

Form C

APPLICATION FOR APPROVAL OF
DEFINITIVE SUBDIVISION PLAN

October 19, 2021

To the Planning Board of the City/Town of Wareham

The undersigned, being the applicant as defined under the Chapter 41, Section 81-L, for approval of a proposed subdivision shown on a plan entitled: Definitive Subdivision Plan of Land of Tobia Way

by JC Engineering Inc., dated 10-19-2021

and described as follows: Tobia Way
located Along the north side of Crooked River Road, number of lots
proposed 2 total acreage of tract 2.08, said applicant hereby submits said plan
as a **DEFINITIVE** plan in accordance with the Rules and Regulations of the Wareham
Planning Board and makes application to the Board for approval of said plan.

The undersigned's title to said land is derived from Christian E. Tobia & Ann Marie Tobia

by deed dated November 21, 2013 and recorded in the Plymouth
District Registry of Deeds Book 43844, Page 278, registered in the _____
Registry District of the Land
Court. Certificate of Title No. _____

_____ and said land is free of
encumbrances except for the following: _____

Said plan has () has not (X) evolved from a preliminary plan submitted to the Board on _____
_____, 20____ and approved (with modifications) () (disapproved) () on _____,
20____.

The undersigned hereby applies for the approval of said DEFINITIVE plan by the Board, in belief that
the plan conforms to the Board's Rules and Regulations.

Received by City/Town Clerk:

Applicant's signature 

Applicant's address _____

5 Crooked River Road

Wareham, MA 02571

Applicant's phone # _____

Owner's signature and address if not the
applicant or applicant's authorization if not
the owner

Date _____

Time _____

Signature _____

Treasurers office: _____

Date: 10-19-2021

Check-list of items to be submitted with application: _____

- 1. X Form C application
- 2. X Application fee:
Amount submitted: \$1965 (\$1500 + 2 lots x \$50 per lot + 365 L.F. of road x \$1 per L.F.)
- 3. X Original plan: # of sheets 4
- 4. X Copies of plan: # of copies 12
- 5. X Engineering Calculations

PLANNING BOARD
TAX VERIFICATION FORM

This verifies that Christian E. Tobia (name of applicant) is up-to-date on the taxes for the property(ies) he/she owns in Wareham. If the applicant is not the current owner of the property that the application addresses, the current owner _____ (name of property owner) is up-to-date on taxes and on all properties he/she owns in the Town of Wareham.


John Foster, Tax Collector

Map 40, Lots 1002, 1020, 1021, & 1022

8/19/2021

FORM C/DEFINITIVE PLAN CHECKLIST

The Definitive Plan shall be prepared by a registered engineer or land surveyor and shall be clearly and legibly drawn in black ink upon mylar suitable for registering at the Plymouth County Registry of Deeds (24" x 36"). The plan shall be at a scale of one inch equals 40 feet (1" = 40') or such other scale that the Board may accept, to show details in a clear and adequate fashion. In addition, 10 copies of reduced plans on ledger-size paper (11" x 17") shall accompany the Definitive Plan submission. At a minimum, the plan shall contain the following information:

1. X The title, "Subdivision Plan of (name of subdivision)";
2. X Date, scale and North arrow, Assessor's Map(s) and Lot(s) number(s) and a legend to explain any graphic representation or symbols on the plan;
3. X The names, addresses and telephone numbers of the owner(s) of record and applicant(s);
4. X The names of the designer, engineer and/or surveyor who prepared the plan;
5. X The names of all abutters, as determined from the most recent local tax list, including property owners on the opposite side of any street abutting the subdivision;
6. X Book and page deed references of the property to be subdivided;
7. X A note referring to which lots will be served by either Town Water Supply, private wells, municipal sewer or private septic systems and the location of the nearest existing public water and sewer utility services;
8. X A locus map at 1" = 2,000', exhibiting the boundaries of the proposed subdivision, location of proposed streets and relation to adjoining properties within a radius of one quarter mile and an aerial map exhibiting the general area surrounding the subject property (approximately ½ mile surrounding the site);
9. X The zoning district, including any overlay district of the land shown on the plan;
10. X The location of all wetlands protected under CMR 10.00 Wetlands

Protection. If protected wetlands are to be filled or altered, an approval from the Wareham Conservation Commission must accompany this definitive application;

