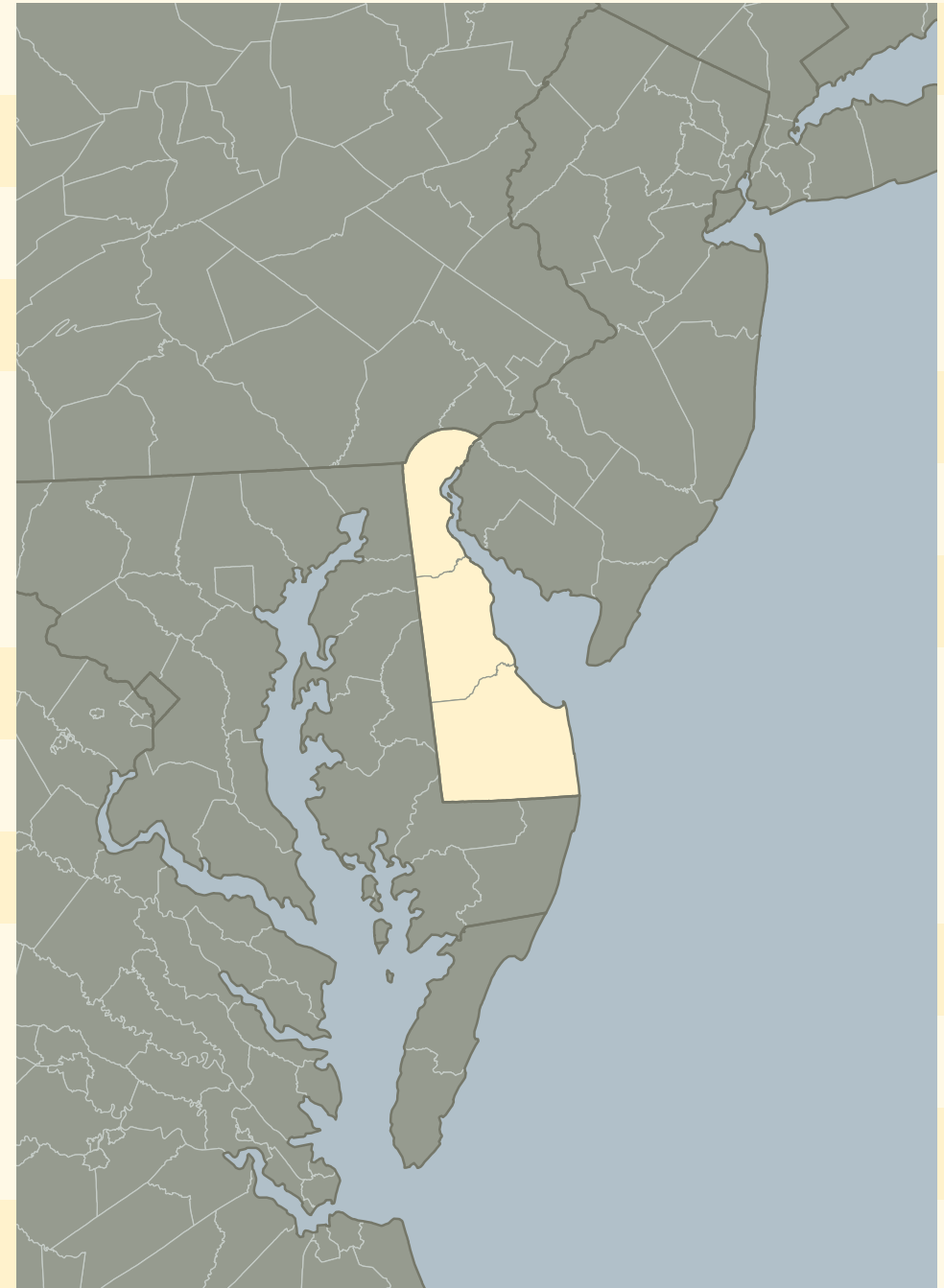# Infrastructure Master Plan Guide

September 2009

How to Use this Guide

This guide provides an overview for developing an infrastructure master plan at a subregional level. While each plan will ultimately reflect the special needs of that particular subregion, the steps to develop a plan are ultimately the same. The process contains five steps:

Each step is outlined in this guide, and is discussed in five ways:

What is the purpose of this step?
What critical questions and tasks should this step contain?
What is the relationship between this step and the next steps?

