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Create and execute continuing, cooperative and comprehensive regional long-range planning efforts that pro-actively drive transportation decisions to improve safety, connectivity, economic development and quality of life in the Wilmington region.

**Wilmington Urban Area Metropolitan Planning Organization
Board
Meeting Agenda**

TO: Wilmington Urban Area MPO Board Members
FROM: Mike Kozlosky, Executive Director
DATE: April 21, 2017
SUBJECT: April 26th meeting

A meeting of the Wilmington Urban Area MPO Board will be held on Wednesday, April 26th at 3 pm. The meeting will be held in the 6th Floor Conference Room at 320 Chestnut Street in downtown Wilmington.

The following is the agenda for the meeting:

- 1) Call to Order
- 2) Conflict of Interest Statement
- 3) Approval of Board Member Excused Absences
- 4) Approval of the Agenda
- 5) Public Comment Period
- 6) Presentation
 - a. MPO Travel Demand Model, Suraiya Motsinger, WMPO
- 7) Consent Agenda
 - a. Approval of Board Meeting Minutes- March 29, 2017 (p. 3-7)
 - b. Opening of the 30-day public comment period for STIP/MTIP Amendments (April) (p. 8)
 - c. Resolution approving the STIP/MTIP Modifications (March) (p. 9-10)
- 8) Regular Agenda
 - a. Resolution adopting the CFPTA's Transit Asset Management Plan and NCDOT's Transit Asset Management Plan Performance Targets and Measures (p. 11-39)
 - b. Resolution supporting a modification in the scope for the Middle Sound Greenway (p. 40-41)
 - c. Resolution supporting the allocation of additional Direct Attributable funds to New Hanover County for the Middle Sound Greenway (p. 42)
 - d. Resolution supporting the allocation of additional Direct Attributable funds to the City of Wilmington for the 5th Avenue/Dawson Street and 5th Avenue/Wooster Street Intersection Improvements (p. 43-44)
- 9) Discussion
 - a. STIP/MTIP Modifications (April) (p. 45)
- 10) Updates

Wilmington Urban Area Metropolitan Planning Organization

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- a. Crossing over the Cape Fear River (p. 46)
 - b. Wilmington Urban Area MPO (p. 47-54)
 - c. Rail Re-alignment Task Force
 - d. Cape Fear Public Transportation Authority (p. 55-57)
 - e. NCDOT Division (p. 58-65)
 - f. NCDOT Transportation Planning Branch
- 11) Announcements
- a. WMPO Bike/Ped Committee- No Meeting
 - b. River to Sea Ride- April 22nd
 - c. Division 3 DRAFT STIP 2018-2027 Meeting- April 24th
 - d. Northern New Hanover County Future Streets Plan Meeting- April 25th
 - e. May Bike Month Events
- 12) Next meeting –May 31, 2017

Attachments

- Board Minutes 3/29/17 meeting
- Proposed STIP/MTIP Amendments (April)
- Proposed STIP/MTIP Modifications (March)
- Resolution approving the STIP/MTIP Modifications (March)
- Cape Fear Public Transportation Authority's Transit Asset Management Plan
- North Carolina Department of Transportation's Transit Asset Management Plan Performance Targets and Measures
- Resolution adopting the CFPTA's Transit Asset Management Plan and NCDOT's Transit Asset Management Plan Performance Targets and Measures
- Letter from New Hanover County
- Resolution supporting a modification in the scope for the Middle Sound Greenway
- Resolution supporting the allocation of additional Direct Attributable funds to New Hanover County for the Middle Sound Greenway
- Letter from the City of Wilmington
- Resolution supporting the allocation of additional Direct Attributable funds to the City of Wilmington for the 5th Avenue/Dawson Street and 5th Avenue/Wooster Street Intersection Improvements
- Proposed STIP/MTIP Modifications (April)
- Cape Fear River Crossing Update (April)
- Wilmington MPO Project Update (April)
- Cape Fear Public Transportation Authority Update (April)
- NCDOT Project Update (April)

Meeting Minutes
Wilmington Urban Area Metropolitan Planning
Organization Board Meeting
Date: March 29, 2017

Members Present:

Gary Doetsch, Town of Carolina Beach
David Piepmeyer, Pender County
Mike Forte, Brunswick County
Pat Batleman, Town of Leland
Neil Anderson, City of Wilmington
Charlie Rivenbark, City of Wilmington
Skip Watkins, New Hanover County
Jonathan Barfield, Cape Fear Public Transportation Authority

Others Present:

Mike Kozlosky, Executive Director, WMPO
Karen Collette, Division Engineer, NCDOT

1. Call to Order

Mr. Doetsch called the meeting to order at 3:08 p.m.

2. Conflict of Interest Reminder

Mr. Doetsch asked if any members had a conflict of interest with any items on the meeting agenda. No members reported having a conflict of interest.

3. Approval of Board Members' Excused Absence

Mr. Doetsch stated that the following board members have requested to be excused from today's meeting: Ms. Emily Swearingen, Mr. Eulis Willis, and Mr. Hank Miller.

Mr. Kozlosky added that Mr. Joe Breault, and either Mr. Landon Zimmer or Mr. Danny McComas are also not able to attend today's meeting.

Mr. Doetsch noted that Mr. Mike Forte is present in place of Mr. Williams.

Mr. Rivenbark made a motion to excuse the absence of Ms. Swearingen, Mr. Willis, Mr. Miller, Mr. Breault, Mr. Zimmer and/or Mr. McComas from the meeting. Mr. Piepmeyer seconded the motion and it carried unanimously.

4. Approval of Agenda

Mr. Kozlosky requested that several Items be added to the discussion portion of the agenda as follows: acknowledgement of Ms. Penny Bray's last meeting due to her retirement; introduction of Ms. Tracy Manning; and the scheduling of a potential June 15, 2017 meeting at 1:30 p.m. for a meet and greet with Transportation Secretary James H. Trogdon, III.

Ms. Batleman made a motion to approve the agenda as amended, seconded by Mr. Rivenbark, and the motion carried unanimously.

5. Public Comment Period

Mr. deAndré Corniffe spoke to the board. He expressed concerns regarding traffic and public safety impacts to neighborhood streets as potential consequences of planned railroad crossing closures identified in the Traffic Separation Study (TSS). He requested that the crossings, particularly at Henry and Clay Streets, not be closed without further opportunity for public input.

A question/answer and discussion period was held. Mr. Kozlosky explained the closure process, which includes adoption of the TSS by Council and the MPO Board, identification of funding by the NCDOT, and inclusion of improvements in the MPO's long-range plan for funding. He noted that the number of

recommended public closures was scaled back due to public input. He added that the closures have not be designed yet and would need to return to Council for the local contribution and feedback on design. He pointed out that today's action would adopt the plan only, and that the public would have further opportunity to comment.

Ms. Jennifer Maksymiak spoke to the Board regarding the 140-Bypass through Leland. She expressed concerns regarding the lack of a barrier between the highway and her neighborhood. She requested that the board consider a barrier that would enhance public safety such as a six (6)-foot-tall chain-link or privacy fence. She noted that she signed a waiver regarding the Bypass when she bought her home four and a half (4½) years ago, but did not expect it to be so close to the highway.

Ms. Collette explained that the DOT has no opportunities in these areas. She noted that the Declaration of Recordation was completed before the Compass Pointe and Windsor Park neighborhoods existed; and, no noise studies were done prior to their development. She noted that Compass Pointe left an adequate border between the edge of the right-of-way and its homes; however, Windsor Park did not. She added that the DOT has standards for controlled access designs. She suggested that the developer could install a measure if it were to meet DOT design criteria. She explained that the Department has no funds for installations after the fact.

6. Presentations

a. Cape Fear River Crossing, Joanna Rocco, AECOM

Ms. Joanna Rocco gave a presentation/update on the Cape Fear River Crossing Project. She acknowledged the presence of AECOM Deputy Project Manager Celia Foushee and Project Engineer Neil Dean, and NCDOT Project Engineer Jay McInnis. She distributed copies of the project impact table and reminded the board that the Cape Fear River Crossing study was reinitiated in 2013. She noted that functional designs on 12 Detailed Study Alternatives (DSA) have been completed; technical documentation is in progress; and meetings with agencies are anticipated in a couple of months, followed by preparation of a draft environmental statement, for which data is currently being collected and evaluated.

In response to a request by Ms. Batleman, Ms. Rocco responded that Concurrence Point (CP) 2A will be held in Wilmington at the end of May. Mr. Kozlosky stated that he would forward meeting details to the Board for attendance in a guest capacity when finalized.

Ms. Rocco gave an overview of various recommended crossings, and a status update of current and upcoming tasks. A question and answer period followed.

Mr. Watkins made a motion to schedule a work session to discuss the proposed alternatives at 1:30 p.m. prior to the regularly scheduled WMPO Board meeting of April 26, 2017. The motion was seconded by Mr. Rivenbark and carried unanimously.

Mr. Kozlosky stated that he would forward today's presentation on river crossings to board members.

7. Consent Agenda

a. Approval of Board Meeting Minutes

The minutes for the February 22, 2017 meeting were approved unanimously.

b. Resolution approving the Wilmington Urban Area MPO's FY 18 Unified Planning Work Program

c. Resolution Certifying the Transportation Planning Process for the Wilmington Urban Area MPO

d. Resolution amending the FY 16- 17 Unified Planning Work Program

e. Resolution approving the STIP/MTIP Amendments (January)

- f. **Resolution approving the STIP/MTIP Modifications (February)**
- g. **Resolution adopting the Wilmington Traffic Separation Study**
- h. **Resolution requesting the North Carolina Department of Transportation designate the Hampstead Bypass as US 17 Bypass and retain US 17 on the existing route**

Mr. Barfield made the motion to approve the consent agenda. Mr. Watkins seconded the motion and it carried unanimously.

8. Regular Agenda

Mr. Barfield requested that page numbers accompany Items on the agenda face, especially big projects.

a. Resolution requesting the North Carolina Department of Transportation re-examine the Traffic Noise Policy

Mr. Kozlosky stated that issues have occurred associated with the timeframe between the Date of Public Knowledge and the North Carolina Department of Transportation's building of a project, and surrounding development such as Windsor Park. He noted that the community has expressed a desire for protection from noise. He added that this resolution requests that the North Carolina Department of Transportation re-examine its Traffic Noise Policy. He noted that, if adopted, this resolution would be forwarded to the NCDOT for consideration. A brief question/answer and discussion period was held.

Mr. Watkins made the motion to support the resolution requesting the North Carolina Department of Transportation re-examine their Traffic Noise Policy. Mr. Doetsch seconded the motion and it carried unanimously.

b. Resolution requesting the North Carolina Department of Transportation assign all highway projects in the Wilmington Urban Area MPO Planning Area Boundary to the NCDOT Division 3 office

Mr. Kozlosky told members that projects are being managed in two different ways -- some at the central office in Raleigh and others locally by the Division 3 staff. This resolution is to request that all projects within the WMPO be assigned to the local Division office. He noted that the Division office has the ability and has been successful in accelerating projects, and staff would like this success to continue.

A question/answer and discussion period was held.

Mr. Piepmeyer made the motion to approve the resolution requesting that NCDOT assign all highway projects in the WMPO planning area boundary to the NCDOT Division 3 office.

Mr. Forte seconded the motion and it carried unanimously.

c. Resolution supporting the allocation of Remaining Direct Attributable funds to the Town of Carolina Beach and City of Wilmington

Mr. Lowe told members that the Town of Carolina Beach has requested \$220,000 for the Island Greenway (bikeway) project, and the City of Wilmington, \$240,000, for its Park Avenue (Multi-use path) Phase II Project to support unanticipated costs. He noted that this would come from the reserve that was agreed upon at the last Board meeting.

Mr. Doestch explained that the Town of Carolina Beach is dealing with three (3) different agencies and is having difficulty getting everyone on the same page. He noted that every change requires additional man hours and increases the cost of the project.

Following a brief question/answer and discussion period, Ms. Batleman made the motion to approve the resolution supporting the allocation of Direct Attributable funds to the Town of Carolina Beach and the City of Wilmington. Mr. Anderson seconded the motion and it carried unanimously.

9. Discussion

a. STBGP-DA and TASA-DA Reserve Anticipated Expenditures

Mr. Lowe told members that the table included in the agenda packet describes the anticipated additional funding requests. Based on project estimates, the expected overage in fiscal year 2017 (ending in October of this year) is anticipated to be \$718,000, \$460,000 of which was just approved in the prior resolution. In fiscal year 2018 (beginning in October 1st of this year), the projected overage is \$604,000; and in fiscal year 2019, \$486,000. He noted that these are preliminary estimates since a few projects are still in the design phase.

b. Surface Transportation Block Grant Program-Direct Attributable (STBGP-DA) and Transportation Alternatives Set Aside-Direct Attributable (TASA-DA) Process Improvements

Mr. Lowe told members that staff held a workshop on February 21st with TCC members to discuss concerns regarding the STBGP-DA and TASA-DA program. He added that staff also received written comments from members who could not attend the meeting. He categorized comments and concerns the STBGP-DA and TASA-DA process as follows:

1. Project Management

Mr. Lowe reported that staff received several requests for additional assistance due to local agency staffing challenges, particularly those of smaller administrations. He told members that staff introduced a workshop series to provide guidance through the STBGP-DA and TASA-DA process beginning with new projects awarded in January. He noted that NCDOT staff from Raleigh participated in the first hands-on workshop on March 3, 2017 to walk participants through the process of inputting agreement requests into the system. He added that staff hopes to build upon this by holding other workshops; the next in the summer to address onboarding and the competitive selection process for consultants.

2. Preliminary Analysis/Applications

Mr. Lowe stated that concerns revolved around the accuracy of estimates and project scopes. Staff proposed to introduce a "due diligence" process prior to application submittal. He added that it has been implemented in other areas of the state, such as the Raleigh and Greensboro MPOs. He noted that staff will follow-up with proposed process alternatives such as encouraging planners and engineers to meet earlier to improve project design.

3. Project Process and Coordination at the Local Level

Mr. Lowe stated that staff instituted monthly meetings with current project managers in order to discuss project status and help identify potential obstacles to project advancement.

4. NCDOT/FHWA Process

Mr. Lowe told members that although many of these factors are outside the control of the MPO, staff will bring its concerns to the NCDOT. He noted that a question was raised at the workshop regarding increased NCDOT involvement and the cost for NCDOT to take over management of the projects from start to finish. Mr. Lowe said that staff will include it in discussions with the Department if the Board agrees.

A question/answer and discussion period. Mr. Kozlosky proposed to schedule a meeting with the NCDOT and TCC and/or TAC members and other members who wish to attend, such as Town Managers or their representatives, to discuss process improvement.

c. STIP/MTIP Modifications (March)

Mr. Kozlosky told members that the STIP/MTIP Modification for March is for information purposes only. Staff will bring the modification to the Board for consideration at their April meeting.

Additional Items for Discussion

- **Scheduling of a potential June 15, 2017 meeting at 1:30 p.m. for a meet and greet with Transportation Secretary James H. Trogdon, III**
Mr. Doestch made a motion to approve the scheduling of a meet and greet with Secretary Trogdon, seconded by Mr. Barfield, and the motion carried unanimously.
- **Introduction of New Administrative Assistant, Tracy Manning**
- **Recognition of Retiring Administrative Assistant, Penny Bray**
Mr. Doestch read and presented Ms. Bray with a plaque of appreciation for her many years of service to the Board. Ms. Bray expressed appreciation.

10. Updates

Updates are included in the agenda packet.

11. Adjournment

With no further business, the meeting was adjourned at 4:57 p.m.

