

511 Data Exchange including an Open511 Protocol

Toll Data

February 5, 2020



METROPOLITAN
TRANSPORTATION
COMMISSION

Table of Contents

1	Overview	5
2	Toll Data APIs	6
2.1	API: Toll Program.....	6
3	Appendix A: API Response Messages- XML.....	18
3.1	Toll Program XML	18
4	Appendix B: API Response Messages- JSON	35
4.1	Toll Program JSON.....	35

List of Tables

A.1.1 Example Toll Program Response (XML).....	18
B.1.1 Example Toll Program Response (JSON).....	35

Document History

Description	Version	Date
Initial Draft	0.1	04/13/17
Updated based on MTC's comment	0.2	06/21/17
Added order to toll-destination and defined values for toll-sign-status	0.3	07/06/17
Added JSON response sample and finalized document	0.4	05/15/18
Updated URL and response sample	0.5	02/05/20

1 Overview

This document focuses on data exchange APIs for the Toll data. For a complete overview of 511 Data Exchange, please refer to *Open 511 Data Exchange Specifications – Overview* document. The overview document covers:

- General information about 511 Data Exchange
- Different protocols and data feeds available through Open 511 APIs
- Standard Discovery API specifications.
- Encodings and Protocols along with reference to standard documentation.
- Technical Guidelines

It is highly recommended that all users of Open 511 Data Exchange review the information in the overview document.

2 Toll Data APIs

The Toll Data consists of a single resource - the Toll Program. The Toll Program resource provides configuration and toll rate data on all the Toll Signs contained within the Toll Program.

Open511 provides message structure and API endpoint for accessing these resources. Open511 will also provide metadata/lookup information that can be used by consumers to filter and limit information during requests.

2.1 API: Toll Program

The Toll Program resource provides information about various toll programs within a jurisdiction. The Toll Program includes details of all the Toll Signs that the program supports. Consumers can request information on all the available programs or they can use additional filters such as a program authority, toll sign id or geography to restrict the results as per their needs and use case.

The Toll-Program structure is the main element of the Toll-Programs collection. Below is a message structure of Toll-Program.

Field	Type	Mandatory/ Optional	Description
self	Link	<i>Mandatory</i>	Self link to the current resource
Jurisdiction	Link	<i>Mandatory</i>	Link to the jurisdiction publishing the Toll Program
Id	String	<i>Mandatory</i>	A unique ID for the Toll Program, following the format jurisdiction-id/toll-program-id. For example, 511.org/8c3f2.
Toll-authority-info	Container	<i>Mandatory</i>	Container for Toll Authority information
—Toll-authority	String	<i>Mandatory</i>	Name of the toll authority. For example, 'Bay Area Toll Authority (BATA)'
—Toll-program-name	String	<i>Mandatory</i>	Name of toll program. A toll authority may have more than one toll program, but each toll program will have its own toll program resource. A toll program essentially identifies a toll corridor or facility. For example, 'I-680 South from Concord to Dublin' or 'Golden Gate Bridge.'
General-toll-info	Container	<i>Optional</i>	Contains rules that apply globally to all toll signs within the toll program
Toll-signs	Collection	<i>Mandatory</i>	Collection of toll signs within the toll program

General-toll-info structure

The General-toll-info structure provides rules that apply globally to all toll signs within the toll program.

Field	Type	Mandatory/ Optional	Description
tolled-vehicles	Collection	<i>Optional</i>	<p>The vehicle types that are required to pay toll. The tolled-vehicles element indicates the vehicle types that will be charged a toll. The tolled vehicles specified under the general-toll-info element are applied to all toll rates within a program. The tolled vehicles specified under toll-rate take precedence over tolled vehicles provided under the general-toll-info element. When this element is included, the element must have at least one vehicle type specified under it.</p>
—vehicle-type	Enum	<i>Optional</i>	<p>Vehicle type. Value list:</p> <ul style="list-style-type: none"> AV: All Vehicles SOV: Single Occupancy Vehicles HOV2: HOV 2+: High Occupancy Vehicles, 2 or more people HOV2OC: HOV 2 for vehicles that have maximum of 2 seats. HOV3: HOV 3+: High Occupancy Vehicles, 3 or more people HOV4: HOV 4+: High Occupancy Vehicles, 4 or more people HYBCARS: Hybrid Cars MOTORBIKE: Motor bikes BUS: Bus/Buses VANPOOL: Vanpools LOWEV: Low Emission Vehicles HIGHEV: High Emission Vehicles TRAILER: Trailers AXLE2: 2-Axle Vehicles AXLE3: 3-Axle Vehicles AXLE4: 4-Axle Vehicles AXLE5: 5-Axle Vehicles AXLE6: 6-Axle Vehicles MULTIAXLE: Multi-Axle Vehicles VEHCLASS1: Vehicle Class 1 VEHCLASS2: Vehicle Class 2 VEHCLASS3: Vehicle Class 3 VEHCLASS4: Vehicle Class 4 VEHCLASS5: Vehicle Class 5 VEHCLASS6: Vehicle Class 6 VEHCLASS7: Vehicle Class 7 VEHCLASS8: Vehicle Class 8 VEHCLASS9: Vehicle Class 9 VEHCLASS10: Vehicle Class 10 VEHCLASS11: Vehicle Class 11 VEHCLASS12: Vehicle Class 12 VEHCLASS13: Vehicle Class 13

tolling-methods	Collection	<i>Optional</i>	<p>This element provides the list of tolling methods for this toll program. A tolling method is a means by which the toll is collected. Example of tolling methods are “FasTrak,” “Pay by Plate,” and “Toll Booth.”</p> <p>The tolling methods provided in this element are considered to be the only tolling methods applicable for this toll program. When this element is included, the element must have at least one tolling methods specified under it.</p> <p>The tolling methods specified under toll-rate take precedence over tolling methods provided under the <u>general-toll-info</u> element.</p>
—tolling-method	Enum	<i>Optional</i>	<p>Tolling method. Value list:</p> <p>CASH: Cash PAYBYPLATE: Pay by (License) Plate FASTRAK: FasTrak TOLLBOOTH: Toll Booth</p>
Payment-options	Collection	<i>Optional</i>	<p>This element provides the list of payment options that are applicable for this toll program. A payment option represents a mode of payment. Examples of payment options are “invoice,” “cash”, “credit cards”, etc.</p> <p>The payment-options provided in this element are considered to be the only payment options applicable for this toll program.</p> <p>The payment options specified under toll-rate take precedence over payment options provided under the <u>general-toll-info</u> element.</p>
—payment-option	Enum	<i>Optional</i>	<p>Payment option. Value list:</p> <p>CASH: Cash CC: Credit Card FASTRAK: FasTrak INVOICE: Invoice PREPAID: Pre-Paid</p>
Minimum-toll	Decimal	<i>Optional</i>	Minimum toll rate that applies across all tolls in the toll program.
Maximum-toll	Decimal	<i>Optional</i>	Maximum toll rate that applies across all tolls in the toll program.
Toll-currency	String	<i>Optional</i>	This element specifies the toll currency type. The value is specified in ISO 4217 based on a three-Letter currency code. For example, USD (US Dollars).
Toll-exemptions	Collection	<i>Optional</i>	<p>The toll-exemptions element specifies the vehicle types and lanes or contains general information about the toll where it is exempted.</p> <p>This list can be omitted if there are no exemptions. When the list is included, there must be at least one toll exemption provided.</p> <p>The toll exemptions specified under toll-rate take precedence over toll restrictions provided under the <u>general-toll-info</u> element</p>
—vehicle-type	Enum	<i>Optional</i>	Specifies the types and classes of vehicles that are exempted from providing any toll. Value list:

			<p>AV: All Vehicles SOV: Single Occupancy Vehicles HOV2: HOV 2+: High Occupancy Vehicles, 2 or more people HOV2OC: HOV 2 for vehicles that have maximum of 2 seats. HOV3: HOV 3+: High Occupancy Vehicles, 3 or more people HOV4: HOV 4+: High Occupancy Vehicles, 4 or more people HYBCARS: Hybrid Cars MOTORBIKE: Motor bikes BUS: Bus/Buses VANPOOL: Vanpools LOWEV: Low Emission Vehicles HIGHEV: High Emission Vehicles TRAILER: Trailers AXLE2: 2-Axle Vehicles AXLE3: 3-Axle Vehicles AXLE4: 4-Axle Vehicles AXLE5: 5-Axle Vehicles AXLE6: 6-Axle Vehicles MULTIAXLE: Multi-Axle Vehicles VEHCLASS1: Vehicle Class 1 VEHCLASS2: Vehicle Class 2 VEHCLASS3: Vehicle Class 3 VEHCLASS4: Vehicle Class 4 VEHCLASS5: Vehicle Class 5 VEHCLASS6: Vehicle Class 6 VEHCLASS7: Vehicle Class 7 VEHCLASS8: Vehicle Class 8 VEHCLASS9: Vehicle Class 9 VEHCLASS10: Vehicle Class 10 VEHCLASS11: Vehicle Class 11 VEHCLASS12: Vehicle Class 12 VEHCLASS13: Vehicle Class 13</p>
—lane-type	Enum	<i>Optional</i>	<p>Specifies the toll lanes that are exempted from collecting any toll. Value list: ALL: All Lanes LEFTLANE: Left Lane LEFTLANE2: Two left lanes LEFTLANE3: Three left lanes MIDDLELANE: Middle Lane MIDDLELANE2: Two middle lanes MIDDLELANE3: Three middle lanes RIGHTLANE: Right lane RIGHTLANE2: Two Right Lanes RIGHTLANE3: Three Right Lanes CARPOOLLANE: Carpool lanes</p>
—general	String	<i>Optional</i>	<p>Specifies any general information about the tolls where tolls are exempted. This is free-form text field.</p>
Toll-restrictions	Collection	<i>Optional</i>	<p>The toll-restrictions specify the vehicle types that are restricted from toll lanes, toll lanes that are restricted</p>

			<p>from any particular type of toll traffic and any other general toll restriction information. This list can be omitted if there are no restrictions. When the list is included, there must be at least one toll restriction provided. The toll restrictions specified under toll-rate take precedence over toll restrictions provided under the general-toll-info element.</p>
—vehicle-type	Enum	<i>Optional</i>	<p>Vehicle type for the restriction. Value list:</p> <p>AV: All Vehicles SOV: Single Occupancy Vehicles HOV2: HOV 2+: High Occupancy Vehicles, 2 or more people HOV2OC: HOV 2 for vehicles that have maximum of 2 seats. HOV3: HOV 3+: High Occupancy Vehicles, 3 or more people HOV4: HOV 4+: High Occupancy Vehicles, 4 or more people HYBCARS: Hybrid Cars MOTORBIKE: Motor bikes BUS: Bus/Buses VANPOOL: Vanpools LOWEV: Low Emission Vehicles HIGHEV: High Emission Vehicles TRAILER: Trailers AXLE2: 2-Axle Vehicles AXLE3: 3-Axle Vehicles AXLE4: 4-Axle Vehicles AXLE5: 5-Axle Vehicles AXLE6: 6-Axle Vehicles MULTIAXLE: Multi-Axle Vehicles VEHCLASS1: Vehicle Class 1 VEHCLASS2: Vehicle Class 2 VEHCLASS3: Vehicle Class 3 VEHCLASS4: Vehicle Class 4 VEHCLASS5: Vehicle Class 5 VEHCLASS6: Vehicle Class 6 VEHCLASS7: Vehicle Class 7 VEHCLASS8: Vehicle Class 8 VEHCLASS9: Vehicle Class 9 VEHCLASS10: Vehicle Class 10 VEHCLASS11: Vehicle Class 11 VEHCLASS12: Vehicle Class 12 VEHCLASS13: Vehicle Class 13</p>
—lane-type	Enum	<i>Optional</i>	<p>Lane Type for the restriction. Value list:</p> <p>ALL: All Lanes LEFTLANE: Left Lane LEFTLANE2: Two left lanes LEFTLANE3: Three left lanes MIDDLELANE: Middle Lane MIDDLELANE2: Two middle lanes MIDDLELANE3: Three middle lanes</p>

			RIGHTLANE: Right lane RIGHTLANE2: Two Right Lanes RIGHTLANE3: Three Right Lanes CARPOOLLANE: Carpool lanes
—general	String	<i>Optional</i>	General restriction. This is a free-form text field.

Toll-sign structure

The Toll-sign structure provides information on the individual toll signs supported by the toll program.

Field	Type	Mandatory/ Optional	Description
Id	String	<i>Mandatory</i>	Unique ID for the toll sign within a toll program.
geography	Geospatial (http://www.open511.org/documentation/1.0/guidelines.html#geospatial)	<i>Mandatory</i>	Geographical coordinates for this toll sign which is represented by standard EPSG:4326 (latitude/longitude) spatial reference system. For XMLoutput a subset of GML v3 will be used. For JSON, this will be present using GeoJSON.
Name	String	<i>Optional</i>	Name for the toll sign.
Toll-sign-status	Enum	<i>Optional</i>	The sign status represents whether the toll sign is currently operational (live) or not. Possible value range is 1-4. 1 = operational 2 = offline 3 = failed 4 = unknown
Description	String	<i>Optional</i>	Toll sign description
toll-sign-image-link	String	<i>Optional</i>	URL to actual toll sign image.
raw-sign-message	Collection	<i>Optional</i>	Collection of the raw text message lines in sequential order as it appears on the toll sign from top to bottom. This is to help replicate the exact sign content in a display.
—message-line	String	<i>Optional</i>	Text in one line of the raw sign message from top to bottom. First message-line provides the content of the first line on the sign, second message-line provides the content of the second line on the sign, etc.
additional-info	Collection	<i>Optional</i>	Collection of additional information as it appears on the actual sign.
—info	String	<i>Optional</i>	One informational line. This line can also include references and links.
Toll-destinations	Collection	<i>Mandatory</i>	Collection of toll destinations that are part of this toll sign

Toll-destination structure

The Toll-destination structure provides information on the individual toll destinations within a toll sign.

Field	Type	Mandatory/ Optional	Description
Id	String	<i>Mandatory</i>	Unique ID for the toll destination under a toll program.
Name	String	<i>Mandatory</i>	Name for the toll destination.
Description	String	<i>Optional</i>	Additional details about the toll destination
destination-type	Enum	<i>Optional</i>	Type of destination. Values are: Tunnel Bridge Freeway
additional-info	Collection	<i>Optional</i>	Collection of additional information as it appears on the actual sign for this destination.
—info	String	<i>Optional</i>	One informational line. This line can also include references and links.
Travel-time	Integer	<i>Optional</i>	Travel time (in minutes) from the toll-sign location to the toll destination.
Toll-rates	Collection	<i>Mandatory</i>	One or more toll-rate structures that provide toll rates and additional exemptions, restrictions and schedule that may apply to the toll rate.
Order	Integer	<i>Mandatory</i>	Sequence/order number of the toll destination, along direction of travel. The order number shall begin with 1 for the first toll destination and should be incremented by 1 for subsequent destinations within a sign.

Toll-rate structure

The Toll-rate structure provides toll rates and additional exemptions, restrictions and schedule that may apply to the toll rate.

Field	Type	Mandatory/ Optional	Description
Toll-price	Decimal	<i>Mandatory</i>	The toll price for this current sign for the specified destination. The price is specified in a decimal format without currency information or a symbol, such as “2.00”, “1.35”. When there is no toll is applicable, the toll price is specified as “0”.
Last-updated	DateTime (UTC)	<i>Mandatory</i>	Specifies when the toll price was last updated.
Toll-periods	Collection	<i>Optional</i>	This element provides the list of toll periods for which the toll rate is applicable. Toll periods are toll schedule definitions based on times of day and days of week.
—toll-period	Container	<i>Mandatory</i>	A toll period is defined by a combination of times of the day and day(s) of the week. This is particularly useful where the toll information changes during

