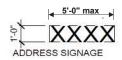
-	 	41 sqft 28 sqft 23 ft² SIGN INSTALLER 1. Verify (ft²) (flush, raceway, or pin) (solid area or letters) 2. Select fastener for wall structure.												MARK DISOSWAY, PE 163 SW Midtown PI, Ste 103				
	-	-	(Letters)	(Letters)	(Letters)	INSTRU	CTIONS		enly space fasteners over whole sign area.		Sigi	nen	gineering@gmail.com	Lake City, Florida 32025				
						1				Flori	ida Embossing seal or rubber s	stamp-size 1 7/8°;	7-16	386-754-5419				
									ALY ATTACH TO STRUCTURAL WALL MATERIAL (UNO). Shape and strength of ed 2 fasteners, "J" - 3, "H" - 4, "W" - 5; and 1/8" thick plastic may need more	Flo	rida, FBC 7	7th Ed ((2020), Sect 1609 ref ASCE 7-16	FLPE53915				
						fasteners to avoid bend	ling. Follow sign manu	acturer's	instructions and code requirements for placement of fasteners. At least put one in			wind	1 "	THIS PDF HAS DIGITAL SIGNATURE AND ELECTRONIC SEAL. PRINTED				
						each corner top and bo	ttom. Follow fastener	manutao	urer's instructions and code requirements for installation.				II, Normal hazard to human life; III, Substantial hazard to human life; IV,	COPIES ARE NOT CONSIDERED				
			으		t		CALCIII A	TION	Minimum Number of Fasteners	=	Risk Category		Essential, emergency, critical	SIGNED OR SEALED. YOU MUST				
			Pickup	논	шa				Spaced Over Whole Sign	120	Wind Spe	eed	Basic Wind Speed, Ultimate, mph, from ASCE 7-16, Fig 26.5-1A, Risk II; or	VERIFY SIGNATURE ON THIS PDF. CLICK HERE TO VERIFY.				
			<u>P</u>	Spark	Walmart				on Whole Sign Area / Fastener Allowable Tension)		· ·		Fig.26.5-1B, Risk III & IV Wind Exposure; C, House size obstructions for > 600 ft; D, no obstructions	DISCOURT				
Min	Minimum Fasteners for Whole Sign Fastener Wall Structure Pull								,	С	Exposure		> 5000'	ST. CENSON STATE				
(Use More if Sign Needs It)							Fastener Installation	30	Sign Heig	aht	Sign Height Above Ground, ft, H; Sign cannot be higher than top of wall or	No 53915						
-		ļ	4 12		5	3/8" or 1/2" ThruBolt	Structural Wall Wood Sheathing	200	3/8" or 1/2" bolt, nut, washer thru wall; CMU, brick, concrete, 2x4 or unistrut backer		Orgin more	9	60'. For multiple signs use worst case.	STATE OF				
							100 200	3/8" or 1/2" bolt, nut, and washer thru 1/2" OSB or plywood sheathing 3/8" - 16 screw in hole, tap anchor flush.	See Table	Sign Area	а	Gross Sign Area, ft², means the overall area surrounding and including all sign letters and logos.	SONAL STATE					
									3/8" - 16 screw in hole, tap anchor flush.			C: ASCE	7-16, Section 29.4.2, Solid Attached Signs	5/13/2022				
			4	12	4	1/4" Tapcon	Concrete	_	1/4" Tapcon, min 1.5" embedment, protect from moisture.				pressure on solid sign attached flat against wall or parallel to wall, < 3' from	This seal for structural engineering per				
	-	ļ	26 7	36 12	24 6	1/4" Tapcon #12 Metal Screw	Grout Filled CMU 20ga CFS Frame	21	1/4" Tapcon, min 1.25" embedment, protect from moisture. #12-14 Self-drilling screws 3 threads thru 20ga steel frame.				uals wall wind pressure from ASCE 7-16, Section 30.4. In; F = P _{ASD} * Net Sign Area	scope of work (Fasteners only)				
-	+	<u> </u>	14	19	13	#12 Wetal Screw	5/8" Plywood	_	#12-14 wood screw or SMS into 5/8" OSB or plywood.		6 psf Wind Pre			SCOPE OF WORK ENGINEERING: Calculation of minimum				
		1	4	12	4	Timber Screw	Wood Framing	170	FastenMaster TimberLOK, 1/4" thread wood screw 1.25" in wood				= q _{h,ull} *GC _p ; C&C, ASCE 7-16, Eq 30.3-1	fasteners, ONLY. (See equation)				
			6	12	5	3/8" Toggle Bolt	Hollow CMU	100	3/8" Toggler - Snaptoggle BC, toggle anchor - into hollow CMU				q _{h,ult} = 0.00256*K _z *K _{zt} *K _d *V _{ult} ; ASCE 7-16, Eq 26.10-1					
