



**PRELIMINARY EXISTING WATER SYSTEM
ANALYSIS REPORT**

for

Multi-Family Project
2190 and 2200 Wehrle Drive
Town of Amherst, Erie County, New York

Prepared for

Young Development, Inc.

1120 Bullis Road
Elma, New York 14059

Prepared by

Carmina Wood Design

80 Silo City Row, Suite 100
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

September 17, 2025
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Section 1 - Location & Description

This project is a development of a 24.9 acre site located on the north side of Wehrle Drive between Youngs Road and Transit Road in the Town of Amherst. Construction will consist of multiple 2-story multi-family buildings with attached garages, a clubhouse building with onsite resident amenities and associated utility, lighting, and landscaping improvements. Currently the site is vacant. The proposed site development area to be disturbed for this project is approximately 24 acres when construction is completed.

Section 2 - Water Service

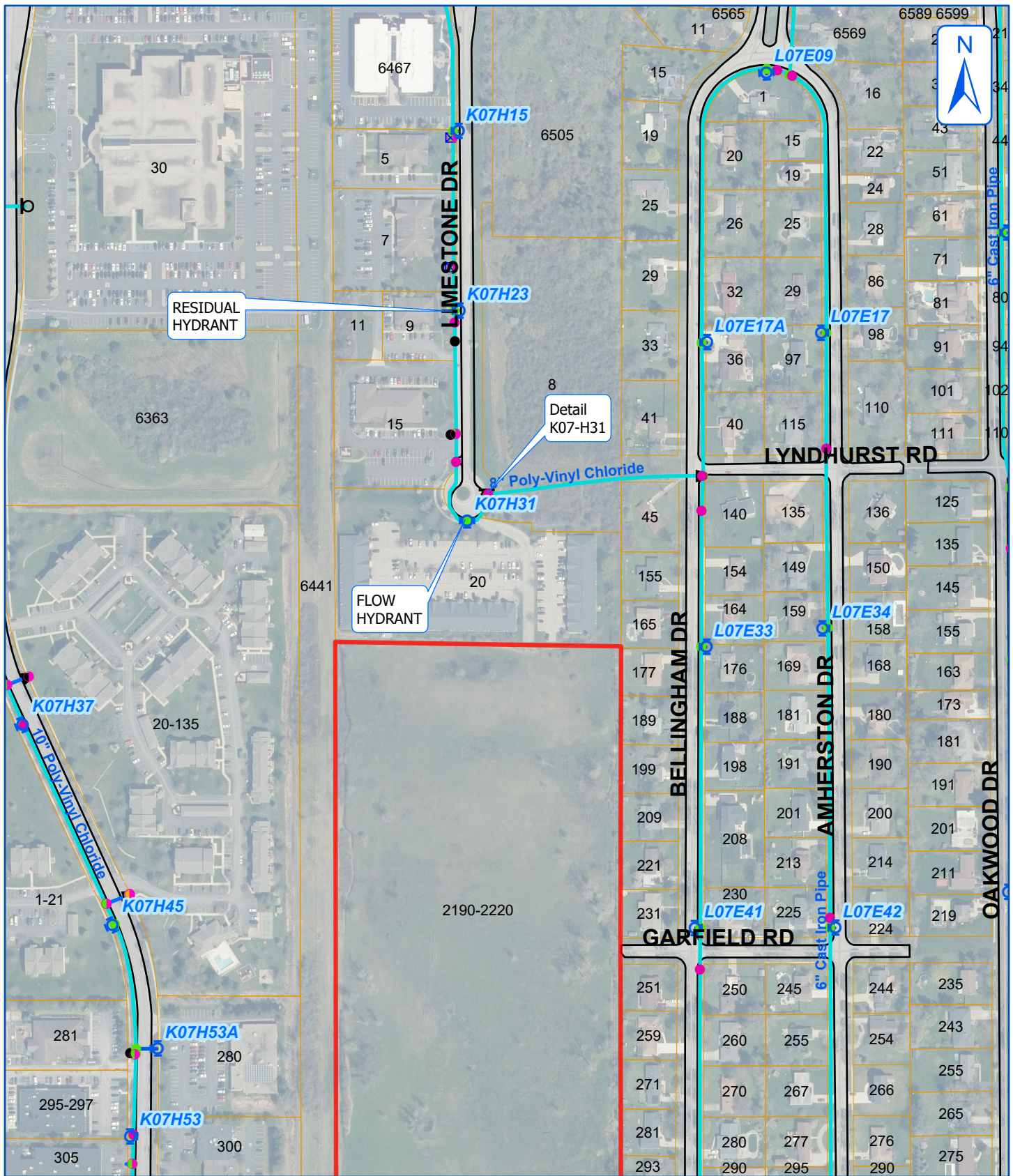
Water service for the building will be tapped off the existing 12" ECWA water main on the south side of Wehrle Drive and the 8" ECWA watermain on Limestone Drive. The service will be an 8" combined water service, then split into an 8" PVC fire service and a 6" domestic service. Both services will continue into a pump house where booster pumps and meter will be housed. Proper heat and lighting will be provided to the enclosure, drainage due to testing or failure of the pump house will be to the outside grade. The owner will be responsible for keeping the drainage ports clear of snow and debris. The pump system will be designed by others. Water inside the buildings will be used for typical domestic uses. The multi-family buildings are to be sprinklered, interior fire protection system to be designed by others. Existing public hydrants along Wehrle Drive and proposed private hydrants throughout the development will ensure fire hose coverage not exceeding 600' for each building.

Current static water pressure on Wehrle Drive is 43 psi and approximately 54 psi on Limestone Drive per hydrant flow data provided by the ECWA. The relatively low pressure in this area has been a concern of surrounding neighbors as to how the proposed multi-family development could affect the existing water supply and pressure. Domestic flows were determined using demand from the NYSDEC Wastewater Design Manual Typical Per-Unit Hydraulic Loading Rates Tabel B-3 of 110 gpd/bedroom, totaling an average daily demand of 43.5 gpm (114 1-bdrm unit, 198 2-bdrm, 20 3-bdrm unit = 62,700 gpd $\approx$ 43.5 gpm). A fire flow analysis of all surrounding node locations is included within the analysis provided showing ample flow rates through the watermain system in the event of a fire emergency. Supply is not an issue in this area because of the existing flow provided via the 12" watermain on Wehrle Drive and the 8" watermain on Limestone Drive. The surrounding system is routed through the existing residential neighborhood to the east, Limestone Drive to the north and Spindrift Road to the west, all of which are connected on both Wehrle Drive and Main Street. ECWA has provided analysis of the existing watermain system in current conditions and with the proposed development demand included to depict the effects of the proposed development. The analysis was performed using the system's diurnal curves from the watermain model of the ECWA. All existing waterline mapping, hydrant flow data, and model graphs are included in the Appendices of this report. The attached table shows pressure at the eleven (11) analyzed node locations throughout the surrounding area under current and future average and peak demands.

As shown, the minor or no drop in pressure is shown between existing and future conditions. Under normal conditions the proposed project will not have a measurable impact to the existing water system, therefore there will be no significant impact to the existing waterline pressure and supply to the surrounding area.

Node	Location	Min. Pressure (psi)	
		Ex.	Prop.
K07G07	Main Street	40.5	40.5
K07G30	Youngs Road	43.3	43.3
K07G62	Youngs Road/Wehrle Drive	39.3	39.3
K07H28	Spindrift Drive	39.3	39.2
K07H63	Wehrle Drive	39.2	39.1
L07E01	Main Street	35.3	35.3
L07E31	Berkley Road	31.9	31.9
L07E33	Bellingham Drive	38.3	38.3
L07F10	Main Street/Transit Road	33.8	33.8
L07F34B	Transit Road	32.4	32.4
L07F58	McKinley Ave/Wehrle Drive	33.4	33.4

