

Appendix E:
Level 2 Alternatives Screening Matrix

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Future64 Level 2 Alternative Screening: No Build Needs

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Future64 Level 2 Alternative Screening: Alternative 1 Needs

Need	Increase safety for all users		Improve transportation system with intuitive navigation to, from, and across I-64		Reduce the barrier effect of I-64 for bicycle, pedestrian, and transit users		Optimize bridge maintenance by improving structural conditions to maintain a good state of repair		Maintain interstate function, operations, and capacity for the future		Environmental Resource Protection	
Sub Need	Regional Vehicular-Movements	Bike/Ped	I-64 Access	Interstate / Local Network Interface	Support other entities' bike/ped plans	Transit Access/Effectiveness	Structure Repair	Reduce Structures	Capacity	Freight	Environmental Resources	Does the alternative impact social and built resources?
Questions to Ask	<p>Does the concept improve safety on the I-64 mainline, ramps, and/or ramp terminals?</p> <p>Does the concept improve safety within the local road network and within the study area?</p> <p>Does the improvement address identified crash hot spots?</p>	<p>Does the concept improve safety for people walking and biking and/or transit users across I-64 and throughout the study area?</p>	<p>Does the concept maintain access or provide access to current and known future destinations?</p>	<p>Does the concept provide logical access to the perpendicular street grid and provide for all traffic movements (on and off in both directions)?</p>	<p>Does the concept facilitate connectivity for transit users and people walking and biking across I-64 and within the study area?</p>	<p>Does the concept facilitate transit access and connectivity to other non-motorized modes and/or operations?</p>	<p>After extending all MoDOT bridges to meet a life span of 2050, what is the total number of structures that would require replacement for their next major repair?</p>	<p>Does the alternative reduce the total number of MoDOT Maintained structures, including bridges and walls?</p>	<p>"Does the concept maintain capacity on I-64 mainline, ramps, and/or ramp terminals?</p>	<p>Does the alternative have the potential to facilitate freight movements and improve maneuverability along, to, and from I-64?</p>	<p>Does the alternative impact environmental resources?</p>	<p>Does the alternative impact social and built resources?</p>
Data/Rationale	<p>Interchange spacing would remain unchanged.</p> <p>The total number of access points to the I-64 mainline is reduced from 22 to 21.</p> <p>1 of 2 existing left-hand entrances is removed.</p> <p>Improved acceleration lengths associated with ramps from Papin St. and Grand Blvd. would result in a 27% and 36% reduction in crashes, respectively.</p> <p>Improved deceleration lengths associated with the ramps to Boyle Ave. and Grand Blvd. would result in a 25% and 27% reduction in crashes, respectively.</p> <p>Replacing the signal on Grand Blvd. at Council Plaza with right-in/right-out access is anticipated to reduce crashes by 56%.</p>	<p>Separated facilities along Clayton Ave., Grand Blvd., Forest Park Ave., Chouteau Ave., Tower Grove Ave., and other roads increase separation and safety for non-motorized users.</p> <p>Reconfiguration of the Forest Park Ave./Grand Blvd. intersection increases bicycle and pedestrian exposure to motor vehicle traffic and potential conflict points between motor vehicles and non-motorized users due to increased turning movements.</p>	<p>No increases in travel distance in excess of 0.39 miles to 11 identified destinations, which could equate to an additional minute of travel time. Negligible decreases in travel distances/times.</p> <p><u>Turning Movements to 11 Destinations</u></p> <ul style="list-style-type: none">• 6 destinations are accessible with 1 or less turning movements to/from I-64• 4 destinations are accessible with up to 2 turning movements to/from I-64• 1 destination requires up to 3 turning movements to/from I-64 <p><u>Impact on Existing Signage/Wayfinding</u></p> <ul style="list-style-type: none">• Removal of 37A on and off ramps (Market/Bernard) is an improvement due to counterintuitive wayfinding.• Consolidation of access at Grand Blvd. creates one interchange serving all directions via a single crossroad.	<p>5 interchanges connecting to 9 local roadways: Kingshighway, Tower Grove, Boyle, Papin, Vandeventer, Grand, Theresa, Jefferson, 22nd</p> <p><u>Gore Separation</u></p> <ul style="list-style-type: none">• Existing non-compliant gore spacing locations to remain in place – 1• Existing compliant gore spacing locations to remain in place – 2• Existing non-compliant gore spacing locations removed – 1• Existing compliant gore spacing locations removed – 3• New compliant gore spacing locations - 3 <p>Ramps are in the same order as local roads.