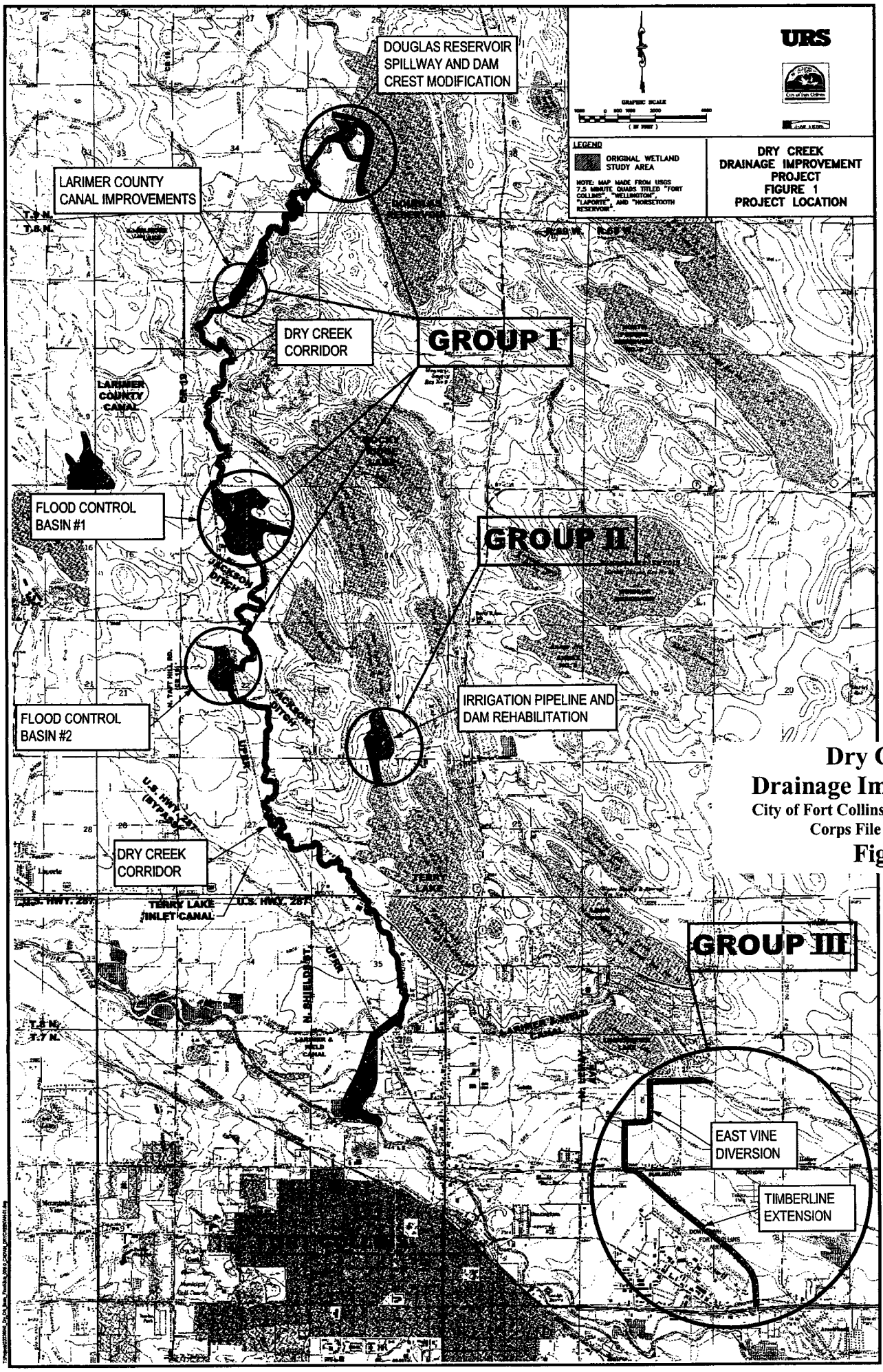
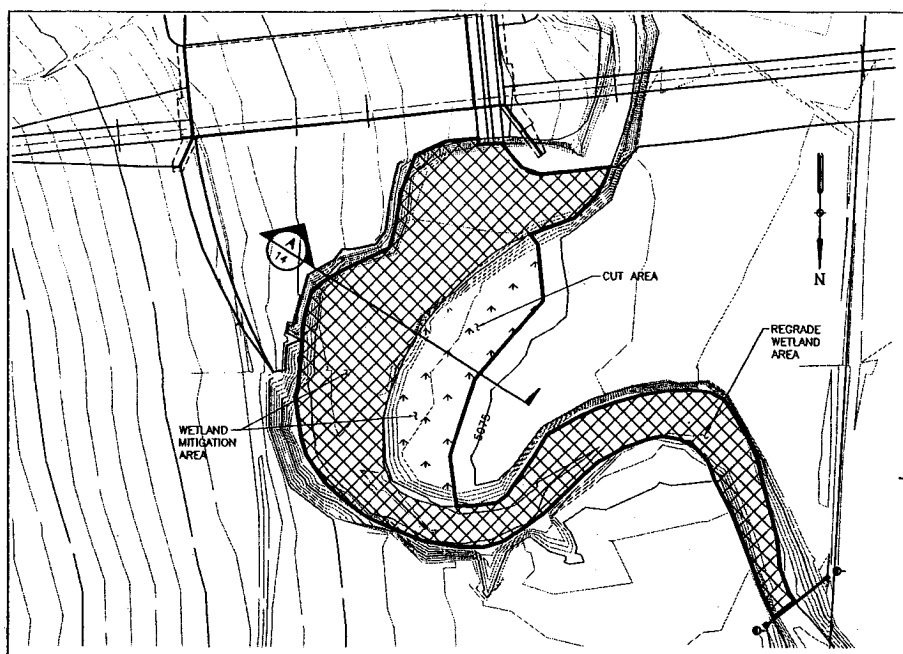


