APPENDIX A

Comment Letters

Index of Written Comments Received on the DEIS

Blood Brothers - Sheldrake

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FS: Comment letter index.lwp

cc: Tim Miller, Paul Noto, Village Manager, Tom Yardley, Building Inspector, Planning Board Chair

BFJ Planning

MEMORANDUM

Via Fedex

Letter #1

To: Village of Mamaroneck Mayor and Trustees

From: Frank Fish, Georges Jacquemart, Tom Yardley

Re: Sheldrake Estates DEIS

Date: April 18, 2006

The following provides comments on the Sheldrake Estates DEIS, dated February 27, 2006 and the amended pages under cover of letter dated March 24, 2006. This memo does not include an engineering review which will be conducted separately by Village Engineer Keith Furey. This memo is intended to provide the Board with substantive comments that take into consideration comments received at the public hearing on April 10, 2006.

Proposed Project

The applicant requests a zone change for a 1.75 acre portion of a 2.31 acre property at 270 Waverly Avenue from M-1 to RM-3 zoning, a 0.56 portion of the site would remain R4-F. The property is currently occupied by the Blood Brother's auto-wrecking business. The rezoning will allow a new residential development consisting of 114 units in three main buildings and two smaller townhouse buildings fronting Waverly Avenue with a total of 6 units. Parking will be provided in spaces surrounding the buildings, as well as under the buildings, at street level.

Comments at April 10 Public Hearing:

- **Density**: A key item that affects the site layout, building bulk, parking and traffic generation, is concern that, at 114 units, the proposed project may be too dense and an alternative to the proposed RM-3 zoning should be considered.
- **Traffic**: Comments at the hearing focused on the following:
  - Exploring the possibility of providing both vehicular and pedestrian access from the project site along East Plaza Avenue to Mamaroneck Avenue as a way of relieving potential impacts to traffic on Waverly Avenue.
  - The need to provide on-site, free-of charge parking for residents of the proposed development to limit potential for creating new parking demand on Waverly Avenue.
  - Concern that the proposed project will have significant impacts to the Levels of Service at the intersections listed in the EIS.
- **Access along Sheldrake River**: Many comments focused on the possibility of providing pedestrian and vehicular access to the site along the Sheldrake River on East Plaza Avenue.
- **Stormwater Runoff**: This is an item that Keith Furey, the Village's consulting engineer, will address on behalf of the Board.
- **Hazardous Materials**: Concerns were raised regarding the adequacy of the DEIS in addressing potential impacts of contaminants on-site as a result of the former Blood Brothers auto-wrecking and salvage operation.
- **Alternatives**: Comments were received on the density of the project and the possibility of a less-dense alternative.

BFJ Planning **MEMORANDUM**

Date: April 18, 2006
Sheldrake Estates DEIS

Overall the DEIS has addressed issues as outlined in the November scope as adopted by the Board of Trustees as lead agency, but with the following comments:

Land Use and Zoning
Comment #1 (p.3-1)
The DEIS refers to R-3 zoning, this should be corrected to RM-3.

Comment #2: (p.3.1-4)
Given concerns raised over the project's density, the DEIS should further examine how the RM-3 zoning is "compatible and consistent with the adjoining R4-F zoning" that fronts on Waverly Avenue as compared to RM-2 which provides a less dense alternative.

Comment #3: (p.3.1-5)
Table 3.1-2 describes a lot area provided as 93,838 square feet (2.15 acres). This is inconsistent with the lot area of 2.31 acres described throughout the document and the 1.75 acre portion that is currently zoned M-1. This discrepancy should be resolved.

Soils and Groundwater
Comment #4 (p.3.2-1)
Following concerns regarding the subsurface conditions at the project site and proximity to the Sheldrake River, BFJ Planning has shared the Phase 2 site assessment with our sub consultants EEA Inc. Their comments are attached under cover of an April 13 memo.

Traffic and Transportation
Comment #5
The methodology used by the DEIS author corresponds to the generally accepted methodology for these types of traffic studies. We verified the traffic generation rates used in Tables 3.5-5 and 3.5-8. These rates are acceptable to us, and are probably conservative because they do not take into consideration the proximity of the site to the Metro-North station and the fact that a certain number of residents will walk to the station. The traffic distribution among the various access routes seems reasonable.

Comment #6
The intersection of Hoyt Avenue and Fenimore Rd should be analyzed. This intersection is projected to carry about 30% of the inbound project traffic and 10% of the outbound project traffic. (If commercial traffic is prohibited on Waverly Ave the intersection of Hoyt and Mamaroneck Ave should also be analyzed)

Comment#7
Today Waverly Avenue carries about 4,000 vehicles per day (430 in the am peak hour and 360 in the pm peak hour). This number is projected to increase by about 6% to 4,200 as the result of general growth and approved projects in the study area, and without the Sheldrake development. With the Sheldrake development the daily traffic would increase from about 4,200 to 4,500, an increase of about 8%. Even though this level of daily traffic volumes is relatively high for a residential street, the increase produced by this project does not change the character of Waverly Avenue. During the morning peak hour there would be an additional 48 vehicles on Waverly Avenue (one car every 1.25 minutes), and during the afternoon peak

hour there would be an additional 21 vehicles (one car every 2.9 minutes). Due to the one-way pattern, the traffic increases would only occur on the section of Waverly Ave between the site exit and Mamaroneck Avenue. For the vehicles turning left from Waverly onto Mamaroneck Avenue average delays would increase from 41.8 seconds per vehicle to 48 seconds during the morning peak hour, whereas in the afternoon they would increase from 35.6 to 36.9 seconds. The intersection of Mamaroneck and Waverly Avenues would continue to operate at good levels of service.

Comment #8 (p.3.5-17)
Potential Mitigation Measures and Circulation Alternatives: One of the drawbacks of the one-way site circulation combined with the one-way traffic on Waverly Ave is that all vehicles exiting from the project site have to use Waverly Avenue. One way to mitigate this impact would be to allow vehicles to also exit at the Plaza Avenue exit point, as they do today from existing parking lots. This would reduce the traffic impact along Waverly north of the site exit. Today the vehicles leaving the site that have a southerly or westerly orientation have to drive north on Waverly turn right onto Mamaroneck, right onto Hoyt Avenue, and right again onto Fenimore Rd. The DEIS consultant should analyze this option. Impacts should be calculated on vehicle miles of travel in the neighborhood, levels of service at the intersections of Waverly/Mamaroneck, Waverly/Plaza Ave and Hoyt/Fenimore.

The other option that should be analyzed is the prohibition of commercial traffic along Waverly Ave north of Plaza Avenue. The DEIS consultant should count the number of commercial vehicles on this section of the road and estimate where these vehicles would shift under this scenario.

Using East Plaza Avenue for vehicular access or egress from the project site should be evaluated as well. Considering the narrow width of this right-of-way (13 feet), the consultant should assess the feasibility of making it a one-way exit for the project traffic, still maintaining 2-way access for the intervening uses (between the Blood Brother's site and Mamaroneck Ave). The alternative mitigation measure would be to build a pedestrian path along the river providing for a direct pedestrian connection to Mamaroneck Avenue. This path could also be used by the general public between Plaza Ave and Mamaroneck Ave.

Comment #9
The first footnote in Tables 3.5-5 and 3.5-8 seems to be incorrect.

Comment #10
The proposed plan provides 1.59 spaces per unit. This meets the parking requirements of the Village code. However, we recommend that the spaces not be individually assigned to dwelling units. This will improve the overall supply since there are always some resident cars that will be away on vacation or business trips. The sign at the entrance should say "Parking Restricted to Residents and Guests". We note that under the RM-2 alternative there would be more space for on-site visitor parking which would reduce the potential demand from the project for parking on Waverly Avenue. This should be explored under the Alternatives section of the DEIS.

The parking and site dimensions need to be verified. There does not seem to be sufficient room for parking and circulation. Some of the parking spaces seem to extend beyond the property line.

Visual Resources

Comment #11 (p.3-6-2)
We concur with the implications of the statement that "Construction of the proposed action would replace a visually unattractive commercial property with a residential development of 4.5 story buildings including landscaping, parking areas and driveways." However, the visual impacts are hard to assess without at least one rendering of the proposed project from Waverly Avenue. We also suggest a rendering of the RM-2 alternative looking from Waverly Avenue, which at 3 ½ stories is a full story less than RM-3 option. Photomontages using basic massing diagrams for the proposed buildings would be sufficient.

Comment #12 (p.3-6-2)
Consistent with comments at the public hearing from Mr. Mitsch of the Sheldrake Environmental Center, the Applicant should explore the possibility of providing pedestrian access along the Sheldrake River and indicate this on the proposed landscope plan. We note that Section 3.5.11 (p.3.5-17) includes a discussion of providing such a walkway, but at this time, there is no diagram of such a connection, nor is there an internal sidewalk clearly indicated on the site plan. On-site public access could connect to the Waverly Avenue improvements outlined in the Waverly Avenue Design Study prepared on behalf of the Village. The Applicant should also further address the feasibility of providing pedestrian access from the project site along East Plaza Avenue to Mamaroneck Avenue.

Comment #13 (p.3-6-3)
The copy of the DEIS sent to our office did not include a lighting plan. In order to assess potential lighting impacts as a result of the proposed project, a photometric diagram should be included. Cuts of lighting fixtures will also assist in assessing potential visual impacts.

Community Facilities/Fiscal Analysis

The DEIS includes an assessment of potential impacts to the community facilities within the Village including police, fire protection and schools. No responses have been received from the Police Department, Fire Department or School District as regards potential impacts. We note that the project is anticipated to generate 7-8 school children. This is based on multipliers published by the Urban Land Institute, and is consistent with data that our office uses.

We also note that the DEIS includes a fiscal analysis and that the Village currently receives $21,300 in annual property tax revenues and $55,739 in school taxes from the site. Under the proposed scheme, property taxes would increase to $87,042 and school taxes to $226,566. The additional 8 students anticipated as a result of this project would increase the total costs to the Schools District by $140,448 annually (The estimated annual costs per student is $17,556). This leaves net revenue of $86,118 to the schools which is clearly a net positive.

Comment #14 (p.3.7-1)
The statement "additional parking is to be provided along the periphery of the project site for both residents and the public" should be substantiated. It is unclear how the site caters to additional parking beyond the requisite number of spaces required by zoning.

Comment #15 (p. 3.7-3)
We suggest that the Applicant seek comment from the Fire Department regarding the proposed project and

BFJ Planning **MEMORANDUM**

the adequacy of the proposed site access for emergency vehicles and fire trucks.

Alternatives

Comment #16: (DEIS p.4-3)

We note that Section 4.0 of the DEIS includes a discussion of alternatives including RM-2 as an alternative zoning envelope for the proposed project. As you can see from the attached schedule, RM-2 permits a maximum FAR of 1.0 as compared to 1.5 under RM-3. RM-2 also has a density limitation of 1 unit per 1,500 square feet of lot area as compared to 1 unit per 1,000 square feet of lot area under RM-3. We note that on p.4-3, the DEIS states that under the RM-2 alternative a total of 62 residential condominium units would be developed. It appears that 62 units is calculated by taking the 1.75 acre M-1 zoned portion and applying the density limitation of 1 unit per 1,500 square feet of lot area. This excludes the 6 townhouse units on the R4-F portion of the site and the 20% bonus for affordable units which would bring the total unit count up to 74 under the RM-2 option.

The DEIS states that "The sixty-two unit RM-2 Alternative does not represent any significant reduction in the overall area of physical development of the site." We note the following:

- The maximum lot coverage under RM-2 is 30% as compared to 35% under RM-3; and
- RM-2 requires 300 square feet of open space per unit as compared to 200 square feet of open space per unit under RM-3; and
- With a reduction in the need for parking spaces under RM-2, there would be a corresponding reduction in the amount of paved surface at the project site under RM-2.

We suggest that the RM-2 alternative be more fully explored given the above bullet points and benefits of reducing on-site impervious surfaces.

Comment #17

The DEIS states that the RM-2 alternative "would result in significantly fewer housing units than the proposed project, and given the financial considerations of the alternative, it would not meet the objectives of the applicant." We note that in terms of total floor area, the proposed project contains a total of 1.11 FAR, only 0.11 more than the 1.0 of FAR permitted under RM-2. We suggest that this statement be substantiated with further economic analysis and comparison of the economics of RM-2 as compared to RM-3.

We suggest that the RM-2 alternative be more fully developed by including a table that compares the impacts of the proposed RM-3 zoning with the RM-2 alternative. This will enable the Trustees to make an informed decision as to the environmental impacts of each option. The table should include the seven impact categories listed (land use zoning and public policy; traffic, community resources; natural resources; demographics/fiscal; visual and construction).

C: Larry Fraioli
Applicant

Attached: RM-2, RM-3 zoning schedules
4/13/06 memorandum EEA, Inc. re: Phase II Site Investigation

SCHEDULE OF MINIMUM REQUIREMENTS FOR RESIDENTIAL DISTRICTS
Village of Mamaroneck
(Part 3)

[Amended 9-11-1972, effective 9-27-1972; 10-25-1983 by L.L. No. 13-1983, effective 11-8-1983; 10-8-1984 by L.L. No. 23-1984, effective 10-29-1984; 5-13-1985 by L.L. No. 13-1985, effective 5-23-1985; 4-29-1986 by L.L. No. 10-1986, effective 5-8-1986; 9-14-1988 by L.L. No. 11-1988, effective 9-28-1988; 9-26-1989 by L.L. No. 17-1989, effective 10-6-1989; 11-13-2000 by L.L. No. 12-2000, effective 11-23-2000]

1	2	3	4	5	6	7	8	9	10	11	12	13	14
					Maximum Height of Principal Building		Minimum Required Yards						
District	Minimum Lot Area (square feet)	Minimum Lot Width and Frontage (feet)	Minimum Lot Depth (feet)	Minimum Habitable Floor Area (square feet)	Stories	Feet	Front (feet)	Lesser Side (feet)	2 Sides Combined (feet)	Rear (feet)	Maximum Coverage All Buildings (as percentage of lot area)	Other Requirements	Maximum Floor Area Ratio[2]
RM-2 Multiple Residence	20,000, but not less than 1,500 per dwelling unit	150	150	–	3 (3½ on wide streets)	40	25	25	50	25	30%	[1][3][4][5][11]	1.0
RM-3 Multiple Residence	20,000, but not less than 1,000 per dwelling unit	100	150	–	4 (4½ on wide streets)	50	25	25	50	30	33%	[1][3][4][6][11]	1.5
RM/SC Multiple Residence/ Senior Citizen	20,000, but not less than 300 per dwelling unit	100	100	415	3 (4½ on wide streets)	75	10	5	10	30	50%	[1][3][4][7][8][9][11]	4.0
Parking	5,000	50	–	–	2	35	Minimum of 3 feet and maximum of 20 feet, as determined by the Planning Board				10%	[3] and § 342-16. (Preceding standards apply only to P District)	—

NOTES:

5 - 30 - 2001

[1] The Planning Board may approve a site plan which increases to the total number of permissible dwelling units by 20% to provide for below-market housing in accordance with Article XV of this chapter. In addition, where at least 2/3 of a project's units are a mix of zero- and one-bedroom units, the Planning Board may grant an additional ten-percent bonus in the total number of permissible dwelling units. This bonus shall be dependent upon a finding of no seriously adverse impact upon the school district.

[2] There shall be provided a minimum of 400 square feet of usable open space per dwelling unit in the RM-1 District, 300 square feet per dwelling unit in the RM-2 District, 200 square feet per dwelling unit in the RM-3 District and, in the RM/SC District, the amount of usable open space shall be determined by the Planning Board during site plan approval. "Usable open space" shall be defined as active recreation sitting or landscaped areas open to the sky. Parking shall not be considered usable open space. On any lot containing more than 15 dwelling units, the design, layout and equipment of such open space shall be subject to Planning Board approval. Rooftop and atrium spaces that are open to all of the residents of the building may account for up to 10% of the open space requirements if the Planning Board finds that they provide usable open space. For purposes of open space calculations, an "atrium" is defined as a continuous area open to a sidewalk and street which is open and unobstructed, except for sitting and landscaped areas, to a height of at least 25 feet and whose roof and wall configuration allows natural sunlight as the main light source.

[3] No building may exceed a length of 160 feet in overall dimension in the RM-1 Zone or 185 feet in overall dimensions in the RM-2 and RM-3 Zones.

[4] The following minimum distances shall be observed between buildings on the same lot: a distance equal to the average height of such buildings at the points where such buildings are nearest each other.

[5] The least horizontal dimension of any court, at any level, shall be not less than the height of any vertical wall forming part of such court above the sills of the lowest windows served by such court, but not less than 20 feet for an outer court nor less than 40 feet for an inner court.

[6] For off-street parking and loading requirements, see Article VIII.

[7] No side yards are required between attached dwellings.

[8] On Mamaroneck Avenue and Boston Post Road, the Planning Board may approve an additional half floor if it is determined by the Board that such a half floor will not present undue bulk and height or be incompatible with the adjacent properties, and provided that such an additional half floor will not cover more than 50% of the building footprint and will be set back from at least two sides of the building at least one foot horizontally for every one foot in elevation. The latter requirement on horizontal setback may be waived by the Planning Board on any building whose setback to the street or adjacent homes exceeds the required setbacks by 50%. In the case of two or more buildings, the Planning Board may allow a full fourth floor on one of the buildings, provided that such a floor still does not exceed 50% of the footprint of all the permitted buildings.

[9] In the RM/SC Residence District, a building may have a mix of studios, one- and two-bedroom units. However, the number of two-bedroom units may not normally exceed 15% of the total dwelling units, unless the applicant can show, to the satisfaction of the Planning Board, that such units are necessary for senior citizens and will only be used exclusively by senior citizens.

[10] In the RM/SC Residence District, the following special requirements for the elderly and handicapped shall apply:

A) Walks, ramps and driveways: Gradients shall not exceed 10%; single riser grade changes in walks shall not be permitted.

B) Handrails: Handrails shall be provided as deemed necessary by the Planning Board, for the handicapped.

C) Fixtures: The size of the kitchen and bathroom and arrangement of the fixtures, accessories and trim shall be selected for and provide the maximum features of design that contribute to the safety, convenience and aid to older persons. The bathroom floor finish shall be impervious to water, have nonslip characteristics and slope inward. The threshold shall be flush with the floor. Doors of all rooms shall be of sufficient width, at least two feet 10 inches, to accommodate wheelchairs and persons on crutches.

D) Elevators: Elevator service shall be provided to all floors.

[11] Every accessory building or structure shall conform in all respects to the minimum front and side yard setbacks applicable to the lot in question and shall not be located closer than six feet to the rear lot line.

[12] The maximum floor area ratio provisions shall not apply to additions to existing single-family residences where at least 20% of the existing structure is retained and the footprint of the structure is not increased.

cc: Board of Trustees, Tim Miller, Tom Yardley, Larry Fraioli, Village Manager, Village Attorney, Building Inspector, Paul Noto

Westchester gov.com

Letter #2

Andrew J. Spano
County Executive

County Planning Board

April 20, 2006

Agostino A. Fusco, Clerk-Treasurer
Village of Mamaroneck
123 Mamaroneck Avenue
Mamaroneck, New York 10543

Subject: **Referral File No. MMV 06-010 – Sheldrake River Project/Estates Condominium Zoning Map Amendment; Site Plan Application Draft Environmental Impact Statement**

Dear Mr. Fusco:

The Westchester County Planning Board has received a copy of a draft Environmental Impact Statement (EIS), dated accepted March 13, 2006, prepared pursuant to the New York State Environmental Quality Review Act (SEQR) for the above referenced set of proposed actions.

The applicant requests the Village Board of Trustees to rezone 1.75 acres of a 2.31-acre site from M-1 Manufacturing to RM-3, a designation which permits multi-family dwellings. The remaining 0.56 acres of the site is currently zoned R-4F and would retain that designation. Based on the new zoning, the applicant requests the Village Planning Board to grant site plan approval for the construction of 114 condominium units on the site.

The site, formerly the location of a commercial auto wrecking and salvage business, is located at the southern end of the Washingtonville neighborhood, south of Waverly Avenue. The main section of the lot is a rectangle approximately 700 feet long and 100 feet wide, located behind existing residential dwellings with frontage on the south side of Waverly Avenue. Two stub sections extend north to provide frontage for the site on Waverly Avenue in two locations - 57 feet of frontage directly opposite the intersection of Waverly Avenue and Plaza Avenue and 150 feet of frontage beginning 350 feet to the east. The west and south property lines abut the Sheldrake River over a length of 840 feet. The east property line abuts a parking lot for an adjacent commercial property and East Plaza Avenue, a Village-owned alley connecting to Mamaroneck Avenue.

As described in the draft EIS, the proposed development would consist of three 4-story main buildings (height of 49 feet), positioned parallel to the Sheldrake River, each containing 36 residential units, constructed over a grade level parking lot. These buildings would be located on the portion of the site that would be rezoned to RM-3. Of these 108 units, 72 would be one-bedroom units and 36 would be two-bedroom units. In addition, six 3-bedroom townhouse units (height of 33 feet) would be constructed in two facing buildings located perpendicular to Waverly Avenue on the portion of the site

zoned R-4F. Each unit would have a garage at grade level and two stories above of living space. The three existing residential buildings now located in this area would be demolished. On-site parking would total 196 spaces.

Vehicular access would be via a one-way pattern with the entrance driveway located at the intersection of Plaza and Waverly Avenues and the exit driveway located along the site's other frontage on Waverly, positioned between the two proposed townhouse buildings. East Plaza Avenue, a 16-foot wide alley to the east of the site, is proposed to be utilized as an emergency access route and as a pedestrian connection to Mamaroneck Avenue and the Metro-North New Haven Line train station, which is a short walk away.

We have reviewed the draft environmental impact statement under the provisions of Section 239 L, M and N of the General Municipal Law and Section 277.61 of the County Administrative Code and have the following comments:

1. **Proposed rezoning.** The draft EIS states that "the proposed RM-3 zoning would be compatible and consistent with the adjoining R4-F zoning located nearby." While both districts permit more than one dwelling unit per residential building, the district regulations vary significantly in limits set on maximum density and building dimensions. We recommend that the Village take a hard look at the subject of compatibility and consider potential long-term impacts on development trends in the adjacent area. Our observations of three important aspects follow:

a. DENSITY The R4-F District permits detached structures with up to four dwelling units in each structure provided that 2,500 square feet of lot area is provided for each unit. The six proposed townhomes shown on the site plan are designed in accordance with this standard, occupying 15,000 square feet of the tract (the portion of the site classified RF-4 adjacent to Waverly Avenue).

The remainder of the site, if rezoned to RM-3, would have a permitted density 2.5 times greater than the maximum density permitted within the R4-F District. (The RM-3 requires that only 1,000 square feet of lot area be provided per dwelling unit.) This increased density would be permitted at the rear of the lower density dwellings fronting on Waverly Avenue. Access for residents of the higher density area would be via driveways built through the lower density zone.

b. BUILDING HEIGHT AND BULK The three proposed multi-family buildings would create a 50-foot wall (a height equivalent to five stories) over a length of 500 feet behind the residences that front on Waverly Avenue. The existing residences are generally two or three stories tall. The Washingtonville neighborhood today has a residential character with buildings of uniform height and size in the blocks north of Waverly Avenue. The proposed taller building heights, coupled with the larger bulk of the buildings, may conflict with the scale of the neighborhood.

c. ADJACENT LAND USES The draft EIS notes that manufacturing uses abut the property directly to the west, east and south. When the Washingtonville neighborhood is viewed as a whole, the proposed rezoning would place the highest residential density in the neighborhood

immediately up against these manufacturing uses. The Village should consider how such a rezoning relates to future planning and development objectives and policies for the wider area around the project site – both the residential area to the north and the non-residential area to the south. Any rezoning action for the subject site should implement a long-term planning vision, not simply a site specific development request.

2. **Conformity with zoning regulations**. In our review of the draft EIS, we could not understand how the applicant has applied the Village's zoning regulations. We have the following observations:

a. MAXIMUM DENSITY If 1.75 acres of the site is rezoned to RM-3, the zoning would appear to permit a maximum of 76 dwelling units (76,230 square feet/1,000 square feet per unit). The zoning table shown on page 3.1-5 of the draft EIS indicates that the RM-3 zoning would permit 93 units and notes that the construction of 108 dwelling units in the three multi-family buildings is proposed.

b. BONUS DENSITY The zoning table shown on page 3.1-5 also indicates that a 20% density bonus for inclusion of affordable units may be applied so as to increase the maximum number of units up to 111. However, the draft EIS states that no affordable units are proposed as part of this development.

c. SETBACKS The zoning regulations establish minimum setbacks from property lines; some are identified in the zoning table shown on page 3.1-5. However, even though the draft EIS text states that all requirements are met, the included site plan shows that the setback requirements are not met. In fact, in one area along the center of the site's southern border, the site plan shows a portion of the proposed parking lot and stormwater collection system to be constructed across the property line and up to eight feet into the adjacent lot.

3. **Stormwater management**. The draft EIS states that the required stormwater pollution prevention plan will "control stormwater flow rates and remove pollutants from stormwater after the site has been stabilized." However, the stormwater pollution prevention plan in the draft EIS, titled "Stormwater Pollution Prevention Program for Construction Activities," dated February 2006, by Bohler Engineering, is focused exclusively on controlling polluted stormwater runoff during construction. Neither the draft EIS nor the site development plans show any post-construction stormwater management practices that would protect water quality by controlling stormwater runoff after construction. In fact, the site plan drawings show surface catch basins that would collect polluted stormwater runoff from driveway, parking and building surfaces and discharge this runoff, untreated, directly into the Sheldrake River, which drains into the Mamaroneck River and Long Island Sound.

The direct discharge of untreated polluted stormwater runoff directly into a watercourse runs counter to water quality protection and stormwater management guidelines, policies and regulations, including the "New York State Stormwater Management Design Manual" and "Controlling Polluted Stormwater: A Management Plan for the Sheldrake and Mamaroneck Rivers and Mamaroneck Harbor," dated January 2001, which was endorsed by the Village Board of Trustees on March 26, 2001.

The Village should require that an adequate plan for treatment of stormwater be prepared consistent with NYS and local requirements and guidelines.

4. **County drainage channel.** The Sheldrake River is a regulated Westchester County drainage channel. A County Stream Control Permit will be required from the Westchester County Department of Public Works (WCDPW) as part of the approval process for this project. We note that WCDPW is not listed as an involved or interested agency as part of this environmental review. The Village must direct the applicant to coordinate with WCDPW to obtain the proper reviews and approval.

5. **Sewage flows.** The proposed development will increase sewage flows from this site into the existing infrastructure. The increased flow will add to the volume of sewage flow requiring treatment at one of the sewage treatment plants operated by Westchester County. As a matter of policy, Westchester County recommends that local municipalities require developers to propose measures that can offset the projected increase in flow. The best means to do so is through reductions in inflow/infiltration (I&I). The NYS Department of Environmental Conservation requires an offset on a three for one ratio as part of sewer extension approvals; this should be the preferred target for all offsets.

6. **Provision of affordable housing units.** ***Patterns for Westchester***, the County Planning Board's long-range land use policy document, and the ***Westchester County Affordable Housing Needs Assessment*** call for the provision of a range of housing types that are affordable to various levels of incomes. As noted above, the draft EIS states that none of the development's units would be set aside as affordable. We encourage the Village to consider requiring a set percentage of affordable units as part of its zoning requirements so as to help meet the need for affordable housing. In order for such units to be considered in meeting the Village's fair share allocation target, the units must be affordable to a family at or below 80% of area median income for no less than 40 years.

7. **Pedestrian access.** The draft EIS states that proposed pedestrian improvements on the site would include a sidewalk along the landscaped buffer of the Sheldrake River, possible sidewalks along the site's driveways with Waverly Avenue and the use of East Plaza Avenue as a pedestrian access point to Mamaroneck Avenue. In addition, the draft EIS states that an internal sidewalk could be provided. We note with concern that none of these facilities are shown on the site plan drawings. Since the site appears to be built out almost to the limits of the property lines, it is unclear where they would be placed.

Especially in consideration of the fact that the east end of the site is 300 feet west of Mamaroneck Avenue and that the Mamaroneck train station is only slightly farther east of Mamaroneck Avenue, the proposed project should be required to incorporate as many facilities as possible to facilitate pedestrian movements. The proposed pedestrian facilities described in the draft EIS would help address that objective. The Village should require that the site plan be revised to incorporate such facilities.

Similarly, the site plan should be required to be revised to provide the proposed walkway along the Sheldrake River, which the draft EIS states could be open to public access. We strongly support this concept as it could serve as an amenity for all area residents. Furthermore, as land uses in the area

change over time, additional opportunities should open up that will permit other segments of walkways along the Sheldrake River to be constructed. This development could set the precedent for public access to the Sheldrake River.

8. **Vehicular circulation.** The proposed vehicular circulation plan does not appear to be optimally designed. All vehicles would be required to enter the site using the driveway opposite Plaza Avenue, which would be designated as one-way, even though it would have a width of 24 feet, which is typically used for 2-way traffic. Vehicles would then be required to go underneath the multi-family buildings before getting to any other part of the site, which could raise an issue for trucks (such as moving trucks) which may be taller than the clearance for this area. After circulating through the site, all traffic would have to exit the site through the driveway between the townhouse buildings through a one-way exit. We note that the townhouse residents, despite living along Waverly Avenue, would have to follow the same pattern as everyone else and enter the site opposite Plaza Avenue. In addition, because the overflow parking for the development is located at the entrance by Plaza Avenue (which is one-way in), any vehicle seeking to park in an overflow spot after finding the rest of the parking to be full would have to exit back out onto Waverly Avenue, then turn onto Mamaroneck Avenue and circle back around to Plaza Avenue to access these parking spaces.

Thank you for the opportunity to comment on this matter.

Respectfully,
WESTCHESTER COUNTY PLANNING BOARD

By:
Edward Buroughs, AICP
Deputy Commissioner

EEB/LH

cc: Angelo Sgobbo, Senior Engineer, County Department of Public Works
Pat Farracane, Region 3, NYS Department of Environmental Conservation

EEA *Inc.*

Environmental Consultants
To Industry And Government

55 Hilton Avenue
Garden City, New York 11530

Telephone (516) 746-4400
(212) 227-3200

MEMORANDUM

Letter #3

TO: Tom Yardley
BFJ Planning

DATE: April 13, 2006

FROM: Allen Serper
EEA, Inc.

SUBJECT: Review of Phase II Subsurface Investigation – Blood Brothers Auto Wreckers Property, Mamaroneck, New York Prepared by Tim Miller Associates, Inc.

I have reviewed the Phase II Investigation for the subject property. The report and the investigation appeared to be conducted in a professional manner. The results are consistent. However, the following are my concerns:

- Only one groundwater sample was obtained and this sample was above the New York State Department of Environmental Conservation (NYSDEC) cleanup standards for VOCs. The NYSDEC may require groundwater remediation. The statement that the protection of the groundwater is not of "primary consideration" may not be the sentiment of the NYSDEC.

- Additional groundwater samples and soil borings should be conducted at the site and submitted for review to the NYSDEC. The NYSDEC would decide on the need for remediation.

DRAFT

Letter #4

April 19, 2006

Mr. Phillip Trifiletti, Mayor
Village of Mamaroneck
19 Mamaroneck Avenue
Mamaroneck, New York 10563

Re: Draft Environmental Impact Statement
Sheldrake Estates

Dear Mr. Trifiletti:

The Westchester County Health Department has reviewed the Draft Environmental Impact Statement (DEIS) for the Sheldrake Estates Condominium dated March 13, 2006. We understand this document was prepared in support of the rezoning petition. Our comments on this document relate to environmental issues, specifically water supply, sanitary sewage and hazardous materials.

Since this project will be in the condominium form of ownership, the Westchester County Sanitary Code requires that the water distribution system and sanitary collection system be publicly owned, with appropriate easements granted as needed. A plan showing the proposed onsite utilities and their connection to existing utilities should be provided.

Water Supply
There should be an in-depth discussion of the proposed water supply system for the project. This should include an analysis of the proposed water demand, both for domestic and irrigation uses; the capacity of the existing water system; and a conclusion of the ability of the public water system to serve this project. Verification from the Westchester Joint Water Works regarding existing system capacity and demand is required.

Sanitary Sewage
The DEIS states that the existing sanitary sewer in Waverly Avenue does not have the capacity to serve this project, then briefly discusses proposed alternates to the use of this sewer. This discussion must be expanded to include the proposed sanitary flows from the project; the capacity of the existing sewers surrounding the project, including average and peak daily flows; and a more thorough analysis of the proposed alternatives. At a minimum, a map showing the proposed routes should be provided.

Existing Environmental Conditions on Site

The DEIS states that former uses of this site have resulted in the deposition of petroleum products and mentions that a work plan will be prepared and approved by the DEC prior to removal of these products. A copy of the DEC approved work plan should be provided, and the locations of on-site contamination relative to building locations must be shown.

If you have any questions please call me at 914-813-5155. Thank you for the opportunity to comment.

Very truly yours,

Louise Carosi Doyle, P.E.
Associate Engineer
Bureau of Environmental Quality

Cc: Ed Burroughs, WC Planning
File

cc: Tim Miller, Paul Noto, Tom Yardley, Larry Fraioli, Building Inspector

doris erdman AIA
REGISTERED ARCHITECT
ARCHITECTURE/SPACE PLANNING

1013 SEVEN OAKS LANE MAMARONECK, N Y

Letter #5

Mayor Philip Triffiletti and Members of the Board of Trustees

Re:Proposed Project on Former Blood Brothers Property

April 18.2006

Gentlemen:

As a result of the proposed major expansion of Beach & Tennis and the resultant public outcry with regard to its effect on the harbor, the board of trustees revisited and ultimately revised Chapter 240, Management of Coastal Zone, Harbor and Watercraft. At that time I was the chair of the Planning Board and it fell to my board to work on the revision for the trustees.

A most significant feature of that revision was the inclusion of all Mamaroneck Village waterways feeding into the harbor, in the stipulation that no construction would be permitted within 50 feet of such waterways. The original revision was written with a 100 foot requirement, but due to the reluctance of one then board member, it was necessary to compromise at 50 feet to get the measure passed.

Now I find that a special permit to bypass this requirement has been proposed by the developers of this project as noted in their DEIS (2-6). To allow this would fly in the face of all that this administration and the prior ones have done to ameliorate the situation at the harbor, to say nothing of the work done on the section of the Sheldrake River passing through Columbus Park just upstream and almost adjacent to this proposed project. Hundreds of thousands of dollars were spent on this restoration both by the county and our village.

Only the preservation of that 50 foot strip and the restoration of any impervious surface lying in it can be consistent with the principals and aims that this administration has espoused in its championing and stewardship of our harbor and our waterways.

Doris Erdman
Past Chair Planning Board

PAUL A. RYAN
139 WAVERLY AVE.
MAMARONECK, NY 10543

Memorandum

To: Clerk Treasurer A. Fusco, Village of Mamaroneck

From: Paul A. Ryan

Date: April 19, 2006

Re: SHELDRAKE ESTATES - D.E.I.S. Comments

The following comments and questions with the appropriate answers to be included in the F.E.I.S. for this Project

1) Under Land Use, Zoning and Public Policy, the applicant refers several times to the Project being an "incompatible use". The word incompatible in this context is used repeatedly throughout the DEIS. According to the Zoning Code of the Village, I believe that this should read "prohibited use". Junk yard was grandfathered but is not permitted now on this site due to its not being used for this purpose for more than six months.

2) Pg1-2 refers to 6" concrete slab (presumably over 95% of the land). When was this slab constructed? According to the Sanborn Maps, this land was undeveloped until at least 1954 – ie. no concrete slab. Local residents have told me that this junk yard was put up prior to I95 being built. Is it very possible that this site was used as a junkyard for many years before the slab was built? Therefore, could there be a strong possibility of toxic substances buried below the slab.

3) DEIS states that 70% of site will be impermeable surfaces after construction with no post construction measures to control flow of oil, grease and other residue of residents' and guests' automobiles into the Sheldrake River and on to LIS. - I do agree that the use of traps and

other retention basin types of anti-pollution devices are sometimes worse than worthless. However, applicant must do something to prevent these byproducts from entering the River. To say that it will be better than a junkyard is not enough.

4) Applicant talks about getting a waiver of the 50' buffer to make this project viable for him. In all actuality, it should be a 100' buffer. A minimum 50' buffer would permit the construction of a berm with topsoil to prevent runoff into the Sheldrake. However, given the lat topography of the site with gradual sloping to the River, a 100' buffer would be much more environmentally sound to prevent silting of the River and Mamaroneck Harbor.

5) Project will be approximately 50' above ground level. A shadow diagram would be appreciated to determine what impact this project would have on the adjoining houses on both sides of Waverly Avenue.

6) In section 3-2-6, applicant states that " erosion will be controlled by pavement". Please explain. Does it not hold true that the erosion will morph into urbanized runoff into the River?

7) No borings were done near the Sheldrake bank. Please explain reasoning.

8) Only 10 borings were done on 1.58 acres. Except for three borings, all were clustered around Crusher. Please explain rationale for not spacing out borings evenly over the total area of the site.

9) If there are contaminants under the concrete slab, will they not (by virtue of land slopes mentioned in DEIS) leach into the Sheldrake?

10) #1-4 talks about traffic . The intersection of Waverly and Mam'k Avenue is already an "F" intersection. The project proposes to add 47 cars in the peak morning hours. THIS IS A 10% INCREASE. Also, by their own admission, it will add approximately 30 seconds to the time to get through the intersection (from 58.75 secs to 81.75 secs in AM. PM would go from 16.86 secs to 22.29 secs.). Is taking an "F" intersection and making it much worse what one would call unavoidable since there is no designation worse than an "F".

11) Flooding is a very serious problem in this area. Even a "33 year storm" such as we had in 1975 will flood the proposed site completely, thereby making it impossible for emergency vehicles to reach the site - either from Waverly Ave or from East Plaza. Please address.

12) Flooding will also severely limit the ability of either storm water or sanitary sewers to handle the current load - much less the load from an additional 116 families. Will the project be sloped towards the center of the property so no storm water goes out onto Waverly Ave? Also, will the applicant commit to building a new sanitary sewer out to Mamaroneck Avenue.

13) DEIS states that Lower Westchester in general and Mamaroneck Village is in need of more housing. My feeling is that this is pure nonsense. What this Village does not need is more luxury housing. What this Village does need is more below market rate housing. What will applicant do to regarding this need on this site (and others he is planning in Mamaroneck)? Will the Applicant commit to 10% below market rate units?

14) Construction vehicles are too heavy to make weight limits on Waverly Avenue Bridge. How will applicant gain access to the site? Would applicant be willing to foot the bill to strengthen this bridge and save the taxpayers the expense?

15) Waverly Avenue is too narrow and crowded to comfortably take any more traffic from this site. Entrance to site could be from Plaza Avenue but an exit further down Waverly would be an undue burden on Waverly Avenue residents. It would be much better to exit the site via East Plaza or even Hoyt Avenue. Please comment.

Respectfully submitted,

/s/
Paul A. Ryan

cc/Tim Miller, Paul Noto, Tom Yardley, Building Inspector, Village Manager, Planning Board Chair

SHELDRAKE ENVIRONMENTAL CENTER

685 Weaver Street, Larchmont NY 10538
Tel: 914-834-1443 Fax: 914-834-1447
sheldrakecenter@verizon.net
www.sheldrakecenter.org

Letter #7

Mayor and Trustees
Village of Mamaroneck
123 Mamaroneck Avenue
Mamaroneck, NY 10543

April 17, 2006

RE: Sheldrake Estates DEIS

Dear Mayor Trifiletti, Trustees Angilletta, Paonessa and Vozza, and Murphy:

The Board of Directors of the Sheldrake Environmental Center supports the change of use of the Waverly Avenue site, formerly the place of business of Blood Brother's Auto Wreckers, to an RM-2 residential zone, smaller in density than that requested by the developer.

We also ask that The Village of Mamaroneck stand by the Planning Board Coastal Zone regulations to limit construction of a structure within 50' ft. of a waterway feeding Long Island Sound.

This determination, made from an environmental standpoint only, will give the Village an opportunity to improve the environmental quality of the site and in doing so, the quality of the water in Mamaroneck Harbor and Long Island Sound.

However, the layout and size of this residential project as currently proposed will likely have a negative effect on water quality, flood control and public access. We urge the Village to require the developer to establish a "river walk corridor," with a minimum of a 65' natural stream buffer along the Sheldrake River. This small addition to the project will address all three issues:

- It will provide a natural buffer to filter storm water before it reaches the Sheldrake River;
- Using a natural riverbank edge along with a naturally planted buffer will provide adequate flood control; and
- It keeps open the future option of a linear park connection from Mamaroneck Harbor to the upland natural habitat of the Sheldrake River Watershed.

Development of the Waverly Avenue site presents the chance to move forward with important open space and water quality initiatives. The trail plan is an integral part of the Village of Mamaroneck, the Town of Mamaroneck and the Westchester County Department of Planning's stated goal of restoring stream buffers and reducing storm water pollution and flooding [1]. It is also aligned with the expressed goal of increasing public access to local waterways and creating linear parks with existing parks and trails [2].

Currently, much of the right-of-way exists to complete a trail connection to the Lower Westchester Greenway Trail System from Mamaroneck Harbor, but a few additional easements are needed. These gaps exist on Waverly Avenue in the Village of Mamaroneck industrial zone – specifically, the former Blood Brother's Auto Wreckers property, the Suburban Carting waste transfer station and a small strip of parking in Phillips Park. This is a wonderful opportunity to get closer to our communities' stated goals in this area. Without incorporating a sufficient and

appropriate stream buffer, any plans to develop the Waverly Avenue site will likely negate the chance to create this trail in the future and we will miss an important opportunity to improve the long-term health of the Sheldrake River and subsequently, Long Island Sound.

Given the environmental goals of the Village Board and the residents of the Village, we urge you to seize the opportunity to send a strong message to the community about your commitment to improving the health of the Sheldrake River and the Mamaroneck Harbor. Sheldrake Environmental Center looks forward to working with you on this important undertaking for our community and to future occasions to comment on the proposed development on Waverly Avenue.

Respectfully submitted,

Marie R. Venezia

Marie R. Venezia
Executive Director

cc: Village of Mamaroneck Planning Board
Village of Mamaroneck Zoning Board
Committee for the Environment
Paul J. Noto, Esq.

1. *Controlling Polluted Stormwater, A Management Plan for the Sheldrake and Mamaroneck Rivers and Mamaroneck Harbor.* Watershed Advisory Committee 4, Westchester County Department of Planning. January, 2001. Sec.1 Stream Assessment and Restoration, pg. 81-82.

2. *Westchester County Department of Planning Open Space Policies.*
Policy 3. Linkages
• It shall be the policy of the County to continue to provide open space linkages that form a connected system of parklands in the tradition of Westchester's major parks, parkways and regional trail system.
Priorities:
• Properties which create or enhance linkages or linear parks between communities, or serve as open space routes connecting state, county or municipal parks for pedestrians, bicyclists, or similar uses.
www.westchestergov.com/planning/default.htm

Jon

From: Roseann Denaro [rdenaro@vomny.org]
Sent: Thursday, April 20, 2006 12:10 PM
To: 'jdahlgren@timmillerassociates.com'; 'PAULNOTOESQ@MSN.COM'; 'Tom Yardley'; 'realtymanage@aol.com'; Richard Carroll
Subject: FW: The Village of Mamaroneck Water Quality CommitteeRequestsYour Comments

-----Original Message-----
From: Len Verrastro
Sent: Thursday, April 20, 2006 11:35 AM
To: Roseann Denaro
Subject: FW: The Village of Mamaroneck Water Quality CommitteeRequestsYour Comments

Ro,
I was not sure if you had received this from Phil.

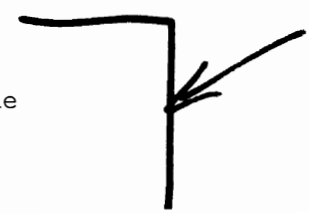
Lenny

-----Original Message-----
From: Radow, Elisabeth [mailto:ERadow@cuddyfeder.com]
Sent: Thursday, April 20, 2006 11:18 AM
To: Phil Trifiletti
Cc: Len Verrastro
Subject: FW: The Village of Mamaroneck Water Quality CommitteeRequestsYour Comments

Mayor, Please provide this information to The Board of Trustees as part of the public comment. Thanks very much.
Elisabeth Radow
On behalf of the Water Quality Committee.

-----Original Message-----
From: Dennis Mildner [mailto:DMildner@dos.state.ny.us]
Sent: Thursday, April 20, 2006 10:15 AM
To: Jleitner@ambientgroup.com; aliceworks@aol.com; BigAD1@aol.com; Cld637shy@aol.com; DSEarchplan@aol.com; ggpp703@aol.com; KAJIM2@aol.com; ottingers@aol.com; paulr10383@aol.com; latimeg@assembly.state.ny.us; gschief@bkskarch.com; Radow, Elisabeth; Steven Resler; douglasgould@douglasgould.com; tedesco.mark@epamail.epa.gov; david.voneiff@gmail.com; lsmeyers@gw.dec.state.ny.us; mxgeorge@gw.dec.state.ny.us; joanheilman@hotmail.com; saraheg@optonline.com; alexschief@optonline.net; EWolff80@optonline.net; raresty@optonline.net; rdm12@optonline.net; Leicht@prism-ny.com; cwachs@rightbraindesign-ny.com; conservationdept@townofmamaroneck.org; pwittner@townofmamaroneck.org; tanders124@verizon.net; aml4@westchestergov.com; ceo@westchestergov.com; eel4@westchestergov.com; gms2@westchestergov.com; gtd1@westchestergov.com; JAMG@westchestergov.com; mmL7@westchestergov.com; rff3@westchestergov.com; sad8@westchestergov.com; sdc4@westchestergov.com; jsheehan@woodardcurran.com
Cc: REALTYMANAGE@aol.com; jemelanc@gw.dec.state.ny.us; alterego2@optonline.net; philt@us.ibm.com; ryamuder@villageofmamaroneck.org; lverrastro@vomny.org; helen.rosenberg@westhab.org
Subject: Re: The Village of Mamaroneck Water Quality CommitteeRequestsYour Comments

Additionally, the Village and others involved should keep in mind the



report titled Controlling Polluted Stormwater: A Management Plan for the Sheldrake and Mamaroneck Rivers, the product of a two-year effort to improve water quality in the watersheds of these rivers and the harbor http://www.westchestergov.com/PLANNING/environmental/wac4report/WAC4report.htm
; and Westchester County's ongoing Clean Water / Clean Air Bond Act project to improve water quality and habitat at multiple locations on the Shelrdrake River.

Dennis Mildner
NYSDOS/Division of Coastal Resources

>>> "Leonard Meyerson" <lsmeyers@gw.dec.state.ny.us> 4/14/2006 11:20:06 AM >>>
I want to remind the Village that under MS4 requirements, the discharge of pollutants (fecal coliform) through Village storm sewers must be addressed under this new permit that will be a legal requirement when this general SPDES Permit becomes enforceable in less than 2 years.

Lenny Meyerson
Regional Water Engineer

>>> "Radow, Elisabeth" <ERadow@cuddyfeder.com> 04/14/06 10:04 AM >>>

April 12, 2006

At its meeting on Monday, April 10th the Board of Trustees of Mamaroneck Village invited the public to make comments within the 10 days after the meeting in connection with the proposed construction of 114 new residential housing units on the former Blood Brothers site, a long, narrow stretch of land along the Sheldrake River. The Village's Water Quality Committee requests your input during this comment period by making a response directly to The Village of Mamaroneck Board of Trustees c/o Village Hall, 123 Mamaroneck Avenue, Mamaroneck, NY 10543 with your reasons, in support of, or not in support of, this development and suggestions for what would make it a viable project.

In addition, please provide to my attention and to the Village Board of Trustees any information you have updating the 2000 Westchester County Health Department study which disclosed unacceptably high levels of coliform and fecal coliform bacteria in the Sheldrake River, immediately adjacent to the Blood Brothers site. This so-called "hot spot" contributed to the closure of the public beach at Harbor Island which fronts on the Long Island Sound. If no current updated information is available, it is recommended by the Village's Water Quality Committee that water testing be performed at this time, both before and after rainfall, to determine whether a continuing pollution/ health safety condition exists in the river water at this location. Such water testing would be prudent in light of the contemplated residential development.

In addition, comments are welcome regarding the protocol for a developer to add to sewer capacity and not unduly tax the existing storm water and sanitary sewer lines.

Thank you in advance for your time and interest in responding to this request.

Sincerely,
Elisabeth Radow, Chairwoman
Village of Mamaroneck Water Quality Committee

(eradow@cuddyfeder.com)

****

Jon

From: Roseann Denaro [rdenaro@vomny.org]
Sent: Thursday, April 20, 2006 9:56 AM
To: 'jdahlgren@timmillerassociates.com'; 'PAULNOTOESQ@MSN.COM'; 'Tom Yardley'; 'realtymanage@aol.com'
Subject: FW: Comments For The Village Board Of Trustees

-----Original Message-----
From: Len Verrastro
Sent: Thursday, April 20, 2006 9:53 AM
To: Roseann Denaro
Cc: Augie Fusco
Subject: FW: Comments For The Village Board Of Trustees

-----Original Message-----
From: Radow, Elisabeth [mailto:ERadow@cuddyfeder.com]
Sent: Thursday, April 20, 2006 9:39 AM
To: Phil Trifiletti
Cc: Cld637shy@aol.com; KAJIM2@aol.com; Sarah Evans; DSEarchplan@aol.com; tanders124@verizon.net; david.voneiff@gmail.com; Len Verrastro; ryamuder@villageofmamaroneck.org
Subject: Comments For The Village Board Of Trustees

April 20, 2006

Good Morning Mayor:

In addition to the comments forwarded to you yesterday from Phyllis Wittner regarding the 1992 study of the Sheldrake River by Robert Hohberg, entitled "Industrial Reaches of the Sheldrake River," it has come to my attention that there exists a summary of the Westchester County Health Department water sampling data with respect to testing done near the Blood Brothers' site (Our Committee can provide the Village with a copy). There is also a study performed in 1994 by Baker Engineering, entitled "Sanitary Sewer Evaluation Study" (SSES); it is my understanding a copy of this document is at Village Hall.

In connection with the proposed development at the Blood Brothers' site, it is the recommendation of the Water Quality Committee that Woodard & Curran, the independent engineering firm familiar which has previously performed work for the Village, review and analyze this data which collectively provides a benchmark for the current conditions.

This request is in addition to the prior recommendation that current water testing be done at this site, both before and after rainfall.

Please pass along this information to the Village of Mamaroneck Board of Trustees in connection with the Board's invitation to receive comments on the proposed development from the public.

Thank you,
Elisabeth Radow
On Behalf of the Water Quality Committee

Jon

From: Roseann Denaro [rdenaro@vomny.org]
Sent: Tuesday, April 18, 2006 2:20 PM
To: 'jdahlgren@timmillerassociates.com'; 'PAULNOTOESQ@MSN.COM'; 'Tom Yardley'; Len Verrastro
Subject: FW: Blood Brothers

From: MURPHY365@aol.com [mailto:MURPHY365@aol.com]
Sent: Tuesday, April 18, 2006 2:05 PM
To: rdenaro@vomny.org
Cc: f-fish@peapc.com; lverrastro@vomny.org
Subject: Blood Brothers

Hi Roseanne,
I am writing to give you some written comments on the record for the DEIS on the Blood Brothers site. Please distribute these comments in the normal trustee mail and have the applicant receive them also.
Thanks
Tom

1) The applicant should perform traffic speed runs down Waverly Ave. during the peak flow periods.

2) There should be a traffic comparison between current conditions and as built conditions for RM-2 zoning. And compare and contrast the differences between the RM-3 and RM-2 traffic studies.

3) If the applicant has to hook up the projects sanitary sewer lines to the county trunk line who will bear this cost, the applicant or the Village?

4) To achieve a RM-3 zoning designation is the applicant willing to set aside a certain percentage of the units as affordable units for volunteer firefighters or Village employees?

Jon

From: Tom Yardley [T.Yardley@bfjplanning.com]

Sent: Wednesday, April 19, 2006 10:53 AM

To: Roseann Denaro

Cc: PAULNOTOESQ@MSN.COM; Bob Galvin; Frank Fish; jdahlgren@timmillerassociates.com; realtymanage@aol.com

Subject: Blood Brother's

Roseann,
One further comment – courtesy of Bob Galvin – p.2-6 Description of the Proposed Action – states "All units are planned as market rate residences." This conflicts with Table 3.1-2 which includes a 20% bonus for below-market rate units. This discrepancy should be resolved.

