MIAMI-DADE MPO
Metropolitan Planning Organization

February 14, 2014

2040 LRTP

Agenda

- Introductions
- LRTP Update / Needs Assessment Process
- Screenline Workshop
- Project Costs
- Next Steps
- Meeting Adjournment

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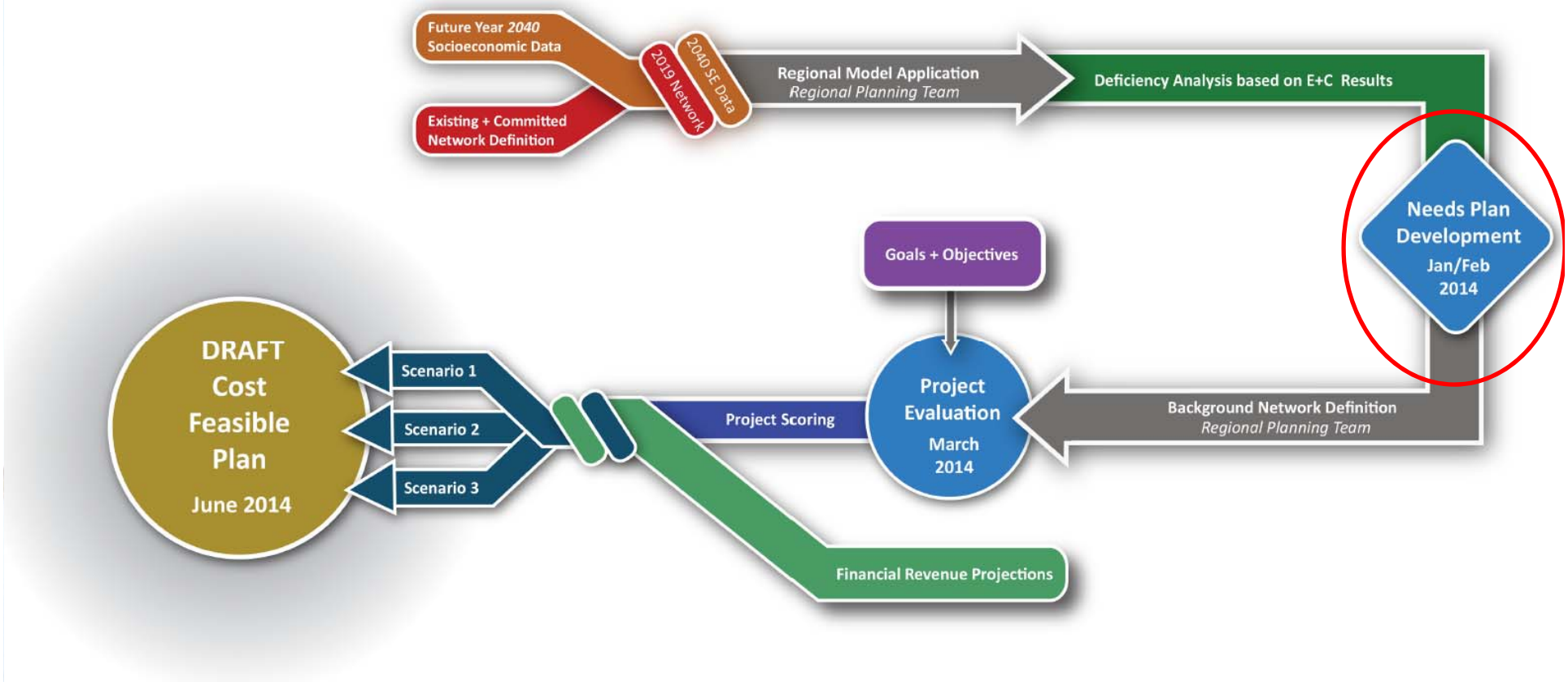
LRTP Update Process



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Needs/Cost Feasible Plan Milestones

- Assess Needs – January/February 2014
  - Workshop problematic screenlines today using MNAT
  - Revisit screenlines at subsequent, if necessary
  - **MNAT results NOT intended to represent ultimate project impact or project evaluation criteria – it is a WORKING tool**
- Evaluate/Prioritize Needs – March 2014
- Present Needs to Public – April 2014
- Test Cost Feasible Plan scenarios – May 2014
- Review/Revise/Finalize DRAFT Cost Feasible Plan – June 2014

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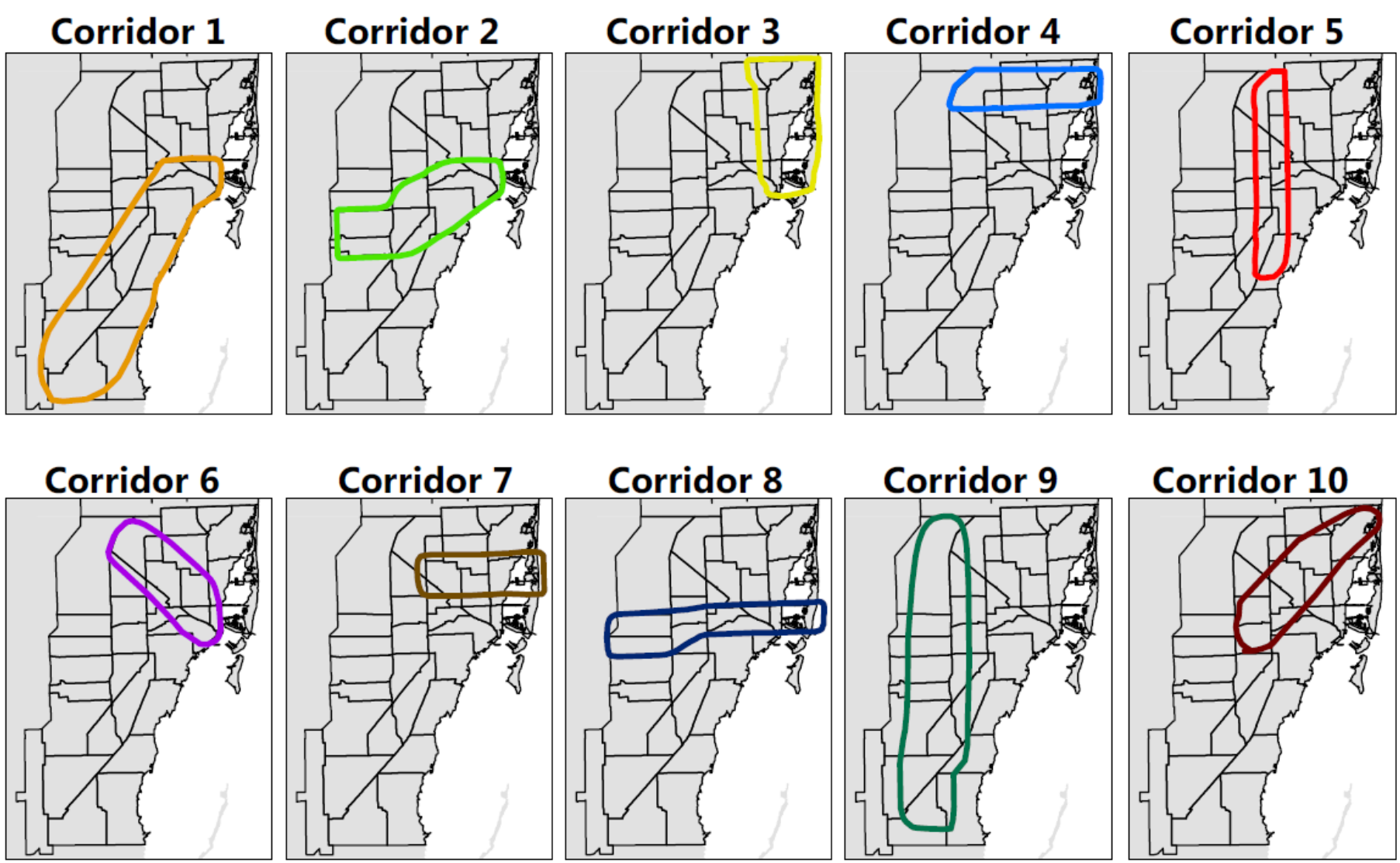
2040 Needs Assessment Corridors



