FINAL REPORT

INTERIM REMEDIAL MEASURE QUARTERLY PROGRESS REPORT (OCTOBER – DECEMBER 2000)

FORMER GRIFFIN TECHNOLOGY FACILITY FARMINGTON, NEW YORK INDEX NO. (B8-315-90-01)

Prepared for:
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1.1 PURPOSE AND ORGANIZATION

This report presents the information collected by URS Corporation (URS), formerly URS Greiner Woodward Clyde, between October and December 2000 during operation of the Interim Remedial Measure (IRM) system at the Griffin Technology, Inc. (GTI) site located at 6132 Victor-Manchester Road in the Town of Farmington, Ontario County, New York. A general location map is included as Figure 1.

The IRM system consists of four wells equipped with groundwater extraction pumps, which have been plumbed to discharge groundwater into the local sanitary sewer system. The system layout is shown in Figure 2.

The activities performed during this three-month period of operation are described in Section 2.0. Information collected during this period of operation is presented in Section 3.0. Summary information is presented in Section 4.0.

1.2 SYSTEM DESCRIPTION

The IRM system was proposed in the *IRM Work Plan* submitted to the New York State Department of Environmental Conservation (NYSDEC) on July 10, 1996. The Work Plan was prepared in accordance with the Order on Consent agreement (Index No. B8-315-90-01) entered into by GTI and the NYSDEC. Information supporting the selected IRM, such as a Field Sampling Plan (FSP), Quality Assurance Project Plan (QAPP), and Health and Safety Plan (HASP) were included in the Work Plan.

On September 27, 1996, GTI submitted an *Interim Remedial Measure Program, Final Design Document* to the NYSDEC. This document contained the proposed layout and detail drawings for the IRM system and a copy of the letter approving the discharge of recovered groundwater into the local publicly-owned treatment works (POTW) sanitary sewer.

During December 1996 and January 1997, the IRM components were installed at the site. The components included three recovery wells (RW-1 through RW-3) and one deep monitoring well with the potential to be converted to a recovery well in the future. Following approval by the NYSDEC and the Canandaigua-Farmington Water and Sewer District to discharge recovery water into the sanitary sewer system, the system was placed on line with three recovery wells. The IRM system began operating on February 18, 1997. Between April and June 1999, one deep monitoring well (MW-2D) was converted to a recovery well (RW-4) and brought on line.

Between December 1999 and March 2000, a new sanitary sewer main crossing was installed

beneath Victor-Manchester Road to provide separate sanitary sewer service to the undeveloped western parcel of the former GTI site on which the recovery system is located. On April 7, 2000, the recovery system discharge was disconnected from the sanitary sewer on the central parcel of the GTI site and connected to the new sanitary sewer main crossing at the clean out on the western parcel.

The activities performed during this quarter of IRM operation consisted of measuring monitoring well groundwater elevations, recording the quantity of water discharged by the IRM system, and attempting to collect samples of the IRM system effluent for laboratory analysis. Each of these activities is described in greater detail below.

2.1 HYDRAULIC HEAD MEASUREMENT

During this quarter of IRM operation, hydraulic head (groundwater elevation) measurements were collected an average of twice per month from each on-site groundwater well and piezometer and off-site monitoring well MW-11D. Hydraulic head measurements were also collected monthly from off-site monitoring wells MW-6S and MW-6D. These off-site wells are located in the immediate vicinity of the IRM system. Measurements were collected using an electronic water level indicator capable of measuring the water elevation to the nearest 0.01 feet.

2.2 EFFLUENT MONITORING, SAMPLING AND ANALYSIS

At the end of each month of operation, the quantity of effluent discharged by the IRM system was recorded from a totalizing flow meter located on the common header discharge in the Central Access Vault. The value from the preceding months operation was subtracted from this value in order to determine the monthly effluent discharge to the Canandaigua-Farmington Water and Sewer District wastewater treatment facility. In addition, monthly attempts were made to collect a sample of the effluent from a sample port located on the header discharge in the Central Access Vault in order to evaluate the quality of the groundwater being recovered by the IRM system. Due to low monthly discharge, the sample volume was insufficient for submittal to Columbia Analytical Services, Inc. (CASI) for analysis of volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Test Method 8260. Therefore, no analytical results were available to report estimated loadings to the POTW.

Data obtained during this quarter of IRM system operation are presented in the following subsections.

3.1 EFFLUENT OPERATING DATA

A summary of the operating data collected during each month of the IRM system operation is presented in Table 1. The quantity of water discharged by the system was lower than during previous quarter. The monthly discharge was slightly higher at the beginning of the quarter, decreased during the middle of the quarter, and increased slightly at the end of the quarter. The quantity of water discharged by the system appears to correlate with seasonal changes in groundwater elevations.

3.2 HYDRAULIC HEAD MEASUREMENT RESULTS

Hydraulic head measurements collected during this quarter of IRM system operation are presented in Table 2. These data were used to prepare monthly groundwater elevation and flow maps for the overburden and bedrock groundwater zones (Figures 3 through 8).

During this quarter of operation, groundwater elevations were relatively low for the majority of the quarter and increased slightly at the end of the quarter. The groundwater contour maps from the GTI site indicate that groundwater in the overburden water-bearing zone typically flows to the south or southwest. In the bedrock water-bearing zone, groundwater generally appeared to flow toward a groundwater low area near the southwest corner of the site, in the vicinity of RW-03. The data indicate that the IRM system is continuing to influence groundwater flow patterns at the GTI site. These data are consistent with previous observed site conditions.

