

Bundling maintained
01, D2, D3 / H1, H2, H4



17- \$50 = \$850
2- \$75 = \$150
\$1000

BALTIMORE COUNTY
DEPARTMENT OF PERMITS, APPROVALS & INSPECTIONS
111 WEST CHESAPEAKE AVENUE
TOWSON, MD 21204
410-887-3391

SIGN USE PERMIT

B 939062
A 758989

The applicant is authorized
to affirm that there are no
current violations at this
site pursuant to Section
112.7 BCC
Initials ND

Permit Fees are Non-Refundable; Make Check Payable to "Baltimore County, Maryland"

PROPERTY ADDRESS 825 Duane Valley Rd ZIP CODE 21204
BUSINESS NAME Towson Town Center ZONING _____
OWNER'S NAME Towson TC LLC PHONE NO. _____ HISTORIC DISTRICT ☐ Yes ☒ No
MAILING ADDRESS PO box 617905 Chicago IL 60661
APPLICANT/OWNER'S AGENT Heather Davis (Gable) PHONE NO. 410-255-6400
SIGN COMPANY NAME Gable Signs & Graphics PHONE NO. 410-255-6400
TYPE OF SIGN: ☐ Window Sign TAX ACCOUNT NO. 2200 / 0116 / 232

☐ Temporary- Including Real Estate/Construction/Event

Temporary Signs in the Last Year: ☐ Yes ☒ No

☒ Permanent ☐ Changeable Copy ☒ Wall ☐ Face Change Only ☐ Non-Illuminated

☐ Freestanding ☐ Pylon ☐ Monument ☒ Illuminated (separate electrical permit required)

Size: _____ feet x _____ feet = _____ square feet

Height: _____ feet (freestanding signs)

Property Line/Street Right-of-Way Setbacks: front _____, sides _____ and _____, and rear _____.

NOTE: A construction plan, drawn to scale and clearly showing that all requirements have been met, must be attached; a site plan also must be attached for freestanding signs.

Table of Sign Regulations: 450.4. Attachment 1, 1.- An Electronic Changeable Copy Sign may only have a maximum Frequency of one instantaneous message change per 15 second cycle.

450.6.B.3 Changeable copy signs must operate at a constant intensity and not give the appearance of movement by flashing, blinking, strobing, scrolling, oscillating, or alternating lights.

PROHIBITIONS: including roof signs (Sections 450.5.B.7 and 450.6.A, Baltimore County Zoning Regulations):

1. Signs cannot impair motorist's clear view of traffic or government signs. All signs are subject to Section 102.5, BCZR.
2. Signs cannot imitate or resemble government signs, except for private traffic control and notice signs.
3. Signs cannot be placed in or project into or above street right of way or governmental property.
4. Sign or framework cannot obstruct window or opening for light and air or access to building, fire hydrant, or stand pipe.
5. Vehicle cannot be parked for the purpose of displaying an attached sign.
6. Except for flags exempted, flags, pennants, ribbons, streamers, tethered balloons, laser projections, and similar objects are prohibited.
7. Portable signs are prohibited, except for A-frame and sandwich board signs issued a use permit in B.M. - C.T. zones.
8. There can be no display or simulation of moving parts or message, except for an outdoor advertising sign with tri-vision, a changeable copy sign, or a thermometer, barometer, weather vane, barber pole, or clock.
9. No sign may emit sound

Work Description (including number of signs, special conditions, materials, locations and size): Install 19 wall

mounted parking garage directional
(8) sign 15x2.3-35sq ft / (2) two 17.5x3.8-66sq ft / (7) seven 30x1.25-37sq ft
(2) two 33.3x1.25-41sq ft

CORNER LOT ☐

OWNER/AGENT CERTIFICATION

I solemnly affirm under the penalties of perjury and upon personal knowledge that the contents of the above are true and further agree to locate the proposed sign such that it will not violate Baltimore County laws and regulations.

Signature

Date

Print/Type Name

☐ Require Planning Signature

Date

Copies: White-Office; Yellow- Applicant (keep
this Copy for your permanent records)

REV 10/14

Authority under Section 500.4, BCZR **PAI Approval** (SIGN ONLY)

Signature

Initials

Date



BALTIMORE COUNTY
Maryland

KEVIN KAMENETZ
County Executive

ARNOLD JABLON
*Deputy Administrative Officer
Director, Department of Permits,
Approval and Inspections*

29 March 2017

Lisa Bisenius
Towson Town Center LLC
825 Dulaney Valley Road
Towson, MD 21204

Re: DRP # 584 / 825 Dulaney Valley Road – Towson Town Center Mall

Dear Mrs. Bisenius,

In accordance with Section 32-4-203(1), Baltimore County Code, and as designee for the Directors of the Departments of Permits, Approval and Inspections, Planning and Environmental Protection and Sustainability, please be advised that the recommendation of the Design Review Panel (DRP) has been accepted and approved. This approval is a condition precedent for the issuance of a permit for the above captioned property.

The DRP met in public forum on 8th, February 2017, and after hearing from the applicant and/or representatives and receiving public comment, the DRP panel has determined to recommend approval as more particularly described in its inter-office correspondence to me, dated 23, March 2017, and which is attached hereto and incorporated in its entirety hereby.

Should you have any questions, please contact the Department of Planning.

Be further advised, an appeal to this decision must be made within thirty (30) days of the date of this letter.

Sincerely,

A handwritten signature in cursive script, appearing to read "Arnold Jablon".

Arnold Jablon
Deputy Administrative Officer &
Director of Permits, Approvals and Inspections

C:
Jan Cook, PAI
Andrea Van Arsdale, Planning
Jennifer Nugent, Planning
Vince Gardina, EPS
David Lykens, EPS
Janell Vaughan, General Growth Properties
Ed Gilliss, Counsel for GGP

Aej/aj

BALTIMORE COUNTY, MARYLAND
INTER-OFFICE MEMORANDUM

TO: Arnold Jablon, Deputy Administrative Officer
and Director, Department of Permits, Approvals
and Inspections

DATE: March 23, 2017

FROM: Andrea Van Arsdale, Director
Department of Planning

SUBJECT: Design Review Panel – APPROVAL

PROJECT NAME: 825 Dulaney Valley Road

PROJECT: DRP # 584

PROJECT TYPE: Commercial Towson DTD

MEETING DATE: February 8, 2017

DESIGN REVIEW PANEL MEMBERS IN ATTENDANCE:

David Martin, Cecily Bedwell, Matt D'Amico, Julie Kirsh

PROJECT DESCRIPTION:

Mr. Ed Gilliss representing General Growth Properties introduced the Towson Town Center's proposed comprehensive signage and wayfinding package, including lighting modifications and minor exterior façade improvements. Mr. Gilliss stated that the signage is intended as a consistent, hierarchical system of primary, secondary and tertiary signage directing customers from the surrounding streets to individual anchor stores, parking decks and spaces, and retail shops in order to present a consistent property identity, easier navigation and smoother traffic flow.

Andrea Van Arsdale, Director of Planning, stated that the Department of Planning had reviewed the project proposal and found that it met the Downtown Towson Guidelines with two exceptions. The Department recommended approval subject to removal of the "Towson Town Center" sign on Dulaney Valley Road in front of the graphic panels and an administrative review of any revised planting. It was also noted that painting of the interior garage levels included in the package were reviewed and approved administratively by the Planning Department.

DISPOSITION:

Ms. Bedwell made a motion to approve the plan with the following conditions:

Subject: Approval (Design Review Panel)
Project name: Towson Town Center Mall

Project #: DRP 584

1. The tenant signage on the tower element at the intersection of Dulaney and Fairmount be reduced in scale.
2. The Towson Town Center signage with the 5 panels be reworked.
3. The garage parking level with the blue color identifier be neutralized and painting be reviewed and approved administratively.

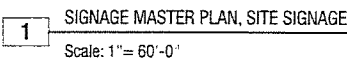
The motion was seconded by Ms. Kirsch and approved by acclamation at 8:50 p.m.

As of March 23, 2017 all revised plans have been submitted to the Department of Planning for review and approval. The Department of Planning finds that the revisions meet the DRP's conditions and therefore recommends approval.

JGN:File

c: DRP members in attendance
Ed Gilliss, Counsel for GGP

7/15/2008 2:42:08 PM



Drawing Number
SG1.01

Designed Per IBC 2012 MD Edition
Designed Per Maryland Building Performance

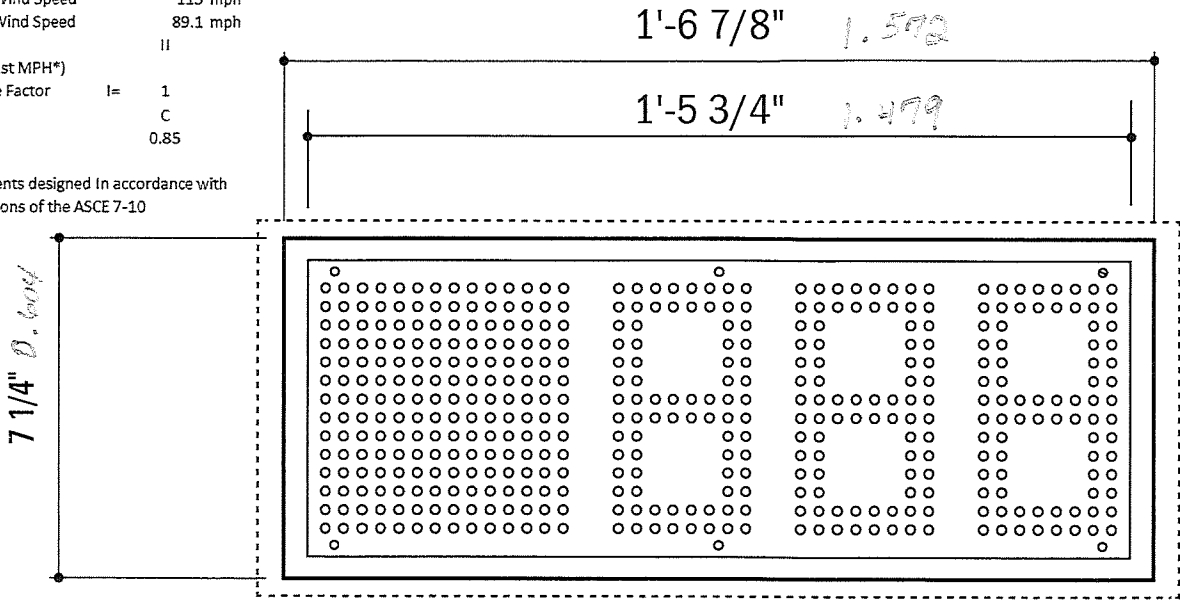
Snow Loads

Ground Snow Load	Pg=	25 psf
Snow Exposure Factor	Ce=	1.0
Snow Load Importance	Is=	1.1
Thermal Factor	Ct=	1.0

Wind Loads

Ultimate Design Wind Speed	115 mph
Nominal Design Wind Speed	89.1 mph
Risk Cat	II
(3-Sec Peak Gust MPH*)	
Wind Importance Factor	I= 1
Wind Exposure	C
Gust Factor	0.85

Exterior components designed in accordance with applicable provisions of the ASCE 7-10



