

KEY MAP

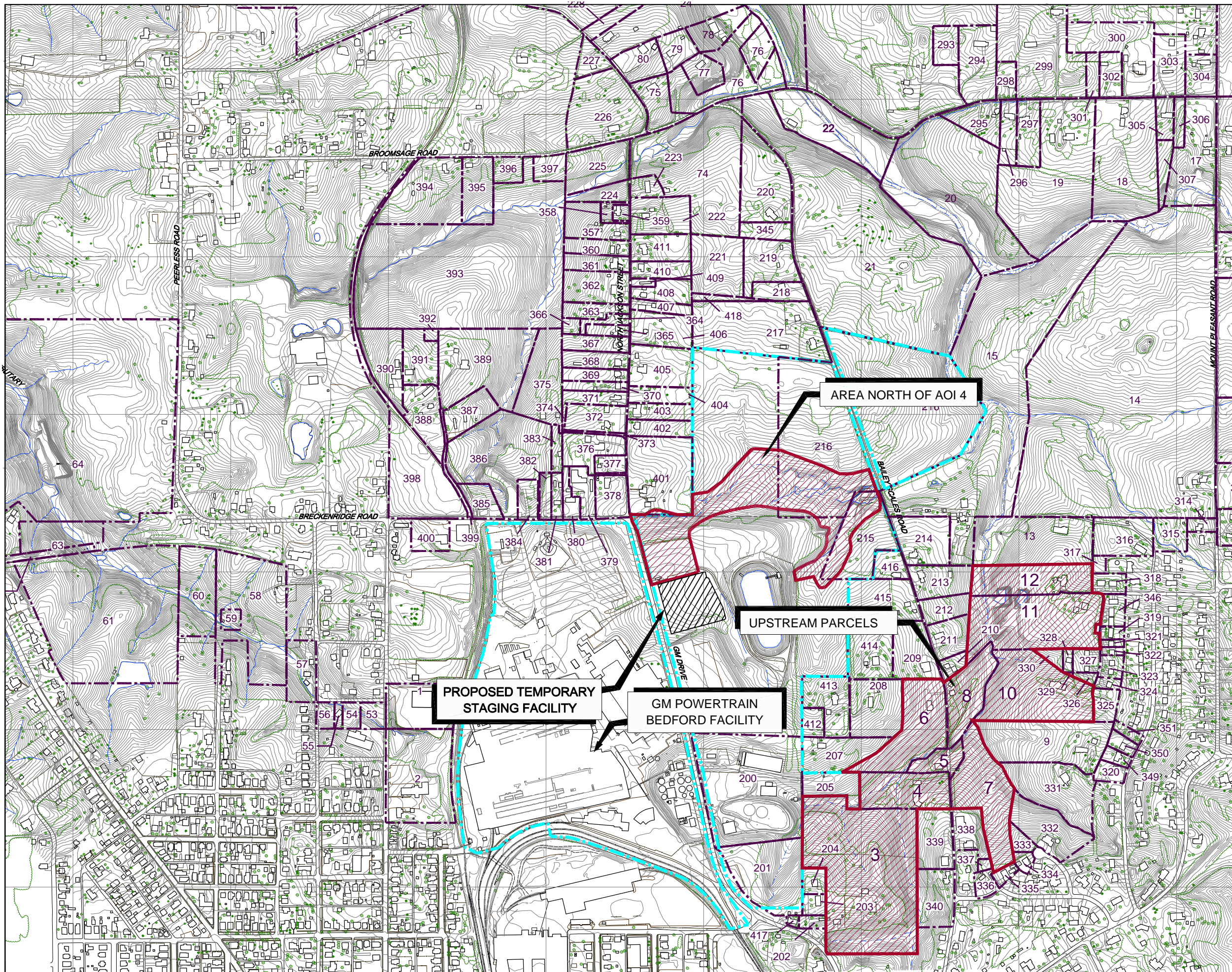
UPSTREAM PARCELS REMOVAL ACTION GM POWERTRAIN FACILITY BEDFORD, INDIANA

DRAWING INDEX

<u>DWG. No.</u>	<u>REV. No.</u>	<u>DATE</u>	<u>TITLE</u>
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C-03	1	APRIL 2003	SITE PREPARATION - UPSTREAM PARCELS
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C-06	1	APRIL 2003	SITE WORKS III - UPSTREAM PARCELS EXCAVATION PLAN
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C-10	1	APRIL 2003	SITE WORKS VI - AREA NORTH OF AOI 4 EXCAVATION PLAN
C-11	0	FEBRUARY 2003	DETAILS SHEET 1 OF 2
C-12	0	FEBRUARY 2003	DETAILS SHEET 2 OF 2
C-13	0	FEBRUARY 2003	PCB CONTAMINATED SOIL STAGING FACILITY PLAN
C-14	0	FEBRUARY 2003	PCB CONTAMINATED SOIL STAGING FACILITY SECTIONS



CONESTOGA-ROVERS & ASSOCIATES



No.	Revision	Date	Initial
1	REVISED TO INCLUDE PARCELS 11 AND 12, AND GM PROPERTY	APRIL 5, 2003	A.W.

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- PARCELS FORMING THE WORK AREA

SCALE VERIFICATION
THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved _____

DRAWING STATUS		
Status	Date	Initial

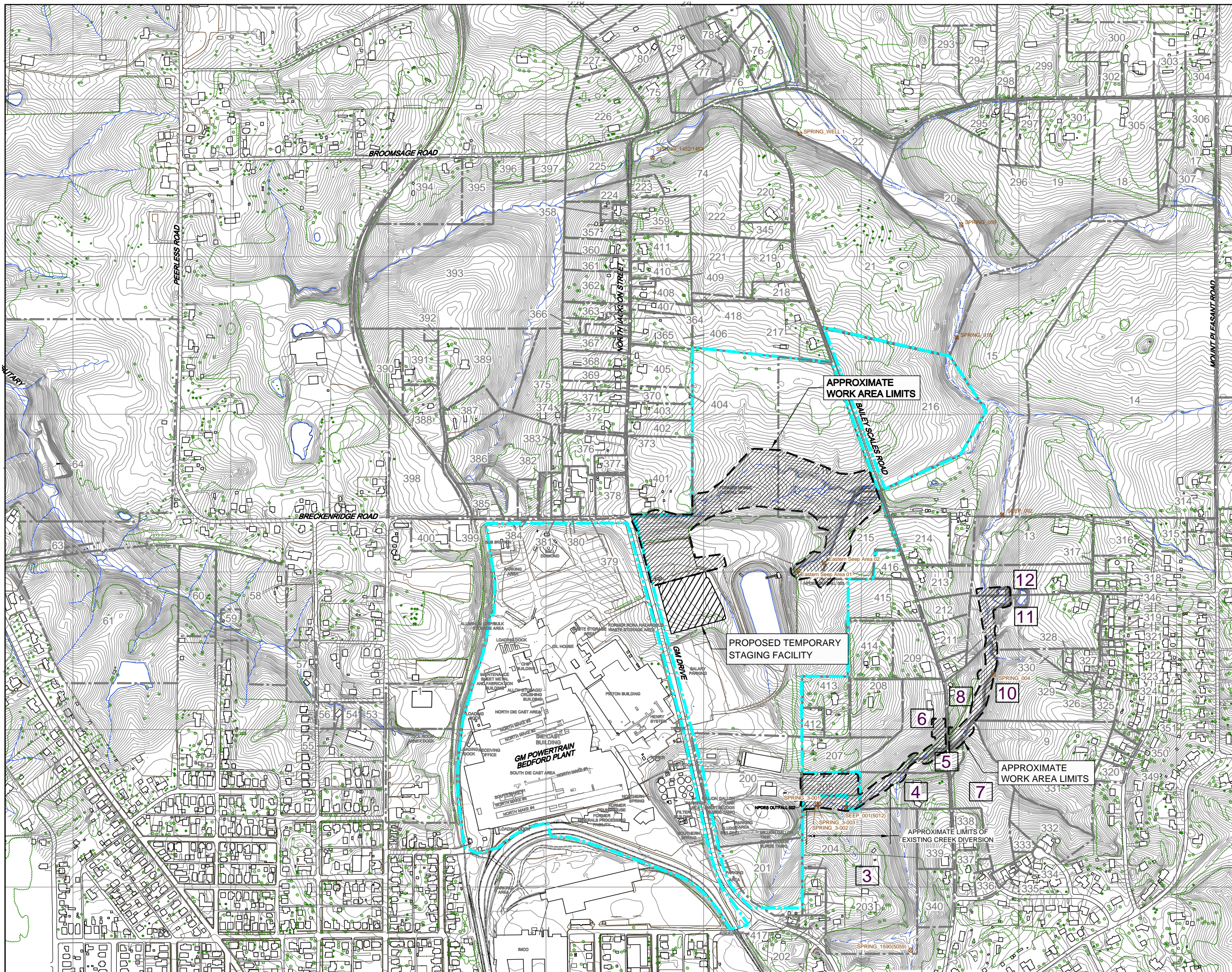
**GM POWERTRAIN FACILITY
BEDFORD, INDIANA
UPSTREAM PARCELS REMOVAL ACTION
SITE LOCATION**

CONESTOGA-ROVERS & ASSOCIATES

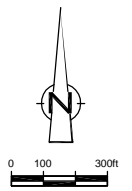
Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001.

Project Manager: J. MCGUIGAN	Reviewed By: J. DANIEL	Date: APRIL 2003
Scale: AS SHOWN	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-01

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NO	Revision	Date	Initial
1	REVISED TO INCLUDE PARCELS 11 AND 12 AND GM PROPERTY	APRIL 5, 2003	A.W.



- LEGEND**
- EXISTING GROUND SURFACE
 - ELEVATION CONTOURS (feet AMSL)
 - EXISTING VEGETATION
 - EXISTING BUILDINGS
 - FENCE LINE
 - RAILROAD TRACKS
 - DIRT ROADS
 - ROADS / PAVED AREAS
 - APPROXIMATE PARCEL BOUNDARY
 - APPROXIMATE GM PROPERTY BOUNDARY
 - APPROXIMATE SURFACE WATER LOCATION
 - SEEP SAMPLE LOCATION
 - SPRING SAMPLE LOCATION
 - LOCATION OF OBSERVED SPRING
 - HIGH FLOW SAMPLE LOCATION (5012)
 - WORK AREA LIMITS
 - PARCEL NUMBER

SCALE VERIFICATION
THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved _____

