

Site type will be completed by the Study Coordinator after the Observation Form is completed.

# SITE OBSERVATION FORM

## 1. Instructions & Site ID

1.1 Preferred day of week: \_\_\_\_\_  
*[from Interview Form, Q 1]*

Aim to match days of weeks (**at a minimum: weekday vs. weekend**).

1.2 Preferred time of day: \_\_\_\_:\_\_\_\_ am pm to \_\_\_\_:\_\_\_\_ am pm  
hr: min hr: min  
*[from Interview Form, Q 1.1 and 1.2]*

Aim to match times of day within ± one hour (**at a minimum: morning rush, mid-day, afternoon rush, evening, night**).

**Coordinators: List times in 1.2 to nearest ½ hour.**

*[On weekends, match day (9 to 6), evening (6-10, and night (10 to 9)]*

1.3 Sections of this form to complete for this site

- Instructions & Site ID**
- Off-road** if Question 11.2 = 1  
if Question 11.2 = 2
- Road** if Question 11.2 = 3  
if Question 11.1 = 1 and Question 11.2 = 2
- Intersection** if Question 11.1 = 2
- General Route Characteristics**
- Photographs**

**Coordinators: Note that for off-road paths that meet a road, the Site Observers should also complete "Section 4. Intersections" to account for the road met.**

*Based on Interview Form, Question 11*

1.4 Find the site from the attached **photo** and **Interview Form question 11 & site diagram**. The following features should be indicated:

- Names of streets & other identifiable features
- The **cyclist's location** *[marked with an X]* including
  - o whether on the road, sidewalk, or path, and which side & which lane
  - o whether at an intersection or not
- The cyclist's **direction of travel** *[marked with an arrow, before and after the X]*

If the photo is incorrect (e.g., out of date), **modify photo** or **provide corrected sketch of site** with these features on flip side of the photo.

You will not be able to pinpoint the exact location. The purpose is to identify

- the **correct block**,
- the approximate **position on the block**,
- the **direction of travel**, and
- **where the cyclist was riding at this position** (via question 11 on the Interview Form).

You will be collecting data on the "permanent" infrastructure. As long as the observations are done as soon as possible after the injury event, the correct data should be captured.

Site Observer: \_\_\_\_\_

Observation Day of Week: \_\_\_\_\_

Observation Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_  
DD MM YYYY

Observation Start: \_\_\_\_:\_\_\_\_ am pm  
hr: min

## 2. INFRASTRUCTURE: OFF-ROAD

2.1 What type of route is this?

**Circle number** of subject's response.  
**Circle one response only.**  
 If path is for cyclists and other wheeled vehicles, e.g., rollerbladers, and **not** pedestrians, circle "3. Bicycle-only path".

1. Pedestrian-only path, including most sidewalks
2. Multi-use path or sidewalk for bikes, pedestrians, others
3. Bicycle-only path
4. No path (e.g., across field)

2.2 Was the cyclist traveling **beside** a road, but physically separated from vehicles?

0. No
1. Yes

**Bold text of response** indicates that there are **sub-questions** for items with this response only.

Please answer yes, to this question, even if path is more than 3 metres from the road.

*[If yes]*

2.2.1 If the cyclist was cycling beside the road, but physically separated from vehicles, what separated the cyclist from the road?

*[check all that apply]*

- Curb *[bicycle path or sidewalk above road]*
- Concrete barrier
- Fence or bollards
- Raised median
- Grass
- Parked cars
- Other *[specify: \_\_\_\_\_]*

2.3 What is the surface that the cyclist was cycling on?

**Mark checkboxes** with an **X** in the appropriate boxes.  
 Mark **as many responses as apply.**

- Asphalt
- Concrete
- Cobblestones, bricks or paving stones
- Packed gravel or dirt
- Loose gravel or dirt
- Grass
- Other *[specify: \_\_\_\_\_]*

2.4 Is the traffic one-way or two-way?

1. One-way
2. Two-way, no lane demarcation
3. Two-way, line demarcating separate lanes
4. Two-way, barrier or curb demarcating separate lanes

2.5 What is posted speed limit for bicycles on the route?

*[Check back -100 meters of site, along cyclist's direction of travel. Can posted speed be seen from here?]*

0.

