

ITEM 12 –Information
October 18, 2017

Critical Urban Freight Corridor
Designation for the National Capital Region

Staff

Recommendation: The Board will be briefed on the draft critical urban freight corridor segments for the Maryland, District of Columbia, and Virginia portions of the National Capital Region.

Issues: None

Background: The board will be briefed on the draft critical urban freight corridor segments for the Maryland, District of Columbia, and Virginia portions of the National Capital Region. The board will be asked to designate the National Capital Region’s critical urban freight corridors at its November 15 meeting.



MEMORANDUM

TO: Transportation Planning Board
FROM: Jon Schermann, TPB Transportation Planner
SUBJECT: Critical Urban Freight Corridor Designation for the National Capital Region
DATE: October 12, 2017

This memorandum describes the proposed critical urban freight corridor (CUFC) segments for the National Capital Region. It includes the Maryland CUFCs that were provisionally designated by the Steering Committee on June 2, 2017 as well as the Virginia and District of Columbia CUFC segments that have been developed since then. The Board will be requested to take action to designate the critical urban freight corridors for the National Capital Region during the November 15, 2017 TPB meeting.

BACKGROUND

The Fixing America's Surface Transportation (FAST) Act established the National Highway Freight Program (NHFP) to improve the efficient movement of freight on the National Highway Freight Network (NHFN). The NHFP provides Federal funding eligibility for a wide range of activities including planning, engineering, and construction on the NHFN.

The NHFN consists of four components:

- Primary Highway Freight System (PHFS);
- The portions of the Interstate System not on the PHFS;
- Critical Rural Freight Corridors (CRFC); and
- Critical Urban Freight Corridors (CUFC).

The first two components (PHFS and other interstate portions not on the PHFS) were designated within the FAST Act itself. The last two components (Critical Rural Freight Corridors and Critical Urban Freight Corridors) may be designated by either State Departments of Transportation (DOT) or by Metropolitan Planning Organizations (MPO) depending on the type of corridor (CRFC or CUFC) and the size of the MPO. In all cases, the FAST Act requires DOTs and MPOs to coordinate on CRFC and CUFC designations as shown in Table 1 (next page).

Table 1: Role in Designating CUFCs and CRFCs

Corridor Type	State DOT role	MPO role
CRFC	Designates all CRFC's – must coordinate with MPOs	Coordinates with state DOTs
CUFC	Designates CUFCs in MPOs with less than 500,000 population – must coordinate with MPOs	Designates CUFCs in MPOs with greater than 500,000 population – must coordinate with state DOTs

After December 4, 2017, designated and approved CUFCs and CRFCs become part of the National Highway Freight Network (NHFN) and thereby become eligible for National Highway Freight Program (NHFP) funding.¹ Table 2 below provides a rough estimate of the NHFP funding available statewide for each of our member states. The remainder of this memorandum will focus exclusively on Critical Urban Freight Corridors (CUFC).

Table 2: Estimate of NHFP Funding by State (statewide)

State	NHFP Funds
District of Columbia	approximately \$6 million / year
Maryland	approximately \$20 million / year
Virginia	approximately \$25 million / year

REQUIREMENTS FOR DESIGNATION OF CRITICAL URBAN FREIGHT CORRIDORS

To be designated as a Critical Urban Freight Corridor, a candidate public roadway must be located within an urbanized area and meet at least one of the following criteria:

- Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility;
- Is located within a corridor of a route on the PHFS and provides an alternative option important to goods movement;
- Serves a major freight generator, logistics center, or manufacturing and warehouse industrial land; or
- Is important to the movement of freight within the region, as determined by the MPO or the State.

¹ Provided the State has an approved, FAST-Act compliant State Freight Plan.

Two caveats should be noted regarding CUFCs. First, they comprise a funding network – they do not have to be contiguous, nor is there necessarily enough mileage allotted in the FAST Act to allow for a contiguous functional network. Second, CUFCs can be redesignated as needed, and would be expected to be designated for locations where projects are programmed or anticipated in the near future.

MILEAGE LIMITATIONS

For each state, according to the FAST Act, a maximum of 75 miles of highway or 10% of the PHFS mileage in the state, whichever is greater, may be designated as a CUFC. Table 3 shows the relevant mileage limitations for Maryland, Virginia, and the District of Columbia.

Table 3: Critical Urban Freight Corridor Mileage

State	CUFC Miles: Total	CUFC Miles: National Capital Region
Maryland	75.00	25.0
District of Columbia	75.00	75.0
Virginia	83.35	17.8

MARYLAND CRITICAL URBAN FREIGHT CORRIDORS

The proposed Maryland CUFC segments listed here are **nearly identical to those that the TPB Steering Committee provisionally designated at their June 2, 2017 meeting**. The Steering Committee action was part of an expedited process that MDOT requested for the approval of provisional CUFCs within Maryland to enable completion of their FAST Act-compliant State Freight Plan by June 30, 2017. The TPB will be requested to designate the full set of National Capital Region CUFCs including those in Maryland, Virginia, and the District of Columbia in November 2017. The Maryland Public Roads listed in Table 4 and shown in Figure 1 (below and following page) are proposed as CUFCs.