11. X Sufficient data to readily determine the location, direction and length of every street, way, easement, lot and boundary line and to establish those lines on the ground. The areas of all lots shall be shown and all lots shall be numbered. All bearings are to be referred to Massachusetts Prime Meridian if reference points are within a reasonable distance;
12. X The location and present widths of streets bounding, approaching or within a reasonable proximity of the subdivision (500');
13. X The location of all permanent monuments, properly identified as to whether existing or proposed; location of temporary stakes to enable the Planning Board to find and appraise features of the subdivision plan;
14. X Proposed street names with approval of the Town's 911 system;
15. X Any public or common areas within the subdivision;
16. X The location of all abutting land owned by the applicant not presently being subdivided;
17. X A suitable block to record the action and signatures of the Planning Board;
18. X A suitable block for the Town Clerk's signature along with the statement "I hereby certify that 20 days have elapsed since the notice of approval from the Planning Board was received and recorded, and no notice of appeal has been filed in this office";
19. X A listing of all requested waivers from the literal requirements of these Rules and Regulations;
20. X A contour plan showing existing and proposed topography at 2' intervals Related to an existing permanent benchmark;
21. X Utility plan showing in plan and profile, but not limited to, the size and location of existing and proposed water and sewer lines, hydrants, electric lines, telephone lines, gas lines, fire alarm systems, cable television lines, storm drains and any easements pertinent thereto;
22. X A drainage plan shall be prepared showing existing and proposed streets,

lots, 2' contours and other pertinent data; the drainage limits and acreage of the area tributary to each stormwater inlet and culvert; location and type of inlets proposed; location, size, length, invert elevations, slope of proposed drains and culverts; structural details of inlets, manholes, pipe, headwalls and all other drainage structures required to complete the plan; an estimate of the present rate and volume of run-off, as well as an estimate of the rate and volume of run-off that would occur after completion of the proposed subdivision, shall both be submitted along with supporting data. In calculating the run-off and drainage requirements, consideration shall be given to the impact of septic systems on the ability of the soil to absorb any additional stormwater, as well as any upgradient run-off which may impact the subdivision;

23. X

Street plans and profiles at a horizontal scale of one inch equals forty feet (1" = 40') and a vertical scale as the Planning Board may approve. The following information shall be included:

- a. exterior lines of the right of way with sufficient data to determine their location, direction and length;
- b. existing centerline profile to be shown as a fine continuous line. Existing centerline profile for intersecting streets to be shown for at least 10', each side of the intersection on street centerlines. Proposed right sideline shall be shown as a dashed black line, left sideline is black dots. Evaluations shall be based on USGS datum;
- c. proposed centerline profile to be a heavy continuous line with elevations based on USGS datum shown every 50', every 25' on vertical curves;
- d. road centerline stationing.

24. X

A typical section showing proposed roadway construction at a scale of one inch equals ten feet (1" = 10') shall be provided with the profile plan (see typical section in appendix);

25. N/A

Street lights and tree planting plan shall be provided for the area within the proposed street right of way. The plan shall be superimposed on the contour plan and shall show the following:

- a. existing trees to be preserved within the right of way;
- b. any proposed street trees;
- c. existing and proposed street lights.

26. X

If the Planning Board determines that erosion due to development activity will be excessive or significant to wetlands, streams, ponds or other water bodies, the developer shall submit a soil erosion and sediment control plan. This plan shall consist of a drawing certified by a

registered civil engineer, identifying the appropriate control measures and their locations;

27. X If necessary, to determine compliance with these rules and regulations, the Board may require further engineering or environmental analysis to be prepared at the expense of the applicant, employing professionals approved by the Board.

This application constitutes the applicant's willingness to work under the Town of Wareham's Subdivision Rules and Regulations. Any errors or omissions from this checklist of the Subdivision Regulations may result in the application not being placed on a Planning Board agenda or a denial of this Definitive Plan.

**TOWN OF WAREHAM
ANR/SUBDIVISION/SITE PLAN REVIEW FORM**

Check one: ANR _____ Form B _____ Form C Site Plan Review _____

Date stamped in _____ Date decision in due _____

Applicant's name(s) Christian E. Tobia

Applicant's address 5 Crooked River Road, Wareham, MA 02571

Telephone number _____

Address of property 5 Crooked River Road & 0 Crooked River Road (Lot 1020)

Landowner's name Christian E. Tobia

Owner's address 5 Crooked River Road, Wareham, MA 02571

Telephone number _____

Contact person JC Engineering Inc Telephone 508-273-0377

Map # 40 Lot # 1002, 1020, 1021, 1022 Zone R-30

Date Approved _____ Date Denied _____

Comments (state reasons for denial or stipulations of approval)

Conditions for: _____

RECORD OF PLANNING BOARD PROCEEDINGS AND DECISIONS
Town of Wareham Planning Board

Name of Subdivision or Project: _____

APPLICATION: FORM A _____ FORM B _____ FORM C _____
 SITE PLAN REVIEW _____ OTHER _____

DATE SUBMITTED: _____

DATE DECISION IS DUE: _____

DATE OF PUBLIC HEARING(S): _____

DECISION DATE: _____

DATE DECISION SENT TO TOWN CLERK: _____

DATE APPEALS PERIOD BEGINS _____ ENDS _____

PLANNING BOARD DECISIONS: (yes or no or abstention) if abstaining, appropriate recusal form should accompany decision.

