



Geodetic Control Network

Surveyed in June, 2003

Prepared by:

 **TEAGUE NALL AND PERKINS**
INC. ENGINEERS ♦ SURVEYORS ♦ MUNICIPAL CONSULTANTS
1100 Macon Street
Fort Worth, Texas 76102
(817) 336-5773

**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.

[illegible]

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		N 442561.878			00°30'27.50610"					
							ZONE: NC										
							CODE: 4202		E 2285734.424								
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS									NAD 83 GRID DATA			COORDINATES (U.S. SURVEY FEET)			PLANE AZIMUTH ANGLE (CONVERGENCE)		
												STATE: TX			N 7008467.329		
												ZONE: NC					
												CODE: 4202			E 2561097.260		
AZIMUTH MARK							AZIMUTH		DISTANCE						METRIC CONVERSION FACTOR: 3.2808333333		

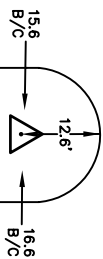
DESCRIPTION OF POINTS:
THE BERNITSEN TOP SECURITY MONUMENT WITH ACCESS COVER
IS LOCATED IN THE CL OF MEDIAN OF ROWLETT ROAD NORTH OF
OXFORD DRIVE 15.3' NORTH OF MEDIAN CURB. IT IS ALSO LOCATED
15.4' EAST OF THE WEST CURB AND 15.6' WEST OF THE EAST CURB
OF ROWLETT ROAD.

DESCRIPTION OF POINTS: THE BERNITSEN 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 LONGITUDE	32°52'47.32799" 96°34'10.17153"		NORTH WEST 472.10'
FIELD SKETCH:				
MAPSCO 30-Q N.T.S.				

STATION NAME: A-5		DATE: JUNE 2003		ADJUSTED HORIZONTAL CONTROL DATA				
MONUMENT TYPE: BERTTSEN 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: 0.999855170					
SURVEYOR: TEAGUE NALL AND PERKINS			PREPARED BY: TWS		NAD 27 COORDINATES (U.S. SURVEY FEET)		PLANE AZIMUTH ANGLE (CONVERGENCE)	
PROJECT NAME: ROW01365					GRID DATA			
					STATE: TX		N 442264.806	
					ZONE: NC			
					CODE: 4202		E 2301439.257	
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS					NAD 83 GRID DATA		COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)
					STATE: TX		N 7008319.631	
					ZONE: NC			
					CODE: 4202		E 2576804.559	01°04'50.82402"
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 250' SOUTH
OF THE RR TRACKS. IT IS LOCATED 12.6' SOUTH OF THE NOSE OF
THE SOUTH MEDIAN, 15.6' EAST OF THE WEST CURB AND 16.6' WEST
OF THE EAST CURB

ADJUSTED HORIZONTAL CONTROL DATA			
ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		
COMBINED SCALE FACTOR:		0.999855170	
NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)	
STATE: TX ZONE: NC CODE: 4202	N 442264.806 E 2301439.257	00°32'07.92793"	
NAD 83 GRID DATA	COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)	
STATE: TX ZONE: NC CODE: 4202	N 7008319.631 E 2576804.559	01°04'50.82402"	
METRIC CONVERSION FACTOR:		3.2808333333	
GEODETIC DATA	POSITION		ELEV.(GPS)
	LATITUDE 32°52'42.97283"	NAD 27 <input type="checkbox"/> NAD 83 (93) <input checked="" type="checkbox"/>	459.73'
	LONGITUDE 96°31'06.03617"		WEST
FIELD SKETCH:			
N.T.S.			



