

Date:	5-21-20	City, State:	Mohegan Lake, NY	SHEET:	1 OF 2
Client:	Broadway National Sign & Lighting	Overall Height:	20'-0" Max.	Sean M. McFarland, P.E.	
Sign:	Chipotle #31-3467	Wind Speed	115 mph	McFarland Engineering	

**Project Description**      **3144 E Main St Rte 6**      **Table of Contents**

ME Job:	48364 A	<b>Content:</b>	<b>Page</b>
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		Connection Design. . . . .	1-2

**ULTIMATE LOADS**  
**REVISED CONNECTORS**

Overall Size: 3'-1" x 18'-0"  
 Mounting Height: 20'-0" Max.  
 Mounting Style: Channel Letters w/ Backer Cabinet Mounted, Various Attachment Methods

**Structural Variables and Code Loading Specifications**

Sign Type:	Channel Letters / Wall Signs	Code:	2015 IBC / 2016 NY State
Existing Wall Material:	Various	Wind Speed:	115
Sign Weight Per Foot:	5	Wind Exposure:	C

Wind Loads Per ASCE 7-10

**Connection Design**

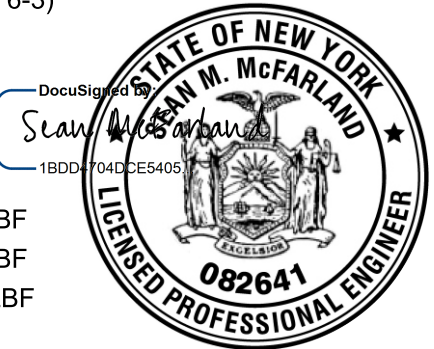
Using ASCE 7-10 (Simplified Procedure)

Topography:	Homogeneous	I =	1.15 (Table 6-1)
Exposure:	C	lambda =	1.29 (Figure 6-3, Exp. C, height=20 ft)
Enclosure:	Enclosed		
Structure:	Components and Cladding	Zone =	5 (End-Wall - Worst Case)
Building:	Category III	Effective Wind Area =	10 Sq. Ft.
		Net Wind Pressure =	-24.1 (Figure 6-3)

**Total Load**      Pnet = (lambda)\*I\*Pnet

Pnet (20) = -35.75 PSF

Sign Loads	Area	Pressure (Suction)	Tension Force	Shear Force
Letters (EA)	2.6 FT^2	-35.8 PSF	-94 LBF	13 LBF
Pepper Logo	3.9 FT^2	-35.8 PSF	-139 LBF	19 LBF
Sign Cabinets	58.5 FT^2	-35.8 PSF	-2092 LBF	293 LBF



**Tension Connection Design**

	Connections	Tension / Connection	1/4" Dia. TEKS	3/8" Dia. Lags (2x)
Letters (EA)	4	-24 LBF	95 LBF	
Pepper Logo	5	-28 LBF	95 LBF	
Sign Cabinets	12	-174 LBF		245 LBF

Date:	5-21-20	City, State:	Mohegan Lake, NY	SHEET:	2 OF 2
Client:	<b>Broadway National Sign &amp; Lighting</b>	Overall Height:	20'-0" Max.	Sean M. McFarland, P.E.	
Sign:	Chipotle #31-3467	Wind Speed	115 mph	McFarland Engineering	

**3144 E Main St Rte 6**

ME Job: 48364 A

**Shear**

**Connection Design**

	Connections Total	Shear / Connection	1/4" Dia. TEKS 95 LBF	3/8" Dia. Lags (2x)
Letters (EA)	4	3 LBF		
Pepper Logo	5	4 LBF	95 LBF	

Sign Cabinets

12	24 LBF	140 LBF
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**Combined Connector  
(% of Capacity)**

		Tension	Shear	Total Capacity	
		%	%	%	
Letters (EA)	4	TEKS -9.4%	1.9%	9.6%	OK
Pepper Logo	5	TEKS -11.1%	2.2%	11.3%	OK

Sign Cabinets

12	Lags (2x)	-71.1%	17.4%	73.2%	OK
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Lags into 2X - Full Tip Penetration

**Connection Specifications**

Attach Channel Letters w/ **Sign Cabinets** to Wall with Double Clips & Evenly Spaced Connectors. See Drawings for Complete Fabrication Specifications. Don't Overtighten Connectors.

