

CITY OF MERIDIAN

RESOLUTION NO. 19-2174

BY THE CITY COUNCIL:

BERNT, BORTON, CAVENER,  
LITTLE ROBERTS, MILAM, PALMER

**A RESOLUTION ADOPTING THE WELCOME TO MERIDIAN SIGNAGE PLAN.**

**WHEREAS**, the Welcome to Meridian Signage Plan is designed to enhance and support Meridian as a premier City that is built for business and designed for living; and

**WHEREAS**, Meridian is the population and employment center of the Treasure Valley, surrounded on all sides by other cities; and

**WHEREAS**, recognition and identity are important to the City's livability factor and meeting economic development goals; and

**WHEREAS**, the Welcome to Meridian Signage Plan, as set forth in *Exhibit A* hereto, establishes a framework to locate entryway signs along streets throughout the City;

**NOW THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF MERIDIAN CITY, IDAHO:**

**Section 1.** That the Welcome to Meridian Signage Plan, as set forth in *Exhibit A* hereto, is hereby adopted.

**Section 2.** That the Community Development Department is hereby authorized to implement and carry out the Welcome to Meridian Signage Plan, as set forth in *Exhibit A*.

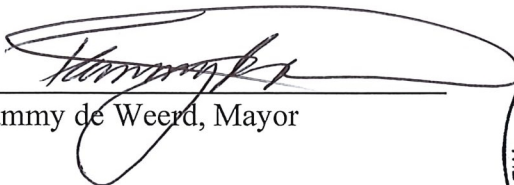
**Section 3.** That this Resolution shall be in full force and effect on December 1, 2019.


**ADOPTED** by the City Council of the City of Meridian, Idaho, this 12<sup>th</sup> day of November, 2019.


**APPROVED** by the Mayor of the City of Meridian, Idaho, this 12<sup>th</sup> day of November, 2019.

APPROVED:

ATTEST:

  
\_\_\_\_\_  
Tammy de Weerd, Mayor

  
\_\_\_\_\_  
Chris Johnson, City Clerk

  
INCORPORATED 1900  
MERIDIAN, IDAHO  
SEAL  
THE CENTER of the TREASURE VALLEY

# Welcome to Meridian Signage Plan

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## Introduction

The Welcome to Meridian Signage Plan is designed to enhance and support Meridian as a premier City that is built for business and designed for living. As the population and employment center of the metropolitan area, surrounded on all sides by other cities, recognition and identity are important to the City's livability factor and economic development goals.

## Background

This Plan has been a functional program since 2010 when the City first began working with the Ada County Highway District (ACHD) to locate entryway street signs along arterial roadways. These metal signs were first installed to help stakeholders and visitors know when they enter into Meridian City limits. While the 2' x 3' metal street signs are adequate for community identity on many roads, they are not visible at major points of entry such as at interchanges or on wider, multi-lane roadways.

Historically, development along high-profile entryway corridors, such as Fairview Avenue east of Eagle Road, created opportunities for larger entryway features. Larger monument signs are more visible to motorists and better able to market the City. These monuments are designed and engineered to make efficient use of materials and construction time, and have been constructed in several locations around the City. Today these monuments are sited and built both by the City and willing development partners; this Plan helps to highlight opportunities for additional monument signs into the future.

## Street Signs

Welcome to Meridian street signs are 24" x 36" branded metal signs that have been locally manufactured, and installed in coordination with the ACHD. The signs utilize City standards for market colors and logo use, and are mounted on standard 12-foot breakaway posts. These signs are very similar to the City's flag, a design since emulated by others.

The City keeps several of these metal street signs and posts on-hand so they are readily available should a replacement for an existing sign be needed.



Double Face Halo Illuminated Monument Sign

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## Monument Signs

In 2012, the City obtained construction drawings for three types of monuments, and later expanded on this with an option for a larger variant. Monument signs are standardized, pre-engineered, and come in the following varieties: standard (full) horizontal, highway horizontal, and a vertical (small) monument intended for constrained locations. All monument signs share some general look and feel elements. All varieties use standardized material colors, include a faux or real brick, the City's logo or emblem (the star swoosh), and all include recessed backlit halo illumination of sign copy.

The City prefers a consistent design for monument signs. However, the City is open to considering other designs when appropriate. When a custom design is proposed, the City would prefer to have some of the standard elements listed above maintained so the overall branding is consistent. It may be appropriate for a custom sign, however, to incorporate design characteristics consisting with existing or planned development so it ties into that theme as well. In all cases, the City logo and/or name and emblem would still need to be included in the monument design. See General Specifications for information on use of the City's logo.

## Overview

Historically the City has utilized GIS to memorialize existing and future desired locations for metal street signs and monuments. The City works with ACHD to locate signs in public right-of-way (ROW) and works with property owners and developers to locate monuments outside of public ROW (typically in an easement).

With Meridian's rapid growth, relocating metal street signs as development occurs would be a burden on agency staff time. Instead, the City typically reviews existing locations and City limit boundaries

every few years. This is a relatively simple mapping process where existing signs are compared with City limits, and the City then provides maps and makes a request to the ACHD Sign Shop, to relocate street signs which are no longer at the limits of City boundaries.

Monument signs require a more concerted coordination effort to implement. This generally occurs either through City initiated efforts, or through exploring opportunities and partnerships with property owners as development is proposed. In both cases, monument signs are generally located on real property, either land that the City already owns, or where an easement or other agreement is negotiated on property owned by others.

The most common way monument signs are constructed is through City-led efforts via the budgeting process. When staff or elected officials believe there is an opportunity for a new monument sign, review and research is done to verify feasibility. If an opportunity seems like a good fit, then a request is made through the City's annual budget process.

The other way monument signs may be constructed is when a developer or property owner volunteers to construct one or proposes to collaborate with the City for construction. Staff will notify developers and property owners during pre-application meetings when a monument sign is envisioned on or near the property proposed for development (see Maps section for locations).

## Implementation

There are several city policies, code sections, and permitting processes that are involved in implementation of this Plan.

## Comprehensive Plan

At the highest level, the City's Comprehensive Plan provides broad direction to support efforts to welcome residents, visitors, and other stakeholders into the City.

## City Code

Meridian's code requires several types of permits for signs, in addition to general landscape and setback restrictions. However, a sign coordinated by the City and installed by ACHD does not require an additional permit or agreement when located in public right-of-way. It is not planned, expected, or desired for a street sign to be located on real property, but rather placed in ACHD right-of-way.

Monuments, while a type of signage, require permits regardless of whether the City, private development, or others install them. Monument signs require footing and electrical review, and the easiest process to approve those is through a City-issued sign permit. If a monument is to be installed by a partner agency or developer, then part of any agreement should clarify and consider permits, inspections, acceptance, and any associated costs as part of the agreement.

It is envisioned that monument signs will be installed over time, both by the City independently and as part of private-public partnerships. Partnerships can vary, and the City should remain open to exploring any and all proposals from potential partners to implement this plan.

## Maintenance

In most cases, it is expected that the City will take on the responsibility for maintenance and repair of all metal street and welcome monument signs. For any instance where this may not be desirable, an agreement should overview any roles, responsibilities, and expectations.