Regards,

Tom Yardley
Associate

BFJ Planning
115 FIFTH AVENUE
NEW YORK, NY 10003
T 212.353.7484
F 212 353 7494
E t.yardley@bfjplanning.com

WWW.BFJPLANNING.COM

JON

Letter #14

From: Roseann Denaro [rdenaro@vomny.org]
Sent: Thursday, April 20, 2006 12:42 PM
To: 'jdahigren@timmillerassociates.com'; 'PAULNOTOESQ@MSN.COM'; 'Tom Yardley'; realty manage@aol.com'; Len Verrastro; Phil Trifiletti; **Bill Paonessa; 'JoeAngilletta@optonline. net; Tony Vozza; Tom Murphy; Richard Carroll**
Subject: FW: The Village of Mamaroneck Water Quality Committee RequestsYour Comments

Original Message ------
From: cwachs [mailto:cwachs@rightbraindesign-ny.com] Sent:
Thursday, April 20, 2006 12:25 PM
To: rdenaro@vomny.org; Mayor Trifiletti
Cc: <gtdl@westchestergov.com>; <BigADI@aol.com>; Steven Resler;
<gms2@westchestergov.com>; <JAMG@westchestergov.com>; <sad8@westchestergov.com>;
<KAJIM2@aol.com>; <ceo@westchestergov.com>; <saraheg@optonline.com>; Christie Derrico;
<tedesco.mark@epamail.epa.gov>; <DSEarchplan@aol.com>; Dennis Mildner;
<philt@us.ibm.com>; <aml4@westchestergov.com>; <david.voneiff@gmail.com>;
<douglasgould@douglasgould.com>; <rdml2@optonline.net>;
<latimeg@assembly.state.ny.us>; <alterego2@optonline.net>;
<ryamuder@villageofmamaroneck.org>; <aliceworks@aol.com>; <rff3@westchestergov.com>;
<ottingers@aol.com>; <gschief@bkskarch.com>; <eel4@westchestergov.com>; <Leicht@prism-
ny.com>; <sdc4@westchestergov.com>; <EWolff80@optonline.net>;
<conservationdept@townofmamaroneck.org>; <jemelanc@gw.dec.state.ny.us>;
<ggpp703@aol.com>; <paulrl0383@aol.com>; <joanheilman@hotmail.com>;
<ERadow@cuddyfeder.com>; <lverrastro@vomny.org>; <jsheehan@woodardcurran.com>;
<raresty@optonline.net>; <Jleitner@ambientgroup.com>; <alexschief@optonline.net>;
<mxgeorge@gw.dec.state.ny.us>; <tanders124@verizon.net>; <REALTYMANAGE@aol.com>;
<lsmeyers@gw.dec.state.ny.us>; <pwittner@townofmamaroneck.org>;
<helen.rosenberg@westhab.org>; <mmL7@westchestergov.com>
Subject: Re: The Village of Mamaroneck Water Quality Committee RequestsYour Comments

Regarding the Blood Brothers site development, I am concerned about the additional stormwater flow into the Sheldrake and the already overburdened and cracked sewer pipes. New Rochelle, which has similar problems, requires the developer to pitch in money to help fix their aging sewer lines.] PD

Additionally, the soil there is said to be contaminated. Who will test and remediate the property? Care must be taken not to release the contaminated soil into the river.] Hazmat

Catherine Wachs
Environment Committee Chair
League of Women Voters of Larchmont/ Mamaroneck

Letter #15

Jon

From: Len Verrastro [lverrastro@vomny.org]
Sent: Wednesday, April 19, 2006 6:18 PM
To: 'Tom Yardley'; Roseann Denaro
Cc: PAULNOTOESQ@MSN.COM; jdahlgren@timmillerassociates.com; Frank Fish; Georges Jacquemart; realtymanage@aol.com; Phil Trifiletti; Steve Altieri; 'PaulR10383@aol.com'
Subject: RE: BFJ Comments on Blood Bros DEIS

Tom,

Another concern that has been raised is the routing of the construction traffic to the site down Center Ave. onto Plaza Ave. into the site in order to avoid the Waverly Ave. Bridge. Under the current Village Code, trucks are not permitted on Center Ave. from Old White Plains Roard to Plaza Avenue.

Perhaps a better solution would be to have the developer meet with Town and Village of Mamaroneck Village offcials to see what if anything can be done in connection with the reconstruction project of the bridge being planned by the Town to upgrade the weight limit of the bridge with some sort of a public/private agreement to share in the cost.

In addition, there is damage to the retaining walls on either side of the bridge which must be repaired by the private property owners, one of which is the owner of the Blood Brothers site.

I believe that this issue needs to be better addressed for a proposed solution.

Leonard M. Verrastro
Village Manager
Village of Mamaroneck

From: Tom Yardley [mailto:T.Yardley@bfjplanning.com]
Sent: Wednesday, April 19, 2006 9:39 AM
To: Verrastro, Leonard; rdenaro@villageofmamaroneck.org
Cc: PAULNOTOESQ@MSN.COM; jdahlgren@timmillerassociates.com; Frank Fish; Georges Jacquemart; realtymanage@aol.com
Subject: BFJ Comments on Blood Bros DEIS

Lenny and Roseann,
Please see the attached. This was sent out last night via fedex to the Mayor and Trustees. I have also copied Paul Noto on this e mail and John Dahlgren (of Tim Miller Consulting).

Regards,

Tom Yardley
Associate

BFJ Planning
115 FIFTH AVENUE
NEW YORK, NY 10003
T 212.353.7484
F 212.353.7494
E t.yardley@bfjplanning.com

Jon

From: Tom Yardley [T.Yardley@bfjplanning.com]

Sent: Thursday, April 20, 2006 12:29 PM

To: Roseann Denaro; Verrastro, Leonard

Cc: robert_galvin@nrbonline.com; PAULNOTOESQ@MSN.COM; jdahlgren@timmillerassociates.com; Frank Fish; realtymanage@aol.com

Subject: Comments on Blood Bros DEIS

Roseann,

Here are three comments from Bob Galvin:

1. The DEIS should include comment on whether a notice of consistency is needed from CZM and how the project addresses the Village's Coastal Zone policies.

2. The alternatives should include a scheme that does not require a 50 ft setback waiver from the Planning Board.

3. As a mitigation for traffic, the DEIS should consider a restriction on either the right or left turning movement on Waverly. The prohibited movement can be shifted to Hoyt. The DEIS would need to evaluate whether Hoyt in its present configuration can handle the added traffic movement and what would the reduction be on Waverly.

Tom Yardley
Associate

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115 FIFTH AVENUE
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WWW.BFJPLANNING.COM

cc: Board of Trustees, Tim Miller, Paul Noto, Village Manager, Village Attorney, Larry Fraioli, Tom Yardley, Building Inspector

Letter #17

Westchestergov.com

Andrew J. Spano
County Executive

Department of Health

Joshua Lipsman, M.D., M.P.H.
Commissioner

April 25, 2006

Mr. Phillip Trifiletti, Mayor
Village of Mamaroneck
19 Mamaroneck Avenue
Mamaroneck, NY 10563

Re: Draft Environmental Impact Statement
Sheldrake Estate, 270 Waverly Avenue, Mamaroneck

Dear Mr. Trifiletti:

The Office of Environmental Health Risk Control of the Westchester County Department of Health has reviewed the Draft Environmental Impact Statement (DEIS) for the Sheldrake Estates Condominium dated March 13th, 2006. Comments and concerns relating to onsite environmental issues, specifically Petroleum Bulk Storage (PBS), spills, soil and groundwater contamination, are outlined below.

Petroleum Bulk Storage

In Article XXV of the Westchester County Sanitary Code this Department regulates facilities that have a combined storage of over 1,100 gallons of petroleum at the same site. A facility may include aboveground tanks, underground tanks, non-stationary tanks or any combination of the above. This site fits the definition of a PBS facility by having waste oil aboveground tanks. This Department has no record of the site ever having registered as a PBS facility. The site owner must bring this site into compliance by registering all the petroleum storage tanks on this property and the contiguous, adjoining property at 147 East Plaza Avenue per Article XXV requirements. The removal or permanent closure of PBS regulated tanks at a facility requires work permits and other necessary environmental sampling, reporting and remediation that are under the jurisdiction of this Department.

Spills

At this time there is one open New York State Department of Environmental Conservation (NYSDEC) spill (0405493). This spill concerns soil and groundwater contamination located at two locations on the former Blood Brothers site. In addition, groundwater contamination exceeding NYSDEC guidelines was detected in one sample at the adjacent property of 147 East Plaza Avenue. A separate spill report should be made to the NYSDEC regarding this discovery.

Soil and Groundwater Contamination

The site is nearly completely paved with a minimum of 6 inches of concrete, however petroleum contamination of soil exceeding NYSDEC guidelines was detected at two locations on the Blood Brothers site beneath the concrete paving, specifically in the location of the crusher and the petroleum storage tanks. Additionally petroleum contamination exceeding the NYSDEC groundwater standard was detected in two groundwater samples, one from the Blood Brothers site and one from 147 East Plaza Avenue. A comprehensive work plan for delineating the extent and severity of soil and groundwater contamination is necessary, as well as a proposal for remediation of such contamination. This work plan should be submitted to the NYSDEC and this Department. The issues of cadmium levels in the soil are under the jurisdiction of the NYSDEC and the site should consult with that agency to determine any further course of action.

Thank you for the opportunity to express our concerns and make comments. If you have any questions please call me at (914) 813-5161.

Sincerely,

J. Carlos Torres
Director
Office of Environmental Health Risk Control

Letter #18

Jon

From: Tim
Sent: Thursday, April 20, 2006 2:30 PM
To: Jon; JimG
Subject: FW: blood bros.

Butler - LU
Zone - LU
Coastal - LU

From: PAUL J. NOTO [mailto:paulnotoesq@msn.com]
Sent: Thursday, April 20, 2006 11:31 AM
To: offer attia; tim miller
Subject: Fw: blood bros.

keep this in mind.

----- Original Message -----
From: Paonessa, William
Sent: Wednesday, April 19, 2006 8:47 AM
To: 'PAUL J. NOTO'
Subject: RE: blood bros.

Traffic

Paul, The construction vehicles and truck's necessary to build this project must use the Waverly Av. Bridge or come thru Plaza next to Billotta's. Any
large vehicle that must make numerous trips can not use Center Av or any other street in Washingtonville. It would cause a big problem to use the
resident's streets for construction vehicles.....BillP.

Jon

From: Tim
Sent: Thursday, April 20, 2006 2:18 PM
To: Jon; JimG
Subject: FW: Re: blood bros.

From: PAUL J. NOTO [mailto:paulnotoesq@msn.com]
Sent: Thursday, April 20, 2006 11:01 AM
To: tim miller
Subject: FW: Re: blood bros.

this is from the mayor, we need to adjust the construction traffic off center ave.

To: paulnotoesq@msn.com
Subject: Re: blood bros.
From: philt@us.ibm.com
Date: Wed, 19 Apr 2006 08:42:29 -0400

Hi, I am ok with the entire project... I just think the 50 feet needs to be addressed and you are doing that and the soil and traffic needs to be addressed and I know they are..so i am ok ...one issue though..... the document says that center ave is going to be used to bring building eguip into the site... that is a problem.. that needs to be adjusted...center cannot handle the traffic and the residents will revolt....

Regards,

Phil Trifiletti
Global Broker Operations Management
IBM Corporation
North Castle Drive 3B - 42A
Armonk, NY 10504-1785
914-765-6412 T/L 251-6412
Fax # 914-765-6624
e-mail - PHILT@US.IBM.COM
Mail Drop - 306

"PAUL J. NOTO" <paulnotoesq@msn.com>
04/19/2006 08:38 AM

To Phil Trifiletti/Somers/IBM@IBMUS
cc
Subject Re: blood bros.

APPENDIX B

Public Hearing Transcripts

VILLAGE OF MAMARONECK
BOARD OF TRUSTEES
----------X
PUBLIC HEARING

PUBLIC COMMENTS ON THE DRAFT EIS RELATIVE TO THE REZONING REQUEST FOR 270 WAVERLY AVENUE & 147 PLAZA AVENUE:

SHELDRAKE PROJECT

----------X

April 10, 2006

Mamaroneck Municipal Building

169 Mt. Pleasant Avenue

Mamaroneck, New York
7:40 p.m.

B E F O R E:

MEMBERS:
Mayor Philip Trifiletti - Chairperson
Thomas A. Murphy - Trustee
Joseph Angilletta - Trustee
William J. Paonessa - Trustee
Leonard M. Verrastro - Village Manager
Roseann DeNaro - Secretary
Agostino A. Fusco - Clerk/Treasurer
Edward E. Flynn - Chief of Police
Lino J. Sciarretta - Village Attorney

A P P E A R A N C E S :

Attorney for the Applicant:

PAUL J. NOTO, ESQ.
650 Halstead Avenue, Suite 105
Mamaroneck, New York 10543

MAYOR TRIFILLETTI: Second public hearing, which are public comments on the draft environmental impact study, relative to the rezoning request for 270 Waverly Avenue, and 147 Plaza Avenue, formerly known as Blood Brother's site, and the

Sheldrake River project. So, I need a motion to open the public hearing.

MR. ANGILLETTA: Make a motion

MR. PAONESSA: I

UNKNOWN SPEAKER: Second.

MR. FUSCO: Yes, I didn't yes I didn't I.

MR. NOTO: Thank you, Mayor, I'm back. Paul Noto, 615 Halstead Avenue. As you know, this has been a fairly lengthy project. We started in May of 2004 with the initial petitions for rezoning the property. And we have moved forward as expeditiously as we possibly could. Tonight we are here, actually at our request, to have a public hearing pursuant to SEQRA on the draft environmental impact statement that the

board has accepted as complete.

For those watching at home, this is the document that was submitted. It's about six inches thick and it contains all of the information that was requested of the applicant pursuant to the scoping session that this board of trustees held as lead agency in November of 2005.

We have with us this evening a stenographer who is taking down verbatim

the public comment. And the reason for that is, after the conclusion of this hearing, we then have to respond to every public comment that is made, and that becomes part of the FEIS.

So, in order to provide accuracy as to the public commentary, the stenographer will take it down word for word so we can respond, and her stenographic record will then be part of the FEIS, so we will have an accurate record of the proceedings. And that is the only reason that she is present.

So, with that I would like to

turn the podium over to Tim Miller, who drafted the document and, I think as Mr. Yardley advised, make a brief presentation and then open it up for public comment.

We don't anticipate having a debate this evening. We would like to hear the comments. At the conclusion of the hearing, if the board closes the hearing, there would be an additional ten days in which people can write comments -- commentary to this board, and you would forward it to us. And all of the comments would then be responded to and become part of the FEIS. Tim.

MR. MILLER: Good evening, Mr. Mayor, members of the board of trustees, interested public. My name is Tim Miller. I'm a professional planner. My firm, in conjunction with some engineering assistance and some other salty specialists prepared the draft environmental statement.

The applicant for this project is Renew Properties, and Renew Properties has

requested a zone change, as Mr. Noto indicated, for a 2.3 acre piece of property that is located at 270 Waverly Avenue. Its location is indicated on this aerial photograph, in the area highlighted in yellow. This is Waverly Avenue, this is Mamaroneck Avenue, and that is Plaza Avenue on the westerly side of the project area.

The site is a long piece of property. As I indicated, it's 2.3 acres in size. It is presently zoned M1. And it has historically supported what is considered a heavy industrial use with an auto wrecking yard. You can see from the aerial photograph the site, at the top of this photograph, which was probably within the last five years, supported a

considerable amount of vehicular whatever they do in a wrecking yard. And it's largely impervious. The site does abut the Sheldrake River, and runoff on the site is going into the river at the present time, pretty much unabated off of

this area where this heavy industrial activity has been taking place.

A small portion of the property, a portion located here, which is -- fronts on Waverly Avenue, is in the -- I guess it's in the M4F zone. And the property for the most part, however, does abut what is an existing residential neighborhood in the M3 zoning district.

So, we are requesting that you consider zoning requests to go to RM3, which would permit a residential project on this site. What we have examined in the EIS is a build out of 114 condominium units, that would be constructed in three main buildings, and then two smaller buildings would be built in the RMF -- I'm sorry, the R4F zoning district.

And the application package, the EIS contains a site plan that shows what we expect would be a likely layout for the project. There's a preliminary lighting

plan and landscape drawings.

This public hearing is on the

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DEIS and potential development that would occur if our zoning request is acted upon affirmatively. If that occurs, what we would then proceed with is a site plan review in front of the planning board, which would also be subject to public hearing and public input.

So, we still have a little bit of a ways to go. What we would like to hear is comments on the contents of the draft EIS. And as Paul indicated, we will respond to all those comments in writing and from the EIS. So, we are here tonight to listen to what people have to say. Thank you.

MR. PAONESSA: Thank you, Tim.

MAYOR TRIFILLETTI: Any comments from the board at this point?

MR. PAONESSA: Just going to see if there is anyone in the audience, possibly. Questions. It's not a debate.

AUDIENCE SPEAKER: Thank you very much.

MR. PAONESSA: Just state your name.

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AUDIENCE SPEAKER: My name is Steve Mitch. And I'm here on the behalf of the Sheldrake Environmental Center, which serves this community, in Larchmont, Town of Mamaroneck, Village of Mamaroneck, Harrison, et cetera.

And as we are upstream in this watershed, up the Sheldrake River at the Sheldrake Environmental Center, and the reservoir there which feeds down this watershed to the harbor here, we have an interest in just raising our continued concerns about the scale or the size of this project.

One thing that your draft environmental impact statement discusses is the zoning change residential RM3 zone, and we would suggest that you look, or at least explain to the board and the planning boards, why the residential RM2 zone, I believe, which would be a slightly smaller scale would be inappropriate for your developer.

And secondly, as we've talked

over the years about your storm water problems and being in a flood plain at the bottom on a very huge watershed. The

degradation of the Sheldrake River has been a concern, even at the federal level. So, with that in mind, considering scaling back.

And also we do not find anything in your plan about continuing to maintain public access to the waterways feeding on Long Island Sound, which are also very important for people to begin to relate to their local watersheds. We have to raise the issue of what a dangerous situation it can be not to have good flood control measures, storm water measures. What you have currently is talking about hardened structures, which would help filter out some of the debris and pollutants that go in, but they also need to be maintained twice yearly and would not really enhance the opportunities that the village wants to create a more stable stream bank situation along the river.

I have just -- I got a map which I would like to give to the board. It maybe shows a little further upstream and downstream. Our maps maybe are not up to date as yours, they are public maps, but I think they are probably also around five years old. So with that caveat, I would

say this is the best I could take.

This is the current situation for vegetative stream watersheds below and above the project area. And as you will see, it actually could help as long as we keep this area open for future possibilities that people would have linear connections to the various parks, and allow people access to the waterways with using pedestrian bicycles and such. So...

MAYOR TRIFILLETTI: Thank you.

AUDIENCE SPEAKER: And every one has a big agenda. But seriously, if there are any questions, please just call us at the Sheldrake Apartment. In any way possible, we would like to assist you.

MAYOR TRIFILLETTI: Steve is an expert in this stuff. You really are.

Yes, sir?

AUDIENCE SPEAKER: What is the difference between the two zones? You mentioned two different zones. Is it the density of the units that go there? Just so people know.

AUDIENCE SPEAKER: It is actually in the report. When you file for a zoning change for a development project, I

believe you also have to, for the environmental impact of it, and other impacts, offer up different opportunities that the developer might be able to do, which would be different from what is the proposed plan. So, this residential would create less density, although it would still be -- what would need to happen, is we'd have to ask the developer if, indeed, he would still not be able to make a reasonable profit on his project.

But the -- this development or the planning board has to agree to allow a

dwelling to be within 50 feet of a waterway feeding Long Island Sound, which is on your planning laws. So they have to get a waiver from you to go to the R3 zone.

MAYOR TRIFILLETTI: Thank you, Steve. Any other comments from the audience? Yes.

AUDIENCE SPEAKER: I just want to know if there's going to be a scale model brought into this room, during the public hearing, so we can really see --

MR. PAONESSA: Just let the gentleman finish. And you can finish the question.

MAYOR TRIFILLETTI: Steve, are you done?

AUDIENCE SPEAKER: Yeah, I just wanted to let -- I will give you this map. It shows down to the harbor and up to where the Greenway Trails exist just next to the highway.

So really, what we are talking about is the industrial zone here is like a

biological bottleneck. It also creates amounts of stream flow down river that leaves sediment in the harbor. It just degrades the environment.

AUDIENCE SPEAKER: Irving Shallow, 334 Isfeld (ph.) Road, Mamaroneck. First thing I want is a scale model so we can make a judgment. Here we're just seeing pictures. I believe for every type of construction that comes before us if it's possible, where there might be difficulties, there should be a scale model and we can really get a good view and see what's happening. We might find out something and make a suggestion to the builder. So, that I would like to see.

Secondly, I would like to know about the -- years back we had floods, are we still subject to floods in this area,

and if the buildings are going to be high enough to take in -- avoid the problem?

MR. PAONESSA: That is not a question for Steve.

MAYOR TRIFILLETTI: He is writing it

down.

MR. PAONESSA: Thank you, Irving.

AUDIENCE SPEAKER: Anyway. I thank you gentlemen, and I appreciate your time at the public hearings and trustees meetings, but we have to go to the planning board and coastal zone where, really, we should be spending more of our time. And so thank you for your --

MAYOR TRIFILLETTI: Thank you. Peter.

AUDIENCE SPEAKER: My name is Peter Agliardo, 520 North Wagner Avenue, Mamaroneck. I go over that bridge quite a bit, Waverly Avenue, and it was a junkyard. It was a lot of garbage and stuff was going into the waterways. I can see where this is going to improve it. I don't know about the density; that is the only thing that has to be taken care of with the planning board. But I can see it's improving the situation.

And as far as access to the

water, if you go down there, you don't

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want to go by the water, now. I'm just hoping that later on it will get better and then it's only a short piece of access and the other side -- used to be the TV place used to be there. But I'm worrying about maybe the density, but it is going to improve the situation.

MAYOR TRIFILLETTI: Thank you, Peter. Anyone else? The items that I keep hearing from people who live in the area and village are the following. Steve mentioned one of them. It's the storm water runoff and how we're going to handle that, the impact of potential flooding which Peter and Irving all talked about, the impact to the sewer and where you are going to tap into, what lines. Whether it be our lines or the county lines. This is an issue I keep hearing about.

Traffic, and how we're going to handle the traffic, additional borings into the soil and through the concrete to make sure that, in fact, the land is inspected thoroughly. And then the other

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one is the access to the river. So from my perspective, those are the items that I hear often from people about their concern about the project.

MR. PAONESSA: Yes, sir. You have to come to the microphone, I'm sorry. Just state your name and where you are from.

AUDIENCE SPEAKER: My name is Leonard Potox, I live at 535 Munro, and I don't have particular comments on the draft. I have more general comments about how does one get access to information that's filed on planning issues, be it with the planning board, be it with the trustees, be it with the zoning board of appeals. I saw this item was on the agenda, I went to the website, the agenda is there. But how does one get the report? How does one know the report is there? If we're seeking the opinions and views from the public, you've got to give the information or you got tell them where they can get information -- what

information is available.

MAYOR TRIFILLETTI: Multiple times it was said at this board meeting that there

are copies of the draft environmental impact study at the village hall, Roseann has the copies. We've said that at least three or four times --

MR. NOTO: It's on the website.

MAYOR TRIFILLETTI: If you go to the website, there is a link there to the report.

MR. ANGILLETTA: I think the best thing to do, a lot of times I go on the website, and I can't find a thing. When in doubt, I would always say call the village manager, and if there's something you do need, he should be able to get it to you, if not, lead you in the direction on how to get it.

MAYOR TRIFILLETTI: The link is probably under "what's new." There is a category called "what's new." It might be there, but it is definitely out there.

AUDIENCE SPEAKER: Let me encourage

you, look at how to get all filings to all the boards on the website in a way that is easy to access. At this point, for example, the planning board to get information for what is filed on the planning board, one needs to file freedom of information requests, and it takes

weeks and weeks to get it. So there is no timely way to get the information to be able to proffer views to the planning board. And if you are seeking public input, rather than just the input of the professionals, then you need to get the information available to the public in a timely fashion, and quite frankly, in an easy fashion.

MR. ANGILLETTA: Lenny, is that right that when there something that's currently recorded in the planning and zoning you have you to file for freedom of information to get the information of something that's currently on the books now?

MR. VERRASTRO: If you want to

copies of it.

MR. PAONESSA: To come and inspect it you shouldn't have to wait.

AUDIENCE SPEAKER: No, you do.

AUDIENCE SPEAKER: To inspect it you don't have to wait.

AUDIENCE SPEAKER: You do. I'm telling you I filed to look at several filings that were in front of the planning board. I asked for it and I was told you need to file a request. I did. I got a

copy from clerk/treasurer saying that in two weeks you will be contacted about how we are going to get the information to you.

MR. PAONESSA: Did you ask for copies, sir, or you just wanted to sit down and read it?

AUDIENCE SPEAKER: I wanted to see it. I wanted to sit down and view it.

I don't know whether or not I want copies until I see it.

MR. PAONESSA: Did you address that?

MR. FUSCO: That was not my

understanding of your request.

AUDIENCE SPEAKER: I filed a request for the public -- Boston Post Road

MR. FUSCO: The planning board's records are kept here at 169 Mount Pleasant Avenue. In order for me to show them to you and make arrangements, I have to bring them down to my office.

MAYOR TRIFILLETTI: Why can't he just view them here?

MR. FUSCO: I have to make arrangements with Geri, so she can be here to give access to the files.

MAYOR TRIFILLETTI: I understand.

AUDIENCE SPEAKER: Let me be clear.

I went to the clerk/treasurer's village office and asked to look at files on Boston Post Road applications.

I was told you have to put something in writing. I put it in writing. I was told you would be contacted. I was contacted by letter saying you will be contacted in two weeks hence about when we will show you the information. That's the

way it stands. I'm not here to debate the issue. There ought to be a way to get information readily available.

MR. ANGILLETTA: There should be a, for lack of a better way of saying it, a viewing room, where there is yes, a viewing library.

AUDIENCE SPEAKER: It's not at the library either. It should be at the library.

MR. FUSCO: We're not centralized, we are pretty much decentralized. Every department keeps their own records. To have a viewing room, you'd have to be centralized. Our current facility does not allow us to do that.

MR. MURPHY: Shouldn't any project's application be in the building department, and be able to go to the building

department and view it without filing for it?

MR. ANGILLETTA: There is that little bench, that window outside of the building department. It's not that

comfortable, but...

MR. FUSCO: Well, once again, the planning board, Geri does all the recordkeeping and everything, so -- and Geri works down in DPW. In an effort to save money, she does two jobs. So, she really has to grant the building department access to some of those records, and she tries to goes there one or two days a week.

MAYOR TRIFILLETTI: We're off the subject of the public hearing, but what I would ask that you work with this gentleman to get what he needs. And look at the possibility of doing something where we can have the records available within a 48 hour period.

MR. FUSCO: We can hire another employee.

MAYOR TRIFILLETTI: No, I'm not saying that. See if there is a possible way of doing it.

MR. ANGILLETTA: There should be

some room. You know what? Maybe if

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someone made a request on a Monday, by Thursday, we can have whatever they requested on Monday down at the Brigota.

MR. FUSCO: If Geri is on vacation, we have to send somebody down there to get the records.

MAYOR TRIFILLETTI: That's something we can work that out. But I want to make one thing plain. I'm not talking about the minutes of the meeting. Those are ready once Geri is able to get them published. I think she has, what, a two weeks period to do that. As far as plans go and things like that --

MR. MURPHY: Should be able to go to the building department.

AUDIENCE SPEAKER: All these files generally all these submissions are generated electronically. So, generally, it should be a requirement they also be filed electronically and then be posted on the website. Cause it would be a lot easier to share information and access information if it is done that way; there

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is a process for it. Thank you.

MAYOR TRIFILLETTI: Thank you.

MR. VERRASTRO: Maybe Lino, I don't know if any other municipalities require electronic --

MR. SCIARRETTA: The ones that I represent did not, but they do have a requirement, for example, like planning submissions are at the library. So, if you wanted to review, you can go down to the library, and not copy them. This is just if you want to review it, plans are submitted at the public library; that is how some have it organized.

MAYOR TRIFILLETTI: Okay. Let's look into it. Thank you very much.

Okay. Any other comments?

MR. ANGILLETTA: I have a couple, Mayor.

MAYOR TRIFILLETTI: Go ahead.

MR. ANGILLETTA: The one was traffic, as I mentioned earlier when this application first came before us, I was on Waverly Avenue, without this project being

built, and something was going on on Mamaroneck Avenue. I spent a half hour on Waverly just trying to get from Plaza to Mamaroneck Avenue.

So, I think we should look at ingress and egress, differences. If there's a way to go out Plaza and in Waverly, if there's something that we do to address that. Because, in my opinion, it is going to be an issue. I think density is on everybody's mind, and I think Mr. Salis had said there was 114 units in one building, and another two smaller buildings. I don't know in those the other two smaller buildings, sir, is there units in there as well or is it 114 in one building and more units in the other or --

MR. MILLER: Total of 114, three large buildings, two small buildings.

MR. ANGILLETTA: Okay. My interest would be the density of the -- traffic, density, parking. Parking, I think they are going to -- I think that the code

insists they have to have the on-site parking there. It's not going to be any street parking. The one issue I will have with parking is I sat on the planning board when they called it that on Willow and I know that we made it very clear that they would have on-site parking. Where we boo-booed, is we never told them that they

couldn't charge them for it. So, what happened was they built plenty of parking, but then if you wanted it, you had to pay for it, so the people ended up parking in the streets.

I think that's one thing that shouldn't be allowed here. If there is on-site parking, it should be included in whatever else they have going on. It shouldn't be an additional charge for either rental or owning, or whatever that is. It should be something that is just part of this development, period. It shouldn't be something that overflows into the streets.

AUDIENCE SPEAKER: Assigned parking

spaces.

MR. ANGILLETTA: Included in the price.

MR. PAONESSA: Mayor, I have a concern as far as the Town of Mamaroneck that is dragging their feet on the bridge. I took pictures with Golf [ph,], the engineer, Ruffeld [ph.] with Lenny. This goes back to Sandy, I believe, and they were supposed to repair it, so I know there has been some outcry to have this gentleman bear the burden of it. But as I

mentioned when Mr. Noto was here the last time, my DPW trucks, my fire engines, even something like police units can't go over that bridge, technically, but they do, school buses. So it bears that the Town of Mamaroneck owns up to fixing that bridge, so that the residents not only of this particular project, but of Washingtonville pay due deserts, because we pay taxes for those bridges.

And the other question is just in the parking issue, as Trustee

Angilletta mentioned, hopefully there is going to be ample parking for visitors, so that there is little overflow parking, if you want to use the term. And hopefully that, I'm sure our planning board will make efforts to make sure there is enough for the residents as well as some visitors.

The Waverly Avenue area is dense enough, if you've driven down it, as Joe mentioned, and then means of egress. We talked about going out, I believe that's called the Plaza, the side street which is by the Delarkis (ph.). If that could possibly be a means of egress as well as Waverly Avenue. If it is that would be a

great relief, because it is a crowded area, but this certainly using Joe's quote, is a heck of a lot better than Blood Brother's.

And I am sure that with the remediation of storm water that they do, and with good management practices, this will be a big plus to the river and a big

plus to the residents, who, by the way, came to one of our meetings and were in favor of it. So, they are on board. I don't see any of them here this evening as far as protest. But they have Washingtonville meeting they were very happy to see residence of that nature down in there. They feel that it is obviously adding and enhancing the neighborhood.

So that you gentlemen continue and hopefully we'll get this done with all parties concerned.

MR. MURPHY: Mr. Miller, you have a no-build condition of traffic and a build condition of traffic. I assume that you did this no-build condition of traffic after Blood Brother's was closed? Blood Brother's was not operating when you did it. So there was absolutely nothing going on at that site?

MR. MILLER: I did a no-build conditions; existing circumstances would continue.

MR. MURPHY: When you did that

survey Blood Brother's was closed; there was no activity at that site?

MR. MILLER: That's true, yes.

MR. MURPHY: Okay. Now, you are going to put 114 units in there, and you are saying in the study that it's basically going to have no impact on the level of service and traffic, and there's going to be nothing that needs to be done to mitigate the traffic problems.

I just find that hard to swallow. I mean, like Joe was saying, it's hard enough to go down that street on a good morning or if you're living on that street to pull your car out onto the street. And now there is nothing going on at that site. You're going to put 114 units at that site, and its going to have, you are saying, no impact?

MR. MILLER: That is correct.

MR. MURPHY: That is pretty amazing. Did you do speed runs on the street; how long it takes somebody to get down the street? Not the intersection. How long

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does it take somebody to get from Plaza to Mamaroneck Avenue?

MR. MILLER: We did not do speed runs; that wasn't in the scope that the board adopted. But in terms of the traffic generation, we did use the Institute of Transportation Engineers Manual for Trip Generation for a project of this nature. That material was reviewed by your consultant, Buckhurst, Fish who does have a traffic engineer on staff and agreed with trip generation, they agreed with our results. The trip generation for this project would be about 60 cars in the morning and 70 cars in the afternoon, spread over the one hour period.

I want to just be clear that we do a lot of traffic studies and we do a lot of traffic studies in a lot of places. Everybody owns two cars and if you multiply two times 114, that is 228, and we're going to be inundated with traffic, but that is not what happens when these

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projects are built.

What happens in the morning is there is peak hour period. It generally ranges between 6:30 to 9:00, 9:30, and the people that will be leaving their apartments for computation purposes will leave during that time.

Now, this particular project is advantageously located to be within walking distance of the train station. We did not take that into account in terms of reducing the trip generation numbers. So, I feel that these trip generation numbers, in fact, are conservative. And again, this is based on nationwide studies of projects of this type.

60 cars an hour, breaks down to about a car a minute. And even if there is peaking that takes place during a 15 minute period, excuse me, it still doesn't add enough volume to Waverly Avenue to cause queuing at the intersection of Waverly and Mamaroneck significantly above and beyond what is taking place today.

I'm not saying there won't be some additional cues. But when we measured that and we modeled those delays in the morning and in the evening, what we

found was is that that rate of added traffic to the existing network would not cause a significant impact and I believe your experts have supported our results.

So, it was a long answer but I hope I answered your question.

AUDIENCE SPEAKER: Just for the record --

MAYOR TRIFILLETTI: Come up to the mic.

AUDIENCE SPEAKER: Tom Yardley here from BFJ Planning for Frank Fish's office. Part of the process, too, is our firm will be providing the board with the comments on the DEIS during the next ten days, which is the full comment period. And part of that will include a full traffic review from principal traffic engineer George Jacamar [ph.].

And part of what I'm doing now as

well, in addition to getting a copy of the stenographer's report, will be taking comments from the trustees and also comments from the public. So, that we bring them back to the office and make sure we've also reviewed everything and then that will get incorporated into the final environmental impact statement.

So, I don't think at this point we can say we've signed off on any traffic report. We may agree with the results of that study, but that's something that our office will come forth with.

MR. MURPHY: So you haven't come to that conclusion?

AUDIENCE SPEAKER: Not at this point.

MR. ANGILLETTA: I think the point is is that a lot of formulas work and are designed to work in certain environments and there's always quirks that might show up that would change the formula we put in place.

I think all I'm asking at this point

is that we consider looking at alternatives. If we can use Plaza as an exit from the site. If there is going to be three buildings and there's going to be an exit on Waverly, then the parking be designed so that a portion of the exit onto Waverly would suit just a portion of the buildings and the rest go out Plaza. Whatever creative ideas we can have to alleviate, even at one car per minute, backed up traffic light, you know, it could be substantial.

So, I think any creative or forward looking idea that we may have to design a parking lot in such a way where if you're going to have three buildings, maybe a portion of them could leave out of Waverly and a portion could leave out of Plaza, and given the current study, if that were the case, then we would be down to, I guess, a car every four or five minutes, which would be substantially better, than one every minute. That's just one of my comments.

MAYOR TRIFILLETTI: Good.

MR. MURPHY: Do we know how many cars go down Waverly in that hour now?

MR. MILLER: Yes.

MR. MURPHY: How many?

MR. MILLER: I don't know.

MR. MURPHY: We don't know.

MR. PAONESSA: You and I discussed this the last time you were here and I asked you if you did know the holmic [ph.] study, tongue in cheek. But they quoted it and it was --

MR. MURPHY: I want to see it.

MR. PAONESSA: It was a lot; it wasn't 280.

MR. MILLER: 429 in the morning.

MR. MURPHY: Down Waverly in that one hour.

MR. MILLER: And 364 in the afternoon.

MR. PAONESSA: I bet you 50 percent of those don't live in the Washingtonville area. Guaranteed. Exactly, you're saying a lot of it is cut through.

AUDIENCE SPEAKER: Absolutely. Nothing to do with the project.

AUDIENCE SPEAKER: Paul Ryan, 139 Waverly. I haven't read the EIS yet, so I can't make any comments on that. I will though.

Traffic is a main concern. 114 units there. I'm sorry, it's too dense.

There was a traffic study done by Jack Mart with Frank Fish's office, what was it? Three years ago 2003, 2002; somewhere around that area. Nothing has been done about it.

Maybe that is one of the reasons that town hasn't done anything about Waverly Avenue Bridge, because there was some talk then about closing the Waverly Avenue bridge.

MR. PAONESSA: No, sir.

AUDIENCE SPEAKER: There was talk

about it.

AUDIENCE SPEAKER: That is not a possibility. I know it. We closed Center Avenue Bridge, and we're suffering now

because of that now. There is no talk about closing Waverly Avenue Bridge. That balloon did not even get off the ground. But that may have been their idea, but not the resident of Washingtonville.

AUDIENCE SPEAKER: You'd be surprised. Because the Washington- -- as I said at the time, the Washingtonville area has changed. When those two bridges went up it was just mixed commercial, industrial and residential, manufacturing. It's totally changed to residential now.

The streets are the narrowest in the village, and because of through traffic that is not neighborhood traffic, it has the highest concentration of traffic. 429 cars something like that, on both Waverly and Center, morning and afternoon, is just too much.

Now, if this development wants to have an egress all the way down at Plaza and it go out on East Plaza, that is an idea.

20, 25 years ago, Hoyt was expanded

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for one reason only, to take all that traffic; to take it for the train station, to take if for 95, to take it to go back up Halstead, and Harrison, whatever. You know, not to put it on the small streets of Washingtonville. They can't handle it.

MR. PAONESSA: Understood.

AUDIENCE SPEAKER: So, you've got -- something like this, you know, traffic studies are great. They say, oh well, certain streets will take so many cars, blah, blah, blah. What we're worried about here and what we have a concern with will be incremental. It's already jammed up. We can't get out of our driveway in the morning. It takes 15 minutes and then you have to hope and pray that there's a nice person that will let you out, and you kind of wave and say thank you Lord, but it's just too much.

MR. PAONESSA: Okay, Paul. Thank you.

MAYOR TRIFILLETTI: Just one second. Where there was talk of closing that

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bridge, actually, I had received two

petitions. One was to close it signed by residents of Washingtonville, and there was one not to close it, signed by residents of Washingtonville and by many property owners in the industrial area. So, you are right, there was talk and two sets of petitions that I have. I think I still have them in my office.

AUDIENCE SPEAKER: I know Happiness Laundry, before when you were going to close the Center Avenue bridge had an absolute fit. Don Lighthouse --

MAYOR TRIFILLETTI: He came to see me.

AUDIENCE SPEAKER: He was totally ballistic, because he wanted his trucks to be able to come up Waverly. That is what I was saying before; that Waverly is not a through street anymore. There are more kids than you can shake a stick at, small children living on that block and all those (indiscernible.) The neighborhood has changed completely.

MAYOR TRIFILLETTI: I think everyone has said the same thing. The leading thing down here is traffic and density and borings and the flooding. So, I think everybody is focusing on the key issues,

one is traffic.

AUDIENCE SPEAKER: Borings, that's a whole different thing. Mr. Miller talked about impermeable surfaces. Well, I don't know how long those surfaces have been impermeable. I know there are concrete pads, but this property was taken over probably as bare, vacant, naked land in the '50s, and I would be willing to bet that there was no concrete pad there then. There was just plain dirt.

This was before SEQRA was even invented. Before we knew about (indiscernible) before we would spell environmental or any of those good words that are now common knowledge with us.

So how many years did gasoline, oil, benzene, antifreeze, battery acid and other things sink into the earth before

the cap was put on it, and how far down did it go?

Now, taking a few borings right around concrete pads isn't going to give you the true story of what's down there. They have to be taken at regular intervals throughout the property and have to go down until it is clean; which why I brought it up as an issue.

MAYOR TRIFILLETTI: Thanks, Paul. Good to see you. Any other questions or comments? I guess the -- go ahead.

MR. NOTO: Yes. The -- I just wanted to clear up one or two misconceptions.

What we were -- assuming closing the hearing tonight and I figured the ten day period for written comments. We will then address all of the commentary in the FEIS.

As you know, some of the comments that were made, some of the information is in the DEIS. But in terms of the 114 units, I just wanted to clear up, maybe a potential misunderstanding. After the

board re-zones it RM3, that, by no means, means that the developer can go and build 114 units, because then they have to go to the planning board. And as Steve mentioned early on, because of the location of the site adjacent to the Sheldrake River, this applicant, as any applicant who would want to do anything in that site, would need a waiver from the planning board for the 50 feet requirement next to the waterfront.

So, the planning board is holding in its cards the ultimate say. So, if the

planning board said 114 is too many, or 110, whatever that is, that process would be done at the planning board level, and they can force any applicant, this one or anyone else, to change the site considerably.

So, I think that every one should be aware of the fact that even if it were rezoned to RM3, there is no -- I guess colloquial term, as of right, requirement or obligation or right to build 114 or any

other number of units.

So with that, we did ask that you close the hearing tonight, trigger the ten day period and then we'll prepare the written response.

MAYOR TRIFILLETTI: Lenny, the written comments when they come in in the ten day period, who should they be addressed to and where should they go?

MR. VERRASTRO: They go to the clerk's office, 123 Mamaroneck Avenue.

Auggie [ph.] you take those and forward them on to Paul.

MR. NOTO: Yes. Actually forward them to Tim Miller. And then any -- even if someone spoke tonight they are not precluded from writing in as well, to

supplement their comments. And that includes any members of the board as well. It's a public hearing. Anyone can come.

MAYOR TRIFILLETTI: So can we get that message out on to the web page.

MR. FUSCO: Okay.

MR. NOTO: Thank you.

MAYOR TRIFILLETTI: Okay. Any other comments from the board?

MR. MURPHY: Yes, Mr. Mayor. I would suggest we wait until the next meeting to close the hearing. It gives people who are maybe watching at home and didn't know fully what was transpiring and tonight was the meeting, a chance to come to the next meeting and voice their concerns.

A lot of people won't write. A lot of people maybe now will be inspired to go look at this. It's a huge document. And hopefully this will give other people who may have questions and concerns, a chance to come and address them at the next meeting.

MAYOR TRIFILLETTI: Any comments?

MR. ANGILLETTA: I think that maybe we have been discussing this for quite some time now. And I think there has been

more than ample notice for public comment. And I think this is going to continue, public comment and planning. The one

question I do have, if we close the public hearing tonight and the concerns we raised, the answers don't meet our expectations, what happens then? Does it still go before the planning board or does it come --

MR. NOTO: No. Ultimately you have to approve the FEIS, you are the lead agency. If you are not satisfied with the answers, then you would, you know, reject it or direct us to do something else.

Ultimately, you are the lead agency. You're making the final decisions both on the SEQRA process and on the ultimate, underlying, rezoning petition. So we certainly concur that there has been sufficient notice. You know, we've had ten people come out and speak tonight. It's a document that was presented two months ago. I'm not sure what more there is to say. I think the Mayor identified the five or salient six issues. We know what they are. We all live here; we all know what the issues are and we'll try and

address them as best we can, and mitigate those that we think can't be addressed to everyone's satisfaction. But we think all of these things can be mitigated.

MR. PAONESSA: Mayor, we've spoken on many occasions -- thank you, Paul -- at the Washingtonville meeting and, again, the exception of Mr. Ryan is noted. As people have said about the congestion, but most of the people, as I mentioned before, were in favor of it; I'd say probably better than nine out of ten. So that their absence as much as someone else sits here. But they do have the opportunity to turn in the next ten days to give us comment and certainly they are open to that. And they're also, as the gentleman mentioned, you have the boards to go before, which also will have a public comment period or at least they can be heard.

So I feel it is not necessary to postpone this, and keeping things going, moving forward, I think notice has been

given and I think we should close the

meeting, and continue as planned.

MAYOR TRIFILLETTI: Okay. I need a motion to close the public hearing on the comments on the draft EIS relative to the rezoning request for 270 Waverly Avenue and 147 Plaza Avenue, formerly known as the Blood Brother's site, Sheldrake River Project.

MR. PAONESSA: So moved.

MAYOR TRIFILLETTI: Thank you.

MR. ANGILLETTA: Second.

MAYOR TRIFILLETTI: Thank you.

MR. FUSCO: Trustees Murphy?

MR. MURPHY: No.

MR. FUSCO: Angilletta?

MR. ANGILLETTA: Yes.

MR. FUSCO: Paonessa?

MR. PAONESSA: Yes.

MR. FUSCO: Mayor Trifilletti?

MAYOR TRIFILLETTI: Aye.

Okay. Thank you. Again, public comment can still be written in over the next ten days. And then we will meet to

review everything once again, take appropriate action after that.

(Time noted: 8:20 p.m.)

C E R T I F I C A T I O N

STATE OF NEW YORK)
) ss.
COUNTY OF PUTNAM)

I, DIANNA FERRIERI, a Court Reporter and Notary Public within and for the County of Putnam, State of New York, do hereby

certify:

That I reported the proceedings that are hereinbefore set forth, and that such transcript is a true and accurate record of said proceedings.

AND, I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand.

_____

DIANNA FERRIERI

Court Reporter

APPENDIX C

Correspondence

BFJ Planning

MEMORANDUM

To:	Mayor and Board of Trustees, Village of Mamaroneck
From:	Frank Fish, Georges Jacquemart, Tom Yardley
Subject:	Sheldrake Estates FEIS
Date:	July 10, 2006

The following is to provide the Board with comments on the responses provided by the Applicant as regards the Final Environmental Impact Statement (FEIS) for the proposed Sheldrake Estates project. On behalf of the Board, both BFJ Planning and the Village Engineer, Keith Furey provided the Applicant with comments on the FEIS. The Applicant has responded to these comments under cover of three separate transmittals:

- July 5 memo from Jon Dahlgren to Mayor and Trustees re: FEIS
- July 7 memo from James A. Garofalo, of Tim Miller Associates, to Georges Jacquemart re: Traffic
- Responses from Bohler Engineering sent to Village Engineer Keith Furey

Based on our review, and a review memo dated July 7 from Keith Furey (attached), we confirm that the Applicant has responded to our comments. If the Board feels that the responses now provide for a complete FEIS it should move to adopt the FEIS for public distribution.

After the FEIS is distributed to the involved agencies, SEQR provides that we give not less than 10 days nor more than 30 days for comment. We can then prepare, with the Village Attorney, draft SEQR findings for an August or September meeting.

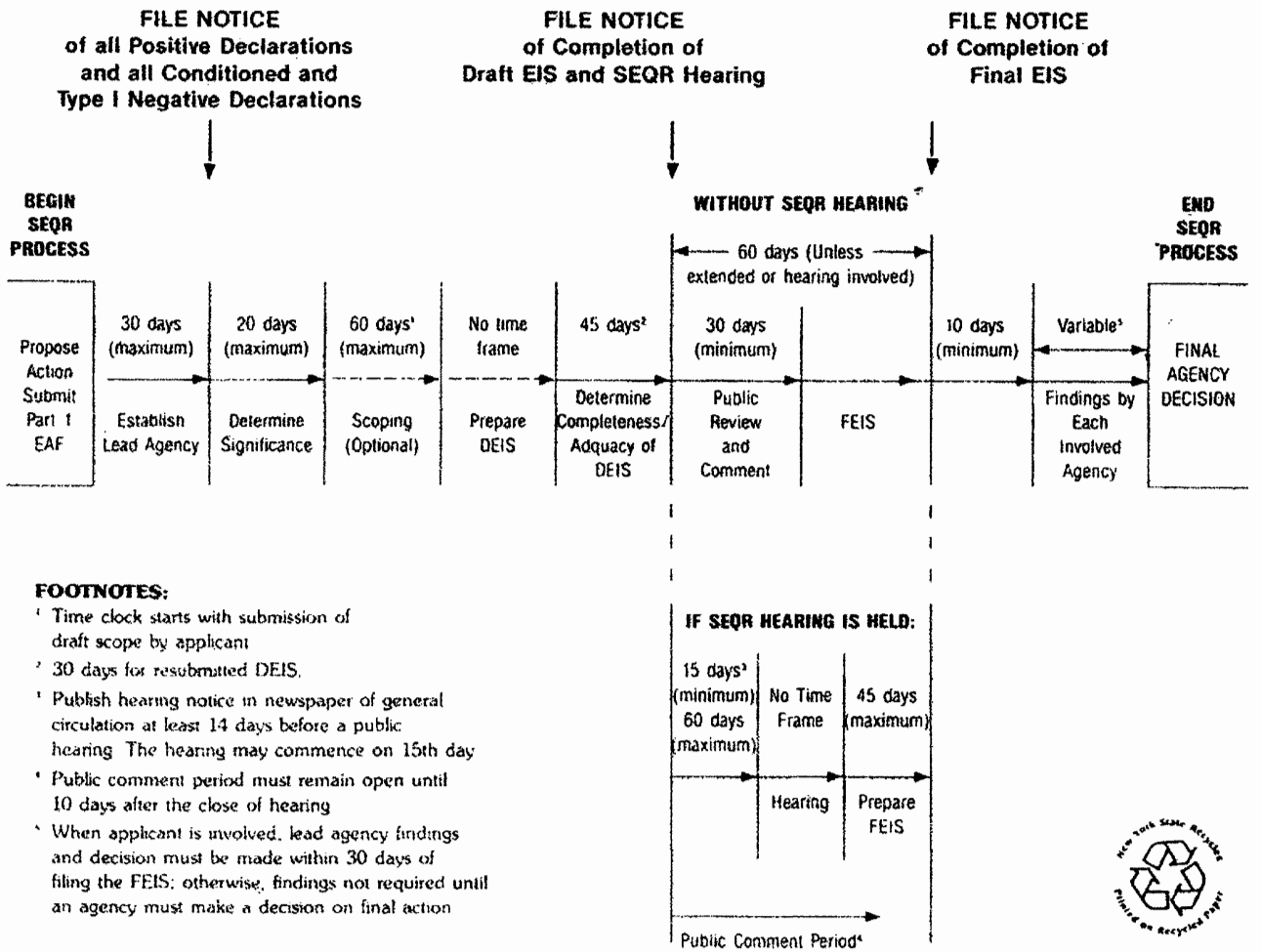
The Applicant's attorney, Paul Noto, has requested that a public hearing be held on the proposed zoning change. There is no SEQR impediment to this and the Board could set such a hearing for an August meeting. The only requirement in that the Board makes its SEQR findings prior to voting on the zone change.

C: Larry Fraioli, Chair, Village Planning Board
Keith Furey, Village Engineer
Paul Noto Esq.
Tim Miller

Attached: SEQR flowchart
Corrected FEIS pages from James Garofalo re: Traffic
Memo from Mr. Keith Furey, Village Engineer

BUCKHURST FISH & JACQUEMART, INC. 115 FIFTH AVENUE NEW YORK, NY 10003 T. 212.353.7474 F. 212.353.7494

SEQR TIME FRAMES



FOOTNOTES:

[1] Time clock starts with submission of draft scope by applicant

[2] 30 days for resubmitted DEIS.

[3] Publish hearing notice in newspaper of general circulation at least 14 days before a public hearing. The hearing may commence on 15th day

[4] Public comment period must remain open until 10 days after the close of hearing

[5] When applicant is involved, lead agency findings and decision must be made within 30 days of filing the FEIS; otherwise, findings not required until an agency must make a decision on final action

KW Furey
Engineering, P.C.
Engineering & Construction Management

Transmitted Via e-mail

July 7, 2006

Hon. Mayor Phillip Trifiletti and
Village of Mamaroneck Board of Trustees
123 Mamaroneck Avenue
Mamaroneck, NY 10543

Re: Sheldrake Estates
Final EIS Comments
Project #: 012.01

Dear Mayor Trifiletti and Honorable Members of the Board:

In response to our letter of June 22, 2006 relative to the above referenced project, we have received a package from Bohler Engineering addressing our previous comments. Relative to this new submission we offer the following:

- ***Page 2-1 - Comment 2-2:*** The applicants revised response to this issue is acceptable in that it references the fact that an I/I reduction Program may, in fact be required for site plan approval, and properly states that the time frame during which such a program would be undertaken would be as a stipulation of said approval, and during the final design of the project. It should, however be noted, that this requirement will be separate form the I/I Study work scheduled for this summer as part of the Inter-Municipal Agreement (IMA) with Westchester County DEF.
- ***Page 2-2 - Comment 2-6:*** Figure 2-4, provided in the submittal adequately addresses this comment.
- ***Page 5-3 - Comment 5-7:*** The applicant has accepted this comment, and agrees to completion of any R/I and R/A work required by the NYS DEC.
- ***Pages 6-1 & 6-2 - Comment 6-1:*** The preliminary drainage calculations and proposed storm water management approach, outlined in the applicants response, appears to be in line with the Phase II Regulations and the recent decisions of the Planning Board relative to drainage.
- ***Page 6-2 - Comment 6-2:*** The applicant has agreed with this comment, and further compliance with the NYSDEC Phase II Stormwater Regulations.
- ***Page 6-3 - Comment 6-4:*** Same as above.
- ***Page 6-3 - Comment 6-6:*** The applicant's preliminary drainage plan has adequately addressed this issue at this stage in the site plan process, of course subject to further review during site plan approval with the Planning Board.
- ***Page 6-4 - Comment 6-8:*** The applicant has agreed to comply with the requirements, both substitive and administrative, of the Phase II Stormwater Requirements specific to this site.
- ***Page 6-4 - Comment 6-9:*** The applicant has noted and agreed with our comment.
- ***Page 6-5 - Comment 6-10:*** The applicant has noted and agreed with our comment.

- ***Page 6-5 - Comment 6-11:*** The applicant has noted and agreed with our comment.
- ***Page 6-5 - Comment 6-12:*** The applicant has noted and agreed with our comment.

In general, the supplemental submission from Bohler adequately addresses the comments from our previous correspondence. For the sake of good order we would recommend that our previous correspondence, Bohler's response package to same, and this letter be included in the FEIS.

Based on the above, we would respectfully recommend, that from an engineering perspective, the pertinent issues have been properly addressed, and that the FEIS is can be accepted. As always feel free to contact me should you have nay questions.