Respectfully submitted,

Mike Kozlosky
Executive Director
Wilmington Urban Area Metropolitan Planning Organization

**THE ABOVE MINUTES ARE NOT A VERBATIM RECORD OF THE PROCEEDINGS.
THE ENTIRE PROCEEDINGS ARE RECORDED ON A COMPACT DISC AS PART OF THIS RECORD.**

Proposed Revisions to 2016-2025 STIP/MTIP Program

STIP/MTIP Amendments (April 2017)			
STATEWIDE	TRANSPORTATION PLANNING BRANCH, TRAFFIC	ENGINEERING	FY 2017 - \$300,000 (T)
* M-0521	FORECASTING FOR MISCELLANEOUS PROJECTS.		FY 2018 - <u>\$300,000</u> (T)
PROJ.CATEGORY	<u>PROJECT ADDED TO EXPEDITE DELIVERY OF STIP</u>		\$600,000
STATEWIDE	<u>PROJECTS.</u>		
REGIONAL			
DIVISION			

Proposed Revisions to 2016-2025 STIP/MTIP Program

STIP/MTIP Modifications (March 2017)			
* R-5783	VARIOUS, DIVISION 3 TRANSPORTATION		2017 - \$200,000 (S)
PROJ.CATEGORY	ALTERNATIVES PROGRAM.	CONSTRUCTION	2017 - <u>\$800,000</u> (TAP)
DIVISION	<u>ADD CONSTRUCTION IN FY 17 NOT PREVIOUSLY</u> <u>PROGRAMMED.</u>		\$1,000,000

**WILMINGTON URBAN AREA METROPOLITAN PLANNING ORGANIZATION
BOARD**

**RESOLUTION APPROVING MODIFICATIONS TO THE
2016-2025 STATE /METROPOLITAN TRANSPORTATION IMPROVEMENT
PROGRAMS**

WHEREAS, the Wilmington Urban Area Metropolitan Planning Organization provides transportation planning services for the City of Wilmington, Town of Carolina Beach, Town of Kure Beach, Town of Wrightsville Beach, Town of Belville, Town of Leland, Town of Navassa, New Hanover County, Brunswick County, Pender County, Cape Fear Public Transportation Authority and the North Carolina Board of Transportation; and

WHEREAS, the Board has found that the Wilmington Urban Area Metropolitan Planning Organization is conducting transportation planning in a continuous, cooperative, and comprehensive manner; and

WHEREAS, the North Carolina Board of Transportation adopted the 2016-2025 State Transportation Improvement Program on June 4, 2015 and the Wilmington Urban Area Metropolitan Planning Organization adopted the Statewide/Metropolitan Transportation Improvement Program on June 24, 2015; and

WHEREAS, the Wilmington Urban Area Metropolitan Planning Organization desires to modify the State/Metropolitan Transportation Improvement Programs for project R-5783.

NOW THEREFORE, be it resolved that the Board of the Wilmington Urban Area Metropolitan Planning Organization hereby approves modifying the 2016-2025 State/Metropolitan Transportation Improvement Programs for project R-5783.

ADOPTED at a regular meeting of the Wilmington Urban Area Metropolitan Planning Organization's Board on April 26, 2017.

Gary Doetsch, Chair

Mike Kozlosky, Secretary



Cape Fear Public Transportation Authority

Transit Asset Management Plan

March 2017

Wave Transit Asset Management Plan

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1.0 INTRODUCTION

1.1 Executive Summary

This plan satisfies the FTA Transit Asset Management Planning requirement. The plan, together with the Maintenance Plan, also meets the requirements of the Fleet Management Plan. The Federal Transit Administration (FTA) has released new requirements for transit agencies related to asset management in Moving Ahead for Progress in the Twenty-First Century (MAP-21) and Fixing America's Surface Transportation (FAST Act). The regulations require all recipients or subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 to prepare a Transit Asset Management Plan (TAMP). As a recipient of these funds, Wave Transit must comply with the new regulations. The Authority falls into the Tier II classification for transit providers as it operates fewer than 100 vehicles in peak revenue service. The required TAMP elements for Tier II providers are summarized in the table below.

Tier II TAMP Requirements

1	Inventory of Capital Assets
2	Condition Assessment
3	Decision Support Tools
4	Investment Prioritization

Asset condition has been determined for all capital assets and is summarized in the table below.

FTA Condition Assessment Summary

Assessment Measure	Condition Rating
FTA SGR Criteria	100% of all capital assets are in a SGR
FTA Performance Measures	Rolling Stock <ul style="list-style-type: none"> ○ 38% of meets or exceeds ULB Equipment <ul style="list-style-type: none"> ○ 50% meets or exceeds ULB Facility <ul style="list-style-type: none"> ○ 0% of units are rated below 3 on the TERM scale

In addition to the application of FTA State of Good Repair (SGR) criteria and performance measures as required by the TAMP, this report further analyzes the capital asset inventory using methods recommended by the American Public Transportation Association (APTA). Results of the assessment are summarized in the table below.

APTA Inventory Analysis

Analytic Applied	Result
System Replacement Value	\$22,703,286 (estimated)
Normal Reinvestment (over 10 years)	\$5,034,128 (estimated) (Annual Normal Reinvestment \$503,413)
Capital Asset Backlog	\$6,032,517 (estimated)
SGR Need (over 10 years)	\$11,066,645 (estimated)
SGR Need (annually)	\$1,106,665 (estimated)

1.2 Plan Horizon and Update Schedule

This Transit Asset Management plan has a horizon of five years. This plan will be updated at a minimum every four years, or if significant changes occur in the assets or the system requiring a more frequent update. The next mandatory plan update is due March 23, 2021.

The current North Carolina Statewide Transportation Improvement Program (STIP) was finalized August 2016, and runs through 2025. Updates to this plan will be coordinated around updates of the STIP, as needed.

2.0 FTA DEFINITIONS

The following definitions are defined by the Federal Transit Administration (FTA) in the final rule regarding Transit Asset Management requirements, published July 26, 2016.

2.1 Capital Asset

As determined by the FTA, a “capital asset” includes the categories of Rolling Stock, Equipment, Infrastructure, and Facilities. Capital assets can include those a transit provider owns, operates, manages, leases, or operates under contract. Rolling Stock means a revenue vehicle used in providing public transportation, including vehicles used for carrying passengers on fare-free services. Equipment is defined as an article of nonexpendable, tangible property having a useful life of not less than one year.

Infrastructure means the underlying framework or structures that support a public transportation system. Facility is described as a building or structure that is used in providing public transportation. The definition of Facility is further clarified by the American Public Transportation Association (APTA) as: “structures that enclose or support maintenance, operations and administrative activities, including those that house specialized equipment that supports the operations and maintenance of the vehicles.”

These definitions are summarized below in Table 1.

Table 1. FTA Capital Asset Definitions

Capital Asset	Definition
Rolling Stock	A revenue vehicle used in providing public transportation, including vehicles used for carrying passengers on fare-free services
Equipment	Nonexpendable, tangible property with a useful life of not less than one year
Infrastructure	The underlying framework or structures that support a public transportation system
Facilities	Building or structure used in providing public transportation

2.2 State of Good Repair

The FTA defines a State of Good Repair (SGR) as: **“the condition in which a capital asset is able to operate at a full level of performance.”** Further, a capital asset is in a state of good repair when the following criteria are met: 1) it is able to perform its designated function, 2) does not pose a known unacceptable safety risk, and 3) its lifecycle investments must have been met or recovered including all preventive maintenance, rehabilitation, and replacements.

Table 2. FTA SGR Criteria

1. Asset is able to perform its designated function
2. Asset does not pose a known unacceptable safety risk
3. Asset lifecycle investments have been met or recovered

2.3 SGR Performance Measures

If an asset meets the SGR criteria and is determined to be in a state of good repair then its performance can be measured. The FTA proposes an SGR performance measure for each asset that is the least burdensome to measure while still efficient. For the measurement of Rolling Stock and Equipment, the FTA proposes an age-based assessment which would measure the percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark (ULB). Length of useful life for each unit is determined by a FTA based Agency depreciation schedule, which groups assets into 7 categories, and varies by asset type within a range of 4 to 12 years or 100,000 to 500,000 miles. The depreciation schedule is provided in Table 4 and Appendix A. Wave Transit does not currently own any infrastructure assets. Therefore, performance measures for that asset category will not be discussed. The FTA suggests a condition-based assessment of Facilities using the Transit Economic Requirements Model (TERM) scale to discover

the percentage of Facilities within an asset class, rated below 3 on the TERM scale (1=poor to 5=excellent).

Table 3. FTA Performance Measures (Proposed)

Asset Category	Classes Measured	Performance Measure
Rolling Stock	All revenue vehicles	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark (ULB)
Equipment	Non-revenue vehicles Maintenance equipment	Percentage of vehicles and equipment that have met or exceeded their ULB
Facilities	All buildings or structures	Percentage of facilities within an asset class, rated below 3 on the Transit Economic Requirements Model (TERM) scale (1=poor to 5=excellent)

3.0 CAPITAL ASSET INVENTORY

This Inventory includes all Agency capital assets, as defined by the FTA. Capital asset categories are limited to Rolling Stock, Equipment, and Facilities as Wave Transit does not currently own any infrastructure assets. Asset data are managed and stored using AssetWorks, the North Carolina Department of Transportation's (NCDOT) asset management database. Each asset listed is maintained using a manufacturer recommended preventive maintenance (PM) schedule and/or is inspected annually. PM programs and inspections have been entered into AssetWorks and managers are alerted to scheduled maintenance through a forecasting calendar.

3.1 Rolling Stock

Wave Transit owns 69 units of Rolling Stock. These units include heavy-duty buses, shuttle buses, vans, and trolleys. 69 of 69 units meet the criteria for a SGR.

For all 69 units of Rolling Stock, a SGR requirement has been determined and therefore a performance measure can be applied. The FTA performance measure for Rolling Stock is the percentage of units that have either met or exceeded their useful life benchmark (ULB). Length of useful life for each unit is determined by an FTA based Agency depreciation schedule, which groups assets into 7 categories, and varies by vehicle type within a range of 4 to 12 years or 100,000 to 500,000 miles. The depreciation schedule is provided in Table 4 and Appendix A. Table 5 provides the Rolling Stock inventory with the age of the vehicle, depreciation category, and indicates whether or not the unit has met or exceeded its Useful Life Benchmark (ULB) as determined by the depreciation schedule. In order to meet or exceed the benchmark a unit must fulfill the criteria for age or mileage. Currently 38 % or 26 of the 69 units of Rolling Stock meet or exceed their ULB.

Table 4. Depreciation Schedule

Category	Vehicle Type	ULB
1	Large (35'-40'), heavy-duty buses	12 yrs. or 500,000 miles
2	Medium (30'), heavy-duty buses	10 yrs. or 350,000 miles
3	Medium (30'), medium-duty buses	7 yrs. or 200,000 miles
4	Medium (25'-35'), light-duty buses	5 yrs. or 150,000 miles
5	Small (16'-28'), light-duty buses	4 yrs. or 100,000
6	Other vehicles	4 yrs. or 100,000
7	Furniture, fixtures, machinery and equipment	3, 5, 7 or 10 yrs.

Table 5. Rolling Stock ULB

	Equipment ID	Year	Description	In service date	Age	Meets or Exceeds ULB
1	51997-1001	2010	1001 GILLIG HYBRID BUS	12/15/10	6	No
2	51997-1002	2010	1002 GILLIG HYBRID BUS	12/15/10	6	No
3	51997-1502	2015	CNG FORD F-550	8/19/15	1	No
4	51997-1503	2015	GILLIG CNG BUS	6/23/15	1	No
5	51997-1504	2015	GILLIG CNG BUS	6/23/15	1	No
6	51997-1505	2016	GILLIG CNG BUS	2/2/16	0	No
7	51997-1506	2016	GILLIG CNG BUS	2/3/16	0	No
8	51997-1507	2016	GILLIG CNG BUS	2/9/16	0	No
9	51997-1508	2016	GILLIG CNG BUS	2/3/16	0	No
10	51997-1611	2016	FORD F-550	6/1/16	0	No
11	51997-1612	2016	FORD F-550	6/1/16	0	No
12	51997-1613	2016	FORD F-550	6/1/16	0	No
13	51997-1801	2008	1801 Goshen Shuttle	1/7/16	8	Yes
14	51997-1802	2008	1802 Goshen Shuttle	1/7/16	8	Yes
15	51997-2201	2012	FORD CHAMPION CRUSADER LTV	4/1/13	3	No
16	51997-2202	2012	FORD CHAMPION CRUSADER LTV	4/1/13	3	No
17	51997-2203	2012	FORD CHAMPION CRUSADER LTV	4/1/13	3	No
18	51997-2204	2012	FORD CHAMPION CRUSADER LTV	4/1/13	3	No
19	51997-2205	2012	FORD CHAMPION CRUSADER LTV	4/1/13	3	No
20	51997-2206	2012	FORD CHAMPION CRUSADER LTV	4/1/13	3	No
21	51997-2207	2012	FORD CHAMPION CRUSADER LTV	4/1/13	3	No
22	51997-2208	2012	FORD CHAMPION CRUSADER LTV	4/1/13	3	No
23	51997-2209	2012	FORD CHAMPION CRUSADER LTV	4/1/13	3	No
24	51997-2501	2015	FORD CHAMPION CRUSADER LTV	4/21/15	1	No
25	51997-2502	2015	FORD CHAMPION CRUSADER LTV	3/20/15	1	No
26	51997-2503	2015	FORD CHAMPION CRUSADER LTV	4/21/15	1	No
27	51997-2504	2015	FORD CHAMPION CRUSADER LTV	3/30/15	1	No

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28	51997-2505	2015	FORD CHAMPION CRUSADER LTV	4/1/15	1	No
29	51997-2506	2015	FORD CHAMPION CRUSADER LTV	12/18/15	0	No
30	51997-2507	2015	FORD CHAMPION CRUSADER LTV	12/18/15	0	No
31	51997-303	2003	303 GILLIG BUS	7/15/03	13	Yes
32	51997-304	2003	304 GILLIG BUS	7/15/03	13	Yes
33	51997-306	2003	306 GILLIG BUS	5/7/03	13	Yes
34	51997-307	2003	307 GILLIG BUS	5/7/03	13	Yes
35	51997-310	2003	310 GILLIG BUS	5/7/03	13	Yes
36	51997-312	2003	312 GILLIG BUS	5/7/03	13	Yes
37	51997-313	2003	313 GILLIG BUS	5/7/03	13	Yes
38	51997-314	2003	314 GILLIG BUS	5/7/03	13	Yes
39	51997-315	2003	315 GILLIG BUS	5/7/03	13	Yes
40	51997-316	2003	316 GILLIG BUS	5/7/03	13	Yes
41	51997-3401	2014	GMC 2500 VAN POOL NO LIFT	7/25/14	2	No
42	51997-3402	2014	GMC 2500 VAN POOL NO LIFT	7/24/14	2	No
43	51997-3403	2014	GMC 2500 VAN POOL NO LIFT	7/25/14	2	No
44	51997-3404	2014	GMC 2500 VAN POOL NO LIFT	7/24/14	2	No
45	51997-402	2004	402 OPTIMA TROLLEY	4/29/04	12	Yes
46	51997-501	2005	501 GILLIG BUS	1/31/05	11	No
47	51997-502	2005	502 GILLIG BUS	1/31/05	11	No
48	51997-603	2006	603 GOSHEN SHUTTLE	7/24/06	10	Yes
49	51997-701	2007	701 OPTIMA TROLLEY	6/4/07	9	No
50	51997-702	2007	702 GILLIG BUS	6/14/07	9	No
51	51997-703	2007	703 GOSHEN SHUTTLE	8/12/07	9	Yes
52	51997-705	2007	705 GOSHEN SHUTTLE	8/12/07	9	Yes
53	51997-901	2009	901 GOSHEN SHUTTLE	4/30/09	7	Yes
54	51997-902	2009	902 GOSHEN SHUTTLE	4/30/09	7	Yes
55	51997-905	2009	905 VANPOOL FORD E350 VAN	3/1/12	4	No
56	51997-906	2009	906 VANPOOL FORD E350 VAN	4/10/12	4	No
57	51997-907	2009	907 GOSHEN SHUTTLE	1/6/10	6	No
58	51997-908	2009	908 GOSHEN SHUTTLE	1/6/10	6	No
59	51997-909	2009	909 GOSHEN SHUTTLE	1/6/10	6	No
60	51997-910	2009	910 GOSHEN SHUTTLE	1/6/10	6	No
61	51997-911	2009	911 GOSHEN SHUTTLE	1/6/10	6	No
62	51997-P010	2010	P010 FORD E350 VAN	5/1/10	6	Yes
63	51997-P011	2010	P011 FORD E350 VAN	5/1/10	6	Yes
64	51997-P012	2010	P012 FORD E350 VAN	5/1/10	6	Yes
65	51997-P902	2009	P902 FORD E350 VAN	9/1/09	7	Yes
66	51997-P904	2009	P904 FORD E350 VAN	9/1/09	7	Yes
67	51997-P905	2009	P905 FORD E350 VAN	9/1/09	7	Yes
68	51997-P906	2009	P906 FORD E350 VAN	9/1/09	7	Yes

69	51997-P907	2009	P907 FORD E350 VAN	9/1/09	7	Yes
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3.2 Equipment

14 units owned by Wave Transit meet the FTA definition of Equipment: “Nonexpendable, tangible property with a useful life of not less than one year.” And: “...including nonrevenue vehicles and maintenance shop equipment.” All 14 units meet the criteria for a SGR. Because SGR has been determined, a performance measure can be applied. The FTA performance measure for Equipment is the percentage of units that have either met or exceeded their useful life benchmark (ULB). Length of useful life for each unit is determined by an FTA regulation based Agency depreciation schedule and varies within a range of 4 to 10 years. See Appendix A for the full depreciation schedule. Table 5 provides the Equipment inventory with the age of the Equipment, depreciation category, and indicates whether or not the unit has met or exceeded its Useful Life Benchmark (ULB) as determined by the depreciation schedule. In order to meet or exceed the benchmark a unit must fulfill the criteria for age or mileage. Currently 50 % or 7 of the 14 Equipment units meet or exceed their ULB.

