

BASIS OF G.P.S. SURVEY (METERS)

PNT	LATITUDE (N)	LONGITUDE (W)	STATE PLANE COORDINATES		ELLIPSOID HEIGHT	ORTHOMETRIC HEIGHT	CONVERGENCE ANGLE	GRID SCALE FACTOR
			NORTH	EAST				
BEND	39° 37' 30.26126"	104° 49' 17.91226"	503919.084	972643.138	1723.44	1740.8	0° 25' 40.2"	.99997767
TANK	39° 35' 15.50957"	104° 45' 53.28061"	499801.436	977556.924	1806.41	1823.8	0° 27' 49.3"	.99997192
JOG	39° 34' 05.17515"	104° 52' 18.24505"	497563.455	968386.196	1779.20	1796.3	0° 23' 46.5"	.99996908
CRAIN	39° 33' 55.77764"	104° 47' 06.15225"	497328.718	975837.474	1730.49	1747.8	0° 27' 03.3"	.99996871

PRIMARY SURVEY CONTROL POINT TABULATION-PROJECT SPECIFIC-U.S. SURVEY FEET

PNT	NORTHING	EASTING	ELEVATION	DESCRIPTION OF MONUMENTS
BEND	1653274.530	3191080.030	5711.54	Rec. NGS std. cap stmpd. "COA, BEND, 1984, St. Plane Coord. PT"
TANK	1639761.263	3207206.050		Rec. 3" brass cap "City of Aurora, Tank" illegible
JOG	1632416.677	3177109.629		Rec. NGS std. disk set in top of conc. mon. stmpd. "JOG 1977"
CRAIN	1631646.322	3201563.172		Rec. NGS brass disk set in conc. flush with ground stmpd. "CRAIN"
212	1640191.461	3197729.268	5723.99	Rec. 3.25" alum. cap stmpd. "CDOT 212"
703	1642497.438	3196649.178	5674.39	Set 3.25" alum. cap stmpd. "CDOT, Control Monument, 2.067161"
706	1646508.818	3194925.360	5658.01	Set 3.25" alum. cap stmpd. "CDOT, Control Monument, 2.061156"
707	1647961.019	3194159.131	5647.73	Set 3.25" alum. cap stmpd. "CDOT, Control Monument, 2.059155"
708	1649325.209	3193110.754	5675.07	Set 3.25" alum. cap stmpd. "CDOT, Control Monument 2.057152"
709	1638958.040	3198150.176	5708.35	Set 3.25" alum. cap stmpd. "CDOT, Control Monument 2.072164"
710	1642261.833	3195236.653	5647.15	Set 3.25" alum. cap stmpd. "CDOT, Control Monument, 2.059155"
856	1651569.395	3191620.031	5640.52(GPS)	Rec. 3.25" alum. cap "north center 1/16 corner PLS 24966"
857	1650251.620	3194262.778	5699.40(GPS)	Rec. 3" brass cap stmpd. "1/4 corner, PLS 16419"
858	1647600.782	3189031.284	5605.02(GPS)	Rec. 8"X3" stone with chiseled "X"
859	1647597.355	3191611.097	5620.64(GPS)	Rec. 3.25" alum. cap "TSS R66W, 1/4, 18 & 19, 1995, LS 13155"
862	1647663.925	3199551.177	5695.37(GPS)	Rec. 3.25" alum. cap stmpd. "TSS R66W, sec17 16 20 21, PLS 16846"
863	1644961.501	3194258.305	5632.01(GPS)	Rec. 3.25" alum. cap stmpd. "TSS R66W, 1/4, sec 19 20, PLS 22088"
866	1639699.744	3194265.151	5655.06(GPS)	Rec. 3.25" alum. cap stmpd. "TSS R66W, 1/4, sec 30 29, PLS 8141"
871	1631794.852	3199487.759	5706.78(GPS)	Rec. 3.25" alum. cap stmpd. "TSS R66W, sec 32 33, PLS 29039"
3156	1644848.193	3195612.520	5668.33	Rec. 1.5" brass cap in conc. walk stmpd. "2.065156"
6324	1632329.605	3201225.803	5734.76(GPS)	Rec. 3.25" alum. cap stmpd. "CDOT, Control Monument 63.24"
6369	1634421.681	3200077.606	5737.77(GPS)	Rec. 3.25" alum. cap stmpd. "CDOT, Control Monument 63.69"

