CITY OF NEWTON

IN BOARD OF ALDERMEN

PUBLIC SAFETY & TRANSPORTATION COMMITTEE AGENDA

WEDNESDAY, JANUARY 4, 2012

7:45 PM
Room 202

Chairman's Note: At this first Committee meeting of the new Board term, there will be a brief discussion of each docket item below relative to information needed before the item is heard again and anticipated timeframe.

ITEMS SCHEDULED FOR DISCUSSION:

#9-12 TRAFFIC COUNCIL CHAIR providing the Annual Report on the work of the Traffic Council for 2011 pursuant to Section 19-30(g) of the City of Newton Rev Ord, 2007. [12/16/11@ 4:00 PM]

#417-11 ALD. JOHNSON requesting a discussion with the Department of Transportation regarding sound barriers along the Turnpike. [12/07/11 @ 9:29 PM]

#278-11 ALD. YATES, requesting a report from His Honor the Mayor on the likely impacts on traffic in Newton from the changes to the Route 9/128 intersection as part of the Add-A-Lane Project. [09/26/11 @ 2:37 PM]

#233-11 ALDERMEN CROSSLEY, YATES AND RICE requesting a discussion with the Massachusetts Department of Conservation & Recreation (DCR) regarding design and location of the recently created pedestrian access from Quinobequin Road to the revised DCR trail parallel to the Charles River, where pedestrians are concealed and unprotected from oncoming traffic, and further to consider redesign and/or relocation to make access points to the trail safe for both pedestrians and drivers. [08/01/11 @ 4:18 PM]

#156-11 ALD. YATES requesting a report from the Massachusetts Bay Transportation Authority on the physical condition of the bridge that carries the MBTA Green Line over Route 9 near Eliot Station. [05/02/11 @ 10:51 PM]

The location of this meeting is handicap accessible and reasonable accommodations will be provided to persons requiring assistance. If you have a special accommodation need, please contact the Newton ADA Coordinator Trisha Guditz at 617-796-1156 or tguditz@newtonma.gov or via TDD/TTY at (617) 796-1089 at least two days in advance of the meeting.

ITEMS NOT SCHEDULED FOR DISCUSSION:

REFERRED TO PS&T AND PUBLIC FACILITIES COMMITTEES

#413-11 ALD. CICCONE, SALVUCCI, GENTILE & LENNON updating the Public Facilities and Public Safety & Transportation Committees on the progress of renovations to the city's fire stations. [11/17/11 @11:07 AM]

REFERRED TO FINANCE AND APPROPRIATE COMMITTEES

#383-11 HIS HONOR THE MAYOR submitting the FY13-FY17 Capital Improvement Program pursuant to section 5-3 of the Newton City Charter and the FY12 Supplemental Capital budget which require Board of Aldermen approval to finance new capital projects over the next several years. [10/31/11 @ 3:12 PM]

#289-11 ALD. HESS-MAHAN, SWISTON, SALVUCCI, requesting a discussion with the Animal Control Department regarding the presence of coyotes in Newton and the recent attack on a dog in West Newton. [10/06/11 @ 9:07 AM]

REFERRED TO PUBLIC SAFETY & TRANS. AND FINANCE COMMITTEES

#262-11 HIS HONOR THE MAYOR requesting amendments to Chapter 17 of the City of Newton Ordinances, 2007 to increase fees for permits issued by the Fire Department. [08/29/11 @ 3:50 PM]

#137-11 ALD. DANBERG AND FULLER requesting possible changes to City Ordinance 19-191, Parking Meter Fees, to require a minimum purchase at long-term parking meters in order to discourage short-term use. [4/26/11 @ 9:52 AM]

REFERRED TO PS&T AND PUBLIC FACILITIES COMMITTEE

#41-11 ALD. JOHNSON, LENNON AND DANBERG requesting discussion of the elimination, except during snow emergencies, of the overnight parking ban which is in effect from November 15 through April 15. [01/18/11 @ 9:00 PM]

#279-10 ALD. JOHNSON, ALBRIGHT & LINSKY, requesting the development of a comprehensive traffic and parking plan for the Newton North High School neighborhood with the following streets as its borders: Commonwealth Avenue, Washington, Harvard and Valentine Streets. This plan to be completed by November 30, 2010 will include a fix to short term (immediate needs) and longer term needs to effectively manage the traffic circulation within the neighborhood, provide pedestrian and vehicular safety, and preserve quality of life for the neighborhood, school staff and faculty. [10/06/10 @ 12:33 PM]

Respectfully submitted,

Allan Ciccone, Jr. Chairman

#9-12

Setti D. Warren
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Candace Havens
Director

MEMORANDUM

DATE: December 29, 2011

TO: Members of the Public Safety and Transportation Committee

FROM: David Koses, Transportation Planning Coordinator
Candace Havens, Director, Planning and Development Department

SUBJECT: #9-12 Traffic Council Chair providing the Annual Report on the work of the Traffic Council for 2011

CC: Board of Aldermen

On December 3, 2007, the Board of Aldermen approved as amended, docket item #421-05, which authorized changes to the structure of the Traffic Council. At that time, the Committee requested an annual update of Traffic Council Actions. The attached information is provided to the Committee as requested. No action is necessary.

During 2011, Traffic Council held twelve evening meetings and one additional daytime meeting. As shown in Appendix A, during 2011 Traffic Council heard 89 distinct items and took final action on 85 of them (four items are still being held). Traffic Council approved (or approved as amended) 61% of all items heard, took no action on 25%, and denied nine items. During 2011, four items were appealed. All of the appealed items were subsequently overturned by the Board of Aldermen. The following is a list of items that were appealed:

- TC35-11(c) ALD. DANBERG, requesting discussion and possible action on the following: No parking on Beacon Street westbound (north side) from Grant Avenue to Dalton Street. **(Appeal approved as amended on 9/7/11 6-2 (Freedman, Johnson). Approved without discussion 20-1 (Johnson) with 3 absent on 9/19/11).**

- TC30-10 NANCY BRAUDIS, 57 Theodore Road, requesting a pedestrian warning beacon with a crosswalk at Theodore Road and Parker Street. **(Appeal approved on 9/21/11 at PS&T with a vote of 6-0). Approved without discussion 24-0 on 10/3/11).**

- TC51-11 PLANNING DEPARTMENT AND THE DEPARTMENT OF PUBLIC WORKS, requesting that the following streets be designated TIGER Permit areas: (a) Beaumont Avenue, (b) Blithedale Street, (c) Bolton Road, (d) Calvin Road, (e) Charlesden Park, (f) Clyde Street, (g) Dexter Road, (h) Elmwood Park, (i) Fairfield Street, (j) Gay Street, (k) Highland Avenue (between Lowell and Walnut), (l) Kimball Terrace, (m) Kirkstall Road (between Walnut and Charlesden Park), (n) Otis Street (between Walden and Walnut), (o) Prospect Avenue, (p) Pulsifer Street, (q) Trowbridge Street (public portion), (r) Walden Street, and (s) Woodside Road. **(Appeal approved on 12/7/11 at PS&T with a vote of 6-0). Approved without discussion 23-0 with one absent on 12/19/11).**

- TC52-11(h) PLANNING DEPARTMENT AND THE DEPARTMENT OF PUBLIC WORKS, requesting: no more than 70 permits will be issued to students that will allow them to override existing time limits and resident parking restrictions and park on public ways that are approved by TC51-11 between the hours of 7:00 a.m. and 4:00 p.m. on school days, provided the following: (1) students can only be assigned to one side of each street approved by TC51-11, and (2) the maximum number of permits issued to students per street cannot exceed the number of houses that have frontage along the TIGER Permit designated side of the street. **(Appeal approved on 12/7/11 at PS&T with a vote of 6-0). Approved without discussion 23-0 with one absent on 12/19/11).**

Four items have been heard by Traffic Council and are still being held. The following is a list of the items which Traffic Council initially heard during calendar year 2011 and which are still being held:

- TC26-11 ALD. RICE, requesting a "Do Not Enter" Sign at the intersection of Beethoven Avenue and Beacon Street on School Days during the hours of 8:30 am to 9:30 am and 2:30 pm to 3:30 pm **(TRIAL ONGOING: Do Not Enter Beethoven Road from Beacon Street and from Evelyn Road, 8:00 AM to 9:00 AM and 2:30 PM to 3:30 PM, School Days).**

- TC28-11 JAMES AND KARIN RIZZA, 19 Cornell Street, requesting that during soccer and baseball seasons parking be allowed only on one side of Cornell Street. **(TRIAL TO BE UNDERTAKEN: No parking Saturdays, April 15-November 30, residential side of Cornell Street between Grove Street and Pine Grove Avenue.)**

- TC29-11 ALDERMEN BAKER, FULLER AND SCHNIPPER requesting installation of pedestrian activated warning light at a crosswalk location to be determined on Beacon Street between Hammond Street and Reservoir Avenue, together with suitable illumination, or other enhancements, to facilitate Safe pedestrian crossing while maintaining through traffic flow. **(BEING HELD: Boston College continuing design work.)**

- ALD. FREEDMAN, FISCHMAN AND LAPPIN, requesting a review of traffic council conditions on automobiles, parking and pedestrian safety in the area of the intersection of Dedham Street and Rachel Road with particular attention to changes that may occur with the opening of the new Beth Menachem Chabad. **(TRIAL ONGOING: no parking, south/east (even numbered) side of Rachel Road between Mosley Road and Dedham Street.)**

Finally, one item is being held, but was not heard during 2011. The following item was last heard by Traffic Council on 12/17/09: TC29-09 ALD. SANGIOLO, GENTILE AND HARNEY requesting installation of a pedestrian-activated warning signal on Commonwealth Avenue in front of the Marriott Hotel in Auburndale.

Appendix A: Summary of 2011 Traffic Council Actions

Traffic Council Vote	Number	Pct
No Action Necessary	22	25%
Approved	50	56%
Approved as Amended	4	4%
Denied	9	10%
Held, and still being held at end of 2011*	4	4%
Number of Unique Items Handled:	**89**	**100%**
Trials Undertaken in 2011	4	4%

Distribution of Items by Ward	Number	Pct
1	*13*	15%
2	*17*	19%
3	*1*	1%
4	*5*	6%
5	*2*	2%
6	*19*	21%
7	*14*	16%
8	*8*	9%
Multiple Wards	*10*	11%
Total Number of Items Heard:	**89**	**100%**

Appeals of Traffic Council Decisions (all were overturned)	**4**	**4%**

Backlog During 2011	# of items	Date
Average	23	
Minimum	17	3/24/11
Maximum	31	6/23/11

*One additional item was heard and held in 2010, and was not heard during 2011.

Traffic Council Actions - 2011

Date	Item	Description	Hold	No Action Necessary	Approve	Approve as Amended	Denial	Trial	Appealed	Ward
		TOTAL:	7	22	50	4	9	4	4	
1/27/11	TC36-08	The WARD 4 ALDERMEN appealing denial of Traffic Council Decision TC42-09 voted on April 29, 2010: ALD, HARNEY, SANGIOLO AND GENTILE requesting a) a study for possible traffic calming measures to regulate speed on the following streets: West Pine Street and Melrose Avenue near the Auburndale Cove playground and parking lot and b) request turning restrictions from Lexington Street onto Staniford Street during rush hour or any other means to reduce cut-through commuter traffic on the surrounding streets – Staniford, West Pine and Melrose Streets. (Ward 4) (Appeal filed on 04/30/10 @ 11:46 AM) Public Safety & Transportation Committee HELD 6-0, Approved a 60-day trial on 06/09/10, No Right Turn, 7:00 a.m. to 9:00 a.m., Monday through Friday, Lexington Street onto Staniford Street. Public Safety & Transportation Committee voted the following on 01/05/11 A) NO ACTION NECESSARY 6-0, Ald. Yates not voting B) TRIAL APPROVED 3-2-1, Ald. Fuller and Freedman opposed, Ald. Shapiro abstaining, Ald. Yates not voting			X					4
1/27/11	TC39-10	JEROME GRAFE requesting discussion of traffic flow and potential parking restrictions on Walnut Street between Beacon and Homer Streets and between Commonwealth Avenue and Elm Road, in support of extending the existing bike lane on Walnut Street, both north and south bound, accordingly.		X						2, 6
2/17/11	TC15-10	JAMES & NANCY BOWDRING, 94 Hammondswood Road, requesting No Left Turn 7:00 a.m. to 9:00 a.m. at the intersection of Beacon Street and Hammondswood Road. (HELD (4-0, Ciccone not present) on 10/21/10 for 60-Day Trial, No Left Turn 7:00 a.m. to 9:00 a.m., from Beacon Street to Hammondswood Road.			X					7
2/17/11	TC1-11	DAREN DEAN, Two Newton Place, 255 Washington Street, requesting Right Turn on Red at the intersection of Centre and Jefferson Streets.					X			1
2/17/11	TC41-10	DAVID KOSES, on behalf of the Newton Safe Routes to School Task Force, requesting parking restrictions on both sides of Cypress Street, in the vicinity of 280 Cypress Street, in association with modifications to the island and related infrastructure changes near the school entrance, to be paid for through Mass DOT'S Safe Routes to School Infrastructure Program.			X					6
2/17/11	TC42-10	DAVID KOSES, on behalf of the Newton Safe Routes to School Task Force, requesting installation of a pedestrian hybrid signal and crosswalk on Parker Street in the vicinity of Daniel Street and Athelstane Road, to be paid for through Mass DOT' Safe Routes to School Infrastructure Program.			X					6
3/24/11	TC28-10	JAMES DANILA, on behalf of the Department of Public Works, requests a right turn only restriction on westbound Carriage Road at Lowell Avenue to facilitate the relocation of the stop line on Lowell Avenue to help improve pedestrian, bicycle, and vehicle safety. (Ward 2)			X					2
3/24/11	TC24-10	ALD. DANBERG, BLAZAR AND SHAPIRO requesting discussion on possible methods of improving traffic flow and safety at the intersections of Beacon and Centre Streets and Beacon Street and Langley Road including but not limited to re-timing of the lights.		X						6
3/24/11	TC40-10	ALD. DANBERG, BLAZAR, SHAPIRO, FULLER AND BAKER requesting discussion of and possible ban of parking during morning rush hour on Beacon Street a) (North side) between Langley Road and Centre Street and b) (South side) between Langley Road and Centre Street		X						6 and 7
3/24/11	TC34-10	ALD. LAPPIN requesting an analysis of parking and traffic flow on Florence Street as it relates to pedestrian and bike safety.		X						7 and 8
3/24/11	TC2-11	ALD. SALVUCCI, LENNON, CICCONE AND MERRILL on behalf of the Citizens of Newton Corner requests establishing reasonable regulations and install traffic safety devices as are necessary to protect pedestrians traveling to the south side of the Massachusetts Turnpike.		X						1
3/24/11	TC3-11	ROBERT TENDLER, 19 Lawrence Avenue, requesting removal of the present parking restrictions and the imposition of "Resident Parking Only" on Lawrence Avenue.			X					7

Traffic Council Actions - 2011

Date	Item	Description	Hold	No Action Necessary	Approve	Approve as Amended	Denial	Trial	Appealed	Ward
		TOTAL:	7	22	50	4	9	4	4	
4/28/11	TC32-10	GABE SMALLMAN, c/o Mark Schwarez, 600 California Street, requesting Goddard Street be considered a one-way street to address speeding and to reduce cut through traffic.					X			8
4/28/11	TC55-09	ALD. CICCONE, LENNON AND MERRILL requesting a safety analysis and improvements at the intersection of Lewis Terrace, Lewis Street and Newtonville Avenue		X						1 and 2
4/28/11	TC38-10	ALD. JOHNSON AND LINSKY requesting a lowering of the speed limit on Cabot Street					X			1 and 2
4/28/11 and 5/26/11	TC6-11	CHIEF MATTHEW CUMMINGS, requesting the installation of a pedestrian traffic signal to replace the existing flashing yellow pedestrian light at the intersection of Crafts Street at Linwood Avenue.	X	X						2
4/28/11 and 5/26/11	TC14-11	PLANNING DEPARTMENT, requesting traffic and pedestrian improvements to Crafts Street between Linwood Avenue and Walnut Street, which may include a traffic signal at the intersection of Crafts and Walnut Streets.	X	X						2
5/26/11	TC21-11	PLANNING DEPARTMENT, on behalf of the NEWTON SAFE ROUTES TO SCHOOL TASK FORCE, requesting establishment of a Blue Zone on Cypress Street, adjacent to the Bowen School.			X					6
5/26/11	TC20-11	PLANNING DEPARTMENT, on behalf of the NEWTON SAFE ROUTES TO SCHOOL TASK FORCE, requesting a raised crosswalk on Cypress Street, in the vicinity of 280 Cypress Street, in association with modification to the school entrance, to be paid for through MassDOT's Safe Routes to School Infrastructure Program		X						6
5/26/11	TC22-11	PLANNING DEPARTMENT, requesting a raised device on Cypress Street near Bow Road		X						6
5/26/11	TC19-11	PLANNING DEPARTMENT, requesting a discussion related to changes to the TIGER Permit Parking Program and the private way section of Elm Road.		X						2
5/26/11	TC7-11	ALD. DANBERG AND FULLER, requesting a discussion on re-striping auto and bicycle lanes at the intersection of Beacon Street and Hammond Pond Parkway to improve traffic flow and bike safety		X						6 and 7
5/26/11	TC23-10	ALD. DANBERG, BLAZAR AND SHAPIRO, on behalf of Kay Alexander and Steve Hamilton requesting a discussion on traffic mitigation possibilities on Sumner, Marshall, Everett and Gibbs Streets in Newton Centre to address speeding and cut-through traffic.		X						6
6/23/11	TC32-11	PLANNING DEPARTMENT, requesting consideration of changes to the parking restrictions on Hull Street, to include TIGER Permit Parking			X					2
6/23/11	TC31-11	PLANNING DEPARTMENT, requesting consideration of changes to the parking restrictions on Lowell Avenue between Austin Street and Arden Road, to include TIGER Permit Parking			X					2
6/23/11	TC30-11	PLANNING DEPARTMENT, requesting consideration of changes to the parking restrictions and directionality of the public section of Elm Road to include TIGER Permit Parking			X					2
6/23/11	TC33-11	ALD DANBERGAND BLAZAR, requesting (a) a No Stopping or Standing zone along the southern curb of Homer Street in the vicinity of 72 and 64 Homer Street and the Newton Centre Playground to accommodate a new bump-out and crosswalk across Homer Street and (b) changing the eastern leg of Grafton Street to one-way northbound (towards Commonwealth Avenue), matching the one-way southbound (towards Homer Street) western leg.			X					6
6/23/11	TC37-10	NEWTON HIGHLANDS NEIGHBORHOOD, Newton recommending the implementation of a pedestrian-activated blinking warning sign on a mast-arm above Walnut Street (at either Hyde or Dunckiee Streets), similar to those recently implemented at other locations in Newton, and any other necessary measures to allow for a safe pedestrian crossing area in this corridor of Walnut Street (currently lacking).			X					6
6/23/11	TC34-11(a)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (a) Left lane must turn left, Langley Road southbound at Beacon and Sumner Streets (matches posted signage).			X					6

