

**Geodetic Control Network
For**

Haltom City, Texas

Surveyed in March 2005

CITY OF



HALTOM CITY

TEAGUE NALL AND PERKINS
INC. CONSULTING ENGINEERS

1100 Mason St. Ft. Worth, TX 76102 (817) 336-5773	235 W. Hickory St. Denton, TX 76201 (940) 383-4177	2001 W. Irving Blvd. Irving, TX 75061 (972) 254-1765
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Creative Engineering Solutions for Our Communities

1.000144415

- 947.60309 North 9/3

- 284.28793 East 9/4

G.P.S. SURVEY REPORT
GEODETIC CONTROL POINTS 1 to 6
ESTABLISHED BY TEAGUE NALL AND PERKINS
FOR THE CITY OF HALTOM CITY, TEXAS
IN MARCH OF 2005

Geodetic Control Points 1 to 6 were established by the Teague Nall and Perkins Survey Department in the month of March, 2005. The purpose of this project was to establish Geodetic Control on the NAD 83(93) System, for use as control for the City's Comprehensive Storm Water Master Plan, and for use as control for future projects.

The project was performed using Trimble 4000SSI Receivers and Trimble 5700 Series Receivers. The receivers were logging both L1 and L2 frequencies. Trimble Geomatics Office Version 1.5 was used to process the baselines. All baselines used were either L1 fixed or Iono Free Fixed. The adjustment was performed using the least squares adjustment in Trimble Geomatics Office Adjustment module.

The City of Haltom City's Geodetic Control Network is based on the N.G.S. Special Order Stations "**Dallas CORS ARP**" and "**Denton CORS ARP**". The Datum used **NAD 83(93)**. The State Plane Coordinates published herein are Texas North Central Zone.

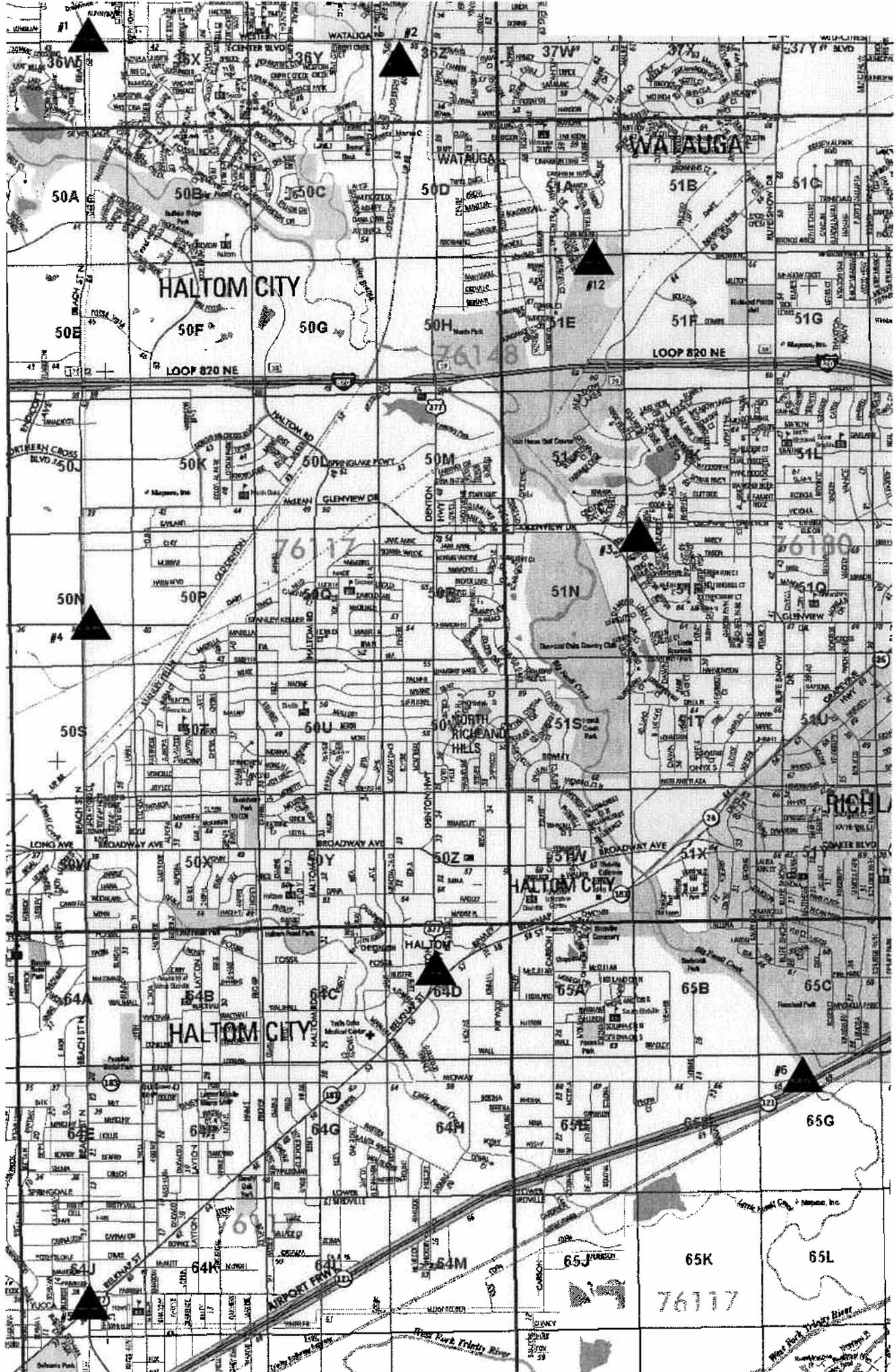
The Vertical Datum published herein is based on the **NAVD 88**. The precision of the data published herein meets and/or exceeds Second Order Accuracy.