FORM A:
 M. Baptiste _____ G. Barrett _____ M. Fitzgerald _____ B. Reed _____
 J. Cronan _____ A. Slavin _____

FORM B:
 M. Baptiste _____ G. Barrett _____ M. Fitzgerald _____ B. Reed _____
 J. Cronan _____ A. Slavin _____

FORM C:
 M. Baptiste _____ G. Barrett _____ M. Fitzgerald _____ B. Reed _____
 J. Cronan _____ A. Slavin _____

SITE PLAN:
 M. Baptiste _____ G. Barrett _____ M. Fitzgerald _____ B. Reed _____
 J. Cronan _____ A. Slavin _____

COMMENTS OR STIPULATIONS ON DECISION: _____

STREET NAME PROPOSED AND ACCEPTED: _____

Conditions for: _____

**Town of Wareham
Street Name Application Form**

Application Date: 10-19-2021

Applicant:

- Check with Planning Board or Board of Selectmen to determine availability of street names.
- One copy of this form, filled out & signed should be submitted with a completed application for Form A, Form B, or Form C.
- Note: Use this form for any new street name requests for public OR private ways.

To the Planning Board:


The undersigned applicant requests the Board's approval of the following proposed names of street(s) within the proposed subdivision shown on a plan entitled: DEFINITIVE

SUBDIVISION PLAN OF LAND OF TOBIA WAY and dated 10-19-2021.

Proposed Street name(s):

TOBIA WAY

Alternative name(s):

Applicant's Signature: 

Address: 5 CROOKED RIVER ROAD
WAREHAM, MA 02571

The Planning Board requests your comments on this application for approval of the above proposed street name(s):

Please submit your comments to the Planning Board before: _____

Approved Name(s): _____

Approval Date: _____

Planning Board Signatures:

Distribution List:

Board of Selectmen
Police Department
Community Development
Municipal Maintenance

Building Department
Board of Health
Wareham Historical Commission
Water Department

EMS
Fire Department
Assessor's Office

Doc#: 00108797
Bk: 43844 Pg: 278 Page: 1 of 2
Recorded: 11/21/2013 11:54 AM
ATTEST: John R. Buckley, Jr. Register
Plymouth County Registry of Deeds

MASSACHUSETTS EXCISE TAX
Plymouth District ROD #11 001
Date: 11/21/2013 11:54 AM
Ctrl# Doc# Plymouth County Registry of Deeds
Fee: \$.00 Cons: \$1.00

DEED

We, Christian E. Tobia and Anne Marie Tobia, of Wareham, Plymouth County, Massachusetts,

For Consideration of One dollar and Zero cents (\$1.00) paid, and the covenants contained in the Separation Agreement and filed in the Plymouth County Probate and Family Court

Grant To Christian E. Tobia, individually, of 5 Crooked River Road, Wareham, Massachusetts

With Quitclaim Covenants,

The land in that part of Wareham, Plymouth County, Massachusetts, known as Agawam Neck, together with the buildings thereon, being bounded and described as Lot 1002, Lot 1020, Lot 1021 as shown on a plan of land dated July 23, 1974 entitled "Subdivision Plan prepared for Robert Brighetti, Wareham, MA by Walter E. Rowley & Associates, Inc. Civil Engineers and Surveyors, West Wareham & Falmouth, MA" as recorded with the Plymouth County Registry of Deeds in Plan Book 18, Page 135 on November 20, 1974.

Including a right of way shown as Lot 1022 on Town of Wareham Assessors Map 40.

This conveyance is subject to any easements, restrictions, covenants, conditions and agreements of record, if any, insofar as they may be in force and applicable.

Being a portion of the same premises conveyed by deed of Pietro Buscaroli and Gilda Buscaroli to Robert Brighetti as Trustee of the P & G Trust dated January 2, 1980 and recorded with said Registry in Book 4872 Page 196; to which deed reference is made for title.

For Title see Deed dated January 17, 2013 and recorded February 7, 2013 with the Plymouth County Registry of Deeds in Book 42654 Page 77.

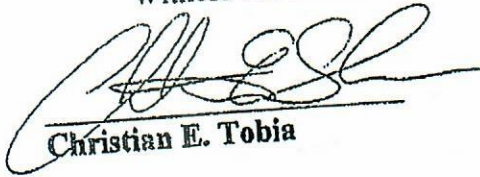
Mail to:
Patricia A. McArdle & Associates
44 Main Street
Mattapoisett MA 02739

Property Address: 5 Crooked River Road, Wareham, MA 02571

The preparer of this Deed did not examine the title.