The **negative sign** (-100 meters) indicates you should check **backwards** along the route, i.e., in the direction the cyclist **has come from**. This distance and direction are used repeatedly on this Form.

2.6 Are there cycling symbols on the route?

*[Check back -100 meters of site, along cyclist's direction of travel. For signs only, can they be seen from here?]*

0. No
1. Yes, painted on the surface of the path
2. Yes, on signs posted beside the path
3. Yes, both

2.7 How wide is this path?

\_\_\_\_\_ meters *[to 1 decimal place, measure with trundle wheel]*

*[If there are lanes demarcated on path, measure only the portion designated for use, i.e., don't measure shoulder of path.]*

0. no path

2.8 What is the traffic count on the **path** or **sidewalk** in 5 minutes?

\_\_\_\_\_ bicyclists

*[total traffic in both directions; stand on one side of route, look across, count traffic passing through slice of route only; if no path/sidewalk, count a 5 meter wide slice across site]*

\_\_\_\_\_ pedestrians

\_\_\_\_\_ other non-motorized wheeled transport

**TYPE OF TRAFFIC**

**COUNT**

Bicyclists, including electric bikes  <i>[riding bike]</i>	
Pedestrians and other traffic  <i>[including dismounted cyclists]</i>	
Other non-motorized wheeled transport  <i>[e.g., skateboarders, rollerbladers, wheelchairs, strollers]</i>	

### 3. INFRASTRUCTURE: ROAD

*[If cyclist was at an intersection, this section applies to the road the cyclist was on prior to entering the intersection.]*

- 3.1** What type of **road** was the cyclist travelling **on** or **beside**?  
*[If the type of road differs on each side of an intersection, indicate type based on section cyclist was on or beside prior to intersection.]*
1. Back lane / alley
  2. Local street *[no centreline or marked lanes]*
  3. Collector or minor arterial road *[centreline only]*
  4. Major arterial road *[multiple through lanes each side of centreline]*
  5. Highway
  6. Expressway
- 3.2** Is this a bus or streetcar route?  
*[Are transit vehicles or stops present?]*
0. No
  1. Yes
- 3.3** What is the **driving surface** of the **road**, within a 5 meter diameter of this site?  
*[check all that apply]*
- Asphalt
  - Concrete
  - Cobblestones, bricks or paving stones
  - Packed gravel or dirt
  - Loose gravel or dirt
  - Grass
  - Other *[specify: \_\_\_\_\_]*
- 3.4** How is the **outer edge** of the **road** finished on the cyclist's side of the road within a 5 meter diameter of this site?  
*[check all that apply]*
- Curb
  - Paved edge of a different surface type
  - Paved shoulder, marked with a line
  - Gravel or dirt shoulder
  - Grass shoulder
  - Ditch
  - Other *[specify: \_\_\_\_\_]*
- 3.5** Is the motor vehicle traffic one-way or two-way?
1. One-way traffic only
  2. Two-way traffic
- 3.6** How many **marked** motor vehicle **through lanes** are on the full width of the **road** at this site?  
*[If this changes at different times of day/week, consider injury trip time]*
0. No lanes marked *[e.g., alleys, some local streets & collectors]*  
\_\_\_\_ lanes
- 3.7** Is parking allowed on this **road** within -100 meters of this site?  
*[If this changes at different times of day/week, consider injury trip time]*
0. No
  1. Yes, on cyclist's side of the street only
  2. Yes, on opposite side of the street only
  3. Yes, on both sides of the street

- 3.8** Are parked motor vehicles present within -100 meters of this site, on the cyclist's side of the street?
0. No  
1. Yes, less than half of spaces filled with vehicles  
2. Yes,  $\geq$  half of the parking spaces filled with vehicles
- 3.9** Are cars parked in non-designated areas, such as a bike lane or a vehicle through lane?
0. No  
1. Yes
- 3.10** Is there any bicycle infrastructure on the road within -100 meters of this site, on the cyclist's side of the road?
- [check all that apply]*
- [For signs only, can bicycle symbols be seen from here?]*
- [If dedicated bicycle lane, with solid line(s)]*
- Bicycle symbols on signs [with street name or separate sign]
  - Bicycle symbols on road
  - Bicycle "sharrows" on road
  - Shared bicycle and bus/HOV lane
  - Dedicated bicycle lane, demarcated with dotted line(s)
  - Dedicated bicycle lane, demarcated with solid line(s)
  - Other *[specify: \_\_\_\_\_]*
  - No, none of the above

If there are multiple positions for the bike lane within -100 meters, choose the position of the bike lane closest to the site.

