

ARTERIAL DESIGN CONSIDERATIONS RESOURCE

TEAM
March 2025



THE BLUEPRINT FOR ARTERIALS

AGENDA

- 1. Survey the Audience
- 2. Review the Blueprint
- 3. Apply the Blueprint

Survey the Audience



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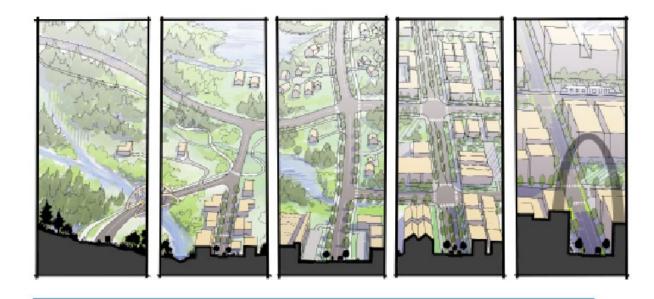
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Review the Blueprint



ARTERIAL DESIGN CONSIDERATIONS RESOURCE

THE BLUEPRINT FOR ARTERIALS

VISION & GOALS

"Moving forward into the future, all arterials in the St. Louis Region should emphasize the safety of the most vulnerable users, advance a wide range of community contexts and goals, and provide for users of all modes. This can only be accomplished through a collaborative process that provides each community with flexible solutions to fit their unique needs."

Vision Statement Key Words:

- 1. Safety
- 2. Vulnerable users
- 3. Community context
- 4. All users
- 5. Process
- 6. Fit (adaptive)

- 1. COLLABORATIVE
 - + INCLUSIVE
- **9** 2. FLEXIBLE
 - + CONSISTENT
- 3. MULTIMODAL
 - + PLACE-BASED
 - 4. SAFE + CONTEXTUAL

INTENT OF THE BLUEPRINT

1. The Blueprint will:

- Incorporate considerations for all modes and users on arterials
- Develop contextual typologies and a toolkit of design elements for arterial design
- Develop a process/tool to provide process consistency and design flexibility
- Align land use and place with roadways and use
- Identify data sources for evaluations
- Identify who needs to be involved and when during the process
- Better align community and stakeholder coordination

2. This Blueprint is not intended to:

- Provide a descriptive solution for every arterial to look and be the same
- Incorporate bike lanes into every road
- Be used for every project on arterials
- Create a new process that is time consuming

SCOPING

p. 22-23

Revised approach to scoping

- ✓ Involve Traffic/Safety and Planning staff in scoping and hiring
- ✓ Involve local agencies in scoping and validation
- ✓ Provides opportunities for early
 consideration of influential factors and
 participants
 - Incorporate SAFER into scope
 - Attracts funding for more than resurfacing
 - Develop plans for more than just asset management

PROJECT INITIATION ↓ START

Project Initiation Step 1:

Project Managers/Area
Engineers fill out checklist of
information:

- Study area/corridor limits
- Project elements, issues, and needs
- Crashes/fatalities/serious injuries
- Public and area team concerns (call reports, what has been shared with local staff, input from local governments)

Share with Planning and Traffic and Safety

Project Initiation Step 3:

Conduct and document meeting with local agencies (municipalities, county, state) to share draft scope. Refine Project Type and scope and budget, if necessary.

Project Initiation Step 2:

Planning and Traffic and Safety provide input on additional scope, if needed for minor and major projects. Add following to project details:

- Study area demographics and user groups - high level input on zero car households, high transit usage, etc
- Missing network transportation gaps
- Trip generators schools, churches, grocery stores, community center, shopping/entertainment nodes, etc
- Regional and community plans
- Thoughts on transect type (Figure 1-27)
- Additional safety issues and hot spots

Summarize details into additional considerations based on above bullets. Estimate additional scope elements and associated funding needed to evaluate safety and mobility for all users. Identify analysis to be considered for STEP 2 in the EPG (i.e., road diet, RSA, TS&O, etc)

Identify Project Type* (Figure 1-11) and any associated funding constraints/
opportunities.

Project Initiation Step 4:

Submit draft scope and budget/elements to Budget Team for preparation to develop final draft budget for submission to prioritization. If projects are prioritized for funding, then they are programmed into the STIP or TIP. If not, then projects become part of a list of Unfunded Needs for seeking funding or perform rescoping to reapply for funding programs

PROJECT TYPES

p. 24

Revised approach to scoping

- ✓ Introduces three general project types:
 - Routine maintenance
 - Minor capital project
 - Major capital project
- ✓ Identify project type based on both current and potential funding
- ✓ Identify project type based both on scope elements and impacts

