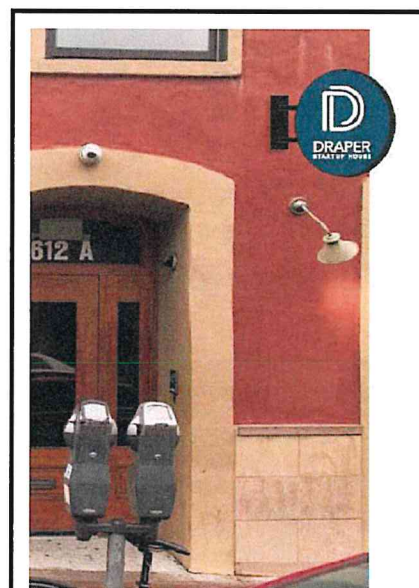
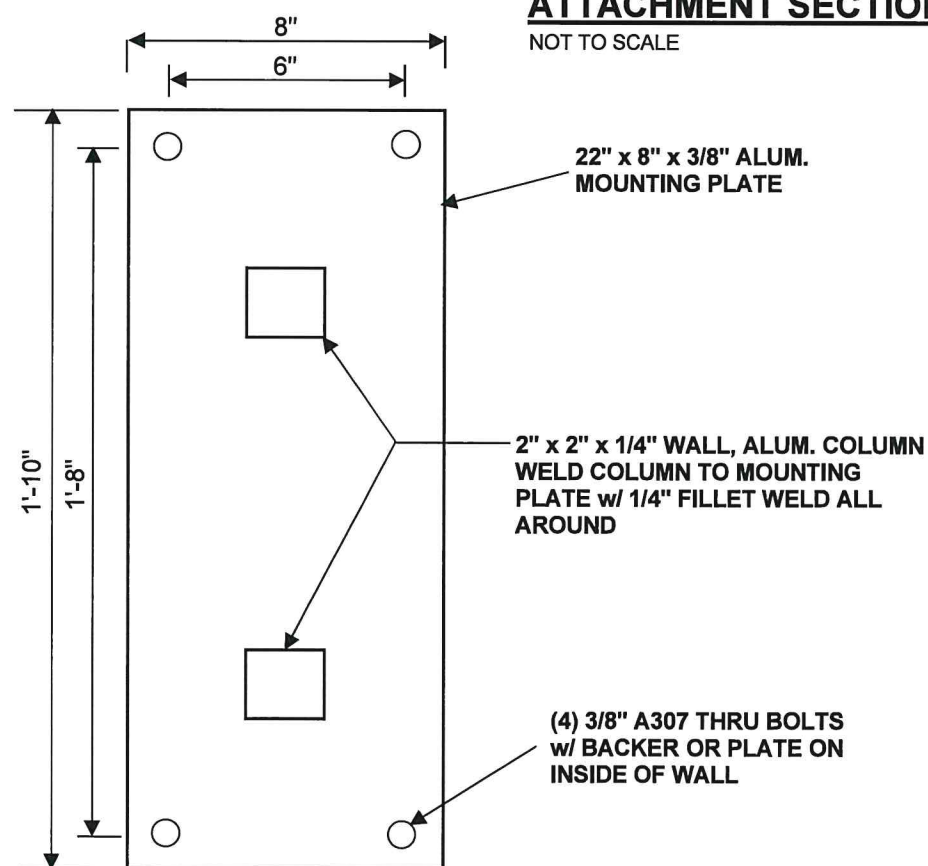


BLADE SIGN ATTACHMENT SECTION

NOT TO SCALE



2015 INTERNATIONAL BUILDING CODE

ref ASCE7-10, local 30psf ASD

SIGN INSTALLER AND MANUFACTURER RESPONSIBILITIES: By using this generic sign attachment engineering the owner, manufacturer, and installer accept responsibility to:

- Design sign faces, letters, cabinets, raceways, and attachment brackets according to sign code, building code, and UL
- Verify site conditions match stated wind speed, risk, exposure and topo factors
- Select approved attachment detail, conforming to this generic attachment engineering, by verifying existing wall; which is not the responsibility of this engineer. In fact materials and construction of existing wall is not known at the time of this seal; for this reason various attachment options for various wall construction types are specified.
- Building design is by the architect of record. By submitting this attachment engineering for permit owner accepts responsibility to verify with architect of record that building structure will support these loads

ENGINEER'S SCOPE OF WORK: This design establishes minimum structural requirements for attachment of generic signs to wall based on stated (not verified) wind & gravity loads.