Very truly yours,

KW FUREY ENGINEERING, P.C.

Keith W. Furey, P.E.
Principal

Enclosures
KWF/df

Sheldrake Estates FEIS Let_02.wpd

Tim Miller Associates, Inc.

Fax Cover This is a confidential message, intended solely for the person to whom it is addressed. If you receive this message in error, please forward it to the correct person, or mail it back to us. Thank you.

To	Georges Jacquemart, P.E. BFJ Planning
Fax No.	212-353-7494
From	James A. Garofalo
Date/Time	July 7, 2006
Subject	FEIS Sheldrake, Village of Mamaroneck, NY TMA #04099
Pages	<6 Pages>, including this one

Thank you for your comments.

Bloodbros/Corresp/
Jacquemart 7-7-06,
1 wp

esponses to your comments and call
information. Additional background
ences have been provided
nents. A new figure, a figure
l table are attached for suggested

n on this matter would be greatly
s a meeting on Monday concerning

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Josh Moreinis, AICP, PP
Jon Dahlgren
Ann Cutignola
Bruce R. Friedmann
Janell Herring
James Bates
Chris Robbins
Maureen Sacchetti
Eram Qadri
Kendra Billings
*James D. Benson, AICP, PWS,**
Stephanie Rawlins
James F. Stanley
Jill M. Butler
Doreen B. Derry

Sergio Smiriglio,
Consulting Hydrogeologist

** CPESC / CPSWQ*

TRAFFIC AND TRANSPORTATION COMMENTS AND RESPONSES

The following comments were made by Georges Jacquemart in the June 26th 2006 memorandum to the board on the Draft FEIS and are responded to herein:

Comment 1 (Memorandum from Georges Jacquemart, BFJ Planning, June 26, 2006): Our comments have been responded to in a satisfactory manner, except that there seems to be a traffic assignment mistake related to the percentage of outbound traffic assigned to Mamaroneck Avenue southbound to Hoyt Avenue... Comparing figures 3.5-9 and 3.5-14 in Appendix E, it appears that not all the traffic in figure 3.5-9 making a right turn at Waverly and Mamaroneck was assigned to Mamaroneck and Hoyt and to Hoyt Avenue.

> ***Response 1:*** *A typographical error occurred in that Figure 3.5-9 should have 30% southbound through traffic not 10%. Site generated and Build Condition volumes are correct as are the level of service analysis. Figure 3.5-9 is attached as corrected. The revised Figure 3.5-9 should be used in the FEIS.*

Comment 2 (Memorandum from Georges Jacquemart, BFJ Planning, June 26, 2006): It does not appear logical that the delays on westbound Hoyt Avenue at Fenimore Rd would be better with the one-way project entrance on Waverly and Plaza Avenue, as compared to the two-way access alternative.

> ***Response 2:*** *The differences between the westbound delays are small 3.1 seconds in the a.m. peak and 0.8 seconds in the p.m. peak favoring the one-way access. The differences are slight because the volumes are small. Why the one-way is slightly better than the two-way access relates to three factors.*
>
> *1) The one-way access right turns at Hoyt Avenue are redistributed to Fenimore Road westbound approach under the two-way access. Right turns at stop approaches to unsignalized intersections have less delay than left turns. Since the westbound Hoyt Avenue approach delay is expressed as an average delay, reducing the lower delayed right turning vehicles access results in the average delay having a higher percentage of longer delayed left turning vehicles in the two-way in the two-way. Thus, reducing the volume on the approach has a counter intuitive result of increasing delay.*
>
> *2) A portion of the vehicles using Mamaroneck Avenue to go south of the railroad tracks can under the two-way access use Waverly Avenue westbound to Fenimore Road southbound. These vehicles increase the number of through vehicles on Fenimore Road past Hoyt Avenue. Increasing the through vehicles on Fenimore Road increases delays from Hoyt Avenue westbound.*
>
> *3) The traffic from the Sheldrake site in the p.m. peak hour would generally be people familiar with the local transportation network. Such drivers would know to avoid Hoyt Avenue left turns at Fenimore Road during peak hours. They would be expected to use alternative routes as westbound Waverly Avenue to Fenimore Road southbound or eastbound Waverly to southbound Mamaroneck Avenue to Post Road or other parallel roads.*

Comment 3 (Memorandum from Georges Jacquemart, BFJ Planning, June 26, 2006): We believe that the two-way access at Waverly and Plaza Avenue will be preferable if and when the sight obstacle for vehicles leaving the projects site at this location is alleviated. This would occur when the overpass gets rebuilt. As mentioned in the FEIS the two-way access would save about 22 vehicle miles per day. The driveway at this location should therefore be built such that it can eventually become two-way.

Response 3: *Comment noted. The FEIS already discusses the potential to convert from one-way entrance to a two-way access in Responses 7-4, and 7-12. There is also a complete traffic analysis provided. The final site design should consider this potential change.*

Comment 4 (Memorandum from Georges Jacquemart, BFJ Planning, June 26, 2006): We agree with the conclusion that East Plaza should not be used as a regular vehicular access to and from this parcel It should be only allow for emergency and pedestrian access.

Response 4: *Comment noted. This was discussed in responses 7-5, 7-10, and 7-15.*

Comment 5 (Memorandum from Georges Jacquemart, BFJ Planning, June 26, 2006): As mentioned by the Westchester County Deputy Commissioner for Planning the pedestrian walkway/sidewalk along the Sheldrake River all the way from the westerly end of the project parcel to Mamaroneck Avenue should be integrated as a mitigation measure, and should become part of the project.

Response 5: *The July 7, 2006 Landscaping Plan (Figure 8-4) shows the walkway concept extended from the emergency access past the three buildings along the river front. This has been attached in a reduced format for faxing. The entrance maybe modified in final site design as a result of further discussion on the entrance design. See also Response 3. Figure 8-4 should be added to the FEIS.*

Comment 6 (Memorandum from Georges Jacquemart, BFJ Planning, June 26, 2006): There seems to be an error in the traffic generation calculation in the alternatives section. Table 10-1 on page 10-3 of the FEIS shows the Total PM Peak Hour Trips/Total Saturday Peak Hour Trips as 46/46 for the proposed action, and 58/44 for the RM-2 zoning alternative. the numbers for the proposed project do not agree with the traffic generation figures shown in the traffic section (Table 3.5-9). the correct traffic generation numbers for the two residential alternatives should be 67/76 for the RM-3 and 47/64 for the RM-2. Based on the statistics provided by the Institute of Transportation Engineers, the traffic generation is projected to decrease less than the number of townhouse units.

Response 6: *Table 3.5-9 is correct. Table 10-1 is incorrect and the revised table is attached to show the a.m. peak hour and the p.m. peak hour with and without the reduction of traffic from the existing use. In addition a foot note has been added to indicate the higher volume RM-3 proposed action is not anticipated to result in a change in the level of service for any lane group of the studied intersections.*

The revised Table 10-1 should be used in the FEIS.

Table 10-1
Zoning Alternatives: Sheldrake Estates

Area of Concern	*Proposed Action (RM-3)*	*Alternative* (RM-2)
Zoning Requirements		
Minimum Lot Area (square feet)	20,000 but not less than 1,000 per dwelling unit	20,000 but not less than 1,500 per dwelling unit
Minimum Lot Width and Frontage	100 feet	150 feet
Maximum Building Height	50 feet	40 feet
Maximum Building Coverage (as percentage of lot area)	35 %	30 %
Minimum Open Space	200 sf per unit	300 sf per unit
Maximum FAR	1.5	1.0
Land Use/Zoning/ Public Policy		
Parcel Area	2.77	2.77
Residential Units	114	62 (As of right) 74 (w/ 20% affordable bonus)
Zoning	RM-3 / R-4F	RM-2 / R4-F
Site Coverage / Construction		
Total Construction Disturbance	2.77	2.77
Total Impervious Surfaces	2.08	1.86
Total Landscaped Area	0.69	0.91
Natural Resources		
Portion of site undisturbed/ natural	0 %	0 %
Visual		
Maximum Building Height	50 feet	40 feet
Community Resources		
Water Demand/Sewage Flow (gpd)	38,500	25,025
Demographics/ Fiscal		
Population	165	90
Revenues to School District	$226,566	$129,730
Revenues to County	$57,929	$33,170
Revenues to Village[1]	$87,042	$49,840
Traffic		
Traffic Generation total a.m. peak hour trips/total p.m. peak hour *	58/67	35/40 ***
Traffic Generation Net Increase total a.m. peak hour trips/total p.m. peak hour (site generated less existing use 11/7)	47/60 **	24/33 ***

Source: Tim Miller Associates, Inc.

* Institute of Transportation Engineers, Trip Generation, 7th edition, Washington, D.C., 2003.

** These volumes resulted in no change in level of service for any lane group between the future conditions without (No Build Condition) and with the project (Build Condition).

*** Based on 62 units.

[1] Information necessary to finalize the analysis of revenues has been requested from the Town and Village of Mamaroneck by TMA and is forthcoming.

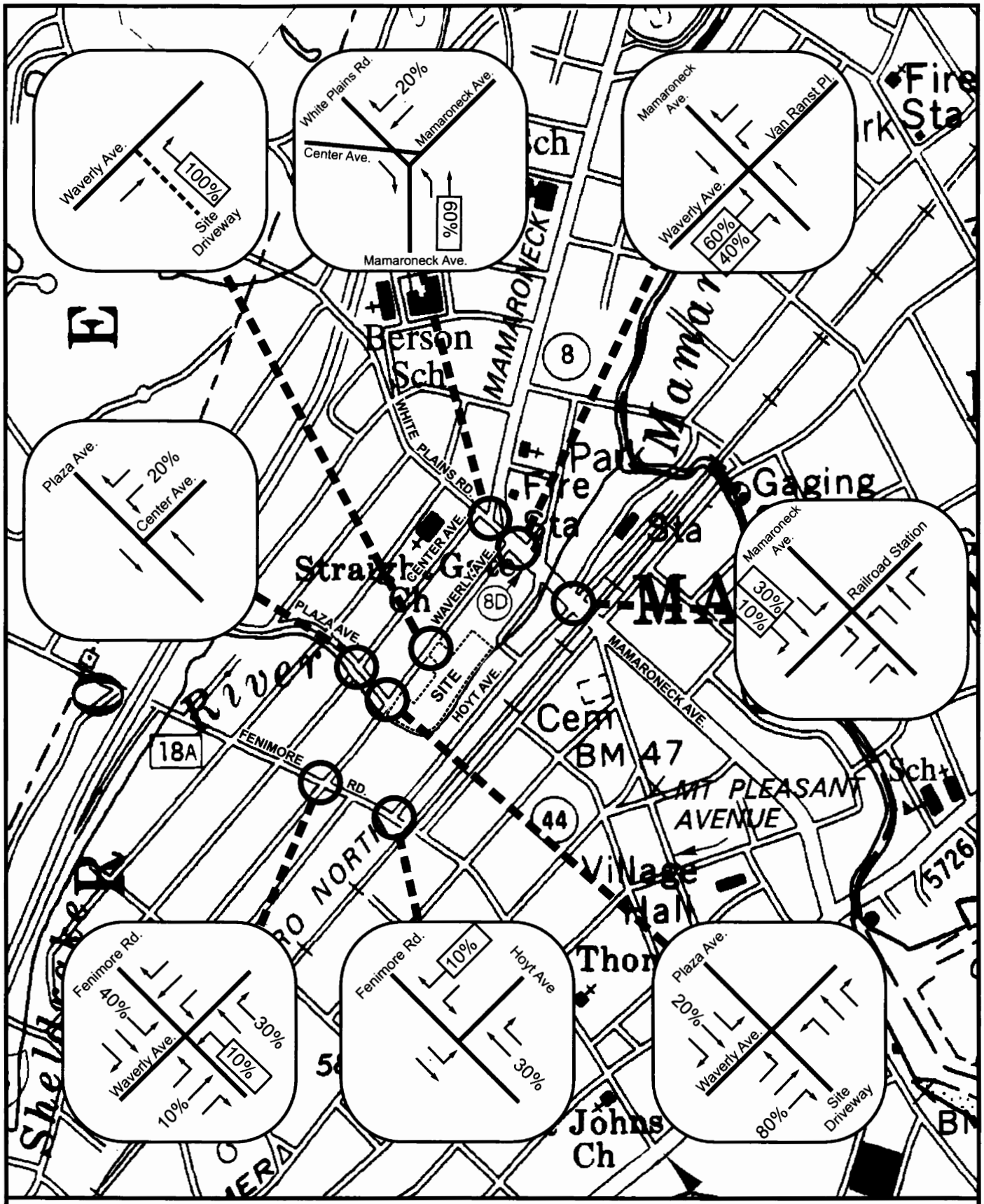


Figure 3.5-9: Percent Distribution Site Generated Trips

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 660 feet

N

W E

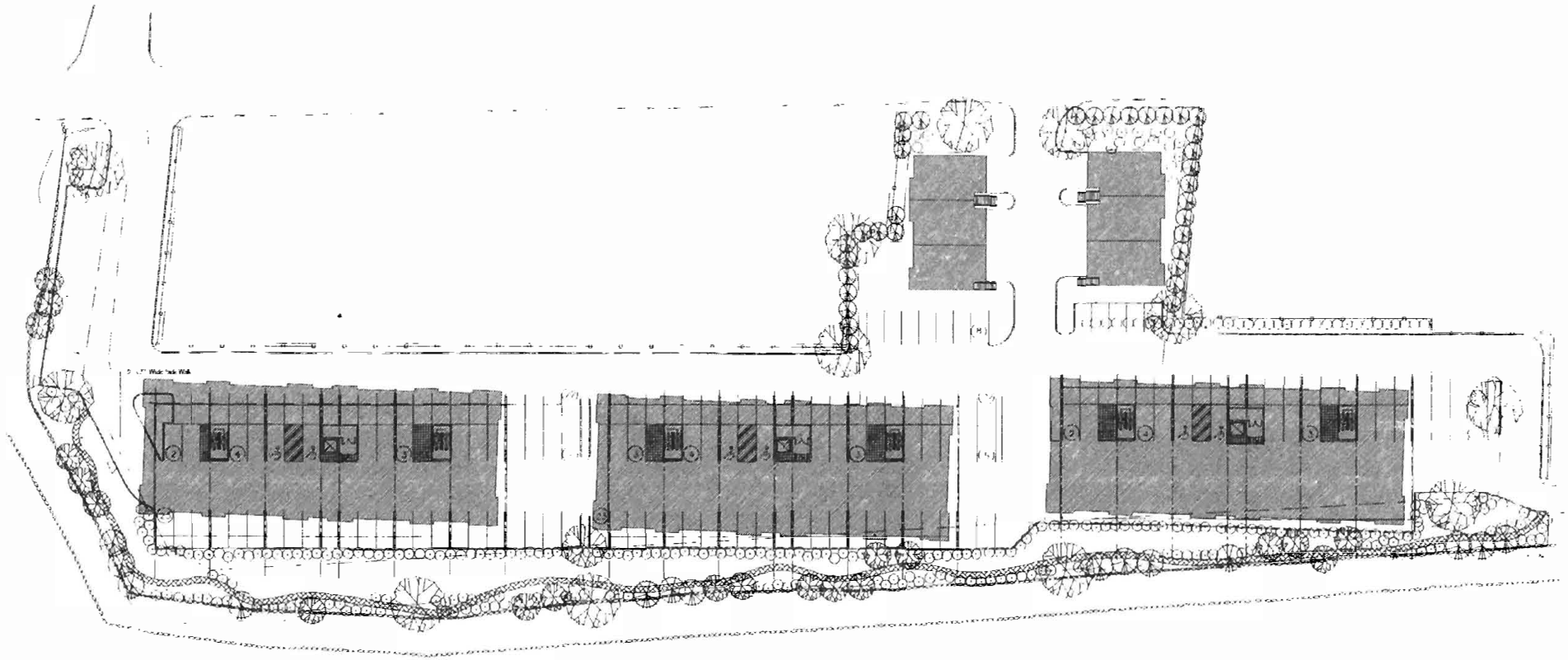
S

LEGEND

- O Intersections Studied
- XX% Outbound
- XX% Inbound

File 04099 07/06/06
JS:\04099

Tim Miller Associates, Inc., 10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418



North

Figure 8-4 : Landscaping Plan

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Source: Blades & Goven Landscape Architect, 07/03/06

Scale: Graphic

JD

TIM MILLER ASSOCIATES, INC.

10 North Street, Cold Spring, NY 10516 (845) 265-4400 265-4418 fax www.timmillerassociates.com

July 5, 2006

Honorable Mayor Philip Trifiletti and
Village of Mamaroneck Board of Trustees
c/o Village Hall
169 Mt. Pleasant Avenue
Mamaroneck, NY 10543

RE: Sheldrake Estate [illegible] Project FEIS

Dear Honorable Trifiletti a

TMA Word pro/

We are writing in respc ake Estates Condominium
Project FEIS from Village was submitted to the Board
of Trustees on June 9, 2 locument include:

Bloodbros./

1) Memo from Frai ne 21, 2006
2) Letter from Keitl l June 22, 2006
3) Memo from Ge(006

07-05-06-BOT-

FEIS Response

This letter addresses th om Yardley. The comments
from Mr. Furey and Mr. e cover. Bohler Engineering
will address Mr. Furey's lress Mr. Jacquemart's traffic
comments.

Responses to the comr randum, as follows:

Affordable Housing Bonus (p. 2-1)
The FEIS Comment 2-1 has been modified to define below-market-rate (afffordable housing) per Article XV of the Village Code as based upon the median annual Village Salary.

Sheldrake River (p. 2-3)
Comment noted.

Land Use Compatibility and Density (p. 3-2 to 3-4)
The comment indicates that a discussion of an Alternative RM-2 designation was absent from the discussion on consistency with the concept of a transition zone (p.3-2, para. 5). It is the Applicant's opinion that a detailed, thorough evaluation of the RM-2 Alternative was provided in Section 10.0 Alternatives. The RM-2 Alternative was evaluated in terms of project density, as it relates to the nearby and surrounding neighborhood, as well as a direct comparison of the zoning requirements and potential impacts of the RM-2 Alternative compared to the proposed RM-3 zoning district. The Applicant believes that the discussion provides the Board with the information needed to consider the merits and impacts of the RM-3 zoning designation, as well as the RM-2 Alternative zoning district.

July 5, 2006
Mayor Philip Trifiletti

Hazardous Materials
Comment noted.

Visual Resources/ Public Access (p. 8-1)
A rendering of the RM-2 Alternative is attached and will be included in the accepted version of the FEIS. As shown in the rendering, the RM-2 Alternative buildings would be approximately 40 feet in height and would be visible at the project entrance and between the existing residences along Waverly Avenue. These buildings would not be visible above the roofline of existing residences on the south side of Waverly Avenue (see Figure 8-1A: RM-2 Alternative - View 1 - Waverly Avenue).

The Landscaping Plan (Figure 8-4) has been modified to include a sidewalk in the landscaped buffer, adjacent to the Sheldrake River, and is attached. The proposed sidewalk would be approximately 3 feet wide, constructed of stone pavers and designed to meander through the landscaped area. The modified Landscaping Plan will be referenced in the accepted FEIS.

Alternatives
Comment noted.

With the enclosed and following responses, the Applicant considers the FEIS to be complete. We respectfully request to be placed on the agenda for the Board of Trustees meeting scheduled for July 10, 2006, for acceptance of the FEIS.

Kindly advise if you have any questions or require anything further.

Sincerely,

Jon P. Dahlgren
Vice President/ Senior Geologist
TIM MILLER ASSOCIATES, INC.

cc: Frank Fish, BFJ, w/ enclosure
Larry Fraioli, Chair, Village Planning Board, w/ enclosure
Keith Furey, P.E. Village Engineer, w/ enclosure
Paul Noto, Esq., w/ enclosure
Craig Tompkins, P.E. Bohler Engineering, w/ enclosure
Ofer Attia, w/ enclosure

File/04099

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BOHLER ENGINEERING, P.C.

2500 Westchester Avenue, Suite 100
Purchase, NY 10577
914 251.9800
914.251.1199 fax
purchase@bohlereng.com

June 30, 2006
Via: Federal Express

KW Furey Engineering, P.C.
One Virginia Street
New City, NY 10956

Attention: Mr. Keith W. Furey, P.E.

Re: Sheldrake Estate
Final EIS Comments

Dear Mr. Furey:

On behalf of the Applicant, Sheldrake Estate, we respectfully submit one (1) copy of the following documents:

1. Site Plan (Preliminary), C-4 of 9, Dated 1/5/06
2. Grading and Drainage Plan (Preliminary), C-5 of 9, Dated 1/5/06
3. Soil Erosion & Sediment Control Plan (Preliminary), C-6 of 9, Dated 1/5/06
4. Utility & Sanitary Plan (Preliminary), C-7 of 9, Dated 1/5/06
5. Boundary & Topographic Survey, 1 of 1 Dated 12/19/05
6. NYSDEC Interim Strategy for Redevelopment Projects Dated April 30, 2004
7. Chapter 4 – Unified Stormwater Criteria (NYS Stormwater Design Manual)
8. NOI and SWPPP (Preliminary)
9. Figure 2-4

Please note that documents 1 through 5 were previously submitted to the Village along with the DEIS. However, by analyzing the comments received from all the parties, it is evident that some of the recipients have not received these plans. In addition to the above referenced documents, we offer the following summary of responses to your memo dated June 22, 2006:

KW Furey Engineering, P.C. Memo

Item #1 Page 2-1 – Comment 2-2

The subject site is within a sewer district and zoned a manufacturing use, by right. The site could easily generate as much sewage as the proposed project. The requirements that developers offset increase in flow has not been consistently exercised in recent applications, particularly projects within a district and served by the existing sewer

service. Thus it is unclear to the applicant that in fact this will be a requirement of the WCDOH.

In any case, in the applicant's opinion, it would be premature to conduct inflow/infiltration studies at this level of project review. Pending a decision on the zoning, the applicant will cooperate with the planning board and staff to evaluate the existing sewers in the vicinity of the site. In addition, it should be noted that the Village I/I study will be complete in September 2006 for review.

Item #2 Page 2-2 – Comment 2-6

The sanitary sewer issue is discussed in Comment 2-5 rather than 2-6. Figure 2-4 is attached for your review. Four alternative routing scenarios were presented in Section 4.4 of the DEIS, and all present viable connection points. At this time, a final route has not been determined. Additional analysis will be required and coordinated with the Village.

Item #3 Page 5-3 – Comment 5-7

Comment noted. The applicant intends to complete the investigation and remediation of the property, to the satisfaction of NYSDEC, prior to any site development or construction.

Item #4 Page 6-1 & 6-2 Comment 6-1

Comment noted. Please find the attached Grading and Drainage Plan (Preliminary), C-5 of 9, Dated 1/5/06 for your review. As shown on the plan, there is a reduction of impervious area by 24.4% from existing to the proposed conditions. As per NYSDEC Interim Strategy for Redevelopment Projects Dated April 30, 2004 (attached), if the redevelopment results in no increase of impervious area or changes to hydrology that increase the discharge rates, the ten-year and hundred-year criteria do not apply. Deviation from the channel protection criterion also may be accepted for redevelopment if there is no increase of impervious area or changes to hydrology that increase the discharge rate or if stormwater is discharged to a Fourth order stream like the Sheldrake River. The Interim Strategy further states that deviations from standard practices (practices listed in Section 5.1 of the Design Manual) are acceptable when a reduction of the impervious area of the site is proposed. Deviations from Quality controls are acceptable if the proposed plan reduces the impervious cover by a minimum of 20% of the total site area (existing + planned). However, stormwater from the subject property will pass through two (2) hydrodynamic stormwater treatment units prior to disposal. A preliminary NOI and SWPPP was part of DEIS and is also attached to this letter.

Item #5 Page 6-2 Comment 6-2

Comment noted and agreed. The original comment from Mr. Edward Burroughs, AICP, is due to a misunderstanding that stormwater will be discharged untreated to the Sheldrake River, which is not correct. The stormwater from the subject property will pass through two (2) hydrodynamic stormwater treatment units prior to discharge. The Grading and Drainage Plan is attached for your reference. A preliminary NOI and SWPPP was part of the DEIS and is also attached to this letter.

Item #6 Page 6-3 Comment 6-4

See our response to Comment 6-2 above.

Item #7 Page 6-3 Comment 6-6

Comment noted and agreed. As shown in the Grading and Drainage Plan, stormwater will be collected towards the center of the property so no stormwater spills onto Waverly Ave. Also see response to Comment 6-1 above.

Item #8 Page 6-4 Comment 6-8

Comment noted and agreed. The applicant will comply.

Item #9 Page 6-4 Comment 6-9

Comment noted.

Item #10 Page 6-5, Comment 6-10

Refer to response to Comment 6-1 above.

Item #11 Page 6-5 Comment 6-11

See our response to Comment 2-2.

Item # 12 Page 6-5 Comment 6-12

Comment noted.

BOHLER
ENGINEERING, P.C.

We respectfully request that this matter be placed on the Board of Trustees' next meeting agenda for continued discussion. In the interim, please do not hesitate to contact our office if you have any questions or if you require additional information.

Sincerely,

BOHLER ENGINEERING, P.C.

Khalid Jamil, CPESC, CPSWQ
Design Engineer

CT/mp
Enclosures
Our Project No.: NW05120

H:\CLIENT\Re-New\2005\NW05120\Letters\2006\063006 - Keith Furey.doc/mp

Interim Strategy for Redevelopment Projects

April 30, 2004

More information from this division:

Division of Water
Bureau of Water Permits

Strategy application: This strategy will be implemented with some flexibility, based on review of individual projects, until the department can study the issue in more depth and prepare more comprehensive guidance.

Definition of terms: In the context of stormwater controls, the term 'redevelopment' refers to reconstruction or modification to any existing, previously developed land such as residential, commercial, industrial, institutional or road / highway which involves soil disturbance. Redevelopment is distinguished from development or new development in that new development refers to construction on land where there had not been previous construction.

Background: Because the Department's technical standards were primarily intended for new development projects, various parties have interpreted post construction treatment requirements in SPDES General Permit for Stormwater Discharges from Construction Activity (GP-02-01) to not apply to or to not be practicable for redevelopment projects. Although most treatment technologies presented in the New York State Stormwater Management Design Manual (Design Manual) may be used in redevelopment, siting post construction controls can present challenges not typical of new development sites. At the same time, redevelopment sites are considered opportunities to reduce pollutant discharges. Redevelopment sites may impose constraints in implementation of full post construction controls, but partial controls can result in useful pollutant reductions. This

strategy balances concerns about technical challenges with the benefits of varying degrees of controls.

General policy: Requirements for installation of post construction controls set forth in GP-02-01 do apply to redevelopment projects. Where site-specific circumstances do not allow conformance to DEC's technical standards, deviations from the standards are acceptable. Examples of such site-specific circumstances include where proper sizing and installation of the acceptable management practices (listed in Table 7.2) is not feasible due to inadequate space, head or other physical constrains of the site. This interim strategy does not apply where sufficient pervious area exists on the site prior to redevelopment and conformance to the Design Manual.

Deviation from technical standards for re-development projects may be accepted at the discretion of the reviewers. Acceptable management practices should include evaluation of the receiving waterbody and potential downstream impacts (TMDL requirements, wetlands impacts, increased flooding, threatened and endangered habitat, Environmental Justice Area impacts). Deviations from technical standards do, however, call for the 60-business day review period set forth in Section I.D.3.b of the permit. In any case the owner/operator should try to achieve the objectives of the standards to the extent practicable. When deviations are proposed the SWPPP should identify the design difficulties that lead to the deviations (inadequate space, head, or other physical constraints). The following suggests a list of review criteria for use by DEC staff on the unified sizing criteria:

A. **Deviations from Water Quantity** controls may be accepted based on the following considerations:

1- If the redevelopment results in no increase of impervious area or changes to hydrology that increase the discharge rate, the **ten-year and hundred-year criteria** do not apply.

This is true because the calculated discharge of pre-development versus post-development flows results in zero net increase. This consideration does not mean that existing quantity controls may be neglected in planned designs. **Existing quantity controls** must be maintained in post development flow discharge control.

2- Deviation from the **channel protection** criterion also may be accepted for redevelopment if there is no increase of impervious area or changes to hydrology that increase the discharge rate.

Neglecting channel protection should not be automatic. This criterion, as defined in the Design Manual, is not based on a pre versus post development comparison. Furthermore, 24 hour extended detention of the 1 year 24 hour storm event, as set forth in the design manual can be readily achievable.

3- If the redevelopment results in an **increase of the total impervious area** and subsequently increased discharge rate, **all quantity controls** apply for the increased discharge.

If the redevelopment results in modified hydrology or flow due to discharge to other subwatersheds, slope change, direct channelization, curb-line modification, etc., **all quantity controls** apply for the increased discharge.

B. Deviations from **Water Quality** controls may be accepted based on the following considerations:

1- Permittees would be responsible to provide post construction runoff controls for the **disturbed area** including both **pervious and impervious areas**. As with design of any practice, sizing of structures should be based on all areas contributing to the stormwater management practice. Redevelopments, which reconstruct a portion of the site, may choose diversion or flow splitters to be able to size the control structures for the reconstructed area only.

2- Deviations from standard practices (practices listed in Section 5.1 of the Design Manual) are acceptable when a reduction of the impervious area of the site is proposed. Deviations from Quality controls are acceptable if the proposed plan reduces the impervious cover by a minimum of 20% of the **total site area** (existing + planned). Conversion to pervious cover may include landscaped or grassed areas, vegetated roof cover (roof garden), and grid pavement where applicable.

3- Deviations are acceptable, when a minimum of 25 % of the water quality volume from the **disturbed area** is captured and treated by the implementation of standard practices.

4- Deviations from **Performance Criteria** are also acceptable when a combination of standard and **non-standard practices** is proposed. **Non-standard practices** may also be accepted without standard practices if they treat 100 % of the water quality volume from the disturbed area as well as any additional runoff from tributary areas that are not within the disturbed area but that are, nonetheless, directed to the practice. Non-standard

practices are supplemental practices listed in Section 5.2 of the Design Manual or equivalent practices.

5- If the project includes a combination of new development and redevelopment, the deviations described above will not be acceptable for the areas of the site under new development.

Back to top of page

Section 4.3 Stream Channel Protection Volume Requirements (Cp_v)

Stream Channel Protection Volume Requirements (Cp_v) are designed to protect stream channels from erosion. In New York State this goal is accomplished by providing 24-hour extended detention of the one-year, 24-hour storm event. Trout waters may be exempted from the 24-hour ED requirement, with only 12 hours of extended detention required to meet this criterion.

For developments greater than 50 acres, with impervious cover greater than 25%, it is recommended that a detailed geomorphic assessment be performed to determine the appropriate level of control. Appendix J provides guidance on how to conduct this assessment.

The Cp_v requirement does not apply in certain conditions, including the following:

- Recharge of the entire Cp_v volume is achieved at a site.
- The site discharges directly tidal waters or fourth order (fourth downstream) or larger streams. Within New York State, streams are classified using the following:

  New York State Codes Rules and Regulations (NYCRR)
  Volumes B-F, Parts 800-941
  West Publishing, Eagan, MN

However this classification system does not provide a numeric stream order. The methodology identified in this Manual is consistence with Strahler-Horton methodology. For an example of stream order identification see section 4.7.

Detention ponds or underground vaults are methods to meet the Cp_v requirement (and subsequent Q_{p10} and Q_f criteria). Schematics of typical designs are shown in Figures 4.2. and 4.3. Note that, although these practices meet water quantity goals, they are unacceptable for water quality because of poor pollutant removal, and need to be coupled with a practice listed in Table 5.1. The Cp_v requirement may also be provided above the water quality (WQ_v) storage in a wet pond or stormwater wetland.

Basis for Determining Channel Protection Storage Volume

The following represent the minimum basis for design:

- TR-55 and TR-20 (or approved equivalent) shall be used to determine peak discharge rates.
- Rainfall depths for the one-year, 24 hour storm event are provided in Figure 4.4.
- Off-site areas should be modeled as "present condition" for the one-year, 24 hour storm event.

Section 4.4 Overbank Flood Control Criteria (Q_p)

The primary purpose of the overbank flood control sizing criterion is to prevent an increase in the frequency and magnitude of out-of-bank flooding generated by urban development (i.e., flow events that exceed the bankfull capacity of the channel, and therefore must spill over into the floodplain).

Overbank control requires storage to attenuate the post development 10-year, 24-hour peak discharge rate (Q_p) to predevelopment rates.

The overbank flood control requirement (Q_p) does not apply in certain conditions, including:
The site discharges directly tidal waters or fourth order (fourth downstream) or larger streams. Refer to Section 4.3 for instructions.

- A downstream analysis reveals that overbank control is not needed (see section 4.7).

Basis for Design of Overbank Flood Control
When addressing the overbank flooding design criteria, the following represent the minimum basis for design:

- TR-55 and TR-20 (or approved equivalent) will be used to determine peak discharge rates.
- When the predevelopment land use is agriculture, the curve number for the pre-developed condition shall be derived from the recommended five-year crop rotation for a region, from the local Soil Conservation Service, or from the historical five-year crop rotation for the site, whichever results in a lower curve number value.
- Off-site areas should be modeled as "present condition" for the 10-year storm event.
- Figure 4.5 indicates the depth of rainfall (24 hour) associated with the 10-year storm event throughout the State of New York.
- The length of overland flow used in t_c calculations is limited to no more than 150 feet for predevelopment conditions and 100 feet for post development conditions. On areas of extremely flat terrain (<1% average slope), this maximum distance is extended to 250 feet for predevelopment conditions and 150 feet for postdevelopment conditions.

Section 4.5 Extreme Flood Control Criteria (Q_f)

The intent of the extreme flood criteria is to (a) prevent the increased risk of flood damage from large storm events, (b) maintain the boundaries of the predevelopment 100-year floodplain, and (c) protect the physical integrity of stormwater management practices

100 Year Control requires storage to attenuate the post development 100-year, 24-hour peak discharge rate (Q_f) to predevelopment rates.

The 100-year storm control requirement can be waived if:

- The site discharges directly tidal waters or fourth order (fourth downstream) or larger streams. Refer to Section 4.3 for instructions.
- Development is prohibited within the ultimate 100-year floodplain
- A downstream analysis reveals that 100-year control is not needed (see section 4.7)

Detention structures involving dams must provide safe overflow of the design flood, as discussed in Appendix A: "Guidelines for the Design of Dams." The flowrates and floodplain extents referred to herein should not be confused with those developed by FEMA for use in the NFIP. Often FEMA has developed 10, 50, 100 and 500-yr flowrates for streams in developed, flood-prone areas, as shown in the Flood Insurance Study (FIS) for a given community. However, it should be noted that these flowrates are only provided at selected locations along studied streams, generally represent the watershed conditions existing at the time of the study, and are commonly developed using stream gauge records or USGS regression equations and therefore do not have any associated storm duration. The extents of the special flood hazard area (SFHA) as shown on the flood insurance rate maps (FIRMs) are defined using these flowrates. These flowrates and flood extents should not be used to compare the pre and post-project development conditions for the purposes of designing on storm water management facilities.

Basis for Design for Extreme Flood Criteria

- The same hydrologic and hydraulic methods used for overbank flood control shall be used to analyze Q_f.
- Figure 4.6 indicates the depth of rainfall (24 hour) associated with the 100-year storm event throughout New York State.
- When determining the storage required to reduce 100-year flood peaks, model off-site areas under current conditions.

Section 4.6 Conveyance Criteria

In addition to the stormwater treatment volumes described above, the manual also provides guidance on safe and non-erosive conveyance to, from, and through SMPs. Typically, the targeted storm frequencies for conveyance are the two-year and ten-year events. The two-year event is used to ensure non-erosive flows through roadside swales, overflow channels, pond pilot channels, and over berms within practices. Figure 4.7 presents rainfall depths for the two-year, 24-hour storm event throughout New York State. The 10-year storm is typically used as a target sizing for outfalls, and as a safe conveyance criterion for open channel practices and overflow channels. Note that some agencies or municipalities may use a different design storm for this purpose.

Section 4.7 Stream Order Identification

This section provides an example to help identify stream order based on Strahler-Horton Method. A network of streams drain each watershed. Streams can be classified according to their order in that network. A stream that is identified as a "blue-line" stream on USGS topo maps, and has no tributaries or branches is defined as a first-order stream. When two first-order streams combine, a second-order stream is created, and so on. Figure 4.8 illustrates the stream order concept (Schueler, T. 1995).

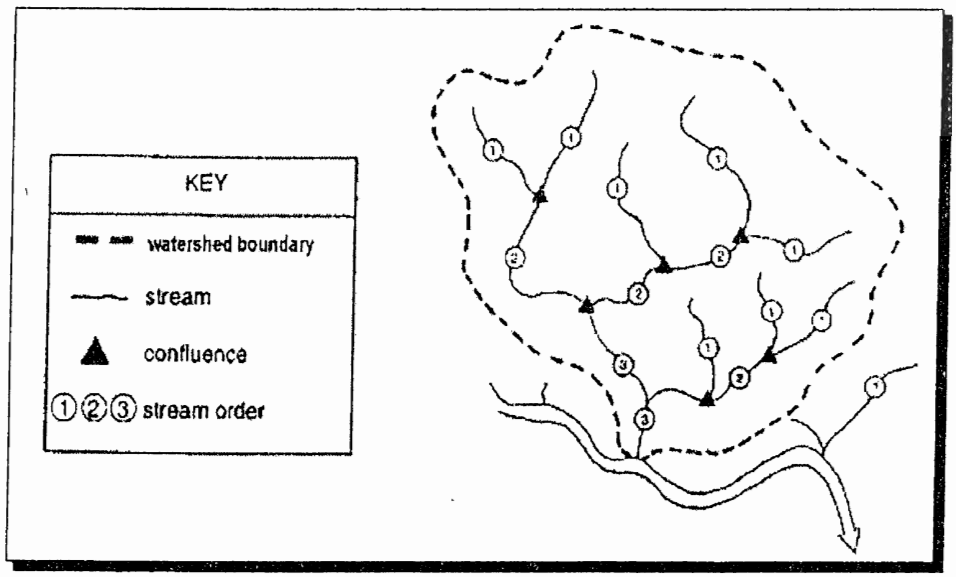


Figure 4.8 A Network of Headwater and Third-order Streams
(Source: Schueler, 1995)

KW Furey
Engineering, P.C.
Engineering & Construction Management

Transmitted Via e-mail

June 22, 2006

Hon. Mayor Phillip Trifiletti and
Village of Mamaroneck Board of Trustees
123 Mamaroneck Avenue
Mamaroneck, NY 10543

Re: Sheldrake Estates
Final EIS Comments
Project #: 012.01

Dear Mayor Trifiletti and Honorable Members of the Board:

We have reviewed the Final Environmental Impact Statement, prepared by Tim Miller and Associates for the above referenced project, and received in this office on June 20, 2006, and offer the following:

- ***Page 2-1 - Comment 2-2:*** The applicants response to this comment does not address any offsets in existing sanitary sewer inflow and infiltration (I/I) as noted by Mr. Burroughs. In order to effectuate such offsets, the applicant would need to conduct a localized Sewer System Evaluation Survey, to identify potential sources of inflow and infiltration, and then propose remedial actions to mitigate same. While the applicants proposed use of PVC sewer pipe for the new sewers to be constructed as part of this project are appropriate, the response does not in any way address the offset of existing I/I as per Mr. Burroughs''s original comment. This item needs to be properly addressed.
- ***Page 2-2 - Comment 2-6:*** In a meeting held with the applicant's engineer, Bohler Engineering, on March 21, 2006, we discussed three (3) different routing scenarios for construction of a new municipal sewer to service the proposed development, and connect to one of the County Trunk lines. At this stage in the project development, it would be unwise to focus in on any one alternative, and dismiss the others, since more investigatory work needs to be conducted to make an informed engineering decision. While we are in agreement that, due to the lack of capacity in the current Waverly Avenue sewer, a new line will need to be constructed by the applicant to service the proposed development, we do not feel that enough information is available at this time to determine the final routing for same. Relative to the capacity of the Mamaroneck Avenue Trunk Line, the characterization that we have concluded that adequate capacity exists in said line is inaccurate. Our evaluation of this line was that, anecdotal evidence does not indicate this section of the County Trunk Line as being problematic. As part of the final design process, during site plan approval, additional investigation as to the capacity issue will need to be done by Bohler, and coordinated with Westchester County DEF, who owns and maintains the trunk lines. That being said, we agree with Mrs. Doyle's original comment that all the proposed routings should be show on the map, and an expanded discussion of the issue included in the FEIS. Inasmuch as our copy of the FEIS is missing the referenced Figure 2-4, we can not evaluate the completeness of this map as to indication of all the possible alternative sewer connections, nor do we find any in-depth discussion of the evaluation of the existing flows and how this issue id being addressed, in accordance with our comments at the Village Board of Trustees Meeting of March 13, 2006.

- ***Page 5-3 - Comment 5-7:*** While the final site Remedial Action Plan (RAP), subject to NYSDEC approval, will be determined subsequent to the findings of a NYSDEC approved Remedial Investigation (RI), as noted in several of the applicants responses, the assertion that the level topography of the site, limits the flow of groundwater towards the Sheldrake River, is without engineering basis. Ground level topography can not be used to accurately predict hydro-geologic contours, especially in the vicinity of an influencing body of water such as the Sheldrake River. Furthermore, there is substantial anecdotal evidence of significant horizontal groundwater migration in the area of this project.
- ***Pages 6-1 & 6-2 - Comment 6-1:*** The response from the applicant to this comment is not entirely accurate. Relative to conformance with the NYSDEC Phase II Stormwater Regulations, the applicant is correct is stating that submission of a Notice of Intent (NOI), along with a Stormwater Pollution Prevention Plan (SWPPP) is required by the applicant. However, it appears that the applicant has characterized the post-development stormwater management system design as having to be in compliance with the NOI submitted by the Village in March of 2003. This is not entirely accurate. The Post-development stormwater management plan must conform to the Phase II Regulations and be in accordance with the NYSDEC Stormwater Design Manual, Chapter 4 (copy attached), and must address Water Quality Volume for the 90% Storm, 24-hour extended detention of the 1-year storm, and stormwater runoff attenuation, to pre-development conditions for the 10-year and 100-year storm events. For all sites involving a disturbance of greater than one-acre (which this site is), the applicant must include it proposed design to meet the post-development stormwater management requirements in its NOI submission to the NYSDEC, and receive a Phase II Permit from the State for same. The applicant is not covered under the Villages Phase II Permit as an MS4 as the response appears to indicate. Although the applicant has not contacted this office to review the Village's SMP, specifically for this project, as indicated in the response, based on the fact that the applicant's engineer has been a participant in the Phase II process with both the Village Planning Board and this office on several other projects within the Village, they are well aware of the specific requirements which will be enforced, prior to any site plan approval being issued.
- ***Page 6-2 - Comment 6-2:*** As noted above, the specific requirements for compliance with the NYSDEC Phase II Stormwater Regulations, will need to be followed by the applicant, including Submission of an NOI, SWPPP and Post-development Stormwater Management Plan in accordance with the NYSDEC Stormwater Management Design Manual of Practice.
- ***Page 6-3 - Comment 6-4:*** The applicant's response to Mr. Ryan's comment does not fully indicate the extent of the treatment measures required by the Phase II Regulations. Specifically, Phase II requires 100% treatment of all stormwater runoff, from the post-developed site, for the 90% storm (1.3 inches in a 24-hr period for Mamaroneck). Said treatment must be accomplished via approved stormwater treatment practices in accordance with the NYSDEC Stormwater Design Manual - Chapter 4. The specific design of these practices will need to be addressed during final design of the site plan, and subject to this office's review during the planning Board Review Process and submission to the NYSDEC for issuance of a Phase II Stormwater Permit for the Site.
- ***Page 6-3 - Comment 6-6:*** Again, the applicants response to Mr. Ryan's comment does not fully address the Phase II requirements. Specifically, as regards stormwater runoff quantity, the post-development stormwater management plan will be required to provide 24-hour extended detention of the fully developed 1-year storm, and attenuation of the 10-year and 100-year storms to pre-development levels.
- ***Page 6-4 - Comment 6-8:*** Again the applicant's response appears to indicate that the Village, rather than the applicant, is the responsible party for compliance with the substitive and administrative requirements of the Phase II Regulations. This is inaccurate, the applicant must comply with the requirements, both substitive and administrative, of the Phase II Stormwater Requirements specific to this site.

- ***Page 6-4 - Comment 6-9:*** The Village is already in compliance with the Phase II Regulations, and submitted the required Phase II NOI and SMP in March of 2003. The Village is not responsible for reduction of pollutants from this proposed development, that is solely the responsibility of the applicant. The Village's responsibility in this matter is to act as the enforcement agency in insuring the applicants conformance with the Phase II regulations.
- ***Page 6-5 - Comment 6-10:*** The applicant appears to indicate, a continuing assertion, that the reduction in impervious surfaces, and therefore storm water runoff quantity, will satisfy any water quality issues on the site. This is neither true, nor acceptable. As previously stated, specific water quality treatment practices must be sized and installed on the site in accordance with the NYSDEC Stormwater Design Manual - Chapter 4. This would include treatment of non-point source fecal coliform which would be of concern relative to stormwater runoff.
- ***Page 6-5 - Comment 6-11:*** While the 1994 Baker Engineering SSES does not deal with stormwater issues (it is specific to the evaluation of the sanitary sewer system), it is important to note that the data contained therein, will be necessary as a baseline for investigation as to how to provide the I/I offsets in the Sanitary Sewer System as noted in Comment 2-2. That being said, the applicant needs to be aware that the data in that study is now twelve years old, and while it provides a baseline and a starting point, it can not be entirely relied upon as a basis of design for I/I reduction, and further investigatory work need to be done by the applicant's engineer as part of the design process.
- ***Page 6-5 - Comment 6-12:*** While the applicants response that the comment is noted is adequate from their perspective, it should be noted that review of the data, designs and site plans, with respect to the engineering issues attendant to this application (ie. stormwater, sanitary sewers, site remediation, etc.) will be conducted by this office as the Village's Consulting Engineer under our function as the engineering advisor to the Planning Board. It is important to remember that although the current data provides a benchmark for the current conditions, as stated by Mrs. Radow, the goal of the Village and this office, relative to post-development water quality issues is not merely improvement over the current conditions, but rather systems that are in line with current Best Management Practices and Environmental Regulations.

In general, we find that the applicant fails to accurately address several significant issues in the FEIS. Specifically, we find that:

1. The issue of I/I offsets is not properly responded to. A statement relative to the proposed materials for the new sewer, which will be required for the development, does not address the plan to investigate potential sources of I/I and mitigate same during the design process. This process needs to be discussed;
2. The overall discussion of the new sanitary sewer line is limited in scope, and appears to have already settled on a single alternative. We do not believe that, at this time, enough information is available to have determined a final routing for same, and that several potential alternatives need to be included in the FEIS, for further evaluation during the design phase of the project;
3. While the stormwater management section of the FEIS fully addresses the SWPPP for the construction activities at the site, the description of the necessary requirements and actions to be undertaken during the design of the Post-development Stormwater Management Plan are neither accurate nor detailed enough, relative to the specific water quality and water quantity treatment measures to be taken, nor do they provide a clear enough picture relative to the difference between the two.

Based on the above, we would respectfully recommend, that the Mayor and Board require the applicant to adequately address the above concerns, prior to acceptance of the FEIS. As always feel free to contact me should you have nay questions.

Very truly yours,

KW FUREY ENGINEERING, P.C.

Keith W. Furey, P.E.
Principal

Enclosures
KWF/df

Sheldrake Estates FEIS Let.wpd

Chapter 4: Unified Stormwater Sizing Criteria

Section 4.1 Introduction

This chapter presents a unified approach for sizing SMPs in the State of New York to meet pollutant removal goals, reduce channel erosion, prevent overbank flooding, and help control extreme floods. For a summary, please consult Table 4.1 below. The remaining sections describe the four sizing criteria in detail and present guidance on how to properly compute and apply the required storage volumes.

Table 4.1 New York Stormwater Sizing Criteria

Water Quality (WQ_v)	**90% Rule:** $WQ_v = [(P)(R_v)(A)] /12$ $Rv = 0.05+0.009(I)$ I = Impervious Cover (Percent) Minimum Rv = 0.2 P = 90% Rainfall Event Number (See Figure 4.1) A = site area in acres
Channel Protection (Cp_v)	**Default Criterion:** Cp_v = 24 hour extended detention of post-developed 1-year, 24-hour storm event. **Option for Sites Larger than 50 Acres:** Distributed Runoff Control - geomorphic assessment to determine the bankfull channel characteristics and thresholds for channel stability and bedload movement.
Overbank Flood (Q_p)	Control the peak discharge from the 10-year storm to 10-year predevelopment rates.
Extreme Storm (Q_f)	Control the peak discharge from the 100-year storm to 100-year predevelopment rates. Safely pass the 100-year storm event.
Note: Channel protection, overbank flood, and extreme storm requirements may be waived in some instances if the conditions specified in this chapter are met. For SMPs involving dams, follow Appendix A Guidelines for Design of Dams for safe passage of the design flood.	

Section 4.2 Water Quality Volume (WQ_v)

The Water Quality Volume (denoted as the WQ_v) is designed to improve water quality sizing to capture and treat 90% of the average annual stormwater runoff volume. The WQ_v is directly related to the amount of impervious cover created at a site. Contour lines of the 90% rainfall event are presented in Figure 4.1.

The following equation can be used to determine the water quality storage volume WQ_v (in acre-feet of storage):

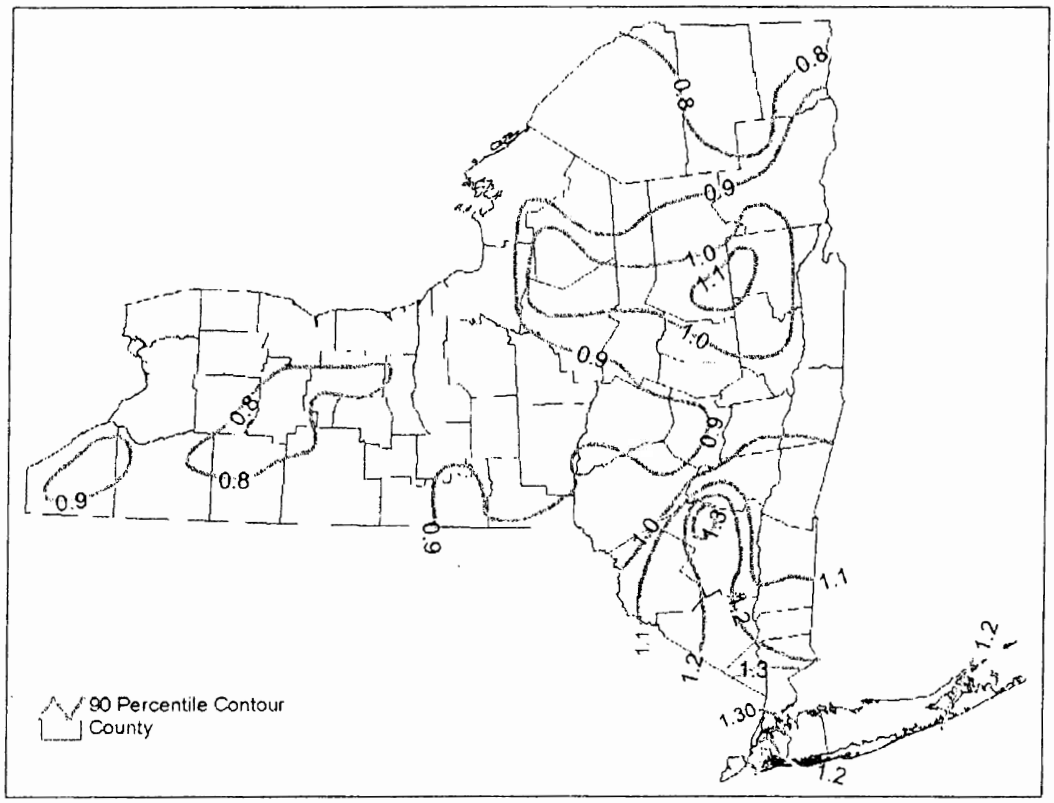
$$WQ_v = \frac{(P)\,(R_v)(A)}{12}$$

where:

WQ_v = water quality volume (in acre-feet)
P = 90% Rainfall Event Number (see Figure 4.1)
R_v = 0.05 + 0.009(I), where I is percent impervious cover
A = site area in acres (contributing area)

A minimum Rv of 0.2 will be applied to regulated sites. (tributary area)

Figure 4.1 90% Rainfall in New York State



Basis Of Design for Water Quality

As a basis for design, the following assumptions may be made:

- *Measuring Impervious Cover*: the measured area of a site plan that does not have permanent vegetative or permeable cover shall be considered total impervious cover. Impervious cover is defined as all impermeable surfaces and includes: paved and gravel road surfaces, paved and gravel parking lots, paved driveways, building structures, paved sidewalks, and miscellaneous impermeable structures such as patios, pools, and sheds. Porous or modular block pavement may be considered 50% impervious. Where site size makes direct measurement of impervious cover impractical, the land use/impervious cover relationships presented in Table 4.2 can be used to initially estimate impervious cover.

Table 4.2 Land Use and Impervious Cover (Source: Cappiella and Brown, 2001)

Land Use Category	Mean Impervious Cover
Agriculture	**2**
Open Urban Land*	**9**
2 Acre Lot Residential	**11**
1 Acre Lot Residential	**14**
1/2 Acre Lot Residential	**21**
1/4Acre Lot Residential	**28**
1/8 Acre Lot Residential	**33**
Townhome Residential	**41**
Multifamily Residential	**44**
Institutional**	**28-41%**
Light Industrial	**48-59%**
Commercial	**68-76%**

* Open urban land includes developed park land, recreation areas, golf courses, and cemeteries.
** Institutional is defined as places of worship, schools, hospitals, government offices, and police and fire stations

- *Aquatic Resources*: More stringent local regulations may be in place or may be required to protect drinking water reservoirs, lakes, or other sensitive aquatic resources. Consult the local authority to determine the full requirements for these resources.