BASIS FOR HORIZONTAL POSITION

The positions for the Geodetic Control Network for the City of Haltom City were established using the N.G.S. Special Order Stations "**Dallas CORS ARP**" and "**Denton CORS ARP**". These points were held fixed for Horizontal Positioning on the City of Haltom City's monuments 1 to 6. Precision on horizontal positions for monuments 1 to 6 meets and/or exceeds Second Order Accuracy.

BASIS FOR VERTICAL DATUM

The vertical datum for the Geodetic Control Network for the City of Haltom City was established using the N.G.S. Station "**Haltom**" and North Richland Hills G.P.S. Monument No. 12. These points were held fixed using Static G.P.S. techniques. The precision for the vertical datum on the City of Haltom City's Geodetic Control Network points 1 to 6 meets and/or exceeds Third Order Accuracy.



GEODETIC CONTROL DATA SHEET

STATION NAME: MONUMENT #2 DATE: MARCH 2005

MONUMENT TYPE: BERNISEN TOP SECURITY W/ACCESS COVER

CITY: HALTOM CITY COUNTY: TARRANT STATE: TX

SURVEYOR: TEAGUE NAIL AND PERKINS PREPARED BY: MOH

PROJECT NAME: HALTOM CITY GEODETIC CONTROL NETWORK

DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS

Surface N = 147°28'31.1220"	
Coordinate E = 22471043.995	
AZIMUTH MARK	DISTANCE

DESCRIPTION OF POINTS:

THE BERNISEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED 50' SOUTH OF THE CENTER OF FLIPPO STREET AND 18' EAST OF THE EAST EDGE OF PAVEMENT OF HUDDLESTON STREET.

ADJUSTED HORIZONTAL CONTROL DATA

ORDER: 2ND SURVEY METHOD: GPS OTHER

COMBINED SCALE FACTOR: 0.999848824

NAD 27 GRID DATA COORDINATES (U.S. SURVEY FEET) PLANE AZIMUTH ANGLE (CONVERGENCE)