	-	<u> </u>	11	15	10	3/8" Toggle Bolt	5/8" plywood	50	3/8" Toggler - Snaptoggle BC, toggle anchor - into 5/8" plywood	0.9			Coeff; K _z =2.01*(H/900)^(2/9.5)ExpC, (700&11.5)ExpD; ASCE 7-16, Table 26.10-1	This seal IS NOT: architecture, electric, or structure of sign and wall.				
	+	1	11 4	15 12	10 4	1/4" Toggle Bolt 1/2"Sleeve Anchor	5/8" plywood Concrete		1/4" Toggler - Snaptoggle BB - into 5/8" plywood 1/2" HILTI HLC-H or HLC-HX304SS3/8 Sleeve Anchor, 1.5" embed	-1. 0.8			f; GC _p =-1.4(<60ft) -1.8(>60ft) Zone 5, 1 ft ² area, ASCE 7-16, Figure 30.3-1, 30.5-1 tor; K _d = .85 for attached signs, ASCE 7-16, Table 26.6-1	ł				
	+	<u> </u>	4	12	4	1/2"Sleeve Anchor	Grout Filled CMU		1/2" HILTI HLC-H or HLC-HX304SS3/8 Sleeve Anchor, 1.5" embed	_			; GC _{ol} = 0, sign flat against wall, ASCE 7-16, Sec 29.3.2	By using this engineering sign installer, manufacturer, and owner agree to:				
			11	15	10	3/8" Stud Epoxy	Hollow CMU	50	3/8" thd rod stud in HIT-SC 16x50 screen tube, in Hollow CMU, Hilti	1.			r; Kzt = 1 for flat ground, no hill, ridge, or escarpment >15'; = 2 for corners or edges	Select fastener from table based on wall				
-	+	ļ							epoxy HIT-HY-270, or equal. 3/8" thd rod stud in Concrete, Hilti epoxy HIT-HY-270, or equal. 2"		5 psf Sign Wei	eight; must b	be less than 5 pounds per sq.ft. net area.	structure. 2. Install fasteners per fastener manufacturer instructions in locations required				
			11	15	10	3/8" Stud Epoxy	Concrete	50	embed.				FLUSH MOUNT	by sign manufacturer; this may mean more				
		1				Stud Thru	1/2" Plywood	60	3/16"pin-stud, nut, and washer thru 1/2" plywood sheathing or 20ga.				1 1	fasteners are required than shown in table. 3.				
	-	ļ			ļ	Stud Glued	Sheathing	25	metal building 3/16*pin-stud glued in wall, LIQUID NAILS FUZE-IT, LN-2000					Make sure sign and wall meets building code, sign code, and UL. Verify stated wind (speed,				
-		<u>. </u>					Wall (test)		one have code approval for structural applications. Sign installer must test these				r <u>⊒</u> ⊥	risk, exp, topo), sign (size, area, location on				
	I'T KNOW V								Tension. Use tripod, game scale, and hooks.					wall, max weight), wall (materials and construction).				
	IT IS CONST				IE			-	10'-10"					construction).				
	NTED FLAT				ALL,			unity	Building			Ł						
	A FASCIA OI		-					30	lans & +	_ 1		Į.						
	4' FROM A						13		viewed \2			1						
	ITECT'S OR				N		15		Code 3 pliance 9					PASTED IMAGES, DETAILS, DRAWINGS, AND				
DRAW	VINGS FOR	WALL DE	TAILS.				13	Con	pliance/§			f		NOTES ON THIS SHEET ARE <u>NOT</u> ENGINEERED OR REVIEWED.				
								S	380	/		I	I I →	ENGINEERED OR REVIEWED.				
								ale	of Florida	X		ř	7	They were pasted in at customer's request				
	12'-2"													to help relate fastener engineering to the job.				
													erra					
			7		.0		1	1	6		_	Ī.	Renewed Thrift Store SmartStyle Hair Salo	Florida Sign				
	5'-6"	1							13:-6	\		Ī	165 ft	Company				
	2		S							_		i i	Tesla Supercharger	. ,				
	-	-		J		25 h 200	7	1				1:	Walmart Supercenter Phoe	Job # 220583				
		Ĺ	41.00	action en			4-4-1	\			- 1	1	Department store	WALL SIGN				
			1'-2"	_		1	40.88 SF	15	.+			1	Tire Kingdom Tire shop	Flat on wall max 12" thick.				
INTERNALLY ILLUMINATED												1	Papa Johns Pizza	i lat on wan max 12 tinck.				
										_		1	Murphy Express	Walmart #0767				
											777	1	Red Lobster					
Sealood - SS												33	2767 W US Hwy 90					
4	4	4	4 541	12 739	4 486	Min Fasteners Wind Force			INTERNALLY ILLUMINATED) 1	46.21 SF		W US Hwy 90 (10)	Lake City, FL				
100	100	100	21 50 41	28 100 28	18 80 23	rves Area sqft % Net Area AREA SQUEL	<u> </u>		etici sy con et con i vegovi paga con etic etic i vegovi etic en 200 etic etic etic etic etic etic etic etic		and the second section of the section of the second section of the section of the second section of the section of th	8 25	S TD Bank	UNO valid for one sign each type at this location.				

