

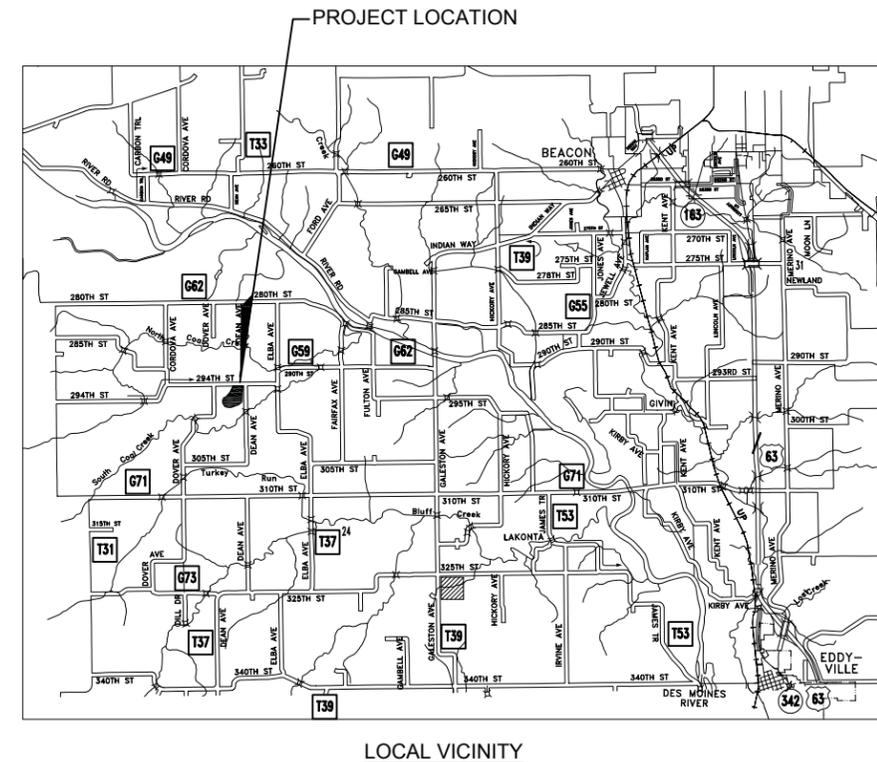
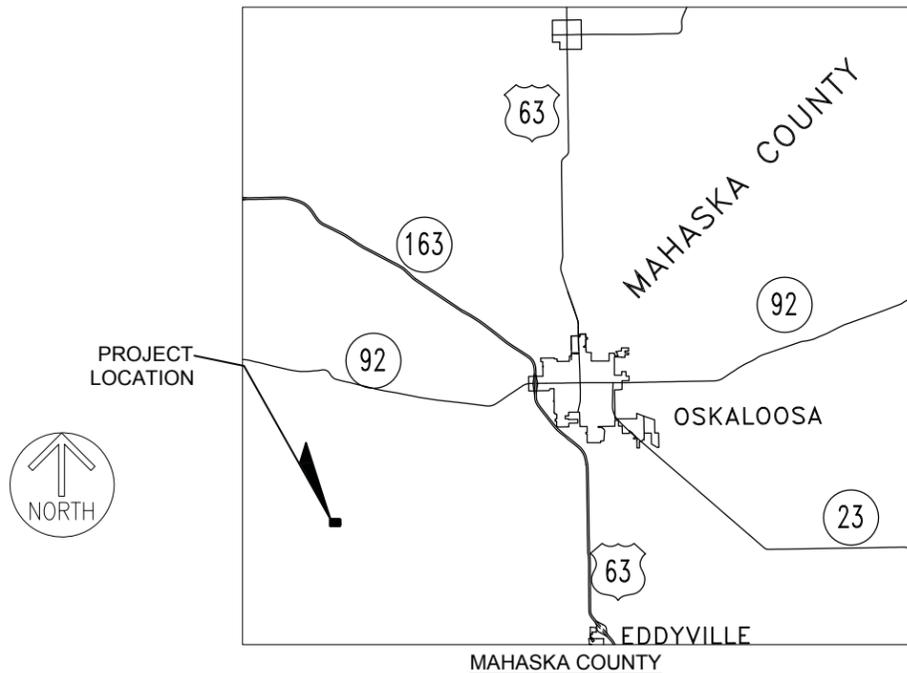
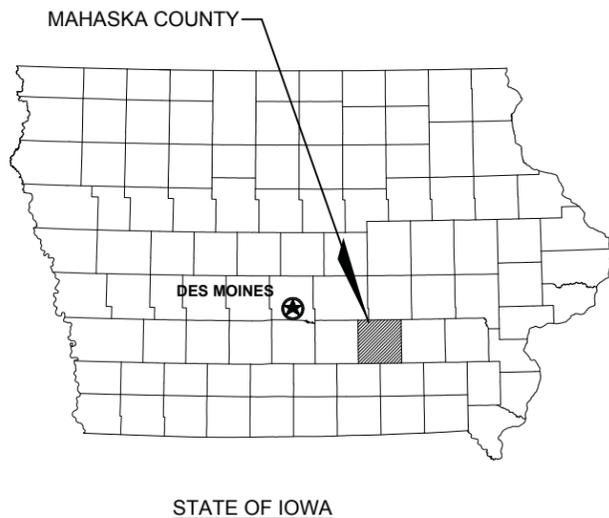
BLIZZARD (IA-057) AML RECLAMATION PROJECT

E ½ SECTION 10, TOWNSHIP 74N, RANGE 17W, MAHASKA COUNTY

DIVISION OF SOIL CONSERVATION IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

GRANT NUMBER: S13AF2008

FUNDED BY:
U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT



INDEX OF SHEETS:

- | | |
|-------|---------------------------------------|
| 1 | COVER SHEET |
| 2 | PROJECT NOTES, QUANTITIES, AND LEGEND |
| 3 | SURVEY CONTROL POINTS |
| 4 | SITUATION PLAN - EXISTING CONDITIONS |
| 5 | SITE GRADING PLAN |
| 6 | GRADING PLAN (NORTH) |
| 7 | GRADING PLAN (SOUTH) |
| 8 | POND OUTLET PROFILE |
| 9-10 | CUT/FILL PLAN |
| 11-13 | TYPICAL DETAILS |
| 14 | SWPPP |
| 15-19 | CROSS SECTIONS |

PREPARED FOR:
DIVISION OF SOIL CONSERVATION
IOWA DEPARTMENT OF AGRICULTURE & LAND STEWARDSHIP
HENRY A. WALLACE BUILDING
502 E. 9TH STREET
DES MOINES, IOWA 50319
(515) 281-4246

ENGINEER:
SHIVE-HATTERY, INC.
1601 48TH STREET, SUITE 200
WEST DES MOINES, IOWA 50266
PHONE - (515) 223-8104
FAX - (515) 223-0622

DISCLAIMER:
Reference to particular products, tradenames, or manufacturers is intended for clarity only and does not represent endorsement by the State of Iowa. Equivalent products or materials may be suitable, subject to the approval of the Engineer or Division.



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

SIGNATURE: _____
NAME: CHRISTOPHER R. BAUER
DATE: _____ LICENSE NUMBER: 19737
MY LICENSE RENEWAL DATE IS: DECEMBER 31, 2013
PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL: _____
PAGES 1 THRU 19

S-H PROJECT NUMBER: 413270-0

CHKD. BY: CRB ISSUED: 01-02-2013 REVISED: -

DESIGN BY: CRB DRAWN BY: JMS

SHIVE-HATTERY
ARCHITECTURE+ENGINEERING
1601 48th St. Suite 200 | West Des Moines, Iowa 50266
515.223.8104 | Fax: 515.223.0622 | shive-hattery.com
Iowa | Illinois | Missouri

DIVISION OF SOIL CONSERVATION
IOWA DEPARTMENT OF AGRICULTURE
AND LAND STEWARDSHIP
HENRY A. WALLACE BUILDING
502 E. 9th STREET, DES MOINES, IOWA 50319
(515) 281-4246



BLIZZARD
AML RECLAMATION PROJECT

TOP SHEET

GENERAL NOTES:

- THE LOCATIONS OF UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS PLOTTED ON THIS DRAWING ARE APPROXIMATE ONLY AND WERE OBTAINED FROM RECORDS MADE AVAILABLE TO SHIVE-HATTERY, INC. THERE MAY BE OTHER EXISTING UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS NOT KNOWN TO SHIVE-HATTERY, INC. AND NOT SHOWN ON THIS DRAWING. THE VERIFICATION OF EXISTENCE OF, AND THE DETERMINATION OF THE EXACT LOCATION OF, UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR(S).
- IOWA CODE 480, UNDERGROUND FACILITIES INFORMATION, REQUIRES VERBAL NOTICE TO IOWA ONE-CALL 1-800-292-8989, NOT LESS THAN 48 HOURS BEFORE EXCAVATING, EXCLUDING WEEKENDS AND HOLIDAYS.
- THE MEANS OF THE WORK AND THE SAFETY OF THE CONTRACTOR'S EMPLOYEES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
- THE MOST RECENT EDITION OF THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SHALL APPLY TO THIS PROJECT FOR ALL WORK NOT SPECIFIED IN THE CONTRACT DOCUMENTS.
- NO WORK SHALL BE PERFORMED BEYOND THE PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION FROM THE OWNER'S REPRESENTATIVE.
- ALL OPEN UTILITY TRENCH EXCAVATIONS SHALL BE PROTECTED.
- REPLACE ANY PROPERTY MONUMENTS REMOVED OR DESTROYED BY CONSTRUCTION. MONUMENTS SHALL BE SET BY A LAND SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF IOWA.
- ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SPECIFICALLY CALLED OUT, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THE COMPLETION OF THIS WORK.
- ALL DEBRIS AND TRASH ENCOUNTERED DURING CONSTRUCTION WITHIN THE PROJECT LIMITS, OR DIRECTED BY THE ENGINEER, SHALL BE PROPERLY DISPOSED OF ACCORDING TO THE PROJECT REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING THAT IS REQUIRED AT NO ADDITIONAL COST TO THE DIVISION.
- REPAIR OR REPLACE DAMAGE TO EXISTING FACILITIES (TILE, UTILITIES, FENCES, ETC.) DESIGNATED TO REMAIN, AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL AREAS DISTURBED BY CONSTRUCTION, INCLUDING STAGING AREAS AND HAUL ROUTES, ARE TO BE REWORKED TO THEIR EXISTING CONDITIONS AND SEEDED AT NO ADDITIONAL COST TO THE DIVISION IF OUTSIDE OF PROJECT LIMITS AND NOT APPROVED BY ENGINEER.
- CONTRACTOR SHALL PROTECT ALL TREES THAT ARE NOT DESIGNATED TO BE REMOVED OR ARE OUTSIDE OF PROJECT LIMITS. CONTRACTOR SHALL NOT PARK OR TRAVEL WITH ANY VEHICLE UNDER THE DRIP LINE OF A TREE TO REMAIN.
- WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSE, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER, AS REQUIRED BY THE OWNER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR IS RESPONSIBLE FOR ALL SURVEY LAYOUT AND CONTROL REQUIRED TO COMPLETE ALL WORK.
- WORK DONE CONTRARY TO THE INSTRUCTIONS OF THE OWNERS REPRESENTATIVE, WORK DONE BEYOND THE LINES SHOWN ON THE PLANS OR ANY EXTRA WORK DONE WITHOUT AUTHORITY WILL NOT BE PAID FOR.
- A SHRINKAGE FACTOR OF 15% WAS ESTIMATED FOR THIS PROJECT. THE CONTRACTOR SHALL MAKE CHANGES IN EARTHWORK AS NEEDED TO ADJUST FOR INACCURACIES INHERENT WITH ESTIMATING THE SHRINKAGE FACTOR. THESE CHANGES SHALL ONLY BE MADE AFTER CONSULTATION AND APPROVAL BY THE ENGINEER AND DIVISION.
- NO PONDING OF WATER WILL BE ACCEPTED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY ANY AREAS OF EXISTING OR PROPOSED GROUND THAT HAVE POTENTIAL TO POND WATER AND MAKE ANY ADJUSTMENTS NECESSARY TO ENSURE THAT WATER WILL POSITIVELY DRAIN. ADJUST GRADES AT PROJECT LIMITS TO ALLOW SMOOTH TRANSITION FROM PROPOSED GRADES TO EXISTING GRADES.
- CONTOURS AND SPOT ELEVATIONS SHOWN ARE TO FINISHED GRADE.
- THE CONTRACTOR SHALL KEEP ALL ROADS OPEN TO THROUGH TRAFFIC AT ALL TIMES.
- SOME CONTOUR LINES MAY NOT BE SHOWN FOR CLARITY.
- A BURN PERMIT IS REQUIRED TO BURN WITHIN 1/4 MILE OF BUILDINGS.
- ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE COORDINATED WITH THE GOVERNING AUTHORITY AND SHALL BE DONE IN ACCORDANCE WITH THEIR STANDARDS.
- NO TREES SHALL BE CLEARED BETWEEN THE DATES OF APRIL 1 TO SEPTEMBER 30 TO COMPLY WITH THE REQUIREMENTS OF THE INDIANA BAT HABITAT WITHOUT THE EXPRESS PERMISSION OF THE DIVISION.
- SUBMIT MANUFACTURER'S CERTIFICATION AND MATERIAL DATA FOR ALL MATERIALS DELIVERED TO THE PROJECT SITE AS REQUESTED BY THE OWNERS REPRESENTATIVE.
- THE FOLLOWING STANDARD ROAD PLANS OF THE IOWA DEPARTMENT OF TRANSPORTATION ARE INCLUDED BY REFERENCE:
MI-103 & MI-104 DETAILS FOR FIELD FENCE CONSTRUCTION
EC-201 EROSION CONTROL DETAILS FOR SILT FENCE
- ALL FENCING SHALL BE STAKED IN THE FIELD BY THE CONTRACTOR AS SHOWN ON THE DRAWINGS AND APPROVED BY DIVISION OR ENGINEER PRIOR TO STARTING CONSTRUCTION OF THE FENCE. FENCE LOCATION SHALL BE ADJUSTED AS REQUIRED BY FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER. WOOD POSTS MAY BE SET BY EITHER EXCAVATION OR DIRECT DRIVING METHODS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEPARTMENT OF NATURAL RESOURCES (DNR) NPDES PERMIT AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS AND REQUIRED CONTAINMENT STRUCTURES. THE DIVISION HAS OBTAINED THE DNR GENERAL PERMIT #2 FOR THE PROJECT AND A TEMPLATE SWPPP HAS BEEN PREPARED BY THE ENGINEER. CONTRACTOR SHALL DEVELOP, IMPLEMENT, MAINTAIN, AND UPDATE THE SWPPP AS REQUIRED TO MEET ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS. REFER TO THE SWPPP AND SWPPP DRAWINGS FOR ADDITIONAL INFORMATION.
- THE DIVISION HAS RECEIVED A DETERMINATION FROM THE U.S. ARMY CORPS THAT A SECTION 404 PERMIT IS NOT REQUIRED. DO NOT DISTURB ANY DELINEATED WETLANDS THAT ARE NOT SHOWN TO BE DISTURBED AND MITIGATED.
- CONTRACTORS WILL BE REQUIRED TO COMPLETE THE DETAILED GRADING SHOWN ON THE PLANS WITHIN THE SPECIFIED GRADING TOLERANCES. CONTRACTORS WILL BE REQUIRED TO COMPLETE SURVEY LAYOUT OF FINAL GRADES OR USE STAKE-LESS GRADING TECHNIQUES TO MEET PROPOSED GRADES AND PROJECT TOLERANCES.
- FOR BIDDING PURPOSES THE ENTIRE SITE IS PROPOSED TO BE COVERED BY 9" OF SELECT BORROW MATERIAL. ACCORDING TO THE SPECIFICATIONS THE ENTIRE SITE EXCLUDING THE SELECT BORROW AREA SHALL BE ROUGH GRADED TO 9" BELOW FINISH GRADE OR AS DIRECTED BY THE ENGINEER. THE AMOUNT OF AVAILABLE SELECT BORROW MATERIAL WILL NEED TO BE EVALUATED AND THE LIMITS OF SELECT BORROW COVER WILL BE ADJUSTED AS REQUIRED BY THE ENGINEER. AREAS WHERE ADEQUATE SOURCES OF SELECT BORROW COVER MATERIAL ARE NOT AVAILABLE WILL BE IDENTIFIED BY ENGINEER AND BE REQUIRED TO BE TREATED ACCORDING TO SPECIFICATION SECTION 02400 - SUBGRADE PREPARATION, WITHOUT COVER MATERIAL.