Table 6. Equipment ULB

Equipment ID	Year	Description	In service date	Age	Dep. Category	Meets or exceeds ULB
51997-4501	2015	2015 GMC SIERRA 2500 CNG	5/15/2015	1	6	No
51997-4502	2015	2015 GMC SIERRA 3500 DIESEL	6/1/2015	1	6	No
51997-4601	2016	2016 Chevy Equinox		0	7	No
51997-SCISSORLIFT	2014	Genie Scissorlift	12/8/2014	1	7	No
51997-5001	2015	Mohawk In-Ground Lift Parallelogram	6/29/2015	1	7	No
51997-5002	2015	Mohawk In-Ground Lift Multiflex	6/29/2015	1	7	No
51997-5003	2015	Challenger In-Ground Lift	6/29/2015	1	7	No
51997-903	2010	903 FORD ESCAPE HYBRID	8/29/2009	7	6	Yes
51997-904	2010	904 FORD ESCAPE HYBRID	8/29/2009	7	6	Yes
51997-P803	2008	P803 FORD E350 VAN	4/25/2008	8	4	Yes
51997-405	2004	405 FORD TAURUS SEDAN	7/2/2004	12	6	Yes
51997-FORKLIFT	2003	2003 HYSTER FORKLIFT	1/1/2003	13	7	Yes
51997-P801	2008	P801 FORD E350 VAN	4/25/2008	8	4	Yes
51997-P903	2009	P903 FORD E350 VAN	9/1/2009	6	4	Yes

3.3 Facilities

Four units owned by Wave Transit meet the FTA criteria for inclusion in the asset category Facilities. A Facility is defined as a building or structure that is used in the provision of public transportation. The definition of Facility is further clarified by the American Public Transportation Association (APTA) as structures that enclose or support maintenance, operations and administrative activities, including those that house specialized equipment that supports the operations and maintenance of the vehicles. All units meet the criteria for a SGR. Because SGR has been determined a performance measure can be applied. The performance measure for this asset class is the percentage of

units rated below three on the Transit Economic Requirements Model (TERM) scale (1= poor to 5 = excellent). The TERM scale is shown in Table 6 and provides both a qualitative and numeric condition rating. The Facility units and their TERM ratings are shown in Table 7. Currently 0% or no Facility units are rated below 3 on the TERM scale.

Table 7. FTA TERM Scale*

Rating	Condition	Description
Excellent	4.8-5.0	No visible defects, near new condition.
Good	4.0-4.7	Some slightly defective or deteriorated components.
Adequate	3.0-3.9	Moderately defective or deteriorated components.
Marginal	2.0-2.9	Defective or deteriorated components in need of replacement.
Poor	1.0-1.9	Seriously damaged components in need of immediate repair.

* Source: Transit Economic Requirements Model

Table 8. Facility TERM Rating

	Equipment ID	Model year	Equipment description	TERM Rating
1	51997-5000	2015	Ops Center	5.0
2	51997-6000	2011	Forden Station	5.0
3	51997-5008	2015	CNG Pumping Station (Structure)	5.0
4	51997-5011	2015	Vehicle Wash System (Enclosure)	5.0

4.0 CONDITION ASSESSMENT

The TAMP condition assessment process is comprised of two steps. First, the application of FTA State of Good Repair (SGR) criteria and second, a performance assessment with differing FTA measures for each asset category. Results of the condition assessment are summarized in Table 9. The application of the FTA criteria for SGR shows that 100% of Wave Transit's 87 capital asset units including Rolling Stock, Equipment, and Facilities are in a State of Good Repair. 100% of all Rolling Stock is in a SGR. All or 100% of Equipment and Facility units meet the SGR criteria. The following figures are calculated for capital asset units that are in a SGR. Currently 38% or 26 of the 69 units of Rolling Stock meet or exceed their ULB. 50% or 7 of the 14 Equipment units meet or exceed their ULB and 0% or no Facility units are rated below 3 on the TERM scale.

Table 9. FTA Condition Assessment

Assessment Measure	Condition Rating
FTA SGR Criteria	100% of all capital assets are in a SGR

FTA Performance Measures	Rolling Stock <ul style="list-style-type: none"> ○ 38% of meets or exceeds ULB Equipment <ul style="list-style-type: none"> ○ 50% meets or exceeds ULB Facility <ul style="list-style-type: none"> ○ 0% of units are rated below 3 on the TERM scale
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4.1 Asset Condition Analysis

In addition to the application of FTA SGR criteria and performance measures as required by the TAMP, this report further analyzes the capital asset inventory using methods recommended by the American Public Transportation Association (APTA). The APTA recommended method of inventory assessment was developed by the Chicago Regional Transportation Authority (RTA) and put forth by the APTA in their 2013 Standards Development Program publication, *Capital Asset Inventory and Condition Assessment*. The excerpted methodology is provided in Appendix B. This method of assessment prescribes analysis of the capital asset inventory resulting in the following data shown in Table 10: System Replacement Value, Normal Reinvestment, Asset Backlog, and State of Good Repair Need (SGR Need).

System Replacement Value is defined as the cost to replace all assets with new assets. This cost is based on the last actual cost of replacing an asset in that category, when available. For assets where this data is not available, the original purchase price of the asset is used. The Normal Reinvestment figure is the anticipated cost for asset replacements/investments over a 10 year period. Asset Backlog is defined by the APTA as the cost to replace all assets that have exceeded their useful life. In this analysis the FTA ULB criteria is used to determine the useful life of an asset. Thus, the Backlog will include assets that have exceeded their ULB as well as those that have met their ULB. A SGR Need is defined as the sum of the Backlog and Normal Reinvestment quantities, and represents the total projected monetary investment needed for a 10 year period. For the APTA analytics, Facility asset data are only used in the calculation of the System Replacement Value. The decision not to include Facility assets in the calculation of SGR Need is based on the fact that most Facility assets are new, with many years of useful life remaining (and no Backlog). Additionally, they have limited history of expenditure/investment to inform a Normal Reinvestment estimate, and no replacements are anticipated during the 10 year period.

Table 10. Capital Asset Inventory Analysis

	Applied Analytic	Result
4.1	System Replacement Value	\$22,703,286 (Estimated)
4.2	Normal Reinvestment (over 10 years)	\$5,034,128 (Estimated) (Annual Normal Reinvestment \$503,413)
4.3	Capital Asset Backlog	\$6,032,517 (Estimated)
4.4	SGR Need (over 10 years)	\$11,066,645 (Estimated) (Annual SGR Need \$1,106,665)

4.2 System Replacement Value

The System Replacement Value or cost to replace all capital assets with new assets is estimated at \$22,703,286. This figure is a sum of the current estimated cost (when available), or the original cost for all capital assets including Rolling Stock, Equipment, and Facilities.

4.3 Normal Reinvestment

Normal Reinvestment, or anticipated asset replacements/investment cost over a 10 year period is estimated to be \$5,034,128. This figure is a sum of the estimated Rolling Stock Normal Reinvestment of \$4,921,816 and the estimated Equipment Normal Reinvestment cost of \$112,312. No Normal Reinvestment cost has been estimated for Facility assets.

4.4 Asset Backlog

The total asset Backlog or replacement cost for all capital assets that have met or exceeded their useful life is estimated at \$6,032,517. This figure is a sum of the estimated Rolling Stock Backlog of \$5,914,947 and the estimated Equipment Backlog of \$117,570. There is no Facilities Backlog.

4.5 SGR Need

The sum of the total Normal Reinvestment and capital asset Backlog amounts, the SGR Need, is estimated at \$11,066,645 for a 10 year period. The annual SGR Need (for 10 years) is estimated at \$1,106,665. The SGR Need for Rolling Stock is estimated to be \$10,836,763. Equipment SGR Need is an estimated \$229,882. No SGR Need has been calculated for Facility assets.

5.0 DECISION SUPPORT TOOLS

Wave Transit primarily utilizes Assetworks software to aid in the development of capital project prioritization. The information that is collected and organized by this software is then used to guide investment prioritization.

5.1 Assetworks Software

Assetworks is Wave Transit's data clearinghouse for all asset management related data. Assetworks stores all equipment records, including maintenance records, preventive maintenance schedules and records, mileage history, parts usage, and labor and parts allocation to work order. This single source allows the Authority to see a comprehensive history of the maintenance failures and repairs made to each asset, as well as usage and service history. This data is then tracked by asset type in an attempt to see maintenance cost by asset type and age.

Currently, Wave Transit has access to about four years of detailed records (this is how long Assetworks software has been in place). While this provides some useful information, it is not sufficient to predict maintenance costs and needs over the course of a 12 year vehicle life. Over these four years, accuracy has increased as employee training has improved, and the organization has learned how to better utilize the software. As more years of accurate data collection accumulates, the decision support value of this tool will increase.

6.0 INVESTMENT PRIORITIZATION

It is estimated that 51 vehicles, or 73.91% of the Authority's revenue rolling stock will have met or exceed its useful life within the five year forecast of this plan. While this number seems high,

Paratransit and vanpool vehicles have a useful life of five years or less so all vehicles in these two categories would be eligible for replacement regardless of their current condition. Even new shuttles with two years use would be eligible for replacement and have been prioritized.

Vehicle replacement prioritization is a fluid process as the Authority is regularly replacing rolling stock. At the time of this report, funding for several replacement vehicles has been identified and new vehicles are either on order or pending order. Priority is not given to vehicle type and identifying funding for a large bus is significantly more challenging than for other vehicles.

Replacement asset prioritization is outlined in Table 11. Assets are rated as high priority, medium priority, or low priority. Investment in replacement vehicles has been prioritized to replace assets in chronological order from oldest to newest. Investment priority is directly related to available funding which is inconsistent. The following lists the investment prioritization for capital assets over the next five years:

Table 11. Capital Asset Investment Prioritization

BUS

Priority	Vehicle	Model Year	Make	Model	VIN	Date in Revenue Service	Date Removed/Planned from Service	Useful Life Years	Actual Life Years	Useful Life Miles	Actual Mileage as of 9/19/2016	Replacement Cost
High	303	2003	Gillig	LF	15GGB201X31073140	7/15/2003	6/1/2015	12	13	500,000	462,088	\$ 465,000
High	304	2003	Gillig	LF	15GGB201131073141	7/15/2003	6/1/2015	12	13	500,000	442,107	\$ 465,000
High	306	2003	Gillig	LF	15GGB201531073143	5/7/2003	6/1/2015	12	13	500,000	514,962	\$ 465,000
High	307	2003	Gillig	LF	15GGB201731073144	5/7/2003	6/1/2015	12	13	500,000	458,535	\$ 465,000
High	310	2003	Gillig	LF	15GGB201231073147	5/7/2003	6/1/2015	12	13	500,000	497,831	\$ 465,000
High	312	2003	Gillig	LF	15GGB201631073149	5/7/2003	6/1/2015	12	13	500,000	568,201	\$ 465,000
High	313	2003	Gillig	LF	15GGB201231073150	5/7/2003	6/1/2015	12	13	500,000	539,345	\$ 465,000
High	314	2003	Gillig	LF	15GGB201431073151	5/7/2003	6/1/2015	12	13	500,000	466,255	\$ 465,000
High	315	2003	Gillig	LF	15GGB201631073152	5/7/2003	6/1/2015	12	13	500,000	518,452	\$ 465,000
High	316	2003	Gillig	LF	15GGB201831073153	5/7/2003	6/1/2015	12	13	500,000	519,988	\$ 465,000
High	402	2004	Optima	TROLLEY	1Z9S2HSS84W216290	4/29/2004	8/1/2013	10	12	250,000	210,628	\$ 325,000
High	501	2005	Gillig	LF	15GGB201151074423	1/31/2005	1/1/2017	12	11	500,000	532,876	\$ 465,000
High	502	2005	Gillig	LF	15GGB201351074424	1/31/2005	1/1/2017	12	11	500,000	516,737	\$ 465,000
High	603	2006	Goshen	LTV	1GBE5V1276F423785	7/24/2006	8/1/2013	7	10	200,000	346,336	\$ 150,000
High	701	2007	Optima	TROLLEY	1Z9S2HSS77W216334	6/4/2007	6/1/2017	10	9	250,000	156,262	\$ 325,000
Med	702	2007	Gillig	LF	15GGB271771078162	6/14/2007	6/1/2019	12	9	500,000	389,261	\$ 465,000
High	703	2007	Goshen	LTV	1GBE5V1937F423474	8/12/2007	9/1/2014	7	9	200,000	338,694	\$ 150,000
High	705	2007	Goshen	LTV	1GBE5V1977F422375	8/12/2007	9/1/2014	7	9	200,000	286,892	\$ 150,000
Med	901	2009	Goshen	LTV	1GBE5V1979F400394	4/30/2009	5/1/2016	7	7	200,000	228,121	\$ 150,000
Med	902	2009	Goshen	LTV	1GBE5V1989F400307	4/30/2009	5/1/2016	7	7	200,000	199,140	\$ 150,000
Med	907	2009	Goshen	LTV	1GBE5V19X9F400535	1/6/2010	1/31/2017	7	6	200,000	264,199	\$ 150,000
Med	908	2009	Goshen	LTV	1GBE5V1979F400671	1/6/2010	1/31/2017	7	6	200,000	314,954	\$ 150,000
Med	909	2009	Goshen	LTV	1GBE5V1989F400744	1/6/2010	1/31/2017	7	6	200,000	290,579	\$ 150,000
Med	910	2009	Goshen	LTV	1GBE5V1949F400756	1/6/2010	1/31/2017	7	6	200,000	304,419	\$ 150,000
Med	911	2009	Goshen	LTV	1GBE5V1999F400767	1/6/2010	1/31/2017	7	6	200,000	283,530	\$ 150,000
Low	1502	2015	Champion	LTV - CNG	1FDGF5GY7FEC65706	8/19/2015	8/20/2020	5	1	150,000	35,687	\$ 150,000
Low	1611	2016	Champion	LTV	1FDGF5GT8GEC18997	6/1/2016	6/1/2021	5	0	150,000	24,046	\$ 150,000
Low	1612	2016	Champion	LTV	1FDGF5GT8GEC18996	6/1/2016	6/1/2021	5	0	150,000	7,123	\$ 150,000
Low	1613	2016	Champion	LTV	1FDGF5GT4GEB80683	6/1/2016	6/1/2021	5	0	150,000	8,926	\$ 150,000
Low	1801	2008	Goshen	LTV	1GBE5V1948F406555	1/7/2016	1/7/2016	7	0	200,000	162,895	\$ 150,000
Low	1802	2008	Goshen	LTV	1GBE5V1958F406631	1/7/2016	1/7/2016	7	0	200,000	195,217	\$ 150,000

VANPOOL

Priority	Vehicle	Model Year	Make	Model	VIN	Date in Revenue Service	Date Removed/Planned from Service	Useful Life Years	Actual Life Years	Useful Life Miles	Actual Mileage as of 9/19/2016	Replacement Cost
Med	906	2009	Ford	E350	1FBNE3BL8ADA05350	4/6/2012	4/6/2017	5	4	100,000	87,028	\$ 25,000
Low	3401	2014	GMC	SAVANA	1GJW7PFA6E1190041	8/1/2014	8/1/2018	4	2	100,000	36,494	\$ 25,000
Low	3402	2014	GMC	SAVANA	1GJW7PFA9E1190275	8/1/2014	8/1/2018	4	2	100,000	50,500	\$ 25,000
Low	3403	2014	GMC	SAVANA	1GJW7PFAXE1189233	8/1/2014	8/1/2018	4	2	100,000	10,460	\$ 25,000
Low	3404	2014	GMC	SAVANA	1GJW7PFAZE1189680	8/1/2014	8/1/2018	4	2	100,000	6,409	\$ 25,000