DRAWING STATUS

Status	Date	Initial

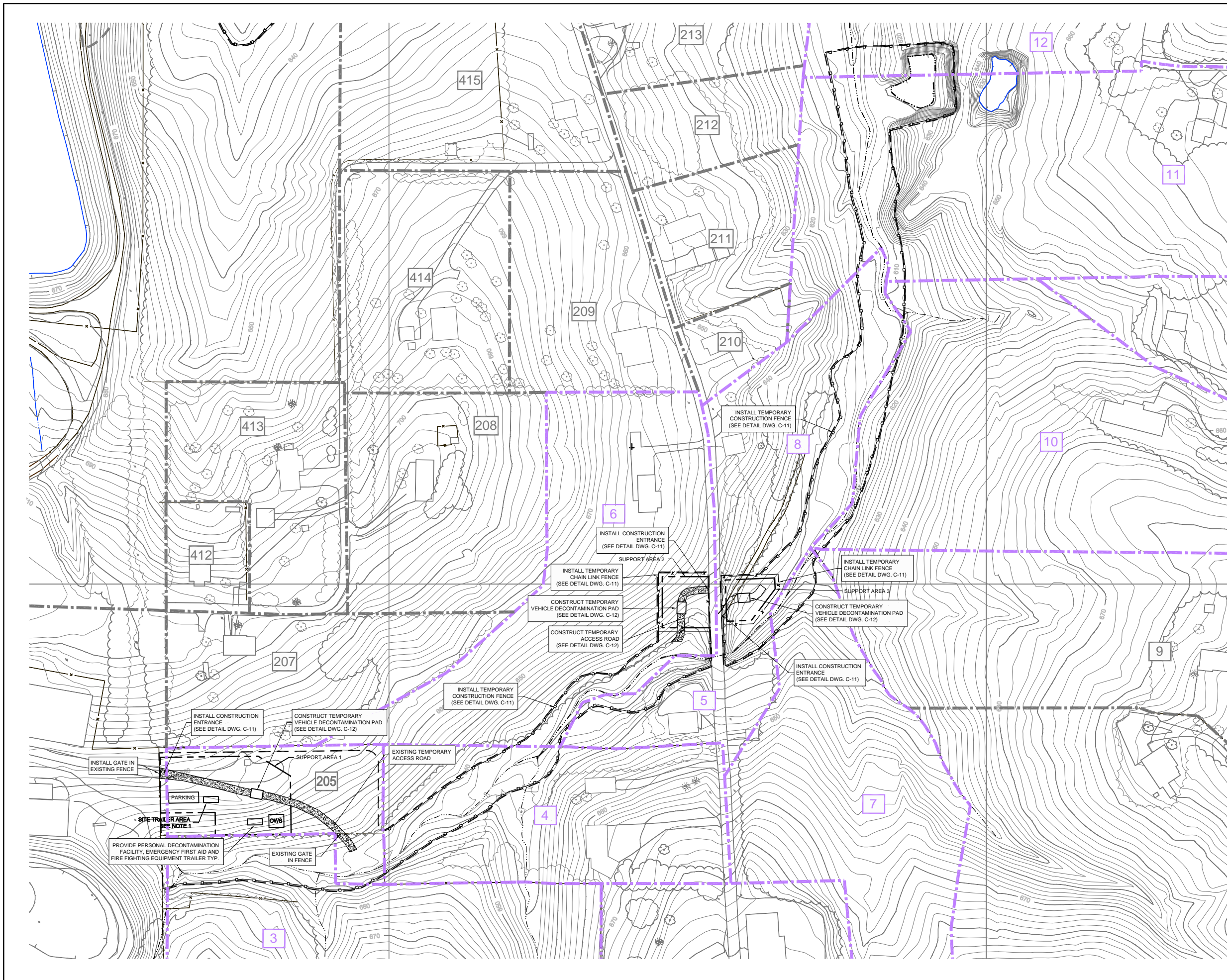
**GM POWERTRAIN FACILITY
BEDFORD, INDIANA
UPSTREAM PARCELS REMOVAL ACTION
SITE PLAN**

CONESTOGA-ROVERS & ASSOCIATES











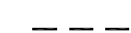



Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001.

Project Manager: J. MCGUIGAN	Reviewed By: J. DANIEL	Date: APRIL 2003
Scale: AS SHOWN	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-02

1:\968\00\01\01\LA\0118.DWG 11 18/2003




NO.	Revision	Date	Initial
1	REVISED TO INCLUDE PARCELS 11 AND 12	APRIL 5, 2003	A.W.


 0 40 80ft
LEGEND
 EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
 EXISTING VEGETATION
 EXISTING BUILDINGS
 DIRT ROADS
 ROADS / PAVED AREAS
 APPROXIMATE SURFACE WATER LOCATION
 EXISTING FENCE
 3 PARCEL NUMBER
 PARCEL LIMIT
 WORK AREA LIMITS
 OVS OIL / WATER SEPARATOR
 - x - PROPOSED TEMPORARY CHAIN LINK FENCE
 - o - PROPOSED TEMPORARY CONSTRUCTION FENCE

NOTE:
 1. CONTRACTOR'S SITE TRAILOR TO BE LOCATED ON GM DRIVE NEXT TO CRA TRAILOR

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.




Approved _____

DRAWING STATUS

Status	Date	Initial

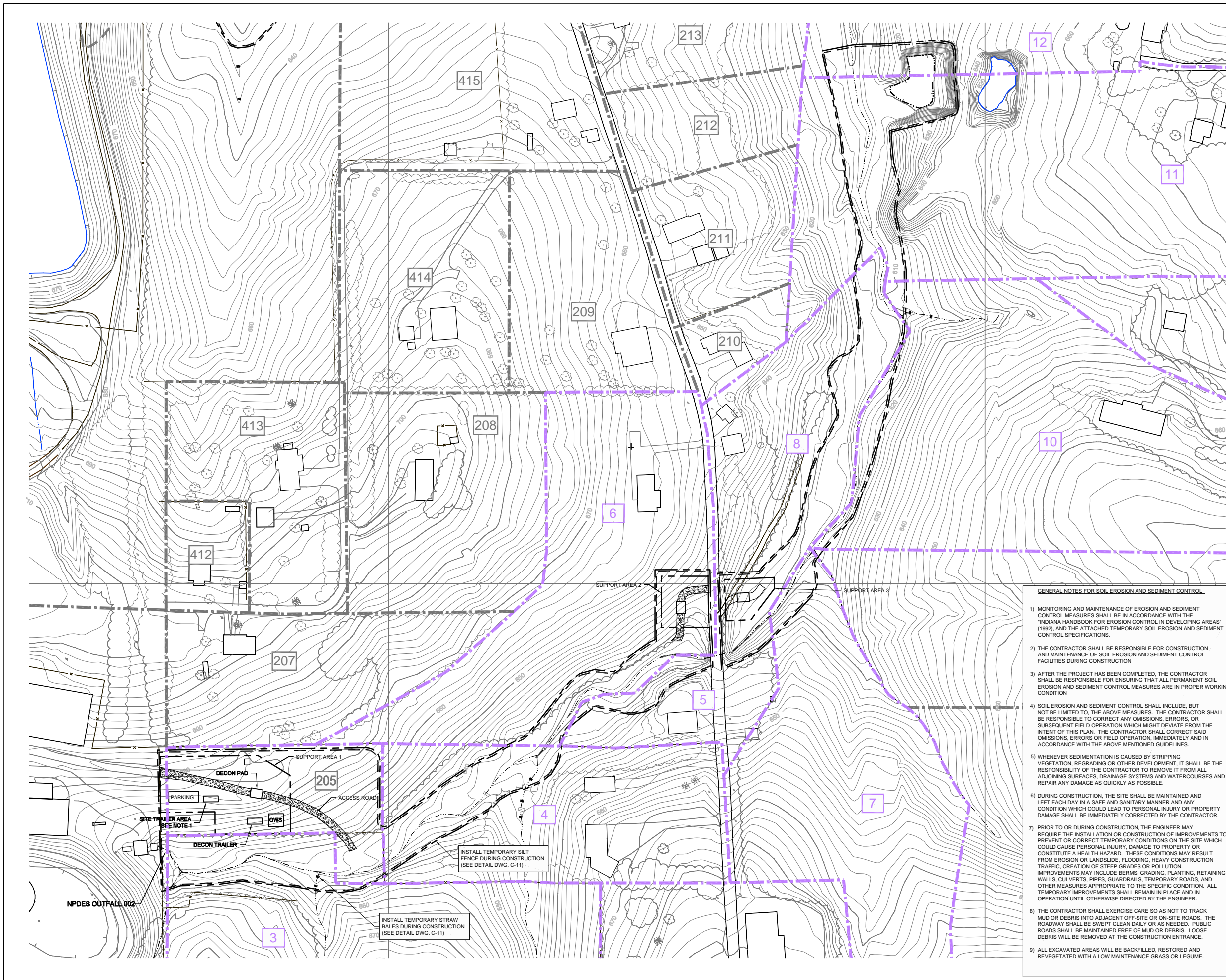
GM POWERTRAIN FACILITY
BEDFORD, INDIANA
REMOVAL ACTION
SITE PREPARATION
UPSTREAM PARCELS


CONESTOGA-ROVERS & ASSOCIATES

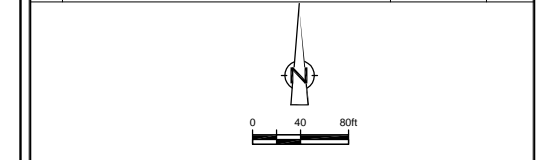
Source Reference:
 BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001

Project Manager: J. MCGUIGAN	Reviewed By: R. MEDSGER	Date: APRIL 2003
Scale: AS SHOWN	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-03

13968-00/03/01/02/03/04/05/06/07/08/09/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100



NO.	Revision	Date	Initial
1	ADD MAINTENANCE AND MONITORING NOTE	DEC. 03, 2002	D.S.
2	REVISED TO INCLUDE PARCELS 11 AND 12	APRIL 5, 2003	A.W.



LEGEND

	EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
	EXISTING VEGETATION
	EXISTING BUILDINGS
	DIRT ROADS
	ROADS / PAVED AREAS
	EXISTING FENCE
	APPROXIMATE SURFACE WATER LOCATION
	PARCEL NUMBER
	PARCEL LIMIT
	WORK AREA LIMITS
	PROPOSED SILT FENCING
	TEMPORARY STRAW BALE DURING CONSTRUCTION
	OIL / WATER SEPARATOR

NOTE:
1. CONTRACTOR'S SITE TRAILER TO BE LOCATED ON GM DRIVE NEXT TO CRA TRAILER

SCALE VERIFICATION
THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved _____

DRAWING STATUS

Status	Date	Initial

**GM POWERTRAIN FACILITY
BEDFORD, INDIANA**

**REMOVAL ACTION
SITE WORKS I - UPSTREAM PARCELS
SOIL EROSION AND SEDIMENT CONTROL**



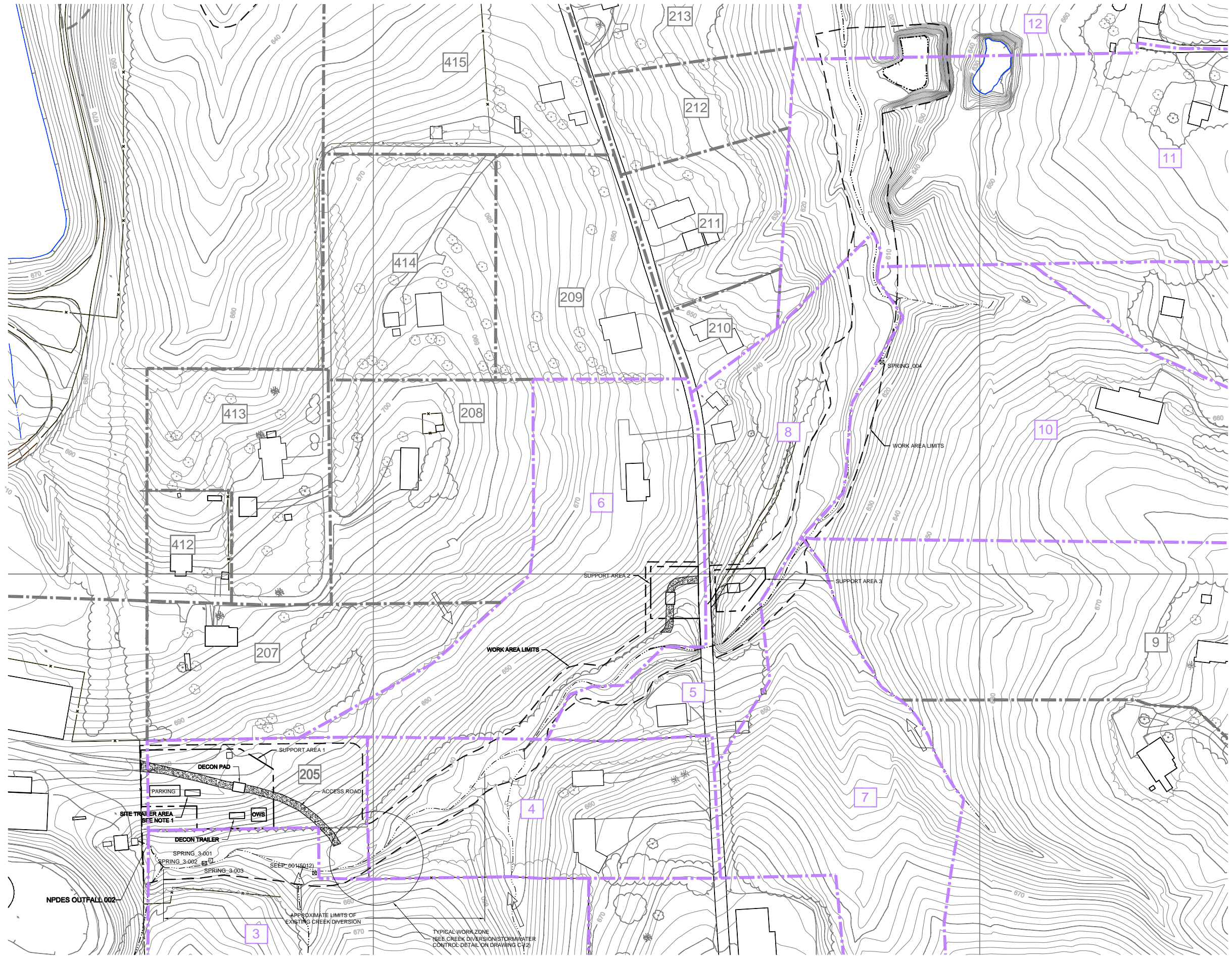
Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001