Date:	5-21-20	City, State:	Mohegan Lake, NY	SHEET:	1 OF 2
Client:	Broadway National Sign & Lighting	Overall Height:	20'-0" Max.	Sean M. McFarland, P.E.	
Sign:	Chipotle #31-3467	Wind Speed	115 mph	McFarland Engineering	

**Project Description**      **3144 E Main St Rte 6**      **Table of Contents**

ME Job:	48364 B	<b>Content:</b>	<b>Page</b>
		Design Loads. . . . .	1
		Connection Design. . . . .	1-2

**ULTIMATE LOADS**

**REVISED SIGN DIMENSIONS**

Overall Size: 2'-3" x 13'-1"  
 Mounting Height: 20'-0" Max.  
 Mounting Style: Channel Letters w/ Backer Cabinet Mounted, Various Attachment Methods

**Structural Variables and Code Loading Specifications**

Sign Type:	Channel Letters / Wall Signs	Code:	2018 IBC / 2020 NY State
Existing Wall Material:	Various	Wind Speed:	115
Sign Weight Per Foot:	5	Wind Exposure:	C

Wind Loads Per ASCE 7-16

**Connection Design**

Using ASCE 7-16 (Simplified Procedure)

Topography:	Homogeneous	I =	1.15 (Table 6-1)
Exposure:	C	lambda =	1.29 (Figure 6-3, Exp. C, height=20 ft)
Enclosure:	Enclosed		
Structure:	Components and Cladding	Zone =	5 (End-Wall - Worst Case)
Building:	Category II	Effective Wind Area =	10 Sq. Ft.
		Net Wind Pressure =	-24.1 (Figure 6-3)

**Total Load**      Pnet = (lambda)\*I\*Pnet

Pnet (20) = -35.75      PSF

Sign Loads	Area	Pressure (Suction)	Tension Force	Shear Force
Letters (EA)	1.3 FT^2	-35.8 PSF	-45 LBF	6 LBF
Pepper Logo	1.9 FT^2	-35.8 PSF	-70 LBF	10 LBF
Sign Cabinets	29.4 FT^2	-35.8 PSF	-1052 LBF	147 LBF



**Tension Connection Design**

	Connections	Tension / Connection	1/4" Dia. TEKS	3/8" Dia. Lags (2x)
Letters (EA)	4	-11 LBF	95 LBF	
Pepper Logo	5	-14 LBF	95 LBF	
Sign Cabinets	8	-132 LBF		245 LBF

Date:	5-21-20	City, State:	Mohegan Lake, NY	SHEET:	2 OF 2
Client:	<b>Broadway National Sign &amp; Lighting</b>	Overall Height:	20'-0" Max.	Sean M. McFarland, P.E.	
Sign:	Chipotle #31-3467	Wind Speed	115 mph	McFarland Engineering	

**3144 E Main St Rte 6**

ME Job: 48364 B

**Shear**

**Connection Design**

	Connections Total	Shear / Connection	1/4" Dia. TEKS 95 LBF	3/8" Dia. Lags (2x)
Letters (EA)	4	2 LBF		
Pepper Logo	5	2 LBF	95 LBF	

Sign Cabinets

8	18 LBF		140 LBF
---	--------	--	---------

**Combined Connector**

**(% of Capacity)**

		Tension	Shear	Total Capacity	
		%	%	%	
Letters (EA)	4	TEKS -4.5%	0.9%	4.6%	OK
Pepper Logo	5	TEKS -5.6%	1.1%	5.7%	OK

Sign Cabinets

8	Lags (2x)	-53.7%	13.1%	55.3%	OK
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Lags into 2X - Full Tip Penetration

**Connection Specifications**

Attach Channel Letters w/ **Sign Cabinets** to Wall with Connectors Directly to Wall Thru Tubes Evenly Spaced. See Drawings for Complete Fabrication Specifications. Don't Overtighten Connectors.

