III.E: Traffic, Transportation and Parking

E. Traffic, Transportation and Parking

John Collins Engineers, P.C. performed a study to evaluate traffic, parking and transportation aspects of the proposed Project on the adjoining/surrounding roadway systems (the "Traffic Study"). Full text of the Traffic Study is included in Appendix 2 of this DEIS. The following sections provide a description of the proposed Project and the tasks undertaken in completing the Traffic Study.

1. Existing Conditions

   a. Project Description and Location

      For the purpose of the Traffic Study, the Project has been broken into four development sites consisting of River Park Center, Cacace Center, Government Center and Palisades Point (see Exhibit III.E-1).

   b. Study Area

      Downtown Yonkers is served by the Saw Mill River Parkway and the Cross County Parkway located approximately 1 mile east of the downtown area. Access to the area is also provided by a number of major arterials including Yonkers Avenue, Nepperhan Avenue, Warburton Avenue, Ashburton Avenue, Riverdale Avenue and South Broadway. These roadways generally have parking and sidewalks on both sides of the streets and have operating speeds between 30 mph and 40 mph.

      Numerous local streets including Main Street, New Main Street, Palisade Avenue, Elm Street, etc. provide additional access within the downtown area. Parking and sidewalks are also provided along these streets. They have operating speeds of 30 mph.

      Table III.E-1 lists the pavement width (curb to curb) and right-of-way width of primary area roadways based on information supplied by the City of Yonkers.

Table III. E-1
Road Pavement and Right-of-Way Widths

Location		Pavement Width Curb to Curb	Right-of-Way
1	**NEPPERHAN AVENUE** (Between South Broadway and Yonkers Avenue)	**108'**	**142'**
2	**ELM STREET** (Between Nepperhan Ave. and Palisade Avenue/School Street)	**34'**	**50'**
3	**PALISADE AVENUE** (between Elm Street/School Street and Main Street)	**32'**	**50'**
4	**BUENA VISTA AVENUE** **(between Dock Street and Prospect Street)**	**34'**	**50'**
5	**YONKERS AVENUE** (Between Nepperhan Avenue and the Saw Mill Parkway Ramps)	**68'**	**90'**
6	**YONKERS AVENUE** (Between the Saw Mill Parkway Ramps and Central Park Ave.)	**64'**	**104'**
7	**ASHBURTON AVENUE** (Between Warburton Avenue and Yonkers Avenue)	**36'**	**50'**
8	**WARBURTON AVENUE** (Between Glenwood Avenue and Riverdale Avenue)	**30'**	**43'**
9	**RIVERDALE AVENUE** (Between Nepperhan Ave./Prospect Street and Valentine Lane)	**81'**	**100'**
10	**NORTH BROADWAY** (Between Glenwood Avenue and Main Street)	**43'**	**60'**
11	**SOUTH BROADWAY** (Between North Broadway and Valentine Avenue)	**65'**	**85'**

Note: The pavement width (curb to curb) and right of way width are based on information supplied by the City of Yonkers

Intersections analyzed in the Traffic Study

To evaluate "Existing," "Future No-Build" and "Future Build Conditions" within the study area, 60 intersections (51 "Primary Intersections" and 9 "Alternate Route Intersections") were identified by the City and are listed below. The 60 intersections are shown on Exhibit III.E-2. The Primary Intersections are as follows:

1. Nepperhan Avenue/Elm Street (signalized)
2. Nepperhan Avenue/New School Street (signalized)
3. Nepperhan Avenue/New Main Street (signalized)
4. Nepperhan Avenue/South Broadway (signalized)
5. South Broadway/Hudson Street (all-way stop)
6. South Broadway/Main Street (signalized)
7. Main Street/Palisade Avenue (signalized)
8. Palisade Avenue/Locust Hill Avenue (all-way stop)
9. Palisade Avenue/Elm Street/New School Street (signalized)
10. Ashburton Avenue/Warburton Avenue (signalized)
11. Ashburton Avenue/North Broadway (signalized)
12. Ashburton Avenue/Locust Hill Avenue (unsignalized)
13. Ashburton Avenue/Palisade Avenue (signalized)
14. Ashburton Avenue/Nepperhan Avenue (signalized)

15. Ashburton Avenue/NYS Route 9A/Walnut Street (signalized)
16. Yonkers Avenue/Walnut Street (signalized)
17. Yonkers Avenue/Prescott Street (signalized)
18. Yonkers Avenue/Ashburton Avenue (signalized)
19. Yonkers Avenue/Saw Mill River Parkway SB Ramp (unsignalized)
20. Yonkers Avenue/Saw Mill River Parkway NB Ramp (signalized)
21. Buena Vista Avenue/Dock Street (all-way stop)
22. Buena Vista Avenue/Main Street (signalized)
23. Buena Vista Avenue/Hudson Street (unsignalized)
24. Warburton Avenue/Dock Street/Nepperhan Street (signalized)
25. Warburton Avenue/Riverdale Avenue/Main Street (signalized)
26. Riverdale Avenue/Hudson Street (signalized)
27. Riverdale Avenue/Prospect Street (signalized)
28. Riverdale Avenue/Vark Street (signalized)
29. Riverdale Avenue/Herriot Street (signalized)
30. Riverdale Avenue/Ludlow Street (signalized)
31. Riverdale Avenue/Radford Street (signalized)
32. Riverdale Avenue/Valentine Lane (signalized)
33. South Broadway/Vark Street (signalized)
34. South Broadway/Herriot Street (signalized)
35. South Broadway/Bright Place (signalized)
36. South Broadway/Ludlow Street (signalized)
37. South Broadway/McLean Avenue (signalized)
38. South Broadway/Radford Street (signalized)
39. South Broadway/Valentine Lane (signalized)
40. Yonkers Avenue/Midland Avenue West (signalized)
41. Yonkers Avenue/Midland Avenue East (signalized)
42. Yonkers Avenue/Seminary Avenue (signalized)
43. Yonkers Avenue/Central Park Avenue SB (signalized)
44. Yonkers Avenue/Central Park Avenue NB (signalized)
45. Warburton Avenue/Glenwood Avenue (signalized)
46. Warburton Avenue/Lamartine Avenue (signalized)
47. North Broadway/Glenwood Avenue (signalized)
48. North Broadway/Lamartine Avenue (signalized)
49. Nepperhan Avenue/Lake Avenue (signalized)
50. Buena Vista Avenue/Prospect Street (unsignalized)
51. Prospect Street/Hawthorne Avenue (unsignalized)

The Alternate Route Intersections are as follows:

52. Rumsey Road/Saw Mill River Pkwy/Cross County Pkwy Ramps (signalized)
53. Rumsey Road/Spruce Street (signalized)
54. Spruce Street/Van Cortlandt Park Avenue (all-way stop)
55. Van Cortlandt Park Avenue/Elm Street (unsignalized)
56. Elm Street/Walnut Street (signalized)
57. Elm Street/Linden Place (all-way stop)

58. Saw Mill River Parkway SB On/Off Ramp/Lockwood Avenue (unsignalized)
59. Saw Mill River Parkway NB On/Off Ramp/Palmer Road (unsignalized)
60. Nepperhan Avenue/Executive Boulevard (signalized)

The existing lane geometry and type of traffic control for each of the Primary Intersections are shown on Exhibits III.E-3 through III.E-8.

The existing lane geometry and type of traffic control for each of the Alternate Route Intersections are shown on Figures No. 1G and 1H in Appendix 2.J of this DEIS.

The intersection capacity analyses are contained in Appendices 2.K-1 (for Primary Intersections), 2.K-2 (for site driveways) and 2.K-3 (for Alternate Route Intersections) of this DEIS and show the existing geometrics, lane widths, existing traffic control and signal timings/phasing where applicable for each intersection.

In addition, the site driveways of the River Park Center, Cacace Center and Palisades Point Project sites were also evaluated for the Future Build Conditions.

c. City of Yonkers Computerized Traffic Signal System

The City of Yonkers has implemented a central computerized traffic signal system for a limited number of New York State Department of Transportation ("NYSDOT") traffic signals in the City (primarily in the vicinity of Cross County Shopping Center, Stew Leonard's and Yonkers Raceway, and on Central Park Avenue). The system is monitored by the City's Traffic Department. The current system has limited capabilities (and is not monitored seven days a week), but is capable of limited remote viewing and can accommodate different signal timing plans for different times of the day. This system provides a real-time communication linkage to the central database as well as the local controllers via a wireless communication.

System upgrades are currently in progress (funded by State grants) that will increase the system communication speeds, the number of intersections monitored along the Central Park Avenue corridor. This will include some 21 locations (none within the study area), and will also include hardware upgrades. Signal upgrades along the Yonkers Avenue/Nepperhan Avenue corridor are also in progress to incorporate additional signals into the system and will include the following 11 locations:

- Nepperhan Avenue/Elm Street
- Nepperhan Avenue/New School Street
- Nepperhan Avenue/New Main Street
- Nepperhan Avenue/South Broadway
- Yonkers Avenue/Walnut Street
- Yonkers Avenue/Prescott Street
- Yonkers Avenue/Ashburton Avenue
- Yonkers Avenue/Saw Mill River Parkway NB Ramp
- Yonkers Avenue/Fox Terrace/Grace Avenue
- Yonkers Avenue/Midland Avenue West

- Yonkers Avenue/Midland Avenue East

The system is capable of accommodating additional traffic signals, as required.

d. Year 2006 Existing Traffic Volumes

In order to determine the Weekday Peak AM Highway Hour and Weekday Peak PM Highway Hour, traffic count data was obtained from the City of Yonkers. This traffic count data was supplemented with Weekday and Saturday manual and machine counts conducted by representatives of John Collins Engineers, P.C. Based on a review of this traffic count data and based on discussions with the City, it was determined that 80% of the Weekday Peak PM Highway Hour was representative of the Saturday Peak Hour. Based this data, the peak hours are as follows:

- Weekday Peak AM Highway Hour_____ 7:30 AM – 8:30 AM
- Weekday Peak PM Highway Hour_____4:30 PM – 5:30 PM
- Saturday Peak Hour_____ 1:00 PM – 2:00 PM

Appendix 2.A of this DEIS contains the Year 2006 Existing Traffic Volumes by individual turning movement. For comparison, the 2006 Existing Total Intersection Volume passing through each of the study area intersections is summarized on Exhibits III.E-9 through III.E-14 for the Weekday Peak AM Highway Hour, Exhibits III.E-15 through III.E-20 for the Weekday Peak PM Highway Hour, and Exhibits III.E-21 through III.E-26 for the Saturday Peak Hour.

A copy of the traffic count data (manual/machine) is contained in Appendix 2.G of this DEIS.

e. School Related Traffic

The counts of existing traffic included school bus traffic on the area roadways. In the study area, school buses generally stop mid-block to pick-up/drop-off children using the on-bus safety system including flashing light and stop signs. As is required by law, traffic stops in both directions allowing safe pick-up/drop-off of children.

f. Emergency Services

The existing Fire Department Headquarters is located on New School Street. Currently, there are no Pre-Emption devices at the adjacent traffic signals to aid access to/from the Headquarters.

2. Future Without the Project

a. Year 2012 No-Build Traffic Volumes

For the purpose of analysis, a Design Year of 2012 has been utilized for the Traffic Study.

In order to develop the Year 2012 No-Build Traffic Volumes (future traffic volumes without the Project), the 2006 Existing Traffic Volumes were increased by a 1% per year background growth factor, for a total background growth factor of 6% to the

2012 Design Year. In addition traffic from other planned developments in the area was included as discussed below.

The City of Yonkers provided a list of planned developments for the area which is included in Appendix 2.C of this DEIS. These developments are distributed throughout the downtown Yonkers area and beyond. Based on a review of this list and discussions with the City, it was determined that traffic attributable to certain of these planned developments was appropriately represented by, and would be included as part of, the 6% total background growth factor.

For other projects in the area, which would potentially have a greater impact within the study area, traffic was added to the roadway network. These developments include Yonkers Green, Ashburton Avenue Redevelopment, iPark Phase 2, Collins Phase 2, Greystone, Main Street Lofts, Homes for America (One Point Street) and Buena Vista Phase 1 & 2.[1] The traffic volumes for these specific developments are contained in Appendix 2.C of this DEIS.

Appendix 2.A of this DEIS contains the Year 2012 No-Build Traffic Volumes by individual turning movement. For comparison, the 2012 No-Build Total Intersection Volume passing through each of the study area intersections is summarized on Exhibits III.E-9 through III.E-14 for the Weekday Peak AM Highway Hour, Exhibits III.E-15 through III.E-20 for the Weekday Peak PM Highway Hour, and Exhibits III.E-21 through III.E-26 for the Saturday Peak Hour.

b. School Related Traffic

Existing school bus activity is discussed in Section 1.e above. While similar school bus operation will continue under Future No-Build Conditions, it should be noted that as the school population changes, bus routes and bus pick-up/drop-off locations also change.

c. Emergency Services

Existing emergency services are discussed in Section 1.f above. Similar traffic-circulation conditions will continue under Future No-Build Conditions, given the location of the firehouse and other emergency service providers.

3. Anticipated Impacts and Mitigation

a. Project Generated Traffic Volumes

In order to estimate the amount of traffic to be generated by the Project, information contained in the Institute of Transportation Engineers (ITE) "Trip Generation Handbook," 7th Edition was referenced. A 30% credit was taken to account for mass transit usage, interplay between uses and pass-by trips. The anticipated Project Generated Traffic Volumes are summarized on Table III. E-2.

[1] Although not included in the No-Build list provided by the City, other projects have been included in the traffic analysis per the City's consultant's request.

Table III. E-2
Hourly Trip Generation and Anticipated Site Generated Traffic Volumes

River Park Center	Entry			Exit			Totals		
	HTGR*	Volume	New	HTGR*	Volume	New	HTGR*	Volume	New
DEVELOPMENT A									
Residential – 475 Units (ITE Land Use 230)			**(1)**			**(1)**			**(1)**
Weekday Peak AM Highway Hour	0.08	38	**27**	0.36	171	**120**	0.44	209	**147**
Weekday Peak PM Highway Hour	0.33	157	**110**	0.19	90	**63**	0.52	247	**173**
Saturday Peak Hour	0.25	119	**83**	0.22	105	**74**	0.47	224	**157**
DEVELOPMENT B									
Residential – 475 Units (ITE Land Use 230)			**(1)**			**(1)**			**(1)**
Weekday Peak AM Highway Hour	0.08	38	**27**	0.36	171	**120**	0.44	209	**147**
Weekday Peak PM Highway Hour	0.33	157	**110**	0.19	90	**63**	0.52	247	**173**
Saturday Peak Hour	0.25	119	**83**	0.22	105	**74**	0.47	224	**157**
DEVELOPMENT C									
Office – 325,000 S.F (ITE Land Use 710)			**(1)**			**(1)**			**(1)**
Weekday Peak AM Highway Hour	1.36	442	**310**	0.19	62	**43**	1.55	504	**353**
Weekday Peak PM Highway Hour	0.25	81	**57**	1.24	403	**282**	1.49	484	**339**
Saturday Peak Hour	0.22	72	**50**	0.19	62	**43**	0.41	134	**93**
DEVELOPMENT D									
Retail + Restaurant – 555,000 S.F (ITE Land Use 820)			**(1)**			**(1)**			**(1)**
Weekday Peak AM Highway Hour	0.63	350	**245**	0.40	222	**155**	1.03	572	**400**
Weekday Peak PM Highway Hour	1.80	999	**699**	1.95	1082	**758**	3.75	2081	**1457**
Saturday Peak Hour	2.58	1432	**1003**	2.39	1326	**928**	4.97	2758	**1931**
DEVELOPMENT E									
Multi-Plex Movie Theater – 2000 Seats (ITE Land Use 445)			**(1)**			**(1)**			**(1)**
Weekday Peak AM Highway Hour	----	----	**----**	----	----	**----**	----	----	**----**
Weekday Peak PM Highway Hour	0.05	100	**70**	0.05	100	**70**	0.10	200	**140**
Saturday Peak Hour	0.05	100	**70**	0.05	100	**70**	0.10	200	**140**
TOTAL									
Weekday Peak AM Highway Hour	----	868	**609**	----	626	**438**	----	1494	**1047**
Weekday Peak PM Highway Hour	----	1494	**1046**	----	1765	**1236**	----	3259	**2282**
Saturday Peak Hour	----	1842	**1289**	----	1698	**1189**	----	3540	**2478**

* The above hourly trip generation rates (HTGR) are based on data Published by the Institute of Transportation Engineers (ITE) as contained in the trip generation handbook, 7th Edition, 2003
A 30% Credit (reduction in Trips) was taken to account for Mass Transit Usage, Interplay between uses and for pass-by trips.

Table III. E-2 (continued)
Hourly Trip Generation Rates and Anticipated Site Generation Traffic Volumes

Cacace Center	**Entry**			**Exit**			**Totals**		
	HTGR*	**Volume**	**New**	**HTGR***	**Volume**	**New**	**HTGR***	**Volume**	**New**
DEVELOPMENT F									
Office – 150,000 S.F (ITE Land Use 710)			**(1)**			**(1)**			**(1)**
Weekday Peak AM Highway Hour	1.36	204	**143**	0.19	28	**20**	1.55	232	**163**
Weekday Peak PM Highway Hour	0.25	38	**27**	1.24	186	**130**	1.49	224	**157**
Saturday Peak Hour	0.22	33	**23**	0.19	28	**20**	0.41	61	**43**
DEVELOPMENT G									
Hotel – 150 Rooms (ITE Land Use 310)			**(1)**			**(1)**			**(1)**
Weekday Peak AM Highway Hour	0.34	51	**36**	0.22	33	**23**	0.56	84	**59**
Weekday Peak PM Highway Hour	0.31	47	**33**	0.28	42	**29**	0.59	89	**62**
Saturday Peak Hour	0.40	60	**42**	0.32	48	**33**	0.72	108	**75**
TOTAL									
Weekday Peak AM Highway Hour	----	255	**179**	----	61	**43**	----	316	**222**
Weekday Peak PM Highway Hour	----	85	**60**	----	228	**159**	----	313	**219**
Saturday Peak Hour	----	93	**65**	----	76	**53**	----	169	**118**
Palisades Point	**Entry**			**Exit**			**Totals**		
	HTGR*	**Volume**	**New**	**HTGR***	**Volume**	**New**	**HTGR***	**Volume**	**New**
DEVELOPMENT H									
Residential – 436 Units (ITE Land Use 230)			**(1)**			**(1)**			**(1)**
Weekday Peak AM Highway Hour	0.08	35	**25**	0.36	157	**110**	0.44	192	**135**
Weekday Peak PM Highway Hour	0.33	144	**101**	0.19	83	**58**	0.52	227	**159**
Saturday Peak Hour	0.25	109	**76**	0.22	96	**67**	0.47	205	**143**
Retail – 8,700 S.F (ITE Land Use 814)			**(1)**			**(1)**			**(1)**
Weekday Peak AM Highway Hour	1.52	13	**13**	1.19	11	**11**	2.71	24	**24**
Weekday Peak PM Highway Hour	1.19	11	**11**	1.52	13	**13**	2.71	24	**24**
Saturday Peak Hour	1.35	12	**12**	1.35	12	**12**	2.70	24	**24**
TOTAL									
Weekday Peak AM Highway Hour	----	48	**38**	----	168	**121**	----	216	**159**
Weekday Peak PM Highway Hour	----	155	**112**	----	96	**71**	----	251	**183**
Saturday Peak Hour	----	121	**88**	----	108	**79**	----	229	**167**
Project Totals	**Entry**			**Exit**			**Totals**		
	HTGR*	**Volume**	**New**	**HTGR***	**Volume**	**New**	**HTGR***	**Volume**	**New**
DEVELOPMENTS A-H									
Weekday Peak AM Highway Hour	----	1171	**826**	----	855	**602**	----	2026	**1428**
Weekday Peak PM Highway Hour	----	1734	**1218**	----	2089	**1466**	----	3823	**2684**
Saturday Peak Hour	----	2056	**1442**	----	1882	**1321**	----	3938	**2763**

* The above hourly trip generation rates (HTGR) are based on data Published by the Institute of Transportation Engineers (ITE) as contained in the trip generation handbook, 7th Edition, 2003
A 30% Credit (reduction in Trips) was taken to account for Mass Transit Usage, Interplay between uses and for pass-by trips.

b. Holiday Traffic

During the end-of-year holiday season, the trip generation rates for uses other than retail would be the same as for other times of the year.

Based on ITE, the retail trip generation rate during the Weekday PM Peak Highway Hour would be the same for holiday and non-holiday time periods. Thus, the evaluation of the Weekday PM Peak Highway Hour reflects both holiday and non-holiday periods.

For the Saturday condition, ITE indicates a higher trip rate when compared to non-holiday time periods (4.97 vs. 5.88). This equates to an additional 160 vehicles entering and 190 vehicles exiting during the holiday Saturday Peak Hour when compared to non-holiday time periods. If these volumes are added to the Saturday Build Condition, the resulting Saturday Peak Build Traffic Volumes are generally less than the Weekday Peak PM Build Traffic Volumes and the expected holiday Saturday Peak Hour Levels of Service are generally better than the Weekday Peak PM Levels of Service. It should be noted that the holiday Saturday condition occurs five or less times per year.

c. Arrival/Departure Distributions

In order to assign the anticipated trip generation for each use within each of the development areas, arrival and departure distributions were developed. The arrival/departure distributions were based on the existing traffic flows and discussions with City officials. The arrival and departure distribution by individual movements are contained in Appendix 2.A of this DEIS. In general, the following assignments were utilized.

(1) River Park Center

The residential and office trips were assigned with 30% to/from the north (5% on Warburton Avenue, 5% on North Broadway, 10% on Nepperhan Avenue and 10% on NYS Route 9A), 20% to/from the south (10% on Riverdale Avenue and 10% on South Broadway) and 50% to/from the east (on Yonkers Avenue). Of the 50% from the east on Yonkers Avenue, 10% was assigned to/from the Saw Mill River Parkway (north), 30% was assigned to/from the Saw Mill River Parkway (south), 5% was assigned to/from Central Park Avenue (north) and 5% was assigned to/from Central Park Avenue (south).

The retail trips were assigned with 50% to/from the north (10% on Warburton Avenue, 15% on North Broadway, 15% on Nepperhan Avenue and 10% on NYS Route 9A), 30% to/from the south (20% on Riverdale Avenue and 10% on South Broadway) and 20% to/from the east (on Yonkers Avenue). Of the 20% from the east on Yonkers Avenue, 5% was assigned to/from the Saw Mill River Parkway (north), 5% was assigned to/from the Saw Mill River Parkway (south), 5% was assigned to/from Central Park Avenue (north) and 5% was assigned to/from Central Park Avenue (south).

The multiplex movie theater trips were assigned with 50% to/from the north (10% on Warburton Avenue, 15% on North Broadway, 15% on Nepperhan Avenue and 10% on NYS Route 9A), 30% to/from the south (20% on Riverdale Avenue and 10% on South Broadway) and 20% to/from the east (on Yonkers Avenue). Of the 20% from the east on Yonkers Avenue, 5% was assigned to/from the Saw Mill River Parkway (north), 5% was assigned to/from the Saw Mill River Parkway (south), 5% was assigned to/from Central Park Avenue (north) and 5% was assigned to/from Central Park Avenue (south).

(2) Cacace Center

The office and hotel trips were assigned with 30% to/from the north (5% on Warburton Avenue, 5% on North Broadway, 10% on Nepperhan Avenue and 10% on NYS Route 9A), 20% to/from the south (10% on Riverdale Avenue and 10% on South Broadway) and 50% to/from the east (on Yonkers Avenue). Of the 50% from the east on Yonkers Avenue, 10% was assigned to/from the Saw Mill River Parkway (north), 30% was assigned to/from the Saw Mill River Parkway (south), 5% was assigned to/from Central Park Avenue (north) and 5% was assigned to/from Central Park Avenue (south).

(3) Palisades Point

The residential and ancillary retail trips were assigned with 30% to/from the north (5% on Warburton Avenue, 5% on North Broadway, 10% Nepperhan Avenue and 10% NYS Route 9A), 20% to/from the south (10% on Riverdale Avenue and 10% on South Broadway) and 50% to/from the east (on Yonkers Avenue). Of the 50% from the east on Yonkers Avenue, 10% was assigned to/from the Saw Mill River Parkway (north), 30% was assigned to/from the Saw Mill River Parkway (south), 5% was assigned to/from Central Park Avenue (north) and 5% was assigned to/from Central Park Avenue (south).

d. Year 2012 Build Traffic Volumes

In order to develop the Year 2012 Build Traffic Volumes (future traffic volumes with the Project), the Project Generated Traffic Volumes were combined with the Year 2012 No-Build Traffic Volumes as discussed below.

Utilizing the arrival and departure distributions discussed in Section III.E.3.c, the Project Generated Traffic Volumes were developed for each of the Project sites. Appendix 2.A of this DEIS contains the Project Generated Traffic Volumes by individual turning movement.

In addition, as a result of the new traffic pattern recommended for the Getty Square/Chicken Island area, under the Future Build Condition the Future No-Build Traffic Volumes were redistributed to reflect the new recommended street patterns including the closing of streets. The Redistributed Year 2012 No-Build Traffic Volumes for the Getty Square/Chicken Island area are contained in Appendix 2.A of this DEIS.

Appendix 2.A contains the Year 2012 Build Traffic Volumes by individual turning movement. For comparison, the Year 2012 Build Total Intersection Volumes passing through each of the study area intersections are summarized on Exhibits III.E-9 through III.E-14 for the Weekday Peak AM Highway Hour, Exhibits III.E-15 through III.E-20 for the Weekday Peak PM Highway Hour, and Exhibits III.E-21 through III.E-26 for the Saturday Peak Hour.

(1) Evaluation of Ballpark

The Project also includes a 6,500 seat ballpark on top of River Park Center. The ballpark has been analyzed as a special event condition.

Based on previous studies performed in connection with its prior proposal, the ballpark was conservatively estimated to generate some 1,552 entering vehicles. This assumed a 90% occupancy rate, a 20% public transit credit and auto occupancy of three people per vehicle. For weekday games, approximately 1/3 of the generation would arrive during the Weekday Peak PM Highway Hour (517 vehicle trips) and for weekend games; approximately 2/3 of the generation would arrive during the Saturday Peak Hour (1035 vehicle trips). It should be noted that **no** credit has been taken for interplay between the ballpark and the retail, restaurant, office and residential uses of the Project.

In order to assign the anticipated ballpark generation as outlined above, an arrival and departure distribution was developed. The arrival and departure distribution for the ballpark by individual movements is contained in Appendix 2.A of this DEIS. In general, the following assignments were utilized.

The ballpark trips were assigned with 25% to/from the north (5% on Warburton Avenue, 5% on North Broadway, 5% on Nepperhan Avenue and 10% on NYS Route 9A), 15% to/from the south (5% on Riverdale Avenue and 10% on South Broadway) and 60% to/from the east (on Yonkers Avenue). Of the 60% from the east on Yonkers Avenue, 25% was assigned to/from the Saw Mill River Parkway (north), 25% was assigned to/from the Saw Mill River Parkway (south), 5% was assigned to/from Central Park Avenue (north) and 5% was assigned to/from Central Park Avenue (south).

Utilizing the above referenced arrival and departure distributions, the ballpark generated traffic volumes were developed. Appendix 2.A of this DEIS contains the Ballpark Generated Traffic Volumes by individual turning movement.

Appendix 2.A also contains the Year 2012 Build Traffic Volumes with Ballpark by individual turning movement. For comparison, the Year 2012 Build with Ballpark Total Intersection Volumes passing through each of the study area intersections are summarized on Exhibits III.E-9 through III.E-14 for the Weekday Peak AM Highway Hour, Exhibits III.E-15 through III.E-20 for the Weekday Peak PM Highway Hour, and Exhibits III.E-21 through III.E-26 for the Saturday Peak Hour.

A Parking Study (see Chapter III.E.1 in this DEIS) was performed for the Project. The Parking Study evaluates the available parking for ball games and other ballpark events. Generally the timing of the events will have to be coordinated with the availability of parking during those periods.

As indicated in the Parking Study surplus parking will be available for ball games starting on Weekday evenings and on Saturday and Sunday afternoons. During these times, the available parking will be in the Cacace Center and the Government Center parking structures.

As discussed in the Anticipated Impacts and Mitigation Section (Section III.E.3), variable message signs will be included within the Project area to direct patrons to the ballpark parking areas. Exhibit III.E-59 shows the potential location of these signs, the preferred routes for ballpark traffic and the existing pedestrian bridge from the Cacace Center to the north side of Nepperhan Avenue. In addition, it is recommended that uniform police officers or traffic control personnel be assigned to direct traffic in the area.

As indicated previously, it is anticipated that a ball game or other event would occur Weekday evenings and Weekends. The schedule would be coordinated with the availability of parking. Based on the Parking Study it is unlikely that any significant ballpark event would occur during the Weekday morning peak hours.

e. Description of Analysis

To determine existing and future traffic operating conditions at the study area intersections, capacity analysis was performed based on the *2000 Highway Capacity Manual*. The following is a description of the analysis method utilized in the Traffic Study.

(1) Signalized Intersection Capacity Analysis

The capacity analyses for the signalized intersections were performed in accordance with the procedures described in the *2000 Highway Capacity Manual*, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service "A" represents the best condition and a Level of Service "F" represents the worst condition. A Level of Service "C" is generally used as a design standard while a Level of Service "D" is acceptable during peak periods. A Level of Service "E" represents an operation near capacity. In order to identify an intersection's Level of Service the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

(2) Unsignalized Intersection Capacity Analysis

The capacity analyses for the unsignalized intersections were also performed in accordance with the procedures described in the *2000 Highway Capacity Manual*. The procedure is based on total elapsed time from when a vehicle stops

at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement to the intersection.

Additional information concerning signalized and unsignalized Levels of Service Standards can be found in Appendix 2.B of this DEIS.

f. Capacity Analyses and Results (Primary Intersections)

To evaluate current and future traffic operating conditions and any recommended improvements, detailed capacity analyses were conducted at each of the study area intersections utilizing the procedures described above.

(1) Capacity Analysis

For the purpose of capacity analysis, the study area was considered to be a "Central Business District (CBD)," which takes into consideration factors such as frequent parking maneuvers or vehicle blockages, taxi/bus activity, high pedestrian activity and dense population. However, for the Build Condition, intersections in the vicinity of the Getty Square/Chicken Island area (Intersections 1 through 9) and the Yonkers Avenue Corridor from Walnut Street to the Saw Mill River Parkway Ramps (Intersections 16 through 20) were not considered to be in a Central Business District to reflect improvements proposed as part of this Project. These improvements include the upgrading to the entire signal system along the Yonkers/Nepperhan Avenue Corridor extending from the Saw Mill River Parkway into the downtown area, which will be included as part of the City's Computerized Traffic Signal System, as well as the removal of off-street parking.

Based on a review of the existing traffic volume, the peak hour factors varied between 0.87 and 0.93. Because this factor can be slightly different for each intersection and can change day by day, for consistency and comparison purposes, an average peak hour factor of 0.92 was used for all conditions, i.e., Existing, No-Build and Build Conditions.

Based on a review of the existing traffic counts, the peak hour factors varied slightly for each intersection and day by day. Based on a review of the traffic counts collected for the study area intersections (60 locations), the average Peak Hour Factor was 0.92. Therefore for consistency and comparison purpose an average peak hour factor of 0.92 was used throughout the analysis for all conditions, i.e., Existing, No-Build and Build Conditions. A copy of the traffic count data is contained in Appendix 2.G of this DEIS.

Based on information from New York State Department of Transportation, a truck factor of 5% is considered reasonable for peak hour conditions for this type of area. This factor was used at all locations (except the ramps to and from

the parkways) for Existing, No-Build and Build Conditions for comparative purposes. A copy of the New York State's 2005 Highway Sufficiency Ratings is included in Appendix 2.G of this DEIS.

The capacity analyses show the existing geometrics, lane widths, existing traffic control, signal timings/phasing where applicable and any recommended improvements for each study area intersection. The capacity analyses are contained in Appendix 2.K-1 of this DEIS for the Primary Intersections.

(2) Results of Capacity Analysis

For comparison, the Overall Intersection Levels of Service and delays are summarized on Exhibits III.E-27 through III.E-32 for the Weekday Peak AM Highway Hour, Exhibits III.E-33 through III.E-38 for the Weekday Peak PM Highway Hour, Exhibits III.E-39 through III.E-44 for the Saturday Peak Hour.

Since the Project includes changes to the existing street system, the Build Condition was evaluated to include the new traffic pattern and any proposed improvements. The Build Levels of Service and delays shown on Exhibits III.E-27 through III.E-44 include the recommended improvements outlined on Exhibits III.E.53 through III.E.58.

Appendix 2.B of this DEIS contains the resulting Levels of Service and delays by movement, by approach as well as for the overall intersection for the Year 2006 Existing, Year 2012 No-Build, Year 2012 Build and Year 2012 Build with Ballpark Conditions.

To further address the Project's impacts, a summary of the existing geometry including traffic control, Existing Levels of Service, No-Build Levels of Service, any recommended improvements and the resulting Build Levels of Service for each of the study area intersections has been included in Appendix 2.H of this DEIS.

g. Driveway Evaluation

The geometry and traffic control for each of the site driveways are shown on Exhibit III.E-45. An analysis of the site driveways was also conducted and the resulting Levels of Service and delays are summarized on Exhibits III.E-46 and III.E-47. As shown on these figures, the proposed driveways will operate at acceptable Levels of Service "A" through "D".

In addition, Appendix 2.I of this DEIS provides a Level of Service and delay summary table and a table summarizing the driveway queues. A copy of the capacity analysis is contained in Appendix 2.K-2.

h. Recommended Improvements and Mitigation

The recommended traffic and transportation mitigation measures are public improvements. The cost of the improvements will be funded through the tax

increment financing program described in Appendix 1.F of this DEIS. The improvements will be undertaken by the City and/or the Applicant.

The construction of the Project will result in the elimination of several streets within the Project area (See Exhibit III.E-48 – Existing and Proposed Circulation). Traffic using these streets would be redistributed to the adjoining street system. Given the current traffic flow pattern and the capacity restrictions in the Getty Square/Chicken Island area, it is recommended that New Main Street be directed away from Getty Square (towards Nepperhan Avenue). In conjunction with this, the section of Elm Street between Nepperhan Avenue and Palisade Avenue as well as Palisade Avenue between Elm Street and Getty Square would be reversed in direction. The reversal of these streets would provide additional capacity and better distribution of traffic within the area.

In addition, traffic circulation within the Project area will allow for a taxi stand to be located along the north side of Palisade Avenue between Locust and New Main Street. Passenger drop-off, especially for the ballpark, will be along Nepperhan Avenue between Elm Street and New Main Street. Parking for the retail uses will be in the parking structures.

Truck deliveries to River Park Center are shown on Exhibits III.E-49 through III.E-52 and indicate "off-street" loading locations as well as the taxi stand and ballpark drop-off.

In addition to the above traffic pattern modification (as shown on Exhibit III.E-53), there are other improvements recommended to improve operating conditions within the study area (Exhibits III.E-53 through III.E-58). These improvements are also summarized in Table III.E-3. These improvements include:

- As discussed above, a new traffic flow pattern is recommended for the Getty Square/Chicken Island area (as shown on Exhibit III.E-53). This would provide additional capacity and better distribution of traffic within the area.

- As part of the new traffic flow patterns, a separate left turn lane should be provided from northbound Nepperhan Avenue to Elm Street as well as a separate right turn lane from southbound Nepperhan Avenue to Elm Street.

- Provide signage for the proposed new traffic pattern including no parking signs along Elm Street, Palisade Avenue and New Main Street.

- As part of the Project, existing crosswalks and pedestrian phases at signalized locations will be maintained. At new signalized locations or at access points to the Project, design features will be implemented to accommodate pedestrian activity. The existing signal at Nepperhan Avenue/New School Street will be retained to provide for a pedestrian crossing. A pedestrian friendly streetscape will be

developed along the River Park Center, Cacace Center and Government Center frontages.

- It is also recommended that within the any proposed new traffic signal have a pedestrian phase and that sidewalks/crosswalks be provided.

- Parking will be eliminated along Palisade Avenue, Elm Street and New Main Street. Current users of this parking will be able to use the River Park Center and Government Center garages.

- The elimination of parking along the Yonkers Avenue/Nepperhan Avenue corridor from the Saw Mill River Parkway to the downtown area. This parking will be replaced with "off-street" parking within the area to provide parking for the residents and merchants currently fronting Yonkers Avenue/Nepperhan Avenue. Section II-Description of the Proposed Action and Section III.A Land Use, Zoning and Public Policy of the DEIS, includes Exhibits showing the proposed replacement parking along Yonkers Avenue (Exhibits II-49, II-49A, II-49B and II-49C).

- Provide a signed area for a taxi stand to be located on the north side of Palisade Avenue between Elm Street and New Main Street. (Exhibit III.E-50)

- A bus drop-off lane will be provided on Nepperhan Avenue westbound between Elm Street and New Main Street for the discharge and boarding of passengers.

- Provide a center median along the Yonkers Avenue Corridor between the Saw Mill River Parkway Ramps and Nepperhan Avenue. The proposed center median will consist of a raised island having a width between 12 and 16 feet. The center island will be used for left turns at intersecting streets. In addition, the median area will be used for communication equipment (buried) that will relay information to and from the City's Computerized Traffic Signal System.

