



"A Quality of Life City"

BENCHMARKS, MONUMENTS & LOCATION MAP

WATER, SANITARY SEWER, STREETS, AND STORM DRAIN

CITY OF HURST
PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION
1505 PRECINCT LINE ROAD
HURST, TEXAS 76054
MAIN NO. (817) 788-7076
METRO NO. (817) 498-2700
FAX NO. (817) 788-7097

August 8, 2002

G.P.S. SURVEY REPORT

PRIMARY GEODETIC CONTROL POINTS 501 TO 508 ESTABLISHED BY TEAGUE NALL AND PERKINS IN ASSOCIATION WITH W. F. GUNN FOR THE CITY OF HURST, TEXAS IN AUGUST OF 1997

CONTROL POINTS

Primary Geodetic Control Points 501 to 508 were established by Teague Nall and Perkins, in association with W. F. Gunn for the City of Hurst, Texas in August of 1997. The purpose of this project was to establish a citywide control network, and a secondary vertical control network.

The project was performed using Ashtech receivers, and Trimble 4000SSI receivers. The receivers were logging both L1 and L2 frequencies. Ashtech and NGS GP to PC processing software were used to process the baselines. All baselines were fixed solutions.

The City of Hurst Control Network is based on the USCGS Second Order Station "Browning". The Datum used is NAD83 (93). The state plane coordinates are Texas North Central Zone.

The vertical datum is based on the NAVD88.

BASIS FOR HORIZONTAL POSITION

The horizontal positions for the Primary Geodetic Control Network for the City of Hurst was established using the USCGS Second Order Station "Browning", and the USCGS Second Order Station "Hope". These points were held fixed for horizontal positioning on the City of Hurst's Primary Monuments 501 to 508.

BASIS FOR VERTICAL DATUM

The vertical datum for the Primary Geodetic Control Network for the City of Hurst was established using the USCGS First Order Class 2 Station "Browning", and the USCGS First Order Class 2 Station "Hope". This was determined from a derived elevation from multiple occupations of this station. The points were held fixed for the Vertical Datum on the City of Hurst's Primary Monuments 501 to 508.

G.P.S. SURVEY REPORT

**PRIMARY GEODETIC CONTROL POINTS 501 TO 508
ESTABLISHED BY TEAGUE NALL AND PERKINS
IN ASSOCIATION WITH W. F. GUNN
FOR THE CITY OF HURST, TEXAS
IN AUGUST OF 1997**

BASIS FOR HORIZONTAL POSITION

The horizontal positions for the Secondary Vertical Control Network for the City of Hurst was established using "Real Time kinematic" G.P.S. procedures. No less than four of the Primary Geodetic Control points 501 to 508 were used for standard calibration procedures. The datum is NAD83 (93). The state plane coordinates are Texas North Central Zone.

BASIS FOR VERTICAL DATUM

The vertical datum for the Secondary Vertical Control Network for the City of Hurst was established using "Real Time kinematic" G.P.S. procedures. No less than four of the Primary Geodetic Control points 501 to 508 were used for standard calibration procedures. The vertical datum publish is based on the NAVD88.

CITY OF HURST

BENCHMARKS

DEFINITIONS:

#	Number assigned to Benchmark. Numbers 1 through 128 are City of Hurst Benchmarks. Numbers 501 through 508 are USGS Monuments.
Location	Intersection of Benchmark
North (ft)	North coordinate on real world coordinate system.
East (ft)	East coordinate on real world coordinate system.
Elevation (ft)	Elevation of top of benchmark or monument.
Monument Position	Detailed location of Benchmark or monument in reference to location
Benchmark	1 ½ diameter brass plate mounted in concrete with inscription of number.
Monument	6" diameter brass plate mounted in square concrete slab with inscription "USGS, #, (number)".

STANDARDS:

Coordinate System	Texas State Plane (North Central Zone)
Zone	5351
Units	Survey Feet
Datum (horizontal)	NAD83
Datum (vertical)	NAVD88