ME #: 48364

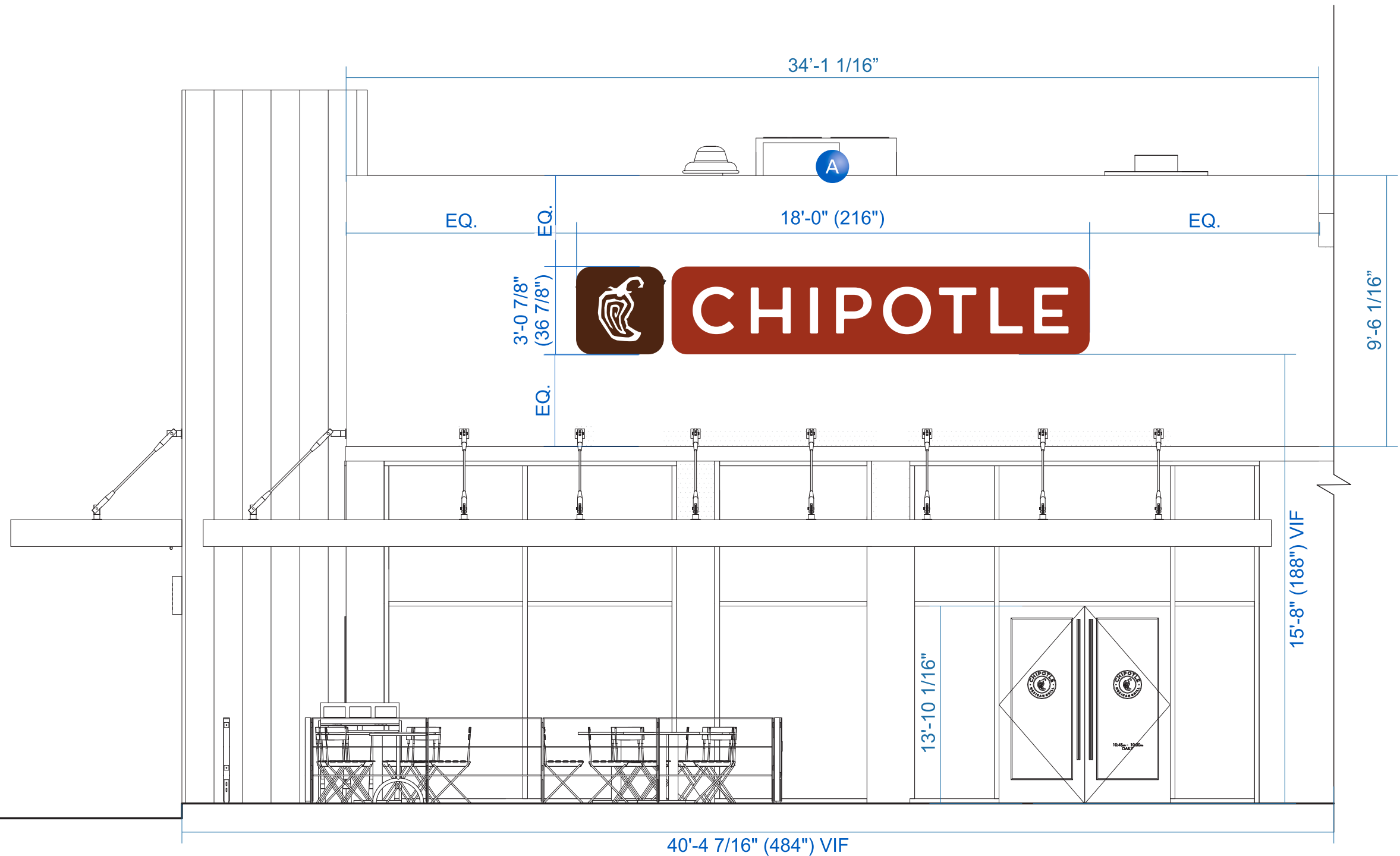
**ELEVATION**

Scale: 1/4" = 1'-0"

T.O. PARAPET  
19' - 0"

T.O. STOREFRONT  
10' - 0"

FINISHED FLOOR  
0' - 0"



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Engineering Services

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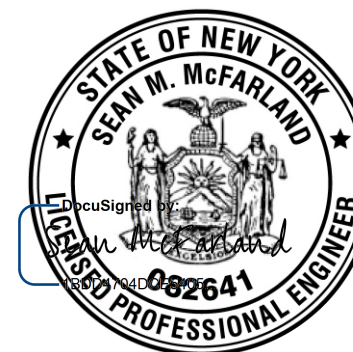
**CHIPOTLE 31-3467**

Address: 3144 E MAIN ST RTE 6  
City/State: MOHEGAN LAKE, NY

Client: BROADWAY NATIONAL SIGN & LIGHTING

ENGINEERING OF  
ATTACHMENT TO WALL ONLY.  
NO CABINET ENGINEERING  
OR EVALUATION OF AS  
BUILT WALL CONDITIONS  
PROVIDED OR IMPLIED.

Initial Drawing: (45642) AB  
Revised Connectors: (48364) DS



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New York License Number: 82641  
New York Expiration Date: 11/30/2022