- The entire signal system along the Yonkers/Nepperhan Avenue corridor extending from the Saw Mill River Parkway into the downtown area will be upgraded and made part of the City's Computerized Traffic Signal System. This will allow for "real time" management of the traffic within the corridor. The City's existing computer system can accommodate the upgraded system.

- A driveway to the River Park Center will be located on Nepperhan Avenue. A separate left turn lane and a separate right turn lane will be developed for traffic entering the site. This intersection will be signal controlled and be made part of the City's Computerized Traffic Signal System along the Yonkers Avenue/Nepperhan Avenue corridor. The existing intersection of Waverly Street/Nepperhan Avenue will be relocated to the west opposite the proposed driveway and will also be under signal control.

- Construct a northbound right turn lane at the intersection of Nepperhan Avenue/South Broadway.

- At the intersection of Riverdale Avenue and Prospect Street/Nepperhan Avenue, the Nepperhan Avenue westbound right turn westbound right turn lane should be re-striped to allow both through and right turn movements.
- Provide dual right turn lanes on the Saw Mill River Parkway Southbound Exit ramp and install a traffic signal.

- Provide dual right turn lanes on the Saw Mill River Parkway Northbound Exit ramp.

- It is recommended that the flashing traffic signal at the intersection of South Broadway/Hudson Street be upgraded to provide normal signal operation and will be linked to the City's Computerized Traffic Signal System.

- Other signals such as Elm Street and Palisade Avenue, South Broadway and Main Street, and Main Street and Palisade Avenue will be upgraded and linked to the City's Computerized Traffic Signal System

- Certain signals will have to be retimed (as required) to improve operation. These have been shown on Exhibits III.E-53 through III.E-58.

- A new bridge will be constructed from Prospect Street across the Metro-North railroad tracks. This will provide direct access to the Palisades Point and the waterfront from the Yonkers Avenue/Nepperhan Avenue corridor.

- A trolley system will be implemented to shuttle people from the railroad station to River Park Center and the Cacace Center. The trolley system will have the ability of multiple stops within the area based on the demand. (See Section III.E.4.c.3 below for further details of the trolley system).

- Variable message signs will be installed in the Project area to direct patrons to the ballpark parking areas. The location of the variable message signs will be coordinated during the site plan approval process along with other signs for the development. Exhibit III.E-59 shows the potential location of these signs, the preferred routes for ballpark traffic and the existing pedestrian bridge from the Cacace Center to the north side of Nepperhan Avenue. In addition, it is recommended that uniform police officers or traffic control personnel be assigned to direct traffic in the area

Table III. E-3
Recommended Improvements: Primary Intersections

LOCATION		NEW TRAFFIC PATTERN AND RECOMMENDED IMPROVEMENTS[1]
1	NEPPERHAN AVENUE & ELM STREET	▪ REVERSE DIRECTION OF ELM STREET ▪ CONSTRUCT RIGHT TURN LANE SB ON NEPPERHAN AVENUE ▪ CONSTRUCT LEFT TURN LANE NB ON NEPPERHAN AVENUE ▪ MODIFY SIGNAL PHASING / TIMING AS REQUIRED
2	NEPPERHAN AVENUE & NEW SCHOOL STREET	▪ ELIMINATE NEW SCHOOL STREET NORTH OF NEPPERHAN AVENUE ▪ KEEP EXISTING SIGNAL FOR PEDESTRIAN MOVEMENT
3	NEPPERHAN AVENUE & NEW MAIN STREET	▪ REVERSE DIRECTION OF NEW MAIN STREET ▪ ELIMINATE NB LEFT TURN LANE ON NEPPERHAN AVENUE ▪ ELIMINATE SB RIGHT TURN LANE ON NEPPERHAN AVENUE ▪ MODIFY SIGNAL PHASING / TIMING AS REQUIRED
4	NEPPERHAN AVENUE & SOUTH BROADWAY	CONSTRUCT NB LEFT TURN LANE ON S. BROADWAY
5	SOUTH BROADWAY & HUDSON STREET	UPGRADE EXISTING FLASHING SIGNAL TO FULL OPERATION AND CONNECT TO CITY'S COMPUTERIZED TRAFFIC SIGNAL SYSTEM
6	SOUTH BROADWAY & MAIN STREET	UPGRADE SIGNAL AND CONNECT TO CITY'S COMPUTERIZED TRAFFIC SIGNAL SYSTEM
7	MAIN STREET & PALISADE AVENUE	▪ REVERSE DIRECTION OF PALISADE AVENUE ▪ UPGRADE SIGNAL AND CONNECT TO CITY'S COMPUTERIZED TRAFFIC SIGNAL SYSTEM
8	PALISADE AVENUE & LOCUST HILL AVENUE	REVERSE DIRECTION OF PALISADE AVENUE
9	PALISADE AVENUE / ELM STREET / NEW SCHOOL STREET (SITE ACCESS #3)	▪ REVERSE DIRECTION OF PALISADE AVENUE / ELM STREET ▪ ELIMINATE NEW SCHOOL STREET SOUTH OF PALISADE AVENUE AND PROVIDE A DRIVEWAY TO THE SITE ▪ UPGRADE SIGNAL AND CONNECT TO CITY'S COMPUTERIZED TRAFFIC SIGNAL SYSTEM
10	ASHBURTON AVE. & WARBURTON AVENUE	CHANGE IN SIGNAL TIMING REQUIRED
11	ASHBURTON AVENUE & NORTH BROADWAY	CHANGE IN SIGNAL TIMING REQUIRED
12	ASHBURTON AVENUE & LOCUST HILL ROAD	NO IMPROVEMENTS PROPOSED
13	ASHBURTON AVENUE & PALISADE AVENUE	CHANGE IN SIGNAL TIMING REQUIRED
14	ASHBURTON AVENUE & NEPPERHAN AVENUE	CHANGE IN SIGNAL TIMING REQUIRED
15	ASHBURTON AVENUE & NYS ROUTE 9A / WALNUT STREET	CHANGE IN SIGNAL TIMING REQUIRED
16	YONKERS AVENUE & WALNUT STREET	CORRIDOR IMPROVEMENTS **
17	YONKERS AVENUE & PRESCOTT STREET	CORRIDOR IMPROVEMENTS **
18	YONKERS AVENUE & ASHBURTON AVENUE	CORRIDOR IMPROVEMENTS **
19	YONKERS AVENUE & SAW MILL RIVER PARKWAY SB RAMP	▪ CONSTRUCT A TWO LANE EXIT RAMP FROM THE SAW MILL RIVER PARKWAY SB ▪ INSTALL TRAFFIC SIGNAL AND CONNECT TO THE CITY'S COMPUTERIZED TRAFFIC SIGNAL SYSTEM
20	YONKERS AVENUE & SAW MILL RIVER PARKWAY NB RAMP	▪ PROVIDE FOR A DUAL RIGHT TURN LANE FROM THE SAW MILL RIVER PARKWAY NB EXIT RAMP ▪ UPDATE SIGNAL AS REQUIRED
21	BUENA VISTA AVENUE & DOCK STREET	NO IMPROVEMENTS PROPOSED
22	BUENA VISTA AVENUE & MAIN STREET	NO IMPROVEMENTS PROPOSED *
23	BUENA VISTA AVENUE & HUDSON STREET	NO IMPROVEMENTS PROPOSED

LOCATION		NEW TRAFFIC PATTERN AND RECOMMENDED IMPROVEMENTS[1]
24	WARBURTON AVENUE & DOCK STREET / NEPPERHAN STREET	NO IMPROVEMENTS PROPOSED *
25	WARBURTON AVENUE / RIVERDALE AVENUE & MAIN STREET	NO IMPROVEMENTS PROPOSED *
26	RIVERDALE AVENUE & HUDSON STREET	NO IMPROVEMENTS PROPOSED *
27	RIVERDALE AVENUE & NEPPERHAN AVENUE / PROSPECT STREET	▪ RESTRIPE THE WB NEPPERHAN AVENUE RIGHT TURN LANE TO PROVIDE THROUGH AND RIGHT TURN MOVEMENTS ▪ UPGRADE SIGNAL AND CONNECT TO CITY'S COMPUTERIZED TRAFFIC SIGNAL SYSTEM
28	RIVERDALE AVENUE & VARK STREET	NO IMPROVEMENTS PROPOSED *
29	RIVERDALE AVENUE & HERRIOT STREET	NO IMPROVEMENTS PROPOSED *
30	RIVERDALE AVENUE & LUDLOW STREET	NO IMPROVEMENTS PROPOSED *
31	RIVERDALE AVENUE & RADFORD STREET	NO IMPROVEMENTS PROPOSED *
32	RIVERDALE AVENUE & VALENTINE LANE	NO IMPROVEMENTS PROPOSED *
33	SOUTH BROADWAY & VARK STREET	NO IMPROVEMENTS PROPOSED *
34	SOUTH BROADWAY & HERRIOT STREET	NO IMPROVEMENTS PROPOSED *
35	SOUTH BROADWAY & BRIGHT PLACE	NO IMPROVEMENTS PROPOSED *
36	SOUTH BROADWAY & LUDLOW STREET	NO IMPROVEMENTS PROPOSED *
37	SOUTH BROADWAY & MCLEAN AVENUE	PHASING AND TIMING CHANGE REQUIRED TO OPTIMIZE THE OPERATION OF THE TRAFFIC SIGNAL
38	SOUTH BROADWAY & RADFORD STREET	NO IMPROVEMENTS PROPOSED *
39	SOUTH BROADWAY & VALENTINE LANE	NO IMPROVEMENTS PROPOSED *
40	YONKERS AVE. & MIDLAND AVENUE (WEST)	NO IMPROVEMENTS PROPOSED *
41	YONKERS AVE. & MIDLAND AVENUE (EAST)	NO IMPROVEMENTS PROPOSED *
42	YONKERS AVENUE & SEMINARY AVENUE	NO IMPROVEMENTS PROPOSED *
43	YONKERS AVE. & CENTRAL PARK AVENUE (SB)	NO IMPROVEMENTS PROPOSED *
44	YONKERS AVE. & CENTRAL PARK AVENUE (NB)	NO IMPROVEMENTS PROPOSED *
45	WARBURTON AVENUE & GLENWOOD AVENUE	NO IMPROVEMENTS PROPOSED *
46	WARBURTON AVENUE & LAMARTINE AVENUE	NO IMPROVEMENTS PROPOSED *
47	NORTH BROADWAY & GLENWOOD AVENUE	NO IMPROVEMENTS PROPOSED *
48	NORTH BROADWAY & LAMARTINE AVENUE	NO IMPROVEMENTS PROPOSED *
49	NEPPERHAN AVENUE & LAKE STREET	CHANGE IN SIGNAL TIMING REQUIRED
50	PROSPECT STREET & BUENA VISTA AVENUE	NO IMPROVEMENTS PROPOSED
51	PROSPECT STREET & HAWTHORNE AVENUE	NO IMPROVEMENTS PROPOSED

[1] - New traffic pattern and recommended improvements as shown on Figure III.E-53 through Figure III.E-58
* - Timing changes may be required to optimize the operation of the traffic signal
** - Corridor improvements include construction of a center median, removal of parking, upgrade of the traffic signal system as required including connection to the City's computerized traffic signal system

The potential traffic impacts of the Project will also be mitigated by Traffic Demand Management (TDM) features including the existing bus and rail mass transit facilities that serve the Project area and will be utilized by residents, office workers and shoppers as well as patrons to the ballpark. As a part of the Project, the applicant will implement a "trolley loop" to interconnect the existing mass transit facilities with each other as well as with the residential, office and retail components of the Project. Other TDM features may be incorporated into the Project during site plan review, including bike racks.

i. School Related Traffic

Existing school bus activity is discussed in Section 1.e above. Notwithstanding the location of the new housing, the general pattern of school bus operations will continue under Future Build Conditions. However, it should be noted that as the school population changes, bus routes and bus pick-up/drop-off locations also change.

j. Emergency Services

Existing emergency services are discussed in Section 1.f above. As part of the Project, a new Fire Department Headquarters will be constructed at the southwest corner of New Main Street and Nepperhan Avenue. This facility will have a greater number of bays than the existing facility located on New School Street. Access to the new facility will be on New Main Street with a Pre-Emption device installed at the Nepperhan Avenue/New Main Street traffic signal. Emergency services in this area will not be significantly impacted by the proposed Project. The reversal of New Main Street, Palisade Avenue and Elm Street will keep the existing one way pattern except in the opposite direction. The removal of parking along these streets will also reduce the potential for "blockage" in the area. Other roadways will remain as is with progression along the major arteries, i.e., Nepperhan Avenue and Yonkers Avenue.

4. Other Studies

a. Alternate Routes Evaluation

As outlined in the Scoping Document, a number of intersections were identified which could potentially be impacted by the Project if alternate routes were taken. Typical alternate routes are:

- <u>Rumsey Road/Saw Mill River Pkwy/Cross County Pkwy Exit</u>
  (Intersections No.52-57)
  This alternate route would occur if southbound Saw Mill River Parkway and westbound Cross County Parkway traffic elected to use the Rumsey Road Exit in lieu of the Yonkers Avenue exits.

- <u>Lockwood Avenue/Saw Mill River Pkwy SB On/Off Ramp</u>
  (Intersection No. 58)
  This alternate route would occur if southbound Saw Mill River Parkway traffic elected to use the Lockwood Road Exit (Manning Avenue) in lieu of utilizing the Yonkers Avenue exit.

- Palmer Road/Saw Mill River Pkwy NB On/Off Ramp
  (Intersection No. 59)
  This alternate route would occur if Northbound Saw Mill River Parkway traffic elected to bypass the Yonkers Avenue exit.

- Nepperhan Avenue/Executive Boulevard
  (Intersection No. 60)
  A sensitivity analysis of the Nepperhan Avenue/Executive Boulevard intersection was performed.

The methodology used in evaluating the Alternate Route Intersections which might potentially be impacted by these routes is the same methodology used in the analysis of the Primary Intersections.

Appendix 2.J of this DEIS provides a summary of the existing geometry including traffic controls, Existing Levels of Service, No-Build Levels of Service, any recommended improvements and the resulting Build Levels of Service.

Appendix 2.J also provides the Year 2006 Existing, Year 2012 No-Build, Year 2012 Build, Year 2012 Build with Ballpark Traffic Volumes.

The capacity analysis for the Alternate Route Intersections is contained in Appendix 2.K-3 of this DEIS.

Certain Alternate Route Intersections will operate at or above capacity under Existing, No-Build or Build Conditions. These locations are currently unsignalized, and signalization may be required to improve operating conditions.

Inspection of the Level of Service Summary Figures and Tables indicate that certain Alternate Route Intersections will operate at or above capacity under Existing, No-Build or Build Conditions. The Lockwood Avenue/Saw Mill River Parkway Southbound On/Off Ramp (Manning Avenue) and the Palmer Road/Saw Mill River Parkway Northbound On/Off Ramp intersections are both currently unsignalized. Signalization may be required to improve operating conditions.

b. Pedestrian Activity

Pedestrian activity is a normal part of any downtown area. This is especially true of the downtown Yonkers area. Pedestrian activity in the area is associated with mass transit usage (Metro-North and the Westchester County Bee-Line Bus System) and pedestrian activity associated with local businesses in the area. Sidewalks are generally provided along most of the area roadways to accommodate pedestrians. The existing control system is designed to accommodate pedestrian phases at signalized locations with crosswalks.

Pedestrian counts were collected by representatives of John Collins Engineers, P.C. as well the City of Yonkers for the following locations:

- Buena Vista Avenue at the Yonkers Train Station
- Main Street at the Yonkers Post Office
- Nepperhan Avenue and New Main Street
- Nepperhan Avenue and South Broadway
- Main Street/North Broadway/ Avenue
- Palisade Avenue/Elm Street/New School Street
- Warburton Avenue and Dock Street/Nepperhan Street
- Warburton Avenue/Riverdale Avenue and Main Street
- Riverdale Avenue and Hudson Street
- Riverdale Avenue and Prospect Street

Copies of the Pedestrian Counts are contained in Appendix 2.D of this DEIS.

Based on these counts, pedestrian activity volumes range from 200 to 300 pedestrians per hour in the vicinity of the train station and 300 to 500 pedestrians per hour in the Getty Square area.

It is anticipated that pedestrian activity in the area will essentially remain the same under Future No-Build Conditions, but with some increases near the Metro-North Station.

In the Future Build Condition, pedestrian activity will continue to be associated with mass-transit usage (to/from the Project's residential, retail and office uses) as well as pedestrian activity from the adjacent neighborhoods (to/from the retail). In developing the Year 2012 Build Traffic Volumes, a 30% credit was taken to account for mass-transit usage, interplay between uses and pass-by trips. It should be noted that a significant portion of the Project's retail pedestrian activity is already on the area roadways. However, in order to provide a conservative estimate of Project generated pedestrian activity, 10% of the Year 2012 Build Traffic Volumes is assumed to represent Project generated pedestrian activity. This equates to approximately 200 pedestrians during the Weekday Peak AM Highway Hour (with an average of some 50 pedestrians per 15 minutes), approximately 400 pedestrians during the Weekday Peak PM Highway Hour (with an average of some 100 pedestrians per 15 minutes) and 400 pedestrians during the Saturday Peak Hour (with an average of some 100 pedestrians per 15 minutes).

The NYSDOT has established pedestrian Levels of Service. These Levels of Service are based on pedestrian flow rates, which are calculated in people per minute per meter. A copy of the NYSDOT flow rates and Levels of Service are contained in Appendix 2.D of this DEIS. Based on these criteria, a sidewalk/crosswalk would result in the flowing flow rates and Levels of Service:

- Pedestrian flow rate of 0 – 24 pedestrians/minute = Level of Service "A"
- Pedestrian flow rate of 24 – 35 pedestrians/minute = Level of Service "B"
- Pedestrian flow rate of 35 – 50 pedestrians/minute = Level of Service "C"
- Pedestrian flow rate of 50 – 74 pedestrians/minute = Level of Service "D"
- Pedestrian flow rate of 74 – 112 pedestrians/minute = Level of Service "E"

- Pedestrian flow rate greater than 112 pedestrians/minute = Level of Service "F"

Based on the above NYSDOT flow rates and Levels of Service, the number of pedestrians that can be accommodated at a Level of Service "C" is some 525 - 750 pedestrians every 15 minutes. Inspection of the pedestrian count data (Appendix 2.D) shows less than 100 pedestrians on any studied sidewalk/crosswalk in any 15-minute period.

Based on the above, the existing pedestrian activity in the area is at Level of Service "C" or better, and it is anticipated that Level of Service "C" or better will be achieved with the Project.

As described in the Anticipated Impacts and Mitigation Section (Section III.E.3.i), a trolley system will be implemented to shuttle people to/from mass transit facilities to/from River Park Center and Cacace Center, a bus drop-off lane will be provided on Nepperhan Avenue westbound between Elm Street and New Main Street and a designated area for a taxi stand will be located on the north side of Palisade Avenue between Elm Street and New Main Street.

In addition, as part of the Project, existing crosswalks and pedestrian phases at signalized locations will be maintained. At new signalized locations or at access points to the development, design features will be implemented to accommodate pedestrian activity. The existing signal at Nepperhan Avenue/New School Street will be retained to provide for a pedestrian crossing. A pedestrian friendly streetscape will be developed along the River Park Center, Cacace Center and Government Center frontages.

It is also recommended that within the Project area, any proposed traffic signal has a pedestrian phase and that sidewalks/crosswalks be provided as part of the Project.
During special events such as a ballgame, uniformed police officers may be required at selected locations to direct traffic and pedestrian flow such as at the Nepperhan Avenue/New Main Street intersection.

c. Public Transportation

(1) Bus Service

Bus Service in the area includes the Westchester County Bee-Line Bus System operated by the Westchester County Department of Transportation with local and express bus service provided within the vicinity of the Project. Available Bus Routes for the areas are shown on Exhibit III.E-60. The Westchester County Department of Transportation indicated that the Bee Line Bus routes in the area generally have available capacity and if ridership increases bus service is adjusted accordingly.

The Westchester County Department of Transportation has indicated that the new traffic patterns proposed appear to have a minimum impact on the Bee Line Bus operations and may benefit the system, and that they will continue to

review the impacts and benefits as the plans develop. (See attached letter in Appendix 2.E of this DEIS).

As part of the Project, a bus drop-off lane will be provided on Nepperhan Avenue westbound between Elm Street and New Main Street for the discharge of passengers. Additional bus stops will be added based on need and will be discussed between the City and the Westchester County Department of Transportation.

(2) Metro-North Railroad

Train service for the area is provided by the Metro-North Railroad (Hudson Line) with service from the Yonkers Train Station to Grand Central Terminal during peak and off-peak hours for both weekdays and weekends. The Yonkers Train Station is approximately 3-4 blocks from River Park Center and has parking at the Buena Vista garage (610 parking spaces) and the Larkin Plaza lot (119 parking spaces). Based on discussions with the Metro-North Railroad, existing train service has capacity to accommodate the increase in ridership anticipated from the Project.

(3) Trolley Service

As previously noted, it is proposed that a trolley system be implemented to link mass transit facilities with River Park Center and Cacace Center. The trolley system will have the ability of multiple stops within the area based on demand. An initial trolley loop is shown on Exhibit III.E-61. Additional loops can be added as development proceeds. The trolley fleet should consist of environmentally sensitive vehicles with frequent service. A real time informational system should be part of any trolley system. This real time system will have an integrated GPS System and will be capable of providing information to riders with respect to anticipated departure times from various stops.

(4) Peak Hour Commuter Trips

Traffic analyses incorporate a mass transit, interplay and pass by credit of 30%. The mass transit credit was taken as 20% of the combined residential and office trips. This equates to roughly 200 trips during the Weekday Peak AM Highway Hour and Weekday Peak PM Highway Hour. Based on discussions with the rail and transit officials, this mass transit usage can be accommodated by the existing bus and rail system.

Based on the relative close proximity of the Project area to the Yonkers Train Station and the implementation of the trolley service, it is not anticipated that the Project will impact the existing commuter lots servicing the Yonkers Train Station.

d. Accident Data

Accident data was obtained from the New York State Department of Transportation Records Access Office for the study area (as shown on Exhibit III.E-1) for the latest available three-year period (January 1, 2003 through December 31, 2005) and include the following roadway links:

- Nepperhan Avenue between South Broadway and Yonkers Avenue
- Elm Street between Nepperhan Avenue and Palisade Avenue/School Street
- Palisade Avenue between Elm Street/School Street and Main Street
- Buena Vista Avenue between Dock Street and Prospect Street
- Yonkers Avenue between Nepperhan Ave & the Saw Mill River Parkway Ramps
- Yonkers Ave. between the Saw Mill River Parkway Ramps & Central Park Ave
- Ashburton Avenue between Warburton Avenue and Yonkers Avenue
- Warburton Avenue between Glenwood Avenue and Riverdale Avenue
- Riverdale Ave. between Nepperhan Avenue/Prospect Street and Valentine Lane
- North Broadway between Glenwood Avenue and Main Street
- South Broadway between North Broadway and Valentine Lane

A copy of the NYSDOT Accident Summary Tables for each of the above roadway links is contained in Appendix 2.F of this DEIS.

A summary of the accident data by year for each of the above roadway links is shown on Table No. III.E-4A and has been summarized by intersection on Table III.E-4B following this Section.

As shown on Table III.E-4B, there are several locations along Yonkers Avenue, Nepperhan Avenue and North/South Broadway that have a range of 10 to 14 accidents a year. The type of accidents are typical type of accidents, such as rear end accidents and turning accidents with apparent contribution factors such as failure to yield right of way and driver error. This accident data reflects existing accident patterns.

It should be noted that with the recommended/proposed improvements which includes improved geometry, new traffic patterns, removal of parking, a proposed median along Nepperhan Avenue/Yonkers Avenue and new traffic signals connected to the City's Centralized Computer System improved traffic flow in the area is expected. These improvements will improve driver awareness thereby reducing driver confusion and/or driver error.

Table III. E-4A
Accident Summary by Roadway Segment

LOCATION		2003	2004	2005
1	**NEPPERHAN AVENUE** (Between South Broadway and Yonkers Avenue)	21	15	34
2	**ELM STREET** (Between Nepperhan Avenue and Palisade Avenue/School Street)	3	8	13
3	**PALISADE AVENUE** (Between Elm Street/School Street and Main Street)	8	7	4
4	**BUENA VISTA AVENUE** (Between Dock Street and Prospect Street)	1	0	2
5	**YONKERS AVENUE** (Between Nepperhan Avenue and the Saw Mill Parkway Ramps)	56	52	37
6	**YONKERS AVENUE** (Between the Saw Mill Parkway Ramps and Central Park Avenue)	62	56	51
7	**ASHBURTON AVENUE** (Between Warburton Avenue and Yonkers Avenue)	37	30	26
8	**WARBUTON AVENUE** (Between Glenwood Avenue and Riverdale Avenue)	25	27	16
9	**RIVERDALE AVENUE** (Between Nepperhan Avenue/Prospect Street and Valentine Lane)	38	38	32
10	**NORTH BROADWAY** (Between Glenwood Avenue and Main Street)	30	27	25
11	**SOUTH BROADWAY** (Between North Broadway and Valentine Avenue)	65	47	52

Table III. E-4B
Accident Summary by Intersection

LOCATION		2003	2004	2005
1	NEPPERHAN AVENUE & ELM STREET	2	4	10
2	NEPPERHAN AVENUE & NEW SCHOOL STREET	1	3	3
3	NEPPERHAN AVENUE & NEW MAIN STREET	2	2	5
4	NEPPERHAN AVENUE & SOUTH BROADWAY	7	3	5
5	SOUTH BROADWAY & HUDSON STREET	1	0	7
6	SOUTH BROADWAY & MAIN STREET	6	10	9
7	MAIN STREET & PALISADE AVENUE	6	10	9
8	PALISADE AVENUE & LOCUST HILL AVENUE	2	1	1
9	PALISADE AVENUE / ELM STREET / NEW SCHOOL STREET	1	4	1
10	ASHBURTON AVENUE & WARBURTON AVENUE	4	5	3
11	ASHBURTON AVENUE & NORTH BROADWAY	3	3	4
12	ASHBURTON AVENUE & LOCUST HILL ROAD	0	1	0
13	ASHBURTON AVENUE & PALISADE AVENUE	*	*	*
14	ASHBURTON AVENUE & NEPPERHAN AVENUE	8	3	4
15	ASHBURTON AVENUE & NYS ROUTE 9A / WALNUT STREET	2	4	2

LOCATION		2003	2004	2005
16	YONKERS AVENUE & WALNUT STREET	6	10	5
17	YONKERS AVENUE & PRESCOTT STREET	6	5	7
18	YONKERS AVENUE & ASHBURTON AVENUE	8	1	2
19	YONKERS AVENUE & SAW MILL RIVER PARKWAY SB RAMP	12	11	1
20	YONKERS AVENUE & SAW MILL RIVER PARKWAY NB RAMP	12	11	1
21	BUENA VISTA AVENUE & DOCK STREET	*	*	*
22	BUENA VISTA AVENUE & MAIN STREET	0	0	1
23	BUENA VISTA AVENUE & HUDSON STREET	1	0	0
24	WARBURTON AVENUE & DOCK STREET / NEPPERHAN STREET	0	2	1
25	WARBURTON AVENUE / RIVERDALE AVENUE & MAIN STREET	1	1	1
26	RIVERDALE AVENUE & HUDSON STREET	0	2	1
27	RIVERDALE AVENUE & PROSPECT STREET	8	7	11
28	RIVERDALE AVENUE & VARK STREET	4	5	1
29	RIVERDALE AVENUE & HERRIOT STREET	1	3	1
30	RIVERDALE AVENUE & LUDLOW STREET	1	5	2
31	RIVERDALE AVENUE & RADFORD STREET	0	3	2
32	SOUTH BROADWAY & VARK STREET	0	0	2
33	SOUTH BROADWAY & HERRIOT STREET	4	3	5
34	SOUTH BROADWAY & BRIGHT PLACE	1	0	0
35	SOUTH BROADWAY & LUDLOW STREET	4	4	0
36	SOUTH BROADWAY & MCLEAN AVENUE	2	3	1
37	SOUTH BROADWAY & RADFORD STREET	3	3	4
38	SOUTH BROADWAY & VALENTINE LANE	0	1	1
39	YONKERS AVENUE & MIDLAND AVENUE (WEST)	14	13	7
40	YONKERS AVENUE & MIDLAND AVENUE (EAST)	14	13	7
41	YONKERS AVENUE & SEMINARY AVENUE	0	3	3
42	YONKERS AVENUE & CENTRAL PARK AVENUE (SB)	14	10	13
43	YONKERS AVENUE & CENTRAL PARK AVENUE (NB)	14	10	13
44	WARBURTON AVENUE & GLENWOOD AVENUE	0	2	0
45	WARBURTON AVENUE & LAMARTINE AVENUE	5	2	2
46	NORTH BROADWAY & GLENWOOD AVENUE	3	3	2
47	NORTH BROADWAY & LAMARTINE AVENUE	1	2	1
48	NEPPERHAN AVENUE & LAKE STREET	*	*	*
49	PROSPECT STREET & BUENA VISTA AVENUE	0	0	1
50	PROSPECT STREET & HAWTHORNE AVENUE	*	*	*

* = No Reportable Accidents. Based on count data obtained from the New York State Department of Transportation Records Access Office.
For the study area for the latest three year period - January 1, 2003 through December 31, 2005

e. SYNCHRO Analysis

A SYNCHRO analysis was conducted for the Nepperhan Avenue/Yonkers Avenue Corridor for Existing, No-Build and Build Conditions for the Weekday Peak AM Highway Hour, Weekday Peak PM Highway Hour and Saturday Peak Hour, with and without the ballpark.

The SYNCHRO analysis was conducted to evaluate the coordination of signalized intersections along the Nepperhan Avenue/Yonkers Avenue Corridor taking into consideration the phasing and timing of the traffic signals. The SYNCHRO analysis also computes the 50th percentile queues (average queues) and 95th percentile queues. Copies of the SYNCHRO analysis are contained in Appendix 2.L of this DEIS.

The average queue for the AM and PM Peak Hours for the No-Build and Build conditions are shown on Table 1-Queue (Appendix 2.L). This table also lists the available storage by movement. In most cases the average queue length is less than the available storage; therefore there is no potential for "spill back" into adjoining intersections.

In a few instances, i.e., Southbound Saw Mill River Parkway/Yonkers Avenue, the queue length is shown to exceed the storage capacity with the potential for "spill back" into an adjoining intersection. However, this is a result of inputs to the model which requires link lengths as well as traffic volumes. In fact, this intersection is controlled by an upstream intersection, i.e., Sawmill River Parkway Northbound on/off ramps and Yonkers Avenue. As such, the queue indicated for the southbound ramps will in fact be accommodated at the northbound ramp intersection. In addition, the proposed centralized computer system will insure that optimum progression is obtained within the system.

f. Parking

A Parking Study has been prepared and is summarized in Section III.E.1 of this DEIS. The full text of the study is included in Appendix 2 of this DEIS.

