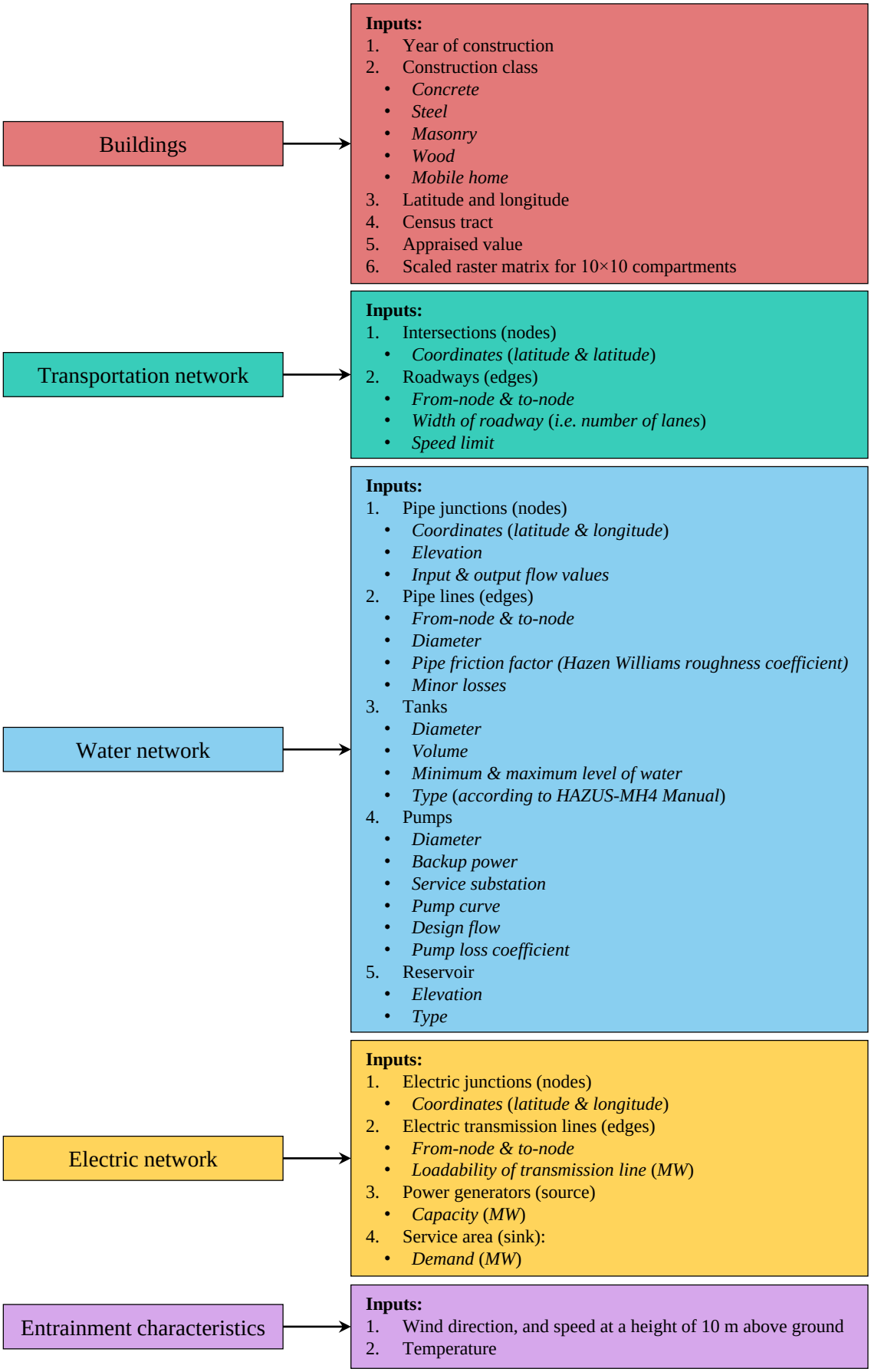
Buildings
Inputs:
1. Year of construction
2. Construction class
• Concrete
• Steel
• Masonry
• Wood
• Mobile home
3. Latitude and longitude
4. Census tract
5. Appraised value
6. Scaled raster matrix for 10×10 compartments
Transportation network
Inputs:
1. Intersections (nodes)
• Coordinates (latitude & latitude)
2. Roadways (edges)
• From-node & to-node
• Width of roadway (i.e. number of lanes)
• Speed limit
Water network
Inputs:
1. Pipe junctions (nodes)
• Coordinates (latitude & longitude)
• Elevation
• Input & output flow values
2. Pipe lines (edges)
• From-node & to-node
• Diameter
• Pipe friction factor (Hazen Williams roughness coefficient)
• Minor losses
3. Tanks
• Diameter
• Volume
• Minimum & maximum level of water
• Type (according to HAZUS-MH4 Manual)
4. Pumps
• Diameter
• Backup power
• Service substation
• Pump curve
• Design flow
• Pump loss coefficient
5. Reservoir
• Elevation
• Type
Electric network
Inputs:
1. Electric junctions (nodes)
• Coordinates (latitude & longitude)
2. Electric transmission lines (edges)
• From-node & to-node
• Loadability of transmission line (MW)
3. Power generators (source)
• Capacity (MW)
4. Service area (sink):
• Demand (MW)
Entrainment characteristics
Inputs:
1. Wind direction, and speed at a height of 10 m above ground
2. Temperature