ME #: 48364

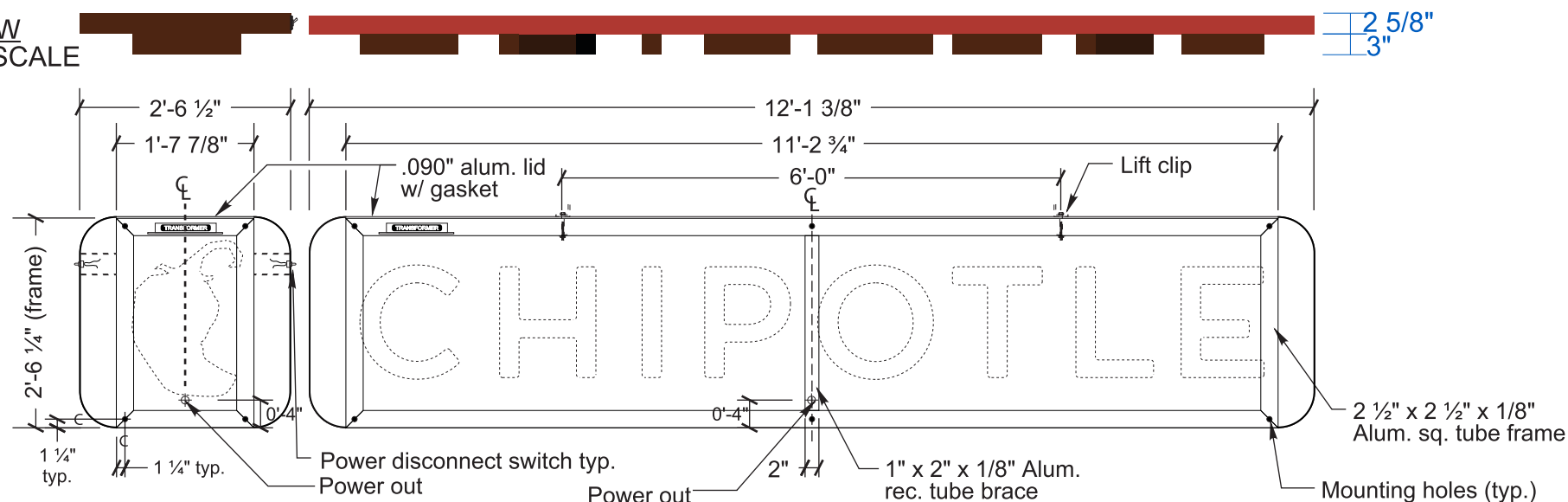
(D-3 SIGN) ILLUMINATED CHANNEL LETTER WALL SIGN 55.31 Sq. Ft.

Scale: 1/2"=1'-0"

