Colorado Department of Transportation
2000 South Holly
Denver, CO 80222
Phone: 303-757-9923 FAX: 303-757-9390
Region 6 SLK

Sheet Revisions		
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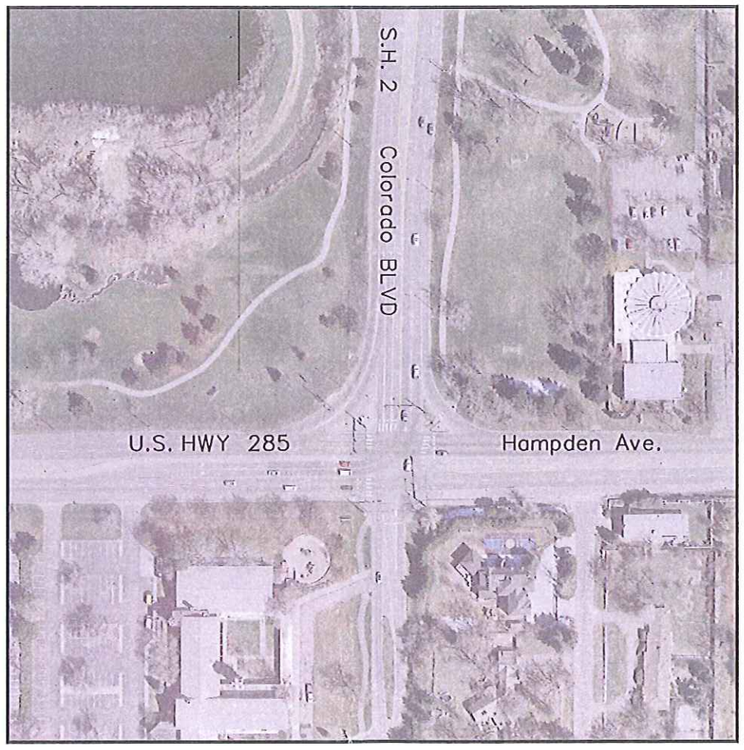
Project Control Diagram
Title Sheet
Project Number: STU 2854-127
Project Location: S.H. 2 @ S.H. 285
Colorado BLVD @ Hampden Ave.

Project Code:	Last Mod. Date	Subset	Sheet No.
18737	9-10-12	3.01 of 3.02	3.01

DEPARTMENT OF TRANSPORTATION
STATE OF COLORADO

PROJECT CONTROL DIAGRAM

State Highway 2 @ U.S. Highway 285
Section 31 T.4S. R67W.
Section 6 T.5S. R67W.
Section 36 T.4S. R68W.
Section 1 T.5S. R68W.
of the 6th Principal Meridian
Counties of Arapahoe and Denver



PROJECT LOCATION MAP

0' 100' 200' 400'

N

SECTION CORNER
QUARTER, SIXTEENTH, AND SECTION CORNERS
SET EASMENT MONUMENT
TEMPORARY EASMENT POINT
RIGHT OF WAY MARKER
BLM MARKER
PP PROPERTY PIN
NOAA MARKER
QUARTER, SIXTEENTH, AND SECTION CORNERS
FED FEDERAL MONUMENT
WC WC WITNESS CORNER
BM BENCH MARK
USGS USGS MARKER
LOCAL OR PLSS MONUMENT
SECONDARY CONTROL MONUMENT
ROW RIGHT OF WAY MARKER
N 9.88 E 3.81 EL 0.00 PROJECT CONTROL MONUMENT
N 10.13 E 3.81 EL 0.00 DENSIFICATION CONTROL MONUMENT
N 10.38 E 3.81 EL 0.00 HIGH ACCURACY REFERENCE NETWORK CONTROL MONUMENT

Note: For a complete listing of symbololgy 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.

Typical Control Monument Cap
Not to Scale

▲ CM - Control Point Monuments set by CDOT. They are CDOT Type 5(s) monuments, a 1" dia. brass control monument.

General Notes:

1. This Project Control Diagram is not a boundary survey of the adjoining property and is prepared for the Colorado Department of Transportation purposes only.

2. This plan set is subject to change and may not be the most current set. It is the user's responsibility to verify with CDOT that this set 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, 2012 found in The Colorado Department of Transportation, M & S Standards for typical survey monument descriptions.

SHEET NO.	INDEX OF SHEETS
3.01-3.01	(1) Title Sheet
3.02-3.02	(1) Coordinate Tables
3.03-3.0X	(N/A) Plan Sheet
	(2) Total Sheets

Basis of Bearings: Bearings used in the calculations of coordinates are based on a grid bearing of S01°50'01"W from Transportation (525) to Z409. Both monuments are NGS deep rods, marked appropriately for location and control position. The survey data was obtained from a Global Positioning System (GPS) survey base on the Colorado High Accuracy Reference Network (CHARN).