Anne Marie Tobia hereby releases any rights of homestead that may have been conferred upon her through M.G.L. Chapter 188 Section 10 as said rights pertain to the property located at 5 Crooked River Road, Wareham, MA, recorded February 7, 2013 with said Registry of Deeds in Book 42654 Page 99.

Witness our hands and seals this 14th day of November 2013


Christian E. Tobia


Anne Marie Tobia

COMMONWEALTH OF MASSACHUSETTS

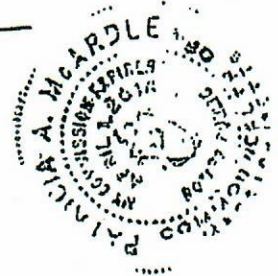
November 14, 2013

County of Plymouth

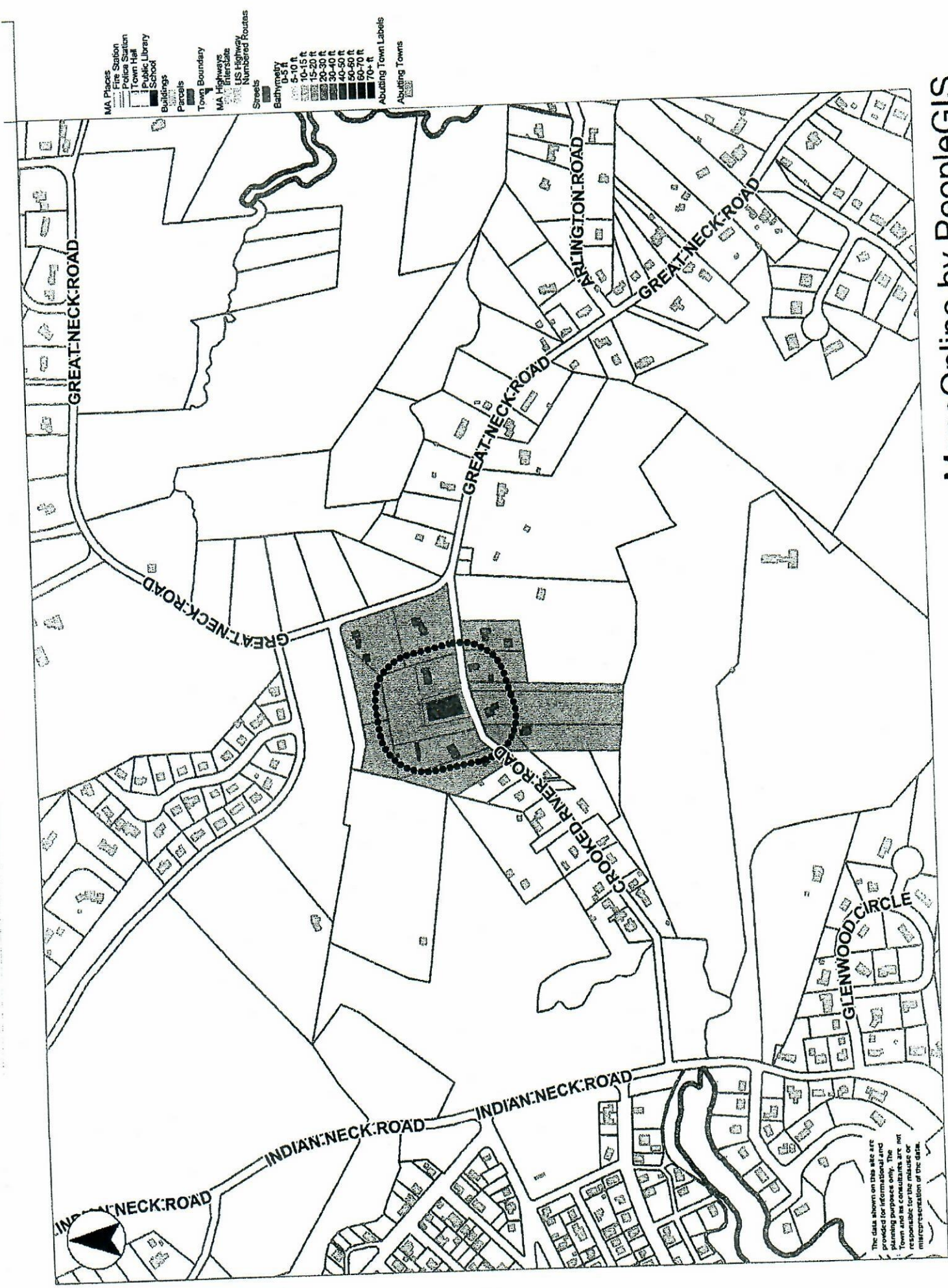
Then personally appeared the above named **Anne Marie Tobia and Christian E. Tobia** identification proven through valid driver's licenses, and acknowledged the foregoing Deed to be his/her free act and deed, before me