			different times of day and/or different days of the week.
—id	String	<i>Mandatory</i>	Unique identifier for the toll period within a toll program.
—start-time	Time	<i>Mandatory</i>	Start time of the toll-period as HH:mm (For example, 16:00)
—end-time	Time	<i>Mandatory</i>	End time of the toll-period as HH:mm (For example, 19:00)
—days-of-week	String	<i>Mandatory</i>	Free text that specifies the days of the week. (For example, Monday to Friday, All days, Daily)
tolled-vehicles	Collection	<i>Optional</i>	The vehicle types for which this toll rate is applicable. The tolled-vehicles element indicates the vehicle types that will be charged a toll. The tolled vehicles specified under toll-rate take precedence over tolled vehicles provided under the general-toll-info element. When this element is included, the element must have at least one vehicle type specified under it.
—vehicle-type	Enum	<i>Optional</i>	Vehicle type. Value list: AV: All Vehicles SOV: Single Occupancy Vehicles HOV2: HOV 2+: High Occupancy Vehicles, 2 or more people HOV2OC: HOV 2 for vehicles that have maximum of 2 seats. HOV3: HOV 3+: High Occupancy Vehicles, 3 or more people HOV4: HOV 4+: High Occupancy Vehicles, 4 or more people HYBCARS: Hybrid Cars MOTORBIKE: Motor bikes BUS: Bus/Buses VANPOOL: Vanpools LOWEV: Low Emission Vehicles HIGHEV: High Emission Vehicles TRAILER: Trailers AXLE2: 2-Axle Vehicles AXLE3: 3-Axle Vehicles AXLE4: 4-Axle Vehicles AXLE5: 5-Axle Vehicles AXLE6: 6-Axle Vehicles MULTIAXLE: Multi-Axle Vehicles VEHCLASS1: Vehicle Class 1 VEHCLASS2: Vehicle Class 2 VEHCLASS3: Vehicle Class 3 VEHCLASS4: Vehicle Class 4 VEHCLASS5: Vehicle Class 5 VEHCLASS6: Vehicle Class 6 VEHCLASS7: Vehicle Class 7 VEHCLASS8: Vehicle Class 8 VEHCLASS9: Vehicle Class 9 VEHCLASS10: Vehicle Class 10 VEHCLASS11: Vehicle Class 11 VEHCLASS12: Vehicle Class 12 VEHCLASS13: Vehicle Class 13

tolling-methods	Collection	<i>Optional</i>	The list of tolling methods that are applicable to this toll rate. A tolling method is a means by which the toll is collected. Example of tolling methods are “FasTrak,” “Pay by Plate,” and “Toll Booth.” When this element is included, the element must have at least one tolling methods specified under it. The tolling methods specified under toll-rate take precedence over tolling methods provided under the general-toll-info element.
—tolling-method	Enum	<i>Optional</i>	Tolling method. Value list: CASH: Cash PAYBYPLATE: Pay by (License) Plate FASTRAK: FasTrak TOLLBOOTH: Toll Booth
Payment-options	Collection	<i>Optional</i>	The list of payment options that are applicable for this toll rate. A payment option represents a mode of payment. Examples of payment options are “invoice,” “cash”, “credit cards”, etc. The payment options specified under toll-rate take precedence over payment options provided under the general-toll-info element.
—payment-option	Enum	<i>Optional</i>	Payment option. Value list: CASH: Cash CC: Credit Card FASTRAK: FasTrak INVOICE: Invoice PREPAID: Pre-Paid
Toll-exemptions	Collection		The toll-exemptions element specifies the vehicle types and lanes or contains general information about where this toll rate is exempted. This list will be omitted if there are no exemptions. When the list is included, there must be at least one toll exemption provided. The toll exemptions specified under toll-rate take precedence over toll restrictions provided under the general-toll-info element
—vehicle-type	Enum	<i>Optional</i>	Specifies the types and classes of vehicles that are exempted from providing the toll. Value list: AV: All Vehicles SOV: Single Occupancy Vehicles HOV2: HOV 2+: High Occupancy Vehicles, 2 or more people HOV2OC: HOV 2 for vehicles that have maximum of 2 seats. HOV3: HOV 3+: High Occupancy Vehicles, 3 or more people HOV4: HOV 4+: High Occupancy Vehicles, 4 or more people HYBCARS: Hybrid Cars MOTORBIKE: Motor bikes BUS: Bus/Buses VANPOOL: Vanpools LOWEV: Low Emission Vehicles

			<p>HIGHEV: High Emission Vehicles TRAILER: Trailers AXLE2: 2-Axle Vehicles AXLE3: 3-Axle Vehicles AXLE4: 4-Axle Vehicles AXLE5: 5-Axle Vehicles AXLE6: 6-Axle Vehicles MULTIAXLE: Multi-Axle Vehicles VEHCLASS1: Vehicle Class 1 VEHCLASS2: Vehicle Class 2 VEHCLASS3: Vehicle Class 3 VEHCLASS4: Vehicle Class 4 VEHCLASS5: Vehicle Class 5 VEHCLASS6: Vehicle Class 6 VEHCLASS7: Vehicle Class 7 VEHCLASS8: Vehicle Class 8 VEHCLASS9: Vehicle Class 9 VEHCLASS10: Vehicle Class 10 VEHCLASS11: Vehicle Class 11 VEHCLASS12: Vehicle Class 12 VEHCLASS13: Vehicle Class 13</p>
—lane-type	Enum	<i>Optional</i>	<p>Specifies the toll lanes that are exempted from collecting the toll. Value list: ALL: All Lanes LEFTLANE: Left Lane LEFTLANE2: Two left lanes LEFTLANE3: Three left lanes MIDDLELANE: Middle Lane MIDDLELANE2: Two middle lanes MIDDLELANE3: Three middle lanes RIGHTLANE: Right lane RIGHTLANE2: Two Right Lanes RIGHTLANE3: Three Right Lanes CARPOOLLANE: Carpool lanes</p>
—general	String	<i>Optional</i>	<p>Specifies any general information about the toll rate where the toll is exempted. This is free-form text field.</p>
Toll-restrictions	Collection	<i>Optional</i>	<p>The toll-restrictions specify the vehicle types that are restricted from toll lanes, toll lanes that are restricted from any particular type of toll traffic and any other general toll restriction information. This list can be omitted if there are no restrictions. When the list is included, there must be at least one toll restriction provided. The toll restrictions specified under toll-rate take precedence over toll restrictions provided under the general-toll-info element.</p>
—vehicle-type	Enum	<i>Optional</i>	<p>Vehicle type for the restriction. Value list: AV: All Vehicles SOV: Single Occupancy Vehicles HOV2: HOV 2+: High Occupancy Vehicles, 2 or more people</p>

			<p>HOV2OC: HOV 2 for vehicles that have maximum of 2 seats.</p> <p>HOV3: HOV 3+: High Occupancy Vehicles, 3 or more people</p> <p>HOV4: HOV 4+: High Occupancy Vehicles, 4 or more people</p> <p>HYBCARS: Hybrid Cars</p> <p>MOTORBIKE: Motor bikes</p> <p>BUS: Bus/Buses</p> <p>VANPOOL: Vanpools</p> <p>LOWEV: Low Emission Vehicles</p> <p>HIGHEV: High Emission Vehicles</p> <p>TRAILER: Trailers</p> <p>AXLE2: 2-Axle Vehicles</p> <p>AXLE3: 3-Axle Vehicles</p> <p>AXLE4: 4-Axle Vehicles</p> <p>AXLE5: 5-Axle Vehicles</p> <p>AXLE6: 6-Axle Vehicles</p> <p>MULTIAXLE: Multi-Axle Vehicles</p> <p>VEHCLASS1: Vehicle Class 1</p> <p>VEHCLASS2: Vehicle Class 2</p> <p>VEHCLASS3: Vehicle Class 3</p> <p>VEHCLASS4: Vehicle Class 4</p> <p>VEHCLASS5: Vehicle Class 5</p> <p>VEHCLASS6: Vehicle Class 6</p> <p>VEHCLASS7: Vehicle Class 7</p> <p>VEHCLASS8: Vehicle Class 8</p> <p>VEHCLASS9: Vehicle Class 9</p> <p>VEHCLASS10: Vehicle Class 10</p> <p>VEHCLASS11: Vehicle Class 11</p> <p>VEHCLASS12: Vehicle Class 12</p> <p>VEHCLASS13: Vehicle Class 13</p>
—lane-type	Enum	<i>Optional</i>	<p>Lane Type for the restriction. Value list:</p> <p>ALL: All Lanes</p> <p>LEFTLANE: Left Lane</p> <p>LEFTLANE2: Two left lanes</p> <p>LEFTLANE3: Three left lanes</p> <p>MIDDLELANE: Middle Lane</p> <p>MIDDLELANE2: Two middle lanes</p> <p>MIDDLELANE3: Three middle lanes</p> <p>RIGHTLANE: Right lane</p> <p>RIGHTLANE2: Two Right Lanes</p> <p>RIGHTLANE3: Three Right Lanes</p> <p>CARPOOLLANE: Carpool lanes</p>
—general	String	<i>Optional</i>	General restriction. This is a free-form text field.

