

LAW OFFICE
ST. PIERRE & ST. PIERRE
291 GRAFTON STREET
SHREWSBURY, MASSACHUSETTS 01545-2253

RODERICK A. ST. PIERRE
JASON M. ST. PIERRE

A PROFESSIONAL CORPORATION

TELEPHONE: (508) 842-1000
FACSIMILE: (508) 842-9666
TOLL FREE: (877) 346-9037

September 24, 2014

Daniel J. Morgado, Town Manager
Town of Shrewsbury
100 Maple Avenue
Shrewsbury, MA 01545

RE: Request for Proposals
Residential or Mixed Use Project
440 Hartford Pike
Park Place West
Expression of Interest

Dear Mr. Morgado:

I have submitted herein one original bound submittal with all completed forms and supporting documents, one original unbound submittal and eight bound copies of all documents including the following:

1. Developer Information-RFI Form 1
2. Site Information-RFI Form 2
3. Qualification and Comparable Experience RFI Form 3

I have also included relevant information on our team's qualifications and prior experiences of the team members.

In addition, included with this submission are concept plans, proposed uses, density, approximate development envelope, open space and storm water management and detention basins.

We are anticipating that the site shall consist of forty-five (45%) percent of one bedroom apartments, forty-five (45%) percent of two bedroom apartments and no more than ten (10%) percent three bedroom apartments.

We would hope that the school department has flexibility of selecting what school district the school children will be attending. There are no residents in this area on Hartford Pike (Route 20) and Paton and Coolidge Schools are of equal distances from the sites being the closest schools.

Weston & Sampson our utility consultant has determined we have capacity in the municipal sewer system. We will be working with the Town and Weston & Sampson to determine improvements, if any, in the three pump stations that handle our projected sewer flows.

The Town will receive approximately \$1,624,000.00 in sewer and water connection and related fees from the development and annual taxes based on today's rate should exceed \$350,000.00.

I have enclosed a summary of the qualification of each team members. The St.Pierre family developed Hills Farms Estates, consisting of one hundred eighty single family homes and my father was the original developer of Lincoln Plaza, Worcester, Massachusetts. Also I have been practicing law for over forty years specializing in real estate.

My family considered a joint venture to develop the apartments, however because of the age of the family members we have decided to seek approval through the comprehensive permit process working with the Town on the local initiative program and then seek a developer.

Form3-Comparable project Experience and references, we have indicated a mixed use. Because of the nature of the business environment on Route 20, a mixed use combined with rental apartments is not feasible. However with the influence of three hundred twenty apartments from our two locations, commercial development is feasible on a parcel we own next to the Hebert Candy Mansion containing 5.4 acres and is located at 550 Hartford Pike. We have included with our submission concept plans and proposed uses for 550 Hartford Pike. We are committed on developing this property for commercial use, thus providing for additional tax benefits to the Town.

As a lifelong resident of Shrewsbury, having a son and grandchildren living in Town we are committed to developing the best quality project that is good for the Town and our family.

Thank you.

Respectfully submitted,



Roderick A. St. Pierre
RAS/pad



TOWN OF SHREWSBURY
100 MAPLE AVENUE
SHREWSBURY, MASSACHUSETTS 01545-5398

**Expression of Interest Cover Sheet
Form 1**

Applicant: Hartford Realty Trust of Shrewsbury

Team: Please list and provide information about all members of the proposed development team.

Lead Party/Developer/Organization

Legal Name: Smart Growth Design, LLC

Form of Legal Entity: Limited Liability Company

Address: 625 South Street
Shrewsbury, MA 01545

Contact Person: Francis Zarette

Telephone: 774-275-0414

Email: fzarette@gmail.com

Interested Party, if a corporation was organized on 2/14/2014 (date) under the laws of the Commonwealth of Massachusetts.

Owner/Mortgagor

Legal Name: Hartford Realty Trust of Shrewsbury

Address: 291 Grafton Street
Shrewsbury, MA 01545

Principals: Roderick A. St.Pierre & Robert J. St. Pierre

Contact Person: Roderick A. St.Pierre

Telephone: 508-842-1000

Email: rod@stpierre-law.com

Has this entity been formed? (x) Yes () No



TOWN OF SHREWSBURY
100 MAPLE AVENUE
SHREWSBURY, MASSACHUSETTS 01545-5398

**Expression of Interest Site Information
Form 2**

Applicant: Hartford Realty Trust of Shrewsbury

Site Location:

Assessor's Parcel ID: Plate 54, Plot 15

Street Address: 440 Hartford Pike

Property Owner: Hartford Realty Trust of Shrewsbury

Current Site Use(s): vacant land

Does the applicant currently have site control? (X) Yes () No

Attach locus map to this form.

440 HARTFORD PIKE

'BASIC' FISCAL IMPACT ANALYSIS

Real Estate Tax Revenue

- #440 Hartford Pike – 192 units
- Valuation: 192 units x \$150,000/unit = \$28,800,000
- Annual Tax Revenue: \$28,800,000 x \$12.17/\$1,000 = \$350,496
- Annual Excise Tax Revenue: 192 units x 1.5 cars/unit = 288 cars
288 cars x \$250/ea = \$72,000

Other Revenue (One Time Fees):

- Sewer and Water Connection Fee: 192 units x 7000 units = \$1,344,000
- Building Permit Fees: \$28,800,000 x \$10/1000 = \$280,000

School Impact

Avalon Bay = 0.45 student/unit

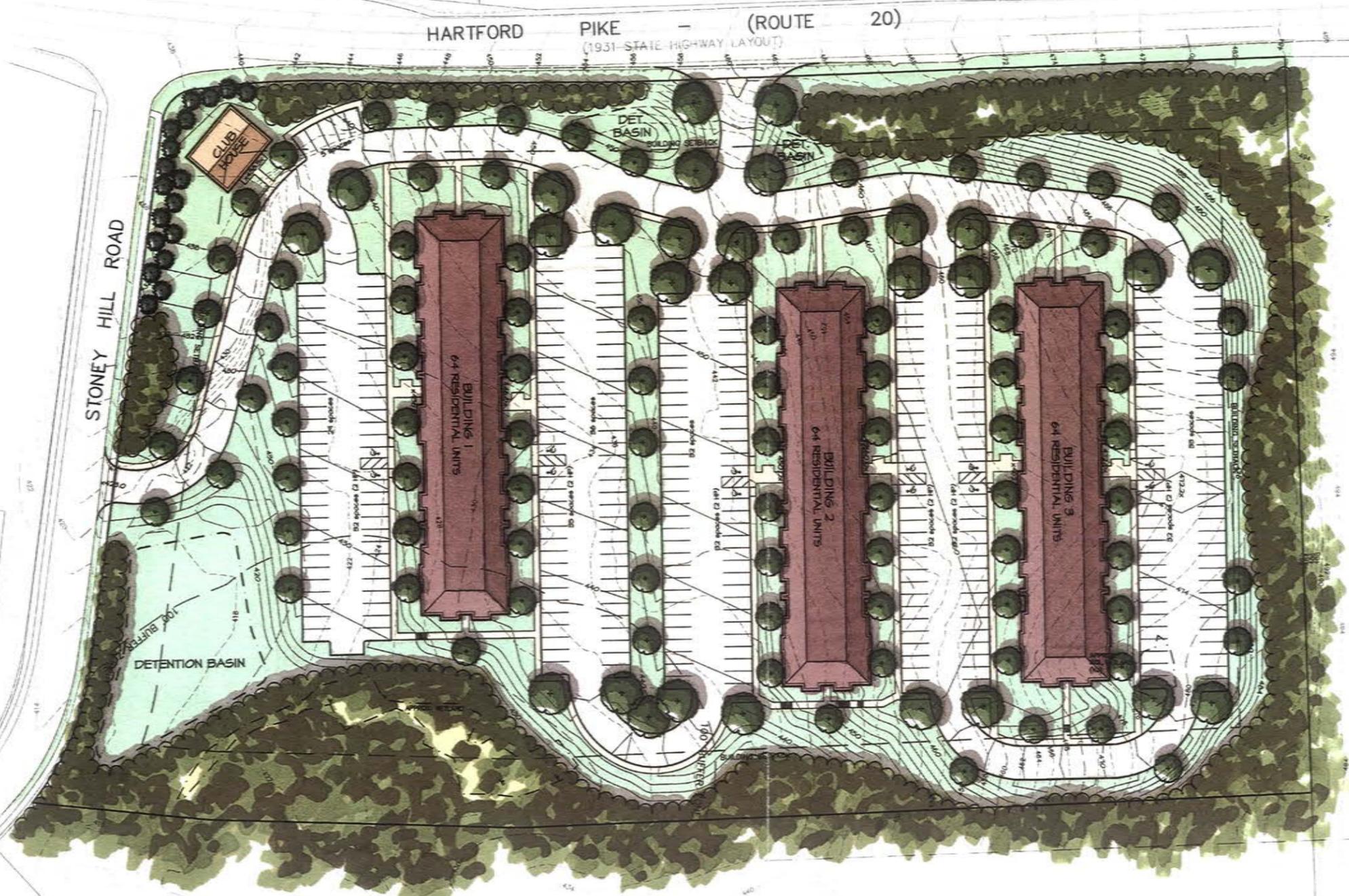
Madison Place = 0.14 student/unit

AVG = 0.30 student/unit

#students: 192 units x 0.30 = 57 students

\$52,000,000/6000 = \$8,666/student

- Impact: 57 students x \$8666 per student = \$493,962



HARTFORD PIKE (ROUTE 20)
(1931 STATE HIGHWAY LAYOUT)

STONEY HILL ROAD

BUILDING 1
64 RESIDENTIAL UNITS

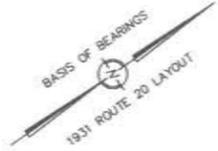
BUILDING 2
64 RESIDENTIAL UNITS

BUILDING 3
64 RESIDENTIAL UNITS

CLUB HOUSE

DETECTION BASIN

THISTLE HILL DR



DEVELOPMENT SUMMARY	
LOT AREA:	10.66 AC.
NUMBER OF UNITS:	192
UNIT DENSITY:	18.0 UNITS PER ACRE
PARKING:	330 SPACES (1.7 SPACES PER UNIT)

SITE PLAN EXHIBIT

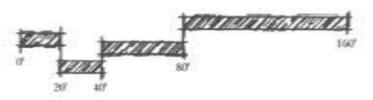
440 HARTFORD PIKE (ROUTE 20)
Shrewsbury, Massachusetts

