



## *City of New Bedford*

### Department of Planning, Housing & Community Development

608 Pleasant St, New Bedford, Massachusetts 02740  
Telephone: (508) 979.1500 Facsimile: (508) 979.1575

**PATRICK J. SULLIVAN**  
**DIRECTOR**

## STAFF COMMENTS

### PLANNING BOARD MEETING

May 10, 2017

To amend the Staff Report Dated March 8, 2017

**Case #08-17: SITE PLAN REVIEW**  
899 Pleasant Street/ES Foster Street  
Southeastern New England Dental  
Map 58 Lots 300, 301, 302, 304 & 499

**Applicant's Agent:** Architectural Consulting Group, Inc.  
Michael W. Josefek, AIA President  
2206 Acushnet Avenue  
New Bedford, MA 02746

**Owner:** Moftah El- Ghadi, DMD  
899 Pleasant Street, LLC  
34 Hillman Street  
New Bedford, MA 02740



### Overview of Request

This is a request to consider Site Plan approval under Chapter 9 Comprehensive Zoning §5400 for construction of a 2,118+/- SF addition to an existing 1,322 +/-SF structure on a 25,396+/- SF site for a dental office and other professional tenants at 899 Pleasant and ES Foster Streets (Maps 58, Lots 300-302, 304 & 499) located in the Mixed Use Business (MUB) zoning district.

Medical offices, Centers or Clinics are permitted under the approval of the Zoning Board of Appeals in the Mixed Use Business zoning district. Case #4268 was approved by the city's Zoning Board's meeting of March 16, 2017 for a request for change of business use in the Mixed Use Business zoning district, conditional upon site plan approval by the Planning Board.

This case was presented to the Planning Board on March 8, 2017 but due to time constraint, continued to April 12, 2017. The case was further continued to the May 10, 2017 Planning Board meeting due to insufficient technical information presented for the Planning Board's consideration by the applicant's agent.

**Item's the Planning Board identified as needing prior to their vote on this request for Site Plan Approval:**

- ☐ The entrance handicap accessibility for van and parking.
- ☐ Show the handicap spots on the site plan in front of the building, both the quantity and have them called out in number of the parking spots provided, show the aisle width, showing ADA compliance, as well as van accessibility;
- ☐ Note the total number of spaces provided and the number required on the site plan, along with the aisle width;
- ☐ Indicate area of curbing and/or car stops;
- ☐ Provide a lighting plan that shows the specifics and specifications on the light fixtures, giving the lumens and/or light candles/foot candles;
- ☐ Indicate the areas of landscaping with dimensions on the landscaping plans, particular to the sensitivity and treatment of the property line, especially the property line on the western edge abutting the residential neighborhood;
- ☐ Provide a clear demarcation of what is grass and what is pavement;
- ☐ Provide a revised drainage plan to show pervious impervious areas, with revised calculations;
- ☐ Provide and update of the drainage along the aisle as it interacts with grading to a low spot in front of the building where the water will pool;
- ☐ Provide an erosion control plan regarding protection of the city catch basins, such as calling out silk sacks and straw bales;
- ☐ Provide any proposed signage to be considered, on the building or otherwise.

At the time this report was compiled, Staff awaits final comments from the Department of Public Infrastructure and sign graphics and specifications for the proposed business.

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**Attachments:**

1. ZBA Decision #4268
2. Revised Plan Set
3. Revised Drainage Report and Drainage Pre and Post-conditions



JONATHAN F. MITCHELL  
MAYOR

*City of New Bedford*  
**ZONING BOARD OF APPEALS**

133 William Street, New Bedford  
Massachusetts 02740  
Telephone: (508) 979.1488  
Facsimile: (508) 979.1576

CITY CLERK

2017 MAR 30 A 9:35

CITY CLERKS OFFICE  
NEW BEDFORD, MA**NOTICE OF DECISION**

Case Number:	#4268			
Request Type:	Special Permit			
Address:	899 Pleasant Street			
Zoning:	Mixed Use Business Zoned District			
Recorded Owner:	899 Pleasant Street, LLC			
Owner's Address:	32 Hillman Street New Bedford, MA 02740			
Applicant:	899 Pleasant Street, LLC & Architectural Consulting Group, Inc. c/o Michael W. Josefek			
Applicant's Address:	32 Hillman Street New Bedford, MA 02740 & 2206 Acushnet Avenue New Bedford, MA 0245			
Application Submittal Date	Public Hearing Date		Decision Date	
February 13 <sup>th</sup> , 2017	March 16 <sup>th</sup> , 2017		March 16 <sup>th</sup> , 2017	
Assessor's Plot Number	Lot Number(s)	Book Number	Page Number	Certificate Number
58	300, 301, 302, 304, & 499	11768	17	

A Special Permit is sought under Chapter 9 Comprehensive Zoning sections 2200 (use regulations), 2210 (general), 2230 (tables of use regulations-appendix A, #20 Medical Office, Center, or Clinic), and 5300-5390 (Special Permit); relative to property located at 899 Pleasant Street, Assessor's Map 58, Lot 300-302, 304, 499 in a Mixed Use Business [MUB] zoned district. To allow the petitioner to erect a dental office as plans filed.

**Action: GRANTED, WITH CONDITIONS, for the reasons set forth in the attached decision with the Conditions as described in the attached decision. (See Attachment)**

A copy of this Decision was filed with the City Clerk of the City of New Bedford on March 30<sup>th</sup>, 2017. Any person aggrieved by this decision has twenty (20) days to appeal the decision in accordance with the procedures set forth in Section 17 of Chapter 40A of the General Laws of Massachusetts.

3/30/2017  
Date

Debra Trahan  
Chair, Zoning Board of Appeals



### **1.) APPLICATION SUMMARY**

The petitioner proposes to erect a dental office as plans filed, which requires a Special Permit under Chapter 9 Comprehensive Zoning sections 2200 (use regulations), 2210 (general), 2230 (tables of use regulations-appendix A, #20 Medical Office, Center, or Clinic), and 5300-5390 (Special Permit); relative to property located at 899 Pleasant Street, Assessor's Map 58, Lot 300-302, 304, 499 in a Mixed Use Business [MUB] zoned district.

### **2.) MATERIALS REVIEWED BY THE BOARD**

#### **Plans Considered to be Part of the Application**

- Plan Set, *899 Pleasant, LLC Southern New England Dental Group*, prepared by Architectural Consulting Group INC., date stamped received by City Clerk's Office February 13<sup>th</sup>, 2017, including:
  - Sheet A-0 Title Page
  - Sheet C-3 Site Plan, dated 2/6/17
  - Sheet A-2 First Floor plan, dated 2/7/17
  - Sheet A-7 Section Through C-C, dated 2/7/17
  - Sheet A-12 North Elevation, dated 2/6/17
  - Sheet A-13 South Elevation, dated 2/6/17
  - Sheet A-14 East Elevation, dated 2/7/17
  - Sheet A-15 West Elevation, dated 2/6/17
  - Proposed Addition and Parking Plan
  - Sheets, drawn by Farland Corp., dated November 21<sup>st</sup>, 2016, including:
    - Sheet C-1 DRAFT Existing Conditions Plan
    - Sheet C-2 DRAFT Approval Not Required Plan

#### **Other Documents & Supporting Material**

- Completed Petition for a Special Permit, stamped received by City Clerk's Office February 13<sup>th</sup>, 2017
- Letter to ZBA from the Commissioner of Buildings & Inspectional Services, Danny D. Romanowicz, dated February 24<sup>th</sup>, 2017
- Staff Comments to ZBA from Department of Planning, Housing and Community Development, dated March 16<sup>th</sup>, 2017.

### **3.) DISCUSSION**

On the evening of the March 16<sup>th</sup>, 2017 meeting, board members: Debra Trahan, Allen Decker, Sherry McTigue, John Walsh, and Leo Schick were present for the public hearing. City of New Bedford staff: Danny D. Romanowicz (Commissioner of Buildings & Inspectional Services) and Jennifer Gonet (Assistant Project Manager, Department of Planning, Housing & Community Development) were present during proceedings for the subject case review.

Mr. Decker alerted the board that the applicant is his dentist. He stated he did not know until immediately before the meeting as the business is corporately listed. He stated he does not believe this [relationship] impacts his impartiality in rendering a decision. He asked the petitioner to acknowledge he had disclosed this information and if he felt comfortable with him hearing the case or



wished for him to rescue himself. Mr. Michael Josefek (2206 Acushnet Avenue New Bedford, MA) and Dr. Moftah El-Ghadi (32 Hillman Street New Bedford, MA) agreed to go forward with Mr. Decker hearing the case.

Clerk Decker made a motion, seconded by Ms. McTigue to receive and place on file the communications from the Commissioner of Buildings & Inspectional Services, Danny D. Romanowicz, dated February 13<sup>th</sup> 2017; Staff Comments from the Department of Planning, Housing & Community Development, dated March 16<sup>th</sup>, 2017; the appeal packet as submitted; the plan as submitted; and, that the owners of the lots as indicated are the ones deemed by the Board to be affected; and that the action of the Clerk in giving notice of the hearing as stated be and is hereby ratified. With all in favor, the motion carried.

Chair Trahan then declared the hearing open.

The representative of the petitioner: Mr. Michael Josefek (2206 Acushnet Avenue New Bedford, MA) of Architectural Consulting Group, Inc. presented that the property has an 1850's or 1860's structure with a garage, large parcel of land to the side, and a large parking lot in the rear. He described the property as shaped like a "hammer" or "dog leg," currently comprised of five (5) separate lots that are going to be combined.

Mr. Josefek explained that the original concept was to take down the building and put up a new building in the same location. However, it was decided to save the building after a series of meetings and conversations with the City. Mr. Josefek explained in order to save the building it costs the applicant more to do the project. Because it is part of the neighborhood, they felt "obligated to try and make it work." He further explained that in order to meet the push and pull of zoning requirements while saving the historic structure, they had an engineer create a draft Form A—not yet submitted—in order to show how they could have the ability to move the barn to a separate lot. There could then be an independent office for a lawyer or other later and share the parking.

Describing the current building as vacant, Mr. Josefek then detailed the proposal as "an addition that is sympathetic to the historic nature of the structure" and described how the project design would maintain and restore the original fabric of the existing structure. The addition, he described, will not be an exact replicate of the existing building as one always wants to be able to see what came first and what came after. He additionally portrayed the proposed work as being a benefit to the neighborhood as it would no longer be a vacant parking lot and would instead, bring new life to that corner.

It was noted that the petitioner is already operating his practice down the hill on Hillman Street in cramped quarters, and has been in the neighborhood for 14 years. In regards to the community benefit criteria, Mr. Josefek explained that the petitioner is "bringing the same services up the hill and expanding them a little bit." He cited the biggest problem at the current location as being the absence of any technology; Comcast/Verizon is not underground at the current location but it is at the proposed location. In this proposed location the applicant would be better able to meet and serve his client's needs. Further he articulated the petitioner has made a commitment to buy property in New Bedford instead of renting which adds to the tax base.

With respect to the adequacy of utilities and other public services, Mr. Josefek, explained the site is presently fully serviced by all utilities, natural gas, drainages, water, sewer, and underground electric.

In regards to traffic flow, Mr. Josefek, detailed that the business has nine (9) employees working between 8am-9am to 5pm so, all those cars will be arriving in the morning and leaving at the end of the day thus there would be no major impact on traffic circulation. During the day, Mr. Josefek testified that the practice would see an average of 4 customers per hour reiterating the minimal impact of the proposed development.

Mr. Josefek explained to the board that the project is currently in the beginning stages of Site Plan Review with the City Planning Board, but that they were continued because they ran out of time at the last Planning Board meeting. "We were continued, so they could not vet all this yet" he explained. He informed the zoning board that the project intends on meeting all the requirements that the City is going to put on the project under Site Plan Review such as, underground water detention and the site improvements DPI [Department of Public Infrastructure] requires. The engineers are currently putting together the detailed plans for public infrastructure including sidewalks and curb cuts.

The project complies with the twenty-eight (28) parking spaces required under the city's code and is designed in such a way as to be in keeping traffic flow and safety considerations within the neighborhood.

In regards to the impacts on the natural environment, Mr. Josefek explained, the water runoff will be less than what is currently there now. The proposed building would be constructed on an area that is already impervious so it would not be adding to the overall presence of impervious area on the site. He also described how in order to meet the parking requirement twelve (12) parking spaces were added to the existing site. They are looking at developing a pervious parking area, he said, that will be vetted through the site plan review process. Also, they will be adding trees as buffers as part of its work through the site plan review process.

Regarding tax base and employment, the project was described as being "good for the city as it keeps the property commercial versus residential, which wouldn't be add children to the schools" and thus it was portrayed as having a "net gain."

Mr. Josefek concluded by noting a handicapped accessible entry, an elevator inside, and the reiteration that traffic around and into the building "won't be like a 7Eleven with people in and out" all day and night. The site would only have what was characterized as being "slight activity."

Ms. McTigue noted the dentist office is on the first floor and sought clarification about the uses on the second floor.

Mr. Josefek explained currently there is no identified use on the second floor. It was designed to match the existing building as a one story building didn't fit right. Further, he suggested maybe in the future the owner might want to rent some of the second floor as office space. Mr. Josefek also noted the



dentist currently has nine (9) employees but the application was submitted for fifteen (15) just in case he needs to expand; and the site has the parking to accommodate that, he stated.

Chair Trahan inquired the reason to separate the lots to which Mr. Josefek responded that the garage/barn was going to be taken down but it was suggested by the City that it's a historic barn. So, in discussion on how to save it they thought about moving it onto a separate lot and also to create parking they realized they could share the parking.

Chair Trahan expressed concern about granting a special permit for the whole site when it may be later split and sold separately causing them not to have enough parking. Mr. Josefek responded that it is legal to share parking. He expressed if they can't keep the garage/barn it's not a problem for them, explaining, they are trying to save the garage/barn for the City not for the petitioner.

As a point of clarification, Commissioner Romanowicz explained the reason he proposes separating the lots is that because you can't have more than one major building on a lot. If he moves the barn over to a separate lot then he'd have two buildings, on two different lots, with two separate uses.

Chair Trahan asked if the petitioner would still undertake the project if there were a condition the lots had to remain together and not be sold separately. Mr. Josefek responded he believed that was beyond the board's jurisdiction. Chair Trahan commented she was very hesitant to grant something then for a big building on what was to become a small lot. Mr. Josefek responded, "Let's just take it out of the mix and we'll just get rid of it." He again explained he would rather the barn be taken away but they were saving it because of the City. Brief comments were exchanged about demolition, historic approvals, and demolition delay.

Mr. Walsh commented that the board was concerned as to whether or not a medical facility could operate out of there or not. Ms. McTigue agreed. Mr. Decker commented the discussion was getting "a little far afield".

Mr. Decker noted the Planning Staff comments said the building square footage didn't match on the plans. Mr. Josefek responded that they had submitted revised plans at the Site Plan review. Mr. Decker observed it mattered for the parking calculation. Ms. Gonet provided a point of information that the applicant is required to submit whatever plans are finally approved by Planning Board to the Zoning Board as well. Mr. Josefek offered that the numbers have been straightened out and there is more than enough parking.

Mr. Decker also asked about the future pavement area noting it's a large addition of impervious surface. Mr. Josefek disagreed suggesting that as the grass area will become the pervious parking surface that would not be the case; this, he noted as being a facet of the plan that was still being worked out. Ms. McTigue confirmed with Mr. Josefek that the parking plan in the Zoning Board Member packets was the outdated one. Mr. Josefek approached the table and demonstrated on the outdated plan where the pervious parking area is being proposed. In response to Ms. McTigue, Mr. Josefek confirmed there is an underground recharge system.



Dr. Mofteh El-Ghadi (6 Wagon Trail Lakeville, MA), trustee of the property and business owner, requested permission to address the board. In regards to questions about the barn he explained he originally thought it was just a garage. He explained he was originally unaware it was a historic barn. While he does not have any intention of "selling anything" the thought about relocating the barn was simply a way to work with historic preservation in keeping the barn. Chair Trahan, explained her concern wasn't related to his intentions but for the future. Mr. Decker expressed that was a different thing completely than what was before the board.

Mr. Josefek interjected that the proposal is required to get a special permit for the medical use. If it were a general office such as attorney he wouldn't be before this board. The code requires review for the medical use in the MUB district, he explained. He explained while he acknowledged the Chair's concerns it's not the review by this board. All the things they are proposing are legal; they aren't doing anything that's not permitted. If needed he could gather all the legal and have it explained another time but preferred the project is not stymied by a "what if" down the road.

Chair Trahan invited to the podium anyone wishing to speak in opposition of the petition. No one in attendance spoke in opposition of the petitions or wished to be recorded in opposition of the petition.

Chair Trahan offered an opportunity for final statements by the petitioner. Mr. El-Ghadi detailed that his practice has been located since 1983 on Hillman Street, and prior to that it was on Foster Street. One major issue he is having at the current location is the lack of Comcast cable lines coming down to the current location. As a business owner he has Verizon and in the afternoon it slows down. Dentistry now requires high speed technology for 3-D printing, and large scanned digital data files which the current location can't accommodate. His practice has grown out of the current location. When this location nearby became available he thought it was the perfect location and a beautiful building. He described it as the natural growth of his dental practice.

With no further comments, Chair Trahan closed the hearing and opened the floor for discussion amongst board members. Board members indicated their readiness to vote.

#### **4.) FINDINGS**

The Board found that in accordance with City of New Bedford Code of Ordinances Chapter 9 Section 5320, the benefit to the City and the neighborhood outweighs the adverse effects of the proposed use, taking into account the characteristics of the site and of the proposal in relation to that site. This determination included consideration of each of the following:

- *Social, economic, or community needs which are served by the proposal;*
  - The proposal keeps an existing dental practice in operation and continuing to serve community needs.
- *Traffic flow and safety, including parking and loading;*
  - The Board found the proposal adequately addresses on-site traffic flow and adds more parking spaces.

- *Adequacy of utilities and other public services;*
  - The Board has found the proposal is neutral because existing adequate utilities are in place.
- *Neighborhood character and social structures;*
  - The Board found the proposal fits within the neighborhood character, inclusive of mixed use development.
- *Impacts on the natural environment;*
  - The Board found the proposal includes pervious pavement for additional parking thereby not adding significant impacts.
- *Potential fiscal impact, including impact on City services, tax base, and employment*
  - The Board found the proposal adds to the City tax base without significant increased demand on City services.

#### **5.) RELIEF**

With respect to the relief requested by the Applicant, the Board has been presented with sufficient information at the hearing to justify the relief described below, subject to the conditions set forth in Section 6.

The Board grants the applicant's request for relief from Chapter 9 Comprehensive Zoning sections 2200 (use regulations), 2210 (general), 2230 (tables of use regulations-appendix A, #20 Medical Office, Center, or Clinic), and 5300-5390 (Special Permit); relative to property located at 899 Pleasant Street, Assessor's Map 58, Lot 300-302, 304, 499 in a Mixed Use Business [MUB] zoned district; to allow the petitioner to erect a dental office as plans filed.

#### **6.) DECISION**

Based on a review of the application documents, testimony given at the public hearing and the findings described above, the Zoning Board of Appeals hereby **GRANTS, WITH CONDITIONS**, the requested special permit.