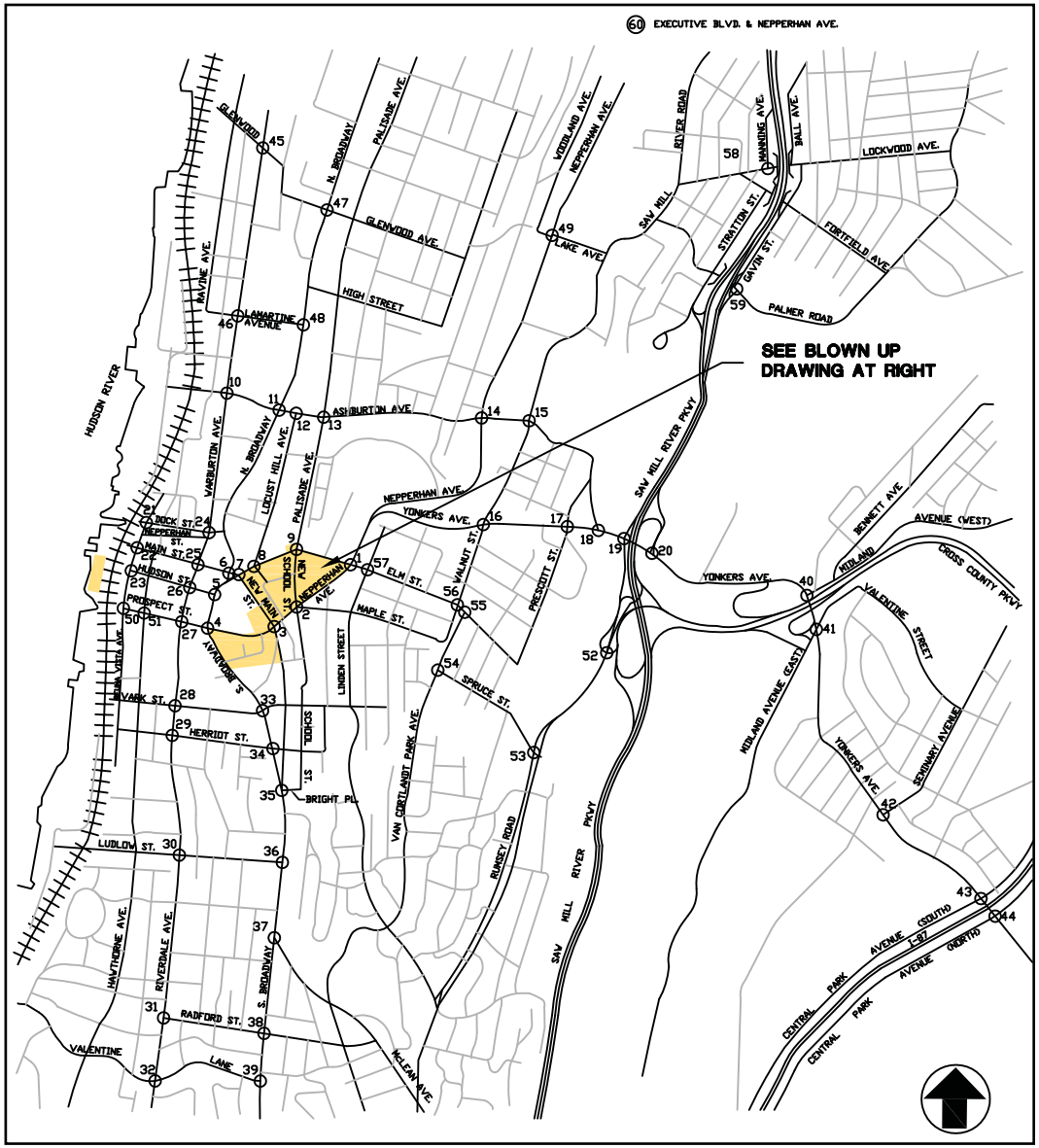


Exhibit III.E-1

LOCATION MAP AND STUDY AREA

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

Exhibit III.E-2

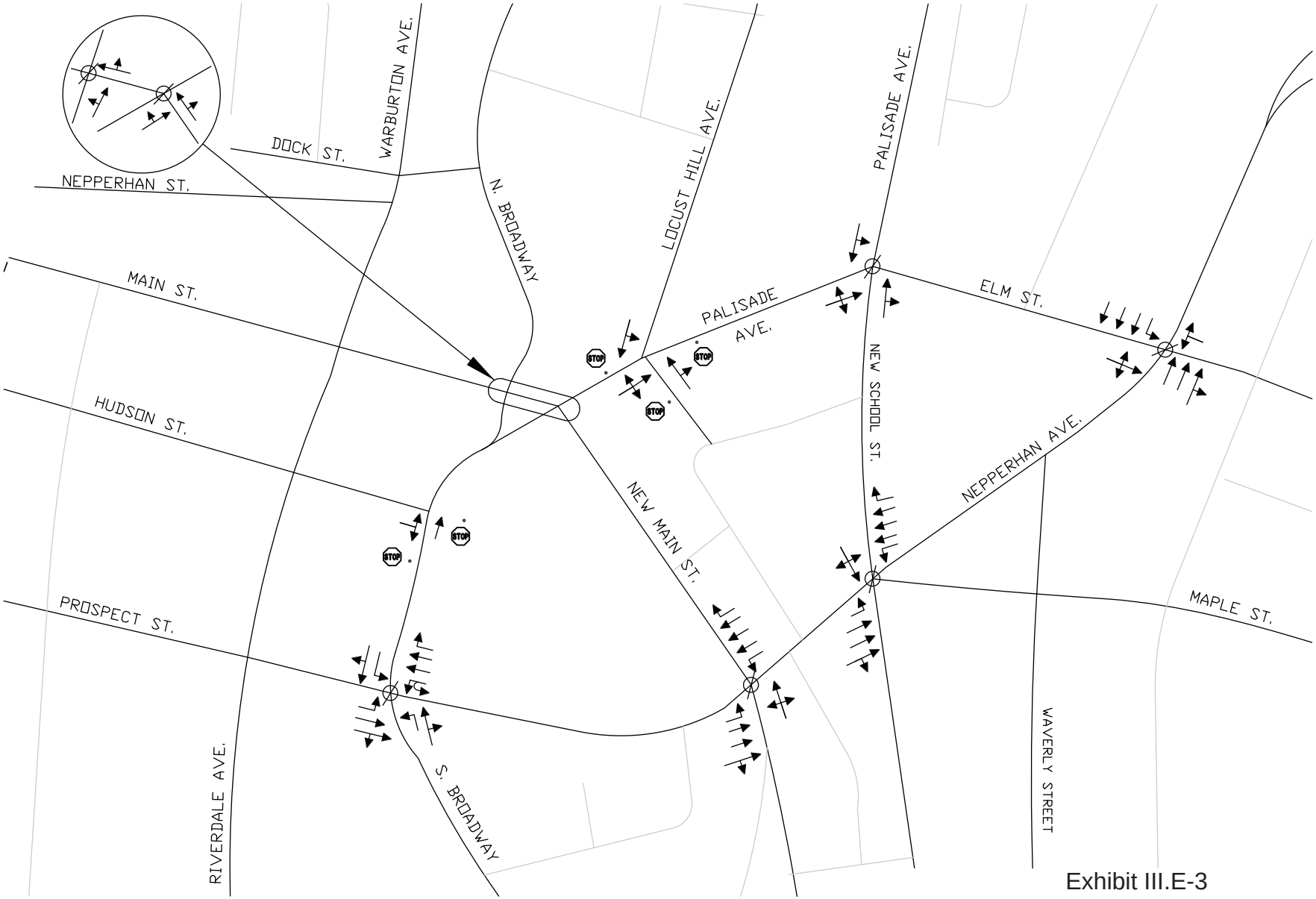
STUDY AREA INTERSECTIONS

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-3

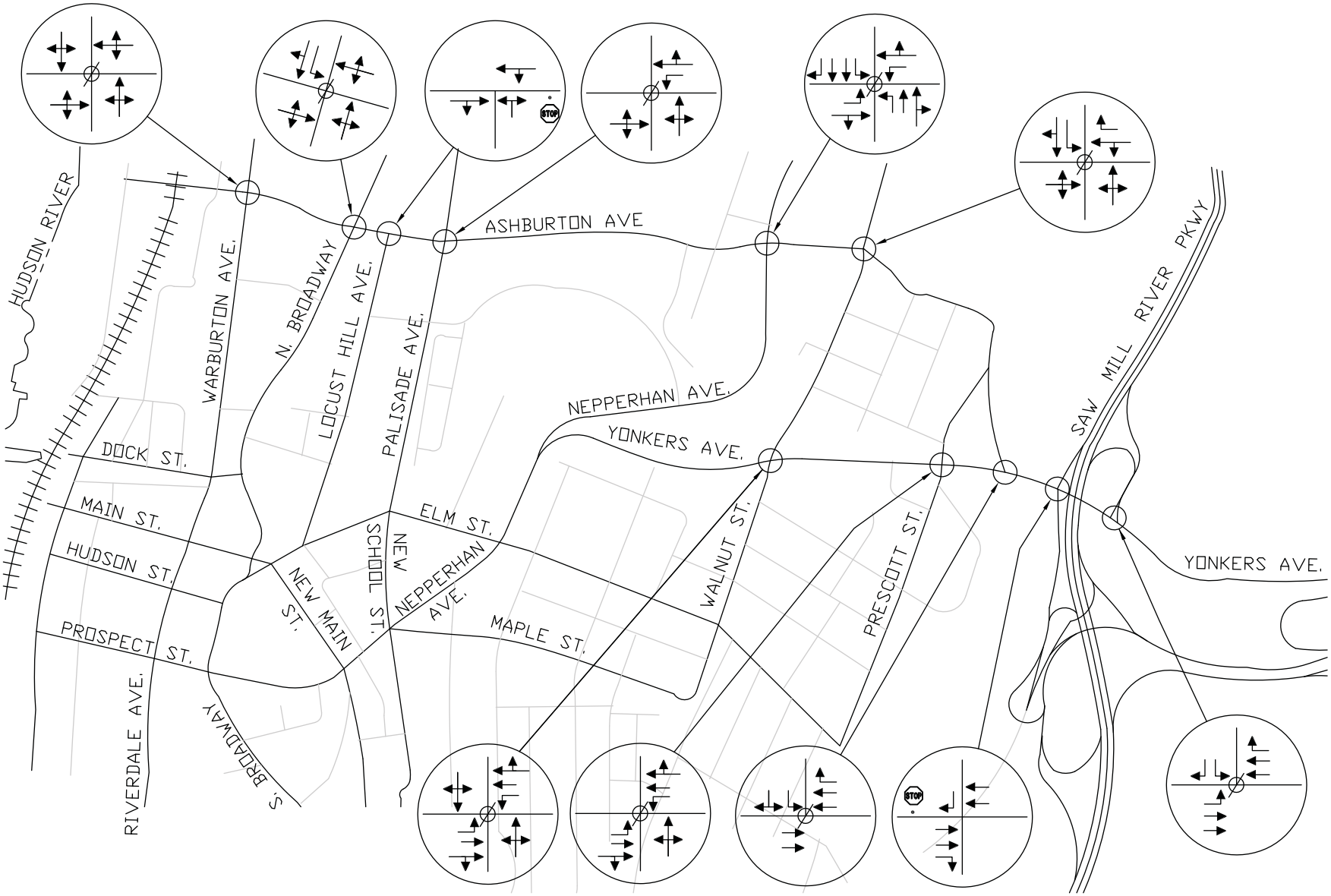
EXISTING GEOMETRY

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-4

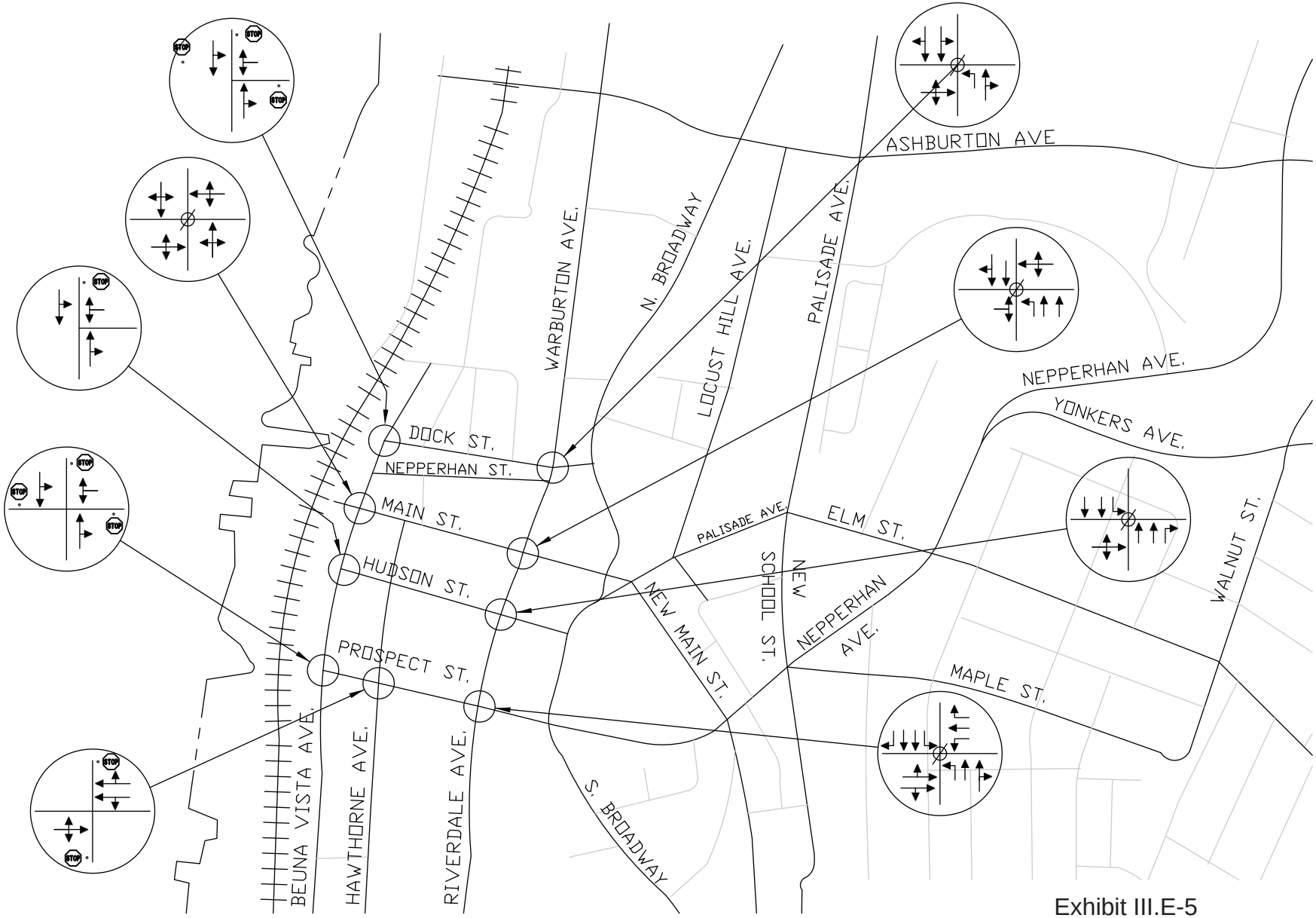
EXISTING GEOMETRY

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-5

EXISTING GEOMETRY

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-6

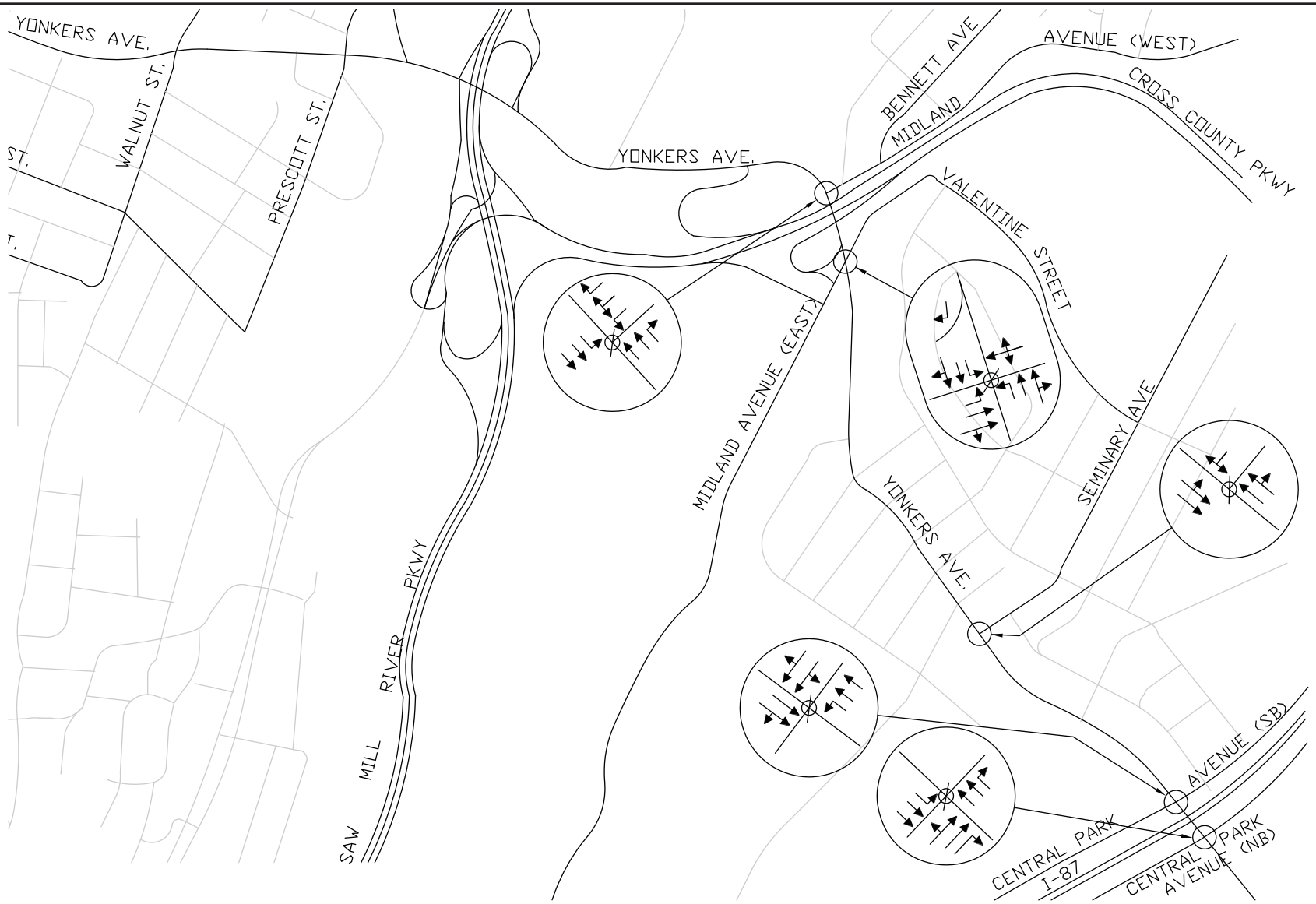
EXISTING GEOMETRY

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-7

EXISTING GEOMETRY

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-8

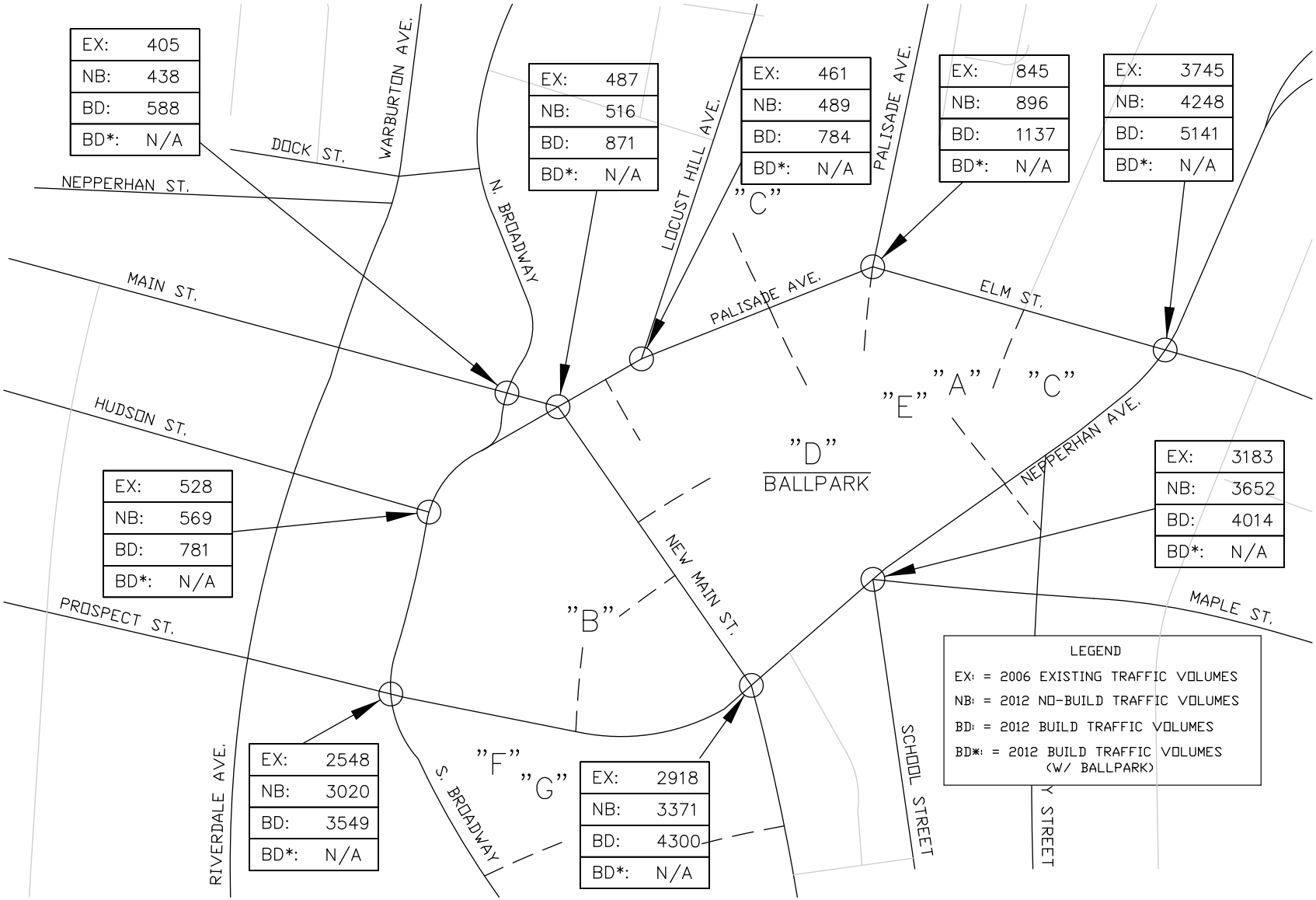
EXISTING GEOMETRY

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-9

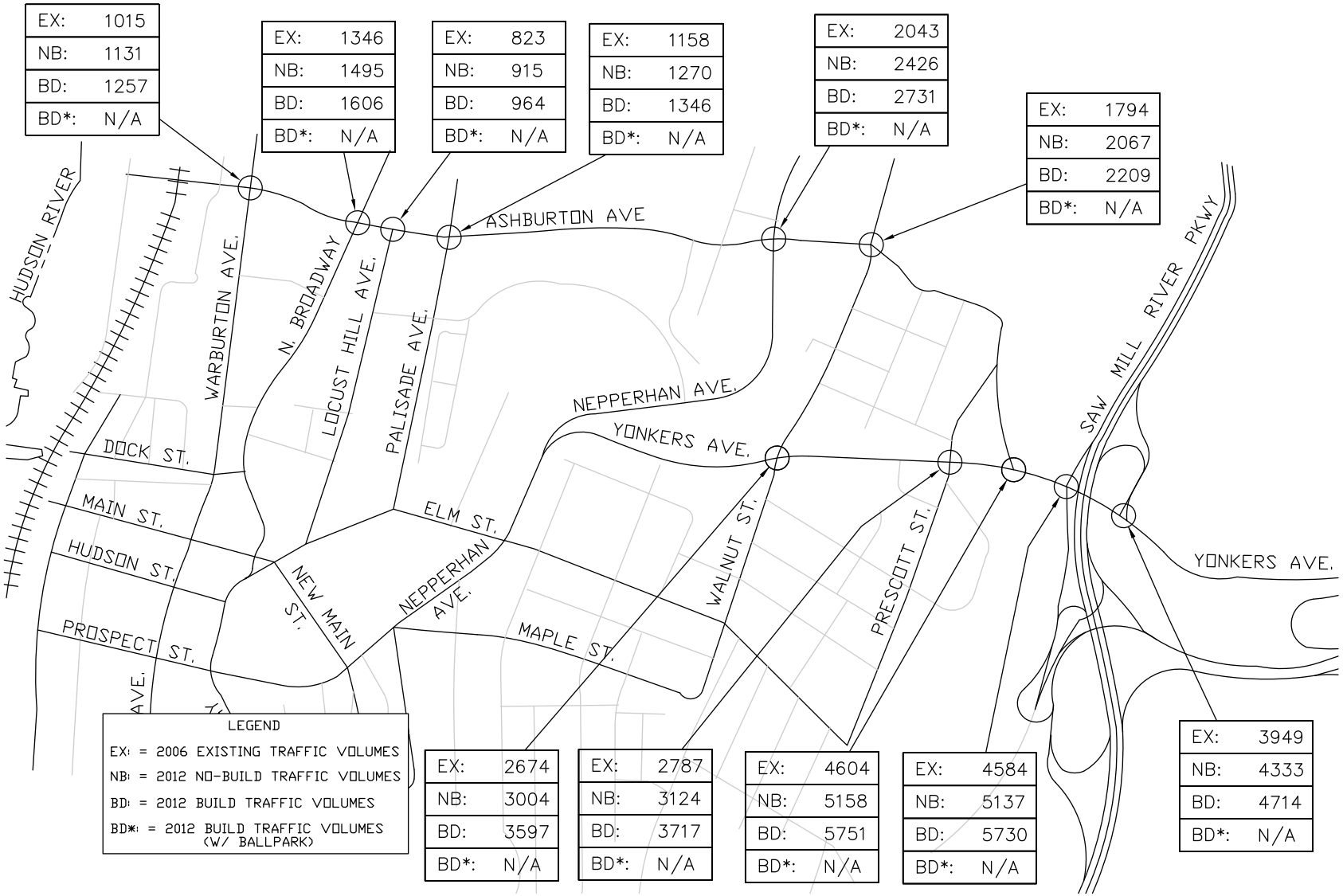
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-10

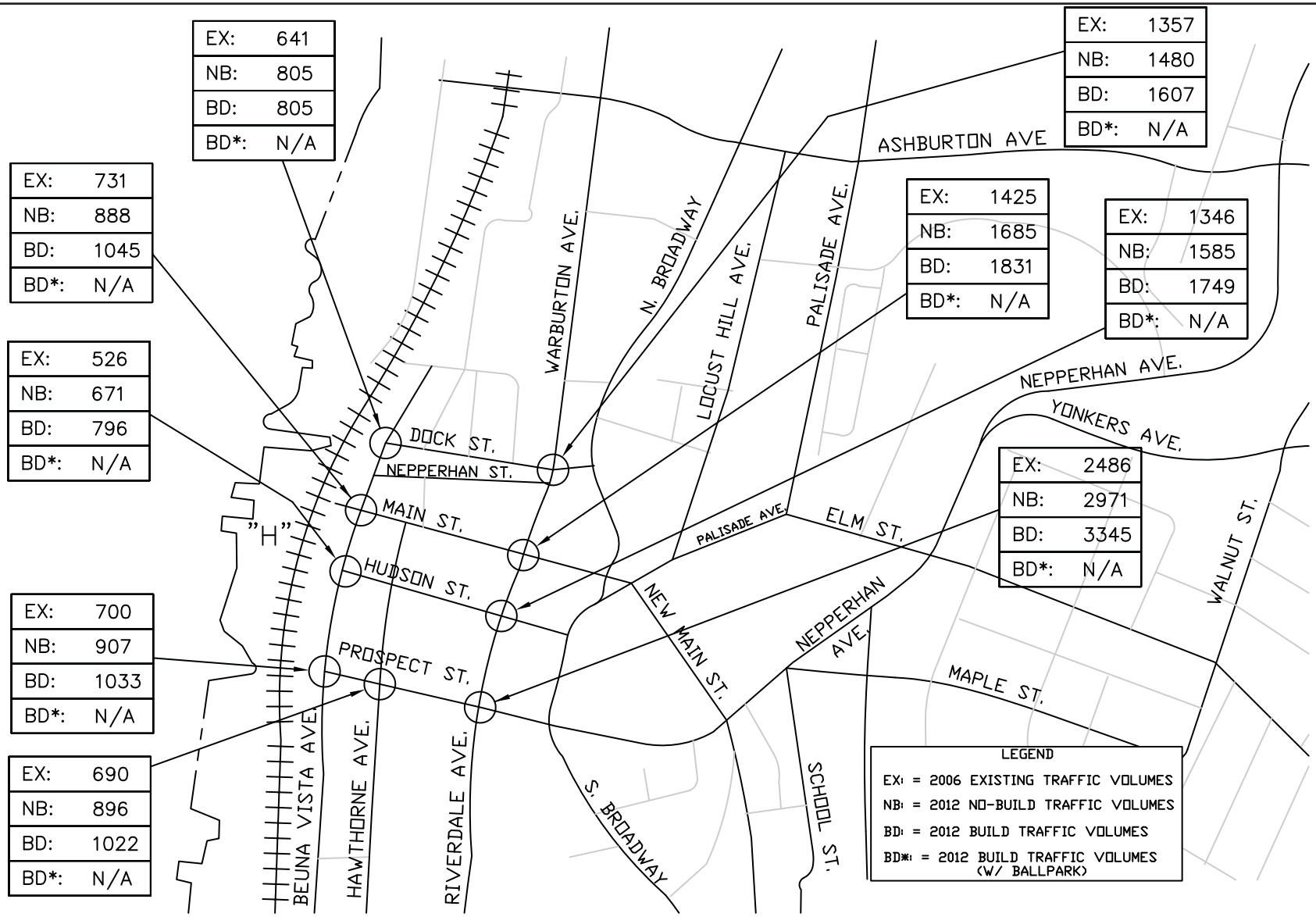
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-11

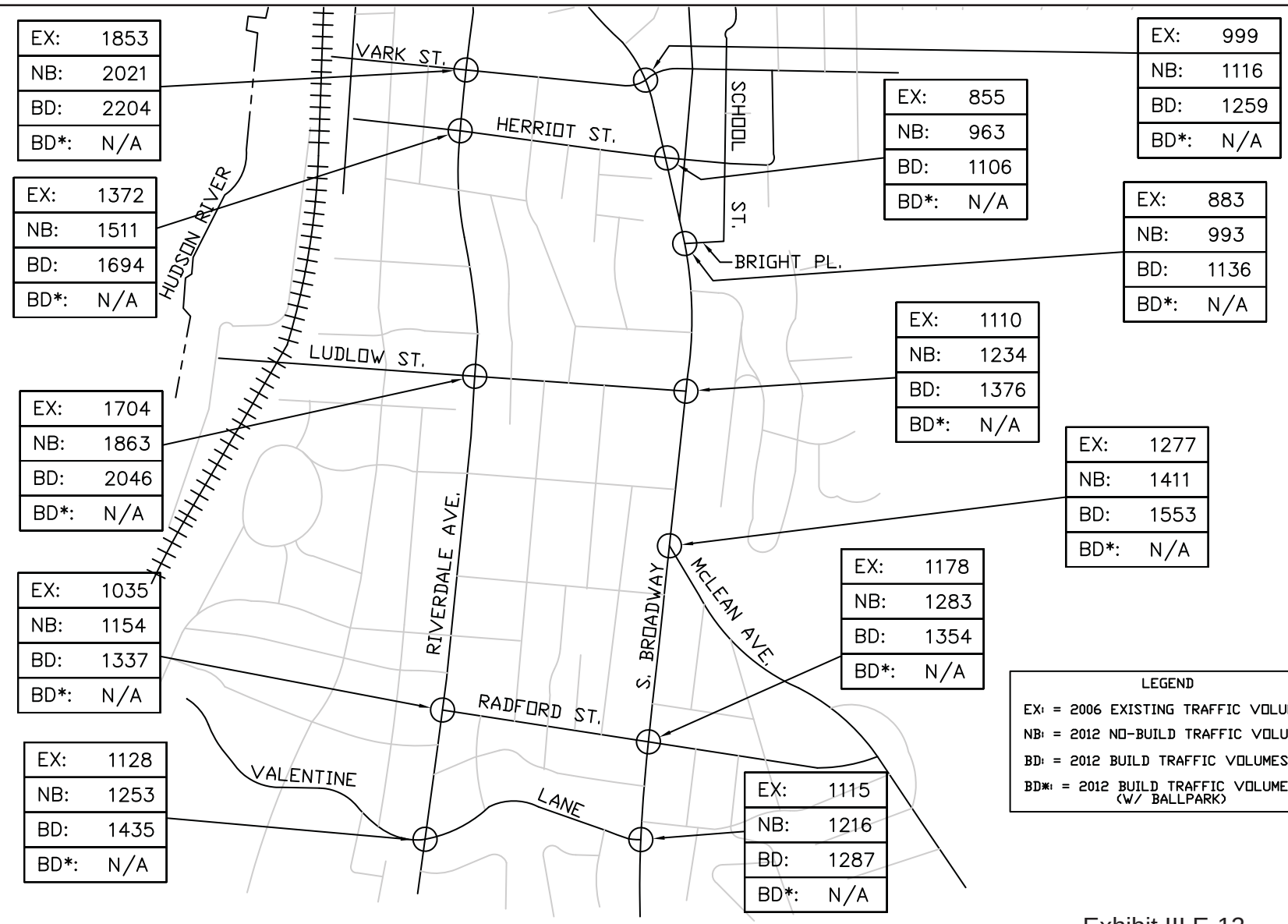
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-12

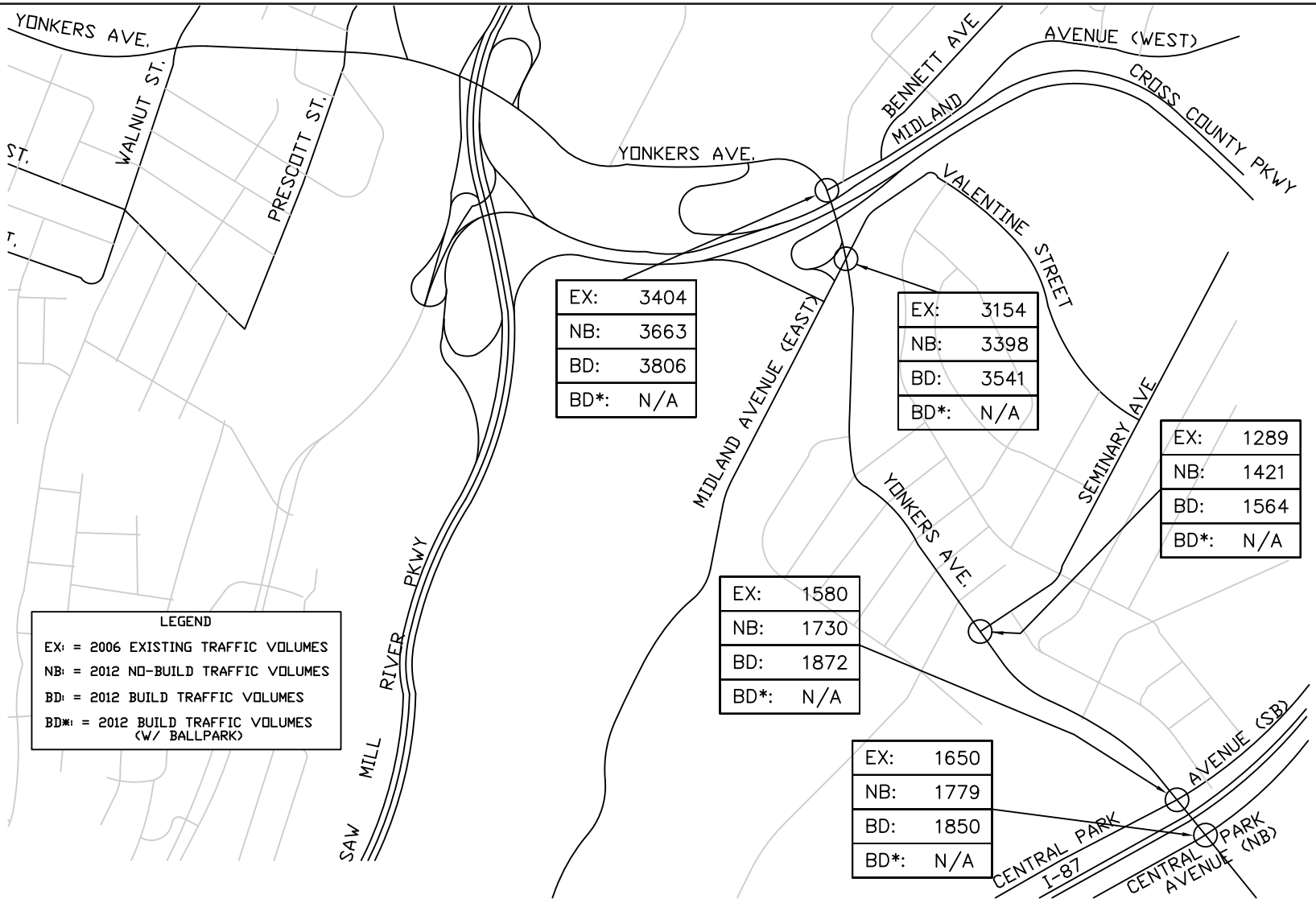
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-13

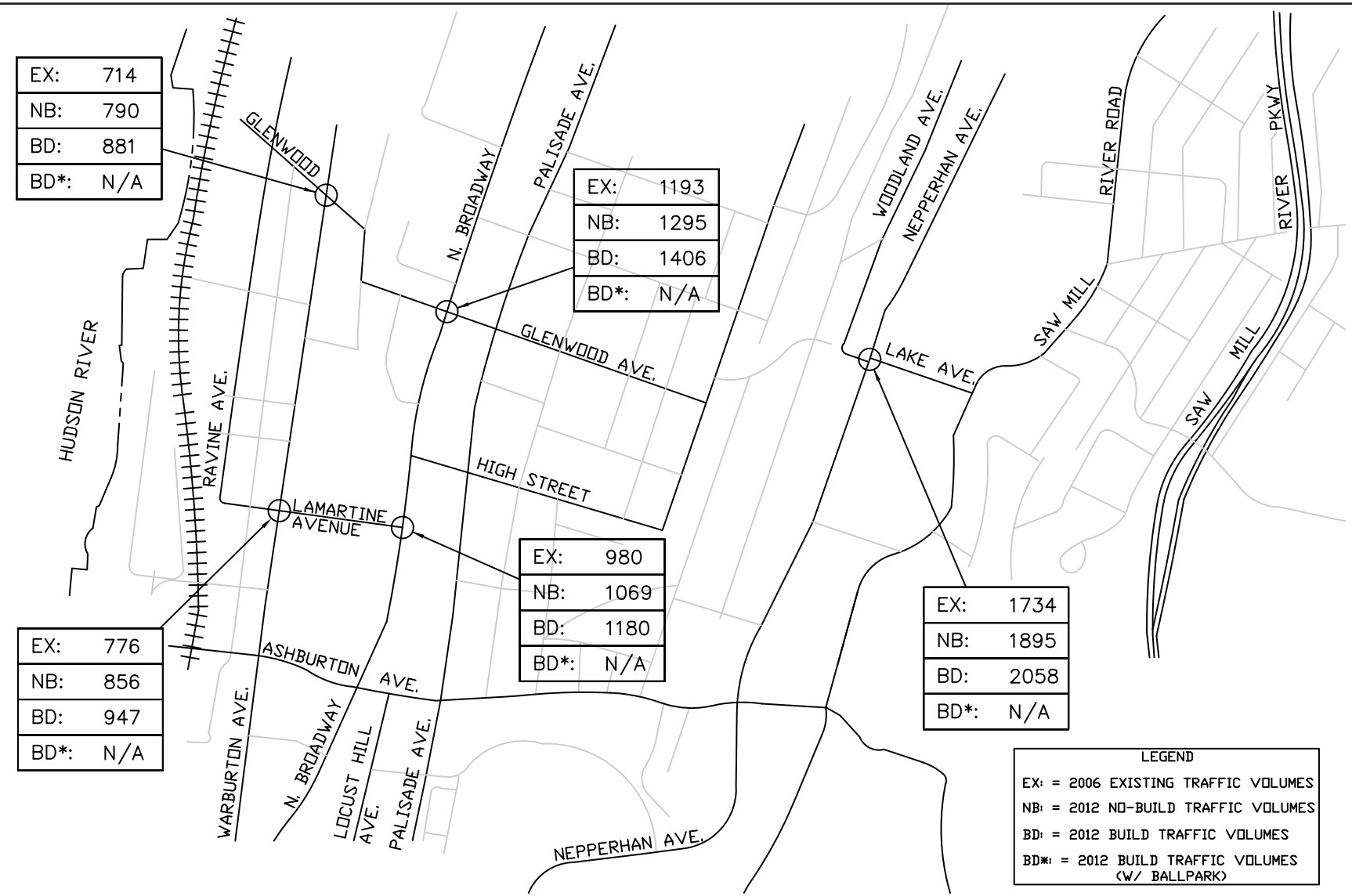
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-14

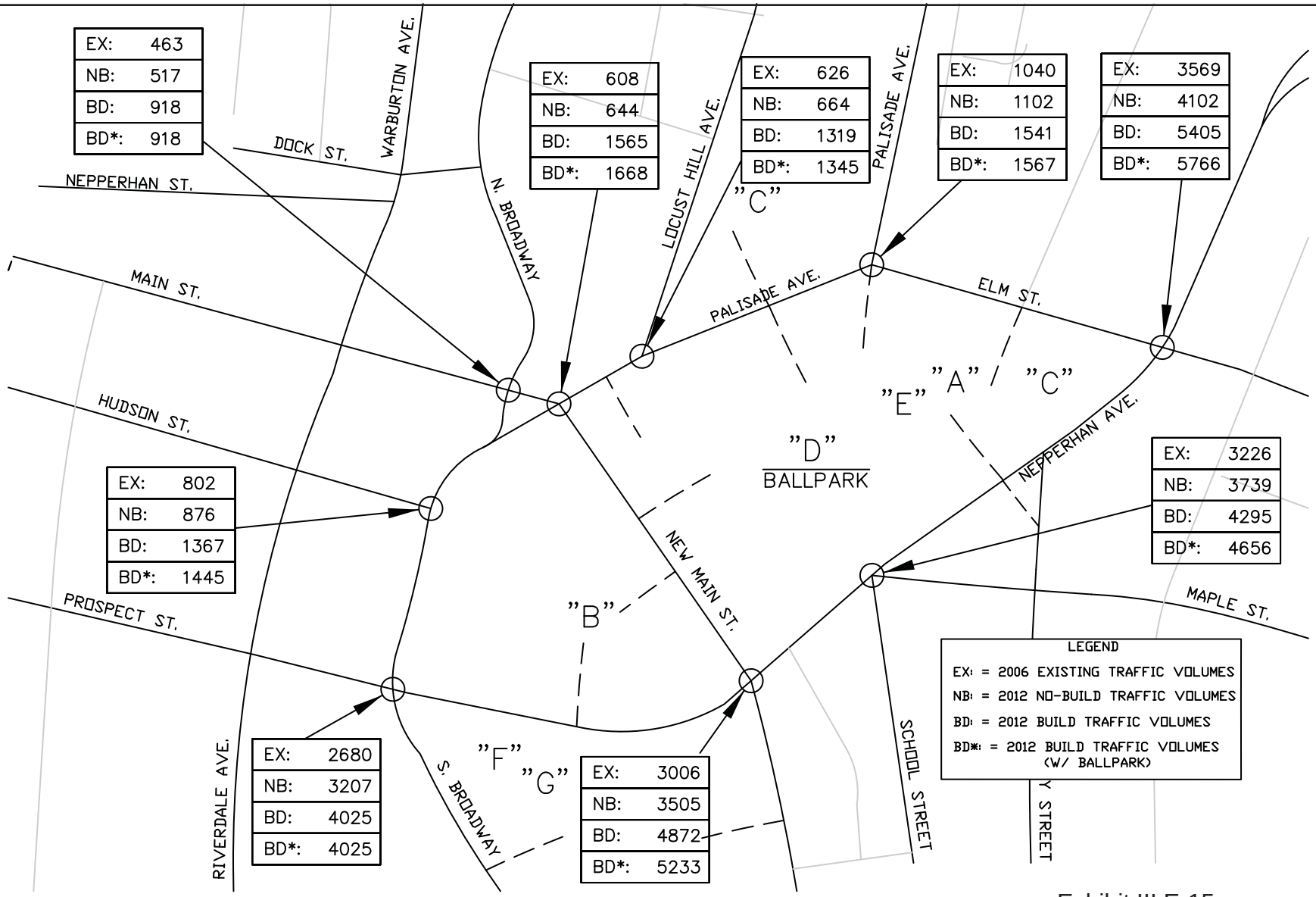
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-15