Project Manager: J. MCGUIGAN	Reviewed By: R. MEDSGER	Date: APRIL 2003
Scale: AS SHOWN	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-04

- GENERAL NOTES FOR SOIL EROSION AND SEDIMENT CONTROL**
- 1) MONITORING AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE "INDIANA HANDBOOK FOR EROSION CONTROL IN DEVELOPING AREAS" (1992), AND THE ATTACHED TEMPORARY SOIL EROSION AND SEDIMENT CONTROL SPECIFICATIONS.
 - 2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF SOIL EROSION AND SEDIMENT CONTROL FACILITIES DURING CONSTRUCTION.
 - 3) AFTER THE PROJECT HAS BEEN COMPLETED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE IN PROPER WORKING CONDITION.
 - 4) SOIL EROSION AND SEDIMENT CONTROL SHALL INCLUDE, BUT NOT BE LIMITED TO, THE ABOVE MEASURES. THE CONTRACTOR SHALL BE RESPONSIBLE TO CORRECT ANY OMISSIONS, ERRORS, OR SUBSEQUENT FIELD OPERATION WHICH MIGHT DEVIATE FROM THE INTENT OF THIS PLAN. THE CONTRACTOR SHALL CORRECT SAID OMISSIONS, ERRORS OR FIELD OPERATION, IMMEDIATELY AND IN ACCORDANCE WITH THE ABOVE MENTIONED GUIDELINES.
 - 5) WHENEVER SEDIMENTATION IS CAUSED BY STRIPPING VEGETATION, REGRADING OR OTHER DEVELOPMENT, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE IT FROM ALL ADJOINING SURFACES, DRAINAGE SYSTEMS AND WATERCOURSES AND TO REPAIR ANY DAMAGE AS QUICKLY AS POSSIBLE.
 - 6) DURING CONSTRUCTION, THE SITE SHALL BE MAINTAINED AND LEFT EACH DAY IN A SAFE AND SANITARY MANNER AND ANY CONDITION WHICH COULD LEAD TO PERSONAL INJURY OR PROPERTY DAMAGE SHALL BE IMMEDIATELY CORRECTED BY THE CONTRACTOR.
 - 7) PRIOR TO OR DURING CONSTRUCTION, THE ENGINEER MAY REQUIRE THE INSTALLATION OR CONSTRUCTION OF IMPROVEMENTS TO PREVENT OR CORRECT TEMPORARY CONDITIONS ON THE SITE WHICH COULD CAUSE PERSONAL INJURY, DAMAGE TO PROPERTY OR CONSTITUTE A HEALTH HAZARD. THESE CONDITIONS MAY RESULT FROM EROSION OR LANDSLIDE, FLOODING, HEAVY CONSTRUCTION TRAFFIC, CREATION OF STEEP GRADES OR POLLUTION. IMPROVEMENTS MAY INCLUDE BERMS, GRADING, PLANTING, RETAINING WALLS, CULVERTS, PIPES, GUARDRAILS, TEMPORARY ROADS, AND OTHER MEASURES APPROPRIATE TO THE SPECIFIC CONDITION. ALL TEMPORARY IMPROVEMENTS SHALL REMAIN IN PLACE AND IN OPERATION UNTIL OTHERWISE DIRECTED BY THE ENGINEER.
 - 8) THE CONTRACTOR SHALL EXERCISE CARE SO AS NOT TO TRACK MUD OR DEBRIS INTO ADJACENT OFF-SITE OR ON-SITE ROADS. THE ROADWAY SHALL BE SWEEPED CLEAN DAILY OR AS NEEDED. PUBLIC ROADS SHALL BE MAINTAINED FREE OF MUD OR DEBRIS. LOOSE DEBRIS WILL BE REMOVED AT THE CONSTRUCTION ENTRANCE.
 - 9) ALL EXCAVATED AREAS WILL BE BACKFILLED, RESTORED AND REVEGETATED WITH A LOW MAINTENANCE GRASS OR LEGUME.

DECON PAD
PARKING
SITE TRAILER AREA
DECON TRAILER
ACCESS ROAD
INSTALL TEMPORARY SILT FENCE DURING CONSTRUCTION (SEE DETAIL DWG. C-11)
INSTALL TEMPORARY STRAW BALES DURING CONSTRUCTION (SEE DETAIL DWG. C-11)

NPDES OUTFALL 002



NO	Revision	Date	Initial
1	REVISED TO INCLUDE PARCELS 11 AND 12	APRIL 5, 2003	A.W.

N

0 40 80ft

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- DIRT ROADS
- ROADS / PAVED AREAS
- EXISTING FENCE
- APPROXIMATE SURFACE WATER LOCATION
- PARCEL NUMBER
- PARCEL LIMIT
- WORK AREA LIMITS
- SEEP
- SEEP SAMPLE LOCATION
- SPRING
- SPRING SAMPLE LOCATION
- LOCATION OF OBSERVED SPRING
- SPRING (5012)
- HIGH FLOW SAMPLE LOCATION
- FLOWS FROM SUB-CATCHMENTS
- OWS / WATER SEPARATOR

NOTE:
1. CONTRACTOR'S SITE TRAILER TO BE LOCATED ON GM DRIVE NEXT TO CRA TRAILER

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved _____

DRAWING STATUS

Status	Date	Initial

**GM POWERTRAIN FACILITY
BEDFORD, INDIANA**

REMOVAL ACTION

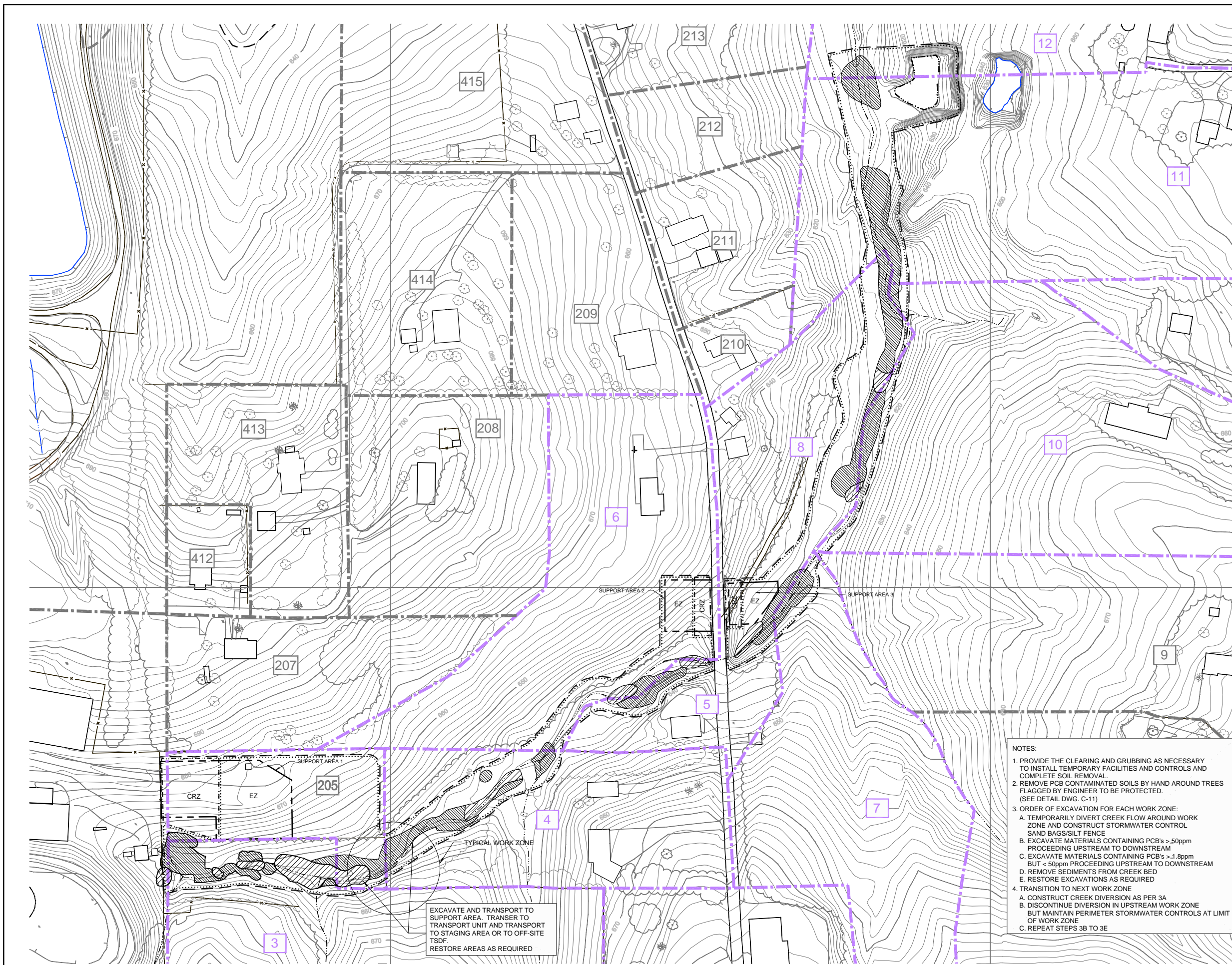
**SITE WORKS II - UPSTREAM PARCELS
STORMWATER MANAGEMENT**

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001

Project Manager: J. MCGUIGAN	Reviewed By: R. MEDSGER	Date: APRIL 2003
Scale: AS SHOWN	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-05

13968-00/01/02/03/LWA/027 II B 17/20/03



EXCAVATE AND TRANSPORT TO SUPPORT AREA. TRANSFER TO TRANSPORT UNIT AND TRANSPORT TO STAGING AREA OR TO OFF-SITE TSDF. RESTORE AREAS AS REQUIRED

- NOTES:**
- PROVIDE THE CLEARING AND GRUBBING AS NECESSARY TO INSTALL TEMPORARY FACILITIES AND CONTROLS AND COMPLETE SOIL REMOVAL
 - REMOVE PCB CONTAMINATED SOILS BY HAND AROUND TREES FLAGGED BY ENGINEER TO BE PROTECTED. (SEE DETAIL DWG. C-11)
 - ORDER OF EXCAVATION FOR EACH WORK ZONE:
 - TEMPORARILY DIVERT CREEK FLOW AROUND WORK ZONE AND CONSTRUCT STORMWATER CONTROL SAND BAGS/SILT FENCE
 - EXCAVATE MATERIALS CONTAINING PCB'S >.50ppm PROCEEDING UPSTREAM TO DOWNSTREAM
 - EXCAVATE MATERIALS CONTAINING PCB'S >.1.8ppm BUT < 50ppm PROCEEDING UPSTREAM TO DOWNSTREAM
 - REMOVE SEDIMENTS FROM CREEK BED
 - RESTORE EXCAVATIONS AS REQUIRED
 - TRANSITION TO NEXT WORK ZONE
 - CONSTRUCT CREEK DIVERSION AS PER 3A
 - DISCONTINUE DIVERSION IN UPSTREAM WORK ZONE BUT MAINTAIN PERIMETER STORMWATER CONTROLS AT LIMIT OF WORK ZONE
 - REPEAT STEPS 3B TO 3E

NO	Revision	Date	Initial
1	REVISED TO INCLUDE PARCELS 11 AND 12	APRIL 5, 2003	A.W.