- Wind controls structural design. This design only MWFRS; not C&C.
- Size, solid area & weight of generic signs is limited as specified in the outline drawing.

3. WIND DESIGN DATA:

- Basic Wind Speed, $V = 115$ MPH (3 second gust, 33ft, Exp. C).
- Risk Category II, (MRI = 700 yr.)
- Wind Directionality Factor, $K_d = .85$, (attached signs)
- Wind Exposure = C, (owner & sign installer must verify)
- Topographic Factor, $K_{zt} = 1.0$, (owner & sign installer must verify)
- Gust-Effect Factor, $G = .85$, (rigid structure)
- Internal Pressure Coefficient, $C_{pi} = N/A$

4. WIND LOADS BY ASCE 7-10 (Ch. 29, Fig. 29.4-1, Solid Freestanding Walls and Signs)

- Sign Height = 20 ft max, $K_z = .90$
- Aspect Ratio, $B/s = 36" / 36" = 1.00$
Clearance Ratio, $s/h = 36" / 47" = 0.78$
Case A&B, $C_f = 1.65$, Case C, $C_f = N/A$
- Velocity Pressure, $q_h = 0.00256 * K_z * K_{zt} * K_d * V^2 = .00256 * .85 * 1 * .85 * 115^2 = 24.4$ psf
- Factored Wind Pressure, $P = q_h * G * C_f = 24.4 * .85 * 1.65 = 34.2$ psf
- Wind Force on Sign, $F = P * A$ (area of sign) =
 $34.2 \text{ psf} * 7.4 \text{ ft}^2 = 253 \text{ lbs} * .6 \text{ (asd)} = 152 \text{ lbs of shear (asd)}$
- Moment at wall = $152 \text{ lbs} * 2.7' = 411 \text{ lb ft (asd) per column}$
- Tension load at fasteners = $411 \text{ lb ft} / .5 = 822 \text{ lbs tension per fastener row}$

5. SIGN COLUMN BENDING AND ATTACHMENT: $M_x = 411 \text{ lb ft}$

- Required $S = M_x / F_{by} / s_f = 411 \text{ lb.ft} / 18 \text{ ksi} / .6 * 12 = 0.456 \text{ in}^3$
2"x2"x1/4" wall thickness Structural aluminum tubing, $S = 2.01 \text{ in}^3$, OK
- 2"x2"x1/4" wall thickness Structural aluminum tubing punch thru and welded front and back to 3/8" aluminum mounting plate with 1/4" continuous fillet weld all around both sides
- Tension load at fasteners = $822 \text{ lb ft} / 2 = 411 \text{ lbs tension per fastener}$
- attachment = 2 rows of (2) fasteners with 411 lbs allowable load 6" oc min. between rows with rows spaced 20" oc

6. Referenced Code Requirements, ASTM specifications, ACI-318 for reinforced concrete, American Welding Society Code for Welding in Building Construction, AISC Specification for Design, Fabrication, and Erection of Structural Steel for Buildings.

7. Wall material specs for attachment only:

- (Building design and structure is by others.)
- CMU shall be 8" ASTM C90 with fasteners in 1.25" face shell.
 - Wood framing shall be 2x4 SPF, 0.42 s.g. w/ fasteners in mid 1/2" of 1.5" edge.
 - Cold Formed Steel Framing shall be .033", 36ksi with fasteners in flange.
 - Wood Structural Sheathing shall be 7/16" OSB or plywood.
 - Concrete shall be 3000 psi min compressive strength.

8. Contractor shall verify all wall materials and construction, dimensions, and conditions in the field before erection and notify the engineer of any discrepancies.