Who are the players that need to be involved in this step?
Each step will contain a number of disciplines, or "players", each of whom will have a purpose and role in that step. There are essentially three types of players that will be involved in the planning process:

- *Policy Stakeholders* – These are high level agency individuals who agree to work together, and craft the "big picture", defining issues, goals, participants and products.
- *A Working Group*– Once the planning process begins, a Working Group is formed to provide the technical guidance needed to develop the plan and conduct the public involvement process. A Policy Stakeholder may continue on the Working Group, or may appoint a senior staff person to represent their organization. An appointee agrees to keep others within the organization informed and involved as may be needed.
- *The Public* – Elected officials and the public must be included in and kept informed during the master planning process.

5   Memorialize Decisions

1. Purpose of this Step

To institutionalize the decisions made in Steps 2, 3 and 4 so that predictable outcomes for infrastructure can occur in the future.

list of critical questions and tasks

Working Group to define and implement:

- What state, regional, county, local and other plans and policies need to incorporate the decisions resulting from the MOA?

- What is the process/time frame to amend or adopt for each identified?

- What process(es) are needed to update information as needed over time?

relationship to next step

Conclusion of this step fulfills MOA signatory obligation.

2. Players

disciplines needed

Transportation
Planning (State, MPO, County, local) - including population projections
Environmental
Agriculture
Institutions (schools, library, religious, police, fire)
Elected officials, Developers, and the Public

purpose and role of each player

Transportation Planning, Modeling, Design - DelDOT/DTC
Community Planning - (OSP/State, MPO, County, local)
Environmental - DNREC
Agriculture - DDA
Institutions - (local governing body, schools, library, religious, police, fire)

participants

Secretary of Transportation
Secretary of DNREC
Secretary of Agriculture
Heads of Office of State Planning, MPO, County Executive, Mayor(s)
School District(s) superintendent(s)

3. Product (s)

interim

final

- Approved, amended and/or executed documents that institutionalize master plan:
  - State level plans
  - MPO plans and policies
  - County master plan
  - Local plans
  - School district plans
  - Developer agreement(s)

4. Duration

about how long

Dependent on type and number of policies that require amendment, and agreements to be developed

5. Concurrence Requirements

internally

Internal and external concurrency achieved through documents

externally

Memorialize Decisions

The purpose of Step 5 is to develop the tools which will allow the plan to be implemented. Depending on the type of future land use, economic development and transportation infrastructure decisions made in Step 4, policies at the local, county, regional or state level will need to be amended. New policy documents may also need to be created, such as a developer recoupment agreement to provide infrastructure in a growth area.

