Complete Streets: A Primer

Complete streets is a multimodal approach to roadway design and safety that considers all users of transportation infrastructure. A street is considered complete if it facilitates the safe movement of users of all ages, abilities, and transportation modes. Additionally, transportation agencies and researchers consider complete streets an approach that can assist communities in reaching safety, accessibility, equity, connectivity, mobility, and environmental goals.

Complete streets encompasses physical changes to roadways (e.g., dedicated bicycle and bus lanes) and sidewalks to specifically accommodate transit, pedestrians, and bicyclists alongside personal motor vehicles. Complete streets also emphasizes other changes, such as adding lighting, planters, trees, and benches, to improve the user experience of a street. The specific elements included in a complete streets design are context sensitive and vary from place to place, but the principles can be applied in urban, suburban, and rural settings.

Section 11206 of the Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58) required states and metropolitan planning organizations to fund the development of complete streets policies and complete streets prioritization plans through the Metropolitan Planning Program (23 U.S.C. §104(d)) and State Planning and Research Program (23 U.S.C. §505). The IIJA authorized related discretionary grant programs including Safe Streets and Roads for All (SS4A) and the Reconnecting Communities Pilot Program.

The IIJA is the first law to establish requirements for complete streets standards and policies. There have been other efforts from the executive and legislative branches. For example, since 2017, the Department of Transportation has identified complete streets as a tool to improve roadway safety in the Safety for All Users Report, the Moving to a Complete Streets Design Model report, and the National Roadway Safety Strategy. Between the 109th and 118th Congresses, at least 17 bills related to complete streets have been introduced, including House and Senate companion bills.
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Introduction

Complete streets is a multimodal and multiuser approach to transportation planning and implementation of public road infrastructure. The Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58), enacted in November 2021, defined complete streets standards or policies as measures that “ensure the safe and adequate accommodation of all users of the transportation system, including pedestrians, bicyclists, public transportation users, children, older individuals, individuals with disabilities, motorists, and freight vehicles.” The IIJA is the first federal legislation to define the term complete streets standards and policies.

This report provides an overview of the concept of complete streets. The report first explains the elements of complete streets in urban and rural settings, then outlines the goals and considerations of complete streets policy. It also discusses the history of executive actions related to complete streets and contains an Appendix identifying complete streets-related bills introduced from the 109th to the 118th Congresses.

What Is a Complete Street?

A complete streets approach encompasses various physical design elements, including travel lanes for motor vehicles and for users other than cars and trucks. Such elements may include, among other things, dedicated bicycle and bus lanes, sidewalks, mid-block pedestrian crossings, traffic calming treatments, and street trees. Complete streets designs are based on context-specific budget, location, and community goals. Figure 1 and Figure 2 provide visual examples of complete streets in urban and rural settings.

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1 “Complete Streets” is capitalized in P.L. 117-58 in reference to “Complete Streets standards and policies,” “Complete Streets prioritization plans,” and “Complete Streets projects.” CRS has determined that “complete streets” will be uncapsulated throughout this report due to the broad use of the phrase “complete streets” within transportation policy; Barbara McCann, Completing Our Streets: The Transition to Safe and Inclusive Transportation Networks (Washington, DC: Island Press, 2013). Hereinafter cited as McCann, Completing Our Streets.

2 P.L. 117-58, Division A, Subtitle B, §11206.

3 According to the Federal Highway Administration (FHWA) and the Institute of Transportation Engineers, to increase the safety of roadways through traffic calming, vehicle speeds and vehicle volumes on a single street or within a street network are reduced. U.S. Department of Transportation (DOT), FHWA, Traffic Calming ePrimer, 2018, https://highways.dot.gov/safety/speed-management/traffic-calming-eprimer.

