BEYOND 77 – MOBILIZATION DIGESTS

POLICY TO STRENGTHEN THE CHARLOTTE REGIONAL ALLIANCE FOR TRANSPORTATION (CRAFT)

The development of a policy to enable CRAFT to serve a more defined role in regional planning processes.

PM-1

AT A GLANCE

Theme: Policy & Programming
Key Area: Policymaking
Category: Regional Partnerships

Recommended Agency Involvement:
- CRAFT
- CRMPO
- CRC
- CRTPO
- GCLMPO
- LNTC
- RRRPO

Relevant Initiatives:
- To be determined

Select Associated Strategies & Solutions:
- To be determined

Goal: To strengthen regional planning efforts and encourage improved connections, coordination, and collaboration between MPOs and RPOs as well as the local jurisdictions the MPO/RPOs serve through transportation and related planning aspects.

Modes

NEED & IMPORTANCE

CRAFT is made up of the MPOs and RPOs as well as other key regional agencies in the greater Charlotte region:
- Cabarrus–Rowan MPO (CRMPO)
- Centralina Regional Council (CRC)
- Charlotte Regional Transportation Planning Organization (CRTPO)
- Gaston–Cleveland–Lincoln MPO (GCLMPO)
- Lake Norman Transportation Commission (LNTC)
- Rocky River RPO (RRRPO)

CRAFT was created in 1999 to facilitate regional transportation planning in the greater Charlotte region.
- Facilitates the exchange of crucial information between the staff and leadership of each of the member organizations
- Helps to avoid conflicting planning initiatives and to foster inclusion of peer agencies

MAKING IT HAPPEN

1. Conduct research to determine the viability of such a policy, including looking for comparable organizations across the country and understanding their policies
   - To identify **best practices** and pursue viable strategies
2. Coordinate with CRAFT leadership and member organizations' leadership to educate as well as collect input and feedback
   - To foster collaboration and achieve a **unified vision**
3. Review the existing CRAFT Memorandum of Understanding (MOU) and identify opportunities to codify roles, responsibilities, and policy/programmatic functions beyond what exists today
   - To enable CRAFT to serve a more meaningful role in regional transportation planning processes
4. Monitor and update the MOU as needed

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POLICY TO CREATE THE BEYOND 77 COALITION

The establishment of a formal partnership between local jurisdictions and partner organizations with a focus on facilitating the implementation of recommendations from Beyond 77.

PM–2

AT A GLANCE

Theme: Policy & Programming
Key Area: Policymaking
Category: Regional Partnerships

Recommended Agency Involvement:
• CRTPO
• Local jurisdictions

Relevant Initiatives:
• To be determined

Select Associated Strategies & Solutions:
• PR–2: Regional Program for Beyond 77 Solutions Implementation

Goal: Create a central hub for coordinating Beyond 77 implementation efforts.

Modes

NEED & IMPORTANCE

The Beyond 77 Coalition (name suggested as an example here) would define roles and responsibilities as well as outline expectations around implementation efforts.
• Establish clear channels of communication
• Set standards and expectations
• Create a forum for discussion and collaboration
Help to reduce conflicts and confusion during the implementation process across multiple jurisdictions and/or agencies.

MAKING IT HAPPEN

1. Identify key stakeholders and agencies throughout the Charlotte region that should be members of this coalition
   – Entities to be considered should include transportation planning agencies as well as collaborators, ranging from non–profit organizations to private entities
2. Assemble a steering committee with representatives from the above organizations to develop a mission, framework, and other details for this coalition
   – To collaborate towards a unified vision
3. Coordinate with elected officials to secure support
4. Establish the Beyond 77 Coalition by having leadership from all member organizations sign a joint resolution

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REGIONAL PROGRAM FOR BEYOND 77 SOLUTIONS IMPLEMENTATION

A new program geared towards the implementation of regional and cross-jurisdictional recommendations from Beyond 77.

PR-2

AT A GLANCE

Theme: Policy & Programming
Key Area: Programming
Category: Public-Public Partnerships

Recommended Agency Involvement:
- Beyond 77 Coalition
- CRTPO
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- To be determined

Select Associated Strategies & Solutions:
- PM-2: Policy to Create the Beyond 77 Coalition

Goal: Bring stakeholders and collaborators together to implement recommendations from Beyond 77.

Modes

NEED & IMPORTANCE

This new program managed by the Beyond 77 Coalition will be geared toward the implementation of **regional and cross-jurisdictional** recommendations.
- Focus on **prioritization** and **funding** of such recommendations
- Plans and projects that cross jurisdiction boundaries are more complicated and require more coordination

MAKING IT HAPPEN

1. Following the establishment of the Beyond 77 Coalition (PM-2), the Coalition should evaluate similar programs to identify best practices, including considerations for which agency should lead this program, which will remain a colaborative effort
   - To facilitate **collaboration**
2. Develop policy and framework for this program.
   - To identify methodology for **prioritizing** recommendations
   - To provide a system for delivering high-quality implementation efforts
3. Identify funding sources, including permanent sources and annual grants/bonus allocations.
   - To provide a mechanism for identifying, pursuing, and managing **funding** for regional recommendations
4. Regularly review implementation progress and funding opportunities to improve processes

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INCIDENT MANAGEMENT SAFETY SUMMIT

A collaboration between local agencies and organizations to highlight existing installations throughout the Charlotte region, to educate the public on challenges and best practices, and to examine emerging tactics and technologies.