PREPARED FOR:
SMART GROWTH DESIGN, LLC
Shrewsbury, Massachusetts

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
Westborough, MA

JOB NO. - 092700
DATE: August 22, 2011
SCALE: 1" = 40'



FILE NO.: 092710
DWG NO.: West Site Plan Exhibit

ZONING CLASSIFICATION:

LIMITED INDUSTRIAL DISTRICT
 MINIMUM LOT AREA: 80,000 S.F.
 MINIMUM FRONT YARD: 50 FEET
 MINIMUM SIDE YARD: 50* FEET
 MINIMUM REAR YARD: 50* FEET
 MAXIMUM BUILDING HEIGHT: 50 FEET
 MAXIMUM BUILDING STORIES: 4
 MAXIMUM LOT COVERAGE: 50%
 MINIMUM OPEN SPACE: 20%

*EXCEPT 100 WHEN ABUTTING A RESIDENTIAL DISTRICT

ASSESSORS MAP REFERENCE:

PARCEL ID #48 009183

OWNER OF RECORD:

HARTFORD REALTY TRUST OF SHREWSBURY
 RODERICK A. ST. PIERRE, TRUSTEE
 PAUL L. ST. PIERRE, TRUSTEE
 291 GRAFTON STREET
 SHREWSBURY, MA 01545

PLAN REFERENCES:

PLAN BOOK 601 PLAN 100
 PLAN BOOK 604 PLAN 68
 PLAN BOOK 684 PLAN 9
 PLAN BOOK 719 PLAN 33
 PLAN BOOK 750 PLAN 59

1931 STATE HIGHWAY LAYOUT OF HARTFORD TURNPIKE (ROUTE 20)

DEED REFERENCE:

DEED BOOK 8104 PAGE 312

FIRM CLASSIFICATION:

FLOOD INSURANCE RATE MAP
 COMMUNITY PANEL NUMBER 250332 0006 B
 EFFECTIVE JUNE 4, 1980

ZONING SUMMARY TABLE

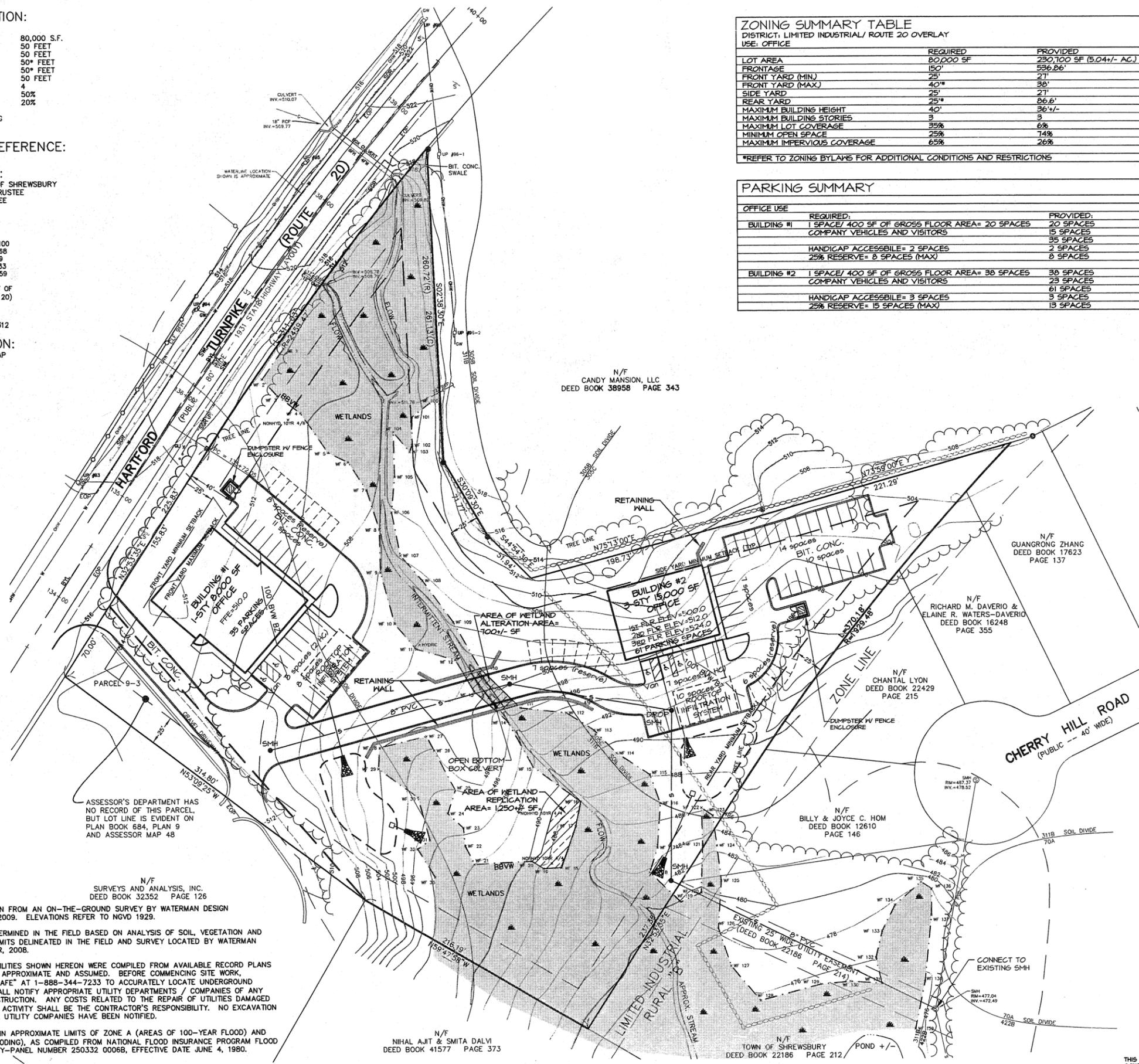
DISTRICT: LIMITED INDUSTRIAL/ ROUTE 20 OVERLAY
 USE: OFFICE

	REQUIRED	PROVIDED
LOT AREA	80,000 SF	230,100 SF (5.04+/- AC.)
FRONTAGE	150'	536.86'
FRONT YARD (MIN.)	25'	27'
FRONT YARD (MAX.)	40'	39'
SIDE YARD	25'	27'
REAR YARD	25'	26.6'
MAXIMUM BUILDING HEIGHT	40'	36.5'
MAXIMUM BUILDING STORIES	3	3
MAXIMUM LOT COVERAGE	55%	6%
MINIMUM OPEN SPACE	25%	74%
MAXIMUM IMPERVIOUS COVERAGE	65%	26%

*REFER TO ZONING BYLAWS FOR ADDITIONAL CONDITIONS AND RESTRICTIONS

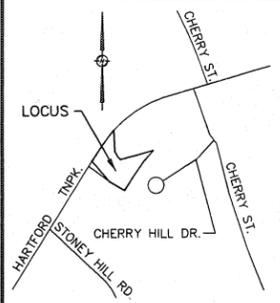
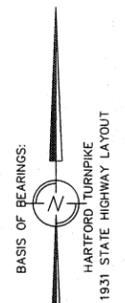
PARKING SUMMARY

OFFICE USE	REQUIRED	PROVIDED
BUILDING #1	1 SPACE/ 400 SF OF GROSS FLOOR AREA = 20 SPACES COMPANY VEHICLES AND VISITORS	20 SPACES 15 SPACES
	HANDICAP ACCESSIBLE = 2 SPACES 25% RESERVE = 5 SPACES (MAX)	2 SPACES 0 SPACES
BUILDING #2	1 SPACE/ 400 SF OF GROSS FLOOR AREA = 30 SPACES COMPANY VEHICLES AND VISITORS	30 SPACES 29 SPACES
	HANDICAP ACCESSIBLE = 3 SPACES 25% RESERVE = 15 SPACES (MAX)	3 SPACES 13 SPACES



PLAN NOTES:

- EXISTING CONDITIONS INFORMATION FROM AN ON-THE-GROUND SURVEY BY WATERMAN DESIGN ASSOCIATES, INC., IN JANUARY, 2009. ELEVATIONS REFER TO NGVD 1929.
- WETLAND BOUNDARIES WERE DETERMINED IN THE FIELD BASED ON ANALYSIS OF SOIL, VEGETATION AND HYDROLOGY. WETLAND FLAGS/LIMITS DELINEATED IN THE FIELD AND SURVEY LOCATED BY WATERMAN DESIGN ASSOCIATES IN DECEMBER, 2008.
- LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND ARE APPROXIMATE AND ASSUMED. BEFORE COMMENCING SITE WORK, CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-344-7233 TO ACCURATELY LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY DEPARTMENTS / COMPANIES OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. ANY COSTS RELATED TO THE REPAIR OF UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO EXCAVATION SHALL BE PERFORMED UNTIL ALL UTILITY COMPANIES HAVE BEEN NOTIFIED.
- NO PART OF THE SITE LIES WITHIN APPROXIMATE LIMITS OF ZONE A (AREAS OF 100-YEAR FLOOD) AND ZONE C (AREAS OF MINIMAL FLOODING), AS COMPILED FROM NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 250332 0006B, EFFECTIVE DATE JUNE 4, 1980.



LOCUS MAP (NOT TO SCALE)

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REV.	DATE	DESCRIPTION	INIT.
A	06/04/09	XXXX	

PREPARED BY:



WATERMAN DESIGN ASSOCIATES, INC.
 31 East Main Street
 Westborough, MA 01581
 508.366.6552
 508.366.6506 (fax)
 watermandesign.com wds@wdsassoc.com

PREPARED FOR:

HARTFORD REALTY TRUST OF SHREWSBURY
 RODERICK A. ST. PIERRE,
 & PAUL L. ST. PIERRE, TRUSTEES
 291 Grafton Street
 Shrewsbury, MA 01545

TITLE:

FEASIBILITY STUDY OFFICE PARK
 550 HARTFORD TURNPIKE
 Shrewsbury, MA (Worcester County)
 FOR DISCUSSION

DATE:	02/10/09	SCALE:	1" = 40'
JOB NO.:	0413.01	DWN. BY:	
FILE NO.:	0413900	CHK'D. BY:	
DRAWING NO.:	0413901A	SHEET:	1

THIS DRAWING IS NOT FOR CONSTRUCTION UNTIL ISSUED FOR CONSTRUCTION BY WATERMAN DESIGN ASSOCIATES, INC.