9. FASTENERS: (all allowable loads are per allowable stress design)

- 3/8" A307 STEEL THROUGH BOLTS: (CMU, concrete, frame)
 - For solid walls install w/ nut and 3x3x1/4" washer on back of wall
 - For frame walls install with 2x6 syp#2, 2x2 angle, or 1.5" unistrut cont. blocking on back of wall (cont. blocking must extend past the end of the sign to the next framing member)

Allowable tension load = 500 lb

NOTE: THIS SIGN IS ADDING LOAD TO THE EXISTING BUILDING IT IS THE RESPONSIBILITY OF THE SIGN INSTALLER TO HAVE THE BUILDING DESIGNER VERIFY THAT THE BUILDING CAN SUPPORT THE ADDITIONAL SIGN LOADS

MARK DISOSWAY, PE

disoswaydesign@gmail.com

163 SW Midtown Place, Ste 103

Lake City, Florida 32025

386-754-5419

TXPE102516Firm12568



2/17/2020

This seal for structural engineering
(Attachment ONLY)

CND Signs

JOB#200190

BLADE SIGN ATTACHMENT

Draper
612 E 6th St
Austin, TX 78701

Valid for one sign at this location.



5213 Tucker Hill Ln.
Cedar Creek, TX 78612
512.888.9788
WWW.CNDSIGNS.COM

Draper
612 A 6th Street
Austin, TX

PAGE 2 OF 3

ART
VERSION 200028-5

DATE 02/13/20

SALES Monica

PM PM

DESIGN Jeg

2/18/20 MOUNTING DETAILS

CONCEPTUAL DESIGN ONLY FINAL
DIMENSIONS DETERMINED AT
PRODUCTION.

ALL DESIGNS ARE PROPERTY OF AND FOR
THE SOLE USE OF CND SIGNS. CND SIGNS
RETAINS RIGHTS TO ALL ARTWORK,
DESIGNS AND LAYOUTS UNTIL FURTHER
ARRANGEMENTS ARE MADE IN A
WRITTEN CONTRACTUAL AGREEMENT.
CND SIGNS DOES NOT HESITATE TO
PROSECUTE FOR UNAUTHORIZED
REPRODUCTION OF ITS DESIGNS UPON
DISCOVERY THAT A DESIGN HAS BEEN
SHARED, RECREATED OR REPRODUCED
WITHOUT APPROPRIATE PERMISSIONS.

A / ILLUMINATED BLADE SIGN

FONT: PER ART
Q. FOOTAGE: 9
SCALE: 1/2"=1'-0"

SCOPE OF WORK : FABRICATE AND INSTALL **ONE (1)** SIGN TO SPECIFICATIONS

- 4" DEEP .080 BLACK AND SW 6804 DIGNITY BLUE ALUMINUM CABINET
- "D" LOGO

- .040 FLAT CUT OUT WHITE ALUMINUM
- WHITE FAUX NEON LED

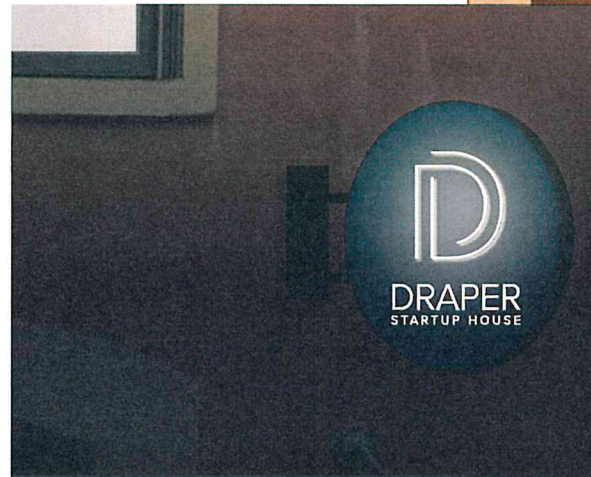
DRAPER & STARTUP HOUSE

- ROUTED OUT LETTERS BACKED WITH WHITE ACRYLIC
- WHITE LED ILLUMINATION
- MOUNTED TO WALL WITH NON CORROSIVE HARDWARE

THE CUSTOMER MUST PROVIDE THE COLORS PRIOR TO FABRICATION
TECHNICAL SURVEY IS REQUIRED PRIOR TO FABRICATION

 SW 6804 DIGNITY BLUE

 MP BLACK



NIGHT VIEW



PROPOSED



Cnd SIGNS DOES NOT provide primary electrical to sign. Power to the sign must be done by a licensed electrical contractor or licensed electrician. Each sign must have: 1. A minimum of two dedicated 120V 20A circuits 2. Junction box installed within 6 feet of sign 3. Three wires: Line, Ground, Neutral
TECL 18581- REGULATED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION P.O. BOX 12157, AUSTIN, TEXAS 78711, 1-800-803-9202, 512-463-6599; WEBSITE: WWW.LICENSE.STATE.TX.US/COMPLAINTS