Mobility Needs Assessment Tool (MNAT application)

Highway Inventory

Screen Line	Link	E+C Lanes	Add Lanes	Grade Sep.	Div. Road	Left Turn Lanes	Changed Screen Line
Yes	Florida Turnpike	6	0	Yes	N/A	N/A	
Yes	I-95	6	2	Yes	N/A	N/A	,31,32,33
Yes	I-95 Managed Lanes	4	0	Yes	N/A	N/A	
Yes	SR 41A	6	0	No	Yes	Yes	
				No	Yes	Yes	
Yes	NW 27th Ave.	6	0	No	Yes	Yes	
Yes	NW 2nd Ave.	6	0	No	Yes	Yes	,32
Yes	NE 1[illegible]th Ave.	4	0	No	Yes	Yes	
Yes	NE 2nd Ave.						
Yes	NW 12th Ave.	2	0	No	No	No	
Yes	NW 7th Ave.	2	0	No	No	No	
Yes	W. Dixie Hwy.	2	0	No	Yes	Yes	,32
No	NW 22nd Ave.	0	2	No	No	No	
No	NW 22nd Ave.	0	2	No	No	No	

Transit Inventory

Route Name	Current Vehicle Type	New Vehicle Type	Current Headway	New Headway	Changed Screen
Rte 2BCT: Broward to Miami Breeze via University Dr.	Regular	BRT	30	5	,31
Rte 3: Aventura Mall to CBD via Biscayne Blvd	Regular	Regular	18	18	
Rte 7BCT: Broward to Miami Breeze via NW 7 Ave	Regular	BRT	30	10	,31,32,33
Rte 9: Aventura Mall to CBD via W. Dixie Hwy/NW 2 Ave	Regular	Regular	12	12	
Rte 17: Vizcaya Station to Opa-Locka via NW 17 Ave/NW 22 Ave	Regular	Regular	30	30	
Rte 18: Broward to Golden Glades via NW 2 Ave	Regular	Regular	15	10	,31
Rte 27: Calder Race Track to Coco Grove MR via 27 Ave	Regular	Regular	30	30	
Rte 75: Miami Lakes to FIU Biscayne Bay 175 St/NW 151 St SR441 to CBD 7 Ave	Regular	Regular	30	30	
				20	
Rte 91: NW 67th Ave to 16[illegible] via NW 215 St/NE 19 Ave				30	
Rte 93: MAX Aventura Mall to CBD via Biscayne Blvd	Regular	Regular	15	15	
Rte 97: MAX NW 207 St to NW 62 St via NW 27 Ave	Regular	Regular			
Rte 183: Aventura Mall to Palm Springs via Miami Gardens Dr	Regular	Regular	30	30	
Rte 441BC[illegible] via US 441			30	5	,31
Rte 95X: N[illegible] via I-95			3	3	
Rte E: Bro[illegible] via Collins Ave/163 St	Regular	Regular	30	30	
Rte K: Diplomat to CBD via Collins Ave/MacArthur Cswy	Regular	Regular	20	20	
Rte S: CBD to Aventura Mall via Collins Ave/Biscayne Blvd	Regular	Regular	12	12	
Tri-Rail	Tri-Rail	Tri-Rail	20	20	
FEC Corridor		Metrorail	0	15	,31,32,33
North Corridor		Metrorail	0	6	,31
New					
New					
New					

Summary

Volume	59,426
E+C Capacity	56,940
2035 Needs Capacity	77,015
E+C V/C	1.04
2035 Needs V/C	0.77
Added Capacity	20,075
Required Capacity	2,220
New V/C	0.77
Δ V/C Required	0.02

Value Changed
Value Changed in another screenline
Input Values

Project exists on facility

Highway improvement types

Transit improvement type 1

Transit improvement type 2

Project exists on facility in other screenline/corridor

Screenlines affected by projects on given facility

Summary statistics

Facility does not cross screenline

Preliminary Needs Plan already in MNAT

- Agency specific Needs Plan projects
  - Master Plan projects where available
  - 2035 Needs Plan projects not advanced into TIP
- Represents Needs Plan at this point

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MNAT Assumptions

- Assumptions guiding marginal capacity adjustments for screenlines.
- All statistics reflect hourly basis (not daily or period).
- Transit capacity is added to highway capacity for this analysis.

Metrorail (30 min headway) =	1	freeway lane
Tri-Rail (20 min headway) =	1	freeway lane
Tri-Rail (45 min headway) =	1	arterial lane
Light Rail (15 min headway) =	1	arterial lane
Light Rail (30 min headway) =	1	collector lane
BRT (10 min headway) =	1	collector lane

Transit*	Capacity Increase
Reduce Headway (120min-60min)	23
Reduce Headway (60min-30min)	45
Reduce Headway (30min-15min)	90
Reduce Headway (10min-5min)	270
Regular to Articulated Vehicle (120min)	14
Regular to Articulated Vehicle (60min)	27
Regular to Articulated Vehicle (45min)	36
Regular to Articulated Vehicle (30min)	54
Regular to Articulated Vehicle (20min)	81
Regular to Articulated Vehicle (10min)	160
Regular to Articulated Vehicle (5min)	320
Add Metrorail (30min)	2,000
Add Metrorail (15min)	4,000
Add Metrorail (10min)	6,000
Add Metrorail (7.5min)	8,000
Add Metrorail (5min)	12,000
Transit*	**Capacity**
Regular Bus Capacity	45
Articulated Capacity	72
Light Rail Capacity	200
Metrorail Capacity (6 cars)	1,000
Tri-Rail Capacity (3 cars)	650
Metromover Capacity (2 cars)	120

*Assume capacity is 60% of crush load.

