



OUR MAIN STREET SPRINGFIELD

MAIN STREET SAFETY PROJECT | 20th Street to 72nd Street

TECHNICAL ADVISORY COMMITTEE MEETING #4 SUMMARY

DATE: Tuesday, April 23, 2019, 11:00 a.m. – 12:00 p.m.

LOCATION: Springfield City Hall, Library Meeting Room

ATTENDANCE

City of Springfield

- Brian Barnett, City Traffic Engineer
- Greg Ferschweiler, Operations Maintenance Supervisor
- Ben Gibson, Operations Supervisor
- Courtney Griesel, Economic Development Manager
- Michael Liebler, Transportation Planning Engineer
- Amy Linder, AIC Deputy Chief/Fire Marshal
- Kristi Krueger, Principal Engineer
- Lt. Russ Boring, Police Department
- Meghan Murphy, Environmental Services Technician
- Emma Newman, Senior Transportation Planner
- Loralyn Spiro, DPW Communications Coordinator

ODOT

- Eric Alexander, Region 2 District 5 Assistant Manager
- Jenna Berman, Region 2 Active Transportation Liaison **[by phone]**
- Nicole Charlson, Region 2 Transportation Safety Coordinator
- Carl Deaton, Region 2 Roadway Engineer
- Scott Nelson, Region 2 Access Management Engineer
- Amanda Salyer, Region 2 Traffic Investigations Engineer & ARTS Program Coordinator
- Katie Scott, Motor Carrier Division Mobility Operations Program Coordinator
- Bob Stolle, Region 2 Rail Crossing Safety Section
- Dorothy Upton, Region 2 Traffic Engineer **[by phone]**
- Kristie Gladhill, TPAU Senior Transportation Analyst
- Keith Blair, Senior Transportation Analyst, Region 2

DLCD

- Patrick Wingard, South Willamette Valley Representative

Utility Providers

- Bart McKee, Senior Civil Engineer, SUB Water
- Dan Norland, Engineering Technician, SUB Electric
- Tamara Pitman, SUB Electric
- John Radosevich, NW Natural

LTD

- Bret Smith, Transit Service Planner
- Kelly Clark, Senior Transportation Planner, [LCOG representing LTD]

Willamalane Park & Recreation District (WPRD)

- Eric Adams, Planning & Development Manager

School District #19 (SPS)

- Laughton Elliott-Deangelis, Safe Routes to Schools Coordinator
- Mike Schlosser, Transportation & Fleet Operations Manager

Project Staff and Consultants

- Bill Johnston, ODOT Project Manager, Transportation Planner, ODOT Region 2
- Molly Markarian, City of Springfield Project Manager, Senior Planner, City of Springfield
- Jean Senechal Biggs, Consultant Project Manager, DKS Associates
- Chris Maciejewski, Transportation Engineer, DKS Associates **[by phone]**
- Lacy Brown, Transportation Engineer, DKS Associates **[by phone]**
- Kayla Fleskes, Transportation Engineering/Planning Assistant, DKS Associates
- Allison Brown, Program Manager and Facilitator, JLA Public Involvement
- Matthew Kitchen, Project Director, ECONorthwest **[by phone]**

Audience / Members of the Public

None present

MEETING PURPOSE

- Update TAC on status of goals and objectives
- Present future baseline traffic operations and safety performance
- Present the economic literature review

WELCOME & INTRODUCTIONS

Molly Markarian, City of Springfield, and Jean Senechal Biggs, DKS Associates, welcomed everyone to this fourth meeting of the TAC. Members of the committee introduced themselves.

UPDATES ON GOALS AND OBJECTIVES

Jean provided a brief update to the TAC members on the revisions to the goals and objectives (see attached handout). Molly summarized the input from SAC, Planning Commission, City Council, and the Main Street Governance Team, noting that the majority of the comments were more detailed in nature and will be incorporated into evaluation criteria, not the goals or objectives. Molly shared that the project team had shared the goals and objectives at community group meetings in March and April, as well.