PR–6

AT A GLANCE

Theme: Policy & Programming
Key Area: Programming
Category: Public–Public Partnerships

Recommended Agency Involvement:
• Centralina Regional Council
• CRTPO
• Emergency services
• Local jurisdictions
• NCDOT

Relevant Initiatives:
• Vision Zero Plans (multiple jurisdictions)

Select Associated Strategies & Solutions:
• To be determined

Goal: Educate planning professionals and the public about incident management and safety efforts throughout the region.

Modes

NEED & IMPORTANCE

Collaboration will form a consensus on best practices.
• Highlight tools and techniques for further research and future implementation

A regional perspective will be critical to reducing incidents throughout the area's multi-modal transportation network.

MAKING IT HAPPEN

1. Compile best practices from across the country and identify a list of existing needs and resources within the region
   – To establish a **foundation of knowledge** to enable everyone to move forward together
2. Identify a lead agency for training as well as delivery strategy (i.e., in-person or hybrid, small or large setting)
   – To simplify and expedite the process
3. Develop supporting material, such as a training series, informative handouts, and similar products
   – To provide to agencies and the public to **spread awareness** and **educate**
4. Hold the Incident Management Safety Summit.
   – To bring experts and interested parties together to highlight **critical issues and opportunities** in the region
5. Follow up Summit with continuing discourse, evaluation, and training.
   – To reinforce importance and ensure implementation

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STAFFING NEEDS EVALUATION

The evaluation of future staffing needs for implementing Beyond 77 and other major initiatives such as CONNECT Beyond by agencies within the region over the next 5 to 10 years.

PR-24

AT A GLANCE

Theme: Policy & Programming
Key Area: Programming
Category: Special Planning Studies

Recommended Agency Involvement:
- CRTPO
- Local jurisdictions

Relevant Initiatives:
- To be determined

Select Associated Strategies & Solutions:
- To be determined

Goal: Ensure agencies throughout the region have the staffing and resources necessary to implement recommendations from Beyond 77 and other major initiatives throughout the region.

Modes

NEED & IMPORTANCE

Staffing evaluations should focus on:
- Identifying/projecting appropriate staffing levels, personnel needs and costs
- Documenting and justifying resource needs
- Improving personnel effectiveness

Inform decision-makers and the public regarding budget development and approval.
- Identify budget changes needed to address identified needs
  – Higher demand on existing staff
  – Increased expectations to address new challenges

MAKING IT HAPPEN

1. Identify which agencies and jurisdictions should participate in this evaluation
   – To secure participation and buy-in
2. Determine region-wide project deployment timeline, scope of work, and potential funding sources for use by participating organizations
   – To pool resources and examine needs from a holistic point of view
   – To allow regional and local agencies flexibility when determining what initiatives are appropriate to focus staffing needs evaluations on for the future of any aspect of implementation
3. Provide proposals to organizations' leaderships to secure funding to accomplish this evaluation

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CONNECTED/AUTONOMOUS VEHICLE (C/AV) & EMERGING TECHNOLOGY POLICY DEVELOPMENT

The development of policy(ies) for state, regional, and local agencies to effectively integrate C/AVs and other mobility-related technologies in existing and future planning and programmatic functions.

PM–13

AT A GLANCE

Theme: Connected/Autonomous Vehicles
Key Area: Policymaking
Category: Regional Partnerships

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- Charlotte Regional ITS Planning study
- CONNECT Beyond
- CRTPO Metropolitan Transportation Plan

Select Associated Strategies & Solutions:
- PR–33: Connected/Autonomous Vehicle (C/AV) Technology Inventory Assessment
- PR–34: Concept of Operations Study
- PR–47: Regional Intelligent Transportation System (ITS) Vision Workshop

Goal: Inform future planning and implementation of smart and connected infrastructure for the safe operation of C/AVs and other forms of mobility.

Modes

NEED & IMPORTANCE

Related policy topics could include (but are not limited to):
- Electric Vehicle (EV) charging stations
- Vehicle-to-vehicle communications
- Smart signalization
- Advanced warning systems

Emerging technologies place higher demands on regional infrastructure.
- C/AVs rely on networks of supporting infrastructure
- Installation of such infrastructure needs to be addressed on a system-wide basis

MAKING IT HAPPEN

1. Evaluate existing and ongoing C/AV Federal and State guidelines as a foundation for regional policy
   - To assure **compliance** and **consistency**
2. Coordinate with stakeholders, partners, decision-makers, and the public to develop a **regional vision** for how C/AVs and other emerging technologies should be integrated into the regional multi-modal network
   - These efforts should include a **public education and input campaign**
   - To form a consensus and develop a roadmap for the future
3. Develop policy based on regional vision and public input
4. Policy adoption should occur at the regional level
   - Policy should focus on the planning and implementation of C/AV infrastructure, safety targets, and future emerging technologies

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CONNECTED/ AUTONOMOUS VEHICLE (C/AV) TECHNOLOGY INVENTORY ASSESSMENT

A comprehensive assessment of all existing and programmed solutions related to C/AV technologies across state, regional, and local agencies.

PR–33

AT A GLANCE

Theme: Connected/Autonomous Vehicles
Key Area: Programming
Category: Special Planning Studies

Recommended Agency Involvement:
• Centralina Regional Council
• CRTPO
• Local jurisdictions
• NCDOT

Relevant Initiatives:
• Charlotte Regional ITS Planning study

Select Associated Strategies & Solutions:
• PM-13: Connected/Autonomous Vehicle (C/AV) & Emerging Technology Policy Development
• PR–47: Regional Intelligent Transportation System (ITS) Vision Workshop

Goal: Collect critical data to inform future planning trends and prepare for a regional ITS program.