</p> <p>2 interchanges (Kingshighway/Grand) allow motorists to get on I-64 via the same crossroad they get off (all directions). 2 interchanges (Vandeventer, Jefferson/22) allow motorists to get on I-64 via the same crossroad that they get off in one direction</p>	<p>Total mileage of facilities (bike/SUP): 12.8</p> <p>Total bike/ped crossings: 16</p> <p>Average ped connectivity ratio: 45.0%</p> <p>Average bike connectivity ratio: 63.0%</p> <p>Interaction complexity: Fewer interactions with removing the Compton Ave/Market St ramp and separated facilities at Grand Blvd ramps.</p>	<p>Transit performance would generally be unaffected by Alternative 1, except for the 70 Grand MetroBus route. Travel times and the reliability of that route would be affected by increased traffic congestion on Grand Blvd.</p> <p>Connectivity to transit would be improved in the vicinity of the Grand MetroLink Station, and the estimated transit-dependent population within a 10-minute walk of a transit stop would be approximately 7,871 persons.</p>	<p>5 Bridges will need replacement following 2050. Presently 2 additional bridges need Replacement or 50 Year Rehab to make it to 2050.</p>	<p>527,195 square feet of Bridge Deck</p> <p>7 Functionally Obsolete Replaced</p> <p>4 New Walls Required</p>	<p>Due to the congestion at Forest Park Ave. and Grand Blvd., assuming an at-grade intersection, the traffic on I-64 via the Grand Blvd. ramps would experience congestion and excessive delays and queues that would spill back onto I-64.</p> <p><u>Speed:</u></p> <p>I-64 EB: 58 mph (AM) / 59 mph (PM)</p> <p>I-64 WB: 58 mph (AM) / 58 mph (PM)</p> <p><u>Density:</u></p> <p>I-64 EB: 26.2 veh/m/ln (AM) / 19.8 veh/m/ln (PM)</p> <p>I-64 WB: 22.0 veh/m/ln (AM) / 22.0 veh/m/ln (PM)</p> <p><u>Network Throughput (includes ramp terminals):</u></p> <p>28,404 veh (AM)</p> <p>29,821 veh (PM)</p> <p><u>Ramp Terminals:</u></p> <p>Acceptable LOS other than:</p> <ul style="list-style-type: none">• Kingshighway Interchange LOS E <p>See Sheet 3 for Alt 1 delay, queues, v/c, and LOS at ramp terminals.</p> <p><u>Tier 2 Failing Intersections:</u></p> <ul style="list-style-type: none">•Kingshighway and Route 100 – LOS F in both peak periods• Forest Park Ave. and Grand Blvd. – LOS F in the PM Peak Hour if at-grade	<p>The majority of ramp terminals are signalized. Many other intersections along the primary routes throughout the study area are also signalized.</p> <p>The only roundabout freight would have to navigate would be Tower Grove and EB off-ramp from I-64.</p> <p>Weight restriction of 45 Tons on Bridge L0667.</p> <p>Bridge A0832 currently has less than 15' clearance.</p> <p>Bridge A3636 is eliminated.</p> <p>6740' of substandard shoulder widened to meet 10' min along mainline I-64.</p> <p>Left entrances remain at the West Interchange but are removed on the east.</p> <p>I-64 EB off Ramp Loop Ramp radii increased along with the grade.</p> <p>Out of direction travel a West Interchange for EB-I64.</p> <p>East Interchange alternative provides access to and from both directions of I-64 directly from Grand.</p> <p>Creates a one-way segment on Spruce that could increase travel time for trips.</p>	<p>Proposed shoulder widening east of Boyle Ave. may impact non-jurisdictional ditch wetland. Potential noise impacts by Stix ECC school. Traffic flow and road optimization should decrease emissions.</p>	<p>2 active brownfield sites within 100 feet of alternative, bike/ped improvements within 2 historic districts, 3 NRHP listed buildings within 100 feet of improvements, and many potential historic buildings throughout which may be impacted visually. Proposed work adjacent to Stars Park and Chaifetz Arena would need to consider public access restrictions or additional ROW regarding section 106. Improved bike/ped connectivity throughout environmental justice areas.</p>
Rating	Moderate	Moderate	Moderate	High/Best	Moderate	Least/Low	Moderate	Least/Low	Least/Low	Moderate	Moderate	Moderate

Future64 Level 2 Alternative Screening: Alternative 2 Needs

Need	Increase safety for all users		Improve transportation system with intuitive navigation to, from, and across I-64		Reduce the barrier effect of I-64 for bicycle, pedestrian, and transit users		Optimize bridge maintenance by improving structural conditions to maintain a good state of repair		Maintain interstate function, operations, and capacity for the future		Environmental Resource Protection	
Sub Need	Regional Vehicular-Movements	Bike/Ped	I-64 Access	Interstate / Local Network interface	Support other entities' bike/ped plans	Transit Access/Effectiveness	Structure Repair	Reduce Structures	Capacity	Freight	Environmental Resources	Does the alternative impact social and built resources?