- *SMP Treatment*: The final WQ_v shall be treated by an acceptable practice from the list presented in this manual. Please consult Chapter 5 for a list of acceptable practices.

- *Determining Peak Discharge for WQ_v Storm*: When designing flow splitters for off-line practices, consult the small storm hydrology method provided in Appendix B.

- *Extended Detention for Water Quality Volume*: The water quality requirement can be met by providing 24 hours of the WQ_v (provided a micropool is specified) extended detention. A local jurisdiction may reduce this requirement to as little as 12 hours in trout waters to prevent stream warming.

- *Off-site Areas:* Provide treatment for off-site areas in their current condition. If water quality treatment is provided off-line, the practice must only treat on-site runoff.

Section 4.3 Stream Channel Protection Volume Requirements (Cp_v)

Stream Channel Protection Volume Requirements (Cp_v) are designed to protect stream channels from erosion. In New York State this goal is accomplished by providing 24-hour extended detention of the one-year, 24-hour storm event. Trout waters may be exempted from the 24-hour ED requirement, with only 12 hours of extended detention required to meet this criterion.

For developments greater than 50 acres, with impervious cover greater than 25%, it is recommended that a detailed geomorphic assessment be performed to determine the appropriate level of control. Appendix J provides guidance on how to conduct this assessment.

The Cp_v requirement does not apply in certain conditions, including the following:

- Recharge of the entire Cp_v volume is achieved at a site.
- The site discharges directly tidal waters or fourth order (fourth downstream) or larger streams. Within New York State, streams are classified using the following:

  New York State Codes Rules and Regulations (NYCRR)
  Volumes B-F, Parts 800-941
  West Publishing, Eagan, MN

However this classification system does not provide a numeric stream order. The methodology identified in this Manual is consistence with Strahler-Horton methodology. For an example of stream order identification see section 4.7.

Detention ponds or underground vaults are methods to meet the Cp_v requirement (and subsequent Q_{p10} and Q_f criteria). Schematics of typical designs are shown in Figures 4.2. and 4.3. Note that, although these practices meet water quantity goals, they are unacceptable for water quality because of poor pollutant removal, and need to be coupled with a practice listed in Table 5.1. The Cp_v requirement may also be provided above the water quality (WQ_v) storage in a wet pond or stormwater wetland.

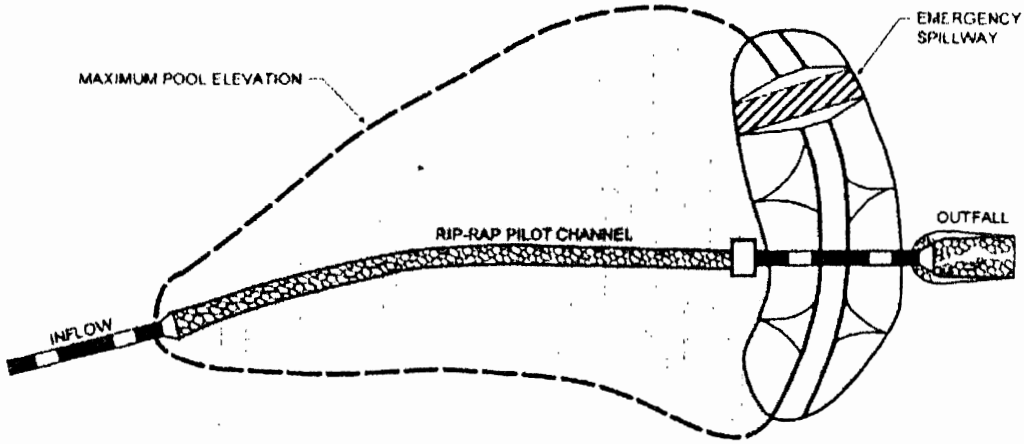
Basis for Determining Channel Protection Storage Volume

The following represent the minimum basis for design:

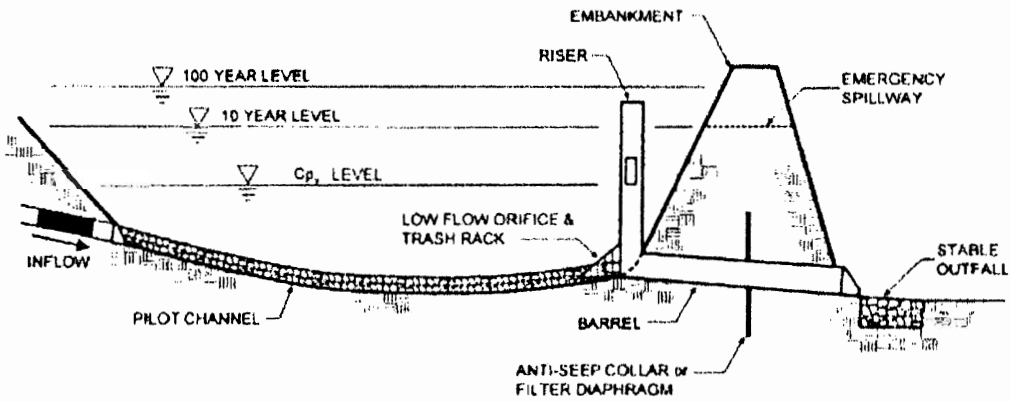
- TR-55 and TR-20 (or approved equivalent) shall be used to determine peak discharge rates.
- Rainfall depths for the one-year, 24 hour storm event are provided in Figure 4.4.
- Off-site areas should be modeled as "present condition" for the one-year, 24 hour storm event.

- The length of overland flow used in time of concentration (t_c) calculations is limited to no more than 100 feet for post development conditions.
- Cp_v is not required at sites where the resulting diameter of the ED orifice is too small, to prevent clogging. (A minimum 3" orifice with a trash rack or 1" if the orifice is protected by a standpipe, having slots with an area less than the internal orifice are recommended to prevent clogging. See Figure 3 in Appendix K for design details).
- Extended detention storage provided for the channel protection (Cp_v-ED) does not meet the WQ_v requirement. Both water quality and channel protection storage may be provided in the same SMP, however.
- The CP_v detention time for the one-year storm is defined as the time difference between the center of mass of the inflow hydrograph (entering the SMP) and the center of mass of the outflow hydrograph (leaving the SMP). See Appendix B for a methodology for detaining this storm event.

Figure 4.2 Example of a Conventional Stormwater Detention Pond



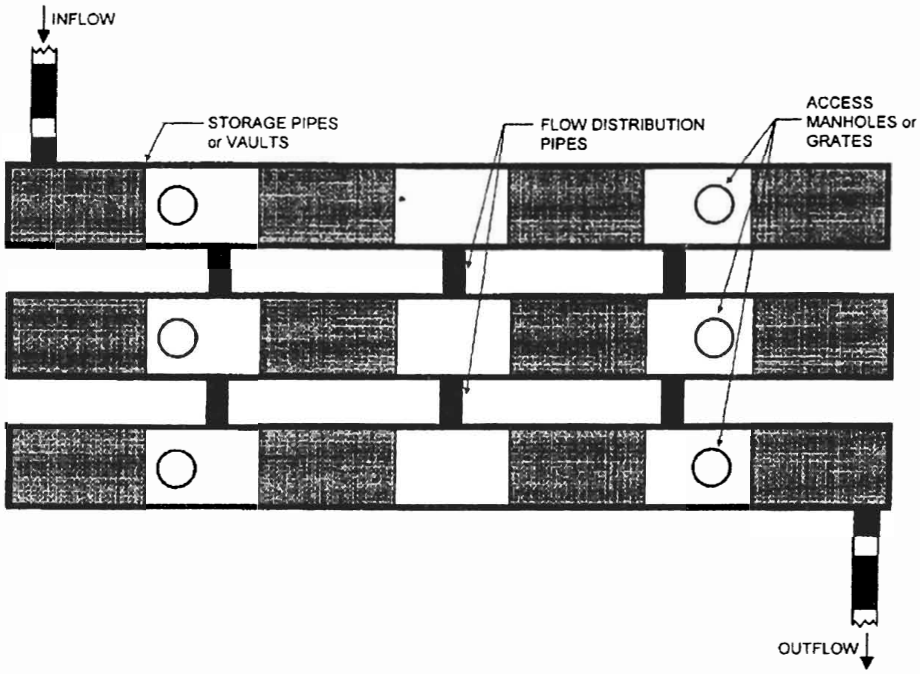
PLAN VIEW



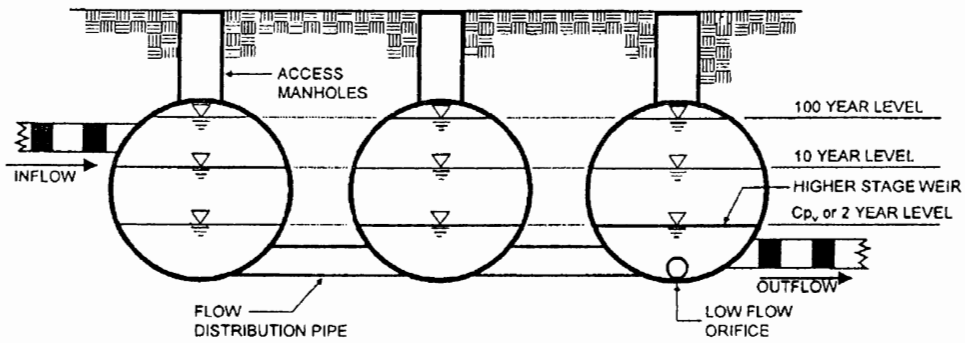
PROFILE

A typical detention facility provides channel protection control (Cp_v) and overbank control (Q_p) but no water quality control (WQ_v). If this practice is used, WQv must be provided in a separate facility listed in Table 5.1.

Figure 4.3 Example of Stormwater Detention Provided by an Underground Pipe System



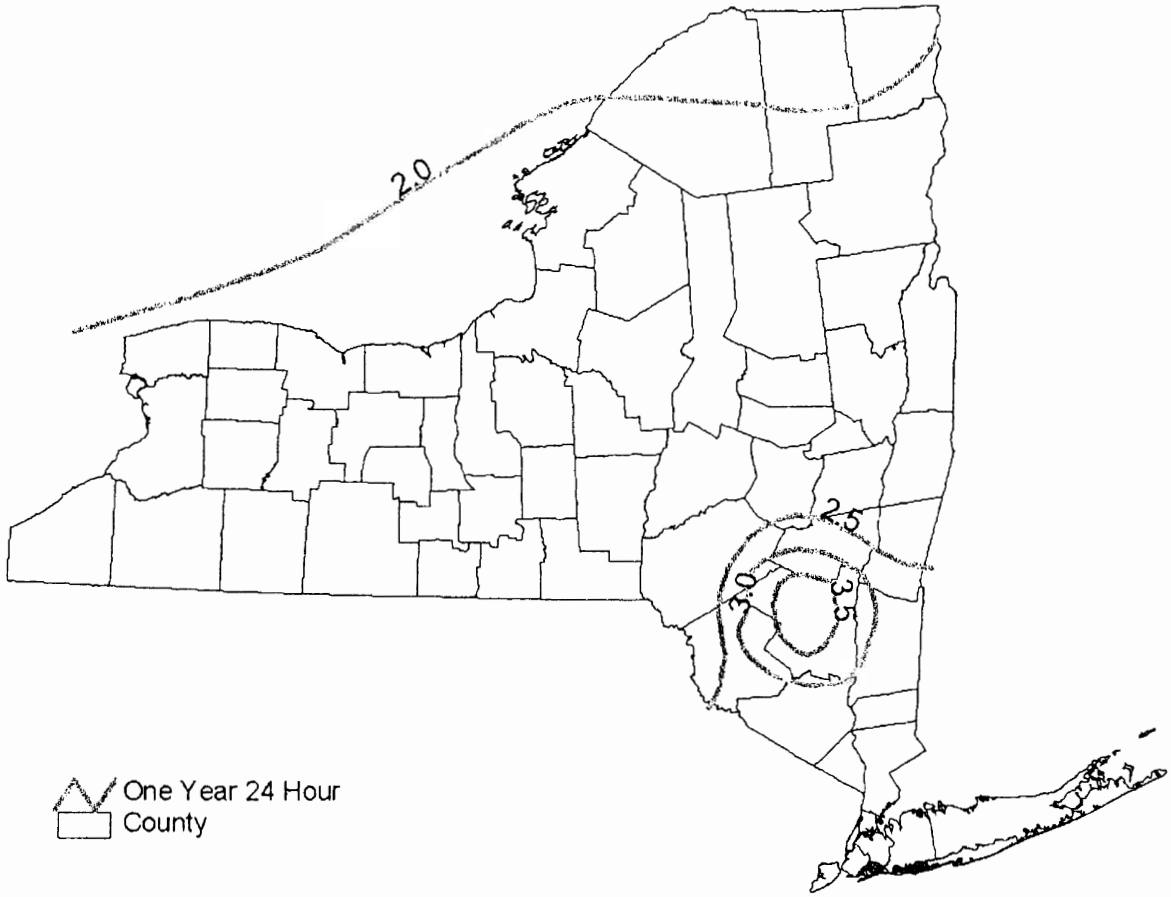
PLAN VIEW



TYPICAL SECTION

An underground pipe system or vaults may be used to provide Cp_v, Q_p and Q_f controls but not WQ_v.

Figure 4.4 One-Year Design Storm



Section 4.4 Overbank Flood Control Criteria (Q_p)

The primary purpose of the overbank flood control sizing criterion is to prevent an increase in the frequency and magnitude of out-of-bank flooding generated by urban development (i.e., flow events that exceed the bankfull capacity of the channel, and therefore must spill over into the floodplain).

Overbank control requires storage to attenuate the post development 10-year, 24-hour peak discharge rate (Q_p) to predevelopment rates.

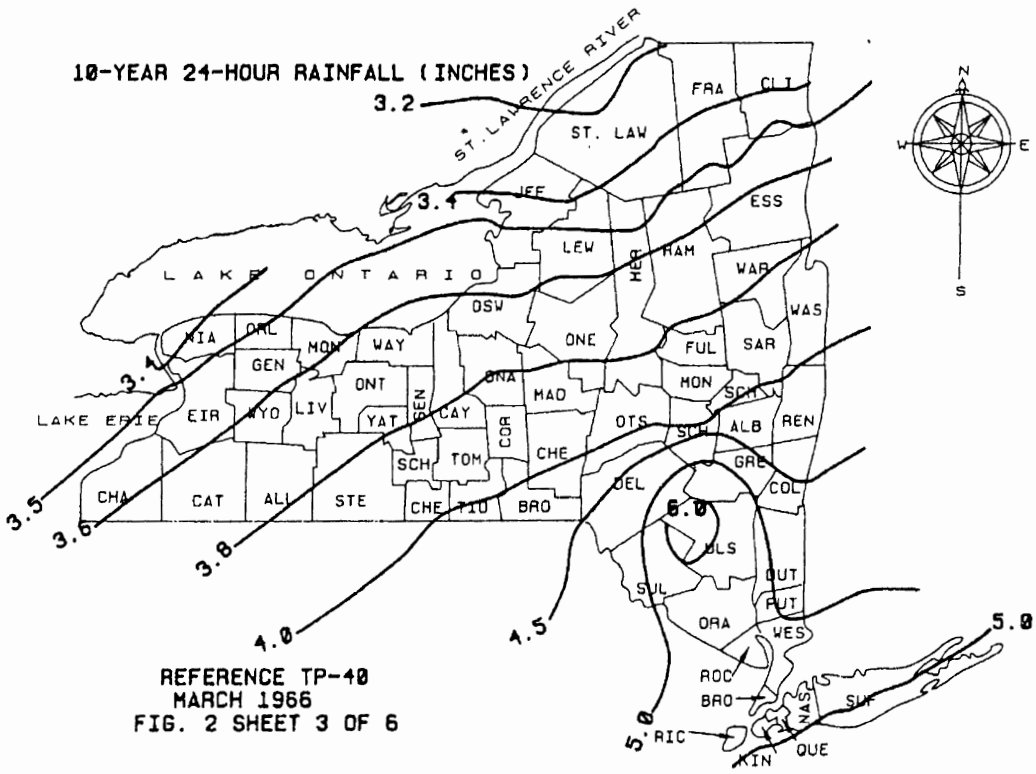
The overbank flood control requirement (Q_p) does not apply in certain conditions, including:
The site discharges directly tidal waters or fourth order (fourth downstream) or larger streams. Refer to Section 4.3 for instructions.

- A downstream analysis reveals that overbank control is not needed (see section 4.7).

Basis for Design of Overbank Flood Control
When addressing the overbank flooding design criteria, the following represent the minimum basis for design:

- TR-55 and TR-20 (or approved equivalent) will be used to determine peak discharge rates.
- When the predevelopment land use is agriculture, the curve number for the pre-developed condition shall be derived from the recommended five-year crop rotation for a region, from the local Soil Conservation Service, or from the historical five-year crop rotation for the site, whichever results in a lower curve number value.
- Off-site areas should be modeled as "present condition" for the 10-year storm event.
- Figure 4.5 indicates the depth of rainfall (24 hour) associated with the 10-year storm event throughout the State of New York.
- The length of overland flow used in t_c calculations is limited to no more than 150 feet for predevelopment conditions and 100 feet for post development conditions. On areas of extremely flat terrain (<1% average slope), this maximum distance is extended to 250 feet for predevelopment conditions and 150 feet for postdevelopment conditions.

Figure 4.5 10-Year Design Storm



Section 4.5 Extreme Flood Control Criteria (Q_f)

The intent of the extreme flood criteria is to (a) prevent the increased risk of flood damage from large storm events, (b) maintain the boundaries of the predevelopment 100-year floodplain, and (c) protect the physical integrity of stormwater management practices

100 Year Control requires storage to attenuate the post development 100-year, 24-hour peak discharge rate (Q_f) to predevelopment rates.

The 100-year storm control requirement can be waived if:

- The site discharges directly tidal waters or fourth order (fourth downstream) or larger streams. Refer to Section 4.3 for instructions.
- Development is prohibited within the ultimate 100-year floodplain
- A downstream analysis reveals that 100-year control is not needed (see section 4.7)

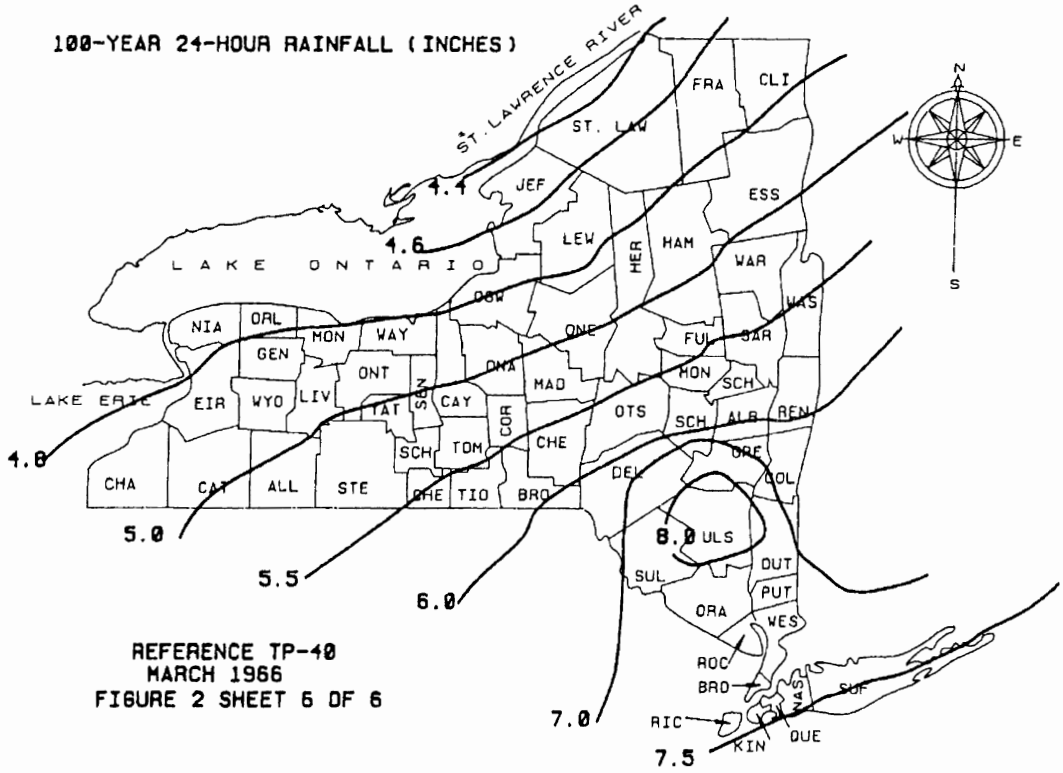
Detention structures involving dams must provide safe overflow of the design flood, as discussed in Appendix A: "Guidelines for the Design of Dams." The flowrates and floodplain extents referred to herein should not be confused with those developed by FEMA for use in the NFIP. Often FEMA has developed 10, 50, 100 and 500-yr flowrates for streams in developed, flood-prone areas, as shown in the Flood Insurance Study (FIS) for a given community. However, it should be noted that these flowrates are only provided at selected locations along studied streams, generally represent the watershed conditions existing at the time of the study, and are commonly developed using stream gauge records or USGS regression equations and therefore do not have any associated storm duration. The extents of the special flood hazard area (SFHA) as shown on the flood insurance rate maps (FIRMs) are defined using these flowrates. These flowrates and flood extents should not be used to compare the pre and post-project development conditions for the purposes of designing on storm water management facilities.

Basis for Design for Extreme Flood Criteria

- The same hydrologic and hydraulic methods used for overbank flood control shall be used to analyze Q_f.
- Figure 4.6 indicates the depth of rainfall (24 hour) associated with the 100-year storm event throughout New York State.
- When determining the storage required to reduce 100-year flood peaks, model off-site areas under current conditions.

- When determining storage required to safely pass the 100-year flood, model off-site areas under ultimate conditions.

Figure 4.6 100-Year Design Storm



Section 4.6 Conveyance Criteria

In addition to the stormwater treatment volumes described above, the manual also provides guidance on safe and non-erosive conveyance to, from, and through SMPs. Typically, the targeted storm frequencies for conveyance are the two-year and ten-year events. The two-year event is used to ensure non-erosive flows through roadside swales, overflow channels, pond pilot channels, and over berms within practices. Figure 4.7 presents rainfall depths for the two-year, 24-hour storm event throughout New York State. The 10-year storm is typically used as a target sizing for outfalls, and as a safe conveyance criterion for open channel practices and overflow channels. Note that some agencies or municipalities may use a different design storm for this purpose.

Section 4.7 Stream Order Identification

This section provides an example to help identify stream order based on Strahler-Horton Method. A network of streams drain each watershed. Streams can be classified according to their order in that network. A stream that is identified as a "blue-line" stream on USGS topo maps, and has no tributaries or branches is defined as a first-order stream. When two first-order streams combine, a second-order stream is created, and so on. Figure 4.8 illustrates the stream order concept (Schueler, T. 1995).

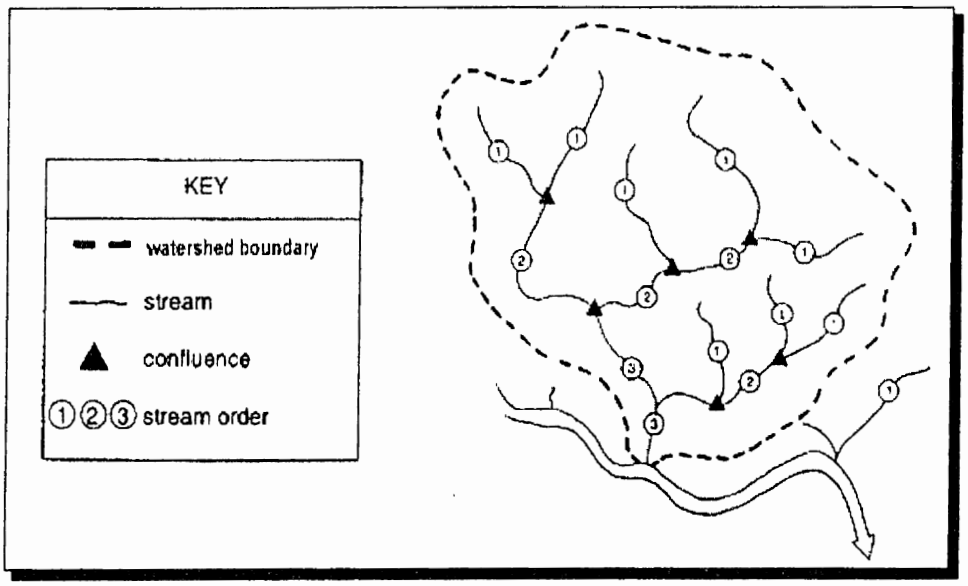


Figure 4.8 A Network of Headwater and Third-order Streams
(Source: Schueler, 1995)

Section 4.8 Downstream Analysis

Overbank, and extreme flood requirements may be waived based on the results of a downstream analysis. In addition, such an analysis for overbank and extreme flood control is recommended for larger sites (i.e., greater than 50 acres) to size facilities in the context of a larger watershed. The analysis will help ensure that storage provided at a site is appropriate when combined with upstream and downstream flows. For example, detention at a site may in some instances exacerbate flooding problems within a watershed. This section provides brief guidance for conducting this analysis, including the specific points along the downstream channel to be evaluated and minimum elements to be included in the analysis.

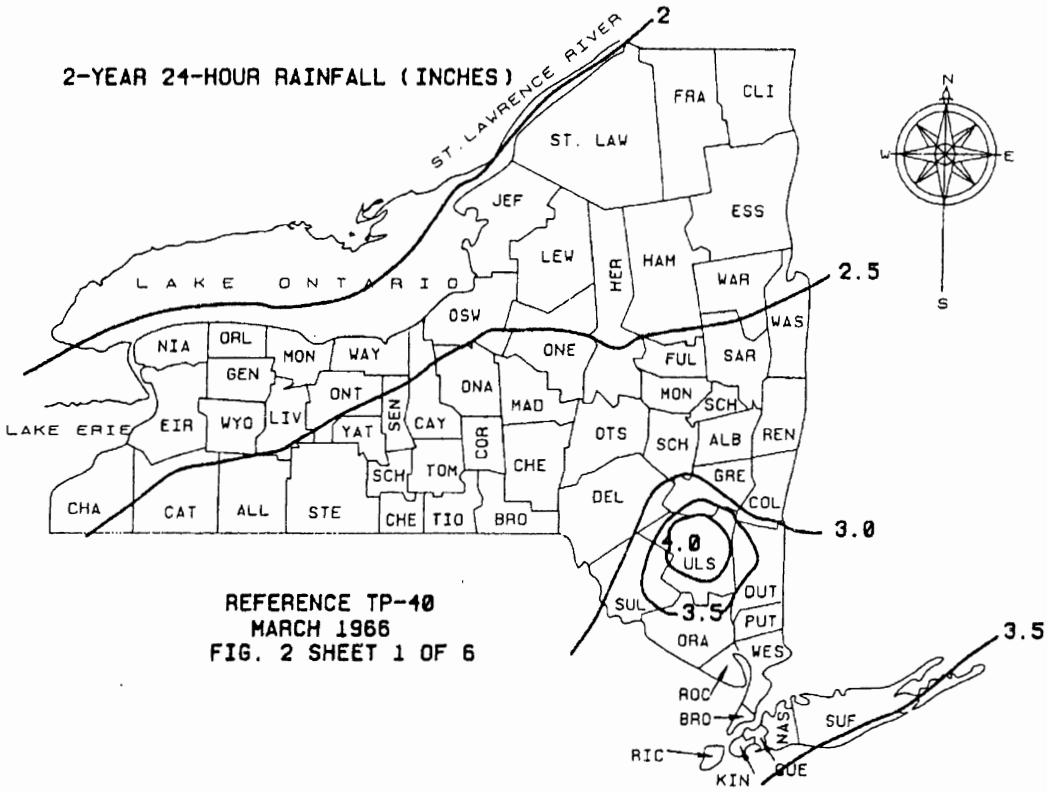
Downstream analysis can be conducted using the 10% rule. That is, the analysis should extend from the point of discharge downstream to the point on the stream where the site represents 10% of the total drainage area. For example, the analysis points for a 10-acre would include points on the stream from the points of discharge to the nearest downstream point with a drainage area of 100 acres. The required elements of the downstream analysis are described below.

- Compute pre-development and post-development peak flows and velocities for design storms (e.g., 10-year and 100-year), at all downstream confluences with first order or higher streams up to and including the point where the 10% rule is met. These analyses should include scenarios both with and without stormwater treatment practices in place, where applicable.
- Evaluate hydrologic and hydraulic effects of all culverts and/or obstructions within the downstream channel.
- Assess water surface elevations to determine if an increase in water surface elevations will impact existing buildings and other structures.

The design, or exemption, at a site level can be approved if both of the following criteria are met:

- Peak flow rates increase by less than 5% of the pre-developed condition for the design storm (e.g., 10-year or 100-year)
- No downstream structures or buildings are impacted.

Figure 4.7 2-Year Design Storm



Section 4. 9 Stormwater Hotspots

A stormwater hotspot is defined as a land use or activity that generates higher concentrations of hydrocarbons, trace metals or toxicants than are found in typical stormwater runoff, based on monitoring studies. If a site is designated as a hotspot, it has important implications for how stormwater is managed. First and foremost, stormwater runoff from hotspots cannot be allowed to infiltrate into groundwater, where it may contaminate water supplies. Second, a greater level of stormwater treatment is needed at hotspot sites to prevent pollutant washoff after construction. This treatment plan typically involves preparing and implementing *a stormwater pollution prevention plan* that involves a series of operational practices at the site that reduce the generation of pollutants from a site or prevent contact of rainfall with the pollutants. Table 4.3 provides a list of designated hotspots for the State of New York

Under EPA's stormwater NPDES program, some industrial sites are required to prepare and implement a stormwater pollution prevention plan. A list of industrial categories that are subject to the pollution prevention requirement can be found in the State of New York SPDES. In addition, New York's requirements for preparing and implementing a stormwater pollution prevention plan are described in the SPDES general discharge permit. The stormwater pollution prevention plan requirement applies to both existing and new industrial sites.

Table 4.3 Classification of Stormwater Hotspots

The following land uses and activities are deemed *stormwater hotspots:*

- Vehicle salvage yards and recycling facilities #
- Vehicle fueling stations
- Vehicle service and maintenance facilities
- Vehicle and equipment cleaning facilities #
- Fleet storage areas (bus, truck, etc.) #
- Industrial sites (based on SIC codes outlined in the SPDES)
- Marinas (service and maintenance) #
- Outdoor liquid container storage
- Outdoor loading/unloading facilities
- Public works storage areas
- Facilities that generate or store hazardous materials #
- Commercial container nursery
- Other land uses and activities as designated by an appropriate review authority

 # indicates that the land use or activity is required to prepare a stormwater pollution prevention plan under the SPDES stormwater program.

The following land uses and activities are not normally considered hotspots:

- Residential streets and rural highways
- Residential development
- Institutional development
- Office developments
- Non-industrial rooftops
- Pervious areas, except golf courses and nurseries (which may need an Integrated Pest Management (IPM) Plan).

While large highways (average daily traffic volume (ADT) greater than 30,000) are not designated as a stormwater hotspot, it is important to ensure that highway stormwater management plans adequately protect groundwater.

TIM MILLER ASSOCIATES, INC.

10 North Street, Cold Spring, New York 10516 *Phone (845) 265-4400* *Fax (845) 265-4418*

June 02, 2006

Chief Vincent Keck
Village of Mamaroneck Fire Department
Post Office Box 8
Mamaroneck, New York 10543

Re: Sheldrake Estates Proposed Residential Development, 270 Waverly Avenue, Village of Mamaroneck, New York

Dear Chief Keck:

Tim Miller Associates, Inc. is in the process of preparing the Final Environmental Impact Statement for a proposed residential development at the above referenced property. The site of the proposed development is a 2.77 acre property on Waverly Avenue. The proposed site plan of the development is enclosed for your reference.

The proposed development will consist of 114 one, two and three bedroom units in five buildings. The proposal also includes parking, utilities and other appurtenances. One way access to the site is proposed from the Waverly Avenue intersection, while egress is proposed onto Waverly Avenue from the eastern portion of the site.

As part of the environmental review process, we wish to include any concerns your Department may have relative to the proposed project. We would greatly appreciate your written response regarding the Fire Department's ability to provide fire protection, and other emergency services, to the proposed development. Information useful in this respect includes:

- Existing manpower (volunteer and professional), facilities and equipment/vehicles;
- Description of any existing plans to expand Department facilities, equipment or manpower;
- Number of responses in the last year; and
- Closest fire stations to the proposed project and estimated response time to the site.

Also, please elaborate on any specific concerns that you may have regarding the provision of fire protection services to this project.

Thank you in advance for your assistance in this matter. Please do not hesitate to call me at 845-265-4400, should you have any questions or need additional information.

Sincerely,

Eram Qadri
Planner/Architect
TIM MILLER ASSOCIATES, INC

Enclosure/Proj. No. 04099

APPENDIX D

Investigation Work Plan

**TIM
MILLER
ASSOCIATES, INC.**

10 North Street, Cold Spring, NY 10516 (845) 265-4400 265-4418 fax www.timmillerassociates.com

June 8, 2006

Mr. Todd Ghiosay
New York State Department of Environmental Conservation
100 Hillside Avenue
Suite 1W
White Plains, New York 10603-2860

Re: Investigation Work Plan
Sheldrake Estates/Blood Brothers Property, Mamaroneck, NY

Dear Mr. Ghiosay:

Tim Miller Associates, Inc. (TMA) is contracted by Attia Enterprises to further investigate environmental conditions on the Sheldrake Estates/Blood Brothers Property in Mamaroneck, New York. The property under consideration was formerly an auto-wrecking operation, known as Blood Brothers Auto Wreckers, which ceased operation in 2005. The property is proposed to be developed as a residential project known as Sheldrake Estates, shown on Figure 1 – Location Map. The proposed residential project is now being reviewed by the Village of Mamaroneck Board of Trustees, for a zoning change.

Preliminary investigations were conducted by TMA in August and November, 2004 for the 270 Waverly Road portion of the Property and October 7, 2005 for the 147 East Plaza Avenue portion of the Property. During the initial investigation a New York State Department of Environmental Conservation (NYSDEC) spill number, 0405493, was opened on August 18, 2004 due to the observance of petroleum (free product) at a single boring location. The results of the investigations were provided in two environmental reports, included with the Draft Environmental Impact Statement (DEIS) associated with the Sheldrake Estates proposed development.

The project site is located in the Village of Mamaroneck, near Waverly Avenue and Mamaroneck Avenue. The property is narrow in shape and has approximately 850 feet of frontage on the Sheldrake River. The property is located in an area of mixed land uses including manufacturing and residential. The site is nearly level and entirely paved. The soil borings indicated approximately six inches of concrete cover the site.

The following is a summary of the environmental reports.

<u>November 19, 2004 Environmental Assessment Report – 270 Waverly Avenue</u>

Two (2) separate soil-sampling investigations were summarized in this report. The investigations involved soil and groundwater sampling with a Geoprobe system.

The first investigation was conducted on August 18, 2004. The objective of this sampling event was to determine if the soil and/or groundwater at the Property had been impacted by the auto-wrecking operations and if so, to identify locations on the site that may have been impacted. On this date five (5) borings were completed with seven (7) soil samples and one (1) groundwater sample collected. The soil boring locations are shown on Figure 2.

Perched groundwater mixed with Light Non-Aqueous Phase Liquid Petroleum (free product) was observed in boring 1 (B-1). A New York State spill number was reported to the NYSDEC spills hotline on August 18, 2004, per NYSDEC requirements. Spill number 0405493 was assigned to the Blood Brothers Property. As shown in Figure 2, B-1 is located adjacent to the vehicle crusher, which was on the property at the time of the investigation. It has since been removed. The product observed in B-1 appeared to be the same material that was present in the catch basin, or sump, located under the vehicle crusher. It was assumed that the vehicle crusher was the source of the free product observed in B-1.

On November 4, 2004 a second soil-sampling investigation was conducted. This investigation was conducted to better define the subsurface conditions around the vehicle crusher. Five (5) borings were completed and samples collected. The locations of the borings are shown on Figure 2.

All samples collected were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and RCRA 8 Metals. The analytical results indicated that four (4) soil boring locations had levels of volatile compounds above the TAGM recommended soil cleanup objectives. Three (3) of the borings were located in the vicinity of the crusher. The fourth boring was located near aboveground storage tanks that contained used gasoline.

The results for semi-volatile (base neutral) organic compounds (SVOCs) indicated that *no* compounds were detected in any of the samples collected on August 18, 2004 or November 4, 2004, above the TAGM recommended soil clean-up objectives.

The analysis for RCRA 8 Metals (metals) indicated cadmium was slightly above the TAGM recommended soil cleanup objectives, in four soil samples. The majority of New York State clean-up guidance values for metals are related to site background concentrations. A site-specific background sample was not collected for this project, due to the urban setting of the property.

Volatile organic compounds were found in the single groundwater sample at levels above the New York State groundwater standards. Nine parameters including benzene, ethyl-benzene, xylene and MTBE were above the State standard, suggesting weathered petroleum as a source.

October 20, 2005 Environmental Assessment Report – 147 East Plaza Avenue

A subsurface investigation was completed at the 147 East Place Avenue property, adjacent to the 270 Waverly Avenue Blood Brothers property. The East Plaza property contains a single warehouse used for the storage of building materials. The property is under separate ownership from the Blood Brothers property, but is now part of the Sheldrake Estates residential project. The objective of this sampling event was to

determine if the soil and/or groundwater at the property had been impacted by on-site activities or activities on the adjacent Blood Brothers Auto Wreckers property.

On October 7, 2005 five (5) borings were completed on the property with a hollow stem auger-drilling rig. The drilling method allows the collection of continuous soil samples and allows the sampling of groundwater. The soil borings were located in accessible portions of the property to provide representative coverage. Soil boring locations are shown in Figure 2.

The soil samples were analyzed for VOCs, SVOCs, and RCRA 8 Metals. The sampling results indicated that volatile organic compounds, SVOCs, and metals were not detected above the NYSDEC recommended soil cleanup objectives (TAGM, 1994). A site-specific background sample was not collected for this project, due to the urban setting.

Methyl-tert-butyl-ether (MTBE), was found at a level slightly above NY State groundwater standards in the groundwater sample from B-1. The sample contained 15.4 ug/L, while the groundwater standard is 10 ug/L. The sampling methodology for the temporary well may have affected the sampling results. A properly installed and developed monitoring well may provide results more representative of the local groundwater.

MTBE is a highly mobile gasoline additive commonly associated with gasoline releases or spills. MTBE was not detected in any of the soil samples and no other gasoline related compounds were detected in soil. Since there is no indication of gasoline storage or use on the Property, this suggests that the MTBE detected in groundwater is from an off-site source.

Proposed Investigation Work Plan

The previous investigations on the Blood Brothers property focused on areas of concern, or locations on the property where petroleum was handled or stored such as the auto crusher and aboveground petroleum storage tanks. The investigation on 147 East Plaza provided a more representative sampling of the property.

Additional soil and groundwater sampling is proposed for the entire Sheldrake Estates property, (270 Waverly Avenue property, former Blood Brothers property, and the 147 East Plaza Avenue property). The purpose of the sampling is to: 1) better define the extent of impact at the two previously identified areas of impact (Boring B-1 and auto crusher) and 2) to provide more comprehensive sampling coverage of the entire property. The results of sampling will be used to prepare a Remediation Work Plan for the property.

Approximately 25 borings are proposed for the property, as shown in the attached plan Figure 2 – Proposed Sample Location Map. Borings will be placed across the property in a grid -like pattern to provide representative coverage across the site. Three soil borings will be placed in the vicinity of boring B-1, which contained elevated VOC's in the initial investigation. The borings will be advanced to a minimum of four feet below the water table or 12 feet in depth, whichever occurs first. Shallow groundwater is found at approximately 6 to 8 feet in depth at the site.

Soil at each boring location will be continuously screened using a photo-ionization detector (PID), which screens for volatile compounds in soil. Soil samples will be collected for laboratory analysis based upon the PID screening. Samples will be collected above the water table. Selected soil samples will be sent to a New York certified laboratory for analysis. Samples will be analyzed for volatile and semi-volatile organic compounds (VOCs and SVOCs).

In addition to soil samples, groundwater samples will be collected from up to six (6) shallow monitoring wells. Monitoring wells will be installed during the soil boring investigation. The proposed well locations are shown in Figure 2 Proposed Boring Plan. Proposed wells are located in upgradient and downgradient locations from the vehicle crusher and former aboveground tank locations. In addition, a well will be installed in the location of B-1 on the 147 East Plaza Avenue property. Low levels of MTBE were found at this location in a previous investigation (October 20, 2005 Environmental Assessment Report). All wells will be properly developed, prior to sampling.

In addition to shallow groundwater, surface water samples will be collected at two (2) locations in the Sheldrake River, which borders the property (see Figure 2). The groundwater and surface water samples will be analyzed for volatile organic compounds.

A report will be completed summarizing the methods and findings of the investigation. The report will provide recommendations for remediation and will be the basis of a remediation work plan. If you have any questions or comments, please do not hesitate to call the undersigned at 845-265-4400.

Sincerely,

Jon P. Dahlgren

Senior Environmental Geologist
TIM MILLER ASSOCIATES, INC.

cc: Mr. J. Carlos Torres – Westchester County Department of Health
Mr. Ofer Attia – Attia Enterprises
Mr. Paul Noto

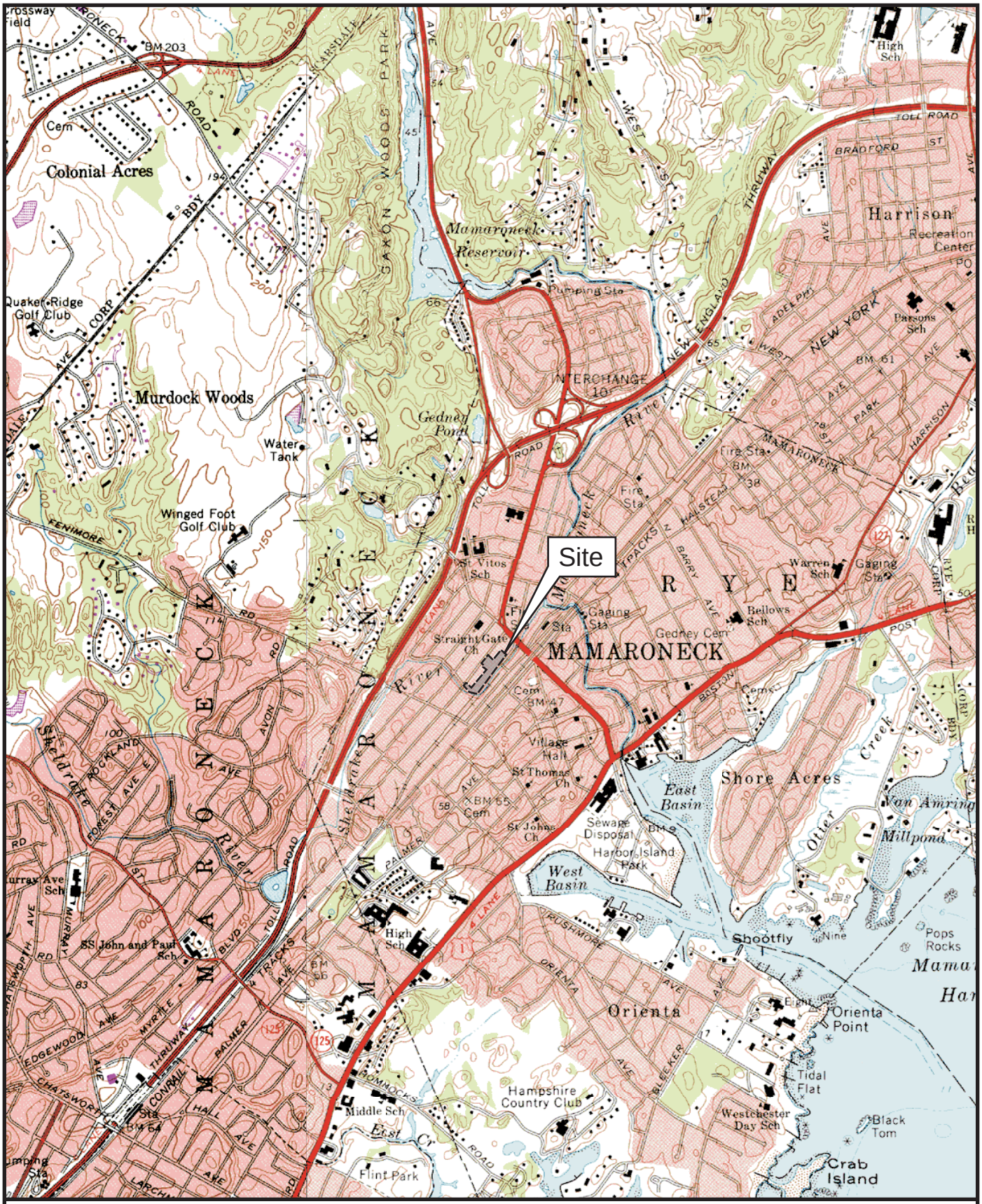


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Figure 1: Location Map

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USGS 7.5-minute Topographic Map, Mamaroneck Quad

Scale: 1 inch = 2,000 feet

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

Legend

- Existing Boring Locations
- Proposed Soil Boring Location
- Proposed Well Point/Soil Boring Location
- Proposed Surface Water Sampling Point

0 30 60 90 150

Feet

W N S E

Figure 2: Proposed Sampling Location Map
Sheldrake River Project
Village of Mamaroneck, Westchester County, New York

Base Map: Control Point Associates, Inc., 12/09/05

Scale: Graphic

File 04099 Fig 2 TMA 06/07/06

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

APPENDIX E

Traffic

3.5 Traffic and Transportation

3.5.1 Regional Network

The project site is situated in the Village of Mamaroneck, Westchester County. The proximity of the site to major highways makes it ideally suited for both east-west and north-south access in southeastern Westchester County and the region. The primary transportation routes in the local region are Interstate 95 (I-95), Interstate 287 (I-287), and US Route 1. Interstate 95, also known as New England Thruway, runs in a northeasterly direction north of the site. Exit 18A allows only traffic from the New York City direction to exit onto Fenimore Road. Further north is a full interchange with Mamaroneck Avenue. Interstate 287, also known as the Cross Westchester Expressway, runs in an east-west direction merging with I-95 north of the site at exit 21 of I-95. Interstate 287 crosses the Hudson River at the Tappan Zee Bridge west of the site. US Route 1 runs in a northeast-southwest direction parallel I-95 south of the site.

The project site is two blocks from the Mamaroneck Railroad Station. From this station Metro North's New Haven Line provides service into New York City's Grand Central Station. Beeline buses run Route 60 on Mamaroneck Avenue plus Routes 61 and 90 on Halstead Avenue south of the railroad.

3.5.2 Description of Local Transportation Network

Figure 3.5-1 depicts the local road network in the vicinity of the project site. The proposed development will have frontage on Waverly Avenue and East Plaza.

This traffic study reviews 2005/2006 Existing Condition, based upon recent traffic counts. The existing data forms the basis of the 2008 No Build Condition (the future scenario without the proposed action) and the 2008 Build Condition (future scenario with the proposed action).

The following intersections were evaluated:

1. Mamaroneck Avenue, Van Ranst Place, and Waverly Avenue
2. Plaza Avenue, Waverly Avenue, and existing site access (future egress)
3. Fenimore Road and Waverly Avenue
4. Center Avenue and Plaza Avenue
5. Mamaroneck Avenue, White Plains Road, and Center Avenue
6. Waverly Avenue and Proposed site egress (Build Condition only)
7. *Mamaroneck Avenue and Hoyt Avenue*
8. *Fenimore Road and Hoyt Avenue*

Key local roads are described below. The village speed limit of 30 miles per hour applies to all study area roads below.

Mamaroneck Avenue: Mamaroneck Avenue has mostly commercial land uses. The southern terminus of Mamaroneck Avenue is near Boston Post Road (US Route 1). Mamaroneck Avenue is primarily a four-lane road running in a northwesterly direction. Mamaroneck Avenue intersects with Hoyt Avenue at the Mamaroneck Railroad Station. *The railroad*

station entrance is part of the Mamaroneck Avenue/ Hoyt Avenue signalized intersection, however the railroad station exit to Mamaroneck Avenue is not part of the intersection. A gas station is located on another corner of the intersection. The gas station, railroad station exit, and Van Ranst Place entrance alter Mamaroneck Avenue traffic between Hoyt Avenue and Waverly Avenue.

Mamaroneck Avenue has a 10 foot 11 inch clearance under the railroad bridge south of the Mamaroneck Avenue/ Hoyt Avenue intersection.

Northwest of Hoyt Avenue is the Mamaroneck Bridge over the Sheldrake River. This bridge was improved in 2005. East Plaza, a narrow road/alley, parallels the Sheldrake River and intersects Mamaroneck Avenue at the northwest corner of the Mamaroneck Avenue bridge. Between the Mamaroneck Avenue signalized intersection with Waverly Avenue and the unsignalized East Plaza/Mamaroneck intersection is a channel for traffic to enter Van Ranst Place. Van Ranst Place traffic enters Mamaroneck Avenue opposite Waverly Avenue. Waverly Avenue and Van Ranst Place are one way streets that meet at the traffic signal at Mamaroneck Avenue. Therefore, at the Mamaroneck Avenue/Waverly Avenue/Van Ranst Place intersection: Waverly Avenue and Van Ranst Place traffic must turn onto Mamaroneck Avenue, and Mamaroneck Avenue traffic must go straight.

One block northwest of Waverly Avenue, Mamaroneck Avenue turns north toward the Mamaroneck Avenue/I-95 Exit. In this area Mamaroneck Avenue intersects with White Plains Road, and an offset extension of Center Avenue. This intersection is referred to herein as Mamaroneck Avenue, White Plains Road, and Center Avenue.

The Mamaroneck Avenue Bridge over the Sheldrake River was improved in 2005 after the Waverly Avenue traffic counts were taken. This project did not involve changing network capacity and thus has no effect of analysis of the traffic volumes nor conditions.

Van Ranst Place: Van Ranst Place is a two lane road divided at its terminus with Mamaroneck Avenue. Vehicles headed northbound toward I-95 can turn right into Van Ranst Place prior to the Van Ranst Place/Waverly Avenue/ Mamaroneck Avenue signalized intersection. Columbus Park separates Van Ranst Place from the Mamaroneck Railroad station.

Fenimore Road: Fenimore Road is a two lane road. Its intersection with Waverly Avenue is signalized with turn lanes. Traffic traveling away from New York City can use Exit 18A to access Fenimore Road. There is no access from Fenimore Road to I-95. Fenimore Road is primarily commercial in this area. Like Mamaroneck Avenue, Fenimore Road's southern terminus is also US Route 1. *The clearance at the Fenimore Road railroad bridge is 10 feet 2 inches. Trucks that cannot meet this clearance are likely to detour to Mamaroneck Avenue.*

Waverly Avenue: Waverly Avenue is primarily a two lane road with commercial uses. The block between Plaza Avenue and Mamaroneck Avenue differs from Waverly Avenue to the west in that it is a one-way, primarily residential street. The Blood Brother Auto Wreckers commercial use on the project site was an exception to the residential use on that block. Waverly Avenue a.m. peak hour traffic utilizes the street to gain access to the Mamaroneck Avenue/I-95 Exit and points south toward New York City. In the afternoon traffic is lighter as vehicles returning from points south exit I-95 at Fenimore Road or use Center Avenue to Plaza Avenue to gain access over the Waverly Avenue Bridge. West of the Plaza

Avenue/Waverly Avenue intersection is the Waverly Avenue Bridge over the Sheldrake River. Trucks are prohibited from crossing the Waverly Avenue Bridge. This bridge has a posted 5 ton limit. Non-local truck traffic is prohibited from Waverly Avenue east of Plaza Avenue.

Hoyt Avenue: Hoyt Avenue parallels Waverly Avenue from Fenimore Road to Mamaroneck Avenue. Trucks are routed to Hoyt Avenue as trucks are prohibited from Waverly Avenue and Center Avenue except local deliveries. The truck routing reflects the 5 ton posting on the Waverly Avenue Bridge. Hoyt Avenue is commercial on the north side and the south side borders the Metro North railroad.

Plaza Avenue: Plaza Avenue is a two lane road that is four blocks long. It serves as the terminus of residential streets including Center Avenue north of and paralleling Waverly Avenue. Plaza Avenue is used in conjunction with these one-way residential streets. Plaza Avenue follows the Sheldrake River. Plaza Avenue in conjunction with Center Avenue provides the reverse traffic route in the p.m. period for traffic which utilizes one-way Waverly Avenue in the morning period.

East Plaza: East Plaza is a narrow road or alley a half block long from Mamaroneck Avenue to the project site. *East Plaza has a stop sign at Mamaroneck Avenue.* East Plaza parallels the Sheldrake River. There is a pedestrian bridge from East Plaza over the Sheldrake River leading through an alley to Hoyt Avenue.

