



```
{ assetUid: 'NODE-X',
  parentAssetUid: null,
  eventTypes: [ 'HEALTH_REPORT' ],
  mediaType: null,
  assetType: 'NODE',
  coordinates: '{LAT}:{LONG}',
  status: 'ONLINE',
  properties: {} }
```

assetType
CAMERA

```
{ assetUid: 'CAM-X',
  parentAssetUid: 'NODE-X',
  eventTypes: [ 'PKOUT', 'PKIN',
                'TFEVT', 'PEDEV',
                'BICYCLE' ],
  mediaType: 'IMAGE,VIDEO',
  assetType: 'CAMERA',
  coordinates: { 'LAT':{ 'LONG' },
  status: 'ONLINE',
  properties: {
    HOMOGRAPHY: 'x,x,x,x,x,x,x,x,x,x',
    CENTER_GEO_COORDINATE:
      { 'LAT':{ 'LONG' },
    IMAGE_SIZE: 'X:Y',
    VIEW: 'X' } }
```

assetType
ENV_SENSOR

```
{ assetUid: 'ENV-X',
  parentAssetUid: 'NODE-X',
  eventTypes: [ 'TEMPERATURE',
                'PRESSURE' ],
  mediaType: "",
  assetType: 'ENV_SENSOR',
  coordinates: '{LAT}:{LONG}',
  status: 'ONLINE',
  properties: {} }
```

assetType
EM_SENSOR

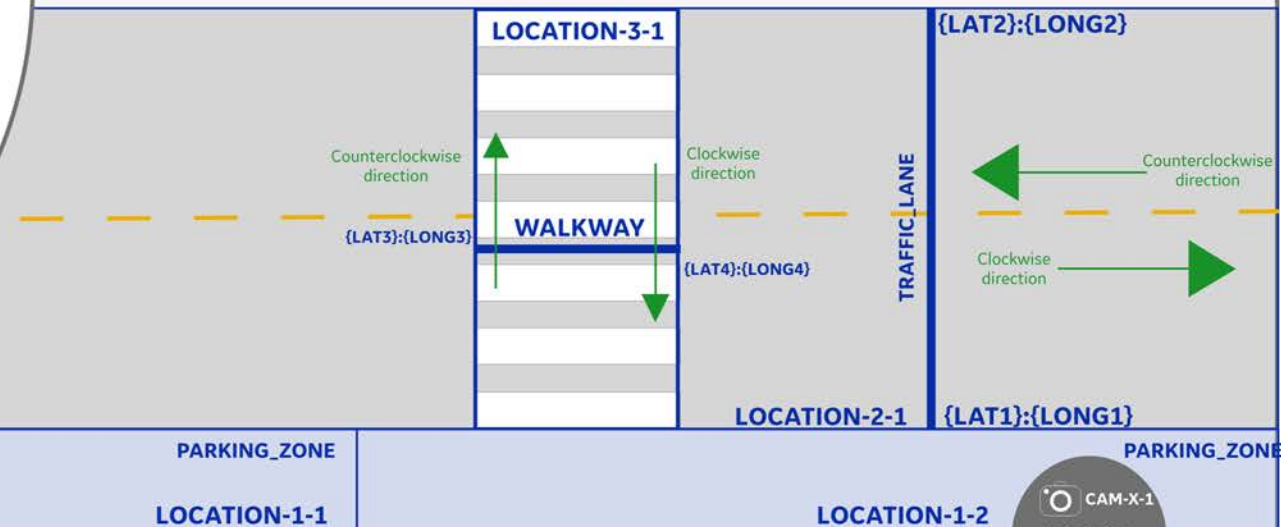
```
{ assetUid: 'EM-X',
  parentAssetUid: 'NODE-X',
  eventTypes: [ 'METROLOGY',
                 'ENERGY_ALERT',
                 'ENERGY_TIMESERIES' ],
  mediaType: null,
  assetType: 'EM_SENSOR',
  coordinates: '(LAT):(LONG)',
  status: 'ONLINE',
  properties: {} }
```

CityIQ Metadata Service

The Metadata Service provides users with static data such as assets and physical locations with their properties and identifiers.

json responses in blue are obtained using the metadata service url

Sample Responses are described here in json. Please note, data is only available by permissions granted by your municipality.



