Complete Streets Chicago

• An initiative of the Chicago Department of Transportation (CDOT)
• Published in 2013
• Provides design guidelines to implement the City’s Complete Street Policy
Organizing Principles

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2013 Edition

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CHAPTER ONE:
INTRODUCTION
Modal Hierarchy

Key Themes
CHAPTER TWO: TYPOLOGY
Typology Sets

- Building Form and Function
- Roadway Form and Function
- Intersections and Crossings
- Overlays

2.1.1 Building Form and Function

The important relationship between land use and transportation is well-established but often ignored. Understanding the context within which a street exists is an important first step.

The seven types for building form and function are specific to Chicago. They are influenced by the City’s Zoning Ordinance as well as the Transect, an urban development theory. They simplify land use and zoning and apply them to street design; in effect serving as a code between roadway standards and zoning. See Figure 7 for a fuller description.

- R – residential
- M – mixed-use
- C – commercial center
- D – downtown
- IC – institutional or campus
- IN – industrial
- P – parks
Typology Sets

• Building Form and Function
• Roadway Form and Function
• Intersections and Crossings
• Overlays

2.1.2 Roadway Form and Function
Historical focus on roadway characteristics such as traffic volume, speed and functional classification does not always yield complete streets. Using typologies inverts this approach: design decisions are informed by roadway context and by a hierarchy of mode prioritization, switching the “burden of proof” for design from traffic measurements and functional classification to placemaking and community preferences.

The six types for roadway form and function describe the physical layout of the roadway. See Figure 8 for a fuller description.

» TH – Thoroughfare
» CN – Connector
» MS – Main Street
» NS – Neighborhood Street
» SW – Service Way
» PW – Pedestrian Way
Typology Sets

- Building Form and Function
- Roadway Form and Function
- Intersections and Crossings
- Overlays

2.1.3 Intersections and Crossings
The typologies above focus primarily on street segments. The seven types below describe intersections and crossings in the city. Their design is particularly important due to the potential for modal conflicts and thus crashes. See Figure 9 for a fuller description.

- SIG – signal
- RBT – roundabout, traffic circle
- AWS – all-way stop
- STY – stop, yield
- UNC – uncontrolled
- MID – midblock pedestrian crossing
- DW – driveway
Typology Sets

- Building Form and Function
- Roadway Form and Function
- Intersections and Crossings
- Overlays

2.1.4 Overlays
The last set of types consists of overlays - jurisdiction, special use - that have an impact on design. For example, the design of a street overlaid with a state route will have to be coordinated with IDOT. A transit-priority street is one set to receive bus rapid transit. See Figure 10 for a fuller description.

- SRT – State Route
- CTY – County Route
- TRK – Truck Route
- SNW – Snow Route
- SRA – Strategic Regional Arterials
- MOB – Mobility Priority Street
- PED – Pedestrian Priority Street
- BIK – Bicycle Priority Street
- BRT – Transit Priority Street
- HBS – Historic Boulevard System
- TOD – Transit-Oriented District
- HZ – Home Zone
**Building Form and Function**

*Mixed-Use (M)*

<table>
<thead>
<tr>
<th><strong>Typology Code</strong></th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Typology Name</strong></td>
<td>Mixed-Use</td>
</tr>
</tbody>
</table>
| **Characteristics** | » buildings with service and commercial uses on the ground floor that serve surrounding neighborhoods  
» residential or office uses above the ground floor |
| **Typical Zoning Districts** | RM, B1, B2 |
| **Typical Buildings** | Height is 2 or more stories and buildings typically abut the sidewalk |
| **Examples** | » 103rd (Longwood to Wood)  
» Damen Avenue |

*Chicago Zoning Ordinance.*
**Roadway Form and Function**

**Connector (CN)**

<table>
<thead>
<tr>
<th>Typology Code</th>
<th>CN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typology Name</td>
<td>Connector</td>
</tr>
</tbody>
</table>

**Definition**
- Main roads
- May have median
- Connects between urban centers
- May be commercial

**Characteristics**
- Lanes: 2 to 4
- Speed*: 20-30 mph
- Blocks: 300-660 ft
- ADT: 5,250
- Flow: 1 or 2 way

**Examples**
- North Avenue
- Harlem Avenue
- Ashland Avenue
- Milwaukee Avenue
- Most of the streets in the loop

*Speed refers to Target Speed, see Section 3.5.5.
**INTERSECTIONS AND CROSSINGS**