Typical Scope Elements	Typical Impacts	Typical Project Name / Funding Stream
Asset M	anagement (Routine Maintenance, Operations, Bridges)	
-Emergency Resurfacing -Traffic signal upgrade and/or retiming -ADA ramp upgrades -Bridge Repairs/structural work -Bridge Inspection -Bridge Deck Resurfacing -Spot safety improvements -Traffic Optimization	No/minor impacts to traffic capacity and parking No/minor impacts to vehicular/pedestrian/cycling ways No impacts to utilities or drainage No changes to curb lines/drainage impacts No impacts to other jurisdictions assets or roads No ROW acquisition No excavation below subbase Rehabilitation work on or around an existing bridge Maintaining existing safety features Minimal coordination needed with other jurisdictions No access management changes	-CMAQ signal optimization -RSAs -Safe Streets Implementation -Safety Funding
	Minor Capital Projects	
-Overlay -Lane reallocation -Full resurfacing with impacts to intersections -Restriping / Road diets -Expansion of cycling network on-road -First / Last mile projects to schools, transit, parks, trip generators -Painting new midblock crossings -Intersection improvements (turn lanes add/remove) -Streetscape improvements -Green Infrastructure	Minor parking impacts Minor impacts to traffic signals No ROW acquisition Minor improvements of traffic calming and network tools Changes to curb lines at intersections (mostly for traffic calming) Minor to moderate impacts to traffic capacity and parking Minor to moderate stormwater and drainage Minor to moderate impacts to utilities with no/moderate utility coordination Minimal to moderate coordination needed to other jurisdictions Safety improvements to address crashes No/minor access management changes Minor to moderate changes at intersection Minor to moderate below grade space (root zone) infrastructure needs	-STP -Developer led -Safe Streets Implementation -Complete Streets -Safety Funding
	Major Capital Projects	
-Corridor improvements -Replacing bridges -Roadway reconstruction -Roundabouts -Expansion of cycling network with protection or separated facilities -Reclamation of roadway for other public uses -Streetscape improvements -Green Infrastructure	Moderate/major coordination need with other jurisdictions Moderate/major stormwater and drainage Moderate/major parking impacts and/or roadway capacity Moderate/major impacts to utilities with possible extensive utility coordination Changes to curb lines along corridor with drainage impacts Major impacts to traffic signals that greatly impact traffic operations in addition to traffic capacity Excavation below subbase ROW acquisition Moderate/major below grade space (root zone) infrastructure needs	-STP -Corridor Studies -PEL -Bridge Replacement -Federal Funding -Major Development led -Great Streets / Local Roadway Plan Implementation -Complete Streets -Other major federal funding

STEPS

<mark>p. 25</mark>

Revised approach to conceptual study

- ✓ Restructures approach to conceptual study
 - Enhanced but NOT LIMITED to public involvement
 - Aligns and clarifies EPG steps
 - Iterates and clarifies decisionmaking process during conceptual phase
- ✓ Focused on how to a roadway adapts and fits with the community context

EPG Project Development STEP		Asset Management	Minor Capital Projects	Major Capital Projects
	Project Initiation	Identified	d during this	step
Step 1:	Develop CEP	х	Х	Х
Inspire and	Collaborate with communications	Х	Х	Х
ldea	Develop purpose and goals		Х	Х
	Define high level issue		Х	Х
	Public Touchpoint (and ENGAGEMENT MEMO)			Х
	ARTERIAL CHECKLIST	х	Х	Х
Step 2:	Discover existing conditions		Х	Х
Planning	Identify typology and tools		Х	Х
Begins	Develop options/alternatives		Х	Х
	Collaborate with Planning and Safety and Traffic		Х	Х
	Collaborate with other Agency partners		Х	Х
	Meet with Budget Team			Х
	DRAFT PLANNING CHECKLIST		Х	Х
Step 3: Public Consulted	Public Touchpoint (and ENGAGEMENT MEMO)		Х	Х
Step 4:	Collaborate with Safety and Traffic		Х	Х
Impact	Collaborate with Maintenance		Х	Х
Assessed	Refine preferred concept		Х	Х
Step 5: Public	Public Touchpoint (and ENGAGEMENT MEMO)		Х	Х
Involved	FINAL PLANNING CHECKLIST (15% concept)		Х	Х
Again Before Project	Collaborate with other Agency partners		Х	Х
Approval	Public Touchpoint (INFORM)	Х		

ENGACEMENT

p. 27-30, 37, & 41

Revised approach to *public* involvement

- ✓ Restructures approach to public involvement
 - Happens before design (preliminary plans)
 - Involve communities early
 - The community helps shape the project
- ✓ Incorporates and clarifies roadway use by/for the local community.
- ✓ Guidance gives framework to assist project teams to build out public involvement

	·
STEP 5: ENGAGEMENT	Title of engagement: 'PROJECT NAME' DESIGN PHASE
PURPOSE OF TOUCHPOINT	The aim is to communicate the input received so far, demonstrate how this input has influenced the proposed solutions, and present these solutions. Additionally, we should share the tools and solutions outlined within the budget, along with discussing any potential future opportunities that may not be encompassed in the current phase.
PUBLIC PARTICIPATION IMPACT	INFORM / CONSULT
ENGAGEMENT TYPE	open house, public survey, informative session
MATERIALS	presentation maps showing solutions and tools comment forms survey for final input
LOCATION	As close to or on arterial as possible. Look for location with a agency partner, community center, place that people in study area gather, or existing event to add on to. There could be a virtual option
INPUT TO GATHER	The overarching goal of this step for minor and major capital projects is to share the input to date and how it has molded and developed the preferred option and solution presentated. This step allows for the public to give final input on the preferred solution for the arterial and future phases (if needed).
NOTES for this step	Preferred solutions and options should be considered draft until final input is gathered. It should be clear what is being designed with current project and where there is future opportunities.