CITY OF HURST BENCHMARKS

#	Location	North (ft)	East (ft)	Elevation (ft)	Monument Type
1	Central Park Dr East of NE Loop 820	6,978,798.00	2,365,027.10	517.90	Storm Drain/ N
2	NE Loop 820 South of Yamaha Dealer	6,979,171.75	2,364,871.34	546.35	Top of Curb/ E
3	Central Park Dr South of Hwy 10	6,979,293.09	2,365,556.38	532.41	Storm Drain/ W
4	Booth Calloway Rd @ Hwy 10	6,979,730.90	2,364,175.74	556.96	Top of Curb (Island)/ NE
5	Putt-Putt Golf Center Parking Lot	6,983,337.58	2,365,435.86	547.92	Corner of Concrete Parking Lot/ W
6	South Bound NE 820 South of Walker Branch	6,982,379.00	2,365,662.75	548.77	Sidewalk/ SW
7	South Bound NE Loop 820 North of Encino Dr	6,980,869.76	2,365,081.84	557.02	Top of Curb/ NW
8	North Bound NE Loop 820 @ Walker Branch	6,982,417.01	2,366,056.05	545.88	Top of Curb(Bridge)/ NE
9	Arcadia St @ Calloway Branch	6,982,142.10	2,367,279.19	538.55	Top of Curb(Bridge)/ E
10	Hurstview Dr @ Oakview Dr	7,004,855.29	2,373,952.69	612.52	Storm Drain/ SW
11	Redbud Dr @ Walker Branch	6,982,910.74	2,368,987.50	531.14	Top of Curb (Bridge)/ S
12	Redbud Dr @ Englewood Ln	6,982,479.64	2,370,423.64	532.67	Storm Drain/ SW
13	Redbud Dr @ Precinct Line Rd	6,982,322.86	2,371,939.21	552.58	Water Valve Box/ NW
14	Precinct Line Rd @ Cullum Ave	6,981,161.00	2,371,953.70	536.95	Top of Curb/ NW
15	West Glade Rd @ Little Bear Creek	7,005,821.02	2,373,883.38	605.14	Sidewalk (center of bridge)/ N
16	Hwy 10 @ Precinct Line Rd	6,979,908.55	2,371,769.47	519.48	Groundwater monitoring well/ NW
17	Glade Creek Dr @ Whitney Way	7,007,271.22	2,374,295.16	617.99	Storm Drain/ NW
18	Cullum Ave @ Redbud Park (E of Crosstimber Dr)	6,981,272.22	2,374,325.21	511.43	Top of Curb (Bridge)/ S
19	Myrtle Ct @ Lorean Branch	6,980,722.94	2,374,431.23	504.89	Storm drain/ SW
20	Redbud Dr @ Lorean Branch	6,982,263.25	2,374,313.45	514.68	Top of Curb (Bridge)/ S
21	Ponderosa Dr @ Ridgecrest Dr	6,982,638.57	2,373,422.48	546.77	Storm Drain/ NW
22	Willow St West of Precinct Line Rd	6,983,951.57	2,371,673.11	558.37	Storm Drain/ NW
23	Precinct Line Rd @ Pipeline Rd	6,985,078.81	2,371,668.95	573.35	Storm Drain/ SW
24	Pipeline Rd @ Forest Oaks Ln	6,985,146.49	2,372,957.70	577.48	Storm Drain/ NE
25	Pipeline Rd @ Trailwood Dr	6,985,151.09	2,373,670.25	561.43	Storm drain/ NE
26	Pipeline Rd @ Hurstview Dr	6,985,099.17	2,374,238.21	545.32	Storm drain/ SE
27	Pipeline Rd @ Lorean Branch	6,985,157.46	2,374,862.80	535.38	Top of Curb (Bridge)/ N
28	Bordeaux Ln East of Bear Creek Dr	7,007,954.47	2,374,908.56	633.04	Storm Drain/ N
29	Elm St @ Mary Dr	6,983,719.67	2,375,104.05	523.08	Top of Curb (Bridge)/ N
30	Hurstview Dr @ Lorean Branch S	6,983,079.89	2,374,768.96	517.50	Top of Curb (Bridge)/ SW
31	Cullum Ave @ Hurstview Dr	6,981,205.46	2,375,457.46	529.82	Storm Drain/ SE
32	Cullum Ave @ Harrison Ln	6,981,428.94	2,376,625.47	532.92	Storm drain/ NW
33	Redbud Dr @ Norwood Dr	6,982,533.53	2,377,151.56	538.17	Storm drain/ NW
34	Lynn Ct @ Norwood Dr	6,981,766.67	2,377,101.13	534.61	Storm Drain/ NW
35	Brown Trl @ Valley View Branch	6,981,095.20	2,378,034.30	507.89	Storm Drain/ W
36	Bluebonnet Dr @ Michael Blvd	6,981,811.93	2,379,434.60	541.62	Top of Curb/ SW
37	Brookfield Dr @ Bellaire Dr	6,982,247.79	2,380,251.54	544.40	Storm Drain/ NW
38	Arwine Dr @ Bluebonnet Dr	6,981,925.00	2,381,211.50	541.50	Storm Drain/ SE

