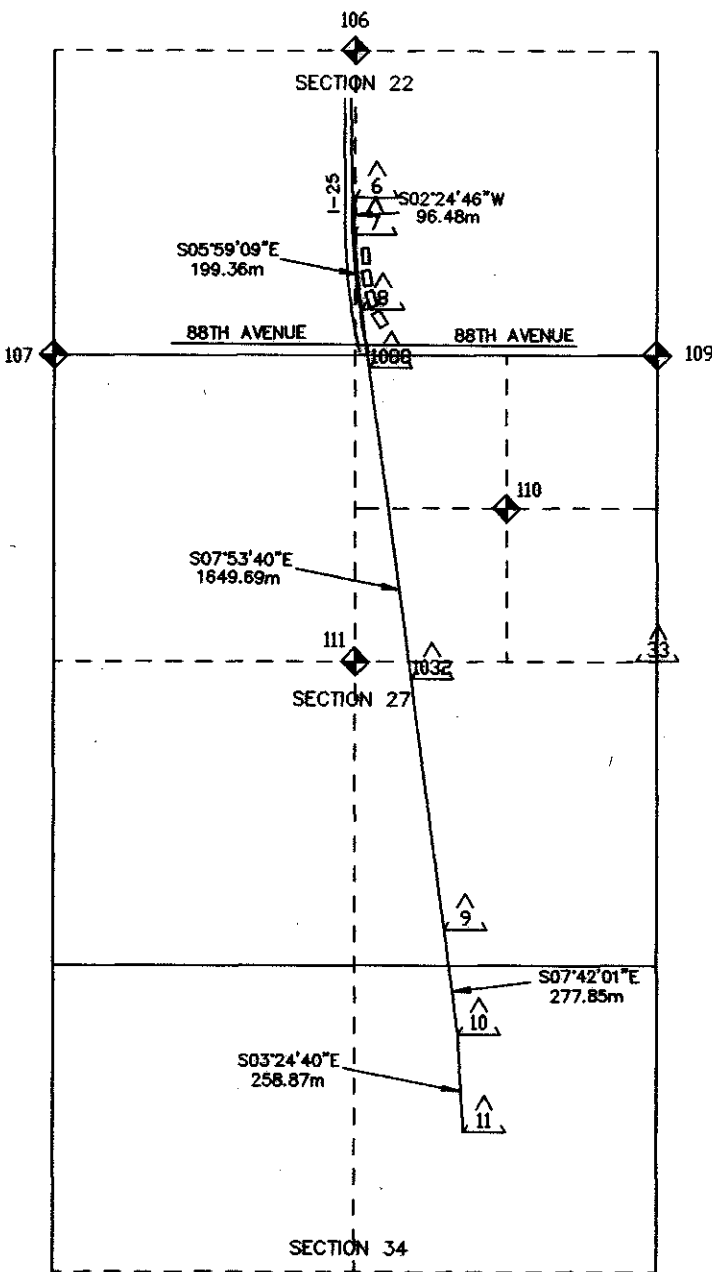


SURVEY CONTROL DIAGRAM

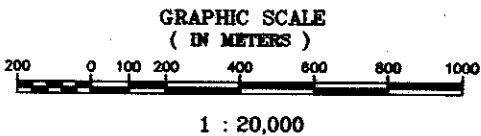
SEC. 22, 27 AND 34 T. 2 S., R. 68 W., 6th P.M.
ADAMS COUNTY, COLORADO



PREPARED BY:
FRASIER & HALBE
ENGINEERING COMPANY
10375 E. HARVARD, SUITE 320
DENVER, COLORADO 80231
(303) 751-9151

LEGEND

- R.O.W. CONTROL POINT
- ALIQUOT CORNERS



GENERAL NOTES

- FOUND AND SET MONUMENTS MEET CDOT TYPE 'A' SURVEY MINIMUM STANDARDS OF 30mm+/- WITH RESPECT TO CONTROLLING MONUMENTS AT A 95% CERTAINTY LEVEL.
- NOTICE ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT FOUND IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIND 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.
- ALL COORDINATES LISTED ARE IN METERS & ARE MODIFIED COLORADO STATE PLANE NORTH ZONE COORDINATES.