Modes

NEED & IMPORTANCE

Assessment to examine:
• Condition
• Location
• Impact

This comprehensive analysis will help local planning professionals and local elected officials by:
• Highlighting opportunities to fill gaps in the existing network
• Establishing needs throughout the system
• Identifying other systems that may be needed to accomodate C/AV users as they begin to become more prevalent on the network

This assessment will include the mapping of publicly accessible resources (e.g., electric vehicle [EV] charging stations).

MAKING IT HAPPEN

1. Identify and catalog existing and programmed C/AV and related solutions
   – To better understand the existing network conditions
2. Identify and evaluate C/AV-related needs and deficiencies
   – To develop a framework for moving forward
3. Identify revenue and cost for implementing and maintaining any existing and future C/AV related infrastructure, as well as identifying alternative scenarios and tradeoffs
   – To evaluate options
4. Evaluate funding opportunities to begin implementation of prioritized solutions
5. Repeat assessment on a regular cycle and keep the public informed of new opportunities

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CONCEPT OF OPERATIONS STUDY

A regional study to inform the integration of emerging technologies into the regional multi-modal network and planning process.

PR–34

AT A GLANCE

Theme: Connected/Autonomous Vehicles
Key Area: Programming
Category: Special Planning Studies

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- Charlotte Regional ITS Planning study

Select Associated Strategies & Solutions:
- PM-13: Connected/Autonomous Vehicle (C/AV) & Emerging Technology Policy Development
- PR–33: Connected/Autonomous Vehicle (C/AV) Technology Inventory Assessment
- PR–47: Regional Intelligent Transportation System (ITS) Vision Workshop

Goal: Inform integration of technological systems from both a user and manager/operator perspective.

Modes

NEED & IMPORTANCE

This study will examine various technological functions of a smart and connected mobility network.

- Connected/Autonomous Vehicles (C/AV) and supporting infrastructure and tools

Critical step to developing a centralized Intelligent Transportation Systems (ITS)/Mobility Infrastructure Asset Management Program.

- Identify local opportunities for pilot applications

MAKING IT HAPPEN

1. Determine which agency should lead this study
2. Coordinate with stakeholders, partners, and CRTPO member jurisdictions to develop a scope of work and goals for this study
   - To discuss **funding priorities** and opportunities for collaboration
3. Identify best practices and guidelines for emerging technologies, ITS, and Integrated Corridor Management (ICM) with a focus on:
   - Safety
   - Equity
   - Funding sources
   - Operations
   - Maintenance
4. Prioritize recommended solutions and alternatives
   - To develop pilot projects for local deployment to examine effectiveness
5. Define a cycle for updating this plan
   - To continue advancing with technological innovations

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REGIONAL INTELLIGENT TRANSPORTATION SYSTEM (ITS) VISION WORKSHOP

A public event to highlight the current state of ITS in the Charlotte metropolitan area and showcase opportunities that could inform next steps for implementation.

PR–47

AT A GLANCE

Theme: Connected/Autonomous Vehicles
Key Area: Programming
Category: Toolkits & Campaigns

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- Charlotte Regional ITS Planning study

Select Associated Strategies & Solutions:
- PM–13: Connected/Autonomous Vehicle (C/AV) & Emerging Technology Policy Development
- PR–33: Connected/Autonomous Vehicle (C/AV) Technology Inventory Assessment
- PR–34: Concept of Operations Study

Goal: Educate the public and local planning professionals about existing ITS conditions and opportunities for future implementation.

Modes

NEED & IMPORTANCE

This event should focus on educating the public and soliciting their input on what they desire for the future.
- Allow transportation network users to advocate for the solutions they want
- Encourage active participation through small groups of diverse perspectives on how ITS can enable improved safety and effective functions of mobility across the region

A regional, unified strategy for alternative funding has never holistically been done before in the Charlotte region.
- New funding sources may require varying changes at either the state or local level.

Encourage residents to provide more input on priorities, which leads to residents having greater ownership over the transportation network.

MAKING IT HAPPEN

1. Identify a list of needs and resources within the region
   - To develop an understanding of existing conditions
2. Conduct research on **national trends** and **emerging technologies** related to ITS
   - To understand and evaluate opportunities for improvement
3. Develop a program for the event and supporting materials
   - To raise **awareness** of the workshop
   - To provide information to interested parties unable to attend the event
4. Hold the workshop
5. Follow up workshop with continuing education opportunities for transportation planning professionals and the general public
   - To **continue engagement** and evaluate new opportunities

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RAMP METERING

The installation of traffic signals on freeway on-ramps to control the frequency at which vehicles enter the flow of traffic on the freenway to minimize congestion issues.

ET–11

AT A GLANCE

Theme: Intelligent Transportation System Pilot Studies
Key Area: Emerging Technology
Category: Freeway Specific Solutions

Recommended Agency Involvement:
- CRTPO
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- Charlotte Regional ITS Planning study
- NCDOT Ramp Metering Feasibility Study for Cabarrus, Gaston, Iredell, and Mecklenburg Counties (2017)

Select Associated Strategies & Solutions:
- ET–34: Work Zone Management / Smart Work Zones

Goal: Evaluate the viability and effects of installing ramp meters along freeway on-ramps in the CRTPO planning area.

