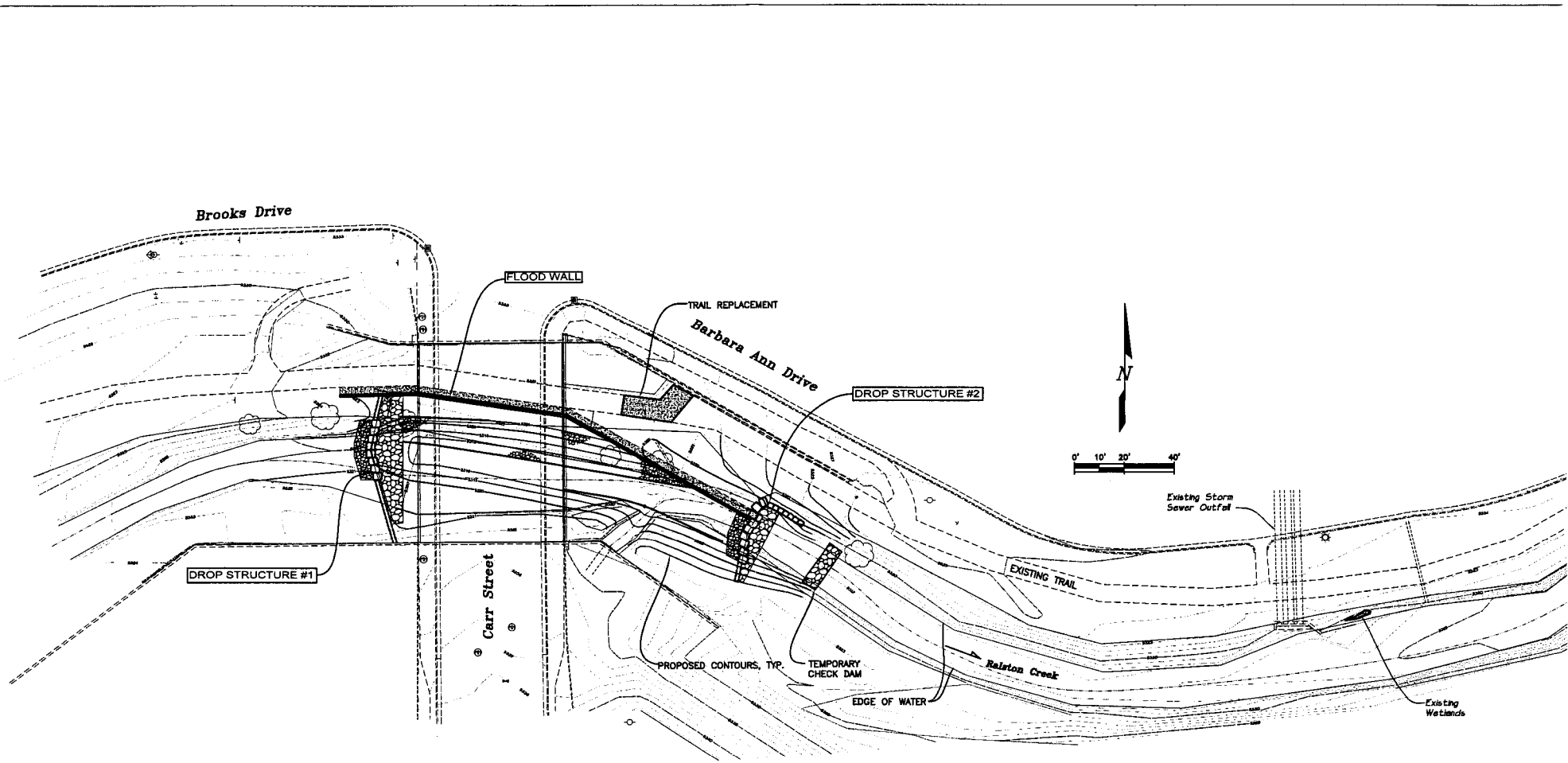


Fig. 1

Channel Improvements on Ralston Creek at Carr Street

Urban Drainage & Flood Control District

Corps File 200380100

DESIGNED: JPJ DATE:
DRAWN: BKB DATE:
CHECKED: DATE:
REVISED: DATE:
REVISED: DATE:

MULLER

MULLER ENGINEERING CO., INC.
CONSULTING ENGINEERS
HIGHGATE 4, SUITE 100
777 SOUTH WADSWORTH BLVD.
LAKEWOOD, COLORADO 80226
(303) 986-4600

PROJECT NO. 01009.10

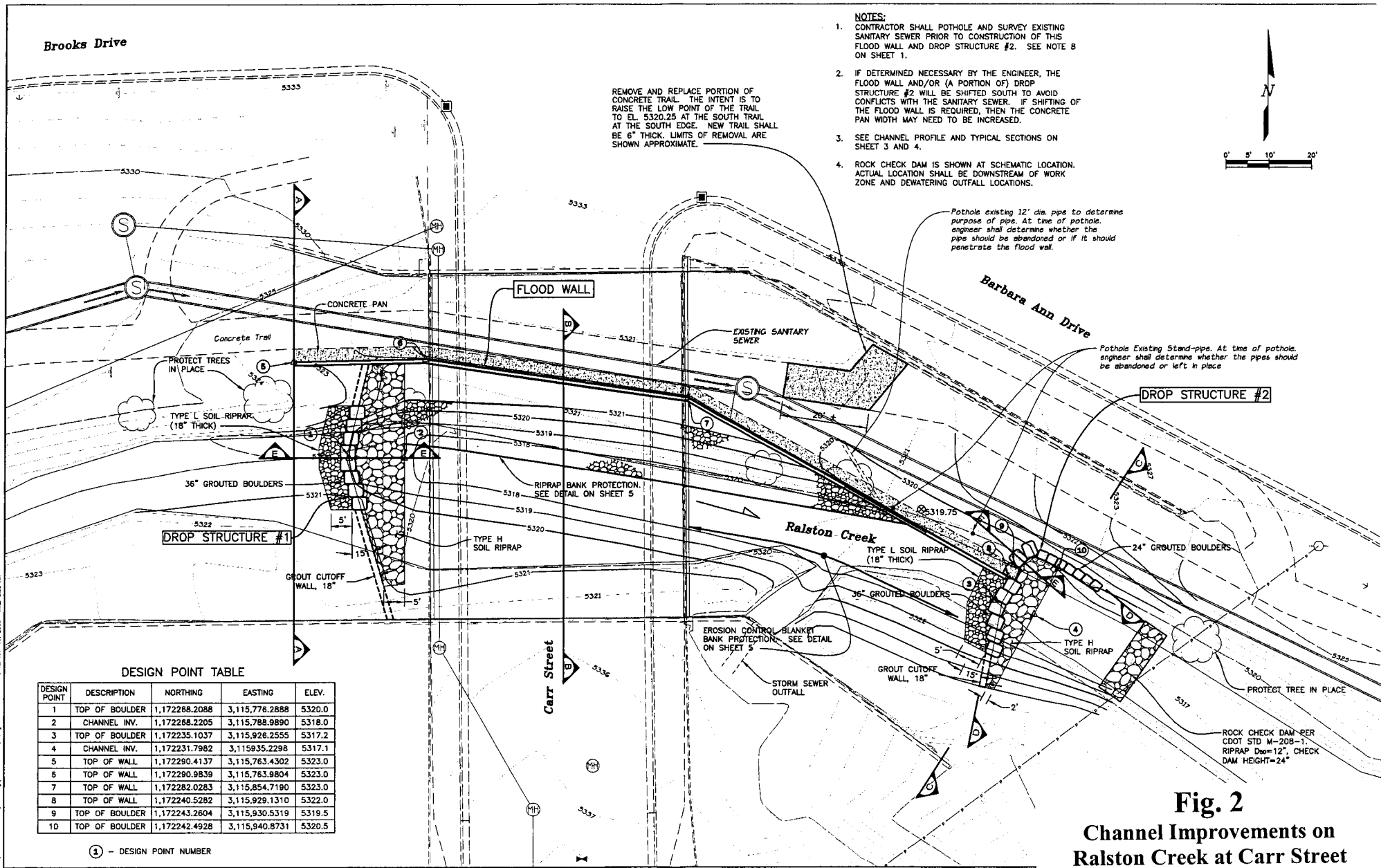
URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
UDFCD PROJECT No. 2201

