Agenda Item: 8.a.

MEMORANDUM

TO: Programs, Projects and Operations Subcommittee

FROM: Martin P. Cleveland, Construction Engineer

SUBJECT: Elk Creek Channel Stabilization EWP Project Bids

DATE: March 3, 2013

The Elk Creek Channel Stabilization EWP Project is located near Jackson, Nebraska in Dakota County. Enclosed is a location map. The project involves the shifting of the existing right bank levee (east side) away from the Elk Creek. Enclosed is a typical cross-section of the channel stabilization project. The levees have experienced severe sloughing due to high water events in 2010 and 2011.

On May 10, 2012, the Board of Directors approved a Cooperative Agreement with the Natural Resources Conservation Service (NRCS) for the design and construction of the Elk Creek EWP Project. Phase 1 of this project was estimated to cost $1,000,000 with $750,000 (75% cost share rate) to be funded by NRCS and $250,000 by District. On June 14, 2012, the Board of Directors, authorized the General Manager to execute additional Phase 2 Cooperative Agreement(s) with NRCS for up to $1,400,000 of additional work, calling for a 25% District cost share up to $350,000. The overall District Elk Creek EWP Project expenditure was to be $600,000 and Federal expenditure would be $1,800,000. Dakota County was to reimburse the District for the local share cost of stabilization under the County's 137th Street Bridge, estimated at $35,000. At the time the Elk Creek EWP Project was estimated to cost about $2,400,000 for most of the right bank levee from Hwy. 20 to 137th Street.

Bids were opened on February 28, 2013 for the construction of the referenced project. Enclosed is a bid summary. A bid from CJ Moyna and Sons was withdrawn on March 1, 2013 due to bid error. The apparent low bidder was Cooney Fertilizer Inc. with a base bid of $407,288.78, Alternate #1 bid of $124,207.46, Alternate #2 bid of $542,023.86 and Alternate #3 bid of $72,706.50 with a grand total of $1,146,226.60. The current Engineer's Estimate by NRCS was $2,659,620.

The NRCS has committed $750,000 towards the Elk Creek Project Construction and with the District's $250,000 cost share, this will fund a $1,000,000 project. The Alternate bids were acquired to allow for additional work in the HWY 20 to 137th Street reach, as additional funds became available from NRCS. NRCS believes there may be some Emergency Watershed Program (EWP) funds returning back from other EWP completed projects in 2013 and these funds may be allocated to Elk Creek. Management believes that additional EWP funds will be allocated in 2013, but if not, the project bids are low enough that it makes sense to contract for the base bid and all

alternates in order to complete all of the Elk Creek EWP Project work and not leave a vulnerable section unimproved.