N

0 40 80ft

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- DIRT ROADS
- ROADS / PAVED AREAS
- EXISTING FENCE
- APPROXIMATE SURFACE WATER LOCATION
- EXCAVATION/RESTORATION AREA (PCB CONCENTRATION >50ppm IN SOIL)
- EXCAVATION/RESTORATION AREA (PCB CONCENTRATION >1.8 ppm AND <50ppm IN SOIL)
- PARCEL NUMBER
- PARCEL LIMIT
- WORK AREA LIMITS
- EXCLUSION ZONE (EZ)
- CONTAINMENT REDUCTION ZONE (CRZ)

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved _____

DRAWING STATUS

Status	Date	Initial

Status	Date	Initial

**GM POWERTRAIN FACILITY
BEDFORD, INDIANA**

REMOVAL ACTION

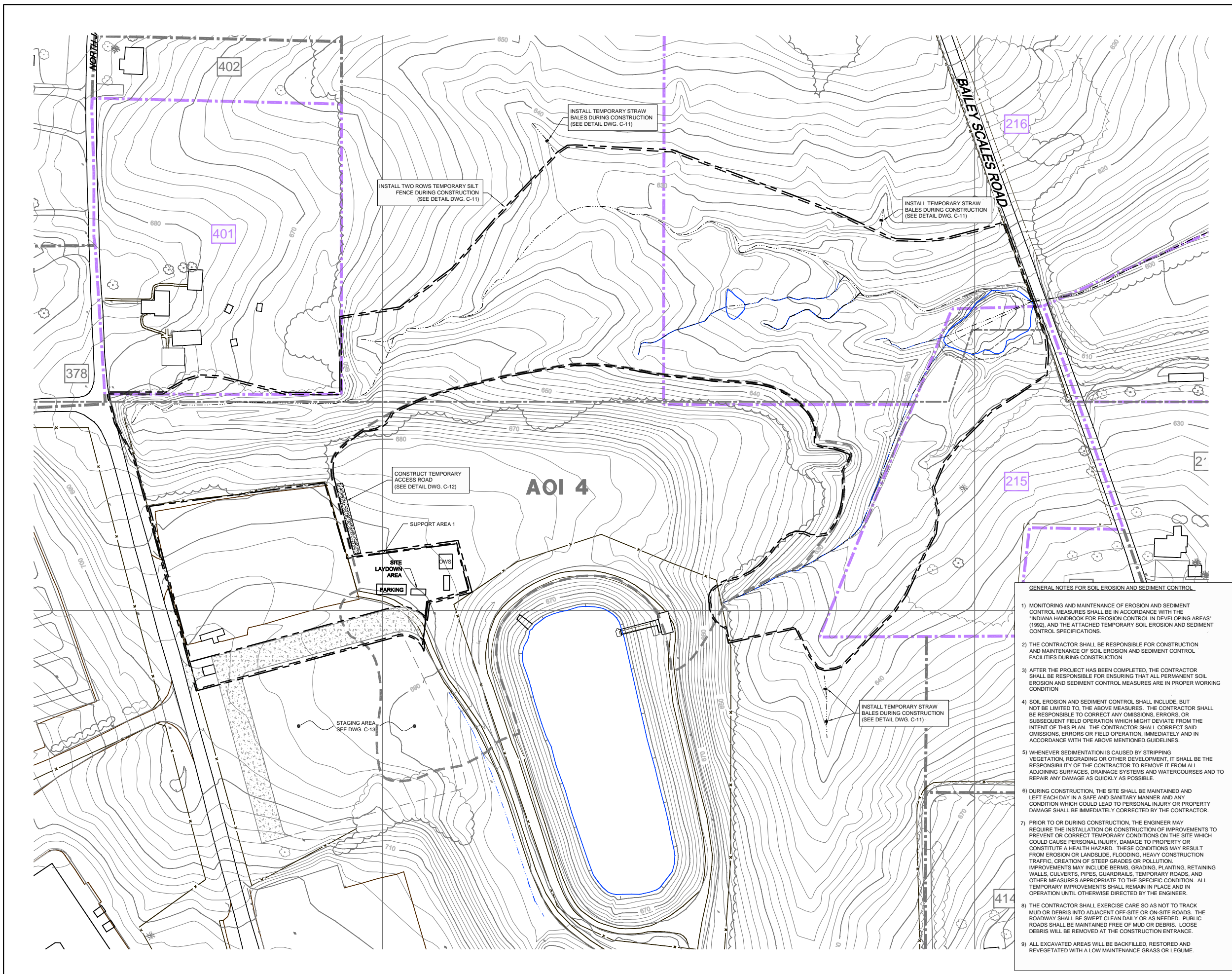
**SITE WORKS III - UPSTREAM PARCELS
EXCAVATION PLAN**

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001

Project Manager: J. MCGUIGAN	Reviewed By: R. MEDSGER	Date: APRIL 2003
Scale: AS SHOWN	Project N ^o : 13968-00	Report N ^o : 030
		Drawing N ^o : C-06

13968.00/03/01/02/03 II B 17/0014



NO	Revision	Date	Initial
1	RELOCATED WORK AREA LAYOUT	JULY 17, 2003	J.D.

N

0 40 80ft

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- DIRT ROADS
- ROADS / PAVED AREAS
- EXISTING FENCE
- APPROXIMATE SURFACE WATER LOCATION
- PARCEL NUMBER
- PARCEL LIMIT
- WORK AREA LIMITS
- PROPOSED SILT FENCING
- TEMPORARY STRAW BALE DURING CONSTRUCTION
- PROPOSED ACCESS ROAD
- OIL / WATER SEPARATOR
- AOI 4 LIMIT

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved _____

DRAWING STATUS

Status	Date	Initial

- GENERAL NOTES FOR SOIL EROSION AND SEDIMENT CONTROL**
- 1) MONITORING AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE "INDIANA HANDBOOK FOR EROSION CONTROL IN DEVELOPING AREAS" (1992), AND THE ATTACHED TEMPORARY SOIL EROSION AND SEDIMENT CONTROL SPECIFICATIONS.
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 - 3) AFTER THE PROJECT HAS BEEN COMPLETED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE IN PROPER WORKING CONDITION.
 - 4) SOIL EROSION AND SEDIMENT CONTROL SHALL INCLUDE, BUT NOT BE LIMITED TO, THE ABOVE MEASURES. THE CONTRACTOR SHALL BE RESPONSIBLE TO CORRECT ANY OMISSIONS, ERRORS, OR SUBSEQUENT FIELD OPERATION WHICH MIGHT DEVIATE FROM THE INTENT OF THIS PLAN. THE CONTRACTOR SHALL CORRECT SAID OMISSIONS, ERRORS OR FIELD OPERATION, IMMEDIATELY AND IN ACCORDANCE WITH THE ABOVE MENTIONED GUIDELINES.
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 - 6) DURING CONSTRUCTION, THE SITE SHALL BE MAINTAINED AND LEFT EACH DAY IN A SAFE AND SANITARY MANNER AND ANY CONDITION WHICH COULD LEAD TO PERSONAL INJURY OR PROPERTY DAMAGE SHALL BE IMMEDIATELY CORRECTED BY THE CONTRACTOR.
 - 7) PRIOR TO OR DURING CONSTRUCTION, THE ENGINEER MAY REQUIRE THE INSTALLATION OR CONSTRUCTION OF IMPROVEMENTS TO PREVENT OR CORRECT TEMPORARY CONDITIONS ON THE SITE WHICH COULD CAUSE PERSONAL INJURY, DAMAGE TO PROPERTY OR CONSTITUTE A HEALTH HAZARD. THESE CONDITIONS MAY RESULT FROM EROSION OR LANDSLIDE, FLOODING, HEAVY CONSTRUCTION TRAFFIC, CREATION OF STEEP GRADES OR POLLUTION. IMPROVEMENTS MAY INCLUDE BERMES, GRADING, PLANTING, RETAINING WALLS, CULVERTS, PIPES, GUARDRAILS, TEMPORARY ROADS, AND OTHER MEASURES APPROPRIATE TO THE SPECIFIC CONDITION. ALL TEMPORARY IMPROVEMENTS SHALL REMAIN IN PLACE AND IN OPERATION UNTIL OTHERWISE DIRECTED BY THE ENGINEER.
 - 8) THE CONTRACTOR SHALL EXERCISE CARE SO AS NOT TO TRACK MUD OR DEBRIS INTO ADJACENT OFF-SITE OR ON-SITE ROADS. THE ROADWAY SHALL BE SWEEPED CLEAN DAILY OR AS NEEDED. PUBLIC ROADS SHALL BE MAINTAINED FREE OF MUD OR DEBRIS. LOOSE DEBRIS WILL BE REMOVED AT THE CONSTRUCTION ENTRANCE.
 - 9) ALL EXCAVATED AREAS WILL BE BACKFILLED, RESTORED AND REVEGETATED WITH A LOW MAINTENANCE GRASS OR LEGUME.