Figure 1. Example of a Complete Street in an Urban Setting

![Figure 1](image1.png)


Figure 1 illustrates possible elements of a complete street in an urban setting, including dedicated bus and bicycle lanes, on-street parking, pedestrian- and vehicle-oriented street lighting, shade trees, benches, and curb ramps, among other features. This example shows how low-cost interventions, such as pavement striping, can delineate boundaries of physical design elements (e.g., where hatched marking separates the on-street parking from the bike lane). Pavement striping could be used to analyze effectiveness prior to a more permanent and expensive installation, such as flex posts or cement planter barriers.

Figure 2. Example of a Complete Street Cross Section in a Rural Setting

![Figure 2](image2.png)


Figure 2 illustrates a complete street design that might be appropriate in a small town and rural context. This street design includes lanes for cars, on-street parking on each side, sidewalks wide enough for people using mobility devices, and shade trees. For some communities, the challenge in implementing complete streets is identifying ways to incorporate space for pedestrians that
separates them from vehicles. In this case, the design of this street could be considered complete due to the presence of safe, accessible sidewalks for pedestrians of all abilities.

Goals and Considerations of Complete Streets

The core goal of complete streets is to improve the safety of all roadway users, especially bicyclists and pedestrians. The Federal Highway Administration (FHWA) has identified other goals of complete streets, including accessibility, equity, and connectivity. Researchers have identified improving mobility and mitigating environmental impacts as additional goals. Explanations of how complete streets could achieve these goals are provided below.

- **Safety**: Change roadway design to impact user behavior. For example, reconfiguring roadways with traffic calming techniques can reduce both motorists’ speeds and roadway crossing distance for pedestrians and bicyclists. These changes can lead to decreased crash risk and severity.

- **Accessibility**: Remove barriers of access to transportation. For example, adding curb ramps and ensuring sidewalk infrastructure does not have obstructions (e.g., fire hydrants) could remove barriers of access for assistive-mobility users.

- **Equity**: Provide transportation options across race, gender, age, ability, or class. For example, adding sidewalks may be an equitable solution for a community that has a high number of zero-car households and a high number of pedestrians.

- **Connectivity**: Improve routes to destinations. For example, installing sidewalks that connect frequented locations in a neighborhood can provide protected routes for pedestrians to travel to multiple local businesses.

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• **Mobility**: Ensure users of all modes are able to move around easily. For example, installing traffic signals can create safer opportunities for pedestrians to cross vehicular traffic.12

• **Environment**: Incorporate environmentally conscious elements in roadway designs. For example, installing street trees along a road can absorb rainfall.13

There are opportunities and challenges associated with each of these goals. **Table 1** identifies examples of these opportunities and challenges.

**Table 1. Selected Opportunities and Challenges of the Complete Streets Approach**

<table>
<thead>
<tr>
<th>Goal</th>
<th>Opportunity</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Decrease the number of traffic-related serious injuries and deaths by installing traffic calming treatments to support decreasing motorists’ speeds</td>
<td>Reducing the number of on-street parking spaces available or reducing motorists’ speeds via traffic calming interventions may be disliked by communities</td>
</tr>
<tr>
<td></td>
<td>Deter crime by increasing lighting and surveillance for pedestrians, bicyclists, and parked cars</td>
<td>Installing lighting and surveillance may add to construction and maintenance costs</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Create infrastructure that can be used by people using all modes and any mobility or assistive device</td>
<td>Establishing limited right-of-way can lead to reducing space for some users to accommodate others</td>
</tr>
<tr>
<td>Equity</td>
<td>Improve access to schools, jobs, and services by creating more safe transportation options for users of all modes and abilities</td>
<td>Accommodating multiple modes can increase construction and maintenance costs</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Remove physical barriers for pedestrians such as high-speed roadways without crossing opportunities</td>
<td>Completing networks for pedestrians can increase vehicle delay time to allow for safe crossing</td>
</tr>
<tr>
<td>Mobility</td>
<td>Decrease travel time for people traveling by transit, bicycle, or foot with dedicated right-of-way and adjusted signal timing</td>
<td>Accommodating additional modes could increase personal vehicle travel time along the corridor</td>
</tr>
<tr>
<td>Environment</td>
<td>Decrease stormwater runoff by increasing vegetation along streets</td>
<td>Adding vegetation could create more street maintenance responsibility and costs</td>
</tr>
</tbody>
</table>


**Note:**

a. As used here, the term right-of-way refers to the public space located between private property boundaries. The ability for governments to widen streets or add sidewalks is dependent on the quantity of rights-of-way owned or able to be acquired.


