

## **Town of Addison**

# **Network Survey Control Manual**

**February 1, 2021** 

#### INTRODUCTION

A network of 15 control points had in 2007 been established for the Town of Addison by the Texas Department of Transportation. Over time five of those monuments were destroyed.

Since that time the coordinates of those monuments have been superseded by newer adjustments/realizations and consequently, those coordinates are no longer up to date. The current Coordinate System as adopted by the National Geodetic Survey (NGS) is based on the North American Datum of 1983 (NAD83) 2011 Adjustment.

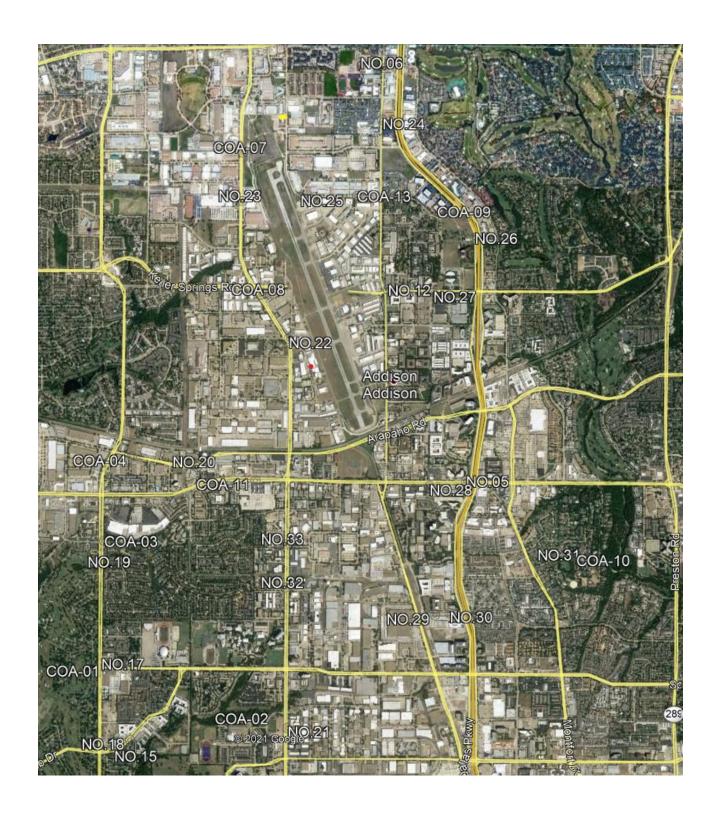
CobbFendley was retained by the Town of Addison to update the coordinates of the existing monuments to make them compatible with the latest NGS adjustment, to replace certain monuments that had been destroyed, and to add additional monuments so that each monument would be paired with another intervisible monument such that each monument would have an equally well located backsight to be used when conventional survey techniques were being utilized. In all 22 new monuments were built and surveyed, making the network a total of 32 monuments now.

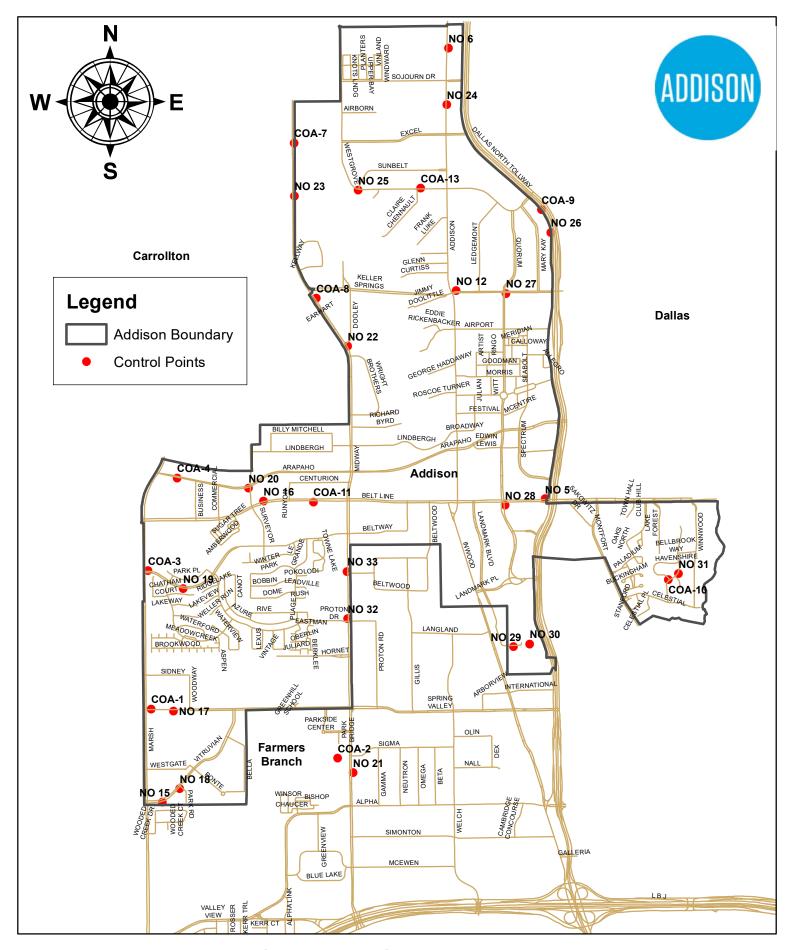
The process of establishing the precise location and coordinates of each monument was completed with the use of the Global Navigation Satellite System (GNSS) which is comprised of four different navigation satellite systems for the highest degree of accuracy possible. Standard deviations (error estimates) for each horizontal and vertical component of the monument locations were typically in the range of 0.01'. To establish these three-dimensional coordinates for each point, a Real Time Network (RTN) of precise GNSS reference stations, known as Smartnet (operated by Leica Geosystems) was used. Multiple individual observations (typically six) of five minutes duration were made over a period of several days to account for variations in the satellite orbits and atmospheric conditions, giving a more reliable weighted average of the observations.

Each Control Data Sheet is a one-page compendium of all the necessary information that a knowledgeable user (surveyor) will need to make use of these control points in day to day work. Location descriptions as well as sketches and photographs are included so that there will be no doubt as to the location of these points, and all the necessary meta data is also provided. A listing of geographic coordinates in addition to Texas Coordinate System of 1983 (State Plane Coordinates) allows the locations of these points to be easily imported into Addison's GIS.

The following tables give the coordinates of each monument in NAD83 (2011) Geographic Coordinates as well as Texas Coordinate System of 1983, North Texas Zone Grid Coordinates. Elevations are referenced to the NAVD88 Vertical Datum by applying vertical shifts calculated using Geoid 2012B to the NAD83 (2011) Ellipsoidal Heights. All values are displayed in US Survey Feet.

#### **LOCATION MAP**





Town of Addison Control Network Map

0	0.125 0.25	0.5	0.75	1
				Miles

## NAD83 (2011 ADJUSTMENT) GEOGRAPHIC COORDNATES

Point Id	Latitude	Longitude	Ellip. Height	Std Deviation Lat	Std Deviation Lon	Std Deviation Ht
COA-01	32 56 24.22609 N	96 51 19.16342 W	485.70	0.004	0.006	0.007
COA-02	32 56 11.19922 N	96 50 24.15394 W	491.54	0.005	0.006	0.011
COA-03	32 56 58.73431 N	96 51 19.53985 W	497.99	0.003	0.006	0.008
COA-04	32 57 21.78957 N	96 51 10.42120 W	495.85	0.006	0.004	0.007
COA-07	32 58 44.99295 N	96 50 34.21702 W	551.95	0.007	0.002	0.005
COA-08	32 58 06.11003 N	96 50 28.37069 W	551.67	0.003	0.003	0.008
COA-09	32 58 27.29910 N	96 49 21.22236 W	528.48	0.004	0.006	0.003
COA-10	32 56 54.41283 N	96 48 45.51949 W	507.13	0.003	0.002	0.013
COA-11	32 57 15.28670 N	96 50 30.20461 W	524.62	0.003	0.001	0.005
COA-13	32 58 33.15329 N	96 49 56.94373 W	555.10	0.005	0.005	0.012
NO.05	32 57 15.10476 N	96 49 21.57029 W	547.21	0.006	0.006	0.006
NO.06	32 59 08.03958 N	96 49 48.04664 W	552.78	0.007	0.008	0.013
NO.12	32 58 07.44507 N	96 49 46.98432 W	551.88	0.003	0.006	0.019
NO.15	32 56 00.92359 N	96 51 16.35179 W	461.35	0.007	0.002	0.012
NO.16	32 57 15.66455 N	96 50 45.01057 W	509.57	0.005	0.004	0.014
NO.17	32 56 23.63199 N	96 51 12.59387 W	496.01	0.006	0.003	0.006
NO.18	32 56 04.22908 N	96 51 11.12906 W	466.60	0.002	0.004	0.009
NO.19	32 56 54.07539 N	96 51 09.15186 W	510.50	0.007	0.005	0.012
NO.20	32 57 18.93188 N	96 50 49.36568 W	508.36	0.006	0.006	0.015
NO.21	32 56 07.52082 N	96 50 19.75415 W	497.04	0.004	0.011	0.004
NO.22	32 57 54.02661 N	96 50 19.32151 W	560.96	0.008	0.007	0.007
NO.23	32 58 31.72597 N	96 50 34.36817 W	529.17	0.005	0.003	0.011
NO.24	32 58 53.92006 N	96 49 48.77379 W	559.33	0.007	0.006	0.006
NO.25	32 58 32.87693 N	96 50 15.50790 W	540.52	0.006	0.003	0.009
NO.26	32 58 21.58743 N	96 49 18.60901 W	525.75	0.003	0.003	0.007
NO.27	32 58 06.56437 N	96 49 32.20634 W	553.43	0.006	0.012	0.012
NO.28	32 57 13.69931 N	96 49 33.45613 W	563.04	0.005	0.006	0.009
NO.29	32 56 38.38256 N	96 49 31.63058 W	536.24	0.003	0.003	0.007
NO.30	32 56 38.93314 N	96 49 26.85501 W	535.63	0.005	0.003	0.010
NO.31	32 56 55.93836 N	96 48 42.38847 W	491.79	0.004	0.003	0.009
NO.32	32 56 45.95334 N	96 50 20.59281 W	512.26	0.004	0.003	0.012
NO.33	32 56 57.81785 N	96 50 20.52484 W	528.63	0.008	0.006	0.013