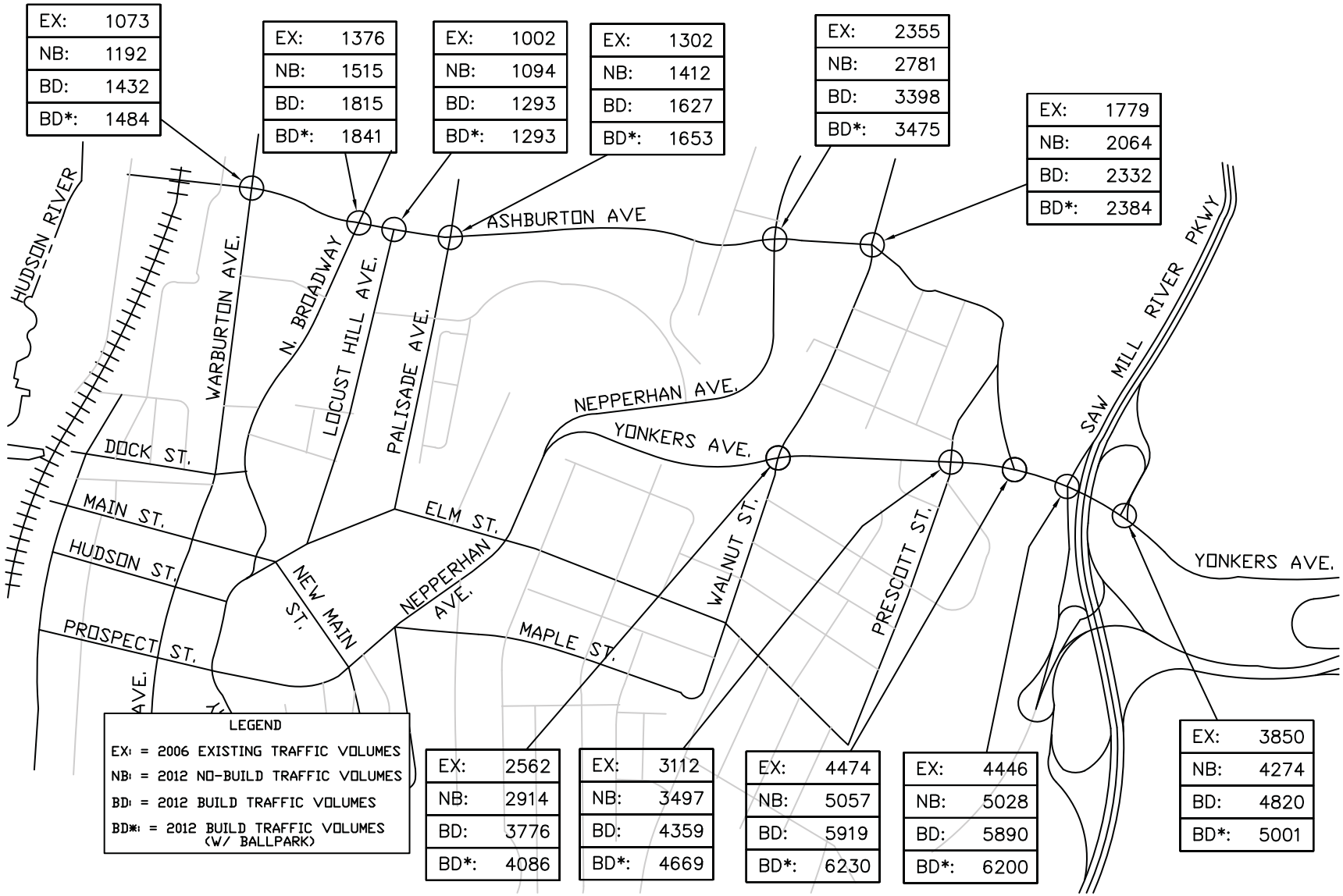
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-16

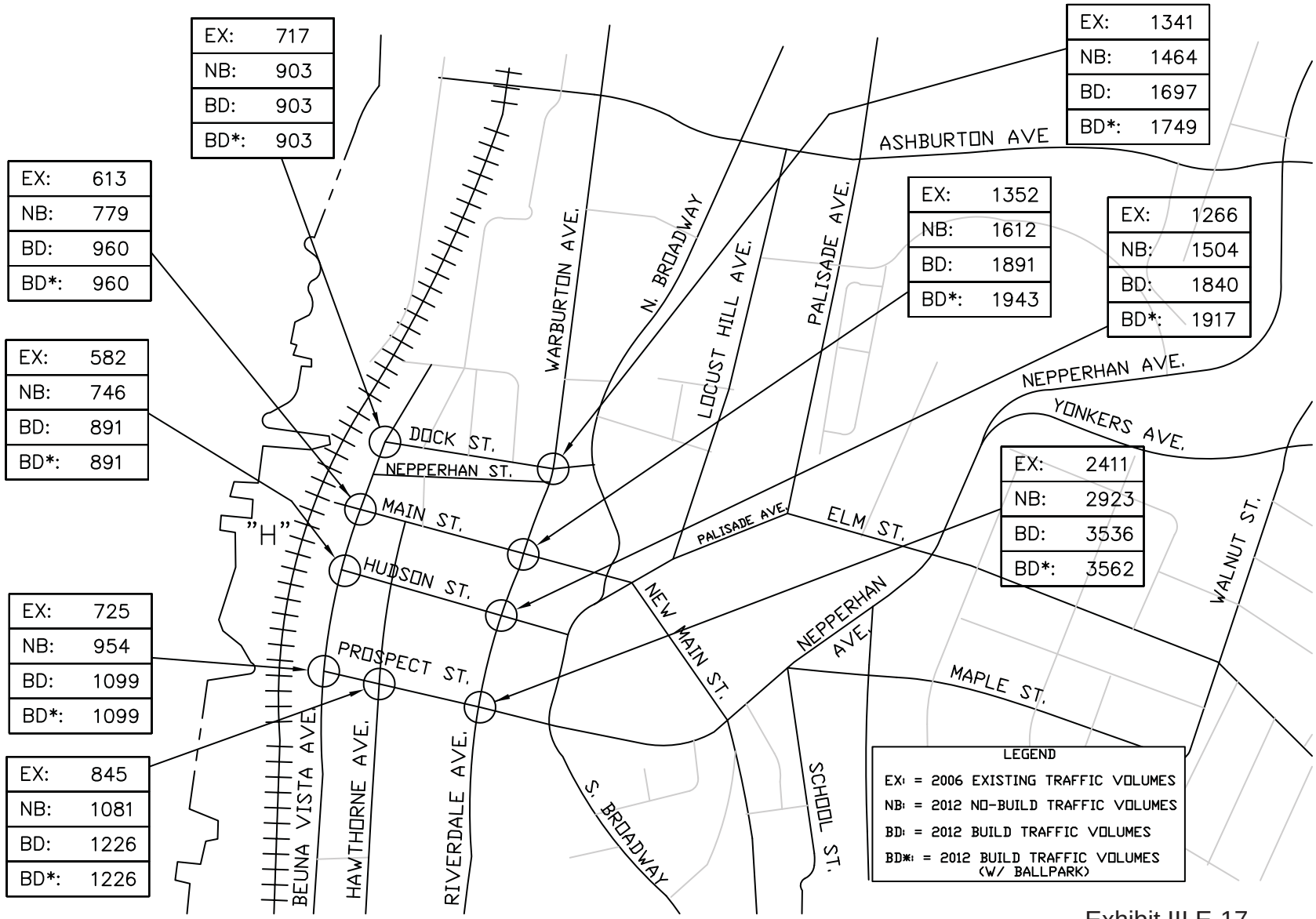
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-17

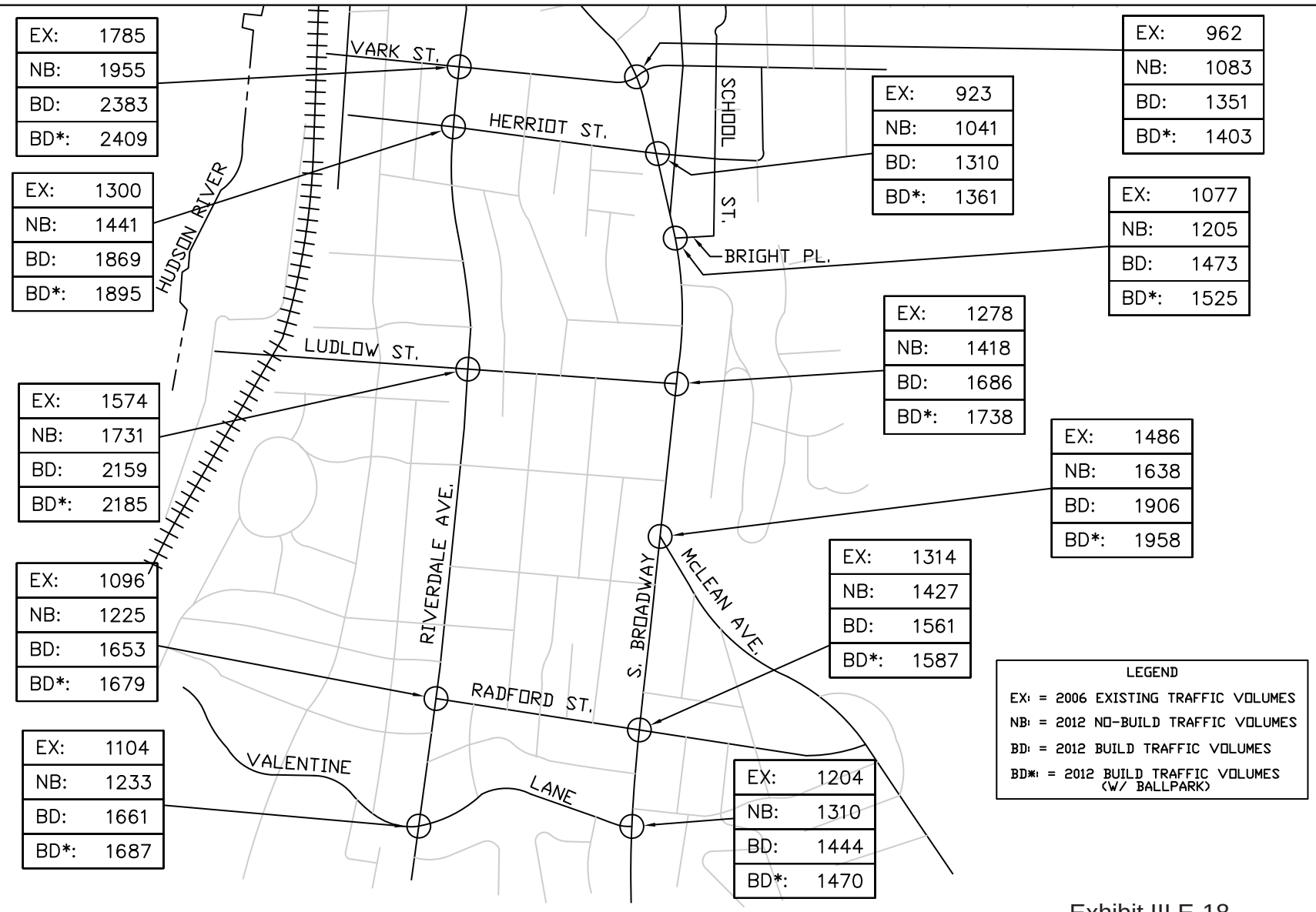
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-18

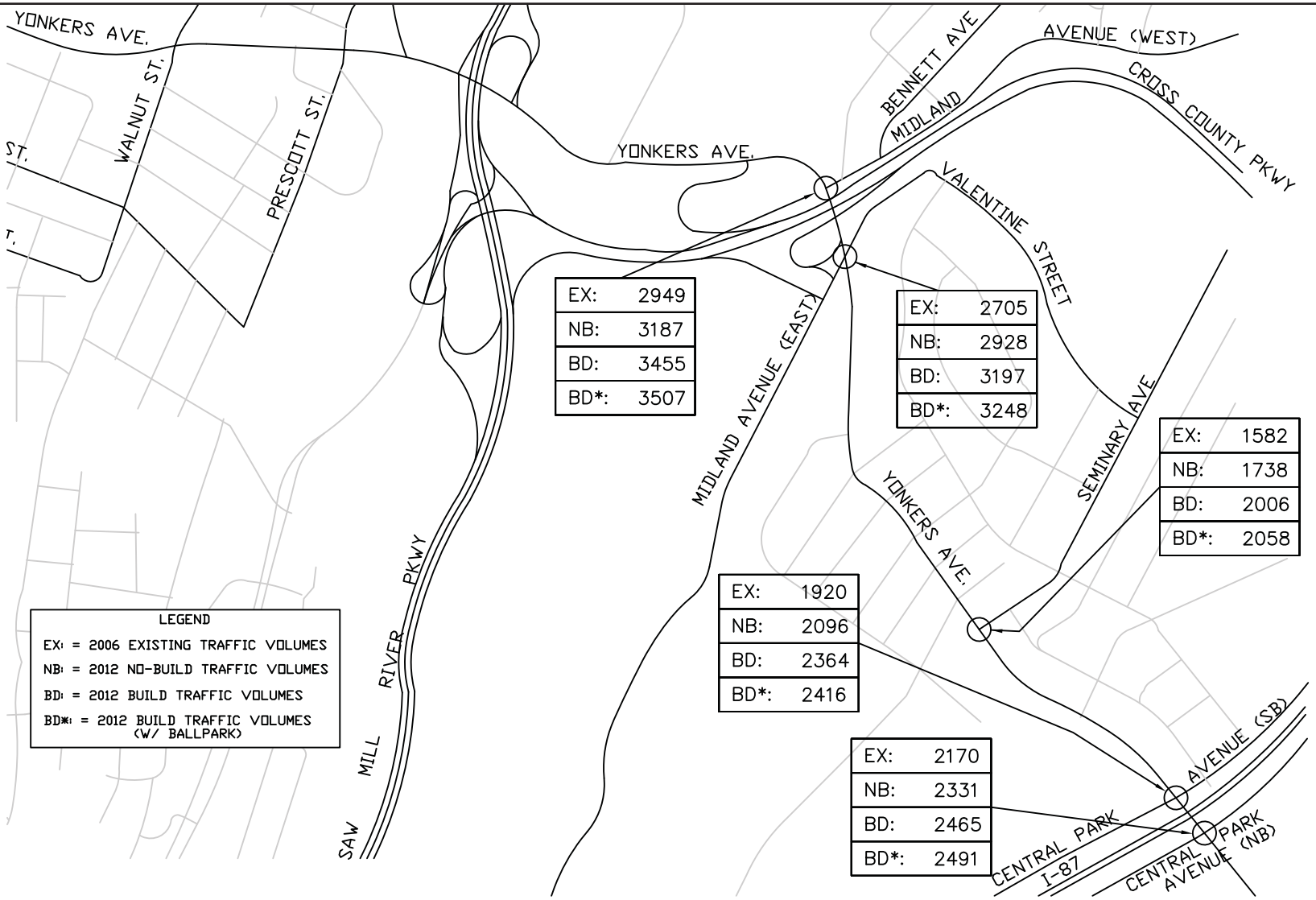
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-19

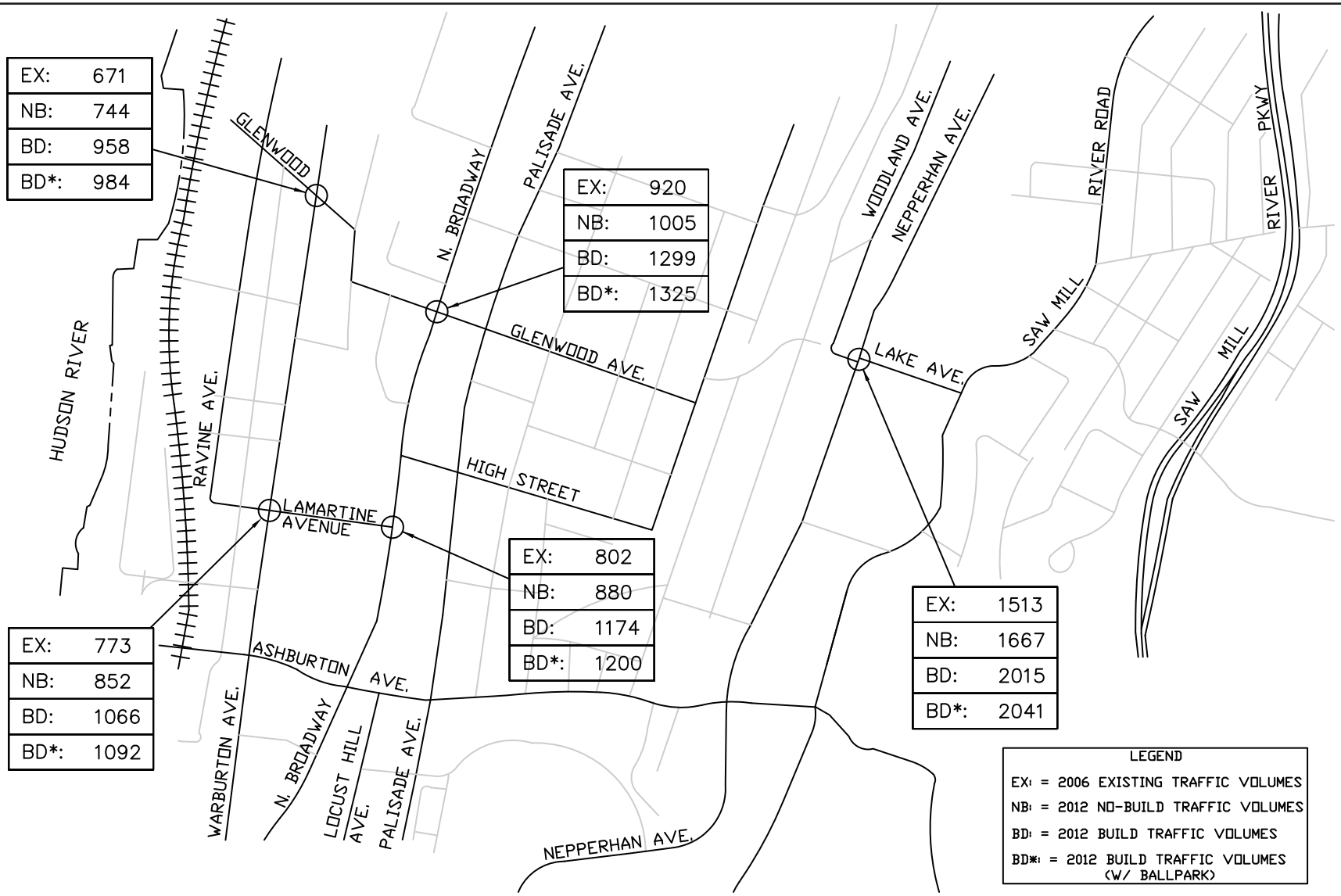
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-20

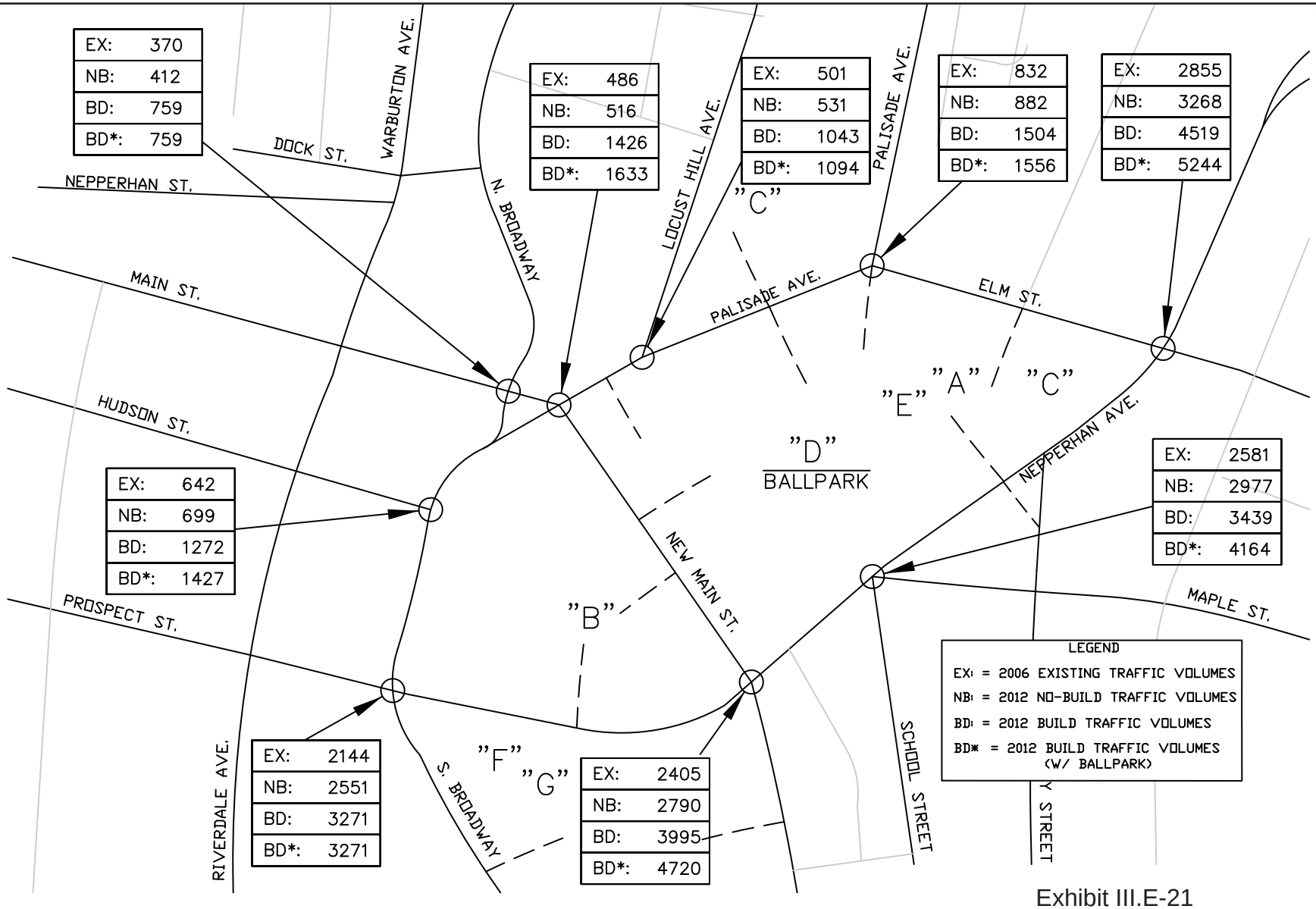
TOTAL INTERSECTION VOLUMES WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-21

TOTAL INTERSECTION VOLUMES SATURDAY PEAK HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

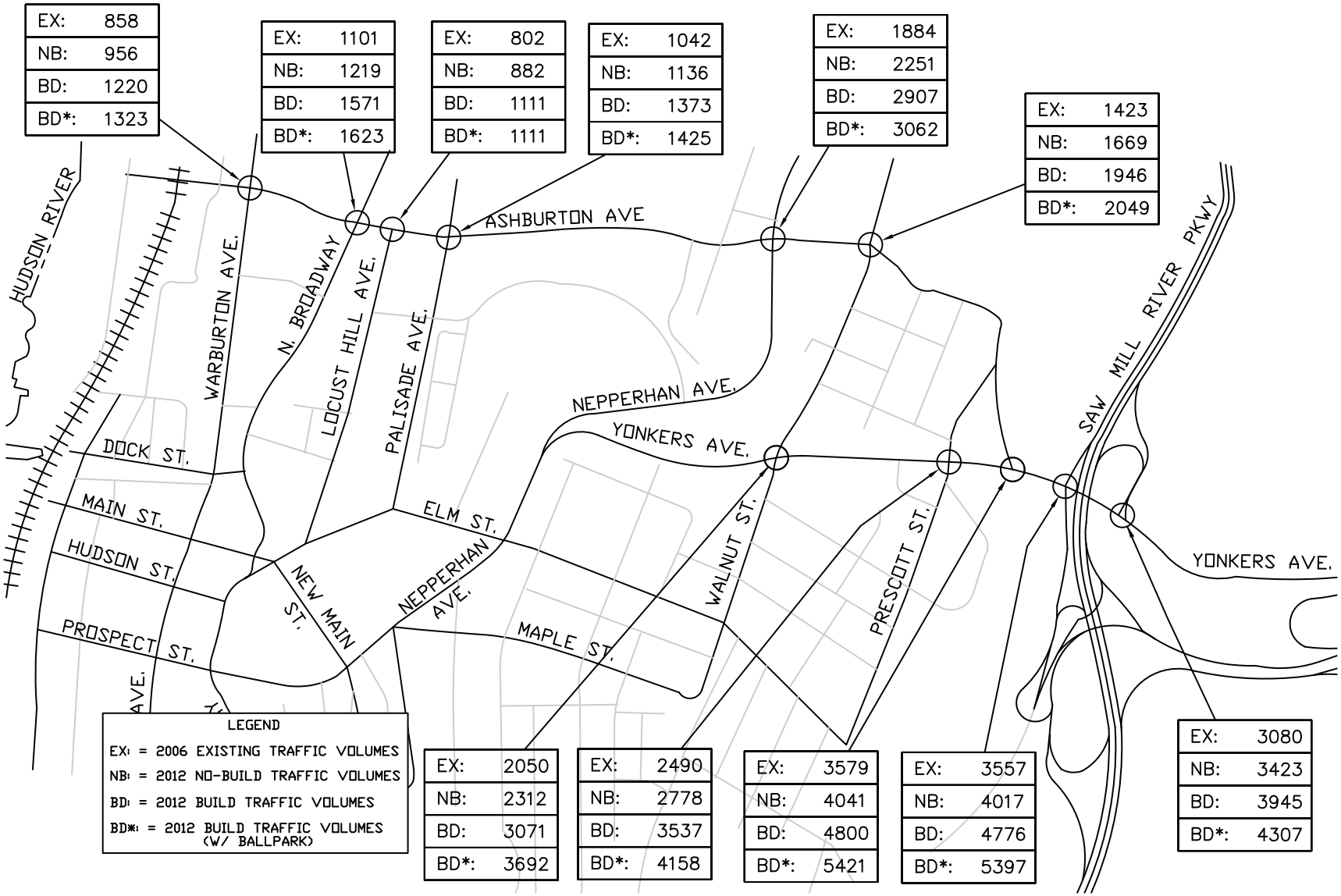


Exhibit III.E-22

TOTAL INTERSECTION VOLUMES SATURDAY PEAK HOUR

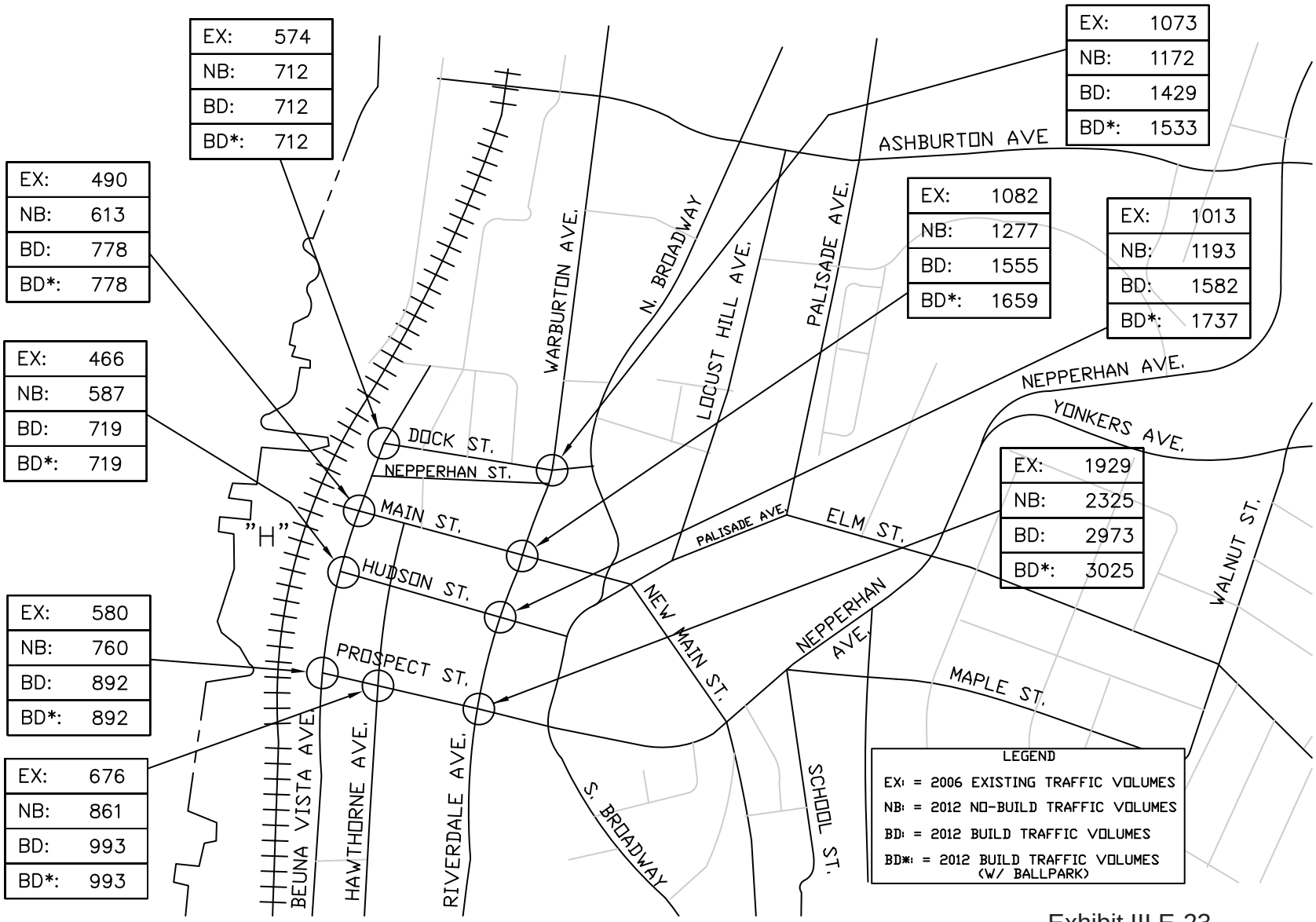
NOTE: LINE DIAGRAM NOT TO SCALE

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-23

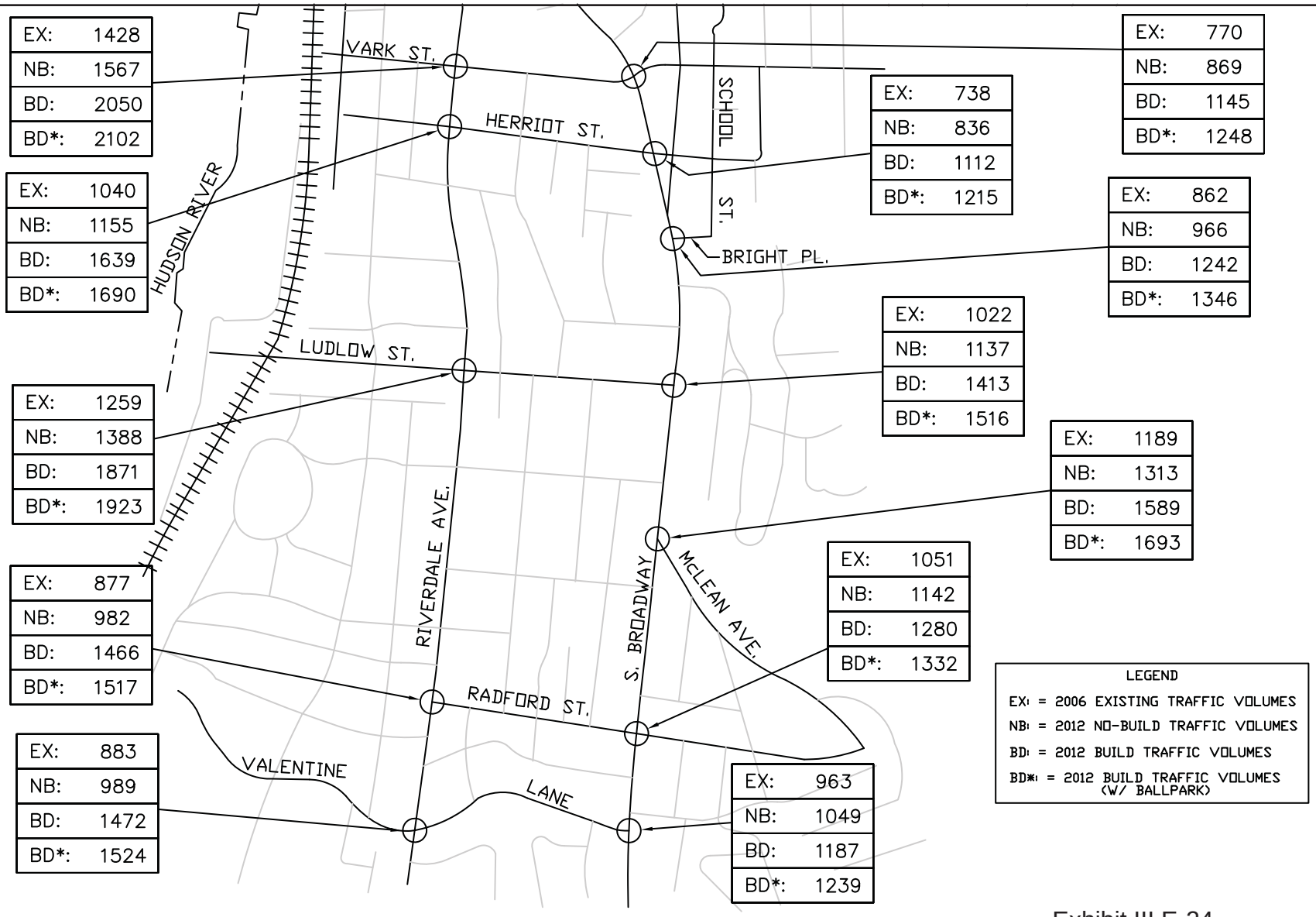
TOTAL INTERSECTION VOLUMES SATURDAY PEAK HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-24