CITY OF HURST BENCHMARKS

#	Location	North (ft)	East (ft)	Elevation (ft)	Monument Type
39	Ellen Ave @ Bellaire Dr	6,980,491.90	2,380,279.10	524.97	Storm Drain/ NE
40	Bluebonnet Dr North of SH 10	6,981,702.50	2,384,336.00	495.43	Storm Drain/ NE
41	Sotogrande Blvd @ SH 10	6,982,174.22	2,386,480.93	562.35	Storm Drain/ SE
42	Pipeline Rd @ Arwine Ct	6,985,123.45	2,381,383.91	557.43	Sidewalk/ NE
43	Pecan St @ Bellaire Dr	6,983,567.79	2,380,201.98	554.68	Storm Drain/ NE
44	Evergreen Dr @ Steve Dr	7,003,955.45	2,373,136.49	624.38	Storm Drain/ NE
45	Uptown Blvd @ Pipeline Rd	6,985,203.80	2,378,694.00	562.97	Storm Drain/ N
46	Plaza Blvd @ Uptown Blvd	6,986,067.20	2,378,678.32	570.88	Top of Curb/ SW
47	Pipeline Rd East of Norwood Dr	6,985,207.79	2,377,795.53	538.45	Storm Drain/ NE
48	Pecan St @ Holder Dr	6,983,598.78	2,377,464.85	525.37	Top of Curb (Sidewalk)/ SE
49	Evan Dr @ Reese Ln	7,004,774.29	2,372,645.56	642.74	Top of Curb/ NE
50	Pipeline Rd @ Harrison Ln	6,985,184.21	2,377,080.17	550.41	Storm Drain/ NE
51	Pipeline Rd @ Walker Branch	6,985,112.47	2,368,385.61	550.08	Top of Curb (Bridge)/ N
52	Pipeline Rd @ Zelda Dr	6,985,045.46	2,369,263.30	545.38	Top of Curb (Bridge)/ S
53	Cheryl Ave @ Melbourne Rd	6,986,291.30	2,367,913.80	547.61	Storm Drain/ NW
54	Precinct Line Rd @ West Glade Rd	7,005,354.74	2,371,919.19	637.42	Storm Drain/ SE
55	Cheryl Ave @ Melbourne Rd	6,986,333.30	2,368,503.68	551.86	Storm Drain/ / NE
56	Black St @ Melbourne Rd	6,986,902.57	2,368,690.56	560.40	Storm Drain/ NE
57	Desiree Ln @ Bedford Euleess Rd	6,988,528.65	2,368,903.51	574.71	Storm Drain/ SE
58	Wheelwood Dr @ Wreycyhill Dr	6,989,337.98	2,370,776.22	608.51	Top of Curb/ SE
59	Airport Freeway @ Albertson's	6,990,561.31	5,371,396.64	579.07	Storm Drain/ SW
60	Private Drive @ Drug Emporium	6,989,264.48	2,372,460.08	565.77	Storm Drain/ W
61	Bedford Euleess Rd @ Princess Ln	6,988,661.99	2,371,131.52	599.51	Storm Drain/ SE
62	Scott Dr @ Edgehill Dr	6,987,029.55	2,371,438.72	603.64	Top of Curb/ NE
63	Cheryl Ave @ Irwin Dr	6,986,394.30	2,370,624.27	582.73	Water valve Box/ NE
64	Precinct Line Rd @ Woodcrest Dr	6,985,823.55	2,371,940.76	583.46	Storm Drain/ W
65	Hurstview Dr @ Lorean Branch North	6,986,224.07	2,374,530.03	537.23	Storm Drain/ SE
66	Brookside Dr @ Patricia Rd	6,986,934.47	2,374,341.03	543.39	Storm Drain/ SW
67	Cavender Dr @ Bedford Ct W	6,987,668.64	2,375,933.27	578.47	Top of Curb/ NE
68	Cheryl Ave @ Valley View Branch	6,986,651.33	2,378,102.65	546.37	Headwall (Bridge)/ SE
69	Bedford Ct W @ Valley View Branch	6,987,647.44	2,377,736.85	554.50	Headwall (Bridge)/ N
70	Bedford Euleess Rd @ Valley View Ct	6,988,871.43	2,377,912.39	558.45	Storm Drain/ SE
71	Hayes Ln @ Harrison Ln	6,990,072.20	2,377,092.28	571.04	Top of Curb/ SW
72	Bedford Euleess Rd @ Yates Dr	6,988,981.90	2,376,668.85	574.04	Storm drain/ NE
73	Precinct Line Rd @ Highland Crest Rd	7,003,428.00	2,371,912.72	659.87	Storm Drain/ NE
74	Fieldwood Ter @ Valentine St	6,989,760.20	2,376,105.10	583.60	Storm Drain/ NE
75	Fieldwood Ter @ Hurstview Dr	6,989,718.18	2,374,789.76	580.29	Storm Drain/ SW
76	Brookside Dr @ Fieldwood Ter	6,989,718.75	2,374,182.41	573.24	Storm Drain/ W