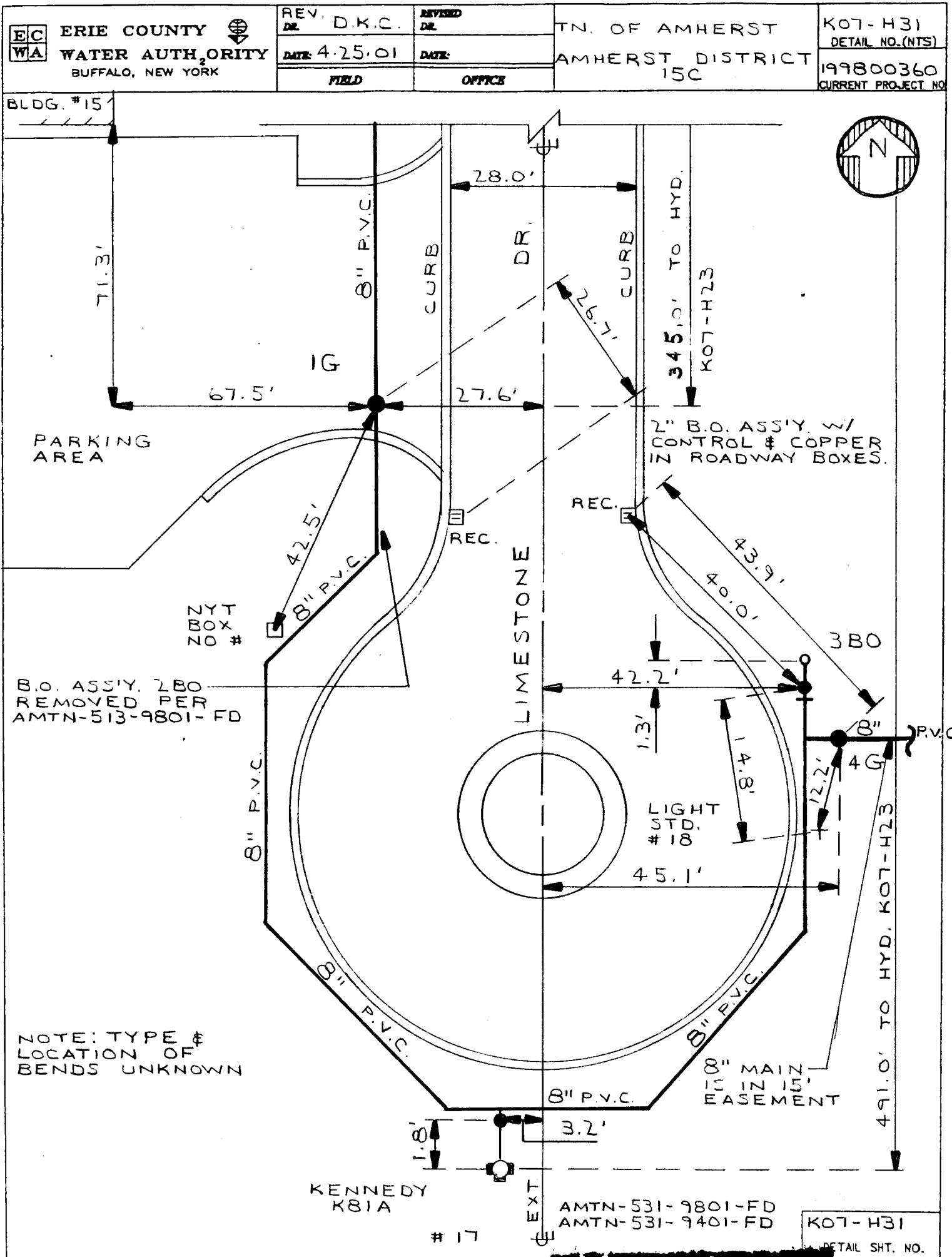
Hydrant Flow Data



2190 Wehrle Dr., AMTN
Limestone Dr. Side



Erie County Water Authority
Buffalo, New York



Hydrant FLOW Test

Print Date: 8/12/2025

Residual Hydrant: K07H23 Test Date/Time: 11/17/2003 14:00

Location.....: 9 LIMESTONE DR 2ND S/O MAIN ST
TOWN OF AMHERST

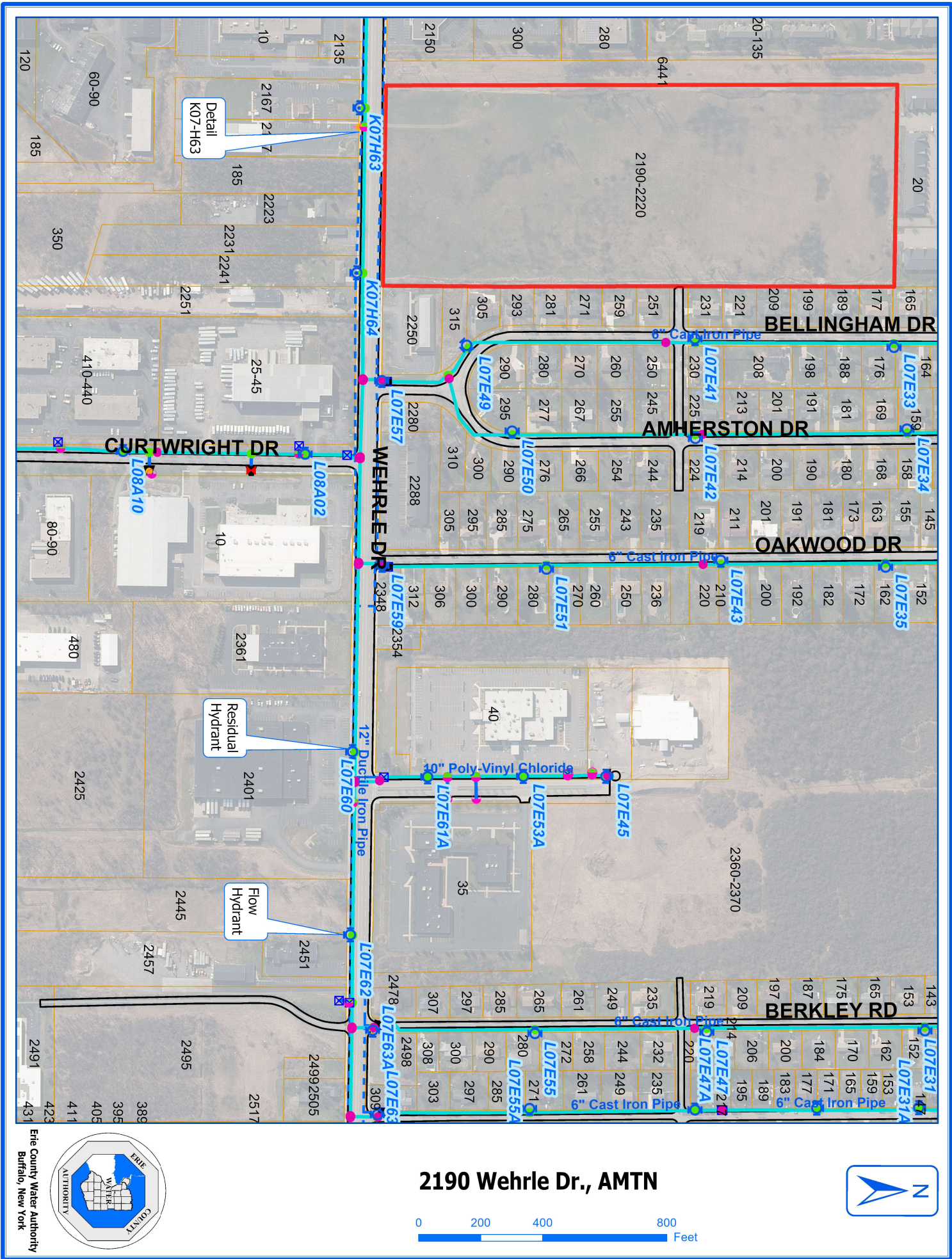
Size of Main/Branch: 8"/6" Fire District: 22031 MAIN TRANSIT FD 14 Water District: 315 AMHERST DISTRICT 15C

Performed By: BM, RLS Comments: HYDRANT FLOW TEST REQUESTED BY JOE PALUMBO
CARMINA & WOOD, PHONE: 842-3165, FAX: 842-0263

Dischrge Coef: 090 Elvtn Usgs(ft): Static(psi): 54 Residual(psi): 42 Required Residual Pressure(psi): 20
Gallons Used..: 3,180 Total Flow(gpm): 1,060 Flow at Req'd Resid Pressure: 1,860

Flow Hydrants:

Flow Hyd	Location	Main/Brnch	Nzle	Size	Pitot	Flow	Comments
K07 H31	17 LIMESTONE DR	8"/6"	1:	2.50	40.0	1,060	
	3RD HYD S/O MAIN ST		2:				
			3:				
						Total Flow:	1,060



2190 Wehrle Dr., AMTN



Erie County Water Authority
Buffalo, New York

MASTER COPY

Print Date: 5/15/2025

Flow	Hyd	Location	Main/Brnch	Nzle	Size	Pitot	Flow	Comments
K07	H64	2241 WEHRLE DR	12"/6"	1:	2.50	23.3	810	
		2ND HYD E/O EARHART DR		2:	2.50	23.3	810	
				3:				Total Flow: 1,620

ECWA Model Hydraulic Analysis



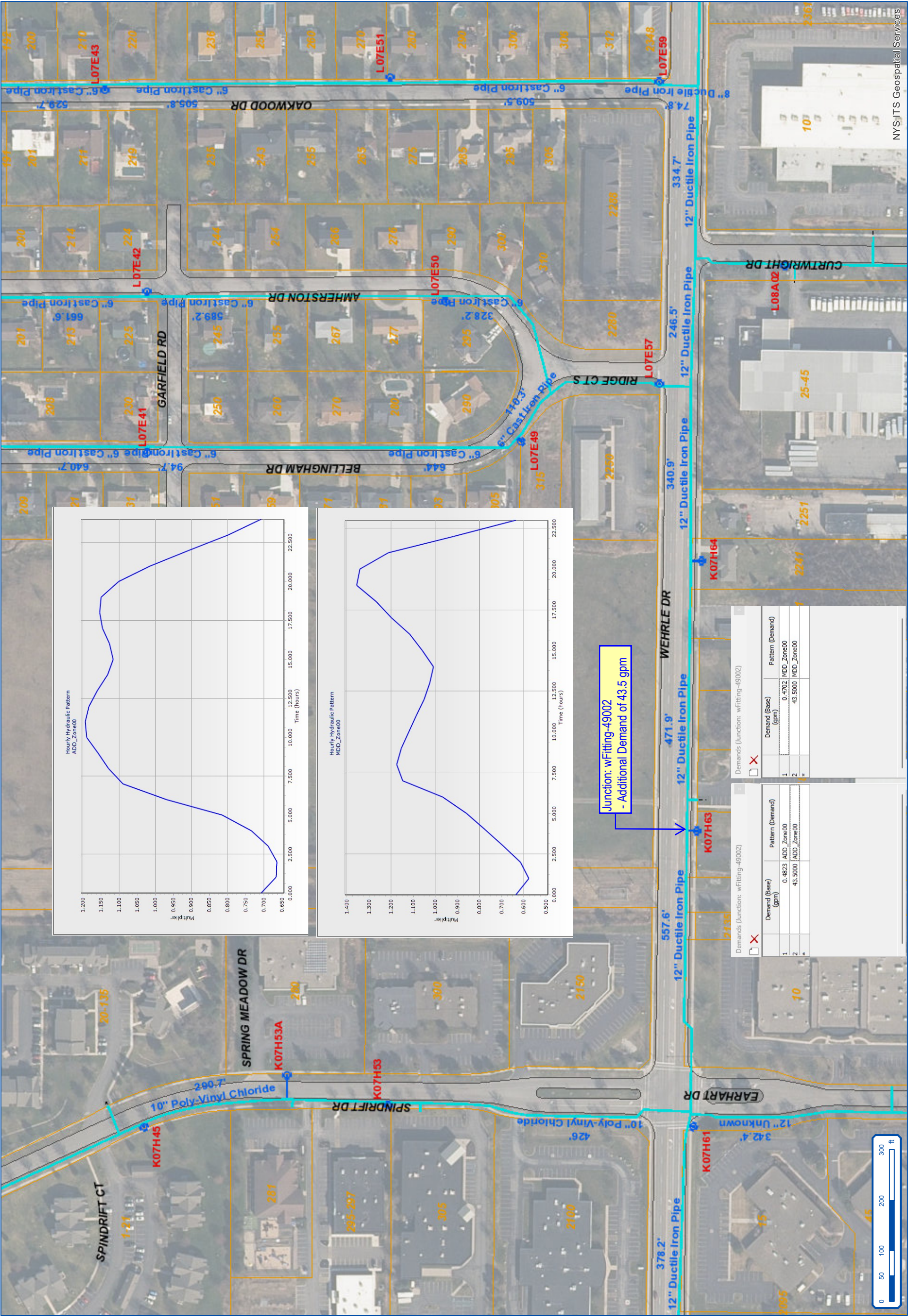
HYDRAULIC ANALYSIS (2190-2220 WEHRLE DRIVE)

September 11, 2025



ERIE COUNTY WATER
AUTHORITY
BUFFALO, NEW YORK

NYS ITS Geospatial Services

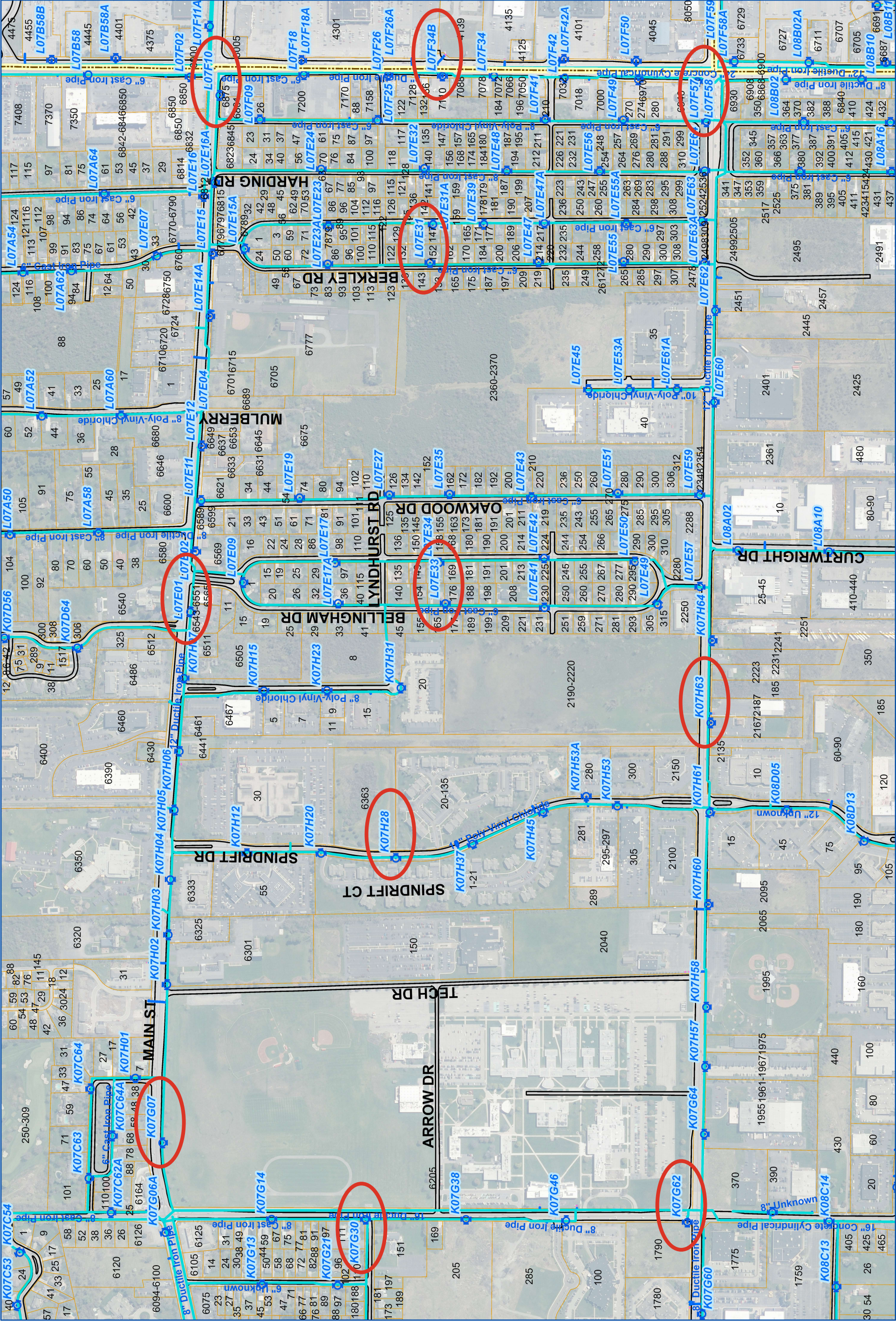




HYDRAULIC ANALYSIS (2190-2220 WEHRLE DRIVE)



