

Purpose + Need

Connect:

- ➔ **Strengthen** the spine of our regional transportation system
- ➔ **Improve** transit connections
- ➔ **Link** neighborhoods, businesses, institutions & employment centers

Thrive:

- ➔ **Advance** RideKC Smart Moves Regional Transit & Mobility Plan
- ➔ **Extend** the benefits of the Downtown starter line (**approaching 4 million rides**)

Develop:

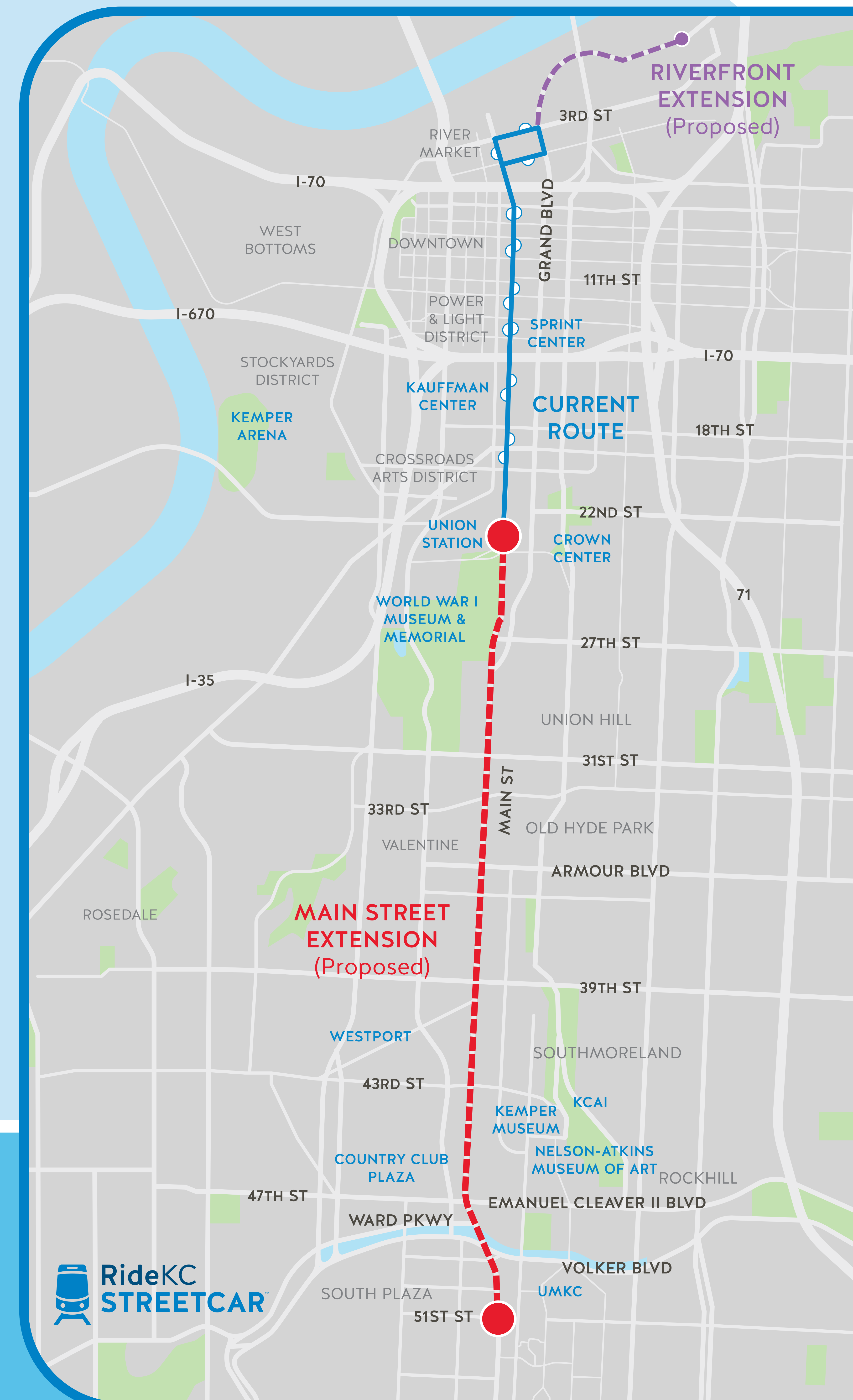
- ➔ **Proven** catalyst for economic development
- ➔ **Support** goals of Main Street Overlay & Midtown/Plaza Area Plan

RideKC Smart Moves 3.0 Regional Transit & Mobility Plan is the region's long-term vision for transit, including the expansion of streetcar as a near-term strategy.

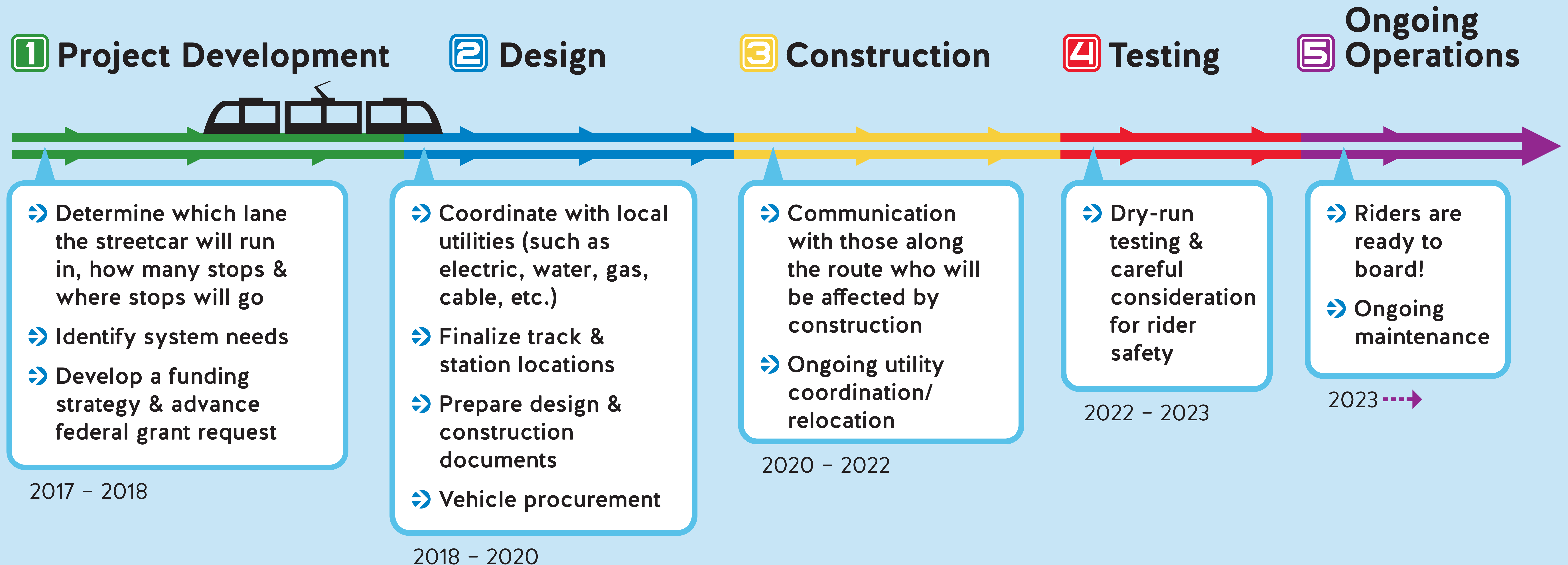
The goal of this project phase is to...

- ➔ Answer two fundamental questions about the Extension:
 1. Where should stops be located?
 2. Which lane(s) of the road should the streetcar run?
- ➔ Recommend transit connections and modifications to the bus system that support an **integrated regional transit system**
- ➔ Advance a request for federal funding

This extension will run from the end of the starter line at Union Station, south along Main Street to the vicinity of 51st Street.



Project Lifecycle

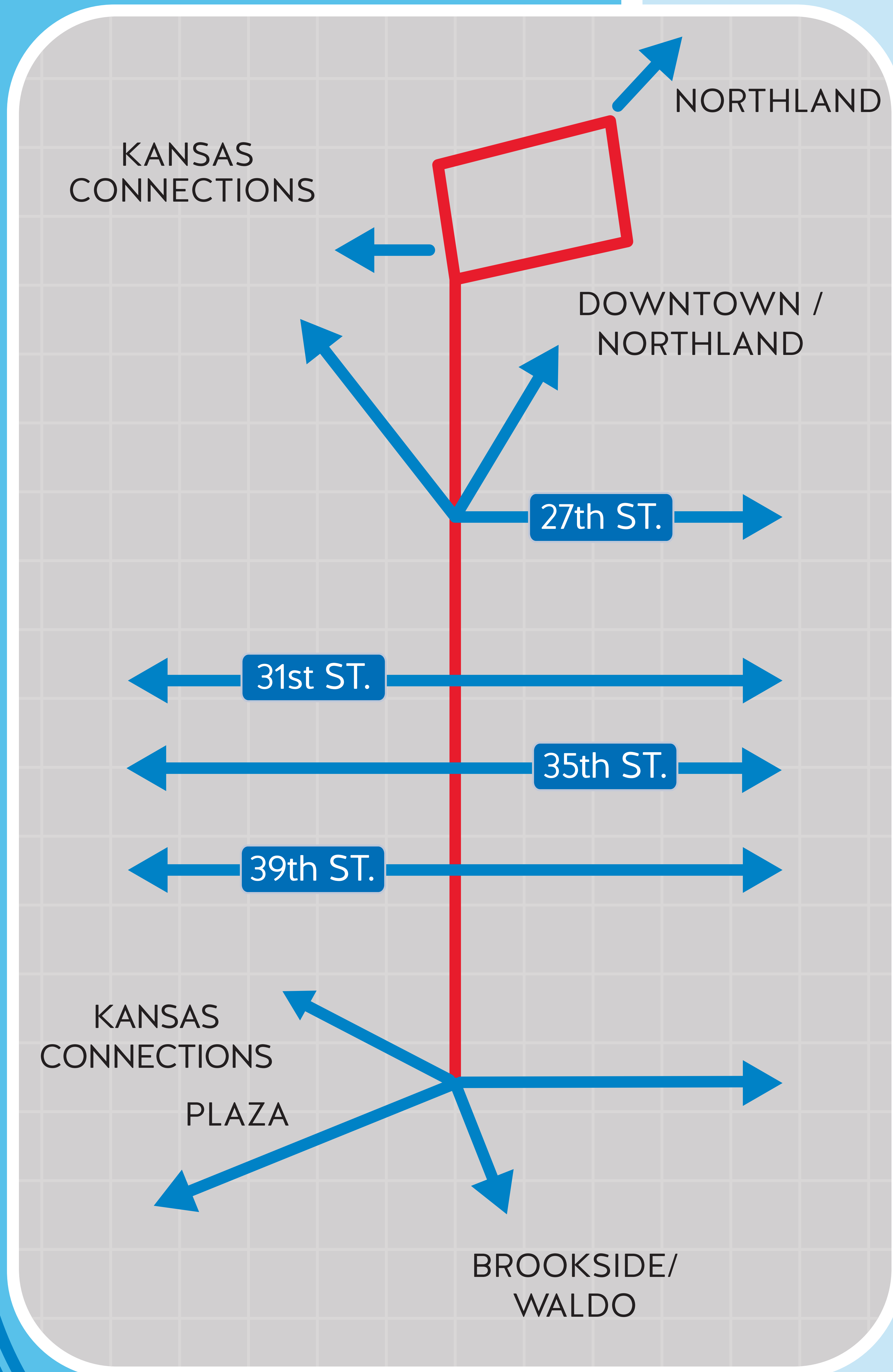


Proposed timeframes are approximate and subject to change.