Questions to Ask	<p>Does the concept improve safety on the I-64 mainline, ramps, and/or ramp terminals?</p> <p>Does the concept improve safety within the local road network and within the study area?</p> <p>Does the improvement address identified crash hot spots?</p>	<p>Does the concept improve safety for people walking and biking and/or transit users across I-64 and throughout the study area?</p>	<p>Does the concept maintain access or provide access to current and known future destinations?</p>	<p>Does the concept provide logical access to the perpendicular street grid and provide for all traffic movements (on and off in both directions)?</p>	<p>Does the concept facilitate connectivity for transit users and people walking and biking across I-64 and within the study area?</p>	<p>Does the concept facilitate transit access and connectivity to other non-motorized modes and/or operations?</p>	<p>After extending all MoDOT bridges to meet a life span of 2050, what is the total number of structures that would require replacement for their next major repair?</p>	<p>Does the alternative reduce the total number of MoDOT Maintained structures, including bridges and walls?</p>	<p>"Does the concept maintain capacity on I-64 mainline, ramps, and/or ramp terminals?</p>	<p>Does the alternative have the potential to facilitate freight movements and improve maneuverability along, to, and from I-64?</p>	<p>Does the alternative impact environmental resources?</p>	<p>Does the alternative impact social and built resources?</p>
Data/Rationale	<p>Interchange spacing would remain unchanged.</p> <p>The total number of access points to the I-64 mainline is reduced from 22 to 20.</p> <p>1 of 2 existing left-hand entrances is removed.</p> <p>Improved acceleration lengths associated with ramps from Papin St. and Grand Blvd. would result in a 27% and 38% reduction in crashes, respectively.</p> <p>Improved deceleration lengths associated with the ramps to Boyle Ave. and Grand Blvd. would result in a 26% and 20% reduction in crashes, respectively.</p> <p>Replacing the signal on Grand Blvd. at Council Plaza with right-in/right-out access is anticipated to reduce crashes by 56%.</p>	<p>Separated facilities along Clayton Ave., Grand Blvd., Forest Park Ave., Chouteau Ave., Tower Grove Ave., and other roads increase separation and safety for non-motorized users.</p> <p>Reconfiguration of the Forest Park Ave./Grand Blvd. intersection increases bicycle and pedestrian exposure to motor vehicle traffic and potential conflict points between motor vehicles and non-motorized users due to increased turning movements.</p> <p>A new at-grade railroad crossing on Theresa Ave. increases potential conflict between bikes, peds, and rail traffic.</p> <p>Clayton Ave. calm street improvements slow motor vehicle traffic and reduce the potential for severe injury crashes.</p>	<p>No increases in travel distance in excess of 0.37 miles to 11 identified destinations, which could equate to an additional minute of travel time. Decreases in travel distance up to 0.66 miles to 11 identified destinations, which could equate to nearly 2 minutes of travel time savings.</p> <p><u>Turning Movements to 11 Destinations</u></p> <ul style="list-style-type: none">• 2 destinations are accessible with 1 or less turning movements to/from I-64• 7 destinations are accessible with up to 2 turning movements to/from I-64• 2 destinations require up to 3 turning movements to/from I-64 <p><u>Impact on Existing Signage/Wayfinding</u></p> <ul style="list-style-type: none">• Relocation of EB on-ramp to Boyle is an improvement• Removal of 37A On & Off ramp (Market Bernard) is an improvement due to existing counterintuitive wayfinding.• Access at Grand/Forest Park expanded to include Spruce and Bernard (4 ramps to/from 4 different roads)	<p>5 interchanges connecting to 9 local roadways: Kingshighway, Tower Grove, Boyle, Vandeventer, Grand, Bernard, Forest Park, Jefferson, 22nd</p> <p><u>Gore Separation</u></p> <ul style="list-style-type: none">• Existing non-compliant gore spacing locations to remain in place – 1• Existing compliant gore spacing locations to remain in place – 1• Existing non-compliant gore spacing locations removed – 1• Existing compliant gore spacing locations removed – 4• New compliant gore spacing locations - 4 <p>Ramps are in the same order as local roads.</p> <p>Only 1 interchange (Kingshighway) allows motorists to get on I-64 via the same crossroad they get off (all directions). 3 interchanges (Boyle, Vandeventer, Jefferson/22) allow motorists to get on I-64 via the same crossroad they get off in one direction.</p>	<p>Total mileage of facilities (bike/SUP): 13.5</p> <p>Total bike/ped crossings: 16</p> <p>Average ped connectivity ratio: 43.0%</p> <p>Average bike connectivity ratio: 64.0%</p> <p>Interaction complexity: Fewer interactions with removing Compton Ave/Market Ave ramps and separated facilities at Grand Blvd ramps.</p>	<p>Transit performance would improve with the inclusion of BRT provisions on Grand Blvd. Dedicated bus lanes would allow buses to avoid traffic congestion, improving transit travel times and increasing reliability.</p> <p>Connectivity to transit would be improved around the Grand MetroLink Station, and the expected transit-dependent population within a 10-minute walk of a transit stop would be approximately 7,742 persons.</p>	<p>4 Bridges will need replacement following 2050. Presently 1 additional bridge needs Replacement or 50 Year Rehab to make it to 2050.