cta Train Tracker API documentation

Introduction

CTA Train Tracker [SM] is a product currently in the beta testing phase. This document covers the arrivals API, currently under release for testing and evaluation by developers who work with CTA data.

Note that, to use this API, you must agree to our Developers License Agreement and Terms of Use. You'll also need to apply for a key.

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NOTE: *This document reflects information during normal service on the 'L'. For special Red Line South Reconstruction reroute considerations, see the supplemental documentation at:* ***http://www.transitchicago.com/developers/ttdocs/rlsdocs.aspx***

About this document

What this document covers

This document explains how to request information and what information is provided through the single arrivals API. Additional APIs may be released at a later date, and this documentation would then be updated accordingly.

What this document does not cover

This document does not cover information provided through the CTA Customer Alerts API, Google Transit Feed Specification data package nor the CTA Bus Tracker API. Visit transitchicago.com/developers for more information on these other data services from CTA.

How information gets into our system

Information in the CTA Train Tracker beta comes from data fed to CTA from its rail infrastructure (unlike buses, our current railcar fleet does not have GPS hardware). This data is then processed by software we use to monitor our rail system which also generates the predictions for train arrivals based on recent train travel times from one point to another. (The software is a product called QuicTrak®.)

Prediction data are combined with other data and polished to help present information in the most meaningful way possible.

Note: QuicTrak is a registered trademark of QEI, Inc.

Some other things you should know

This service is in beta—it may not always be available and may be changed (see DLA for complete details). Here are some notes about what you can expect from the data:

- Predictions for train arrivals are generated as trains move from one section of track to another and for estimated arrivals up to fifteen minutes beyond the train's current position.
- Predictions may be withheld in circumstances where we expect them to be inaccurate, such as during major work, reroutes or unavoidable service disruptions.

  Important tip: Use the Customer Alerts API to determine whether or not an event is affecting service and relay to your end-users when some or all predictions may be affected or unavailable due to an event that affects service.

- When no predictions are available for a station, such as because no train has yet departed a terminal, we offer up to one scheduled departure time in place of a live prediction so long as

service is scheduled. Terminal departures are always represented as a scheduled departure, as live information is not presently available until a train leaves.

- Arrival predictions are available for locations where trains pick up passengers (predictions for terminal arrivals and exit-only platforms are not presently available in the data).
- Predictions for a specific train run number are not available at this time—only for arrival/departures from stops where passengers are accepted.
- Internal testing has shown train arrival accuracy averages <±1 minute from prediction times. Average actual variance from predictions may vary as traffic conditions change.
- Unscheduled express runs (where a train runs non-stop from one point on a route to another, such as to space out service following an unavoidable delay) are not expressed in CTA Train Tracker at this time.
- The default daily transaction limit for this API is 50,000 transactions. If you need additional transactions, contact webmaster@transitchicago.com with your request. Additionally, there is DoS protection installed on our servers which may trigger a temporary "time-out" if a large number of transactions from a single IP address.

This is a beta

The entire CTA Train Tracker service is in beta—including the data that powers it, the processing and presentation of the information and means of syndication such as this API. Nothing you see here is final.

A variety of improvements to information from CTA Train Tracker are under evaluation, and some under active development. As new and better information becomes available, we may also make additions to this API or publish additional APIs for the service.

If you experience any issues or have any comments regarding this service and related policies, please contact us right away. Your feedback is extremely valuable to us!

Why we're providing this API

The hope is that, by publishing this data, it ends up in all sorts of places beyond CTA's sites and services. By having transit information in as many contexts as people might use it, we can extend our reach and help people make informed decisions which can improve people's experiences with transit.

Legal notice

By using this API, you agree to our Developer License Agreement and Terms of Use, the latest version of which is included, as of the publication date of this document, in this document's appendices.

It's important that you, the developer, understand that this service is provided on an as-is basis and without any guarantees as to availability or accuracy. You must read and agree to the full Developer Terms of Use to use this API.

A few definitions…

There are a few bits of lingo that you'll find in this document (we'll try to keep it to a minimum) that we'd like to explain first, so you know what we're talking about.

Customer Alert – An entry in our Customer Alerts database which describes a condition that can affect someone's trip on CTA; see Customer Alerts API for comprehensive alert information, including a special flag for train alerts that indicates whether or not an event may cause Train Tracker to behave less-reliably than normal.

Google Transit Feed Specification (GTFS) – This is a "common format for public transportation schedules and associated geographic information." GTFS is used by hundreds of transit agencies to feed service information to Google™. A GTFS package is generated, as needed, by transit agencies and can be distributed as a simple .zip file with several comma-delimited text files inside. You can read more about GTFS on Google Code. For consistency, the same route IDs and stop IDs are used throughout the Bus Tracker system, the Alerts system as are specified in the CTA GTFS feed (with a few special exceptions—see appendix).

Delay – In the context of this document, a delayed train is one that has not moved from one track circuit to another for an abnormally long period of time.

Terminal – A point of departure or terminus on a train route.

Arrivals API

Description

This API produces a list of arrival predictions for all platforms at a given train station in a well-formed XML document. Registration and receipt of an API key is required for use of this API.

The Follow API produces a list of arrival predictions for a given train at all subsequent stations for which that train is estimated to arrive, up to 20 minutes in the future or to the end of its trip.

Each separate prediction describes a single train, when it's expected to arrive, and various bits of information that explain where it's expected to arrive and certain attributes about the train.

Base URL

lapi.transitchicago.com/api/1.0/ttarrivals.aspx

Parameters:

Use URL query string method.

Name	Value	Description
mapid	**Numeric station identifier** (required if *stpid* not specified)	A single five-digit code to tell the server which *station* you'd like to receive predictions for. *See appendix for information about valid station codes.*
stpid	**Numeric stop identifier** (required if *mapid* not specified)	A single five-digit code to tell the server which specific *stop* (in this context, specific platform or platform side *within* a larger station) you'd like to receive predictions for. *See appendix for information about valid stop codes.*
max	**Maximum results** (optional)	The maximum number you'd like to receive (if not specified, all available results for the requested stop or station will be returned)
rt	**Route code** (optional)	Allows you to specify a single route for which you'd like results (if not specified, all available results for the requested stop or station will be returned)
key	**Alphanumeric API key** (required)	Your unique API key, assigned to you after agreeing to DLA and requesting a key be generated for you.

Response fields:

Name	Description
ctatt	Root element
./tmst	Shows time when response was generated in format: yyyyMMdd HH:mm:ss (24-hour format, time local to Chicago)
./errCd	Numeric error code *(see appendices)*
./errNm	Textual error description/message *(see appendices)*
./eta	Container element (one per individual prediction)
././staId	Numeric GTFS parent station ID which this prediction is for (five digits in 4xxxx range) (matches "mapid" specified by requestor in query)
././stpId	Numeric GTFS unique stop ID within station which this prediction is for (five digits in 3xxxx range)
././staNm	Textual proper name of parent station
././stpDe	Textual description of platform for which this prediction applies
././rn	Run number of train being predicted for
././rt	Textual, abbreviated route name of train being predicted for (matches GTFS routes)
././destSt	GTFS unique stop ID where this train is expected to ultimately end its service run (experimental and supplemental *only*—see note below)
././destNm	Friendly destination description (see note below)
././trDr	Numeric train route direction code (see appendices)
././prdt	Date-time format stamp for when the prediction was generated: yyyyMMdd HH:mm:ss (24-hour format, time local to Chicago)
././arrT	Date-time format stamp for when a train is expected to arrive/depart: yyyyMMdd HH:mm:ss (24-hour format, time local to Chicago)
././isApp	Indicates that Train Tracker is now declaring "Approaching" or "Due" on site for this train
././isSch	Boolean flag to indicate whether this is a live prediction or based on schedule in lieu of live data
././isFlt	Boolean flag to indicate whether a potential fault has been detected (see note below)
././isDly	Boolean flag to indicate whether a train is considered "delayed" in Train Tracker
././flags	Train flags (not presently in use)

Sample Request URL:

http://lapi.transitchicago.com/api/1.0/ttarrivals.aspx?key=a8456djbhf8475683jf7818bha81&mapid=40380&max=5

Remarks:

Stop IDs: Use stop information in GTFS Stops table for associated geolocation of stops listed here. For purposes of this API, use the parent station ID (4xxxx range of stop ID numbers) to specify a station.