VERTICAL CONTROL STATEMENT

THE FOLLOWING TWO BENCH MARKS WERE USED AS THE VERTICAL DATUM BASIS.
B.M. KK1405 NAVD 88 ELEV=5372.88ft(1637.656m) STATION MARK IS A B.M. DISK SET VERTICALLY IN THE NORTH FACE OF THE MOST NORTHERLY COLUMN OF BRIDGE SET 1.4 METERS ABOVE GROUND AT 104th AVE. AND I-25.

B.M. KK1406 NAVD 88 ELEV=5453.15ft(1662.125m) STATION MARK IS STEEL ROD IN BOX AT SW CORNER OF 104th AVE. AND CROKE DRIVE, 1ft NORTH OF W.P. AND FENCE THE MARK IS ABOVE LEVEL WITH THE AVENUE.

THE LEICA NA 2002 AUTO DIGITAL LEVEL WAS USED TO ESTABLISH ELEVATIONS ON THE FIVE (5) PROJECT MONUMENTS FROM THE CONTROLLING NAVD 88 BENCH MARKS.

VERTICAL TOLERANCE MEETS THE ACCURACY TOLERANCE OF
4mm+/- $\sqrt{\text{DISTANCE TRAVELED (IN KILOMETERS)}}$


BASIS OF BEARINGS:

Grid bearing as established by G.P.S. of South 05°25'18" East along the line between CDOT control point #1088 and CDOT control point #1032.

COUNTY SURVEYORS CERTIFICATE

DEPOSITED THIS _____ DAY OF _____, 19____, AT _____M
IN BOOK _____ OF THE COUNTY SURVEYOR'S LAND SURVEY PLATS/
RIGHT-OF-WAY SURVEYS AT PAGE _____, RECEPTION NUMBER _____
THIS LAND SURVEY PLAT COMPLIES WITH SECTION 38-51-102, COLORADO
REVISED STATUTES.

(SIGNED) _____
COUNTY SURVEYOR

Computer File Information				Sheet Revisions				Colorado Department of Transportation				As Constructed		CONTROL & MONUMENTATION				Project No./Code	
Creation Date: 6/30/97		Initials: JRY		<input type="checkbox"/>					2000 S. HOLLY DENVER, CO 80222 Phone: (303) 757-9530 Fax: (303) 757-9280			No Revisions:		Designer: _____ Detailer: JRY Sheet Subset: CONTROL				STA 0253-130	
Last Modification Date: 10/16/97		Initials: EDC		<input type="checkbox"/>															
Full Path: BEAST F:\JOBS\CDOT\5676-011		<input type="checkbox"/>																	
Drawing File Name: CON_MON.DWG		<input type="checkbox"/>																	
Acad Ver. R14 Scale: 1:20,000 Units: METRIC		<input type="checkbox"/>																	
								Region 6		B.S.		Void:		Structure Numbers _____ Subset Sheets: 1 of 2				Sheet Number 1	

SURVEY CONTROL DIAGRAM

SEC. 22, 27 AND 34 T. 2 S., R. 68 W., 6th P.M.
ADAMS COUNTY, COLORADO

PREPARED BY:



SET CONTROL POINTS (METRIC)

(MODIFIED PROJECT SPECIFIC COORDINATES)