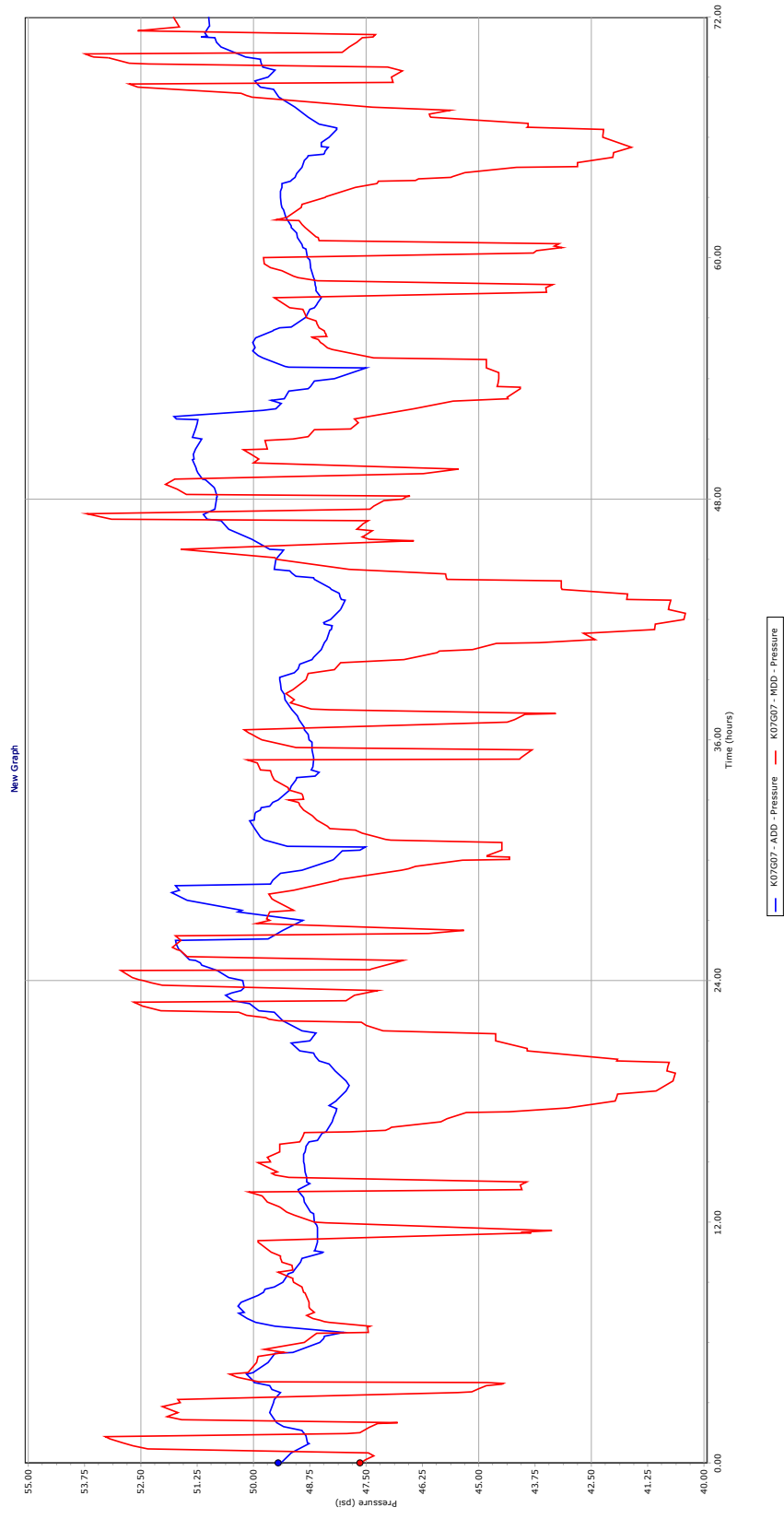
Erie County Water Authority
Buffalo, New York