Road	Average Cap Inc.
Freeway (Add one lane per direction)	2,000 – 2,100
Arterial (Add one lane per direction)	600 – 1,900
Collector (Add one lane per direction)	400 – 900

Preliminary Corridor/Screenline Results

- Comparison of E+C Volume/Capacity ratios to estimated reductions in V/C by needs projects
- Enables the project team to focus on deficient corridors
- Preliminary results indicate 9 of 10 corridors reduced to below 1.0 V/C with needs projects (all 10 corridors have V/C>1.0 in E+C)
- The Goal of the MNAT exercise is to reduce V/C in all 37 screenlines to <1.0
- With agency Master Plan projects (needs projects), 8 screenlines still have V/C = 1.0 or higher

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Preliminary Corridor/Screenline Results

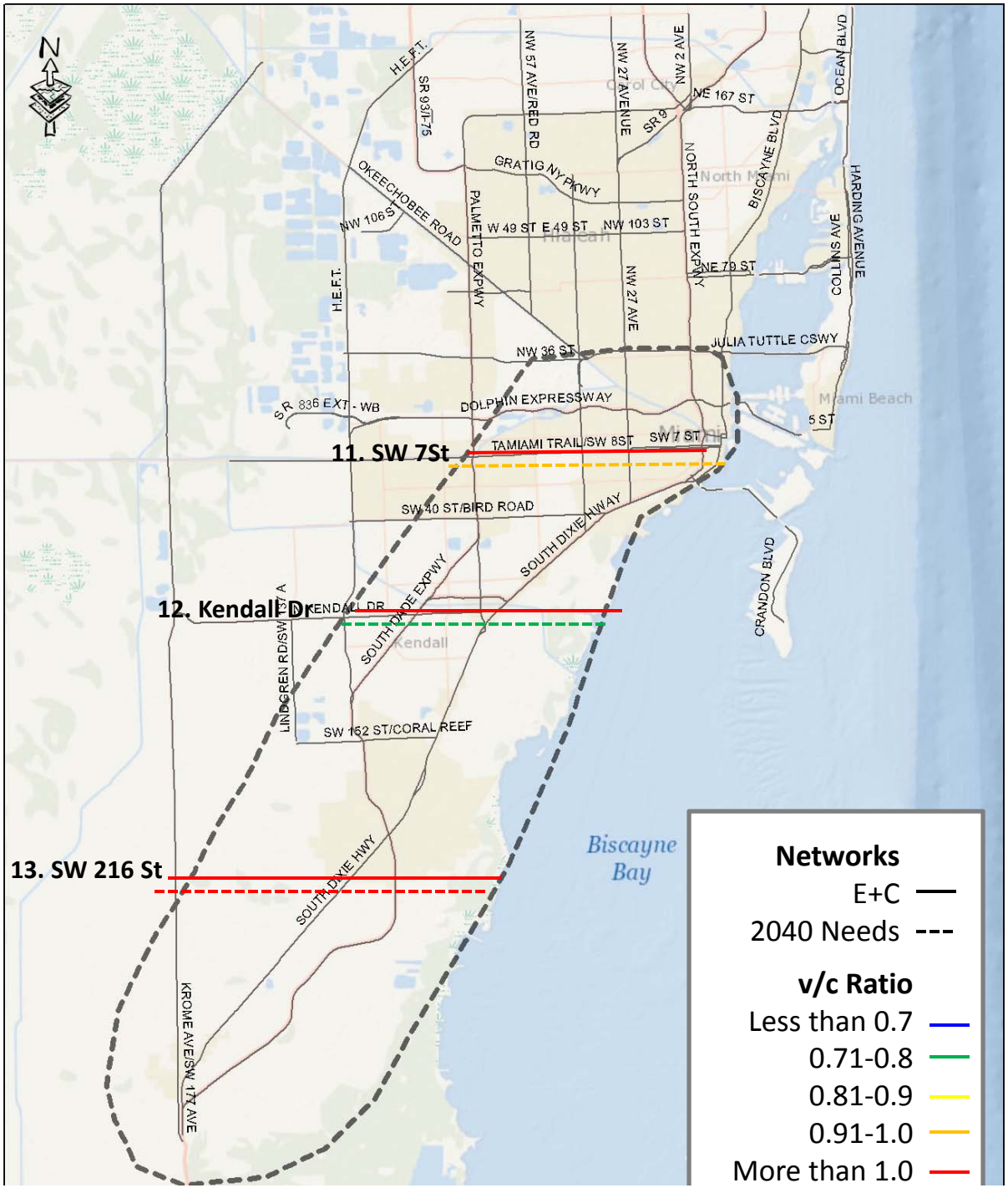
Corridor	2040 E+C Aggregate V/C	2040 Needs	
		Screenlines with V/C >0.98	Aggregate V/C
1 – Southwest US 1	1.22	11	0.91
2 – Kendall-Downtown	1.14	none	0.84
3 – Northeast	1.38	33	0.95
4 – North County	1.03	42	0.84
5 – Northeast Kendall NS	1.09	51, 53	0.95
6 – NW-Downtown	1.16	61	0.86
7 – Northeast EW	1.21	72	1.00
8 – EW-Downtown	1.34	none	0.85
9 – West County	1.06	none	0.72
10 – Kendall-Northeast	1.22	101	0.87

*Aggregate V/C represents sum across screenlines.