DESIGN TOOLS

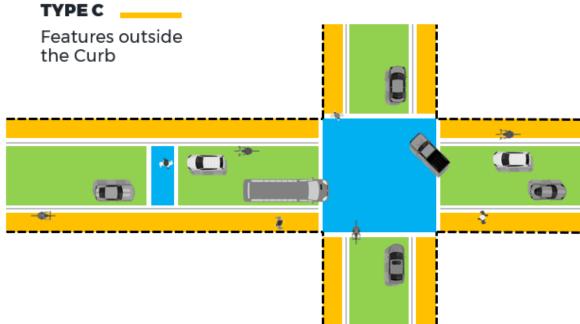
<mark>p. 52-82</mark>

TYPE A

Features inside the Curb

TYPE B

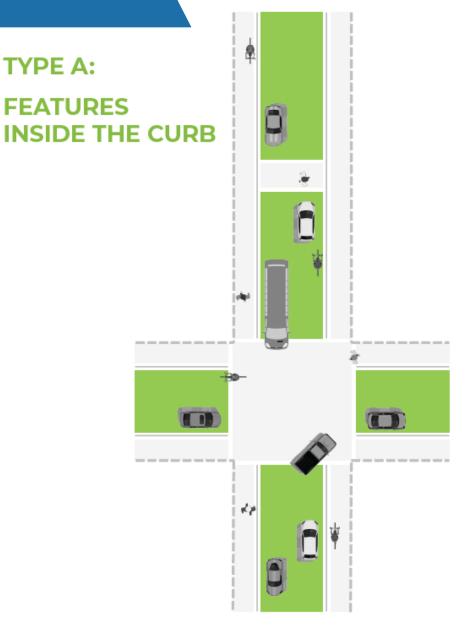
Intersections and Crossings



Type A: Features inside the Cu	ırb
Lowering Design Speed (Restriping or Moving Curbs)	Road Diets
Access Management (Relocation or Consolidation of Driveways)	On-Street Parking
Narrowing Lanes	Transit Mobility Hubs / Protected
Segment Lane Reconfiguration / Curb Relocation	Traffic Calming / Movable Bollards
Traffic Diverters / Forced Turns	Green Infrastructure / Inside Curb
Transit Lanes / Pull-Outs	Enhanced Pavement Markings
Shared Traffic Bike Lanes	Rumble Strips
Dedicated / Protected Bike Lanes	Varying Curb Types
Center Medians	Bike Lane Vertical Separation
Type B: Intersections and Cross	ings
Intersection Control Types	Pedestrian Refuge Islands
Intersection Lane Configuration / Curb Relocation	Traffic Diverters (for Side Streets)
Protected Bike Intersections	Raised Intersections / Crossings
Standard / Floating Island Curb Extensions	Midblock Crossings
Green Bike Crossings / Left Turn Boxes	Transit Signal Priority (TSP)
Median Noses	Intersection / Median Hardening
Pedestrian and Bike-Prioritized Signal Operations	High-Visibility Crosswalks / Crosswalk Visibility Enhancements
Intersection Turn Modifications (Radii/Channelized Right Removal)	Reconfiguring Channelized Right- Turn Lanes
Rectangular Rapid-Flashing Beacons (RRFB)	Floating Transit Islands / Bus Pads / Mobility Hubs
HAWK Pedestrian Signals / Hybrid Beacons	Roundabout Intersections
ADA Curb Ramps and Pedestrian Signals	Protected-Only Left Turns
Type C: Features outside the C	urb
Enhanced / Widened Sidewalks	Changing Site Distance Triangles
Shared Use Path / Elevated Bike Lanes	Relocation of Signals / Cabinets
Protected Bike Lanes (Cycle Tracks)	Continuous Sidewalks
Vulnerable Road User Barriers	Vertical Amenities
Posted Speed Limits / Lowering	Street Signage (MUTCD)
Pedestrian / Hybrid Sidewalk / Street Lighting	Right-of-Way Purchase
Green Infrastructure / Outside Curb	Street Trees / Landscaping

DESIGN TOOLS

TYPE A:



LOWERING **DESIGN SPEED**

WHAT IS IT?

The design speed is a selected speed utilized to determine a variety of geometric features on a roadway (such as curb radii, travel lane width, on-street parking restrictions, quardrails, and clear zones for example) which can affect the actual speeds. Lowering the design speed can also inform decisions during restriping or moving of curbs during redesign.

WHEN TO USE?

Design speeds can be lowered network-wide or in sections. Lowering design speeds should be considered on high-crash corridors (typically identified in a high-injury network) and areas of higher-risk (typically identified in a high-risk network).

GUIDANCE FOR USING

NACTO's Safe Speed Study identifies whether to lower speed considering operating speed, maximum safe speed, and the existing posted speed. However, lowering speeds does not always slow down drivers, as drivers will drive the speed limit that they feel comfortable to drive. Therefore, it is encouraged to pair lowered speeds with traffic calming and speed management countermeasures.



areas (error)	DISTANCE (FT)	RISK (%)	RISK (%)*	
10-15	25	5	2	
20-25	40	15	5	
30-35	75	55	45	
40+	110	90	95	

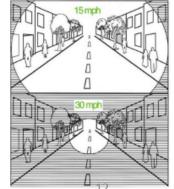
Speeds Relation to Safety FHWA Safe Speed / Risk Chart

BENEFITS:

- · Lowering design speed can reduce intended speeds for cars
- Allows reduction in lane width and tighter turning radii
- · Can allow shorter cycle lengths and pedestrian-priority for crossings
- · Reduces injuries and fatalities for pedestrians and cyclist and overall crash severity

TOOLS TO USE THIS WITH:

- Curb Extensions
- Islands / Medians
- Narrowing Lanes
- Raised Crosswalks
- Road Diets
- Roundabouts
- Street Trees / Landscaping



Speed, Tunnel Vision, and Reaction Time Cone of Sight Distance from America Walks

PROCESS

Revised approach to selection of project elements

Context and Character for the Street Segment

- Urban Core
- Urban
- Suburban
- Rural Town
- Rural

Review any
Applicable
Plans or
Projects or
Major Overlays

- Comprehensive Plans
- Future Land Use Plans
- Area Plans
- Transportation Plans
- Corridor Designs
- Overlay Codes
- On-Going Projects
- Others

Haseline User
Needs and
Priorities for the
Street (Inside
the curb,
Outside the
Curb, and at
Intersections)

- Bicycles
- Pedestrians
- Vehicles
- Parking
- Transit
- Freight

Select Street
Typology for
Customization
and Constraints
Identification

- Downtown Street
- Transit Corridor
- Gateway Street
- Mixed-Use Street
- Main Street
- Commercial Corridor
- Residential Street
- Business Industrial Corridor
- Connector Corridor

Identify context & character



Urban Core
Areas with
highest density,
mixed land uses
within and
among
predominately
high-rise
structures, and
small setbacks.



Urban
Areas with high
density, mixed
land uses and
prominent
destinations,
potential for
some on-street
parking and
sidewalks, and
mixed setbacks.



Suburban
Areas with medium
density, mixed land
uses within and
among structures
(including
mixed-use town
centers, commercial
corridors, and
residential areas),
and varied setbacks.



Rural Town
Areas with
lowest density,
few houses or
structures
(widely dispersed
or no residential,
commercial, and
industrial uses),
and usually large
setbacks.



Rural
Areas with low
density but
diverse land uses
with commercial
main street
character,
potential for onstreet parking and
sidewalks, and
small setbacks.

(Credit: AASHTO Contextual Classification for Geometric Design and the NCHRP Research 855: An Expanded Functional Classification System for Highways and Street 2018)

Identify community details for adapting design

Considers other community details and users:

- ✓ Identifies other plans and projects that could impact the roadway
- ✓ Expands understanding of who are the users and for whom are we designing.
 - Not just vehicle trips and trough-trips
 - Existing and future
- ✓ Shift from "accommodating" to safe, comfortable, convenient, purposeful "inclusion"

WHAT ARE THE RIGHT QUESTIONS TO ASK?

- Are there any existing plans or policies that establish a vision for the area or provide community direction on the future of the area?
- community pref direction contras
- Are these vision approved by loc Or have these et
- How can this pro community achi the future? Are t the community to . funds to particip

What context cle WHAT ARE THE RIGHT QUESTIONS TO ASK?

- Who were the influential groups or leaders involved in the decisionmaking process? (Such as internal agency leaders and departments, political leadership, or external engagement with community leaders.)
- stakeholders, spe businesses, advo community partn
- Did the project b political support. so, what ways we Over what time i

Who were the in WHAT ARE THE RIGHT engaged? (The g QUESTIONS TO ASK?

- What are the known safety issues along the segment? Are some modes that need safety prioritized? Do crashes indicated specific areas to focus efforts?
- What modes of transportation are on the segment now and what are the preferences for the future? Is there estimated demand for other modes and users unmet by the roadway today? Do the plans in the previous step emphasize a desire for other modes? How is safety addressed?
- Are pedestrian facilities included? Is there a need for sidewalks or safe crossings for pedestrians? Are pedestrians facilities appropriate for the context? Wide and safe enough?

p. 104-155

TYPOLOGIES

CONTEXT AND DESIGN CONSIDERATIONS	Downtown Street (DTS) SEE PAGES 108-109	Mixed-Use Street (MUS) SEE PAGES 110-115	Transit Corridor (TRC) SEE PAGES 116-121	Main Street (MNS) SEE PAGES 122-127	Residential Street (RES) SEE PAGES 128-132	Gateway Corridor (GWC) SEE PAGES 134-139	Commercial Corridor (CMC) SEE PAGES 140-145	Business Industrial Corridor (BIC) SEE PAGES 146-149	Connector Corridor (CNC) SEE PAGES 150-155
AASHTO Context Classification	UC	UC; U; S	UC; U; S	U; S; RT	U; S; RT	UC; U; S	U; S; RT	U; S	U; S; R
Right-of-Way (LF)	60'-120' TYP	80'-100' TYP	100'-140'TYP	60'-80' TYP	50'-100' TYP	80'-120' TYP	80'-120' TYP	60'-100' TYP	50'-80' TYP
Vehicle Lanes (#, one way)	0-3 TYP	0-2 TYP	2-4 TYP	0-2 TYP	1-4 TYP	0-3 TYP	2-4 TYP	1-2 TYP	2-3 TYP
Posted Speed (MPH)	25 MPH MAX	25-30 MPH MAX	30 MPH MAX	25-30 MPH MAX	25-35 MPH MAX	25 MPH MAX	30-45 MPH MAX	30-50 MPH MAX	55 MAX
AADT (#)	5,000-15,000 TYP	10,000- 20,000 TYP	10,000- 25,000 TYP	5,000-10,000 TYP	5,000-10,000 TYP	5,000-15,000 TYP	> 15,000 TYP	> 5,000 TYP	> 15,000 TYP
Intersection / Crossing Density (#/LF)	< 300'-325' TYP	250'-500' TYP	300'-800' TYP	250'-500' TYP	300'-800' TYP	250'-500' TYP	300'-800' TYP	> 800'TYP	800'-1,600 TYP

