Complete Streets Policy (2006)

“The safety and convenience of all users of the transportation system including pedestrians, bicyclists, transit users, freight, and motor vehicle drivers shall be accommodated and balanced in all types of transportation and development projects and through all phases of a project so that even the most vulnerable - children, elderly, and persons with disabilities - can operate safely within the public right of way.”
Why Complete Streets?

• **Health**: support active transportation, address obesity and improve health.
• **Economy**: draw people to shop, live, and work in walkable, livable communities.
• **Safety**: design to protect all users, reduce speeding and decrease crashes.
• **Changing Needs**: Chicagoans are driving less and using other modes.
• **Environment**: support quality of life without depleting natural resources.
• **Cost**: help each dollar invested best control long term costs.

Driving is down; transportation choices up
CDOT Goals

• Eliminate pedestrian crash fatalities in ten years (2022)
• Reduce pedestrian and bike crash injuries 50% in five years
• Reach 50% of commute trips made by walking, biking, transit, and working from home by 2030 (currently 38%)

From Policy to Implementation

Sustainable Urban Infrastructure: Guidelines and Policies
Complete Streets
Chicago: Design Guidelines
Modal hierarchy & mode share
Safe Sustainable Streets
Ecological Services
Streets for People: Placemaking Guide (tc)
Placemaking
Implementation: Process

1. **Selection**: Prioritize projects for complete streets
2. **Scoping**: Consider all modes; i.d. building and roadway form and function & project goals
3. **Design**: Address goals and opportunities defined in scoping
4. **Construction**: Ensure project built as designed, for complete streets
5. **Measurement**: Evaluate effectiveness of complete streets
6. **Maintenance**: Ensure all users continue to be accommodated

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Project Specific Guidance

- **Project Delivery Notebook**
  - Step by step design decision-making guidance and documentation
  - Stop gaps and controls for project managers
  - Requirements vary by project type

- **Compliance Committee**
  - Ensures CDOT compliance to guides/policies
  - Approves variances as needed
Project Delivery Process and Tracking

- Project Delivery Summary Sheet - Notebook
  - Project “snap shot” for CDOT management
  - Tracks chain of ownership as project develops
  - Construction RE will receive from design PM along w/ documentation
  - Hand back to PM for Maintenance & Commissioning

Complete Streets Design Guide

Key Complete Streets Themes

- Modal Hierarchy
- Typology
- Design Values
- Procedures
Modal Hierarchy: Pedestrian First

What Does it Look Like?
Research before Scoping

Before designing, consider:

Crash history – each mode
Planning documents
  • Neighborhood plans, transportation plans, developments
Environmental conditions
  • Soil type, flooding, heat island, public space opportunities
Who uses road and how?
  • Site visit
  • Observe all modes

KIMBALL/ LAWRENCE
Pedestrian & Bicyclist Crashes 2008-2012

Pedestrian Crash Severity
  • No Injury
  • Not Serious
  • Serious
  • Fatality

Bicyclist Crash Severity
  • No Injury
  • Not Serious
  • Serious
  • Fatality

Total Pedestrian Crashes 27
Total Bicyclist Crashes 18

CTA - Bus Stop
School Zones
Parks
Typology & Data

Before designing, consider:

Building Form & Function
- Land use, structures, regulatory framework, businesses

Roadway Form & Function
- Character of roadway, speeds, number of lanes, users, parking demand, traffic operations

Intersections & Crossings
- Common conflict points

Special Designations
- Statutory, operational, and planning categories such as snow routes, Pedestrian Streets, bicycling spoke routes, jurisdiction

Typology: Building Form & Function (p. 31-37)

- R (Residential)
- M (Mixed-Use)
- D (Downtown)
- C (Commercial Center)
- IC (Institutional or Campus)
- IN (Industrial)
- P (Parks and Open Space)
Typology: Roadway Form & Function (p. 38-43)

- **TH (Thoroughfare)**: Western Avenue
- **CN (Connector)**: Indiana Avenue
- **MS (Main Street)**: Peoria Street
- **NS (Neighborhood Street)**: Concord Place
- **SW (Service Way)**: Alley near Honore Street
- **PW (Pedestrian Way)**: Riverwalk

Typology: Intersections and Crossings (p. 44-50)

- **MID (Mid-block Pedestrian Crossing)**
- **RBT (Roundabout, Traffic Circle)**
- **SiG (Signal)**
- **AWS (All-way Stop)**
- **STY (Stop, Yield)**
- **UNC (Uncontrolled)**
- **DW (Driveway)**
Sustainable Urban Infrastructure Guidelines and Policies (SUIG)

- **Mission and Purpose:** create and maintain a city where all benefit from a high quality of life without depleting our natural resources

- **8 Environmental categories for public ROW**
  - Objectives prioritized by need
  - Requirements and policies that provide means and methods to meet objectives
  - Strategies to implement the requirements