A motion was made by Mr. Decker and seconded by Mr. Walsh, as follows:

To allow the petitioner to erect a dental office as plans filed, which requires a Special Permit under Chapter 9 Comprehensive Zoning sections 2200 (use regulations), 2210 (general), 2230 (tables of use regulations-appendix A, #20 Medical Office, Center, or Clinic), and 5300-5390 (Special Permit); relative to property located at 899 Pleasant Street, Assessor's Map 58, Lot 300-302, 304, 499 in a Mixed Use Business [MUB] zoned district. Having reviewed this petition in light of the City of New Bedford Code of Ordinances, Chapter 9, comprehensive zoning sections as cited, the board finds that in respect to these sections the petition is in compliance.

In addition to the foregoing sections, this petition was also been found to be in accordance with City of New Bedford Code of Ordinances, Chapter 9, sections 5300-5330 and 5360-5390, relative to the granting of special permits, because the board found that the benefit to the city and the neighborhood



outweighs the adverse effects of the proposed use, taking into account the characteristics of the site and of the proposal in relation to that site.

In consideration of the following sections, the board found that in regards to section 5321 the social, economic or community needs served by this proposal the proposal keeps an existing dental practice in operation and continuing to serve community needs.

Concerning 5322 concerning traffic flow and safety, including parking and loading, the board found that the proposal adequately addresses on-site traffic flow and adds more parking spaces.

Concerning 5323, in regards to the adequacy of utilities and other public services, the board found the proposal is neutral because existing adequate utilities are in place.

Concerning 5324, the neighborhood's character and social structures, the board found the proposal fits within the neighborhood character, inclusive of mixed use development.

Concerning 5324 Impacts on the natural environment found the proposal includes pervious pavement for additional parking thereby not adding significant impacts.

Lastly, as to potential fiscal impact, including impact on city services, tax base and employment, the board has found that the proposal adds to the City tax base without significant increase demand on the City services.

In light of the review of the specifics noted within the motion, the board finding that the material presented is complete, and its careful consideration of the petitioner's request, the Zoning Board found the petition satisfactorily meets the basis of the requested relief.

Therefore this motion was made and included the following conditions:

- That the project be set forth according to plans submitted with the application;
- That the Notice of Decision be recorded at the Registry of Deeds; and
- A building permit be issued by the Department of Inspectional Services and acted upon within one year from the date of the decision.
- Approval of Site Plan Review by City Planning Board be achieved.

On a motion by A. Decker, seconded by J. Walsh to grant the requested Special Permit, the vote carried 5-0 with members D. Trahan, S. McTigue, A. Decker, L. Schick, and J. Walsh voting in the affirmative, no member voting in the negative. (Tally 5-0)

Filed with the City Clerk:

  
Debra Trahan  
Chair of the Zoning Board of Appeals

3/30/2017  
Date



# SOUTHEASTERN NEW ENGLAND DENTAL GROUP



## ADDITIONS AND ALTERATIONS TO 899 PLEASANT ST.

OWNER:  
899 PLEASANT, LLC  
34 HILLMAN ST  
NEW BEDFORD, MA 02740

DESIGNER:  
ARCHITECTURAL CONSULTING GROUP, INC  
2206 ACUSHNET AVE  
NEW BEDFORD, MA 02745  
MICHAEL JOSEFEK, AIA  
JAMES GILMOUR MA REG #8166  
774 202 7991

STRUCTURAL ENGINEER  
COASTAL ENGINEERING CO.  
260 CRANBERRY HIGHWAY  
ORLEANS, MA 02653  
PAUL R. LeROCHELLE  
508 255 6511

M.E.P.F.P. ENGINEER:  
IBRAHIM & IBRAHIM CONSULTING ENGINEERS  
165 FRIEND ST  
BOSTON MA, 02114  
SINOTE H. IBRAHIM  
617 723 9766

CIVIL/SITE ENGINEER:  
FARLAND CORP  
401 COUNTY STREET  
NEW BEDFORD, MA. 02740  
JOHN MARCHAND  
508 717 3479

CONSTRUCTION MANAGER/ CONTRACTOR:  
ARCHITECTURAL CONSULTING GROUP, INC  
2206 ACUSHNET AVE  
NEW BEDFORD, MA 02745  
MICHAEL JOSEFEK  
774 202 7991

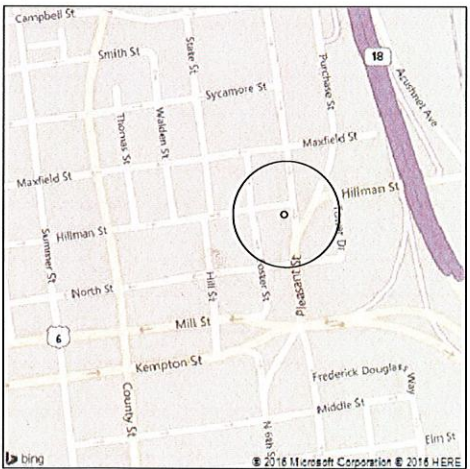
- ZONING DATA -			
DISTRICT: MIXED USE BUSINESS (MUB)			
DESCRIPTION	REQUIRED	EXISTING	PROVIDED
LOT AREA	8,000 S.F.	28,396 S.F.	25,396 S.F.
LOT FRONTAGE	0 FT	585.37 FT	586.37 FT
FRONT SETBACK	0 FT	9.2 FT	5.8 FT
SIDE SETBACK	10 FT	51 FT	3.1 FT
REAR SETBACK	10 FT	116.5 FT	66.2 FT
BUILDING HEIGHT (MAXIMUM)	100 FT	40.0 FT	40.3 FT
BUILDING COVERAGE (MAXIMUM)	30 %	9.2 %	14.2 %
LOT COVERAGE (MAXIMUM)	0 %	41.7 %	20.3 %
- PARKING REQUIREMENT -			
PRINCIPAL USE: DENTAL OFFICE			
(FOR PARKING REGULATION PURPOSES: OFFICES: MEDICAL CLINICS)			
REQUIREMENT	REQUIRED	PROVIDED	
1 SPACE PER 200 S.F. OF G.F.A. BUT NOT LESS THAN TWO SPACES FOR EACH BUSINESS UNIT INTENDED TO OCCUPY THE PREMISES.			
AFTER 10,000 S.F. OF G.F.A., ONE SPACE FOR EVERY 1,000 S.F. OF G.F.A.	36 SPACES	36 SPACES	
WHEN 26-50 TOTAL PARKING SPACES ARE PROVIDED, 2 MUST BE ACCESSIBLE SPACES. ONE IN EVERY EIGHT ACCESSIBLE SPACES, BUT NOT LESS THAN ONE, SHALL BE VAN ACCESSIBLE.	2 ACCESSIBLE, 1 VAN ACCESSIBLE	2 ACCESSIBLE, 2 VAN ACCESSIBLE	

### - INDEX -

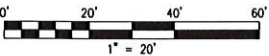
#### SHEET DESCRIPTION

- C0.0 COVER
- C1.0 NOTES & LEGEND
- C2.0 EXISTING CONDITIONS
- C2.1 DEMOLITION
- C3.0 LAYOUT
- C4.0 GRADING & UTILITIES
- C5.0 LANDSCAPING
- C6.0 EROSION CONTROL
- C7.0 DETAILS

LOCUS MAP:  
899 PLEASANT ST. DIRECTION NORTH



DOWNTOWN NEW BEDFORD, MASSACHUSETTS  
SCALE 1" = 300'



#### REVISIONS

1	041217	UTILITIES
2	042717	CB GRATE / HC RAMP
3	050317	PER PB COMMENTS



www.FarlandCorp.com

401 COUNTY STREET  
NEW BEDFORD, MA 02740  
P.508.717.3479

OFFICES IN:

- TAUNTON
- MARLBOROUGH
- WARWICK, RI

DRAWN BY: JKM  
DESIGNED BY: JKM  
CHECKED BY: CAF

SITE PLAN  
899 PLEASANT STREET  
ASSESSORS MAP 58, LOTS 300 & 302  
NEW BEDFORD, MASSACHUSETTS  
PREPARED FOR:  
ARCHITECTURAL CONSULTING GROUP, INC.  
2206 ACUSHNET AVE.  
NEW BEDFORD, MA 02745

MARCH 8, 2017

SCALE: 1"=20'

JOB NO. 16-1340

LATEST REVISION:  
050317

C0.0 - COVER

SHEET 1 OF 9



## GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIG SAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
2. TOPOGRAPHIC AND PROPERTY LINE SURVEY PERFORMED BY FARLAND CORP. IN NOVEMBER 2016.
3. VERTICAL ELEVATIONS REFER TO AN ASSUMED DATUM.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL STANDARDS AND REGULATIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.
6. WHERE PROPOSED PAVEMENT AND WALKS ARE TO MEET EXISTING, THE CONTRACTOR SHALL SAWCUT A NEAT LINE AND MATCH GRADE. SEAL ALL JOINTS WITH HOT BITUMINOUS ASPHALT JOINT SEALER.
7. CURBING TO BE AS INDICATED ON THE PLANS.
8. ALL EXISTING TREES, SHRUBS AND GROUND COVER WHERE NATURAL GRADE IS TO BE RETAINED SHALL BE KEPT IN THEIR EXISTING STATE UNLESS REMOVAL IS REQUIRED FOR CONSTRUCTION PURPOSES.
9. ALL AREAS DISTURBED BY CONSTRUCTION AND NOT TO BE PAVED OR OTHERWISE TREATED AS NOTED ON PLAN SHALL BE TREATED WITH 4" OF LOAM, SEEDING AND MULCH FOR EROSION CONTROL.
10. SITE IMPROVEMENTS SHALL CONFORM TO A.D.A. SPECIFICATIONS.
11. LIGHTING SHALL BE DIRECTED ON SITE AND AWAY FROM TRAFFIC INTERFERENCE.
12. TEST PITS AND/OR BORINGS WERE TAKEN FOR THE PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY. THEY DO NOT NECESSARILY SHOW THE NATURE OF ALL MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
13. THE CONTRACTOR SHALL PROTECT AND/OR CAP OFF ALL EXISTING ON-SITE UTILITY SERVICES ACCORDING TO THE LOCAL AUTHORITY'S SPECIFICATIONS. SERVICES SHALL BE CAPPED OFF WHERE SAME ENTER THE PERIMETER OF THE PROPERTY LINE.
14. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
15. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION. THESE PLANS ARE PERMITTING PLANS AND SHALL NOT BE USED FOR CONSTRUCTION. A FINAL SET OF STAMPED PLANS FOR CONSTRUCTION WILL BE ISSUED AFTER RECEIVING FINAL APPROVAL FROM THE LOCAL AND/OR STATE DEPARTMENTS.

## CONSTRUCTION SEQUENCING NOTES

1. CONSTRUCT TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES. EROSION CONTROL FACILITIES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING.
2. TREE PROTECTION FENCE SHALL BE INSTALLED AND APPROVED BY THE OWNER REPRESENTATIVE PRIOR TO ANY EARTH MOVING.
3. ALL PERMANENT DITCHES AND SWALES ARE TO BE STABILIZED WITH VEGETATION OR RIP RAP PRIOR TO DIRECTING RUNOFF TO THEM.
4. CLEAR CUT, DEMOLISH AND DISPOSE OF EXISTING SITE ELEMENTS NOT TO REMAIN.
5. STORMWATER SHALL NOT BE DIRECTED TOWARDS THE INFILTRATION BASINS UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
6. GRADE AND GRAVEL ALL PAVED AREAS. ALL PROPOSED PAVED AREAS SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
7. BEGIN ALL PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES AND MULCH AND SEED AS REQUIRED.
9. FINISH PAVING ALL HARD SURFACE AREAS.
10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
11. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
12. REMOVE TEMPORARY EROSION CONTROL MEASURES.
13. THE CONSTRUCTION SEQUENCE SHALL BE CONFINED TO THE LIMIT OF WORK AS SHOWN ON THE DRAWINGS.
14. UPON COMPLETION OF CONSTRUCTION THE OWNER SHALL AGREE TO MAINTAIN AND CLEAN ALL DRAINAGE STRUCTURES AS REQUIRED.

## SITE PREPARATION NOTES

1. WITHIN THE LIMIT OF WORK LINE AS NOTED ON THE SITE PLANS, REMOVE AND DISCARD ALL CONCRETE PAVEMENT, BITUMINOUS CONCRETE PAVEMENT, BRICK PAVEMENT, TOP SOIL, MULCH, TRASH, DEAD TREES AND STUMPS, SHRUBBERY, CHAIN LINK FENCE POSTS, RAILS, FABRIC, GATES, FOOTINGS AND ALL APPURTENANCES, BOLLARDS, POSTS, CONCRETE FOOTINGS AND FOUNDATIONS, WALLS AND CURBS UNLESS OTHERWISE NOTED.
2. THE OWNER'S REPRESENTATIVE SHALL BE CONSULTED AND WILL REVIEW THE WORK ON SITE WITH THE CONTRACTOR BEFORE ANY WORK SHALL COMMENCE.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS TO REMAIN THAT ARE DUE TO CONTRACTOR OPERATIONS.
5. ALL ITEMS TO BE REMOVED THAT ARE NOT STOCKPILED FOR LATER REUSE ON THE PROJECT OR DELIVERED TO THE OWNER SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS EFFORTS OF THE DEMOLITION WITH ALL TRADES.
7. THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.
8. THE CONTRACTOR SHALL MAINTAIN OR ADJUST TO NEW FINISH GRADES AS NECESSARY ALL UTILITY AND SITE STRUCTURES SUCH AS LIGHT POLES, SIGN POLES, MANHOLES, CATCH BASINS, HAND HOLES, WATER AND GAS GATES, HYDRANTS, ETC., FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS OTHERWISE NOTED OR DIRECTED BY THE OWNER'S REPRESENTATIVE.

## UTILITY AND GRADING NOTES

1. ALL ON-SITE STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) OR RCP, UNLESS NOTED OTHERWISE.
2. HDPE PIPE SHALL CONFORM WITH AASHTO DESIGNATIONS M284 AND M252, SHALL BE MANUFACTURED WITH HIGH DENSITY POLYETHYLENE PLASTIC AND SHALL BE ADS N-12 PIPE AS MANUFACTURED BY ADVANCE DRAINAGE SYSTEM, INC. OR HANCOR HI Q PIPE AS MANUFACTURED BY HANCOR, INC. OR APPROVED EQUAL UNLESS OTHERWISE NOTED OR DETAILED.
3. A MINIMUM OF 18" VERTICAL CLEARANCE SHALL BE MAINTAINED WHERE WATER SERVICES CROSS STORM DRAIN LINES.
4. ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO A POINT OF 10 FEET FROM THE BUILDING WALL UNLESS OTHERWISE NOTED OR DETAILED.
5. ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 5 FEET OF COVER AND A MAXIMUM OF 6 FEET OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE. GREATER DEPTHS ARE PERMITTED WHERE REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES.
6. GENERALLY, WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE SHOWN FOR INSTALLATION LOCATION PURPOSE. THE CONTRACTOR SHALL NOTE THAT NOT ALL FITTINGS ARE NOTED, SHOWN OR INDICATED.
7. ALL WATER MAIN FITTINGS, TEES, BENDS, HYDRANTS, ETC. SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS.
8. DOMESTIC WATER SERVICES 2.5" AND SMALLER SHALL BE TYPE K COPPER TUBING AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED CORPORATION STOP AND APPROVED SADDLE CURB STOP, AND BOX, USING MATERIALS SPECIFIED BY THE MUNICIPAL WATER DEPARTMENT OR COMPANY.
9. ALL WATER MAIN APPURTENANCES, MATERIALS, METHODS OF INSTALLATION AND TESTING REQUIREMENTS SHALL MEET OR EXCEED ALL LOCAL MUNICIPAL REQUIREMENTS.
10. PRESSURE AND LEAKAGE TEST, DISINFECTION AND FLUSHING SHALL BE IN ACCORDANCE WITH ALL LOCAL MUNICIPAL STANDARDS AND REQUIREMENTS. CONTRACTORS SHALL BE RESPONSIBLE FOR ALL COSTS IN CONNECTION WITH UTILITY TESTS, FLUSHING AND INSPECTIONS AS REQUIRED BY THE LOCAL MUNICIPALITY.
11. PRIMARY WATER METER AND BACKFLOW PREVENTER SHALL BE LOCATED AT THE POINT WHERE THE WATER LINE ENTERS THE BUILDING UNLESS OTHERWISE NOTED OR DETAILED ON THE DRAWINGS.
12. ALL GRAVITY SEWER PIPE SHALL BE PVC PER ASTM D3034, SDR-35 AND ASTM D1784 WITH RUBBER GASKET JOINTS.
13. WHERE SANITARY SEWERS CROSS WATER LINES, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST EIGHTEEN INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF TEN FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR AS THE SEWER AS POSSIBLE. IF MECHANICAL JOINT PIPE IS NOT USED THAN BOTH THE WATER MAIN AND SANITARY SEWER SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE LINE.
14. DUE TO THE SMALL SCALE OF THE SITE WORK DRAWINGS, EXACT LOCATION OF UTILITY STUBS FOR BUILDING CONNECTIONS SHALL BE VERIFIED WITH THE BUILDING DRAWINGS. SERVICE STUBS TO THE BUILDING SHALL BE INSTALLED TO A POINT 10 FEET FROM THE BUILDING WALL UNLESS OTHERWISE NOTED OR DETAILED.
15. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK. PONDING AT TRANSITION AREAS WILL NOT BE ALLOWED.
16. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS AND STRUCTURES.
17. MAXIMUM SLOPE IN DISTURBED AREAS SHALL NOT EXCEED 2:1 UNLESS OTHERWISE NOTED.
18. CONTRACTOR SHALL VERIFY EXISTING GRADES AND NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
19. CONTRACTOR SHALL ADJUST UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.
20. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE OWNER'S REPRESENTATIVE FOR RESOLUTION OF THE CONFLICT.
21. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ALL GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
22. ELECTRICAL DUCT BANK LOCATION IS SHOWN FOR COORDINATION PURPOSES, REFER TO ELECTRICAL PLANS FOR STRUCTURES AND DETAILS OF THE UTILITY DUCT BANK.
23. THE LOCATION, SIZE, DEPTH AND SPECIFICATIONS FOR CONSTRUCTION OF PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY AND APPROVED BY THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE AND ELECTRICAL). FINAL DESIGN AND LOCATIONS AT THE BUILDING WILL BE PROVIDED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE UTILITY CONNECTIONS WITH THE RESPECTIVE COMPANIES PRIOR TO ANY UTILITY CONSTRUCTION.

## LAYOUT AND MATERIAL NOTES





























































1. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
2. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND ALL DETAILS CONTIGUOUS TO THE BUILDING INCLUDING SIDEWALKS, RAMPS, UTILITY ENTRANCE LOCATIONS, WALL PACKS, CONCRETE DOOR PADS, ROOF DRAINS, ETC.
4. ACCESSIBLE CURB RAMPS SHALL BE PER THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD AND THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES, WHICH IS MORE STRINGENT.
5. THE FOLLOWING LAYOUT CRITERIA SHALL CONTROL UNLESS OTHERWISE NOTED ON THE PLAN:  
ALL DIMENSIONS ARE TO OUTSIDE FACE OF BUILDING.  
ALL DIMENSIONS ARE TO FACE OF CURB AT GUTTER LINE.  
ALL DIMENSIONS ARE TO CENTER OF PAVEMENT MARKINGS.  
ALL TIES TO PROPERTY LINES ARE PERPENDICULAR TO THE PROPERTY LINE UNLESS OTHERWISE NOTED.