Destination station ID #s: in `destSt` refer to the ultimate destination of a train per the information about each train that's on the move.

These destination station ID #s are only available once a train has departed (on schedule-based predictions, this element will show "0") and doesn't necessarily match with what will be indicated on a train's destination sign (particularly on routes that operate around the whole Loop).

Once a train leaves Midway, its ultimate destination station's ID is "Midway" because the train will make all stops to the Loop, go around it, and come back to Midway. This allows you to write your own logic on what to show, but we've already gone and done the work for you.

The `destNm` element is the public, friendly-name that should match the destination sign of approaching trains. For example, predictions a train heading toward the Loop on the Orange Line, using this element, will return "Loop" in a result set at Roosevelt, but that same train, even while still Loop-bound, will be listed as being to "Midway" for Harold Washington Library/State-Van Buren, because our system knows that once it gets to Library, it'll now be considered a Midway-bound train.

Calculating a number of minutes: See Appendix D for extended notes on this subject.

XML Schema

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="ctatt">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="tmst" type="xs:string" />
        <xs:element name="errCd" type="xs:unsignedByte" />
        <xs:element name="errNm" />
        <xs:element maxOccurs="unbounded" name="eta">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="staId" type="xs:unsignedShort" />
              <xs:element name="stpId" type="xs:unsignedShort" />
              <xs:element name="staNm" type="xs:string" />
              <xs:element name="stpDe" type="xs:string" />
              <xs:element name="rn" type="xs:unsignedShort" />
              <xs:element name="rt" type="xs:string" />
              <xs:element name="destSt" type="xs:unsignedShort" />
              <xs:element name="destNm" type="xs:string" />
              <xs:element name="trDr" type="xs:unsignedByte" />
              <xs:element name="prdt" type="xs:string" />
              <xs:element name="arrT" type="xs:string" />
              <xs:element name="isApp" type="xs:unsignedByte" />
              <xs:element name="isSch" type="xs:unsignedByte" />
              <xs:element name="isDly" type="xs:unsignedByte" />
              <xs:element name="isFlt" type="xs:unsignedByte" />
              <xs:element name="flags" type="xs:string" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

Example

Request:

http://lapi.transitchicago. com/api/1.0/ttarrivals.aspx?key=e3875818a4743049&max=1& mapid=40360

What this request is asking for:

A maximum of one arrival prediction result from the station with the ID #40360. It also passes the API key for authorization (required).

Response:


```xml
<?xml version="1.0" encoding="utf-8" ?>
<ctatt>
  <tmst>20110321 18:32:02</tmst>
  <errCd>0</errCd>
  <errNm />
    <eta>
      <staId>40360</staId>
      <stpId>30071</stpId>
      <staNm>Southport</staNm>
      <stpDe>Service toward Loop</stpDe>
      <rn>426</rn>
      <rt>Brn</rt>
      <destSt>31740</destSt>
      <destNm>Loop</destNm>
      <trDr>5</trDr>
      <prdt>20110321 18:31:29</prdt>
      <arrT>20110321 18:34:29</arrT>
      <isApp>0</isApp>
      <isSch>0</isSch>
      <isFlt>0</isFlt>
      <isDly>0</isDly>
      <flags/>
    </eta>
</ctatt>
```

Follow This Train API

Description

This API produces a list of arrival predictions for a given train at all subsequent stations for which that train is estimated to arrive, up to 20 minutes in the future or to the end of its trip.

Each separate prediction describes a single train, when it's expected to arrive, and various bits of information that explain where it's expected to arrive and certain attributes about the train.

Base URL

lapi.transitchicago.com/api/1.0/ttfollow.aspx

Parameters:

Use URL query string method.

Name	Value	Description
runnumber	**Train Run Number** (required)	Allows you to specify a single run number for a train for which you'd like a series of upcoming arrival estimations.
key	**Alphanumeric API key** (required)	Your unique API key, assigned to you after agreeing to DLA and requesting a key be generated for you.

Response fields:

Name	Description
ctatt	Root element
./tmst	Shows time when response was generated in format: yyyyMMdd HH:mm:ss (24-hour format, time local to Chicago)
./errCd	Numeric error code *(see appendices)*
./errNm	Textual error description/message *(see appendices)*
./eta	Container element (one per individual prediction)
./../staId	Numeric GTFS parent station ID which this prediction is for (five digits in 4xxxx range) (matches "mapid" specified by requestor in query)
./../stpId	Numeric GTFS unique stop ID within station which this prediction is for (five digits in 3xxxx range)

././staNm	Textual proper name of parent station
././stpDe	Textual description of platform for which this prediction applies
././rn	Run number of train being predicted for
././rt	Textual, abbreviated route name of train being predicted for (matches GTFS routes)
././destSt	GTFS unique stop ID where this train is expected to ultimately end its service run (experimental and supplemental *only*—see note below)
././destNm	Friendly destination description (see note below)
././trDr	Numeric train route direction code (see appendices)
././prdt	Date-time format stamp for when the prediction was generated: yyyyMMdd HH:mm:ss (24-hour format, time local to Chicago)
././arrT	Date-time format stamp for when a train is expected to arrive/depart: yyyyMMdd HH:mm:ss (24-hour format, time local to Chicago)
././isApp	Indicates that Train Tracker is now declaring "Approaching" or "Due" on site for this train
././isSch	Boolean flag to indicate whether this is a live prediction or based on schedule in lieu of live data
././isFlt	Boolean flag to indicate whether a potential fault has been detected (see note below)
././isDly	Boolean flag to indicate whether a train is considered "delayed" in Train Tracker
././flags	Train flags (not presently in use)

Sample Request URL:

http://lapi.transitchicago.com/api/1.0/ttarrivals.aspx?key=a8456djbhf8475683jf7818bha81&runnumber=426

Remarks:

Stop IDs: Use stop information in GTFS Stops table for associated geolocation of stops listed here. For purposes of this API, use the parent station ID (4xxxx range of stop ID numbers) to specify a station.

Destination station ID #s: in `destSt` refer to the ultimate destination of a train per the information about each train that's on the move.

These destination station ID #s are only available once a train has departed (on schedule-based predictions, this element will show "0") and doesn't necessarily match with what will be indicated on a train's destination sign (particularly on routes that operate around the whole Loop).

Once a train leaves Midway, its ultimate destination station's ID is "Midway" because the train will make all stops to the Loop, go around it, and come back to Midway. This allows you to write your own logic on what to show, but we've already gone and done the work for you.

The `destNm` element is the public, friendly-name that should match the destination sign of approaching trains. For example, predictions a train heading toward the Loop on the Orange Line, using this

element, will return “Loop” in a result set at Roosevelt, but that same train, even while still Loop-bound, will be listed as being to “Midway” for Harold Washington Library/State-Van Buren, because our system knows that once it gets to Library, it’ll now be considered a Midway-bound train.

Calculating a number of minutes: See Appendix D for extended notes on this subject.