Dry Creek
Drainage Improvements
City of Fort Collins Utilities, Colorado
Corps File 200480081
Fig. 1

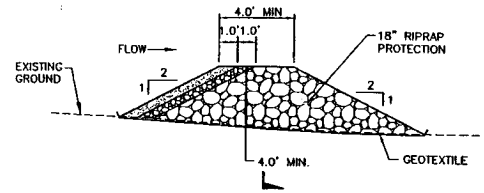


PLAN

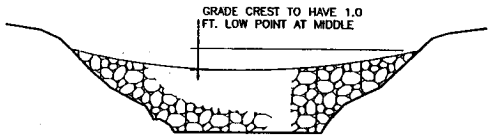
0 50 100 150
SCALE IN FEET

EXISTING WETLANDS TO BE REGRADED (1.03 ACRES)

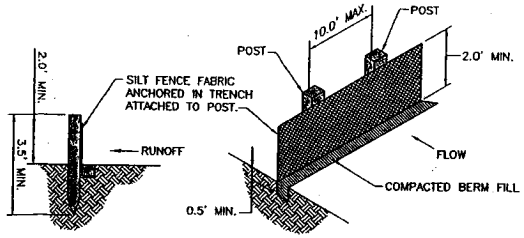
NEWLY CREATED WETLAND (0.27 ACRES)



TYPICAL FILTER DAM SECTION
NOT TO SCALE



SECTION B/14
NOT TO SCALE



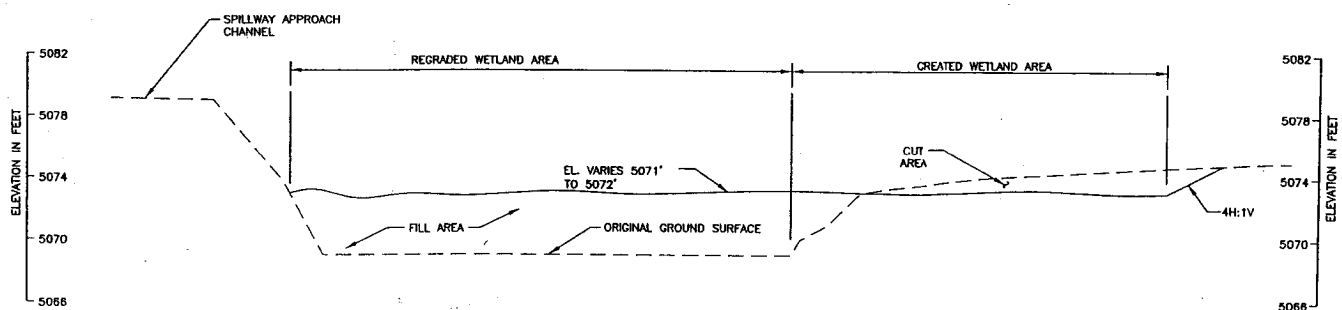
SECTION

ORTHOGRAPHIC VIEW

TYPICAL SILT FENCE INSTALLATION
NOT TO SCALE

NOTES

1. PRIOR TO CONSTRUCTION COMMENCING, A MEETING SHALL TAKE PLACE BETWEEN THE CONTRACTOR AND THE PROJECT BIOLOGIST TO DISCUSS ACCESS, AREAS TO BE PROTECTED, NOXIOUS WEED POPULATION, AND WETLAND CONSTRUCTION.
2. DURING CONSTRUCTION, VEHICLE OPERATION SHALL BE LIMITED TO THE DESIGNATED CONSTRUCTION AREA AND THE LIMITS OF THE CONSTRUCTION AREA SHALL BE FENCED. CONTRACTORS WILL BE SUBJECT TO FINES FOR ENCROACHMENT INTO OR DAMAGE TO NON-CONSTRUCTION AREAS.
3. ANY WETLAND AREAS USED FOR TEMPORARY CONSTRUCTION ACCESS WILL BE COVERED WITH A GEOTEXTILE AND 2 FEET OF SOIL PRIOR TO USE. THESE MATERIALS WILL BE REMOVED WHEN ACCESS IS NO LONGER NEEDED.
4. NO EQUIPMENT STAGING OR STORAGE OF CONSTRUCTION MATERIALS SHALL OCCUR WITHIN 50 FEET OF WETLANDS OR OTHER WATERS.
5. THE USE OF CHEMICALS, SUCH AS SOIL STABILIZERS, DUST INHIBITORS, AND FERTILIZERS WITHIN 50 FEET OF WETLANDS AND OTHER WATERS SHALL BE PROHIBITED.
6. EQUIPMENT SHALL BE REFUELED IN DESIGNATED CONTAINED AREAS, AT LEAST 50 FEET AWAY FROM WETLANDS AND OTHER WATERS.
7. TREES WITH OCCUPIED BIRD NESTS SHALL ONLY BE REMOVED AFTER THE NESTS ARE ABANDONED (TYPICALLY AFTER AUGUST 1 AND BEFORE APRIL 15)
8. THE FINISHED GRADE OF THE NEWLY CONSTRUCTED WETLANDS WILL NOT CONTAIN ANY STRAIGHT EDGES OR RIGHT ANGLES AND WILL HAVE MINOR VARIATIONS IN CONTOURING (UP TO 4 INCHES) TO CREATE A "NATURAL" ENVIRONMENT.
9. THE MITIGATION SITE WILL BE SURVEYED BEFORE TOPSOIL PLACEMENT TO ENSURE PROPER ELEVATIONS.
10. AT LEAST 6 INCHES OF SALVAGED TOPSOIL SHALL BE PLACED IN ALL CONSTRUCTED WETLAND AREAS
11. NO VEHICLES WILL BE ALLOWED ON THE NEWLY CONSTRUCTED WETLANDS AFTER TOPSOIL PLACEMENT
12. ALL NEWLY CONSTRUCTED AND TEMPORARILY IMPACTED WETLAND AREAS WILL BE SEEDED WITH THE WETLAND SEED MIX AND ALL OTHER DISTURBED AREAS WILL BE SEEDED WITH THE UPLAND SEED MIX PER SECTION 02935 OF THE SPECIFICATION. NO FERTILIZER WILL BE USED.
13. THE EXISTING WETLAND TOPSOIL WILL BE SALVAGED FROM ALL PERMANENTLY IMPACTED WETLANDS TO A DEPTH OF 12 INCHES. THE SALVAGED TOPSOIL WILL BE STOCKPILED ON-SITE, WILL BE KEPT WET, AND WILL BE PLACED IN THE NEW WETLANDS WITHIN 10 DAYS.



