

Colorado Department of Transportation



**1420 Second Street
Greeley, CO 80631
Phone: 970-350-2153 FAX: 970-350-2178**

Region 4

DGM

DGM

Sheet Revisions

[illegible]

Sheet Revisions

[illegible]

Sheet Revisions

[illegible]

Right of Way Plans

TABULATION SHEET

Number: BRD C030-031

Location: WCR 13 @ BIG THOMPSON

Location: RIVER

Project Code	Last Mod. Date	Sheet No.	Total No. of Sheets
14989	05-23-08	1 of 1	2.01
			11



Weld County Colorado
Public Works Department
1111 H Street
Greeley, CO 80632
Phone: 970-304-6496 FAX: 970-304-6497

[illegible]

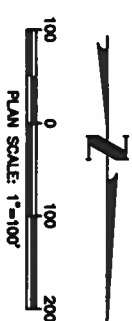
HARRIS KOCHER SMITH

ENGINEERS AND SURVEYORS
1391 Speer Blvd. - Suite 390
Denver, Colorado 80204

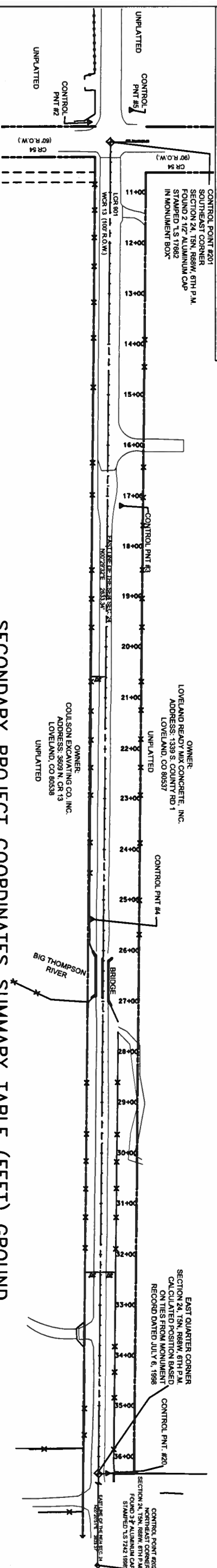


J. F. SATO AND ASSOCIATES
5898 South Rapp Street
Littleton, Colorado 80120

MDG
REGIONAL OFFICE
1420 Second Street
Greely, CO 80631
Phone: 970-350-2153 FAX: 970-350-2223

[illegible]

Right of Way Plans			
PROJECT CONTROL DIAGRAM			
Project Number: BRD C030 -031			
Project Location: WCR 13 & B16 THOMPSON			
Project Location: RIVER			
Project Codes	Sheet No.	Sheet No.	Total No. of Sheets
057-23-08	1 of 1	3, 01	11
14989			



BASIS OF BEARINGS: The East line of the Southeast quarter of Section 24, Township 5 North, Range 68 West of the 6th Principal Meridian, bearing North 00°29'32" East, between a found 2½" Aluminum Cap stamped "LS 17662" at the Southeast corner of said Section 24 and the calculated position based on monument record ties at the East quarter corner of said Section 24.

BASIS OF ELEVATION: Vertical control was established by differential leveling from The City of Greeley Control Network GIS Reference No. 27. The published orthometric height of No. 27 is 4997.82 ft NAVD 1988. Northing 1744019.918, Easting 3114988.848
*NGVD 29 el.=4994.78, difference between NGVD 29 and NAVD 1988 at this point is 3.04 feet.

COORDINATE DATUM: Geodetic coordinates were derived from GPS observations tied to Ham Station "KING". State Plane coordinates NAD 83 (1992) are Colorado Northern Zone. Project coordinates are modified State Plane coordinates in U.S. Survey Feet. To Convert Project coordinates to State Plane Coordinates, multiply by a combined scale factor of 0.9997258157 and applied at scale point Northing 1391643.180, Easting 3158130.712

**"King" – Modified Colorado Northern Zone State Plane Coordinates
Northing 1391643.180, Easting 3158130.712**

Latitude 40° 24' 25.46098 N
Longitude 104° 55' 55.78931 W
Ellip. Ht.= 1517.0 M

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 statement shown.

NOTE: This Project Control Diagram was prepared for The County of Weld purposes. It is not a Boundary Survey, Land Survey Plat or Right of Way Plat.