Kristi Krueger, City of Springfield, asked how the goals would be weighted when the goals compete or conflict with one another for a solution. Molly explained that decision-makers will have to weigh the goals when evaluating potential solutions and narrowing choices. She also noted that above all, selected solutions will have to improve safety.

FUTURE BASELINE CONDITIONS

Kayla Fleskes, DKS Associates, presented on the future baseline conditions, including forecasted traffic volumes and intersection operations. Dorothy Upton, Oregon Department of Transportation (ODOT), noted that there was an incorrect lane configuration on a figure in Technical Memorandum #9 which could potentially impact the intersection operations analysis. Kayla mentioned that she thought the typo was only in the figure, but she would check the analysis to be sure.

Kayla presented future no-build travel time results. The analysis showed that through movements along Main Street increase by 20-30% with normal growth and that the p.m. peak shows a 30% increase in delay in the eastbound direction and a 7% increase in delay in the westbound direction. She also noted that the future delays would impact freight and transit. Kayla pointed to the Main-McVay Transit Study where future transit improvements are being considered.

Kristi asked specifically what improvements are being recommended from the Main-McVay Transit Study with regards to adjusting to future transit demand. Bret Smith, Lane Transit District (LTD), explained that LTD will be looking to reduce transit travel times and address capacity. The Transit Study project team has recommended the Enhanced Corridor transit mode for Main Street which could include more buses or bigger buses to serve the corridor, as well as level boarding and off-board fare collection to reduce dwell times, transit signal priority, queue jumps and stop consolidation.

Kayla discussed the future pedestrian and bicycle network along Main Street, emphasizing that conditions will not significantly change from existing conditions in which the corridor was identified as a high-stress pedestrian and bicyclist environment.

Brian Barnett, City of Springfield, asked about the methodology for travel time calculations through the corridor and if access between signalized intersections was accounted for, noting that the high number of driveways creates “friction” as cars slow down to turn off Main Street. Kayla explained that the methodology used to calculate travel time was limited to signalized intersections and does not fully capture the interactions or delays that occur at side streets and driveways. She mentioned that as work on the project progresses, the project team could quantify the benefits of infrastructure solutions that address mobility issues at side streets or driveways.

Dorothy commented that the impacts of delay east of Bob Straub Parkway are critical to freight movement and need to be considered.

Michael Liebler, City of Springfield, said to make sure to emphasize that the future baseline means no-build, when sharing this information with the public. Bill Johnston, ODOT, noted that the slide could be reworded “without improvements” or something similar to get that point across.

FUTURE SAFETY PERFORMANCE

Lacy Brown, DKS Associates, presented on the future no-build safety performance. She discussed the methodology that was used, noting the difference between the Highway Safety Manual (HSM) predictive method that reports predicted crashes and expected crashes. Lacy noted there is a 19% increase in expected crashes per year along the corridor. She explained the increase in traffic volume increases individual segment and intersection crash risk throughout the corridor by 10-125%.

Lacy discussed how access is a major contributing factor to the safety performance on the corridor, which has significantly more access points per mile than ODOT standards. She noted that the crash risk increases by 4% for every access point above 10 per mile. Some segments of the corridor have a nearly 500% increased crash risk compared to a facility that meets ODOT spacing standards. If the number of access points along Main Street remains the same, the combination of the existing access density and increased traffic volumes will continue to degrade safety on the corridor.

Brian asked why there was so much variability in the increase in expected crashes throughout the corridor, ranging from 10-125%. Lacy explained that it is due to the increase in traffic volumes at locations that are already higher risk locations. Brian noted that the 125% could be misleading, noting that a higher percentage is less important if the increase is based on a small number to begin with. Lacy agreed, noting that she would suggest focusing in on locations where the magnitude of the increase in crashes and the percentage increase in crashes are both high. Brian concurred and suggested making the messaging clearer.

ECONOMIC IMPACT LITERATURE REVIEW

Jean Senechal Biggs presented an overview of the Economic Impact Literature Review. Economists from ECONorthwest are part of the project team. They reviewed available literature to understand impacts of roadway changes such as roundabouts and medians on businesses and property owners.