**GM POWERTRAIN FACILITY
BEDFORD, INDIANA**

UPSTREAM PARCELS REMOVAL ACTION

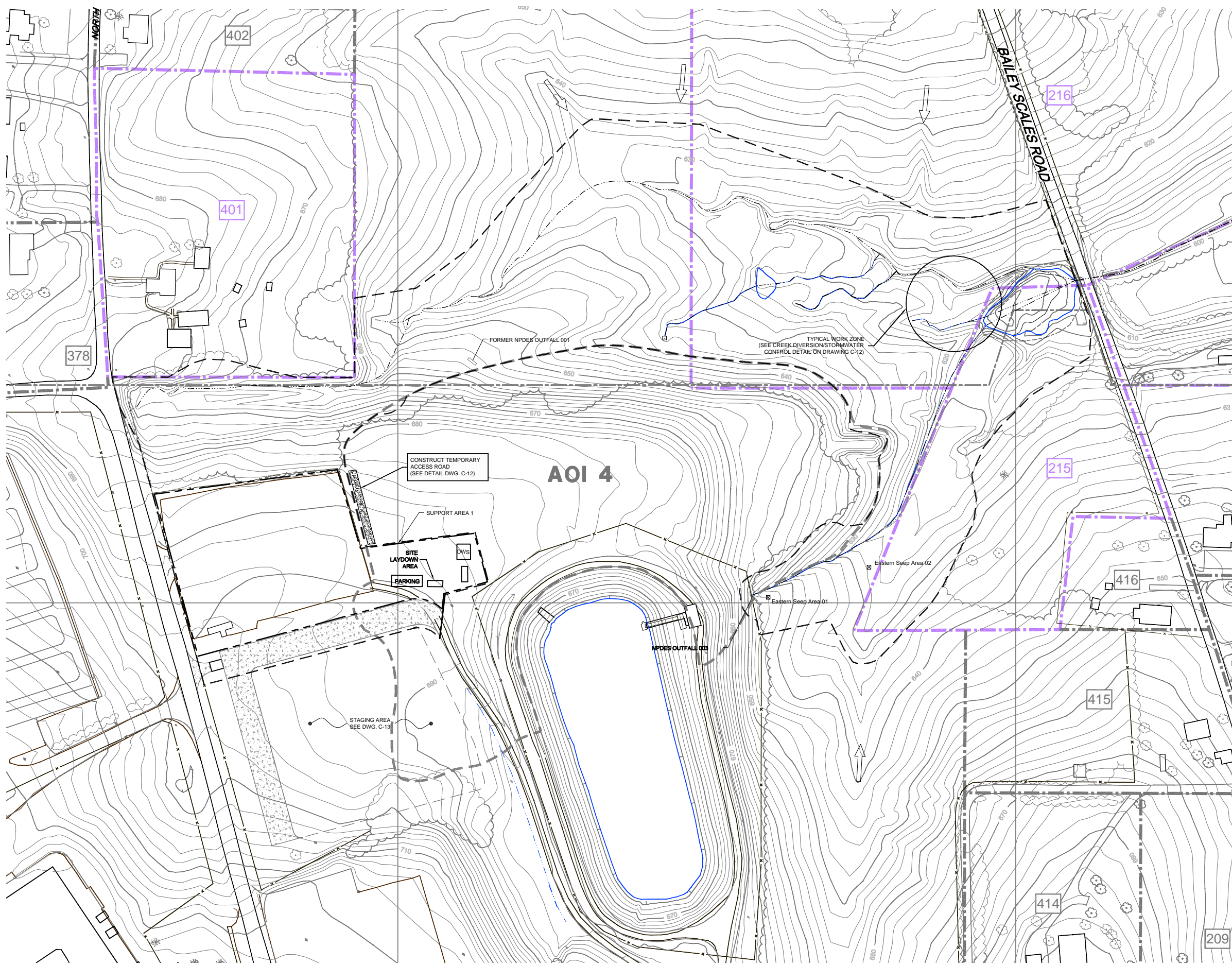
**SITE WORKS IV - AREA NORTH OF AOI 4
SOIL EROSION AND SEDIMENT CONTROL**

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001

Project Manager: J. MCGUIGAN	Reviewed By: J. DANIEL	Date: APRIL 2003
Scale: AS SHOWN	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-08

13968-00/030/01/04/08 11 14/2003



NO.	Revision	Date	Initial
1	RELOCATED WORK AREA LAYOUT	JULY 17, 2003	J.D.

N

0 40 80ft

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- DIRT ROADS
- ROADS / PAVED AREAS
- EXISTING FENCE
- APPROXIMATE SURFACE WATER LOCATION
- PARCEL NUMBER
- PARCEL LIMIT
- WORK AREA LIMITS
- SEEP SEEP SAMPLE LOCATION
- SPRING LOCATION OF OBSERVED SPRING
- FLOWS FROM SUB-CATCHMENTS
- OIL / WATER SEPARATOR
- AOI 4 LIMIT

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

**GM POWERTRAIN FACILITY
BEDFORD, INDIANA**

UPSTREAM PARCELS REMOVAL ACTION

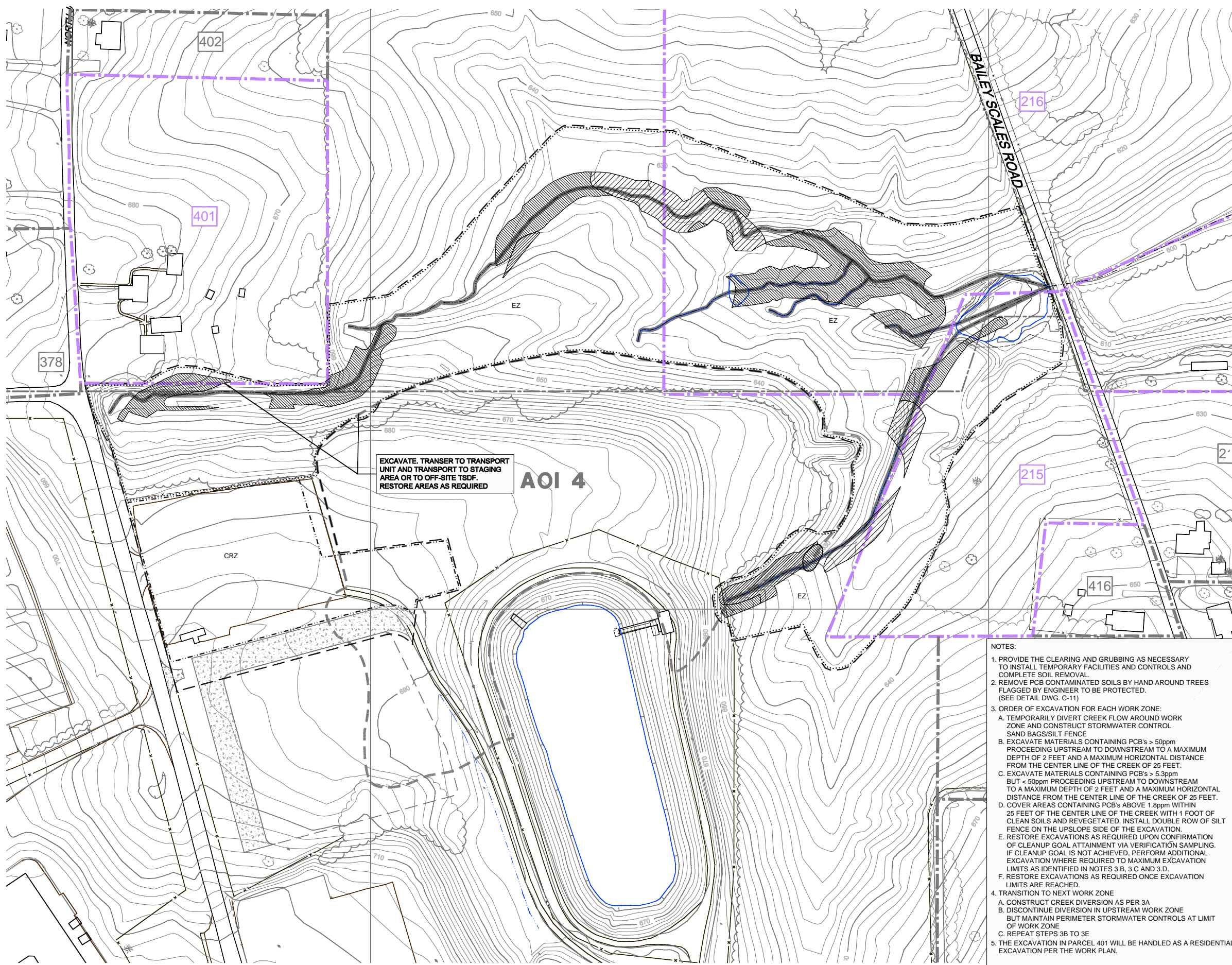
**SITE WORKS V - AREA NORTH OF AOI 4
STORMWATER MANAGEMENT**

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001

Project Manager: J. MCGUIGAN	Reviewed By: J. DANIEL	Date: APRIL 2003
Scale: AS SHOWN	Project N°: 13968-00	Report N°: 030 Drawing N°: C-09

13968L-001/01/02/LM/A011 11 14/2003



NO	Revision	Date	Initial
1	REVISION TO EXCAVATION AREA	APRIL 29, 2003	J.D.
2	RELOCATED WORK AREA LAYOUT	JULY 17, 2003	J.D.

0 40 80ft

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE SURFACE WATER LOCATION
- EXCAVATION/RESTORATION AREA (PCB CONCENTRATION >50ppm IN SOIL)
- EXCAVATION/RESTORATION AREA (PCB CONCENTRATION >5.3ppm AND <50ppm IN SOIL)
- COVER WITH 2 FEET OF SOIL AND REVEGETATE (PCB CONCENTRATIONS >1.8ppm AND <5.3ppm IN SOIL)
- PARCEL NUMBER
- PARCEL LIMIT
- WORK AREA LIMITS
- EXCLUSION ZONE
- CONTAINMENT REDUCTION ZONE
- AOI 4 LIMIT
- LIMITS OF STREAM EXCAVATION

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved		
DRAWING STATUS		
Status	Date	Initial

**GM POWERTRAIN FACILITY
BEDFORD, INDIANA**

UPSTREAM PARCELS REMOVAL ACTION

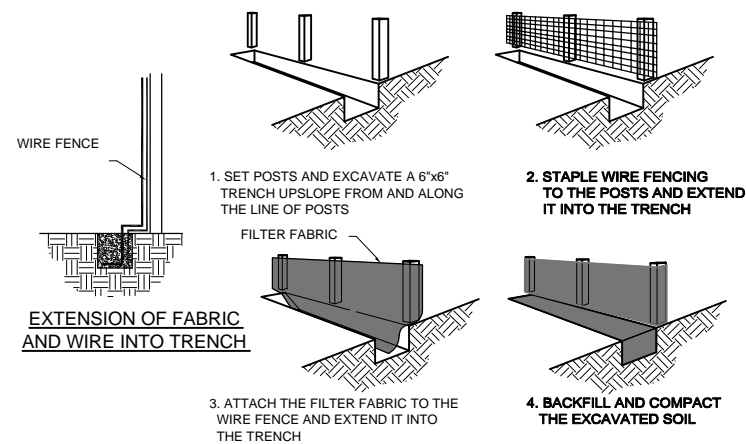
**SITE WORKS VI - AREA NORTH OF AOI 4
EXCAVATION PLAN**

CONESTOGA-ROVERS & ASSOCIATES

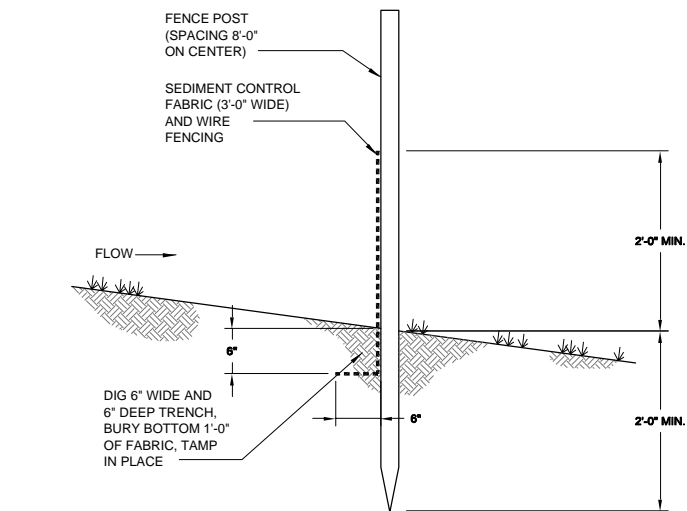
Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001

Project Manager: J. McGUIGAN	Reviewed By: J. DANIEL	Date: APRIL 2003
Scale: AS SHOWN	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-10