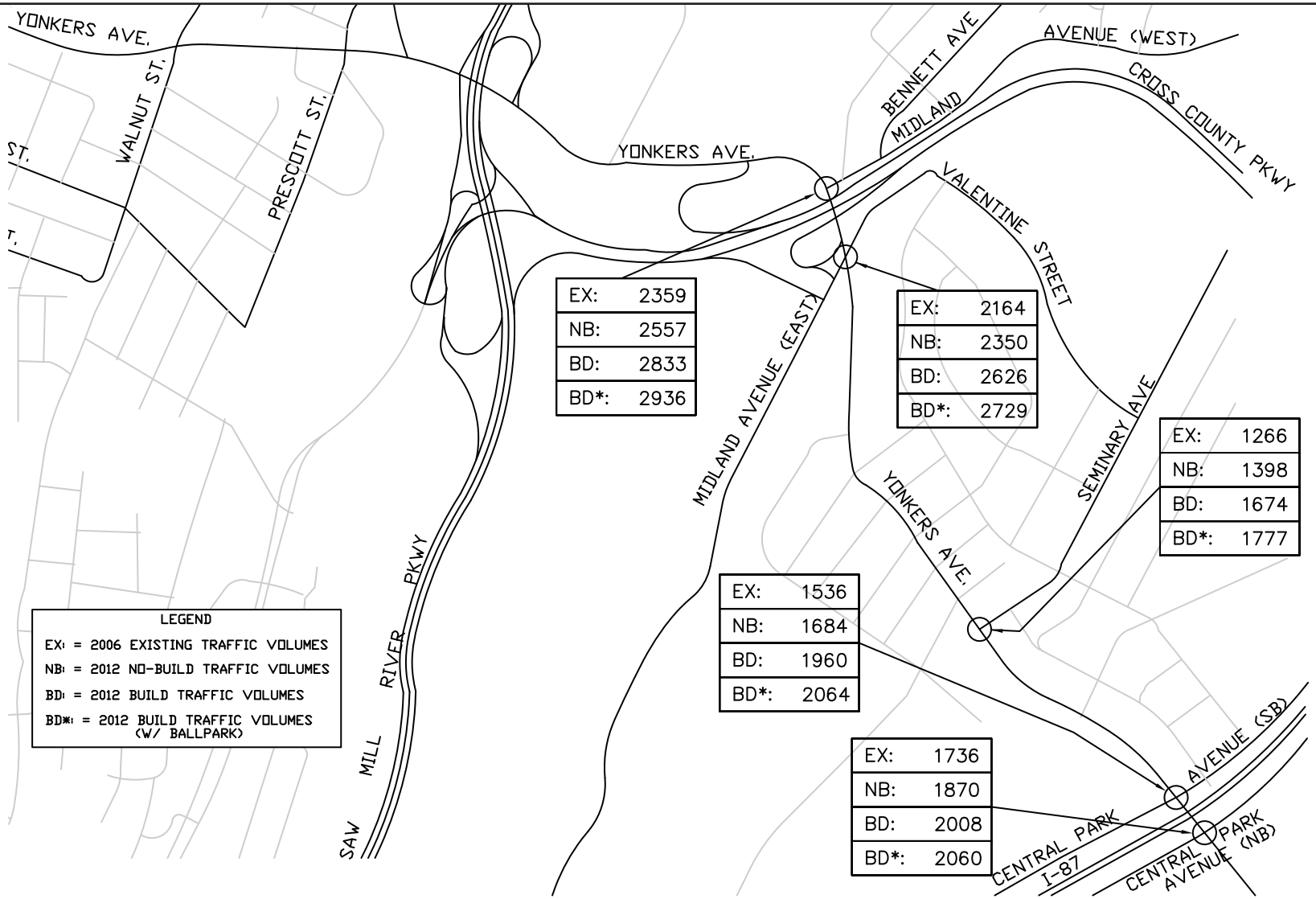
TOTAL INTERSECTION VOLUMES SATURDAY PEAK HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-25

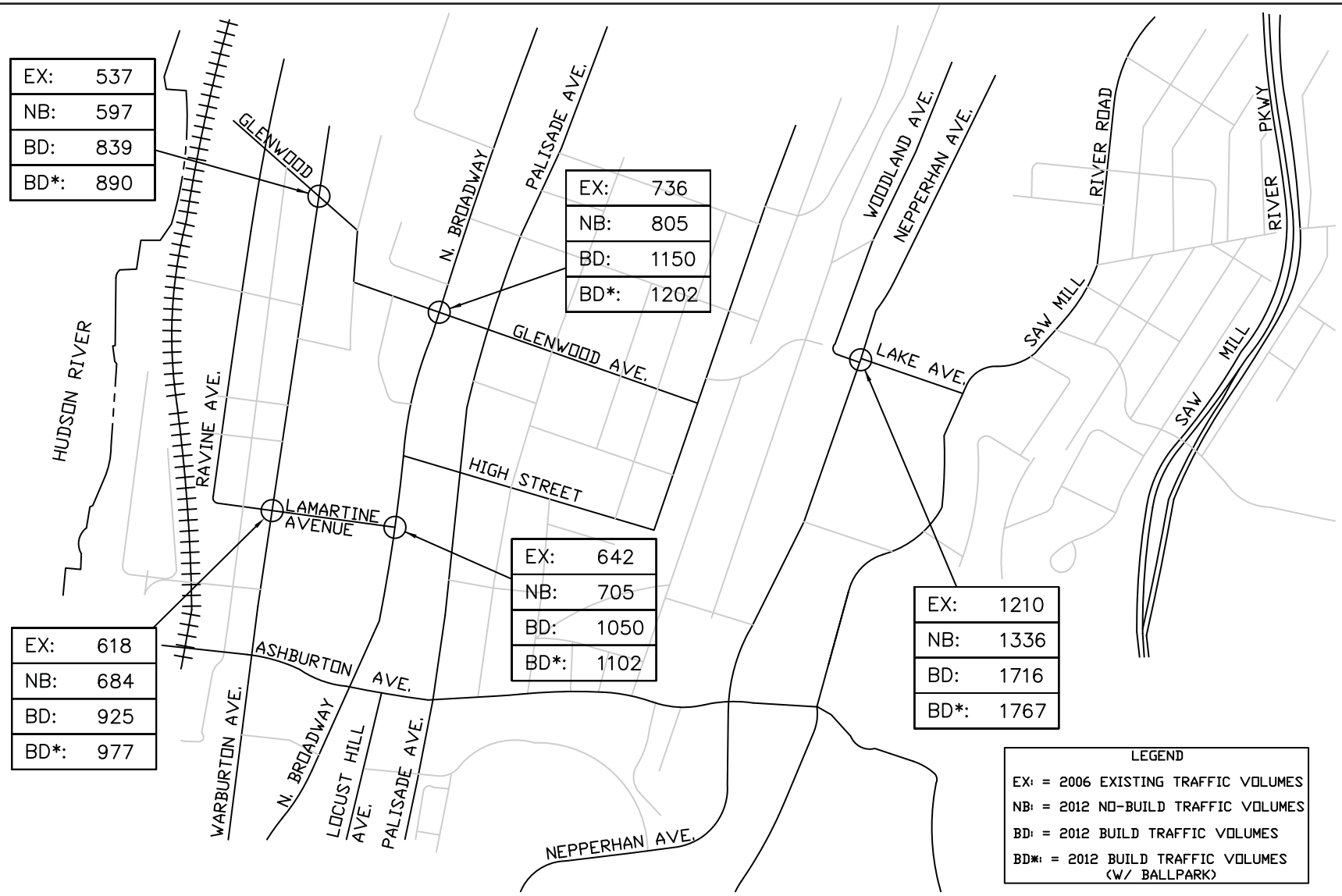
TOTAL INTERSECTION VOLUMES SATURDAY PEAK HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-26

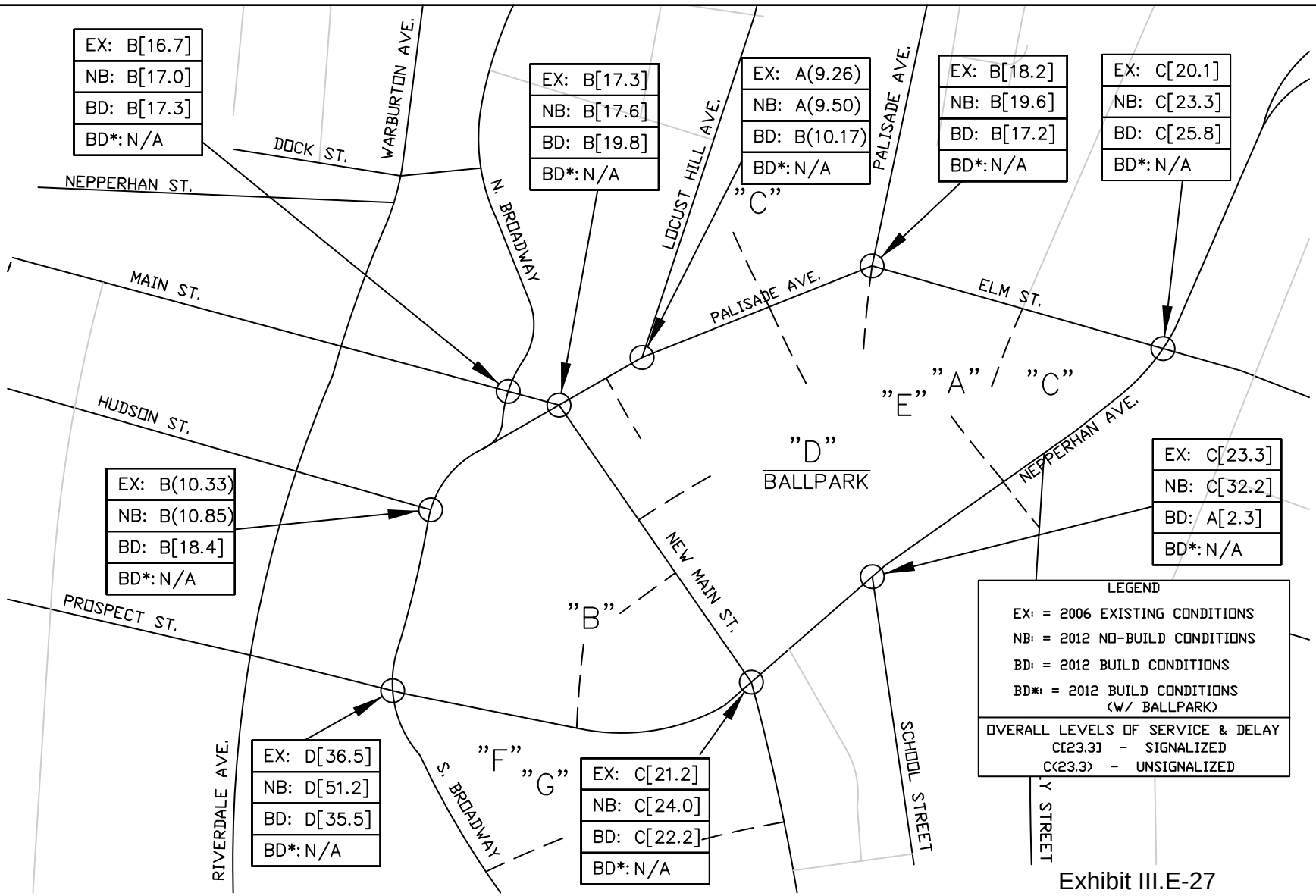
TOTAL INTERSECTION VOLUMES SATURDAY PEAK HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-27

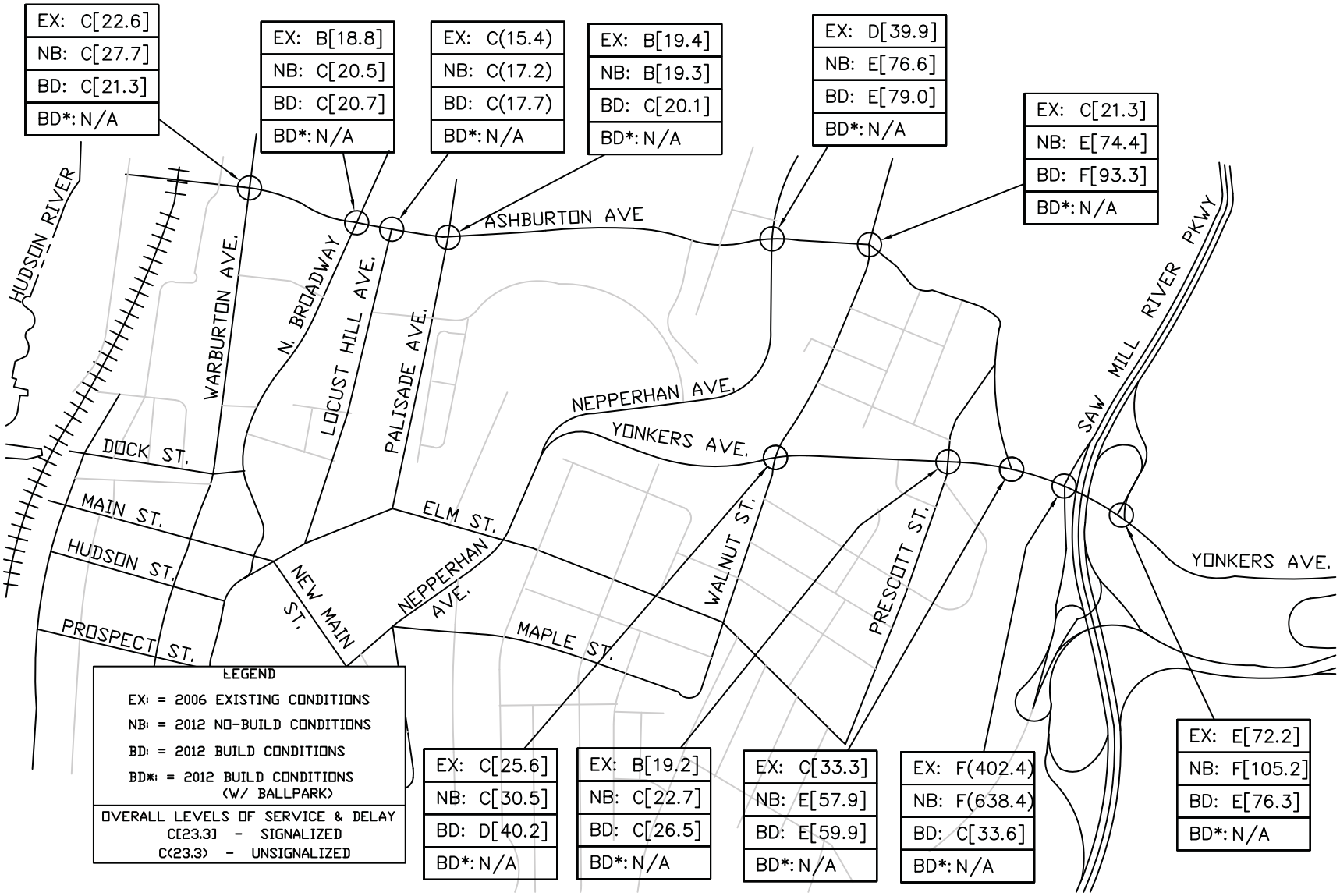
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-28

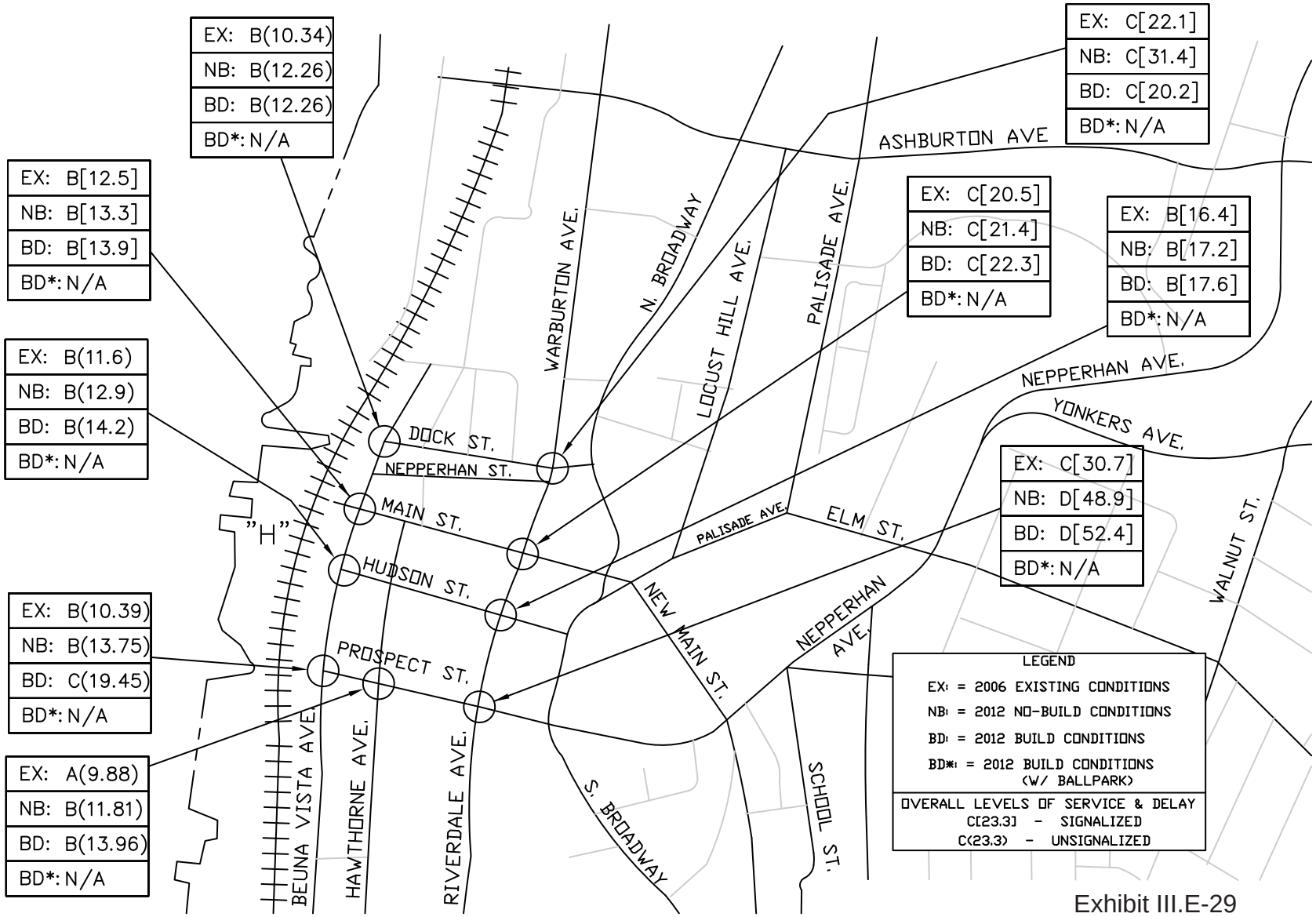
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-29

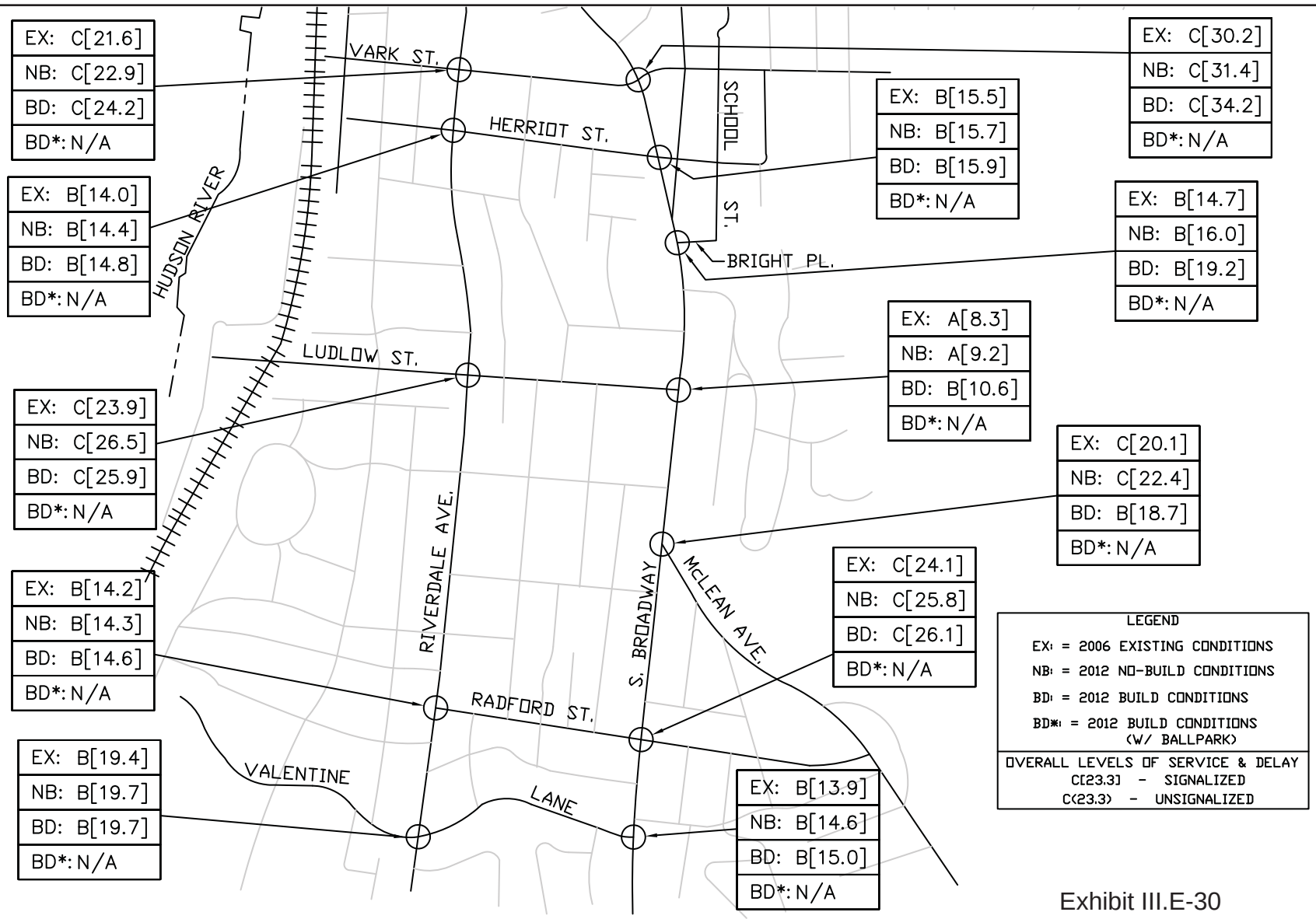
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-30

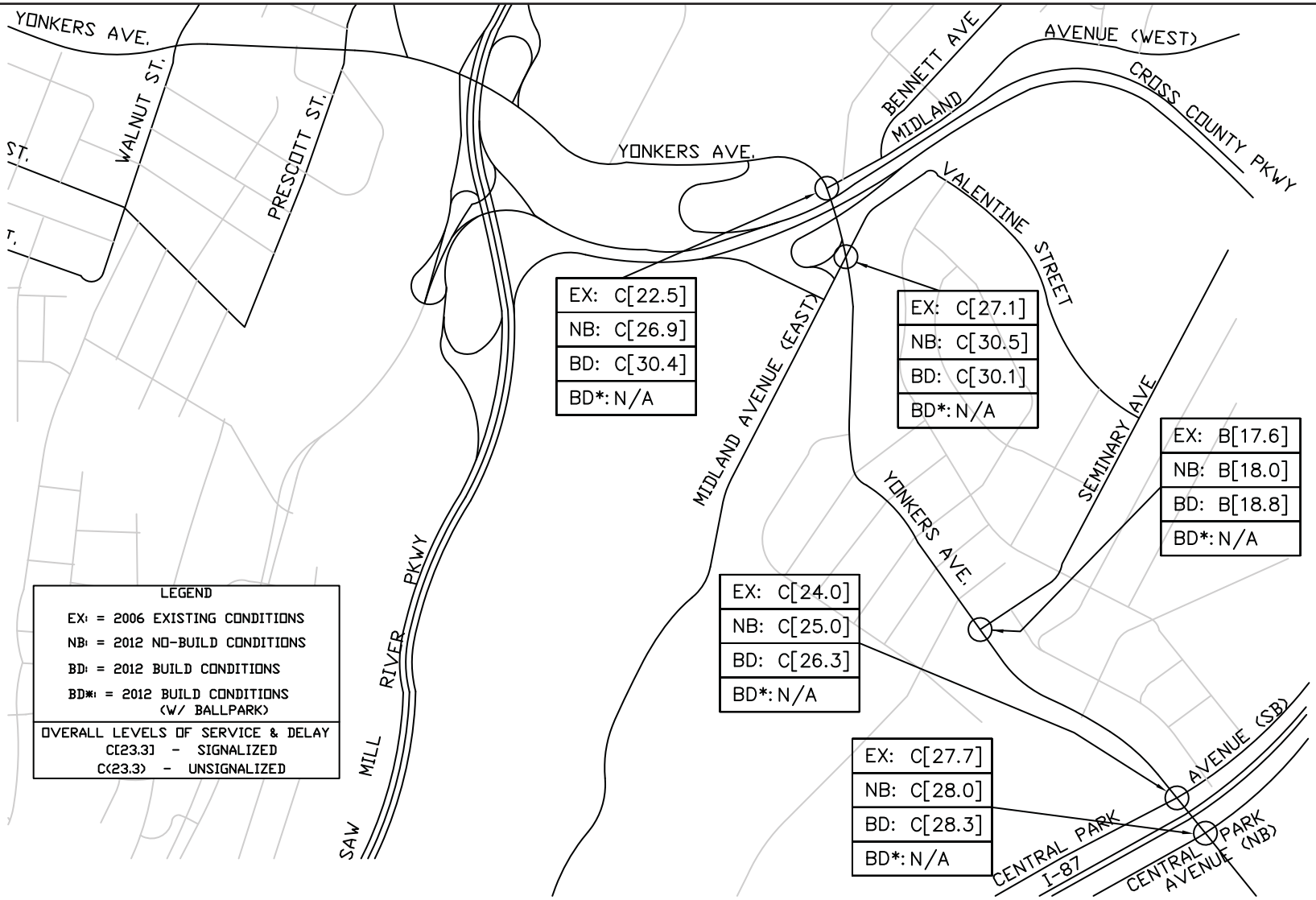
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-31

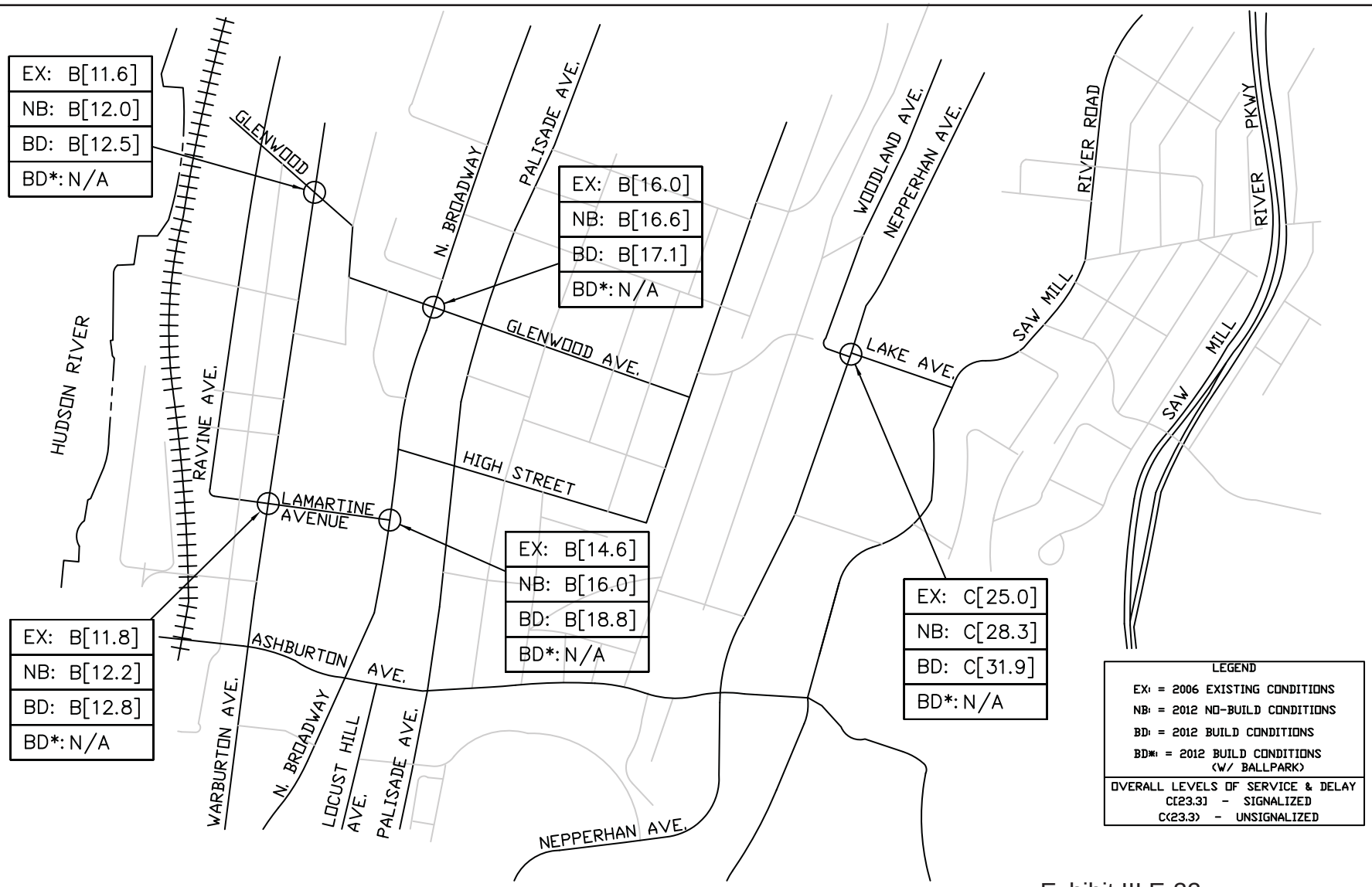
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-32

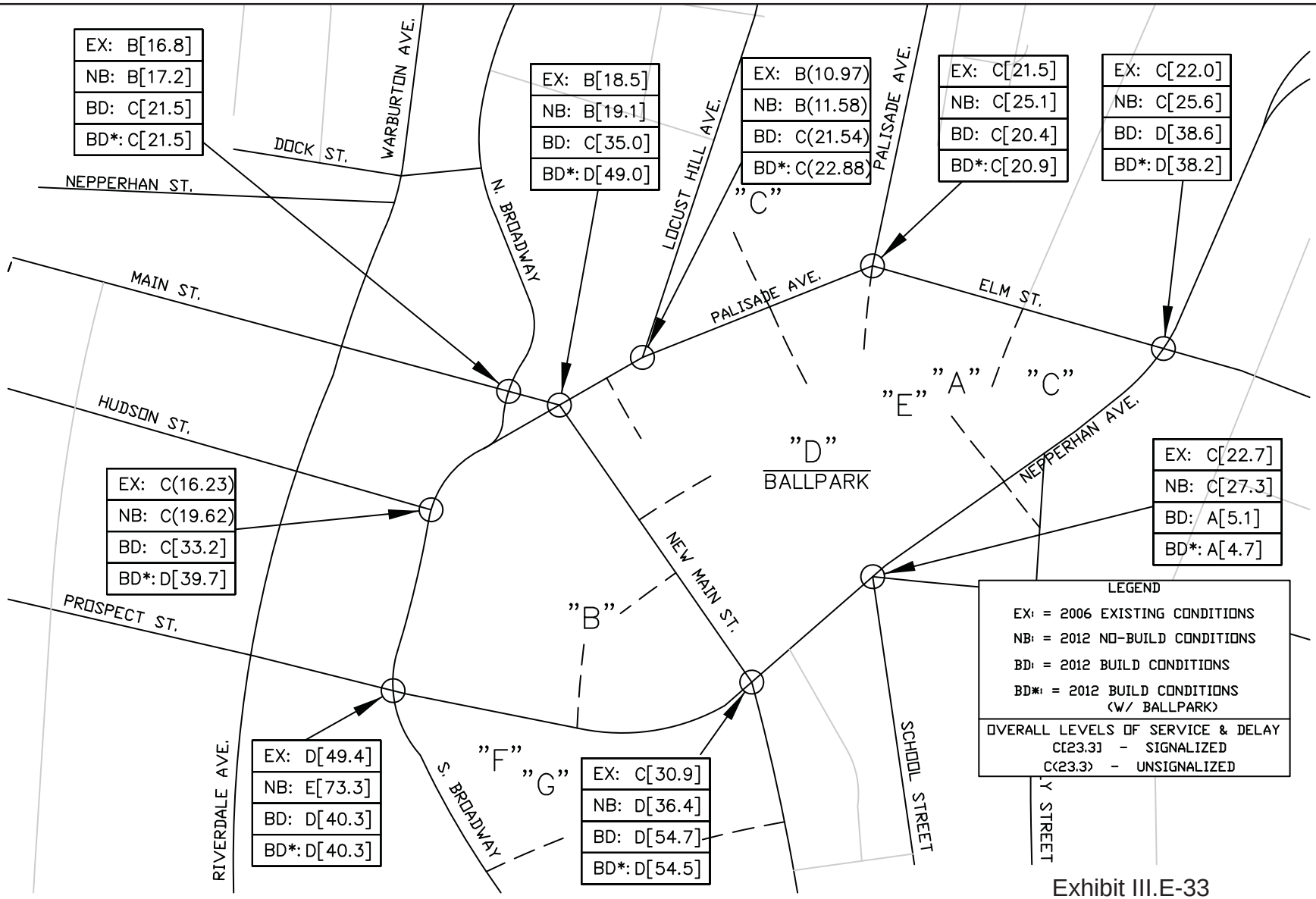
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK AM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-33

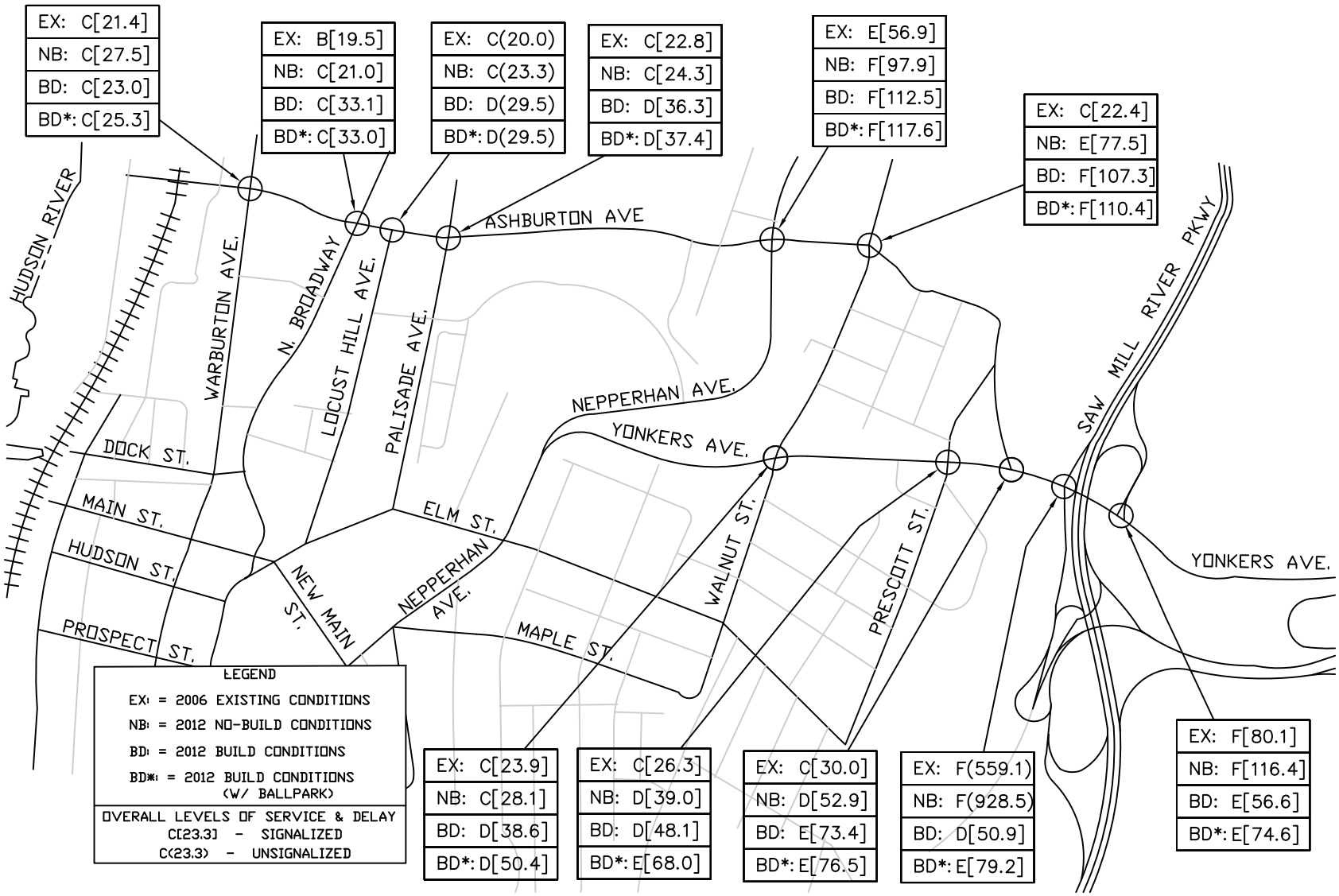
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-34

