BAK

Remediation and Liability Management Company Inc.

James F. Hartnett
Program Manager

January 07, 2003

Gerald Rider, P.E., Chief
Operation & Maintenance Section
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, New York 12233-7014

Re: Ley Creek PCB Dredgings Site (Registry # 7-34-044)
NYSDEC Order on Consent Index # D-7-0008-97-06
2002 Annual OM&M Inspection Report

Dear Mr. Rider,

Enclosed please find documentation pertaining to the Operation, Maintenance, and Monitoring (OM&M) site inspections that were conducted at the Ley Creek PCB Dredgings Site (Site) in 2002. The OM&M site inspections were performed in accordance with the NYSDEC-approved Operation, Maintenance, and Monitoring Manual for the Site. The documentation enclosed consists of three letter reports, one each for the two site inspections and one for the wetland evaluation.

Deficiencies identified in the site inspection and wetland evaluation letter reports will be addressed by REALM during the upcoming 2003 construction season, as site conditions allow.

Should you or your staff have any questions regarding the contents of this annual OM&M inspection report, please contact me at (315) 764-2239.

Sincerely,

James F. Hartnett/BAK

James F. Hartnett
Remediation Program Manager

Enclosure
cc: James Burke (NYSDEC)
Douglas Crawford (O'Brien & Gere)
Robert Nunes (USEPA)

REALM c/o GM Powertrain • Remediation Project Office • Route 37 East • P.O. Box 460 • Massena, NY 13662
Ph: (315) 764-2239 • Fax (315) 764-2312 • Email: jim.f.hartnett@gm.com

BAK

O'BRIEN & GERE
ENGINEERS, INC.

August 29, 2002

James F. Hartnett
Remediation and Liability Management Company, Inc.
6723 Towpath Road, Suite 255
P.O. Box 460
Syracuse, New York 13662

Re: Ley Creek PCB Dredgings Site
2002 August OM&M Inspection

File: 4966/30473 #2

Dear Jim:

The purpose of this letter report is to document the Operation, Maintenance, and Monitoring (OM&M) site inspection conducted on August 20, 2002 by O'Brien & Gere Engineers, Inc. (O'Brien & Gere) at the Ley Creek PCB Dredgings Site (the Site), located in Syracuse, New York. This inspection was performed in accordance with the NYSDEC-approved OM&M manual, dated September 2001. Attached to this letter report are the OM&M checklist, inspection photographs, and site figures associated with the site inspection.

SITE INSPECTION

On August 20, 2002, an OM&M site inspection was performed at the Site. The inspection checklist along with the comments is attached. The inspection photographs are also attached along with a description of the photographs. The approximate locations of where the photographs were taken are shown in the attached site figures.

Establishment of the vegetative cover has continued to improve. Since the OM&M site inspection conducted in December 2001, topsoil has been applied to the areas of erosion and thinning vegetation that were identified in the 2001 OM&M site inspection. These areas are to be seeded and fertilized by Royal Environmental, Inc. in the near future.

During the August 2002 site inspection, two areas of the site security fence were observed to be damaged. These areas are depicted in photographs 7 and 9. The security fence damage should be repaired as soon as practicable.

Other observations that also require repairs are as follows:

- Gully erosion: (Photograph 1. Figure 5.) One area of gully erosion identified in the 2001 OM&M site inspection leading down the slope to CB-5/004 overflow spillway was observed and requires maintenance.

- Stone access road rutting: (Photograph 6. Figure 1.) Silt deposition on the stone access road was observed in this area during the OM&M inspection, which led to rutting.

- Burrowing animals: (Figure 3.) A woodchuck was observed in the area of CB-3 during the site inspection. A hole was observed on the western side slope of the CB-3 overflow spillway near the CB-3 catch basin.

- Area requiring mowing: (Photograph 4. Figure 3.) The vegetation around the CB-3 catch basin was quite high.

- Debris accumulation: Debris was accumulated around the catch basin CB-1.

RECOMMENDATIONS

Vegetation establishment at the Site has continued to improve since the 2000 construction season, however, several areas where topsoil has been placed should be monitored for vegetation establishment.

Below is a list of recommended measures to address the observations during the OM&M inspection:

- Repair the damaged chain link fence
- Repair the gully erosion with topsoil, seed, and fertilizer application
- Apply seed and fertilizer to areas that received topsoil earlier this year
- Repair the stone access road by additional placement of crushed stone
- Remove the woodchuck from the Site, place topsoil in the hole, and apply seed and fertilizer
- Mow/trim the vegetation around CB-3 catch basin
- Remove the debris around CB-1 catch basin.

The next semi-annual OM&M inspection is scheduled to occur in the Fall of 2002.

If you should have any questions pertaining to the information presented in this letter, please feel free to contact Douglas Crawford or me at (315) 437-6100.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Bradley A. Kubiak
Project Engineer

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cc: Douglas Crawford, P.E.
Maureen Markert, P.E.

Date Performed: **August 20, 2002**	Weather: **Sunny and Clear 70-80 F**
Site Name: **Ley Creek PCB Dredgings site**	Inspector Name: **Bradley A. Kubiak**
Site Location: **Syracuse, New York**	Inspector Signature: Bradley A. Kubiak

Item	Task	Response		Comments
		Yes	No	
Vegetative Cover	**Visually inspect surface conditions.**			
	1. Areas of settlement?		X	
	2. Areas of erosion?	X		Photo 1 - Erosion near CB-5/004.
	3. Areas where geotextile visible due to erosion?	X		Photo 1 - Erosion near CB-5/004.
	4. Areas of slope instability?		X	
	5. Lack or thinning vegetation?		X	
	6. Presence of burrowing animals?	X		Woodchuck and hole observed near CB-3 in spillway.
	7. Areas of damage?		X	
	8. Drainage problems?		X	
	9. Mowing required?	X		Photo 4 - Area requires trimming near CB-3.
Access Road	**Visually inspect conditions.**			
	1. Areas of settlement?		X	

Date Performed: **August 20, 2002**	Weather: **Sunny and Clear 70-80 F**
Site Name: **Ley Creek PCB Dredgings site**	Inspector Name: **Bradley A. Kubiak**
Site Location: **Syracuse, New York**	Inspector Signature: Bradley A. Kubiak

Item	Task	Response		Comments
		Yes	No	
Access Road	2. Areas of erosion?		X	
	3. Areas rutted or potholes present?	X		Photo 6 - View of rut at western end of the site.
	4. Areas of damage?	X		Photo 6 - View of rut at western end of the site.
Surface Water Drainage	**Visually inspect ditches, catch basins, etc.**			
	1. Accumulation of debris?	X		Some trash accumulated around CB-1.
	2. Excessive scouring?		X	
	3. Areas of damage?		X	
Ground Water Wells	**Visually inspect conditions.**			
	1. Casings secure and locked?	X		
	2. Areas of damage?		X	
Sanitary sewer access paths	**Visually inspect conditions.**			
	1. Cracks in asphalt?		X	

Date Performed: **August 20, 2002**	Weather: **Sunny and Clear 70-80 F**
Site Name: **Ley Creek PCB Dredgings site**	Inspector Name: **Bradley A. Kubiak**
Site Location: **Syracuse, New York**	Inspector Signature: Bradley A. Kubiak

Item	Task	Response		Comments
		Yes	No	
Sanitary sewer access paths	2. Manhole covers in place?	X		
	3. Debris accumulating in access paths?		X	
Physical Site Security	**Visually inspect fences and gates**			
	1. Signs intact?	X		
	2. Fence breached?	X		Photos 7, and 9 - Views of breached fencing.
	3. Access gates locked?	X		
	4. Areas of damage?	X		Photos 3, 7, and 9 - Views of damaged and breached fencing.

Note any additional comments.

Areas that had thinning vegetation have had topsoil placed in the area. These areas will be fertilized and seeded when the weather is favorable for growth and and establishment of vegetation. Overall the vegetative cover system is in good condition with increasingly denser growth and coverage.

Photo 1- Erosion area with geotextile in view near CB-5/004.

Photo 2 - View along Ley Creek looking West from CB-5/004 outlet.

Photo 3 - View of damaged fence near CB-4/003.

Photo 4 - Area around CB-3 that requires trimming.

Photo 5 - View from west end of the where topsoil was applied.

Photo 6 - View of rut in road at western end of the Site.

Photo 7 - View of breached fence near CB-1.

Photo 8 - View of Site from CB-1 spillway looking east at Site.

Photo 9 - View of breached fence between CB-1 and CB-2.

Photo 10 - View looking east at site from area of damged fence.

Photo 11 - View looking east towards CB-3.

Photo 12 - View looking east from along stone access road near CB-3.

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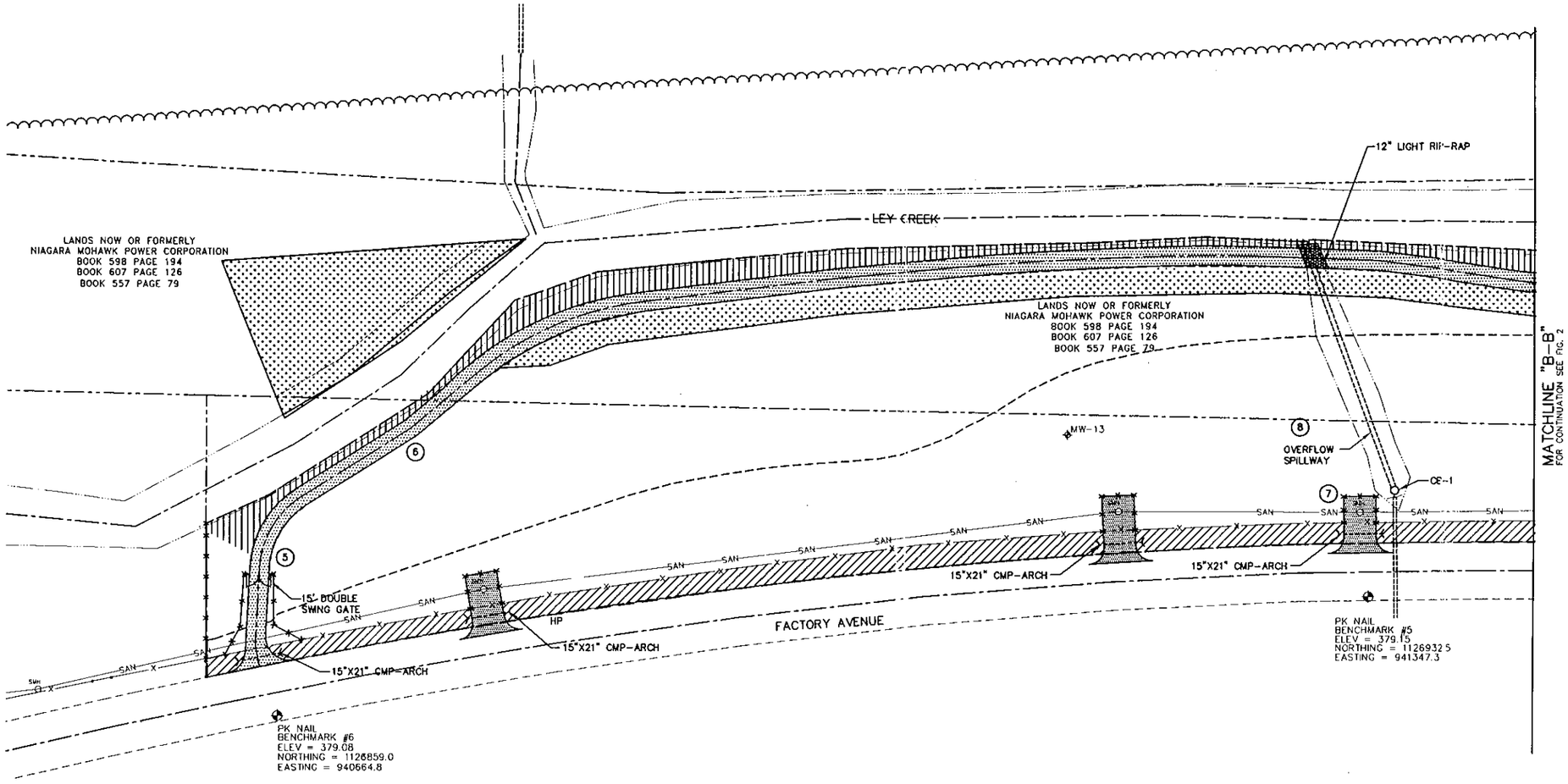


FIGURE 1

LEGEND

- SEEDED WITH CANARY GRASS
- OHW — OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GUY WIRE
- SAN — SANITARY SEWER
- SMH — SANITARY MANHOLE
- CATCH BASIN
- SECURITY FENCE (SEE GENERAL NOTE 4)
- PAVEMENT
- GRAVEL ACCESS ROAD
- LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
- CATCH BASIN
- MW-OBC7C MODIFIED MONITORING WELL
- MONITORING WELL PRESUMED DESTROYED
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON-WOVEN GEOTEXTILE
- (7) PHOTO LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

1"=40' 40 0 40

OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.017
AUGUST 2002

O'BRIEN & GERE
ENGINEERS, INC.