ZONING CLASSIFICATION:

LIMITED INDUSTRIAL DISTRICT
 MINIMUM LOT AREA: 80,000 S.F.
 MINIMUM LOT FRONTAGE: 50 FEET
 MINIMUM FRONT YARD: 50 FEET
 MINIMUM SIDE YARD: 50* FEET
 MINIMUM REAR YARD: 50* FEET
 MAXIMUM BUILDING HEIGHT: 50 FEET
 MAXIMUM BUILDING STORIES: 4
 MAXIMUM LOT COVERAGE: 50%
 MINIMUM OPEN SPACE: 20%

*EXCEPT 100 WHEN ABUTTING A RESIDENTIAL DISTRICT

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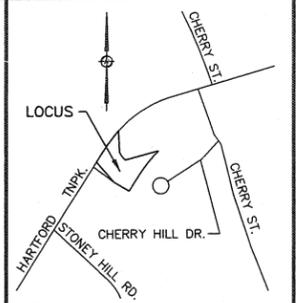
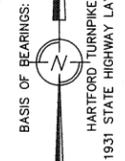
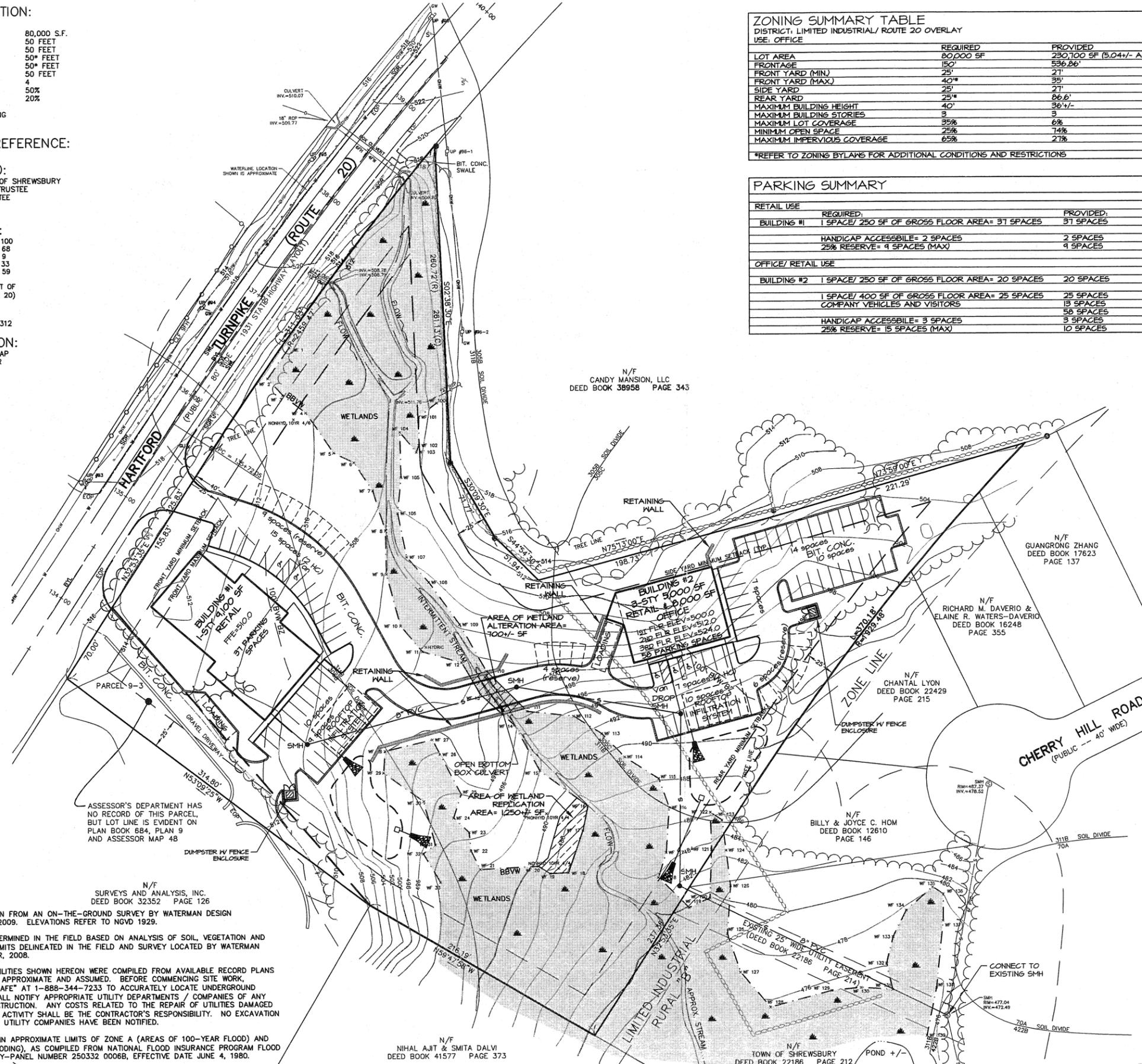
DISTRICT: LIMITED INDUSTRIAL/ ROUTE 20 OVERLAY
 USE: OFFICE

	REQUIRED	PROVIDED
LOT AREA	80,000 SF	230,100 SF (5.04+/- AC)
FRONTAGE	150'	536.86'
FRONT YARD (MIN)	25'	21'
FRONT YARD (MAX)	40*	35'
SIDE YARD	25'	21'
REAR YARD	25*	26.6'
MAXIMUM BUILDING HEIGHT	40'	36'4"
MAXIMUM BUILDING STORIES	3	3
MAXIMUM LOT COVERAGE	35%	6%
MINIMUM OPEN SPACE	25%	74%
MAXIMUM IMPERVIOUS COVERAGE	65%	27%

*REFER TO ZONING BYLAWS FOR ADDITIONAL CONDITIONS AND RESTRICTIONS

PARKING SUMMARY

RETAIL USE		
REQUIRED:		PROVIDED:
BUILDING #1	1 SPACE/ 250 SF OF GROSS FLOOR AREA = 31 SPACES	31 SPACES
	HANDICAP ACCESSIBLE = 2 SPACES	2 SPACES
	25% RESERVE = 4 SPACES (MAX)	4 SPACES
OFFICE/ RETAIL USE		
BUILDING #2	1 SPACE/ 250 SF OF GROSS FLOOR AREA = 20 SPACES	20 SPACES
	1 SPACE/ 400 SF OF GROSS FLOOR AREA = 25 SPACES	25 SPACES
	COMPANY VEHICLES AND VISITORS	13 SPACES
		58 SPACES
	HANDICAP ACCESSIBLE = 3 SPACES	3 SPACES
	25% RESERVE = 15 SPACES (MAX)	10 SPACES



LOCUS MAP (NOT TO SCALE)

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REV.	DATE	DESCRIPTION	INIT.
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 Westborough, MA 01581
 508.366.6552
 508.366.4506 (fax)
 watermandesign.com wda@wdsassoc.com

PREPARED FOR:

HARTFORD REALTY TRUST OF SHREWSBURY
 RODERICK A. ST. PIERRE,
 & PAUL L. ST. PIERRE, TRUSTEES
 291 Grafton Street
 Shrewsbury, MA
 01545

TITLE:

**FEASIBILITY STUDY
 RETAIL/ OFFICE PARK**

**550 HARTFORD
 TURNPIKE**
 Shrewsbury, MA
 (Worcester County)

FOR DISCUSSION

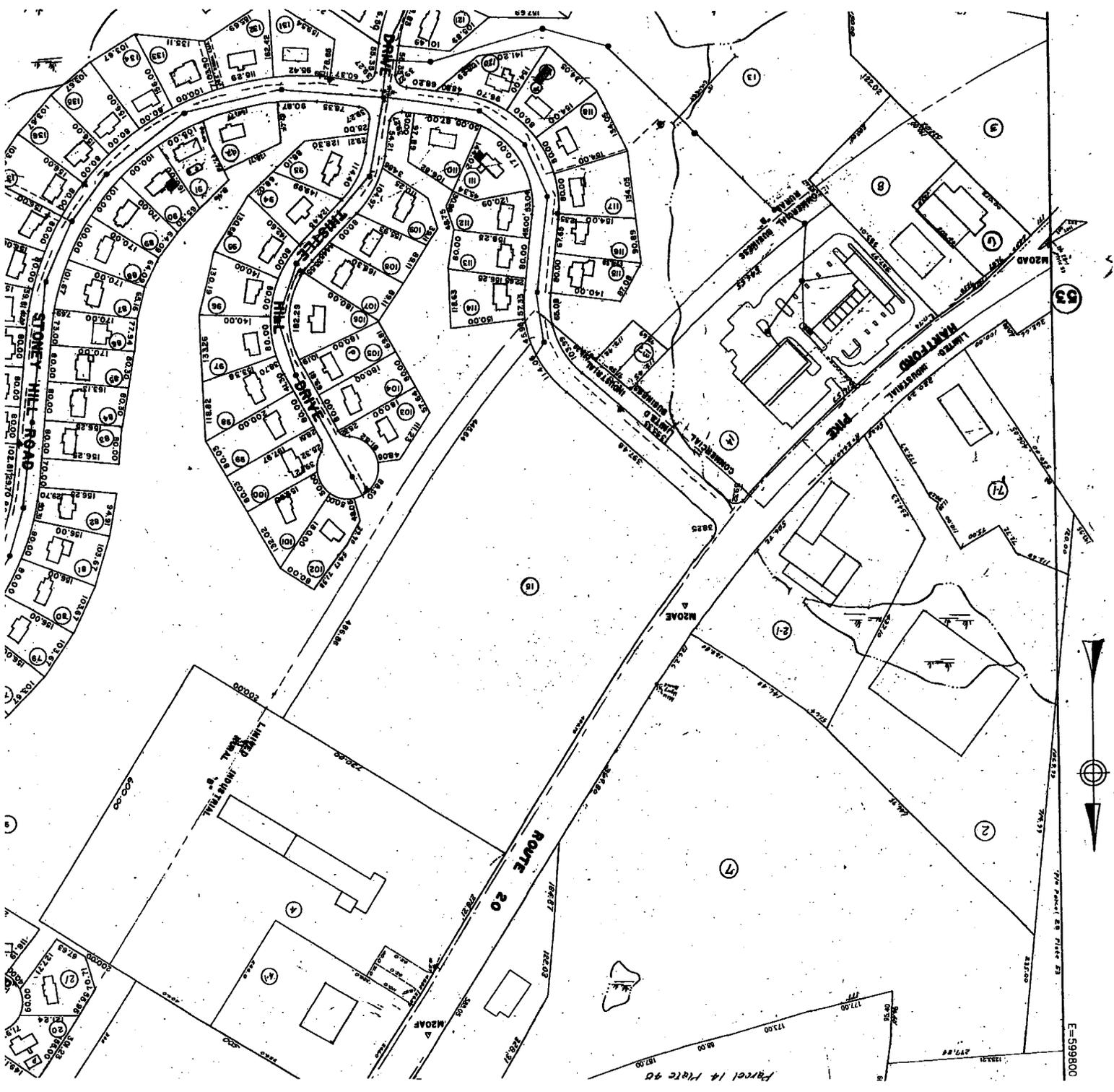
DATE:	02/10/09	SCALE:	1" = 40'
JOB NO.:	0413.01	DWN. BY:	
FILE NO.:	0413910	CHK'D. BY:	
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PLATE: 54
PLOT: 15



E-599800

SEWER CAPACITY

Below is a brief summary of information regarding the hydraulic capacity evaluation for the proposed 40B Property on Route 20:

System Description

The proposed development consists of an east and west residential property located on Route 20 in Shrewsbury between the eastern and western intersections of Stoney Hill Road and Route 20 (see attached Figure 1). Each property will include three buildings containing approximately 160 residential units. For the purposes of this evaluation it is estimated that the development will be comprised of 45 percent one bedroom, 45 percent two bedroom and 10 percent 3 bedroom units, with an estimated 60,000 gallons per day (gpd) of wastewater flow. This flow was divided up into 30,000 gpd for the east and west buildings.