Traffic Council Actions - 2011

Date	Item	Description TOTAL:	Hold 7	No Action Necessary 22	Approve 50	Approve as Amended 4	Denial 9	Trial 4	Appealed 4	Ward
6/23/11	TC34-11(b)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (b) Left lane must turn left, Langley Road northbound at Beacon and Sumner			X					6
6/23/11	TC34-11(c)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (c) Left lane must turn left, Beacon Street eastbound at Grant Avenue (matches posted signage).			X					6, 7
6/23/11	TC34-11(d)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (d) Right lane must turn right, Beacon Street eastbound at Hammond Pond Parkway.			X					7
6/23/11	TC34-11(e)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (e) Left lane must turn left, Beacon Street westbound at Hammond Pond Parkway (matches posted signage).			X					7
6/23/11	TC34-11(f)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (f) Left lane must turn left, Beacon Street eastbound at Hammondswood Road subject to pre-existing turning restrictions or related measures, consideration of lane striping, or limitations on lane use to improve safety for traffic going eastbound on Beacon at Hammondswood Road.		X						7
6/23/11	TC34-11(g)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (g) Left lane must turn left, Beacon Street eastbound at Hammond Street (matches posted signage).			X					7
6/23/11	TC34-11(h)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (h) Left lane must turn left, Beacon Street westbound at Hammond Street (matches posted signage).			X					7
6/23/11	TC34-11(i)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (i) Parking meter zone, one-hour limit, 8 a.m. to 6 p.m., Beacon Street, south side between Langley Road and Union Street (matches posted regulation).			X					6
6/23/11	TC34-11(j)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (j) No Parking zone, Beacon Street, south side from approximately the driveway of 698 Beacon Street to approximately the property line of 680 and 672 Beacon Street.			X					6
6/23/11	TC34-11(k)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (k) No Parking zone, Beacon Street, south side from approximately the driveway of 550 Beacon Street to Hammond Pond Parkway.			X					7
6/23/11	TC34-11(l)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (l) No Parking zone, Beacon Street, north side from Hobart Road to a point approximately 200' west of Bishopsgate Road.			X					7
6/23/11	TC34-11(m)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (m) Remove No Parking regulations, Beacon Street, north side from approximately the driveway of 455 Beacon Street to Hammondswood Road.			X					7
6/23/11	TC34-11(n)	ALD. DANBERG, FULLER, BAKER, BLAZAR AND SHAPIRO, requesting the following changes to accommodate bicycle lanes on Beacon Street (n) Post No Parking signs to match the existing City Traffic and Parking Regulations at the following locations: (1) Beacon Street, south side from Hammond Pond Parkway to Hammond Street, (2) Beacon Street, north side, from		X						7
6/23/11	TC35-11(a)	TC35-11 ALD. DANBERG, requesting discussion and possible action on the following: (a) No parking on Beacon Street eastbound (south side) from Beacon Heights to Hammond Pond Parkway.					X			7

Traffic Council Actions - 2011

Date	Item	Description	Hold	No Action Necessary	Approve	Approve as Amended	Denial	Trial	Appealed	Ward
		TOTAL:	7	22	50	4	9	4	4	
6/23/11	TC35-11(b)	ALD. DANBERG, requesting discussion and possible action on the following: (b) No parking on Beacon Street westbound (north side) from Hammondswood to the driveway at 609 Beacon Street.					X			7
6/23/11	TC35-11(c)	ALD. DANBERG, requesting discussion and possible action on the following: (c) No parking on Beacon Street westbound (north side) from Grant Avenue to Dalton Street.			X				X	6
7/28/11	HP1-11	DONNA DRISCOLL, 468 Watertown Street, requesting a handicap parking space in front of her residence			X					1
7/28/11	TC30-10	NANCY BRAUDIS, 57 Theodore Road, requesting a pedestrian warning beacon with a crosswalk at Theodore Road and Parker Street					X		X	8
7/28/11	TC9-11	WARD 8 ALDERMEN, requesting a review of traffic and pedestrian safety in the area of Memorial-Spaulding School, including parking, traffic signals, street markings, blue zones, student walking routes and any other considerations relevant to safety and traffic flow				X				8
7/28/11	TC10-11	ALDERMAN SHAPIRO on behalf of the Newton South High School Principal and School Council, requesting parking restrictions between approximately 131 Brandeis Road and the Newton South High School parking lot			X					8
7/28/2011, 10/27/11	TC4-11	CATE BURRELL, on behalf of the Hills & Falls Nursery School, 258 Concord Street, requesting a) extend time signs to run the length of the east side of Concord to Hager Streets, b) extend time on signs to include 11:30am - 12:15pm c) requesting to reserve eight parking spaces for staff on the west side of Concord Street and d) requesting painted designations where vehicles should park			X			X		4
7/28/11	TC26-11	ALD. RICE, requesting a "Do Not Enter" Sign at the intersection of Beethoven Avenue and Beacon Street on School Days during the hours of 8:30 am to 9:30 am and 2:30 pm to 3:30 pm	X					X		5
8/9/11	TC29-11	ALDERMEN BAKER, FULLER AND SCHNIPPER requesting installation of pedestrian activated warning light at a crosswalk location to be determined on Beacon Street between Hammond Street and Reservoir Avenue, together with suitable illumination, or other enhancements, to facilitate Safe pedestrian crossing while maintaining through traffic flow	X							7
8/9/11	HP3-10	DAVID KOSES on behalf of the Jackson Homestead, requesting a handicap parking space on Jackson Road in the vicinity of the Jackson Homestead		X						1
8/9/11	TC33-10	DAVID KOSES on behalf of the Jackson Homestead, requesting changes to reduce commuter parking on the south side of Washington Street, in the proximity of the Jackson Homestead		X						1
9/22/11	TC5-11	ALD. SWISTON, on behalf of Joshua Klevens, 351 Otis Street, requesting speed calming measures on Otis Street between Chestnut and Forest Streets as the posted speed limit and "children" signs are not preventing speeding motorists			X					3
9/22/11	TC15-11	ALD. JOHNSON, ALBRIGHT & LINSKY requesting the removal of the "No Right Turn on Red" sign at the intersection of Crafts and Watertown Streets				X				2
9/22/2011 and 10/27/11	TC18-11	RICHARD PASCARELLI, 435 Newtonville Avenue, requesting establishment of a loading zone in the vicinity of 432 Newtonville Avenue	X		X					2
9/22/11	TC16-11	TERESA RICE, 68 Gardner Street, requesting parking restrictions on Gardner Street			X					1
9/22/11	TC48-11	JOYCE McCARTHY, 22 Gardner Street, requesting parking restrictions on Gardner Street		X						1
9/22/11	HP2-11	JOYCE McCARTHY, 22 Gardner Street, requesting a handicap parking space in front of her residence			X					1
9/22/11	TC47-11	PLANNING DEPARTMENT, requesting changes to the parking restrictions on Centre Street between Church Street and Centre Avenue, to include new parking meters			X					1
9/22/11	TC46-11	PLANNING DEPARTMENT, requesting creation of a permit program for the Parks and Recreation Department to accommodate their relocation to Newton Corner			X					1

Traffic Council Actions - 2011

Date	Item	Description	Hold	No Action Necessary	Approve	Approve as Amended	Denial	Trial	Appealed	Ward
		TOTAL:	7	22	50	4	9	4	4	
10/13/11	TC52-11	OF PUBLIC WORKS, requesting the establishment of a permanent TIGER Permit program for students. This program would establish the following: (a) no more than 150 TIGER Permits to be issued to students, per the request of Newton North High School			X					2
10/13/11	TC52-11 (a), (b), (c), (e), (f), (g)	PLANNING DEPARTMENT AND THE DEPARTMENT OF PUBLIC WORKS, requesting the establishment of a permanent TIGER Permit program for students. This program would establish the following: (a) no more than 150 TIGER Permits to be issued to students, per the request of Newton North High School; (b) each TIGER Permit will include an assigned parking space, a permit number, and the effective dates; (c) 40 parking spaces in the Austin Street off-street municipal parking area will be designated as TIGER Permit only between 7:00 a.m. and 4:00 p.m. on school days; (e) the west side of Lowell Avenue between Austin Street and Highland Avenue will be designated as TIGER Permit only between 7:00 a.m. and 4:00 p.m. on school days, with no more than 17 permits assigned to this area; (f) the west side of Lowell Avenue adjacent to Claflin Park will be designated as TIGER Permit only between 7:00 a.m. and 4:00 p.m. on school days, with no more than 23 permits assigned to this area; (g) residents of Hull Street, Elm Road, and Lowell Avenue between Calvin Road and Highland Street will be eligible for TIGER Permits, which will not count against the student cap of 150 permits			X					2
10/13/11	TC52-11 (h)	PLANNING DEPARTMENT AND THE DEPARTMENT OF PUBLIC WORKS, requesting: (h) no more than 70 permits will be issued to students that will allow them to override existing time limits and resident parking restrictions and park on public ways that are approved by TC51-11 between the hours of 7:00 a.m. and 4:00 p.m. on school days, provided the following: (1) students can only be assigned to one side of each street approved by TC51-11, and (2) the maximum number of permits issued to students per street cannot exceed the number of houses that have frontage along the TIGER Permit designated side of the street			X				X	2
10/13/11	TC52-11 (i)	PLANNING DEPARTMENT AND THE DEPARTMENT OF PUBLIC WORKS, requesting the establishment of a permanent TIGER Permit program for students. This program would establish the following: (i) consideration of allowing residents of certain other streets to be eligible to obtain TIGER permits.					X			2
10/13/11	TC51-11	PLANNING DEPARTMENT AND THE DEPARTMENT OF PUBLIC WORKS, requesting that the following streets be designated TIGER Permit areas: (a) Beaumont Avenue, (b) Blithedale Street, (c) Bolton Road, (d) Calvin Road, (e) Charlesden Park, (f) Clyde Street, (g) Dexter Road, (h) Elmwood Park, (i) Fairfield Street, (j) Gay Street, (k) Highland Avenue (between Lowell and Walnut), (l) Kimball Terrace, (m) Kirkstall Road (between Walnut and Charlesden Park), (n) Otis Street (between Walden and Walnut), (o) Prospect Avenue, (p) Pulsifer Street, (q) Trowbridge Street (public portion), (r) Walden Street and (s) Woodside Road				X			X	2
10/13/11	TC14-10	WILLIAM FRANKLIN, 29 Trowbridge Avenue, requesting a) no parking either side of Trowbridge Avenue 24 hours/day except by permit, b) each household should be issued two mobile permits and c) the street should be posted on either end as residents only			X					2
10/13/11	TC43-11	AMY MACKRELL, 12 Dexter Road and BARBARA MODEL, 7 Dexter Road, requesting the implementation of Resident Permit Parking only on Dexter Road			X					2
10/13/11	TC29-11	ROBIN STEIN, 74 Kirkstall Road AND ELAINE WHITESIDE, 64 Kirkstall Road, requesting "No Parking from 8:00am to 10:00am on School Days" on Kirkstall Road and Charlesden Park				X				2

Traffic Council Actions - 2011

Date	Item	Description	Hold	No Action Necessary	Approve	Approve as Amended	Denial	Trial	Appealed	Ward
		TOTAL:	7	22	50	4	9	4	4	
10/27/11	TC45-11	PLANNING DEPARTMENT, requesting consideration of potential changes to the parking restrictions on Washington Street between the Charles River and Route 128, and on Concord Street between Washington Street and Hagar Street, which may include adding new parking meters and/or converting some existing meters from short term to long term parking			X					4
10/27/11	TC41-11	ALD. LAPPIN on behalf of Colella Road and Stein Circle area abutters requesting parking restrictions on Colella Road and or Stein Circle.			X					8
10/27/11	TC27-11	DAVID CARLSTROM, 62 Cypress Street, requesting a "Stop Sign" at the intersection of Cypress and Parker Streets.			X					6 and 8
10/27/11	TC17-11	JENNIFER BAVERSTAN, 21 Southwick Road, requesting "2-hour parking restrictions weekdays, Southwick Road".		X						5
10/27/11	TC59-11	JAMES DANILA, on behalf of the Public Works Department, requesting the removal of the following text from Section TPR-145: "Where directed by the commissioner of public works, traffic control signals shall be placed in flashing operation between the hours of 11:00 p.m. and 7:00 a.m. The commissioner of public works shall consult with the chief of police regarding each such determination			X					Citywide
10/27/11	TC63-11	PLANNING DEPARTMENT, requesting removal of the no parking tow zone restriction on the outer portion of the elbow at the 90-degree bend of Garner Street			X					1
11/17/11	TC8-11	ALD. FREEDMAN, on behalf of David Sands, 37 Baldpate Hill Road, to examine traffic and pedestrian safety at the intersection of Dudley Road and Baldpate Hill Road including stop sign location and pavement markings		X						8
11/17/11	TC60-11	ALD. SANGIOLO, GENTILE & HARNEY, requesting installation of speed tables on Concord Street			X					4
11/17/11	TC28-11	JAMES AND KARIN RIZZA, 19 Cornell Street, requesting that during soccer and baseball seasons parking be allowed only on one side of Cornell Street	X					X		4
11/17/11	HP3-11	N. ROBERT NUNBERG, 41 West Street, requesting a handicap parking space in front of #38 or #42 West Street					X			1
11/17/11	TC38-11	SALLY RIZZO, 52 Playstead Road, requesting Playstead Road be changed to a one-way street					X			1
11/17/11	TC24-11	ALD. CICCONE, requesting parking restrictions on vehicles parking in Hargrave Circle Cul-de-sac		X						6
11/17/11	TC25-11	ALD. CICCONE, requesting parking restrictions on vehicles parking in Wilson Circle Cul-de-sac		X						6
11/17/11	TC36-11	MARSHA CANICK, 11 Duncklee Street, requesting several parking spaces on Walnut Street be removed from the corners on each side of Duncklee Street			X					6
12/15/11	TC39-11	ALD. SHAPIRO, DANBERG, BLAZAR AND FREEDMAN, requesting a discussion and action on parking changes within the vicinity of Homer and Grafton Streets to improve pick-up, drop-off and parking during Little League events			X					6
12/15/11	TC54-11	ALD. DANBERG on behalf of Bowen School, requesting No U-Turn signs on Cypress Street (northbound) at Bow Road and Cypress Street in both directions in the vicinity of #289 and #290.			X					6
12/15/11	TC40-11	ALD. FREEDMAN, FISCHMAN AND LAPPIN, requesting a review of traffic council conditions on automobiles, parking and pedestrian safety in the area of the intersection of Dedham Street and Rachel Road with particular attention to changes that may occur with the opening of the new Beth Menachem Chabad.	X					X		8
12/15/11	TC30-10(2)	ALD LAPPIN, requesting a pedestrian signal with a crosswalk between Theodore Road and Parker Street			X					8
12/15/11	TC49-11	JIM DANILA, on behalf of the Transportation Division, requesting the removal of parking on Centre Street between Church and Ward Streets to accommodate bike lanes.			X					1, 6, 7

Subcommittee/Topic: Governance/Traffic Council

Recommendation:

Decisions on specific transportation projects by the Traffic Council should be consistent with the recommendations of this Transportation Advisory Committee and should whenever possible be made by applying written policies, developed through a public process, to the facts and context of specific projects. The ordinance creating the Traffic Council should be reviewed and, if appropriate, amended in order to ensure that the Traffic Council's jurisdiction is limited to those situations in which decision making by such a public body is necessary and appropriate (as opposed to those projects where professional staff can appropriately make the decision). In addition, the appeals process should be changed to require the filing of an appeal by three or more members of the Board of Alderman (including at least one from outside the ward within which a transportation/traffic matter is being considered).