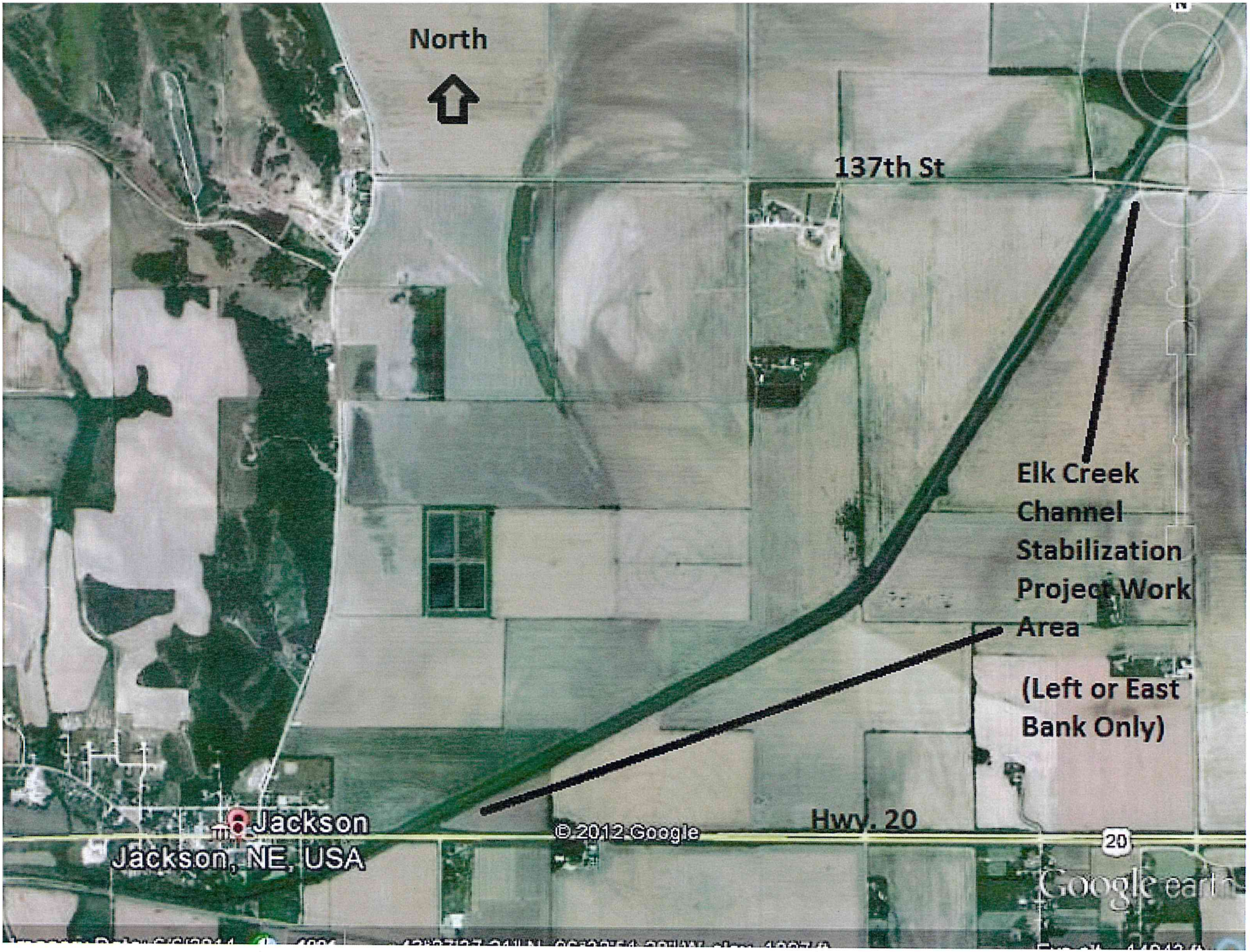
It is Management's recommendation that the Subcommittee recommend to the Board of Directors that the General Manager be authorized to execute a contract for Elk Creek Channel Stabilization EWP Project with Cooney Fertilizer Inc., for their total base bid of $407,288.78, Alternate #1 bid of $124,207.46, Alternate #2 bid of $542,023.86 and Alternate #3 bid of $72,706.50 for a grand total of $1,146,226.60 and that the District pay for all construction costs over $1,000,000, if additional Emergency Watershed Program funds are not allocated by the Natural Resources Conservation Service.

ELK CREEK CHANNEL STABILIZATION EWP PROJECT
BID SUMMARY
February 28, 2013 at 10:00 A.M.

BIDDERS	Commercial Contractors	Prudent Technologies	Kohl Construction	Cooney Fertilizer	Pruss Excavation	K&L Landscape	Nelson& Rock	
A.Base Bid (Sta 63+00 thru Sta 113+50 Right Bank	692,328.10	701,066.86	526,848.25	407,288.78	497,615.76	683,347.00	622,547.50	
B.Alternate 1 (Sta 54+80 thru 63+00 Right Bank and Sta 54+01 thru 55+49 Rocked Side Slope	190,215.30	250,497.95	131,937.50	124,207.46	134,243.74	191,754.60	173,673.90	
C.Alternate 2 (Sta 0+49 thru 54+80 Right Bank)	755,202.50	740,534.00	775,315.00	542,023.86	603,081.54	869,533.30	776,961.90	
D.Alternate 3 (137th Street, County Road Bridge Area)	39,503.50	41,762.38	30,713.00	72,706.50	65,442.00	31,472.50	37,379.50	
E.Grand Total (Add A, B, C, D subtotals):	1,677,249.40	1,733,861.59	1,464,813.70	1,146,226.60*	1,300,383.04	1,776,107.40	1,610,562.80	
Bid Bond	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