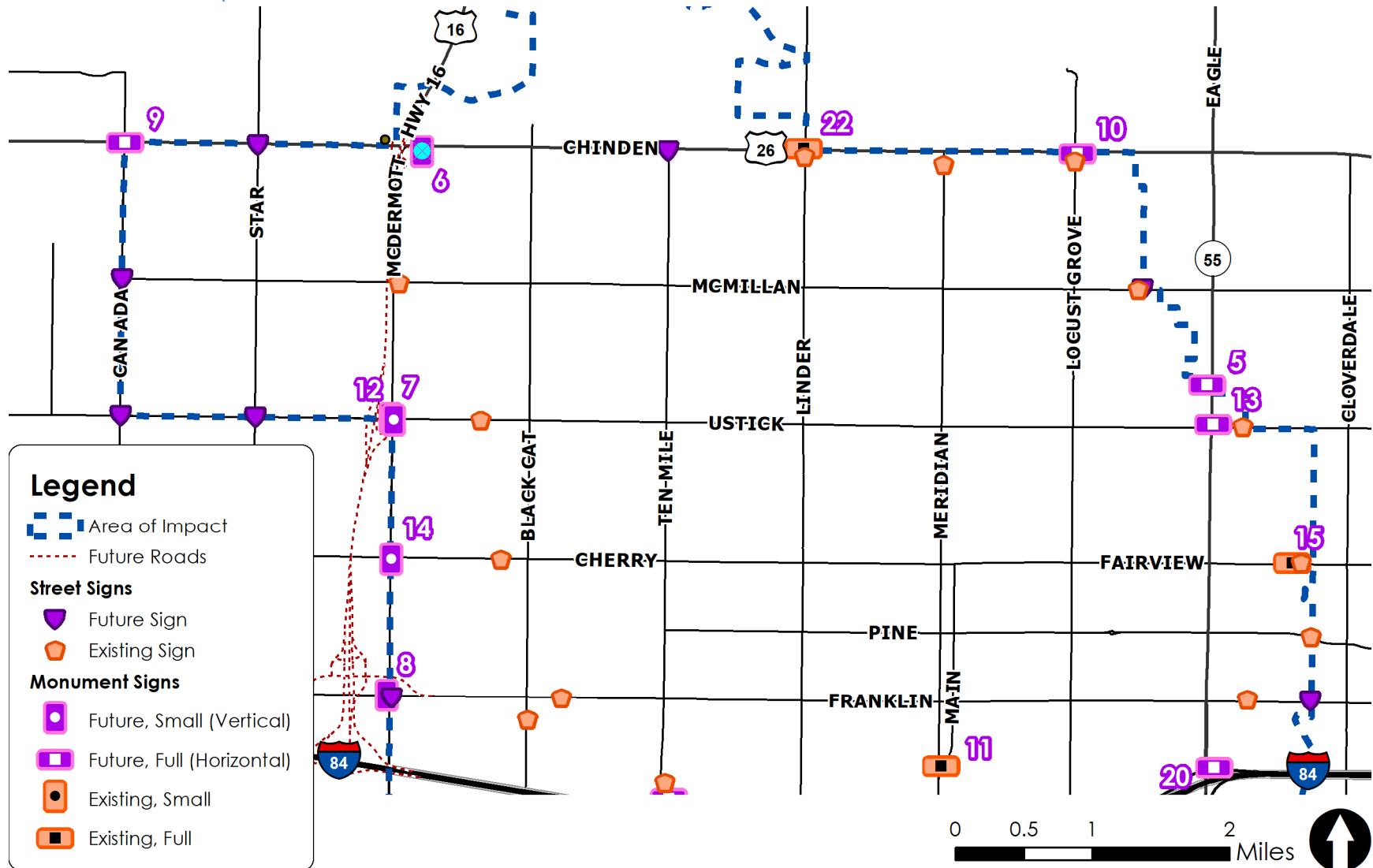
## Maps

The following maps depict the location of existing and future street signs as well as existing and future monument locations. Street signs are planned for the majority of entryways into Meridian, with monument signs only proposed along State highways, interchanges, and key entryways into the City.

It is envisioned that every few years City staff will work with ACHD staff to adjust metal street signs as necessary with little-to-no fiscal implication. Locations and sign type are not exact or parcel specific, but have generally been identified as most desirable at the time of Plan adoption. Numbered symbols on the map correspond to a Map Exhibit Key following the maps, and highlight additional information for the various monument sign locations.

The City should remain open and look for potential partnerships to locate monument signs near key entryways, remaining flexible in both location and monument sign type and design.

# North Meridian Map Exhibit



**Legend**

- Area of Impact
- Future Roads

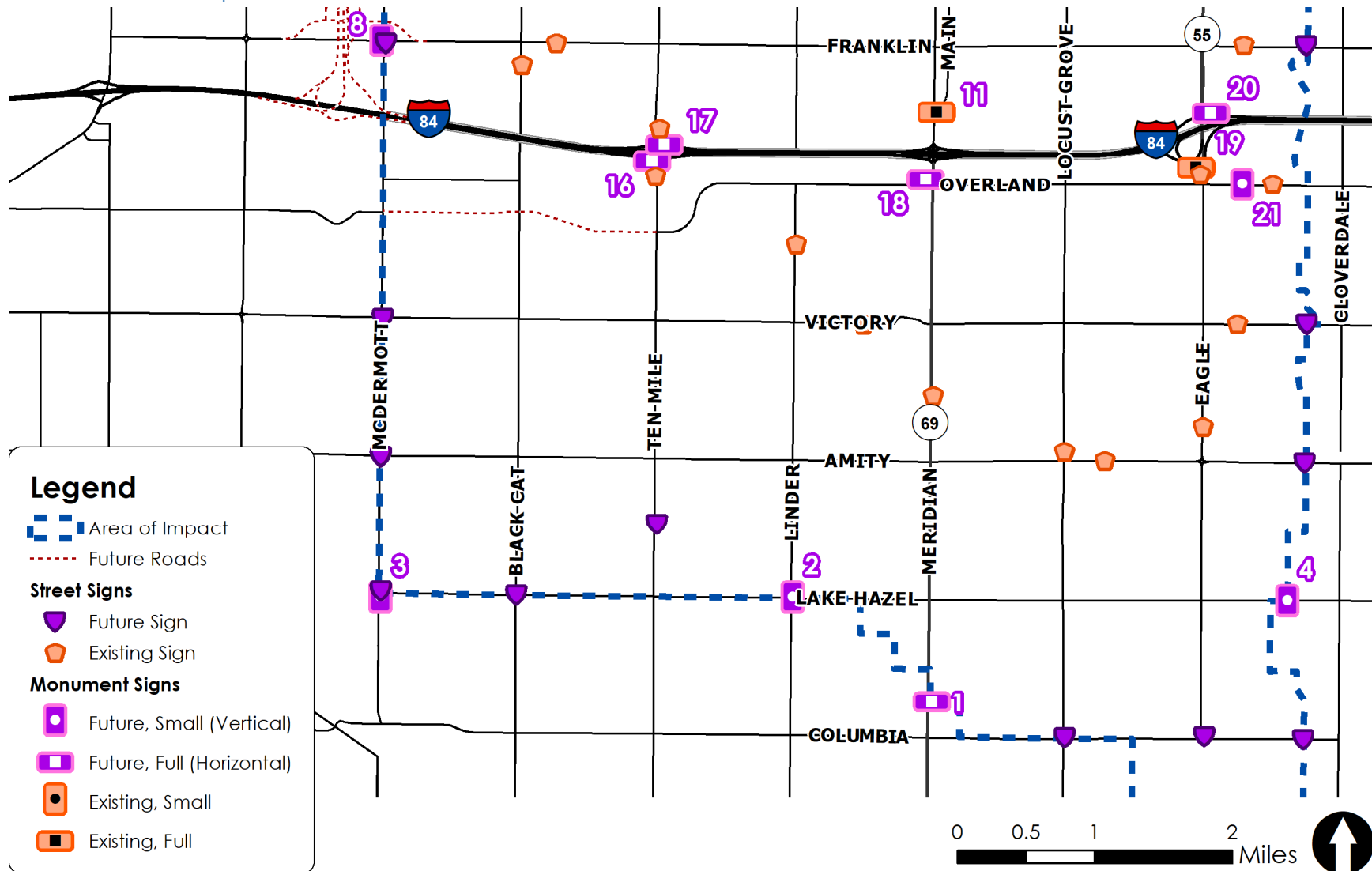
**Street Signs**

- Future Sign
- Existing Sign

**Monument Signs**

- Future, Small (Vertical)
- Future, Full (Horizontal)
- Existing, Small
- Existing, Full

# South Meridian Map Exhibit



## Map Exhibit Key

ID #	Status	Sign Type	Preferred Location	Other Notes
1	Future	Full Monument	Meridian, between Columbia and Lake Hazel	
2	Future	Small Monument	nec Linder/Lake Hazel	
3	Future	Small Monument	sec Lake Hazel/McDermott	
4	Future	Small Monument	Lake Hazel, 1/4 mile west of Cloverdale	
5	Future	Full Monument	west side Eagle Road, near Kohls or Fast Eddy's property	The DA for Fast Eddy's currently includes requirement
6	Future	Small Monument	SH-16 SB off ramp at Chinden	With SH-16 construction?
7	Future	Small Monument	SH-16 off ramp(s) at/near Ustick/McDermott	With SH-16 construction? Two signs?
8	Future	Small Monument	sec Franklin/McDermott at SH-16 off-ramp	With SH-16 construction?
9	Future	Full Monument	sec Chinden/Can-Ada	
10	Future	Full Monument	swc Locust Grove/Chinden (Valley Life Church)	With intersection widening?
11	Existing	Full Monument	Main/Meridian	Metal sculpture at north end of split corridor
12	Future	Small Monument	sec Ustick/McDermott	With SH-16 construction?
13	Future	Full Monument	nec Ustick/Eagle	On Ustick, by Lowe's
14	Future	Small Monument	sec Cherry/McDermott/SH-16	At/Near county line
15	Existing	Full Monument	Fairview, 1/2 mile east of Eagle	In front of CarMax
16	Future	Full Monument	I-84 EB off ramp at Ten Mile	
17	Future	Full Monument	I-84 WB off ramp at Ten Mile	
18	Future	Full Monument	I-84 EB off ramp at Meridian	
19	Existing	Full Monument	I-84 EB off ramp at Eagle	In front of Tru Hotel
20	Future	Full Monument	I-84 WB off ramp at Eagle (St. Luke's)	Could put some CORE material to modify sign; have agreement with hospital
21	Future	Small Monument	Overland near Eagle (Zamzows/Norco area)	Could move further east if redevelopment occurs
22	Existing	Full Monument	nwc Linder/Chinden	Installed with Chinden/Linder crossing project



## Specifications

### General Specifications

The following specifications are to be used both for the approved street sign, monument signs, and any non-standard designs.