The proposed sewer service connection for the west property will occur at the existing 8-inch gravity sewer (manhole 2E-96) to the Quail Hollow Pump Station which then pumps to the Stoney Hill Pump Station. The proposed sewer connection for the east property will occur at the existing 8-inch gravity sewer on Stoney Hill Drive (manhole 2E-127) and flow directly to the Stoney Hill Pump Station.

Wastewater is then conveyed to the gravity sewer (manhole 2E-16A) on Cherry Street near Route 20 and flows by gravity to the Cherry Street Pump Station. The sewer flow is then pumped to the gravity sewer at the intersection of Route 9 and South Street (See attached Figure 2). The gravity sewer then flows to the town's interceptor and on to the Westborough Wastewater Treatment Plant.

Weston & Sampson reviewed existing 2011 sanitary sewer flow monitoring data and updated existing hydraulic capacity analysis to evaluate the impact of the additional sanitary sewer flows on downstream gravity sanitary sewers and pump stations.

Hydraulic Capacity Analysis

Based on Landfill Pump Station data from 2009 (which was used at the time of the Weston & Sampson's Allen Properties Hydraulic Capacity Analysis), we estimated a flow of 95,000 gpd of average daily flow from the Landfill Pump Station. We now understand that the Landfill Pump Station flow has been redirected to the Walnut Street Pump Station and no longer discharges to these sewers. Based on the proposed wastewater flow of 60,000 gpd from the development, along with estimated existing flows, we performed a hydraulic capacity evaluation from sewer manhole 2E-16A to the Cherry Street Pump Station. A hydraulic capacity evaluation was also performed from sewer manhole 2B-25 to the interceptor.

The hydraulic capacity table was updated to reflect the removal of the Landfill Pump Station and addition of peak flows from the proposed development. There are still hydraulic deficiencies in some pipe segments that were verified with field inspection data from Weston & Sampson's Spring 2013 Year Three Infiltration Investigations and August 7, 2014 site visit. Existing flow estimates were based on the current pump station flows and verified with 2011 flow meter data.

In summary, we conclude the following (see Table 1 - Hydraulic Capacity Analysis):

Connection of West Building to Existing Gravity Sewers on Stoney Hill Drive Tributary to The Quail Hollow Pump Station.

- The segments in this tributary area contain the required capacity to handle estimated peak flows generated by the 40B property.

Quail Hollow Pump Station

- The pump station currently distributes approximately 45,000 gpd of average daily flow and 78,000 gpd of peak flow (see attached table). These flows were calculated using 2012 to 2014 pump station run-time data provided by the town.

- Based on our draw down test the pump station is currently operating below design rating.

Connection of East Building to Existing Gravity Sewers on Stoney Hill Drive Tributary to the Stoney Hill Pump Station.

- The segments in this tributary area contain the required capacity to handle estimated peak flows generated by the 40B property.

Stoney Hill Pump Station

- The pump station currently sees approximately 61,000 gpd of average daily flow and 121,000 gpd of peak flow. These flows were calculated using 2012 to 2014 pump station run-time data provided by the town.

- Based on our draw down test the pump station is currently operating below design rating.

Gravity Sewers from Stoney Hill Discharge to Cherry Street Pump Station and Cherry Street Pump Station Discharge to Town Interceptor

- The segments in this tributary area contain the required capacity to handle estimated peak flows generated by the 40B property.

Cherry Street Pump Station

- The pump station currently handles approximately 135,000 gpd of average daily flow and 462,000 gpd of peak flow. These flows were calculated using 2012 to 2014 pump station run-time data provided by the town.

- Based on our draw down test the pump station is currently operating above design rating.

Gravity Sewers from Cherry Street Pump Station Discharge to Town Interceptor

- The sewers of concern in Weston & Sampson’s Allen Properties Hydraulic Capacity Analysis remain in concern but are at no additional risk due to the proposed development peak flows. This is due to the redirection of the Landfill Pump Station discharge to the Walnut Street Pump Station. These segments are highlighted in red in the attached Figure 2.

Town Interceptor to former Wastewater Treatment Plant

- Minimum of 1MGD available capacity in all pipes downstream of proposed flow impact. No segments of concern.

Existing Wastewater Flow Summary

	Average Daily Flow (gpd)	Peak Flow (gpd)
Current Quail Hollow Pump Station Flow	45,000	78,000
Current Stoney Brook Pump Station Flow	61,000	121,000
Proposed 40B Development Flow	-	60,000
Current Cherry Street Pump Station Flow	135,000	462,000
Landfill Pump Station	95,000*	175,000*

*2009 Flow data provided by Town of Shrewsbury

Conclusions & Recommendations

- Pump Stations

- o Complete pump station evaluations of Quail Hollow, Stoney Hill and Cherry Street Pump Stations should be performed.

- o Developer should complete all existing and any new recommended repairs/upgrades.

- Pipeline Upgrades

- o May be necessary to handle proposed development peak flows.

Please let us know if you have any questions.

Thanks,

Pat

Patrick M. Cotton
PROJECT ENGINEER
Weston&Sampson®
5 Centennial Dr.
Peabody, MA 01960
www.westonandsampson.com
Mobile: 978-852-1927
Office: 978-532-1900 ext. 2404
Fax: 978-573-4119

The contents of this e-mail and any attachments are confidential and the property of the Weston & Sampson companies. The e-mail contents are only to be used by the intended recipient of the e-mail. If you are not the intended recipient then use, disclosure, copying, distribution or reliance on the e-mail is prohibited. All professional advice from us should be obtained in writing (not e-mail).

The contents of this e-mail and any attachments are confidential and the property of the Weston & Sampson companies. The e-mail contents are only to be used by the intended recipient of the e-mail. If you are not the intended recipient then use, disclosure, copying, distribution or reliance on the e-mail is prohibited. All professional advice from us should be obtained in writing (not e-mail).

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To: Fran Zarette

From: Nathan C. Brackett,
Nancy B. Doherty, P.E.

Date: May 1, 2014

Subject: Sight Distance Analysis, Shrewsbury, MA

Tetra Tech Inc., (TT) was retained by Mr. Zarette (Client) for professional engineering services to determine the feasibility of locating access points for two parcels of land in Shrewsbury, Massachusetts. Both parcels are being considered for residential development. The westerly parcel is located at the northeast quadrant of the Route 20 and Stoney Hill Drive (west leg) intersection. The easterly parcel is located at the southeast quadrant of the Route 20 and Stoney Hill Drive (east leg) intersection. For the purposes of this study the two parcels will be called West Parcel and East Parcel. Potential driveway placements were selected to maximize both intersection sight lines. Potential driveway sites are shown on Figure 1. This memorandum presents a summary of Tetra Tech's findings.

Methodology and Definitions

Both parcels under consideration for residential development are located along a wide section of Route 20 with an approximate grade of 2 percent to 9 percent and a posted speed of 50 mph¹. These present challenging conditions for driveway placement. Tetra Tech staff first walked the Route 20 frontage of both parcels to ascertain the location of a driveway which would provide the longest sight lines, both for vehicles approaching and exiting the driveway. A similar exercise was conducted for the parcel's Stoney Hill Drive frontages. Once potential driveway sites were established, detailed measurements were made of available stopping and intersection sight lines for site. The definition and criteria for measuring and evaluating each of these types of sight lines are presented below. Additionally, travel speed measurements were taken in the vicinity of the two parcels on Route 20 and on Stoney Hill Road. The data was obtained for a two day period beginning Tuesday, April 15, 2014. The speed data is necessary to determine if the measured sight lines are adequate.

Stopping Sight Distance

Definition. Stopping sight distance (SSD) is the length of roadway ahead which is visible to the driver. The minimum sight distance available on a roadway should be sufficiently long enough to enable a vehicle to stop before reaching a stationary object in its path. SSD includes the length of roadway traveled during the perception and reaction time of a driver to an object in a road, and the distance traveled during braking.

¹ As this study was performed without ground survey information, any data related to the steepness of slopes is based on measurements taken from Google Earth Pro mapping software and should be considered as approximate.

Stopping sight distance criteria are defined by AASHTO² based on design speeds, anticipated driver behavior and vehicle performance, as well as physical roadway conditions.

Measurement Criteria. Per AASHTO guidelines, the stopping sight lines are measured with an eye height 3.5 feet above the road surface. The distance at which a 2-foot tall object located in the road is visible is measured for each approach to the study location.

AASHTO Recommendation. The stopping sight distance recommendation for the major road approach to the intersection is based on the measured 85th percentile travel speed and approach grade.

Intersection Sight Distance

Definition. Intersection sight distance (ISD) is the length of roadway which is visible to a driver stopped on a minor road (or driveway) approach to an intersection. More specifically, AASHTO indicates that intersection sight distance should be long enough for drivers exiting a driveway to accelerate from a stop and complete the required maneuver (a left turn for purposes of this study) without unduly interfering with traffic on the major street.

Measurement Criteria. Per AASHTO guidelines, the intersection sight lines are measured on the minor approach with an eye height 3.5 feet above the road surface and 14.5 feet from the edge of traveled way on the major street. The distance at which a 3.5 foot tall vehicle is visible is measured.