locationType PARKING_ZONE

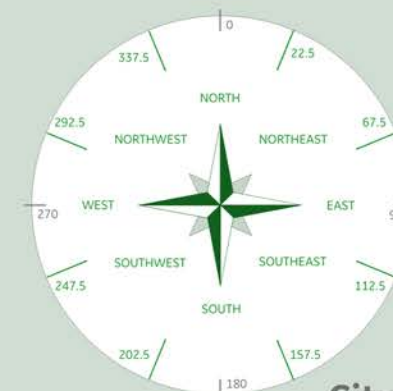
```
{ locationId: 'LOCATION-1-1',
  locationType: 'PARKING_ZONE',
  parentLocationId: 'LOCATION-1',
  coordinatesType: 'GEO',
  coordinates: '{LAT}:{(LONG)},{LAT}:{(LONG)},
               {LAT}:{(LONG)},{LAT}:{(LONG)}',
  name: '1ST-AVE-PARKING-SOUTH',
  city: 'SPRINGFIELD',
  state: 'ILLINOIS',
  country: 'USA',
  zipcode: '12345',
  timezone: 'CDT',
  properties: {
    CD: 'X',
    CCD: 'Y'},
  address: null,
  analyticCategory: {} }
```

locationType TRAFFIC_LANE

```
{ locationUid: 'LOCATION-2-1',
  locationType: 'TRAFFIC_LANE',
  parentLocationUid: 'LOCATION-2',
  coordinatesType: 'GEO',
  coordinates: {(LAT1):(LONG1),(LAT2):(LONG2)},
  name: '1ST-AVE',
  city: 'SPRINGFIELD',
  state: 'ILLINOIS',
  country: 'USA',
  zipcode: '12345',
  timezone: 'CDT',
  properties: {
    CD: 'X',
    CCD: 'Y'},
  address: null,
  analyticCategory: {}
}
```

locationType WALKWAY

```
{ locationUid: 'LOCATION-3-1',
  locationType: 'WALKWAY',
  parentLocationUid: 'LOCATION-3',
  coordinatesType: 'GEO',
  coordinates: '{LAT3}:{LONG3},{LAT4}:{LONG4}',
  name: '1ST-AVE-WALKWAY-SOUTH',
  city: 'SPRINGFIELD',
  state: 'ILLINOIS',
  country: 'USA',
  zipcode: '12345',
  timezone: 'CDT',
  properties: {
    CD: 'X',
    CCD: 'Y'
  },
  address: null,
  analyticCategory: {}
}
```





assetType NODE

```
{ assetUid: 'NODE-X',
  parentAssetUid: null,
  eventTypes: [ 'HEALTH_REPORT' ],
  mediaType: null,
  assetType: 'NODE',
  coordinates: '{LAT}:{LONG}',
  status: 'ONLINE',
  properties: {} }
```



assetType CAMERA

```
{ assetUid: 'CAM-X',
  parentAssetUid: 'NODE-X',
  eventTypes: [ 'PKOUT', 'PKIN', 'TFEVT', 'PEDEVT' ],
  mediaType: 'IMAGE,VIDEO',
  assetType: 'CAMERA',
  coordinates: '{LAT}:{LONG}',
  status: 'ONLINE',
  properties: {
    HOMOGRAPHY: 'x,x,x,x,x,x,x,x',
    CENTER_GEO_COORDINATE: '{LAT}:{LONG}',
    IMAGE_SIZE: 'X:Y',
    VIEW: 'X' } }
```

CityIQ Parking Planning API

The Parking API uses the camera asset and performs CityIQ Analytics on the node and returns Parking In (PKIN) and Parking Out (PKOUT) events



Sample Responses are described here in json. Please note, the Parking Predix Zone ID is a necessary header input to access this API.

json responses in blue are obtained using the metadata service url

json responses in green are obtained using the events service url

objectUid: 12345

objectUid: 12346

LOCATION-1-1

LOCATION-1-2



locationType PARKING_ZONE

```
{ locationUid: 'LOCATION-1-1',
  locationType: 'PARKING_ZONE',
  parentLocationUid: 'LOCATION-1',
  coordinatesType: 'GEO',
  coordinates: '{LAT}:{LONG},{LAT}:{LONG},{LAT}:{LONG},{LAT}:{LONG}',
  name: '1ST-AVE-PARKING-SOUTH',
  city: 'SPRINGFIELD',
  state: 'ILLINOIS',
  country: 'USA',
  zipcode: '12345',
  timezone: 'CDT',
  properties: {
    CD: 'X',
    CCD: 'Y',
  },
  address: null,
  analyticCategory: {} }
```