Logo Color: In addition to black and white, the Meridian logo may be used in the following colors:

- Blue color: Pantone 288 C; and
- Gold color: 124 C.

Logo Proportion: The Meridian logo may not be clipped or distorted, and must maintain a ratio of 1:3.41. For every 1" height, the logo shall be 3.41" in width.

Use of the logo must adhere to the Meridian Brand Manual, which in addition to the above, generally means that the logo must be all black, blue, gold, yellow, or white (approved colors), but may include the Idaho text and the star portion above the swoosh in another of the approved colors.

While the Meridian logo is a graphic, it may be desirable to utilize similar fonts for other work. The font used for the Meridian text (all both the M) is Adobe Jensen. The 'R' has been modified graphically. The 'M' is a variant of the font Vivaldi Script FS.

See the City's Brand Manual for more information on use of the City's logo.

### Street Sign Specifications

In addition to the below specifications, any street sign placed in public right-of-way shall meet all standards and specifications for the applicable agency.

**Sign:** The sign shall be 24" x 36" printed in full color as shown in Figure 1 on reflective 20+ year UV resistant laminate. Sign shall be adhered to 0.08 gauge aluminum grade road sign with 1-1/2" smooth radius corners. Holes shall be 3/8" DIA, pre-drilled 3" from the top and bottom (18" apart) as shown in Figure 1. Holes are sized per Idaho Department of Transportation (ITD) standards but may need to be increased to 7/16" during field install.

**Breakaway Post:** Sign shall be mounted to ACHD standard 12' galvanized metal square sign post



Figure 1: Note location of two black holes for securing sign to breakaway post.

### Monument Sign Specifications

**Standard Designs:** The preferred and default monument signs are pre-designed and engineered. The three variants include: standard horizontal, highway horizontal, and a vertical monument, and are included in the back appendices. The horizontal may be used on normal arterial entryways; those less than 5-lanes. The highway



horizontal should be used adjacent to any interchange of road configuration larger than 5-lanes (including turn-lanes). The vertical monument is intended for constrained locations where landscape area is limited.

**Non-standard Designs:** Other, custom monument sign designs may be considered when they are intended to integrate with other architectural guidelines, when integrated into a public or private art exhibit, or for non-traditional entryways (e.g. – within a roundabout). Regardless, the design must maintain similar size considerations as the typical monument sign for the location, must follow general specifications if using the City's normal logo, and should still reflect the City's level of commitment to aesthetics, quality, and maintenance. See monument construction plans for dimensions on the signs, logos, material types and colors, and other references.

## Appendices

### Monument Construction Plans

- Horizontal Monument, Regular
- Horizontal Monument, Highway
- Vertical Monument



HORIZONTAL ENTRYWAY MONUMENT SIGN









**JOHNSON DESIGN & ENGINEERING, PLLC**

1900 N. LAKES PLACE, SUITE 100, MERIDIAN, ID 83646

Office: (208) 939-1045

Cell: (208) 608-0008

E-mail: tim@jde-idaho.com

June 22, 2015

**Idaho Electric Signs**

6528 Supply Way  
Boise, ID 83705

Voice (208) 338-9401

Attn: Rick Berry

**Re: City of Meridian - Meridian, ID  
11x6 Monument Sign**

As you have requested, we have provided the footing and column design for the above mentioned project. Please find the following enclosed as a list of considerations for your use in completing the project:

- PDF copy of select structural calculations.
- PDF copy of red-lined plans.

If you have any questions or require additional information, please call.

Sincerely,

**JOHNSON DESIGN & ENGINEERING, PLLC**

A handwritten signature in blue ink, appearing to read 'Tim Johnson', written over the company name.

Tim Johnson, P.E.





**JOHNSON DESIGN & ENGINEERING, PLLC**

1900 N. LAKES PLACE, SUITE 100, MERIDIAN, ID 83646

Office: (208) 939-1045

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E-mail: tim@jde-idaho.com

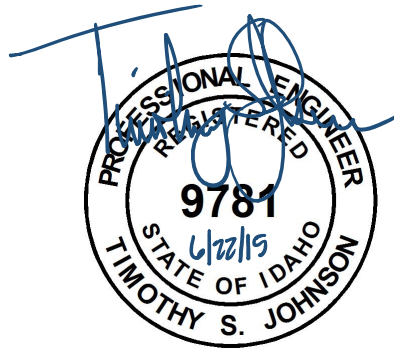
**STRUCTURAL CALCULATIONS**

for

**Idaho Electric Signs**

**City of Meridian - Meridian, ID**

**Select Structural Design**



June 22, 2015

by

**JOHNSON DESIGN & ENGINEERING, PLLC**

1900 N. Lakes Place, Suite 100

Meridian, Idaho 83646

(208) 939-1045

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**JOHNSON DESIGN & ENGINEERING, PLLC**  
**1900 N. LAKES PL., SUITE 100 \* MERIDIAN \* IDAHO**

POLE SIGN DESIGN

2012 IBC

**Client:** Idaho Electric Signs  
**Project:** City of Meridian 11' x 6' Monument Sign  
**Project No.:** 150626  
**Date:** 22-Jun-15

**DESIGN CRITERIA:**

Distance to sign top (h) 9.00 ft.  
 Height (s) 9.00 ft.  
 Width (B) 15.67 ft.  
 s/h 1.00  
 B/s 1.74

**Wind Load:** Basic Wind Speed, V = 115 mph ASCE 7-10, Fig. 26.5-1A  
 Exposure C ASCE 7-10, Sec. 26.7.3  
 Wind Directionality Factor, Kd 0.85 ASCE 7-10, Table 26.6-1  
 Velocity Pressure Exposure Coefficient, Kz = 0.85 ASCE 7-10, Table 30.3-1  
 Velocity Pressure, q = .00256\*Kz\*Kd\*V^2 = 24.46 psf ASCE 7-10, Eq. 29.3-1  
 Force Coefficient, Cf = 1.55 ASCE 7-10, Fig. 29.4-1  
 Gust Factor Coefficient, G = 0.85 ASCE 7-10, Sect. 26.9  
 Design Wind Load, P = q\*G\*Cf\*.63 = 20.30 psf

**Seismic:** Face Area Dead Load, Wt = 20 psf  
 Mapped Spectral Accelerations  
     for short periods, Ss = 1.60 ASCE 7-10, Sec. 11.4.1  
 Site Coefficient, Fa = 1.00 ASCE 7-10, Table 11.4-1  
 Max. Spectral Response, SMS = Fa\*Ss = 1.60 ASCE 7-10, Eq. 11.4-1  
 Design Spectral Response, Sds = 2/3\*SMS = 1.07 ASCE 7-10, Eq. 11.4-3  
 Response Modification Coefficient, R = 2.00 ASCE 7-10 Table 12.2-1  
 Seismic Load, Vs = 1.0\*Sds\*Wt/R = 10.7 psf ASCE 7-10 Eq. 12.14-11

**Soil:** Lateral Loadings Fpv= 200 pcf/ft.  
 Vertical Loadings Fpb= 1500 psf

**Steel Stresses:** Yield Strength, Fy = 36000 psi  
 Bending Stress, Fb=0.66\*Fy= 23760 psi

**Concrete Stress:** Concrete Strength, Fc' = 2000 psi  
 Reinforcing Strength, Fy = 40000 psi

MEMBER NO.	BASE HEIGHT (ft)	Pw (lbs)	Y (ft)	Mw (ft-lbs)	Pv (lbs)
1	0.00	1238	3	3436	1220

**SIGN FORCES:**

MEMBER #1	Sign Area #	Area (Af) (ft2)	Centriod (Cf) (ft from base)	Centroid*Area (ft3)
	1	6.00	5.50	33.00
	2	27.00	3.75	101.25
	3	28.00	1.25	35.00
	· Af =	61.00	· Af*Cf =	169.25

Sign Centriod,6 = (·Af\*Cf)/·Af = 2.77 ft.  
 Wind Load, Pw = ·Af\*Ww = 1238.50 lbs. @ base  
 Vertical Load, Pv = ·Af\*Wt = 1220.00 lbs. @ base

**JOHNSON DESIGN & ENGINEERING, PLLC**  
**1900 N. LAKES PL., SUITE 100 \* MERIDIAN \* IDAHO**

POLE SIGN DESIGN

2012 IBC

**Client:** Idaho Electric Signs  
**Project:** City of Meridian 11' x 6' Monument Sign  
**Project No.:** 150626  
**Date:** 22-Jun-15

**COLUMN DESIGN: [Use AISC (1.6-2);  $f_a/F_a + f_b/F_b < 1.33$ ]**  
 Use sign loads at the base of each column member for analysis  
 of each member

<b>MEMBER #1</b>			per member	total
<b>4" Dia x 0.237" Wall</b>		Ax (in2) =	3.17	6.34
<b>Number of Columns 2</b>		Sx (in3) =	3.21	6.42
		ry (in) =	1.16	
<b>K = 2</b>		L unbraced (ft.) =	9.00	
<b>KL/r = (in.)</b>	186	Fa=AISC T.1-36	24660.00	psi
		fa = Pv/Ax =	192.43	psi
		Fb = AISC 1.5 =	23760.00	psi
		fb = Mw/Sx =	6423.02	psi
		fa/Fa + fb/Fb =	0.28	<1.33 OK!