Corridor 1 | Southwest US 1

Corridor Snapshot

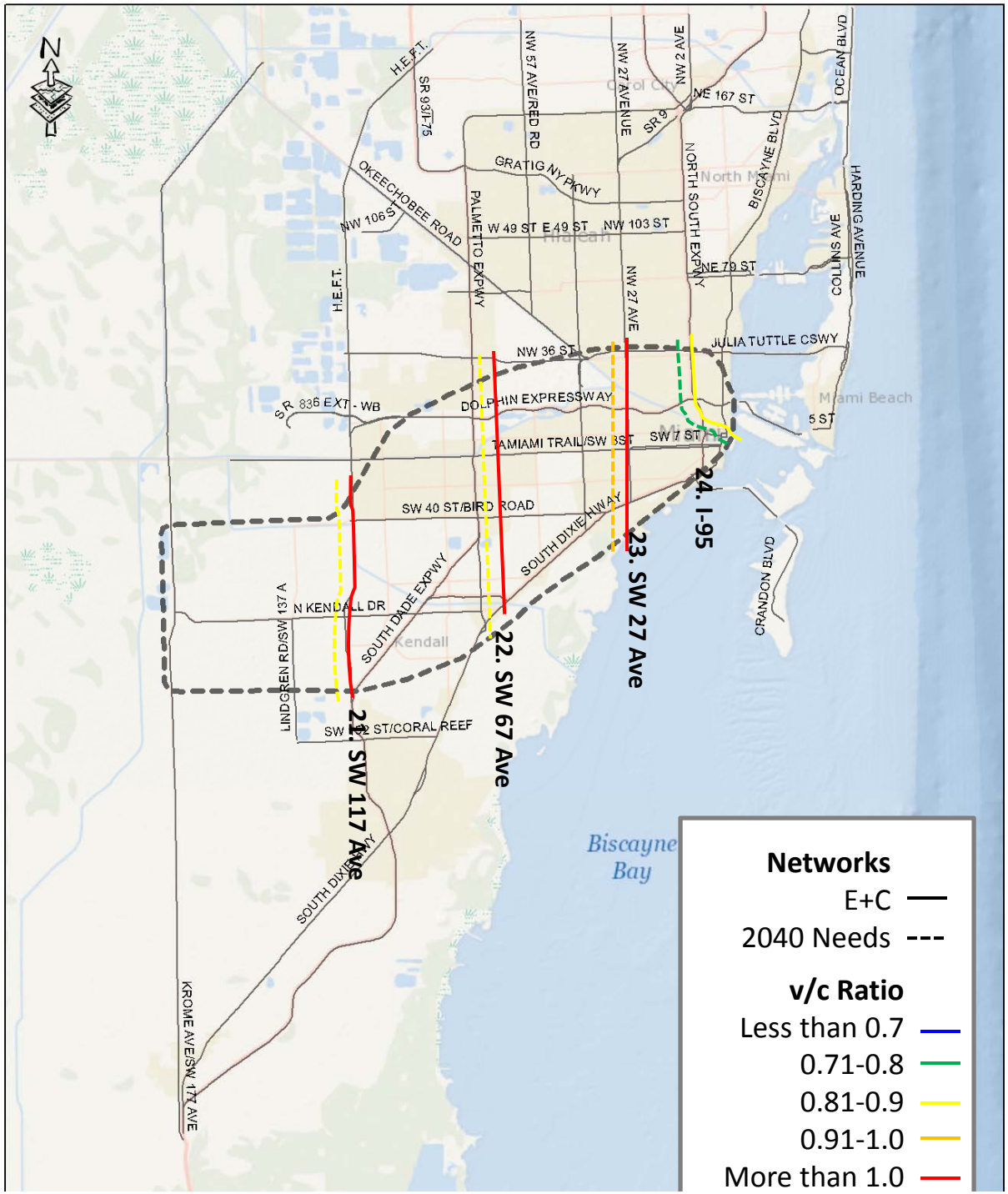
- Daily Person Trips: 1,388,500 (19% of total trips)
- E+C V/C: 1.22
- Needs V/C: 0.91



Corridor 2 | Kendall - Downtown

Corridor Snapshot

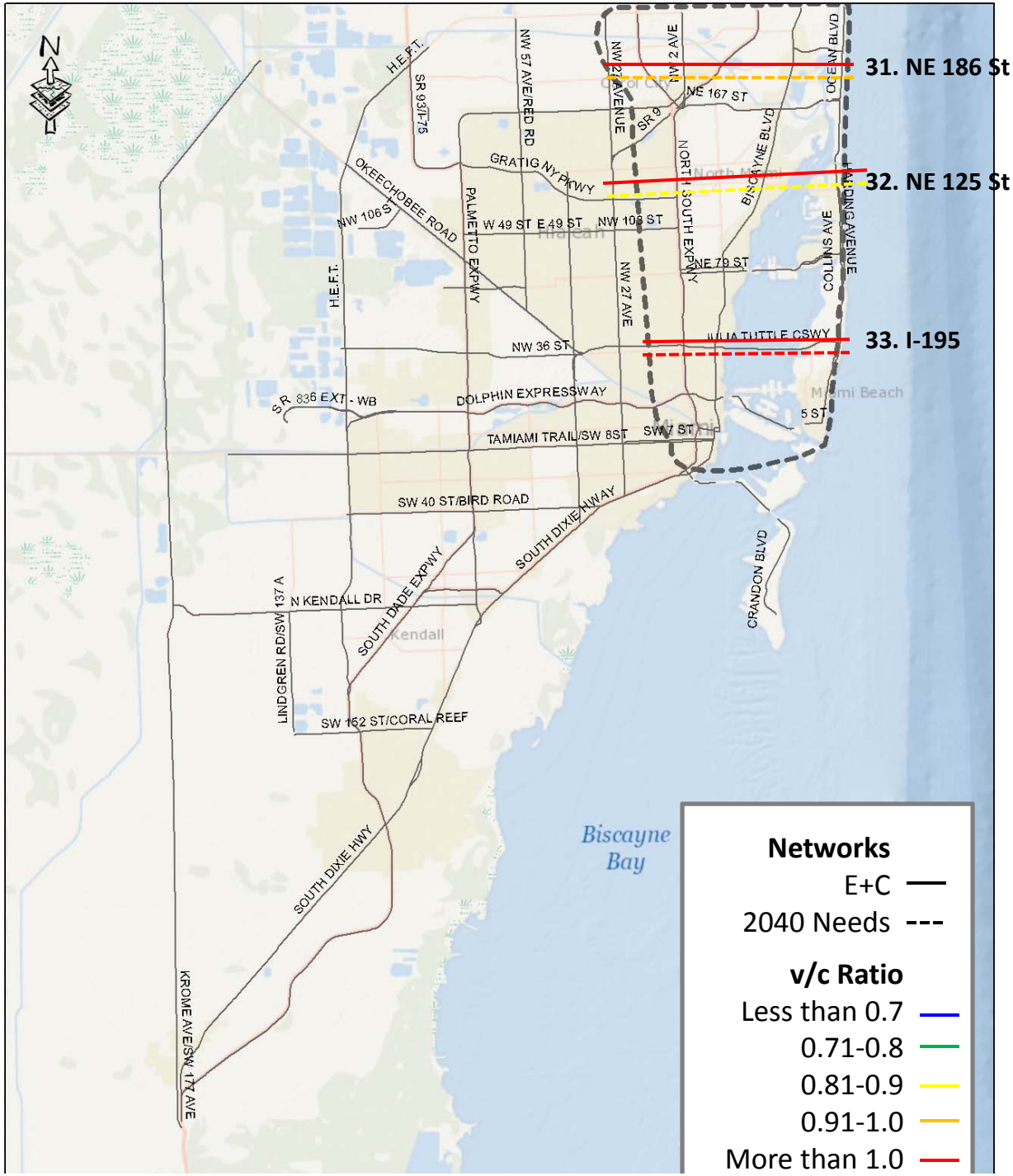
- Daily Person Trips 692,500 (9% of total trips)
- E+C V/C: 1.14
- Needs V/C: 0.83