NOTE: All found or set monuments were located or set from existing City of Greeley Control Network Monuments. The Primary Control Survey was performed at a higher degree of accuracy than the ROW survey shown on this diagram.

POINT NAME	PROJECT COORDINATES APPLIED AT SCALE POINT		PROJECT COORDINATES APPLIED AT ZERO, ZERO		ELEVATION (NAVD 88)	DESCRIPTION
	NORTHING	EASTING	NORTHING	EASTING		
CP-2	1380995.031	3154635.811	1381376.729	3155502.002	4809.69	SET #5 REBAR
CP-3	1381753.070	3154572.823	1382134.771	3155439.015	4809.69	SET #5 REBAR
CP-4	1382571.762	3154630.439	1382953.466	3155496.633	4809.61	SET #5 REBAR
CP-5	1380971.006	3154554.179	1381352.704	3155420.371	4811.32	SET #5 REBAR
CP-20	1383666.418	3154598.824	1384045.902	3155464.003	4813.66	SET #5 REBAR
CP-201	1381033.977	3154593.857	1381412.739	3155459.034	4811.33	SE/4 COR. SEC 24, 2 1/2" ALUM. CAP "LS 17662"
CP-202	1386294.742	3154632.405	1386674.947	3155497.593	4879.19	NE/4 COR. SEC 24, 3 1/4" ALUM. CAP "LS 7242"

SECONDARY PROJECT COORDINATES SUMMARY TABLE (FEET) GROUND

GEODETIC COORDINATES SUMMARY TABLE (FEET) (ADJUSTED FIELD DATA)

POINT NAME	GEODETIC COORDINATES (NAD-83(92) (CHARM))		ELEV. (NAVD 88)	MAPPING ANGLE	SCALE	NAD 83(92) GRID	
	LATITUDE (N)	LONGITUDE (W)				NORTHING	EASTING
CP-2	40°22'40.48506" N	104°56'41.81632" W	4809.69	00°21'31"	0.999959302	1380997.977	3154636.813
CP-3	40°22'47.97780" N	104°56'42.56872" W	4809.69	00°21'31"	0.999959383	1381755.811	3154673.843
CP-4	40°22'56.06229" N	104°56'41.75820" W	4809.61	00°21'31"	0.999959472	1382574.282	3154631.445
CP-5	40°22'40.25277" N	104°56'42.87278" W	4811.32	00°21'30"	0.999959300	1380973.959	3154655.204

* SITE CONTROL COORDINATES ARE MODIFIED STATE PLANE COORDINATES, COLORADO NORTHERN ZONE, TO GET STATE PLANE NORTHERN COORDINATES (NAD 83(92)). MULTIPLY THE MODIFIED STATE PLANE COORDINATES WHICH ARE SHOWN ABOVE BY 0.9997258157

LEGEND

SECTION CORNER AS DESCRIBED

SURVEY CONTROL POINT

SURVEYORS CERTIFICATION: I, George G. Smith Jr., a Professional Land Surveyor in the State of Colorado, hereby certify that this Project Control Diagram was prepared under my direct supervision and checking this 24th day of October, 2007, from a Control Survey performed under my supervision and checking for and on behalf of the Department of Transportation, State of Colorado, and is not a Land Survey Plat or Right-of-Way Survey Plat and to the best of my knowledge and belief this Control Survey, as shown, meets the minimum Horizontal and Vertical Accuracy Tolerance for a CDOT Class B – Secondary Survey, and Topographic, Survey as shown, meets the applicable Minimum Horizontal and Vertical Accuracy Tolerance for a Class C or D TMOSS Survey in accordance with the CDOT Survey Manual.

CDOT Survey Manual.