RALSTON CREEK AT CARR STREET

NAME: P:\01-009\10 Ralston Creek\CAD Dwg\01009-10-WTL40.dwg DATE: MAY 13, 2003 TIME: 8:40 AM

NOTES:

1. CONTRACTOR SHALL POTHOLE AND SURVEY EXISTING SANITARY SEWER PRIOR TO CONSTRUCTION OF THIS FLOOD WALL AND DROP STRUCTURE #2. SEE NOTE 8 ON SHEET 1.
2. IF DETERMINED NECESSARY BY THE ENGINEER, THE FLOOD WALL AND/OR (A PORTION OF) DROP STRUCTURE #2 WILL BE SHIFTED SOUTH TO AVOID CONFLICTS WITH THE SANITARY SEWER. IF SHIFTING OF THE FLOOD WALL IS REQUIRED, THEN THE CONCRETE PAN WIDTH MAY NEED TO BE INCREASED.
3. SEE CHANNEL PROFILE AND TYPICAL SECTIONS ON SHEET 3 AND 4.
4. ROCK CHECK DAM IS SHOWN AT SCHEMATIC LOCATION. ACTUAL LOCATION SHALL BE DOWNSTREAM OF WORK ZONE AND DEWATERING OUTFALL LOCATIONS.



DESIGN POINT TABLE

DESIGN POINT	DESCRIPTION	NORTHING	EASTING	ELEV.
1	TOP OF BOULDER	1,172268.2088	3,115,776.2888	5320.0
2	CHANNEL INV.	1,172268.2205	3,115,788.9890	5318.0
3	TOP OF BOULDER	1,172235.1037	3,115,926.2555	5317.2
4	CHANNEL INV.	1,172231.7982	3,115935.2298	5317.1
5	TOP OF WALL	1,172290.4137	3,115,763.4302	5323.0
6	TOP OF WALL	1,172290.9839	3,115,763.9804	5323.0
7	TOP OF WALL	1,172282.0283	3,115,854.7190	5323.0
8	TOP OF WALL	1,172240.5282	3,115,929.1310	5322.0
9	TOP OF BOULDER	1,172243.2604	3,115,930.5319	5319.5
10	TOP OF BOULDER	1,172242.4928	3,115,940.8731	5320.5

(1) – DESIGN POINT NUMBER

DESIGNED: JPJ/KAH DATE:
DRAWN: BKB DATE:
CHECKED: DATE:
REVISED: DATE:
REVISED: DATE:

MULLER

MULLER ENGINEERING CO., INC.
CONSULTING ENGINEERS
INGOGATE 4, SUITE 100
777 SOUTH WADSWORTH BLVD.
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PROJECT NO. 01009.10

