

**GENERAL NOTES**

- ALL CONCRETE SHALL BE CLASS B (BOX CULVERT).
- ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS PLACED.
- CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS MAY BE CONSTRUCTED ONLY IF APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL MAINTAIN THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
- STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH STANDARD PLAN M-206-1.
- FOR ANY CULVERT SPAN 20 FT. OR GREATER, A FOUNDATION INVESTIGATION AND REPORT ARE REQUIRED.
- BACKFILL SHALL NOT BEAN UNTIL TOP SLAB HAS REACHED DESIGN STRENGTH,  $f_c$ .
- SPLICE QUANTITIES FOR LONGITUDINAL AND TRANSVERSE BARS ARE NOT INCLUDED.
- REINFORCING STEEL SHALL BE GRADE 60.
- THE MINIMUM LAP SPACING FOR EPOXY COATED REINFORCING BARS SHALL BE:
 

BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
- THE MINIMUM LAP SPACING FOR BLACK REINFORCING BARS SHALL BE:
 

BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
- ALL DIMENSIONS ARE PERPENDICULAR TO THE CENTERLINE OF THE BOX.
- WINGWALLS SHALL BE TIED TO CONCRETE BOX CULVERT IN ACCORDANCE WITH STANDARD PLAN M-601-20.
- ALL TRANSVERSE REINFORCING SHALL BE NORMAL TO THE CENTERLINE OF THE BOX.
- FILL HEIGHT IS THE DISTANCE MEASURED FROM TOP OF TOP SLAB TO TOP OF PAVEMENT.
- ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED  $\frac{3}{4}$  IN.
- WHEN THE FILL HEIGHT IS LESS THAN OR EQUAL TO 2 FT., THE SPACING OF THE #4 BARS IN THE BOTTOM OF THE TOP SLAB SHALL BE 6 IN. OR LESS. USE THE FOLLOWING EQUATION TO CALCULATE THE ADDITIONAL REINFORCING QUANTITY WHERE  $S$  IS IN FEET:
 
$$\text{ADDED REINFORCING, LBS./LIN. FT.} = \left( \frac{S}{12} - \frac{1}{2} \right) \times 0.668 \times 0.891 S$$
- DESIGN DATA: 16TH EDITION OF THE ASHOTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- SERVICE LOAD DESIGN METHOD:
 

UNIT STRESSES	$f_s = 24,000$ PSI	$f_y = 60,000$ PSI	$f_c = 1,800$ PSI	$f_c = 4,500$ PSI	$n = 5$
---------------	--------------------	--------------------	-------------------	-------------------	---------
- LOADING DATA:
 

LIVE LOAD	ASHTO, HS 20-44 AND ALTERNATE MILITARY LOADING
HEAD LOAD CASE 1: VERTICAL EARTH LOAD	= 120 LBS./CU. FT.
HORIZONTAL EARTH LOAD	= 30 LBS./CU. FT.
HEAD LOAD CASE 2: VERTICAL EARTH LOAD	= 120 LBS./CU. FT.
HORIZONTAL EARTH LOAD	= 30 LBS./CU. FT.
FUTURE HMA OVERLAY	= 45 LBS./SQ. FT. BASED ON 4 IN. THICKNESS
LIVE LOAD SURCHARGE ON EXTERIOR WALLS	= 2 FT. OF EARTH
- IF HEADWALL MOUNT GUARDRAIL IS USED (SEE STANDARD PLAN M-606-1, SHEET 16):
  - ALL REINFORCING STEEL SHALL BE ACCORDING TO THIS BOX CULVERT PLAN.
  - ANY ADDITIONAL STRENGTH LENGTH WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
  - HEADWALL DIMENSION AND CONCRETE QUANTITY SHALL BE ACCORDING TO STANDARD PLAN M-606-1, SHEET 16.
  - POST ANCHORS SHALL BE PROVIDED ACCORDING TO STANDARD PLAN M-606-1, SHEET 16.
  - POST ANCHORS AND CONCRETE FOR HEADWALL MOUNT OF GUARDRAIL WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
  - POST ANCHORS WHEN REQUIRED AND INCASD IN HEADWALL CONCRETE, SHALL CONFORM TO ASTM A 36 OR ASHTO M 169 STEEL.

**Computer File Information**

Creation Date: 07/04/06 Initials: SUR  
 Last Modification Date: 07/04/06 Initials: LTA  
 Full Path: www.dot.state.co.us/DesignSupport/  
 Drawing File Name: 601010202.dwg  
 CAD Ver: MicroStation V8 Scale: Not to Scale Units: English

**Sheet Revisions**

Date:	Comments

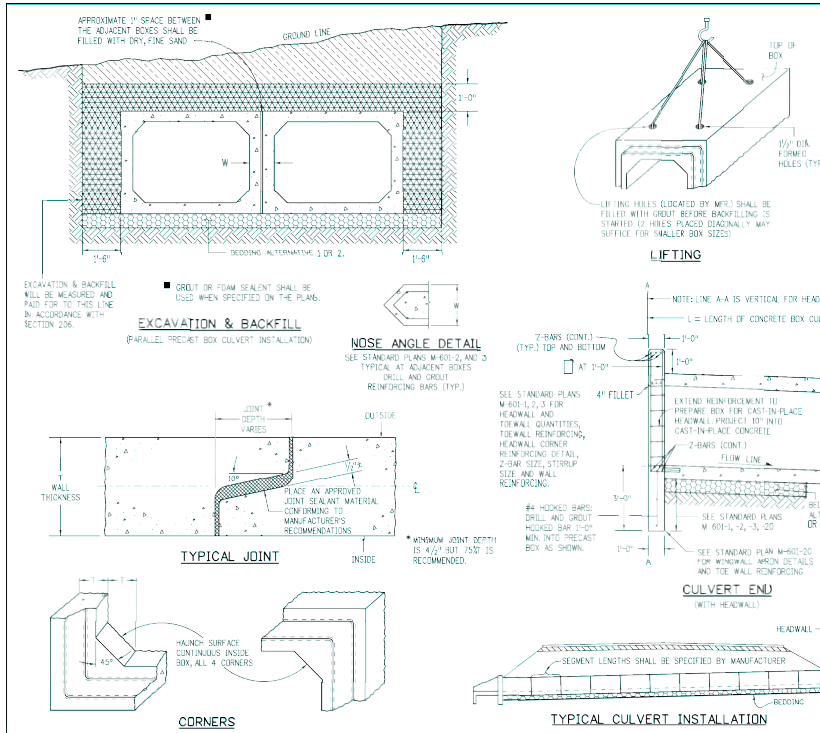
Colorado Department of Transportation  
 4201 East Arkansas Avenue  
 Denver, Colorado 80222  
 Phone: (303) 757-9083  
 Fax: (303) 757-9820  
 Project Development Branch SRJ/LTA

**SINGLE CONCRETE BOX CULVERT**

**STANDARD PLAN NO. M-601-1**

Issued By: Project Development Branch on July 04, 2006

Sheet No. 1 of 2



**Computer File Information**

Creation Date: 07/04/06 Initials: DD  
 Last Modification Date: 07/29/11 Initials: LTA  
 Full Path: www.dot.state.co.us/DesignSupport/  
 Drawing File Name: 603030101.dwg  
 CAD Ver: MicroStation V8 Scale: Not to Scale Units: English

**Sheet Revisions**

Date:	Comments
07/29/09	Changed dimension in typical joint.
07/09/09	Added detail ref. to DN-1.
07/09/09	Added 2 new detail options and added DN-1.
07/29/11	Allowed rubber gaskets.

Colorado Department of Transportation  
 4201 East Arkansas Avenue  
 Denver, Colorado 80222  
 Phone: (303) 757-9083  
 Fax: (303) 757-9820  
 Project Development Branch DD/LTA

**PRECAST CONCRETE BOX CULVERT**

**STANDARD PLAN NO. M-603-3**

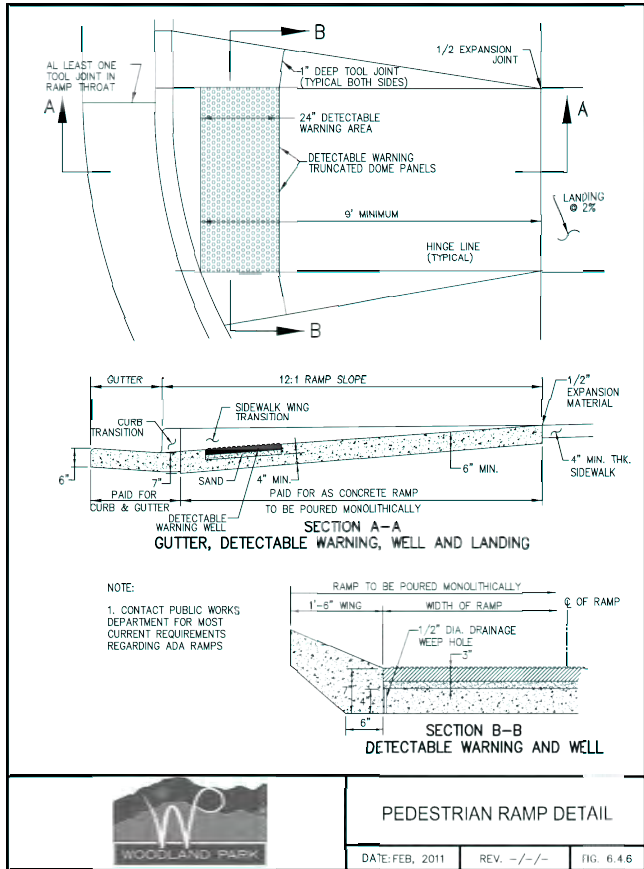
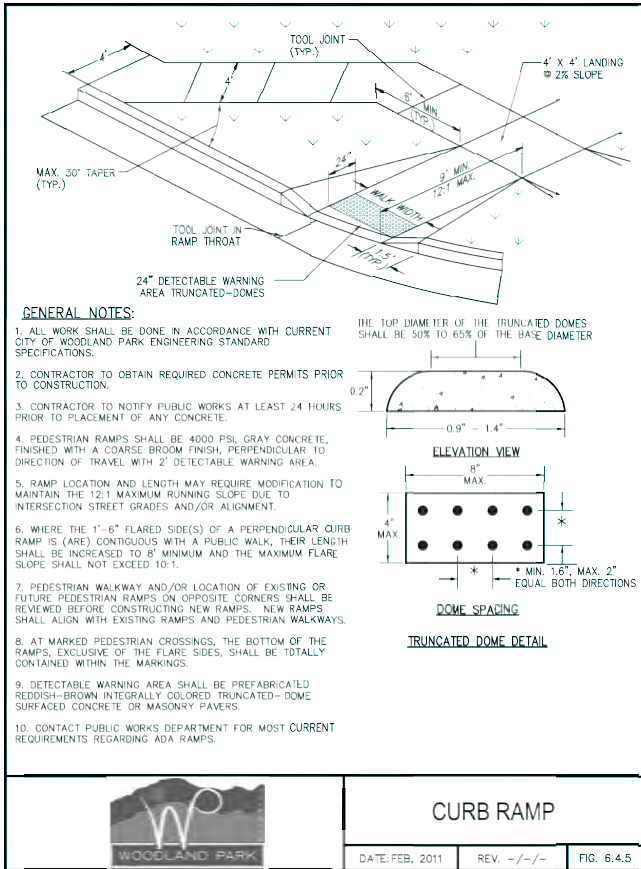
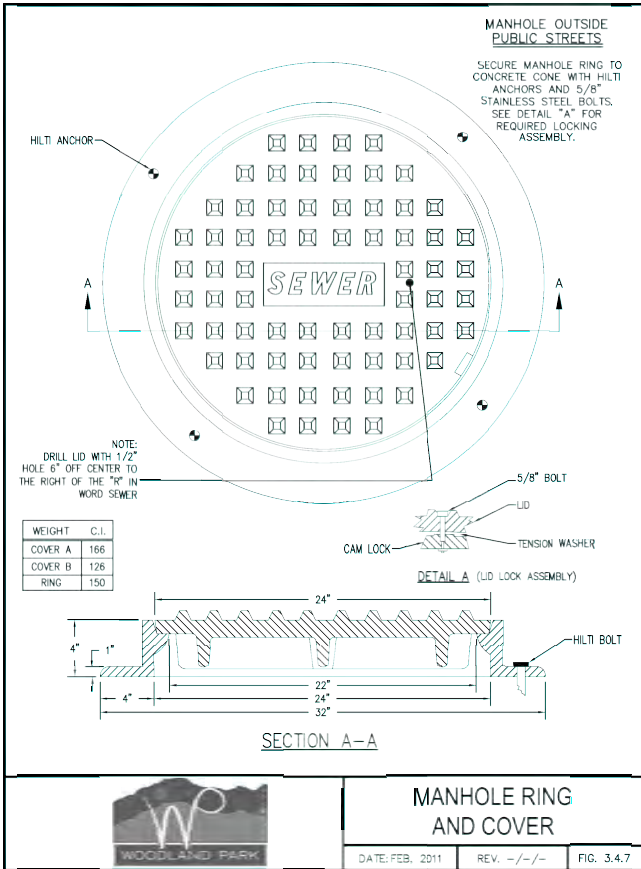
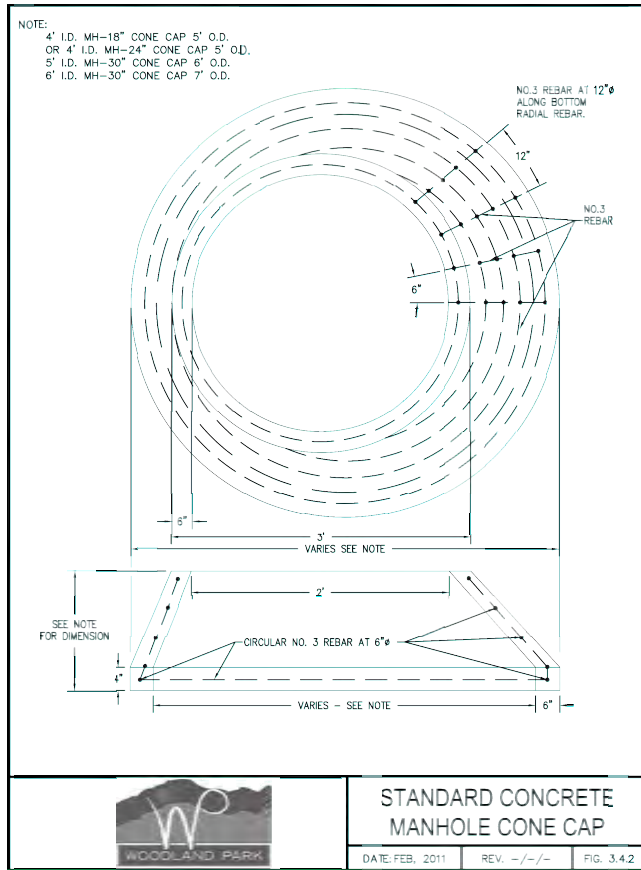
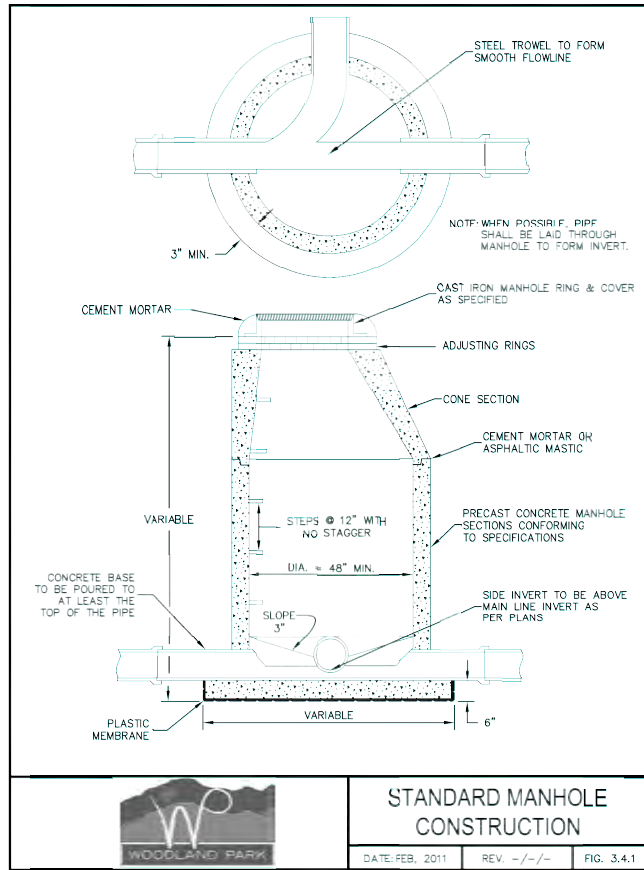
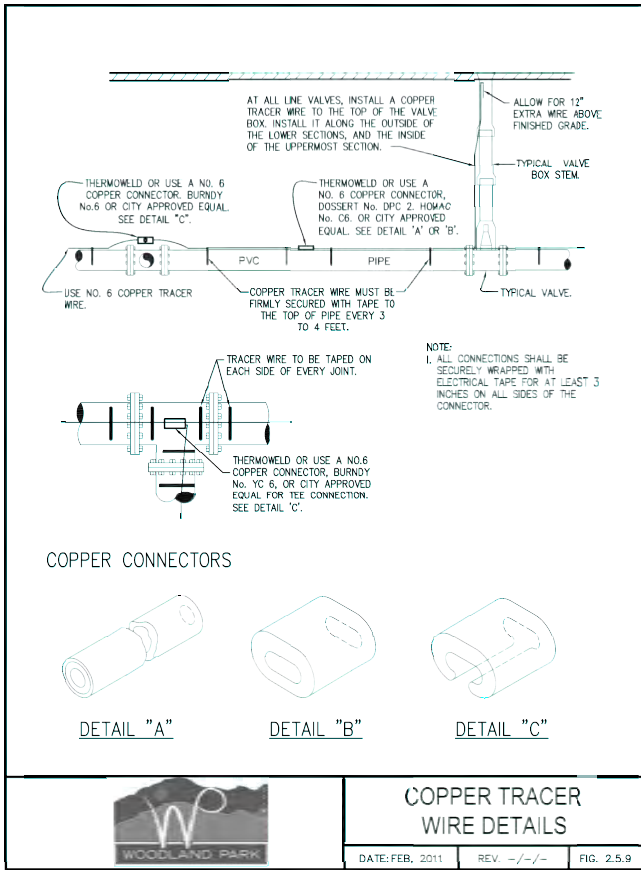
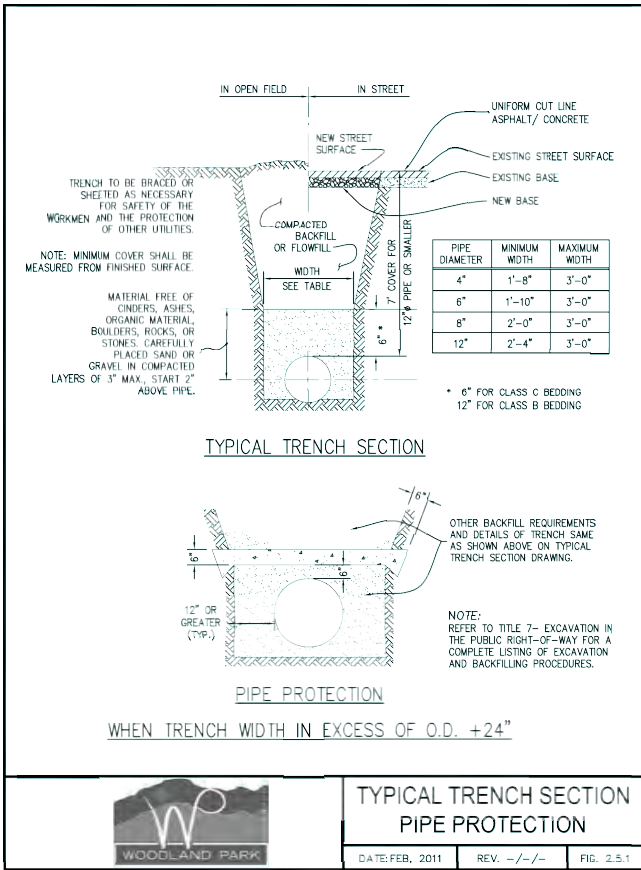
Issued By: Project Development Branch on July 04, 2006