## SOIL EROSION AND SEDIMENT CONTROL NOTES

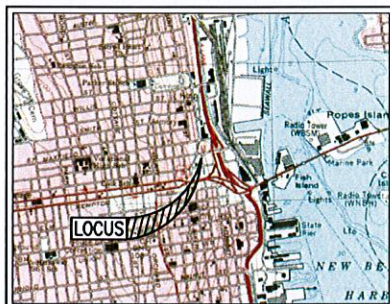
1. A COPY OF THE SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES IN THE PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
3. ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY DEMOLITION GRADING OPERATIONS AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
4. ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
5. ALL SOIL EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
6. THE MAINTENANCE OF SOIL EROSION AND SEDIMENT CONTROL MEASURES AND FACILITIES DURING AND IMMEDIATELY AFTER CONSTRUCTION RESTS WITH THE GENERAL CONTRACTOR. UPON ACCEPTANCE OF THE PROJECT, THE OWNER SHALL BECOME RESPONSIBLE FOR MAINTENANCE OF ANY REMAINING MEASURES AND FACILITIES.
7. OFF SITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE ENGINEER.
8. ENGINEER MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED.
9. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS AT ALL TIMES.
10. THE CONTRACTOR SHALL UTILIZE ALL METHODS NECESSARY TO PREVENT BLOWING AND MOVEMENT OF DUST FROM THE EXPOSED SOIL SURFACES.
11. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
12. A CRUSHED STONE TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ENTRANCE EXISTS. SEE LOCATION DETAIL ON PLAN.
13. ALL CATCH BASIN INLETS SHALL BE PROTECTED DURING CONSTRUCTION AS DETAILED ON THE PLAN, IF APPLICABLE.
14. ALL STORM DRAINAGE OUTLETS SHALL BE PROTECTED AS REQUIRED HEREON BEFORE DISCHARGE POINTS BECOME OPERATIONAL.
15. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
16. LAND AREAS EXPOSED AT ANY ONE TIME AND THE LENGTH OF EXPOSURE SHALL BE KEPT TO A PRACTICAL MINIMUM. THEY SHALL BE LEFT IN A NEAT AND FINISHED APPEARANCE AND PROTECTED FROM EROSION.
17. ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN FOURTEEN (14) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTRIBUTED AREAS SHALL BE MULCHED.
18. ALL CRITICAL AREAS SUBJECT TO EROSION SHALL RECEIVE A TEMPORARY SEEDING AND BE MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS IMMEDIATELY FOLLOWING ROUGH GRADING.
19. IMMEDIATELY AFTER COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, SEED THE STOCKPILE WITH ANNUAL RYE GRASS. STABILIZE TOPSOIL STOCKPILES WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF TEMPORARY SEEDING.
20. SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF WETLANDS, THE FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITIES. THE BASE OF ALL STOCKPILES SHALL BE PROTECTED BY A STRAW WATTLE BARRIER OR SEDIMENT FENCE. LOCATIONS ARE DELINEATED ON THE PLAN.
21. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 2:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
22. ALL AREAS NOT STABILIZED BY CONSTRUCTION, SOODING OR LANDSCAPING SHALL BE SEEDED AND STABILIZED IN ACCORDANCE WITH THE SEEDING AND MULCHING SPECIFICATIONS.
23. MULCHING IS REQUIRED ON ALL SEEDING AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATIVE COVER.
24. ALL Dewatering OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTRATION DEVICE. THE SEDIMENT FILTER MUST BE CAPABLE OF FILTERING THE SEDIMENT AND BE PLACED SO AS NOT TO CAUSE EROSION OF THE DOWNSTREAM AREA.

## GENERAL PLANTING NOTES

1. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN OR THE PLANT MATERIAL WILL BE UNACCEPTABLE. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. THE OWNER AND/OR THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO APPROVE ALL PLANT MATERIAL ON SITE PRIOR TO INSTALLATION.
2. ALL PLANT MATERIAL SHALL BE PROPERLY GUYED, STAKED, WRAPPED, AND PLANTED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS. GUY WIRES SHALL BE ATTACHED TO THE TREE AT A HEIGHT OF TWO-THIRDS THE HEIGHT OF THE TREE AND SHOULD BE LOCATED AT POINTS SO AS NOT TO SPLIT THE TRUNK OF MULTI-STEMMED TREES. PROVIDE THREE STAKES PER TREE UNLESS NOTED OTHERWISE INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE. PROVIDE BURLAP WRAPPING WITH A 50% OVERLAP. CUT AND REMOVE BURLAP FROM TOP ONE-THIRD OF THE ROOT BALL.
3. PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH ONE PART EACH OF TOP SOIL, PEAT MOSS, AND PARENT MATERIAL. IF WET SOIL CONDITIONS EXIST THEN PLANTING PITS SHALL BE EXCAVATED AN ADDITIONAL 12" AND FILLED WITH SAND.
4. NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION AND SHALL BE SUBSEQUENTLY FLOODED TWICE WITHIN TWENTY-FOUR (24) HOURS OF PLANTING. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR AFTER THE DATE OF FINAL ACCEPTANCE. ANY PLANT MATERIAL THAT DIES WITHIN THAT TIME PERIOD SHALL BE REMOVED, INCLUDING THE STUMP, AND REPLACED WITH MATERIAL OF SIMILAR SIZE AND SPECIES AT THE EXPENSE OF THE DEVELOPER. THE REPLACED PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR AFTER THE REPLACEMENT DATE.
6. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM 4" LAYER OF TOPSOIL IN ALL LAWN AREAS AND A MINIMUM OF 6" OF TOPSOIL IN ALL PLANTING AREAS. A FULL SOIL ANALYSIS SHALL BE CONDUCTED AFTER CONSTRUCTION AND PRIOR TO PLANTING TO DETERMINE THE EXTENT OF SOIL AMENDMENT REQUIRED.
7. ALL DISTURBED LAWN AREAS SHALL BE STABILIZED WITH EITHER SOO OR SEED AS INDICATED ON THE LANDSCAPE PLANS. SEED SHALL CONSIST OF THE MIXTURE LISTED IN THE GENERAL SEEDING NOTES. ALL DISTURBED LAWN AREAS SHALL BE TOP SOILED, LIMED, FERTILIZED, AND FINE GRADED PRIOR TO LAWN INSTALLATION.
8. ALL PLANTING BEDS SHALL RECEIVE 3" OF SHREDDED PINE, CEDAR OR HEMLOCK BARK.
9. ALL SHRUB MASSSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS.
10. ALL TREES ARE TO BE GUYED, 3 EACH, UNLESS OTHERWISE NOTED ON PLAN.
11. ALL DECIDUOUS TREES ARE TO BE WRAPPED, WITH TREE WRAP, UP TO THE FIRST BRANCHING AND SECURED.
12. THE LANDSCAPE CONTRACTOR IS TO PERFORM ALL CONTRACTED WORK IN A REASONABLE PERIOD OF CONTINUOUS WORK.
13. THE LANDSCAPE CONTRACTOR IS TO MAINTAIN PLANT MATERIAL WHILE THE PROJECT IS UNDERWAY AND FOR A PERIOD OF TWO WEEKS AFTER THE COMPLETION OF THE PROJECT UNLESS OTHERWISE SPECIFIED.
14. THE CONTRACTOR IS TO CLEAN UP AND REMOVE ANY DEBRIS FROM THE SITE, CAUSED BY THE LANDSCAPE CONTRACTOR.

EXISTING		PROPOSED
	CONCRETE LINE	
	SPOT GRADE	
	EDGE OF PAVEMENT	
	VERTICAL GRANITE CURB	
	SLOPED GRANITE CURB	
	VERTICAL CONCRETE CURB	
	BITUMINOUS CONCRETE CURB	
	CAPE COD BERM	
	STONE WALL	
	CHAIN LINK FENCE	
	IRON FENCE	
	POST & RAIL FENCE	
	STOCKADE FENCE	
	GUARD RAIL	
	STRAW WATTLES	
	WATER LINE	
	FIRE HYDRANT	
	WATER GATE	
	SEWER LINE	
	SEWER MANHOLE	
	GAS LINE	
	GAS METER	
	GAS GATE	
	DRAIN LINE	
	DRAIN MANHOLE	
	CATCH BASIN	
	OVERHEAD WIRES	
	ELECTRIC, TELEPHONE & CABLE	
	UTILITY POLE	
	GUY WIRE	





LOCUS MAP SCALE: 1"=2,000'±

- ZONING DATA -		
DISTRICT: MIXED USE BUILDING (MUB)		
DESCRIPTION	REQUIRED	EXISTING
FRONT SETBACK*	20/0 FT	6.0 FT
SIDE SETBACK	10 FT	5.1 FT
REAR SETBACK	10 FT	11.0 FT

\* 20' FOR RESIDENTIAL & 0' FOR OTHER ALLOWABLE USES

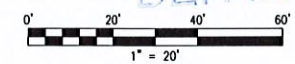
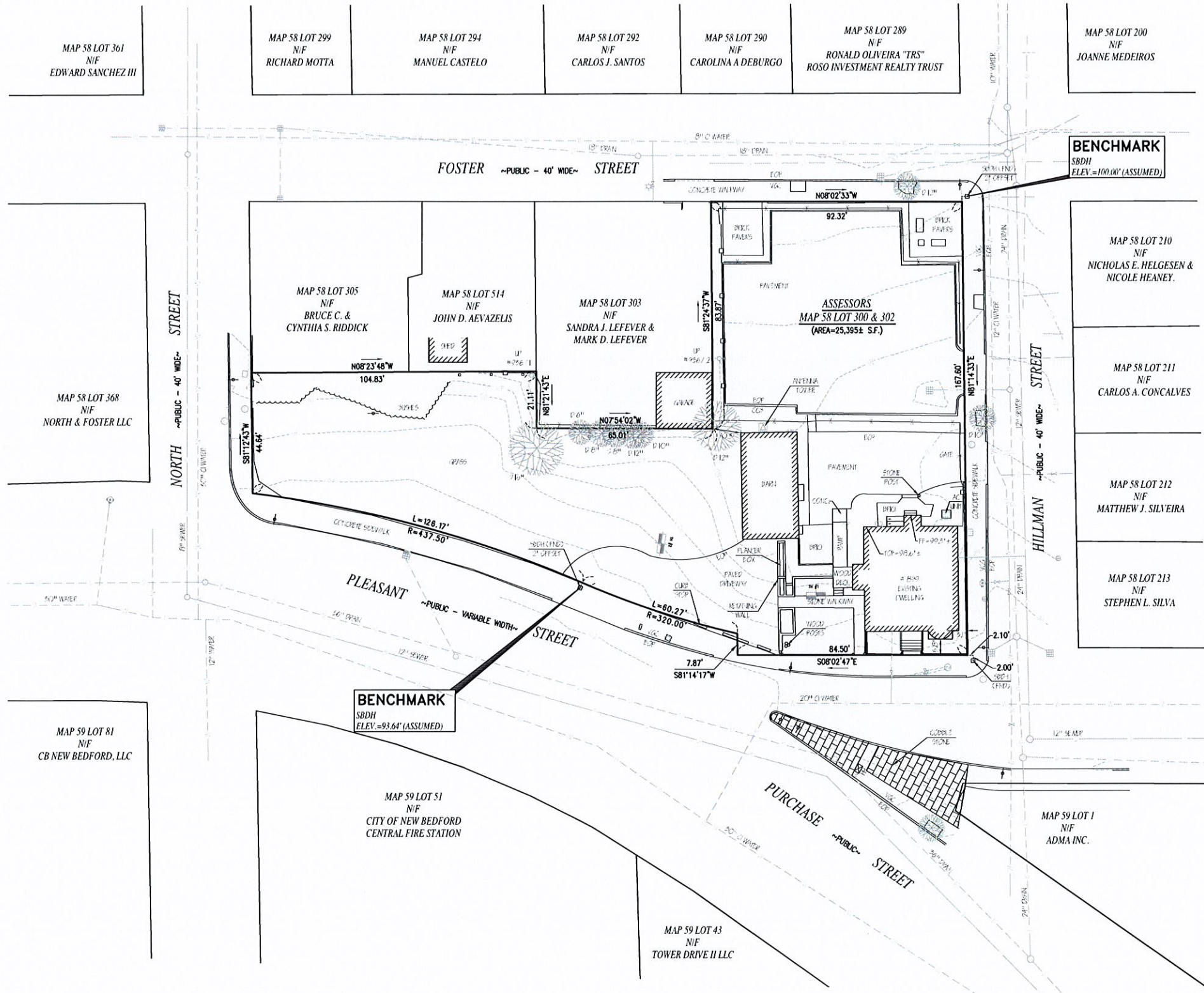
LEGEND



DESCRIPTION  
PROPERTY LINE  
CONTOUR LINE  
SPOT ELEVATION  
EDGE OF PAVEMENT  
VERTICAL GRANITE CURB  
CAPE COD BERM  
GAS LINE  
FENCE  
HYDRANT  
WATER GATE  
GAS GATE  
SIGN  
LIGHT  
UTILITY POLE  
GUY WIRE  
CATCH BASIN  
DRAIN MANHOLE  
SEWER MANHOLE  
ELECTRIC MANHOLE  
CURB INLET  
WATER LINE  
DRAIN LINE  
GRAVITY SEWER

RECORD OWNER:  
ASSESSORS MAP 58 LOT 300 & 302  
899 PLEASANT STREET, LLC  
32 HILLMAN STREET  
NEW BEDFORD, MA 02740  
DEED BOOK 11768 PAGE 17  
PLAN BOOK 97 PAGE 91

- NOTES:
1. TOPOGRAPHIC SURVEY PERFORMED BY FARLAND CORP. IN NOVEMBER, 2016
  2. VERTICAL ELEVATIONS REFER TO AN ASSUMED DATUM.
  3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE.



REVISIONS

1	041217	UTILITIES
2	042717	CB GRATE / HC RAMP
3	050317	PER PB COMMENTS

401 COUNTY STREET  
NEW BEDFORD, MA 02740  
P.508.717.3479  
OFFICES IN:  
• TAUNTON  
• MARLBOROUGH  
• WARWICK, RI

DRAWN BY: SP/CKG  
DESIGNED BY: -  
CHECKED BY: BJM

SITE PLAN  
899 PLEASANT STREET  
ASSESSORS MAP 58 LOTS 300 & 302  
NEW BEDFORD, MASSACHUSETTS  
PREPARED FOR:  
ARCHITECTURAL CONSULTING GROUP, INC. - MICHAEL JOSEFEK  
376 NASH ROAD, 1ST FLOOR  
NEW BEDFORD, MA 02746

MARCH 8, 2017  
SCALE: 1"=20'  
JOB NO. 16-1340  
LATEST REVISION:  
050317  
C2.0 - EXISTING  
CONDITIONS  
SHEET 3 OF 9





MAP 58 LOT 361  
N/F  
EDWARD SANCHEZ III

MAP 58 LOT 299  
N/F  
RICHARD MOTTA

MAP 58 LOT 294  
N/F  
MANUEL CASTELO

MAP 58 LOT 292  
N/F  
CARLOS J. SANTOS

MAP 58 LOT 290  
N/F  
CAROLINA A DEBURGO

MAP 58 LOT 289  
N/F  
RONALD OLIVEIRA "TRS"  
ROSO INVESTMENT REALTY TRUST

MAP 58 LOT 200  
N/F  
JOANNE MEDEIROS

FOSTER ~PUBLIC - 40' WIDE~ STREET

BENCHMARK  
SBDM  
ELEV.=100.00' (ASSUMED)

MAP 58 LOT 305  
N/F  
BRUCE C. &  
CYNTHIA S. RIDDICK

MAP 58 LOT 514  
N/F  
JOHN D. AEAZELIS

MAP 58 LOT 303  
N/F  
SANDRA J. LEFEVER &  
MARK D. LEFEVER

ASSESSORS  
MAP 58 LOT 300 & 302  
(AREA=25,395± S.F.)

MAP 58 LOT 210  
N/F  
NICHOLAS E. HELGESEN &  
NICOLE HEANEY.

MAP 58 LOT 211  
N/F  
CARLOS A. CONCALVES

MAP 58 LOT 212  
N/F  
MATTHEW J. SILVEIRA

MAP 58 LOT 213  
N/F  
STEPHEN L. SILVA

MAP 58 LOT 368  
N/F  
NORTH & FOSTER LLC

NORTH ~PUBLIC - 40' WIDE~ STREET

HILLMAN ~PUBLIC - 40' WIDE~ STREET

PLEASANT ~PUBLIC - VARIABLE WIDTH~ STREET

BENCHMARK  
SBDM  
ELEV.=93.64' (ASSUMED)

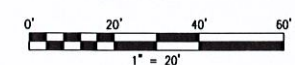
MAP 59 LOT 51  
N/F  
CITY OF NEW BEDFORD  
CENTRAL FIRE STATION

MAP 59 LOT 43  
N/F  
TOWER DRIVE II LLC

MAP 59 LOT 1  
N/F  
ADMA INC.