Center Avenue: Center Avenue is separated by the Sheldrake River. A pedestrian bridge connects the two portions of Center Avenue. Center Avenue parallels Waverly and forms a one-way street pair with Waverly Avenue. The smaller portion northeast of the Sheldrake River is discussed in this report. Center Avenue is one way from White Plains to Plaza Avenue. The channel from Mamaroneck Avenue to White Plains Road, slightly offset from Center Avenue, is referred herein as part of Center Avenue. The intersection of Plaza Avenue and Center Avenue is an all-way stop. *Trucks are prohibited from Center Avenue.*

Figure 3.5-2 shows regulatory signing and traffic signals at key intersections. Figure 3.5-3 shows street widths. Additional information pertaining to lane widths is found in Appendix E level of service calculations.

Sight Distance

Since the Center Avenue/Plaza Avenue intersection is an all-way stop intersection, sight distance only needs to be provided for vehicles stopped at the other stop signs. The Plaza Avenue and Waverly *Avenue* intersection has the same sight distance situation. At this intersection the Waverly Avenue stop is on the far side of the bridge. Existing bridge rails and the angle of the existing site access impedes sight distance toward the Waverly Avenue Bridge stop sign.

Sight distance at Fenimore is needed only for left turning vehicles and vehicles making right turns on red lights. This intersection is being redesigned so sight distance measurements were taken.

The Waverly/Mamaroneck intersection is signal controlled with no left turns permitted from Mamaroneck Avenue. There are no through movements for left turns from Van Ranst Place

or Waverly to need to see. Mamaroneck being four lane road allows these movements to be made from Waverly and Van Ranst Place lane to lane without conflict.

White Plains Road intersects Mamaroneck Avenue at an acute angle making it difficult to see from that location. Geometries and the White Plains Road stop sign where White Plains Road and Center Avenue intersect greatly reduce speeds at this intersection. Only Mamaroneck Avenue traffic flows freely at this intersection.

Many existing driveways along Waverly have restricted sight distance either due to parking on the north side of the street or due to vegetation that is over 3.5 feet tall adjacent to the sidewalk between the sidewalk and houses. Waverly Avenue is flat and straight allowing drivers on Waverly a clear view from the Waverly Bridge over the Sheldrake River to Mamaroneck Avenue.

The sight distance of vehicles exiting East Plaza is restricted by vehicles parking on the west side of the Mamaroneck Avenue. Furthermore, sight distance for the sidewalk is blocked by the building corner, and therefore drivers must approach the sidewalk carefully.

Existing Parking

A parking survey was done on Saturday, February 11, 2006 and Wednesday, night February 22, 2006.

Existing parking was reviewed on the block formed by Plaza Avenue, Mamaroneck Avenue, Center Avenue, and Waverly Avenue. Parking can be categorized into three areas:

- residential parking on Waverly and Center Avenue east of Plaza Avenue,
- retail parking on Mamaroneck Avenue, and
- Office commercial on Waverly west of Plaza Avenue.

Existing signing prohibits parking commercial vehicles on the residential streets. Also, once a month parking is restricted on residential streets in a rotating fashion.

The residential parking would be expected to peak during the night-time periods, weekends, and holidays. Customers of the nearby retail stores on Mamaroneck Avenue may compete with neighboring residential parking on Saturday. The commercial and office uses on Waverly west of Plaza Avenue would typically not compete with the residential parking east of Plaza Avenue on Waverly Avenue and Center Avenue.

Local drivers are most likely to find available parking in the Waverly Avenue commercial area west of the Sheldrake River, during weekends and evenings. The Mamaroneck railroad Station begins at Mamaroneck Avenue between Hoyt Avenue and East Plaza. The railroad station offers free parking weekends, and holidays and is the nearest major parking area to the site.

Table 3.5-1 shows local area parking on Saturday morning and weekday evening. Saturday is a time when residential and retail parking would mix.

Table 3.5-1
Parking

		Vehicle Parking		
Location	**Parking restrictions**	**Evening Weekday**	**Saturday**	**Parking Spaces**
Plaza from Waverly to Center	No Parking Commercial Vehicles	4	4	6
	No Parking 9 AM to 12 p.m. (noon) 2nd Tuesday of month			
	No Parking on South side of street.			
Center Mamaroneck to Plaza	No Parking Commercial Vehicles	24	19	25
	No Parking 9 AM to 12 p.m. (noon) 1st Wednesday of month			
	No Parking on South side of street.			
	2 spaces are 15 minute parking 7:30 a.m. to 5:30 p.m.			
Waverly Avenue Mamaroneck to Plaza	No Parking Commercial Vehicles	22	21	25
	No Parking 9 AM to 12 p.m. (noon) 1st Wednesday of month			
	Two hour parking 9 a.m. to 6 p.m.			
	No Parking on South side of street.			
Residential Subtotal		**50**	**44**	**56**
Waverly Fenimore to Plaza	No Parking Anytime on the north side	13	6	18
	South side is perpendicular parking			
Mamaroneck Avenue Center to Waverly West side	90 Minutes 9 a.m. to 5 p.m.	0	7	8
Mamaroneck Avenue Waverly to Hoyt Avenue West side		0	3	6

The parking on Waverly Avenue observed west of Plaza may be overflow parking from the residential area of Waverly indicating that the existing parking in the residential area at night is effectively at capacity.

During the Saturday morning period 28 spaces were available in the immediate study area.

During the evening, parking is available on Hoyt Avenue. During the daytime periods (9 a.m. to 7 p.m) parking is limited to 90 minutes. Hoyt Avenue parking could be accessed over the pedestrian bridge to East Plaza however, the alley may deter use of this route at night.

Parking on Van Ranst Place has a 2 a.m. to 7 a.m. parking prohibition, and therefore this area would not be suitable for overnight parking.

Metro North has 265 parking spaces and has issued 249 permits. There are no permits available and a waiting list of 112. Actual weekday daytime utilization is 88%. A new parking garage at New Rochelle may reduce the local demand for commuter parking. Parking is free in the Metro North lot on weekends and holidays. Paid daily parking is available for 16 or 24 hours. During the weekday evenings and Saturday the Metro North lot near the project site is virtually empty with over 100 vacant permit parking spaces.

Metro North has listed a Mamaroneck Station Rehabilitation and Parking Improvement project PIN M402-03-09. This is intended to be phase I of the station improvements. The project site is close enough (two blocks) to the railroad station that project residents would likely walk to the station. Station parking currently includes 385 spaces and 217 metered spaces (see http://as0.mta.info/mnr/stations/station_detail.cfm?key=210 for further station information). The station is served by Bee-Line bus Routes 60 and 61 along with Paramount Taxi.

The proposed train station improvements may redirect existing vehicular trips into the station and away from I-95. The improvements include 32 additional parking spaces, station rehabilitation including drainage, lighting, sidewalks, and guardrail.

Existing Traffic

Waverly Avenue traffic counts were taken on Thursday, January 25, 2005, between 6:30 a.m. and 9:00 a.m., and between 4:00 p.m. and 7:00 p.m.. Based upon these original counts, the time periods were shifted slightly and expanded for Center Avenue counts. Center Avenue counts were taken on Thursday January 19, 2006 from 7:00 a.m. to 9:30 a.m. and 3:00 p.m. to 6:30 p.m. *Hoyt Avenue intersections were counted from 7:00 a.m. to 9:30 a.m. and 3:30 p.m. to 7:00 p.m. on Monday, May 15, 2006.* These counts identify weekday morning and afternoon peak hour levels of traffic. It is during these times commuter traffic is heavily using Waverly Avenue, Center Avenue, Fenimore *Road, Hoyt* Avenue, and Mamaroneck Avenue. Figures 3.5-4 and 3.6-5 show the existing a.m. and p.m. weekday peak hour traffic volumes at the studied intersections.

For the purposes of the traffic analysis, Waverly Avenue*, Hoyt Avenue,* and Center Avenue are defined as east-west and Mamaroneck Avenue, Fenimore Road, Plaza Avenue, and the site accesses are defined as being north-south. Traffic volumes at the new site egress have been balanced with Waverly Avenue approach to Mamaroneck Avenue.

Peak morning traffic volumes occur between 7:30 a.m. and 9:00 a.m. at all the studied intersections. The p.m. peak hour for study intersections occurs between 4:00 p.m. and 5:45 p.m.. The Center Avenue intersections appear to peak slightly earlier than Waverly intersections resulting in a traffic shifting slightly from westbound to eastbound travel. As a result of directional volume shifts and period changes, north-south movements vary in the peak hour. A check of the Center Avenue traffic in a.m. peak hour indicated a volume difference of five vehicles or less than two percent and three vehicles or less than one percent in the p.m. peak.

The left turn volumes on Waverly Avenue turning onto Mamaroneck Avenue and right turns from Plaza Avenue onto Waverly Avenue and from Mamaroneck Avenue southbound represent through movements between the Fenimore Road area and Mamaroneck Avenue/I-95 area.

3.5.3 Measures of Effectiveness

Level of Service Criteria

The Highway Capacity Manual (National Academy of Sciences, Transportation Research Board, National Research Council, Washington, DC, 2000) procedures document the methodologies used for modeling levels of service, and average vehicle delay at both signalized and unsignalized intersections. Level of service is a measure of the operational quality of an intersection; level of service A is the highest, most efficient level, and level of service F is the lowest level. The operational quality of an intersection is based on the average amount of time a vehicle is delayed. Levels of service are examined by lane group, the set of lanes allowing common movement(s) on an approach.

The New York State Department of Transportation policy (Highway Design Manual, NYS DOT, Section 5.2.2.3, Nov. 2003) requires capacity analysis methodologies consistent with Highway Capacity Manual. The Highway Capacity Manual serves as the basis for all level of service computations in the *Highway Capacity Software* (McTrans Center, University of Florida, Gainsville, Florida, 2005).

Table 3.5-2 presents the levels of service criteria for unsignalized intersections.

Table 3.5-2
Unsignalized Intersections
Level of Service Criteria

Level of Service	Average Control Delay (Seconds Per Vehicle)
A	less than or equal to 10
B	greater than 10 and less than or equal to 15
C	greater than 15 and less than or equal to 25
D	greater than 25 and less than or equal to 35
E	greater than 35 and less than or equal to 50
F	greater than 50

SOURCE: Highway Capacity Manual, National Academy of Sciences, Transportation Research Board, National Research Council, Washington, DC, 2000.

Table 3.5-3 presents the levels of service criteria for signalized intersections. The New York State Department of Transportation (NYS DOT) generally seeks a minimum level of service D (delay of 55 seconds or less for a signalized intersection) for all lane groups. The NYS DOT's Highway Design Manual notes, "In some cases, it may be necessary to accept LOS (levels of service) E or F on individual lane groups due to unreasonable costs or impacts associated with improving the level of service."

Table 3.5-3
Signalized Intersections
Level of Service Criteria

Level of Service	Average Control Delay (Seconds Per Vehicle)
A	*less than or equal to 10*
B	*greater than 10 and less than or equal to 20*
C	*greater than 20 and less than or equal to 35*
D	*greater than 35 and less than or equal to 55*
E	*greater than 55 and less than or equal to 80*
F	*greater than 80*

SOURCE: Highway Capacity Manual, National Academy of Sciences, Transportation Research Board, National Research Council, Washington, DC, 2000.

The *Highway Capacity Software* model was used to review peak hour periods only and do not represent every minute of traffic operations. During off peak periods, which is the majority of the time, drivers typically will find operations better than the modeled peak hour results. During peak periods the experience of individual drivers can vary, because the model calculates average vehicle delay.

Peak 15 minute traffic flows typically do not all occur in the same 15 minute period in the peak hour. The traffic model does not always account for the ability of the traffic signal to compensate for shifting traffic volumes and thus may overestimate delay. For unsignalized intersections, the model conservatively assumes peak approach volumes occur simultaneously.

3.5.4 Existing Levels of Service

The results of the existing level of service analyses for the study area intersections are summarized in Table 3.5-4. Capacity analysis calculations are provided in Appendix E. In the capacity analysis, the intersection of Waverly Avenue, Plaza Avenue and the site access is treated as an all-way stop intersection. The stop sign for the Waverly Avenue approach is on the far side of the bridge. The intersection of White Plains Road/Mamaroneck Avenue/Center Avenue is treated as a three way intersection with Mamaroneck Avenue as an north-south major street and Center Avenue and White Plains Road as the eastbound approach.

All of the studied intersections operated at level of service D or better except the a.m. peak hour of the Waverly Avenue approach to Plaza Avenue *and the Hoyt Avenue approach to Fenimore Road*. Waverly Avenue is a level of service F at Plaza Avenue in the a.m. peak hour. The Waverly Avenue traffic is heaviest in the morning as traffic heads toward I-95. *The Hoyt Avenue approach to Fenimore Road is level of service F in the a.m. and p.m. peak hours.*

Table 3.5-4
Existing Condition Level of Service Summary

Intersection Road	Lane Group Approach Direction - Movement	A.M. Weekday Peak Hour Delay (seconds /vehicle)	A.M. Weekday Peak Hour Level of Service	P.M. Weekday Peak Hour Delay (seconds /vehicle)	P.M. Weekday Peak Hour Level of Service
Site Access, Plaza Ave., and Waverly Ave.					
Waverly Avenue	EB - L, T, R	58.75	F	16.86	C
Site Access	NB - L, T, R	9.97	A	8.79	A
Plaza Avenue	SB - L, T, R	16.89	C	11.28	B
	Overall	42.92	E	14.57	B
Waverly Avenue and Fenimore Road					
Waverly Avenue	*EB - L, T, R*	*34.9*	*C*	*17.6*	*B*
Waverly Avenue	*WB - L, T, R*	*21.6*	*C*	*15.6*	*B*
Fenimore Road	*NB - L*	*11.9*	*B*	*13.3*	*B*
	NB - T, R	*14.9*	*B*	*17.5*	*B*
Fenimore Road	*SB - L*	*25.6*	*C*	*18.7*	*B*
	SB - T	*13.3*	*B*	*15.9*	*B*
	SB - R	*9.1*	*A*	*11.6*	*B*
	Overall	*20.7*	*C*	*16.7*	*B*
Mamaroneck Ave. and Waverly Avenue					
Waverly Avenue	*EB - L*	*38.5*	*D*	*33.9*	*C*
	EB - R	*23.7*	*C*	*22.6*	*C*
Van Ranst Place	*WB - L*	*23.2*	*C*	*22.1*	*C*
	WB - R	*23.4*	*C*	*23.6*	*C*
Mamaroneck Avenue	*NB - L, T, R*	*13.8*	*B*	*15.4*	*B*
Mamaroneck Avenue	*SB - L, T, R*	*13.9*	*B*	*13.3*	*B*
	Overall	*18.8*	*B*	*17.8*	*B*
Mamaroneck Avenue, White Plains Road, and Center Avenue					
Mamaroneck Avenue	NB -L	11.6	B	13.7	B
Center Avenue					
White Plains Road	EB-R	12.1	B	12.7	B
Mamaroneck Avenue, White Plains Road, and Center Avenue					
Center Avenue	WB - L, R	14.25	B	11.29	B
Plaza Avenue	NB -T	10.84	B	8.94	A
Plaza Avenue	SB -T	10.53	B	8.75	A
	Overall	12.38	B	10.33	B

level-of-Service (see Tables 3.5-2 and 3.5-3 for level-of-service criteria).
Signalized intersections are shown in *italics.*
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
L = left, R= right, T = through, (e.g. WB-L = Westbound left).

Table 3.5-4a *Hoyt Avenue Intersetions Existing Condition Level of Service Summary*					
Intersection Road	*Lane Group Approach Direction - Movement*	*A.M. Weekday Peak Hour*		*P.M. Weekday Peak Hour*	
		Delay (seconds /vehicle)	*Level of Service*	*Delay (seconds /vehicle)*	*Level of Service*
Mamaroneck Ave. and Hoyt Avenue					
Hoyt Avenue	*EB - L, T*	*42.9*	*D*	*34.3*	*C*
	EB - R	*31.6*	*C*	*31.8*	*C*
Mamaroneck Avenue	*NB - L*	*10.6*	*B*	*13.5*	*B*
	NB - T, R	*6.8*	*A*	*7.0*	*A*
Mamaroneck Avenue	*SB - L*	*22.7*	*C*	*21.0*	*C*
	SB - T, R	*25.5*	*C*	*26.8*	*C*
	Overall	*20.6*	*C*	*19.3*	*B*
Fenimore Road, and Hoyt Avenue					
Fenimore Road	SB - L	9.6	A	9.1	A
Hoyt Avenue	WB - L, R	165.5	F	64.3	F
level-of-Service (see Tables 3.5-2 and 3.5-3 for level-of-service criteria). *Signalized intersections are shown in italics.* *NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.* *L = left, R= right, T = through, (e.g. WB-L = Westbound left).*					

3.5.5 No Build Condition Traffic Projections

Typically a project's traffic impact is determined by comparing future traffic conditions without the project's traffic (2008 No Build Condition) to traffic conditions with project-generated traffic (2008 Build Condition).

The No Build traffic condition is an interim scenario that establishes a future baseline condition upon which the project generated traffic can be compared. No Build traffic conditions are ascertained based on a number of factors: (1) improvements in the local road network that are planned or underway; (2) traffic from general population growth in the local area; and (3) traffic from identified development projects in the project site vicinity.

The New York State Department of Transportation lists area projects in the draft Statewide Transportation Improvement Program (October 1, 2006 to September 30, 2010). There are several major projects planned by the New York State Department of Transportation in the vicinity of the studied intersections.

The signal retiming projects for throughout Westchester County include intersections in the Town and Village of Mamaroneck but not did not include the studied intersections. No change to study area traffic operations was assumed from these traffic signal timing improvements.

The Fenimore Reconstruction PIN 875495 project (NYS DOT Doug Cotton 431-5884 and Village of Mamaroneck Assistant Village Manager Robert A. Yemuder 777-7736) will be completed in the existing right-of-way improving drainage, and operations. The lane configurations at Fenimore Road/Waverly Avenue are anticipated to be altered as indicated

in Figure 3.5-B-1 of Appendix B. The nearly 2.6 million dollar reconstruction is anticipated to begin in 2006 and hence the new lane configuration is used in future conditions (No Build and Build Conditions).

In December of 2004, Buckhurst Fish & Jacquemart Inc. completed the Waverly Avenue Design Study. Although the study area covered the industrial portion of Waverly Avenue west of the Waverly Avenue Bridge, streetscape recommendations (Page 11) could affect the portion of Waverly Avenue containing the project site. These recommendations included:

- Signage to discourage use of Waverly Avenue as a through street.
- Signage directing use of Hoyt Avenue.
- More prominent no trucks signs east of Fenimore Road and at the Waverly Bridge over the Sheldrake River.

No reduction in traffic was assumed based on these recommended Waverly Avenue improvements, since there is no funding and timeline for the improvements. *No truck use on Waverly Avenue between Plaza Avenue and Mamaroneck Avenue was identified in the count periods.*

The Town of Mamaroneck has several proposed bridge improvement projects and has included money to rehabilitate the Waverly Avenue Bridge in the 2006 budget.

Two development projects, Van Ranst and Maplewood were added to the No Build Condition.

Table 3.5-5
Other Area Development Projects Trip Generation Rates

Land Uses {ITE Code}	Trips			
	A.M. Peak Hour		P.M. Peak Hour	
	IN (Trips/ Unit)	OUT (Trips/ Unit)	IN (Trips/ Unit)	OUT (Trips/ Unit)
90 Townhouse residential units Maplewood (230)	0.090	0.438	0.410	0.202
41 dwelling units Van Ranst (220)	0.116	0.465	0.637	0.343

Unit is in numbers of dwelling units for the residential development and Number of field for the Park land use.
Trip Generation, Institute of Transportation Engineers, 7th edition, Washington, DC, 2003.

Table 3.5-6
Other Area Development Projects Trips Generated

Land Uses	Trips					
	A.M. Peak Hour			P.M. Peak Hour		
	IN (Trips)	OUT (Trips)	Total (Trips)	IN (Trips)	OUT (Trips)	Total (Trips)
90 Townhouse residential units Maplewood	8	39	47	37	18	55
41 dwelling units Van Ranst	5	19	24	26	14	40

Trip Generation, Institute of Transportation Engineers, 7th edition, Washington, DC, 2003.

The traffic assignment for the Maplewood project on Maple Avenue and Stanley Avenue south of the railroad was based on The Environment Assessment Form and Traffic Impact & Access Analysis (Frederic P. Clark Associates, Inc., Rye, N.Y., November 2005) indicating 20 percent of the site traffic traveling on Mamaroneck Avenue. The Maplewood traffic from this analysis was assumed to travel through the Sheldrake traffic study area on Mamaroneck Avenue on-route to or from the I-95 interchange or areas further north. Bishop Avenue traffic added an assumed additional 5 percent of traffic traveling north on Fenimore and 15 percent traveling south on Fenimore.

The Van Ranst development was assumed to be apartments which have a higher trip rate than Townhouse/condominiums. For the Van Ranst development, 25 percent of traffic was assumed to/from the south using Mamaroneck Avenue. Traffic traveling north was assumed to use a more northern intersection outside the study area for Mamaroneck Avenue access. Van Ranst Place has a one way channel positioned such that traffic from southern Mamaroneck Avenue is outside the Mamaroneck Avenue/Waverly Avenue/Van Ranst Place intersection. Only traffic destined for southbound Mamaroneck Avenue passes through the Van Ranst Place/ Waverly Avenue/Mamaroneck Avenue intersection. Riders for the Metro North Train station were assumed to walk through Columbus Park.

In relatively fully developed areas, a one percent per year background traffic growth rate is typically used in traffic studies. However an additional one percent per year was added to reflect potential increased trips related to the train station. Thus, a conservatively high short-term traffic growth rate of two percent per year was used as the background growth for the build year of 2008.

Peak hour traffic volumes for the weekday a.m. and p.m. No Build scenarios are provided in Figures 3.5-6 and 3.5-7. These figures reflect the existing traffic volumes plus a background traffic growth of two percent annually over three years for Waverly Avenue intersections and over two years for Center Avenue *and Hoyt Avenue* intersections, plus traffic from the two additional other area projects.

3.5.6 No Build Level of Service

Table 3.5-7 represents level of service for the studied intersections in the No Build Condition. In the No Build Condition, there are three improvements in level of service from the reconstruction of the Waverly Avenue/Fenimore Road intersection. There were three declines in level of service, however all remain at level of service D or better. Delays at *both level of service F locations,* the Waverly Avenue approach to Plaza Avenue *and at Hoyt Avenue approach to Fenimore Road,* increased.

Table 3.5-7
No Build Condition Level of Service Summary

Intersection Road	Lane Group Approach Direction - Movement	A.M. Weekday Peak Hour Delay (seconds /vehicle)	A.M. Weekday Peak Hour Level of Service	P.M. Weekday Peak Hour Delay (seconds/ vehicle)	P.M. Weekday Peak Hour Level of Service
Site Access, Plaza Avenue, and Waverly Avenue					
Waverly Avenue	EB - L, T, R	81.85	F	19.26	C
Site Access	NB - L, T, R	10.02	B *	8.94	A
Plaza Avenue	SB - L, T, R	18.26	C	12.02	B
	Overall	57.85	F*	16.30	C*
Waverly Avenue and Fenimore Road					
Waverly Avenue	*EB - L*	*18.5*	*B **	*12.5*	*B*
	EB - T, R	*22.1*	*C*	*16.0*	*B*
Waverly Avenue	*WB - L, T*	*25.9*	*C*	*14.0*	*B*
	WB - R	*15.2*	*B **	*13.2*	*B*
Fenimore Road	*NB - L*	*13.5*	*B*	*13.9*	*B*
	NB - T	*12.6*	*B*	*16.0*	*B*
	NB - R	*10.7*	*B*	*12.9*	*B*
Fenimore Road	*SB - L*	*16.9*	*B **	*16.5*	*B*
	SB - T	*14.7*	*B*	*17.2*	*B*
	SB - R	*9.1*	*A*	*11.7*	*B*
	Overall	*16.6*	*B **	*15.5*	*B*
Mamaroneck Avenue and Waverly Avenue					
Waverly Avenue	*EB - L*	*41.8*	*D*	*35.6*	*D**
	EB - R	*23.8*	*C*	*22.7*	*C*
Van Ranst Place	*WB - L*	*23.4*	*C*	*22.2*	*C*
	WB - R	*23.5*	*C*	*23.8*	*C*
Mamaroneck Avenue	*NB - L, T, R*	*14.3*	*B*	*16.0*	*B*
Mamaroneck Avenue	*SB - L, T, R*	*14.2*	*B*	*13.7*	*B*
	Overall	*19.6*	*B*	*18.5*	*B*
Mamaroneck Avenue, White Plains Road, and Center Avenue					
Mamaroneck Avenue	NB -L	12.0	B	14.5	B
Center Avenue					
Whitle Plains Road	EB-R	12.4	B	13.1	B
Mamaroneck Avenue, White Plains Road, and Center Avenue					
Center Avenue	WB - L, R	15.06	C*	11.65	B
Plaza Avenue	NB -T	11.18	B	9.05	A
Plaza Avenue	SB -T	10.82	B	8.85	A
	Overall	12.92	B	10.59	B

level-of-Service (see Tables 3.5-2 and 3.5-3 for level-of-service criteria).
* Decrease in level of service from the Existing Condition.
** Improvement in level of service from the Existing Condition.
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
L = left, R= right, T = through, (e.g. WB-L = Westbound left).

Table 3.5-7a *Hoyt Avenue Intersections No Build Condition Level of Service Summary*					
Intersection Road	*Lane Group Approach Direction - Movement*	*A.M. Weekday Peak Hour*		*P.M. Weekday Peak Hour*	
		Delay (seconds /vehicle)	*Level of Service*	*Delay (seconds /vehicle)*	*Level of Service*
Mamaroneck Ave. and Hoyt Avenue					
Hoyt Avenue	*EB - L, T*	*44.9*	*D*	*34.8*	*C*
	EB - R	*31.7*	*C*	*31.9*	*C*
Mamaroneck Avenue	*NB - L*	*11.2*	*B*	*14.7*	*B*
	NB - T, R	*6.9*	*A*	*7.1*	*A*
Mamaroneck Avenue	*SB - L*	*23.5*	*C*	*21.3*	*C*
	SB - T, R	*26.1*	*C*	*27.6*	*C*
	Overall	*21.1*	*C*	*19.8*	*B*
Fenimore Road, and Hoyt Avenue					
Fenimore Road	SB - L	9.8	A	9.3	A
Hoyt Avenue	WB - L, R	232.7	F	91.1	F
level-of-Service (see Tables 3.5-2 and 3.5-3 for level-of-service criteria). *Signalized intersections are shown in italics.* *NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.* *L = left, R= right, T = through, (e.g. WB-L = Westbound left).* ** Decrease in level of service from the Existing Condition.*					

3.5.7 Site Access Future Condition with Project (Build Condition)

The proposed Action would result in the potential construction of 114 townhouses with associated off-street parking. The site will have access to Waverly Avenue. The ingress would be at Plaza Avenue at the location of the existing access to the Blood Brothers site. The egress would be mid block between the Waverly Bridge over the Sheldrake River and Mamaroneck Avenue. An emergency and pedestrian access would be provided to East Plaza, which leads directly to Mamaroneck Avenue near the railroad station.

Parking

The proposed Site Plan provides 181 parking spaces for the 114 residential units, in accordance with the requirements of the Zoning Code. The peak demand periods for on-site parking will generally occur at the same time as the demand for other residential parking. Retail businesses along Mamaroneck Avenue would also require parking, especially on Saturdays when project residents would be home. Parking on Waverly Avenue west of Plaza Avenue and at the railroad station is more available at peak parking demand periods.

The applicant proposes a partially designated parking program. Each residential unit would be provided a single parking space and therefore, residents would be assured of a single parking space at all times. The remainder of the spaces would be open to both residents and visitors, allowing flexibility. ~~The project, as proposed, does not include any designated visitor parking spaces. Visitors to the development will share parking with residents and visitors will park in spaces that residents have vacated during the day or evening.~~ In the event that all on-site parking spaces are taken, visitors would have to find alternative

locations to park, either on nearby streets, or in vacant spaces in the Metro North rail station parking lot. As described above, parking spaces are available on Waverly Avenue west of Plaza and at the railroad station during periods of higher residential demand, such as Saturdays or Sundays.

3.5.8 Project Trip Generation and Distribution

Project Traffic

Tables 3.5-8 and 3.5-9 show trip generation rates and total trips generated by the proposed townhouse development using the Institute of Transportation Engineers' Trip Generation. No reduction in trip generation was taken for the proximity to the railroad station. The townhouse trip distribution is shown in Figure 3.5-9. Figure 3.5-10 and 3.5-11, show peak hour trips in the roadway network resulting from the residential development. The trip distribution considers existing traffic flows, and access to the railroad station, the village business district, and interstate system.

Trips from the Blood Brothers Auto Wreckers from the site access at Waverly and Plaza Avenue were removed from the traffic network. Trips from the two existing residences on Waverly which will be removed as part of the site development were not removed in the traffic analysis for the Build Condition.

Table 3.5-8
Project Site Trip Generation Rates

Land Uses {ITE Code}	Trips			
	A.M. Peak Hour		P.M. Peak Hour	
	IN (Trips/ Unit)	OUT (Trips/ Unit)	IN (Trips/ Unit)	OUT (Trips/ Unit)
114 Townhouse residential units {230}	**0.086**	**0.417**	**0.393**	**0.194**

Unit is in numbers of dwelling units for the residential development and Number of field for the Park land use.
Trip Generation, Institute of Transportation Engineers, 7th edition, Washington, DC, 2003.

Table 3.5-9
Project Site Total Trips Generated

Land Uses	Trips					
	A.M. Peak Hour			P.M. Peak Hour		
	IN (Trips)	OUT (Trips)	Total (Trips)	IN (Trips)	OUT (Trips)	Total (Trips)
114 Townhouse residential units	10	48	58	45	22	67
Existing Trips Waverly Access	6	5	11	2	5	7
Net change	**4**	**43**	**47**	**43**	**17**	**60**

Trip Generation, Institute of Transportation Engineers, 7th edition, Washington, DC, 2003.

Construction Traffic

Construction traffic to the project site is limited by the Waverly Avenue Bridge which has a 5 ton weight rating. During construction, the project will have a construction routing plan for all

construction vehicles entering and exiting the site. All construction *truck* traffic will be routed to avoid the Waverly Avenue Bridge. ~~Any construction traffic traveling eastbound on Waverly Avenue will be routed southbound (southeast) on Fenimore to eastbound (northeast) on Hoyt to northbound on Mamaroneck Avenue to westbound (southwest) on Center Avenue to southbound on Plaza Avenue into the site.~~ *To the extent practical, East Plaza would be utilized for routing construction truck traffic into the site.* Since Waverly is a one-way street, eastbound, no construction traffic exiting the site would cross the Waverly Avenue bridge.

While construction traffic would travel on residential streets (Center Avenue, Plaza Avenue*,* and Waverly Avenue, these activities would be temporary and during daytime periods. Since there is little proposed grading and earthwork involved in the project construction, the primary construction *truck* traffic would result from the delivery of materials such as steel and concrete for the residential buildings.

3.5.9 Build Condition Traffic

Total a.m. and p.m. peak hour site generated trips are shown in Figures 3.5-10 and 3.5-11. These trips are added to the No Build Condition (Figures 3.5-6 and 3.5-7) traffic to obtain Build Condition traffic, as shown in Figures 3.5-12 and 3.5-13.

3.5.10 Build Level of Service

Table 3.5-10 *and 3.5-11* presents levels of service for the 2008 Build Condition for the studied intersections. There is no change in level of service for any lane groups. All lane groups would operate at level of service D or better except the Waverly Avenue approach to Plaza Avenue *and Hoyt Avenue approaches to Fenimore Road*. Removing the site egress from the intersection of Waverly Avenue and Plaza Avenue slightly reduces delays there. Removing the site traffic exiting at that intersection should improve safety by making the intersection less complex.

Table 3.5-10 - Build Condition Level of Service Summary

Intersection Road	Lane Group Approach Direction - Movement	A.M. Weekday Peak Hour Delay (seconds /vehicle)	A.M. Weekday Peak Hour Level of Service	P.M. Weekday Peak Hour Delay (seconds/ vehicle)	P.M. Weekday Peak Hour Level of Service
Site Ingress, Plaza Ave., and Waverly Avenue					
Waverly Avenue	EB - L, T, R	81.75	F	22.29	C
Site Access					
Plaza Avenue	SB - L, T, R	18.16	C	12.55	B
	Overall	58.14	F	18.49	C
Waverly Avenue and Fenimore Road					
Waverly Avenue	*EB - L*	*18.4*	*B*	*12.5*	*B*
	EB - T, R	*22.1*	*C*	*16.1*	*B*
Waverly Avenue	*WB - L, T*	*24.6*	*C*	*14.0*	*B*
	WB - R	*15.2*	*B*	*13.2*	*B*
Fenimore Road	*NB - L*	*13.8*	*B*	*14.0*	*B*
	NB - T	*12.6*	*B*	*16.0*	*B*
	NB - R	*10.7*	*B*	*13.2*	*B*
Fenimore Road	*SB - L*	*17.0*	*B*	*17.6*	*B*
	SB - T	*14.7*	*B*	*17.2*	*B*
	SB - R	*9.1*	*A*	*11.7*	*B*
	Overall	*16.5*	*B*	*15.6*	*B*
Mamaroneck Avenue and Waverly Avenue					
Waverly Avenue	*EB - L*	*48.0*	*D*	*36.9*	*D*
	EB - R	*24.5*	*C*	*22.9*	*C*
Van Ranst Place	*WB - L*	*23.4*	*C*	*22.2*	*C*
	WB - R	*23.5*	*C*	*23.8*	*C*
Mamaroneck Avenue	*NB - L, T, R*	*14.3*	*B*	*16.0*	*B*
Mamaroneck Avenue	*SB - L, T, R*	*14.2*	*B*	*13.7*	*B*
	Overall	*21.0*	*C**	*18.8*	*B*
Mamaroneck Ave., White Plains Rd., and Center Ave.					
Mamaroneck Avenue	NB -L	12.0	B	14.6	B
Center Avenue					
White Plains Road	EB-R	12.4	B	13.1	B
Plaza Avenue and Center Avenue					
Center Avenue	WB - L, R	15.18	C	11.79	B
Plaza Avenue	NB -T	11.18	B	9.07	A
Plaza Avenue	SB -T	10.83	B	8.88	A
	Overall	12.99	B	10.71	B
Waverly Avenue and Site Egress					
Site Egress	NB - R	11.9	B	11.0	B

level-of-Service (see Tables 3.5-2 and 3.5-3 for level-of-service criteria).
* Decrease in level of service from the No Build Condition.
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
L = left, R= right, T = through, (e.g. WB-L = Westbound left).

Table 3.5-11
Hoyt Avenue Intersections Build Condition Level of Service Summary

Intersection Road	*Lane Group Approach Direction - Movement*	*A.M. Weekday Peak Hour*		*P.M. Weekday Peak Hour*	
		Delay (seconds /vehicle)	*Level of Service*	*Delay (seconds /vehicle)*	*Level of Service*
Mamaroneck Ave. and Hoyt Avenue					
Hoyt Avenue	*EB - L, T*	*44.9*	*D*	*34.8*	*C*
	EB - R	*31.7*	*C*	*31.9*	*C*
Mamaroneck Avenue	*NB - L*	*11.6*	*B*	*14.9*	*B*
	NB - T, R	*6.9*	*A*	*7.1*	*A*
Mamaroneck Avenue	*SB - L*	*23.5*	*C*	*21.3*	*C*
	SB - T, R	*26.4*	*C*	*27.8*	*C*
	Overall	*21.3*	*C*	*19.9*	*B*
Fenimore Road, and Hoyt Avenue					
Fenimore Road	SB - L	9.8	A	9.3	A
Hoyt Avenue	WB - L, R	235.7	F	98.5	F

level-of-Service (see Tables 3.5-2 and 3.5-3 for level-of-service criteria).
Signalized intersections are shown in italics.
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
L = left, R= right, T = through, (e.g. WB-L = Westbound left).

3.5.11 *Potential Improvements and Alternatives*

Pedestrian Alternatives~~Activity~~

Internal pedestrian traffic will focus on trips between parked vehicles and entrances (Stairways and elevators). Thus the spaces in closed proximity to the entrances and under cover will be in the highest demand. Pedestrians will make their way to vehicles though the parking lot.

Three design improvements would encourage pedestrian activity between the site and Mamaroneck Avenue. Mamaroneck Avenue is a likely pedestrian destination from the site since retail uses, the Metro North rail station, and Columbus Park are in close proximity. These improvements would include: 1) a sidewalk along the landscaped buffer of the Sheldrake River 2) to eliminate site traffic use of East Plaza Avenue, and 3) A sidewalk connection along the site egress.

The applicant has discussed with Village officials the concept of a sidewalk located along the landscaped buffer of the Sheldrake River. The provision of a sidewalk along the Sheldrake River would provide an amenity and encourage pedestrian access to both Waverly Avenue and Mamaroneck Avenue. Issues such as off-site public use, maintenance, and safety will require further consideration and discussions with the Village.

Pedestrian access to Mamaroneck Avenue would be encouraged by restricting vehicular use of East Plaza Avenue. East Plaza Avenue is a narrow (approximately 13 feet wide) alley that was formerly used by Blood Brothers Auto Wrecking and is currently used by a limited number of commercial businesses along East Plaza. The proposed site plan would restrict

access from East Plaza into the project site to emergency vehicles only, as well as pedestrians. Reducing the vehicular use of East Plaza Avenue is the best method for improving its use for pedestrian activity. Grass pavers and signage are suggested in combination with a sidewalk as a means to encourage pedestrian activity, permit emergency access and discourage non-emergency vehicular use.

A sidewalk at the site egress would allow residents in the main buildings near the Sheldrake River to access the Waverly Avenue sidewalk easier and provide access to Mamaroneck Avenue. The applicant would consider an internal sidewalk, although a design for walkway is not presently shown on the current site plan.

~~3.5.12 Mitigation Measures~~

Traffic

All intersection movements are expected to continue to operate at level of service D or better and unchanged under the proposed Build Condition except for the Waverly Avenue approach to Plaza Avenue continues unchanged from the Existing condition's level of service F. Since removing the site egress from that intersection should reduce delay and increase safety, no further traffic mitigation measures are proposed for the development.

The project is itself a transportation mitigation measure. Construction of residential housing within walking distance of the Mamaroneck Railroad Station provides the opportunity to increase use of the railroad without a corresponding increase in demand on railroad parking. The Transportation Plan for the Hudson Valley, the 21st Century Mobility Study (NYS DOT, 1992), encourages the use of public transportation to conserve energy, reduce air pollution and maximize highway capacity. Furthermore, the common principals stated therein includes encouraging new development in existing urbanized areas where transportation services are available.

The proposed project is not expected to overburden the surrounding roadway network or result in a decline in traffic operations. The project is expected to generate 58 vehicular trips in the a.m. peak hour and 67 trips in the p.m. peak hour. Accounting for existing site traffic to be eliminated, the site would generate a net increase of 47 a.m. peak hour trips and 60 p.m. peak hour trips as compared to the Existing Conditions (assuming Blood Brothers Auto Wrecking in operation).

Peak hour delays were calculated to establish the quality of operation (level of service) of the intersections studied under the existing condition, future condition without the project and the future condition with the project. No lane group is anticipated to decline in level of service resulting from the proposed project. Delays will be slightly reduced and safety improved at the Waverly Avenue/Plaza Avenue intersection by removing the site's existing egress at this intersection.

Waverly Avenue Bridge

The proposed project has parking near the intersection of Plaza Avenue/Waverly Avenue and no buildings are proposed for this area on-site. Therefore, the project would not impede a future realignment of the Waverly Avenue Bridge. According to the Town of Mamaroneck

Department of Public Works representatives, the Waverly Avenue Bridge is proposed for rehabilitation and not replacement at the current time.

The proposed "entrance only" circulation of the proposed site plan does not require any change in the location of the Waverly Bridge. Since vehicles will not be exiting the site at Plaza Avenue/Waverly Avenue, site distance from the project site is not longer an issue and provides a safer condition than currently exists. As described above, the Town of Mamaroneck has budgeted funds for rehabilitating the Waverly Avenue bridge. improvements.

Alternative Two-Way Driveway at Waverly Avenue/Plaza Avenue

The existing driveway at Waverly Avenue/Plaza Avenue is proposed as an entrance only to reduce the complexity of the intersection, reduce delay, and eliminate the poor sight distance from the project driveway to vehicles coming over the Waverly Avenue bridge. Retaining the driveway movement into Plaza Avenue/Waverly Avenue intersection would reduce the trip length toward but not from the Fenimore Road area. Traffic volumes on Center Avenue would not be affected and thus the Build Conditions for the intersection of Center Avenue/Plaza Avenue and Center Avenue/Mamaroneck Avenue would be unchanged. The existing site plan shows the entrance only configuration that could be further narrowed or converted into entrance-exit either as part of the initial project or altered when conditions permit.

Figures 3.5-14 through 3.5-18 show the trip distribution and build condition with a site entrance-exit at the Plaza Avenue/Waverly Avenue intersection.

The two-way configuration results in slightly increased delays for Waverly Avenue traffic raising the delay from 81.75 seconds per vehicle to 83.13 seconds per vehicle in the a.m. peak hour as shown in Table 3.5-12. In addition, making the Waverly Avenue site entrance into an exit-entrance, would affect the Hoyt Avenue approach to Fenimore Road. The change in vehicle distribution would result in an increased delay (3.1 seconds per vehicle Table 3.5-13) at the Hoyt Avenue approach to Fenimore Road. The primary benefit of an entrance-exit at Waverly Avenue is a convenience to site drivers, since it would provide an overall reduction of 22 vehicle miles traveled per day.

The existing guide rail, vegetation, telephone pole, and bridge layout contribute to the sight distance issue at the bridge. The Waverly Avenue Bridge is slightly raised above the driveway elevation and is angled southward away from the intersection. The stop sign is located on Waverly Avenue in advance (west side) of the bridge. The stop sign eliminates queuing on the bridge. More typically, the stop sign would be located at the intersection with Plaza Avenue where Waverly Avenue vehicles could be easily seen.

Alternative Two-Way Traffic at Proposed Waverly Avenue Exit

The Waverly Avenue mid block exit is proposed to reduce vehicle trips in front of houses on Waverly Avenue between Plaza Avenue and the site exit. A single exit lane is narrower than an exit-entrance which allows more space for landscaping or pedestrian walkways. No capacity analysis is provided for a two-way entrance exit since the additional traffic would not alter the acceptable conditions at the site mid block curb cut.

Table 3.5-12 - Build Condition with Two Way Driveway at Plaza Avenue/Waverly Avenue Level of Service Summary					
Intersection Road	*Lane Group Approach Direction - Movement*	*A.M. Weekday Peak Hour*		*P.M. Weekday Peak Hour*	
		Delay (seconds /vehicle)	*Level of Service*	*Delay (seconds/ vehicle)*	*Level of Service*
Site Ingress, Plaza Ave., and Waverly Avenue					
Waverly Avenue	EB - L, T, R	83.13	F	22.29	C
Site Access (two-way)	NB - L, T, R	10.05	B	9.24	A
Plaza Avenue	SB - L, T, R	18.45	C	12.62	B
	Overall	58.70	F	18.48	C
Waverly Avenue and Fenimore Road					
Waverly Avenue	*EB - L*	*18.7*	*B*	*12.5*	*B*
	EB - T, R	*22.1*	*C*	*16.1*	*B*
Waverly Avenue	*WB - L, T*	*27.6*	*C*	*14.1*	*B*
	WB - R	*15.2*	*B*	*13.2*	*B*
Fenimore Road	*NB - L*	*13.5*	*B*	*13.9*	*B*
	NB - T	*12.6*	*B*	*16.0*	*B*
	NB - R	*10.7*	*B*	*13.2*	*B*
Fenimore Road	*SB - L*	*17.0*	*B*	*17.6*	*B*
	SB - T	*14.7*	*B*	*17.2*	*B*
	SB - R	*9.1*	*A*	*11.7*	*B*
	Overall	*16.8*	*B*	*15.6*	*B*
Mamaroneck Avenue and Waverly Avenue					
Waverly Avenue	*EB - L*	*48.0*	*D*	*36.9*	*D*
	EB - R	*24.1*	*C*	*22.8*	*C*
Van Ranst Place	*WB - L*	*23.4*	*C*	*22.2*	*C*
	WB - R	*23.5*	*C*	*23.8*	*C*
Mamaroneck Avenue	*NB - L, T, R*	*14.3*	*B*	*16.0*	*B*
Mamaroneck Avenue	*SB - L, T, R*	*14.2*	*B*	*13.7*	*B*
	Overall	*21.0*	*C**	*18.8*	*B*
Waverly Avenue and Site Egress					
Site Egress	NB - R	11.7	B	11.0	B

level-of-Service (see Tables 3.5-2 and 3.5-3 for level-of-service criteria).
** Decrease in level of service from the No Build Condition.*
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
L = left, R= right, T = through, (e.g. WB-L = Westbound left).
Center Avenue intersections not shown, unchanged from Build Condition Table 3.5-10.

Table 3.5-13 Hoyt Avenue Intersections Build Condition Level of Service Summary					
Intersection Road	Lane Group Approach Direction - Movement	A.M. Weekday Peak Hour Delay (seconds /vehicle)	 Level of Service	P.M. Weekday Peak Hour Delay (seconds /vehicle)	 Level of Service
Mamaroneck Ave. and Hoyt Avenue					
Hoyt Avenue	*EB - L, T*	*44.9*	*D*	*34.8*	*C*
	EB - R	*31.7*	*C*	*31.9*	*C*
Mamaroneck Avenue	*NB - L*	*11.4*	*B*	*14.8*	*B*
	NB - T, R	*6.9*	*A*	*7.1*	*A*
Mamaroneck Avenue	*SB - L*	*23.5*	*C*	*21.3*	*C*
	SB - T, R	*26.2*	*C*	*27.7*	*C*
	Overall	*21.2*	*C*	*19.8*	*B*
Fenimore Road, and Hoyt Avenue					
Fenimore Road	SB - L	9.8	A	9.3	A
Hoyt Avenue	WB - L, R	238.8	F	97.7	F

level-of-Service (see Tables 3.5-2 and 3.5-3 for level-of-service criteria).
Signalized intersections are shown in italics.
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.
L = left, R= right, T = through, (e.g. WB-L = Westbound left).
** Decrease in level of service from the No Build Condition.*

Parking Alternatives

Several alternatives are available for on-site parking, including designated parking, open parking, purchased spaces, or combinations of these options. Purchased parking spaces discourages on-site residents from parking on-site and may result in residents seeking off-site parking. Therefore, purchased parking is not advisable, or proposed. Non-designated, or open parking allows both residents and visitors to park in any available spaces. This option affords flexibility, but may result in residents not being able to find an on-site parking space if too many visitors are at the development at a particular time. A fully designated parking scheme may not provide sufficient spaces for visitors.

The applicant proposes a partially designated parking program. Each unit would have a single designated parking space, and therefore, residents would be assured of one parking space at all times. The remaining spaces would be open to both residents and visitors. This parking program allows flexibility and encourages both residents and visitors to park on-site.