</p>	<p>545,320 square feet of bridge deck</p> <p>9 functionally obsolete replaced</p> <p>5 new walls required</p>	<p>No operational concerns along I-64.</p> <p><u>Speed:</u></p> <p>I-64 EB: 58 mph (AM) / 59 mph (PM)</p> <p>I-64 WB: 58 mph (AM) / 58 mph (PM)</p> <p><u>Density:</u></p> <p>I-64 EB: 26.3 veh/m/ln (AM) / 20.0 veh/m/ln (PM)</p> <p>I-64 WB: 21.9 veh/m/ln (AM) / 23.2 veh/m/ln (PM)</p> <p><u>Network Throughput (includes ramp terminals):</u></p> <p>28,407 veh (AM)</p> <p>30,840 veh (PM)</p> <p><u>Ramp Terminals:</u></p> <p>Acceptable LOS other than:</p> <ul style="list-style-type: none">• Kingshighway Interchange LOS E <p>See Sheet 3 for Alt 2 delay, queues, v/c, and LOS at ramp terminals.</p> <p><u>Tier 2 Failing Intersections:</u></p> <ul style="list-style-type: none">• Kingshighway and Route 100 – LOS F in both peak periods	<p>The majority of ramp terminals are signalized. Many other intersections along the primary routes throughout the study area are also signalized.</p> <p>Freight would have to navigate a roundabout at Tower Grove and EB off-ramp from I-64 and at Bernard/Theresa/Spruce and EB off-ramp from I-64.</p> <p>Weight restriction of 45 Tons on Bridge L0667.</p> <p>Bridge A0832 is eliminated.</p> <p>Bridge A3636 is eliminated.</p> <p>7310' of substandard shoulder widened to meet 10' min along mainline I-64.</p> <p>Left Entrance remains at West Interchange and is eliminated and East Interchange.</p> <p>Direct Access to EB I-64 from Boyle.</p> <p>I-64 EB off Ramp Tight Loop Ramp is eliminated.</p> <p>East Interchange is the least intuitive and provides the least direct access to Grand for Freight.</p>	<p>Proposed shoulder widening east of Boyle Ave. may impact non-jurisdictional ditch wetland. Potential noise impacts by Stix ECC school. Traffic flow and road optimization should decrease emissions.</p>	<p>2 active brownfield sites within 100 feet of alternative, bike/ped improvements within 2 historic districts, 3 NHRP listed buildings within 100 feet of improvements, and many potential historic buildings throughout which may be impacted visually. Proposed work adjacent to Stars Park and Chaifetz Arena would need to consider public access restrictions or additional ROW regarding section 106. Improved bike/ped connectivity throughout environmental justice areas. Additional bike/ped connectivity to Forest Park. Likely a ROW acquisition of the building in the southeast corner of Grand and I-64.</p>
Rating	Moderate	Least/Low	Moderate	Moderate	High/Best	High/Best	Moderate	Least/Low	High/Best	Moderate	Moderate	Moderate

Future64 Level 2 Alternative Screening: Alternative 3 Needs

Need	Increase safety for all users		Improve transportation system with intuitive navigation to, from, and across I-64		Reduce the barrier effect of I-64 for bicycle, pedestrian, and transit users		Optimize bridge maintenance by improving structural conditions to maintain a good state of repair		Maintain interstate function, operations, and capacity for the future		Environmental Resource Protection	
Sub Need	Regional Vehicular-Movements	Bike/Ped	I-64 Access	Interstate / Local Network interface	Support other entities' bike/ped plans	Transit Access/Effectiveness	Structure Repair	Reduce Structures	Capacity	Freight	Environmental Resources	Does the alternative impact social and built resources?
Questions to Ask	<p>Does the concept improve safety on the I-64 mainline, ramps, and/or ramp terminals?</p> <p>Does the concept improve safety within the local road network and within the study area?</p> <p>Does the improvement address identified crash hot spots?</p>	<p>Does the concept improve safety for people walking and biking and/or transit users across I-64 and throughout the study area?</p>	<p>Does the concept maintain access or provide access to current and known future destinations?</p>	<p>Does the concept provide logical access to the perpendicular street grid and provide for all traffic movements (on and off in both directions)?</p>	<p>Does the concept facilitate connectivity for transit users and people walking and biking across I-64 and within the study area?</p>	<p>Does the concept facilitate transit access and connectivity to other non-motorized modes and/or operations?</p>	<p>After extending all MoDOT bridges to meet a life span of 2050, what is the total number of structures that would require replacement for their next major repair?</p>	<p>Does the alternative reduce the total number of MoDOT Maintained structures, including bridges and walls?</p>	<p>"Does the concept maintain capacity on I-64 mainline, ramps, and/or ramp terminals?</p>	<p>Does the alternative have the potential to facilitate freight movements and improve maneuverability along, to, and from I-64?</p>	<p>Does the alternative impact environmental resources?</p>	<p>Does the alternative impact social and built resources?</p>