Modes

NEED & IMPORTANCE

Ramp metering reduces overall freeway congestion.
- Manages the amount of traffic entering the freeway
- Breaks up platoons that make it difficult to merge onto the freeway

MAKING IT HAPPEN

1. Evaluate the ramp metering programs of other state DOTs (e.g., Georgia DOT) for lessons learned and best practices
   - To understand **challenges and opportunities for improvements**
2. Conduct a series of internal meetings with NCDOT to identify feasibility and potential locations for a pilot project
   - Based on findings from the 2017 Feasibility Study
3. After identifying pilot location(s), coordinate with local jurisdiction(s) to evaluate the impact on local roads
4. Conduct public education campaign ahead of and alongside installation of pilot projects
   - To **educate the public** on how ramp meters function and why they are valuable
5. After pilot study is completed, evaluate impacts and consider a large scale regional roll-out when/where applicable

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WEATHER RESPONSE TRAFFIC INFORMATION (WxTINFO)

An application that uses fixed and mobile weather data to provide weather notifications to motorists to increase situational awareness during adverse driving conditions.

ET–17

AT A GLANCE

Theme: Intelligent Transportation System Pilot Studies

Key Area: Programming

Category: Information Dissemination Systems Solutions

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- Charlotte Regional ITS Planning study

Select Associated Strategies & Solutions:
- ET–19: Smart Truck Parking App
- ET–34: Work Zone Management / Smart Work Zones

Goal: Increase road users' and emergency services' abilities to respond quickly and appropriately to adverse weather and roadway surface conditions in order to reduce or eliminate weather-related crashes and delays.

Modes

NEED & IMPORTANCE

This mobile application will provide notifications through:
- Dynamic message signs
- Public-facing website
- Other forms of public communication (e.g., directly to connected vehicles through alert systems)

Leverage varied channels of communication to distribute information that can:
- Increase situational awareness
- Improve roadway levels of service
- Optimize the use of resources and materials

MAKING IT HAPPEN

1. Identify a list of direct stakeholders, including:
   - Media networks (TV, online, radio)
   - Emergency response agencies (e.g., Federal Emergency Management Agency [FEMA])
   - Transportation agencies
2. Coordinate with interested private and public agencies to develop a framework that includes the logistics, implementation, maintenance, operation, and funding
3. Develop and test pilot application to evaluate framework and gather feedback
   - To identify any shortfalls or issues
4. Deploy final application and maintain regularly
   - To ensure continued effectiveness and integrate new tools and data as they become available

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SMART TRUCK PARKING APP

A mobile application to inform freight-truck operators of available truck parking facilities and associated amenities for optimal trip-planning on delivery routes.

ET-19

AT A GLANCE

Theme: Intelligent Transportation System Pilot Studies

Key Area: Programming

Category: Toolkits & Campaigns

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- Charlotte Regional ITS Planning study

Select Associated Strategies & Solutions:
- ET-17: Weather Response Traffic Information (WxTINFO)
- ET-34: Work Zone Management / Smart Work Zones

Goal: Reduce freight-related congestion and improve freight optimization throughout the region.

Modes

NEED & IMPORTANCE

The safe and efficient movement of freight is critical to the economy.
- Freight vehicles use local/regional roadways every day
- Keeping truck drivers alert and informed is important to the safety of all road users

This app would aid freight companies and truck operators to optimally plan local and regional freight routes as well as understand operational constraints.
- Identify:
  - Location and supply of parking
  - Travel conditions
  - Loading/unloading scheduling
- Improve economic competitiveness of the region

MAKING IT HAPPEN

1. Identify a list of direct stakeholders and convene a focus group or steering committee
   - To include regional freight companies and suppliers
2. Coordinate with interested private entities and public agencies to develop a framework that includes the logistics, implementation, maintenance, operation and funding
3. Consider integration of other similar applications
   - To create a more **diverse and comprehensive app**
4. Develop and test pilot application to evaluate framework and gather feedback
   - To identify any shortfalls or issues
5. Deploy final application and maintain regularly
   - To ensure continued effectiveness and integrate new tools and data as they become available

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WORK ZONE MANAGEMENT / SMART WORK ZONES

Smart work zones and management solutions leverage new technologies to improve safety for drivers and worker in work zones.

ET–34

AT A GLANCE

Theme: Intelligent Transportation System Pilot Studies
Key Area: Programming
Category: Smart/Detection Systems Solutions

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- Charlotte Regional ITS Planning study

Select Associated Strategies & Solutions:
- ET–11: Ramp Metering
- ET–17: Weather Response Traffic Information (WxTINFO)
- ET–19: Smart Truck Parking App

Goal: Leverage coordinated funding mechanisms to support future investment needs.

Modes

NEED & IMPORTANCE

Management solutions include items such as (but not limited to):
- Work zone warnings
- Dynamic lane merge systems
- Variable speed limit systems
- Automated speed enforcement systems
- Warnings about hazards in a work zone

Work zone management focuses on better informing motorists.
- Set expectations and reduce frustrations
- Encourage motorists to take alternative routes

Reduce congestion and allow more freely flowing traffic as well as make work zones safer for highway workers and motorists
- Clear incidents more quickly
  - Reduce secondary incidents

MAKING IT HAPPEN

1. Assemble steering committee or working group to evaluate and prioritize various opportunities offered by smart work zones
   - To include stakeholders from different agencies throughout the construction process
2. Identify funding sources and agencies that will implement pilot projects for **prioritized management solutions**
3. Gather public input and opinions about pilots
   - To understand how the effectiveness of the pilots
   - To understand how to improve the projects to better **communicate with motorists**
4. Collaborate to implement regional projects based on most successful, effective, and supported pilots

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REGIONAL STRATEGY FOR FUNDING ALTERNATIVES

A regional shared vision and strategy for diversifying funding sources to address critical needs and reduce reliance on state and federal programs.