eventType PKIN

```
{ locationUid: 'LOCATION-1-1',
  assetUid: 'CAM-X',
  eventType: 'PKIN',
  timestamp: 1539090000000,
  properties: {
    orgPixelCoordinates: 'X:Y,X:Y,X:Y,X:Y',
    pixelCoordinates: 'A:B,A:B,A:B,A:B',
    objectUid: '12345',
    geoCoordinates: '{LAT}:{LONG},{LAT}:{LONG}',
    imageAssetUid: 'CAM-X',
  },
  measures: {} }
```

eventType PKOUT

```
{ locationUid: 'LOCATION-1-2',
  assetUid: 'CAM-X',
  eventType: 'PKOUT',
  timestamp: 1539090011000,
  properties: {
    orgPixelCoordinates: 'X:Y,X:Y,X:Y,X:Y',
    pixelCoordinates: 'A:B,A:B,A:B,A:B',
    objectUid: '12346',
    geoCoordinates: '{LAT}:{LONG},{LAT}:{LONG}',
    imageAssetUid: 'CAM-X',
  },
  measures: {} }
```




assetType NODE

```
{ assetUid: 'NODE-X',  
  parentAssetUid: null,  
  eventTypes: [ 'HEALTH_REPORT' ],  
  mediaType: null,  
  assetType: 'NODE',  
  coordinates: '{LAT}:{LONG}',  
  status: 'ONLINE',  
  properties: {} }
```



assetType CAMERA

```
{ assetUid: 'CAM-X',  
  parentAssetUid: 'NODE-X',  
  eventTypes: [ 'PKOUT', 'PKIN', 'TFEVT', 'PEDEVT' ],  
  mediaType: 'IMAGE,VIDEO',  
  assetType: 'CAMERA',  
  coordinates: '{LAT}:{LONG}',  
  status: 'ONLINE',  
  properties: {  
    HOMOGRAPHY: 'x,x,x,x,x,x,x,x',  
    CENTER_GEO_COORDINATE: '{LAT}:{LONG}',  
    IMAGE_SIZE: 'X:Y',  
    VIEW: 'X' } }
```

CityIQ Pedestrian Planning API

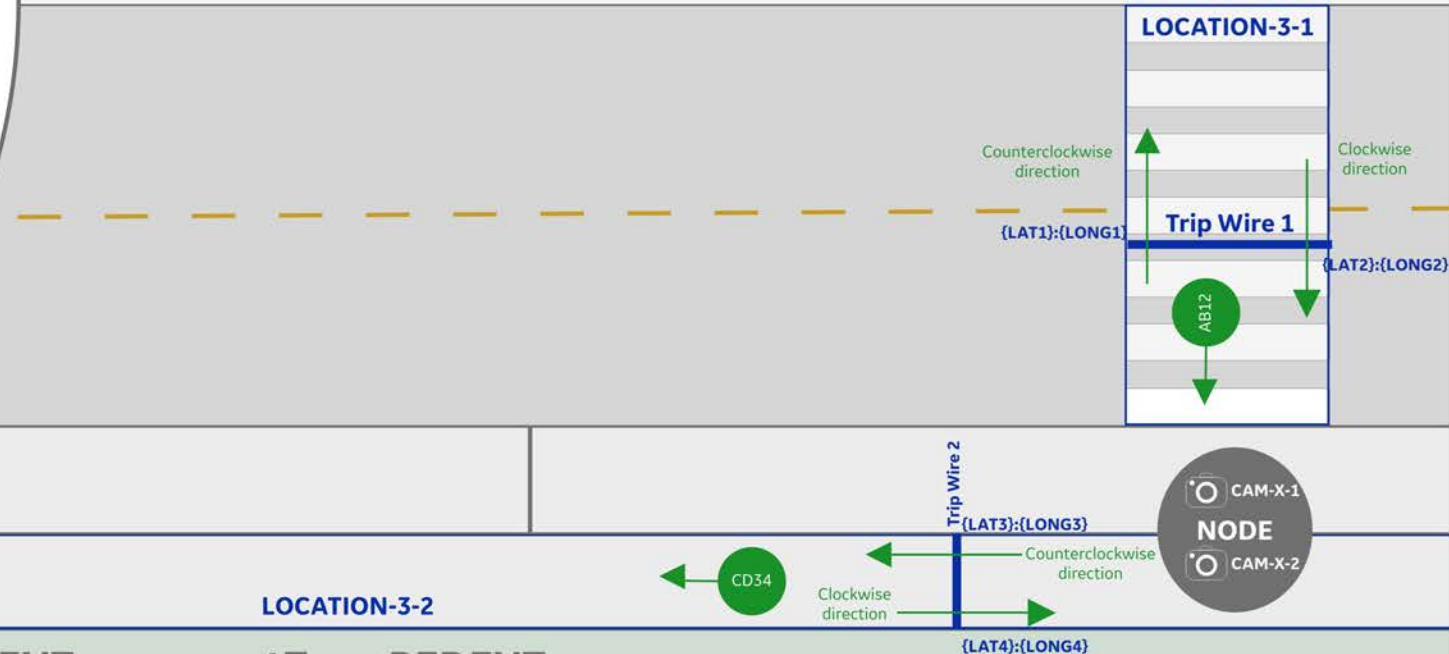
The Pedestrian API uses the camera asset and performs CityIQ Analytics on the node to return Pedestrian Events (PEDEVT)