SECONDARY RECOVERED MONUMENTATION-PROJECT SPECIFIC-U.S. SURVEY FEET

PNT	NORTHING	EASTING	DESCRIPTION OF MONUMENTS
600	1639209.53	3197974.89	1.5" O.P.C. "PLS 28286"
601	1637072.05	3199228.81	1.25" R.P.C. "LS 16828"
602	1637072.88	3199228.55	3" BRASS CAP "STATE HIGHWAY DEPT."
603	1638296.94	3198682.27	1.25" R.P.C. "LS 16828"
604	1638075.92	3198567.27	1.25" Y.P.C. "PLS 9010"
605	1638238.28	3198481.85	1.25" ALUM. CAP "EMK PLS 12405"
606	1638158.37	3198523.58	2" ALUM. CAP "EMK PLS 12405"
607	1637919.41	3198879.35	1.25" R.P.C. "LS 16828"
608	1637830.95	3198711.25	2" ALUM. CAP "PLS 33203"
609	1637572.11	3198814.24	1.25" Y.P.C. "PLS 9010"
610	1642266.86	3196366.68	3.25" ALUM. CAP "PLS 29420"
611	1639508.39	3197807.81	1.5" O.P.C. "PLS 28286"
612	1641730.28	3196464.03	1" Y.P.C. "PLS 13486"
613	1642394.62	3194315.08	#5 REBAR WITH LATH "PROP COR"
614	1642245.37	3194318.00	3.25" ALUM. CAP "CDOH, RP, 95.33"
615	1642389.19	3194257.73	1.5" ALUM. CAP "JR ENGR LS 30109"
616	1642413.03	3198131.09	NAIL WITH WASHER "PLS 34582"
617	1642433.96	3197571.85	NAIL WITH WASHER "PLS 34582"
618	1642270.88	3198186.49	3.25" ALUM. CAP "CDOH ROW"
619	1637648.00	3199003.87	1.25" R.P.C. "LS 16828"
620	1641731.52	3196760.91	1.5" ALUM. CAP "HWYS ROW 1802"
621	1641731.25	3196795.03	3.25" CDOH ROW
622	1638301.95	3198685.89	1.25" ALUM. CAP "CDOH 1760 ROW"
623	1641381.10	3198900.09	1" Y.P.C.
624	1639059.66	3198282.98	1.5" ALUM. CAP "CDOH, ROW, 1206"
625	1638696.07	3198502.35	#5 REBAR
626	1638097.01	3198523.82	1.5" Y.P.C. "EMK PLS 12405"
627	1640205.20	3197472.45	1.5" ALUM. CAP "CDOH ROW 1804"
628	1637550.07	3199039.99	3.25" ALUM. CAP "CDOH ROW 1804"
629	1641420.43	3196900.76	#5 REBAR
630	1645115.39	3195607.20	1.25" O.P.C. "PLS 25636"
631	1638205.96	3198434.36	#4 REBAR
632	1638147.13	3198442.92	1.25" Y.P.C. "PLS 12405"
633	1637206.12	3198959.24	1.5" ALUM. CAP "HWYS 1335 ROW"
634	1639067.37	3198336.94	1.5" ALUM. CAP "CDOH 1208"
635	1643196.62	3196399.47	PLS 34582 NAIL W/WASHER
636	1642303.21	3196782.42	3.25" ALUM. CAP "PLS 29420"
637	1642293.67	3196735.55	3.25" ALUM. CAP "PLS 29420"
638	1642275.40	3196725.16	3.25" ALUM. CAP "PLS 29420"
639	1642266.95	3196366.70	3.25" ALUM. CAP "PLS 29420"
640	1648567.05	3193864.04	1.25" Y.P.C. "LS 24670"
641	1648435.62	3193889.45	1.25" Y.P.C. "LS 24670"
642	1648632.49	3193795.56	1.25" Y.P.C. "LS 24670"
643	1648133.97	3194260.54	1.25" Y.P.C. "CLC LS illegible"

SECONDARY RECOVERED MONUMENTATION-PROJECT SPECIFIC-U.S. SURVEY FEET

PNT	NORTHING	EASTING	DESCRIPTION OF MONUMENTS
644	1648180.11	3194212.10	#5 REBAR
645	1647687.29	3194260.74	3" BRASS CAP "STATE HY ROW"
646	1648268.03	3194149.21	1.25" Y.P.C. "LS 24670"
647	1645105.81	3195520.43	#5 REBAR
648	1645348.57	3195391.38	#5 REBAR
649	1645303.45	3195408.99	PLS 25636
650	1645109.33	3195512.47	PLS 25636
651	1645949.32	3195170.71	2" ALUM. CAP "PLS 28286"
652	1645781.72	3195212.49	1.25" "11389"
653	1646134.18	3195094.25	2" ALUM. CAP "PLS 28286"
654	1642409.02	3197572.06	1.25" Y.P.C. "PLS 34582"
655	1642846.83	3196702.42	#4 REBAR
656	1641014.07	3196901.61	#4 REBAR WITH FLAGGING
657	1637281.50	3199149.80	1.25" RPC "BELL LS 16828"
658	1645004.59	3195365.93	3.25" ALUM. CAP "JR -"
659	1644129.23	3195770.51	1.25" Y.P.C. "LS"
660	1640687.33	3197506.36	1.5" ALUM. CAP "CDOH 1176 ROW"
661	1640358.51	3197670.78	1.5" ALUM. CAP "CDOH 1175 ROW"
662	1640514.58	3197592.88	1.5" ALUM. CAP "CDOH 1175 ROW"
663	1640808.26	3197450.25	1.5" ALUM. CAP "CDOH 1175 ROW"
664	1640894.15	3197137.44	1.5" ALUM. CAP "CDOH 1801 ROW"
665	1640901.99	3197408.02	1.5" ALUM. CAP "CDOH 1174 ROW"
666	1640894.33	3197169.91	1.5" ALUM. CAP "CDOH 1529 ROW"
667	1639330.50	3198160.23	1.5" ALUM. CAP "CDOH ROW"
668	1641644.86	3197035.32	1.5" ALUM. CAP "CDOH ROW 1131"
669	1641345.29	3197197.69	1.5" ALUM. CAP "CDOH ROW 112"
670	1641876.52	3197558.35	1.25" Y.P.C. "LS 10717"
671	1641949.85	3196898.16	1.5" ALUM. CAP "CDOH ROW 1108"
672	1640990.29	3197893.36	1.25" Y.P.C. "Hammer PLS 24307"
673	1642261.87	3196896.72	3.25" ALUM. CAP "CDOH ROW "LS 29420"
674	1641680.56	3197889.62	#4 REBAR
675	1641350.65	3197891.48	#4 REBAR
676	1641682.53	3198189.85	#4 REBAR
677	1641050.59	3197893.33	1.25" Y.P.C. "Robinson PLS 2132"
678	1642003.93	3196897.58	0.50" Steel Pin
91130	1641564.23	3197099.21	1.5" ALUM. CAP "CDOH 1130"
91160	1640987.16	3197463.01	1.5" ALUM. CAP "CDOH illegible"