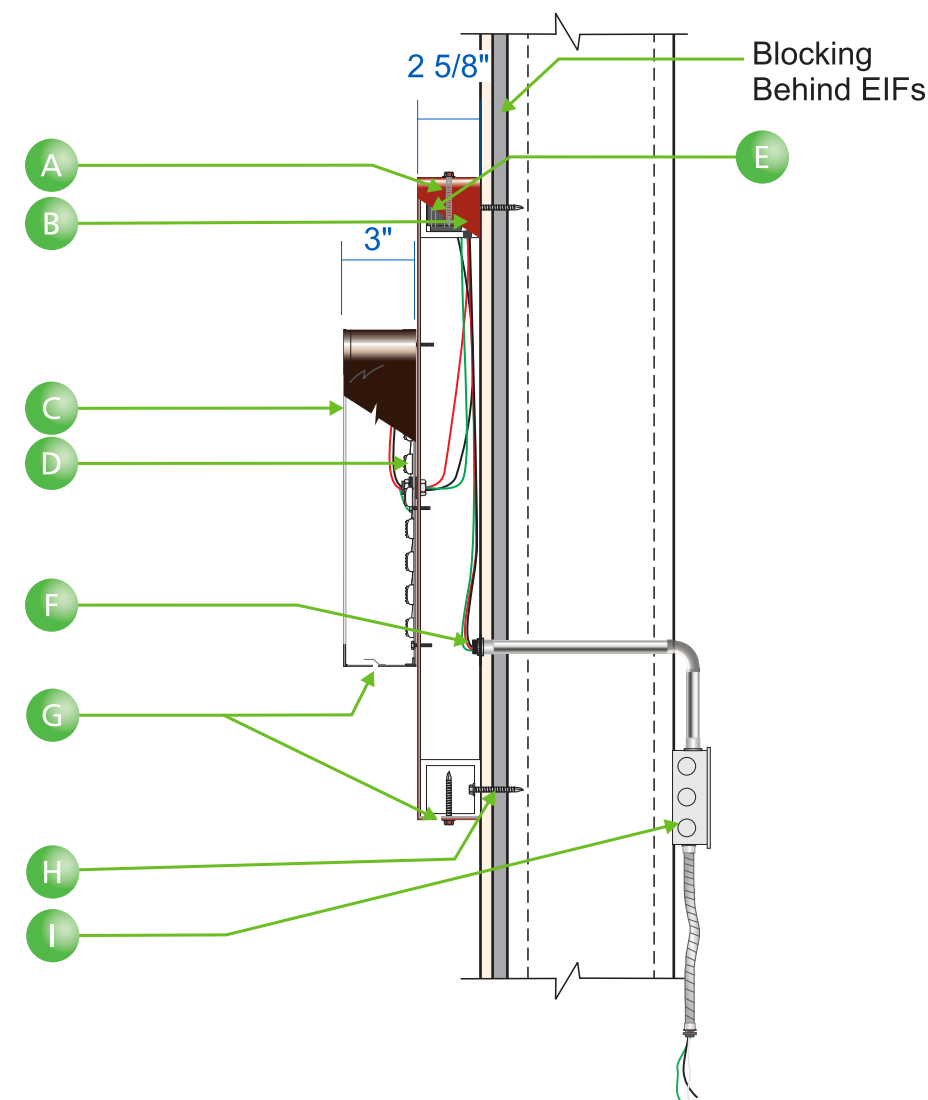
SIGN A



PLAN VIEW  
NOT TO SCALE

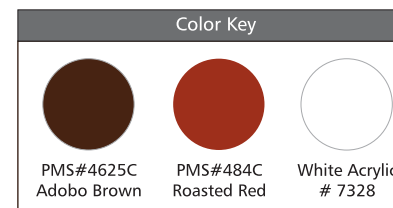


SIDE DETAIL  
SCALE: NOT TO SCALE



- A** 2 5/8" x .125" aluminum Pan Face raceway/cabinet  
Pepper cabinet PTM PMS #4625C  
Chipotle cabinet PTM PMS #484C attached to  
Attached to mounting bracket w/ 3/8" hex head screw
- B** 3"x .040" channel letters returns  
PTM Adobo Brown PMS #4625
- C** 3/16" #7328 White acrylic faces, 3/4" brown  
Jewelite PTM Adobo Brown PMS #4625C.  
Pepper detail: Digitally printed vinyl to  
match Adobo Brown applied 1st surface
- D** White GE Tetra MiniMax LEDs or equivalent

- E** LED Power Supply
- F** Electrical feed from main power supply
- G** 1/4" Diameter drain hole with light baffle  
where necessary (for exterior signs only)
- H** 3/8" Lag Bolt Mounting hardware to suite  
EIF's Facade Composition w/ blocking behind it
- I** 120V J Box by others prior to installation



**NOTES:**  
ALL ELECTRICAL PARTS & ASSEMBLIES UL LISTED  
APPROVED UL LABELS ATTACHED IF REQUIRED.

**NOTES:**  
ELECTRICAL WIRING FROM SIGN WILL NEED TO BE WIRED  
INTO THE PRIMARY ELECTRICAL SOURCE MUST BE A  
DEDICATED CIRCUIT AND BONDED AS PER CODE.

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Structural Sign Design  
&  
Engineering Services

Ph: (281) 813-7439  
Email: sean@signstructures.com  
Web: www.signstructures.com

**CHIPOTLE 31-3467**

Address: 3144 E MAIN ST RTE 6  
City/State: MOHEGAN LAKE, NY

Client: BROADWAY NATIONAL SIGN & LIGHTING

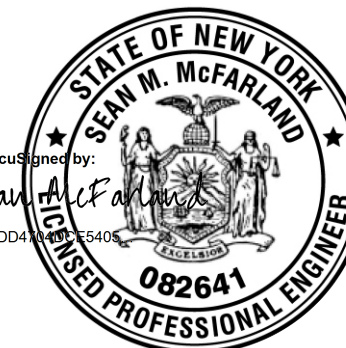
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Initial Drawing: (45642) AB  
Revised Connectors: (48364) DS

DocuSigned by:

Sean M. McFarland

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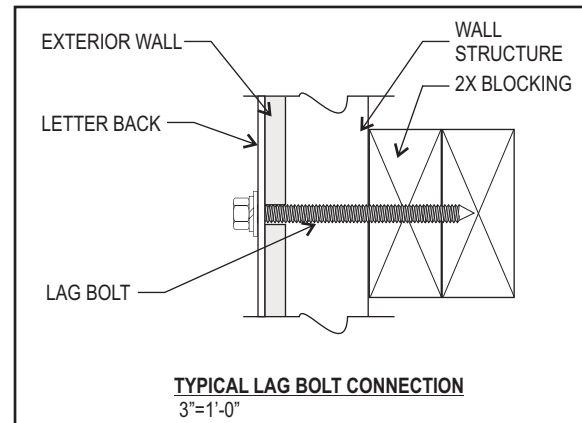
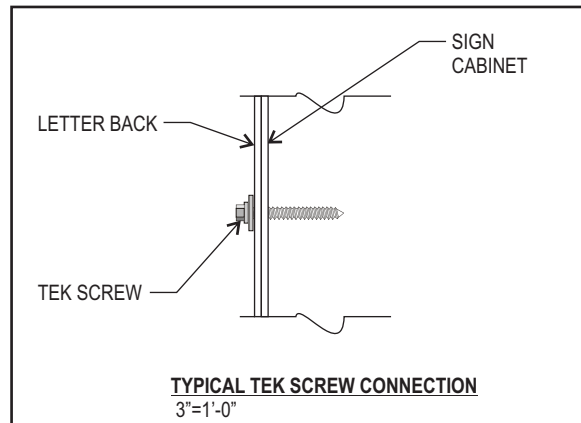
NC Firm Registration: F-1136  
New York License Number: 82641  
New York Expiration Date: 11/30/2022

ME #: 48364

**Connection Specifications**  
 Attach Channel Letters w/ **Sign Cabinets** to Wall with Double Clips & Evenly Spaced Connectors. See Drawings for Complete Fabrication Specifications. Don't Overtighten Connectors.