9 sqft Stud (Letters)	5 sqft Stud (Letters)	95 sqft Stud (Letters)	21 sqft Stud (Letters)	45 sqft Stud (Letters)	28 ft² Stud (Letters)		INSTRUCTIONS 1. Verify (ft²) (flush, raceway, or pin) (solid area or letters) 2. Select fastener for wall structure. 3. Evenly space fasteners over whole sign area.											
	#	Pharmacy		Spirits		sign may require more t fasteners to avoid bend	fasteners. Example: "I" ing. Follow sign manuf	may ne	NLY ATTACH TO STRUCTURAL WALL MATERIAL (UNO). Shape and strength of ed 2 fasteners, "J" - 3, "H" - 4, "W" - 5; and 1/8" thick plastic may need more instructions and code requirements for placement of fasteners. At least put one inturer's instructions and code requirements for installation.									
Vision	Address a	Home & F	Outdoor	Wine & S	Market	(Eve	enly	: Minimum Number of Fasteners Spaced Over Whole Sign on Whole Sign Area / Fastener Allowable Tension)	in								
Mini	mum F (Use		rs for \ Sign Need		Sign	Fastener	Wall Structure	Pull	Fastener Installation	1								
4	4	21	8	12	10	Stud Thru	1/2" Plywood Sheathing	60	3/16"pin-stud, nut, and washer thru 1/2" plywood sheathing or 20ga. metal building	1								
10	6	51	18	29	24	Stud Glued	Wall (test)	25	3/16"pin-stud glued in wall, LIQUID NAILS FUZE-IT, LN-2000	1								
						IMPORTANT - Adhesives and toggles are strong but none have code approval for structural applications. Sign installer must test these connection strengths. Pull on fastener 2.5 * Allowable Tension. Use tripod, game scale, and hooks.												