5213 Tucker Hill Ln.
Cedar Creek, TX 78612

512.888.9788
WWW.CNDSIGNS.COM

Draper
612 A 6th Street
Austin, TX

PAGE 3 OF 3

ART
VERSION 200028-5

DATE 02/13/20

SALES Monica

PM PM

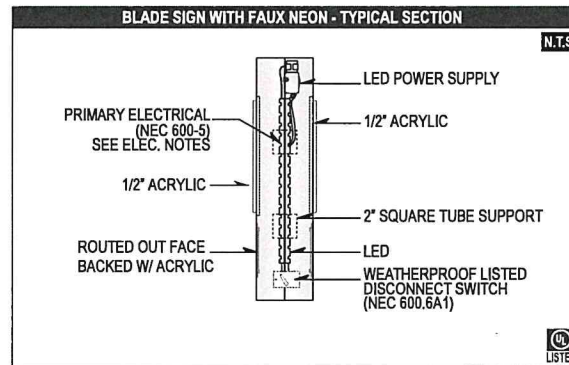
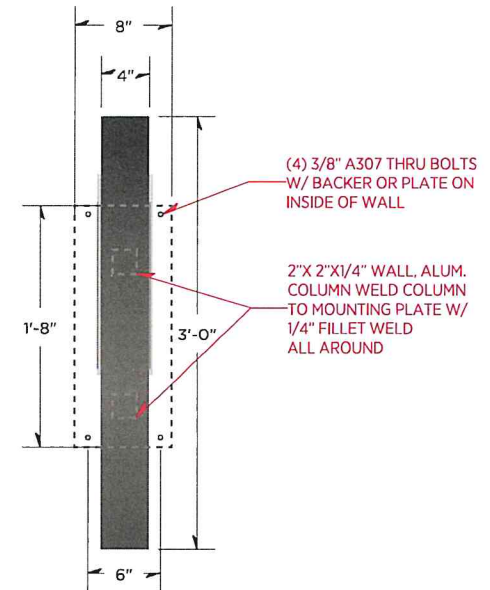
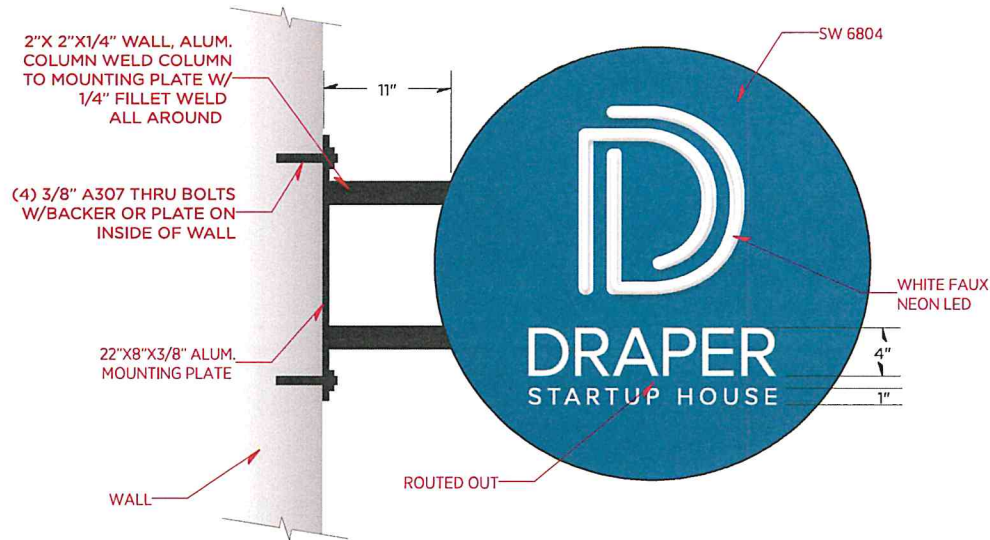
DESIGN Jeg

2/18/20 MOUNTING DETAILS

CONCEPTUAL DESIGN ONLY FINAL
DIMENSIONS DETERMINED AT
PRODUCTION.

