



3 Main Street Lakeville, MA 02347
(508) 947-4208 - www.zcellc.com

- Civil Engineering
- Septic Design (Title 5)
- Septic Inspections (Title 5)
- Commercial and Industrial Site Plans
- Chapter 91 Permitting

March 27, 2023

Mansfield Planning Board
Mansfield Town Hall
6 Park Row
Mansfield, MA 02747

Subject: 89 Forbes Boulevard Site Plan Revisions

Dear Planning Board Members:

Submitted herewith is an application for site plan review for the subject property. There is no new building or building addition proposed, but rather, modifications to the site layout and the addition of a new building entrance for a new tenant, specifically a pediatrician. It should be noted that the new entrance is designed to be handicap accessible.

Other changes to the site layout include the addition of handicap parking spaces, the addition of parking spaces for mothers with strollers and a modification to the parking lot to allow vehicles to travel in both directions around the existing building. Additionally, there is an existing driveway access to the site off Forbes Boulevard. That access drive is steep, narrow, and constructed with unsafe geometry. Its elevation also prevents vehicles from traveling completely around the building. As such, it is proposed to remove this access drive. The site will maintain its two other entrances off of Chauncy Street and Green Street.

There are no proposed changes to the utilities servicing the building. However, there will be a slight increase to the amount of impervious area on the site due to the reconfiguration of the parking lot. The total increase in impervious area is 1,100 square feet. To mitigate the increase in impervious area, a subsurface infiltration system is proposed which is designed to infiltrate the runoff from the 1,100 square feet of pavement for all design storms up to and including the 100-year storm event. Drainage calculations for this system are attached to this letter.

In accordance with the Town of Mansfield Site Plan Application procedures, the following items are attached:

1. A check made out to the Town of Mansfield for the application fee. The amount of the fee was calculated as follows: $\$350 + (\$0.017 \times 193,091 \text{ sf (lot area)}) = \$3,282.55$
2. The original application form and 11 copies.
3. 12 copies of the proposed site plans.

We look forward to meeting with your Board to discuss this project. If you have any questions or comments, please do not hesitate to contact our office at 508-947-4208.

Sincerely,
Zenith Consulting Engineers, LLC

A handwritten signature in blue ink that reads "Robert M. Forbes". The signature is written in a cursive style.

Robert M. Forbes, P.E.
Senior Engineer



TOWN OF MANSFIELD, MASSACHUSETTS

Six Park Row, Mansfield, MA 02048

SITE PLAN APPLICATION/CHECKLIST

Site Plan Approval is conducted in accordance with **Section 230-5.3** of the Mansfield Zoning By-Law. **ALL** information required by **Section 230-5.3** (copy attached) and by pages 2 and 3 of this application must be submitted. Applicants should obtain a copy of the complete Zoning By-Law from the Town Clerk's Office.

Fee \$ 3,632.55

Address of Site: 89 Forbes Boulevard Zoning District: PBD

New Construction: * or Addition: and Percentage of Expansion: 0 * site Revisions

Owner: Mansfield MOB, LLC Applicant: Whelan Associates, LLC

70 North Second Street 70 North Second Street

New Bedford, MA 02740 New Bedford, MA 02740

Phone: (508) 984-4100 Phone: (508) 984-4100

Email: wmwhelan@whelanassociates.com Email: rforbes@zcellc.com (Engineer)

Process

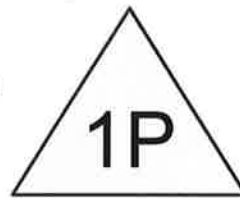
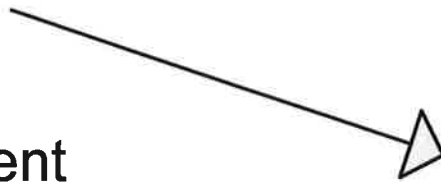
1. Original and 11 copies of the complete site plan application, including plans and filing fee, are submitted to the Town Clerk's Office. See Zoning By-Law **Section 230-5.3** (attached) and pages 2 and 3 of this application for submission requirements;
2. Staff-level review, scheduled by the Building Inspector;
3. Planning Board public meeting.