George G. Smith, PLS 19003

HARRIS KOCHER SMITH
engineers and surveyors
1391 Speer Blvd. - Suite 390
Denver, Colorado 80204

JFS
J. F. SATO AND ASSOCIATES
5898 South Rapp Street
Littleton, Colorado 80120

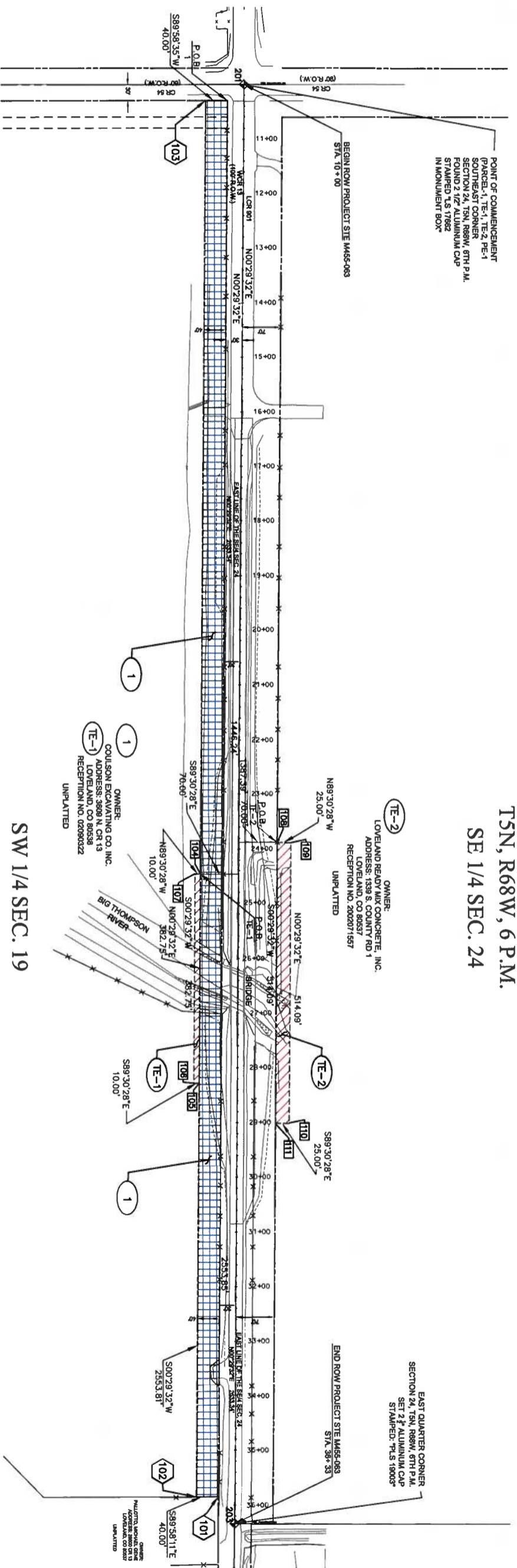


Colorado Department of Transportation
1420 Second Street
Greeley, CO 80631
Phone: 970-350-2153 FAX: 970-350-2178
Region 4
DCM

WELD COUNTY
Colorado
Public Works Department
1111 H Street
Greeley, CO 80632
Phone: 970-304-6496 FAX: 970-304-6497

Sheet Revisions			Sheet Revisions			Sheet Revisions		
Date	Description	Initials	Date	Description	Initials	Date	Description	Initials
mm/yy			mm/yy			mm/yy		

Right of Way Plans		
PLAN SHEET		
Project Number: BRD C030-031		
Project Location: WCR 13 @ BIG THOMPSON		
Project Location: RIVER		
Project Code	Last Mod. Date	Sheet No.
14989	05-23-08	1 of 1
		Sheet No. of Sheets
		11



ROW ACQUISITION
TEMPORARY CONSTRUCTION EASEMENT

DESCR.	STA	NORTHING	EASTING
CNT PT. 201	10+00	1381033.97	3154593.85
E 1/4 SEC. 24	36+33.34	1383667.21	3154616.47

PROJECT BASELINE CONTROL

SW 1/4 SEC. 19
T5N, R67W, 6 P.M.

HARRIS KOCHER SMITH
1391 Speer Blvd. - Suite 390
Denver, Colorado 80204
JFS
J. F. SATO AND ASSOCIATES
5898 South Rood Street
Littleton, Colorado 80120

Colorado Department of Transportation
1420 Second Street
Greeley, CO 80631
Phone: 970-350-2153 FAX: 970-350-2178
Region 4
DGM

WELD
COLORADO
Weld County Colorado
Public Works Department
1111 H Street
Greeley, CO 80632
Phone: 970-304-6496 FAX: 970-304-6497

Sheet Revisions		Sheet Revisions		Sheet Revisions	
Date	Description	Date	Description	Date	Description
mm/yy		mm/yy		mm/yy	