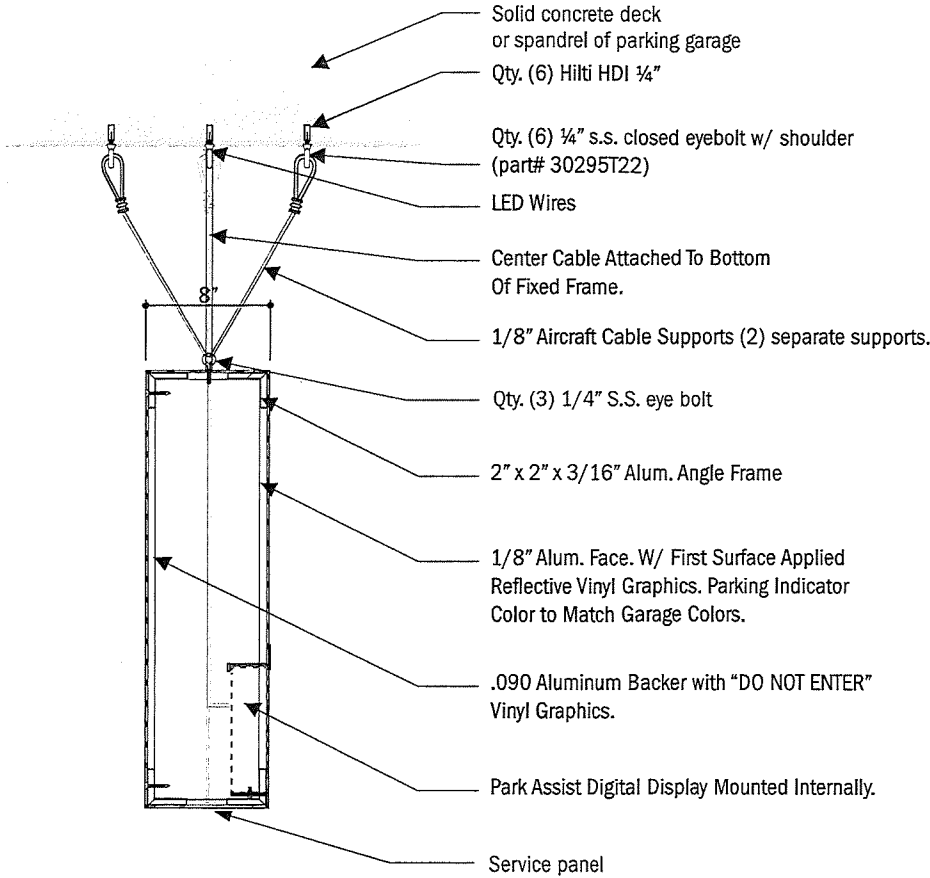
1 WINDOW DETAIL FOR PARK ASSIST
SCALE: 3" = 1'

Connection Calculations

Tension = $900 \text{ lb} \times 1 \text{ ft} / 0.75 \text{ ft anchor spacing} = 1200 \text{ lb}$
Tension per anchor = $1200 / 3 = 400 \text{ lb}$
Allowable tension HDI anchors = 500 lb
Connection OK

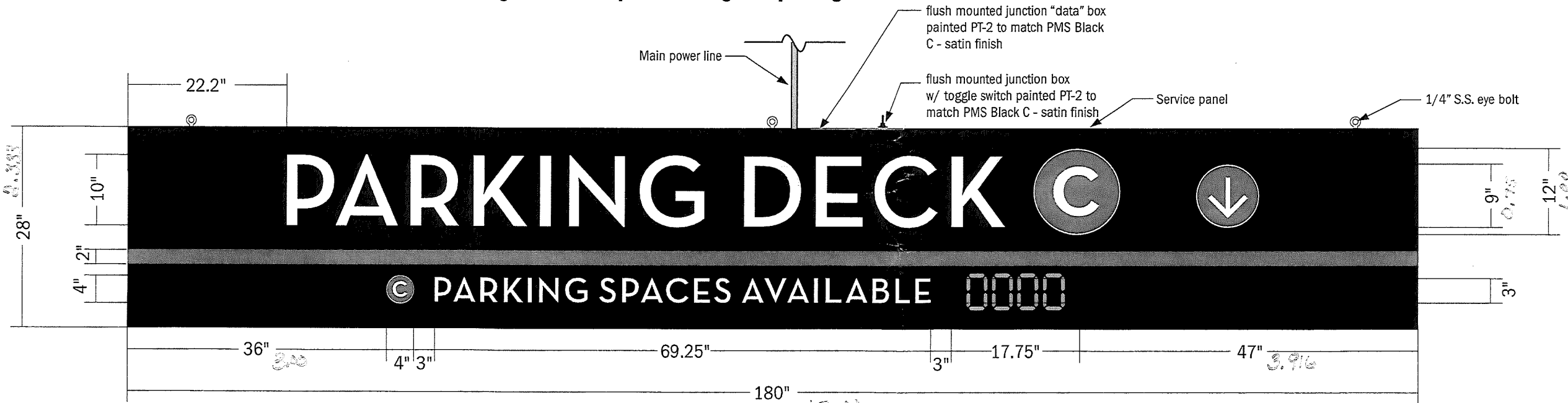
Engineer's Note:

Min anchor spacing 9" front to back
Designed at 1' drop from ceiling to top of sign

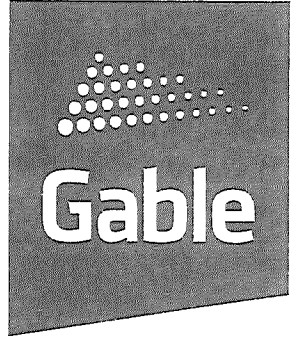


1 SIDE VIEW
SCALE: 1" = 1'

Install NOTE: GPR areas prior to install



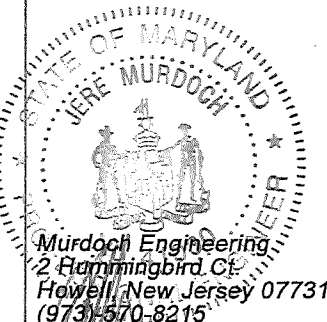
1 FRONT VIEW
SCALE: 3/4" = 1'



A VISUAL
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COMPANY.

7440 Fort Smallwood Road
Baltimore, Maryland 21226
800.854.0568

PROJECT TITLE: Towson Town Center			
ORDER TITLE: Towson Town Center - Parking Improv.			
CITY/STATE Towson, MD		PHONE NUMBER	
DRAWING DATE 07/11/17	SALES REP MG	PROJECT MGR. MG	
REVISION HISTORY			
NO.	DATE	PREV DRWG	DESCRIPTION



7/14/17
Jere Murdoch, P.E.
Professional Engineer
Maryland P.E. License #41030
PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the state of Maryland. License No. 41030, expiration date 8/17/17

This drawing remains the exclusive property of Gable. It is submitted for your consideration in the purchase of the product(s) manufactured according to these plans. This design cannot be copied in whole or in part, altered or exhibited in any manner without written permission of Gable. Exceptions are previously copyrighted artwork supplied by client.

SIGN TYPE:
Sign Type: D1 - Hanging Sign
Transition Identification

DWG. TYPE:
Construction/Engineering

PROJECT NO.	TASK NO.	QTY.
72951	136640	4
DWG. NO.	SHEET	
0029MRO	2 of 11	

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Designed Per IBC 2012 MD Edition
Designed Per Maryland Building Performance

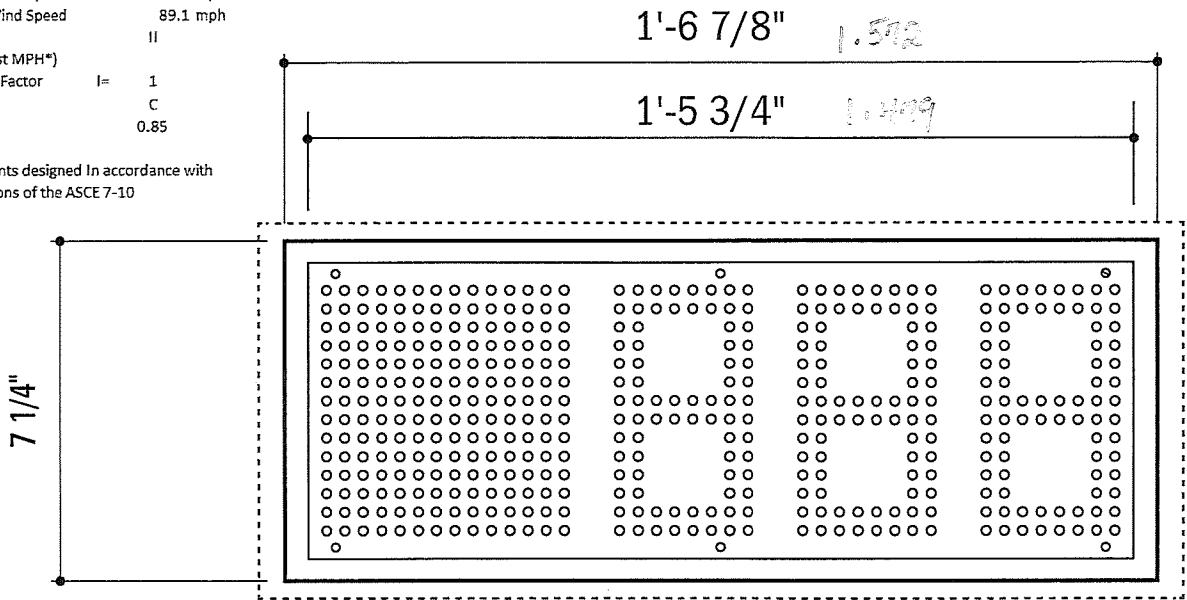
Snow Loads

Ground Snow Load	Pg=	25 psf
Snow Exposure Factor	Ce=	1.0
Snow Load Importance	Is=	1.1
Thermal Factor	Ct=	1.0

Wind Loads

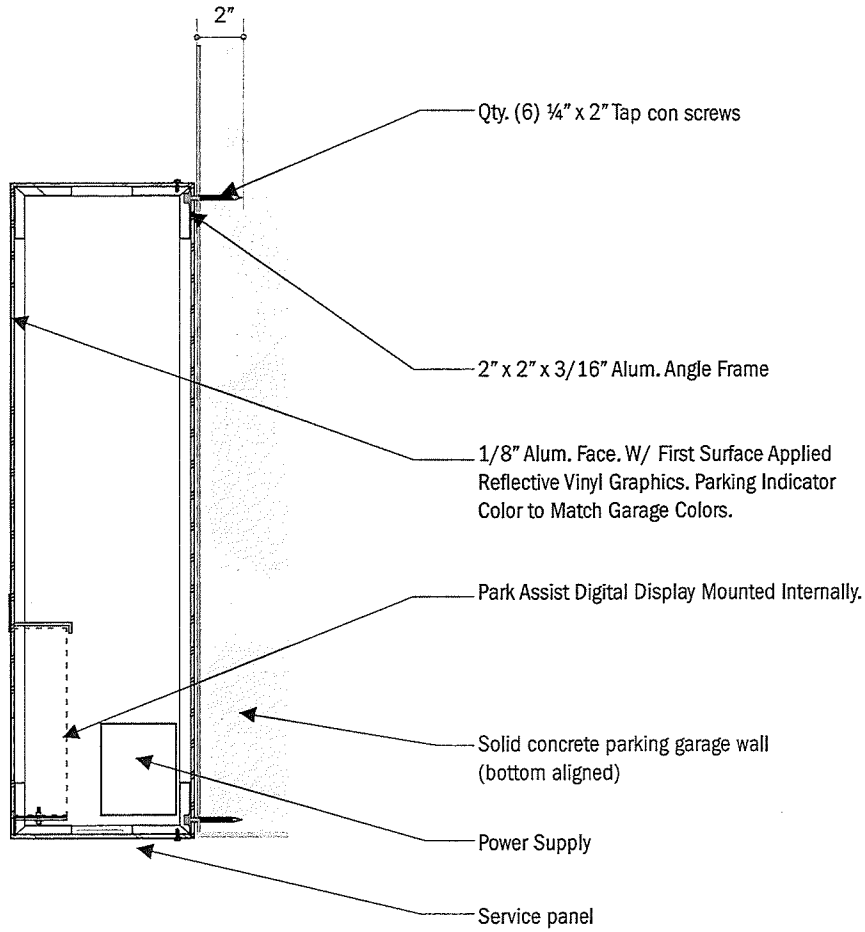
Ultimate Design Wind Speed	115 mph
Nominal Design Wind Speed	89.1 mph
Risk Cat	II
(3-Sec Peak Gust MPH*)	
Wind Importance Factor	I= 1
Wind Exposure	C
Gust Factor	0.85