The input received at tonight's meeting will help the Project Team advance the extension into the Design Phase.

Transit Connections & Modifications

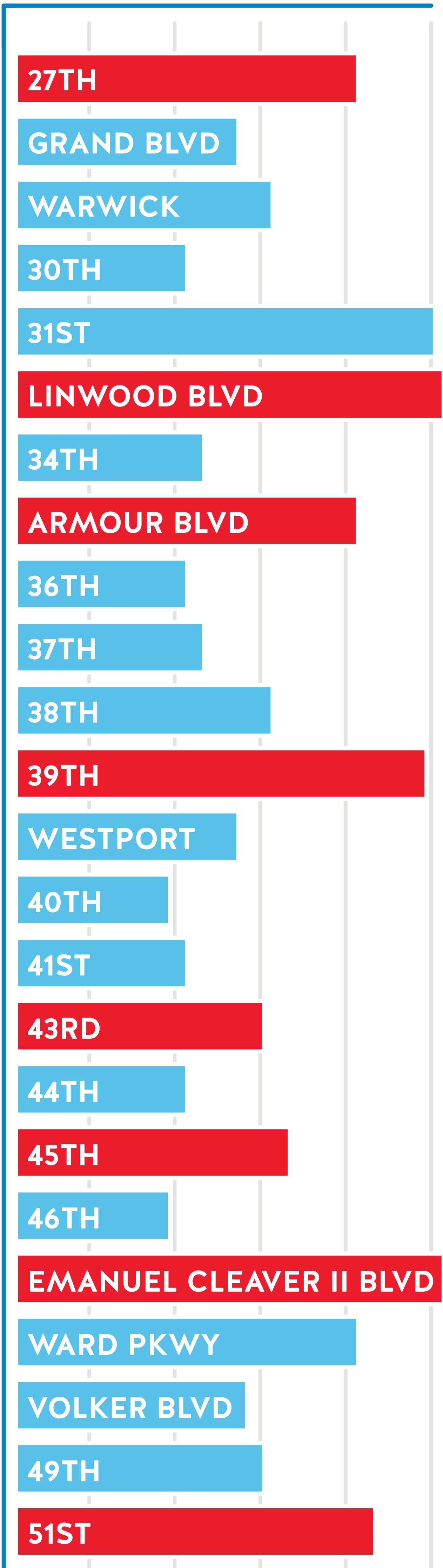
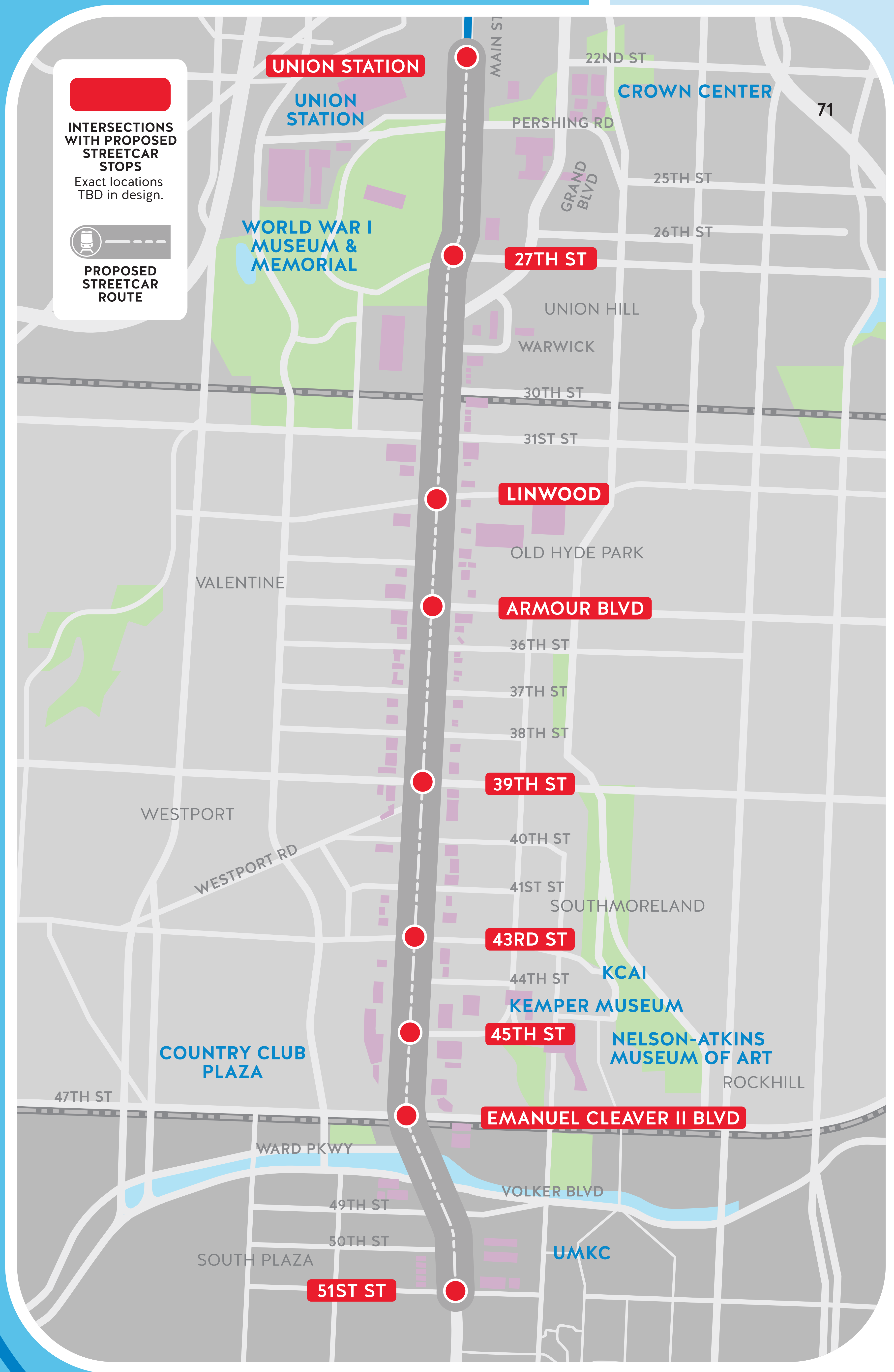
- ➔ Streetcar would operate from Downtown to UMKC
- ➔ Streetcar replaces Main MAX – strengthening the spine of our regional transit system
- ➔ New bus connector route would offer frequent service between the streetcar route, Plaza, Brookside & Waldo
- ➔ East/west connectivity through planned transfer connections



Where should stops be located?

Proposed stop locations were evaluated against key criteria:

- ➔ Regional connectivity
- ➔ Bus integration
- ➔ Ridership
- ➔ Economic development potential
- ➔ Pedestrian demand/Land use
- ➔ Spacing (cost + travel time)
- ➔ Informed by previous studies



Data-driven Process Informed by Public Input

PURPOSE + NEED



**IMPROVE MOBILITY CHOICES
& ACCESSIBILITY**



INTEGRATE SEAMLESSLY
with existing & future transit
service; promote a holistic regional
system with a strong spine



ECONOMIC DEVELOPMENT
develop underutilized/vacant
property; support existing
residential & commercial activity

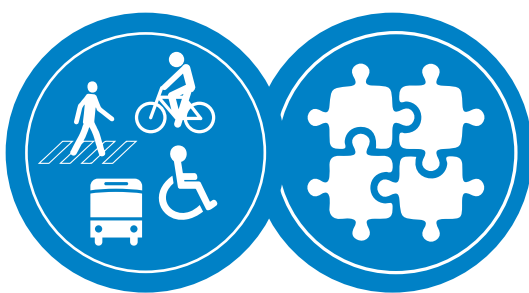


INCREASE DENSITY
and promote a broader mix
of building uses; activate spaces

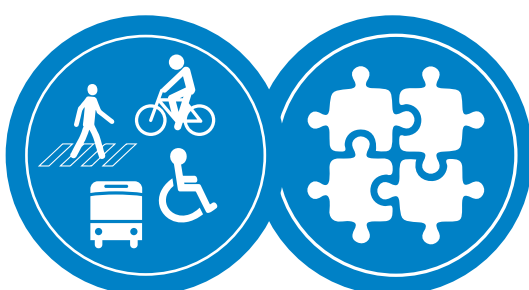


EFFICIENT, RELIABLE, SAFE
transit service

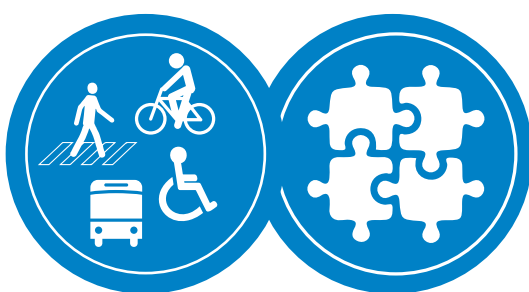
1a. DEVELOP STOP LOCATIONS By Intersection



REGIONAL CONNECTIVITY
Does the location serve an existing or future
regional transit need (e.g. east-west connection)?