I DON'T KNOW WHAT THIS WALL LOOKS LIKE OR HOW IT IS CONSTRUCTED BUT I ASSUMED THE SIGN IS LESS THAN 30' ABOVE GRADE, MOUNTED FLAT TO A NORMAL VERTICAL WALL, NOT A FASCIA OR PARAPET, AND NO CLOSER THAN 4' FROM ANY CORNER, ROOF, EAVE, CANOPY, SOFFIT, OR END OF WALL. SEE ARCHITECT'S OR SIGN INSTALLER'S ELEVATION DRAWINGS FOR WALL DETAILS.





Home & Pharmacy 94.90 SF



44.44 SQ. FT.





signengineering@gmail.com

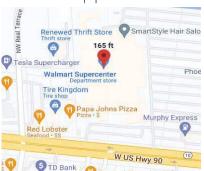
Florida, FBC 7th Ed (2020), Sect 1609 wind II, Normal hazard to human life; III, Substantial hazard to human life; IV, Risk Category Essential, emergency, critical Basic Wind Speed, Ultimate, mph, from ASCE 7-16, Fig 26.5-1A, Risk II; or 120 Wind Speed Fig.26.5-1B, Risk III & IV Wind Exposure; C, House size obstructions for > 600 ft; D, no obstructions Exposure С Sign Height Above Ground, ft, H; Sign cannot be higher than top of wall or Sign Height 30 60'. For multiple signs use worst case. Gross Sign Area, ft2, means the overall area surrounding and including all Sign Area sign letters and logos.

WIND LOAD CALC: ASCE 7-16, Section 29.4.2, Solid Attached Signs

Components & Cladding wind pressure on solid sign attached flat against wall or parallel to wall, < 3' from surface and > 3' from edge, equals wall wind pressure from ASCE 7-16, Section 30.4.

зипасе а	ana >	3 from edge, equals wall wind pressure from ASCE 7-16, Section 30.4.
See Ta	able	Wind Force on Sign; F = P _{ASD} * Net Sign Area
-26	psf	Wind Pressure; P _{ASD} = Pult * 0.6 per ASCE 7-16 section 2.4.1
-44	psf	Wind Pressure; $P_{ult} = q_{h,ult} *GC_p$; C&C, ASCE 7-16, Eq 30.3-1
31	psf	Velocity Pressure; q _{h,ult} = 0.00256*K _z *K _{zt} *K _d *V ² _{ult} ; ASCE 7-16, Eq 26.10-1
0.98		Veloc Pres Expos Coeff; K _z =2.01*(H/900)^(2/9.5)ExpC, (700&11.5)ExpD; ASCE 7-16, Table 26.10-1
-1.4		Ext. Pressure Coeff; GC _p =-1.4(<60ft) -1.8(>60ft) Zone 5, 1 ft ² area, ASCE 7-16, Figure 30.3-1, 30.5-1
0.85		Wind Direction Factor; K _d = .85 for attached signs, ASCE 7-16, Table 26.6-1
0		Int. Pressure Coeff; GC _{pi} = 0, sign flat against wall, ASCE 7-16, Sec 29.3.2
1.0		Topographic Factor; Kzt = 1 for flat ground, no hill, ridge, or escarpment >15'; = 2 for corners or edges
5	psf	Sign Weight; must be less than 5 pounds per sq.ft. net area.

STUD MOUNT



MARK DISOSWAY, PE 163 SW Midtown PI, Ste 103 Lake City, Florida 32025 386-754-5419

FLPE53915
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AND ELECTRONIC SEAL, PRINTED

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5/13/2022

This seal for structural engineering per scope of work (Fasteners only)

SCOPE OF WORK

ENGINEERING: Calculation of minimum fasteners, ONLY. (See equation)

This seal IS NOT: architecture, electric, or structure of sign and wall.