Exterior components designed in accordance with applicable provisions of the ASCE 7-10

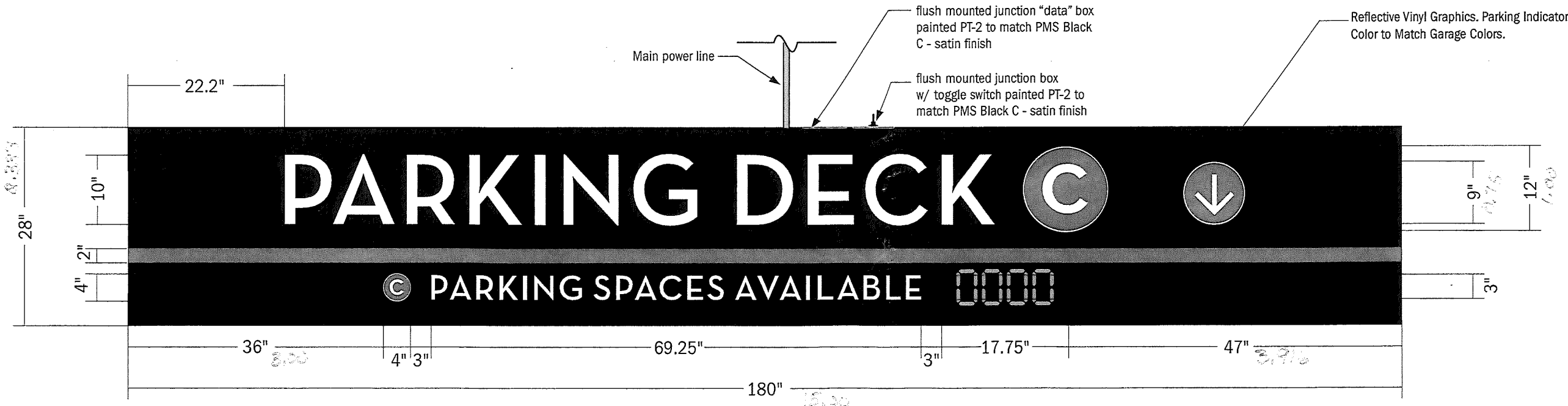


1 WINDOW DETAIL FOR PARK ASSIST
SCALE: 3" = 1'

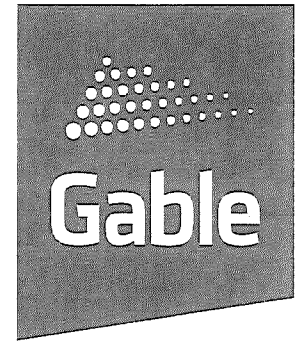
Connection Calculations
Shear = 10psf * 0.95sf = 10 lb
Shear per anchor = 10/3 = 3.3 lb
Allowable shear per tapcon = 225 lb
Connection OK



1 SIDE VIEW
SCALE: 1 1/2" = 1'



1 FRONT VIEW
SCALE: 3/4" = 1'



**A VISUAL
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COMPANY.**

7440 Fort Smallwood Road
Baltimore, Maryland 21226
800.854.0568

PROJECT TITLE: Towson Town Center			
ORDER TITLE: Towson Town Center - Parking Improv.			
CITY/STATE: Towson, MD		PHONE NUMBER:	
DRAWING DATE: 07/11/17	SALES REP: MG	PROJECT MGR: MG	
REVISION HISTORY			
NO.	DATE	PREV DRWG	DESCRIPTION

Murdoch Engineering
2 Hummingbird Ct.
Howell, New Jersey 07731
(973) 570-8215

7/14/17

Jere Murdoch, P.E.
Professional Engineer
Maryland P.E. License #41030
PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the state of Maryland.
License No. 41030, expiration date 8/17/17

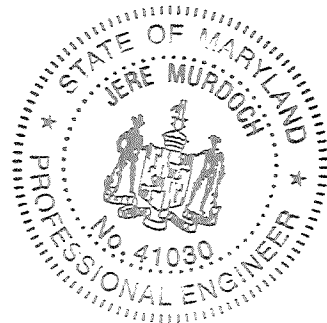
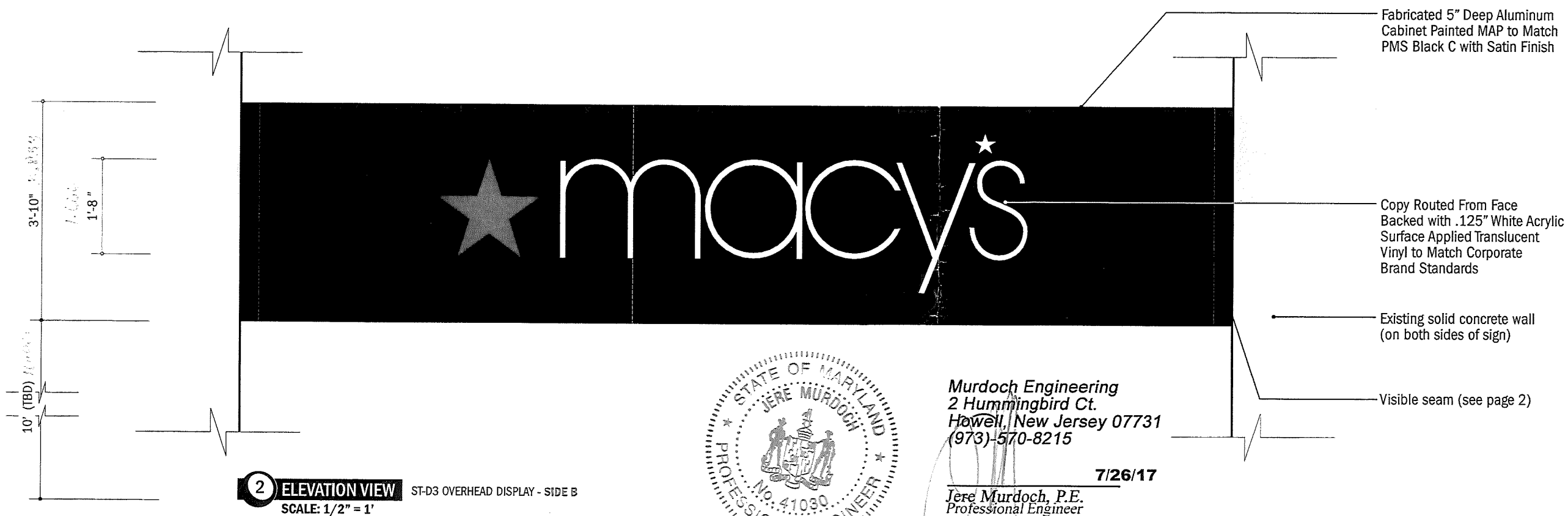
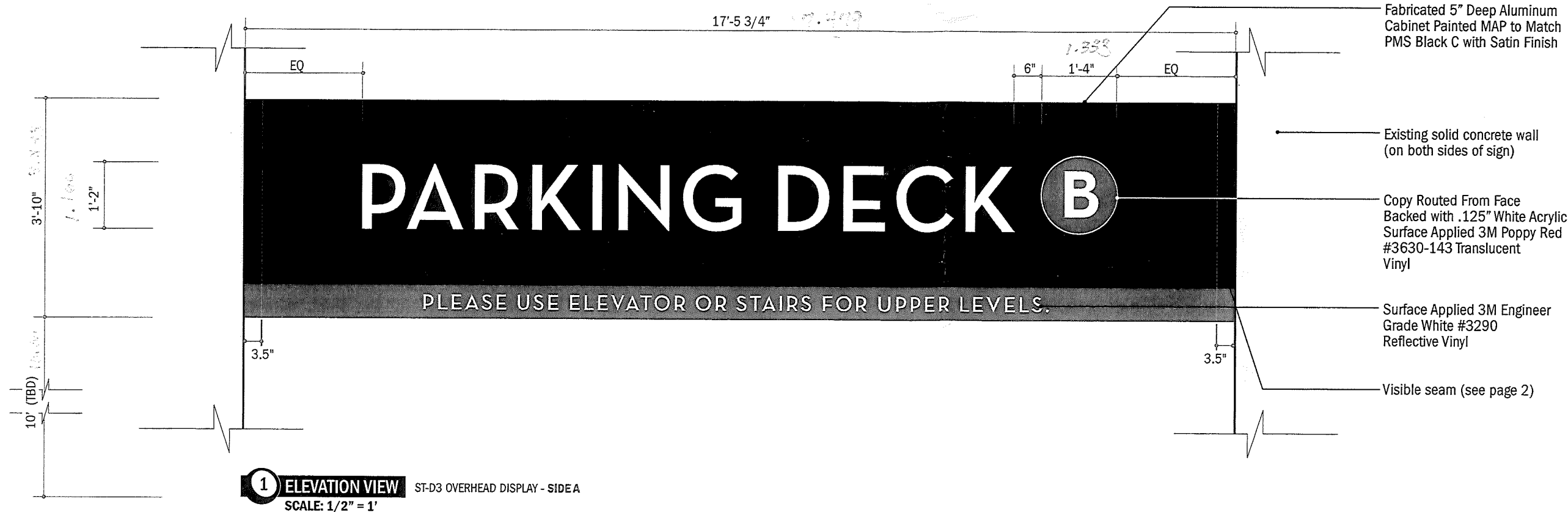
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SIGN TYPE:
Sign Type: D2 - Wall Mounted Transition Identification

DWG. TYPE:
Construction/Engineering

PROJECT NO.	TASK NO.	QTY.
72951	136640	4
DWG. NO.	SHEET	
0029MRO	3 of 11	

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Murdoch Engineering
2 Hummingbird Ct.
Howell, New Jersey 07731
(973)-570-8215

7/26/17

Jere Murdoch, P.E.
Professional Engineer
Maryland P.E. License #41030

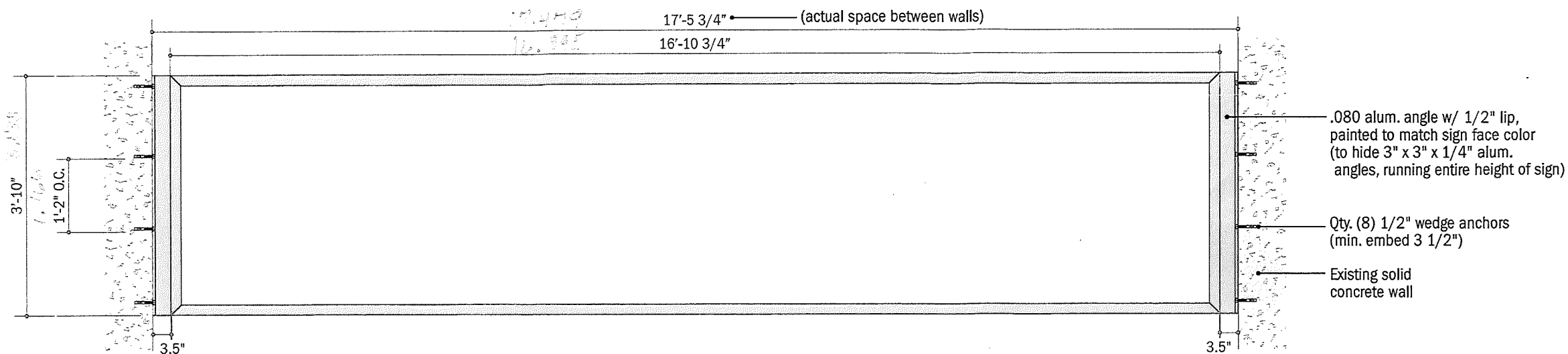
PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the state of Maryland.