Based on the information collected during this quarterly monitoring period of IRM system operation, the following summary has been developed regarding environmental conditions at the GTI site:

- The monthly quantity of groundwater discharged by the IRM system was slightly higher at the beginning of the quarter, decreased during the middle of the quarter, and increased slightly at the end of the quarter. The quantity of groundwater discharged by the system appears to correlate with seasonal changes in groundwater elevations, with lower discharge and groundwater elevations in late summer, fall, and early winter and higher discharge and groundwater elevations in late winter, spring, and early summer.
- Groundwater elevations were relatively low for the majority of the quarter and increased slightly at the end of the quarter.
- Groundwater flow in the overburden water-bearing zone at this site is primarily to the south and southwest. This is consistent with previous reports for the GTI site.
- The IRM system is affecting groundwater flow patterns in the vicinity of the GTI facility. The groundwater elevation data indicate the presence of a groundwater low in the bedrock water-bearing zone in the southwest portion of the site in the immediate vicinity of recovery well RW-03.

Data collection activities during the next quarter of IRM operation will consist of the same activities performed during the previous quarter of operation. The next semi-annual sampling of all groundwater monitoring wells is scheduled to be completed in March 2001.

Tables

TABLE 1
SUMMARY OF EFFLUENT DISCHARGES TO POTW
GRIFFIN TECHNOLOGY FACILITY
FARMINGTON, NEW YORK

	DISCHARGE	CONCENTRATIONS				
MONTH	(GAL.)	TCE	1,1,1-TCA	Cis-1,2-DCE	2-BUTANONE	VINYL CHLORIDE
October 2000	85,271	NS	NS	NS	NS	NS
November 2000	55,510	NS	NS	NS	NS	NS
December 2000	79,350	NS	NS	NS	NS	NS

Notes:

1. All results expressed in micrograms per liter (µg/l).
2. No other VOC compounds detected.
3. ND indicates not detected.
4. NS indicates no sample was detected due to low discharge.

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER - DECEMBER 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-01	641.79	10/13/00	11.83	629.96
		11/02/00	12.85	628.94
		11/22/00	13.82	627.97
		12/01/00	12.45	629.34
		12/15/00	12.59	629.20
		12/29/00	8.61	633.18
MW-02S	641.28	10/13/00	DRY	DRY
		11/02/00	DRY	DRY
		11/22/00	DRY	DRY
		12/01/00	DRY	DRY
		12/15/00	DRY	DRY
		12/29/00	15.19	626.09
MW-2D	642.37	Monitoring well converted to recovery well RW-4.		
MW-03	642.17	10/13/00	15.55	626.62
		11/02/00	16.02	626.15
		11/22/00	17.03	625.14
		12/01/00	14.99	627.18
		12/15/00	14.91	627.26
		12/29/00	11.73	630.44
MW-04	641.75	10/13/00	17.88	623.87
		11/02/00	19.36	622.39
		11/22/00	18.92	622.83
		12/01/00	17.98	623.77
		12/15/00	18.98	622.77
		12/29/00	16.60	625.15

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER - DECEMBER 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-05S	640.85	10/13/00	19.15	621.70
		11/02/00	19.92	620.93
		11/22/00	20.33	620.52
		12/01/00	DRY	DRY
		12/15/00	20.43	620.42
		12/29/00	17.87	622.98
MW-05D	641.01	10/13/00	21.03	619.98
		11/02/00	21.61	619.40
		11/22/00	22.12	618.89
		12/01/00	21.88	619.13
		12/15/00	22.11	618.90
		12/29/00	20.12	620.89
MW-06S	636.61	10/13/00	14.21	622.40
		11/02/00	NM	NM
		11/22/00	15.55	621.06
		12/01/00	NM	NM
		12/15/00	15.48	621.13
		12/29/00	NM	NM
MW-06D	636.83	10/13/00	14.42	622.41
		11/02/00	NM	NM
		11/22/00	15.85	620.98
		12/01/00	NM	NM
		12/15/00	15.71	621.12
		12/29/00	NM	NM

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER - DECEMBER 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-11D	641.89	10/13/00	16.61	625.28
		11/02/00	17.33	624.56
		11/22/00	18.09	623.80
		12/01/00	17.58	624.31
		12/15/00	17.43	624.46
		12/29/00	14.64	627.25
PZ-1S	640.50	10/13/00	DRY	DRY
		11/02/00	DRY	DRY
		11/22/00	DRY	DRY
		12/01/00	DRY	DRY
		12/15/00	DRY	DRY
		12/29/00	DRY	DRY
PZ-1D	640.67	10/13/00	DRY	DRY
		11/02/00	DRY	DRY
		11/22/00	DRY	DRY
		12/01/00	DRY	DRY
		12/15/00	DRY	DRY
		12/29/00	DRY	DRY