FIGURE 1-32: Table Cross-Referencing Street Typology with Context and Design Considerations

Identify the typology by segment

Rte. 100 / Manchester Big Bend to Vandeventer



COMMERCIAL CORRIDOR CMC-RT

DESCRIPTION AND INTENTION:

A typology for the region's extensive network of radial and traversing commercial thoroughfares that link urban cores to population / employment centers through and between communities with a wide range of densities, heights and uses. A rural town Commercial Corridor is characterized by its provision of local land access and access management, and consideration for freight. Where possible and needed to support local businesses, they should include wide sidewalks and amenities, as well as on-street parking.



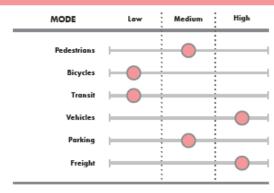
APPLICABLE CONTEXTS:

AASHTO Context	Municipality
Rural Town (RT)	SCC; JEF; FRK

CONTEXT CHARACTERISTICS:

Factors	Quantitative Metric
Development Density	1-3 Stories typical; heights may vary widely; and parcels are often built out.
Land Uses	Mostly vertical mixing of land uses within buildings with some areas of concentrated, single land use areas.
Building Setbacks	Ranging from 0' to 25' front setbacks, consistently and some consistent side setbacks relative to adjacent buildings.
Parking Location	> 60% On-street parking. < 40% Off-street parking. ~ 0% In buildings / structures.

TYPICAL MODAL PRIORITY:



OTHER MODAL CONSIDERATIONS:

Pedestrians Preferred: Wide sidewalks with amenities. Bicycles Optional: If included, protected or separate facilities preferred. Transit Optional: LRT, STC, BRT, or BUS facilities and amenities. Vehicles Recommended: Turn lanes or median
or separate facilities preferred. Transit Optional: LRT, STC, BRT, or BUS facilities and amenities.
facilities and amenities.
Vehicles Recommended: Turn lanes or median
Perking Preferred: On-street parking and curb space for loading and pickup.
Freight Recommended: Provisions for larger design vehicles.

OTHER DESIGN CONSIDERATIONS:

Right-of-Way (LF)	80'-120' TYP
Vehicle Lanes (one way)	2-4 TYP
Posted Speed (MPH)	30-45 MAX
AADT (#)	> 15,000 TYP
Intersection / Crossing Density (#/LF)	300'-800' TYP

APPLICABLE TOOLS:

[145]

Type A: Features inside the Curb

- Lowering Design Speed (Restriping or Moving Curbs)
- Road Diets / Narrowing Lanes
- **Dedicated Transit Lanes** / Bus Pull-Outs
- Dedicated / Protected Bike Lanes
- Traffic Calming Bollards

Type B: Intersections and Crossings

- Roundabout Intersections
- Protected Bike Intersections
- Raised Intersections / Crossings
- Floating Transit Islands / Mobility Hubs
- Queue Jump Lanes / Transit Signal Priority (TSP)
- Green Bike Crossings / Laft Turn Boxas
- Standard / Floating Island Curb Extensions
- Midblock Crossings
- Pedestrian Refuge Islands
- Intersection Turn Modifications
- Protected-Only Left Turns

Type C: Features outside the Curb

- Shared-use Path / Elevated Bike Lane
- Padastrian / Hybrid Sidawalk Lighting
- Street Trees / Landscaping
- Vertical Amenities (A variety of items)

LEGEND

- Yes, the tool should be considered.
- Maybe, the tool could be utilized.
- No, the tool is not ideal.

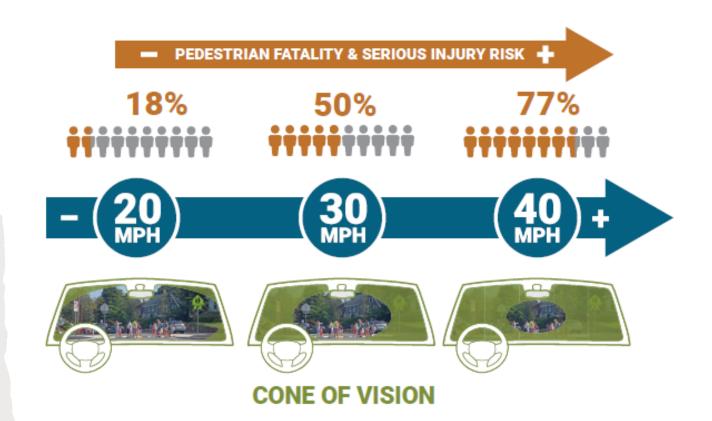
SEE PAGE X FOR FULL TOOL DETAILS







Applying the Blueprint



Identifying Context – Rural Town

Lebanon, MO

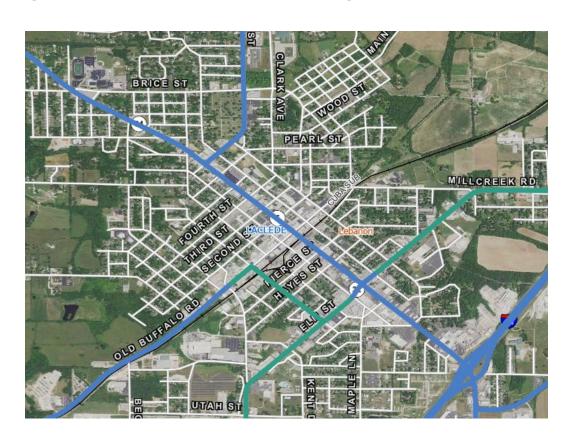
MO 5 (Jefferson Ave)

Pass alongside Main Street (Commercial Street)

Camdenton, MO

US-54

Pass through Main Street





Identifying Context – Rural Town

Kennett, MO

MO 84 (St. Francis St.)