TABULATION OF R.O.W. MARKERS TO BE SET

Point No.	Northing	Easting	Description
711	1641727.13	3196998.32	
717	1642007.44	3197427.64	
716	1641700.18	3197131.39	
719	1641690.18	3197131.39	
720	1641696.25	3197061.75	
721	1641706.06	3197063.72	
745	1641629.56	3197888.77	
747	1641348.01	3197530.71	
748	1641428.62	3197546.65	
749	1641723.28	3197724.03	
750	1641729.06	3197889.33	
751	1641682.07	3197769.97	
752	1641430.08	3197632.06	
774	1641348.10	3197551.76	
775	1641226.54	3197601.52	
776	1641113.07	3197569.23	
777	1641047.76	3197517.22	
779	1641080.27	3197416.54	
780	1641141.30	3197515.82	
781	1641231.08	3197541.74	
788	1641881.43	3197888.49	
799	1641881.43	3197921.83	
800	1641857.54	3197937.34	
828	1641002.63	3197458.01	
827	1642429.97	3197663.72	
829	1643279.16	3198320.03	
830	1642835.74	3198865.45	
831	1642602.41	3198887.68	
832	1642567.42	3198887.68	
833	1642880.38	3198524.74	

TABULATION OF ALIQUOT MONUMENTS TO BE RESET

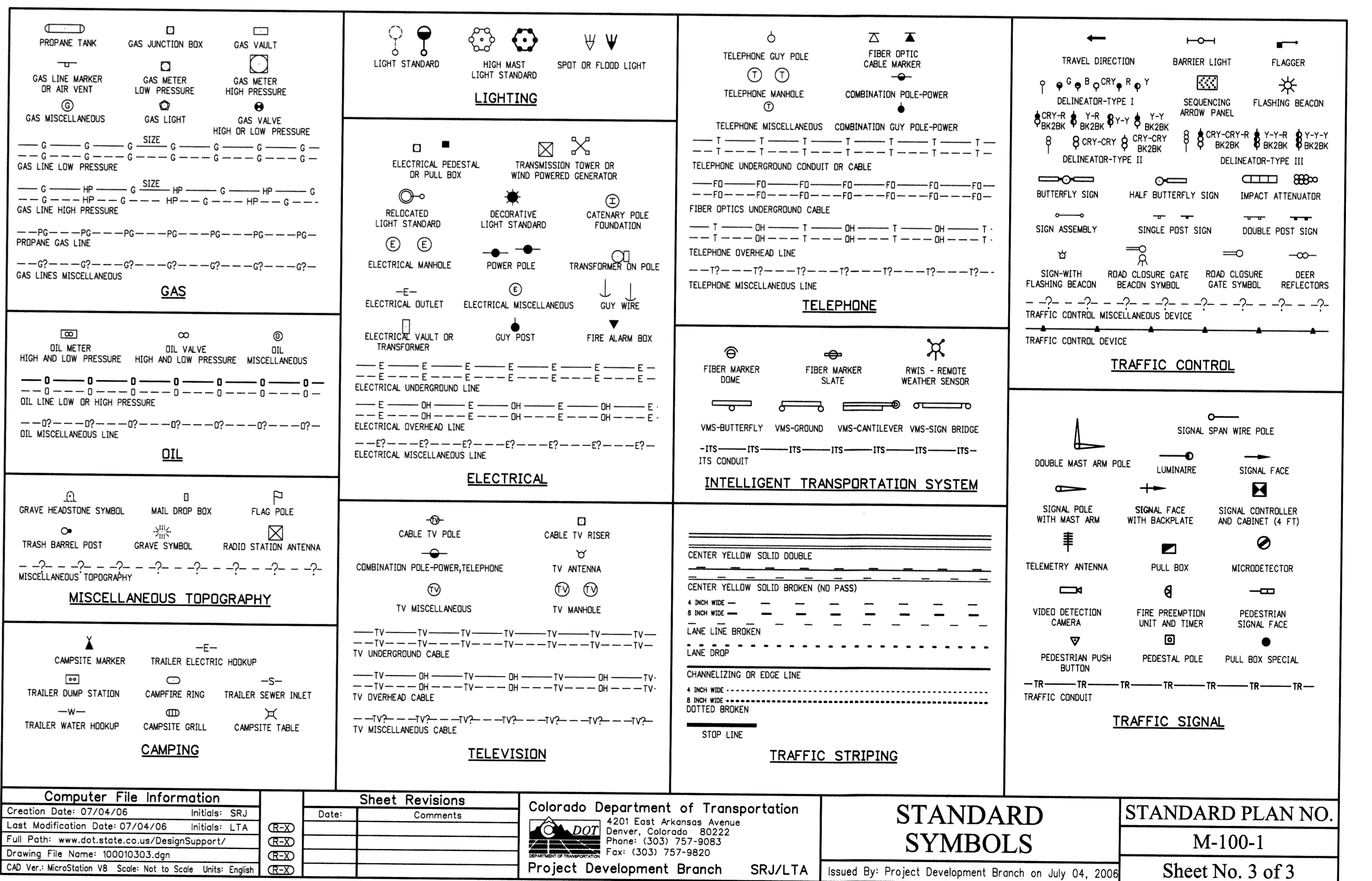
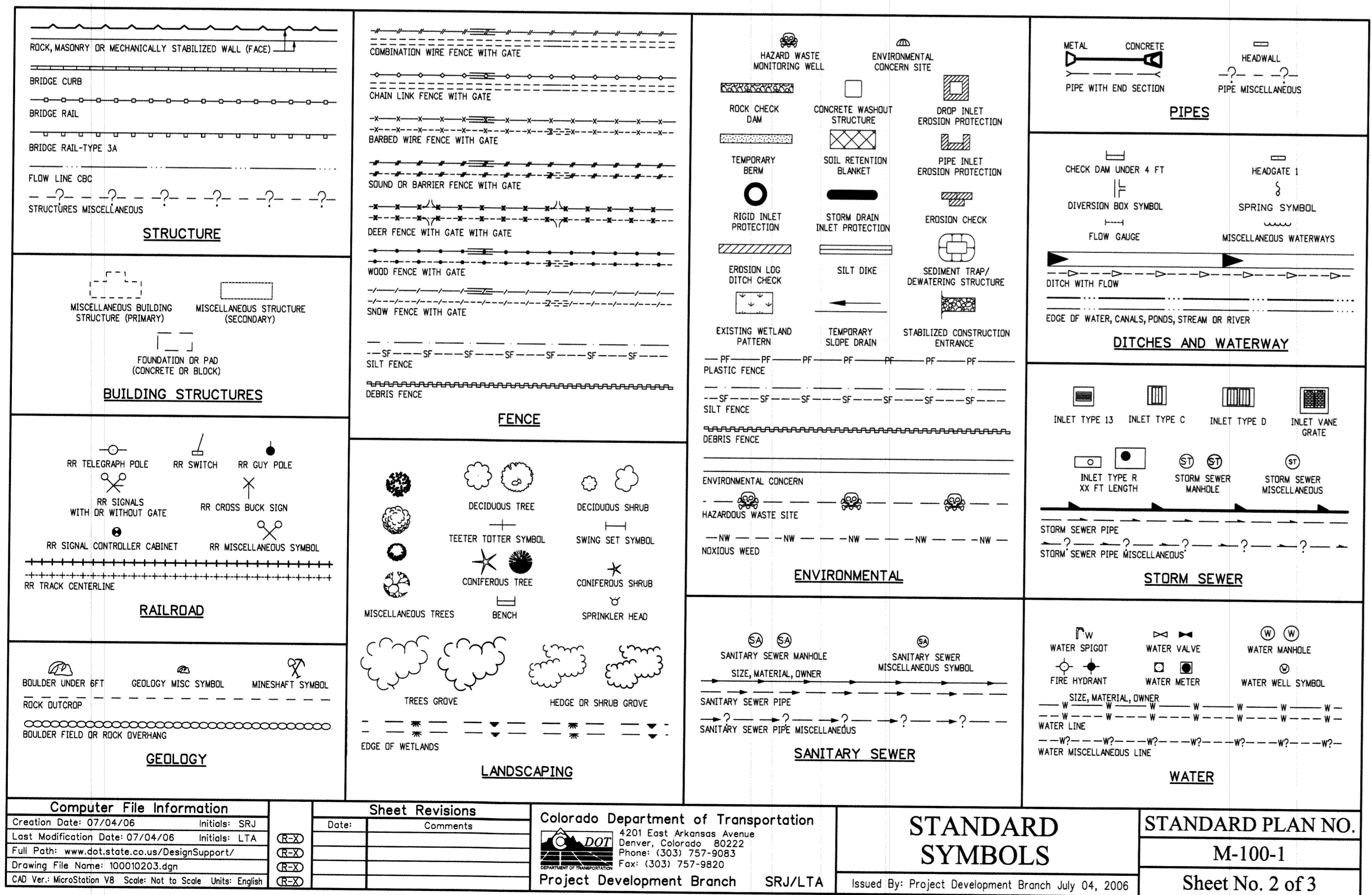
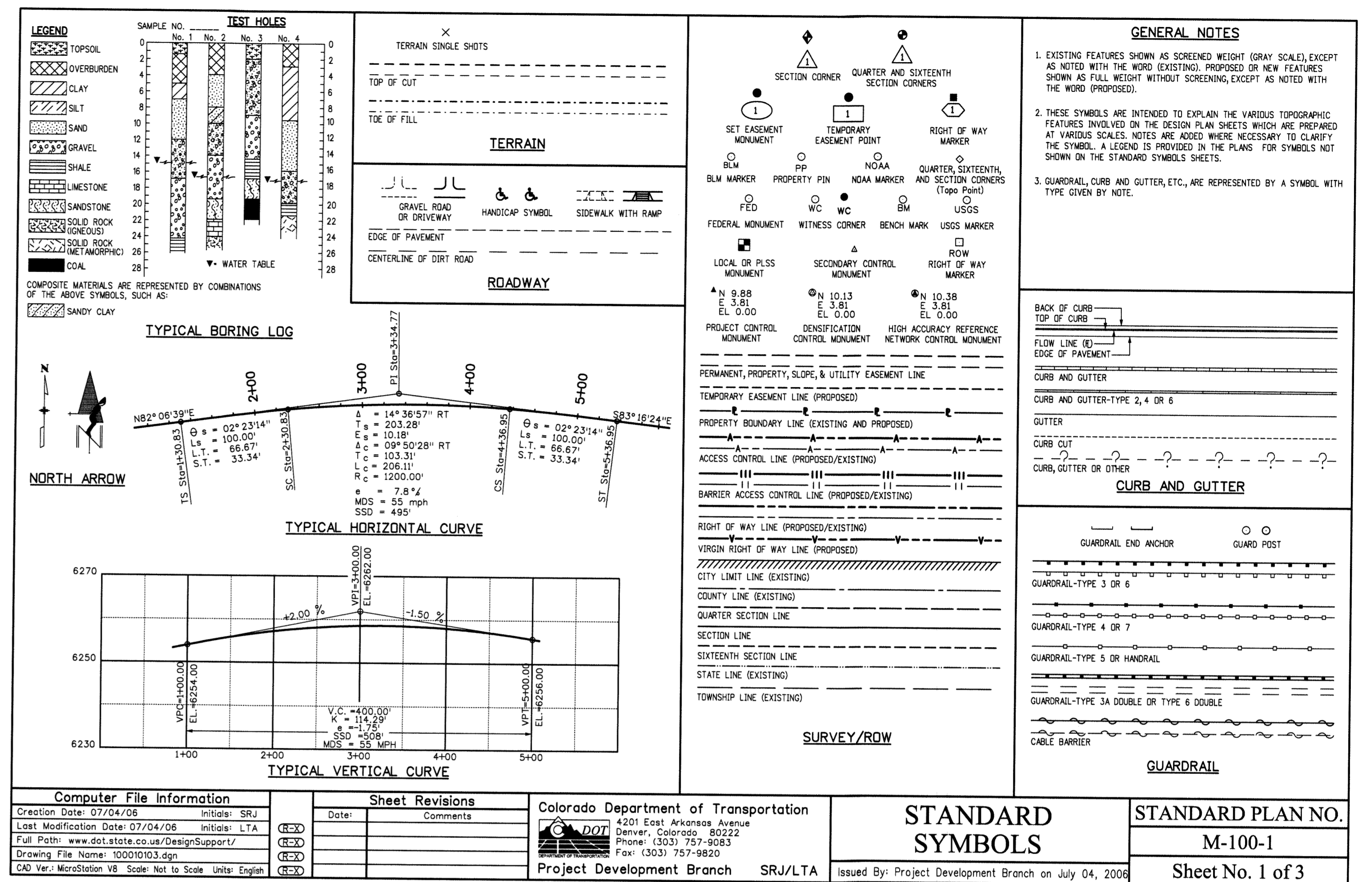
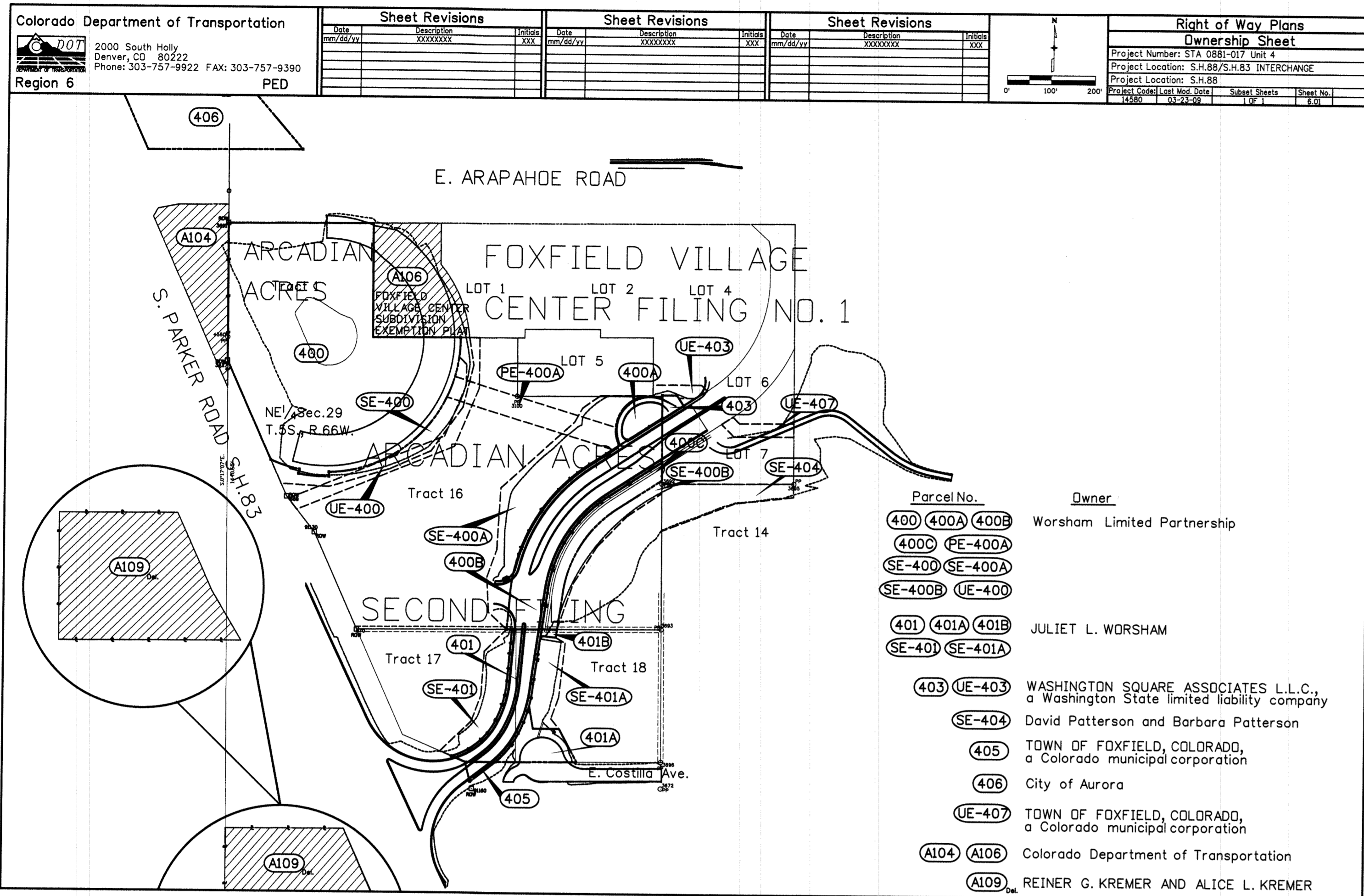
Point No.	Northing	Easting	Description
125	1642333.78	3196896.27	Type 3A

