

**New York State Department of Environmental Conservation  
Division of Environmental Remediation**

Remedial Bureau B, 12<sup>th</sup> Floor  
625 Broadway, Albany, New York 12233-7016  
Phone: (518) 402-9768 • Fax: (518) 402-9773  
Website: [www.dec.ny.gov](http://www.dec.ny.gov)



April 18, 2012

Mr. Brian McGinnis  
FMC Corporation, Remediation Department  
1735 Market Street  
Philadelphia, Pennsylvania 19103

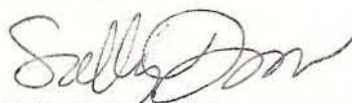
Dear Mr. McGinnis:

Re: FMC Corporation, Middleport, NY  
EPA ID No. NYD002126845  
AOC Docket No. II-RCRA-90-3008(h)-0209  
DER Site No. 932014  
**Revised Operation, Maintenance and Monitoring Plan for the North Railroad  
Property Phase 2 ICM revised March 2012**

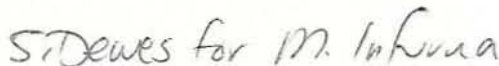
The United States Environmental Protection Agency (USEPA) and the New York State Department of Environmental Conservation (NYSDEC) hereafter referred to as "the Agencies" have received and reviewed the above mentioned document. The changes are acceptable and the report is hereby approved.

If you have questions concerning this letter, you may contact either Ms. Sally Dewes (NYSDEC) at (518)402-9768 or Mr. Michael Infurna (USEPA) at (212) 637-4177.

Sincerely,



Sally Dewes, P.E.  
NYSDEC Project Coordinator  
Division of Environmental Remediation



Michael Infurna  
USEPA Project Coordinator  
Environmental Planning and Protection Division

ec: R. Cozzy/M. Komoroske, DER  
M. Hinton/G. Sutton, NYSDEC Region 9 Buffalo  
R. Locey/R. Rink, NYSDEC Region 9 Buffalo  
S. Radon/D. Weiss, NYSDEC Region 9  
M. Infurna, USEPA  
N. Freeman, NYSDOH  
W. Lachell, AMEC  
D. Watts, MCIG Technical Advisor  
W. Arnold, MCIG Chairperson  
D. Seaman, Seaman, Jones, Hogan & Brooks

# FMC Corporation

**FMC Corporation**  
1735 Market Street  
Philadelphia PA 19103  
  
215.299.6000 phone  
215.299.6947 fax  
  
www.fmc.com

## Transmitted Via Email and FedEx

March 30, 2012

Ms. Sally Dewes, PE  
NYSDEC Project Coordinator  
Remedial Bureau B  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
625 Broadway, 12<sup>th</sup> Floor  
Albany, NY 12233-7016

Mr. Michael Infurna  
USEPA Project Coordinator  
Division of Environmental Planning and Protection  
United States Environmental Protection Agency, Region II  
290 Broadway, 22<sup>nd</sup> Floor  
New York, NY 10007-1866

Re: Revised Operation, Maintenance and Monitoring Plan for the  
North Railroad Property Phase 2 Interim Corrective Measures (ICM)  
RCRA Section 3008(h) Administrative Order on Consent (AOC)  
Docket No. II-RCRA-90-3008(h)-209  
FMC Corporation, Middleport, NY Facility  
EPA I.D. No. NYD002126845

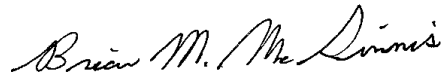
Dear Ms. Dewes and Mr. Infurna:

By letter dated January 18, 2012, FMC Corporation (FMC) requested approval to reduce the frequency of sampling and analysis activities specified in the *Operation, Maintenance, and Monitoring Plan for the North Railroad Property – Phase 2 Interim Corrective Measures (ICM)* (October 2009) (“Phase 2 OM&M Plan”). The New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (USEPA) (jointly, “the Agencies”), in consultation with the New York State Department of Health (NYSDOH), identified, by letter dated February 27, 2012, two conditions under which reduction in the frequency of sampling and analysis activities would be acceptable. By letter dated March 12, 2012, FMC agreed to the Agencies’ condition #1, provided comments on condition #2, and requested a meeting with the Agencies to discuss condition #2. On March 21, 2012, FMC and the Agencies discussed the Agencies’ conditions, and agreed that sampling would be conducted as described in Section 4 of the enclosed revised Phase 2 ICM OM&M Plan.

March 30, 2012

If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink that reads "Brian M. McGinnis". The signature is written in a cursive, flowing style.

Brian M. McGinnis  
Remediation Project Manager  
(215) 299-6047

cc: M. Mortefolio, NYSDEC, Albany  
M. Hinton, NYSDEC, Buffalo  
R. Locey, NYSDEC, Buffalo  
N. Freeman, NYSDOH, Troy  
R. Westcott, Mayor, Village of Middleport  
D. Seaman, Esq., Village Attorney, Village of Middleport  
Middleport Library Document Repository  
W. Lachell, AMEC  
E. Rankin, PE, ARCADIS



**Operation, Maintenance and  
Monitoring Plan for the  
North Railroad Property Phase 2  
Interim Corrective Measures (ICM)**

**FMC Corporation  
Middleport, New York**

October 2009

Revision No. 1 – March 2012



**Operation, Maintenance and  
Monitoring Plan for the North  
Railroad Property Phase 2  
Interim Corrective Measures**

FMC Corporation  
Middleport, New York

Prepared for:  
FMC Corporation

Prepared by:  
ARCADIS  
6723 Towpath Road  
P.O. Box 66  
Syracuse  
New York 13214-0066  
Tel 315.446.9120  
Fax 315.449.0017

Our Ref.:  
B0037764

Date:  
October 2009  
Revision No. 1 – March 2012

## Table of Contents

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2. Summary of Phase 2 ICM Activities	2
3. Inspection, Maintenance and Monitoring Activities	3
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## Figure

- 1 Phase 2 ICM OM&M Activities Site Plan

## Appendices

- A Copies of Record Drawings
- B Inspection Form

## 1. Background and Purpose

The North Railroad Property, which was formerly owned by Conrail and acquired by FMC Corporation (FMC) in May 2002, is located to the north of the FMC Middleport, New York Plant Site as shown on Figure 1. The North Railroad Property includes an active railroad mainline and portions of spurs to the FMC Plant Site, stormwater drainage ditches, and the “Northwest Conrail Area,” which comprises a concrete platform and a grass-covered area. The North Railroad Property was remediated in two phases (“Phase 1” and “Phase 2”) in accordance with an Administrative Order on Consent (AOC) [Docket No. II RCRA-90-3008(h)-0209] entered into by FMC, the New York State Department of Environmental Conservation (NYSDEC), and the United States Environmental Protection Agency (USEPA) (the latter two entities are referred to herein collectively as “the Agencies”), effective July 2, 1991. The locations of the FMC Plant Site, Phase 1 ICM Area, and Phase 2 ICM area are shown on Figure 1.

The Phase 1 ICM activities were completed in 2005, and involved soil excavation and construction of a surface cover on the Phase 1 ICM Area of the North Railroad Property. The Phase 1 ICM activities are documented in the *Final Construction Report for the North Railroad Property Phase 1 Interim Corrective Measures Work Plan* (Phase 1 ICM Construction Report) (2006).

The Phase 2 ICM activities were completed in 2008, and involved installation of a surface cover on the Phase 2 ICM Area of the North Railroad Property and installation of post-Phase 1 stormwater management controls on the northeastern portion of the FMC Plant Site. The Phase 2 ICM activities are documented in the *North Railroad Property Phase 2 Interim Corrective Measures Construction Report* (Phase 2 ICM Construction Report) (2009).

A plan titled *Operation, Maintenance and Monitoring Plan for the North Railroad Property – Phase 2 Interim Corrective Measures (ICM)* (Phase 2 ICM OM&M Plan) (2009), describing the post-construction inspection, maintenance and monitoring activities to be conducted by FMC relative to the Phase 2 ICM Area, was approved by the Agencies by letter dated March 4, 2010. Based on analytical data for surface water samples collected from the Phase 2 ICM Area under the Phase 2 ICM OM&M Plan from December 2009 through November 2011, FMC submitted a request to the Agencies on January 18, 2012 to reduce the frequency of sampling and analysis activities from quarterly to annual. By letter dated February 27, 2012, the Agencies, in consultation with the New York State Department of Health (NYSDOH), identified two conditions under which the requested reduction in frequency of sampling and analysis activities would be acceptable. On March 21, 2012, FMC and the Agencies discussed the Agencies’ conditions, and agreed that sampling would be conducted as described in Section 4 of this revised Phase 2 ICM OM&M Plan.

## 2. Summary of Phase 2 ICM Activities

The Phase 2 ICM construction activities included the following:

- Installation of a surface cover system consisting of (from bottom to top) a flexible membrane liner (FML), a non-woven geotextile, approximately 12 inches of select soil fill, a demarcation layer, approximately 8 inches of general soil fill, and approximately 4 inches of vegetated topsoil.
- Installation of a V-notch strip drain above the surface cover system, ending with a riprap covered termination.
- Installation of an asphalt cover system along the southern, eastern and northeastern perimeters of the Phase 2 ICM Area.
- Installation of a permanent asphalt-lined stormwater diversion and curb in the southwestern portion of the Phase 2 ICM Area and an asphalt-lined stormwater diversion swale along the eastern portion of the Phase 2 ICM Area.
- Installation of an asphalt cover around an existing stormwater catch basin (CB-1-NRR) in the southwest portion of the Phase 2 ICM Area.
- Installation of stormwater management controls on the northeastern portion of the FMC Plant Site to mitigate potential post-Phase 1 ICM increases in stormwater runoff to the Western Surface Impoundment (WSI). These controls consist of a Stormwater Attenuation Structure (SWAS) and adjoining berm.