WETAND CROSS SECTION A/14

0 4 8 12
VERTICAL SCALE IN FEET

0 10 20 30
HORIZONTAL SCALE IN FEET

DRAFT - FOR REVIEW ONLY

REV	DESCRIPTION OF REVISION	BY	DATE
1	95% DESIGN	GGG	7/14/04
2	50% DESIGN	GGG	3/17/04

CITY OF FORT COLLINS UTILITIES
700 WOOD STREET
FORT COLLINS, CO 80522
(970) 221-6700

URS
URS Center
8181 E. Tufts Avenue
Denver, CO 80237-2637
(303) 694-2770

DESIGNED: AMH
DRAWN: TMT
CHECKED: GGG
PEER REVIEWED: SWR
PROJECT MANAGER: SWR
DATE: 7/14/04

FLOOD CONTROL BASIN No. 1 LARIMER COUNTY, CO

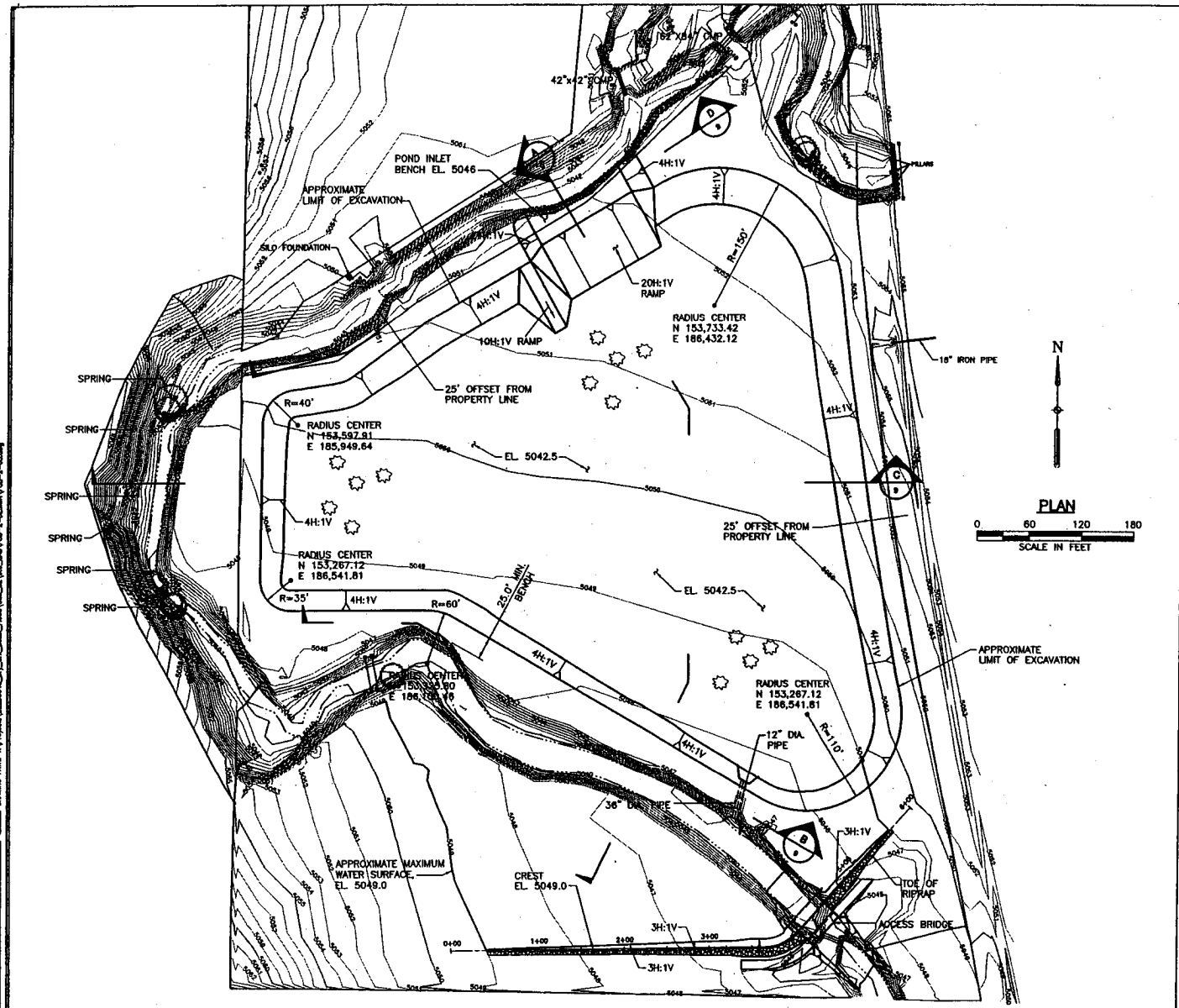
RECLAMATION AND WETLAND MITIGATION

REVISION 1
PROJECT 22236040
DRAWING 14
SHEET 14 OF 14

Dry Creek Drainage Improvements

City of Fort Collins Utilities, Colorado
Corps File 200480081

Fig. 2



50% DESIGN	CGG	1/2004	

CITY OF FORT COLLINS UTILITIES
700 WOOD STREET
FORT COLLINS, CO 80522
(970) 221-6700

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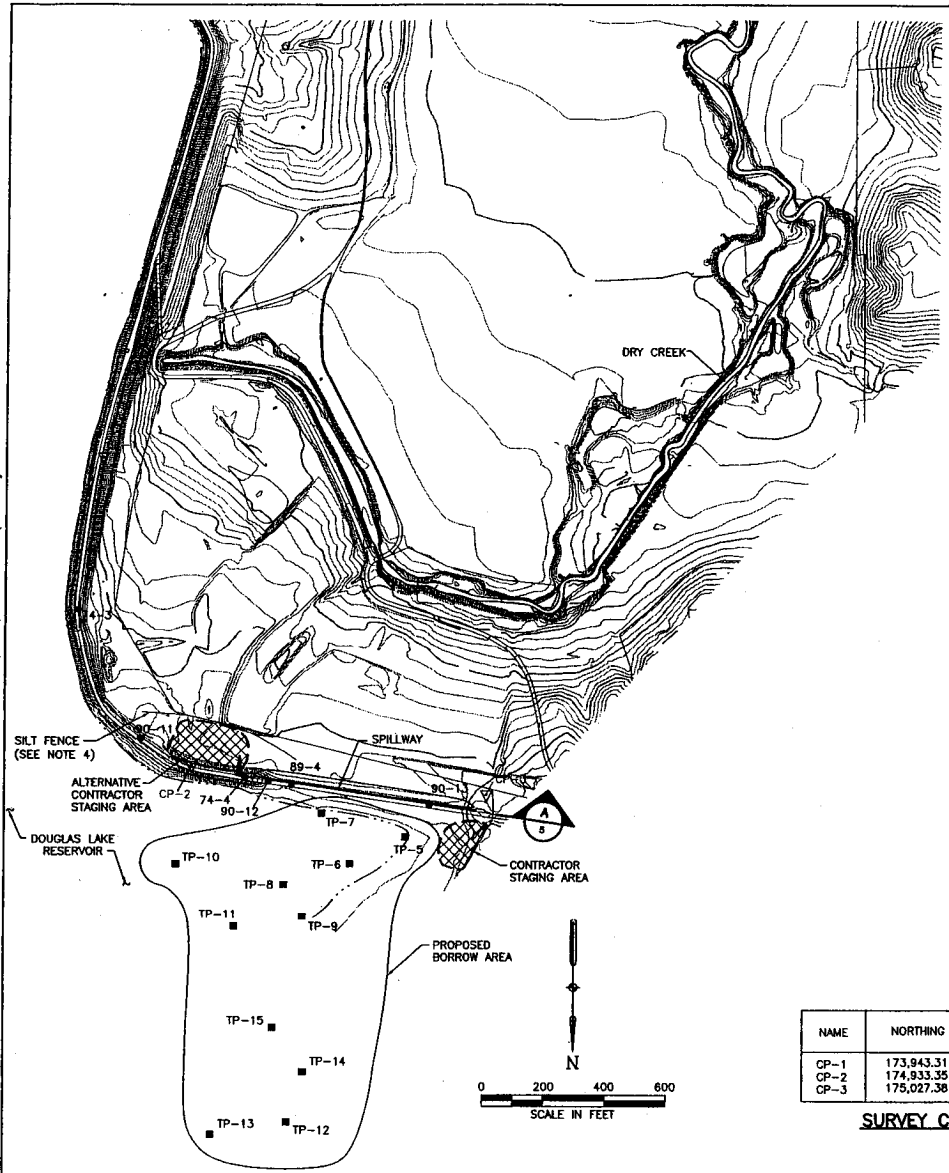
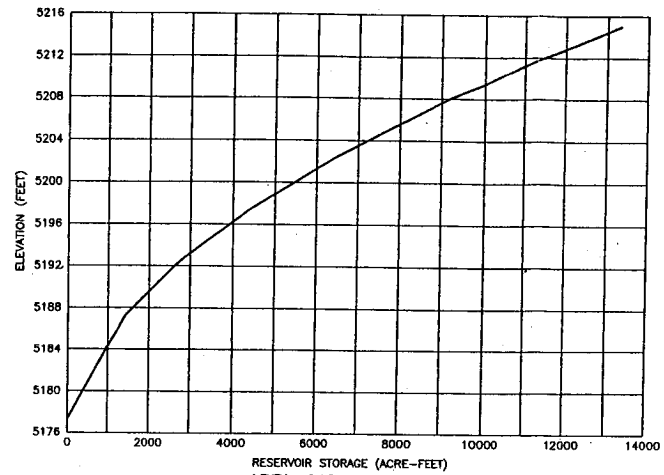
URS Center
8181 E. Tufts Avenue

