcements

For the latest news or tips on using Google Transit, straight from the Google Transit team. Please also check our <u>Google Earth and Maps Team Blog</u>. Feature Requests and Suggestion For discussion on new features and ide of Google Transit.

# Alternatives exist and are b developed: an open-source

## of Google

# cy website nclude trip er form

### California Trip Planner

0 Lemon St, Riverside, CA hty of San Bernardino Time AM/PM 9:23 AM \$

Time



### Inland Empire Bus/Rail Providers

Make the choice to beat congestion, contribute to cleaner air, and reduce your carbon footprint, all at the same time. Try the bus or Metrolink. Use the time to relax, read, go online, work or sleep and arrive at your destination relaxed.

Get door-to-door routing and travel times using our Bus/Rail Trip Planner powered by Google Transit.

The Inland Empire has two major transit agencies: Riverside Transit Agency in Riverside County and Omnitrans in San Bernardino County. In addition, there are a number of sub-regional bus services. These include:

#### **Riverside County**

- Banning
- Beaumont
- Corona
- Palo Verde Valley Transit Authority
- SunLine Transit Agency

### San Bernardino County

Barstow

### Southern Cali Bus/Rail Trip

End e.g. County of S

Date Time 08/30/201: 9:2

Plan by

Departure Time

Get Directions

### of Google sit

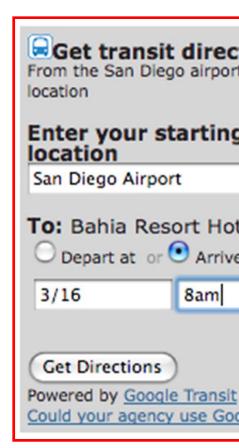
Google sit as a tool ke transit a readily able option someone nning a trip

**nple:** CT erence San Diego, California 92109 Telephone: (858) 539-7700 Fax: (858) 48 Single room rates are \$139.00 per night if reserved before February 1 Reservations received after Friday, February 13, 2009 will be provided space available basis at prevailing rates.

Reservations must be guaranteed by credit card or advance deposit an 30 business days prior to arrival. Individual reservations will automatic billed for one night unless canceled 24 hours prior to arrival. To make reservation please call 800-576-4229 and tell them you are with the C Conference.

### Transportation

The airport is 6.5 miles from the Bahia Resort and accessible by taxi or other transportation shuttles. You can reserve a ride with Cloud 9 Super Shuttle by visiting www.supershuttle.com or you can reserve a town car by calling Unique Tours and Transportation at 800-316-4140.



Final Agenda (The Final Agenda is a large file. If you are having trouble downloading it, you can download an inside conv of the agenda information

# of Google

Google sit as a tool ike transit a readily able option someone nning a trip

nple: Coast nal calendar





NEWS North Coast Journal Best Of 2011 Fifty-one weeks a year, we at the North Coast

Journal give you the

lowdown on ...

#### ON THE COVER / BY RYAN BURNS

### Whose Arcata?

From pot growers and transients to goats and the affluent, a city struggles to find its identity

SEVEN-O-HEAVEN

Curl

Talkin' 'Bout My





NEWS STORY Wanted: Garbage Collector

Almost a year after opening its new power plant in Eureka, Pacific Gas and Electric ...

It's one of those incredible late-summer days in Arcata

when the air is so crisp and

### .... Beer! ....

#### NEWS STORY Map Quest

Redrawing the jagged, meandering lines that define Humboldt County's five supervisorial districts is no ...



Best What?

Editor:

Recently I was casting my vote for your "Best of Humboldt" competition (Aug. 18 ...

#### THE HUM This is Humboldt

(In a show of empathy, this edition of The Hum is dedicated to new/returning

THIS WEEK

and state and state and state of the state o



851 Bayside R Arcata, CA (In Sunny Brae at Creses 707.822.7 www.atozeyec



### a Nationals

Tomorrow

8 p.m.