The locations of these features are indicated on Figure 1. Details regarding the construction of these features are provided in the Record Drawings of the Phase 2 ICM Construction Report. A copy of the Record Drawings is provided in Appendix A of this plan.



### 3. Inspection, Maintenance and Monitoring Activities

The Phase 2 ICM post-construction activities include inspection, maintenance, and monitoring to maintain the condition and integrity of the Phase 2 ICM components (i.e., surface covers, permanent erosion and sediment control, and stormwater management features) and to monitor surface water quality entering catch basin CB-1-NRR in the Phase 2 ICM Area.

Inspection, maintenance and monitoring of Phase 2 ICM components will be conducted in accordance with the procedures outlined in Section 3 of the *Phase 1 Interim Corrective Measures Operation, Maintenance and Monitoring Plan for the North Railroad Property* (Phase 1 ICM OM&M Plan) (2011). The Phase 2 ICM OM&M components include (see Figure 1):

- Phase 2 ICM Area Surface Covers
- Strip Drain Termination
- Swales and Diversions
- Stormwater Attenuation Structure
- Catch Basin CB-1-NRR

The Phase 2 ICM components will be inspected on a quarterly basis, concurrently with the inspection of the Phase 1 ICM Area O&M components.

Personnel conducting inspection activities will complete an Inspection Form (Appendix B). The Inspection Form includes information necessary to review the condition of the Phase 2 ICM components and will aid in determining whether maintenance activities are required. The Inspection Form provides an organized and consistent means of recording typical inspection information such as the date and time of inspection, personnel involved, visual observations, and photographs.

If any problems are encountered during an inspection, FMC shall notify the NYSDEC within three (3) business days of identifying the problem or problems. This notification shall include a description of the problem(s), any immediate actions that were taken to correct or mitigate the problem, and the actions planned to correct the problem, along with a time frame for implementation of such actions. Subject to the provisions of the AOC, including but not limited to Sections VII and XI.1, FMC will also take any alternative or additional actions deemed necessary and directed in writing by the NYSDEC to protect human health and the environment.

#### 4. Surface Water Sample Collection and Analysis

Catch basin CB-1-NRR receives surface water runoff from a portion of the Northwest Conrail Area and the backyards of several residential properties, adjacent to the western boundary of the FMC Plant Site, that were remediated during the 2003 West Properties ICM (2007). In addition, the catch basin receives the effluent from FMC's State Pollutant Discharge Elimination System (SPDES) permitted Outfall 001 (which includes treated water from the Facility water treatment plant [WTP] and stormwater runoff from the south side of the Facility). The catch basin is connected to the Village of Middleport's existing storm sewer system that drains to Tributary One.

Samples of the surface water run-off from the Phase 2 ICM Area entering catch basin CB-1-NRR (not the flow within the catch basin) will be collected during the first calendar quarter (January 1 to March 31) of each year, if feasible. Attempts will be made to collect the samples, during weekday daytime working hours (i.e., 8 am to 5 pm) and when safe to do so, until samples are collected. If surface water samples cannot be collected during the first calendar quarter, then the location will be checked during the subsequent quarter (and thereafter, as needed), with the objective of obtaining a surface water sample within the calendar year.

Sampling and analysis will be conducted in accordance with Section 2.3 and Section 3 of the *North Railroad Property Run-On Sampling and Analysis Plan* (SAP) (2005) that is included as Attachment B to the Phase 1 ICM OM&M Plan. The sample will be submitted to a NYSDOH Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for analysis. The sample will be analyzed for the same constituents and parameters and by the same methods as specified for the Phase 1 ICM Area surface water samples. The analyses and methods include:

- Total and dissolved arsenic (USEPA SW-846 Method 6010B)
- Total and dissolved lead (USEPA SW-846 Method 6010B)
- Site-specific parameter list (SSPL) chlorinated pesticides (USEPA SW-846 Method 8081A)
- Total ammonia (as Nitrogen) (Methods for Chemical Analysis of Water and Wastes [MCAWW] Method 350.1)
- Hardness (MCAWW Method 130.2)

Laboratory analysis, quality control and reporting, and data validation will be conducted in accordance with Section 4 and Section 5 of the SAP.

## 5. Deliverables and Schedule

The findings of the Phase 2 ICM OM&M activities will be documented in the same manner as for the Phase 1 ICM OM&M activities. The results of the quarterly inspections will be discussed in the Quarterly Progress Reports for the FMC Plant Site. If a stormwater sample is collected and analyzed, then the results will be discussed in a report to be provided to the Agencies within 90 days following receipt of the analytical data. If surface water samples are also concurrently collected from the Phase 1 ICM Area ditches, then the results will be provided in a combined report, separate from the Quarterly Progress Report. The content of the report is outlined in Section 4.3 of the Phase 1 ICM OM&M Plan.

## References

ARCADIS. 2009. North Railroad Property Phase 2 Interim Corrective Measures Construction Report (October).

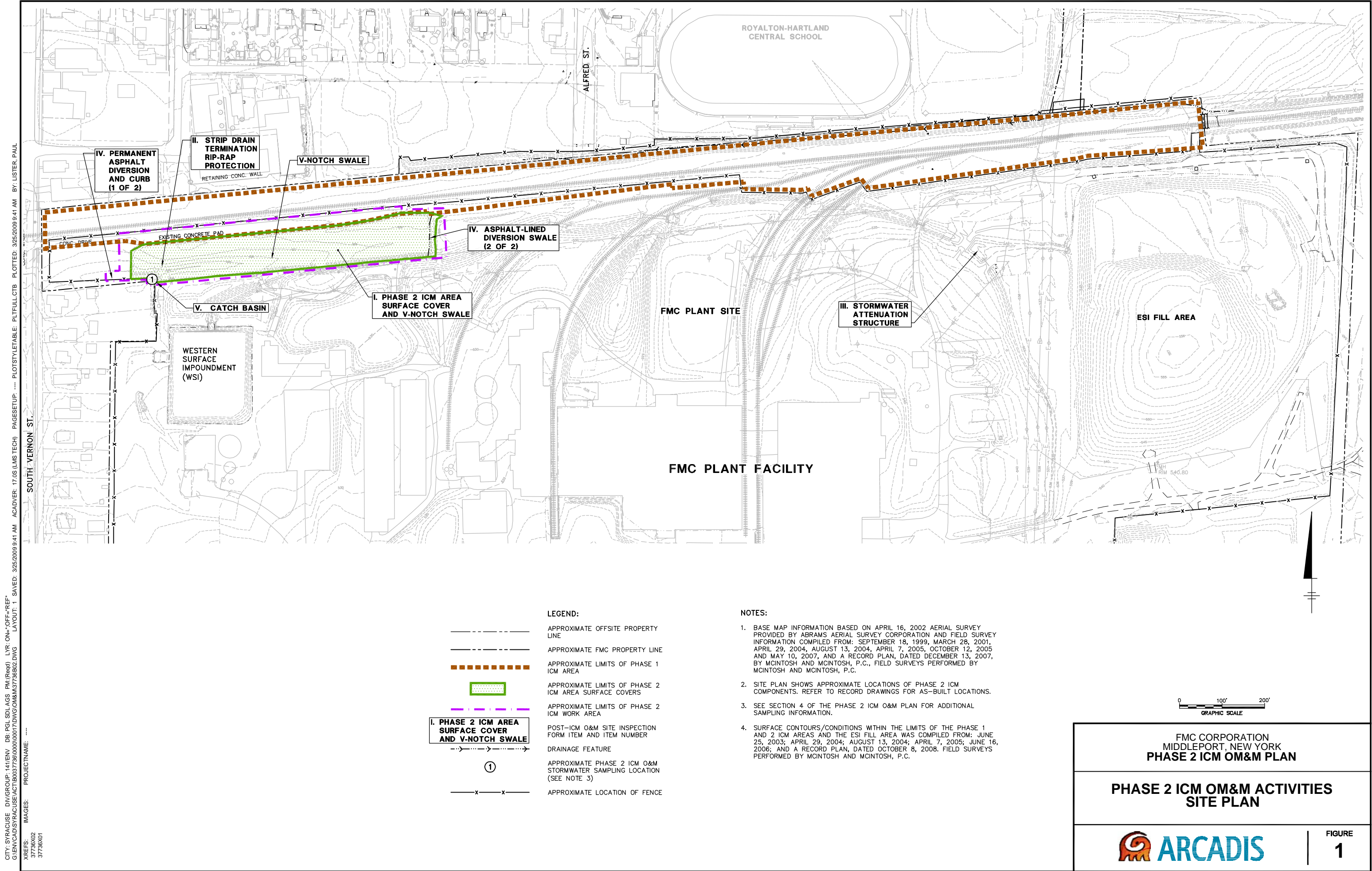
ARCADIS. 2011. Operation, Maintenance, and Monitoring Plan for the North Railroad Property Phase 1 Interim Corrective Measures (Revision No. 1 – June).

BBL. 2006. Final Construction Report for the North Railroad Property Phase 1 Interim Corrective Measures Work Plan (January).