## NAD83 (2011) TEXAS NORTH CENTRAL ZONE GRID COORDINATES

Point Id	Northing	Easting	Ortho. Height	Convergence Angle	Combined Scale Factor
COA-01	7028890.93	2473021.93	573.13	0 53 49	0.999851269
COA-02	7027648.34	2477729.77	578.79	0 54 19	0.999851114
COA-03	7032377.34	2472935.27	585.40	0 53 49	0.999850371
COA-04	7034719.16	2473675.60	583.22	0 53 54	0.999850281
COA-07	7043175.04	2476627.16	639.12	0 54 14	0.999847009
COA-08	7039253.93	2477187.12	638.86	0 54 17	0.999847277
COA-09	7041485.82	2482872.41	615.42	0 54 54	0.999848244
COA-10	7032148.78	2486064.02	594.03	0 55 13	0.999849971
COA-11	7034115.97	2477111.98	611.85	0 54 16	0.999848958
COA-13	7042028.92	2479820.59	642.16	0 54 34	0.999846932
NO.05	7034190.42	2482959.26	634.20	0 54 53	0.999847879
NO.06	7045566.08	2480522.31	639.78	0 54 39	0.999846835
NO.12	7039444.69	2480710.13	638.93	0 54 39	0.999847258
NO.15	7026540.06	2473298.38	548.79	0 53 51	0.999852659
NO.16	7034134.26	2475850.05	596.85	0 54 08	0.999849675
NO.17	7028839.66	2473582.63	583.42	0 53 53	0.999850781
NO.18	7026881.04	2473738.17	554.01	0 53 54	0.999852375
NO.19	7031920.44	2473827.66	597.88	0 53 55	0.999849813
NO.20	7034458.57	2475473.84	595.65	0 54 05	0.999849706
NO.21	7027282.58	2478110.55	584.27	0 54 22	0.999850887
NO.22	7038045.13	2477977.21	648.13	0 54 22	0.999846919
NO.23	7041834.26	2476635.44	616.36	0 54 14	0.999848182
NO.24	7044138.38	2480483.06	646.35	0 54 38	0.999846602
NO.25	7041975.94	2478239.93	627.64	0 54 24	0.999847632
NO.26	7040912.24	2483104.21	612.69	0 54 55	0.999848412
NO.27	7039375.74	2481970.29	640.43	0 54 48	0.999847190
NO.28	7034032.25	2481948.96	650.08	0 54 47	0.999847133
NO.29	7030466.13	2482161.37	623.29	0 54 48	0.999848720
NO.30	7030528.25	2482567.36	622.66	0 54 50	0.999848744
NO.31	7032307.21	2486328.29	578.67	0 55 15	0.999850691
NO.32	7031164.89	2477977.68	599.48	0 54 21	0.999849799
NO.33	7032363.84	2477964.52	615.84	0 54 21	0.999848913

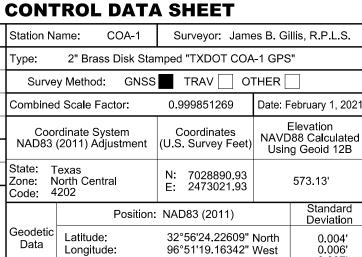
In addition, new control data sheets were created for each of the 32 monuments, with sketches, color photographs and location descriptions. These data sheets and a scale able map showing these locations accompany this report.

	TOWN 0	F ADDISON	C			
Distance & Direction to Reference & Azimuth Marks						
Reference Mark	Direction	Distance (feet)	Т			
1) Storm Drain MH	West	8.9'	Г			
2) Back of Curb	South	2.7'	C			
3) ATMOS Gas Marker	East	4.2'	Г			
Azimuth Mark	Grid Azimuth	Grid Distance				
NO 17	95°13'26"	563.03'	]s z			









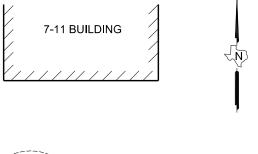
0.006' 0.007'

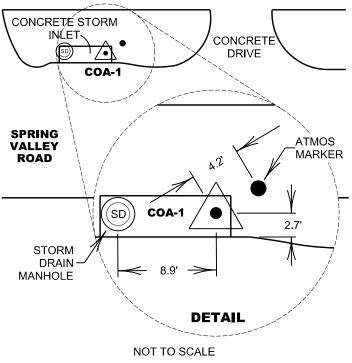
Located at the Northeast corner of a concrete Storm Inlet, 110' +/- East from the intersection of Marsh Lane and Spring Valley Road, 970' +/- West from the intersection of Woodway Drive and Spring Valley Road.

Data

Longitude:

Ellipsoid Height:





	TOWN C	F ADDISON	CONTROL DATA	A SHEET
Distance & D	irection to Reference & A	Azimuth Marks	Station Name: COA-2	Surveyor: Ja
Reference Mark	Direction	Distance (feet)	Type: 2" Brass Disk Sta	mped "TXDOT Co
1) Storm Drain MH	Southwest	2.9'	Survey Method: GNSS	TRAV
2) Back of Curb	Northwest	3.1'	Combined Scale Factor:	0.999851114
3) Light Pole	Southwest	30.4'	Coordinate System	Coordinates
Azimuth Mark	Grid Azimuth	Grid Distance	NAD83 (2011) Adjustment	(U.S. Survey Fe
NO 21	133°50'53"	527.99'	State: Texas Zone: North Central	N: 7027648.3



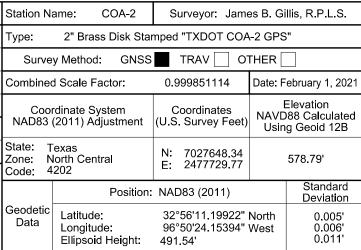
	CADOL .
1534	COA-2
	GPS,
and the party lake	



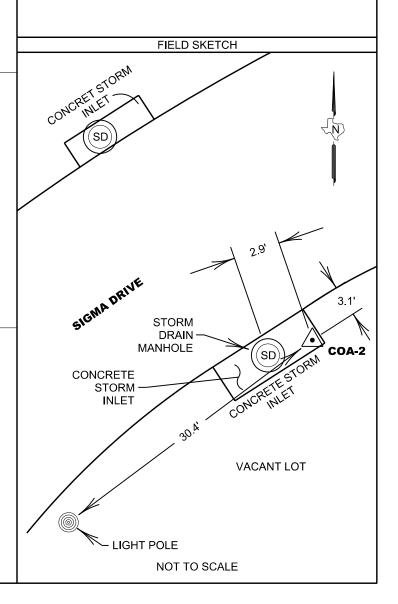
**FACING EAST** 



**FACING WEST** 



Located at the Southeast corner of a concrete Storm Inlet, within the southerly Right-of-Way line of Sigma Drive and being 269' +/-West from the intersection of Midway Road and Sigma Drive.

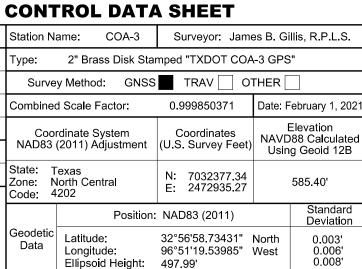


	TOWN C	F ADDISON	(			
Distance & Direction to Reference & Azimuth Marks						
Reference Mark	Direction	Distance (feet)	ŀ			
1) Fire Hydrant	West	31.3'	I			
2) Storm Drain MH	West	19.4'	Ī			
3) Back of Curb	South	2.6'	Γ			
Azimuth Mark	Grid Azimuth	Grid Distance	l			
NO 19	117°06'44"	1,002.55'				

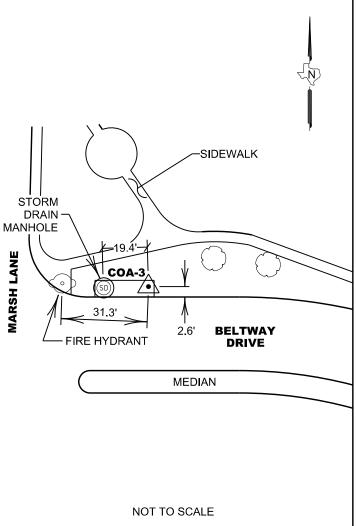








Located on the Northeast corner of a concrete Storm Inlet, 45' +/-from the intersection of Marsh Lane and Beltway Drive, 593' +/-from the intersection of Les Lacs Avenue and Beltway Drive.



	TOWN 0	F ADDISON	C			
Distance & Direction to Reference & Azimuth Marks						
Reference Mark	Direction	Distance (feet)	T			
1) Back of Curb	North	0.5'	Γ			
2) Light Pole	West	19.9'	Ī			
3) Storm Drain MH	East	2.1'	Γ			
Azimuth Mark	Grid Azimuth	Grid Distance	l			
NO 20	98°14'43"	1,817.02'				

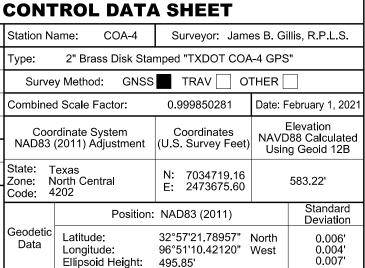




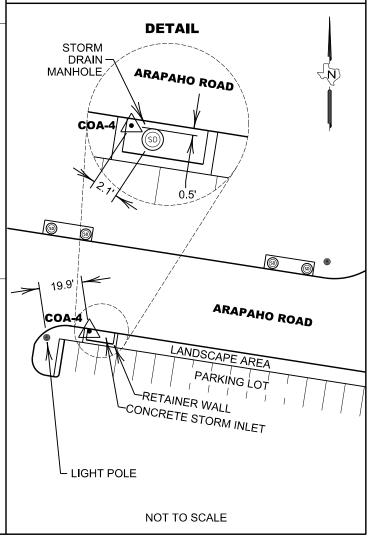
FACING EAST



**FACING WEST** 



Located at the Northwest corner of a concrete Drain Inlet along the southerly Right-of-Way line of Arapaho Road, 450' +/- East of the intersection of Marsh Lane and Arapaho Road, 458' +/- West of the intersection of Arapaho Road and Business Avenue.