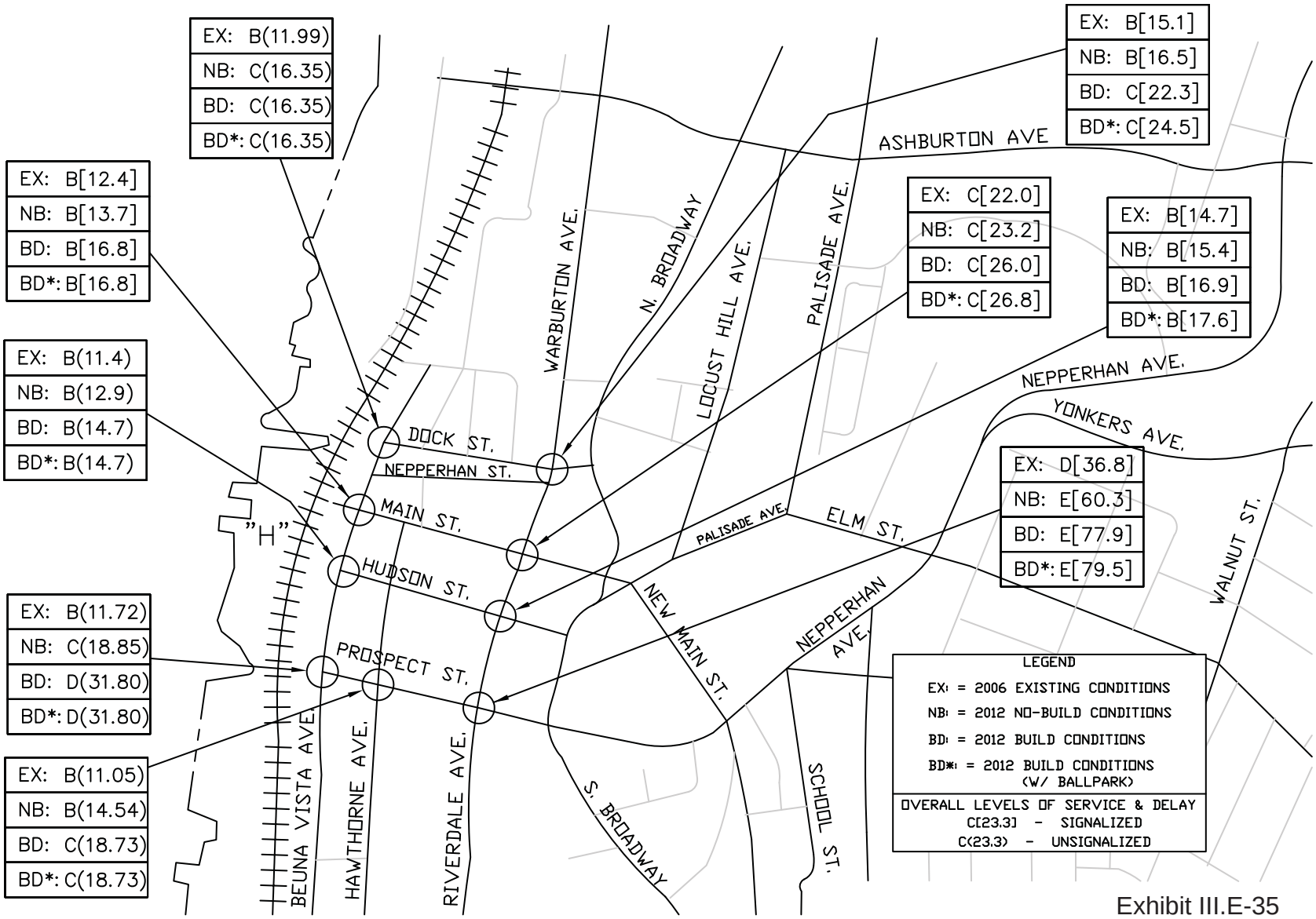
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-35

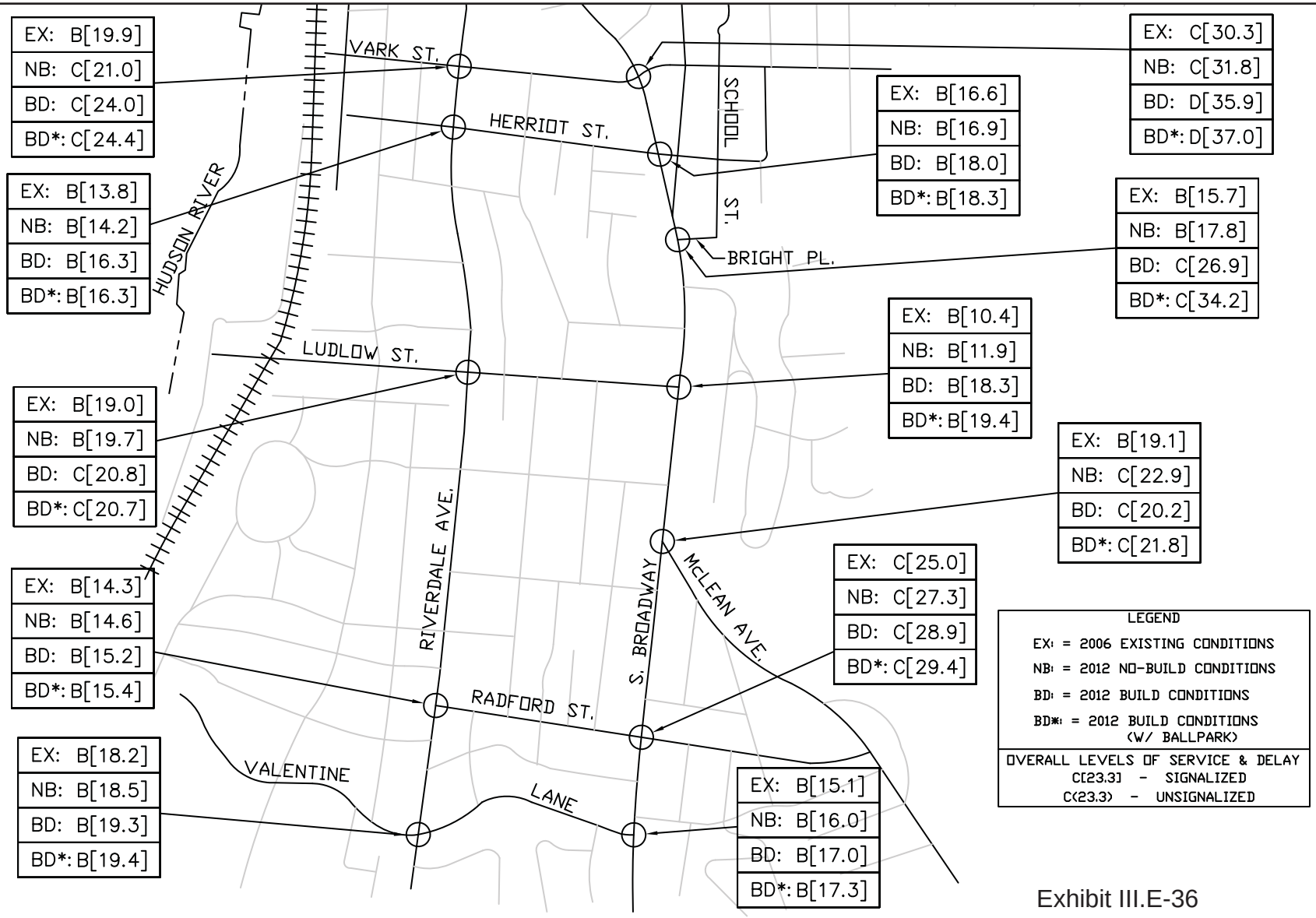
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-36

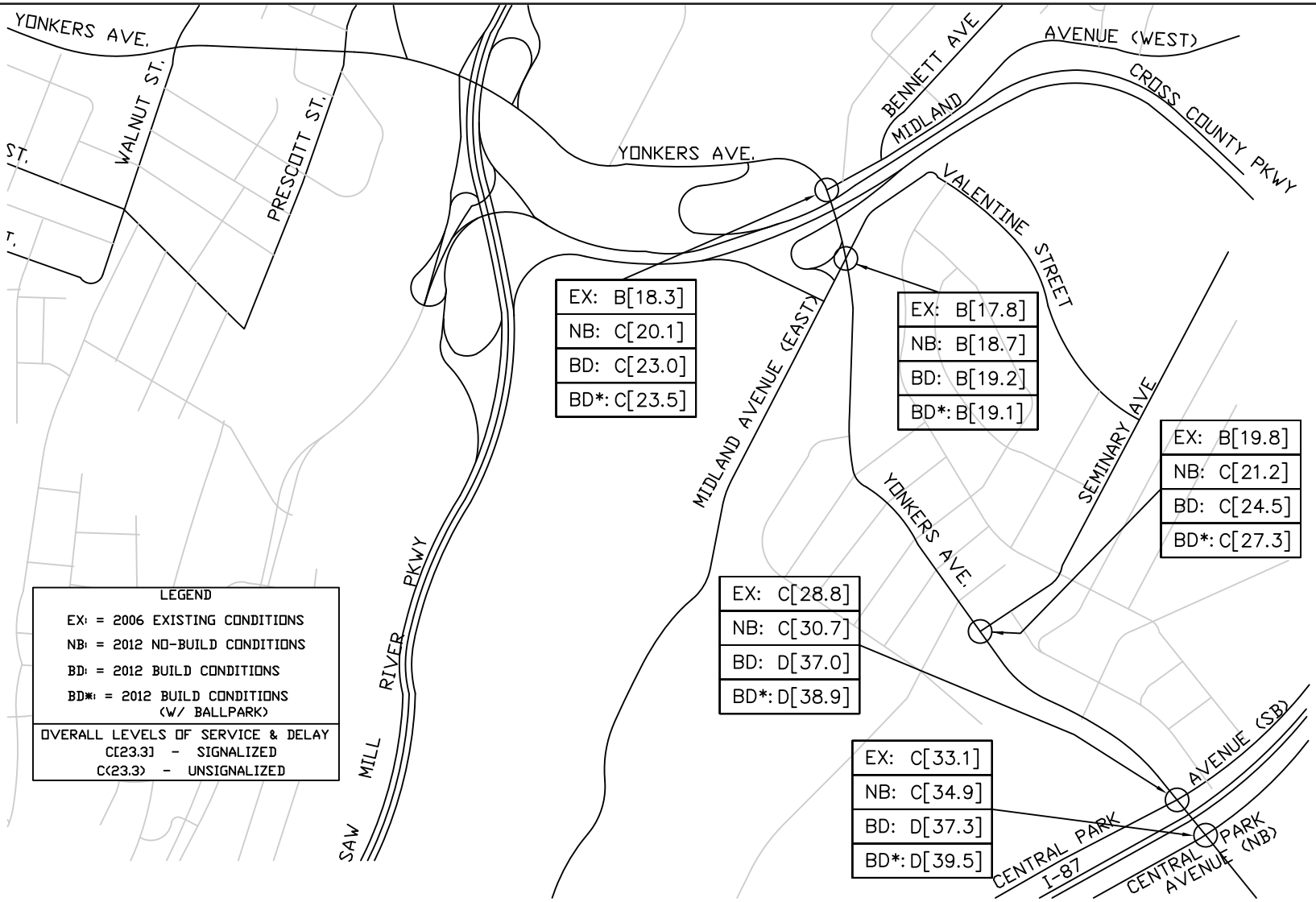
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-37

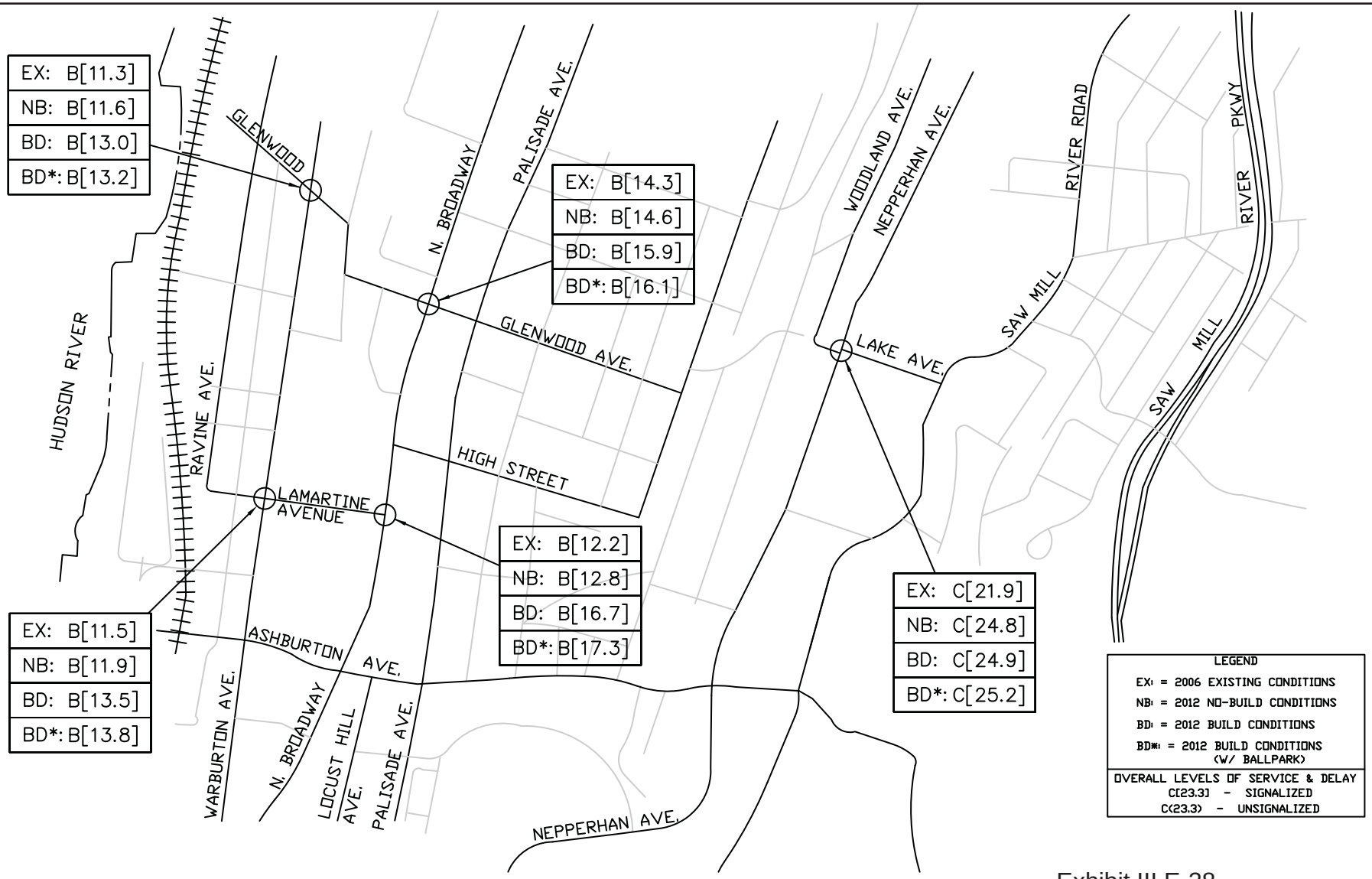
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-38

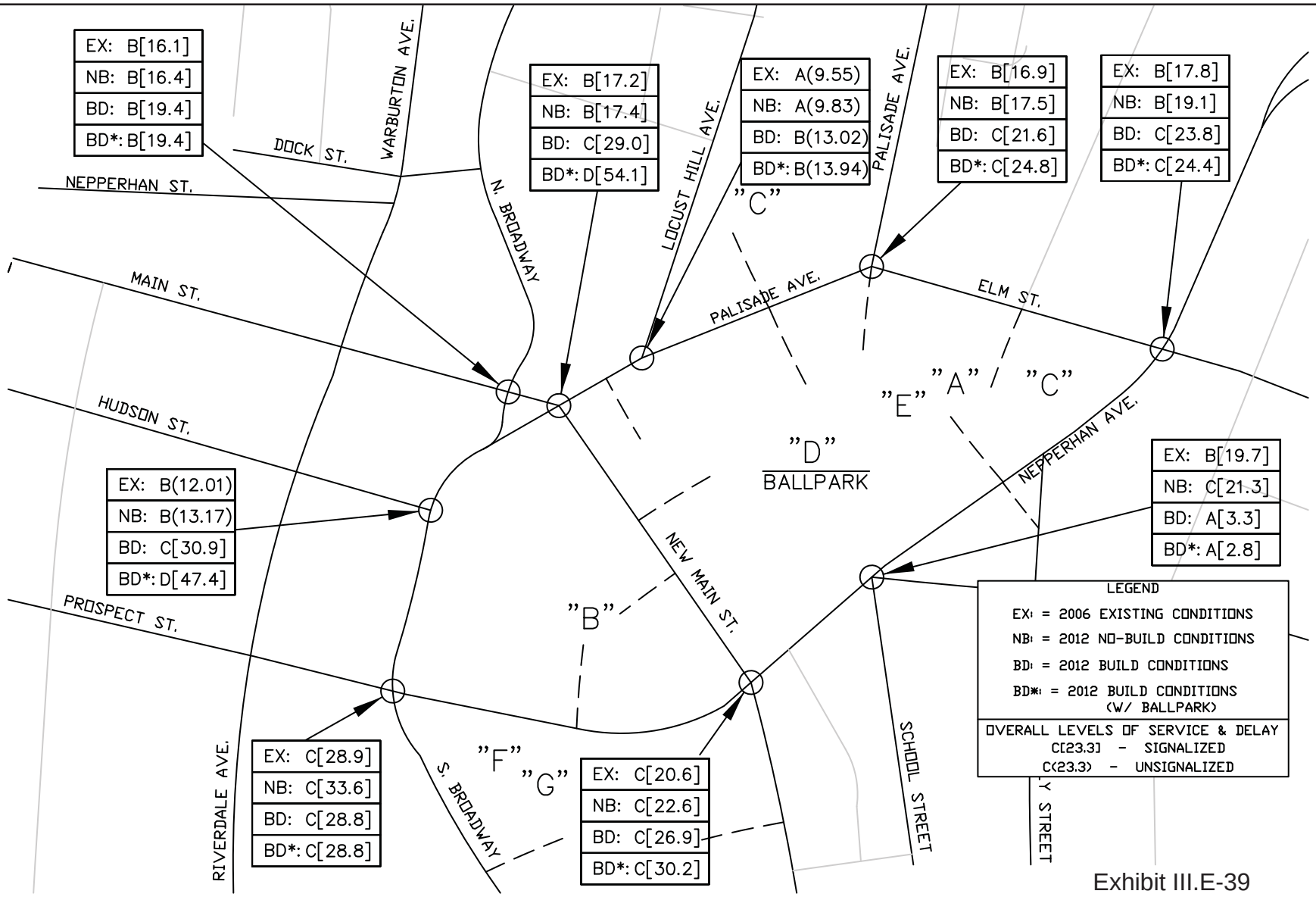
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS WEEKDAY PEAK PM HIGHWAY HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-39

OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS SATURDAY PEAK HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

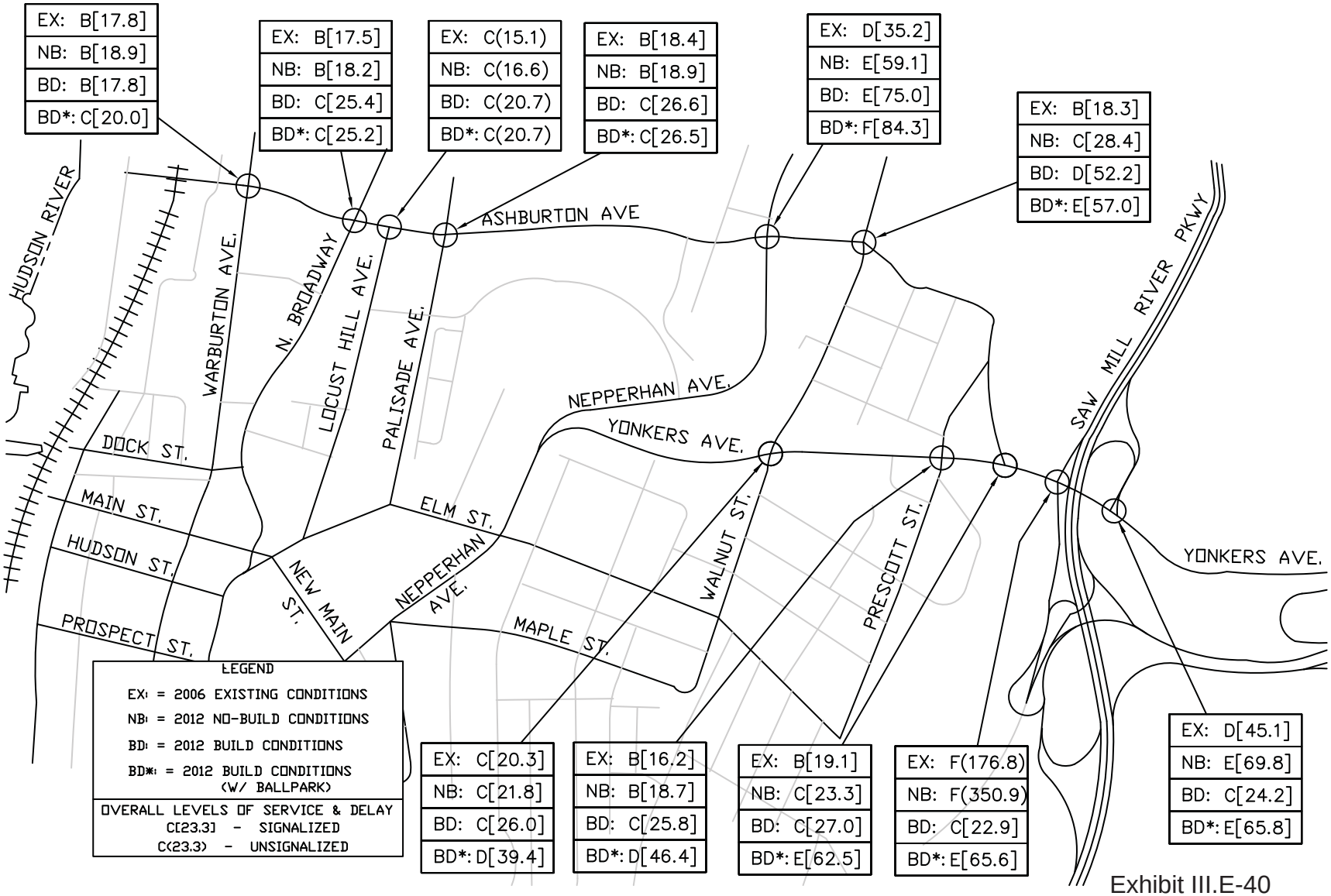


Exhibit III.E-40

OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS SATURDAY PEAK HOUR

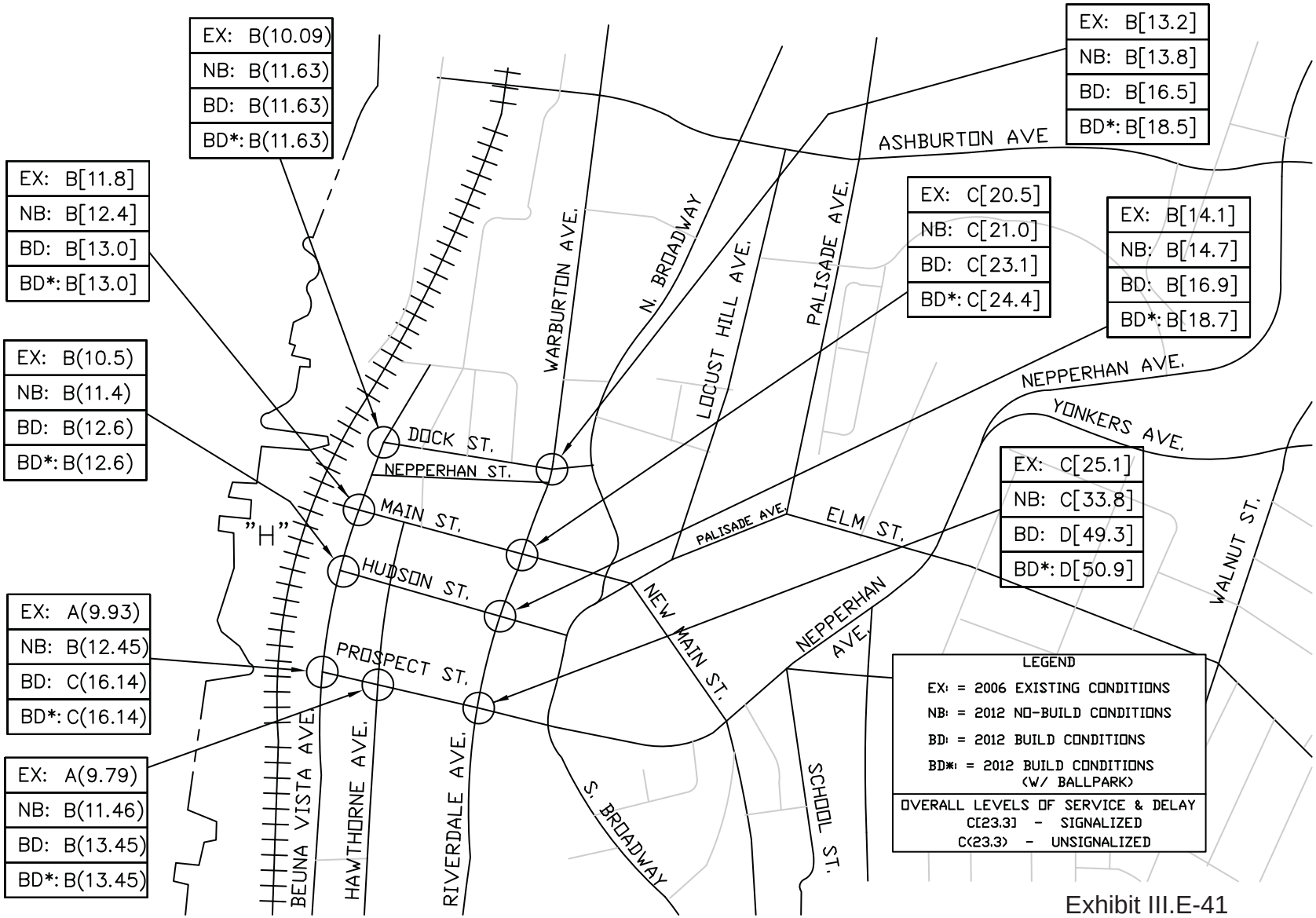
NOTE: LINE DIAGRAM NOT TO SCALE

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-41

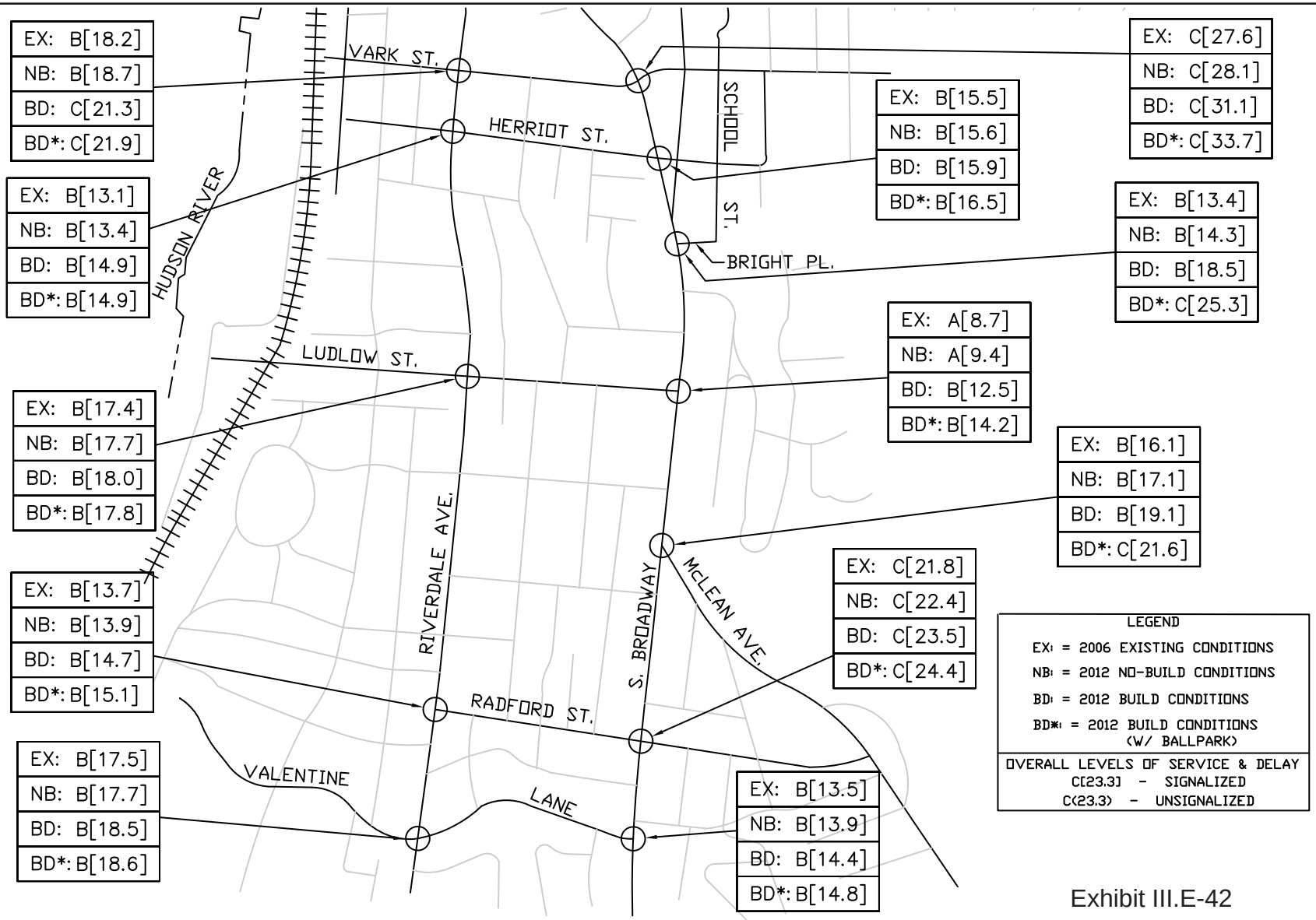
OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS SATURDAY PEAK HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-42

OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS SATURDAY PEAK HOUR

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

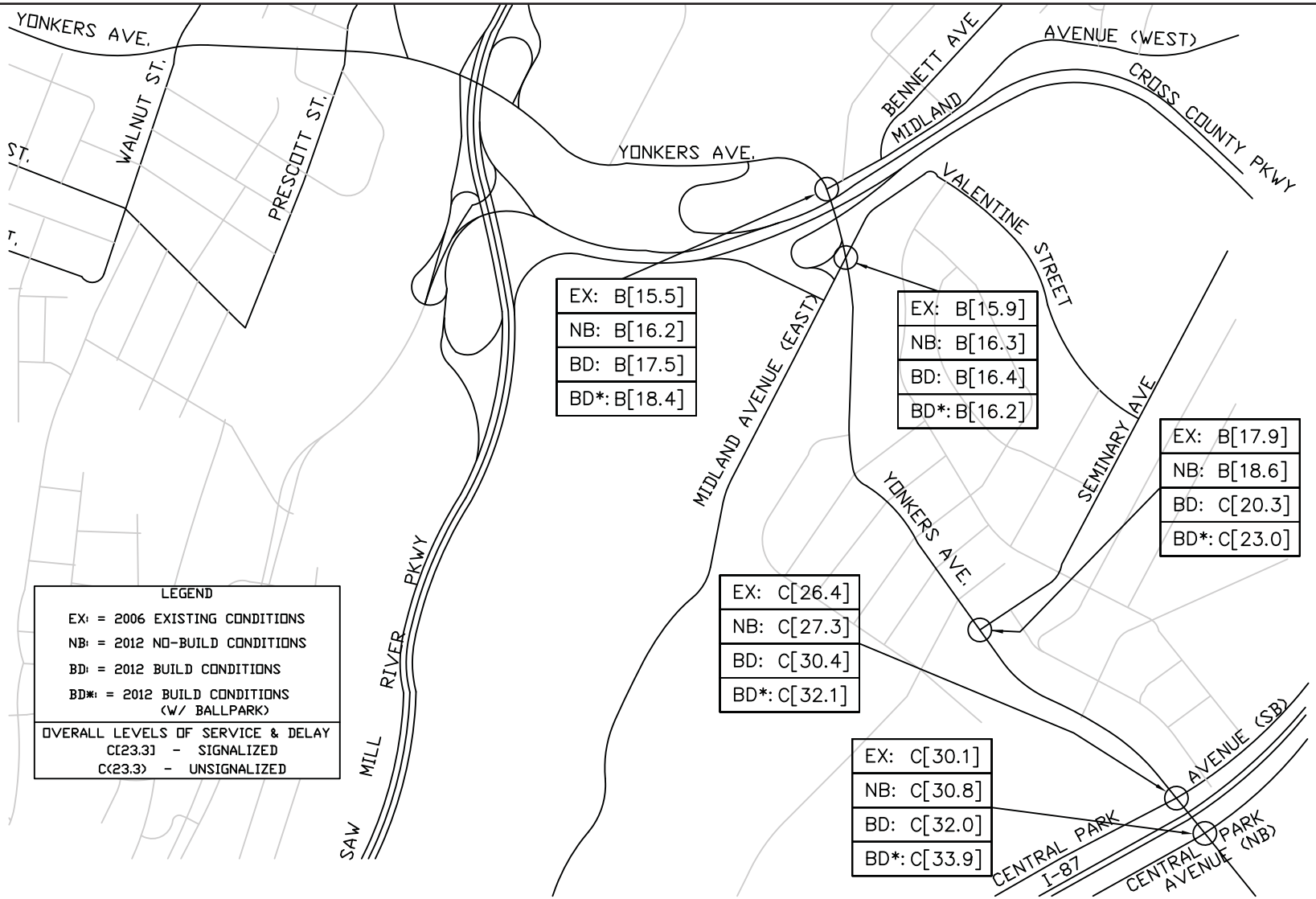


Exhibit III.E-43

OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS SATURDAY PEAK HOUR

NOTE: LINE DIAGRAM NOT TO SCALE

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

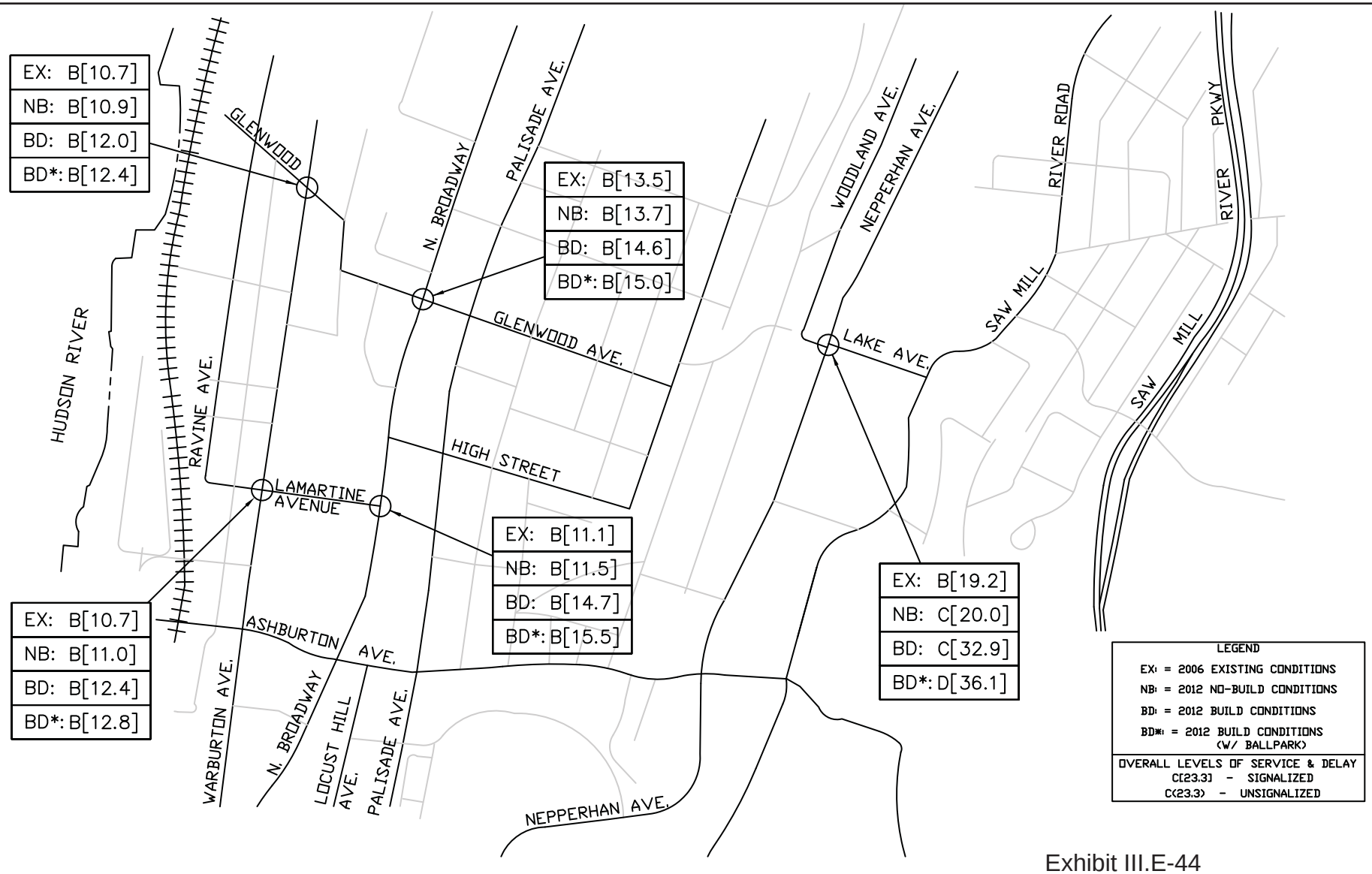


Exhibit III.E-44

OVERALL INTERSECTION LEVELS OF SERVICE AND DELAYS SATURDAY PEAK HOUR

NOTE: LINE DIAGRAM NOT TO SCALE

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

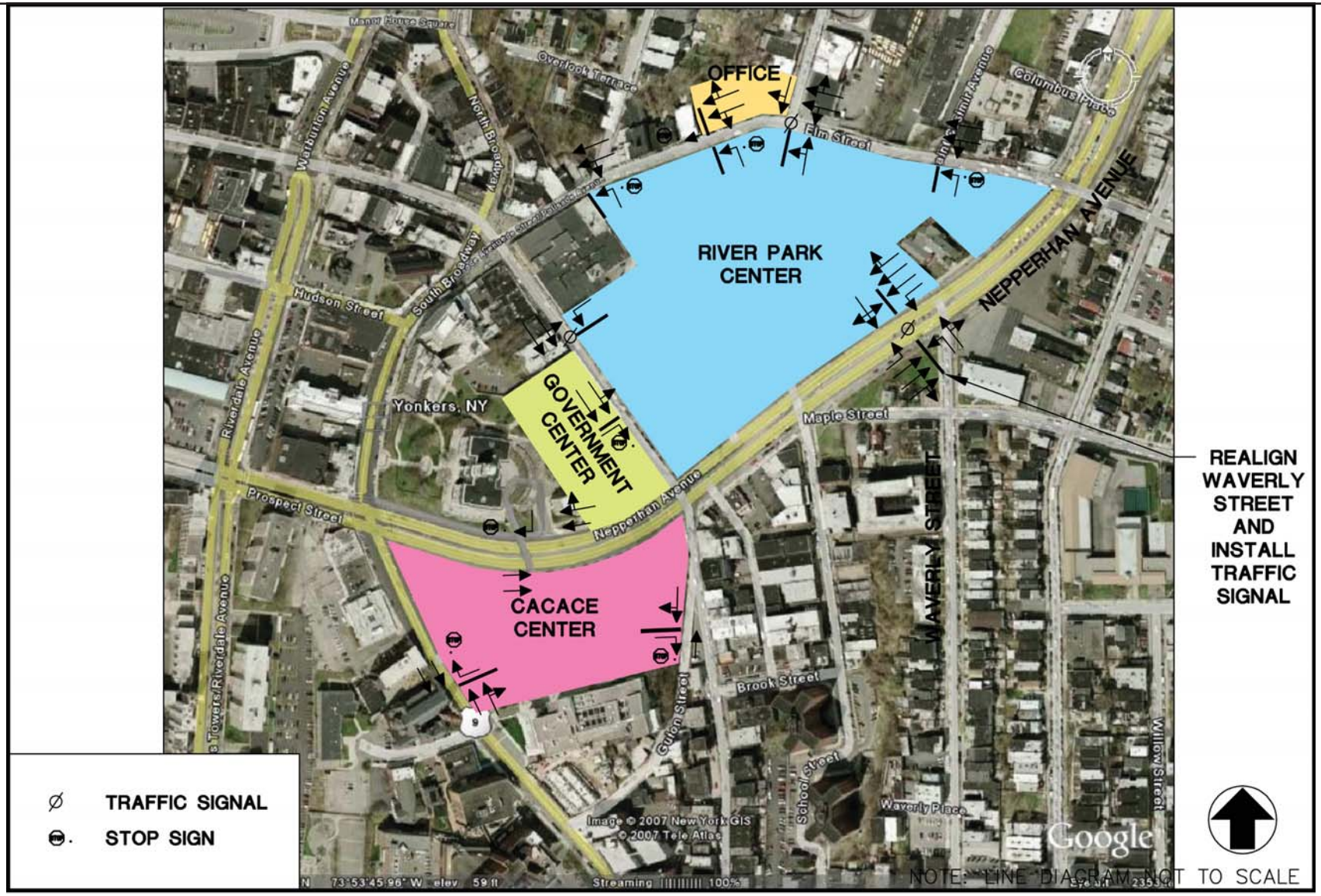


Exhibit III.E-45

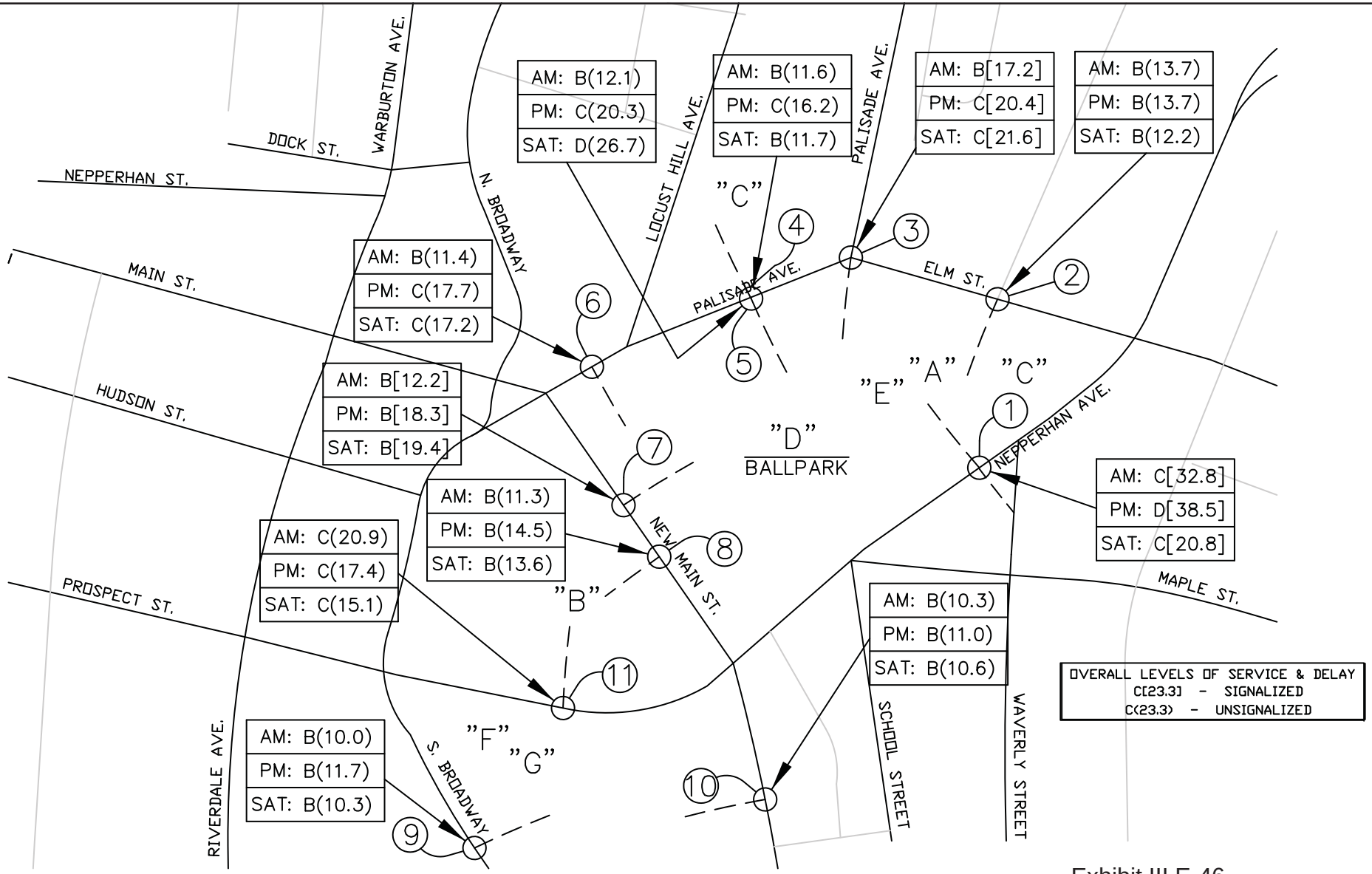
DRIVEWAY GEOMETRY AND TRAFFIC CONTROL

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-46

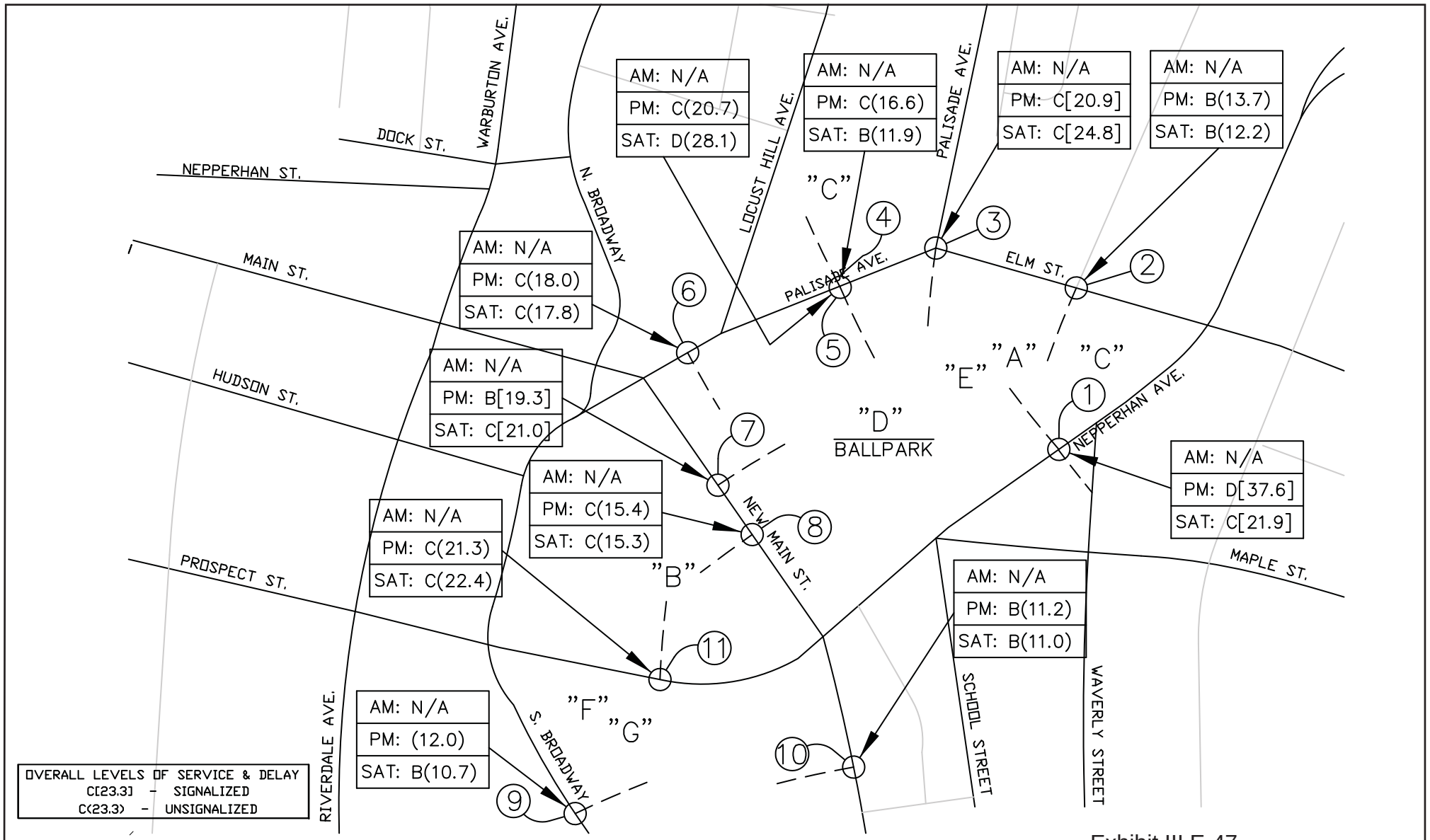
DRIVEWAY LEVELS OF SERVICE AND DELAYS

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-47

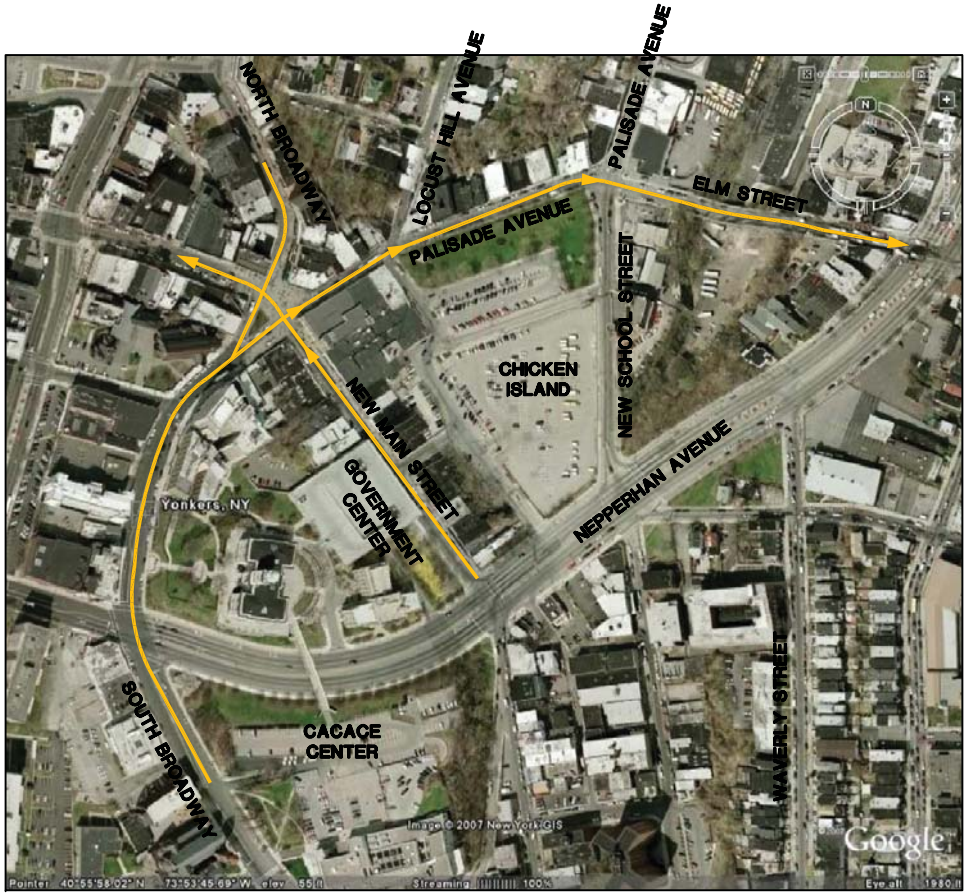
DRIVEWAY LEVELS OF SERVICE AND DELAYS (WITH BALLPARK)

DOWNTOWN DEVELOPMENT SITES

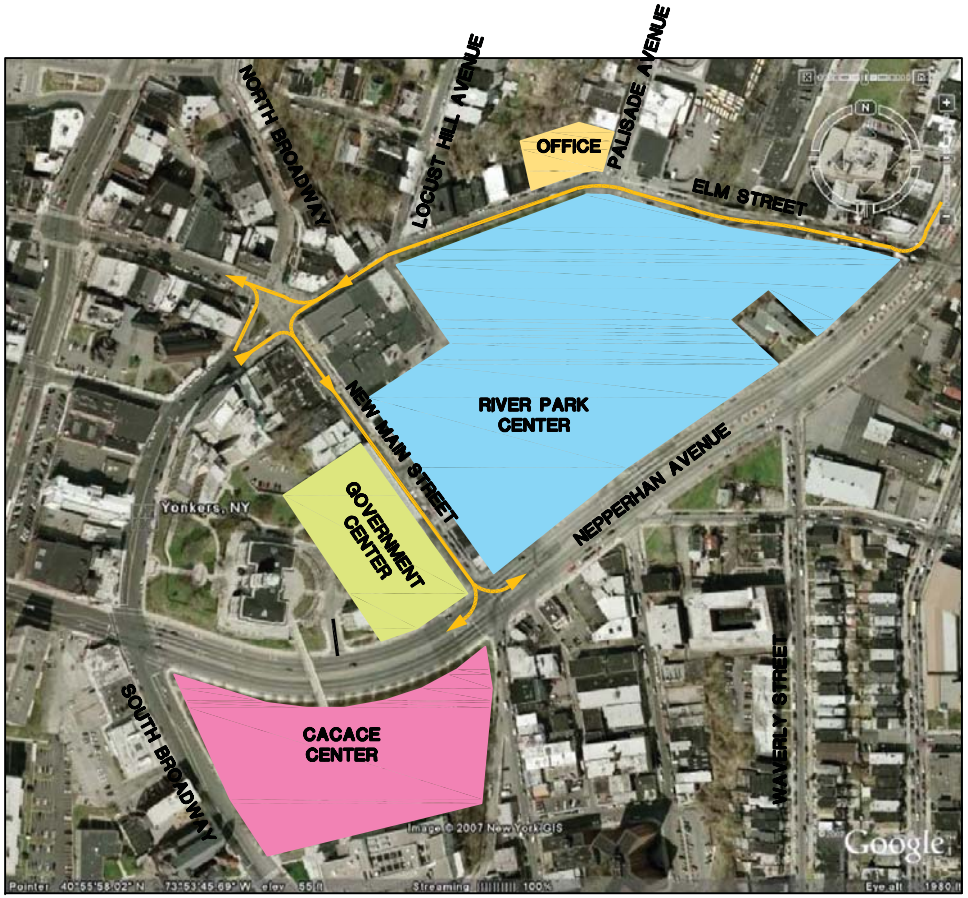
STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



EXISTING



PROPOSED

NOTE: FLOW ARROWS INDICATE ONE WAY STREETS,
ALL OTHER STREETS ARE TWO WAY.

NOTE: LINE DIAGRAM NOT TO SCALE

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

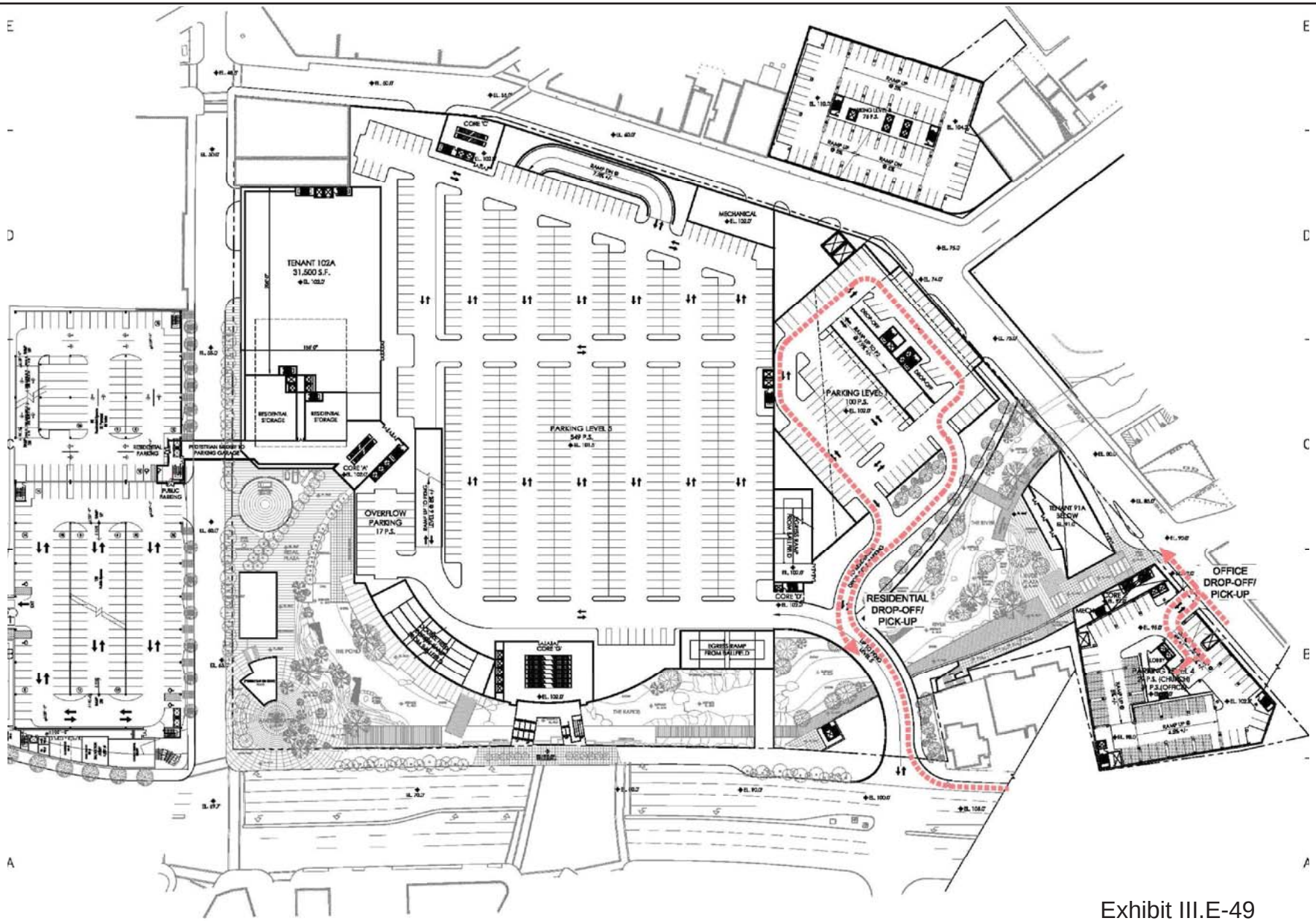
Exhibit III.E-48

EXISTING AND PROPOSED CIRCULATION

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants



NOTE: LINE DIAGRAM NOT TO SCALE

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

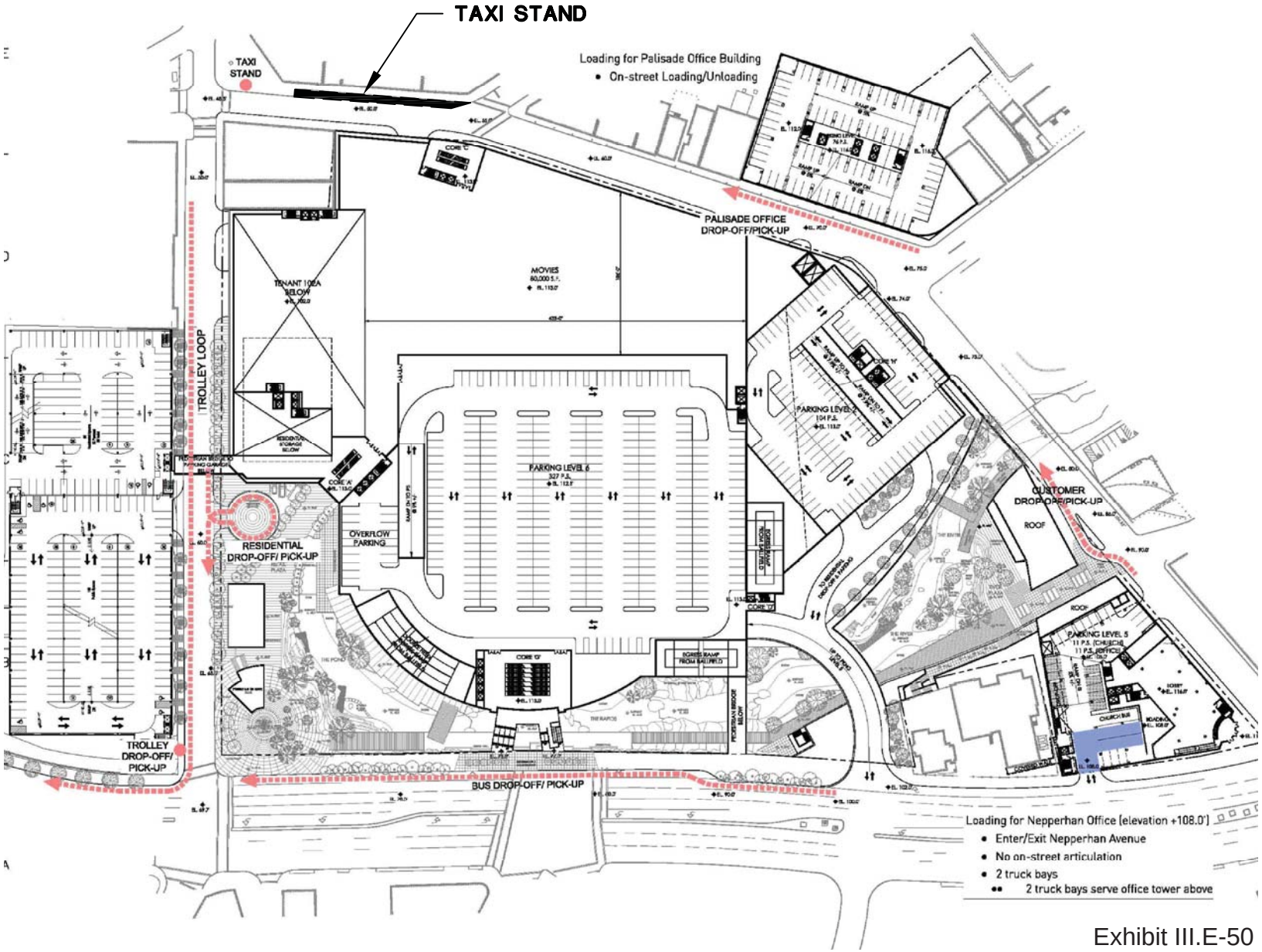
Exhibit III.E-49

TRUCK LOADING AND UNLOADING

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants



NOTE: LINE DIAGRAM NOT TO SCALE

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

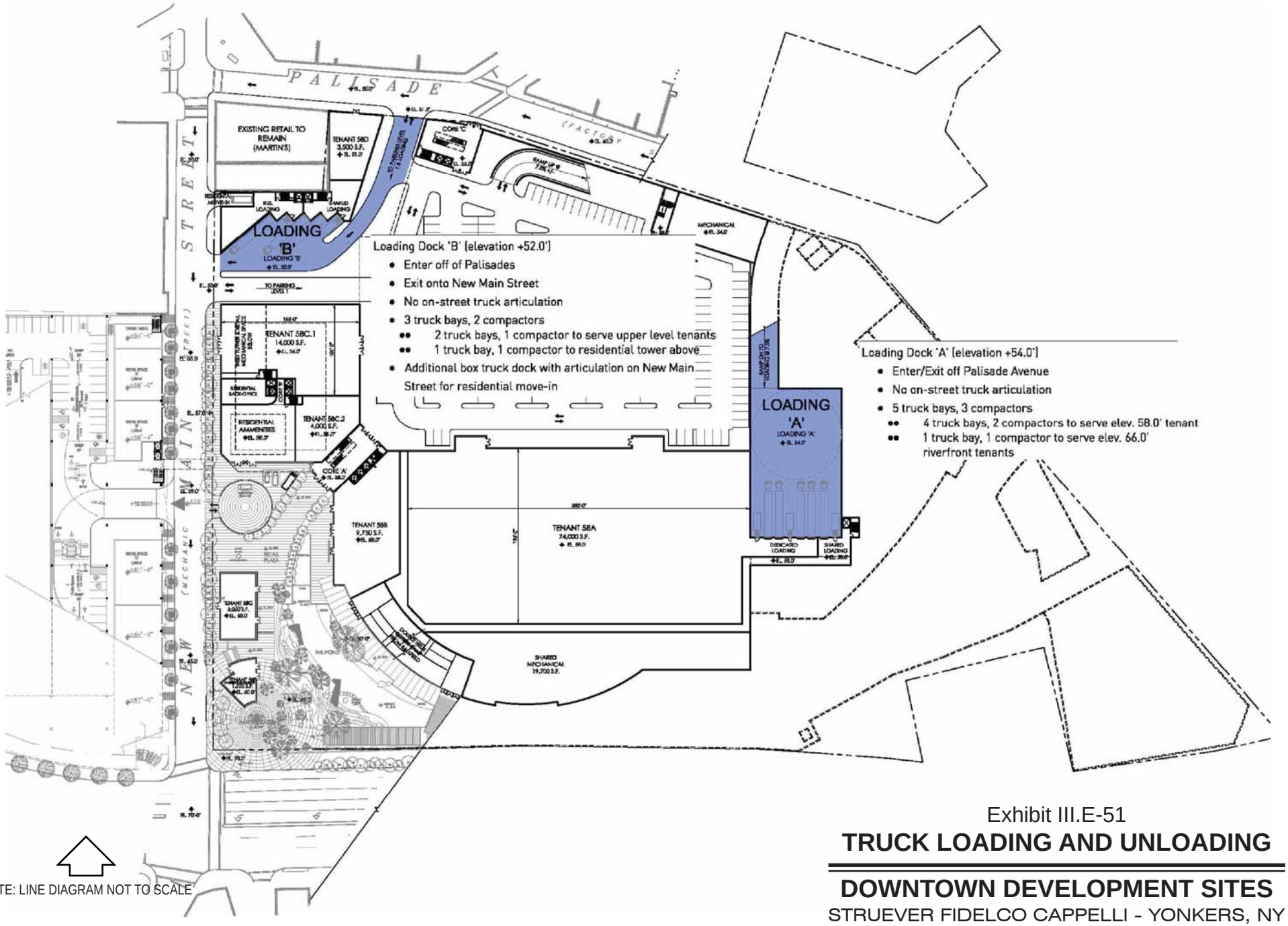
Exhibit III.E-50

TRUCK LOADING AND UNLOADING

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-51

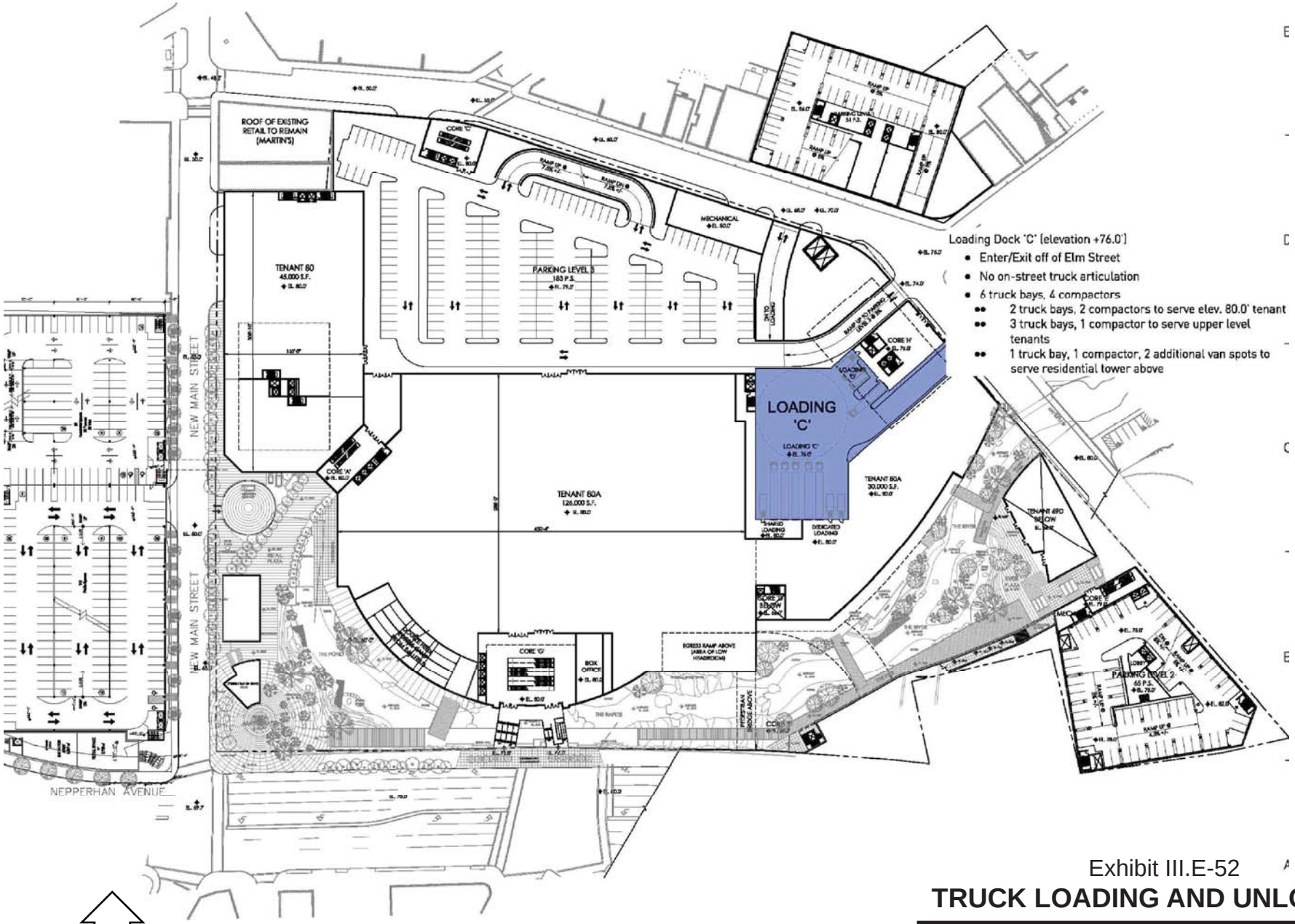
TRUCK LOADING AND UNLOADING

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-52

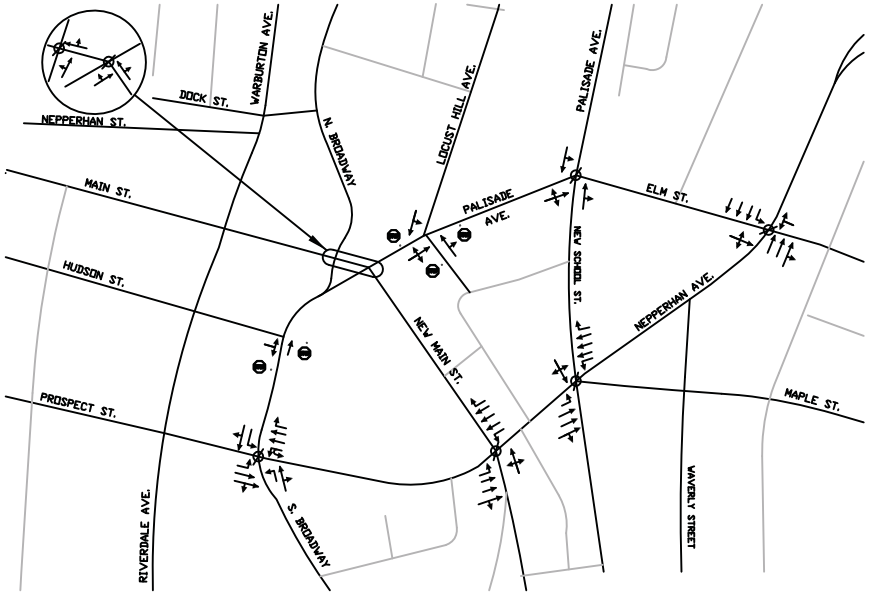
TRUCK LOADING AND UNLOADING

DOWNTOWN DEVELOPMENT SITES

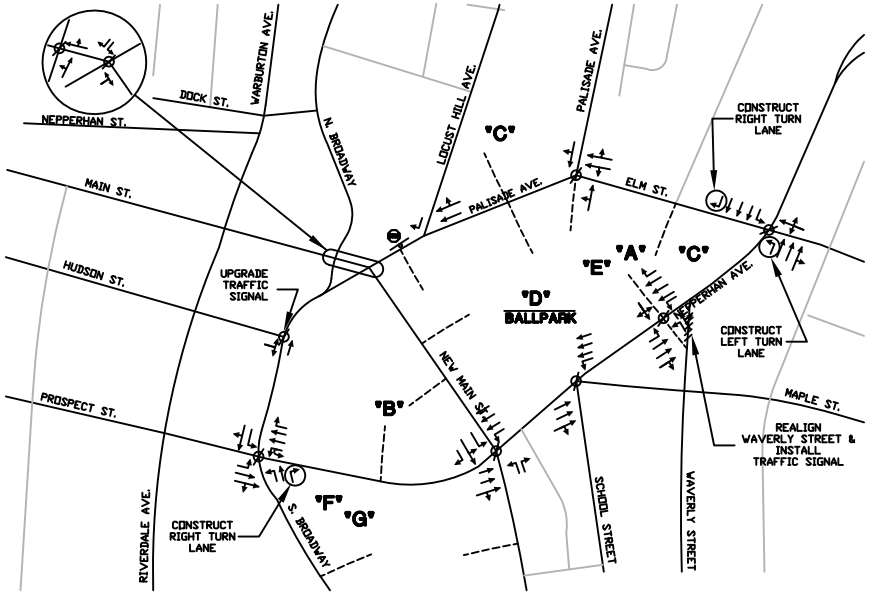
STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