PARATRANSIT

Priority	Vehicle	Model Year	Make	Model	VIN	Date in Revenue Service	Date Removed/Planned from Service	Useful Life Years	Actual Life Years	Useful Life Miles	Actual Mileage as of 9/19/2016	Replacement Cost
High	P011	2010	Ford	E350	1FTDS3EL9ADA22606	5/1/2010	5/1/2015	5	6	100,000	174,061	\$ 55,000
High	P012	2010	Ford	E350	1FTDS3EL4ADA22612	5/1/2010	5/1/2015	5	6	100,000	157,606	\$ 55,000
High	P902	2009	Ford	E350	1FTDS34L59DA40887	9/1/2009	5/1/2014	5	7	100,000	170,633	\$ 55,000
High	P904	2009	Ford	E350	1FTDS34L49DA40878	9/1/2009	5/1/2014	5	7	100,000	170,334	\$ 55,000
High	P905	2009	Ford	E350	1FTDS34L99DA40889	9/1/2009	5/1/2014	5	7	100,000	149,096	\$ 55,000
High	P906	2009	Ford	E350	1FTDS34L59DA40890	9/1/2009	5/1/2014	5	7	100,000	185,313	\$ 55,000
High	P907	2009	Ford	E350	1FTDS34L96DA40882	9/1/2009	5/1/2015	5	7	100,000	182,304	\$ 55,000
Med	2201	2012	Champion	Crusader	1FDEE3FL4CDB33945	4/1/2013	4/1/2018	5	3	100,000	95,287	\$ 55,000
Med	2202	2012	Champion	Crusader	1FDEE3FL6CDB33946	4/1/2013	4/1/2018	5	3	100,000	106,285	\$ 55,000
Med	2203	2012	Champion	Crusader	1FDEE3FL8CDB33964	4/1/2013	4/1/2018	5	3	100,000	93,975	\$ 55,000
Med	2204	2012	Champion	Crusader	1FDEE3FL4CDB33962	4/1/2013	4/1/2018	5	3	100,000	107,045	\$ 55,000
Med	2205	2012	Champion	Crusader	1FDEE3FL1CDB33966	4/1/2013	4/1/2018	5	3	100,000	103,716	\$ 55,000
Med	2206	2012	Champion	Crusader	1FDEE3FL4CDB33976	4/1/2013	4/1/2018	5	3	100,000	84,303	\$ 55,000
Med	2207	2012	Champion	Crusader	1FDEE3FL6CDB33977	4/1/2013	4/1/2018	5	3	100,000	87,399	\$ 55,000
Med	2208	2012	Champion	Crusader	1FDEE3FL8CDB33978	4/1/2013	4/1/2018	5	3	100,000	110,091	\$ 55,000
Med	2209	2012	Champion	Crusader	1FDEE3FLXCD833979	4/1/2013	4/1/2018	5	3	100,000	110,026	\$ 55,000
Low	2501	2015	Champion	Crusader	1FDEE3FLXFDA17332	3/20/2015	2/2/2019	4	1	100,000	51,851	\$ 55,000
Low	2502	2015	Champion	Crusader	1FDEE3FL1FDA17333	3/20/2015	2/2/2019	4	1	100,000	53,467	\$ 55,000
Low	2503	2015	Champion	Crusader	1FDEE3FL3FDA17334	4/21/2015	2/2/2019	4	1	100,000	55,898	\$ 55,000
Low	2504	2015	Champion	Crusader	1FDEE3FL5FDA17335	3/30/2015	2/2/2019	4	1	100,000	56,467	\$ 55,000
Low	2505	2015	Champion	Crusader	1FDEE3FL5FDA17318	4/1/2015	2/18/2019	4	1	100,000	61,394	\$ 55,000
Low	2506	2015	Champion	Crusader	1FDEE3FLXGDC22439	12/18/2015	12/19/2019	4	1	100,000	32,985	\$ 55,000
Low	2507	2015	Champion	Crusader	1FDEE3FL4GDC11386	12/18/2015	12/19/2019	4	1	100,000	28,789	\$ 55,000

Eight Paratransit vehicles are rated as high priority for replacement due to age and current condition. The high priority Paratransit vehicles have a replacement value of \$440,000. Funding has been identified for eight replacement Paratransit vehicles. Nine Paratransit vehicles with a 2017 value of \$495,000 are rated as medium priority. Seven Paratransit vehicles with a 2017 value of \$385,000 are rated as low priority for replacement over the five year plan forecast.

Seventeen buses and shuttles are rated as high priority for replacement due to age and current condition. The high priority buses and shuttles have a replacement value of \$6,680,000. Funding has been identified for five replacement shuttles and two replacement buses with an estimated replacement value of \$1,680,000. Eight buses and shuttles are rated as medium priority for replacement due to age and condition and/or anticipated depreciation over the five year plan forecast. The replacement cost for medium priority buses and shuttles is \$1,515,000 in 2017 dollars. Six shuttles with a low replacement priority will meet or exceed their useful life over the five year plan forecast. Replacement value is estimated at \$900,000 in 2017 dollars.

No vanpool vans are rated as high priority for replacement. Two vanpools with a 2017 value of \$50,000 are rated as medium priority. Four vanpool vans are rated as low priority for replacement. The vehicles have a 2017 replacement value of \$100,000.

7.0 FLEET REQUIREMENTS

In order to operate an effective transit service, it is imperative that Wave Transit's fleet is not only in a state of good repair, but also that it contains the proper types of vehicles, and the proper number, to operate the required service. This section analyzes fleet needs and presents a plan for vehicle replacement based on these needs.

7.1 Fixed Route Vehicle Needs

Wave Transit operates 25 vehicles in peak service on fixed route. Each route is assigned a type of vehicle, depending on the unique route requirements. These types are heavy duty

buses, cutaways, and replica trolleys. Each route is evaluated on an annual basis to determine if the requirements have changed. These requirements, applied in order, are:

- Only cutaway vehicles can service UNCW station due to roadway size limitations.
- The free downtown trolley is a branded route, and must have a replica trolley.
- If a route carries more than 18 passengers per hour at peak, it must have a heavy duty bus due to capacity requirements.
- If a route carries more than 10 passengers per hour on average, it must have a heavy duty bus for capacity and durability requirements.
- If a route carries more than 0.06 passengers in a wheelchair per hour, it must have a low floor bus to minimize route delays due to load time. With our current fleet, this means it must be a heavy duty bus.
- Routes not specified by the above are assigned a cutaway.

Based on these requirements, the current route requirements are:

Route	Vehicle Type
101-1	Gillig
101-2	Gillig
103	Gillig
104	Gillig
105	Gillig
106	Gillig
107	Cutaway
108	Gillig
201	Gillig
202	Gillig
203	Trolley
204	Cutaway
205	Gillig
207	Gillig
209	Gillig
301	Cutaway
701 Blue	Cutaway
702 Green	Cutaway
703 Red	Cutaway
704 Yellow	Gillig
705 Loop Shuttle	Cutaway
706 Orange Shuttle	Cutaway
707-1 Red Express	Cutaway
711 Grey	Gillig
712 Teal	Cutaway

7.2 Fixed Route Vehicle Specifications

To best meet the needs of passengers, three types of fixed route vehicles have been determined to be valuable to the fleet. Each requires some specifications:

7.2.1 Heavy Heavy Duty Bus (HHD)

The primary fixed route vehicle is a heavy duty bus. Wave Transit currently operates Gillig buses. Heavy duty buses are ordered as 35' low floor buses for maximum cost efficiency, and convenience to customers. After extensive investment in Compressed Natural Gas fueling infrastructure, all heavy duty buses are ordered with CNG powered engines. This yields an environmental benefit from reduced emissions and cost savings on fuel. While not all heavy duty buses are yet CNG, future orders are anticipated to be CNG. Wave Transit anticipates the entire heavy duty fleet will be CNG powered by 2022, if all vehicles are replaced at the end of their useful life.

7.2.2 Cutaway

Routes with less usage or those that are required to operate in tighter roadways, utilize cutaway shuttles. These vehicles have a shorter useful life, and require higher maintenance than HHD buses, though they may be cheaper to purchase and operate in the short term due to increased fuel efficiency. Cutaways are high floor vehicles with wheelchair accessible lifts. Cutaways are equipped with diesel or CNG engines.

7.2.3 Replica Trolley

Wave Transit operates a single branded free trolley route in the historic commercial business district. Trolleys used on this route are rubber wheeled, replica trolleys with wooden trim and a historic feel. Trolleys are typically diesel powered. Future decisions between CNG and diesel trolleys will be made based on availability and cost reasonableness.

7.3 Paratransit Vehicle Needs

Wave Transit currently operates up to 16 paratransit vehicles at peak hours. This number is flexible, based on service demand, and can vary. It is reevaluated annually. Paratransit service utilizes cutaway vehicles with a capacity of two wheelchair positions, and up to eight passenger seats. While it may be beneficial to have one or two vehicles with a smaller capacity (such as one wheelchair position and two or three seats), the majority of vehicles need the larger capacity or service would be unnecessarily inefficient. At this time, no smaller capacity vehicles have been identified that would fulfill the need at a reasonable cost. If an appropriate vehicle is located, it may be added to the fleet, replacing the same number of paratransit vehicles, up to not more than two. Paratransit vehicles are typically powered by gasoline engines.

7.4 Vanpool Vehicle Needs

In Wave Transit's vanpool program, the vehicles are owned and maintained by the Authority, while the operation is handled by private individuals or companies. The number of vanpools in operation at any time fluctuates. For its vanpool program, Wave Transit utilizes eight passenger vans. The vehicles are gasoline powered.

7.5 Non-Revenue Vehicle Needs

Wave Transit utilizes a variety of non-revenue vehicles in support of daily operations and administration. The following list outlines the non-revenue vehicle needs.

- Two service trucks for maintenance of bus stops, facilities, and road call response

- Three administrative vehicles for business travel, road supervision, and accident response
- One administrative vehicle for the 5310 program
- Three retired paratransit vans for fixed route operator relief driver transportation

7.6 Spare Ratio Requirements

Fleet requirements are based on two factors. First, a sliding scale indicating the spare ratio needed for each vehicle category based on fleet age. The scale starts at an 18% spare ratio for an average fleet age of 1 year, and increases by 0.7% spare ratio for each additional year of average fleet age. The progression of spare ratio to fleet age factors in the decreased reliability of older vehicles, which requires more vehicles to maintain reliable operations. The size of the scale is based on data obtained from the Transit Cooperative Research Program Synthesis 109, which analyzed spare ratio needs at transit systems across the country.

Second, fleet requirements are based on the mileage and age each vehicle will be required to operate, versus the mileage put on the vehicle each year. For example, a heavy duty bus is Altoona tested for 12 years or 500,000 miles. If the bus will be required to last 12 years, it should average 41,700 miles per year of service. Therefore, for every 41,700 miles of scheduled service to be performed each year by a heavy duty bus, one such bus is required. Any fewer vehicles would require the remaining vehicles to operate in revenue service beyond their tested service life.

These two factors are combined, with the vehicle requirements determined to be the higher number for each vehicle category, either based on the average age dictated spare ratio, or on the number of vehicles needed to maximize life and utilization of the vehicle category.

The charts and calculations used by the Authority are included in Appendix C. The results are as follows:

	Max in Service	Vehicles Needed	Spare Ratio
Trolley	1	2	100%
Heavy Duty Bus	14	22	57%
Cutaway	10	13	30%
Paratransit	16	20	25%
Vanpool	2	3	50%

7.7 Current Fleet Analysis and Plan

Wave Transit currently owns more revenue vehicles than this plan identifies. Current need, compared to actual ownership, is shown in the chart below:

	Vehicles Needed	Vehicles Owned
Trolley	2	2
Heavy Duty Bus	22	21
Cutaway	13	17
Paratransit	20	24
Vanpool	3	6

Here, it is seen that Wave Transit is in need of one additional heavy duty bus, and can reduce the fleet by four cutaways, five paratransit vans, and three vanpool vans. The

expansion of the heavy duty bus fleet is in part due to routes that were once considered “cutaway” vehicle routes growing in ridership, and now being operated by heavy duty buses, primarily on routes serving UNCW.

The cutaway fleet was expanded by two cutaways in January 2016 by purchase of two used, retired vehicles from another transit agency. These vehicles were necessary due to maintenance problems causing a significant portion of the cutaway fleet to be unavailable, and were instrumental in maintaining service for the public. It is anticipated these vehicles will be retired by July 2018, and will not be replaced. Two additional cutaway vehicles will be retired by July, 2018 without being replaced. This will bring the cutaway fleet in line with the needs outlined.

The paratransit division is undergoing potentially significant changes due to changes at the state level with the Non-Emergency Medicaid Transportation program. The Authority has been unable to determine if these changes will decrease, increase, or leave unchanged the ridership demand felt by the division. Due to the possibility that ridership will be increased, potentially significantly, Wave Transit is going to hold any fleet reduction until the changes at the state level are implemented and evaluated. If the current fleet needs evaluation is still accurate, four paratransit vehicles will be retired without being replaced. If the current fleet needs evaluation is no longer deemed accurate, it will be updated, and action will be taken based on the update.

The vanpool program currently has more vanpools than necessary. However, the number of vanpools in service at any given time can vary based on current contracts. We do not anticipate reducing this fleet at this time. Rather, efforts are moving towards securing additional contracts to expand the program.

8.0 ADOPTION

The Cape Fear Public Transportation hereby adopts the Wave Transit Management Plan on this the 23rd day of March, 2017.

William Bryden
Chairman

Attest

(seal)

Don Betz
Secretary

APPENDIX A

Depreciation Schedule

Depreciation is calculated by the straight-line method over an estimated useful life. The estimation of useful life is determined by the FTA for each type of asset. Effective July 1, 2013 with the adoption of the following depreciation schedule on June 26, 2014 Wave Transit will depreciate capital assets based on the following schedule:

1. Large (35'-40'), heavy-duty buses = 12 yrs. or 500,000 miles
2. Medium (30'), heavy-duty buses = 10 yrs. or 350,000 miles
3. Medium (30'), medium-duty buses = 7 yrs. or 200,000 miles
4. Medium (25'-35'), light-duty buses = 5 yrs. or 150,000 miles
5. Small (16'-28'), light-duty buses = 4 yrs. or 100,000
6. Other vehicles = 4 yrs. or 100,000
7. Furniture, fixtures, machinery and equipment = 3, 5, 7 or 10 yrs.

APPENDIX B

Inventory Assessment Methodology

Excerpted from the APTA Standards Development Program Recommended Practice, Capital Asset Inventory and Condition Assessment

© 2013 American Public Transportation Association

Inventory Assessment Methodology

(Developed by Chicago Regional Transportation Authority [RTA])

The following recommended steps are herewith offered in order to follow a relatively easy, seamless, affordable and understandable procedure in developing an asset inventory and asset condition assessment.

1. Based on the agreed upon condition assessment strategy and agency may assemble an inventory assessment team composed of in-house asset stewards and contracted asset type experts to form a project team to collect and assemble the data into the inventory/assessment (I/A). The in house staff may be asked to work part time on the I/A or to take it on as a temporary full time project.
2. Review sample inventory / assessments within this report, and select one or more to use as a guide for your I/A. Guidance and templates for this process will be forthcoming.
3. Define, tally, categorize and construct a living listing of every asset type, to form the basis of your agencies I/A. This is meant to be a large exhaustive list of every asset type within the agencies properties. For example a large transit system may include as many as 100 asset types broken into as many as 10 categories. These may include facilities, structures, rolling stock, track, yards etc. When assembling an inventory for the first time, asset data will most likely need to be obtained from a variety of sources. Potential asset data sources include:
 - Prior I/A efforts
 - Maintenance Management Systems (MMS, e.g., Maximo, Ellipse etc...)
 - Fleet roster (for vehicles)
 - Department level / asset manager records: which may exist in spreadsheet format
 - Fixed Asset Ledger (accounting system): Generally not a preferred source for larger assets but useful for small value items such as radios, shelters, and non-revenue vehicles
 - Primary data collection
4. Create a recording template for each asset type (using the guide documents noted above). The templates should be designed to provide enough data to document each asset's type, date built or acquired (to assess age), quantity, unit cost and condition.
5. Determine estimated useful life for each asset. These may be copied from the provided guide document samples or determined by the I/A team.
6. Establish age for each asset. Should the actual purchase or installation date be unavailable, proxies (estimates) must be used to determine these quantities.
7. The ratio of age to useful life can be used to group assets into age quintiles and these quintiles can then be used as simple measures of asset condition as follows:
 - 5 = 25% of useful life consumed
 - 4 = 26% to 50% of useful life consumed
 - 3 = 51% to 75% of useful life consumed
 - 2 = 76% to 100% of useful life consumed

- 1 = > 100% of useful life consumed
8. Populate the asset type templates with available data. Proxies (educated estimates) must be used for any unavailable data in order for the I/A to be as complete as possible.
 9. Perform an inspection of a sampling segment of each asset type in order to verify the consistency of the calculated conditions above with the observed conditions. This activity may necessitate changes to some of the condition ratings of the I/A.
 10. Determine replacement costs (Cost to replace with new asset) for each asset. Knowledge of the original cost is helpful in this task. If unavailable; a proxy must be used to estimate such. This quantity represents the System Replacement Value. How do we handle betterment of an asset? Technology etc.
 11. Calculate the replacement cost for all assets that exceed their useful life (i.e., rated 1 using the condition measure suggested above). This quantity represents the Backlog.
 12. Determine the time period for the asset condition assessment. For consistency it is recommended that a 10 year period be utilized by all agencies. Create a 10 year matrix using Excel or other to record the following.
 13. Determine any anticipated asset replacements (example bus fleet replacements) and any anticipated large capital investments (example locomotive half life overhaul) over the 10 year period. This quantity represents the Normal Reinvestment. Plot these on the 10 year matrix.
 14. Add the quantities Backlog and Normal Reinvestment. This quantity represents the. SGR Need for the ten year period.
 15. In order to visualize the size of the SGR Need, it is helpful to compare it to the System Replacement Value. This can be done by simply dividing the SGR need for the ten year period by 10 to get an Annual average SGR need. This quantity can be compared to the agency's System Replacement Value. For example, one large older agency's SGR need for the ten year period is \$26.4B. This amounts to an annual average SGR need of \$2.6B. Its System Replacement Value is \$140B. By dividing the \$2.6B by \$140B we can see that the annual average SGR need for this agency amounts to 1.8% of its System Replacement Value.