	TOWN 0	F ADDISON	CONTROL DATA	A SHEET	
Distance & Di	rection to Reference & A	Azimuth Marks	Station Name: COA-7	Surveyor: Jam	es B. Gillis
Reference Mark	Direction	Distance (feet)	Type: 2" Brass Disk Sta	mped "TXDOT COA	-7 GPS"
1) 6' Chain Link Fence	East	8.2'	Survey Method: GNSS	TRAV O	THER 🗌
2) Storm Drain MH	North	3.6'	Combined Scale Factor:	0.999847009	Date: Feb
3) Back of Curb	West	2.7'	Coordinate System	Coordinates	Ele NAVD88
Azimuth Mark	Grid Azimuth	Grid Distance	NAD83 (2011) Adjustment	(U.S. Survey Feet)	Using
NO 23	179°38'47"	1,340.81'	State: Texas Zone: North Central	N: 7043175.04 E: 2476627.16	60



Coordinate System NAD83 (2011) Adjustment		Coordinates (U.S. Survey Feet)		Elevation NAVD88 Calculated Using Geoid 12B	
State: Texas Zone: North Central Code: 4202		N: E:	7043175.04 2476627.16		639.12'
	Position: NAD83 (2011)				Standard Deviation
Geodetic Data	Latitude: Longitude: Ellipsoid Height:		0'34.21702"	North West	0.007' 0.002' 0.005'

Surveyor: James B. Gillis, R.P.L.S.

Date: February 1, 2021

#### Approximate Location:

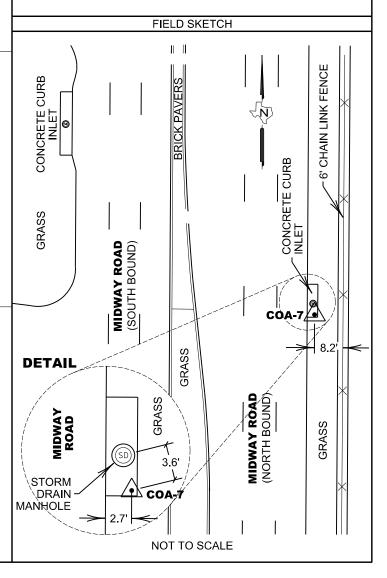
Located at the Southeast corner of a concrete Curb Inlet, 190.0' +/- North of the intersection of Skylane Drive and Midway Road, 1,390.0' +/- South of the intersection of Belmeade Drive and Midway Road.



**FACING NORTH** 



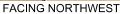
**FACING SOUTH** 



	TOWN C	F ADDISON	CONTROL DATA	A SHEET
Distance & D	irection to Reference & A	Azimuth Marks	Station Name: COA-8	Surveyor: Ja
Reference Mark	Direction	Distance (feet)	Type: 2" Brass Disk Sta	mped "TXDOT CO
1) Storm Drain MH	Southeast	4.9'	Survey Method: GNSS	TRAV
2) Back of Curb	Southwest	2.6'	Combined Scale Factor:	0.999847277
3) Light Pole	East	18.5'	Coordinate System	Coordinates
Azimuth Mark	Grid Azimuth	Grid Distance	NAD83 (2011) Adjustment	(U.S. Survey Fee
NO 22	146°49'51"	1,444.11'	State: Texas Zone: North Central	N: 7039253.9





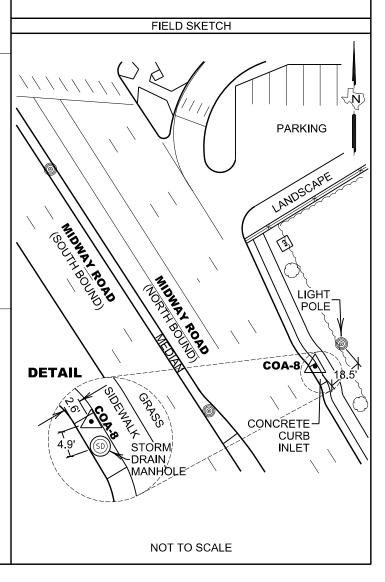




FACING SOUTHEAST

	Station Na	ame: COA-8	Surveyor: James B. Gillis, R.P.L.S.					
	Туре:	Type: 2" Brass Disk Stamped "TXDOT COA-8 GPS"						
	Surve	y Method: GNSS	TRAV 0	THER				
	Combined	d Scale Factor:	0.999847277	Date: F	ebruary 1, 2021			
		rdinate System (2011) Adjustment			Elevation 88 Calculated g Geoid 12B			
State: Texas Zone: North Central Code: 4202			N: 7039253.93 E: 2477187.12	638.86'				
		Position:	NAD83 (2011)		Standard Deviation			
	Geodetic Data Latitude: Longitude: Ellipsoid Height:			North West	0.003' 0.003' 0.008'			

Located at the Northeast corner of a concrete Curb Inlet, 200.0' +/-Southeast of the intersection of Keller Spring Road and Midway Road, 427' +/- Northwest of the intersection of Earhart Drive and Midway Road.



	TOWN C	F ADDISON	CONTROL DATA	A SHEET
Distance & Di	irection to Reference & A	Azimuth Marks	Station Name: COA-9	Surveyor: Ja
Reference Mark	Direction	Distance (feet)	Type: 2" Brass Disk Sta	mped "TXDOT C
1) Fiber Optic Marker	Northwest	26.7'	Survey Method: GNSS	TRAV
2) Storm Drain MH	Southeast	4.5'	Combined Scale Factor:	0.999848244
3) Back of Curb	Northeast	3.1'	Coordinate System	Coordinates
Azimuth Mark	Grid Azimuth	Grid Distance	NAD83 (2011) Adjustment	(U.S. Survey Fe
NO 26	157°59'42"	618.65'	State: Texas Zone: North Central	N: 7041485.8



***		
	COA-S	
	GPS	
	010	



**FACING NORTHWEST** 



COA-9 Surveyor: James B. Gillis, R.P.L.S. Station Name: 2" Brass Disk Stamped "TXDOT COA-9 GPS" Type: **GNSS** TRAV OTHER Survey Method: Combined Scale Factor: 0.999848244 Date: February 1, 2021 Elevation NAVD88 Calculated Using Geoid 12B Coordinate System NAD83 (2011) Adjustment Coordinates (U.S. Survey Feet)

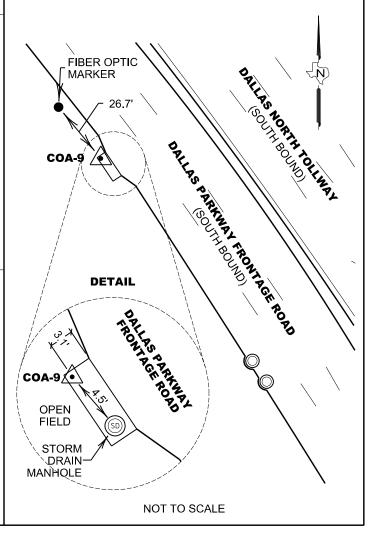
State: Texas 7041485.82 2482872.41 North Central 4202 Zone: Code:

615.42

Standard Position: NAD83 (2011) Deviation Geodetic Latitude: 32°58'27.29910" North 0.004' Data 96°49'21.22236" 0.006' 0.003' Longitude: West Ellipsoid Height: 528.48'

#### Approximate Location:

Located at the Northeast corner of a concrete Curb Inlet, 200.0' +/from the Southeast of the intersection of Westgrove Place and the South bound frontage road of Dallas North Tollway, 915.0' +/- from the Northeast driveway of Mary Kay Property Building.



	TOWN C	F ADDISON	CONTROL DATA	A SHEET
Distance & D	rirection to Reference & A	Azimuth Marks	Station Name: COA-10	Surveyor: Ja
Reference Mark	Direction	Distance (feet)	Type: 2" Brass Disk Sta	mped "TXDOT Co
1) Storm Sewer MH	South	21.7'	Survey Method: GNSS	TRAV
2) Storm Drain MH	Northwest	7.5'	Combined Scale Factor:	0.999849971
3) Stop Sign	South	11.2'	Coordinate System NAD83 (2011) Adjustment	Coordinates
Azimuth Mark	Grid Azimuth	Grid Distance	NAD83 (2011) Adjustment	(U.S. Survey Fe
NO 31	59°03'24"	308.12'	State: Texas Zone: North Central	N: 7032148.7



Coordinate System NAD83 (2011) Adjustment		Coordinates (U.S. Survey Feet)		Elevation NAVD88 Calculated Using Geoid 12B	
State: Texas Zone: North Central Code: 4202		N: E:	7032148.78 2486064.02		594.03'
	Position:	NAE	083 (2011)		Standard Deviation
Geodetic Data	Latitude: Longitude: Ellipsoid Height:	32°56'54.41283" North 96°48'45.51949" West 507.13'		0.003' 0.002' 0.013'	

2" Brass Disk Stamped "TXDOT COA-10 GPS"

Surveyor: James B. Gillis, R.P.L.S.

