

SMITHGROUP

January 11, 2023

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Ms. Amber Miller
DDA Capital Projects & Planning Manager
Ann Arbor Downtown Development Authority
150 South Fifth Avenue
Suite 301
Ann Arbor, Michigan 48104

Mr. Trevor Brydon
Transportation Program Manager
Public Services City of Ann Arbor
301 East Huron Street
PO Box 8647
Ann Arbor, Michigan 48107-8647

Re: Ann Arbor Downtown Area Circulation Study

Dear Ms. Miller and Mr. Brydon,

Ann Arbor's downtown and adjoining areas are an invaluable part of the community's fabric, culture, and economy, with recent years bringing unprecedented levels of change to this part of the City. A range of transportation infrastructure improvements have been implemented, which have improved the safety and comfort of the downtown for all people and travelers. The COVID-19 pandemic has shaken-up long established transportation patterns and informed how public rights-of-way can be better utilized to meet community needs. These changes provide growing opportunities to meet our values and community goals.

SmithGroup and **Wade Trim** have been honored to be a part of this downtown area transformation through our work with the Ann Arbor Downtown Development Authority (DDA) and the City of Ann Arbor on the People Friendly Streets 2 (PFS2) project. We are pleased to provide you with the attached scope of work, which will build on the PFS2 effort and continue to support DDA and City staff in making strategic, value-based decisions to guide transportation improvements moving forward.

A critical challenge in implementing transportation projects is the need to strategically balance the needs of a range of different modes of travel, adjacent business activity, property uses, and public infrastructure demands within a given street corridor, all while simultaneously considering network-wide transportation impacts. A further complication is the need to align and coordinate different sources of infrastructure funding, from active transportation and transit to road resurfacing, stormwater, and underground utilities. Across all of this is the importance of engaging stakeholders and the community to inform priorities, navigate tradeoffs, understand impacts, and align values.

The **Downtown Area Circulation (DAC) Study** will provide a multi-modal transportation operational model, conceptual design studies and cost opinions, best practice reviews, stakeholder engagement, and technical recommendations for advancing a range of projects in a coordinated manner in the downtown area. These efforts include:

- Detailed assessments of potential all ages and abilities bicycle connections - building on the Moving Together Transportation Plan and connecting to the completed downtown bikeway loop - from a feasibility, priority, and project coordination standpoint.
- Investigation into the feasibility and desirability of restoring Fifth and Division to two-way traffic, including consideration of the Broadway Bridge and Division interchange.
- Understanding and aligning desired transit priority street improvements from TheRide's 2045 Long-Range Plan into downtown infrastructure planning efforts.

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- Exploring the feasibility and desirability of implementing future event street projects in key commercial areas, such as shared streets, pedestrian malls, and/or curbless street designs.

The DAC Study will enable these future opportunities to be understood in terms of how they overlap and impact one another and align with capital investments in public infrastructure. This study will provide actionable recommendations for how to best advance feasible and desired projects, while ensuring that public resources are aligned with project needs and public support.

Downtown Ann Arbor is a vibrant, thriving, and highly valued part of the community – and public space and transportation infrastructure is critical to its success. We are excited to deliver this scope, which builds on our prior work, supports you and your partners, and continues building this great legacy in the heart of our community.

Thank you kindly,

A handwritten signature in black ink, appearing to read "Oliver Kiley". The signature is fluid and cursive, with a large initial "O" and a long, sweeping tail.

Oliver Kiley, PLA
Principal | Landscape Architect

ANN ARBOR DOWNTOWN AREA CIRCULATION STUDY SCOPE OF SERVICES

STUDY PURPOSE

The **Downtown Area Circulation (DAC) Study** will build upon recent transportation planning efforts and completed street projects, with the goal to provide actionable, detailed recommendations to guide future downtown transportation and mobility projects in a coordinated manner that best align with community values.

Past transportation planning efforts have established community values and identified prospective transportation projects connecting to and through the Downtown:

- **People Friendly Street 2 Program (PFS2):** Planning work during the PFS2 process identified several potential future projects to explore from a feasibility and design standpoint. These included the possibility of restoring Fifth and Division to two-way traffic, improvements to North Main Street, bicycle connections to the downtown bicycle network, and potential transit priority streets. The DAC Study will build on the PFS2 work and assess the feasibility, benefits/costs, design direction, and stakeholder feedback for these potential projects.
- **Moving Together Toward Vision Zero Comprehensive Transportation Plan (Moving Together Transportation Plan):** This plan identified several priority corridors and intersections in the downtown, along with a network of proposed low-stress bicycle facilities. These opportunities will be similarly assessed for feasibility, benefits/costs, design direction, and stakeholder feedback, with recommendations provided for how potential projects should be advanced.
- **TheRide 2045 Long-Range Plan:** This plan identified system-wide strategies and opportunities for continued improvement to TheRide transit system. This included consideration of key priority transit service corridors into the downtown. The DAC Study will help identify potential infrastructure changes that would support TheRide's long-term goals and ensure these can be feasibly aligned with other transportation needs into and through the downtown.

Recently built projects have made significant, transformative changes to the downtown's transportation infrastructure. From the restoration of First and Ashley Street to two-way traffic and the South Main Street "road diet" to the completion of a protected bicycle infrastructure loop (William, Division, First, Catherine/Miller Streets), changes have focused on improving safety and comfort for all users, expanding mobility choices, and increasing the flexibility for how public rights-of-ways operate. These projects have established new transportation patterns and practices in downtown.

In consideration of recent plans and built work, the DAC Study will comprehensively assess prospective projects for all modes of travel (walking, cycling, transit, and automotive), assess the feasibility, operations, and design direction at a more detailed level, ensure value-alignment, and engage the community to understand preferences and set priorities based on values.