Corridor 3 | Northeast

Corridor Snapshot

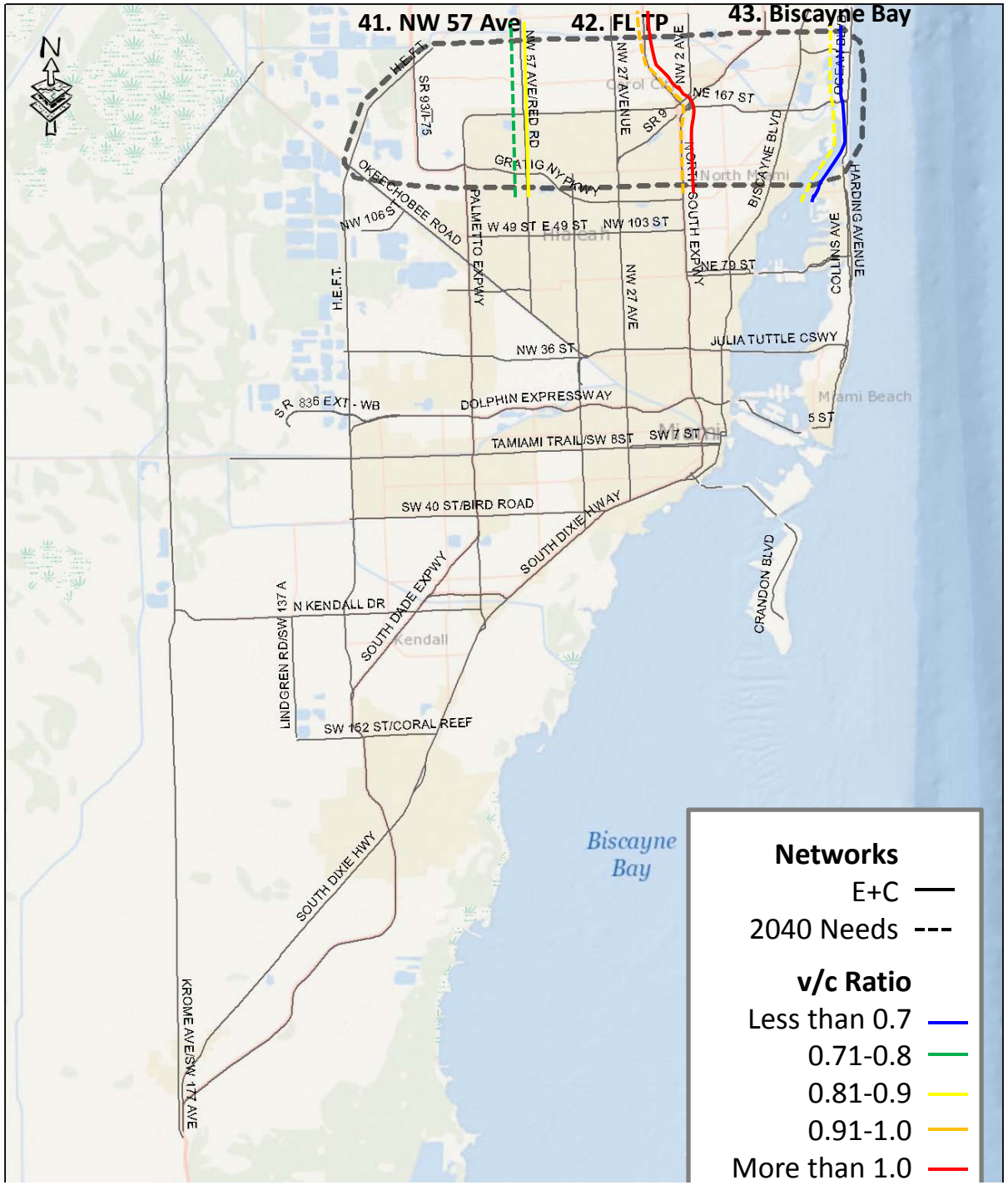
- Daily Person Trips 442,700 (6% of total trips)
- E+C V/C: 1.38
- Needs V/C: 0.95



Corridor 4 | North County

Corridor Snapshot

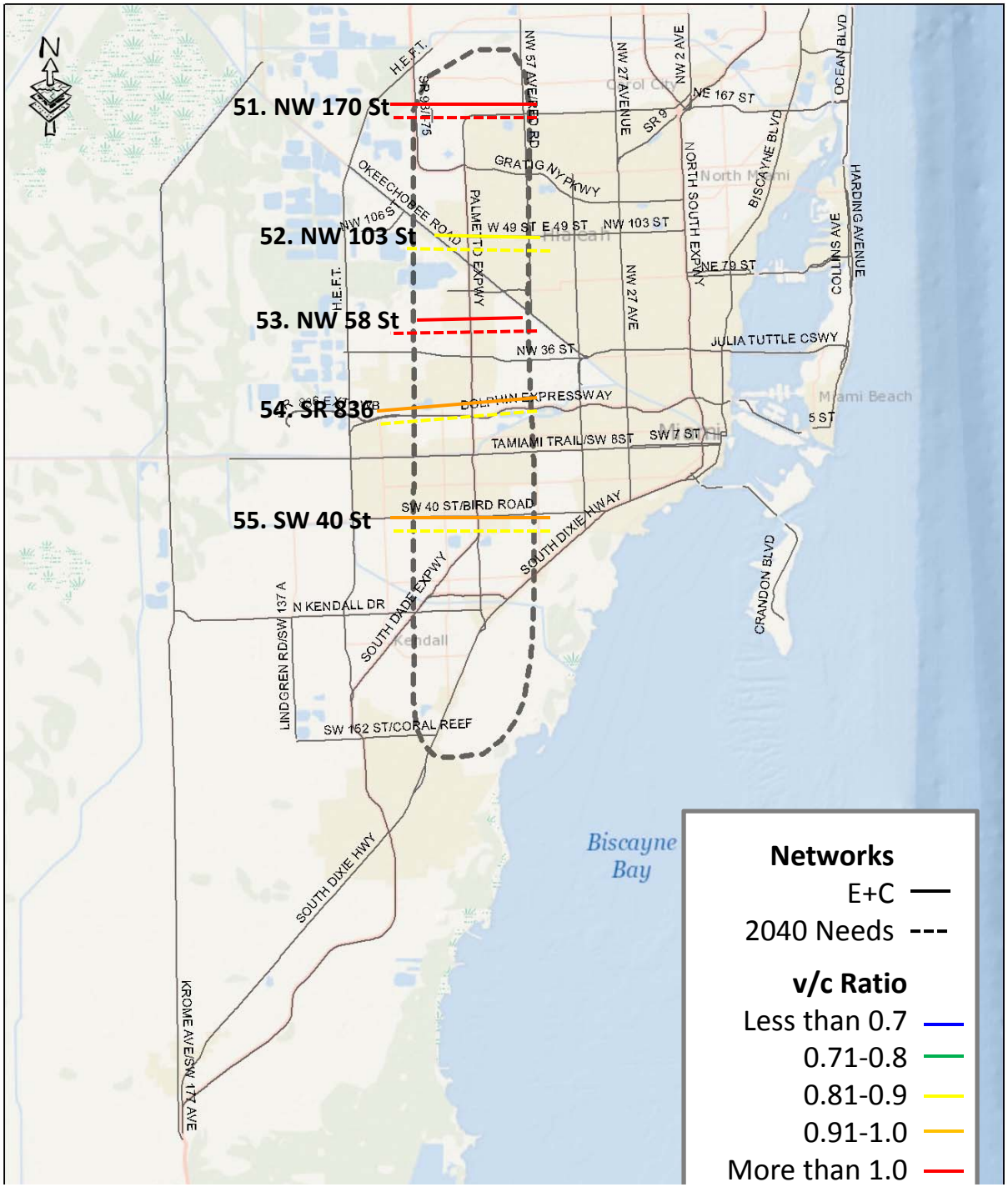
- Daily Person Trips 519,700 (7% of total trips)
- E+C V/C: 1.03
- Needs V/C: 0.84