Table 4: Critical Urban Freight Corridors in the Maryland Portion of the National Capital Region

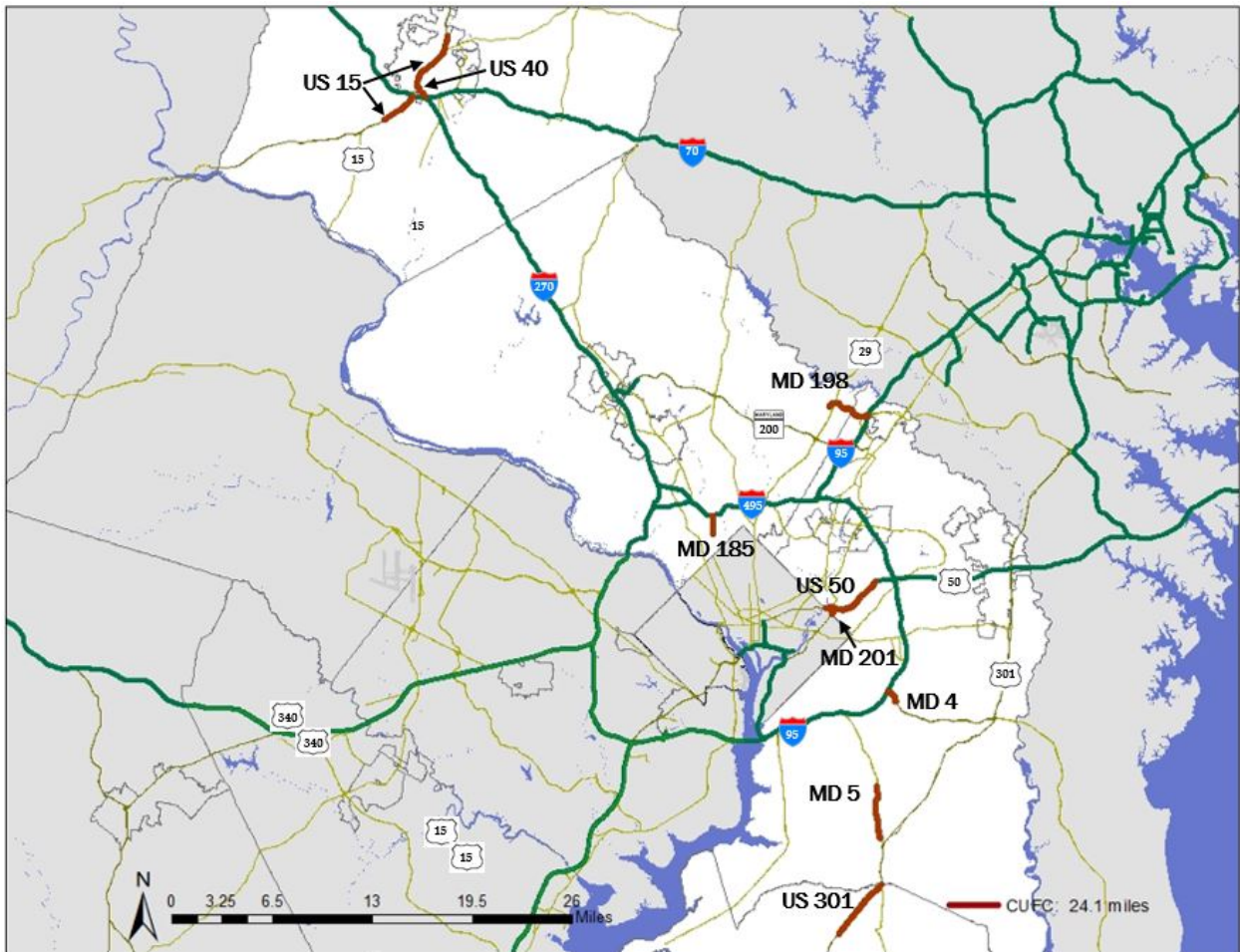
ID	Route Number	Start Point	End Point	Length (miles)	Criteria*
CUFC 01	US 15	MD 26	US 40 / S. Jefferson St	3.2	J, K
CUFC 02	US 40	US 15 / US 340	I-70 / I-270	0.6	I, J, K
CUFC 03	US 15 / US 340	I-70	Mt. Zion Rd	2.5	K
CUFC 04	US 15	Hayward Rd	MD 26	1.0	J, K
CUFC 05	US 301	Mattawoman Rd	Smallwood Dr	4.0	I, J, K
CUFC 06	US 50	DC / MD line	MD 410	4.1	I, J, K
CUFC 07	MD 198	Old Columbia Pike	I-95	2.6	J, K
CUFC 08	MD 201 (Kenilworth Ave)	US 50	MD / DC line	0.5	I, J, K
CUFC 09	MD 4	I-95	MD 337	0.9	J, K

ID	Route Number	Start Point	End Point	Length (miles)	Criteria*
CUFC 10	MD 185 (Connecticut Ave)	I-495	MD 410 (East West Hwy)	1.2	J, K
CUFC 11	MD 5	Surratts Rd	MD 373	3.5	K