Right of Way Plans			
OWNERSHIP SHEET			
Project Number: BRD C030-031			
Project Location: WCR 13 @ BIG THOMPSON			
Project Location: RIVER			
Project Code:	Let No. Date	Sheet No.	Total No. of Sheets
14989	05-23-08	1 of 1	6.01

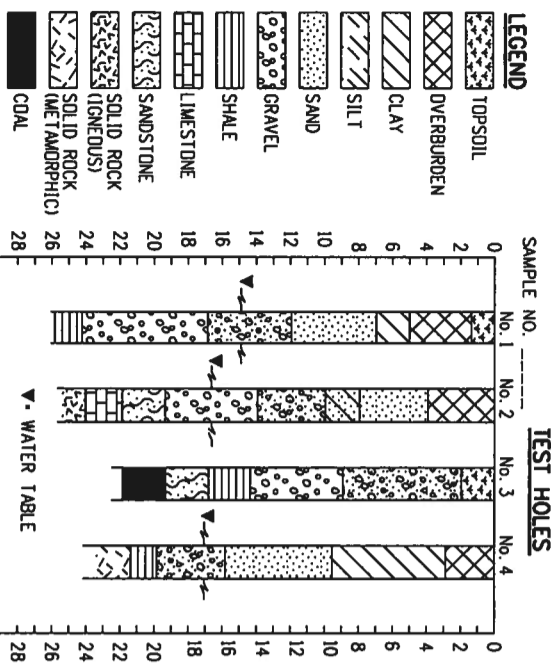


BASIS OF BEARING:
The East line of the Southeast quarter of Section 24, Township 5 South, Range 68 West of the 6th Principal Meridian, bearing North 00°29'32" East, between a found 2 1/2" Aluminum Cap stamped "LS 17662" at the Southeast Corner of said Section 24 and set a 2 1/2" Aluminum Cap stamped: "PLS 19003" at the East Quarter Corner of said Section 24.

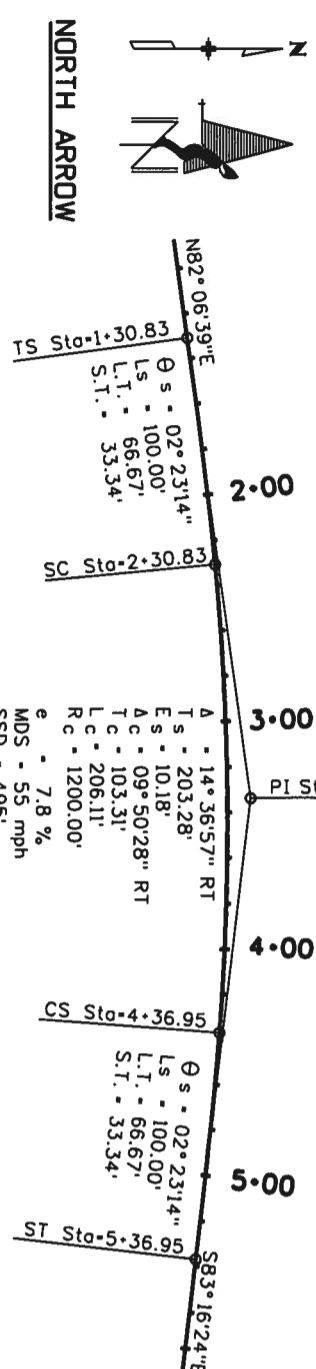
ROW ACQUISITION
TEMPORARY CONSTRUCTION EASEMENT

HARRIS KOCHER SMITH
Surveyors
1391 Speer Blvd. - Suite 390
Denver, Colorado 80204