Corridor 5 | Northwest - Kendall

Corridor Snapshot

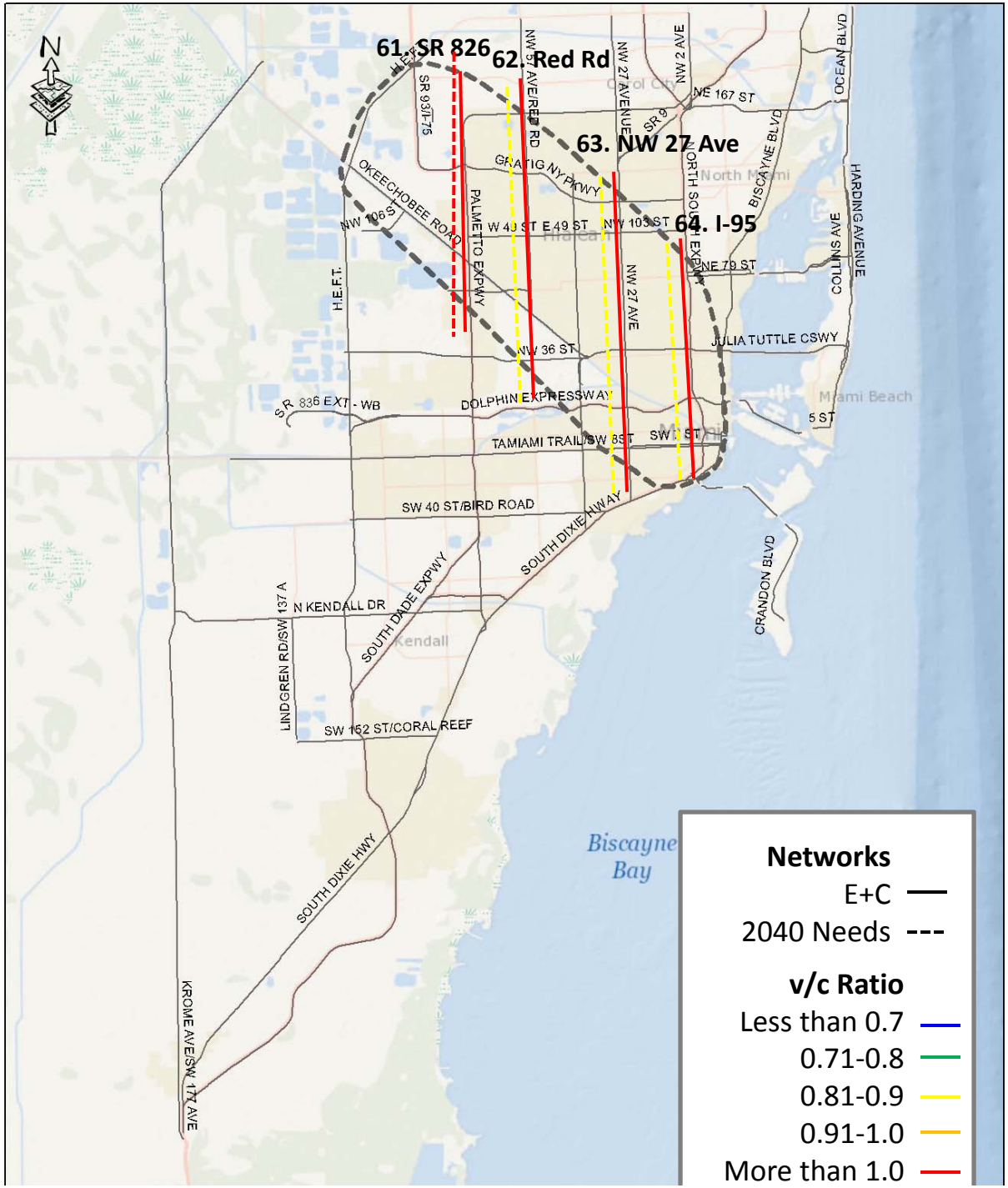
- Daily Person Trips 501,100 (7% of total trips)
- E+C V/C: 1.09
- Needs V/C: 0.96



Corridor 6 | Northwest - Downtown

Corridor Snapshot

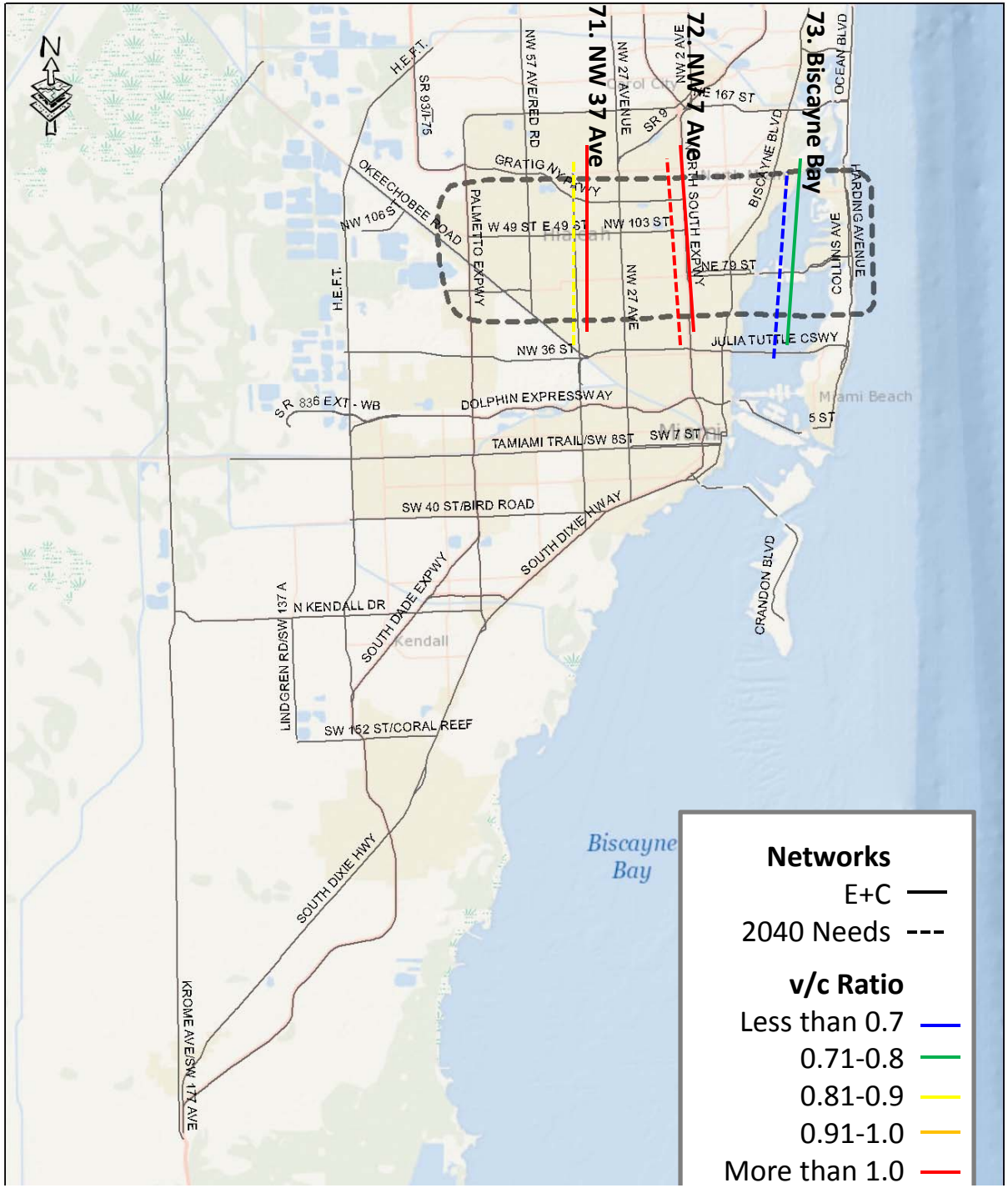
- Daily Person Trips 883,900 (12% of total trips)
- E+C V/C: 1.16
- Needs V/C: 0.85



