



## City of Sugar Land Geodetic Control Station

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| <b>Project Name: City of Sugar Land</b><br><b>Reference Marker Resurvey 2021 Elevations</b>                                                                                                                                                                                                                                                                                                                                                                          |  | <b>Floodplain RM No.: SGR-RM033</b><br><b>Designation Number: SGR-RM033</b>                                                 |
| <b>County:</b> Fort Bend <b>State:</b> Texas<br><b>Key Map No.:</b> 568H                                                                                                                                                                                                                                                                                                                                                                                             |  | <b>Established By:</b> Tejas Surveying, Inc.<br><b>Date Established:</b> 09/10/2021                                         |
| <b>NGS Classification<sup>(1)</sup>:</b> RANGE VI                                                                                                                                                                                                                                                                                                                                                                                                                    |  | <b>Watershed:</b> Ditch A-22                                                                                                |
| <b>Constrained to OPUS Solutions For:</b> RM001, RM003, RM018R & RM019<br><b>Units of Measure:</b> U.S. Survey Feet                                                                                                                                                                                                                                                                                                                                                  |  | <b>Survey Method Hor.:</b> GPSOBS-RTN<br><b>Survey Method Vert.:</b> GPSOBS-RTN & Differential Levels                       |
| <b>Horizontal Datum:</b> NAD83 (2011) (EPOCH 2010.0000)<br><b>Horizontal Adj.<sup>(2)</sup>:</b> August 2021<br><b>Projection Zone:</b> Texas South Central 4204                                                                                                                                                                                                                                                                                                     |  | <b>Vertical Datum:</b> NAVD 88<br><b>Vertical Adjustment<sup>(2)</sup>:</b> August 2021<br><b>Geoid Model Used:</b> GEOID18 |
| <b>Station Name:</b> SGR-RM033                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | <b>Contractor PID:</b> TS# 509                                                                                              |
| <b>Marker:</b> 3" Brass Disk                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <b>Rod Depth:</b> SURFACE                                                                                                   |
| <b>Stamping:</b> RM 033                                                                                                                                                                                                                                                                                                                                                                                                                                              |  | <b>Sleeve Depth:</b> N/A                                                                                                    |
| <b>Mark Logo:</b> CITY OF SUGAR LAND                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | <b>Geoid Height:</b> -89.569' -27.3007m                                                                                     |
| <b>Latitude:</b> 29°38'10.369958" N                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | <b>Northing (grid):</b> 13,794,511.560                                                                                      |
| <b>Longitude:</b> 95°36'21.758634" W                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | <b>Easting (grid):</b> 3,046,488.065                                                                                        |
| <b>Ellipsoid Height:</b> -11.784' -3.5917m                                                                                                                                                                                                                                                                                                                                                                                                                           |  | <b>Elevation:</b> 77.805' 23.7148m                                                                                          |
| <b>Convergence:</b> 1°39'46"                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <b>Scale Factor:</b> 0.999877019                                                                                            |
| <b>Satellite Observable:</b> Yes                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | <b>Elevation Factor:</b> 1.000000564                                                                                        |
| <b>NGS PID (If Applicable):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | <b>Combined Factor:</b> 0.999877583                                                                                         |
| <b><u>General Location</u></b><br>Intersection of Industrial Blvd and Jess Pirtle Blvd.                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                             |
| <b><u>To Reach Description</u></b><br>From the intersection of US Highway 90A and Industrial Blvd in Sugar Land, travel north on Main St. about 0.7 mile to the intersection with Reed Road. The disk located about 140 feet north on the east bank of the ditch where Reed Road, Industrial and Jess Pirtle all intersect.                                                                                                                                          |  |                                                                                                                             |
| Positional Information shown hereon is the results of averaging redundant RTN GPS observations on three (3) different days with differing satellite geometry.                                                                                                                                                                                                                                                                                                        |  |                                                                                                                             |
| <b>Notes:</b><br>(1) Range VI indicates that this position meets the 0.02m-0.05m Accuracy Standard for Horizontal Position, Ellipsoidal Height, and Orthometric Height (elevation) at the 95% confidence level (m=meters).<br>(2) Horizontal & Vertical Adjustment - This survey is constrained to the redundant OPUS solutions from three static sessions at least 5.5 hours long processed in reference frame: NAD 83 (2011) (EPOCH: 2010.0000) NAVD 88 (GEOID 18) |  |                                                                                                                             |
| <b>SUPERCEDED NAVD '88 2001 ADJ.</b><br>ELEVATION = N/A                                                                                                                                                                                                                                                                                                                                                                                                              |  | <b>NATIONAL SPATIAL REFERENCE SYSTEM (NSRS)</b><br>APPROX HEIGHT = 77.10' (xGeoid19B,GRS80,ITRF2014)                        |

