

# HOUSING PASSPORT METADATA

This document provides definitions for all attributes. The availability of attributes differs per AOI. Some file formats may truncate the attribute title.

## BUILDINGS

TITLE	ATTRIBUTE	DESCRIPTION
<b>General/government information</b>		
address	street address	street address
aoi	Area of Interest	Area of Interest
block	block	block
geohash	geohash	alphanumeric string to encode geographic coordinates
count	number of tax records	number of tax records available per building
id	building ID	building ID in database
pt_avg	average property tax	average property tax per building
pt_avg_owed	average property tax owed	average property tax owed (cumulative balance including prior years)
pt_sum	sum of property tax	sum of property tax per building
pt_sum_owed	sum of property tax owed	sum of property tax owed (cumulative balance including prior years)
<b>Drone</b>		
d_area	roof area (m2)	estimated roof area in square meters
d_avg_height	height (m)	Average (mean) height of the building in meters derived from the rooftop polygon and the digital height information derived from the drone. Calculated using zonal statistics.
d_condition	roof condition	Roof condition is based on construction appearance, such as patching and coloring (rust). <b>good:</b> new, well-constructed (no holes) and very minimal patching or discoloration. <b>fair:</b> roof is patched or discolored, but still sturdy; may look old or drab but seems livable and not precarious. <b>poor:</b> lots of patching, holes, items to hold it down, or bags to stop leaks. Otherwise, the building may be <b>under construction</b> or <b>vacant</b> .
d_material	roof material	<b>concrete:</b> more than 50% of the rooftop is visibly concrete. <b>metal:</b> vast majority of the rooftop is covered in metal (70-90%). <b>mixed:</b> multiple materials used to cover the roof and keep the inhabitants dry. Typically, this is less than 50% concrete. <b>tile:</b> more than 50% of the rooftop is clay tile or metal tile. <b>other:</b> tent or tarp material.
d_slope	ground slope (degree)	average (mean) slope of the ground in degrees underneath the roof
d_volume	volume (m3)	estimated volume of building in cubic meters
<b>Street view</b>		
sv_complet	complete	construction status of the building: <b>complete</b> or <b>incomplete</b>
sv_condit	wall condition	<b>good:</b> new construction and sturdy. <b>fair:</b> sturdy but shows signs of aging. <b>poor:</b> dilapidated, temporary, self-built, or not well-maintained. The predominant construction type is organized into the following categories. <b>unreinforced masonry:</b> refers to buildings made from brick, stone or concrete blocks that appear from the outside to be missing concrete columns or beams (or both). Other examples include buildings made from adobe or constructed using timber or wooden frames. <b>reinforced masonry:</b> refers to buildings with confined masonry or concrete frames, which may be called reinforced masonry in some countries. Reinforcement components such as rebar inside of blocks are not always possible to determine from street view analysis but at times, particularly when buildings are 'incomplete' rebar is visible. <b>unknown:</b> unknown
sv_constru	construction	
sv_design	designed	<b>designed:</b> building designed at one time; <b>undesigned:</b> building designed incrementally
sv_door	doors	number of doors
sv_garage	garages	number of garages
sv_materia	wall material	<b>brick or concrete block; plaster; wood - polished; wood - crude/plank; adobe; corrugated metal; stone with mud/ashlar with lime or cement; container/trailer; plant material; mix/unclear/other</b>
sv_securit	extra security	<b>secured</b> or <b>unsecured</b>