BUS INTEGRATION
Is there a need or desire to have a shared streetcar /
bus stop or a nearby transfer?



RIDERSHIP
Does the location have high bus ridership and/or
would it have forecasted streetcar ridership?



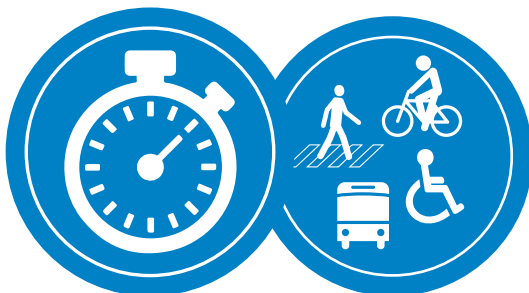
PEDESTRIAN DEMAND
Does the location serve high-pedestrian demand
and/or pedestrian-oriented land uses?



ECONOMIC DEVELOPMENT
Is there an opportunity for (re)development here?



LOCAL EXPRESSED DESIRE
Have Stakeholders and/or the public expressed
interest in a stop near this location?



SPACING
Does a stop here provide a reasonable/desirable
distance from adjacent stops?

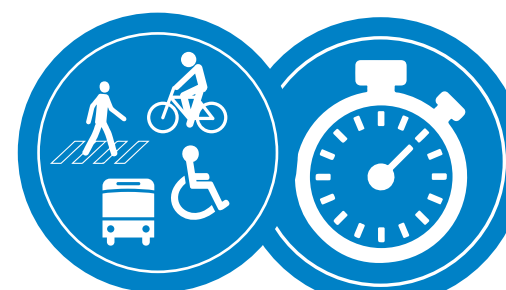


PHYSICAL CAPABILITY
Does the width of the sidewalk and street allow
for a stop to physically fit at this location?

1b. DEVELOP BEST-LANE ALTERNATIVES By Segment



ON-STREET PARKING / LOADING
Is there a need for on-street parking and/or
loading on one or both sides of the street?



THROUGH LANES
How many vehicular through lanes are needed?



DRIVEWAY ACCESS
Is there a need to access businesses between
intersections (especially via left turns)?



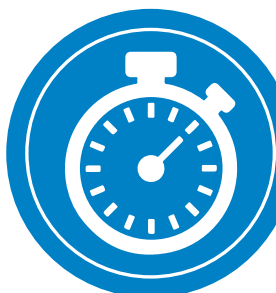
INTERSECTION LEFT TURNS
Is there a need to allow left-turns at intersections?



PEDESTRIAN NEEDS
Does the segment allow space for pedestrians and
waiting riders (if a stop is planned within the segment)?



BIKE & TRAIL INTEGRATION
What provisions are needed to integrate the
Trolley Track Trail and bicycles?



UTILITIES
Would utility issues create conflicts with streetcar
tracks in a given lane?



CURB STOP NEEDED
Do other factors dictate need for a curb stop (e.g. local
development, shared bus stops or system considerations)?

2. SYSTEM CONSIDERATIONS



**OPERATIONAL
EFFICIENCY**



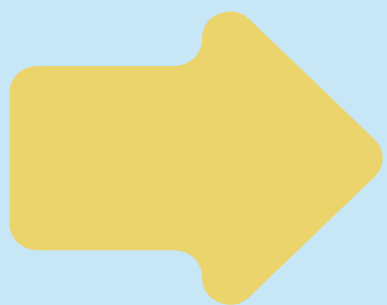
COST



CONSTRUCTABILITY



PUBLIC INPUT



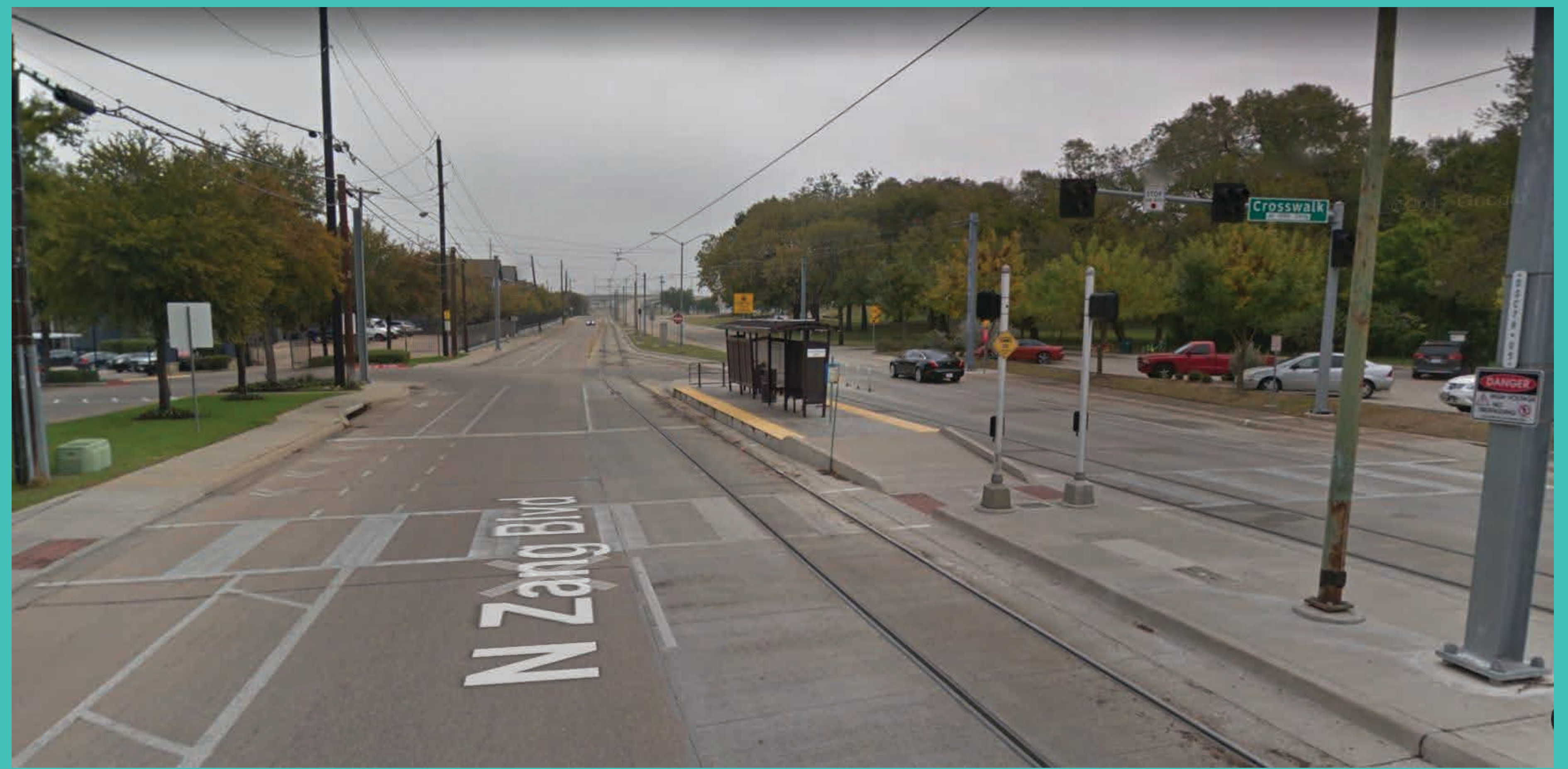
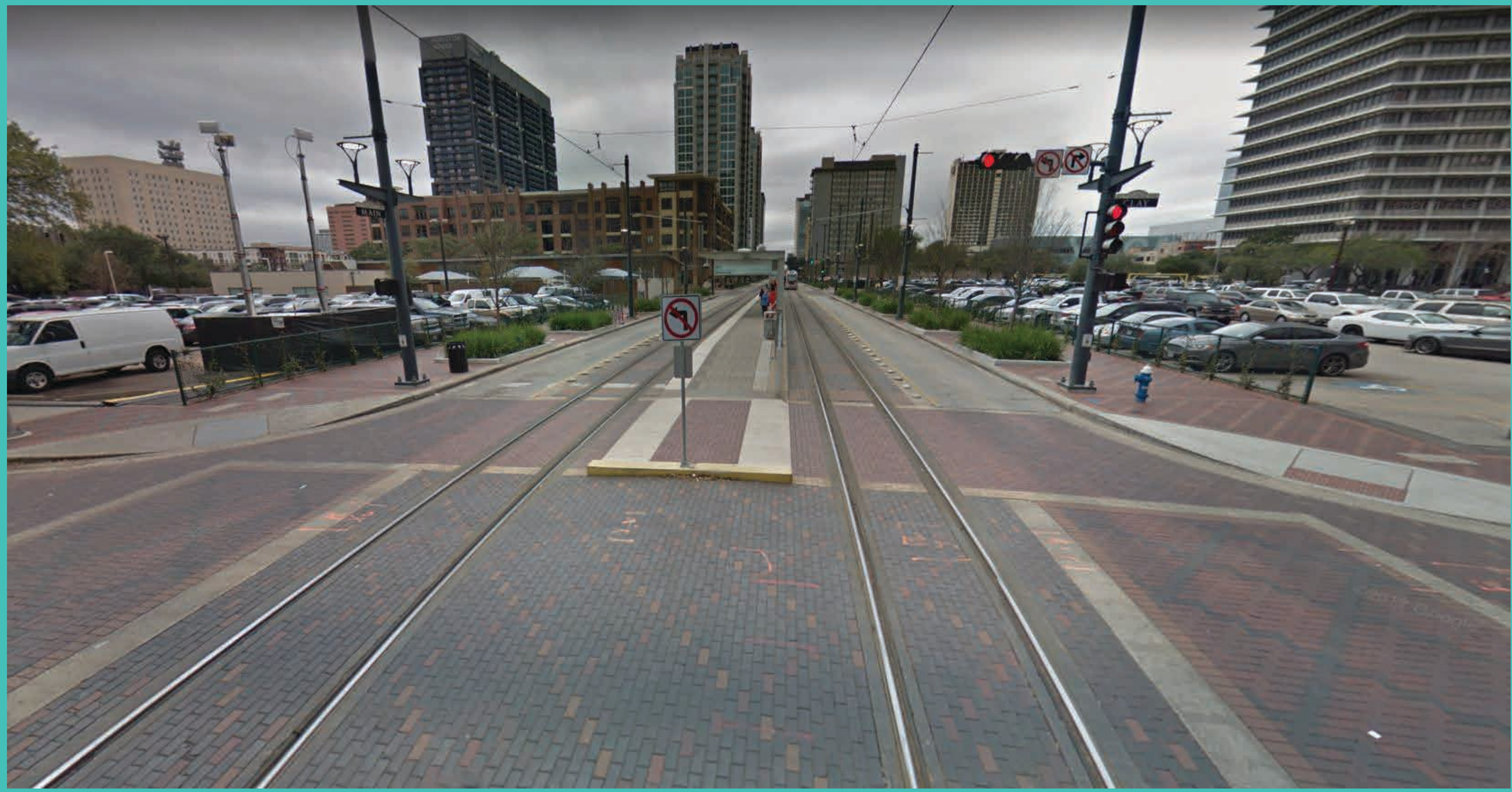
3. COMPARE ALTERNATIVES

Which lane(s) of the road should the streetcar run in?

