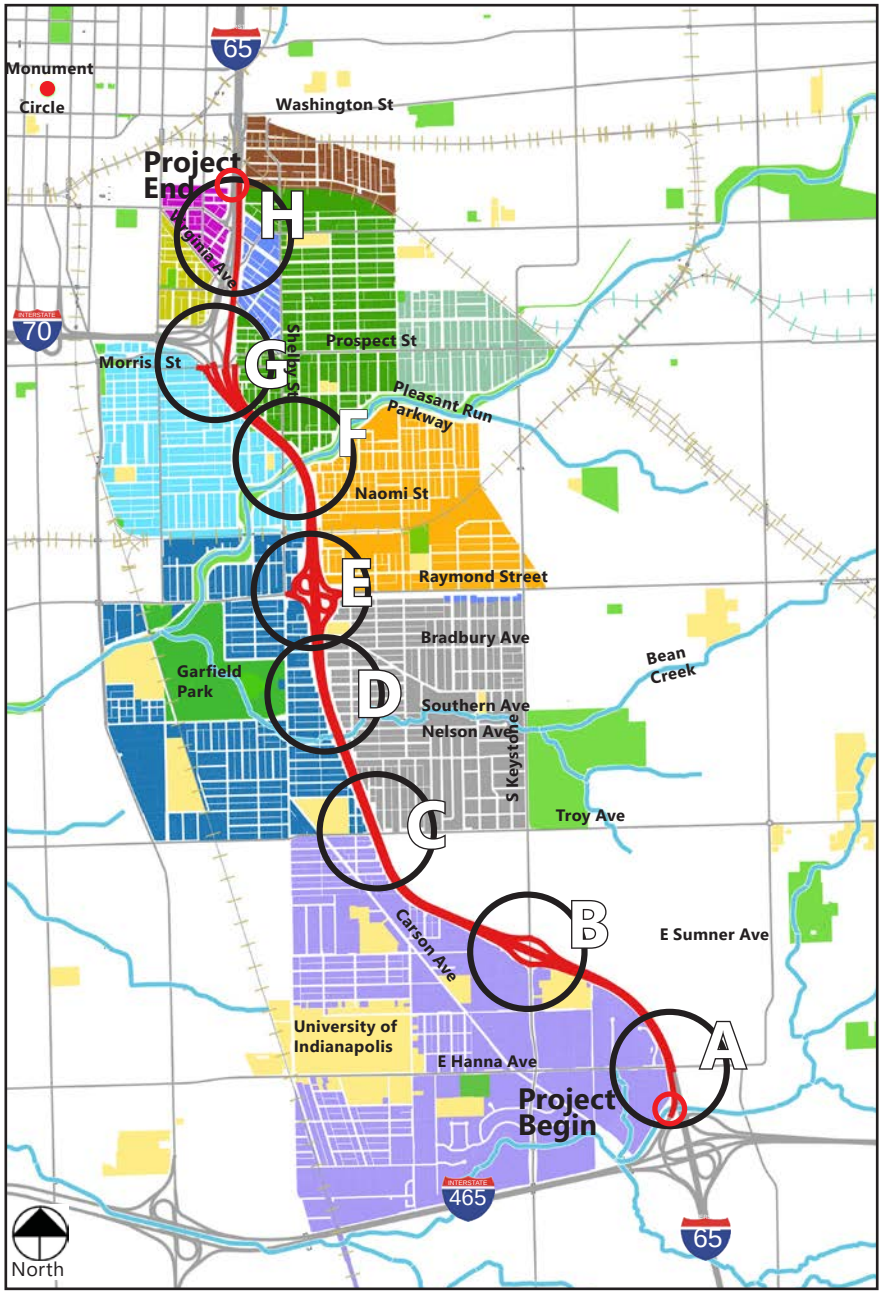
Section 2: Context



I-65 SAFE PROJECT AREA

Indy Parks

Schools

Rethink Coalition I-65 SAFE Project study locations based on neighborhood connectivity portals

Approach: active listening, issue sharing, opportunity discovery

Response to an emergent social issue... the interstate underpass as refuge of last resort rather than a neighborhood's safe passage to destination now separated by the interstate.

The underpasses are portals between residential districts, employment destinations, shopping and access to the Red Line Bus Rapid (BRT) transit route. The prohibitions addressed by the sign above are better addressed by making theses spaces attractive, convenient and safe as connectivity features designed in a way that disincentivises their use as shelter.