Brief Statement of Underlying Principle or Intent of Recommendation:

Many transportation-related decisions that are made by the professional staff of Transportation and Planning departments in Massachusetts and throughout the United States are, in Newton, made by the Traffic Council. While this approach has important benefits by involving the public in such decisions, it can often slow down the process of making decisions about important transportation projects. As the Council's web page currently notes "Due to the volume of petitions received, there is approximately a 3 to 6 month wait for requests to be heard." The TAC therefore makes two recommendations to streamline the work of Traffic Council: that a review be conducted to see if any decisions currently within the jurisdiction of the Traffic Council should be removed (and transferred to professional staff) and that the Traffic Council increasingly seek to act through the application of generally applicable written policies rather than on a case-by-case basis. The Council itself has begun to implement such a policy-based approach through the adoption of policies such as one on requests for handicap parking spaces and the TAC believes that these efforts should be expanded and institutionalized. In addition, the TAC believes that the current appeals process – under which a single member of the Board of Alderman can appeal a decision of the Traffic Council to the full Board of Alderman – is time-consuming and works against the goal of greater policy-based decision making and therefore recommends changes to limit the number of appeals.

Action Required:

An ordinance change is required to change the appeals process and make any changes in jurisdiction identified in the recommended review of Traffic Council jurisdiction. The Traffic Council already has the authority to develop and adopt written policies to guide its decision making.

Recommended Timeline:

The review of Traffic Council jurisdiction should be completed by June 2012 so that any recommended changes, along with the TAC's recommended changes to the appeals process, can be docketed as an ordinance change in July 2012.

#409-03

IN BOARD OF ALDERMEN
OCTOBER 20, 2003
RESOLUTION
AUSTIN STREET-NEWTONVILLE
NEIGHBORHOOD PETITION TO TURNPIKE AUTHORITY
FOR INSTALLATION OF SOUND BARRIERS

Whereas, The NEWTONVILLE ASSOCIATION FOR NOISE ABATEMENT, hereafter referred to as NANA, a group of Austin Street neighborhood residents formed in December of 1989, has repeatedly tried to secure some noise relief from traffic on the abutting Massachusetts Turnpike, and

Whereas, NANA has contacted local, state and Congressional representatives and senators with their concerns about the noise levels and the health risks associated with high (>40 decibels) and noted various communications and announcements by the Massachusetts Turnpike Authority over the years, including their acknowledging the problem and promising to do something to reduce it, and

Whereas, the Massachusetts Turnpike Authority tried to solve the noise level problem, but despite the planting of somewhat less than 1,000 new trees along Austin Street's north slope, NANA maintains that this welcomed effort has NOT changed the noise level in this area, and

NOW THEREFORE BE IT RESOLVED
That HIS HONOR THE MAYOR and members of this NEWTON BOARD OF ALDERMEN agreeably go on official record that in the interests of both public health and safety there is a definitive need for the installation of permanent sound barriers along this section of the Turnpike and respectfully urge State Turnpike and Highway officials to prioritize this long awaited and unanswered request from the patient members of NANA.

Resolution offered by

ALD. CICCONE_____

ALD. JOHNSON _____

ALD. LINSKY _____
Approved unanimously by voice vote

_____
DAVID B. COHEN, MAYOR

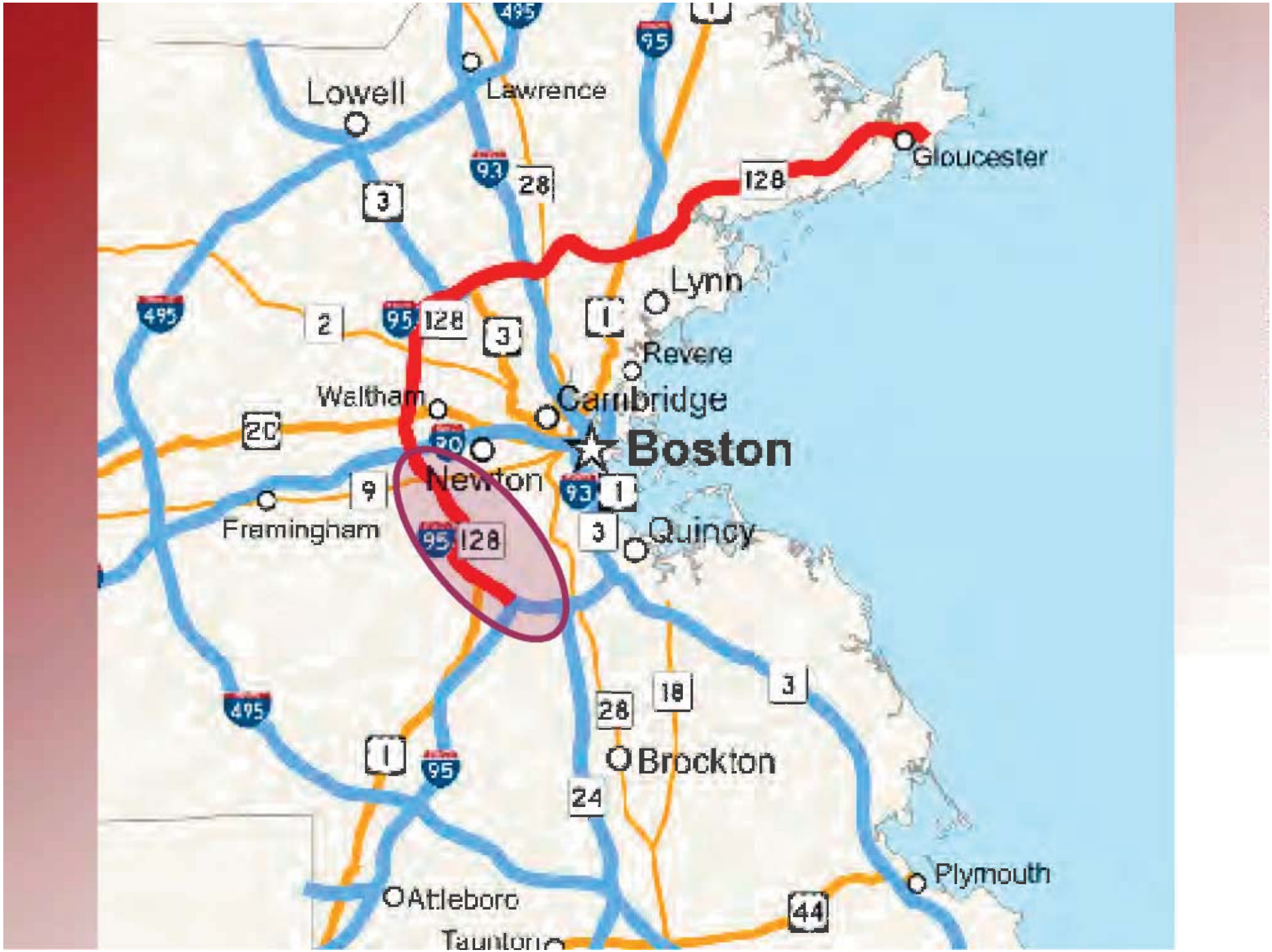
I-95 Add-A-Lane
(Kendrick to Route 9)

Clint Schuckel

Director of Transportation

Newton DPW

October 19, 2011

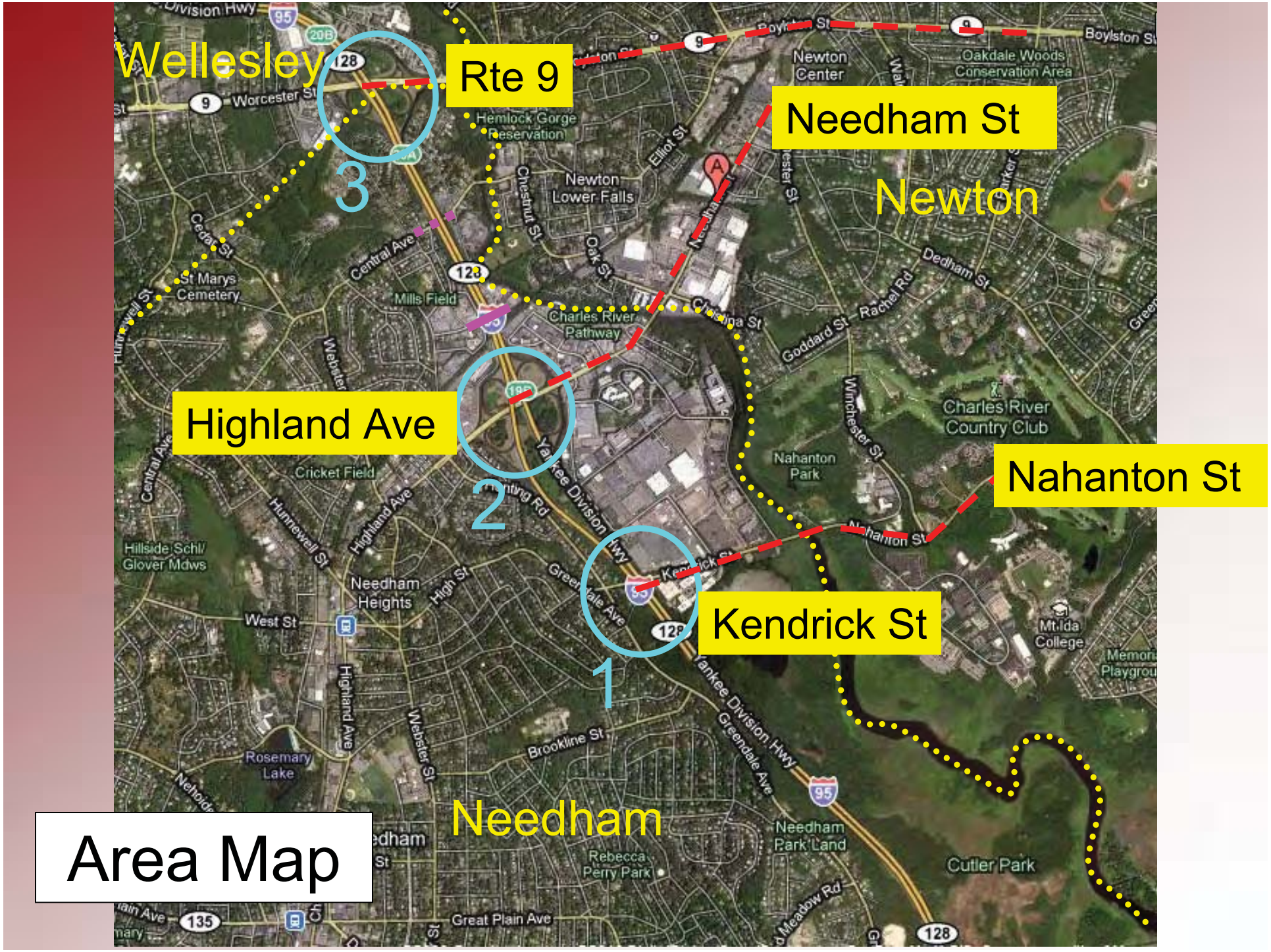

Lowell
Lawrence
Gloucester
Lynn
Revere
Waltham
Cambridge
Boston
Newton
Framingham
Quincy
Brockton
Plymouth
Attleboro
Taunton
495
95
93
128
3
28
2
1
20
9
18
24
44

"Add a Lane" Overview

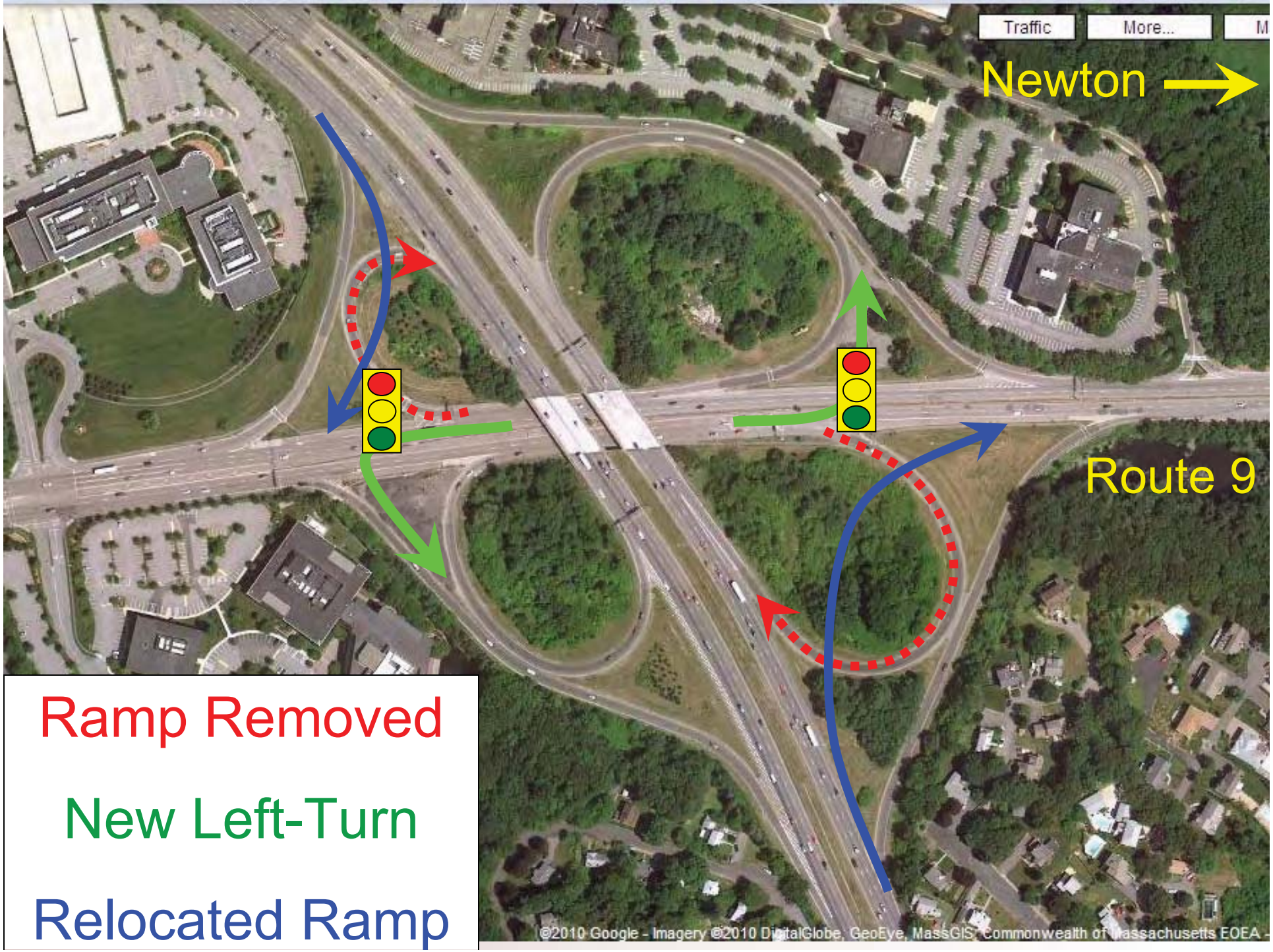
- Reconstruct
  - 14.3 miles of I-95 (widen to 8 full lanes) from Route 24 in Randolph to Route 9 in Wellesley
  - 22 bridges
- Cost= $344 million (Source: BostonGlobe, April 2010)
- Sequence: from south (Rte 24) to north (Rte 9)
- Start: 2003
- Projected completion: 2016

Needham/Wellesley Section Overview
"Bridge V" or "Contract 5"

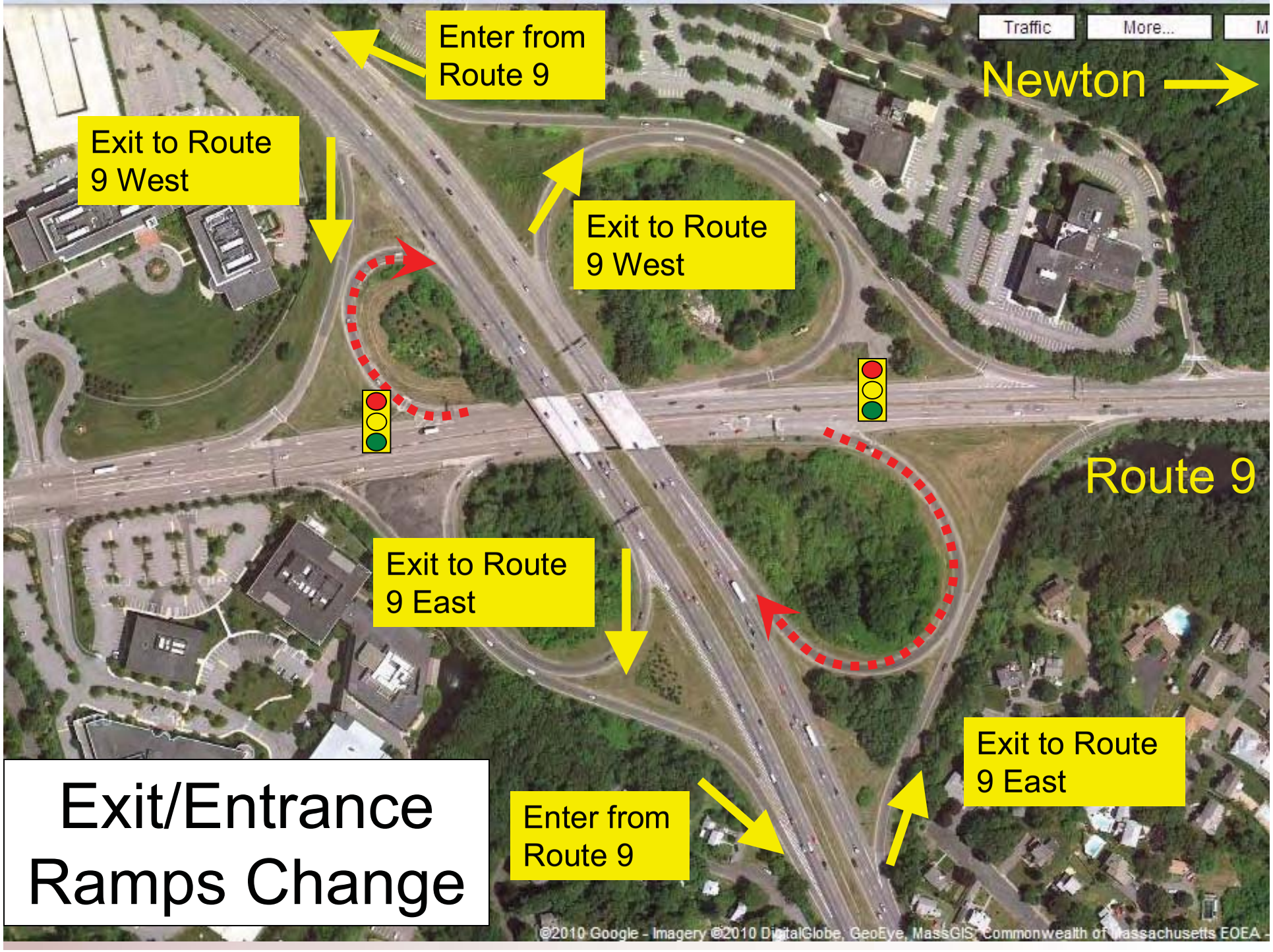
- Reconstruct
  - 3.3 miles of I-95 (widen to 8 full lanes)
  - 3 interchanges (Kendrick, Highland, Route 9)
  - MBTA bridge (center pier only)
  - Central St overpass (becomes Elliot St in Newton)
- Estimated construction cost: $127 million
- Designer: Jacobs/HDR, McMahon (traffic)
- Estimated start date: Fall 2012 or 2013
- Estimated completion: 2016


