



Pedestrian Environment Data Scan

AUDIT PROTOCOL

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Audit Protocol written by Andrea D. Livi -Spring 2004; modified by Tracy E. McMillan – Summer 2006. Modified for Mexico, June 2012.

GENERAL DIRECTIONS:

Surveyors will go out each day with their team. Surveyors will notify a supervisor upon departure and return from the field. A map of segments and a list of segments will be given each morning to direct surveyors regarding which segments they should survey. Surveyors will return to the research office each day to record completed entries into the computer. In case of inclement weather, the audit team and supervisor will assess the situation and decide whether surveying should be postponed.

SUPPLIES:

- Map of area with segments detailed
- Master list of segments
- Audit sheets (enough for the number of segments detailed on map x 2—extras are always good to have on hand)
- Water
- Hat/Visor
- Sunscreen
- Telephone
- Pencils

PROCEDURE FOR EACH SEGMENT

- At each street segment, assess the safety before getting out of the car.
- If anything looks dangerous or suspicious, write a note and report to Project Manager. Move onto the next safe street assessment option.
- If there is a street that is not on the list, collect data for it in a blank Pedestrian Environment Data Scan form. Include street name and address.
- If there is a street that starts inside the 1/2 mile diameter boundary and extends beyond the boundary, then that street should be fully surveyed.
- Make sure you locate the beginning and endpoint of the street segment. Look at the map to find the information
- Walk the segment once **WITHOUT** writing anything on the survey form. You should look around in all directions, without forgetting to look up and down as well.
- Walk the segment again, this time while filling out the survey (as explained below). Go back and forth as often as necessary in order to fill in each question. Make sure you are in agreement with your teammate about your choices.
NOTE: The audit only consists of “check” (boxes) and “fill in number” (line) questions. For the numeric answer, use integers only. If you need to round the number, always round up.
- When you have filled each question, go over the entire survey again to make sure you have completely answered the form and that you are satisfied with your answers (in the paper audit, this means you will have at least one check mark per cluster of boxes). You can then move on to the next segment, following the same procedure.
- Make sure to record any modifications such as street segments that are merged or do not exist. Also, make note of any questions or problems that arose while surveying the segment in the additional comments section.

COMPLETING THE TOP SECTION OF THE PEDS FORM:

Name = Name of Assessor

Date = Date of Data Collection

Neighborhood = School ID

Street Segment Number = 4 digit number

Time = record starting and ending time of data collection

Weather = weather condition at time of assessment (ie: clear, cloudy, partly cloudy)

QUESTION BREAKDOWN:

The following section of the protocol describes each question and response category to aid the administrators in dealing with variations in the environment. The administrators are encouraged to read through this section and use it as a reference while surveying the segments. For each question, the name and number are in **bold**, the answer options are in *italics* and the comments, definitions or directions in regular text.

SECTION 1: SEGMENT NUMBER & TYPE

1. Segment Type

Answer Options

Low volume road – audit both sides

High volume road – audit this side only

Bike or ped path – skip section C

Generally, high volume roads will be the main roads that carry approximately 5,000-10,000 cars per 24 hour period (what traffic engineers call arterials and collector streets), while moderate to low volume roads will be residential streets carrying less than 5,000. As an example near the UH campus, Cullen and Scott are high volume roads. The residential street that we assessed (Rosedale) is a low volume road. We do not make this determination based on number of lanes.

High volume roads will only be audited on one side for all questions except question 3: Segment Intersections (count ALL intersections) and 15: Number of Lanes (count ALL lanes).

SECTION A: ENVIRONMENT

2. Uses In Segment

Count EVERY USE within the segment. That is: every use within the boundary formed by making a right-angle line from the beginning and end of the segment. Uses only count if there is access to it in the segment, like a driveway, walkway, or entrance. Access to a back door or a loading dock would count as access. Abandoned buildings do not qualify as vacant. Instead, count them under their intended use.

Answer Options

Housing – Single Family Detached

Housing – Multi-Family: attached housing, apartments, duplexes.

Housing – Mobile Homes

Office/Institutional: office parks, corporate campuses, public buildings, schools, churches, hospitals etc. This also includes professional offices in residential buildings (dentist, lawyer, doctor, accountant, etc.)

Restaurant/Café/Commercial: restaurants, stores, malls, gas stations etc.