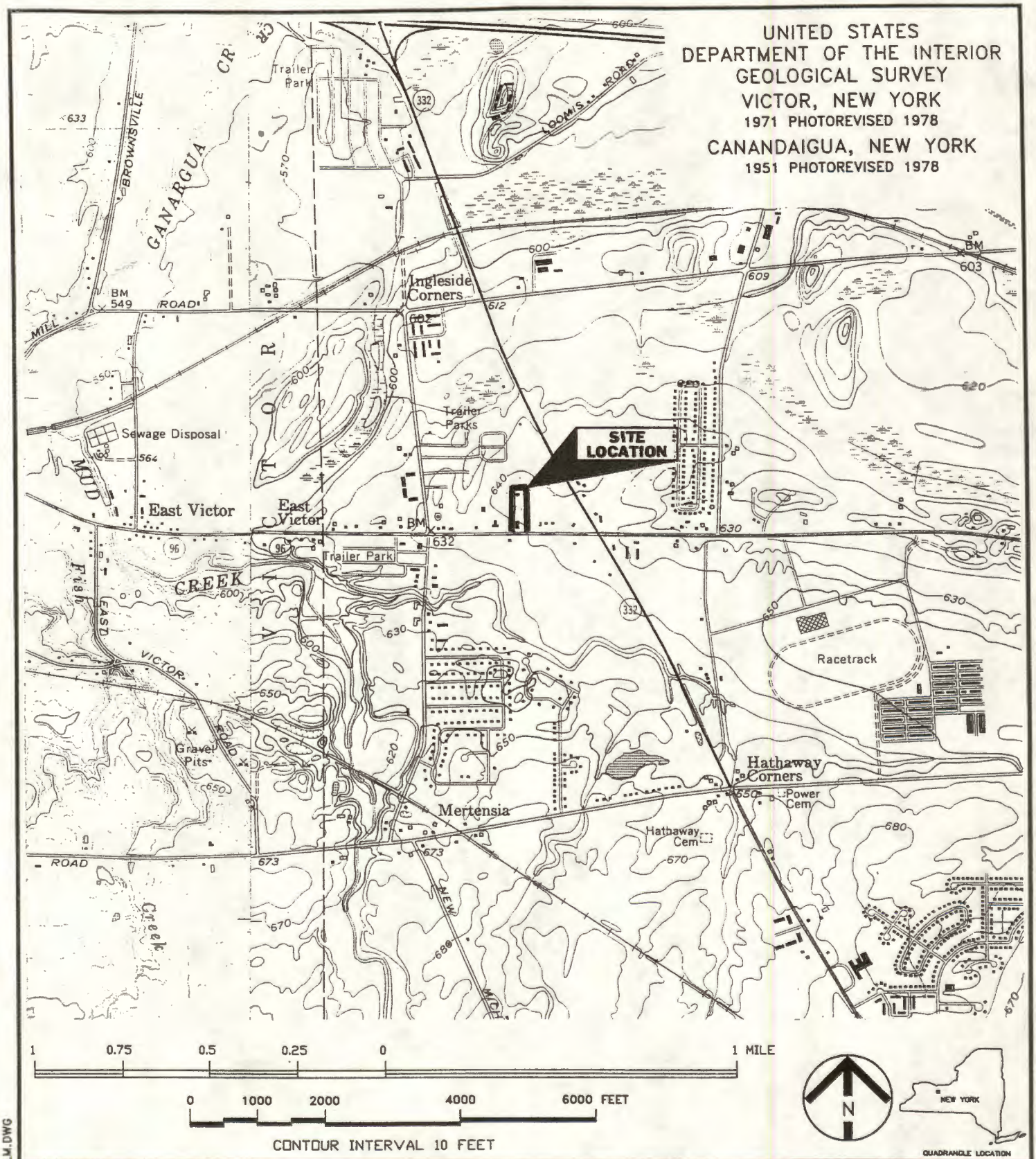
NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER - DECEMBER 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
PZ-2S	639.73	10/13/00	DRY	DRY
		11/02/00	DRY	DRY
		11/22/00	DRY	DRY
		12/01/00	DRY	DRY
		12/15/00	DRY	DRY
		12/29/00	DRY	DRY
PZ-2D	640.01	10/13/00	19.42	620.59
		11/02/00	19.94	620.07
		11/22/00	20.20	619.81
		12/01/00	19.96	620.05
		12/15/00	20.20	619.81
		12/29/00	18.51	621.50

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

Figures



GENERAL LOCATION MAP

FORMER GRIFFIN TECHNOLOGY INC. - ONTARIO COUNTY - FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 6-18-99	FIGURE NO: 1