An example of a commonly heard concern: "... the underpass feels unsafe and hazardous for pedestrians and even experienced cyclists"

The Shelby Street underpass shown above is a major bike/ped link between Fountain Square and Garfield Park, a functional extension of the Cultural Trail, and a Red Line Bus Rapid Transit (BRT) route. It is also unsafe.

This report develops design considerations for each of the I-65 SAFE project crossings, or portals, to provide safe travel options that reconnect neighborhoods to each other and to destinations.

APPROACH

The Rethink Coalition's approach to the I-65 SAFE project has been to listen to the community not as experts but as peers actively collaborating to turn deeply concerning issues into actionable opportunities.

Listening and learning and exploring what-if scenarios often went well beyond formal project influence and jurisdictional boundaries. But in doing so something obvious emerged...transportation, in the true multimodal sense of connectivity is a fundamental and ubiquitous human need [and right] that transcends boundaries, demographic differences and silos of expertise.

But those context-setting explorations always circled back to pragmatic solutions to community-experienced interface issues with an Interstate highway corridor that disruptively passes over and across multiple neighborhoods like a fortress wall.

Through these conversations that wall's underpass openings are now seen by the community as potential portals of connectivity that can and should be addressed by the I-65 SAFE project regardless of an original project constrained to Interstate mainline improvements.

Community listening sessions

RETHINK I-65 SAFE PROJECT LISTENING SESSIONS

Bates Hendricks Neighborhood Association
- December 2, 2022
- January 13, 2023

Bean Creek Neighborhood Association
- November 18, 2022
- January 20, 2023

Big Car Collaborative
- January 20, 2023

Fletcher Place Neighborhood Association
- December 9, 2023

Fountain Square Alliance Neighborhood Association
- November 18, 2022

Fountain Square Neighborhood Association
- December 9, 2023

Garfield Park Neighborhood Association
- November 18, 2022
- January 20, 2023

North Square Neighborhood Association
- December 2, 2022
- January 13, 2023

Prospect Falls Neighborhood Association
- December 2, 2022
- January 13, 2023

Reconnecting to Our Waterways
- January 20, 2023

Fountain Fletcher District Association
- February 3, 2023

Site Walks/Drone Videography
- October 19, 2022 - Morris/Prospect Bridge focus
- October 25, 2022 - all crossings
- January 24, 2023 - pm peak hour video
- February 14, 2023 - am peak hour video
- June 5, 2023 - am & pm peak hour video