XML Schema

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
    <xs:element name="ctatt">
        <xs:complexType>
            <xs:sequence>
                <xs:element name="tmst" type="xs:string" />
                <xs:element name="errCd" type="xs:unsignedByte" />
                <xs:element name="errNm" />
                <xs:element maxOccurs="unbounded" name="eta">
                    <xs:complexType>
                        <xs:sequence>
                            <xs:element name="staId" type="xs:unsignedShort" />
                            <xs:element name="stpId" type="xs:unsignedShort" />
                            <xs:element name="staNm" type="xs:string" />
                            <xs:element name="stpDe" type="xs:string" />
                            <xs:element name="rn" type="xs:unsignedByte" />
                            <xs:element name="rt" type="xs:string" />
                            <xs:element name="destSt" type="xs:unsignedShort" />
                            <xs:element name="destNm" type="xs:string" />
                            <xs:element name="trDr" type="xs:unsignedByte" />
                            <xs:element name="prdt" type="xs:string" />
                            <xs:element name="arrT" type="xs:string" />
                            <xs:element name="isApp" type="xs:unsignedByte" />
                            <xs:element name="isSch" type="xs:unsignedByte" />
                            <xs:element name="isDly" type="xs:unsignedByte" />
                            <xs:element name="isFlt" type="xs:unsignedByte" />
                            <xs:element name="flags" type="xs:string" />
                        </xs:sequence>
                    </xs:complexType>
                </xs:element>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
</xs:schema>
```

Example

Request:

http://lapi.transitchicago. com/api/1.0/ttarrivals.aspx?key=e3875818a474304& runnumber=123

What this request is asking for:

Upcoming arrivals for run 123 (a Blue Line train). It also passes the API key for authorization (required).

(For brevity, what would be a longer series of “eta” sequence element is limited to two in this example.)

Response:


```xml
<?xml version="1.0" encoding="utf-8" ?>
<ctatt>
  <tmst>20130515 14:11:17</tmst>
  <errCd>0</errCd>
  <errNm />
  <eta>
    <staId>40010</staId>
    <stpId>30001</stpId>
    <staNm>Austin</staNm>
    <stpDe>Austin to O'Hare</stpDe>
    <rn>123</rn>
    <rt>Blue Line</rt>
    <destSt>30171</destSt>
    <destNm>O'Hare</destNm>
    <trDr>1</trDr>
    <prdt>20130515 14:10:23</prdt>
    <arrT>20130515 14:11:23</arrT>
    <isApp>1</isApp>
    <isSch>0</isSch>
    <isDly>0</isDly>
    <isFlt>0</isFlt>
    <flags />
  </eta>
  <eta>
    <staId>40970</staId>
    <stpId>30187</stpId>
    <staNm>Cicero</staNm>
    <stpDe>Cicero to O'Hare</stpDe>
    <rn>123</rn>
    <rt>Blue Line</rt>
    <destSt>30171</destSt>
    <destNm>O'Hare</destNm>
    <trDr>1</trDr>
    <prdt>20130515 14:10:23</prdt>
```

```
    <arrT>20130515 14:15:23</arrT>
    <isApp>0</isApp>
    <isSch>0</isSch>
    <isDly>0</isDly>
    <isFlt>0</isFlt>
    <flags />
  </eta>
</ctatt>
```

Appendices

Appendix A: Route ID Quick Reference

CTA 'L'

'L' routes (rapid transit train services) are identified as follows:

- Red = Red Line (Howard-95th/Dan Ryan service)
- Blue = Blue Line (O'Hare-Forest Park service)
- Brn = Brown Line (Kimball-Loop service)
- G = Green Line (Harlem/Lake-Ashland/63rd-Cottage Grove service)
- Org = Orange Line (Midway-Loop service)
- P = Purple Line (Linden-Howard shuttle service)
- Pink = Pink Line (54th/Cermak-Loop service)
- Y = Yellow Line (Skokie-Howard [Skokie Swift] shuttle service)

Note: In the separate Customer Alerts API, alerts that apply specifically to the Purple Line Express (but not Purple Line Local/Shuttle service north of Howard) will use the additional route designator "Pexp". When integrating Customer Alert information into your code project, be sure to account that alerts applying to the Purple Line may have the route designator "P" or "Pexp" (or both).

Appendix B: Station IDs

Each bus or train stop on the CTA system, as you'll see if you look at the "stops" table in our Google Transit Feed Specification feed, has its own unique identifier. This helps to power trip planners such as the Google Maps transit directions capability in identifying individual locations and paths where vehicles make stops along a route in each direction.

Note, however, that in the GTFS data, most train stations have three entries in the stops table—one in each direction, with a third entry that covers the entire station facility, known as the "parent stop." We've numbered our stops differently, using the following convention:

0-29999	= Bus stops
30000-39999	= Train stops
40000-49999	= Train stations (parent stops)

The API accepts and responds with both train stop IDs and station IDs to allow you maximum flexibility in how you build your application.

More Help

A packed, quick reference stop list is available for download here:
Downloadable Quick Reference (.zip)

Example from GTFS

For example, Southport, on the Brown Line has three entries in our GTFS table (only relevant rows shown here):

```
stop_id,stop_code,stop_name,stop_lat,stop_lon,location_type,parent_station,wheelchair_boarding
30070,,"Southport",41.943744,-87.663619,0,40360,1
30071,,"Southport",41.943744,-87.663619,0,40360,1
40360,,"Southport",41.943744,-87.663619,1,,1
```

The first two represent specific stops in GTFS—one for each direction from the Southport station (toward Loop or toward Kimball).

The third entry is the associated parent station GTFS, which represents the entire station facility known as "Southport" inside of which these separate "stops" are grouped.

Note that while Southport's parent entry and individual stop entries all have the same basic attributes, this may vary in some stations for map clarity and to assist trip planners (particularly where bus stops also reference a parent station at a larger transfer facility like the transit center at Jefferson Park).

How these look in the API

In the Arrivals API, for example, responses for Southport might include either:

```
<staId>40360</staId>
<stpId>30071</stpId>
<staNm>Southport</staNm>
<stpDe>Service toward Loop</stpDe>
```

Or