CITY OF HURST BENCHMARKS

#	Location	North (ft)	East (ft)	Elevation (ft)	Monument Type
77	Bedford Euless Rd @ Lorean Branch	6,988,850.68	2,373,266.75	555.30	Sidewalk (Bridge)/ SE
78	Airport Freeway East @ Lorean Brnch	6,991,775.07	2,373,215.80	561.71	Drain Box/ SW
79	Airport Freeway 1/10 mi. West of Yates Dr	6,990,828.21	2,376,274.05	586.45	Storm Drain/ S
80	Pleasantview Dr @ Brown Trl	6,992,783.70	2,379,989.30	599.94	Top of Curb/ SW
81	Renee Dr @ Louella Dr	6,993,129.26	2,378,943.61	587.55	Storm Drain/ NE
82	Westridge Dr @ Shady Lake Dr	6,994,279.13	2,378,598.16	597.71	Top of Curb/ SW
83	Pleasantview Dr @ Valley View Branch	6,992,101.00	2,378,153.40	574.44	Storm Drain/ SE
84	Louella Dr @ Valley View Branch	6,993,314.04	2,377,838.92	580.79	Headwall (Bridge)/ N
85	Circleview Dr N @ Yates Dr	6,992,740.10	2,376,666.63	586.52	Storm Drain/ NW
86	Plainview Dr @ Cavender Dr	6,991,272.50	2,375,834.80	593.86	Top of Curb/ S
87	Cavender Dr @ Louella Dr	6,993,293.50	2,375,574.14	601.13	Top of Curb/ SW
88	Circleview Dr N @ Hurstview Dr	6,992,713.19	2,374,554.63	593.90	Top of Curb/ SE
89	Airport Freeway West of Cimarron Trl (West Bound)	6,991,088.10	2,373,340.30	566.07	Top of Curb (between lanes)/ Cntr
90	Precinct Line Rd @ Pleasantview Dr	6,991,967.62	2,371,925.77	591.79	Storm Drain/ SW
91	Harwood Rd @ Campus Dr	6,992,279.02	2,370,109.04	598.43	Sanitary Sewer Box/ NW
92	Precinct Line Rd @ Harwood Rd	6,993,002.30	2,371,992.30	585.72	Storm Drain/ N
93	1601 Greentree Ct	6,992,638.82	2,372,617.46	577.03	Top of Curb/ W
94	Cimarron Trl @ Harwood Rd	6,993,468.60	2,373,701.90	585.25	Storm Drain/ S
95	Hurstview Dr @ Harwood Rd	6,993,790.70	2,374,535.86	597.45	Storm Drain/ SE
96	Cavender Dr @ Harwood Rd	6,994,384.26	2,375,580.85	599.02	Storm Drain/ NW
97	Norwood Rd @ Harwood Rd	6,994,975.80	2,376,857.44	601.20	Top of Curb (median)/ N
98	Harwood Rd @ East City Limits	6,995,093.30	2,377,558.69	596.54	Storm drain/ N
99	Northglen Dr @ Carolyn Dr	6,996,079.30	2,377,202.11	612.15	Storm Drain/ NE
100	Cannon Dr @ Northglen Dr	6,996,942.06	2,376,226.87	619.16	Storm Drain/ N
101	Cavender Dr @ Mountainview Dr	6,995,194.80	2,375,572.90	604.17	Storm Drain/ NW
102	Fairhaven Dr @ Address 408 (east of sidewalk)	6,996,332.20	2,375,516.91	616.93	Top of Curb/ N
103	Chisolm Trl @ Cambridge Dr	6,996,896.42	2,375,081.77	614.34	Storm Drain/ NE
104	Farrington Ln @ Fairlane Ct	6,997,580.11	2,373,947.46	596.14	Storm Drain/ NE
105	Womack Ct West of Hurstview Dr	6,997,145.36	2,374,231.70	599.83	Storm Drain/ W
106	Julia Dr @ Mesquite Trl	6,995,450.38	2,373,957.51	601.94	Top of Curb/ SE
107	Cimarron Trl @ TES Co ROW	6,995,057.94	2,373,045.50	579.79	Storm Drain/ SE
108	Precinct Line Rd @ TES Co ROW	6,995,221.70	2,371,904.06	586.12	Storm Drain/ NW
109	Precinct Line Rd @ Cannon Dr	6,995,717.70	2,371,997.30	589.09	Top of Curb/ S
110	Hwy 26 @ Precinct Line Rd	6,996,923.54	2,372,117.55	588.90	Water Valve Box/ SE
111	Hwy 26 @ Valley View Branch	6,998,562.80	2,373,766.80	599.68	Headwall/ S
112	Hwy 26 @ Hurstview Dr	6,999,292.71	2,374,364.73	604.68	Top of Curb/ NW
113	Hwy 26 @ East City Limits	7,000,779.40	2,375,895.65	635.60	Storm Drain/ NW
114	Mid-Cities Blvd @ Woodbridge Dr	7,000,827.45	2,375,534.03	628.40	Storm Drain/ SW