Basis of Elevations: Project elevations are based on Bench Mark Y409 1984, PID: KK1491, a deep rod bench mark set in a 5" LOGO box flush with ground, with a NAVD 88 elevation of 5483.81 ft. Y409 is a NGS first order benchmark.

COORDINATE DATUM: Project coordinates are modified Colorado State Plane Central Zone NAD '83/(92) coordinates. The combined elevation/scale factor used to modify the coordinates from state plane to project coordinates is 1.000263782. The CHARN is based on the NAD '83(92) datum.
Project Coordinates Northing US Survey Feet = (State Plane Coordinate Northing * 1.000263782 - 1,002,478.76).
Project Coordinates Easting US Survey Feet = (State Plane Coordinate Easting * 1.000263782 - 2,181,724.58).

Horizontal Control Tolerance for Primary control meets CDOT class A (+/- 0.07' with 95% certainty.) Horizontal Control Tolerance for Secondary control meets CDOT class B (+/-0.13' with 95% certainty.)

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

Coordinates were established on the tabulated Secondary control monuments, Aliquots, found property pins and Right of Way markers using dual base RTK from Primary control points and meaning the two observations at each location.

Aliqouts, Right of Way Markers and Property pins tabulated are Project specific coordinates having GPS derived elevations.

Lineal units are in U.S. Survey feet.

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 (PROJECT CONTROL DIAGRAM)

I, Kathryn Jane Lyon, a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation this Project Control Diagram 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. 38110

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DOT
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mm/dd/yy	XXXXXXXX	XXX

0' 50 100 200

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Project Control Diagram
Plan Sheet
Project Number: STU 2854-127
Project Location: S.H. 285 @ S.H. 2
Hampden Ave. @ Colorado BLVD.

Project Code:	Last Mod. Date	Subset	Sheet No.
18737	09-11-12	3.02 of 3.02	3.02

CHARN GEODETIC COORDINATE SUMMARY TABLE

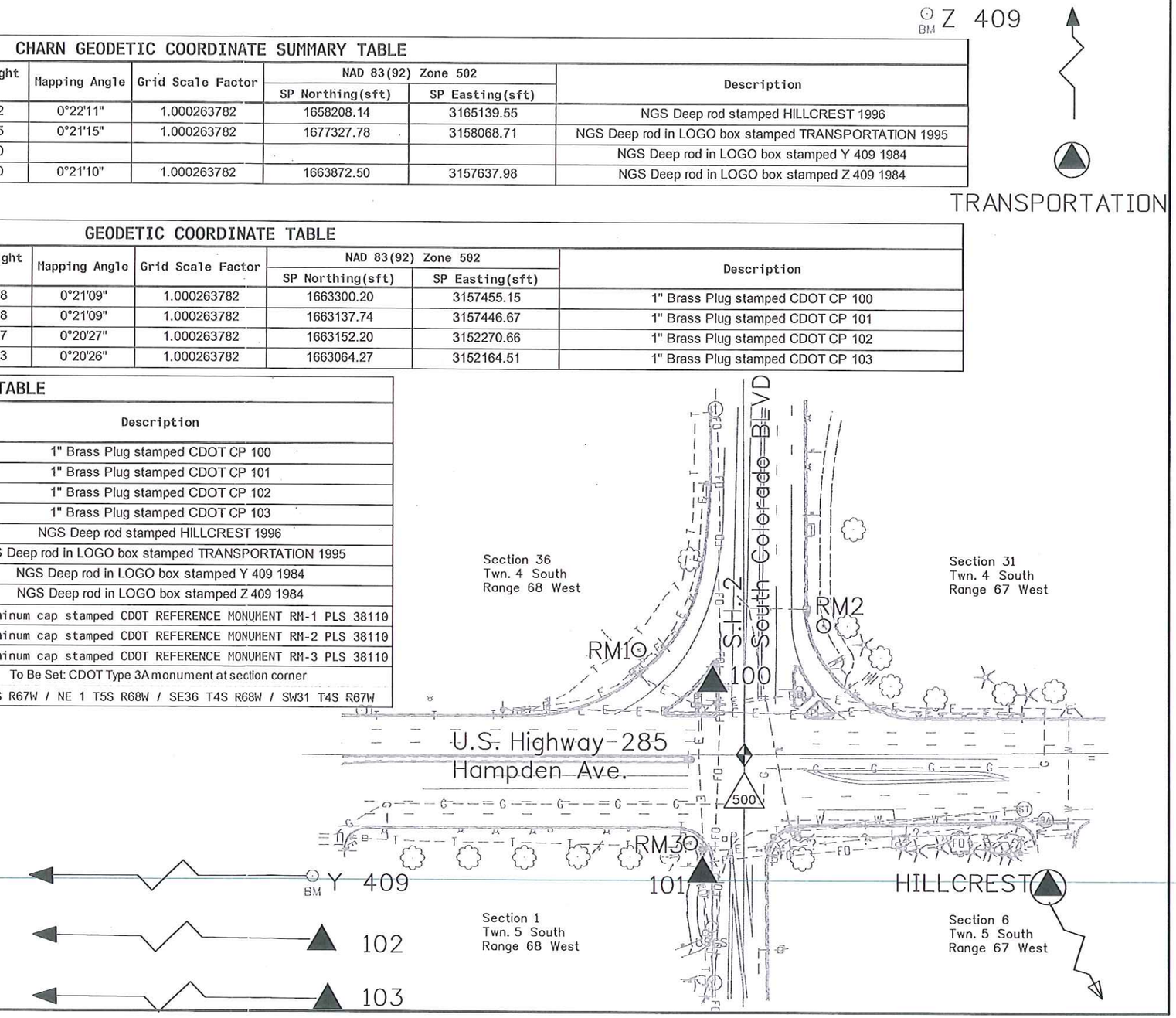
Point No.	Geodetic Coordinates NAD-83(92) (CHARN)		Elip Height (NAVD88) (sft)	Ortho Height (sft)	Mapping Angle	Grid Scale Factor	NAD 83(92) Zone 502		Description
	Latitude(N)	Longitude(W)					SP Northing(sft)	SP Easting(sft)	
516	39°38'20.80449"	-104°54'49.02620"	5569.354	5625.622	0°22'11"	1.000263782	1658208.14	3165139.55	NGS Deep rod stamped HILLCREST 1996
525	39°41'30.20297"	-104°56'17.89912"	5391.532	5447.835	0°21'15"	1.000263782	1677327.78	3158068.71	NGS Deep rod in LOGO box stamped TRANSPORTATION 1995
Y409	39°39'10.16612"	-104°56'48.97540"	5427.847	5483.810					NGS Deep rod in LOGO box stamped Y 409 1984
Z409	39°39'17.25266"	-104°56'24.46985"	5433.908	5489.970	0°21'10"	1.000263782	1663872.50	3157637.98	NGS Deep rod in LOGO box stamped Z 409 1984