Gable

A VISUAL SOLUTIONS COMPANY.

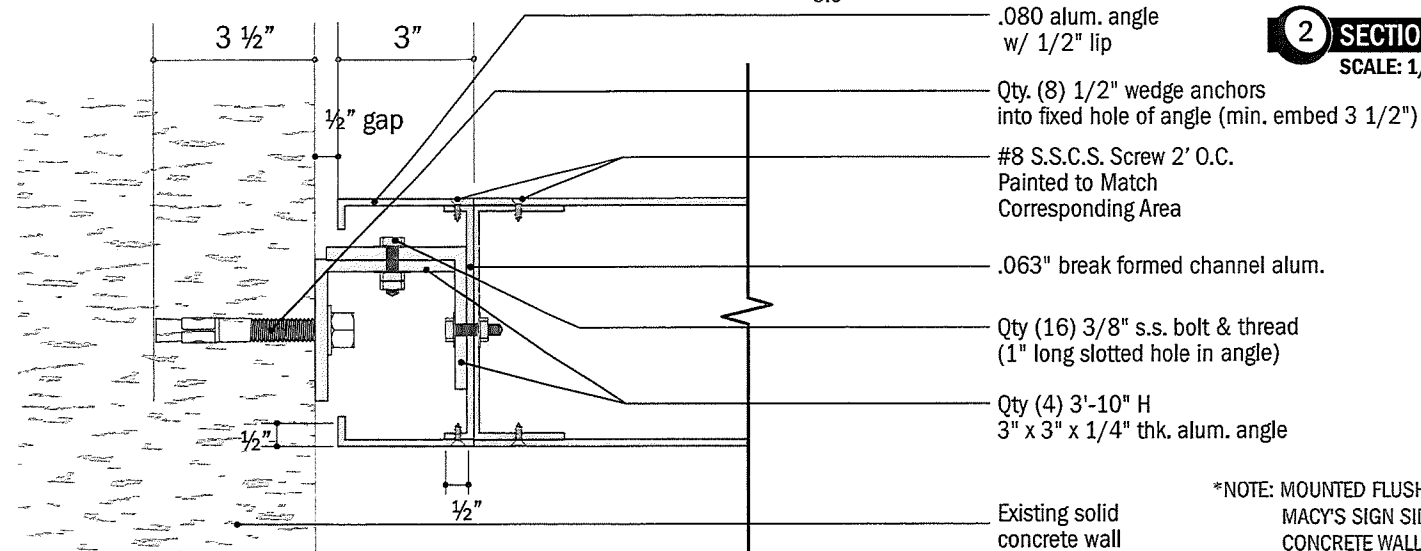
7440 Fort Smallwood Road
Baltimore, Maryland 21226
800.854.0568

PROJECT TITLE: Towson Town Center																												
ORDER TITLE: Towson Town Center - Parking Improv.																												
CITY/STATE: Towson, MD	PHONE NUMBER:																											
DRAWING DATE: 07/21/17	SALES REP: MG	PROJECT MGR: MG																										
REVISION HISTORY																												
NO.	DATE	DESCRIPTION																										
Designed Per IBC 2015 MI Edition With Applicable Amendments Snow Loads <table border="1"> <tr> <td>Ground Snow Load</td> <td>Pg=</td> <td>25 psf</td> </tr> <tr> <td>Snow Exposure Factor</td> <td>Ce=</td> <td>1.0</td> </tr> <tr> <td>Snow Load Importance</td> <td>Is=</td> <td>1.1</td> </tr> <tr> <td>Thermal Factor</td> <td>Ct=</td> <td>1.0</td> </tr> </table> Wind Loads <table border="1"> <tr> <td>Ultimate Design Wind Speed</td> <td>115 mph</td> </tr> <tr> <td>Nominal Design Wind Speed</td> <td>89.1 mph</td> </tr> <tr> <td>Risk Cat</td> <td>II</td> </tr> <tr> <td colspan="2">(3-Sec Peak Gust MPH*)</td> </tr> <tr> <td>Wind Importance Factor</td> <td>I= 1</td> </tr> <tr> <td>Wind Exposure</td> <td>C</td> </tr> <tr> <td>Gust Factor</td> <td>0.85</td> </tr> </table> Exterior components designed in accordance with applicable provisions of the ASCE 7-10			Ground Snow Load	Pg=	25 psf	Snow Exposure Factor	Ce=	1.0	Snow Load Importance	Is=	1.1	Thermal Factor	Ct=	1.0	Ultimate Design Wind Speed	115 mph	Nominal Design Wind Speed	89.1 mph	Risk Cat	II	(3-Sec Peak Gust MPH*)		Wind Importance Factor	I= 1	Wind Exposure	C	Gust Factor	0.85
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SIGN TYPE: ST-D3																												
DWG. TYPE: Construction/Engineering																												
PROJECT NO. 72951	TASK NO. 137397	QTY.																										
DWG. NO. 0049MRO		SHEET 1 of 2																										

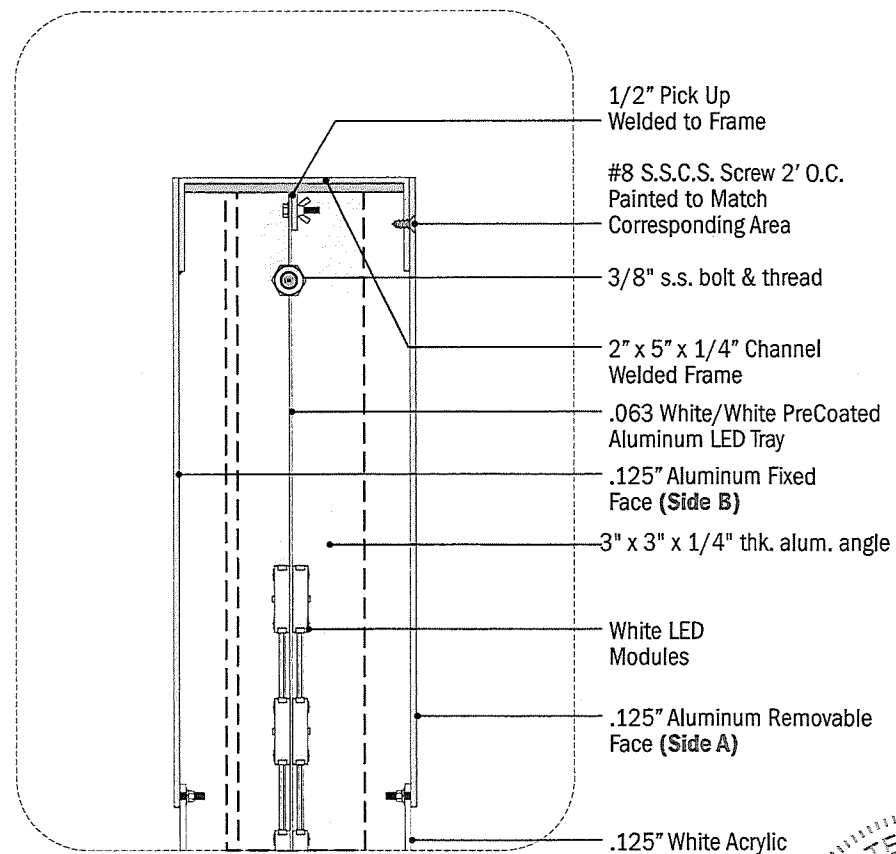


1 ELEVATION DETAIL
SCALE: 1/2" = 1'

2 SECTION DETAIL - A
SCALE: 1/2" = 1'

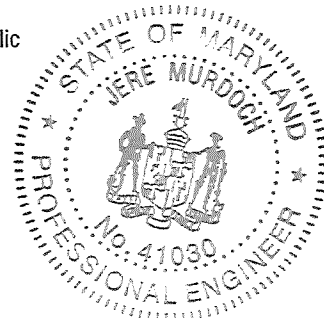


4 PARTIAL SECTION DETAIL (PLAN VIEW) - C
SCALE: 3" = 1'



3 BLOW UP DETAIL - B
SCALE: 3" = 1'

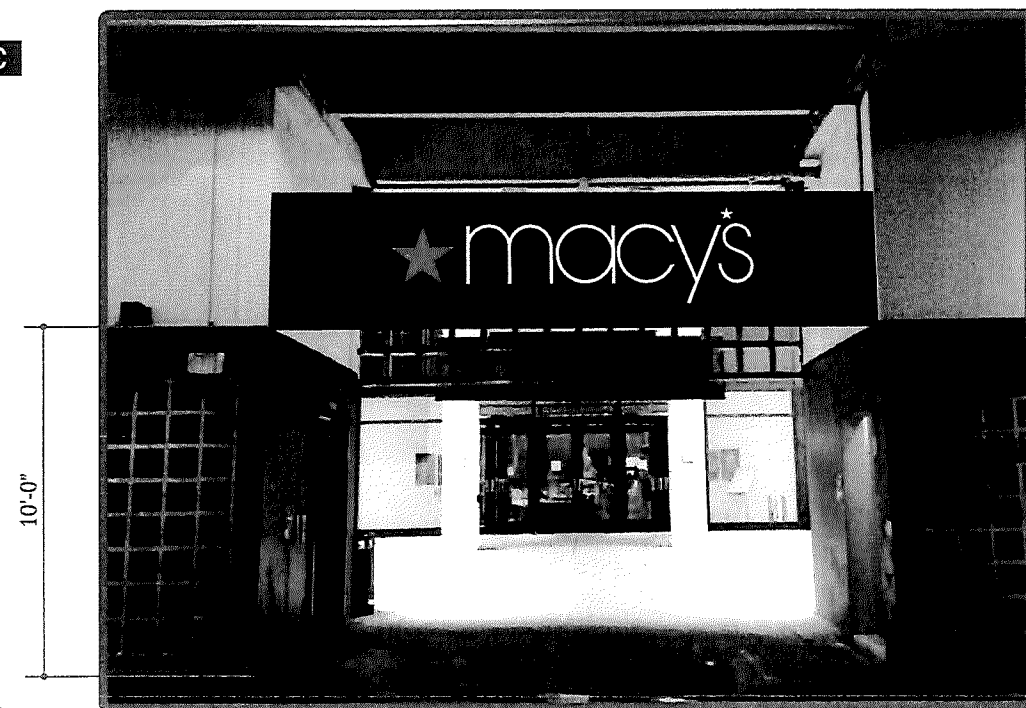
Engineer's Note:
Concrete must be x-rayed if it is pretensioned concrete to avoid hitting steel when drilling



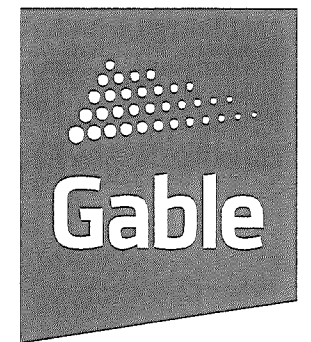
Murdoch Engineering
2 Hummingbird Ct.
Howell, New Jersey 07731
(973)-570-8215

7/26/17

Jere Murdoch, P.E.
Professional Engineer
Maryland P.E. License #41030
PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me and that I am



5 ELEVATION VIEW
SCALE: 3/16" = 1'



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COMPANY.

