

Town of Glen 7 Erie Street Fultonville, NY 12072

APPLICATION #_____

Page 1 of 4

FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

This form is to be filled out in duplicate; file copy, applicant copy

SECTION 1: GENERAL PROVISIONS (APPLICANT to read and sign):

- 1. No work may start until a permit is issued.
- 2. The permit may be revoked if any false statements are made herein.
- 3. If revoked, all work must cease until permit is re-issued.
- 4. Development shall not be used or occupied until a Certificate of Compliance is issued.
- 5. The permit is invalid if no work is commenced within six months of issuance, and expires 2 years from date of issuance.
- 6. Applicant is hereby informed that other permits may be required to fulfill local, state and federal regulatory requirements.
- Applicant hereby gives consent to the Local Administrator or his/her representative to make reasonable inspections required to verify compliance.
- 8. I, THE APPLICANT, CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

(APPLICANT'S SIGNATURE) N

DATE 6/12/23

SECTION 2: PROPOSED DEVELOPMENT (To be completed by APPLICANT)

Len

	NAME		ADDRESS	TELEPHONE
APPLICAN	^T Carver	Realty MV, LLC	2170 River Rd Coermons NY 12045	518-355-6034
BUILDER	Corver	Construction, Inc	2170 River Rd Coermons Ny. 12045	518-355-6034
ENGINEEF	Insaces	& Associates, LLP	2603 Suickerend Arc Schenchary Ny 12306	518-393-7725

PROJECT LOCATION:

To avoid delay in processing the application, please provide enough information to easily identify the project location. Provide the street address, lot number or legal description (attach) and, outside urban areas, the distance to the nearest intersecting road or well-known landmark. A map attached to this application, and a sketch showing the project layout would be helpful.

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189 Riversile Drive

36. -3-9



Town of Glen 7 Erle Street Fultonville, NY 12072

APPLICATION #____

DESCRIPTION OF WORK (Check all applicable boxes):

A. STRUCTURAL DEVELOPMENT

ACTIVITY

□ Addition

□ Alteration

□ Relocation

STRUCTURE TYPE

- New Structure
- Residential (1-4 Family)
- Residential (More than 4 Family)
- □ Non-residential (Floodproofing? □ Yes □ No)
- Combined Use (Residential & Commercial)
 - ☐ Manufactured (Mobile) Home (In Manufactured Home Park? ☐ Yes ☐ No)
- DemolitionReplacement

ESTIMATED COST OF PROJECT \$_____

B. OTHER DEVELOPMENT ACTIVITIES:

- X Fill □ Mining □ Drilling X Grading
- Excavation (Except for Structural Development Checked Above)
- D Watercourse Alteration (Including Dredging and Channel Modifications)
- Drainage Improvements (Including Culvert Work), Stormwater Control Structures or Ponds
- C Road, Street or Bridge Construction
- □ Subdivision (New or Expansion)
- Individual Water or Sewer System
- □ Other (Please Specify)___

After completing SECTION 2, APPLICANT should submit form to Local Administrator for review.

SECTION 3: FLOODPLAIN DETERMINATION (To be completed by LOCAL ADMINISTRATOR)

The proposed development is located on FIRM Panel No. 36057C0179E, Dated 1/19/2018

The Proposed Development:

- The proposed development is reasonably safe from flooding. Entire property is in Zone B, C or X.
- X The proposed development is in adjacent to a flood prone area.
 - 100-Year flood elevation at the site is:
 - 292.0 _Ft. D NGVD 1929/ X NAVD 1988 (MSL)
 - 🛛 Unavailable
- X See Section 4 for additional instructions for development that is or may be in a flood prone area.