In order for different agencies' quantities to be comparable, a level of consistency is important. As mentioned in item 12, it is recommended that all agencies utilize a consistent 10 year I/A period. In that same spirit, it is also recommended that the quantities used throughout the assessment period remain in starting dollar quantities, without addition of yearly inflationary adjustments. These costing upgrades may be added separately to individual reports. It is further recommended that a consistent 20% to 30% be added to all quantities to account for soft costs, including force account and contingencies. It is recommended that after performing a Capital Asset Inventory and Condition Assessment, that it be upgraded every year for five years in order to maximize its accuracy. A following computerized, continual, living, work authorization SGR tracking system by in house maintenance specialists for the purpose of keeping the State of Good Repair accurately definable over time, by in house forces is an excellent goal.

APPENDIX C

Spare Ratio Calculations

Vehicle Age Chart

Average Fleet Age (In Years)	Spare Ratio Percentage	Vehicles in Max Service:															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	18.0%	2	3	4	5	6	8	9	10	11	12	13	15	16	17	18	19
2	18.7%	2	3	4	5	6	8	9	10	11	12	14	15	16	17	18	19
3	19.4%	2	3	4	5	6	8	9	10	11	12	14	15	16	17	18	20
4	20.1%	2	3	4	5	7	8	9	10	11	13	14	15	16	17	19	20
5	20.8%	2	3	4	5	7	8	9	10	11	13	14	15	16	17	19	20
6	21.5%	2	3	4	5	7	8	9	10	11	13	14	15	16	18	19	20
7	22.2%	2	3	4	5	7	8	9	10	11	13	14	15	16	18	19	20
8	22.9%	2	3	4	5	7	8	9	10	12	13	14	15	16	18	19	20
9	23.6%	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
10	24.3%	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
11	25.0%	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
12	25.7%	2	3	4	6	7	8	9	11	12	13	14	16	17	18	19	21
13	26.4%	2	3	4	6	7	8	9	11	12	13	14	16	17	18	19	21
14	27.1%	2	3	4	6	7	8	9	11	12	13	14	16	17	18	20	21
15	27.8%	2	3	4	6	7	8	9	11	12	13	15	16	17	18	20	21
16	28.5%	2	3	4	6	7	8	9	11	12	13	15	16	17	18	20	21
17	29.2%	2	3	4	6	7	8	10	11	12	13	15	16	17	19	20	21
18	29.9%	2	3	4	6	7	8	10	11	12	13	15	16	17	19	20	21
19	30.6%	2	3	4	6	7	8	10	11	12	14	15	16	17	19	20	21
20	31.3%	2	3	4	6	7	8	10	11	12	14	15	16	18	19	20	22

Vehicles needed by age only:

	Ave. Fleet Age	Max in Service	Vehicles Needed
Trolley	11	1	2
Gillig	9	14	18
Cutaway	6	10	13
Paratransit	4	16	20
Vanpool	3	2	3

Vehicle need by mileage:

	Life Expectancy	Mileage Expectancy	Miles per Year	Annual Miles Used	# vehicles Needed
Gillig	12	500,000	41,667	902,078	22
Cutaway	5	150,000	30,000	320,346	11
Trolley	10	250,000	25,000	40,493	2

Transit Asset Management Plan

Performance Targets and Measures

The TAM Final Rule requires transit providers and group TAM plan sponsors to set State of Good Repair (SGR) performance targets and measures within three months after the effective date of the Final Rule [49 CFR § 625.45 (b)(1)]. Accordingly, transit providers and group TAM plan sponsors must set initial SGR performance targets no later than January 1, 2017.

Performance targets are expressed based on quantifiable indicator of a performance measure.

NCDOT Group TAM Plan

All agencies that are currently sub-recipients of NCDOT and considered Tier II Providers [49 CFR § 625.45] may participate in the NCDOT Group TAM Plan. Those agencies that are considered direct recipients of Federal Transit Administration funds may not participate in the NCDOT Group TAM Plan and must complete individual TAM Plans conducted internally. The Tier II providers are listed in Appendix B.

Agencies participating in the Group TAM Plan must submit the provided TAM Inventory to NCDOT via Partner Connect. This inventory must be certified by the Accountable Executive [49 CFR § 625.5] for such an agency with each claim submitted and annually before TAM Plan submission to FTA.

Tracking TAM Inventory

The NCDOT TAM Inventory is a tool created to uniformly gather data on the assets held by transit agencies. The inventory tracks asset data for the 3 asset categories: Rolling Stock, Equipment and Facilities. Collection of these accurately updated inventories will be required with every relevant asset claim requested from NCDOT. Instructions for the TAM Inventory are attached in Appendix A.

Equipment will be tracked using a database and will be updated by routinely by NCDOT beginning FY17. All other active asset categories will be assessed yearly in total before updating the TAM Plan and determining Performance Targets. Rolling Stock will be assessed using a combination of the NCDOT Vehicles Inventory database and the TAM Inventory Rolling Stock asset category. Facilities will be assessed using reported TERM Scale measures from the TAM Inventory.

Defining Performance Measures

EQUIPMENT: Percentage of equipment that have met or exceeded their Useful Life Benchmark (ULB). All tangible assets used in the provision of transportation (Replacement/Annual Rental Cost >\$100.00). All equipment shall be updated by the



Transit System with each reimbursement claim. The equipment asset category also includes any asset valued at greater than \$50,000.

ROLLING STOCK: Percentage of revenue vehicles within a particular asset class that have met or exceeded their ULB. Tracking all revenue vehicles including NCDOT funded vehicles and locally-owned vehicle assets. All rolling stock shall be updated annually.

FACILITIES: Percentage of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale (1=Poor to 5=Excellent). Includes entire existing inventory. All facilities shall be updated by the Transit System annually.

- **TERM SCALE:** To determine median value across components. Calculate this by tabulating the number of components inspected at each condition rating, and use as the overall rating the lowest rating achieved by at least half of the components. Example: If 10 components were inspected and the results were evenly distributed between ratings (2 components with each of the 5 rating values), the overall rating would be 3, at least half of the ratings would have a value of 3 or less.

Performance Targets

EQUIPMENT: Percentage of equipment valued > \$50,000 (support/service vehicles) that have met useful life.

ROLLING STOCK: Percentage of revenue vehicles surpassing Useful Life Benchmarks (ULB) by Asset Class. The ULB for Vans= five (5) years, Light Transit Vehicle (LTV) = Seven (7) years, Bus = ten (10) years.

- 3 Asset Classes
- Assessed according to Age based on Model Year
- Benchmarks determined by Capital Replacement Plan

FACILITIES: Calculated according to percentage of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale (1=Poor to 5=Excellent). This includes entire existing inventory. All facilities shall be updated by the Transit System with each reimbursement claim.

Summary: State of Good Repair (SGR) Performance Targets and Measures

Performance targets and measures are submitted to MPOs in January 2017. The TAM Final Rule requires transit providers and group sponsors to set State of Good Repair (SGR) performance targets within three months after the effective date of the Final Rule [49 CFR § 625.45 (b)(1)]. Accordingly, transit providers and group TAM plan sponsors must set initial SGR performance targets no later than January 1, 2017.

Appendix A

General Instructions

Transportation Asset Management Inventory (TAM): Getting Started


General Overview

This Excel workbook collects asset information for each agency. The workbook is separated into 3 worksheets organized according to FTA asset categories.

Saving the TAM Inventory File

Your first step should be to save this file to a location where it can be retrieved and updated. It is helpful to save the document with the transit system name and fiscal year in the the format "[System Name].FY17.TAM_Inventory.xlsx" Once saved, open the file and complete the form following the step-by-step instructions. It is recommended that the file be saved frequently while updating information so as not to lose data if technical difficulties with hardware or software are experienced.

Worksheet Tabs and Line Numbers

Tabs for each worksheet are located at the bottom of the Excel program screen and are labeled. Begin with the first tab "1. Rolling Stock" to select your system's name. All lines formatted in  require a number or other information to be entered. Instructions are provided in this document for each row. A popup with directions will appear in any cell requiring a user entry. In some lines and columns, the answer is automatically calculated or information is copied from another section in the report. These autofill lines and columns are protected and the answers cannot be changed.

Effective Date

The Effective Date of this TAM Inventory requirement is July 1st, 2016, the start of the fiscal year. Any Equipment acquired after this date should be included in this asset inventory. All agency-owned Rolling Stock and all Facilities currently used in the provision of transportation must be reported in this inventory.

How to Report

1. Rolling Stock

Report only revenue vehicles for which NCDOT does not hold the title that are used in the provision of public transportation.

*THIS INCLUDES (but is not limited to):

- Agency owned vehicles
- FTA Direct-Recipient Vehicles
- Transportation Authority owned vehicles
- 3rd Party Leased vehicles
- County owned vehicles

*DOES NOT INCLUDE:

- NCDOT leased vehicles (these are tracked separately)
- Service and Support Vehicles
- Brokered transportation vehicles
- Purchased-transportation vehicles

Appendix A

2. Equipment

-Report all capital assets used in the provision of transportation:

- With a purchase price greater than \$100 AND
- With a useful life greater than 1 year AND
- Purchased after July 1st, 2016 (start of FY17)

-Report all assets with a replacement value greater than \$50,000 regardless of purchase date.
-This includes service vehicles and support vehicles, hydraulic lifts and high-value maintenance equipment

3. Facilities

Report all facilities used in the provision of transportation, whether they are owned, leased or rented.

*THIS INCLUDES (but is not limited to):

- Rented/leased office spaces
- Parking facilities (ex. Park and Ride Lots, Garages)
- Administrative and maintenance facilities (county or agency owned)

*DOES NOT INCLUDE:

- Private service stations (ex. Joe's Garage, Jiffy Lube, Meineke)

Please use the attached TERM Scale Worksheet to assign a condition rating to facilities. Please save a copy of the TERM Scale Worksheet for each facility in your personal records.

NCDOT does not require copies of these worksheets to be submitted but they may be requested during a site visit.

Where to Send the TAM Inventory

Systems should submit the completed TAM Inventory to PTD via Partner Connect Drop Box under the category "TAM Inventory" with the proper naming convention given above.

Report Deadlines

The initial data collection deadline is December 15th, 2016. All subsequent claims after this date must be submitted with an updated copy of the TAM Inventory.



APPENDIX B

TRANSIT SYSTEMS PARTICIPAING IN GROUP PLAN

Alleghany County
Aging, Disability and Transit Services of Rockingham Co. (Inc.)
Alamance County Transportation Authority
Albemarle Regional Health Services (dba ICPTA)
Anson County
AppalCART
Ashe County Transportation Authority, Inc.
Avery County Transportation Authority
Beaufort County Developmental Center, Inc.
Bladen County
Brunswick Transit System, Inc.
Buncombe County
Cabarrus County
Carteret County
Caswell County
Chatham Transit Network (Inc.)
Cherokee County
Choanoke Public Transportation Authority
City of Wilson
Clay County
Columbus County
Community & Senior Serv. of Johnston County, Inc.
Craven County
Cumberland County
Dare County
Davidson County
Duplin County
Durham County
Eastern Band of Cherokee Indians
Gaston County
Gates County
Goldsboro-Wayne Transportation Authority
Graham County
Greene County
Guilford County
Harnett County
Hoke County
Hyde County Non-Profit Private Transportation Corp.
Iredell County
Jackson County
Kerr Area Transportation Authority
Lee County
Lenoir County
Lincoln County
Macon County
Madison County Transportation Authority
Martin County



McDowell County Transportation Planning Board, Inc.
Mecklenburg County
Mitchell County Transportation Authority
Moore County
Mountain Projects, Inc./ Haywood County
Onslow United Transit System, Inc.
Orange County
Pender Adult Services, Inc.
Person County
Pitt County
Polk County Transportation Authority
Randolph County Senior Adult Association, Inc.
Richmond Interagency Transportation, Inc.
Robeson County
Rowan County
Rutherford County
Sampson County
Scotland County
Stanly County
Swain County Focal Point on Aging, Inc.
Tar River Transit/ City of Rocky Mount
Transportation Administration of Cleveland Co., Inc.
Transylvania County
Tyrrell County
Union County
Wake County
Washington County
Western Carolina Community Action, Inc.
Western Piedmont Regional Transit Authority
Wilkes Transportation Authority
Wilson County
Yadkin Valley Economic Development District, Inc.
Yancey County Transportation Authority

**WILMINGTON URBAN AREA METROPOLITAN PLANNING ORGANIZATION
BOARD**

**RESOLUTION ADOPTING THE CAPE FEAR PUBLIC TRANSPORTATION AUTHORITY'S
TRANSIT ASSET MANAGEMENT PLAN AND NORTH CAROLINA DEPARTMENT OF
TRANSPORTATION'S PERFORMANCE TARGETS AND MEASURES**

WHEREAS, the Wilmington Urban Area Metropolitan Planning Organization provides transportation planning services for the City of Wilmington, Town of Carolina Beach, Town of Kure Beach, Town of Wrightsville Beach, Town of Belville, Town of Leland, Town of Navassa, New Hanover County, Brunswick County, Pender County, Cape Fear Public Transportation Authority and the North Carolina Board of Transportation; and

WHEREAS, The Moving Ahead for Progress in the 21st Century (MAP-21) Act required the Federal Transit Administration and Federal Highway Administration to develop performance-driven and out-come based programs that provide a greater level of transparency and accountability; and

WHEREAS, The Fixing America's Surface Transportation (FAST) Act further affirmed the transition to performance management approach; and

WHEREAS, the Transit Asset Management (TAM) Final Rule requires transit providers to set performance targets for State of Good Repair; and

WHEREAS, the Planning Rule requires Metropolitan Planning Organizations to establish targets no later than 180 days after the date on which the relevant State or provider of public transportation establishes its performance measures; and

WHEREAS, Metropolitan Planning Organizations must establish their State of Good Repair targets by June 30, 2017.

NOW THEREFORE, be it resolved that the Board of the Wilmington Urban Area Metropolitan Planning Organization hereby adopts the Cape Fear Public Transportation Authority's Transit Asset Management Plan and North Carolina Department of Transportation's Transit Asset Management Plan Performance Targets and Measures in order to meet the federal requirements.

ADOPTED at a regular meeting of the Wilmington Urban Area Metropolitan Planning Organization's Board on April 26, 2017.

Gary Doetsch, Chair

Mike Kozlosky, Secretary



NEW HANOVER COUNTY PARKS & GARDENS
230 GOVERNMENT CENTER DRIVE, SUITE 120 • WILMINGTON, NC 28403
(910) 798-7620 • (910) 798-7621 FAX • WWW.NHCGOV.COM

April 3, 2017

Mr. Mike Kozlosky
Wilmington Metropolitan Planning Organization
PO Box 1810
Wilmington, NC 28402

Re: Project U-5527 C; Federal Aid No: TAP-0332 (55); Middle Sound Greenway

Dear Mr. Kozlosky,

New Hanover County would like to request additional funds to support the design and construction of the Middle Sound Greenway, specifically the segment from Oyster Lane to Middle Sound Village. The project was originally approved on March 14, 2014 for \$90,000 with a 600' multi-use path along Middle Sound Loop Road connecting with the Middle Sound Village driveway.

We would like to request the federal funding be increased to \$140,000 and the scope be expanded to a 900' multi-use path along Middle Sound Loop Road to the end of the property line of Middle Sound Village. New Hanover County is prepared to provide the required 20% match at \$35,000.

We appreciate your support for the County's initiative to provide transportation alternatives and recreational opportunities to our citizens and visitors of the area. If you have any questions regarding our request, please feel free to contact me at 910-798-7635.

Sincerely,

Tara Duckworth
Director of Parks and Gardens

**WILMINGTON URBAN AREA METROPOLITAN PLANNING ORGANIZATION
BOARD**

**RESOLUTION SUPPORTING A MODIFICATION TO THE PROJECT SCOPE FOR
THE MIDDLE SOUND GREENWAY PROJECT**

WHEREAS, the Wilmington Urban Area Metropolitan Planning Organization provides transportation planning services for the City of Wilmington, Town of Carolina Beach, Town of Kure Beach, Town of Wrightsville Beach, Town of Belville, Town of Leland, Town of Navassa, New Hanover County, Brunswick County, Pender County, Cape Fear Public Transportation Authority and the North Carolina Board of Transportation; and

WHEREAS, on February 6, 2014 New Hanover County was awarded Transportation Alternative Program-Direct Attributable (TAP-DA) funding in the amount of \$90,000 for the Middle Sound Greenway project; and

WHEREAS, the funds were to be utilized to construct a multi-use path approximately 600 linear feet in length along Middle Sound Loop Road from Oyster Lane to the Middle Sound Village Driveway; and

WHEREAS, New Hanover County desires to modify the scope of the project by increasing the project length to approximately 900 linear feet to extend to the eastern property line of the Middle Sound Village development.