Each plan or policy that needs to be amended or created should be identified. The Working Group should develop an Action Plan which identifies who will lead, who will support and the expected timeframe for developing and implementing each tool.
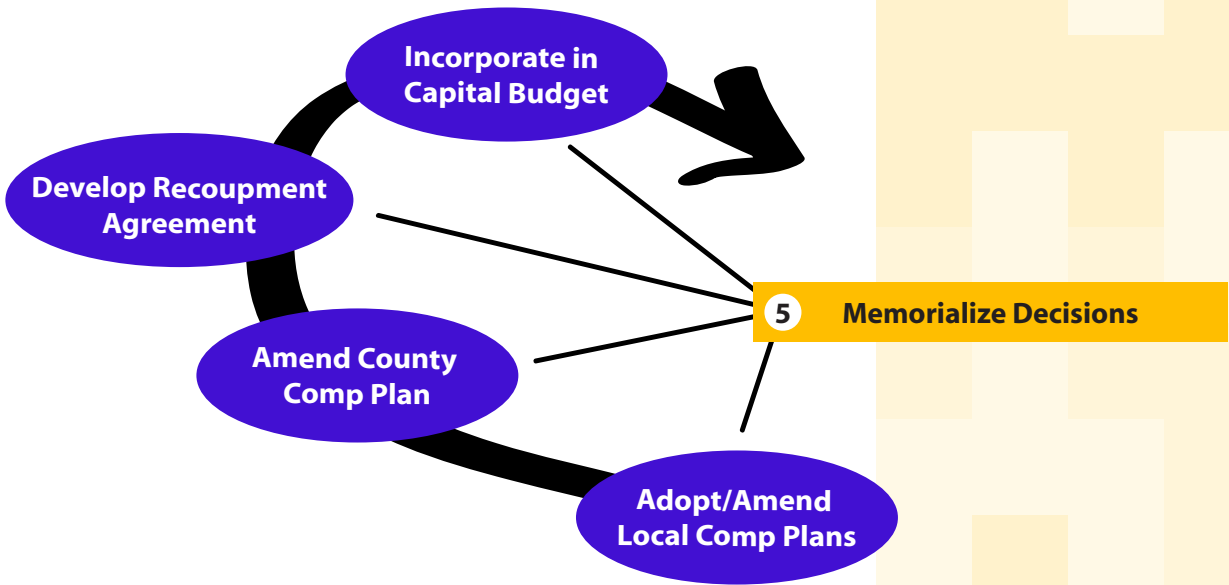
What are the products that this step will produce?
Each step will produce a product or products that will move the plan forward towards completion.

How long will this step take?
It is important to work towards the purpose of each step. Time will vary depending on the size and complexity of the plan being undertaken, the particular step and other variables.

Concurrence Requirements
For the process to move forward, at the conclusion of each step, each entity participating in the Memorandum of Agreement (MOA) must agree with the products of that step. This agreement signals that the plan can proceed to the next step.

Concurrence is both internal and external. Participants may need to discuss an issue within their organization or agency and bring comments or approval back to the group. Externally, depending on the step, the group may also need to seek consensus with elected officials or the public.

Overview

The process to develop an infrastructure master plan contains five steps:

Step 1: Sign Memorandum of Agreement, or MOA
Step 2: Base Conditions
Step 3: Community Facilities
Step 4: Land/Use Transportation
Step 5: Memorialize Decisions

Step 1, Sign MOA, provides the framework, or "vision" for what is to be accomplished in the plan. This vision becomes the guiding force to make and measure decisions. The vision is revisited throughout the process as more information becomes known and understood. Each subsequent step builds on the previous step to achieve this vision.

Step 2: Base Conditions, accomplishes three tasks:
  • Assembles the base data needed for the plan
  • Defines what natural, built and farmland assets exist and where their boundaries are
  • Defines the future built areas, or centers

Step 3: Community Facilities, defines the infrastructure elements which form the public framework, or context, for the plan. Community facilities may include:
  • Education
  • Emergency Services
  • Health Care
  • Libraries and Cultural Facilities
  • Sewer availability
  • Green infrastructure, including parks and trails

Step 4: Land Use/Transportation, defines the type, nature and tools needed for future land use, economic development and transportation.

Step 5: Memorialize Decisions, is a final, critical step. Step 5 lays out how the plan will be implemented, by whom, and within what time frame. This step defines what plan and policies need to be created, or what existing plans and policies need to be amended, to implement the decisions made in Steps 2, 3 and 4.

Elected officials and the public are kept informed throughout the process. Their input is sought at key milestones to help shape the decisions that will move the plan forward to the next step.