TASK OVERVIEW

The DAC Study is organized under the major tasks and areas of work described below. These tasks and associated deliverables are described in the **Detailed Scope of Work** section.

- **TASK 1. Project Coordination & Engagement:** This task will provide on-going coordination and alignment between the Ann Arbor Downtown Development Authority (DDA), City, and partner organizations over the course of the planning process. This includes engagement with a **technical**

advisory committee and support for overall community and focused stakeholder engagement and communications.

Deliverable: Engagement and communication materials and facilitation. Summaries of key engagement activities and decision-making record.

- **TASK 2. Multi-Modal Operational Model:** This task will utilize recently collected and to-be-procured transportation data to build a downtown multi-modal traffic model for major portions of the downtown area. This model will reflect recent built projects and operational policies and will be used to support decision-making and feasibility assessments in other project tasks (below). Includes an assessment of signalization practices and will provide location-specific recommendations for safety and operational improvements (e.g., use of accessible pedestrian signals, bicycle signals, left-turn phasing – see detailed scope for more). Provides an overarching assessment of project alignment, compatibility, prioritization, and community input.
Deliverable: Multi-modal operational model for the downtown area and technical memo containing downtown street intersection control recommendations.
- **TASK 3. Active Transportation System Plan & Project Design:** This task will examine the feasibility of several previously identified connectors into and through the downtown, develop conceptual alignments and construction cost estimates, and engage relevant stakeholders. A system-wide active transportation plan (map graphic) for the downtown will be developed, with broad recommendations to support bicycle system wayfinding. Multi-modal impacts will be assessed using the operational model (Task 2) and focused community engagement efforts.
Deliverable: Revised system plan (map graphic) and level of traffic stress analysis, feasibility assessments, and conceptual alignments, cross-sections, and cost opinions for up to six (6) bicycle infrastructure projects.
- **TASK 4. Transit Plan Alignment & Transit Priority Streets:** This task will engage TheRide staff and partners in assessing potential streets for transit priority, building off the 2045 Long-Range Plan. The task will identify the types of improvements that may be needed, their associated feasibility, and align priority improvements with other transportation infrastructure objectives.
Deliverable: Technical memo providing recommended improvements and infrastructure needs to support transit priority street in the downtown area. Includes focused recommendations for up to six (6) candidate corridors.
- **TASK 5. Fifth & Division Two-Way Restoration Feasibility Study:** This task will utilize the multi-modal operational model (Task 2) to explore potential restoration of two-way traffic. This includes conceptual layout/cross-sections of the corridor, intersection treatments, and more detailed feasibility and design work at the Broadway Bridge “interchange” area. Includes focused community/stakeholder engagement efforts.
Deliverable: Technical memo describing the feasibility, benefits/costs, value-alignment, design factors, cost considerations, and community feedback for restoring Fifth and Division to two-way traffic operations.
- **TASK 6. Event Feasibility Studies:** This task will assess the feasibility, design implications, and transportation operational impacts (building on Task 2) for up to four (4) special event street (e.g., pedestrian mall, shared street, or curbside street) concepts. This will include focused stakeholder engagement around each prospective project.
Deliverable: Conceptual designs/layout for prospective projects and technical memos documenting the feasibility, value-alignment, benefits/costs, and stakeholder feedback.

DETAILED SCOPE OF WORK

The anticipated project duration, over the six (6) areas of work, is anticipated to be ten (10) months.

This scope of work will refer to the **Consultant Team** and the **Project Team**. The consultant team consists of SmithGroup (prime consultant) and Wade Trim (sub-consultant). The project team consists of the consultant team in addition to key staff from the DDA and City assigned to this project.

TASK 1. PROJECT COORDINATION & ENGAGEMENT

PURPOSE: This task covers critical coordination meetings among the project team members and key stakeholders with a role and responsibility in the operations of downtown streets, along with overall support for community and stakeholder engagement.

1.1 Project Team & Kick-off

- Establish a cohesive project team with key decision-makers for the process. This will include City transportation staff, DDA staff, TheRide staff, and the consultant team members.
- Ten (10) monthly 2-hour work session meetings, anticipated to be in-person to the extent feasible.
- Ten (10) monthly 1-hour coordination meetings, anticipated to be virtual, on the alternating bi-weeks.
- Meetings will be used to validate, align, and confirm operating values and goals for the decision-making process, review draft material, solicit feedback, coordinate engagement, and refine deliverables.
- **Establish Basis of Study:** Consultant team will summarize into a presentation document recent outcomes of transportation planning and construction efforts relative to the Moving Together Transportation Plan and PFS2 outcomes and as a basis for how this project will build upon that work.

DELIVERABLES:

Meeting materials, tracking assignments and action items in shared task planning tool, coordination of schedule.

1.2 Technical Advisory Committee

- Formation of a technical advisory committee (TAC) consisting of key staff from the City Street Design Team, TheRide, Fire and Police, University of Michigan (U-M), Active Transportation advocates, and/or Washtenaw Area Transportation Study (WATS). DDA and City staff will be responsible for assembling this TAC, with the consultant team providing engagement and facilitation support.
- Three (3) while-group TAC meetings over the course of the project at key points in the process (e.g., value validation, reviewing concepts/options, and reviewing recommendations).
- Up to 12 sub-group meetings focused on specific topics/issues as needing during the course of the project. Meetings will be on an as-needed basis depending on the topic and specific task item being discussed.

DELIVERABLES:

Meeting notes and meeting notes/summaries.