OIGNED	DATE	
SIGNED	DAIE	

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Town of Glen 7 Erie Street Fultonville, NY 12072

APPLICATION #____

SECTION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by LOCAL ADMINISTRATOR)

The applicant must submit the documents checked below before the application can be processed:

- A site plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions and proposed development.
- Development plans and specifications, drawn to scale, including where applicable: details for anchoring structures, proposed elevation of lowest floor (including basement), types of water resistant materials used below the first floor, details of floodproofing of utilities located below the first floor, details of enclosures below the first floor, openings in foundation for entry and exit of floodwaters.
 Other
- Elevation Certificate
- Subdivision or other development plans (If the subdivision or other development exceeds 50 lots or 5 acres, whichever is the lesser, the applicant <u>must</u> provide 100-year flood elevations if they are not otherwise available).
- X Plans showing the watercourse location, proposed relocations, Floodway location.
- X Topographic information showing existing and proposed grades, location of all proposed fill. 10/4/23 as prepared by Ingalls &

Site/Grading Plan, Carver Realty MV, LLC, Riverside Dr., dated 10/4/23 as prepared by Ingalls & Associates, LLP

- X Top of new fill elevation 288.0 Ft. D NGVD 1929/ X NAVD 1988 (MSL)
- D PE Certification of Soil Compaction
- Floodproofing protection level (non-residential only) ____ D NGVD 1929/ D NAVD 1988 (MSL) For floodproofed structures, applicant must attach certification from registered engineer or architect.
- A Other: Technical Note, Carver Realty, LLC. Floodplain Evaluation dated 10/5/2023 as prepared by Ramboll.

SECTION 5: PERMIT DETERMINATION (To be completed by LOCAL ADMINISTRATOR)

I have determined that the proposed activity:	А. В.	X Is ⊡ Is not	Glen Code Section 74 - Flood Damage Prevention
In conformance with provisions of Local Law # and made part of this permit.		, (yr <u>) 2004</u> .	This permit is herby issued subject to the conditions attached to

SIGNED_____, DATE_____

<u>If BOX A is checked</u>, the Local Administrator may issue a Development Permit upon payment of designated fee. <u>If BOX B is checked</u>, the Local Administrator will provide a written summary of deficiencies. Applicant may revise and resubmit an application to the Local Administrator or may request a hearing from the Board of Appeals.

Expiration Date: _____

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7 Erle Street Fultonville, NY 12072

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APPEALS: A H	ppealed to Board of Appeals?	Yes	X 	No	
A	ppeals Board Decision Approved? Conditions:	<u> </u>	Yes	a □ No	

SECTION 6: AS-BUILT ELEVATIONS (To be submitted by APPLICANT before Certificate of Compliance is issued) NA

The following information must be provided for project structures. This section must be completed by a registered professional engineer or a licensed land surveyor (or attach a certification to this application). Complete 1 or 2 below.

- Actual (As-Built) Elevation of the top of the lowest floor, including basement (in Coastal High Hazard Areas, bottom of lowest structural member of the lowest floor, excluding plling and columns) is: ______ FT.
 □ NGVD 1929/ □ NAVD 1988 (MSL). Attach Elevation Certificate FEMA Form 81-31
- 2. Actual (As-Built) Elevation of floodproofing protection is _____ FT. □ NGVD 1929/ □ NAVD 1988 (MSL). Attach Floodproofing Certificate FEMA Form 81-65

NOTE: Any work performed prior to submittal of the above information is at the risk of the Applicant.

SECTION 7: COMPLIANCE ACTION (To be completed by LOCAL ADMINISTRATOR)

The LOCAL ADMINISTRATOR will complete this section as applicable based on inspection of the project to ensure compliance with the community's local law for flood damage prevention.

INSPECTIONS:	DATE	BY	DEFICIENCIES?	D YES	□ NO
	DATE	BY	DEFICIENCIES?	D YES	D NO
	DATE	BY	DEFICIENCIES?	D YES	D NO

SECTION 8: CERTIFICATE OF COMPLIANCE(To be completed by LOCAL ADMINISTRATOR)

Certificate of Compliance issued: DATE:_____

BY: _____



Town of Glen 7 Erie Street Fultonville, NY 12072

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Attachment B

SAMPLE CERTIFICATE OF COMPLIANCE

for Development in a Special Flood Hazard Area



CERTIFICATE OF COMPLIANCE FOR DEVELOPMENT IN A SPECIAL FLOOD HAZARD AREA

(Owner Must Retain This Certificate)

