

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



MARION TWP.
WASHINGTON COUNTY
CLIFFORD BRIDGE
OVER
CLIFFORD STREAM
STATE ROUTE 86, KING STREET
FEDERAL AID PROJECT NO. 2521100
PROJECT LENGTH 0.090 mi.
BRIDGE NO. 5223

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Ninth Edition 2020.

DESIGN LOADING

Live Load HL - 93 Modified for Strength I

TRAFFIC DATA

Current (2021) AADT 670
Future (2041) AADT 800
DHV - % of AADT 14
Design Hourly Volume 102
Heavy Trucks (% of AADT) 5
Heavy Trucks (% of DHV) 3
Directional Distribution (% of DHV) 65
18 kip Equivalent P 2.0 13
18 kip Equivalent P 2.5 12
Posted Speed (mph) 45

HYDROLOGIC DATA

Drainage Area 5.48 sq mi
Design Discharge (Q25) 515 cfs
Design Discharge (Q50) 600 cfs
Check Discharge (Q100) 690 cfs
Headwater Elevation (Q1.1) 106.48 ft
Headwater Elevation (Q10) 108.90 ft
Headwater Elevation (Q50) 110.28 ft
Headwater Elevation (Q100) 110.87 ft
Discharge Velocity (Q1.1) 1.15 fps
Discharge Velocity (Q50) 2.93 fps
Discharge Velocity (Q100) 3.24 fps

MATERIALS

Concrete:
 Precast Class "P"
 All Other Class "A"
Reinforcing Steel ASTM A615/ A615M, Grade 60
Welded Wire Reinforcement ASTM A1064/A1064M

BASIC DESIGN STRESSES

Concrete f 'c = 4,000 psi
Precast Concrete f 'c = 5,000 psi

Reinforcing Steel f y = 60,000 psi
Welded Wire Reinforcement f y = 65,000 psi

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UTILITIES

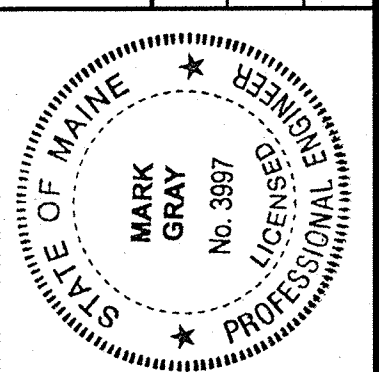
Consolidated Communications of Northern New England
Versant Power

MAINTENANCE OF TRAFFIC

Maintain alternating one-way traffic utilizing stop signs and flaggers.

PROJECT LOCATION	Clifford Stream, Located 1.56 miles Southwest of Marion Station Road. Lat./Long. 44°52'26.5" N 67°20'42.8" W
PROGRAM AREA	Bridge
OUTLINE OF WORK	Large Culvert Replacement

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		DATE
APPROVED		11-9-23
COMMISSIONER	<i>[Signature]</i>	11-9-23
CHIEF ENGINEER	<i>[Signature]</i>	11-9-2023



<i>[Signature]</i>	SIGNATURE	P.E. NUMBER	DATE
	3997	11-8-2023	

PROJECT INFORMATION		PROJECT COMPLETION DATE	
PROGRAM	BRIDGE		
PROJECT MANAGER	M. PARLIN		
DESIGNER	M. GRAY		
CONSULTANT			
PROJECT RESIDENT			
CONTRACTOR			

MARION TWP. CLIFFORD BRIDGE	TITLE SHEET
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SHEET NUMBER
1
OF 21