- 3.10.1** If there is a bicycle lane, is it
1. Between the edge of the road and moving vehicles  
2. Between parked cars and moving vehicles  
3. Between two lanes of moving vehicles
- 3.10.2** If there is a bicycle lane, what is its direction of travel?
1. One-way, same direction as vehicle traffic  
2. One-way, opposite direction to vehicle traffic  
3. Two-way, no lane demarcation for cyclists travelling in opposite directions  
4. Two-way, line demarcating separate lanes for cyclists in each direction  
5. Two-way, barrier or curb demarcating separate lanes

- 3.11** Are any of the following features present on the **road** within -100 meters of this site, or at the nearest intersection (nearest intersection must be within 200 m of site)?
- [check all that apply;]*
- Speed humps or bumps
  - Rumble strips
  - Raised within-block median *[including street car island]*
  - Bike-permeable median at intersection
  - Traffic circle or roundabout
  - Traffic diverter, e.g., "right turn only"
  - Planters restricting road
  - Corner bulge, restricting road
  - Other *[specify: \_\_\_\_\_]*
  - No, none of the above

Single features should only be indicated **once** on this list. Please choose the one that best reflects the feature. Can include bollards as "other".

- 3.12** What is posted speed limit on the road?
- [Check back -100 meters of site, along cyclist's direction of travel.]*
- \_\_\_\_\_ km/h *[if not posted, 20 km/h on back alleys, 50 km/h on local and arterial streets, 80 km/h on highways or expressways]*

3.13 What is the average measured speed of motor vehicles on the road?

km/h

*[Measure 5 times facing traffic with vehicle at normal operating speed for this infrastructure. If at traffic light, measure when light goes green. If at a stop sign, measure accelerating or decelerating traffic.]*

Radar gun registers top speed during cycle with trigger depressed. May capture several cars this way; this is not a problem. Best to aim at license plates, and keep hand steady. When there is **insufficient traffic**, stay minimum of 5 minutes (when there have been no cars for entire Site Observation), maximum of 10 minutes (when there is some traffic).

**Emphasize traffic likely to affect cyclist.**

If a **residential local street**, both directions likely important. If street with **centre median**, traffic on cyclists side only is important.

3.14 How wide are the following?

*[Measure road width before elements that change the width of the road, e.g., corner bulges, turn lanes, diverters; don't look at trundle wheel; choose safe place and time; cross at corner crosswalks where possible; can use sightlines to estimate different start and endpoints than those at cross-walk; all to 1 decimal place; where meet curb, add 0.15 meters to measurement of each curb; 0 meters if not present]*

**Road** \_\_\_\_\_ meters *[include bike lanes, parking lanes, paved shoulders, raised median]*

**Total marked paved shoulder** \_\_\_\_\_ meters

**Total marked bike lane** \_\_\_\_\_ meters

**Total raised median** \_\_\_\_\_ meters

You may come across **areas with no curbs, where the surface of the road appears to extend from buildings on one side of the street to buildings on the other side** of the street. An example is Granville Island in Vancouver.

If cars can reasonably go anywhere in this width (including for parking), then this is the full width of the road. If there are bollards, benches or other features blocking this full width for cars, measure only that width where cars can travel or park.

3.15 What is the traffic count on the **road** in 5 minutes? \_\_\_\_\_ Motor vehicles  
 [total traffic in both directions; \_\_\_\_\_ Bicycles  
 stand on one side of road, look across, count  
 traffic passing through slice of road only]

TYPE OF TRAFFIC	COUNT	
Motor vehicles, including cars, SUVs, vans, motorcycles, scooters, buses, streetcars, trucks	<div style="border: 2px solid red; padding: 10px;"> <p>Use "4 dots connected with 6 strokes" system when traffic <b>can be recorded individually</b>.</p> <p><b>When traffic too heavy for individual recording</b>, count 10 vehicles at a time, with one stroke per 10.</p> <p><b>When traffic too heavy to count both directions at once</b>, do one 5-minute count per direction, one in each count box.</p> <p>May also need separate 5-minute count for bicycle traffic.</p> </div>	
Bicyclists, including electric bikes  <i>[riding bike]</i>		