Fire Flow

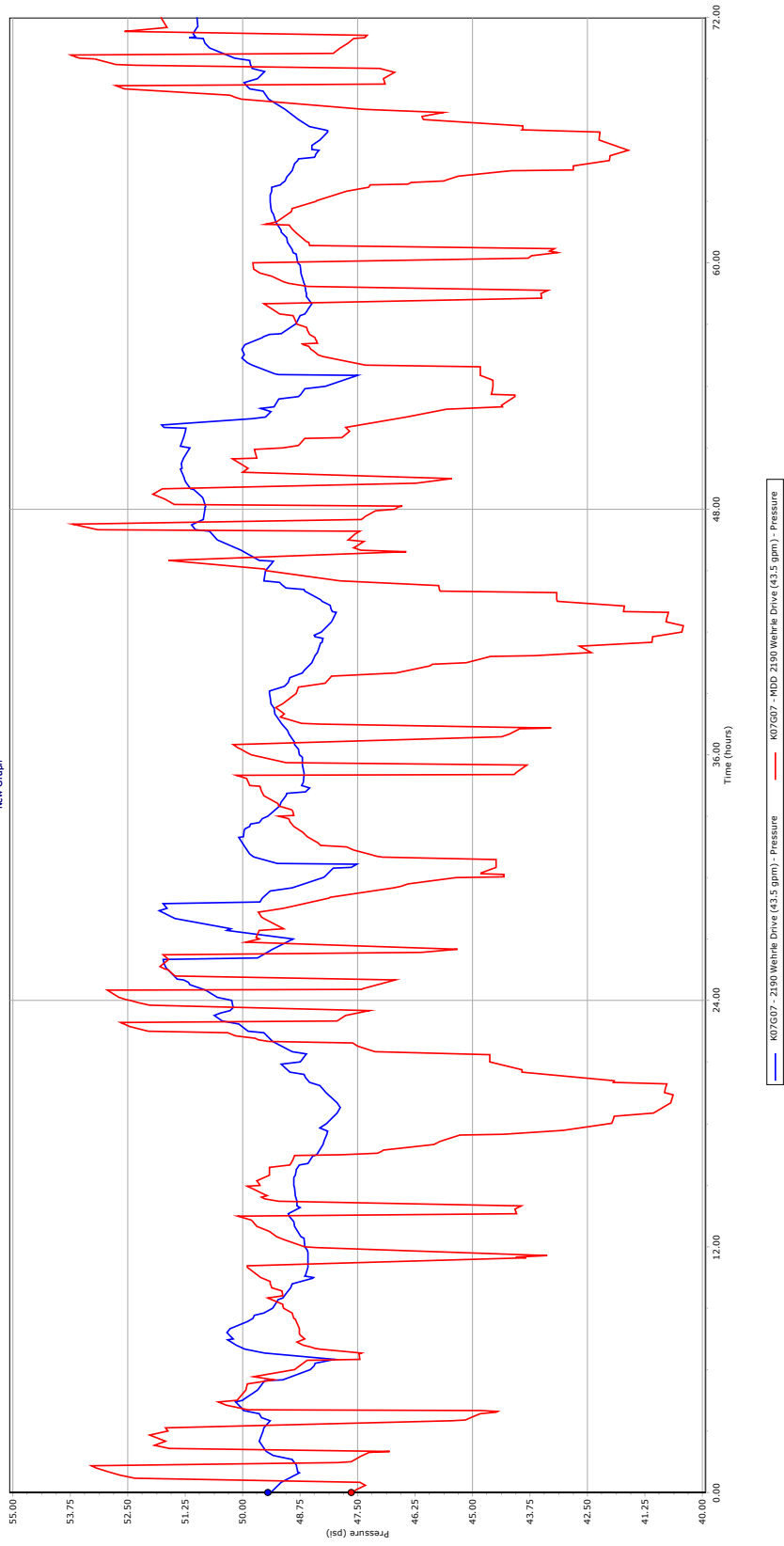


K07G07 - Existing Conditions

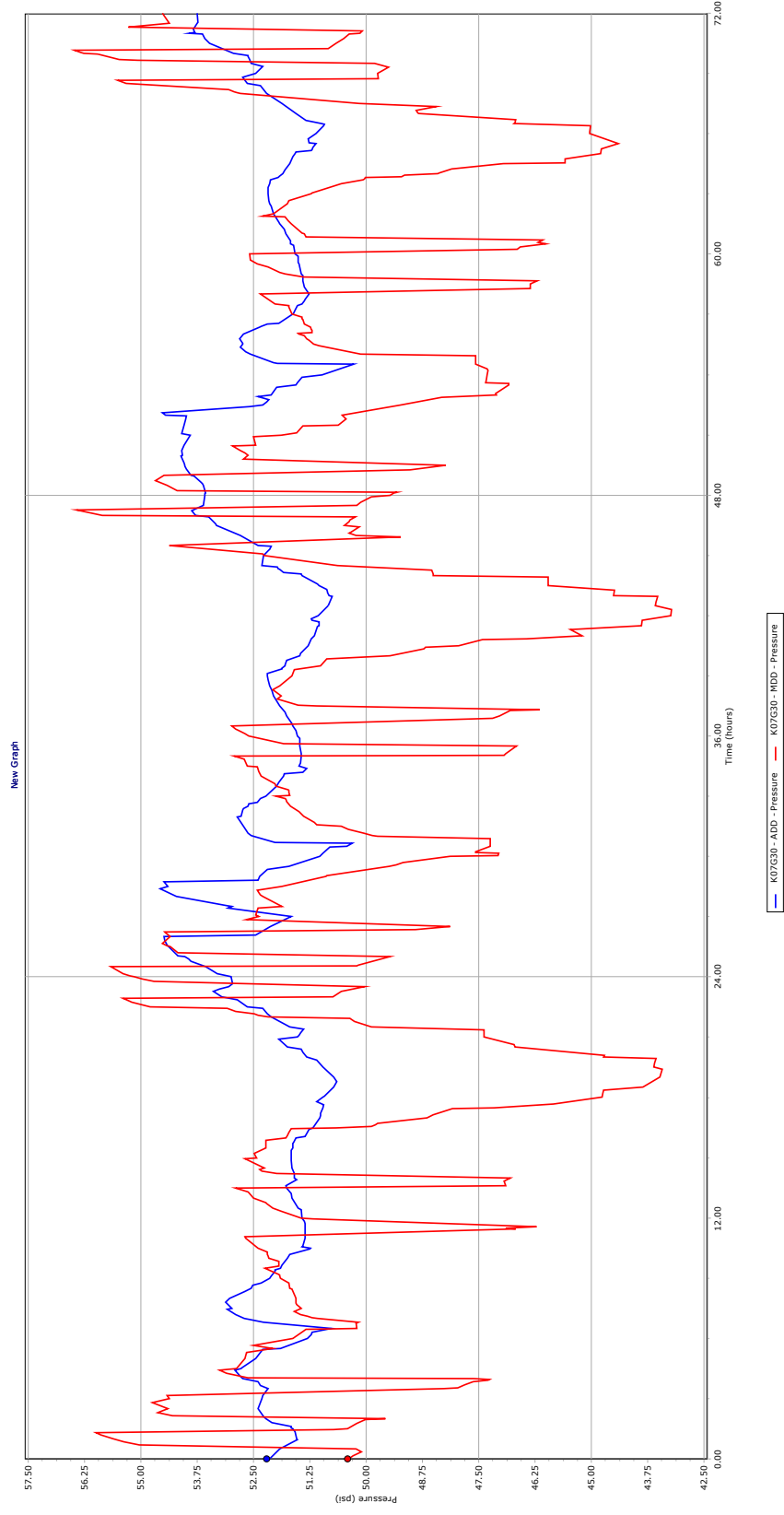


K07G07 - Wehrle Conditions

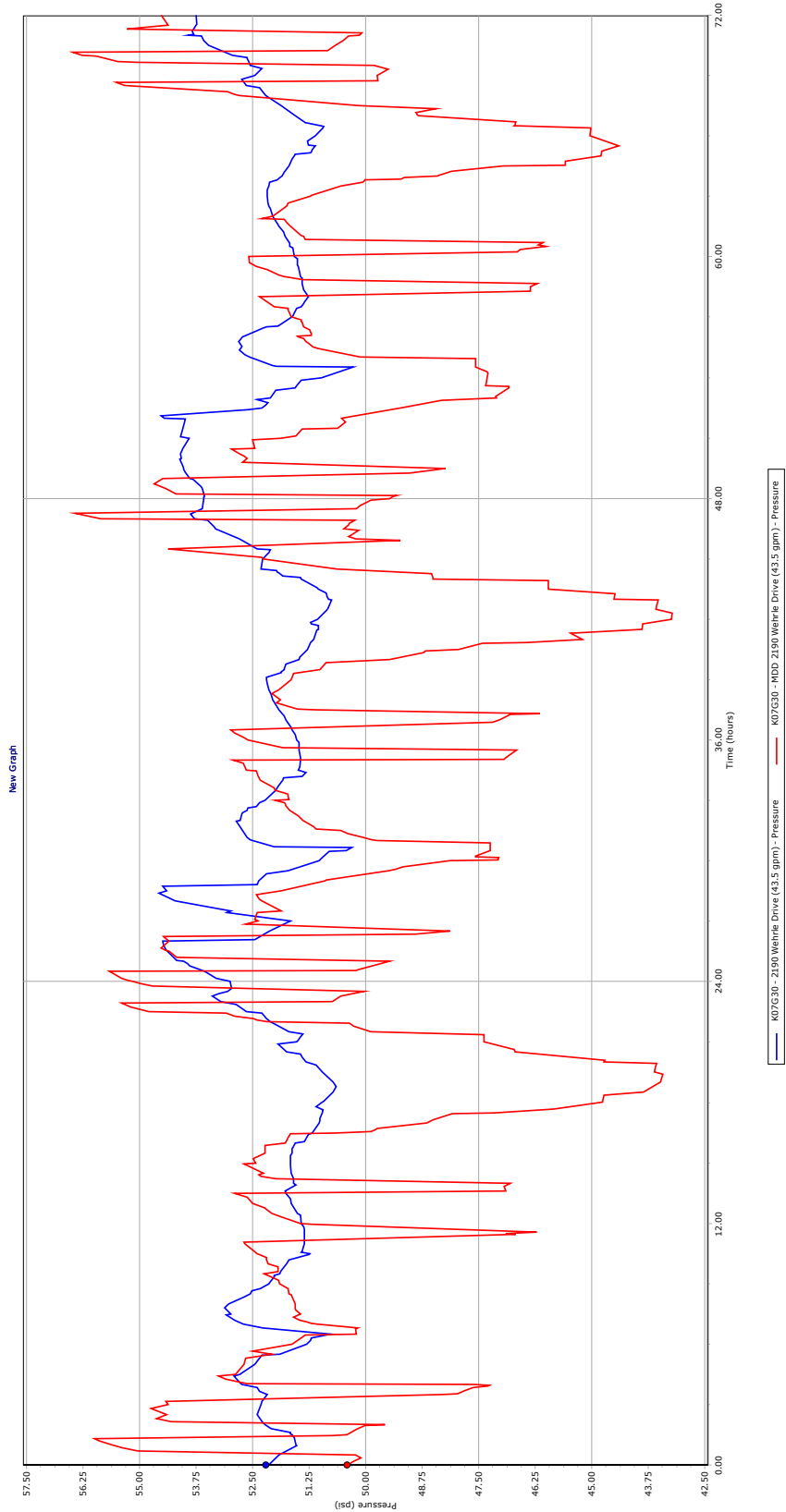
New Graph



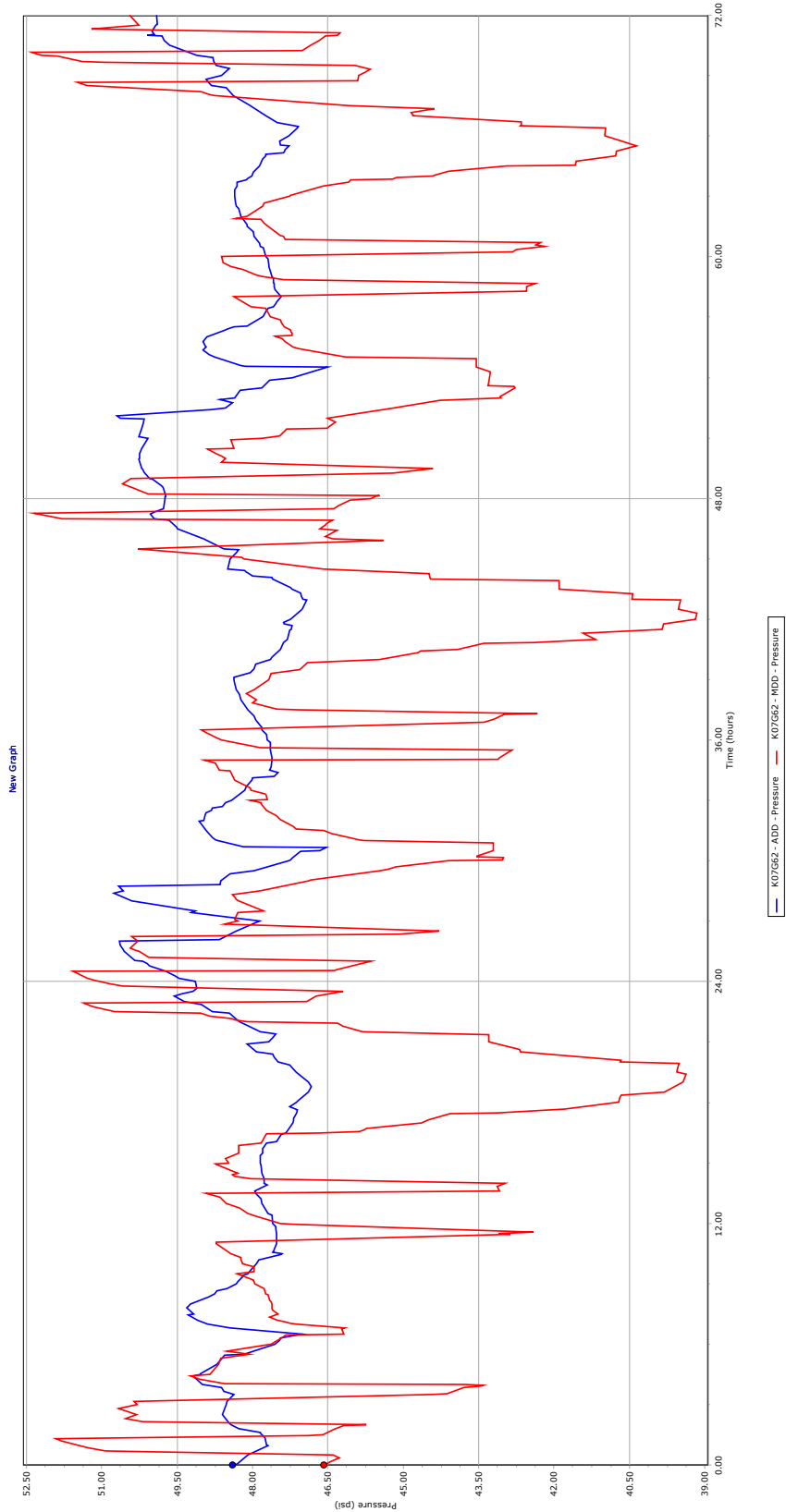
K07G30 - Existing Conditions



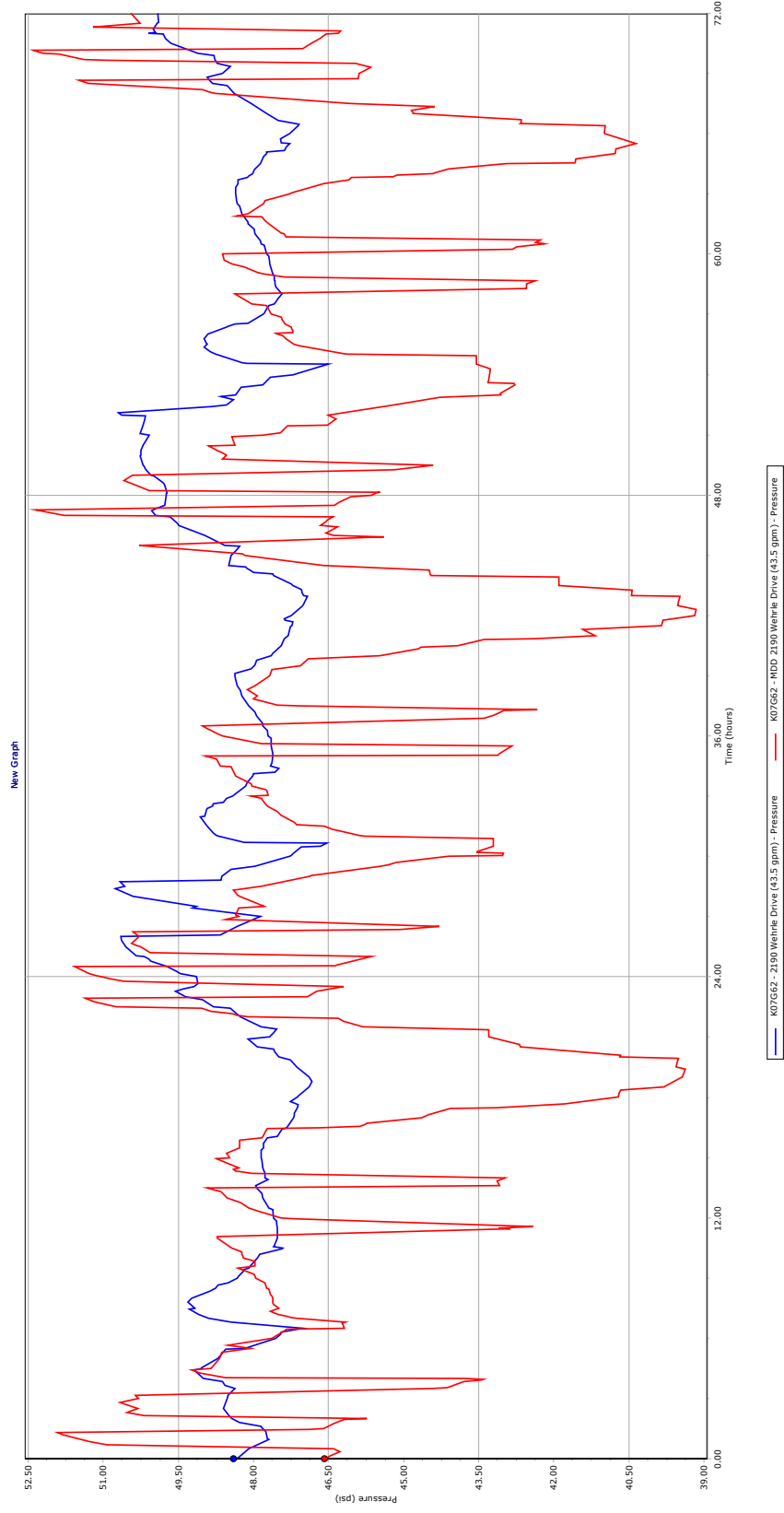