OTHER

Date: February 1, 2021

#### Approximate Location:

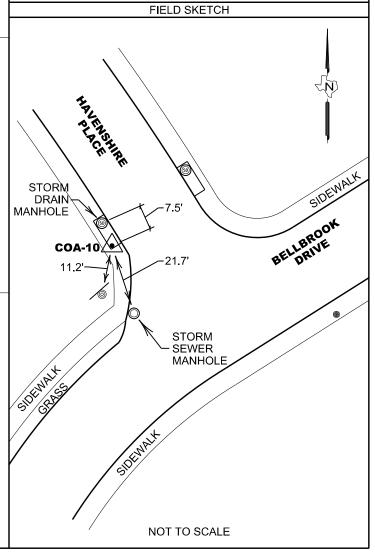
Located at the Southwest corner of a concrete Drain Inilet at the Southwest corner of Havenshire Place and Bellbrook Drive, 563' +/-North of the intersection of Bellbrook Drive and Celestial Road.



**FACING NORTHEAST** 



**FACING SOUTHWEST** 



	TOWN C	F ADDISON	C
Distance & Di	rection to Reference & A	zimuth Marks	Į
Reference Mark	Direction	Distance (feet)	ŀ
1) Storm Drain MH	West	11.5'	I
2) Back of Curb	North	2.5'	Ī
3) Electric Cabinet	South	8.8'	Γ
Azimuth Mark	Grid Azimuth	Grid Distance	l
NO 16	270°49'50"	1,262.06'	

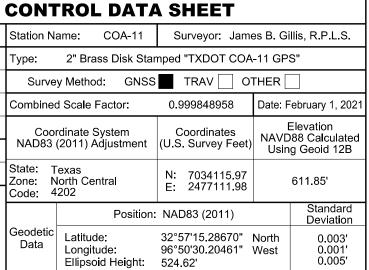




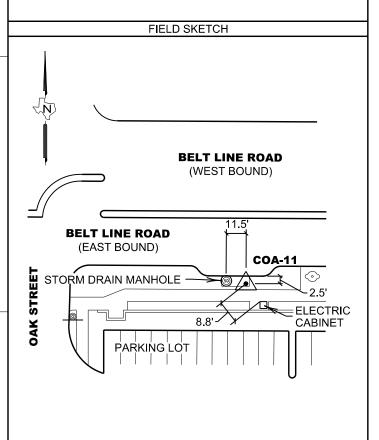
FACING EAST



**FACING WEST** 



Located at the Southeast corner of a concrete Drain Inlet, 826' +/-West of the intersection of Midway Road and Belt Line Road, 70' +/- East of the intersection of Oak Street and Belt Line Road.



NOT TO SCALE

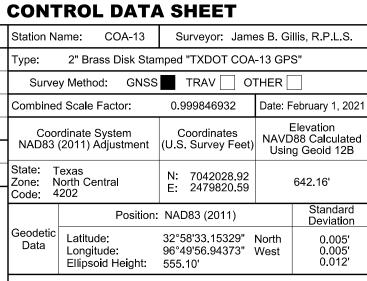
	TOWN 0	F ADDISON
Distance & Di	rection to Reference & A	zimuth Marks
Reference Mark	Direction	Distance (feet)
1) Museum Sign	Southeast	5.3'
2) Back of Curb	South	7.9'
3) Back of Curb	North	16.2'
Azimuth Mark	Grid Azimuth	Grid Distance
NO 25	268°04'48"	1,581.55'





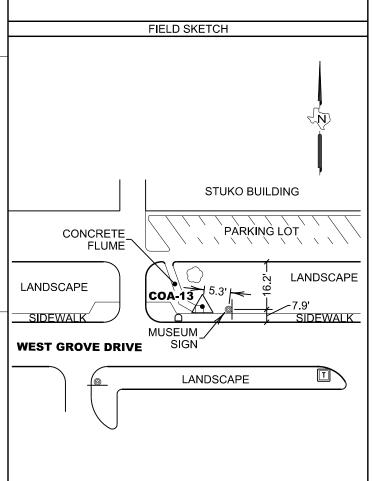


FACING WEST



#### Approximate Location:

Located at the Northeast corner of a concrete Drop Inlet, 80' +/-East of the intersection of Claire Chennault Drive and West Grove Drive, 630' West of the intersection of Addison Drive and West Grove Drive.



NOT TO SCALE

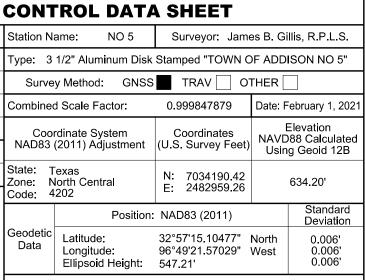
	TOWN 0	F ADDISON			
Distance & Di	Distance & Direction to Reference & Azimuth Marks				
Reference Mark	Direction	Distance (feet)			
1) Storm Drain MH	West	4.5'			
2) Back of Curb	South	2.9'			
3) Power Pole	Northwest	19.3'			
Azimuth Mark	Grid Azimuth	Grid Distance			
NO 28	261°06'08"	1,022.60'			



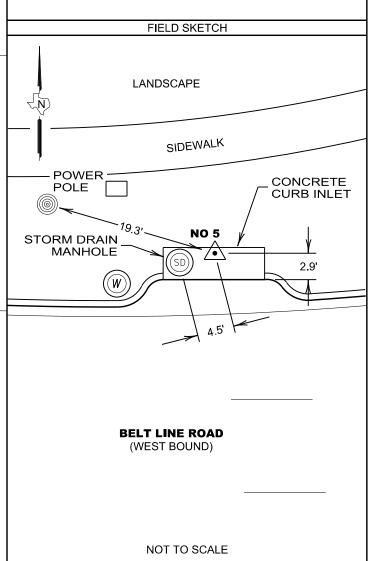
FACING EAST



**FACING WEST** 



Located within the Northerly side of a concrete Storm Inlet, 125' +/-West from the intersection of the South Bound Lane of "Dallas Parkway Service Road" and Belt Line Road, 1,081' +/- East of the interection of Quorum Drive and Belt Line Road.



	TOWN 0	F ADDISON
Distance & Di	rection to Reference & A	zimuth Marks
Reference Mark	Direction	Distance (feet)
1) Storm Drain MH	South	7.6'
2) Light Pole	North	27.9'
3) Sidewalk	East	8.1'
Azimuth Mark	Grid Azimuth	Grid Distance
NO 24	181°34'28"	1,428.25'





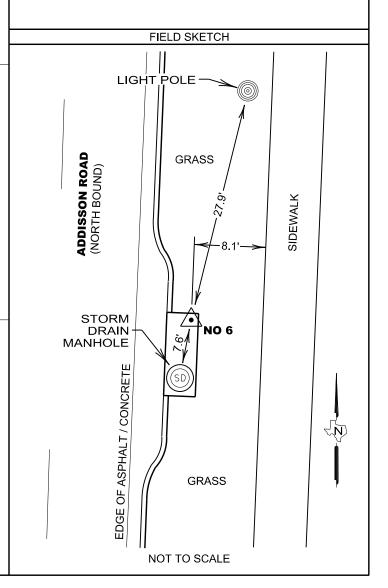
**FACING NORTH** 



**FACING SOUTH** 

CONTROL DATA SHEET						
Station Na	ame: NO 6	Surveyor: James B. Gillis, R.P.L.S.				
Type: 3	1/2" Alum <b>i</b> num Disk	Stamped "TOWN OF ADDISON NO 6"				
Surve	y Method: GNSS	TRAV OTHER				
Combined	d Scale Factor: 0.999846835 Date: February 1, 2021					
	rdinate System (2011) Adjustment	Coordinates (U.S. Survey Feet)  Elevation NAVD88 Calculated Using Geoid 12B				
Zone: N	exas lorth Central 202	N: 7045566.08 E: 2480522.31 639.78'				
	Position:	: NAD83 (2011) Standard Deviation				
Geodetic Data	Latitude: Longitude: Ellipsoid Height:	32°59'08.03959" North 96°49'48.04664" West 552.78' 0.003'				

Located at the Northeast corner of a concrete Drain Inlet along the easterly Right-of-Way of Addison Road, 1,690' +/- South of the intersection of Trinity Mills Road and Addison Road, 805' +/- North of the intersection of Sojourn Drive and Addison Road.



	TOWN 0	F ADDISON			
Distance & Di	Distance & Direction to Reference & Azimuth Marks				
Reference Mark	Direction	Distance (feet)			
1) Back of Curb	South	6.2'			
2) Power Pole	North	7.5'			
3) Airport Sign	Northwest	11.4'			
Azimuth Mark	Grid Azimuth	Grid Distance			
NO 27	93°07'55"	1,262.04'			

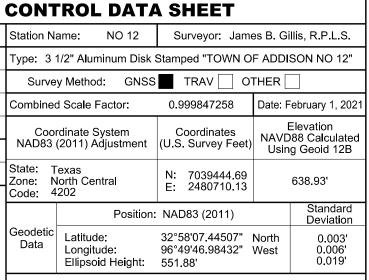




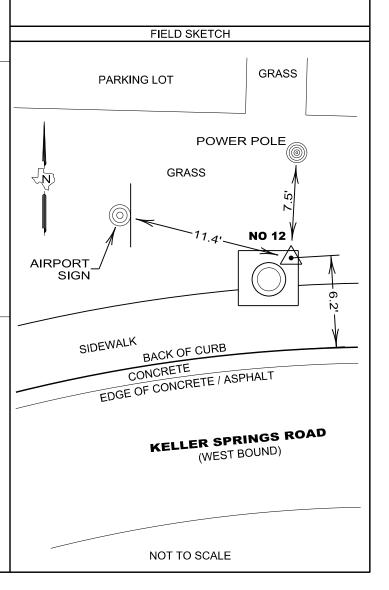
**FACING EAST** 



**FACING WEST** 



Located at the Northeast corner of a concrete Vault, 75' +/-East of the intersection of Addison Road and Keller Springs Road, 575' +/- West of the intersection of Ledgemont Lane and Keller Springs Road.