Corridor 7 | East Coast

Corridor Snapshot

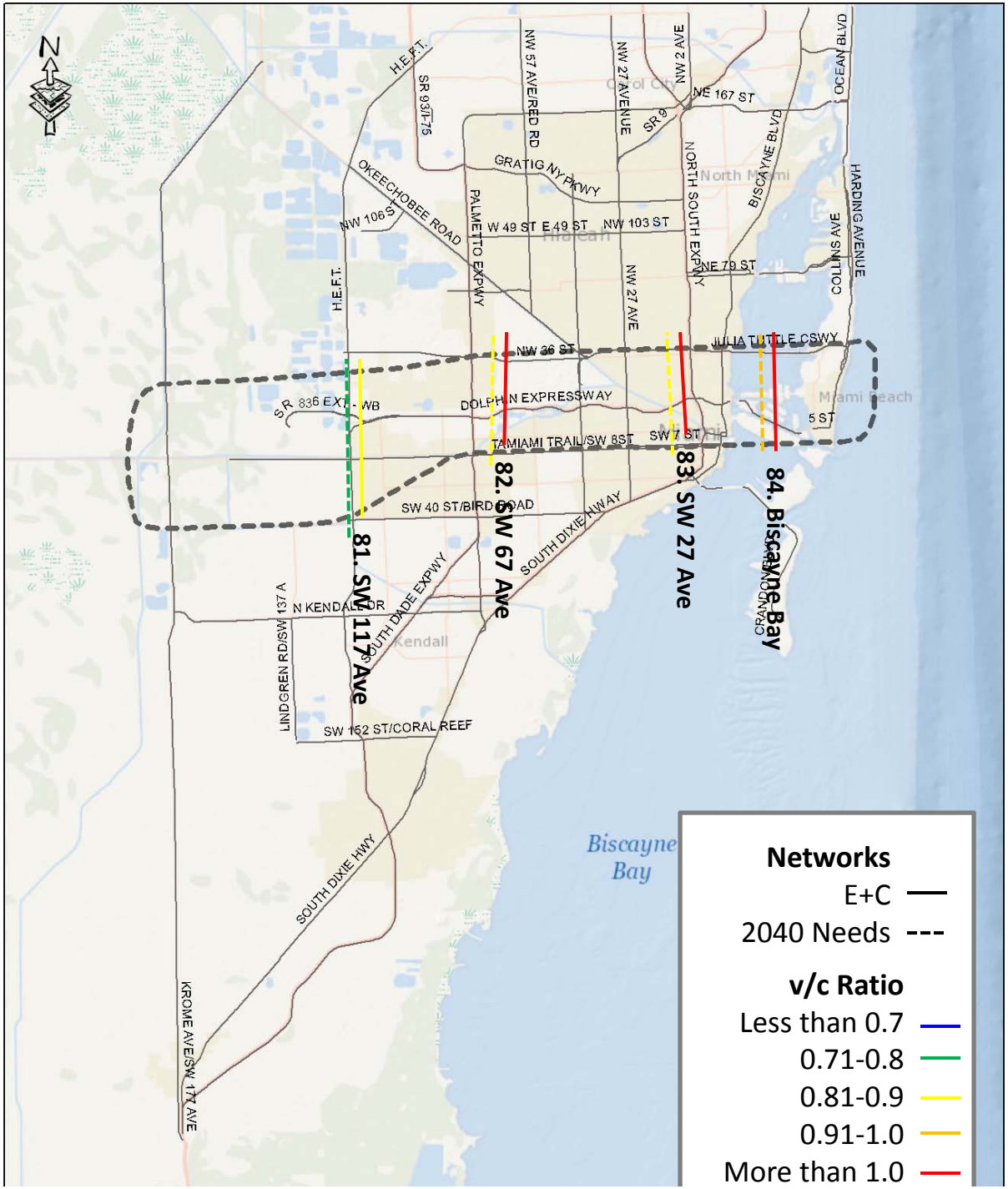
- Daily Person Trips 76,600 (1% of total trips)
- E+C V/C: 1.21
- Needs V/C: 1.01