PLOT DATE: 8/21/02

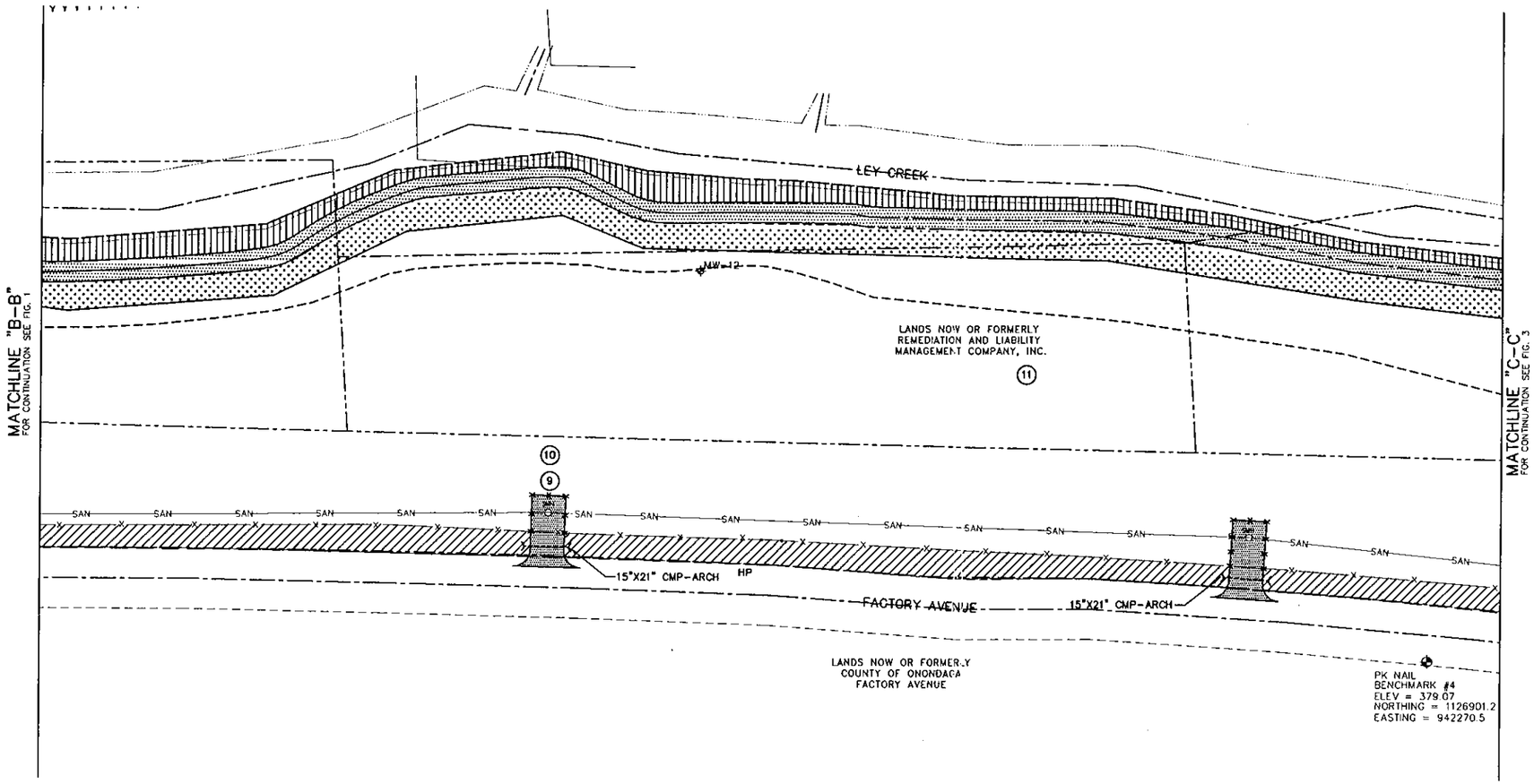


FIGURE 2

LEGEND

- SEEDED WITH CANARY GRASS
- OHW — OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GUY WIRE
- SAN — SANITARY SEWER
- SMH — SANITARY MANHOLE
- CATCH BASIN
- SECURITY FENCE (SEE GENERAL NOTE 4)
- PAVEMENT
- GRAVEL ACCESS ROAD
- LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
- CATCH BASIN
- MW-08G7C — MODIFIED MONITORING WELL
- MONITORING WELL PRESUMED DESTROYED
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON-WOVEN GEOTEXTILE
- (9) PHOTO LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

1"=40' 40 0 40

OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.018
AUGUST 2002

O'BRIEN & GERE
ENGINEERS, INC.

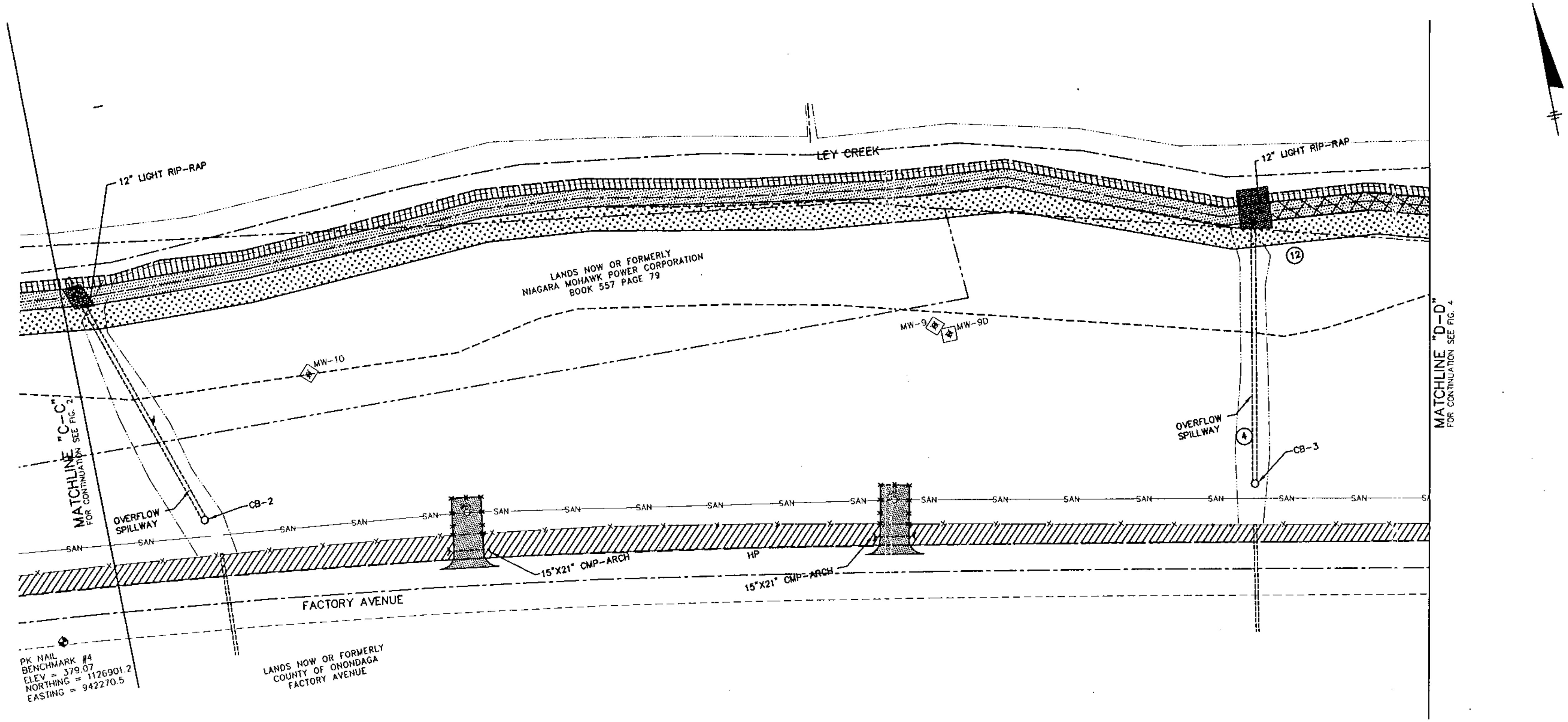


FIGURE 3

LEGEND

- SEEDED WITH CANARY GRASS
- OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GUY WIRE
- SANITARY SEWER
- SANITARY MANHOLE
- CATCH BASIN
- SECURITY FENCE (SEE GENERAL NOTE 4)
- PAVEMENT
- GRAVEL ACCESS ROAD
- LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
- CATCH BASIN
- MW-OBG7C MODIFIED MONITORING WELL
- MONITORING WELL PRESUMED DESTROYED
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON-WOVEN GEOTEXTILE
- PHOTO LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

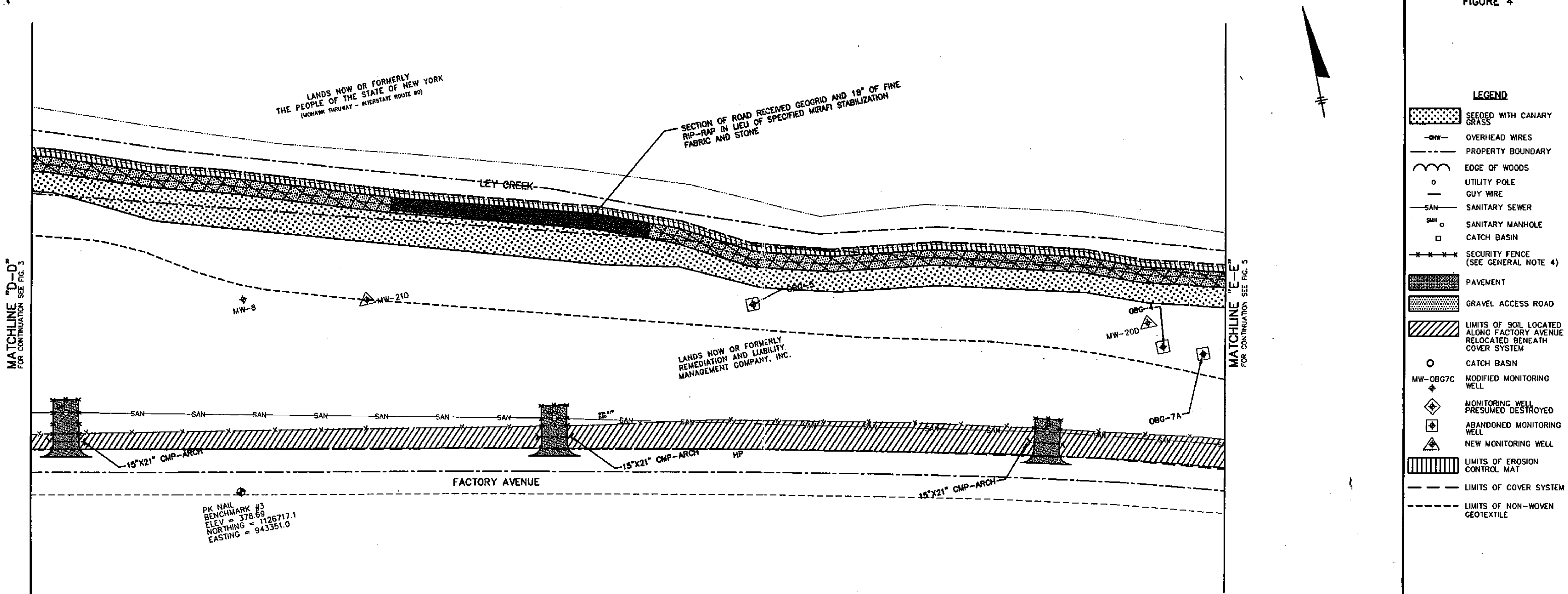
1"=40' 40 0 40

OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.019
AUGUST 2002

O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 8/21/02



LANDS NOW OR FORMERLY THE PEOPLE OF THE STATE OF NEW YORK (MOHAWK THRUWAY - INTERSTATE ROUTE 90)
SECTION OF ROAD RECEIVED GEOGRID AND 18" OF FINE RIP-RAP IN LIEU OF SPECIFIED MIRAFI STABILIZATION FABRIC AND STONE
LEY CREEK
MATCHLINE "D-D"
FOR CONTINUATION SEE FIG. 3
MATCHLINE "E-E"
FOR CONTINUATION SEE FIG. 5
MW-8
MW-21D
OBG-5
OBG-4
MW-20D
OBG-7A
LANDS NOW OR FORMERLY REMEDIATION AND LIABILITY MANAGEMENT COMPANY, INC.
SAN
15"X21" CMP-ARCH
HP
FACTORY AVENUE
PK NAIL
BENCHMARK #3
ELEV = 378.69
NORTHING = 1126717.1
EASTING = 943351.0
LEGEND
SEEDED WITH CANARY GRASS
OVERHEAD WIRES
PROPERTY BOUNDARY
EDGE OF WOODS
UTILITY POLE
GUY WIRE
SANITARY SEWER
SANITARY MANHOLE
CATCH BASIN
SECURITY FENCE (SEE GENERAL NOTE 4)
PAVEMENT
GRAVEL ACCESS ROAD
LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
CATCH BASIN
MW-OBG7C
MODIFIED MONITORING WELL
MONITORING WELL PRESUMED DESTROYED
ABANDONED MONITORING WELL
NEW MONITORING WELL
LIMITS OF EROSION CONTROL MAT
LIMITS OF COVER SYSTEM
LIMITS OF NON-WOVEN GEOTEXTILE
1"=40'
40
0
40

FIGURE 4

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

OM&M PARTIAL SITE PLAN

FILE NO. 4966.30473.020
AUGUST 2002

O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 8/21/02

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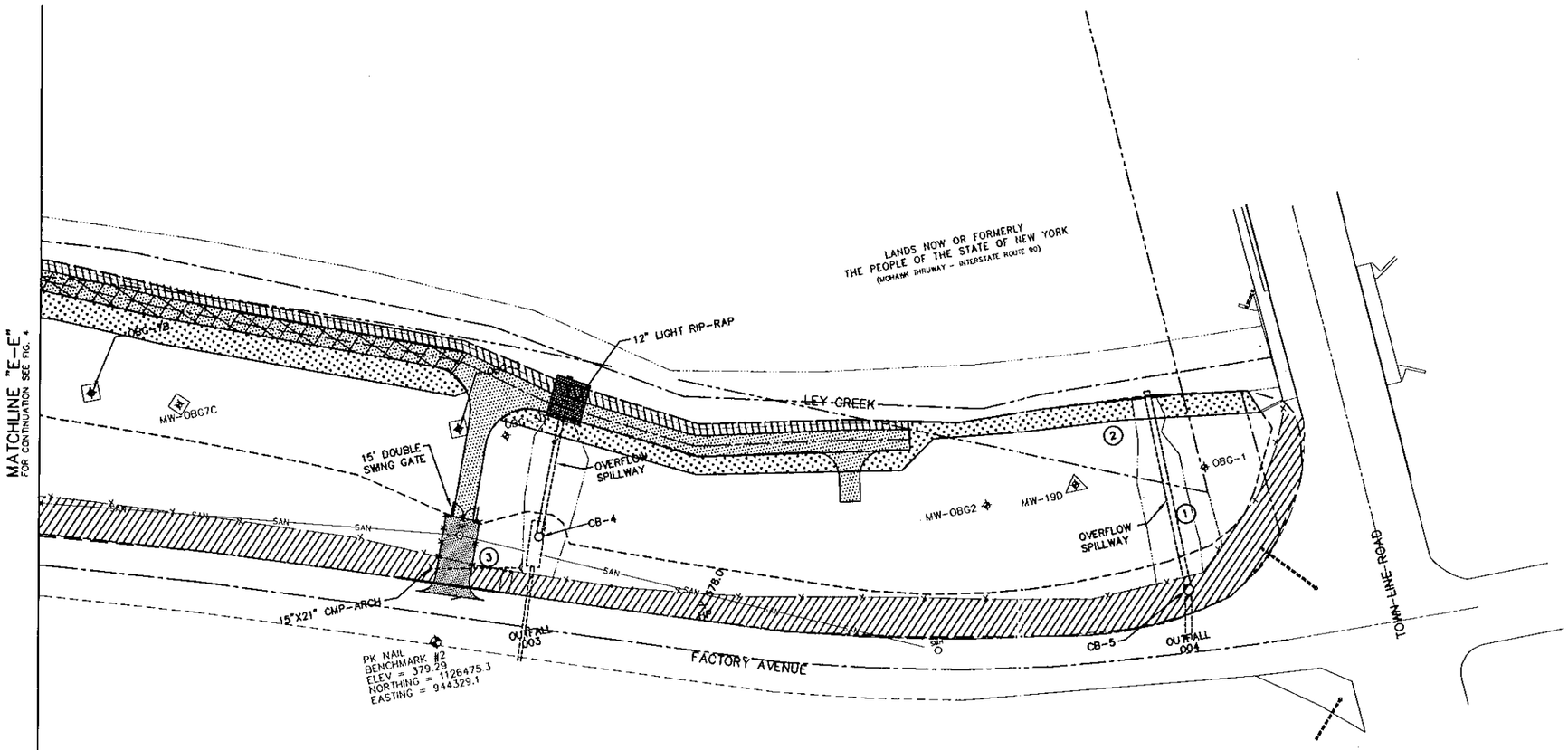
PLOT DATE: 8/21/02

FIGURE 5



LEGEND

- SEEDED WITH CANARY GRASS
- OHW — OVERHEAD WIRES
- PROPERTY BOUNDARY
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- CATCH BASIN
- MW-OBG7C MODIFIED MONITORING WELL
- MONITORING WELL PRESUMED DESTROYED
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON-WOVEN GEOTEXTILE
- (2) PHOTO LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

1"=40' 40 0 40

OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.021
AUGUST 2002

O'BRIEN & GERE
ENGINEERS, INC.