AASHTO Recommendation. The intersection sight distance recommendation for a left turn maneuver is based on the 85th percentile travel speeds on the major street and the approach grade on the minor street. The desirable sight distance should exceed stopping sight distance. However, AASHTO indicates that "if the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions". In other words, ISD can be at a minimum equal to SSD.

West Parcel

West Parcel is located at the north corner of the intersection of Stoney Hill Road and Route 20. At this location Route 20 travels in an approximate east-west direction and is comprised of two travel lanes eastbound (a through lane and a climbing lane) and one lane westbound. Stoney Hill Road provides one travel lane in each direction.

The speed data indicates that in the vicinity of West Parcel, the 85th percentile travel speed along Route 20 is approximately 55 mph and on Stoney Hill Road is 33 mph. Eighty-fifth percentile speeds are shown by direction on Figure 1 and summarized in Table 1. Speed data sheets are attached.

Based on a visual inspection of the parcel's frontage, it was determined that the optimum location for potential driveways were as follows:

- Route 20: 425 feet east of Stoney Hill Road
- Stoney Hill Road: 275 feet south of Route 20.

Approximate grades along Route 20 and Stoney Hill Road at these locations and the AASHTO recommended Stopping and Intersection sight distances for these grades and the measured speeds are provided in Table 1.

The sight lines were measured on Friday, April 25, 2014 and these results are also provided in Table 1.

Photographs of each the measured sight lines are attached.

² *A Policy on Geometric Design of Highways and Streets, 6th Edition*, (American Association of State Highway and Transportation Officials, 2011)

Table 1 West Parcel Sight Distance Measurements (SSD and ISD)

Intersection	85 th Percentile Speed (mph)	Approx. Grade	AASHTO Desirable (feet)	Measured Distance (feet)	Meets AASHTO Desirable?
Route 20 Driveway Site					
<u>Stopping Distance</u>					
From the East	52	-9%	541	>700	Yes
From the West	55	+3%	469	>700	Yes
<u>Intersection Sight Distance</u>					
To the East	52		612	>700	Yes
To the West	55		647	>700	Yes
Stoney Hill Road Driveway Site					
<u>Stopping Distance</u>					
From the North	32	-8%	245	from Rte. 20	Yes
From the South	33	+6%	210	345	Yes
<u>Intersection Sight Distance</u>					
To the North	32		353	to Rte. 20	Yes
To the South	33		364	335	No

Conclusions. Based on the measured travel speeds, the number of travel lanes, the approximately grades on Route 20 and a level driveway, the sight lines measured at the West Parcel Route 20 driveway site, appear to meet AASHTO standards. Annual clearing of shrubbery and trees may be required to maintain adequate sight lines.

Due to the grades and curving alignment of Stoney Hill Road, the intersection sight distance at the Stoney Hill Road site driveway fails to meet the AASHTO minimum distance to the south. As the driveway site is at the top of a hill and proceeds downhill to the south, shifting the driveway site to the north would actually reduce the intersection sight line to the south. However, it is noted that the measured intersection sight line exceeds the Stopping Sight Distance requirement of 210 feet. Thus, if a vehicle did pull out of the Stoney Hill Road driveway unexpectedly, a vehicle proceeding towards the driveway from the south would sufficient time to either decelerate or even come to a stop.

East Parcel

East Parcel is located at the south corner of the intersection of Stoney Hill Road and Route 20. At this location Route 20 travels in an approximate east-west direction and is comprised of a single lane and wide shoulder in each travel direction. Stoney Hill Road provides one travel lane in each direction.

The speed data indicates that in the vicinity of East Parcel the 85th percentile travel speed along Route 20 is approximately 50 mph and on Stoney Hill Road is approximately 32 mph. Eighty-fifth percentile speeds are shown by direction on Figure 1 and summarized in Table 2. Speed data sheets are also attached.

Based on a visual inspection of the parcel's frontage, it was determined that the optimum location for potential driveways were as follows:

- Route 20: 190 feet west of Stoney Hill Road
- Stoney Hill Road: 320 feet south of Route 20.

Approximate grades along Route 20 and Stoney Hill Road at these locations and the AASHTO recommended Stopping and Intersection sight distances for these grades and the measured speeds are provided in Table 2.

The sight lines were measured on Friday, April 25, 2014 and these results are also provided in Table 2. Photographs of each the measured sight lines are attached.

Table 2 East Parcel Sight Distance Measurements (SSD and ISD)

Intersection	85 th Percentile Speed (mph)	Approx. Grade	AASHTO Desirable (feet)	Measured Distance (feet)	Meets AASHTO Desirable?
Route 20 Driveway Site					
<i>Stopping Distance</i>					
From the East	50	-2%	438	>700	Yes
From the West	51	+3%	417	>700	Yes
<i>Intersection Sight Distance</i>					
To the East	50		600	>700	Yes
To the West	51		588	>700	Yes
Stoney Hill Road Driveway Site					
<i>Stopping Distance</i>					
From the North	29	-5%	201	From Rte. 20	Yes
From the South	32	+5%	203	550	Yes
<i>Intersection Sight Distance</i>					
To the North	29		320	To Rte. 20	Yes
To the South	32		353	232	No

Conclusions. Based on the measured travel speeds, the number of travel lanes, the approximately grades on Route 20 and a level driveway, the sight lines measured at the East Parcel driveway site appear to meet AASHTO standards.

Due to the grades and curving alignment of Stoney Hill Road, the intersection sight distance at the Stoney Hill Road site driveway fails to meet the AASHTO minimum distance to the south. As the driveway site is just north of an S shaped curve on Stoney Hill Drive, shifting the driveway site further south would improve sight lines to and from the south; however this is not recommended since it would reduce both intersection and stopping sight distances to and from Route 20. It is noted that the measured intersection sight line to the south does exceed the Stopping Sight Distance requirement of 203 feet. Thus, if a vehicle did pull out of the Stoney Hill Road driveway unexpectedly, a vehicle proceeding towards the driveway from the south would sufficient time to either decelerate or even come to a stop.

Summary

As requested, Tetra Tech has conducted sight distance analyses for potential driveway sites for two parcels on Route 20 under consideration for residential development. The analyses indicate that adequate sight lines are available for potential driveway locations along Route 20 at both sites. Sight lines for driveway sites on Stoney Hill Road were limited at both parcels by the roads alignment, but meet minimum requirements.

Although not addressed in this sight distance analysis, the existing two-way volume on Route 20 during peak commuting hours is approximately 1,900 vehicles per hour. Vehicles exiting from a future driveway and turning left onto Route 20 during these peak periods may incur long delays, which typically results in drivers accepting shorter gaps in traffic. This may have safety implications.

Attachments: West Parcel Speed Data and Photographs, East Parcel Speed Data and Photographs

P:\76351\143-76351-14001\Docs\Reports\2014.05.05 Sight Distance Memo\Final Sight Distance Memo.docx

DEVELOPER BIOGRAPHICAL SYNOPSIS

FRANCIS P. ZARETTE, P.E.

625 South Street
Shrewsbury, MA 01545
774-275-0414

Background:

- Born 1949, Worcester, MA
- Shrewsbury, MA Resident – 1976 to Present
- Jr. Engineer, Town of Shrewsbury Engineering Department – 1968 to 1971
- Environmental Project Engineer, Bay State Abrasives/Westborough, MA – 1972 to 1981
- Sales Manager, Commonwealth Gas Company, MA – 1981 to 1985
- Self-Employed, Real Estate Developer/Professional Engineer – 1985 to present

Education:

- Worcester Public Schools, Worcester, MA
- Bachelor of Science Degree in Civil Engineering, Northeastern University, Boston, MA (1972)
- Master of Science Degree in Civil Engineering, Worcester Polytechnic Institute, Worcester, MA (1978)
- Graduate School of Industrial Management, Worcester Polytechnic Institute, Worcester, MA (1984)

Professional:

- Registered Professional Engineer, Commonwealth of Massachusetts
- Registered Professional Engineer, State of New Hampshire (Inactive)
- Member of American Society of Civil Engineers & Boston Society of Civil Engineers
- Vice-Chairman, Westborough/Shrewsbury Treatment Plant Board
- Licensed Real Estate Broker, Commonwealth of Massachusetts
- Licenses Construction Supervisor, Commonwealth of Massachusetts

Business Affiliations:

- Former President, Zarette Realty Trust, Shrewsbury, MA
- Manager/Member, Active Adult Communities, LLC, Shrewsbury, MA
- Former President, Land Design, Inc. Civil and Consulting Engineers, Shrewsbury, MA
- Manager, 346 Turnpike, LLC, Westborough, MA
- Manager/Partner, Westborough Village, LLC, Westborough, MA
- Manager, Smart Growth Design, LLC, Westborough, MA

Developer:

- Westbrook Crossing, 73 units (Active Adult condominiums), Shrewsbury, MA
- Walker Meadow, 100 units (Active Adult condominiums), Westborough, MA
- Real Estate & Marketing Consultant and Engineering Consultant, Orchard Meadows, 110 units (Active Adult Community), Shrewsbury, MA
- Westboro Village, T.O.V. Project, Permitted, 300 condominium units, Westborough, MA
- Westborough Woods, Chp. 40B, 250 unit apartment complex, Westborough, MA
- Mixed-use Condominium Complex 20 units, currently under design for permits, Westborough, MA

SECTION 1: #4 OUTLINE OF DEVELOPMENT TEAM

Applicant

Smart Growth Design, LLC
625 South Street
Shrewsbury, MA 01545
Phone: (774) 275-0414
Fax: (508) 842-1415
Email: fzarette@gmail.com

Civil Engineering

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Senior Engineer
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Westborough, MA 01581
Phone: (508) 366-6552
Fax: (508) 366-6506
www.watermandesign.com

Architect

Peter W. Bartash
Project Coordinator
CUBE 3 Studio, LLC
360 Merrimack Street
Building 5, Floor 3
Lawrence, MA 01843
Main: (978) 989-9900 x52
Direct: (978) 379-8752
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Legal Counsel

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Traffic Consultant

Nancy B. Doherty, P.E.