NOW THEREFORE, be it resolved that the Board of the Wilmington Urban Area Metropolitan Planning Organization hereby supports the change in project scope for the Middle Sound Greenway project.

ADOPTED at a regular meeting of the Wilmington Urban Area Metropolitan Planning Organization's Board on April 26, 2017.

Gary Doetsch, Chair

Mike Kozlosky, Secretary

**WILMINGTON URBAN AREA METROPOLITAN PLANNING ORGANIZATION
BOARD**

**RESOLUTION SUPPORTING THE ALLOCATION OF SURFACE TRANSPORTATION BLOCK
GRANT- DIRECT ATTRIBUTABLE RESERVE FUNDS TO THE MIDDLE SOUND GREENWAY
PROJECT**

WHEREAS, the Wilmington Urban Area Metropolitan Planning Organization provides transportation planning services for the City of Wilmington, Town of Carolina Beach, Town of Kure Beach, Town of Wrightsville Beach, Town of Belville, Town of Leland, Town of Navassa, New Hanover County, Brunswick County, Pender County, Cape Fear Public Transportation Authority and the North Carolina Board of Transportation; and

WHEREAS, on July 18, 2012 the Federal Transit Administration (FTA) and the Federal Highways Administration (FHWA) designated the Wilmington Urban Area Metropolitan Planning Organization as a Transportation Management Area (TMA); and

WHEREAS, Transportation Alternative Set Aside - Direct Attributable (TASA-DA) funds are available for all designated TMAs; and

WHEREAS, the TASA-DA program was previously known as the Transportation Alternative Program-Direct Attributable (TAP-DA) program under Moving Ahead for Progress in the 21st Century Act (MAP-21); and

WHEREAS, Surface Transportation Block Grant- Direct Attributable (STBGP-DA) funds are available for all designated TMAs; and

WHEREAS, the STBGP-DA program was previously known as the Surface Transportation Program-Direct Attributable (STP-DA) program under Moving Ahead for Progress in the 21st Century Act (MAP-21); and

WHEREAS, the Wilmington Urban Area Metropolitan Planning Organization's Board allocated FY 2014 TAP-DA funds to the Middle Sound Greenway project; and

WHEREAS, New Hanover County has requested an additional \$50,000 from the Wilmington Urban Area Metropolitan Planning Organization's reserve funds for un-anticipated project costs and scope change; and

WHEREAS, if approved, the project will require a 20% local contribution from New Hanover County for the local match.

NOW THEREFORE, be it resolved that the Board of the Wilmington Urban Area Metropolitan Planning Organization hereby supports the allocation of STBGP-DA reserve funds to New Hanover County for the Middle Sound Greenway project.

ADOPTED at a regular meeting of the Wilmington Urban Area Metropolitan Planning Organization's Board on April 26, 2017.

Gary Doetsch, Chair

Mike Kozlosky, Secretary



City of Wilmington
Engineering
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March 16, 2017

Mr. Mike Kozlosky, Director
Wilmington WPO
P.O. Box 1810
Wilmington, NC 28402

Re: City of Wilmington 5th & Dawson/Wooster Pedestrian Crossing, TIP U-5527-B

Dear Mr. Kozlosky,

I would like to bring you up to date on the progress of the City of Wilmington's 5th & Dawson/Wooster Pedestrian Crossing project. The project scope includes asphalt removal/repair, curb and gutter, curb ramps, drainage, high-visibility crossings and pedestrian signals at the two intersections. The project design is at 95% with the DOT encroachment agreement currently pending. DOT funds have been released for the project.

The initial cost estimate for the project was \$118,734. The latest opinion of probable cost is \$260,709, including 10% contingency, plus 20% for DOT inspection and administration. This results in an estimated shortfall of \$142,000.

The City of Wilmington requests that the Wilmington MPO commit the additional funds to the project with the understanding that the City of Wilmington will contribute the required 20 percent matching funds. Thank you for your consideration.

Sincerely,

Phil Bevilacqua, Jr., P.E.
Sr. Project Engineer

Cc: Carl H. Farmer, Jr., P.E., Division Engineer
David Cowell, P.E., City Engineer

**WILMINGTON URBAN AREA METROPOLITAN PLANNING ORGANIZATION
BOARD**

**RESOLUTION SUPPORTING THE ALLOCATION OF SURFACE TRANSPORTATION BLOCK
GRANT- DIRECT ATTRIBUTABLE RESERVE FUNDS TO THE 5TH / DAWSON AND 5TH / WOOSTER
PEDESTRIAN CROSSING PROJECT**

WHEREAS, the Wilmington Urban Area Metropolitan Planning Organization provides transportation planning services for the City of Wilmington, Town of Carolina Beach, Town of Kure Beach, Town of Wrightsville Beach, Town of Belville, Town of Leland, Town of Navassa, New Hanover County, Brunswick County, Pender County, Cape Fear Public Transportation Authority and the North Carolina Board of Transportation; and

WHEREAS, on July 18, 2012 the Federal Transit Administration (FTA) and the Federal Highways Administration (FHWA) designated the Wilmington Urban Area Metropolitan Planning Organization as a Transportation Management Area (TMA); and

WHEREAS, Transportation Alternative Set Aside - Direct Attributable (TASA-DA) funds are available for all designated TMAs; and

WHEREAS, the TASA-DA program was previously known as the Transportation Alternative Program-Direct Attributable (TAP-DA) program under Moving Ahead for Progress in the 21st Century Act (MAP-21); and

WHEREAS, Surface Transportation Block Grant- Direct Attributable (STBGP-DA) funds are available for all designated TMAs; and

WHEREAS, the STBGP-DA program was previously known as the Surface Transportation Program-Direct Attributable (STP-DA) program under Moving Ahead for Progress in the 21st Century Act (MAP-21); and

WHEREAS, the Wilmington Urban Area Metropolitan Planning Organization's Board allocated FY 2014 TAP-DA funds to the 5th / Dawson and 5th / Wooster Pedestrian Crossing project; and

WHEREAS, the City of Wilmington has requested an additional \$113,600 from the Wilmington Urban Area Metropolitan Planning Organization's reserve funds for un-anticipated project costs; and

WHEREAS, if approved, the project will require a 20% local contribution from the City of Wilmington for the local match.

NOW THEREFORE, be it resolved that the Board of the Wilmington Urban Area Metropolitan Planning Organization hereby supports the allocation of STBGP-DA reserve funds to the City of Wilmington for the 5th / Dawson and 5th / Wooster Pedestrian Crossing project.

ADOPTED at a regular meeting of the Wilmington Urban Area Metropolitan Planning Organization's Board on April 26, 2017.

Gary Doetsch, Chair

Mike Kozlosky, Secretary

Proposed Revisions to 2016-2025 STIP/MTIP Program

STIP/MTIP Modifications (April 2017)			
U-5732A	DAN OWEN DRIVE EXTENSION, SR 1570	RIGHT OF WAY	FY 2017 - \$755,000 (T)
PENDER	(FACTORY ROAD) TO DAN OWEN DRIVE.	CONSTRUCTION	FY 2018 - <u>\$750,000</u> (T)
PROJ.CATEGORY	<u>SEGMENT INTO 2 SECTIONS AND ACCELERATE</u>		\$1,505,000
REGIONAL	<u>RIGHT OF WAY FROM FY 18 TO FY 17 AND</u>		
	<u>CONSTRUCTION FROM FY 21 TO FY 18 FOR</u>		
	<u>SEGMENT "A" .</u>		



Cape Fear Crossing

STIP U-4738

Brunswick and New Hanover Counties

PROJECT STATUS REPORT

March 31, 2017

Project Description

The Cape Fear Crossing project is proposed as a roadway extending from the vicinity of US 17 Bypass and I-140 in Brunswick County to US 421 in New Hanover County, including a crossing of the Cape Fear River. The project is programmed in the approved 2016-2025 and draft 2017-2027 STIP for planning and environmental studies only using STPDA funding from the Wilmington MPO.

The following list includes tasks during the month of March:

Current Activities

- The project team continues to coordinate and correspond with project stakeholders.
- Studies for the Traffic Noise Analysis and Air Quality Analysis are ongoing.
- An update to the Draft Natural Resources Technical Report is ongoing.
- The Draft Sea Level Rise Assessment is under review by NCDOT.
- Right-of-Way cost estimates and relocation reports have been initiated.

Upcoming Activities

- The project team will hold the next NEPA/Section 404 Merger meeting, Concurrence Point 2A – Bridging Decisions and Alignment Review on May 30-31st in Wilmington (location TBD).
- The project team will initiate preparation of the Draft Environmental Impact Statement.

Past Activities

- The project team presented the status of the project and preliminary alternative impact analysis results to the WMPO TAC on 3/29/17.
- The project team met with the State Historic Preservation Office on 3/27/17 to review historic resources in the project study area and finalize the Section 106 effect calls.
- The Archaeological Predictive Model Update was finalized on 2/13/17.
- The project team held the Section 106 Effects meeting with the State Historic Preservation Office and Federal Highway Administration on 12/08/16.
- The NEPA/Section 404 Merger Team reached Concurrence Point 2 – “Detailed Study Alternatives Carried Forward” on 2/10/14.
- The NEPA/Section 404 Merger Team reached Concurrence Point 1 – “Purpose and Need and Study Area Defined” on 12/12/13.
- Technical documents that have been finalized are available on the project website under “Project Documents.”

Contact Information

NCDOT – Jay McInnis, jmcinnis@ncdot.gov, 919.707.6029

AECOM – Joanna Rocco, joanna.rocco@aecom.com, 919.239.7179

Website: <http://www.ncdot.gov/projects/capefear/>

Email: capefear@ncdot.gov

Hotline: 1.800.233.6315

WILMINGTON MPO
TRANSPORTATION PLANNING
APRIL 2017

17TH STREET STREETScape

Project Descriptions/Scope: The 17th Street streetscape project will include upgrades to 17th Street between Wrightsville Avenue and Princess Place Drive. The project will provide for a more efficient transportation system by reduced travel speeds, removal of the lateral shift, improved pedestrian crossings, improved safety and enhance the aesthetics of the area. The project may also include aesthetic improvements that will enhance the entryway into Carolina Heights and provide a pocket park. The City awarded the construction contract to Lanier Construction on June 21st. Construction began on August 22nd. Construction is on-going and anticipated to be complete in July.

Next Steps:

- Complete construction of the improvements

GULCH GREENWAY MASTER PLAN

Project Description/Scope: Create a master plan to guide the development of a section of trail located in the former railroad bed between 3rd and McRae Streets in downtown Wilmington. This section of trail is identified in the Wilmington/New Hanover County Comprehensive Greenway Plan as part of the top-ranked “Downtown Trail”. A lease for the right-of-way for this section of future trail has been authorized through SB174. The master plan will utilize broad community and stakeholder engagement to lay out a conceptual design towards successful funding and construction of this project. This plan is being created through a joint effort between the Wilmington MPO, NCDOT, City of Wilmington, and the Cape Fear Public Transportation Authority.

Next Steps:

- Receive direction from elected leadership regarding the progress of the Gulch Greenway Master Plan and the implementation of the Public Outreach Plan
- Implement the Public Outreach Plan to develop public engagement/marketing tools to include a project website, a PowerPoint template, and other marketing materials
- Officially launch the project and engage the public/stakeholders in the development of the plan
- Finalize existing conditions analysis work to inform the development of the trail’s conceptual design

LELAND STREET DESIGN STANDARDS MANUAL

Project Description/Scope: The Town of Leland is partnering with the Wilmington Urban Area MPO to utilize consultant services for the development of a street design standards manual. This manual will guide new development towards the construction of streets that better align with the town’s values in terms of connectivity, multi-modal activity, maintenance, design, and safety. The Leland Street Design Standards Manual will include the provision of both technical standards to be used by engineers in their plan sets, and conceptual tables/graphics which will more easily convey the impact of technical standards on the physical landscape to the public and elected officials.

Next Steps:

- Host a kickoff steering committee meeting to present information and receive input on the street design concepts
- Prepare the draft Leland Street Design Standards Manual

MAYOR'S RAIL RE-ALIGNMENT TASK FORCE

Project Description/Scope: The City of Wilmington has appointed a Mayor's Task Force to evaluate the feasibility of re-aligning the rail line that currently traverses the City of Wilmington and potentially re-purpose this rail line for another use. This project is jointly funded by the City of Wilmington, North Carolina Department of Transportation and Wilmington MPO. Moffatt & Nichol is completing the study. The draft Physical Conditions, Socio-economic Conditions, Financial Conditions, Legal Conditions, Transit Economic Benefit Assessment, Transit Environmental Analysis Summary, Rail Transit Recommendations, Engineering Analysis, Environmental Analysis, Rail Environmental Analysis Summary, Financial Analysis, Executive Summary and Implementation Schedule reports have been reviewed and comments have been provided to the consultant. Public meetings were held on February 20th and 22nd.

Next Steps:

- The consultant is revising the reports to address comments
- Report to be distributed to the Task Force in early April
- Hold a Task Force meeting on April 26th
- Presentations to the Wilmington City Council and Wilmington MPO in May

Northeastern New Hanover County Future Street Plan

Project Description/Scope: New Hanover County and the Wilmington Urban Area MPO are partnering to develop a Future Street Plan for Northeastern New Hanover County. This plan will serve as a framework for a future street system in the study area by examining how well the existing transportation system performs, developing multi-modal street design guidelines, and creating strategies for integrating land use and transportation development. The plan will consider the impacts of the street network on public health, traffic safety, emergency management, and access for existing and future residents.

Next Steps:

- Host a kickoff Technical Advisory Panel meeting
- Hold a public work session on April 25, 2017 at the Northeastern NHC library – Economic Development Center
- Draft Existing Conditions Memorandum

SITE DEVELOPMENT REVIEW

Project Descriptions/Scope: The Wilmington MPO assists with site development and transportation impact analysis review for the MPO's member jurisdictions. During the last month, staff has reviewed the following development proposals:

- New Hanover County Development Plan Reviews: 7 reviews
- New Hanover County Informal Plan Reviews: 1 reviews
- New Hanover Concept Reviews: 0 reviews
- Town of Leland Formal Reviews: 3 reviews

- Town of Leland Informal Reviews: 0 reviews
- Town of Carolina Beach Formal Reviews: 0 reviews
- Town of Carolina Beach Informal Reviews: 0 reviews
- Brunswick County Formal Plan Reviews: 0 reviews
- Brunswick County Informal Plan Reviews: 0 reviews
- TIA Reviews: 18 total (New Hanover County 7, City of Wilmington 7, Carolina Beach 0, Leland 1, and Pender County 3) new 3 and ongoing 15
- Pender County Development Plan Reviews: 5 reviews
- Pender County Informal Plan Reviews: 1 reviews
- Pender County Concept Reviews: 0 reviews
- City of Wilmington Formal Reviews: 55 (5 new, 50 on-going)
- City of Wilmington Informal Reviews: 23 (5 new, 18 on-going)
- City of Wilmington Concept Reviews: 21 (15 new concept reviews-6 on-going concept)
- COW Project Releases: 17 Full releases

STP-DA/TAP-DA FY 2013, 2014 and 2015 Project Status
STP-DA

U-5534B - CITY OF WILMINGTON- HEIDI TRASK DRAWBRIDGE

Project Descriptions/Scope: This project consists of construction of a public walkway/pier underneath the Heidi Trask Drawbridge to provide for a safe crossing for cyclists and pedestrians across US 74 (Wrightsville Avenue) on the mainland side of the drawbridge in Wilmington.

Next Steps:

- Construction contract awarded to Intercoastal Marine, LLC
- Pricing for change order received from contractor. Staff is following up regarding the amount.
- DOT comments on substructure design received. Consultant and DOT coordination and follow up needed for addressing comments.
- ECS providing additional geotechnical services to the City

U-5534C - WRIGHTSVILLE AVENUE/GREENVILLE AVENUE TO HINTON AVENUE

Project Descriptions/Scope: The project is for construction of intersection re-alignment improvements at the intersection of Wrightsville Avenue/Greenville Avenue and bike lanes and sidewalks along Greenville Avenue from Wrightsville Avenue to Hinton Avenue.

Next Steps:

- Final plan package and contract documents anticipated submission on April 14, 2017
- Staff is working on right of way acquisition. Anticipate R/W acquisition completed May 2017.
- Finalizing comments from CFPUA

U-5534D - TOWN OF LELAND - OLD FAYETTEVILLE ROAD MUP

Project Descriptions/Scope: This project is for design and construction of a ten foot (10') wide multi use path, separate but adjacent to Old Fayetteville Road, beginning at or around the corner of the Leland Town Hall Campus and ending at the driveway of the North Brunswick High School.