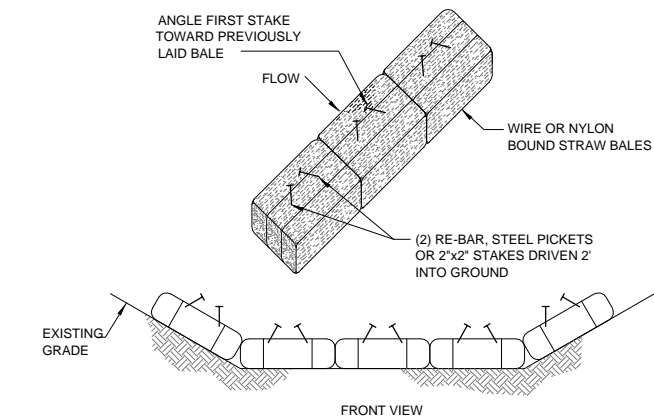
- NOTES:**
1. PROVIDE THE CLEARING AND GRUBBING AS NECESSARY TO INSTALL TEMPORARY FACILITIES AND CONTROLS AND COMPLETE SOIL REMOVAL.
 2. REMOVE PCB CONTAMINATED SOILS BY HAND AROUND TREES FLAGGED BY ENGINEER TO BE PROTECTED. (SEE DETAIL DWG. C-11)
 3. ORDER OF EXCAVATION FOR EACH WORK ZONE:
 - A. TEMPORARILY DIVERT CREEK FLOW AROUND WORK ZONE AND CONSTRUCT STORMWATER CONTROL SAND BAGS/SILT FENCE
 - B. EXCAVATE MATERIALS CONTAINING PCB's > 50ppm PROCEEDING UPSTREAM TO DOWNSTREAM TO A MAXIMUM DEPTH OF 2 FEET AND A MAXIMUM HORIZONTAL DISTANCE FROM THE CENTER LINE OF THE CREEK OF 25 FEET.
 - C. EXCAVATE MATERIALS CONTAINING PCB's > 5.3ppm BUT < 50ppm PROCEEDING UPSTREAM TO DOWNSTREAM TO A MAXIMUM DEPTH OF 2 FEET AND A MAXIMUM HORIZONTAL DISTANCE FROM THE CENTER LINE OF THE CREEK OF 25 FEET.
 - D. COVER AREAS CONTAINING PCB's ABOVE 1.8ppm WITHIN 25 FEET OF THE CENTER LINE OF THE CREEK WITH 1 FOOT OF CLEAN SOILS AND REVEGETATED. INSTALL DOUBLE ROW OF SILT FENCE ON THE UPSLOPE SIDE OF THE EXCAVATION.
 - E. RESTORE EXCAVATIONS AS REQUIRED UPON CONFIRMATION OF CLEANUP GOAL ATTAINMENT VIA VERIFICATION SAMPLING. IF CLEANUP GOAL IS NOT ACHIEVED, PERFORM ADDITIONAL EXCAVATION WHERE REQUIRED TO MAXIMUM EXCAVATION LIMITS AS IDENTIFIED IN NOTES 3.B, 3.C AND 3.D.
 - F. RESTORE EXCAVATIONS AS REQUIRED ONCE EXCAVATION LIMITS ARE REACHED.
 4. TRANSITION TO NEXT WORK ZONE
 - A. CONSTRUCT CREEK DIVERSION AS PER 3A
 - B. DISCONTINUE DIVERSION IN UPSTREAM WORK ZONE BUT MAINTAIN PERIMETER STORMWATER CONTROLS AT LIMIT OF WORK ZONE
 - C. REPEAT STEPS 3B TO 3E
 5. THE EXCAVATION IN PARCEL 401 WILL BE HANDLED AS A RESIDENTIAL EXCAVATION PER THE WORK PLAN.



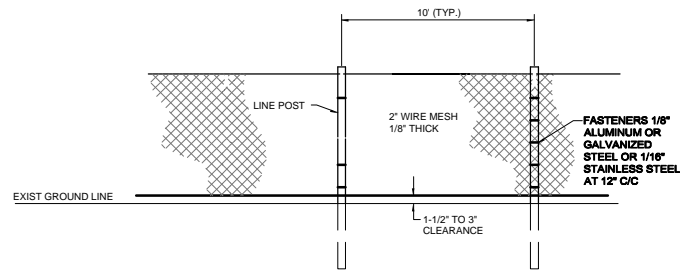
INSTALLATION SEQUENCE



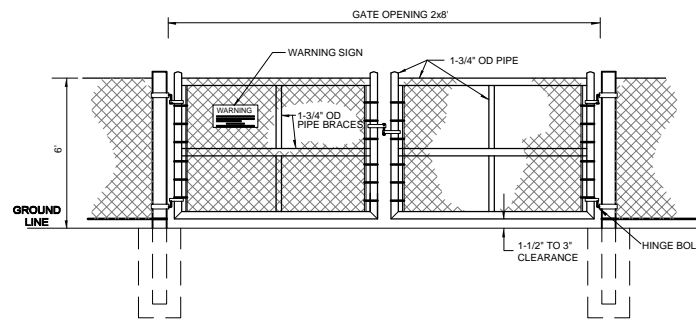
TEMPORARY CONSTRUCTION SILT FENCE DETAIL
NTS



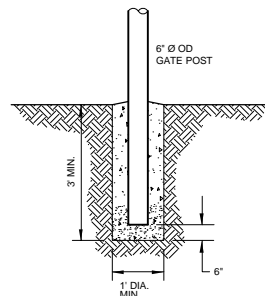
TEMPORARY CONSTRUCTION STRAW BALE DETAIL
NTS



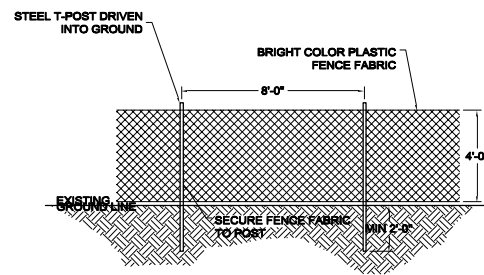
TEMPORARY CONSTRUCTION CHAIN LINK FENCE
NTS



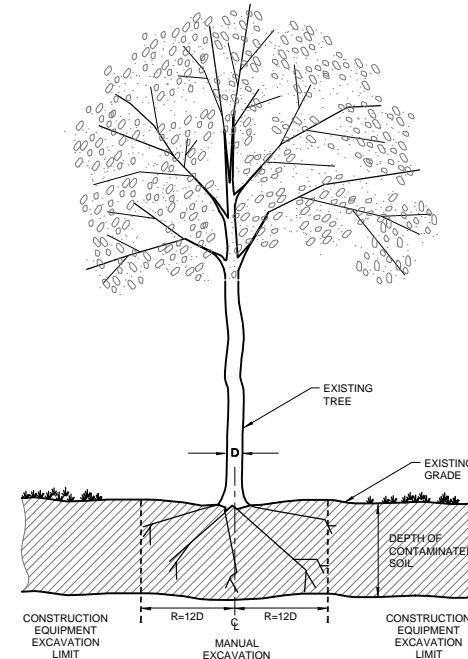
DOUBLE GATE / CONSTRUCTION ENTRANCE
NTS



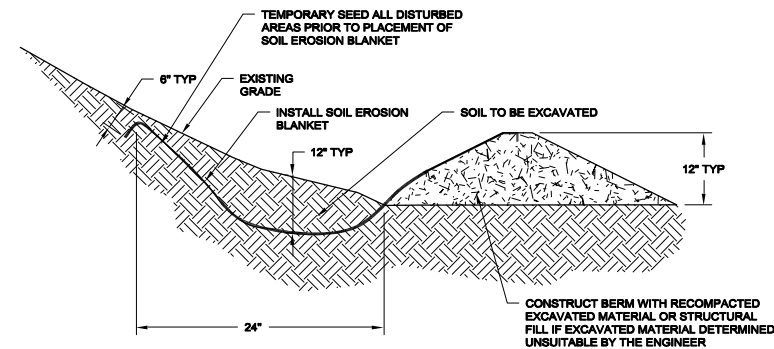
GATE POST DETAIL
NTS



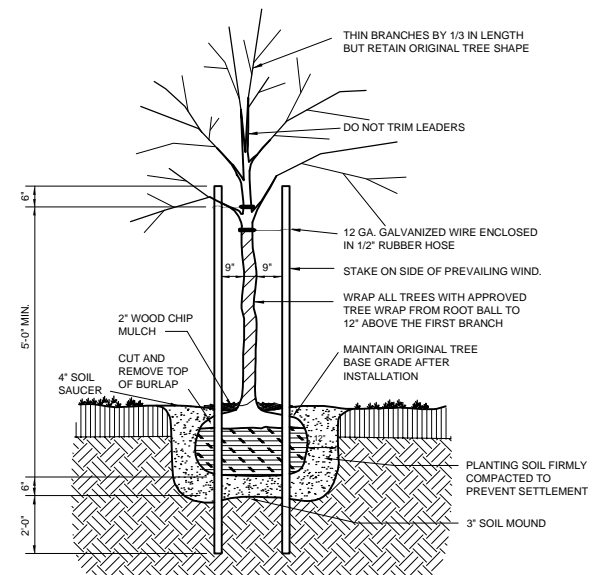
TEMPORARY CONSTRUCTION FENCE DETAIL



EXCAVATION AROUND EXIST. TREES
NTS



SURFACE RUN-OFF DIVERSION SWALE DETAIL
NTS



- NOTE:**
1. PAINT ALL CUTS TO TREE ROOTS AND BRANCHES OVER 1/4" WITH APPROVED TREE WOUND PAINT
 2. DETAIL APPLIES TO TREES 3" CALIPER AND UNDER

TREE PLANTING SECTION
NTS

NO	Revision	Date	Initial

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

GM POWERTRAIN FACILITY
BEDFORD, INDIANA

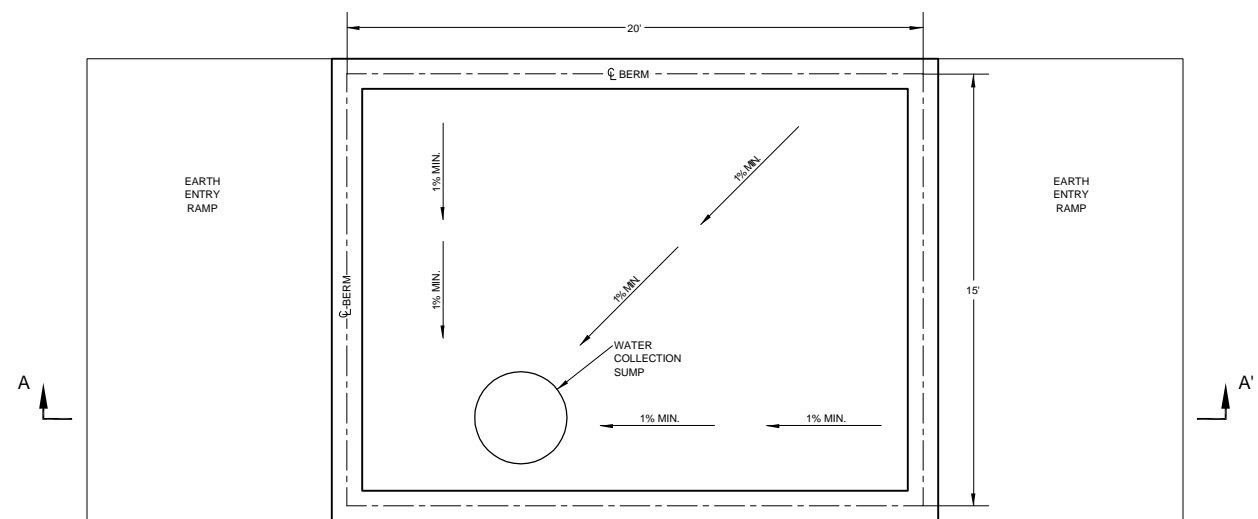
UPSTREAM PARCELS REMOVAL ACTION

DETAILS
SHEET 1 OF 2

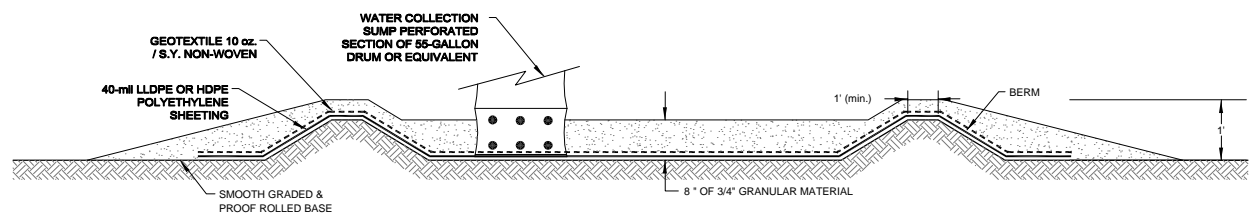
CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: J. MCGUIGAN	Reviewed By: J. DANIEL	Date: FEBRUARY 2003
Scale: AS SHOWN	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-11