**FOUNDATION DESIGN [IBC -Section 18]**

FOOTING DEPTH =  $A/2(1+(1+(4.36*Y/A))^{0.5})$

2012 IBC Equation 18-1

<b>ASSUMED</b>	Multiple Excavated Footings	# Footings, #F =	1
		Ftg. Width = (ft.)	11.50
		Ftg. Thick = (ft.)	3.50
		Depth = (ft.)	2.50
	A = $(2.34*P_w/\#F)/(S*B)$ =		0.72
	where		
	S = Soil Bearing @ 1/3 Depth =		333.33 (psf)
	B = Effective Footing Width =		12.02 (ft.)
	MINIMUM FOOTING DEPTH = (FT.)		1.88 OK!
	CK. FOOTING AREA REQ'D = $P_v/Ab$		0.81 OK!









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Boise's Only Full Service Sign Company



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THE COLORS DEPICTED IN THIS DRAWING ARE TO ASSIST YOU IN VISUALIZING OUR PROPOSAL AND MAY NOT MATCH ACTUAL COLORS USED ON THE FINISHED DISPLAY.

**REVISIONS**

- 2-30-15 (REV #3)
- CHANGED FROM ONE PIPE SUPPORT TO TWO
- 4" X .237 PIPES AS PER ENGINEERING. ADDED FOOTING SIZE.
- (SEE ENGINEERING)

All signs are listed by Underwriters Laboratories (U.L.) and will be installed in accordance with the installation instructions and Article 600 of the National Electric Code

**SALES**

NEIL

**DESIGNER**

RICK BREDE

**SKETCH #**

**RICK'S FILE**

N/A

**CUSTOMER**

CITY OF MERIDIAN

**LOCATION**

MERIDIAN

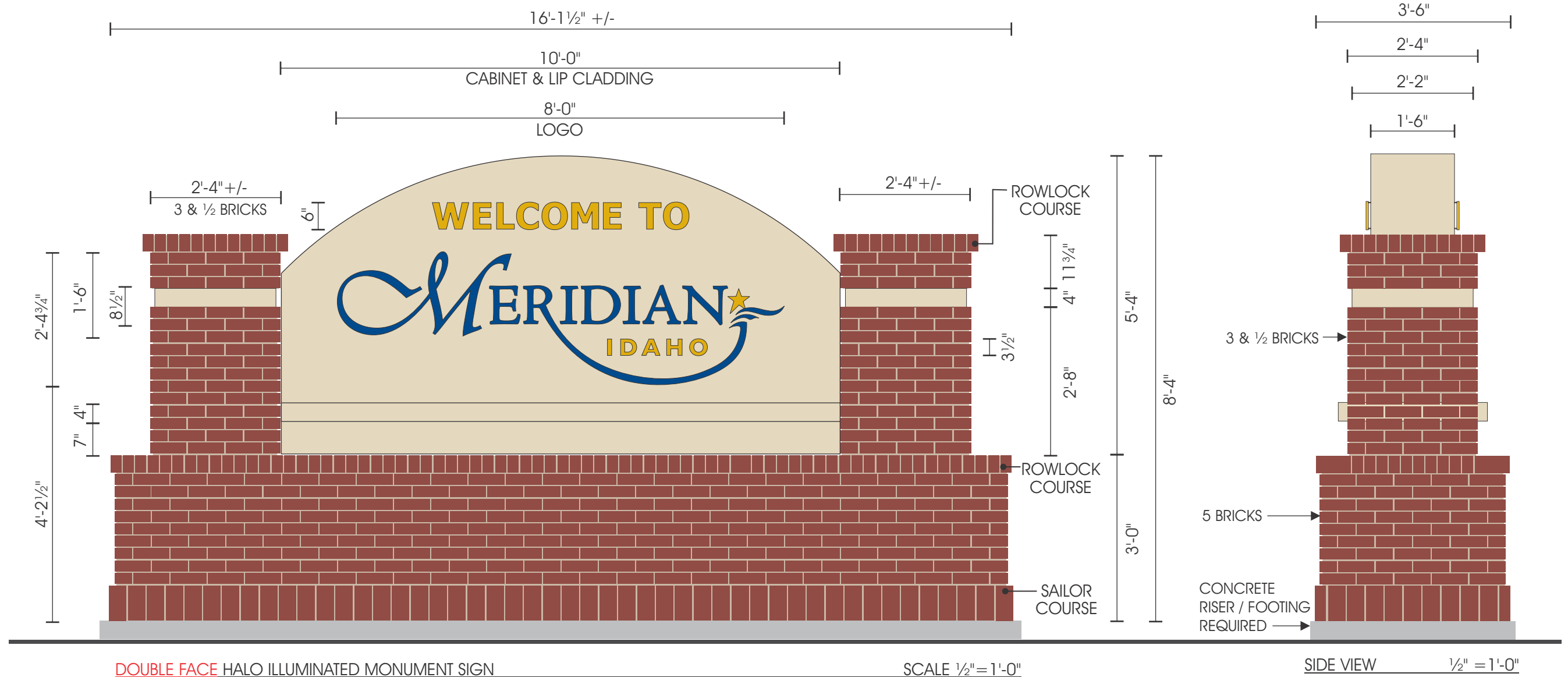
**DATE**

1-23-15

**PAGE #**

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DOUBLE FACE HALO ILLUMINATED MONUMENT SIGN

SCALE 1/2" = 1'-0"

SIDE VIEW 1/2" = 1'-0"

**NOTES:**

**CABINET-**

FABRICATED WITH ALUMINUM FRAME AND SKINNED WITH .080 ALUMINUM SHEETING PAINTED WITH A BEIGE TEXTURED FINISH. SW 6128 BLONDE. SHERWIN-WILLIAMS

**"WELCOME TO" REVERSE PAN LETTERS-** TYPE STYLE IS TAHOMA.

1/2" DEEP FABRICATED STAINLESS STEEL LETTERS. FACES AND RETURNS ARE PAINTED YELLOW TO MATCH PMS 124C. LETTERS ARE PEGGED 1/2" FROM BACKGROUND.

**REVERSE PAN LOGO- "MERIDIAN"**

1/2" DEEP FABRICATED STAINLESS STEEL LETTERS. "MERIDIAN" FACES AND RETURNS ARE PAINTED BLUE TO MATCH PMS 288C. STAR FACE AND RETURNS ARE PAINTED YELLOW TO MATCH PMS 124C.

ALL TO BE PEG MOUNTED 1/2" FROM BACKGROUND. **USE ONLY APPROVED CITY LOGO.**

**HALO ILLUMINATION-** GELCORE TETRA MINI MAX WHITE LEDS OR EQUIVALENT. U.L. LISTED.

**"IDAHO"-** NON-ILLUMINATED FLAT CUT OUT LETTERS

ROUTED FROM 1/2" ALUMINUM PAINTED YELLOW TO MATCH PMS 124C. PEG MOUNTED 1/2" FROM BACKGROUND. FACES TO BE FLUSH WITH REVERSE PAN COPY.

**BOTTOM LIP-** (SEE ADDITIONAL DRAWING)

FABRICATED WITH ALUMINUM FRAME AND SKINNED WITH .080 ALUMINUM SHEETING PAINTED WITH A BEIGE TEXTURED FINISH. SW 6128 BLONDE. SHERWIN-WILLIAMS. LIP BOLTS TO CABINET.