ECONorthwest sought evidence of the link between street redesign and business performance by focusing on literature that reflected the best practices in research design. Jean noted that well-designed studies that control for a wide range of factors influencing business performance are difficult and expensive to implement, and ECONorthwest learned that there are few studies that attempted to measure the effect of roadway changes on retail sales and business performance. However, the studies they did find suggested that impacts to businesses are likely not significant and may be positive overall.

Jean reviewed the current business mix along Main Street with employment statistics for businesses along the corridor. ECONorthwest analyzed state Quarterly Census of Employment and Wages data for businesses within 500 feet of Main Street and those within ¼ mile of Main Street, noting that those within 500 feet are most directly affected by corridor redesign.

Jean reviewed a list of factors that influence business impacts when redesigning a corridor, noting that changes in accessibility are unique to each business location. She noted how street redesign investments change the performance of a corridor in terms of traffic volumes, travel times and reliability, and dictate how vehicles, cyclists and pedestrians access specific business sites.

Jean then shared ECONorthwest's findings on the impacts of raised medians and roundabouts, as well as general business impacts of access management. A few studies focused specifically on the effects of new raised medians or roundabouts. These studies suggest impacts to businesses will likely not be significant and may be positive overall. Business owner perceptions of roundabouts are generally positive, with an impression of improved traffic flow. Business impressions of raised medians appear to be less positive, and harder to shift. Kristi asked if the review found any studies that included both medians and roundabouts. Matthew Kitchen, ECONorthwest, said he believes none of the studies looked at both together. Michael noted that the Golden Colorado study examined both roundabouts and medians in the same context. Dorothy noted that many roundabouts include medians at the approaches.

Jean presented the findings on general business impacts of corridor redesigns. The broader literature on business impacts of access management and arterial corridor redesigns are dominated by before-and-after studies and surveys of commercial businesses about their perceptions of business performance after access management treatments have been implemented. Jean noted that there was no clear indication that access management, safety projects, and corridor operational investments lead to declines in business performance and that there is some evidence that such investments may improve business performance as a result of addressing underlying traffic congestion and safety deficiencies. Jean added that this does not suggest that no single business in a redesigned corridor could experience business losses due to changes in accessibility.

Jean asked Matthew Kitchen, ECONorthwest, to add any clarifying comments. He noted that the literature shows that property owners will try to increase lease rates if the value of the property increases due to safety or operational improvements.

Courtney Griesel, City of Springfield, noted that the positive impacts to property values counteract a lot of the other negative business impacts, and that the positive impacts are long-term benefits. Courtney suggested thoughtful messaging when discussing site selection since some industries do not select sites based on corridor improvements in the same way that other businesses might.

Jean noted that ECONorthwest will continue to be involved in the project as the team develops and evaluates infrastructure solutions.

Courtney suggested more nuance needs to occur when discussing business impacts. She noted that businesses could feel like the positive impacts do not apply to them. Courtney noted that business and property owners are not seeing the same Return on Investment (ROI) and suggested that business impacts and property owner impacts be pulled out separately.

Courtney also suggested that since the literature review has a specific focus on impacts to businesses and property owners, that the memo be renamed from Economic Impact Literature Review to Business and Property Owner Impact Literature Review. Jean and Molly agreed that this change was appropriate.

Bill shared that more analysis is yet to come, particularly with the travel time impacts to businesses that generate a lot of traffic.

Brian commented that the literature review must be sensitive to what can and cannot be documented so people are informed.

Bill stated that one of his key conclusions about the literature review is that the business and property impacts of access management are difficult to prove because the literature is limited, but the literature does counteract the message that there are “obvious adverse impacts” to roundabouts and medians.

NEXT STEPS

Allison Brown, JLA Public Involvement, asked the TAC to think about comments or key takeaways from the literature review for Fact Sheet #2, which is being developed to help explain some of this information to the community.

The next TAC meetings will be scheduled for Early May, Early June, and Late July.