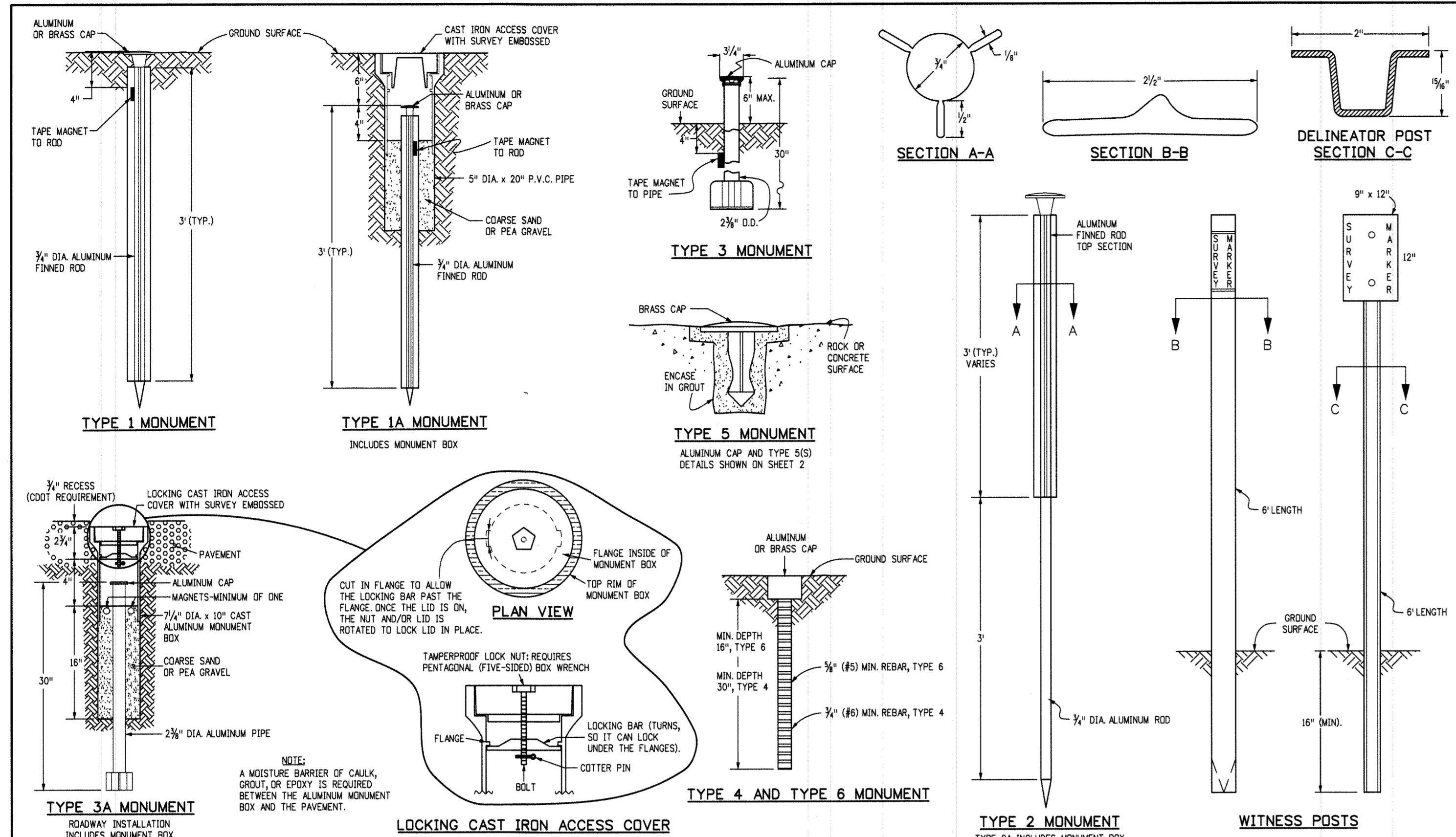
PERMANENT EASEMENT POINTS TO BE STAKED-NO MONUMENTS TO BE SET