```
<staId>40360</staId>
<stpId>30070</stpId>
<staNm>Southport</staNm>
<stpDe>Service toward Kimball</stpDe>
```

This allows you to reference GTFS for a variety of things, and also provides you additional descriptive information which helps you explain results to your customers, depending on how you wish to present them.

Parent Stop ID Quick Reference

This is a list of the parent stops and their associated ID# in GTFS. (Note: In addition to this quick reference, a machine readable CSV of all stops and parent stops is contained within the GTFS data, in stops.txt.)

Descriptive station name	StopID
18th	40830
35th-Bronzeville-IIT	41120
35th/Archer	40120
43rd	41270
47th (Green Line)	41080
47th (Red Line)	41230
51st	40130
54th/Cermak	40580
63rd	40910
69th	40990
79th	40240
87th	41430
95th	40450
Adams/Wabash	40680
Addison (Blue Line)	41240
Addison (Brown Line)	41440
Addison (Red Line)	41420
Argyle	41200
Armitage	40660
Ashland/63rd	40290

Ashland (Green, Pink Lines)	40170
Ashland (Orange Line)	41060
Austin (Blue Line)	40010
Austin (Green Line)	41260
Belmont (Red, Brown, Purple Lines)	41320
Belmont (Blue Line)	40060
Berwyn	40340
Bryn Mawr	41380
California (Pink Line)	40440
California (Green Line)	41360
California (Blue Line-O'Hare Branch)	40570
Central Park	40780
Central (Green Line)	40280
Central (Purple Line)	41250
Cermak-Chinatown	41000
Chicago (Blue Line)	41410
Chicago (Brown Line)	40710
Chicago (Red Line)	41450
Cicero (Pink Line)	40420
Cicero (Blue Line-Forest Park Branch)	40970
Cicero (Green Line)	40480

Clark/Division	40630
Clark/Lake	40380
Clinton (Blue Line)	40430
Clinton (Green Line)	41160
Conservatory	41670
Cumberland	40230
Damen (Brown Line)	40090
Damen (Pink Line)	40210
Damen (Blue Line-O'Hare Branch)	40590
Davis	40050
Dempster	40690
Diversey	40530
Division	40320
Cottage Grove	40720
Forest Park	40390
Foster	40520
Francisco	40870
Fullerton	41220
Garfield (Green Line)	40510
Garfield (Red Line)	41170
Grand (Blue Line)	40490
Grand (Red Line)	40330
Granville	40760
Halsted (Green Line)	40940
Halsted (Orange Line)	41130
Harlem (Blue Line-Forest Park Branch)	40980
Harlem (Green Line)	40020
Harlem (Blue Line-O'Hare Branch)	40750
Harold Washington Library-State/Van Buren	40850
Harrison	41490
Howard	40900
Illinois Medical District	40810
Indiana	40300
Irving Park (Blue Line)	40550
Irving Park (Brown Line)	41460
Jackson (Blue Line)	40070
Jackson (Red Line)	40560
Jarvis	41190
Jefferson Park	41280
Kedzie (Brown Line)	41180
Kedzie (Pink Line)	41040
Kedzie (Green Line)	41070

Kedzie-Homan (Blue Line)	40250
Kedzie (Orange Line)	41150
Kimball	41290
King Drive	41140
Kostner	40600
Lake	41660
Laramie	40700
LaSalle	41340
LaSalle/Van Buren	40160
Lawrence	40770
Linden	41050
Logan Square	41020
Loyola	41300
Madison/Wabash	40640
Main	40270
Merchandise Mart	40460
Midway	40930
Monroe (Blue Line)	40790
Monroe (Red Line)	41090
Montrose (Blue Line)	41330
Montrose (Brown Line)	41500
Morgan	41510
Morse	40100
North/Clybourn	40650
Noyes	40400
Oak Park (Blue Line)	40180
Oak Park (Green Line)	41350
Oakton	41680
O'Hare	40890
Paulina	41310
Polk	41030
Pulaski (Pink Line)	40150
Pulaski (Blue Line-Forest Park Branch)	40920
Pulaski (Green Line)	40030
Pulaski (Orange Line)	40960
Quincy/Wells	40040
Racine	40470
Randolph/Wabash	40200
Ridgeland	40610
Rockwell	41010
Roosevelt	41400
Rosemont	40820
Sedgwick	40800

Sheridan	40080
Skokie	40140
South Boulevard	40840
Southport	40360
Sox-35th	40190
State/Lake	40260
Thorndale	40880
UIC-Halsted	40350
Washington/Wells	40730
Washington (Blue Line)	40370

Wellington	41210
Western (Brown Line)	41480
Western (Pink Line)	40740
Western (Blue Line-Forest Park Branch)	40220
Western (Blue Line-O'Hare Branch)	40670
Western (Orange Line)	40310
Wilson	40540

Individual Stop IDs Quick Reference

Downloadable quick reference

In addition to the stop IDs that represent a whole station, each place where a train stops has its own identifier. You may find these relevant as well. (Note: In addition to this quick reference, a machine readable CSV of all stops and parent stops is contained within the GTFS data, in stops.txt.)

Stop_ID	Descriptive Stop Name	Normal traffic flow to:	Parent Stop_ID
30162	18th	West	40830
30161	18th	East	40830
30214	35-Bronzeville-IIT	South	41120
30213	35-Bronzeville-IIT	North	41120
30023	35th/Archer	South	40120
30022	35th/Archer	North	40120
30246	43rd	South	41270
30245	43rd	North	41270
30209	47th (Green Line)	North	41080
30210	47th (Green Line)	South	41080
30237	47th (Red Line)	North	41230
30238	47th (Red Line)	South	41230
30024	51st	North	40130
30025	51st	South	40130
30114	54th/Cermak	West	40580
30113	54th/Cermak	East	40580
30177	63rd	North	40910
30178	63rd	South	40910
30192	69th	South	40990
30191	69th	North	40990
30046	79th	North	40240
30047	79th	South	40240
30276	87th	South	41430

30275	87th	North	41430
30088	95th	North	40450
30089	95th	South	40450
30131	Adams/Wabash	North (Outer Loop)	40680
30132	Adams/Wabash	South (Inner Loop)	40680
30240	Addison (Blue Line)	South	41240
30239	Addison (Blue Line)	North	41240
30278	Addison (Brown Line)	South	41440
30277	Addison (Brown Line)	North	41440
30273	Addison (Red Line)	North	41420
30274	Addison (Red Line)	South	41420
30230	Argyle	South	41200
30229	Argyle	North	41200
30127	Armitage	North	40660
30128	Armitage	South	40660
30056	Ashland/63rd	East	40290
30057	Ashland/63rd	West	40290
30033	Ashland-Lake	West	40170
30032	Ashland-Lake	East	40170
30205	Ashland (Orange Line)	North	41060
30206	Ashland (Orange Line)	South	41060
30001	Austin (Blue Line)	East	40010
30002	Austin (Blue Line)	West	40010
30243	Austin (Green Line)	East	41260
30244	Austin (Green Line)	West	41260
30255	Belmont	North	41320
30256	Belmont	South	41320
30257	Belmont	North	41320
30258	Belmont	South	41320
30013	Belmont (Blue Line)	South	40060
30012	Belmont (Blue Line)	North	40060
30067	Berwyn	South	40340
30066	Berwyn	North	40340
30267	Bryn Mawr	North	41380
30268	Bryn Mawr	South	41380
30087	California (Pink Line)	West	40440
30086	California (Pink Line)	East	40440
30266	California (Green Line)	West	41360
30265	California (Green Line)	East	41360
30111	California (Blue Line-O'Hare Branch)	North	40570
30112	California (Blue Line-O'Hare Branch)	South	40570
30151	Central Park	East	40780
30152	Central Park	West	40780

30054	Central (Green Line)	East	40280
30055	Central (Green Line)	West	40280
30241	Central-Purple	North	41250
30242	Central-Purple	South	41250
30194	Cermak-Chinatown	South	41000
30193	Cermak-Chinatown	North	41000
30271	Chicago (Blue Line)	North	41410
30272	Chicago (Blue Line)	South	41410
30137	Chicago (Brown Line)	North	40710
30138	Chicago (Brown Line)	South	40710
30280	Chicago (Red Line)	South	41450
30279	Chicago (Red Line)	North	41450
30082	Cicero (Pink Line)	East	40420
30083	Cicero (Pink Line)	West	40420
30188	Cicero-Forest Park	West	40970
30187	Cicero-Forest Park	East	40970
30009	Cicero (Green Line)	West	40480
30094	Cicero (Green Line)	East	40480
30122	Clark/Division	South	40630
30121	Clark/Division	North	40630
30074	Clark/Lake (Elevated)	East (Inner Loop)	40380
30075	Clark/Lake (Elevated)	West (Outer Loop)	40380
30375	Clark/Lake (Subway)	North	40380
30374	Clark/Lake (Subway)	South	40380
30084	Clinton (Blue Line)	East	40430
30085	Clinton (Blue Line)	West	40430
30221	Clinton (Green Line)	East	41160
30222	Clinton (Green Line)	West	41160
30291	Conservatory	East	41670
30292	Conservatory	West	41670
30045	Cumberland	South	40230
30044	Cumberland	North	40230
30018	Damen (Brown Line)	North	40090
30019	Damen (Brown Line)	South	40090
30040	Damen (Pink Line)	East	40210
30041	Damen (Pink Line)	West	40210
30116	Damen (Blue Line-O'Hare Branch)	South	40590
30115	Damen (Blue Line-O'Hare Branch)	North	40590
30010	Davis	North	40050
30011	Davis	South	40050
30134	Dempster	South	40690
30133	Dempster	North	40690
30103	Diversey	North	40530

30104	Diversey	South	40530