1. Purpose of this Step

To support Steps 2 and 3, identify and agree on type, nature and tools needed for future land use, economic development and transportation infrastructure

list of critical questions and tasks

Working Group to discuss, and prepare for public input:
  - What is the existing zoning and what does it allow?
  - Where is the existing transportation and sewer infrastructure?
  - Where are the funded capital transportation improvements?
• Define future land use and transportation needs:
  - What types of uses are needed?
  - What range of densities?
  - What economic development is needed and where?
  - What infrastructure needs are generated and who should pay for them?
• What decisions need public input? What special interest groups, boards and entities need to be briefed prior to a public workshop?
• What tools are needed to implement identified needs and who has the lead/support role(s)?
• What plans or policies need to be amended or changed to implement potential land use decisions?

relationship to next step

This information will be mapped as two layers - existing and proposed - and used to make land use and transportation decisions with elected officials, key stakeholder groups, and the public

2. Players   *disciplines needed*

Transportation
Planning (State, MPO, County, local) - including population projections
Environmental
Agriculture
Institutions (schools, library, religious, police, fire)
Elected officials, Developers, and Public

purpose and role of each player

Transportation Planning, Modeling, Design - DelDOT/DTC
Community Planning - (OSP/State, MPO, County, local)
Environmental - DNREC
Agriculture - DDA
Institutions - (local governing body, schools, library, religious, police, fire)

participants

Senior Transportation staff
Senior DNREC staff
Senior Agriculture staff
Designees from Office of State Planning, County Executive
Head of MPO, Mayor(s)
School District(s) superintendent(s)

3. Product (s)   *interim*

• Base map layer with:
  - natural, built and farm boundaries
  - community facilities
  - funded transportation projects

final

• Map with potential future scenario(s)
• For decisions to discuss with the public, briefing materials will be prepared for elected officials and a set of graphic materials will be generated for a public workshop