**BRICK MASONRY BASE-** (SEE ADDITIONAL DRAWING FOR BRICK AND COLUMN CAP DETAILS)

MUTUAL MATERIALS MODULAR BRICK. COLOR IS DESERT ROSE. 3/8" JOINTS WITH ADOBE TAN GROUT. JOINTS ARE TO BE IRONED SMOOTH. 4" REVEAL IS CAST CONCRETE 4" THICK X 2'-2" SQUARE.

REVEAL COLOR IS SW 6128 BLONDE. SHERWIN-WILLIAMS. BLOCK BACKER AND FILLER REQUIRED IN BASE, **COLUMNS CORE IS CONCRETE, BLOCK, OR APPROPRIATE BACKER.** WATERPROOFING MASONRY SEALER REQUIRED. **RISER / FOOTING FOR MASONRY BASE IS TO BE ENGINEERED.**

**INSTALLATION-**

CABINET IS ATTACHED TO CENTER PIPE SUPPORT. (SEE ADDITIONAL DRAWING & ENGINEERING) A POLYURETHANE MASONRY SEALANT IS REQUIRED AT ALL CABINET TO MASONRY CONTACT POINTS. JUNCTION BOX ATTACHED TO POLE ABOVE MASONRY CORE WITH LONG SWEEP ELBOW CONDUIT INTO FOUNDATION.





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IDAHO ELECTRIC SIGNS, INC.

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ARE TO ASSIST YOU IN VISUALIZING OUR  
PROPOSAL AND MAY NOT MATCH ACTUAL  
COLORS USED ON THE FINISHED DISPLAY.

**REVISIONS**

2-30-15 (REV #3)  
CHANGED FROM ONE  
PIPE SUPPORT TO TWO  
4" X .237 PIPES AS PER  
ENGINEERING. ADDED  
FOOTING SIZE.  
(SEE ENGINEERING)

All signs are listed by Underwriters  
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installed in accordance with the  
installation instructions and Article  
600 of the National Electric Code

**SALES**

NEIL

**DESIGNER**

RICK BREDE

**SKETCH #**

**RICK'S FILE**

N/A

**CUSTOMER**

CITY OF MERIDIAN

**LOCATION**

MERIDIAN

**DATE**

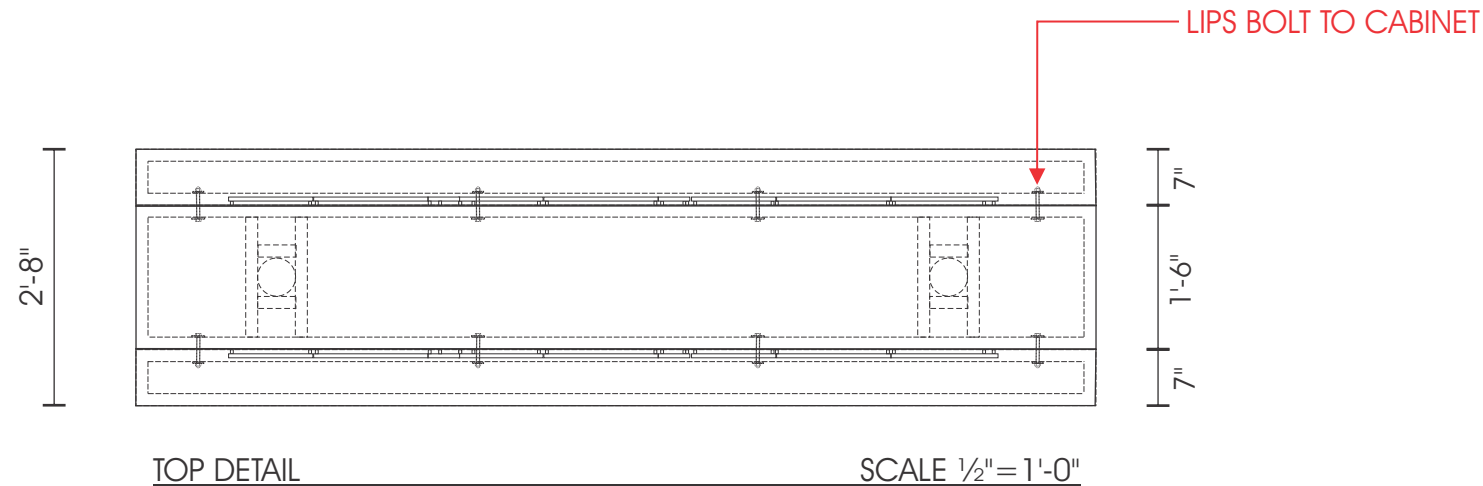
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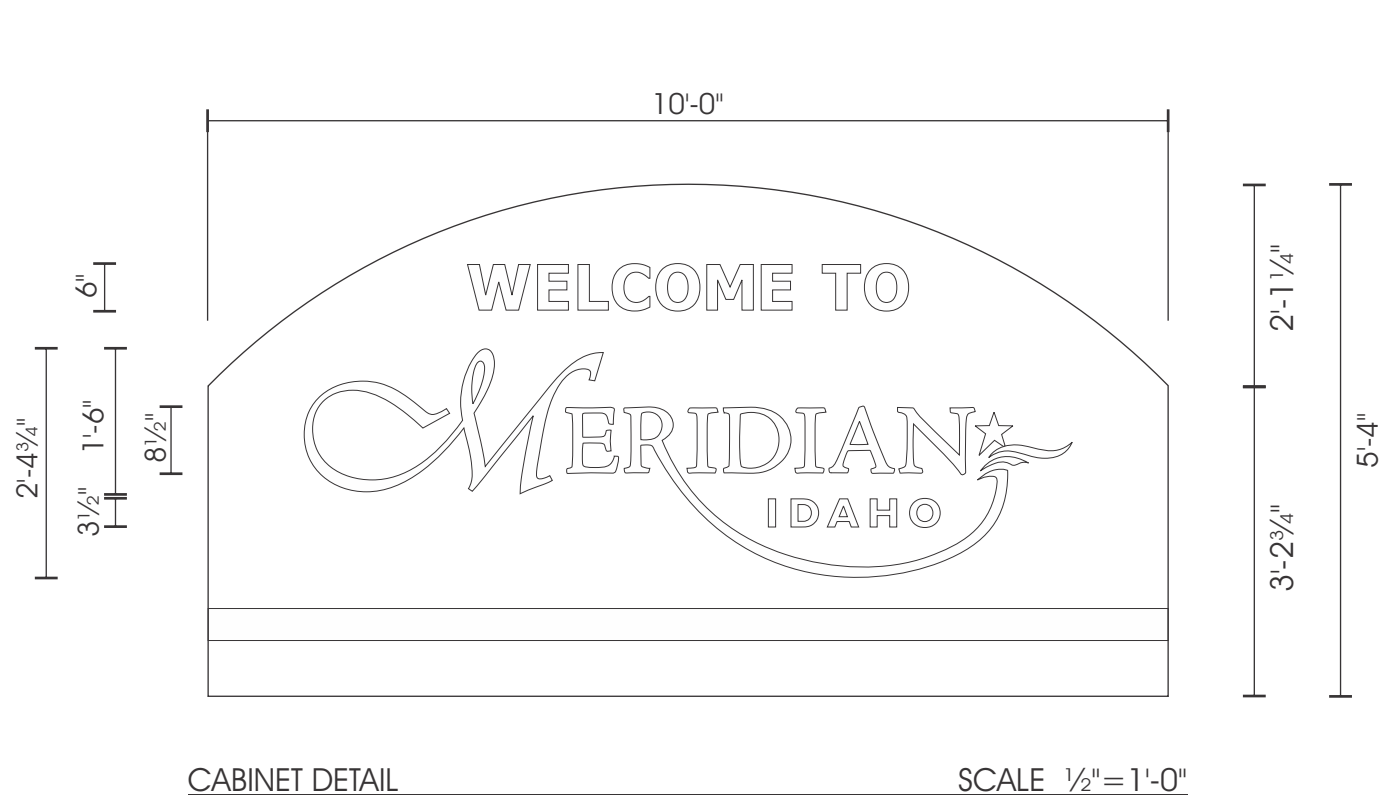
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CABINET AND LIP DETAILS



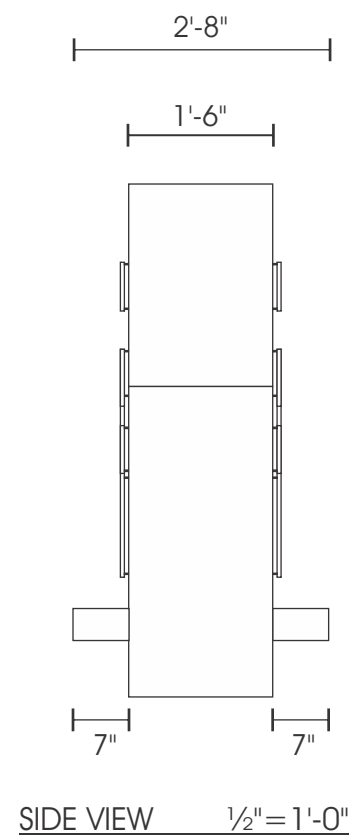
TOP DETAIL

SCALE 1/2" = 1'-0"



CABINET DETAIL

SCALE 1/2" = 1'-0"



SIDE VIEW

1/2" = 1'-0"





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6528 SUPPLY WAY / BOISE, ID 83716

Boise's Only Full Service Sign Company



USING SUSTAINABLE PRODUCTS WHICH PROVIDE SAVINGS BY CONSERVING ENERGY

THIS IS AN UNPUBLISHED DRAWING/DESIGN SUBMITTED FOR YOUR PERSONAL USE IN CONNECTION WITH A PROJECT BEING PLANNED FOR YOU BY IDAHO ELECTRIC SIGNS, INC. AND IS NOT TO BE REPRODUCED, COPIED OR EXHIBITED IN ANY FASHION WITHOUT WRITTEN PERMISSION OF IDAHO ELECTRIC SIGNS, INC.