	TOWN C	F ADDISON	CONTROL DATA	A SHEET
Distance & D	irection to Reference & A	Azimuth Marks	Station Name: NO 15	Surveyor: Ja
Reference Mark	Direction	Distance (feet)	Type: 3 1/2" Aluminum Disk	Stamped "TOWN
1) Storm Drain MH	West	9.7'	Survey Method: GNSS	TRAV
2) Back of Curb	Northwest	2.8'	Combined Scale Factor:	0.999852659
3) Vault	Southeast	6.8'	Coordinate System	Coordinates
Azimuth Mark	Grid Azimuth	Grid Distance	NAD83 (2011) Adjustment	(U.S. Survey Fee
NO 18	52°12'47"	556.50'	State: Texas Zone: North Central	N: 7026540.0



State: Texas Zone: North Central Code: 4202		N: E:	7026540.06 2473298.38		548.79'
	Position:	NAE	083 (2011)		Standard Deviation
Geodetic Data	Latitude: Longitude: Ellipsoid Height:		66'00.92360" 61'16.35179" 35'	North West	0.007' 0.002' 0.012'

Type: 3 1/2" Aluminum Disk Stamped "TOWN OF ADDISON NO 15"

Coordinates (U.S. Survey Feet)

Surveyor: James B. Gillis, R.P.L.S.

OTHER

Date: February 1, 2021

Elevation NAVD88 Calculated Using Geoid 12B

#### Approximate Location:

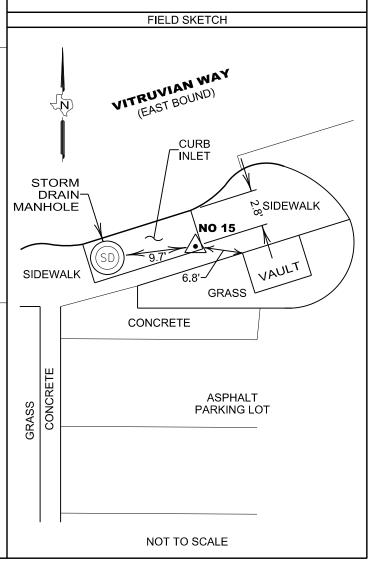
Located at the Southeast corner of a concrete Curb Inlet, 370' +/-East of the intersection of Marsh Lane and Vitruvian Way, 1,126' +/-Southwest of the intersection of Ponte Avenue and Vitruvian Way.



**FACING EAST** 



**FACING WEST** 

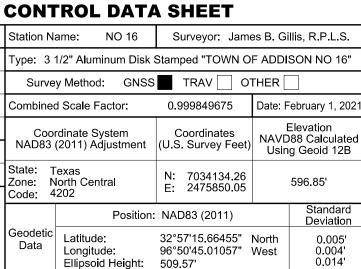


	TOWN 0	F ADDISON			
Distance & Di	Distance & Direction to Reference & Azimuth Marks				
Reference Mark	Direction	Distance (feet)			
1) Storm Drain MH	West	19.9'			
2) Back of Curb	South	2.6'			
3) ONCOR Vault	East	6.5'			
Azimuth Mark	Grid Azimuth	Grid Distance			
COA-11	90°49'50"	1,262.06'			









509.57

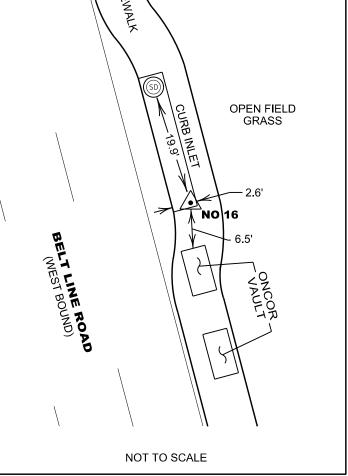
West

Located at the Northeast corner of a concrete Curb Inlet, 305' +/-East of the intersection of Surveyor Boulevard and Belt Line Road, 661' +/- West of the intersection of Runyon Road and Belt Line

FIELD SKETCH

Longitude:

Ellipsoid Height:



	TOWN 0	F ADDISON	(
Distance & D	irection to Reference & A	Azimuth Marks	I
Reference Mark	Direction	Distance (feet)	I
1) Storm Drain MH	Northwest	1.5'	I
2) Back of Curb	North	2.7'	I
3) Power Pole	West	24.0'	Ī
Azimuth Mark	Grid Azimuth	Grid Distance	
COA-1	275°13'26"	563.03'	1



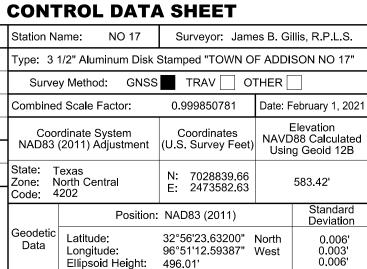
	NOF	
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	MONUR	



**FACING EAST** 



**FACING WEST** 

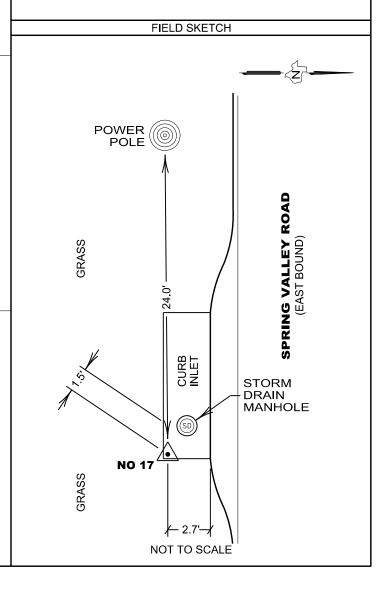


496.01'

West

Located at the Southeast corner of a concrete Curb Inlet, 670' +/-East of the intersection of Marsh Lane and Spring Valley Road, 1,530' +/- West of the intersection of Vitruvian Way and Spring Valley Road.

Ellipsoid Height:



	TOWN 0	F ADDISON	CONT
Distance & Di	rection to Reference & A	zimuth Marks	Station N
Reference Mark	Direction	Distance (feet)	Type: 3
1) Back of Curb	Northwest	7.3'	Surve
2) Back of Curb	Southeast	7.1'	Combine
3) Sign	West	11.7'	Coo
Azimuth Mark	Grid Azimuth	Grid Distance	NAD83
NO 15	232°12'47"	556.50'	State: Ţ Zone: N





FACING NORTHEAST

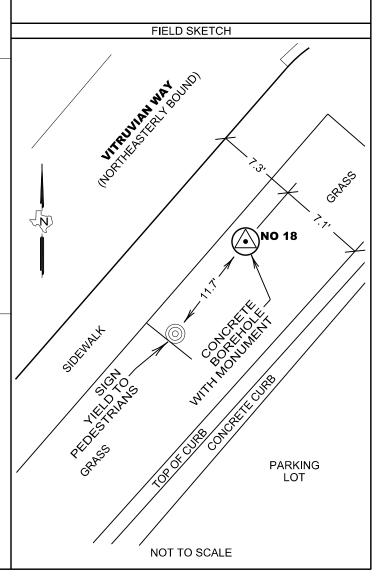


**FACING SOUTHWEST** 

CONT	ROL DATA	SHEET			
Station Na	tation Name: NO 18 Surveyor: James B. Gillis, R.P.L.S.				
Type: 3 1	I/2" Aluminum Disk	Stamped "TOWN O	F ADDI	SON NO 18"	
Surve	y Method: GNSS	TRAV O	THER [		
Combined Scale Factor: 0.999852375 Date: February 1, 202					
Coor NAD83 (	rdinate System (2011) Adjustment	Coordinates (U.S. Survey Feet)	Elevation NAVD88 Calculated Using Geoid 12B		
State: Texas Zone: North Central Code: 4202		N: 7026881.04 E: 2473738.17	554.01'		
	Position:	NAD83 (2011)		Standard Deviation	
Geodetic Data Latitude: Longitude: Ellipsoid Height:			North 0.002' West 0.004' 0.009'		

#### Approximate Location:

Located within a poured concrete borehole within the southerly Right-of-Way of Vitruvian Way, 34' +/- Southwesterly from the intersection of Park Road and Vitruvian Way, 915' +/- Northwesterly from the intersection of March Land and Vitruvian Way.



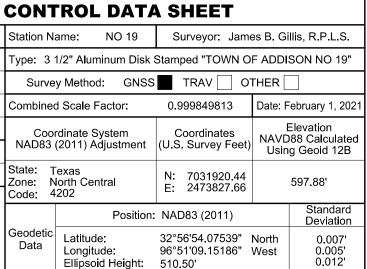
	TOWN 0	F ADDISON			
Distance & Di	Distance & Direction to Reference & Azimuth Marks				
Reference Mark	Direction	Distance (feet)			
1) Edge of Curb	North	3.4'			
2) Edge of Sidewalk	South	6.4'			
3) Light Pole	Southeast	6.6'			
Azimuth Mark	Grid Azimuth	Grid Distance			
COA-3	297°46'84"	1,002.55'			



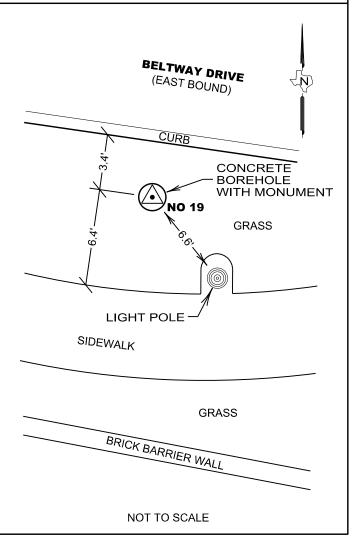




**FACING WEST** 



Located within a poured concrete borehole within the southerly Right-of-Way of Beltway Drive, 360' +/- Easterly from the intersection of Les Lacs Avenue and Beltway Drive, 860' +/- Westerly from the intersection of Proton Drive and Beltway Drive.