1.3 Communication & Overall Engagement

- The project team will discuss, and the consultant team will subsequently draft, a community/stakeholder engagement plan describing the key anticipated decision-points across project tasks and what level of community input is needed for each. Stakeholder engagement is anticipated to be more necessary where input on shaping specific designs or prioritizing improvements may be called for. The City's public engagement toolkit can be utilized, with City staff support, in developing this plan and clarifying the right level of engagement.
- The project team will help develop overall community messaging and communication around this project and its intended outcomes. The consultant team will provide up to six (6) two-page equivalent web- and print-based "fact sheets" covering critical topics. These will be identified during the process.
- Consultant team will provide concise website content (images, brief narratives, etc.) for use on the City- and DDA- webpage over the course of the project.
- Consultant team will attend and present (if needed) at up to two (2) Transportation Commission meetings over the course of the project.

DELIVERABLES:

Engagement materials and collateral, summaries of public engagement activities.

TASK 2. MULTI-MODAL OPERATIONAL MODEL

PURPOSE: This task will build a multi-modal traffic operational model for portions of the downtown and central-city area to better understand current transportation patterns and provide guidance on several scenarios relative to potential street and intersection modifications, including:

- Active transportation projects and future low stress bicycle facilities (see Task 3)
- Transit priority street improvements (See Task 4)
- Restoring two-way traffic on Fifth and Division (See Task 5)
- Shared street and pedestrian malls (See Task 6)
- Intersection control changes, such as (a) the downtown No Turn On Red policy; (b) signal warrant analysis and conversions to stop-controlled intersection; (c) bicycle and pedestrian signal safety improvements; and, (d) vehicle signal safety improvements (See Tasks 2.2 - 2.5)

2.1 Overarching Operational Model

The consultant team will develop a Synchro model for the existing conditions including AM and PM peak periods to be utilized in the capacity and geometric analysis. Specific tasks include:

- Obtain traffic counts and/or conduct turning movement counts at major intersections and midblock crossings to include pedestrians, cyclists, vehicles, and heavy vehicles (see maps further below)
- Request signal timing permits from the City
- Field review and identify deficiencies
- Create existing condition Synchro models for AM and PM peak periods, volume balance, calibrate and validate models, and simulate results using SimTraffic
- Develop warrant analyses for intersections that may need review of appropriate traffic control
- Calculate vehicle and pedestrian clearance intervals
- Create proposed Synchro models based on the recommendations for AM and PM peak periods for potential future conditions (as informed by Tasks 2, 3, 4, and 5)

DELIVERABLES:

Multi-modal operational traffic model.

Please see the appendix of this scope for additional details on count locations and availability of existing traffic data from recent projects.

2.2 Intersection Controls: Warrant Studies for Signal Removal (MDOT Warrant Spreadsheets)

- Traffic signal warrant analysis will be conducted by the consultant team at selected intersections in accordance with the Michigan Manual on Uniform Traffic Control Devices, which includes evaluation of pedestrian volume warrants.
- This scope will include allowances for up to five (5) intersection warrant analyses, based on locations that may benefit operationally in removing signalization and operating as an all-way stop. Twelve (12) hour counts will be taken to evaluate the signal warrants. Potential intersections may include:
 - Liberty Street and 4th Avenue
 - Liberty Street and 5th Avenue
 - Liberty Street and Division Street
 - Liberty Street and Thompson Street
 - Washington StreetOther potential intersections identified during the process can be assessed on an as-needed basis.

DELIVERABLES:

Technical memo describing the results of the warrant analysis and recommendations for where signal removal/modifications should be implemented.

2.3 Downtown “No Turn On Red” Policy

A No Turn on Red policy for downtown intersections has been advanced in the City. This task will support implementation of this policy to improve pedestrian safety as part of the operational model.

- At intersections impacted by the policy, the No Turn on Red parameter will be implemented at study intersections in the traffic models to evaluate delay and queuing impacts on traffic to restricting turns.

DELIVERABLES:

Integration of No Turn on Red controls into the operational model (Task 2.1).

2.4 Bicycle & Pedestrian Signal Improvements

This task will assess a range of opportunities for improving the safety of traffic operations through modification to bicycle and pedestrian signals. The consultant team will review and provide a consideration of best practices that can be used across the topics below, in consideration of their application in the downtown area:

- **Bicycle signals:** Bicycle operations will be evaluated and implemented where appropriate. These will include the Bicycle Use Ped Signal approach, review of policies and established bicycle operations guidance.
- **Exclusive pedestrian/bicycle phasing:** Investigate the best suited intersections, for example those with light vehicle turning movement volumes, and short crossing distances, etc. A list has already been developed by the City of potential locations. Potential locations will be evaluated at a high level based on pedestrian volumes and crash data, and additional locations may be recommended based on criteria to be coordinated with the project team.

- **Accessible Pedestrian signal (APS) use:** Evaluate current APS locations and preferred practices and methods for use of APS signals in the downtown environment and how that relates to existing pedestrian signal practices, in an effort to reinforce the implementation effort.
- **Pedestrian overlaps with LPIs:** Where applicable, the overlap portion of the pedestrian phase (buffer interval) will be analyzed with the LPI to make more efficient use of existing cycle length or reduce cycle length. According to Federal Highway Administration (FHWA) research, this has been found to improve pedestrian progression.

DELIVERABLES:

Technical memo(s) documenting best practices for treatments and recommended application within the downtown area as part of signal operational updates and/or future capital projects.

2.5 Vehicle Signal Safety Improvements

In this task, the consultant team (with input from DDA and City staff) will examine intersections, based on the traffic operational model, and assess whether signal changes may be warranted to further improve multi-modal safety and comfort.