7440 Fort Smallwood Road
Baltimore, Maryland 21226
800.854.0568

PROJECT TITLE:
Towson Town Center
ORDER TITLE:
Towson Town Center - Parking Improv.
CITY/STATE: **Towson, MD** PHONE NUMBER:

DRAWING DATE: **07/21/17** SALES REP: **MG** PROJECT MGR: **MG**

REVISION HISTORY			
NO.	DATE	PREV DRWG	DESCRIPTION

Designed Per IBC 2015 MI Edition
With Applicable Amendments

Snow Loads			
Ground Snow Load	Pg=	25	psf
Snow Exposure Factor	Ce=	1.0	
Snow Load Importance	Is=	1.1	
Thermal Factor	Ct=	1.0	

Wind Loads			
Ultimate Design Wind Speed		115	mph
Nominal Design Wind Speed		89.1	mph
Risk Cat		II	
(3-Sec Peak Gust MPH*)			
Wind Importance Factor	I=	1	
Wind Exposure		C	
Gust Factor		0.85	

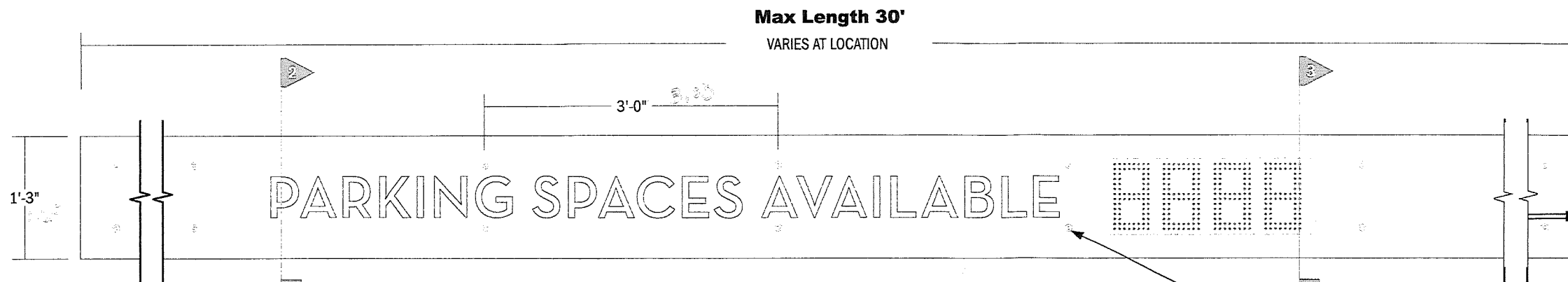
Exterior components designed in accordance with applicable provisions of the ASCE 7-10

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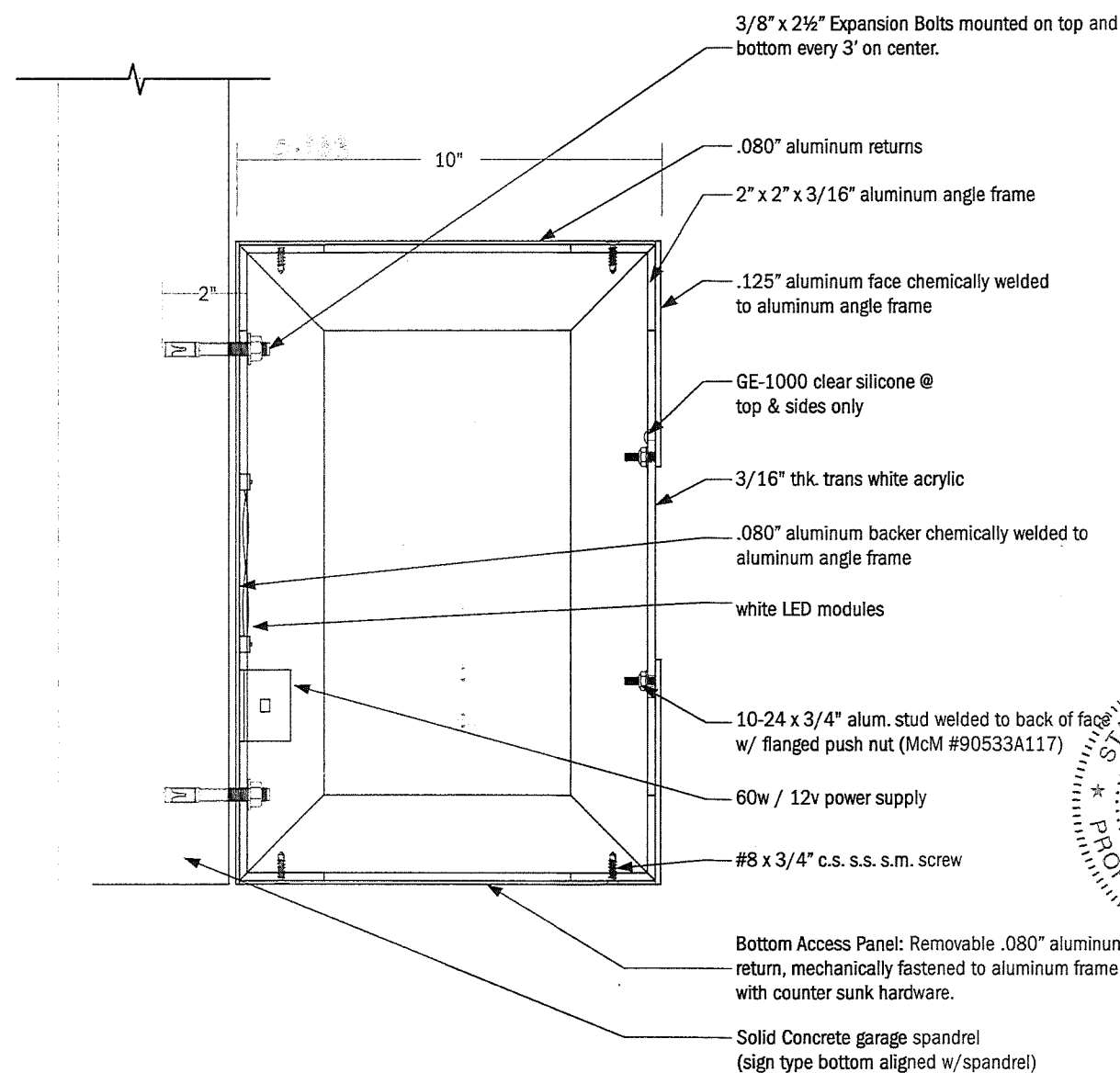
SIGN TYPE:
ST-D3

DWG. TYPE:
Construction/Engineering

PROJECT NO.	TASK NO.	QTY.
72951	137397	
DWG. NO.	SHEET	



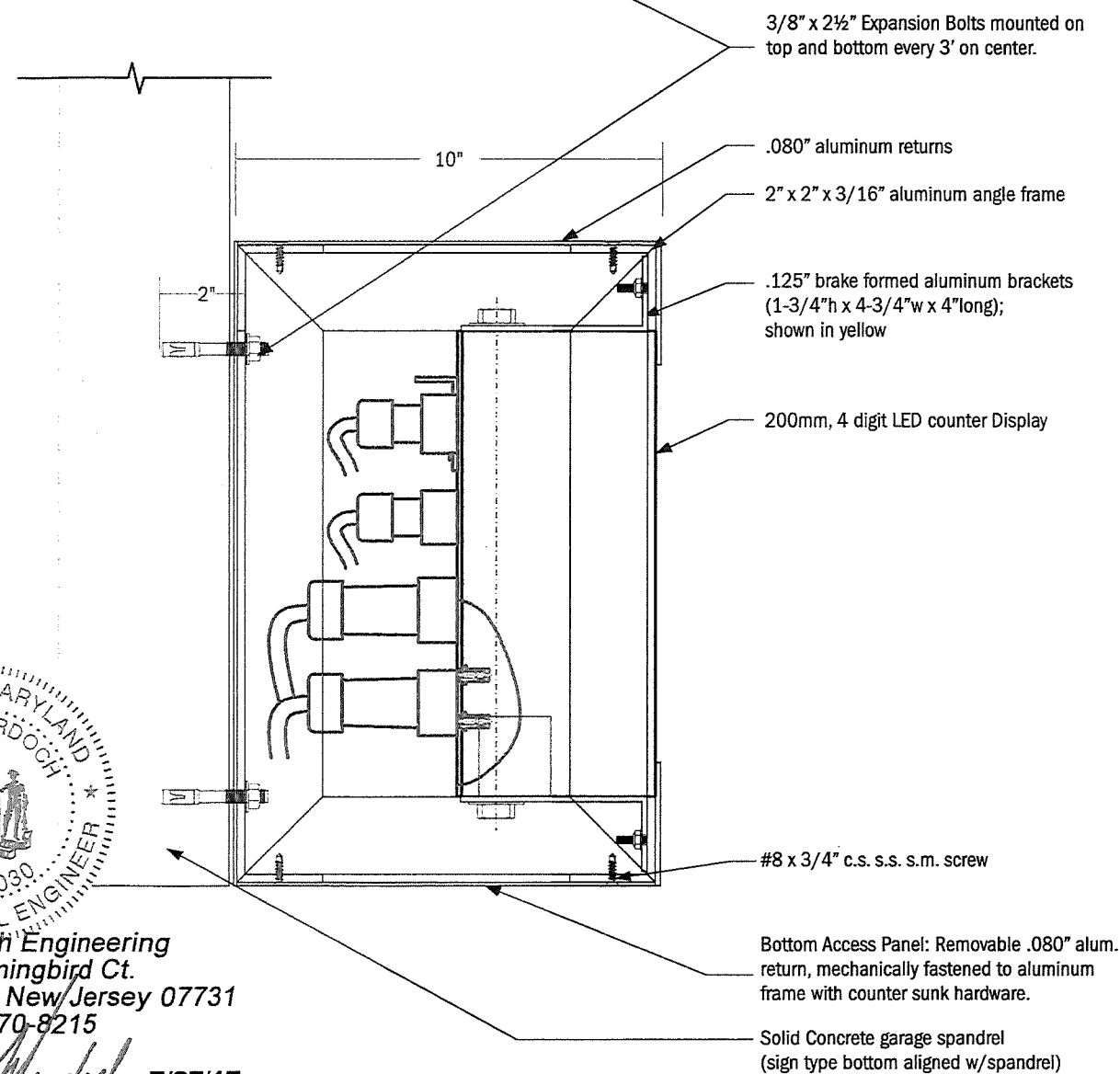
1 TYPICAL MOUNTING DETAIL
SCALE: 3/4" = 1'



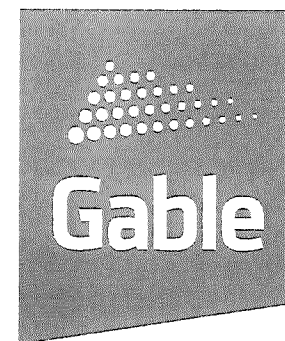
2 SECTION DETAIL: SOLID WALL ROUTED & BACKED GRAPHICS
SCALE: 3" = 1'



Murdoch Engineering
2 Hummingbird Ct.
Howell, New Jersey 07731
(973)-570-8215
Jere Murdoch, P.E.
Professional Engineer
Maryland P.E. License #41030
PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the state of Maryland.