University of Indianapolis
- January 13, 2023

University Heights Neighborhood Association
- January 13, 2023

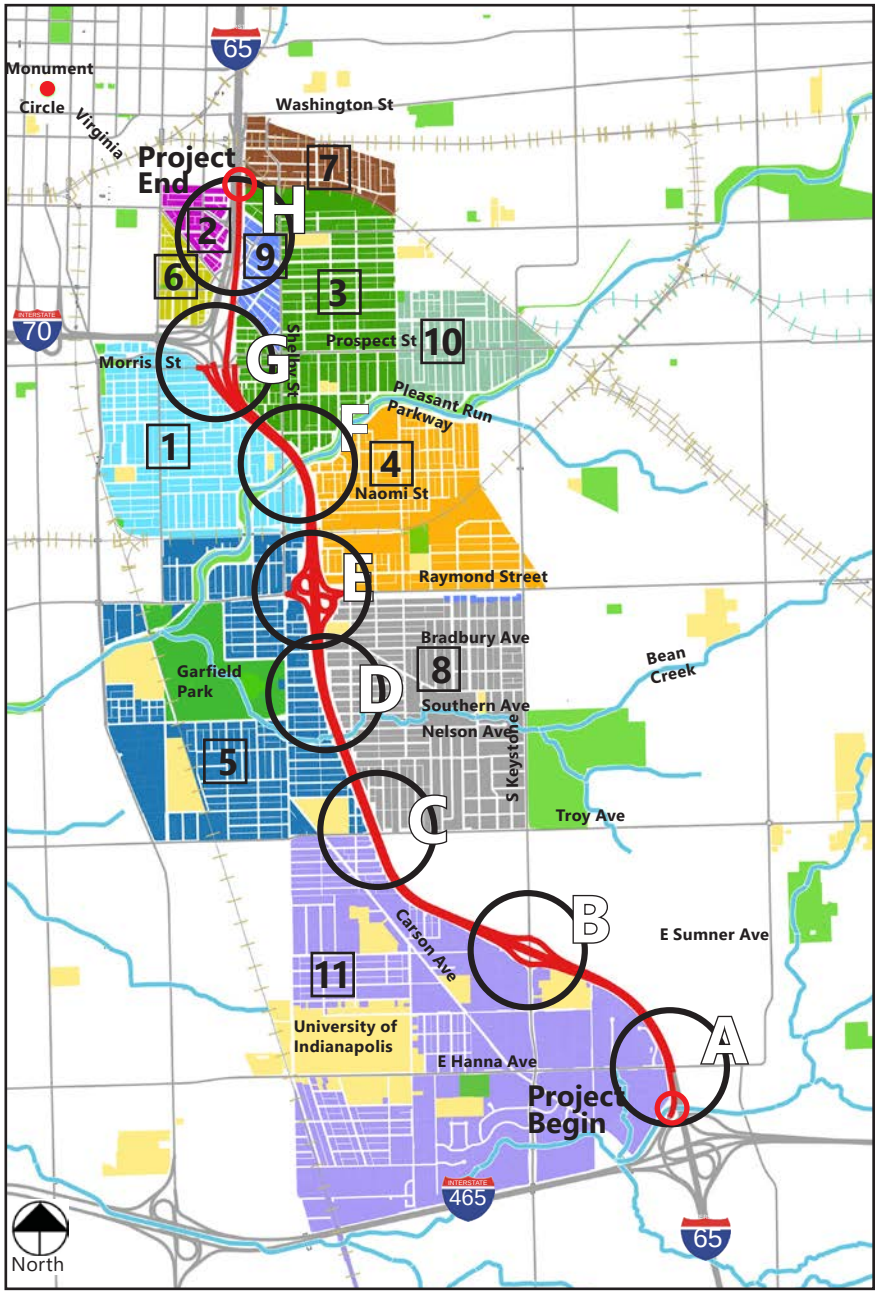
PURPOSE & PROCESS

The Rethink Stakeholder listening sessions sought the experience of Interstate neighbors and communities, and how those experiences inform and expand traditional transportation project objectives. From those conversations Rethink distilled environmental justice principles and priorities articulated by the neighborhoods for increased mobility choices. Those include:

- Safe travel for all transportation modes between neighboring communities adjacent to the interstate divide
- Removing felt barriers between adjacent communities;
- Linking to transit stops by utilizing the interstate corridor underpasses;
- Mitigating interstate generated traffic impacts on adjacent communities;
- Mitigating environmental health and safety impacts on adjacent communities;
- Quality of life initiatives that align with federal and state interstate standards and guidelines promulgated by current policy.

In addition to the small group listening sessions with the leadership of the adjoining communities, Rethink conducted extensive field observation and videography to inform this report. Rethink met with most leadership groups twice; the first time to listen and understand the issues in the neighborhood as it related to the interstate, and a second time to discuss potential solutions and hear feedback.

I-65 SAFE Project Neighborhood Map



NEIGHBORHOOD KEY

1. Bates-Hendricks
2. Fletcher Place
3. Fountain Square
4. Fountain Sq. Alliance
5. Garfield Park
6. Holy Rosary
7. Irish Hill
8. Bean Creek
9. North Square
10. Prospect Falls
11. University Heights