APPENDIX

- TAC Slide Show (attached)
- Revised Goals and Objectives (attached)



OUR
MAIN
STREET
SPRINGFIELD

MAIN STREET SAFETY PROJECT | 20th Street to 72nd Street

TECHNICAL ADVISORY COMMITTEE MEETING

April 23, 2019



AGENDA

- **Project Goals and Objectives Update**
- **Future Baseline Conditions**
 - Traffic Volumes
 - Intersection Operations
 - Safety

AGENDA

- **Economic Impact Literature Review**

- Mix of Businesses Along Main Street
- Factors that Influence Business Impacts
- Business and Property Impacts of Access Management

GOALS & OBJECTIVES

A **goal** is an overarching principle or a broad statement of intent that informs the range of possible transportation solutions and guides decision-making.

Objectives are specific, measurable, and relevant steps that are taken to meet the goal.

GOALS & OBJECTIVES

Safety – Increase the safety of Main Street for all users

Business Community – Support the viability of existing and future businesses

Mobility – Ensure people and goods travel efficiently and reliably through the corridor

Transportation Choices – Create a multimodal environment that connects people and destinations

Vital Community – Support the vitality of the community and its vision for Main Street

Feasibility – Develop a plan with a clear and achievable approach to implementation

GOALS & OBJECTIVES

Feb/March/April:

- Review & feedback from TAC, SAC, Planning Commission, City Council, Main Street Governance Team
- Share & response from Community Groups

Late April: Revised Goals & Objectives

Late June: Recommend GT endorsement

GOALS & OBJECTIVES

Questions?

FUTURE CONDITIONS

What did we analyze?

- Future (year 2040) traffic volumes
- Intersection operations
- Multimodal conditions
- Safety performance

FUTURE CONDITIONS

How will we use this data?

- Confirming problems that need to be addressed if nothing is done in the future
- Set up baseline for alternatives analysis

FUTURE CONDITIONS

Traffic Operations

- Main Street traffic volumes will increase by 20-30% by 2040
- Four signalized intersections are forecasted to exceed mobility standards
 - Main Street/28th St
 - Main Street/42nd St
 - Main Street/Bob Straub Pkwy
 - Main Street/58th St

FUTURE CONDITIONS

Vehicle Delay and Travel Time

- Eastbound intersection delay is expected to double by 2040
- Intersection approach delay will increase travel times by 30% eastbound
- Westbound travel times will increase by 7% due to intersection delay
- Delays will also impact freight and transit

FUTURE CONDITIONS

Transit on Main Street

- Delays will impact transit operations
- Future improvements being studied by the Main-McVay Transit Study may include:
 - Increased service in response to demand, transit signal priority, queue jumps or stop consolidation

FUTURE CONDITIONS

High-stress Pedestrian Environment

- No significant changes from existing conditions
- Proximity of vehicles
- High roadway speeds
- Narrow sidewalks with no buffer
- Sidewalk obstructions and ADA ramps

FUTURE CONDITIONS

High-stress Cycling Environment

- No significant changes from existing conditions
- Many unsignalized intersection and driveway crossings
- High roadway speeds
- Two lanes of traffic in each direction and center left turn lane
- 5 to 7 ft wide bike lanes, no buffer

FUTURE CONDITIONS

Questions?