Wellesley
Rte 9
Needham St
Newton
Highland Ave
Nahanton St
Kendrick St
Needham
3
2
1
Area Map
Boylston St
Newton Center
Oakdale Woods Conservation Area
Hemlock Gorge Reservation
Newton Lower Falls
Worcester St
Cedar St
St Marys Cemetery
Central Ave
Mills Field
Charles River Pathway
Chestnut St
Oak St
Elliot St
Dedham St
Rachel Rd
Goddard St
Winchester St
Charles River Country Club
Nahanton Park
Cricket Field
Hillside Schl/ Glover Mdws
Needham Heights
West St
High St
Greendale Ave
Yankee Division Hwy
Mt Ida College
Rosemary Lake
Brookline St
Webster St
Needham Park Land
Rebecca Perry Park
Cutler Park
Great Plain Ave
Meadow Rd

#278-11


Traffic
More...
Newton
Route 9
Ramp Removed
New Left-Turn
Relocated Ramp
©2010 Google - Imagery ©2010 DigitalGlobe, GeoEye, MassGIS, Commonwealth of Massachusetts EOEA -

#278-11



Exit/Entrance Ramps Change

#278-11

City of Newton

DEPARTMENT OF PUBLIC WORKS
OFFICE OF THE COMMISSIONER
1000 Commonwealth Avenue
Newton Centre, MA 02459-1449

Setti D. Warren
Mayor

Date: June 16, 2011

To: Larry Cash, MassDOT Project Manager

From: David F. Turocy, Commissioner of Public Works

Subject: City of Newton Comments on I-95 Project # 603711, 25% Design Hearing

On behalf of Mayor Setti Warren, I submit the following comments and concerns regarding the Massachusetts Department of Transportation (MassDOT) I-95 "Add-a-Lane" project, located in Wellesley and Needham. The City of Newton supports MassDOT's efforts to improve safety throughout the corridor by eliminating travel in the breakdown lane, creating standard width breakdown lanes on both sides of the highway, and by improving merging areas at the existing Highland Avenue and Route 9 interchanges. However, there are elements of the projects which generate some concerns which the City asks MassDOT to address as the design moves forward. The concerns listed below are representative of the testimony provided by the four City officials who spoke at the MassDOT design public hearing on June 1: Chief Operating Officer Robert Rooney, Alderman Cheryl Lappin, Alderman Deborah Crossley, and Associate City Engineer, Clint Schuckel.

1. The City is concerned that the peak hour traffic projections for the Kendrick Street-Nahanton Street corridor may underestimate the future traffic volumes resulting from the cumulative effect of ten years of annual growth in vehicle traffic, new development in Needham's New England Business Center, and new highway access.

At a minimum, the project's traffic study should be expanded to the following intersections in the City of Newton:

- Nahanton Street at Wells Avenue;
- Nahanton Street at Winchester Street;
- Nahanton Street at Dedham Street; and
- Dedham Street at Brookline Street.

The study should examine at least three traffic scenarios: 1) existing, 2) the project's current traffic projections, and 3) a "worst case" scenario in which future traffic increases to a level where mitigation measures (e.g., signalization, geometric improvements, etc.) are required to maintain an acceptable level of service at each of the four intersections above. The City would collaborate with the State's traffic consultant, McMahon Associates, on the methodology and the peak period traffic volumes requiring improvements.

For each of the three conditions, the proposed traffic study would identify the most cost-effective intersection improvements and estimated costs. Based on the study findings, the City requests that MassDOT create a reserve fund within the project budget that is dedicated for future traffic monitoring and mitigation at the above four locations should the peak period volumes reach the thresholds established for Condition 3. This fund would be available for up to two years following project completion, during which time the monitoring program would determine if the traffic thresholds have been met to require the study's recommended mitigation.

2. Please explain how the sequencing of this project will intersect with other projects in the area, including but not limited to, the Route 9 improvements associated with the Chestnut Hill Square project and the Needham Street/Highland Avenue reconstruction project.

3. For the Kendrick Street and Highland Avenue interchanges, it appears that while additional vehicle travel lanes are provided to accommodate increased traffic, accommodations for bicycles are limited to striped four foot shoulders. Vehicles utilizing the bridges are both maneuvering to access/egress the interstate and traveling at speeds often exceeding 40 miles per hour. This condition necessitates greater design considerations to provide safe bicycle accommodations such as raising the elevation of the bicycle lane to that of the sidewalk throughout the project limits. Utilizing curbing will provide added protection from errant vehicles and will help to keep roadway detritus off the bicycle lane, another key factor in bicycle crashes.

4. The location of pedestrian crosswalks at the Highland Ave on-ramps to I-95 (northbound and southbound) are currently located too far down the ramp. The result is that a pedestrian attempting to cross has limited sight distance to on-coming traffic due to the ramp curvature and adjacent property obstructions such as shrubs, guardrail, and signage. Given the speeds vehicles travel approaching these on-ramps combined with the limited sight distance, the distance a pedestrian can achieve crossing the ramp is estimated to be the mid-point of the roadway before a vehicle reaches the crosswalk; a potentially very dangerous situation. Therefore, greater sight distance of approaching ramp traffic needs to be provided at the curb line of the crosswalk.

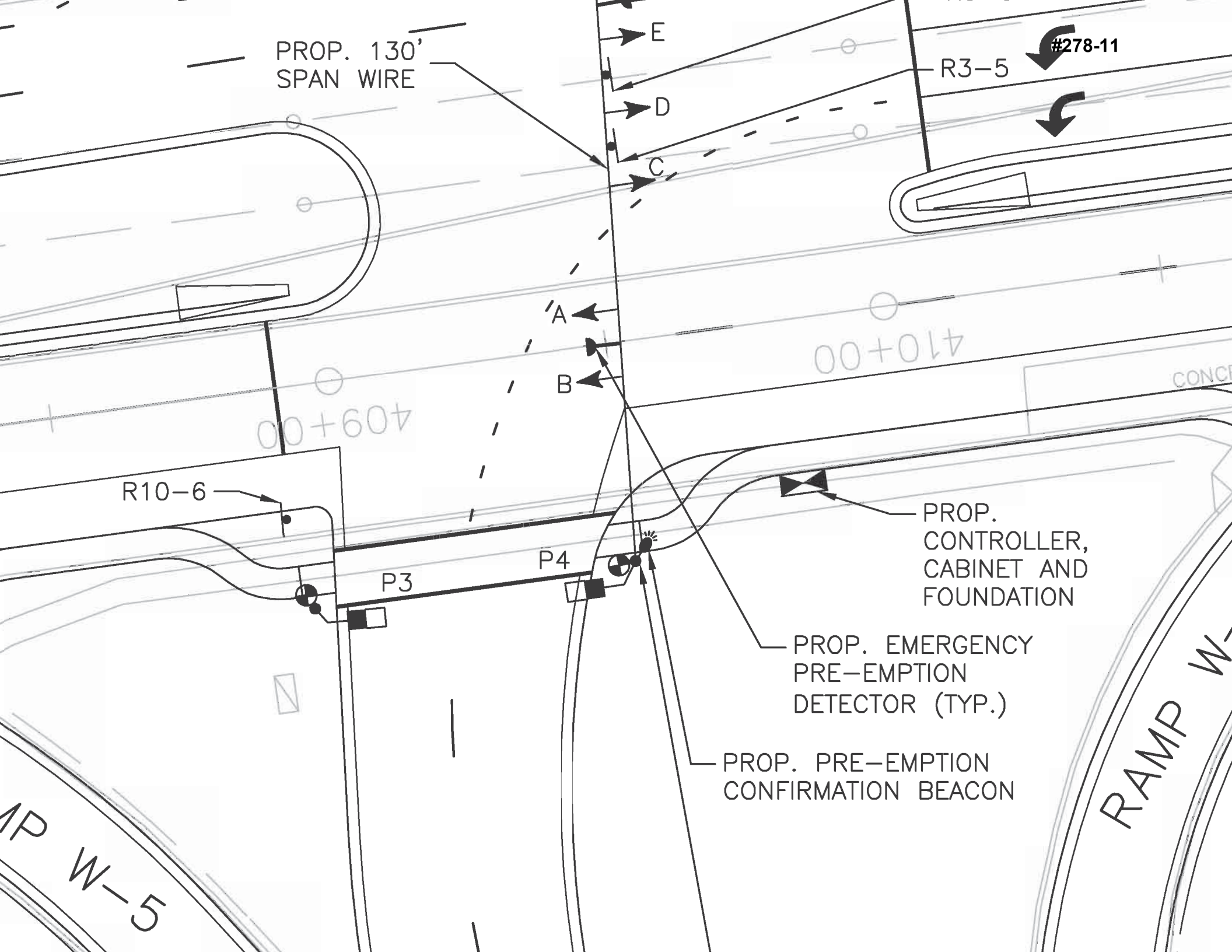
5. As the City of Newton is directly downstream along the Charles River, which is immediately adjacent to the Add-a-Lane project and the likely destination of roadway runoff, the City respectfully requests that MassDOT copy the City Engineer, Lou Taverna (ltaverna@newtonma.gov), on all stormwater management plans, analyses, and related documents that are submitted to the Towns of Needham and Wellesley.

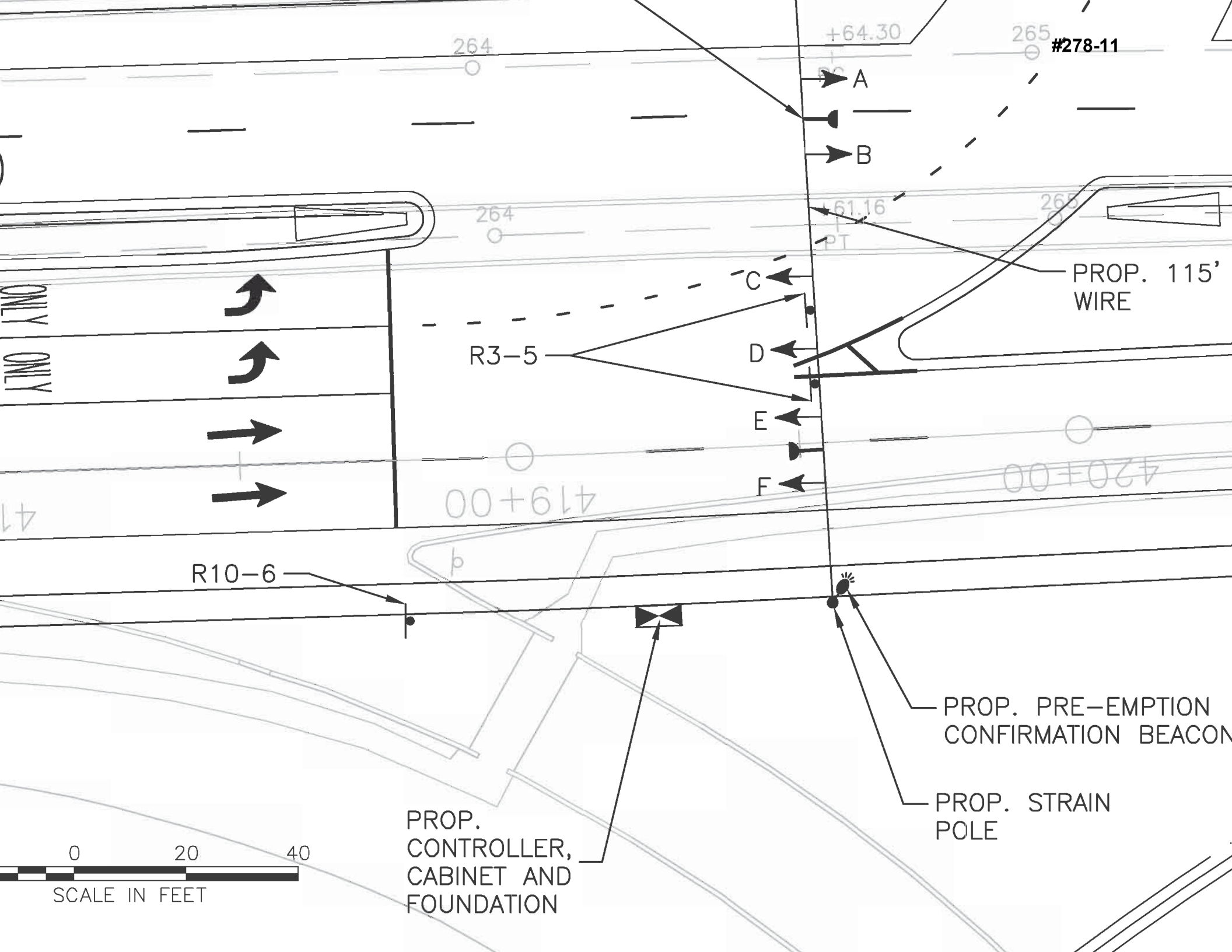
Thank you for your consideration of these comments. I look forward to working with MassDOT on these issues, and to the successful completion of the Add-a-Lane project.

Cc: Robert Rooney, Chief Operating Officer
Alderman Cheryl Lappin
Alderman Deborah Crossley
Lou Taverna, City Engineer
Clint Schuckel, Associate City Engineer

Telephone: (617) 796-1008 • Fax: (617) 796-1050 • dturocy@newtonma.gov


#278-14
RAMP W-6
RAMP W-5
RELOCATED
RAMP W-3
725
720
715
1


PROP. 130' SPAN WIRE
E
D
C
A
B
#278-11
R3-5
R10-6
P3
P4
PROP. CONTROLLER, CABINET AND FOUNDATION
PROP. EMERGENCY PRE-EMPTION DETECTOR (TYP.)
PROP. PRE-EMPTION CONFIRMATION BEACON
RAMP W-5
410+00
409+00


#278-11
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+64.30
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PT
PROP. 115' WIRE
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PROP. PRE-EMPTION CONFIRMATION BEACON
PROP. STRAIN POLE
PROP. CONTROLLER, CABINET AND FOUNDATION
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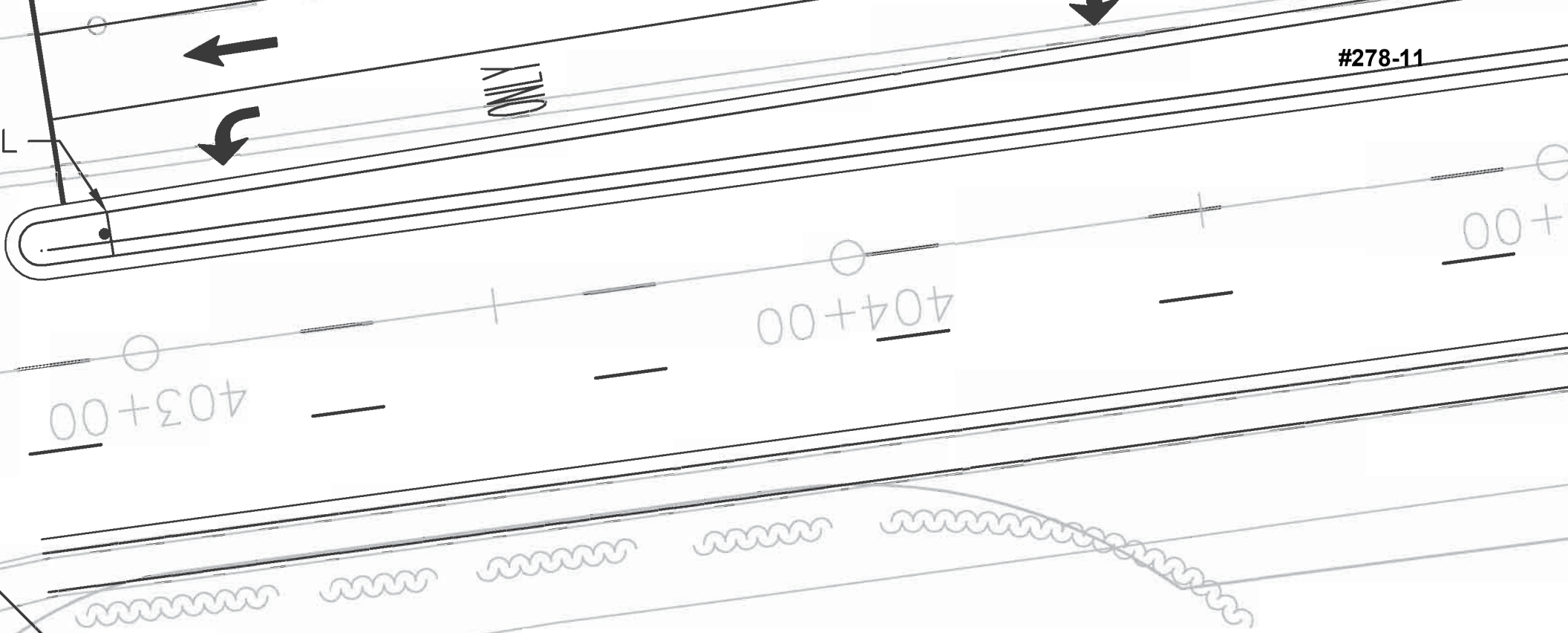
40
SCALE IN FEET



EXISTING SIGNAL EQUIPMENT TO BE RETAINED. (TYP.)