BID QUANTITIES:

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITIES
1	MOBILIZATION	LS	1
2	SITE CLEARING AND PREPARATION	ACRE	68.5
3	OFF SITE WASTE DISPOSAL	TON	200
4	IMPOUNDMENT DISCHARGE	LS	1
5	SILT FENCES-INSTALLATION	LF	9,000
6	SILT FENCES-REMOVAL	LF	9,000
7	WATTLES-INSTALLATION	LF	300
8	WATTLES-REMOVAL	LF	300
9	GRANULAR SURFACING	TON	75
10	EXCAVATION	CY	365,400
11	SELECT BORROW, TOPSOIL	CY	4,300
12	SELECT BORROW, EXCAVATION	CY	79,300
13	RIPRAP	TON	1250.0
14	FILTER FABRIC	SY	1,100
15	TERRACES	LF	8,550
16	RISER-TERRACE (12")	EA	18
17	TILING (8")	LF	2,120
18	TILING (10")	LF	315
19	TILING (12")	LF	80
20	24" RCP CULVERT	LF	68
21	RISER-(30") (SECTION 02310)	EA	1
22	PIPE-(12" HDPE)	LF	470
23	PIPE-(15" RCP)	LF	30
24	MULCH, SUBGRADE (5 TONS/ACRE)	ACRE	65.9
25	AGRICULTURAL LIME, SUBGRADE (50 TONS ECCE/ACRE)	TON	2740.0
26	FIELD FENCING	LF	950
27	CHANNEL CROSSING FENCE	LF	40
28	DOUBLE GATE (2-12 FOOT PANELS)	EA	1
29	AGRICULTURAL LIME, SEEDING (10 TONS ECCE/ACRE)	TON	685.0
30	AGRICULTURAL LIME, EXISTING PASTURE (5 TONS ECCE/ACRE)	TON	35.0
31	NITROGEN, N (100 LBS/ACRE)	LBS	6,850
32	POTASSIUM, K (100 LBS/ACRE)	LBS	6,850
33	PHOSPHORUS, P (100 LBS/ACRE)	LBS	6,850
34	INTERIM SEEDING	ACRE	68.5
35	MULCH, SEEDING (2 TONS/ACRE)	ACRE	68.5

LEGEND:

- STA: 45+00
x 740.0 **GRID STATION**
- 740----- **EXISTING SPOT ELEVATION**
- 740----- **EXISTING CONTOUR**
- 740----- **PROPOSED CONTOUR**
- 740----- **CONSTRUCTION LIMITS**
- 740----- **PROPOSED TERRACE**
- 740----- **EXISTING FENCE**
- 740----- **DRAINAGE DITCH OR STREAM**
-  **PROPOSED RIP-RAP**
-  **EXISTING TREE LINE**
-  **EXISTING TREES**
-  **POWER POLE**
- 740----- **SHEET MATCH LINE**
- 740----- **EXISTING TERRACE**
- 740----- **EXISTING CROP EDGE**

DESIGN BY: CRB DRAWN BY: JMS CHKD. BY: CRB ISSUED: 01-02-2013 REVISED: - S-H PROJECT NUMBER: 413270-0

SHIVE-HATTERY
ARCHITECTURE+ENGINEERING
1601 46th St. Suite 200 | West Des Moines, Iowa 50266
515.223.9104 | Fax: 515.223.0622 | shive-hattery.com
Iowa | Illinois | Missouri

DIVISION OF SOIL CONSERVATION
IOWA DEPARTMENT OF AGRICULTURE
AND LAND STEWARDSHIP
HENRY A. WALLACE BUILDING
502 E. 9th STREET, DES MOINES, IOWA 50319
(515) 281-4246

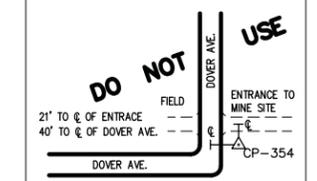


BLIZZARD
AML RECLAMATION PROJECT
PROJECT NOTES, QUANTITIES AND LEGEND



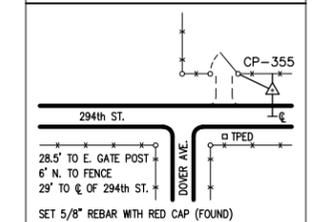
SURVEY CONTROL

▲ CP - 354 N | 446,413.77
E | 2,191,768.62
ELEV. = 759.46



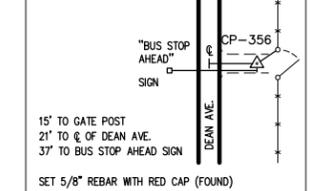
SET 5/8" REBAR WITH RED CAP (FOUND, BUT IT WAS DAMAGED.)

▲ CP - 355 N | 448,950.57
E | 2,191,766.24
ELEV. = 811.41



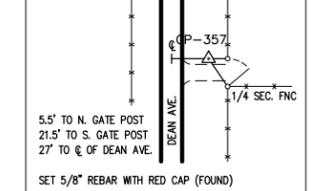
SET 5/8" REBAR WITH RED CAP (FOUND)

▲ CP - 356 N | 445,898.88
E | 2,194,399.03
ELEV. = 740.25



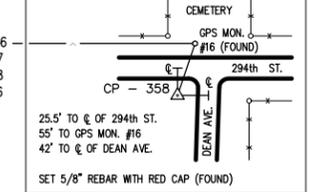
SET 5/8" REBAR WITH RED CAP (FOUND)

▲ CP - 357 N | 447,648.79
E | 2,194,385.91
ELEV. = 722.95



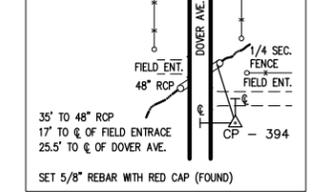
SET 5/8" REBAR WITH RED CAP (FOUND)

▲ CP - 358 N | 448,931.84
E | 2,194,303.83
ELEV. = 805.73



SET 5/8" REBAR WITH RED CAP (FOUND)

▲ CP - 394 N | 447,543.87
E | 2,191,749.80
ELEV. = 777.09

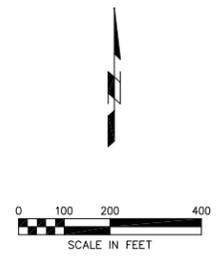


SET 5/8" REBAR WITH RED CAP (FOUND)

NOTE: GROUND CONTROL AND REFERENCE TIES BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA.