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
UDFCD PROJECT No. 2201

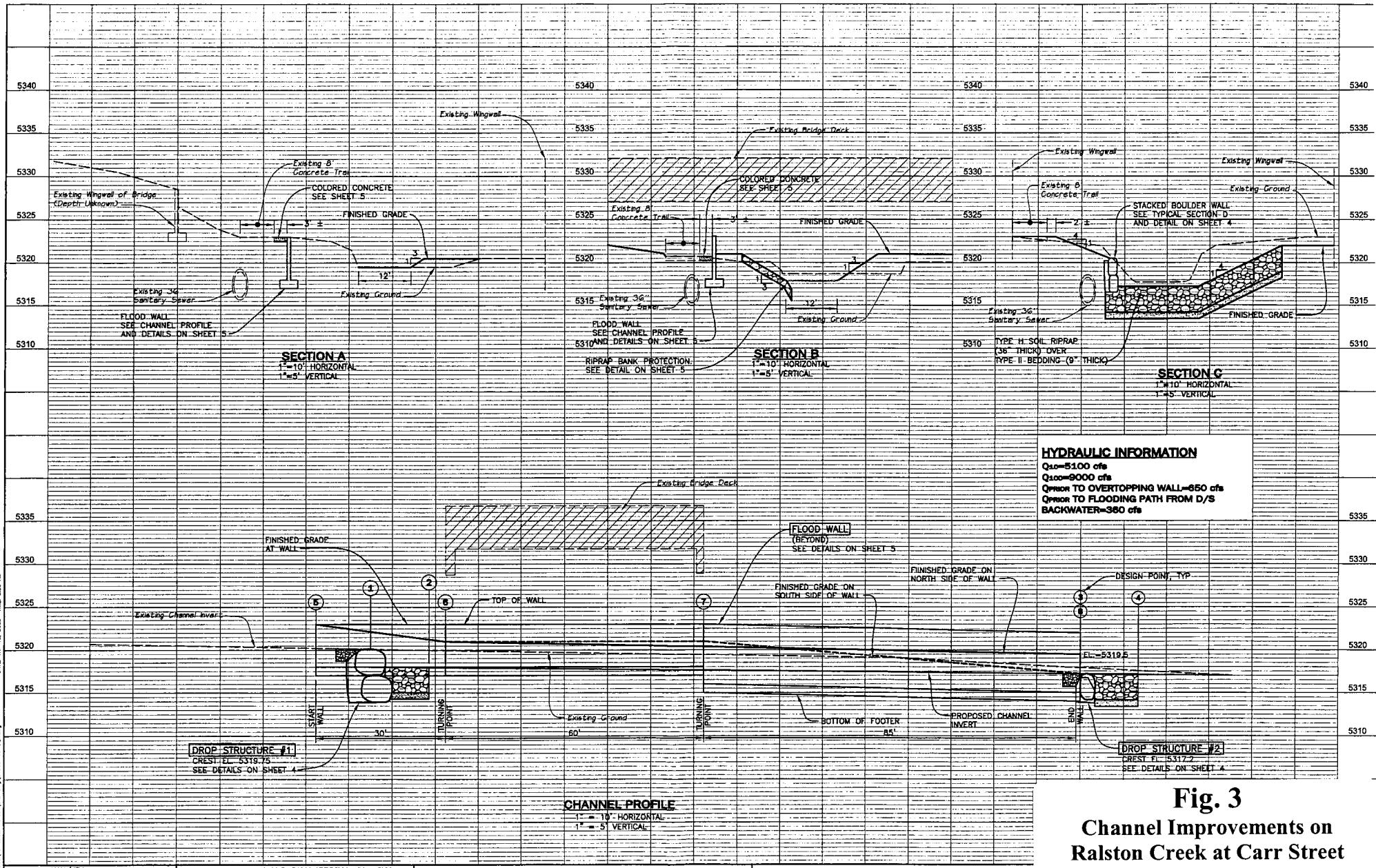
RALSTON CREEK AT CARR STREET

NAME: P:\01-009\10 Ralston Creek\CAD Dwg\01009-10-PLN.dwg DATE: MAY 13, 2003 TIME: 8:53 AM

Fig. 2

Channel Improvements on Ralston Creek at Carr Street

Urban Drainage & Flood Control District
Corps File 200380100



DESIGNED: KAH/JPJ DATE:
DRAWN: BKB DATE:
CHECKED: DATE:
REVISED: DATE:
REVISED: DATE:

MULLER ENGINEERING CO., INC.
CONSULTING ENGINEERS
IRONGATE 4, SUITE 100
777 SOUTH WADSWORTH BLVD.
LAKEWOOD, COLORADO 80226
(303) 986-4939
PROJECT NO. 01009.10