707-826-1195

Mosgo's

The Delta Nationals

Free

ransit directions

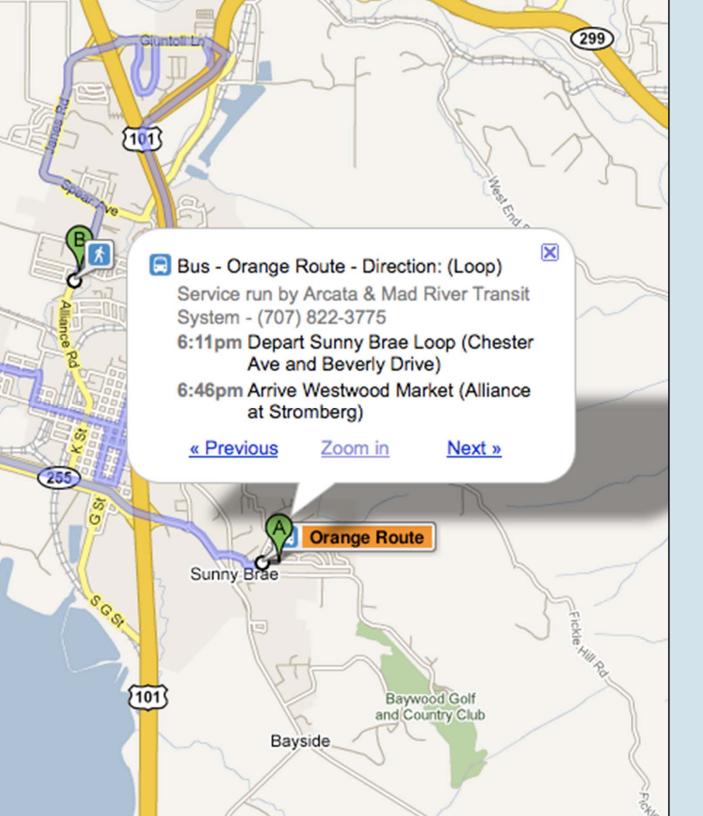
our starting location ester ave, arcata ca G St, Arcata, CA

oldt State University

/ 8 p.m. on Sept. 19,

ections

by <u>Google Transit</u> ed by <u>Green Wheels</u> and **Online** even calendar ha two clicks to transit directions fo events, usin Google Trar



**Online** even calendar has two clicks to transit directions fo events, usin **Google Trar** 

ecification, as a lightweight d ndard for transit geographic ar nedule data, has quickly becon increasingly ubiquitous mat.

# d you don't have to be Google

L:

### of GTFS rage your stment: advantage er uses for le Transit

data

- Feed Specification Building Standard Format
  - transit schedule, fare, stop location, and service calendar data
  - Open license for the standard (not owned by Google)
  - In 4 years, has become the m commonly-used format for tra data: +200 North American agencies, many European and Asian agencies
  - More at

# of GTFS

data makes d-wide unity of opers your ab

| essible transit da<br>sit schedule data<br>They contain sch<br>d detailed route s<br>feed format, see t<br>Area<br>Portland, OR | published by transit agencies and operators in <u>GTFS</u> format for<br>eduled times, stop locations, route information and optionally   |   |
|---|---|---|
| essible transit da<br>sit schedule data<br>They contain sch<br>d detailed route s<br>feed format, see t<br>Area<br>Portland, OR | ta feeds published by transit agencies and operators in <u>GTFS</u> format for reduled times, stop locations, route information and optionally thapes. the <u>Google Transit Feed Specification</u> document. Feed Location http://developer.trimet.org/schedule/GTFS/ Ode.google.cor | tom.brown.code<br>Labels: Featured<br>Notes<br>Use is subject to the terms<br>of their developer license<br>M/Der Gio Gio Gigle |
| sit schedule data<br>They contain sch<br>d detailed route s<br>feed format, see t<br>Area<br>Portland, OR                       | published by transit agencies and operators in <u>GTFS</u> format for<br>eduled times, stop locations, route information and optionally<br>hapes.<br>he <u>Google Transit Feed Specification</u> document.<br>Feed Location<br>http://developer.trimet.org/schedule/GTFS/             | tom.brown.code<br>Labels: Featured<br>Notes<br>Use is subject to the terms<br>of their developer license<br>M/Der Gio Gio Gigle |
| They contain scl<br>d detailed route s<br>feed format, see t<br>Area<br>Portland, OR  | eduled times, stop locations, route information and optionally shapes.<br>the <u>Google Transit Feed Specification</u> document.<br>Feed Location<br>http://developer.trimet.org/schedule/GTFS/<br>Ode.google.cor   | Notes<br>Use is subject to the terms<br>of their developer license<br>M/Der Groe Gagle  |
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*advantage* of GTFS *rage your stment:* advantage ner uses for le Transit data