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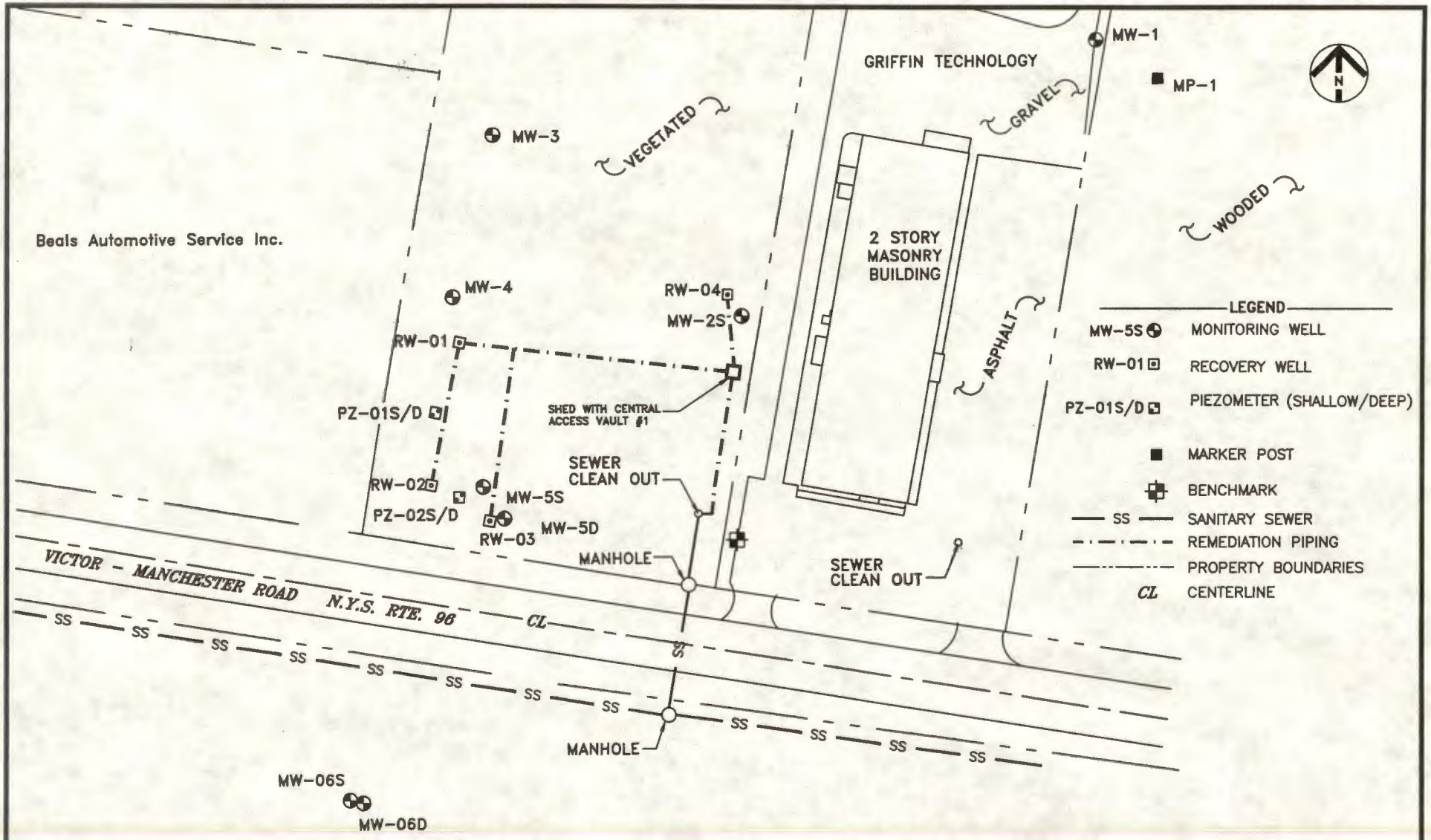
URS Greiner Woodward Clyde



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SCALE IN FEET

IRM SYSTEM LAYOUT

GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 8/8/00	FIGURE NO: 2

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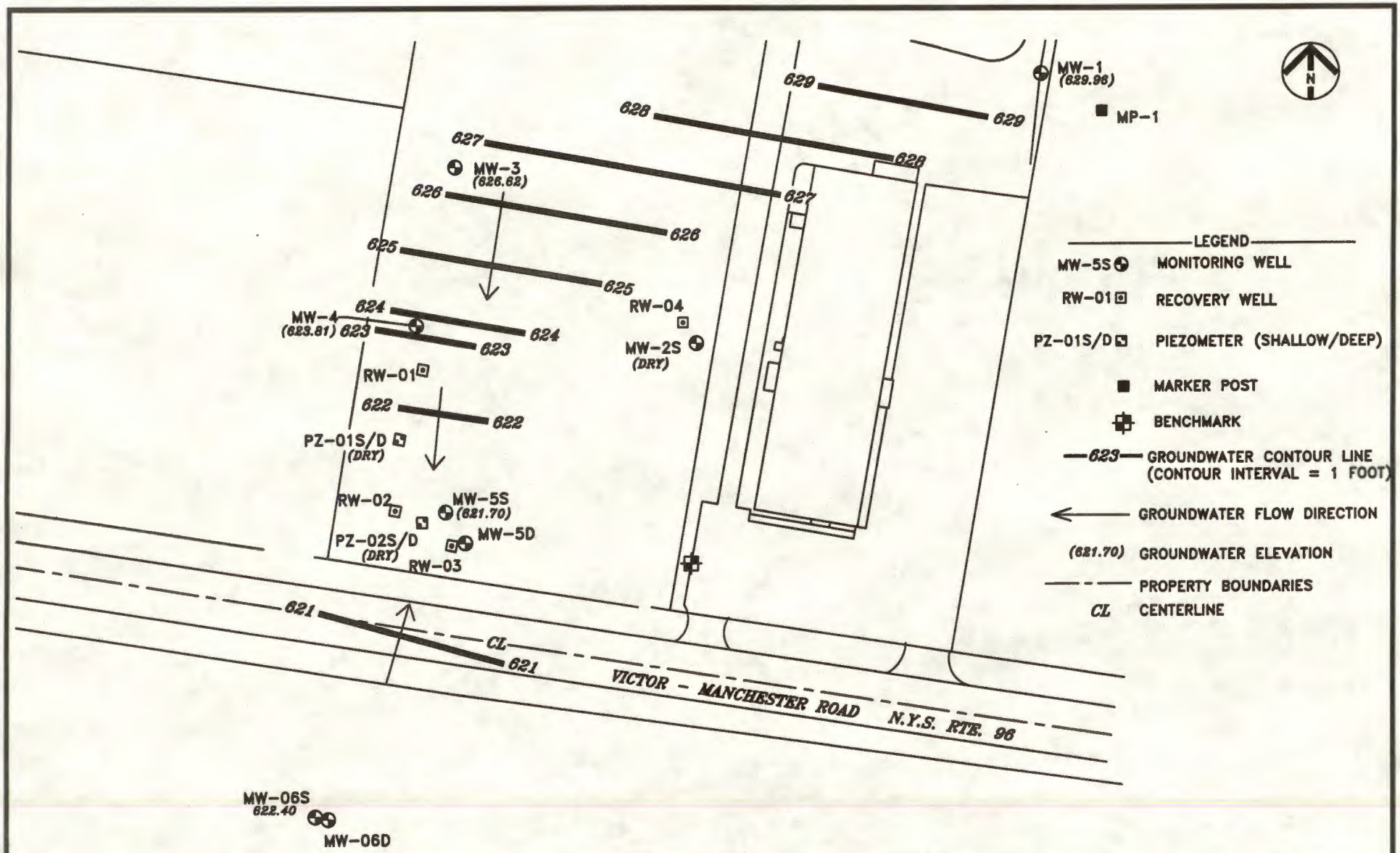
URS Greiner Woodward Clyde