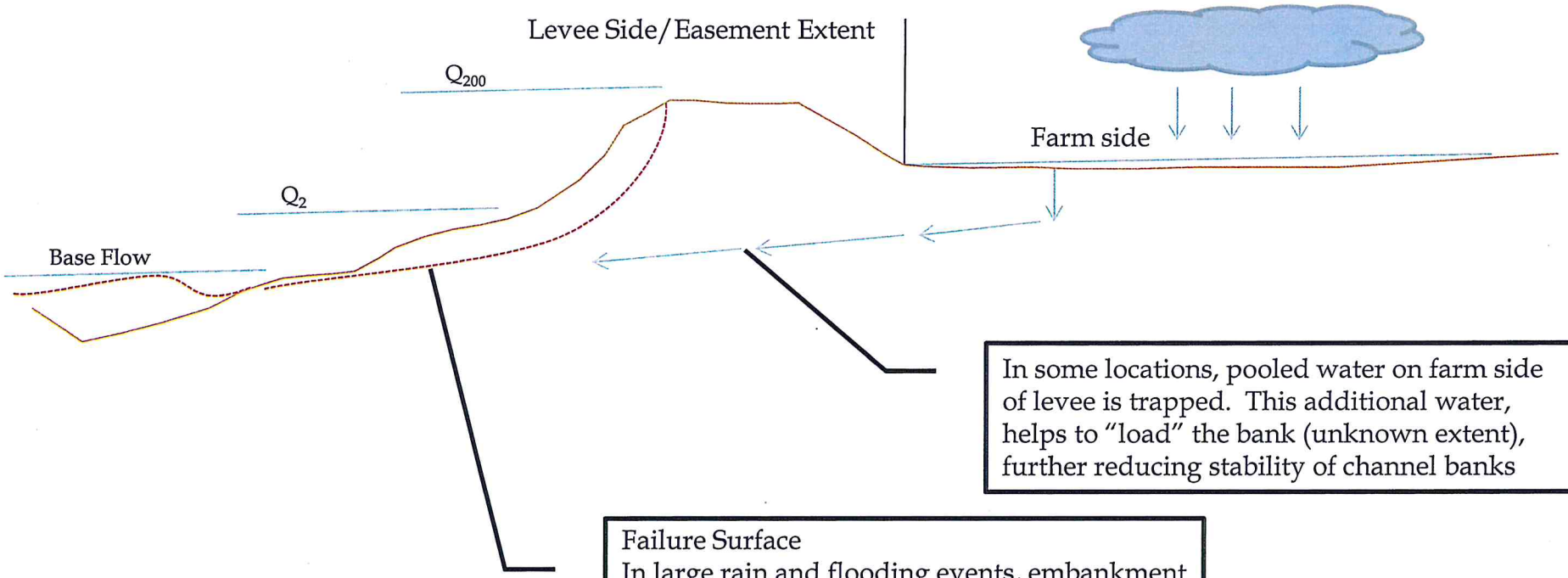
BIDDERS	Lieber Construction	Coastal Environmental						
A.Base Bid (Sta 63+00 thru Sta 113+50 Right Bank	558,016.89	542,690.80						
B.Alternate 1 (Sta 54+80 thru 63+00 Right Bank and Sta 54+01 thru 55+49 Rocked Side Slope	148,036.41	171,628.00						
C.Alternate 2 (Sta 0+49 thru 54+80 Right Bank)	738,163.95	633,904.00						
D.Alternate 3 (137th Street, County Road Bridge Area)	21,988.86	51,810.20						
E.Grand Total (Add A, B, C, D subtotals):	1,466,206.00	1,400,033.00						
Bid Bond	Yes	Yes						

Notes: * Apparent Low Bid


North
137th St
Elk Creek Channel Stabilization Project Work Area
(Left or East Bank Only)
Jackson
Jackson, NE, USA
© 2012 Google
Hwy. 20
20
Google earth

Existing Elk Creek Cross Section

Prospective Drawing Not To Scale!