Sample request endpoint for operators

Request Type	GET
---------------------	-----

Request EndPoint Example	For e.g. <code>http://api.511.org/toll/programs</code>
---------------------------------	--

Parameters and Filters

Parameters and filters supported with the request are shown in the table below. The Toll Program response for XML is shown in Appendix A Section A.I.I. The Toll Program response for JSON is shown in Appendix B Section B.I.I.

Parameter	Mandatory/ Optional	Description
Format	<i>Optional</i>	The response format (json/xml) desired. If none specified, then default response would be JSON.
api_key	<i>Mandatory</i>	Unique key assigned to a user after they signup for Open511.
geography	<i>Optional</i>	Filter toll programs with toll signs around a point. The geography value should be provided as a WKT string in WGS84 latitude/longitude. Example: ...geography=POINT (-73.64 45.52). The geography must be used in conjunction with the tolerance filter.
tolerance	<i>Conditional</i>	Provide a tolerance of radius in meters around a POINT when used as filtering parameter. For example ...geography=POINT+(-73.64+45.52)&tolerance=50 would retrieve all the toll programs with toll signs within a circle of 50m radius around the selected point.
jurisdiction	<i>Optional</i>	The ID or URL of a jurisdiction, in order to show only toll programs from a given jurisdiction. Use a comma-separated list to make OR queries. Example: jurisdiction=511.org.
Toll-sign-id	<i>Conditional</i>	Returns only toll sign with the provided toll-sign-id. Use a comma-separated list to make 'OR' queries. The toll-sign-id must be used in conjunction with the Toll-program-name.
Toll-destination-id	<i>Conditional</i>	Returns only toll destination containing the provided toll-destination-id. Use a comma-separated list to make 'OR' queries. The Toll-destination-id must be used in conjunction with the Toll-program-name and toll-sign-id.

Possible Errors

Listed below are HTTP status code and message returned for certain common errors:

- 500 - Internal Server Error (System has issues processing your request)
- 401 – Unauthorized (Invalid API key)

- 404 – Not found (If an individual Toll Program resource cannot be located).

3 Appendix A: API Response Messages- XML

3.1 Toll Program XML

A.1.1 Example Toll Program Response (XML)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<open511 xmlns:gml="http://www.opengis.net/gml" xml:lang="en" xml:base="http://api.511.org"
version="v1">
  <toll-programs>
    <toll-program>
      <id>3199</id>
      <link rel="self" href="/toll/programs/511.org/3199"/>
      <link rel="jurisdiction" href="http://api.511.org/jurisdictions/511.org"/>
      <toll-authority-info>
        <toll_program-name>BAIFA</toll_program-name>
        <toll-authority>BAIFA</toll-authority>
      </toll-authority-info>
      <general-toll-info>
        <tolled-vehicles/>
        <tolling-methods/>
        <payment-options/>
        <toll-exemptions/>
        <toll-restrictions/>
        <maximum-toll>0.00</maximum-toll>
        <minimum-toll>0.00</minimum-toll>
        <toll-currency>USD</toll-currency>
      </general-toll-info>
      <toll-signs>
        <toll-sign>
          <id>5209</id>
          <geography>
            <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
              <gml:pos>37.83958899999997 -122.01657500000003</gml:pos>
            </gml:Point>
          </geography>
          <name>I-680 NB - Livorna - 5</name>
          <toll-sign-status>0</toll-sign-status>
          <description>VTMS Being Reported</description>
          <toll-sign-image-link/>
          <additional-info>
            <info/>
          </additional-info>
          <raw-sign-message>
            <message-line>ML1:6.75 ML3:FASTRAK REQUIRED</message-line>
          </raw-sign-message>
          <toll-destinations>
            <toll-destination>
              <id>4211</id>
              <name>Livorna - 6</name>
              <order>1</order>
              <description>End Of Zone</description>
              <destination-type/>
              <travel-time>0</travel-time>
              <additional-info>
                <info/>
              </additional-info>
            </toll-destination>
          </toll-destinations>
        </toll-sign>
      </toll-signs>
    </toll-program>
  </toll-programs>
</open511>
```

```

<toll-rates>
  <toll-rate>
    <toll-price>6.75</toll-price>
    <last-updated>2020-02-05T15:18:31.662875-08:00</last-updated>
    <tolled-vehicles/>
    <tolling-methods/>
    <payment-options/>
    <toll-exemptions/>
    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5103</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.752468 -121.96061699999999</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 SB - Alcosta - 4</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:0.50 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4100</id>
      <name>Alcosta - 5</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>
        <info/>
      </additional-info>
      <toll-rates>
        <toll-rate>
          <toll-price>0.50</toll-price>
          <last-updated>2020-02-05T15:18:31.678476-08:00</last-updated>
          <tolled-vehicles/>
          <tolling-methods/>
          <payment-options/>
          <toll-exemptions/>
          <toll-restrictions/>
        </toll-rate>
      </toll-rates>
    </toll-destination>
  </toll-destinations>
</toll-sign>
<toll-sign>
  <id>5104</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.760038999999999 -121.966723000000002</gml:pos>
    </gml:Point>

```

```

</geography>
<name>I-680 SB - Alcosta - 3</name>
<toll-sign-status>0</toll-sign-status>
<description>VTMS Being Reported</description>
<toll-sign-image-link/>
<additional-info>
  <info/>
</additional-info>
<raw-sign-message>
  <message-line>ML1:0.50 ML3:FASTRAK REQUIRED</message-line>
</raw-sign-message>
<toll-destinations>
  <toll-destination>
    <id>4100</id>
    <name>Alcosta - 5</name>
    <order>1</order>
    <description>End Of Zone</description>
    <destination-type/>
    <travel-time>0</travel-time>
    <additional-info>
      <info/>
    </additional-info>
  </toll-destination>
</toll-destinations>
<toll-rates>
  <toll-rate>
    <toll-price>0.50</toll-price>
    <last-updated>2020-02-05T15:18:31.694078-08:00</last-updated>
    <toll-vehicles/>
    <tolling-methods/>
    <payment-options/>
    <toll-exemptions/>
    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5105</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.781568 -121.97760399999999</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 SB - Alcosta - 1</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:0.50 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4100</id>
      <name>Alcosta - 5</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>

```

```

</info/>
</additional-info/>
<toll-rates>
  <toll-rate>
    <toll-price>0.50</toll-price>
    <last-updated>2020-02-05T15:18:31.709679-08:00</last-updated>
    <tolled-vehicles/>
    <tolling-methods/>
    <payment-options/>
    <toll-exemptions/>
    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5106</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.804625999999999 -121.990058000000005</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 SB - Crow Canyon - 8</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4105</id>
      <name>Crow Canyon - 9</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>
        <info/>
      </additional-info>
      <toll-rates>
        <toll-rate>
          <toll-price>0.50</toll-price>
          <last-updated>2020-02-05T15:18:31.725281-08:00</last-updated>
          <tolled-vehicles/>
          <tolling-methods/>
          <payment-options/>
          <toll-exemptions/>
          <toll-restrictions/>
        </toll-rate>
      </toll-rates>
    </toll-destination>
  </toll-destinations>
  <toll-destination>
    <id>4100</id>
    <name>Alcosta - 5</name>
    <order>2</order>
    <description>End Of Segment</description>
    <destination-type/>

```

```

<travel-time>0</travel-time>
<additional-info>
  <info/>
</additional-info>
<toll-rates>
  <toll-rate>
    <toll-price>1.00</toll-price>
    <last-updated>2020-02-05T15:18:31.740882-08:00</last-updated>
    <tollled-vehicles/>
    <tolling-methods/>
    <payment-options/>
    <toll-exemptions/>
    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5109</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.839275000000001 -122.016664000000006</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 SB - Crow Canyon - 5</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
<toll-destinations>
  <toll-destination>
    <id>4105</id>
    <name>Crow Canyon - 9</name>
    <order>1</order>
    <description>End Of Zone</description>
    <destination-type/>
    <travel-time>0</travel-time>
    <additional-info>
      <info/>
    </additional-info>
    <toll-rates>
      <toll-rate>
        <toll-price>0.50</toll-price>
        <last-updated>2020-02-05T15:18:31.756484-08:00</last-updated>
        <tollled-vehicles/>
        <tolling-methods/>
        <payment-options/>
        <toll-exemptions/>
        <toll-restrictions/>
      </toll-rate>
    </toll-rates>
  </toll-destination>
<toll-destination>
  <id>4100</id>
  <name>Alcosta - 5</name>
  <order>2</order>

```