cof GTFS rage your stment: advantage her uses for le Transit data and mobile phones to tell riders with special needs when to alight from th vehicle.

### Travel Assistant Device

Using Cell Phone Technology to Aid Transit Riders

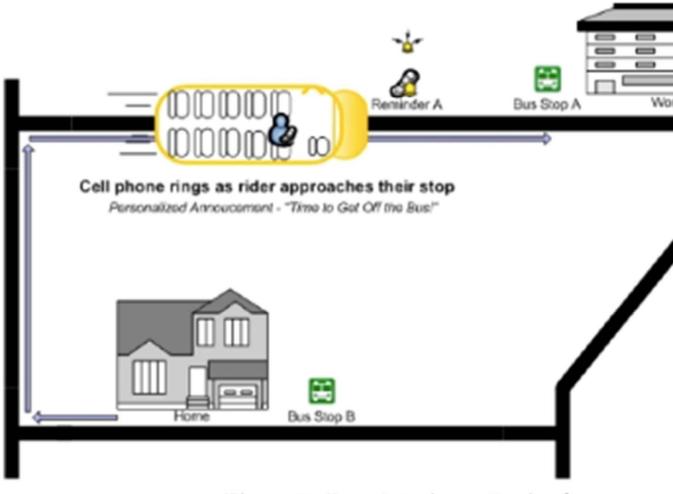


Figure 7 - Travel Assistant Device Concept

of GTFS rage your stment: advantage er uses for le Transit data

| <ul> <li>TimeTable Publisher: P R I N T</li> <li>TimeTable Publisher: P R I N T</li> <li>Time Society</li> <li>Single Peed Spec Data ] •</li> <li>single pdf (proofing)          <ul> <li>bypass conf</li> <li>Service Date (on / after): 11-5-2008</li> <li>2nd Service Date (to compare): 1-1-20</li> </ul> </li> <li>Time Buffer (in minutes): 3</li> <li>Bear Transit - UC Berkeley Shuttle A<br/>Bear Transit - UC Berkeley Shuttle A</li> </ul> | <b>TimeTal</b><br><b>Publish</b><br>takes what was<br>process of proof<br>schedules into a<br>process of autor<br>outputting sched | <b>ble</b><br><b>er:</b><br>a multi-da<br>reading<br>few hour<br>natically<br>lules <i>(se</i> |
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|  | mepoint Diff   |  |
| 104-A Line (Weekday - Outbound)  | no change in timepoints<br>no change in timepoints<br>no change in timepoints  | no change<br>no change<br>no change  |

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104-A Line (Saturday - Outbound)

104-A Line (Sunday - Inbound)

104-A Line (Sunday - Outbound)