K07G30 - Wehrle Conditions



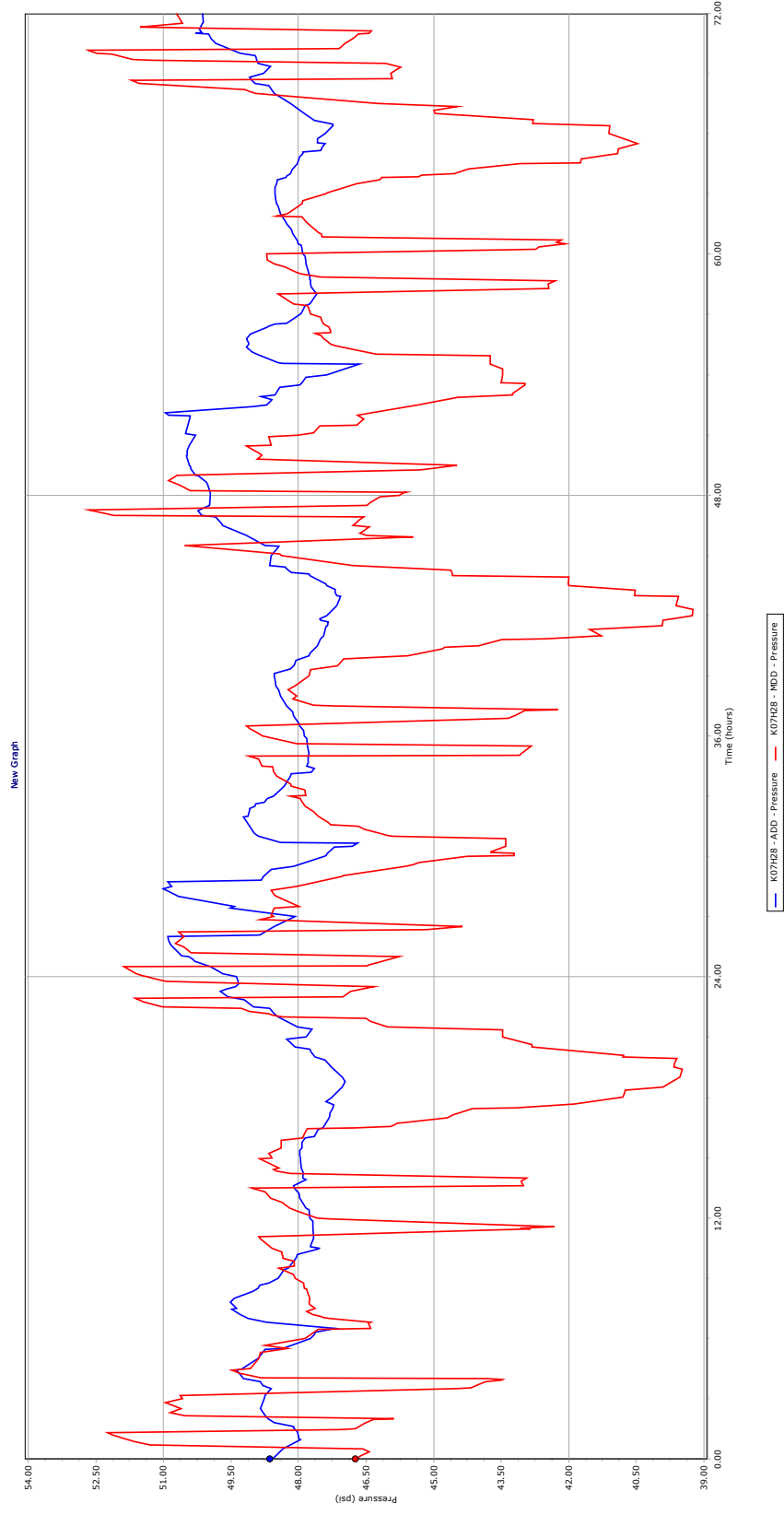
K07G62 - Existing Conditions



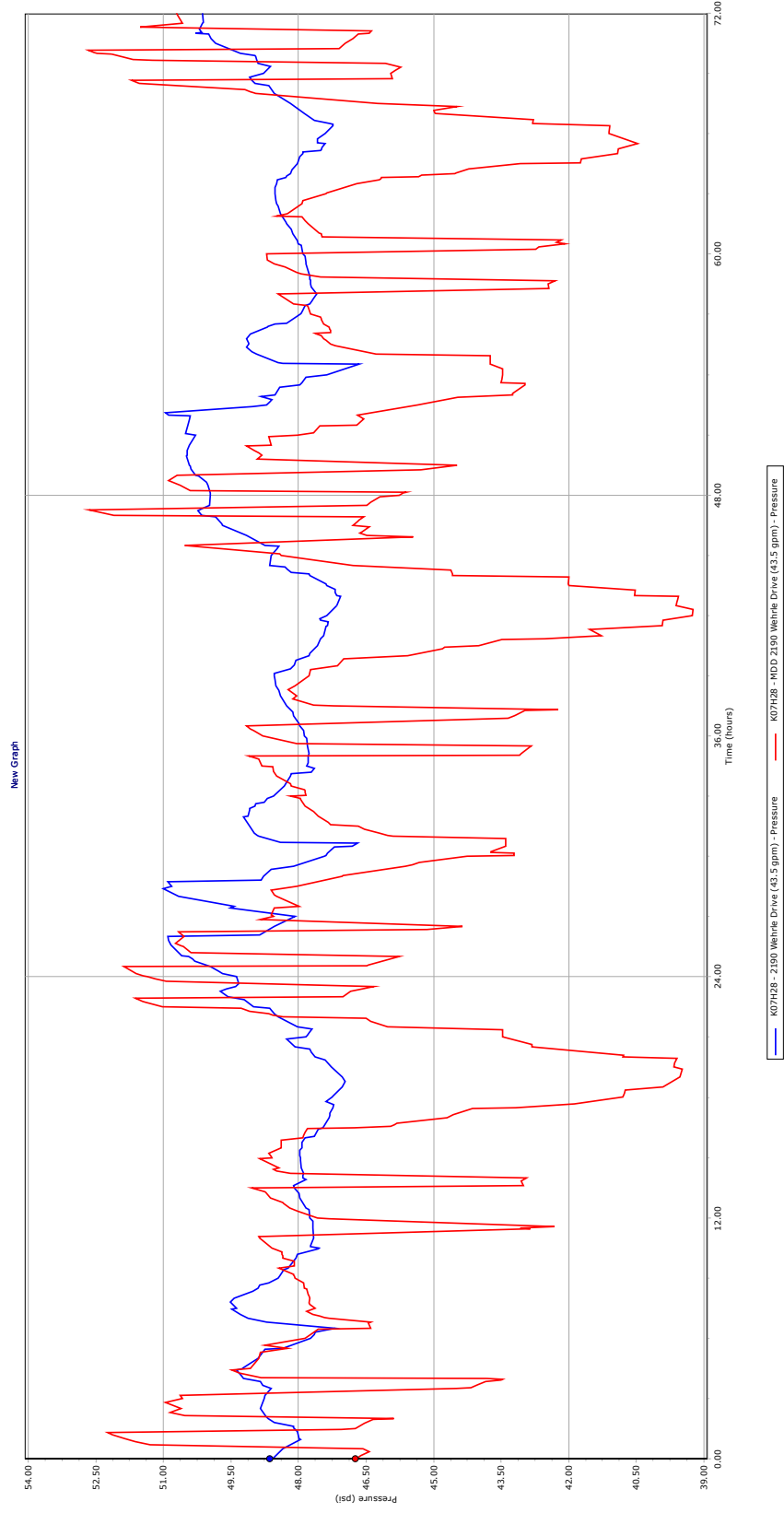
K07G62 - Wehrle Conditions



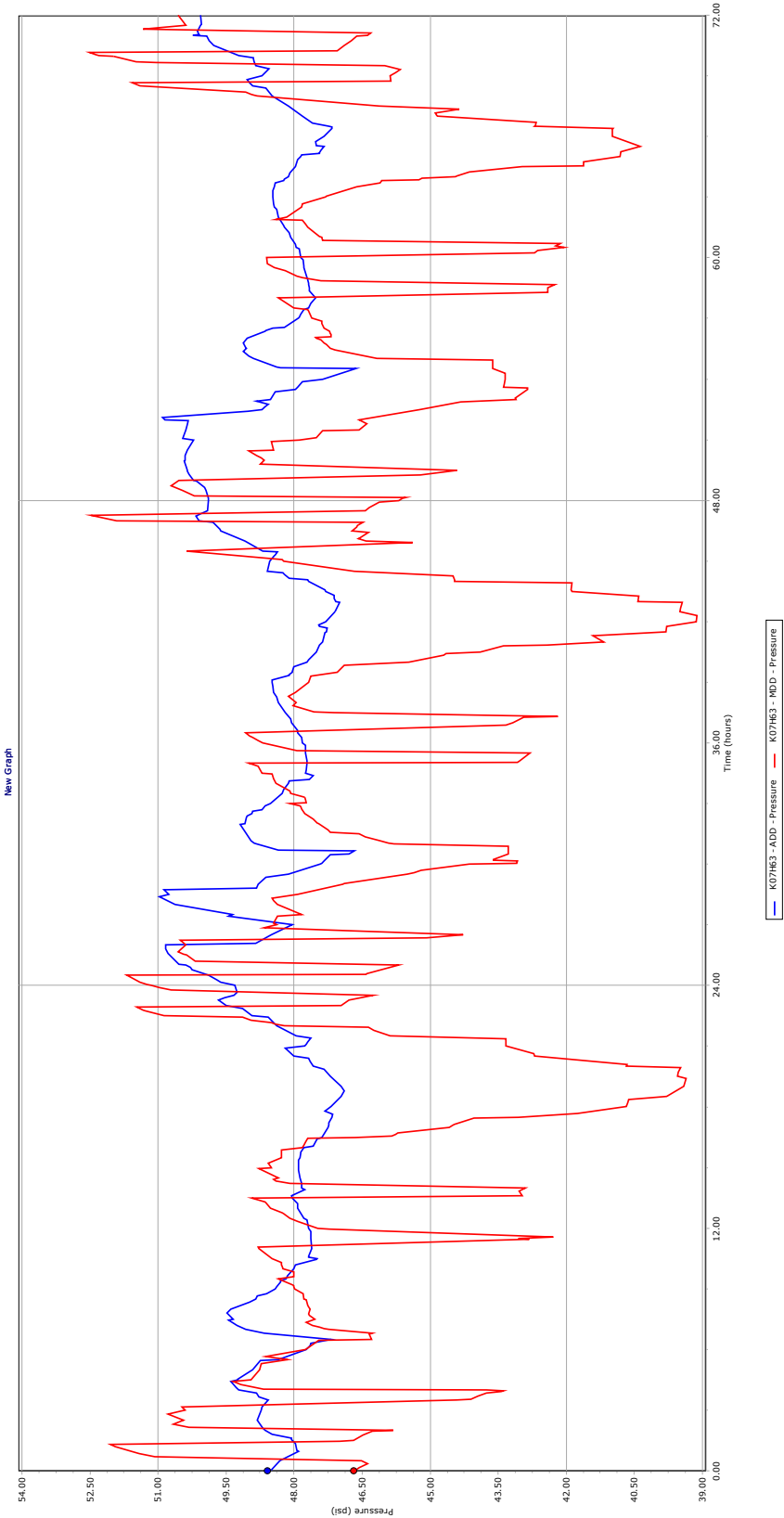
K07H28 - Existing Conditions



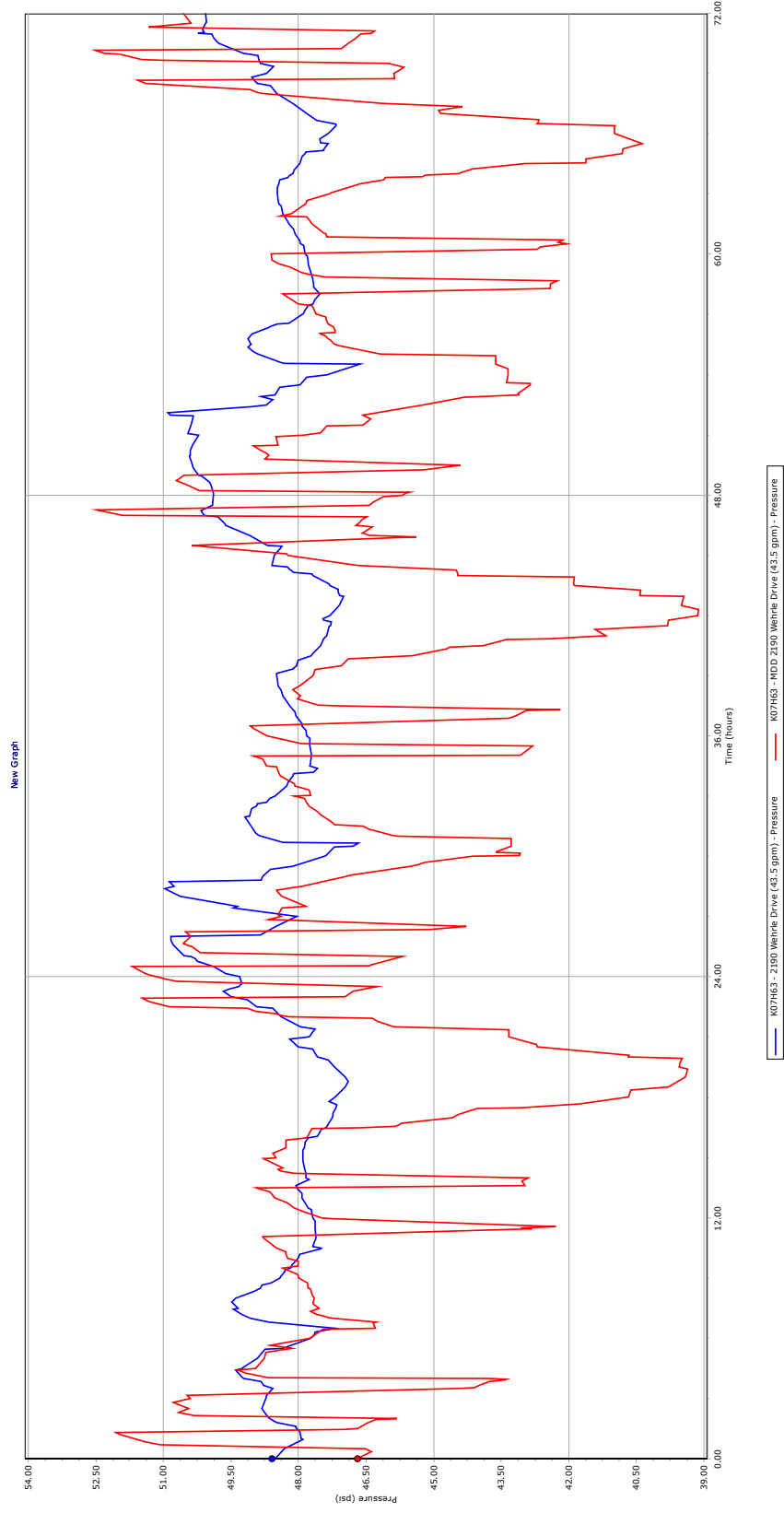
K07H28 - Wehrle Conditions