```

<description>End Of Segment</description>
<destination-type/>
<travel-time>0</travel-time>
<additional-info>
  <info/>
</additional-info>
<toll-rates>
  <toll-rate>
    <toll-price>1.00</toll-price>
    <last-updated>2020-02-05T15:18:31.772085-08:00</last-updated>
    <tolled-vehicles/>
    <tolling-methods/>
    <payment-options/>
    <toll-exemptions/>
    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5205</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.792375 -121.982876000000005</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 NB - Livorna - 2</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:6.75 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4211</id>
      <name>Livorna - 6</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>
        <info/>
      </additional-info>
      <toll-rates>
        <toll-rate>
          <toll-price>6.75</toll-price>
          <last-updated>2020-02-05T15:18:31.787687-08:00</last-updated>
          <tolled-vehicles/>
          <tolling-methods/>
          <payment-options/>
          <toll-exemptions/>
          <toll-restrictions/>
        </toll-rate>
      </toll-rates>
    </toll-destination>
  </toll-destinations>
</toll-sign>

```

```

<toll-sign>
  <id>5207</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.81884000000002 -121.993073999999993</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 NB - Livorna - 3</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:6.75 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4211</id>
      <name>Livorna - 6</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>
        <info/>
      </additional-info>
      <toll-rates>
        <toll-rate>
          <toll-price>6.75</toll-price>
          <last-updated>2020-02-05T15:18:31.81889-08:00</last-updated>
          <toll-vehicles/>
          <tolling-methods/>
          <payment-options/>
          <toll-exemptions/>
          <toll-restrictions/>
        </toll-rate>
      </toll-rates>
    </toll-destination>
  </toll-destinations>
</toll-sign>
<toll-sign>
  <id>5208</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.829462999999997 -122.00028600000003</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 NB - Livorna - 4</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:6.75 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4211</id>

```

```

<name>Livorna - 6</name>
<order>1</order>
<description>End Of Zone</description>
<destination-type/>
<travel-time>0</travel-time>
<additional-info>
  <info/>
</additional-info>
<toll-rates>
  <toll-rate>
    <toll-price>6.75</toll-price>
    <last-updated>2020-02-05T15:18:31.850093-08:00</last-updated>
    <tolled-vehicles/>
    <tolling-methods/>
    <payment-options/>
    <toll-exemptions/>
    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5211</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.856923999999999 -122.03036099999999</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 NB - Livorna - 6</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:6.75 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4211</id>
      <name>Livorna - 6</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>
        <info/>
      </additional-info>
      <toll-rates>
        <toll-rate>
          <toll-price>6.75</toll-price>
          <last-updated>2020-02-05T15:18:31.881296-08:00</last-updated>
          <tolled-vehicles/>
          <tolling-methods/>
          <payment-options/>
          <toll-exemptions/>
          <toll-restrictions/>
        </toll-rate>
      </toll-rates>
    </toll-destination>
  </toll-destinations>

```

```

</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5301</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.47098600000003 -121.93000899999998</gml:pos>
    </gml:Point>
  </geography>
  <name>I-880 SB - Dixon Landing - 4</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:TEST ML3:TEST 1 - NO TOLLS</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4300</id>
      <name>Dixon Landing - 5</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>
        <info/>
      </additional-info>
      <toll-rates>
        <toll-rate>
          <toll-price>1.00</toll-price>
          <last-updated>2020-02-05T15:18:31.896897-08:00</last-updated>
          <toll-vehicles/>
          <tolling-methods/>
          <payment-options/>
          <toll-exemptions/>
          <toll-restrictions/>
        </toll-rate>
      </toll-rates>
    </toll-destination>
  </toll-destinations>
</toll-sign>
<toll-sign>
  <id>5302</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.48675200000003 -121.94082400000006</gml:pos>
    </gml:Point>
  </geography>
  <name>I-880 SB - Dixon Landing - 3</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:TEST ML3:TEST 1 - NO TOLLS</message-line>
  </raw-sign-message>
  <toll-destinations>

```

```

<toll-destination>
  <id>4300</id>
  <name>Dixon Landing - 5</name>
  <order>1</order>
  <description>End Of Zone</description>
  <destination-type/>
  <travel-time>0</travel-time>
  <additional-info>
    <info/>
  </additional-info>
  <toll-rates>
    <toll-rate>
      <toll-price>1.00</toll-price>
      <last-updated>2020-02-05T15:18:31.912499-08:00</last-updated>
      <tollled-vehicles/>
      <tolling-methods/>
      <payment-options/>
      <toll-exemptions/>
      <toll-restrictions/>
    </toll-rate>
  </toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5400</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.462535000000003 -121.925826999999998</gml:pos>
    </gml:Point>
  </geography>
  <name>I-880 NB - Auto Mall - 1</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:TEST ML2:TEST ML3:TEST 1 - NO TOLLS</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4402</id>
      <name>Auto Mall NB - 2</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>
        <info/>
      </additional-info>
      <toll-rates>
        <toll-rate>
          <toll-price>1.00</toll-price>
          <last-updated>2020-02-05T15:18:31.943702-08:00</last-updated>
          <tollled-vehicles/>
          <tolling-methods/>
          <payment-options/>
          <toll-exemptions/>
          <toll-restrictions/>
        </toll-rate>
      </toll-rates>
    </toll-destination>
  </toll-destinations>

```

```

</toll-rates>
</toll-destination>
<toll-destination>
  <id>4410</id>
  <name>Decoto/84 - 3</name>
  <order>2</order>
  <description>End Of Segment</description>
  <destination-type/>
  <travel-time>0</travel-time>
  <additional-info>
    <info/>
  </additional-info>
  <toll-rates>
    <toll-rate>
      <toll-price>1.50</toll-price>
      <last-updated>2020-02-05T15:18:31.959303-08:00</last-updated>
      <toll-vehicles/>
      <tolling-methods/>
      <payment-options/>
      <toll-exemptions/>
      <toll-restrictions/>
    </toll-rate>
  </toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5221</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.713417 -121.931557999999995</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 NB - Crow Canyon - 1</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:0.50 ML2:7.25 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4203</id>
      <name>Crow Canyon - 5</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>
        <info/>
      </additional-info>
      <toll-rates>
        <toll-rate>
          <toll-price>0.50</toll-price>
          <last-updated>2020-02-05T15:18:31.974905-08:00</last-updated>
          <toll-vehicles/>
          <tolling-methods/>
          <payment-options/>
          <toll-exemptions/>
        </toll-rate>
      </toll-rates>
    </toll-destination>
  </toll-destinations>

```

```

    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
<toll-destination>
  <id>4211</id>
  <name>Livorna - 6</name>
  <order>2</order>
  <description>End Of Segment</description>
  <destination-type/>
  <travel-time>0</travel-time>
  <additional-info>
    <info/>
  </additional-info>
  <toll-rates>
    <toll-rate>
      <toll-price>7.25</toll-price>
      <last-updated>2020-02-05T15:18:31.990506-08:00</last-updated>
      <toll-vehicles/>
      <tolling-methods/>
      <payment-options/>
      <toll-exemptions/>
      <toll-restrictions/>
    </toll-rate>
  </toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5110</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.850803999999997 -122.028783000000004</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 SB - Crow Canyon - 4</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4105</id>
      <name>Crow Canyon - 9</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>
        <info/>
      </additional-info>
      <toll-rates>
        <toll-rate>
          <toll-price>0.50</toll-price>
          <last-updated>2020-02-05T15:18:32.006108-08:00</last-updated>
          <toll-vehicles/>
          <tolling-methods/>
        </toll-rate>
      </toll-rates>
    </toll-destination>
  </toll-destinations>

```