*Uncontrolled (UNC)*

<table>
<thead>
<tr>
<th>Typology Code</th>
<th>UNC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typology Name</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>Definition</td>
<td>Intersections that have no traffic control device (stop sign, signal)</td>
</tr>
<tr>
<td>Discussion</td>
<td>Typically these occur at low vehicle volume locations; nevertheless they need to be analyzed for pedestrian and bicycle access, especially crossings</td>
</tr>
</tbody>
</table>
| Examples      | » California Blue Line Stop  
                » Dickens Street & Honora Street |
OVERLAYS
State Route (SRT)

<table>
<thead>
<tr>
<th>Typology Code</th>
<th>SRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typology Name</td>
<td>State Route</td>
</tr>
<tr>
<td>Source</td>
<td>IDOT</td>
</tr>
<tr>
<td>Discussion</td>
<td>Approximately 37% of Chicago’s major roadways are under state jurisdiction. This limits the city’s ability to control and maintain its street network. An inter-agency directive provides guidance on when and how to use jurisdictional transfer for such streets.</td>
</tr>
</tbody>
</table>
**OVERLAYS**

*State Route (SRT)*

<table>
<thead>
<tr>
<th>Typology Code</th>
<th>SRT</th>
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<tbody>
<tr>
<td>Typology Name</td>
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</tr>
</tbody>
</table>

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*North Avenue*

*Irving Park Road*
CHAPTER THREE: DESIGN GUIDANCE
Cross-Section Elements

**FIGURE 21**

- **PEDESTRIAN REALM**
  - Stoop Area
  - Door Zone
  - Yards
  - Building Setbacks
  - Walkways
  - Trees
  - Sidewalk Furniture
  - Driveways

- **INTERSTITIAL AREA**
  - Curbs
  - Bicycle Lanes
  - Protected Bicycle Lanes
  - Parking
  - Turn Lanes

- **VEHICLE REALM**
  - Bus Lanes
  - Travel Lanes
  - Bicycle Lanes

- **MEDIAN**
  - Landscaping
  - Pedestrian Refuges
  - Bus-rapid Transit
  - Protected Bicycle Lanes
  - Turn Lanes

- **INTERSTITIAL AREA**
  - Bus Lanes
  - Travel Lanes
  - Bicycle Lanes
  - Parking
  - Turn Lanes

- **PEDESTRIAN REALM**
  - Stoop Area
  - Door Zone
  - Yards
  - Building Setbacks
  - Walkways
  - Trees
  - Sidewalk Furniture
  - Driveways

Cross-Section Elements
# Cross-Section Dimensions

## FIGURE 20.3

### ROADWAY FORM AND FUNCTION

**ALL DIMENSIONS ARE IN FEET**

<table>
<thead>
<tr>
<th>Building Form and Function</th>
<th>Pedestrian Realm</th>
<th>Interstitial Area</th>
<th>Vehicle Realm</th>
<th>Median</th>
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<tbody>
<tr>
<td></td>
<td>Frontage</td>
<td>Pedestrian Zone</td>
<td>Furniture Zone</td>
<td>Curb Zone</td>
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<tr>
<td>P Parks</td>
<td>Target</td>
<td>0</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>2</td>
<td>10</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Constrained</td>
<td>0</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>R Residential</td>
<td>Target</td>
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<tr>
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<td>Maximum</td>
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<td>10</td>
<td>12</td>
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<td></td>
<td>Constrained</td>
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<td>0</td>
</tr>
<tr>
<td>M Mixed Use</td>
<td>Target</td>
<td>4</td>
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<td>6</td>
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<td></td>
<td>Maximum</td>
<td>5</td>
<td>12</td>
<td>–</td>
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<tr>
<td></td>
<td>Constrained</td>
<td>1</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>C Commercial Center</td>
<td>Target</td>
<td>1</td>
<td>8</td>
<td>6</td>
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<tr>
<td></td>
<td>Maximum</td>
<td>5</td>
<td>12</td>
<td>10</td>
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<td></td>
<td>Constrained</td>
<td>1</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>D Downtown</td>
<td>Target</td>
<td>5</td>
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<td>6</td>
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<td>Maximum</td>
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<tr>
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<td>Constrained</td>
<td>1</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>IC Institutional Campus</td>
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<td>6</td>
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<td></td>
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<td>4</td>
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<td></td>
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<tr>
<td>IN Industrial</td>
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<td></td>
<td>Constrained</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>
Design Guidance

A key element of median design is the nose - the portion that extends past the crosswalk. The nose protects people waiting on the median and slows turning drivers.

Figure 24 illustrates a solution where a turn lane is needed at a median with a crosswalk. By striping a shoulder along the median, the width of the median increases so that both the turn lane and pedestrian refuge can be included. Note also the nose of the median, which extends past the crosswalk.

Crosswalk and Turn Lane at Median
Design Guidance

**FIGURE 32**

*Guidelines for Crosswalk Installation on Street with Speed Limit of 30 mph or Below*

![Diagram showing guidelines for crosswalk installation based on average daily traffic and road type.]