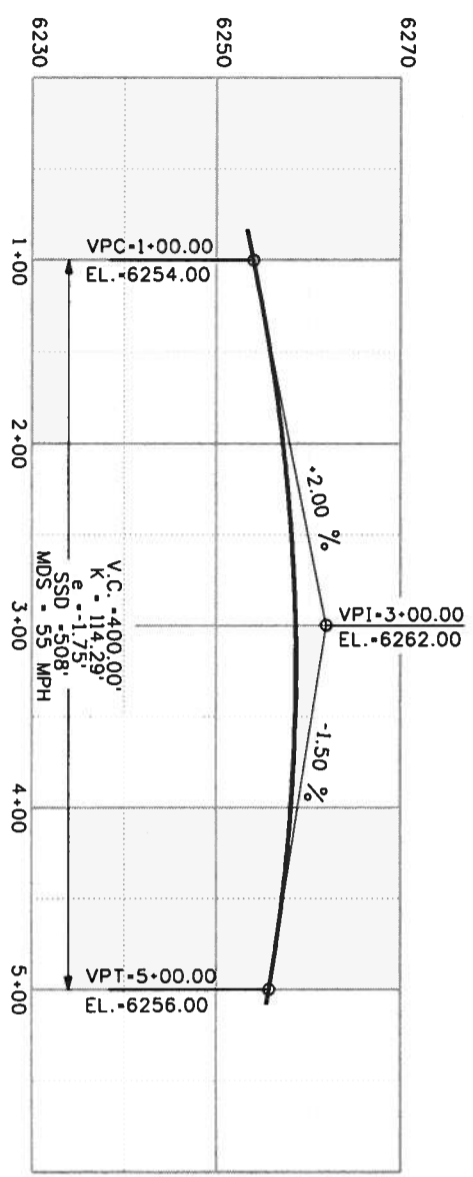
JFS
J. F. SAITO AND ASSOCIATES
3698 South Robb Street
Littleton, Colorado 80120



TYPICAL BORING LOG



TYPICAL HORIZONTAL CURVE



TYPICAL VERTICAL CURVE

Computer File Information

Creation Date: 07/04/06	Initials: SRJ
Last Modification Date: 07/04/06	Initials: LTA
Full Path: www.dot.state.co.us/DesignSupport/	
Drawing File Name: 100010103.dgn	
CAD Ver.: MicroStation V8	Scale: Not to Scale Units: English

Sheet Revisions

Date:	Comments:

Colorado Department of Transportation

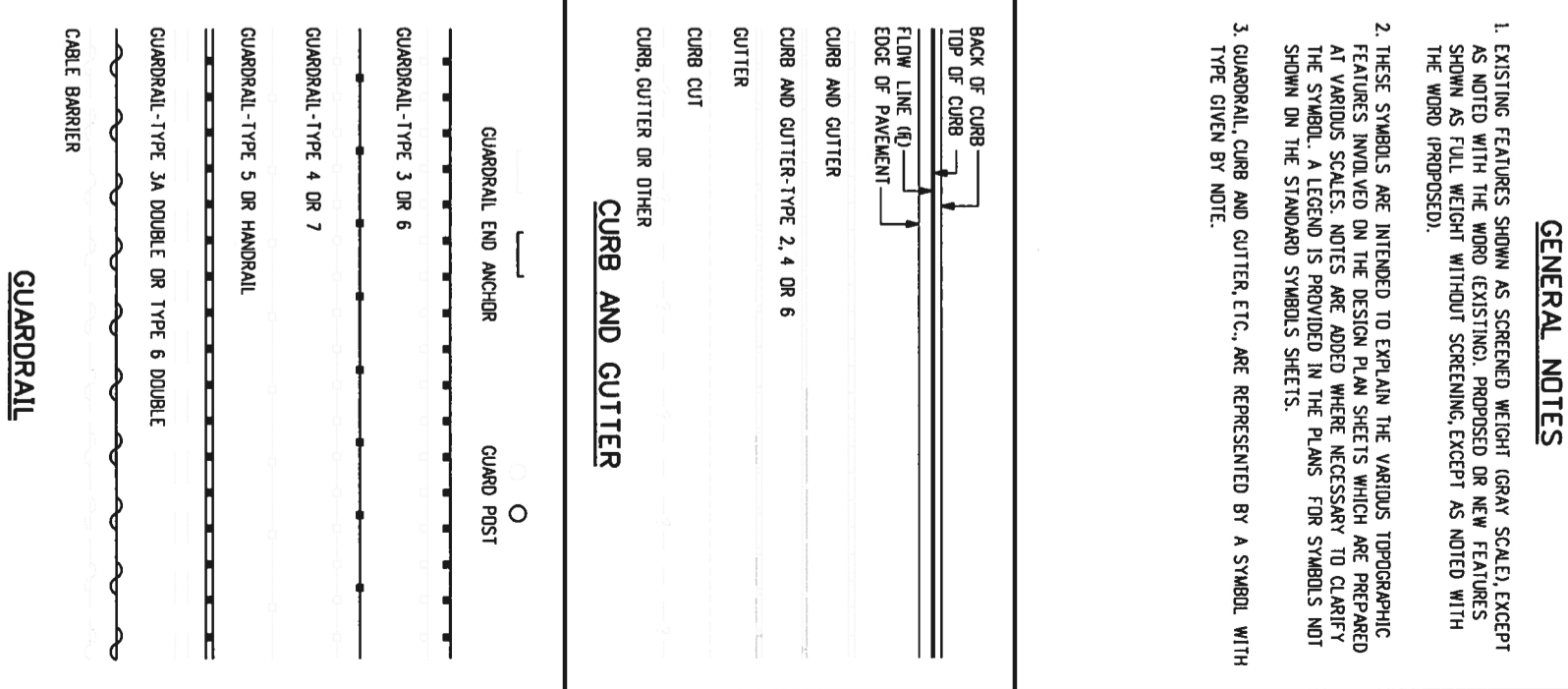
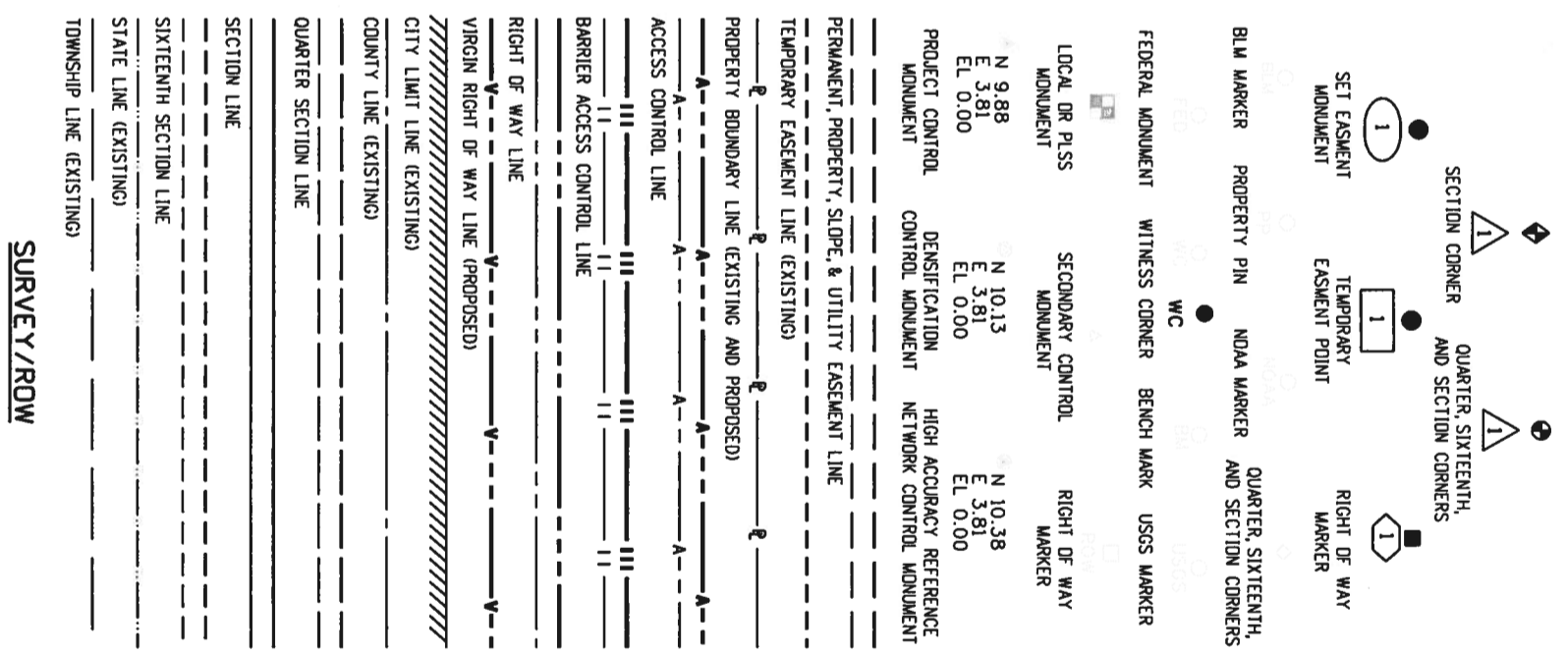
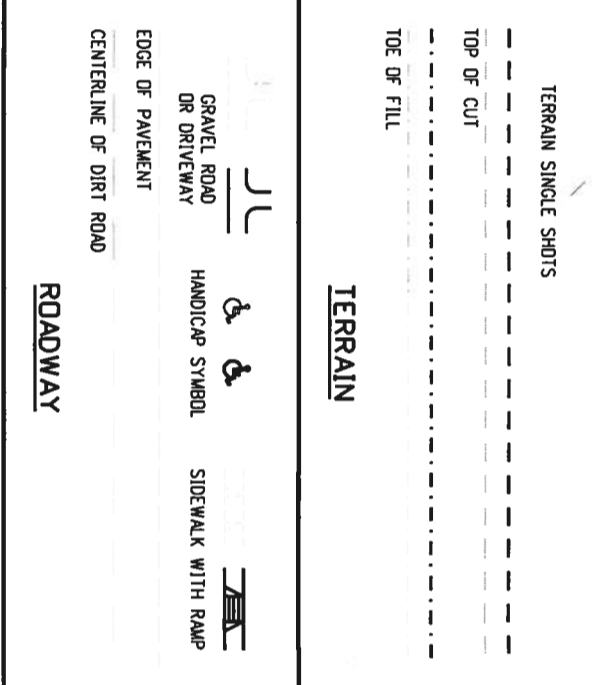
4201 East Arkansas Avenue
Denver, Colorado 80222
Phone: (303) 757-9083
Fax: (303) 757-9820