Current Complete Streets Law and Funding

Infrastructure Investment and Jobs Act

Section 11206 of the IIJA required states and metropolitan planning organizations (MPOs) to adopt complete streets policies and develop complete streets prioritization plans. The IIJA set aside an estimated $93 million from the highway formula grant programs for these purposes.\textsuperscript{14}

Section 11206 of the IIJA addressed complete streets in five subsections:

- (a) Definition of Complete Streets Standards or Policies
- (b) Funding Requirement
- (c) Activities Described (This section describes planning activities eligible for funds in subsection (b).)
- (d) Federal Share
- (e) State Flexibility (This section provides states with flexibility to opt out of subsection (b)).

Section 11206(b) contains a complete streets funding set-aside. It requires both states and MPOs to spend no less than the 2.5% of funding apportioned to states through 23 U.S.C. §505, State Planning and Research, and no less than the 2.5% of funding granted to MPOs under 23 U.S.C. §104(d), Metropolitan Planning, to carry out activities as described in Section 11206(c) until the Department of Transportation (DOT) has certified that the requirements have been met. When the policy requirements are met, states and MPOs are no longer required to spend funds on complete streets. In the IIJA, funding for complete streets derives from federal funds directed toward both states and MPOs.\textsuperscript{15}

Funds granted to MPOs under 23 U.S.C. §104(d) are administered by states on behalf of DOT through contract authority.\textsuperscript{16} Under 23 U.S.C. §104(d)(2), states create a formula for distributing the funds; the formula requires approval by DOT. States may need to change their formulas in accordance with the set-aside requirement of IIJA Section 11206.

\textsuperscript{14} DOT, FHWA, “Bipartisan Infrastructure Law Fact Sheets: Metropolitan Planning Program,” February 8, 2022, https://www.fhwa.dot.gov/bipartisan-infrastructure-law/metro_planning.cfm; DOT, FHWA, “Bipartisan Infrastructure Law Fact Sheets: Surface Transportation Block Program,” October 26, 2022, https://www.fhwa.dot.gov/bipartisan-infrastructure-law/stbg.cfm. Not less than 2.5% of the funding allocated to states according to 23 U.S.C. §505 and to metropolitan planning organizations under 23 U.S.C. §104(d) is to be used to carry out activities as described in subsection (c), Section 11206 of P.L. 117-58. The complete streets funding set aside from the Metropolitan Planning Program (23 U.S.C. §104(d)) is approximately $57 million of the $2.28 billion that will be made available between FY2022 and FY2026. The State Planning and Research Program (23 U.S.C. §104(d)) is 2% of funding of the Surface Transportation Block Grant Program, and approximately $72 billion will be made available through the Surface Transportation Block Grant Program between FY2022 and FY2026. Of the $72 billion, approximately $1.44 billion will be made available for states through the State Planning and Research Program. Of the $1.44 billion, the funding set aside for complete streets planning activities is $36 million. The total available through Section 11206(b) of P.L. 117-58 is approximately $93 million, which includes $57 million for metropolitan planning organizations and $36 million for states.

\textsuperscript{15} Under the Complete Streets Acts of 2019 and 2021 (H.R. 3663/S. 2077 and H.R. 1289/S. 425, respectively), which were not enacted, the proposed complete streets program would have been completely funded and managed by states.