Senior Project Engineer

Tetra Tech / Engineering & Architecture Services

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www.tetrattech.com

Affordable Housing/40B Consultant

SEB, LLC

Robert Engler

165 Chestnut Hill Ave. #2

Brighton, MA 02135

T: (617) 782-2300 x 201

F: (617) 782-4500

rengler@s-e-b.com

www.s-e-b.com

Section 1: #3 Experience of the Sponsor

Project Summary	Project #1	Project #2	Project #3	Project #4	Project #5	Project #6
Community	Shrewsbury	Westborough	Shrewsbury	Westborough	Westborough	Westborough
Housing Type	Active Adult Condos	Active Adult Condos	Active Adult Condos	Condominiums - Transit Oriented Development	Apartments - 40B	Mixed use Commercial Buildings and Residential Cottage Condominiums
Number of Units	73	100	110	300	250	20
Total Development Costs	\$15,000,000	\$30,000,000	\$32,000,000	\$45,000,000	\$35,000,000	\$9,000,000
Year Completed	1996	2002	2008	On-Going	Startup	In Permit Stage
Role	Developer	Developer	Marketing Consultant and Engineer	Permitted and then sold to Toll Brothers	Permitted and then sold to Toll Brothers	Plan to Develop Project and sell Condominiums, Developer

MHP FINANCIAL INFORMATION FOR PEL APPLICATIONS

LIST OF BANK FINANCIAL REFERENCES (or other lending company of individual)							Total Amount Borrowed	Purpose of the Loan	Loan Balance
Name and Address of Reference	Contact Person	Phone Number	Fax Number	Email Address					
Marlborough Savings Bank 81 Granger Blvd. Marlborough, MA 01752	Christopher Berglund, V.P.	(508) 460-4154	(508) 481-2673	cberglund@agreatbank.com			\$600,000 \$525,000	Loan for entitlements (loan closed) Loan for land acquisition (open)	\$0.00 \$425,000
Commonwealth National Bank (now United Bank) 33 Waldo Street, Worcester, MA	Charles Valade, V.P.	(508) 752-4800	(508) 793-8321	cvalade@bankatunited.com			\$5,500,000 \$6,000,000 \$3,300,000 (three different loans on three different projects)	Land acquisitions and permitting (all loans have closed)	\$0.00 \$0.00 \$0.00
Commerce Bank and Trust Co., Worcester, MA	Michael Crawford, V.P.	(508) 797-6950	(508) 797-6869	mcrawford@bankatcommerce.com			\$1,300,000	Land acquisitions and permitting (loan is closed)	\$0.00
Various Investors	Confidential	-	-	-			\$1,000,000	Land entitlements (loan closed)	\$0.00

CUBE 3 Studio: Company Information



Why CUBE 3 Studio?

Market- Rate Residential Experience: Over 4,500 residential units built or in construction. Over 17,000 residential units designed.

Planning and Zoning Approvals: 15 Approved projects within the Boston Metro area in the last several years

Corporate Experience: \$300 M of corporate construction designed by CUBE 3 Studio in the past four years

Mill Repositioning: Over 750,000 sf of mill repositioning in Lawrence, MA & Manchester, NH

Sustainability: \$623 M worth of construction completed under LEED, Energy Star, or EarthCraft rating systems

Parking: CUBE 3 Studio has been an industry leader in podium construction and residential shared parking strategies

Retail: Diverse portfolio of design work including lifestyle centers and regional malls

Master Planning: Wide range of experience including downtown center master planning, academic campus, corporate campus, healthcare campus, and neighborhood development

Philosophy

CUBE 3 Studio is a dynamic and responsive design firm with the vision and conviction to provide thoughtful design solutions. We embrace the vision of our clients, and deliver outstanding documentation on time – every time. Our commitment and dedication to our work ensures that we will deliver the best design value and overall working experience to our clients.

While design excellence and innovation are the ultimate goals of our practice, integrity and reliability are the cornerstones on which we approach a wide range of architectural, interior design and planning challenges for our clients. We bring a developers mentality to each project and have a keen understanding of value driven design

The Firm

Nicholas Middleton and Brian O'Connor, the founding partners of CUBE 3 Studio, started the firm after working as a team at one of Boston's leading architectural and interior design firms. Each brings singular strengths to the firm while having a wide range of experience and a solid reputation for excellence. The firm has emerged as one of the fastest growing design firms in the United States being ranked by Inc. 500 | 5000 for the past four years and has established a national reputation as a powerful new design force. With complimentary talents and an extremely diverse staff, the firm is able to easily accommodate a wide range of needs, resulting in multi-dimensional practice that meets a diversity of needs.

Inc.
500

Inc.
500

CUBE3
STUDIO
architecture
interiors
planning

CUBE 3 Studio: Company Information



Architecture

Innovative thinking, design creativity, and uncompromising attention to detail allow us to create buildings and interior spaces that have lasting value. Our highly evolved process leads to design solutions that improve quality of life and are firmly grounded in economic reality. By partnering with our clients, we are able to provide customized design services that consistently exceed expectations. We work with developers to create a unique brand reflective of the project goals and appropriate for the context of each individual project and client.



Interiors

Our dynamic interior environments are designed to provide comfortable, vibrant and cost-efficient spaces that do not compromise on quality. An open design process and clear communication allows us to respond directly to client goals, finding unique solutions that stand the test of time. Our interior design process is fully integrated with the overall planning and architectural design of each project to ensure that a consistent design language is carried inside and out.



Planning

Effectively shaping the future development of our cities, towns, and communities requires the ability to define clear goals, so that solutions not only enrich the quality of life, but also provide far reaching social and economic benefits.

Our planning approach is based on rigorous site analysis, sensitivity to the project context, and a keen awareness of our environmental responsibility. We strive to build consensus and provide solutions that are bold and achievable. Whether a standalone building or an entire neighborhood development, we weave the new with the old to enhance the community as a whole and bring vibrancy to those who experience their built surroundings.

CUBE 3 Studio is a fully integrated Architecture, Interiors and Planning firm with a wide variety of in-house capabilities. Our talented staff offers a unique blend of market specialists, technical experts, innovative thinkers, and problem solvers. Through this collaboration we are able to offer the following design services:

Design Services

- Programming
- Comparative site analysis
- Urban design
- Interior design
- BIM Integration
- Code review and analysis
- 3D and animation
- Presentation graphics
- Workplace standards
- Graphic and signage design
- Conceptual planning
- Master planning
- Architectural design
- LEED certification
- Web development
- Fit plans
- Furniture selection



Residential Experience

Project Name	Master Planning	Construction Documents	In Construction	Completed
Abbott Housing - Manchester, NH	200			200
2 Line Drive - Manchester, NH	36			
Gutierrez Development - Stoneham, MA	35			
Mill Creek - Natick Mews - Natick MA			150	
Mill Creek - The Acres - Hopkinton, MA	250			
Mill Creek - Medford MA		297		
JPI - Jefferson at Ashland Station - Ashland, MA	500	500		
JPI - Walpole, MA	210			
JPI - Cranston, RI	196			
JPI - Hamden, NJ	255			
Oaktree Development - Belmont, MA	125			
Criterion Development Partners - Village at Taylor Pond - Bedford, MA	188	188		188
Criterion Development Partners - Village at Taylor Pond II - Bedford, MA	12	12		
Criterion Development Partners - Residences at River's Edge - Medford, MA	220	220		220
Criterion Development Partners - Medford II - Medford, MA	218			
Criterion Development Partners - Mystic Valley Parkway - Medford, MA	165	165	165	
Criterion Development Partners - VOX on two - Cambridge, MA	227	248		248
Criterion Development Partners - Binney Street - Cambridge, MA	155			
Criterion Development Partners - Riverbend on the Charles, Watertown, MA	170	170		170
Criterion Development Partners - Watertown II - Watertown, MA	27		27	
Criterion Development Partners - Waltham Street - Watertown, MA	244			
Criterion Development Partners - Natick, MA	150	150		
Criterion Development Partners - Natick II - Natick, MA	140			
Criterion Development Partners - Norwood, MA	210			
Criterion Development Partners - Morristown, NJ	84			
Criterion Development Partners - Winchester, MA	200			
Criterion Development Partners - Quincy, MA	160			
Criterion Development Partners - Westbrook, MA	220			
Criterion Development Partners - Somerville, MA	150			
Criterion Development Partners - Atlanta, GA	250			
Criterion Development Partners - Weymouth, MA	338			
Criterion Development Partners - Woburn, MA	210			
Criterion Development Partners - Stoughton Crossing - Stoughton, MA	159			
Criterion Development Partners - Needham, MA	320			
Criterion Development Partners - Needham II - Needham, MA	269			
Criterion Development Partners - Hanover, MA	248			
Criterion Development Partners - Aberdeen, NJ	340			
Criterion Development Partners - Linden, NJ	208			
Criterion Development Partners - Hanover, NJ	224			
Criterion Development Partners - Stoneham, MA	352			
Criterion Development Partners - Waltham, MA	250			
Criterion Development Partners - Riverside Station, Newton, MA	290			
Criterion Development Partners - Merrit Corporate Woods - Milford, CT	150			
Criterion Development Partners - Arlington, MA	170			
Criterion Development Partners - Saugus, MA	300			
Criterion Development Partners - Greenway Commons - CT	180			
Criterion Development Partners - Westchester, PA	200			
Criterion Development Partners - Medford, MA	228			
Criterion Development Partners - Northpoint - Cambridge, MA	208			
Criterion Development Partners - Cross Street Residential	121			
Wood Partners - Alta Brigham Square, Arlington, MA	116	116		116
Wood Partners - Alta at Legacy Farms, Hopkinton, MA	240	240		240
Wood Partners - Wakefield, MA	176	176	176	
Wood Partners - Somers, NY	24			
Forest City - Lynn, MA	400			
Forest City - Lawrence, MA	600			
Forest City - Bridgeport, CT	90			
Forest City - Stratford, CT	128	128		128
Forest City - Pacific Mills - Lawrence, MA	374			
Liscotti Development, Woodland Townhomes - Manchester, NH				4
Cabot Cabot & Forbes - Fawcett Street Phase I - Cambridge, MA	260	260		260
Cabot Cabot & Forbes - Fawcett Street Phase II - Cambridge, MA	169	169	169	
Cabot Cabot & Forbes - Reading, MA	240			
Cabot Cabot & Forbes - Jamaica Plain, MA	260			
Cabot Cabot & Forbes - Winchester Street - Newton, MA	132			
Cabot Cabot & Forbes - Lexington, MA	257			
Cabot Cabot & Forbes - Westwood, MA	296			
Cabot Cabot & Forbes - North Quincy, MA	310	310		
Cabot Cabot & Forbes - Moulton St - Cambridge, MA	220			
Cabot Cabot & Forbes - Huntington Ave - Cambridge, MA	250			
The Hanover Company - CambridgePark Residential - Cambridge, MA	398	398	398	
Westboro Mixed Use - Westboro, MA	200			
National Development - Aborpoint at Lynnfield - Lynnfield, MA	180	180		180
TRC - Hingham, MA	248			
Nordblom - Littleton, MA	210			
Lazarus House, Lawrence, MA	28	28	28	28
Haven Real Estate Group - Baystate Residential - Lawrence, MA	30			
Hines - Current on the Charles - Waltham, MA	200	200	200	
Hines - Totten Pond - Waltham, MA	308			
Hines - Mishawum Station - Woburn, MA	260			
Hines - Marina Bay		382		
RJ Finlay - Bedford, NH	260			
RJ Finlay - Hopkinton, MA	160			
New England Development - Chestnut Hill Square	70			
EA Ventures - Canal Street Residential - Lawrence, MA	233			
Stapinski - Canal Street - Lawrence, MA	110			
Royale Shores - Hampton, NH	92			
Boylston Properties - Watertown, MA	181			
Larkin - Sea Breeze Estates - Gloucester, MA	46			
Zarette - Westborough Woods, Westborough, MA	250			
	17,768	4,537	1,313	1,994



Tetra Tech



Tetra Tech offers a full complement of land development services, from acquisition due diligence through planning, permitting, design and construction management. We have particularly strong capabilities in fulfilling design/build and on-call engineering services contracts in a timely and cost-effective manner.