- **Shorter cycle lengths:** Wherever feasible, the study will review the impacts to pedestrian and vehicle delays in shortening the signal cycles. In general, this method has been found to reduce pedestrian delay, improve pedestrian compliance, and reduce vehicle speeding, etc. The criteria will consider elements of the downtown network, as well as pedestrians, cyclists, and transit user impacts for cycle length selection. Any special triggers requiring lengthening the cycle length (such as transit signal priority) will also be considered.
- **Protected only left-turns or lagging lefts:** This scenario will be evaluated as it has been found to reduce pedestrian/bicycle conflicts with vehicles, and the suitability will focus on intersections with existing left-turn phasing.
- **Leading through intervals at intersections with turn lanes:** This method allows for a longer protected interval for pedestrians/cyclists than might be possible with LPIs.

DELIVERABLES:

Technical memo(s) documenting best practices for treatments and recommended application within the downtown area as part of signal operational updates and/or future capital projects.

2.6 Overarching Value Assessment, Priorities, & Community Alignment

This task will enable the project team to determine if any of the proposed future projects (Tasks 3 through 6) or operational changes (Tasks 2.2 through 2.5) are infeasible or in conflict with one another. Only those project opportunities that are feasible will be refined for further discussion and consideration. Opportunities that pose conflicts with other opportunities will be revised and prioritized (relative to those other opportunities) based on an assessment of values and community/stakeholder engagement feedback.

- **Update Values Matrix:** The consultant team will update a values matrix, describing how each assessed future project aligns with established values or can be modified to meet those values.
- **Area-Wide Community Engagement:** If any future opportunities are determined to be in conflict, the consultant team will engage the public with DDA and City staff to better understand specific community priorities, in consideration of values, to inform recommended next steps and which projects or project elements should be advanced towards implementation.

DELIVERABLES:

Presentation-format document describing value assessments, community priority findings and engagement summaries, and overarching recommendations for project coordination.

TASK 3. ACTIVE TRANSPORTATION SYSTEM PLAN & PROJECT DESIGN

PURPOSE: Provide a detailed update to the active transportation recommendations from the Moving Together Transportation Plan adopted in 2021 and the 2022 Downtown Street Framework Plan (from the Street Design Manual) into an aligned active transportation framework. This task will also provide concept-level alignments, layout plans, and cost opinions for key connector projects.

3.1 Revised “Level of Traffic Stress/Comfort”

The consultant team will provide a revised Level of Traffic Stress (LTS) map for the downtown area and determine where gaps in all ages and abilities (low stress) network remain given recent project work. This analysis will fine tune the LTS to downtown area unique conditions. This analysis will help navigate design trade-offs that will need to be made to accommodate low stress bicycle infrastructure and alignment with other capital project needs and opportunities.

DELIVERABLES:

Updated GIS map layer depicting the LTS analysis and a detailed workflow which can be utilized to update the layer in the future.

3.2 Bicycle Connector Concept Studies

Up to six (6) specific bicycle connector projects will be assessed by the consultant team to determine potential alignments, layouts, feasibility, and as a basis for soliciting stakeholder feedback. These projects are anticipated to include a combination of the following:

- **First Street Bikeway to Berm Tunnel Connector:** Potential connection along Kingsley Condo’s along the Treeline Trail route, through 721 N. Main, and to/through Wheeler Park to connect to the Berm Tunnel.
- **Broadway Bridge & Division Connector:** This would consider connections from the Division Street Bikeways to the Broadway Bridge and to the Berm Tunnel. Would evaluate extension of the Division Street separated bikeway as a one-way versus two-facility. This effort will align closely with Task 5.3 in consideration of the “Broadway Interchange” area.
- **Fifth Avenue & Berm Tunnel Connector:** This potential route would consider bicycle access from Fifth Avenue to the Berm Tunnel and would be coordinated in consideration of Task 5 (Fifth and Division two-way restoration study).
- **Catherine/Ann Street Connector:** Evaluate extension of the Miller/Catherine Bikeway east to the U-M medical campus on Catherine and/or Ann Street.
- **Miller Street to West Park Connector:** Assess the continuation of the Miller Street separated bikeway to Chapin Street and to the shared use trails in West Park. Considers an extension of a separated bikeway on Miller west to Newport Road.
- **Washington Street Bike Boulevard:** This item will explore potential bicycle boulevard treatments along Washington Street from the residential area from the west and into the downtown.
- **South Main Street:** Explore feasibility of improvements as a lower stress bicycle facility.

These concept studies will not be based on a detailed engineering survey, but will utilize available ariel imagery, GIS property and roadway information, and field site visits appropriate to a concept-level study.

DELIVERABLES:

For each specific project listed above, a conceptual layout will be developed utilizing a combination of GIS data (right-of-way boundaries and curb line data), aerial imagery, and site visits. These concept

plans will depict recommended facilities, intersection controls, and high-level conceptual cost opinions. These concepts will be used to support decision making and provide a clear recommendation on right-of-way space trade-offs that may be needed for implementation.

3.3 Quick-Build/Vision Zero Alignment

In this task, the project team will review the City's on-going Vision Zero implementation work and the Moving Together Transportation Plan projects to identify potential areas of focus for further improvement. This will include identifying additional locations where "paint and post" projects may be utilized to achieve quick physical changes – such as adding vertical separation to existing buffered or conventional lanes, painted bump outs, and other treatments.

DELIVERABLES:

Technical memo documenting recommended locations and potential treatment measures in alignment with the Vision Zero Implementation effort.

3.4 Plan Alignment & Recommendations

The consultant team will prepare a unified set of recommendations and priorities for advancing bicycle infrastructure and other safety and operational improvements that can be used to update the Moving Together Transportation Plan and the Downtown Street Design Manual Framework plan accordingly. These recommendations will consider right-of-way impacts of any desired transit street improvements (see Task 4 below). Routes and street typologies will be updated based on feasibility, value-alignment, and community engagement findings.

DELIVERABLES:

Technical memo and revised plan/map graphics of the downtown area bicycle infrastructure network that aligns with values and priorities (Task 2.6) and can be used to update the Moving Together Transportation Plan and the Downtown Street Design Manual Framework plan.