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION OF MONUMENT SET
6	363503.690	958537.986	1613.446	STATION MARK IS A TYPE 1, 3 1/4" CDOH ALUMINUM CAP, SET FLUSH W/ GROUND, THE MARK IS STAMPED "COLO DEPT OF TRANSPORTATION 1.091000, PLS NO 14083".
7	363407.293	958533.924	1608.317	STATION MARK IS A TYPE 1, 3 1/4" CDOH ALUMINUM CAP, SET FLUSH W/ GROUND, THE MARK IS STAMPED "COLO DEPT OF TRANSPORTATION 1.090000, PLS NO 14083".
8	363209.019	958554.714	1606.049	STATION MARK IS A TYPE 1, 3 1/4" CDOH ALUMINUM CAP, SET FLUSH W/ GROUND, THE MARK IS STAMPED "COLO DEPT OF TRANSPORTATION 1.089000, PLS NO 14083".
9	361574.962	958781.294	1609.934	STATION MARK IS A TYPE 1, 3 1/4" CDOH ALUMINUM CAP, SET FLUSH W/ GROUND, THE MARK IS STAMPED "COLO DEPT OF TRANSPORTATION 1.081003, PLS NO 14083".
10	361299.619	958818.523	1606.279	STATION MARK IS A TYPE 1, 3 1/4" CDOH ALUMINUM CAP, SET FLUSH W/ GROUND, THE MARK IS STAMPED "COLO DEPT OF TRANSPORTATION 1.079004, PLS NO 14083".
11	361041.208	958833.926	1602.319	STATION MARK IS A TYPE 1, 3 1/4" CDOH ALUMINUM CAP, SET FLUSH W/ GROUND, THE MARK IS STAMPED "COLO DEPT OF TRANSPORTATION 1.078004, PLS NO 14083".

ALIQUOT CORNERS FOUND

POINT #	NORTHING	EASTING	DESCRIPTION OF SECTION CORNER FOUND
106	363891.480	958537.008	C 1/4 SEC 22 FND 3 1/4" ALUM MON. IN R/BOX STATION MARK IS STAMPED PLS#23904. LATITUDE N 39°51'48.629562" LONGITUDE W 104°59'13.968268
107	363084.773	957736.776	SW 1/4 COR SEC 22 FND 3 1/4" ALUM MON IN R/BOX STAMPED PLS#23904. LATITUDE N 39°51'22.629246" LONGITUDE W 104°59'47.820768"
109	363093.219	959338.164	NE 1/4 COR SEC 27 FND 2 1/2" BRASS CAP IN R/BOX FLUSH W/ MEDIAN SURFACE, STATION MARK IS STAMPED LS #13155. LATITUDE N 39°51'22.602906" LONGITUDE W 104°58'40.467188"
110	362687.167	958941.903	NE 1/16 COR SEC 27 FND #5 REBAR STAMPED PLS#23904. LATITUDE N 39°51'09.516223" LONGITUDE W 104°58'57.232898"
111	362281.353	958542.051	C 1/4 SEC 27 FND 3 1/4" ALUM MON IN R/BOX STATION MARK IS STAMPED PLS#26288. LATITUDE N 39°50'56.437311" LONGITUDE W 104°59'14.147752"

PROPERTY MARKERS FOUND

POINT #	NORTHING	EASTING	DESCRIPTION OF PROPERTY MARKER FOUND
50	363114.909	958583.750	FOUND NO.5 REBAR W/ YELLOW PLASTIC CAP(UNREADABLE)
51	363124.019	958584.383	FOUND NO.5 REBAR W/ YELLOW PLASTIC CAP STAMPED C.R. MOORE PLS 10945
52	363123.388	958593.524	FOUND P.K. & WASHER STAMPED C.R. MOORE PLS 10945
53	363114.256	958592.874	FOUND NO.5 REBAR W/ YELLOW PLASTIC CAP STAMPED C.R. MOORE PLS 10945

CONTROLLING MONUMENTS - VERTICAL

POINT #	METERS	ELEVATIONS FEET	DESCRIPTION OF MONUMENT FOUND
1032	1601.45	5254.090	STATION NAME: 1032, STATION NUMBER: 1.084003, NAVD 88 STATION MARK IS A 3-1/4" ALUMINUM DISK EPOXIED IN WALK, LOCATED AT SOUTHEAST CORNER OF BRIDGE AT I-25 & 84TH.
1033	1598.48	5244.396	STATION NAME: 1033, STATION NUMBER: 1.084007, NAVD 88, STATION MARK IS A 3-1/4" ALUMINUM DISK EPOXIED FLUSH W/CONCRETE IN CENTER MEDIAN AT 84TH & WASHINGTON.