Tetra Tech's ability to provide unmatched client service with an eye toward constructability sets us apart from other firms. By involving experienced construction managers in the design process and field-training our design staff, we are able to streamline the development process and ensure a smooth transition to construction.

Tetra Tech's site/civil engineering team collaborates with clients to select, design and develop a wide range of facilities and infrastructure. We offer technical expertise, full knowledge of best practices and applicable laws, regulations and codes; and seasoned management to guide even the most challenging land development programs to fruition. Tetra Tech's multi-phased services include:

- Site feasibility studies
- Survey
- Acquisition due diligence
- Property condition assessment
- Site plan review and design
- Land use planning
- Facility/infrastructure design and engineering
- Federal, state and local permitting
- Procurement assistance
- Bidding and contractor negotiations
- Construction cost estimates
- Construction oversight
- Owner's representation
- Peer review
- Public involvement support

Representative Experience

Boston College

Full land development services for campus expansion since 1999

Foxrock Properties, LLC

Planning and design services for the South Shore Medical Center's 28-acre campus development in Norwell, which includes a new 80,000-sf building

Federal Bureau of Prisons

Multidisciplinary services for the design/build of a 700-acre prison complex in NH

Gale International

Fast-track engineering and environmental permitting services for the Seaport Square waterfront development in Boston

Genzyme Corporation

Land development services, including design/build, for corporate, manufacturing and R&D facilities

Lowe's Home Improvement Centers

Initial feasibility/due diligence analysis for potential locations and complete development services from conceptual planning, engineering, design and permitting through construction compliance

Preotle, Lane & Associates, LLC

Final site plans for the River's Edge mixed-use development along the Malden River

The Hanover Company

Planning, engineering, design and construction services for a 350-unit 40B project in Needham

Various Public Agencies

On-call engineering design and review services for a variety of construction, utility, parking access and utility projects. Current clients include the Towns of Ashburnham, Hubbardston, Malden, Medway and Westminster, the Cities of Cambridge and Quincy, and the Massachusetts Convention Center Authority



Tetra Tech
8th
Largest
Design Firm

About Tetra Tech

Tetra Tech is the 8th largest design firm in the United States and a leading provider of consulting, engineering and technical services worldwide. With \$2.6 billion in annual revenue, our firm employs more than 13,000 associates in 330 offices across the globe. Tetra Tech's solutions for government, commercial and institutional clients span the entire lifecycle from concept through construction. For more than 40 years, we have guided multidisciplinary projects to successful completion, with particular expertise in:

- Land Development
- Architecture
- Remediation, Assessment and Compliance
- Transportation
- Natural Resources
- Water and Wastewater

Tetra Tech's integrated services are not only technically sound, but responsive to each client's "big picture" in terms of cost and schedule controls, regulatory issues and stakeholder involvement.

As a one-stop source for all project needs, we offer a winning combination of industry-leading corporate resources and local capabilities. In New England, Tetra Tech enjoys a strong regional presence with 12 offices and more than 500 technical staff

Tetra Tech is a trusted partner in land development and offers responsive multidisciplinary services.

Architecture

Tetra Tech's services encompass the full spectrum of high performance building design and construction, across every building market—from commercial and residential buildings, to government and educational facilities, to local community infrastructure projects. Our architecture professionals work collaboratively with in-house engineers to ensure energy efficiencies, water conservation, safety and accessibility, sustainability, functionality, and operational effectiveness over the life of each building. We also provide specialized design support services for design/build project delivery. In addition, Tetra Tech's interior design professionals excel at creating inviting, cheerful, supportive spaces using proven, durable, maintainable, and cost-effective materials, finishes and details.

Remediation, Assessment and Compliance

Tetra Tech is unique in its ability to maximize opportunities for urban renewal and economic revitalization by managing the environmental aspects of land development. Our team of Licensed Site Professionals (LSPs), geologists, environmental engineers and compliance specialists informs every step of land development from proper selection of site and end-use options to assessment and remediation of hazardous materials in soil, groundwater and building materials. We have particular expertise in the design of construction-sequencing strategies that minimize mitigation costs.

Transportation

Tetra Tech's planners and designers address the transportation access, mobility and safety issues associated with land development programs. We assess existing conditions, forecast future capacity needs and then bridge any gap that exists between the two with on- and off-site parking, roadway and traffic signal improvements. Our services help maximize development potential by relieving traffic congestion and creating synergy among all modes of travel.

Natural Resources

Tetra Tech specializes in environmental planning and permitting for land development, transportation, remediation, and water and wastewater programs. We offer expertise in wetlands, erosion control, stormwater management, the Chapter 91 Waterfront Act and US Coast Guard bridge permitting. Tetra Tech also prepares Stormwater Pollution Prevention Plans (SWPPPs) in support of National Pollutant Discharge Elimination System (NPDES) general permits for construction activities. In addition, Tetra Tech's certified inspectors assist with local, state and federal permit compliance.

Water and Wastewater

Tetra Tech has unmatched capabilities in utilities planning, design, permitting and construction. Our engineers and scientists develop water, wastewater and stormwater drainage systems that maximize the use of existing infrastructure while providing the level of service necessary to support development. We design on- and off-site utility improvements with an eye toward minimizing capital and O&M costs, including stormwater low impact development (LID) solutions.



Tetra Tech's residential project roster includes single and multi-family homes, condominiums, subdivisions, and affordable housing projects. Much of the development effort is expended in obtaining local permits and approvals for subdivision, zoning variances or special permits, and wetlands protection. Our experienced engineers, planners, landscape architects and environmental specialists can effectively address the many issues raised by residential projects. Clients gain direct economic benefit from Tetra Tech's designs, which make optimal use of available land, and through our knowledge and accurate preparation of permit filings, which can expedite the public and regulatory approval process. Following is a sample of multi-family residential projects undertaken by our firm:

- The Pinehills, Plymouth, MA (300-acre golf/residential community)
- Lenox Farms, Braintree, MA (338-unit luxury apartment community)
- The Lodge, Ames Pond, Tewksbury, MA (364-unit apartment community)
- Arsenal Street, Watertown, MA (420 rental units)
- Madison Place, Shrewsbury, MA (120-unit, 40B residential development)
- The Residences at Johnson Farm, Sudbury, MA (56-unit, 40B townhouse condominium development)
- Charles River Landing, Needham, MA (350-unit residential development)
- Fairfield Residential, Marlborough, MA (306-unit apartment community)
- Fairfield Residential, Dedham, MA (40B apartment community)
- West Village, Mansfield, MA (200-unit residential community)
- Willowbend, Mashpee, MA (residential community and golf course)
- Hanson, MA (affordable housing project)
- Archstone Communities, Danvers, Framingham, Methuen, Reading and Woburn, MA (apartment communities)
- Criterion Development, Medford, MA (220- and 282-unit apartment communities)
- O'Neill Properties, Belmont, MA (299-unit residential community)

HIGHLIGHTS

- Residential project roster includes single and multi-family homes, condominiums, subdivisions, and affordable housing projects
- Balancing public/regulatory needs and development objectives
- Obtaining local permits and approvals for subdivisions, zoning variances or special permits, and wetlands protection

SEB Client List

SEB, as a Marketing/Lottery Agent, has represented more units of affordable housing than any entity in Massachusetts. SEB's experience as a Lottery Agent reflects its ability to successfully serve a diverse portfolio of clients and developments– from large rental properties to small for-sale projects . With increasing oversight and regulation associated with the affordable housing lottery process, it is critical for the developer to work with a Lottery Agent with the experience not only in conducting lotteries, but an understanding of how the lottery process works within the overall development process.

Representative Project Experience

Rental Developments

<i>Project Location</i>	<i>Project Name</i>	<i>Developer/Manager</i>	<i>Total Units</i>	<i>Affordable Units</i>	<i>Permit</i>
Arlington	Arlington 360	Arlington 360 LLC		26 & 9 middle income	Special Permit
Arlington	Alta Brigham Square	Wood Partners	116	17	LIP
Boston	West Square Apartment	Lincoln Property	255	33	Special Permit
Concord	Concord Mews	Mill Creek Residential	350	88	40B
Holden	Reserve at Salisbury	Reserve at Salisbury, LLC	192	48	40B
Hopkinton	Alta Legacy Farms	Wood Partners	240	60	Special Permit
Melrose	Alta Stone Place	Wood Partners	212	19	Special Permit
Waltham	Watch Factory Lofts	Berkeley Investments	240	24	Special Permit
Bellingham	Jefferson @ Bellingham	Lincoln Property Company	285	72	40B
Foxboro	The Lodge @ Foxboro	The Hanover Company/UDR	250	63	40B
Needham	Charles River Landing	The Hanover Company/UDR	350	88	40B
Natick	Cloverleaf	Forest Properties	183	46	40B
Westborough	Flanders Hill	Lincoln Property Company	280	70	40B
Quincy	Neponset Landing	The Dolben Company	280	28	Special Permit
Braintree	The Ridge @ Blue Hills	The Hanover Company/UDR	188	47	40B
Tewksbury	The Lodge @ Ames Pond	The Hanover Company/UDR	364	91	40B
Stamford, CT.	The Glenview House	Lincoln Property Company	146	14	Special Permit
Foxboro	Chestnut Green	Feeling Foxy LLC	55	14	Special Permit
North Reading	Edgewood	Lincoln Property Company	406	102	40B
Medford	Wellington Place	Abbott Real Estate Development	137	5	Special Permit
Franklin	The Residences @ Union Place	Lincoln Property Company	300	75	40B
Methuen	Summit Place	The Dolben Company	280	70	40B
Boston	Boston Common *	Archstone-Smith	412	46	Special Permit