30062	Division	North	40320
30063	Division	South	40320
30139	East 63rd-Cottage Grove	East	40720
30140	East 63rd-Cottage Grove	West	40720
30077	Forest Park	West	40390
30076	Forest Park	East	40390
30101	Foster	North	40520
30102	Foster	South	40520
30168	Francisco	South	40870
30167	Francisco	North	40870
30233	Fullerton	North	41220
30236	Fullerton	South	41220
30235	Fullerton	North	41220
30234	Fullerton	South	41220
30099	Garfield (Green Line)	North	40510
30100	Garfield (Green Line)	South	40510
30223	Garfield (Red Line)	North	41170
30224	Garfield (Red Line)	South	41170
30096	Grand (Blue Line)	South	40490
30095	Grand (Blue Line)	North	40490
30064	Grand (Red Line)	North	40330
30065	Grand (Red Line)	South	40330
30148	Granville	South	40760
30147	Granville	North	40760
30184	Halsted (Green Line)	West	40940
30183	Halsted (Green Line)	East	40940
30215	Halsted (Orange Line)	North	41130
30216	Halsted (Orange Line)	South	41130
30189	Harlem-Forest Park	East	40980
30190	Harlem-Forest Park	West	40980
30004	Harlem (Green Line)	West	40020
30003	Harlem (Green Line)	East	40020
30145	Harlem (Blue Line-O'Hare Branch)	North	40750
30146	Harlem (Blue Line-O'Hare Branch)	South	40750
30165	Harold Washington Library-State/Van Buren	East (Outer Loop)	40850
30166	Harold Washington Library-State/Van Buren	West (Inner Loop)	40850
30285	Harrison	North	41490
30286	Harrison	South	41490
30176	Howard	South	40900
30175	Howard	North	40900
30173	Howard	North	40900
30174	Howard	South	40900

30158	Illinois Medical District	West	40810
30157	Illinois Medical District	East	40810
30059	Indiana	South	40300
30058	Indiana	North	40300
30107	Irving Park (Blue Line)	North	40550
30108	Irving Park (Blue Line)	South	40550
30282	Irving Park (Brown Line)	South	41460
30281	Irving Park (Brown Line)	North	41460
30015	Jackson (Blue Line)	South	40070
30014	Jackson (Blue Line)	North	40070
30110	Jackson (Red Line)	South	40560
30109	Jackson (Red Line)	North	40560
30228	Jarvis	South	41190
30227	Jarvis	North	41190
30248	Jefferson Park	South	41280
30247	Jefferson Park	North	41280
30225	Kedzie (Brown Line)	North	41180
30226	Kedzie (Brown Line)	South	41180
30201	Kedzie (Pink Line)	East	41040
30202	Kedzie (Pink Line)	West	41040
30208	Kedzie (Green Line)	West	41070
30207	Kedzie (Green Line)	East	41070
30048	Kedzie-Homan	East	40250
30049	Kedzie-Homan	West	40250
30219	Kedzie (Orange Line)	North	41150
30220	Kedzie (Orange Line)	South	41150
30249	Kimball	North	41290
30250	Kimball	South	41290
30217	King Drive	East	41140
30218	King Drive	West	41140
30117	Kostner	East	40600
30118	Kostner	West	40600
30289	Lake	North	41660
30290	Lake	South	41660
30136	Laramie	West	40700
30135	Laramie	East	40700
30261	LaSalle	East	41340
30262	LaSalle	West	41340
30031	LaSalle/Van Buren	West (Inner Loop)	40160
30030	LaSalle/Van Buren	East (Outer Loop)	40160
30150	Lawrence	South	40770
30149	Lawrence	North	40770
30204	Linden	South	41050

30203	Linden	North	41050
30197	Logan Square	North	41020
30198	Logan Square	South	41020
30251	Loyola	North	41300
30252	Loyola	South	41300
30124	Madison/Wabash	South (Inner Loop)	40640
30123	Madison/Wabash	North (Outer Loop)	40640
30052	Main	North	40270
30053	Main	South	40270
30090	Merchandise Mart	North	40460
30091	Merchandise Mart	South	40460
30182	Midway	South	40930
30181	Midway	North	40930
30153	Monroe (Blue Line)	North	40790
30154	Monroe (Blue Line)	South	40790
30212	Monroe (Red Line)	South	41090
30211	Monroe (Red Line)	North	41090
30259	Montrose (Blue Line)	North	41330
30260	Montrose (Blue Line)	South	41330
30288	Montrose (Brown Line)	South	41500
30287	Montrose (Brown Line)	North	41500
30296	Morgan (Green & Pink Lines)	West	41510
30295	Morgan (Green & Pink Lines)	East	41510
30021	Morse	South	40100
30020	Morse	North	40100
30126	North/Clybourn	South	40650
30125	North/Clybourn	North	40650
30078	Noyes	North	40400
30079	Noyes	South	40400
30034	Oak Park (Blue Line)	East	40180
30035	Oak Park (Blue Line)	West	40180
30263	Oak Park (Green Line)	East	41350
30264	Oak Park (Green Line)	West	41350
30297	Oakton	North	41680
30298	Oakton	South	41680
30172	O'Hare	South	40890
30171	O'Hare	North	40890
30254	Paulina	South	41310
30253	Paulina	North	41310
30200	Polk	West	41030
30199	Polk	East	41030
30029	Pulaski (Pink Line)	West	40150
30028	Pulaski (Pink Line)	East	40150

30180	Pulaski (Blue Line-Forest Park Branch)	West	40920
30179	Pulaski (Blue Line-Forest Park Branch)	East	40920
30005	Pulaski (Green Line)	East	40030
30006	Pulaski (Green Line)	West	40030
30186	Pulaski (Orange Line)	South	40960
30185	Pulaski (Orange Line)	North	40960
30008	Quincy/Wells	South (Outer Loop)	40040
30007	Quincy/Wells	North (Inner Loop)	40040
30092	Racine	East	40470
30093	Racine	West	40470
30038	Randolph/Wabash	North (Outer Loop)	40200
30039	Randolph/Wabash	South (Inner Loop)	40200
30120	Ridgeland	West	40610
30119	Ridgeland	East	40610
30196	Rockwell	South	41010
30195	Rockwell	North	41010
30080	Roosevelt (Elevated)	North	41400
30081	Roosevelt (Elevated)	South	41400
30270	Roosevelt (Subway)	South	41400
30269	Roosevelt (Subway)	North	41400
30159	Rosemont	North	40820
30160	Rosemont	South	40820
30156	Sedgwick	South	40800
30155	Sedgwick	North	40800
30017	Sheridan	South	40080
30016	Sheridan	North	40080
30293	Sheridan	North	40080
30294	Sheridan	South	40080
30026	Skokie	North	40140
30027	Skokie	South	40140
30164	South Boulevard	South	40840
30163	South Boulevard	North	40840
30071	Southport	South	40360
30070	Southport	North	40360
30037	Sox-35th	South	40190
30036	Sox-35th	North	40190
30051	State/Lake	West (Outer Loop)	40260
30050	State/Lake	East (Inner Loop)	40260
30169	Thorndale	North	40880
30170	Thorndale	South	40880
30069	UIC-Halsted	West	40350
30068	UIC-Halsted	East	40350
30141	Washington/Wells	North (Inner Loop)	40730

30142	Washington/Wells	South (Outer Loop)	40730
30073	Washington (Blue Line)	South	40370
30072	Washington (Blue Line)	North	40370
30098	Washington (Red Line)	South	40500
30097	Washington (Red Line)	North	40500
30232	Wellington	South	41210
30231	Wellington	North	41210
30283	Western (Brown Line)	North	41480
30284	Western (Brown Line)	South	41480
30143	Western (Pink Line)	East	40740
30144	Western (Pink Line)	West	40740
30043	Western (Blue Line-Forest Park Branch)	West	40220
30042	Western (Blue Line-Forest Park Branch)	East	40220
30130	Western (Blue Line-O'Hare Branch)	South	40670
30129	Western (Blue Line-O'Hare Branch)	North	40670
30060	Western (Orange Line)	North	40310
30061	Western (Orange Line)	South	40310
30106	Wilson	South	40540
30105	Wilson	North	40540

Appendix C: Route Direction Code Quick Reference

In the Arrivals API response, you'll see a train direction ("trDr") element. These values represent what you might describe as an "operational" direction—it's not expressive of the physical direction of a train at its current location so much as the big-picture route direction (even though it often coincides).

How a train's direction is defined here loosely translates to a "northbound" (trDr=1) or "southbound" (trDr=5) direction, it can be a little tricky to imagine how that applies to routes such as the Blue Line.

Also, note that this value represents the current operational direction of the train *as of when the prediction was generated*, not which operational direction it'll have once it reaches a given station that it's predicted to reach. For example, an Orange Line train that's at Halsted on its way to the Loop will be shown as such, even for predictions at Harold Washington Library-State/Van Buren by which time it'll have changed to being a train to Midway the moment it enters the Loop.

Here's a quick reference to help you understand what these values mean, on a per-route basis:

Red Line
1 = Howard-bound
5 = 95th/Dan Ryan-bound

Blue Line
1 = O'Hare-bound
5 = Forest Park-bound

Brown Line
1 = Kimball-bound
5 = Loop-bound

Green Line
1 = Harlem/Lake-bound