DESIGNED: ADT	FLOOD CONTROL BASIN No. 2	LARIMER COUNTY, CO	REVISION 1
DRAWN: WDH			PROJECT 22238040
CHECKED: GGG	PLAN OF MODIFICATIONS		DRAWING 5
PGR REVIEWED: HKB			
PROJECT MANAGER: SWR			

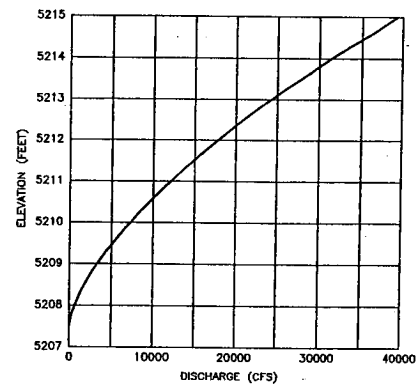
Dry Creek
Drainage Improvements
City of Fort Collins Utilities, Colorado
Corps File 200480081
Fig. 3





AREA-CAPACITY CURVE

ELEVATION (FT)	STORAGE VOLUME (AC-FT)
5,177.3	0
5,187.3	1,425
5,192.3	2,705
5,197.3	4,362
5,202.3	6,408
5,207.5	8,940
5,207.8	9,099
5,208.3	9,364
5,208.8	9,650
5,209.3	9,937
5,209.8	10,214
5,210.3	10,491
5,210.8	10,770
5,211.3	11,050
5,211.8	11,356
5,212.3	11,682
5,212.8	11,968
5,213.3	12,275
5,213.8	12,582
5,214.3	12,890
5,214.8	13,200
5,215.0	13,324



DOUGLAS SPILLWAY RATING CURVE

ELEVATION (FT)	DISCHARGE (CFS)
5,207.5	0
5,207.8	290
5,208.3	1,290
5,208.8	2,680
5,209.3	4,390
5,209.8	6,370
5,210.3	8,600
5,210.8	11,050
5,211.3	13,720
5,211.8	16,590
5,212.3	19,650
5,212.8	22,910
5,213.3	26,350
5,213.8	29,970
5,214.3	33,770
5,214.8	37,730
5,215.0	39,360

NAME	NORTHING	EASTING	ELEVATION
CP-1	173,943.31	192,087.93	
CP-2	174,933.35	191,801.87	
CP-3	175,027.38	190,851.61	

SURVEY CONTROL POINTS

NOTES:

1. TEST HOLES AND TEST PITS ARE BASED ON HISTORICAL DATA PRESENTED IN THE WOODWARD-CLYDE REPORT TITLED "DOUGLAS DAM AND SPILLWAY REHABILITATION" GEOTECHNICAL AND HYDROLOGIC INVESTIGATION DATED JANUARY 1991. THIS DATA IS PROVIDED AS REFERENCE ONLY AND ANY MATERIAL OR QUANTITY ASSUMPTIONS NEED TO BE VERIFIED AS CONDITIONS AT THE SITE MAY HAVE CHANGED.
2. AREA-CAPACITY CURVE AND EQUATION FOR THE SPILLWAY RATING CURVE ARE TAKEN FROM WOODWARD-CLYDE DESIGN DRAWINGS TITLED "DOUGLAS DAM AND SPILLWAY REHABILITATION" DATED JANUARY 1991.
3. AREA USED TO CALCULATE SPILLWAY DISCHARGE CAPACITY WAS REDUCED BY THE PROJECTED CROSS-SECTIONAL AREA OF THE DIVIDER WALLS.
4. SILT FENCE TO BE INSTALLED UNLESS ALL CONSTRUCTION ACTIVITIES REMAIN UPSTREAM OF THE EXISTING SPILLWAY CUTOFF WALL.

DRAFT - FOR REVIEW ONLY

REV	DESCRIPTION OF REVISION	BY	DATE
1	95% DESIGN SUBMITTAL	GOG	7/28/04
0	50% DESIGN SUBMITTAL	GOG	4/29/04

CITY OF FORT COLLINS UTILITIES
700 WOOD STREET
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URS
URS Center
8181 E. Tufts Avenue
Denver, CO 80237-2637