Premise	s located at: 	
Owner:		
Owner's	a Address:	
Permit	No Permit Date: One: New Building Existing Building Fill Other:	
The Lo	cal Floodplain Administrator is to complete a.	or b. below:
a.	Compliance is hereby certified with the requi	rements of Local Law No, (yr)
	Signed:	Dated:
b.	Compliance is hereby certified with the requi	rements of Local Law No, (yr), as modified
	Signed:	Dated:

6

National Flood Hazard Layer FIRMette



Legend



Basemap Imagery Source: USGS National Map 2023

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-N-SITE LOCATION MAP SCALE: 1" = 2000' <u>LEGEND</u> EXISTING PROPERTY LINE _____ PROPOSED PROPERTY LINE _____ PROPOSED SETBACK _ _ _ _ _ _ _ _ ADJACENT PROPERTY LINE _____ PROPOSED EASEMENT ______ EXISTING CONTOUR EXISTING TREELINE EXISTING HYDRANT -Q-HYD EXISTING UTILITY POLE NG 19 EXISTING SIGN · 31.3' 20' WIDE WEIR СВ EXISTING CATCH BASIN EL.=283.00 EXISTING SANITARY MANHOLE S EXISTING SANITARY SEWER EXISTING STORM SEWER EXISTING WATERMAIN · · __ W ___ · EXISTING OVERHEAD WIRE PROPOSED CONTOUR **^**200— PROPOSED STORM SEWER PROPOSED SILT FENCE PROPOSED CLEARING LIMITS ----- LOD-------LIMITS OF GRAVEL/MILLINGS AREA * * * * * LIMITS OF GRASS AREA * * * * * * * * * INFILTRATION TEST LOCATION 0 P TP-1 SOIL TEST PIT LOCATION ADDRESS: OWNER: 189 RIVERSIDE DRIVE CARVER REALTY MV, LLC 2170 RIVER ROAD P.O. BOX 890 ZONE: COEYMANS, NY 12045 lands n/f RURAL RESIDENTIAL N.Y.S. BARGE CANAL S.B.L. 36.-3-10 APPLICANT: TAX MAP ID: CARVER REALTY MV, LLC 36.-3-9 2170 RIVER ROAD P.O. BOX 890 SITE AREA: COEYMANS, NY 12045 11.23 ACRES FOR MUNICIPAL APPROVAL ONLY NOT FOR CONSTRUCTION SITE/GRADING PLAN CARVER REALTY MV, LLC RIVERSIDE DRIVE ingalls TOWN OF GLEN COUNTY OF MONTGOMERY STATE OF NEW YORK

DRAWN BY: PJY CADD FILE:

OCTOBER 11, 2021

CHECKED BY: JOB NO. 21-109

SCALE: 1'' = 50'

SHEET 1 OF 2

ingalls & associates, LLP CC engineering, environmental, surveying DATE

2603 GUILDERLAND AVENUE SCHENECTADY, N.Y. 12306 PHONE: (518) 393-7725 FAX: (518) 393-2324



TECHNICAL NOTE

Project name	Carver Reality, LLC Floodplain Evaluation
Project no.	1940102846
Client	Ingalls & Associates, LLP
Technical Note no.	1
Version	2.0
То	David Ingalls, PE
From	Shaun Gannon, P.E., D.WRE, P.H., CFM, PMP
Copy to	File
Prepared by	Shaun B. Gannon, P.E.

Date October 5, 2023

1 Background

Carver Reality, LLC (Carver, the applicant) is considering developing a parcel situated along the Mohawk River in the Town of Glen, Montgomery County, New York. The parcel (INST #2016-66824, S.B.L. 36.-3-9) is situated within the 1% Annual Chance Exceedance (ACE) floodplain of the Mohawk River as shown on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 36057C0178E effective January 19, 2018 (FIRMette attached). The Base Flood Elevation (BFE) at the parcel is 292 ft. NAVD88 and portions of the parcel are within the floodway.

The National Flood Insurance Program (NFIP) 44CFR60.3(d)(3) states the following:

"Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge."