CITY OF HURST BENCHMARKS

#	Location	North (ft)	East (ft)	Elevation (ft)	Monument Type
115	Crystal Glenn Cir @ Mid-Cities Blvd	7,000,394.69	2,374,867.70	612.33	Storm Drain/ NW
116	Fox Glenn Ct @ Mid-Cities Blvd	7,000,018.51	2,373,406.56	613.82	Storm Drain/ NE
117	Regency Dr @ Precinct Line Rd	7,000,492.88	2,371,999.62	645.19	Top of Curb/ SE
118	Precinct Line Rd @ Toni Dr	7,001,730.82	2,371,920.83	643.25	Storm Drain/ NE
119	Autumn Dr @ Springhill Dr	7,001,288.00	2,373,360.80	641.67	Top of Curb/ W
120	Summerdale Dr @ Autumn Dr	7,002,260.45	2,373,430.29	641.64	Storm Drain/ SE
121	Winterhaven Dr @ Stephanie Ln	7,002,596.17	2,374,403.45	642.82	Top of Curb/ NW
122	Bremen Dr @ Henereta Dr	7,003,265.33	2,375,355.83	603.98	Storm Drain/ SW
123	Antwerp Dr @ Henereta Dr	7,003,320.65	2,376,809.77	612.63	Storm Drain/ SE
124	Mill Ridge Dr @ Bremen Dr	7,003,675.03	2,378,002.68	598.04	Storm Drain/ NW
125	Springhill Dr @ Address 116 (east of Antwerp Dr)	7,002,519.63	2,377,150.89	632.32	Top of Curb/ N
126	Cottonwood Ln @ Bremen Dr	7,002,203.79	2,375,079.49	613.99	Storm Drain/ SW
127	Evergreen Dr @ Hurstview Dr	7,003,923.67	2,373,919.69	629.00	Top of Curb/ SE
128	Evergreen Dr @ Oakview Dr	7,003,967.61	2,374,999.92	607.47	Storm Drain/ NE
129	Dillon Ct @ Bear Creek Dr	7,006,885.00	2,374,760.76	616.76	Storm Drain/ NW
130	Madison Ave @ Dalton Dr	7,006,303.27	2,375,202.77	612.15	Storm Drain/ SW
131	Sophie Ln @ Bear Creek Dr	7,005,966.18	2,375,045.86	611.75	Storm Drain/ SE

CITY OF HURST MONUMENTS

#	Location	North (ft)	East (ft)	Elevation (ft)	Monument Type
501	SH 26 @ NRH2O	6,995,136.13	2,370,155.60	611.93	GPS Mon./ NE of Parking Lot
502	SH 26 @ Antwerp Dr	7,001,913.63	2,377,144.82	633.57	GPS Mon./ N (50 ft E of Inter.)
503	Bedford Eules Rd @ Address 941	6,988,550.68	2,369,542.58	598.47	GPS Mon./ SW
504	E Pleasantview Dr @ L D Bell HS	6,992,524.03	2,378,639.55	578.91	GPS Mon./ N of Ballfield
505	SH 10 @ IH 820 Service Rd	6,979,741.17	2,365,049.97	557.15	GPS Mon./ NE (in island)
506	Elm St @ Address 530	6,983,693.20	2,374,871.91	528.07	GPS Mon./ N
507	Glade Rd East of Precinct Line Rd	7,005,805.34	2,372,383.87	632.73	GPS Mon./ N (700 ft E of Inter.)
508	SH 10 West of Arwine Rd	6,980,350.90	2,382,319.75	518.80	GPS Mon./ N (550 ft E of Inter., 20 ft BOC)