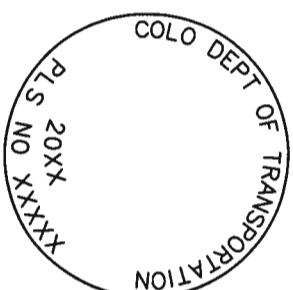
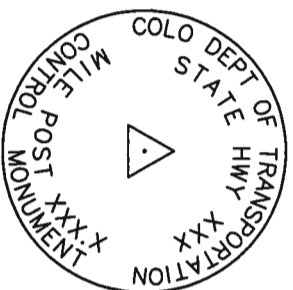
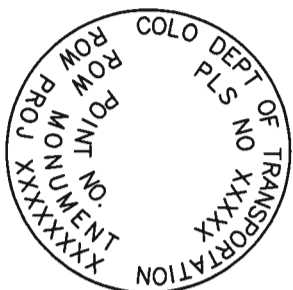
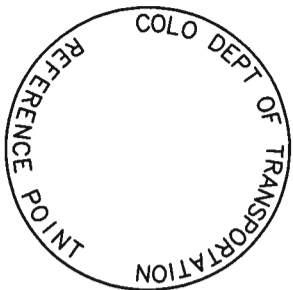
Project Development Branch SRJ/LTA

STANDARD PLAN NO.

M-100-1

Sheet No. 1 of 3





NOTE: A BLANK CAP MAY BE SUBSTITUTED IF THE APPROPRIATE CAP SHOWN ABOVE IS NOT AVAILABLE. IF A BLANK CAP IS USED, ALL INFORMATION NORMALLY INCLUDED ON THE APPROPRIATE STANDARD CAP, SHALL BE STAMPED ON THE BLANK CAP ALONG WITH SPECIFIC PROJECT INFORMATION SUCH AS PROJECT NO., DATE, POINT NO., ETC..