### ekday

| Shattuck<br>Avenue @ | Evans Hall:<br>Hearst Mining<br>Circle Side<br>Stop ID 2532 | Strawberry<br>Canyon<br>Recreational<br>Area<br>Stop ID 2590 | UC Botanical<br>Garden<br>Stop ID 2592 | Lawrence Hall<br>of Science<br>Stop ID 2579 | Space Sciences<br>Lab/MSRI<br>Stop ID 2589 | Lawrence Hall<br>of Science<br>Stop ID 2539 | UC Botanical<br>Garden<br>Stop ID 2553 | Strawberry<br>Canyon<br>Recreational<br>Area<br>Stop ID 2551 | Evans Hall: |
|----------------------|---|--|--|---|--|---|--|--|-------------|
| 7:35                 | 7:40  | 7:45   | 7:47                                   | 7:49  | 7:55                                       | 7:57  | 7:59                                   | 8:01   |             |
| -                    | 8:10  | 8:15   | 8:17                                   | 8:19  | 8:25                                       | 8:27  | 8:29                                   | 8:31   |             |
| -                    | 8:40  | 8:45   | 8:47                                   | 8:49  | 8:55                                       | 8:57  | 8:59                                   | 9:01   |             |
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| -                    | 10:10   | 10:15  | 10:17                                  | 10:19                                       | 10:25                                      | 10:27                                       | 10:29                                  | 10:31  |             |
| -                    | 10:40   | 10:45  | 10:47                                  | 10:49                                       | 10:55                                      | 10:57                                       | 10:59                                  | 11:01  |             |
| -                    | 11:10   | 11:15  | 11:17                                  | 11:19                                       | 11:25                                      | 11:27                                       | 11:29                                  | 11:31  |             |
| -                    | 11:40   | 11:45  | 11:47                                  | 11:49                                       | 11:55                                      | 11:57                                       | 11:59                                  | 12:01  |             |
| -                    | 12:10   | 12:15  | 12:17                                  | 12:19                                       | 12:25                                      | 12:27                                       | 12:29                                  | 12:31  |             |
| -                    | 12:40   | 12:45  | 12:47                                  | 12:49                                       | 12:55                                      | 12:57                                       | 12:59                                  | 1:01   |             |
| -                    | 1:10  | 1:15   | 1:17                                   | 1:19  | 1:25                                       | 1:27  | 1:29                                   | 1:31   |             |
| -                    | 1:40  | 1:45   | 1:47                                   | 1:49  | 1:55                                       | 1:57  | 1:59                                   | 2:01   |             |
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| -                    | 3:10  | 3:15   | 3:17                                   | 3:19  | 3:25                                       | 3:27  | 3:29                                   | 3:31   |             |
| _                    | 3:40  | 3:45   | 3:47                                   | 3:49  | 3:55                                       | 3:57  | 3:59                                   | 4:01   |             |
| -                    | 4:10  | 4:15   | 4:17                                   | 4:19  | 4:25                                       | 4:27  | 4:29                                   | 4:31   |             |
| -                    | 4:40  | 4:45   | 4:47                                   | 4:49  | 4:55                                       | 4:57  | 4:59                                   | 5:01   |             |
| _                    | 5:10  | 5:15   | 5:17                                   | 5:19  | 5:25                                       | 5:27  | 5:29                                   | 5:31   |             |
|                      | 5.40  | 5.45   | 5.47                                   | 5.40  | 6.66                                       | 6.67  | 5.50                                   | 0.04   |             |