FILE COPY
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O'BRIEN & GERE
ENGINEERS, INC.

December 16, 2002

James F. Hartnett
Remediation and Liability Management Company, Inc.
6723 Towpath Road, Suite 255
P.O. Box 460
Syracuse, New York 13662

Re: Ley Creek PCB Dredgings Site
2002 OM&M Wetland Evaluation

File: 4966/30473 #2

Dear Jim:

This letter presents the results of wetland evaluation efforts performed at the Ley Creek PCB Dredgings Site (the Site), located in Syracuse, New York. Steve Mooney and Ron Chiarello of O'Brien & Gere Engineers, Inc. (O'Brien & Gere) performed the evaluation on September 13, 2002, in accordance with Section 2.6 of the September 2001 *Operation, Maintenance and Monitoring Manual* (OM&M Manual), which was approved by the New York State Department of Environmental Conservation (NYSDEC).

The OM&M Manual specifies that wetland evaluation is to be performed following the first full growing season (2001) and the subsequent four years (2002 through 2005). This wetland evaluation (Year 2002 Evaluation) represents the second full growing season following NYSDEC approval of the *Remedial Action Engineering Report* in 2001.

BACKGROUND

As was stated in the *Wetland Assessment Report* for the Site (O'Brien & Gere 1998), eight emergent wetlands, totaling approximately 1.4 acres and dominated by dense stands of common reed (*Phragmites australis*) were identified at the Site prior to implementation of the Remedial Action. These wetlands were considered fringe wetlands based on their location adjacent to Ley Creek. The implementation of the Remedial Action at the Site temporarily eliminated these wetlands. A Wetland Mitigation Plan (letter report dated September 15, 2000), which consisted of the planting of reed canary grass (*Phalaris arundincea*), was prepared by O'Brien & Gere on behalf of General Motors (GM) and approved by NYSDEC and United States Environmental Protection Agency (USEPA) for the impacted wetlands at the Site. The wetland mitigation plan was based on an evaluation of pre-remediation Site conditions and anticipated post-remediation site conditions. The wetland mitigation was incorporated in the remedial design. Figures 1 through 5 of this letter report depict the locations of the restored wetland areas at the Site.

INSPECTION ACTIVITIES

In accordance with the OM&M Manual, a site visit was performed by qualified O'Brien & Gere wetland scientists on September 13, 2002 to evaluate the second year conditions of the restored wetlands and to identify maintenance activities that would be required to support the success of the wetland mitigation.

RESTORATION EVALUATION OBJECTIVES AND CRITERIA

This letter report presents the results of the second evaluation effort for the restored wetlands at the Site. Restoration success is based on the target percentage of ground cover and the density of planted species (reed canary grass). The restoration goal for restored wetlands at the Site, as specified in Section 2.6 of the OM&M Manual, is 90% ground cover within the sample plots of seeded (reed canary grass) and wetland species. The performance standard for wetlands restoration at the Site is measured by the percent of established ground cover, either through planting or natural recruitment.

Consistent with the OM&M Manual, four 9 square-foot sample plots were used to evaluate ground cover in the restored wetlands during the 2002 evaluation. Data collected for these sample plots were recorded on field data forms developed by O'Brien & Gere and are included as Attachment 1 of this letter. The sample plot locations are identified on Figures 1 through 5 of this letter.

In accordance with the OM&M Manual, percent ground cover evaluation plots were located randomly in representative areas along the access road at the Site. The percent vegetative ground cover and percent ground cover by species was visually estimated within each plot and recorded on field data forms (Attachment 1). The data forms included species observed within the sample plot, percent ground cover for each species observed, the United States Fish and Wildlife Service (USFWS) indicator status for each species as described in the USFWS NERC-99/18.21 document dated 1988 - *National List of Plant Species That Occur in Wetlands*, total percent ground cover, and the percent of the total ground which are hydrophytic species (FAC, FACW and OBL).

RESULTS AND DISCUSSION

Four ground cover sample plots were evaluated within the restored wetlands at the Site. Data collected from the sample plots are presented on the field data forms included as Attachment 1. The comparison of observed percent ground cover to the restoration goal is presented in Table 1. As depicted on the field data forms, Plot #4 was the only plot that met or exceeded the target ground cover percentage of 90% for seeded (reed canary grass) and wetland species, excluding invasive wetland species such as *Phragmites australis* (common reed) and *Lythrum salicaria* (purple loosestrife).

In Plot #4, reed canary grass made up 100% of the total ground cover, and in Plot #1, reed canary grass made up 15% of the total ground cover. The other two sample plots (Plots #2 and #3) were found to be totally lacking in cover of the planted target species (reed canary grass). As these sample plot results indicate, for a majority of the Site restored wetlands, the target ground cover percentages have not yet been met; however, based on general observations in the restored wetland area, the overall presence of reed canary grass has increased from the 2001 evaluation.

In contrast to the year 2001 results, in which all restored wetland areas were lacking adequate ground cover and comprised predominantly bare ground, the sample plots evaluated indicated that a minimum of 95% ground cover has been established in the evaluated areas. A photograph log of the sample plot areas is included as Attachment 2.

Also, common reed and purple loosestrife, two highly invasive species, were generally observed in larger numbers over the restored wetland areas and along the banks of Ley Creek in the Site area than was observed during the 2001 monitoring event. Neither of these species was present in any of the sample plots evaluated in 2001; however, both were present in Plot #3, and common reed was present in Plot #4.

CONCLUSIONS AND RECOMMENDATIONS

Evaluation efforts performed during the second full growing season following NYSDEC and USEPA approval of the O&M Plan at the Ley Creek PCB Dredgings Site indicated that the restored wetlands are improving but have not yet attained the restoration goal. As was recommended following the 2001 evaluation, O'Brien & Gere recommends the following activities to be performed within the restored wetlands at the times presented below, to continue progress towards meeting the success criteria:

- Additional seeding of herbaceous wetland species (reed canary grass) is recommended in the emergent portion of this wetland, and should be performed in late Spring 2003. Fertilizer 6-44-12 should be applied at a rate of 300 lbs per acre and FINN HST soil conditioner should be applied at a rate of 2.5 gallons per acre. Conwed HYDRO MULCH 2000 should be applied at a rate of 2,500 lbs per acre to minimize the potential of newly applied seed/fertilizer/soil conditioner being carried away during high discharge periods within Ley Creek.

The preceding recommendation was not implemented during the 2002 growing season; however, conditions within the restored wetland did indicate progress towards meeting the restoration goal. It is possible that the wetland restoration will succeed in meeting the restoration goal without the implementation of this recommendation. However, the implementation of this recommendation in the 2003 growing season should accelerate the restoration of the wetlands towards meeting the restoration goal. The next wetland evaluation will be performed in 2003 in accordance with the OM&M Manual.

If you should have any questions pertaining to the information presented in this letter, please feel free to contact Douglas Crawford or me at (315) 437-6100.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Bradley A. Kubiak
Project Engineer

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cc: Ron Chiarello
Douglas Crawford, P.E.
Maureen Markert, P.E.

Table 1. *Summary of Evaluation Criteria Comparisons*

Sample Plot #	**Ground Cover Criterion**[a]	Observed Ground Cover	Observed Desirable Ground Cover[b]
1	**90%**	110%	20%
2	**90%**	95%	0%
3	**90%**	95%	0%
4	**90%**	105%	100%

[a] Ground cover of seeded and wetland-dependent sepcies.

[b]Calculated by subtracting % cover of undesirable wetland species, *i.e., Lythrum salicaria, Phragmites australis*, if present, and non-wetland species from total % ground cover.

Attachment 1

Field Data Forms

GROUND COVER DATA FORM

Site: GM Ley Creek Site - Restored Wetland
Date: 9/13/2002
Investigator(s): S. Mooney & R. Chiarello
Plot: Plot #1
Wetland type: Emergent

Species	Wetland Indicator Status	Percent cover
Lotus corniculatus	FACU-	50
Plantago major	FACU	5
Phalaris arundinacea	FACW+	15
Dactylis glomerata	FACU	5
Lolium perenne	FACU-	5
Trifolium repens	FACU-	25
Populus deltoides	FAC	5
Total ground cover (%)		110
% desirable ground cover		20a
% ground cover hydrophytic (FAC, FACW and OBL)		18b

Note
[a]Calculated by subtracting % cover of undesirable wetland species, *i.e., Lythrum salicaria, Phragmites australis*, if present, and non-wetland (FACU and FACU-) species from total % ground cover.
[b]Calculated by adding percent cover for each indicator status and dividing by total ground cover %.

Wetland Indicator Status Range
UPL (obligate upland) = probability of occurrence in wetland <1%
FACU (facultative upland) = probability of occurrence in wetland in the range 1 to 33%
FACU- (facultative upland -) = probability of occurrence in wetland in the lower part of the range 1 to 33%
FACU+ (facultative upland +) = probability of occurrence in wetland in the upper part of the range 1 to 33%
FAC (facultative) = probability of occurrence in wetland in the range 34 to 66%
FAC- (facultative -) = probability of occurrence in wetland in the lower part of the range 34 to 66%
FAC+ (facultative +) = probability of occurrence in wetland in the upper part of the range 34 to 66%
FACW (facultative wetland) = probability of occurrence in wetland in the range 67 to 99%
FACW- (facultative wetland -) = probability of occurrence in wetland in the lower part of the range 67 to 99%
FACW+ (facultative wetland +) = probability of occurrence in wetland in the upper part of the range 67 to 99%
OBL (obligate wetland) = probability of occurrence in wetland >99%

GROUND COVER DATA FORM

Site: GM Ley Creek Site - Restored Wetland
Date: 9/13/2002
Investigator(s): S. Mooney & R. Chiarello
Plot: Plot #2
Wetland type: Emergent

Species	Wetland Indicator Status	Percent cover
Trifolium repens	FACU-	55
Lolium perenne	FACU-	15
Dactylis glomerata	FACU	10
Lotus corniculatus	FACU-	15
Total ground cover (%)		95
% desirable ground cover		0[a]
% ground cover hydrophytic (FAC, FACW and OBL)		0[b]

Note
[a]Calculated by subtracting % cover of undesirable wetland species, *i.e., Lythrum salicaria, Phragmites australis*, if present, and non-wetland species (FACU and FACU-) from total % ground cover.
[b]Calculated by adding percent cover for each indicator status and dividing by total ground cover %.

Wetland Indicator Status Range
UPL (obligate upland) = probability of occurrence in wetland <1%
FACU (facultative upland) = probability of occurrence in wetland in the range 1 to 33%
FACU- (facultative upland -) = probability of occurrence in wetland in the lower part of the range 1 to 33%
FACU+ (facultative upland +) = probability of occurrence in wetland in the upper part of the range 1 to 33%
FAC (facultative) = probability of occurrence in wetland in the range 34 to 66%
FAC- (facultative -) = probability of occurrence in wetland in the lower part of the range 34 to 66%
FAC+ (facultative +) = probability of occurrence in wetland in the upper part of the range 34 to 66%
FACW (facultative wetland) = probability of occurrence in wetland in the range 67 to 99%
FACW- (facultative wetland -) = probability of occurrence in wetland in the lower part of the range 67 to 99%
FACW+ (facultative wetland +) = probability of occurrence in wetland in the upper part of the range 67 to 99%
OBL (obligate wetland) = probability of occurrence in wetland >99%

GROUND COVER DATA FORM

Site: GM Ley Creek Site - Restored Wetland
Date: 9/13/2002
Investigator(s): S. Mooney & R. Chiarello
Plot: Plot #3
Wetland type: Emergent

Species	Wetland Indicator Status	Percent cover
Lythrum salicaria	FACW+	60
Phragmites australis	FACW	25
Lolium perenne	FACU-	5
Dactylis glomerata	FACU	5
	Total ground cover (%)	95
	% desirable ground cover	0[a]
	% ground cover hydrophytic (FAC, FACW and OBL)	89b

Note
[a]Calculated by subtracting % cover of undesirable wetland species, *i.e., Lythrum salicaria, Phragmites australis*, if present, and non-wetland (FACU and FACU-) species from total % ground cover.
[b]Calculated by adding percent cover for each indicator status and dividing by total ground cover %.

Wetland Indicator Status Range
UPL (obligate upland) = probability of occurrence in wetland <1%
FACU (facultative upland) = probability of occurrence in wetland in the range 1 to 33%
FACU- (facultative upland -) = probability of occurrence in wetland in the lower part of the range 1 to 33%
FACU+ (facultative upland +) = probability of occurrence in wetland in the upper part of the range 1 to 33%
FAC (facultative) = probability of occurrence in wetland in the range 34 to 66%
FAC- (facultative -) = probability of occurrence in wetland in the lower part of the range 34 to 66%
FAC+ (facultative +) = probability of occurrence in wetland in the upper part of the range 34 to 66%
FACW (facultative wetland) = probability of occurrence in wetland in the range 67 to 99%
FACW- (facultative wetland -) = probability of occurrence in wetland in the lower part of the range 67 to 99%
FACW+ (facultative wetland +) = probability of occurrence in wetland in the upper part of the range 67 to 99%
OBL (obligate wetland) = probability of occurrence in wetland >99%

GROUND COVER DATA FORM

Site: GM Ley Creek Site - Restored Wetland
Date: 9/13/2002
Investigator(s): S. Mooney & R. Chiarello
Plot: Plot #4
Wetland type: Emergent

Species	Wetland Indicator Status	Percent cover
Phalaris arundinacea	FACW+	100
Phragmites australis	FACW	5
	Total ground cover (%)	105
	% desirable ground cover	100a
	% ground cover hydrophytic (FAC, FACW and OBL)	100b

Note
[a]Calculated by subtracting % cover of undesirable wetland species, *i.e., Lythrum salicaria, Phragmites australis*, if present, from total % ground cover.
[b]Calculated by adding percent cover for each indicator status and dividing by total ground cover %.