Indy Parks
Schools
A Rethink Coalition I-65 SAFE Project Study Areas

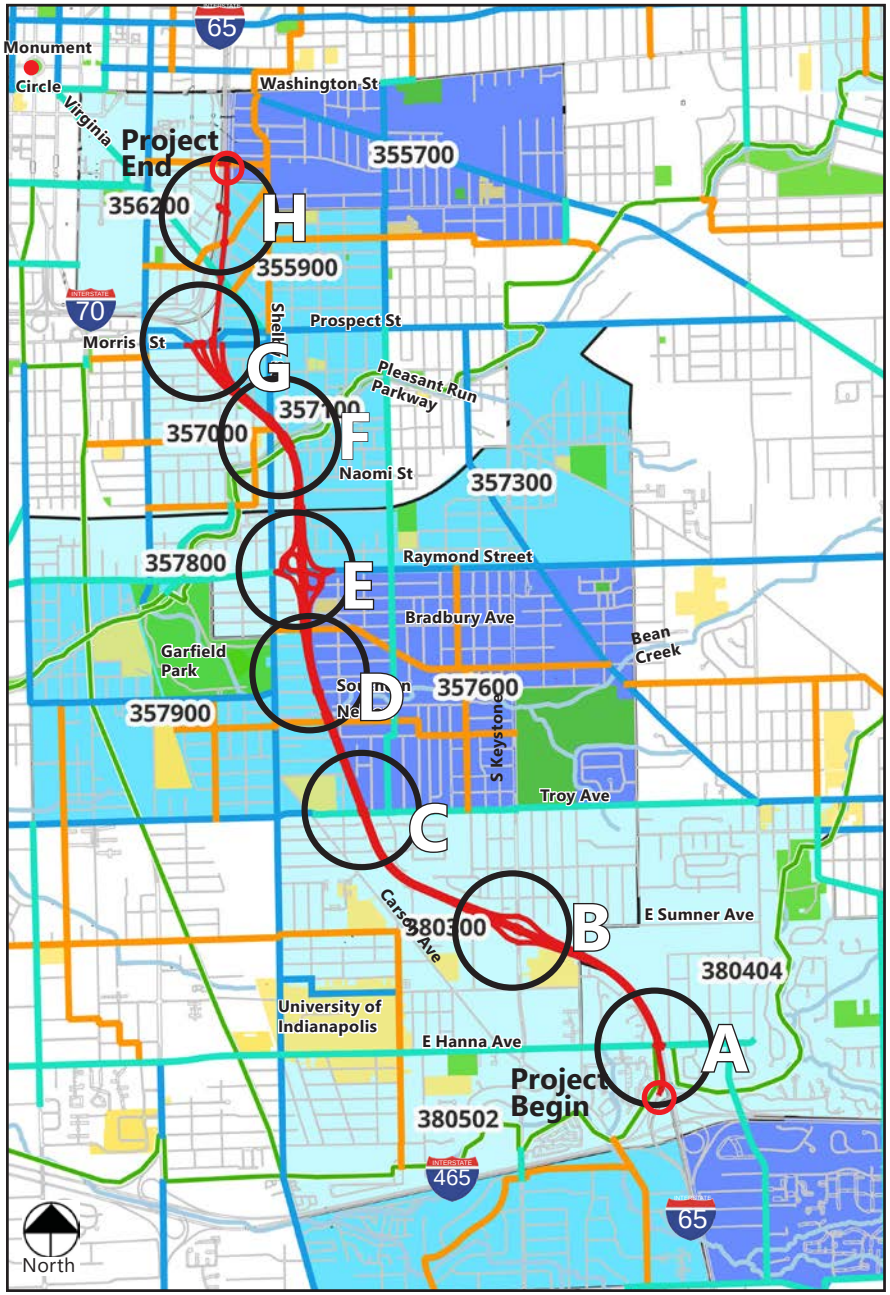
I-65 SAFE PROJECT NEIGHBORHOODS

Neighborhood listening sessions were organized around I-65 portals, those crossing/bridge/intersection nodes between I-465 and the Inner Loop of I-65/I-70 and their logical lateral extensions to destinations or transit stops.

I-65 SAFE PROJECT STUDY AREAS

A Hanna Street Bridge
B Keystone Avenue Interchange
C Troy Avenue Bridge
D Nelson/Southern/Bradbury Underpasses
E Raymond Street Interchange
F CSX/Naomi/Pleasant Run/Shelby Street Underpasses
G Bridges
H Virginia/Calvary/Fletcher Street Bridges

I-65 SAFE Project Census Tract Map



I-65 SAFE PROJECT ADJOINING CENSUS TRACTS

USDOT-Determined Historically Disadvantaged Transportation Communities ranked 1-5