DESIGNED: TEM
DRAWN: TMT
CHECKED: GOG
PEER REVIEWED: -
PROJECT MANAGER: SWR
DATE: 7/28/04

DOUGLAS DAM FUSEPLUG — LARIMER COUNTY, CO

SITE PLAN, AREA-CAPACITY CURVE, AND SPILLWAY RATING CURVE

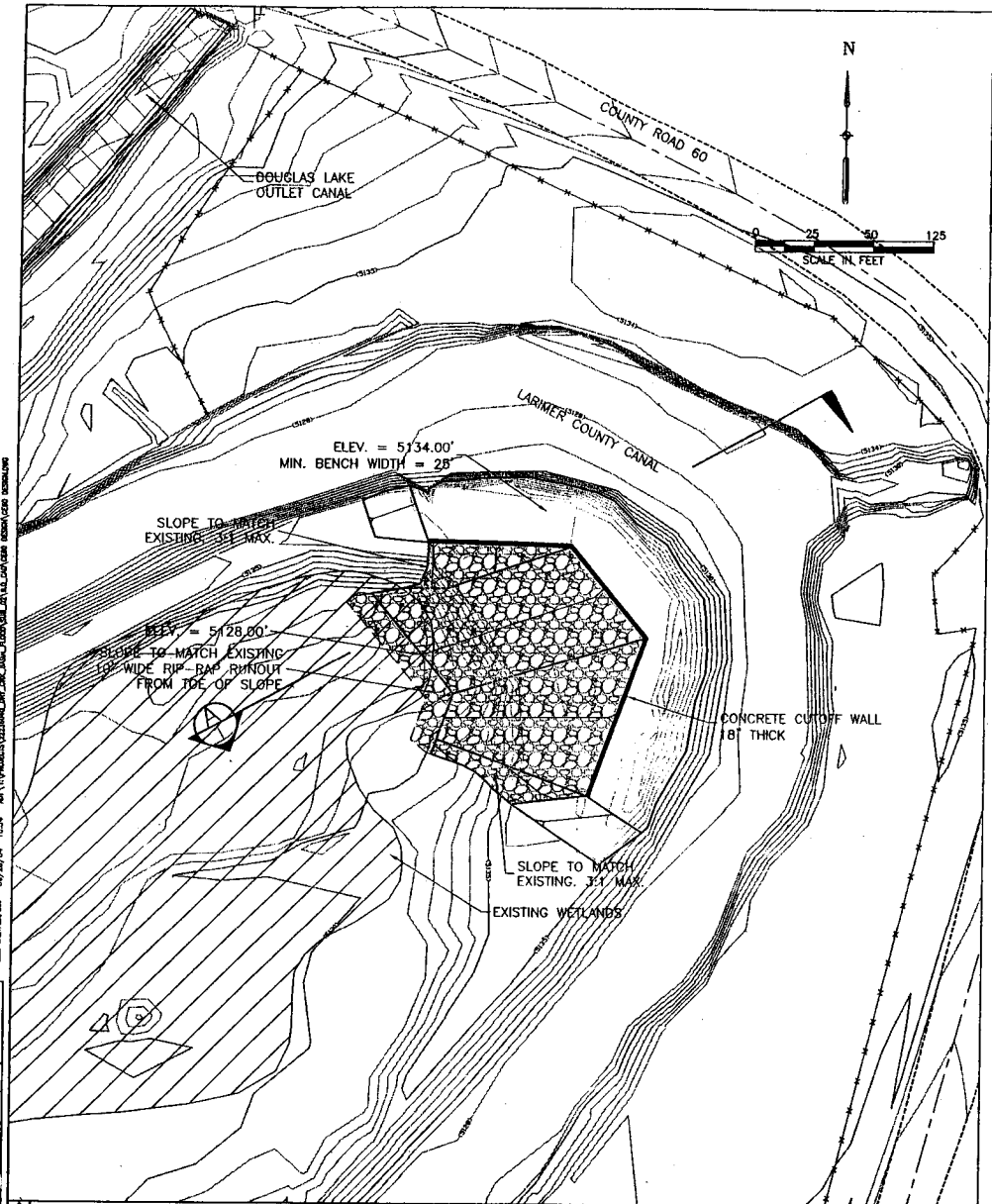
REVISION 1
PROJECT 22238040
DRAWING 4
SHEET 4 OF 9