```

        <payment-options/>
        <toll-exemptions/>
        <toll-restrictions/>
    </toll-rate>
</toll-rates>
</toll-destination>
<toll-destination>
    <id>4100</id>
    <name>Alcosta - 5</name>
    <order>2</order>
    <description>End Of Segment</description>
    <destination-type/>
    <travel-time>0</travel-time>
    <additional-info>
        <info/>
    </additional-info>
    <toll-rates>
        <toll-rate>
            <toll-price>1.00</toll-price>
            <last-updated>2020-02-05T15:18:32.021709-08:00</last-updated>
            <tolled-vehicles/>
            <tolling-methods/>
            <payment-options/>
            <toll-exemptions/>
            <toll-restrictions/>
        </toll-rate>
    </toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
    <id>5112</id>
    <geography>
        <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
            <gml:pos>37.874118000000003 -122.044492000000005</gml:pos>
        </gml:Point>
    </geography>
    <name>I-680 SB - Crow Canyon - 2</name>
    <toll-sign-status>0</toll-sign-status>
    <description>VTMS Being Reported</description>
    <toll-sign-image-link/>
    <additional-info>
        <info/>
    </additional-info>
    <raw-sign-message>
        <message-line>ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED</message-line>
    </raw-sign-message>
    <toll-destinations>
        <toll-destination>
            <id>4105</id>
            <name>Crow Canyon - 9</name>
            <order>1</order>
            <description>End Of Zone</description>
            <destination-type/>
            <travel-time>0</travel-time>
            <additional-info>
                <info/>
            </additional-info>
            <toll-rates>
                <toll-rate>
                    <toll-price>0.50</toll-price>
                    <last-updated>2020-02-05T15:18:32.037311-08:00</last-updated>
                </toll-rate>
            </toll-rates>
        </toll-destination>
    </toll-destinations>

```



```

    <toll-price>0.50</toll-price>
    <last-updated>2020-02-05T15:18:32.068514-08:00</last-updated>
    <tolled-vehicles/>
    <tolling-methods/>
    <payment-options/>
    <toll-exemptions/>
    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
<toll-destination>
  <id>4100</id>
  <name>Alcosta - 5</name>
  <order>2</order>
  <description>End Of Segment</description>
  <destination-type/>
  <travel-time>0</travel-time>
  <additional-info>
    <info/>
  </additional-info>
  <toll-rates>
    <toll-rate>
      <toll-price>1.00</toll-price>
      <last-updated>2020-02-05T15:18:32.084115-08:00</last-updated>
      <tolled-vehicles/>
      <tolling-methods/>
      <payment-options/>
      <toll-exemptions/>
      <toll-restrictions/>
    </toll-rate>
  </toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5107</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.821708999999998 -121.993415999999996</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 SB - Crow Canyon - 7</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4105</id>
      <name>Crow Canyon - 9</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>
        <info/>
      </additional-info>
    </toll-destination>
  </toll-destinations>

```

```

<toll-rates>
  <toll-rate>
    <toll-price>0.50</toll-price>
    <last-updated>2020-02-05T15:18:32.115318-08:00</last-updated>
    <tolled-vehicles/>
    <tolling-methods/>
    <payment-options/>
    <toll-exemptions/>
    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
<toll-destination>
  <id>4100</id>
  <name>Alcosta - 5</name>
  <order>2</order>
  <description>End Of Segment</description>
  <destination-type/>
  <travel-time>0</travel-time>
  <additional-info>
    <info/>
  </additional-info>
  <toll-rates>
    <toll-rate>
      <toll-price>1.00</toll-price>
      <last-updated>2020-02-05T15:18:32.13092-08:00</last-updated>
      <tolled-vehicles/>
      <tolling-methods/>
      <payment-options/>
      <toll-exemptions/>
      <toll-restrictions/>
    </toll-rate>
  </toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5202</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.748026000000003 -121.957348999999994</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 NB - Crow Canyon - 4</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:0.50 ML2:7.25 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4203</id>
      <name>Crow Canyon - 5</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>
      <travel-time>0</travel-time>
      <additional-info>

```

```

</info/>
</additional-info>
<toll-rates>
  <toll-rate>
    <toll-price>0.50</toll-price>
    <last-updated>2020-02-05T15:18:32.162123-08:00</last-updated>
    <tolled-vehicles/>
    <tolling-methods/>
    <payment-options/>
    <toll-exemptions/>
    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
<toll-destination>
  <id>4211</id>
  <name>Livorna - 6</name>
  <order>2</order>
  <description>End Of Segment</description>
  <destination-type/>
  <travel-time>0</travel-time>
  <additional-info>
    <info/>
  </additional-info>
  <toll-rates>
    <toll-rate>
      <toll-price>7.25</toll-price>
      <last-updated>2020-02-05T15:18:32.193326-08:00</last-updated>
      <tolled-vehicles/>
      <tolling-methods/>
      <payment-options/>
      <toll-exemptions/>
      <toll-restrictions/>
    </toll-rate>
  </toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
<toll-sign>
  <id>5200</id>
  <geography>
    <gml:Point srsName="urn:ogc:def:crs:EPSG::4326">
      <gml:pos>37.731665999999997 -121.946335000000005</gml:pos>
    </gml:Point>
  </geography>
  <name>I-680 NB - Crow Canyon - 2</name>
  <toll-sign-status>0</toll-sign-status>
  <description>VTMS Being Reported</description>
  <toll-sign-image-link/>
  <additional-info>
    <info/>
  </additional-info>
  <raw-sign-message>
    <message-line>ML1:0.50 ML2:7.25 ML3:FASTRAK REQUIRED</message-line>
  </raw-sign-message>
  <toll-destinations>
    <toll-destination>
      <id>4203</id>
      <name>Crow Canyon - 5</name>
      <order>1</order>
      <description>End Of Zone</description>
      <destination-type/>

```

```

<travel-time>0</travel-time>
<additional-info>
  <info/>
</additional-info>
<toll-rates>
  <toll-rate>
    <toll-price>0.50</toll-price>
    <last-updated>2020-02-05T15:18:32.208927-08:00</last-updated>
    <tolled-vehicles/>
    <tolling-methods/>
    <payment-options/>
    <toll-exemptions/>
    <toll-restrictions/>
  </toll-rate>
</toll-rates>
</toll-destination>
<toll-destination>
  <id>4211</id>
  <name>Livorna - 6</name>
  <order>2</order>
  <description>End Of Segment</description>
  <destination-type/>
  <travel-time>0</travel-time>
  <additional-info>
    <info/>
  </additional-info>
  <toll-rates>
    <toll-rate>
      <toll-price>7.25</toll-price>
      <last-updated>2020-02-05T15:18:32.224529-08:00</last-updated>
      <tolled-vehicles/>
      <tolling-methods/>
      <payment-options/>
      <toll-exemptions/>
      <toll-restrictions/>
    </toll-rate>
  </toll-rates>
</toll-destination>
</toll-destinations>
</toll-sign>
</toll-signs>
</toll-program>
</toll-programs>
<pagination>
  <offset>0</offset>
</pagination>
<link rel="self" href="/toll/programs?api_key=18044823-70f2-401c-bd8b-057c4f615f11"/>
<link rel="up" href="/"/>
</open511>

```

4 Appendix B: API Response Messages- JSON

4.1 Toll Program JSON

B.1.1 Example Toll Program Response (JSON)

```

{
  "toll-programs": [
    {
      "toll-authority-info": {
        "toll-authority": "BAIFA",
        "toll-program-name": "BAIFA"
      },
      "general-toll-info": {
        "minimum-toll": 0.0,
        "maximum-toll": 0.0,
        "toll-currency": "USD",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      },
      "toll-signs": [
        {
          "id": "5209",
          "name": "I-680 NB - Livorna - 5",
          "toll-sign-status": 0,
          "description": "VTMS Being Reported",
          "toll-sign-image-link": "",
          "additional-info": null,
          "raw-sign-message": {
            "message-line": [
              "ML1:6.75 ML3:FASTRAK REQUIRED"
            ]
          }
        },
        {
          "toll-destinations": [
            {
              "id": "4211",
              "order": 1,
              "name": "Livorna - 6",
              "description": "End Of Zone",
              "destination-type": "",
              "travel-time": 0,
              "additional-info": null,
              "toll-rates": [
                {
                  "toll-price": 6.75,
                  "last-updated": "2020-02-05T15:20:31.669613-08:00",
                  "tolled-vehicles": {},
                  "tolling-methods": {},
                  "payment-options": {},
                  "toll-exemptions": {},
                  "toll-restrictions": {}
                }
              ]
            }
          ]
        }
      ],
      {
        "id": "5103",
        "name": "I-680 SB - Alcosta - 4",
        "toll-sign-status": 0,
        "description": "VTMS Being Reported",
        "toll-sign-image-link": ""
      }
    ]
  }
}

```