By using this engineering sign installer,

manufacturer, and owner agree to:

1. Select fastener from table based on wall structure. 2. Install fasteners per fastener manufacturer instructions in locations required by sign manufacturer; this may mean more fasteners are required than shown in table. 3. Make sure sign and wall meets building code, sign code, and UL. Verify stated wind (speed, risk, exp, topo), sign (size, area, location on wall, max weight), wall (materials and construction).

PASTED IMAGES, DETAILS, DRAWINGS, AND NOTES ON THIS SHEET ARE NOT ENGINEERED OR REVIEWED.

They were pasted in at customer's request to help relate fastener engineering to the job.

Florida Sign Company

Job # 220583

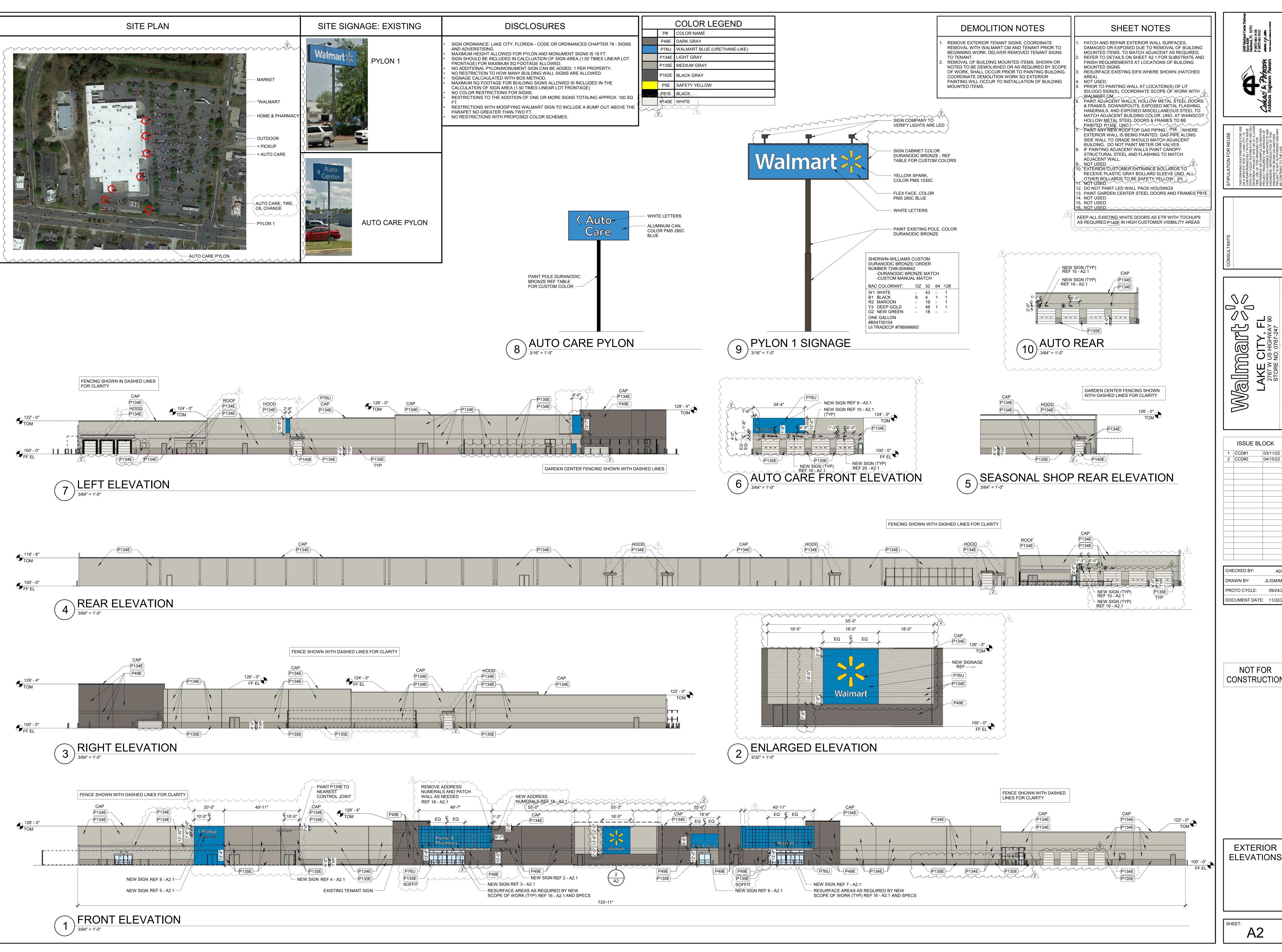
WALL SIGN

Flat on wall max 12" thick.

Walmart #0767 2767 W US Hwy 90 Lake City, FL

UNO valid for one sign each type at this location

MARK 163 SW Lake	THIS PDF HAS DIGITAL SIGNATURE AND ELECTRONIC GEAL, RINITED COURTS ARE NOT CONSIDERED	***>	min	nd including all	П	This se	SCOPE OF WORK ENGINEERING: Calculation of minimum	fasteners, ONLY. (See equation)	ASCE 7-16, Table 26.10-1 This seal IS NOT: architecture, electric, or structure of sign and wall.	7-16, Figure 30-3-1, 30-5-1 By using this engineering sign installer		rs or edges 1. Select fastener from table based on wall structure 2 histall fasteners per fastener	manufacturer instructions in locations required	by sign manufacturer; this may mean more fasteners are required than shown in table. 3		wall, max weight), wall (materials and	construction).	PASTED IMAGES, DETAILS, DRAWINGS, AND NOTES ON THIS SHEET ARE <u>NOT</u> ENGINEERED OR REVIEWED.	They were pasted in at customer's request to help relate fastener engineering to the job.	Florida Sign		Job # 220583	WALL SIGN Flat on wall max 12" thick.		2767 W US Hwy 90 Lake City FI