20 0 20 40

SCALE IN FEET

LIST OF MAJOR ITEMS REQUIRED

#278-11

FUNCTIONAL DESIGN REPORT

FOR THE

I-95/I-93 TRANSPORTATION IMPROVEMENT PROJECT (BRIDGE V)

ROUTE 9/HIGHLAND AVENUE/KENDRICK ST. SECTION
NEEDHAM AND WELLESLEY, MASSACHUSETTS

AUGUST 2010

PREPARED FOR:

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

PREPARED BY:

#278-11

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Route 9 Interchange

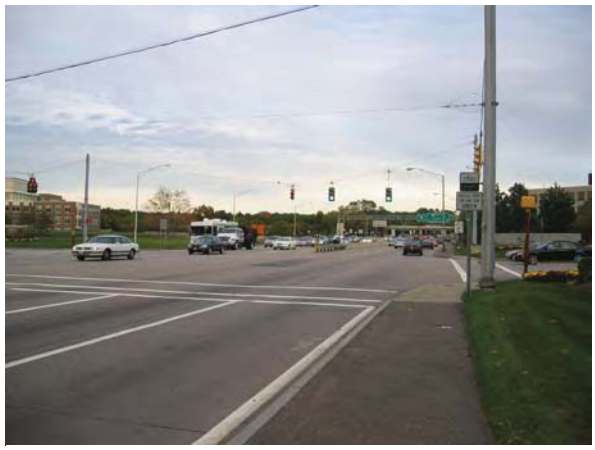
Existing Conditions

Route 9 Interchange

The second of the two existing interchanges in the study area is located at Route 9. This interchange has a cloverleaf ramp configuration. The ramp configurations create a weave section within the interchange in each direction of travel. The weave sections were analyzed and are described as follows:

- I-95/Route 128 northbound between the on-ramp from Route 9 eastbound and the off-ramp to Route 9 westbound
- I-95/Route 128 southbound between the on-ramp from Route 9 westbound and the off-ramp to Route 9 eastbound

<u>Interchange Conditions</u>



Route 9 at Sun Life and Harvard Pilgrim Drives

Interstate 95/Route 128 is designated as a north-south highway and travels in a northwest-southeast direction at the study interchange with a speed limit of 55 miles per hour (mph). South of the Route 9 Interchange, I-95/Route 128 currently provides three travel lanes in each direction. From 6:00 AM until 10:00 AM and again between 3:00 PM and 7:00 PM, travel is allowed in the breakdown lanes in both directions. With travel permitted in the breakdown lanes, I-95/Route 128 operates with four through travel lanes and no right-hand shoulder in each direction during the morning and evening peak hours. To assure that motorists have locations to pull over out of the active traffic stream, there are "pullouts" spaced at approximately ½ mile intervals in both the northbound and southbound directions.

The existing interchange provides full access between I-95/Route 128 and Route 9 through a full cloverleaf configuration. The existing ramp configurations create a weave section within the interchange in each direction of travel on both roadways.

Route 9 (Worcester Street) travels east-west and is a median divided four lane roadway. The I-95/Route 128 interchange at Route 9 is a cloverleaf interchange providing right-hand ramps along Route 9. Aside from the I-95/Route 128 ramp intersections, the study area on Route 9 includes one intersection: Route 9 at the Sun Life Driveway. The intersection of Route 9 at the Sun Life Driveway is a four-leg signalized intersection. The eastbound approach has a left turn lane, two through lanes, and a shared through and right turn lane. The right-most eastbound through lane becomes an exit only lane to I-95/Route 128 southbound just east of the intersection. The westbound approach has a left turn lane, three through lanes, and a right turn lane. The three westbound through lanes reduce to two through lanes approximately 0.1 miles west of the intersection. The northbound approach has a shared left turn and through lane and a right turn lane. The southbound approach has a left turn lane, a shared left turn and through lane, and a right turn lane.

Highway Structures

The existing bridges carrying I-95/Route 128 over Route 9 are two span steel stringer structures which were constructed in 1962. Both of the bridges were rehabilitated in 1995. The bridges each carry four lanes of I-95/Route 128 traffic and an additional on off ramp weave lane. Both of these I-95/Route 128 barrels are supported on concrete decks which are 64 feet curb to curb and are separated by a 40 foot open median. These structures span over Route 9, which has a 108-foot wide cross section including a center median of varying width. The median contains a center pier and there is a 6 foot sidewalk adjacent to each abutment. Increase of the vertical clearance over Route 9 is required based on the existing clearance, which is approximately 14 feet.

Traffic Volumes

As mentioned previously, the current conditions of this area were studied in great detail by CTPS. As such, this report has used the traffic counts collected by CTPS and factored them to reflect conditions in 2007. Automatic Traffic Recorders (ATRs) were deployed by MassDOT at key locations in order to accomplish this task. Also, the CTPS study did not include the interchange of I-95/Route 128 at Route 9. New counts were conducted by MassDOT at this location in July 2007. Existing traffic volumes are graphically depicted in Figure 2.

Traffic Safety

Crash data for Route 9 (also called Worcester Street in Wellesley) was summarized by location between its intersection with Maple Street and its intersection with Quinobequin Road, as shown in Table 19. For the years 2006 through 2008, 108 crashes occurred on this segment of Route 9. Of the 108 crashes summarized in Table 19, the

#278-11

two most common crash types were rear-end (62 percent) and single vehicle crashes (23 percent).

Thirteen crashes occurred on Route 9 at its intersection with Dearborn Street and Sun Life Park, including anything within 200 feet to the east of the intersection. This section of roadway is adjacent to the I-95/Route 128 ramps. Six (46 percent) of the crashes were rear-ends. Rear-end crashes at this location are most likely the result of congestion from merging, diverging, and weaving traffic. Rear-end crashes are not generally severe crashes resulting often in property damage only. The other crashes were sideswipe, same direction, and angle.

There were 14 crashes at the intersection of the I-95/Route 128 southbound ramps with Route 9 from 2006 through 2008. Forty-three percent (6 of them) were rear-end collisions, and seven of the crashes (50 percent) were single vehicle crashes. Six of all crashes at this location were property damage only, and another six resulted in a non-fatal injury and the severity of two crashes is unknown.

Meanwhile, there were 26 crashes that occurred at the intersection of Route 9 with the I-95/Route 128 northbound ramps, the majority of them being rear-end collisions and single vehicle crashes. Thirty-three crashes were known to have occurred in the vicinity of I-95/Route 128, but not enough information existed to know exactly where they occurred. They may have been near the I-95/Route 128 northbound or the I-95/Route 128 southbound ramps or simply near the overpass. Of these collisions, 23 (70 percent) were rear-end collisions and 25 (76 percent) resulted in property damage only. Four crashes resulted in non-fatal injury.

At the intersection of Route 9 and Williams Street there were 20 crashes recorded from 2006 through 2008. Of these, ten (50 percent) were rear-end collisions. The remaining were of the following types: single-vehicle, sideswipe (same direction), and angle. One was unknown. In terms of severity, seventeen (85 percent) were property damage only, and two (10 percent) resulted in non-fatal injury.

Table 19. Route 9 Crash Summary

	Maple / Street	Dearborn Street/ Sun Life Park	I-95 SB Ramps	I-95 Vicinity	I-95 NB Ramps	William Street	Quinobequin Road
2006	1	3	5	14	5	10	0
2007	0	6	2	13	9	5	0
2008	1	4	7	6	12	5	0
Total	**2**	**13**	**14**	**33**	**26**	**20**	**0**
Type							
Rear-end	0	6	6	23	9	10	0
Sideswipe, same direction	1	5	0	5	4	2	0
Angle	1	2	0	2	1	4	0
Single vehicle crash	0	0	7	1	9	3	0
Head-on	0	0	0	0	0	0	0
Rear-to-rear	0	0	0	0	0	0	0
Sideswipe	0	0	0	1	0	0	0
Not reported	0	0	1	1	3	1	0
Unknown	0	0	0	0	0	0	0
Total	**2**	**13**	**14**	**33**	**26**	**20**	**0**
Severity							
Fatal	0	0	0	0	0	0	0
Injury	0	2	6	4	6	2	0
PDO	1	11	6	25	18	17	0
Not Reported	1	0	2	3	2	1	0
Unknown	0	0	0	1	0	0	0
Total	**2**	**13**	**14**	**33**	**26**	**20**	**0**
Weather							
Clear	1	4	7	23	18	8	0
Cloudy	0	5	4	5	2	9	0
Rain	1	3	3	5	4	3	0
Snow	0	0	0	0	2	0	0
Fog	0	0	0	0	0	0	0
Sleet, hail	0	0	0	0	0	0	0
Not reported	0	1	0	0	0	0	0
Total	**2**	**13**	**14**	**33**	**26**	**20**	**0**
Time							
7:00 AM to 9:00 AM	0	1	1	6	3	2	0
9:00 AM to 4:00 PM	0	7	6	16	14	6	0
4:00 PM to 6:00 PM	0	4	2	4	2	9	0
6:00 PM to 7:00 AM	2	1	5	7	7	3	0
Total	**2**	**13**	**14**	**33**	**26**	**20**	**0**

Crash Rate	0.25
District 4 Average Crash Rate	**0.88**

Source: MassDOT

Traffic Operations

Merge/Diverge

Analyses were performed for each merge and diverge point for the ramps at the interchange of I-95/Route 128 and Route 9 based on methodologies contained in the HCM. As described previously, the level of service for merge and diverge areas is based on density for cases of stable operation. Stable operation represents levels of service A through E. Level of service F exists for a merge area when the total flow departing from the merge area exceeds the capacity on the downstream freeway. Likewise, level of service F exists for diverge areas when the volume entering the diverge area exceeds the capacity on the upstream freeway. Level of service criteria for merge and diverge areas was presented in Table 8.

Ramp capacity analyses were performed for existing and projected conditions using the latest version of the Highway Capacity Software, HCS+. The existing conditions ramp capacity analyses worksheets are included in Appendix F.

Results of the existing conditions ramp capacity analyses, summarized in Table 20, indicated that most ramps currently operate at an unacceptable level of service during either the AM and/or PM peak hour, with the exception of the I-95 southbound to Route 9 westbound ramp, and the Route 9 westbound to I-95 southbound ramp.

The following ramps fall within exist weave sections on Route 128 and Route 9:

- Route 9 eastbound to I-95 northbound
- I-95 northbound to Route 9 westbound
- I-95 southbound to Route 9 eastbound
- Route 9 westbound to I-95 southbound

Ramp capacity analyses have not been conducted at these locations. Instead traffic operations at these ramps are analyzed in the weave analysis, which can be found in the following section of this report.

Table 20. 2007 Existing Route 9 Ramp Levels of Service

	Morning Peak Hour		Evening Peak Hour	
	LOS[1]	Density[2]	LOS	Density
I-95/Route 128 at Route 9				
I-95/Route 128 NB to Route 9 EB	F	39.0	D	34.1
Route 9 WB to I-95/Route 128 NB	F	37.6	F	33.2
Route 9 EB to I-95/Route 128 SB	D	29.8	F	30.8
I-95/Route 128 SB to Route 9 WB	D	33.7	D	33.0

[1] Level-of-Service

[2] Density in passenger cars per mile per lane (pc/mi/ln)

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Weave

Capacity/level-of-service analyses were performed for the weave sections on I-95/Route 128 at the Route 9 interchange. The analyses performed are based on *HCM* methodologies. Level-of-service for weave sections is determined by the density of traffic in the weave section, as summarized in Table 21. Parameters that affect density include: weave segment length, number of lanes, type of weaving configuration, and the type of terrain in the weave segment.

A summary of the results is presented in Table 22. As shown in Table 22, the northbound weave section in the I-95/Route 128 and Route 9 interchange operates at LOS F during both the morning and evening peak hours. The southbound weave section in the I-95/Route 128 and Route 9 interchange operates at LOS E in the morning peak hour and at LOS F in the evening peak hour. The capacity analysis worksheets for the existing conditions weave analysis may be found in Appendix P.

Table 21. Freeway Weaving Segment Level of Service Criteria

Level of Service	Density (pc/mi/ln)
A	≤ 10
B	> 10 – 20
C	> 20 – 28
D	> 28 – 35
E	> 35 – 43
F	> 43

Table 22. 2007 Existing Weave Segment Levels of Service

	Morning Peak Hour		Evening Peak Hour	
	LOS[1]	Density[2]	LOS	Density
I-95/Route 128 at Route 9				
Northbound	F	77.1	F	69.7
Southbound	E	41.5	F	47.6

Corridor Intersections

Based on standard methodologies contained in the *Highway Capacity Manual* (HCM), a detailed capacity/level-of-service analysis was performed for the existing morning and evening peak hour traffic volumes for the one local road intersection in the vicinity of the Route 9 Interchange.

The signalized intersection capacity analysis methodology was described previously under the Highland Avenue/Kendrick Street Interchange. The level of service criteria for signalized intersections was presented in Table 11.

Weekday Morning Peak Hour

The capacity/level-of-service analysis results for the existing weekday morning peak hour are presented in Table 23. As shown in Table 23, the signalized intersection of Route 9 at the Sun Life and Harvard Pilgrim driveways operated at an overall LOS of C. One movement operates at LOS F: the southbound through movement. The remaining movements operate at LOS D or better.

Table 23. 2007 Existing Route 9 Intersection Levels of Service

			Morning Peak Hour			Evening Peak Hour		
Intersection	**Movement**		**LOS[1]**	**Delay[2]**	**V/C[3]**	**LOS**	**Delay**	**V/C**
Route 9 at Sun Life/Harvard Pilgrim	EB	L	C	21.3	0.53	A	9.9	0.20
	EB	TR	C	23.1	0.89	C	20.4	0.71
	WB	L	D	35.8	0.64	A	9.0	0.11
	WB	T	B	13.6	0.55	C	21.3	0.75
	WB	R	A	3.9	0.49	A	6.7	0.07
	NB	LT	D	53.0	0.04	F	263.7	1.44
	NB	R	A	9.8	0.06	A	5.7	0.44
	SB	L	D	53.5	0.17	F	271.5	1.44
	SB	T	F	92.5	0.88	F	290.0	1.49
	SB	R	B	10.2	0.06	A	5.0	0.24
	Overall		*C*	*20.4*		*D*	*47.1*	

[1] Level-of-Service

[2] Average vehicle delay in seconds

[3] Volume to capacity ratio

Weekday Evening Peak Hour

The capacity/level-of-service analysis results for the existing weekday evening peak hour are also presented in Table 23. As shown in Table 23, the intersection of Route 9 at the Sun Life and Harvard Pilgrim driveways operates at LOS D. Failing movements include: northbound shared left and through, southbound left, and southbound through. The remaining movements operate at LOS C or better.

Detailed capacity analysis worksheets for the existing conditions intersection analysis may be found in Appendix G.

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Roadway Design

Local Roadways

In order to achieve acceptable traffic operations for the entire project area, it is necessary to insure that the local roadways are capable of accepting traffic flows from the improved freeway and ramp systems. In that regard, this section examines the following roadway facilities located at Route 9 (Worcester Street).

The major intersections along these roadways in the immediate site environs were examined. Upstream and downstream traffic signals were evaluated as necessary. Originally, the alterations to the Route 9 at I-95/Route 128 interchange were proposed to be temporary and were primarily related to the traffic management and construction staging elements of this project. However, MassDOT has expressed interest in permanently implementing the temporary improvements at the Route 9 Interchange. Due to the application of the construction staging set up as a permanent interchange configuration, further analysis was conducted and is described in later sections of this report.

Future Alternatives

In an effort to determine the most appropriate interchange configuration for the Route 9 at I-95/Route 128 interchange, several alternatives were considered. A full technical analysis was completed as part of an Interchange Modification Report and can be found in Appendix Q. The following alternatives were considered:

- No Build Alternative: Full Cloverleaf
- Build Alternative 1: Full Cloverleaf Interchange with Compliant Geometry
- Build Alternative 2: Diamond Interchange
- Build Alternative 3: Diverging Diamond Interchange
- Build Alternative 4: Single Point Urban Interchange
- Build Alternative 5: Partial Cloverleaf Interchange

No Build Alternative - Full Cloverleaf

The future No Build roadway network includes an additional travel lane in each direction on I-95/Route 128 (as a result of the I-95/93 (Route 128) Transportation Improvement Plan Project) and the existing full cloverleaf geometry with right-hand maneuvers to and from Route 9 at all I-95/Route 128 ramps. The weave conditions along I-95/Route 128 and along Route 9 will continue to occur for the future No Build condition.