Industrial: factories, mills, industrial complexes, etc.

Vacant/Undeveloped: cleaned or cleared off lots, naturally occurring vegetation, natural features such as lakes and rivers.

Recreation: parks, golf courses, basketball courts etc. Official pedestrian paths coming off a segment can count as recreation.

Surface parking lot

School

Areas of worship

SECTION B: PEDESTRIAN FACILITY

If there is no pedestrian facility in the segment (i.e., if you cannot answer question 4), skip to section C

Note: An incomplete sidewalk in front of a residential home or commercial center counts if it looks as though it was built by the city or by the developer per city requirements.

3. Type(s) of Pedestrian Facility (check all that apply)

Answer Options

Footpath (worn dirt path)

Paved Trail: a paved trail is any paved walkway that is not associated with a roadway.

Sidewalk: a walkway will only be considered a sidewalk if it is associated with a roadway.

Pedestrian Street (closed to cars)

NOTE: The rest of the questions in this section refer to the BEST pedestrian facility selected above.

4. Path Condition/Maintenance

Answer Options

Poor (many bumps/cracks/holes): A sidewalk will be considered “poor” if a stroller cannot be pushed along the sidewalk without significant jarring motions and/or if it clearly needs to be replaced (patches would not be sufficient)

Fair (some bumps/cracks/holes): A sidewalk will be considered “fair” if a stroller can easily be pushed along the sidewalk with few jarring motions to the passenger and/or it only needs patches or other minor repair.

Good (very few bumps/cracks/holes): A sidewalk will be considered “good” if a stroller can easily be pushed along the sidewalk without jarring motions to the passenger and/or it needs no repair at this time.

Under Repair: A sidewalk will only be considered “under repair” if there is evidence of work being done to improve the sidewalk. Orange cones are not enough. If construction work is being done adjacent to the sidewalk, blocking it off as a result, it is considered “under repair.”

5. Path Obstructions (check all that apply)

NOTE: An object is only a path obstruction if it severely reduces or completely blocks off the pedestrian facility. Threshold: Could you get by in a wheelchair or while pushing a stroller?

For this question, you are looking at potential obstructions on ALL pedestrian facilities on the street. In other words, if there are two sidewalks and only one has obstructions, please write down those obstructions.

Answer Options

Poles or Signs

Parked Cars: cars in driveways that block the sidewalk should be counted.

Garbage Cans

Vegetation

Other

None

6. Buffers between road and path (check all that apply)

Answer Options

Fence

Trees: trees are only a buffer if they are part of a landscape/grass buffer or if they occur regularly enough on the street to discourage pedestrians from walking along the roadway. Trees within a grass buffer count as a buffer.

Hedges

Landscape (flower beds, gravel, etc.)

Grass

None

7. Path connectivity to other sidewalks

This refers to the number of connections the segment sidewalk has to other sidewalks at the intersection corners (i.e., if you cross the street at the intersection to another corner, will you connect with a sidewalk, or at the intersection can you turn and continue on a sidewalk without crossing the street?). This will be scored as follows:

At the beginning of the segment, looking behind you, to your left and to your right: how many sidewalk connections are there?

At the end of the segment, looking ahead of you, to your left and to your right: how many sidewalk connections are there?

In the middle of the segment: are there mid-block crosswalks that allow you to connect to a sidewalk on the other side of the street?

These three scores should be added to make up the connectivity score. A very well connected segment will have a score of six plus any crosswalks that may exist along the segment.

SECTION C: ROAD ATTRIBUTES

NOTE: skip this section if answered Bike or Ped path for Questions 0 (segment type)

8. Number of Lanes

Minimum number of lanes to cross

Maximum number of lanes to cross

Count ALL lanes (even if it is a high volume road), including turn only lanes and/or “suicide lanes” one would need to cross the road at its widest point along the segment.

9. Posted Speed Limit

Answer Options

None Posted

(kph):

Check the “none posted” box unless there is a sign WITHIN the segment that displays the speed limit. Even if there is a sign outside the segment, within plain view, it does not count.

10. Traffic Control Devices (check all that apply)

Count only the traffic control devices within the segment, not those that are visible but outside the segment (they will be captured when the next segment is surveyed.)

Answer Options

Traffic Light

Stop Sign

Traffic Circle: count this for all the segments that go into the circle. Triangular traffic control devices can also be counted under this category.