THE COLORS DEPICTED IN THIS DRAWING ARE TO ASSIST YOU IN VISUALIZING OUR PROPOSAL AND MAY NOT MATCH ACTUAL COLORS USED ON THE FINISHED DISPLAY.

REVISIONS

- 2-30-15 (REV #3)
- CHANGED FROM ONE PIPE SUPPORT TO TWO
- 4" X .237 PIPES AS PER ENGINEERING. ADDED FOOTING SIZE. (SEE ENGINEERING)

All signs are listed by Underwriters Laboratories (U.L.) and will be installed in accordance with the installation instructions and Article 600 of the National Electric Code

SALES

NEIL

DESIGNER

RICK BREDE

SKETCH #

RICK'S FILE

N/A

CUSTOMER

CITY OF MERIDIAN

LOCATION

MERIDIAN

DATE

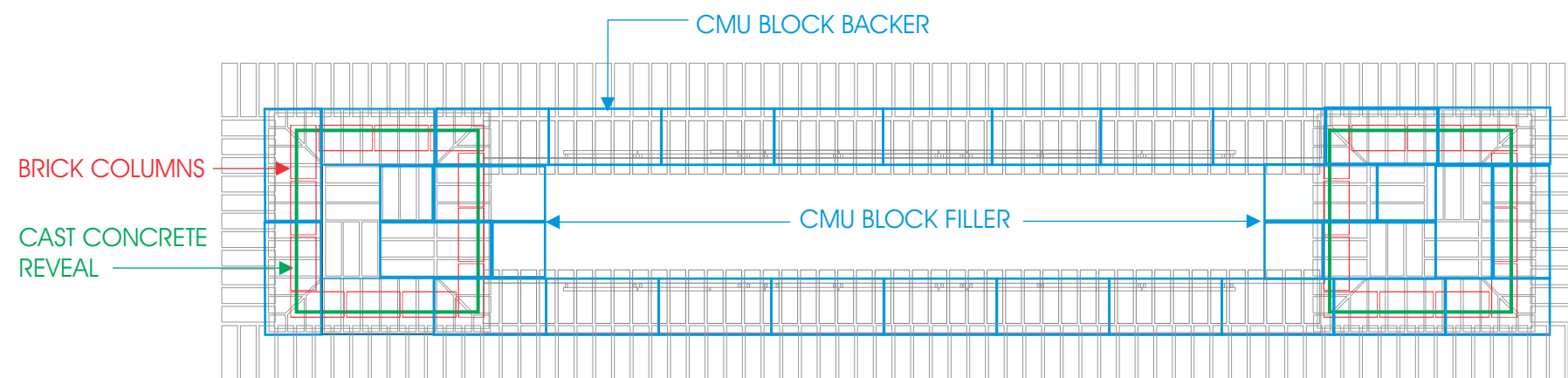
1-23-15

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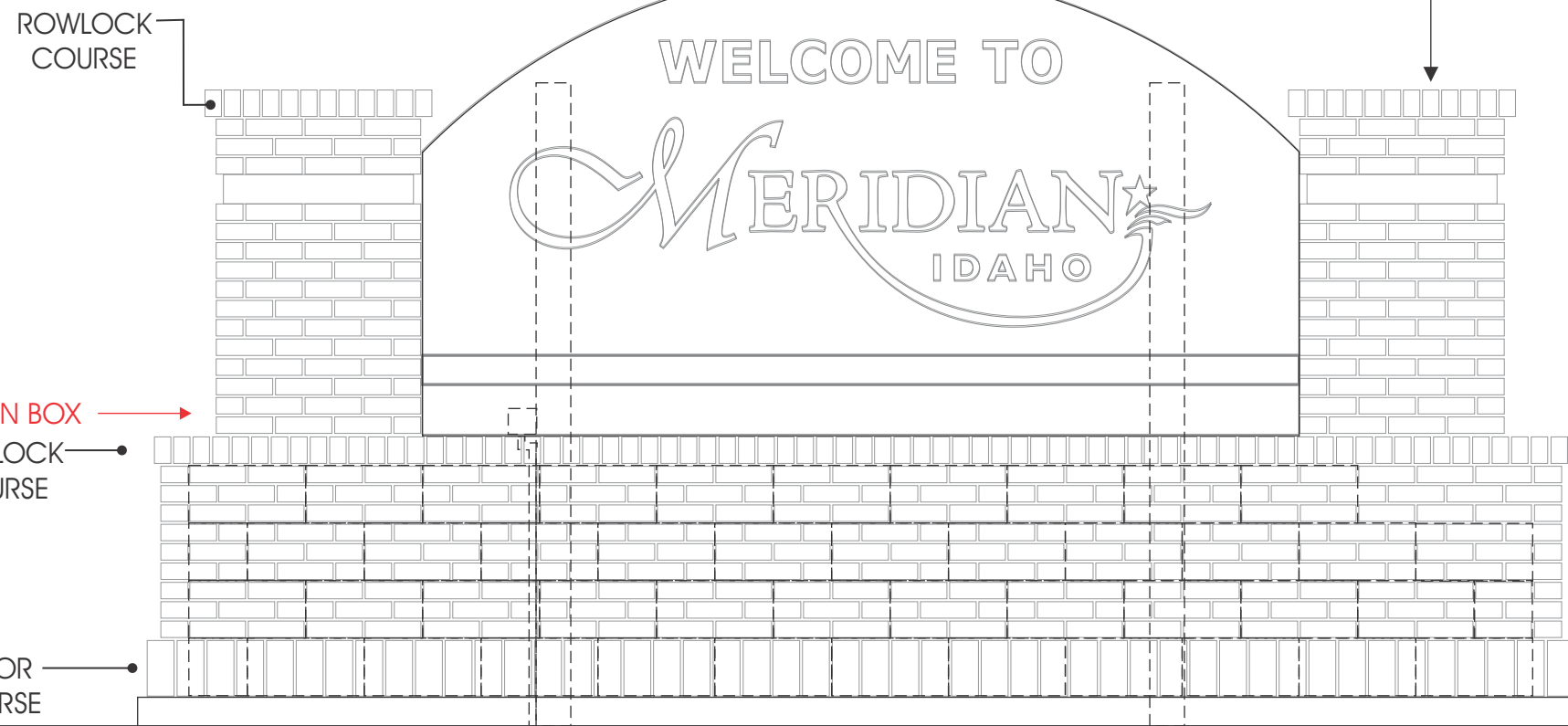
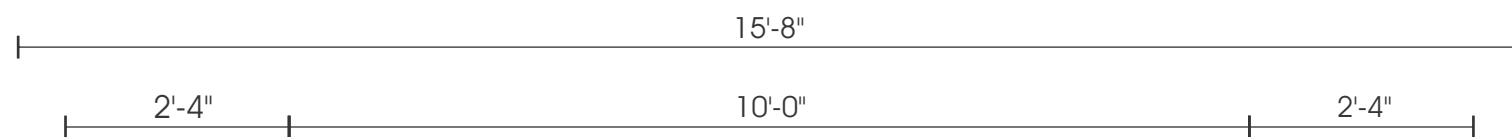
4 OF 5

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BRICK BASE DETAILS

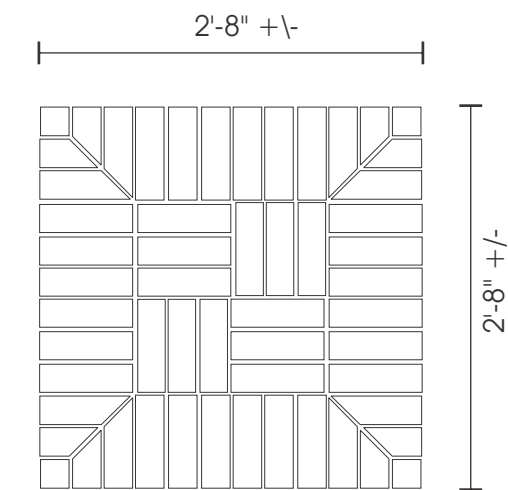


TOP VIEW 1/2" = 1'-0"