4. Duration   *about how long*

Dependent on complexity of proposed scenario

5. Concurrence Requirements   *internally*

Concurrence on land use/economic development and transportation layer

externally

MOA group to brief elected officials prior to workshop on future development scenario(s), what input is needed from the public, and the potential agreements/policy changes/plan amendments that will be necessary to achieve the plan.
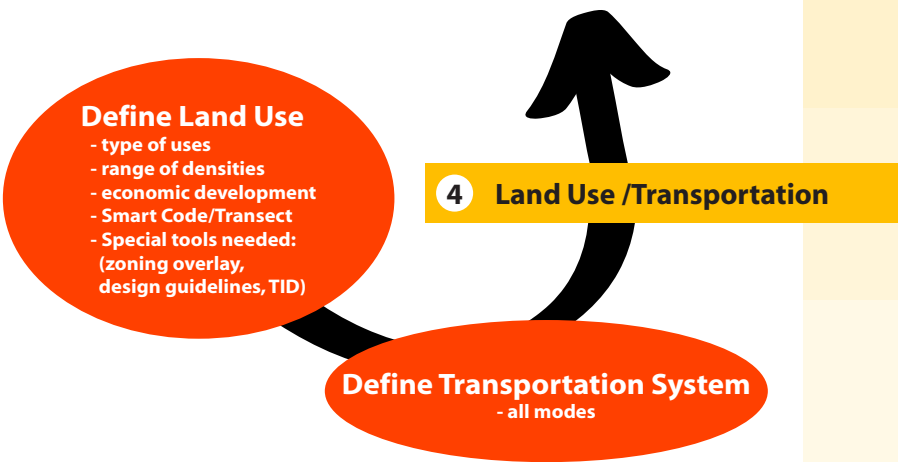
MOA group to brief elected officials after workshop on results.
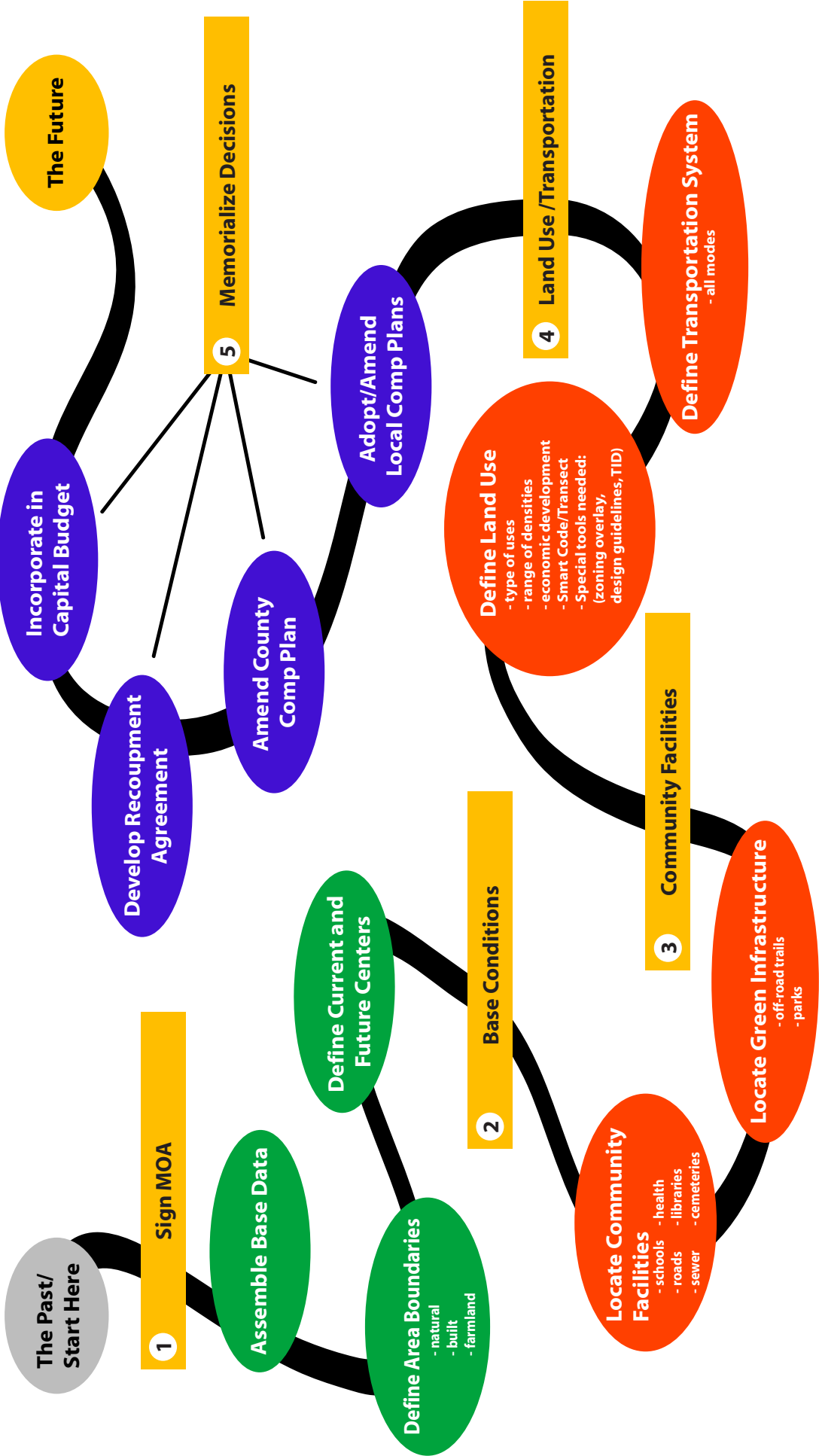
Land Use /Transportation

Once the existing and future needed community facilities have been defined, existing and future land use, economic development and transportation infrastructure can be identified.

In the context of where existing and future centers were defined in Step 2: Base Condition and the existing community facilities and future needs identified in Step 3, land use, and economic development needs should be discussed.

The Working Group may want to develop possible growth scenarios to discuss with the elected officials and the public. Land use should be defined in fairly specific terms - the types of uses, the range of densities, and the nature of economic development - so that possible outcomes can be evaluated. To fully evaluate land use and economic development scenarios, the transportation and sewer infrastructure improvements needed to support these scenarios should be defined.