OVERBURDEN GROUNDWATER CONTOUR MAP
OCTOBER 13, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 5/14/01	FIGURE NO: 3

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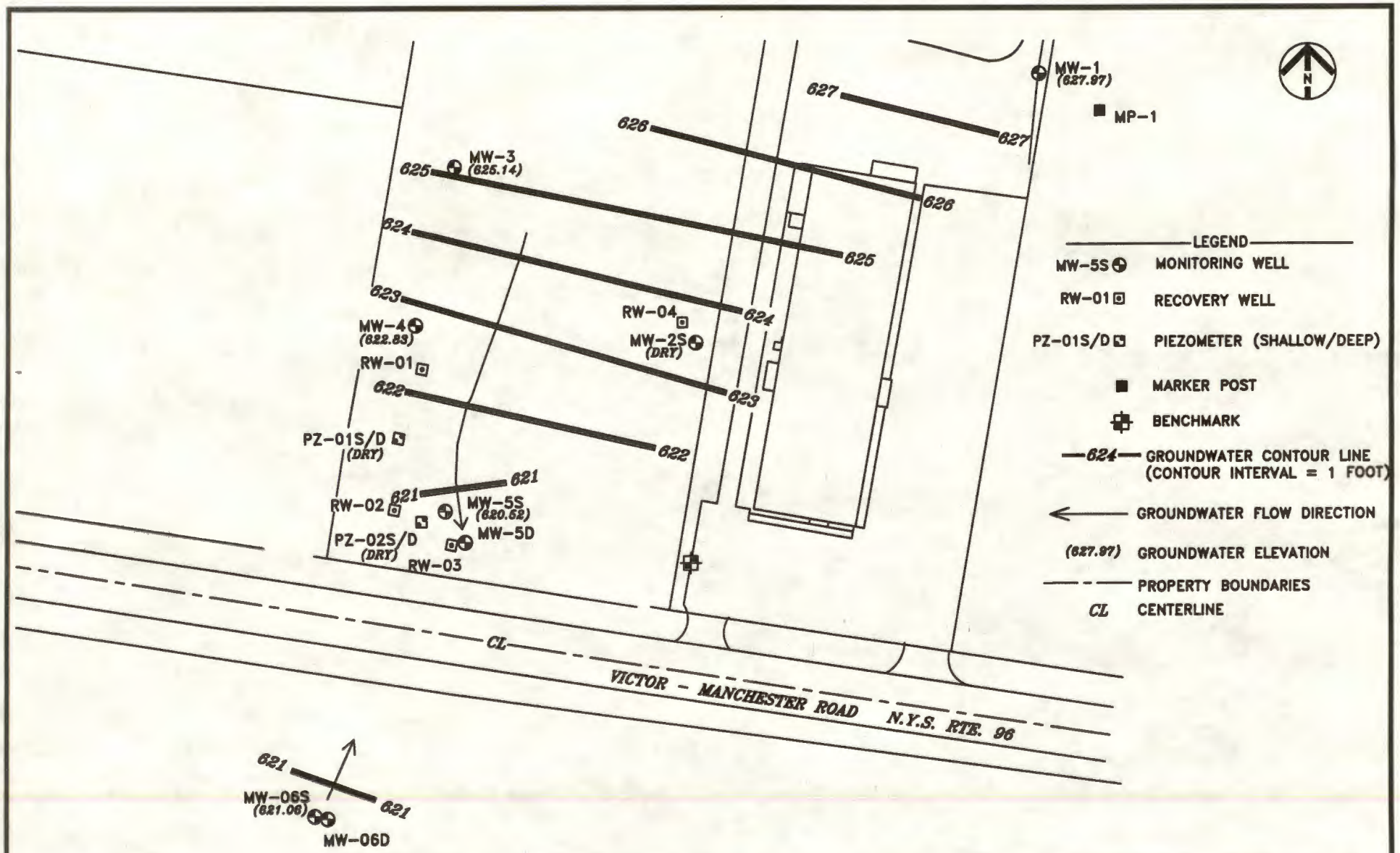