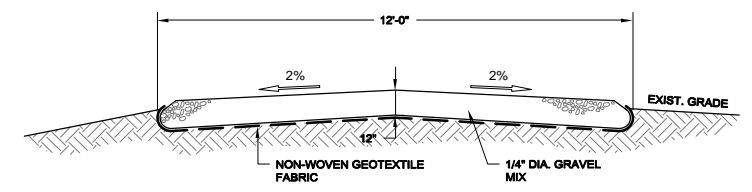
PLAN VIEW



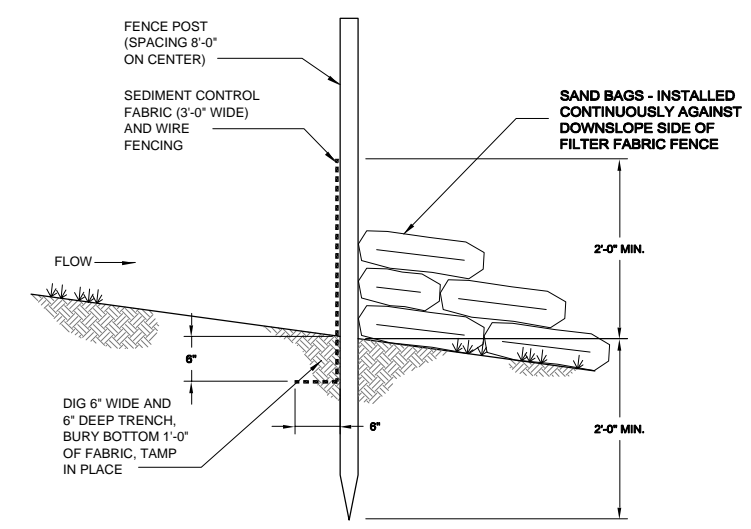
SECTION A-A'

- NOTES:
1. TEMPORARY DECONTAMINATION PAD TO BE CONSTRUCTED IN SUITABLE LOCATION CLOSE TO WORK AREAS, AS REQUIRED.
 2. TEMPORARY DECONTAMINATION PAD GRANULAR MATERIAL AND SEDIMENTS FROM DECONTAMINATING EXCAVATION EQUIPMENT TO BE BACKFILLED WITHIN ON-SITE CONSOLIDATION AREA.

TYPICAL TEMPORARY VEHICLE DECONTAMINATION PAD DETAIL



CONSTRUCTION ACCESS ROAD DETAIL
NTS



SILT FENCE REINFORCED BY SAND BAGS
NTS

NO.	Revision	Date	Initial

SCALE VERIFICATION

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Approved

DRAWING STATUS

Status	Date	Initial

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BEDFORD, INDIANA

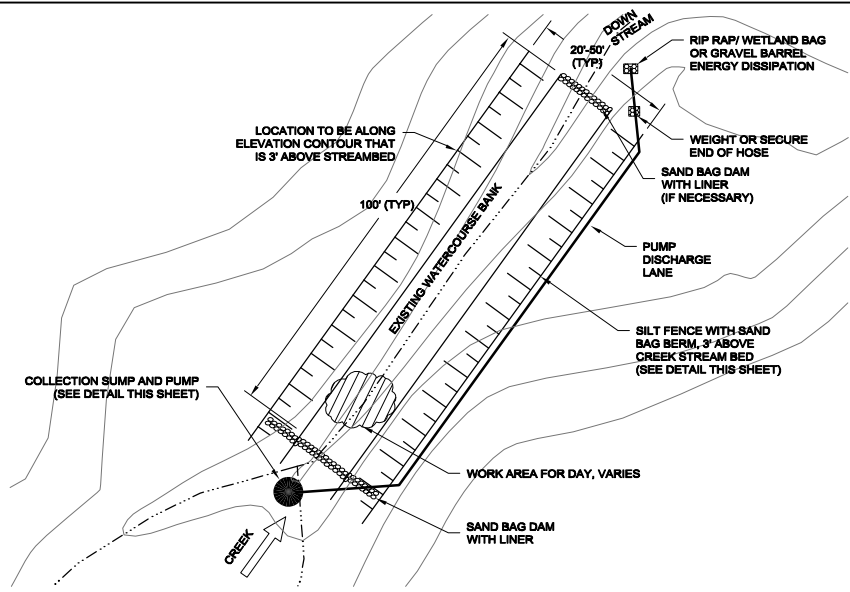
UPSTREAM PARCELS REMOVAL ACTION

DETAILS
SHEET 2 OF 2

CONESTOGA-ROVERS & ASSOCIATES

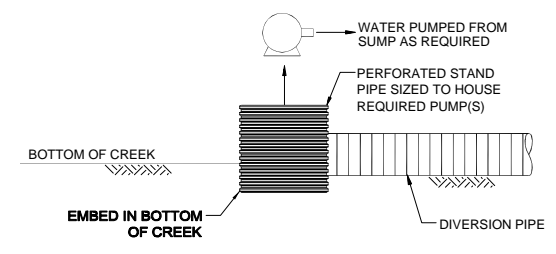
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Project Manager: J. MCGUIGAN	Reviewed By: J. DANIEL	Date: FEBRUARY 2003
Scale: AS SHOWN	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-12



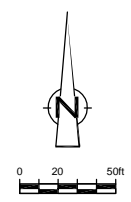
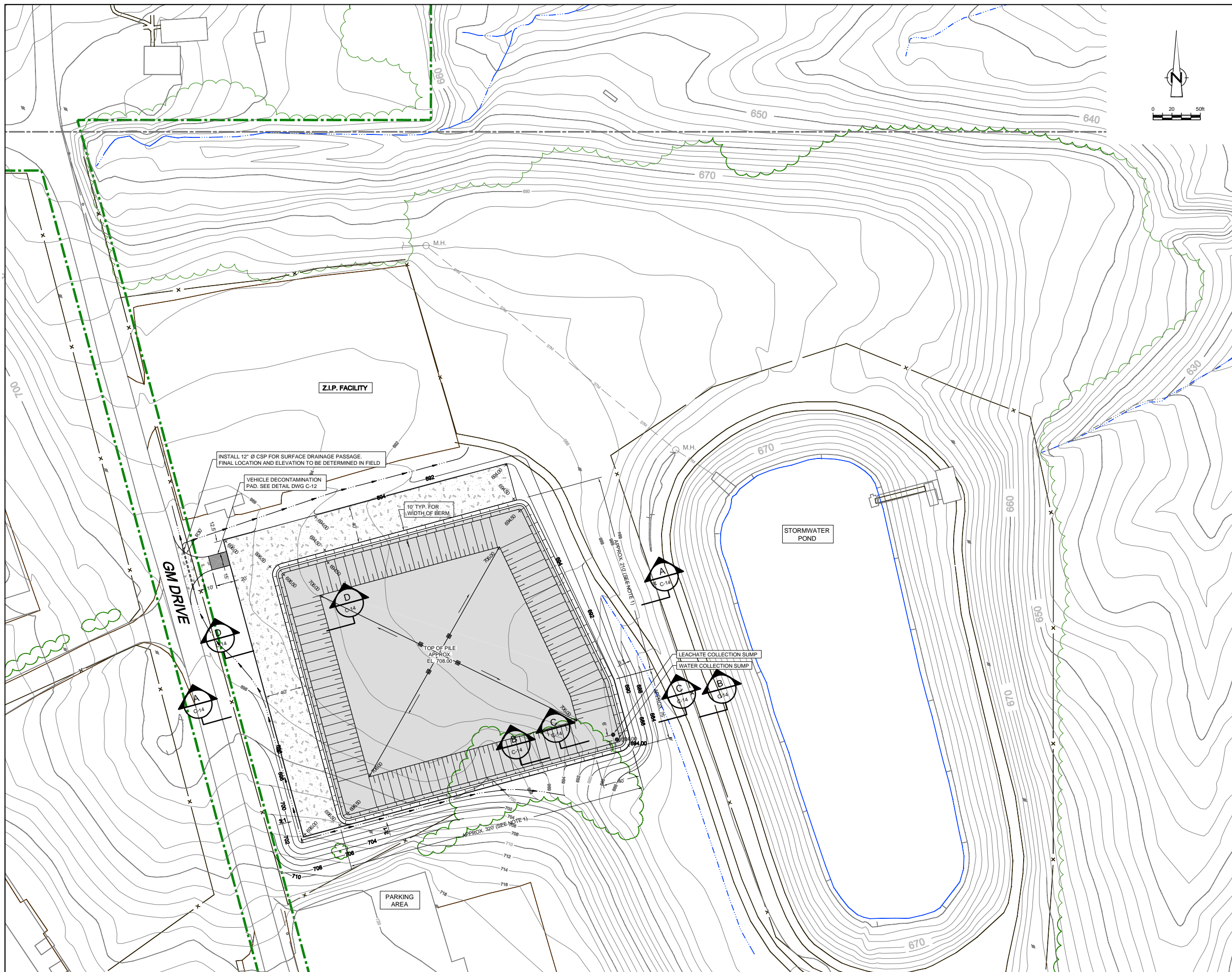
CREEK DIVERSION/STORMWATER CONTROL DETAIL (TYP)
NTS

- NOTES:
1. INSTALL UPSTREAM SANDBAG (OR EQUIVALENT) CHECK DAM WITH GEOTEXTILE LINER ACROSS WATERCOURSE AND MATCH EXISTING BANKS.
 2. INSTALL SO THAT FLOW UNDER OR BETWEEN BAGS IS PREVENTED BY OVERLAPPING THE STACKED BAGS AND ENTRENCHING THE BOTTOM SET.
 3. SAND BAG BARRIERS SHALL BE REGULARLY INSPECTED AND MAINTAINED, AND ANY BREAKS OR UNDERCUTTING IN THE BARRIER SHALL BE PROMPTLY REPAIRED.
 4. REMOVE SEDIMENT BEHIND THE BARRIER WHEN IT ACCUMULATES.
 5. REPLACE BROKEN BAGS IMMEDIATELY.
 6. INSTALL INSTREAM PUMP OR INTAKE LINE OF REMOTE PUMP IN SUMP LOCATED UPSTREAM OF WORK AREA. DISCHARGE WATER THROUGH OR INTO AN ENERGY DISSIPATER INTO THE WATERCOURSE SUFFICIENTLY DOWNSTREAM TO PREVENT WATER FLOWING BACK INTO WORK AREA. (USE TEMPORARY SANDBAG BACKWATER DAM IF NECESSARY.)
 7. THE TEMPORARY DIVERSION METHOD MAY BE REVISED AS NECESSARY BY THE CONTRACTOR. CONTRACTOR'S REVISED DETAILS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY ENGINEER AND PERMITTING AGENCIES PRIOR TO CONSTRUCTION.
 8. COLLECT SEEPAGE INTO EXCAVATION AREA. TRANSPORT TO THE WASTEWATER TREATMENT SYSTEM.



- NOTES:
- A. SIZE THE DIVERSION PIPE, SUMP AND STANDPIPE IN THE FIELD.
 - B. THE TEMPORARY DIVERSION METHOD MAY BE REVISED AS NECESSARY BY THE CONTRACTOR. CONTRACTOR'S REVISED DETAILS SHALL BE SUBMITTED FOR REVIEW PRIOR TO CONSTRUCTION.