Build Alternative 1 – Full Cloverleaf Interchange with Compliant Geometry

Build Alternative 1 was considered to determine the feasibility of maintaining the existing Full Cloverleaf operations for the study interchange. The configuration, and its expected impacts to the surrounding developments, was reviewed to determine its feasibility. A review of the proposed interchange configuration reveals that, with the redesign of all on and off-ramps to meet AASHTO standards, this configuration would be expected to significantly impact the existing development on all four quadrants of the proposed interchange. The proposed ramp modifications would be anticipated to significantly impact office developments located on the northeast and northwest quadrant of the interchange. On the south side of Route 9, the proposed ramp modifications would be expected to significantly impact Sun Life Financial and residential developments. Given the significant impacts expected as a result of the reconfiguration of the existing ramps to meet AASHTO standards while maintaining a Full Cloverleaf operation, Build Alternative 1 is not a practical solution.

Build Alternative 2 – Diamond Interchange

Build Alternative 2 would be a complete reconstruction of the interchange as a Diamond interchange. All ramps would meet current AASHTO standards. With this geometry, traffic along Route 9 would be controlled by two signals; one at the I-95/Route 128 northbound ramps and one at the I-95/Route 128 southbound ramps. Right turn movements exiting the I-95/Route 128 ramps would operate under yield control. Right turn movements from Route 9 onto I-95/Route 128 would operate as free-flow. Dual left turn lanes would be provided on Route 9 at the signalized intersections. The proposed traffic signals would operate in a coordinated signal system with the existing traffic signal at Route 9/Sun Life/Harvard Pilgrim. Figure 18 shows the proposed interchange design concept for this alternative.

With the removal of the loop ramps connecting Route 9 to I-95/Route 128, the existing weave conditions along mainline I-95/Route 128 would be eliminated in both the northbound and southbound directions of travel. Further, the weave conditions along Route 9 in both the eastbound and westbound directions of travel would also be eliminated with the proposed interchange configuration. This would eliminate any accidents expected to occur as a result of the weave conditions, which could include, among others, rear-end and side-swipe accidents. In addition, the existing safety concern resulting from the weaving maneuver performed from the southbound off-ramp to Route 9 -westbound to the left-turn lane into Sun Life/Harvard Pilgrim, across the Route 9 westbound traffic would be eliminated with the signalization of the southbound off-ramp traffic. Finally, ample queue storage would be provided for the westbound-to-southbound and the eastbound-to-northbound left-turn traffic to assure

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that the queues from these movements do not spill back into the through traffic stream. This improvement may also reduce the rear-end accidents currently observed along the corridor. Therefore, safety conditions for this Build alternative are expected to improve in comparison to the No Build conditions.

Build Alternative 3 – Diverging Diamond Interchange

Build Alternative 3 was developed as a Diverging Diamond interchange. All ramps would be reconfigured to meet current AASHTO standards. With this geometry, the eastbound and westbound travel movements along Route 9 would cross at a signalized intersection west of I-95/Route 128 and again at a signalized intersection east of I-95/Route 128.

Under this scenario, the left turn movements of a conventional diamond interchange are converted to free flowing or merge movements by crossing the two directions of travel along Route 9. Right turn movements entering ramps are free-flow and right turn movements exiting ramps are under yield condition. The Route 9 traffic reverses direction at two signalized intersections; one to the east of Route 128 and one to the west of Route 128. The signalized intersections do not have left turn movements, allowing the signals to operate in two phases; one phase for eastbound traffic and one phase for westbound traffic.

Figure 19 shows the proposed interchange design concept for this alternative.

With the removal of the loop ramps connecting Route 9 to I-95/Route 128, the existing weave conditions along mainline I-95/Route 128 would be eliminated in both the northbound and southbound directions of travel. This would eliminate any accidents expected to occur as a result of the weave conditions, which could include, among others, rear-end and side-swipe accidents. In addition, the existing safety condition occurring as a result of the weaving maneuver performed by the southbound-to-westbound traffic and the westbound traffic along Route 9 would be eliminated with the signalization of the southbound off-ramp traffic. However, a new weave condition would be introduced between the northbound-to-westbound traffic and the westbound-to-southbound traffic on Route 9 westbound. On Route 9 eastbound, a new weave condition would be introduced between the southbound-to-eastbound traffic and the eastbound-to-northbound traffic. Therefore, while this alternative eliminates the weave sections on Route 128 which may be contributing to the high occurrence of accidents, it creates weave sections along Route 9 that effectively retain the existing weave areas. The diverging diamond is also a newer type of interchange configuration that has not been used in this region. It is expected that significant driver education efforts would be needed for drivers to understand the new roadway configuration.

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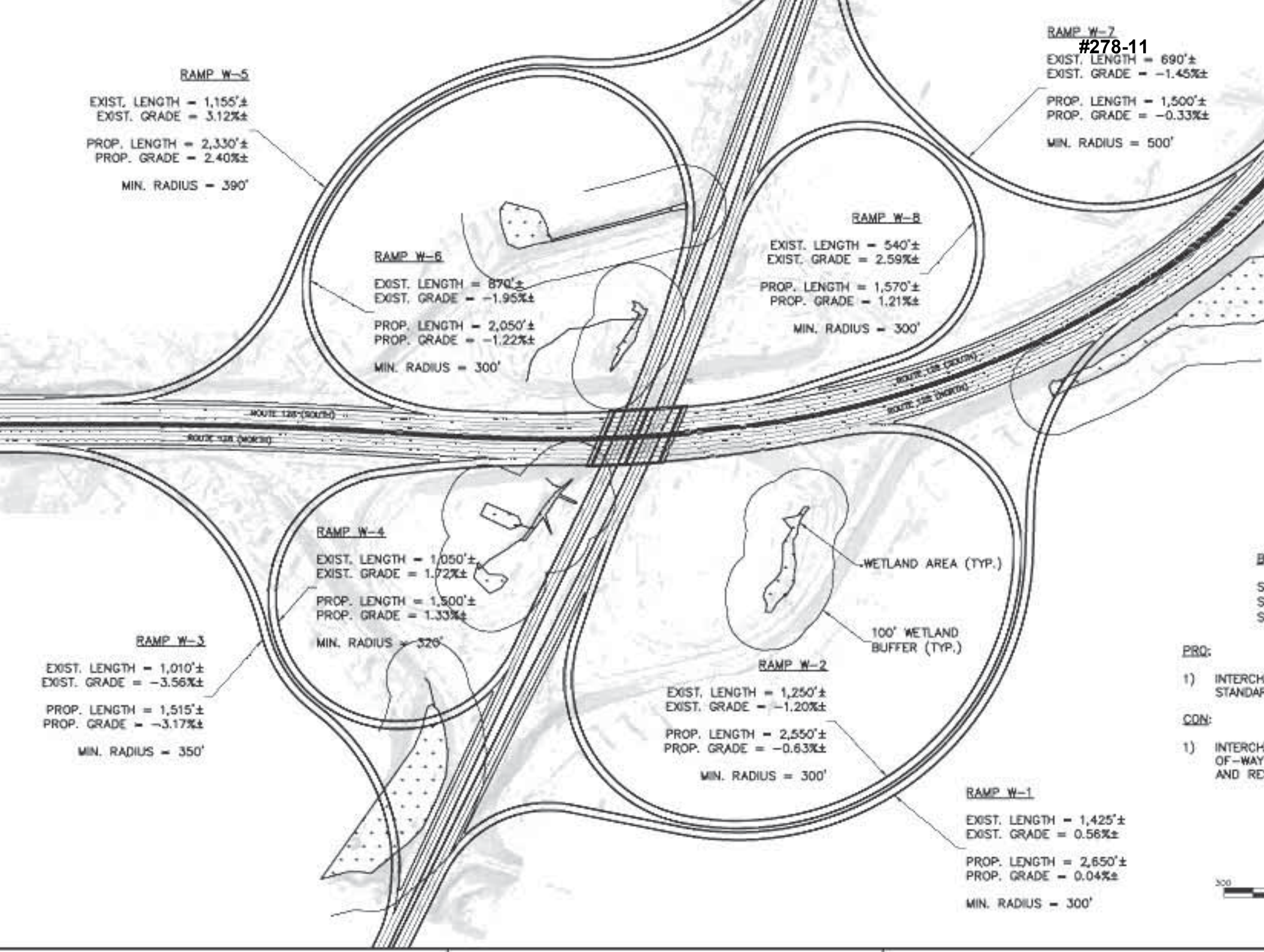

Full Standards for Current AASHTO Standards

I-95/I-93 (Route 128) Tran

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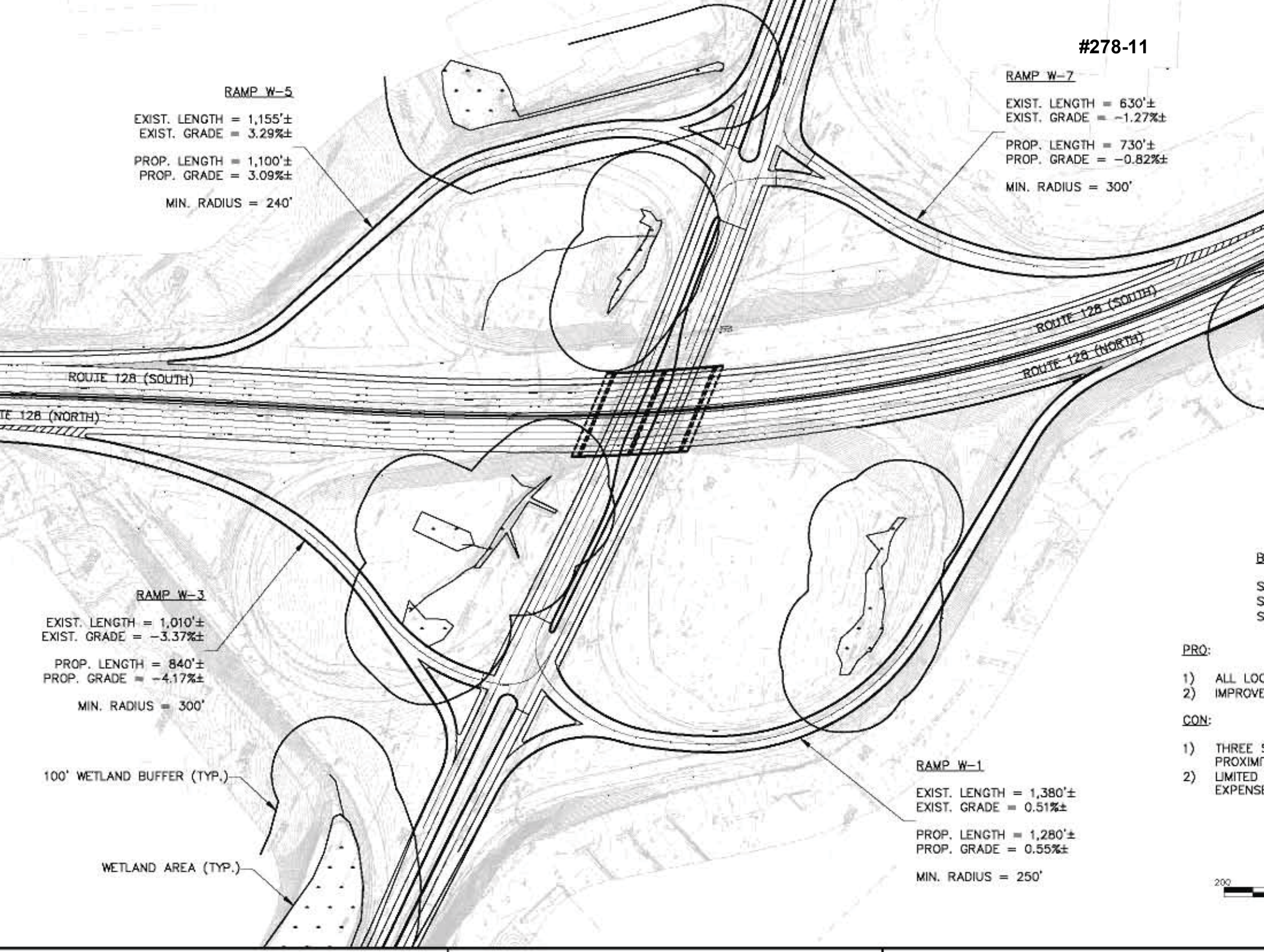

Proposed Full Diamond Options

I-95/I-93 (Route 128) Trans

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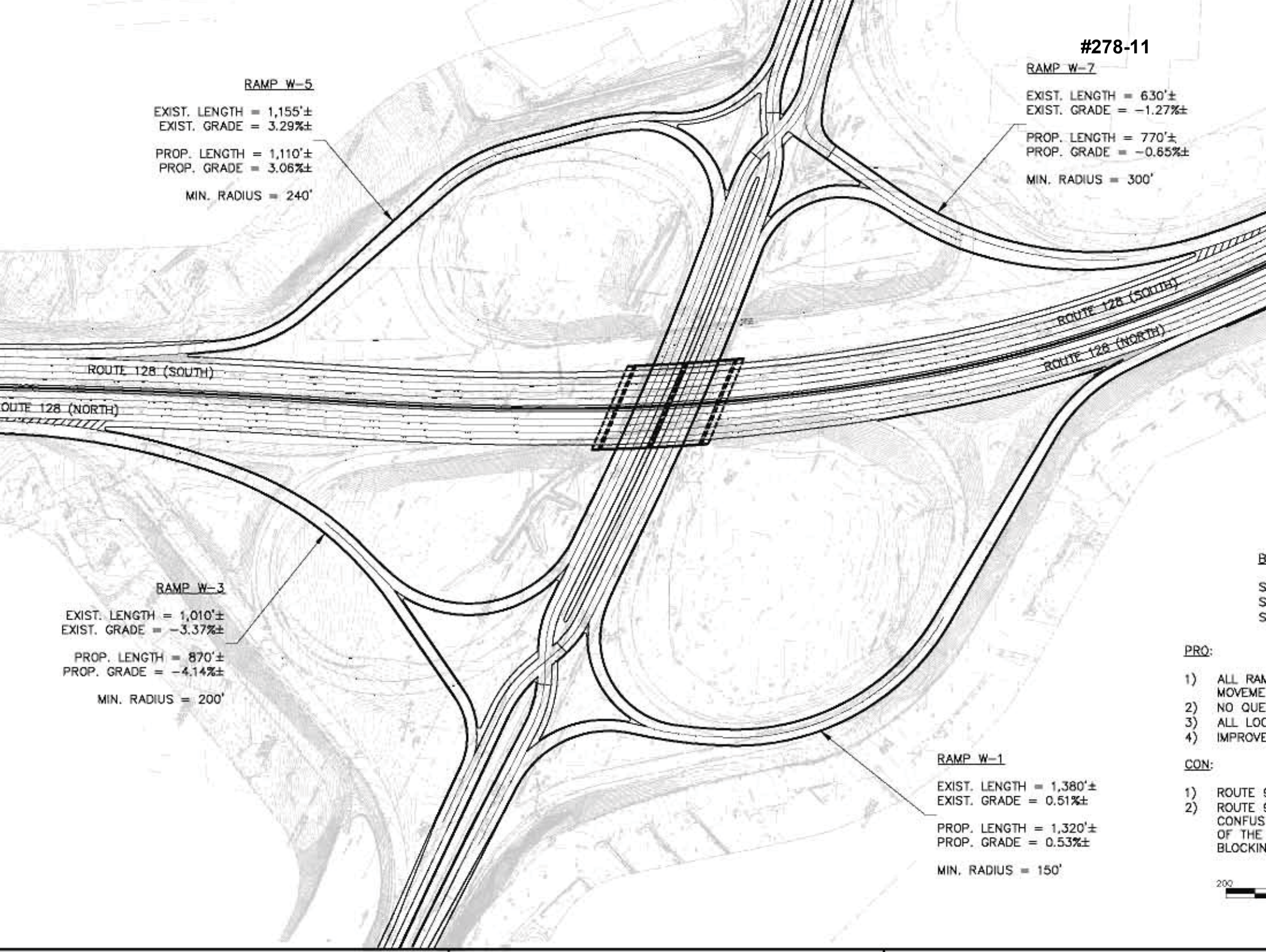

Proposed Diverging Diamond Option

I-95/I-93 (Route 128) Trans

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Build Alternative 4 – Single Point Urban Interchange

Build Alternative 4 was developed as a Single Point Urban interchange. All ramps would be reconfigured to meet current AASHTO standards. With this geometry, all left turns and the Route 9 through movements would converge at a single signalized intersection on Route 9. Dual left turn lanes are provided on Route 9 and on the exiting ramps. The signal operates in three phases. Route 9 traffic turning right onto a ramp runs as free-flow and the ramp traffic turning right onto Route 9 runs under yield conditions. Figure 20 shows the proposed interchange design concept for this alternative.

With the removal of the loop ramps connecting Route 9 to I-95/Route 128, the existing weave conditions along mainline I-95/Route 128 would be eliminated in both the northbound and southbound directions of travel. Further, the weave conditions along Route 9 in both the eastbound and westbound directions of travel would also be eliminated with the proposed interchange configuration. This would eliminate any accidents expected to occur as a result of the weave conditions, which could include, among others, rear-end and side-swipe accidents. In addition, although the southbound-to-westbound right-turn movement would continue to be performed under free-flow control, the existing safety condition occurring as a result of the weaving maneuver performed by the southbound-to-westbound traffic and the westbound traffic along Route 9 would be eliminated given the relocation of the ramp. The southbound-to-westbound right-turn lane would transition into a westbound through travel lane along Route 9 with the proposed interchange configuration. Safety conditions for this Build alternative would be expected to be improved when compared to No Build conditions.