* Criteria code:

- H: Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility
- I: Is located within a corridor of a route on the PHFS and provides an alternative option important to goods movement
- J: Serves a major freight generator, logistics center, or manufacturing and warehouse industrial land
- K: Is important to the movement of freight within the region, as determined by the MPO or the State

Figure 1: CUFCs (Red) and Other NHFN-Designated Roadways (Green) in the Maryland Portion of the National Capital Region



MARYLAND METHODOLOGY

TPB and SHA staff worked together to identify the CUFCs shown above. The methodology utilized both objective data and professional judgment and is outlined on the next page:

- The Maryland State Highway Administration (SHA) and its consultant partner Cambridge Systematics developed a Geographic Information System (GIS) geodatabase that assigned truck volumes and a freight density score² to each link in Maryland’s highway network.
- TPB staff scored each urban link within the Maryland portion of the National Capital Region by normalizing the truck volumes and freight density scores and then combining them into a “total score”.
- The links were sorted in descending order by total score.
- The highest scoring corridor segments (by total score) totaling 50 miles in length (twice the mileage allotted) were identified by TPB staff iteratively querying the geodatabase.
- The resulting 50 miles of CUFC corridor “candidates” were compared to project locations within Maryland’s 2017 Consolidated Transportation Program to identify those candidate corridors where expenditures are planned for budget years 2018 through 2022.
- Those candidate corridors (less than 25 miles in total length) were advanced to the final stage.
- The highest scoring remaining candidates were advanced to the final stage such that the total combined mileage of all the identified corridors did not exceed 25 miles.
- These “final” CUFCs comprise the list displayed in Table 4 and are the Critical Urban Freight Corridors the Steering Committee will be asked to provisionally approve.

VIRGINIA CRITICAL URBAN FREIGHT CORRIDORS

The Virginia Public Roads listed in Table 5 and Figure 2 (below and following page) are proposed as CUFCs.

Table 5: Critical Urban Freight Corridors in the Virginia Portion of the National Capital Region

ID	Route Number	Start Point	End Point	Length (miles)	Criteria*
CUFC A	I-395	I-95	VA-DC Line	10.5	I, K
CUFC B	US 29	Old Route 670	NCL Warrenton	2.5	K
CUFC C	VA 234 (Prince William Pkwy)	University Blvd	I-66	3.5	J, K
CUFC D	VA 7	VA 267 (Dulles Toll Rd)	VA 123 (Chain Bridge Rd)	1.4	J, K

* Criteria code:

H: Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility

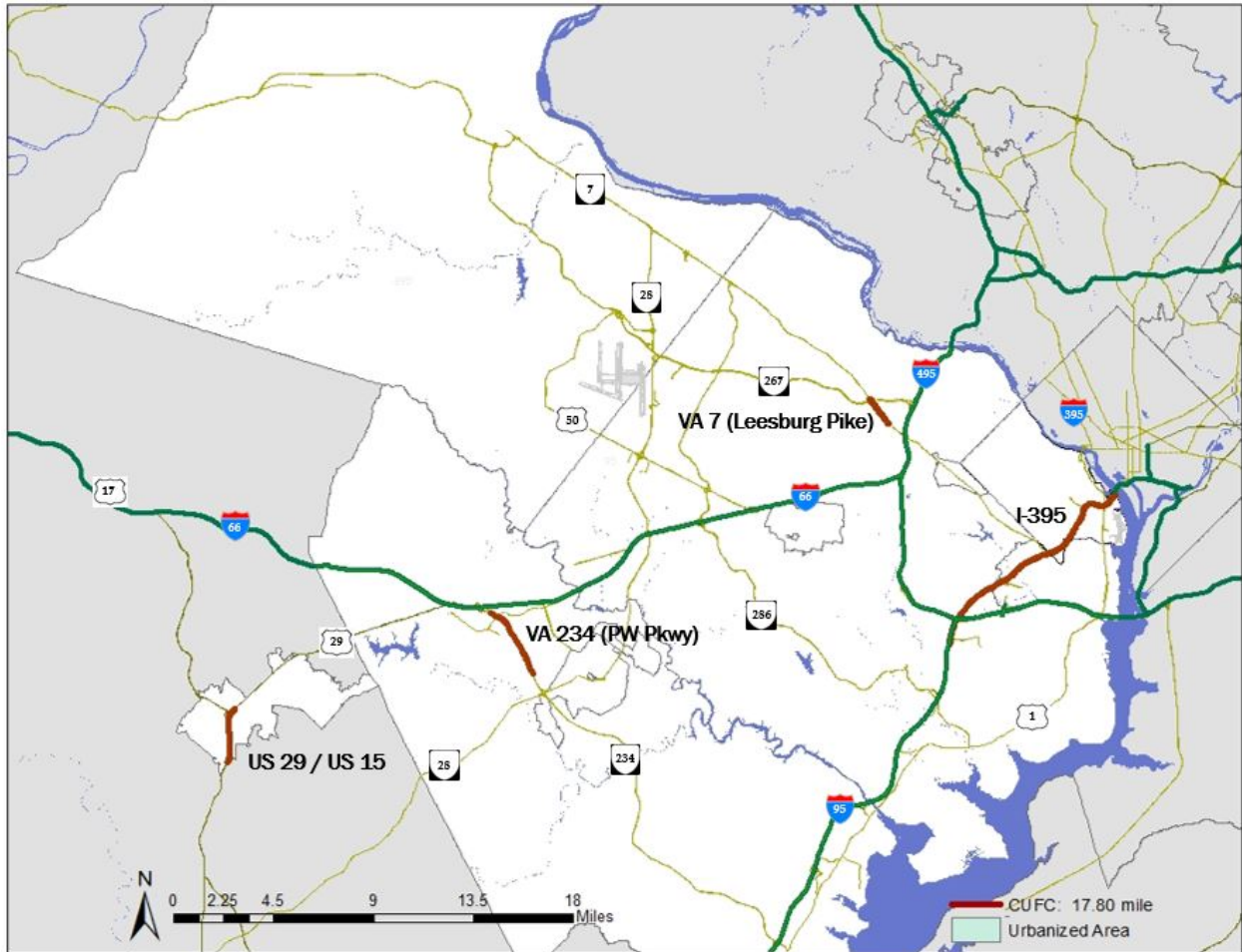
I: Is located within a corridor of a route on the PHFS and provides an alternative option important to goods movement