3.5 Stakeholder & Community Engagement for Active Transportation

This task provides capacity for the consultant team to engage stakeholders on a project-by-project (Task 3.2) basis to identify and respond to issues and concerns affecting project design and implementation, to keep nearby residents and businesses informed of the design direction, and to solicit input as appropriate. Anticipated to inform needed plan refinements (Task 3.4) and overall bicycle connectivity priorities into and within the downtown. Methods to be identified in Task 1.3.

DELIVERABLES:

Engagement materials and summaries of engagement activities and results.

3.6 Bicycle Wayfinding Recommendations

The consultant team will review best practices and case studies for downtown bicycle wayfinding systems and provide high-level recommendations for what type of wayfinding systems may be beneficial for Ann Arbor. This will include a consideration of how such systems might be adapted to local conditions. This may include identification of key destinations, districts, and corridors where wayfinding infrastructure should be aligned.

DELIVERABLES:

Technical memo documenting best practices and consideration for implementation into the downtown area.

TASK 4. TRANSIT PLAN ALIGNMENT & TRANSIT PRIORITY STREETS

PURPOSE: TheRide completed their 2045 Transit Master Plan in 2022. This task will engage TheRide staff in understanding potential right-of-way impacts of future transit projects and how these impacts will be balanced alongside other demands and needs within the right-of-way. The overall aim is to align plans and established a preferred direction for resolving potential conflicts and right-of-way limitations. Specific tasks include:

4.1 Transit Priority Street Assessments

- The project team will engage with TheRide and U-M staff to understand future transit needs/opportunities and refine corridors and concepts for how enhanced transit service might be accommodated into/through the central-city area.
- The project team will assess the impacts to multi-modal transportation operations utilizing the operational model (Task 2.1) for where transit priority improvements may call for modifications to the roadway allocation or intersection operations.
- The consultant team will facilitate a half-day work session with the project team and TheRide staff to review 2025 Long-Range Plan recommendations and discuss implementation approaches to be considered in the downtown area.

DELIVERABLES:

Technical memo and supporting graphics identifying potential transit priority streets, implementation considerations, and outcomes from the work session.

4.2 Specific Transit Corridor Investigations

- The consultant team will evaluate the need for transit signal prioritization and transit-only lanes along up to five (5) corridors. Candidate corridors may include:
 - Fourth Avenue
 - Fifth/Division/Broadway
 - Huron Street
 - Observatory/Huron/Washtenaw Avenue
 - Miller
 - Packard
 - State
- This task will provide recommendations for what priority specific priority transit improvements may be warranted and should be accounted for in capital project scopes. Where desired transit improvements are concurrent with low stress bicycle facility improvements, methods of resolving conflicts can be proposed.

DELIVERABLES:

Conceptual drawings/graphics/plans showing type and extent of recommended transit improvements and operational considerations.

TASK 5. FIFTH & DIVISION TWO-WAY RESTORATION FEASIBILITY STUDY

PURPOSE: Fifth Avenue between Beakes Street and Madison Street, and Division Street between Detroit Street/Carey Street and Hill Street, is a one-way street pair and a candidate for two-way restoration. This task will evaluate the feasibility, benefits, and costs association with restoring Fifth and Division back to a two-way traffic pattern. Areas of work include:

5.1 Operational and Safety Assessment of Two-Way Restoration

The consultant team will assess the impacts of changing the travel direction from one-way to two-way streets on Fifth Avenue and Division from a safety and traffic operational standpoint, utilizing the overall Central City Operational Model (Task 2) as a baseline.

- With the current emphasis on the Complete Streets Policy and Vision Zero objectives, where the street is designed for all users, vehicles, pedestrians, cyclists, etc., one-way streets have been found to increase driving time and distance, leading to increasing vehicle speeds, and forcing motorists and cyclists to use other routes to achieve their travel desires.
- Utilizing traffic modeling and origin-destination estimating, options for converting traffic to a uniform flow will be assessed. Directional traffic flow of the one- and two-way mixed roadway system will be analyzed, and criteria will be evaluated for the one-way streets and the roadway network will be modeled for traffic operations analysis.

DELIVERABLES:

Technical memo (traffic report) assessing the feasibility, operations, and safety impacts of two-way restoration along the corridor.

5.2 Conceptual Design

The consultant team will prepare typical cross-sections and conceptual intersection layouts that describe potential changes needed to the roadway to support restoration of two-way traffic operations. This evaluation will also include evaluating the impacts and potential design alternatives to operations at the intersection of Main/Kingsley/Beakes Streets.

DELIVERABLES:

Typical cross-section, conceptual plans identifying potential geometric changes to the corridor (intersection changes, lane adjustments, etc.) needed for the two-way restoration.

5.3 Broadway Interchange Focus Area

The consultant team will assess the reconfiguration of the complex intersection(s) of Beakes Street, Broadway Street, Detroit Street, Division Street, and Carey Street to facilitate the restoration of two-way traffic to Fifth Avenue and Division Street, building off prior studies where applicable. This is anticipated to include a consideration of geometric layouts and design alternatives for this interchange, given the multiple converging roadways and elevation complexities. This will include a detailed multi-modal operational study for the interchange.

DELIVERABLES:

Conceptual layout plan identifying the limits and scope of impact for reconfiguring the interchange, along with a technical findings memo of operational considerations.

5.4 Stakeholder & Community Engagement for Fifth & Division Study

If two-way restoration appears feasible from an operational standpoint, this task provides capacity for the consultant team to engage identified, relevant stakeholders (residents, businesses, travelers) in understanding issues and concerns and soliciting feedback on design approaches and how localized needs, access, and service can be met through the conceptual design. Specifics methods of engagement to be identified in Task 1.3.