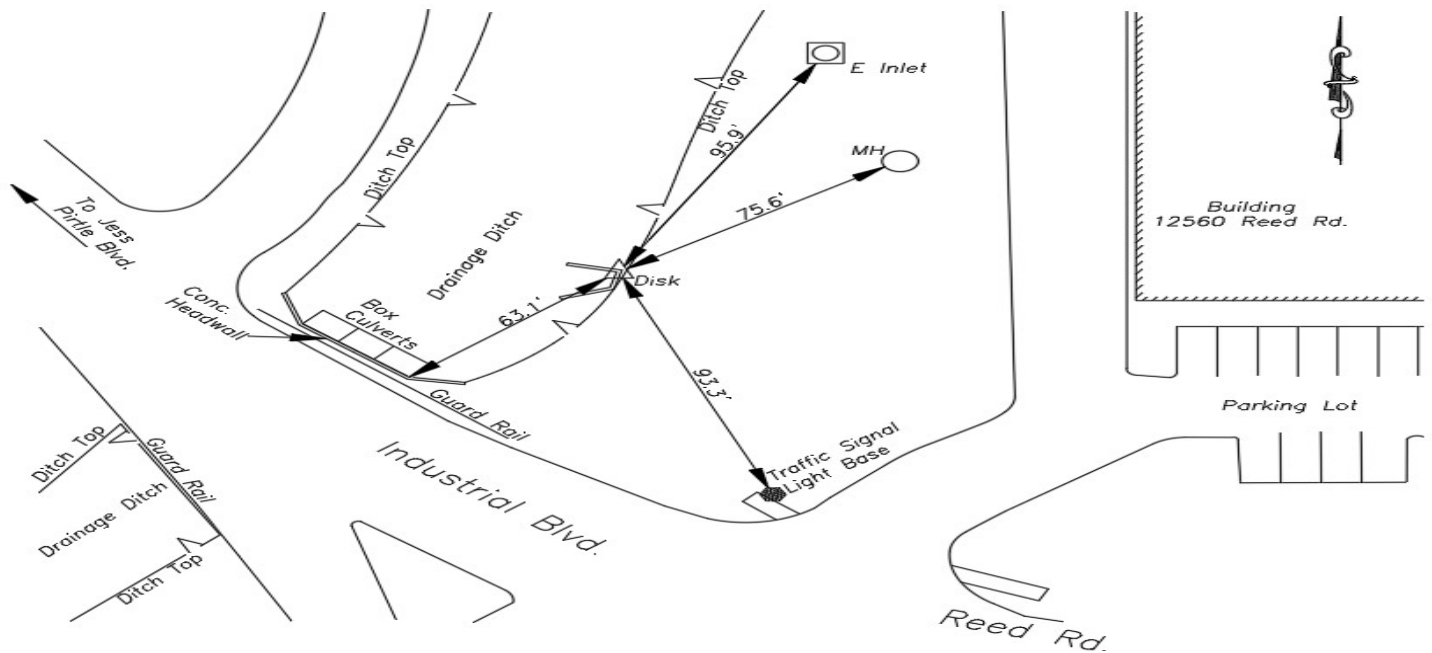


# City of Sugar Land Geodetic Control Station

Project Name  
City of Sugar Land  
Reference Marker Resurvey  
2021 Elevations

GPS Control Station  
RM No: **SGR-RM 033**  
Date: **September, 2021**

Station Sketch:



MARKER RM 033

Photo 1-Station Detail:



Photo 2-Station Area Picture:





## City of Sugar Land Geodetic Control Station

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|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Project Name<br>City of Sugar Land<br>Reference Marker Resurvey<br>2021 Elevations                         | GPS Control Station<br>RM No: <b>SGR-RM 033</b><br>Date: <b>September, 2021</b> |
| Recovery Notes:                                                                                            |                                                                                 |
| <p>Benchmark recovered by City Staff January 2023.<br/>Benchmark recovered by City staff January 2026.</p> |                                                                                 |