**Crosswalk Selection Criteria**

19CDOT Pedestrian Plan
Design Guidance

Tracking Surveys
A tracking survey documents exactly where and how people cross a street, complex intersection, or plaza. This information is useful in locating crosswalks and refuge islands, redesigning intersections, and understanding the interface between streets and the surrounding buildings and spaces. The best time to perform this type of survey is a weekday between 3 and 6 PM, when there is an overlap of school, rush hour, and evening traffic. This is also the time period when most vehicle-pedestrian crashes occur. Typically 20 minutes is required to establish a pattern, more or less depending on the volumes. Additional surveys can be done at different times of the day to highlight temporal fluctuations.

Figure 34 envisions a tracking survey at the complex intersection of Clybourn-Division-Orleans-Sedgwick. The diagram identifies 14 likely pedestrian destinations and funnel points: bus stops, park gates, building entrances, parking lot entrances, and sidewalks. These are shown as blue dots. A surveyor would stand at each of these points and “track” every person that passed and crossed the street. The lines track where a person would cross the street, irrespective of crosswalk. One line is shown for each person. Thicker lines indicate more people crossing at the same location.

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21 Chicago Forward: DOT Action Agenda.
23 This drawing is speculative; no actual survey was conducted.
Design Guidance

Level of Service Policy

1. LOS should be consistent with modal hierarchy. In a typical project, pedestrians will enjoy the highest LOS, while drivers will have the lowest. In essence, all LOS is relative by mode. LOS should not purposely be lowered; a street where all modes rate A is acceptable.

2. There shall be no minimum MVLOS for any project. Within the Loop and River North, the default maximum MVLOS for CDOT-initiated projects shall be E. This is not to say that the MVLOS must purposely be lowered, but efforts should not be made to increase it above E. Developer-initiated projects may not negatively impact the MVLOS, unless corresponding increases are made in pedestrian, bicycle, and transit level of service, consistent with the modal hierarchy.

3. LOS evaluations shall consider cross flows (especially pedestrian) as well as corridor flows.

4. Delay for pedestrians at signals shall not exceed 60 seconds. Along streets with typology NM, C, D or IC, the minimum peak-hour sidewalk pedestrian LOS should be B.

5. A working group will best decide how to evaluate LOS, whether using traditional methods or more recent multi-modal level of service methodologies. Project managers are encouraged to utilize multi-hour evaluations instead of peak-hour-only calculations, see Figure 17.

6. LOS evaluation is only required for projects identified in the Project Delivery Process (see 4.1). It should be calculated when required by funding sources, but may be balanced with other factors.

Relying primarily on MVLOS produces two outcomes inconsistent with complete streets:

1. streets are routinely “upgraded” for higher traffic volumes at the expense of other users
2. streets designed for rush hour volumes end up with excess speed and width off-peak and at night
Design Guidance

**FIGURE 38**

Chance a person would survive if hit by a car travelling at this speed

- 20 mph: 45 ft to stop (95% survival rate)
- 30 mph: 85 ft to stop (60% survival rate)
- 40 mph: 145 ft to stop (20% survival rate)

*Tunnel Vision: as speed increases, peripheral vision decreases.*

**Policy**
CDOT will use target rather than design speed. The target speed of each street will be equal to or less than the speed limit, as per roadway type.

- Thoroughfare: 25-30 mph
- Connector: 20-30 mph
- Main Street: 15-25 mph
- Neighborhood Street: 10-20 mph
- Service Way: 5-10 mph

The prima facie speed limit in the City of Chicago is 30 mph. The use of target speeds may require lowering the speed limit, or posting speed advisory signs. The target speed should account for specific geometric elements such as curves and traffic calming devices. The **Chicago Pedestrian Plan** proposes a 20 mph target speed for residential streets. These will generally be on Main Streets and Neighborhood Streets.

*Speed Concepts*
3.5.6 Lane Width
The width of a travel lane affects the completeness of a street in subtle ways. The difference between a 10 and 12 foot lane is but 24 inches. Yet on a six lane roadway, this equals another lane, two bike lanes, a wider sidewalk, on-street parking, or a median. Similarly the crossing distance becomes longer, which impacts signal timing. It has also been shown that wider lanes lead to higher travel speeds and are no safer than 10-foot lanes.41

Policy
The standard width for automobile travel lanes, including turning lanes, shall be 10 feet. One lane per direction on scheduled Chicago Transit Authority (CTA) bus routes and/or on a mapped truck route may be 11 feet wide. Lanes widths are measured from the face of curb, where present. Lane widths are further articulated in section 3.2.1 above. In general, they will be as follows:

» Thoroughfare: 10-11’
» Connector: 9-11’
» Main Street: 9-10’
» Neighborhood Street: n/a
CHAPTER FOUR: IMPLEMENTATION
FIGURE 39

COMPLETE STREETS PROJECT DELIVERY PROCESS

**GOAL:** Identify and promote projects that advance Complete Streets

1. stage

- **external:** alderman requests
- **internal:** pavement condition
- **moving forward:** strategic planning, safety

**GOAL:** Address all modes - consider land use and roadway context

2. stage

- **project needs:** existing conditions, modal deficiencies, plans and funding
- **exceptions:** prohibited modes, cost vs. benefit, no foreseeable use
- **desired outcomes:** community needs, system opportunities, modal hierarchy

**GOAL:** Address objectives defined during scoping stage

3. stage

- **cross section:** develop alternative, address all modes, community needs
- **intersection design:** geometric layout, signal timing, modal conflict points
- **trade-offs:** exceptions process, modal hierarchy, allow for feedback

**GOAL:** Ensure project is built as designed for Complete Streets

4. stage

- **issues and conflicts:** refer to project manager, address problems, do not sacrifice modal components
- **opportunities:** communicate priorities to contractors, allow for design improvements, reward efficiency

**GOAL:** Measure the effectiveness of the Complete Street

5. stage

- **safety:** no exceptions, decrease severity, normalize measures
- **modeshare:** measure people, establish targets, favor bike and walk
- **others:** health and economic impacts, transit consistency and travel times, process streamlining, coordination, and feedback

**GOAL:** Ensure all users are accommodated through the projects lifespan

6. stage

- **coordinate:** include maintenance staff in scoping (2), include maintenance staff in design (3)
- **funding:** program funds for maintenance, maintenance should not limit complete designs

---

**Scoping:**
- Step 1: Establish Objectives
- Step 2: Perform Research
- Step 3: Conduct Site Visits
- Step 4: Assemble Data
- Step 5: Set Mode Hierarchy
- Step 6: Revisit Objectives

**Design:**
- Step 1: Draft Alternatives
- Step 2: Develop Design
- Step 3: Evaluate Impact
- Step 4: Obtain Feedback
- Step 5: Prepare Final Design

**ENGAGE PUBLIC STAKEHOLDERS**
- find key opportunities to interface with community groups, residents, and business owners - allow projects to be influenced by lessons learned through outreach efforts

**ENGAGE AGENCIES & DEPARTMENTS**
- coordinate CDOT projects and measurement with external agencies and other city departments to assure the best use of resources and meet multiple objectives through complete design processes
What is Make Way for People?

The Make Way for People Program is an initiative to strengthen communities. By converting neighborhood streets, sidewalks, plazas and alleys into places for people to sit, eat, and play, the program helps create safe, walkable neighborhoods that support local business and strengthen a sense of place. The idea is to use lighter, less expensive tools such as removable decks, paint, and flower pots to quickly convert underutilized or small sections of the public right-of-way into people centered places that help change the perception and the behavior of people in the community. The Chicago Department of Transportation (CDOT) has partnered with communities throughout the city in the development of over 20 Make Way for People initiatives in a variety of neighborhoods. These include People Spots, People Streets, People Plazas and People Alleys.
Make Way for People

What kind of projects can I do?

The Make Way for People program enables communities to use public ways such as streets, parking spots, plazas and alleys for programming that promotes safer and more walkable communities while encouraging economic development in Chicago neighborhoods.

- **People Spots**
  - Platforms in parking lanes adjacent to sidewalks

- **People Streets**
  - Public spaces in “excess” asphalt areas

- **People Alleys**
  - Temporary space for events in city alleys

- **People Plazas**
  - Opportunities in existing CDOT malls, plazas, and triangles
Make Way for People

- People Streets and People Spots

Project Examples

**DePaul People Street**
Sponsoring Organization: DePaul University
Location: Kenmore between Fullerton and Belden

**Lakeview People Street**
Sponsoring Organization: Lakeview Chamber of Commerce
Location: 3000 N Lincoln Avenue

**Paulina Avenue People Street**
Sponsoring Organization: Lakeview Chamber of Commerce
Location: 3335-3354 N Paulina Avenue

**47th Street People Spots**
Sponsoring Organization: Quad Communities Development Corporation
Location: 641-643 & 916-920 E 47th Street

**Andersonville People Spot**
Sponsoring Organization: Andersonville Development Council
Location: 5214-5216 N Clark Street

**Lakeview People Spots**
Sponsoring Organization: Lakeview Chamber of Commerce
Location: 2959 N. Lincoln Avenue & 3551 N. Southport Avenue