SURVEY DATUM:
HORIZONTAL - NAD83, IOWA STATE PLANES, SOUTH ZONE
US FOOT
VERTICAL - NAVD88

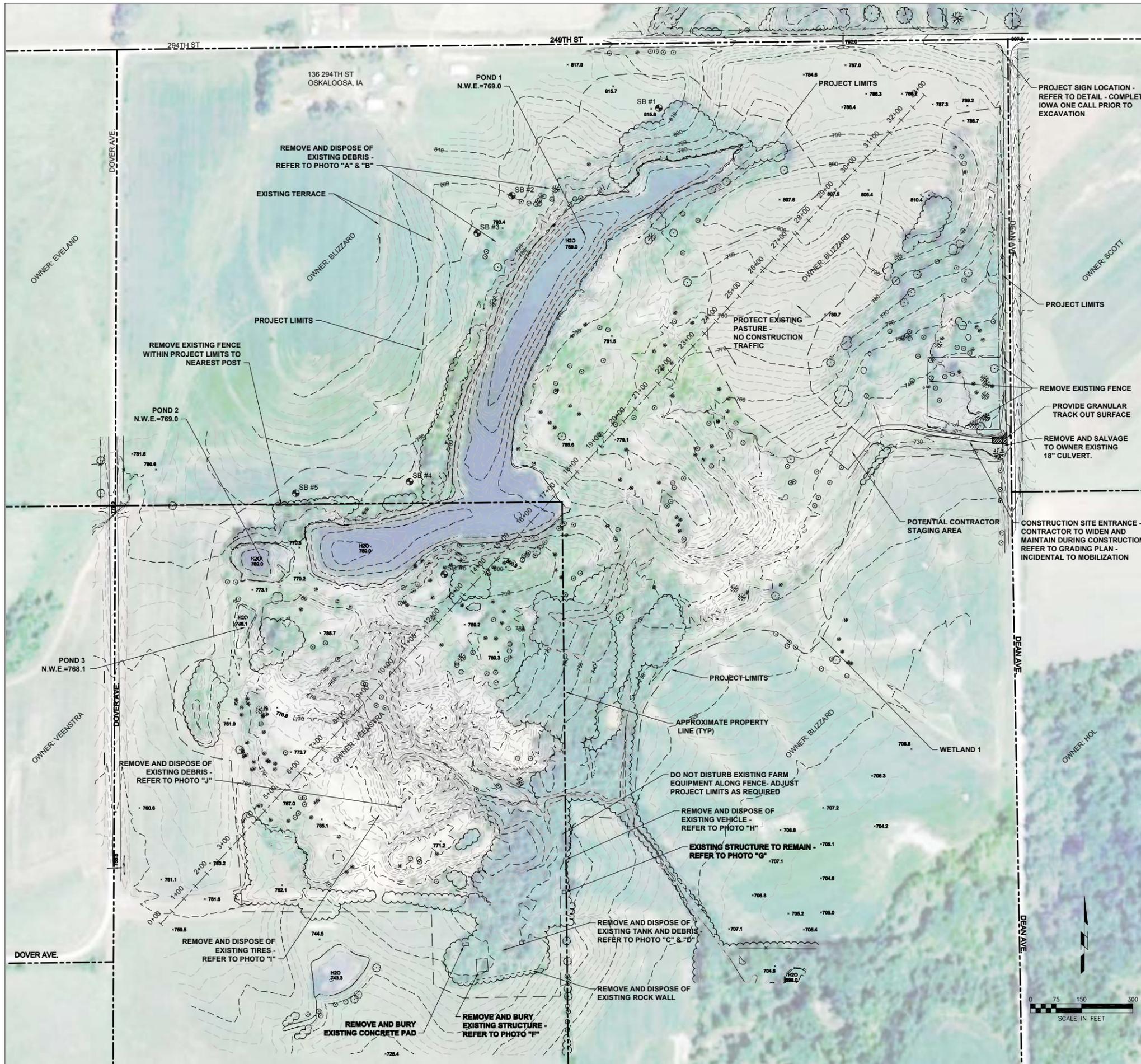
GPS MONUMENT #16
N 448,985.7
E 2,194,293.8
ELEV. 809.6



DESIGN BY: CRB	DRAWN BY: JMS	CHKD. BY: CRB	ISSUED: 01-02-2013	REVISED: -	S-H PROJECT NUMBER: 413270-0
BLIZZARD AML RECLAMATION PROJECT			DIVISION OF SOIL CONSERVATION IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP HENRY A. WALLACE BUILDING 502 E. 9th STREET, DES MOINES, IOWA 50319 (515) 281-4246		
SURVEY CONTROL POINTS					
SHEET 3 OF 19					

SHIVEHATTERY
ARCHITECTURE+ENGINEERING

1601 48th St. Suite 200 | West Des Moines, Iowa 50266
515.223.6104 | Fax: 515.223.0622 | shivehattery.com
Iowa | Illinois | Missouri



LEGEND:

- x 740.0 EXISTING SPOT ELEVATION 15+00 GRID STATION
- CONSTRUCTION LIMITS 5+00 LT GRID OFFSET
- - - 740 EXISTING CONTOUR ∅ POWER POLE
- - - EXISTING FENCE --- SHEET MATCH LINE
- - - DRAINAGE DITCH OR STREAM --- FENCE-BY CONTRACTOR
- ~ ~ ~ EXISTING TREE LINE ⊕ SOIL BORING LOCATION
- ⊗ EXISTING TREES

NOTES:

1. REFER TO SOILS REPORT BOUND IN SPECIFICATIONS FOR SOIL BORING INFORMATION.
2. SITE IS OWNED BY TWO PROPERTY OWNERS: DONNIE BLIZZARD & RICHARD VEENSTRA.
3. IMAGE OBTAINED FROM GOOGLE EARTH.

