

**G.P.S. SURVEY REPORT
GEODETIC CONTROL NETWORK
ESTABLISHED BY TEAGUE NALL AND PERKINS
FOR THE CITY OF ROWLETT, TX.
IN MAY AND JUNE OF 2003**

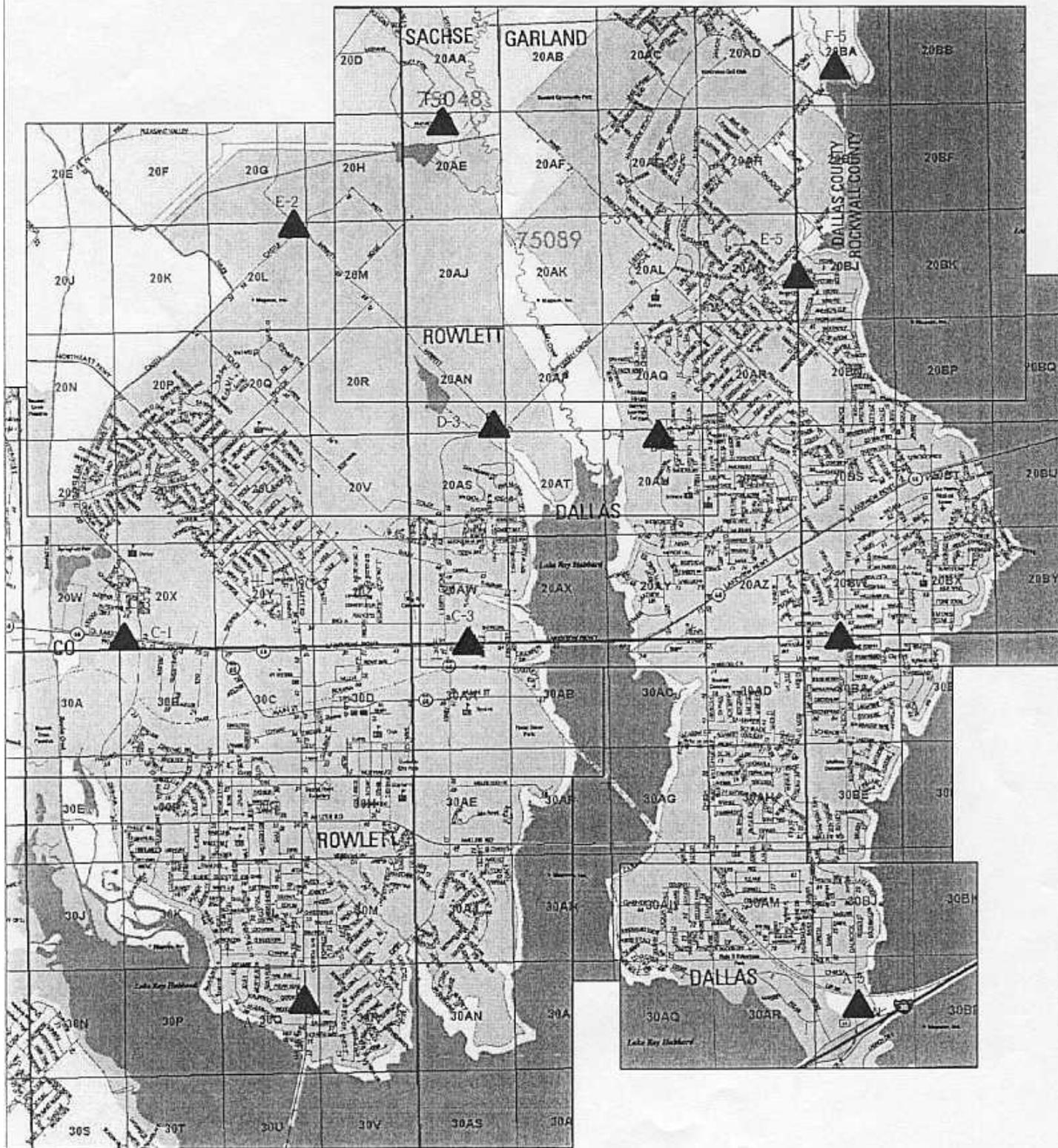
11 Geodetic Control Points were established by the Teague Nall and Perkins Survey Department in the months of May and June of 2003. The purpose of this project was to establish Geodetic Control on the NAD 83(93) System, for citywide control.