Sample Responses are described here in json. Please note, the Pedestrian Predix Zone ID is a necessary header input to access this API.

json responses in blue are obtained using the metadata service url

json responses in green are obtained using the events service url



locationType WALKWAY

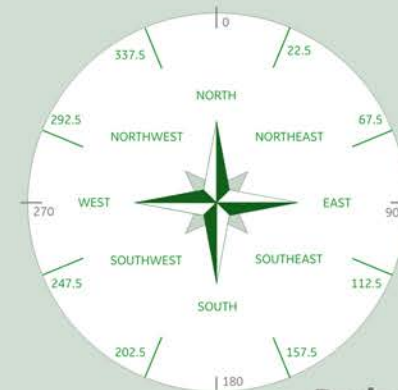
```
{ locationUid: 'LOCATION-3-1',  
  locationType: 'WALKWAY',  
  parentLocationUid: 'LOCATION-3',  
  coordinatesType: 'GEO',  
  coordinates: '{LAT1}:{LONG1},{LAT2}:{LONG2}',  
  name: '1ST-AVE-WALKWAY-SOUTH',  
  city: 'SPRINGFIELD',  
  state: 'ILLINOIS',  
  country: 'USA',  
  zipcode: '12345',  
  timezone: 'CDT',  
  properties: {  
    CD: 'X',  
    CCD: 'Y',  
    address: null,  
    analyticCategory: {} }
```

eventType PEDEVT

```
{ locationUid: 'LOCATION-3-1',  
  assetUid: 'CAM-X-1',  
  eventType: 'PEDEVT',  
  timestamp: 1539090011000,  
  properties: {  
    directionUnit: 'DEGREE',  
    speedUnit: 'METERS_PER_SEC',  
    eventUid: 'ABC123' },  
  measures: {  
    counter_direction_speed: '0',  
    counter_direction_pedestrianCount: '0',  
    pedestrianCount: '1',  
    counter_direction: '180',  
    speed: '0.6',  
    direction: '180' } }
```

eventType PEDEVT

```
{ locationUid: 'LOCATION-3-2',  
  assetUid: 'CAM-X-2',  
  eventType: 'PEDEVT',  
  timestamp: 1539090011000,  
  properties: {  
    directionUnit: 'DEGREE',  
    speedUnit: 'METERS_PER_SEC',  
    eventUid: 'CD34' },  
  measures: {  
    counter_direction_speed: '0.5',  
    counter_direction_pedestrianCount: '1',  
    pedestrianCount: '1',  
    counter_direction: '270',  
    speed: '0',  
    direction: '90' } }
```





assetType NODE

```
{ assetUid: 'NODE-X',  
  parentAssetUid: null,  
  eventTypes: [ 'HEALTH_REPORT' ],  
  mediaType: null,  
  assetType: 'NODE',  
  coordinates: '{LAT}:{LONG}',  
  status: 'ONLINE',  
  properties: {} }
```



assetType CAMERA

```
{ assetUid: 'CAM-X',  
  parentAssetUid: 'NODE-X',  
  eventTypes: [ 'PKOUT', 'PKIN', 'TFEVT', 'PEDEV' ],  
  mediaType: 'IMAGE,VIDEO',  
  assetType: 'CAMERA',  
  coordinates: '{LAT}:{LONG}',  
  status: 'ONLINE',  
  properties: {  
    HOMOGRAPHY: 'X,X,X,X,X,X,X,X',  
    CENTER_GEO_COORDINATE: '{LAT}:{LONG}',  
    IMAGE_SIZE: 'X:Y',  
    VIEW: 'X' } }
```