signengineering@gmail.com	l ë	Risk Category Essential remergency, critical Resistance Resist	Exposure	30 Sign Height of the regard recommendation of the regard that the person of the regard that the person of the regard that the person of the regard that the regard that the person of the regard that the person of the regard that the regar	Table O'1911 Arted Isign letters and logos. WIND LOAD CALC: ASCE 7-16, Section 29.42, Solid Attached Signs	components & cladding wind pressure on soild sign attached ital against waii or parallel to waii, < 3 from surface and > 3' from edge, equals wall wind pressure from ASCE 7-16, Section 30.4.	See Table Wind Force on Sign; F = P _{ASD} * Net Sign Area -26 psf Wind Pressure; P _{ASD} = Pult*0.6 per ASCE 7-16 section 2.4.1	-44 psf Wind Pressure; P _{tit} = 0 _{tit} , °GC _p ; C&C, ASCE 7-16, Eq 30.3-1 31 psf Velocity Pressure; q _{tit} , = 0.0026 ⁵ t/ ₂ , ¹ K ₃ , ¹ K ₄ , ¹ V ₂ , ii. ASCE 7-16, Eq 26.10-1	Veloc Pres Expos Coeff; K _z =2.01*(H/900)*(2/9.5)ExpC; (700&11.5)ExpD; ASCE	ne 5, 1 ff area, ASCE ASCE 7-16, Table 26.6-1	0 Int. Pressure Coeff; GCp; = 0, sign flat against wall, ASCE 7-16, Sec 29.3.2	1.0 Topographic Factor; Kzt = 1 for flat ground, no hill, ridge, or escarpment >15', = 2 for corners or edges 5 losf Sign Weight; must be less than 5 pounds per so, ft. net area.		STUD MOUNT	Ţ,	<u></u>			922	Renewed Thrift Store SmartStyle Hair Salo	NW Thrift store	Testa Supercharger Walmart Supercenter	Department store Tire Kingdom The shop	Papa Johns Pizza Murphy Express Red Lobster	
1. Verify (ft²) (flush, raceway, or pin) (solid area or letters) 2. Select fastener for wall structure. 3. Evenly space fasteners over whole sign area.	