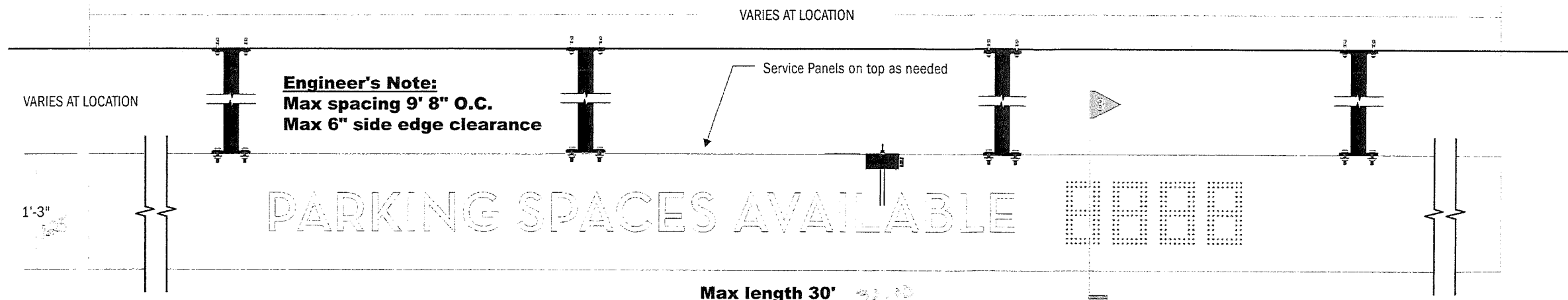
3 SECTION DETAIL: SOLID WALL LED PARKING COUNTER
SCALE: 3" = 1'



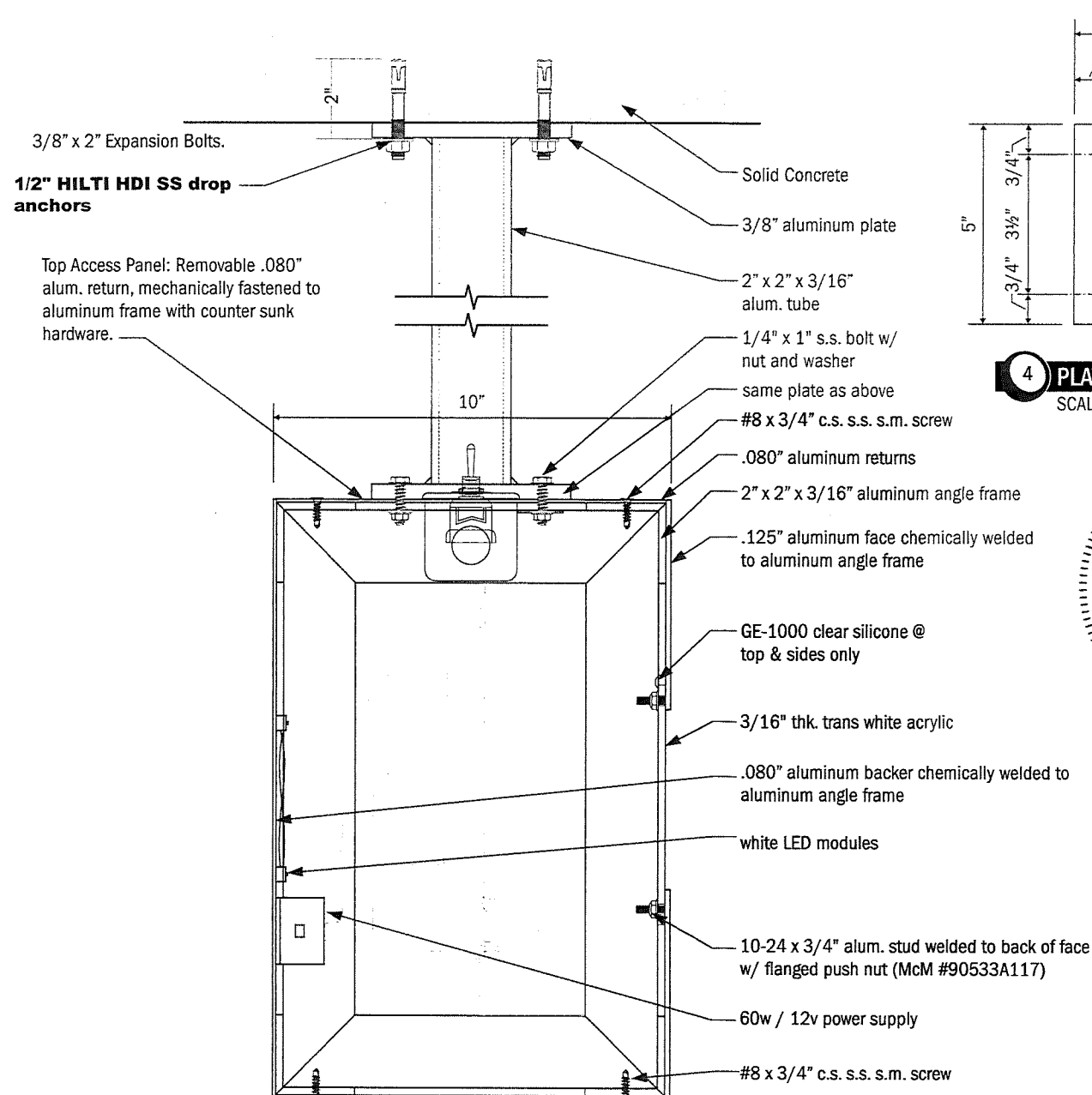
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SOLUTIONS
COMPANY.

7440 Fort Smallwood Road
Baltimore, Maryland 21228
410.355.6400

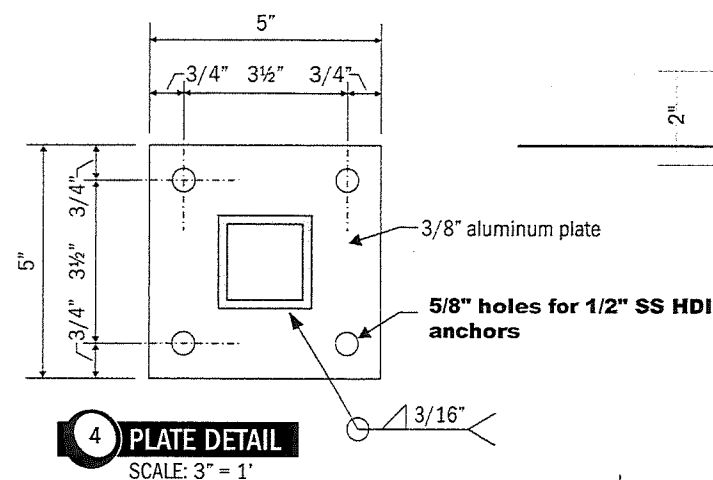
PROJECT TITLE: Towson Town Center		
ORDER TITLE: Towson Town Center		
CITY/STATE: Towson, MD		
DRAWING DATE: 07/20/17	SALES REP: MG	PROJECT MGR: MG
REVISION HISTORY		
NO.	DATE	DESCRIPTION
Designed Per IBC 2012 MD Edition Designed Per Maryland Building Performance		
Snow Loads		
Ground Snow Load	Pg=	20 psf
Snow Exposure Factor	Ce=	1.0
Snow Load Importance	Is=	1.1
Thermal Factor	Ct=	1.0
Wind Loads		
Ultimate Design Wind Speed		115 mph
Nominal Design Wind Speed		89.1 mph
Risk Cat		II
(3-Sec Peak Gust MPH*)		
Wind Importance Factor	I=	1
Wind Exposure		C
Gust Factor		0.85
Exterior components designed in accordance with applicable provisions of the ASCE 7-10		
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SIGN TYPE: ST-H1: Park Assist - Wall Mounted		
DWG. TYPE: Construction		
PROJECT NO. 72951-1	TASK NO. 136647	QTY. 4
DWG. NO. 0046MRO	SHEET 1 of 4	



1 TYPICAL MOUNTING DETAIL
SCALE: 3/4" = 1'



2 SECTION DETAIL ROUTED & BACKED GRAPHICS
SCALE: 3" = 1'

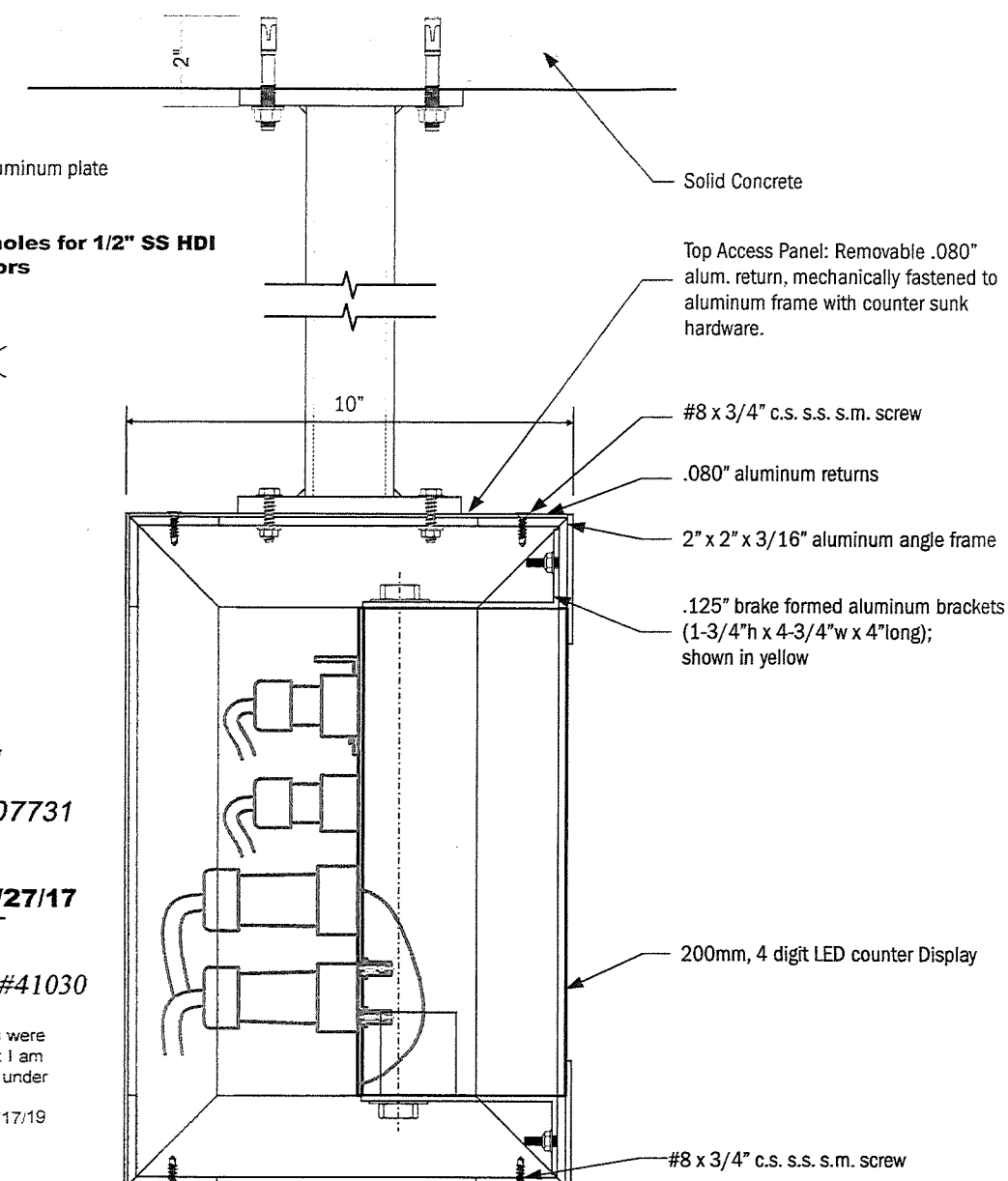


STATE OF MARYLAND
JERE MURDOCH
PROFESSIONAL ENGINEER
No. 41030

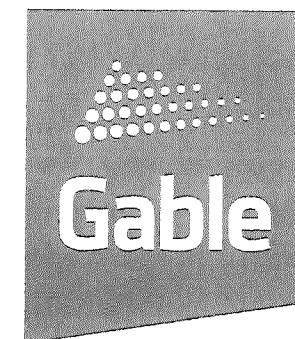
Murdoch Engineering
2 Hummingbird Ct.
Howell, New Jersey 07731
(973)-570-8215

Jere Murdoch 7/27/17
Jere Murdoch, P.E.
Professional Engineer
Maryland P.E. License #41030

PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the state of Maryland.
License No. 41030, expiration date 8/17/19



3 SECTION DETAIL LED PARKING COUNTER
SCALE: 3" = 1'



A VISUAL
SOLUTIONS
COMPANY.