TYPICAL SUMP PIT
NTS



NO.	Revision	Date	Initial

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING POWER POLE
- EXISTING BUILDINGS
- RAILROAD TRACKS
- ROADS / PAVED AREAS
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- EXISTING STORM SEWER
- FINAL GRADE CONTOUR
- DRAINAGE PATH
- NEW ACCESS ROAD
- CONTAMINATED SOIL PILE AREA
- EARTHEN BERM

NOTES:

1. FINAL FOOTPRINT, DIMENSIONS AND TOP LINEAR CONFIGURATION OF THE SOIL STAGING FACILITY WILL BE DETERMINED BASED ON FIELD CONDITIONS AND VOLUME OF MATERIAL TO BE STAGED.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

**GM POWERTRAIN FACILITY
BEDFORD, INDIANA**

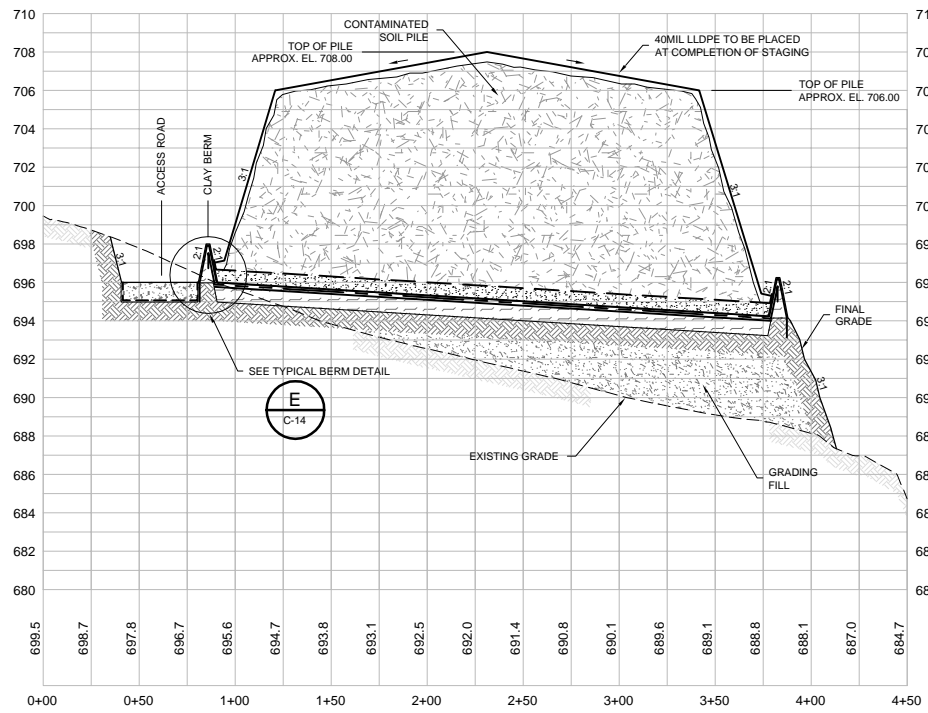
UPSTREAM PARCELS REMOVAL ACTION

**PCB CONTAMINATED SOIL
STAGING FACILITY PLAN**

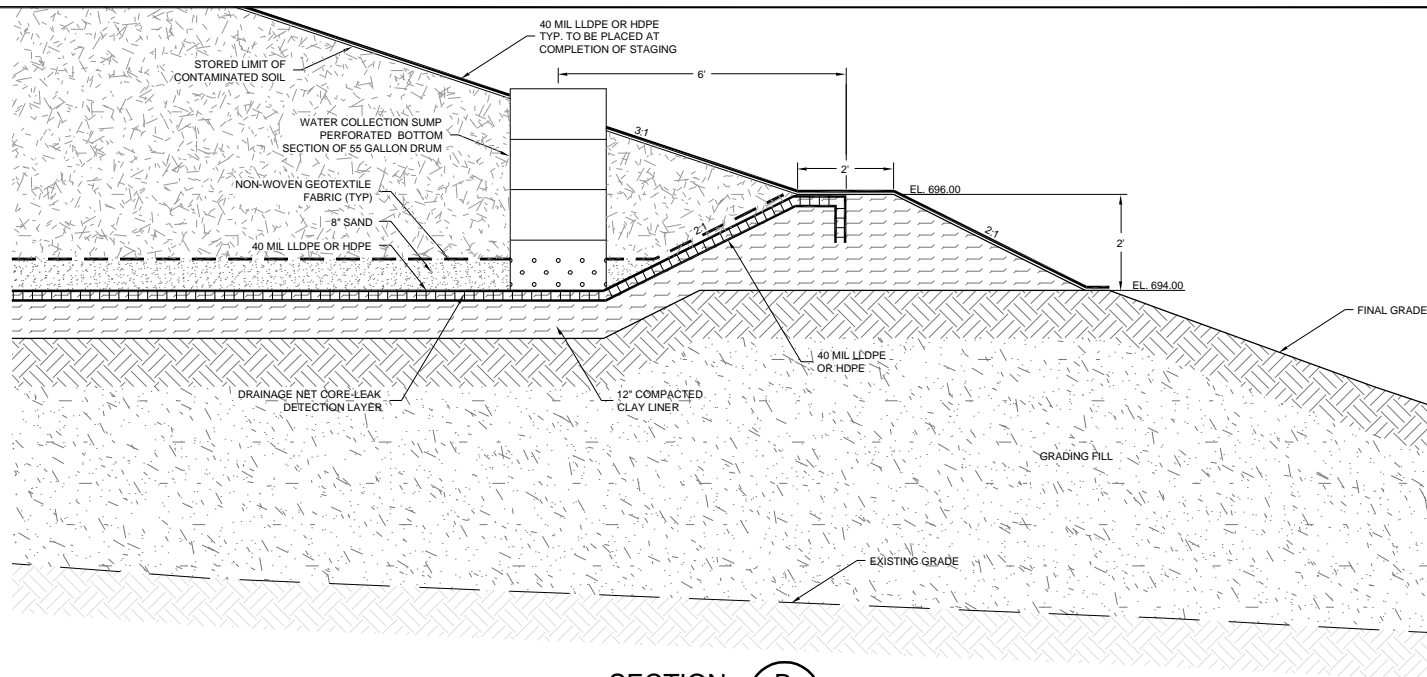


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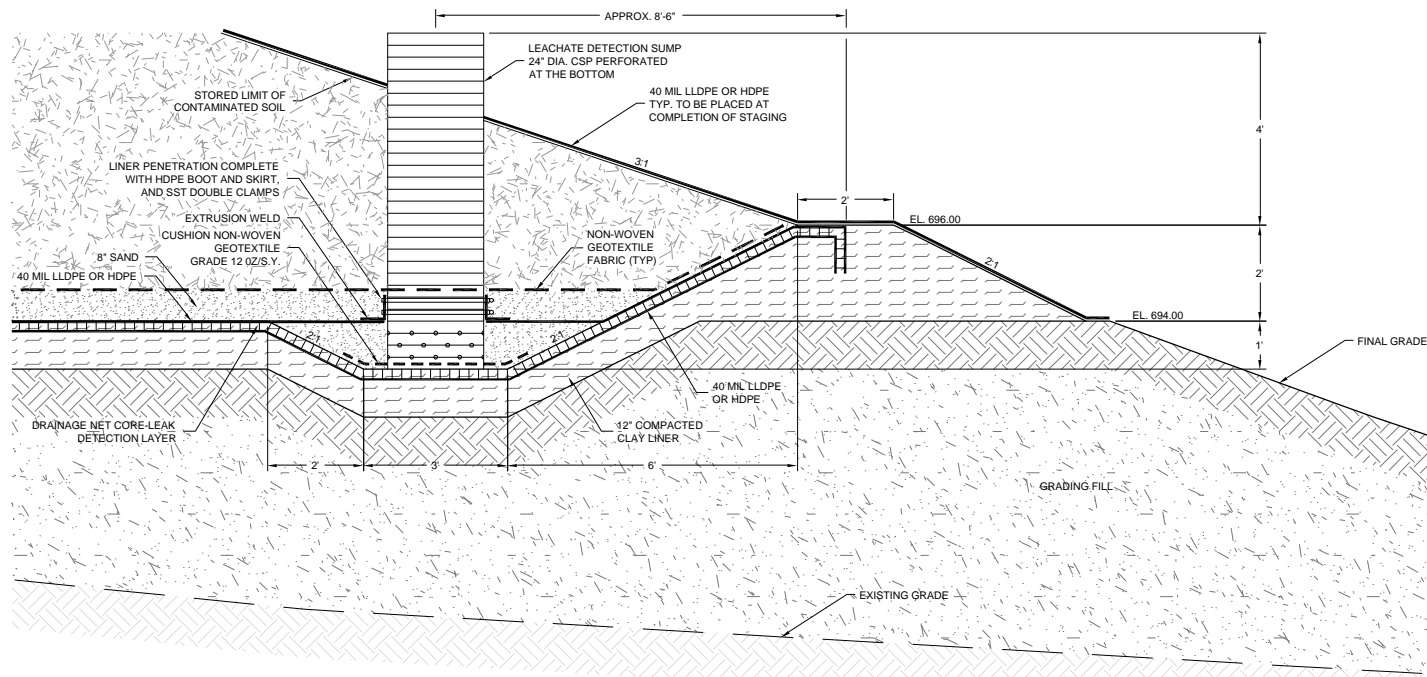
Project Manager: J. MCGUIGAN	Reviewed By: J. DANIEL	Date: FEBRUARY 2003
Scale: 1" = 50'	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-13



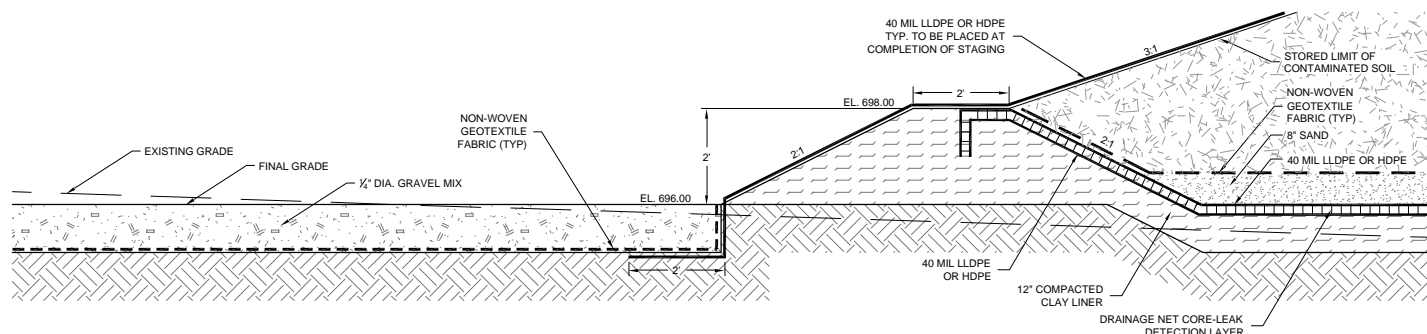
SECTION A
 HOR. 1" = 50'
 VER. 1" = 5'



SECTION B
 1" = 2'



SECTION C
 1" = 2'



SECTION D
 1" = 2'

NO.	Revision	Date	Initial

NOTES:
 1. FINAL CAP CONFIGURATION BASED ON VOLUME OF MATERIAL PLACED.

SCALE VERIFICATION
 THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

**GM POWERTRAIN FACILITY
 BEDFORD, INDIANA**
UPSTREAM PARCELS REMOVAL ACTION
**PCB CONTAMINATED SOIL
 STAGING FACILITY SECTIONS**



Source Reference:

Project Manager: J. MCGUIGAN	Reviewed By: J. DANIEL	Date: FEBRUARY 2003
Scale: HOR. 1" = 50' VER. 1" = 5'	Project N°: 13968-00	Report N°: 030
		Drawing N°: C-14