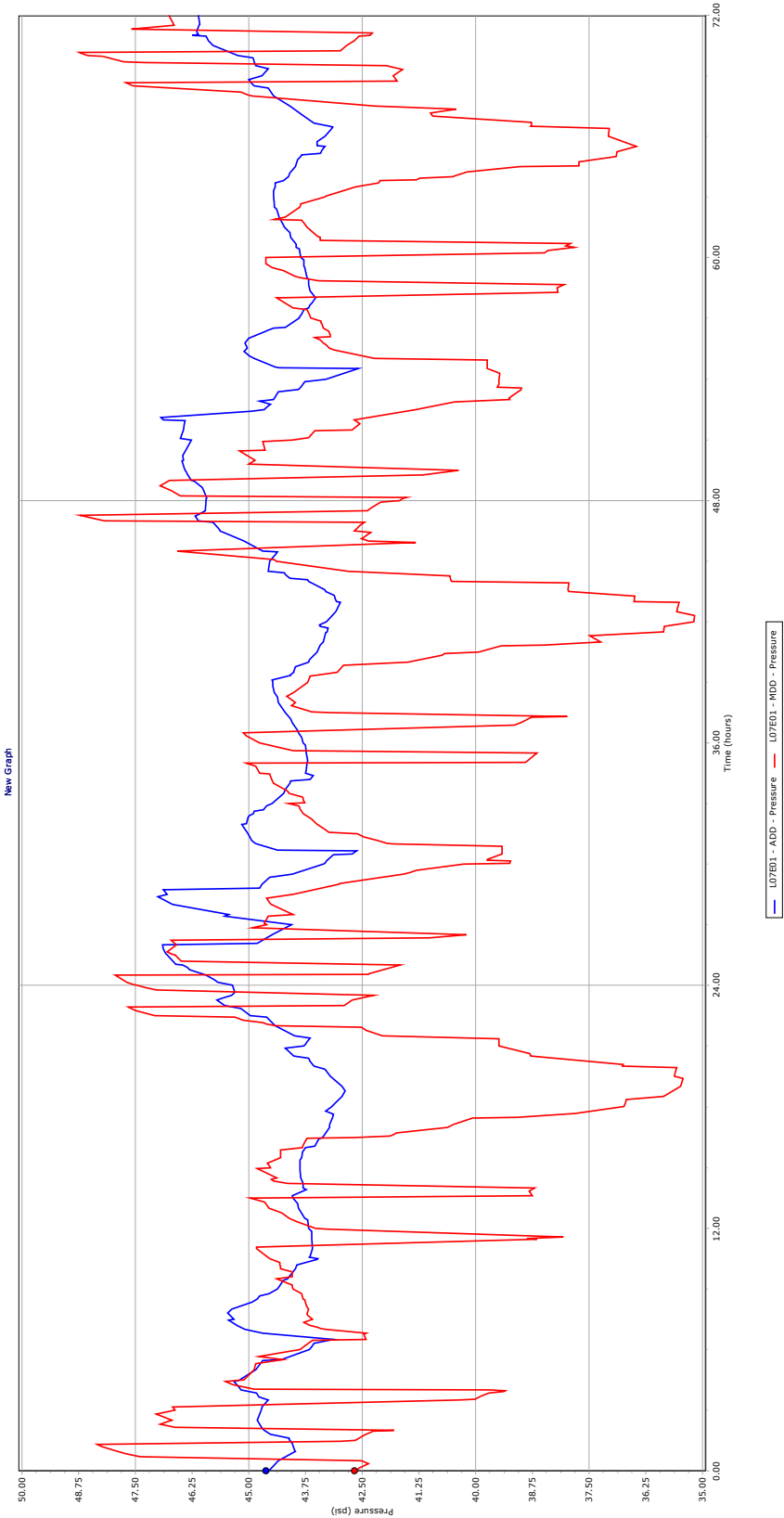
K07H63 - Existing Conditions



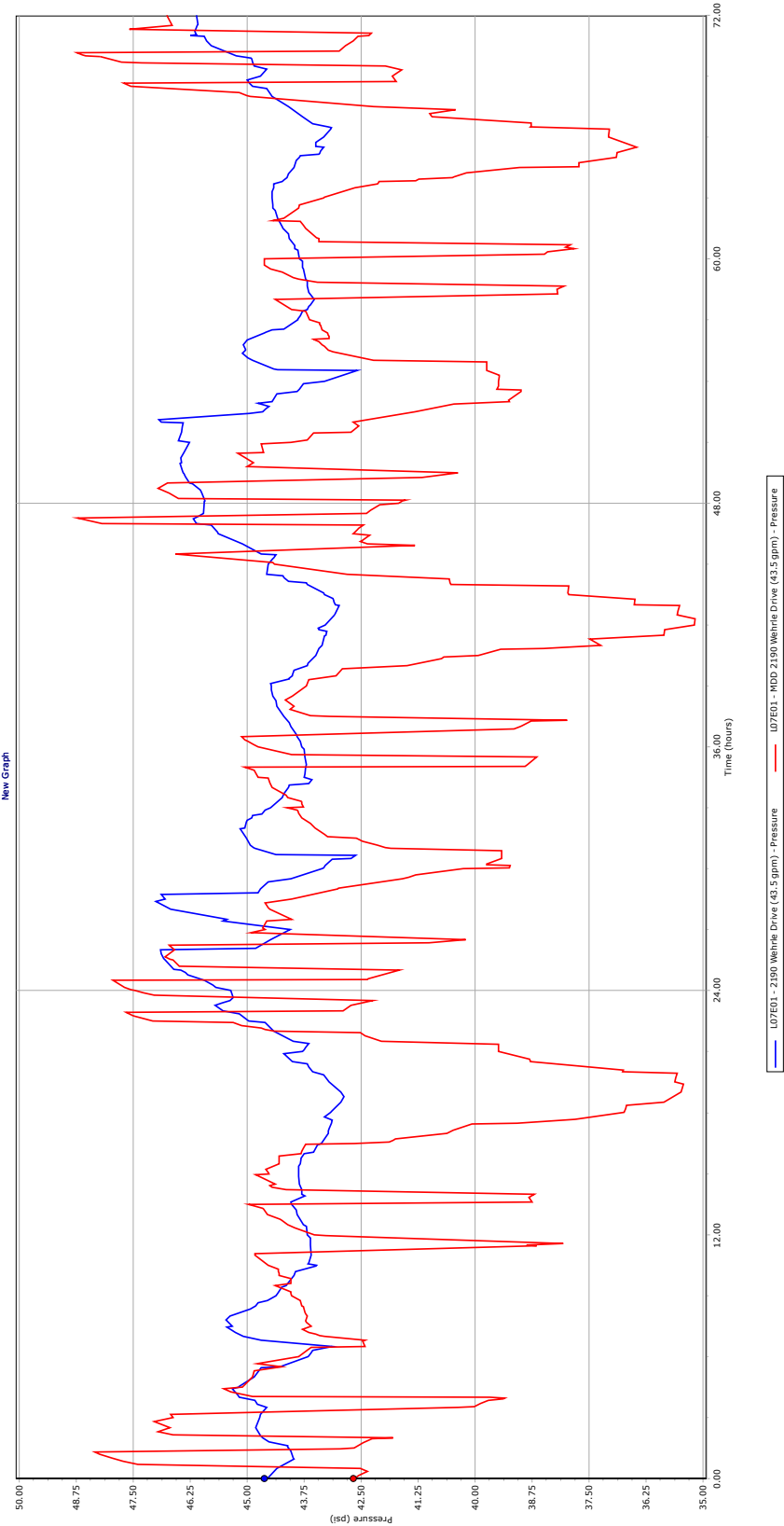
K07H63 - Wehrle Conditions



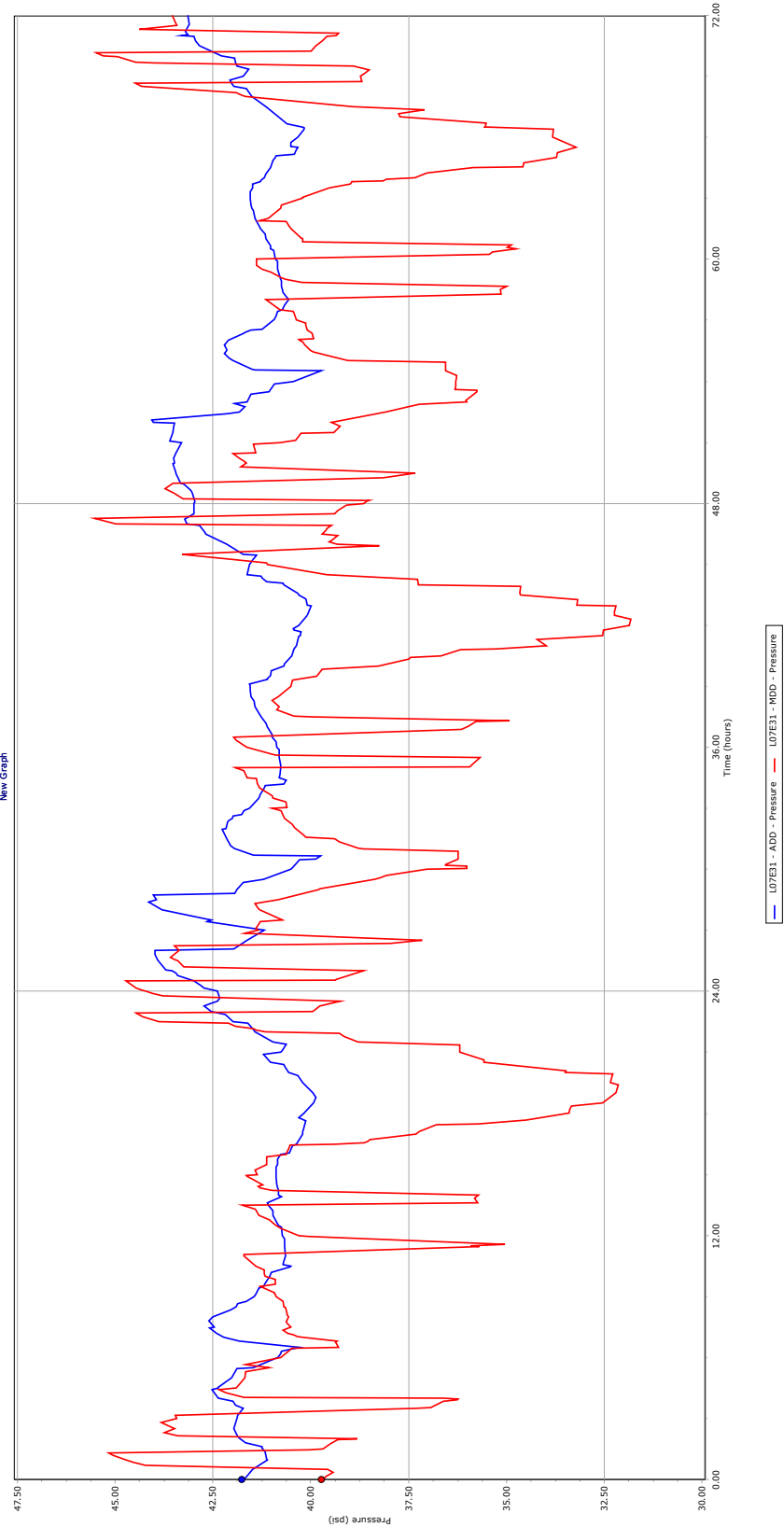
L07E01 - Existing Conditions



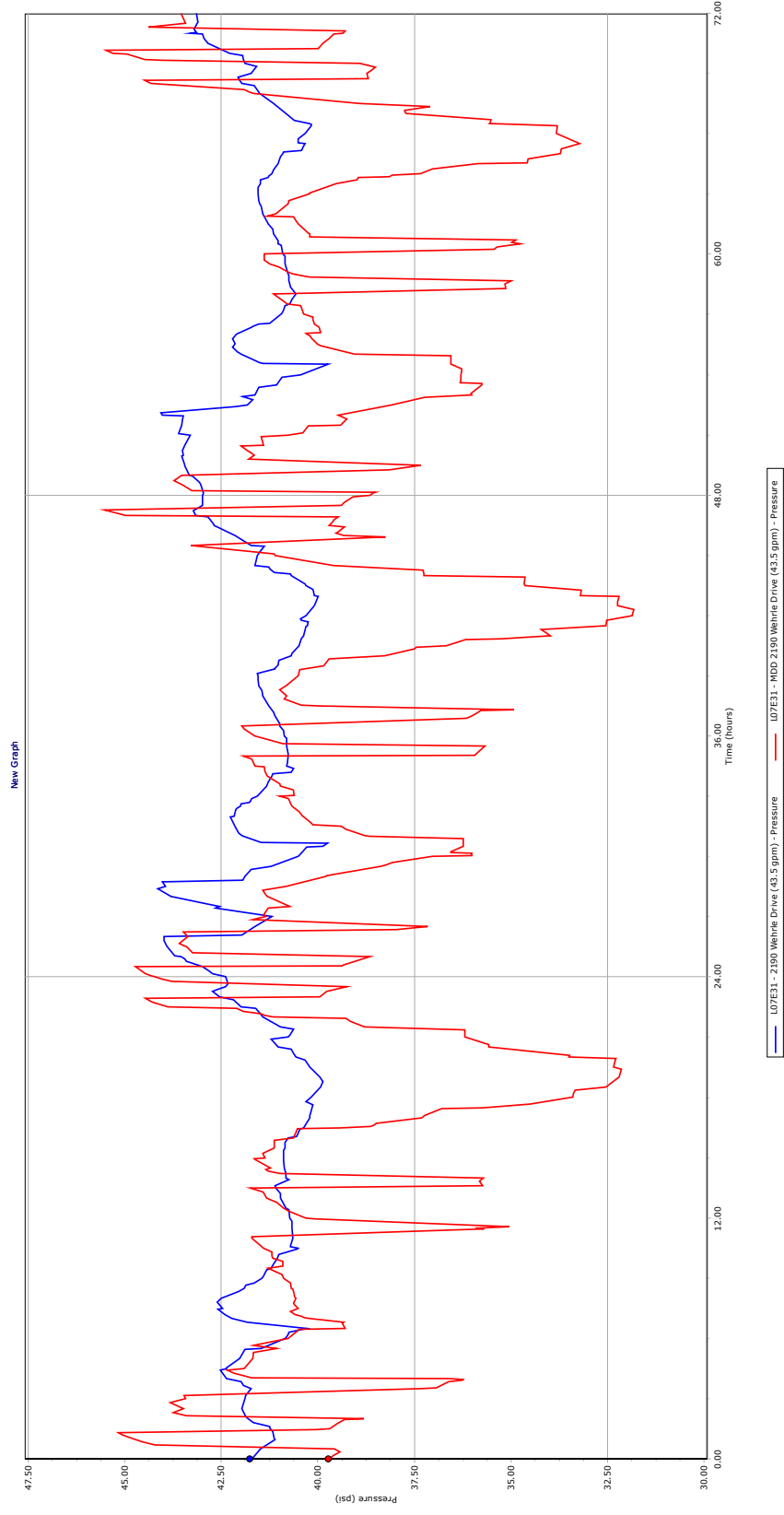
L07E01 - Wehrle Conditions