7440 Fort Smallwood Road
Baltimore, Maryland 21228
410.293.8420

PROJECT TITLE: Towson Town Center		
ORDER TITLE: Towson Town Center		
CITY/STATE: Towson, MD		
DRAWING DATE: 07/20/17	SALES REP: MG	PROJECT MGR: MG

REVISION HISTORY		
NO.	DATE	DESCRIPTION

Designed Per 18C 2012 MD Edition
Designed Per Maryland Building Performance

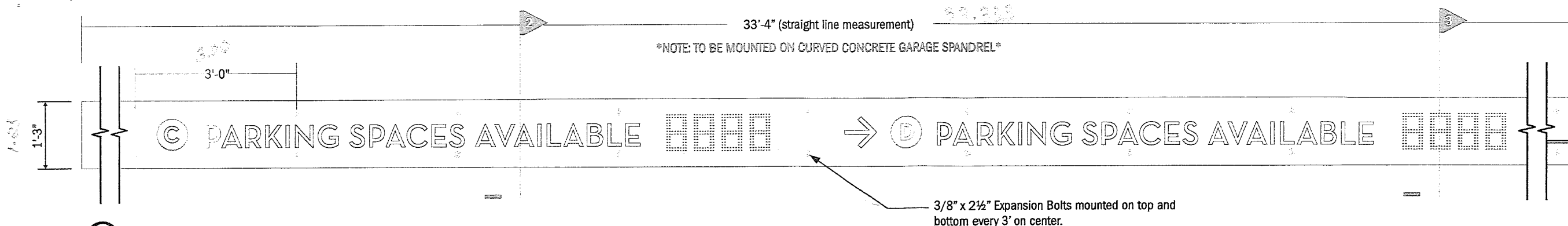
Snow Loads		
Ground Snow Load	Pg-	20 psf
Snow Exposure Factor	Ce-	1.0
Snow Load Importance	Is-	1.1
Thermal Factor	Ct-	1.0

Wind Loads		
Ultimate Design Wind Speed		115 mph
Nominal Design Wind Speed		89.1 mph
Risk Cat		II
(3-Sec Peak Gust MPH)		
Wind Importance Factor	I=	1
Wind Exposure	C	
Gust Factor		0.85

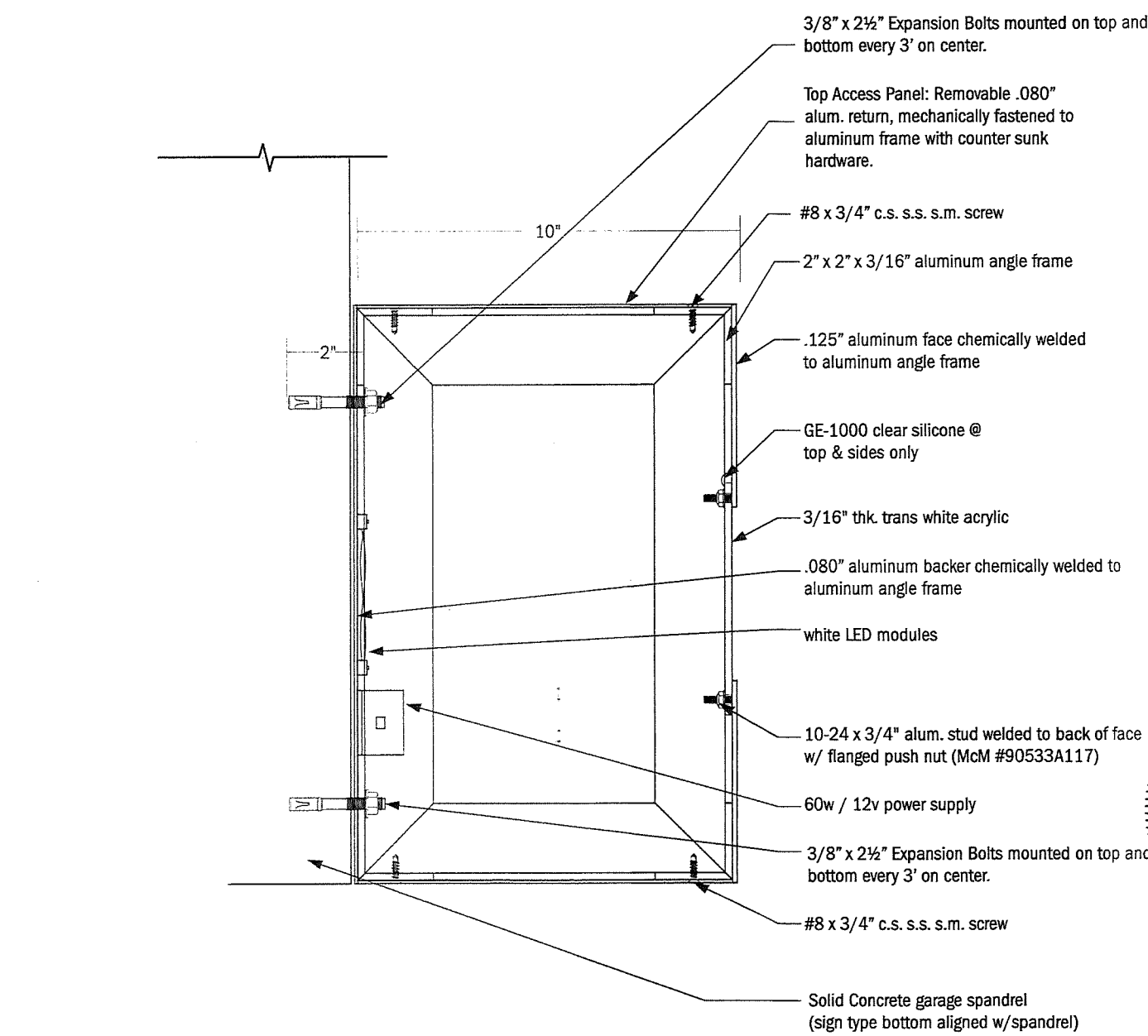
Exterior components designed in accordance with applicable provisions of the ASCE 7-10

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SIGN TYPE: ST-H2: Park Assist - Suspended		
DWG. TYPE: Construction		
PROJECT NO. 72951-1	TASK NO. 136647	QTY. 3
DWG. NO. 0046MRO	SHEET 2 of 4	



1 TYPICAL MOUNTING DETAIL
SCALE: 1/2" = 1'



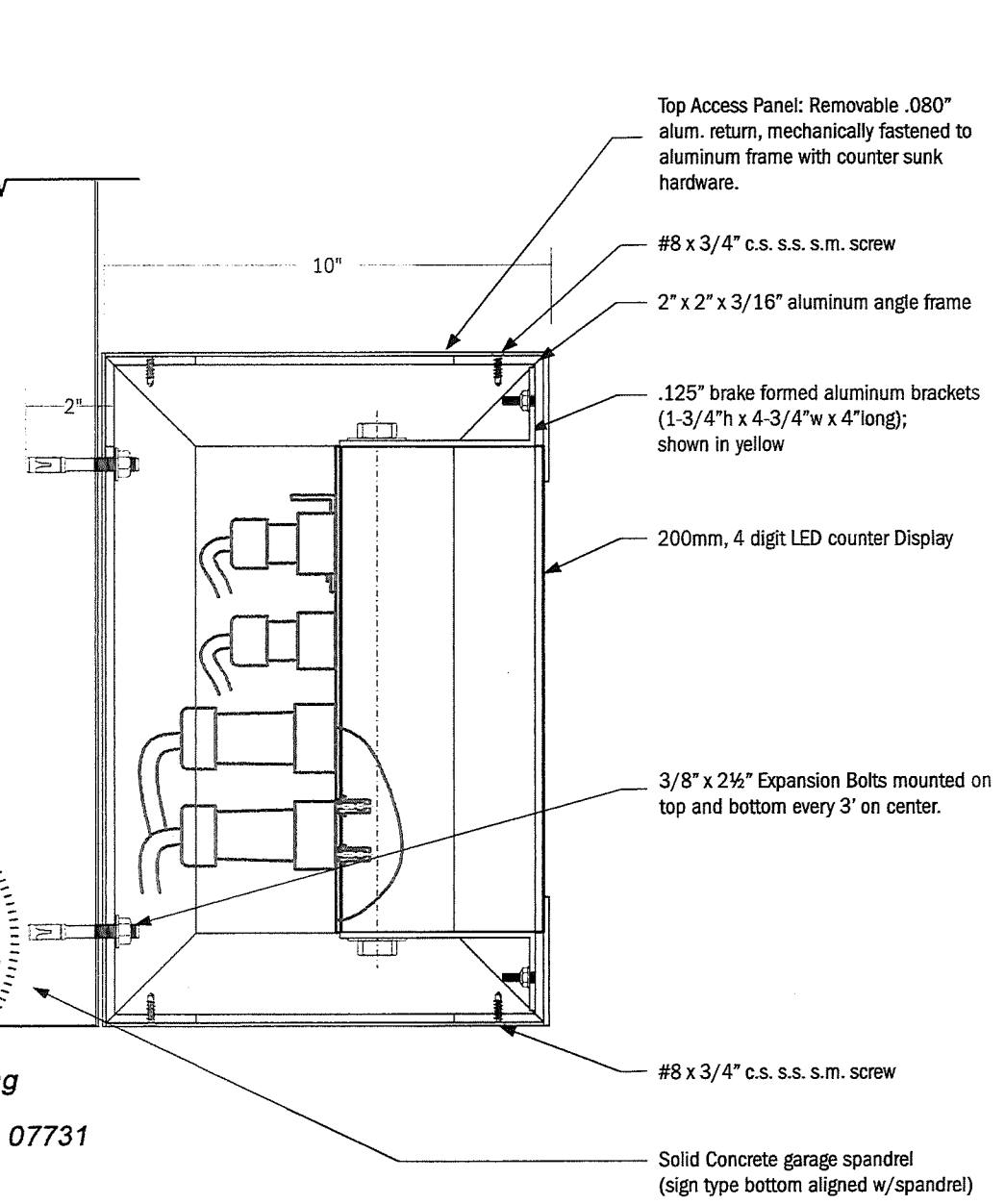
2 SECTION DETAIL: SOLID WALL
SCALE: 3" = 1'