```

"additional-info": null,
"raw-sign-message": {
  "message-line": [
    "ML1:0.50 ML3:FASTRAK REQUIRED"
  ]
},
"toll-destinations": [
  {
    "id": "4100",
    "order": 1,
    "name": "Alcosta - 5",
    "description": "End Of Zone",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 0.5,
        "last-updated": "2020-02-05T15:20:31.685214-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  }
],
{
  "id": "5104",
  "name": "I-680 SB - Alcosta - 3",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:0.50 ML3:FASTRAK REQUIRED"
    ]
  },
  "toll-destinations": [
    {
      "id": "4100",
      "order": 1,
      "name": "Alcosta - 5",
      "description": "End Of Zone",
      "destination-type": "",
      "travel-time": 0,
      "additional-info": null,
      "toll-rates": [
        {
          "toll-price": 0.5,
          "last-updated": "2020-02-05T15:20:31.700816-08:00",
          "tolled-vehicles": {},
          "tolling-methods": {},
          "payment-options": {},
          "toll-exemptions": {},
          "toll-restrictions": {}
        }
      ]
    }
  ]
}

```

```

    }
  ]
}
},
{
  "id": "5105",
  "name": "I-680 SB - Alcosta - 1",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:0.50 ML3:FASTRAK REQUIRED"
    ]
  },
  "toll-destinations": [
    {
      "id": "4100",
      "order": 1,
      "name": "Alcosta - 5",
      "description": "End Of Zone",
      "destination-type": "",
      "travel-time": 0,
      "additional-info": null,
      "toll-rates": [
        {
          "toll-price": 0.5,
          "last-updated": "2020-02-05T15:20:31.716417-08:00",
          "tolled-vehicles": {},
          "tolling-methods": {},
          "payment-options": {},
          "toll-exemptions": {},
          "toll-restrictions": {}
        }
      ]
    }
  ]
},
{
  "id": "5106",
  "name": "I-680 SB - Crow Canyon - 8",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED"
    ]
  },
  "toll-destinations": [
    {
      "id": "4105",
      "order": 1,
      "name": "Crow Canyon - 9",
      "description": "End Of Zone",
      "destination-type": "",

```

```

"travel-time": 0,
"additional-info": null,
"toll-rates": [
  {
    "toll-price": 0.5,
    "last-updated": "2020-02-05T15:20:31.74762-08:00",
    "tolled-vehicles": {},
    "tolling-methods": {},
    "payment-options": {},
    "toll-exemptions": {},
    "toll-restrictions": {}
  }
]
},
{
  "id": "4100",
  "order": 2,
  "name": "Alcosta - 5",
  "description": "End Of Segment",
  "destination-type": "",
  "travel-time": 0,
  "additional-info": null,
  "toll-rates": [
    {
      "toll-price": 1.0,
      "last-updated": "2020-02-05T15:20:31.74762-08:00",
      "tolled-vehicles": {},
      "tolling-methods": {},
      "payment-options": {},
      "toll-exemptions": {},
      "toll-restrictions": {}
    }
  ]
}
]
},
{
  "id": "5109",
  "name": "I-680 SB - Crow Canyon - 5",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED"
    ]
  }
},
"toll-destinations": [
  {
    "id": "4105",
    "order": 1,
    "name": "Crow Canyon - 9",
    "description": "End Of Zone",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {

```

```

        "toll-price": 0.5,
        "last-updated": "2020-02-05T15:20:31.763222-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
    }
  ]
},
{
  "id": "4100",
  "order": 2,
  "name": "Alcosta - 5",
  "description": "End Of Segment",
  "destination-type": "",
  "travel-time": 0,
  "additional-info": null,
  "toll-rates": [
    {
      "toll-price": 1.0,
      "last-updated": "2020-02-05T15:20:31.778823-08:00",
      "tolled-vehicles": {},
      "tolling-methods": {},
      "payment-options": {},
      "toll-exemptions": {},
      "toll-restrictions": {}
    }
  ]
}
],
{
  "id": "5205",
  "name": "I-680 NB - Livorna - 2",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:6.75 ML3:FASTRAK REQUIRED"
    ]
  }
},
"toll-destinations": [
  {
    "id": "4211",
    "order": 1,
    "name": "Livorna - 6",
    "description": "End Of Zone",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 6.75,
        "last-updated": "2020-02-05T15:20:31.794425-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},

```

```

        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
    }
  ]
}
],
{
  "id": "5207",
  "name": "I-680 NB - Livorna - 3",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:6.75 ML3:FASTRAK REQUIRED"
    ]
  },
  "toll-destinations": [
    {
      "id": "4211",
      "order": 1,
      "name": "Livorna - 6",
      "description": "End Of Zone",
      "destination-type": "",
      "travel-time": 0,
      "additional-info": null,
      "toll-rates": [
        {
          "toll-price": 6.75,
          "last-updated": "2020-02-05T15:20:31.810026-08:00",
          "tolled-vehicles": {},
          "tolling-methods": {},
          "payment-options": {},
          "toll-exemptions": {},
          "toll-restrictions": {}
        }
      ]
    }
  ]
},
{
  "id": "5208",
  "name": "I-680 NB - Livorna - 4",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:6.75 ML3:FASTRAK REQUIRED"
    ]
  },
  "toll-destinations": [
    {
      "id": "4211",
      "order": 1,

```

```

    "name": "Livorna - 6",
    "description": "End Of Zone",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 6.75,
        "last-updated": "2020-02-05T15:20:31.825628-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  },
  {
    "id": "5211",
    "name": "I-680 NB - Livorna - 6",
    "toll-sign-status": 0,
    "description": "VTMS Being Reported",
    "toll-sign-image-link": "",
    "additional-info": null,
    "raw-sign-message": {
      "message-line": [
        "ML1:6.75 ML3:FASTRAK REQUIRED"
      ]
    }
  },
  "toll-destinations": [
    {
      "id": "4211",
      "order": 1,
      "name": "Livorna - 6",
      "description": "End Of Zone",
      "destination-type": "",
      "travel-time": 0,
      "additional-info": null,
      "toll-rates": [
        {
          "toll-price": 6.75,
          "last-updated": "2020-02-05T15:20:31.841229-08:00",
          "tolled-vehicles": {},
          "tolling-methods": {},
          "payment-options": {},
          "toll-exemptions": {},
          "toll-restrictions": {}
        }
      ]
    }
  ]
},
{
  "id": "5301",
  "name": "I-880 SB - Dixon Landing - 4",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",

```

```

"toll-sign-image-link": "",
"additional-info": null,
"raw-sign-message": {
  "message-line": [
    "ML1:TEST ML3:TEST 1 - NO TOLLS"
  ]
},
"toll-destinations": [
  {
    "id": "4300",
    "order": 1,
    "name": "Dixon Landing - 5",
    "description": "End Of Zone",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 1.0,
        "last-updated": "2020-02-05T15:20:31.856831-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  }
],
},
{
  "id": "5302",
  "name": "I-880 SB - Dixon Landing - 3",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:TEST ML3:TEST 1 - NO TOLLS"
    ]
  },
  "toll-destinations": [
    {
      "id": "4300",
      "order": 1,
      "name": "Dixon Landing - 5",
      "description": "End Of Zone",
      "destination-type": "",
      "travel-time": 0,
      "additional-info": null,
      "toll-rates": [
        {
          "toll-price": 1.0,
          "last-updated": "2020-02-05T15:20:31.872432-08:00",
          "tolled-vehicles": {},
          "tolling-methods": {},
          "payment-options": {},
          "toll-exemptions": {},
        }
      ]
    }
  ]
}

```