SURVEY NOTES:

1. EXISTING TOPOGRAPHIC MAPPING BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA. FLIGHT DATE 4/13/2001.
2. CONTRACTOR SHALL VERIFY CONTROL AND EXISTING SURFACE PRIOR TO CONSTRUCTION.
3. IMAGE OBTAINED FROM GOOGLE EARTH.

DEMOLITION PHOTOS:



DEMOLITION NOTES:

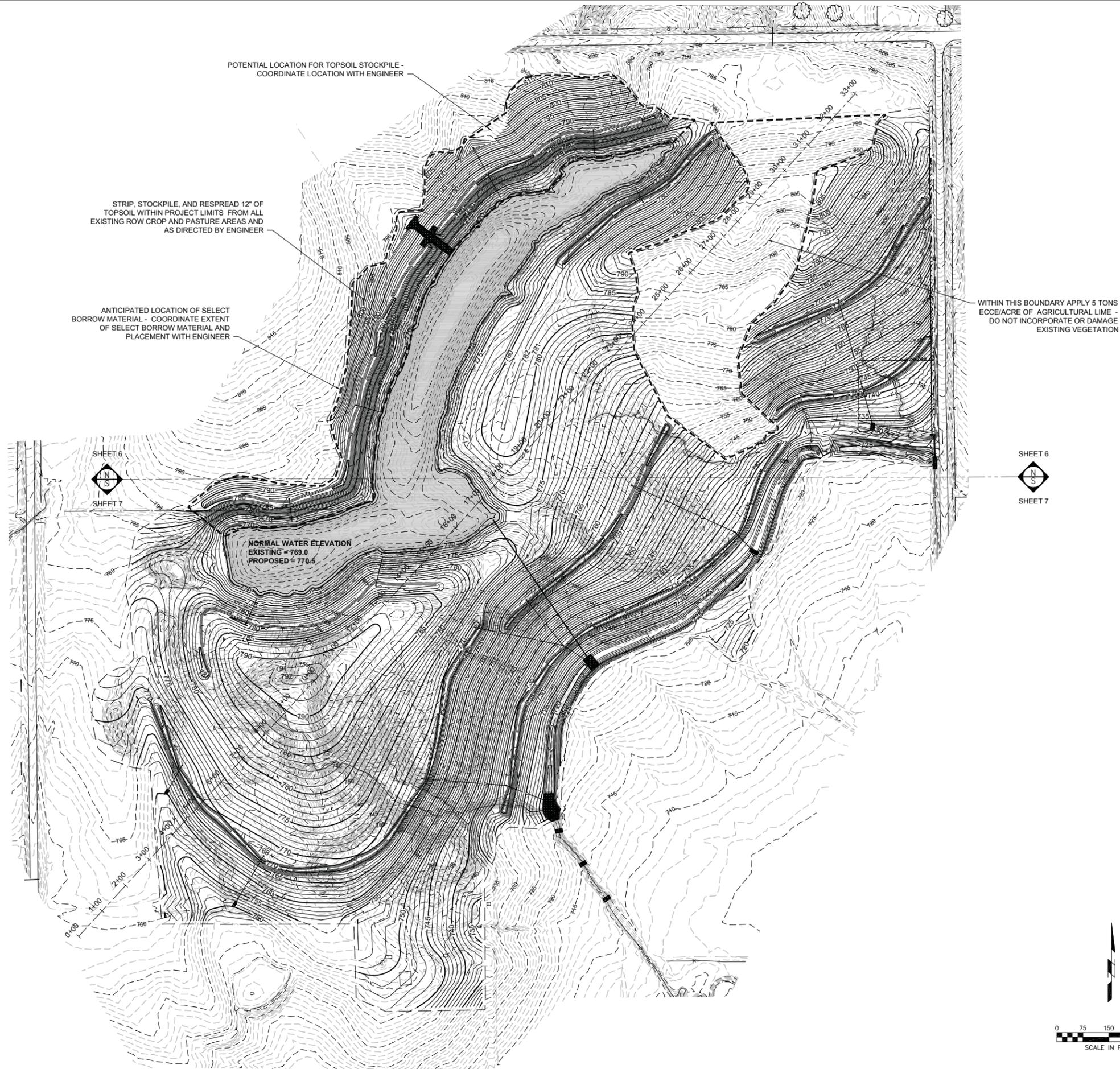
1. ALL DEBRIS AND TRASH ENCOUNTERED DURING CONSTRUCTION WITHIN THE PROJECT LIMITS, OR DIRECTED BY THE ENGINEER, SHALL BE PROPERLY DISPOSED OF ACCORDING TO THE PROJECT SPECIFICATIONS.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBSERVE EXISTING SITE CONDITIONS AND IDENTIFY ALL DEBRIS TO BE REMOVED.

DESIGN BY: CRB DRAWN BY: JMS CHKD. BY: CRB ISSUED: 01-02-2013 REVISED:	S-H PROJECT NUMBER: 413270-0	 <p style="font-size: small;">DIVISION OF SOIL CONSERVATION IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP HENRY A. WALLACE BUILDING 502 E. 9th STREET, DES MOINES, IOWA 50319 (515) 281-4246</p>	<p style="font-size: x-small; margin: 0;">SHIVE-HATTERY ARCHITECTURE+ENGINEERING</p> <p style="font-size: x-small; margin: 0;">1601 48th St. Suite 200 West Des Moines, Iowa 50266 515.223.6104 fax: 515.223.0622 shive-hattery.com Iowa Illinois Missouri</p>
<p style="font-size: small; margin: 0;">BLIZZARD AML RECLAMATION PROJECT</p>		<p style="font-size: small; margin: 0;">SITUATION PLAN-EXISTING CONDITIONS</p>	
SHEET 4 OF 19			