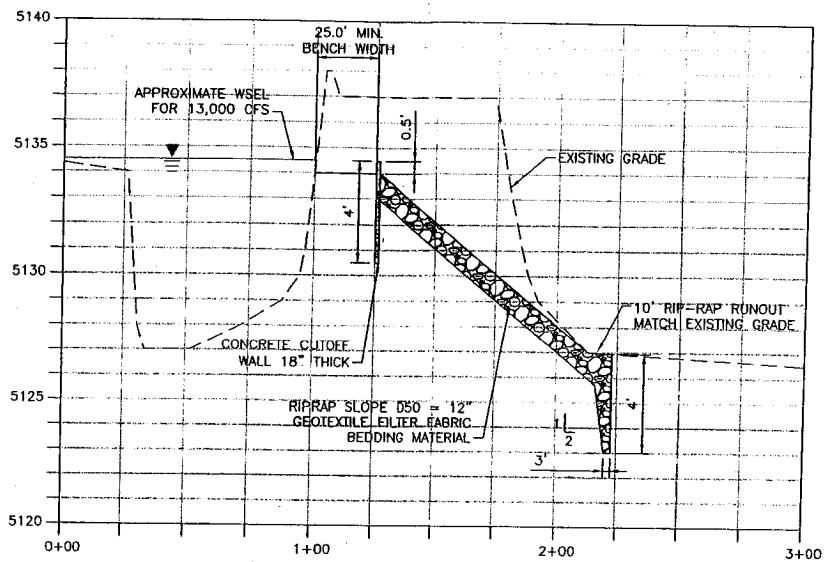
Dry Creek Drainage Improvements

City of Fort Collins Utilities, Colorado

Corps File 200480081

Fig. 4





SECTION A/1

0 10 20
VERTICAL SCALE IN FEET

0 100 200
HORIZONTAL SCALE IN FEET

REV.	DESCRIPTION OF REVISION	BY	DATE

CITY OF FORT COLLINS UTILITIES
700 WOOD STREET
FORT COLLINS, CO 80522
(970) 221-6700

URS
URS Center
8181 E. Tufts Avenue
Denver, CO 80237-2637
(303) 694-2770

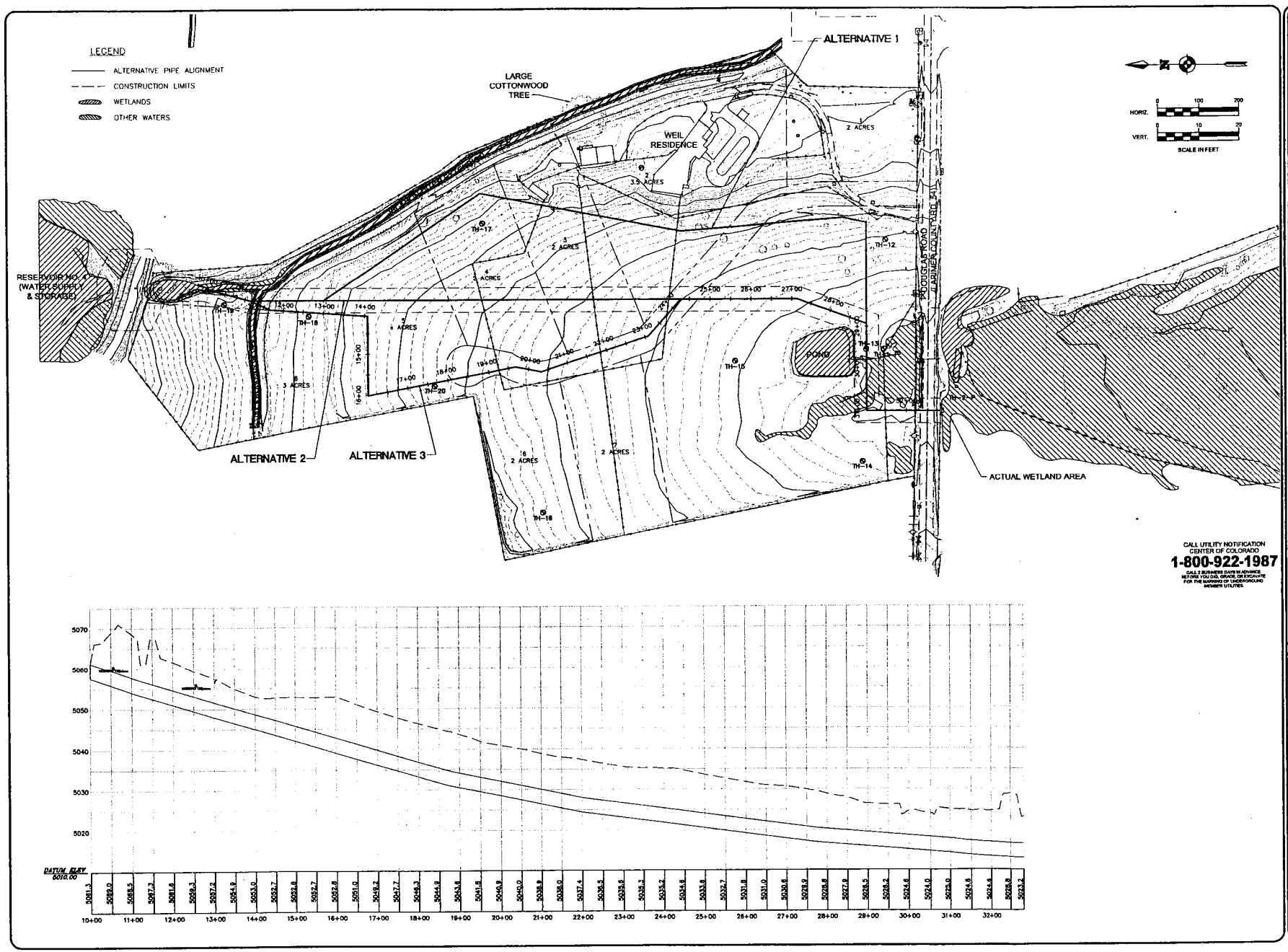
DESIGNED: ADT
DRAWN: ADT
CHECKED:
PEER REVIEWED: GCG
PROJECT MANAGER: SWR
DATE: 08/28/2004