Data/Rationale	<p>As opposed to Alt #1 and Alt #2, Alt #3 improves interchange spacing due to the removal of the WB off-ramp to Forest Park Ave.</p> <p>The total number of access points to the I-64 mainline is reduced from 22 to 21.</p> <p>Both of the two existing left-hand entrances are removed.</p> <p>Improved acceleration lengths associated with ramps from Papin St. and Grand Blvd. would result in a 27% and 39% reduction in crashes, respectively.</p> <p>Improved deceleration lengths associated with the ramps to Boyle Ave. and Grand Blvd. would result in a 21% and 22% reduction in crashes, respectively.</p> <p>Replacing the signal on Grand Blvd. at Council Plaza with right-in/right-out access is anticipated to reduce crashes by 56%.</p>	<p>Separated facilities along Clayton Ave., Grand Blvd., Forest Park Ave., Chouteau Ave., Tower Grove Ave., and other roads increase separation and safety for non-motorized users.</p> <p>Reconfiguration of the Forest Park Ave./Grand Blvd. Intersection increases bicycle and pedestrian exposure to motor vehicle traffic and potential conflict points between motor vehicles and non-motorized users due to increased turning movements.</p> <p>Grade-separated crossing on Tower Grove Ave. at I-64 south outer road replaces roundabout and eliminates conflicts with motor vehicles.</p> <p>Conversion of Tower Grove Ave. bridge over I-64 eliminates conflicts with motor vehicles.</p>	<p>No increases in travel distance in excess of 0.58 miles to 11 identified destinations, which could equate to an additional 2 minutes of travel time. Decreases in travel distance up to 0.34 miles to 11 identified destinations, which could equate to nearly one minute of travel time savings.</p> <p><u>Turning Movements to 11 Destinations</u></p> <ul style="list-style-type: none">• 3 destinations are accessible with 1 or less turning movements to/from I-64• 4 destinations are accessible with up to 2 turning movements to/from I-64• 4 destinations require up to 3 turning movements to/from I-64 <p><u>Impact on Existing Signage/Wayfinding</u></p> <ul style="list-style-type: none">• Consolidation of access at Boyle creates one interchange serving all directions via a single crossroad.• Removal of local vehicular traffic from Tower Grove overpass disrupts the neighborhood grid.• Addition of EB on-ramp from Grand provided additional access from N/S arterial• Removal of 37A On & Off ramp (Market Bernard) is an improvement due to existing counterintuitive wayfinding.• Consolidation of access at Grand Blvd. creates one interchange serving three of four directions via a single crossroad.	<p>5 interchanges connecting to 8 local roadways: Kingshighway, Tower Grove, Boyle, Vandeventer, Grand, Theresa, Jefferson, 22nd</p> <p><u>Gore Separation</u></p> <ul style="list-style-type: none">• Removal of Market St./Compton Ave./Forest Park Ave. connections results in a spacing of 5,110' near compliance with design standards.• Existing non-compliant gore spacing locations to remain in place – 2• Existing compliant gore spacing locations to remain in place – 3• Existing non-compliant gore spacing locations removed – 2• Existing compliant gore spacing locations removed – 7• New compliant gore spacing locations - 6 <p>Ramps are in the same order as local roads.</p> <p>2 interchanges (Kingshighway/Boyle) allow motorists to get on I-64 via the same crossroad they get off (all directions).</p> <p>3 interchanges (Vandeventer, Grand, Jefferson/22) allows motorists to get on I-64 via the same crossroad that they get off in one direction</p>	<p>Total mileage of facilities (bike/SUP): 12.8</p> <p>Total bike/ped crossings: 16</p> <p>Average ped connectivity ratio: 46.0%</p> <p>Average bike connectivity ratio: 63.0%</p> <p>Interaction complexity: Fewer interactions with the removal of Compton Ave/Market Ave ramps, separated facilities at Grand Blvd ramps, provision of a grade-separated crossing of Tower Grove Ave at the proposed outer road, repurposing of Tower Grove Ave overpass to bike/ped only.</p>	<p>Transit performance would generally be unaffected by Alternative 3, except for the 70 Grand MetroBus route. Travel times and the reliability of that route would be affected by increased traffic congestion on Grand Blvd.</p> <p>Connectivity to transit would be improved in the vicinity of the Grand MetroLink Station, and the estimated transit-dependent population within a 10-minute walk of a transit stop would be approximately 7,842 persons.</p>	<p>5 Bridges will need replacement following 2050. Presently 1 additional bridge needs Replacement or 50 Year Rehab to make it to 2050.</p>	<p>583,934 square feet of bridge deck</p> <p>8 functionally obsolete replaced</p> <p>6 new walls required</p>	<p>No operational concerns along I-64.</p> <p><u>Speed:</u></p> <p>I-64 EB: 57 mph (AM) / 59 mph (PM)</p> <p>I-64 WB: 58 mph (AM) / 58 mph (PM)</p> <p><u>Density:</u></p> <p>I-64 EB: 26.1 veh/m/ln (AM) / 20.0 veh/m/ln (PM)</p> <p>I-64 WB: 22.3 veh/m/ln (AM) / 22.6 veh/m/ln (PM)</p> <p><u>Network Throughput (includes ramp terminals):</u></p> <p>28,105 veh (AM)</p> <p>30,335 veh (PM)</p> <p><u>Ramp Terminals:</u></p> <p>Acceptable LOS other than:</p> <ul style="list-style-type: none">• Kingshighway Interchange LOS E <p>See Sheet 3 for Alt 3 delay, queues, v/c, and LOS at ramp terminals.</p> <p><u>Tier 2 Failing Intersections:</u></p> <ul style="list-style-type: none">• Kingshighway and Route 100 – LOS F in both peak periods	<p>The majority of ramp terminals are signalized. Many other intersections along the primary routes throughout the study area are also signalized.</p> <p>Freight would have to navigate one roundabout at Theresa/Spruce and EB off-ramp from I-64.</p> <p>Weight restriction of 45 Tons on Bridge L0667.</p> <p>Bridge A0832 currently has less than 15' clearance.</p> <p>Bridge A3636 is eliminated.</p> <p>7310' of substandard shoulder widened to meet 10' min along mainline I-64.</p> <p>Removes Left entrances at both the West and East Interchanges.</p> <p>Direct Access to EB I-64 from Boyle and Vandeventer Ramp. Eliminates the Roundabout at Tower Grove.</p> <p>I-64 EB off Ramp Tight Loop Ramp is eliminated.