Inb

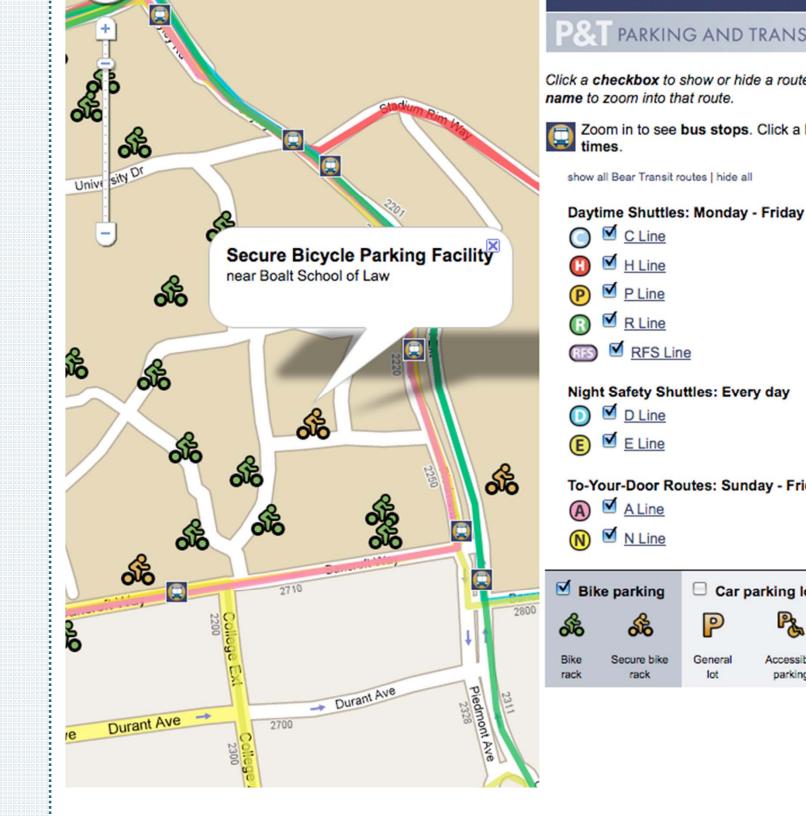
### PARKING AND TRANSPORTATION

|    |                                       |   |  |  |   |  | 1               |
|----|---------------------------------------|---|--|--|---|--|-----------------|
| RT | Warren Hall:<br>West Crescent<br>Side | Life Science<br>Addition: West<br>Circle Side | Moffitt Library:<br>Memorial Glade<br>Side | Campbell Hall:<br>University Drive<br>Side | Kroeber Hall:<br>Bancroft Way @<br>College Avenue | ASUC: Bancroft<br>Way @<br>Telegraph<br>Avenue | To<br>(<br>Se   |
|    | 9:06pm                                | 9:07pm  | 9:09pm                                     | 9:10pm                                     | 9:12pm  | 9:13pm   |                 |
|    | 9:36pm                                | 9:37pm  | 9:39pm                                     | 9:40pm                                     | 9:42pm  | 9:43pm   |                 |
|    | 9:36pm                                | 9:37pm  | 9:39pm                                     | 9:40pm                                     | 9:42pm  | 9:43pm   |                 |
|    | 10:36pm                               | 10:37pm                                       | 10:39pm                                    | 10:40pm                                    | 10:42pm   | 10:43pm  |                 |
|    | 11:06pm                               | 11:07pm                                       | 11:09pm                                    | 11:10pm                                    | 11:12pm   | 11:13pm  |                 |
|    | 11:36pm                               | 11:37pm                                       | 11:39pm                                    | 11:40pm                                    | 11:42pm   | 11:43pm  |                 |
|    | 12:06am                               | 12:07am                                       | 12:09am                                    | 12:10am                                    | 12:12am   | 12:13am  |                 |
|    | 12:36am                               | 12:37am                                       | 12:39am                                    | 12:40am                                    | 12:42am   | 12:43am  |                 |
|    | 1:06am                                | 1:07am  | 1:09am                                     | 1:10am                                     | 1:12am  | 1:13am   |                 |
|    | 1:36am                                | 1:37am  | 1:39am                                     | 1:40am                                     | 1:42am  | 1:43am   |                 |
|    | 2:06am                                | 2:07am  | 2:09am                                     | 2:10am                                     | 2:12am  | 2:13am   |                 |
|    | 2:36am                                | 2:37am  | 2:39am                                     | 2:40am                                     | 2:42am  | 2:43am   |                 |
| RT | Warren Hall:<br>West Crescent<br>Side | Life Science<br>Addition: West<br>Circle Side | Moffitt Library:<br>Memorial Glade<br>Side | Campbell Hall:<br>University Drive<br>Side | Kroeber Hall:<br>Bancroft Way @<br>College Avenue | ASUC: Bancroft<br>Way @<br>Telegraph<br>Avenue | To ·<br>(<br>Se |

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Walkable Neighborhoods | Why Walk? | Walkability | How It Works | How It Doesn't Work | R