Next Steps:

- 65% plans submitted at the end of March
- Begin R/W acquisition anticipated September 2017
- Construction contract let is anticipated in May 2018

U-5534E - TOWN OF CAROLINA BEACH - ISLAND GREENWAY AND HARPER AVENUE

Project Descriptions/Scope: This project is for the design and construction of an off-road multi-use path that begins at Mike Chappell Park and winds along the existing cleared fire path and terminates at Alabama Avenue and the Harper Avenue bike lanes will consist of a bicycle boulevard on existing pavement on each side of Harper Avenue from Dow Road to Lake Park Boulevard. The Town desires to combine the project with the awarded 2014 STP-DA project. The right of way certification received December 14, 2016. The design plans have been approved.

Next Steps:

- Finalize contract documents and estimate.
- Town needs to submit request for supplemental agreement to adjust funding amount
- Supplemental agreement needs to be put on the BOT agenda by June 3
- Construction fund request needs to be put on the BOT agenda before the end of July to make the September BOT meeting
- Anticipated Let Date: September 2017

U-5534F – CITY OF WILMINGTON – PARK AVENUE MUP – PHASE II

Project Descriptions/Scope: This project is for the design and construction of an off-road multi-use path between Audubon Boulevard and Kerr Avenue. The right of Way certification was received November 2, 2016.

Next Steps:

- Final plans, specifications, contract documents, and final cost estimate need to be submitted to NCDOT for review
- City needs to submit request for supplemental agreement to adjust funding amount
- Supplemental agreement needs to be put on the BOT agenda by June 3
- Construction fund request needs to be put on the BOT agenda before the end of July to make the September BOT meeting
- Anticipated Let Date: September 2017

U-5534S (Formerly U-5534M)– Coral Drive Sidewalks

Project Descriptions/Scope: The construction of sidewalks along coral drive will install approximately 954 feet of 5 foot wide sidewalk on Coral Drive adjacent to Wrightsville Beach Elementary. The Letters of Interest has closed and the Town has received proposals.

Next Steps:

- Notice to proceed issued to SEPI.
- Survey underway
- Anticipated Let Date: November 2017. May need to push to contractor NTP to summer 2018 due to amount of school traffic on the roadway.

U-5534H – HINTON AVE MULTI-USE PATH

Project Descriptions/Scope: This project consists of the construction of a 10' wide multi-use path along Hinton Avenue from Park Avenue to Greenville Avenue.

Next Steps:

- Plan comments have been received from NCDOT
- City following up on revised scope from McKim and Creed
- Revised 60% plans anticipated by May 2017
- Anticipated Let Date of Fall 2018

U-5534G –HOOKER ROAD MULTI-USE PATH

Project Descriptions/Scope: The project consist of the construction of a 10' wide multi-use path along Hooker Road from Wrightsville Avenue to Mallard Drive/Rose Ave intersection

Next Steps:

- Plan comments have been received from NCDOT
- City following up on revised scope from McKim and Creed
- Revised 60% plans anticipated by May 2017
- Anticipated Let Date of Fall 2018

U-5534K –LELAND MIDDLE SCHOOL SIDEWALK

Project Descriptions/Scope: The construction of 5 foot wide concrete sidewalk adjacent to Old Fayetteville Road from Ricefield Branch Rd to the Hwy 74/76 overpass after Glendale Drive with connections to Leland Middle School and the surrounding neighborhoods. The design plans are complete.

Next Steps:

- Right of way acquisition underway
- Right of way Certification anticipated April 2017
- Encroachment agreement needed once right-of-way finalized
- Let date will be delayed to match up with “J” project.
- CEI has been selected

U-5534J –OLD FAYETTEVILLE LOOP ROAD PEDESTRIAN LOOP

Project Descriptions/Scope: The construction of 5 foot wide sidewalks in three locations: along Village Road from Town Hall Drive going southeast to the existing sidewalk in front of the apartment complex, along Town Hall Drive from Village Road NE to the sidewalk currently under construction by the new Town Hall, and along Old Fayetteville Road from the existing sidewalk in front of the apartment complex to Village Road NE. The design plans are complete.

Next Steps:

- Right of way acquisition underway
- Town is going to propose change in scope to be MUP instead of sidewalk. Anticipate possible 6 month project delay.
- CEI has been selected

U-5534I –VILLAGE ROAD MULTI-USE PATH EXTENSION

Project Description/Scope: The construction of a 10 foot wide asphalt multi-use path routed across Perry Ave, behind the library, out to Village Road, down Village Road ending on the western edge of the First Baptist Church property before the Sturgeon Creek Bridge. The design plans are complete.

Next Steps:

- Right of way acquisition underway
- Right of way Certification anticipated April 2017
- Encroachment agreement needed once right-of-way finalized
- Let date will be delayed to match up with “J” project.
- CEI has been selected

SHIPYARD BOULEVARD SIDEWALK-

Project Description/Scope: The construction of a sidewalk and bus pull-out along Shipyard Boulevard between Vance Street and Rutledge Drive. This will be a partnership between the City of Wilmington, Cape Fear Public Transportation Authority and Wilmington MPO.

Next Steps:

- 60% design plans anticipated on April 17, 2017
- Design completion anticipated August 2017

U-5534O Cape Fear Blvd Multi-Use Path –

Project Description/Scope: The construction of approximately 3200 lf of 10’ wide paved off-road Multi-use Path along the south side of Cape Fear Blvd. from 6th Street to Dow Road.

Next Steps:

- Design consultant agreement executed
- 65% plan review completed by NCDOT
- Final design should be underway
- Anticipated let date September/October 2017

U-5534Q –S. College/Holly Tree Crosswalks –

Project Description/Scope: The project will install sidewalk, ADA ramps, Curb and gutter, markings and traffic signal revisions required to install actuated pedestrian crossings of S. College Road and crossings on Holly Tree Road.

Next Steps:

- City routing consultant contract for signatures
- City to provide the survey for the project

U-5534P –Westgate Multi-Use Path (Design Phase) –

Project Description/Scope: funding for preliminary engineering and design phase services for this project in the amount of \$96,172

Next Steps:

- It is anticipated that the Town will be requesting to remove this project from the program

- It is anticipated that the Town will be requesting to move money awarded to this project to cover the CEI costs associated with the I,J,K projects.

TAP-DA

CITY OF WILMINGTON – MILITARY CUTOFF ROAD MULTI-USE PATH

Project Descriptions/Scope: This project is for the design and construction of a 10-foot wide, asphalt multi-use path on Military Cutoff Road from Eastwood Road to Drysdale Drive.

Next Steps:

- LJB is working on the schedule for design services
- Anticipated let date Fall 2018

U-5527B CITY OF WILMINGTON – 5th AVE INTERSECTION UPGRADES

Project Descriptions/Scope: This project is for the construction of high visibility crosswalks, curb ramps, and pedestrian activated signals on 5th Ave at the Dawson Street and Wooster Street intersections.

Next Steps:

- City of Wilmington is preparing plans for the project
- Plans approved
- Right-of-way certification has been obtained
- PCE approval received
- Construction authorization request submitted
- City has requested an additional \$113,600 in federal funds for the project.
- Anticipated Let Date: May 2017

U-5527C NEW HANOVER COUNTY – MIDDLE SOUND GREENWAY – EXTENSION TO MIDDLE SOUND VILLAGE

Project Descriptions/Scope: This project is for the construction of a multi-use path along Middle Sound Loop Road from Oyster Lane to the Middle Sound Village driveway.

Next Steps:

- NHC selected Davenport for design
- NHC is negotiating scope and fee with consultant
- The County has requested a scope change for the project to add 300 linear feet to the project making the total project length 900 feet.
- The County has requested an additional \$50,000 of federal funding for the project to bring the total federal funding amount to \$140,000.
- NHC reaching out to NCDOT to request speed reduction on Middle Sound in the project vicinity

U-5527D HARPER AVE. MULTI-USE PATH

Project Descriptions/Scope: The construction of approximately 2104 lf of 10' wide paved multi-use path along Harper Ave. from Dow Road to 6th Street

Next Steps:

- NCDOT Agreement is in place
- PE funds authorized August 2, 2016
- Advertisement of PE Services is anticipated in early summer 2017

- Anticipated let date June 2018

TRANSPORTATION DEMAND MANAGEMENT PROGRAM

Project Description/Scope: UNCW is taking the role as lead employer for the Cape Fear region. The WMPO will coordinate with UNCW to work with other major employers in the region to identify opportunities for public outreach, marketing, carpooling, vanpooling, alternative/compressed work schedules, Emergency Guaranteed Ride Home, park and ride lots, etc. The MPO established 2 park and ride lots in Brunswick County and a ridesharing program that began on January 5, 2015. The MPO adopted “Work Cape Fear: Expanding Commuter Options in the Cape Fear Region” TDM Short Range Plan on January 28, 2015 and also authorized staff to apply for a TDM grant through NCDOT that if approved would fund a full-time TDM Coordinator position. The Agreement with NCDOT for the full-time TDM Coordinator position was approved on November 4, 2015. The Wilmington MPO has hired a full-time TDM Coordinator. Pulsar is continuing to develop branding materials for the TDM program.

Next Steps:

- Continue regularly scheduled TDM Committee meetings
- Attend meeting with TDM Committee and Pulsar for presentation of proposed branding materials (scheduled for 4/11/17)
- Organize Bike to Work Week for the Cape Fear Region
- Partner with large employers to determine vanpool options
- Partner with K-12 schools in WMPO jurisdiction to provide carpool opportunities to parents
- Partner with UNCW to explore carpool matching options and guaranteed ride home strategies
- Coordinate with employers to implement 2 additional vanpool programs and potential Park & Ride lot locations
- Develop bike share RFP
- Coordinate bike share presentations for interested employers



Cape Fear Public Transportation Authority

Project Update

April 2017

REGIONAL AUTHORITY PROJECTS

1. **Bus fleet replacement** - identifying state and federal funding opportunities to replace eleven thirty-five foot buses, two trolleys, and three shuttles. The Authority continues to seek federal funding for replacement buses. Two replacement shuttle vehicles were delivered in March 2017. Three replacement shuttle vehicles will be considered by the Authority in April. Seven replacement paratransit vehicles have been approved for funding. The paratransit vehicles will be ordered throughout the summer for delivery in the fall of 2017.
2. **Short Range Transportation Plan** - following adoption of Cape Fear Transportation 2040 by the Wilmington Metropolitan Planning Organization (WMPO), Wave Transit is preparing to begin its latest short range plan. The plan will set a course for public transportation initiatives, route structure and revenue programming for the next five years. The plan will also include a financial element to ensure that transit programs are compliant with FTA rules and regulations.
Under the direction of the Authority's Operations and Planning Committee made up of funding partners, Board members, staff, WMPO board members, WMPO staff, passengers, interested citizens, and professional transit planning consultants, the 9 - 12 month plan is an important tool in identifying and quantifying the public transportation needs of the community. Marketing, public relations and community support for financing transit in Southeastern North Carolina will also be a focus of the plan. A key component of the plan will be extensive surveying and data collection to assess the needs of current and prospective passengers. A contract with Nelson Nygaard Consulting was awarded on March 23, 2017. The plan kickoff is scheduled for April 06, 2017.
3. **Long Term Funding** - (no significant change) currently, the Authority does not have a dedicated source of local funding. Strategies to meet future revenue requirements will be identified during SRTP development. The Authority has drafted a *Short Range Financial Plan* which was adopted on January 26, 2017. The financial plan findings will be reviewed by the SRTP consultant and included in the final plan. A study regarding long term funding for transit in the region has been requested by the City of Wilmington and New Hanover County. The request will be included as part of the upcoming short range planning effort.
4. **Shelter Program** - a program to replace and add up to 50 bus shelters and 25 benches at bus stops is underway. Construction of the first eight shelters is complete. Phase two, consisting of 12 shelters and 15 benches is expected to begin in April 2017. Phase three consisting of three super stops at Independence Mall, Hanover Center, and Monkey Junction is in the engineering and permitting phase.

WMPO SPONSORED PROJECTS

1. **Pleasure Island Special Appropriation** - an STBGP-DA transfer was approved by the WMPO in 2016 for \$75,000 to support Wave Transit route 301. The process of flexing the funds from FHWA to FTA is in process and expected to be complete in the second quarter of calendar 2017.

2. **Wilmington Multimodal Transportation Center** - An Interlocal Agreement between Authority, City of Wilmington, WMPO, and NCDOT has been executed. Demolition of Haul building is complete. The NEPA document has been submitted and approved by FTA making the project eligible for federal funding. Thanks to generous support from the WMPO, STP-DA funding in the amount of \$2,400,000 has been flexed by FHWA to FTA for the project and a formal grant with FTA has been submitted. Approval of the grant application is in the final stages and expected in the second quarter of calendar 2017.

The real property transfer is complete. Stabilization design is complete and the Authority is soliciting quotes for hazardous materials abatement and demolition. A contract for demo and abatement is expected to be considered by the Authority on April 27, 2017. Stabilization construction beyond demolition and abatement is expected to begin in late spring or early summer.

Renovation design and utility relocation is underway with an anticipated completion date of late spring. Renovation construction is expected to commence in the fall of 2017 with a spring 2018 completion.

3. **Preventive Maintenance & ADA** - STP-DA funding in the amount of \$350,000 for preventive maintenance and ADA service throughout the region was approved by the WMPO in 2016. The process of flexing the funds from FHWA to FTA is in process and expected to be complete in the second quarter of calendar 2017. The funds will assist the Authority in maintaining its fleet of fixed route buses and FTA funded facilities to meet the FTA *State of Good Repair Requirement*. The preventive maintenance funding will ensure that Wave Transit vehicles are safe, reliable, and provide a positive and comfortable experience on Wave Transit routes throughout the region. The allocation does not represent all PM funding to the Authority but will serve to supplement current federal funding.

Americans with Disabilities Act (ADA) compliance utilized under the funding will be used to offset the cost of providing complementary ADA service for passengers unable to access Wave Transit fixed routes. Paratransit services provided under the WMPO authorized funding include specialized origin to destination van service. In February 2017 the Authority provided 1,616 ADA passenger trips. The period of performance for the project is 07/01/2016 through 06/30/2017.

4. **Preventive Maintenance & ADA** - STBGP-DA funding in the amount of \$510,778 for preventive maintenance and ADA service throughout the region was approved by the WMPO in 2016. The process of flexing the funds from FHWA to FTA is in process and expected to be complete in the second quarter of calendar 2017. The funds will assist the Authority in maintaining its fleet of fixed route buses and FTA funded facilities to meet the FTA *State of Good Repair Requirement*. The preventive maintenance funding

will ensure that Wave Transit vehicles are safe, reliable, and provide a positive and comfortable experience on Wave Transit routes throughout the region.

Americans with Disabilities Act (ADA) compliance utilized under the funding will be used to offset the cost of providing complementary ADA service for passengers unable to access Wave Transit fixed routes. Paratransit services provided under the WMPO authorized funding include specialized origin to destination van service. The period of performance for the project is 07/01/2017 through 06/30/2018.

5. **Replacement CNG Buses** - In February 2017 the WMPO appropriated \$372,000 in FHWA funding for two replacement CNG buses. The Authority has a contract for the vehicles with Gillig, LLC. Final pricing pursuant to the PPI provisions of the contract are being calculated. Local matching funds are being finalized. A purchase order for the vehicles will be considered by the Authority following the fund transfer request from NCDOT to FHWA. Pursuant to the contract, delivery is scheduled within 365 days of issuance of a purchase order.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

April 20, 2017

WMPO Project Update List
Projects Under Construction

***Contract C203922: Greenfield Lake:** Realign and upgrade intersection at SR 1436/US 421 and SR 1140 (Burnett Blvd.) south of Willard Street.

Contractor has begun waterline relocations for proposed culvert. 60% complete.

Contractor plans to shut down 3rd Street and Burnett Blvd. on April 11th. Contract allows Contractor to close road until Mid-December.

Contractor: Mountain Creek Contractors Inc.

Bid Amount: \$3,156,247.36

Estimated Completion Date: October 2018

Percent Complete: 13.6%

***R-2633 BA – (Wilmington Bypass: C203199)** construct a 4-lane divided highway from US 74/76 (near Malmo) to SR 1430 (Cedar Hill Road).

Estimated Contract Completion Date April 30, 2018

Open to traffic on November 2017

Contractor: Barnhill Contracting

Percent Complete: 69.8%

***R-2633 BB – (Wilmington Bypass: Bridge over Cape Fear River: C203198)** construct a 4-lane divided highway from SR 1430 (Cedar Hill Road) to US 421 (where I-140 currently ends in New Hanover County...this includes the large bridge over the Cape Fear River).