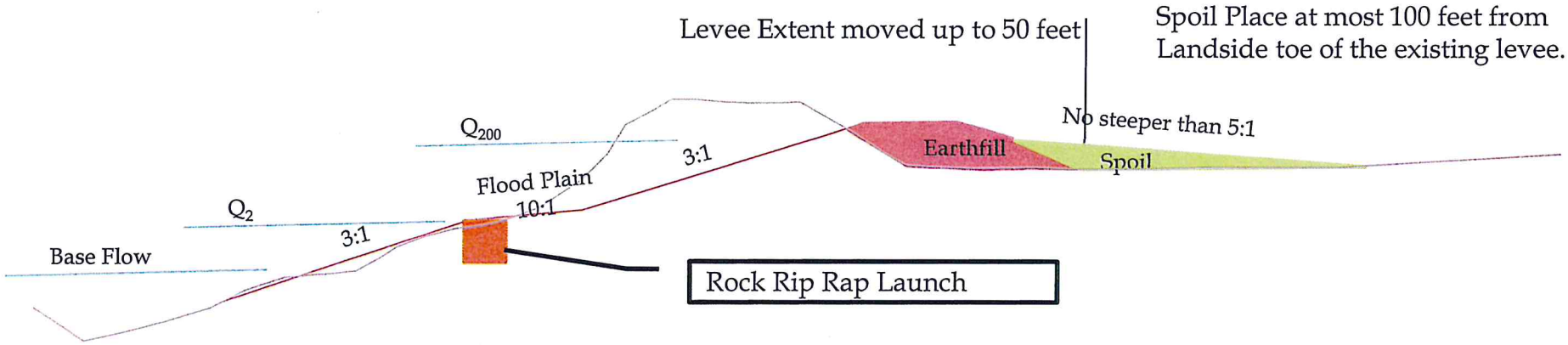


In some locations, pooled water on farm side of levee is trapped. This additional water, helps to "load" the bank (unknown extent), further reducing stability of channel banks

Failure Surface
In large rain and flooding events, embankment becomes saturated "loaded". When the water levels go down, saturated embankments "un-load" creating unstable slopes. Failed slope deposit material into stream, reducing channel capacity and raising the water surface of future events

Proposed Plan Elk Creek Cross Section

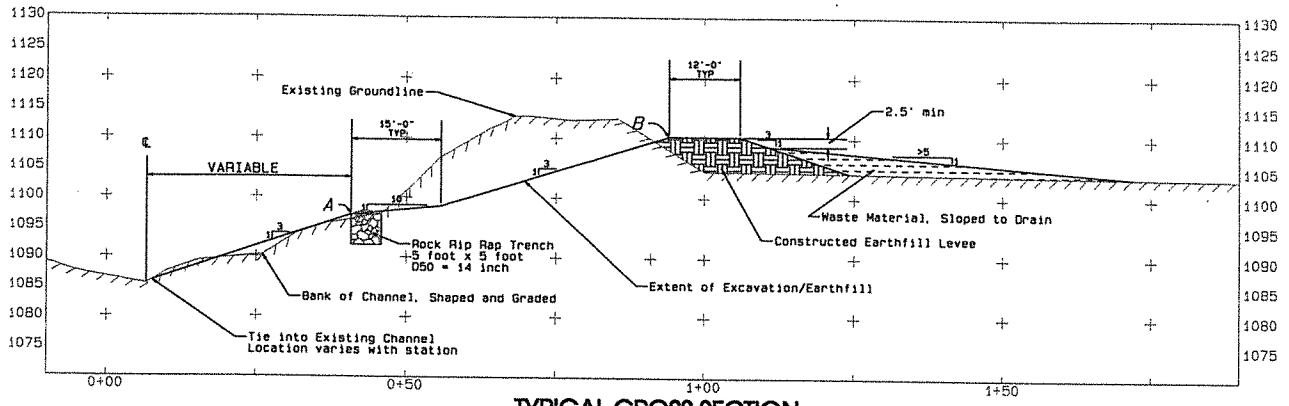
Prospective Drawing Not to Scale!



Proposed Least Cost Plan for Elk Creek

-Excavated Material from existing levee and channel spoiled in adjacent farm fields at no steeper than 5:1.

-To reduce long term risk of eroding bank line, a launch able Rock Rip Rap trench is dug and backfilled. If the stream channel erodes to that point, rock will launch and protect those areas effected from further erosion. Rock is Covered with earth material for ease of maintenance.