	TOWN 0	F ADDISON			
Distance & Di	Distance & Direction to Reference & Azimuth Marks				
Reference Mark	Direction	Distance (feet)			
1) Back of Curb	North	7.2'			
2) Traffic Signal Pole	Southeast	23.7'			
3) Light Pole	East	5.7'			
Azimuth Mark	Grid Azimuth	Grid Distance			
COA-4	278°14'43"	1,817.02'			







Type: 3 1/2" Aluminum Disk Stamped "TOWN OF ADDISON NO 20" Survey Method:

Station Name:

**CONTROL DATA SHEET** 

NO 20

TRAV **GNSS** OTHER

Date: February 1, 2021 Combined Scale Factor: 0.999849706 Elevation NAVD88 Calculated Using Geoid 12B Coordinate System Coordinates NAD83 (2011) Adjustment (U.S. Survey Feet)

State: Texas 7034458.57 2475473.84 North Central 4202 Zone: Code:

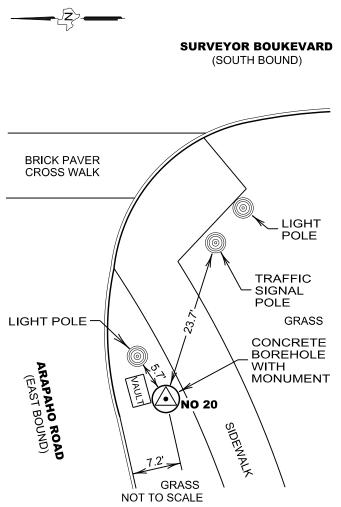
595.65'

Surveyor: James B. Gillis, R.P.L.S.

Standard Position: NAD83 (2011) Deviation Geodetic Latitude: 32°57'18.93189" North 0.006' Data 96°50'49.36568" 0.006' 0.015' Longitude: West Ellipsoid Height: 508.36

#### Approximate Location:

Located within a poured concrete borehole within the southerly Right-of-Way of Arapaho Road, 45' +/- Westerly from the intersection of Surveyor Boulevard and Arapaho Road, 752' +/-Easterly from the intersection of Commercial Drive and Arapaho Road.

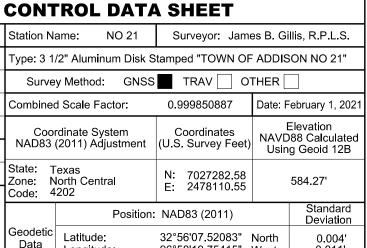


	TOWN 0	F ADDISON	C		
Distance & Di	Distance & Direction to Reference & Azimuth Marks				
Reference Mark	Direction	Distance (feet)	Т		
1) Storm Drain MH	North	9.4'	Г		
2) Back of Curb	West	2.7'	C		
3) Fiber Optic Vault	East	6.8'	Γ		
Azimuth Mark	Grid Azimuth	Grid Distance	L		
COA-2	313°50'53"	527.99'	]s		









96°50'19.75415"

West

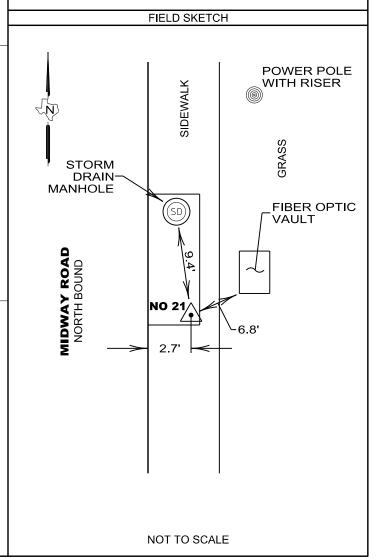
0.011' 0.004'

Located at the Southeast corner of a concrete Curb Inlet, 385' +/-South of the intersection of Sigma Road. and Midway Road, 810' +/- North of the intersection of Alpha Road and Midway Road.

497.04'

Longitude:

Ellipsoid Height:

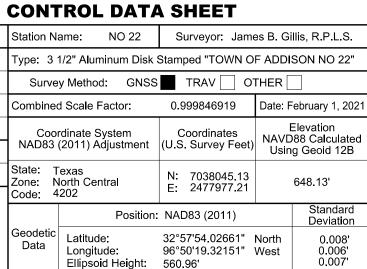


	TOWN 0	F ADDISON			
Distance & Di	Distance & Direction to Reference & Azimuth Marks				
Reference Mark	Direction	Distance (feet)			
1) Back of Curb	Southwest	3.7'			
2) Traffic Pull Box	Northeast	5.0'			
3) Traffic Signal Pole	North	45.6'			
Azimuth Mark	Grid Azimuth	Grid Distance			
COA-8	326°49'51"	1,444.11'			





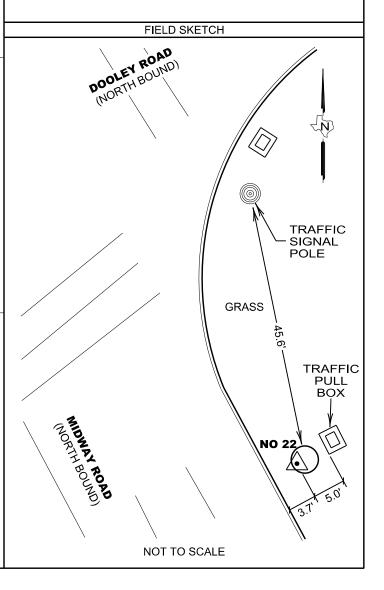




560.96'

Ellipsoid Height:

Located within a concrete borehole within the easterly Right-of-Way of Midway Road, 57' +/- Southerly from the intersection of Midway Road and Dooley Road, 268' +/- Northerly from the intersection of Midway Road and Wright Brothers Road.



	TOWN 0	F ADDISON			
Distance & Di	Distance & Direction to Reference & Azimuth Marks				
Reference Mark Direction Distance (feet)					
1) Storm Drain MH	South	6.7'			
2) Back of Curb	West	2.5'			
3) Light Pole	Northeast	23.2'			
Azimuth Mark	Grid Azimuth	Grid Distance			
COA-7	359°38'47"	1,340.81'			







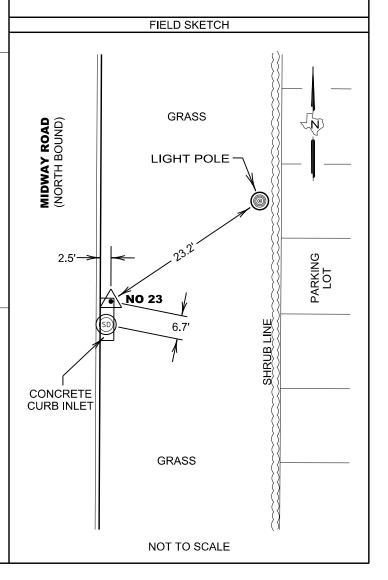
FACING SOUTH

CONT	ROL DATA	SHEET		
Station Nar	me: NO 23	Surveyor: Jame	es B. Gill	is, R.P.L.S.
Type: 3 1/2" Aluminum Disk Stamped "TOWN OF ADDISON NO 23"				
Survey	Method: GNSS	TRAV O	THER [	
Combined	Scale Factor:	0.999848182	Date: Fe	ebruary 1, 2021
	linate System 2011) Adjustment	Coordinates (U.S. Survey Feet)	NAVD	levation 88 Calculated Geoid 12B
	exas orth Central 02	N: 7041834.26 E: 2476635.44	6	616.36'
	Position	NAD83 (2011)		Standard

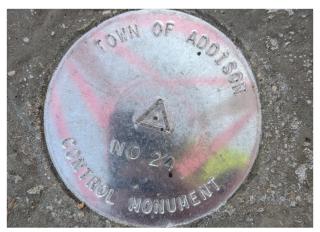
	Position	NAD83 (2011)		Standard Deviation
Geodetic Data	Latitude: Longitude: Ellipsoid Height:	32°58'31.72598" 96°50'34.36817" 529.17'	North West	0.005' 0.003' 0.011'

#### Approximate Location:

Located at the Northeast corner of a Concrete Curb Inlet, 1,300' +/-North from the intersection of Kellway Drive and Midway Road, 540' +/- South from the intersection of Commander Drive and Midway Road.



	TOWN C	F ADDISON	CO
Distance & D	irection to Reference & A	Azimuth Marks	Stat
Reference Mark	Direction	Distance (feet)	Тур
1) Back of Curb	East	6.6'	
2) Back of Curb	West	2.4'	Con
3) Power Pole	South	25.2'	
Azimuth Mark	Grid Azimuth	Grid Distance	NA
NO 6	01°34'28"	1,428.25'	State



All the second s	
The state of the s	
A BOOK OF THE OWNER	
NO ZA	

FACING NORTH



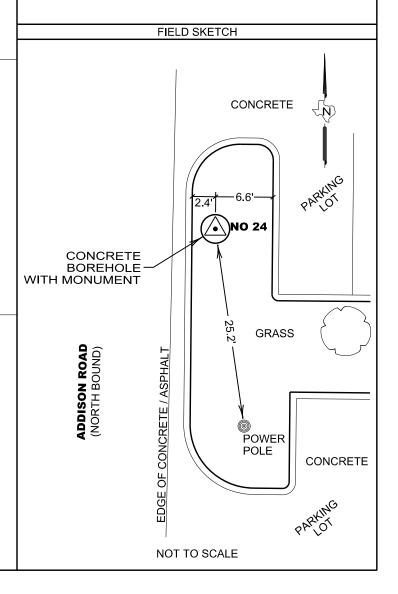
FACING SOUTH

CONTROL DATA SHEET					
Station Na	Station Name: NO 24 Surveyor: James B. Gillis, R.P.L.S.				
Type: 3 <sup>2</sup>	I/2" Aluminum Disk	Stamped "TOWN O	F ADDI	SON NO 24"	
Survey Method: GNSS TRAV OTHER					
Combined	d Scale Factor:	0.999846602	Date: F	ebruary 1, 2021	
Coordinate System NAD83 (2011) Adjustment		Coordinates (U.S. Survey Feet)	Elevation NAVD88 Calculated Using Geoid 12B		
State: Texas Zone: North Central Code: 4202		N: 7044138.38 E: 2480483.06	646.35'		
	Position:	NAD83 (2011)		Standard Deviation	
Geodetic	Latitudas	32°58'53 02007"	Morth	0.0071	

# | Capacitic | Latitude: | 32°58'53.92007" | North | 0.007' | Longitude: | 96°49'48.77379" | West | 0.006' | Ellipsoid Height: | 559.33' | 0.006'

#### Approximate Location:

Located within a concrete borehole within the easterly Right-of-Way of Addison Road, 737' +/- North from the intersection of Excel Parkway and Addison Road, 584' +/- South from the intersection of Sojourn Drive and Addison Road.