Get your Walk Score

Address:

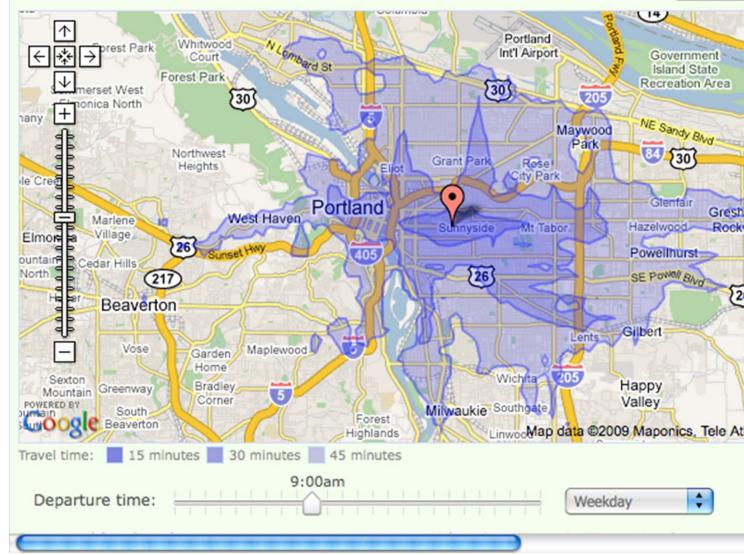
#### Transit Time Map: Portland, 9:00am

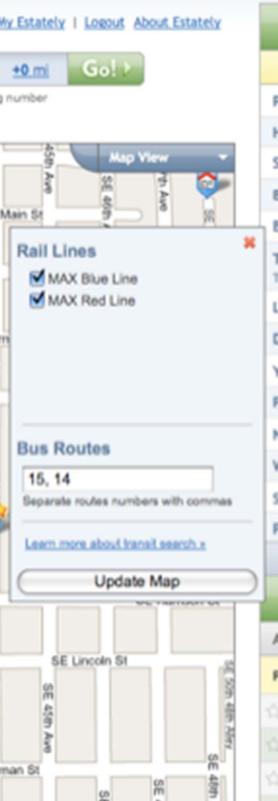
#### **Technology Preview**

Portland,

Go

Click the map to see how far you can travel in 45 minutes on public transit.