The project was performed using Trimble 4000SSi Site Surveyor and Trimble 5700 Series Receivers. The receivers were logging both L1 and L2 frequencies. Trimble Geomatics Office version 1.5 were 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 Module in Trimble Geomatics Office.

The City of Rowlett's Geodetic Control Network is based on the N.G.S. A Order Station "Arlington RRP". The Datum used is NAD 83(93). The State Plane Coordinates published herein are Texas North Central Zone.

The Vertical Datum published herein is based on the N.G.S. First Order Class II Station "Arlington RRP", and the N.G.S. First Order Class II Station "V 1498". The Datum used is NAVD 88.

ROWLETT GEODETIC CONTROL NETWORK

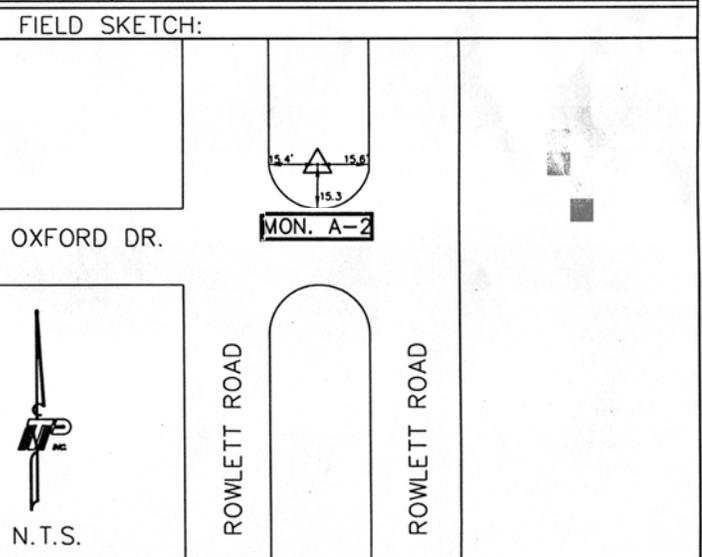


GEODETIC CONTROL DATA SHEET

STATION NAME: A-2		DATE: JUNE 2003	ADJUSTED HORIZONTAL CONTROL DATA		
MONUMENT TYPE: BERNTSEN TOP SECURITY MONUMENT W/ACCESS COVER		ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999854515		
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS	NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)
PROJECT NAME: ROW01365			STATE: TX ZONE: NC CODE: 4202	N 442561.878 E 2285734.424	00°30'27.50610"
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS			NAD 83 GRID DATA	COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)
			STATE: TX ZONE: NC CODE: 4202	N 7008467.329 E 2561097.260	01°03'10.39762"
AZIMUTH MARK	AZIMUTH	DISTANCE	METRIC CONVERSION FACTOR: 3.2808333333		

DESCRIPTION OF POINTS:
 THE BERNTSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED IN THE CL. OF MEDIAN OF ROWLETT ROAD NORTH OF OXFORD DRIVE 15.3' NORTH OF MEDIAN CURB. IT IS ALSO LOCATED 15.4' EAST OF THE WEST CURB AND 15.6' WEST OF THE EAST CURB OF ROWLETT ROAD.