PURCHASE ~PUBLIC~ STREET

PLANNING  
MAY 04 2017  
DEPARTMENT

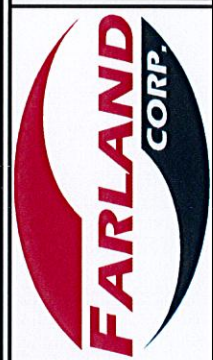


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MAP 59 LOT 81  
N/F  
CB NEW BEDFORD, LLC

REVISIONS

1	041217	UTILITIES
2	042717	CB GRATE / HC RAMP
3	050317	PER PB COMMENTS



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401 COUNTY STREET  
NEW BEDFORD, MA 02740  
P.508.717.3479  
OFFICES IN:  
• TAUNTON  
• MARLBOROUGH  
• WARWICK, RI

DRAWN BY: JKM

DESIGNED BY: JKM

CHECKED BY: CAF

SITE PLAN

899 PLEASANT STREET  
ASSESSORS MAP 58, LOTS 300 & 302  
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR:  
ARCHITECTURAL CONSULTING GROUP, INC.  
2206 ACUSHNET AVE.  
NEW BEDFORD, MA 02745

MARCH 8, 2017

SCALE: 1"=20'

JOB NO. 16-1340

LATEST REVISION:  
050317

C2.1-DEMOLITION PLAN

SHEET 4 OF 9





MAP 58 LOT 361  
N/F  
EDWARD SANCHEZ III

MAP 58 LOT 297  
N/F  
GEORGE E. BOUCHER "TRUSTEE"  
& KATHLEEN L. BOUCHER "TRUSTEE"

MAP 58 LOT 299  
N/F  
RICHARD MOTTA

MAP 58 LOT 294  
N/F  
MANUEL CASTELO

MAP 58 LOT 292  
N/F  
CARLOS J. SANTOS

MAP 58 LOT 290  
N/F  
CAROLINA A DEBURGO

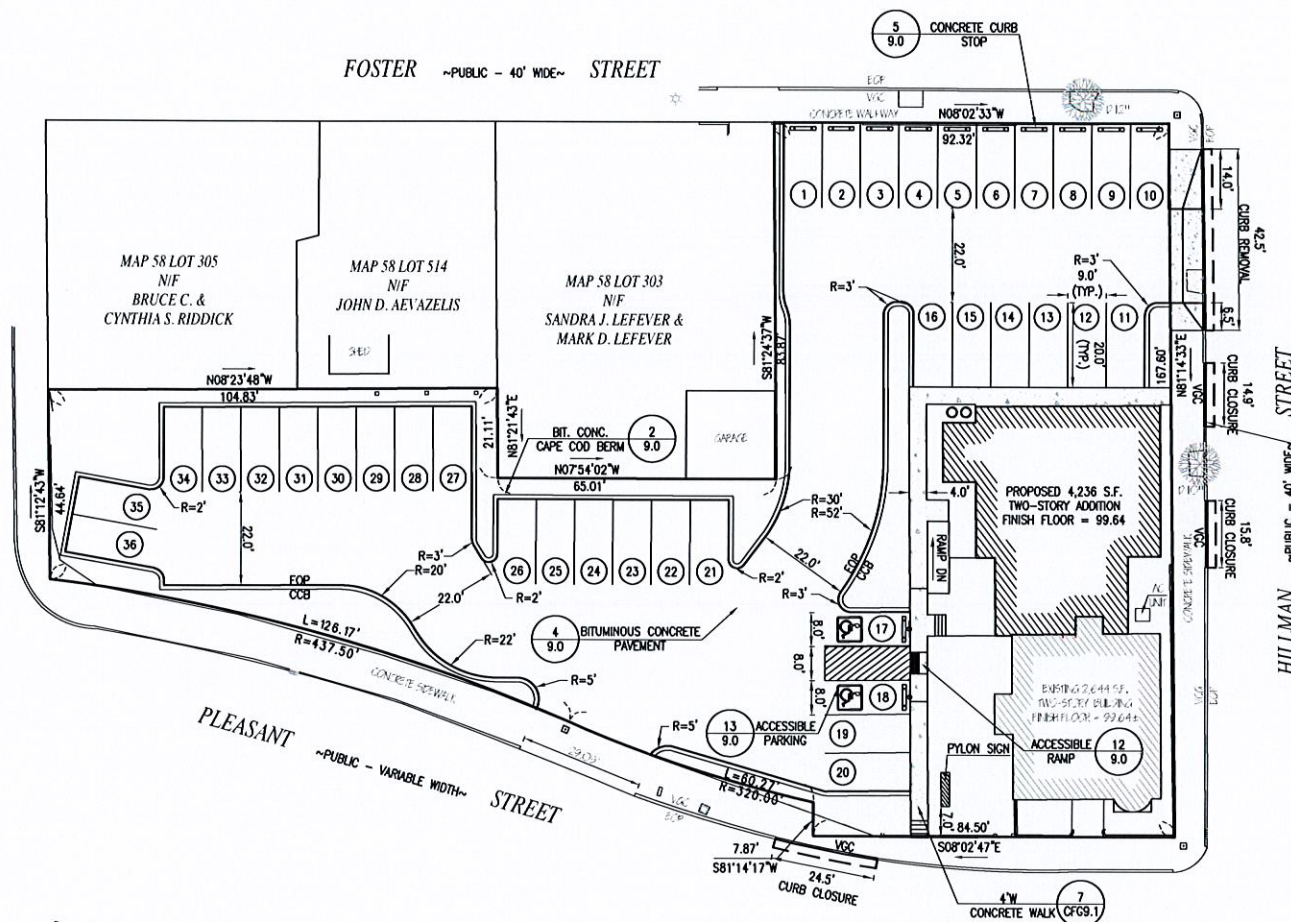
MAP 58 LOT 289  
N/F  
RONALD OLIVEIRA "TRS"  
ROSO INVESTMENT REALTY TRUST

MAP 58 LOT 200  
N/F  
JOANNE MEDEIROS

MAP 58 LOT 368  
N/F  
NORTH & FOSTER LLC

NORTH STREET  
~PUBLIC - 40' WIDE~

FOSTER ~PUBLIC - 40' WIDE~ STREET



MAP 58 LOT 210  
N/F  
NICHOLAS E. HELGESEN &  
NICOLE HEANEY.

MAP 58 LOT 211  
N/F  
CARLOS A. CONCALVES  
VERTICAL GRANITE  
CURB 3 9.0

MAP 58 LOT 212  
N/F  
MATTHEW J. SILVEIRA

MAP 58 LOT 213  
N/F  
STEPHEN L. SILVA

MAP 59 LOT 81  
N/F  
CB NEW BEDFORD, LLC

MAP 59 LOT 51  
N/F  
CITY OF NEW BEDFORD  
CENTRAL FIRE STATION

MAP 59 LOT 43  
N/F  
TOWER DRIVE II LLC

MAP 59 LOT 1  
N/F  
ADMA INC.

PURCHASE STREET  
~PUBLIC~

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# REVISIONS

1	041217	UTILITIES
2	042717	CB GRATE / HC RAMP
3	050317	PER PB COMMENTS



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401 COUNTY STREET  
NEW BEDFORD, MA 02740  
P.508.717.3479  
OFFICES IN:  
•TAUNTON  
•MARLBOROUGH  
•WARWICK, RI

DRAWN BY: JKM

DESIGNED BY: JKM

CHECKED BY: CAF

SITE PLAN  
899 PLEASANT STREET  
ASSESSORS MAP 58, LOTS 300 & 302  
NEW BEDFORD, MASSACHUSETTS  
PREPARED FOR:  
ARCHITECTURAL CONSULTING GROUP, INC.  
2206 ACUSHNET AVE.  
NEW BEDFORD, MA 02745

MARCH 8, 2017

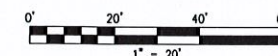
SCALE: 1"=20'

JOB NO. 16-1340

LATEST REVISION:  
050317

C3.0 - LAYOUT PLAN

SHEET 5 OF 9







MAP 58 LOT 361  
N/F  
EDWARD SANCHEZ III

MAP 58 LOT 297  
N/F  
GEORGE E. BOUCHER "TRUSTEE"  
& KATHLEEN L. BOUCHER "TRUSTEE"

MAP 58 LOT 299  
N/F  
RICHARD MOTTA

MAP 58 LOT 294  
N/F  
MANUEL CASTELO

MAP 58 LOT 292  
N/F  
CARLOS J. SANTOS

MAP 58 LOT 290  
N/F  
CAROLINA A DEBURGO

MAP 58 LOT 289  
N/F  
RONALD OLIVEIRA "TRS"  
ROSO INVESTMENT REALTY TRUST

MAP 58 LOT 200  
N/F  
JOANNE MEDEIROS

MAP 58 LOT 368  
N/F  
NORTH & FOSTER LLC

MAP 58 LOT 305  
N/F  
BRUCE C. &  
CYNTHIA S. RIDDICK  
SUBSURFACE RECHARGE SYSTEM  
(3) 6" 700-GALLON  
DRY WELLS IN A 8'W X 8'L  
CRUSHED STONE BED (EACH)

MAP 58 LOT 514  
N/F  
JOHN D. AEVAZELIS

MAP 58 LOT 303  
N/F  
SANDRA J. LEFEVER &  
MARK D. LEFEVER

SUBSURFACE RECHARGE SYSTEM  
(9) 6" 700-GALLON  
DRY WELLS IN A 8'W X 8'L  
CRUSHED STONE BED (EACH)

MAP 58 LOT 210  
N/F  
NICHOLAS E. HELGESEN &  
NICOLE HEANEY.

MAP 58 LOT 211  
N/F  
CARLOS A. CONCALVES

MAP 58 LOT 212  
N/F  
MATTHEW J. SILVEIRA

MAP 58 LOT 213  
N/F  
STEPHEN L. SILVA

**BASIN-1**  
BOTT. STONE=88.00  
BOTT. PIT=88.50  
TOP PIT=92.50  
12"IN. IN=90.20  
6"IN. OUT=90.92

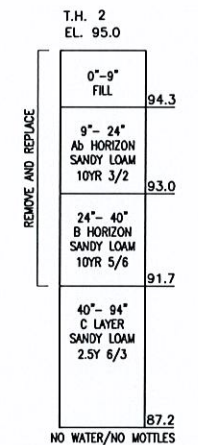
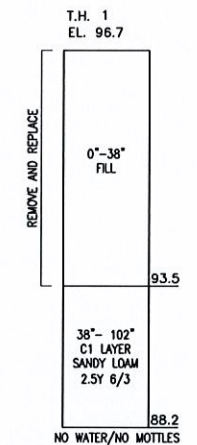
**BASIN-2**  
BOTT. STONE=88.00  
BOTT. PIT=88.50  
TOP PIT=92.50  
12"IN. IN=90.20  
6"IN. IN=91.50

**BENCHMARK**  
SBDH  
ELEV=93.64' (ASSUMED)

MAP 59 LOT 1  
N/F  
ADMA INC.

MAP 59 LOT 43  
N/F  
TOWER DRIVE II LLC

MAP 59 LOT 51  
N/F  
CITY OF NEW BEDFORD  
CENTRAL FIRE STATION



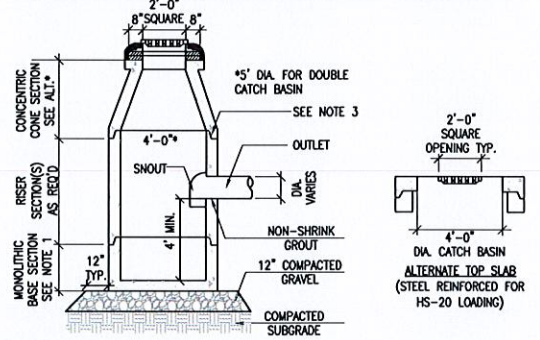
DATE: 02-17-17  
PERFORMED BY: JOHN MARCHAND  
WITNESS: NONE

DATE: 08-14-15  
PERFORMED BY: JOHN MARCHAND  
WITNESS: NONE

### 1 SOIL PROFILES

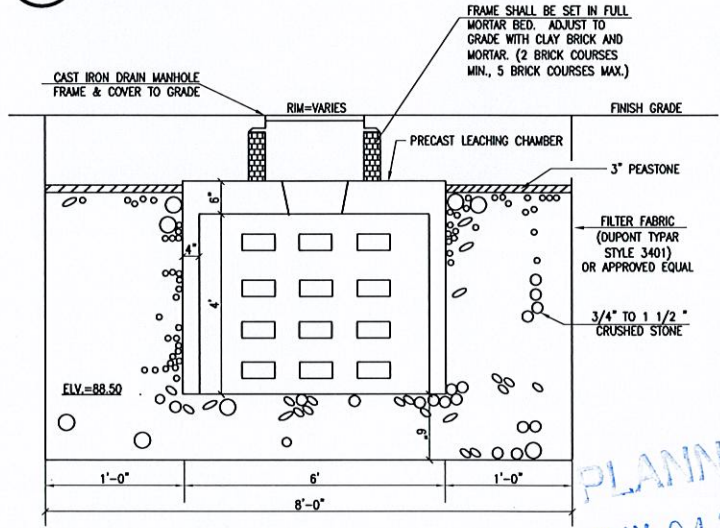
C5.0 NOT TO SCALE

- NOTES:
1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
  2. PROVIDE "Y" KNOCKOUTS FOR PIPES WITH 1" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
  3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
  4. CATCH BASIN FRAME SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR. (2 BRICK COURSES MIN. 5 BRICK COURSES MAX.)
  5. FRAME AND GRATE TO BE EQUAL TO LEBARON LK 120 (3 FLANGE) OR LK 121 (4 FLANGE) WITH SG-1 GRATE. DOUBLE FRAME AND GRATE SHALL BE LEBARON TYPE R-3531 B OR APPROVED EQUAL BY THE ENGINEER.



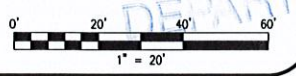
### 2 CATCH BASIN

C5.0 NOT TO SCALE



### 3 DRAINAGE LEACHING BASIN

C5.0 NOT TO SCALE



#### REVISIONS

1	041217	UTILITIES
2	042717	CB GRATE / HC RAMP
3	050317	PER PB COMMENTS



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401 COUNTY STREET  
NEW BEDFORD, MA 02740  
P.508.717.3479

OFFICES IN:  
• TAUNTON  
• MARLBOROUGH  
• WARWICK, RI

DRAWN BY: JKM  
DESIGNED BY: JKM  
CHECKED BY: CAF

**SITE PLAN**  
899 PLEASANT STREET  
ASSESSORS MAP 58, LOTS 300 & 302  
NEW BEDFORD, MASSACHUSETTS  
PREPARED FOR:  
ARCHITECTURAL CONSULTING GROUP, INC.  
2206 ACUSHNET AVE.  
NEW BEDFORD, MA 02745

MARCH 8, 2017  
SCALE: 1"=20'  
JOB NO. 16-1340  
LATEST REVISION:  
050317

C4.0 - GRADING &  
DRAINAGE PLAN  
SHEET 6 OF 9

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MAP 58 LOT 361  
N/F  
EDWARD SANCHEZ III

MAP 58 LOT 297  
N/F  
GEORGE E. BOUCHER "TRUSTEE"  
& KATHLEEN L. BOUCHER "TRUSTEE"

MAP 58 LOT 299  
N/F  
RICHARD MOTTA

MAP 58 LOT 294  
N/F  
MANUEL CASTELO

MAP 58 LOT 292  
N/F  
CARLOS J. SANTOS

MAP 58 LOT 290  
N/F  
CAROLINA A DEBURGO

MAP 58 LOT 289  
N/F  
RONALD OLIVEIRA "TRS"  
ROSO INVESTMENT REALTY TRUST

MAP 58 LOT 200  
N/F  
JOANNE MEDEIROS

FOSTER ~PUBLIC - 40' WIDE~ STREET

MAP 58 LOT 305  
N/F  
BRUCE C. &  
CYNTHIA S. RIDDICK

MAP 58 LOT 314  
N/F  
JOHN D. AEVAZELIS

MAP 58 LOT 303  
N/F  
SANDRA J. LEFEVER &  
MARK D. LEFEVER

LEYLAND CYPRESS OR  
HOLMSTRUP ARBORVITAE  
(TYP.) 4-5' ON CENTER

HYDRANGEA BLUSHING  
BRIDE (TYP.)

MAP 58 LOT 210  
N/F  
NICHOLAS E. HELGESEN &  
NICOLE HEANEY.

MAP 58 LOT 211  
N/F  
CARLOS A. CONCALVES

MAP 58 LOT 212  
N/F  
MATTHEW J. SILVEIRA

MAP 58 LOT 213  
N/F  
STEPHEN L. SILVA

MAP 58 LOT 368  
N/F  
NORTH & FOSTER LLC

NORTH STREET  
~PUBLIC - 40' WIDE~

HILLMAN STREET  
~PUBLIC - 40' WIDE~

PLEASANT STREET  
~PUBLIC - VARIABLE WIDTH~

MAP 59 LOT 81  
N/F  
CB NEW BEDFORD, LLC

MAP 59 LOT 51  
N/F  
CITY OF NEW BEDFORD  
CENTRAL FIRE STATION

MAP 59 LOT 43  
N/F  
TOWER DRIVE II LLC

MAP 59 LOT 1  
N/F  
ADMA INC.

PURCHASE STREET  
~PUBLIC~

LANDSCAPE LEGEND					
COUNT	TAG	SYMBOL	DESCRIPTION	DIA	HEIGHT
59	1		CUPRESSUS LEYLANDI-LEYLAND CYPRESS- SCREEN	2'	6'
0	2		THUJA OCCIDENTALIS- HOLMSTRUP ARBORVITAE- SCREEN	2'	4'
21	4		BUXUS MICROPHYLLA-BOXWOOD ORNAMENTAL SHRUB	2'	3'
38	5		HYDRANGEA MACROPHYLLA- HYDRANGEA BLUSHING BRIDE	2'	3'

REVISIONS		
1	041217	UTILITIES
2	042717	CB GRATE / HC RAMP
3	050317	PER PB COMMENTS



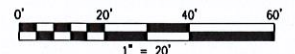
www.FarlandCorp.com  
401 COUNTY STREET  
NEW BEDFORD, MA 02740  
P.508.717.3479  
OFFICES IN:  
•TAUNTON  
•MARLBOROUGH  
•WARWICK, RI

DRAWN BY: JKM  
DESIGNED BY: JKM  
CHECKED BY: CAF

SITE PLAN  
899 PLEASANT STREET  
ASSESSORS MAP 58, LOTS 300 & 302  
NEW BEDFORD, MASSACHUSETTS  
PREPARED FOR:  
ARCHITECTURAL CONSULTING GROUP, INC.  
2206 ACUSHNET AVE.  
NEW BEDFORD, MA 02745

MARCH 8, 2017  
SCALE: 1"=20'  
JOB NO. 16-1340  
LATEST REVISION:  
050317

C5.0 - LANDSCAPE PLAN  
SHEET 7 OF 9



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MAP 58 LOT 361  
N/F  
EDWARD SANCHEZ III

MAP 58 LOT 299  
N/F  
RICHARD MOTTA

MAP 58 LOT 294  
N/F  
MANUEL CASTELO

MAP 58 LOT 292  
N/F  
CARLOS J. SANTOS

MAP 58 LOT 290  
N/F  
CAROLINA A DEBURGO

MAP 58 LOT 289  
N/F  
RONALD OLIVEIRA "TRS"  
ROSO INVESTMENT REALTY TRUST

MAP 58 LOT 200  
N/F  
JOANNE MEDEIROS

MAP 58 LOT 305  
N/F  
BRUCE C. &  
CYNTHIA S. RIDDICK

MAP 58 LOT 514  
N/F  
JOHN D. AEVAZELIS

MAP 58 LOT 303  
N/F  
SANDRA J. LEFEVER &  
MARK D. LEFEVER

LOCATION OF PERMANENT  
INFILTRATION BASIN SHALL NOT  
BE UTILIZED FOR CONSTRUCTION  
PERIOD SEDIMENT CONTROL

PROPOSED PARKING AREA TO BE UTILIZED  
AS CONSTRUCTION PERIOD PARKING AND  
STAGING AREA. AREA TO BE GRADED TO  
SHED RUNOFF TOWARD TEMPORARY  
SEDIMENT TRAPS OR EROSION CONTROL  
BARRIERS

MAP 58 LOT 210  
N/F  
NICHOLAS E. HELGESEN &  
NICOLE HEANEY

MAP 58 LOT 211  
N/F  
CARLOS A. CONCALVES

MAP 58 LOT 212  
N/F  
MATTHEW J. SILVEIRA

MAP 58 LOT 213  
N/F  
STEPHEN L. SILVA

MAP 58 LOT 368  
N/F  
NORTH & FOSTER LLC

NORTH STREET  
~PUBLIC - 40' WIDE~

FOSTER STREET  
~PUBLIC - 40' WIDE~

HILLMAN STREET  
~PUBLIC - 40' WIDE~

TEMPORARY CONSTRUCTION PERIOD SOIL  
STOCKPILE AREA. EROSION CONTROL BARRIER  
TO BE INSTALLED AT BOTTOM OF ALL SLOPES  
(TYP.) OTHER STOCKPILE AREAS MAY BE UTILIZED  
WITH PROPER EROSION CONTROLS

PLEASANT STREET  
~PUBLIC - VARIABLE WIDTH~

PROVIDE TYPE B SILTSACK CATCH  
BASIN SEDIMENT CAPTURE DEVICE  
WITH CURB INLET DEFLECTOR

10  
9.0

TEMPORARY 40' L X 20' W  
CONSTRUCTION ENTRANCE  
\*UTILIZE EXISTING CURB OPENING  
UNTIL SITE CONSTRUCTION  
PROHIBITS ACCESS FROM EXISTING  
CURB OPENING

PROVIDE STRAW WATTLE AND  
SILTATION FENCE OR EQUIVALENT  
EROSION CONTROL BARRIER AT ALL  
DOWNSLOPE LIMITS OF CONSTRUCTION

9  
9.0

PROVIDE TYPE B SILTSACK CATCH  
BASIN SEDIMENT CAPTURE DEVICE  
WITH CURB INLET DEFLECTOR

10  
9.0

MAP 59 LOT 81  
N/F  
CB NEW BEDFORD, LLC

MAP 59 LOT 51  
N/F  
CITY OF NEW BEDFORD  
CENTRAL FIRE STATION

MAP 59 LOT 43  
N/F  
TOWER DRIVE II LLC

MAP 59 LOT 1  
N/F  
ADMA INC.