Wetland Indicator Status Range
UPL (obligate upland) = probability of occurrence in wetland <1%
FACU (facultative upland) = probability of occurrence in wetland in the range 1 to 33%
FACU- (facultative upland -) = probability of occurrence in wetland in the lower part of the range 1 to 33%
FACU+ (facultative upland +) = probability of occurrence in wetland in the upper part of the range 1 to 33%
FAC (facultative) = probability of occurrence in wetland in the range 34 to 66%
FAC- (facultative -) = probability of occurrence in wetland in the lower part of the range 34 to 66%
FAC+ (facultative +) = probability of occurrence in wetland in the upper part of the range 34 to 66%
FACW (facultative wetland) = probability of occurrence in wetland in the range 67 to 99%
FACW- (facultative wetland -) = probability of occurrence in wetland in the lower part of the range 67 to 99%
FACW+ (facultative wetland +) = probability of occurrence in wetland in the upper part of the range 67 to 99%
OBL (obligate wetland) = probability of occurrence in wetland >99%

Attachment 2

Photograph Log

Photo 1: Looking east at area of restored wetland evaluation Plot #1.
Date photo taken: 9/13/2002

Photo 2: Looking west at area of restore wetland evaluation Plot #2.
Date photo taken: 9/13/2002

Photo 3: Looking west at area of restored wetland evaluation Plot #3.
Date photo taken: 9/13/2002

Photo 4: Looking east at area of restored wetland evaluation Plot #4.
Date photo taken: 9/13/2002

FIGURE 1

LANDS NOW OR FORMERLY
NIAGARA MOHAWK POWER CORPORATION
BOOK 598 PAGE 194
BOOK 607 PAGE 126
BOOK 557 PAGE 79

LEY CREEK

WETLAND GROUND COVER
SAMPLE PLOT 1

WETLAND GROUND COVER
SAMPLE PLOT 2

LANDS NOW OR FORMERLY
NIAGARA MOHAWK POWER CORPORATION
BOOK 598 PAGE 194
BOOK 607 PAGE 126
BOOK 557 PAGE 79

12" LIGHT RIP-RAP

OVERFLOW
SPILLWAY

CB-1

MW-13

15' DOUBLE
SWING GATE

HP

15"X21" CMP-ARCH

15"X21" CMP-ARCH

15"X21" CMP-ARCH

FACTORY AVENUE

PK NAIL
BENCHMARK #5
ELEV = 379.15
NORTHING = 1126932.5
EASTING = 941347.3

PK NAIL
BENCHMARK #6
ELEV = 379.05
NORTHING = 1126859.0
EASTING = 940964.8

MATCHLINE "B-B"
FOR CONTINUATION SEE

LEGEND

- SEEDED WITH CANADA GRASS
- -OHW- OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GAS LINE
- SANITARY SEWER
- SANITARY MANHOLE
- CATCH BASIN
- SECURITY FENCE (SEE GENERAL NOTE 3)
- PAVEMENT
- GRAVEL ACCESS ROAD
- LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
- O CATCH BASIN
- MW-08S7C MODIFIED MONITORING WELL
- MONITORING WELL PRESUMED DESTROYED
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON WOVEN GEOTEXTILE
- WETLAND GROUND COVER SAMPLE PLOT LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

OM&M PARTIAL SITE PLAN WETLAND EVALUATION

FILE NO. 4966.30473.006
NOVEMBER 2002

O'BRIEN & GERE

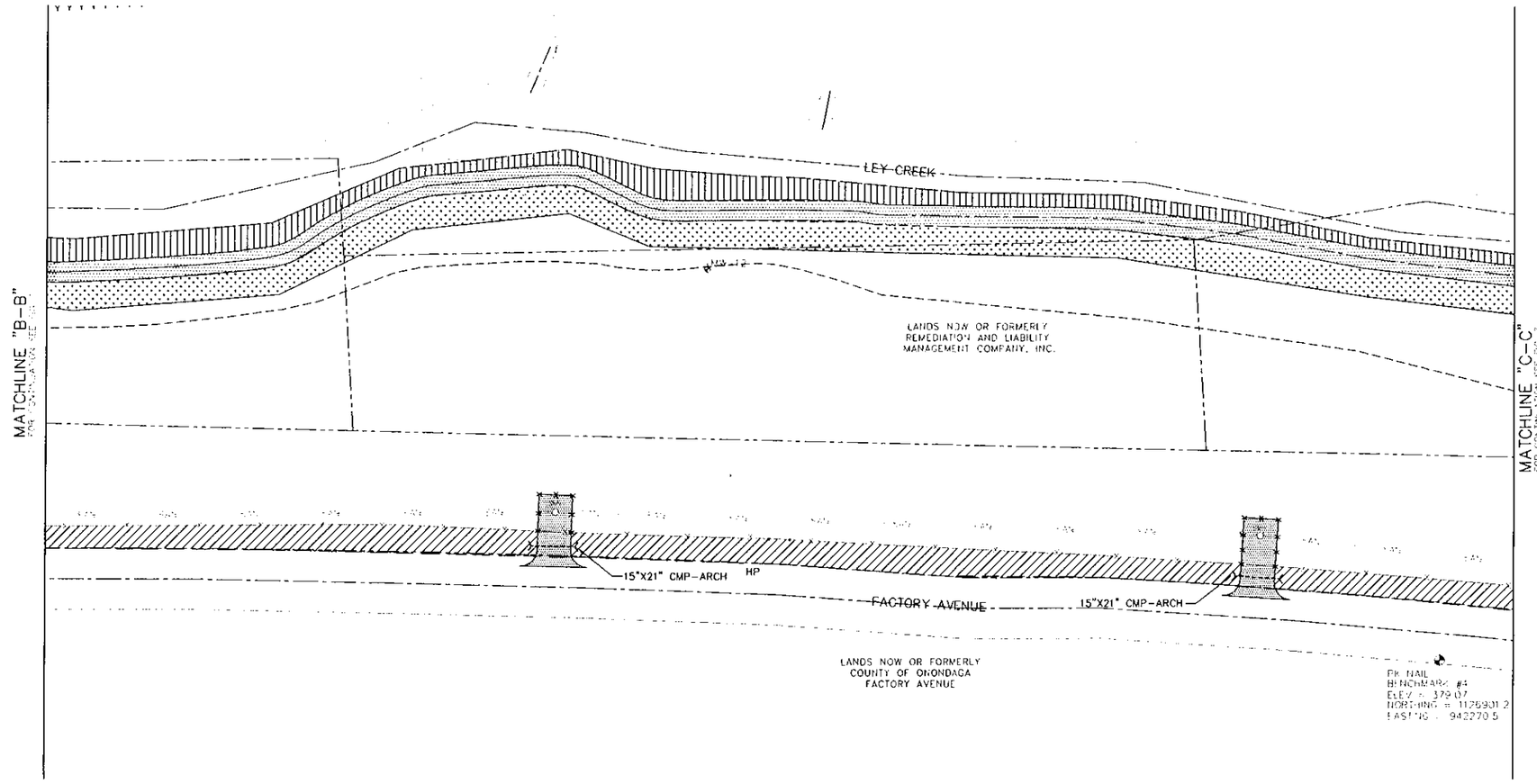


FIGURE 2

LEGEND

- SEEDED WITH CANARY GRASS
- OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GUY WIRE
- SANITARY SEWER
- SANITARY MANHOLE
- CATCH BASIN
- SECURITY FENCE (SEE GENERAL NOTE 4)
- PAVEMENT
- GRAVEL ACCESS ROAD
- LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
- CATCH BASIN
- MW-OW2A MODIFIED MONITORING WELL
- MONITORING WELL PRESUMED DESTROYED
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON-WOVEN GEOTEXTILE
- WETLAND GROUND COVER SAMPLE PLOT LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

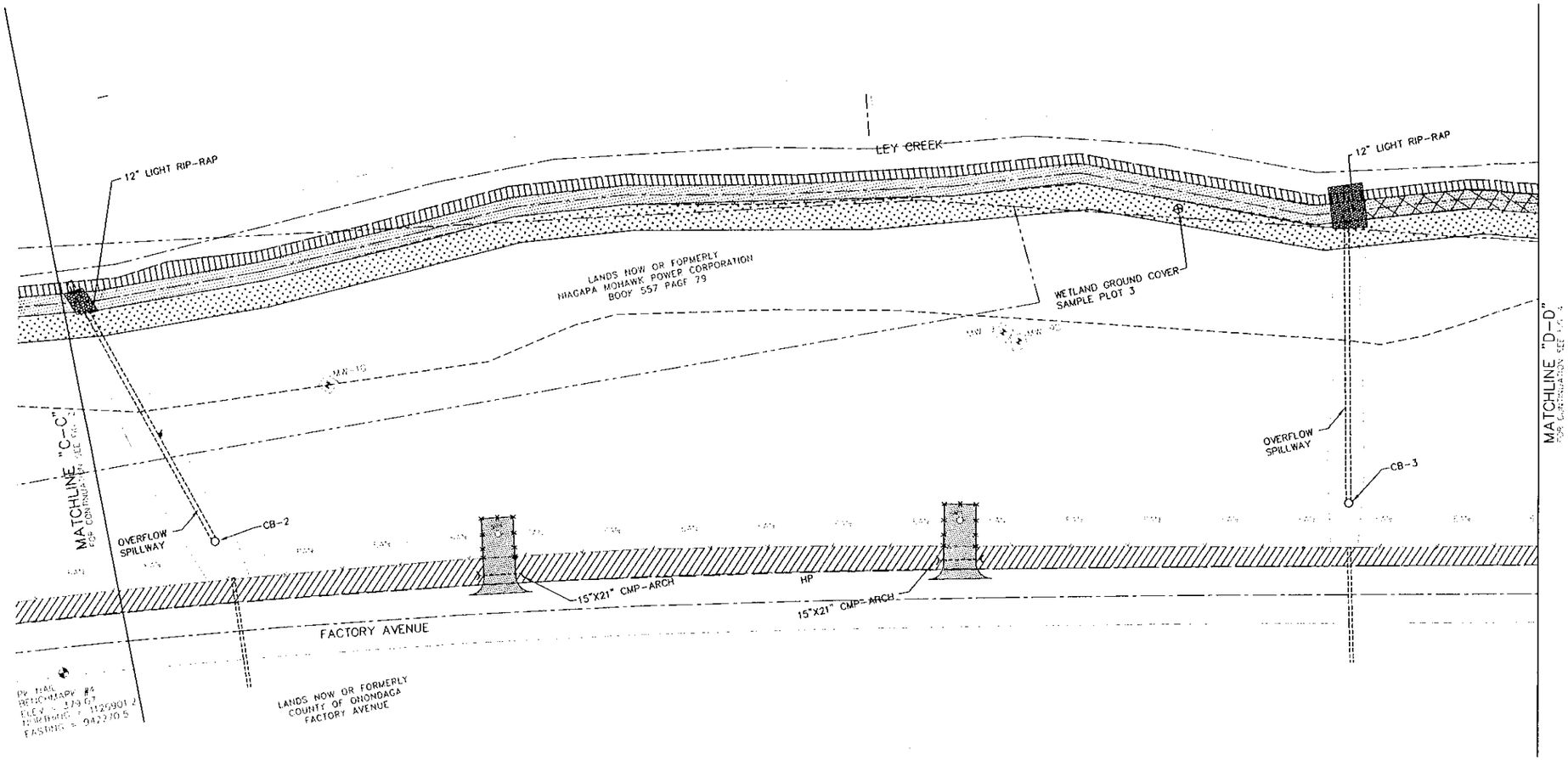
1" = 40' 40 0 40

OM&M PARTIAL SITE PLAN WETLAND EVALUATION

FILE NO. 4966.30473.007
NOVEMBER 2002

O'BRIEN & GERE

FIGURE 3



LEGEND

- SEEDED WITH CANARY GRASS
- OHW — OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GAS MAIN
- SAN SEWER
- SANITARY MANHOLE
- CATCH BASIN
- SECURITY FENCE (SEE GENERAL NOTE 4)
- PAVEMENT
- GRAVEL ACCESS ROAD
- LIMITS OF SOIL TREATED ACTIVE FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
- CATCH BASIN
- MW-OPCAL MODIFIED MONITORING WELL
- MONITORING WELL (PRESUMED DESTROYED)
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON WOVEN GEOTEXTILE
- WETLAND GROUND COVER SAMPLE PLOT LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