CityIQ Traffic Planning API

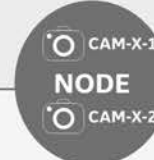
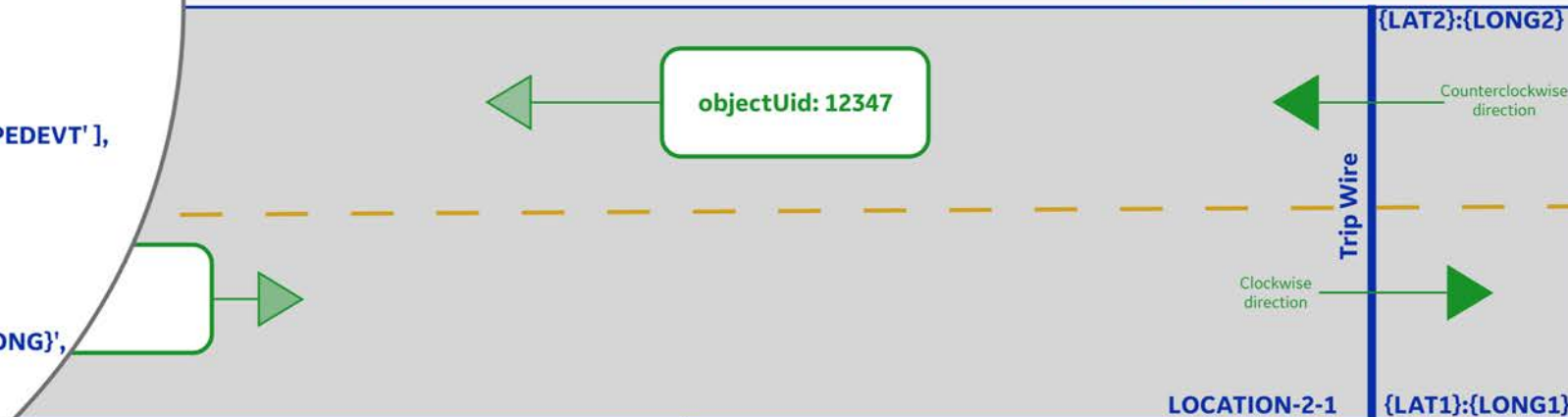
The Traffic API uses the camera asset and performs CityIQ Analytics on the node to return Traffic Events (TFEVT) which register vehicles passing the tripwire in blue.



Sample Responses are described here in json. Please note, the Traffic Predix Zone ID is a necessary header input to access this API.

json responses in blue are obtained using the metadata service url

json responses in green are obtained using the events service url

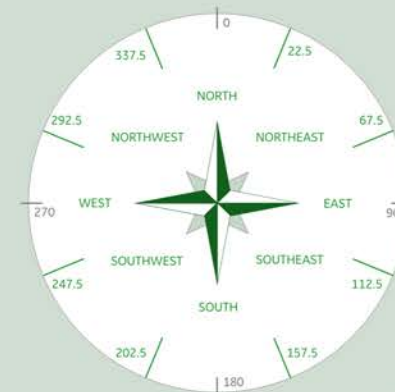


locationType TRAFFIC_LANE

```
{ locationUid: 'LOCATION-2-1',  
  locationType: 'TRAFFIC_LANE',  
  parentLocationUid: 'LOCATION-2',  
  coordinatesType: 'GEO',  
  coordinates: '{LAT1}:{LONG1},{LAT2}:{LONG2}',  
  name: '1ST-AVE',  
  city: 'SPRINGFIELD',  
  state: 'ILLINOIS',  
  country: 'USA',  
  zipcode: '12345',  
  timezone: 'CDT',  
  properties: {  
    CD: 'X',  
    CCD: 'Y',  
    address: null,  
    analyticCategory: {  
      TFEVT: "TRAFFIC_FLOW" } }
```

