

Colorado Department of Transportation  2000 South Holly Denver, CO 80222 Phone: 303-757-9923 FAX: 303-757-9390 Region 6 SLK	Sheet Revisions			Sheet Revisions			Sheet Revisions			Land Survey ControlDiagram				
	Date	Description	Initials	Date	Description	Initials	Date	Description	Initials	Title Sheet				
	mm/dd/yy	XXXXXXXX	XXX	mm/dd/yy	XXXXXXXX	XXX	mm/dd/yy	XXXXXXXX	XXX	Project Number: C 0761-204				
										Project Location: I-76 Over the South Platte River				
										Sec. 36 T2S, R68W Sec. 1 T3S, R68W of the 6th PM				
										Project Code:	Last Mod. Date	Subset	Sheet No.	
										17536	11-01-2010	4.01 to 4.02	4.01	

DEPARTMENT OF TRANSPORTATION

STATE OF COLORADO

LAND SURVEY CONTROL DIAGRAM

SHEET NO.	INDEX OF SHEETS
4.01-4.01	(1) Title Sheet
4.02-4.02	(1) Monument Coordinate Tables
	(2) Total Sheets

State Highway I-76 MP 7.0 to 8.0
Section 36
Township 2 South, Range 68 West
Section 1
Township 3 South, Range 68 West
of the 6th Principle Meridian
County of Adams

6.Elevations were run to an accuracy of +/-0.035 ft. times the square root of the distance traversed in miles.

7.Primary Horizontal Control Tolerances meets C.D.O.T. Class A (+/-0.7' with 95% certainty)

8.Secondary Horizontal Control Tolerances meets C.D.O.T. Class B (+/-0.13' with 95% certainty)

9.Coordinates were established on the tabulated secondary monuments with RTK using dualbases on primary control points and meaning the two at each location.

10.Property Pin coordinates are from Colorado Department of Transportation Land Survey ControlDiagram Project No. BR 0761-192

11.Aliquot and Property Pin Monument collection method legend:
F.S.=Fast Static D.B.=RTK double based & S.B.=RTK single based

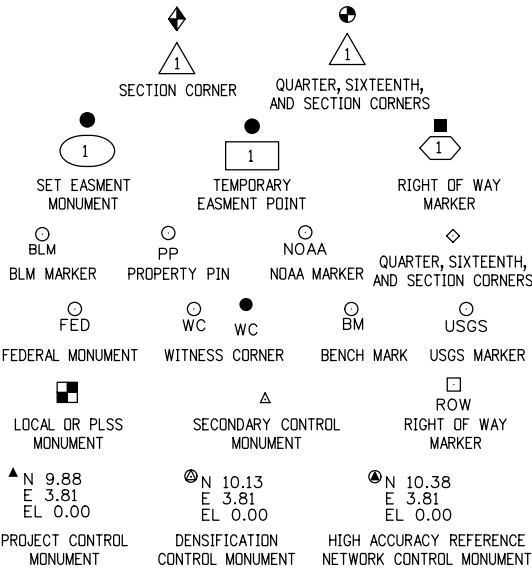
12.To Convert SP Coordinates Colorado North Zone (501) to project Coordinates:
(State Plane Northing in USFT x 1.0002649042) = Project Northing
(State Plane Easting in USFT x 1.0002649042) = Project Easting

12.Localsite settings

Project latitude:39° 49'49.65323"N Ground scale factor:1.0002649042
Project longitude:104° 56'44.04515W False northing offset:-313.003
Project height:5076.847sft False easting offset:-835.962

NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

SURVEYOR STATEMENT (LAND SURVEY CONTROL DIAGRAM)	
I, <u>Lee Pennell</u> , a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation this Land Survey ControlDiagram was prepared and the field survey it represents was performed under my responsible charge and, based upon my knowledge, information and belief is in accordance with applicable standards of practice defined by Colorado Department of Transportation publications. This statement is not a guaranty or warranty, either expressed or implied.	
PLS No. 38027	



Note: For a complete listing of symbolology used within this set of plans, please refer to the M-100-1 Standard Symbols of the Colorado Department of Transportation M&S Standards Publication dated July 2006. Existing features are shown as screened weight (gray scale). Proposed or new features are shown as full weight without screening.

▲ CM-MP - Control Point Monuments set by CDOT. They are CDOT Type 2 monuments, a 3 1/4" dia. aluminum control monument cap (as shown) on a 3' x 3/4" dia. aluminum security rod on a 3' x 3/4" dia. smooth aluminum rod.

General Notes:

1.This Land Survey ControlDiagram (LSCD) is to document the recovery and/or establishment of survey points that will be the basis of future surveys for design purposes, right-of-way acquisition, monumentation and/or roadway construction. This LSCD is not a Land Survey Plat, Boundary Survey or Right of Way Plat and does not address matters of title.