</p> <p>East Interchange provides three of the four movements to I-64 directly from Grand.</p>	<p>Proposed shoulder widening east of Boyle Ave. may impact non-jurisdictional ditch wetland. Potential noise impacts by Stix ECC school. Traffic flow and road optimization should decrease emissions. Potential noise impacts near Choteau Park and Aventura Forest Park Apartments.</p>	<p>2 active brownfield sites within 100 feet of alternative, bike/ped improvements within 2 historic districts, 3 NHRP listed buildings within 100 feet of improvements, and many potential historic buildings throughout which may be impacted visually. Proposed work adjacent to Stars Park and Chaifetz Arena would need to consider public access restrictions or additional ROW regarding section 106. Improved bike/ped connectivity throughout environmental justice areas. Additional bike/ped connectivity to Forest Park. Likely the ROW acquisition of a building at the southeast corner of Grand and I-64 and a building at the southeast corner of Boyle and I-64.</p>
Rating	High/Best	High/Best	Moderate	High/Best	High/Best	Least/Low	Moderate	Least/Low	High/Best	Moderate	Moderate	Moderate

Future64 Level 2 Alternative Screening: No Build Goals

Project Goals											
Sub Needs	Right-size I-64 to reduce the highway footprint and reuse the space to benefit the community.	Support improved land use near transit stations and trails.	Improve equitable outcomes: Protect community assets	Improve equitable outcomes: Improve quality of life	Improve equitable outcomes: Improved access to underserved communities	Coordinate with regional partners to enhance the connectivity, safety, and comfort of the local transportation network	Integrate bicycle and pedestrian facility design best practices into project designs	Consolidate access points from interstate to the local system	Invest in projects that provide good cost-benefit improvements	Integrate ecology best practices into project designs and right-of-way use.	Integrate improved aesthetics and visual environment into project designs.
Question(s) to ask	Does the alternative reduce the acreage of the footprint of I-64 ROW, interchanges, and ramps? How much released land is viable for redevelopment (acres)?	Does the alternative support transit and trail-oriented development?	Does this alternative impact any community assets?	Does this alternative contribute to an improved quality of life for local residents and workers?	Does the alternative improve access to underserved communities?	Does the alternative create opportunities to allow for coordinated enhancements in connectivity, safety, and comfort of travel by regional transportation and service delivery partners?	Are the proposed bicycle and pedestrian facilities designs considered best practices?	Does the alternative consolidate access points from I-64 to the local system?	Does the alternative have a good cost-benefit?	Does the alternative provide opportunities for green infrastructure, native plantings, and stormwater management?	Does the alternative provide opportunities to improve beautification, placemaking, and inviting infrastructure?
Data/Rationale	N/A (no released land)	N/A (no released land)				No Build utilizes the existing roadway system to build a low-stress network and adds new connections via the development of the Brickline Greenway, Tower Grove-Cortex Connector, and Compton Ave. Cycle Track. Projects add significant mileage to active transportation networks over existing conditions.	No Build bike/ped facilities meet or exceed AASHTO standards and guidance. Likely and committed local partner bikeway and multi-use path projects, particularly the Brickline and Tower Grove Connector projects, will integrate NACTO-based guidance and other design elements that exceed AASHTO standards, such as increased facility width.	22 total ramps provided within 6 interchanges connecting to 12 local roadways: Kingshighway, Tower Grove, Boyle, Papin, Vandeventer, Market, Bernard, Grand, Forest Park, Compton, Jefferson, 22nd Only 1 interchange (Kingshighway) allows motorists to get on I-64 via the same crossroad they get off (all directions). 4 interchanges (Vandeventer, Market, Grand/Forest Park, Jefferson/22) allow motorists to get on I-64 via the same crossroad they get off in one direction.	Maintenance Cost of existing Structures to extend life to 2050 or greater = \$80 Million No operational improvements but requires \$80 to maintain structures.	No opportunities created	No opportunities created
Rating	Least/Low	Least/Low	Least/Low	Least/Low	Least/Low	Moderate	Moderate	Least/Low	Least/Low	Least/Low	Least/Low

Future64 Level 2 Alternative Screening: Alternative 2 Goals

Project Goals											
Sub Needs	Right-size I-64 to reduce the highway footprint and reuse the space to benefit the community.	Support improved land use near transit stations and trails.	Improve equitable outcomes: Protect community assets	Improve equitable outcomes: Improve quality of life	Improve equitable outcomes: Improved access to underserved communities	Coordinate with regional partners to enhance the connectivity, safety, and comfort of the local transportation network	Integrate bicycle and pedestrian facility design best practices into project designs	Consolidate access points from interstate to the local system	Invest in projects that provide good cost-benefit improvements	Integrate ecology best practices into project designs and right-of-way use.	Integrate improved aesthetics and visual environment into project designs.