TYPICAL CROSS SECTION

(To Be Constructed)

RIGHT BANK - POINT A - Floodplain Bench

Sta	Northing	Easting	Elevation	Grade
Sta 0+49	15436021.33	2307817.48	1092.66	
Sta 1+38	15435934.84	2307784.35	1093.48	0.00%
Sta 2+50	15435840.72	2307724.50	1093.48	
Sta 4+00	15435703.98	2307647.01	1093.48	
Sta 7+00	15435458.76	23074B1.97	1093.48	
Sta 10+00	15435202.60	2307327.13	1093.48	
Sta 13+00	15434947.94	2307173.20	1093.48	
Sta 16+00	15434688.46	2307016.35	1093.48	
Sta 19+00	15434439.75	2306866.01	1093.48	
Sta 19+00	15434439.75	2306866.01	1093.48	0.01%
Sta 21+00	15434254.86	2306781.87	1093.51	
Sta 24+00	15434001.39	2306623.71	1093.55	
Sta 27+00	15433747.00	2306467.29	1093.59	
Sta 30+00	15433494.89	2306312.20	1093.63	
Sta 33+00	15433234.22	2306159.46	1093.67	
Sta 36+00	15432979.00	2306009.51	1093.71	
Sta 39+00	15432726.11	2305851.60	1093.75	
Sta 42+00	15432466.91	2305705.41	1093.79	
Sta 45+00	15432204.78	2305560.72	1093.83	
Sta 48+00	15431947.26	2305403.79	1093.87	
Sta 51+00	15431693.29	2305248.97	1093.91	
Sta 53+89	15431433.18	2305098.98	1093.95	
Sta 54+71	15431365.09	2305051.85	1094.22	
Sta 54+71	15431365.09	2305051.85	1094.22	0.32%
Sta 56+69	15431199.63	2304923.02	1096.65	
Sta 57+01	15431175.58	2304902.48	1096.66	
Sta 59+99	15430958.83	2304699.75	1096.78	
Sta 60+20	15430941.04	2304677.24	1096.79	
Sta 61+20	15430885.03	2304595.85	1096.83	
Sta 62+16	15430831.03	2304516.66	1096.87	
Sta 63+00	15430792.15	2304443.71	1096.90	
Sta 63+00	15430792.15	2304443.71	1096.90	0.04%
Sta 66+00	15430629.00	2304189.76	1097.02	
Sta 69+00	15430472.95	2303933.12	1097.14	
Sta 72+00	15430327.54	2303670.65	1097.26	
Sta 75+00	15430174.20	2303412.72	1097.38	
Sta 78+00	15430033.48	2303147.57	1097.49	
Sta 81+00	15429896.20	2302881.07	1097.61	
Sta 84+00	15429751.66	2302618.63	1097.73	
Sta 87+00	15429593.43	2302362.97	1097.85	
Sta 90+00	15429454.48	2302097.21	1097.97	
Sta 93+00	15429302.43	2301838.32	1098.09	
Sta 96+00	15429158.27	2301575.31	1098.21	
Sta 99+00	15429017.06	2301310.35	1098.33	
Sta 102+00	15428874.22	2301046.94	1098.44	
Sta 105+00	15428715.68	2300791.87	1098.56	
Sta 107+64	15428592.41	2300559.22	1098.67	
Sta 107+64	15428592.41	2300559.22	1098.67	0.04%
Sta 108+00	15428578.68	2300533.30	1098.68	
Sta 111+00	15428431.46	2300273.32	1098.80	
Sta 113+50	15428309.08	2300057.94	1098.90	