DEDICATED LANE

MIXED TRAFFIC

CENTER RUNNING



OUTSIDE RUNNING



North Section (Pershing to 30th Street)

CENTER RUNNING in a Dedicated Lane

- ➔ Streetcar runs in **dedicated center** lanes
- ➔ **Stop platforms** in the middle of the street
- ➔ One auto lane in each direction (**road diet**)
- ➔ Center turn lanes, medians or platforms, **to be determined** as street widths & streetcar operations permit

WEIGH-IN HERE

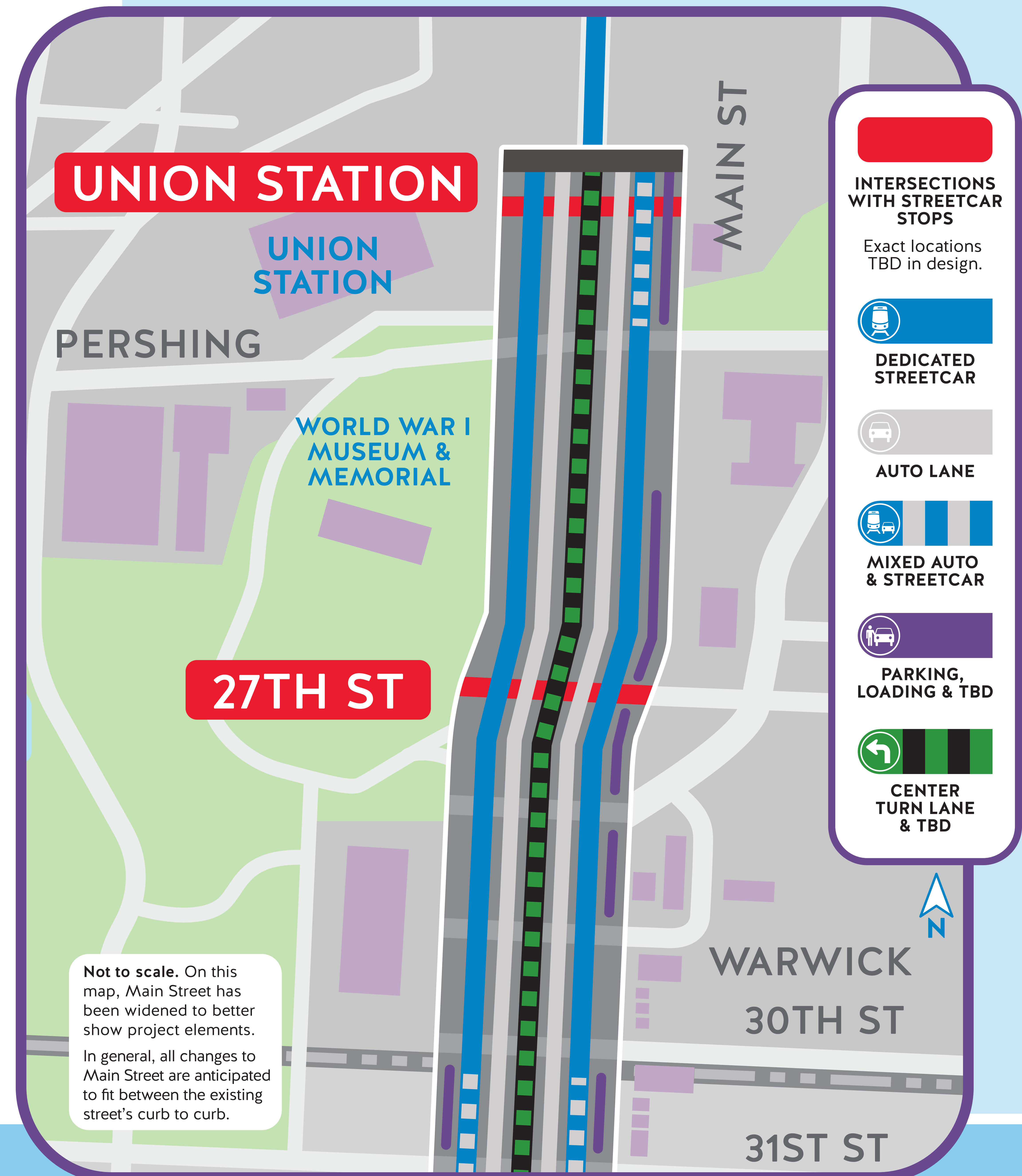


North Section (Pershing to 30th Street)

OUTSIDE RUNNING in a Dedicated Lane

- ➔ Streetcar runs in **dedicated outside lanes**
- ➔ Stop platforms on sidewalk “bumpouts”
- ➔ One auto lane in each direction (road diet) plus turn lanes at intersections

WEIGH-IN HERE



North Section (Pershing to 30th Street)



Crown Center



Union Hill / 30th & Main



View east from Union Station



Liberty Memorial

CRITERIA

ON-STREET PARKING/LOADING

Is there a need for on-street parking and/or loading on one or both sides of the street?

THROUGH LANES

How many auto through lanes are needed?

DRIVEWAY ACCESS & INTERSECTION LEFT TURNS

Is there a need to access businesses or driveways?

PEDESTRIAN NEEDS

Does the alternative meet pedestrian needs?

UTILITIES

Would existing utilities create conflicts with streetcar tracks in a given lane?

CENTER RUNNING

in a Dedicated Lane



On-street parking is currently limited in this section and the need is therefore lower. However, opportunities are available.



Both alternatives can provide one through lane for auto traffic in each direction. **A road diet, or elimination of through lanes, is being recommended for this section under both alternatives.**



Less conducive to left-turn movements onto & off Main Street. Overall, the effect of these alternatives on access and turns in this section is not large, due to the limited number of driveways & intersections.



Center stop platforms may not provide adequate space for waiting passengers during busy events; may not be able to share bus stops. Both options add a sidewalk on the east (where none currently).



Based on preliminary inventory, neither alternative would have greater conflict with utilities. A detailed utility assessment will occur during Design.

OUTSIDE RUNNING

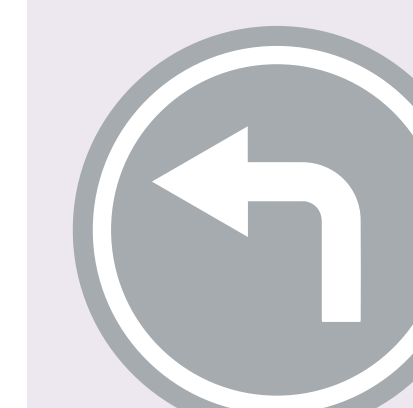
in a Dedicated Lane



On-street parking is currently limited in this section and the need is therefore lower. However, opportunities are available. **Policy decisions could restrict parking adjacent to the dedicated lane.**



Both alternatives can provide one through lane for auto traffic in each direction. **A road diet, or elimination of through lanes, is being recommended for this section under both alternatives.**



More conducive to left-turn movements onto & off Main Street. Overall, the effect of these alternatives on access and turns in this section is not large, due to the limited number of driveways & intersections.



Stops are accessed from the sidewalk & typically accommodated via a curb "bump-out." Both options add a sidewalk on the east side between Pershing & Grand (where it does not currently exist).



Based on preliminary inventory, neither alternative would have greater conflict with utilities. A detailed utility assessment will occur during Design.

SYSTEM CONSIDERATIONS

OPERATIONAL EFFICIENCY

How is travel time impacted?



On-street parking/loading & left turns are not a significant factor on this section due to limited parking & fewer driveways. **Center running may offer less delay from illegal on-street parking.**

COST

Does either alternative pose significant cost considerations for this section of the corridor?



Alternatives relatively equal in this respect. Variances will be due to final design & policy decisions.

CONSTRUCTABILITY

Are there any significant characteristics that would impact construction?



None identified during this Project Development Phase.



On-street parking/loading & left turns are not a significant factor on this section due to limited parking & fewer driveways.



Alternatives relatively equal in this respect. Variances will be due to final design & policy decisions.



None identified during this Project Development Phase.