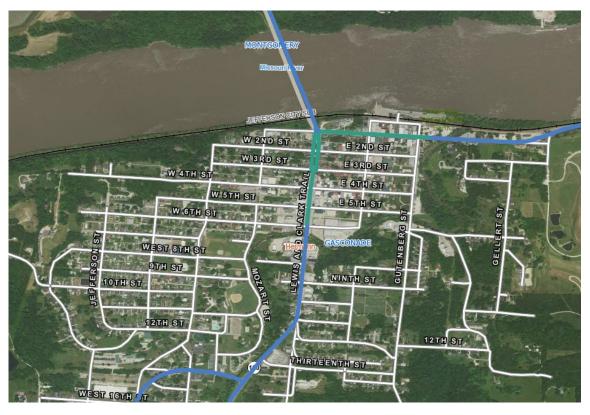
Main Street



Hermann, MO

MO 19 (Market St.)

Main Street – split ownership



Community Details

Business 63 in Kirksville, MO

- Typology: Residential Street Rural Town (below)
- Era: Pre-WWII
- Comfortable for pedestrian





- Typology: Commercial corridor Rural Town (above)
- Era: Post-WWII
- How comfortable for pedestrians crossing the street?

Community Details

US-65 in Chillicothe, MO

- Typology: Main Street Rural Town (below)
- Era: Pre-WWII
- Pedestrian focused streetscape



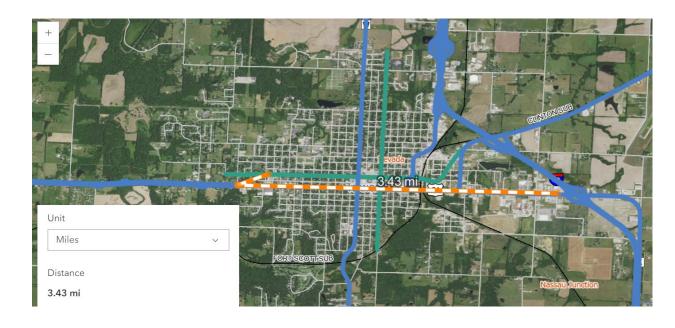


- Typology: Commercial Corridor Rural Town (Above)
- Main Street: Post-WWII
- Regional level commercial
- Needs improvement for pedestrians

Typologies & Design

US-54 in Nevada, MO

- 30 MPH zone
- 5-lane arterial
- Block lengths under 400 feet with sidewalks in pre-WWII area
- Pedestrian trip generators:
 Walmart, grocery, dollar store, dining, etc.
- 5 crosswalks for 3 miles
- Traffic volumes under 15k and most under 10k
- Rural town with pre-WWI layout





Example: US-54 / **Nevada, MO**

Potential design options

- ✓ Consolidate / remove driveways
- ✓ Add pedestrian crossings with lighting and refuge islands & enhance 5 existing crosswalks
- ✓ Re-allocate roadway space based on traffic and context:
 - Road diet 5-to-3 lane
 - Curb extensions or choker islands
 - Medians

connections and walkability between, through, and along communities and provide local access for single and multi-family areas with lower densities and heights. A rural town Residential Street is characterized by its provision of wide sidewalks and amenities and on-street parking to create a neighborhood feel. Where possible or necessary, bicycle



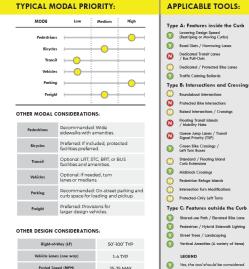
APPLICABLE CONTEXTS

[132]

AASHTO Context	Municipality
Rural Town (RT)	SCC; JEF; FRK

Factors	Quantitative Metric
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Land Uses	Mostly vertical mixing of land uses within buildings with some areas of concentrated, single land use areas.
Building Setbacks	Ranging from 0' to 25' front setbacks, consistently and some consistent side setbacks relative to adjacent buildings.
Parking Location	> 60% On-street parking. < 40% Off-street parking. ~ 0% In buildings / structures.
Location	~ 0% In buildings / structures.

TYPICAL MODAL PRIORITY:



5.000-30.000 TVD





APPLICABLE TOOLS:

Type A: Features inside the Curl

Lowering Design Speed (Restriping or Moving Curbs)

Road Diets / Narrowing Lane

Dedicated / Protected Bike Lane



Maybe, the tool could be utilized

No, the tool is not ideal.