ALL DESIGNS ARE PROPERTY OF AND FOR
THE SOLE USE OF CND SIGNS. CND SIGNS
RETAINS RIGHTS TO ALL ARTWORK,
DESIGNS AND LAYOUTS UNTIL FURTHER
ARRANGEMENTS ARE MADE IN A
WRITTEN CONTRACTUAL AGREEMENT.
CND SIGNS DOES NOT HESITATE TO
PROSECUTE FOR UNAUTHORIZED
REPRODUCTION OF ITS DESIGNS UPON
DISCOVERY THAT A DESIGN HAS BEEN
SHARED, RECREATED OR REPRODUCED
WITHOUT APPROPRIATE PERMISSIONS.

SCALE: 1"=1'-0"



Cnd SIGNS DOES NOT provide primary electrical to sign. Power to the sign must be done by a licensed electrical contractor or licensed electrician. Each sign must have: 1. A minimum of two dedicated 120V 20A circuits 2. Junction box installed within 6 feet of sign 3. Three wires: Line, Ground, Neutral
TECL 18581- REGULATED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION P.O. BOX 12157, AUSTIN, TEXAS 78711, 1-800-803-9202, 512-463-6599; WEBSITE: WWW.LICENSE.STATE.TX.US/COMPLAINTS



DRAPER
STARTUP HOUSE

612 A

612 B

Draper Startup House

TEJAS



APPROVED BY
HISTORIC LANDMARK COMMISSION
DATE:
BY: *Steve Sadowsky*
for HLC Chair

APPROVED
By Angela Gaudette at 12:11 pm, Mar 10, 2020



512.888.9788 | 5213 Tucker Hill Ln., Cedar Creek TX 78612 | www.CNDSigns.com





5213 Tucker Hill Ln.
Cedar Creek, TX 78612

512.888.9788

WWW.CND SIGNS.COM

Draper
612 A 6th Street
Austin, TX

PAGE 2 OF 3

ART
VERSION 200060-4

DATE 02/20/20

SALES Monica

PM PM

DESIGN Jeg

DATE REVISION NOTE

CONCEPTUAL DESIGN ONLY FINAL
DIMENSIONS DETERMINED AT
PRODUCTION.

ALL DESIGNS ARE PROPERTY OF AND FOR
THE SOLE USE OF CND SIGNS. CND SIGNS
RETAINS RIGHTS TO ALL ARTWORK,
DESIGNS AND LAYOUTS UNTIL FURTHER
ARRANGEMENTS ARE MADE IN A
WRITTEN CONTRACTUAL AGREEMENT.
CND SIGNS DOES NOT HESITATE TO
PROSECUTE FOR UNAUTHORIZED
REPRODUCTION OF ITS DESIGNS UPON
DISCOVERY THAT A DESIGN HAS BEEN
SHARED, RECREATED OR REPRODUCED
WITHOUT APPROPRIATE PERMISSIONS.

A/ ILLUMINATED SIGN

FONT: PROXIMA NOVA
SQ. FOOTAGE: 19.47
SCALE: 1/8"=1'-0"

SCOPE OF WORK : FABRICATE AND INSTALL **ONE (1)** SIGN TO SPECIFICATIONS

LOGO & DRAPER

- 3/16" CLEAR LEXAN BACKS
- .063 RETURNS FINISHED IN SW 6804 DIGNITY BLUE
- .090 ALUMINUM FACES FINISHED SW 6804 DIGNITY BLUE
- **BLUE AND WHITE LED**
- INDIVIDUAL MOUNTED WITH STANDOFFS
- INTERIORS FINISHED MP WHITE FOR LIGHT ENHANCEMENT

STARTUP HOUSE

- 1/4" FLAT CUT OUT ALUMINUM LETTERS FINISHED SW 6804 DIGNITY
MOUNTED ON ALUMINUM RAIL FINISHED TO MATCH FACADE COLOR
ATTACHED TO WALL WITH WHITE LED INDIRECT ILLUMINATION