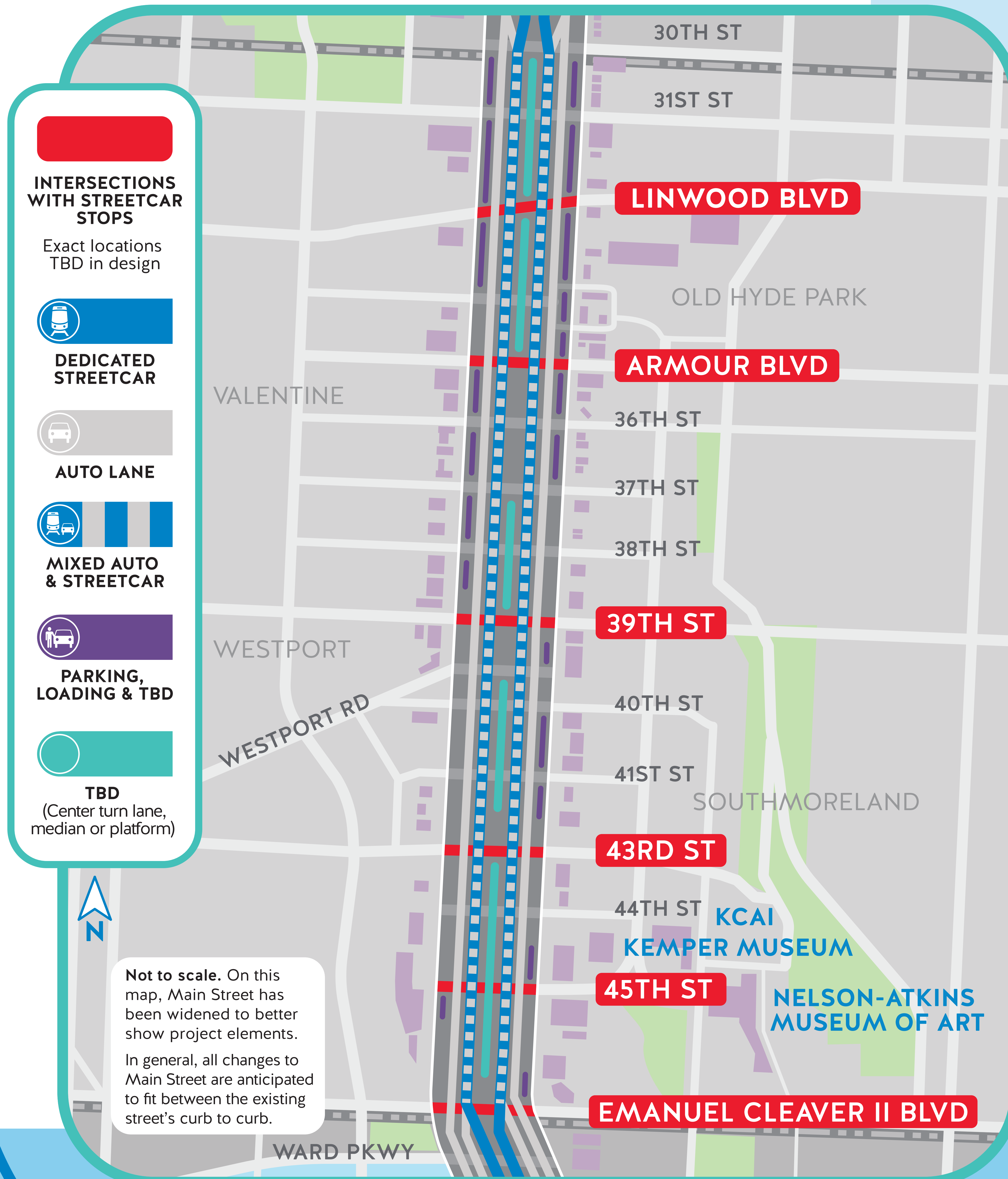
CRITERIA
RANKING:

FAIR

GOOD

BETTER

Middle Section (30th St. to Emanuel Cleaver II)

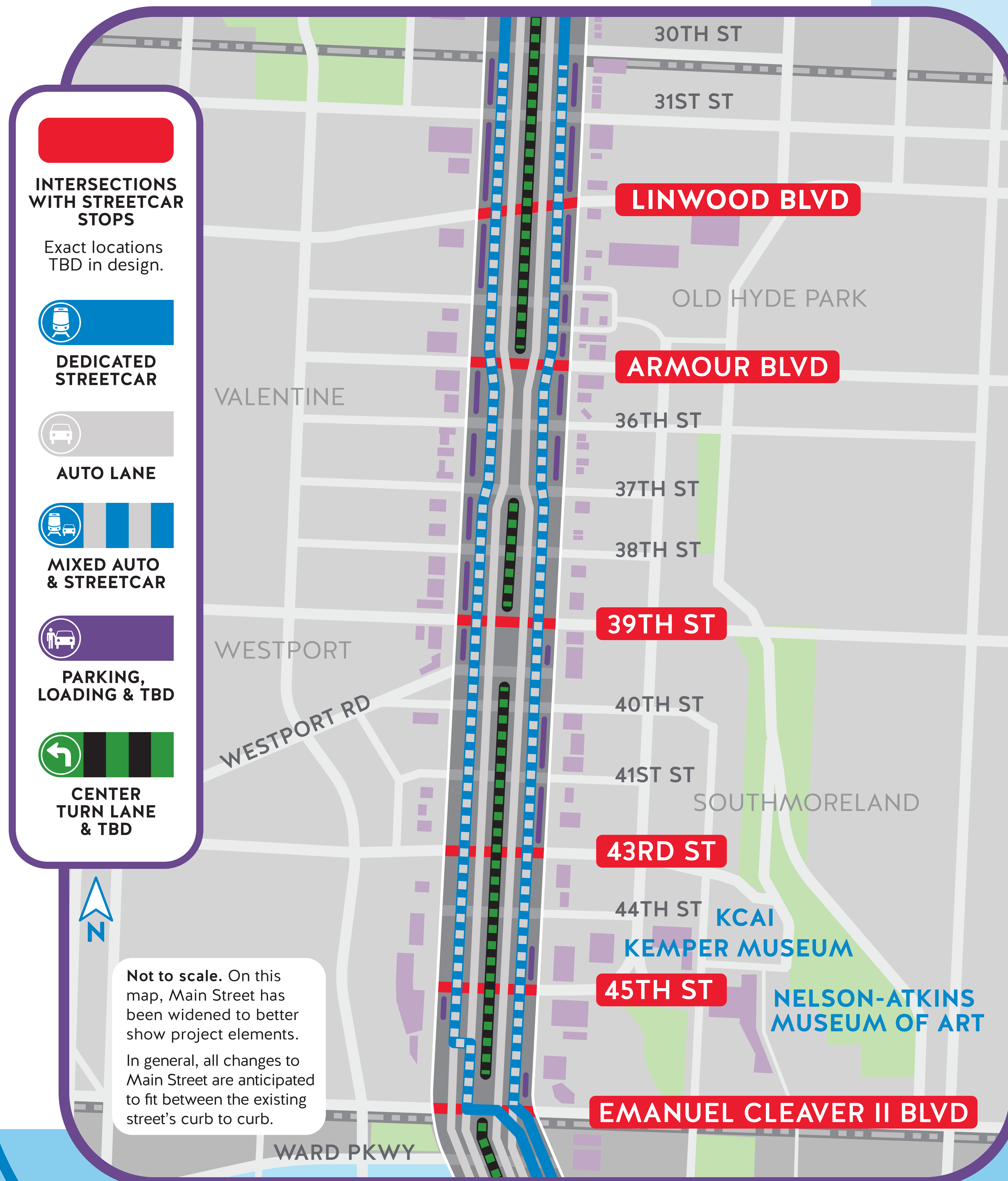


CENTER RUNNING in Mixed Traffic

- ➔ Streetcar runs in **mixed traffic, inside lanes**
- ➔ **Stop platforms in the middle of the street**
- ➔ Two auto lanes in each direction
- ➔ Center turn lanes, medians or platforms, **to be determined** as street widths & streetcar operations permit

WEIGH-IN HERE

Middle Section (30th St. to Emanuel Cleaver II)



OUTSIDE RUNNING in Mixed Traffic

- ➔ Streetcar runs in **mixed traffic, outside lanes**
- ➔ **Stop platforms on sidewalk “bumpouts”**
- ➔ Two auto lanes in each direction
- ➔ **Center turn lanes** where street widths & streetcar operations permit

WEIGH-IN HERE

Middle Section (30th St. to Emanuel Cleaver II)



Costco just east on Linwood



Mac Properties Infill near Armour



39th & Main looking west



Cleaver II Blvd. looking north

CRITERIA

CENTER RUNNING

in Mixed Traffic

OUTSIDE RUNNING

in Mixed Traffic

ON-STREET PARKING/LOADING

Is there a need for on-street parking and/or loading on one or both sides of the street?



On-street parking is currently available along many blocks of this section; some is time restricted for bus use. **Center running may provide more where stop platforms are in the center of the street (vs. curb).**



On-street parking is currently available along many blocks of this section; some is time-restricted for bus use. **Outside running may provide more in areas where a center lane is not necessary.**

THROUGH LANES

How many auto through lanes are needed?



Both alternatives can provide two through lanes for auto traffic in each direction.



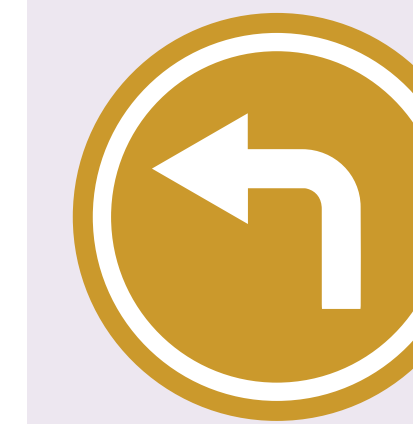
Both alternatives can provide two through lanes for auto traffic in each direction.

DRIVEWAY ACCESS & INTERSECTION LEFT TURNS

Is there a need to access businesses or driveways?



Less conducive to left turns onto & off Main Street. Center stop platforms are slightly wider & must connect to crosswalks - this can reduce space for turn lanes at intersections.



More conducive to left turns onto & off Main Street. May preserve more access to existing driveways. Provides more opportunity for left turns at intersections.

PEDESTRIAN NEEDS

Does the alternative meet pedestrian needs?



Center stop platforms at high-demand stops may not be able to provide adequate waiting space for passengers during peak times.



Curbside stop platforms allow pedestrians to wait on sidewalks during peak times.

UTILITIES

Would existing utilities create conflicts with streetcar tracks in a given lane?



Based on preliminary inventory, neither alternative would have greater conflict with utilities. A detailed utility assessment will occur during Design.



Based on preliminary inventory, neither alternative would have greater conflict with utilities. A detailed utility assessment will occur during Design.

SYSTEM CONSIDERATIONS

OPERATIONAL EFFICIENCY

How is travel time impacted?