CONNECTION QUANTITY	①	②
	1/4" TEKS	3/8" LAGS (2X4)
LETTERS (EA)	4	
PEPPER LOGO	5	
SIGN CABINETS		12

Lags into 2X - Full Tip Penetration



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 Web: www.signstructures.com

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 Address: 3144 E MAIN ST RTE 6  
 City/State: MOHEGAN LAKE, NY  
 Client: BROADWAY NATIONAL SIGN & LIGHTING

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Initial Drawing: (45642) AB  
 Revised Connectors: (48364) DS

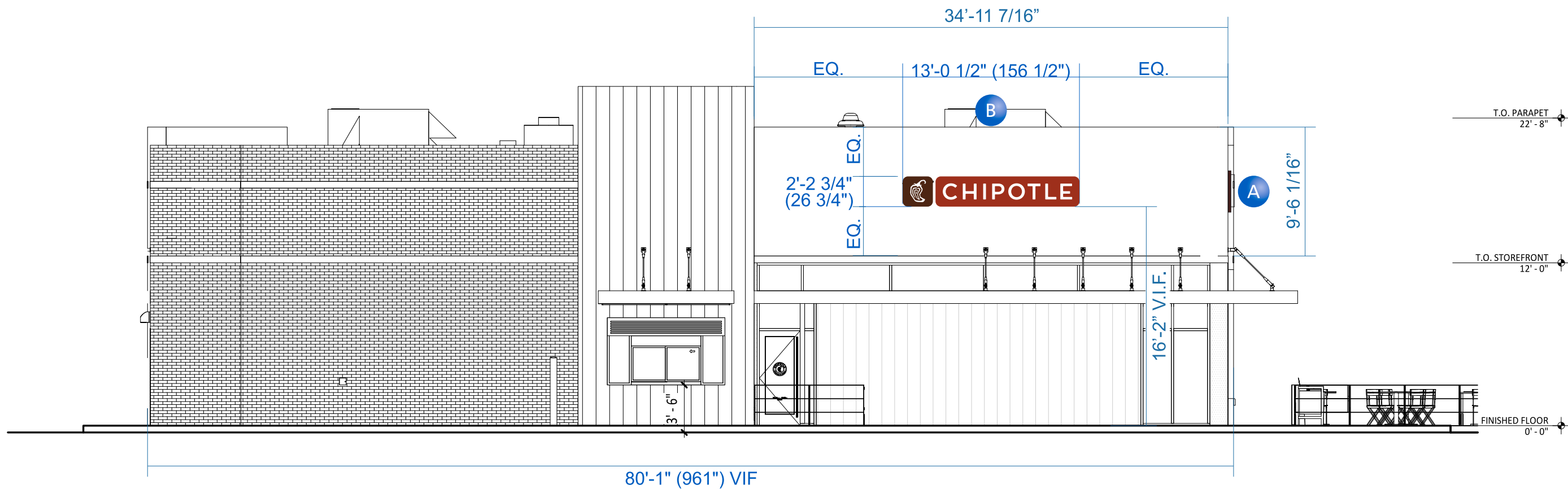


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**ELEVATION**

Scale: 1/8" = 1'-0"



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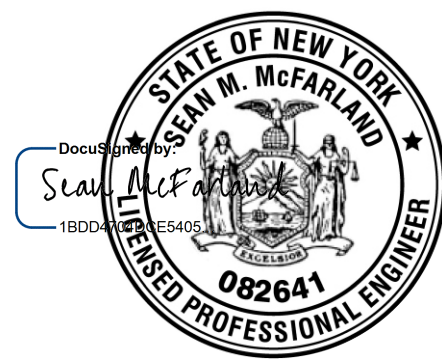
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**CHIPOTLE 31-3467**  
 Address: 3144 E MAIN ST RTE 6  
 City/State: MOHEGAN LAKE, NY  
 Client: BROADWAY NATIONAL SIGN & LIGHTING

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Initial Drawing: (45642) AB  
 Revised Connectors: (47549) DS  
 Revised Sign Dimensions: (48364) DS