Geomatrix. 2005. North Railroad Property Run-On Sampling and Analysis Plan (SAP). Included as Attachment B to the Phase 1 ICM O&M Plan.

Geomatrix. 2007. Final Construction Report for the West Properties Soil and Former Sewer Removal ICM (February).

**Figure**



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PROJECTNAME: 37736X02 37736X01



## **Appendices**



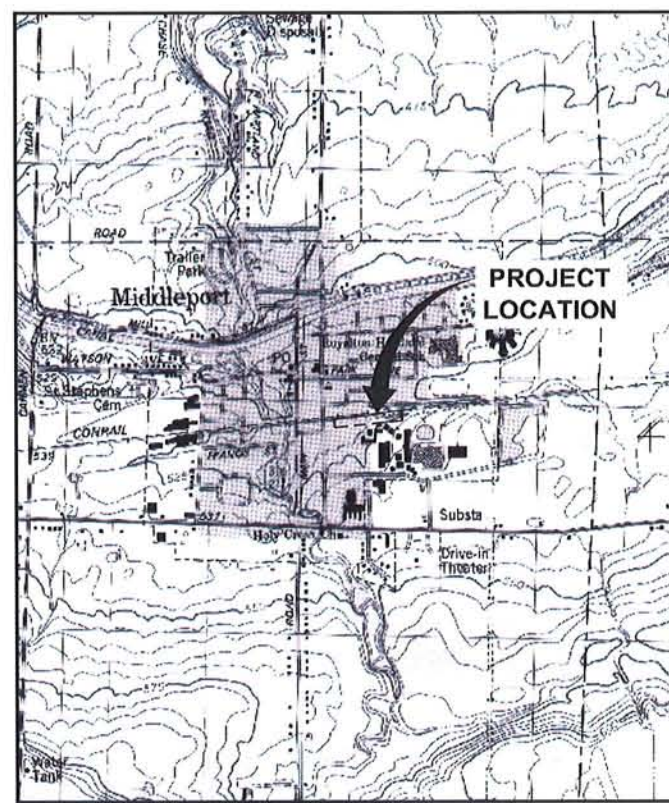
## **Appendix A**

### **Copies of Record Drawings**



RECORD DRAWINGS

NORTH RAILROAD PROPERTY  
PHASE 2 INTERIM CORRECTIVE  
MEASURES CONSTRUCTION REPORT



REFERENCE: BASE MAP USGS 7.5 MINUTE QUADRANGLE, MEDINA, NEW YORK.

LOCATION MAP  
NOT TO SCALE



DATE ISSUED / DATE REVISED  
**FEBRUARY 2009**

**FMC CORPORATION  
MIDDLEPORT, NEW YORK**



ARCADIS OF NEW YORK, INC.

**RECORD DRAWINGS**  
TO THE BEST OF OUR KNOWLEDGE,  
INFORMATION AND BELIEF, THESE RECORD  
DRAWINGS SUBSTANTIALLY REPRESENT  
THE PROJECT AS CONSTRUCTED.  
**ARCADIS of New York, Inc.**  
(formerly BLASLAND, BOUCK & LEE, INC.)  
DATE 7/29/09 BY Joe Molina

**INDEX TO DRAWINGS**

- COVER SHEET
- 1. SITE PLAN
- 2. FINAL GRADING PLAN
- 3. DETAILS AND SECTIONS
- 4. DETAILS AND SECTIONS
- 5. DETAILS AND SECTIONS
- 6. DETAILS AND SECTIONS

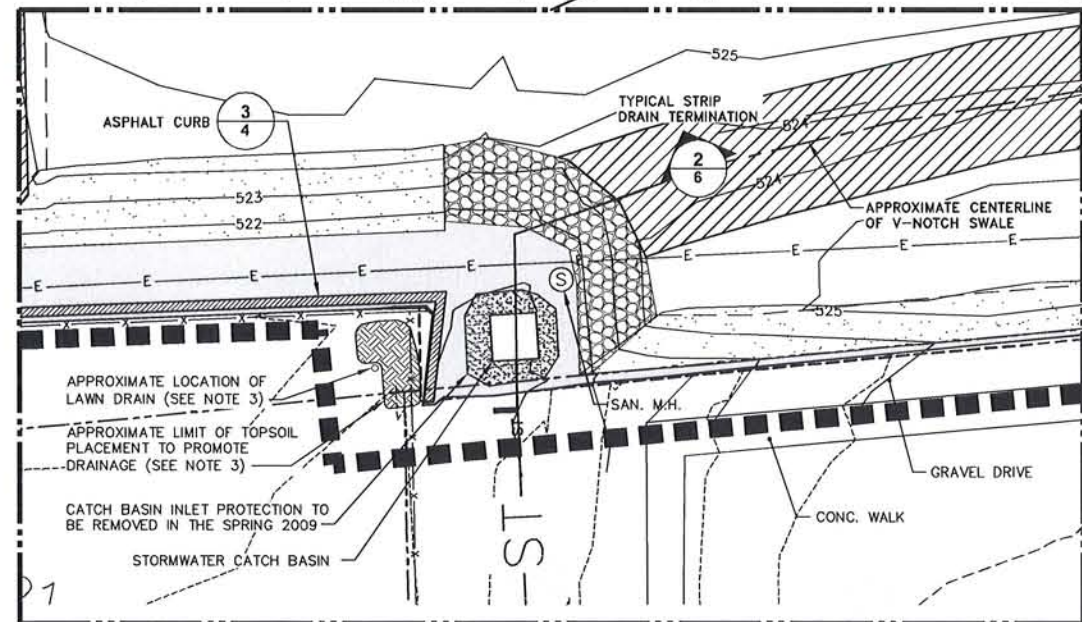
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XREFS: 37736X05 37736X01 37736X00  
IMAGES: PROJECTNAME: 37736X05 37736X01 37736X00



PLAN ENLARGEMENT

0 10' 20'  
SCALE: 1"=10'

LEGEND:

- APPROXIMATE LIMIT OF WORK
- LIMIT OF PHASE 2 ICM AREA
- LIMITS OF FIELD SURVEY
- APPROXIMATE OFFSITE PROPERTY LINE
- APPROXIMATE FMC PROPERTY LINE
- 530 FINAL GRADE CONTOUR
- GRADE BREAK
- TEMPORARY EROSION CONTROL MAT (SEE NOTE 2)
- RIPRAP
- ASPHALT PAVING
- FINE STONE

NOTES:

- REFER TO RECORD DRAWING 1 FOR ADDITIONAL BASEMAP INFORMATION.
- TEMPORARY EROSION CONTROL MAT LOCATION IS APPROXIMATE AND IS BASED ON FIELD OBSERVATIONS.
- FOLLOWING CONSTRUCTION OF THE ASPHALT CURB, ADDITIONAL TOPSOIL WAS PLACED TO PROMOTE POSITIVE DRAINAGE TO AN EXISTING LAWN DRAIN LOCATED ON THE NORTHERN MOST RESIDENTIAL PROPERTY SOUTHWEST OF THE PHASE 2 ICM AREA. LOCATION OF THE EXISTING LAWN DRAIN AND LIMIT OF TOPSOIL PLACEMENT WERE ESTIMATED FROM FIELD OBSERVATIONS.

RECORD DRAWINGS  
TO THE BEST OF OUR KNOWLEDGE,  
INFORMATION AND BELIEF, THESE RECORD  
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(formerly BLAISLAND, BOUCK & LEE, INC.)

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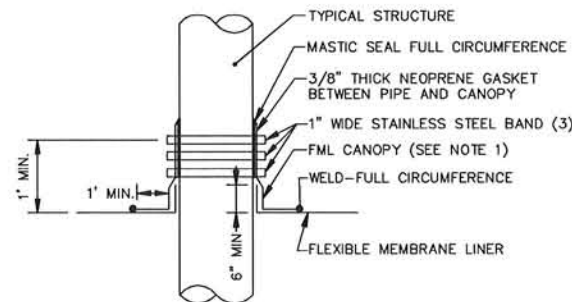
FMC CORPORATION • MIDDLEPORT, NEW YORK  
NORTH RAILROAD PROPERTY - PHASE 2 ICM CONSTRUCTION REPORT

FINAL GRADING PLAN

ARCADIS Project No.  
B0037736.0000.00018  
Date  
FEBRUARY 2009  
ARCADIS  
6723 TOWPATH RD  
PO BOX 66  
SYRACUSE, NY 13214-0066  
TEL. 315.446.9120