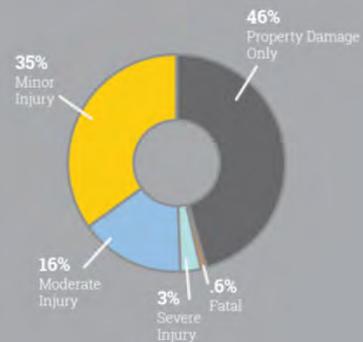
FUTURE CONDITIONS

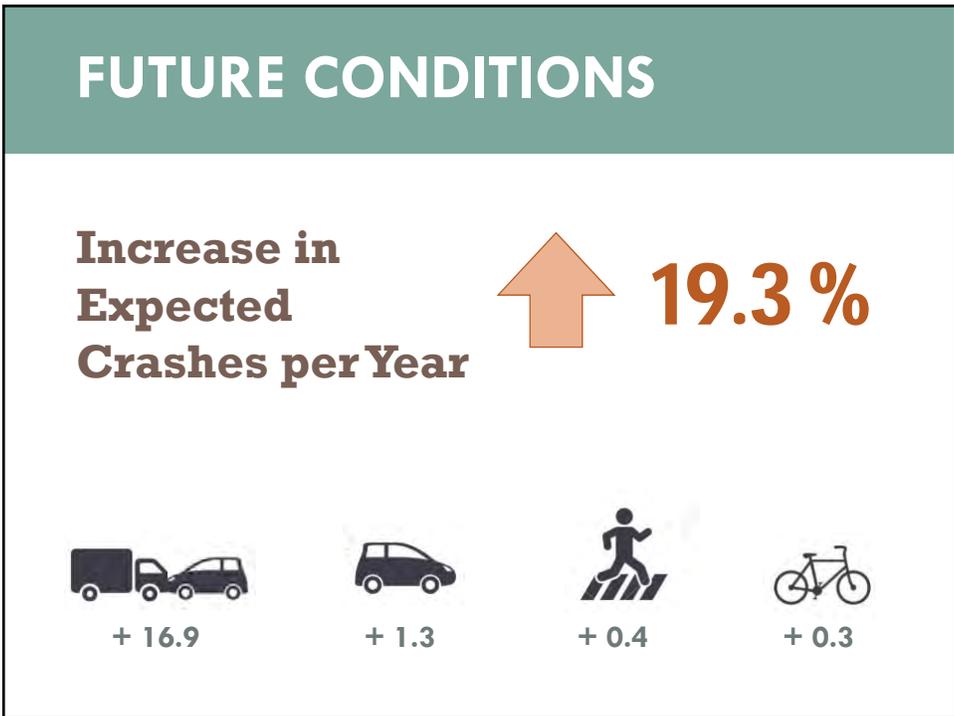
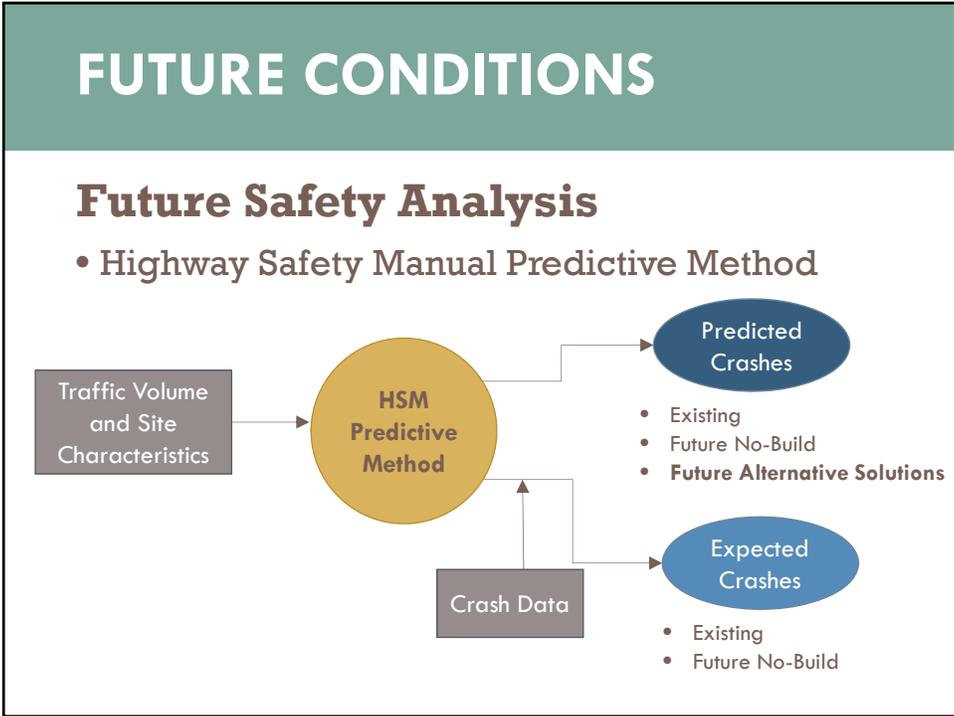
Main Street today:

High crash corridor

- 653 crashes (2012–2016)
- Approximately 1-1/3 crashes per week
- Crashes occur throughout the corridor

BREAKDOWN OF CRASH SEVERITY ON MAIN STREET (2012–2016)





FUTURE CONDITIONS

Increased traffic volumes will further degrade safety along the corridor

- Crashes at individual intersections/segments increase by 10-125%
- Directly related to forecasted increase in volume

FUTURE CONDITIONS

Access density is a major contributing factor

- Average density is 75 access points per mile
- Does not meet ODOT standards (roughly 10 access points per mile)
- Crash risk increases by 4% for every access point above 10 per mile
- Some segments of the corridor have a nearly 500% increased crash risk compared to a facility that meets ODOT standards

FUTURE CONDITIONS

Bottom Line:

If the number of access points along Main Street remains the same, the combination of the existing access density and increased traffic volumes will continue to degrade safety on the corridor.

FUTURE CONDITIONS

Questions?

LITERATURE REVIEW

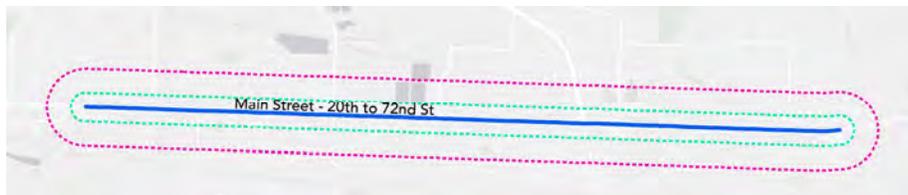
Reviewed studies on the impacts of access management on nearby businesses and property owners

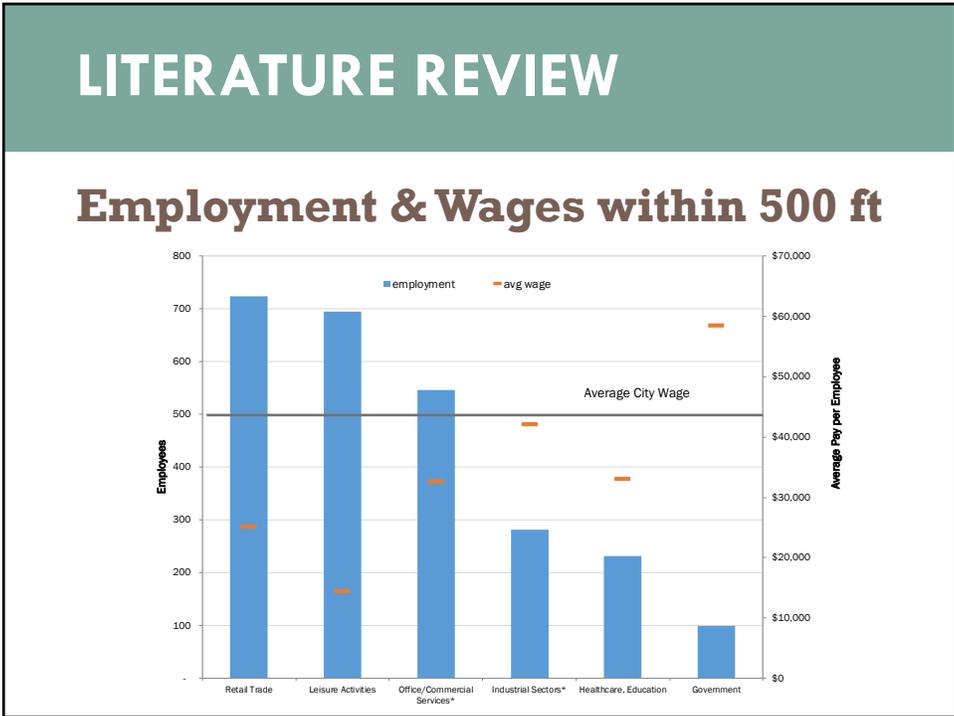
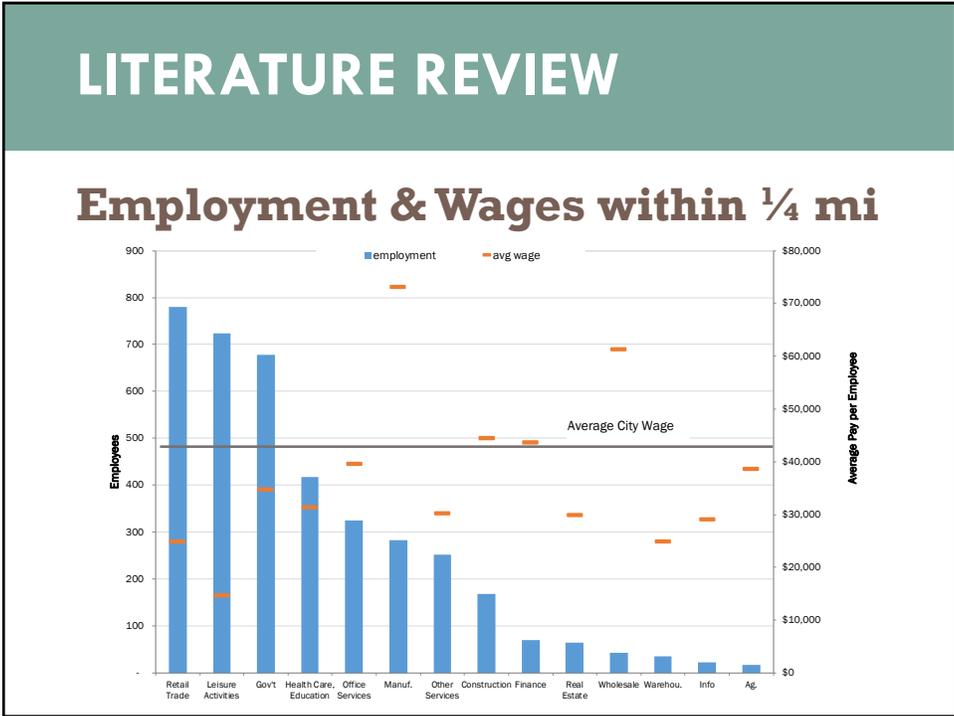
Focus on those studies with the best practice in research