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SCALE IN FEET

OVERBURDEN GROUNDWATER CONTOUR MAP
NOVEMBER 22, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 5/14/01	FIGURE NO: 4

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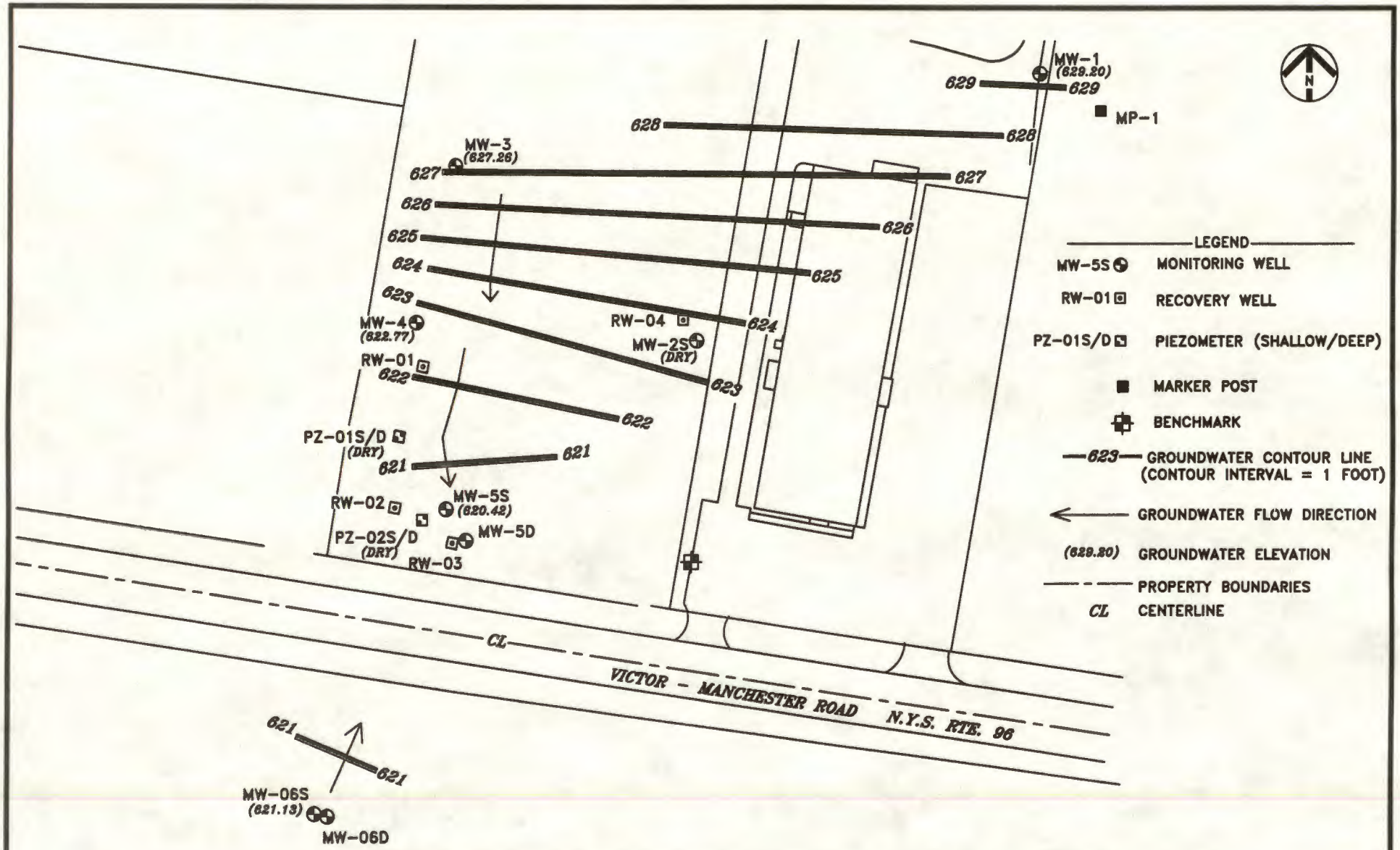
URS



OVERBURDEN GROUNDWATER CONTOUR MAP
DECEMBER 15, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 5/14/01	FIGURE NO: 5