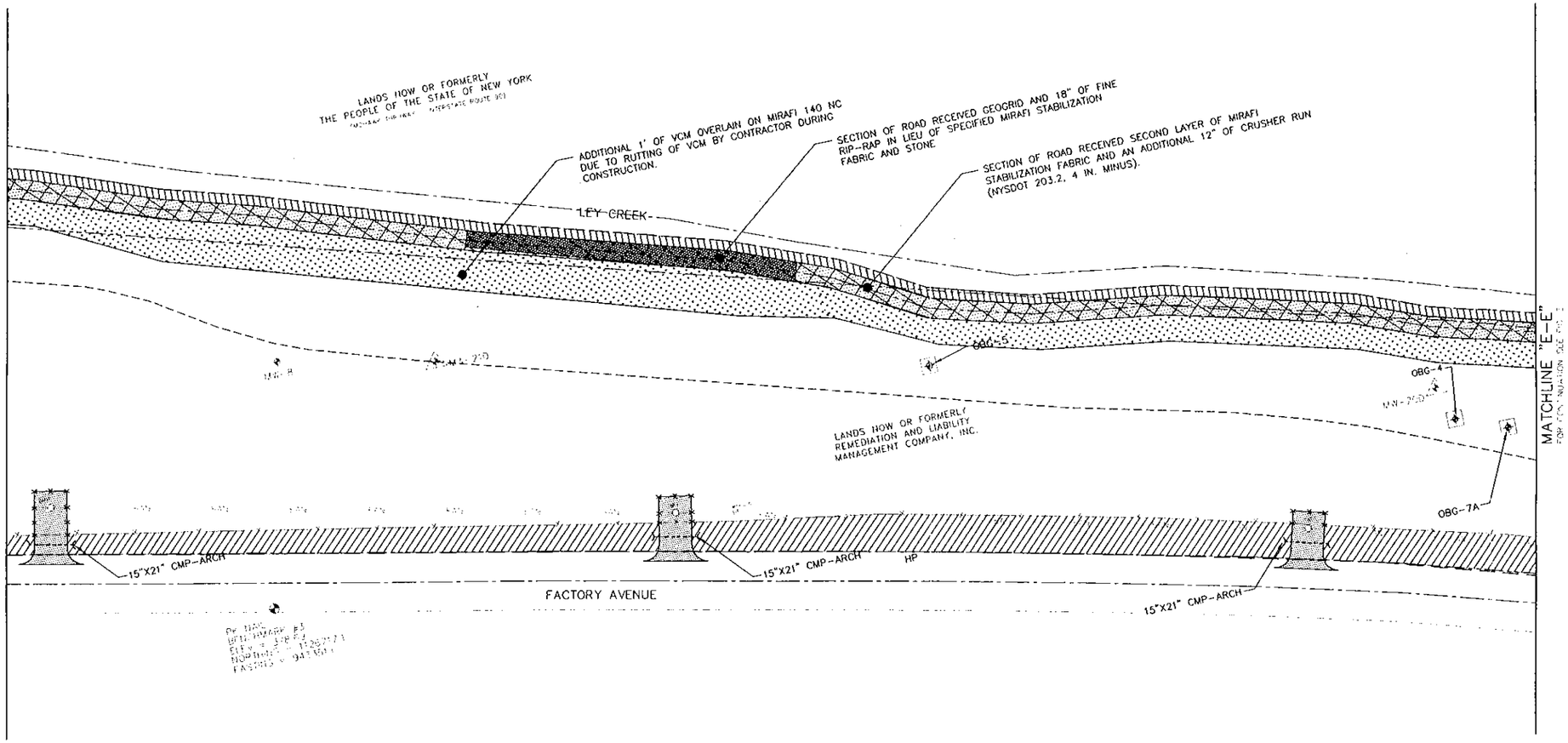
40 0 40

OM&M PARTIAL SITE PLAN WETLAND EVALUATION

FILE NO. 4966.30473.008
NOVEMBER 2002

O'BRIEN & GERE

FIGURE 4



LEGEND

- SEEDED WITH CANARY GRASS
- OHW — OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GUY WIRE
- SAN — SANITARY SEWER
- SANITARY MANHOLE
- CATCH BASIN
- SECURITY FENCE (SEE GENERAL NOTE 4)
- PAVEMENT
- GRAVEL ACCESS ROAD
- LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
- CATCH BASIN
- MW-OBG02 MODIFIED MONITORING WELL
- MONITORING WELL PRESUMED DESTROYED
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON-WOVEN GEOTEXTILE
- WETLAND GROUND FOOLP SAMPLE LOCATION AREA

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

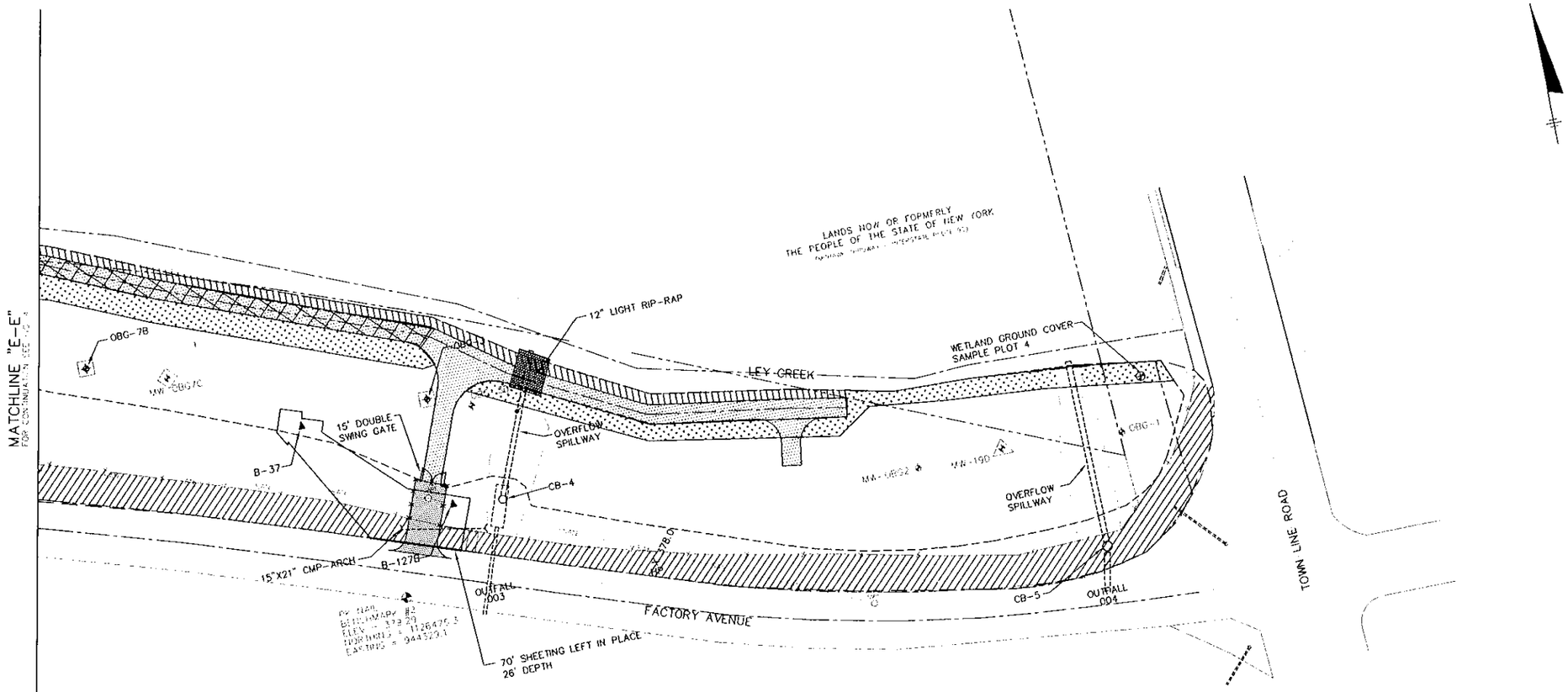
1"=40' 40 0 40

OM&M PARTIAL SITE PLAN WETLAND EVALUATION

FILE NO. 4966.30473.009
NOVEMBER 2002

OBRIEN&GERE

FIGURE 5



LEGEND

- SEEDED WITH CANARY GRASS
- OHW — OVERHEAD WIRES
- PROPERTY BOUNDARY
- FENCE OF WINDS
- HYDRO POLE
- TEL WIRE
- SANITARY SEWER
- SMH — SANITARY MANHOLE
- CB — CATCH BASIN
- SECURITY FENCE (SEE GENERAL NOTE 4)
- PAVEMENT
- GRAVEL ACCESS ROAD
- LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
- CATCH BASIN
- MW-OBG7C MODIFIED MONITORING WELL
- MONITORING WELL PRESUMED DESTROYED
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON-WOVEN GEOTEXTILE
- WETLAND GROUND COVER SAMPLE PLOT LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

OM&M PARTIAL SITE PLAN WETLAND EVALUATION

FILE NO. 4966.30473.010
NOVEMBER 2002

O'BRIEN & GERE

O'BRIEN & GERE
ENGINEERS, INC.

December 9, 2002

James F. Hartnett
Remediation and Liability Management Company, Inc.
6723 Towpath Road, Suite 255
P.O. Box 460
Syracuse, New York 13662

Re: Ley Creek PCB Dredgings Site
2002 November OM&M Inspection

File: 4966/30473 #2

Dear Jim:

The purpose of this letter report is to document the Operation, Maintenance, and Monitoring (OM&M) site inspection conducted on November 19, 2002 by O'Brien & Gere Engineers, Inc. (O'Brien & Gere) at the Ley Creek PCB Dredgings Site (the Site), located in Syracuse, New York. This inspection was performed in accordance with the NYSDEC-approved OM&M Manual, dated September 2001. Attached to this letter report are the OM&M checklist, inspection photographs, and site figures associated with the site inspection.

SITE INSPECTION

On November 19, 2002, an OM&M site inspection was performed at the Site. The inspection checklist along with the comments is attached. The inspection photographs are also attached along with a description of the photographs. The approximate locations of where the photographs were taken are shown in the attached site figures.

Establishment of the vegetative cover has continued to improve. Since the OM&M site inspection conducted in August 2002, vegetation has begun to become established in the areas in which repairs were made by placement of topsoil with subsequent seed and fertilizer application.

Other observations that also require repairs are as follows:

- Gully erosion: (Photograph 9. Figure 5.) One area of gully erosion identified in the August 2002 OM&M site inspection leading down the slope to CB-5/004 overflow spillway was observed and requires maintenance.

- Vegetative cover erosion: (Photographs 3,4,6,7,8, and 9. Figures 1,3 and 5.) Small areas of the vegetative cover were observed to be eroded.

- Stone access road erosion: (Photograph 7. Figure 5.) A portion of the stone access road near the CB-4/003 overflow spillway was observed to be eroded.

- Stone access road rutting: (Photograph 2. Figure 1.) Rutting of the stone access road was observed; the ruts were filled with sediments and water.

- Visible geotextile: (Photographs 3,4, and 9. Figures 1 and 5.) Geotextile fabric was visible due to erosion of the vegetative cover.

- Burrowing animals: (Figure 3.) The hole observed during the August 2002 inspection on the western side slope of the CB-3 overflow spillway near the CB-3 catch basin was still present.

- Debris accumulation: (Figures 1, 3, and 4.) Debris was accumulated in two areas of the ditch that runs parallel to the site along Factory Ave and in one of the access pathways.

- Fence damage: (Figure 5.) A small portion of the fence near the eastern gate was observed to be damaged, but not breached.

- Sinkhole: (Photograph 10. Figure 5.) A sinkhole, located immediately south of the CB-5/004 catch basin was observed.

RECOMMENDATIONS

Vegetation establishment at the Site has continued to improve since the 2001 OM&M inpsection, however, several areas where topsoil has been placed should continue to be monitored for vegetation establishment.

Below is a list of recommended measures to address the observations from the November 2002 OM&M inspection:

- Repair the areas of vegetative cover erosion with topsoil, seed, and fertilizer application
- Repair the stone access road by additional placement of crushed stone
- Remove the woodchuck from the Site, place topsoil in the hole, and apply seed and fertilizer
- Repair damage to the fence
- Remove the debris from the ditch and access pathway
- Repair sinkhole by removal of rip-rap, placement of crushed stone to meet surrounding grade, and replacement of removed rip-rap.

The next semi annual OM&M inspection is scheduled to occur in Late Spring/Early Summer of 2003.

If you should have any questions pertaining to the information presented in this letter, please feel free to contact Douglas Crawford or me at (315) 437-6100.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Bradley A. Kubiak
Project Engineer

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cc: Douglas Crawford, P.E.
Maureen Markert, P.E.

OM&M Inspection checklist

Date Performed: **November 19, 2002**	Weather: **Rain 40 F**
Site Name: **Ley Creek PCB Dredgings site**	Inspector Name: **Bradley A. Kubiak**
Site Location: **Syracuse, New York**	Inspector Signature:

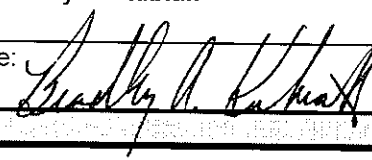
Item	Task	Response		Comments
		Yes	No	
Vegetative Cover	**Visually inspect surface conditions.**			
	1. Areas of settlement?		X	
	2. Areas of erosion?	X		Refer to Photographs 3,4,6,7,8, and 9
	3. Areas where geotextile visible due to erosion?	X		Refer to Photographs 3,4, and 9
	4. Areas of slope instability?		X	
	5. Lack or thinning vegetation?		X	
	6. Presence of burrowing animals?	X		(Figure 3) Woodchuck hole observed near CB-3 in spillway.
	7. Areas of damage?		X	
	8. Drainage problems?		X	
	9. Mowing required?		X	
Access Road	**Visually inspect conditions.**			
	1. Areas of settlement?	X		Photograph 2 - View of rut at western end of the site.

Date Performed: **November 19, 2002**	Weather: **Rain 40 F**
Site Name: **Ley Creek PCB Dredgings site**	Inspector Name: **Bradley A. Kubiak**
Site Location: **Syracuse, New York**	Inspector Signature: Bradley A. Kubiak

Item	Task	Response		Comments
		Yes	No	
Access Road	2. Areas of erosion?	X		Photograph 7 - View of erosion at eastern end of the site.
	3. Areas rutted or potholes present?	X		Photograph 2 - View of rut at western end of the site.
	4. Areas of damage?	X		Photographs 2 and 7 - Views of damage of access road.
	5. Areas of debris accumulation?	X		Photograph 2 - View of rut filled with water and sediments.
Surface Water Drainage	**Visually inspect ditches, catch basins, etc.**			
	1. Accumulation of debris?		X	
	2. Excessive scouring?		X	
	3. Areas of damage?		X	
Ground Water Wells	**Visually inspect conditions.**			
	1. Casings secure and locked?	X		
	2. Areas of damage?		X	

Date Performed: **November 19, 2002**	Weather: **Rain 40 F**
Site Name: **Ley Creek PCB Dredgings site**	Inspector Name: **Bradley A. Kubiak**
Site Location: **Syracuse, New York**	Inspector Signature:

Item	Task	Response		Comments
		Yes	No	
Sanitary sewer access paths	**Visually inspect conditions.**			
	1. Cracks in asphalt?		X	
Sanitary sewer access paths	2. Manhole covers in place?	X		
	3. Debris accumulating in access paths?	X		(Figures 1,3, and 4)Some debris in a few of the access path
Physical Site Security	**Visually inspect fences and gates**			
	1. Signs intact?	X		
	2. Fence breached?		X	
	3. Access gates locked?	X		
	4. Areas of damage?	X		(Figure 5) Damage near the eastern gate.

Date Performed: **November 19, 2002**	Weather: **Rain 40 F**
Site Name: **Ley Creek PCB Dredgings site**	Inspector Name: **Bradley A. Kubiak**
Site Location: **Syracuse, New York**	Inspector Signature: 

Item	Task	Response		Comments
		Yes	No	
Note any additional comments.				
Areas that received additional topsoil and fertilizer in August 2002 have shown a considerable increase in vegetation establishment. Some debris is beginning to accumulate along Factory Ave. in the ditch and in a few of the access paths. Overall vegetation establishment continues to increase.				

11/19/02
Photograph 1- View looking East from western gate.

11/19/02
Photograph 2- View of ponded water in ruts in access road.

11/19/02
Photograph 3- View of geotextile near CB-1 flared end section.

11/19/02
Photograph 4- View of geotextile near CB-1 flared end section.

11/19/02
Photograph 5- View of new vegetation looking East from CB-2.

11/19/02
Photograph 6- View of erosion area in CB-3 overflow spillway.

11/19/02
Photograph 7- View of erosion in access road near CB-4/003.

11/19/02
Photograph 8- View of erosion in CB-4/003 overflow spillway.

11/19/02
Photograph 9- View of erosion channel near CB-5/004.

11/19/02
Photograph 10- View of sinkhole near CB-5/004.