J: Serves a major freight generator, logistics center, or manufacturing and warehouse industrial land

K: Is important to the movement of freight within the region, as determined by the MPO or the State

² The freight density score is based on each roadway link’s proximity to freight dependent businesses. It is derived using US Census Bureau economic census data and other sources.

Figure 2: CUFCs (Red) and Other NHFN-Designated Roadways (Green) in the Virginia Portion of the National Capital Region



VIRGINIA METHODOLOGY

TPB staff coordinated with VDOT to identify the CUFCs shown above. The methodology outlined below is similar to that used for the Maryland CUFCs and utilized both objective data and professional judgment:

- VDOT provided truck volumes for each urban roadway link
- TPB staff examined available data and developed a freight density score for each link based on total square footage of industrial, warehouse/distribution, and retail buildings within $\frac{3}{4}$ mile
- TPB staff developed an intermodal connector score for each link based on whether it provided access to NOVA freight intermodal terminals
- Truck volumes, freight density scores, and intermodal connector scores were normalized and combined into an overall score

- Urban roadway links in Virginia’s portion of the TPB planning area were sorted in descending order by overall score
- TPB staff iteratively identified top 50 miles of CUFC “candidates”
- Three tiers (17.8, 22.4, and 30.1 miles) of CUFCs were identified based on total scores and planned VDOT investments. VDOT notified TPB staff that the 17.8-mile tier would be the correct tier to use at this time.

DISTRICT OF COLUMBIA CRITICAL URBAN FREIGHT CORRIDORS

The District of Columbia Public Roads listed in Table 6 and Figures 3 and 4 (below and following pages) are proposed as CUFCs.

Table 6: Critical Urban Freight Corridors in the District of Columbia Portion of the National Capital Region

ID	Route	Start Point	End Point	Length (miles)	Criteria*
CUFC 01	16th St	U St NW/New Hampshire Ave NW	K St NW	0.9986	K
CUFC 02	Georgia Ave	DC Line/Eastern Ave NW	Florida Ave NW	4.7550	J, K, I
CUFC 03a	Massachusetts Ave.	Dupont Cir NW	9th St NW	1.0611	J, K
CUFC 03b	Massachusetts Ave.	7th St NW	North Capitol St BN	0.7636	J, K
CUFC 04a	Pennsylvania Ave.	29th St NW	22nd St NW	0.4744	J, K
CUFC 04b	Pennsylvania Ave.	14th St NW	3rd St NW	0.9522	J, K
CUFC 04c	Pennsylvania Ave.	Independence Ave SE	DC Line/Southern Ave SE	3.4834	K
CUFC 05	Wisconsin Ave.	DC Line/Western Ave NW	M St NW	4.1218	J, K
CUFC 06	Connecticut Ave.	DC Line/Western Ave NW	K St NW	5.0031	J, K
CUFC 07	Rhode Island Ave.	DC Line/Eastern Ave NE	Scott Cir NW	4.5508	J, K
CUFC 08	South Dakota Ave.	Riggs Rd NE	New York Ave NE	3.7028	J, K
CUFC 09	Florida Ave.	9th St NW	H St NE	2.4386	J, K
CUFC 10	North Capitol St.	New Hampshire Ave NE	Louisiana Ave NE	4.3487	K, I
CUFC 11	14th St.	Rhode Island Ave NW	I-395	2.5628	J, K
CUFC 12	Nebraska Ave.	Military Rd NW	Tenley Cir NW	1.1852	K
CUFC 13	H St.	Florida Ave NE	Massachusetts Ave NW	1.7157	K
CUFC 14	7th St.	Florida Ave NW	Independence Ave SW	1.9797	J, K
CUFC 15	Benning Rd.	East Capitol St BN	Florida Ave NE	2.6696	J, K
CUFC 16	Missouri Ave.	Military Rd NW	North Capitol St BN	1.3273	K
CUFC 17	K St.	27th St NW	7th St NW	1.8414	J, K