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
UDFCD PROJECT No. 2201

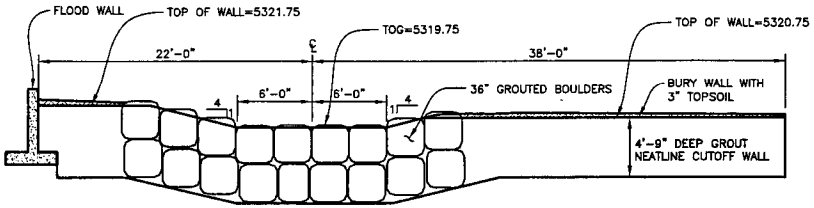
RALSTON CREEK AT CARR STREET

NAME: P:\01-009\10 Ralston Creek\CAD Dwg\01009-10-DET.dwg DATE: MAY 13, 2003 TIME: 8:38 AM

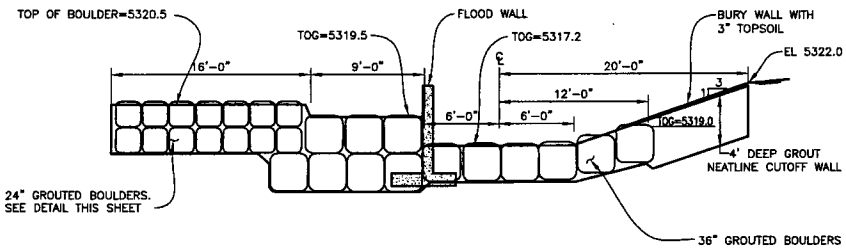
Fig. 3

Channel Improvements on Ralston Creek at Carr Street

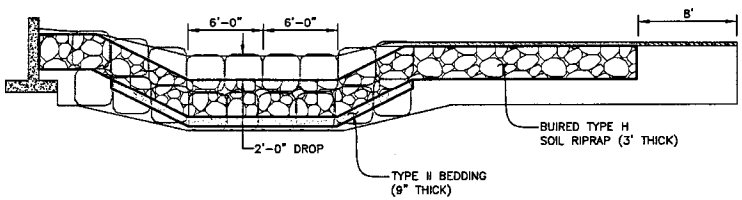
Urban Drainage & Flood Control District
Corps File 200380100



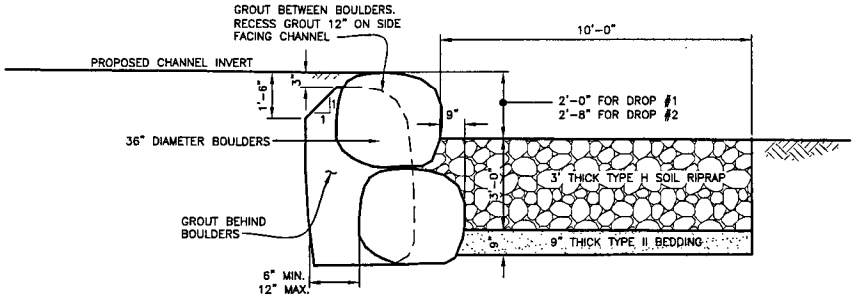
DROP STRUCTURE #1 DETAIL (LOOKING DOWNSTREAM)
SCALE: 1"=5'



DROP STRUCTURE #2 DETAIL (SECTION D)
SCALE: 1"=5'

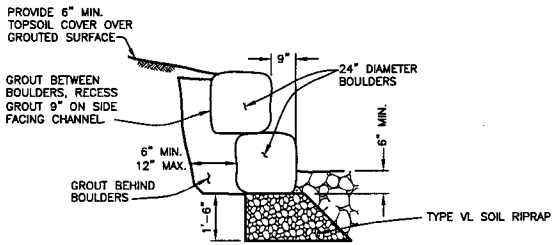


DROP STRUCTURE #1 RIPRAP DETAIL
SCALE: 1"=5'