DELIVERABLES:

Engagement materials (graphics, plans, images) and summaries of engagement activities and resulting feedback/input.

TASK 6. EVENT STREET FEASIBILITY STUDIES

PURPOSE: A number of streets have been identified as potential candidates for conversion to curbless/festival streets, shared-streets, or full pedestrian malls (collectively referred to as “Event Streets”). The PFS2 process identified possible streets, and recommended not moving these ideas forward, however a comprehensive study was not undertaken at that time. This task will assess candidate event streets for their feasibility of being converted into one of these special streets types, potential design direction, and evaluate associated benefits/costs, operational, routing implications, and stakeholder receptivity.

6.1 Event Street Concepts

The project team will identify different event street candidates, and the consultant team will evaluate different approaches for implementing these events street candidates, including a consideration of level of reconstruction that may be needed, programmatic needs/opportunities, and cost considerations. Up to four (4) candidate streets will be explored during this task. Candidates may include:

- Destination Commercial Streets such as Washington, Liberty, South University, and Main Street
- Institutional/Campus Streets such as North University

The consultant team will provide a review of applicable case studies and best practices relative to implementing event streets to help inform recommendations for moving forward.

DELIVERABLES:

Conceptual drawings and/or cross-sections of potential event street design opportunities. Narrative text describing best practices and recommendations for how to implement and/or program the event streets will be provided.

6.2 Event Street Operational Analysis

The consult team will use the multi-modal operational model developed in Task 2.1 to evaluate different concepts for converting streets into event streets, considering impacts to closing streets permanently or partially to vehicle traffic and the implications for re-routing traffic to adjacent roadways.

DELIVERABLES:

Technical memo describing the transportation and operational impacts of potential event streets and the feasibility of and associated recommendations for whether to advance implementation of a specific event street.

6.3 Stakeholder & Community Engagement for Special Streets

This task provides capacity for the consultant team to engage stakeholders to determine issues and concerns relative to implementing feasible event streets - with a focus on proximate business and residents. The intent is to share design and feasibility considerations, understand issues and opportunities, and provide feedback on potential event street design concepts. Specific methods of engagement to be identified in Task 1.3.

DELIVERABLES:

Engagement materials (graphics, plans, images) and summaries of engagement activities and resulting feedback/input.

APPENDIX MULTIMODAL TRANSPORTATION COUNT LOCATIONS

To develop the transportation models, traffic counts will be used. Over the past few years, many traffic counts have already been conducted for various evaluations throughout the downtown area. Shown as red points in Figure 1 below are the counts taken between 2017 and 2022 for peak periods. Recognizing that some counts may be outdated due to global changes in traffic patterns over the COVID pandemic, only more recent counts will be used for the purposes of this study. Shown in Figure 2 are counts taken within the past two years.

Figure 1. Intersection Turning Movement Count Locations 2017-2022 (Wade Trim/Quality Counts)