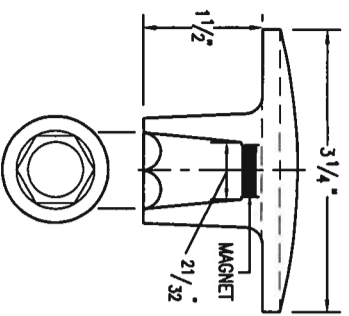
REFERENCE MONUMENT CAP

ROW MONUMENT CAP

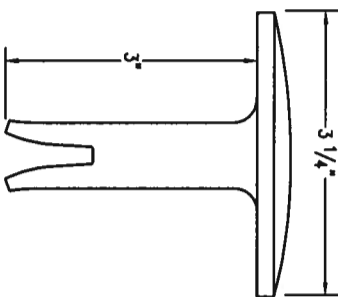
CONTROL MONUMENT CAP

ALIQUOT CORNER MONUMENT CAP

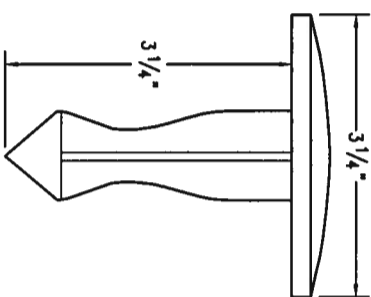
ALUMINUM CAP



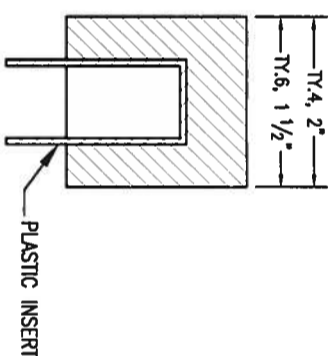
ALUMINUM CAP USED WITH ALUMINUM ROD



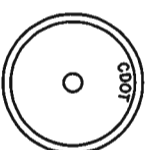
ALUMINUM CAP TYPE 5 FOR PLACING IN EXISTING CONCRETE OR ROCK



BRASS CAP TYPE 5 FOR PLACING IN EXISTING CONCRETE OR ROCK

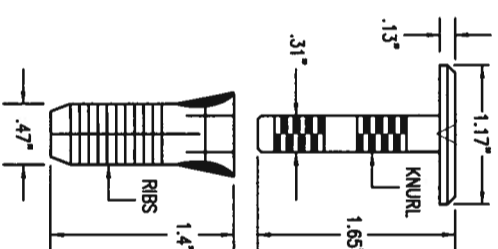


ALUMINUM CAP



CAP TYPE	MONUMENT TYPE					
	1	1A	2	2A	3	3A
REFERENCE	X	X				
ROW	X	X				
CONTROL			X	X		
ALIQUOT CORNER	X	X			X	X
PERMANENT EASEMENT						X
PROJECT POINTS						X
WITNESS POST * (REQUIRED)	X		X	X	X	

MONUMENT APPLICATION



COPPER ALLOY CAP TYPE 5(S) FOR PLACING IN EXISTING SIDEWALK, CURB, OR GUTTER

ALL MONUMENTATION MATERIALS WILL BE FURNISHED BY CDOT. 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 CDOT 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 STABILITY. HORIZONTAL AND VERTICAL STABILITY ARE REQUIRED. TYPE 1A MONUMENT INCLUDES MONUMENT BOX. A LOCKING CAST IRON ACCESS COVER SHALL BE INSTALLED WHEN THE MONUMENT IS LOCATED IN THE ROADWAY PAVEMENT.

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. FINNED ROD SECTIONS SHALL BE ADDED AND DRIVEN FLUSH WITH THE GROUND UNTIL THE MONUMENT IS IN A STABLE POSITION. THE FINS 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 2A MONUMENT INCLUDES MONUMENT BOX. A LOCKING CAST IRON ACCESS COVER SHALL BE INSTALLED WHEN THE MONUMENT IS LOCATED IN THE ROADWAY PAVEMENT.

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 CDOT 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 MINIMUM 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 CDOT 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 A UNIQUE 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 5/8 IN. (#5) MINIMUM REBAR.

* WITNESS POSTS

THE WITNESS POST WILL BE SUPPLIED BY CDOT AND INSTALLATION SHALL BE INCLUDED IN THE WORK. IT SHALL BE DRIVEN WITHIN 1 FT. OF THE MONUMENT WHEN POSSIBLE. A DELINEATOR SIGN 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-612-1. 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.

Computer File Information

Creation Date: 07/04/06 Initials: SJR
Last Modification Date: 07/04/06 Initials: LTA
Full Path: www.dot.state.co.us/DesignSupport/
Drawing File Name: 629010202.dwg
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

Sheet Revisions

Date:	Comments
(R=)X	
(R=)X	
(R=)X	
(R=)X	

Colorado Department of Transportation

4201 East Arkansas Avenue
Denver, Colorado 80222
Phone: (303) 757-9083
Fax: (303) 757-9820

Project Development Branch

SRJ/LTA

SURVEY MONUMENTS

STANDARD PLAN NO.

M-629-1

Issued By: Project Development Branch on July 04, 2006

Sheet No. 2 of 2