Patricia A McArdle
Notary Public
My commission expires: 4/1/2016



MAP & LOT	OWNER	CO-OWNER	STREET ADDRESS	TOWN	STATE	ZIP CODE
TOWN OF WAREHAM ABUTTERS						
MAP 40 LOT 1002 300'						
OWNER CHRISTIAN E TOBIA						
40-1003/C	CAMANDONA KAREN L		PO BOX 5	WAREHAM	MA	02571
40-1003/D	CARR RYAN M		7 CROOKED RIVER RD	WAREHAM	MA	02571
40-1013/C	TOWN OF WAREHAM		54 MARION RD	WAREHAM	MA	02571
37-1025	GORDON CLAIRE H LIFE ESTATE		14 CROOKED RIVER RD	WAREHAM	MA	02571
37-1022	CAPACHIONE MICHAEL J	CAPACHIONE PATRICIA A	12 CROOKED RIVER RD	WAREHAM	MA	02571
40-1002	TOBIA CHRISTIAN E		5 CROOKED RIVER RD	WAREHAM	MA	02571
37-1021	BESSE G MICHAEL TRUSTEE	0 CROOKED RIVER ROAD TRUST	PO BOX 232	ONSET	MA	02558
40-1001	GORDON PETER W	GORDON THERESA A	3 CROOKED RIVER RD	WAREHAM	MA	02571
37-1020	RAYMOND ROXANNE	RAYMOND TIM	8 CROOKED RIVER RD	WAREHAM	MA	02571
40-1013/A	FITZGERALD SCOTT M	FITZGERALD VERONICA L	89 GREAT NECK RD	WAREHAM	MA	02571
37-1018	DRUM MICHAEL P	DRUM SCOTT E TRUSTEES	6 CROOKED RIVER RD	WAREHAM	MA	02571
40-1000	KISSELL DENISE M	THOMPSON JASON B	91 GREAT NECK RD	WAREHAM	MA	02571
CERTIFIED ABUTTERS AS THEY						
APPEAR ON OUR TAX ROLLS						
AS OF 8/31/2021						
	<i>W. Roni Atkins</i>					
ASSESSORS OFFICE						
REQUESTED BY						
SAM JAMELE JC ENGINEERING INC						
508 273-0377						
SIAMELE@JCENG.ORG						



The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.



On-Site Runoff



Routing Diagram for Existing Conditions
Prepared by JC Engineering Inc., Printed 9/30/2021
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Existing Conditions

Prepared by JC Engineering Inc.

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Printed 9/30/2021

Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.028	76	Gravel roads, HSG A (DA-1)
0.039	98	Unconnected roofs, HSG A (DA-1)
2.013	43	Woods/grass comb., Fair, HSG A (DA-1)
2.081	44	TOTAL AREA

Existing Conditions

Prepared by JC Engineering Inc.

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Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.081	HSG A	DA-1
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.081		TOTAL AREA

Existing Conditions

Prepared by JC Engineering Inc.

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Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.028	0.000	0.000	0.000	0.000	0.028	Gravel roads	DA-1
0.039	0.000	0.000	0.000	0.000	0.039	Unconnected roofs	DA-1
2.013	0.000	0.000	0.000	0.000	2.013	Woods/grass comb., Fair	DA-1
2.081	0.000	0.000	0.000	0.000	2.081	TOTAL AREA	

Existing Conditions

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Type III 24-hr 25 YR Rainfall=5.40"

Printed 9/30/2021

Page 5

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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 DA-1: On-Site Runoff

Runoff Area=90,630 sf 1.86% Impervious Runoff Depth>0.52"
Flow Length=340' Tc=16.0 min CN=44 Runoff=0.47 cfs 0.090 af

Total Runoff Area = 2.081 ac Runoff Volume = 0.090 af Average Runoff Depth = 0.52"
98.14% Pervious = 2.042 ac 1.86% Impervious = 0.039 ac

Existing Conditions

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Type III 24-hr 25 YR Rainfall=5.40"

Printed 9/30/2021

Page 6

Summary for Subcatchment DA-1: On-Site Runoff

Runoff = 0.47 cfs @ 12.44 hrs, Volume= 0.090 af, Depth> 0.52"