# 4. INFRASTRUCTURE: INTERSECTION

## 4.1 Intersection description



1. 3-way, intersecting road to right of cyclist [Figure 1a]
2. 3-way, intersecting road to left of cyclist
3. 3-way, T-intersection [Figure 1b]
4. 4-way
5. > 4-way
6. Other [specify: \_\_\_\_\_]

## 4.2 Type of traffic control

1. Uncontrolled
2. Traffic circle
3. Stop sign, on one road only
4. Stop sign, on all roads
5. Crossing guards
6. Traffic light, with no controls for cyclists
7. Traffic light, with controls for cyclists [including bike signal light, push button, or in street sensors]
8. Crosswalk light only

## 4.3 Other intersection features

[check all that apply]

Collect data for **all roads intersecting** at this point.

**Single features** should only be indicated **once** on this list. Please choose the one that best reflects the feature.

- Right-turn lanes for motor vehicles [Number: \_\_\_\_\_]
- Left-turn lanes for motor vehicles [Number: \_\_\_\_\_]
- Marked pedestrian crossing [Number: \_\_\_\_\_]
- Pedestrian and/or bike bridge [Number: \_\_\_\_\_]
- Bike box [Number: \_\_\_\_\_]
- Bike-permeable median [Number: \_\_\_\_\_]
- Raised median, not bike permeable [Number: \_\_\_\_\_]
- Corner bulge, restricting road width [Number: \_\_\_\_\_]
- Motor vehicle traffic diverter [Number: \_\_\_\_\_]
- Other [specify: \_\_\_\_\_]
- No, none of the above

## 4.4 If there is a bicycle lane on the route that the cyclist was coming from, what happens to this lane at the intersection?

0. No bicycle lane
1. Bicycle lane no longer present within a 5 meter diameter of intersection
2. Bicycle lane merges with right turn lane within a 5 meter diameter of intersection, or becomes bike permeable
3. Bicycle lane continues to intersection, but not into it
4. Bicycle lane marked through intersection
5. Other [specify: \_\_\_\_\_]

*[The next questions apply to the **street that crosses** the road the cyclist was on or beside prior to entering the intersection.*

*For a cyclist that entered the intersection from the sidewalk or other off-street path beside the road, the cross-street is the road the cyclist crosses; note that this may not be the street the cyclist was riding beside before entering the intersection]*

**4.5** For a cyclist travelling on the road prior to entering the intersection, the cross-street is the one that crosses the road already measured in section 3

**For a cyclist who entered the intersection from a sidewalk or other off-street path beside the road,** the cross-street is the road the cyclist crosses at that intersection. Note that this may not be the street the cyclist was riding beside before entering the intersection. Also note that no Section 3 will have been completed for this site.

6. Expressway

**4.6** Is the motor vehicle traffic on the cross-street one-way or two-way?      1. One-way traffic only  
2. Two-way traffic

**4.7** How many marked motor vehicle through lanes are on the full width of the cross-street?      \_\_\_\_\_ lanes

*[If this changes at different times of day/week, consider injury trip time]*

**4.8** What is the average measured speed of motor vehicles on the road?      \_\_\_\_\_ km/h

*[Measure 5 times facing traffic with vehicles at normal operating speed for this infrastructure. If at traffic light, measure when light green and traffic at full speed. If at a stop sign, can measure accelerating or decelerating traffic.]*

\_\_\_\_\_ km/h

\_\_\_\_\_ km/h

\_\_\_\_\_ km/h

\_\_\_\_\_ km/h

**4.9** How wide is the cross-street?  
[including bike lane, parking lane, & paved shoulder (on the cyclist's side of the street)]      \_\_\_\_\_ meters      *[to 1 decimal place; where meet curb, add 0.15 meters to measurement]*

**4.10** What is the traffic count on the cross-street in 5 minutes?

*[Total traffic in both directions;*

*Stand on one side of cross-street, look across, count traffic passing through slice of street and sidewalk only]*