Define Land Use
- type of uses
- range of densities
- economic development
- Smart Code/Transect
- Special tools needed:
  (zoning overlay,
  design guidelines, TID)

④ Land Use /Transportation

Define Transportation System
- all modes

Infrastructure Master Plan Process

The Future

⑤ Memorialize Decisions

④ Land Use /Transportation

Define Transportation System
- all modes

Adopt/Amend Local Comp Plans

Incorporate in Capital Budget

Define Land Use
- type of uses
- range of densities
- economic development
- Smart Code/Transect
- Special tools needed:
  (zoning overlay,
  design guidelines, TID)

Develop Recoupment Agreement

Amend County Comp Plan

Community Facilities

③ Community Facilities

Define Current and Future Centers

Base Conditions

② Base Conditions

Locate Green Infrastructure
- off-road trails
- parks

Sign MOA

Assemble Base Data

Define Area Boundaries
- natural
- built
- farmland

Locate Community Facilities
- schools
- roads
- sewer
- health
- libraries
- cemeteries

The Past/ Start Here

① Sign MOA

Developing an Infrastructure Master Plan will require participation from transportation, planning, environmental, agriculture, education and other entities. The first step is to define what entities need to be involved at a "big picture" policy level. Once these Policy Stakeholders agree to work together and have discussed what they want to accomplish , an MOA should be prepared.

The MOA defines the vision for the Infrastructure Master Plan. It provides a written understanding of the specific goals to be accomplished, an understanding of the process and products that will be developed and documents the commitment of all signatories to work together. It is typically signed by heads of agencies or organizations.   These entities, in turn, form a Working Group who will guide the master planning process.

Public involvement is a very important component of the planning process. A MOA should have a section that states that the elected officials and the public will be involved. At each step in the process, those developing the plan should consider whether the public is to be involved, and the nature of decisions or comment they will be asked.

The MOA parties should discuss and create a set of ground rules to follow in each meeting. This creates a uniform set of expectations that will help the planning process move more smoothly and efficiently. A typical set of ground rules could be:

- Each person must consistently participate for the process and the end result to be successful.
- Follow through on commitments. Each participant is responsible for providing whatever input, information or materials are within their responsibility. Each person must be responsible for providing comment, whether in agreement or disagreement. Silence is considered agreement.
- A range of opinions strengthens the analysis and decision-making process.
- Working together will sometimes bring conflict, but conflict is sometimes necessary to reach a decision.
- Be respectful of peoples' time. Start on time; end on time. Limit side conversations.

A signed MOA signals that Step 1 has been completed, allowing the process to move forward to Step 2.