- 3 or more Indicators
- 4 or more Indicators
- 5 or more Indicators

I-65 SAFE PROJECT STUDY AREAS

A Hanna Street Bridge

B Keystone Avenue Interchange

C Troy Avenue Bridge

D Nelson/Southern/ Bradbury Underpasses

E Raymond Street Interchange

F CSX/Naomi/Pleasant Run/Shelby Street Underpasses

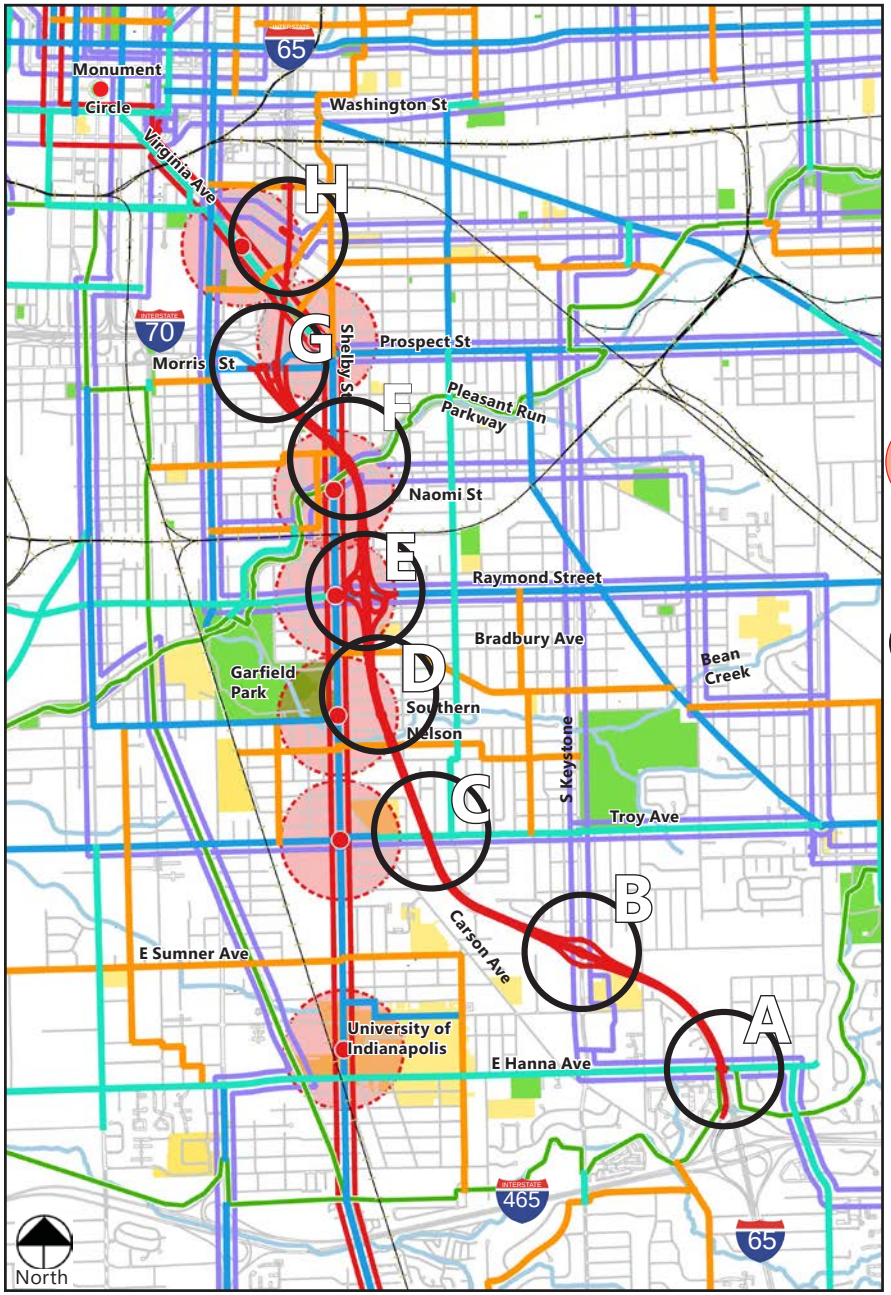
G Morris/Prospect Street Interchange and Bridges

H Virginia/Calvary/Fletcher Street Bridges & Project Terminus at abandoned RR Bridge

USDOT HISTORICALLY DISADVANTAGED TRANSPORTATION COMMUNITIES

USDOT utilized 22 indicators collected at the census tract level and grouped into six (6) categories of transportation disadvantage to determine Disadvantaged Transportation Communities ranked from 1-5. All census tracts along the SAFE project area have an aggregate ranking of 3 and above. The numbers in parenthesis show how many indicators fall in that category (USDOT):

- **Transportation access disadvantage:** communities and places that spend more and take longer to get to where they need to go. (4)
- **Health disadvantage:** variables associated with adverse health outcomes, disability, as well as environmental exposures. (3)
- **Environmental disadvantage:** disproportionately high levels of certain air pollutants. (6)
- **Economic disadvantage:** high poverty, low wealth, lack of local jobs, low home ownership, low educational attainment, and high inequality. (7)
- **Resilience disadvantage:** vulnerable to hazards caused by climate change. (1)
- **Equity disadvantage:** a high percentile of persons (age 5+) who speak English "less