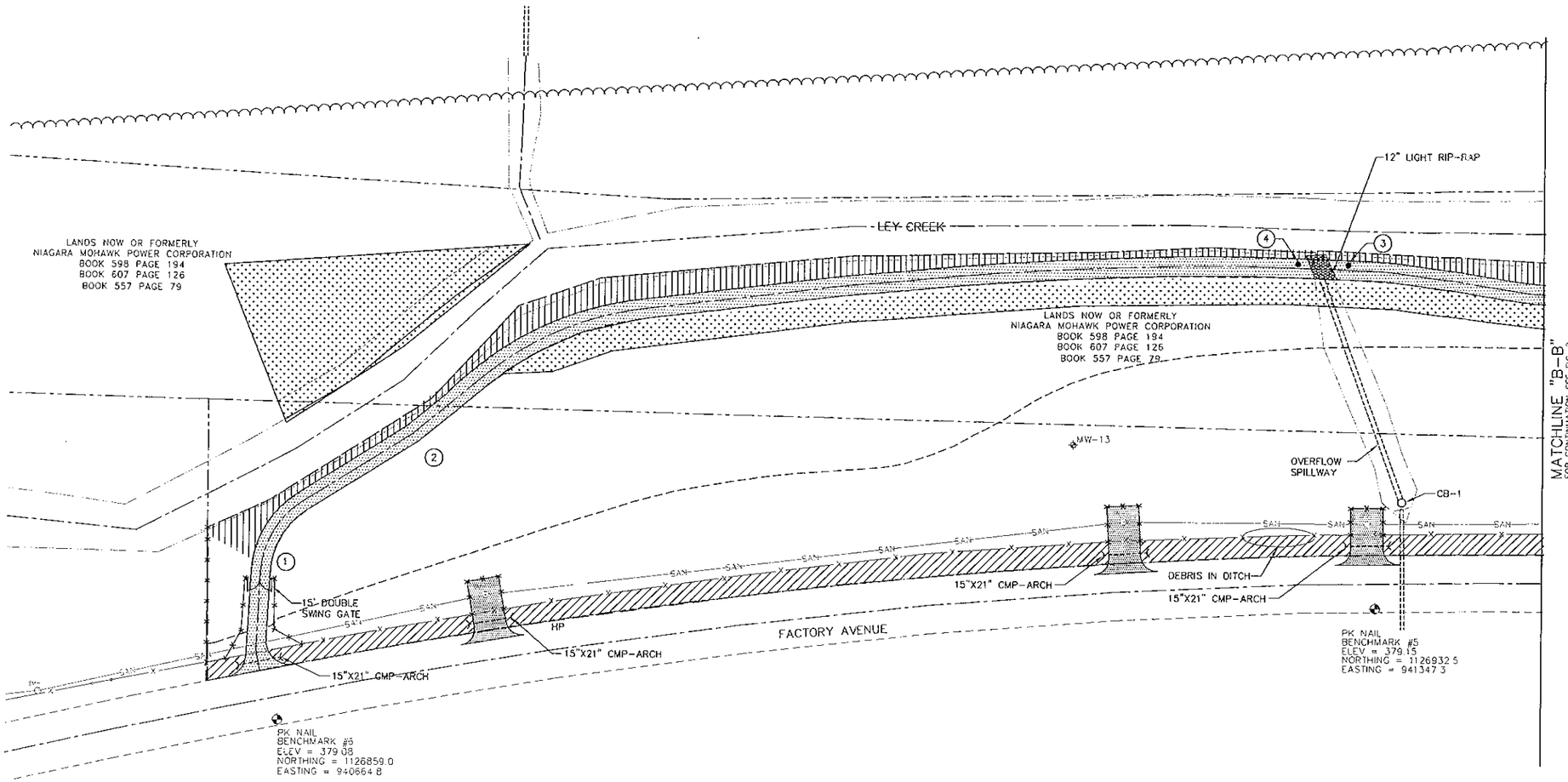


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FIGURE 1

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

1"=40' 40 0 40

OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.024
NOVEMBER 2002

OBRIEN & GERE
ENGINEERS, INC

PLOT DATE: 12/4/02

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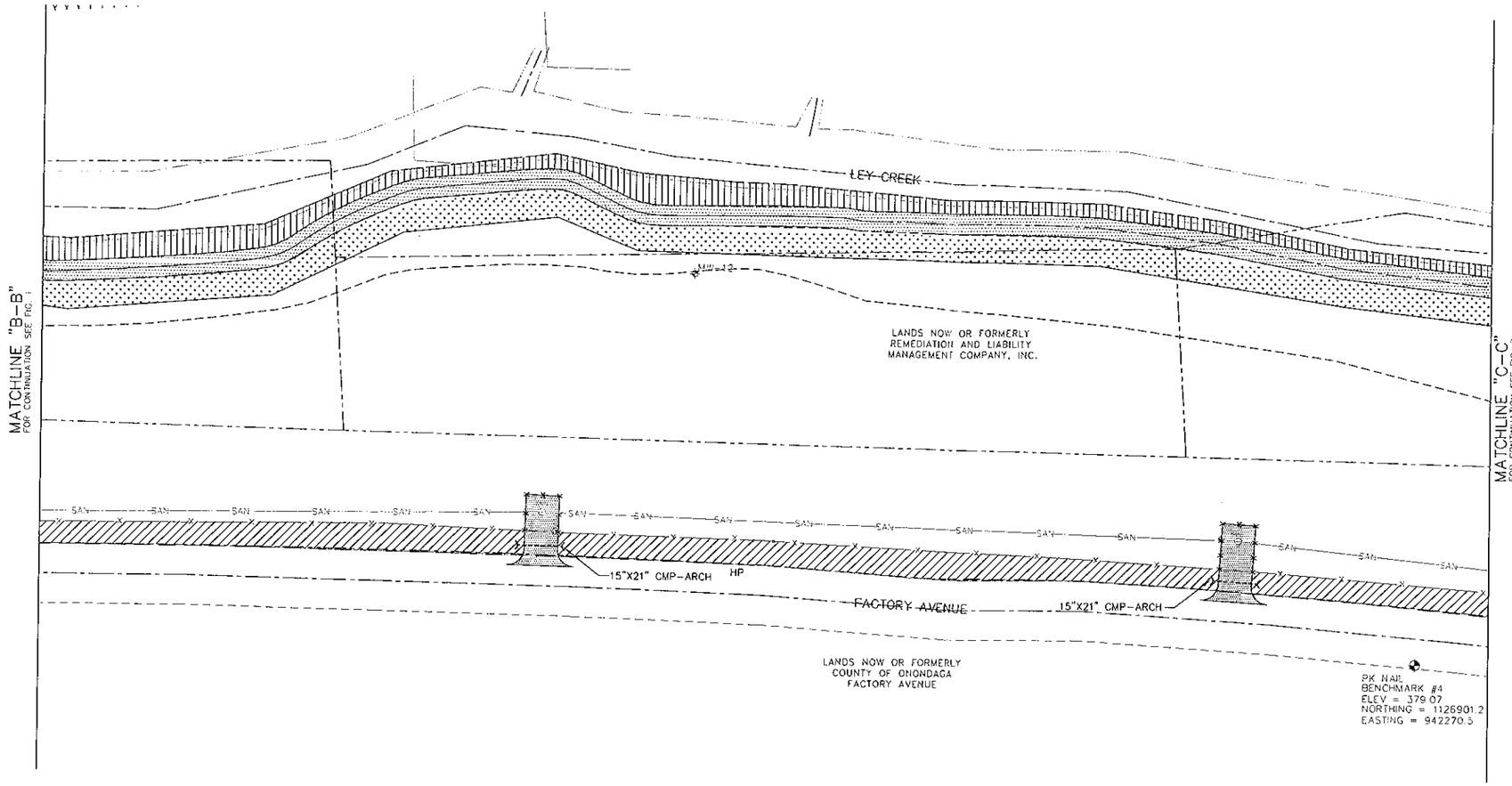
FIGURE 2



LEGEND

- SEEDED WITH CANARY GRASS
- OHW — OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GUY WIRE
- SAN — SANITARY SEWER
- SMH — SANITARY MANHOLE
- CATCH BASIN
- SECURITY FENCE (SEE GENERAL NOTE 4)
- PAVEMENT
- GRAVEL ACCESS ROAD
- LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
- CATCH BASIN
- MW-OBG7C — MODIFIED MONITORING WELL
- MONITORING WELL PRESUMED DESTROYED
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON-WOVEN GEOTEXTILE
- (17) PHOTOGRAPH LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

1"=40' 40 0 40

OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.025
NOVEMBER 2002

O'BRIEN & GERE
ENGINEERS, INC.

PLOT DATE: 12/4/02

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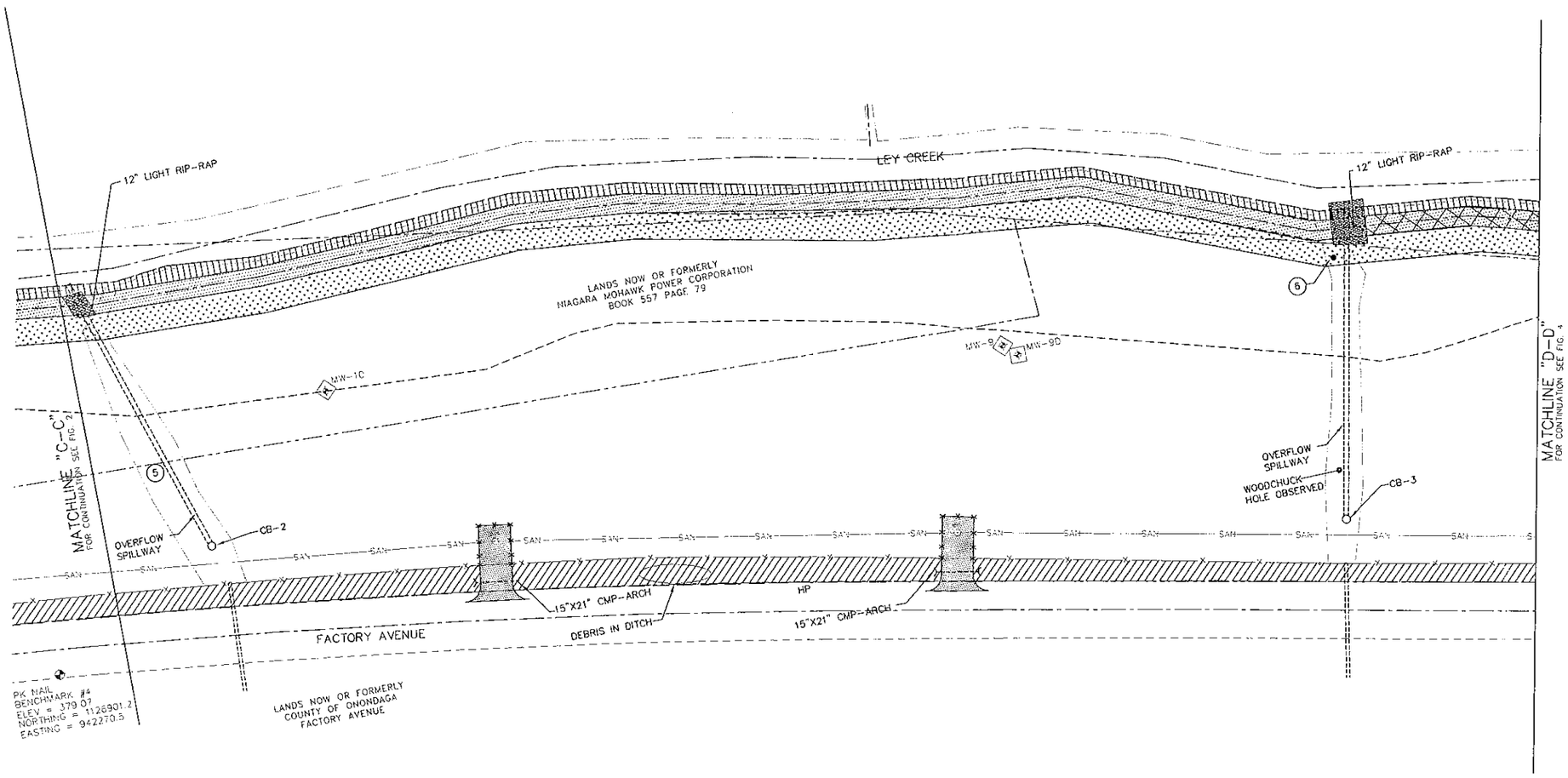
FIGURE 3



LEGEND

- SEEDED WITH CANARY GRASS
- OHW — OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GUY WIRE
- SAN — SANITARY SEWER
- SMH — SANITARY MANHOLE
- CATCH BASIN
- SECURITY FENCE (SEE GENERAL NOTE 4)
- PAVEMENT
- GRAVEL ACCESS ROAD
- LIMITS OF SOIL LOCATED ALONG FACTORY AVENUE RELOCATED BENEATH COVER SYSTEM
- CATCH BASIN
- MW-08G7C — MODIFIED MONITORING WELL
- MONITORING WELL PRESUMED DESTROYED
- ABANDONED MONITORING WELL
- NEW MONITORING WELL
- LIMITS OF EROSION CONTROL MAT
- LIMITS OF COVER SYSTEM
- LIMITS OF NON-WOVEN GEOTEXTILE
- (17) PHOTOGRAPH LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

1"=40' 40 0 40

OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.026
NOVEMBER 2002

O'BRIEN & GERE
ENGINEERS, INC.