Sheet No. 1 of 1

**SINGLE CONCRETE BOX CULVERT DIMENSIONS & QUANTITIES (EXCLUDING HEADWALLS & TOEWALLS)**

BOX SIZE	SLAB & WALL THICKNESS (INCHES)	BAR SIZES	QUANTITIES
6' x 6'	12"	#4	132
6' x 8'	12"	#4	156
6' x 10'	12"	#4	180
6' x 12'	12"	#4	204
6' x 14'	12"	#4	228
6' x 16'	12"	#4	252
6' x 18'	12"	#4	276
6' x 20'	12"	#4	300
6' x 22'	12"	#4	324
6' x 24'	12"	#4	348
6' x 26'	12"	#4	372
6' x 28'	12"	#4	396
6' x 30'	12"	#4	420
6' x 32'	12"	#4	444
6' x 34'	12"	#4	468
6' x 36'	12"	#4	492
6' x 38'	12"	#4	516
6' x 40'	12"	#4	540
6' x 42'	12"	#4	564
6' x 44'	12"	#4	588
6' x 46'	12"	#4	612
6' x 48'	12"	#4	636
6' x 50'	12"	#4	660
6' x 52'	12"	#4	684
6' x 54'	12"	#4	708
6' x 56'	12"	#4	732
6' x 58'	12"	#4	756
6' x 60'	12"	#4	780
6' x 62'	12"	#4	804
6' x 64'	12"	#4	828
6' x 66'	12"	#4	852
6' x 68'	12"	#4	876
6' x 70'	12"	#4	900
6' x 72'	12"	#4	924
6' x 74'	12"	#4	948
6' x 76'	12"	#4	972
6' x 78'	12"	#4	996
6' x 80'	12"	#4	1020
6' x 82'	12"	#4	1044
6' x 84'	12"	#4	1068
6' x 86'	12"	#4	1092
6' x 88'	12"	#4	1116
6' x 90'	12"	#4	1140
6' x 92'	12"	#4	1164
6' x 94'	12"	#4	1188
6' x 96'	12"	#4	1212
6' x 98'	12"	#4	1236
6' x 100'	12"	#4	1260
6' x 102'	12"	#4	1284
6' x 104'	12"	#4	1308
6' x 106'	12"	#4	1332
6' x 108'	12"	#4	1356
6' x 110'	12"	#4	1380
6' x 112'	12"	#4	1404
6' x 114'	12"	#4	1428
6' x 116'	12"	#4	1452
6' x 118'	12"	#4	1476
6' x 120'	12"	#4	1500
6' x 122'	12"	#4	1524
6' x 124'	12"	#4	1548
6' x 126'	12"	#4	1572
6' x 128'	12"	#4	1596
6' x 130'	12"	#4	1620
6' x 132'	12"	#4	1644
6' x 134'	12"	#4	1668
6' x 136'	12"	#4	1692
6' x 138'	12"	#4	1716
6' x 140'	12"	#4	1740
6' x 142'	12"	#4	1764
6' x 144'	12"	#4	1788
6' x 146'	12"	#4	1812
6' x 148'	12"	#4	1836
6' x 150'	12"	#4	1860
6' x 152'	12"	#4	1884
6' x 154'	12"	#4	1908
6' x 156'	12"	#4	1932
6' x 158'	12"	#4	1956
6' x 160'	12"	#4	1980
6' x 162'	12"	#4	2004
6' x 164'	12"	#4	2028
6' x 166'	12"	#4	2052
6' x 168'	12"	#4	2076
6' x 170'	12"	#4	2100
6' x 172'	12"	#4	2124
6' x 174'	12"	#4	2148
6' x 176'	12"	#4	2172
6' x 178'	12"	#4	2196
6' x 180'	12"	#4	2220
6' x 182'	12"	#4	2244
6' x 184'	12"	#4	2268
6' x 186'	12"	#4	2292
6' x 188'	12"	#4	2316
6' x 190'	12"	#4	2340
6' x 192'	12"	#4	2364
6' x 194'	12"	#4	2388
6' x 196'	12"	#4	2412
6' x 198'	12"	#4	2436
6' x 200'	12"	#4	2460
6' x 202'	12"	#4	2484
6' x 204'	12"	#4	2508
6' x 206'	12"	#4	2532
6' x 208'	12"	#4	2556
6' x 210'	12"	#4	2580
6' x 212'	12"	#4	2604
6' x 214'	12"	#4	2628
6' x 216'	12"	#4	2652
6' x 218'	12"	#4	2676
6' x 220'	12"	#4	2700
6' x 222'	12"	#4	2724
6' x 224'	12"	#4	2748
6' x 226'	12"	#4	2772
6' x 228'	12"	#4	2796
6' x 230'	12"	#4	2820
6' x 232'	12"	#4	2844
6' x 234'	12"	#4	2868
6' x 236'	12"	#4	2892
6' x 238'	12"	#4	2916
6' x 240'	12"	#4	2940
6' x 242'	12"	#4	2964
6' x 244'	12"	#4	2988
6' x 246'	12"	#4	3012
6' x 248'	12"	#4	3036
6' x 250'	12"	#4	3060
6' x 252'	12"	#4	3084
6' x 254'	12"	#4	3108
6' x 256'	12"	#4	3132
6' x 258'	12"	#4	3156
6' x 260'	12"	#4	3180
6' x 262'	12"	#4	3204
6' x 264'	12"	#4	3228
6' x 266'	12"	#4	3252
6' x 268'	12"	#4	3276
6' x 270'	12"	#4	3300
6' x 272'	12"	#4	3324
6' x 274'	12"	#4	3348
6' x 276'	12"	#4	3372
6' x 278'	12"	#4	3396
6' x 280'	12"	#4	3420
6' x 282'	12"	#4	3444
6' x 284'	12"	#4	3468
6' x 286'	12"	#4	3492
6' x 288'	12"	#4	3516
6' x 290'	12"	#4	3540
6' x 292'	12"	#4	3564
6' x 294'	12"	#4	3588
6' x 296'	12"	#4	3612
6' x 298'	12"	#4	3636
6' x 300'	12"	#4	3660
6' x 302'	12"	#4	3684
6' x 304'	12"	#4	3708
6' x 306'	12"	#4	3732
6' x 308'	12"	#4	3756
6' x 310'	12"	#4	3780
6' x 312'	12"	#4	3804
6' x 314'	12"	#4	3828
6' x 316'	12"	#4	3852
6' x 318'	12"	#4	3876
6' x 320'	12"	#4	3900
6' x 322'	12"	#4	3924
6' x 324'	12"	#4	3948
6' x 326'	12"	#4	3972
6' x 328'	12"	#4	3996
6' x 330'	12"	#4	4020
6' x 332'	12"	#4	4044
6' x 334'	12"	#4	4068
6' x 336'	12"	#4	4092
6' x 338'	12"	#4	4116
6' x 340'	12"	#4	4140
6' x 342'	12"	#4	4164
6' x 344'	12"	#4	4188
6' x 346'	12"	#4	4212
6' x 348'	12"	#4	4236
6' x 350'	12"	#4	4260
6' x 352'	12"	#4	4284
6' x 354'	12"	#4	4308
6' x 356'	12"	#4	4332
6' x 358'	12"	#4	4356
6' x 360'	12"	#4	4380
6' x 362'	12"	#4	4404
6' x 364'	12"	#4	4428
6' x 366'	12"	#4	4452
6' x 368'	12"	#4	4476
6' x 370'	12"	#4	4500
6' x 372'	12"	#4	4524
6' x 374'	12"	#4	4548
6' x 376'	12"	#4	4572
6' x 378'	12"	#4	4596
6' x 380'	12"	#4	4620
6' x 382'	12"	#4	4644
6' x 384'	12"	#4	4668
6' x 386'	12"	#4	4692
6' x 388'	12"	#4	4716
6' x 390'	12"	#4	4740
6' x 392'	12"	#4	4764
6' x 394'	12"	#4	4788
6' x 396'	12"	#4	4812
6' x 398'	12"	#4	4836
6' x 400'	12"	#4	4860
6' x 402'	12"	#4	4884
6' x 404'	12"	#4	4908
6' x 406'	12"	#4	4932
6' x 408'	12"	#4	4956
6' x 410'	12"	#4	4980
6' x 412'	12"	#4	5004
6' x 414'	12"	#4	5028
6' x 416'	12"	#4	5052
6' x 418'	12"	#4	





PREPARED FOR CONSTRUCTION UNDER MY DIRECT SUPERVISION:

(AFFIX SEAL, EXPIRATION DATE AND PE SIGNATURE) \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED FOR CONSTRUCTION  
CITY ENGINEER OR APPOINTED REPRESENTATIVE  
..... DATE \_\_\_\_\_

\*AS-BUILT\* CERTIFIED BY: \_\_\_\_\_ DATE \_\_\_\_\_

(AFFIX SEAL, EXPIRATION DATE AND PE SIGNATURE) \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED FOR \*AS-BUILT\* RECORD  
CITY ENGINEER OR APPOINTED REPRESENTATIVE  
..... DATE \_\_\_\_\_

90% SUBMITTAL  
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	APP

DESIGN BY:  
RTS  
DRAWN BY:  
MDH  
DATE:  
01-11-2013

MATTHEW D. HICKOX, EI  
PROJECT ENGINEER  
RICHARD T. SMITH, PE  
PROJECT MANAGER  
35409  
PE NO.