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sv_use	building use	<p><b>residential:</b> used solely for residential purposes.</p> <p><b>commercial:</b> used for commercial purposes, such as a store.</p> <p><b>critical infrastructure:</b> used for public purposes, such as education, government, public services, health care, religion, banks or other public infrastructures.</p> <p><b>non-residential:</b> used for commercial or public purposes, such as education, government, public services, health care, religion, banks or other public infrastructures.</p> <p><b>mixed:</b> used for residential and non-residential purposes. A common case is a mini-market on the first floor and residential housing above.</p>
sv_vintage	vintage	estimated era of building construction: 1) <b>pre-1940</b> , 2) <b>1941-1974</b> , 3) <b>1975-1999</b> , 4) <b>2000-present</b>
sv_window	windows	number of windows
<b>Hazards</b>		
hz_earthqu	earthquake risk	<b>1</b> =very low, <b>2</b> =low, <b>3</b> =medium, <b>4</b> =high, <b>5</b> =very high
hz_flood	flood risk	<b>1</b> =very low, <b>2</b> =low, <b>3</b> =medium, <b>4</b> =high, <b>5</b> =very high
hz_landslide	landslide risk	<b>1</b> =very low, <b>2</b> =low, <b>3</b> =medium, <b>4</b> =high, <b>5</b> =very high
hz_tsunami	tsunami risk	<b>1</b> =very low, <b>2</b> =low, <b>3</b> =medium, <b>4</b> =high, <b>5</b> =very high
hz_wind	wind risk	<b>1</b> =very low, <b>2</b> =low, <b>3</b> =medium, <b>4</b> =high, <b>5</b> =very high
<b>Analysis/field work</b>		
cap_payment	payment capacity	Capacity of payment from households: maximum household annual income=( <u>estimated value</u> /5). Estimated value can be modeled from field surveys. This is for illustrative purposes.
dem_insur	home insurance	Demand for home insurance premiums: <b>yes</b> , if <u>total quality</u> =good or very good; all other demands=no AND <u>general value</u> =medium or high. Otherwise, <b>no</b> . General value can be calculated from the total quality and building volume, determined per AOI. This is for illustrative purposes.
dem_micro	home microfinance	Demand for home improvement microloans: <b>yes</b> , if ONLY demand for <u>quality improvement</u> =yes and <u>structural improvements</u> =yes; and <u>capacity of payment</u> > US\$10,000. This is for illustrative purposes.
dem_reset	resettlement	Demand for resettlement: <b>yes</b> , if any hazard=5; total quality=poor or very poor. Otherwise, <b>no</b> .
dem_struct	structural improvement	Demand for structural improvement: <b>yes</b> , if earthquake <u>hazard</u> is 3 or lower AND flood, landslide or wind <u>hazard</u> is between 0 and 4 AND <u>construction type</u> =unreinforced masonry or reinforced masonry AND <u>soft story</u> =yes AND <u>total quality</u> =good or fair. Otherwise, <b>no</b> .
dem_qualit	quality improvement	Demand for quality improvement: <b>yes</b> , if <u>hazards</u> are below 5 AND <u>construction type</u> =reinforced masonry AND possible <u>soft story</u> =yes AND <u>total quality</u> =fair, poor or very poor. Otherwise, <b>no</b> .
extra_attrs	extra attributes	General purpose field where extra data may be added such as from a survey. Recommended to export as a geopackage to view.
infrastruc	access to paved roads	Is the building within 10 m of a paved road? <b>1</b> =yes, <b>0</b> =no
K3	COVID-19 index	The COVID-19 index locates the bottom-40 and bottom-10 vulnerable households at the block level. Variables correspond to overcrowding, age, illness, disability, and access to water, sewerage, electricity, and internet. Values range from 1-3 with 1 being most vulnerable. If all K3 values=3 in export the index is not available for AOI.
land_publi	public land	Is the building on public land? <b>1</b> =yes, <b>0</b> =no
land_servi	access to services	Is it possible to bring public services? For example, is there a bus stop within 400 m (five minute walk)? <b>1</b> =yes, <b>0</b> =no
opp_expansion	expansion	Opportunity for expansion: <b>yes</b> , if <u>building height</u> is less than 3 m AND within 200 m of <u>greenspace</u> AND within 10 m of <u>paved road</u> . Otherwise, <b>no</b> .
park	greenspace	Does this building have good access to greenspace? i.e. is it walking distance or less than 200 meters from a park? <b>1</b> =yes, <b>0</b> =no
soft_story	soft story	Is this a potential soft story building? For example, the <u>building height</u> is at least 7.5 meters AND has at least one garage AND at least two windows. Other calculations are possible. <b>1</b> =yes, <b>0</b> =no
tot_qualit	total quality	<p>Determined by comparing the roof and wall condition derived from drone and street view imagery. If roof and wall condition are not the same designation (good, fair or poor), the lower value of the two is taken.</p> <p><b>very good:</b> if both roof and wall condition are good.</p> <p><b>good:</b> if roof or wall condition is good and the other is under construction, vacant or otherwise unknown.</p> <p><b>fair:</b> if both roof and wall condition are fair; or if one is fair and the other is good, under construction, vacant or otherwise unknown.</p> <p><b>poor:</b> if roof or wall condition is poor and the other is good, fair, under construction, vacant or otherwise unknown.</p> <p><b>very poor:</b> if both roof and wall condition are poor.</p>
value	estimated value	estimated value modelled from field survey

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## SECTORS

General/government information		
aoi	Area of Interest	Area of Interest
area_km	area (km2)	area of sector in square kilometers
avg_tax	average tax	average tax per sector
avg_tax_owed	average tax owed	average tax owed per sector
id	id	sector id in database
name	sector	name of sector
sector_id	sector id	sector id in database (string)
Analysis/field work		
building_count	building count	total number of buildings in sector
commercial	commercial buildings	number of commercial buildings
critical_infrastructure	critical infrastructure	number of critical infrastructure buildings
fair_quality	fair quality	number of buildings in fair condition (total quality)
good_quality	good quality	number of buildings in good condition (total quality)
mixed	mixed buildings	number of mixed buildings
poor_quality	poor quality	number of buildings in poor condition (total quality)
resettlement	resettlement	number of buildings in demand for resettlement
residential	residential buildings	number of residential buildings
softstory	soft story	number of potential soft story buildings
very_good_quality	very good quality	number of buildings in very good condition (total quality)
very_poor_quality	very poor quality	number of buildings in very poor condition (total quality)

## GREENSPACE

Greenspace		
area_m	area (m2)	area in square meters
id	id	greenspace id in database
type	type of feature	Designation of cemetery, forest, grass, meadow, park, playing field, recreation ground or scrub derived from OpenStreetMap.