Estimated Contract Completion Date June, 2018

Open to traffic on November 2017

Contractor: Balfour Beatty Infrastructure

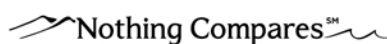
Percent Complete: 83.4%

R-3324 – (Long Beach Road Extension: C202155) construct a 2-lane, 2-way roadway from NC 133 (near Jump & Run Creek) to NC 87. Most of this roadway will be on new location.

Contractor: Balfour Beatty Infrastructure

Waiting on Final Estimate

Percent Complete: 100%



B-5103: (C203540) replace bridge #35 over the abandoned railroad on SR 1627 (3rd Street), in Wilmington.

Percent Complete: 99.9%. Waiting on final estimate.

***U-3338B: (C203772)** Widening of Kerr Ave. from Randall Parkway to Martin Luther King, Jr. Parkway. Installing storm drain throughout project, and grading Multi-Use Path at Kerr Ave. and Randall Prkwy.

Estimated Contract Completion Date September 2019

Contractor: Sealand Contractors Corp.

Percent Complete: 34.4%

Wrightsville Avenue (EB-4411C: DC00119):

Widen for bike lanes on SR 1411 (Wrightsville Ave.) from Huntington Ave. to US 76 (Oleander Drive). Pavement markings have been placed.

Estimated Contract Completion Date September 2016. Pushed back

Contractor: Highland Paving Company

Percent Complete: 100.0%. Waiting on Final Estimate

***B-4929: (C203789) Bridge @ Surf City NC 50/210** - replace bridge #16 over the inter-coastal waterway with a fixed span high rise structure. Moratorium for driving piles is April 1, 2017. The area where they are working is considered a Primary Nursery Area. No bottom disturbing activities can be performed in a PNA during the April 1- September 30 time frame. Contractor is working 24hrs a day/6-days a week. Installation of permanent casings has begun. Building temporary access trestle from mainland and island side.

Estimated Contract Completion Date November 2020

Contractor: Balfour Beatty Infrastructure

Percent Complete: 21.9%

R-3432: SR 1163 (Old Georgetown Road Ext. C203163): Add roadway extension from SR 1184 (Ocean Isle Beach Road), to NC 179.

Project is Complete. Waiting on final walk through.

Future Projects

R-3300B: US 17 Hampstead Bypass: Add new divided highway from NC 210 north to Sloop Point Loop Road. (Currently funded)

Let Date: FY2021

US 421: Grading, drainage, paving and install signal and culvert at the intersection of SR 1436 / US 421 and SR 1140 South of Willard Street. Miles (0.170).

Anticipated Completion Date: October 2018

B-5236: replace bridge #19 over Lords Creek on SR 1100 (River Road)

Let Date September 2017

***U-4751: Military Cutoff Road Extension:** extending Military Cutoff Road from Market Street to the Wilmington Bypass, with an interchange at the Bypass.

Construction will begin at Lendire Road, West of US 17 Business (Market Street) to US 17 Business (Market Street) SR 1403 (Middle Sound Loop Road). Realign roadway.

NCDOT currently providing inspector for relocating utilities.

Construction forecasted from FY2017 - FY2021

Let Date October 2017

R-5021: widening of NC 211 from NC 87 to SR 1500 (Midway Road) to a 4-lane divided facility.

Let Date June 2018

U-4902 C&D: US 17 Business (Market Street) construct a “super-street” (median) from SR 2734 (Marsh Oaks Drive) to Lendire Drive & from Station Road to US 74 (MLK Parkway/Eastwood Road).

Let Date October 2018

B-4590: replace bridge #29 over Smith Creek on NC 133 (Old Castle Hayne Road)

Let Date December 2018

U-5710: US 74 (Eastwood Road) from Burnett Avenue to US 117 (Shipyard Blvd) upgrade the roadway.

Let Date July 2021

U-5729: US 421 (Carolina Beach Road) from Burnett Avenue to US 117 (Shipyard Blvd) upgrade the roadway

Let Date July 2021

U-5790: US 421 (Carolina Beach Road) widen existing US 421 from Sanders Road to NC 132 (College Road) and construct fly-overs at Monkey Junction intersection

Design Build Selection Date January 2020

***U-5731: US 74 (US 17/US 421 in Wilmington)**

Construct a Fly-Over and Free Flow Ramp at interchange

Let Date September 2022

U-5732: US 17 (Ocean Highway in Hampstead)

Convert to superstreet from SR 1582 (Washington Acres Road) to SR 1563 (Sloop Point Loop Road).

Let Date September 2020

***U-5734: US 421 (South Front Street)**

Widen to multi-lanes from US17 Business/US 76/US 421 (Cape Fear Memorial Bridge) to US 421 (Burnett Blvd.)

Let Date September 2023. Right of Way and Utilities Let 2021

U-5710: US 74 (Eastwood Road) construct an interchange at the at-grade intersection of SR 1409 (Military Cutoff Road) & US 74 (Eastwood Road)

Let Date January 2022

FS-1503A: Feasibility Study US 17 Bus. (Market Street) study the at-grade intersection of US 17 Business (Market Street), US 74 (MLK Parkway) & US 74 (Eastwood Road) for installment of an interchange.

Feasibility Study in progress.

FS U-5734: Feasibility Study S. Front Street study the widening of S. Front Street from the intersection of Burnett Blvd. and US 421 (Carolina Beach Road), to Dawson Street.

Environmental Assessment in progress.

***FS-1003B: Feasibility Study US 421 (Carolina Beach Road)** study the widening of roadway from Sanders Road to NC 132 (College Road).

Feasibility Study in progress.

Resurfacing Contracts - New Hanover County

Mill & resurface the following primary routes in New Hanover County: 2017CPT.03.07.20651

SR 1318 (Blue Clay Rd.) – from radius at intersection of SR 1322 (Kerr Ave.) to pvt seam at US 117. 2.89 miles.

SR 1324 (Sheridan Dr.) – from NC 133 to SR 1325 (Long Leaf Drive).

SR 1325 (Long Leaf Dr.) – from SR 1326 (Laurel Drive) to SR 1358 (Holland Drive).

SR 1326 (Laurel Dr.) – from SR 1358 (Holland Drive) to dead end.

SR 1332 (Chair Rd.) – from NC 133 west on NC 133.

SR 1382 (Garden Place Dr.) – from NC 132 to SR 1387 (Hyacinth Ave.)

SR 1383 (Wedgewood Rd.) – from SR 1382 (Garden Place Dr.) to dead end.

SR 1387 (Hyacinth Ave.) – from SR 1382 (Garden Place Dr.) to dead end.

SR 1668 (Balsam Dr.) – from SR 1667 (Hickory Knoll Dr.) to SR 1668 (Balsam Dr.).

SR 1669 (Darley Ln.) – from SR 1667 (Hickory Knoll Dr.) to SR 1686 (Royal Oak Dr.)
SR 1686 (Royal Oak Dr.) – SR 1492 (Myrtle Grove Rd.) to SR 1667 (Hickory Knoll Dr.)
SR 2071 (Arlene Dr.) – from NC 133 to end of maintenance.
SR 2181 (Blue Clay Rd. / Dairy Farm Rd.) – from SR 1002 (Holly Shelter Rd.) to SR 1336 (Sidbury Rd.).
SR 2199 (Creekstone Ln.) – from SR 1335 (Parmele Rd.) to end of maintenance.
SR 2200 (Plum Tree Lane) – from SR 2199 (Creekstone Ln.) to end of maintenance.
SR 2501 (Access Rd. to Monkey Jct.) – from US 421 to US 421.
SR 1322 (Murrayville Rd.) – from SR 2234 (Brittany Rd.) to SR 2691 (Retriever Dr.).
SR 2313 (Wilshire Blvd.) – from west of SR 1175 (Kerr Ave.) to east of Rosemont Ave.
SR 1400 (Flutch Creek Rd./Champ Davis Rd.) – from south of SR 2845 (Market Street) to SR 1491 (Porters Neck Rd.)
SR 2652 (Northchase Pkwy. NE) – from US 117 to cul-de-sac

Let Date Spring: 2017

Mill & resurface the following primary routes in New Hanover County:

US 421 (Carolina Beach Road) – from 0.26 miles south of Independence Blvd. (non-system portion) to west of Lake Shore Drive (non-system)
US 117 Northbound Lanes (Shipyard Blvd) – from US 421 to 0.05 miles east of US 421 (Carolina Beach Road)
US 117 Southbound Lanes (Shipyard Blvd) – from 0.20 miles east of US 421 to US 421 (Carolina Beach Road)
US 421 Southbound Lanes (South 3rd Street) – from US 76 (Dawson Street) to Greenfield Street (non-system)
US 421 Northbound Lanes (South 3rd Street) – from Greenfield Street (non-system) to US 76 (Dawson Street)
US 17 Business (South 3rd Street) – from US 76 eastbound lanes to US 76 westbound lanes.

Mill & resurface the following secondary routes in New Hanover County:

SR 1218 (16th Street) – from US 76 westbound lanes (Wooster Street) to US 76 eastbound lanes (Dawson Street)
SR 1371 (16th St.) - from Grace Street (non-system) to US 17 Business (Market Street)
SR 2816 (16th St.) - from US 17 Business (Market Street) to US 76 westbound lanes (Wooster Street)
SR 1301 (17th Street) - from US 17 Business (Market Street) to Grace Street (non-system)
SR 2817 (17th Street) - from US 76 eastbound lanes (Dawson Street) to US 17 Business (Market Street)
SR 1411 (Wrightsville Avenue) - from Dawson Street Extension (non-system) to SR 1209 (Independence Blvd.)

Resurface the following secondary routes in New Hanover County:

SR 2699 (Amsterdam Way) - from SR 2700 (Old Dairy Rd.) to SR 2048 (Gordon Rd.)

SR 2701 (Antilles Ct.) - from SR 2698 (Netherlands Dr.) to end maintenance
SR 2698 (Netherlands Dr.) - from SR 2048 (Gordon Rd.) to SR 2700 (Old Dairy Rd.)
SR 2700 (Old Dairy Rd.) - from US 17 Bus. (Market St.) to SR 2699 (Amsterdam Way)
SR 2220 (Windmill Way) - from SR 2219 (N. Green Meadows Dr.) to SR 2700 (Old Dairy Rd.)
SR 2183 (Spring Rd) - from NC 133 (Castle Hayne Rd.) to SR 2184 (Fairfield Rd.)
SR 2184 (Fairfield Rd.) - from SR 2183 (Spring Rd) to SR 1318 (Blue Clay Rd)

Widen & resurface following routes in New Hanover County:

SR 1940 (Covil Farm Rd) - from SR 1409 (Military Cut-Off Rd) to SR 1916 (Red Cedar Rd)
SR 2717 (Torchwood Blvd.) - from US 17 Bus. (Market St.) to SR 2718 (Beacon Dr.)
Mill & resurface a section & just resurface another section of SR 1363 (Bayshore Dr.) from US 17 Bus. (Market St.) to SR 1393 (Biscayne Dr.)

New Hanover:

I-40 – milling & resurfacing from Gordon Road interchange to NC 210 interchange
I-40 – milling & resurfacing from US 117 interchange to mile post 393 (approximately 3.5 miles east of US 117 interchange)

No activity to report to date

New Hanover County: Resurfacing Contract: C203868, I-5760

I-140 (Wilmington Bypass) resurface from I-40 to US 421 & reconstruction of bridge approaches, joint repair & signals. **No activity to report to date.**

Contractor: Barnhill Contracting Company

Estimated Contract Completion Date August 2017

Percent Complete: 12.6%

New Hanover County: Resurfacing Contract: 2017CPT.03.01.10651 C203888

US 117/NC 132 (College Road) from US 17 Business (Market Street) to SR 2313 (Wilshire Blvd.)

WBS #36249.3622 City of Wilmington signal plan modifications & work to install pedestrian upgrades at the intersection of US 117/NC 132 (S. College Road) and SR 2313 (Wilshire Blvd) to US-17 Business.

Includes safety projects:

W-5203AA construct offset left turn lanes on College Road & Hurst/Hoggard Drive upgrade pedestrian facilities to high visibility crosswalks w/ countdown pedestrian heads. Extend sidewalk to connect with existing sidewalk.

W-5601BB install high visibility crosswalks & push button pedestrian signals at the intersection of College Road & New Center Drive.

Contractor: Barnhill Contracting Company

Percent Complete: 4.7%. Estimated Contract Completion Date February 2018

Resurfacing Projects - Brunswick County

Resurfacing Contract: C203923, 2017CPT.03.06.10101 & 2017CPT.03.06.20101

Brunswick County primary routes: 1 Section of US 74/US 76, 2 Sections of NC 87, NC 179, NC 904/179, and 41 Sections of secondary roads.

Percent Complete: 5.4%

***Estimated Completion Date: December 2017**

Resurfacing Contract: I-5357, C203630, WBS #46176.3.FS1, Brunswick County secondary routes:

SR 1104 (Beach Drive) – patching, milling, resurface & leveling from beginning of curb & gutter section to end of SR 1104

SR 1828 (Kings Lynn Drive) – patching, mill & resurface from SR 1104 (West Beach Drive) to SR 1828

SR 1401 (Galloway Road) – resurface from US 17 to SR 1402 (Randolphville Road)

SR 1435 (North Navassa Road) – patching, mill & resurface from SR 1472 (Village Road Northeast) to SR 1432 (Old Mill Road Northeast)

SR 1430 (Cedar Hill Road) – patching, mill & resurface from SR 1435 (North Navassa Road) to 0.58 miles south of SR 1431 (Royster Road Northeast)

SR 1430 (Cedar Hill Road) – patching, mill & resurface from 0.54 miles north of SR 1431 (Royster Road Northeast) to SR 1426 (Mount Misery Road)

Contractor: S.T. Wooten

Percent Complete: 100.0%. Waiting on final estimate

Resurfacing Contract: DC00117, Brunswick County:

NC 87/NC 133 (River Road) resurfacing from project limits of R-3324 (Long Beach Road Extension) to SR 1526 (Jabbertown Road)

SR 1100 (Caswell Beach Road) milling & resurfacing from SR 1190 (Oak Island Drive) to end of system

SR 1101 (Fish Factory Road) resurfacing from NC 133 (Long Beach Road) to end of system

SR 1194 (West Street) resurfacing from NC 211 to end of system, in Southport

SR 1209 (9th Street) resurfacing from NC 211 to end of system, in Southport

SR 1210 (Old Bridge Road) resurfacing from NC 133 (Long Beach Road) to end of system

SR 1526 (Jabbertown Road) resurfacing from NC 87 to SR 1527 (Leonard Street), in Southport

SR 1528 (Moore Street) resurfacing from NC 211 to end of system, in Southport

Contractor: Highland Paving Company

***Percent Complete: 100%. Waiting on final estimate**

Resurfacing Contract: 2016, C203760, Brunswick County:

US 17 NBL & SBL resurfacing from NC 904 to South Carolina line
SR 1139 (Seashore Road) resurfacing from NC 130 (Holden Beach Road) to
SR 1137 (Boones Neck Road)
SR 1184 (Ocean Isle Beach Road) resurfacing from US 17 to NC 904/179
SR 1241 (Milliken Avenue) resurfacing from
SR 1242 (Beach Drive) resurfacing from NC 179 Bus. to end of the system
SR 1940 (Claremont Drive) resurfacing from SR 1941 (Stratford Place) to
end of the system
SR 1941 (Stratford Place) resurfacing from SR 1943 (Country Club Drive) to
SR 1940 (Claremont Drive)
SR 1942 (Bruce Lane) resurfacing from SR 1941 (Stratford Place) to
SR 1944 (Deep Branch Road)
SR 1944 (Deep Branch Road) resurfacing from SR 1942 (Bruce Lane) to
SR 1940 (Claremont Drive)
SR 1813 (Pinewood Drive) resurfacing from SR 1950 (Camelia Drive) to
end of system
SR 1943 (Country Club Drive) resurfacing from SR 1949 (Brierwood Road) to
SR 1941 (Stratford Place)
SR 1949 (Brierwood Road) resurfacing from SR 1943 (Country Club Drive) to
Shallotte City Limits
SR 1950 (Camelia Drive) resurfacing from SR 1141 (Kirby Road) to SR 1813
(Pinewood Drive)
SR 1951 (Driftwood Acres Drive) resurfacing from SR 1950 (Camelia Drive) to
end of the system
SR 1952 (Myrtlewood Drive) resurfacing from SR 1950 (Camelia Drive) to
end of the system

***Percent Complete: 100%**

- Changes to Project Update List made March 31, 2017
- Traffic updates per Division Staff Meeting held March 14, 2017.
 - April 5th – 9th – Azalea Festival in Downtown Wilmington
 - May 1st – 7th – Wells Fargo PGA Golf Tournament being held at Eagle Point Golf Club in Porters Neck.

If you have any questions, please contact Alan Pytcher at the Division 3 Office:
(910) 341-2000, apytcher@ncdot.gov