EXISTING GEOMETRY



NEW TRAFFIC PATTERN & RECOMMENDED IMPROVEMENTS

Ø TRAFFIC SIGNAL

⊖ STOP SIGN

Ø TRAFFIC SIGNAL

⊖ STOP SIGN

EXISITING GEOMETRY AND NEW TRAFFIC PATTERN/RECOMMENDED IMPROVEMENTS

NOTE: LINE DIAGRAM NOT TO SCALE

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

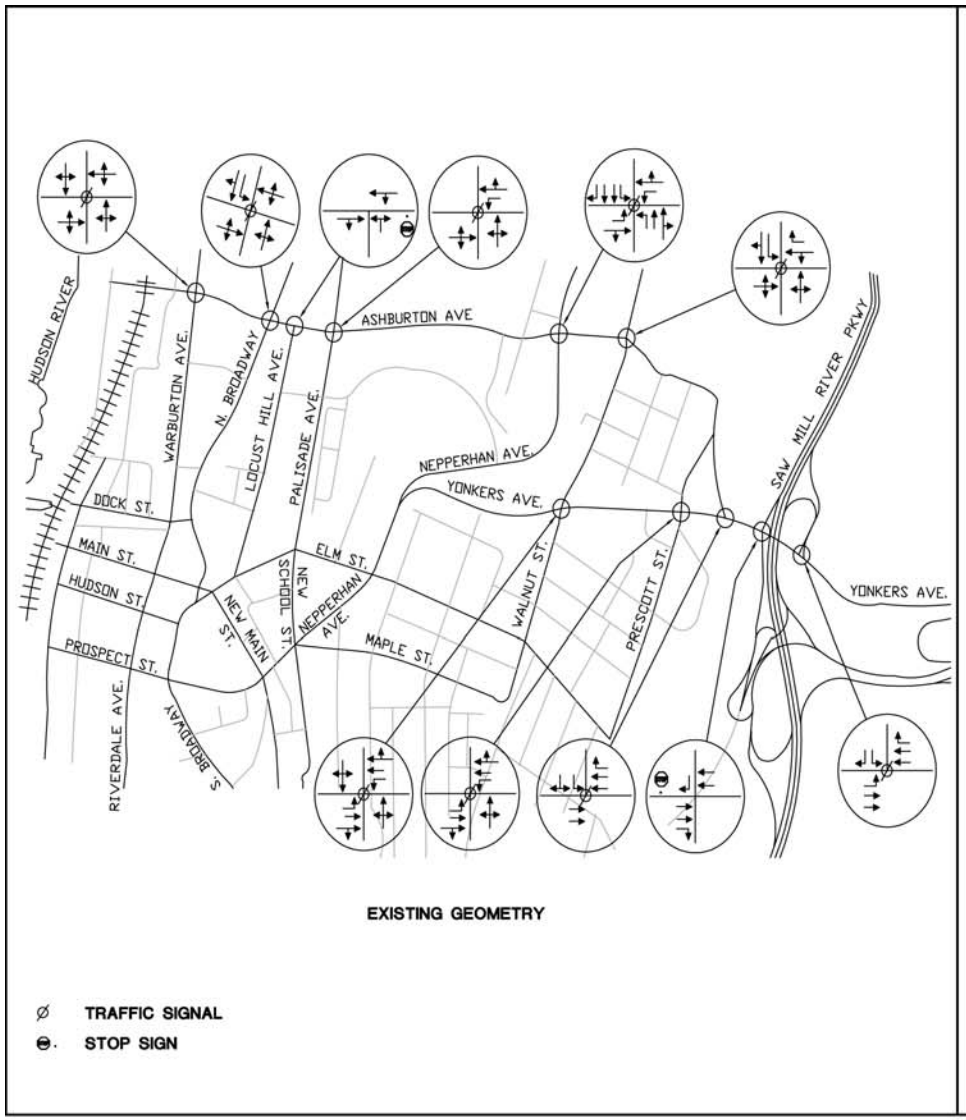
Exhibit III.E-53

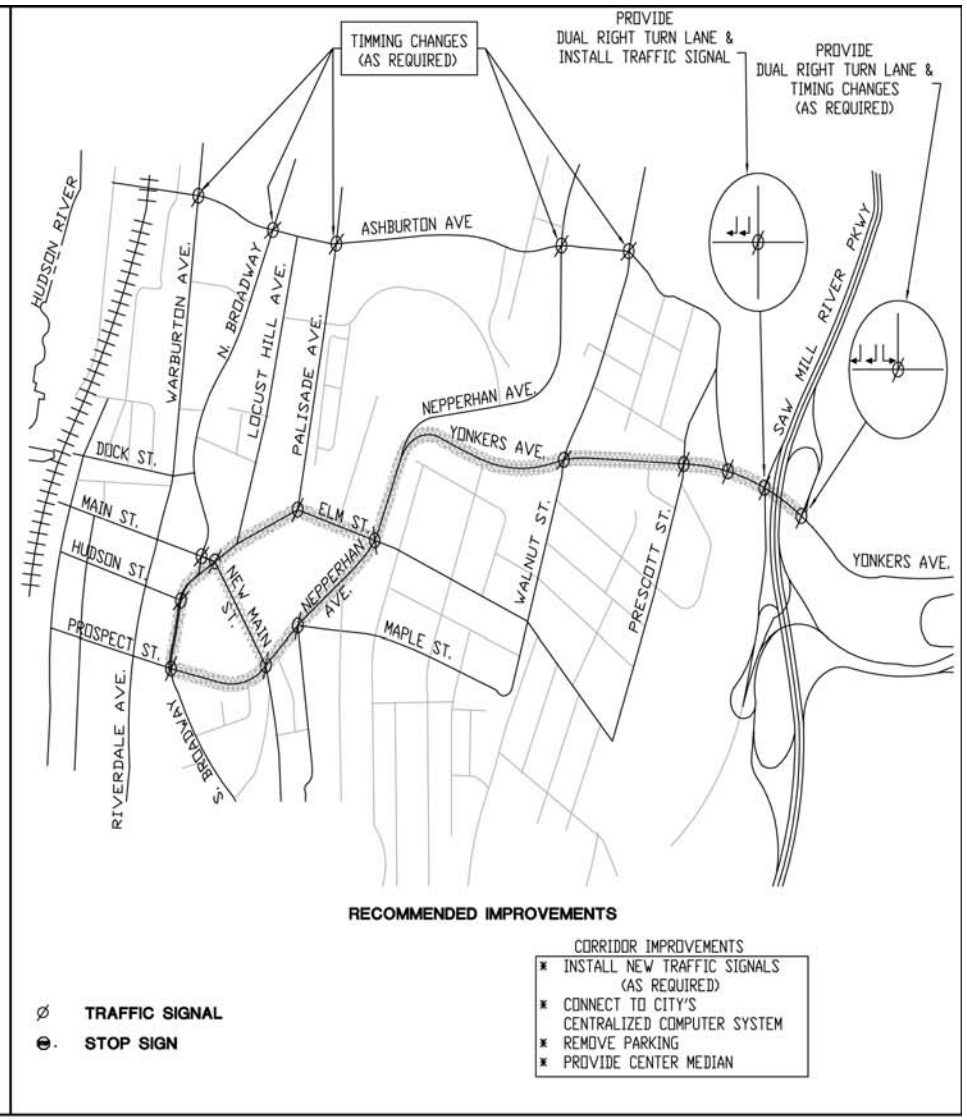
RECOMMENDED IMPROVEMENTS

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants





EXISITING GEOMETRY AND RECOMMENDED IMPROVEMENTS

NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-54

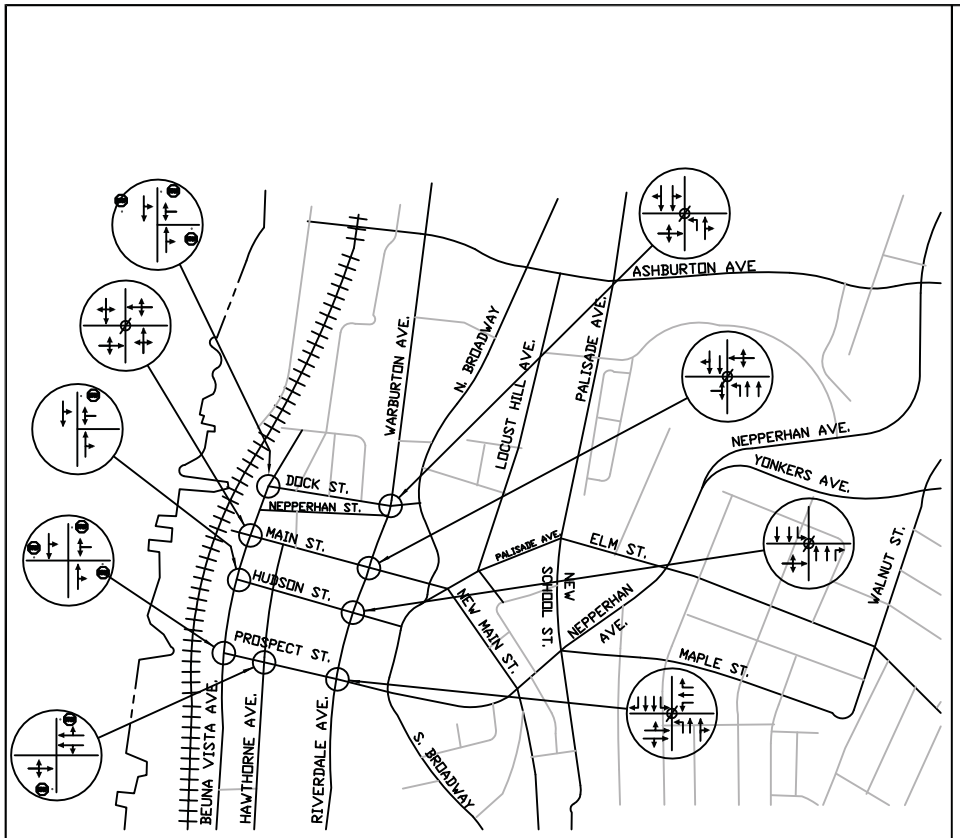
RECOMMENDED IMPROVEMENTS

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

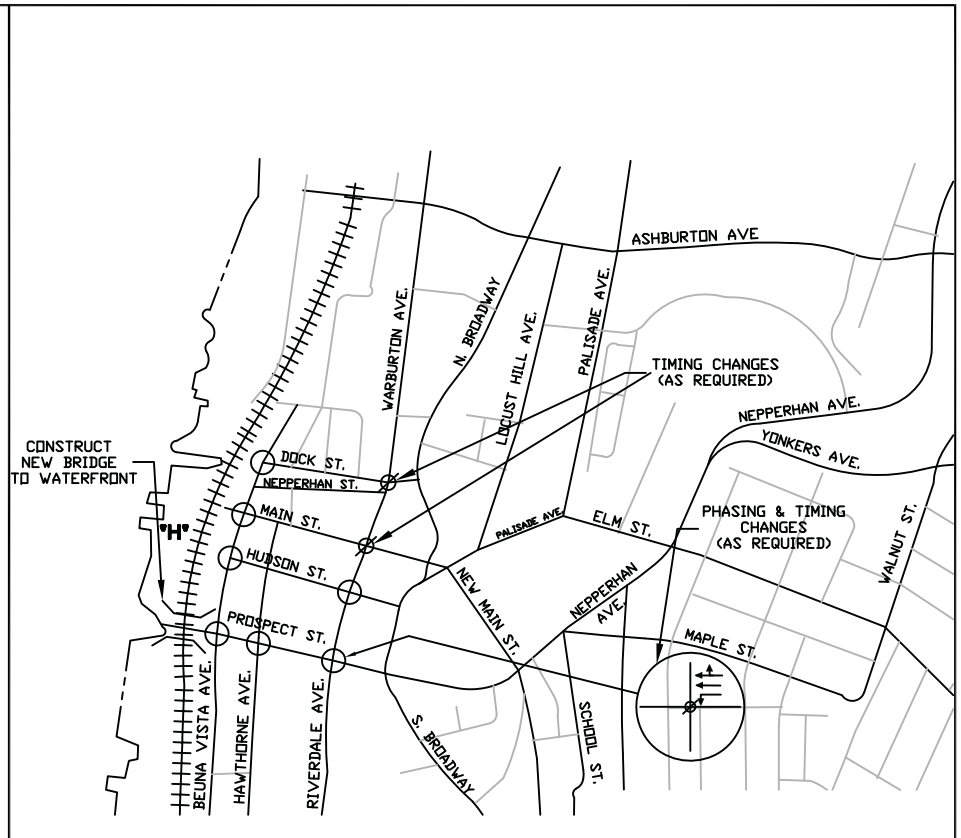
DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



EXISTING GEOMETRY

Ø **TRAFFIC SIGNAL**

⊖ **STOP SIGN**



RECOMMENDED IMPROVEMENTS

Ø **TRAFFIC SIGNAL**

⊖ **STOP SIGN**

EXISITING GEOMETRY AND RECOMMENDED IMPROVEMENTS

NOTE: LINE DIAGRAM NOT TO SCALE

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

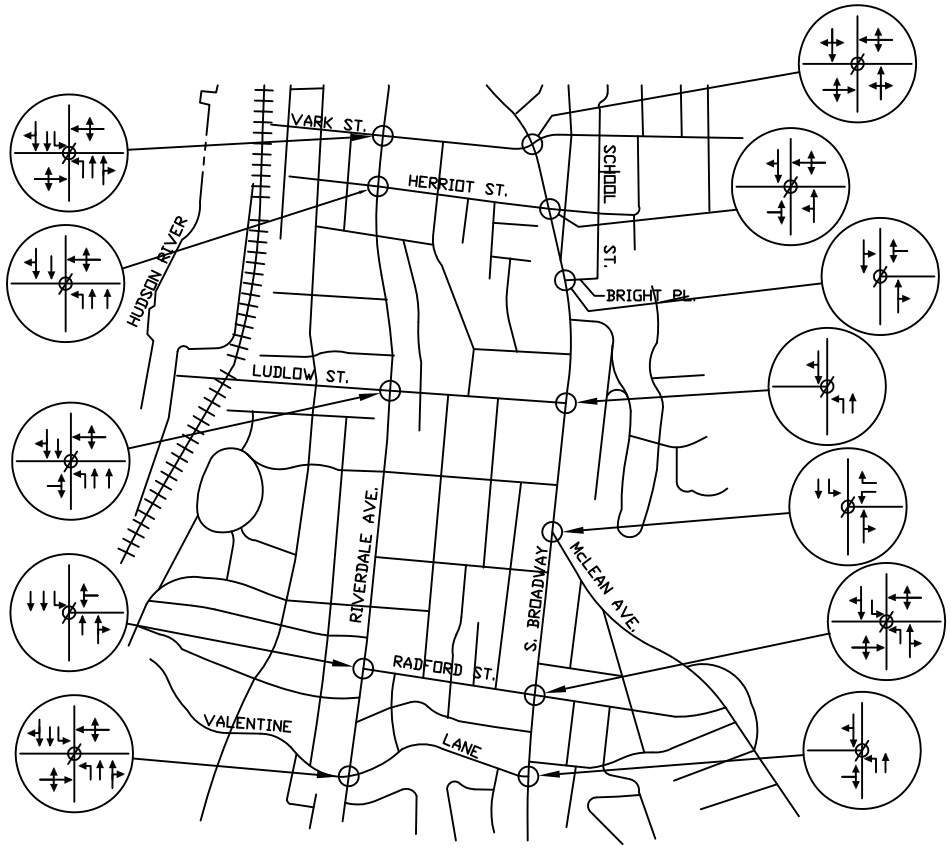
Exhibit III.E-55

RECOMMENDED IMPROVEMENTS

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

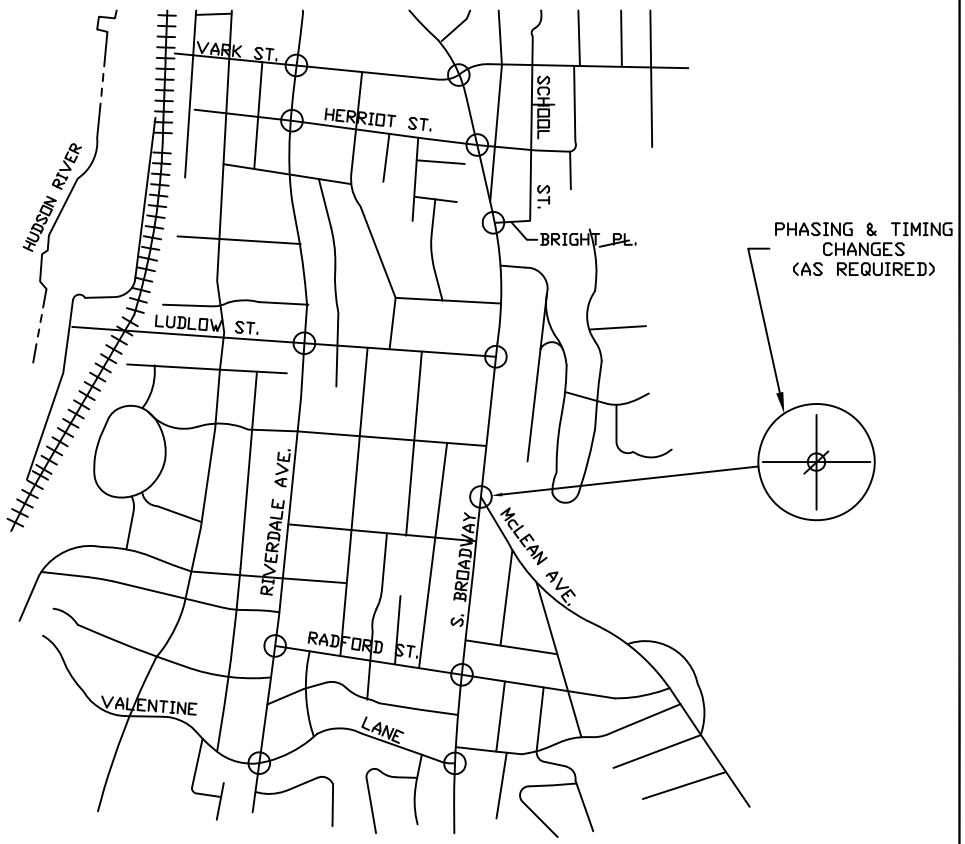
Saccardi & Schiff, Inc. - Planning and Development Consultants



EXISTING GEOMETRY

Ø **TRAFFIC SIGNAL**

⊖ **STOP SIGN**



RECOMMENDED IMPROVEMENTS

Ø **TRAFFIC SIGNAL**

⊖ **STOP SIGN**

EXISITING GEOMETRY AND RECOMMENDED IMPROVEMENTS

Exhibit III.E-56

RECOMMENDED IMPROVEMENTS

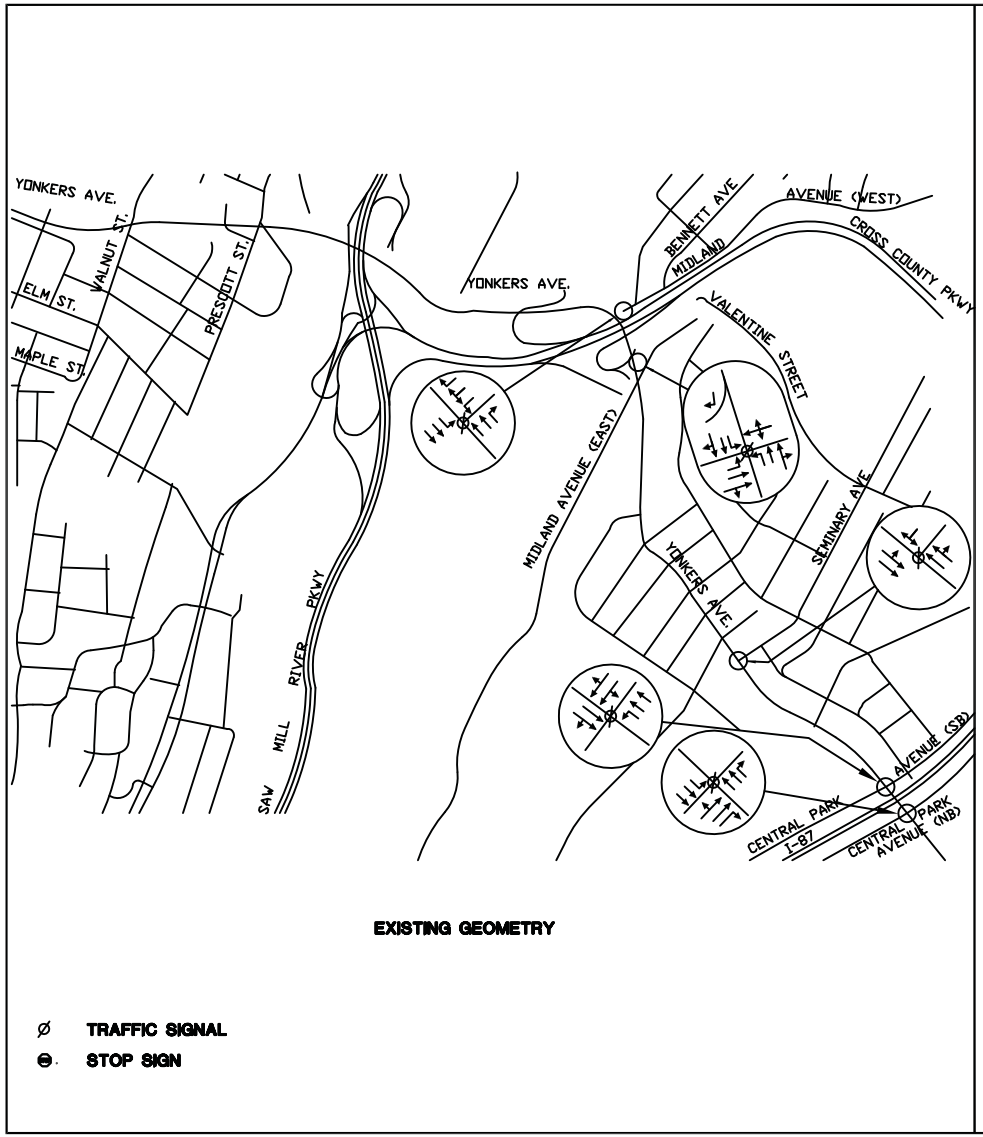
NOTE: LINE DIAGRAM NOT TO SCALE

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

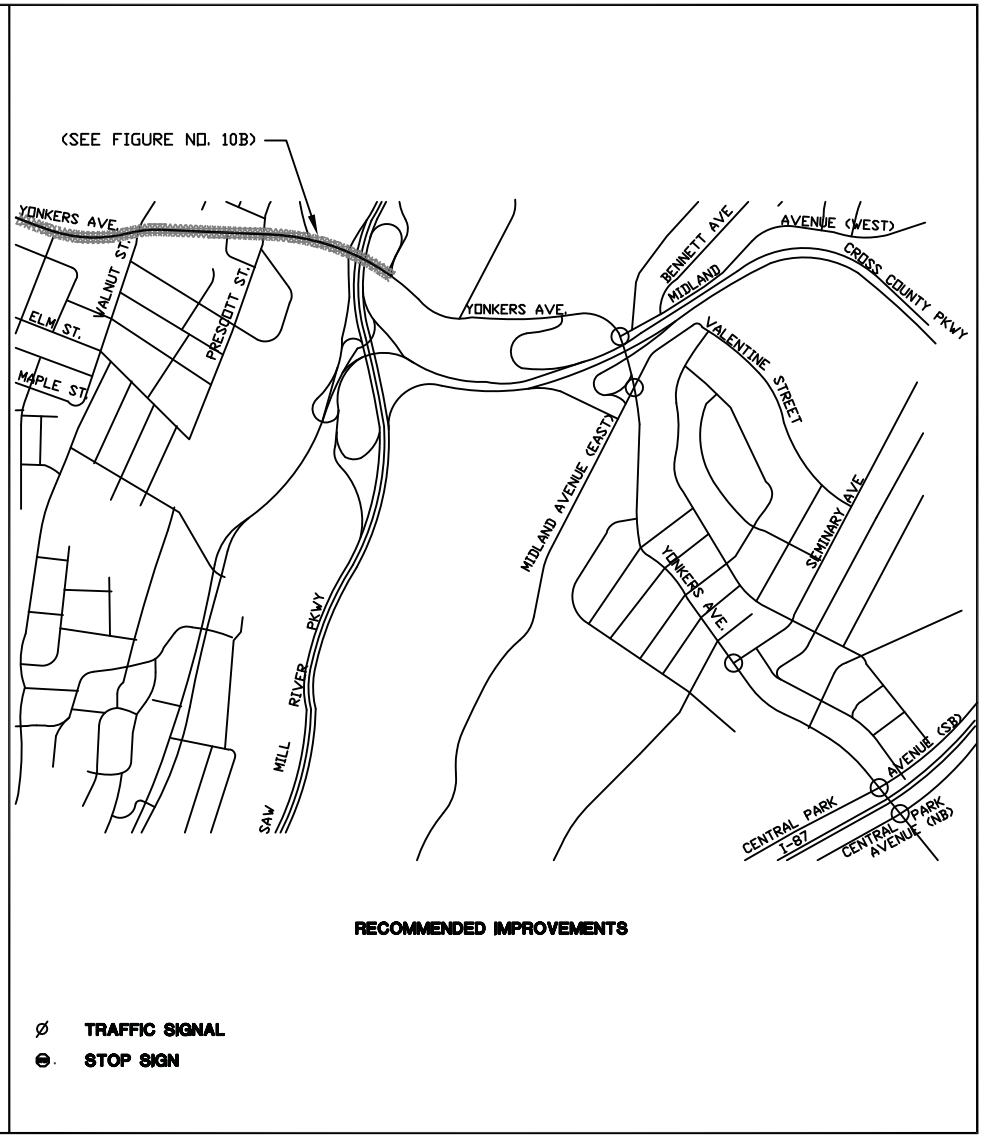
DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants



EXISTING GEOMETRY



RECOMMENDED IMPROVEMENTS

Ø TRAFFIC SIGNAL

⊖ STOP SIGN

Ø TRAFFIC SIGNAL

⊖ STOP SIGN

EXISITING GEOMETRY AND RECOMMENDED IMPROVEMENTS

NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-57

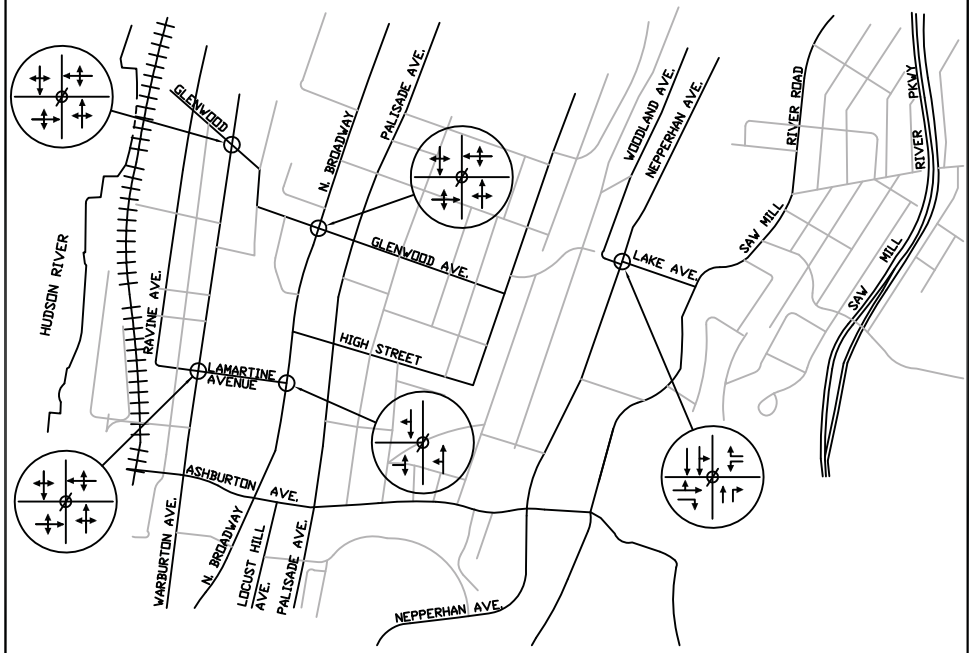
RECOMMENDED IMPROVEMENTS

DOWNTOWN DEVELOPMENT SITES

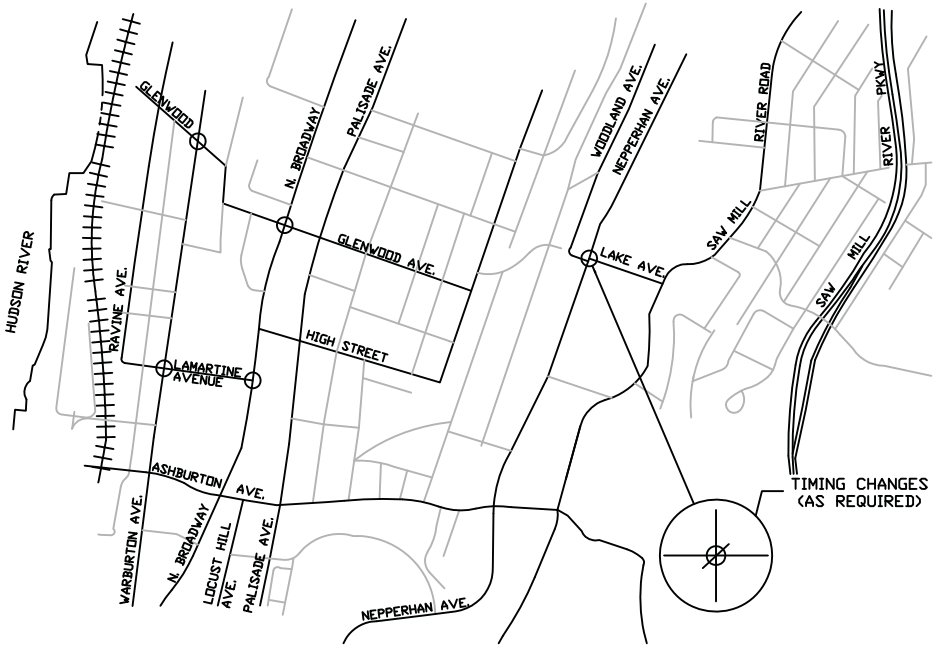
STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.



EXISTING GEOMETRY



RECOMMENDED IMPROVEMENTS

Ø TRAFFIC SIGNAL

⊖ STOP SIGN

Ø TRAFFIC SIGNAL

⊖ STOP SIGN

EXISITING GEOMETRY AND RECOMMENDED IMPROVEMENTS

NOTE: LINE DIAGRAM NOT TO SCALE

Exhibit III.E-58

RECOMMENDED IMPROVEMENTS

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

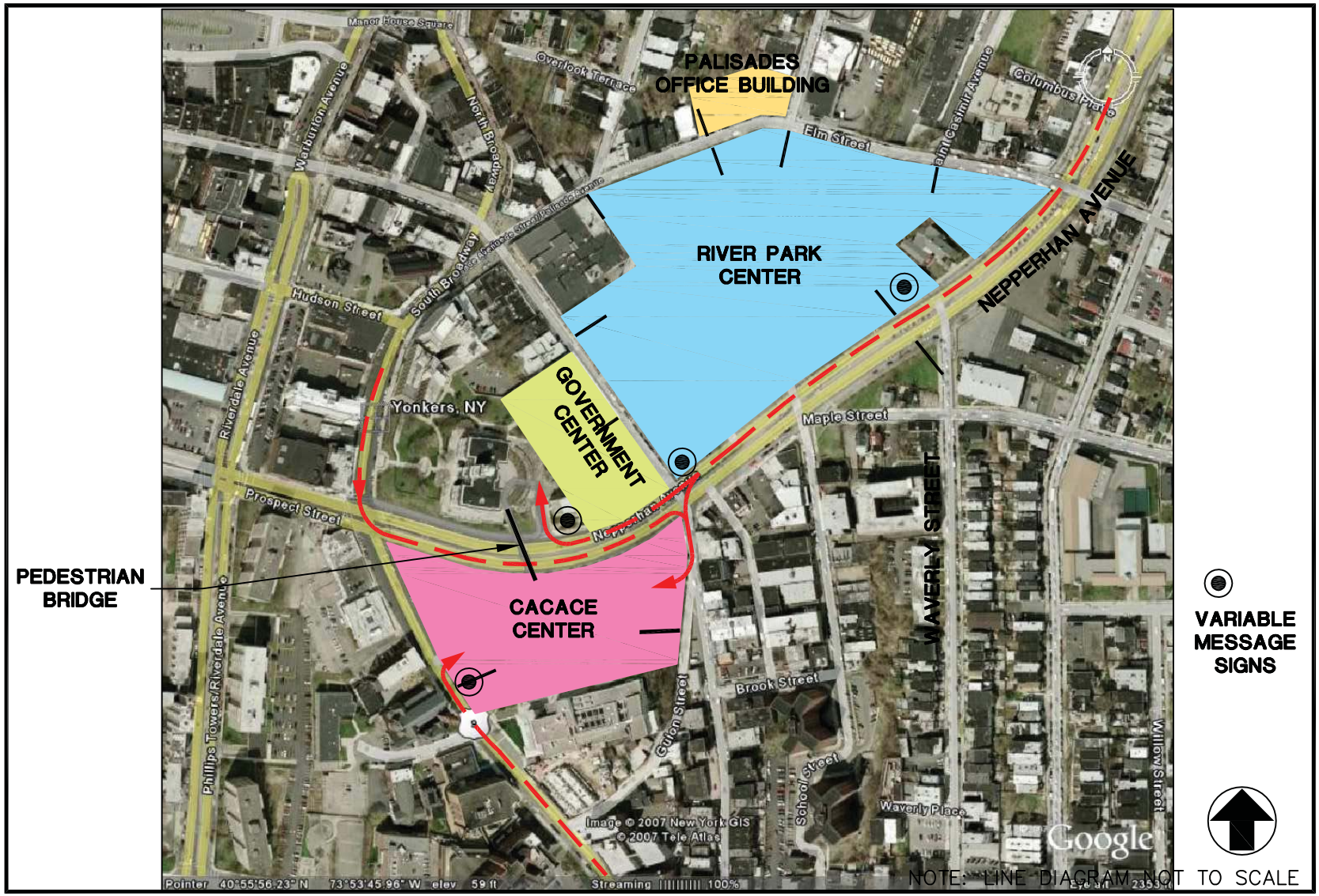


Exhibit III.E-59

PRIMARY ROUTES
BALLPARK PARKING AREAS

DOWNTOWN DEVELOPMENT SITES

STRUEVER FIDELCO CAPPELLI - YONKERS, NY

Saccardi & Schiff, Inc. - Planning and Development Consultants

DATE: April, 2007
SOURCE: John Collins Engineers, P.C.

Exhibit III.E-60

AVAILABLE BUS ROUTES

SFC PHASE I PROJECTS

STRUEVER FIDELCO CAPPELLI LLC

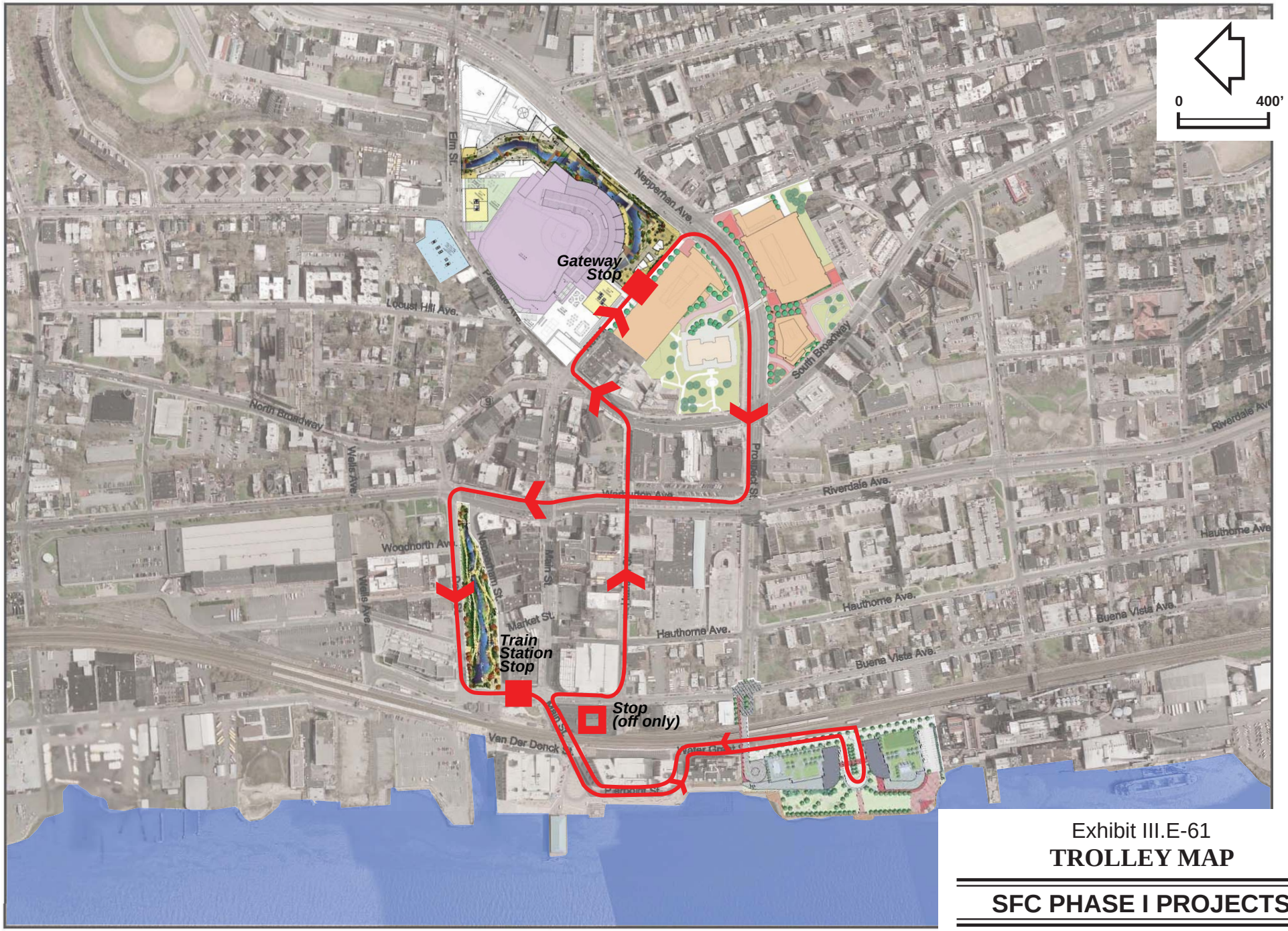


Exhibit III.E-61

TROLLEY MAP

SFC PHASE I PROJECTS

STRUEVER FIDELCO CAPPELLI LLC