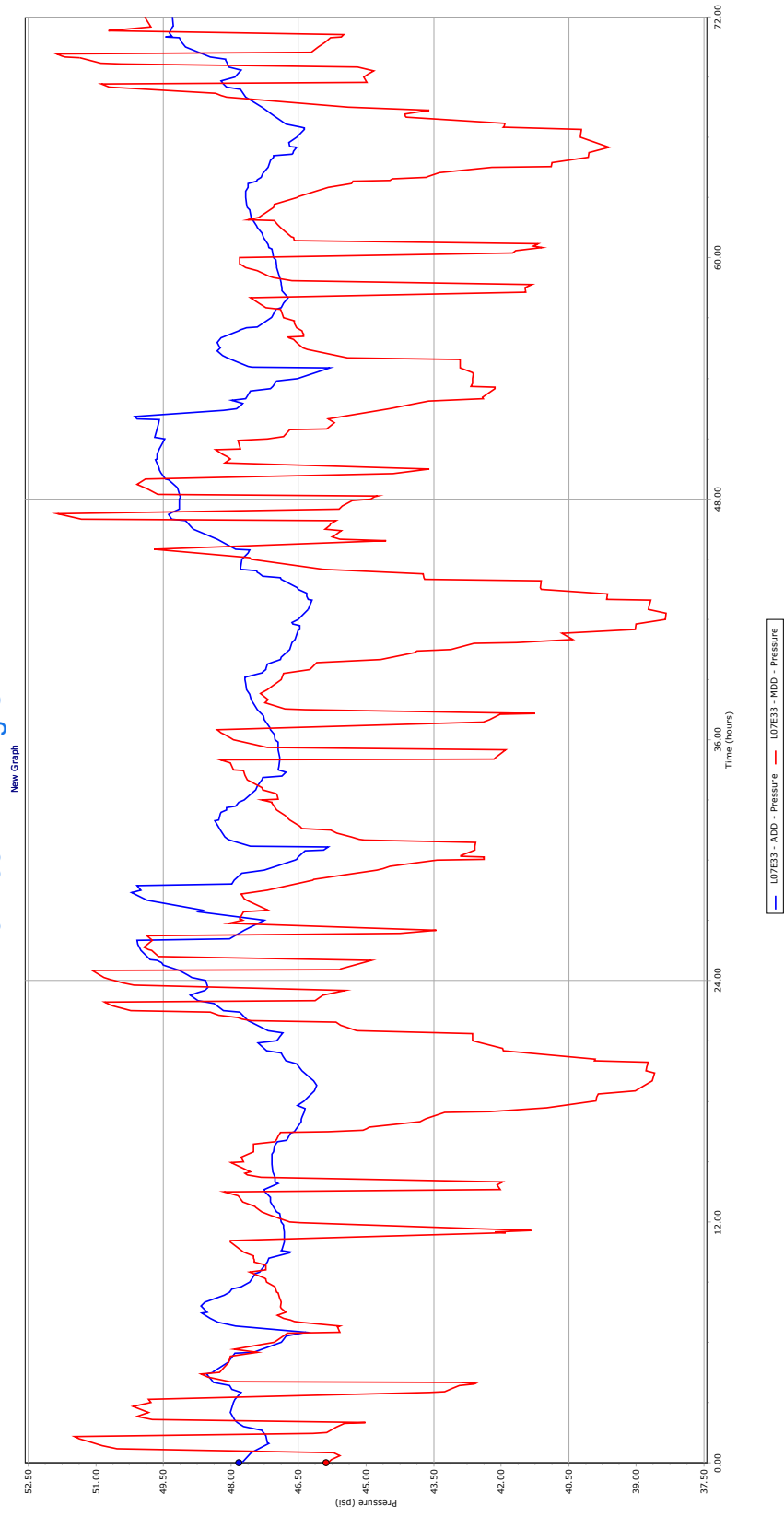
L07E31 - Existing Conditions



L07E31 - Wehrle Conditions

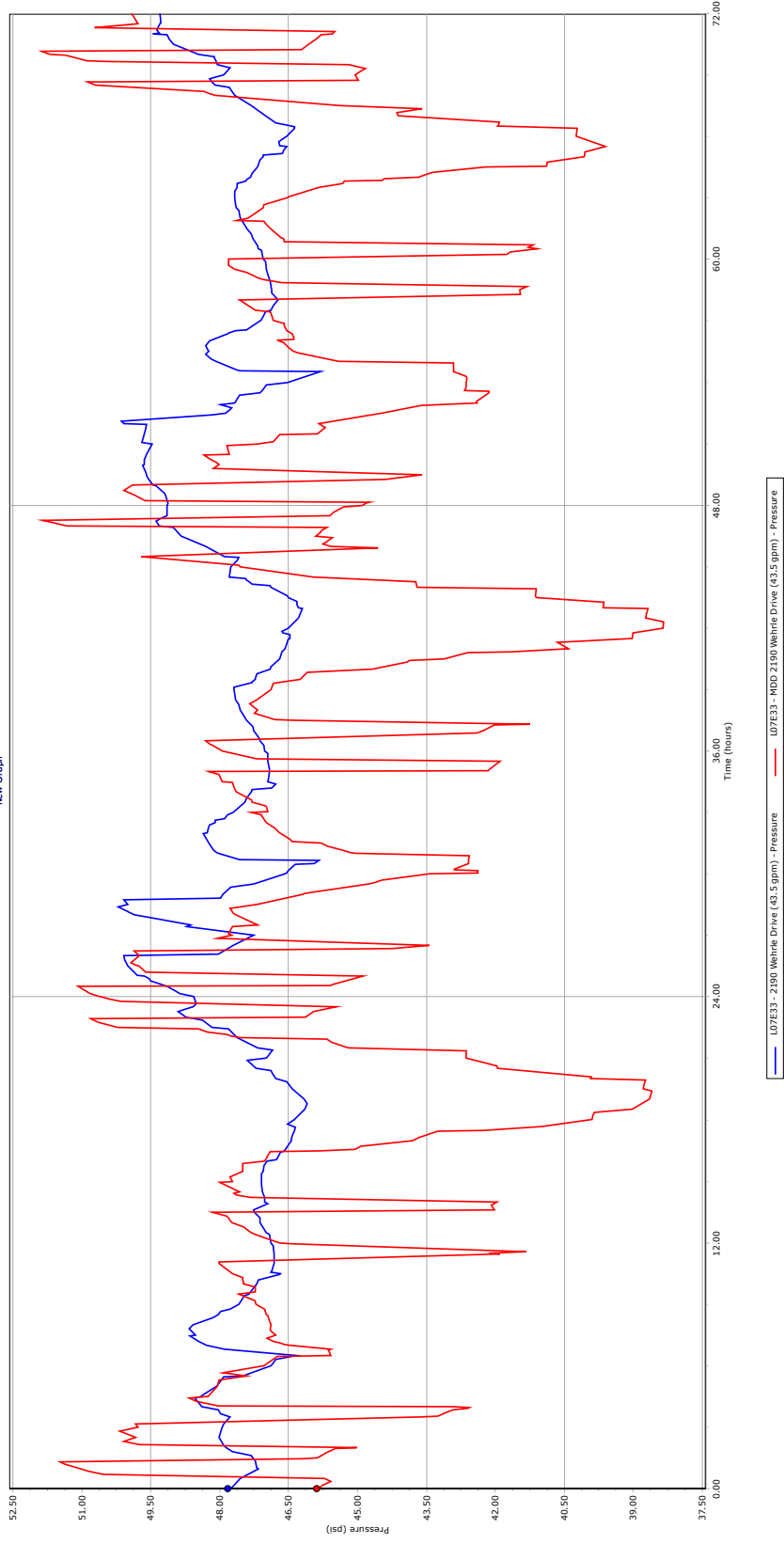


L07E33 - Existing Conditions



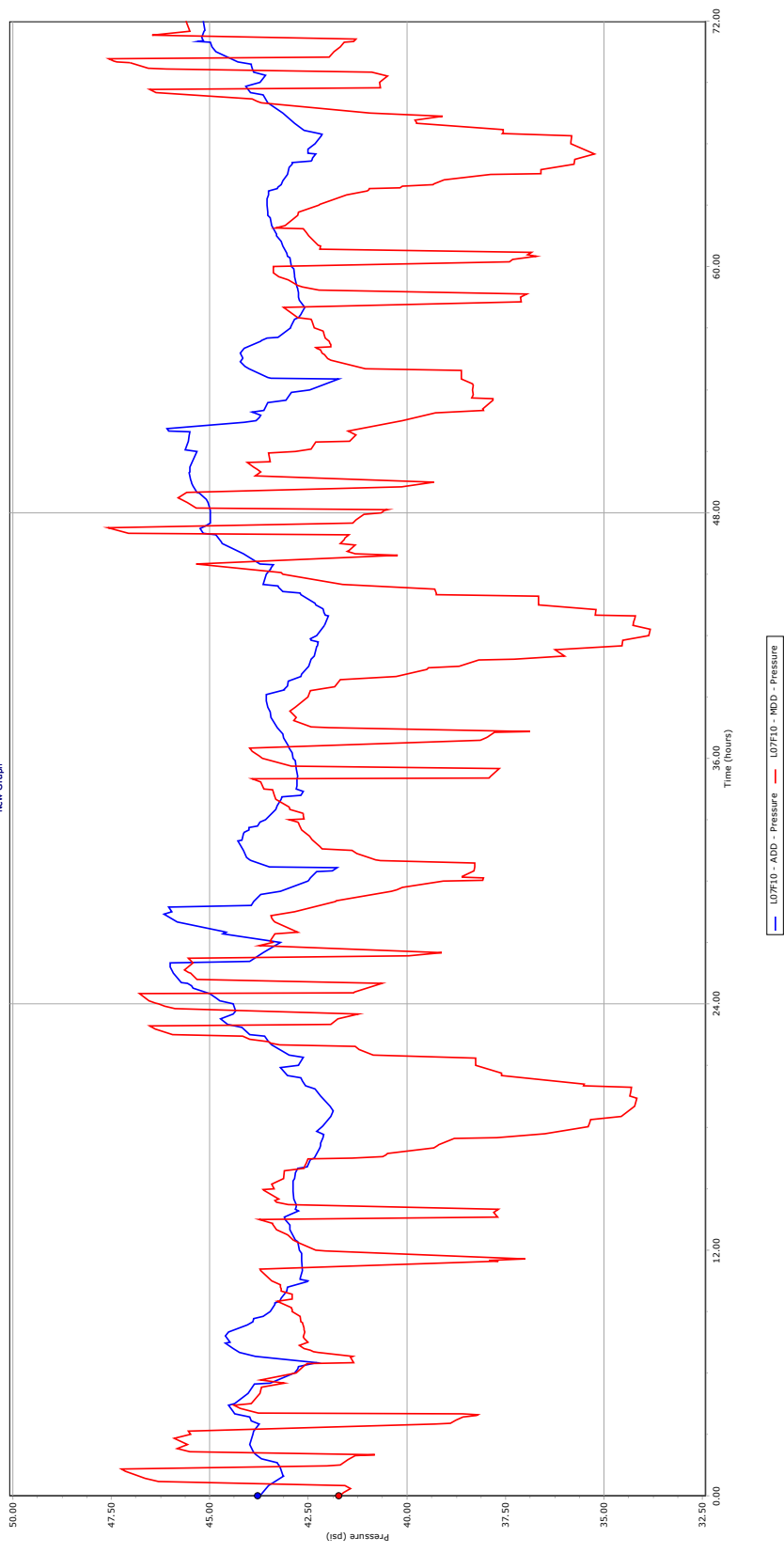
L07E33 - Wehrle Conditions

New Graph

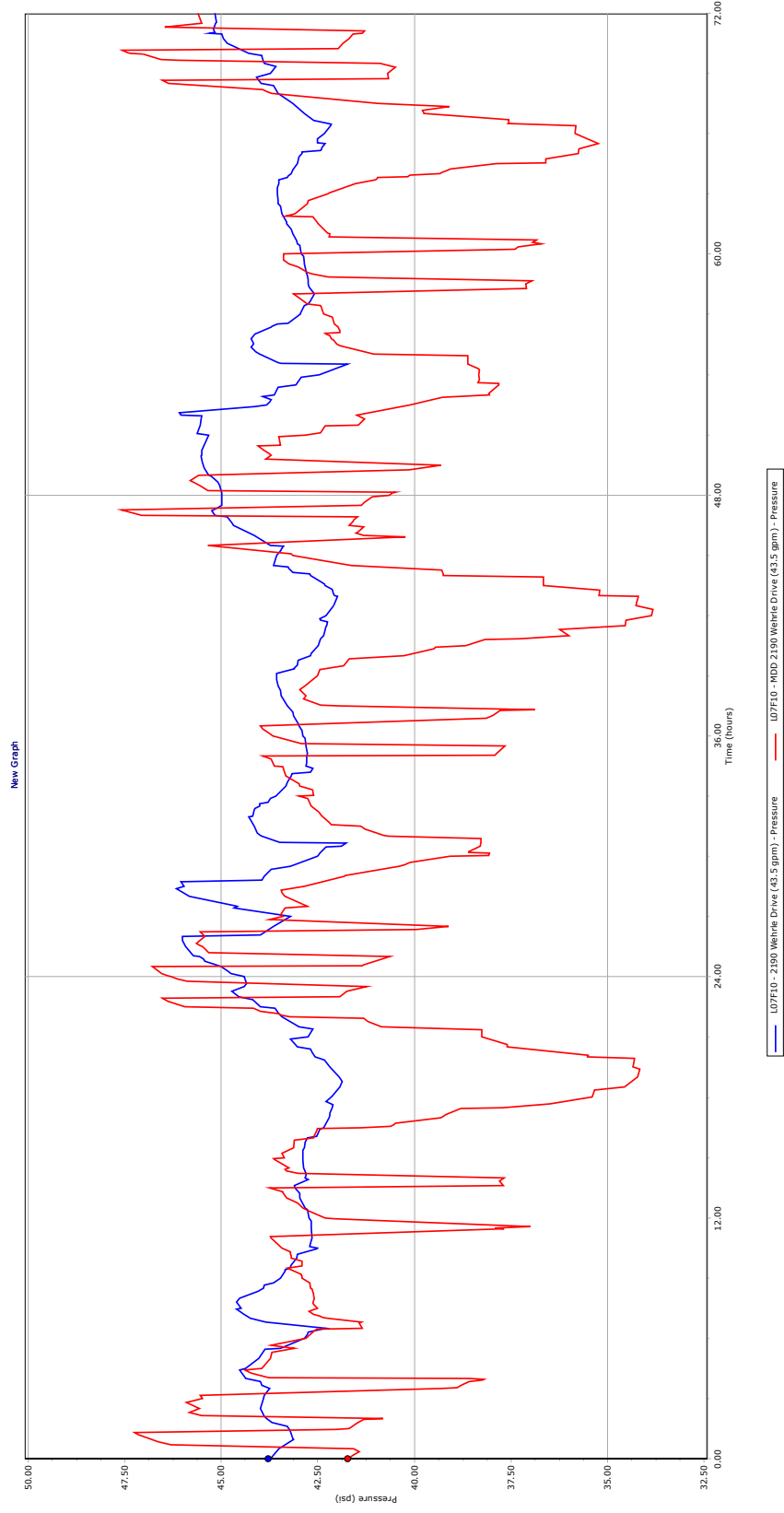


L07F10 - Existing Conditions