ID	Route	Start Point	End Point	Length (miles)	Criteria*
CUFC 18a	Constitution Ave.	14th St NW	Pennsylvania Ave NW	0.7297	K
CUFC 18b	Constitution Ave.	Pennsylvania Ave NW	Louisiana Ave NW	0.1781	K
CUFC 19	Independence Ave.	14th St SW	3rd St SW	0.9043	H, K
CUFC 20	South Capitol St.	Firth Sterling Ave SE	Washington Ave SW	2.3447	J, K, I
CUFC 21	M St.	US29	29th St NW	0.6764	J, K
CUFC 22	Military Rd.	Nebraska Ave NW	Missouri Ave NW	1.9496	K
CUFC 23	New Hampshire Ave.	DC Line/Eastern Ave NE	North Capitol St BN	0.7020	J, K
CUFC 24	Dupont Cir.	Massachusetts Ave NW	Massachusetts Ave NW	0.2682	K
CUFC 25	U St.	15th St NW	9th St NW	0.5700	J, K
CUFC 26	Thomas Cir.	M St NW	M St NW	0.1569	K
CUFC 27	Tenley Cir.	Nebraska Ave NW	Nebraska Ave NW	0.1359	K
CUFC 28	Washington Cir.	Pennsylvania Ave NW	Pennsylvania Ave NW	0.2318	K
CUFC 29	Scott Cir.	Massachusetts Ave NW	Massachusetts Ave NW	0.1165	K
CUFC 30	New York Ave. (US 50)	DC Line NE	7th St NW	4.6039	J, K, I
CUFC 31	East Capitol St.	DC Line/Southern Ave SE	Benning Rd SE	1.3113	K, I
CUFC 32	Louisiana Ave.	North Capital St BN	Constitution Ave NW	0.3042	K
CUFC 33	Riggs Rd.	South Dakota Ave NE	North Capitol St BN	0.4001	K
CUFC 34a	9th St.	Mt Vernon Pl NW	K St NW	0.0581	K
CUFC 34b	9th St.	Pennsylvania Ave NW	Frontage Rd SW	0.7452	K
CUFC 35	12th St.	I-395 BN	Pennsylvania Ave NW	1.1082	K
CUFC 36	Francis Scott Key Bridge	DC Line/GW Memorial Pkwy	M St NW	0.3111	K
CUFC 37	Mt. Vernon Pl.	7th St NW	9th St NW	0.1145	K
CUFC 38	Anacostia Fwy	I-295	East Capitol St BN	2.4600	K, I
CUFC 39	Kenilworth Ave	East Capitol St BN	DC Line/Eastern Ave NE	2.0424	K
CUFC 40	Water St NW/Whitehurst Fwy NW	350' east of Key Bridge NW	27th St NW	0.7850	K

* Criteria code:

- H: Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility
- I: Is located within a corridor of a route on the PHFS and provides an alternative option important to goods movement
- J: Serves a major freight generator, logistics center, or manufacturing and warehouse industrial land
- K: Is important to the movement of freight within the region, as determined by the MPO or the State