AVRES  
ASSOCIATES

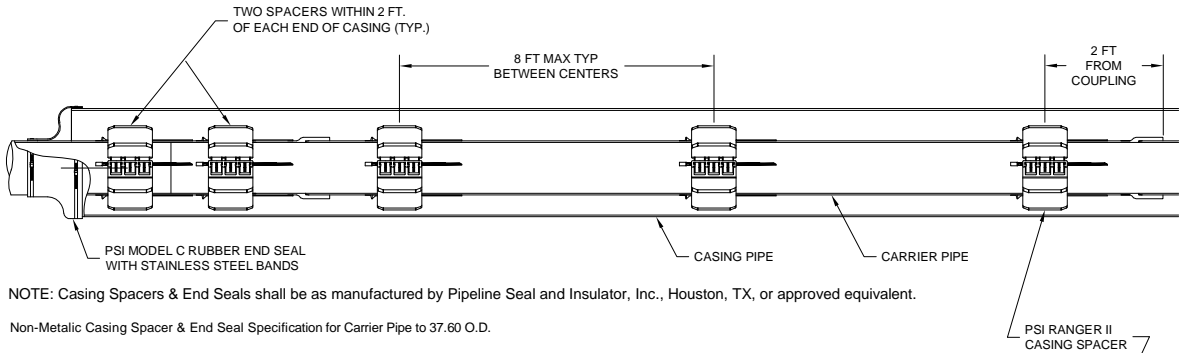
12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.938.8874 PHONE  
303.938.8211 FAX

ELEVATE!  
WOODLAND PARK  
CITY ENGINEER, PE, 00000000  
220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

FOUNTAIN CREEK STABILIZATION & EROSION CONTROL PROJECT  
CITY OF WOODLAND PARK  
STANDARD DETAILS

DRAWING NO.  
C-801  
PROJECT NO.  
35-0200.00  
FILE NO.  
STANDARD DETAILS.dwg  
SHEET  
20  
OF 31 SHEETS

CASING SPACER DETAIL



NOTE: Casing Spacers & End Seals shall be as manufactured by Pipeline Seal and Insulator, Inc., Houston, TX, or approved equivalent.

Non-Metallic Casing Spacer & End Seal Specification for Carrier Pipe to 37.60 O.D.

A. Casing Spacers

Upon completion of the installation of the steel pipe encasement, the contractor shall furnish and install a Ranger II® bollless casing spacer on the carrier pipe as described below. Casing spacers shall be spaced a maximum of eight (8) feet apart along the length of the carrier pipe with one casing spacer within two (2) feet of each side of a pipe joint and the rest evenly spaced. Wood skids are not an acceptable method of supporting the carrier pipe.

1. Casing spacers shall be all non-metallic (polypropylene), molded in segments for field assembly without any special tools. Spacer segments shall be secured around carrier pipe by insertion of a Slide-Lock. The casing spacer polymer shall contain ultraviolet inhibitors and shall have a minimum compressive strength of 3,000 psi, an 800 Volts/ml dielectric strength and impact strength of 1.5 ft-lbs./inch. Each casing spacer shall have full length, integrally molded skids extending beyond the bell or mechanical joint of the carrier pipe. Casing Spacers shall be specified to "Clear Bell Only" or "Centered/Restrained".

2. Spacers shall be at least as wide as listed below.

Carrier Pipe Diameter Inches	Ranger II Model	Length Inches (mm)
0.83 to 3.07"	Micro	2.13" (54)
2.48 to 5.51"	Mini	3.15" (80)
5.51 to 16.65"	Midi	5.12" (130)
16.77 to 25.98"	Medi	6.87" (175)
21.22 to 37.60"	Maxi	8.86" (225)

3. The casing spacers shall be the PSI Ranger II® Casing Spacers as manufactured by Pipeline Seal and Insulator, Inc., Houston, Texas.

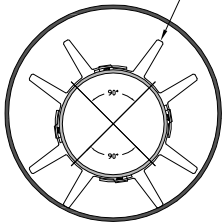
B. End Seals

After insertion of the carrier pipe into the casing, the ends of the casing shall be closed by installing 1/8" thick synthetic rubber end seals equal to the PSI Model "C" end seal as manufactured by Pipeline Seal and Insulator, Inc., Houston, Texas.

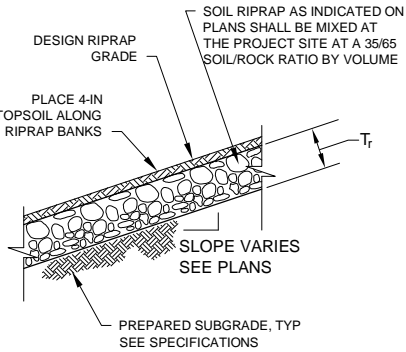
ISO 9000 Registration

Each casing spacer and end seal shall be manufactured at a facility that has a Registered ISO 9001:2000 Quality Management System. Copy of current ISO 9001:2000 Registration shall be provided with material submittal.

END VIEW



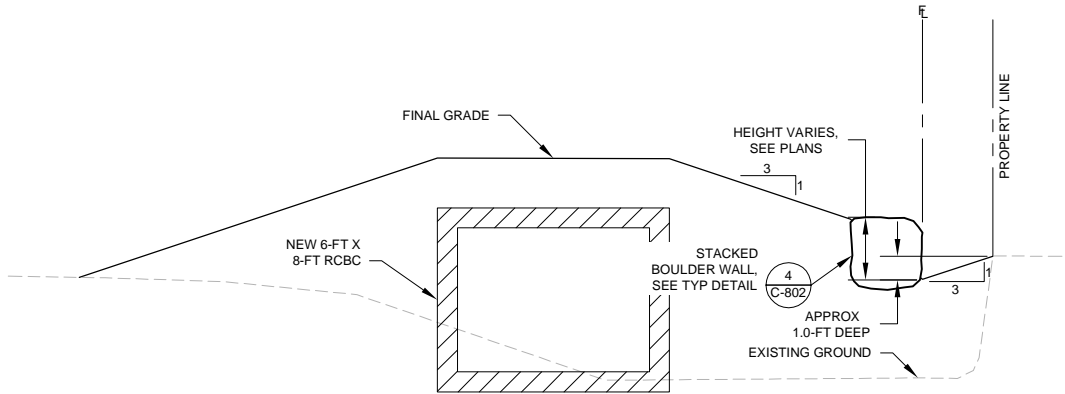
1 CASING SPACER DETAIL  
C-802 SCALE: NTS



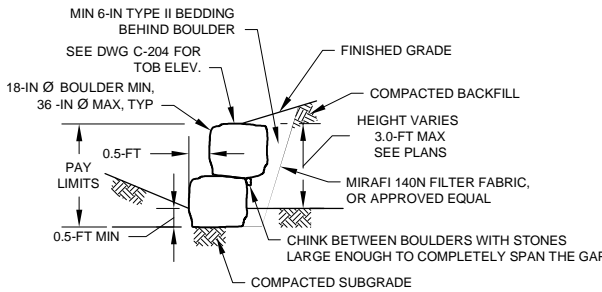
1. RIPRAP AND BURIED RIPRAP ARE APPLICABLE TO FLAT OR SLOPED AREAS. REFER TO THE GRADING PLAN FOR ACTUAL LOCATION AND LIMITS.
2. REFER TO SPECIFICATIONS FOR MATERIALS AND PLACEMENT REQUIREMENTS FOR RIPRAP AND GRANULAR BEDDING MATERIAL.
3. GENERAL PLACEMENT TECHNIQUES SHOULD RESULT IN LARGER ROCK AT THE SURFACE AND ROCK SECURELY INTERLOCKED AT THE DESIGN THICKNESS AND GRADE. COMPACTION AND LEVELING SHOULD RESULT IN MINIMAL VOIDS AND PROJECTIONS ABOVE GRADE. TYPICAL FOR BOTH RIPRAP AND BURIED RIPRAP.
4. FILL MATERIAL FOR VOIDS SHALL BE TOPSOIL FOR SOIL RIPRAP. FILL VOIDS WITH SOIL AND COMPACT WITH WATER.
5. ELIMINATE GRANULAR BEDDING WHEN SOIL RIPRAP IS USED

RIPRAP THICKNESS TABLE		
RIPRAP TYPE	T <sub>r</sub>	T
TYPE H SOIL RIPRAP	3-FT	N/A

2 TYPICAL RIPRAP PLACEMENT  
C-802 SCALE: NTS

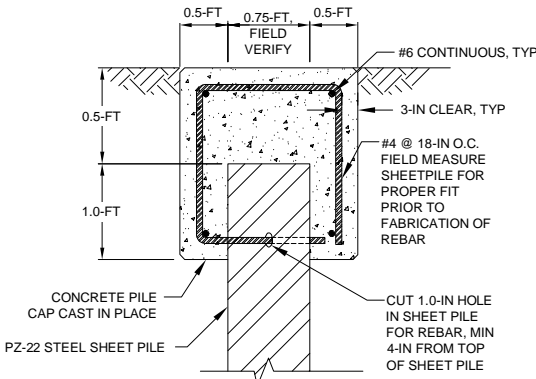


3 TYPICAL STACKED BOULDER WALL SECTION - BASIN 1 LOCAL DRAINAGE  
C-802 SCALE: NTS

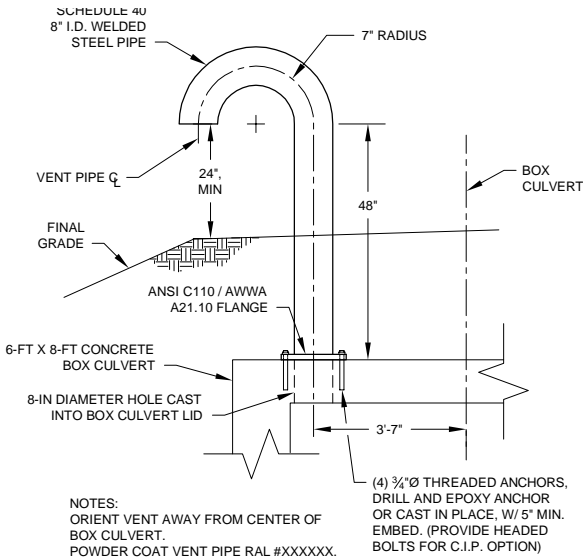


- NOTES:
1. BOULDERS SHALL BE STACKED IN A STABLE AND SAFE FASHION.
  2. CONTRACTOR SHALL REUSE SALVAGED BOULDERS FROM DOWNSTREAM OF EXISTING CULVERT UNDER SHERIDAN AVE. BOULDERS SHALL BE PLACED TO MINIMIZE THE APPEARANCE OF GROUT REMAINING ON THE BOULDERS. THE OWNER, OR OWNER'S REPRESENTATIVE, RESERVES THE RIGHT TO REJECT ANY BOULDER PLACED FOR THE APPEARANCE OF TOO MUCH GROUT.

4 STACKED BOULDER RETAINING WALL  
C-802 SCALE: NTS

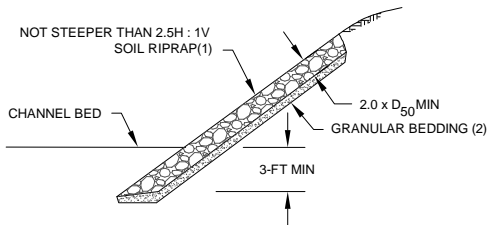


5 CONCRETE SHEET PILE CAP DETAIL  
C-802 SCALE: NTS



- NOTES:
1. ORIENT VENT AWAY FROM CENTER OF BOX CULVERT.
  2. POWDER COAT VENT PIPE RAL #XXXXXX.
  3. (4) 3/4" Ø THREADED ANCHORS, DRILL AND EPOXY ANCHOR OR CAST IN PLACE, W/ 5" MIN. EMBED. (PROVIDE HEADED BOLTS FOR C.I.P. OPTION)

6 BOX CULVERT VENT PIPE DETAIL  
C-802 SCALE: NTS



- (1) SEE PLANS FOR LOCATIONS OF RIPRAP OR SOIL RIPRAP.  
(2) ELIMINATE GRANULAR BEDDING WHEN SOIL RIPRAP IS USED.

7 RIPRAP CHANNEL BANK LINING AND TOE PROTECTION DETAIL  
SCALE: NTS

90% SUBMITTAL  
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	APP

DESIGN BY:	RTS
DRAWN BY:	MDH
DATE:	01-11-2013

PROJECT ENGINEER	MATTHEW D. HICKOX, EI
PROJECT MANAGER	RICHARD T. SMITH, PE
FE NO.	35409

**AVRES ASSOCIATES**

12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.938.8874 PHONE  
303.938.8211 FAX

**WOODLAND PARK**

220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

**FOUNTAIN CREEK STABILIZATION & EROSION CONTROL PROJECT**

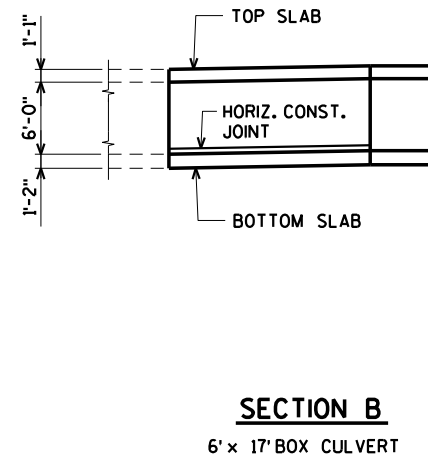
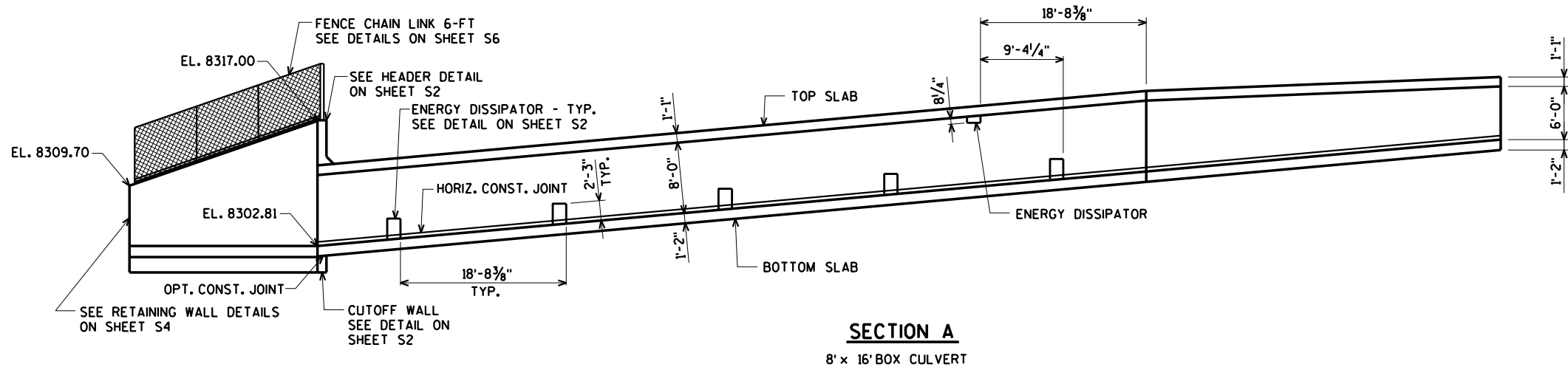
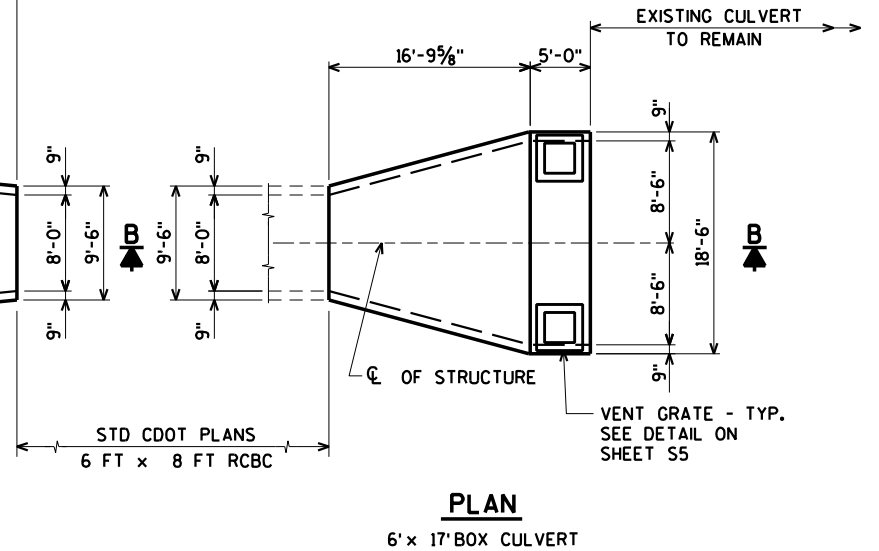
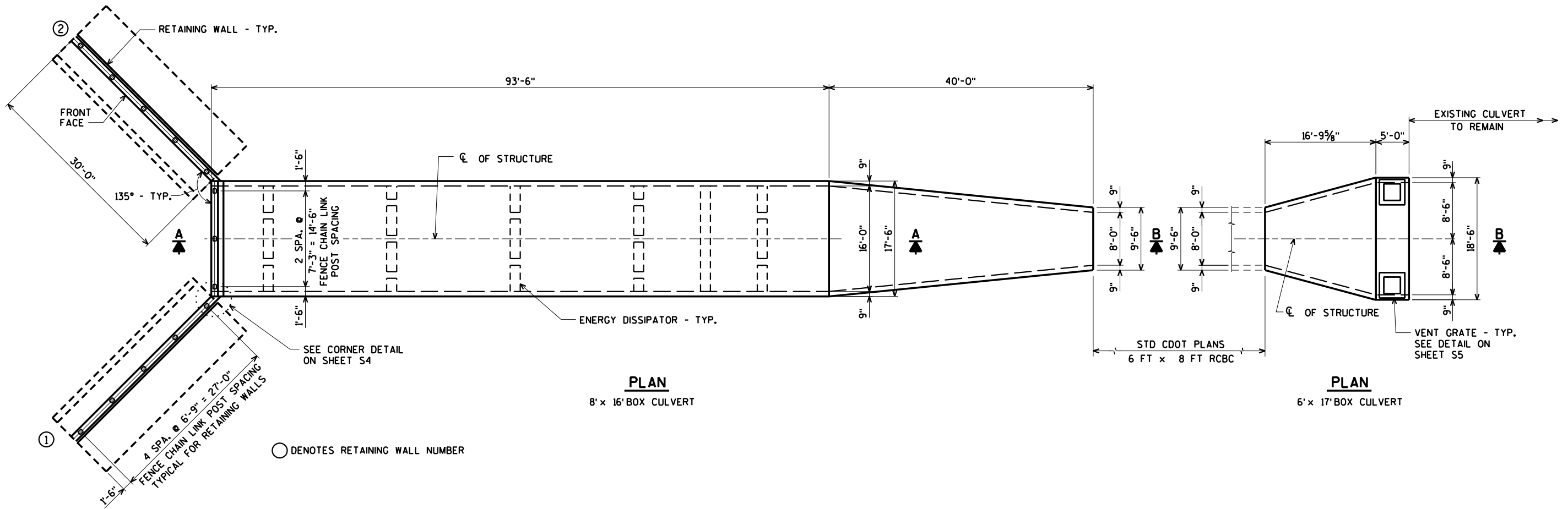
**CIVIL DETAILS**