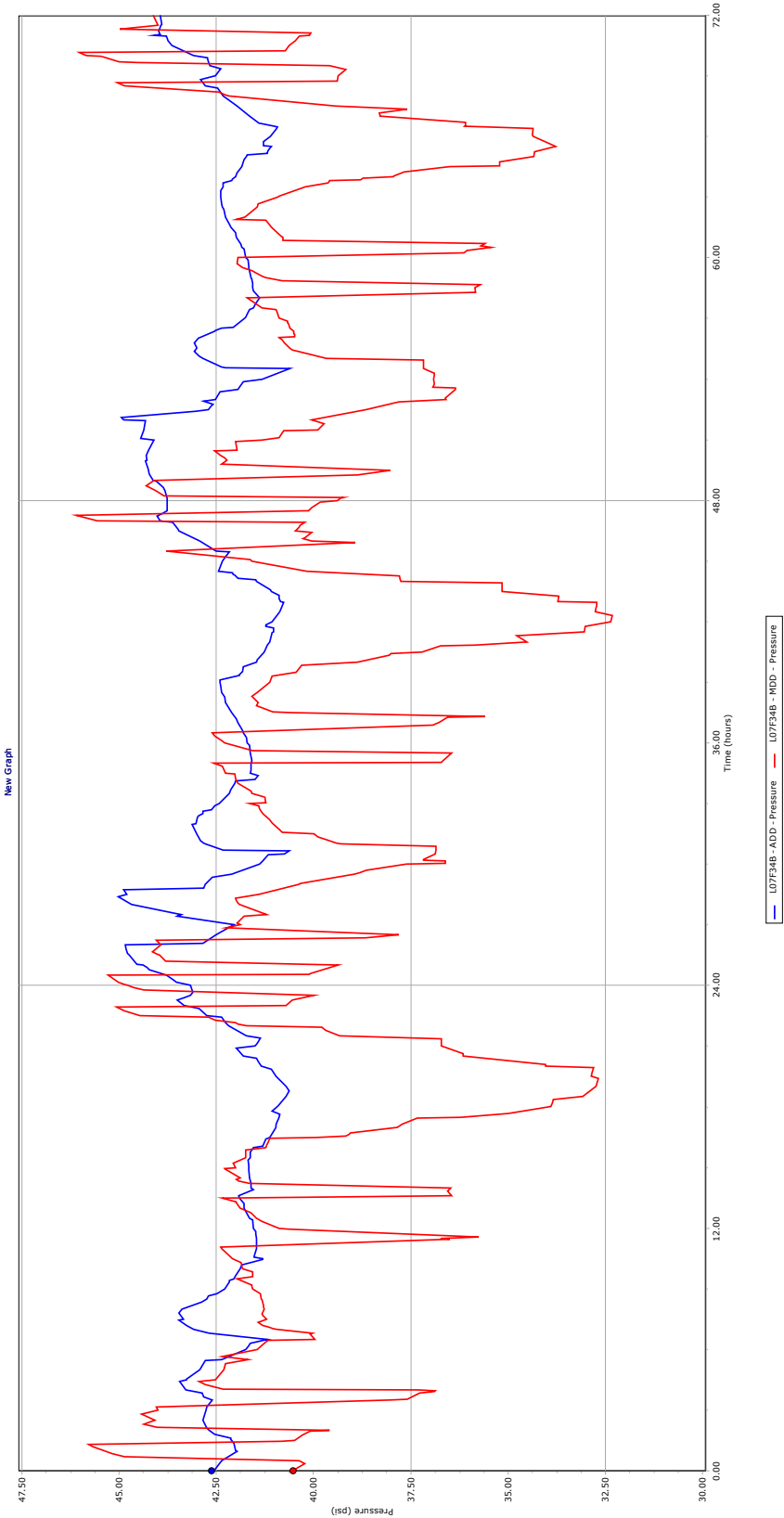
New Graph



L07F10 - Wehrle Conditions

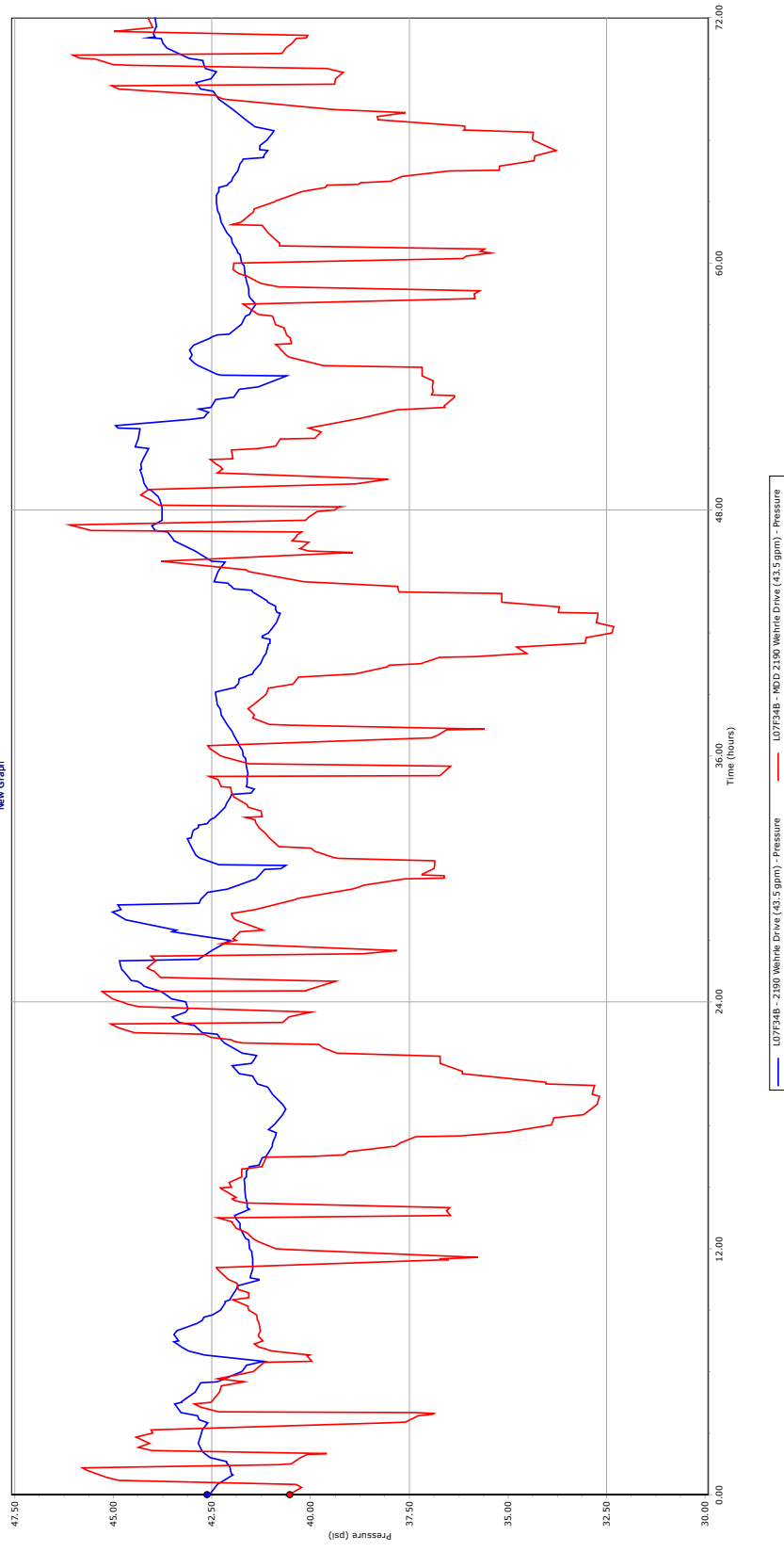


L07F34B - Existing Conditions



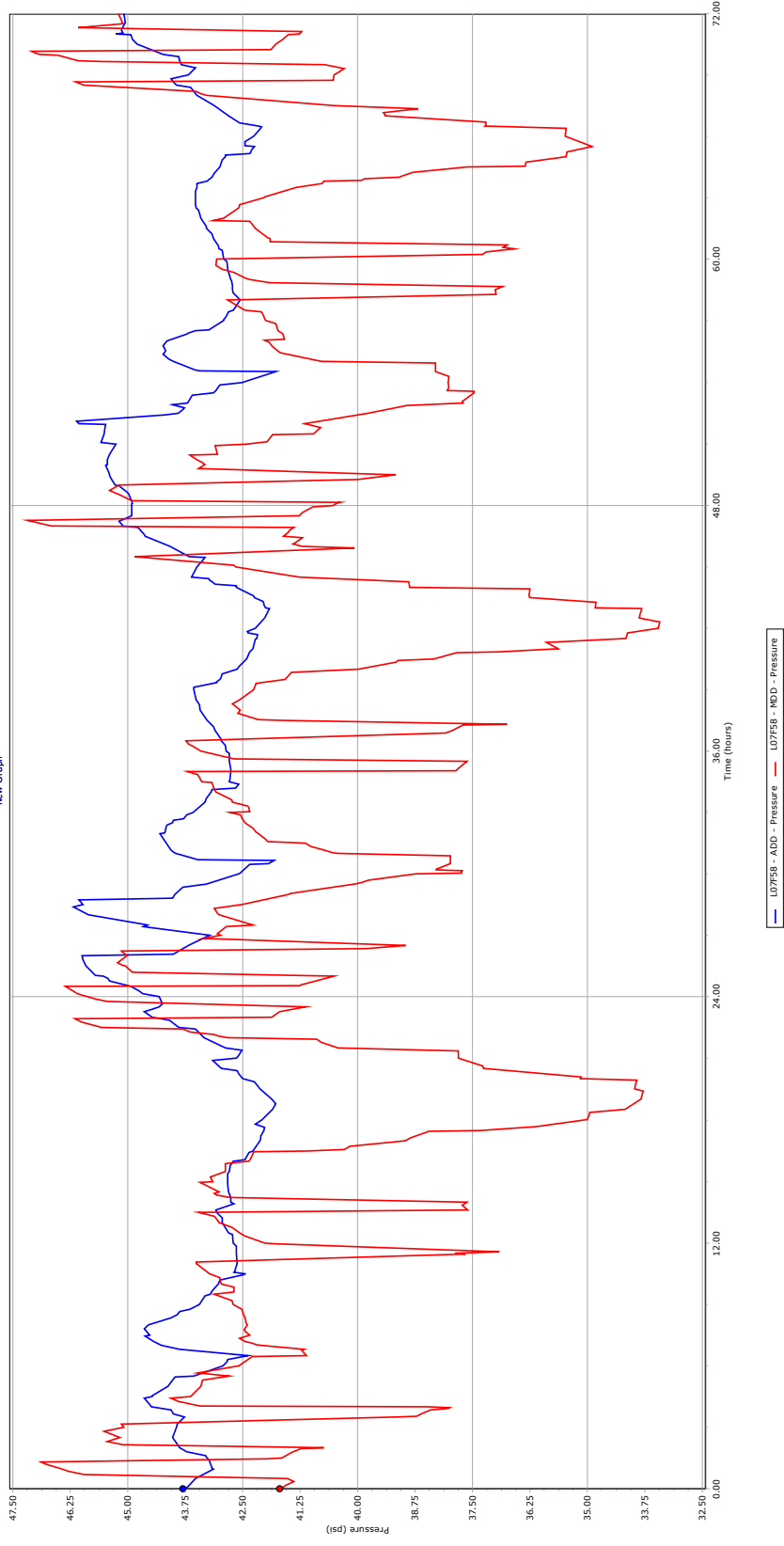
L07F34B - Wehrle Conditions

New Graph



L07F58 - Existing Conditions

New Graph



L07F58 - Wehrle Conditions

New Graph