5 = Ashland/63rd- *or* Cottage Grove-bound (toward 63rd St destinations)

Orange Line
1 = Loop-bound
5 = Midway-bound

Purple Line
1 = Linden-bound
5 = Howard- or Loop-bound

Pink Line
1 = Loop-bound
5 = 54th/Cermak-bound

Yellow Line
1 = Skokie-bound
5 = Howard-bound

Appendix D: Insight into Polishing Your Output from the Experts

While the raw information alone is powerful, it's helpful to interpret results and present them in such a way that can make them more meaningful for your customers.

Delays

The CTA Train Tracker service looks at how long it's been since a train has moved from one track circuit to the next and identifies delays if a train appears to not be moving.

The "isDly" element is an expression of whether or not we've detected the likelihood that a train is delayed. If the value of isDly = 1, then consider indicating that the train is delayed rather than simply representing the last prediction, which might be growing stale (which you could compare timestamps to determine, independently).

Schedule faults

The isFlt element in the results indicates what we call a "schedule fault" in the context of Train Tracker. A fault on an ETA that is schedule-based (isSch=1) indicates that the scheduled arrival time given might not be feasible to serve due to the lack of a scheduled departure having occurred. Our system is designed to do some math in order to calculate whether or not a scheduled arrival is feasible based on minimum travel times from a terminal to where the arrival is being estimated for.

Note that this doesn't necessarily mean that there are delays or that service is not good at the time—it only means that a train didn't leave when the *planned* schedule had provisioned. Transit systems are complex and delays are sometimes unavoidable; our transportation managers use a variety of strategies, including making on-the-go schedule modifications, to maintain service levels (particularly during peak periods when trains leave every few minutes) and provide the best possible service. This is normal and provides a better service to our customers.

Events that affect prediction quality

Some construction or unplanned events that affect service (particularly if they cause trains to be routed differently than normal) can affect the quality of predictions in Train Tracker. While we work to improve back-end exception handling, we can alert users that the quality of predictions may be affected by a current event (or altogether unavailable). In certain situations where we know the information may be unreliable, we may temporarily stop offering predictions for all or portions of a route, which will also be reflected in the API. Our Customer Alerts API Alerts Feed contains a special "Train Tracker impact" flag (element "`ttim`") to indicate when works are affecting prediction quality.

Calculating a number of minutes until arrival from this data

To calculate the number of minutes until arrival (so you can say "4 min" instead of 2:35 p.m., for example, we recommend comparing `arrT` to `prdt` – this will give you the number of minutes we calculated from when a train last moved into a new track circuit until when it should get to a station.

The reason for this is because the arrival time value is actually based on how long it should take to get from where the train was when its location was last updated in our prediction database, weighted in such a way to improve prediction accuracy, which happens on a frequent cycle.

The reason we represent this information in date-time form is for added flexibility in defining your own logic, as it allows you to show clock times or make computations as you feel is best for your code project, and can be more meaningful if your app doesn't update very frequently.

Thus, it gives you the control to compare `arrT` to `prdt` if you do have the capability to update frequently, but, if not, you might then also consider other, more advanced scenarios, where you weight that comparison against the age of your last update. (It's your app, so it's really all up to you!)

Additionally, note that output for the `arrT` element, at least at this stage in the beta (we are open to your feedback as developers), is a minimum of 60 seconds from most recent prediction generation (trains disappear from result sets once they actually reach the station).

Due Trains

We show "due" or "approaching" on trains which are expected to arrive shortly because "1 min" is a very short period of time, and encourage you to consider doing the same.

Accessibility

We work very hard to design our Web services to be fully accessible to people with a wide range of levels of ability, including people with limited or no vision, limited mobility, cognitive disabilities and more.

While it's up to you how to implement our data in your product and to what lengths you go to cater to audiences who are less able to interact with technology than others, we strongly encourage you to take into consideration accessibility implications on whatever platform you write for and to make sure your incorporation of public transit information helps the whole public, to the best of your ability.

We encourage you to catch up on accessibility standards such as those laid out in the Federal Section 508 guidelines, the Illinois Information Technology Accessibility Act (IITAA), as well as staying up on modern Web or software accessibility best practices. It'll lead to better products for you and everyone who might benefit from them.

Appendix E: Error Codes

Error codes are given in the event an unexpected request was made or if an error in processing occurred. A good response comes with an error code of 0.

Arrivals API Error Codes

Error Code	Error Name	Error Explanation
0	OK	No error.
100	Required parameter *[value]* is missing.	The query string does not contain one of the required parameters, currently: "mapid or stpid", "key".
101	Invalid API key	The value for the required parameter "key" is not a valid API key.
102	Maximum Daily CTA Train Tracker API usage exceeded.	The number of successful API Requests using the supplied "key" have exceeded the maximum daily value.
103	Invalid mapid: [value]	At least one of the supplied values for the "mapid" parameter is not valid. The first invalid id is returned.
104	Mapid's need to be integers: [value]	At least one of the supplied values for the "mapid" parameter is not an integer value. The first invalid id is returned.
105	Maximum of mapid's you can request is 4.	A maximum of 4 values may be specified for the parameter "mapid". More than 4 were supplied.
106	Invalid Route Identifier: [value]	At least one of the supplied values for the "rt" parameter is invalid. Supported values are: "Red", "Blue", "Brn", "G", "Org", "P", "Pink", "Y".
107	Maximum of rt's you can request is 4.	A maximum of 4 values may be specified for the parameter "rt". More than 4 were supplied.
108	Invalid stpId specified: [value]	At least one of the supplied values for the "stpId" parameter is invalid. The first invalid value is returned.

109	Maximum of stpid's you can request is 4.	A maximum of 4 values may be specified for the parameter "stpId". More than 4 were supplied.
110	Invalid max specified: [value]	A non-integer value was specified for the "max" parameter.
111	Parameter 'max' must be a positive integer.	A value less than 1 was specified for the "max" parameter. The value must be an integer greater than zero.
112	Stpid's need to be integers: [value]	At least one of the supplied values for the "stpid" parameter is not an integer value. The first invalid id is returned.
500	Invalid parameter: *[value]*	The query string contains a parameter that is not supported by the train tracker API, currently supported parameters are: "mapid", "key", "rt", "stpid", "max".
900	Server Error	A server error occurred.