PURCHASE STREET  
~PUBLIC~

0' 20' 40' 60'  
1" = 20'

REVISIONS

1	041217	UTILITIES
2	042717	CB GRATE / HC RAMP
3	050317	PER PB COMMENTS

John Marchand

www.FarlandCorp.com

401 COUNTY STREET  
NEW BEDFORD, MA 02740  
P.508.717.3479  
OFFICES IN:  
•TAUNTON  
•MARLBOROUGH  
•WARWICK, RI

DRAWN BY: JKM  
DESIGNED BY: JKM  
CHECKED BY: CAF

SITE PLAN

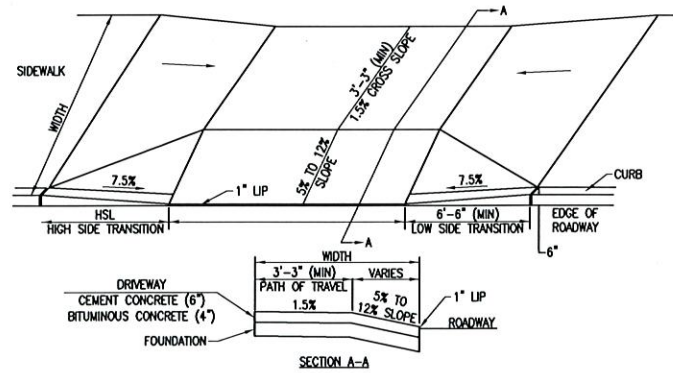
899 PLEASANT STREET  
ASSESSORS MAP 58, LOTS 300 & 302  
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR:  
ARCHITECTURAL CONSULTING GROUP, INC.  
2206 ACUSHNET AVE.  
NEW BEDFORD, MA 02745

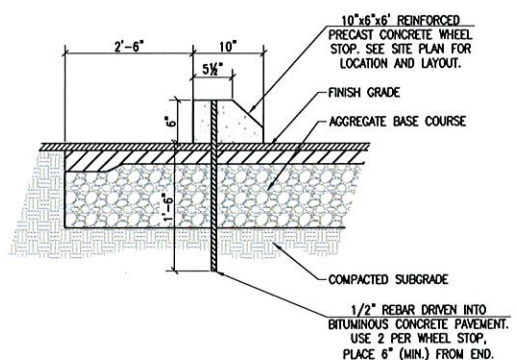
MARCH 8, 2017  
SCALE: 1"=20'  
JOB NO. 16-1340  
LATEST REVISION:  
050317  
C8.0 - EROSION  
CONTROL PLAN  
SHEET 8 OF 9

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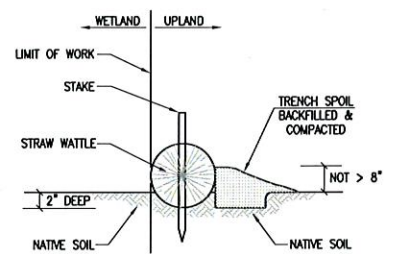




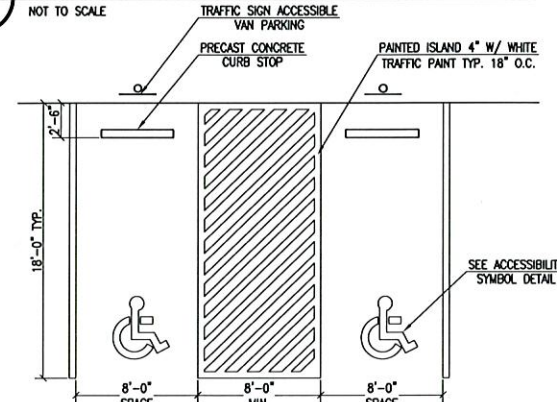
**1 DRIVEWAY CURB CUT**  
9.0 NOT TO SCALE



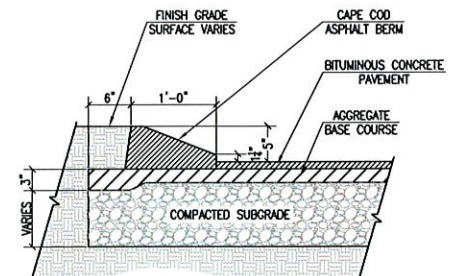
**5 PRECAST CONCRETE WHEEL STOP**  
9.0 NOT TO SCALE



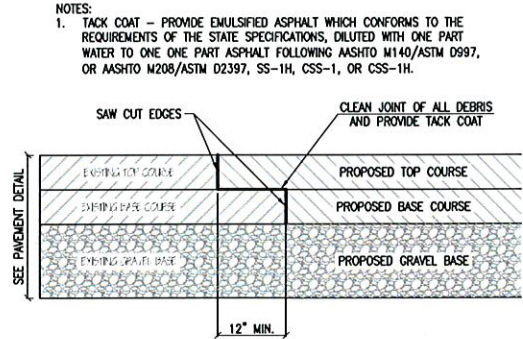
**9 STAKED STRAW WATTLE**  
9.0 NOT TO SCALE



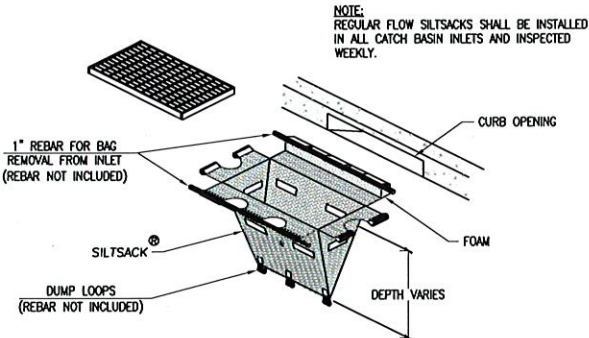
**13 ACCESSIBLE PARKING LAYOUT**  
9.0 NOT TO SCALE



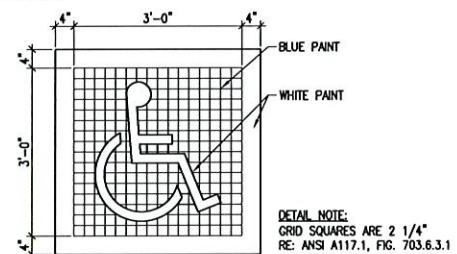
**2 BITUMINOUS CONCRETE CAPE COD BERM**  
9.0 NOT TO SCALE



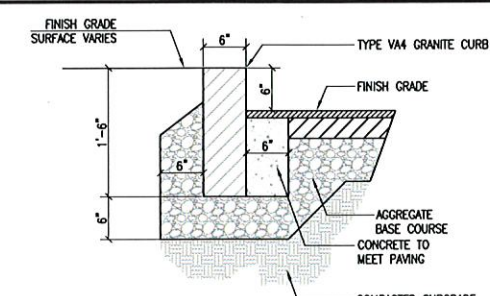
**6 PAVEMENT SAWCUT KEY DETAIL**  
9.0 NOT TO SCALE



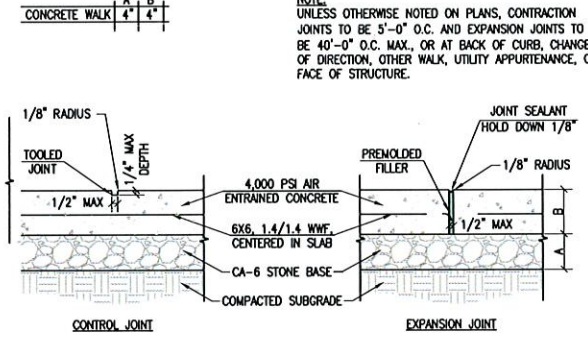
**10 REGULAR FLOW SILTSACK**  
9.0 NOT TO SCALE



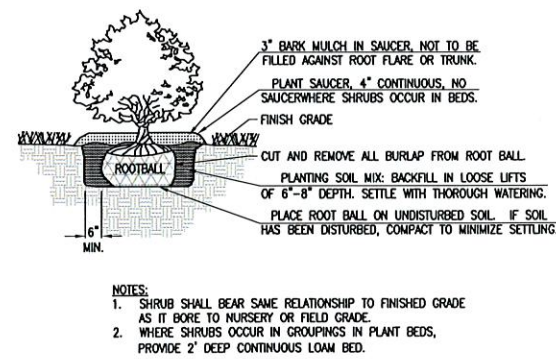
**14 ACCESSIBLE PARKING SYMBOL**  
9.0 NOT TO SCALE



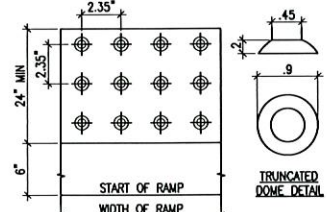
**3 VERTICAL GRANITE CURB**  
9.0 NOT TO SCALE



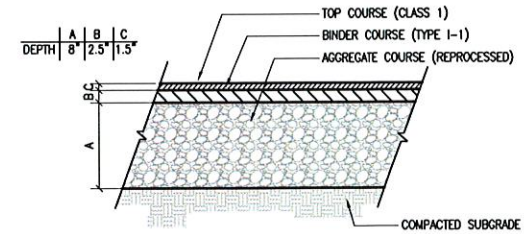
**7 CONCRETE PAVEMENT SIDEWALK**  
9.0 NOT TO SCALE



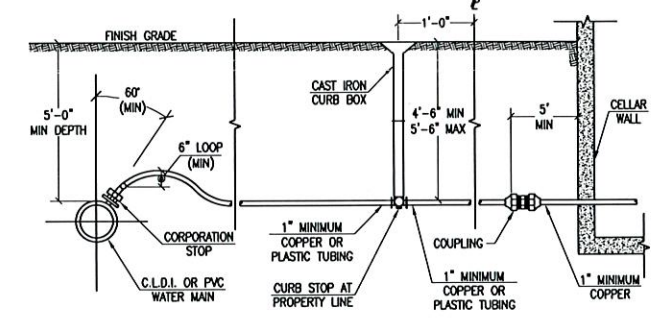
**11 SHRUB PLANTING**  
9.0 NOT TO SCALE



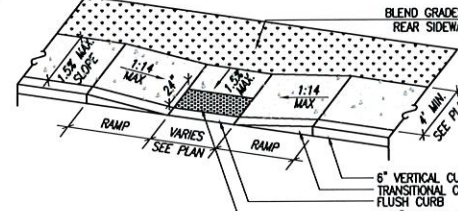
**15 DETECTABLE WARNING DETAIL**  
9.0 NOT TO SCALE



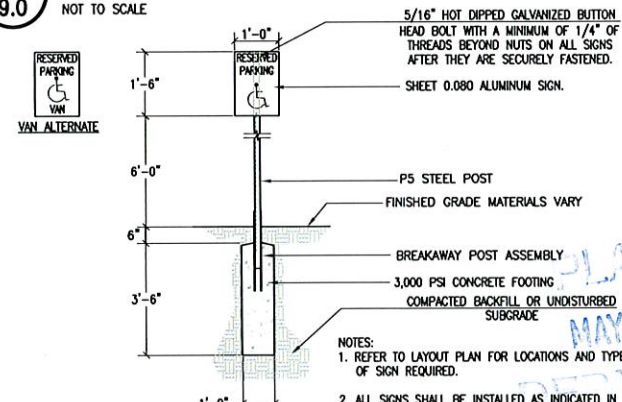
**4 BITUMINOUS CONCRETE PAVEMENT**  
9.0 NOT TO SCALE



**8 WATER SERVICE CONNECTION**  
9.0 NOT TO SCALE



**12 ACCESSIBLE RAMP TYPE B**  
9.0 NOT TO SCALE



**16 ACCESSIBLE PARKING SIGN**  
9.0 NOT TO SCALE

**REVISIONS**

1	041217	UTILITIES
2	042717	CB GRATE / HC RAMP
3	050317	PER PB COMMENTS

**FARLAND CORP.**

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401 COUNTY STREET  
NEW BEDFORD, MA 02740  
P.508.717.3479

OFFICES IN:

- TAUNTON
- MARLBOROUGH
- WARWICK, RI

DRAWN BY: JKM  
DESIGNED BY: JKM  
CHECKED BY: CAF

**SITE PLAN**

899 PLEASANT STREET  
ASSESSORS MAP 58, LOTS 300 & 302  
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR: ARCHITECTURAL CONSULTING GROUP, INC.  
2206 ACUSHNET AVE.  
NEW BEDFORD, MA 02745

MARCH 8, 2017  
SCALE: 1"=20'  
JOB NO. 16-1340  
LATEST REVISION: 050317

C7.0 - DETAILS  
SHEET 9 OF 9

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MAP 58 LOT 361  
N/F  
EDWARD SANCHEZ III

MAP 58 LOT 368  
N/F  
NORTH & FOSTER LLC

MAP 59 LOT 81  
N/F  
CB NEW BEDFORD, LLC

NOTE: ALL LIGHTING SHALL BE TURNED OFF ONE HOUR

AFTER CLOSE OF BUSINESS

NO OVERHEAD PARKING LOT LIGHTING OR WALL LIGHT PACKS SHALL BE INSTALLED

MAP 58 LOT 200  
N/F  
JOANNE MEDEIROS

MAP 58 LOT 210  
N/F  
NICHOLAS E. HELGESEN &  
NICOLE HEANEY.

MAP 58 LOT 211  
N/F  
CARLOS A. CONCALVES

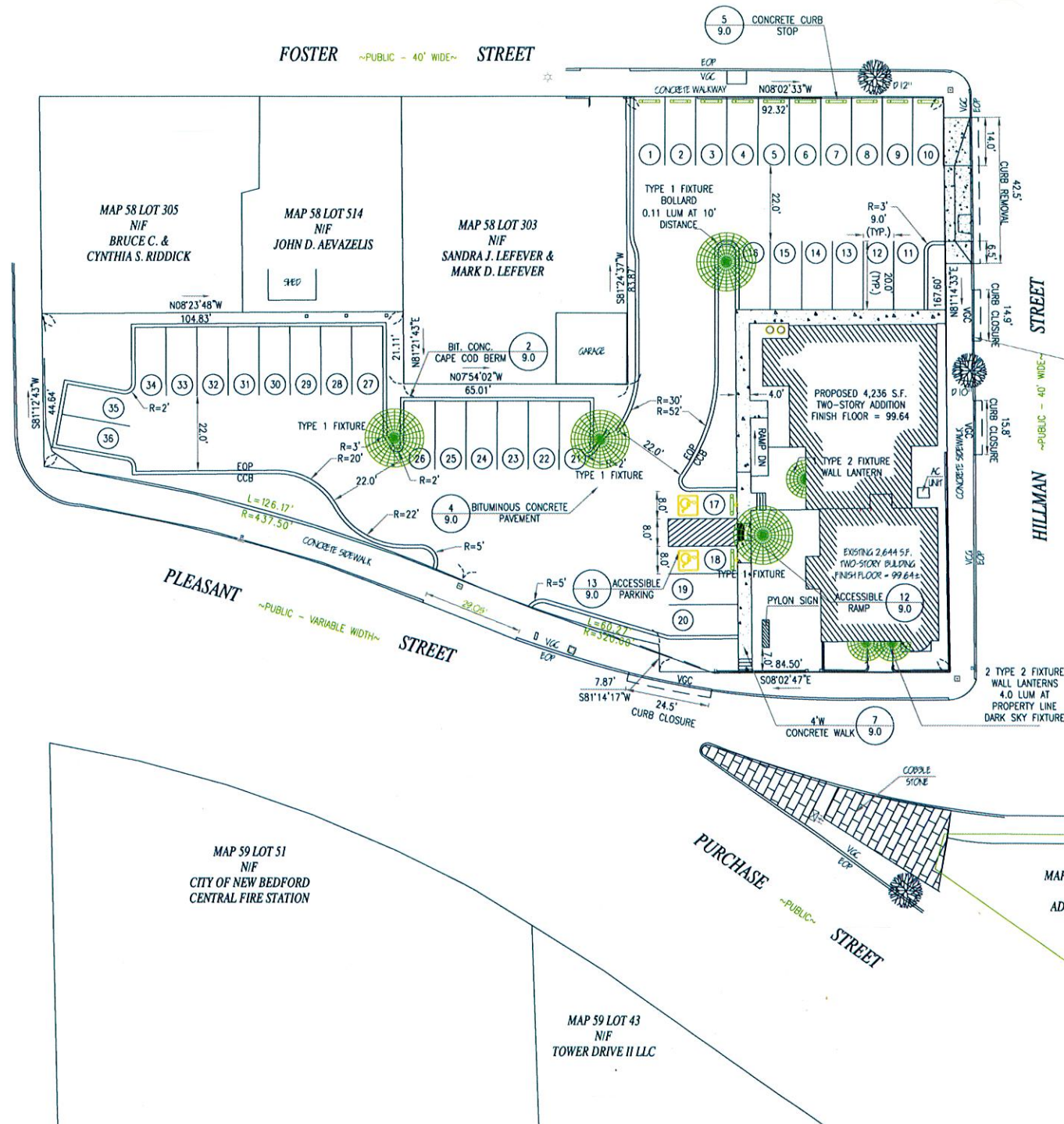
MAP 58 LOT 212  
N/F  
MATTHEW J. SILVEIRA

MAP 58 LOT 213  
N/F  
STEPHEN L. SILVA

MAP 59 LOT 1  
N/F  
ADMA INC.