EARTHWORK VOLUMES

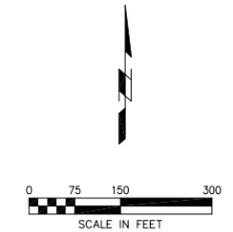
ITEM	CUT (CY)
1. SITE EARTHWORK BALANCE	407,400
2. SELECT BORROW, TOPSOIL	4,300
3. SELECT BORROW, EARTHWORK	79,300
4. OVEREXCAVATION FOR SUITABLE SOIL RE-SPREAD	41,600
5. EXCAVATION (ITEM 1 - ITEM 2 - ITEM 3 + ITEM 4)	365,400

ALL PROPOSED GRADES FOR THE ENTIRE PROJECT AREA TO BE LEFT 9" LOW TO ACCOMMODATE PLACEMENT OF SELECT BORROW FROM CUT ON NORTHWEST SIDE OF POND



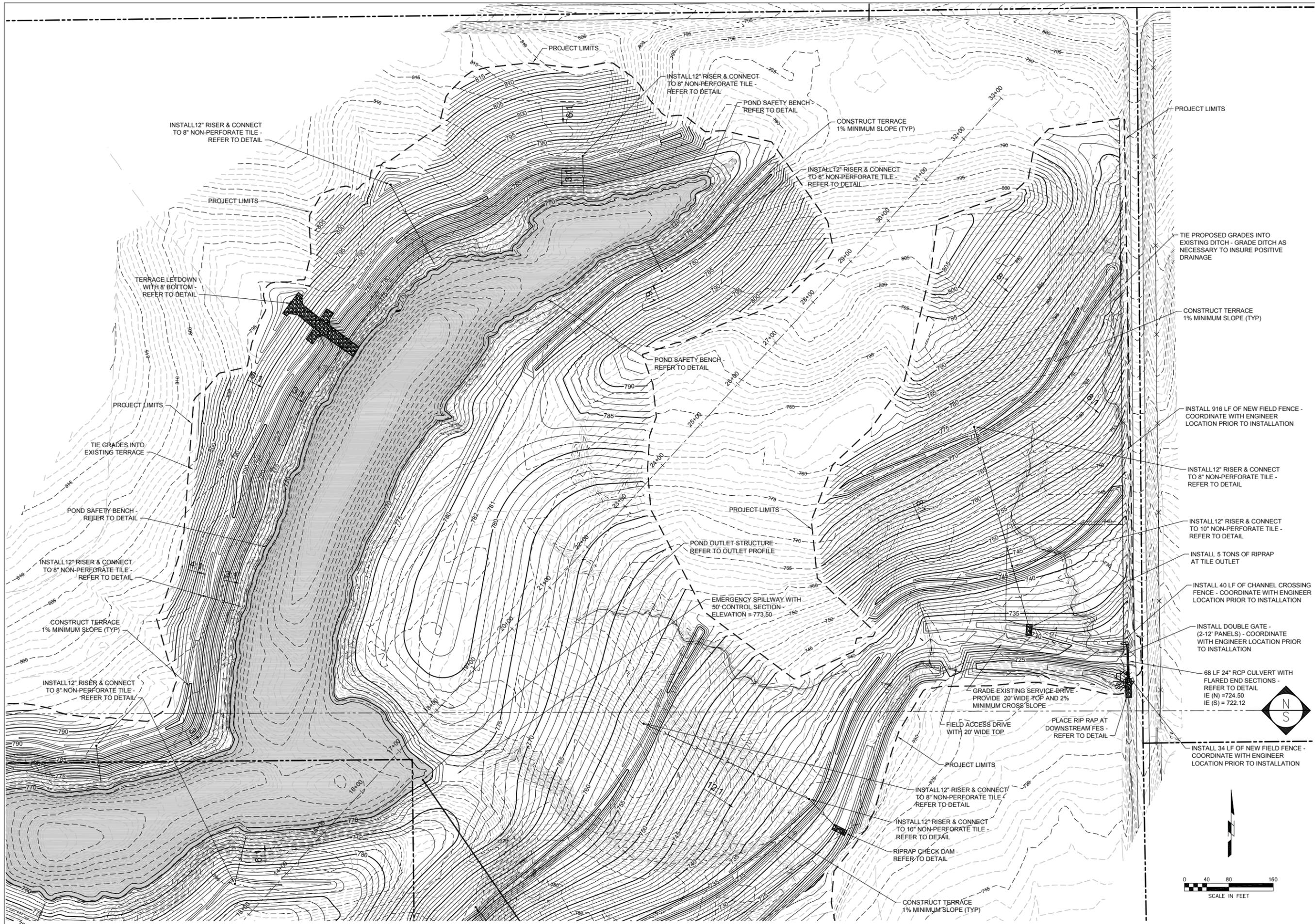
HYDRAULIC DESIGN BASIS

SURFACE AREA = 8.13 ACRES
 D.A. = 44.0 ACRES
 PRINCIPAL OUTLET EL. = 770.50'
 EMERGENCY SPILLWAY EL. = 773.50'
 HIGH WATER, 50 YR. EL. = 771.83'
 HIGH WATER, 100 YR. EL. = 772.14'
 $Q_{50} = 6.26$ CFS
 $Q_{100} = 6.39$ CFS



DESIGN BY: CRB	DRAWN BY: JMS	CHKD. BY: CRB	ISSUED: 01-02-2013	REVISED:	S-H PROJECT NUMBER: 413270-0
			DIVISION OF SOIL CONSERVATION IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP HENRY A. WALLACE BUILDING 502 E. 9th STREET, DES MOINES, IOWA 50319 (515) 281-4246		
BLIZZARD AML RECLAMATION PROJECT		SITE GRADING PLAN			
SHEET 5 OF 19					