DRY CREEK DRAINAGE IMPROVEMENT LARIMER COUNTY, CO

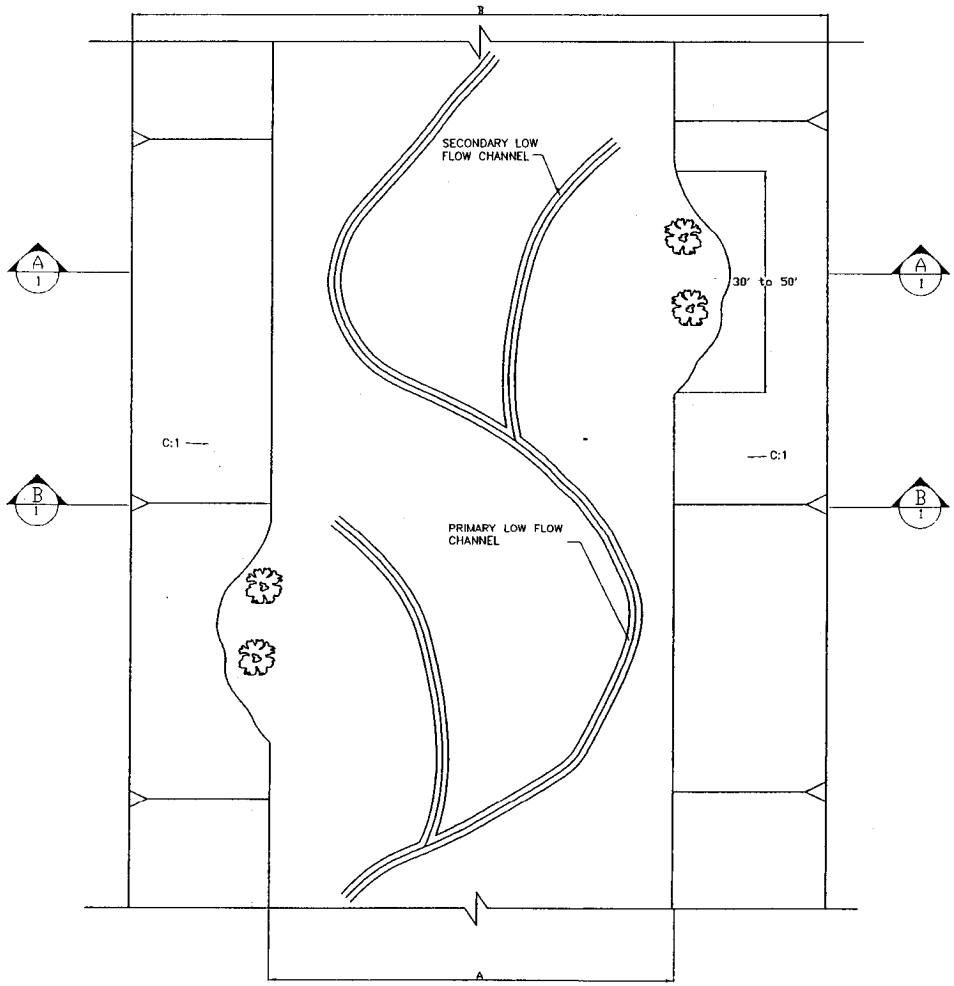
LARIMER COUNTY CANAL
WASTEWAY STRUCTURE

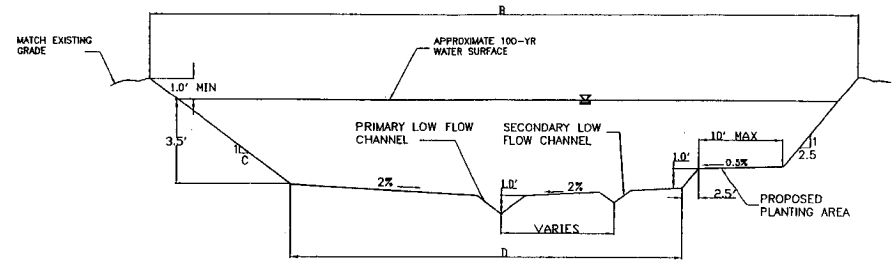
REVISION 1
PROJECT 22238040
DRAWING 01
SHEET 1 OF 2

Dry Creek
Drainage Improvements
City of Fort Collins Utilities, Colorado
Corps File 200480081
Fig. 5

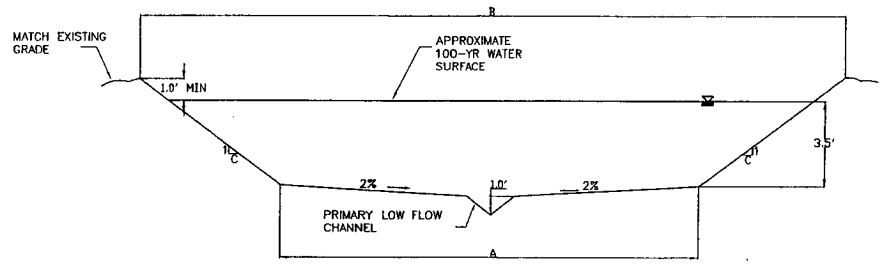


Dry Creek
Drainage Improvements
City of Fort Collins Utilities, Colorado
Corps File 200480081
Fig. 6





A 1 SECTION
N.T.S.



B 1 SECTION
N.T.S.

Reach Name	Flow	A	B	C	D
	CFS	FT	FT	FT/FT	FT
East Vine	500	33	69	4	29.5
East Vine	500	40	58	2	36
Timberline Channel	500	85	121	4	76.5
Timberline Channel	500	94	112	2	84.6
Timberline Channel	1400	115	151	4	103.5
Timberline Channel	1400	124	142	2	111.6

NOTE:
1. SURFACE AREAS OF LOW FLOW CHANNELS TO MATCH SURFACE AREA OF EXISTING WETLANDS

REV	DESCRIPTION OF REVISION	BY	CHK	DATE

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(303) 694-2770

PRELIMINARY PROGRESS PRINT NOT FOR CONSTRUCTION

DESIGNED TJJ
DRAWN TJJ
CHECKED GGG
PROJECT MANAGER GGG
DATE 07/28/04

DRY CREEK DRAINAGE IMPROVEMENT

EAST VINE AND TIMBERLINE PROPOSED CHANNEL PLAN AND SECTION

STATUS DRAFT
REVISION A
DRAWING NUMBER 1
SHEET 1 OF 1

Dry Creek Drainage Improvements

City of Fort Collins Utilities, Colorado

Corps File 200480081

Fig. 7