

## Street Design Direct Observation

### Introduction

This tool and protocol were developed by the evaluation team from Transtria LLC (Laura Brennan, PhD, MPH, Principal Investigator; Allison Kemner, MPH; Tammy Behlmann, MPH; Jessica Stachecki, MSW, MBA; Carl Filler, MSW) and Washington University Institute for Public Health (Ross Brownson, PhD, Co-Principal Investigator; Christy Hoehner, PhD, MSPH) as well as feedback from national advisors and partners. This tool and protocol were adapted from the System for Observing Play and Leisure Activity (SOPLAY) and System for Observing Play and Recreation in Communities (SOPARC) tools, protocols, and operational definitions.

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### Prior to conducting the observations

#### Safety

- Assess the safety of the environment for observing before entering the area:
  - If dangerous or suspicious activities are taking place, leave the premises, notify the Project Director or Coordinator, and determine whether to schedule a new observation.
  - If weather conditions (ice or snow, thunder or lightning) are not ideal for collecting data, leave the premises, notify the Project Director or Coordinator, and determine whether to schedule a new observation period.

#### Items to remember

- Pencils, a copy of the paper tools for all data collectors, clipboards
- Comfortable shoes, umbrella (if it's raining), sunscreen
- Data collectors' contact information (in case of emergency)
- List and map of sites for data collection, identifying boundaries of the area
- Letter from the Project Director or Coordinator explaining the reason for data collection
- Transportation to and from the site for observers, if needed

### Direct Observation schedule

Recommended timeframe for observations:

- Count street users crossing an imaginary plane for 15-30 minutes.
- Counts should last for 30 seconds to 1 minute (depending on the number of people in the area).
- There should be a 1 minute rest between recorded observations.

Schedule observations at different times of the day (2-3 times per day recommended). Example times:

- Morning (7:30 AM)
- Noon (11:30 AM)
- Afternoon (3:30 PM)
- Evening (6:30 PM)

Schedule observations for multiple times a week (2-3 days recommended). Example schedules:

- Two weekdays (Monday through Friday) and one weekend day (Saturday and Sunday)
- Example: Tuesday, Thursday, Saturday

### Street Design Direct Observation Mapping Table (Instruction Sheet)

The purpose of mapping is to record various features on different street segments or intersections. Completing the map will allow for a better understanding of the individual behaviors observed in the designated street segment or intersection.

Before observing activities, recorders should have knowledge of the segment or intersection where they are going to conduct observations. A rough sketch should be made of the overall street (and if it has been divided into areas for different observers as necessary). Each segment, intersection, or area should be numbered on the sketch. In addition, all permanent structures and natural and constructed boundaries should be recorded in the sketch. A copy of the sketch should be retained for reference during data analysis.

Below you will find detailed descriptions for each column within the Street Design Mapping Table.

**Street segment or intersection:** All descriptive details about the street(s) should be easily referenced between the sketched map and the Mapping Table. From the sketched map, place the area number in the first column of the Mapping Table and follow the row across to complete all categories. [Note: The area numbers will also be referenced in the second sheet: "Street Design Direct Observation tool."]

**Setting:** Record whether the area is a street segment, intersection, or other thoroughfare (specify).

**Type:** Record the types of facilities to support active transportation or recreation (i.e., non-motorized). Choose from the following categories.

- Trail/greenway: A designated trail or greenway for active transportation or recreation immediately adjacent to the segment or intersection.
- Sidewalk: A continuous, designated walking route through the segment or intersection.
- Bike lane or sharrows: A continuous, designated biking route through the segment or intersection.
- Public transit: A sign, bench, or covered shelter indicating the availability of public transportation in the segment or intersection.
- Other (specify): Record any other type of facility that supports active transportation or recreation not specified above.

**Condition:** This section provides basic descriptive information about the designated segment or intersection.

- Accessible: Segment or intersection is not restricted from public use (e.g., sidewalk is not blocked off for construction).
- Usable: Segment or intersection is safe for pedestrians (including wheelchairs, walkers, and strollers), bicyclists, and public transit users (e.g., no high speed traffic).
- Amenities: Segment or intersection has public drinking fountains, restrooms, benches, trash bins, shade trees, or other characteristics to facilitate public use of the segment or intersection.
- Other (specify): Record any other descriptive information not specified above.

**Intervention:** Record the specific intervention changes that assist children in walking, biking, or using public transit in this segment or intersection. This will include modifications such as street markings (e.g., sharrows, bike lanes), sidewalk or street improvements (e.g., curb cuts, speed humps), and signage (e.g., "Share the Road," pedestrian crossing). **Do not** record temporary improvements such as portable speed trailers.