STATE OF MARYLAND
JERE MURDOCH
No. 41030
PROFESSIONAL ENGINEER

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Jere Murdoch 7/27/17
Jere Murdoch, P.E.
Professional Engineer
Maryland P.E. License #41030

PROFESSIONAL CERTIFICATION
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License No. 41030, expiration date 8-17-19



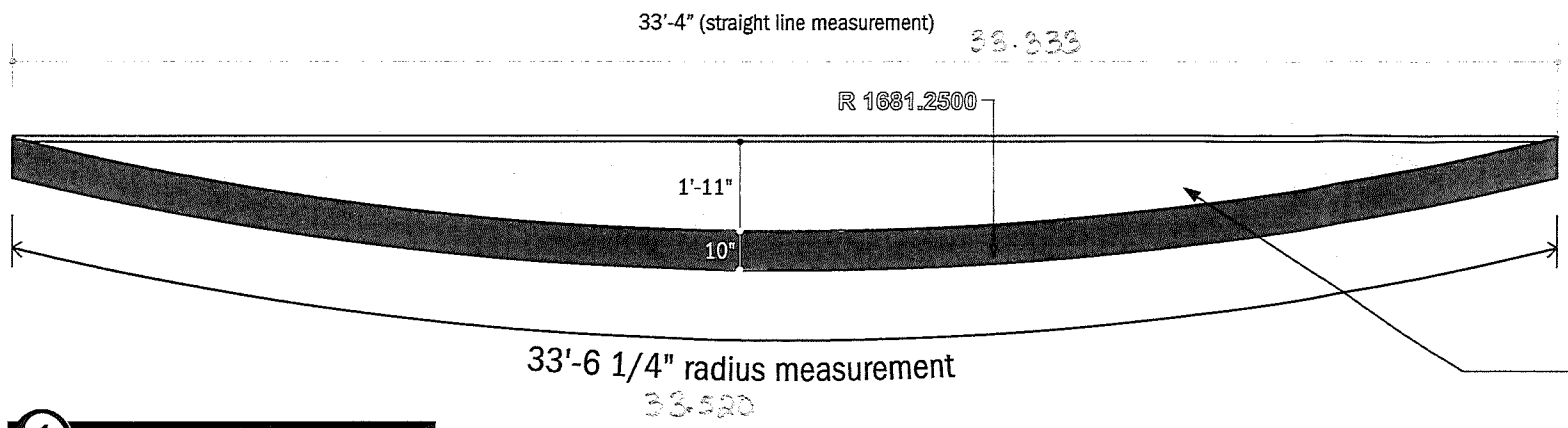
3 SECTION DETAIL: SOLID WALL
SCALE: 3" = 1'

Gable

A VISUAL SOLUTIONS COMPANY.

7440 Fort Smallwood Road
Baltimore, Maryland 21226
410.359.6400

PROJECT TITLE: Towson Town Center		
ORDER TITLE: Towson Town Center		
CITY/STATE: Towson, MD		
DRAWING DATE 07/20/17	SALES REP MG	PROJECT MGR. MG
REVISION HISTORY		
NO.	DATE	DESCRIPTION
Designed Per IBC 2012 MD Edition Designed Per Maryland Building Performance		
Snow Loads		
Ground Snow Load	Pg=	20 psf
Snow Exposure Factor	Ce=	1.0
Snow Load Importance	Is=	1.1
Thermal Factor	Ct=	1.0
Wind Loads		
Ultimate Design Wind Speed		115 mph
Nominal Design Wind Speed		89.1 mph
Risk Cat		II
(3-Sec Peak Gust MPH*)		
Wind Importance Factor	I=	1
Wind Exposure		C
Gust Factor		0.85
Exterior components designed in accordance with applicable provisions of the ASCE 7-10		
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SIGN TYPE: ST-H4: Park Assist - Wall Mounted		
DWG. TYPE: Construction		
PROJECT NO. 72951-1	TASK NO. 136647	QTY. 2
DWG. NO. 0046MRO		SHEET 3 of 4



1 PLAN VIEW - JOPPA ENTRANCE
SCALE: 1/4" = 1'

H1 Calculations

INPUT DATA
Exposure category (B, C or D): C
Importance factor, pg 73, (0.87, 1.0 or 1.15): 1.00
Basic wind speed (3 sec. gust wind): 115 mph
Topographic factor (Sec 6.5.7.2, pg 25 & 45): 1
Height of top: 15 ft
Vertical dimension (for wall, s = h): 1.25 ft
Horizontal dimension: 30 ft
Dimension of return corner: 10 ft
Sign Face to building wall: 0 ft
Letter depth = L: 0 ft
Return to building from face = Lr: 0 ft
Enter Raceway Height in feet = Rh: 0 ft
Rows of Fasteners: 2

DESIGN SUMMARY
Max horizontal wind pressure: 54 psf
Max total horizontal force at centroid of base: 1.48 kips
Max bending moment at centroid of base: 21.30 ft-kips
Max torsion at centroid of base: 8.89 ft-kips

CONNECTION CALCULATIONS

Wind Pressure = 40psf @ V=115mph
Risk Category = II
Wind Load = 1481 lbs (Max)
Check Connection at Building Wall
Maximum tension force on top row fasteners
(((1481 x 0.63)) + ((375.0 x (E.C.)) x 1.25)) = 2240.71
Total Fasteners (2= ROWS) = 14.00 Total
Allowable tension:
3/8" Double Lag-Shield Bolt into Solid Masonry/CMU
Allowable Per/Fastener: (Tension = 365.0 / Shear = 720)
Actual Tension = 2241 lbs. < 2355.0 lbs. Allowable = OK
Actual Per/Fastener Shear = 27 < 720 lbs. Allowable = OK
Analysis:
Applied Load 2.24 kips - 2.56 kips Fastener Total = 0.32 Kips
Minimum Fasteners @ Top Edge = (7) x (2) Rows = 14

H2 Calculations

Ultimate Wind Speed= 115 IBC-2012/2015 Ultimate (Blank for IBC 2009 or older)
Normal Wind Speed= 90 IBC-2009/2012 Nominal
Exposure= C open terrain, scattered buildings <30FL
Ct= 1.75 ASCE 7-10 / ASCE 7-10 Force Coefficient
G= 0.85 Gust Factor
Kh= 0.85 Velocity pressure Coefficient @ height
Z= 1 Topographic factor
I= 1 Importance factor
Kd= 0.85 Wind directionality factor

Area Subject to Wind Forces

Height	Width	Area	Centroid	Wind	Pounds	lbs. Total	TOS
10	30	300	15	24.0	720	2880	15

Column Support Design Table

# of Co's	Column Type (P, I, S)	Column Size (in)	Length (ft)	Start Elev (ft)	End Elev (ft)	Sleeve Depth (in)	S fact (in'3)	ft (ksi)
4	RT	RT2XX19	19	0	19	19	0.75	8.5

Plate Design

of Base Plates= 4
Maximum Column Dimension, OD= 20.0 in, perpendicular to sign face
Number of Bolts, n= 2 per line front and back
Compressive Strength of Concrete, fc= 3000 psi at 28 days
Moment / Base Plate, M= 534 lb-ft
Bolt Line Spacing, L= 3.50 in, from front to back
Base Plate Dimensions: N= 9.00 in B= 9.00 in
Tension per Bolt Line, T= 1.832 lb = M/L (simple moment couple)
Maximum Moment on the Plate, Mpl= 1.374 lb-in = (T) x (L-OD) / 2
Plate Thickness w/o Gussets, t= 0.28 in = Sqrt((6M) / (0.75Fy(4/3) Beff))
Plate Thickness w/ Gussets, t= 0.22 in = Sqrt((6M) / (0.75Fy(4/3) Beff) * 0.8)
Alum. PL Thickness w/o Gussets, t= 0.33

Tension/anchor = 1832 lb / 2 = 916 lb
1/2" HDI anchor allowable = 945 lb
Tension OK

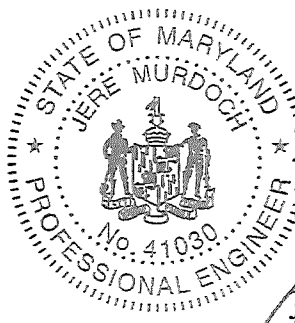
H4 Calculations

INPUT DATA
Exposure category (B, C or D): C
Importance factor, pg 73, (0.87, 1.0 or 1.15): 1.00
Basic wind speed (3 sec. gust wind): 115 mph
Topographic factor (Sec 6.5.7.2, pg 25 & 45): 1
Height of top: 15 ft
Vertical dimension (for wall, s = h): 1.25 ft
Horizontal dimension: 30 ft
Dimension of return corner: 10 ft
Letter depth = L: 0 ft
Return to building from face = Lr: 0 ft
Enter Raceway Height in feet = Rh: 0 ft
Rows of Fasteners: 2

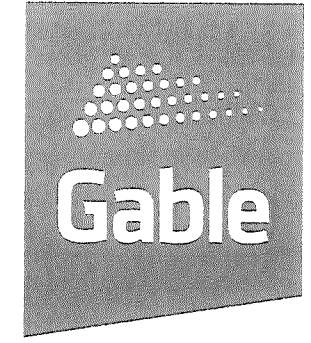
DESIGN SUMMARY
Max horizontal wind pressure: 54 psf
Max total horizontal force at centroid of base: 1.48 kips
Max bending moment at centroid of base: 21.30 ft-kips
Max torsion at centroid of base: 8.89 ft-kips

CONNECTION CALCULATIONS

Wind Pressure = 40psf @ V=115mph
Risk Category = II
Wind Load = 1481 lbs (Max)
Check Connection at Building Wall
Maximum tension force on top row fasteners
(((1481 x 0.63)) + ((416.7 x (E.C.)) x 1.25)) = 2489.65
Total Fasteners (2= ROWS) = 16.00 Total
Allowable tension:
3/8" Double Lag-Shield Bolt into Solid Masonry/CMU
Allowable Per/Fastener: (Tension = 365.0 / Shear = 720)
Actual Tension = 2490 lbs. < 2920.0 lbs. Allowable = OK
Actual Per/Fastener Shear = 26 < 720 lbs. Allowable = OK
Analysis:
Applied Load 2.49 kips < 2.92 kips Fastener Total = 0.42 Kips
Minimum Fasteners @ Top Edge = (8) x (2) Rows = 16



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PROFESSIONAL CERTIFICATION
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License No. 41030 expiration date 8/17/19



7440 Fern Smallwood Road
Baltimore, Maryland 21226
410.255.6400

PROJECT TITLE: Towson Town Center		
ORDER TITLE: Towson Town Center		
CITY/STATE: Towson, MD		
DRAWING DATE 07/20/17	SALES REP MG	PROJECT MGR. MG
REVISION HISTORY		
NO.	DATE	DESCRIPTION
Designed Per IBC 2012 MD Edition Designed Per Maryland Building Performance		
Snow Loads		
Ground Snow Load	Pg=	20 psf
Snow Exposure Factor	Ce=	1.0
Snow Load Importance	Is=	1.1
Thermal Factor	Ct=	1.0
Wind Loads		
Ultimate Design Wind Speed		115 mph
Nominal Design Wind Speed		89.1 mph
Risk Cat		II
(3-Sec Peak Gust MPH*)		
Wind Importance Factor	I=	1
Wind Exposure		C
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SIGN TYPE: ST-H4: Park Assist - Wall Mounted		
DWG. TYPE: Construction		
PROJECT NO.	TASK NO.	QTY.
72951-1	136647	
DWG. NO.	SHEET	
0046MRO	4 of 4	