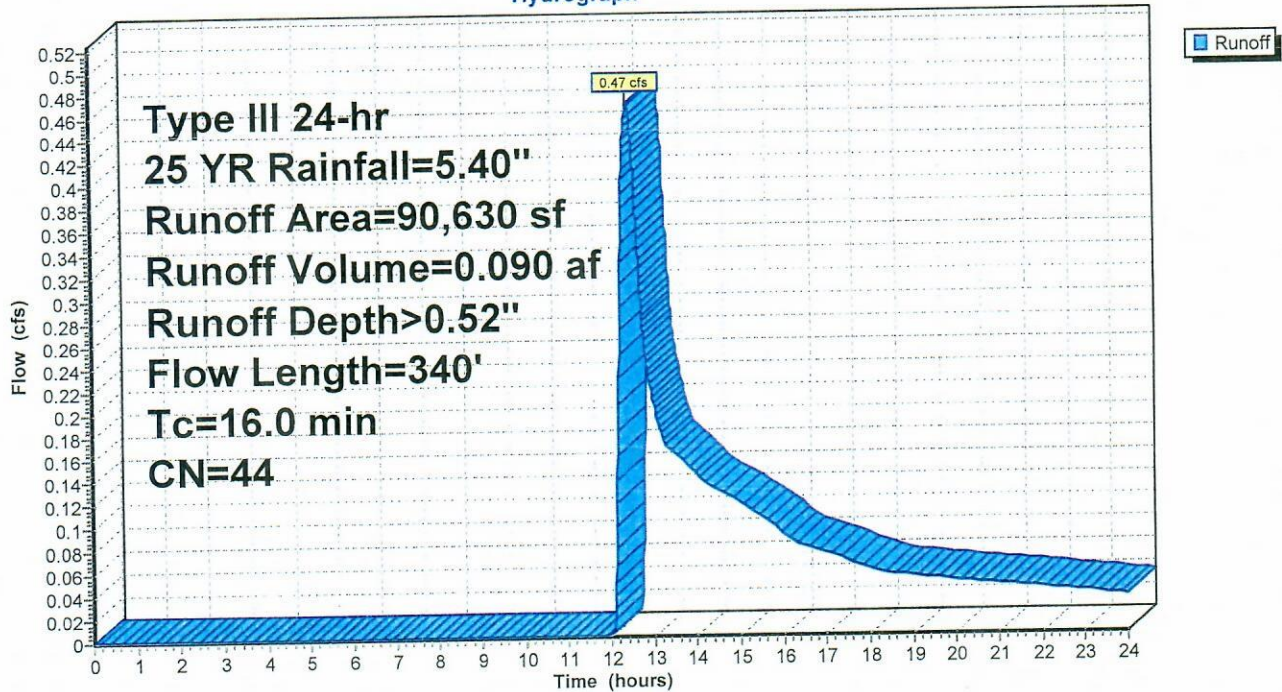
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25 YR Rainfall=5.40"

Area (sf)	CN	Description
1,690	98	Unconnected roofs, HSG A
1,232	76	Gravel roads, HSG A
87,708	43	Woods/grass comb., Fair, HSG A
90,630	44	Weighted Average
88,940		98.14% Pervious Area
1,690		1.86% Impervious Area
1,690		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.2	50	0.0300	0.08		Sheet Flow, A - B Woods: Light underbrush n= 0.400 P2= 3.40"
5.8	290	0.0275	0.83		Shallow Concentrated Flow, B - C Woodland Kv= 5.0 fps
16.0	340	Total			

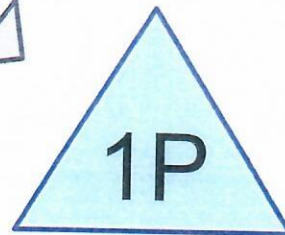
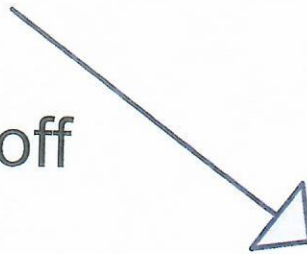
Subcatchment DA-1: On-Site Runoff

Hydrograph





Road Runoff



Detention Basin



On-Site Runoff



Proposed Conditions

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.028	76	Gravel roads, HSG A (DA-1)
0.098	98	Paved parking, HSG A (DA-1, DA-2)
0.039	98	Roofs, HSG A (DA-1)
1.916	43	Woods/grass comb., Fair, HSG A (DA-1, DA-2)
2.081	47	TOTAL AREA

Proposed Conditions

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Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.081	HSG A	DA-1, DA-2
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.081		TOTAL AREA

Proposed Conditions

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Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.028	0.000	0.000	0.000	0.000	0.028	Gravel roads	DA-1
0.098	0.000	0.000	0.000	0.000	0.098	Paved parking	DA-1, DA-2
0.039	0.000	0.000	0.000	0.000	0.039	Roofs	DA-1
1.916	0.000	0.000	0.000	0.000	1.916	Woods/grass comb., Fair	DA-1, DA-2
2.081	0.000	0.000	0.000	0.000	2.081	TOTAL AREA	

Proposed Conditions

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Type III 24-hr 25-year Rainfall=5.40"

Printed 9/30/2021

Page 5

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment DA-1: On-Site Runoff

Runoff Area=73,807 sf 2.76% Impervious Runoff Depth>0.57"
Flow Length=340' Tc=16.0 min CN=45 Runoff=0.45 cfs 0.081 af