GEODETIC DATA	POSITION		NAD 27 <input type="checkbox"/>	NAD 83 (93) <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°52'47.32799"	NORTH		472.10'
	LONGITUDE	96°34'10.17153"	WEST		



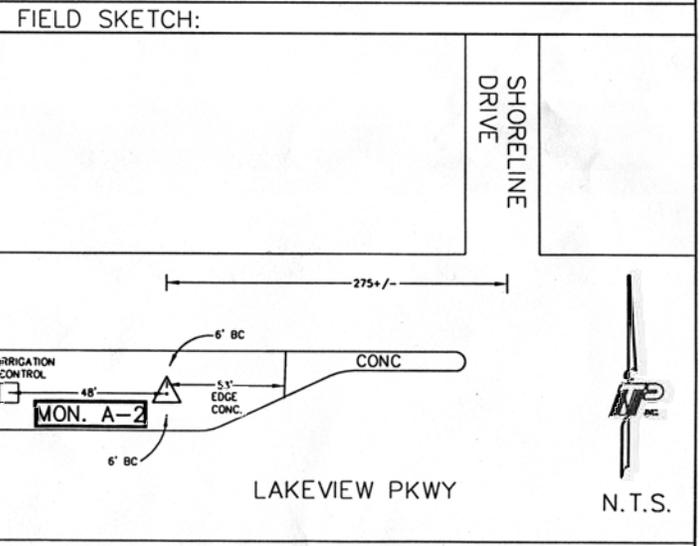
MAPSCO 30-Q

GEODETIC CONTROL DATA SHEET

STATION NAME: C-3		DATE: JUNE 2003	ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERNTSEN TOP SECURITY MONUMENT W/ACCESS COVER			ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999852524	
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS	NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)
PROJECT NAME: ROW01365			STATE: TX ZONE: NC CODE: 4202	PLANE AZIMUTH ANGLE (CONVERGENCE) N 452804.726 E 2290693.061 00°30'59.80962"
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS				
AZIMUTH MARK AZIMUTH DISTANCE				
METRIC CONVERSION FACTOR: 3.280833333				

DESCRIPTION OF POINTS:
 THE BERNTSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED IN THE CL OF MEDIAN OF LAKEVIEW PKWY 275+/- WEST OF SHORELINE DR. IT IS 48' EAST OF A IRRIGATION CONTROL PEDESTAL, 53' WEST OF EDGE OF CONC MEDIAN, 6' SOUTH OF NORTH CURB AND 6' NORTH OF SOUTH CURB

GEODETIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83 <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°54'28.24109"	NORTH	485.73'
	LONGITUDE	96°33'10.93936"	WEST	



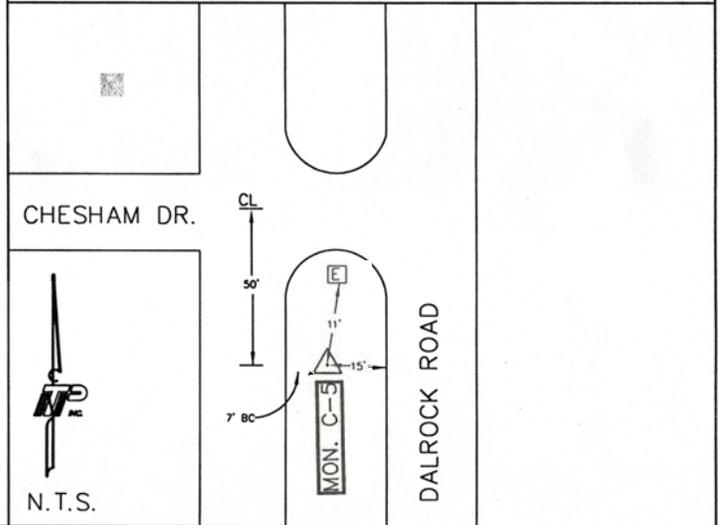
GEODETIC CONTROL DATA SHEET

STATION NAME: C-5		DATE: JUNE 2003	ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERNTSEN TOP SECURITY MONUMENT W/ACCESS COVER		ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999852940	
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS	NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)
PROJECT NAME: ROW01365			STATE: TX ZONE: NC CODE: 4202	N 452872.412 E 2301426.842
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS			NAD 83 GRID DATA	COORDINATES (U.S. SURVEY FEET)
			STATE: TX ZONE: NC CODE: 4202	N 7018926.599 E 2576691.179
				PLANE AZIMUTH ANGLE (CONVERGENCE)
				00°32'08.48282"
				01°04'51.37878"
AZIMUTH MARK	AZIMUTH	DISTANCE		
			METRIC CONVERSION FACTOR: 3.2808333333	