I-65 SAFE PROJECT MAP WITH *INDY MOVES* PLAN OVERLAY

Existing & Planned Bike/Pedestrian System

- Greenway
- Multi Use Path
- Neighborway
- Bike Lane

IndyGo Public Transit System

- Local Transit Route
- Red Line BRT Stop 1/4 Mile R Walkshed
- Indy Parks
- Schools
- I-65 SAFE Project Study Areas

I-65 SAFE PROJECT STUDY AREAS

A Hanna Street Bridge

B Keystone Avenue Interchange

C Troy Avenue Bridge

D Nelson/Southern/ Bradbury Underpasses

E Raymond Street Interchange

F CSX/Naomi/Pleasant Run/Shelby Street Underpasses

G Morris/Prospect Street Interchange and Bridges

H Virginia/Calvary/ Fletcher Street Bridges & abandoned RR Bridge

SAFETY, MOBILITY, EFFICIENCY THRU AN ENVIRONMENTAL JUSTICE LENS

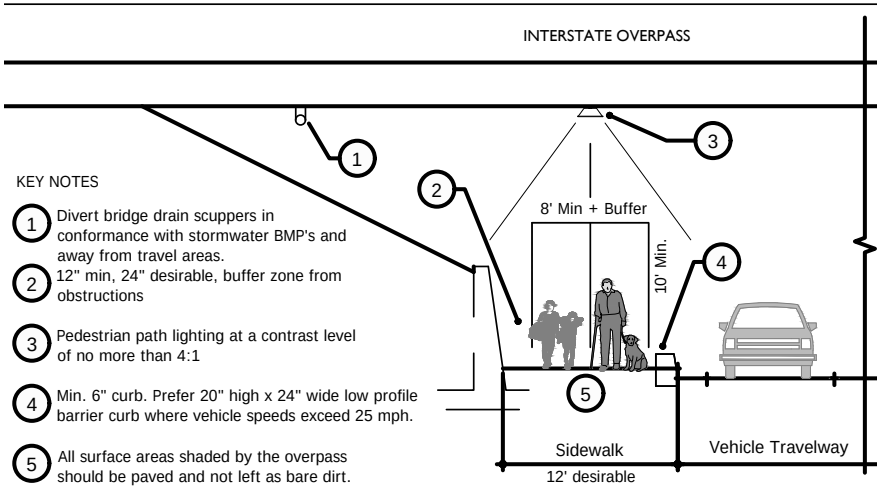
The principles and priorities in this report can help ensure that the SAFE Project enhances safety, mobility and efficiency for all interfacing travel modes including those utilizing local arterials, streets and transit.

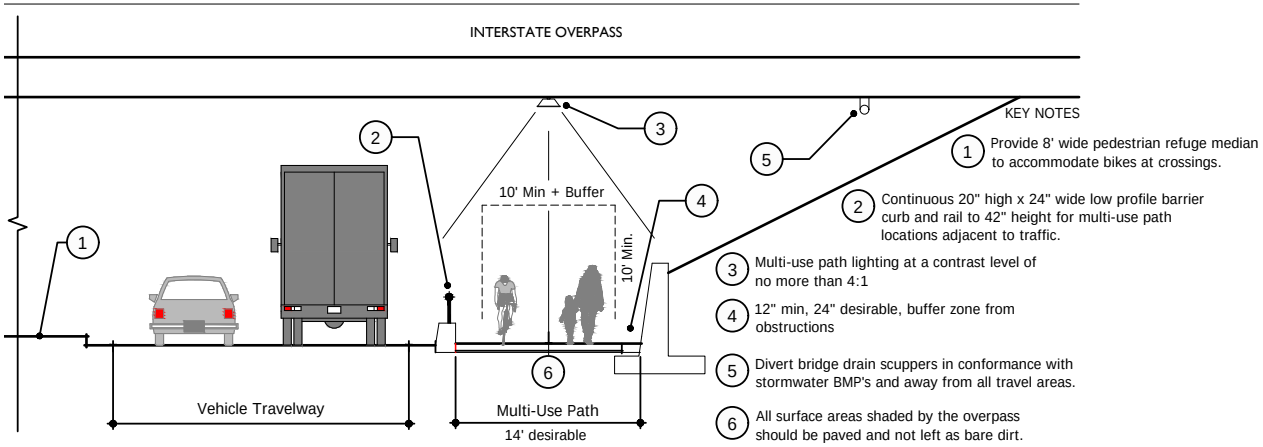
The City has been diligently working to overcome the interstate barrier between neighborhoods through the *Indy Moves* and IndyGo transit systems. Shown in this map are the existing and proposed *Indy Moves* bicycle/ pedestrian facility recommendations and the *Red Line Bus Rapid Transit (BRT)* stops in the SAFE project area.