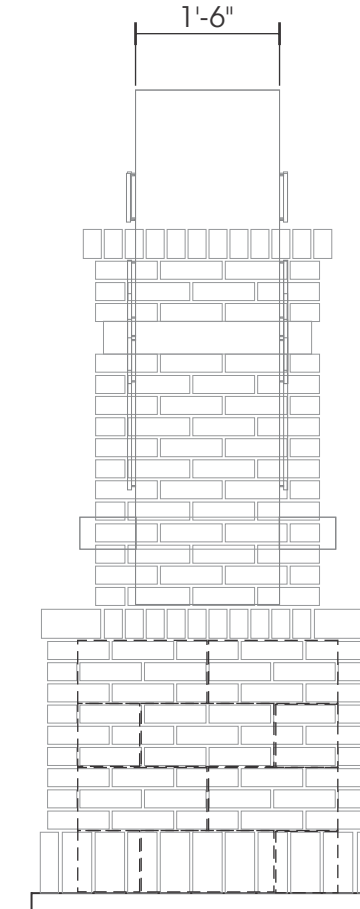
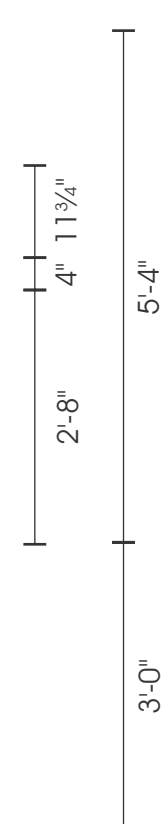
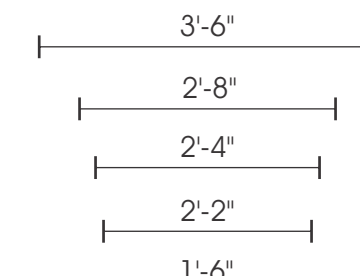


DOUBLE FACE HALO ILLUMINATED MONUMENT SIGN

SCALE 1/2" = 1'-0"



DETAIL - COLUMN CAP 3/4" = 1'-0"



SIDE VIEW 1/2" = 1'-0"



HELPING OUR CUSTOMERS  
SUCCEED FOR 31 YEARS

208-338-9401  
6528 SUPPLY WAY / BOISE, ID 83716

Boise's Only  
Full Service Sign Company



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- PIPE SUPPORT TO TWO
- 4" X .237 PIPES AS PER
- ENGINEERING. ADDED
- FOOTING SIZE.
- (SEE ENGINEERING)

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**CUSTOMER**

CITY OF MERIDIAN

**LOCATION**

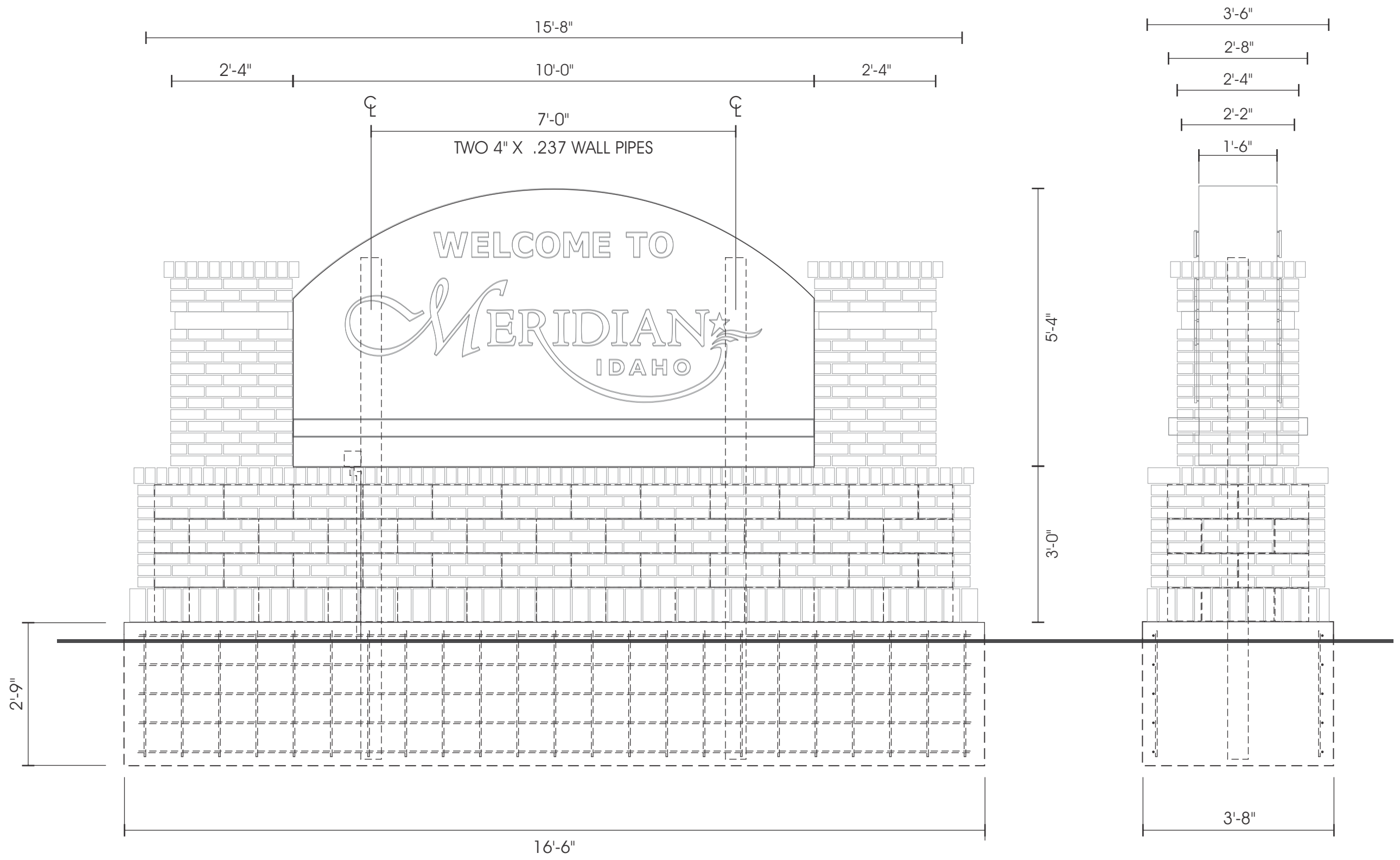
MERIDIAN

**DATE**

1-23-15

**PAGE #**

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**JOHNSON DESIGN & ENGINEERING, PLLC**

1900 N. LAKES PLACE, SUITE 100, MERIDIAN, ID 83646

Office: (208) 939-1045

Cell: (208) 608-0008

E-mail: [tim@jde-idaho.com](mailto:tim@jde-idaho.com)

March 31, 2015

**Idaho Electric Signs**

6528 Supply Way  
Boise, ID 83705

Voice (208) 338-9401

Attn: Rick Berry

**Re: City of Meridian - Meridian, ID**

As you have requested, we have provided the footing and column design for the above mentioned project. Please find the following enclosed as a list of considerations for your use in completing the project:

PDF copy of select structural calculations.

PDF copy of red-lined plans.

If you have any questions or require additional information, please call.

Sincerely,

**JOHNSON DESIGN & ENGINEERING, PLLC**



Tim Johnson, P.E.