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ME #: 48364

SIGN B

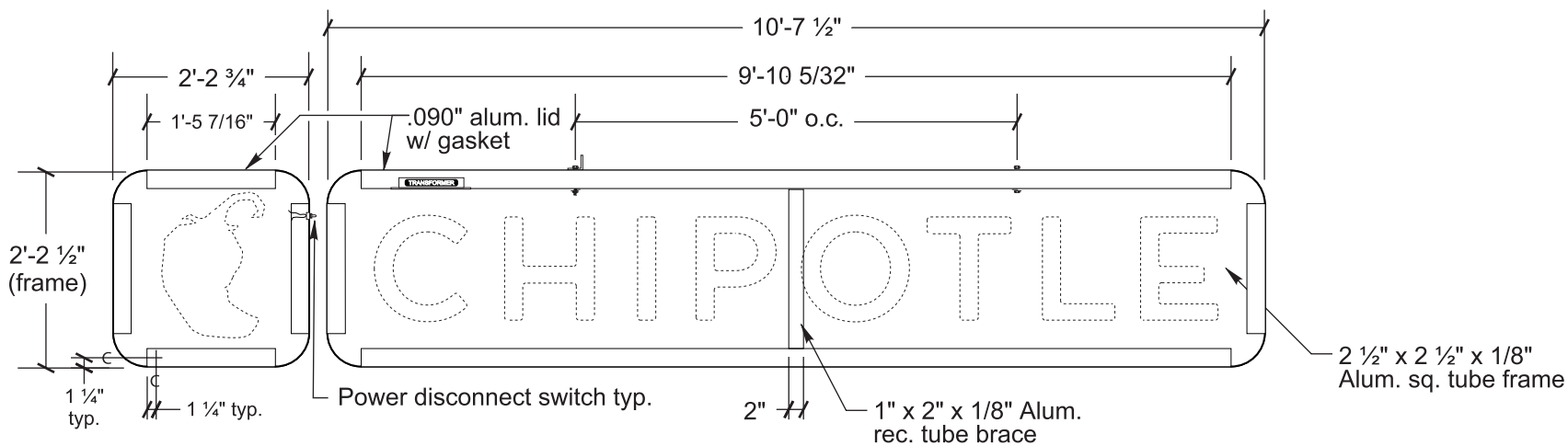
(A-3 SIGN) ILLUMINATED CHANNEL LETTER WALL SIGN

29.07 Sq. Ft.

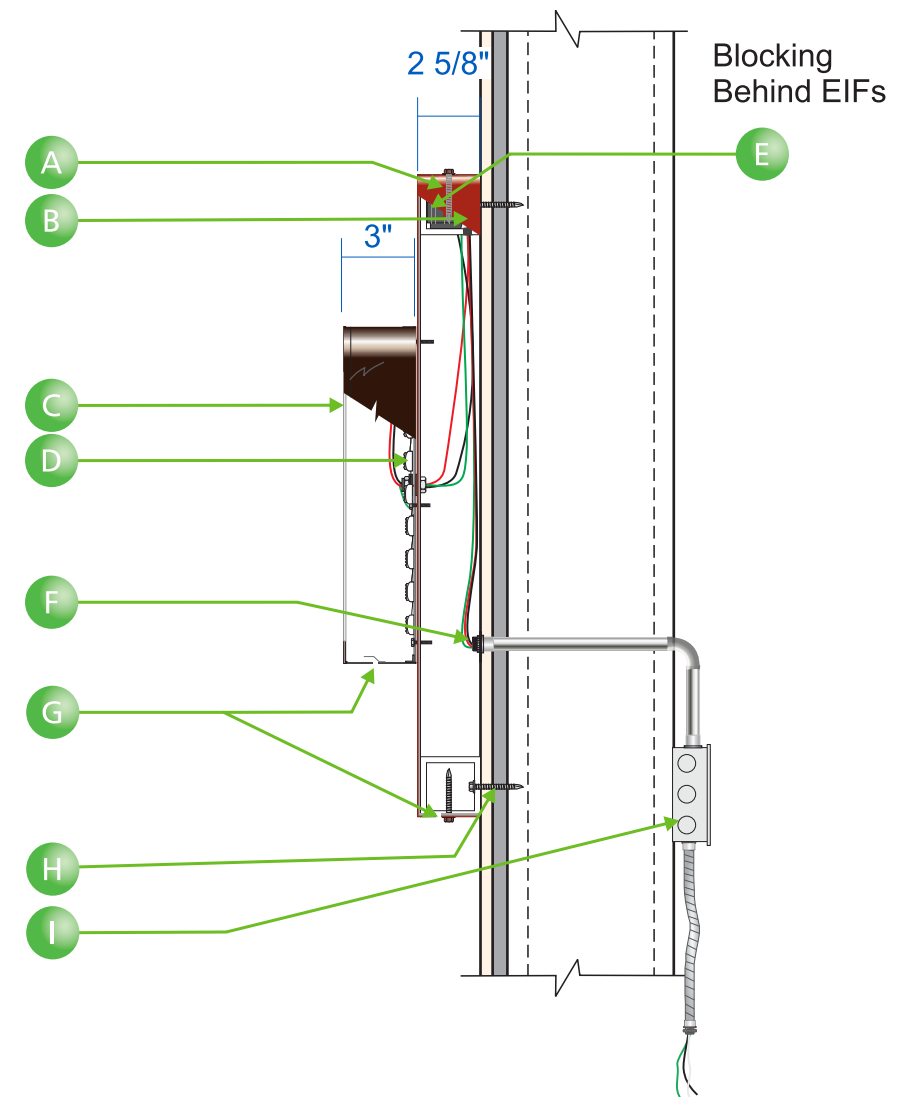
QTY (1)

Scale: 1/2" = 1'-0"