SEB Client List

Representative Project Experience

Rental Developments (continued)

<i>Project Location</i>	<i>Project Name</i>	<i>Developer/Manager</i>	<i>Total Units</i>	<i>Affordable Units</i>	<i>Permit</i>
Westford	Princeton Westford	Princeton Property	200	40	40B
Westwood	Gables University Station	Hanover	350	69	Special Permit
Medford	Residences on the Mystic	Criterion Development Partners	163	16	Special Permit
Wakefield	Everly	Wood Partners/ Behringer Harvard Residential	186	32	Special Permit
Waltham	Acadia on the Charles	Hines	200	20	Special Permit
Waltham	Moody & Main on the Common	Northland Investments	269	29	Special Permit
Watertown	Alta at the Estate	Wood Partners	155	16	Special Permit
Watertown	Watertown Mews	Mill Creek Residential	206	32	Special Permit
Concord	Warner Woods	Warner Woods LLC	80	16	40B
Waltham	The Ridge	LPC Indian Ridge	264	66	40B
Peabody	14 North	UDR	387	77	40B
Stoughton	Alta at Indian Woods	Wood Partners	154	39	40B
Reading	30 Haven Street	Oaktree Development	53	11	40B
Stoughton	Lodge @ Stoughton	UDR/Lincoln Property	240	60	40B

Homeownership Developments

<i>Project Location</i>	<i>Project Name</i>	<i>Developer/Manager</i>	<i>Total Units</i>	<i>Affordable Units</i>	<i>Permit</i>
Hingham	BackRiver Townhomes	Hastings Company	45	5	Special Permit
Natick	The Natick Collection	GGP Natick Residence LLC	250	48	Special Permit
Barnstable	Schooner Village	Bayberry Building	29	11	40B
Bridgewater	Cassidy Place	Diamond Realty	20	5	40B
Milford	Beaver Pond Commons	AFCO Land & Development	88	22	40B
Berlin	Sawyer Hill Co-Housing	Sawyer Hill, LLC	68	17	40B
Natick	20 South Street	RFR Enterprises	28	5	Special Permit
Concord	Concord Commons	Tambone Investment	58	3	Special Permit
Taunton	The Settlement	Bruce LLC II	99	25	40B
Kingston	Barrows Brook Village	Delwin, LLC	56	14	40B
Hingham	Derby Brook	Realty Assets, Inc	24	6	40B

SEB Client List

Homeownership Developments (continued)

<i>Project Location</i>	<i>Project Name</i>	<i>Developer/Manager</i>	<i>Total Units</i>	<i>Affordable Units</i>	<i>Permit/ Financing</i>
Bridgewater	Elm Street Estates	Elm Residences at Bridgewater, LLC	20	5	40B
Burlington	Reserve at Seven Springs	Northland Residential	50	2	Special Permit
Duxbury	Duxbury Woods	Northland Residential	44	11	40B
Easton	Welsch Woods	Welsch Woods, LLC	28	7	40B
Grafton	Providence Road Commons	Providence Road Commons, LLC	28	7	40B
Rehoboth	Horton Estates	Horton Estates, LLC	66	17	40B
Wrentham	Eagle Brook Village	Eaglebrook Development, LLC	101	28	40B
Hingham	Derby Brook	Realty Assets, Inc	24	6	40B
Weston	South Avenue	South Avenue LLC	16	4	40B
Weston	Post Road Green	Post Road Green LLC	8	2	40B
Weston	Winter Gardens	Town of Weston	24	1	40B
Stoughton	Village at Goddard Highlands	AGS Development	104	26	40B
North Andover	Campion Estates	Campion Estates	26	7	40B
Newton	Parkview Homes	Parkview Homes, LLC	10	10	40B

<i>Weymouth, Rockland, Abington</i>	<i>Southfield</i>	<i>Multiple Developers (Starwood is the Master Developer)</i>	<i>2,000+ Rental & Sales</i>	<i>200+</i>	<i>Special Permit</i>
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About the Firm

SEB has provided housing development and planning services that have resulted in the approval and development of more than 10,000 units of affordable housing. Our work has involved a broad range of housing types in a number of different communities, from work on HOPE VI developments in urban areas, to the development of co-housing communities in suburban areas, and the development of mixed income communities in a number of different cities and towns. SEB has been involved in public or private sector projects in more than 180 cities and towns in Massachusetts

SEB successfully and effectively manages development teams and steers the development process through all phases. SEB has extensive knowledge of the Massachusetts Comprehensive Permit Law, M.G.L. chapter 40B, which leads to housing opportunities in many communities. SEB has assisted in the financial packaging of over 90 mixed-finance developments under Chapter 40B. In connection with these projects, SEB has prepared or reviewed development pro formas, negotiated with local officials, neighbors and developers and successfully leveraged local, state and federal subsidies using almost every available affordable housing financing source.

WATERMAN DESIGN ASSOCIATES, INC.

Westborough, MA

Overview

Located in Westborough, Massachusetts, Waterman Design Associates, Inc. is a full service design firm offering a broad range of professional surveying, site design and land assessment services for residential, office and retail projects. With specific expertise in civil engineering, surveying, landscape architecture, regulatory permitting and wetlands consulting, our professionals can serve as the team leader or provide individual services on a specified task.

Our contracts often include the entire range of services, from conceptual planning through final construction for projects ranging from small subdivisions to large multi building retail centers.

Professional Services

Waterman Design Associates, Inc. provides:

- **Civil Engineering:** comprehensive site engineering consisting of road, utility, drainage and site design, peer review services, pump station analysis and design, cost estimates and construction support.
- **Landscape Architecture:** site feasibility, master planning, site design, planting/lighting layout, open space/cluster subdivision design, and recreational facilities planning.
- **Surveying:** field and office surveying for property line, topographic, Land Court, construction layout and as-built plans using state-of-the-art total stations/data collectors, or our own global positioning system (GPS) equipment.
- **Planning:** complete project management, permitting strategies and schedules, open space/conservation planning and fiscal assessments.
- **Wetlands Consulting:** identification of state and federal wetlands by soils/vegetative indicators, compensatory wetland design, state and federal wetland regulatory strategies, construction supervision and monitoring.
- **Environmental Permitting:** extensive experience in the preparation of Special Permits, Variances, Notices of Intent, Site Plan Review, Chapter 40B Comprehensive Permits, MEPA (ENF and EIR filings), NPDES, Chapter 91 Waterways, Water Quality Certifications, and Army Corps of Engineers filings.

Representative Projects

The design professionals at WDA value the reliance and confidence placed on us by our clients. Our success relies on achieving the development goals of our clients quickly, efficiently and creatively. Several representative projects include:

- Full boundary and topographic surveys, master planning and preparation of comprehensive mixed-use site design plans for 250 affordable (Ch. 40B) multi-family units with 5,340 sf of retail space on Route 9 in Westborough (Westborough Woods).
- Full boundary and topographic surveys, master planning and preparation of comprehensive site design plans for a 600,000 sf retail lifestyle center (Northborough Crossing) with the first Wegman's in Massachusetts, and 350 affordable (Ch. 40B) apartments on 160± acres on Route 20 in Northborough.

WATERMAN DESIGN ASSOCIATES, INC.

Westborough, MA

- Design, permitting and construction of a 69 unit "over 55" 40B Community on 8 acres in Sturbridge. The main 57 unit single building included 1 - 2 bedroom units and the project included 12 cottage style units (Crescent Gate).
- Comprehensive services including survey, site design, landscape architecture and local, state and federal permit approvals for a 60,000 sf office and restaurant facility (Not Your Average Joe's) on Route 9 in Westborough.
- Redevelopment plans for a 56 acre mixed-use development on a brownfield site in Westborough Center (Bay State Commons) for reuse as a 400,000 sf retail center and a 50 unit multi-story condominium building.
- Conceptual planning through final site design and construction services for a 144 unit 40B affordable housing project in Chelmsford (Kensington at Chelmsford).
- Full service design from concept planning to site design drawing, permit approvals, and construction layout and monitoring for a first class 75,000 sf, 4-story office building off of West Park Drive in Westborough.
- Master planning and preliminary design for 70 multi-family units and 24 single family homes on a 153± acre parcel in Hopkinton, Massachusetts (Hopkinton Highlands). Services also included a full boundary survey, wetland delineation, soils testing, three special permits, definitive subdivision plans, site plans, public water supply wells, and a private on site sewage treatment plant.
- Complete master planning services for 140± acres of property on Boston Hill in Westborough, Northborough and Shrewsbury at the intersection of Route 9 and Route 20. This property contains five zoning districts and includes plans for up to 400,000 sf of office space and 30,000 sf of retail space. WDA completed the full design plans for a 65,000 sf regional YMCA on this property.
- Orchard Square North was re-developed to accommodate the new 55,000 square foot home of Acton Toyota. Orchard Square South will contain approximately 32,000 square feet of retail and restaurant in two separate buildings.

Multi-family Projects

Stoneleigh Woods Active Adult Housing Community, Sturbridge, MA

WDA was commissioned to provide comprehensive permitting and site design services for a 71 Unit Active Adult Housing Community located on 35 acres. The project includes 17 buildings of three and four clustered townhouse units with an emphasis on the creation and preservation of public access to the new open space areas.

Senior Housing Development, Grafton/Sutton, MA

WDA performed the master planning of 80 acres of property in two towns for the development of 63 independent living units in detached cottages, 128 congregate units in a central community facility, and 180 assisted living units in a stand-alone building.

Hopkinton Highlands III, Hopkinton, MA

WDA designed a multi-family layout for a difficult 60± acre parcel near a town reservoir. After completion of a thorough site analysis and conceptual design phase, we presented several options to the owners for a 27 unit multi-family garden apartment plan that utilized the best development areas and retained significant open space along the town's reservoir.

Peppercorn Village Senior Housing, Hopkinton, MA

WDA's landscape architects were commissioned to participate in the development of original concept plans for this 65 unit age restricted housing project on 28± acres in Hopkinton. Concept plans were completed for presentation to the Town, and our staff also prepared a scale model of the site.