eventType TFEVT

```
{ locationUid: 'LOCATION-2-1',  
  assetUid: 'CAM-X',  
  eventType: 'TFEVT',  
  timestamp: 1539090011000,  
  properties: {  
    speedUnit: 'METERS_PER_SEC',  
    eventUid: '12347',  
    directionUnit: 'DEGREE',  
    counter_direction_vehicleType: 'vehicle',  
    vehicleType: '' },  
  measures: {  
    counter_direction: "270",  
    counter_direction_speed: "20",  
    counter_direction_vehicleCount: '1',  
    direction: "90",  
    speed: "0",  
    vehicleCount: "1" } }
```





assetType NODE

```
{ assetUid: 'NODE-X',
  parentAssetUid: null,
  eventTypes: [ 'HEALTH_REPORT' ],
  mediaType: null,
  assetType: 'NODE',
  coordinates: '{LAT}:{LONG}',
  status: 'ONLINE',
  properties: {} }
```



assetType CAMERA

```
{ assetUid: 'CAM-X',
  parentAssetUid: 'NODE-X',
  eventTypes: [ 'PKOUT', 'PKIN', 'BICYCLE', 'PEDEVT' ],
  mediaType: 'IMAGE,VIDEO',
  assetType: 'CAMERA',
  coordinates: '{LAT}:{LONG}',
  status: 'ONLINE',
  properties: {
    HOMOGRAPHY: 'x,x,x,x,x,x,x',
    CENTER_GEO_COORDINATE: '{LAT}:{LONG}',
    IMAGE_SIZE: 'X:Y',
    VIEW: 'X' } }
```

CityIQ Bicycle Planning API

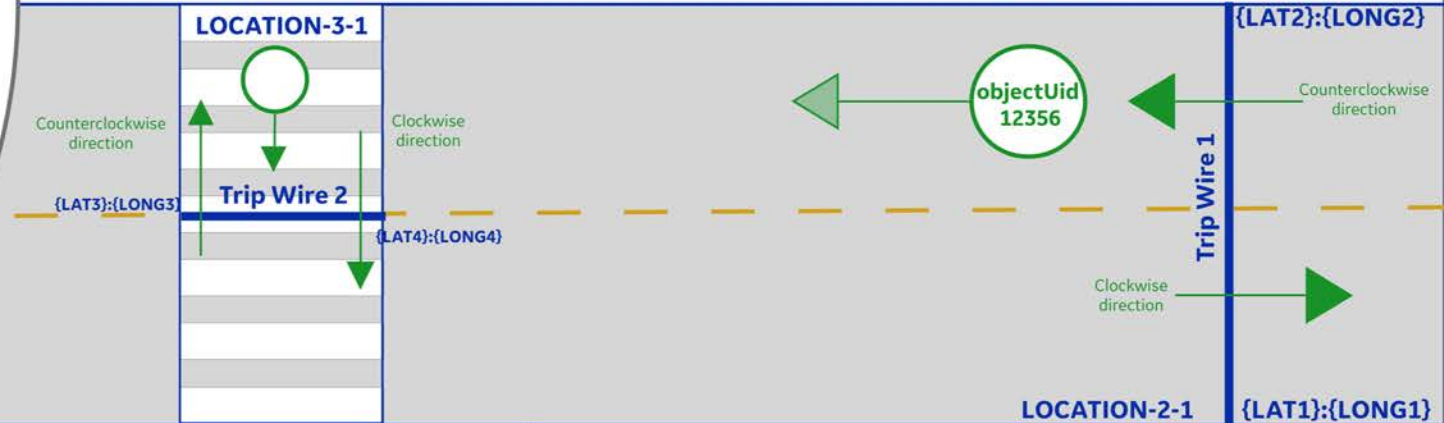
The Bicycle API uses the camera asset and performs CityIQ Analytics on the node to return Bicycle Events (BICYCLE) which register vehicles passing the tripwire in blue.