DESCRIPTION AND INTENTION

A typology for the region's extensive network of radial and traversing commercia thoroughfares that link urban cores to population / employment centers through and between communities with a wide range of densities heights and uses A rural town Commercial Corridor is characterized by its provision of local land access and access management, and consideration for freight. Where possible and needed to support local busin they should include wide sidewalks and amenities, as well as on-street parking



APPLICABLE CONTEXTS: Bural Town (RT) SCC: JEE: ERK

[144]

MODE	Low	Medium	High
Pedestrians			
Bicycles	-		
Transit	<u> </u>		
Vehicles			-0
Parking			
Freight			-
HER MODAL CO	ONSIDERATIO	ONS:	
THER MODAL CO		ONS: de sidewalks	

r separate facilities preferred

curb space for loading and pickup.

80'-120' TYP

2-4 TVP

30-45 MAX

> 15.000 TVP

Vertical Amenities (A variety of item

Maybe, the tool could be utilized





Typologies & Design

US-50 in Sedalia, MO

- 5-lane arterial, 35 mph
- Block lengths under 400 feet for 2.9 miles with sidewalks
- 6 crosswalks for 3 miles
- Traffic volumes over 20k
- Rural town with pre-WWI layout
- Potential design options:

medians, turn pockets, mid-block crossings, 10-feet wide lanes, lower speed to 30 mph, roundabouts

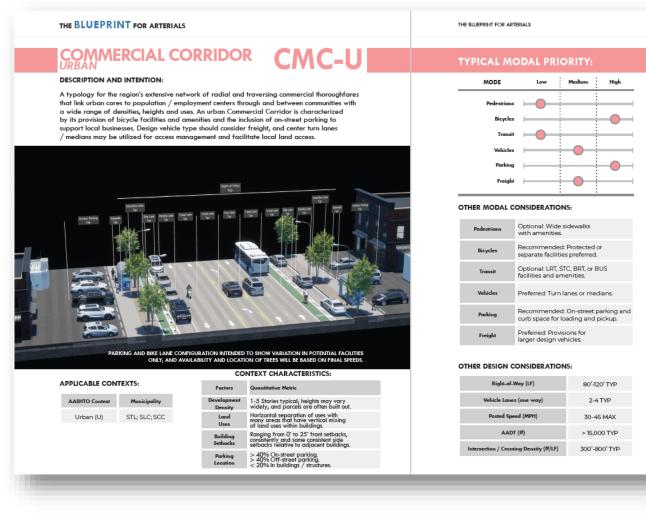




Example: Route 231 / South St. Louis County

Results of community input and technical analysis

- ✓ Re-allocates roadway space based on traffic and context
 - ✓ Road diet 4-to-3 lane
 - ✓ Adds buffered bicycle lane
 - ✓ Designates on-street parking
 - ✓ Removes unwarranted turn lanes
- ✓ Adds 4 pedestrian mid-block crossings with lighting and refuge islands
- ✓ Enhances 4 existing crosswalk locations
- ✓ Begins to improve safety and movement for all users



[141]

APPLICABLE TOOLS:

Type A: Features inside the Curb

Type B: Intersections and Crossings

tandard / Floating Islan

Protected-Only Left Turns

Type C: Features outside the

Padastrian / Hybrid Sidawalk Light

Vertical Amenities (A variety of items

Yes, the tool should be considered

Maybe, the tool could be utilized.

No, the tool is not ideal

Supportive Plans & Policies

Federal

- National Roadway Safety Strategy (NRSS)
- Safe Systems Approach
- Complete Streets as default approach
 - Safety and mobility for all users

State

- MoDOT EPG 907.10 -**Complete Streets**
- SAFER (prompts to ask)
- Vulnerable Road User Safety Assessment
- Strategic Highway Safety Plan



ASKING THE RIGHT QUESTIONS THE SAFE SYSTEM APPROACH

INSTRUCTIONS

The goal is to incorporate safety measures in all projects. The intent of this tool is to facilitate a discussion of safety in all MoDOT projects. Project Managers with the core team should use this document to consider baseline safety improvements for projects. Crash history and customer areas of concern should be part of the discussion, as well as considerations for potential future crashes. This is not an allinclusive list, and further safety analysis may be required. If other safety improvements not specified on the form have been considered, these items can be added to the form. Comments can be added to note core team discussions and decisions



Page Ave. (Route D) ROAD SAFETY AUDIT



PROJECT INFORMATION

- 1.4 miles in north St. Louis county, through Pagedale and Wellston
- Pennsylvania Ave. to Skinker/Kienlen
- Multimodal connections (GRG & Metrolink)



SCHEDULE

The road safety audit process starts with listening to the community. More collaborative opportunities to be involved will be comina!

O WINTER 2023/2024

Public meeting #1, online survey, walk audit & focus

SPRING 2024

Pop-up demonstration; concepts tested, Public meeting #2

SUMMER/FALL 2024

Public meeting #3; final recommendations

2026

Construction Begins

Route D St. Louis County

3X statewide crash rate

Safety Projects



ST. LOUIS CITY LIMITS TO INTERSTATE 55 **ROUTE 100 (MANCHESTER/CHOUTEAU)** RESURFACING AND SAFETY IMPROVEMENT PROJECT

The Missouri Department of Transportation will resurface Route 100 (Manchester/Chouteau) in the City of St. Louis in 2025. The new pavement provides an opportunity to make changes to what the roadway looks like. Now is the right time to get the community's input so it can be part of a new design that will improve safety for all users.

The project area extends nearly 7 miles and includes 27 signals.

SEEKING A SAFER ROUTE 100 (MANCHESTER/CHOUTEAU)

Crash rates in the project area exceed the statewide average for similar roadways and include 36 serious injury and fatal crashes in the last five years.