\_\_\_\_\_ Motor vehicles

\_\_\_\_\_ Bicycles

\_\_\_\_\_ Pedestrians

**TYPE OF TRAFFIC**

**COUNT**

<p>Motor vehicles, including cars, SUVs, vans, motorcycles, scooters, buses, streetcars, trucks</p>		
<p>Bicyclists, including electric bikes</p> <p><i>[riding bike]</i></p>		
<p>Pedestrians and other foot traffic</p> <p><i>[including dismounted cyclists; count one side of street only – the side of the street the cyclist was on when entering the intersection]</i></p>	<div style="border: 2px solid red; padding: 5px; width: fit-content;"> <p>Note, for <b>this</b> pedestrian count only, count one side of the street only.</p> </div>	

## 5. GENERAL ROUTE CHARACTERISTICS [complete for all site types]

5.1 What is the grade of the route?

*[Measure with clinometer, left side of scale; To sight: use tape at eye level on feature 10 to 20 meters away, unless grade changes before that]*



\_\_\_\_\_ degrees

*[Mark - = negative if cyclist travelling in downhill direction  
+ = positive if cyclist travelling in uphill direction]*

5.2 How far back is the route visible (in the direction the cyclist came from)?

*[Consider effect of permanent features only, including curves, hills, trees;*

*Stand at site, look back towards direction cyclist was coming from.]*

1. < 5 meters
2. 5 to < 10 meters
3. 10 to < 20 meters
4. 20 to < 50 meters
5. 50 to < 100 meters
6. ≥ 100 meters

Ensure grade **direction** is marked.

5.3 Within a 5 meter diameter of the site, are there streetcar or railway tracks on the surface the cyclist was on?

0. No
1. Yes, perpendicular to direction of travel
2. Yes, parallel to direction of travel
3. Yes, oblique to direction of travel
4. Yes, multiple angles to direction of travel

5.4 Within a 5 meter diameter of the site, what is the quality of the surface the cyclist was on?

*[choose worst case]*

2 cm \_\_\_\_\_

5 cm \_\_\_\_\_

1. Smooth
2. Pitted, bumps, broken pavement (2-5 cm)
3. Potholes or bumps (> 5 cm)

Estimate.  
Do **not** go onto road to measure.  
Do **not** include street car tracks in answer to 5.4.

5.5 Within a 5 meter diameter of the site, are any of the following on the surface the cyclist was on?

*[for debris, consider whether it is a quantity likely to be bothersome to cyclists]*

*[check all that apply]*

- Leaves
- Glass
- Sand
- Gravel
- Papers
- Sewer grates
- Manhole covers
- Construction holes
- Metal / wood plates covering construction
- Puddles of water
- Ice
- Snow
- Other *[specify: \_\_\_\_\_]*
- No, none of the above

Some items to be included as "**Other**": expansion joints, curbs, concrete dividers, bollards, benches, sign posts, parked bikes.

5.6 Is the site on a bridge, or in an underpass or tunnel?

- 0. No
- 1. Yes, on a bridge
- 2. Yes, in an underpass or tunnel

5.7 Is there "street" lighting on the route within view of this site, i.e., unobscured?

- 0. No
- 1. Yes

[If yes]



5.7.1 How far from the site is the **nearest unobscured** light?

*[approximate with trundle wheel]*

- 1. < 5 meters
- 2. 5 to < 10 meters
- 3. 10 to < 25 meters
- 4. 25 to < 50 meters
- 5. ≥ 50 meters

5.8 What are the land uses within -100 meters of this site, along both sides of the cyclist's route?

*[check all that apply]*

*[Consider property adjacent to road or path.]*

- Residential, detached houses
- Residential, townhouses
- Residential, low rise apartments [ $\leq 4$  stories high]
- Residential, high rise apartments
- Park, playing field, golf course, cemetery, empty lot, green space
- Shopping mall
- Local business/shopping district, i.e., low rise
- Downtown business/shopping district, i.e., high rise
- Surface parking lot
- Parking garage
- Air, rail, or road transport depot
- Industry or factory
- Institutional: elementary or secondary school
- Institutional: college or university
- Institutional: stadium
- Institutional: church, recreation, community centre
- Institutional: hospital or government buildings
- Agricultural or other rural
- Construction site
- Freeway entrance or exit
- Waterway: river, lake, ocean
- Above or below ground, e.g., on bridge or in tunnel

**Theatres and hotels** would be marked as local or downtown **business/shopping district**, depending on whether the buildings are low rise or high rise. **Uses not indicated here** can be included in Question 5.10.