RIGHT BANK - POINT B - Top of Levee

Sta	Northing	Easting	Elevation	Grade
Sta 0+49	15435997.83	2307865.43	1106.95	0.00%
Sta 1+38	15435909.58	2307831.36	1106.95	
Sta 2+50	15435815.15	2307769.51	1106.95	
Sta 4+00	15435673.74	2307686.62	1106.95	
Sta 7+00	15435431.45	2307523.65	1106.95	
Sta 10+00	15435175.78	2307369.13	1106.95	
Sta 13+00	15434923.48	2307216.61	1106.95	
Sta 16+00	15434660.61	2307057.67	1106.95	
Sta 19+00	15434422.09	2306912.61	1106.95	
Sta 19+00	15434422.09	2306912.61	1106.95	0.07%
Sta 21+00	15434226.93	2306824.91	1107.11	
Sta 24+00	15433972.13	2306666.45	1107.32	
Sta 27+00	15433718.63	2306511.25	1107.53	
Sta 30+00	15433469.09	2306358.30	1107.74	
Sta 33+00	15433203.57	2306203.11	1107.95	
Sta 36+00	15432950.74	2306055.35	1108.16	
Sta 39+00	15432699.16	2305898.81	1108.37	
Sta 42+00	15432439.84	2305753.14	1108.58	
Sta 45+00	15432179.08	2305609.78	1108.79	
Sta 48+00	15431915.93	2305450.07	1109.00	
Sta 51+00	15431665.15	2305297.86	1109.21	
Sta 53+89	15431398.67	2305144.23	1109.42	
Sta 54+71	15431325.56	2305089.52	1109.48	
Sta 54+71	15431325.56	2305089.52	1109.48	0.07%
Sta 56+69	15431162.23	2304957.53	1109.60	
Sta 57+01	15431139.07	2304935.95	1109.62	
Sta 59+99	15430921.78	2304733.62	1109.83	
Sta 60+20	15430900.99	2304705.61	1109.85	
Sta 61+20	15430843.99	2304624.01	1109.92	
Sta 62+16	15430789.65	2304544.48	1109.99	
Sta 63+00	15430749.98	2304473.02	1110.04	
Sta 63+00	15430749.98	2304473.02	1110.04	0.09%
Sta 66+00	15430583.06	2304216.63	1110.32	
Sta 69+00	15430428.00	2303958.57	1110.60	
Sta 72+00	15430281.57	2303696.55	1110.88	
Sta 75+00	15430127.23	2303438.88	1111.16	
Sta 78+00	15429990.63	2303170.80	1111.44	
Sta 81+00	15429849.49	2302907.81	1111.72	
Sta 84+00	15429706.20	2302647.77	1112.00	
Sta 87+00	15429545.09	2302389.52	1112.28	
Sta 90+00	15429407.47	2302124.09	1112.56	
Sta 93+00	15429254.69	2301864.93	1112.84	
Sta 96+00	15429109.10	2301602.63	1113.12	
Sta 99+00	15428966.88	2301337.75	1113.40	
Sta 102+00	15428825.39	2301075.58	1113.68	
Sta 105+00	15428666.58	2300819.87	1113.96	
Sta 107+64	15428542.52	2300585.66	1114.24	
Sta 107+64	15428542.52	2300585.66	1114.24	0.81%
Sta 108+00	15428526.54	2300559.37	1114.53	
Sta 111+00	15428373.84	2300303.37	1116.95	
Sta 113+50	15428248.28	2300094.07	1118.97	

NOTE:

1. End Slopes of Channel excavation and earthfill are to be 6:1 or blend into centerline of existing levee.
2. Rock Rip Rap Trench shall be covered with a minimum of 6 inches, maximum of 12 inches of earth material. Material shall be placed loose and compacted with a single pass of wheeled equipment over its entire surface.
3. Areas to recieve earthfill on the channel side of the levee to meet the proposed lines and grade. The COR shall inspect and verify for adequate foundation prior to placement of earthfill.

PROFESSIONAL CIVIL ENGINEER
TIMOTHY G. HAAKENSTAD
E-8793
STATE OF NEBRASKA

REVISIONS

DATE	DESCRIPTION
01/31/13	UPDATED PER REVIEW
04/24/13	ISSUED FOR CONSTRUCTION

SCALE VERIFICATION: THIS BAR MEASURES 2" ON ORIGINAL. ADJUST SCALE ACCORDINGLY

FILE NAME: P:\Lincoln Robison NRCS Engineering Drive\Projects\Elk Creek EWP\Design\Elk Creek EWP_Final.prw