CONTROLLING MONUMENTS - HORIZONTAL

POINT #	NORTHING	EASTING	DESCRIPTION OF MONUMENT FOUND
33	362322.731	959344.856	STA. NAME: NO.33, STA. #: 1.084007, STATION MARK IS CDOH TYPE 2 3-1/4" ALUMINUM DISK SET IN EPOXY, FLUSH W/ CONCRETE AND ON TOP OF 6" ALUMINUM 3/4" DIA. ROD IN MEDIAN.
142	372715.994	959469.134	ADAMS COUNTY CONTROL POINT, STATION MARK IS 3-1/4" ALUMINUM DISK STAMPED ADAMS COUNTY 1995, 95.0142.
1032	362270.277	958723.462	STA. NAME: NO.1032, STA. #: 1.084003, STATION MARK IS 3-1/4" ALUMINUM DISK EPOXIED IN CONCRETE WALK FLUSH W/ SURFACE AT THE SOUTHEAST CORNER OF BRIDGE ABUTMENT.
1088	363075.934	958646.997	STA. NAME: GRANT, STA. #: 1.088002, STATION MARK IS 3-1/4" ALUMINUM DISK IN ACCESS COVER, STAMPED LS#13212.

G.P.S. INFORMATION ON CONTROLLING MONUMENTS

POINT #	LATITUDE	LONGITUDE	ELLIPSOID HEIGHT(m)	STATE PLANE COORDINATES NORTHING	EASTING	SCALE FACTOR	CONVERGENCE ANGLE
33	N 39°50'57.626690"	W 104°58'40.376570"	1581.539	362224.288	959084.202	0.999981237	0°20'14"
142	N 39°56'34.352380"	W 104°58'33.045630"	1554.983	372610.313	959197.084	0.999971200	0°20'19"
1032	N 39°50'56.044200"	W 104°59'06.521440"	1584.540	362171.848	958462.977	0.999981291	0°19'58"
1088	N 39°51'22.173470"	W 104°59'09.540630"	1589.556	362977.286	958386.533	0.999980416	0°19'56"

ORTHOMETRIC HEIGHTS WERE DETERMINED BY DIFFERENTIAL LEVELING.

SEA LEVEL FACTOR WAS CALCULATED USING A VALUE OF 6,372,161.545(m) FOR THE EARTH RADIUS.

MODIFIED GRID FACTOR WAS CALCULATED AT POINT #8 BY MULTIPLYING THE SCALE FACTOR TIMES THE SEA LEVEL FACTOR (0.999728300).

SURVEYOR CERTIFICATE

G.P.S. DATA WAS COLLECTED AND PROCESSED
UNDER MY SUPERVISION AND CHECKING.

SURVEYOR CERTIFICATE

CONTROL SURVEY AND MONUMENTATION WAS DONE
UNDER MY SUPERVISION AND CHECKING.

Kevin C. Hoffman
1-2-98 2568
KEVIN C. HOFFMAN P.L.S. #22568

James H. Luke
JAMES HAROLD LUKE
REGISTERED
1-2-98
14115
STATE OF COLORADO
JAMES H. LUKE P.L.S. #14115

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Last Modification Date: 10/16/97	Initials: EDC			Region 6		Revised:		Designer:	Structure	10746	
Full Path: BEAST F:\JOBS\CDOT\5676-011						Void:		Detailer: JRY	Numbers		
Drawing File Name: CON_MON.DWG								Sheet Subset: CONTROL	Subset Sheets: 2 of 2	Sheet Number 2	
Acad Ver. R14	Scale: N/A	Units: METRIC									