GEODETIC CONTROL DATA SHEET

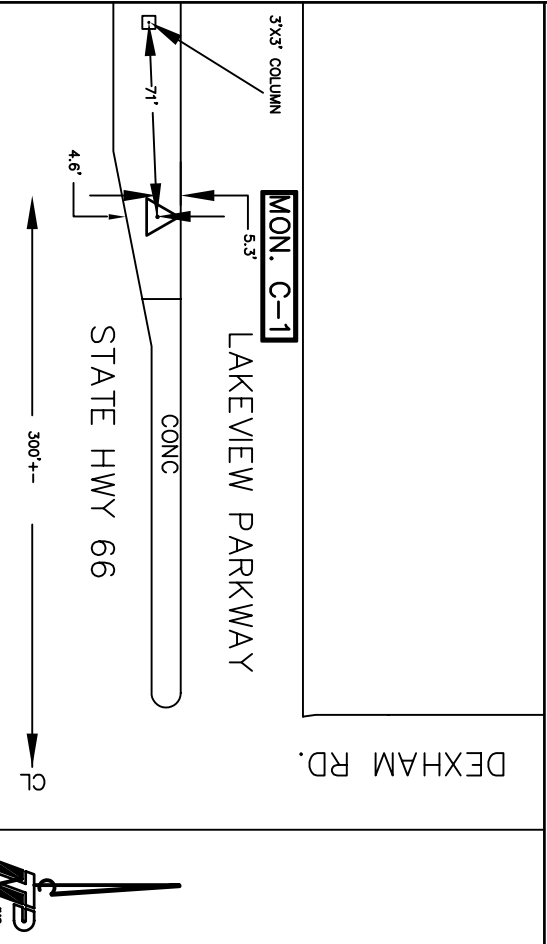
STATION NAME: C-1		DATE: JUNE 2003		ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERNITSEN TOP SECURITY MONUMENT W/ACCESS COVER		ORDER: 2ND		SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999852501		
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS			
PROJECT NAME: ROW01365					
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS					
AZIMUTH MARK	AZIMUTH	DISTANCE			

DESCRIPTION OF POINTS:
 THE BERNITSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED IN THE CL OF MEDIAN OF LAKEVIEW PARKWAY 300' +- WEST OF THE CL OF DEXHAM ROAD. IT IS 50' WEST OF THE END OF THE CONC MEDIAN, 5.3' SOUTH OF THE NORTH MEDIAN CURB AND 4.6' NORTH OF THE SOUTH MEDIAN CURB. IT IS ALSO 71' EAST OF A 3'X3' STONE COLUMN.

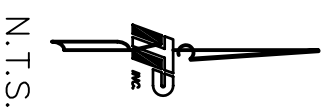
NAD 27		COORDINATES (U.S. SURVEY FEET)		PLANE AZIMUTH ANGLE (CONVERGENCE)	
GRID DATA					
STATE: TX	ZONE: NC	N 453042.382			
CODE: 4202		E 2280636.245	00°29'55.48419"		
NAD 83		COORDINATES (U.S. SURVEY FEET)		PLANE AZIMUTH ANGLE (CONVERGENCE)	
GRID DATA					
STATE: TX	ZONE: NC	N 7018898.838			
CODE: 4202		E 2555899.459	01°02'38.37422"		
METRIC CONVERSION FACTOR: 3.2808333333					

GEODETIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83 <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°54'.31.47508"		NORTH
	LONGITUDE	96°35'08.88757"		WEST

FIELD SKETCH:



MAPSCO 20-X

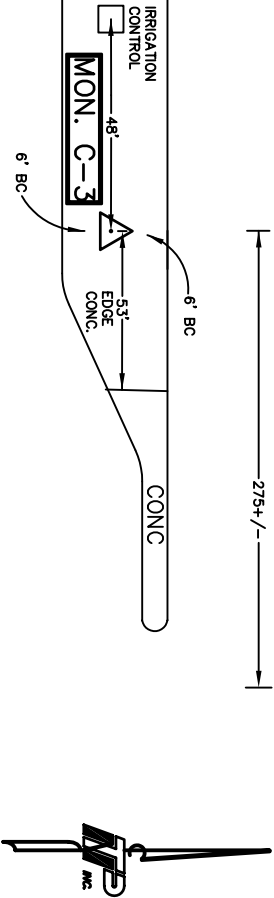


GEODETIC CONTROL DATA SHEET

STATION NAME: C-3		DATE: JUNE 2003		ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERTNSEN 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	
PROJECT NAME: ROW01365		STATE: TX		COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)
		ZONE: NC		N 452804.726	
		CODE: 4202		E 2290693.061	00°30'59.80962"
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS		NAD 83 GRID DATA		COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)
AZIMUTH MARK	AZIMUTH	DISTANCE			

DESCRIPTION OF POINTS:
THE BERTNSEN 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

METRIC CONVERSION FACTOR: 3.2808333333				
GEODETIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83 <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°54'28.24109"		NORTH
	LONGITUDE	96°33'10.93936"		WEST
FIELD SKETCH:				



MAPSCO 20A-W

LAKEVIEW PKWY

N.T.S.