Fees (Based on the size of the lot)

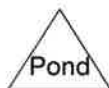
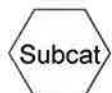
5,000 square feet or less	\$50
5,001 to 10,000 square feet	\$100
10,000 and over	\$385 + 1.7 cents per square foot of lot area



new pavement



infiltrators



89 Forbes Blvd Post

Type III 24-hr 100 yr Rainfall=7.00"

Prepared by {enter your company name here}

Printed 3/24/2023

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Page 2

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment S1: new pavement

Runoff Area=1,100 sf 100.00% Impervious Runoff Depth=6.76"
Tc=6.0 min CN=98 Runoff=0.17 cfs 0.014 af

Pond 1P: infiltrators

Peak Elev=191.82' Storage=275 cf Inflow=0.17 cfs 0.014 af
Outflow=0.01 cfs 0.014 af

Total Runoff Area = 0.025 ac Runoff Volume = 0.014 af Average Runoff Depth = 6.76"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.025 ac

Summary for Subcatchment S1: new pavement

Runoff = 0.17 cfs @ 12.08 hrs, Volume= 0.014 af, Depth= 6.76"

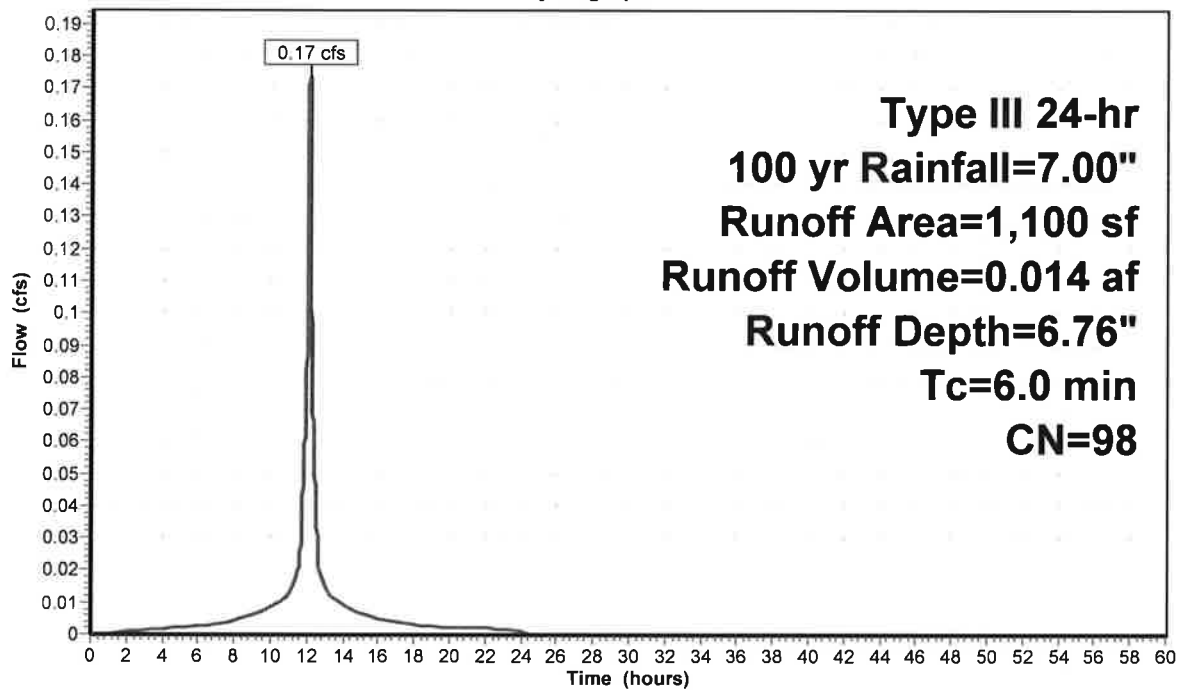
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100 yr Rainfall=7.00"

Area (sf)	CN	Description
* 1,100	98	paved
1,100		100.00% Impervious Area

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

Subcatchment S1: new pavement

Hydrograph



— Runoff

Summary for Pond 1P: infiltrators

Inflow Area = 0.025 ac, 100.00% Impervious, Inflow Depth = 6.76" for 100 yr event
 Inflow = 0.17 cfs @ 12.08 hrs, Volume= 0.014 af
 Outflow = 0.01 cfs @ 10.17 hrs, Volume= 0.014 af, Atten= 95%, Lag= 0.0 min
 Discarded = 0.01 cfs @ 10.17 hrs, Volume= 0.014 af

Routing by Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 Peak Elev= 191.82' @ 14.13 hrs Surf.Area= 155 sf Storage= 275 cf

Plug-Flow detention time= 255.9 min calculated for 0.014 af (100% of inflow)
 Center-of-Mass det. time= 255.9 min (998.9 - 743.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	189.00'	153 cf	6.33'W x 24.50'L x 3.54'H Field A 550 cf Overall - 168 cf Embedded = 382 cf x 40.0% Voids
#2A	189.50'	168 cf	Cultec R-330XLHD x 3 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 1 rows
		320 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	189.00'	2.410 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.01 cfs @ 10.17 hrs HW=189.04' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Pond 1P: infiltrators

Hydrograph