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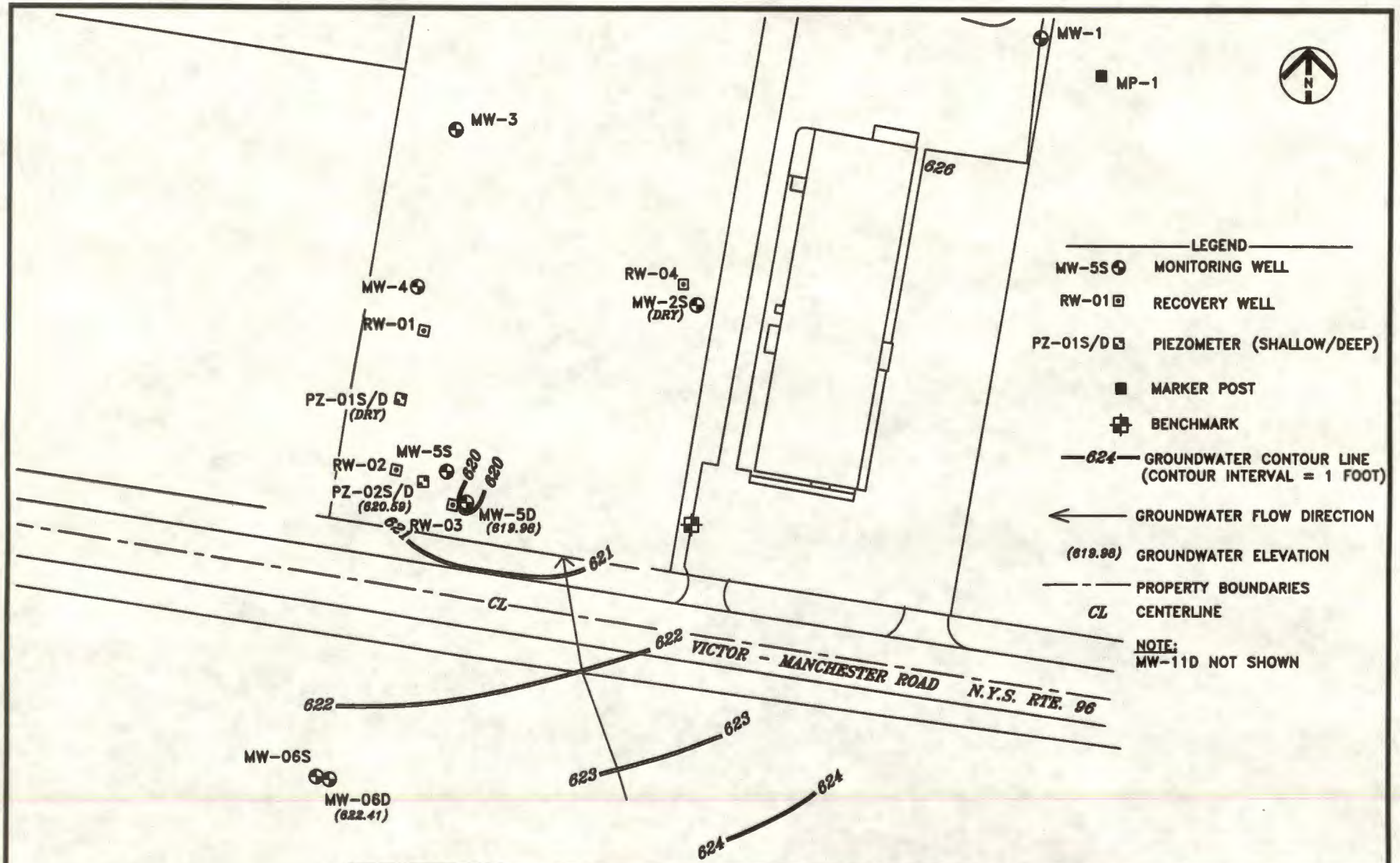

BEDROCK GROUNDWATER CONTOUR MAP
OCTOBER 13, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 5/14/01	FIGURE NO: 6

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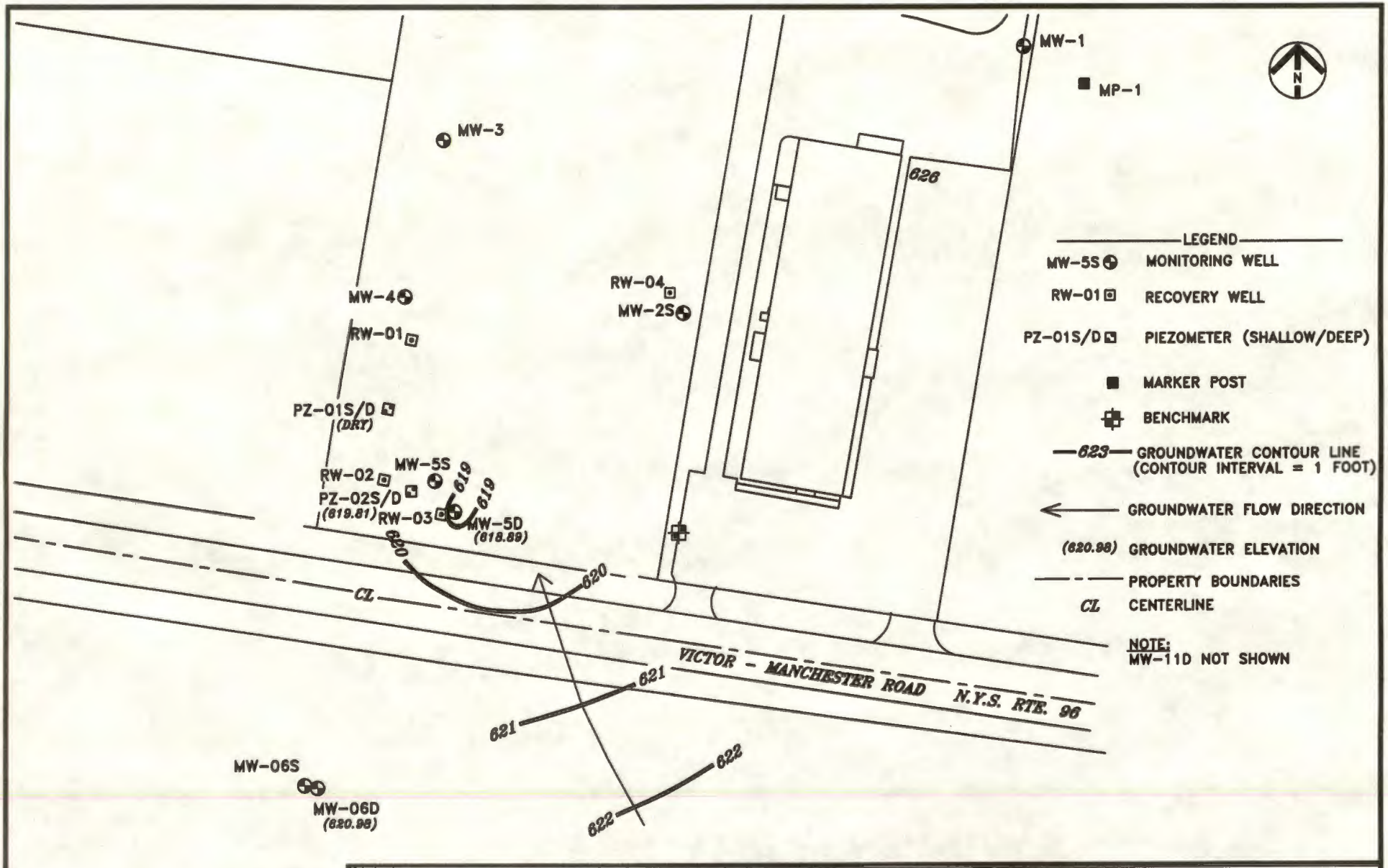

