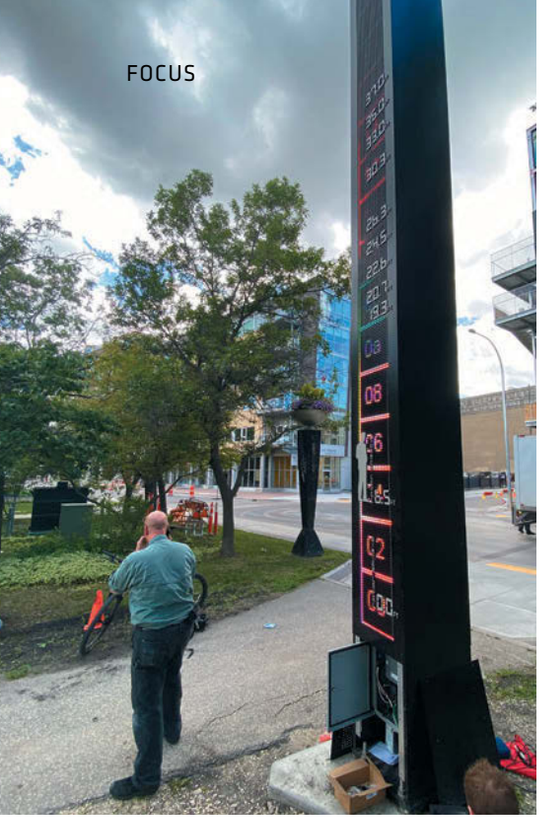

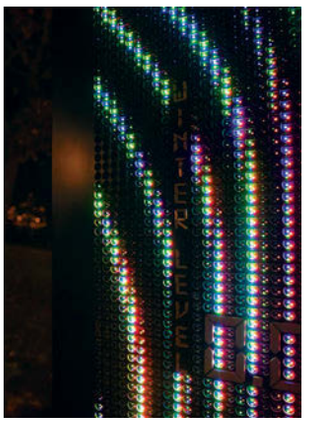

1, 2, 3, 4, 5

1 WATER LEVEL INDICATOR TESTING **2** WATER LEVEL INDICATOR FALL 2020 **3** WATER LEVEL INDICATOR FALL 2020 **4** WATER LEVEL INDICATOR SUMMER 2020 **5** WATER LEVEL INDICATOR SPECIAL EVENT NOV 11 2020

PHOTOS 1 JEREMY CHOY, PATTERN INTERACTIVE
2, 3, 5 DAVID MODER, DAVID MODER PHOTOGRAPHY
4 CONSTANTINA DOUVRIS, HTFC PLANNING & DESIGN

05/ INTERACTIVE HERITAGE INTERPRETATION

James Avenue Water Level Indicator

JAMES HUDSON + JEREMY CHOY

FOR MANY YEARS, a river-level gauging chamber sat next to the James Avenue Pumphouse on the west bank of the Red River in Winnipeg's Historic East Exchange District. Functioning as a kind of measuring tape, the gauge calculated and transmitted water levels every 15 minutes to city and federal officials and was the primary device used to determine fluctuating river levels in Winnipeg.

Technical advancements led to the removal of the chamber in 2016, replaced by Station 050J15, operated by the Water Survey of Canada. As part of streetscape improvements on James Avenue, HTFC Planning & Design and Pattern Interactive developed a heritage interpretation piece to honour the significance of the river-level gauging chamber.

The James Avenue Water Level Indicator is a pre-programmed and motion activated light cycle indicating nine historically significant flood events throughout Winnipeg's history and compares them to the current Red River water level reading at James Avenue.

Housed within an I-beam, the display is double-sided, made up of 15 vertically stacked LED modules capable of displaying 281 trillion colours, and requires only 692 watts of power to run at full brightness. The display's internal components are located within two heated, weatherproof enclosures at the base of the I-beam and include a computer (CPU) to handle the dynamic water levels and visuals, a Video Imaging Processor (VIP) for translating the visuals to the display, a router to connect to the web, a computer vision sensor located at the top of the I-beam that responds to motion and triggers animations, and a custom temperature monitor designed to alert if any faults are present within the enclosure.

The web connection allows the display to indicate real-time water level data, collected from the Government of Canada's Water Office web site, and provides vital health statistics on the internal hardware components. Additional background animations and customized text can be uploaded and displayed during special events and the water level indicator can be connected to social media networks like Twitter and Instagram in real time.

Motion activated vision sensor-zones trigger a variety of changes to the display program, allowing the Water Level Indicator to have some A.I. (artificial Intelligence). The display can determine from which direction a person is approaching and decide what to play based on where they stand.

Flexible and customizable software allows the Water Level Indicator limitless passive and social interaction. The two-way communication creates an engaging user experience filled with unique animations.

This interactive piece of heritage interpretation has revealed a curious remnant of Winnipeg's past, reminding us of our flood history while becoming an exciting subject of social media posts for a new generation of information seekers.