PR–4

AT A GLANCE

Theme: Equity & Funding
Key Area: Programming
Category: Public–Public Partnerships

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- CONNECT Beyond
- CRTPO Metropolitan Transportation Plan
- CRTPO Strategic Plan
- NC First Commission

Select Associated Strategies & Solutions:
- PM-16: Regional Public–Private Partnership (P3) Policy Development

Goal: Leverage coordinated funding mechanisms to support future investment needs.

Modes

NEED & IMPORTANCE

Transportation needs in the region are out-pacing available funding.
- Funding shortfalls are affecting planning organizations throughout the region
- Many regional plans have identified a need to seek alternative funding as a key issue

A regional, unified strategy for alternative funding has never holistically been done before in the Charlotte region.
- New funding sources may require varying changes at either the state or local level

Encourage residents to provide more input on priorities, which leads to residents having greater ownership over the transportation network.

MAKING IT HAPPEN

1. Establish a **forum of collaboration** (i.e., steering committee or work group)
   - To serve as the central point of **information distribution** and **consensus building**
2. Bring regional partners together
   - To discuss **funding priorities** and opportunities for collaboration
3. Gather input from community stakeholders
   - To understand **community vision** and inform partner priorities
4. Leverage opportunities for collaboration
   - To apply for **joint projects** and avoid competition for the same funding opportunities
5. Regularly review community vision and regional funding priorities

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POLICY TO DEFINE EQUITABLE MOBILITY

The development of a dynamic and effective policy that incorporates equity into all planning practices through a collaborative process involving local and regional leaders, elected officials, and the general public.

PM–9

AT A GLANCE

Theme: Equity & Funding
Key Area: Policymaking
Category: Regional Partnerships

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Federal Highway Administration
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- CONNECT Beyond
- CRTPO Metropolitan Transportation Plan

Select Associated Strategies & Solutions:
- PM–34: Policies for Equity Factors in Planning
- PM–38: Policies for Defining Equity in Performance Measures

Goal: Establish a regional understanding and shared view of equitable mobility to be integrated into the planning processes of agencies throughout the region.

Modes

NEED & IMPORTANCE

Transportation is a critical need for everyone to conduct their daily lives.
- Regional agencies strive to develop a multimodal transportation network that is accessible to all.

The importance of equity to transportaion planning continues to grow.
- Federal directives such as the Justice40 Initiative make it imperative that state and local agencies integrate equity practices.

Regional agencies should ensure that all planned infrastructure and service programs help to offer the same opportunity / outcome to all users.
- Historical inequities and harmful policies need to be addressed.

MAKING IT HAPPEN

1. Research similar efforts and identify **best practices** from across the nation.
   - To serve as the foundation for developing regional policies.
   - To ensure compliance with Federal regulations.
2. Assemble **community stakeholders** to evaluate best practices and provide feedback.
   - To gather feedback from experts and key leaders in the region.
3. Conduct an **extensive public input campaign**.
   - To gather **community-sensitive context**.
   - To educate the public on the importance of equity in planning.
4. Draft policy based on best practices, stakeholder feedback, and public input.
   - Identify key equity factors to be used throughout the region (PM–34).
   - Include performance measures for regular monitoring (see PM–38).
     » For increased transparency with the public.
     » For agencies to evaluate and continually improve practices.

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REGIONAL PUBLIC-PRIVATE PARTNERSHIP (P3) POLICY DEVELOPMENT

The development of one or more new policies that enable, encourage, and incentivize the use of public-private partnerships for regional and local project implementation.

PM-16

AT A GLANCE

Theme: Equity & Funding
Key Area: Policymaking
Category: Financial/Incentive Mobility Policy

Recommended Agency Involvement:
- Charlotte Area Transit System
- Centralina Regional Council
- CRTPO
- Federal Highway Administration
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- CONNECT Beyond
- CRTPO Strategic Plan

Select Associated Strategies & Solutions:
- To be determined

Goal: Establish a system for incentivizing public-private partnerships to create more opportunities for project implementation.

Modes

NEED & IMPORTANCE

Public–private partnerships (P3s) are contractual agreements between a public agency and a private entity that allow for greater private participation in the delivery of projects.
- Typically involves the private sector taking on additional project risks such as:
  - Design
  - Construction
  - Finance
  - Long-term operation
  - Traffic revenue collection

Financing a project through a P3 can allow a project to be completed sooner or make it a possibility in the first place.

Policy development should rely on state enabling legislation as its foundation and incorporate NCDOT's Public Private Partnership Policy & Procedures.

MAKING IT HAPPEN

1. Conduct research for P3 best practices across North Carolina and the country
2. Hold a series of meetings with key stakeholders, local elected officials, and the public
   - To develop a **consensus and united message** for discussions with state officials
3. Develop a scope of work
   - To serve as a foundation for a new P3 Regional Policy
4. In the scope creation, key chapters will need to be explored and detailed
   - Such as type of projects, targets, entities, terms, and general pros and cons

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POLICIES FOR EQUITY FACTORS IN PLANNING

The development of new, optional policy language for regional jurisdictions and organizations to adopt into local planning and project work that includes recommendations for integrating equity.