CITY: SYRACUSE DW: GROUP: 14/ENV DB: AGS LD: AGS PIC: PM: TWY TM: MBH LY: ROWN: OFF: REF: PLOT: 7/29/09 4:43 PM BY: SAMOS, ALEX  
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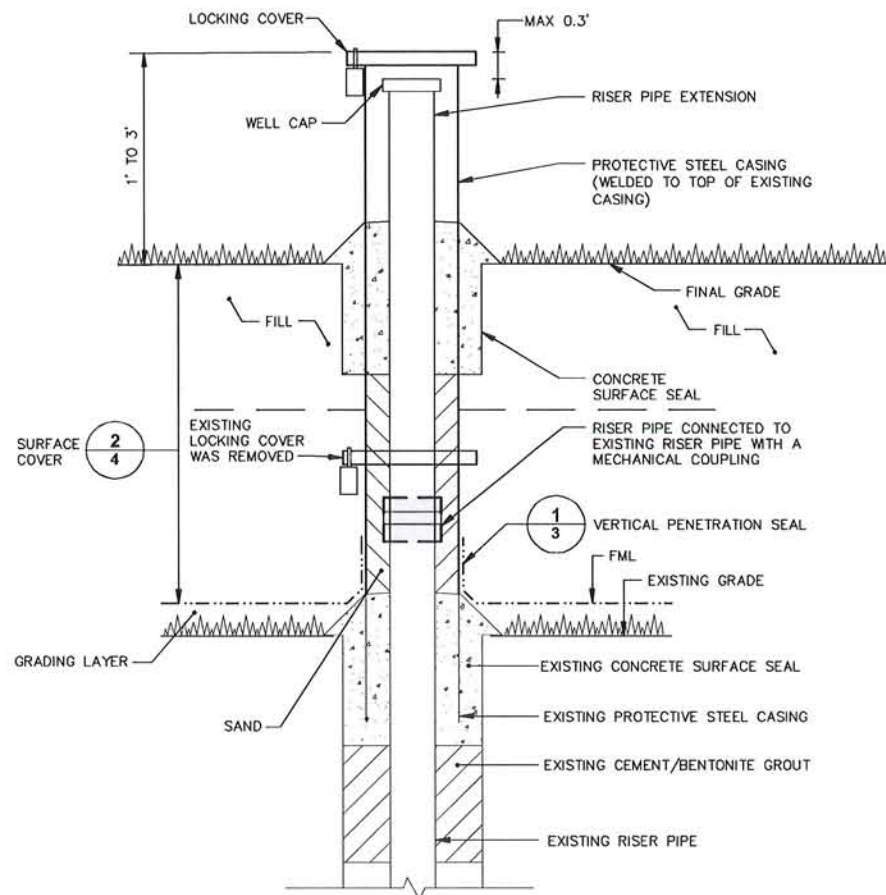
NOTE:

1. EXTRA FML MATERIAL WAS PROVIDED AT THE CANOPY TO ACCOMMODATE FML MATERIAL SHRINKAGE.

### VERTICAL PENETRATION SEAL

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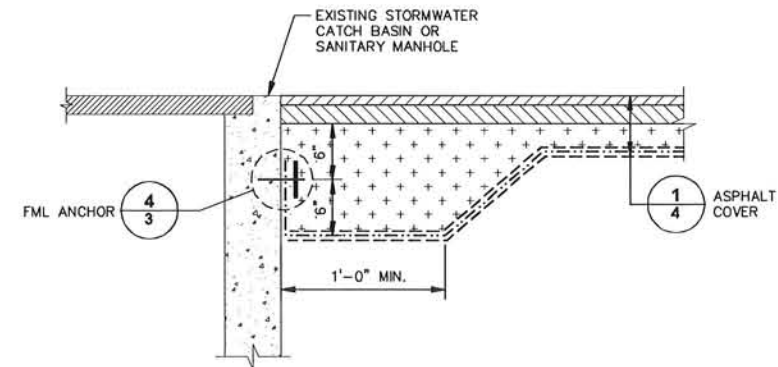
1



### MONITORING WELL EXTENSION

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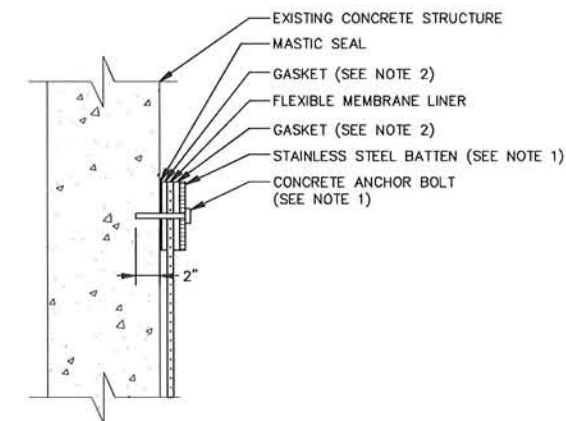
2



### FML TERMINATION AT THE EXISTING SANITARY MANHOLE AND STORMWATER CATCH BASIN

NOT TO SCALE

3



NOTES:

1. AT THE STORMWATER CATCH BASIN (I.E., THE SQUARE STRUCTURE), STAINLESS STEEL BATTEN STRIPS AND CONCRETE ANCHOR BOLTS WERE USED TO ANCHOR THE FML TO THE WALL OF THE CATCH BASIN (AS SHOWN). THE BATTEN STRIP WAS 1/4-INCH-THICK BY 2 INCHES WIDE, ANCHORED WITH 3/8-INCH-DIAMETER BY 3-INCH-LONG STAINLESS STEEL BOLTS. AT THE SANITARY MANHOLE (I.E., THE ROUND STRUCTURE), A 1/2-INCH-WIDE STAINLESS STEEL BAND CLAMP WAS USED IN PLACE OF THE BATTEN STRIP AND THE ANCHOR BOLTS.
2. GASKET MATERIAL CONSISTS OF 1/4-INCH-THICK CLOSED-CELL NEOPRENE WITH AN ADHESIVE BACKING.

### FML ANCHOR

NOT TO SCALE

4

(RECORD DRAWING: MADE FROM DRAWING NO. 7, TRACER NO. 37686G07.DWG, DATED 8/8/07) DATE 7/29/09 BY Joe Molina

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NORTH RAILROAD PROPERTY - PHASE 2 ICM CONSTRUCTION REPORT

## DETAILS AND SECTIONS

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(formerly BLASLAND, BOUCK & LEE, INC.)

ARCADIS Project No.  
B0037736.0000.00018  
Date  
FEBRUARY 2009  
ARCADIS  
6723 TOWPATH RD  
PO BOX 66  
SYRACUSE, NY 13214-0066  
TEL. 315.446.9120

3



ARCADIS

ARCADIS OF NEW YORK, INC.

NOT TO SCALE

THIS BAR  
REPRESENTS ONE  
INCH ON THE  
ORIGINAL DRAWING.

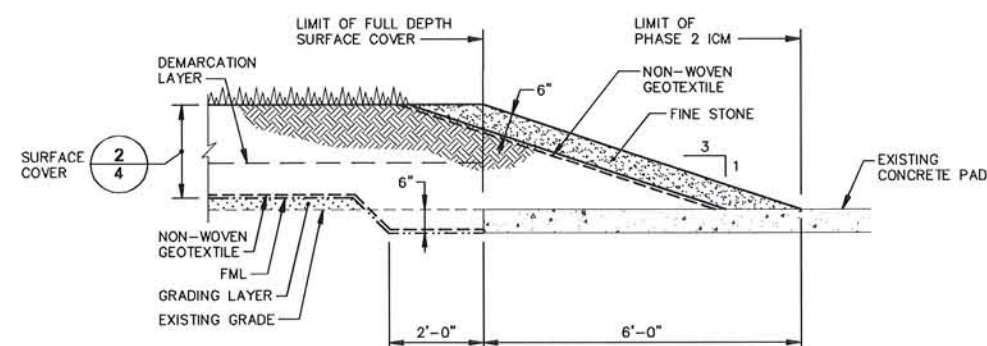
USE TO VERIFY  
FIGURE  
REPRODUCTION  
SCALE

No. Date Revisions By Ckd  
THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

Professional Engineer's Name  
JOSEPH MOLINA, III  
Professional Engineer's No.  
072644  
State  
NY  
Date Signed  
7/29/09  
Project Manager  
TWY  
Designed by  
MB/HTAS  
Drawn by  
AGS  
Checked by

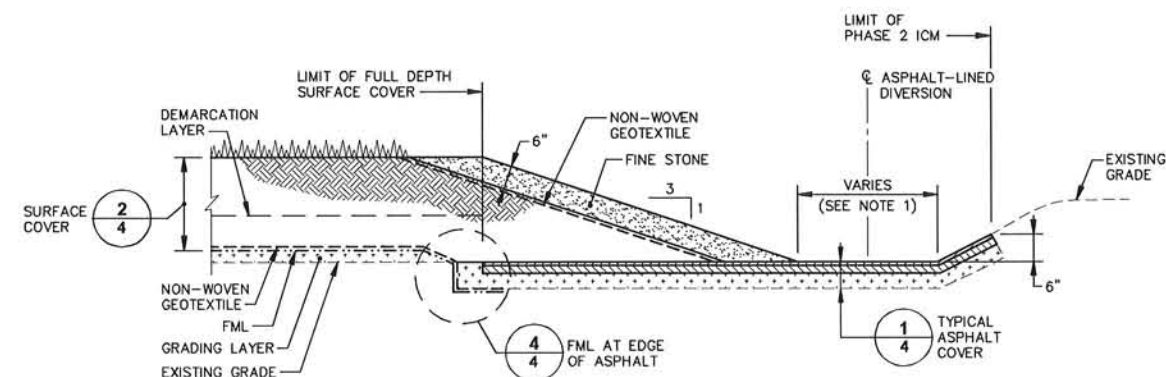






**TYPE 1 - TYPICAL SURFACE COVER TERMINATION**  
**(NORTH PERIMETER)**

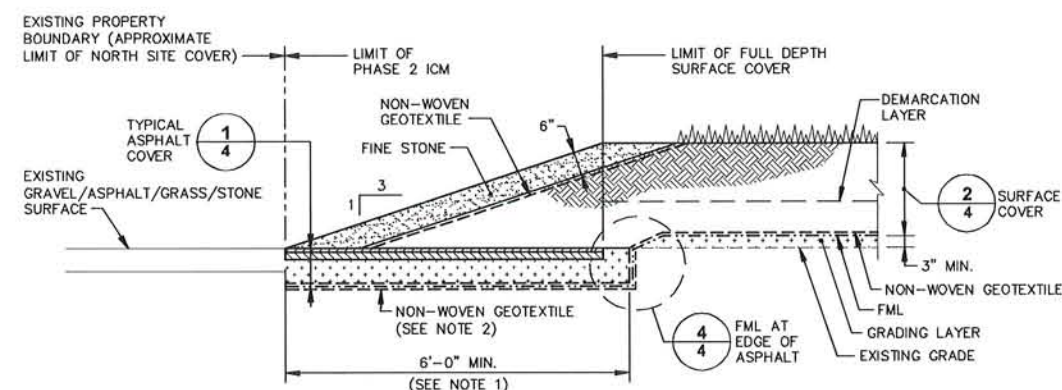
NOT TO SCALE



NOTE:

1. BOTTOM WIDTH OF ASPHALT LINED DIVERSION VARIES FROM 0' TO APPROXIMATELY 9'-0"

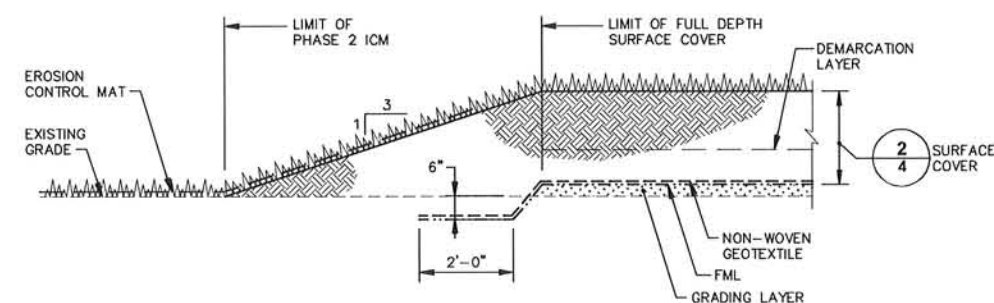
**TYPE 3 - TYPICAL SURFACE COVER TERMINATION**  
**(EAST PERIMETER)**



NOTES:

1. ALONG SOUTHERN PERIMETER, THE ASPHALT COVER EXTENDED TO EXISTING ASPHALT SURFACE (WHERE APPLICABLE) OR A MINIMUM OF 1'-0" BEYOND THE EXISTING PROPERTY BOUNDARY (E.G., GRASS AND GRAVEL AREAS).
2. FML WAS EXTENDED BENEATH THE FULL WIDTH OF THE ASPHALT PAVING ALONG THE SOUTHERN PERIMETER OF THE PHASE 2 1CM AREA ONLY. AN ADDITIONAL NON-WOVEN GEOTEXTILE WAS PLACED BENEATH THE FML WHERE THE FML EXTENDS BENEATH THE FULL WIDTH OF THE ASPHALT PAVING.

**TYPE 2 - TYPICAL SURFACE COVER TERMINATION**  
**(NORTHEASTERN AND SOUTHERN PERIMETERS)** 2



**TYPE 4 - TYPICAL SURFACE COVER TERMINATION**  
**(WEST PERIMETER)**

**RECORD DRAWINGS**  
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**ARCADIS of New York, Inc.**  
(formerly **BLASLAND, BOUCK & LEE, INC.**)

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NORTH RAILROAD PROPERTY - PHASE 2 ICM CONSTRUCTION REPORT

## DETAILS AND SECTIONS

ARCADIS Project No.  
B0037736.0000.00018

Date  
FEBRUARY 2005

ARCADIS  
6723 TOWPATH RD  
PO BOX 66  
SYRACUSE, NY 13214-0066  
TEL. 315.446.9120

4

NOT TO SCALE

THIS BAR  
REPRESENTS ONE  
INCH ON THE  
ORIGINAL DRAWING:



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FIGURE  
REPRODUCTION  
SCALE

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Professional Engineer's Name  
**JOSEPH MOLINA, III**

Professional Engineer's No. \_\_\_\_\_

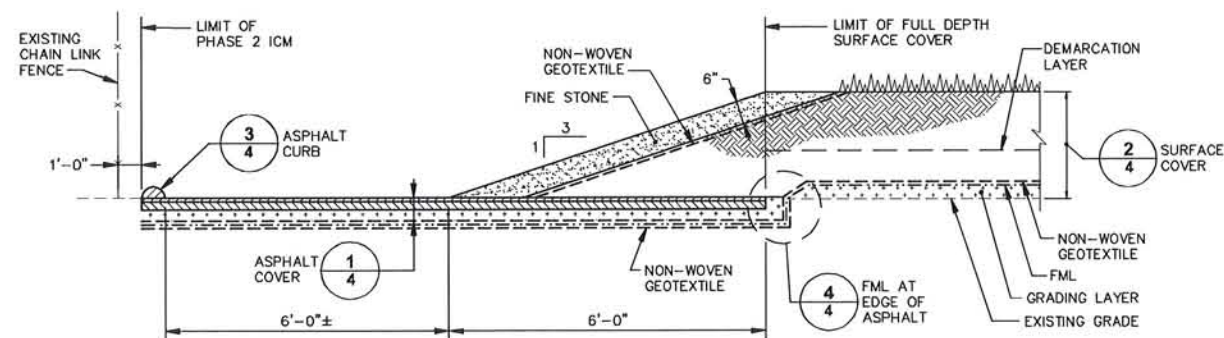
State	Date Signed	Project Mgr.
NY	7/25/09	TWY
Designed by	Drawn by	Checked by
MDU/TEAC	AGC	

Designed by	Drawn by	Checked by
MDL/STAC	AGC	


**ARCADIS**

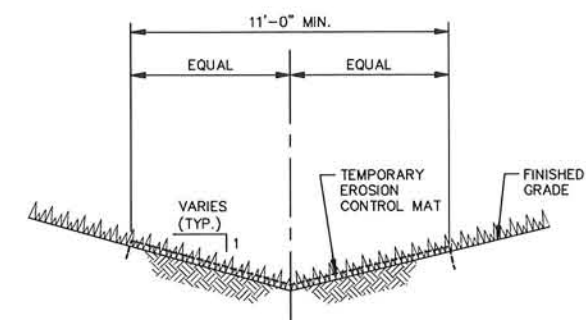
ARCADIS OF NEW YORK, INC.





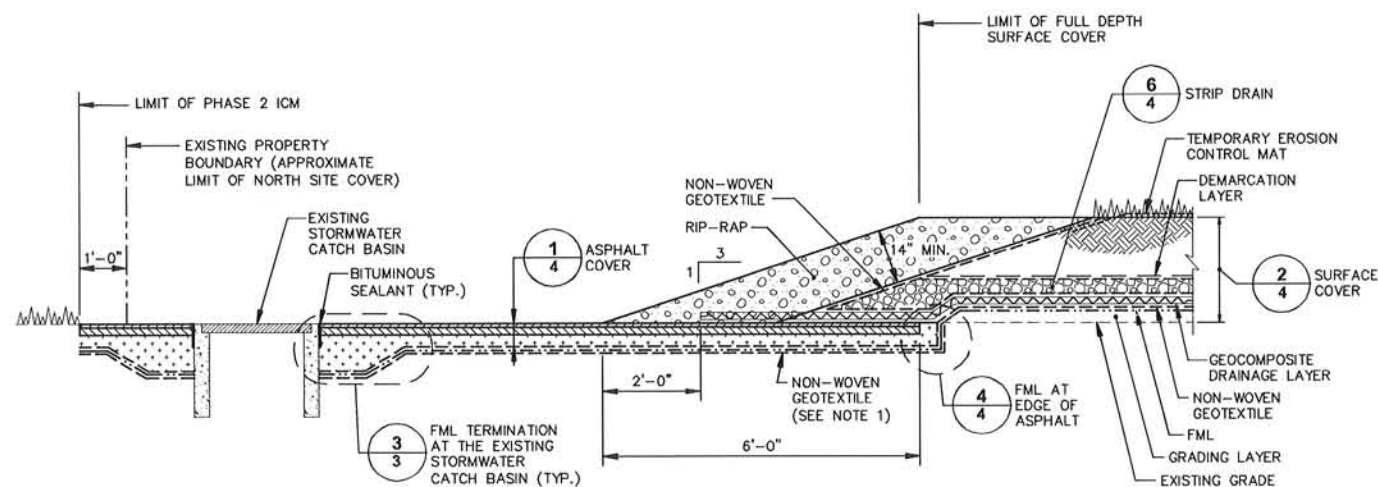
**TYPE 5 - TYPICAL SURFACE COVER TERMINATION**  
**(SOUTHWEST PERIMETER ALONG EXISTING FENCE LINE) 1**