Figure 3: CUFCs (Green) in the District of Columbia

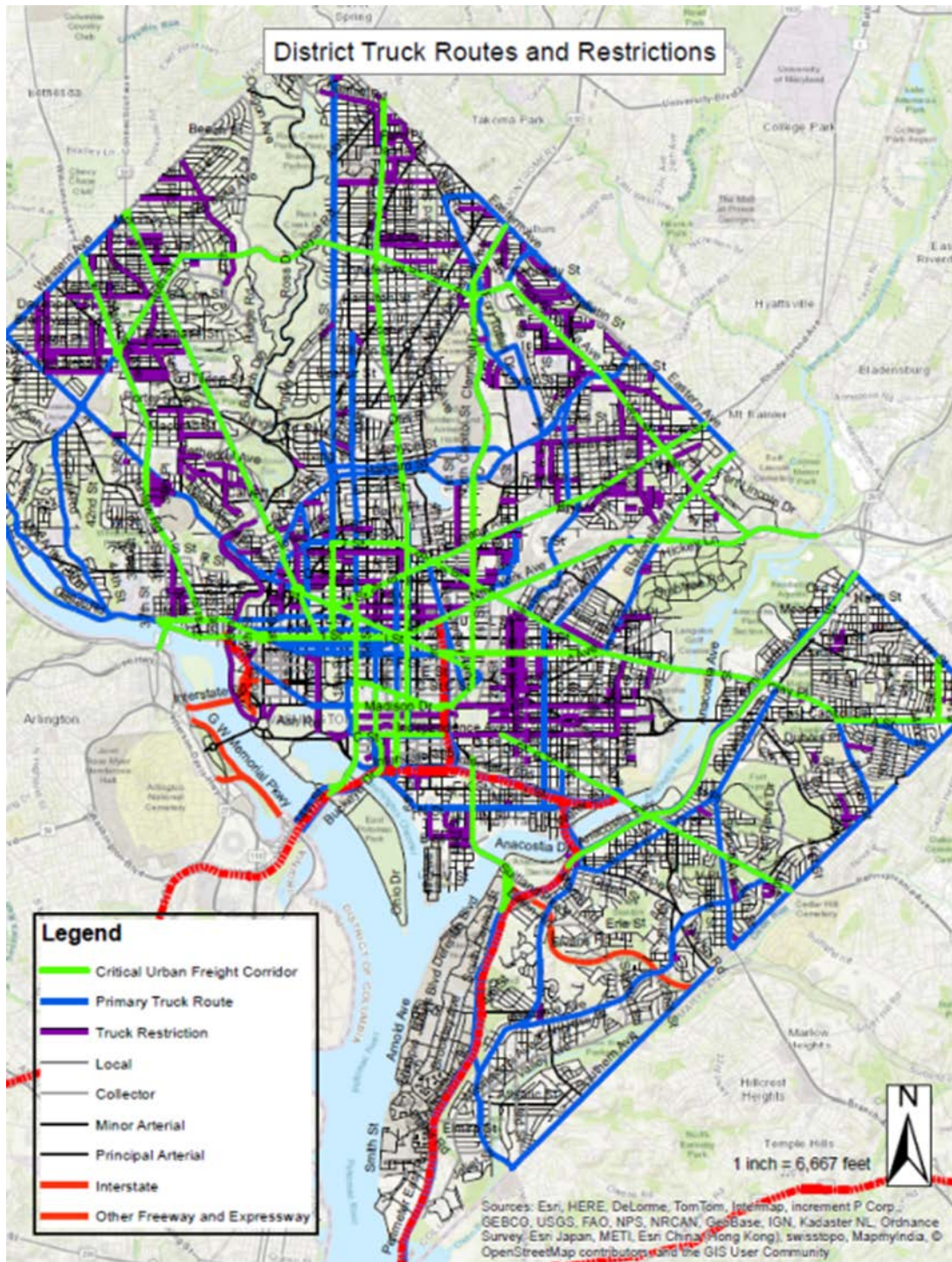
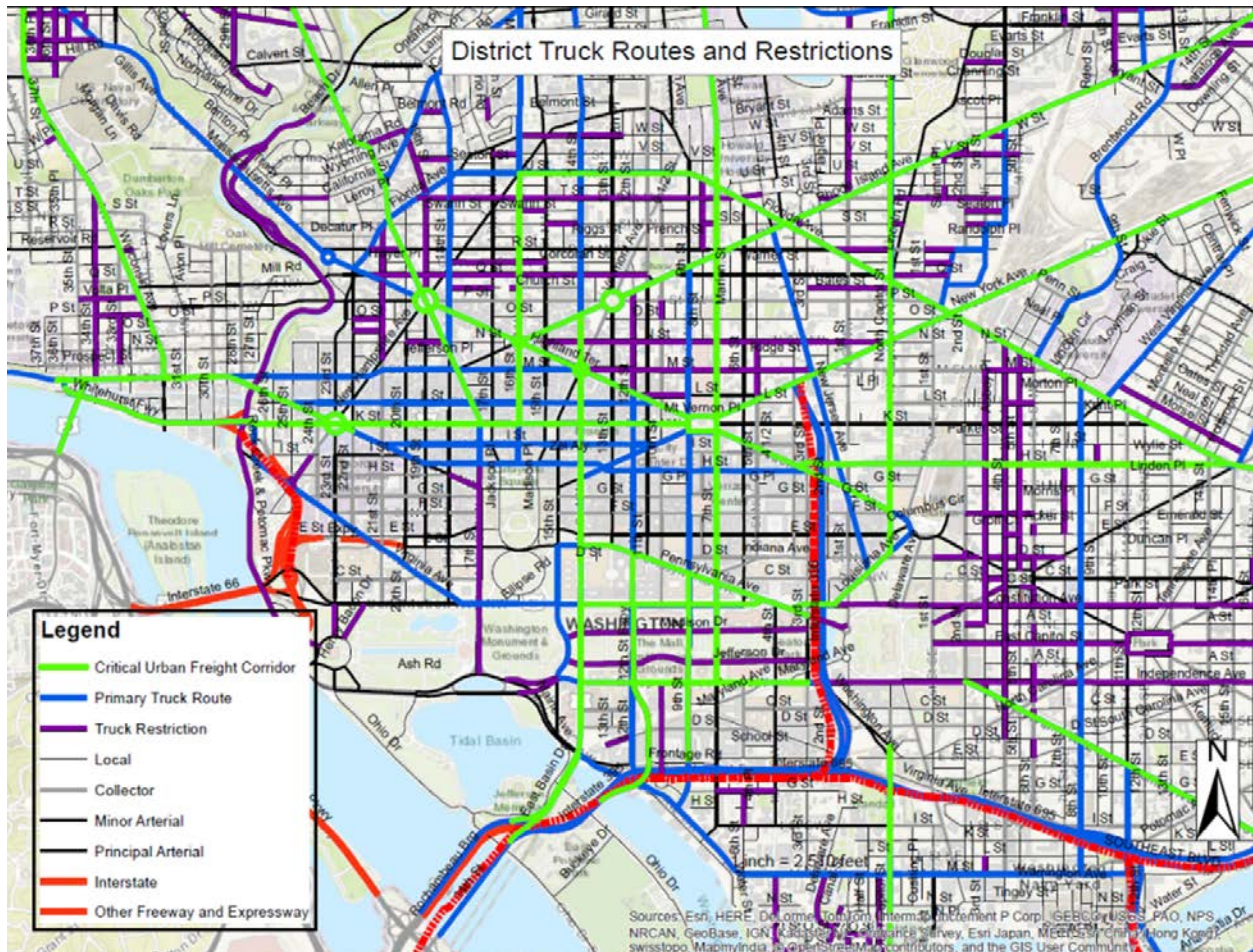


Figure 4: CUFCs in the District of Columbia – Downtown Area Detail



DISTRICT OF COLUMBIA METHODOLOGY

DDOT staff used their 2010 District truck and bus route designation as a starting point in their work to identify CUFC segments. The effort to designate truck and bus routes in the District included extensive data collection and analysis that considered road characteristics, percent truck traffic, AADT, functional classification, and connectivity. The truck and bus route designation process also included a thorough review of existing restrictions and outreach to the public and private industry.

Because the extent of the designated truck and bus routes was greater than the 75 mile CUFC limit, DDOT staff analyzed additional factors to select the most important segments from the overall truck and bus route network. This included analysis of high traffic corridors, connections to freight generators and commercial districts, and locations of planned investments, among other considerations.

SUMMARY OF NATIONAL HIGHWAY FREIGHT NETWORK MILEAGE IN THE NATIONAL CAPITAL REGION

Most of the National Highway Freight Network (NHFN) miles within the National Capital Region were designated by Congress within the FAST Act. Because critical urban freight corridors become part of the NHFN, the proposed segments identified in this memo will provide additional miles to the NHFN as shown in Table 7 below.

Table 7: National Highway Freight Network Miles within the National Capital Region

State	NHFN miles established within the		Total NHFP miles
	FAST Act	Proposed CUFC miles	
District of Columbia	11.7	73.1	84.8
Maryland	126.3	24.1	150.4
Virginia	73.6	17.8	91.4
National Capital Region	211.6	115.0	326.6

NEXT STEPS

- TPB staff will respond to input from the Technical Committee and this Board.
- Board action to designate CUFCs for the District of Columbia, Maryland, and Virginia will be requested at the November TPB meeting in order to meet the December 4, 2017 federal deadline.
- Following TPB action, the TPB resolution designating CUFCs will be submitted to the FHWA with copies to the state DOTs.



CRITICAL URBAN FREIGHT CORRIDOR DESIGNATION

Jon Schermann
TPB Transportation Planner

Transportation Planning Board
October 18, 2017



National Capital Region
Transportation Planning Board

Agenda Item #12

Action Requested

- The board will be asked to officially **designate Critical Urban Freight Corridors** for the National Capital Region during the **November 15, 2017 TPB meeting**