DRAWING NO. **C-802** SHEET **21**

PROJECT NO. 35-0200.00 OF 31 SHEETS

FILE NO. **DRAINAGE TRAIL & FENCE.dwg**

9/11/2012 5:09 AM C:\USERS\HICKOAM\DESKTOP\WORK\DRIVE\_L\_P\350200.00 FOUNTAIN CREEK CHANNEL IMPROVEMENTS\DESIGN\DWG\FOUNTAIN CREEK\EXTERNAL REFERENCES\DWG\22X34 TITLEBLOCK.DWG



PREPARED FOR CONSTRUCTION UNDER MY DIRECT SUPERVISION:	
(AFFIX SEAL, EXPIRATION DATE AND PE SIGNATURE)	DATE
APPROVED FOR CONSTRUCTION	
CITY ENGINEER OR APPOINTED REPRESENTATIVE	DATE
"AS-BUILT" CERTIFIED BY:	
(AFFIX SEAL, EXPIRATION DATE AND PE SIGNATURE)	DATE
APPROVED FOR "AS-BUILT" RECORD	
CITY ENGINEER OR APPOINTED REPRESENTATIVE	DATE

90% SUBMITTAL  
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	APP

DESIGN BY:	CBM
DRAWN BY:	CLS
DATE:	03-18-2013

PROJECT ENGINEER	CHRISTOPHER B McMAHON, PE	42329
PROJECT MANAGER	RICHARD T. SMITH, PE	35409

**AYRES**  
**ASSOCIATES**

12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.938.8874 PHONE  
303.938.8211 FAX

220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

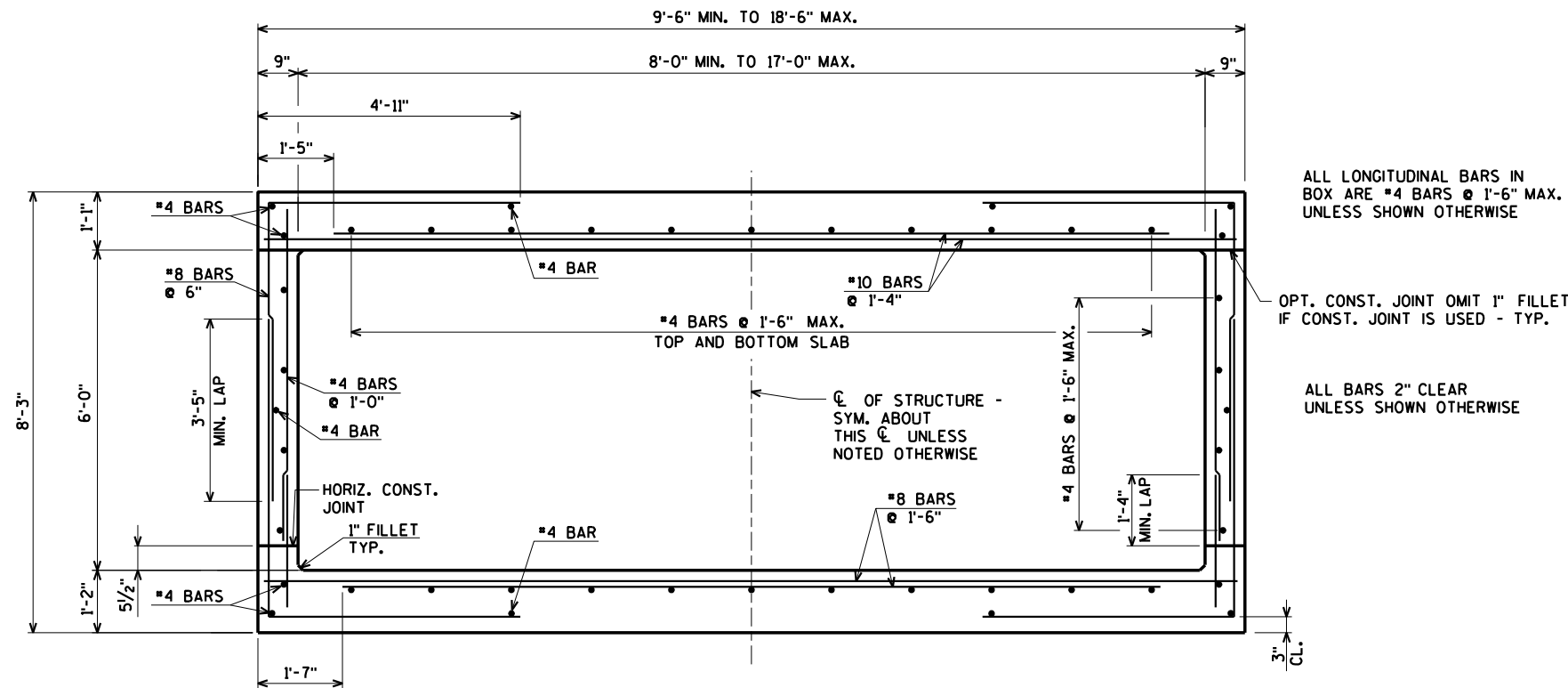
FOUNTAIN CREEK STABILIZATION & EROSION CONTROL PROJECT  
PROJECT LAYOUT DETAILS

DRAWING NO.	SHEET
PROJECT NO.	S1
FILE NO.	35-0200.00

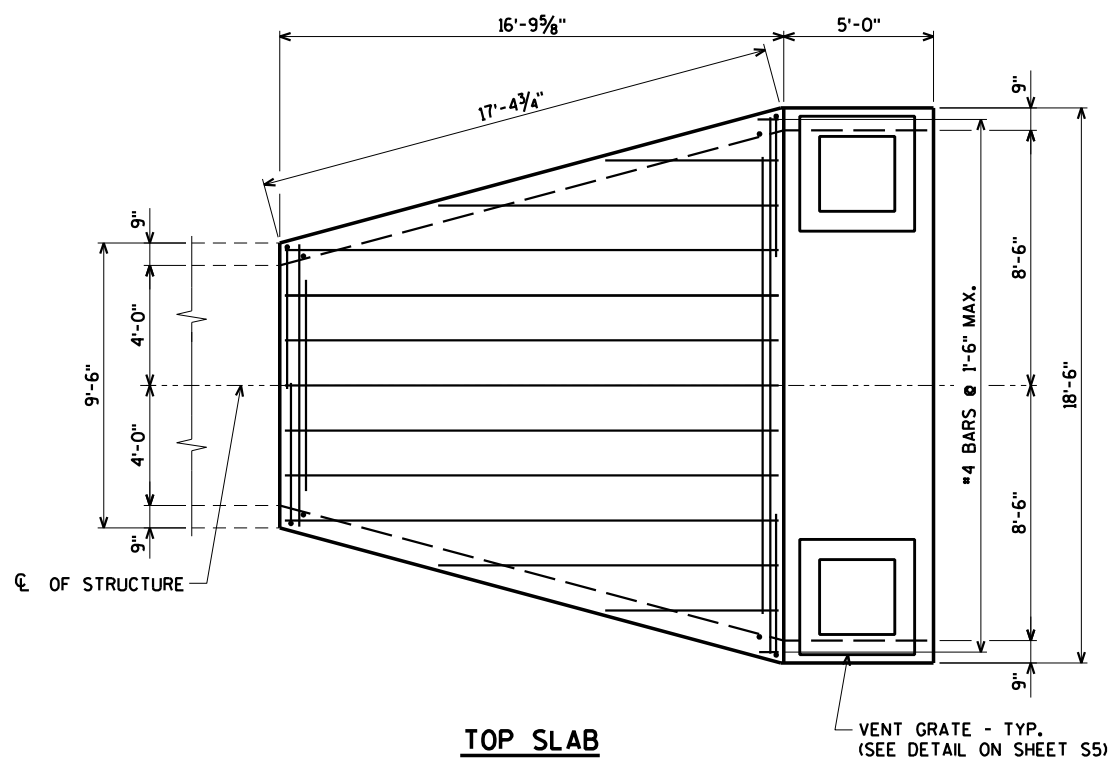




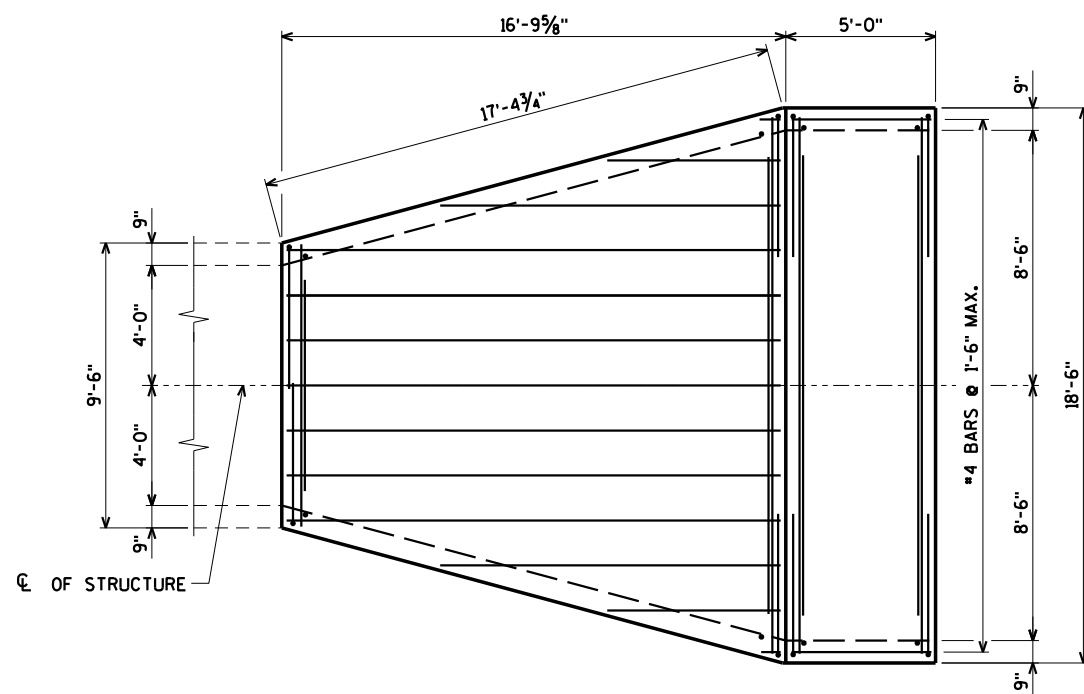
9/11/2012 5:09 AM C:\USERS\HICKOM\DESKTOP\WORK\DRIVE\_L\_P\350200\00 FOUNTAIN CREEK CHANNEL IMPROVEMENTS\DESIGN\DWG\FOUNTAIN CREEK\EXTERNAL REFERENCES\DWG\22\34 TITLEBLOCK.DWG