PLOT DATE: 12/4/02

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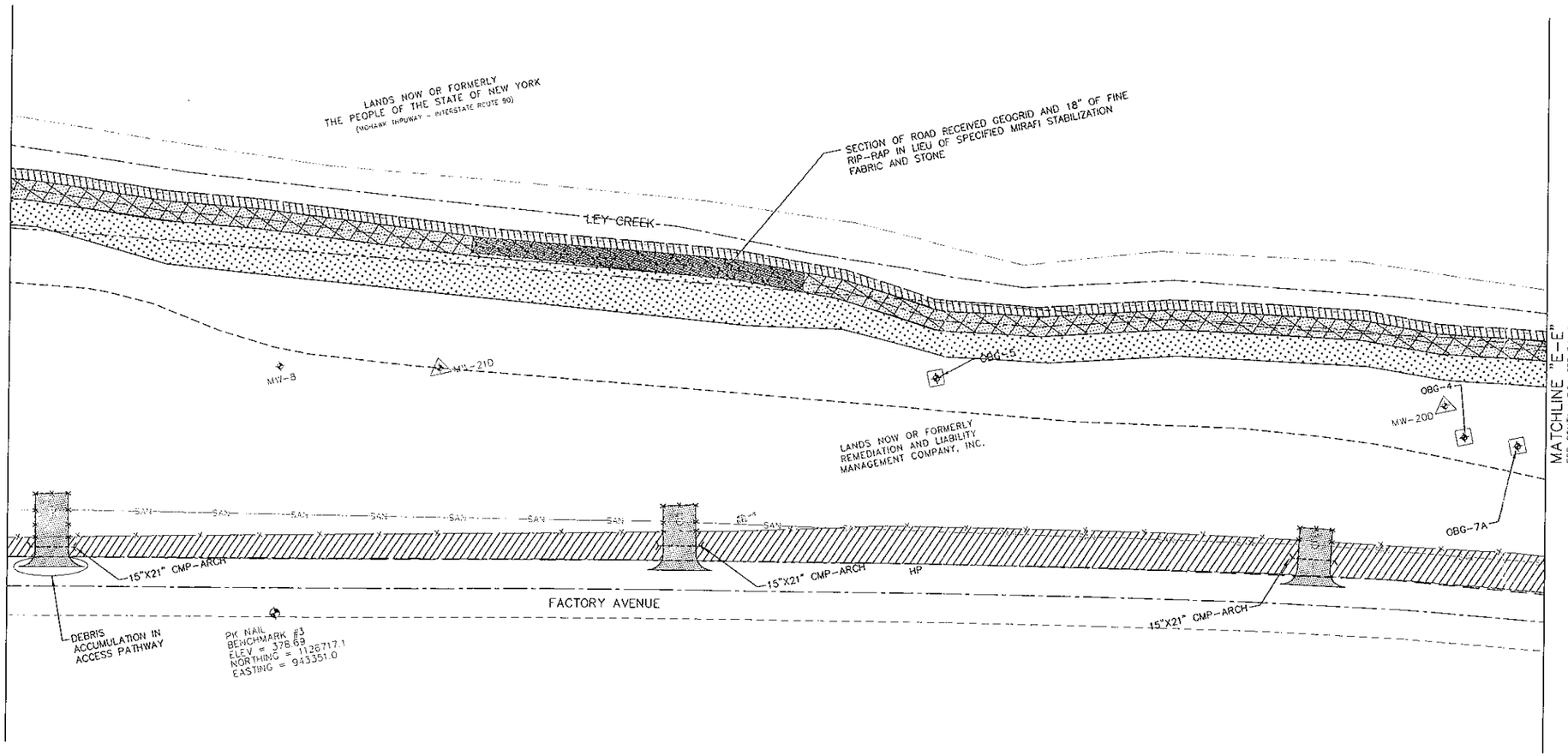

FIGURE 4

LEGEND

- SEEDED WITH CANARY GRASS
- OHW — OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GUY WIRE
- SAN — SANITARY SEWER
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- SECURITY FENCE (SEE GENERAL NOTE 4)
- PAVEMENT
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- (17) PHOTOGRAPH LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

1"=40' 40 0 40

OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.027
NOVEMBER 2002

O'BRIEN & GERE
ENGINEERS, INC.

PLOT DATE: 12/4/02

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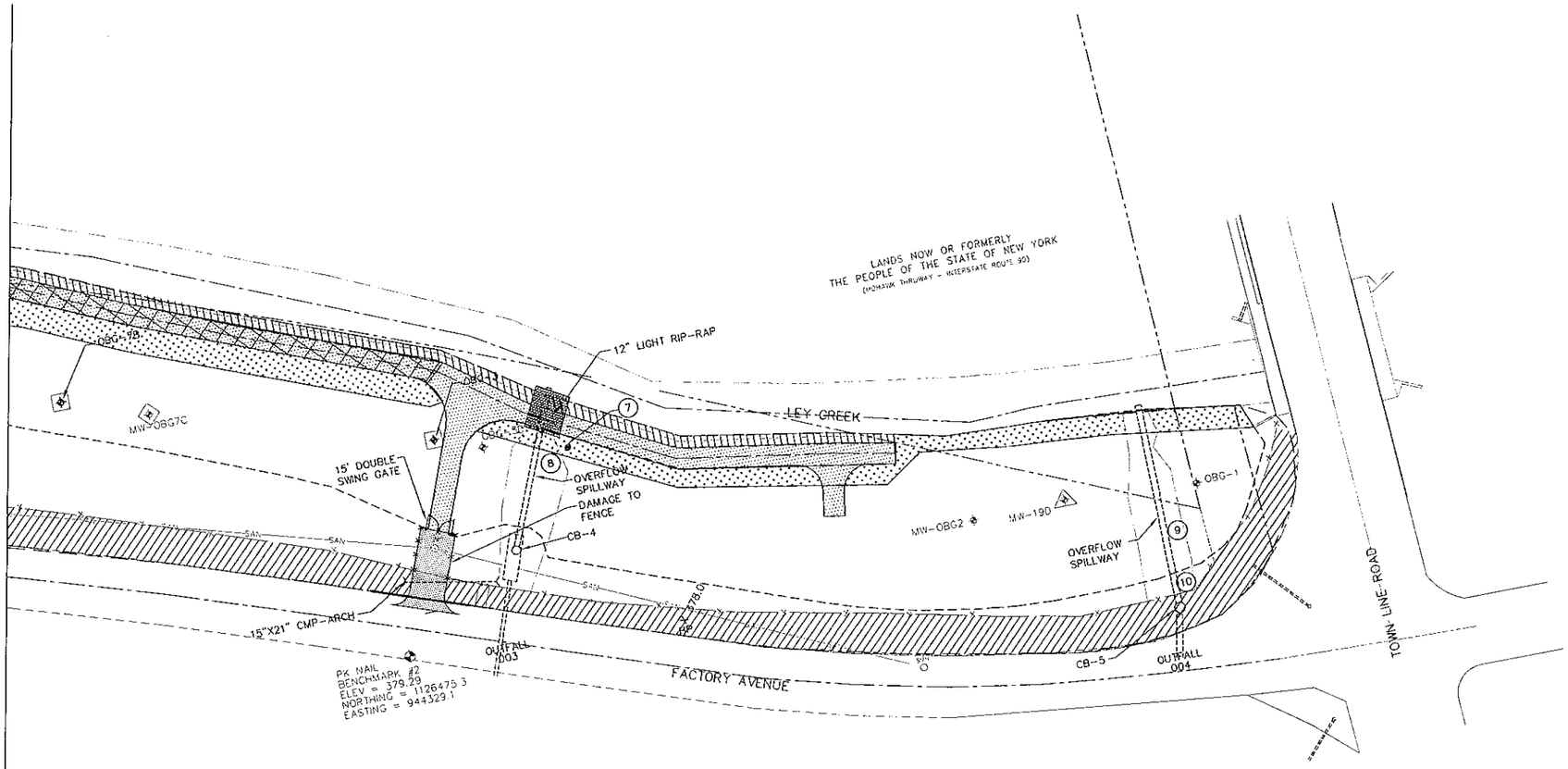

FIGURE 5

LEGEND

- SEEDED WITH CANARY GRASS
- OHW — OVERHEAD WIRES
- PROPERTY BOUNDARY
- EDGE OF WOODS
- UTILITY POLE
- GUY WIRE
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LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

1"=40' 40 0 40

OM&M PARTIAL SITE PLAN

FILE NO. 4966.30473.028
NOVEMBER 2002

O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 12/4/02

BAK

O'BRIEN & GERE
ENGINEERS, INC.

August 29, 2002

James F. Hartnett
Remediation and Liability Management Company, Inc.
6723 Towpath Road, Suite 255
P.O. Box 460
Syracuse, New York 13662

Re: Ley Creek PCB Dredgings Site
2002 August OM&M Inspection

File: 4966/30473 #2

Dear Jim:

The purpose of this letter report is to document the Operation, Maintenance, and Monitoring (OM&M) site inspection conducted on August 20, 2002 by O'Brien & Gere Engineers, Inc. (O'Brien & Gere) at the Ley Creek PCB Dredgings Site (the Site), located in Syracuse, New York. This inspection was performed in accordance with the NYSDEC-approved OM&M manual, dated September 2001. Attached to this letter report are the OM&M checklist, inspection photographs, and site figures associated with the site inspection.

SITE INSPECTION

On August 20, 2002, an OM&M site inspection was performed at the Site. The inspection checklist along with the comments is attached. The inspection photographs are also attached along with a description of the photographs. The approximate locations of where the photographs were taken are shown in the attached site figures.

Establishment of the vegetative cover has continued to improve. Since the OM&M site inspection conducted in December 2001, topsoil has been applied to the areas of erosion and thinning vegetation that were identified in the 2001 OM&M site inspection. These areas are to be seeded and fertilized by Royal Environmental, Inc. in the near future.

During the August 2002 site inspection, two areas of the site security fence were observed to be damaged. These areas are depicted in photographs 7 and 9. The security fence damage should be repaired as soon as practicable.

Other observations that also require repairs are as follows:

- Gully erosion: (Photograph 1. Figure 5.) One area of gully erosion identified in the 2001 OM&M site inspection leading down the slope to CB-5/004 overflow spillway was observed and requires maintenance.

- Stone access road rutting: (Photograph 6. Figure 1.) Silt deposition on the stone access road was observed in this area during the OM&M inspection, which led to rutting.

- Burrowing animals: (Figure 3.) A woodchuck was observed in the area of CB-3 during the site inspection. A hole was observed on the western side slope of the CB-3 overflow spillway near the CB-3 catch basin.

- Area requiring mowing: (Photograph 4. Figure 3.) The vegetation around the CB-3 catch basin was quite high.

- Debris accumulation: Debris was accumulated around the catch basin CB-1.

RECOMMENDATIONS

Vegetation establishment at the Site has continued to improve since the 2000 construction season, however, several areas where topsoil has been placed should be monitored for vegetation establishment.

Below is a list of recommended measures to address the observations during the OM&M inspection:

- Repair the damaged chain link fence
- Repair the gully erosion with topsoil, seed, and fertilizer application
- Apply seed and fertilizer to areas that received topsoil earlier this year
- Repair the stone access road by additional placement of crushed stone
- Remove the woodchuck from the Site, place topsoil in the hole, and apply seed and fertilizer
- Mow/trim the vegetation around CB-3 catch basin
- Remove the debris around CB-1 catch basin.

The next semi-annual OM&M inspection is scheduled to occur in the Fall of 2002.

If you should have any questions pertaining to the information presented in this letter, please feel free to contact Douglas Crawford or me at (315) 437-6100.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Bradley A. Kubiak
Project Engineer

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cc: Douglas Crawford, P.E.
Maureen Markert, P.E.

Date Performed: **August 20, 2002**	Weather: **Sunny and Clear 70-80 F**
Site Name: **Ley Creek PCB Dredgings site**	Inspector Name: **Bradley A. Kubiak**
Site Location: **Syracuse, New York**	Inspector Signature: Bradley A. Kubiak

Item	Task	Response		Comments
		Yes	No	
Vegetative Cover	**Visually inspect surface conditions.**			
	1. Areas of settlement?		X	
	2. Areas of erosion?	X		Photo 1 - Erosion near CB-5/004.
	3. Areas where geotextile visible due to erosion?	X		Photo 1 - Erosion near CB-5/004.
	4. Areas of slope instability?		X	
	5. Lack or thinning vegetation?		X	
	6. Presence of burrowing animals?	X		Woodchuck and hole observed near CB-3 in spillway.
	7. Areas of damage?		X	
	8. Drainage problems?		X	
	9. Mowing required?	X		Photo 4 - Area requires trimming near CB-3.
Access Road	**Visually inspect conditions.**			
	1. Areas of settlement?		X	

Date Performed: **August 20, 2002**	Weather: **Sunny and Clear 70-80 F**
Site Name: **Ley Creek PCB Dredgings site**	Inspector Name: **Bradley A. Kubiak**
Site Location: **Syracuse, New York**	Inspector Signature: Bradley A. Kubiak

Item	Task	Response		Comments
		Yes	No	
Access Road	2. Areas of erosion?		X	
	3. Areas rutted or potholes present?	X		Photo 6 - View of rut at western end of the site.
	4. Areas of damage?	X		Photo 6 - View of rut at western end of the site.
Surface Water Drainage	**Visually inspect ditches, catch basins, etc.**			
	1. Accumulation of debris?	X		Some trash accumulated around CB-1.
	2. Excessive scouring?		X	
	3. Areas of damage?		X	
Ground Water Wells	**Visually inspect conditions.**			
	1. Casings secure and locked?	X		
	2. Areas of damage?		X	
Sanitary sewer access paths	**Visually inspect conditions.**			
	1. Cracks in asphalt?		X	

Date Performed: **August 20, 2002**	Weather: **Sunny and Clear 70-80 F**
Site Name: **Ley Creek PCB Dredgings site**	Inspector Name: **Bradley A. Kubiak**
Site Location: **Syracuse, New York**	Inspector Signature: Bradley A. Kubiak

Item	Task	Response		Comments
		Yes	No	
Sanitary sewer access paths	2. Manhole covers in place?	X		
	3. Debris accumulating in access paths?		X	
Physical Site Security	**Visually inspect fences and gates**			
	1. Signs intact?	X		
	2. Fence breached?	X		Photos 7, and 9 - Views of breached fencing.
	3. Access gates locked?	X		
	4. Areas of damage?	X		Photos 3, 7, and 9 - Views of damaged and breached fencing.

Note any additional comments.

Areas that had thinning vegetation have had topsoil placed in the area. These areas will be fertilized and seeded when the weather is favorable for growth and and establishment of vegetation. Overall the vegetative cover system is in good condition with increasingly denser growth and coverage.

Photo 1- Erosion area with geotextile in view near CB-5/004.

Photo 2 - View along Ley Creek looking West from CB-5/004 outlet.

Photo 3 - View of damaged fence near CB-4/003.

Photo 4 - Area around CB-3 that requires trimming.

Photo 5 - View from west end of the where topsoil was applied.

Photo 6 - View of rut in road at western end of the Site.

Photo 7 - View of breached fence near CB-1.

Photo 8 - View of Site from CB-1 spillway looking east at Site.

Photo 9 - View of breached fence between CB-1 and CB-2.

Photo 10 - View looking east at site from area of damged fence.

Photo 11 - View looking east towards CB-3.

Photo 12 - View looking east from along stone access road near CB-3.