\textsuperscript{16} Contract authority allows states to obligate funding when the surface transportation reauthorization act is enacted. Contract authority differs from the appropriated budget authority process in surface transportation funding, which requires two legislative actions to begin implementation—an authorization and an appropriation. For more information on contract authority, see DOT, FHWA, Funding Federal-Aid Highways, FHWA-PL-17-011, March 2017, https://www.fhwa.dot.gov/policy/olsp/fundingfederalaid/FFAH_2017.pdf.
Among other options, Congress may consider seeking analysis of the benefits and challenges for states of changing their formulas and the impact, if any, on achievement of the complete streets requirement. For instance, Congress could direct DOT, the Government Accountability Office, or another entity to study the impact of IIJA Section 11206 on state formula structures and administration processes for funding distributed under 23 U.S.C. §104(d). More generally, the implementation of requirements in the IIJA might help inform congressional deliberations on the type and extent of additional actions and programs, if any, that might be beneficial and the advisability of amendment or repeal of current programs or requirements. To that end, Congress may request updates from DOT on the progress of complete streets adoption nationwide.

Other Funding Sources

In addition to IIJA Section 11206, which designates funding specifically for complete streets policies and planning, other new programs in the IIJA may support complete streets goals. Such programs include two discretionary grant programs: Safe Streets and Roads for All (SS4A) and Reconnecting Communities Pilot Program.\(^{17}\) From FY2022 through FY2026, SS4A is to make available $5 billion, and the Reconnecting Communities program is to make available $1 billion. Complete streets projects and activities also are eligible under many of the eight Federal-Aid Highway Programs, including the Surface Transportation Block Program; Highway Safety Improvement Program; Congestion Mitigation and Air Quality Improvement Program; Carbon Reduction Program; and Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation Formula Program. Funds under these programs have some transferability between programs, which allows for the customization of funding to accomplish safety goals associated with complete streets. FHWA has prepared guidance on the formula and discretionary federal funding sources that can be used to support complete streets projects.\(^{18}\)

Selected Recent Executive Actions

Since 2017, several actions by DOT have supported state and local agencies’ development of complete streets policies and plans.

Safety for All Users Report

In December 2017, DOT published the Safety for All Users Report, pursuant to requirements of Section 1442 of the Fixing America’s Surface Transportation Act (FAST Act; P.L. 114-94) and based on Senate committee guidance in S.Rept. 114-243.\(^{19}\) In the Safety for All Users Report, DOT described policies and programs that promote safety for all users, including complete streets

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\(^{17}\) The Safe Streets and Roads for All program is at P.L. 117-58, Division A, §24112. The Reconnecting Communities Pilot Program is at P.L. 117-58, Division A, §11509.


\(^{19}\) DOT, Safety for All Users Report: A Report Developed by the U.S. Department of Transportation Under Section 1442 of the Fixing America’s Surface Transportation (FAST) Act, December 2017, p. 2, https://www.transportation.gov/sites/dot/files/docs/mission/safety/303201/safety-all-users-report.pdf. Section 1442(b) states that “[n]ot later than 2 years after the date of enactment of this Act, the Secretary shall make available to the public a report cataloging examples of State law or State transportation policy that provide for the safe and adequate accommodation of all users of the surface transportation network, in all phases of project planning, development, and operation.” (FAST; P.L. 114-94); S.Rept. 114-243 pertained to S. 2844, the Transportation, Housing and Urban Development, and Related Agencies Appropriations Act, 2017.
policies as a recommended tool. DOT declared in the report that complete streets would become part of subsequent policy initiatives.

**Moving to a Complete Streets Design Model Report**

In March 2022, FHWA issued a report to Congress entitled *Moving to a Complete Streets Design Model*. The agency cited this report as a response to House committee guidance in H.Rept. 116-152, for DOT to adopt a complete streets design model for non-access-controlled roadways. Such roadways comprise nearly 80% of the National Highway System’s mileage. The FHWA report indicated that DOT could provide guidance on the statutory requirement to consider all modes of transportation found throughout federal standards for infrastructure planning and design. The FHWA report suggested that proactive guidance and technical support from DOT could help state leadership and practitioners, MPOs, and local agencies adopt complete streets principles.