PM–34

AT A GLANCE

Theme: Equity & Funding
Key Area: Policymaking
Category: Policies Enhancing Land–Mobility Connection

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Federal Highway Administration
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- CONNECT Beyond
- CRTPO Metropolitan Transportation Plan
- CRTPO Strategic Plan

Select Associated Strategies & Solutions:
- PM-9: Policy to Define Equitable Mobility
- PM-38: Policies for Defining Equity in Performance Measures

Goal: Establish and codify equity-focused planning priorities.

Modes

NEED & IMPORTANCE

Equity is a critical element to consider throughout the planning process.
- We should strive to exceed the standard requirements as defined by Federal or State agencies.

Policy language should define key terminology and include recommendations for use in planning processes based on best practices and local input/context.
- Language should seek to effectively what equity means across the region.
- Language should be sueful for and integrated into various planning processes.

This offers an opportunity to ultimately pair equity needs between land use and transportation planning.

MAKING IT HAPPEN

1. Research similar efforts and identify best practices to enact equitable mobility policies from across the nation
   - To lay the **foundation** for regional discussions
2. Establish a focus group, steering committee, or similar assembly of stakeholders to help draft policies for adoption
   - To focus our efforts on strategies best suited to **our region**
3. Conduct an extensive public input campaign focusing on engaging transportation disadvantaged and environmental justice communities
   - To ensure that the **public has a voice** in crafting these policies
4. Draft policies based on best practices and public input that include performance measures for regular monitoring
   - To meet the community's vision and provide **useful recommendations** to jurisdictions that will adopt these policies
5. Pursue adoption of these policies at both the local and regional levels
   - To ensure a **shared vision of equity in planning** is held by agencies in the region

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POLICIES DEFINING EQUITY IN PERFORMANCE MEASURES

The establishment of clear indicators to measure the progress and impact of integrating equity measures into planning processes throughout the region.

PM-38

AT A GLANCE

Theme: Equity & Funding
Key Area: Policymaking
Category: Policies Enhancing Land-Mobility Connection

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Federal Highway Administration
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- CONNECT Beyond
- CRTPO Metropolitan Transportation Plan
- CRTPO Strategic Plan

Select Associated Strategies & Solutions:
- PM-9: Policy to Define Equitable Mobility
- PM-34: Policies for Equity Factors in Planning

Goal: Inform the future success of integrating equity factors into planning practices.

Modes

NEED & IMPORTANCE

Performance-based planning and programming is a system-level, data-driven process to identify strategies and investments.
- Can be applied to various aspects of the planning process, from public input to project development
- Performance provides the feedback that keeps plans and projects on target
- Provides the necessary inputs to continually improve the planning process

MAKING IT HAPPEN

1. Research similar efforts and **identify best practices** to enact equitable mobility policy from across the nation
    - To begin efforts from a strong base of knowledge
2. Establish a focus group, steering committee, or similar assembly of stakeholders to help draft policies for adoption
    - To review and evaluate national best practices
3. Conduct an extensive public input campaign focusing on engaging transportation disadvantaged and environmental justice communities
    - To ensure policies are **context-sensitive to local conditions**
4. Draft policies based on best practices and public input that include performance measures for regular monitoring

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BIKE ROUTE IMPROVEMENTS (A–G)

A suite of multimodal infrastructure projects that cross and run parallel to I-77 between Uptown Charlotte and the NC/SC state line.

PI–27

AT A GLANCE

Theme: Active Transportation
Key Area: Project Implementation Methods/ Infrastructure Solutions
Category: General Connectivity Enhancements

Recommended Agency Involvement:
* CRTPO
* Local jurisdictions
* NCDOT

Relevant Initiatives:
* CONNECT Beyond
* CRTPO Metropolitan Transportation Plan
* CRTPO Strategic Plan

Select Associated Strategies & Solutions:
* To be determined

Goal: Improve the multimodal network along the I-77 corridor.

Modes

NEED & IMPORTANCE

Important to provide additional multimodal infrastructure across and parallel to I-77 between Uptown Charlotte and the NC/SC line.
* New crossings will provide safe access along and across one of the most significant north–south corridors in the region
* Gives users access to more destinations and improves cyclist safety

MAKING IT HAPPEN

1. Convene agencies with jurisdiction throughout the Beyond 77 study area to analyze the proposed list of projects
2. Identify gaps and deficiencies in prioritized corridors
   - To ensure project recommendations address most pressing needs
3. Develop project (right-of-way, design, construction) recommendations to address gaps
4. Identify funding strategies for applicable active transportation projects

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GREEN PAVEMENT MARKINGS (J-K)

A suite of multimodal infrastructure projects that cross and run parallel to I-77 between Uptown Charlotte and the NC/SC state line.

PI–27

AT A GLANCE

Theme: Active Transportation
Key Area: Project Implementation Methods/ Infrastructure Solutions
Category: General Connectivity Enhancements

Recommended Agency Involvement:
- CRTPO
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- CONNECT Beyond
- CRTPO Metropolitan Transportation Plan
- CRTPO Strategic Plan

Select Associated Strategies & Solutions:
- To be determined

Goal: Improve the multimodal network along the I-77 corridor.

Modes

NEED & IMPORTANCE

Green-colored bike lane surfacing is a safety feature that communicates to road users that a portion of the roadway has been set aside for preferential or dedicated use by bicycles.