Categories and Objectives

**ECONOMICS**
- **OBJECTIVES**
  - Quantify the environmental value of investments
  - Enhance property values
  - Coordinate with other city departments and agencies
  - Streamline utility coordination and installation
  - Maximize implementation of adaptation strategies
  - Support green collar job creation

**WATER**
- **OBJECTIVES**
  - Reduce basement and street
  - Reduce CSO events and volumes
  - Reduce potable water use
  - Clean and direct stormwater to natural water bodies
  - Reduce non-point source pollution to natural water bodies
  - Ensure erosion and sediment control

**ENERGY**
- **OBJECTIVES**
  - Reduce Energy use
  - Use clean and renewable energy
  - Generate and transmit renewable energy

**MATERIALS & WASTE**
- **OBJECTIVES**
  - Maximize construction waste reduction and recycling of construction waste
  - Maximize the reuse of materials and the use of recycled materials
  - Support sustainable production practices
Categories and Objectives

**URBAN ECOLOGY**
- Objectives
  - Create and support natural habitat
  - Protect and restore natural habitat
  - Allow for interaction and observation of both people and the natural world

**BEAUTY & COMMUNITY**
- Objectives
  - Implement the complete streets policies
  - Create unique and quality spaces that reflect the local neighborhood
  - Educate and promote environmental awareness
  - Include stakeholder input in your decision making process

**CLIMATE & AIR QUALITY**
- Objectives
  - Reduce urban heat island effect
  - Use low-emitting materials
  - Promote alternative fuel use
  - Reduce emissions related to construction activities

**COMMISSIONING**
- Objectives
  - Maintain the site year round to ensure environmental benefits
  - Identify and develop design tools to predict performance
  - Evaluate verify and document performance and update design tools

Design Guidance

- Modal Hierarchy
- Design Trees
- Cross-Section Elements
- Intersections
- Geometric and Operational Policies
Design Guidance

Cross Section Elements (p. 89)

Design Guidance

Design Trees (Appx. A)
Design Guidance
Sample Cross Section (Appx. A)

Cross Section Code: p.m.cn
Typical Roadway Width: 80 Feet
Mode Hierarchy: Pedestrian - P > T > B > A
Building Form and Function: Mixed-Use
Roadway Form and Function: Connector

Design Guidance
Geometric and Operational Policies

• Level of Service
• Traffic Control (Signals)
• Right Turn on Red
• Design and Control Vehicles
• Design and Target Speed
• Lane Widths
Design Guidance

**Intersections**

- Small, simple intersections
- Minimize crossing length, locate at desire lines
- Align lanes
- Square off
- Manage speed
- Organize buses and cyclists
- Prioritize signals for peds
- Convert excess pavement

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Design Guidance

**Speed Control**

- Synchronize signals to target speed
- Narrow lanes & roadways
- Traffic calming
- Limit sight distances
- Terminating vista
- Trees, landscaping, poles, crosswalks
Documentation

Assign specific personnel to track compliance during design and construction, in coordination with RE Documentation Reports that may be required include:

- Stormwater Pollution Prevention Plan
- Construction Waste Management Plan
- Noise Mitigation Plan
- Traffic Management Plan
- Stakeholder Involvement Plan
- Monitoring & Commissioning Plan
- Maintenance Plan

Quantifying Assets vs. Measuring Success

**Tracking Assets Installed:**

**Outputs – Examples**
- Pedestrian Refuge Islands
- Center median (miles)
- Pedestrian countdown timers
- Protected bike lanes (miles)
- LED fixtures
- Waste management plan
- Noise Mitigation Plan

**Measuring Success:**

**Performance Metrics – Examples**
- % reduction in pedestrian crashes
- % reduction total crashes
- Gallons of stormwater stored, released at .9 CFS or less
- Area of permeable concrete/asphalt
- % recycled material by cost
- % waste diverted from landfill
- Area of high albedo pavement

* Maintenance & Commissioning is affected by Construction Phase data quality
Commissioning

- Design, Construction, and Commissioning Performance Report
- Details implementation of Sustainable Goals, Including Ideas Not Selected
- Living Document to Include Construction and Commissioning Reports

Impacts to Construction Practices

- Construction Sequencing;
  - Stormwater BMP Implementation & Protection
  - Clean Diesel Ordinance
- Regional materials;
- Construction waste management;
  - Defining the denominator
  - Demolition vs. Deconstruction
- Wide adoption of sustainable pavement mix designs
- General and subcontractor documentation compliance.
Getting Started – South Chicago Ave

(Before) South Chicago – Looking SE  (After) South Chicago – Looking SE

Dearborn Street

Dearborn Street - Before  Dearborn Street - After
Lawrence Avenue – Existing Conditions

Lawrence Avenue – Proposed Conditions
Pilsen - Pre-construction Conditions

Pilsen Sustainable Street

- Permeable Pavement for Stormwater Management
- Photocatalytic for Air Quality
- High SRI for Lighting and UHI
- Bike/ Parking Lane
Thank You!

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