**National Roadway Safety Strategy**

In January 2022, DOT released a National Roadway Safety Strategy outlining its approach to eliminating roadway deaths. As part of the strategy, DOT adopted the Safe Systems Approach to roadway design. The approach has five objectives: safer people, safer roads, safer vehicles, safer speeds, and post-crash care. A comprehensive Complete Streets Initiative is described as one of six key actions to achieve the safer roads objective. For the Complete Streets Initiative, DOT committed to providing technical assistance to communities, incorporating complete streets criteria in federal grant opportunities, incorporating lighting in roadway upgrades, and involving transit providers in complete streets implementation.

**Complete Streets Formula Grant Match Waivers**

On January 5, 2023, FHWA published a memorandum approving a waiver of the nonfederal match requirement of the funding described in Section 11206(d) of P.L. 117-58. Thus, states and MPOs would not have to contribute local dollars to meet the complete streets funding requirement described in Section 11206(d) of P.L. 117-58. The Federal Transit Administration took action on March 10, 2023, to approve a waiver of the nonfederal match for the Metropolitan Planning Program and State Planning and Research Program funding authorized at 49 U.S.C. §5305 for complete streets planning activities for each fiscal year under Section 11206(d) of P.L. 117-58. The nonfederal match waiver is available until the state or MPO meets requirements of Section 11206(d) of P.L. 117-58.

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20 The agency’s report is DOT, FHWA, *Moving to a Complete Streets Design Model*. The House committee report is H.Rept. 116-152, pertaining to H.R. 7616, the Transportation, Housing and Urban Development, and Related Agencies Appropriations Act, 2021.


Appendix. A

<table>
<thead>
<tr>
<th>House Bill</th>
<th>Senate Bill</th>
<th>Congress</th>
<th>Short Title</th>
</tr>
</thead>
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<tr>
<td>—</td>
<td>S. 794</td>
<td>109</td>
<td>Safe and Complete Streets Act of 2005c</td>
</tr>
<tr>
<td>H.R. 1443</td>
<td>S. 584</td>
<td>111</td>
<td>Complete Streets Act of 2009</td>
</tr>
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<td>H.R. 1780</td>
<td>S. 1056</td>
<td>112</td>
<td>Safe and Complete Streets Act of 2011</td>
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<tr>
<td>H.R. 2071</td>
<td>—</td>
<td>114</td>
<td>Safe Streets Act of 2015</td>
</tr>
<tr>
<td>H.R. 3663</td>
<td>S. 2077</td>
<td>116</td>
<td>Complete Streets Act of 2019</td>
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<td>H.R. 1289</td>
<td>S. 425</td>
<td>117</td>
<td>Complete Streets Act of 2021</td>
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<tr>
<td>H.R. 3562</td>
<td>—</td>
<td>117</td>
<td>Vision Zero Act of 2021d</td>
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<tr>
<td>H.R. 7082</td>
<td>S. 3670</td>
<td>118</td>
<td>Complete Streets Act of 2024</td>
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</tbody>
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Source: CRS based on Congress.gov, February 21, 2024.
Notes: CRS accessed Congress.gov to identify bills as of February 21, 2024. The phrase “complete streets” was searched across the years 1973-2024 to identify bills. None were identified prior to the 109th Congress. From the 109th to 118th Congresses, 17 bills were identified through a search for “complete streets” in the title or summary of a bill. Legislation that is not freestanding, such as amendments, would not be captured by this search. House and Senate companion bills identified as related in Congress.gov are listed together.

The table does not reflect the provisions that established the complete streets program as contained in Section 11206 of the Infrastructure Investment and Jobs Act (P.L. 117-58).

a. There were no bills identified for the 115th Congress.
b. The “Short Title” column reflects the short title of the bill as introduced.
c. Provisions from S. 794 were included in the Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005 (SAFETEA; P.L. 109-59).
d. Provisions of this bill were included in a related bill, H.R. 3684, enacted as the Infrastructure Investment and Jobs Act (P.L. 117-58).
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