Left-turn restrictions would be necessary in areas to maximize streetcar reliability; preventing streetcar delays from left-turning cars. Center platforms cannot share bus stops or support a bus bridge.



Streetcar could be delayed by illegally parked/loading cars; restrictions & buffer likely necessary in areas to minimize delays. More potential for reduced streetcar speeds due to cars turning right.

COST

Does either alternative pose significant cost considerations for this section of the corridor?



Alternatives relatively equal; however center running may result in fewer stop platforms (**center platforms can be shared for travel in either direction**) potentially reducing costs.



Alternatives relatively equal in this respect.

CONSTRUCTABILITY

Are there any significant characteristics that would impact construction?



None identified during this Project Development Phase.



None identified during this Project Development Phase.

CRITERIA
RANKING:

FAIR

GOOD

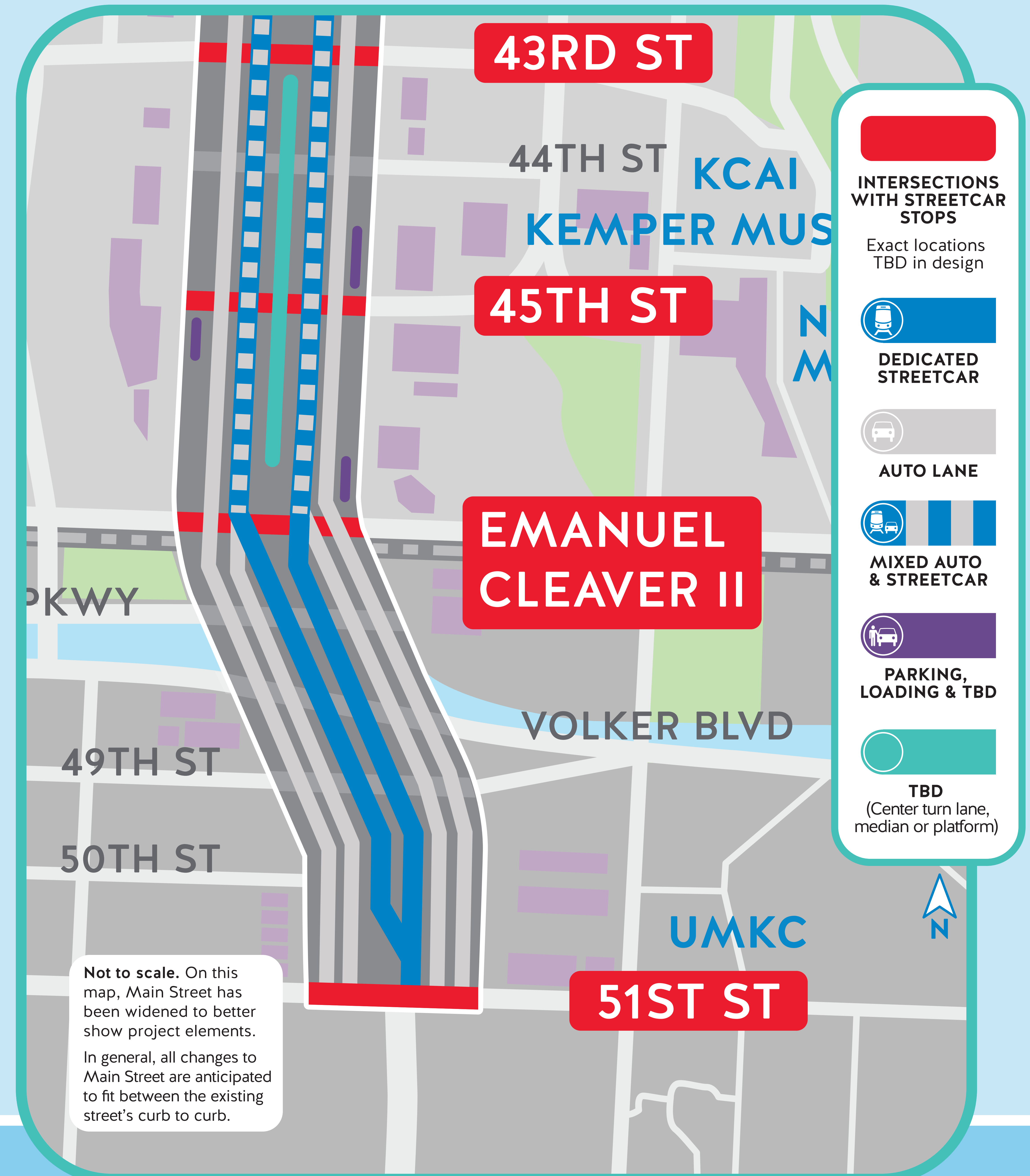
BETTER

South Section (Emanuel Cleaver II to 51st Street)

CENTER RUNNING in a Dedicated Lane

- ➔ Streetcar in **dedicated center** lanes
- ➔ **Stop platforms** in the middle of the street
- ➔ Two auto lanes in each direction plus center turn lanes, medians or platforms, **TBD** as street widths & streetcar operations permit
- ➔ Brookside widened south of Volker
- ➔ Trolley Track Trail remains

WEIGH-IN HERE

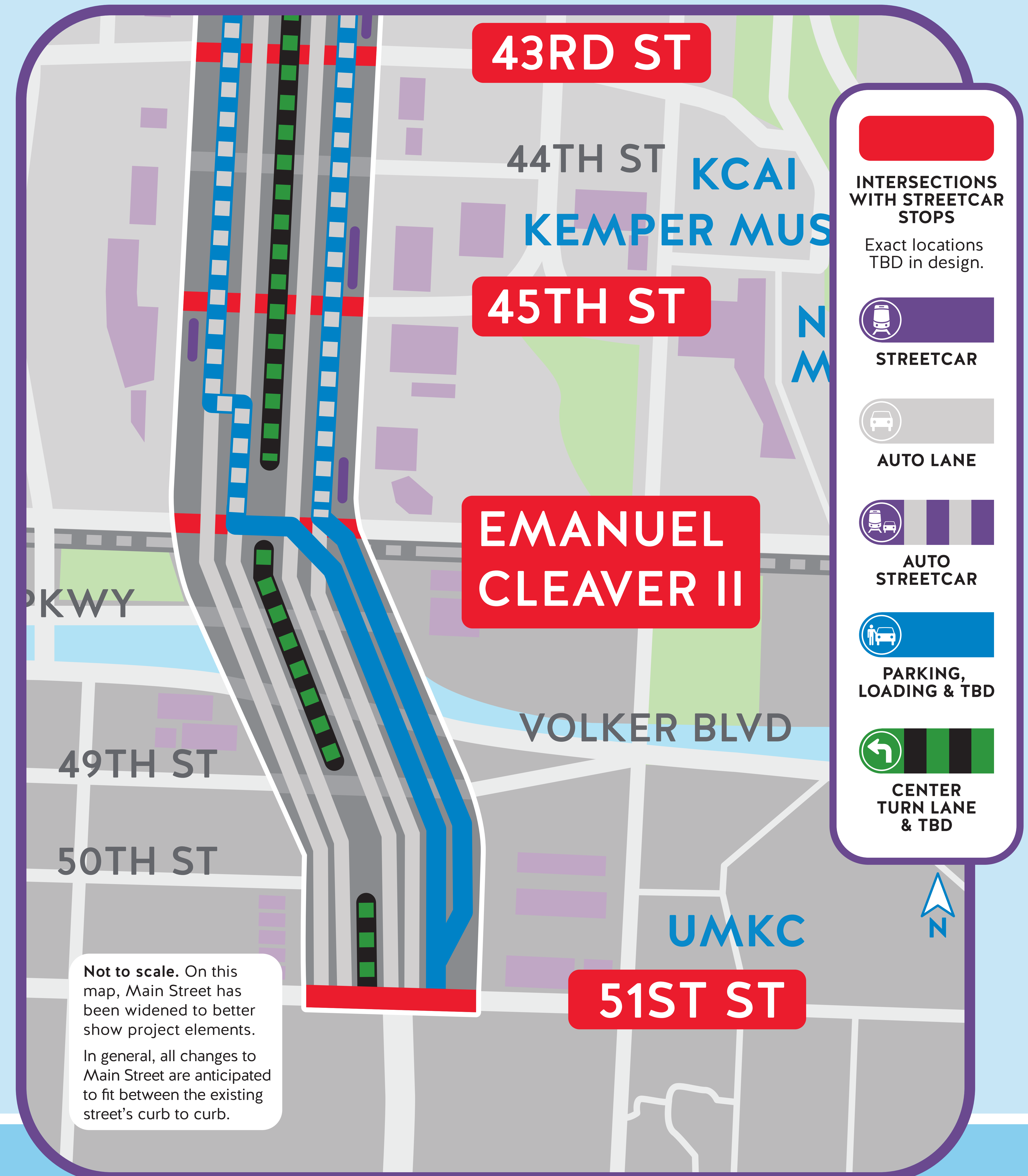


South Section (Emanuel Cleaver II to 51st Street)

COUNTRY CLUB R.O.W. in a Dedicated Lane

- ➔ Streetcar shifts to **Country Club Right-of-Way** south of Cleaver II Blvd.
- ➔ Final stop on Country Club Right-of-Way, facing UMKC
- ➔ Brookside Boulevard configuration generally remains the same as is today
- ➔ Trolley Track Trail remains

WEIGH-IN HERE



South Section (Emanuel Cleaver II to 51st Street)