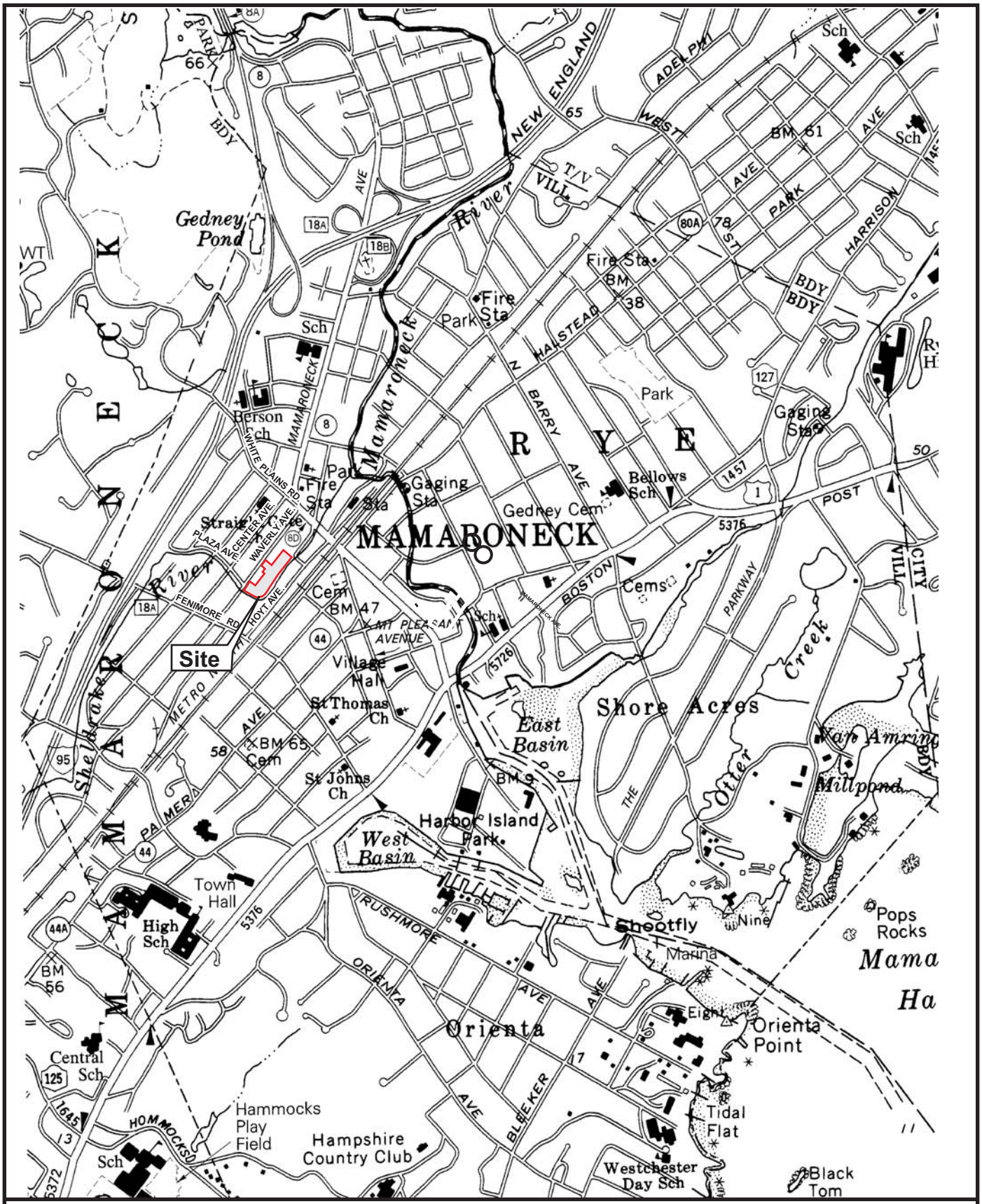

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Figure 3.5-1: Transportation Network

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 1800 feet

File 04099 02/26/06
JS:\04099

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

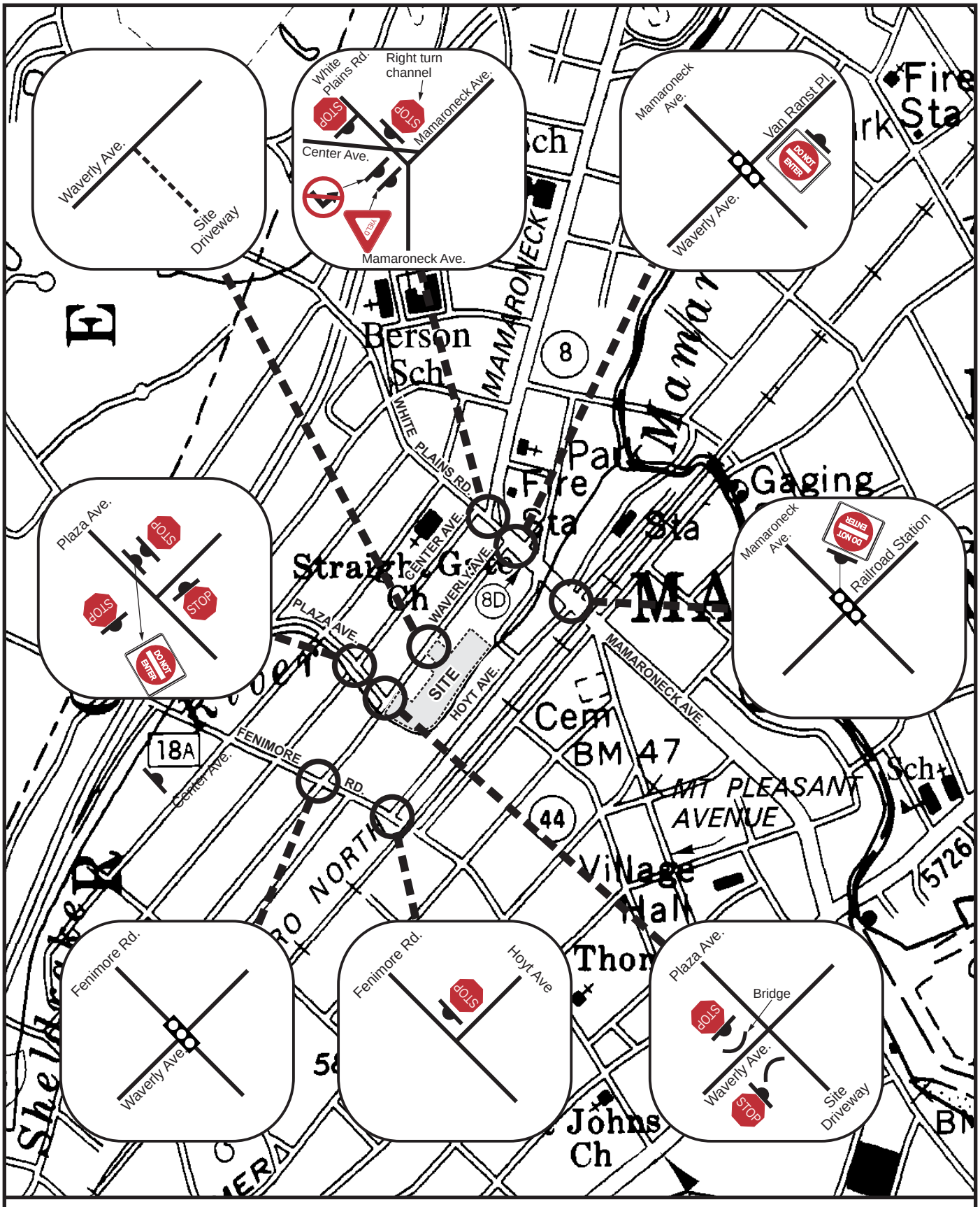

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Figure 3.5-2: Regulatory Signage
Sheldrake River Project
Village of Mamaroneck, Westchester County, New York
Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad
Approx. Scale: 1 inch = 660 feet

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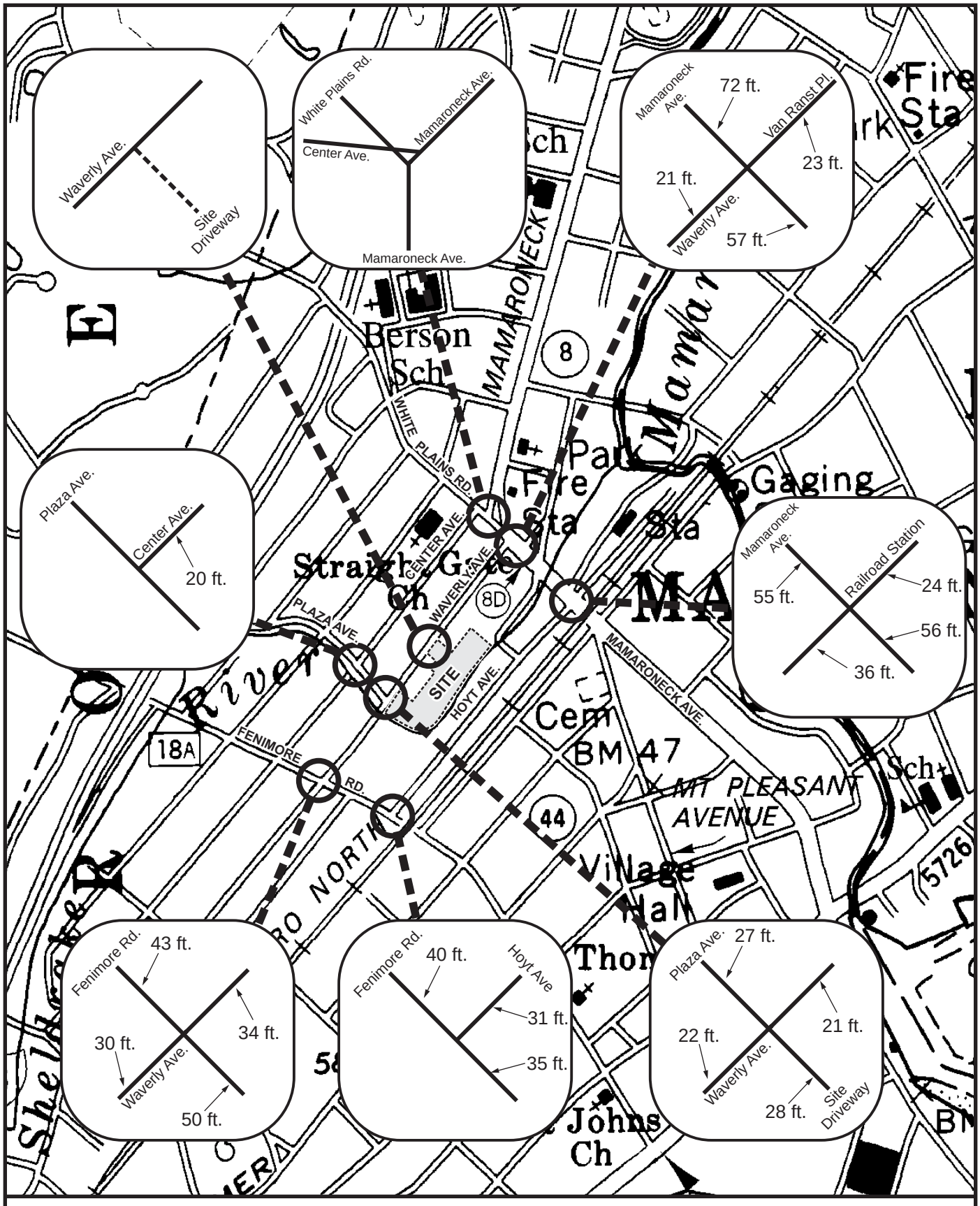

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Figure 3.5-3: Road Widths
Sheldrake River Project
Village of Mamaroneck, Westchester County, New York
Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad
Approx. Scale: 1 inch = 660 feet

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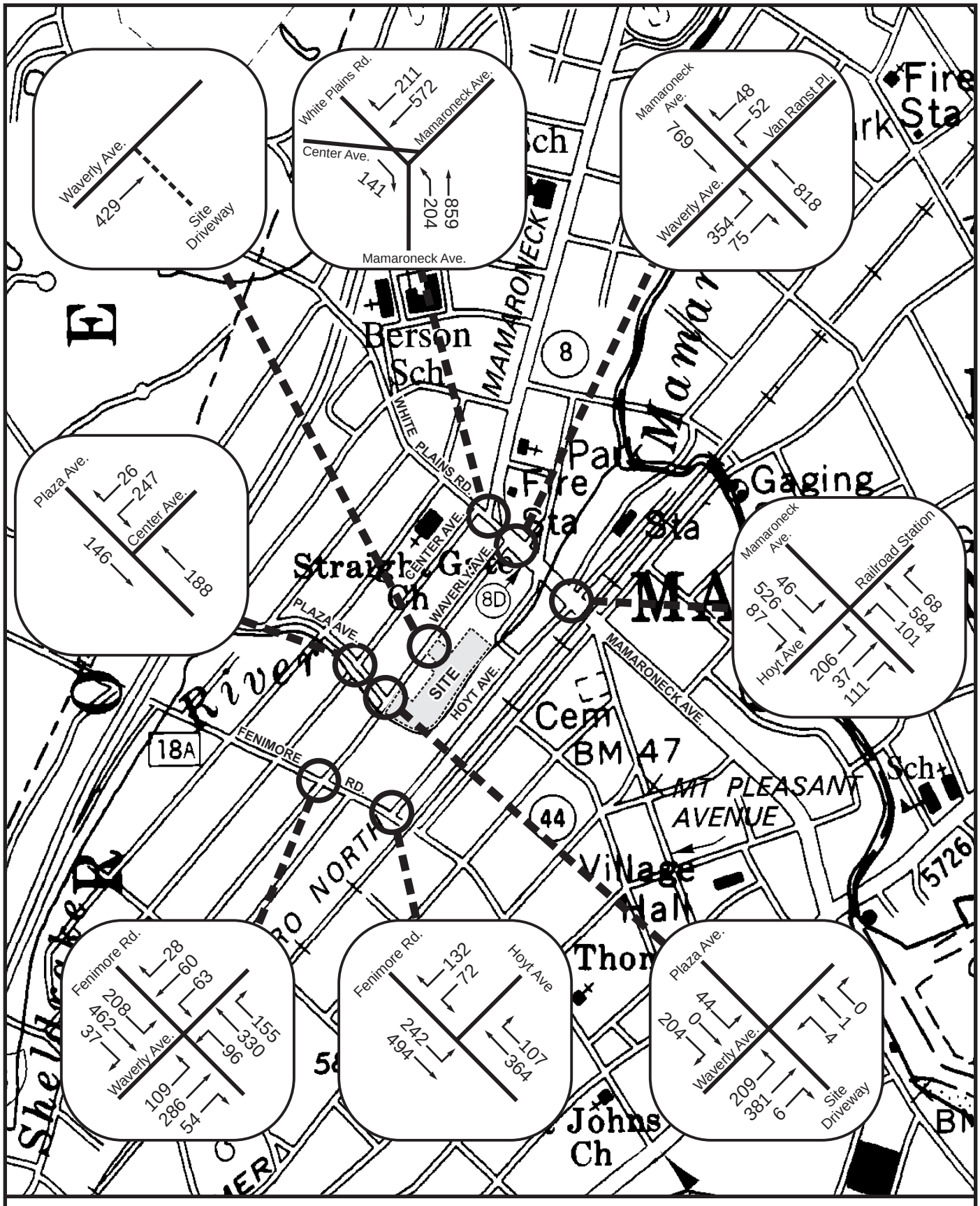

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Figure 3.5-4: Existing AM Peak Hour Traffic

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 660 feet

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

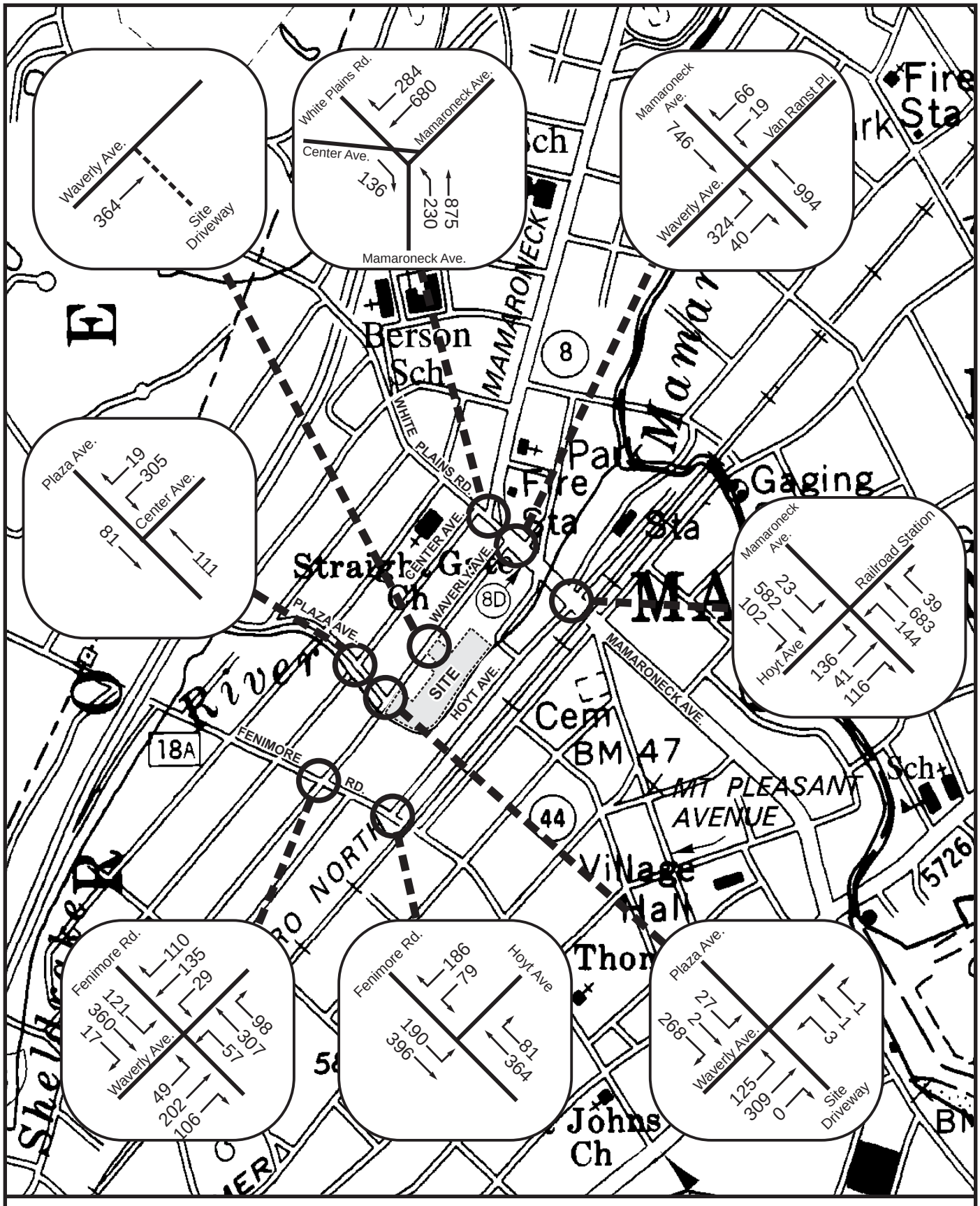

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Figure 3.5-5: Existing PM Peak Hour Traffic

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 660 feet

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

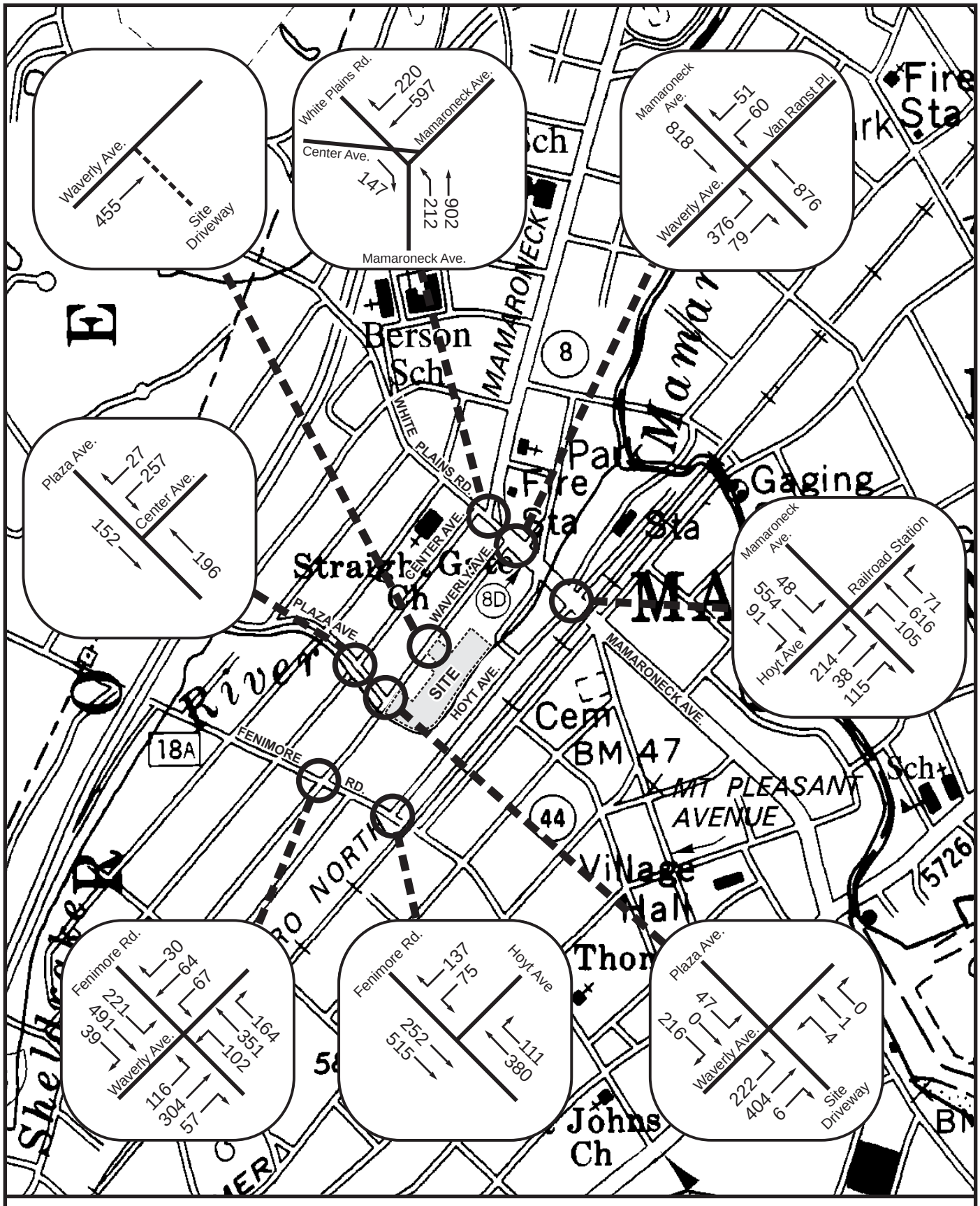

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Figure 3.5-6: No Build AM Peak Hour Traffic

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 660 feet

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

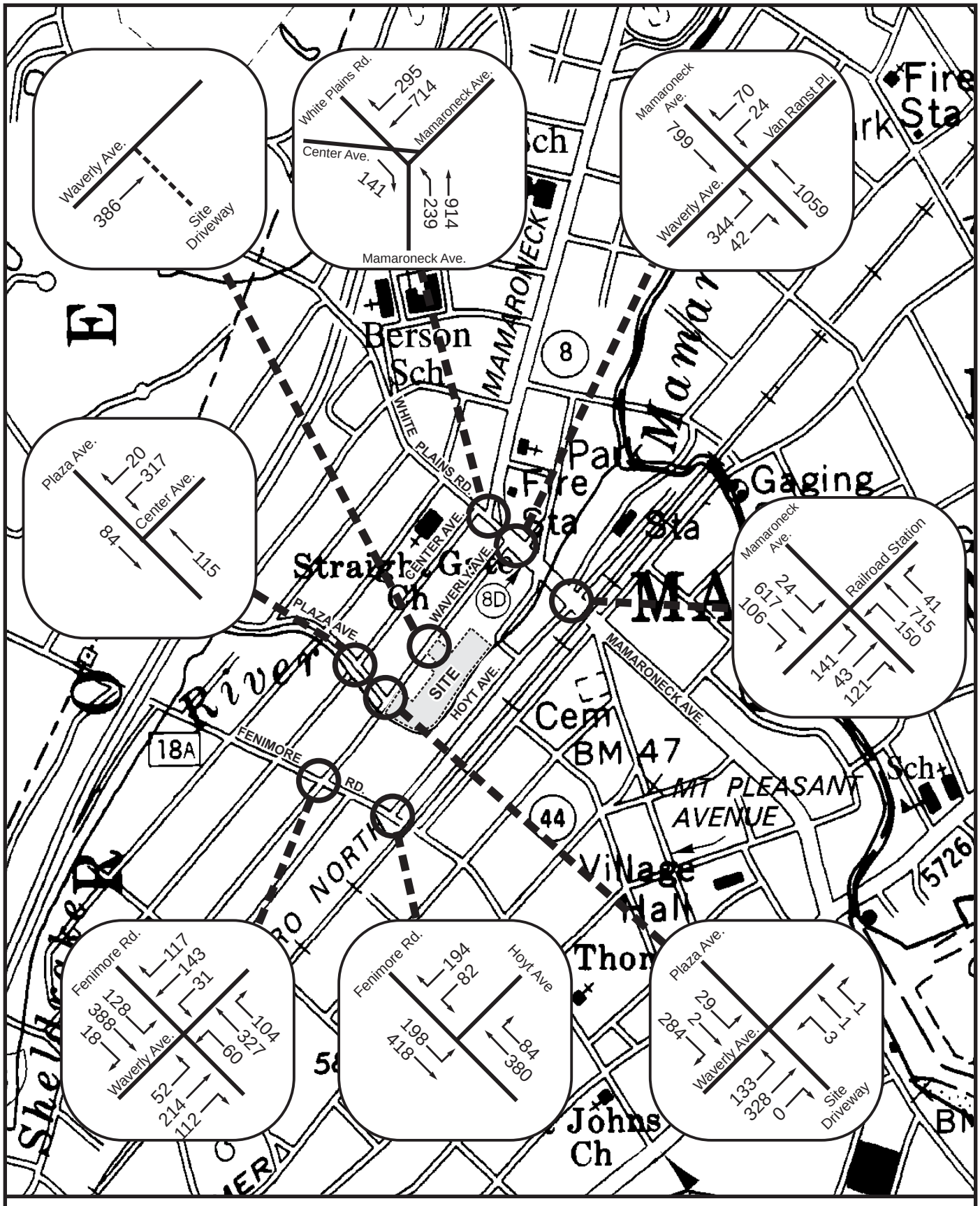

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Figure 3.5-7: No Build PM Peak Hour Traffic

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 660 feet

File 04099 06/02/06
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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

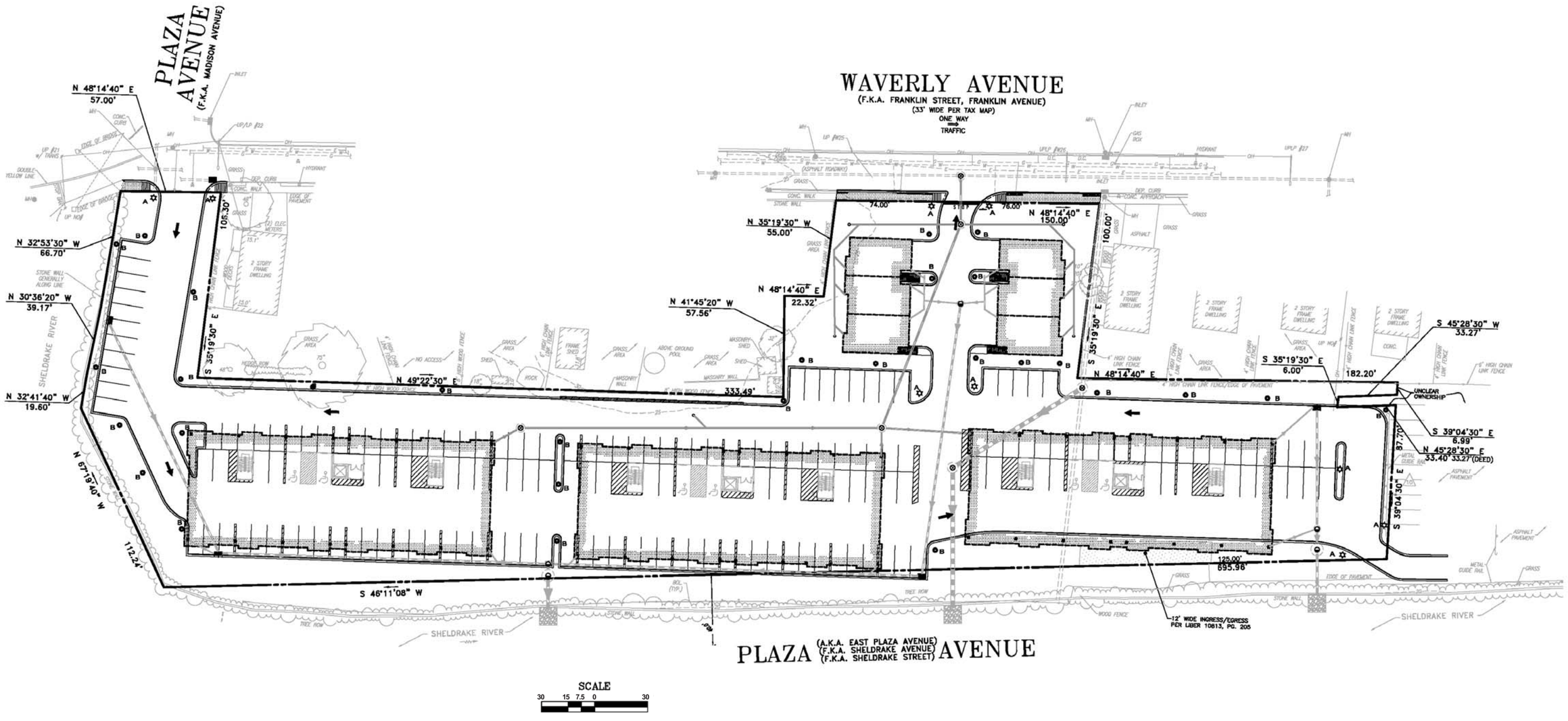

Figure 3.5-8: Proposed Site Plan
Sheldrake River Project
Village of Mamaroneck, Westchester County, New York
Source: Bohler Engineering, P.C., 01/05/06
Scale: Graphic

File 04099 02/24/06
JS/04099

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

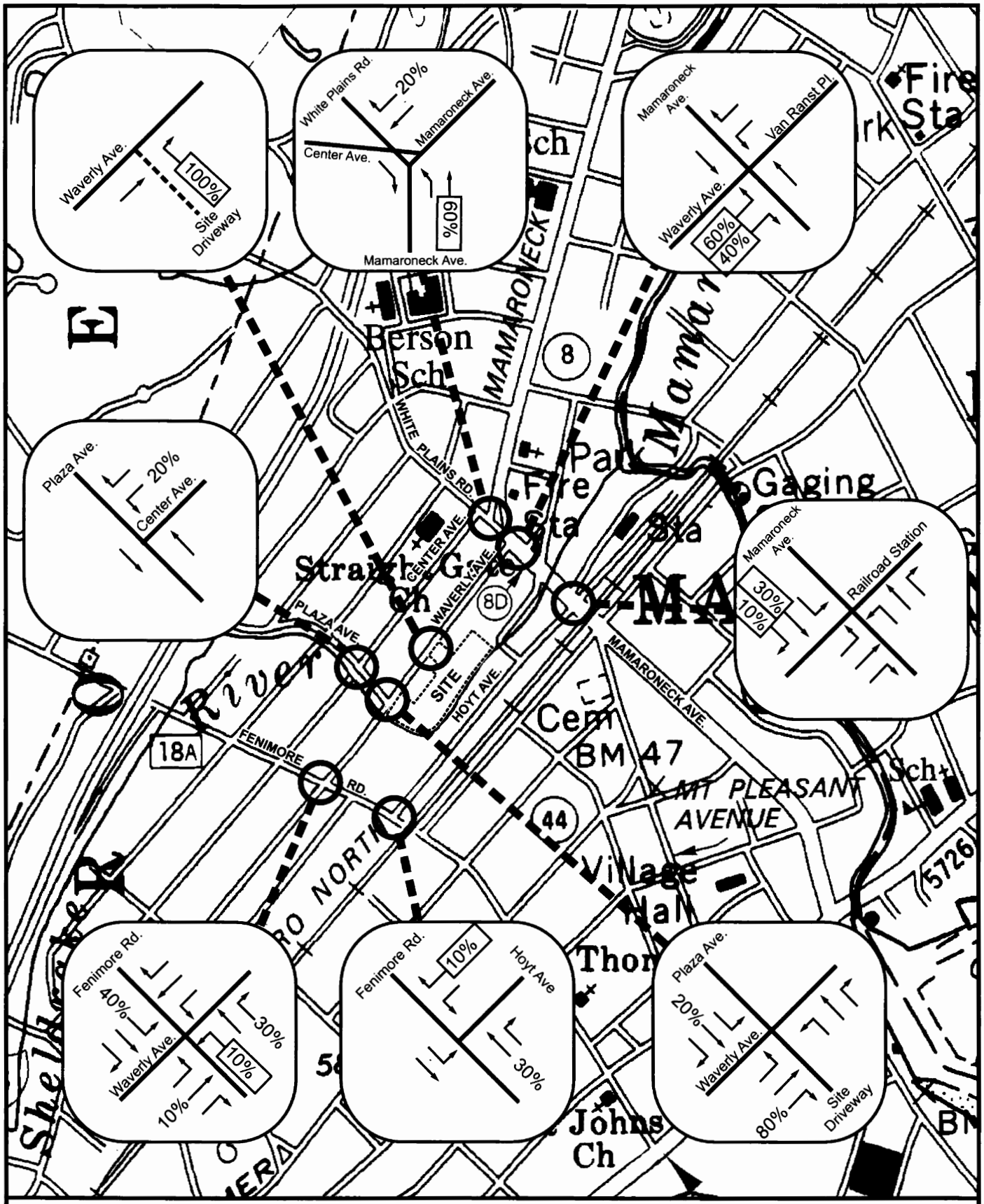

Figure 3.5-9: Percent Distribution Site Generated Trips

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 660 feet

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- O Intersections Studied
- XX% Outbound
- XX% Inbound

File 04099 07/06/06
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Tim Miller Associates, Inc., 10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

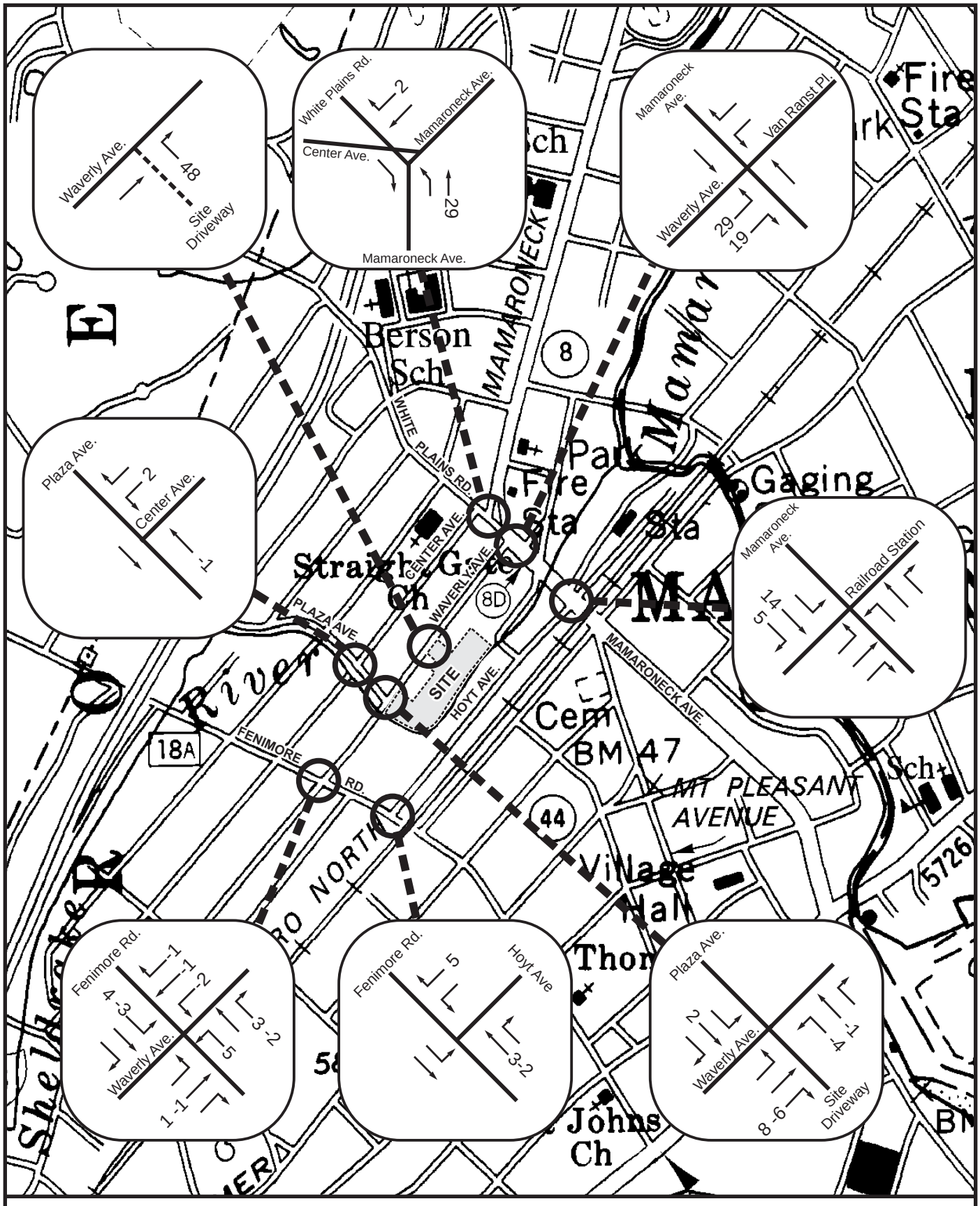

Figure 3.5-10: Site Generated AM Peak Hour Trips

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 660 feet

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File 04099 06/02/06
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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

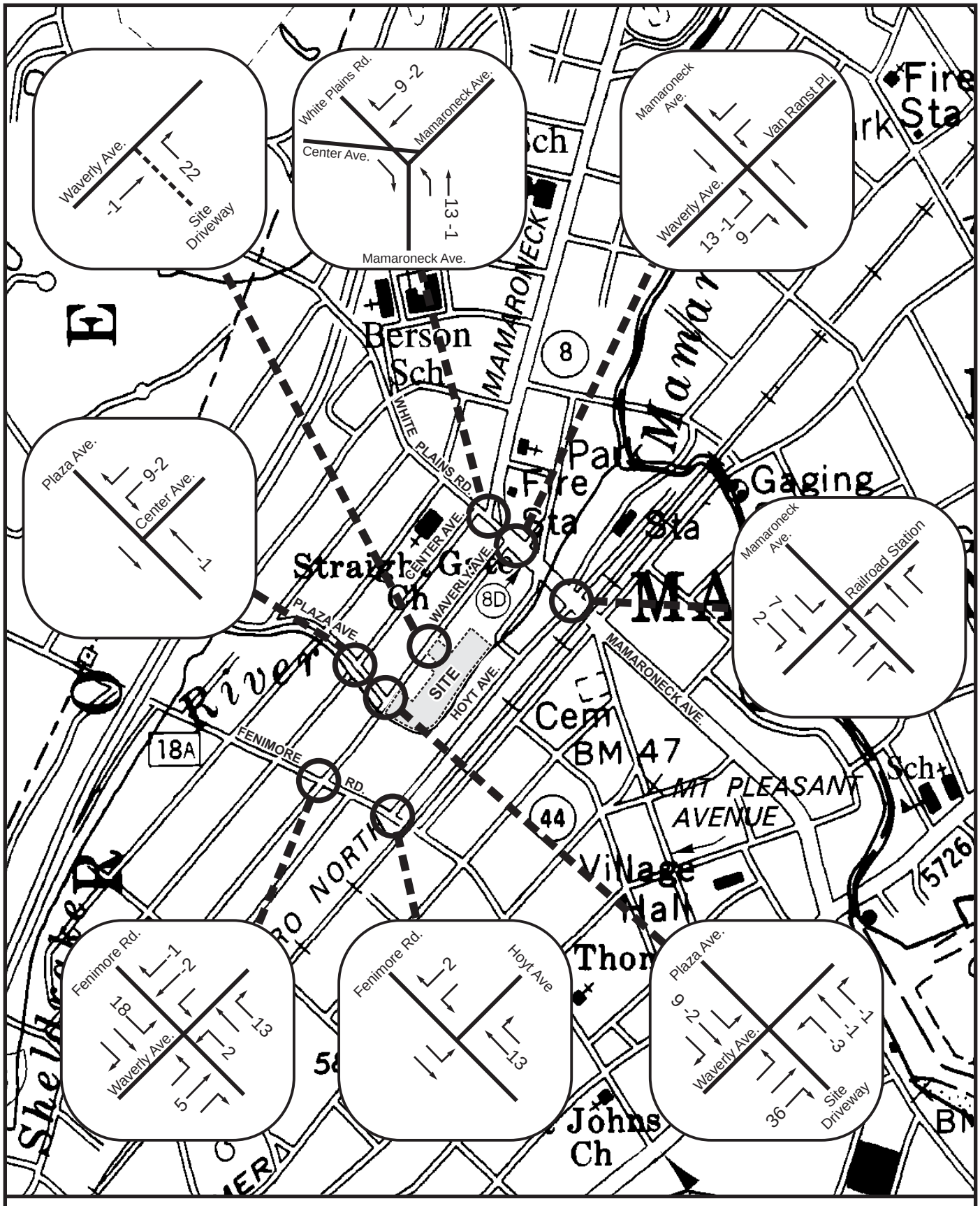

Figure 3.5-11: Site Generated PM Peak Hour Trips

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 660 feet

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File 04099 06/02/06
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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

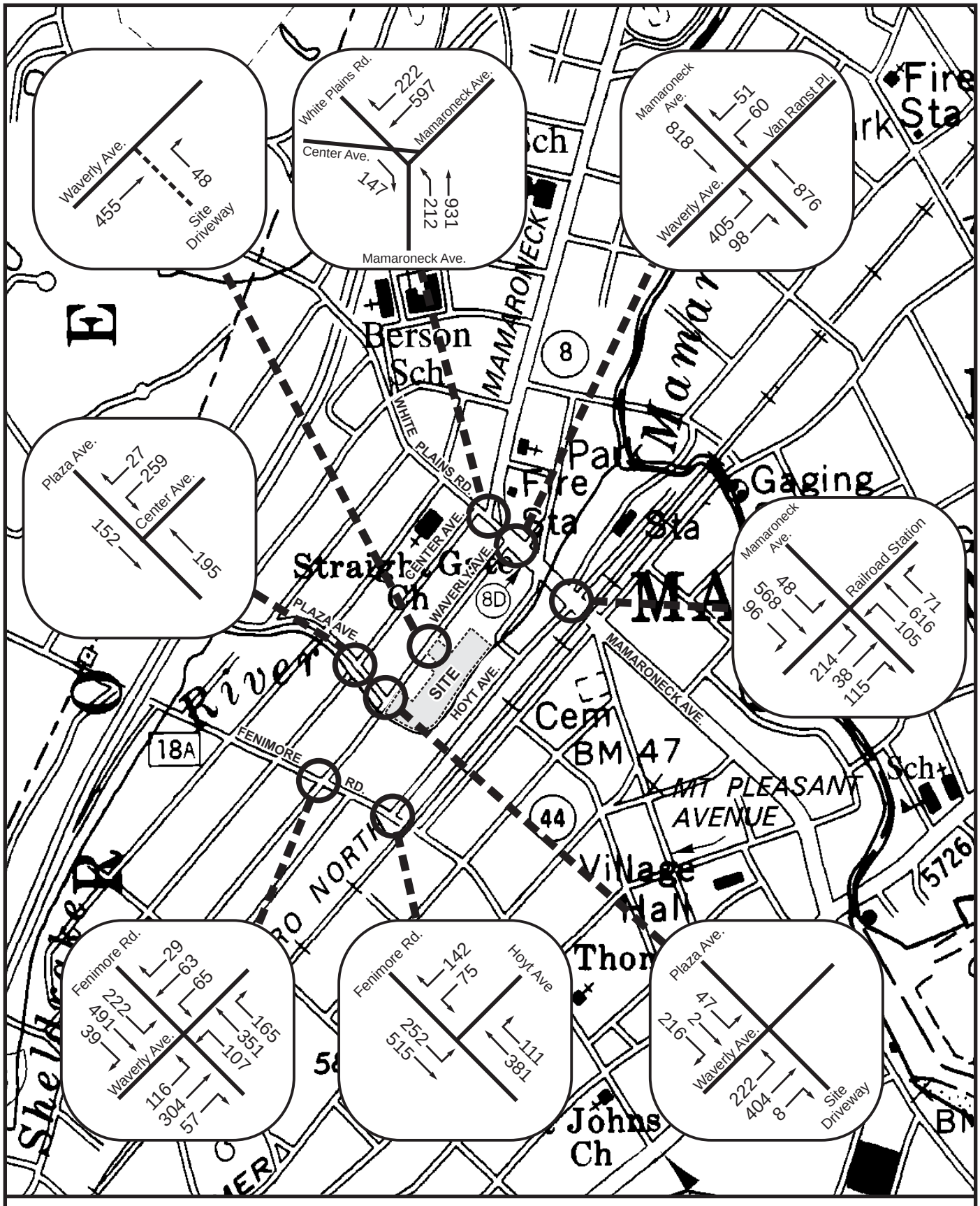

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Figure 3.5-12: Build AM Peak Hour Traffic

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 660 feet

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

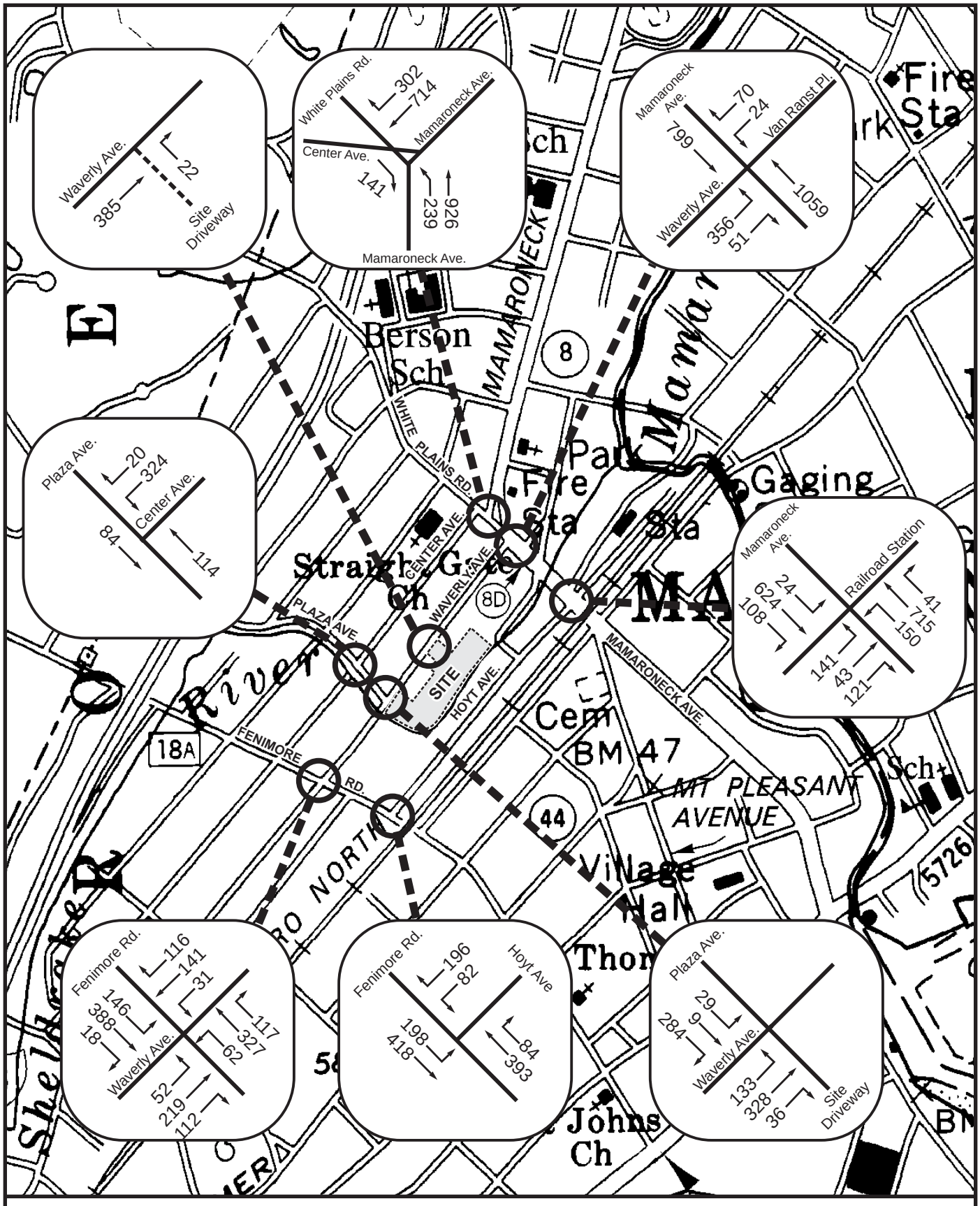

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Figure 3.5-13: Build PM Peak Hour Traffic

Sheldrake River Project

Village of Mamaroneck, Westchester County, New York

Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad

Approx. Scale: 1 inch = 660 feet

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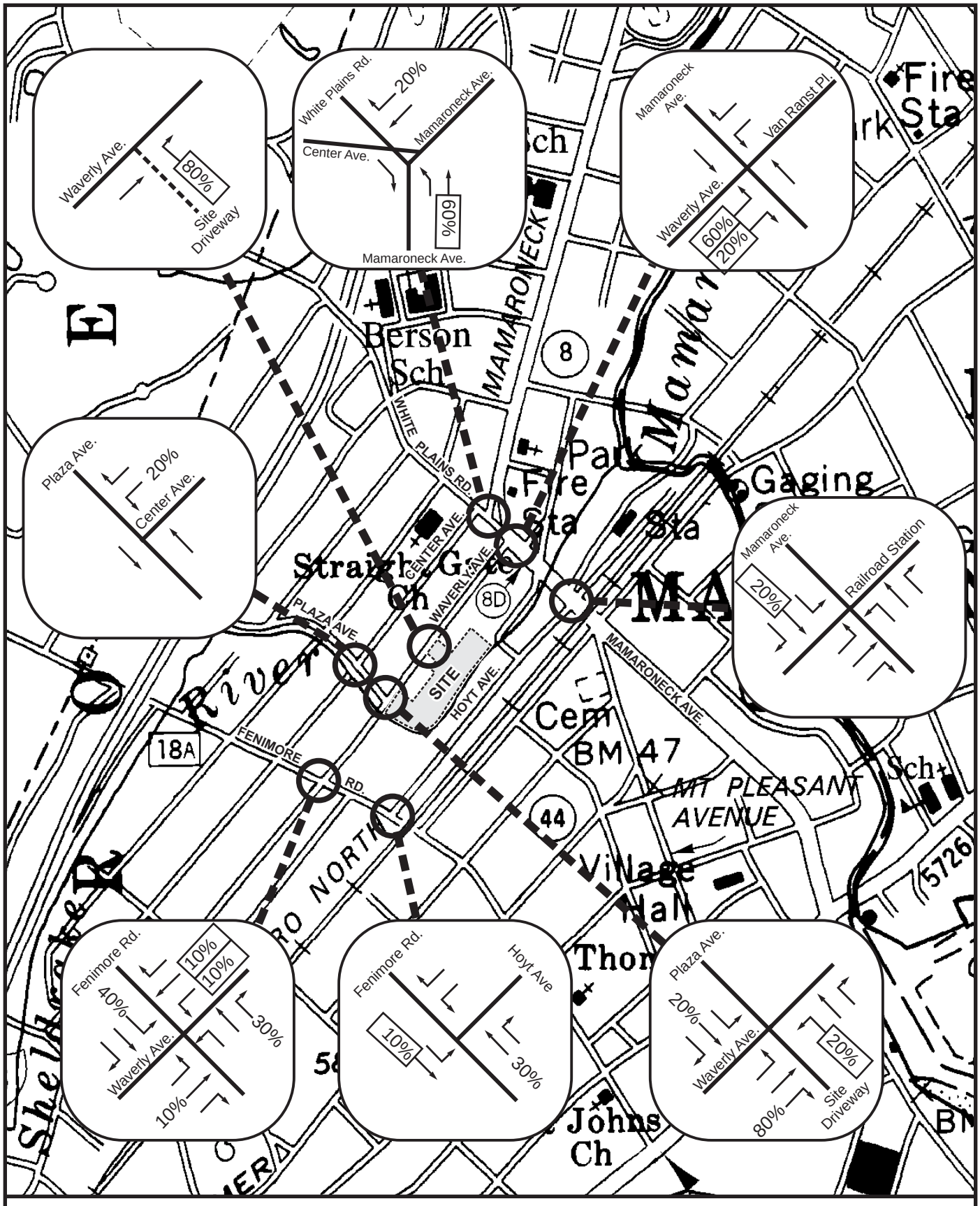
Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418



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LEGEND

- Intersections Studied
- XX% Outbound
- XX% Inbound

Figure 3.5-14: Percent Distribution Site Generated Trips
Two- Way Main Entrance
Sheldrake River Project
Village of Mamaroneck, Westchester County, New York
Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad
Approx. Scale: 1 inch = 660 feet

File 04099 06/02/06
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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

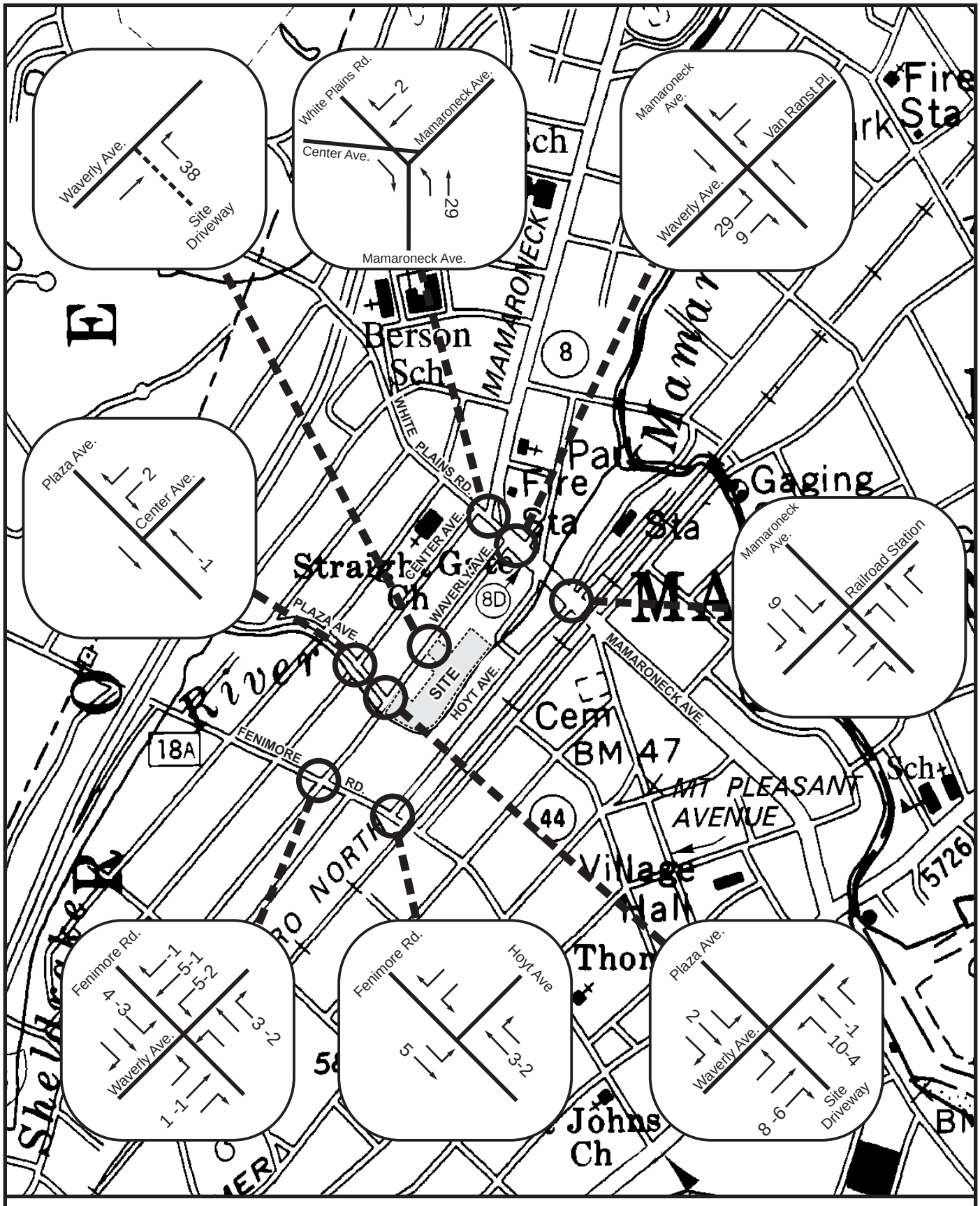

Figure 3.5-15: Site Generated AM Peak Hour Trips
Two-Way Main Entrance
Sheldrake River Project
Village of Mamaroneck, Westchester County, New York
Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad
Approx. Scale: 1 inch = 660 feet

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File 04099 06/02/06
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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

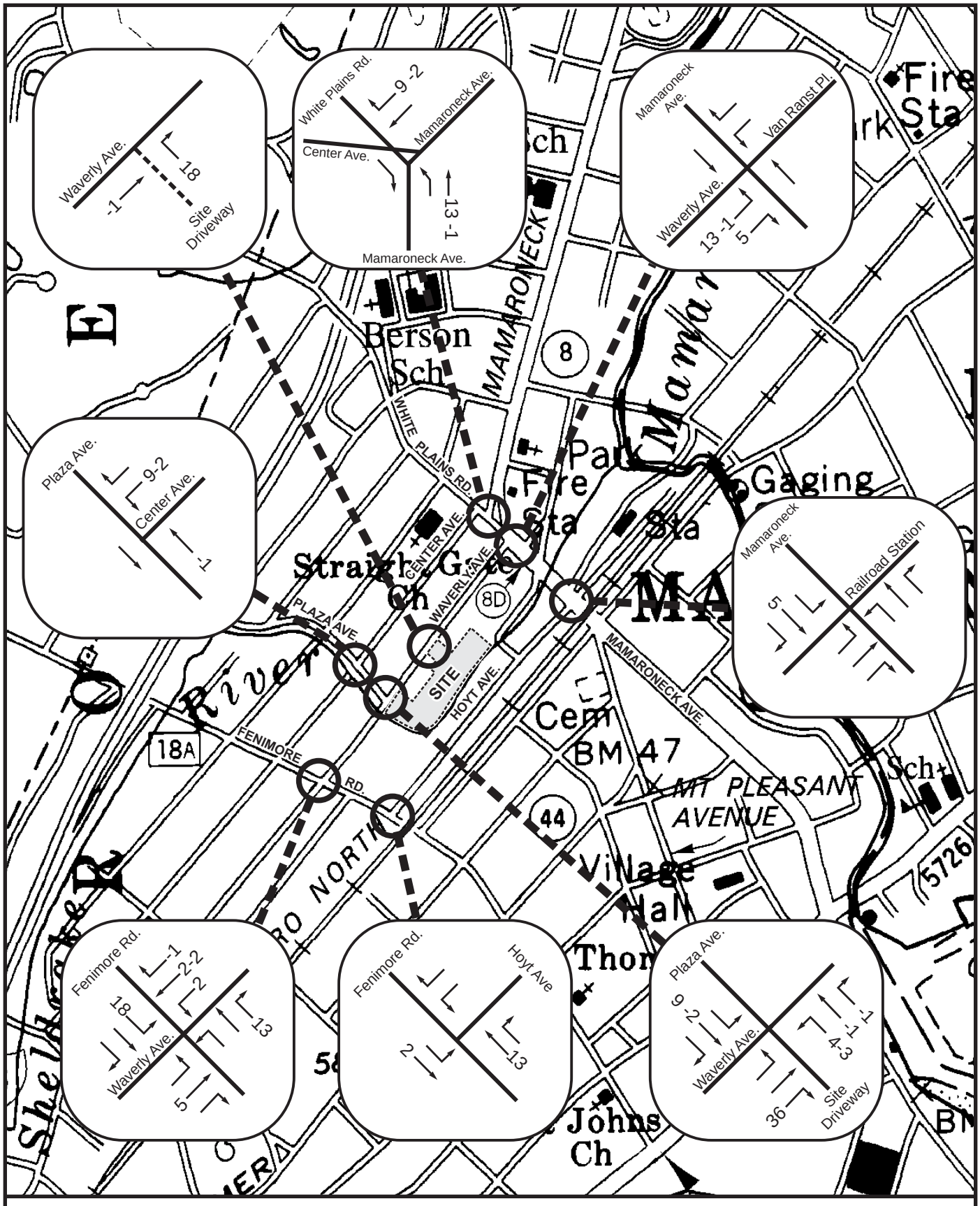

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Figure 3.5-16: Site Generated PM Peak Hour Trips
Two-Way Main Entrance
Sheldrake River Project
Village of Mamaroneck, Westchester County, New York
Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad
Approx. Scale: 1 inch = 660 feet