BEDROCK GROUNDWATER CONTOUR MAP
NOVEMBER 22, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 5/14/01	FIGURE NO: 7

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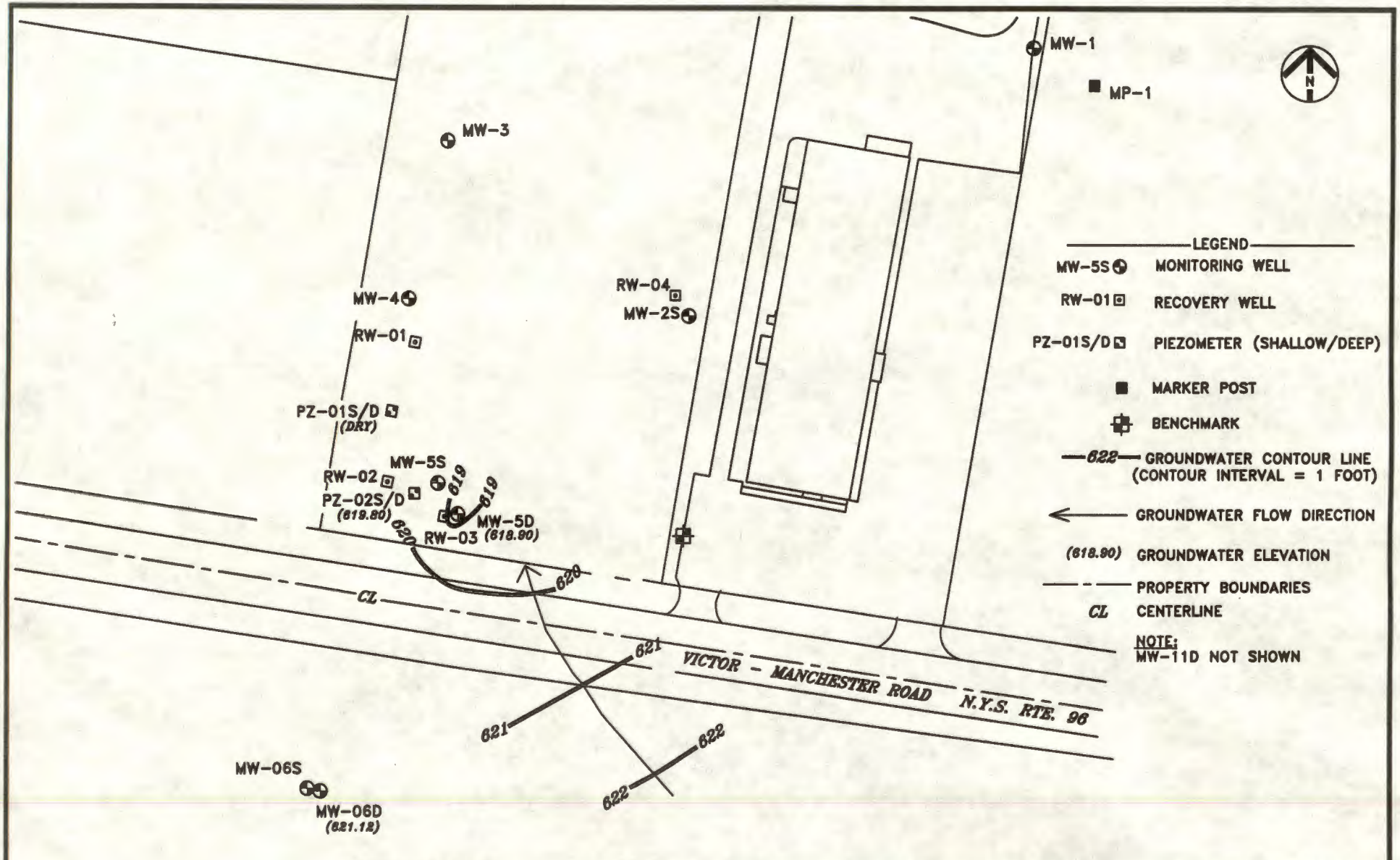

BEDROCK GROUNDWATER CONTOUR MAP
DECEMBER 15, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 5/14/01	FIGURE NO: 8

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