Build Alternative 5 – Partial Cloverleaf Interchange

Build Alternative 5 was developed as a Partial Cloverleaf interchange. With this geometry, the ramps in the northeast and southwest quadrants will remain. In the northwest quadrant, the loop ramps carrying traffic from Route 9 westbound to I-95 southbound will be removed and this movement will be served via Ramp W-6 on the opposite side of Route 9. Similarly, the loop ramp in the southeast quadrant will be removed and the movement from Route 9 eastbound to I-95 northbound will be served via Ramp W-1 on the opposite side of Route 9.

The eastbound to northbound movement that was made via Ramp W-4 under existing conditions will now be served via a left turn from Route 9 eastbound onto Ramp W-1. The westbound to southbound movement that was made via Ramp W-8 under existing conditions will now be made via a left turn from Route 9 onto Ramp W-5.

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The new ramp in the northeast quadrant will intersect Route 9 opposite of Ramp W-5. The four-legged intersection will be signal controlled with dual left turn lanes on Route 9. To the east of I-95/Route 128, the intersection of Route 9 and Ramp W-1 will also be signalized with dual left turn lanes on Route 9. These signals will operate in coordination with the Route 9/Sun Life/Harvard Pilgrim intersection.

Traffic entering Ramps W-1 and W-5 via right turns will continue to operate as free flow. Traffic exiting Ramp W-3 via a right turn will operate under yield conditions. Traffic exits Ramp W-7 via two right turn lanes. There is not adequate length along Route 9 prior to the adjacent signalized intersection to allow the dual right-turn lanes to merge onto Route 9. Therefore, the right turn lanes will be signal controlled.

Figure 21 shows the proposed interchange design concept for this alternative.

With the removal of the eastbound-to-northbound and the westbound-to-southbound loop ramps connecting Route 9 to I-95/Route 128, the existing weave conditions along mainline I-95/Route 128 would be removed in both the northbound and southbound directions of travel. Further, the weave conditions along Route 9 in both the eastbound and westbound directions of travel would also be removed with the proposed interchange configuration. This would eliminate any accidents expected to occur as a result of the weave conditions, which could include, among others, rear-end and side-swipe accidents. In addition, the existing safety concerns occurring as a result of the weaving maneuver performed by the southbound-to-westbound traffic and the westbound traffic along Route 9 would be eliminated with the signalization of the southbound off-ramp traffic. Therefore, safety conditions for this Build alternative would be expected to be improved when compared to No Build conditions.

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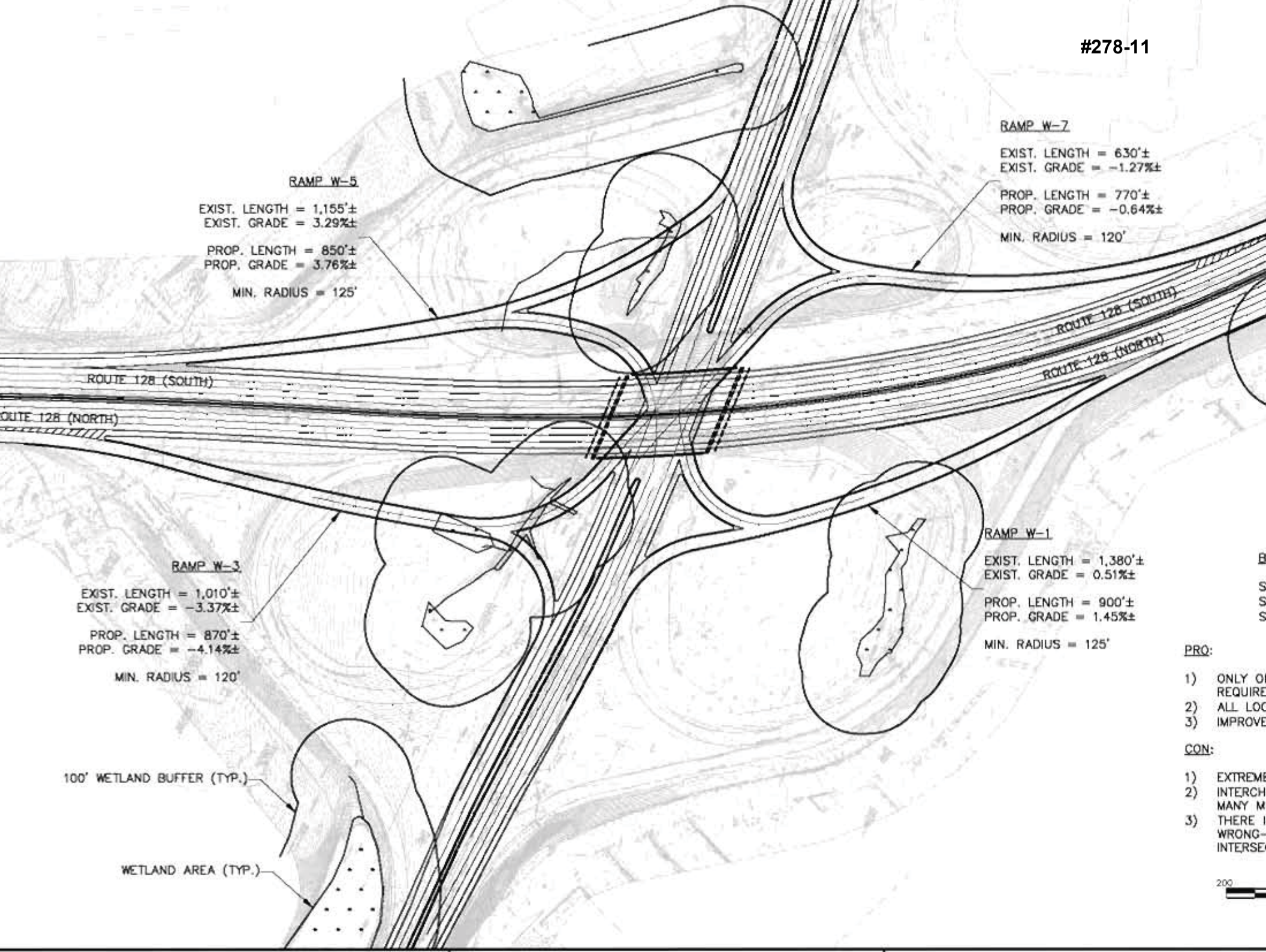

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Proposed Single Point Urban Interchange Option

I-95/I-93 (Route 128) Trans

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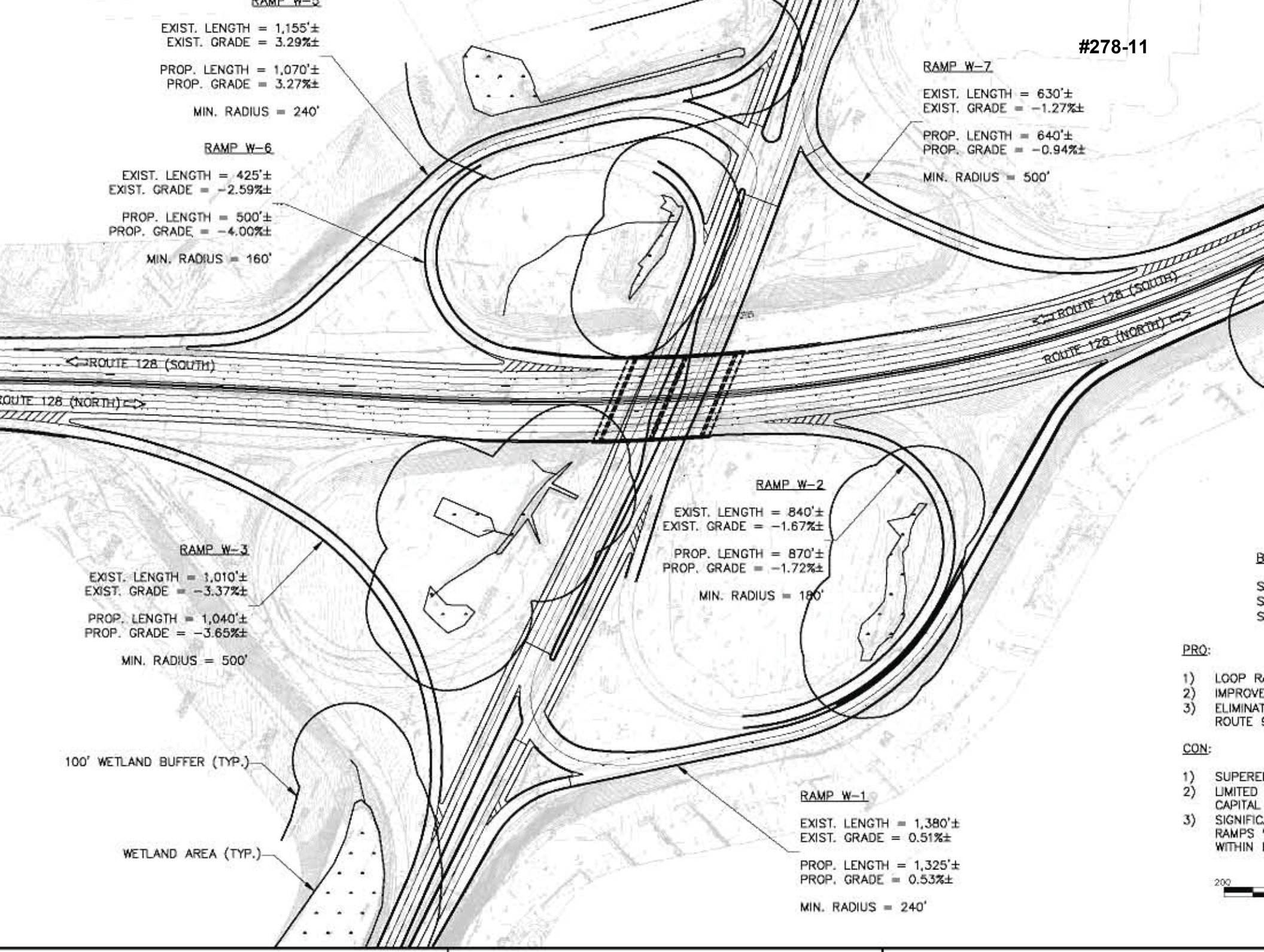

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Proposed Partial Cloverleaf Option

I-95/I-93 (Route 128) Trans

Preferred Alternative – Partial Cloverleaf Interchange

The results of the intersection and ramp capacity analyses for the proposed alternatives and the No Build Alternative were compared and evaluated.

The Build alternatives offer safety improvements as they eliminate the inadequate weaves on Route 128 and eliminate some of the weave maneuvers on Route 9. Under the Build alternatives, the ramps are projected to operate at poor levels of service due to the over-capacity peak hour conditions of I-95/Route 128. Build Alternative 1 would likely provide the best traffic operations relative to capacity given that all the ramps operate under free-flow condition. However, the construction of the ramps to AASHTO standards renders the project infeasible given its impacts to the abutting properties. A comparison of the analyses for the practical alternatives revealed that the Partial Cloverleaf Alternative would provide significant improvement in vehicle delays and, therefore, in levels of service, when compared to the other Build alternatives and when compared to the No Build Alternative.

Given the results of the analyses, the preferred interchange configuration for the proposed reconstruction of the interchange of Route 9 and I-95/Route 128 is Build Alternative 5 – Partial Cloverleaf. The preferred Alternative is graphically depicted in Figure 22.

Design Exceptions

With the selected alternative for the Route 9 interchange configuration, there are a series of exceptions to design standards and requirements from AASHTO and MassDOT. These design exceptions are required in order to implement the proposed design alternative. The design exceptions are listed and described in a memo from HDR Engineering and can be found in Appendix R. Such exceptions include vertical clearances, distance between successive ramps, and ramp curve radii and lengths.

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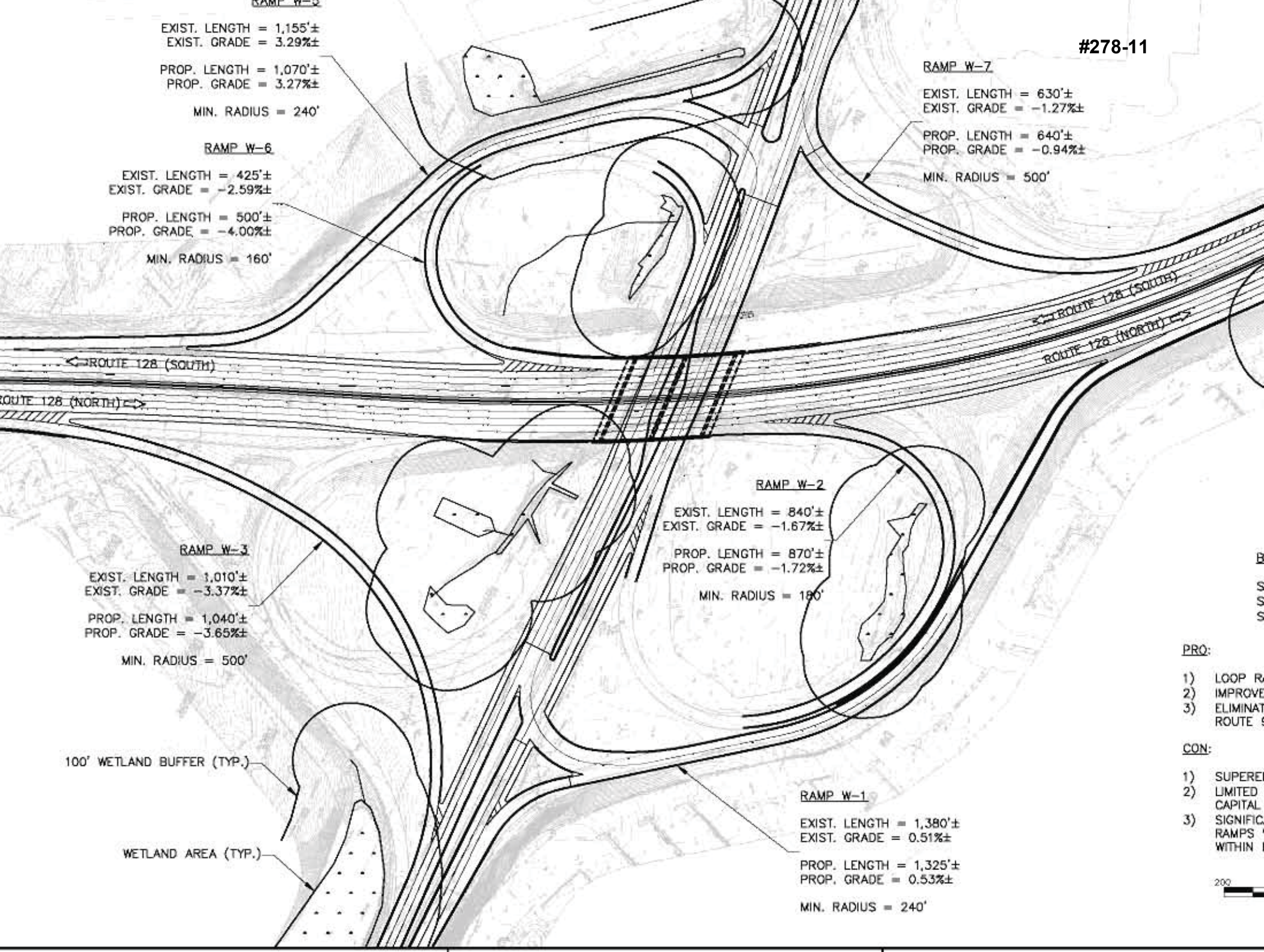

PRO:

1) LOOP R
2) IMPROVE
3) ELIMINAT ROUTE

CON:

1) SUPEREL
2) LIMITED CAPITAL
3) SIGNIFIC RAMPS WITHIN

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Proposed Partial Cloverleaf Option

I-95/I-93 (Route 128) Trans

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Future Traffic Volumes

No-Build

Figure 11 presents the morning and evening peak hour traffic flows for the No-Build condition for the year 2025 and Figure 14 depicts the morning and evening peak hour traffic volumes for the 2017 No-Build condition. These scenarios represent full growth in the study area without the improvements to I-95/Route 128 resulting from this project.

Build

Future traffic volumes along Route 9 and at the I-95/Route 128 interchange for this alternative were estimated based upon a reassignment of the future Full Cloverleaf volumes. The resulting 2017 Partial Cloverleaf Interchange traffic volumes along Route 9 and the I-95/Route 128 ramps are graphically depicted in Figure 15 for the morning and evening peak hours. The 2025 morning and evening peak hour traffic flows for the Build Condition are shown in Figure 12.

Future Analysis

Ramps

Table 24 displays the levels of service for the ramp merge and diverge movements during the morning peak hour for the 2025 no build and 2025 build scenarios. Table 25 presents the analysis results for the ramps for the evening peak hour for both the 2025 no build and build conditions. As shown in Table 24 and Table 25, for the 2025 no build condition all of the ramps in the Route 9 Interchange are expected to operate at LOS F during both the weekday morning and evening peak hours. With the partial cloverleaf alternative the two new ramps will operate at LOS E during the morning peak hours and LOS F during the afternoon peak hours. During the 2025 build scenario all maintained ramps will continue to operate at LOS F during both the weekday morning and evening peak hours, with two exceptions.