- Painted bike lanes serve as a continuous reminder to drivers of the possibility of the presence of bicyclists as they merge or change lanes
- Reduce the likelihood of collisions

MAKING IT HAPPEN

1. Identify **key bicycling connections/corridors** across and parallel to I–77
2. Identify **safety concerns** along key bicycling corridors, such as:
   - High average annual daily traffic (AADT)
   - Bicycle and pedestrian accidents
   - High conflict intersections
3. Develop a **suite of green pavement solutions** for the identified project areas
4. Coordinate with NCDOT and jurisdictions on resurfacing and intersection project schedules and designs

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SHARED SPACE INTERSECTION STUDY

A pilot study and evaluation of a shared space intersection, which is an urban design approach that minimizes the segregation between modes of road user.

PR–37

AT A GLANCE

Theme: Active Transportation
Key Area: Programming
Category: Special Planning Studies

Recommended Agency Involvement:
- CRTPO
- FHWA
- Local jurisdictions
- NCDOT

Relevant Initiatives:
- CONNECT Beyond
- CRTPO Metropolitan Transportation Plan
- CRTPO Strategic Plan
- Vision Zero Plans (multiple jurisdictions)

Select Associated Strategies & Solutions:
- To be determined

Goal: Investigate an innovative strategy to increase road user safety.

Modes

NEED & IMPORTANCE

A shared space intersection is an innovative urban design approach accomplished by removing features such as road surface markings, traffic signs, and traffic lights.
- Causes drivers to reduce their speed and behave more cautiously
- Reduces the dominance of motorized vehicles
  - Reduces crash incident and fatality rates
  - Improves safety for all road users
- Allows for free movement and fluid negotiation between all modes

This strategy is most effective in downtowns, urban cores, and main street areas due to the vertical design of the streetscape.
- New funding sources may require varying changes at either the state or local level.

One shortfall is how to accommodate those with disabilities and/or special needs, which would need to be carefully studied.

MAKING IT HAPPEN

1. Identify feasibility and requirements for Federal Highway Administration (FHWA) experimental approval
2. Determine legal liability of not using traffic control devices and other potential limitations
3. Develop criteria for the Shared Space Intersection Concept (i.e., AADT, crossing distances, pedestrian traffic, posted speeds, land uses, etc.)
   - To account for all variables in preparing for pilot study
4. Coordinate with local agencies to identify potential intersection for pilot study

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SIDEWALKS, GREENWAYS, & TRAILS SAFETY CAMPAIGN

A regional communications effort focused on developing public awareness of safe methods of travel when using sidewalks, greenways, and/or multi-use trails.

PR-52

AT A GLANCE

Theme: Active Transportation
Key Area: Programming
Category: Toolkits & Campaigns

Recommended Agency Involvement:
- Centralina Regional Council
- CRTPO
- Local jurisdictions
- NCDOT
- Regional parks and recreation departments

Relevant Initiatives:
- CONNECT Beyond
- CRTPO Strategic Plan
- Safe Routes to School
- Vision Zero Plans (multiple jurisdictions)

Select Associated Strategies & Solutions:
- To be determined

Goal: Raise public awareness of safety strategies as they walk on sidewalks, greenways, and trails throughout the region.

Modes

NEED & IMPORTANCE

Help build the confidence of all mode–type users allowed to use these facilities.
- Focus on simple strategies for addressing potential concerns

Encourage safe interactions between users throughout the specified networks.

MAKING IT HAPPEN

1. Identify best practices for active transportation safety
   - To provide the most current and relevant information for the public
2. Develop a strategy for a public awareness campaign
   - To effectively target different population groups and stakeholders
3. Coordinate with local Vision Zero and Safe Routes to School initiatives
   - To tap into their resources and collaborate for a more comprehensive campaign
4. Identify funding sources for public awareness, promotions, and communication intiatives
5. Conduct the campaign

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UNIFIED PARKING PAYMENT SYSTEM

A unified parking payment system that integrates a variety of technologies to form a common data platform for parking solutions to support transit services and transportation demand management policies.

ET–23

AT A GLANCE

Theme: Transit
Key Area: Emerging Technologies
Category: Payment Systems Solutions

Recommended Agency Involvement:
- Centralina Regional Council
- Charlotte Area Transit System
- CRTPO
- Iredell County Area Transit System
- Mecklenburg Transportation System
- Union County Transportation

Relevant Initiatives:
- CONNECT Beyond
- CRTPO Metropolitan Transportation Plan
- CRTPO Strategic Plan

Select Associated Strategies & Solutions:
- To be determined

Goal: Create a system that simplifies the process of using alternative modes of transportation in combination with transit.

Modes

NEED & IMPORTANCE

A unified parking payment system will improve accessibility for users across various transit services, first-mile/last-mile providers, and similar.
- Encourage residents to use alternative modes to access transit

The system would focus on parking that directly supports transit services and transportation demand management policies.

Would also need to develop appropriate policies and procedures for data collection, sharing, and utilization among relevant agencies.

MAKING IT HAPPEN

1. Coordinate with Centralina Regional Council to integrate this recommendation with the development of the Parking Policies Toolkit from CONNECT Beyond
   – To effectively and efficiently collaborate between initiatives
2. Educate local governments on the impacts of minimum and maximum parking requirements on creating mobility–friendly places
   – To provide policy context that supports the use of transit services
3. Identify best practices and develop model ordinances for member jurisdictions to adopt
   – To provide member jurisdictions with a toolkit to develop their own policies that will be consistent throughout the region

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POLICY TO ENSURE INTEGRATED TRANSIT SERVICES

The development of new policies or agreements that formalize partnerships between independently operated transit services to make trips that use services from multiple providers a seamless experience.