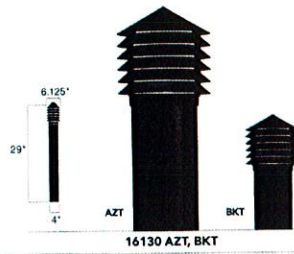
MAP 59 LOT 43  
N/F  
TOWER DRIVE II LLC

MAP 59 LOT 51  
N/F  
CITY OF NEW BEDFORD  
CENTRAL FIRE STATION



#### 12V LED PATH & SPREAD

#### LOUVERED BOLLARD



Kelvin	2800K Warm White/Pure White
Ordering Guide & Finish	16130AZT28 16130BKT28
Housing	Cast Aluminum with Weathered White Glass
Light Source	3 Omega Directional Integrated High Output Nichia® LEDs, tightly binned for color uniformity utilizing remote phosphor technology and constant current driver
Color Temp. (CCT) & CRI	2800K / 35+ CRI/80+ Ra
Power Usage at 12V AC Input VA and Watts	3.5W, 5.67VA
Operating Voltage Range	9V-15V AC/DC with no loss in output due to constant current technology
Lumen Maint.	Tested to an L-70 of 40,000 hours
Delivered Lumens & Efficacy	2800K = 224lm 2800K = 64lm/W
Wiring	20' of usable #18-2 SPT-2-W leads. Cable connectors supplied.
Required Installation Accessories*	15671ST - Bollard Template Kit 1557BKT - Bollard Mounting Stake
Fixture Photometric (lm)	Distance from Light 1' 2' 3' 4' 5' 6' 7' 8' 9' 10'

50 KICHLER®

- 1' DISTANCE = 1.83 LUM
- 2' DISTANCE = 4.73 LUM
- 3' DISTANCE = 5.58 LUM
- 4' DISTANCE = 2.69 LUM
- 5' DISTANCE = 1.5 LUM
- 6' DISTANCE = 0.75 LUM
- 7' DISTANCE = 0.43 LUM
- 8' DISTANCE = 0.32 LUM
- 10' DISTANCE = 0.11 LUM



TYPE 1 FIXTURE  
KICHLER LIGHTING  
-16130-28 BOLLARD



TYPE 2 FIXTURE  
KICHLER LIGHTING  
DARK SKY COMPLIANT

#### FIXTURE SCHEDULE

TYPE 1 FIXTURE  
KICHLER LIGHTING  
-16130-28 BOLLARD

TYPE 2 FIXTURE  
KICHLER LIGHTING  
DARK SKY COMPLIANT

PLANNING  
MAY 05 2017

DEPARTMENT

CASE 06-17

#### REVISIONS

NO.	DATE	PER	COMMENTS
1	5/3/2017	PER	PB COMMENTS



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401 COUNTY STREET  
NEW BEDFORD, MA 02740  
P.508.717.3479  
OFFICES IN:  
•TAUNTON  
•MARLBOROUGH  
•WARWICK, RI

DRAWN BY: JKM/MWJ

DESIGNED BY: JKM

CHECKED BY: CAF

SITE LIGHTING PLAN  
899 PLEASANT STREET  
ASSESSORS MAP 58, LOTS 300 & 302  
NEW BEDFORD, MASSACHUSETTS  
ARCHITECTURAL CONSULTING GROUP, INC.  
2206 ACUSHNET AVE.  
NEW BEDFORD, MA 02745

MARCH 8, 2017

SCALE: 1"=20'

JOB NO. 16-1340

LATEST REVISION:  
050317

E-1 - SITE LIGHTING PLAN

E-1



REVISION 05/03/17

# **STORMWATER MANAGEMENT REPORT AND HYDROLOGIC ANALYSIS**

**Commercial Site Plan – #899 Pleasant Street  
(Assessors Map 58, Lots 300 & 302)  
New Bedford, Massachusetts**

## **Project Summary**

The project area associated with this proposed development is bounded to the south by North Street, to the east by Pleasant Street, to the north by Hillman Street, and to the west by Foster Street. The site is comprised of two existing tax parcels totaling approximately 0.58 acres. It is located entirely in the city's Mixed Use Business (MUB) zoning district. An existing unoccupied business structure (most recently office space) and barn are located on the site. The site is bounded by residential uses to the north and west, by commercial uses to the south, and by a fire station to the east.

The applicant is seeking permission to construct a 2,118 s.f. addition off the western side of the existing structure. The structure will be utilized as a dental office. Thirty-six paved parking spaces have been provided in the proposed parking lot, including two handicap van-accessible spaces. The site is proposed to be accessed by; (1) the existing curb opening in Pleasant Street, and (2) a new curb opening on Hillman Street. Stormwater runoff from the site will be collected by a series of proposed catch basins, and discharged to subsurface infiltration systems, or will otherwise be allowed to follow existing drainage patterns. The building will be serviced by municipal water and sewer services.

## **Methodology**

Drainage computations were performed using the Natural Resources Conservation Services (NRCS) TR-20 method and HydroCAD® Drainage Calculation Software to determine the change in the existing and post-development runoff rates from each drainage area for the 2-, 10-, 25-, and 100-year 24 hour storm events. The limits of the work proposed to construct the project do not fall within an area subject to protection by the Wetlands Protection Act, therefore, strict compliance with DEP Stormwater Management Standards is not required. The drainage facilities are designed to comply with section 5454 of the Zoning By-Law, which requires stormwater design to conform to City of New Bedford Subdivision Regulations. Sketches of the existing and proposed watershed areas, HydroCAD® Report, and copies of the calculation sheets are included as appendices to this report.

PLANNING  
MAY 04 2017  
DEPARTMENT  
CASB 08-17



### **Existing Conditions**

The soils underlying the site are identified in the Natural Resources Conservation Service (NRCS) Soil Survey of Bristol County. The site soils are classified as 602 (Urban Land), which indicates that the soil consists of a significant amount of excavated and filled land.

Soil testing was performed by Farland Corp. under the direction of John Marchand, P.E. on February 17, 2017 to confirm the soil survey and determine the soil suitability for on-site stormwater management purposes.

The deep test holes was performed to a depth of approximately 7-1/2 to 8-1/2 feet to determine the seasonal high groundwater elevation. No evidence of seasonal high groundwater was observed in either of the two test hole performed. Soils consisted of fill material, underlain by a natural layer of Sandy Loam. For these purposes, a Hydrologic Soil Group "B" was assumed for the hydrologic calculations. The locations of the testholes are shown on the site plan.

### **Stormwater Management Overview**

#### Existing Conditions:

The project site is comprised of one existing subcatchment drainage area, which represents off-site stormwater discharges which are directed to the municipal drain system. The design point chosen for the project is the perimeter of the site. The existing site does not contain any stormwater BMP's which provide for attenuation or recharge of stormwater. Runoff is allowed to flow overland onto the abutting streets, or is collected by a single catch basin, which discharges directly to the municipal drain system on Hillman Street.

#### Proposed Conditions:

Under proposed conditions, three subcatchment areas have been included in the drainage model. The design point remains the same. Much of the stormwater runoff from the developed site will be captured by two deep-sump hooded catch basins which have been proposed. One of the catch basins will discharge directly to the municipal drain system on Hillman Street, as it had for pre-development conditions. The second catch basin will discharge to a series of proposed subsurface dry wells which will temporarily store and recharge a portion of the runoff. Runoff from larger storms will be discharged toward the municipal drain system in Pleasant Street. Runoff from the proposed roof is also directed to another series of subsurface dry wells, which also collects runoff which is captured by a catch basin and discharged to the dry wells. Runoff from larger storms will be allowed to surcharge the catch basin grate and follow overland flow patterns toward the municipal drainage system. In accordance with the Subdivision Regulations, the rate mitigation facilities have been engineered so that the aggregate peak discharge rates during a 2-year, 10-year,



25-year, or 100-year frequency storm event are no greater following development than the estimated rate prior to development.

### **Subdivision Regulations – New Bedford, Massachusetts**

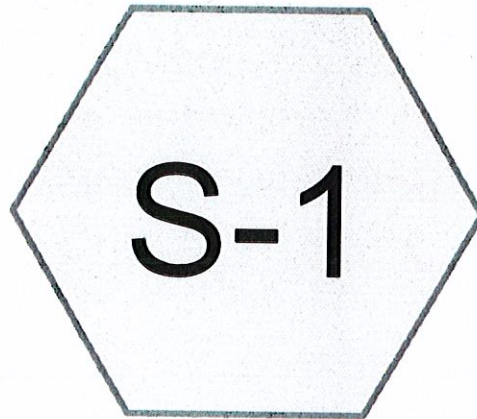
#### **Article VI(B)(14):**

Drainage provisions shall be made such that the peak run-off after development is not more than the peak run-off prior to development. Said condition shall be attained either through the containment of drainage on-site and/or the provisions for linkage to public storm drains. Further, provisions for collecting and discharging surface drainage shall be made, such that the drainage flowing onto surrounding properties after development is no more than the drainage flowing onto surrounding properties prior to development. All run-off calculations shall be based on the 100 year storm projections. This project meets this requirement.

**Table 1 - Comparison of  
Pre- versus Post-Development Offsite Runoff**

Storm Frequency	Pre-Development		Post-Development	
	Rate (cfs)	Volume (af)	Rate (cfs)	Volume (af)
<b>2-Year Storm</b>				
Off-site flow	1.04	0.076	0.67	0.057
<b>10-Year Storm</b>				
Off-site flow	1.82	0.132	1.41	0.101
<b>25-Year Storm</b>				
Off-site flow	2.29	0.166	1.69	0.136
<b>100-Year Storm</b>				
Off-site flow	3.11	0.228	2.50	0.198





# Off-site Flow to Municipal Drain System



**Drainage Diagram for PRE**

Prepared by Farland Corp.

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**PRE**

*Type III 24-hr 2-year storm Rainfall=3.40"*

Prepared by Farland Corp.

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Page 2

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment S-1: Off-site Flow to**

Runoff Area=0.583 ac 50.26% Impervious Runoff Depth=1.56"  
Flow Length=55' Tc=6.0 min CN=80 Runoff=1.04 cfs 0.076 af

**Total Runoff Area = 0.583 ac Runoff Volume = 0.076 af Average Runoff Depth = 1.56"**  
**49.74% Pervious = 0.290 ac 50.26% Impervious = 0.293 ac**



**Summary for Subcatchment S-1: Off-site Flow to Municipal Drain System**

Runoff = 1.04 cfs @ 12.10 hrs, Volume= 0.076 af, Depth= 1.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-year storm Rainfall=3.40"

Area (ac)	CN	Description
0.290	61	>75% Grass cover, Good, HSG B
* 0.051	98	Ex. Roof
* 0.215	98	Ex. Pavement
* 0.027	98	Ex. Concrete / Brick
0.583	80	Weighted Average
0.290		Pervious Area
0.293		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	15	0.1000	0.16		<b>Sheet Flow, AB</b>
					Grass: Dense n= 0.240 P2= 3.40"
2.8	35	0.0500	0.21		<b>Sheet Flow, BC</b>
					Grass: Short n= 0.150 P2= 3.40"
0.0	5	0.0500	3.60		<b>Shallow Concentrated Flow, CD</b>
					Unpaved Kv= 16.1 fps
1.6					<b>Direct Entry, TR-55 Minimum</b>
6.0	55	Total			



**PRE**

*Type III 24-hr 10-year storm Rainfall=4.80"*

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Page 4

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment S-1: Off-site Flow to**

Runoff Area=0.583 ac 50.26% Impervious Runoff Depth=2.72"

Flow Length=55' Tc=6.0 min CN=80 Runoff=1.82 cfs 0.132 af

**Total Runoff Area = 0.583 ac Runoff Volume = 0.132 af Average Runoff Depth = 2.72"**

**49.74% Pervious = 0.290 ac 50.26% Impervious = 0.293 ac**



PRE

Type III 24-hr 10-year storm Rainfall=4.80"

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Page 5

### Summary for Subcatchment S-1: Off-site Flow to Municipal Drain System

Runoff = 1.82 cfs @ 12.09 hrs, Volume= 0.132 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-year storm Rainfall=4.80"

Area (ac)	CN	Description
0.290	61	>75% Grass cover, Good, HSG B
* 0.051	98	Ex. Roof
* 0.215	98	Ex. Pavement
* 0.027	98	Ex. Concrete / Brick
0.583	80	Weighted Average
0.290		Pervious Area
0.293		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	15	0.1000	0.16		<b>Sheet Flow, AB</b>
					Grass: Dense n= 0.240 P2= 3.40"
2.8	35	0.0500	0.21		<b>Sheet Flow, BC</b>
					Grass: Short n= 0.150 P2= 3.40"
0.0	5	0.0500	3.60		<b>Shallow Concentrated Flow, CD</b>
					Unpaved Kv= 16.1 fps
1.6					<b>Direct Entry, TR-55 Minimum</b>
6.0	55	Total			



**PRE**

*Type III 24-hr 25-year storm Rainfall=5.60"*

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Page 6

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment S-1: Off-site Flow to**

Runoff Area=0.583 ac 50.26% Impervious Runoff Depth=3.42"

Flow Length=55' Tc=6.0 min CN=80 Runoff=2.29 cfs 0.166 af

**Total Runoff Area = 0.583 ac Runoff Volume = 0.166 af Average Runoff Depth = 3.42"**  
**49.74% Pervious = 0.290 ac 50.26% Impervious = 0.293 ac**



PRE

Type III 24-hr 25-year storm Rainfall=5.60"

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### Summary for Subcatchment S-1: Off-site Flow to Municipal Drain System

Runoff = 2.29 cfs @ 12.09 hrs, Volume= 0.166 af, Depth= 3.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-year storm Rainfall=5.60"

Area (ac)	CN	Description
0.290	61	>75% Grass cover, Good, HSG B
* 0.051	98	Ex. Roof
* 0.215	98	Ex. Pavement
* 0.027	98	Ex. Concrete / Brick
0.583	80	Weighted Average
0.290		Pervious Area
0.293		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	15	0.1000	0.16		<b>Sheet Flow, AB</b> Grass: Dense n= 0.240 P2= 3.40"
2.8	35	0.0500	0.21		<b>Sheet Flow, BC</b> Grass: Short n= 0.150 P2= 3.40"
0.0	5	0.0500	3.60		<b>Shallow Concentrated Flow, CD</b> Unpaved Kv= 16.1 fps
1.6					<b>Direct Entry, TR-55 Minimum</b>
6.0	55	Total			



**PRE**

*Type III 24-hr 100-year storm Rainfall=7.00"*

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Page 8

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment S-1: Off-site Flow to**

Runoff Area=0.583 ac 50.26% Impervious Runoff Depth=4.69"  
Flow Length=55' Tc=6.0 min CN=80 Runoff=3.11 cfs 0.228 af

**Total Runoff Area = 0.583 ac Runoff Volume = 0.228 af Average Runoff Depth = 4.69"**  
**49.74% Pervious = 0.290 ac 50.26% Impervious = 0.293 ac**



PRE

Type III 24-hr 100-year storm Rainfall=7.00"

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### Summary for Subcatchment S-1: Off-site Flow to Municipal Drain System

Runoff = 3.11 cfs @ 12.09 hrs, Volume= 0.228 af, Depth= 4.69"

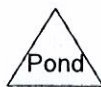
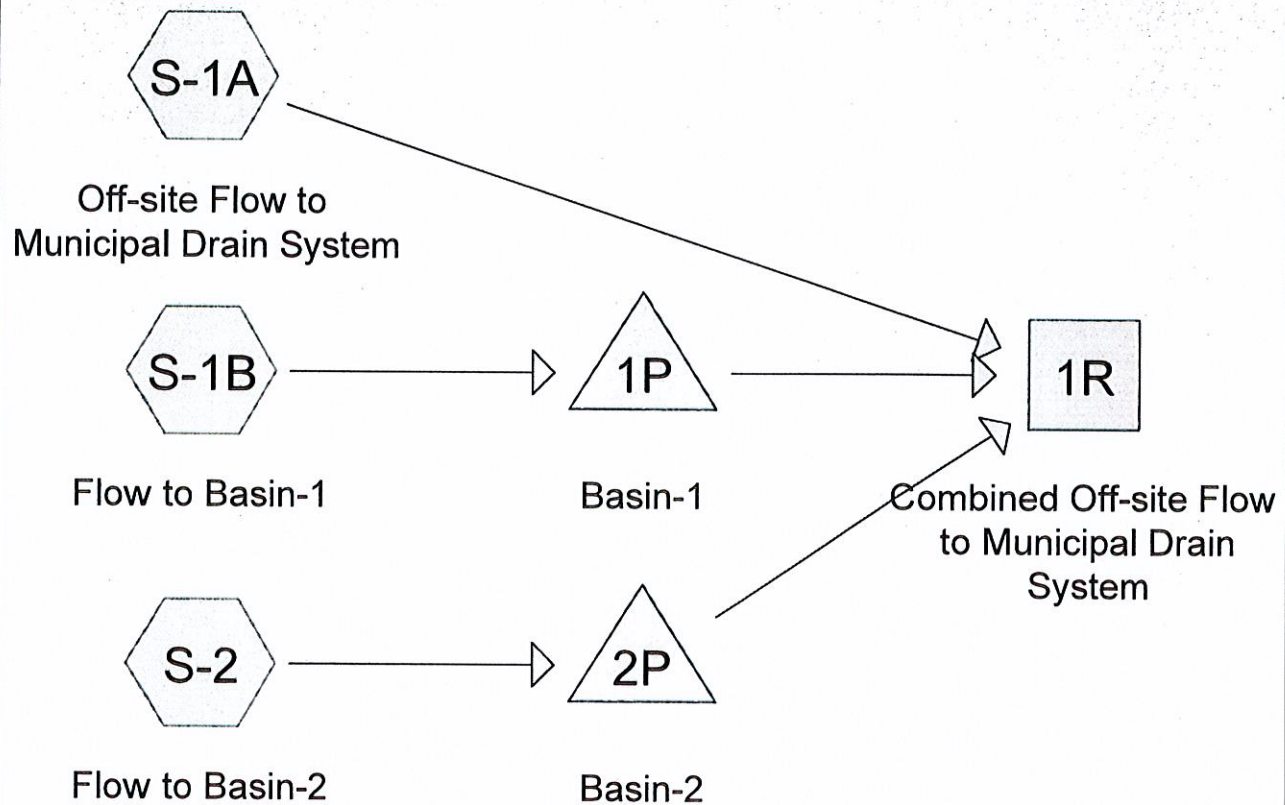
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 100-year storm Rainfall=7.00"

Area (ac)	CN	Description
0.290	61	>75% Grass cover, Good, HSG B
* 0.051	98	Ex. Roof
* 0.215	98	Ex. Pavement
* 0.027	98	Ex. Concrete / Brick
0.583	80	Weighted Average
0.290		Pervious Area
0.293		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	15	0.1000	0.16		<b>Sheet Flow, AB</b> Grass: Dense n= 0.240 P2= 3.40"
2.8	35	0.0500	0.21		<b>Sheet Flow, BC</b> Grass: Short n= 0.150 P2= 3.40"
0.0	5	0.0500	3.60		<b>Shallow Concentrated Flow, CD</b> Unpaved Kv= 16.1 fps
1.6					<b>Direct Entry, TR-55 Minimum</b>
6.0	55	Total			





**Drainage Diagram for POST**

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**POST***Type III 24-hr 2-year storm Rainfall=3.40"*

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Page 2

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

**Subcatchment S-1A: Off-site Flow to**Runoff Area=0.262 ac 74.43% Impervious Runoff Depth=2.26"  
Tc=6.0 min CN=89 Runoff=0.67 cfs 0.049 af**Subcatchment S-1B: Flow to Basin-1**Runoff Area=0.100 ac 82.00% Impervious Runoff Depth=2.45"  
Tc=6.0 min CN=91 Runoff=0.28 cfs 0.020 af**Subcatchment S-2: Flow to Basin-2**Runoff Area=0.221 ac 84.62% Impervious Runoff Depth=2.54"  
Tc=6.0 min CN=92 Runoff=0.63 cfs 0.047 af**Reach 1R: Combined Off-site Flow to Municipal Drain System**Inflow=0.67 cfs 0.057 af  
Outflow=0.67 cfs 0.057 af**Pond 1P: Basin-1**Peak Elev=91.15' Storage=0.008 af Inflow=0.28 cfs 0.020 af  
Discarded=0.00 cfs 0.008 af Primary=0.12 cfs 0.007 af Outflow=0.12 cfs 0.015 af**Pond 2P: Basin-2**Peak Elev=90.77' Storage=1,241 cf Inflow=0.63 cfs 0.047 af  
Discarded=0.02 cfs 0.032 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.032 af**Total Runoff Area = 0.583 ac Runoff Volume = 0.117 af Average Runoff Depth = 2.40"**  
**20.41% Pervious = 0.119 ac 79.59% Impervious = 0.464 ac**

**POST**

Type III 24-hr 2-year storm Rainfall=3.40"

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Page 3

**Summary for Subcatchment S-1A: Off-site Flow to Municipal Drain System**

Runoff = 0.67 cfs @ 12.09 hrs, Volume= 0.049 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-year storm Rainfall=3.40"

Area (ac)	CN	Description
0.067	61	>75% Grass cover, Good, HSG B
* 0.189	98	Prop. Pavement
* 0.006	98	Prop. Concrete
0.262	89	Weighted Average
0.067		Pervious Area
0.195		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-1B: Flow to Basin-1**

Runoff = 0.28 cfs @ 12.09 hrs, Volume= 0.020 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-year storm Rainfall=3.40"

Area (ac)	CN	Description
* 0.082	98	Prop. Pavement
0.018	61	>75% Grass cover, Good, HSG B
0.100	91	Weighted Average
0.018		Pervious Area
0.082		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-2: Flow to Basin-2**

Runoff = 0.63 cfs @ 12.09 hrs, Volume= 0.047 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-year storm Rainfall=3.40"



**POST**

Type III 24-hr 2-year storm Rainfall=3.40"

Prepared by Farland Corp.