Sample Responses are described here in json. Please note, the Bicycle Prefix Zone ID is a necessary header input to access this API.

json responses in blue are obtained using the metadata service url

json responses in green are obtained using the events service url



CAM-X-1
NODE
CAM-X-2

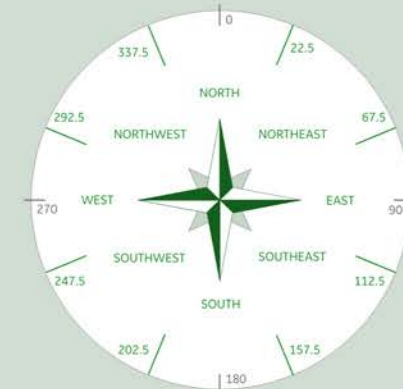
locationType TRAFFIC_LANE locationType WALKWAY

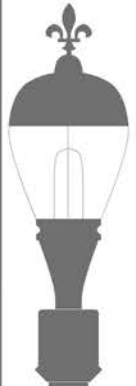
```
{ locationUid: 'LOCATION-2-1',
  locationType: 'TRAFFIC_LANE',
  parentLocationUid: 'LOCATION-2',
  coordinatesType: 'GEO',
  coordinates: '{LAT1}:{LONG1},{LAT2}:{LONG2}',
  name: '1ST-AVE',
  city: 'SPRINGFIELD',
  state: 'ILLINOIS',
  country: 'USA',
  zipcode: '12345',
  timezone: 'CDT',
  properties: {
    CD: 'X',
    CCD: 'Y',
    address: null,
    analyticCategory: {}
  }
}
```

```
{ locationUid: 'LOCATION-3-1',
  locationType: 'WALKWAY',
  parentLocationUid: 'LOCATION-3',
  coordinatesType: 'GEO',
  coordinates: '{LAT3}:{LONG3},{LAT4}:{LONG4}',
  name: '1ST-AVE-WALKWAY-WEST',
  city: 'SPRINGFIELD',
  state: 'ILLINOIS',
  country: 'USA',
  zipcode: '12345',
  timezone: 'CDT',
  properties: {
    CD: 'X',
    CCD: 'Y',
    address: null,
    analyticCategory: {}
  }
}
```

eventType BICYCLE

```
{ locationUid: 'LOCATION-2-1',
  assetUid: 'CAM-X',
  eventType: 'BICYCLE',
  timestamp: 1539090011000,
  properties: {
    speedUnit: 'METERS_PER_SEC',
    eventId: '12356',
    directionUnit: 'DEGREE' },
  measures: {
    bicycleCount: 0,
    counter_direction: "270",
    counter_direction_speed: "5",
    counter_direction_bicycleCount: "1",
    direction: "90",
    speed: "0" }
}
```





assetType NODE

```
{ assetUid: 'NODE-X',  
  parentAssetUid: null,  
  eventTypes: [ 'HEALTH_REPORT' ],  
  mediaType: null,  
  assetType: 'NODE',  
  coordinates: '{LAT}:{LONG}',  
  status: 'ONLINE',  
  properties: {} }
```

((.)) assetType ENV_SENSOR

```
{ assetUid: 'ENV-X',  
  parentAssetUid: 'NODE-X',  
  eventTypes: [ 'TEMPERATURE',  
                'PRESSURE', ],  
  mediaType: "",  
  assetType: 'ENV_SENSOR',  
  coordinates: '{LAT}:{LONG}',  
  status: 'ONLINE',  
  properties: {} }
```

Sample Calculation for Temperature:
Temp in Celsius = $2880 \text{ K} * 10^{-1} - 273 = 15^{\circ}\text{C}$

CityIQ Environmental Planning API



The Environmental API uses the sensor assets and reports measurements periodically in the form of Temperature, Humidity, and Pressure events.

Sample Responses are described here in json. Please note, the Environmental Prefix Zone ID is a necessary header input to access this API.

json responses in blue are obtained using the metadata service url

json responses in green are obtained using the events service url

eventType TEMPERATURE

```
{ locationUid: 'ENV_NODE_LOCATION',  
  assetUid: 'ENV-X',  
  eventType: 'TEMPERATURE',  
  timestamp: 1539090011000,  
  properties: {  
    unit: 'KELVIN',  
    powerOf10: '-1' },  
  measures: {  
    min: '2880',  
    median: '2890',  
    max: '2930',  
    mean: '2900' } }
```



eventType PRESSURE

```
{ locationUid: 'ENV_NODE_LOCATION',  
  assetUid: 'ENV-X',  
  eventType: 'PRESSURE',  
  timestamp: 1539090011000,  
  properties: {  
    unit: 'PASCALS',  
    powerOf10: '0' },  
  measures: {  
    min: '100711',  
    median: '100717',  
    max: '100722',  
    mean: '100717' } }
```