DESCRIPTION OF POINTS:
 THE BERNTSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED IN THE CL OF MEDIAN OF DALROCK ROAD AT THE INTERSECTION OF CHESHAM DR. IT IS 50' SOUTH OF THE CL OF CHESHAM DR. ,11' SE OF AN ELECTRIC PULL BOX AND 15' WEST OF THE EAST MEDIAN CURB

GEODETIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83 (93) <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°54'27.93480"		NORTH
	LONGITUDE	96°31'05.01899"		WEST

FIELD SKETCH:



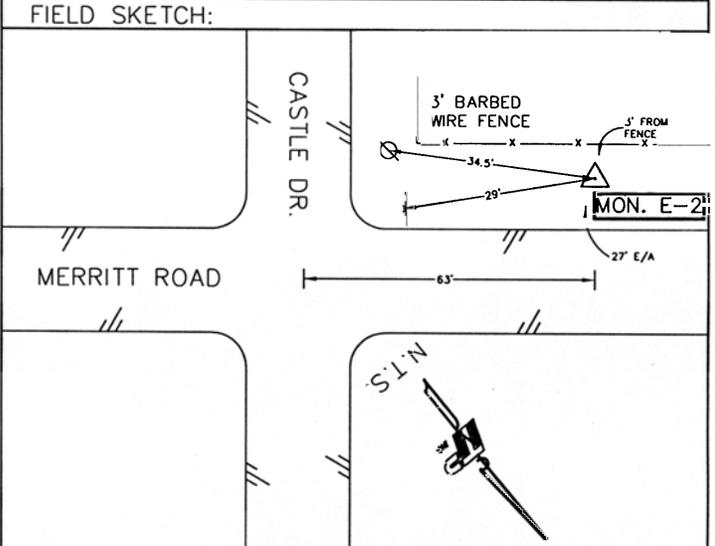
MAPSCO 30B-A

GEODETIC CONTROL DATA SHEET

STATION NAME: E-2		DATE: JUNE 2003	ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERNTSEN TOP SECURITY MONUMENT W/ACCESS COVER			ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999849447	
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS	NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)
PROJECT NAME: ROW01365			STATE: TX ZONE: NC CODE: 4202	N 464986.645 E 2285671.007
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS			PLANE AZIMUTH ANGLE (CONVERGENCE)	00°30'28.37183"
			NAD 83 GRID DATA	COORDINATES (U.S. SURVEY FEET)
			STATE: TX ZONE: NC CODE: 4202	N 7030890.400 E 2560820.428
			PLANE AZIMUTH ANGLE (CONVERGENCE)	01°03'11.26324"
AZIMUTH MARK	AZIMUTH	DISTANCE	METRIC CONVERSION FACTOR: 3.2808333333	

DESCRIPTION OF POINTS:
 THE BERNTSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF MERRITT ROAD AND CASTLE DRIVE. THE MONUMENT IS 63' NORTHWEST OF THE INTERSECTION OF THE CENTERLINE OF MERRITT AND CASTLE DR. THE MONUMENT IS 29' WEST OF A STOP SIGN ON THE SOUTHWEST CORNER OF MERRITT AND CASTLE AND 34.5' WEST OF A POWER POLE. THE MONUMENT IS 27' SOUTH OF THE SOUTH EDGE OF PAVEMENT ON MERRITT RD. AND 3' NORTH OF A BARBED WIRE FENCE.

GEODETIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83 (93) <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°56'29.22417"		NORTH
	LONGITUDE	96°34'08.58439"		WEST



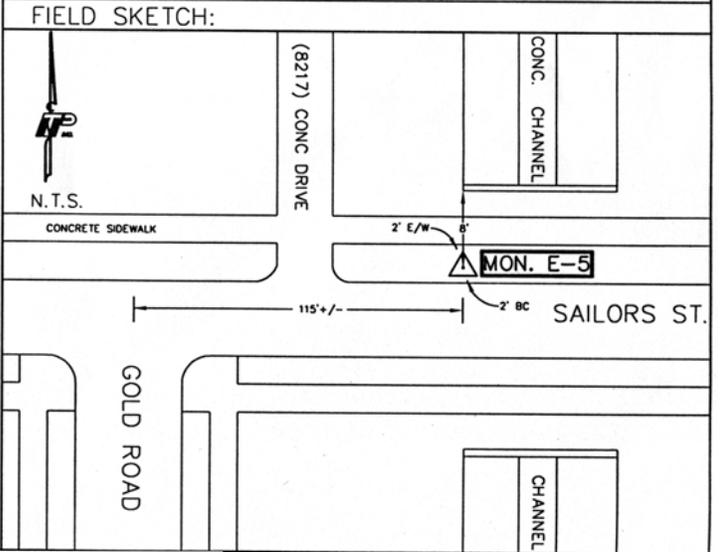
MAPSCO 20-L

GEODETIC CONTROL DATA SHEET

STATION NAME: E-5		DATE: JUNE 2003	ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERNTSEN TOP SECURITY MONUMENT W/ACCESS COVER		ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999852870	
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS	NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)
PROJECT NAME: ROW01365			STATE: N	PLANE AZIMUTH ANGLE (CONVERGENCE)
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS			ZONE: E	00°32'01.54035"
			NAD 83 GRID DATA	COORDINATES (U.S. SURVEY FEET)
			STATE: N	PLANE AZIMUTH ANGLE (CONVERGENCE)
			ZONE: E	01°04'44.43585"
			CODE: E	
AZIMUTH MARK	AZIMUTH	DISTANCE	METRIC CONVERSION FACTOR: 3.280833333	

DESCRIPTION OF POINTS:
 THE BERNTSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED IN THE NORTH ROW OF SAILORS ST. 115'+- EAST OF THE CL OF GOLD RD. IT IS ALSO 2' FROM BC, 2' FROM THE EDGE OF A SIDEWALK AND 8' FROM THE SW CORNER OF HEADWALL ON THE N. SIDE OF SAILORS RD.

GEODETIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83 (93) <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°56'13.63974"	NORTH	454.53'
	LONGITUDE	96°31'17.74909"	WEST	