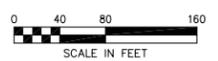
SHIVEHATTERY
 ARCHITECTURE+ENGINEERING
 1601 48th St. Suite 200 | West Des Moines, Iowa 50266
 515.223.6104 | Fax: 515.223.0622 | shivehattery.com
 Iowa | Illinois | Missouri

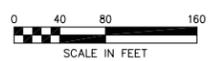
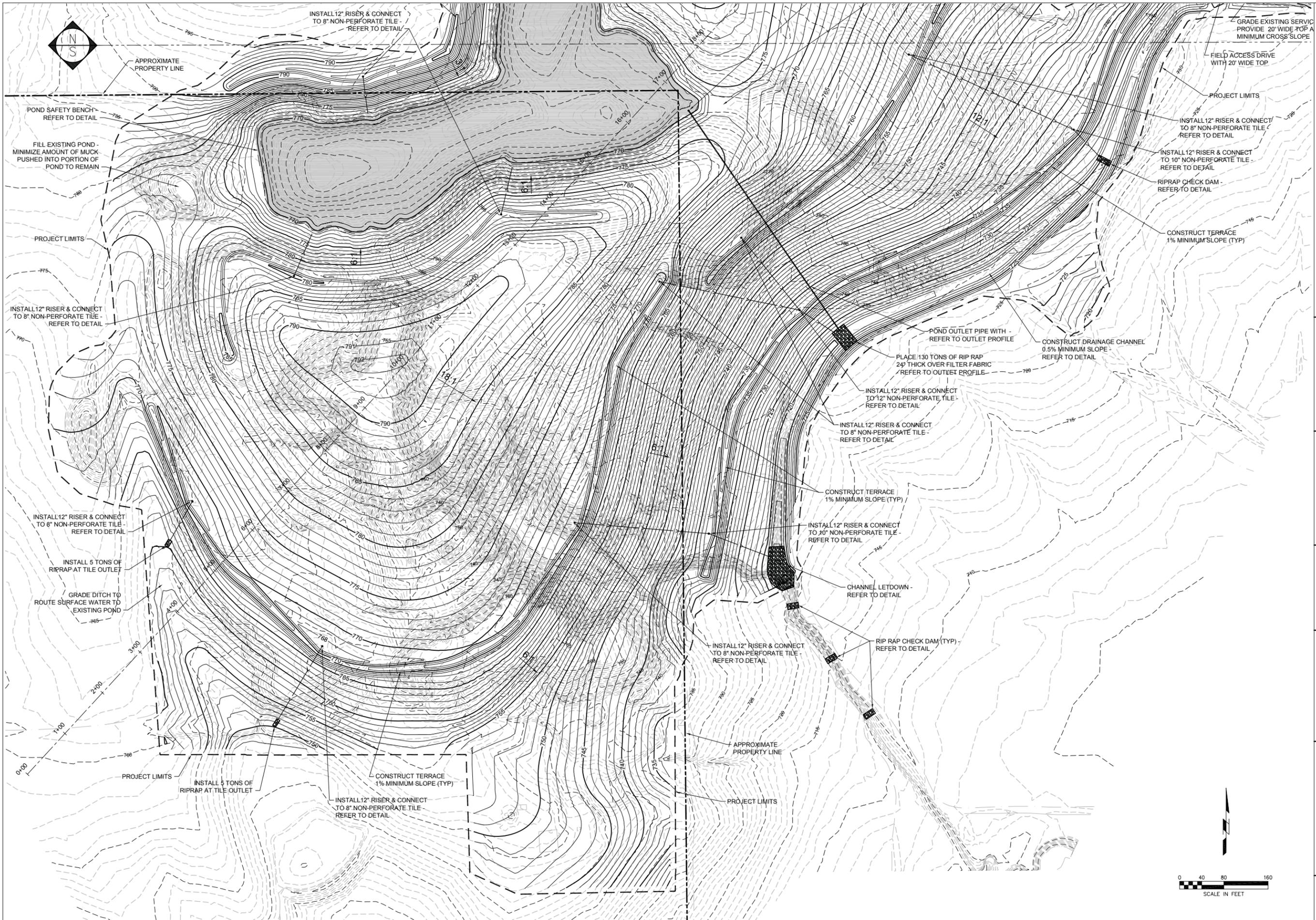


DESIGN BY: CRB	DRAWN BY: JMS	CHKD. BY: CRB	ISSUED: 01-02-2013	REVISED:	S-H PROJECT NUMBER: 413270-0
					
BLIZZARD AML RECLAMATION PROJECT GRADING PLAN (NORTH)					
SHEET 6 OF 19					

SHIVE-HATTERY
 ARCHITECTURE+ENGINEERING
 1601 48th St. Suite 200 | West Des Moines, Iowa 50266
 515.223.6104 | Fax: 515.223.0622 | shive-hattery.com
 Iowa | Illinois | Missouri

DIVISION OF SOIL CONSERVATION
 IOWA DEPARTMENT OF AGRICULTURE
 AND LAND STEWARDSHIP
 HENRY A. WALLACE BUILDING
 502 E. 9th STREET, DES MOINES, IOWA 50319
 (515) 281-4246





DESIGN BY: CRB DRAWN BY: JMS	CHKD. BY: CRB ISSUED: 01-02-2013 REVISED:	S-H PROJECT NUMBER: 413270-0	<div style="text-align: center;">  <p> DIVISION OF SOIL CONSERVATION IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP HENRY A. WALLACE BUILDING 502 E. 9th STREET, DES MOINES, IOWA 50319 (515) 281-4246 </p> </div>
BLIZZARD AML RECLAMATION PROJECT			GRADING PLAN (SOUTH)
SHEET 7 OF 19			 <p> 1601 48th St. Suite 200 West Des Moines, Iowa 50266 515.223.6104 fax: 515.223.0622 shive-hattery.com Iowa Illinois Missouri </p>