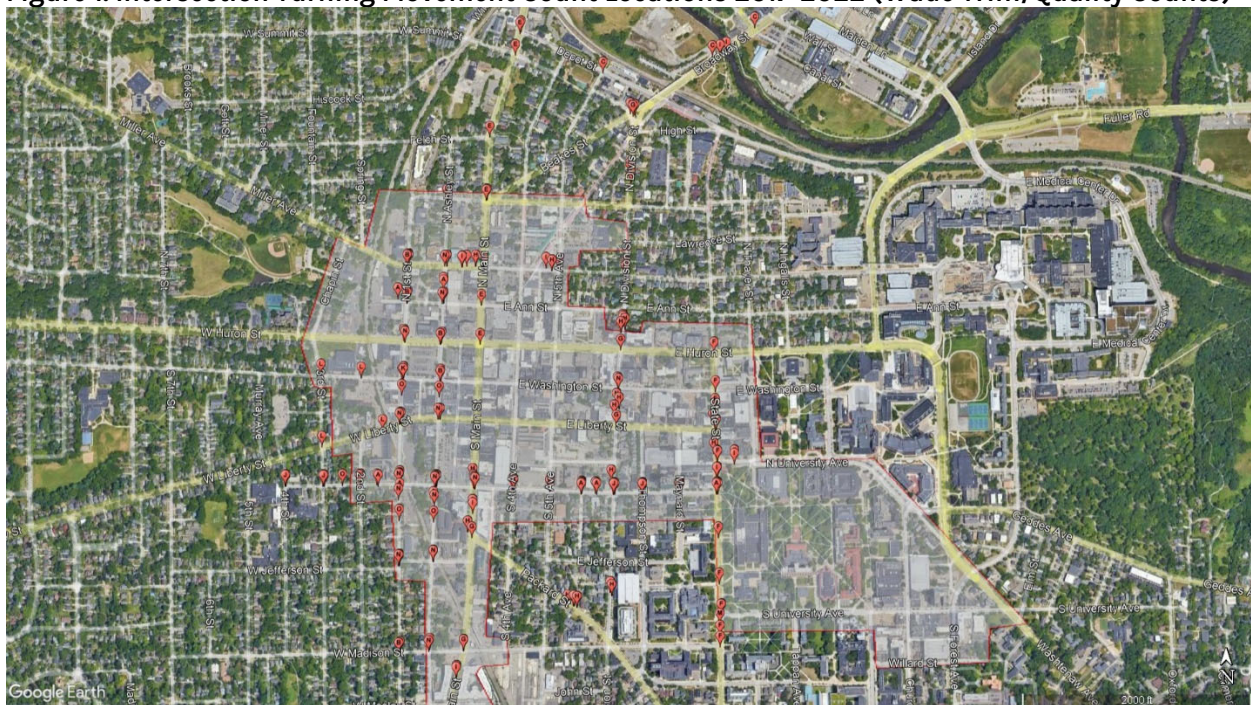
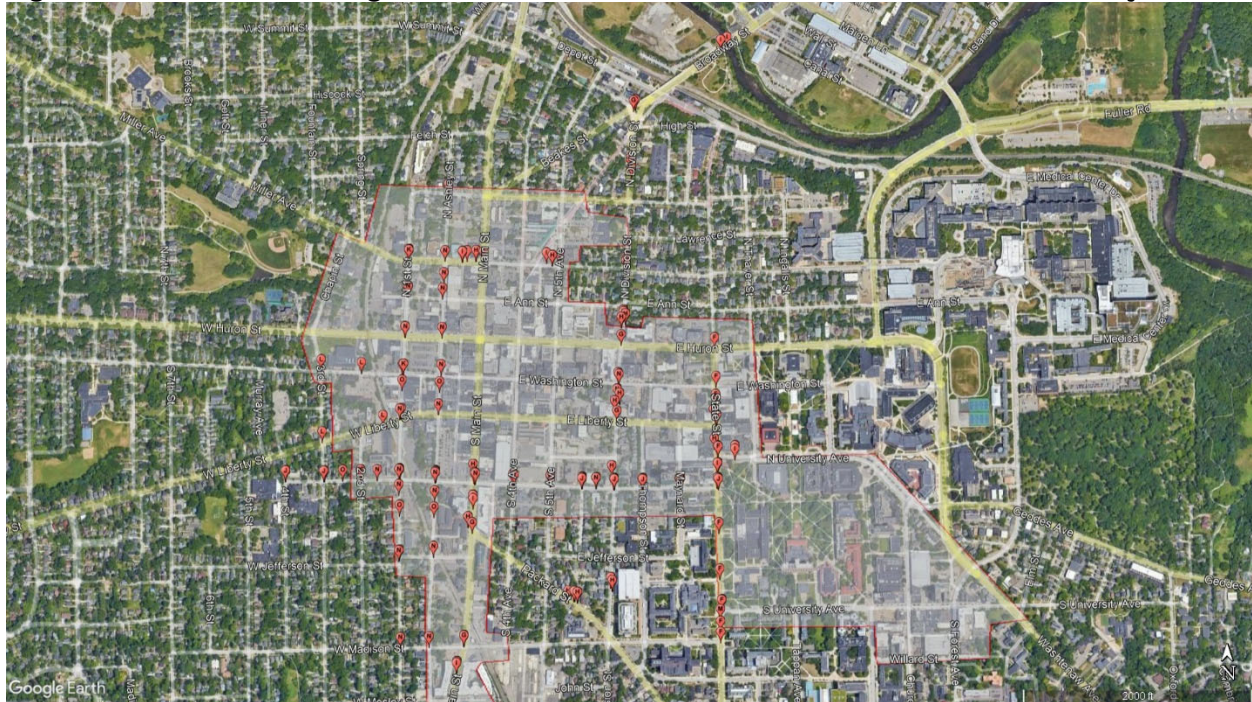
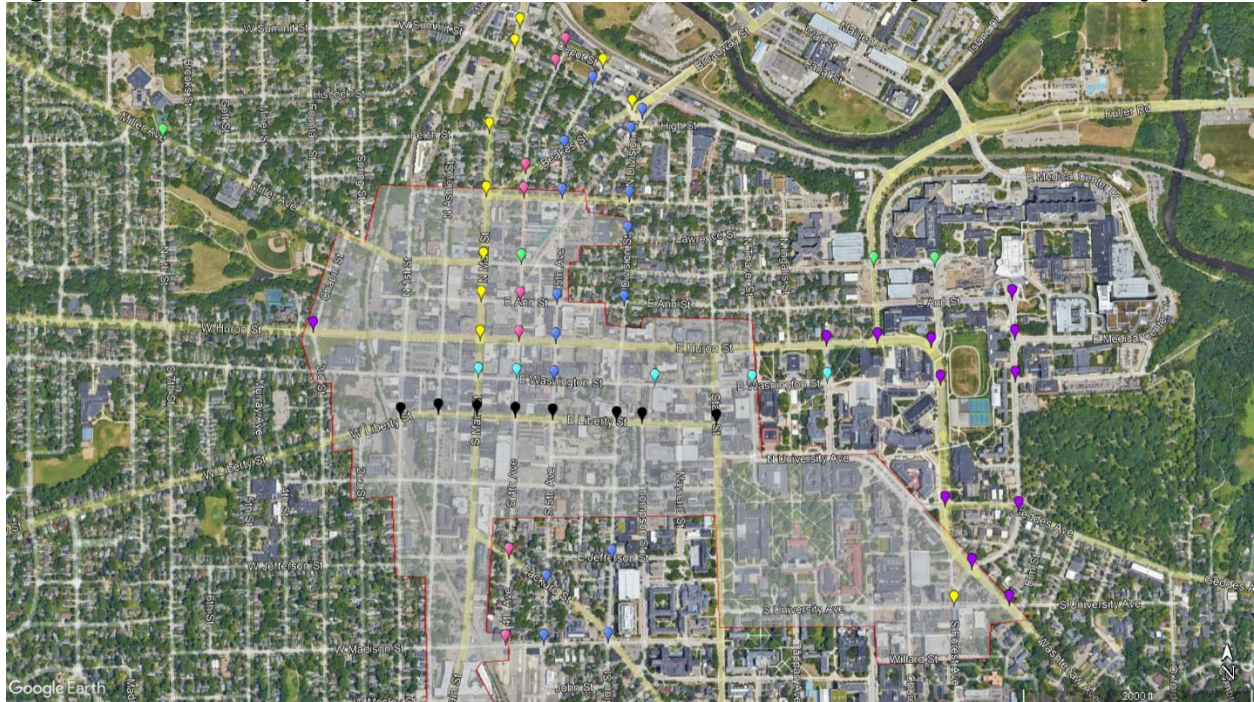


Figure 2. Intersection Turning Movement Count Locations 2020-2022 (Wade Trim/Quality Counts)



To support the study and for use in determining post-pandemic traffic patterns, additional counts will be taken at key study intersections, as shown in Figure 3. In addition, the same locations are shown in the Google Map link below as well as listed on the following pages. The subconsultant, Quality Counts, will collect traffic counts at necessary locations. Peak period manual turning movement counts will be collected on a typical weekday during the school year, and will include pedestrians, bicycles, passenger vehicles, and trucks for the time periods of 7:00 a.m. to 9:00 a.m. and 2:00 p.m. to 6:00 p.m.