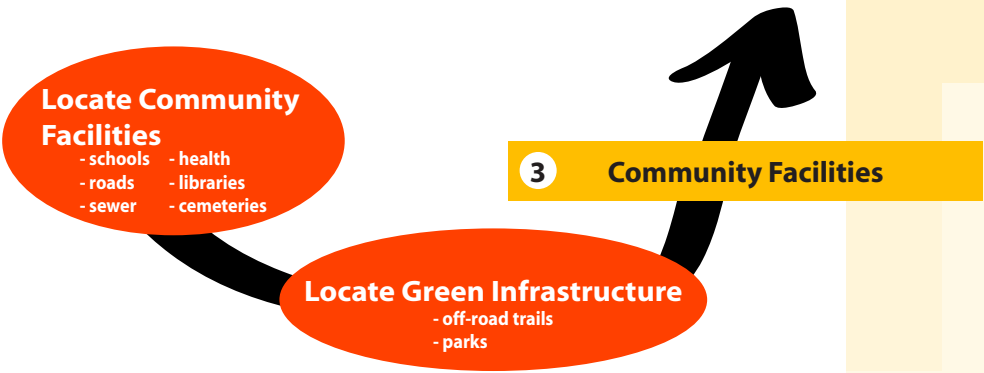| 1. Purpose of this Step		**To identify potential locations for future community facilities within the areas identified in Step 2**
	list of critical questions and tasks	Working Group to discuss:
		Where are our existing community facilities:
		- public and private schools?
		- sewer/utilities?
		- libraries?
		- emergency services?
		- green infrastructure?
		What base information exists to answer these questions and in what form is it?
		What are our future community facility needs?
		What are the policies that guide/change locating these facilities?
		How is this information updated? (ex. public school needs are defined by population projections; need identified in 10 Year Plan)
	relationship to next step	This information will be mapped as a layer over the base conditions and used to make future community facility, land use and transportation decisions
2. Players	disciplines needed	Transportation
		Planning (State, MPO, County, local) - including population projections
		Environmental
		Agriculture
		Institutions (schools, library, religious, police, fire)
	purpose and role of each player	Transportation Planning and Design - DelDOT/DTC
		Community Planning - (OSP/State, MPO, County, local)
		Environmental - DNREC
		Agriculture - DDA
		Institutions - (local governing body, schools, library, religious, police, fire)
	participants	Senior Transportation staff
		Senior DNREC staff
		Senior Agriculture staff
		Designees from Office of State Planning, County Executive
		Head of MPO, Mayor(s)
		School District(s) superintendent(s)
3. Product (s)	interim	Base conditions map with community facilities overlaid
	final	
4. Duration	about how long	To be defined in initial planning process and adjusted as necessary as project moves forward
5. Concurrence Requirements	internally	Concurrence on community facility layer
	externally	MOA group to brief elected officials on community facilities layer

Community facilities include schools, libraries, houses of worship, emergency services and open space. These facilities form the heart of a community, and the framework of the Plan.

Existing community facilities should be mapped over the Base Conditions defined in Step 1. The Working Group should discuss and evaluate future community facility needs in relation to the Base Condition mapped in Step 2, and the existing community facilities mapped in this step.

The Working Group should brief elected officials on the findings of this step. Consensus on future community facility needs concludes this step.

Locate Community Facilities
- schools   - health
- roads   - libraries
- sewer   - cemeteries

3 | Community Facilities

Locate Green Infrastructure
- off-road trails
- parks

1. Purpose of this Step

To assemble the Policy Stakeholders and commit to work together through an agreement

list of critical questions and tasks

Policy Stakeholders to discuss:

To develop this plan:
- What are our critical issues?
- What do we want to accomplish?
- What information do we need to get there?
- Who needs to be involved, and at what level, to make this happen?
- What support do the partners need to make this commitment?

To realize this plan:
- What plans and policies must ultimately be adopted or amended to reflect the plan that results from this MOA?
- How will information be updated?

relationship to next step

The MOA forms the foundation for the master plan process.

Those signing the MOA must be able to provide, review and verify the information necessary to develop base conditions.

2. Players   **disciplines needed**

Transportation
Planning
Environmental
Agriculture
Institutions (schools)

purpose and role of each player

Transportation Planning and Design - DelDOT/DTC
Community Planning - (OSP/State, MPO, County, local)
Environmental - DNREC
Agriculture - DDA
Institutions - (local governing body, schools)

participants

Secretary of Transportation
Secretary of DNREC
Secretary of Agriculture
Heads of Office of State Planning, MPO, County Executive, Mayor(s)
School District(s) superintendent(s)

3. Product (s)   **interim**

Draft MOA

final

Final MOA

4. Duration   **about how long**

3 months or less

5. Concurrence Requirements   **internally**

Each stakeholder to define what internal entity (departments, governing boards, etc.) needs to be briefed for project to move forward at this and each step

externally

MOA group to define what other entities may need to be briefed if not participating