Point No.	Northing	Easting
739	1641871.91	3197397.42
740	1641918.70	3197415.42
741	1641907.50	3197783.73
743	1641757.35	3197776.83

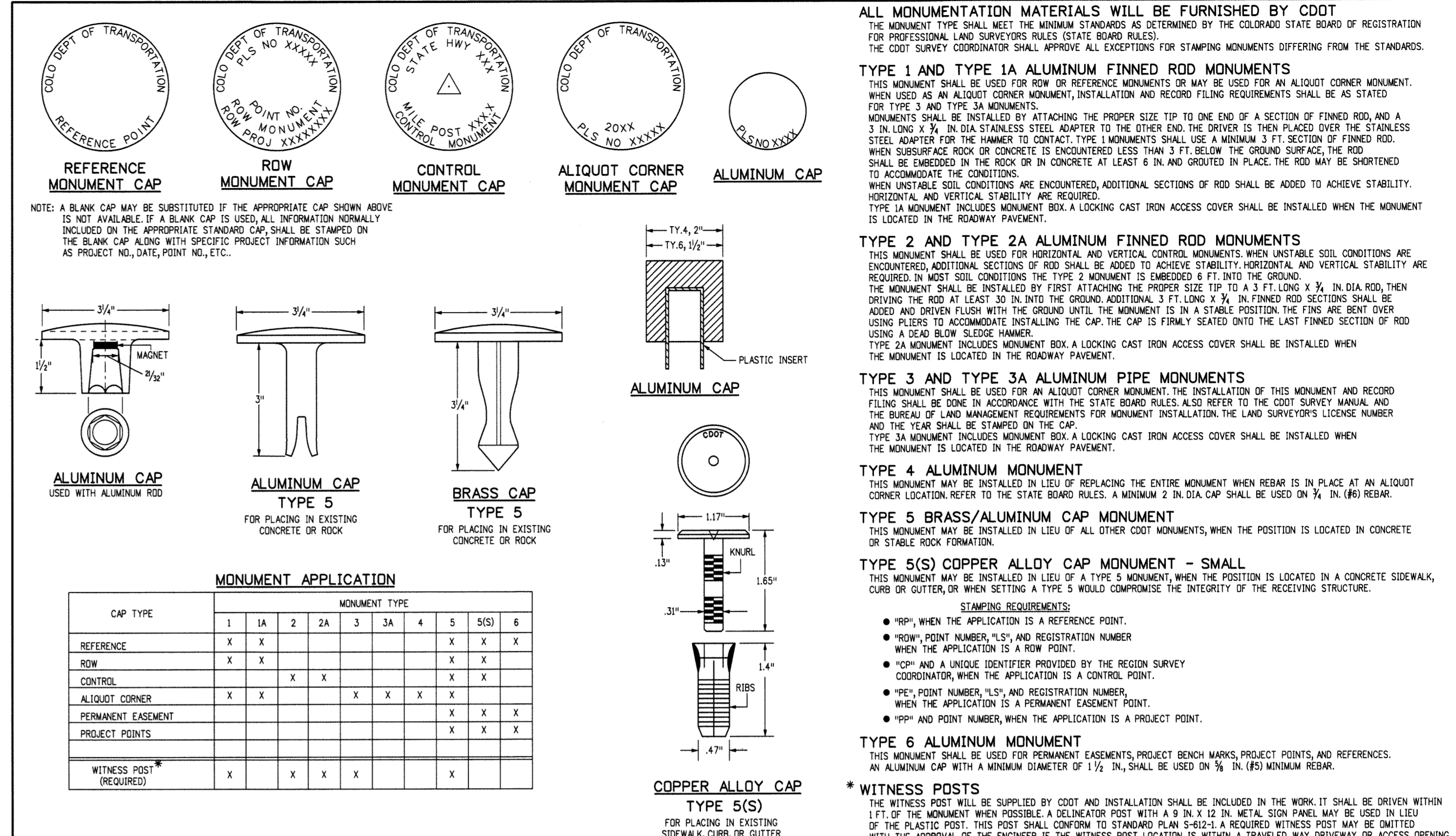
UTILITY EASEMENT POINTS TO BE STAKED-NO MONUMENTS TO BE SET

Point No.	Northing	Easting
729	1641615.28	3197058.78
730	1641639.77	3197039.35
731	1641783.99	3197393.21
732	1641699.75	3197441.74
733	1641948.50	3197441.94
734	1641963.64	3197424.95
736	1642007.75	3197472.21
737	1641993.05	3197471.72
738	1641760.90	3197416.07
796	1641880.64	3197867.53
802	1641904.66	3197867.53
803	1641905.12	3197977.51
804	1641892.13	3197966.62
80		





Computer File Information		Sheet Revisions		Colorado Department of Transportation		SURVEY MONUMENTS		STANDARD PLAN NO.	
Creation Date: 07/04/06	Initials: SJR	Date:	Comments:	4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9083 Fax: (303) 757-9820		M-629-1		M-629-1	
Last Modification Date: 07/04/06	Initials: LTA			Project Development Branch SRJ/LTA		Sheet No. 1 of 2		Sheet No. 1 of 2	
Full Path: www.dot.state.co.us/DesignSupport/				Issued By: Project Development Branch July 04, 2006				Sheet No. 2 of 2	
Drawing File Name: 629010102.dgn									
CAD Ver.: MicroStation V8	Scale: Not to Scale	Units: English							



Computer File Information		Sheet Revisions		Colorado Department of Transportation		SURVEY MONUMENTS		STANDARD PLAN NO.	
Creation Date: 07/04/06	Initials: SJR	Date:	Comments:	4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9083 Fax: (303) 757-9820		M-629-1		M-629-1	
Last Modification Date: 07/04/06	Initials: LTA			Project Development Branch SRJ/LTA		Sheet No. 2 of 2		Sheet No. 2 of 2	
Full Path: www.dot.state.co.us/DesignSupport/				Issued By: Project Development Branch July 04, 2006					
Drawing File Name: 629010102.dgn									
CAD Ver.: MicroStation V8	Scale: Not to Scale	Units: English							

ALL MONUMENTATION MATERIALS WILL BE FURNISHED BY CDDT
 THE MONUMENT TYPE SHALL MEET THE MINIMUM STANDARDS AS DETERMINED BY THE COLORADO STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS RULES (STATE BOARD RULES).
 THE CDDT SURVEY COORDINATOR SHALL APPROVE ALL EXCEPTIONS FOR STAMPING MONUMENTS DIFFERING FROM THE STANDARDS.

TYPE 1 AND TYPE 1A ALUMINUM FINNED ROD MONUMENTS
 THIS MONUMENT SHALL BE USED FOR ROW OR REFERENCE MONUMENTS OR MAY BE USED FOR AN ALIQUOT CORNER MONUMENT. WHEN USED AS AN ALIQUOT CORNER MONUMENT, INSTALLATION AND RECORD FILING REQUIREMENTS SHALL BE AS STATED FOR TYPE 3 AND TYPE 3A MONUMENTS.
 MONUMENTS SHALL BE INSTALLED BY ATTACHING THE PROPER SIZE TIP TO ONE END OF A SECTION OF FINNED ROD, AND A 3 IN. LONG x 3/4 IN. DIA. STAINLESS STEEL ADAPTER TO THE OTHER END. THE DRIVER IS THEN PLACED OVER THE STAINLESS STEEL ADAPTER FOR THE HAMMER TO CONTACT. TYPE 1 MONUMENTS SHALL USE A MINIMUM 3 FT. SECTION OF FINNED ROD. WHEN SUBSURFACE ROCK OR CONCRETE IS ENCOUNTERED LESS THAN 3 FT. BELOW THE GROUND SURFACE, THE ROD SHALL BE EMBEDDED IN THE ROCK OR IN CONCRETE AT LEAST 6 IN. AND GROUTED IN PLACE. THE ROD MAY BE SHORTENED TO ACCOMMODATE THE CONDITIONS.
 WHEN UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, ADDITIONAL SECTIONS OF ROD SHALL BE ADDED TO ACHIEVE HORIZONTAL AND VERTICAL STABILITY ARE REQUIRED.