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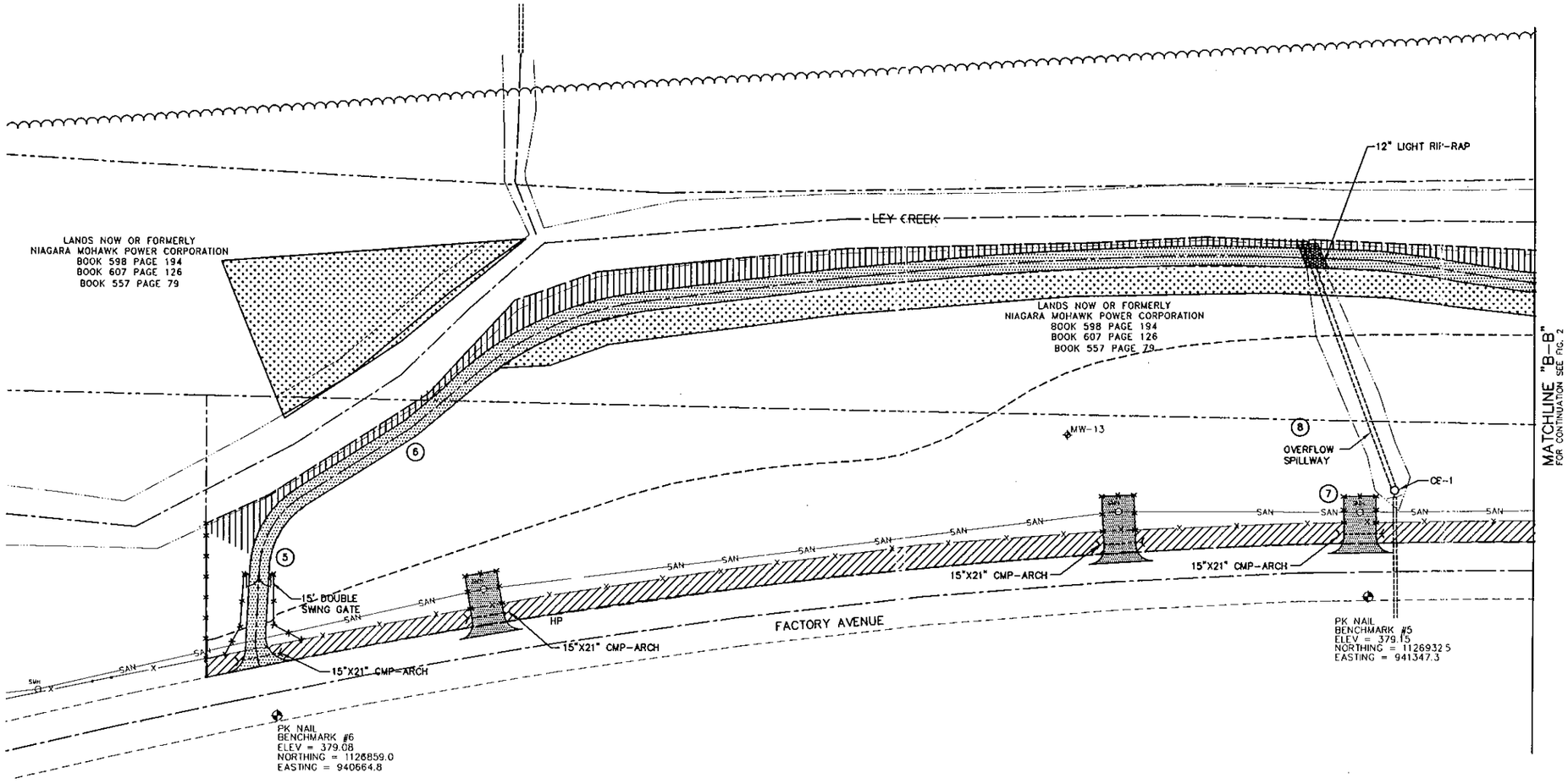

FIGURE 1

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- (7) PHOTO LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

1"=40' 40 0 40

OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.017
AUGUST 2002

O'BRIEN & GERE
ENGINEERS, INC.

PLOT DATE: 8/21/02

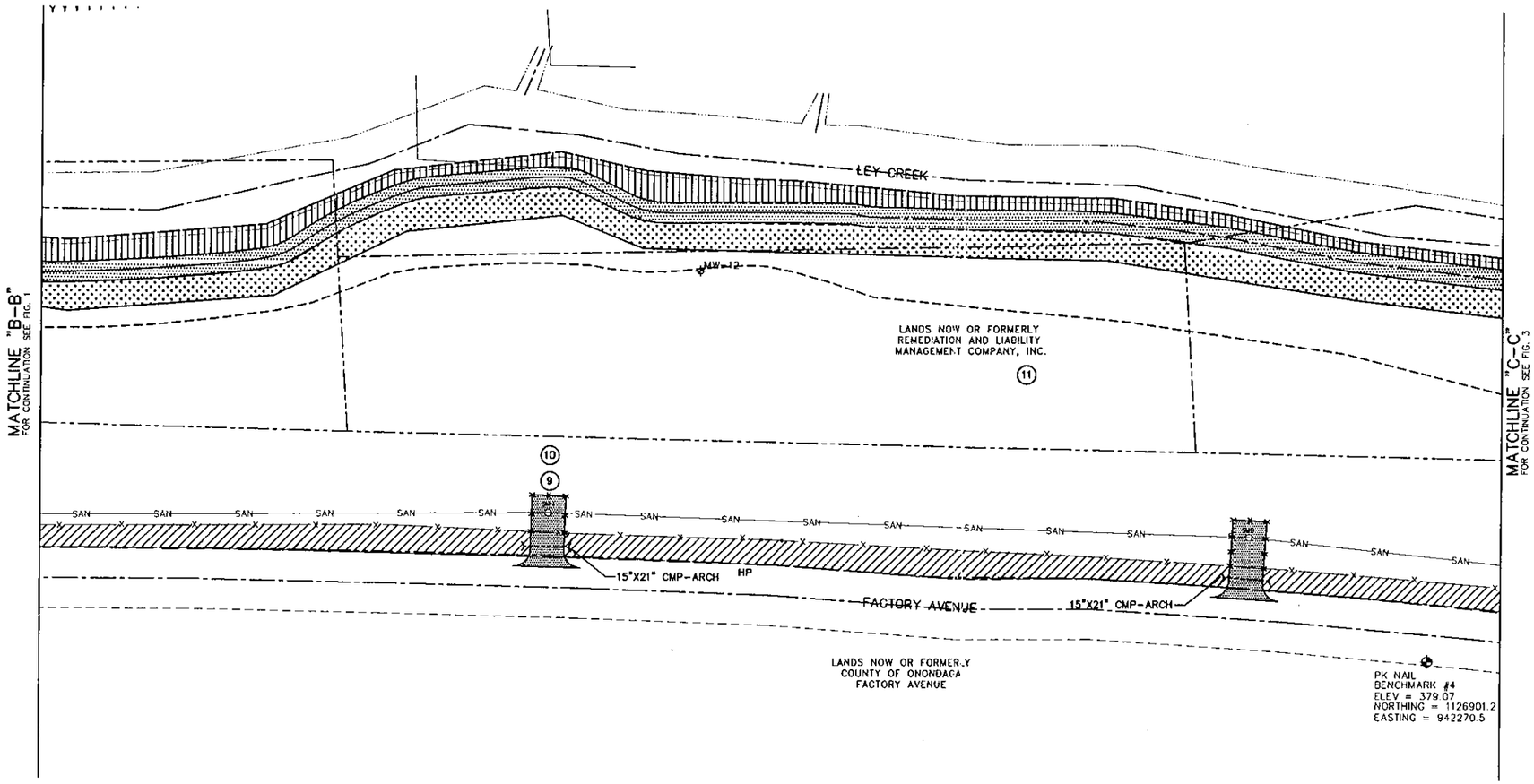

FIGURE 2

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- (9) PHOTO LOCATION

LEY CREEK PCB DREDGINGS SITE
SYRACUSE, NEW YORK
SITE REMEDIATION PROJECT

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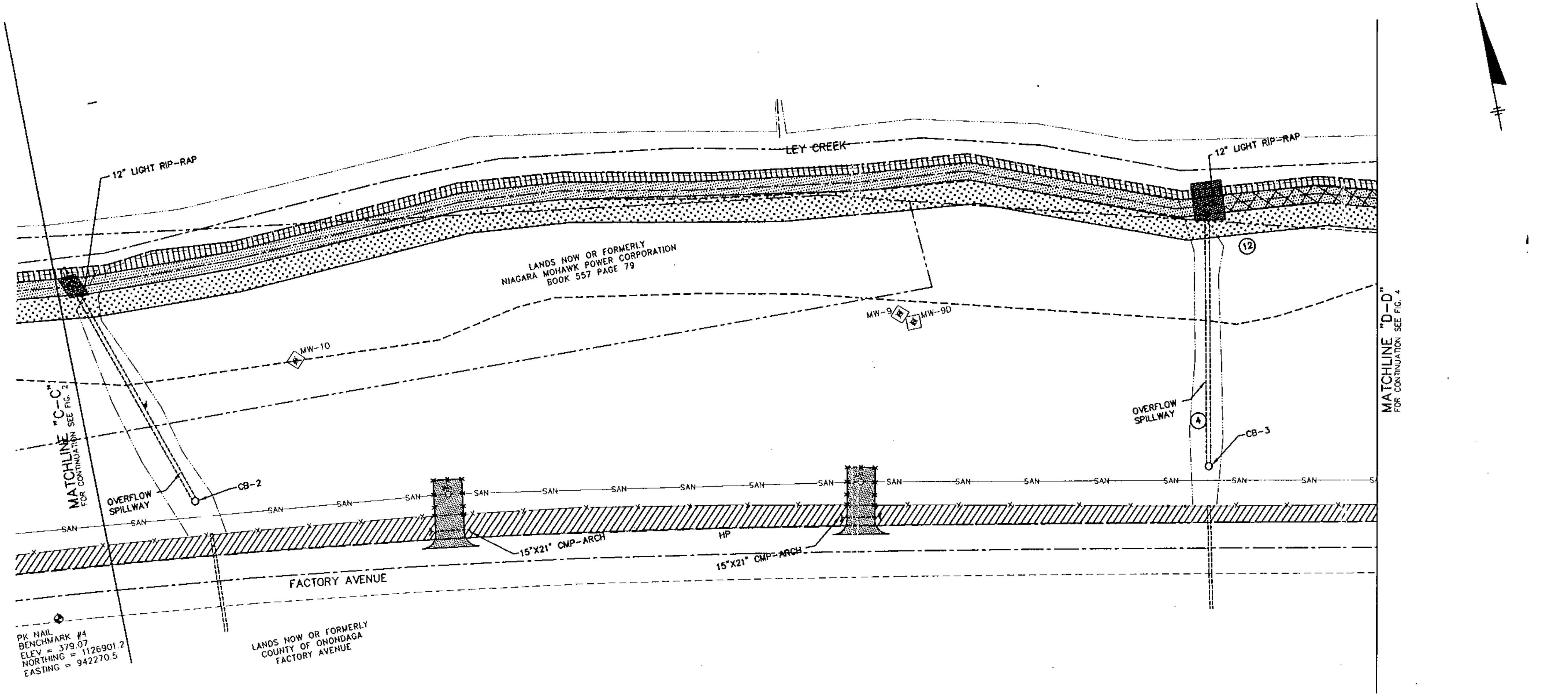
OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.018
AUGUST 2002

O'BRIEN & GERE
ENGINEERS, INC.

FIGURE 3



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O'BRIEN & GERE ENGINEERS, INC.

PLOT DATE: 8/21/02

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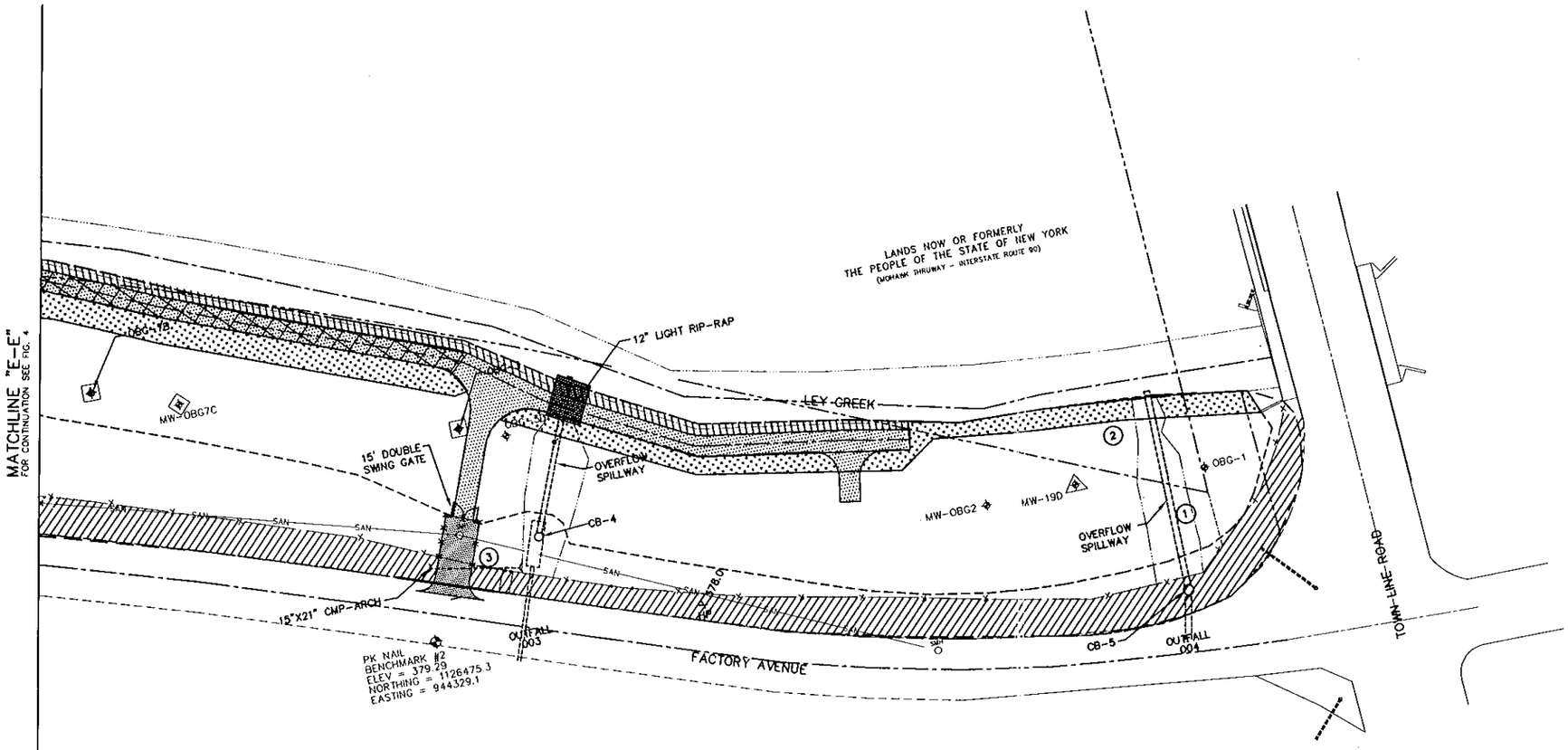
PLOT DATE: 8/21/02

FIGURE 5



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OM&M
PARTIAL SITE PLAN

FILE NO. 4966.30473.021
AUGUST 2002

O'BRIEN & GERE
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