JSE MORE FASTENERS IF THE SIGN NEEDS IIT ONLY ATTACH TO STRUCTURAL WALL MATERIAL (UNO). Shape and strength of many require more disterents. Example: "I may need 2 fasteners, "1.5" H"-4", "A"-5" and "IVE Mick plasto may need more insteners to avoid bending. Follow sign manufacturer instructions and code requirements for placement of fasteners. At least put one in asch comer top and bottom. Follow fastener manufacturer's instructions and code requirements for installation.	CALCULATION: Minimum Number of Fasteners Evenly Spaced Over Whole Sign Fasteners Wind Street Whole Sign Anal Fastener Minds		60 3/16"pin-stud, nut, and washer thru 1/2" plywood sheathing or 20ga. metal building	LS FUZE-IT, LN-2000 applications. Sign installer must test these	a nooks.				6-11"				9.19 SF x2 signs		10' - 10"			D 00:			ノロノイ			
SIGN INSTALLER INSTRUCTIONS	USE MORE FASTENERS IF THE SIGN NEED sign may require more fasteners. Example: "I" sateners to avoid bending. Follow sign manuficach comer top and bottom. Follow fastener in acch comer top and bottom.	CALCULAT Events = Wind	Fastener Wall Structure	Stud Thru Sheathing	Stud Glued Wall (test) 25 3/16*pin-stud glued in wall. LIGUID NAI MPORTANT - Adhesives and dugles are strong but none have code approval for structural management and a strong but none have code approval for structural management.	connection strengtns. Full on tastener 2.5 A	2'-4"	-0		2.33 SF	x4 SIGNS				12' - 4 1/2"				N		(7/8/	1)	6.25 SF TVD	M. C. Coloniano
3 sqft 10 sqft 25 sqft 17 sqft 5 ft 5 sqft 17 sqft 5 ft 5 sqft 17 sqft 5 sqft	2x 9	ire x4 Si il Chang ilGNS into Care Auto Care Auto Care iutomotiv iumerals inmerals	Fasteners for Whole Sign	4 5 11 8 4	4 11 27 18 6	7	I DON'T KNOW WHAT THIS WALL LOOKS LIKE OR HOW IT IS CONSTRUCTED BUT I ASSUMED THE	SIGN IS LESS THAN 30' ABOVE GRADE, MOUNTED FLAT TO A NORMAL VERTICAL WALL,	NOT A FASCIA OR PARAPET, AND NO CLOSER THAN 4' FROM ANY CORNER, ROOF, EAVE,	CANOPY, SOFFIT, OR END OF WALL. SEE	DRAWINGS FOR WALL DETAILS.				12'			1 74 WIGO	9-10		()	_9-		<u>=</u>	