Emanuel Cleaver II looking south



















Country Club Plaza



UMKC



New developments at 51st & Main

CRITERIA	CENTER RUNNING in a Dedicated Lane	COUNTRY CLUB R.O.W. in a Dedicated Lane
ON-STREET PARKING/LOADING Is there a need for on-street parking and/or loading on one or both sides of the street?	 N/A - No on-street parking/loading is currently available on this section of the extension.	 N/A - No on-street parking/loading is currently available on this section of the extension.
THROUGH LANES How many auto through lanes are needed?	 Requires reconstruction within the Country Club Right-of-Way (widening Brookside Boulevard) to maintain needed lanes. Both alternatives can provide two through lanes for auto traffic.	 No widening of Brookside Boulevard required. Both alternatives can provide two through lanes for auto traffic.
DRIVEWAY ACCESS & INTERSECTION LEFT TURNS Is there a need to access businesses or driveways?	 No driveways on this segment. Both alternatives can accommodate left turns at the intersections.	 No driveways on this segment. Both alternatives can accommodate left turns at the intersections.
PEDESTRIAN NEEDS Does the alternative meet pedestrian needs?	 Center stop platforms may not provide adequate space for waiting passengers during busy events; may not be able to share bus stops. The Trolley Track Trail would remain under both alternatives.	 Streetcar stops are accessed via sidewalk/Trolley Track Trail. Sidewalk platforms provide passenger convenience to nearby retail. The Trolley Track Trail would remain under both alternatives.
UTILITIES Would existing utilities create conflicts with streetcar tracks in a given lane?	 Based on preliminary inventory, neither alternative would have greater conflict with utilities. A detailed utility assessment will occur during Design.	 Based on preliminary inventory, neither alternative would have greater conflict with utilities. A detailed utility assessment will occur during Design.
SYSTEM CONSIDERATIONS		
OPERATIONAL EFFICIENCY How is travel time impacted?	 Since limited, on-street parking/loading & left turns are not a significant factor. Both alternatives will have to be carefully designed through the congested intersections along this segment.	 Building in the Country Club Right-of-Way provides additional opportunities for maintenance and temporary streetcar storage.
COST Does either alternative pose significant cost considerations for this section of the corridor?	 Additional costs would be required to widen Brookside Boulevard.	 Potential cost savings by utilizing the existing Country Club Right-of-Way.
CONSTRUCTABILITY Are there any significant characteristics that would impact construction?	 None identified during this Project Development Phase.	 None identified during this Project Development Phase. Less reconstruction required (widening Brookside Boulevard)

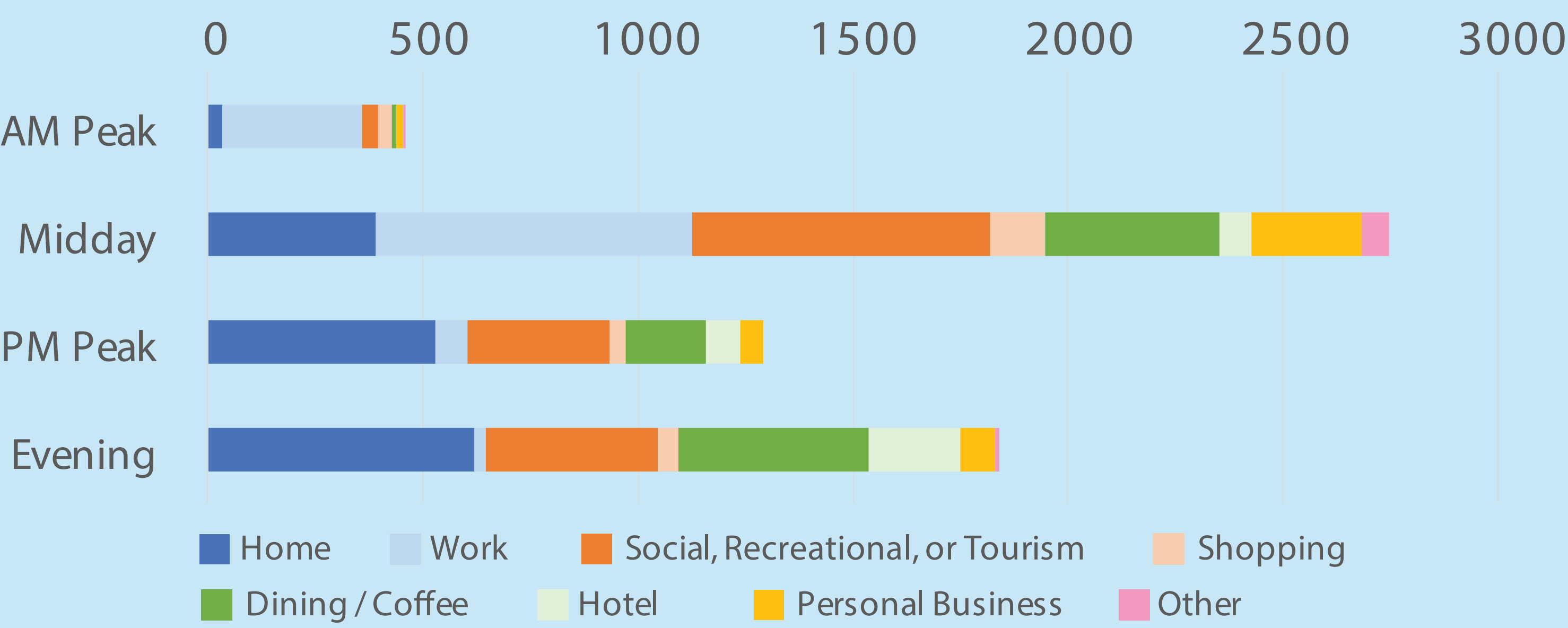
CRITERIA
RANKING:



My Vision for Main Street Extension is...

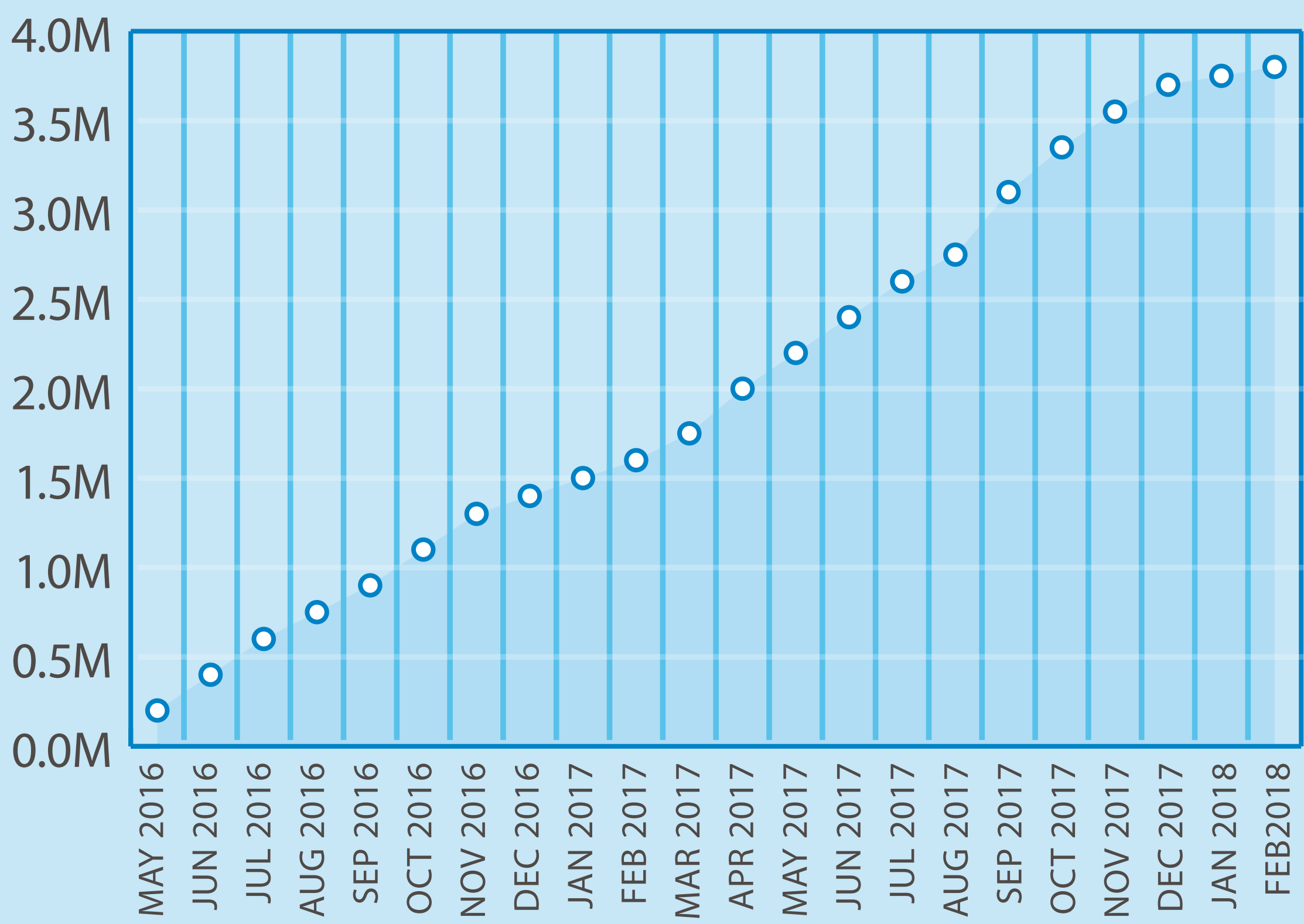
Extending the benefits of the Downtown starter line