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Page 4

Area (ac)	CN	Description
* 0.087	98	Proposed Roof
* 0.091	98	Proposed Pavement
* 0.009	98	Proposed Concrete
0.034	61	>75% Grass cover, Good, HSG B
0.221	92	Weighted Average
0.034		Pervious Area
0.187		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Reach 1R: Combined Off-site Flow to Municipal Drain System**

Inflow Area = 0.583 ac, 79.59% Impervious, Inflow Depth = 1.16" for 2-year storm event  
 Inflow = 0.67 cfs @ 12.09 hrs, Volume = 0.057 af  
 Outflow = 0.67 cfs @ 12.09 hrs, Volume = 0.057 af, Atten = 0%, Lag = 0.0 min

Routing by Stor-Ind method, Time Span = 0.00-30.00 hrs, dt = 0.05 hrs

**Summary for Pond 1P: Basin-1**

Inflow Area = 0.100 ac, 82.00% Impervious, Inflow Depth = 2.45" for 2-year storm event  
 Inflow = 0.28 cfs @ 12.09 hrs, Volume = 0.020 af  
 Outflow = 0.12 cfs @ 12.30 hrs, Volume = 0.015 af, Atten = 56%, Lag = 12.6 min  
 Discarded = 0.00 cfs @ 9.05 hrs, Volume = 0.008 af  
 Primary = 0.12 cfs @ 12.30 hrs, Volume = 0.007 af

Routing by Stor-Ind method, Time Span = 0.00-30.00 hrs, dt = 0.05 hrs  
 Peak Elev = 91.15' @ 12.30 hrs Surf.Area = 0.004 ac Storage = 0.008 af

Plug-Flow detention time = 267.0 min calculated for 0.015 af (76% of inflow)  
 Center-of-Mass det. time = 183.0 min ( 983.2 - 800.2 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	0.004 af	<b>8.00'W x 8.00'L x 4.00'H Prismaticoid x 3</b> 0.018 af Overall - 0.008 af Embedded = 0.009 af x 40.0% Voids
#2	88.50'	0.007 af	<b>6.00'D x 3.50'H Vertical Cone/Cylinder x 3</b> Inside #1 0.008 af Overall - 4.0" Wall Thickness = 0.007 af
		0.011 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>1.020 in/hr Exfiltration over Surface area</b>
#2	Primary	90.92'	<b>6.0" x 40.0' long Culvert</b> CPP, projecting, no headwall, Ke = 0.900 Outlet Invert = 89.00' S = 0.0480 '/' Cc = 0.900 n = 0.013 Concrete pipe, bends & connections

**POST**

Type III 24-hr 2-year storm Rainfall=3.40"

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**Discarded OutFlow** Max=0.00 cfs @ 9.05 hrs HW=88.04' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.00 cfs)

**Primary OutFlow** Max=0.12 cfs @ 12.30 hrs HW=91.15' (Free Discharge)

↑2=Culvert (Inlet Controls 0.12 cfs @ 1.30 fps)

**Summary for Pond 2P: Basin-2**

Inflow Area = 0.221 ac, 84.62% Impervious, Inflow Depth = 2.54" for 2-year storm event  
 Inflow = 0.63 cfs @ 12.09 hrs, Volume= 0.047 af  
 Outflow = 0.02 cfs @ 10.05 hrs, Volume= 0.032 af, Atten= 97%, Lag= 0.0 min  
 Discarded = 0.02 cfs @ 10.05 hrs, Volume= 0.032 af  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 90.77' @ 16.23 hrs Surf.Area= 768 sf Storage= 1,241 cf

Plug-Flow detention time= 447.1 min calculated for 0.032 af (69% of inflow)

Center-of-Mass det. time= 354.7 min ( 1,150.3 - 795.6 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	642 cf	<b>8.00'W x 8.00'L x 4.00'H Prismatic</b> x 12 3,072 cf Overall - 1,466 cf Embedded = 1,606 cf x 40.0% Voids
#2	88.50'	1,188 cf	<b>6.00'D x 3.50'H Vertical Cone/Cylinder</b> x 12 Inside #1 1,466 cf Overall - 4.0" Wall Thickness = 1,188 cf
#3	92.00'	7 cf	<b>2.00'D x 2.20'H Vertical Cone/Cylinder</b>
#4	94.00'	100 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)
		1,937 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	200	0	0
94.50	200	100	100

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>1.020 in/hr Exfiltration over Surface area</b>
#2	Primary	94.02'	<b>5.0' long x 2.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#3	Device 2	94.00'	<b>0.10' x 0.10' Horiz. Orifice/Grate X 5.00 columns</b> X 5 rows Limited to weir flow C= 0.600

**Discarded OutFlow** Max=0.02 cfs @ 10.05 hrs HW=88.07' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=88.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

↑3=Orifice/Grate ( Controls 0.00 cfs)



**POST***Type III 24-hr 10-year storm Rainfall=4.80"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

**Subcatchment S-1A: Off-site Flow to**Runoff Area=0.262 ac 74.43% Impervious Runoff Depth=3.58"  
Tc=6.0 min CN=89 Runoff=1.05 cfs 0.078 af**Subcatchment S-1B: Flow to Basin-1**Runoff Area=0.100 ac 82.00% Impervious Runoff Depth=3.79"  
Tc=6.0 min CN=91 Runoff=0.42 cfs 0.032 af**Subcatchment S-2: Flow to Basin-2**Runoff Area=0.221 ac 84.62% Impervious Runoff Depth=3.89"  
Tc=6.0 min CN=92 Runoff=0.94 cfs 0.072 af**Reach 1R: Combined Off-site Flow to Municipal Drain System**Inflow=1.41 cfs 0.101 af  
Outflow=1.41 cfs 0.101 af**Pond 1P: Basin-1**Peak Elev=91.43' Storage=0.009 af Inflow=0.42 cfs 0.032 af  
Discarded=0.00 cfs 0.009 af Primary=0.38 cfs 0.017 af Outflow=0.39 cfs 0.026 af**Pond 2P: Basin-2**Peak Elev=94.04' Storage=1,845 cf Inflow=0.94 cfs 0.072 af  
Discarded=0.02 cfs 0.036 af Primary=0.04 cfs 0.005 af Outflow=0.07 cfs 0.041 af**Total Runoff Area = 0.583 ac Runoff Volume = 0.181 af Average Runoff Depth = 3.74"**  
**20.41% Pervious = 0.119 ac 79.59% Impervious = 0.464 ac**

**POST**

Type III 24-hr 10-year storm Rainfall=4.80"

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**Summary for Subcatchment S-1A: Off-site Flow to Municipal Drain System**

Runoff = 1.05 cfs @ 12.09 hrs, Volume= 0.078 af, Depth= 3.58"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-year storm Rainfall=4.80"

Area (ac)	CN	Description
0.067	61	>75% Grass cover, Good, HSG B
* 0.189	98	Prop. Pavement
* 0.006	98	Prop. Concrete
0.262	89	Weighted Average
0.067		Pervious Area
0.195		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-1B: Flow to Basin-1**

Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.032 af, Depth= 3.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-year storm Rainfall=4.80"

Area (ac)	CN	Description
* 0.082	98	Prop. Pavement
0.018	61	>75% Grass cover, Good, HSG B
0.100	91	Weighted Average
0.018		Pervious Area
0.082		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-2: Flow to Basin-2**

Runoff = 0.94 cfs @ 12.09 hrs, Volume= 0.072 af, Depth= 3.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-year storm Rainfall=4.80"



**POST**

Type III 24-hr 10-year storm Rainfall=4.80"

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Area (ac)	CN	Description
* 0.087	98	Proposed Roof
* 0.091	98	Proposed Pavement
* 0.009	98	Proposed Concrete
0.034	61	>75% Grass cover, Good, HSG B
0.221	92	Weighted Average
0.034		Pervious Area
0.187		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Reach 1R: Combined Off-site Flow to Municipal Drain System**

Inflow Area = 0.583 ac, 79.59% Impervious, Inflow Depth = 2.07" for 10-year storm event  
 Inflow = 1.41 cfs @ 12.10 hrs, Volume= 0.101 af  
 Outflow = 1.41 cfs @ 12.10 hrs, Volume= 0.101 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

**Summary for Pond 1P: Basin-1**

Inflow Area = 0.100 ac, 82.00% Impervious, Inflow Depth = 3.79" for 10-year storm event  
 Inflow = 0.42 cfs @ 12.09 hrs, Volume= 0.032 af  
 Outflow = 0.39 cfs @ 12.12 hrs, Volume= 0.026 af, Atten= 7%, Lag= 2.2 min  
 Discarded = 0.00 cfs @ 7.80 hrs, Volume= 0.009 af  
 Primary = 0.38 cfs @ 12.12 hrs, Volume= 0.017 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
 Peak Elev= 91.43' @ 12.12 hrs Surf.Area= 0.004 ac Storage= 0.009 af

Plug-Flow detention time= 176.3 min calculated for 0.026 af (83% of inflow)  
 Center-of-Mass det. time= 109.3 min ( 897.5 - 788.2 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	0.004 af	<b>8.00'W x 8.00'L x 4.00'H Prismaticoid x 3</b> 0.018 af Overall - 0.008 af Embedded = 0.009 af x 40.0% Voids
#2	88.50'	0.007 af	<b>6.00'D x 3.50'H Vertical Cone/Cylinder x 3</b> Inside #1 0.008 af Overall - 4.0" Wall Thickness = 0.007 af
		0.011 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>1.020 in/hr Exfiltration over Surface area</b>
#2	Primary	90.92'	<b>6.0" x 40.0' long Culvert</b> CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 89.00' S= 0.0480 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections

**POST**

Type III 24-hr 10-year storm Rainfall=4.80"

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**Discarded OutFlow** Max=0.00 cfs @ 7.80 hrs HW=88.04' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.00 cfs)

**Primary OutFlow** Max=0.37 cfs @ 12.12 hrs HW=91.41' (Free Discharge)

↑2=Culvert (Inlet Controls 0.37 cfs @ 1.88 fps)

**Summary for Pond 2P: Basin-2**

Inflow Area = 0.221 ac, 84.62% Impervious, Inflow Depth = 3.89" for 10-year storm event  
 Inflow = 0.94 cfs @ 12.09 hrs, Volume= 0.072 af  
 Outflow = 0.07 cfs @ 13.45 hrs, Volume= 0.041 af, Atten= 93%, Lag= 81.5 min  
 Discarded = 0.02 cfs @ 13.30 hrs, Volume= 0.036 af  
 Primary = 0.04 cfs @ 13.45 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 94.04' @ 13.45 hrs Surf.Area= 971 sf Storage= 1,845 cf

Plug-Flow detention time= 393.0 min calculated for 0.041 af (58% of inflow)

Center-of-Mass det. time= 287.1 min ( 1,071.1 - 784.0 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	642 cf	<b>8.00'W x 8.00'L x 4.00'H Prismatoid x 12</b> 3,072 cf Overall - 1,466 cf Embedded = 1,606 cf x 40.0% Voids
#2	88.50'	1,188 cf	<b>6.00'D x 3.50'H Vertical Cone/Cylinder x 12</b> Inside #1 1,466 cf Overall - 4.0" Wall Thickness = 1,188 cf
#3	92.00'	7 cf	<b>2.00'D x 2.20'H Vertical Cone/Cylinder</b>
#4	94.00'	100 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)
		1,937 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	200	0	0
94.50	200	100	100

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>1.020 in/hr Exfiltration over Surface area</b>
#2	Primary	94.02'	<b>5.0' long x 2.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#3	Device 2	94.00'	<b>0.10' x 0.10' Horiz. Orifice/Grate X 5.00 columns</b> X 5 rows Limited to weir flow C= 0.600

**Discarded OutFlow** Max=0.02 cfs @ 13.30 hrs HW=94.01' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

**Primary OutFlow** Max=0.04 cfs @ 13.45 hrs HW=94.04' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Weir Controls 0.04 cfs @ 0.37 fps)

↑3=Orifice/Grate (Passes 0.04 cfs of 0.18 cfs potential flow)



**POST***Type III 24-hr 25-year storm Rainfall=5.60"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

**Subcatchment S-1A: Off-site Flow to** Runoff Area=0.262 ac 74.43% Impervious Runoff Depth=4.35"  
Tc=6.0 min CN=89 Runoff=1.26 cfs 0.095 af

**Subcatchment S-1B: Flow to Basin-1** Runoff Area=0.100 ac 82.00% Impervious Runoff Depth=4.57"  
Tc=6.0 min CN=91 Runoff=0.50 cfs 0.038 af

**Subcatchment S-2: Flow to Basin-2** Runoff Area=0.221 ac 84.62% Impervious Runoff Depth=4.68"  
Tc=6.0 min CN=92 Runoff=1.12 cfs 0.086 af

**Reach 1R: Combined Off-site Flow to Municipal Drain System** Inflow=1.69 cfs 0.136 af  
Outflow=1.69 cfs 0.136 af

**Pond 1P: Basin-1** Peak Elev=91.52' Storage=0.009 af Inflow=0.50 cfs 0.038 af  
Discarded=0.00 cfs 0.009 af Primary=0.44 cfs 0.024 af Outflow=0.45 cfs 0.033 af

**Pond 2P: Basin-2** Peak Elev=94.10' Storage=1,857 cf Inflow=1.12 cfs 0.086 af  
Discarded=0.02 cfs 0.038 af Primary=0.34 cfs 0.017 af Outflow=0.36 cfs 0.055 af

**Total Runoff Area = 0.583 ac Runoff Volume = 0.219 af Average Runoff Depth = 4.51"**  
**20.41% Pervious = 0.119 ac 79.59% Impervious = 0.464 ac**

**POST**

Type III 24-hr 25-year storm Rainfall=5.60"

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**Summary for Subcatchment S-1A: Off-site Flow to Municipal Drain System**

Runoff = 1.26 cfs @ 12.09 hrs, Volume= 0.095 af, Depth= 4.35"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-year storm Rainfall=5.60"

Area (ac)	CN	Description
0.067	61	>75% Grass cover, Good, HSG B
* 0.189	98	Prop. Pavement
* 0.006	98	Prop. Concrete
0.262	89	Weighted Average
0.067		Pervious Area
0.195		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-1B: Flow to Basin-1**

Runoff = 0.50 cfs @ 12.09 hrs, Volume= 0.038 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-year storm Rainfall=5.60"

Area (ac)	CN	Description
* 0.082	98	Prop. Pavement
0.018	61	>75% Grass cover, Good, HSG B
0.100	91	Weighted Average
0.018		Pervious Area
0.082		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-2: Flow to Basin-2**

Runoff = 1.12 cfs @ 12.09 hrs, Volume= 0.086 af, Depth= 4.68"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-year storm Rainfall=5.60"



**POST**

Type III 24-hr 25-year storm Rainfall=5.60"

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Area (ac)	CN	Description
* 0.087	98	Proposed Roof
* 0.091	98	Proposed Pavement
* 0.009	98	Proposed Concrete
0.034	61	>75% Grass cover, Good, HSG B
0.221	92	Weighted Average
0.034		Pervious Area
0.187		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Reach 1R: Combined Off-site Flow to Municipal Drain System**

Inflow Area = 0.583 ac, 79.59% Impervious, Inflow Depth = 2.79" for 25-year storm event  
 Inflow = 1.69 cfs @ 12.09 hrs, Volume= 0.136 af  
 Outflow = 1.69 cfs @ 12.09 hrs, Volume= 0.136 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

**Summary for Pond 1P: Basin-1**

Inflow Area = 0.100 ac, 82.00% Impervious, Inflow Depth = 4.57" for 25-year storm event  
 Inflow = 0.50 cfs @ 12.09 hrs, Volume= 0.038 af  
 Outflow = 0.45 cfs @ 12.13 hrs, Volume= 0.033 af, Atten= 10%, Lag= 2.3 min  
 Discarded = 0.00 cfs @ 7.10 hrs, Volume= 0.009 af  
 Primary = 0.44 cfs @ 12.13 hrs, Volume= 0.024 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
 Peak Elev= 91.52' @ 12.13 hrs Surf.Area= 0.004 ac Storage= 0.009 af

Plug-Flow detention time= 152.1 min calculated for 0.033 af (86% of inflow)  
 Center-of-Mass det. time= 92.2 min ( 875.4 - 783.2 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	0.004 af	<b>8.00'W x 8.00'L x 4.00'H Prismaticoid x 3</b> 0.018 af Overall - 0.008 af Embedded = 0.009 af x 40.0% Voids
#2	88.50'	0.007 af	<b>6.00'D x 3.50'H Vertical Cone/Cylinder x 3 Inside #1</b> 0.008 af Overall - 4.0" Wall Thickness = 0.007 af
		0.011 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>1.020 in/hr Exfiltration over Surface area</b>
#2	Primary	90.92'	<b>6.0" x 40.0' long Culvert</b> CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 89.00' S= 0.0480 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections

**POST**

Type III 24-hr 25-year storm Rainfall=5.60"

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**Discarded OutFlow** Max=0.00 cfs @ 7.10 hrs HW=88.04' (Free Discharge)  
 ↑1=Exfiltration (Exfiltration Controls 0.00 cfs)

**Primary OutFlow** Max=0.44 cfs @ 12.13 hrs HW=91.51' (Free Discharge)  
 ↑2=Culvert (Inlet Controls 0.44 cfs @ 2.22 fps)

**Summary for Pond 2P: Basin-2**

Inflow Area = 0.221 ac, 84.62% Impervious, Inflow Depth = 4.68" for 25-year storm event  
 Inflow = 1.12 cfs @ 12.09 hrs, Volume= 0.086 af  
 Outflow = 0.36 cfs @ 12.42 hrs, Volume= 0.055 af, Atten= 67%, Lag= 20.0 min  
 Discarded = 0.02 cfs @ 12.40 hrs, Volume= 0.038 af  
 Primary = 0.34 cfs @ 12.42 hrs, Volume= 0.017 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 3  
 Peak Elev= 94.10' @ 12.40 hrs Surf.Area= 971 sf Storage= 1,857 cf