Question(s) to ask	Does the alternative reduce the acreage of footprint of I-64 ROW, interchanges, and ramps? How much released land is viable for redevelopment (acres)?	Does the alternative support transit and trail-oriented development?	Does this alternative impact any community assets?	Does this alternative contribute to an improved quality of life for local residents and workers?	Does the alternative improve access to underserved communities?	Does the alternative create opportunities to allow for coordinated enhancements in connectivity, safety, and comfort of travel by regional transportation and service delivery partners?	Are the proposed bicycle and pedestrian facilities designs considered best practices?	Does the alternative consolidate access points from I-64 to the local system?	Does the alternative have a good cost-benefit?	Does the alternative provide opportunities for green infrastructure, native plantings, and stormwater management?	Does the alternative provide opportunities to improve beautification, placemaking, and inviting infrastructure?
Data/Rationale	Estimated Released Land Acreage: 7.1 ac Redevelopment Acreage: 14.8 ac Residential Units: 580 to 640 units Commercial SF: 12,000 to 16,000 SF	<u>Developments with Transit Access</u> Count: 4 Residential: 580 to 640 units Commercial: 12,000 to 16,000 SF <u>Developments with Adjacent Trail Access</u> Count: 4 Residential: 580 to 640 units Commercial: 12,000 to 16,000 SF	<u>10 MIN WALKSHED IMPROVEMENT</u> Health Clinics: Marginal Higher Education: Marginal Hospitals: Low Community Services: Marginal Schools: Marginal Other Community Assets: Medium Overall Score: Low <u>10 MIN BIKESHED IMPROVEMENT</u> Health Clinics: Low Higher Education: Low Hospitals: Low Community Services: Low Schools: Low Other Community Assets: Medium Overall Score: Low	<u>10 MIN WALKSHED IMPROVEMENT</u> Major Employers: Low Commercial & Entertainment Destinations: Marginal Groceries: Low Parks: Marginal Overall Score: Low <u>10 MIN BIKESHED IMPROVEMENT</u> Major Employers: Low Commercial & Entertainment Destinations: Low Groceries: Medium Parks: Marginal Overall Score: Low	<u>OVERALL IMPROVEMENT IN WALKSHED SERVING VULNERABLE AREAS</u> Community Assets: Least/Low Quality of Life Destinations: Least/Low Transit Stops: Least/Low	The improvements identified in Alt 2 will support and enhance bicycle and pedestrian safety and connectivity as described in the No Build. Adds 1.5 miles of new facilities that provide direct connections to existing and committed bikeways and multi-use paths. Enhances connectivity by increasing facility density with new connections on Theresa, Scott, and other corridors. These facilities can serve as Brickline Greenway connections between Grand MetroLink Station and Market St/Compton Ave. The at-grade signalized intersection at Grand Blvd. and Bernard St. provides a new link from Grand Blvd. east to Compton Ave. and north to Forest Park Ave. via Theresa Ave., circumventing the new at-grade intersection of Grand Blvd. and Forest Park Ave. The Theresa Ave. at-grade railroad crossing provides additional local connectivity and an alternative north-south corridor parallel to the Grand Blvd. viaduct.	Alt 2 will meet or exceed standards based on AASHTO guidance.	20 ramps provided within 5 interchanges connecting to 9 local roadways: Kingshighway, Tower Grove, Boyle, Vandeventer, Grand, Bernard, Forest Park, Jefferson, 22nd Only 1 interchange (Kingshighway) allows motorists to get on I-64 via the same crossroad they get off (all directions). 3 interchanges (Boyle, Vandeventer, Jefferson/22) allow motorists to get on I-64 via the same crossroad that they get off in one direction	Total \$200 M West Interchange = \$30 M East Interchange = \$100 M Additional Bridge Maintenance Needed on Existing Structures = \$70 M Requires \$120 M more than No Action and achieves two needs well with moderate improvement for others	Area 2 near Grand has a potential 5-acre site.	New Boyle bridge and bridge widening over Sarah St. New 64 bridges over Theresa with companion bike/ped facilities. Bernard St connection to Grand. New bus and bike lanes on Grand provide an opportunity for a "complete street" design.