LITERATURE REVIEW

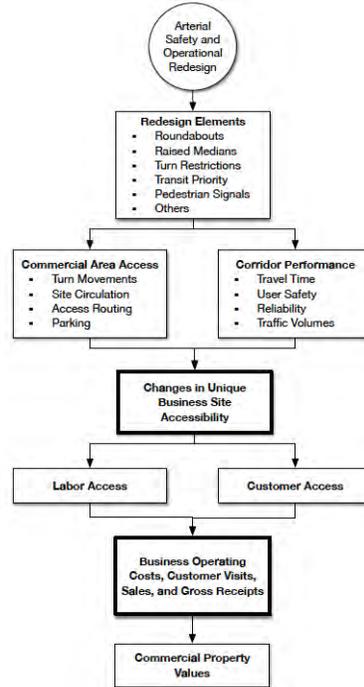
Business Mix Along Main Street

- ¼ -mile buffer: Businesses likely impacted by accessibility from Main Street
- 500-ft buffer: Businesses most directly affected by corridor redesign





Factors that Influence Business Impacts



LITERATURE REVIEW

Impacts of Raised Medians and Roundabouts

- Businesses near these solutions performed (in terms of sales) as well as, or better than, their counterparts in corridors where no investments occurred.
- Business owner perceptions of roundabouts are generally positive
 - Impression of improved traffic flow

LITERATURE REVIEW

Impacts of Raised Medians and Roundabouts

- Business impressions of raised medians appear to be less positive, and harder to shift.
- Even in cases where sales data demonstrates business performance has improved, businesses perceive the raised medians as a potential impediment to customer and delivery access.

LITERATURE REVIEW

General Business Impacts

- No clear indication that access management, safety projects, and corridor operational investments lead to declines in business performance.
- Some evidence that such investments may improve business performance as a result of addressing underlying traffic congestion and safety deficiencies.