File 04099 06/02/06
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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

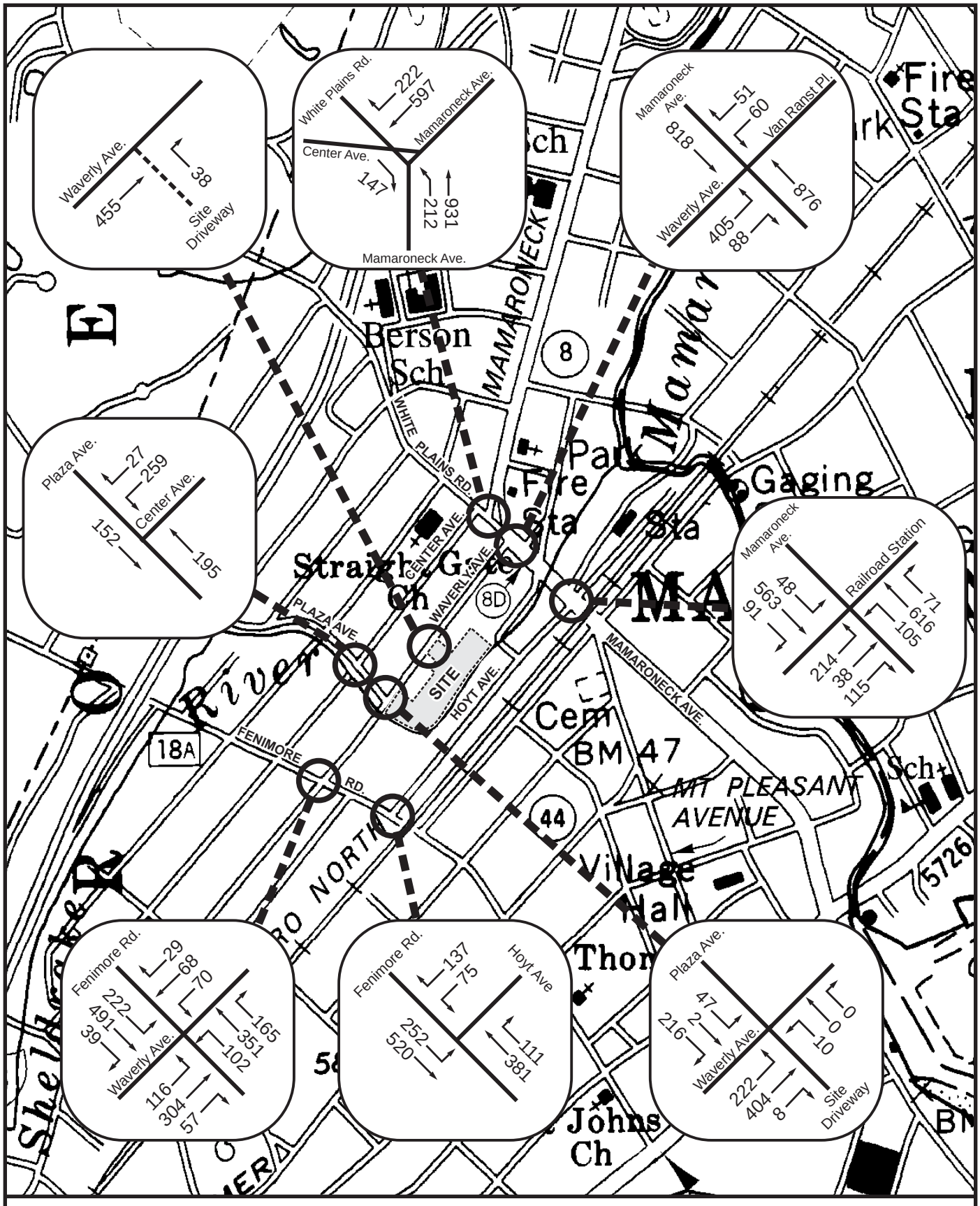

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Figure 3.5-17: Build AM Peak Hour Traffic
Two-Way Main Entrance
Sheldrake River Project
Village of Mamaroneck, Westchester County, New York
Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad
Approx. Scale: 1 inch = 660 feet

File 04099 06/02/06
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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

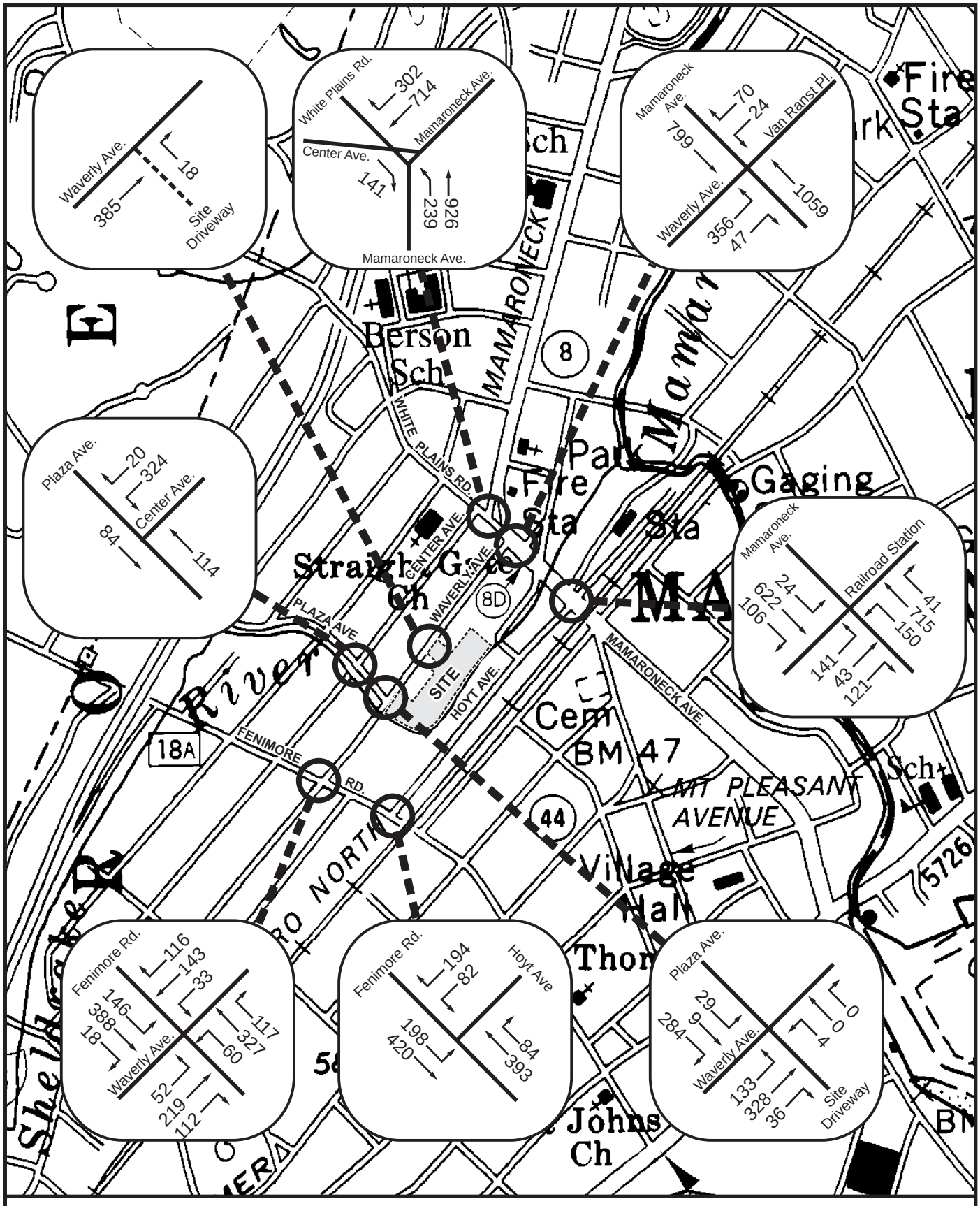

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Figure 3.5-18: Build PM Peak Hour Traffic
Two-Way Main Entrance
Sheldrake River Project
Village of Mamaroneck, Westchester County, New York
Base: USDOT 7.5-minute Planimetric Map, Mamaroneck Quad
Approx. Scale: 1 inch = 660 feet

File 04099 06/02/06
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CAPACITY CALCULATIONS
APPENDIX E ATTACHMENT A

EXISTING

NO-BUILD

BUILD

BUILD (with two way Access)

HCS+™ DETAILED REPORT

General Information		Site Information	
Analyst	*JAG*	Intersection	*Waverly/Fenimore*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/19/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*AM Peak Hour*	Analysis Year	*Existing Condition*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*0*	*1*	*0*	*0*	*1*	*0*	*1*	*1*	*0*	*1*	*1*	*1*
Lane Group		*LTR*			*LTR*		*L*	*TR*		*L*	*T*	*R*
Volume, V (vph)	*109*	*286*	*54*	*63*	*60*	*28*	*96*	*330*	*155*	*208*	*452*	*37*
% Heavy Vehicles, %HV	*3*	*3*	*3*	*0*	*0*	*0*	*2*	*2*	*2*	*2*	*2*	*2*
Peak-Hour Factor, PHF	*0.96*	*0.96*	*0.96*	*0.66*	*0.66*	*0.66*	*0.92*	*0.92*	*0.92*	*0.97*	*0.97*	*0.97*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*			*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*
Extension of Effective Green, e		*2.0*			*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*
Arrival Type, AT		*3*			*3*		*3*	*3*		*3*	*3*	*3*
Unit Extension, UE		*3.0*			*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	*3.0*
Filtering/Metering, I		*1.000*			*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b		*0.0*			*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*12.0*			*14.0*		*13.0*	*13.0*		*11.0*	*13.0*	*13.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*			*0*		*0*	*0*		*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *35.0*	G =	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*					Cycle Length, C = *70.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*468*			*228*		*104*	*527*		*214*	*466*	*38*
Lane Group Capacity, c		*557*			*454*		*379*	*917*		*308*	*963*	*818*
v/c Ratio, X		*0.84*			*0.50*		*0.27*	*0.57*		*0.69*	*0.48*	*0.05*
Total Green Ratio, g/C		*0.36*			*0.36*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*
Uniform Delay, d_1		*20.7*			*17.6*		*10.1*	*12.3*		*13.4*	*11.5*	*9.0*
Progression Factor, PF		*1.000*			*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*
Delay Calibration, k		*0.50*			*0.50*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*
Incremental Delay, d_2		*14.2*			*3.9*		*1.8*	*2.6*		*12.2*	*1.7*	*0.1*
Initial Queue Delay, d_3		*0.0*			*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*
Control Delay		*34.9*			*21.6*		*11.9*	*14.9*		*25.6*	*13.3*	*9.1*
Lane Group LOS		*C*			*C*		*B*	*B*		*C*	*B*	*A*
Approach Delay	*34.9*			*21.6*			*14.4*			*16.7*		
Approach LOS	*C*			*C*			*B*			*B*		
Intersection Delay	*20.7*			X_C = *0.76*			Intersection LOS			*C*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/19/06*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Waverly/Plaza*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Existing Condition*

Project ID *Sheldrake*

East/West Street: *Waverly Avenue* North/South Street: *Plaza Avenue/Site*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*209*	*381*	*6*	*0*	*0*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*4*	*1*	*0*	*44*	*0*	*204*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*				*LTR*		*LTR*	
PHF	*0.85*				*0.42*		*0.60*	
Flow Rate (veh/h)	*700*				*11*		*412*	
% Heavy Vehicles	*0*				*0*		*0*	
No. Lanes	*1*		*0*		*1*		*1*	
Geometry Group	*1*				*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.3*				*0.8*		*0.2*	
Prop. Right-Turns	*0.0*				*0.0*		*0.8*	
Prop. Heavy Vehicle	*0.0*				*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*			*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*			*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*			*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*				*0.2*		*-0.5*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*				*3.20*		*3.20*	
x, initial	*0.62*				*0.01*		*0.37*	
hd, final value (s)	*5.19*				*6.83*		*5.42*	
x, final value	*1.01*				*0.02*		*0.62*	
Move-up time, m (s)	*2.0*				*2.0*		*2.0*	
Service Time, t_s (s)	*3.2*				*4.8*		*3.4*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*700*				*261*		*662*	
Delay (s/veh)	*58.75*				*9.97*		*16.89*	
LOS	*F*				*A*		*C*	
Approach: Delay (s/veh)	*58.75*				*9.97*		*16.89*	
LOS	*F*				*A*		*C*	
Intersection Delay (s/veh)	*42.92*							
Intersection LOS	*E*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Mamaroneck/Waverly/Ranst*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/19/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*AM Peak Hour*	Analysis Year	*Existing Conditions*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*		*1*	*1*		*1*		*2*			*2*	
Lane Group	*L*		*R*	*L*		*R*		*T*			*T*	
Volume, V (vph)	*354*		*75*	*52*		*48*		*818*			*769*	
% Heavy Vehicles, %HV	*0*		*0*	*0*		*0*		*2*			*1*	
Peak-Hour Factor, PHF	*0.91*		*0.91*	*0.68*		*0.68*		*0.90*			*0.90*	
Pretimed (P) or Actuated (A)	*P*		*P*	*P*		*P*		*P*			*P*	
Start-up Lost Time, l_1	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Extension of Effective Green, e	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Arrival Type, AT	*3*		*3*	*3*		*3*		*3*			*3*	
Unit Extension, UE	*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			*3.0*	
Filtering/Metering, I	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Initial Unmet Demand, Q_b	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Lane Width	*11.0*		*11.0*	*12.0*		*11.0*		*13.0*			*11.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*		*0*	*0*		*0*		*0*			*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	Thru Only	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *45.0*	G =	G =	G =
	Y = *8*	Y =	Y =	Y =	Y = *8*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *86.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*389*		*82*	*76*		*71*		*909*			*854*	
Lane Group Capacity, c	*507*		*454*	*525*		*454*		*1918*			*1812*	
v/c Ratio, X	*0.77*		*0.18*	*0.14*		*0.16*		*0.47*			*0.47*	
Total Green Ratio, g/C	*0.29*		*0.29*	*0.29*		*0.29*		*0.52*			*0.52*	
Uniform Delay, d_1	*27.8*		*22.8*	*22.6*		*22.7*		*13.0*			*13.0*	
Progression Factor, PF	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Delay Calibration, k	*0.50*		*0.50*	*0.50*		*0.50*		*0.50*			*0.50*	
Incremental Delay, d_2	*10.6*		*0.9*	*0.6*		*0.7*		*0.8*			*0.9*	
Initial Queue Delay, d_3	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Control Delay	*38.5*		*23.7*	*23.2*		*23.4*		*13.8*			*13.9*	
Lane Group LOS	*D*		*C*	*C*		*C*		*B*			*B*	
Approach Delay	*35.9*			*23.3*			*13.8*			*13.9*		
Approach LOS	*D*			*C*			*B*			*B*		
Intersection Delay	*18.8*			X_C = *0.58*			Intersection LOS			*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/23/06*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Center/Mamaroneck*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Existing Condition*

Project Description *Sheldrake*

East/West Street: *White Plains Road/Center Ave* | North/South Street: *Mamaroneck Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*204*	*859*			*572*	*211*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*1.00*	*1.00*	*0.89*	*0.89*
Hourly Flow Rate, HFR (veh/h)	*217*	*913*	*0*	*0*	*642*	*237*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*141*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.84*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*167*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*							*R*
v (veh/h)	*217*							*167*
C (m) (veh/h)	*764*							*675*
v/c	*0.28*							*0.25*
95% queue length	*1.17*							*0.97*
Control Delay (s/veh)	*11.6*							*12.1*
LOS	*B*							*B*
Approach Delay (s/veh)	--	--				*12.1*		
Approach LOS	--	--				*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/22/06*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Center Avenue/Plaza Avenue*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Existing Condition*

Project ID *Sheldrake*

East/West Street: *Center Avenue* North/South Street: *Plaza Avnue*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*247*	*0*	*26*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*188*	*0*	*0*	*146*	*0*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration			*LR*		*T*		*T*	
PHF			*0.72*		*0.84*		*0.74*	
Flow Rate (veh/h)			*379*		*223*		*197*	
% Heavy Vehicles			*2*		*0*		*1*	
No. Lanes	*0*		*1*		*1*		*1*	
Geometry Group			*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns			*0.9*		*0.0*		*0.0*	
Prop. Right-Turns			*0.1*		*0.0*		*0.0*	
Prop. Heavy Vehicle			*0.0*		*0.0*		*0.0*	
hLT-adj			*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj			*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj			*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed			*0.2*		*0.0*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)			*3.20*		*3.20*		*3.20*	
x, initial			*0.34*		*0.20*		*0.18*	
hd, final value (s)			*5.19*		*5.28*		*5.34*	
x, final value			*0.55*		*0.33*		*0.29*	
Move-up time, m (s)			*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)			*3.2*		*3.3*		*3.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)			*629*		*473*		*447*	
Delay (s/veh)			*14.25*		*10.84*		*10.53*	
LOS			*B*		*B*		*B*	
Approach: Delay (s/veh)			*14.25*		*10.84*		*10.53*	
LOS			*B*		*B*		*B*	
Intersection Delay (s/veh)	*12.38*							
Intersection LOS	*B*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Hoyt and Mamaroneck*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*6/1/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*A.M. Peak Hour*	Analysis Year	*Existing Condition*
		Project ID	*Sheldrake Estates*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*0*	*1*	*1*				*1*	*2*	*0*	*1*	*2*	*0*
Lane Group		*LT*	*R*				*L*	*TR*		*L*	*TR*	
Volume, V (vph)	*206*	*37*	*111*				*101*	*584*	*68*	*46*	*526*	*87*
% Heavy Vehicles, %HV	*7*	*7*	*7*				*3*	*3*	*3*	*4*	*4*	*4*
Peak-Hour Factor, PHF	*0.89*	*0.89*	*0.89*				*0.92*	*0.92*	*0.92*	*0.93*	*0.93*	*0.93*
Pretimed (P) or Actuated (A)	*A*	*A*	*A*				*A*	*A*	*A*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Extension of Effective Green, e		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Arrival Type, AT		*3*	*3*				*3*	*3*		*3*	*3*	
Unit Extension, UE		*3.0*	*3.0*				*3.0*	*3.0*		*3.0*	*3.0*	
Filtering/Metering, I		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Initial Unmet Demand, Q_b		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*				*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*10.0*	*13.0*				*11.0*	*12.0*		*10.0*	*10.0*	
Parking / Grade / Parking	*N*	*0*	*N*				*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*	*0*				*0*	*0*		*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*						*3.2*			*3.2*		

Phasing	EB Only	02	03	04	NS Perm	NB Only	07	08
Timing	G = *22.0*	G =	G =	G =	G = *36.0*	G = *23.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis, T = *0.25* | Cycle Length, C = *96.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*273*	*125*				*110*	*709*		*49*	*660*	
Lane Group Capacity, c		*364*	*358*				*693*	*2305*		*222*	*1191*	
v/c Ratio, X		*0.75*	*0.35*				*0.16*	*0.31*		*0.22*	*0.55*	
Total Green Ratio, g/C		*0.23*	*0.23*				*0.67*	*0.67*		*0.38*	*0.38*	
Uniform Delay, d_1		*34.4*	*31.0*				*10.5*	*6.7*		*20.4*	*23.7*	
Progression Factor, PF		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Delay Calibration, k		*0.31*	*0.11*				*0.11*	*0.11*		*0.50*	*0.50*	
Incremental Delay, d_2		*8.4*	*0.6*				*0.1*	*0.1*		*2.3*	*1.9*	
Initial Queue Delay, d_3		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Control Delay		*42.9*	*31.6*				*10.6*	*6.8*		*22.7*	*25.5*	
Lane Group LOS		*D*	*C*				*B*	*A*		*C*	*C*	
Approach Delay	*39.3*						*7.3*			*25.3*		
Approach LOS	*D*						*A*			*C*		
Intersection Delay	*20.6*			X_C = *0.42*			Intersection LOS			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/31/06*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Hoyt and Fenimore*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Existing Condition*

Project Description *Sheldrake Estates*

East/West Street: *Hoyt Avenue* | North/South Street: *Fenimore Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*364*	*107*	*242*	*494*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*395*	*116*	*263*	*536*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*72*		*132*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.81*	*1.00*	*0.81*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*88*	*0*	*162*
Percent Heavy Vehicles	*0*	*0*	*0*	*6*	*0*	*6*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*263*		*250*				
C (m) (veh/h)		*1049*		*212*				
v/c		*0.25*		*1.18*				
95% queue length		*0.99*		*12.34*				
Control Delay (s/veh)		*9.6*		*165.5*				
LOS		*A*		*F*				
Approach Delay (s/veh)	--	--	*165.5*					
Approach LOS	--	--	*F*					

HCS+™ DETAILED REPORT

General Information		Site Information	
Analyst	*JAG*	Intersection	*Waverly/Fenimore*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/19/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*PM Peak Hour*	Analysis Year	*Existing Condition*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*0*	*1*	*0*	*0*	*1*	*0*	*1*	*1*	*0*	*1*	*1*	*1*
Lane Group		*LTR*			*LTR*		*L*	*TR*		*L*	*T*	*R*
Volume, V (vph)	*49*	*202*	*106*	*29*	*135*	*110*	*57*	*307*	*98*	*121*	*360*	*17*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*1*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*0.94*	*0.85*	*0.85*	*0.85*	*0.92*	*0.92*	*0.92*	*0.96*	*0.96*	*0.96*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*			*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*
Extension of Effective Green, e		*2.0*			*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*
Arrival Type, AT		*3*			*3*		*3*	*3*		*3*	*3*	*3*
Unit Extension, UE		*3.0*			*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	*3.0*
Filtering/Metering, I		*1.000*			*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b		*0.0*			*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*12.0*			*14.0*		*13.0*	*13.0*		*11.0*	*13.0*	*13.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*			*0*		*0*	*0*		*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *30.0*	G =	G =	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*					Cycle Length, C = *70.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*380*			*322*		*62*	*441*		*126*	*375*	*18*
Lane Group Capacity, c		*716*			*769*		*370*	*811*		*290*	*833*	*708*
v/c Ratio, X		*0.53*			*0.42*		*0.17*	*0.54*		*0.43*	*0.45*	*0.03*
Total Green Ratio, g/C		*0.43*			*0.43*		*0.43*	*0.43*		*0.43*	*0.43*	*0.43*
Uniform Delay, d_1		*14.8*			*13.9*		*12.3*	*14.9*		*14.0*	*14.2*	*11.6*
Progression Factor, PF		*1.000*			*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*
Delay Calibration, k		*0.50*			*0.50*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*
Incremental Delay, d_2		*2.8*			*1.7*		*1.0*	*2.6*		*4.7*	*1.8*	*0.1*
Initial Queue Delay, d_3		*0.0*			*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*
Control Delay		*17.6*			*15.6*		*13.3*	*17.5*		*18.7*	*15.9*	*11.6*
Lane Group LOS		*B*			*B*		*B*	*B*		*B*	*B*	*B*
Approach Delay	*17.6*			*15.6*			*17.0*			*16.5*		
Approach LOS	*B*			*B*			*B*			*B*		
Intersection Delay	*16.7*			X_C = *0.54*			Intersection LOS			*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/19/06*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Waverly/Plaza*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Existing Condition*

Project ID *Sheldrake*

East/West Street: *Waverly Avenue* | North/South Street: *Plaza Avenue/Site*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*125*	*309*	*0*	*0*	*0*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*3*	*1*	*1*	*27*	*2*	*268*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*				*LTR*		*LTR*	
PHF	*0.87*				*0.63*		*0.88*	
Flow Rate (veh/h)	*498*				*6*		*336*	
% Heavy Vehicles	*0*				*0*		*0*	
No. Lanes	*1*		*0*		*1*		*1*	
Geometry Group	*1*				*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.3*				*0.7*		*0.1*	
Prop. Right-Turns	*0.0*				*0.2*		*0.9*	
Prop. Heavy Vehicle	*0.0*				*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*			*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*			*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*			*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*				*0.0*		*-0.5*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*				*3.20*		*3.20*	
x, initial	*0.44*				*0.01*		*0.30*	
hd, final value (s)	*4.81*				*5.73*		*4.69*	
x, final value	*0.67*				*0.01*		*0.44*	
Move-up time, m (s)	*2.0*				*2.0*		*2.0*	
Service Time, t_s (s)	*2.8*				*3.7*		*2.7*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*730*				*256*		*586*	
Delay (s/veh)	*16.86*				*8.79*		*11.28*	
LOS	*C*				*A*		*B*	
Approach: Delay (s/veh)	*16.86*				*8.79*		*11.28*	
LOS	*C*				*A*		*B*	
Intersection Delay (s/veh)	*14.57*							
Intersection LOS	*B*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Mamaroneck/Waverly/Ranst*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/19/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*PM Peak Hour*	Analysis Year	*Existing Conditions*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*		*1*	*1*		*1*		*2*			*2*	
Lane Group	*L*		*R*	*L*		*R*		*T*			*T*	
Volume, V (vph)	*324*		*40*	*19*		*66*		*994*			*746*	
% Heavy Vehicles, %HV	*0*		*0*	*0*		*0*		*1*			*1*	
Peak-Hour Factor, PHF	*0.95*		*0.95*	*0.82*		*0.82*		*0.88*			*0.96*	
Pretimed (P) or Actuated (A)	*P*		*P*	*P*		*P*		*P*			*P*	
Start-up Lost Time, l_1	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Extension of Effective Green, e	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Arrival Type, AT	*3*		*3*	*3*		*3*		*3*			*3*	
Unit Extension, UE	*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			*3.0*	
Filtering/Metering, I	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Initial Unmet Demand, Q_b	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Lane Width	*11.0*		*11.0*	*12.0*		*11.0*		*13.0*			*11.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*		*0*	*0*		*0*		*0*			*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	Thru Only	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *45.0*	G =	G =	G =
	Y = *8*	Y =	Y =	Y =	Y = *8*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *86.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*341*		*42*	*23*		*80*		*1130*			*777*	
Lane Group Capacity, c	*507*		*454*	*525*		*454*		*1937*			*1812*	
v/c Ratio, X	*0.67*		*0.09*	*0.04*		*0.18*		*0.58*			*0.43*	
Total Green Ratio, g/C	*0.29*		*0.29*	*0.29*		*0.29*		*0.52*			*0.52*	
Uniform Delay, d_1	*26.9*		*22.2*	*21.9*		*22.8*		*14.1*			*12.6*	
Progression Factor, PF	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Delay Calibration, k	*0.50*		*0.50*	*0.50*		*0.50*		*0.50*			*0.50*	
Incremental Delay, d_2	*7.0*		*0.4*	*0.2*		*0.8*		*1.3*			*0.7*	
Initial Queue Delay, d_3	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Control Delay	*33.9*		*22.6*	*22.1*		*23.6*		*15.4*			*13.3*	
Lane Group LOS	*C*		*C*	*C*		*C*		*B*			*B*	
Approach Delay	*32.6*			*23.3*			*15.4*			*13.3*		
Approach LOS	*C*			*C*			*B*			*B*		
Intersection Delay	*17.8*			X_C = *0.62*			Intersection LOS			*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/23/06*
Analysis Time Period	*P.M. Peak Hour*

Site Information

Intersection	*Center/Mamaroneck*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Existing Condition*

Project Description *Sheldrake*

East/West Street: *White Plains Road/Center Ave* | North/South Street: *Mamaroneck Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*230*	*875*			*680*	*287*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.91*	*0.91*
Hourly Flow Rate, HFR (veh/h)	*242*	*921*	*0*	*0*	*747*	*315*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*136*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.87*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*156*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*							*R*
v (veh/h)	*242*							*156*
C (m) (veh/h)	*652*							*623*
v/c	*0.37*							*0.25*
95% queue length	*1.71*							*0.99*
Control Delay (s/veh)	*13.7*							*12.7*
LOS	*B*							*B*
Approach Delay (s/veh)	--	--				*12.7*		
Approach LOS	--	--				*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/22/06*
Analysis Time Period	*P.M. Peak Hour*

Site Information

Intersection	*Center Avenue/Plaza Avenue*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Existing Condition*

Project ID *Sheldrake*

East/West Street: *Center Avenue* | North/South Street: *Plaza Avnue*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*305*	*0*	*19*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*111*	*0*	*0*	*81*	*0*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration			*LR*		*T*		*T*	
PHF			*0.94*		*0.93*		*0.78*	
Flow Rate (veh/h)			*344*		*119*		*103*	
% Heavy Vehicles			*1*		*3*		*0*	
No. Lanes	*0*		*1*		*1*		*1*	
Geometry Group			*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns			*0.9*		*0.0*		*0.0*	
Prop. Right-Turns			*0.1*		*0.0*		*0.0*	
Prop. Heavy Vehicle			*0.0*		*0.0*		*0.0*	
hLT-adj			*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj			*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj			*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed			*0.2*		*0.1*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)			*3.20*		*3.20*		*3.20*	
x, initial			*0.31*		*0.11*		*0.09*	
hd, final value (s)			*4.64*		*4.97*		*4.94*	
x, final value			*0.44*		*0.16*		*0.14*	
Move-up time, m (s)			*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)			*2.6*		*3.0*		*2.9*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)			*594*		*369*		*353*	
Delay (s/veh)			*11.29*		*8.94*		*8.75*	
LOS			*B*		*A*		*A*	
Approach: Delay (s/veh)			*11.29*		*8.94*		*8.75*	
LOS			*B*		*A*		*A*	
Intersection Delay (s/veh)	*10.33*							
Intersection LOS	*B*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Hoyt and Mamaroneck*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*6/1/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*P.M. Peak Hour*	Analysis Year	*Existing Condition*
		Project ID	*Sheldrake Estates*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*0*	*1*	*1*				*1*	*2*	*0*	*1*	*2*	*0*
Lane Group		*LT*	*R*				*L*	*TR*		*L*	*TR*	
Volume, V (vph)	*136*	*41*	*116*				*144*	*683*	*39*	*23*	*582*	*102*
% Heavy Vehicles, %HV	*2*	*2*	*2*				*1*	*1*	*1*	*1*	*1*	*1*
Peak-Hour Factor, PHF	*0.84*	*0.84*	*0.84*				*0.91*	*0.91*	*0.91*	*0.90*	*0.90*	*0.90*
Pretimed (P) or Actuated (A)	*A*	*A*	*A*				*A*	*A*	*A*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Extension of Effective Green, e		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Arrival Type, AT		*3*	*3*				*3*	*3*		*3*	*3*	
Unit Extension, UE		*3.0*	*3.0*				*3.0*	*3.0*		*3.0*	*3.0*	
Filtering/Metering, I		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Initial Unmet Demand, Q_b		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*				*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*10.0*	*13.0*				*11.0*	*12.0*		*10.0*	*10.0*	
Parking / Grade / Parking	*N*	*0*	*N*				*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*	*0*				*0*	*0*		*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*						*3.2*			*3.2*		

Phasing	EB Only	02	03	04	NS Perm	NB Only	07	08
Timing	G = *22.0*	G =	G =	G =	G = *36.0*	G = *23.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis, T = *0.25* | Cycle Length, C = *96.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*211*	*138*				*158*	*794*		*26*	*760*	
Lane Group Capacity, c		*384*	*375*				*669*	*2369*		*202*	*1226*	
v/c Ratio, X		*0.55*	*0.37*				*0.24*	*0.34*		*0.13*	*0.62*	
Total Green Ratio, g/C		*0.23*	*0.23*				*0.67*	*0.67*		*0.38*	*0.38*	
Uniform Delay, d_1		*32.6*	*31.1*				*13.3*	*6.9*		*19.7*	*24.4*	
Progression Factor, PF		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Delay Calibration, k		*0.15*	*0.11*				*0.11*	*0.11*		*0.50*	*0.50*	
Incremental Delay, d_2		*1.7*	*0.6*				*0.2*	*0.1*		*1.3*	*2.4*	
Initial Queue Delay, d_3		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Control Delay		*34.3*	*31.8*				*13.5*	*7.0*		*21.0*	*26.8*	
Lane Group LOS		*C*	*C*				*B*	*A*		*C*	*C*	
Approach Delay	*33.3*						*8.0*			*26.6*		
Approach LOS	*C*						*A*			*C*		
Intersection Delay	*19.3*			X_C = *0.54*			Intersection LOS			*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/31/06*
Analysis Time Period	*P.M. Peak Hour*

Site Information

Intersection	*Hoyt and Fenimore*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Existing Condition*

Project Description *Sheldrake Estates*

East/West Street: *Hoyt Avenue* | North/South Street: *Fenimore Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*364*	*81*	*190*	*396*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.91*	*0.91*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*404*	*90*	*208*	*435*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*79*		*186*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*83*	*0*	*195*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*208*		*278*				
C (m) (veh/h)		*1080*		*312*				
v/c		*0.19*		*0.89*				
95% queue length		*0.71*		*8.30*				
Control Delay (s/veh)		*9.1*		*64.3*				
LOS		*A*		*F*				
Approach Delay (s/veh)	--	--	*64.3*					
Approach LOS	--	--	*F*					

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Waverly/Fenimore*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/18/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*AM Peak Hour*	Analysis Year	*No Build Condition*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*	*1*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Lane Group	*L*	*TR*			*LT*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Volume, V (vph)	*116*	*304*	*57*	*67*	*64*	*30*	*102*	*351*	*164*	*221*	*491*	*39*
% Heavy Vehicles, %HV	*3*	*3*	*3*	*0*	*0*	*0*	*2*	*2*	*2*	*2*	*2*	*2*
Peak-Hour Factor, PHF	*0.96*	*0.96*	*0.96*	*0.66*	*0.66*	*0.66*	*0.92*	*0.92*	*0.92*	*0.97*	*0.97*	*0.97*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Extension of Effective Green, e	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Arrival Type, AT	*3*	*3*			*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Unit Extension, UE	*3.0*	*3.0*			*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
Filtering/Metering, I	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane Width	*10.0*	*12.0*			*11.0*	*10.0*	*11.0*	*11.0*	*10.0*	*11.0*	*11.0*	*11.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*			*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *35.0*	G =	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *70.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*121*	*376*			*199*	*45*	*111*	*382*	*178*	*228*	*506*	*40*
Lane Group Capacity, c	*380*	*643*			*335*	*538*	*323*	*901*	*739*	*421*	*901*	*766*
v/c Ratio, X	*0.32*	*0.58*			*0.59*	*0.08*	*0.34*	*0.42*	*0.24*	*0.54*	*0.56*	*0.05*
Total Green Ratio, g/C	*0.36*	*0.36*			*0.36*	*0.36*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Uniform Delay, d_1	*16.3*	*18.3*			*18.4*	*14.9*	*10.6*	*11.1*	*9.9*	*12.0*	*12.2*	*9.0*
Progression Factor, PF	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Delay Calibration, k	*0.50*	*0.50*			*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Incremental Delay, d_2	*2.2*	*3.9*			*7.6*	*0.3*	*2.9*	*1.5*	*0.8*	*4.9*	*2.5*	*0.1*
Initial Queue Delay, d_3	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Control Delay	*18.5*	*22.1*			*25.9*	*15.2*	*13.5*	*12.6*	*10.7*	*16.9*	*14.7*	*9.1*
Lane Group LOS	*B*	*C*			*C*	*B*	*B*	*B*	*B*	*B*	*B*	*A*
Approach Delay	*21.3*			*23.9*			*12.2*			*15.1*		
Approach LOS	*C*			*C*			*B*			*B*		
Intersection Delay	*16.6*			X_C = *0.58*			Intersection LOS			*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/19/06*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Waverly/Plaza*
Jurisdiction	
Analysis Year	*No Build Condition*

Project ID *Sheldrake*

East/West Street: *Waverly Avenue* North/South Street: *Plaza Avenue/Site*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*222*	*404*	*6*	*0*	*0*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*4*	*1*	*0*	*47*	*0*	*216*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*				*LTR*		*LTR*	
PHF	*0.85*				*0.42*		*0.60*	
Flow Rate (veh/h)	*743*				*11*		*437*	
% Heavy Vehicles	*0*				*0*		*0*	
No. Lanes	*1*		*0*		*1*		*1*	
Geometry Group	*1*				*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
Prop. Left-Turns	*0.4*				*0.8*		*0.2*	
Prop. Right-Turns	*0.0*				*0.0*		*0.8*	
Prop. Heavy Vehicle	*0.0*				*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*			*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*			*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*			*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*				*0.2*		*-0.5*	

Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
hd, initial value (s)	*3.20*				*3.20*		*3.20*	
x, initial	*0.66*				*0.01*		*0.39*	
hd, final value (s)	*5.26*				*6.87*		*5.43*	
x, final value	*1.09*				*0.02*		*0.66*	
Move-up time, m (s)	*2.0*				*2.0*		*2.0*	
Service Time, t_s (s)	*3.3*				*4.9*		*3.4*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*743*				*261*		*664*	
Delay (s/veh)	*81.85*				*10.02*		*18.26*	
LOS	*F*				*B*		*C*	
Approach: Delay (s/veh)	*81.85*				*10.02*		*18.26*	
LOS	*F*				*B*		*C*	
Intersection Delay (s/veh)	*57.85*							
Intersection LOS	*F*							

HCS+™ DETAILED REPORT

General Information		Site Information	
Analyst	*JAG*	Intersection	*Mamaroneck/Waverly/Ranst*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/18/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*AM Peak Hour*	Analysis Year	*No Build Conditions*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*		*1*	*1*		*1*		*2*			*2*	
Lane Group	*L*		*R*	*L*		*R*		*T*			*T*	
Volume, V (vph)	*376*		*79*	*60*		*51*		*876*			*818*	
% Heavy Vehicles, %HV	*0*		*0*	*0*		*0*		*2*			*1*	
Peak-Hour Factor, PHF	*0.91*		*0.91*	*0.68*		*0.68*		*0.90*			*0.90*	
Pretimed (P) or Actuated (A)	*P*		*P*	*P*		*P*		*P*			*P*	
Start-up Lost Time, l_1	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Extension of Effective Green, e	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Arrival Type, AT	*3*		*3*	*3*		*3*		*3*			*3*	
Unit Extension, UE	*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			*3.0*	
Filtering/Metering, I	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Initial Unmet Demand, Q_b	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Lane Width	*11.0*		*11.0*	*12.0*		*11.0*		*13.0*			*11.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*		*0*	*0*		*0*		*0*			*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	Thru Only	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *45.0*	G =	G =	G =
	Y = *8*	Y =	Y =	Y =	Y = *8*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *86.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*413*		*87*	*88*		*75*		*973*			*909*	
Lane Group Capacity, c	*507*		*454*	*525*		*454*		*1918*			*1812*	
v/c Ratio, X	*0.81*		*0.19*	*0.17*		*0.17*		*0.51*			*0.50*	
Total Green Ratio, g/C	*0.29*		*0.29*	*0.29*		*0.29*		*0.52*			*0.52*	
Uniform Delay, d_1	*28.3*		*22.9*	*22.7*		*22.7*		*13.3*			*13.3*	
Progression Factor, PF	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Delay Calibration, k	*0.50*		*0.50*	*0.50*		*0.50*		*0.50*			*0.50*	
Incremental Delay, d_2	*13.4*		*0.9*	*0.7*		*0.8*		*1.0*			*1.0*	
Initial Queue Delay, d_3	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Control Delay	*41.8*		*23.8*	*23.4*		*23.5*		*14.3*			*14.2*	
Lane Group LOS	*D*		*C*	*C*		*C*		*B*			*B*	
Approach Delay	*38.7*			*23.5*			*14.3*			*14.2*		
Approach LOS	*D*			*C*			*B*			*B*		
Intersection Delay	*19.6*			X_C = *0.62*			Intersection LOS			*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/23/06*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Center/Mamaroneck*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*No Build Condition*

Project Description *Sheldrake*

East/West Street: *White Plains Road/Center Ave* | North/South Street: *Mamaroneck Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*212*	*902*			*597*	*220*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*1.00*	*1.00*	*0.89*	*0.89*
Hourly Flow Rate, HFR (veh/h)	*225*	*959*	*0*	*0*	*670*	*247*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*147*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.84*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*175*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*							*R*
v (veh/h)	*225*							*175*
C (m) (veh/h)	*740*							*661*
v/c	*0.30*							*0.26*
95% queue length	*1.29*							*1.06*
Control Delay (s/veh)	*12.0*							*12.4*
LOS	*B*							*B*
Approach Delay (s/veh)	--	--				*12.4*		
Approach LOS	--	--				*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/22/06*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Center Avenue/Plaza Avenue*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*No Build Condition*

Project ID *Sheldrake*

East/West Street: *Center Avenue* North/South Street: *Plaza Avnue*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*257*	*0*	*27*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*196*	*0*	*0*	*152*	*0*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration			*LR*		*T*		*T*	
PHF			*0.72*		*0.84*		*0.74*	
Flow Rate (veh/h)			*393*		*233*		*205*	
% Heavy Vehicles			*2*		*0*		*1*	
No. Lanes	*0*		*1*		*1*		*1*	
Geometry Group			*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns			*0.9*		*0.0*		*0.0*	
Prop. Right-Turns			*0.1*		*0.0*		*0.0*	
Prop. Heavy Vehicle			*0.0*		*0.0*		*0.0*	
hLT-adj			*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj			*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj			*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed			*0.2*		*0.0*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)			*3.20*		*3.20*		*3.20*	
x, initial			*0.35*		*0.21*		*0.18*	
hd, final value (s)			*5.25*		*5.36*		*5.42*	
x, final value			*0.57*		*0.35*		*0.31*	
Move-up time, m (s)			*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)			*3.3*		*3.4*		*3.4*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)			*643*		*483*		*455*	
Delay (s/veh)			*15.06*		*11.18*		*10.82*	
LOS			*C*		*B*		*B*	
Approach: Delay (s/veh)			*15.06*		*11.18*		*10.82*	
LOS			*C*		*B*		*B*	
Intersection Delay (s/veh)	*12.92*							
Intersection LOS	*B*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Hoyt and Mamaroneck*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*6/1/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*A.M. Peak Hour*	Analysis Year	*No Build Condition*
		Project ID	*Sheldrake Estates*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*0*	*1*	*1*				*1*	*2*	*0*	*1*	*2*	*0*
Lane Group		*LT*	*R*				*L*	*TR*		*L*	*TR*	
Volume, V (vph)	*214*	*38*	*115*				*105*	*616*	*71*	*48*	*554*	*91*
% Heavy Vehicles, %HV	*7*	*7*	*7*				*3*	*3*	*3*	*4*	*4*	*4*
Peak-Hour Factor, PHF	*0.89*	*0.89*	*0.89*				*0.92*	*0.92*	*0.92*	*0.93*	*0.93*	*0.93*
Pretimed (P) or Actuated (A)	*A*	*A*	*A*				*A*	*A*	*A*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Extension of Effective Green, e		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Arrival Type, AT		*3*	*3*				*3*	*3*		*3*	*3*	
Unit Extension, UE		*3.0*	*3.0*				*3.0*	*3.0*		*3.0*	*3.0*	
Filtering/Metering, I		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Initial Unmet Demand, Q_b		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*				*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*10.0*	*13.0*				*11.0*	*12.0*		*10.0*	*10.0*	
Parking / Grade / Parking	*N*	*0*	*N*				*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*	*0*				*0*	*0*		*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*						*3.2*			*3.2*		

Phasing	EB Only	02	03	04	NS Perm	NB Only	07	08
Timing	G = *22.0*	G =	G =	G =	G = *36.0*	G = *23.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis, T = *0.25* | Cycle Length, C = *96.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*283*	*129*				*114*	*747*		*52*	*694*	
Lane Group Capacity, c		*364*	*358*				*680*	*2305*		*210*	*1192*	
v/c Ratio, X		*0.78*	*0.36*				*0.17*	*0.32*		*0.25*	*0.58*	
Total Green Ratio, g/C		*0.23*	*0.23*				*0.67*	*0.67*		*0.38*	*0.38*	
Uniform Delay, d_1		*34.7*	*31.1*				*11.1*	*6.8*		*20.7*	*24.0*	
Progression Factor, PF		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Delay Calibration, k		*0.33*	*0.11*				*0.11*	*0.11*		*0.50*	*0.50*	
Incremental Delay, d_2		*10.2*	*0.6*				*0.1*	*0.1*		*2.8*	*2.1*	
Initial Queue Delay, d_3		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Control Delay		*44.9*	*31.7*				*11.2*	*6.9*		*23.5*	*26.1*	
Lane Group LOS		*D*	*C*				*B*	*A*		*C*	*C*	
Approach Delay	*40.8*						*7.5*			*25.9*		
Approach LOS	*D*						*A*			*C*		
Intersection Delay	*21.1*			X_C = *0.46*			Intersection LOS			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/31/06*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Hoyt and Fenimore*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*No Build Condition*

Project Description *Sheldrake Estates*

East/West Street: *Hoyt Avenue* | North/South Street: *Fenimore Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*380*	*111*	*252*	*515*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*413*	*120*	*273*	*559*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*75*		*137*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.81*	*1.00*	*0.81*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*92*	*0*	*169*
Percent Heavy Vehicles	*0*	*0*	*0*	*6*	*0*	*6*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*273*		*261*				
C (m) (veh/h)		*1030*		*194*				
v/c		*0.27*		*1.35*				
95% queue length		*1.07*		*14.93*				
Control Delay (s/veh)		*9.8*		*232.7*				
LOS		*A*		*F*				
Approach Delay (s/veh)	--	--	*232.7*					
Approach LOS	--	--	*F*					

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Waverly/Fenimore*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/18/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*PM Peak Hour*	Analysis Year	*No Build Condition*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*	*1*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Lane Group	*L*	*TR*			*LT*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Volume, V (vph)	*52*	*214*	*112*	*31*	*143*	*117*	*60*	*327*	*104*	*128*	*388*	*18*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*1*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*0.94*	*0.85*	*0.85*	*0.85*	*0.92*	*0.92*	*0.92*	*0.96*	*0.96*	*0.96*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Extension of Effective Green, e	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Arrival Type, AT	*3*	*3*			*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Unit Extension, UE	*3.0*	*3.0*			*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
Filtering/Metering, I	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane Width	*10.0*	*12.0*			*11.0*	*11.0*	*11.0*	*11.0*	*10.0*	*11.0*	*11.0*	*11.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*			*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *30.0*	G =	G =	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *70.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*55*	*347*			*204*	*138*	*65*	*355*	*113*	*133*	*404*	*19*
Lane Group Capacity, c	*477*	*772*			*711*	*669*	*322*	*787*	*646*	*359*	*779*	*663*
v/c Ratio, X	*0.12*	*0.45*			*0.29*	*0.21*	*0.20*	*0.45*	*0.17*	*0.37*	*0.52*	*0.03*
Total Green Ratio, g/C	*0.43*	*0.43*			*0.43*	*0.43*	*0.43*	*0.43*	*0.43*	*0.43*	*0.43*	*0.43*
Uniform Delay, d_1	*12.0*	*14.2*			*13.0*	*12.5*	*12.5*	*14.2*	*12.4*	*13.6*	*14.7*	*11.6*
Progression Factor, PF	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Delay Calibration, k	*0.50*	*0.50*			*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Incremental Delay, d_2	*0.5*	*1.9*			*1.0*	*0.7*	*1.4*	*1.9*	*0.6*	*2.9*	*2.5*	*0.1*
Initial Queue Delay, d_3	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Control Delay	*12.5*	*16.0*			*14.0*	*13.2*	*13.9*	*16.0*	*12.9*	*16.5*	*17.2*	*11.7*
Lane Group LOS	*B*	*B*			*B*	*B*	*B*	*B*	*B*	*B*	*B*	*B*
Approach Delay	*15.6*			*13.7*			*15.1*			*16.8*		
Approach LOS	*B*			*B*			*B*			*B*		
Intersection Delay	*15.5*			X_C = *0.48*			Intersection LOS			*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/19/06*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Waverly/Plaza*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*No Build Condition*

Project ID *Sheldrake*

East/West Street: *Waverly Avenue* North/South Street: *Plaza Avenue/Site*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*133*	*328*	*0*	*0*	*0*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*3*	*1*	*1*	*29*	*2*	*284*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*				*LTR*		*LTR*	
PHF	*0.87*				*0.63*		*0.88*	
Flow Rate (veh/h)	*529*				*6*		*356*	
% Heavy Vehicles	*0*				*0*		*0*	
No. Lanes	*1*		*0*		*1*		*1*	
Geometry Group	*1*				*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.3*				*0.7*		*0.1*	
Prop. Right-Turns	*0.0*				*0.2*		*0.9*	
Prop. Heavy Vehicle	*0.0*				*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*			*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*			*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*			*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*				*0.0*		*-0.5*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*				*3.20*		*3.20*	
x, initial	*0.47*				*0.01*		*0.32*	
hd, final value (s)	*4.88*				*5.89*		*4.79*	
x, final value	*0.72*				*0.01*		*0.47*	
Move-up time, m (s)	*2.0*				*2.0*		*2.0*	
Service Time, t_s (s)	*2.9*				*3.9*		*2.8*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*722*				*256*		*606*	
Delay (s/veh)	*19.26*				*8.94*		*12.02*	
LOS	*C*				*A*		*B*	
Approach: Delay (s/veh)	*19.26*				*8.94*		*12.02*	
LOS	*C*				*A*		*B*	
Intersection Delay (s/veh)	*16.30*							
Intersection LOS	*C*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Mamaroneck/Waverly/Ranst*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/18/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*PM Peak Hour*	Analysis Year	*No Build Conditions*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*		*1*	*1*		*1*		*2*			*2*	
Lane Group	*L*		*R*	*L*		*R*		*T*			*T*	
Volume, V (vph)	*344*		*42*	*24*		*70*		*1059*			*799*	
% Heavy Vehicles, %HV	*0*		*0*	*0*		*0*		*1*			*1*	
Peak-Hour Factor, PHF	*0.95*		*0.95*	*0.82*		*0.82*		*0.88*			*0.96*	
Pretimed (P) or Actuated (A)	*P*		*P*	*P*		*P*		*P*			*P*	
Start-up Lost Time, l_1	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Extension of Effective Green, e	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Arrival Type, AT	*3*		*3*	*3*		*3*		*3*			*3*	
Unit Extension, UE	*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			*3.0*	
Filtering/Metering, I	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Initial Unmet Demand, Q_b	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Lane Width	*11.0*		*11.0*	*12.0*		*11.0*		*13.0*			*11.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*		*0*	*0*		*0*		*0*			*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	Thru Only	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *45.0*	G =	G =	G =
	Y = *8*	Y =	Y =	Y =	Y = *8*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *86.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*362*		*44*	*29*		*85*		*1203*			*832*	
Lane Group Capacity, c	*507*		*454*	*525*		*454*		*1937*			*1812*	
v/c Ratio, X	*0.71*		*0.10*	*0.06*		*0.19*		*0.62*			*0.46*	
Total Green Ratio, g/C	*0.29*		*0.29*	*0.29*		*0.29*		*0.52*			*0.52*	
Uniform Delay, d_1	*27.3*		*22.3*	*22.0*		*22.9*		*14.5*			*12.9*	
Progression Factor, PF	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Delay Calibration, k	*0.50*		*0.50*	*0.50*		*0.50*		*0.50*			*0.50*	
Incremental Delay, d_2	*8.3*		*0.4*	*0.2*		*0.9*		*1.5*			*0.8*	
Initial Queue Delay, d_3	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Control Delay	*35.6*		*22.7*	*22.2*		*23.8*		*16.0*			*13.7*	
Lane Group LOS	*D*		*C*	*C*		*C*		*B*			*B*	
Approach Delay	*34.2*			*23.4*			*16.0*			*13.7*		
Approach LOS	*C*			*C*			*B*			*B*		
Intersection Delay	*18.5*			X_C = *0.65*			Intersection LOS			*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*JAG*	Intersection	*Center/Mamaroneck*
Agency/Co.	*TMA*	Jurisdiction	*Village of Mamaroneck*
Date Performed	*2/23/06*	Analysis Year	*No Build Condition*
Analysis Time Period	*P.M. Peak Hour*		

Project Description *Sheldrake*

East/West Street: *White Plains Road/Center Ave*	North/South Street: *Mamaroneck Avenue*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*239*	*914*			*714*	*295*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.91*	*0.91*
Hourly Flow Rate, HFR (veh/h)	*251*	*962*	*0*	*0*	*784*	*324*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*141*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.87*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*162*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*							*R*
v (veh/h)	*251*							*162*
C (m) (veh/h)	*626*							*607*
v/c	*0.40*							*0.27*
95% queue length	*1.93*							*1.07*
Control Delay (s/veh)	*14.5*							*13.1*
LOS	*B*							*B*
Approach Delay (s/veh)	--	--				*13.1*		
Approach LOS	--	--				*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/22/06*
Analysis Time Period	*P.M. Peak Hour*