GEODETIC COORDINATE TABLE

Point No.	Geodetic Coordinates NAD-83(92) (CHARN)		Elip Height (NAVD88) (sft)	Ortho Height (sft)	Mapping Angle	Grid Scale Factor	NAD 83(92) Zone 502		Description
	Latitude(N)	Longitude(W)					SP Northing(sft)	SP Easting(sft)	
100	39°39'11.60784"	-104°56'26.85243"	5442.704	5498.748	0°21'09"	1.000263782	1663300.20	3157455.15	1" Brass Plug stamped CDOT CP 100
101	39°39'10.00276"	-104°56'26.97364"	5446.207	5502.248	0°21'09"	1.000263782	1663137.74	3157446.67	1" Brass Plug stamped CDOT CP 101
102	39°39'10.45538"	-104°57'33.14858"	5366.085	5421.887	0°20'27"	1.000263782	1663152.20	3152270.66	1" Brass Plug stamped CDOT CP 102
103	39°39'09.59260"	-104°57'34.51239"	5368.027	5423.823	0°20'26"	1.000263782	1663064.27	3152164.51	1" Brass Plug stamped CDOT CP 103

PROJECT COORDINATE TABLE

Point No.	Project Coordinates		Elev(ft) (NAVD88)	Description
	Northing(ft)	Easting(ft)		
100	661260.18	976563.45	5498.75	1" Brass Plug stamped CDOT CP 100
101	661097.68	976554.96	5502.25	1" Brass Plug stamped CDOT CP 101
102	661112.15	971377.59	5421.89	1" Brass Plug stamped CDOT CP 102
103	661024.19	971271.41	5423.82	1" Brass Plug stamped CDOT CP 103
516	656166.67	984249.87	5625.62	NGS Deep rod stamped HILLCREST 1996
525	675291.46	977177.17	5447.84	NGS Deep rod in LOGO box stamped TRANSPORTATION 1995
Y409	661103.68	974833.55	5483.81	NGS Deep rod in LOGO box stamped Y 409 1984
Z409	661832.64	976746.32	5489.97	NGS Deep rod in LOGO box stamped Z 409 1984
RM1	661288.32	976499.82	5495.69	3.25" Aluminum cap stamped CDOT REFERENCE MONUMENT RM-1 PLS 38110
RM2	661309.16	976658.76	5496.93	3.25" Aluminum cap stamped CDOT REFERENCE MONUMENT RM-2 PLS 38110
RM3	661123.80	976544.42	5501.28	3.25" Aluminum cap stamped CDOT REFERENCE MONUMENT RM-3 PLS 38110
500	661198.90	976590.70	5500	To Be Set: CDOT Type 3A monument at section corner
				NW 6 T5S R67W / NE 1 T5S R68W / SE36 T4S R68W / SW31 T4S R67W



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