Speed Humps/Bumps

Mid-block island/chicanes/chokers: chicanes are a series of narrowings or curb extensions that alternate from one side of the street to the other forming S-shaped curves. Chokers are curb extensions at midblock or intersection corners that narrow a street by extending the sidewalk or widening the planting strip.

None

11. Crossing Aids (check all that apply)

Answer Options

Yield to Pedestrian Paddles in middle of street

Pedestrian Signal at intersection

Median/Traffic Island in middle of road: may serve as pedestrian refuge on wide roads

Curb Extension: extends the sidewalk surface/curb into the intersection to shorten the crossing distance for pedestrians

Overpass/Underpass

Pedestrian Crossing Street Sign: street sign without flashing light. Children at play signs can also be included here. Yield signs for cars do not count.

Flashing Warning

Share the Road Warning

None

12. Bicycle Facilities (check all that apply)

Answer Options

Bicycle route signs

Striped bicycle lane designation

Visible bicycle parking facilities (racks, etc): these facilities must be useable by the public, not for private use only

Bicycle crossing warning

No bicycle facilities

SECTION D: WALKING/CYCLING ENVIRONMENT

13. Roadway/Path Lighting

Answer Options

Road-oriented lighting: there are public light fixtures that aim light at the road or are very high and illuminate broad expanses.

Pedestrian-scale lighting: there are public light fixtures that aim light at the walking path.

Other lighting: lighting from stores, apartments etc. that lights the road and/or pedestrian path.

No Lighting: there is no artificial lighting in the area.

24. Amenities (check all that apply)

Must be for public use. Also, visible and accessible from the pedestrian path.

Answer Options

Garbage Cans: only public use garbage cans count. Residential garbage cans do not count.

Benches

Water Fountain

Street Vendors/Vending Machines: this includes soda machines, candy machines, public pay phones, mailboxes and newspaper dispensers.

No Amenities

15. Overall Street Cleanliness and Building Maintenance

Leaves, branches, and brush all count towards cleanliness based on the amount and if it is clearly visible and in the pedestrian path.

Answer Options

Poor: there is noticeable garbage, graffiti and/or broken facilities along the segment.

Fair: there is some litter graffiti or broken facilities.

Good: there is no graffiti, litter or broken facilities in the segment.

16. Physical difficulty for walking

Answer Options

Easy: it is possible to walk on this segment for a person with physical limitations.

Moderate: there are some obstructions limiting the ease of walking in this segment.

Difficult: a person with physical limitations could not walk this segment.

17. Finding your way around the neighborhood

Evaluate the overall ease of navigating your way around in this neighborhood. Take into account way finding aids (e.g. street signs) or maps.

Answer Options

Very Easy

Fairly Easy

Not Easy at all: it is very likely to get lost in this neighborhood

18. Presence of Physical Disorder

Answer Options

1= None

2= A few (1-3)

3= Some (4-6)

4= A lot (≥ 7)

For each segment, rate how much physical disorder is visible for the following elements:

How much graffiti is on the buildings, signs or walls? _____

How many buildings have broken windows? _____

How many buildings have boarded up windows? _____

SECTION SA: SUBJECTIVE ASSESSMENT

Answer Options

1 = Strongly Agree

2 = Agree

3 = Disagree

4 = Strongly Disagree

*Segment... .. is attractive for walking ... is attractive for cycling ... feels safe for walking ...
feels safe for cycling*

Response to the “attractive” question should answer the question: “would you want to walk/bike this segment?” This includes finding the area aesthetically pleasing and existence of destinations.

Response to the “safe” question for walking should take into consideration not only walking along the sidewalk but crossing the street. The administrator should think of walking the segment with a 10 year old child. Would a child be safe walking the segment?

Response to the “safe” question for cycling should take into consideration road attributes. A segment can only score a 1 in this question if the traffic goes below 25 miles an hour or there is a formal bicycle lane present.

ADDITIONAL COMMENTS: use this section to note anything that is not captured easily on the assessment checklist

Questions? Contact Rebecca E. Lee, PhD, at releephd@yahoo.com.

The Pedestrian Environment Data Scan (PEDS) was originally developed by Kelly J. Clifton, Ph.D. Urban Studies and Planning Program, National Center for Smart Growth, University of Maryland. It has been modified for use on the HIP and RWJF Houston projects.