	TOWN 0	F ADDISON			
Distance & Direction to Reference & Azimuth Marks					
Reference Mark	Direction	Distance (feet)			
1) Guardrail	North	2.3'			
2) Chain Link Fence	South	5.6'			
3) Back of Curb	North	6.2'			
Azimuth Mark	Grid Azimuth	Grid Distance			
COA-13	88°04'48"	1,581.55'			





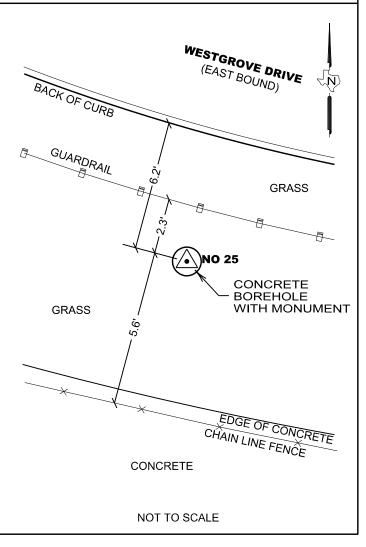
FACING EAST



**FACING NORTHWEST** 

CONTROL DATA SHEET				
Station Name: NO 25 Surveyor: James B. Gillis, R.P.L.S.				
Type: 3	1/2" Aluminum Disk	Stamped "TOWN O	F ADDI:	SON NO 25"
Surve	y Method: GNSS	TRAV O	THER [	
Combined	d Scale Factor:	0.999847632	Date: F	ebruary 1, 2021
	rdinate System (2011) Adjustment	Coordinates (U.S. Survey Feet)	NAVD	Elevation 88 Calculated g Geoid 12B
Zone: N	exas lorth Central 202	N: 7041975.94 E: 2478239.93	627.64'	
	Position:	NAD83 (2011)		Standard Deviation
Geodetic Data	Latitude: Longitude: Ellipsoid Height:		North West	0.006' 0.003' 0.009'

Located within a poured concrete borehole at the southerly Right-of-Way line of Westgrove Drive at its intersection with Sunbelt Drive, 515' +/- West from the intersection of Amelia Earhart Drive and Westgrove Drive



	TOWN 0	F ADDISON			
Distance & Direction to Reference & Azimuth Marks					
Reference Mark	Direction	Distance (feet)			
1) Storm Drain MH	Southeast	4.5'			
2) Storm Drain MH	North	50.0'			
3) Water Valve	South	51.8'			
Azimuth Mark	Grid Azimuth	Grid Distance			
COA-9	337°59'42"	618.65'			





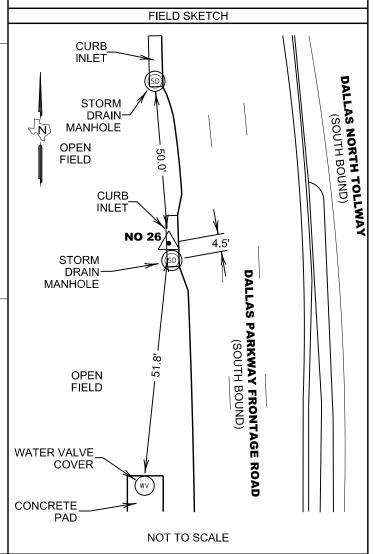


#### **CONTROL DATA SHEET** Station Name: NO 26 Surveyor: James B. Gillis, R.P.L.S. Type: 3 1/2" Aluminum Disk Stamped "TOWN OF ADDISON NO 26" Survey Method: **GNSS** TRAV OTHER Combined Scale Factor: 0.999848412 Date: February 1, 2021 Elevation NAVD88 Calculated Using Geoid 12B Coordinate System Coordinates NAD83 (2011) Adjustment (U.S. Survey Feet) State: Texas 7040912.24 2483104.21 North Central 4202 Zone: 612.69' Code:

	Position:	NAD83 (2011)		Standard Deviation
Geodetic Data	Latitude: Longitude: Ellipsoid Height:	32°58'21.58743" 96°49'18.60901" 525.75'	North West	0.003' 0.003' 0.007'

#### Approximate Location:

Located along the westerly side of a concrete Drain Inlet along the Westerly Right-of-Way of the South bound Dallas Parkway Service Road, 1,095' +/- Southeasterly from the intersection of Westgrove Drive and the Dallas Parkway Service Road, 1,482' +/- North from the intersection of Keller Springs Road and the Dallas Parkway Service Road.



	TOWN 0	F ADDISON			
Distance & Direction to Reference & Azimuth Marks					
Reference Mark	Direction	Distance (feet)			
1) Pull Box	East	5.4'			
2) Traffic Pole	Northeast	9.0'			
3) Pull Box	Northwest	10.4'			
Azimuth Mark	Grid Azimuth	Grid Distance			
NO 12	273°07'55"	1,262.04'			





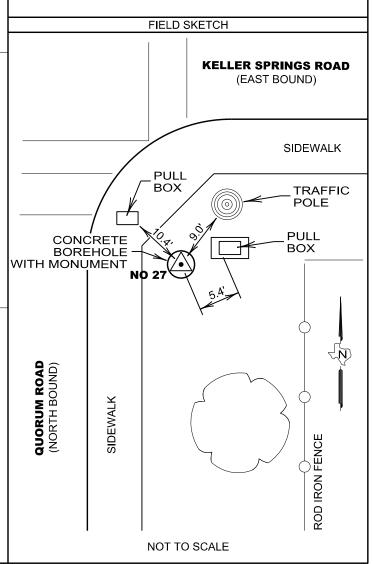
FACING NORTH



FACING SOUTH

	CONT	ROL DATA	SHEET			
	Station Name: NO 27 Surveyor: James B. Gillis, R.P.L.S.					
	Type: 3 <sup>2</sup>	1/2" Aluminum Disk \$	Stamped "TOWN O	F ADDI	SON NO 27"	
	Surve	y Method: GNSS	TRAV O	THER [		
	Combined	d Scale Factor:	0.999847190	Date: F	ebruary 1, 2021	
		rdinate System (2011) Adjustment	Coordinates (U.S. Survey Feet)	Elevation NAVD88 Calculated Using Geoid 12B		
	Zone: N	exas lorth Central 202	'   N: /N3U3/5 //			
		Position:	NAD83 (2011)		Standard Deviation	
Geodetic Data	Geodetic Data	Latitude: Longitude: Ellipsoid Height:		North West	0.006' 0.012' 0.012'	

Located within a poured concrete borehole 36' +/- from the Southwest intersection corner of Quorum Drive and Keller Springs Road, 1,289' +/- West from the intersection of Dallas North Tollway and Keller Springs Drive.



	TOWN C	F ADDISON	CONTROL DATA	A SHEET
Distance & D	irection to Reference & A	Azimuth Marks	Station Name: NO 28	Surveyor: Ja
Reference Mark	Direction	Distance (feet)	Type: 3 1/2" Aluminum Disk	Stamped "TOWN
1) Turn Right Sign	South	5.9'	Survey Method: GNSS	TRAV
2) Water Meter	East	9.2'	Combined Scale Factor:	0.999847133
3) Water Meter	East	10.6'	Coordinate System NAD83 (2011) Adjustment	Coordinates
Azimuth Mark	Grid Azimuth	Grid Distance	NAD83 (2011) Adjustment	(U.S. Survey Fee
NO 5	81°06'08"	1,022.60'	State: Texas Zone: North Central	N: 7034032.2



Coordinate System NAD83 (2011) Adjustment		Coordinates (U.S. Survey Feet)		Elevation NAVD88 Calculated Using Geoid 12B	
State: Texas Zone: North Central Code: 4202		N: E:	7034032.25 2481948.96	650.08'	
	Position:	NAE	083 (2011)		Standard Deviation
Geodetic Data	Latitude: Longitude: Ellipsoid Height:	32°57'13.69931" North 96°49'33.45613" West 563.04'		0.005' 0.006' 0.009'	

Type: 3 1/2" Aluminum Disk Stamped "TOWN OF ADDISON NO 28"

Surveyor: James B. Gillis, R.P.L.S.

OTHER

Date: February 1, 2021

#### Approximate Location:

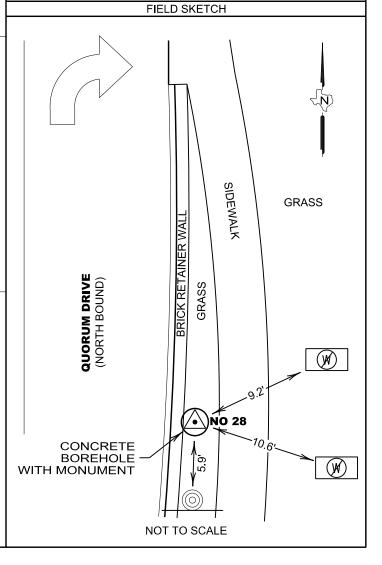
Located within a poured concrete borehole along the easterly Right of-Way of Quorum Drive, 53' South from the intersection of Quorum Drive and Belt Line Road, 1,925' +/- North of the intersection of Landmark Place and Quorum Drive.



**FACING NORTH** 



**FACING SOUTH** 



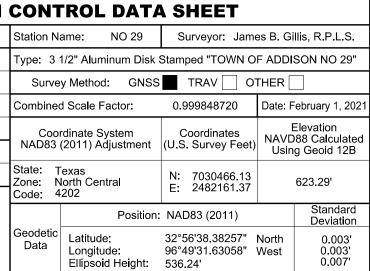
TOWN OF ADDISON						
Distance & Direction to Reference & Azimuth Marks						
Reference Mark	Direction	Distance (feet)				
1) Storm Drain MH	East	5.4'				
2) Back of Curb	North	2.7'				
3) Irrigation Control Valve	South	31.3'				
Azimuth Mark	Grid Azimuth	Grid Distance				
NO 30	81°18'02"	410.72'				



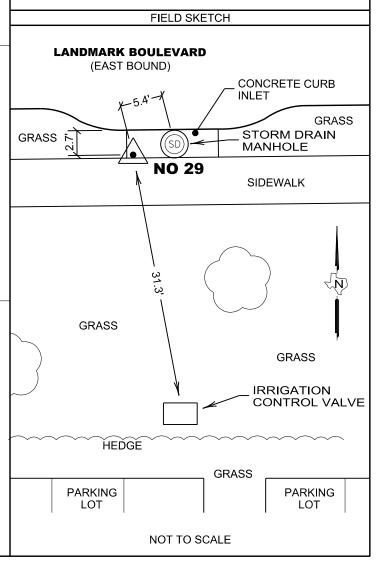




**FACING WEST** 



Located at the Southwest corner of a concrett Drain Inlet along the southerly Right-of-Way of Landmark Boulevard, 437' +/- West from the end of the road of Landmark Boulevard.



TOWN OF ADDISON							
Distance & Direction to Reference & Azimuth Marks							
Reference Mark	Direction	Distance (feet)					
1) Back of Curb	South	5.5'					
2) Edge of Hedge	North	8.5'					
3) End of Curbline	East	22.1'					
Azimuth Mark	Grid Azimuth	Grid Distance					
NO 29	261°18'02"	410.72'					

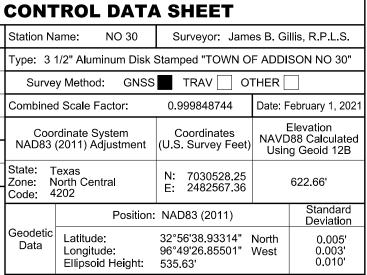




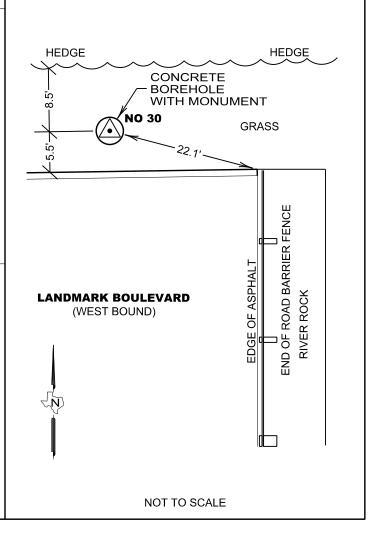
FACING EAST



FACING WEST



Located within a poured concrete borehole along the northery Right-of-Way of Landmark Boulevard, 26' +/- West from the end of the road of Landmark Boulevard.



	TOWN C	F ADDISON	CONTROL DATA	A SHEET
Distance & Di	rection to Reference & A	Azimuth Marks	Station Name: NO 31	Surveyor: Ja
Reference Mark	Direction	Distance (feet)	Type: 3 1/2" Aluminum Disk	Stamped "TOWN
1) Water Meter Medal Cover	North	2.7'	Survey Method: GNSS	TRAV
2) Water Meter Plastic Cover	East	5.7'	Combined Scale Factor:	0.999850691
3) Back of Curb	West	4.7'	Coordinate System NAD83 (2011) Adjustment	Coordinates
Azimuth Mark	Grid Azimuth	Grid Distance	NAD83 (2011) Adjustment	(U.S. Survey Fe
COA-10	239°03'24"	308.13'	State: Texas Zone: North Central	N: 7032307.2



Zone: N	Zone: North Central N: 7032307.21				578.67'	
	Position: NAD83 (2011)			Standard Deviation		
Geodetic Data	Latitude: Longitude: Ellipsoid Height:	32°56'55.93836" North 96°48'42.38847" West 491.79'		0.004' 0.002' 0.009'		

Type: 3 1/2" Aluminum Disk Stamped "TOWN OF ADDISON NO 31"

Coordinates (U.S. Survey Feet)

Surveyor: James B. Gillis, R.P.L.S.

OTHER

Date: February 1, 2021

Elevation NAVD88 Calculated Using Geoid 12B

#### Approximate Location:

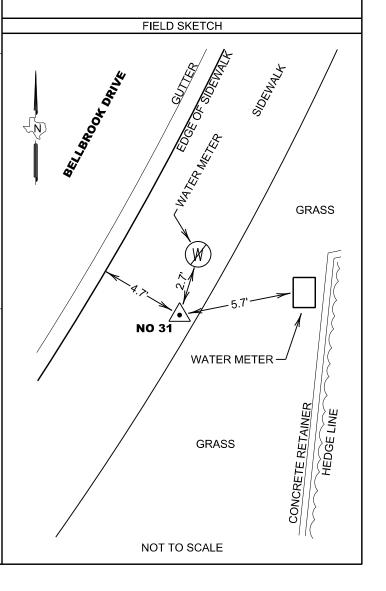
Located within a concrete sidewalk along the Southeastlery Right-of-Way of Bellbrook Drive, 122' +/- Northeast of the intersection of Havenshire Place and Bellbrook Drive.



**FACING NORTHEAST** 



**FACING SOUTHWEST** 



TOWN OF ADDISON						
Distance & Direction to Reference & Azimuth Marks						
Reference Mark	Direction	Distance (feet)	Ī			
1) Back of Curb	East	2.5'	I			
2) Storm Drain MH	South	9.8'	I			
3) Traffic Signal Pull Box	North	15.0'	I			
Azimuth Mark	Grid Azimuth	Grid Distance	1			
NO 33	359°22'15"	1,199.02'				



N J	

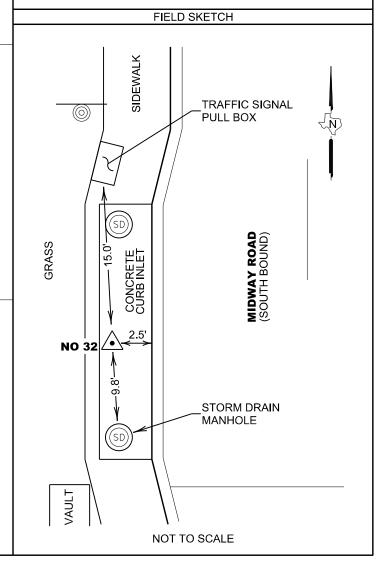
**FACING NORTH** 



**FACING SOUTH** 

CONTROL DATA SHEET							
Station Name: NO 32 Surveyor: James B. Gillis, R.P.L.S.							
Type: 3 1/2" Aluminum Disk Stamped "TOWN OF ADDISON NO 32"							
Survey Method: GNSS TRAV OTHER							
Combined Scale Factor: 0.999849799 Date: February 1, 202							
	rdinate System (2011) Adjustment	(U.S. Survey Feet) NAVD8		Elevation 88 Calculated g Geoid 12B			
Zone: N	exas lorth Central 202	N: 7031164.89 E: 2477977.68	599.48'				
	Position:	NAD83 (2011)		Standard Deviation			
Geodetic Data	Latitude: Longitude: Ellipsoid Height:		North West	0.004' 0.003' 0.012'			

Located at the Westerly edge of a concrete curb Inlet, 63' +/-North of the intersection of Proton Road and Midway Road, 1,125' +/- South from the intersection of Beltwood Parkway and Midway Road.



TOWN OF ADDISON							
Distance & Direction to Reference & Azimuth Marks							
Reference Mark	Direction	Distance (feet)					
1) Back of Curb	East	2.0'					
2) Storm Drain MH	South	8.8'					
3) Hedge	West	15.1'					
Azimuth Mark	Grid Azimuth	Grid Distance					
NO 32	179°22'15"	1,199.02'					





**FACING SOUTH** 



FACING NORTH

N	CONT	ROL	DATA	\ S	HEET		
	Station Name: NO 33 Surveyor: James B. Gillis				llis, R.P.L.S.		
	Type: 3	1/2" A <b>l</b> um	inum Disk	Stam	ped "TOWN O	F ADDI	SON NO 33"
	Surve	y Method	: GNSS		TRAV 0	THER [	
	Combined Scale Factor:			0.9	99848913	Date: F	ebruary 1, 2021
	Coordinate System NAD83 (2011) Adjustment				oordinates . Survey Feet)	NAVD	Elevation 88 Calculated g Geoid 12B
	State: Texas Zone: North Central Code: 4202		tral	N: E:	7032363.84 2477964.52		615.84'
			Position:	NAE	083 (2011)		Standard

#### 

#### Approximate Location:

Located at the Northwest corner of a concrete curb Inlet, 53' +/-North from the intersection of Beltwook Parkway and Midway Road, 955' +/- South from the intersection of Beltway Drive and Midway Road.