Follower API Error Codes

Detailed error information will be added to this document soon.

Note: A successful response has an error code of “0”. Any other result implies an error.

Appendix F:
Developer License Agreement and Terms of Use

This Developer License Agreement and Terms of Use ("**Agreement**") governs the use by developers and third parties ("**you**") of electronic data owned and maintained by Chicago Transit Authority ("**CTA**," "**we**" or "**us**"), including, but not limited to, CTA Bus Tracker data, CTA Train Tracker data, transitchicago.com Alerts data, General Transit Feed Specification ("**GTFS**") and Scheduled Service data (collectively, "**CTA Data**"). CTA can change this Agreement at any time by posting a revised Agreement as CTA deems necessary. Your continued use of any CTA Data constitutes acceptance of those changes.

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2. By using, reproducing, or distributing the CTA Data, you agree to be bound by this Agreement. IF YOU DO NOT AGREE TO BE BOUND BY THIS AGREEMENT, YOU MAY NOT USE CTA DATA.

II. Ownership of CTA Data

1. All right, title and interest in and to patents, copyrights, trademarks, and other intellectual property and ownership rights embodied in the CTA Data, including, but not limited to, any new or useful art, discovery, improvement, technical development or invention, whether or not patentable, and all related know-how, designs, mask works, formulae, processes, trade secrets, ideas, artwork, software, hardware, graphics, layout, and modules, are CTA's sole and exclusive property and are protected from unauthorized use, copying and distribution by U.S. and international laws, regulations and international treaties.

2. You acknowledge that CTA owns all rights in the CTA Data, including, without limitation, any changes that you make to the CTA Data, and you do not acquire any rights in the CTA Data by virtue of your use of the CTA Data under this Agreement or otherwise.

3. All uses of the CTA Data by you inure to the sole benefit of CTA to the extent they relate to intellectual property and other proprietary rights owned by CTA.

4. You agree not to challenge, directly or indirectly, CTA's rights in the CTA Data or assert any right, title or interest in or to the CTA Data or assist any third party in doing so.

5. Subject to the license to use the CTA Data and CTA Brand Assets (defined below), you retain ownership of your application, technology, website, feature, product, or service, etc. that incorporates the CTA Data (collectively and each, an "**application**") (including any code therein) and you are solely responsible for claims made in connection with or related to your application, and you agree to defend, indemnify and hold CTA harmless for any claims with respect thereto.

III. Limitations on Use of CTA Data and Guidelines for Use of the CTA Brand Assets

Your use of CTA Data is subject to the following limitations and restrictions:

1. You and your application must not express or imply any affiliation or relationship with or sponsorship or endorsement by CTA.

2. You may cache CTA Data you receive from CTA in order to improve your application's user experience, but you agree to take reasonable efforts to keep the CTA Data up to date.

3. You will not sell, auction or barter any CTA Data separate from your application. If you are acquired by or merge with a third party, you can continue to use CTA Data within your application subject to the terms of this Agreement, but you may not transfer the CTA Data outside your application.

4. Subject to you abiding by this agreement and the CTA Trademark Guidelines for Developers < http://www.transitchicago.com/asset.aspx?AssetId=4864> (incorporated herein by reference), CTA grants you a limited, non-exclusive, non-assignable, non-transferable and revocable license and right to use the names, logos, trademarks, title treatments and art (the "**CTA Brand Assets**") as provided by CTA that relate to the CTA Data, including the CTA, CTA BUS TRACKER, and CTA TRAIN TRACKER word marks and the CTA Bus Tracker Logo and CTA Train Tracker Logo, for your use solely in connection with offering your application.

5. You may not use the CTA Brand Assets or any trademarks or terms confusingly similar to CTA's trademarks in the name of your application or in any way that may suggest that CTA is affiliated with, endorses, or sponsors you or your application or that is likely to tarnish or dilute the CTA Brand Assets. You must comply with the CTA Trademark Guidelines for Developers which contain important restrictions, as well as examples of uses that are and are not acceptable.

6. When using the CTA Data, you have the option, but not the obligation, to credit CTA. If you elect to include a credit line, it should read as follows: "Data provided by Chicago Transit Authority," "Data provided by CTA" or "Powered by CTA data" or similar, descriptive language.

    - Solely for purposes of a credit line accompanying a use of CTA Bus Tracker data, you have the option, but not the obligation, to use the logo icon shown below as more fully described in the appendices of this document, provided that such use otherwise comports with this Agreement. If you elect to include a credit line, it should read: "CTA Bus Tracker data provided by Chicago Transit Authority. The CTA Bus Tracker logo is a trademark of Chicago Transit Authority" or similar, descriptive language.

      See Trademark Guidelines for Developers for larger icons

    - Solely for purposes of a credit line accompanying a use of CTA Train Tracker data, you have the option, but not the obligation, to use the CTA Train Tracker logo shown below as more fully described in the appendices of this document, provided that such use otherwise comports with this Agreement. If you elect to include a credit line, it should read: "CTA Train Tracker data provided by Chicago Transit Authority. The CTA Train Tracker logo is a trademark of Chicago Transit Authority" or similar descriptive language.

      See Trademark Guidelines for Developers for larger icons

IV. Quality Control

1. You acknowledge that the CTA Brand Assets have acquired a most valuable goodwill and that it is of great importance to CTA that you, in the offering of any products or services in connection with the CTA Brand Assets, maintain the high standards and reputation CTA has established such that the goodwill associated with the CTA Brand Assets is protected at all times. You agree to maintain the same high standards of quality for any applications bearing the CTA Brand Assets.

2. You acknowledge that CTA owns all rights in the CTA Brand Assets and you do not acquire any rights in the CTA Brand Assets by virtue of its use pursuant to this Agreement.

3. All uses of the CTA Brand Assets by you inure to the sole benefit of CTA.

4. You agree not to challenge, directly or indirectly, CTA's rights in the CTA Brand Assets or assert any right, title or interest in or to the CTA Brand Assets or assist any third party in doing so.

5. You agree to cooperate with CTA and provide CTA with specimens of use of the CTA Brand Assets promptly upon CTA's request.

6. You are solely responsible for your application and its code and content and all uses you make of the CTA Data and CTA Brand Assets. This includes ensuring your use and your application's use of the CTA Data and CTA Brand Assets meets the requirements of this Agreement.

V. Termination

1. Notwithstanding any other provision in this Agreement, if you are in breach of your obligations under this Agreement, including, without limitation, the CTA Trademark Guidelines for Developers < http://www.transitchicago.com/asset.aspx?AssetId=4864>, CTA has the right to terminate this Agreement immediately.