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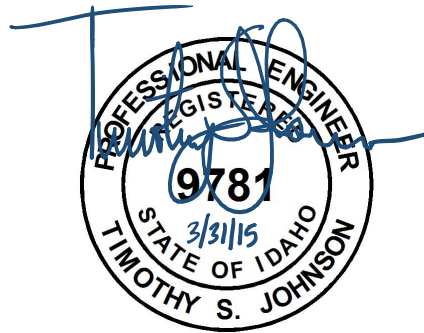
**STRUCTURAL CALCULATIONS**

for

**Idaho Electric Signs**

**City of Meridian - Meridian, ID**

**Select Structural Design**



March 31, 2015

by

**JOHNSON DESIGN & ENGINEERING, PLLC**

1900 N. Lakes Place, Suite 100

Meridian, Idaho 83646

(208) 939-1045

Page 1 of 5

**JOHNSON DESIGN & ENGINEERING, PLLC**  
**1900 N. LAKES PL., SUITE 100 \* MERIDIAN \* IDAHO**

POLE SIGN DESIGN

2012 IBC

**Client:** Idaho Electric Signs  
**Project:** City of Meridian Horizontal Monument Sign  
**Project No.:** 150347  
**Date:** 31-Mar-15

**DESIGN CRITERIA:**

Distance to sign top (h) 9.00 ft.  
 Height (s) 9.00 ft.  
 Width (B) 15.67 ft.  
 s/h 1.00  
 B/s 1.74

**Wind Load:** Basic Wind Speed, V = 115 mph ASCE 7-10, Fig. 26.5-1A  
 Exposure C ASCE 7-10, Sec. 26.7.3  
 Wind Directionality Factor, Kd 0.85 ASCE 7-10, Table 26.6-1  
 Velocity Pressure Exposure Coefficient, Kz = 0.85 ASCE 7-10, Table 30.3-1  
 Velocity Pressure, q = .00256\*Kz\*Kd\*V^2 = 24.46 psf ASCE 7-10, Eq. 29.3-1  
 Force Coefficient, Cf = 1.55 ASCE 7-10, Fig. 29.4-1  
 Gust Factor Coefficient, G = 0.85 ASCE 7-10, Sect. 26.9  
 Design Wind Load, P = q\*G\*Cf\*.63 = 20.30 psf

**Seismic:** Face Area Dead Load, Wt = 20 psf  
 Mapped Spectral Accelerations  
     for short periods, Ss = 1.60 ASCE 7-10, Sec. 11.4.1  
 Site Coefficient, Fa = 1.00 ASCE 7-10, Table 11.4-1  
 Max. Spectral Response, SMS = Fa\*Ss = 1.60 ASCE 7-10, Eq. 11.4-1  
 Design Spectral Response, Sds = 2/3\*SMS = 1.07 ASCE 7-10, Eq. 11.4-3  
 Response Modification Coefficient, R = 2.00 ASCE 7-10 Table 12.2-1  
 Seismic Load, Vs = 1.0\*Sds\*Wt/R = 10.7 psf ASCE 7-10 Eq. 12.14-11

**Soil:** Lateral Loadings Fpv= 200 pcf/ft.  
 Vertical Loadings Fpb= 1500 psf

**Steel Stresses:** Yield Strength, Fy = 36000 psi

Bending Stress, Fb=0.66\*Fy= 23760 psi

**Concrete Stress:** Concrete Strength, Fc' = 2000 psi

Reinforcing Strength, Fy = 40000 psi

MEMBER NO.	BASE HEIGHT (ft)	Pw (lbs)	Y (ft)	Mw (ft-lbs)	Pv (lbs)
1	0.00	2477	4	9883	2440

**SIGN FORCES:**

MEMBER #1	Sign Area #	Area (Af) (ft2)	Centriod (Cf) (ft from base)	Centroid*Area (ft3)
	1	15.00	7.75	116.25
	2	60.00	5.00	300.00
	3	47.00	1.50	70.50
	· Af =	122.00	· Af*Cf =	486.75

Sign Centriod,6 = (·Af\*Cf)/·Af =

3.99 ft.

Wind Load, Pw = ·Af\*Ww =

2476.99 lbs. @ base

Vertical Load, Pv = ·Af\*Wt =

2440.00 lbs. @ base

**JOHNSON DESIGN & ENGINEERING, PLLC**  
**1900 N. LAKES PL., SUITE 100 \* MERIDIAN \* IDAHO**

POLE SIGN DESIGN

2012 IBC

**Client:** Idaho Electric Signs  
**Project:** City of Meridian Horizontal Monument Sign  
**Project No.:** 150347  
**Date:** 31-Mar-15

**COLUMN DESIGN: [Use AISC (1.6-2);  $f_a/F_a + f_b/F_b < 1.33$ ]**  
 Use sign loads at the base of each column member for analysis  
 of each member

<b>MEMBER #1</b>			per member	total
<b>4" Dia x 0.237" Wall</b>		Ax (in <sup>2</sup> ) =	3.17	6.34
<b>Number of Columns 2</b>		Sx (in <sup>3</sup> ) =	3.21	6.42
		ry (in) =	1.16	
<b>K = 2</b>		L unbraced (ft.) =	9.00	
<b>KL/r = (in.)</b>	186	Fa=AISC T.1-36	4320.00	psi
		fa = Pv/Ax =	384.86	psi
		Fb = AISC 1.5 =	23760.00	psi
		fb = Mw/Sx =	18472.12	psi
		fa/Fa + fb/Fb =	0.87	<1.33 OK!

**FOUNDATION DESIGN [IBC -Section 18]**

FOOTING DEPTH =  $A/2(1+(1+(4.36*Y/A))^{0.5})$

2012 IBC Equation 18-1

<b>ASSUMED</b>	Multiple Excavated Footings	# Footings, #F =	1
		Ftg. Width = (ft.)	16.50
		Ftg. Thick = (ft.)	3.67
		Depth = (ft.)	2.75
	A = $(2.34*P_w/\#F)/(S*B)$ =		0.94
	where		
	S = Soil Bearing @ 1/3 Depth =		366.67 (psf)
	B = Effective Footing Width =		16.90 (ft.)
	MINIMUM FOOTING DEPTH = (FT.)		2.54 OK!
	CK. FOOTING AREA REQ'D = $P_v/Ab$		1.63 OK!







MERIDIAN  
IDAHO

VERTICAL ENTRYWAY MONUMENT SIGN







**JOHNSON DESIGN & ENGINEERING, PLLC**

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If you have any questions or require additional information, please call.

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A handwritten signature in blue ink, appearing to read 'Tim Johnson', written over the company name.

Tim Johnson, P.E.



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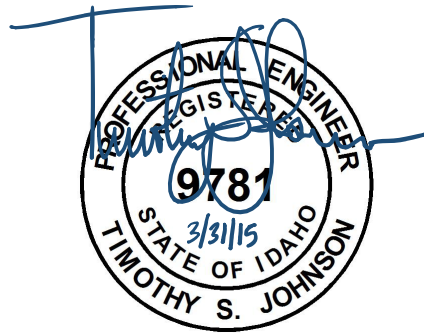
**STRUCTURAL CALCULATIONS**

for

**Idaho Electric Signs**

**City of Meridian - Meridian, ID**

**Select Structural Design**



March 31, 2015

by

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1900 N. Lakes Place, Suite 100

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Page 1 of 5

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2012 IBC

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 Vertical Loadings Fpb= 1500 psf

**Steel Stresses:** Yield Strength, Fy = 36000 psi  
 Bending Stress, Fb=0.66\*Fy= 23760 psi

**Concrete Stress:** Concrete Strength, Fc' = 2000 psi  
 Reinforcing Strength, Fy = 40000 psi

MEMBER NO.	BASE HEIGHT (ft)	Pw (lbs)	Y (ft)	Mw (ft-lbs)	Pv (lbs)
1	0.00	447	6	2457	440

**SIGN FORCES:**

MEMBER #1	Sign Area #	Area (Af) (ft2)	Centriod (Cf) (ft from base)	Centroid*Area (ft3)
	1	22.00	5.50	121.00
	· Af =	22.00	· Af*Cf =	121.00

Sign Centriod,6 = (·Af\*Cf)/·Af = 5.50 ft.  
 Wind Load, Pw = ·Af\*Ww = 446.67 lbs. @ base  
 Vertical Load, Pv = ·Af\*Wt = 440.00 lbs. @ base

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 Use sign loads at the base of each column member for analysis  
 of each member

MEMBER #1			per member	total
4" Dia x 0.237" Wall		Ax (in <sup>2</sup> ) =	3.17	3.17
Number of Columns 1		Sx (in <sup>3</sup> ) =	3.21	3.21
		ry (in) =	1.51	
K = 2		L unbraced (ft.) =	10.00	
KL/r = (in.)	159	Fa=AISC T.1-36	5910.00	psi
		fa = Pv/Ax =	138.80	psi
		Fb = AISC 1.5 =	23760.00	psi
		fb = Mw/Sx =	9183.88	psi
		fa/Fa + fb/Fb =	0.41	<1.33 OK!

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2012 IBC Equation 18-1

<b>ASSUMED</b>	Multiple Excavated Footings	# Footings, #F =	1
		Ftg. Width = (ft.)	2.00
		Ftg. Thick = (ft.)	2.00
		Depth = (ft.)	3.50
	A = $(2.34*P_w/\#F)/(S*B)$ =		0.79
	where		
	S = Soil Bearing @ 1/3 Depth =		466.67 (psf)
	B = Effective Footing Width =		2.83 (ft.)
	MINIMUM FOOTING DEPTH = (FT.)		2.61 OK!
	CK. FOOTING AREA REQ'D = $P_v/Ab$		0.29 OK!