TYPE 2 AND TYPE 2A ALUMINUM FINNED ROD MONUMENTS
 THIS MONUMENT SHALL BE USED FOR HORIZONTAL AND VERTICAL CONTROL MONUMENTS. WHEN UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, ADDITIONAL SECTIONS OF ROD SHALL BE ADDED TO ACHIEVE STABILITY. HORIZONTAL AND VERTICAL STABILITY ARE REQUIRED. IN MOST SOIL CONDITIONS THE TYPE 2 MONUMENT IS EMBEDDED 6 FT. INTO THE GROUND.
 THE MONUMENT SHALL BE INSTALLED BY FIRST ATTACHING THE PROPER SIZE TIP TO A 3 FT. LONG x 3/4 IN. DIA. ROD, THEN DRIVING THE ROD AT LEAST 30 IN. INTO THE GROUND. ADDITIONAL 3 FT. LONG x 3/4 IN. DIA. FINNED ROD SECTIONS SHALL BE ADDED AND DRIVEN FLUSH WITH THE GROUND UNTIL THE MONUMENT IS IN A STABLE POSITION. THE FINNS ARE BENT OVER USING PLIERS TO ACCOMMODATE INSTALLING THE CAP. THE CAP IS FIRMLY SEATED ONTO THE LAST FINNED SECTION OF ROD USING A DEAD BLOW SLEDGE HAMMER.

TYPE 3 AND TYPE 3A ALUMINUM PIPE MONUMENTS
 THIS MONUMENT SHALL BE USED FOR AN ALIQUOT CORNER MONUMENT. THE INSTALLATION OF THIS MONUMENT AND RECORD FILING SHALL BE DONE IN ACCORDANCE WITH THE STATE BOARD RULES. ALSO REFER TO THE CDDT SURVEY MANUAL AND THE BUREAU OF LAND MANAGEMENT REQUIREMENTS FOR MONUMENT INSTALLATION. THE LAND SURVEYOR'S LICENSE NUMBER AND THE YEAR SHALL BE STAMPED ON THE CAP.
 TYPE 3A MONUMENT INCLUDES MONUMENT BOX. A LOCKING CAST IRON ACCESS COVER SHALL BE INSTALLED WHEN THE MONUMENT IS LOCATED IN THE ROADWAY PAVEMENT.

TYPE 4 ALUMINUM MONUMENT
 THIS MONUMENT MAY BE INSTALLED IN LIEU OF REPLACING THE ENTIRE MONUMENT WHEN REBAR IS IN PLACE AT AN ALIQUOT CORNER LOCATION. REFER TO THE STATE BOARD RULES. A MONUMENT 2 IN. DIA. CAP SHALL BE USED ON 3/4 IN. (#6) REBAR.

TYPE 5 BRASS/ALUMINUM CAP MONUMENT
 THIS MONUMENT MAY BE INSTALLED IN LIEU OF ALL OTHER CDDT MONUMENTS, WHEN THE POSITION IS LOCATED IN CONCRETE OR STABLE ROCK FORMATION.

TYPE 5(S) COPPER ALLOY CAP MONUMENT - SMALL
 THIS MONUMENT MAY BE INSTALLED IN LIEU OF A TYPE 5 MONUMENT, WHEN THE POSITION IS LOCATED IN A CONCRETE SIDEWALK, CURB OR GUTTER, OR WHEN SETTING A TYPE 5 WOULD COMPROMISE THE INTEGRITY OF THE RECEIVING STRUCTURE.

STAMPING REQUIREMENTS:

- "RP" WHEN THE APPLICATION IS A REFERENCE POINT.
- "ROW", POINT NUMBER, "LS", AND REGISTRATION NUMBER WHEN THE APPLICATION IS A ROW POINT.
- "CP" AND AN INCLUSIVE IDENTIFIER PROVIDED BY THE REGION SURVEY COORDINATOR, WHEN THE APPLICATION IS A CONTROL POINT.
- "PE", POINT NUMBER, "LS", AND REGISTRATION NUMBER, WHEN THE APPLICATION IS A PERMANENT EASEMENT POINT.
- "PP" AND POINT NUMBER, WHEN THE APPLICATION IS A PROJECT POINT.

TYPE 6 ALUMINUM MONUMENT
 THIS MONUMENT SHALL BE USED FOR PERMANENT EASEMENTS, PROJECT BENCH MARKS, PROJECT POINTS, AND REFERENCES. AN ALUMINUM CAP WITH A MINIMUM DIAMETER OF 1 1/2 IN., SHALL BE USED ON 3/4 IN. (#6) MINIMUM REBAR.

*** WITNESS POSTS**
 THE WITNESS POST WILL BE SUPPLIED BY CDDT AND INSTALLATION SHALL BE INCLUDED IN THE WORK. IT SHALL BE DRIVEN WITHIN 1 FT. OF THE MONUMENT WHEN POSSIBLE. A DELINEATOR POST WITH A 9 IN. x 12 IN. METAL SIGN PANEL MAY BE USED IN LIEU OF THE PLASTIC POST. THIS POST SHALL CONFORM TO STANDARD PLAN S-82-2. A REQUIRED WITNESS POST MAY BE OMITTED WITH THE APPROVAL OF THE ENGINEER IF THE WITNESS POST LOCATION IS WITHIN A TRAVELED WAY, DRIVEWAY, OR ACCESS OPENING.