LITERATURE REVIEW

General Business Impacts

- Does not suggest that no single business in a redesigned corridor could experience business losses due to changes in accessibility.
- Some evidence that businesses in mid-block locations may be more susceptible to lower customer visitation as a consequence of access restrictions (restricted turn movements, limitations in sight lines, etc.).

LITERATURE REVIEW

General Business Impacts

- Businesses that more heavily rely on pass-by traffic (where the business is not a primary customer trip destination) may be affected by access restrictions should their business become less accessible to pass-by traffic.

LITERATURE REVIEW

General Business Impacts

- Some literature suggests business losses during construction may be the primary negative effect on business performance.
- However, such construction impacts would occur from any corridor re-construction, independent of the final configuration of the project.

LITERATURE REVIEW

General Business Impacts

- Should roadway improvements change business site accessibility and gross sales, those changes should eventually be captured in the value of the underlying property as opposed to the profitability of a specific business.
- So while changes in land values may be observed, those changes may not indicate business gains or losses in terms of sales or profits.

LITERATURE REVIEW

General Business Impacts

- Roadway improvements that change how individual corridors perform, and influence business site accessibility within those corridors, are unlikely to have any influence on the broader regional economic productivity.
- As site values in the affected corridor change, they do so relative to site values elsewhere in the broader urbanized area.

LITERATURE REVIEW

Questions?

NEXT STEPS / NEXT MEETING	
May 7th	TAC Meeting <ul style="list-style-type: none">• Key Principles and Methodology work session
Early June	TAC Meeting <ul style="list-style-type: none">• Key Principles and Methodology Tech Memo
Late July	Preliminary Alternative Solutions

THANK YOU	
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Main Street Safety Project Revised Draft Goals & Objectives – 4-23-19

Safety¹ – Increase the safety of Main Street for all users

Objectives: Identify infrastructure solutions that:

- ✓ Have been demonstrated to result in reducing fatalities and serious injury crashes so that Main Street is not on the statewide high crash list
- ✓ Have been demonstrated to result in reducing the frequency of all crashes so that Main Street is not on the statewide high crash list

Business Community – Support the viability of existing and future businesses

Objectives: Identify infrastructure solutions that:

- ✓ Provide viable ways for customers and deliveries to patronize/serve businesses along Main Street corridor
- ✓ Support the visibility and economic viability of Main Street businesses
- ✓ Support the potential for future businesses to locate on Main Street

Mobility – Ensure people and goods travel efficiently and reliably through the corridor

Objectives: Identify infrastructure solutions that:

- ✓ Maintain or improve the efficiency and reliability of passenger vehicle operations through the corridor
- ✓ Maintain or improve the efficiency and reliability of transit operations through the corridor
- ✓ Maintain or improve emergency response times for police, fire and life safety operations
- ✓ Meet ODOT's freight vehicle mobility standards along Main Street

Transportation Choices – Create a multimodal environment that connects people and destinations

Objectives: Identify infrastructure solutions that:

- ✓ Ensure access to services and destinations along Main Street for all members of the community
- ✓ Create safe, comfortable, efficient, and continuous pedestrian and bicycle travel and access along Main Street
- ✓ Support existing transit service and provide flexibility to accommodate enhanced transit service in the future

Vital Community – Support the vitality of the community and its vision for Main Street

Objectives: Identify infrastructure solutions that:

- ✓ Enhance the built and natural environment and stimulate implementation of the Main Street Vision Plan to make it a vibrant place for those who live, work, shop and travel through the corridor
- ✓ Connect neighborhood residents to Main Street destinations and services; and transportation options to access the broader region

Feasibility – Develop a plan with a clear and achievable approach to implementation

Objectives: Identify infrastructure solutions that:

- ✓ Can be implemented starting within five years and maintained with foreseeable resources
- ✓ Can be implemented incrementally as funding is secured
- ✓ Ensure the cost-effective use of resources

¹The primary purpose of the Main Street Safety Project is to improve safety. For a design solution to advance, it must demonstrate an improvement to safety above all other goals.