**TYPICAL SECTION THRU BOX**  
6' x 17' BOX CULVERT



**TOP SLAB**



**BOTTOM SLAB**

**90% SUBMITTAL**  
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	APP

DESIGN BY:	CBM
DRAWN BY:	CLS
DATE:	03-18-2013

PROJECT ENGINEER	CHRISTOPHER B McMAHON, PE	42329
PROJECT MANAGER	RICHARD T. SMITH, PE	35409

**AYRES ASSOCIATES**  
12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.938.8874 PHONE  
303.938.8211 FAX

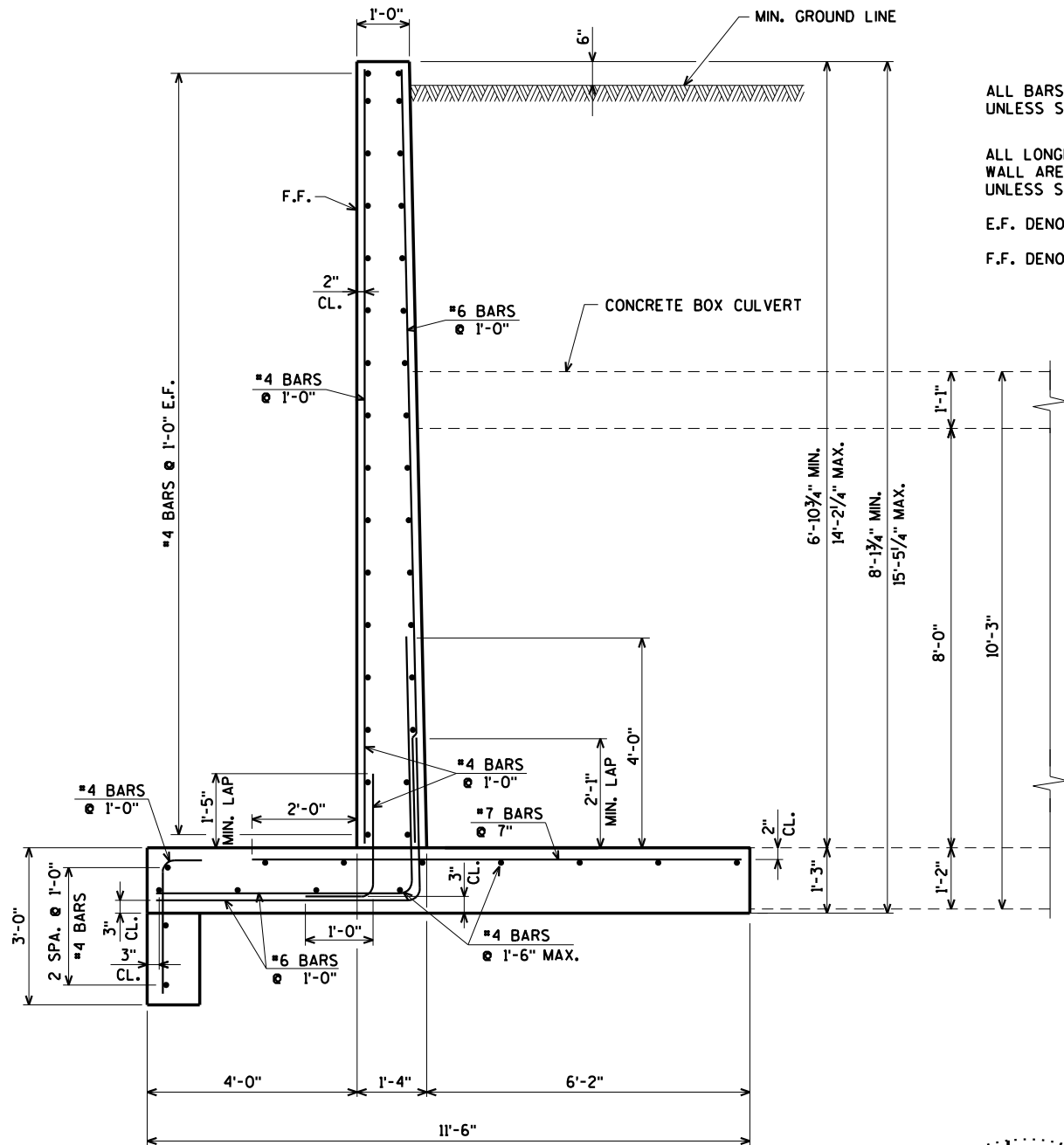
220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

FOUNTAIN CREEK STABILIZATION & EROSION CONTROL PROJECT
6 x 17 CULVERT EXTENSION

DRAWING NO.	SHEET
PROJECT NO.	S3
FILE NO.	35-0200.00



9/11/2012 5:09 AM C:\USERS\HICKAM\DESKTOP\WORK\DRIVE\_P\350200.00 FOUNTAIN CREEK CHANNEL IMPROVEMENTS\DESIGN\DWG\FOUNTAIN CREEK\EXTERNAL REFERENCES\DWG\22X34 TITLEBLOCK.DWG



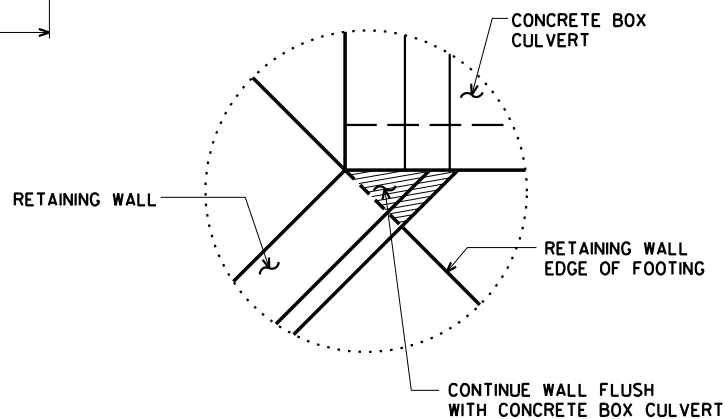
TYP. SECTION THRU RETAINING WALL

ALL BARS 2" CLEAR  
UNLESS SHOWN OTHERWISE

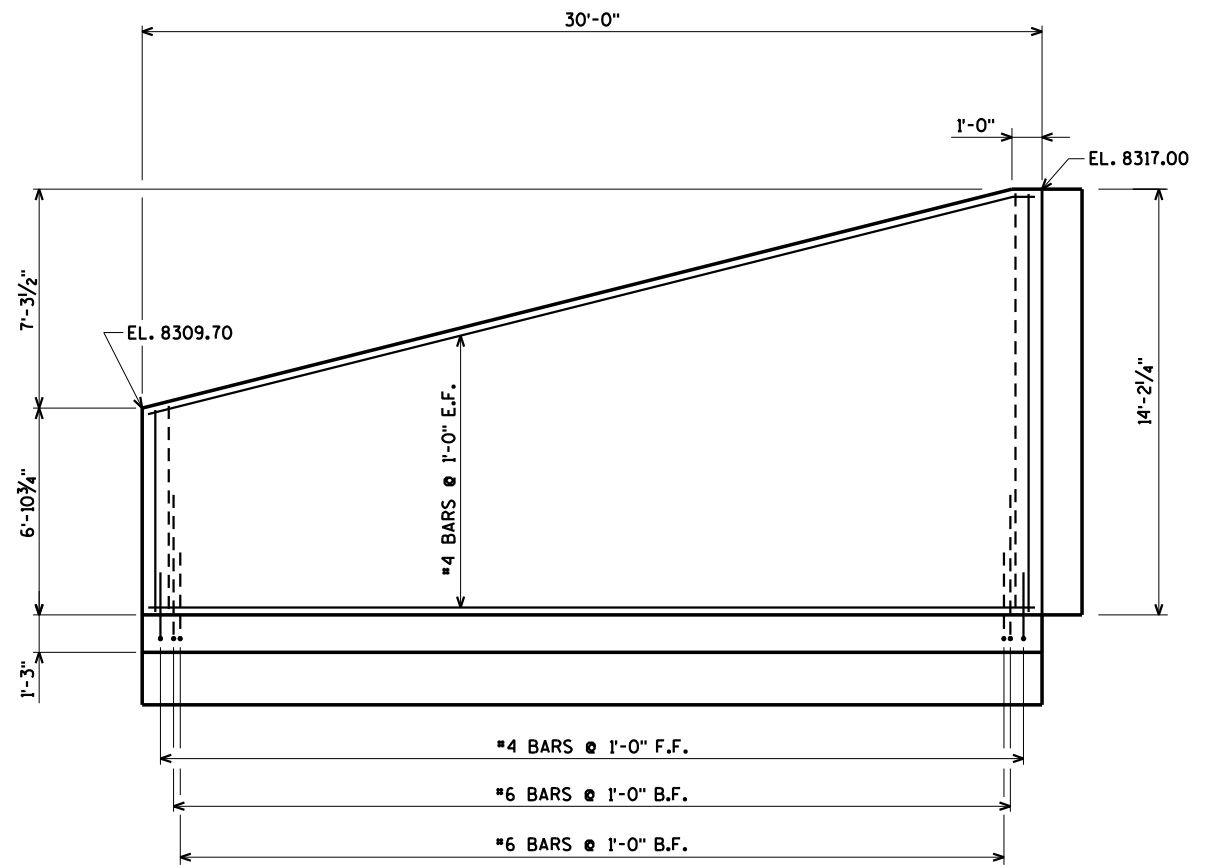
ALL LONGITUDINAL BARS IN  
WALL ARE #4 BARS @ 1'-0" MAX.  
UNLESS SHOWN OTHERWISE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

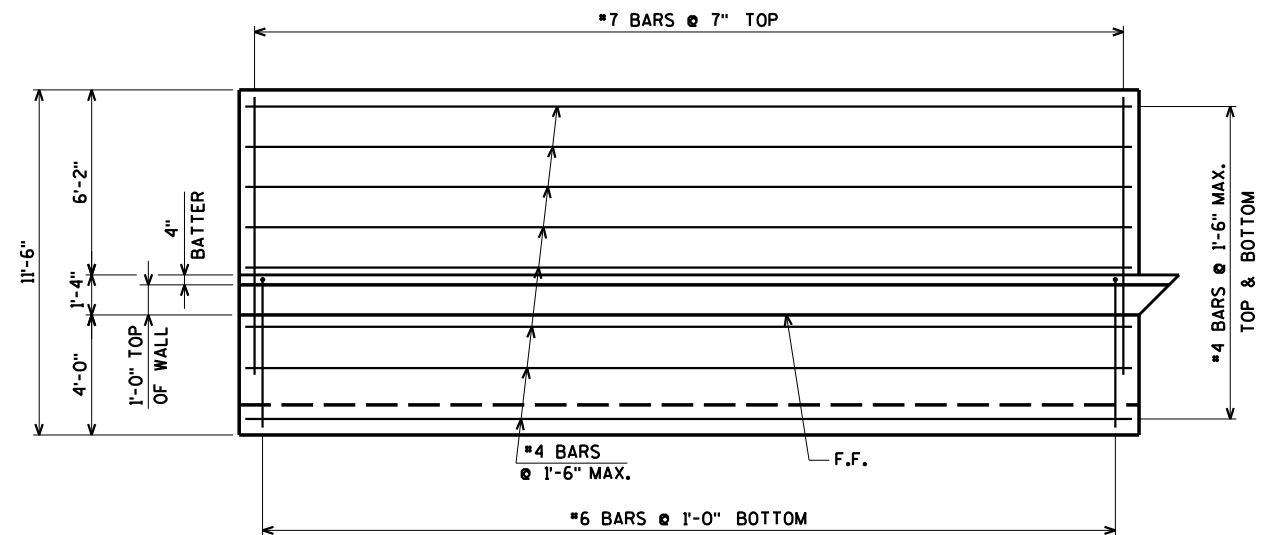


CORNER DETAIL



ELEVATION

(RETAINING WALL 1 SHOWN, RETAINING WALL 2 SIMILAR)



PLAN

(RETAINING WALL 1 SHOWN, RETAINING WALL 2 SIMILAR)

90% SUBMITTAL  
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	APP

DESIGN BY:	CBM
DRAWN BY:	CLS
DATE:	03-18-2013

CHRISTOPHER B McMAHON, PE	42329
PROJECT ENGINEER	PE NO.
RICHARD T. SMITH, PE	35409
PROJECT MANAGER	PE NO.

**AYRES**  
**ASSOCIATES**

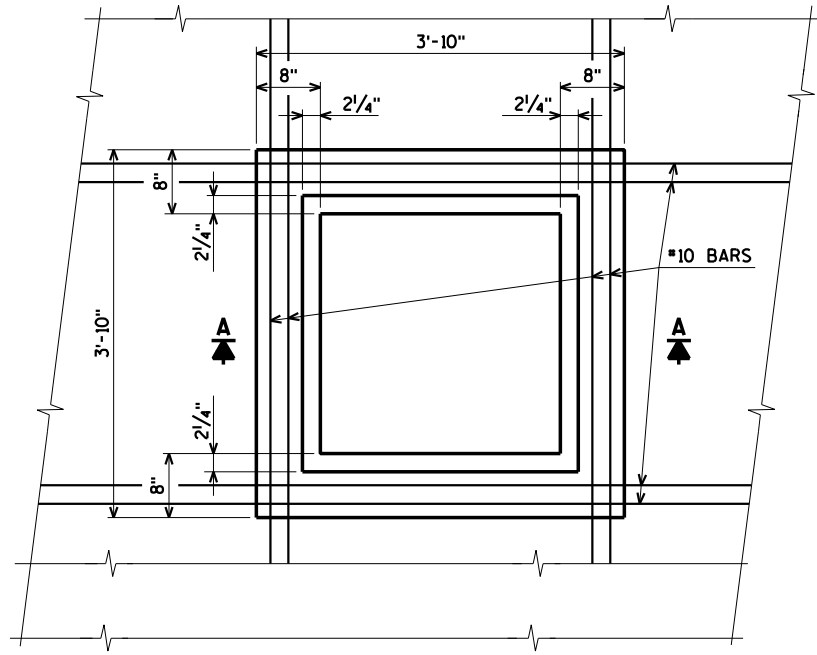
12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.938.8874 PHONE  
303.938.8211 FAX

220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

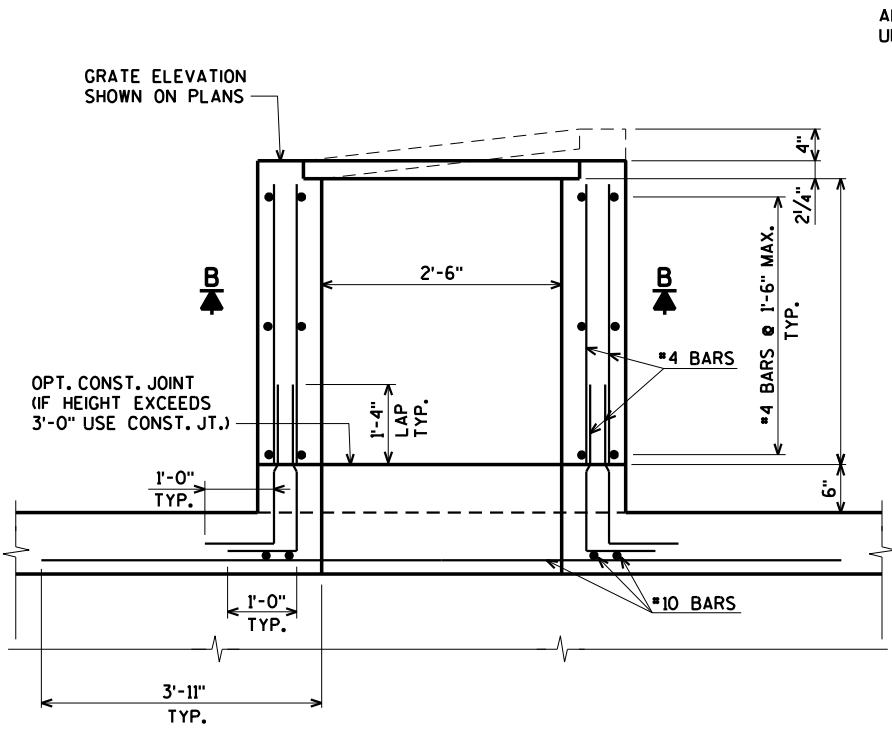
FOUNTAIN CREEK STABILIZATION & EROSION CONTROL PROJECT
RETAINING WALL DETAILS

DRAWING NO.	
PROJECT NO.	35-0200.00
FILE NO.	