```

    "toll-restrictions": {}
  }
]
},
{
  "id": "5400",
  "name": "I-880 NB - Auto Mall - 1",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:TEST ML2:TEST ML3:TEST 1 - NO TOLLS"
    ]
  },
  "toll-destinations": [
    {
      "id": "4402",
      "order": 1,
      "name": "Auto Mall NB - 2",
      "description": "End Of Zone",
      "destination-type": "",
      "travel-time": 0,
      "additional-info": null,
      "toll-rates": [
        {
          "toll-price": 1.0,
          "last-updated": "2020-02-05T15:20:31.888034-08:00",
          "tolled-vehicles": {},
          "tolling-methods": {},
          "payment-options": {},
          "toll-exemptions": {},
          "toll-restrictions": {}
        }
      ]
    },
    {
      "id": "4410",
      "order": 2,
      "name": "Decoto/84 - 3",
      "description": "End Of Segment",
      "destination-type": "",
      "travel-time": 0,
      "additional-info": null,
      "toll-rates": [
        {
          "toll-price": 1.5,
          "last-updated": "2020-02-05T15:20:31.903635-08:00",
          "tolled-vehicles": {},
          "tolling-methods": {},
          "payment-options": {},
          "toll-exemptions": {},
          "toll-restrictions": {}
        }
      ]
    }
  ]
}
}

```

```

]
},
{
  "id": "5221",
  "name": "I-680 NB - Crow Canyon - 1",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:0.50 ML2:7.25 ML3:FASTRAK REQUIRED"
    ]
  }
},
"toll-destinations": [
  {
    "id": "4203",
    "order": 1,
    "name": "Crow Canyon - 5",
    "description": "End Of Zone",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 0.5,
        "last-updated": "2020-02-05T15:20:31.919237-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  }
],
{
  "id": "4211",
  "order": 2,
  "name": "Livorna - 6",
  "description": "End Of Segment",
  "destination-type": "",
  "travel-time": 0,
  "additional-info": null,
  "toll-rates": [
    {
      "toll-price": 7.25,
      "last-updated": "2020-02-05T15:20:31.919237-08:00",
      "tolled-vehicles": {},
      "tolling-methods": {},
      "payment-options": {},
      "toll-exemptions": {},
      "toll-restrictions": {}
    }
  ]
}
],
},
{
  "id": "5110",

```

```

"name": "I-680 SB - Crow Canyon - 4",
"toll-sign-status": 0,
"description": "VTMS Being Reported",
"toll-sign-image-link": "",
"additional-info": null,
"raw-sign-message": {
  "message-line": [
    "ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED"
  ]
},
"toll-destinations": [
  {
    "id": "4105",
    "order": 1,
    "name": "Crow Canyon - 9",
    "description": "End Of Zone",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 0.5,
        "last-updated": "2020-02-05T15:20:31.934838-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  },
  {
    "id": "4100",
    "order": 2,
    "name": "Alcosta - 5",
    "description": "End Of Segment",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 1.0,
        "last-updated": "2020-02-05T15:20:31.95044-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  }
],
{
  "id": "5112",
  "name": "I-680 SB - Crow Canyon - 2",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",

```

```

"additional-info": null,
"raw-sign-message": {
  "message-line": [
    "ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED"
  ]
},
"toll-destinations": [
  {
    "id": "4105",
    "order": 1,
    "name": "Crow Canyon - 9",
    "description": "End Of Zone",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 0.5,
        "last-updated": "2020-02-05T15:20:31.966041-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  },
  {
    "id": "4100",
    "order": 2,
    "name": "Alcosta - 5",
    "description": "End Of Segment",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 1.0,
        "last-updated": "2020-02-05T15:20:31.981643-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  }
]
},
{
  "id": "5113",
  "name": "I-680 SB - Crow Canyon - 1",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED"
    ]
  }
}

```

```

    ]
  },
  "toll-destinations": [
    {
      "id": "4105",
      "order": 1,
      "name": "Crow Canyon - 9",
      "description": "End Of Zone",
      "destination-type": "",
      "travel-time": 0,
      "additional-info": null,
      "toll-rates": [
        {
          "toll-price": 0.5,
          "last-updated": "2020-02-05T15:20:31.997244-08:00",
          "tolled-vehicles": {},
          "tolling-methods": {},
          "payment-options": {},
          "toll-exemptions": {},
          "toll-restrictions": {}
        }
      ]
    }
  ],
  {
    "id": "4100",
    "order": 2,
    "name": "Alcosta - 5",
    "description": "End Of Segment",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 1.0,
        "last-updated": "2020-02-05T15:20:31.997244-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  }
],
  {
    "id": "5107",
    "name": "I-680 SB - Crow Canyon - 7",
    "toll-sign-status": 0,
    "description": "VTMS Being Reported",
    "toll-sign-image-link": "",
    "additional-info": null,
    "raw-sign-message": {
      "message-line": [
        "ML1:0.50 ML2:1.00 ML3:FASTRAK REQUIRED"
      ]
    }
  },
  "toll-destinations": [
    {

```

```

    "id": "4105",
    "order": 1,
    "name": "Crow Canyon - 9",
    "description": "End Of Zone",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 0.5,
        "last-updated": "2020-02-05T15:20:32.012846-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  },
  {
    "id": "4100",
    "order": 2,
    "name": "Alcosta - 5",
    "description": "End Of Segment",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [
      {
        "toll-price": 1.0,
        "last-updated": "2020-02-05T15:20:32.028447-08:00",
        "tolled-vehicles": {},
        "tolling-methods": {},
        "payment-options": {},
        "toll-exemptions": {},
        "toll-restrictions": {}
      }
    ]
  }
],
{
  "id": "5202",
  "name": "I-680 NB - Crow Canyon - 4",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:0.50 ML2:7.25 ML3:FASTRAK REQUIRED"
    ]
  }
},
{
  "toll-destinations": [
    {
      "id": "4203",
      "order": 1,
      "name": "Crow Canyon - 5",
      "description": "End Of Zone",

```

```

"destination-type": "",
"travel-time": 0,
"additional-info": null,
"toll-rates": [
  {
    "toll-price": 0.5,
    "last-updated": "2020-02-05T15:20:32.044049-08:00",
    "tolled-vehicles": {},
    "tolling-methods": {},
    "payment-options": {},
    "toll-exemptions": {},
    "toll-restrictions": {}
  }
]
},
{
  "id": "4211",
  "order": 2,
  "name": "Livorna - 6",
  "description": "End Of Segment",
  "destination-type": "",
  "travel-time": 0,
  "additional-info": null,
  "toll-rates": [
    {
      "toll-price": 7.25,
      "last-updated": "2020-02-05T15:20:32.044049-08:00",
      "tolled-vehicles": {},
      "tolling-methods": {},
      "payment-options": {},
      "toll-exemptions": {},
      "toll-restrictions": {}
    }
  ]
}
],
{
  "id": "5200",
  "name": "I-680 NB - Crow Canyon - 2",
  "toll-sign-status": 0,
  "description": "VTMS Being Reported",
  "toll-sign-image-link": "",
  "additional-info": null,
  "raw-sign-message": {
    "message-line": [
      "ML1:0.50 ML2:7.25 ML3:FASTRAK REQUIRED"
    ]
  }
},
"toll-destinations": [
  {
    "id": "4203",
    "order": 1,
    "name": "Crow Canyon - 5",
    "description": "End Of Zone",
    "destination-type": "",
    "travel-time": 0,
    "additional-info": null,
    "toll-rates": [

```

```

    {
      "toll-price": 0.5,
      "last-updated": "2020-02-05T15:20:32.05965-08:00",
      "tolled-vehicles": {},
      "tolling-methods": {},
      "payment-options": {},
      "toll-exemptions": {},
      "toll-restrictions": {}
    }
  ],
},
{
  "id": "4211",
  "order": 2,
  "name": "Livorna - 6",
  "description": "End Of Segment",
  "destination-type": "",
  "travel-time": 0,
  "additional-info": null,
  "toll-rates": [
    {
      "toll-price": 7.25,
      "last-updated": "2020-02-05T15:20:32.075252-08:00",
      "tolled-vehicles": {},
      "tolling-methods": {},
      "payment-options": {},
      "toll-exemptions": {},
      "toll-restrictions": {}
    }
  ]
}
]
}
],
"ProgramID": 3199,
"ProgramName": null
}
],
"pagination": {
  "offset": 0
},
"meta": {
  "url": "/toll/programs?api_key=18044823-70f2-401c-bd8b-057c4f615f11&format=json",
  "up_url": "/",
  "version": "v1"
}
}
}

```