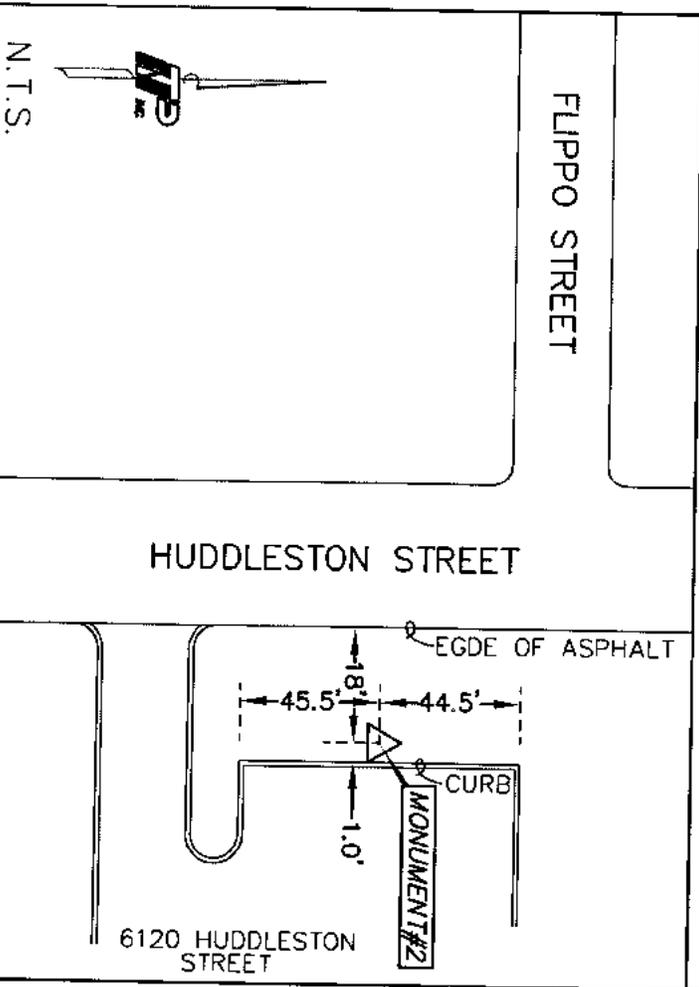
STATE: TX ZONE: NC CODE: 4202

NAD 83 GRID DATA COORDINATES (U.S. SURVEY FEET) PLANE AZIMUTH ANGLE (CONVERGENCE)

METRIC CONVERSION FACTOR: 3.2808333333

GEODETIC DATA	POSITION	NAD 27	NAD 83 (93)	ELEV. (GPS)
LATITUDE	32°51'34.12169"	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NORTH
LONGITUDE	97°15'58.64126"	<input type="checkbox"/>	<input checked="" type="checkbox"/>	WEST

FIELD SKETCH:



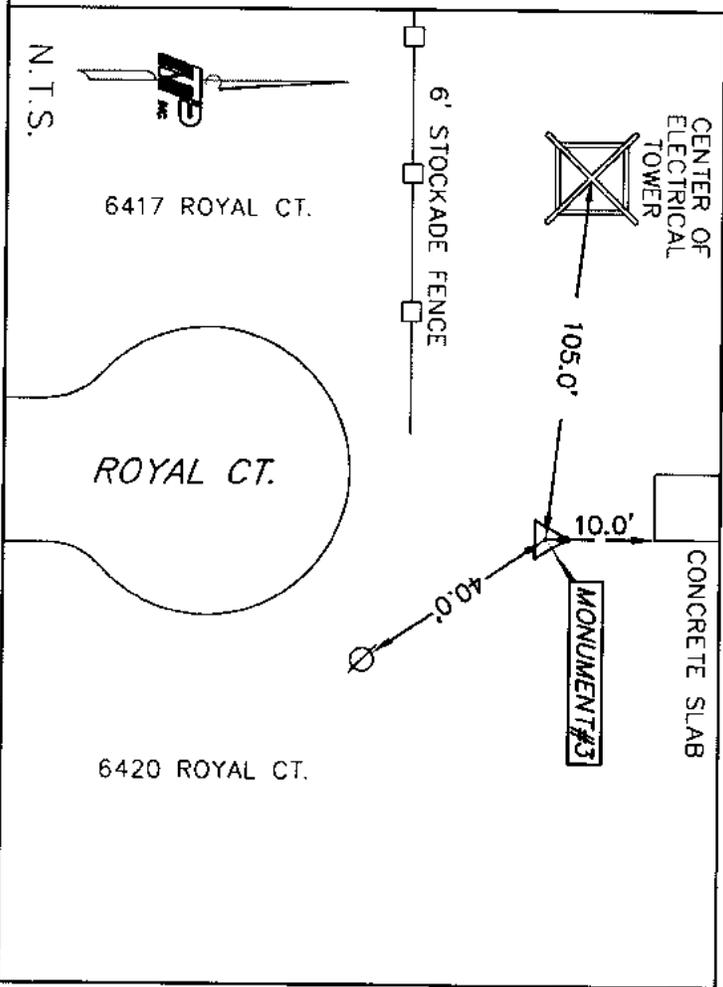
GEODETIC CONTROL DATA SHEET

STATION NAME: MONUMENT #3	DATE: MARCH 2005	ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERNITSEN TOP SECURITY W/ACCESS COVER	ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	
CITY: HALTOM CITY	COUNTY: TARRANT	COMBINED SCALE FACTOR: 0.999852966	
SURVEYOR: TEAGUE NALL AND PERKINS	PREPARED BY: MOH	NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)
PROJECT NAME: HALTOM CITY GEODETIC CONTROL NETWORK		NAD 83 GRID DATA	COORDINATES (U.S. SURVEY FEET)
		STATE: TX	ZONE: N
		STATE: TX	ZONE: NC
		CODE: 4202	CODE: E 2352813.9250
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS		METRIC CONVERSION FACTOR: 3.2808333333	
		PLANE AZIMUTH ANGLE (CONVERGENCE)	00°40'56.69169"

DESCRIPTION OF POINTS:
 THE BERNITSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED NORTH OF ROYAL COURT IN THE OVERHEAD ELECTRIC EASEMENT IN LINE WITH THE CENTER OF THE TOWERS AND 105' EAST OF NEARAST TOWER.

GEODETIC DATA		POSITION		ELEV.(GPS)
LATITUDE	32°49'46.20630"	NAD 27 <input type="checkbox"/>	NAD 83 (93) <input checked="" type="checkbox"/>	
LONGITUDE	97°14'55.56865"	NORTH	WEST	567.43'

FIELD SKETCH:



GEODETIC CONTROL DATA SHEET

STATION NAME: MONUMENT #4 DATE: MARCH 2005

MONUMENT TYPE: BERNITSEN TOP SECURITY W/ACCESS COVER

CITY: HALTOM CITY COUNTY: TARRANT STATE: TX

SURVEYOR: TEAGUE NALL AND PERKINS PREPARED BY: MOH

PROJECT NAME: HALTOM CITY GEODETIC CONTROL NETWORK

DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS

Surface No: 16852447.657	
Coords: P = 2340455.3188	
AZIMUTH MARK	AZIMUTH
	DISTANCE

DESCRIPTION OF POINTS:

THE BERNITSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED IN THE CENTER MEDIAN OF MEACHAM BLVD. 56' EAST OF NOSE OF MEDIAN AND EAST OF NORTH BEACH STREET.