Subcatchment DA-2: Road Runoff

Runoff Area=16,823 sf 23.27% Impervious Runoff Depth>1.25"
Flow Length=300' Slope=0.0083 '/ Tc=3.3 min CN=56 Runoff=0.54 cfs 0.040 af

Pond 1P: Detension Basin

Peak Elev=25.61' Storage=948 cf Inflow=0.54 cfs 0.040 af
Outflow=0.03 cfs 0.025 af

Total Runoff Area = 2.081 ac Runoff Volume = 0.121 af Average Runoff Depth = 0.70"
93.43% Pervious = 1.944 ac 6.57% Impervious = 0.137 ac

Proposed Conditions

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Type III 24-hr 25-year Rainfall=5.40"

Printed 9/30/2021

Page 6

Summary for Subcatchment DA-1: On-Site Runoff

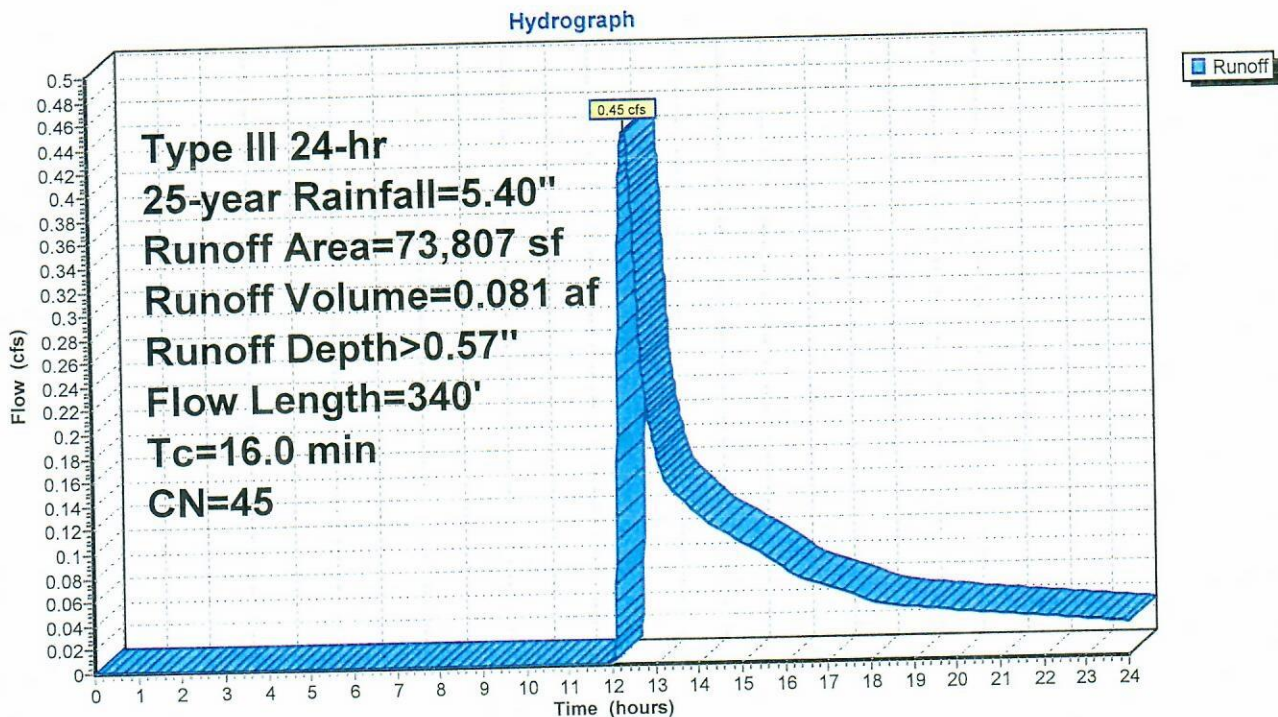
Runoff = 0.45 cfs @ 12.42 hrs, Volume= 0.081 af, Depth> 0.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-year Rainfall=5.40"

Area (sf)	CN	Description
1,690	98	Roofs, HSG A
1,232	76	Gravel roads, HSG A
70,539	43	Woods/grass comb., Fair, HSG A
346	98	Paved parking, HSG A
73,807	45	Weighted Average
71,771		97.24% Pervious Area
2,036		2.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.2	50	0.0300	0.08		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.40"
5.8	290	0.0275	0.83		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
16.0	340	Total			

Subcatchment DA-1: On-Site Runoff



Proposed Conditions

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Type III 24-hr 25-year Rainfall=5.40"

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Page 7

Summary for Subcatchment DA-2: Road Runoff

Runoff = 0.54 cfs @ 12.06 hrs, Volume= 0.040 af, Depth> 1.25"

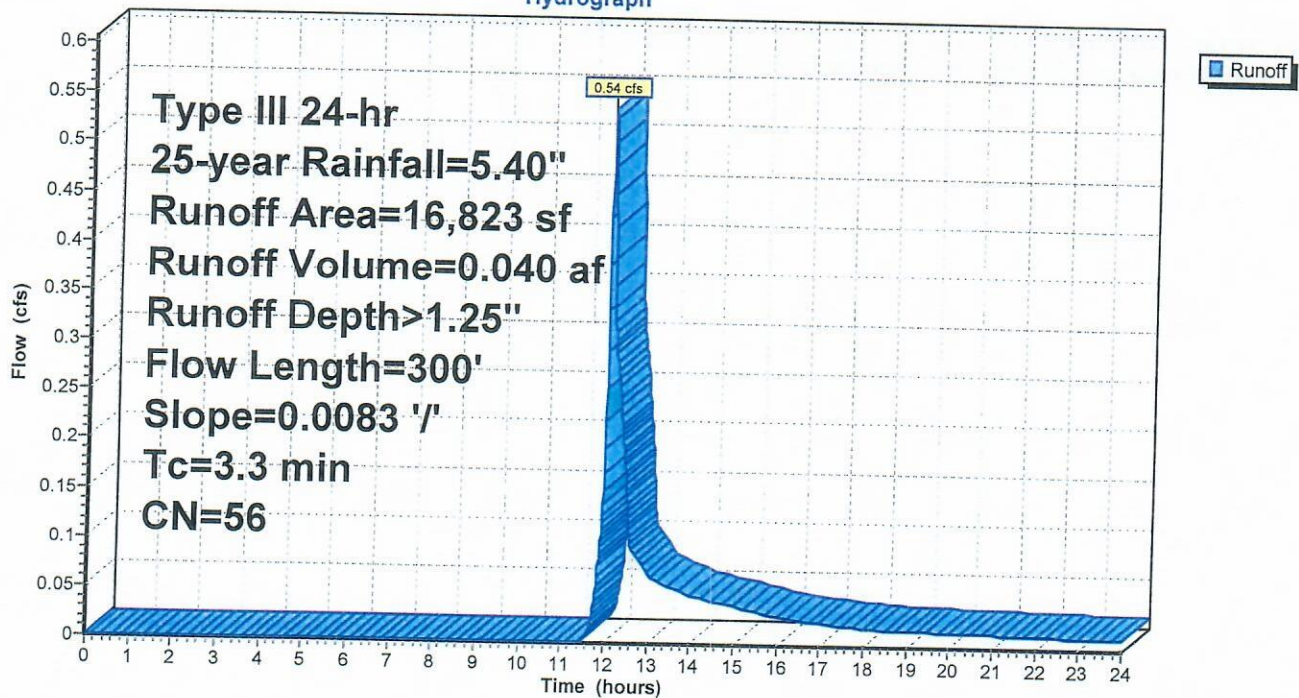
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.40"

Area (sf)	CN	Description
3,914	98	Paved parking, HSG A
12,909	43	Woods/grass comb., Fair, HSG A
16,823	56	Weighted Average
12,909		76.73% Pervious Area
3,914		23.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	50	0.0083	0.87		Sheet Flow, A-B
2.3	250	0.0083	1.85		Smooth surfaces n= 0.011 P2= 3.40" Shallow Concentrated Flow, B-C
3.3	300	Total			Paved Kv= 20.3 fps

Subcatchment DA-2: Road Runoff

Hydrograph



Proposed Conditions

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Page 8

Summary for Pond 1P: Detention Basin

Inflow Area = 0.386 ac, 23.27% Impervious, Inflow Depth > 1.25" for 25-year event
Inflow = 0.54 cfs @ 12.06 hrs, Volume= 0.040 af
Outflow = 0.03 cfs @ 16.11 hrs, Volume= 0.025 af, Atten= 95%, Lag= 242.6 min
Discarded = 0.03 cfs @ 16.11 hrs, Volume= 0.025 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 25.61' @ 16.11 hrs Surf.Area= 1,139 sf Storage= 948 cf

Plug-Flow detention time= 323.2 min calculated for 0.025 af (61% of inflow)
Center-of-Mass det. time= 198.3 min (1,077.5 - 879.2)

Volume	Invert	Avail.Storage	Storage Description
#1	24.00'	1,454 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.00	163	0	0
25.00	645	404	404
26.00	1,455	1,050	1,454

Device	Routing	Invert	Outlet Devices
#1	Discarded	24.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.03 cfs @ 16.11 hrs HW=25.61' (Free Discharge)
↑ **1=Exfiltration** (Exfiltration Controls 0.03 cfs)

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Printed 9/30/2021

Page 9

Pond 1P: Detention Basin

Hydrograph