2.This LSCD is subject to change and may not be the most current LSCD. It is the user's responsibility to verify with CDOT that this LSCD is the most current. The information contained on the attached drawing is not valid unless this copy bears an original signature of the Professional Land Surveyor hereon named.

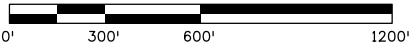
3.Refer to the M-629-1 Survey Monuments of the Standard Plans dated July, 2006 found in The Colorado Department of Transportation, M & S Standards for typical survey monument descriptions.

4.Basis of Bearings: Bearings are grid bearings of the State Plane Coordinate Colorado North Zone (501), Nad 1983 (1992). The line between points 1019 and 968 monumented as shown herein, bears S37° 20'51"W.

5.Basis of Elevations: Project elevations are based on NGS First Order Class II Vertical deep rod, Point Identification Designation E 392. NAVD 88 vertical datum is 5133.02. Project elevations were established by differential leveling.



PROJECT LOCATION MAP





Sheet Revisions

Date	Description	Initials
04/08/10		RJC

Sheet Revisions

Date	Description	Initials
mm/dd/yy	XXXXXXXX	XXX

N



1" = 300'

Land Survey Control Diagram

Plan Sheet

Project Number: C 0761-204			
Project Location: I-76 Over the South Platte River			
Sec. 36 T2S, R68W Sec. 1 T3S, R68W of the 6th PM			
Project Code:	Last Mod. Date	Subset	Sheet No.
17536	11-01-2010	4.01 to 4.02	4.02

Primary Survey Control Point Tabulation In U.S. Survey Feet Project Specific

Point	Latitude	Longitude	Ellipsoid Height	Convergence Angle	Northing (SP 501)	Easting (SP 501)	Point	Northing (project)	Easting (project)	Elevation NAVD 88'	Description
221	39°49'30.36655"N	104°57'00.50940"W	5053.39	0°21'19.0"	1179615.262	3154438.902	221	1179927.746	3155274.527	5110.26	SET 1.17" BRASS PLUG "CDOT CP 221" CDOT TYPE 5S
222	39°49'34.03825"N	104°56'54.06757"W	5041.32	0°21'23.2"	1179989.901	3154939.172	222	1180302.484	3155774.930	5098.23	SET 1.17" BRASS PLUG "CDOT CP 222" CDOT TYPE 5S
223	39°49'32.64391"N	104°56'57.75012"W	5049.81	0°21'20.8"	1179847.030	3154652.746	223	1180159.575	3155488.427	5106.70	SET 1.17" BRASS PLUG "CDOT CP 223" CDOT TYPE 5S
224	39°49'34.97545"N	104°56'54.11029"W	5041.20	0°21'23.1"	1180084.709	3154935.249	224	1180397.317	3155771.006	5098.10	SET 1.17" BRASS PLUG "CDOT CP 224" CDOT TYPE 5S
225	39°49'33.69035"N	104°56'57.46060"W	5043.63	0°21'21.0"	1179953.053	3154674.676	225	1180265.627	3155510.364	5100.52	SET 1.17" BRASS PLUG "CDOT CP 225" CDOT TYPE 5S
226	39°49'35.80022"N	104°56'54.16214"W	5041.39	0°21'23.1"	1180168.138	3154930.685	226	1180480.768	3155766.440	5098.29	SET 1.17" BRASS PLUG "CDOT CP 226" CDOT TYPE 5S
227	39°49'35.18663"N	104°56'57.98272"W	5045.53	0°21'20.6"	1180104.199	3154633.001	227	1180416.813	3155468.677	5102.42	SET 1.17" BRASS PLUG "CDOT CP 227" CDOT TYPE 5S
228	39°49'26.30254"N	104°56'54.13668"W	5050.35	0°21'23.1"	1179207.137	3154938.650	228	1179519.513	3155774.407	5107.25	SET 3.25" ALUMINUM CAP "CDOT CP 228" CDOT TYPE 2
229	39°49'40.62058"N	104°56'58.73759"W	5044.16	0°21'20.2"	1180653.663	3154570.696	229	1180966.422	3155406.356	5101.06	SET 3.25" ALUMINUM CAP "CDOT CP 229" CDOT TYPE 2
968	39°49'36.23233"N	104°56'57.50074"W	5041.62	0°21'21.0"	1180210.242	3154669.947	968	1180522.883	3155505.633	5098.51	RECOVERED 3.25" ALUMINUM CAP "CDOH 968 ZBS PLS 11434"
1019	39°49'49.65323"N	104°56'44.04515"W	5076.85	0°21'29.7"	1181574.763	3155711.216	1019	1181887.766	3156547.178	5133.80	RECOVERED 3.25" ALUMINUM CAP "CDOH GPS 19 ZBS PLS 11434 1.074035"