ADJUSTED HORIZONTAL CONTROL DATA

ORDER: 2ND SURVEY METHOD: GPS OTHER

COMBINED SCALE FACTOR: 0.9999851287

NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)
	N	

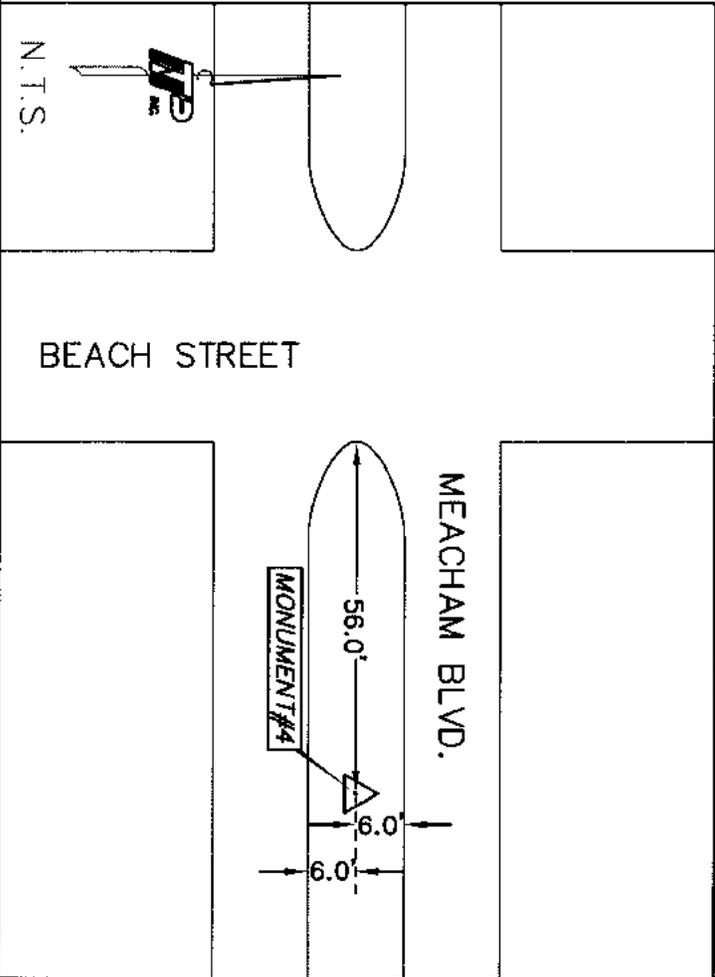
NAD 83 GRID DATA	COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)
	N	

STATE: TX	ZONE: NC	CODE: 4202	ELEV.(GPS)
			610.05'

METRIC CONVERSION FACTOR: 3.2808333333

GEODETIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83 (93) <input checked="" type="checkbox"/>	ELEV.(GPS)
LATITUDE	32°49'27.21192"			
LONGITUDE	97°17'24.64647"			

FIELD SKETCH:



MAPSCO 50-N

GEODETIC CONTROL DATA SHEET

STATION NAME: HALTOM DATE: MARCH 2005

MONUMENT TYPE: CGS DISK IN CONCRETE

CITY: HALTOM CITY COUNTY: TARRANT STATE: TX

SURVEYOR: TEAGUE NAIL AND PERKINS PREPARED BY: MOH

PROJECT NAME: HALTOM CITY GEODETIC CONTROL NETWORK

DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS

Surface	N =	1697.76537	5992
Control	E =	224.82472	289
	AZIMUTH		DISTANCE

DESCRIPTION OF POINTS:

THE "HALTOM" MONUMENT IS LOCATED 68' EAST OF CENTERLINE OF U.S. HIGHWAY 377, 6.8' NORTHEAST OF THE NORTHEAST CORNER OF A BRICK DUMPSTER WALL AND 5.7' NORTHEAST OF A METAL WITNESS POST.

ADJUSTED HORIZONTAL CONTROL DATA

ORDER: 2ND SURVEY METHOD: GPS OTHER

COMBINED SCALE FACTOR: 0.999855585

NAD 27 GRID DATA COORDINATES (U.S. SURVEY FEET) PLANE AZIMUTH ANGLE (CONVERGENCE)