NOT TO SCALE



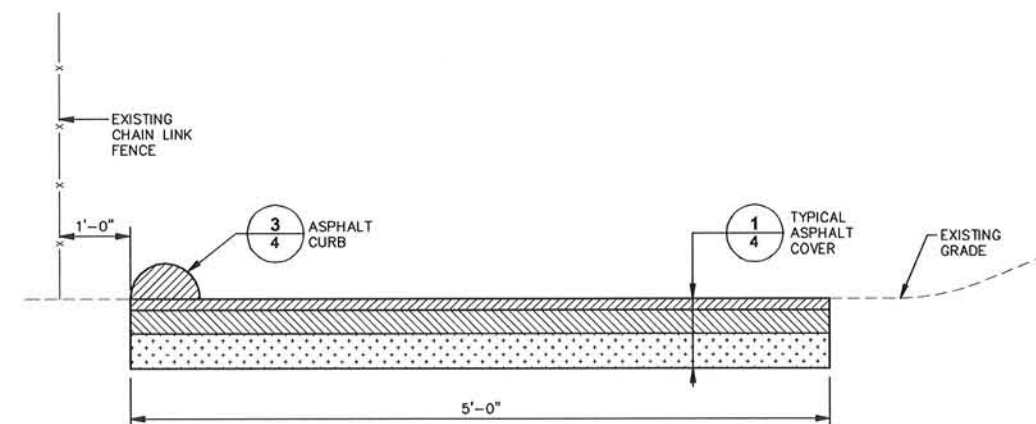
**V-NOTCH SWALE** 3  
NOT TO SCALE

NOT TO SCALE



## TYPICAL STRIP DRAIN TERMINATION (2)

NOT TO SCALE



**NOTE:**

1. PERMANENT DIVERSION HAS A LONGITUDINAL SLOPE OF APPROXIMATELY 0.2% TOWARD THE EXISTING STORMWATER CATCH BASIN.

**PERMANENT DIVERSION** (4)  
NOT TO SCALE

NOT TO SCALE

**RECORD DRAWINGS**  
TO THE BEST OF OUR KNOWLEDGE,  
INFORMATION AND BELIEF, THESE RECORD  
DRAWINGS SUBSTANTIALLY REPRESENT  
THE PROJECT AS CONSTRUCTED.  
**ARCADIS of New York, Inc.**  
**(formerly BLASLAND, BOUCK & LEE, INC.)**

(RECORD DRAWING: MADE FROM DRAWING NO. 10, TRACER NO. 37686G10.DWG, DATED 8/8/07) DATE 7/29/09 BY Joe Molise

FMC CORPORATION • MIDDLEPORT, NEW YORK  
NORTH RAILROAD PROPERTY - PHASE 2 ICM CONSTRUCTION REPORT

## DETAILS AND SECTIONS

ARCADIS Project No.  
B0037736.0000.00018

Date  
FEBRUARY 2009

ARCADIS  
6723 TOWPATH RD  
PO BOX 66  
SYRACUSE, NY 13214-0066  
TEL. 315.446.9120

6

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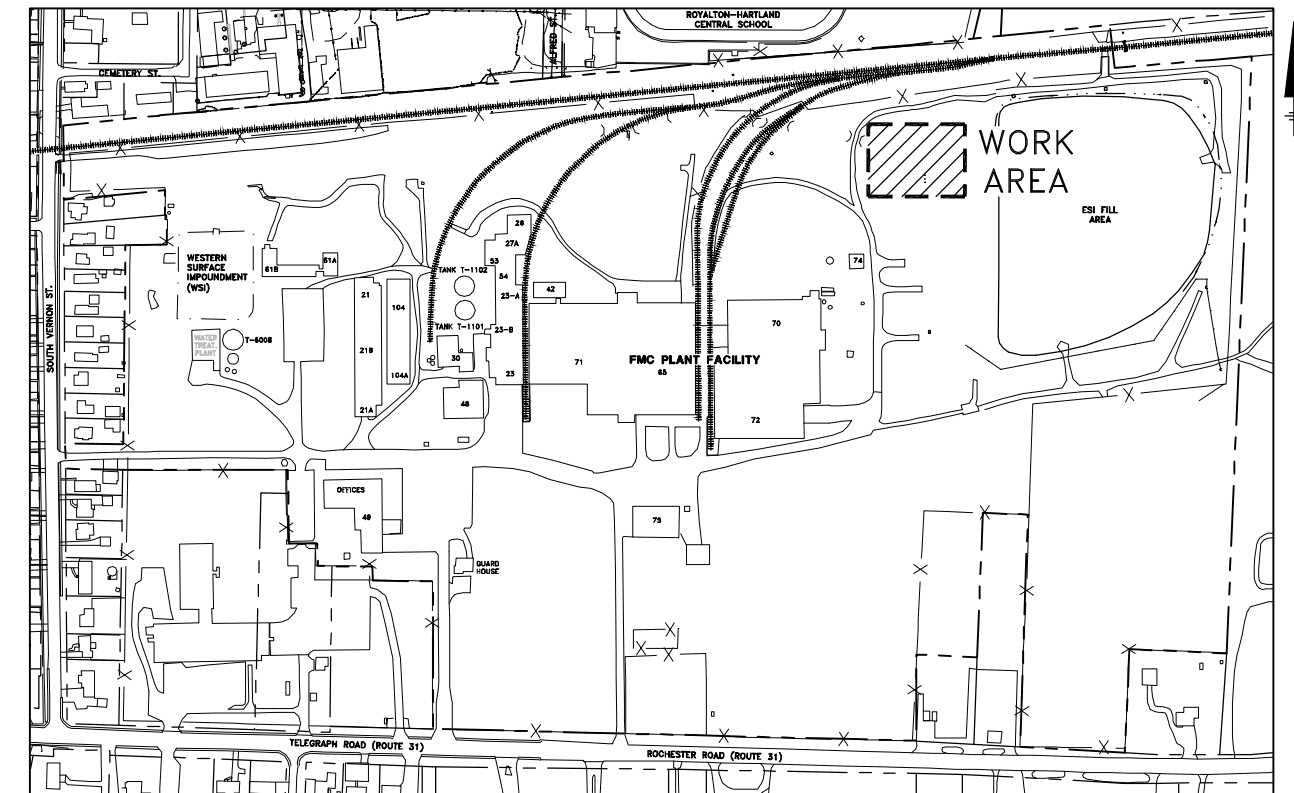
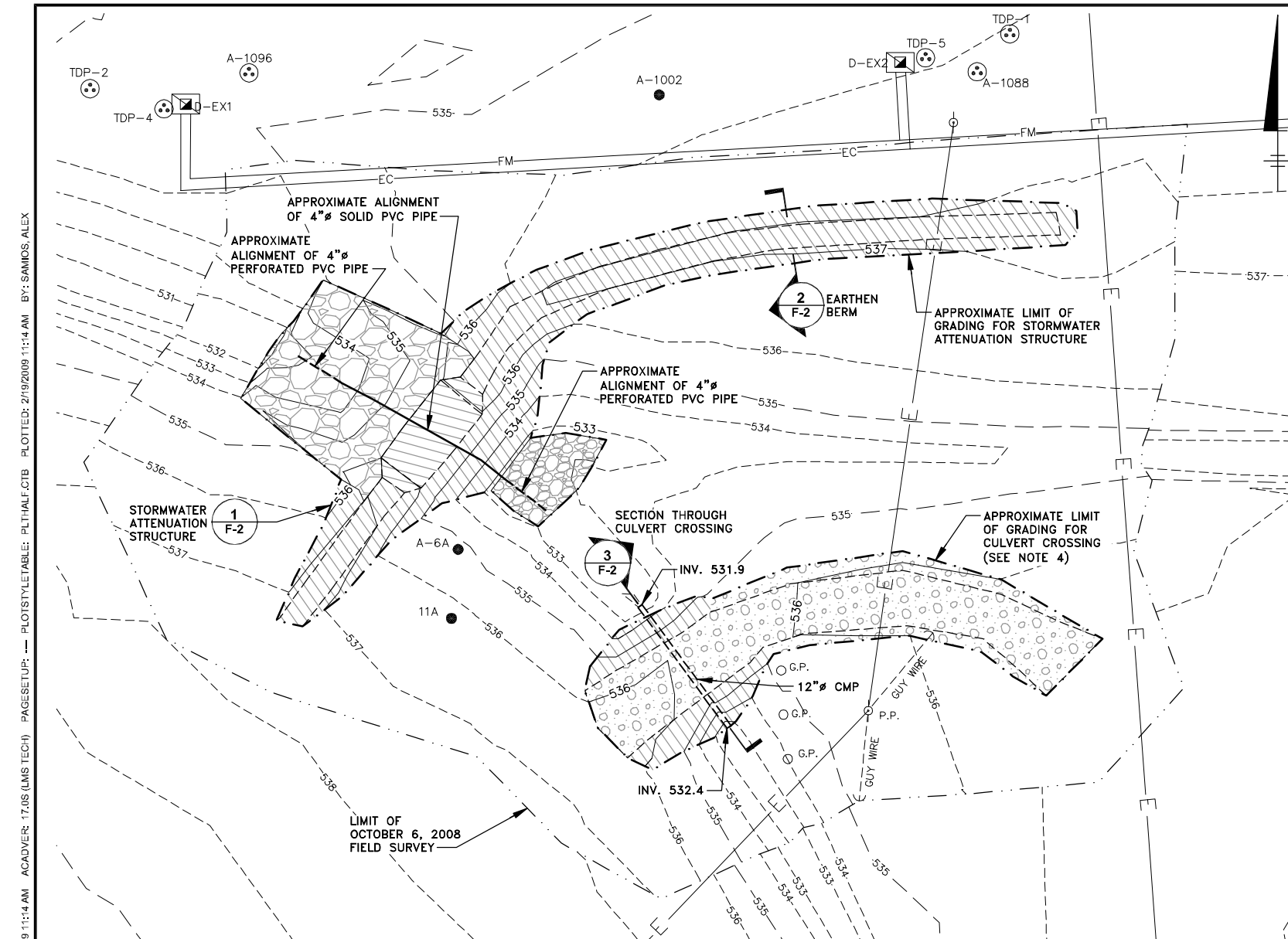
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Professional Engineer's Name  
**JOSEPH MOLINA, III**  
Professional Engineer's No.