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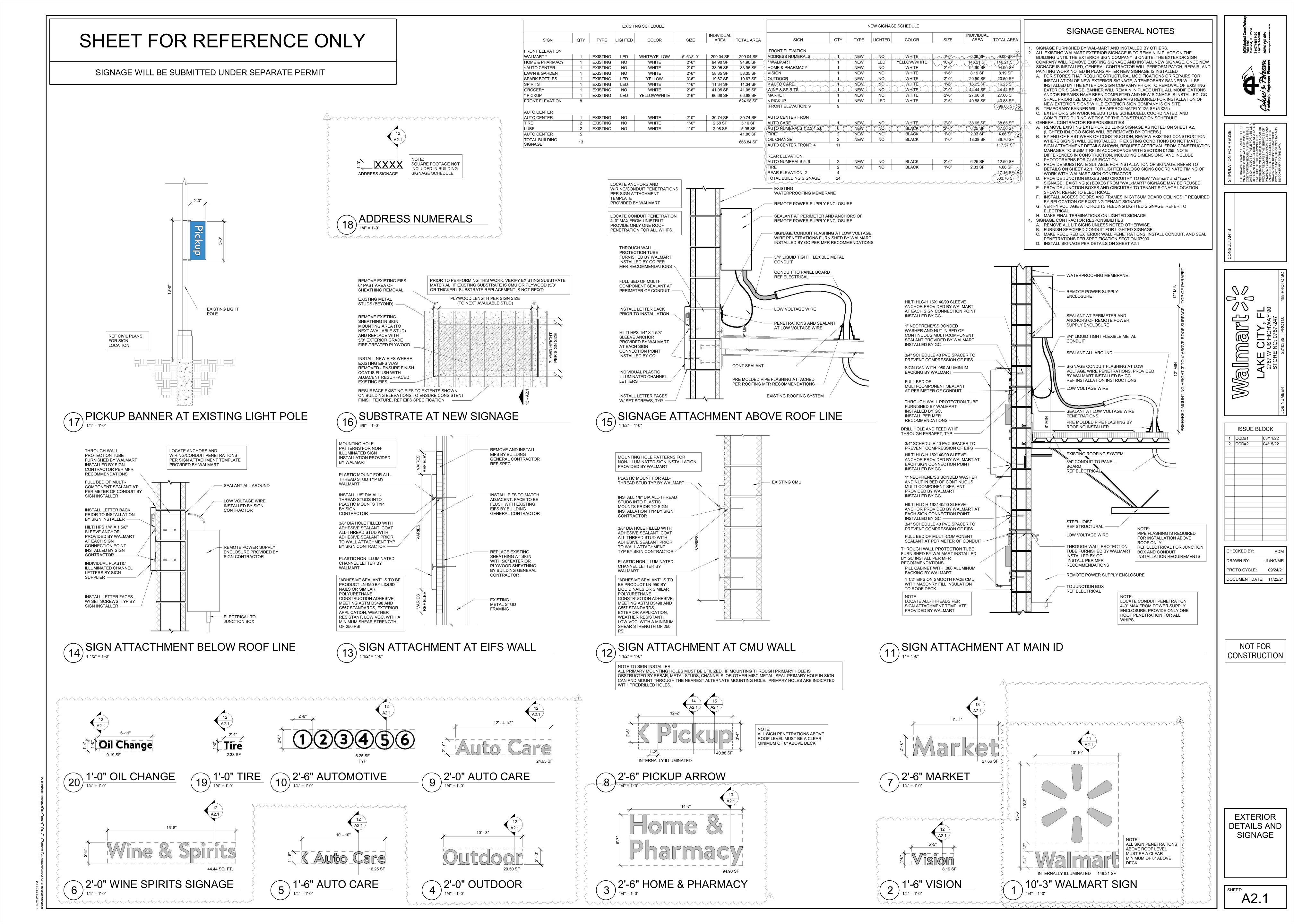
CHECKED BY: JL/GM/MR DRAWN BY: PROTO CYCLE: DOCUMENT DATE: 11/22/21

03/11/22

NOT FOR CONSTRUCTION

EXTERIOR ELEVATIONS

A2



Front-Lit Plex-Face GEMLITE ILLUMINATED LETTER FLUSH MOUNTED • **CHANNEL LETTER - TYPICAL SECTION - FRONT-LIT PLASTIC FACE** ES0000193 Charles Ogle SECONDARY WIRING PRIMARY ELECTRICAL (NEC 600-5) CONTROL BOX W/ POWER SUPPLIES (SEE DETAIL BELOW) DISCONNECT LED ILLUMINATION TOGGLE SWITCH DISCONNECT TOGGLE SWITCH FASTENERS AS REQUIRED FOUR PER LETTER **ATTIC SIDE**

120V Primary System - Low Voltage Secondary

FASCIA

N.T.S.