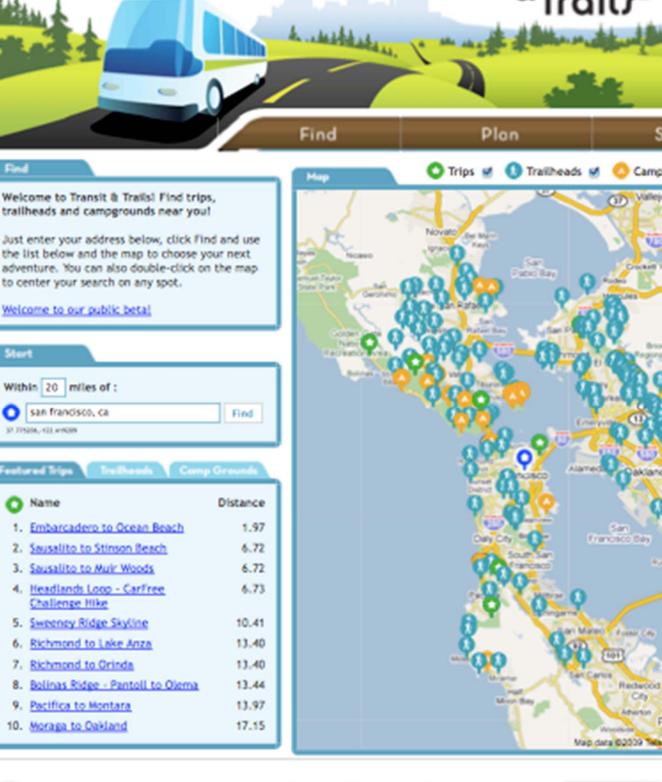




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|   | 🙀 Save Search  | 1                          | 6.1   | Link to  | Page   |   |  |  |  |
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|   | Bathrooms:   | -                          | \$    | to 🦲     |        | • |  |  |  |
| - | Text Search:<br>Try words like fixer, waterfront or hardwood. Learn more |                            |       |          |        |   |  |  |  |
|   | Lot Size: -  | 1                          | to    | -        |        | • |  |  |  |
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|   | Parking Spaces:  | -                          | \$    | to 🧲     |        | • |  |  |  |
|   | Near Transit: 1/2 mile from Trains/Busses                                |                            |       |          |        |   |  |  |  |
|   | Walk Score**:  | -                          | \$    | to 🦳     |        | • |  |  |  |
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|   | ☆ 5005 SE LINCOLN ST   | \$339k                     | 3     | 2,180    | 3      |   |  |  |  |
|   | 2409 SE 51ST AVE   | \$170k                     | 1     | 598      | 3      |   |  |  |  |
|   | 🖄 3938 SE MADISON ST   | \$340k                     | 2     | 1,930    | 3      | Ļ |  |  |  |
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Real estate sea site lets users search by prox to transit. Esta obtains transit from public Go Transit Feed S data.

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BAY AREA OPEN SPACE COUNCIL

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News Terms Resources Tech



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-modal trip

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# **Applications**



3<sup>rd</sup> party applications designed to consume GTFS

Multi-modal trip planning

Show all relevant options – including public transit, private employer shuttles, carpool, vanpool, biking, walking – throug a single map

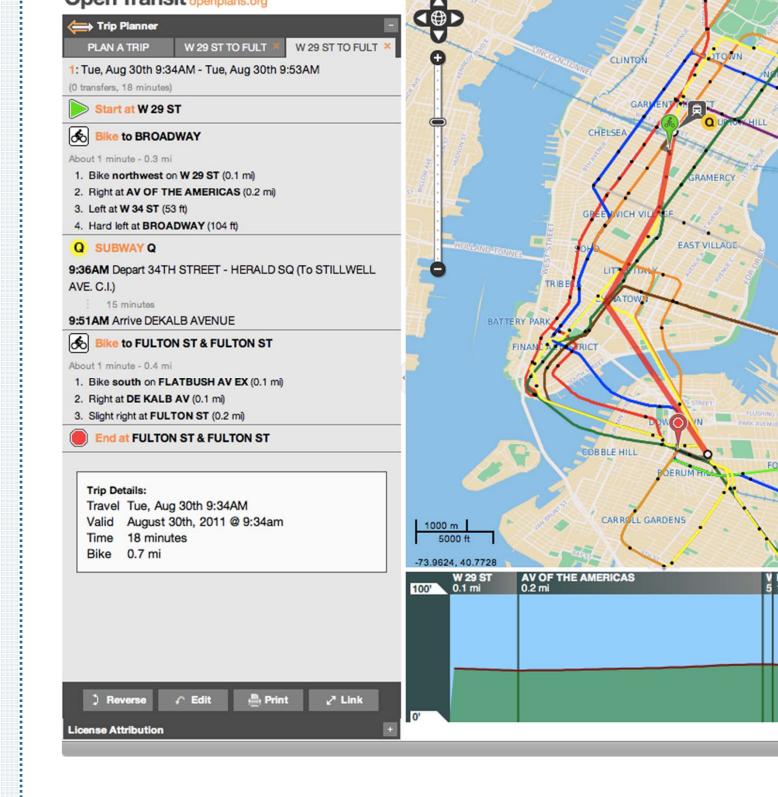
Show interagency transfers

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# nd Empire 511 .ie511.org

# gle Transit partner program s.google.com/help/maps/transit/partners

# gle Transit Feed Specification

.google.com/transit/spec/transit\_feed\_specification

# um Solutions

.trilliumtransit.com

.trilliumtransit.com/blog

# on im<u>aaron@trilliumtransit.com</u>