WEEKDAY DESTINATIONS

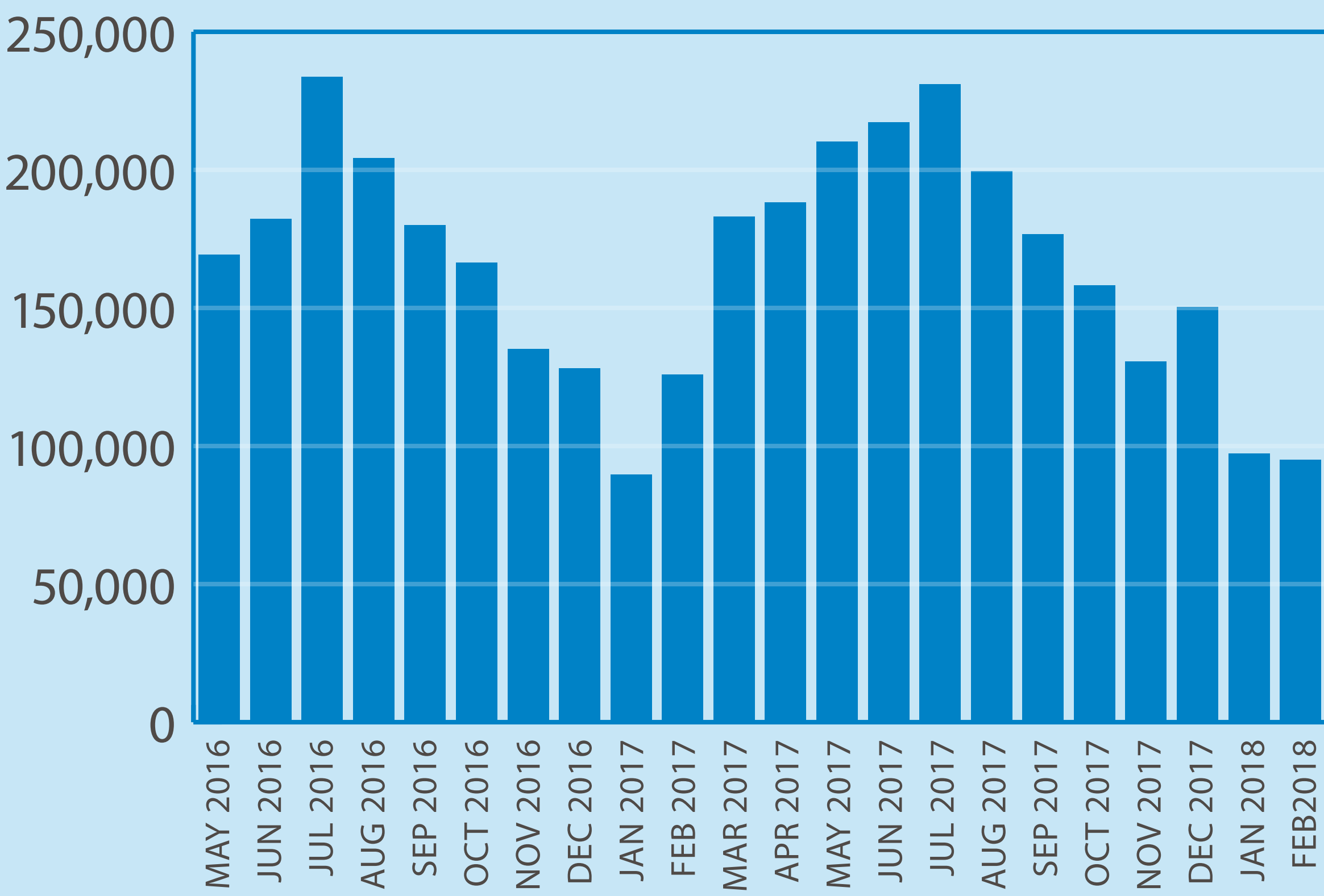


*According to an in-person survey conducted on-board the KC Streetcar in fall 2017.

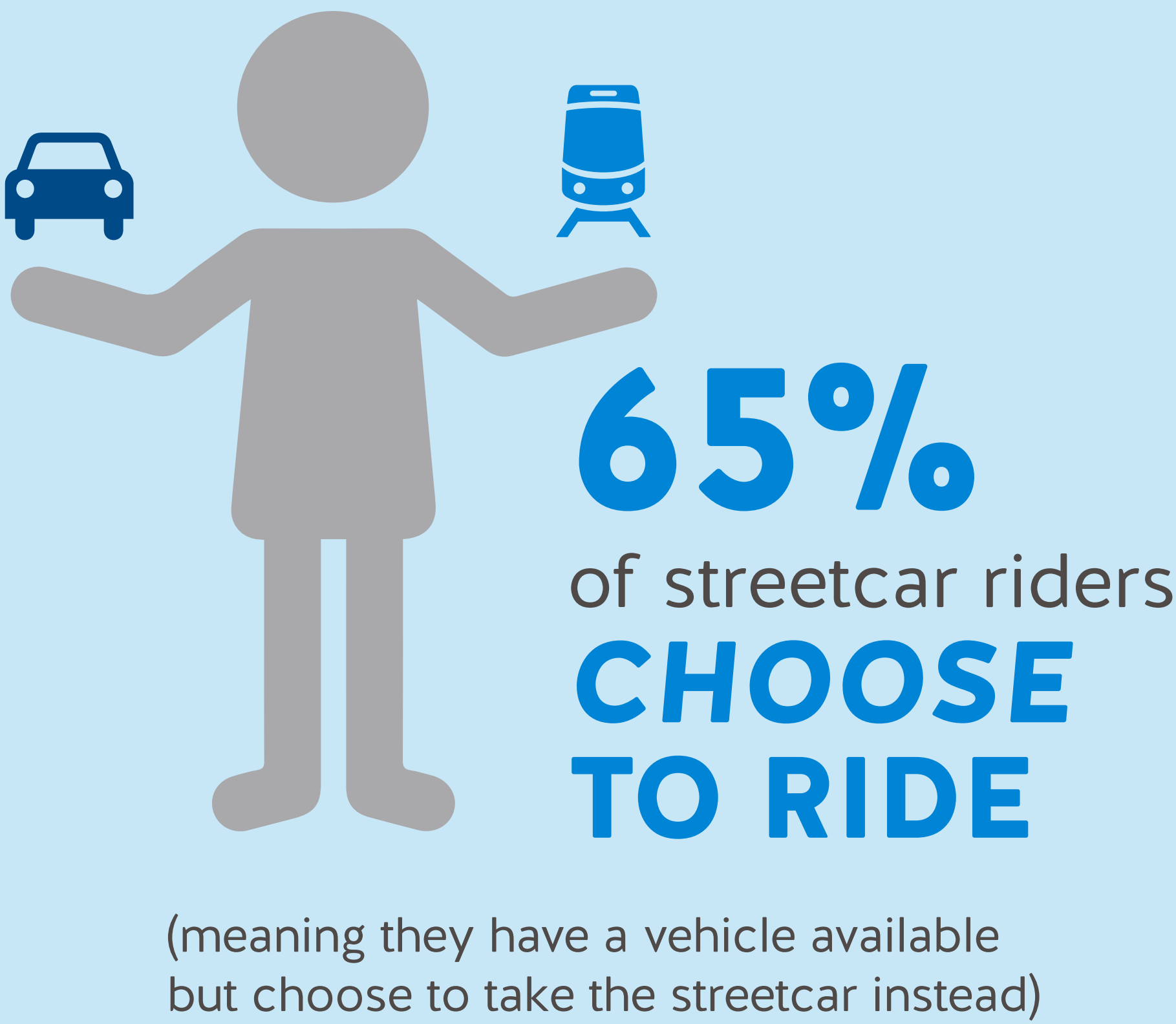
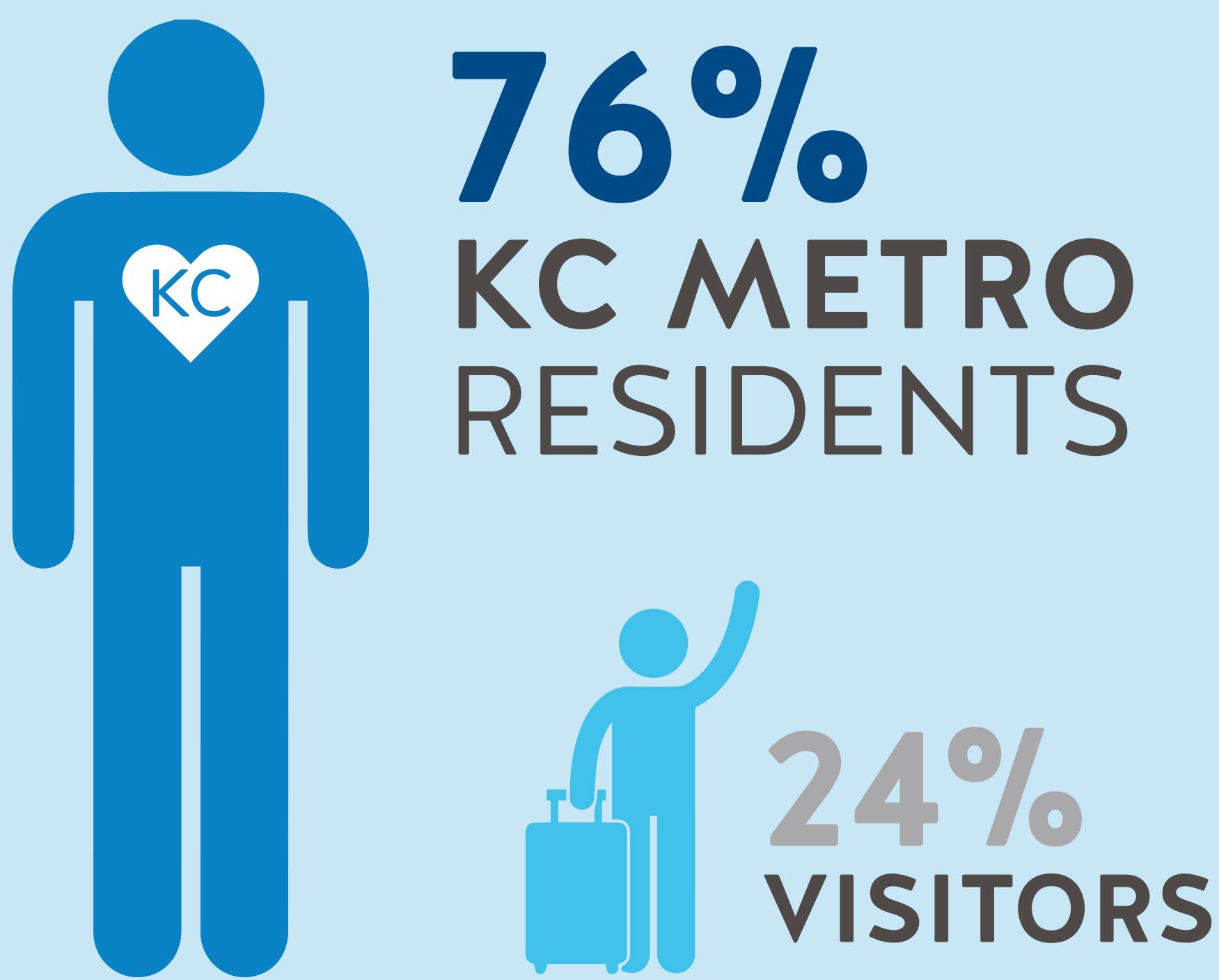
RIDERSHIP TRENDS



RIDERSHIP BY MONTH



WHO is Riding the KC Streetcar?



*According to an in-person survey conducted on-board the KC Streetcar in fall 2017.