- Resurface Route 100 (Manchester/Chouteau) in the city of St Louis.
- 2. Work with the community to identify safety concerns along the corridor and determine possible solutions.
- 3. Work with local partners to address safety concerns during the resurfacing

Route 100

City of St. Louis

5X statewide crash rate

SCHEDULE

During this project, we want to hear from you! There are several opportunities to share your insights as we move through the early portion of the project.

FALL/WINTER 2023

Understand community concerns

- . Focus Group #1
- · Public Meeting #1

WINTER/SPRING 2024

Evaluate Potential Safety Strategies

- Focus Group #2
- Public Meeting #2

SPRING 2024

Review Selected Safety Strategies

. Focus Group #3

SUMMER/FALL 2024

Preliminary Design

 Present Preliminary Design for Comment

Route D

City of St. Louis

6X statewide crash rate



MODOT SKINKER/KIENLAN TO TUCKER IN THE CITY OF ST. LOUIS **ROUTE D (PAGE & MLK) ROAD SAFETY AUDIT**

The Missouri Department of Transportation is conducting a Road Safety Audit of Rte. D (Page & MLK) in the City of St. Louis to address safety concerns for all users.

The project area extends 5.8 miles along Page Avenue between Skinker on the west and Dr. Martin Luther King Drive, then on Dr. Martin Luther King Drive to Tucker Boulevard on the east.

SEEKING A SAFER ROUTE D (PAGE & MLK)

Crash rates in the project area exceed the statewide average for similar roadways and include 10 fatal crashes in the last five years.



The project will:

- 1. Document and assess existing traffic trends and roadway
- 2. Evaluate improvement alternatives to enhance safety for all roadway users.
- 3. Work collaboratively with the community to develop contextsensitive, community-supported designs that address community issues and needs.

SCHEDULE

The Road Safety Audit will be developed through collaborative and inclusive engagement with the public. Several opportunities for engagement are planned

Community Meeting #1: **Understand Community** Concerns

SUMMER 2023

Pop-Up Demonstrations: Test Proposed Solutions

LATE-SUMMER 2023

Community Meeting #2: **Draft Recommendations**

WINTER/SPRING 2024

Community Meeting #3: Final Recommendations

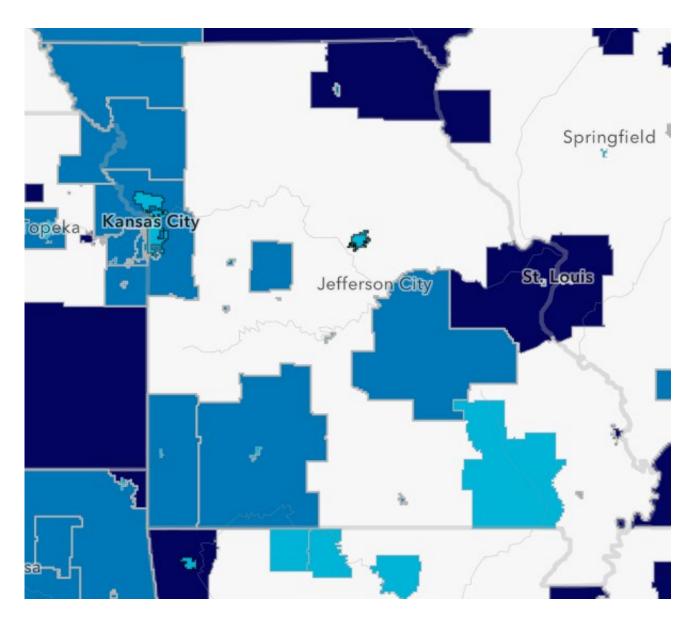
2026 (ANTICIPATED) Construction of Road Resurfacing Project

Growing Relevance

SS4A Grant Recipients

Expanded opportunities for safety projects:

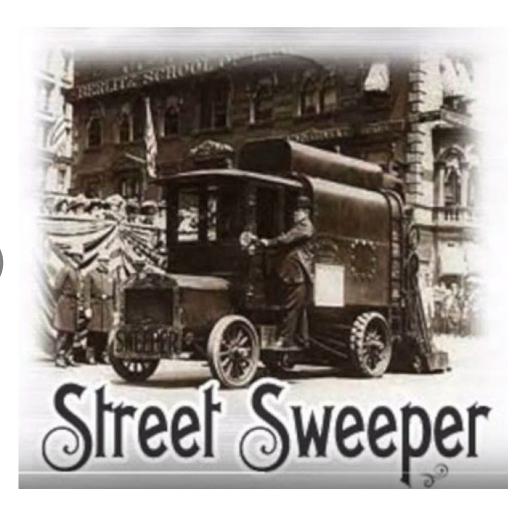
- 10 RPCs, 9 remain
- 6 MPOs, 3 remain
- 21 cities
- 1 county



What's Next?

- Blueprint for Arterials Part 2: Maintenance & Costs
- Performance-based *prioritization*
- Minor capital projects
 - Rte. AC, U / North St. Louis County (now)
 - Rte. EE / North St. Louis County (next)
- Major capital projects
 - Rte. 30 / St. Louis City (next)
 - US-61/67 / Jefferson County (next)

Maintaining streets since 1896!!!





ARTERIAL DESIGN CONSIDERATIONS RESOURCE

THE BLUEPRINT FOR ARTERIALS