MOA group to brief elected officials about the MOA and steps of the process

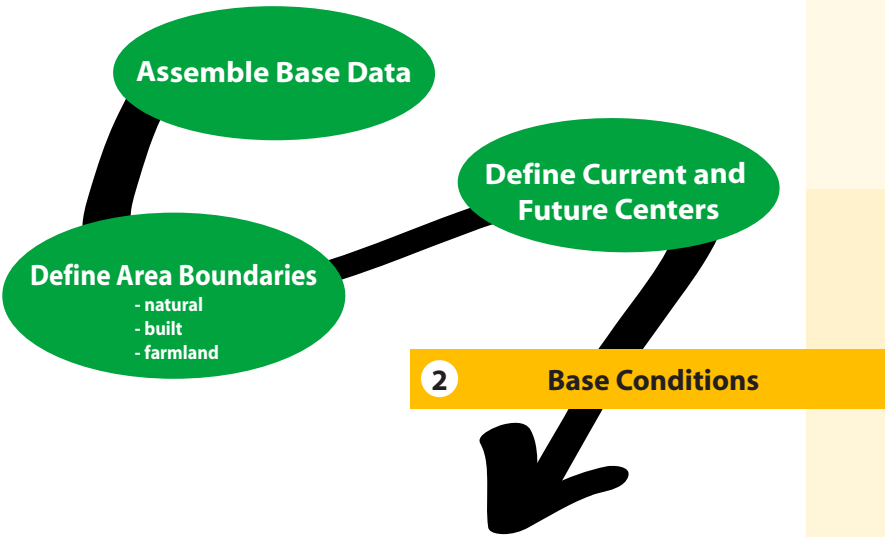In Step 2, Base Conditions are defined. Three critical tasks are undertaken:

Assemble Base Data
It is important to have good base data and aerial mapping to guide decision-making in all future steps. Each player in the Working Group will likely have important information that ideally should be captured in layers on base mapping.

Base mapping should be at sufficient detail to allow working at a parcel level in subsequent steps. Once the base mapping is assembled, the Working Group should:

Define Area Boundaries for the existing natural environment, the built environment, and the farm environment.

Define Future Centers. Future centers are areas where growth can, should and will occur.

Infrastructure decisions in Steps 3 and 4 must support the natural, built, and farm environments and where growth is desired. Once the Working Group agrees on the boundaries for these components, the map should be reviewed and discussed with elected officials. Concurrence on the defined boundaries moves the plan to Step 3.

- **Assemble Base Data**
- **Define Current and Future Centers**
- **Define Area Boundaries**
  - natural
  - built
  - farmland
- **2**   **Base Conditions**

1. Purpose of this Step		**To identify and agree on the boundaries for the three major assets (natural, built, farm) and future centers in the master plan**

	list of critical questions and tasks	Working Group to discuss:
		
		• Where are our existing area boundaries for:
		  - natural (environmental) areas?
		  - built areas/centers?
		  - farmland?
		
		• Where are our future centers?
		
		• What base information exists to answer these questions and in what form is it? How is it updated?

	relationship to next step	This information will form the base conditions map upon which Steps 3 and 4 will be developed Those representing an entity during the process must be able to consistently attend, help shape and coordinate the planning process.
2. Players	disciplines needed	Transportation Planning (State, MPO, County, local) - including population projections Environmental Agriculture Institutions (schools)
	purpose and role of each player	Transportation Planning and Design - DelDOT/DTC Community Planning - (OSP/State, MPO, County, local) Environmental - DNREC Agriculture - DDA Institutions - (County and local governing body)
	participants	Senior Transportation staff Senior DNREC staff Senior Agriculture staff Designees from Office of State Planning, County Executive Head of MPO, Mayor(s) School District(s) superintendent(s)
3. Product (s)	interim	Draft base conditions map with natural, built and farm boundaries delineated at a conceptual level
	final	Refined base conditions map with natural, built and farm boundaries and parcel lines delineated and issues identified.
4. Duration	about how long	To be defined in initial planning process and adjusted as necessary as project moves forward
5. Concurrence Requirements	internally	Concurrence on defined boundaries for natural, built and farmland areas, future centers.
	externally	MOA group to brief elected officials on defined boundaries