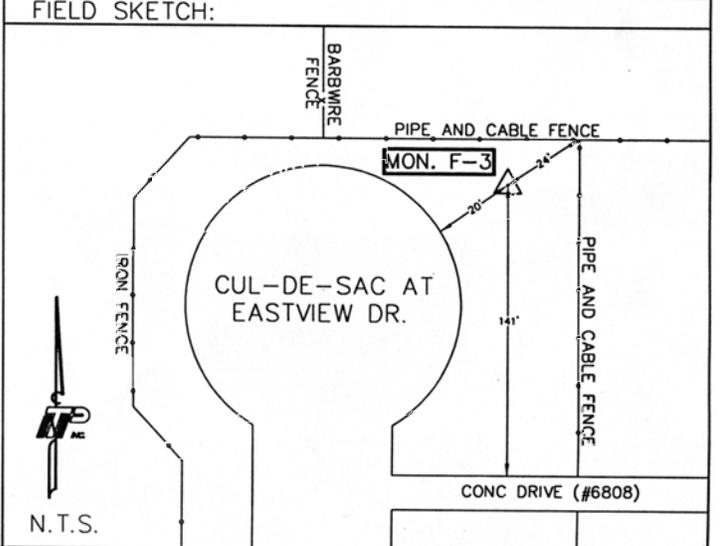


GEODETIC CONTROL DATA SHEET

STATION NAME: F-3		DATE: JUNE 2003	ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERNTSEN TOP SECURITY MONUMENT W/ACCESS COVER			ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999852540	
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS	NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)
PROJECT NAME: ROW01365			STATE: TX ZONE: NC CODE: 4202	N 468057.409 E 2290063.861
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS			NAD 83 GRID DATA	COORDINATES (U.S. SURVEY FEET)
			STATE: TX ZONE: NC CODE: 4202	N 7034002.789 E 2565183.948
				PLANE AZIMUTH ANGLE (CONVERGENCE)
				00°30'56.66268"
				01°03'39.55530"
AZIMUTH MARK	AZIMUTH	DISTANCE	METRIC CONVERSION FACTOR: 3.2808333333	

DESCRIPTION OF POINTS:
 THE BERNTSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED AT THE NE CORNER OF THE CUL-DE-SAC OF EASTVIEW DRIVE. IT IS 141' NORTH OF THE DRIVEWAY AT 6808 EASTVIEW DRIVE AND IS 20' NE OFF OF THE BACK OF CURB OF THE CUL-DE-SAC AND 24' SW OF THE INTERSECTION OF THE PIPE AND CABLE FENCE

GEODETIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83 (93) <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°56'59.22031"	NORTH	452.76'
	LONGITUDE	96°33'16.70988"	WEST	



MAPSCO 20A-E

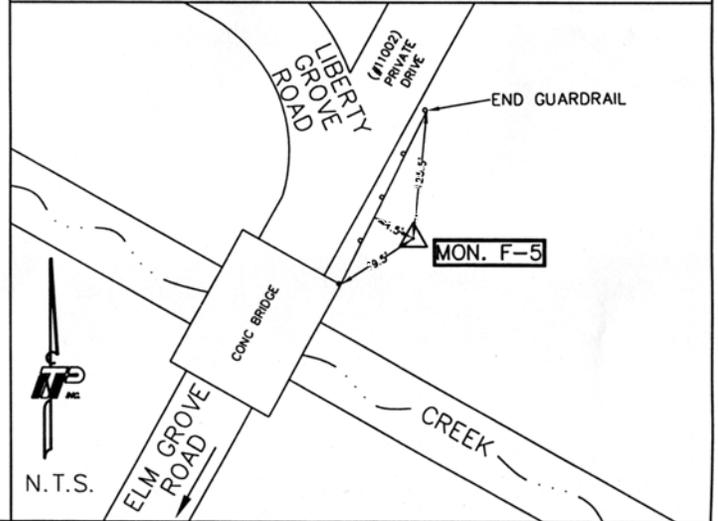
GEODETIC CONTROL DATA SHEET

STATION NAME: F-5		DATE: JUNE 2003	ADJUSTED HORIZONTAL CONTROL DATA		
MONUMENT TYPE: BERNTSEN TOP SECURITY MONUMENT W/ACCESS COVER			ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999852688		
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS			
PROJECT NAME: ROW01365					
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS					
			NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)
			STATE: TX ZONE: NC CODE: 4202	N 469407.610 E 2301379.880	00°32'09.17180"
			NAD 83 GRID DATA	COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)
			STATE: TX ZONE: NC CODE: 4202	N 7035460.538 E 2576486.834	01°04'52.06755"
AZIMUTH MARK		AZIMUTH	DISTANCE		
			METRIC CONVERSION FACTOR: 3.2808333333		

DESCRIPTION OF POINTS:
 THE BERNTSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED IN THE EAST ROW OF LIBERTY GROVE ROAD 19.5' NE OF THE NE CORNER OF THE BRIDGE OVER A CREEK AND IS 125.5' SE OF THE NORTH END OF THE GUARDRAIL LOCATED EAST OF THE DRIVEWAY OF 11002 LIBERTY GROVE ROAD

GEODETIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83 (93) <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°57'11.55195"	NORTH	447.50'
	LONGITUDE	96°31'03.75610"	WEST	

FIELD SKETCH:



MAPSCO 20B-A