Per the attached site plan, Carver intends to regrade the site to an elevation of 286 ft. NAVD88, triggering the need for a flood encroachment analysis.

2 Methodology

As of the date of this memorandum, Ramboll has not received the effective model from the FEMA library. Therefore, the findings herein are preliminary and are subject to change. Ramboll does have an unofficial copy of the MIKE 11 model used by FEMA to develop the effective Flood Insurance Study (FIS). This model was used to evaluate potential impacts of the proposed development on the 1% ACE.

Ramboll 101 First Street 4th Floor Utica, NY 13501 USA

T 315-956-6950 F 315-790-5434 https://ramboll.com



Ramboll followed the FEMA MT-2 process to assess potential impacts of the proposed placement of fill in the floodplain. This methodology is the process by which FEMA evaluates requests to revise the FIRM. While Carver is not requesting a revision to the FIRM, following this methodology provides the local floodplain administrator clear documentation allowing them to execute their obligation under the NFIP accurately.

The MT-2 process is a muti-step approach which provides well-defined documentation of results ensuring clear understanding of the reason for changes in water surface elevation (WS). The process involves 4 steps:

- 1. Obtain the effective model used to develop the FIS.
- 2. Execute the effective model in the current version of the modeling software, creating a duplicate effective model, and document any changes in WS.
- 3. Using the duplicate effective model, create a corrected effective model to include any known changes within the reach and document any changes in WS.
- 4. Using the corrected effective model, develop a proposed conditions model which includes the proposed grading within the floodplain and document any changes in WS.

At the conclusion of this process the documentation clearly separates what, if any, changes in WS are attributed to the proposed project and which can be attributed to changes in software coding or other development within the reach. The following subsection details steps 2, 3, and 4 of the MT-2 process performed for this site. Each model was executed for the 1% ACE discharges shown in the effective FIS.

Duplicate Effective Model

The unofficial version of the effective model used for this analysis was developed using the Danish Hydraulics Institute (DHI) 2007 version of MIKE 11 software. A duplicate effective model was developed by executing the MIKE 11 model in the 2022 update 1 release of DHI MIKE +. MIKE + includes updates to the one-dimensional unsteady computation method used in MIKE 11. The project is located at XS 52 with chainage 97200.72.



Figure 1. Project site relative to MIKE + model cross section.





Figure 2. XS 52 duplicate effective model results.

Corrected Effective Model

The duplicate effective model was reviewed and compared against known changes within the floodplain in the vicinity of the proposed project by observation of time-lapsed orthoimagery. Ramboll did not identify development within a hydraulicly significant distance to the proposed project that would alter the results in the duplicate effective model. Therefore, the corrected and duplicate effective models are the same for this analysis.

Proposed Conditions Model

To create the proposed conditions model, the duplicate effective model was modified by altering cross section 52 with chainage 97200.72 in the MIKE + model. Modifications included smoothing and raising the grade within the project limits including bulk aggregate storage (25 ft. (7.6 m) x 10 ft. (3.2 m).



Figure 3. Proposed conditions Chainage 97200.72



Chainage 97200.72 was duplicated and placed 520 feet (159 meters) upstream creating chainage 97042.22 resulting in two cross sections representing the proposed conditions at the project site. Figure 4 represents the proposed conditions at chainage 97042.22. Figure 5 represents the location of chainage 97042.22 in relationship to the proposed grading plan.



Figure 4: Additional Chainage 97042.22



Figure 5: Proposed Chainage Map



Table 1 below summaries the duplicate effective and proposed conditions WS at XS 52 and surrounding XS.

MIKE + XS (Chainage)	Duplicate Effective (WS, m / ft.)	Proposed Condition (WS, m / ft.)	Difference (m / ft.)
53 (97692.67)	88.952 / 291.801	88.942 / 291.801	0.00
New (97042.22)	88.952 / 291.801	88.942 / 291.801	0.00
52 (97200.72)	89.013 / 292.034	89.013 / 292.034	0.00
51 (96814.84)	89.071 / 292.224	89.071 / 292.224	0.00

Table 1. Duplicate Effective and Proposed Conditions WS at XS 52

A review of the table indicates that the proposed project will have no adverse impact as it will not increase the BFE or the 1% ACE WS.

Encroachment Analysis

The Town of Glen, New York Code §74-15 requires that, "all encroachment, including fill, new construction, substernal improvements and other development, are prohibited within the floodway unless a technical evaluation demonstrates that such encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge."

The regulatory flood elevation at the site is between 292 and 292.4, Labeled Sections S and T in Figure 4. The Floodway elevation increase is between 0.3 and 0.4 ft. to between 292.3 and 292.8 ft. NAVD88, per Figure 4.

The proposed grading will raise the site to a maximum of 288 ft., NAVD88, or approximately 4 feet below the regulatory flood stage. An encroachment analysis was performed using the MIKE 11 model against the exiting condition encroachment station and the proposed grading plan. This analysis indicates that the proposed grading will result in a 0.00 ft. change in the effective base flood elevation.



_										
				-		BASE FLOOD				
	FLOODING SOUR	CE		FLOODWA	Y	WATER-SURFACE ELEVATION				
\vdash						(FEET NAVD)				
				SECTION	MEAN					
	CROSS SECTION	DISTANCE ¹	WIDTH	AREA	VELOCITY	REGULATORY	WITHOUT	WITH	INCREASE	
			(FEET)	(SQUARE	(FEET PER		FLOODWAY	FLOODWAY		
L.	Inhauda Diseas			FEET)	SECOND)					
N	Continued)									
6	continued)	48044	1020	22009	4.0	272.7	272.7	272.1	0.4	
		40079	045	19049	8.2	275.7	275.7	278.1	0.4	
	ĸ	51146	1254	26035	4.5	276.6	276.6	277.0	0.4	
	ï	56247	1375	24648	4.7	278.0	278.0	278.3	0.3	
	м	61907	1429	26034	4.5	279.5	279.5	279.7	0.2	
	N	67106	1219	17719	6.5	280.8	280.8	281.1	0.4	
	0	70529	1369	27083	4.3	289.1	289.1	289.1	0.0	
	P	75542	1466	20045	3.4	290.1	290.1	290.1	0.0	
	Q	79775	1427	23216	2.9	290.5	290.5	290.8	0.3	
	R	84173	1102	20485	3.3	291.2	291.2	291.4	0.2	
	5	90875	772	17019	3.9	292.0	292.0	292.3	0.3	
		93322	845	16887	4.0	292.4	292.4	292.8	0.4	
	v	97795	/32	14295	4.0	293.3	293.3	293.7	0.4	
	Ŵ	102014	900	21081	3.0	294.1	299.1	299.0	0.4	
	×	109885	1211	20755	2.8	295.0	205.0	205.3	0.4	
	Ŷ	115526	983	18400	3.5	295.6	295.6	296.0	0.4	
	z	119006	893	16947	3.7	296.1	296.1	296.6	0.5	
	AA	123670	1218	20040	3.1	297.3	297.3	297,9	0.6	
	AB	129501	1121	22120	2.8	298.5	298.5	299.0	0.5	
	AC	131869	845	19873	3.1	298.8	298.8	299.3	0.5	
	AD	137769	1116	22498	2.7	299.6	299.6	300.2	0.6	
	AE	141916	734	15024	4.0	300.3	300.3	300.9	0.6	
	AF	144546	905	20752	2.9	301.0	301.0	301.6	0.6	
	AG	150604	1322	24190	2.5	301.9	301.9	302.2	0.3	
	AH	156423	640	16257	3.6	302.6	302.6	302.9	0.3	
1,	east above limit of study							l		
	eet above limit of study									
	FEDERAL EMERGENC	Y MANAGEMENT	AGENCY							
-										
⊳						FLOOD	WAY DA	IA		
ω	MONTGOME	RY COUNT	TY. NY							
		COLORION								
Ш	(ALL JUR	SDICTION	(5)			MOUA		D		
œ						WOHA		ĸ		

Figure 6. Effective FIS Floodway Data Table