The 1/4 mile buffer shown around the BRT stops illustrates the walkable distance zone to a bus stop. During the Stakeholder sessions, many commented that the interstate underpasses felt unsafe for access to the BRT stop. Generally the BRT stops are located at an economic center or major amenity (such as Garfield Park) and correspond to neighborhood destinations for employment, shopping and/or recreation. Many of the BRT stops or *Indy Moves Plan* recommendations correspond to an interstate underpass or crossing impacted by intersection issues controlled by INDOT.

The following guidelines are referenced for each I-65 SAFE crossing area as the basis for the Environmental Justice recommendations in this report.

Design Toolkit Elements





GENERALIZED MULTI-USE PATH CONDITION
INTERSTATE UNDERPASS

UNDERPASS IMPROVEMENTS

Address interstate underpass deficiencies to enhance safety, mobility and efficiency not just for main-line users above but for adjacent populations that walk, cycle, drive or ride transit at these widely spaced passages below.

1 Improve lighting, not only at night but also in daytime when high contrast lighting levels impact safety. Improve fixtures and spacing to achieve balanced lighting at all times on all surfaces.

2 Reduce conflicts between bicycle/pedestrian and vehicular travel through spatially constrained underpasses by widening sidewalks, adding curbs or barriers, and in some cases by truncating slope walls.

4 Correct environmental issues, including redirection of bridge drain scuppers that dump contaminated stormwater and debris on surfaces below bridges.

6 Hardscape earthen areas under bridges that will not support vegetation.

7 Relocate right-of-way fencing as diagonals to bridge ends to eliminate boxed in enclosures and improve landscape maintenance access. In many cases problematic fencing as well as W-beam guardrails can re replaced by the truck height concrete barrier rails recommended for the entire corridor for noise abatement, reduced maintenance and safety.

Design Toolkit Recommendations

PROVIDE SAFE BIKE/PEDESTRIAN WAYS AT UNDERPASS/BRIDGE PORTALS WITH LOW PROFILE MEDIAN/EDGE BARRIERS

Rethink recommends that all shared-use or multi-use paths be protected from counterflow vehicle hazard by either spatial separation, not usually available in underpasses or an unmountable barrier such as the Low Profile Median Barrier [LPMB] which crash test to vehicle speeds up to 45 mph. Rationale:

- Typical six to eight inch high curbs offer little protection from larger vehicles and are a drop-off hazard for bicycles, other personal mobility devices and pedestrians.
- Allows bicycle-rated 42" net height railing vs costly vehicle-rated railing.
- Provides real vs. the perceived protection of flexible wand delineators used along some protected bicycle lanes..

Low Profile Median Barrier in Speedway

MITIGATE NOISE, SAFETY AND LIFE CYCLE COST ISSUES WITH CONTINUOUS TRUCK-HEIGHT F-SHAPE BARRIERS

Rethink recommends extending outer lane truck height F-shape bridge barrier rails continuously between bridges to:

- Prevent truck run off's and roll overs prevalent at curves and elevated sections.
- Eliminate need for most barrier end protection devices.
- Eliminate the high cost and traffic disruption of maintenance or replacement of frequently damaged W-beam barrier rails or bridge end protection devices.
- Contain roadside debris that drifts to adjacent slopes and neighborhoods, simplifying mowing and debris collection.
- Reduce animal-vehicle collisions and mortality, while discouraging human trespass hazards more effectively than W-beam guardrails or right-of-way fencing.
- Reduce frequent hazardous exposure of maintenance workforce to high speed traffic.
- Effects a continuous conspicuous guide rail pavement edge reference for motorists.
- Reduce line-of-sight distractions and provide *near-object effect* traffic calming.
- Reduce wheel-pavement noise impacts by more than five decibels, which in combination with other noise countermeasures can eliminate the need for marginally effective noise walls that cost $2.5 million per edge mile at 25% of that cost.