DISCONNECT SWITCH



SIDE DETAIL  
SCALE: NOT TO SCALE






- A** 2 5/8" x .125" aluminum Pan Face raceway/cabinet  
Pepper cabinet PTM PMS #4625C  
Chipotle cabinet PTM PMS #484C attached to  
Attached to mounting bracket w/ 3/8" hex head screw
- B** 3"x .040" channel letters returns  
PTM Adobo Brown PMS #4625
- C** 3/16" #7328 White acrylic faces, 3/4" brown  
Jewelite PTM Adobo Brown PMS #4625C.  
Pepper detail: Digitally printed vinyl to  
match Adobo Brown applied 1st surface
- D** White GE Tetra MiniMax LEDs or equivalent

- E** LED Power Supply
- F** Electrical feed from main power supply
- G** 1/4" Diameter drain hole with light baffle  
where necessary (for exterior signs only)
- H** 3/8" Lag Bolt Mounting hardware to suite  
EIF's Facade Composition w/ Blocking Behind It
- I** 120V J Box by others prior to installation

**NOTES:**  
RELOCATE THE EXISTING A-3 SIGN THAT IS  
CURRENTLY ON FRONT ELEVATION TO THE  
SIDE ELEVATION"

Color Key

		
PMS#4625C Adobo Brown	PMS#484C Roasted Red	White Acrylic # 7328

**NOTES:**  
ALL ELECTRICAL PARTS & ASSEMBLIES UL LISTED  
APPROVED UL LABELS ATTACHED IF REQUIRED.

**NOTES:**  
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INTO THE PRIMARY ELECTRICAL SOURCE MUST BE A  
DEDICATED CIRCUIT AND BONDED AS PER CODE.

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Initial Drawing: (45642) AB  
Revised Connectors: (47549) DS  
Revised Sign Dimensions: (48364) DS

DocuSign by:  
**Sean M. McFarland**  
18DD4704DCE5900  
**STATE OF NEW YORK**  
**SEAN M. MCFARLAND**  
**LICENSED PROFESSIONAL ENGINEER**  
082641

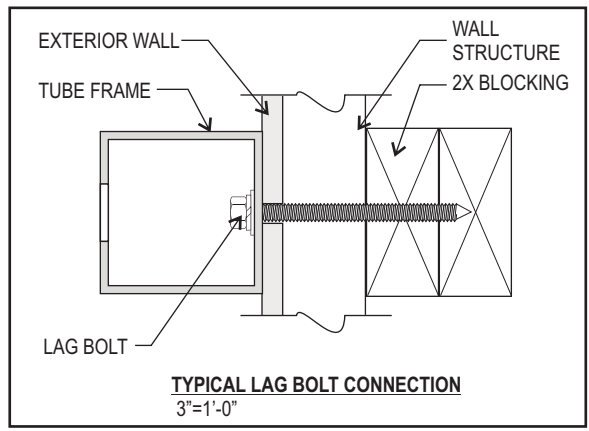
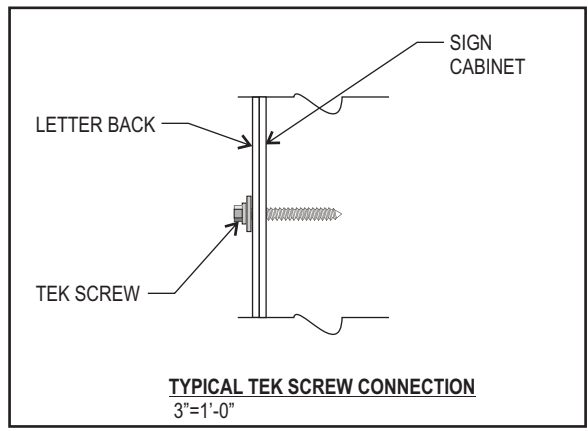
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**Connection Specifications**  
 Attach Channel Letters w/ **Sign Cabinets** to Wall with Connectors Directly to Wall Thru Tubes Evenly Spaced. See Drawings for Complete Fabrication Specifications. Don't Overtighten Connectors.

CONNECTION QUANTITY	①	②
	1/4" TEKS	3/8" LAGS (2X4)
LETTERS (EA)	4	
PEPPER LOGO	5	
SIGN CABINETS		8

Lags into 2X - Full Tip Penetration



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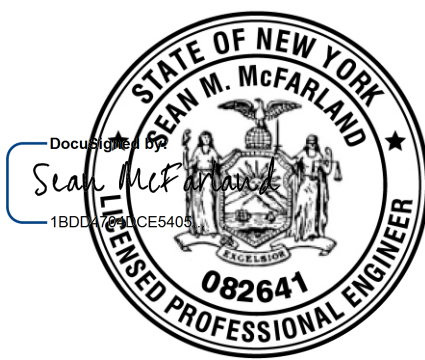
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Initial Drawing: (45642) AB  
 Revised Connectors: (47549) DS  
 Revised Sign Dimensions: (48364) DS



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