GEODETIC CONTROL DATA SHEET

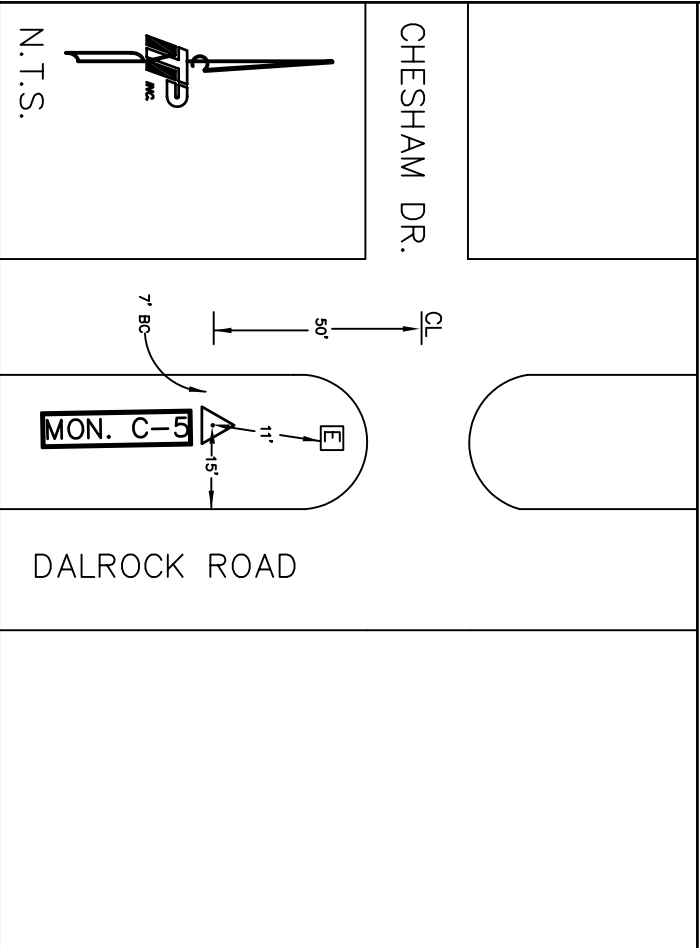
STATION NAME: C-5		DATE: JUNE 2003		ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERNITSEN TOP SECURITY MONUMENT W/ACCESS COVER		ORDER: 2ND		SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999852940		
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS			
PROJECT NAME: ROW01365					
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS					
AZIMUTH MARK	AZIMUTH	DISTANCE			

DESCRIPTION OF POINTS:
 THE BERNITSEN 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

NAD 83 GRID DATA		COORDINATES (U.S. SURVEY FEET)		PLANE AZIMUTH ANGLE (CONVERGENCE)	
STATE: TX	ZONE: NC	N 452872.412		00°32'08.48282"	
CODE: 4202		E 2301426.842			
NAD 83 GRID DATA		COORDINATES (U.S. SURVEY FEET)		PLANE AZIMUTH ANGLE (CONVERGENCE)	
STATE: TX	ZONE: NC	N 7018926.599		01°04'51.37878"	
CODE: 4202		E 2576691.179			
METRIC CONVERSION FACTOR: 3.2808333333					

GEODETIC DATA	POSITION		NAD 27 <input type="checkbox"/>	NAD 83 (93) <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°54'27.93480"	NORTH		477.10'
	LONGITUDE	96°31'05.01899"	WEST		

FIELD SKETCH:



GEODETIC CONTROL DATA SHEET

STATION NAME: D-4		DATE: JUNE 2003		ADJUSTED HORIZONTAL CONTROL DATA			
MONUMENT TYPE: BERNITSEN 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: 0.999852035				
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS					
PROJECT NAME: ROW01365							
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS							
AZIMUTH MARK	AZIMUTH	DISTANCE					
DESCRIPTION OF POINTS: THE BERNITSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED IN THE WEST END OF NORTH POINT DR. MEDIAN AT INTERSECTION OF CHIESA RD. IT IS ALSO 13' WEST OF A STONE SIGN, 14' NORTH OF SOUTH MEDIAN CURB, 11.5 SOUTH OF NORTH MEDIAN CURB AND 6' EAST OF NOSE OF MEDIAN.							
GEODETIC DATA		POSITION		NAD 27 <input type="checkbox"/>	NAD 83 (93) <input checked="" type="checkbox"/>	ELEV.(GPS)	
		LATITUDE		32°55'26.35203"		NORTH	
		LONGITUDE		96°32'05.92095"		WEST	
FIELD SKETCH:							
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> </div> <div style="width: 50%;"> <p>CHIESA ROAD</p> <p>NORTH POINT DR.</p> <p>STONE SIGN</p> <p>MON. D-4</p> <p>11.5'</p> <p>6'</p> <p>13'</p> <p>14'</p> <p>NORTH POINT DR.</p> </div> </div>							

MAPSCO 20A-U

GEODETIC CONTROL DATA SHEET

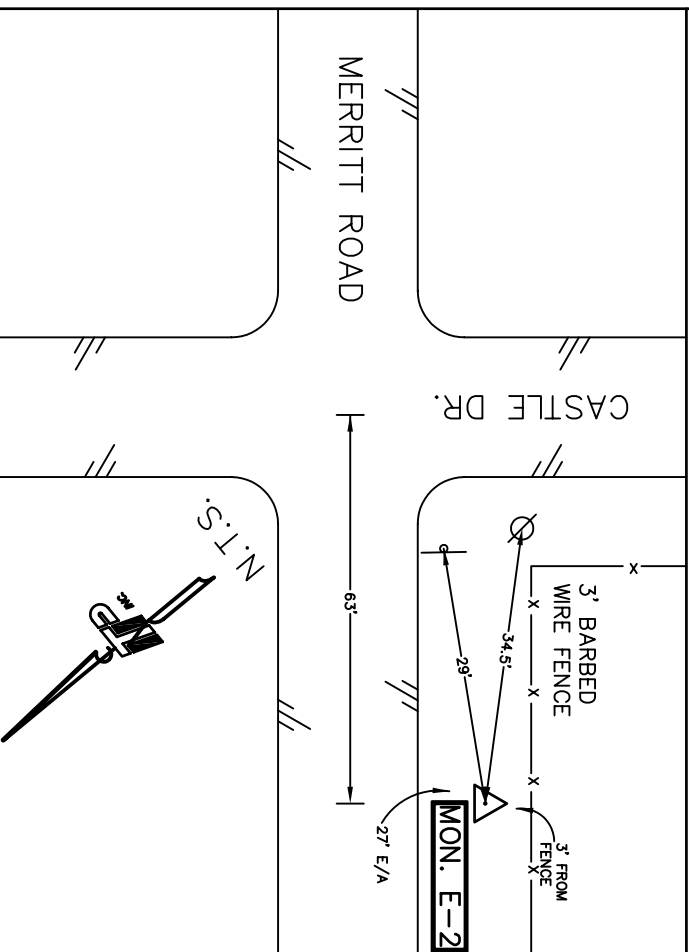
STATION NAME: E-2		DATE: JUNE 2003		ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERTSEN TOP SECURITY MONUMENT W/ACCESS COVER		ORDER: 2ND		SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999849447		
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS			
PROJECT NAME: ROW01365					
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS					
AZIMUTH MARK	AZIMUTH	DISTANCE			

DESCRIPTION OF POINTS:
THE BERTSEN 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.

NAD 83 GRID DATA		COORDINATES (U.S. SURVEY FEET)		PLANE AZIMUTH ANGLE (CONVERGENCE)	
STATE: TX ZONE: NC CODE: 4202		N 464986.645 E 2285671.007		00°30'28.37183"	
NAD 83 GRID DATA		COORDINATES (U.S. SURVEY FEET)		PLANE AZIMUTH ANGLE (CONVERGENCE)	
STATE: TX ZONE: NC CODE: 4202		N 7030890.400 E 2560820.428		01°03'11.26324"	
METRIC CONVERSION FACTOR: 3.2808333333					

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

FIELD SKETCH:



GEODETIC CONTROL DATA SHEET

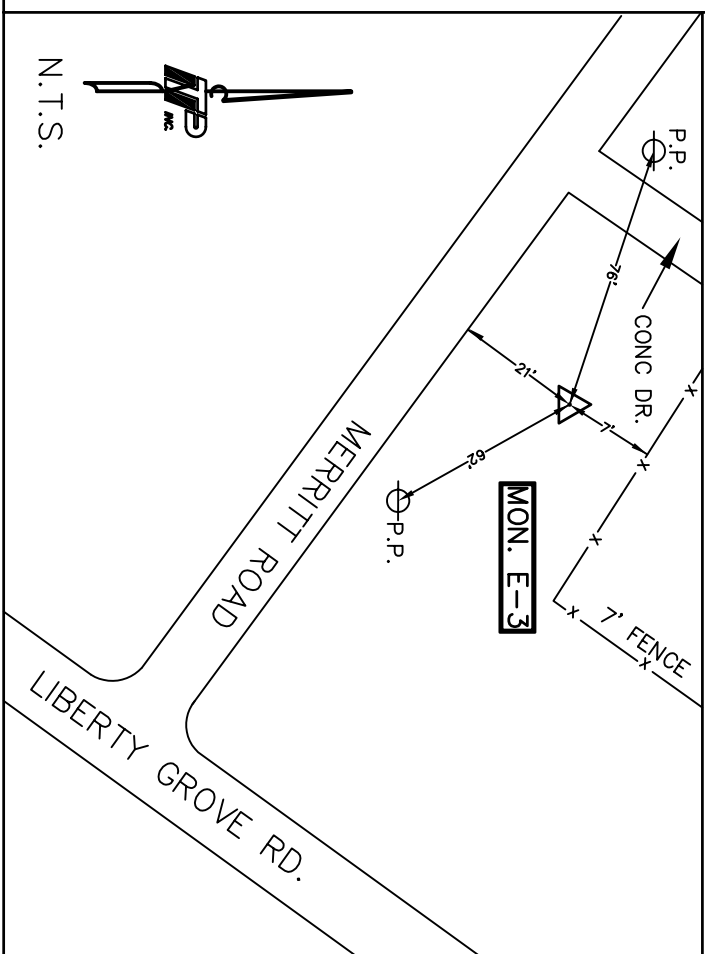
STATION NAME: E-3		DATE: JUNE 2003		ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERNITSEN TOP SECURITY MONUMENT W/ACCESS COVER		ORDER: 2ND		SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	
CITY: ROWLETT	COUNTY: DALLAS	STATE: TX	COMBINED SCALE FACTOR: 0.999852549		
SURVEYOR: TEAGUE NALL AND PERKINS		PREPARED BY: TWS			
PROJECT NAME: ROW01365					
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS					
AZIMUTH MARK	AZIMUTH	DISTANCE			

DESCRIPTION OF POINTS:
 THE BERNITSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED IN FRONT OF 7500 MERRITT RD. NORTH OF LIBERTY GROVE RD. .21' NE OF PAVEMENT, 7' SW OF A 7' FENCE, 76'SE OF A PP AND 62' NW OF A PP.

NAD 27		COORDINATES (U.S. SURVEY FEET)		PLANE AZIMUTH ANGLE (CONVERGENCE)	
NAD 83		COORDINATES (U.S. SURVEY FEET)		PLANE AZIMUTH ANGLE (CONVERGENCE)	
STATE: TX		N 459286.633		00°31'04.55278"	
ZONE: NC		E 2291375.874		00°31'04.55278"	
CODE: 4202					
STATE: TX		N 7025244.919		01°03'47.44582"	
ZONE: NC		E 2566579.403			
CODE: 4202					
METRIC CONVERSION FACTOR: 3.2808333333					

GEODETIC DATA	POSITION		NAD 27	<input type="checkbox"/>	NAD 83 (93)	<input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE		32°55'32.31766"		NORTH		469.989'
	LONGITUDE		96°33'02.24233"		WEST		

FIELD SKETCH:

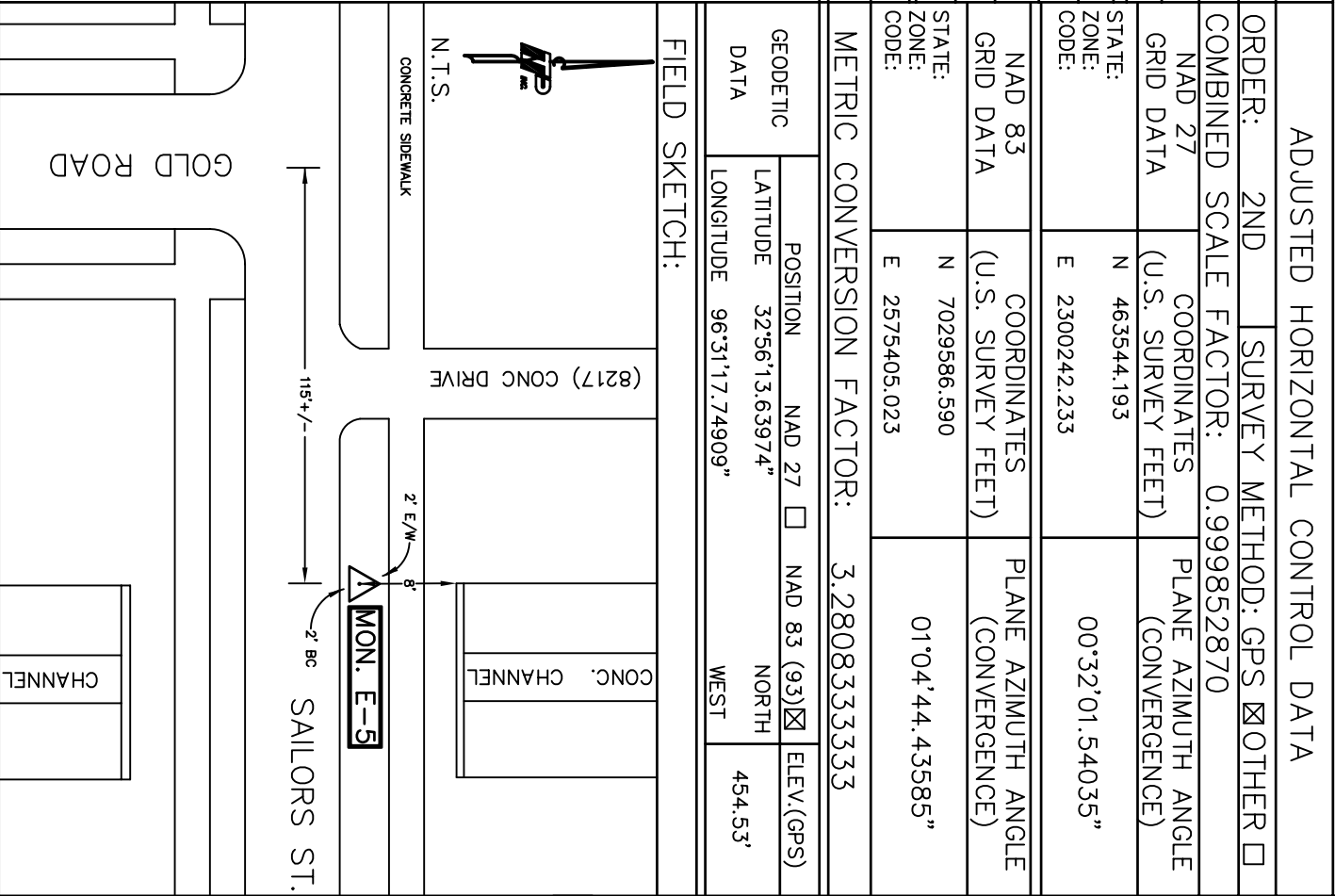


MAPSCO 20A-N

N.T.S.