Date 10/2012
Designed Robison
Drawn Robison
Checked
Approved

TYPICAL CROSS-SECTION DETAIL

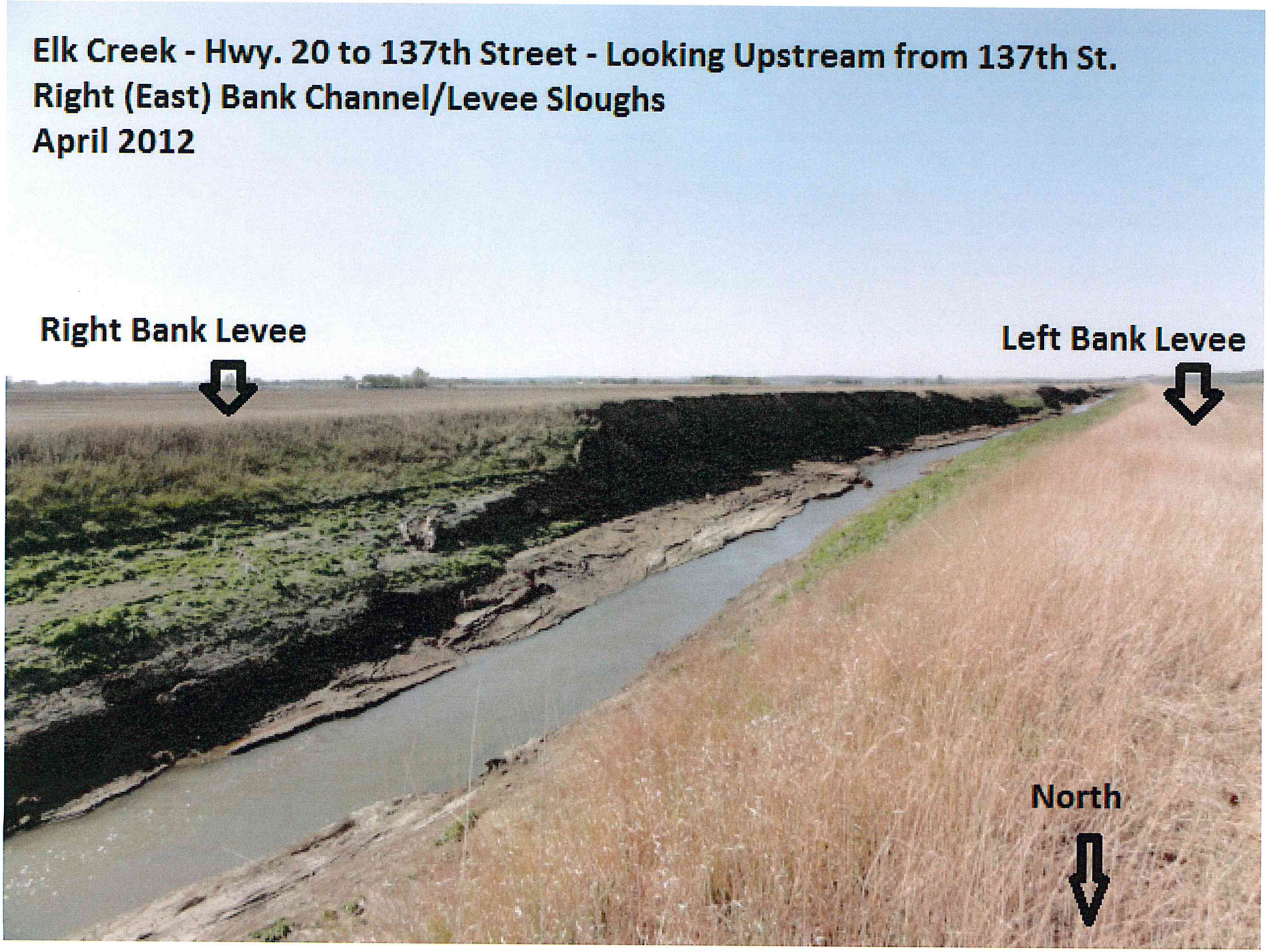
ELK CREEK EWP

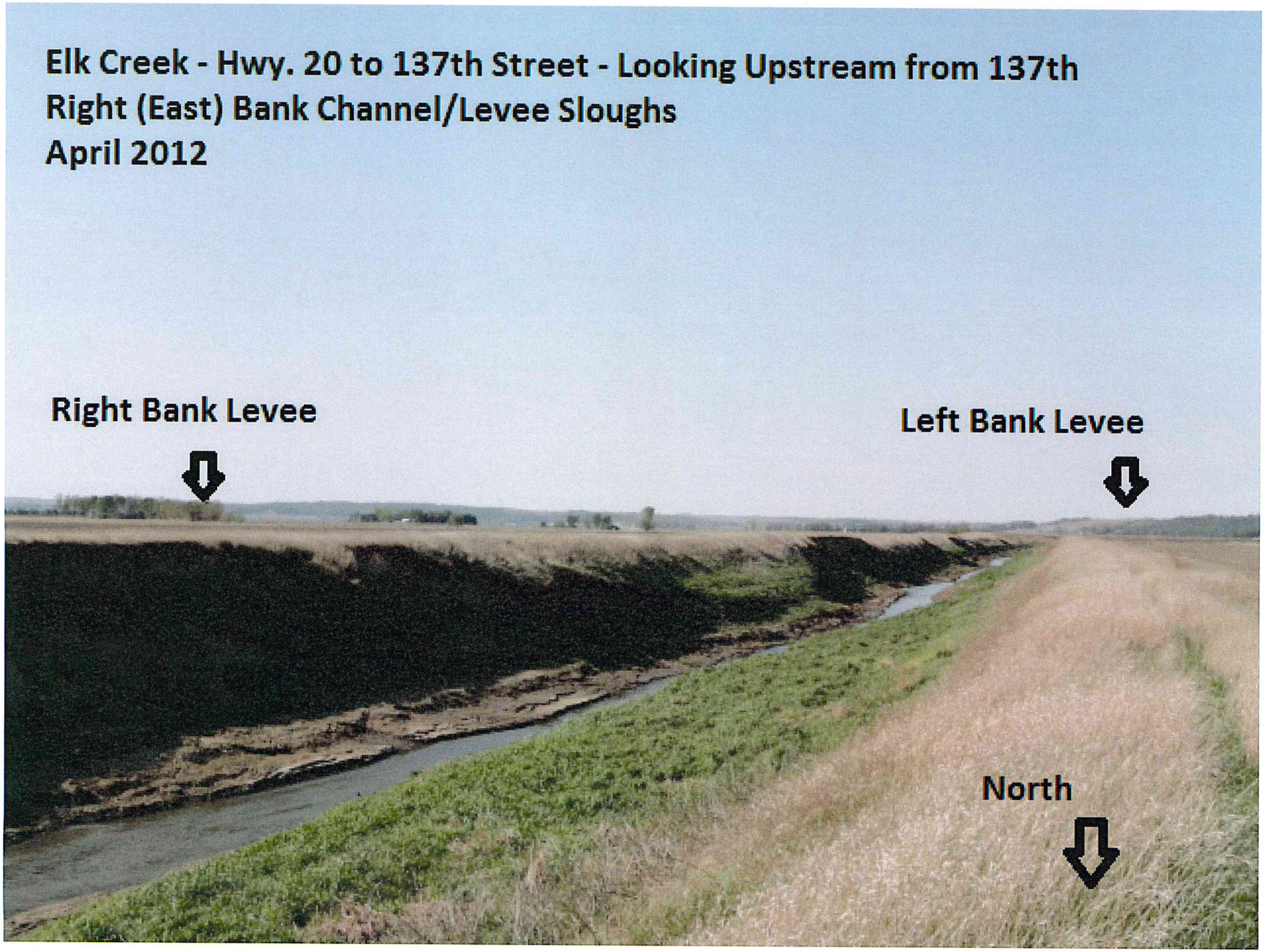
DAKOTA COUNTY, NEBRASKA

NRCS Natural Resources Conservation Service

Drawing No.
Sheet 8 of 14

Elk Creek - Hwy. 20 to 137th Street - Looking Upstream from 137th St.
Right (East) Bank Channel/Levee Sloughs
April 2012




Elk Creek - Hwy. 20 to 137th Street - Looking Upstream from 137th
Right (East) Bank Channel/Levee Sloughs
April 2012
Right Bank Levee
Left Bank Levee
North

Elk Creek - Hwy. 20 to 137th Street - Looking East at Levee Slough
April 2012