MITIGATE NOISE IMPACTS WITH MULTIPLE NOISE COUNTERMEASURE STRATEGY [WITHOUT NOISE WALLS]

Observed and measured sound levels indicate a need for mitigation of existing interstate-proximate noise levels that will only worsen with proposed higher capacity and higher average speeds and lane expansion towards the right-of-way. The usual solution to highway noise is to construct visually intrusive noise walls. While those can create immediate but short-distanced noise reduction, they also impact areas some distance away by diffraction caused by micro-meteorological conditions. A preferred strategy is to minimizes noise at or near its source and predominately caused by tire-pavement interaction (Sandberg and Ejsmont, 2002). Therefore Rethink recommends the following strategy:

- Install continuous outer lane F-shape Truck height concrete barriers that test at a significant 5+ DB noise reduction of tire generated noise, while offering significant safety benefit as well.
- Use quiet pavement technology such as longitudinal microgrooved concrete and open-graded or rubberized asphalt which reduce tire-pavement noise by 5-9 DB.
- Maximise acoustically soft/rough ground surfaces with woody shrubs and coniferous tree planting between noise source and residential or recreational areas.
- And avoid outer lane expansion that moves noise sources closer to the right-of-way.

Design Considerations

ELIMINATE COSTLY BRIDGE WIDENING

Since the I-65 SAFE project is an Interim [near-term] rather than Major [long-term] project, as defined by expenditure thresholds, Rethink opposes bridge widening until the outcome of the *Reconnecting Communities Pilot Program Grant and ProPEL Indy* studies are known. Overbuilding is not prudent at this time.

Four-lane expansion can still be accommodated by more efficient use of the inner shoulder and by the feasible elimination of two inner lane pinch points near the Morris-Prospect interchange. Traffic assumptions for the need for more than four lanes were based on pre-pandemic trends for peak hour demand.

- There is growing consensus that post pandemic work patterns have stabilized at or near a 24% reduction in the peak hour commuter traffic that was the volume/ capacity ratio design basis for this project.
- As an interim project the capacity basis of design can be reasonably deferred until empirical evidence about demand is accumulated over time. That coincides with end of useful life for many of the steel-framed bridges in the corridor, and completion of studies to determine the future form of the inner loop itself.
- Current traffic counts are near meaningless while major segments of the I-465 belt are shut down for multiple bridge projects and I-69 last mile work.

ELIMINATE OUTER LANE EXPANSION

Rethink highly recommends deferring the addition of a northbound auxiliary lane [a virtual fifth lane] between Raymond Street and the South Split until the full inner lane shoulder reconfiguration to and through the I-70 WB ramp and the I-65 NB bridge is completed and assessed. That work should eliminate two pinch points that contribute to this traffic bottleneck and provide a balanced two and two lane split onto the pair of two-lane bridges without the fifth lane. Concerns:

- The fifth lane would reinstate the current imbalance with an additional bottleneck-inducing weaving dilemma. The apparent need for an additional lane into the 1-70 and I-65 merging pattern can be easily accommodated north of the NB I-65 bridge over Morris-Prospect. That need should be validated by the concurrent *Reconnecting Communities and ProPEL Indy planning studies and when more reliable traffic data becomes available.*
- Regarding that data, there is growing consensus that post pandemic work patterns have stabilized at or near a 24% reduction in the peak hour commuter traffic that was the volume/capacity design basis for this project.
- As an interim project the capacity basis of design can be reasonably deferred until the end of useful life for many of the steel-framed bridges in the corridor, and completion of studies to determine the future form of the inner loop itself.

DISAGGREGATE TRAFFIC DATA

Rethink recommends disaggregation of combined truck and general traffic counts to more fully understand the impact of general traffic commingling with freight within the inner loop and along its approaches. Freight traffic travel-time reliability metrics are a strong industry factor driving congestion mitigation projects such as the SAFE project and its precursor FAST projects. Emerging logistics patterns suggest however that significant improvements to freight efficiency, while needed, are possibly beyond the capacity of the I-65 SAFE *interim* project to resolve. Consideration of more far reaching freight accommodation, such as truck only lanes, may be better addressed by a long term planning horizon rather than by an interim project. Recommendations:

- Develop freight-specific traffic data to inform the *Reconnecting Communities and ProPEL Indy planning process*.
- Initiate a review of new concepts for freight separation such as truck-only lanes as an alternative scenario for future inner loop reconstruction, while providing better political and public understanding of the logistics component of highway usage.
- Current traffic counts are meaningless while major segments of the I-465 belt are shut down for multiple bridge projects and I-69 last mile work.
- *Meanwhile don't* overbuild for an unknown.

Rethink advisors reviewing connectivity constraints at Morris Street on October 19, 2022. Site reconnaissance informed the recommendations included in this report.