Plug-Flow detention time= 315.2 min calculated for 0.055 af (63% of inflow)  
 Center-of-Mass det. time= 216.7 min ( 995.9 - 779.2 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	642 cf	<b>8.00'W x 8.00'L x 4.00'H Prismatoid x 12</b> 3,072 cf Overall - 1,466 cf Embedded = 1,606 cf x 40.0% Voids
#2	88.50'	1,188 cf	<b>6.00'D x 3.50'H Vertical Cone/Cylinder x 12</b> Inside #1 1,466 cf Overall - 4.0" Wall Thickness = 1,188 cf
#3	92.00'	7 cf	<b>2.00'D x 2.20'H Vertical Cone/Cylinder</b>
#4	94.00'	100 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)
		1,937 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	200	0	0
94.50	200	100	100

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>1.020 in/hr Exfiltration over Surface area</b>
#2	Primary	94.02'	<b>5.0' long x 2.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#3	Device 2	94.00'	<b>0.10' x 0.10' Horiz. Orifice/Grate X 5.00 columns</b> X 5 rows Limited to weir flow C= 0.600

**Discarded OutFlow** Max=0.02 cfs @ 12.40 hrs HW=94.10' (Free Discharge)  
 ↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

**Primary OutFlow** Max=0.29 cfs @ 12.42 hrs HW=94.10' (Free Discharge)  
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 0.29 cfs @ 0.72 fps)  
 ↑3=Orifice/Grate (Passes 0.29 cfs of 0.34 cfs potential flow)



**POST***Type III 24-hr 100-year storm Rainfall=7.00"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

**Subcatchment S-1A: Off-site Flow to** Runoff Area=0.262 ac 74.43% Impervious Runoff Depth=5.71"  
Tc=6.0 min CN=89 Runoff=1.63 cfs 0.125 af

**Subcatchment S-1B: Flow to Basin-1** Runoff Area=0.100 ac 82.00% Impervious Runoff Depth=5.94"  
Tc=6.0 min CN=91 Runoff=0.64 cfs 0.049 af

**Subcatchment S-2: Flow to Basin-2** Runoff Area=0.221 ac 84.62% Impervious Runoff Depth=6.05"  
Tc=6.0 min CN=92 Runoff=1.42 cfs 0.112 af

**Reach 1R: Combined Off-site Flow to Municipal Drain System** Inflow=2.50 cfs 0.198 af  
Outflow=2.50 cfs 0.198 af

**Pond 1P: Basin-1** Peak Elev=91.73' Storage=0.010 af Inflow=0.64 cfs 0.049 af  
Discarded=0.00 cfs 0.010 af Primary=0.56 cfs 0.035 af Outflow=0.56 cfs 0.044 af

**Pond 2P: Basin-2** Peak Elev=94.49' Storage=1,934 cf Inflow=1.42 cfs 0.112 af  
Discarded=0.02 cfs 0.040 af Primary=0.82 cfs 0.039 af Outflow=0.85 cfs 0.079 af

**Total Runoff Area = 0.583 ac Runoff Volume = 0.286 af Average Runoff Depth = 5.88"**  
**20.41% Pervious = 0.119 ac 79.59% Impervious = 0.464 ac**

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**Summary for Subcatchment S-1A: Off-site Flow to Municipal Drain System**

Runoff = 1.63 cfs @ 12.09 hrs, Volume= 0.125 af, Depth= 5.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 100-year storm Rainfall=7.00"

Area (ac)	CN	Description
0.067	61	>75% Grass cover, Good, HSG B
* 0.189	98	Prop. Pavement
* 0.006	98	Prop. Concrete
0.262	89	Weighted Average
0.067		Pervious Area
0.195		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-1B: Flow to Basin-1**

Runoff = 0.64 cfs @ 12.09 hrs, Volume= 0.049 af, Depth= 5.94"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 100-year storm Rainfall=7.00"

Area (ac)	CN	Description
* 0.082	98	Prop. Pavement
0.018	61	>75% Grass cover, Good, HSG B
0.100	91	Weighted Average
0.018		Pervious Area
0.082		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-2: Flow to Basin-2**

Runoff = 1.42 cfs @ 12.09 hrs, Volume= 0.112 af, Depth= 6.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Type III 24-hr 100-year storm Rainfall=7.00"



**POST**

Type III 24-hr 100-year storm Rainfall=7.00"

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Area (ac)	CN	Description
* 0.087	98	Proposed Roof
* 0.091	98	Proposed Pavement
* 0.009	98	Proposed Concrete
0.034	61	>75% Grass cover, Good, HSG B
0.221	92	Weighted Average
0.034		Pervious Area
0.187		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Reach 1R: Combined Off-site Flow to Municipal Drain System**

Inflow Area = 0.583 ac, 79.59% Impervious, Inflow Depth = 4.08" for 100-year storm event  
 Inflow = 2.50 cfs @ 12.15 hrs, Volume= 0.198 af  
 Outflow = 2.50 cfs @ 12.15 hrs, Volume= 0.198 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

**Summary for Pond 1P: Basin-1**

Inflow Area = 0.100 ac, 82.00% Impervious, Inflow Depth = 5.94" for 100-year storm event  
 Inflow = 0.64 cfs @ 12.09 hrs, Volume= 0.049 af  
 Outflow = 0.56 cfs @ 12.13 hrs, Volume= 0.044 af, Atten= 12%, Lag= 2.7 min  
 Discarded = 0.00 cfs @ 6.20 hrs, Volume= 0.010 af  
 Primary = 0.56 cfs @ 12.13 hrs, Volume= 0.035 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
 Peak Elev= 91.73' @ 12.13 hrs Surf.Area= 0.004 ac Storage= 0.010 af

Plug-Flow detention time= 125.7 min calculated for 0.044 af (89% of inflow)  
 Center-of-Mass det. time= 75.2 min ( 851.6 - 776.4 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	0.004 af	8.00'W x 8.00'L x 4.00'H Prismatoid x 3 0.018 af Overall - 0.008 af Embedded = 0.009 af x 40.0% Voids
#2	88.50'	0.007 af	6.00'D x 3.50'H Vertical Cone/Cylinder x 3 Inside #1 0.008 af Overall - 4.0" Wall Thickness = 0.007 af
		0.011 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	1.020 in/hr Exfiltration over Surface area
#2	Primary	90.92'	6.0" x 40.0' long Culvert CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 89.00' S= 0.0480 ' /' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections

**POST**

Type III 24-hr 100-year storm Rainfall=7.00"

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**Discarded OutFlow** Max=0.00 cfs @ 6.20 hrs HW=88.04' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.00 cfs)**Primary OutFlow** Max=0.55 cfs @ 12.13 hrs HW=91.71' (Free Discharge)↑ **2=Culvert** (Inlet Controls 0.55 cfs @ 2.79 fps)**Summary for Pond 2P: Basin-2**

Inflow Area = 0.221 ac, 84.62% Impervious, Inflow Depth = 6.05" for 100-year storm event  
 Inflow = 1.42 cfs @ 12.09 hrs, Volume= 0.112 af  
 Outflow = 0.85 cfs @ 12.21 hrs, Volume= 0.079 af, Atten= 40%, Lag= 7.4 min  
 Discarded = 0.02 cfs @ 12.15 hrs, Volume= 0.040 af  
 Primary = 0.82 cfs @ 12.21 hrs, Volume= 0.039 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 3  
 Peak Elev= 94.49' @ 12.21 hrs Surf.Area= 971 sf Storage= 1,934 cf

Plug-Flow detention time= 241.5 min calculated for 0.079 af (71% of inflow)  
 Center-of-Mass det. time= 150.5 min ( 923.2 - 772.7 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	642 cf	<b>8.00'W x 8.00'L x 4.00'H Prismatic</b> x 12 3,072 cf Overall - 1,466 cf Embedded = 1,606 cf x 40.0% Voids
#2	88.50'	1,188 cf	<b>6.00'D x 3.50'H Vertical Cone/Cylinder</b> x 12 Inside #1 1,466 cf Overall - 4.0" Wall Thickness = 1,188 cf
#3	92.00'	7 cf	<b>2.00'D x 2.20'H Vertical Cone/Cylinder</b>
#4	94.00'	100 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)
		1,937 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
94.00	200	0	0
94.50	200	100	100

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>1.020 in/hr Exfiltration over Surface area</b>
#2	Primary	94.02'	<b>5.0' long x 2.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#3	Device 2	94.00'	<b>0.10' x 0.10' Horiz. Orifice/Grate X 5.00 columns</b> X 5 rows Limited to weir flow C= 0.600

**Discarded OutFlow** Max=0.02 cfs @ 12.15 hrs HW=94.33' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.02 cfs)**Primary OutFlow** Max=0.81 cfs @ 12.21 hrs HW=94.47' (Free Discharge)↑ **2=Broad-Crested Rectangular Weir** (Passes 0.81 cfs of 3.93 cfs potential flow)↑ **3=Orifice/Grate** (Orifice Controls 0.81 cfs @ 3.23 fps)





-SUBCATCHMENT DATA-	
SUCATCHMENT	AREA (ACRES)
S-1	0.583
TOTAL	0.583

REVISIONS	



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NEW BEDFORD, MA 02740  
P.508.717.3479  
OFFICES IN:  
• TAUNTON  
• MARLBOROUGH  
• WARWICK, RI

DRAWN BY: JKM  
DESIGNED BY: JKM  
CHECKED BY: CAF

DRAINAGE MAP  
899 PLEASANT STREET  
ASSESSORS MAP 58, LOTS 300 & 302  
NEW BEDFORD, MASSACHUSETTS  
PREPARED FOR:  
ARCHITECTURAL CONSULTING GROUP, INC.  
2206 ACUSHNET AVE.  
NEW BEDFORD, MA 02745

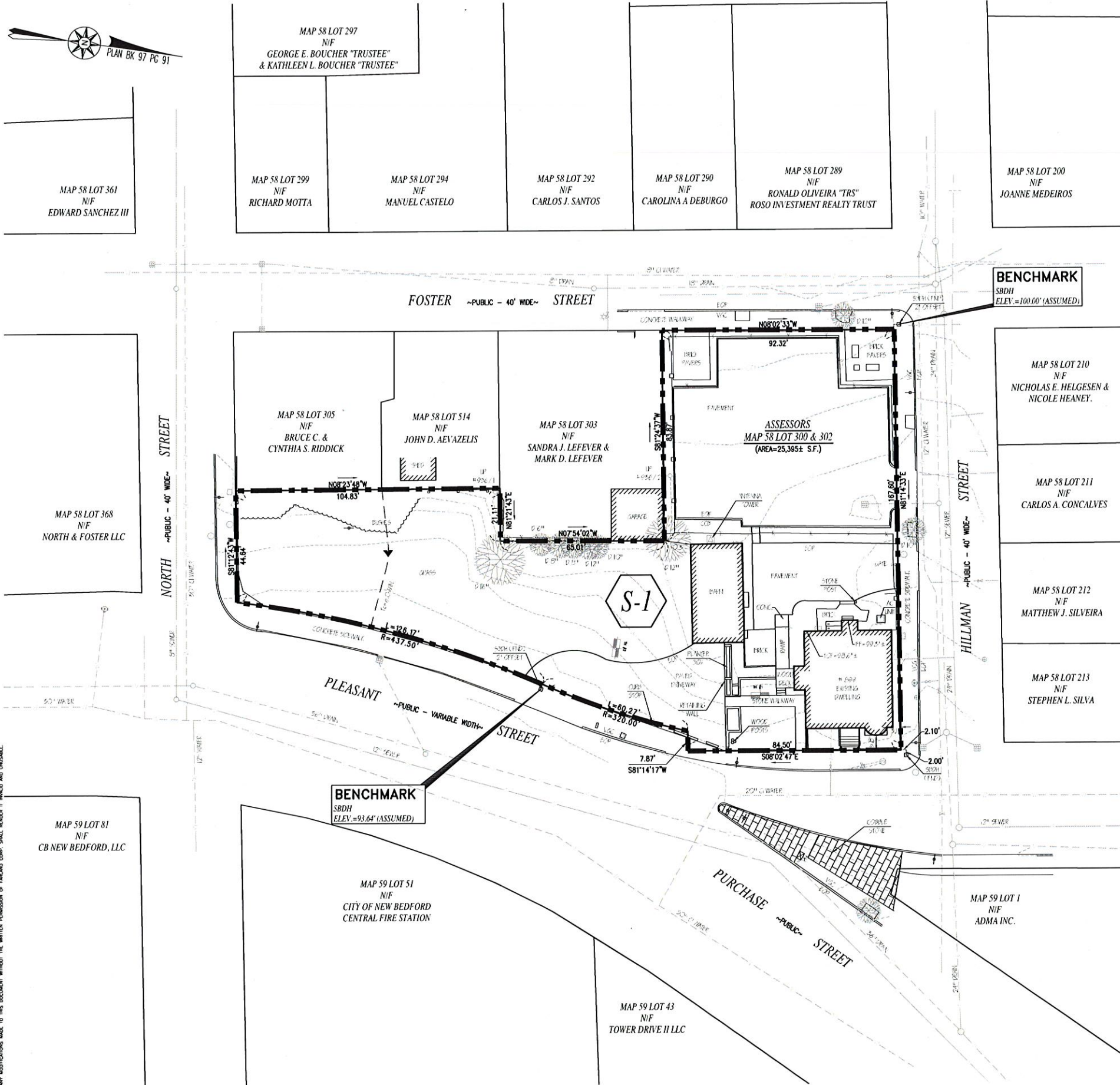
MARCH 8, 2017  
SCALE: 1"=20'  
JOB NO. 16-1340  
LATEST REVISION:

PRE-DEVELOPMENT  
SHEET 1 OF 2



PLANNING  
MAY 04 2017  
DEPARTMENT

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MAP 58 LOT 361  
N/F  
EDWARD SANCHEZ III

MAP 58 LOT 297  
N/F  
GEORGE E. BOUCHER "TRUSTEE"  
& KATHLEEN L. BOUCHER "TRUSTEE"

MAP 58 LOT 299  
N/F  
RICHARD MOTTA

MAP 58 LOT 294  
N/F  
MANUEL CASTELO

MAP 58 LOT 292  
N/F  
CARLOS J. SANTOS

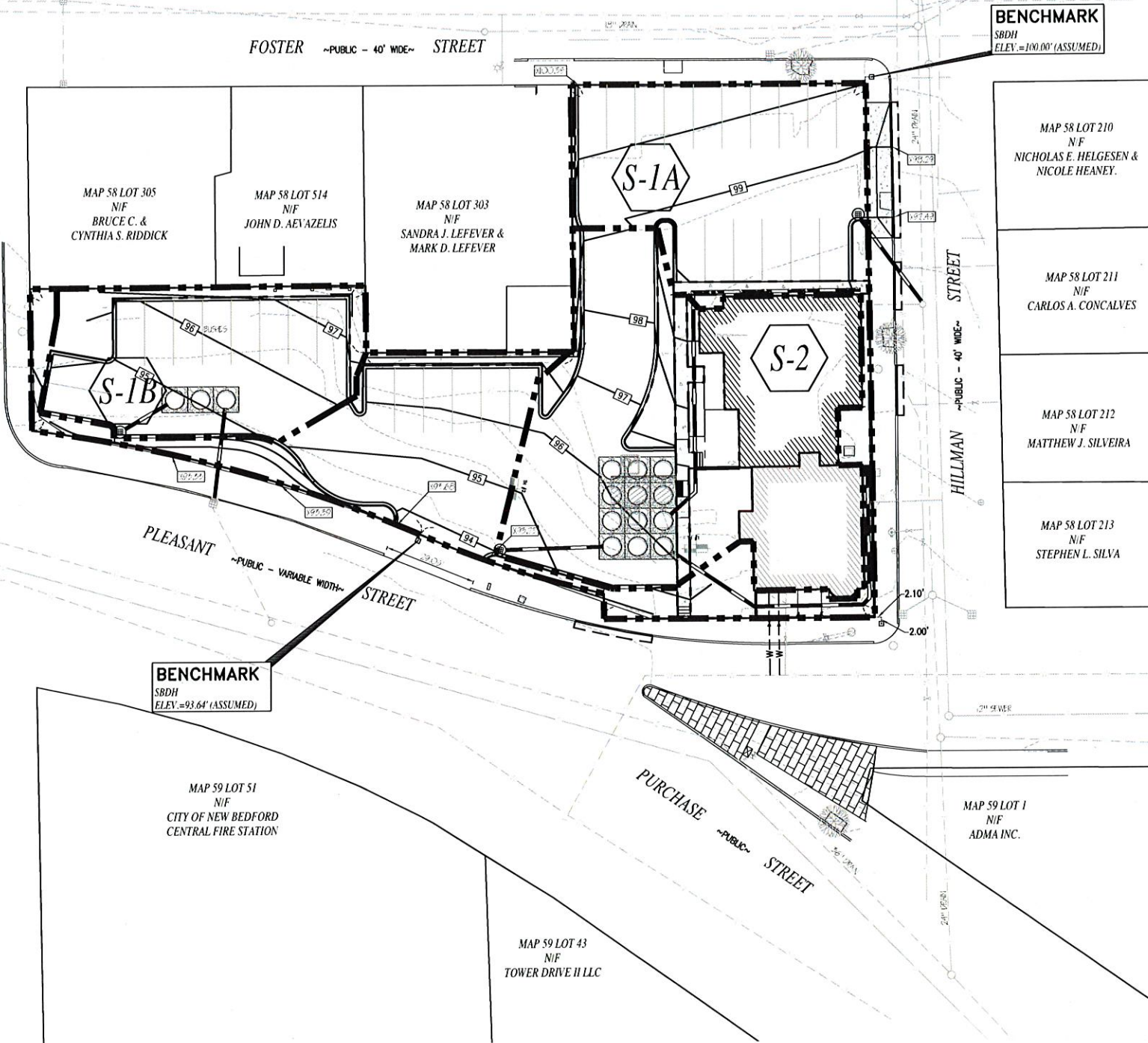
MAP 58 LOT 290  
N/F  
CAROLINA A DEBURGO

MAP 58 LOT 289  
N/F  
RONALD OLIVEIRA "TRS"  
ROSO INVESTMENT REALTY TRUST

MAP 58 LOT 200  
N/F  
JOANNE MEDEIROS

MAP 58 LOT 368  
N/F  
NORTH & FOSTER LLC

NORTH STREET  
~PUBLIC - 40' WIDE~



MAP 59 LOT 81  
N/F  
CB NEW BEDFORD, LLC

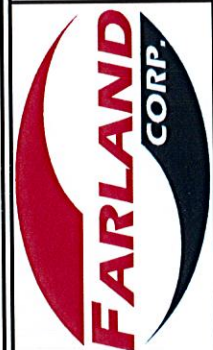
MAP 59 LOT 51  
N/F  
CITY OF NEW BEDFORD  
CENTRAL FIRE STATION

MAP 59 LOT 43  
N/F  
TOWER DRIVE II LLC

MAP 59 LOT 1  
N/F  
ADMA INC.

-SUBCATCHMENT DATA-	
SUCATCHMENT	AREA (ACRES)
S-1A	0.262
S-1B	0.100
S-2	0.221
TOTAL	0.583

REVISIONS	

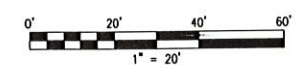


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PLANNING  
MAY 04 2017  
DEPARTMENT



MAY 3, 2017  
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JOB NO. 16-1340  
LATEST REVISION:  
POST-DEVELOPMENT  
SHEET 2 OF 2