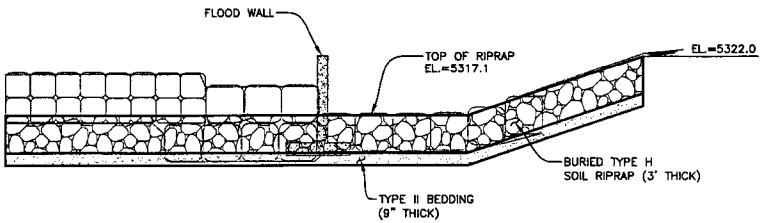


DROP STRUCTURE PROFILE (SECTION E)
SCALE: 1"=2'

NOTE:
TOG=TOP OF GROUT



24" GROUTED BOULDER WALL DETAIL
SCALE: 1"=2'



DROP STRUCTURE #2 RIPRAP DETAIL
SCALE

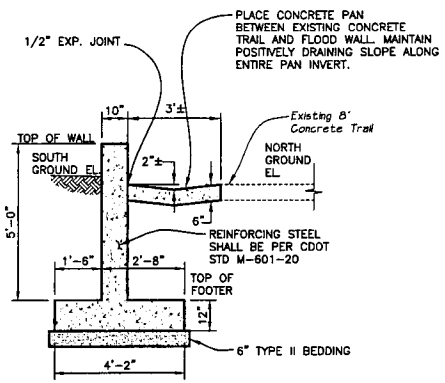
Fig. 4

Channel Improvements on Ralston Creek at Carr Street

Urban Drainage & Flood Control District
Corps File 200380100

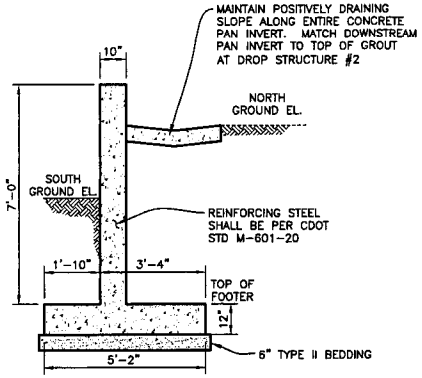
DESIGNED: KAH/JPJ DATE:	MULLER ENGINEERING CO., INC. CONSULTING ENGINEERS IRONGATE 4, SUITE 150 777 SOUTH WADSWORTH BLVD. LAKEWOOD, COLORADO 80226 (303) 985-4959 PROJECT NO. 01009.10	URBAN DRAINAGE AND FLOOD CONTROL DISTRICT UDFCD PROJECT No. 2201	RALSTON CREEK AT CARR STREET
DRAWN: BKB DATE:			
CHECKED: DATE:			
REVISED: DATE:			
REVISED: DATE:			

NAME: P:\01-009\10 Ralston Creek\CAD Dwg\01009-10-DET.dwg DATE: MAY 13, 2003 TIME: 8:39 AM



WALL DETAIL 1 (FROM DESIGN PT. 5 TO 7)

SCALE: 1/2"=1'-0"



WALL DETAIL 2 (FROM DESIGN PT. 7 TO 8)

SCALE: 1/2"=1'-0"

DESIGN POINT	TOP OF WALL	TOP OF FOOTER	NORTH GROUND EL.	SOUTH GROUND EL.
5	5323.0	5318.0	MATCH TOP OF EXISTING TRAIL	5323.0
6	5323.0	5318.0		5321.0
7	5323.0	5318.0		5321.0

DESIGN POINT	TOP OF WALL	TOP OF FOOTER	NORTH GROUND EL.	SOUTH GROUND EL.
7	5323.0	5316.0	5320.5±	5321.0
8	5322.0	5315.0	5319.5	5317.3

CONCRETE NOTES:

REINFORCING STEEL

1. CLEARANCE FOR REINFORCEMENT BARS, UNLESS SHOWN OTHERWISE, SHALL BE:
   - WHEN PLACED ON GROUND: ——— 3"
   - ALL OTHER CONCRETE SURFACES: – 2"
2. ALL WALL CORNER AND WALL INTERSECTION REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALLS.
3. REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF ASTM A615, GRADE 60.