Two of the ramps were not analyzed utilizing HCS, since they are classified as lane additions/drops instead of merges and diverges. These ramps are located at the southern most part of the Route 9 Interchange, identified as Ramp W-5 and W-3. Traffic travels on Ramp W-5 from Route 9 eastbound to I-95/Route 128 southbound and results in an added lane in the southbound direction on I-95/Route 128. Ramp W-3 travels from I-95/Route 128 northbound to Route 9 eastbound and results in a dropped lane on I-95/Route 128 in the northbound direction. The HCS procedure does not adjust for mainline lane additions or lane drops at a ramp junction. Therefore, different analyses were completed to account for the mainline lane addition and drop.

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When dealing with ramps that either add a lane or drop a lane from the mainline, a ramp merge analysis does not provide the complete analysis. Instead these types of merges are considered lane additions. As indicated on page 25-9 of the HCM, it should be analyzed by comparing the capacities of each entering ramp lane and the departing freeway (Exhibit 25-7) to the peak demand flow. The downstream segment should simply be looked at as a basic freeway segment with an added lane or subtracted lane. In the case of the partial cloverleaf interchange alternative, the freeway segment will be analyzed as a weave segment, due to the proximity of the Highland Avenue interchange.

Ramp W-5 in the southbound direction results in an added lane to the mainline, resulting in a five lane cross-section downstream of the ramp. Using the data from Exhibit 25-7, the downstream capacity is approximately 2,400 passenger cars per hour (pc/h) per lane or 12,000 pc/h for the roadway. Demand during the morning peak hour is approximately 9,046 pc/h and the demand during the evening peak hour is approximately 10,040 pc/h. Using this methodology, sufficient capacity has been calculated downstream of the W-5 ramp for the demand during both the morning and evening peak hours. In addition to these calculations, the ramp was analyzed with HCS utilizing a 5 lane cross-section. Although this is not accurate depiction of how the ramp is configured, it does generate an approximate LOS for the ramp. Using this analysis, the ramp would operate at a LOS D for the morning peak period and at LOS C during the evening peak period.

This same logic can be applied to ramp W-3 in the northbound direction. This ramp is a dropped lane which results in a four lane cross-section north of the ramp. Using the data from Exhibit 25-7, the capacity upstream and downstream of the ramp is approximately 2400 pc/h per lane or 9,600 pc/h. Demand during the morning peak hour is approximately 8,918 pc/h and the demand during the evening peak hour is approximately 9,646 pc/h. Therefore, sufficient capacity has been calculated downstream of the W-3 ramp for the demand during the morning peak hour. During the afternoon peak hour, the downstream segment is just slightly over capacity as the demand flow is less than one percent higher than the capacity. Again, using HCS to approximate a LOS, the ramp would operate at a LOS E for both the morning and evening peak period

The 2025 Build Alternative 5 conditions ramp capacity analyses worksheets and calculations are included in Appendix K.

Table 24. Route 9 Ramp Levels of Service for 2025 Morning Peak Hour

	No Build		Build	
	LOS[1]	Density[2]	LOS	Density
I-95/Route 128 at Route 9				
I-95/Route 128 NB to Route 9 EB	F	*	**	**
I-95/Route 128 NB to Route 9 WB	n/a	n/a	E	37.7
Route 9 WB to I-95/Route 128 NB	F	*	F	*
I-95/Route 128 SB to Route 9 WB	F	*	F	*
I-95/Route 128 SB to Route 9 EB	n/a	n/a	E	38.5
Route 9 EB to I-95/Route 128 SB	F	*	**	**

[1] Level-of-Service

[2] Density in passenger cars per mile per lane (pc/mi/ln)

[*] Volume exceeds capacity. Density is not calculated.

[**] Ramp analysis not completed using HCS

Table 25. Route 9 Ramp Levels of Service for 2025 Evening Peak Hour

	No Build		Build	
	LOS[1]	Density[2]	LOS	Density
I-95/Route 128 at Route 9				
I-95/Route 128 NB to Route 9 EB	F	*	**	**
I-95/Route 128 NB to Route 9 WB	n/a	n/a	F	*
Route 9 WB to I-95/Route 128 NB	F	*	F	*
I-95/Route 128 SB to Route 9 WB	F	*	F	*
I-95/Route 128 SB to Route 9 EB	n/a	n/a	F	*
Route 9 EB to I-95/Route 128 SB	F	*	**	**

[1] Level-of-Service

[2] Density in passenger cars per mile per lane (pc/mi/ln)

[*] Volume exceeds capacity. Density is not calculated.

[**] Ramp analysis not completed using HCS

Weave Sections

Table 26 shows the summary of results from the capacity analysis of the weave sections in the study area for the morning and evening peak hours, respectively. For the 2025 no build conditions, the northbound weave section on I-95/Route 128 at the Route 9 interchange is expected to operate at LOS F during both the weekday morning and evening peak hours. For the 2025 no build scenarios, the I-95/Route 128 southbound weave section at the Route 9 interchange is expected to operate at LOS F during the morning and evening peak hour. The worksheets for the No Build capacity analysis for

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the weave sections may be found in Appendix S. Note that the weave sections are eliminated under the build condition.

Table 26. 2025 No Build Weave Segment Levels of Service

	AM Peak Hour		PM Peak Hour	
	LOS[1]	Density[2]	LOS	Density
I-95/Route 128 at Route 9				
Northbound	F	74.6	F	84.6
Southbound	F	50.5	F	54.5

[1] Level-of-Service

[2] Density in passenger cars per mile per lane (pc/mi/ln)

Local Street Corridor Intersections

Previously, no permanent changes were proposed as part of this project for the Route 9 corridor as no change in traffic patterns or volumes would result from the Add-a-Lane project. The Route 9 corridor is included in this analysis as it will experience changes from the proposed construction staging for the I-95/Route 128 overpass. In order to reconstruct these bridges, it is proposed to remove the loop ramps entering onto I-95/Route 128, thereby eliminating the need for an acceleration lane on the bridge. The ramp modification would occur for both northbound and southbound entering traffic. To effect the elimination of the loop ramps entering onto I-95/Route 128, two new traffic signals would be required near the existing ramp termini on Route 9 to allow entering ramp traffic to turn left from Route 9 onto the ramps. Although this plan was originally meant to be temporary, as part of the construction, MassDOT expressed interest in maintaining the configuration permanently. As a result, further analysis and evaluation were conducted to evaluate the traffic operations of the corridor intersections of this alternative and is described below.

Table 27 is a summary of the expected traffic operations for the Route 9 ramp modifications for the existing morning and evening peak hours. As illustrated on this table, the traffic operates at LOS C for the Route 9 at Harvard Pilgrim/Sun Life driveway. The new signal at the southbound ramps to I-95/Route 128 would operate at LOS B during the morning peak hour and at LOS A during the evening peak hour. The new signal at the northbound ramps to I-95/Route 128 would operate at LOS A during the morning peak hour and at LOS C during the evening peak hour. Further, the traffic operates at an acceptable LOS for the Route 9 mainline traffic, thus minimizing traffic queues in the area. As the signals are constructed, fine tuning of the signal timings based on field conditions is recommended. The capacity analysis worksheets for the Route 9 ramp modifications intersection analysis for the existing morning and evening peak can be found in Appendix T.

Table 27. 2007 Existing Route 9 Ramp Modification Levels of Service

Intersection	Movement		Morning Peak Hour LOS[1]	Morning Peak Hour Delay[2]	Morning Peak Hour V/C[3]	Evening Peak Hour LOS	Evening Peak Hour Delay	Evening Peak Hour V/C
Route 9 at Sun Life/Harvard Pilgrim	EB	L	E	60.3	0.63	D	47.9	0.26
	EB	TR	D	35.4	0.97	C	22.1	0.68
	WB	L	E	56.2	0.57	D	52.9	0.13
	WB	T	B	17.2	0.50	C	24.1	0.94
	WB	R	A	4.3	0.43	A	3.5	0.09
	NB	LT	E	55.3	0.03	F	175.2	1.21
	NB	R	B	10.2	0.10	A	6.3	0.48
	SB	L	E	57.9	0.21	F	103.3	0.95
	SB	T	F	229.3	1.31	F	100.4	0.94
	SB	R	A	8.2	0.07	A	5.8	0.34
	Overall		*C*	*34.1*		*C*	*33.0*	
Route 9 at I-95/Route 128 SB Ramps	EB	T	C	23.3	0.83	A	6.0	0.55
	WB	L	C	28.6	0.76	D	36.2	0.78
	WB	T	A	0.3	0.40	A	0.6	0.62
	Overall		*B*	*15.7*		*A*	*7.7*	
Route 9 at I-95/Route 128 NB Ramps	EB	L	B	16.8	0.56	D	52.9	0.86
	EB	T	A	1.5	0.67	A	0.3	0.40
	WB	T	A	7.2	0.42	C	20.4	0.89
	Overall		*A*	*4.9*		*B*	*19.6*	

[1] Level-of-Service

[2] Average vehicle delay in seconds

[3] Volume to capacity ratio

No Build

Intersection capacity analyses were performed for the intersection of Route 9 at Sun Life/Harvard Pilgrim. The 2017 No Build conditions intersection capacity analyses worksheets are included in Appendix U.

Build

Intersection capacity analyses were performed for 2017 Build Alternative 5 conditions at the intersection of Route 9 at Sun Life/Harvard Pilgrim and Route 9 at the proposed I-95/Route 128 ramps. The signals along Route 9 were coordinated to a 100-second cycle length for analyses purposes. The 2017 build conditions intersection capacity analyses worksheets are included in Appendix V. Results of the analyses are summarized in Table 28 and Table 29.

Table 28. Route 9 Levels of Service for 2017 Morning Peak Hour

Intersection	Movement		2017 No Build LOS[1]	2017 No Build Delay[2]	2017 No Build V/C[3]	2017 Build LOS	2017 Build Delay	2017 Build V/C
Route 9 at Sun Life/Harvard Pilgrim	EB	L	D	49.0	0.58	D	49.0	0.58
	EB	TR	C	25.5	0.92	C	25.5	0.92
	WB	L	F	145.8	1.09	F	126.5	1.09
	WB	T	C	22.3	0.72	B	15.8	0.72
	WB	R	A	5.3	0.47	A	2.2	0.47
	NB	LT	D	45.0	0.03	D	45.0	0.03
	NB	R	B	10.8	0.13	B	10.8	0.13
	SB	L	D	48.3	0.21	D	48.3	0.21
	SB	T	F	251.3	1.38	F	251.3	1.38
	SB	R	A	7.2	0.06	A	7.2	0.06
	Overall		*C*	33.1		C	30.2	
Route 9 at I-95 Southbound Ramps	EB	T	n/a	n/a	n/a	A	7.7	0.77
	EB	R	n/a	n/a	n/a	A	3.1	0.46
	WB	L	n/a	n/a	n/a	D	46.5	0.84
	WB	T	n/a	n/a	n/a	A	8.1	0.62
	SB	R	n/a	n/a	n/a	D	49.2	0.91
	Overall		***n/a***	n/a	n/a	B	16.4	
Route 9 at I-95 Northbound Ramps	EB	L	n/a	n/a	n/a	D	41.0	0.57
	EB	T	n/a	n/a	n/a	A	1.1	0.66
	WB	T	n/a	n/a	n/a	B	13.5	0.60
	Overall		***n/a***	n/a	n/a	B	10.0	

[1] Level-of-Service

[2] Average vehicle delay in seconds

[3] Volume to capacity ratio

As seen in Table 28 and Table 29 the intersection of Route 9 at Sun Life/Harvard Pilgrim would be expected to continue to operate at an overall acceptable level of service during AM and PM peak hour conditions. However, delays would continue to be observed along the minor streets of the intersection. The intersection of Route 9 and I-95/Route 128 Northbound Ramps and the intersection of Route 9 and I-95/Route 128 Southbound Ramps would be expected to operate at an overall acceptable level of service B during both peak periods. Further, all movements would be expected to operate at an acceptable level of service during both peak periods. It is also worth noting that the future queues for the eastbound-to-northbound and the westbound-to-southbound left-turn movements would not be anticipated to exceed the available storage expected to be provided on Route 9.

Table 29. Route 9 Levels of Service for 2017 Afternoon Peak Hour

Intersection	Movement		2017 No Build LOS[1]	2017 No Build Delay[2]	2017 No Build V/C[3]	2017 Build LOS	2017 Build Delay	2017 Build V/C
Route 9 at Sun Life/Harvard Pilgrim	EB	L	D	45.7	0.26	D	45.7	0.26
	EB	TR	C	23.6	0.82	C	23.6	0.82
	WB	L	D	45.1	0.13	C	26.4	0.13
	WB	T	C	25.6	0.84	B	18.3	0.84
	WB	R	A	7.8	0.09	A	6.1	0.09
	NB	LT	F	288.9	1.50	F	288.9	1.50
	NB	R	A	7.8	0.54	A	7.8	0.54
	SB	L	F	244.4	1.36	F	244.4	1.36
	SB	T	F	246.1	1.36	F	246.1	1.36
	SB	R	A	7.8	0.34	A	7.8	0.34
	Overall		*D*	47.1		*D*	*44.1*	
Route 9 at I-95 Southbound Ramps	EB	T	n/a	n/a	n/a	B	12.9	0.82
	EB	R	n/a	n/a	n/a	A	6.5	0.63
	WB	L	n/a	n/a	n/a	D	51.7	0.75
	WB	T	n/a	n/a	n/a	B	13.0	0.56
	SB	R	n/a	n/a	n/a	D	41.6	0.67
	Overall		*n/a*	*n/a*	*n/a*	*B*	*17.7*	
Route 9 at I-95 Northbound Ramps	EB	L	n/a	n/a	n/a	C	27.1	0.79
	EB	T	n/a	n/a	n/a	A	0.5	0.53
	WB	T	n/a	n/a	n/a	C	30.4	0.93
	Overall		*n/a*	*n/a*	*n/a*	*B*	*17.7*	

[1] Level-of-Service

[2] Average vehicle delay in seconds

[3] Volume to capacity ratio

The improved operations associated with this alternative are due to the fact that only one direction of Route 9 traffic and the left –turn onto the ramp are under signal control at each intersection. These signals are able to operate with an efficient two-phase configuration.

Conclusions

Overview of Preferred Plan

As documented in this report, the improvements from this project will provide an overall benefit for this sector of the I-95/Route 128 corridor. This project will result in four travel lanes and a full shoulder in each direction along I-95/Route 128. This cross section will provide an increase in the capacity of the mainline, primarily through improved merge and diverge operations. The elimination of travel on the shoulder will provide for a smoother traffic flow and safer environment by returning the shoulder/breakdown lane to its intended purpose during the eight hours it is currently used as a travel lane and by providing adequate merge and diverge areas. In addition, this project will result in a new interchange at Kendrick Street. The new interchange will provide more direct access to office and industrial parks to the east of I-95/Route 128 and will divert trips from the Highland Avenue interchange and the Great Plain Avenue interchange to the south. The interchange at Route 9 will also be reconfigured to eliminate the weave sections which currently exist due to the substandard existing cloverleaf interchange. After a thorough analysis of the available interchange alternatives, the redesigned interchange will be built as a partial cloverleaf interchange.

Operational Analyses and Findings

For this project, analyses were conducted for the freeways, ramps and local street systems. The freeways and ramps were analyzed using the CTPS 2025 travel forecasts and the local street network used a 2017 planning horizon. Both are consistent with MassDOT design guidelines.

The opening of a new interchange on Kendrick Street is the most dramatic improvement to the study area and in particular to the economic opportunities to the neighboring communities. This interchange will provide relief to the Highland Avenue corridor and Greendale Avenue and allow better access into the office/industrial area to the east. By allowing only turns to the east for exiting traffic at this interchange, with the exception of right turning vehicles off of the southbound off ramp, there is protection offered to residential uses to the west of the proposed interchange.

In order to open a new interchange at Kendrick Street and to reduce conflicts on the mainline, a C-D roadway was required to distribute traffic between Highland Avenue and Kendrick Street in an efficient and safe manner. This C-D Road is an integral component of the improvement scheme. A refinement to the C-D roadway was presented by the project team to separate the northbound I-95/Route 128 traffic exiting to Kendrick Street from the traffic exiting to the northbound C-D roadway by

constructing separate ramps. Construction of separate ramps for the Kendrick Street interchange and the C-D Road will provide acceptable operations on both ramps.

This FDR also analyzed the Highland Avenue and Kendrick Street corridors. In particular, the Kendrick Street corridor is essential to understand the traffic implications of the proposed interchange at Kendrick Street. The Highland Avenue corridor is also an important roadway that serves the industrial developments to the east of I-95/Route 128.

As shown in this document, the impacts to Kendrick Street can be accommodated with modest improvements to existing intersections including an additional lane in the eastbound direction between the proposed interchange and Third Avenue.

The Highland Avenue corridor will be somewhat improved under this project due to changed traffic patterns and additional improvements to this corridor that are currently being designed by the Town of Needham. The overall improvement scheme for the I-95/I-93 Transportation Improvement Project (Bridge V) will not be detrimental to Highland Avenue as traffic is afforded a more direct connection to many of the local traffic generators via the proposed Kendrick Street ramps. However, traffic operations along Highland Avenue will continue to be strained given plans to expand the New England Business Center and other growth potential in the immediate environs. The operations of Highland Avenue should be further assessed during the permitting for future development projects.

Another component of the project is for the temporary construction staging alterations to the Route 9 interchange to become part of the improvement scheme. The traffic operation with two signals on Route 9 eliminates a substandard weave length on the mainline of the freeway and eliminates the weaving sections on Route 9. This component of the project was not included as part of the original project, but has now been included due to the reconsidered scope and design.

Based on the findings in this FDR, it is concluded that this project will be beneficial to traffic operations and safety on I-95/Route 128, and in the neighboring communities.