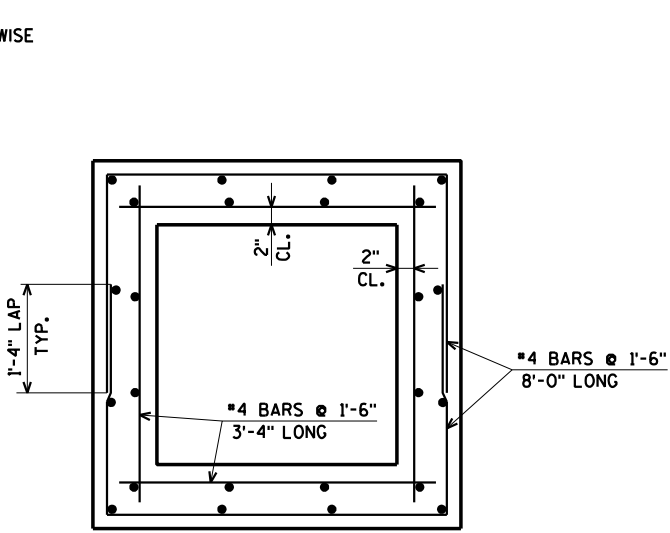
SHEET	S4
OF SHEETS	



PLAN



SECTION A



SECTION B

ALL BARS 2" CLEAR  
UNLESS SHOWN OTHERWISE

9/11/2012 5:09 AM C:\USERS\HICKAM\DESKTOP\WORK\DRIVE\_L\_P\350200.00 FOUNTAIN CREEK CHANNEL IMPROVEMENTS\DESIGN\DWG\FOUNTAIN CREEK\EXTERNAL REFERENCES\DWG\22\34 TITLE BLOCK.DWG

90% SUBMITTAL  
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	APP

DESIGN BY:	CBM
DRAWN BY:	CLS
DATE:	03-18-2013

CHRISTOPHER B McMAHON, PE	42329
PROJECT ENGINEER	PE NO.
RICHARD T. SMITH, PE	35409
PROJECT MANAGER	PE NO.

**AYRES**  
**ASSOCIATES**

12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.938.8874 PHONE  
303.938.8211 FAX

220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

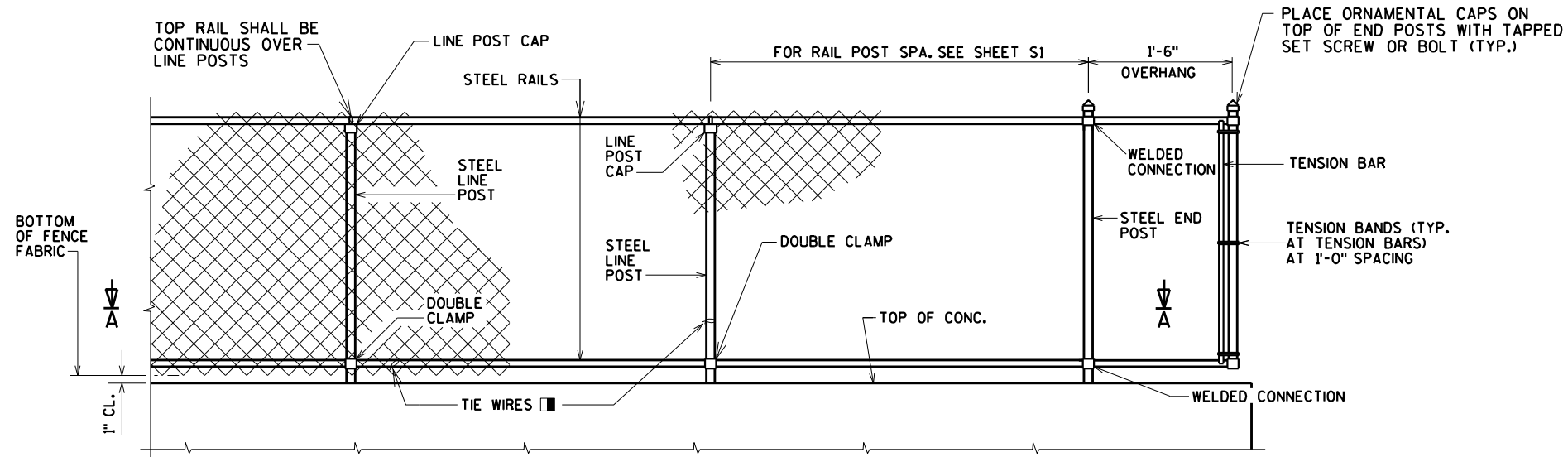
FOUNTAIN CREEK STABILIZATION & EROSION CONTROL PROJECT
GRATE ACCESS DETAILS

DRAWING NO.	
PROJECT NO.	35-0200.00
FILE NO.	

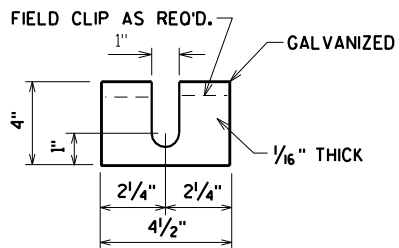
SHEET	S5
OF SHEETS	



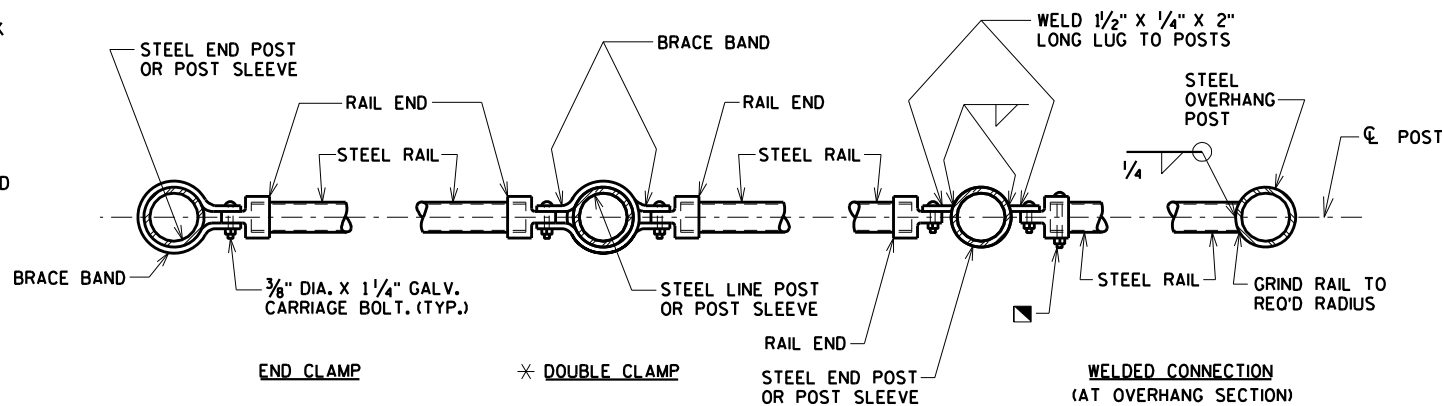
STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



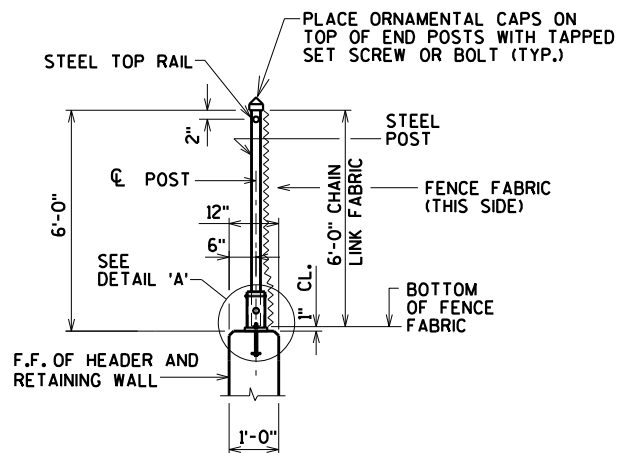
## VIEWING FABRIC SIDE



SHIMS REQUIRED ONLY WHEN END POSTS AND  
LINE POSTS ARE WELDED TO BASE PLATES.  
PROVIDE 4 SHIMS PER POST. USE WHERE  
REQUIRED FOR ALIGNMENT.



NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE  
ADJACENT TO BACK OF RETAINING WALLS AND HEADER.



The image contains two technical drawings of fence posts, labeled 'A' and 'B'.

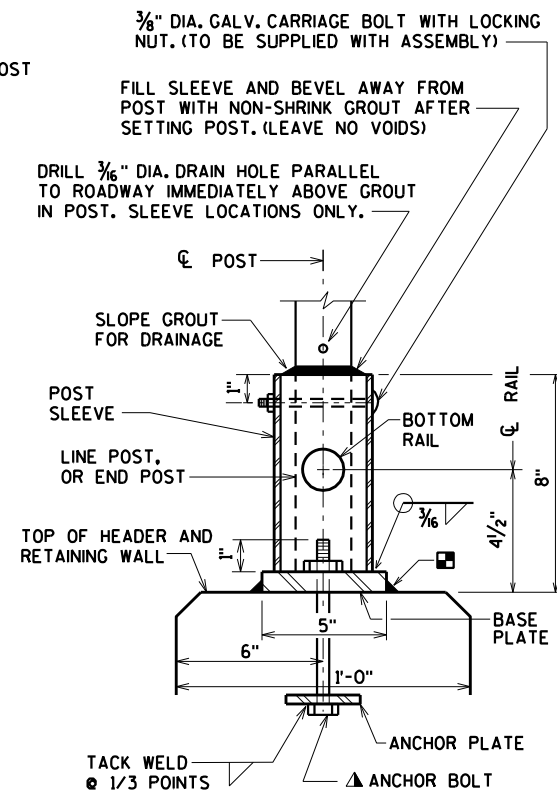
**Diagram A: Standard Galvanized Post**

- Material:** GALVANIZED
- Overall Dimensions:** 2" wide, 8" high.
- Internal Features:** Two 5/8" DIA. HOLES spaced 6" apart, with 1" from the top and bottom edges.
- Labels:** GALVANIZED, 5/8" DIA. HOLE, 1", 2", 6", 8", POST, 1/4" x 2" x 8"

**Diagram B: Post with Drain Hole**

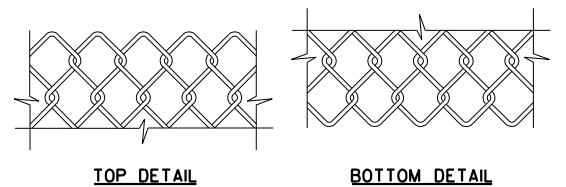
- Overall Dimensions:** 5" wide, 8" high.
- Internal Features:**
  - Top and bottom 5/8" DIA. HOLES for 1/2" DIA. ANCHOR BOLTS, spaced 1" from the top and bottom edges.
  - Center 3/4" x 5" x 8" POST SLEEVE, LINE POST, OR END POST.
  - Center 1/2" DIA. DRAIN HOLE.
- Labels:** 5/8" DIA. HOLE FOR 1/2" DIA. ANCHOR BOLTS, POST SLEEVE, LINE POST, OR END POST, 1/2" DIA. DRAIN HOLE, 3/4" x 5" x 8", 1", 3", 5", 8", POST

BASE PLATE



UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.



FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL, EXCEPT THE FENCE FABRIC WHICH MAY BE ALUMINUM-COATED STEEL OR GALVANIZED STEEL.

FABRIC SHALL CONFORM TO ASTM A491 OR A392, CLASS 2.  
STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM  
TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40).  
FITTINGS SHALL CONFORM TO ASTM F626.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS  
BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE  
ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY  
ALONG THE C/L OF THE POST.

■ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

✱ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

▲ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. 1/2" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN CONCRETE MASONRY ANCHORS ARE USED. SEE ☆

☆ 1/2" DIA. CONCRETE MASONRY ANCHORS, 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE AND MINIMUM PULLOUT CAPACITY OF 10 KIPS. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

■ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

■ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION.  
ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR  $\frac{1}{4}$  POINT OF POST SPACING.

REV.	DATE	DESCRIPTION

DESIGN BY: CBM	CHRISTOPHER B McMAHON, PE	42329
DRAWN BY: CLS	PROJECT ENGINEER	PE NO.
DATE: 03-18-2013	RICHARD T. SMITH, PE	35409
	PROJECT TRANSMISSION	PE NO.

**AVRES**  
**ASSOCIATES**

12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.938.8874 PHONE  
303.938.8211 FAX

220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

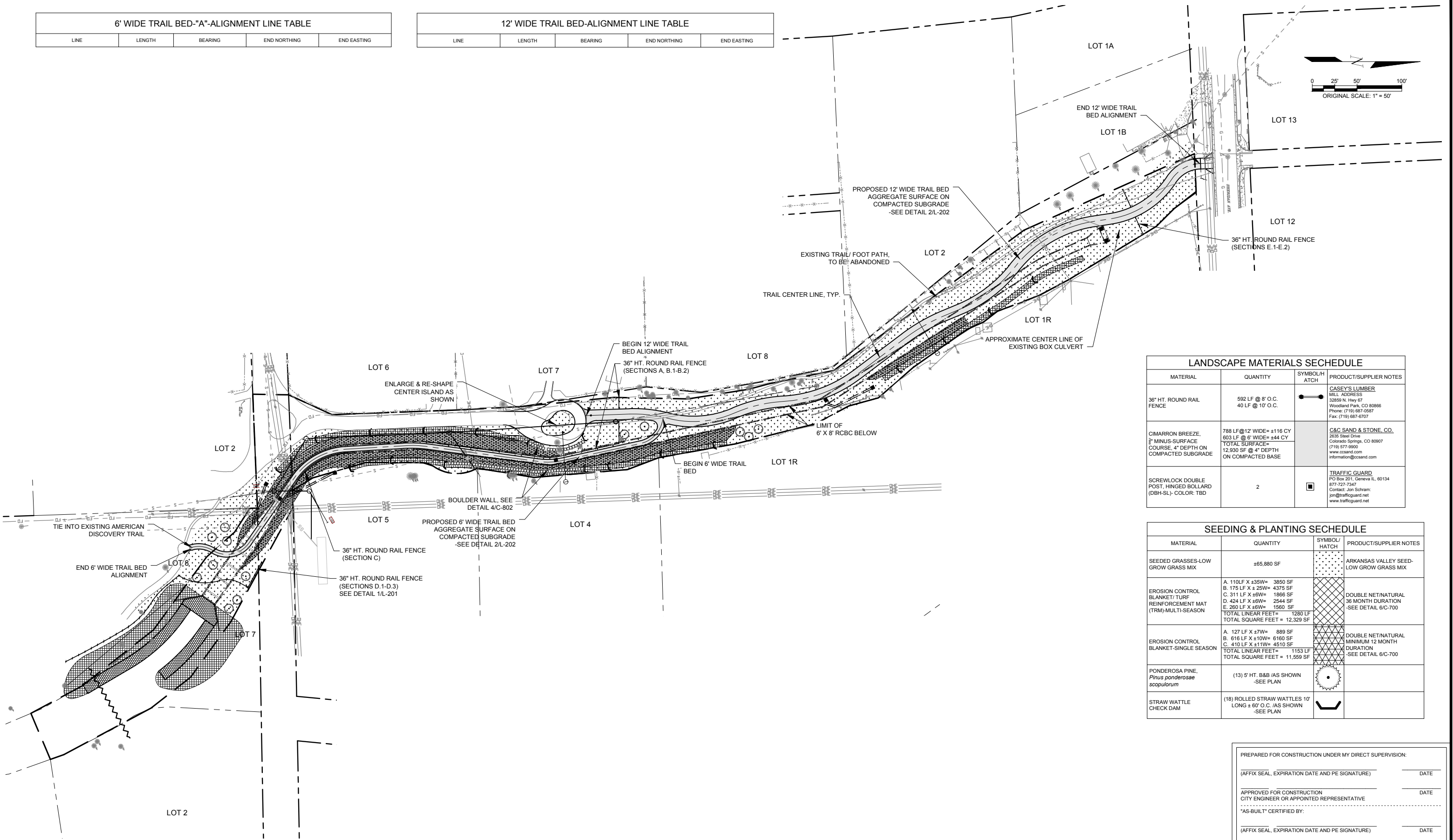
FOUNTAIN CREEK STABILIZATION &amp; EROSION CONTROL PROJECT