STRUCTURAL CONCRETE:

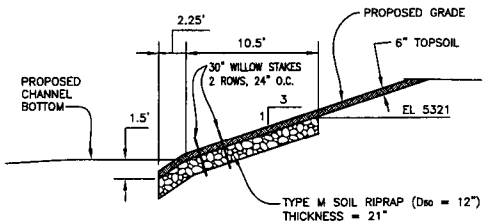
1. STRUCTURAL CONCRETE FOR FLOOD WALL SHALL MEET THE REQUIREMENTS OF CDOT CONCRETE CLASS D. CONCRETE PAN AND TRAIL SHALL BE CLASS B WITH FIBERMESH.
2. EXPOSED CONCRETE SURFACES OF STRUCTURES SHALL BE PROVIDED WITH A CLASS 2 RUBBED FINISH PER CDOT SPECIFICATIONS.
3. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/4" x 3/4" CHAMFER (INCLUDING TOP OF WALL).
4. CONTROL JOINTS SHALL BE PLACED EVERY 10' FOR CONCRETE PAN AND TRAIL.
5. FORM LINER SHALL BE INSTALLED ALONG THE EXPOSED NORTH VERTICAL FACE OF RETAINING WALL. FORM LINER SHALL BE DAYTON/RICHMOND #1520. WALL THICKNESS SHALL BE INCREASED TO 12" WHERE FORM LINER IS USED TO ACCOUNT FOR DEPTH OF FORM LINER PATTERN.

Fig. 5

Channel Improvements on Ralston Creek at Carr Street

Urban Drainage & Flood Control District

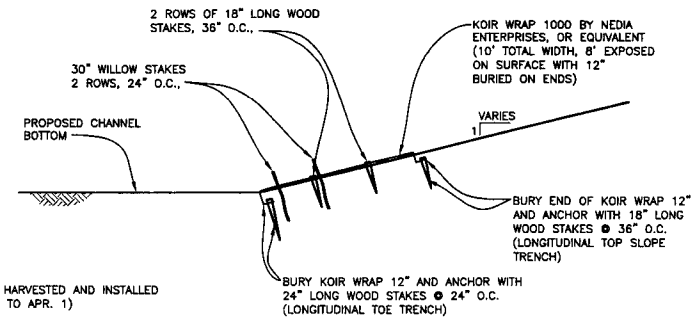
Corps File 200380100



NOTE:
ELIMINATE WILLOW STAKES DIRECTLY BENEATH BRIDGE DECK.

RIPRAP BANK PROTECTION DETAIL

SCALE: 1"=5'



NOTES:

1. WILLOW STAKES SHALL BE HARVESTED AND INSTALLED WHILE DORMANT (MID OCT. TO APR. 1)
2. WOOD STAKES SHALL BE CUT FROM 2x4 LUMBER

EROSION CONTROL BLANKET DETAIL

N.T.S.