Topo Property Pin Evidence
U.S. Survey Feet Project Specific

Point	Northing (project)	Easting (project)	Elevation NAVD 88'	Description
1220	1181078.43	3156969.87	5123.59	1.0" YELLOW PLASTIC CAP 'LS 29043'
1221	1180958.18	3156854.19	5102.17	1.0" ORANGE PLASTIC CAP 'LS 29043'
1222	1180829.18	3156691.17	5103.60	NUMBER 4 REBAR, NO CAP
9900	1180714.38	3156554.18	5103.88	1.0" YELLOW PLASTIC CAP 'LS 6973'

Secondary Survey Control Point Tabulation
In U.S. Survey Feet Project Specific

Point	Northing (project)	Easting (project)	Elevation NAVD 88'	Description
603	1180048.860	3154426.470	5123.59	3.25" ALUMINUM CAP "CDOH 7603 ZBS PLS 11434"
301	1180782.500	3155602.020	5090.94	1.5" ALUMINUM CAP "COLO DEPT TRANS 301" CDOT TYPE 1

Right of Way Marker Table U.S. Survey Feet Project Specific

Point	Northing (project)	Easting (project)	Elevation NAVD 88'	Description	Method
ROW 1	1180162.720	3154595.955	5105.08	3.125" BRASS CAP IN CONCRETE STAMPED WITH '+' & "DEPARTMENT OF HIGHWAYS ROW MARKER"	D.B.
ROW 3	1180923.549	3156333.532	5102.40	3.125" BRASS CAP IN CONCRETE STAMPED WITH '+' & "DEPARTMENT OF HIGHWAYS ROW MARKER"	D.B.

Basis of GPS Survey In U.S. Survey Feet

Point	Latitude	Longitude	Ellipsoid Height	Convergence Angle	Northing (SP 501)	Easting (SP 501)	Elevation NAVD 88'	Description
1019	39°49'49.65323"N	104°56'44.04515"W	5076.85	0°21'29.7"	1181574.763	3155711.216	5133.77	RECOVERED 3.25" ALUMINUM CAP "CDOH GPS 19 ZBS PLS 11434 1.074035"
B 394	39°46'47.04084"N	104°56'26.22144"W	5205.00	0°02'16.8"	1163106.073	3157218.247	5261.82	RECOVERED STANDARD NGS VERTICAL CONTROL MARK DISK "B 394 1983"
E 393	39°43'06.11629"N	104°54'46.76977"W	5336.27	0°03'20.2"	1140802.348	3165130.435	5393.20	RECOVERED STANDARD NGS DEEP ROD IN CONCRETE
JOLIET	39°46'29.81576"N	104°51'43.26393"W	5245.62	0°05'17.8"	1161512.330	3179321.282	5303.24	RECOVERED CDOT TYPE 2
RAMP	39°46'48.45107"N	104°53'55.72183"W	5194.84	0°03'53.1"	1163325.654	3168966.802	5252.14	RECOVERED CDOT TYPE 2
RODRIGUEZ	39°50'26.18771"N	104°54'01.18607"W	5096.45	0°03'49.9"	1185354.135	3168391.220	5153.95	RECOVERED ADAMS COUNTY BRASS CAP SET IN CONCRETE "RODRIGUEZ 1995"
ROTELLA	39°50'21.84996"N	104°57'58.13992"W	5139.19	0°01'18.1"	1184797.092	3149911.289	5195.91	RECOVERED ADAMS COUNTY BRASS CAP SET IN CONCRETE "ROTELLA 1995"

Aliquot Table U.S. Survey Feet Project Specific

Point	Northing (project)	Easting (project)	Elevation NAVD 88'	Description	Method
ALQ 3	1180708.160	3152734.128	5117.35	RECOVERED 3.25" ALUM CAP WITH DIMPLE IN 'A' "COLO DEPT HYWS R68W T2S 35 36 2 1 T3S 1987 PLS NO. 22571	D.B.
ALQ 4	1179373.863	3155379.913	5094.58	RECOVERED 2.5" ON #6 REBAR "LS 12083 CN 1/16 S1 1998"	D.B.
109	1180711.834	3155374.295	5102.59	RECOVERED 3.25" ALUM. CAP C.H. RUSSELL PLS 23519 T2S R68W S36	F.S.
107	1180718.261	3158010.269	5127.67	RECOVERED 3.25" ALUM. CAP SEC. CRN SEC. 1, 6 R68W SEC. 6, 31 R67W T3S 1994 PLS NO. 24673	S.B.