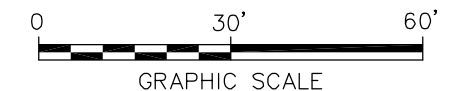
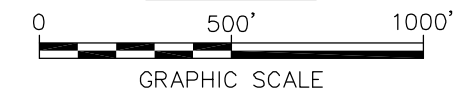
State	Date Signed	Project
NY	7/29/09	TWY
Designed by	Drawn by	Checked by
MBH/TAS	AGS	


**ARCADIS**

ARCADIS OF NEW YORK, INC.



## KEY MAP



FMC CORPORATION  
MIDDLEPORT, NEW YORK  
**PHASE 2 ICM CONSTRUCTION REPORT**

## PHASE 2 ICM STORMWATER MANAGEMENT CONTROLS - SITE PLAN



FIGURE E-1

LAYOUT: F-1    SAVED: 2/18/2009 11:14 AM    ACADVER: 17.0S (LMS TECH)    PAGES: 21    PLOT: 2/19/2009 11:14 AM    BY: SAMIOS, ALEX








CITY: SYRACUSE DM/GROUP: 141/ENV DB: RLP GHS AGS PM: JLL/TWY  
G:\ENVCAD\SYRACUSE\ACT\B0037736\000018\DWG\FR-PH2\37736G01.DWG

IMAGES: PROJECTNAME: --

XREFS:  
37736X01  
37736X02

**LEGEND:**

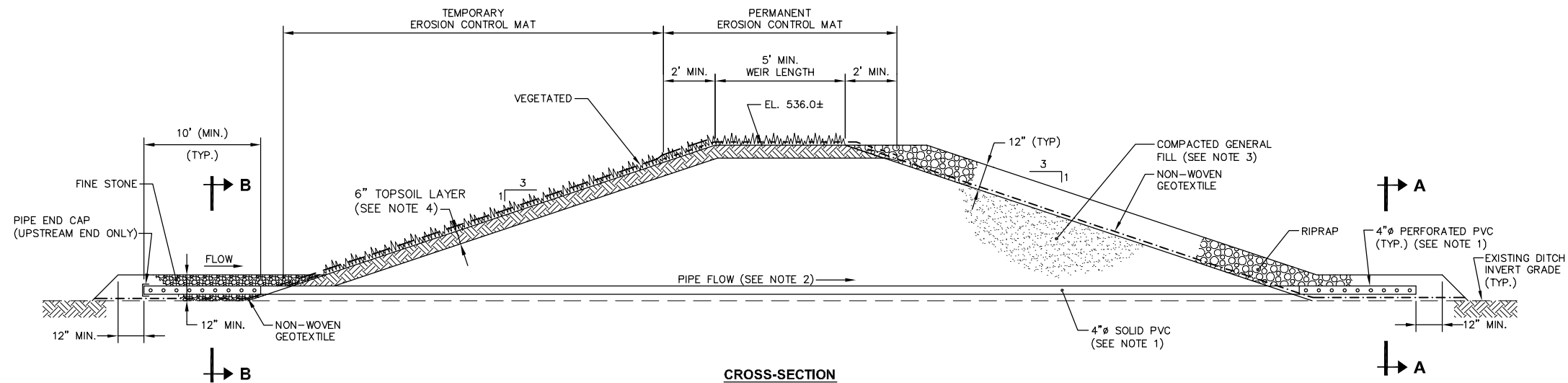
- |  |                                     |
|--|-------------------------------------|
|  | PROPERTY LINE                       |
|  | EXISTING GRADE INDEX CONTOUR        |
|  | EXISTING GRADE INTERMEDIATE CONTOUR |
|  | OVERHEAD UTILITY AND POLE           |
|  | ABOVEGROUND FORCEMAIN               |
|  | ABOVEGROUND ELECTRICAL CONDUIT      |
|  | PUMP HOUSE                          |
|  | SHALLOW BEDROCK MONITORING WELL     |
|  | OVERBURDEN MONITORING WELL          |
|  | DEEP BEDROCK MONITORING WELL        |
|  | EXTRACTION WELL                     |
|  | SHALLOW BEDROCK PIEZOMETER          |
|  | OVERBURDEN PIEZOMETER               |
|  | DEEP BEDROCK PIEZOMETER             |

- |   |   |
|---|---|
|  | APPROXIMATE LIMIT OF PERMANENT<br>EROSION CONTROL MAT |
|  | APPROXIMATE LIMIT OF TEMPORARY<br>EROSION CONTROL MAT |
|  | APPROXIMATE LIMIT OF RIPRAP                           |
|  | APPROXIMATE LIMIT OF STONE                            |
|  | APPROXIMATE LIMIT OF GRAVEL                           |
|  | GRADE BREAK   |
|  | FINAL GRADE CONTOUR                                   |

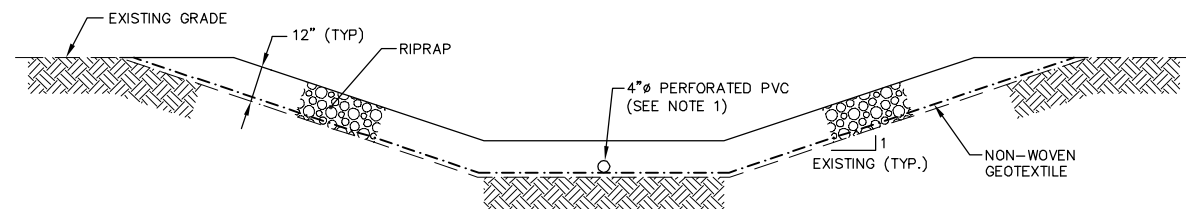
NOTES:

1. BASEMAP INFORMATION SHOWN ON THIS FIGURE WAS COMPILED FROM FIELD SURVEYS PERFORMED BY MCINTOSH AND MCINTOSH, P.C. DATED SEPTEMBER 18, 1999; MARCH 28, 2001; APRIL 29, 2004; AUGUST 13, 2004; APRIL 7, 2005; AND RECORD DRAWINGS DATED SEPTEMBER 9, 2005 (PHASE 1 ICM AS-BUILT) AND OCTOBER 6, 2008 (REVISED ON FEBRUARY 10, 2009).
2. EXISTING AND FINAL GRADE CONTOUR INTERVAL EQUALS 1 FOOT.
3. ELECTRICAL LINE IS SHOWN OFFSET FROM THE FOREMAIN FOR CLARITY PURPOSES. ELECTRICAL LINE RUNS WITHIN CONDUIT, WHICH IS ANCHORED TO THE SUPPORT POSTS FOR THE ABOVEGROUND FOREMAIN, WHERE FOREMAIN RUNS UNDERGROUND THE ELECTRICAL LINE RUNS IN A TRENCH ADJACENT TO THE FOREMAIN.
4. THE EXISTING CULVERT CROSSING WAS RAISED, IN ACCORDANCE WITH FIELD MODIFICATION/CLARIFICATION FORM NO. 02. REFER TO APPENDIX B OF THE PHASE 2 ICM FINAL CONSTRUCTION REPORT FOR THE FIELD MODIFICATION/CLARIFICATION FORMS.