MINIMUM ELECTRICAL REQUIREMENTS:

ONE (1) 120V 20A DEDICATED CIRCUITS WITHIN 6' OF SIGN, INSTALLED BY OTHERS
NOTE: CONFIRM NUMBER OF CIRCUITS PRIOR TO INSTALLATION

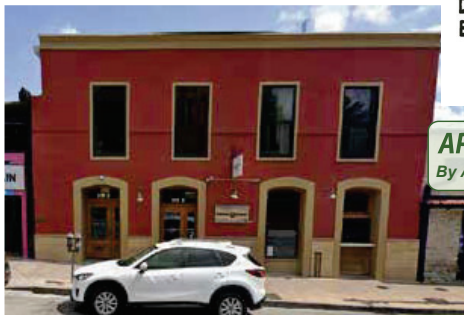
TECHNICAL SURVEY IS REQUIRED PRIOR TO FABRICATION



APPROVED BY

HISTORIC LANDMARK COMMISSION

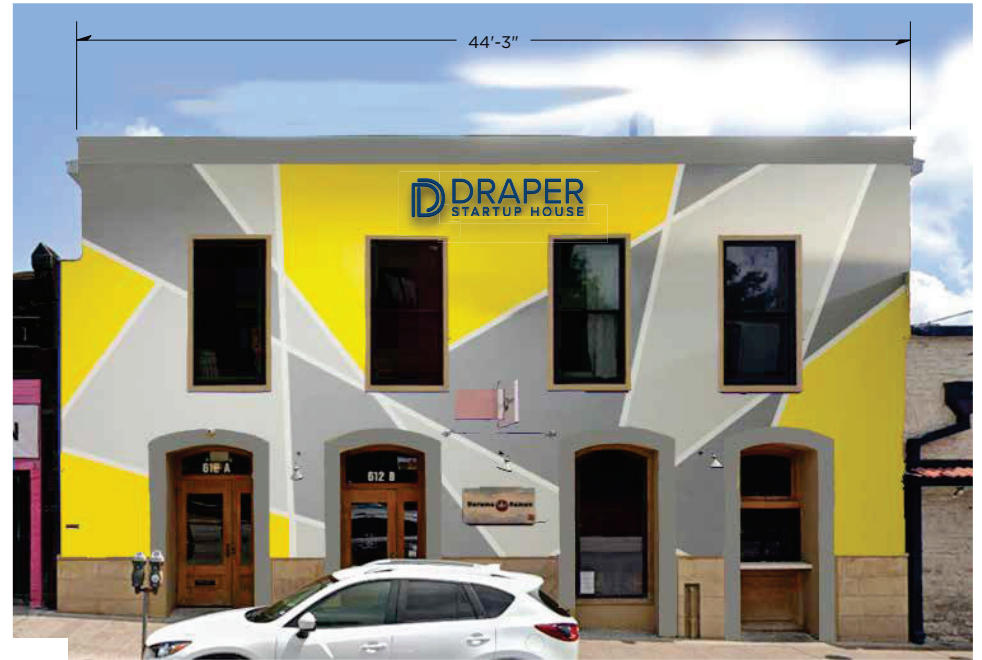
DATE:
BY: *Steve Sedovsky*
for HLC Chair



EXISTING

APPROVED

By Angela Gaudette at 12:11 pm, Mar 10, 2020



PROPOSED



NIGHT VIEW



Cnd SIGNS DOES NOT provide primary electrical to sign. Power to the sign must be done by a licensed electrical contractor or licensed electrician. Each sign must have: 1. A minimum of two dedicated 120V 20A circuits 2. Junction box installed within 6 feet of sign 3. Three wires: Line, Ground, Neutral
TECL 18581- REGULATED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION P.O. BOX 12157, AUSTIN, TEXAS 78711, 1-800-803-9202, 512-463-6599; WEBSITE: WWW.LICENSE.STATE.TX.US/COMPLAINTS