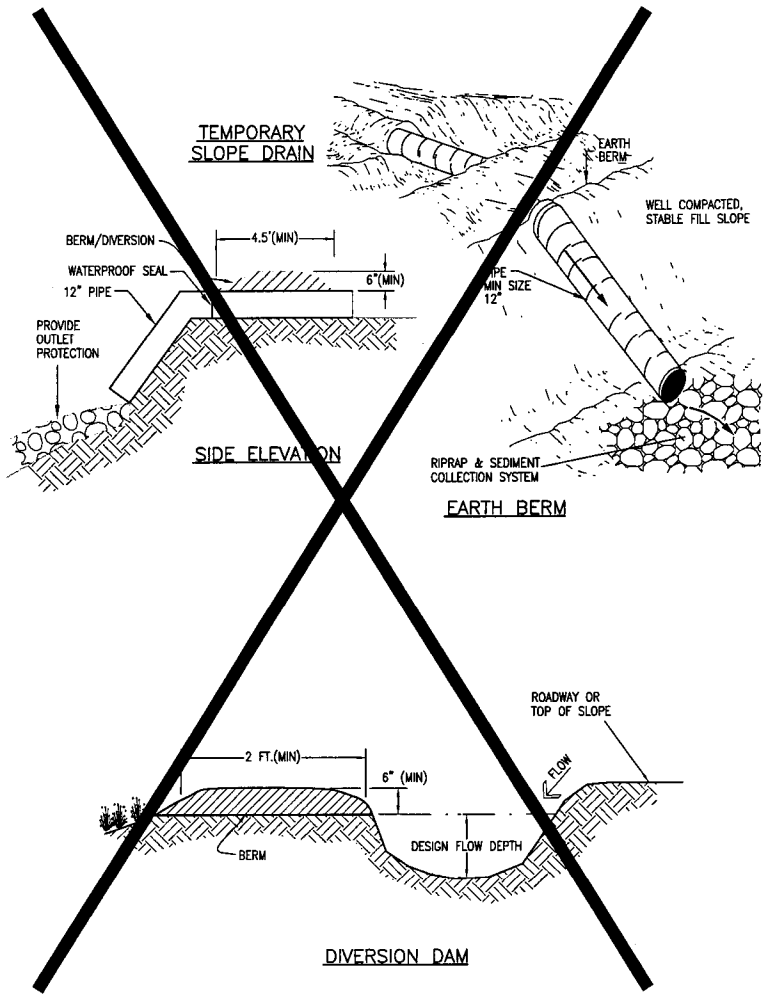
DESIGNED: KAH/JPJ DATE:	MULLER ENGINEERING CO., INC. CONSULTING ENGINEERS SHOGGATE 4, SUITE 160 777 SOUTH WADSWORTH BLVD. LAKEWOOD, COLORADO 80226 (303) 985-4998	URBAN DRAINAGE AND FLOOD CONTROL DISTRICT	RALSTON CREEK AT CARR STREET
DRAWN: BKB DATE:		UDFCD PROJECT No. 2201	
CHECKED: DATE:			
REVISED: DATE:			
REVISED: DATE:	PROJECT NO. 01009.10		

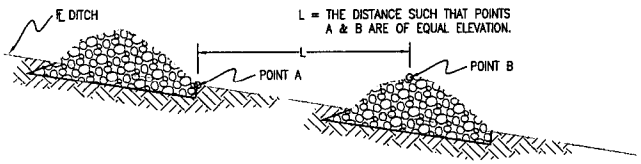
NAME: P:\01-009\10 Ralston Creek\CAD Dwg\01009-10-DET.dwg DATE: MAY 13, 2003 TIME: 8:39 AM

Fig. 6

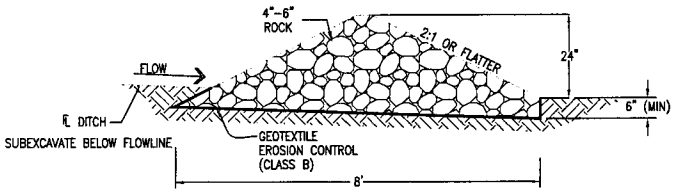
Channel Improvements on Ralston Creek at Carr Street

Urban Drainage & Flood Control District
Corps File 200380100





PROFILE VIEW ALONG DITCH FLOWLINE



PROFILE

RIPRAP CHECK DAM

Colorado Department of Transportation	Computer File Information	Standard Plan Revised		TEMPORARY EROSION CONTROL	STANDARD PLAN NO.
DOT 4201 East Arkansas Avenue, Denver, Colorado 80222, Phone: (303) 757-9083 FAX: (303) 757-9820	Path: www.dot.state.co.us/DevelopProjects/DesignSupport/MStandards/	Date:	Comments:		
	Drawing File Name: 208010407.dwg				
Project Development Branch SD	Acad Version: R14 Scale: NA Units: English			Issued By: Project Development Branch October 1, 2000	