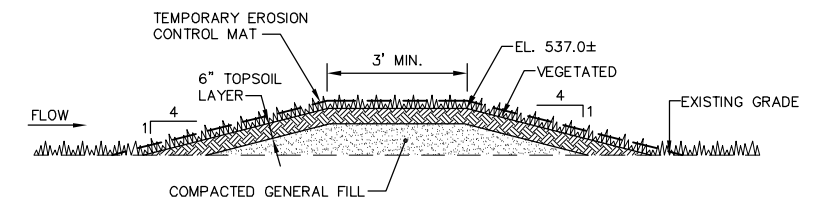




### CROSS-SECTION



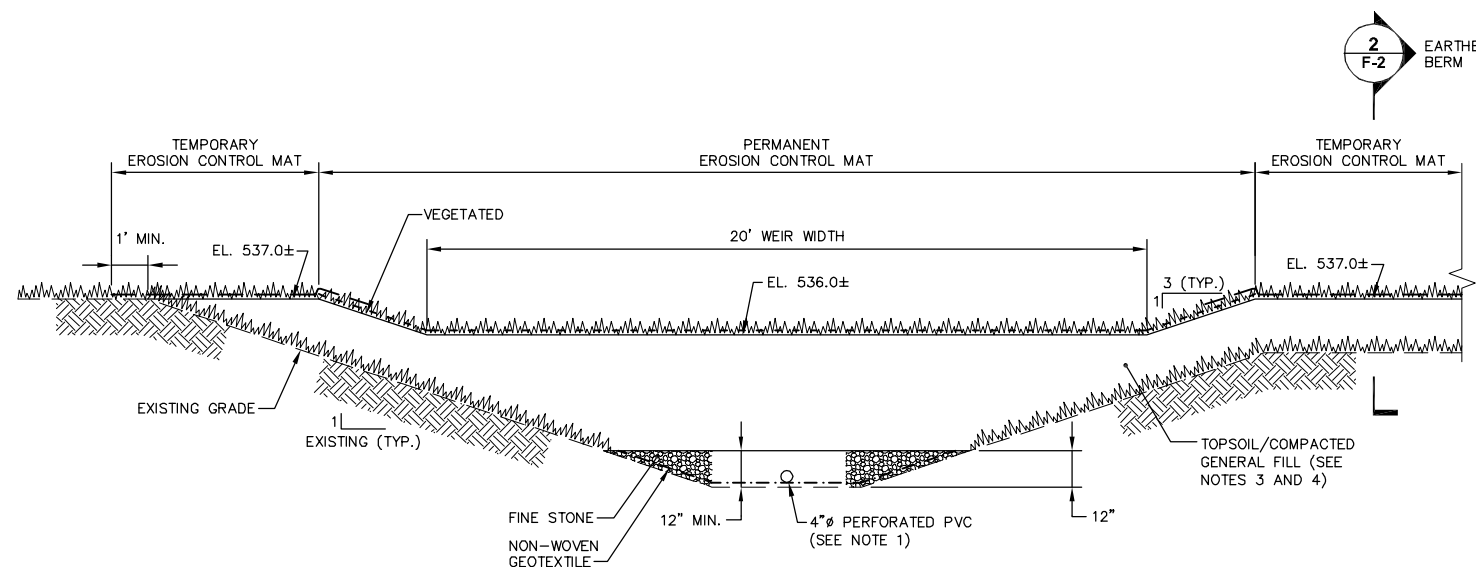
**SECTION A-A**



## EARTHEN BERM

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2



**SECTION B-B**

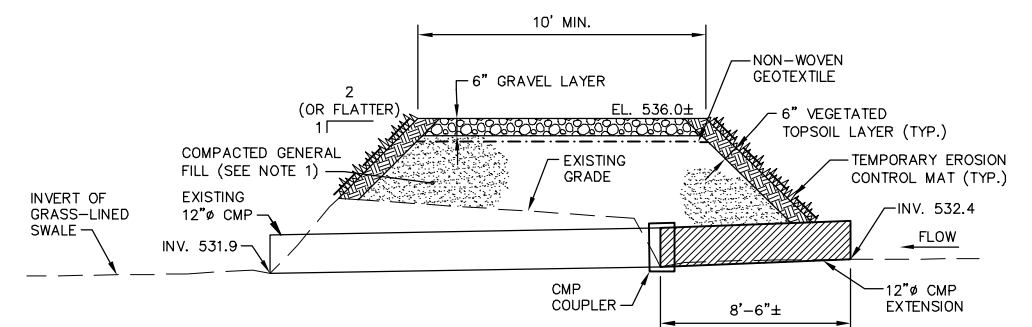
NOTES:

1. PERFORATED PVC PIPE IS DR35 MANUFACTURED BY IPEX. SOLID PVC PIPE IS SCHEDULE 40. ALL CONNECTIONS WERE MADE IN ACCORDANCE WITH PIPE MANUFACTURERS SPECIFICATIONS/RECOMMENDATIONS.
2. PIPE SLOPE EQUAL TO EXISTING DITCH INVERT SLOPE (I.E., PRE-CONSTRUCTION).
3. GENERAL FILL WAS PLACED IN HORIZONTAL LAYERS NOT MORE THAN 6 INCHES IN THICKNESS, AND COMPACTED TO OBTAIN 96 PERCENT MAXIMUM DRY DENSITY (STANDARD PROCTOR), IN ACCORDANCE WITH FIELD MODIFICATION/CLARIFICATION FORM NO. 02.
4. A 6-INCH LAYER OF TOPSOIL WAS INSTALLED ON THE UPGRADE FACE OF THE STORMWATER ATTENUATION STRUCTURE (AS SHOWN), IN ACCORDANCE WITH FIELD MODIFICATION/CLARIFICATION FORM NO. 02.
5. REFER TO APPENDIX B OF THE PHASE 2 ICM FINAL CONSTRUCTION REPORT FOR THE FIELD MODIFICATION/CLARIFICATION FORMS.

## STORMWATER ATTENUATION STRUCTURE

NOT TO SCALE

1



### SECTION THROUGH CULVERT CROSSING

NOT TO SCALE

3

FMC CORPORATION  
MIDDLEPORT, NEW YORK  
**PHASE 2 ICM CONSTRUCTION REPORT**

## PHASE 2 ICM STORMWATER MANAGEMENT CONTROLS - SECTIONS AND DETAILS



FIGURE

**-2**





## **Appendix B**

### **Inspection Form**

**Inspection Form**  
**Phase 2 ICM OM&M Plan**  
**North Railroad Property**  
**FMC Corporation - Middleport, New York**

<b>Inspector Name:</b>  <b>Date/Time:</b>	<b>Weather:</b>	<b>Other Parties Present (and affiliation):</b>
---	-----------------	---

**I. Phase 2 ICM Area Surface Covers**

Yes	No	<i>(If Yes, describe below, identify location on site map, and provide photo.)</i>
<input type="checkbox"/>	<input type="checkbox"/>	Is the grass cover growing evenly with the surface cover area?
<input type="checkbox"/>	<input type="checkbox"/>	Is the grass growth even and properly maintained? Are there any distressed areas? (describe below)
<input type="checkbox"/>	<input type="checkbox"/>	Are there any signs of erosion?
<input type="checkbox"/>	<input type="checkbox"/>	Are there any ponded areas?
<input type="checkbox"/>	<input type="checkbox"/>	Is there any evidence of slope failure?
<input type="checkbox"/>	<input type="checkbox"/>	Is there any evidence of burrowing animals?
<input type="checkbox"/>	<input type="checkbox"/>	Is the non-woven geotextile exposed?
<input type="checkbox"/>	<input type="checkbox"/>	Are there any trees, bushes, or other large vegetation growing on the surface cover area?
<input type="checkbox"/>	<input type="checkbox"/>	Is there any debris, accumulated sediments, or excessive vegetation present in the surface cover area V-notch swale?

*Comments/Recommended Actions*

**II. Strip Drain Termination**

Yes	No	<i>(If Yes, describe below, identify location on site map, and provide photo.)</i>
<input type="checkbox"/>	<input type="checkbox"/>	Is there any sign of erosion?
<input type="checkbox"/>	<input type="checkbox"/>	Is any of the rip rap dislodged exposing the strip drain? (describe below)
<input type="checkbox"/>	<input type="checkbox"/>	Is there sediment visible directly down-gradient from the outlet structure?

*Comments/Recommended Actions*

**III. Stormwater Attenuation Structure**

Yes	No	<i>(If Yes, describe below, identify location on site map, and provide photo.)</i>
<input type="checkbox"/>	<input type="checkbox"/>	Is there any sign of erosion, sloughing or displacement of structural material or grass lining? (describe below)
<input type="checkbox"/>	<input type="checkbox"/>	Is there water flowing in the downstream ditch? If yes, is the water clear or turbid? (describe below)
<input type="checkbox"/>	<input type="checkbox"/>	Is there sediment build up upstream of the attenuation structure? (describe below)
<input type="checkbox"/>	<input type="checkbox"/>	Is there evidence of conditions (e.g., burrowing animals, vegetation growth) that may impede flow? (describe below)

*Comments/Recommended Actions*

**IV. Swales and Diversions**

Yes	No	<i>(If Yes, describe below, identify location on site map, and provide photo.)</i>
<input type="checkbox"/>	<input type="checkbox"/>	Is there any sign of erosion along the edges of the asphalt lining? (describe below)
<input type="checkbox"/>	<input type="checkbox"/>	Is there any sign of cracking, depressions or holes in the asphalt lining? (describe below)
<input type="checkbox"/>	<input type="checkbox"/>	Are there any cracks or breaks in the asphalt curbs? (describe below)
<input type="checkbox"/>	<input type="checkbox"/>	Is there any debris, accumulated sediments, or excessive vegetation?
<input type="checkbox"/>	<input type="checkbox"/>	Is there any water flowing in the swales? If yes, is the water clear or turbid? (describe below)

*Comments/Recommended Actions*

**Inspection Form**  
**Phase 2 ICM OM&M Plan**  
**North Railroad Property**  
**FMC Corporation - Middleport, New York**

<b>Inspector Name:</b>  <b>Date/Time:</b>	<b>Weather:</b>	<b>Other Parties Present (and affiliation):</b>
---	-----------------	---

**V. Catch Basin Structure**

Yes    No    (If Yes, describe below, identify location on site map, and provide photo.)

☐ ☐    ☐ ☐    Is there any sign of erosion or asphalt damage in the vicinity of the catch basin structure? (describe below)

☐ ☐    ☐ ☐    Is there any debris or accumulated sediments within the catch basin structure?

☐ ☐    ☐ ☐    Is there any apparent damage to the catch basin structure? (describe below)

Comments/Recommended Actions

**VI. Surface Water Samples**

Sample Information

Sample Number	Describe the surface water sample characteristics (i.e., turbidity, color, presence of debris, odor):

Comments/Recommended Actions

**VII. Photographic Documentation**

*Instructions: Photo documentation is required during inspection. Describe each photo and mark its location and view direction on a site map.*

Photo Number	Location	Inspection Item Number and Photo Description

**VIII. Problem Identification and Corrective Action**

*If applicable, describe any problem(s) identified, immediate actions taken to correct or mitigate the problem(s), documentation of NYSDEC notification, the nature and timeframe for implementation of planned corrective actions, and for follow-up inspections.*

**IX. Site Use**

Yes    No    (If Yes, describe below and provide photo.)

☐ ☐    ☐ ☐    Have there been any changes to the use of the Phase 2 ICM Area?

☐ ☐    ☐ ☐    Has anything been constructed on the cover system?

Comments