5213 Tucker Hill Ln.
Cedar Creek, TX 78612
512.888.9788
WWW.CNDSIGNS.COM

Draper
612 A 6th Street
Austin, TX

PAGE 3 OF 3

ART
VERSION 200060-4

DATE 02/20/20

SALES Monica

PM PM

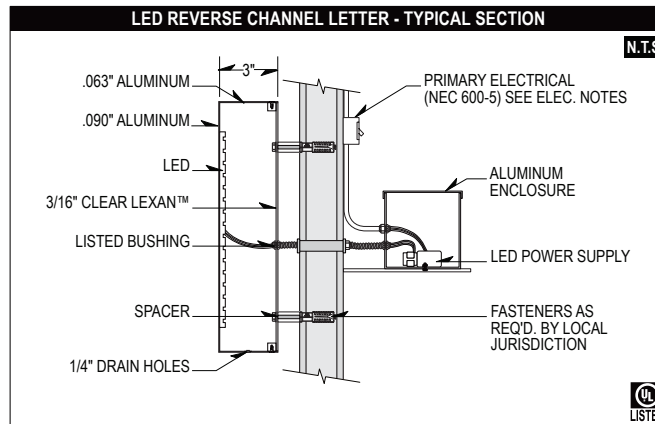
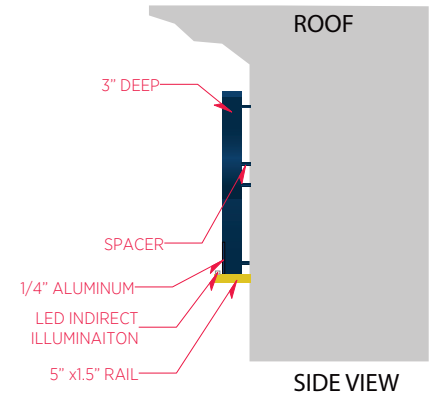
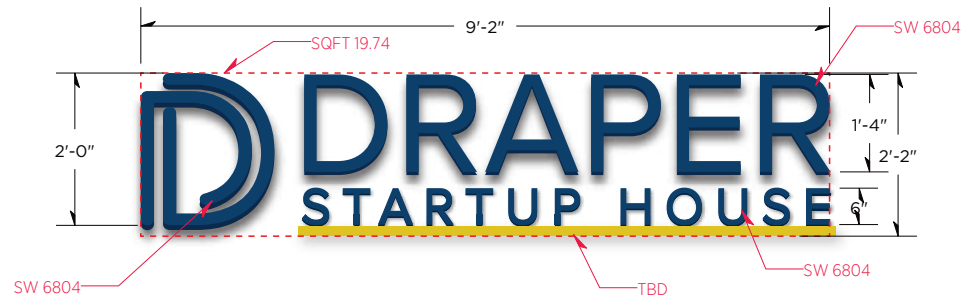
DESIGN Jeg

DATE REVISION NOTE

CONCEPTUAL DESIGN ONLY FINAL
DIMENSIONS DETERMINED AT
PRODUCTION.

ALL DESIGNS ARE PROPERTY OF AND FOR
THE SOLE USE OF CND SIGNS. CND SIGNS
RETAINS RIGHTS TO ALL ARTWORK,
DESIGNS AND LAYOUTS UNTIL FURTHER
ARRANGEMENTS ARE MADE IN A
WRITTEN CONTRACTUAL AGREEMENT.
CND SIGNS DOES NOT HESITATE TO
PROSECUTE FOR UNAUTHORIZED
REPRODUCTION OF ITS DESIGNS UPON
DISCOVERY THAT A DESIGN HAS BEEN
SHARED, RECREATED OR REPRODUCED
WITHOUT APPROPRIATE PERMISSIONS.

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



APPROVED BY
HISTORIC LANDMARK COMMISSION
DATE:
BY: *Steve Sedowsky*
for HLC Chair

APPROVED
By Angela Gaudette at 12:11 pm, Mar 10, 2020



Cnd SIGNS DOES NOT provide primary electrical to sign. Power to the sign must be done by a licensed electrical contractor or licensed electrician. Each sign must have: 1. A minimum of two dedicated 120V 20A circuits 2. Junction box installed within 6 feet of sign 3. Three wires: Line, Ground, Neutral
TECL 18581- REGULATED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION P.O. BOX 12157, AUSTIN, TEXAS 78711, 1-800-803-9202, 512-463-6599; WEBSITE: WWW.LICENSE.STATE.TX.US/COMPLAINTS