PM-6

AT A GLANCE

Theme: Transit
Key Area: Programming
Category: Public–Public Partnerships

Recommended Agency Involvement:
- Centralina Regional Council
- Charlotte Area Transit System
- CRTPO
- Iredell County Area Transit System
- Mecklenburg Transportation System
- Union County Transportation

Relevant Initiatives:
- CONNECT Beyond
  - Recommendations B-11, D-31, D-54, D-65, D-72)
- CRTPO Metropolitan Transportation Plan
- CRTPO Strategic Plan

Select Associated Strategies & Solutions:
- To be determined

Goal: Create a synchronous network of transit providers throughout the region.

Modes

NEED & IMPORTANCE

Will require coordination of services between the regin's transit providers to create a better user experience.
- Could include considerations for a unified ticketing system or similar strategy for simplifying the process
- Encourage improved funding opportunities
- Capture processes such as ensuring county transit services to make full trips possible
- This policy does **not** include the recommendation of merging transit/ transportation services agency organizations

A regional, unified strategy for alternative funding has never holistically been done before in the Charlotte region.
- New funding sources may require varying changes at either the state or local level.

Encourage residents to provide more input on priorities, which leads to residents having greater ownership over the transportation network.

MAKING IT HAPPEN

1. Develop policies to:
   - Help increase/promote service frequencies
   - Expand hours of service
   - Reach new markets for existing bus routes
2. Optimize routing across different agencies
   - To **improve efficiencies**
   - To provide opportunities to route along CONNECT Beyond's recommended **emerging mobility corridors**
3. Develop regional transit standards and performance measures so all agencies can strive to implement consistent service levels by service type
   - To set clear expectations for providers and the public
4. Explore the development of the Regional Fare Integration and Implementation Study as detailed in recommendations D–31, D–54, and D–65 of CONNECT Beyond

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POLICY(IES) TO ALLOW FOR FIRST-MILE/ LAST-MILE TRANSIT CONNECTIONS

The development of new policies or agreements to formalize partnerships between transit providers and first-mile/ last-mile mobility services.

PM-10

AT A GLANCE

Theme: Transit
Key Area: Policymaking
Category: Regional Partnerships

Recommended Agency Involvement:
- Centralina Regional Council
- Charlotte Area Transit System
- CRTPO
- Iredell County Area Transit System
- Mecklenburg Transportation System
- Union County Transportation

Relevant Initiatives:
- CONNECT Beyond
  - Recommendations A-12 and B-12
- CRTPO Metropolitan Transportation Plan
- CRTPO Strategic Plan

Select Associated Strategies & Solutions:
- To be determined

Goal: Create a system that encourages transit riders to use alternative modes to access transit.

Modes

NEED & IMPORTANCE

First-mile mobility services get transit users from their start point (e.g., home) to a transit stop.

Last-mile mobility services get transit users from a transit stop to their final destination (e.g., workplace).

Expand existing agreements to include all types of mobility-as-a-service solutions to higher capacity transit services.
- Enable public subsidies of such services
- Design policy to evolve over time as services change and enhance each other

Charlotte Area Transit System (CATS) already has an agreement with Lyft (2019).
- CATS contributes a portion of the trip fee when a user rides Lyft within a certain area to ride the LYNX Blue Line
  - Incentives like these should encourage residents across a larger area to consider using alternative modes (out of their cars) to access transit

MAKING IT HAPPEN

1. Refine mobility hub locations and **develop an inventory** of all active transportation facilities
   - To have a comprehensive understanding of existing conditions
2. Identify priority locations and associated service options in each jurisdiction based on an **Emerging Mobility Suitability Assessment**, and identify participating funding partners
   - To identify the most suitable locations and partners
3. Establish Memoranda of Understanding (MOUs)/funding agreements with mobility solution partners
   - To formalize arrangements
4. Set performance measures and a process for evaluating pilot outcomes for a data-driven approach to making permanent investments
   - To ensure that permanent investments provide the **most meaningful impact for the community**

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TRANSIT FREQUENCY MAPS

An online, interactive mapping tool that displays transit routes and the frequency of service for those routes as well as including information that indicates the providers' planned / desired future improvements and expansions of service.

PR-61

AT A GLANCE

Theme: Transit
Key Area: Programming
Category: Toolkits & Campaigns

Recommended Agency Involvement:
* Centralina Regional Council
* Charlotte Area Transit System
* CRTPO
* Iredell County Area Transit System
* Mecklenburg Transportation System
* Union County Transportation

Relevant Initiatives:
* CONNECT Beyond
    - Recommendations D-08 and D-70
* CRTPO Metropolitan Transportation Plan
* CRTPO Strategic Plan

Select Associated Strategies & Solutions:
* To be determined

Goal: Create a single, central point of data regarding transit routes and service frequency.

Modes

NEED & IMPORTANCE

This mapping tool will be designed to help the public understand:
* The existing conditions of the transit network
* The anticipated future status of the transit network
* How different levels of service impact different communities and areas of the region

The platform could be expanded to be used for public education purposes by including information that system build-out of desired frequencies.
* Include information on costs needed to deliver higher levels of service than what exist today

MAKING IT HAPPEN

1. Identify and evaluate available software and examples of peer system implementation of similar software
    - To assess **best practices** and viable options
2. CONNECT Beyond team to complete a **Regional Fixed-route Scheduling Integration and Implementation Study** and present recommendations for appropriate next steps
3. Leverage shared purchasing agreements to buy software for regional agencies (if needed)
    - To lower costs
    - To have fixed-route providers **collectively adopt** a shared scheduling software platform
4. Regularly review and update the map(s)

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