STATION NAME: E-5		DATE: JUNE 2003		ADJUSTED HORIZONTAL CONTROL DATA					
MONUMENT TYPE: BERTITSEN 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)	PLANE AZIMUTH ANGLE (CONVERGENCE)		
PROJECT NAME: ROW01365				STATE: ZONE:		N E	463544.193 2300242.233	00°32'01.54035"	
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS				CODE:		E			
				NAD 83 GRID DATA		COORDINATES (U.S. SURVEY FEET)		PLANE AZIMUTH ANGLE (CONVERGENCE)	
				STATE: ZONE:		N	7029586.590	01°04'44.43585"	
				CODE:		E	2575405.023		
AZIMUTH MARK				AZIMUTH	DISTANCE				
METRIC CONVERSION FACTOR:				3.2808333333					

DESCRIPTION OF POINTS: THE BERNITSEN 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
	LONGITUDE	96°31'17.74909"	WEST
FIELD SKETCH:			
<p>The sketch shows a plan view of the monument area. At the top is 'GOLD ROAD'. Below it is a horizontal line representing the 'CONCRETE DRIVE (8217) CONC DRIVE'. To the right of the drive is a 'CONC. CHANNEL'. Below the drive is 'SAILORS ST.'. A 'CONCRETE SIDEWALK' runs along the north side of Sailors St. The monument, labeled 'MON. E-5', is located at the intersection of the sidewalk and Sailors St. Dimensions are shown: 115' +/- from Gold Road to the sidewalk; 2' E/W from the sidewalk to the monument; 8' from the monument to the concrete channel; and 2' BC from the monument to the edge of Sailors St.</p>			
MAPSCO 20A-M			



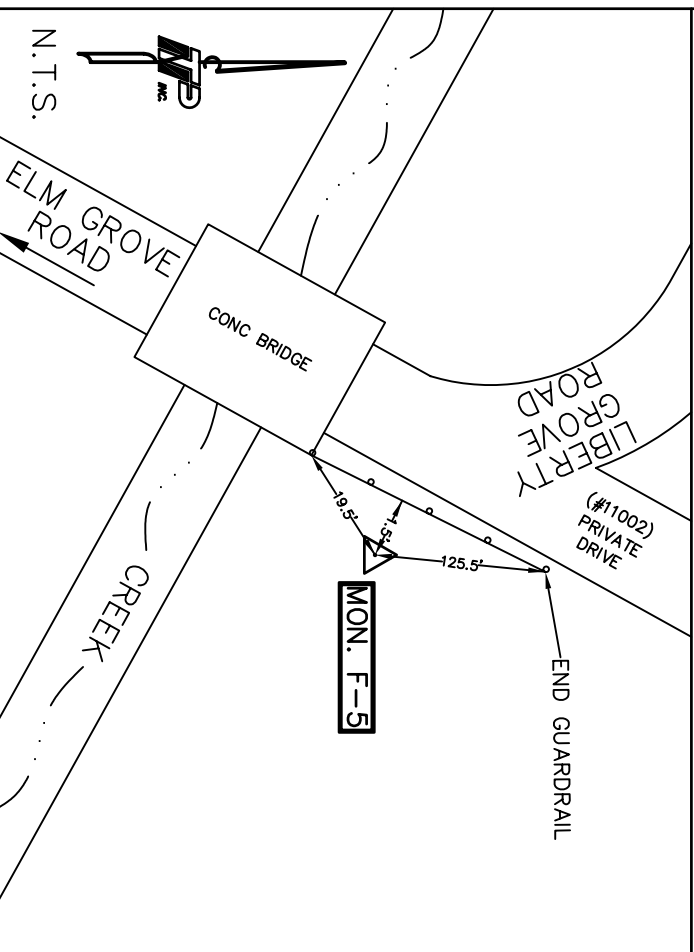
GEODETIC CONTROL DATA SHEET

STATION NAME: F-5		DATE: JUNE 2003		ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERTNSEN 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					
		STATE: TX	COORDINATES	PLANE AZIMUTH ANGLE	
		ZONE: NC	(U.S. SURVEY FEET)	(CONVERGENCE)	
		CODE: 4202	N 469407.610	00°32'09.17180"	
			E 2301379.880		
		NAD 83	COORDINATES	PLANE AZIMUTH ANGLE	
		GRID DATA	(U.S. SURVEY FEET)	(CONVERGENCE)	
		STATE: TX	N 7035460.538	01°04'52.06755"	
		ZONE: NC			
		CODE: 4202	E 2576486.834		
AZIMUTH MARK	AZIMUTH	DISTANCE			
METRIC CONVERSION FACTOR: 3.2808333333					

DESCRIPTION OF POINTS:
 THE BERTNSEN 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
	LONGITUDE	96°31'03.75610"		WEST

FIELD SKETCH:



MAPSCO 20B-A