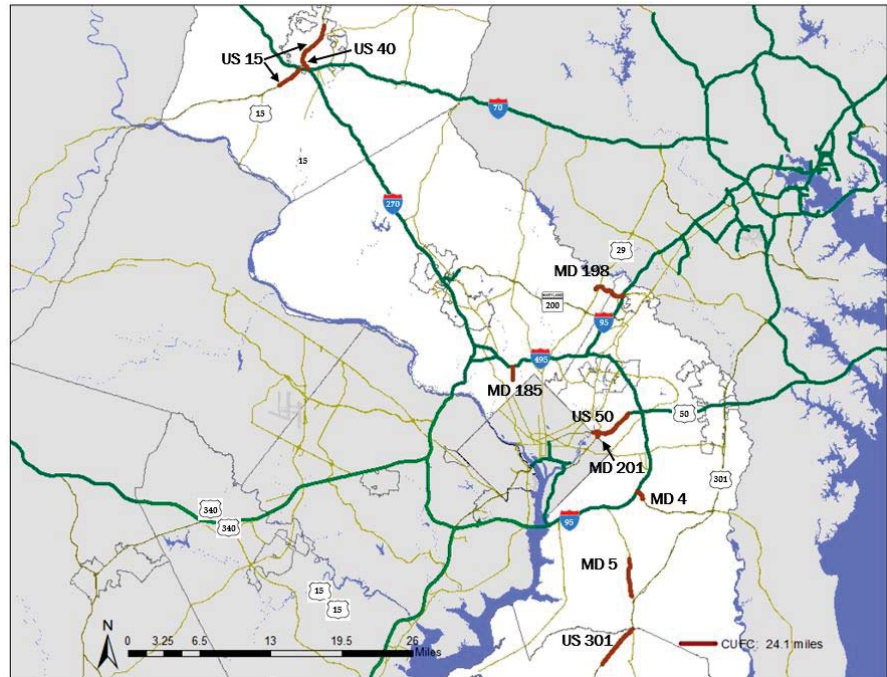


Recommended CUFC Segments: Maryland Portion of the NCR

NHFN miles
established within
the FAST Act:
126.3

Proposed CUFC
miles: 24.1

Total NHFP miles:
150.4

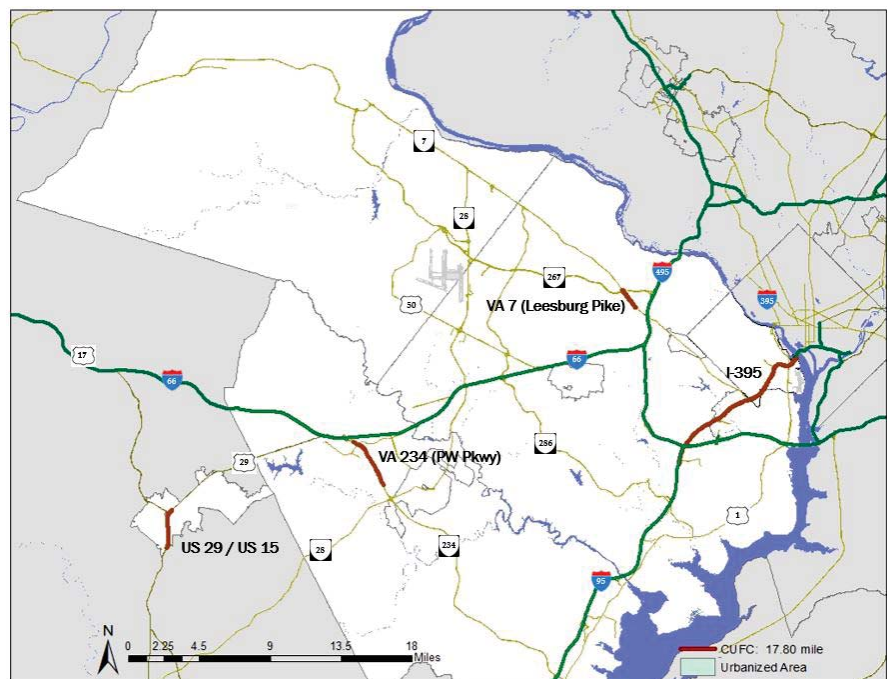


Recommended CUFC Segments: Virginia Portion of the NCR

NHFN miles
established within
the FAST Act:
73.6

Proposed CUFC
miles: 17.8

Total NHFP miles:
91.4



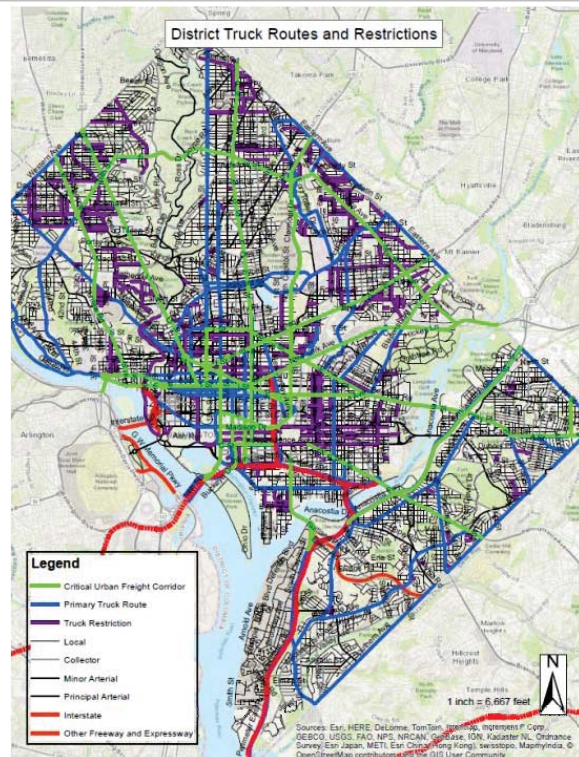
Recommended CUFC Segments: District of Columbia Portion of the NCR

NHFN miles established within the FAST Act: 11.7

Proposed CUFC miles: 73.1

Total NHFP miles: 84.8

Note: Proposed CUFCs are in *Green*



Critical Urban Freight Corridors

- **CUFCs** are a component of the National Highway Freight Network (NHFN) established by the FAST Act
- CUFCs provide additional roadway miles eligible for National Highway Freight Program (NHFP) funding
- MPOs with > 500,000 population can designate CUFCs – must coordinate with State DOTs
- Rough magnitude of federal NHFP funds available statewide are:
 - Maryland ~ \$20 million per year
 - Virginia ~ \$25 million per year
 - District of Columbia ~ \$ 6 million per year

CUFC Caveats

- CUFCs comprise a funding network – they do not have to be contiguous
- CUFCs can be redesignated as needed

Next Steps

- TPB staff will address comments received
- TPB staff will present all regional CUFC candidates (MD, VA, and DC) to the Technical Committee and to the TPB to request official designation (November 2017)
- TPB resolution designating CUFCs will be submitted to FHWA with copies to the state DOTs (November 2017)

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