Figure 3. Additional Proposed Count Locations for Ann Arbor Central City Circulation Study



***Google Map for Proposed Count Locations:**

https://www.google.com/maps/d/viewer?mid=1gZ6LRZSbVz_j6pezXcBCm8TS-AudQ0&ll=42.27781662294454%2C-83.74761890206909&z=15

Fifth Ave & Division Ave Study

17 intersections (two locations included in Liberty St list)

- Peak hours 7:00-9:00 a.m. & 2:00-6:00 p.m.
 - S. Division & E. Hoover Ave
 - S. Division & E. Madison/Packard
 - S. Division & E. Jefferson
 - N. Division & E. Ann St
 - N. Division & Lawrence St
 - N. Division & E. Kingsley St
 - N. Division & Detroit St/Carey St
 - S. 5th Ave & E. Madison St
 - S. 5th Ave & Packard St
 - S. 5th Ave & E. Liberty
 - S. 5th Ave & E. Washington St
 - N./S. 5th Ave & E. Huron St
 - N. 5th Ave & Ann St
 - N. 5th Ave & Beakes St
 - N. 5th Ave & Kingsley St
 - N. 5th Ave & Summit St
 - N. Division Ave & Carey St

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Miller Ave – Catherine St

5 intersections

- Peak hours 7:00-9:00 a.m. & 2:00-6:00 p.m.
 - Catherine St & Zina Pitcher Pl
 - Catherine St & N. 4th Ave
 - Catherine St & Glen Ave
 - Miller Ave & 7th St
 - Miller Ave & Newport Rd

Washington St

5 intersections

- Peak hours 7:00-9:00 a.m. & 2:00-6:00 p.m.
 - E. Washington St & Main St
 - E. Washington St & S. 4th Ave
 - E. Washington St & Ped Xing E of S. Division St
 - E. Washington St & S. Thayer St
 - E. Washington St & Fletcher St

Fourth Ave

9 intersections (one included in Liberty St list)

- Peak hours 7:00-9:00 a.m. & 2:00-6:00 p.m.
 - S. 4th Ave & E. Madison St
 - S. 4th Ave & E. Packard St
 - S. 4th Ave & E. Liberty St
 - N./S. 4th Ave & E. Huron St
 - N. 4th Ave & E. Ann St
 - N. 4th Ave & E. Kingsley St
 - N. 4th Ave & E. Beakes St
 - N. 4th Ave & E. Summit St
 - N. 4th Ave & Depot St

Transit

12 intersections

- Peak hours 7:00-9:00 a.m. & 2:00-6:00 p.m.
 - W. Huron St & Chapin St
 - E. Huron St & Fletcher St
 - E. Huron St & Glen Ave
 - E. Huron St & Zina Pitcher Pl
 - Washtenaw Ave & Palmer Ave
 - Washtenaw Ave & Geddes Ave
 - Washtenaw Ave & S. Forest Ave/Observatory St
 - Washtenaw Ave & S. University Ave
 - Observatory St & Geddes Ave
 - Observatory St & Washington Heights
 - Observatory St & E. Medical Center Dr
 - Observatory St & E. Ann St

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Liberty

4 intersections

- 12-hr count peak daytime period for signal warrants
 - Liberty St & 4th Ave
 - Liberty St & 5th Ave
 - Liberty St & Division St
 - Liberty St & Thompson St

4 intersections

- Peak hours 7:00-9:00 a.m. & 2:00-6:00 p.m.
 - Liberty St & 1st St
 - Liberty St & Ashley St
 - Liberty St & Main St
 - Liberty St & State St

Other Intersections to Fill Gaps in the Network

10 Intersections

- Peak hours 7:00-9:00 a.m. & 2:00-6:00 p.m.
 - S. University Ave & S. Forest Ave
 - N. Main St & W/E Huron St
 - N. Main St & W/E Ann St
 - N. Main St & Miller Ave/Catherine St
 - N. Main St & Kingsley St/Beakes St
 - N. Main St & Felch St
 - N. Main St & Summit St
 - N. Main St & Depot St
 - N. 5th Ave & Depot St
 - N. Division St / E. Summit St & Beakes St / Broadway St

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ANN ARBOR DOWNTOWN AREA CIRCULATION STUDY FEE SUMMARY

TASKS	ESTIMATED HOURS	LABOR FEE	EXPENSES
TASK 1. Project Coordination & Engagement	494	\$77,023	\$1,500
TASK 2. Multi-Modal Operational Model	564	\$87,806	\$40,000
TASK 3. Active Transportation System Plan & Project Design	944	\$131,416	\$500
TASK 4. Transit Plan Alignment & Transit Priority Streets	400	\$62,291	\$0
TASK 5. Fifth & Division Two-Way Restoration Feasibility Study	756	\$117,988	\$500
TASK 6. Event Street Feasibility Studies	390	\$58,089	\$500
SUB-TOTAL	3,548	\$534,613	\$43,000
PROJECT TOTAL			\$577,613