### FENCE CHAIN LINK DETAILS

DRAWING NO.	SHEET:  <b>S6</b>
PROJECT NO.  35-0200.00	
FILE NO.	OF SHEETS

6' WIDE TRAIL BED-"A"-ALIGNMENT LINE TABLE				
LINE	LENGTH	BEARING	END NORTHING	END EASTING

12' WIDE TRAIL BED-ALIGNMENT LINE TABLE				
LINE	LENGTH	BEARING	END NORTHING	END EASTING



LANDSCAPE MATERIALS SECHEDULE			
MATERIAL	QUANTITY	SYMBOL/HATCH	PRODUCT/SUPPLIER NOTES
36" HT. ROUND RAIL FENCE	592 LF @ 8' O.C. 40 LF @ 10' O.C.		CASEY'S LUMBER MILL ADDRESS 32859 N. Hwy 67 Woodland Park, CO 80866 Phone: (719) 687-0587 Fax: (719) 687-6707
CIMARRON BREEZE, 1/2" MINUS-SURFACE COURSE, 4" DEPTH ON COMPACTED SUBGRADE	788 LF @ 12' WIDE= ±116 CY 603 LF @ 6' WIDE= ±44 CY TOTAL SURFACE= 12,930 SF @ 4" DEPTH ON COMPACTED BASE		C&C SAND & STONE, CO. 2635 Steel Drive Colorado Springs, CO 80907 (719) 577-9900 www.ccsand.com information@ccsand.com
SCREWLOCK DOUBLE POST, HINGED BOLLARD (DBH-SL). COLOR: TBD	2		TRAFFIC GUARD PO Box 201, Geneva IL, 60134 877-727-7347 Contact: Jon Schram jon@trafficguard.net www.trafficguard.net

SEEDING & PLANTING SECHEDULE			
MATERIAL	QUANTITY	SYMBOL/HATCH	PRODUCT/SUPPLIER NOTES
SEEDED GRASSES-LOW GROW GRASS MIX	±65,880 SF		ARKANSAS VALLEY SEED- LOW GROW GRASS MIX
EROSION CONTROL BLANKET/ TURF REINFORCEMENT MAT (TRM)-MULTI-SEASON	A. 110LF X ±35W= 3850 SF B. 175 LF X ± 25W= 4375 SF C. 311 LF X ±6W= 1866 SF D. 424 LF X ±0W= 2544 SF E. 260 LF X ±6W= 1560 SF TOTAL LINEAR FEET= 1280 LF TOTAL SQUARE FEET = 12,329 SF		DOUBLE NET/NATURAL 36 MONTH DURATION SEE DETAIL 6/C-700
EROSION CONTROL BLANKET-SINGLE SEASON	A. 127 LF X ±7W= 889 SF B. 616 LF X ±10W= 6160 SF C. 410 LF X ±11W= 4510 SF TOTAL LINEAR FEET= 1153 LF TOTAL SQUARE FEET = 11,559 SF		DOUBLE NET/NATURAL MINIMUM 12 MONTH DURATION SEE DETAIL 6/C-700
PONDEROSA PINE, <i>Pinus ponderosae</i> <i>scopulorum</i>	(13) 5' HT. B&B /AS SHOWN -SEE PLAN		
STRAW WATTLE CHECK DAM	(18) ROLLED STRAW WATTLES 10' LONG ± 60' O.C. /AS SHOWN -SEE PLAN		

PREPARED FOR CONSTRUCTION UNDER MY DIRECT SUPERVISION:

(AFFIX SEAL, EXPIRATION DATE AND PE SIGNATURE) \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED FOR CONSTRUCTION  
CITY ENGINEER OR APPOINTED REPRESENTATIVE \_\_\_\_\_ DATE \_\_\_\_\_

"AS-BUILT" CERTIFIED BY: \_\_\_\_\_

(AFFIX SEAL, EXPIRATION DATE AND PE SIGNATURE) \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED FOR "AS-BUILT" RECORD  
CITY ENGINEER OR APPOINTED REPRESENTATIVE \_\_\_\_\_ DATE \_\_\_\_\_

75% SUBMITTAL  
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	APP

DESIGN BY:  
RTS  
DRAWN BY:  
DAS  
DATE:  
12-12-2012

MATTHEW D. HICKOX, EI  
PROJECT ENGINEER

RICHARD T. SMITH, PE  
PROJECT MANAGER

35409  
PE NO.

**AVRES**  
**ASSOCIATES**

12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.936.8874 PHONE  
303.936.8211 FAX

ELEVATE!  
WOODLAND PARK  
CONSERVATION TRAIL

220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

FOUNTAIN CREEK STABILIZATION & EROSION CONTROL PROJECT

SEEDING & PLANTING  
PLAN

DRAWING NO.

22

PROJECT NO.

35-0200.00

FILE NO.

SEEDING & PLANTING.dwg

SHEET

L-100

OF 24 SHEETS

3/18/2013 11:23 AM C:\USERS\USER\DOCUMENTS\ACCOUNTS\00017\_FOUNTAIN CREEK\WORKING\DWG\FOUNTAIN CREEK\PRODUCTION DRAWINGS\SEEDING & PLANTING.DWG



3/18/2013 1:23 AM C:\USERS\USER\DOCUMENTS\ACCOUNTS\00017\_FOUNTAIN CREEK\WORKING\DWG\FOUNTAIN CREEK PRODUCTION DRAWINGS\SEEDING & PLANTING.DWG

75% SUBMITTAL  
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	APP

DESIGN BY:  
RTS  
DRAWN BY:  
DAS  
DATE:  
12-12-2012

MATTHEW D. HICKOX, EI  
PROJECT ENGINEER  
RICHARD T. SMITH, PE  
PROJECT MANAGER  
35409  
PE NO.

**AYRES**  
ASSOCIATES

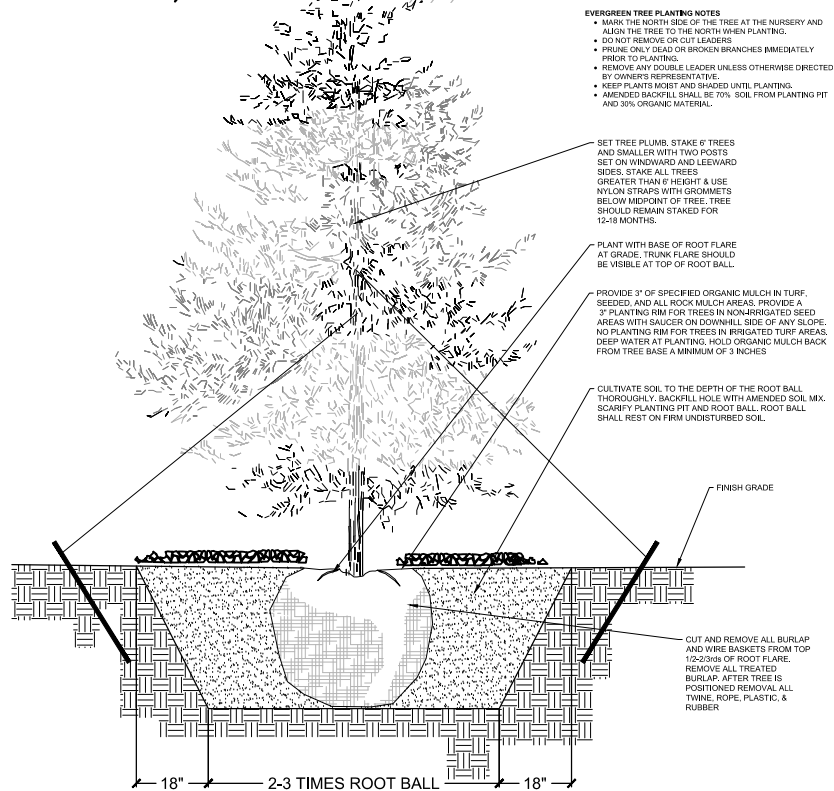
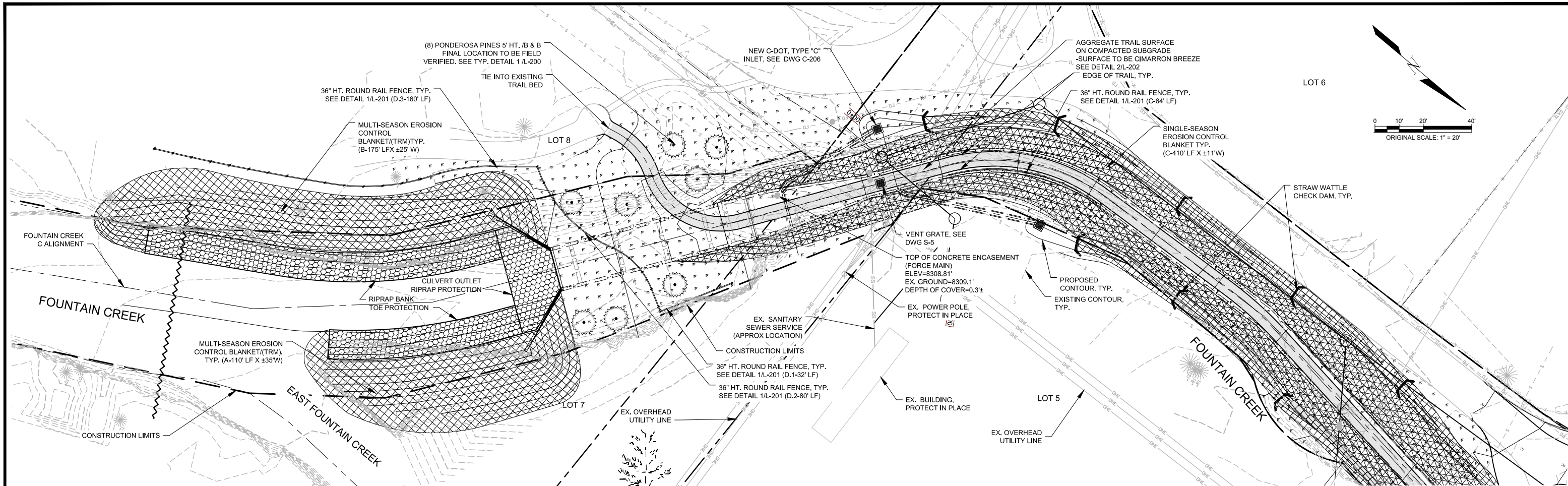
12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.936.8874 PHONE  
303.936.8211 FAX

ELEVATE!  
WOODLAND PARK  
SUNSHINE. THE FUTURE.

220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

FOUNTAIN CREEK STABILIZATION & EROSION CONTROL PROJECT  
SEEDING & PLANTING  
DETAILS

DRAWING NO.  
23  
PROJECT NO.  
35-0200.00  
FILE NO.  
SEEDING & PLANTING.dwg  
SHEET  
L-200  
OF 24 SHEETS

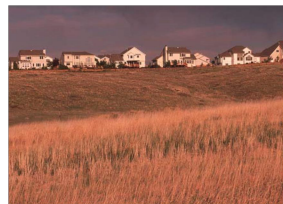


1  
L-200  
EVERGREEN TREE PLANTING DETAIL  
NOT TO SCALE



## Low Grow Grass Mix

A mixture of perennial, cool season, drought tolerant, grasses suitable for areas where mowing is difficult or not desirable. It grows an average of 8-12 inches a year with normal rainfall in the Intermountain region and the Desert Southwest. This mix is a great soil stabilizer. Our wildflower mixes are very compatible with this mix.



- Characteristics:**
- Grows 8-12 inches tall
  - Requires little to no maintenance
  - Grows well in elevations up to 10,000 ft

**Seeding Rate:**

New Seeding	
Dryland:	20-25 lbs/acre
Irrigated:	40 lbs/acre
Overseeding	
Dryland:	10-15 lbs/acre
Irrigated:	20 lbs/acre