Corridor 8 | E-W Mid County

Corridor Snapshot

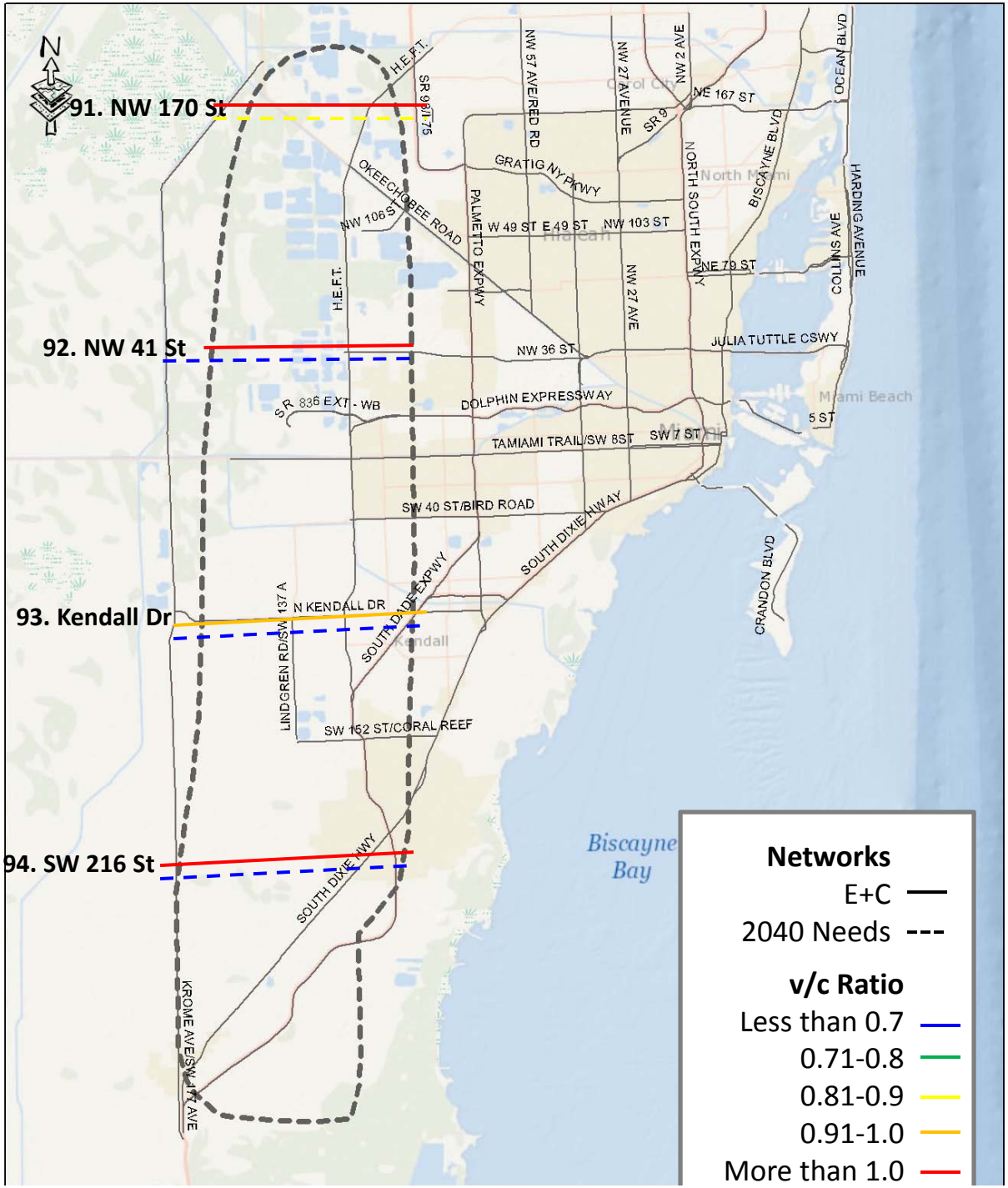
- Daily Person Trips 571,000 (8% of total trips)
- E+C V/C: 1.34
- Needs V/C: 0.86



Corridor 9 | West County

Corridor Snapshot

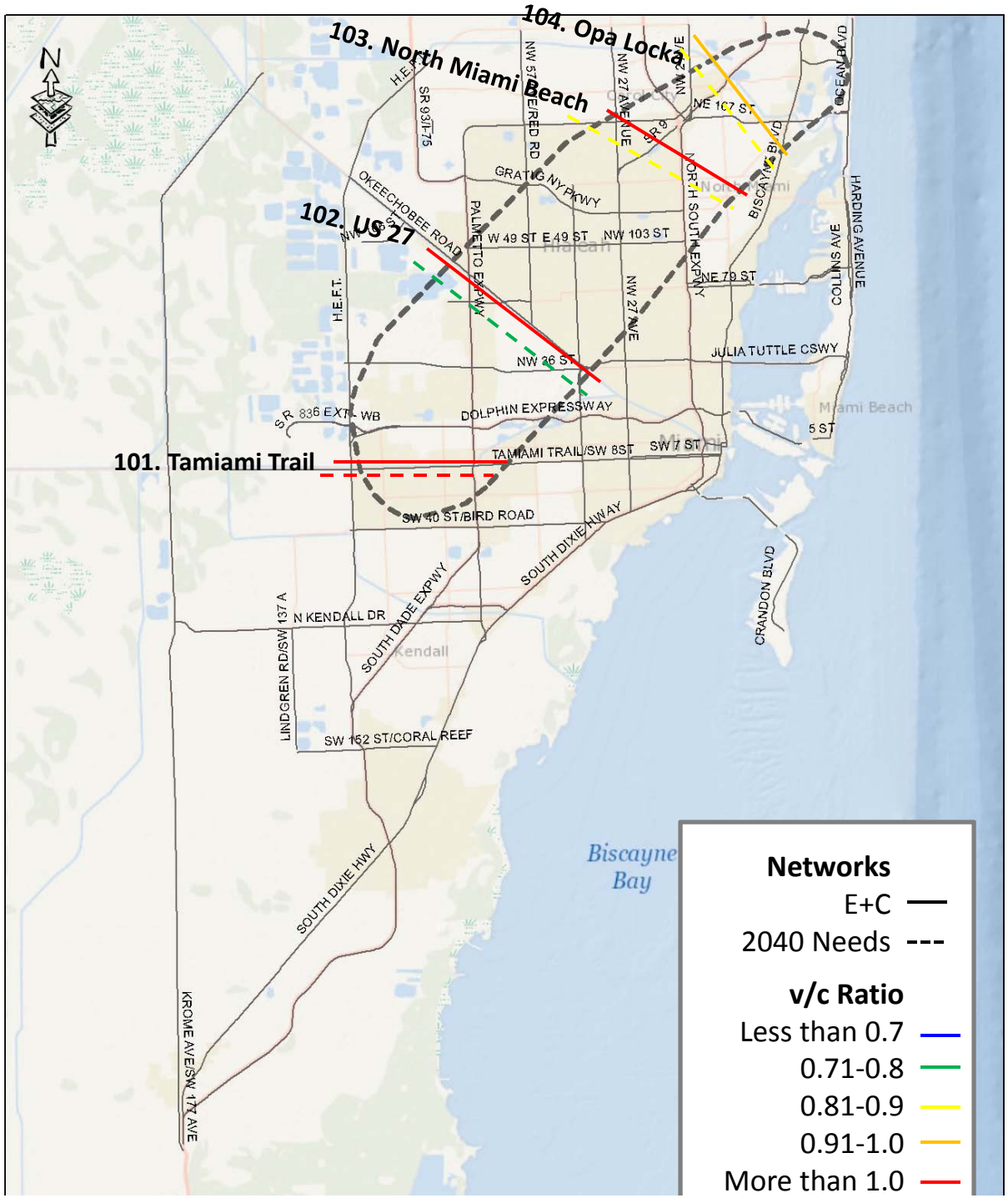
- Daily Person Trips 427,900 (6% of total trips)
- E+C V/C: 1.06
- Needs V/C: 0.76



Corridor 10 | Northeast - Kendall

Corridor Snapshot

- Daily Person Trips 406,600 (6% of total trips)
- E+C V/C: 1.22
- Needs V/C: 0.89



Project Costs

- Detailed project costs needed to build Cost Feasible Plan
  - Planning/Design
  - Right of Way
  - Construction
  - O&M
- Historical project costs for projects included in 2035 LRTP Cost Feasible Plan can be accessed at:

  http://www.miamidade2035transportationplan.com/docs/Miami-Dade2035-FinancialResourcesReportAppB.pdf
- Project cost estimates not provided will be estimated using FDOT unit cost information

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Next Steps

- Project Evaluation
- Project Costs
- Revenue Scenarios
- Public Meetings

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Questions / Comments

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