Site Information

Intersection	*Center Avenue/Plaza Avenue*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*No Build Condition*

Project ID *Sheldrake*

East/West Street: *Center Avenue* | North/South Street: *Plaza Avnue*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*317*	*0*	*20*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*115*	*0*	*0*	*84*	*0*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration			*LR*		*T*		*T*	
PHF			*0.94*		*0.93*		*0.78*	
Flow Rate (veh/h)			*358*		*123*		*107*	
% Heavy Vehicles			*1*		*3*		*0*	
No. Lanes	*0*		*1*		*1*		*1*	
Geometry Group			*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns			*0.9*		*0.0*		*0.0*	
Prop. Right-Turns			*0.1*		*0.0*		*0.0*	
Prop. Heavy Vehicle			*0.0*		*0.0*		*0.0*	
hLT-adj			*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj			*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj			*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed			*0.2*		*0.1*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)			*3.20*		*3.20*		*3.20*	
x, initial			*0.32*		*0.11*		*0.10*	
hd, final value (s)			*4.67*		*5.02*		*4.99*	
x, final value			*0.46*		*0.17*		*0.15*	
Move-up time, m (s)			*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)			*2.7*		*3.0*		*3.0*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)			*608*		*373*		*357*	
Delay (s/veh)			*11.65*		*9.05*		*8.85*	
LOS			*B*		*A*		*A*	
Approach: Delay (s/veh)			*11.65*		*9.05*		*8.85*	
LOS			*B*		*A*		*A*	
Intersection Delay (s/veh)	*10.59*							
Intersection LOS	*B*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Hoyt and Mamaroneck*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*6/1/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*P.M. Peak Hour*	Analysis Year	*No Build Condition*
		Project ID	*Sheldrake Estates*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*0*	*1*	*1*				*1*	*2*	*0*	*1*	*2*	*0*
Lane Group		*LT*	*R*				*L*	*TR*		*L*	*TR*	
Volume, V (vph)	*141*	*43*	*121*				*150*	*715*	*41*	*24*	*617*	*106*
% Heavy Vehicles, %HV	*2*	*2*	*2*				*1*	*1*	*1*	*1*	*1*	*1*
Peak-Hour Factor, PHF	*0.84*	*0.84*	*0.84*				*0.91*	*0.91*	*0.91*	*0.90*	*0.90*	*0.90*
Pretimed (P) or Actuated (A)	*A*	*A*	*A*				*A*	*A*	*A*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Extension of Effective Green, e		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Arrival Type, AT		*3*	*3*				*3*	*3*		*3*	*3*	
Unit Extension, UE		*3.0*	*3.0*				*3.0*	*3.0*		*3.0*	*3.0*	
Filtering/Metering, I		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Initial Unmet Demand, Q_b		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*				*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*10.0*	*13.0*				*11.0*	*12.0*		*10.0*	*10.0*	
Parking / Grade / Parking	*N*	*0*	*N*				*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*	*0*				*0*	*0*		*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*						*3.2*			*3.2*		

Phasing	EB Only	02	03	04	NS Perm	NB Only	07	08
Timing	G = *22.0*	G =	G =	G =	G = *36.0*	G = *23.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis, T = *0.25* | Cycle Length, C = *96.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*219*	*144*				*165*	*831*		*27*	*804*	
Lane Group Capacity, c		*384*	*375*				*653*	*2369*		*191*	*1226*	
v/c Ratio, X		*0.57*	*0.38*				*0.25*	*0.35*		*0.14*	*0.66*	
Total Green Ratio, g/C		*0.23*	*0.23*				*0.67*	*0.67*		*0.38*	*0.38*	
Uniform Delay, d_1		*32.8*	*31.3*				*14.5*	*7.0*		*19.8*	*24.9*	
Progression Factor, PF		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Delay Calibration, k		*0.16*	*0.11*				*0.11*	*0.11*		*0.50*	*0.50*	
Incremental Delay, d_2		*2.0*	*0.7*				*0.2*	*0.1*		*1.5*	*2.7*	
Initial Queue Delay, d_3		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Control Delay		*34.8*	*31.9*				*14.7*	*7.1*		*21.3*	*27.6*	
Lane Group LOS		*C*	*C*				*B*	*A*		*C*	*C*	
Approach Delay	*33.7*						*8.3*			*27.4*		
Approach LOS	*C*						*A*			*C*		
Intersection Delay	*19.8*			X_C = *0.57*			Intersection LOS			*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/31/06*
Analysis Time Period	*P.M. Peak Hour*

Site Information

Intersection	*Hoyt and Fenimore*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*No Build Condition*

Project Description *Sheldrake Estates*

East/West Street: *Hoyt Avenue* | North/South Street: *Fenimore Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*380*	*84*	*198*	*418*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.91*	*0.91*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*422*	*93*	*217*	*459*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*82*		*194*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*86*	*0*	*204*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*217*		*290*				
C (m) (veh/h)		*1061*		*291*				
v/c		*0.20*		*1.00*				
95% queue length		*0.77*		*10.37*				
Control Delay (s/veh)		*9.3*		*91.1*				
LOS		*A*		*F*				
Approach Delay (s/veh)	--	--	*91.1*					
Approach LOS	--	--	*F*					

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Waverly/Fenimore*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/18/05*	Jurisdiction	*Village of Mamaroneck*
Time Period	*AM Peak Hour*	Analysis Year	*Build Condition*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*	*1*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Lane Group	*L*	*TR*			*LT*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Volume, V (vph)	*116*	*304*	*57*	*65*	*63*	*29*	*107*	*351*	*164*	*222*	*491*	*39*
% Heavy Vehicles, %HV	*3*	*3*	*3*	*0*	*0*	*0*	*2*	*2*	*2*	*2*	*2*	*2*
Peak-Hour Factor, PHF	*0.96*	*0.96*	*0.96*	*0.66*	*0.66*	*0.66*	*0.92*	*0.92*	*0.92*	*0.97*	*0.97*	*0.97*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Extension of Effective Green, e	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Arrival Type, AT	*3*	*3*			*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Unit Extension, UE	*3.0*	*3.0*			*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
Filtering/Metering, I	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane Width	*10.0*	*12.0*			*11.0*	*10.0*	*11.0*	*11.0*	*10.0*	*11.0*	*11.0*	*11.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*			*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *35.0*	G =	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *70.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*121*	*376*			*193*	*44*	*116*	*382*	*178*	*229*	*506*	*40*
Lane Group Capacity, c	*385*	*643*			*343*	*538*	*323*	*901*	*739*	*421*	*901*	*766*
v/c Ratio, X	*0.31*	*0.58*			*0.56*	*0.08*	*0.36*	*0.42*	*0.24*	*0.54*	*0.56*	*0.05*
Total Green Ratio, g/C	*0.36*	*0.36*			*0.36*	*0.36*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Uniform Delay, d_1	*16.3*	*18.3*			*18.1*	*14.9*	*10.7*	*11.1*	*9.9*	*12.0*	*12.2*	*9.0*
Progression Factor, PF	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Delay Calibration, k	*0.50*	*0.50*			*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Incremental Delay, d_2	*2.1*	*3.9*			*6.5*	*0.3*	*3.1*	*1.5*	*0.8*	*5.0*	*2.5*	*0.1*
Initial Queue Delay, d_3	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Control Delay	*18.4*	*22.1*			*24.6*	*15.2*	*13.8*	*12.6*	*10.7*	*17.0*	*14.7*	*9.1*
Lane Group LOS	*B*	*C*			*C*	*B*	*B*	*B*	*B*	*B*	*B*	*A*
Approach Delay	*21.2*			*22.9*			*12.3*			*15.1*		
Approach LOS	*C*			*C*			*B*			*B*		
Intersection Delay	*16.5*			X_C = *0.57*			Intersection LOS			*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/19/06*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Waverly/Plaza*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Condition*

Project ID *Sheldrake*

East/West Street: *Waverly Avenue* North/South Street: *Plaza Avenue/Site*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*222*	*404*	*8*	*0*	*0*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*47*	*2*	*216*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*						*LTR*	
PHF	*0.85*						*0.60*	
Flow Rate (veh/h)	*745*						*440*	
% Heavy Vehicles	*0*						*0*	
No. Lanes	*1*		*0*		*0*		*1*	
Geometry Group	*1*						*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.4*						*0.2*	
Prop. Right-Turns	*0.0*						*0.8*	
Prop. Heavy Vehicle	*0.0*						*0.0*	
hLT-adj	*0.2*	*0.2*					*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*					*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*					*1.7*	*1.7*
hadj, computed	*0.1*						*-0.5*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*						*3.20*	
x, initial	*0.66*						*0.39*	
hd, final value (s)	*5.25*						*5.39*	
x, final value	*1.09*						*0.66*	
Move-up time, m (s)	*2.0*						*2.0*	
Service Time, t_s (s)	*3.2*						*3.4*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*745*						*669*	
Delay (s/veh)	*81.75*						*18.16*	
LOS	*F*						*C*	
Approach: Delay (s/veh)	*81.75*						*18.16*	
LOS	*F*						*C*	
Intersection Delay (s/veh)	*58.14*							
Intersection LOS	*F*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Mamaroneck/Waverly/Ranst*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/18/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*AM Peak Hour*	Analysis Year	*Build Conditions*
		Project ID	

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*		*1*	*1*		*1*		*2*			*2*	
Lane Group	*L*		*R*	*L*		*R*		*T*			*T*	
Volume, V (vph)	*405*		*98*	*60*		*51*		*876*			*818*	
% Heavy Vehicles, %HV	*0*		*0*	*0*		*0*		*2*			*1*	
Peak-Hour Factor, PHF	*0.91*		*0.91*	*0.68*		*0.68*		*0.90*			*0.90*	
Pretimed (P) or Actuated (A)	*P*		*P*	*P*		*P*		*P*			*P*	
Start-up Lost Time, l_1	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Extension of Effective Green, e	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Arrival Type, AT	*3*		*3*	*3*		*3*		*3*			*3*	
Unit Extension, UE	*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			*3.0*	
Filtering/Metering, I	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Initial Unmet Demand, Q_b	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Lane Width	*11.0*		*11.0*	*12.0*		*11.0*		*13.0*			*11.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*		*0*	*0*		*0*		*0*			*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	Thru Only	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *45.0*	G =	G =	G =
	Y = *8*	Y =	Y =	Y =	Y = *8*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *86.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*445*		*108*	*88*		*75*		*973*			*909*	
Lane Group Capacity, c	*507*		*454*	*525*		*454*		*1918*			*1812*	
v/c Ratio, X	*0.88*		*0.24*	*0.17*		*0.17*		*0.51*			*0.50*	
Total Green Ratio, g/C	*0.29*		*0.29*	*0.29*		*0.29*		*0.52*			*0.52*	
Uniform Delay, d_1	*29.0*		*23.2*	*22.7*		*22.7*		*13.3*			*13.3*	
Progression Factor, PF	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Delay Calibration, k	*0.50*		*0.50*	*0.50*		*0.50*		*0.50*			*0.50*	
Incremental Delay, d_2	*19.0*		*1.2*	*0.7*		*0.8*		*1.0*			*1.0*	
Initial Queue Delay, d_3	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Control Delay	*48.0*		*24.5*	*23.4*		*23.5*		*14.3*			*14.2*	
Lane Group LOS	*D*		*C*	*C*		*C*		*B*			*B*	
Approach Delay	*43.4*			*23.5*			*14.3*			*14.2*		
Approach LOS	*D*			*C*			*B*			*B*		
Intersection Delay	*21.0*			X_C = *0.64*			Intersection LOS			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/23/06*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Center/Mamaroneck*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Condition*

Project Description *Sheldrake*

East/West Street: *White Plains Road/Center Ave* | North/South Street: *Mamaroneck Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*212*	*931*			*597*	*222*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*1.00*	*1.00*	*0.89*	*0.89*
Hourly Flow Rate, HFR (veh/h)	*225*	*990*	*0*	*0*	*670*	*249*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*147*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.84*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*175*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*							*R*
v (veh/h)	*225*							*175*
C (m) (veh/h)	*738*							*661*
v/c	*0.30*							*0.26*
95% queue length	*1.29*							*1.06*
Control Delay (s/veh)	*12.0*							*12.4*
LOS	*B*							*B*
Approach Delay (s/veh)	--	--				*12.4*		
Approach LOS	--	--				*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/22/06*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Center Avenue/Plaza Avenue*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Condition*

Project ID *Sheldrake*

East/West Street: *Center Avenue* North/South Street: *Plaza Avnue*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*259*	*0*	*27*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*195*	*0*	*0*	*152*	*0*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration			*LR*		*T*		*T*	
PHF			*0.72*		*0.84*		*0.74*	
Flow Rate (veh/h)			*396*		*232*		*205*	
% Heavy Vehicles			*2*		*0*		*1*	
No. Lanes	*0*		*1*		*1*		*1*	
Geometry Group			*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns			*0.9*		*0.0*		*0.0*	
Prop. Right-Turns			*0.1*		*0.0*		*0.0*	
Prop. Heavy Vehicle			*0.0*		*0.0*		*0.0*	
hLT-adj			*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj			*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj			*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed			*0.2*		*0.0*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)			*3.20*		*3.20*		*3.20*	
x, initial			*0.35*		*0.21*		*0.18*	
hd, final value (s)			*5.25*		*5.37*		*5.43*	
x, final value			*0.58*		*0.35*		*0.31*	
Move-up time, m (s)			*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)			*3.3*		*3.4*		*3.4*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)			*646*		*482*		*455*	
Delay (s/veh)			*15.18*		*11.18*		*10.83*	
LOS			*C*		*B*		*B*	
Approach: Delay (s/veh)			*15.18*		*11.18*		*10.83*	
LOS			*C*		*B*		*B*	
Intersection Delay (s/veh)	*12.99*							
Intersection LOS	*B*							

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/19/06*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Site Egress*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Condition*

Project Description *Sheldrake*

East/West Street: *Waverly Avenue* | North/South Street: *Site Egress*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*455*				
Peak-Hour Factor, PHF	*1.00*	*0.91*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*499*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*T*				
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*48*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.90*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*53*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*53*			
C (m) (veh/h)					*576*			
v/c					*0.09*			
95% queue length					*0.30*			
Control Delay (s/veh)					*11.9*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*11.9*					
Approach LOS	--	--	*B*					

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Hoyt and Mamaroneck*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*6/1/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*A.M. Peak Hour*	Analysis Year	*Build Condition*
		Project ID	*Sheldrake Estates*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*0*	*1*	*1*				*1*	*2*	*0*	*1*	*2*	*0*
Lane Group		*LT*	*R*				*L*	*TR*		*L*	*TR*	
Volume, V (vph)	*214*	*38*	*115*				*105*	*616*	*71*	*48*	*568*	*96*
% Heavy Vehicles, %HV	*7*	*7*	*7*				*3*	*3*	*3*	*4*	*4*	*4*
Peak-Hour Factor, PHF	*0.89*	*0.89*	*0.89*				*0.92*	*0.92*	*0.92*	*0.93*	*0.93*	*0.93*
Pretimed (P) or Actuated (A)	*A*	*A*	*A*				*A*	*A*	*A*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Extension of Effective Green, e		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Arrival Type, AT		*3*	*3*				*3*	*3*		*3*	*3*	
Unit Extension, UE		*3.0*	*3.0*				*3.0*	*3.0*		*3.0*	*3.0*	
Filtering/Metering, I		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Initial Unmet Demand, Q_b		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*				*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*10.0*	*13.0*				*11.0*	*12.0*		*10.0*	*10.0*	
Parking / Grade / Parking	*N*	*0*	*N*				*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*	*0*				*0*	*0*		*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*						*3.2*			*3.2*		

Phasing	EB Only	02	03	04	NS Perm	NB Only	07	08
Timing	G = *22.0*	G =	G =	G =	G = *36.0*	G = *23.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis, T = *0.25* | Cycle Length, C = *96.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*283*	*129*				*114*	*747*		*52*	*714*	
Lane Group Capacity, c		*364*	*358*				*672*	*2305*		*210*	*1191*	
v/c Ratio, X		*0.78*	*0.36*				*0.17*	*0.32*		*0.25*	*0.60*	
Total Green Ratio, g/C		*0.23*	*0.23*				*0.67*	*0.67*		*0.38*	*0.38*	
Uniform Delay, d_1		*34.7*	*31.1*				*11.5*	*6.8*		*20.7*	*24.2*	
Progression Factor, PF		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Delay Calibration, k		*0.33*	*0.11*				*0.11*	*0.11*		*0.50*	*0.50*	
Incremental Delay, d_2		*10.2*	*0.6*				*0.1*	*0.1*		*2.8*	*2.2*	
Initial Queue Delay, d_3		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Control Delay		*44.9*	*31.7*				*11.6*	*6.9*		*23.5*	*26.4*	
Lane Group LOS		*D*	*C*				*B*	*A*		*C*	*C*	
Approach Delay	*40.8*						*7.5*			*26.2*		
Approach LOS	*D*						*A*			*C*		
Intersection Delay	*21.3*			X_C = *0.47*			Intersection LOS			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/31/06*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Hoyt and Fenimore*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Condition*

Project Description *Sheldrake Estates*

East/West Street: *Hoyt Avenue* | North/South Street: *Fenimore Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*381*	*111*	*252*	*515*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*414*	*120*	*273*	*559*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*75*		*142*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.81*	*1.00*	*0.81*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*92*	*0*	*175*
Percent Heavy Vehicles	*0*	*0*	*0*	*6*	*0*	*6*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*273*		*267*				
C (m) (veh/h)		*1029*		*197*				
v/c		*0.27*		*1.36*				
95% queue length		*1.07*		*15.30*				
Control Delay (s/veh)		*9.8*		*235.7*				
LOS		*A*		*F*				
Approach Delay (s/veh)	--	--	*235.7*					
Approach LOS	--	--	*F*					

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Waverly/Fenimore*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/18/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*PM Peak Hour*	Analysis Year	*Build Condition*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*	*1*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Lane Group	*L*	*TR*			*LT*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Volume, V (vph)	*52*	*219*	*112*	*31*	*141*	*116*	*62*	*327*	*117*	*146*	*388*	*18*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*1*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*0.94*	*0.85*	*0.85*	*0.85*	*0.92*	*0.92*	*0.92*	*0.96*	*0.96*	*0.96*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Extension of Effective Green, e	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Arrival Type, AT	*3*	*3*			*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Unit Extension, UE	*3.0*	*3.0*			*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
Filtering/Metering, I	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane Width	*10.0*	*12.0*			*11.0*	*11.0*	*11.0*	*11.0*	*10.0*	*11.0*	*11.0*	*11.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*			*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *30.0*	G =	G =	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *70.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*55*	*352*			*202*	*136*	*67*	*355*	*127*	*152*	*404*	*19*
Lane Group Capacity, c	*479*	*773*			*709*	*669*	*322*	*787*	*646*	*359*	*779*	*663*
v/c Ratio, X	*0.11*	*0.46*			*0.28*	*0.20*	*0.21*	*0.45*	*0.20*	*0.42*	*0.52*	*0.03*
Total Green Ratio, g/C	*0.43*	*0.43*			*0.43*	*0.43*	*0.43*	*0.43*	*0.43*	*0.43*	*0.43*	*0.43*
Uniform Delay, d_1	*12.0*	*14.2*			*13.0*	*12.5*	*12.5*	*14.2*	*12.5*	*14.0*	*14.7*	*11.6*
Progression Factor, PF	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Delay Calibration, k	*0.50*	*0.50*			*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Incremental Delay, d_2	*0.5*	*1.9*			*1.0*	*0.7*	*1.5*	*1.9*	*0.7*	*3.6*	*2.5*	*0.1*
Initial Queue Delay, d_3	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Control Delay	*12.5*	*16.1*			*14.0*	*13.2*	*14.0*	*16.0*	*13.2*	*17.6*	*17.2*	*11.7*
Lane Group LOS	*B*	*B*			*B*	*B*	*B*	*B*	*B*	*B*	*B*	*B*
Approach Delay	*15.6*			*13.7*			*15.1*			*17.1*		
Approach LOS	*B*			*B*			*B*			*B*		
Intersection Delay	*15.6*			X_C = *0.49*			Intersection LOS			*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/19/06*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Waverly/Plaza*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Condition*

Project ID *Sheldrake*

East/West Street: *Waverly Avenue* | North/South Street: *Plaza Avenue/Site*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*133*	*328*	*36*	*0*	*0*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*29*	*9*	*284*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*						*LTR*	
PHF	*0.87*						*0.88*	
Flow Rate (veh/h)	*570*						*364*	
% Heavy Vehicles	*0*						*0*	
No. Lanes	*1*		*0*		*0*		*1*	
Geometry Group	*1*						*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.3*						*0.1*	
Prop. Right-Turns	*0.1*						*0.9*	
Prop. Heavy Vehicle	*0.0*						*0.0*	
hLT-adj	*0.2*	*0.2*					*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*					*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*					*1.7*	*1.7*
hadj, computed	*0.0*						*-0.5*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*						*3.20*	
x, initial	*0.51*						*0.32*	
hd, final value (s)	*4.87*						*4.88*	
x, final value	*0.77*						*0.49*	
Move-up time, m (s)	*2.0*						*2.0*	
Service Time, t_s (s)	*2.9*						*2.9*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*726*						*614*	
Delay (s/veh)	*22.29*						*12.55*	
LOS	*C*						*B*	
Approach: Delay (s/veh)	*22.29*						*12.55*	
LOS	*C*						*B*	
Intersection Delay (s/veh)	*18.49*							
Intersection LOS	*C*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Mamaroneck/Waverly/Ranst*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*2/18/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*PM Peak Hour*	Analysis Year	*Build Conditions*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*		*1*	*1*		*1*		*2*			*2*	
Lane Group	*L*		*R*	*L*		*R*		*T*			*T*	
Volume, V (vph)	*356*		*51*	*24*		*70*		*1059*			*799*	
% Heavy Vehicles, %HV	*0*		*0*	*0*		*0*		*1*			*1*	
Peak-Hour Factor, PHF	*0.95*		*0.95*	*0.82*		*0.82*		*0.88*			*0.96*	
Pretimed (P) or Actuated (A)	*P*		*P*	*P*		*P*		*P*			*P*	
Start-up Lost Time, l_1	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Extension of Effective Green, e	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Arrival Type, AT	*3*		*3*	*3*		*3*		*3*			*3*	
Unit Extension, UE	*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			*3.0*	
Filtering/Metering, I	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Initial Unmet Demand, Q_b	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Lane Width	*11.0*		*11.0*	*12.0*		*11.0*		*13.0*			*11.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*		*0*	*0*		*0*		*0*			*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	Thru Only	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *45.0*	G =	G =	G =
	Y = *8*	Y =	Y =	Y =	Y = *8*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *86.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*375*		*54*	*29*		*85*		*1203*			*832*	
Lane Group Capacity, c	*507*		*454*	*525*		*454*		*1937*			*1812*	
v/c Ratio, X	*0.74*		*0.12*	*0.06*		*0.19*		*0.62*			*0.46*	
Total Green Ratio, g/C	*0.29*		*0.29*	*0.29*		*0.29*		*0.52*			*0.52*	
Uniform Delay, d_1	*27.6*		*22.4*	*22.0*		*22.9*		*14.5*			*12.9*	
Progression Factor, PF	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Delay Calibration, k	*0.50*		*0.50*	*0.50*		*0.50*		*0.50*			*0.50*	
Incremental Delay, d_2	*9.3*		*0.5*	*0.2*		*0.9*		*1.5*			*0.8*	
Initial Queue Delay, d_3	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Control Delay	*36.9*		*22.9*	*22.2*		*23.8*		*16.0*			*13.7*	
Lane Group LOS	*D*		*C*	*C*		*C*		*B*			*B*	
Approach Delay	*35.1*			*23.4*			*16.0*			*13.7*		
Approach LOS	*D*			*C*			*B*			*B*		
Intersection Delay	*18.8*			X_C = *0.66*			Intersection LOS			*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/23/06*
Analysis Time Period	*P.M. Peak Hour*

Site Information

Intersection	*Center/Mamaroneck*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Condition*

Project Description *Sheldrake*

East/West Street: *White Plains Road/Center Ave* | North/South Street: *Mamaroneck Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*239*	*926*			*714*	*302*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.91*	*0.91*
Hourly Flow Rate, HFR (veh/h)	*251*	*974*	*0*	*0*	*784*	*331*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*141*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.87*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*162*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*							*R*
v (veh/h)	*251*							*162*
C (m) (veh/h)	*622*							*607*
v/c	*0.40*							*0.27*
95% queue length	*1.95*							*1.07*
Control Delay (s/veh)	*14.6*							*13.1*
LOS	*B*							*B*
Approach Delay (s/veh)	--	--				*13.1*		
Approach LOS	--	--				*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/22/06*
Analysis Time Period	*P.M. Peak Hour*

Site Information

Intersection	*Center Avenue/Plaza Avenue*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Condition*

Project ID *Sheldrake*

East/West Street: *Center Avenue* | North/South Street: *Plaza Avenue*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*324*	*0*	*20*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*0*	*114*	*0*	*0*	*84*	*0*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration			*LR*		*T*		*T*	
PHF			*0.94*		*0.93*		*0.78*	
Flow Rate (veh/h)			*365*		*122*		*107*	
% Heavy Vehicles			*1*		*3*		*0*	
No. Lanes	*0*		*1*		*1*		*1*	
Geometry Group			*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns			*0.9*		*0.0*		*0.0*	
Prop. Right-Turns			*0.1*		*0.0*		*0.0*	
Prop. Heavy Vehicle			*0.0*		*0.0*		*0.0*	
hLT-adj			*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj			*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj			*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed			*0.2*		*0.1*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)			*3.20*		*3.20*		*3.20*	
x, initial			*0.32*		*0.11*		*0.10*	
hd, final value (s)			*4.67*		*5.03*		*5.01*	
x, final value			*0.47*		*0.17*		*0.15*	
Move-up time, m (s)			*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)			*2.7*		*3.0*		*3.0*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)			*615*		*372*		*357*	
Delay (s/veh)			*11.79*		*9.07*		*8.88*	
LOS			*B*		*A*		*A*	
Approach: Delay (s/veh)			*11.79*		*9.07*		*8.88*	
LOS			*B*		*A*		*A*	
Intersection Delay (s/veh)	*10.71*							
Intersection LOS	*B*							

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*2/19/06*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Site Egress*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Conditiion*

Project Description *Sheldrake*

East/West Street: *Waverly Avenue* | North/South Street: *Site Egress*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*385*				
Peak-Hour Factor, PHF	*1.00*	*0.87*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*442*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*T*				
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*22*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.90*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*24*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*24*			
C (m) (veh/h)					*620*			
v/c					*0.04*			
95% queue length					*0.12*			
Control Delay (s/veh)					*11.0*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*11.0*					
Approach LOS	--	--	*B*					

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Hoyt and Mamaroneck*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*6/1/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*P.M. Peak Hour*	Analysis Year	*Build Condition*
		Project ID	*Sheldrake Estates*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*0*	*1*	*1*				*1*	*2*	*0*	*1*	*2*	*0*
Lane Group		*LT*	*R*				*L*	*TR*		*L*	*TR*	
Volume, V (vph)	*141*	*43*	*121*				*150*	*715*	*41*	*24*	*624*	*108*
% Heavy Vehicles, %HV	*2*	*2*	*2*				*1*	*1*	*1*	*1*	*1*	*1*
Peak-Hour Factor, PHF	*0.84*	*0.84*	*0.84*				*0.91*	*0.91*	*0.91*	*0.90*	*0.90*	*0.90*
Pretimed (P) or Actuated (A)	*A*	*A*	*A*				*A*	*A*	*A*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Extension of Effective Green, e		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Arrival Type, AT		*3*	*3*				*3*	*3*		*3*	*3*	
Unit Extension, UE		*3.0*	*3.0*				*3.0*	*3.0*		*3.0*	*3.0*	
Filtering/Metering, I		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Initial Unmet Demand, Q_b		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*				*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*10.0*	*13.0*				*11.0*	*12.0*		*10.0*	*10.0*	
Parking / Grade / Parking	*N*	*0*	*N*				*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*	*0*				*0*	*0*		*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*						*3.2*			*3.2*		

Phasing	EB Only	02	03	04	NS Perm	NB Only	07	08
Timing	G = *22.0*	G =	G =	G =	G = *36.0*	G = *23.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis, T = *0.25* | Cycle Length, C = *96.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*219*	*144*				*165*	*831*		*27*	*813*	
Lane Group Capacity, c		*384*	*375*				*650*	*2369*		*191*	*1226*	
v/c Ratio, X		*0.57*	*0.38*				*0.25*	*0.35*		*0.14*	*0.66*	
Total Green Ratio, g/C		*0.23*	*0.23*				*0.67*	*0.67*		*0.38*	*0.38*	
Uniform Delay, d_1		*32.8*	*31.3*				*14.7*	*7.0*		*19.8*	*25.0*	
Progression Factor, PF		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Delay Calibration, k		*0.16*	*0.11*				*0.11*	*0.11*		*0.50*	*0.50*	
Incremental Delay, d_2		*2.0*	*0.7*				*0.2*	*0.1*		*1.5*	*2.8*	
Initial Queue Delay, d_3		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Control Delay		*34.8*	*31.9*				*14.9*	*7.1*		*21.3*	*27.8*	
Lane Group LOS		*C*	*C*				*B*	*A*		*C*	*C*	
Approach Delay	*33.7*						*8.4*			*27.6*		
Approach LOS	*C*						*A*			*C*		
Intersection Delay	*19.9*			X_C = *0.58*			Intersection LOS			*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/31/06*
Analysis Time Period	*P.M. Peak Hour*

Site Information

Intersection	*Hoyt and Fenimore*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Condition*

Project Description *Sheldrake Estates*

East/West Street: *Hoyt Avenue* | North/South Street: *Fenimore Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*393*	*84*	*198*	*418*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.91*	*0.91*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*436*	*93*	*217*	*459*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*82*		*196*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*86*	*0*	*206*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*217*		*292*				
C (m) (veh/h)		*1048*		*286*				
v/c		*0.21*		*1.02*				
95% queue length		*0.78*		*10.85*				
Control Delay (s/veh)		*9.3*		*98.5*				
LOS		*A*		*F*				
Approach Delay (s/veh)	--	--	*98.5*					
Approach LOS	--	--	*F*					

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Waverly/Fenimore*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*5/5/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*AM Peak Hour*	Analysis Year	*Build Two Way Entrance*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*	*1*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Lane Group	*L*	*TR*			*LT*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Volume, V (vph)	*116*	*304*	*57*	*70*	*68*	*29*	*102*	*351*	*165*	*222*	*491*	*39*
% Heavy Vehicles, %HV	*3*	*3*	*3*	*0*	*0*	*0*	*2*	*2*	*2*	*2*	*2*	*2*
Peak-Hour Factor, PHF	*0.96*	*0.96*	*0.96*	*0.66*	*0.66*	*0.66*	*0.92*	*0.92*	*0.92*	*0.97*	*0.97*	*0.97*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Extension of Effective Green, e	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Arrival Type, AT	*3*	*3*			*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Unit Extension, UE	*3.0*	*3.0*			*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
Filtering/Metering, I	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane Width	*10.0*	*12.0*			*11.0*	*10.0*	*11.0*	*11.0*	*10.0*	*11.0*	*11.0*	*11.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*			*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *35.0*	G =	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *70.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*121*	*376*			*209*	*44*	*111*	*382*	*179*	*229*	*506*	*40*
Lane Group Capacity, c	*371*	*643*			*330*	*538*	*323*	*901*	*739*	*421*	*901*	*766*
v/c Ratio, X	*0.33*	*0.58*			*0.63*	*0.08*	*0.34*	*0.42*	*0.24*	*0.54*	*0.56*	*0.05*
Total Green Ratio, g/C	*0.36*	*0.36*			*0.36*	*0.36*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Uniform Delay, d_1	*16.4*	*18.3*			*18.7*	*14.9*	*10.6*	*11.1*	*10.0*	*12.0*	*12.2*	*9.0*
Progression Factor, PF	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Delay Calibration, k	*0.50*	*0.50*			*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Incremental Delay, d_2	*2.3*	*3.9*			*8.9*	*0.3*	*2.9*	*1.5*	*0.8*	*5.0*	*2.5*	*0.1*
Initial Queue Delay, d_3	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Control Delay	*18.7*	*22.1*			*27.6*	*15.2*	*13.5*	*12.6*	*10.7*	*17.0*	*14.7*	*9.1*
Lane Group LOS	*B*	*C*			*C*	*B*	*B*	*B*	*B*	*B*	*B*	*A*
Approach Delay	*21.3*			*25.5*			*12.2*			*15.1*		
Approach LOS	*C*			*C*			*B*			*B*		
Intersection Delay	*16.8*			X_C = *0.59*			Intersection LOS			*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/5/06*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Waverly/Plaza*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Two Way entrance*

Project ID *Sheldrake*

East/West Street: *Waverly Avenue* North/South Street: *Plaza Avenue/Site*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*222*	*404*	*8*	*0*	*0*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*10*	*0*	*0*	*47*	*2*	*216*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*				*LTR*		*LTR*	
PHF	*0.85*				*1.00*		*0.60*	
Flow Rate (veh/h)	*745*				*10*		*440*	
% Heavy Vehicles	*0*				*0*		*0*	
No. Lanes	*1*		*0*		*1*		*1*	
Geometry Group	*1*				*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.4*				*1.0*		*0.2*	
Prop. Right-Turns	*0.0*				*0.0*		*0.8*	
Prop. Heavy Vehicle	*0.0*				*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*			*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*			*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*			*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*				*0.2*		*-0.5*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*				*3.20*		*3.20*	
x, initial	*0.66*				*0.01*		*0.39*	
hd, final value (s)	*5.27*				*6.92*		*5.43*	
x, final value	*1.09*				*0.02*		*0.66*	
Move-up time, m (s)	*2.0*				*2.0*		*2.0*	
Service Time, t_s (s)	*3.3*				*4.9*		*3.4*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*745*				*260*		*664*	
Delay (s/veh)	*83.13*				*10.05*		*18.45*	
LOS	*F*				*B*		*C*	
Approach: Delay (s/veh)	*83.13*				*10.05*		*18.45*	
LOS	*F*				*B*		*C*	
Intersection Delay (s/veh)LOS	*58.70 F*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Mamaroneck/Waverly/Ranst*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*5/5/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*AM Peak Hour*	Analysis Year	*Build Two-way entrance*
		Project ID	

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*		*1*	*1*		*1*		*2*			*2*	
Lane Group	*L*		*R*	*L*		*R*		*T*			*T*	
Volume, V (vph)	*405*		*88*	*60*		*51*		*876*			*818*	
% Heavy Vehicles, %HV	*0*		*0*	*0*		*0*		*2*			*1*	
Peak-Hour Factor, PHF	*0.91*		*0.91*	*0.68*		*0.68*		*0.90*			*0.90*	
Pretimed (P) or Actuated (A)	*P*		*P*	*P*		*P*		*P*			*P*	
Start-up Lost Time, l_1	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Extension of Effective Green, e	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Arrival Type, AT	*3*		*3*	*3*		*3*		*3*			*3*	
Unit Extension, UE	*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			*3.0*	
Filtering/Metering, I	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Initial Unmet Demand, Q_b	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Lane Width	*11.0*		*11.0*	*12.0*		*11.0*		*13.0*			*11.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*		*0*	*0*		*0*		*0*			*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	Thru Only	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *45.0*	G =	G =	G =
	Y = *8*	Y =	Y =	Y =	Y = *8*	Y =	Y =	Y =

Duration of Analysis, T = *0.25* | Cycle Length, C = *86.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*445*		*97*	*88*		*75*		*973*			*909*	
Lane Group Capacity, c	*507*		*454*	*525*		*454*		*1918*			*1812*	
v/c Ratio, X	*0.88*		*0.21*	*0.17*		*0.17*		*0.51*			*0.50*	
Total Green Ratio, g/C	*0.29*		*0.29*	*0.29*		*0.29*		*0.52*			*0.52*	
Uniform Delay, d_1	*29.0*		*23.1*	*22.7*		*22.7*		*13.3*			*13.3*	
Progression Factor, PF	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Delay Calibration, k	*0.50*		*0.50*	*0.50*		*0.50*		*0.50*			*0.50*	
Incremental Delay, d_2	*19.0*		*1.1*	*0.7*		*0.8*		*1.0*			*1.0*	
Initial Queue Delay, d_3	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Control Delay	*48.0*		*24.1*	*23.4*		*23.5*		*14.3*			*14.2*	
Lane Group LOS	*D*		*C*	*C*		*C*		*B*			*B*	
Approach Delay	*43.7*			*23.5*			*14.3*			*14.2*		
Approach LOS	*D*			*C*			*B*			*B*		
Intersection Delay	*21.0*			X_C = *0.64*			Intersection LOS			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/5/06*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Site Egress*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Two way entrance*

Project Description *Sheldrake*

East/West Street: *Waverly Avenue* | North/South Street: *Site Egress*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*455*				
Peak-Hour Factor, PHF	*1.00*	*0.91*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*499*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*T*				
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*38*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.90*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*42*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*42*			
C (m) (veh/h)					*576*			
v/c					*0.07*			
95% queue length					*0.24*			
Control Delay (s/veh)					*11.7*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*11.7*					
Approach LOS	--	--	*B*					

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Hoyt and Mamaroneck*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*6/1/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*A.M. Peak Hour*	Analysis Year	*Build 2 way entrance*
		Project ID	*Sheldrake Estates*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*0*	*1*	*1*				*1*	*2*	*0*	*1*	*2*	*0*
Lane Group		*LT*	*R*				*L*	*TR*		*L*	*TR*	
Volume, V (vph)	*214*	*38*	*115*				*105*	*616*	*71*	*48*	*563*	*91*
% Heavy Vehicles, %HV	*7*	*7*	*7*				*3*	*3*	*3*	*4*	*4*	*4*
Peak-Hour Factor, PHF	*0.89*	*0.89*	*0.89*				*0.92*	*0.92*	*0.92*	*0.93*	*0.93*	*0.93*
Pretimed (P) or Actuated (A)	*A*	*A*	*A*				*A*	*A*	*A*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Extension of Effective Green, e		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Arrival Type, AT		*3*	*3*				*3*	*3*		*3*	*3*	
Unit Extension, UE		*3.0*	*3.0*				*3.0*	*3.0*		*3.0*	*3.0*	
Filtering/Metering, I		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Initial Unmet Demand, Q_b		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*				*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*10.0*	*13.0*				*11.0*	*12.0*		*10.0*	*10.0*	
Parking / Grade / Parking	*N*	*0*	*N*				*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*	*0*				*0*	*0*		*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*						*3.2*			*3.2*		

Phasing	EB Only	02	03	04	NS Perm	NB Only	07	08
Timing	G = *22.0*	G =	G =	G =	G = *36.0*	G = *23.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis, T = *0.25* | Cycle Length, C = *96.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*283*	*129*				*114*	*747*		*52*	*703*	
Lane Group Capacity, c		*364*	*358*				*676*	*2305*		*210*	*1192*	
v/c Ratio, X		*0.78*	*0.36*				*0.17*	*0.32*		*0.25*	*0.59*	
Total Green Ratio, g/C		*0.23*	*0.23*				*0.67*	*0.67*		*0.38*	*0.38*	
Uniform Delay, d_1		*34.7*	*31.1*				*11.3*	*6.8*		*20.7*	*24.1*	
Progression Factor, PF		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Delay Calibration, k		*0.33*	*0.11*				*0.11*	*0.11*		*0.50*	*0.50*	
Incremental Delay, d_2		*10.2*	*0.6*				*0.1*	*0.1*		*2.8*	*2.1*	
Initial Queue Delay, d_3		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Control Delay		*44.9*	*31.7*				*11.4*	*6.9*		*23.5*	*26.2*	
Lane Group LOS		*D*	*C*				*B*	*A*		*C*	*C*	
Approach Delay	*40.8*						*7.5*			*26.0*		
Approach LOS	*D*						*A*			*C*		
Intersection Delay	*21.2*			X_C = *0.46*			Intersection LOS			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/31/06*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Hoyt and Fenimore*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build 2 way Entrance*

Project Description *Sheldrake Estates*

East/West Street: *Hoyt Avenue* | North/South Street: *Fenimore Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*381*	*111*	*252*	*520*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*414*	*120*	*273*	*565*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*75*		*137*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.81*	*1.00*	*0.81*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*92*	*0*	*169*
Percent Heavy Vehicles	*0*	*0*	*0*	*6*	*0*	*6*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*273*		*261*				
C (m) (veh/h)		*1029*		*192*				
v/c		*0.27*		*1.36*				
95% queue length		*1.07*		*15.10*				
Control Delay (s/veh)		*9.8*		*238.8*				
LOS		*A*		*F*				
Approach Delay (s/veh)	--	--	*238.8*					
Approach LOS	--	--	*F*					

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Waverly/Fenimore*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*5/5/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*PM Peak Hour*	Analysis Year	*Build Two-way Entrance*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*	*1*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Lane Group	*L*	*TR*			*LT*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Volume, V (vph)	*52*	*219*	*112*	*33*	*143*	*116*	*60*	*327*	*117*	*146*	*388*	*18*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*1*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*0.94*	*0.85*	*0.85*	*0.85*	*0.92*	*0.92*	*0.92*	*0.96*	*0.96*	*0.96*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Extension of Effective Green, e	*2.0*	*2.0*			*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Arrival Type, AT	*3*	*3*			*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Unit Extension, UE	*3.0*	*3.0*			*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
Filtering/Metering, I	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane Width	*10.0*	*12.0*			*11.0*	*11.0*	*11.0*	*11.0*	*10.0*	*11.0*	*11.0*	*11.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*			*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *30.0*	G =	G =	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *70.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*55*	*352*			*207*	*136*	*65*	*355*	*127*	*152*	*404*	*19*
Lane Group Capacity, c	*474*	*773*			*703*	*669*	*322*	*787*	*646*	*359*	*779*	*663*
v/c Ratio, X	*0.12*	*0.46*			*0.29*	*0.20*	*0.20*	*0.45*	*0.20*	*0.42*	*0.52*	*0.03*
Total Green Ratio, g/C	*0.43*	*0.43*			*0.43*	*0.43*	*0.43*	*0.43*	*0.43*	*0.43*	*0.43*	*0.43*
Uniform Delay, d_1	*12.0*	*14.2*			*13.1*	*12.5*	*12.5*	*14.2*	*12.5*	*14.0*	*14.7*	*11.6*
Progression Factor, PF	*1.000*	*1.000*			*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Delay Calibration, k	*0.50*	*0.50*			*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Incremental Delay, d_2	*0.5*	*1.9*			*1.1*	*0.7*	*1.4*	*1.9*	*0.7*	*3.6*	*2.5*	*0.1*
Initial Queue Delay, d_3	*0.0*	*0.0*			*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Control Delay	*12.5*	*16.1*			*14.1*	*13.2*	*13.9*	*16.0*	*13.2*	*17.6*	*17.2*	*11.7*
Lane Group LOS	*B*	*B*			*B*	*B*	*B*	*B*	*B*	*B*	*B*	*B*
Approach Delay	*15.6*			*13.8*			*15.1*			*17.1*		
Approach LOS	*B*			*B*			*B*			*B*		
Intersection Delay	*15.6*			X_C = *0.49*			Intersection LOS			*B*		

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/5/06*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Waverly/Plaza*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Two-way entrance*

Project ID *Sheldrake*

East/West Street: *Waverly Avenue* North/South Street: *Plaza Avenue/Site*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*133*	*328*	*36*	*0*	*0*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*4*	*0*	*0*	*29*	*9*	*284*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*				*LTR*		*LTR*	
PHF	*0.87*				*0.90*		*0.88*	
Flow Rate (veh/h)	*570*				*4*		*364*	
% Heavy Vehicles	*0*				*0*		*0*	
No. Lanes	*1*		*0*		*1*		*1*	
Geometry Group	*1*				*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.3*				*1.0*		*0.1*	
Prop. Right-Turns	*0.1*				*0.0*		*0.9*	
Prop. Heavy Vehicle	*0.0*				*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*			*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*			*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*			*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*				*0.2*		*-0.5*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*				*3.20*		*3.20*	
x, initial	*0.51*				*0.00*		*0.32*	
hd, final value (s)	*4.87*				*6.20*		*4.90*	
x, final value	*0.77*				*0.01*		*0.50*	
Move-up time, m (s)	*2.0*				*2.0*		*2.0*	
Service Time, t_s (s)	*2.9*				*4.2*		*2.9*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*726*				*254*		*614*	
Delay (s/veh)	*22.29*				*9.24*		*12.62*	
LOS	*C*				*A*		*B*	
Approach: Delay (s/veh)	*22.29*				*9.24*		*12.62*	
LOS	*C*				*A*		*B*	
Intersection Delay (s/veh)LOS	*18.48 C*							

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Mamaroneck/Waverly/Ranst*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*5/5/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*PM Peak Hour*	Analysis Year	*Build Two Way entrance*
		Project ID	*Sheldrake*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*		*1*	*1*		*1*		*2*			*2*	
Lane Group	*L*		*R*	*L*		*R*		*T*			*T*	
Volume, V (vph)	*356*		*47*	*24*		*70*		*1059*			*799*	
% Heavy Vehicles, %HV	*0*		*0*	*0*		*0*		*1*			*1*	
Peak-Hour Factor, PHF	*0.95*		*0.95*	*0.82*		*0.82*		*0.88*			*0.96*	
Pretimed (P) or Actuated (A)	*P*		*P*	*P*		*P*		*P*			*P*	
Start-up Lost Time, l_1	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Extension of Effective Green, e	*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			*2.0*	
Arrival Type, AT	*3*		*3*	*3*		*3*		*3*			*3*	
Unit Extension, UE	*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			*3.0*	
Filtering/Metering, I	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Initial Unmet Demand, Q_b	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Lane Width	*11.0*		*11.0*	*12.0*		*11.0*		*13.0*			*11.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*		*0*	*0*		*0*		*0*			*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	Thru Only	06	07	08
Timing	G = *25.0*	G =	G =	G =	G = *45.0*	G =	G =	G =
	Y = *8*	Y =	Y =	Y =	Y = *8*	Y =	Y =	Y =

Duration of Analysis, T = *0.25* Cycle Length, C = *86.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*375*		*49*	*29*		*85*		*1203*			*832*	
Lane Group Capacity, c	*507*		*454*	*525*		*454*		*1937*			*1812*	
v/c Ratio, X	*0.74*		*0.11*	*0.06*		*0.19*		*0.62*			*0.46*	
Total Green Ratio, g/C	*0.29*		*0.29*	*0.29*		*0.29*		*0.52*			*0.52*	
Uniform Delay, d_1	*27.6*		*22.3*	*22.0*		*22.9*		*14.5*			*12.9*	
Progression Factor, PF	*1.000*		*1.000*	*1.000*		*1.000*		*1.000*			*1.000*	
Delay Calibration, k	*0.50*		*0.50*	*0.50*		*0.50*		*0.50*			*0.50*	
Incremental Delay, d_2	*9.3*		*0.5*	*0.2*		*0.9*		*1.5*			*0.8*	
Initial Queue Delay, d_3	*0.0*		*0.0*	*0.0*		*0.0*		*0.0*			*0.0*	
Control Delay	*36.9*		*22.8*	*22.2*		*23.8*		*16.0*			*13.7*	
Lane Group LOS	*D*		*C*	*C*		*C*		*B*			*B*	
Approach Delay	*35.3*			*23.4*			*16.0*			*13.7*		
Approach LOS	*D*			*C*			*B*			*B*		
Intersection Delay	*18.8*			X_C = *0.66*			Intersection LOS			*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/5/06*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Site Egress*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build Two-way entrance*

Project Description *Sheldrake*

East/West Street: *Waverly Avenue* | North/South Street: *Site Egress*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*385*				
Peak-Hour Factor, PHF	*1.00*	*0.87*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*442*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*T*				
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*18*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.90*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*20*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*20*			
C (m) (veh/h)					*620*			
v/c					*0.03*			
95% queue length					*0.10*			
Control Delay (s/veh)					*11.0*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*11.0*					
Approach LOS	--	--	*B*					

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JAG*	Intersection	*Hoyt and Mamaroneck*
Agency or Co.	*TMA*	Area Type	*All other areas*
Date Performed	*6/1/06*	Jurisdiction	*Village of Mamaroneck*
Time Period	*P.M. Peak Hour*	Analysis Year	*Build 2 way entrance*
		Project ID	*Sheldrake Estates*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*0*	*1*	*1*				*1*	*2*	*0*	*1*	*2*	*0*
Lane Group		*LT*	*R*				*L*	*TR*		*L*	*TR*	
Volume, V (vph)	*141*	*43*	*121*				*150*	*715*	*41*	*24*	*622*	*106*
% Heavy Vehicles, %HV	*2*	*2*	*2*				*1*	*1*	*1*	*1*	*1*	*1*
Peak-Hour Factor, PHF	*0.84*	*0.84*	*0.84*				*0.91*	*0.91*	*0.91*	*0.90*	*0.90*	*0.90*
Pretimed (P) or Actuated (A)	*A*	*A*	*A*				*A*	*A*	*A*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Extension of Effective Green, e		*2.0*	*2.0*				*2.0*	*2.0*		*2.0*	*2.0*	
Arrival Type, AT		*3*	*3*				*3*	*3*		*3*	*3*	
Unit Extension, UE		*3.0*	*3.0*				*3.0*	*3.0*		*3.0*	*3.0*	
Filtering/Metering, I		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Initial Unmet Demand, Q_b		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*				*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*10.0*	*13.0*				*11.0*	*12.0*		*10.0*	*10.0*	
Parking / Grade / Parking	*N*	*0*	*N*				*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*	*0*				*0*	*0*		*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*						*3.2*			*3.2*		

Phasing	EB Only	02	03	04	NS Perm	NB Only	07	08
Timing	G = *22.0*	G =	G =	G =	G = *36.0*	G = *23.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis, T = *0.25* | Cycle Length, C = *96.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*219*	*144*				*165*	*831*		*27*	*809*	
Lane Group Capacity, c		*384*	*375*				*652*	*2369*		*191*	*1226*	
v/c Ratio, X		*0.57*	*0.38*				*0.25*	*0.35*		*0.14*	*0.66*	
Total Green Ratio, g/C		*0.23*	*0.23*				*0.67*	*0.67*		*0.38*	*0.38*	
Uniform Delay, d_1		*32.8*	*31.3*				*14.6*	*7.0*		*19.8*	*24.9*	
Progression Factor, PF		*1.000*	*1.000*				*1.000*	*1.000*		*1.000*	*1.000*	
Delay Calibration, k		*0.16*	*0.11*				*0.11*	*0.11*		*0.50*	*0.50*	
Incremental Delay, d_2		*2.0*	*0.7*				*0.2*	*0.1*		*1.5*	*2.8*	
Initial Queue Delay, d_3		*0.0*	*0.0*				*0.0*	*0.0*		*0.0*	*0.0*	
Control Delay		*34.8*	*31.9*				*14.8*	*7.1*		*21.3*	*27.7*	
Lane Group LOS		*C*	*C*				*B*	*A*		*C*	*C*	
Approach Delay	*33.7*						*8.3*			*27.5*		
Approach LOS	*C*						*A*			*C*		
Intersection Delay	*19.8*			X_C = *0.58*			Intersection LOS			*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*5/31/06*
Analysis Time Period	*P.M. Peak Hour*

Site Information

Intersection	*Hoyt and Fenimore*
Jurisdiction	*Village of Mamaroneck*
Analysis Year	*Build 2-way Entrance*

Project Description *Sheldrake Estates*

East/West Street: *Hoyt Avenue* | North/South Street: *Fenimore Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*393*	*84*	*198*	*420*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.91*	*0.91*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*436*	*93*	*217*	*461*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*82*		*194*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*86*	*0*	*204*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*217*		*290*				
C (m) (veh/h)		*1048*		*285*				
v/c		*0.21*		*1.02*				
95% queue length		*0.78*		*10.75*				
Control Delay (s/veh)		*9.3*		*97.7*				
LOS		*A*		*F*				
Approach Delay (s/veh)	--	--	*97.7*					
Approach LOS	--	--	*F*					

APPENDIX E ATTACHMENT B

Table EB-1 indicates the actual speed runs show slightly lower delay than computed in the capacity analysis. Delays are primarily stop, acceleration, and deceleration delays from the stop sign at Plaza Avenue and traffic signal at Mamaroneck Avenue.

Table EB-1
Waverly Avenue Delays

Location	Existing Delays A.M. Peak Hour(s)			
	Delays			
	Stop Delay (Seconds)	Traveling Delay [2] (Seconds)	Control Delays[4] (Seconds)	Total Delay (Seconds)
Worse Case 2006 Speed Run (Actual Delays)[1]				
Waverly Avenue At Plaza Avenue	5			
Waverly Avenue		62		**90**
Waverly Avenue At Mamaroneck Avenue	23			
Computed Delays[3]				
Waverly Avenue At Plaza Avenue			59	
Waverly Avenue				**98**
Waverly Avenue At Mamaroneck Avenue			39	

[1] Actual Delays based on worst case of travel time runs from 7:00 a.m. to 9:30 a.m. on a Thursday.

[2] Traveling delay (including acceleration and deceleration delays) based on difference from speed of 30 miles per hour.

[3] Computed delay based on intersection delay only from Highway Capacity analysis. Control delay includes stop, acceleration, and deceleration delays.

[4] Delays rounded to nearest second based on Highway Capacity analysis existing condition.