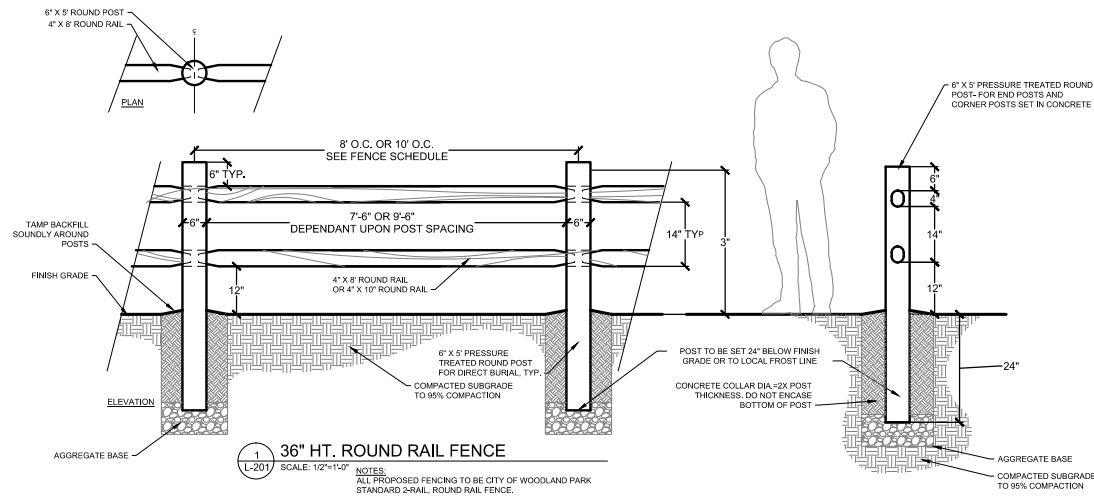
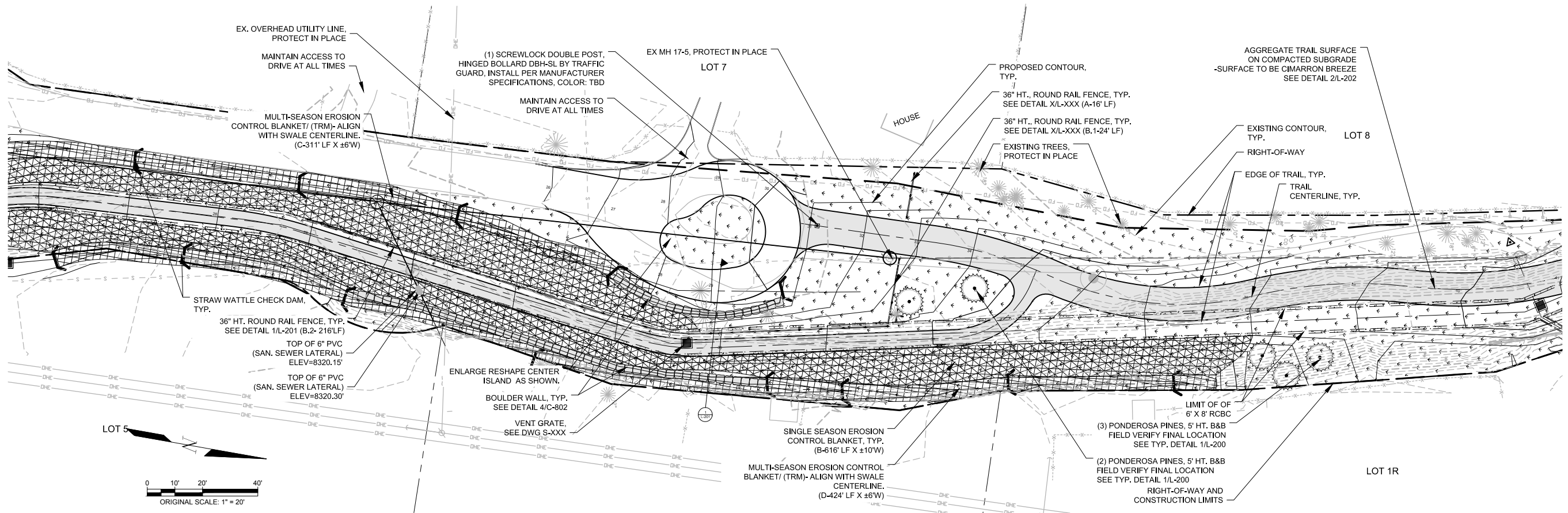
- Mix contains:**
- 30% Ephraim Crested Wheatgrass**  
Slightly rhizomatous bunchgrass with germination in 14-21 days. Drought resistant and winter hardy with a deep root system making it an excellent soil binder. Crested wheatgrass is well adapted to stabilization of disturbed soils and does well on a variety of soil types.
  - 25% Sheep Fescue**  
Bunchgrass with germination in 14-21 days. Well adapted to most soil conditions and is great for soil erosion control and low maintenance mixtures.
  - 20% Perennial Rye**  
Bunchgrass with germination in 5-10 days. One of the most widely used grasses and is adaptable to a wide variety of soils and climate conditions. It has a leafy head and fine stem.
  - 15% Chewings Fescue**  
Sod-forming grass with germination in 7-21 days. Fine fescue that is shade tolerant and requires little water. Persists in dry soils and infertile soils.
  - 10% Kentucky Bluegrass**  
Sod-forming grass with germination in 14-21 days. Resistant to drought and some salinity. It is used to reclaim disturbed area such as gravel pits, cut roads, roadsides, and mines.

Formulations & varieties are subject to change without notice

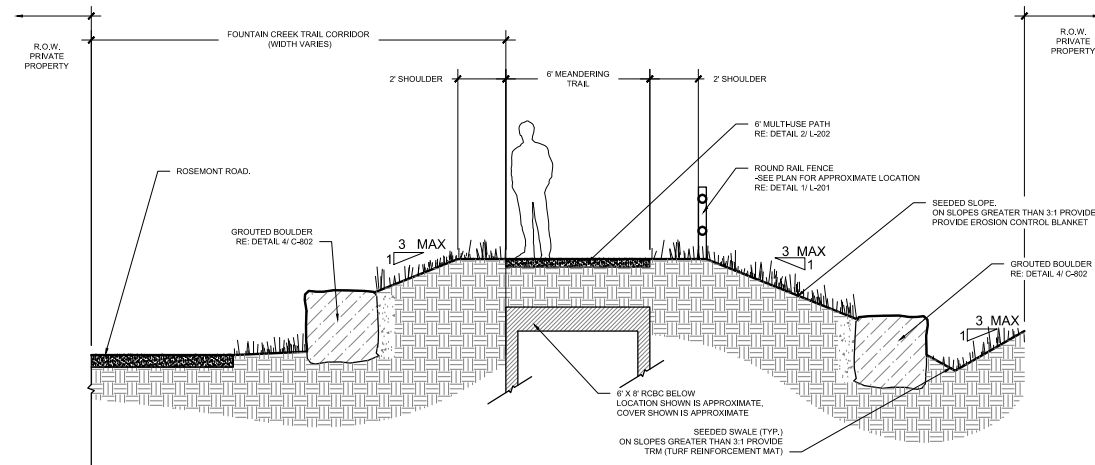
Arkansas Valley Seed, Inc.  
4300 Monaco Street, Denver, CO 80216  
303-328-7500  
877-907-3337  
www.avseeds.com



3/18/2013 1:23 AM C:\USERS\USER\DOCUMENTS\ACCOUNTS\00017\_FOUNTAIN CREEK\WORKING\DWG\FOUNTAIN CREEK\PRODUCTION DRAWINGS\SEEDING & PLANTING.DWG



FENCE SCHEDULE				
REFERENCE	LINEAR FEET (LF)	POST SPACING	POST QNTY.	RAIL QNTY.
A	16	8' O.C.	3	4
B.1	24	8' O.C.	4	8
B.2	216	8' O.C.	27	52
C	84	8' O.C.	8	14
D.1	32	8' O.C.	5	8
D.2	80	8' O.C.	10	18
D.3	160	8' O.C.	20	38
E.1	20	10' O.C.	3	4
E.2	20	10' O.C.	3	4



PREPARED FOR CONSTRUCTION UNDER MY DIRECT SUPERVISION:	
(AFFIX SEAL, EXPIRATION DATE AND PE SIGNATURE)	DATE
APPROVED FOR CONSTRUCTION CITY ENGINEER OR APPOINTED REPRESENTATIVE	
DATE	
"AS-BUILT" CERTIFIED BY:	
(AFFIX SEAL, EXPIRATION DATE AND PE SIGNATURE)	DATE
APPROVED FOR "AS-BUILT" RECORD CITY ENGINEER OR APPOINTED REPRESENTATIVE	
DATE	

75% SUBMITTAL  
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	APP

DESIGN BY:  
RTS  
DRAWN BY:  
DAS  
DATE:  
12-12-2012

MATTHEW D. HICKOX, EI  
PROJECT ENGINEER  
RICHARD T. SMITH, PE  
PROJECT MANAGER

35409  
PE NO.

**AVRES**  
ASSOCIATES

12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.936.8874 PHONE  
303.936.8211 FAX

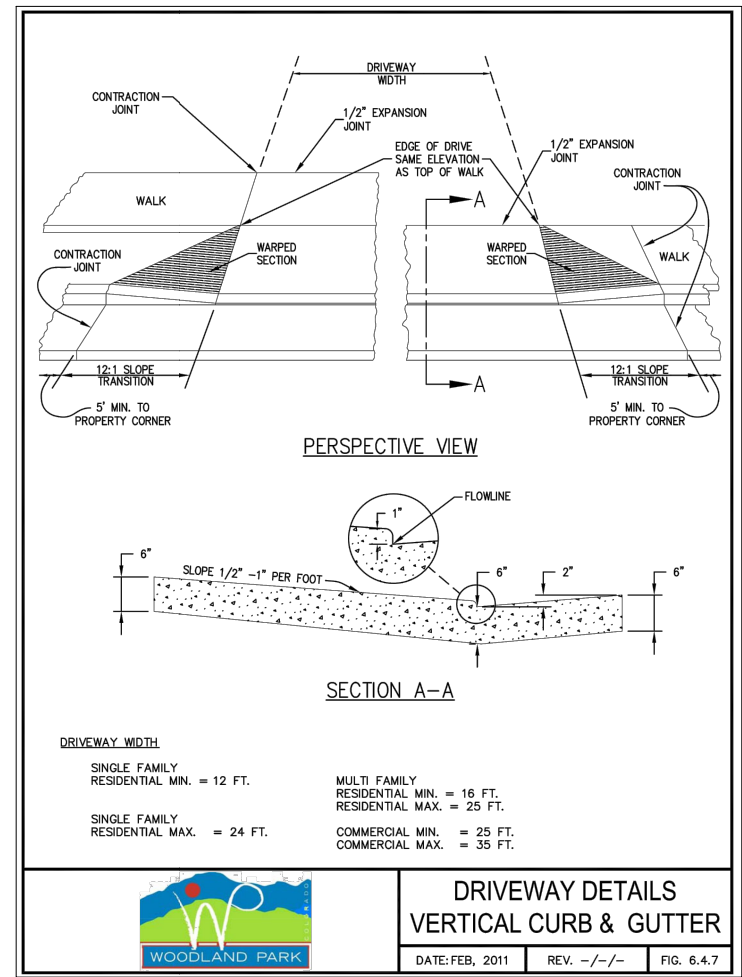
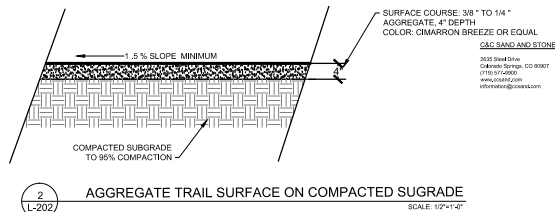
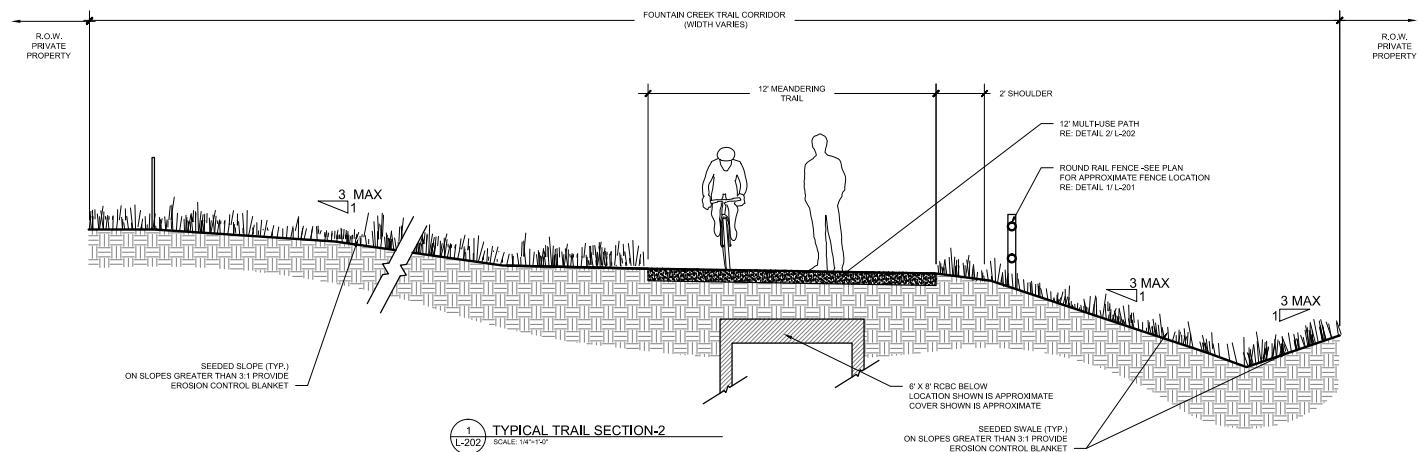
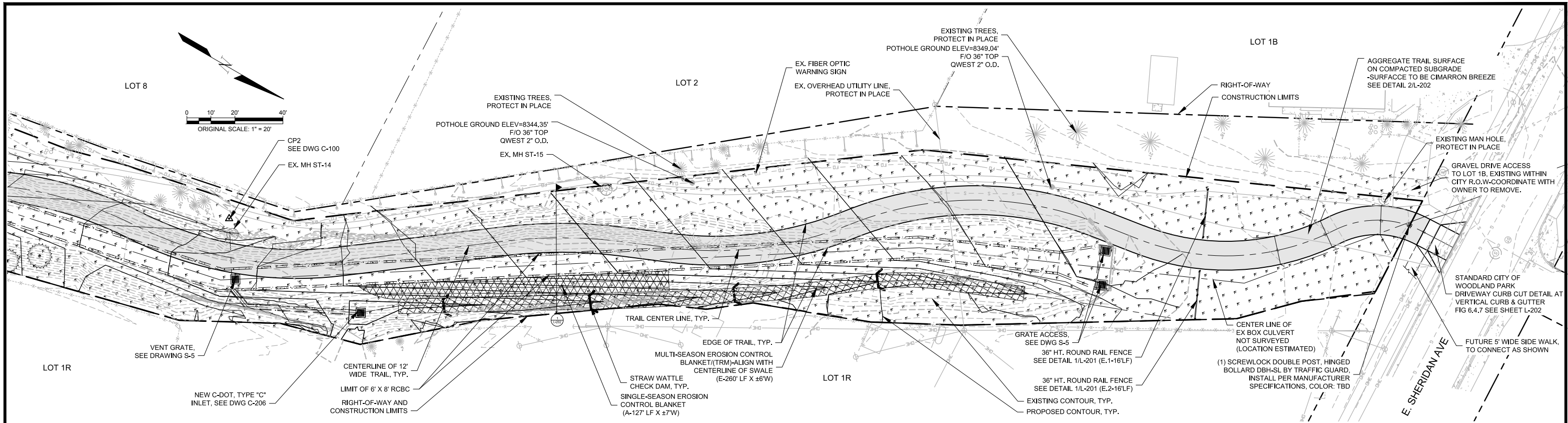
ELEVATE!  
WOODLAND PARK  
CITY ENGINEER - PE 80866

220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

FOUNTAIN CREEK STABILIZATION & EROSION CONTROL PROJECT  
SEEDING & PLANTING  
DETAILS

DRAWING NO.  
24  
PROJECT NO.  
35-0200.00  
FILE NO.  
SEEDING & PLANTING.dwg  
SHEET  
201  
OF 24 SHEETS





PREPARED FOR CONSTRUCTION UNDER MY DIRECT SUPERVISION:	
(AFFIX SEAL, EXPIRATION DATE AND PE SIGNATURE)	DATE
APPROVED FOR CONSTRUCTION CITY ENGINEER OR APPOINTED REPRESENTATIVE	
DATE	
"AS-BUILT" CERTIFIED BY:	
(AFFIX SEAL, EXPIRATION DATE AND PE SIGNATURE)	DATE
APPROVED FOR "AS-BUILT" RECORD CITY ENGINEER OR APPOINTED REPRESENTATIVE	
DATE	

75% SUBMITTAL  
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION

DESIGN BY: RTS	MATTHEW D. HICKOX, EI
DRAWN BY: DAS	PROJECT ENGINEER
DATE: 12-12-2012	RICHARD T. SMITH, PE
APP	35409
	PE NO.

**AYRES ASSOCIATES**

12050 N. Pecos Street, Suite 150  
Westminster, Colorado 80234  
303.936.8874 PHONE  
303.936.8211 FAX

ELEVATE!

WOODLAND PARK

220 W. SOUTH AVENUE  
PO BOX 9007  
WOODLAND PARK, CO 80866

FOUNTAIN CREEK STABILIZATION & EROSION CONTROL PROJECT

SEEDING & PLANTING  
DETAILS

DRAWING NO.  
25

PROJECT NO.  
35-0200.00

FILE NO.  
SEEDING & PLANTING.dwg

L-202

24 SHEETS