2. CTA can take enforcement action against you and any or all of your applications if CTA determines, in our sole judgment, that you or your application violates this Agreement. Enforcement actions can include disabling your application, restricting you and your application's access to the CTA Data, terminating our agreements with you, or any other action as we in our sole discretion deem appropriate.

3. Upon any termination or expiration of this Agreement, you will promptly delete all CTA Data from your application, computer systems or other storage devices and discontinue all use of the CTA Brand Assets. You agree to certify in writing that it has performed its obligations under this Section V if CTA requests a certification.

VI. No Guarantee or Warranty of Availability of CTA Data

1. CTA reserves the right at any time and from time to time to discontinue posting the CTA Data (or any part thereof), temporarily or permanently, with or without notice to you.

2. You agree that CTA will not be liable to you for any modification, suspension or discontinuance of the availability of the CTA Data.

3. CTA reserves the right to alter, correct and modify CTA Data at any time without prior notice to you.

VII. Disclaimer of Warranties

1. YOU AGREE THAT CTA DATA IS PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS. TO THE FULLEST EXTENT PERMITTED BY LAW, CTA, ITS EMPLOYEES, OFFICERS, DIRECTORS AND AGENTS (COLLECTIVELY, THE "**CTA PARTIES**") MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, AS TO THE CTA DATA, ITS ACCURACY, COMPLETENESS, USEFULNESS, TIMELINESS, RELIABILITY OR FUNCTIONALITY, OR THAT ANY PRODUCTS OR SERVICES MADE AVAILABLE BY THE CTA OR THIRD PARTIES INCORPORATING THE CTA DATA, AND/OR THE

SECURITY ASSOCIATED WITH THE TRANSMISSION OF CTA DATA. THE CTA PARTIES HEREBY DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, ACCURACY, AND NON-INFRINGEMENT. YOU AGREE THAT USE OF CTA DATA IS AT YOUR SOLE RISK. SOME JURISDICTIONS DO NOT ALLOW THE DISCLAIMER OF IMPLIED OR OTHER WARRANTIES, SO THE ABOVE DISCLAIMER MAY NOT APPLY TO YOU.

2. THE CTA PARTIES ARE NOT RESPONSIBLE FOR, AND DO NOT ENDORSE, THIRD PARTY CONTENT, APPLICATIONS AND/OR MATERIALS INCORPORATING CTA DATA THAT MAY BE MADE AVAILABLE FROM TIME TO TIME ON CHICAGOTRANSITAUTHORITY.COM OR ELSWHERE (COLLECTIVELY, THE "**CTA WEB SITE**") (EVEN IF THE CTA WEB SITE PROVIDES A LINK TO OR OTHERWISE ADVERTISES SUCH THIRD PARTY CONTENT, APPLICATIONS AND/OR MATERIALS) AND SPECIFICALLY DISCLAIMS ANY RESPONSIBILITY OR LIABILITY TO ANY PERSON OR ENTITY, INCLUDING, WITHOUT LIMITATION, ANY PERSON OR ENTITY THAT MAY USE OR RELY ON SUCH THIRD PARTY CONTENT, APPLICATIONS AND/OR MATERIALS, EVEN IF THEY INCORPORATE CTA DATA, FOR ANY LOSS, DAMAGE (WHETHER ACTUAL, CONSEQUENTIAL OR OTHERWISE), INJURY, CLAIM, LIABILITY OR OTHER CLAIM OF ANY KIND BASED UPON OR RESULTING FROM SUCH THIRD PARTY CONTENT, APPLICATIONS AND/OR MATERIALS.

VIII. Limitation of Liability

YOU AGREE THAT THE CTA PARTIES WILL NOT BE LIABLE FOR LOSSES OR DAMAGES OF ANY KIND ARISING FROM THE USE OF CTA DATA, INCLUDING, BUT NOT LIMITED TO, DIRECT, INDIRECT, INCIDENTAL, PUNITIVE AND CONSEQUENTIAL LOSSES OR DAMAGES, REGARDLESS OF WHETHER SUCH LOSSES OR DAMAGES ARISE BASED UPON CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT, WARRANTY OR OTHER LEGAL THEORY AND REGARDLESS OF WHETHER SUCH LOSS OR DAMAGES WERE FORESEEABLE, EVEN IF THE CTA PARTIES WERE ADVISED OF OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL THE CTA PARTIES' TOTAL LIABILITY TO YOU FOR LOSS OR DAMAGES EXCEED TEN U.S. DOLLARS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

IX. Indemnification

1. You agree to indemnify, defend and hold the CTA Parties harmless from and against any and all fines, suits, proceedings, claims, causes of action, demands, or liabilities (including reasonable attorney's fees) of any kind or of any nature arising out of or in connection with: (i) your use of CTA Data; (ii) a breach or alleged breach of your representations, warranties, agreements or obligations in this Agreement; (iii) any actual or alleged infringement, misappropriation, or violation of any third party's intellectual property or other rights, including, without limitation, patents, copyrights, trademarks, service marks, or trade secrets by you or your application; and (iv) the development, marketing, distribution, licensing, sale and/or use of any applications, technology, products or services sold, licensed or otherwise distributed by you.

2. You agree not to settle any claim, action or lawsuit subject to this Section IX without the prior written consent of CTA.

3. You agree that CTA will have the right, but not the obligation, to participate in any claim, action or lawsuit for which you have an indemnification obligation under this Agreement.

X. Binding Effect; No Assignability without Express Consent

1. The terms of this Agreement are binding upon both you and CTA and inure to the benefit of the successors and assigns of the parties as if they were parties to this Agreement.

2. None of the rights, duties or obligations under this Agreement may be assigned by you without the express written consent of an authorized CTA representative.

XI. Severability

To the extent a court of competent jurisdiction determines that any part or provision of this Agreement is unenforceable as a matter of law, such part or provision of this Agreement will be deemed severable and the remainder of this Agreement will survive and remain enforceable.

XII. Applicable Law and Forum; Compliance with Laws

1. The laws of the State of Illinois govern all rights and obligations under this Agreement, without giving effect to any principles of conflicts of laws.
2. Any use of the CTA Data or CTA Brand Assets will be deemed made in the State of Illinois, USA, regardless of your location. You agree that any dispute with CTA arising out of any use of the CTA Data, the CTA Brand Assets or this Agreement must be brought by you exclusively in the state or federal courts situated in Cook County, State of Illinois. You agree that such venue is appropriate.
3. You agree to at all times observe and comply with all applicable laws, ordinances, rules, regulations and executive orders of Federal, state and local government entities, now existing or hereinafter in effect, which may in any manner affect the performance of this Agreement. Provision(s) required by law, ordinances, rules, regulations or executive orders to be inserted herein will be deemed inserted herein whether or not they appear in this Agreement or, upon application by either party, this Agreement will forthwith be amended to literally make such insertion; however, in no event will failure to insert such provision(s) prevent the enforcement of this Agreement.

XIII. Entire Agreement

This Agreement constitutes the complete and exclusive agreement between CTA and you with respect to the subject matter hereof and supersedes all prior oral or written understandings, communications, or agreements not specifically incorporated herein. CTA reserves the right to modify or revoke this Agreement at any time.

XIV. No Waiver

Waiver by CTA of strict performances of any provision of this Agreement will not be a waiver of or prejudice CTA's right to require strict performance of the same provision in the future or of any other provision of this Agreement.

XV. No Agency, Joint Venture or Affiliation

No provision of this Agreement, nor any act by you or CTA, will be deemed or construed by either of the parties or by third parties, to create any relationship of third party beneficiary, or of principal or agent, or of limited or general partnership, or of joint venture, or of any association or relationship involving you and CTA.