STATE: TX N
ZONE: NC E
CODE: 4202

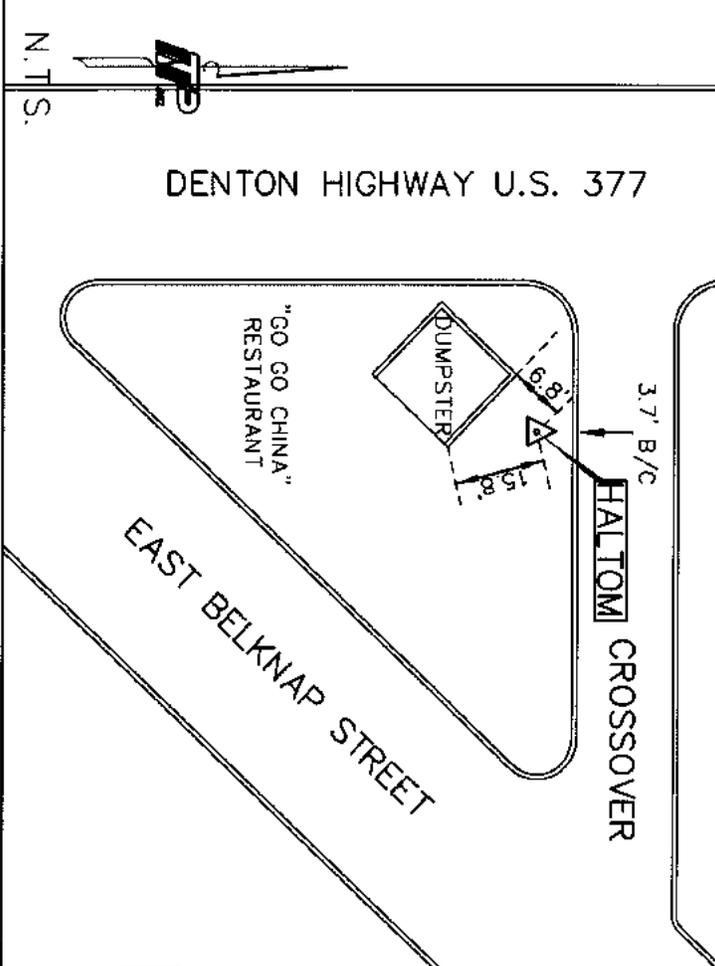
NAD 83 GRID DATA COORDINATES (U.S. SURVEY FEET) PLANE AZIMUTH ANGLE (CONVERGENCE)

STATE: TX N
ZONE: NC E
CODE: 4202

METRIC CONVERSION FACTOR: 3.280833333

GEODETIC DATA	POSITION		ELEV (GPS)
	LATITUDE	LONGITUDE	
	32°48'06.25121"	97°15'51.82533" WEST	553.94

FIELD SKETCH:



GEODETIC CONTROL DATA SHEET

STATION NAME: NORTH RICHLAND HILLS G.P.S. 12 DATE: MARCH 2005

MONUMENT TYPE: BERNITSEN TOP SECURITY MONUMENT W/ACCESS COVER

CITY: NORTH RICHLANDHILLS COUNTY: TARRANT STATE: TX

SURVEYOR: TEAGUE NALL AND PERKINS PREPARED BY: MOH

PROJECT NAME: HALTOM CITY GEODETIC NETWORK

DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS

Surface	N =	6894612.662
Coordinate	E =	23521688.788
AZIMUTH MARK	AZIMUTH	DISTANCE

DESCRIPTION OF POINTS:

THE BERNITSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED 14.7' NORTH OF GOLF CART PATH NORTH OF GREEN #14 ON THE IRON HORSE GOLF COURSE.

ADJUSTED HORIZONTAL CONTROL DATA

ORDER: 2ND SURVEY METHOD: GPS OTHER

COMBINED SCALE FACTOR: 0.999851895

NAD 27 GRID DATA COORDINATES (U.S. SURVEY FEET) PLANE AZIMUTH ANGLE (CONVERGENCE)

STATE: TX ZONE: NC CODE: 4202 N E NAD 83 GRID DATA COORDINATES (U.S. SURVEY FEET) PLANE AZIMUTH ANGLE (CONVERGENCE)

STATE: TX ZONE: NC CODE: 4202 N E NAD 83 GRID DATA COORDINATES (U.S. SURVEY FEET) PLANE AZIMUTH ANGLE (CONVERGENCE)

STATE: TX ZONE: NC CODE: 4202 N E NAD 83 GRID DATA COORDINATES (U.S. SURVEY FEET) PLANE AZIMUTH ANGLE (CONVERGENCE)

METRIC CONVERSION FACTOR: 3.2808333333

GEODETIC DATA	POSITION	NAD 27	NAD 83 (93)	ELEV.(GPS)
LATITUDE	32°50'51.53611"		<input checked="" type="checkbox"/>	NORTH
LONGITUDE	97°15'00.68266"		<input type="checkbox"/>	WEST
				565.38'

FIELD SKETCH:

