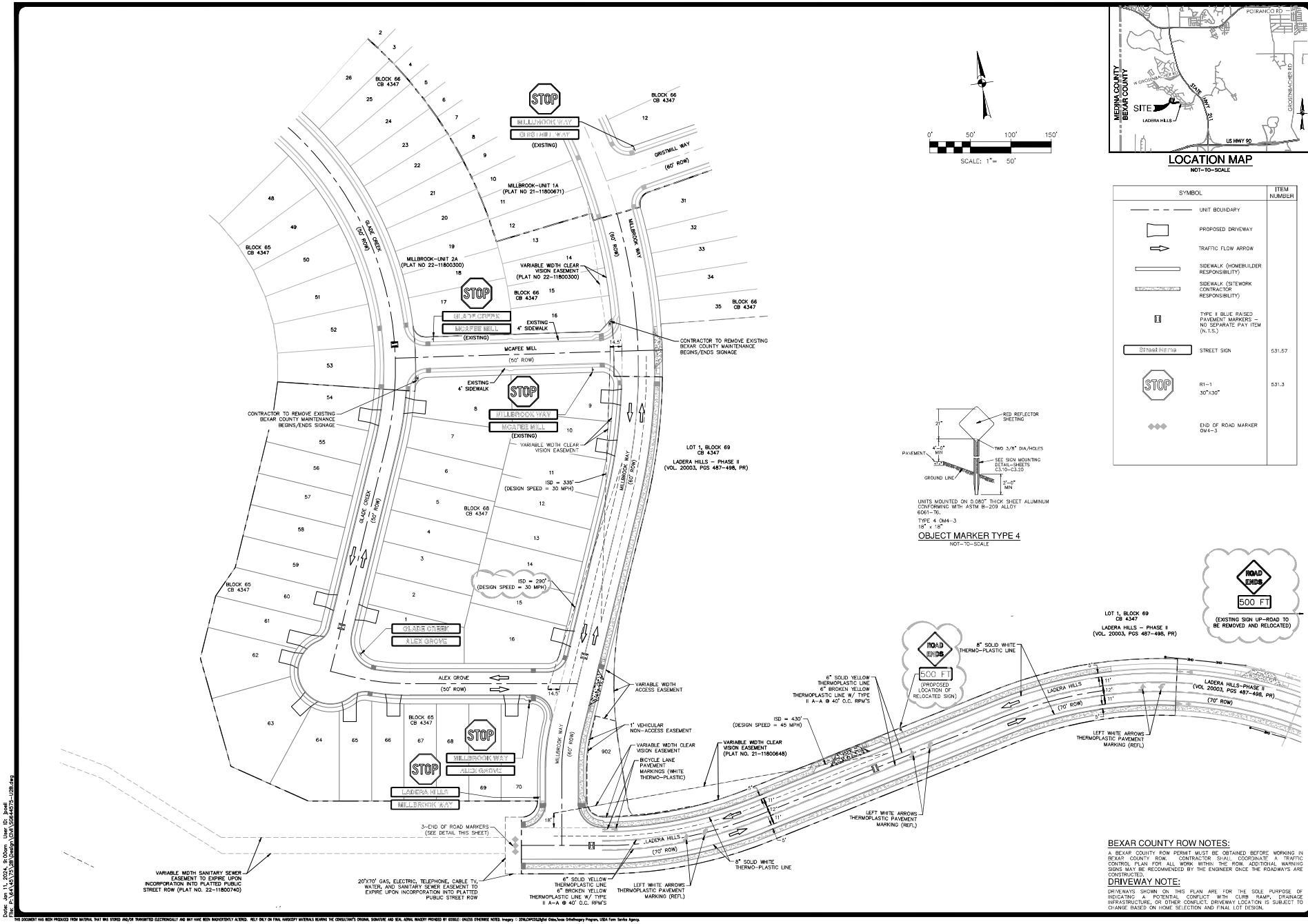

LOCATION MAP

NOT–TO–SCALE

SYMBOL		ITEM NUMBER
	UNIT BOUNDARY	
	PROPOSED DRIVEWAY	
	TRAFFIC FLOW ARROW	
	SIDEWALK (HOMEBUILDER RESPONSIBILITY)	
	SIDEWALK (SITEWORK CONTRACTOR RESPONSIBILITY)	
	TYPE II BLUE RAISED PAVEMENT MARKERS – NO SEPARATE PAY ITEM (N.T.S.)	
Street Name	STREET SIGN	531.57
STOP	R1–1 30"X30"	531.3
	END OF ROAD MARKER OM4–3	

UNITS MOUNTED ON 0.080" THICK SHEET ALUMINUM CONFORMING WITH ASTM B–209 ALLOY 6061–T6.

TYPE 4 OM4–3
18" x 18"

OBJECT MARKER TYPE 4

NOT–TO–SCALE

BEXAR COUNTY ROW NOTES:

A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.

DRIVEWAY NOTE:

DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

NO.	REVISION	DATE
1.	REVISED RAMPS, SIDEWALK, AND SIGNAGE	02/27/2023
2.	REVISED RELOCATION LANGUAGE AND ADDED SIGHT DISTANCE DRAINAGE	01/15/2024

1/11/2024

STATE OF TEXAS
REBECCA ANN CARROLL
92666
LICENSED
PROFESSIONAL ENGINEER

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

MILLBROOK - UNIT 2B

BEXAR COUNTY, TEXAS

SIGNAGE PLAN

PLAT NO. 22-11800595
JOB NO. 6445-75
DATE JANUARY 2024
DESIGNER JP
CHECKED BAC DRAWN SS
SHEET C3.00

Date: Jan 11, 2024, 9:00am User ID: bpell
File: P:\6445\75\Civil\Design\Civil\SDR\44575-1128.dwg

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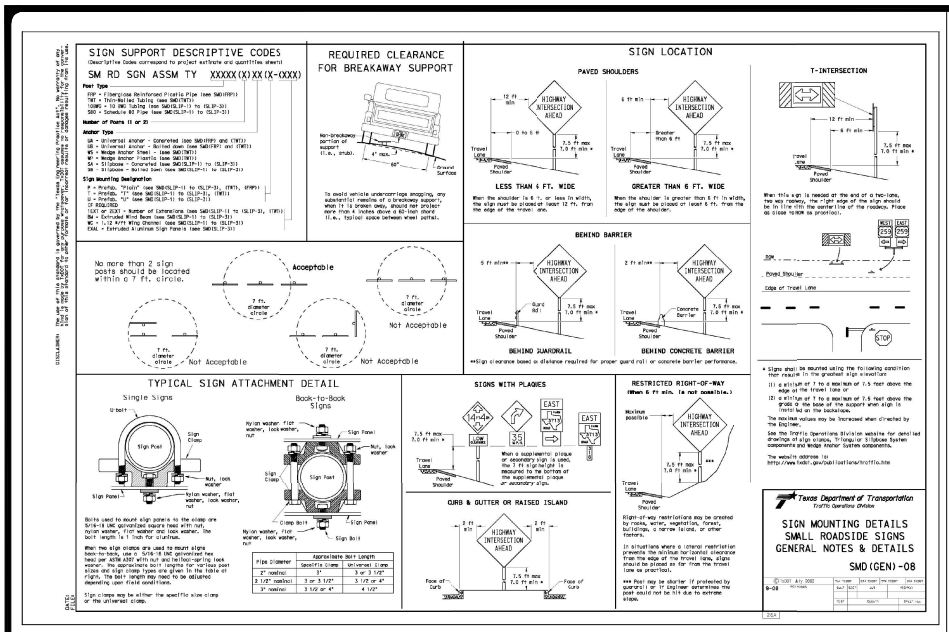

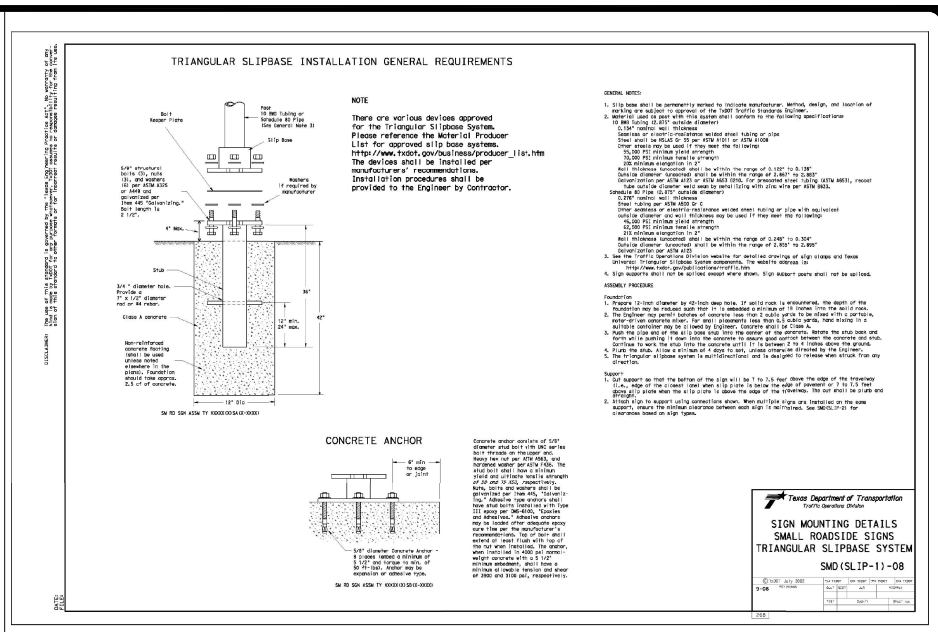

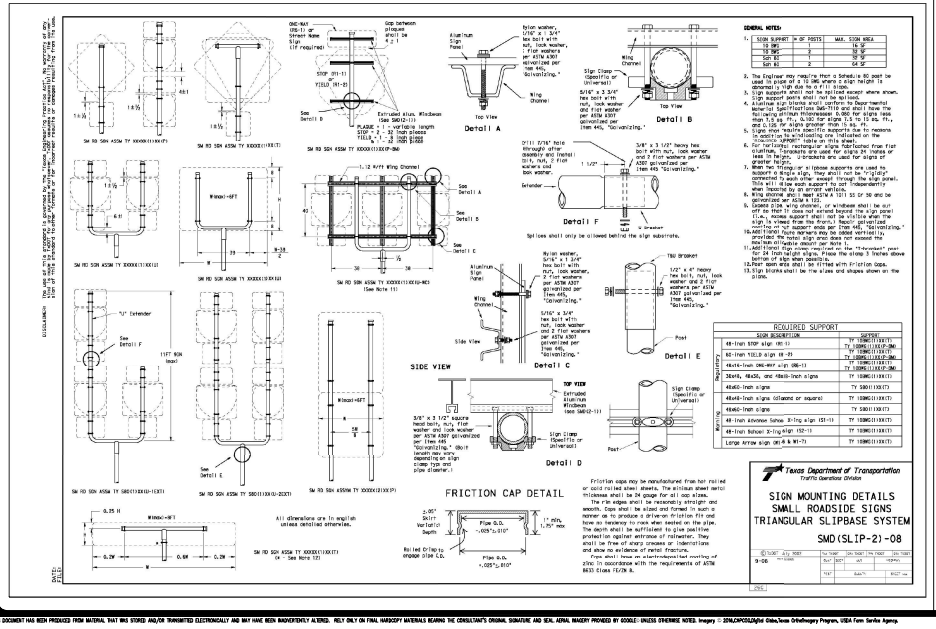

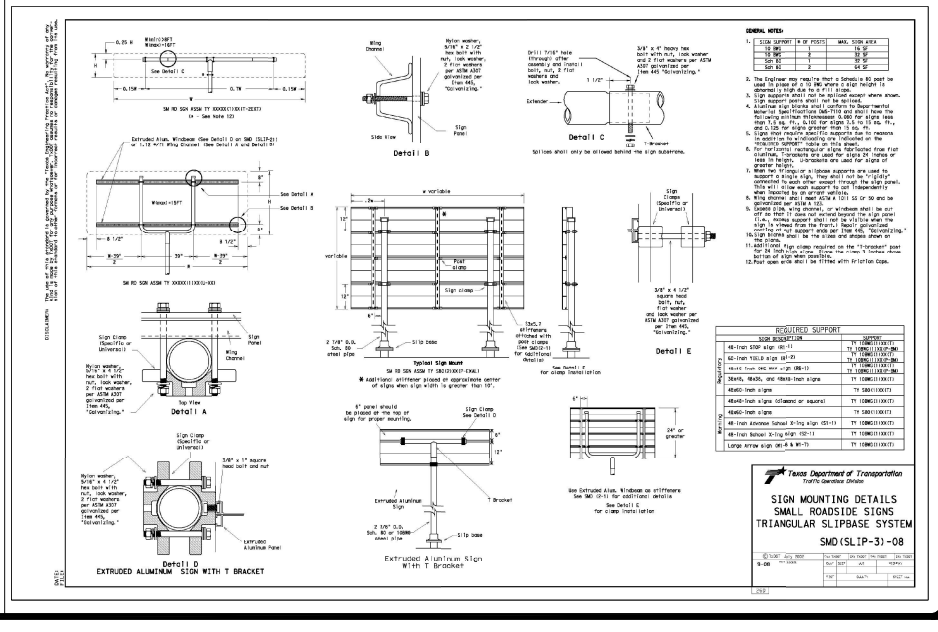

NO.	REVISION	DATE

9/26/2023

STATE OF TEXAS
REBECCA ANN CARROLL
92668
LICENSED PROFESSIONAL ENGINEER

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

MILLBROOK - UNIT 2B

BEXAR COUNTY, TEXAS

SIGNAGE DETAILS (SHEET 1 OF 3)

FLAT NO. 22-11800595
JOB NO. 6445-75
DATE SEPTEMBER 2023
DESIGNER JP
CHECKED BAC DRAWN SS
SHEET C3.10

Date: Sep 26, 2023, 8:54am User ID: jpaul
File: P:\6445\75\SB\Design\CAD\SGD\644575-U2B.dwg
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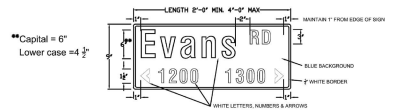
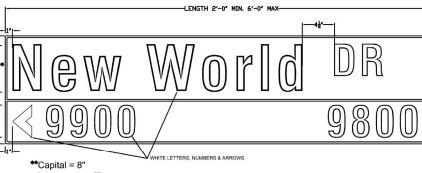
9" GROUND MOUNT STREET NAME SIGNS



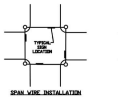
9" GROUND MOUNT STREET NAME SIGNS
WITH STREET DESIGNATION



18" OVERHEAD STREET NAME SIGNS

	18" OVERHEAD SIGN	9" GROUND MOUNT SIGNS
HEIGHT	18" (381 mm)	9" (228 mm)
LENGTH	48" (1200 mm) MIN. 72" (1800 mm) MAX. (1 DIGITS INCREMENTS PER LENGTH)	24" (600 mm) MIN. 48" (1200 mm) MAX. (2 DIGITS INCREMENTS PER LENGTH)
THICKNESS	0.125 (3 mm)	
SUBSTRATE	ALUMINUM ALLOY 3003-H38 (ASTM B-209 GOLD CHIRMATE FINISH	
SIGN FACE MATERIALS	BLUE FILM ✱ OVER DIAMOND GRADE - ASTM Type XI Non-Fluorescent	BLUE FILM ✱ OVER HIGH INTENSITY PRISMATIC- ASTM Type IV
LEGENDS AND SYMBOLS	SERIES D & OR C IF NAME OTHERWISE EXCEEDS MAXIMUM (SEE LENGTH)	
COLOR	WHITE LEGEND ON BLUE BACKGROUND	
LETTER TRACKING	17% (USUAL) 10% (MIN.)	10%

✱ ACRYLIC ELECTRONIC CUTTABLE FILM



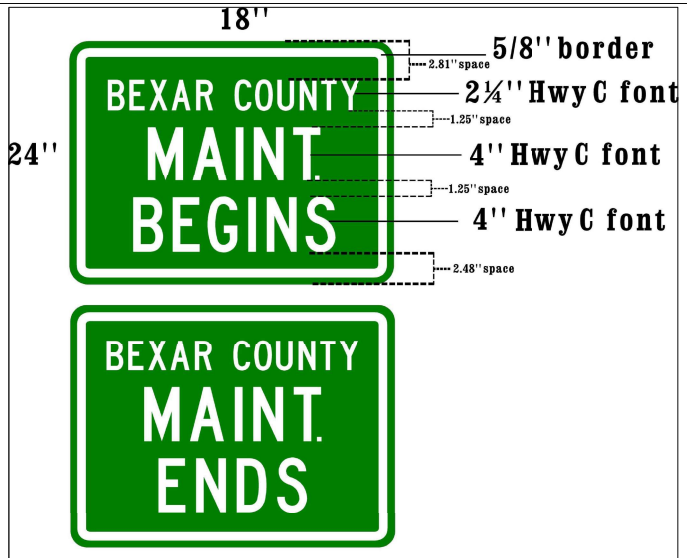
SIGN FACE MATERIALS
SHALL CONFORM TO:

1. STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS & BRIDGES ON FEDERAL HIGHWAY PROJECTS - FP-03 U.S. CUSTOMARY UNITS SECTION 718
2. GENERAL SERVICES ADMINISTRATION-FEDERAL SPECIFICATIONS L-S-300C
3. ASTM D 4956 - 09a1

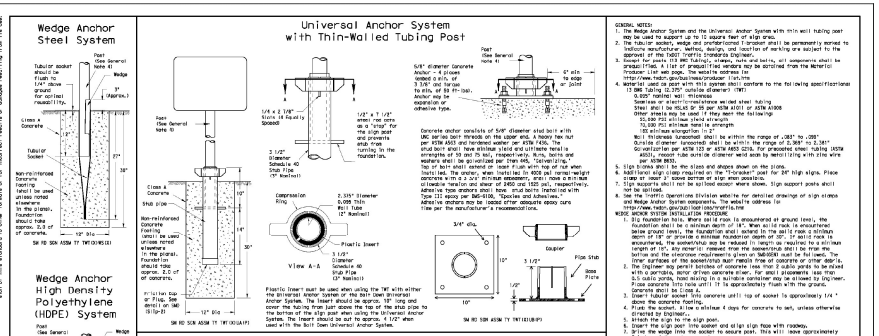
Bexar County Public Works

Street Name Sign Details

SHEET 1



18" x 24"
White Prismatic Background
Green Overlay Film
Hwy C lettering



GENERAL NOTES:

1. The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 12 square feet of sign area.
2. The tubular socket, wedge and perforbicated T-brackets shall be permanently marked to indicate manufacturer, method, designs, and insertion of marking are subject to the approval of the Traffic Operations Division Engineer.
3. Except for posts 103 MMS Railing, always, note and below, all components shall be prequalified. A list of prequalified vendors may be accessed from the Material Producer List web page. The website address is: http://www.txdot.gov/business/producer list.htm
4. Material used as part with this system shall conform to the following specifications: 13 gauge (0.75") outside diameter (TWT)
   Q-235 Steel Tubing (TWT)
   Seamless or electrical-resistance welded steel tubing
   Steel shall be ASLAS Gr 55 per ASTM A1011 or ASTM A1008
   Other steels may be used if they meet the following:
   55,000 PSI minimum yield strength
   70,000 PSI minimum tensile strength
   20 minimum elongation in 2"
   Wall thickness (unscribed) shall be within the range of .057" to .085"
   Outside diameter (unscribed) shall be within the range of 0.369" to 0.381"
   Galvanization per ASTM 123 or ASTM A653 G210. For prequoted steel tubing (ASTM A500), mesoor tube outside diameter weld seam by metallizing with the wire per ASTM B833.
5. Sign panels shall be the sizes and shapes shown on the plans.
6. Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
7. Sign supports shall not be welded shown where shown. Sign support posts shall not be spliced.
8. See the Traffic Operations Division website for detailed drawings of sign stamps and the sign support components. The website address is: http://www.txdot.gov/publications/traffic.htm

WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the auger/hole may be reduced in length as required to a minimum length of 18". Any material removed from the auger/hole shall be free the bottom and the clearance requirements given on SMD(SIGN) must be followed. The inner surfaces of the auger/hole must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed. Use the manufacturer's recommendations.
3. Insert tubular socket into concrete until top of socket is approximately 1/4 " above the concrete footing.
4. Allow concrete to cure a minimum 4 days for concrete to set, unless otherwise directed by the Engineer.
5. Attach the sign to the sign post.
6. Insert the sign post into socket and align sign faces with roadway.
7. Drive the wedge into the socket to secure post. This will leave approximately 1 inches of the wedge exposed.

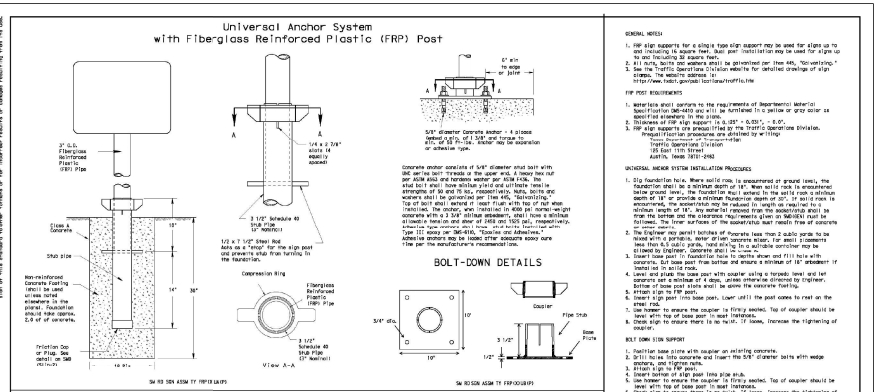
UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the auger/hole may be reduced in length as required to a minimum length of 18". Any material removed from the auger/hole shall be free the bottom and the clearance requirements given on SMD(SIGN) must be followed. The inner surfaces of the auger/hole must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed. Use the manufacturer's recommendations.
3. Insert base post into hole. Lower until the post comes to rest on steel rod.
4. Level and plumb the base post with supplier using a torpedo level and let concrete set a minimum of 4 days, unless otherwise directed by Engineer. Bottom of base post slots shall be above the concrete footing.
5. Insert sign post into base post.
6. Insert sign post into base post. Lower until the post comes to rest on the steel rod.
7. Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
8. Check sign to ensure there is no twist. If twist, increase the tightening of coupler.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
WEDGE & UNIVERSAL ANCHOR
WITH THIN WALL TUBING POST
SMD(TWT)-08

© TxDOT July 2002	DN: TxDOT	CK: TxDOT	FHWA	CK: FHWA
9-08 REVISIONS	DW: TxDOT	CK: TxDOT	FHWA	CK: FHWA
	FILE:	Date/T:	SMD(TWT) sheet	



GENERAL NOTES:

1. FRP sign supports for a single type sign support may be used for signs up to and including 16 square feet. Dual post installation may be used for signs up to and including 32 square feet.
2. All nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing."
3. See the Traffic Operations Division website for detailed drawings of sign stamps. The website address is: http://www.txdot.gov/publications/traffic.htm

FRP POST REQUIREMENTS

1. Materials shall conform to the requirements of Departmental Material Specifications. Posts shall be furnished in a yellow or gray color as specified elsewhere in the plans.
2. Thickness of FRP sign support is 0.125" +- 0.03", - 0.0".
3. FRP sign support is prequalified by the Traffic Operations Division. Prequalification procedures are obtained by writing:
   Texas Department of Transportation
   Traffic Operations Division
   125 East 11th Street
   Austin, Texas 78701-2483

UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURES

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the auger/hole may be reduced in length as required to a minimum length of 18". Any material removed from the auger/hole shall be free the bottom and the clearance requirements given on SMD(SIGN) must be followed. The inner surfaces of the auger/hole must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed. Use the manufacturer's recommendations.
3. Insert base post into hole. Backfill hole to depths shown and fill hole with concrete. Put base post free bottom and ensure a minimum of 18" embedment if installed in solid rock.
4. Level and plumb the base post with supplier using a torpedo level and let concrete set a minimum of 4 days, unless otherwise directed by Engineer. Bottom of base post slots shall be above the concrete footing.
5. Insert sign post into base post.
6. Insert sign post into base post. Lower until the post comes to rest on the steel rod.
7. Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
8. Check sign to ensure there is no twist. If twist, increase the tightening of coupler.

BOLT DOWN SIGN SUPPORT

1. Position base plate with coupler on existing concrete.
2. Drill holes into concrete and insert the 5/8" diameter bolts with wedge anchors to 4" embedment.
3. Attach sign to FRP post.
4. Insert bottom of sign post into plate ends.
5. Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
6. Check sign to ensure there is no twist. If twist, increase the tightening of coupler.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
UNIVERSAL ANCHOR SYSTEM
WITH FRP POST
SMD(FRP)-08

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9-08 REVISIONS	DW: TxDOT	CK: TxDOT	FHWA	CK: FHWA
	FILE:	Date/T:	SMD(FRP) sheet	

NO.	REVISION	DATE

9/26/2023

STATE OF TEXAS
REBECCA ANN CARROLL
92666
LICENSED
PROFESSIONAL ENGINEER

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

MILLBROOK - UNIT 2B
BEXAR COUNTY, TEXAS

SIGNAGE DETAILS
(SHEET 2 OF 3)

FLAT NO. 22-11800595
JOB NO. 6445-75
DATE SEPTEMBER 2023
DESIGNER JP
CHECKED BAC DRAWN SS
SHEET C3.20

Date: Sep 26, 2023, 8:54am User ID: jpaul
File: P:\6445\75\38\Design\Civil\SIGN\6445075-U2B.dwg
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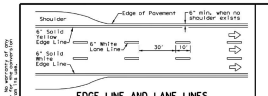
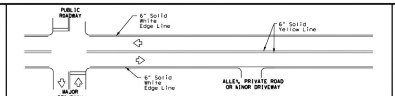


EDGE LINE AND LANE LINES
ONE-WAY ROADWAY
WITH OR WITHOUT SHOULDERS



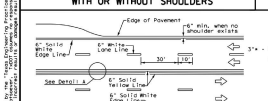
TYPICAL TWO-LANE, TWO-WAY PAVEMENT
MARKINGS THROUGH INTERSECTIONS

GENERAL NOTES

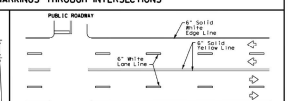
1. Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edge lines are not required in curb and gutter sections of roadways.
2. The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the center of edge line to the center of edge line of a two lane roadway.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

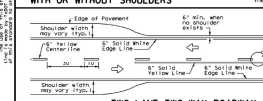
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



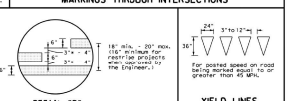
CENTERLINE AND LANE LINES
FOUR LANE TWO-WAY ROADWAY
WITH OR WITHOUT SHOULDERS



TYPICAL MULTI-LANE, TWO-WAY PAVEMENT
MARKINGS THROUGH INTERSECTIONS



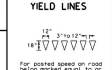
TWO LANE TWO-WAY ROADWAY
WITH OR WITHOUT SHOULDERS

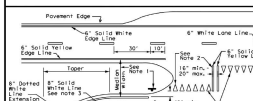


DETAIL "B"

* 2" minimum for restripe projects when approved by the Engineer.

YIELD LINES





FOUR LANE DIVIDED ROADWAY CROSSOVERS

NOTES

1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. For median width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs and stop bars are optional as determined by the Engineer.
2. Install median striping (double yellow centerlines and stop lines/yield lines) when a 50' or greater median centerline can be placed. Stop lines shall only be used with stop signs. Yield lines shall only be used with yield signs.
3. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

NOTE: Traveled way is exclusive of shoulder widths. Refer to General Note 1 for additional details.

GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Roadways

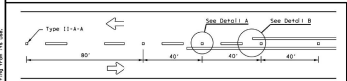
Texas Department of Transportation — Traffic Safety Division Standard

TYPICAL STANDARD PAVEMENT MARKINGS

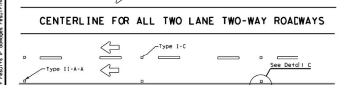
PM(1)-22

FILE: pm1-22.dgn	DN:	CK:	DW:	CK:
©TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 11-78 8-00 10-00 12-00 8-98 5-00 12-02 2-10 5-21	DIST		COUNTY	SHEET NO.

REFLECTIVE RAISED PAVEMENT MARKERS
FOR VEHICLE POSITIONING GUIDANCE



CENTERLINE FOR ALL TWO LANE TWO-WAY ROADWAYS

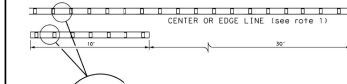


CENTERLINE & LANE LINES
FOR FOUR LANE TWO-WAY ROADWAYS

DETAIL "A"

DETAIL "B"

DETAIL "C"



CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE

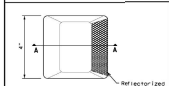
LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

Raised pavement markers Type II-C-A shall have clear face toward normal traffic and red face toward wrong-way traffic.

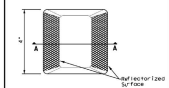
See Note 3.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

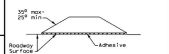
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)



Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS

6" EDGE LINE, 6" CENTERLINE OR 6" LANE LINE

REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKERS

A quick field check for the thickness of the profile markers is to see if it approximately equal to a stack of 5 quarters to a maximum height of 7 quarters.

NOTES

1. Edge lines should typically be 6" wide and the material shall be specified on the plans.
2. Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

GENERAL NOTES

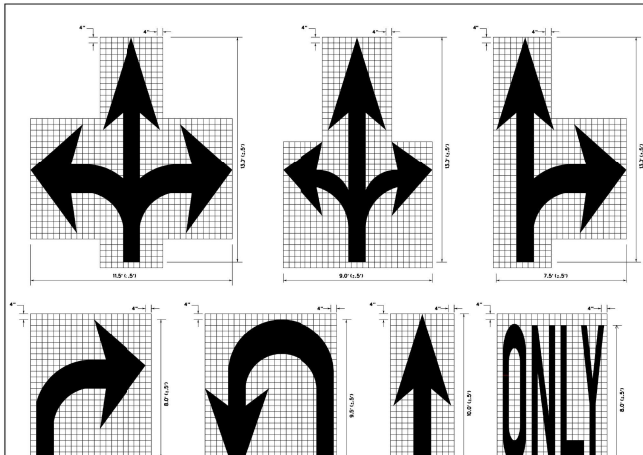
1. All raised pavement markers placed along broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers shall be placed to one side of the longitudinal joints.
3. Use raised pavement marker Type I-C with undivided roadways, four median and two way left turn lanes. Use raised pavement marker Type II-C-A with divided highways and raised medians.

Texas Department of Transportation — Traffic Safety Division Standard

POSITION GUIDANCE USING RAISED MARKERS RELECTORIZED PROFILE MARKINGS

PM(2)-22

FILE: pm2-22.dgn	DN:	CK:	DW:	CK:
©TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-10 8-20 10-20 1-90 5-00 12-02 2-10 5-21	DIST		COUNTY	SHEET NO.



NOTES:

1. MINIMUM 8 FOOT WHITE MARKINGS SHALL BE USED. UNLESS OTHERWISE NOTED. IF MESSAGE CONSISTS OF MORE THAN ONE WORD, THEY SHOULD BE PLACED WITH FIRST WORD NEAREST THE DRIVER.
2. THESE DETAILS ARE STANDARD SIZE FOR NORMAL INSTALLATION SIZES MAY BE REDUCED APPROXIMATELY ONE-THIRD DEPENDING ON CONDITIONS.
3. THE LONGITUDINAL SPACE BETWEEN MARKINGS SHOULD BE 30 FEET.
4. MARKINGS CONSIDERED APPROPRIATE FOR USE WHEN WARRANTED INCLUDE THE FOLLOWING:
   A. REGULATORY
      STOP
      RIGHT (LEFT) TURN ONLY
      25 MPH
      SYMBOL ARROWS
   B. WARNING
      STOP AHEAD
      SIGNAL AHEAD
      SCHOOL
      SCHOOL X-ING
      PED X-ING
      R X R (SEE RCPM DETAIL)
      OTHER WORDS OR SYMBOLS MAY BE NECESSARY UNDER CERTAIN CONDITIONS.
5. UNCONTROLLED USE OF PAVEMENT MARKINGS CAN RESULT IN DRIVER CONFUSION. WORD AND SYMBOL MARKINGS SHOULD BE NO MORE THAN THREE LANES.
6. THE WORD "STOP" SHALL NOT BE USED ON THE PAVEMENT UNLESS ACCOMPANIED BY A STOP LINE AND STOP SIGN. THE WORD "STOP" SHALL NOT BE PLACED ON THE PAVEMENT IN ADVANCE TO A STOP LINE UNLESS EVERY VEHICLE IS REQUIRED TO STOP AT ALL TIMES.
7. PAVEMENT MARKINGS SHOULD GENERALLY BE NO MORE THAN ONE LANE IN WIDTH, WITH SCHOOL MESSAGES BEING THE EXCEPTION. FOR DETAILS OF SCHOOL AND SCHOOL CROSSING PAVEMENT MARKINGS, REFER TO PART VI OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
8. SPACING BETWEEN LETTERS SHOULD BE APPROXIMATELY 4 INCHES. THE WIDTH OF LETTERS MAY VARY DEPENDING ON THE WIDTH OF THE TRAVEL LANES.
9. LANE-USE ARROW MARKINGS MAY BE USED TO CONVEY EITHER GUIDANCE OR MANDATORY MESSAGES. ARROWS USED TO CONVEY A MANDATORY MOVEMENT MUST BE ACCOMPANIED BY STANDARD SIGNS AND THE PAVEMENT MARKING WORD "ONLY".
10. PAVEMENT MARKINGS ARE TO BE LOCATED AS SPECIFIED ELSEWHERE IN THE PLANS.

SEPTEMBER 2009

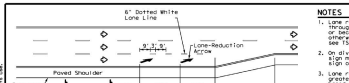
CITY OF SAN ANTONIO

DEPARTMENT OF PUBLIC WORKS

STANDARD PAVEMENT MARKINGS (ARROWS)

SHEET 3 OF 16

DESIGN: R. BURNETTE	PROJECT NO.			CKD:
DRWN: BY:	CHKD: BY:	DATE:	SCALE: NONE	SHEET NO.



LANE REDUCTION

NOTES

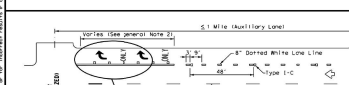
1. Lane reduction pavement markings are used where the number of through lanes is reduced because of narrowing of the roadway or because of a reduction of on-street parking in what would generally be a through lane, for Texas Super 2 Passing Lanes, see TxDOT standard sheets.
2. On divided highways, an additional RIGHT LANE ENDS (W9-1R) sign may be placed in the median along with the W9-1R sign on the right side of the highway.
3. Lane reduction arrows are required for speeds of 45 mph or greater. An optional third lane reduction arrow may be added. Based on engineering judgement, if used, the optional third lane reduction arrow should be centered between the first and last lane reduction arrows.
4. For lane reductions on Freeways and Expressways, signing shall conform to the TxDOT Freeway Signing Handbook.

ADVANCED WARNING SIGN DISTANCE (D)		
Posted Speed Limit	D (ft)	L (ft)
30 MPH	460	$L=\frac{WS^2}{60}$
35 MPH	565	
40 MPH	670	
45 MPH	775	
50 MPH	885	
55 MPH	990	L=WS
60 MPH	1,100	
65 MPH	1,200	
70 MPH	1,250	
75 MPH	1,350	

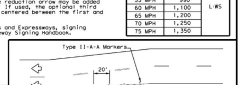
GENERAL NOTES

1. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes where the lane is used for both through and turning movements. Word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows are as shown in the Standard Highway Sign Designs for Texas.
2. When lane-use words and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 200 feet. Place the first set of arrows at the beginning and the second set of arrows for a short turn lane, it should be located at or near the upstream end of the full-width turn lane.
3. Use raised pavement marker Type I-C with undivided highways, four medians and two way left turn lanes. Use raised pavement marker Type II-C-A with divided highways and raised medians.
4. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer. See Chapter 3 of the Roadway Design Manual for additional information on turning lanes or storage lengths.

TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP



A two-way left-turn (TWLT) lane-use arrow pavement marking should be used at or just downstream from the beginning of a two-way left-turn lane within a corridor. Repeating the TWLT lane-use arrow pavement marking in the bay is not required unless stated elsewhere in the plans.

TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

TYPICAL TWO-LANE ROADWAY INTERSECTION WITH LEFT TURN BAYS

DETAIL A

DETAIL B

* 2" minimum allowed for restripe projects when approved by the Engineer.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

Texas Department of Transportation — Traffic Safety Division Standard

TWO-WAY LEFT TURN LANES, RURAL LEFT TURN BAYS, AND LANE REDUCTION PAVEMENT MARKINGS

PM(3)-22

FILE: pm3-22.dgn	DN:	CK:	DW:	CK:
©TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-98 8-20 10-20 1-90 5-00 12-02 2-10 5-21	DIST		COUNTY	SHEET NO.

NO.	REVISION	DATE
1	UPDATED TXDOT DETAILS	11/21/23

11/21/2023

STATE OF TEXAS — REBECCA ANN CARROLL — 92668 — LICENSED — PROFESSIONAL ENGINEER

PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

MILLBROOK - UNIT 2B

BEXAR COUNTY, TEXAS

SIGNAGE DETAILS
(SHEET 3 OF 3)

FLAT NO. 22-11800595
JOB NO. 6445-75
DATE NOVEMBER 2023
DESIGNER JP
CHECKED BAC DRAWN SS
SHEET C3.30

Date: Nov 21, 2023, 1:20pm User ID: jpatil
File: P:\6445\75\30\Design\Civil\SIGN\644575-U2B.dwg

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