Street Design Mapping Table

Street or Intersection Name: \_\_\_\_\_ Observer Name: \_\_\_\_\_

Community Partnership: \_\_\_\_\_ Weather Condition: \_\_\_\_\_ Date: \_\_\_\_\_

Segment/ Intersection	Setting	Type	Condition	Intervention
1	<input type="checkbox"/> Street Segment <input type="checkbox"/> Intersection <input type="checkbox"/> Other:	<input type="checkbox"/> Trail/greenway <input type="checkbox"/> Sidewalk <input type="checkbox"/> Bike lane <input type="checkbox"/> Public transit <input type="checkbox"/> Other:	<input type="checkbox"/> Accessible <input type="checkbox"/> Usable <input type="checkbox"/> Amenities <input type="checkbox"/> Other:	
2	<input type="checkbox"/> Street Segment <input type="checkbox"/> Intersection <input type="checkbox"/> Other:	<input type="checkbox"/> Trail/greenway <input type="checkbox"/> Sidewalk <input type="checkbox"/> Bike lane <input type="checkbox"/> Public transit <input type="checkbox"/> Other:	<input type="checkbox"/> Accessible <input type="checkbox"/> Usable <input type="checkbox"/> Amenities <input type="checkbox"/> Other:	
3	<input type="checkbox"/> Street Segment <input type="checkbox"/> Intersection <input type="checkbox"/> Other:	<input type="checkbox"/> Trail/greenway <input type="checkbox"/> Sidewalk <input type="checkbox"/> Bike lane <input type="checkbox"/> Public transit <input type="checkbox"/> Other:	<input type="checkbox"/> Accessible <input type="checkbox"/> Usable <input type="checkbox"/> Amenities <input type="checkbox"/> Other:	
4	<input type="checkbox"/> Street Segment <input type="checkbox"/> Intersection <input type="checkbox"/> Other:	<input type="checkbox"/> Trail/greenway <input type="checkbox"/> Sidewalk <input type="checkbox"/> Bike lane <input type="checkbox"/> Public transit <input type="checkbox"/> Other:	<input type="checkbox"/> Accessible <input type="checkbox"/> Usable <input type="checkbox"/> Amenities <input type="checkbox"/> Other:	
5	<input type="checkbox"/> Street Segment <input type="checkbox"/> Intersection <input type="checkbox"/> Other:	<input type="checkbox"/> Trail/greenway <input type="checkbox"/> Sidewalk <input type="checkbox"/> Bike lane <input type="checkbox"/> Public transit <input type="checkbox"/> Other:	<input type="checkbox"/> Accessible <input type="checkbox"/> Usable <input type="checkbox"/> Amenities <input type="checkbox"/> Other:	

**Street Design Direct Observation Instruction Sheet**

Use the following codes and definitions to assist you in completing the observation tool.

**Observers:** Observers will be split into groups of two to observe different segments, intersections, or parts of segments and intersections (depending on volume of users) at the same time. See the example below that corresponds with the segments and intersections on the Street Design Mapping Table.

Segment 1:	Observer 1
	Observer 2
Segment 2:	Observer 3
	Observer 4

**Start Time:** This is the clock time for the beginning of each observation period. Each observation will last the same amount of time (with the length of time dependent on the number of individuals within the observed area) with a one minute break in-between observations to record (see below for an example). In the first column, record the start time for each period of observation.

Period 1:	Minute 1 – Observation
	Minute 2 – Break/Record
Period 2:	Minute 3 – Observation
	Minute 4 – Break/Record
Period 3:	Minute 5 – Observation
	Minute 6 – Break/Record

**Map:** Before observation begins, the observers will split the street into sections (e.g., segments and intersections) and each observer will be responsible for observing his/her section. The observers should record the appropriate number in the second column of the observation tool.

**Counting:** When counting users in the segment or intersection, the observer should identify an imaginary plane in front of them. Each time a user crosses that plane, the observer should complete the observation tool by tallying activity by age group, in addition to reporting the activity codes for the age group. Try to count each individual only one time, recording the activity code and intensity level (see below). [Note: the imaginary plane should only include one side of the segment or intersection to increase accuracy of the counts, particularly along busy thoroughfares. In addition, individuals passing back-and-forth should only be counted once, if possible.]

**Ages:** Each age category has its own count. Please provide the number of individuals represented during the observation period participating in different intensity levels of activity and their specific activity (i.e., activity code).

**Activity Level:** During counts of individuals passing through the imaginary plane, all people should be accounted for as either participating in very active, moderate, or sedentary behaviors. Mark a tally for each individual in the proper activity level and age box (i.e., if you see a 14 year old walking, put a tally mark in Moderate under Adolescents).

- **Sedentary** behaviors are defined as activities in which people are not moving (e.g., standing, sitting).
- **Moderate** intensity behaviors require more movement but no strenuous activity (e.g., walking, biking slowly).
- **Very active** behaviors show evidence of increased heart rate and inhalation rate (e.g., running, biking vigorously, playing basketball).

**Activity Codes:** During counts of individuals passing through the imaginary plane, all people should be accounted for as participating in a specific activity. All codes are labeled at the bottom of the observation tool.