Rating	Moderate	Moderate	Least/Low	Least/Low	Least/Low	High/Best	Moderate	Moderate	Moderate	Moderate	High/Best

Future64 Level 2 Alternative Screening: Alternative 3 Goals

Project Goals											
Sub Needs	Right-size I-64 to reduce the highway footprint and reuse the space to benefit the community.	Support improved land use near transit stations and trails.	Improve equitable outcomes: Protect community assets	Improve equitable outcomes: Improve quality of life	Improve equitable outcomes: Improved access to underserved communities	Coordinate with regional partners to enhance the connectivity, safety, and comfort of the local transportation network	Integrate bicycle and pedestrian facility design best practices into project designs	Consolidate access points from interstate to the local system	Invest in projects that provide good cost-benefit improvements	Integrate ecology best practices into project designs and right-of-way use.	Integrate improved aesthetics and visual environment into project designs.
Question(s) to ask	Does the alternative reduce the acreage of footprint of I-64 ROW, interchanges, and ramps? How much released land is viable for redevelopment (acres)?	Does the alternative support transit and trail-oriented development?	Does this alternative impact any community assets?	Does this alternative contribute to an improved quality of life for local residents and workers?	Does the alternative improve access to underserved communities?	Does the alternative create opportunities to allow for coordinated enhancements in connectivity, safety, and comfort of travel by regional transportation and service delivery partners?	Are the proposed bicycle and pedestrian facilities designs considered best practices?	Does the alternative consolidate access points from I-64 to the local system?	Does the alternative have a good cost-benefit?	Does the alternative provide opportunities for green infrastructure, native plantings, and stormwater management?	Does the alternative provide opportunities to improve beautification, placemaking, and inviting infrastructure?
Data/Rationale	Estimated Released Land Acreage: 10.7 ac Redevelopment Acreage: 30.8 ac Residential Units: 1,750 to 1,845 units Commercial (SF/Rooms): 58,000 to 70,000 SF, 230 to 250 hotel rooms	<u>Developments with Transit Access</u> Count: 5 Residential: 1,750 to 1,845 units Commercial: 54,000 to 64,000 SF, <u>Developments with Adjacent Trail Access</u> Count: 6 Residential: 1,750 to 1,845 units Commercial: 58,000 to 70,000 SF, 230 to 250 hotel rooms	<u>10 MIN WALKSHED IMPROVEMENT</u> Health Clinics: High Higher Education: Medium Hospitals: Low Community Services: Low Schools: Marginal Other Community Assets: High Overall Score: Medium <u>10 MIN BIKESHED IMPROVEMENT</u> Health Clinics: Low Higher Education: Low Hospitals: Low Community Services: Low Schools: Low Other Community Assets: Marginal Overall Score: Low	<u>10 MIN WALKSHED IMPROVEMENT</u> Major Employers: High Commercial & Entertainment Destinations: Medium Groceries: High Parks: Low Overall Score: High <u>10 MIN BIKESHED IMPROVEMENT</u> Major Employers: Low Commercial & Entertainment Destinations: Low Groceries: Medium Parks: Marginal Overall Score: Low	<u>OVERALL IMPROVEMENT IN WALKSHED SERVING VULNERABLE AREAS</u> Community Assets: High/Best Quality of Life Destinations: High/Best Transit Stops: Moderate	The improvements identified in Alt 3 will support and enhance bicycle and pedestrian safety and connectivity as described in the No Build. Adds 0.9 miles of new facilities that provide direct connections to existing and committed bikeways and multi-use paths. Alt 3 enhances connectivity by increasing facility density with new connections on Theresa, Scott, and other corridors. These facilities can serve as Brickline Greenway connections between Grand MetroLink Station and Market St/Compton Ave. The Tower Grove Ave. bike/ped-only facility provides a low-stress crossing of I-64 between the bike/ped bridge east of Kingshighway Blvd. and the Sarah St. separated bikeway, and the grade-separated crossing of the I-64 south outer road at Tower Grove Ave. reduces conflict at this interchange.	Alt 3 will meet or exceed standards based on AASHTO guidance. Repurposing Tower Grove Ave to a bike/ped-only facility provides opportunities to apply NACTO best practices.	21 ramps provided within 5 interchanges connecting to 8 local roadways: Kingshighway, Tower Grove, Boyle, Vandeventer, Grand, Theresa, Jefferson, 22nd 2 interchanges (Kingshighway/Boyle) allow motorists to get on I-64 via the same crossroad they get off (all directions). 3 interchanges (Vandeventer, Grand, Jefferson/22) allow motorists to get on I-64 via the same crossroad they get off in one direction.	Total \$234 M West Interchange = \$74 M East Interchange = \$90 M Additional Bridge Maintenance Needed on Existing Structures = \$70 M \$150M more than No Action and addresses most needs in a substantial way, as well as most goals.	Area 2 near Grand has a potential 3-acre site.	Roundabout area, new Boyle bridge, and bridge widening over Sarah St. New 64 bridges over Theresa with companion bike/ped facilities. Bernard St connection to Grand. New bus and bike lanes on Grand provide an opportunity for a "complete street" design.
Rating	High/Best	High/Best	High/Best	High/Best	High/Best	Moderate	High/Best	High/Best	High/Best	Moderate	Moderate