



SINGLE 55"

Modular Range

Hot-dipped galvanized frame

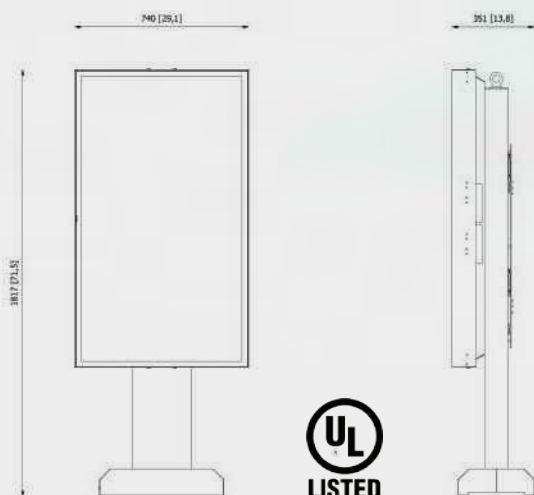
Aluminum panels

Modular Mounting Structure

Allows for various screen sizes with panel/mount replacement

Option for crane in or manual 2 person assembly

Currently designed for the Samsung OHF panel but mounting hardware can be modified for alternate screen specifications in future





DOUBLE 55"

Modular Range

Hot-dipped galvanized frame

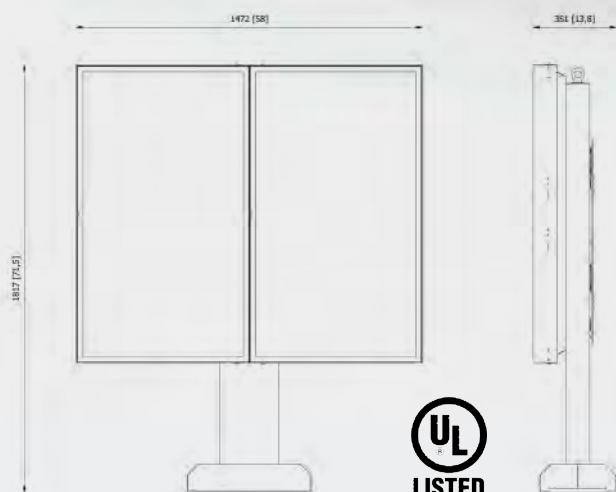
Aluminum panels

Modular Mounting Structure

Allows for various screen sizes with panel/mount replacement

Option for crane in or manual 2 person assembly

Currently designed for the Samsung OHF panel but mounting hardware can be modified for alternate screen specifications in future





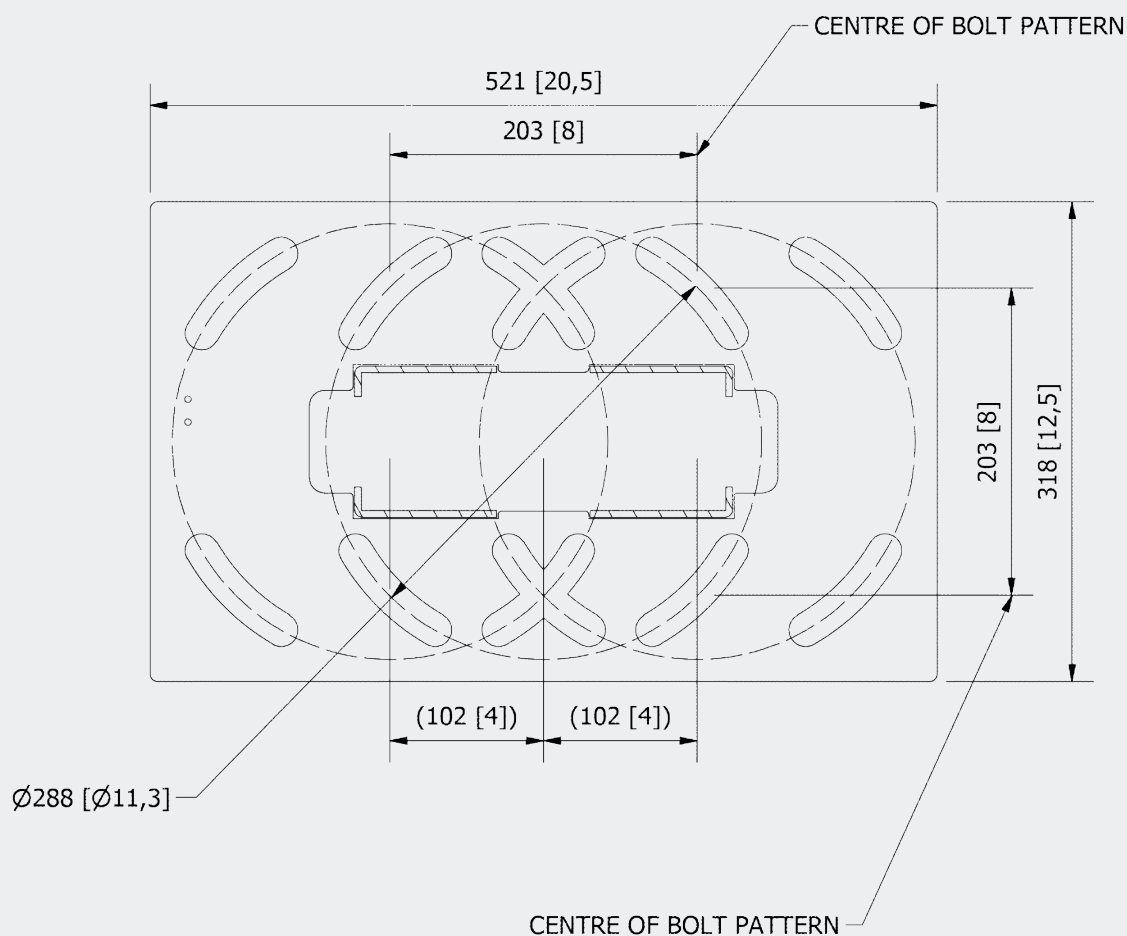
BASEPLATE

Single & Double

Single and double units share the same baseplate detail

Baseplate designed for McD existing triple 8 x 8 mounting patterns

There is angle adjustment in both directions post-installation to ensure the best screen viewing angle for drivers



3M™ Wireless Communication System Model XT-1

Technical Data

3M Wireless Communications System Model XT-1's Night Volume feature to comply with City Decibel Level output ordinance.

With the concern over environmental noise today, many communities restrict the audio level of drive-thru intercom systems during normal day-time business hours and for business operations during night time. Usually, this audio level is specified to be below some number at the property line.

Audio levels are measured in terms of "Sound Pressure Level" with the unit of change being the "Decibel". For example, the city of South Plainfield, NJ requires that sound levels not exceed 65 decibels SPL (sound pressure level) in an industrial area. Taking this into consideration, 3M intercom systems provide an adjustable menu speaker volume to assure compliance with city sound ordinances.

The 3M XT-1 Intercom System can be adjusted at installation to produce an audio sound pressure level of 65 decibels (*) at a distance of 4 feet on axis to the center of the speaker. It is VERY easy for the installation company to verify this reading using an Audio dB meter (set to A weighing, slow response). Please note that sound diminishes at the rate of 6 decibels every time the distance from the sound source is doubled. So, at a distance of 8 feet, the level is 59 decibels, at 16 feet it is 53 decibels and so on.

The 3M XT-1 Intercom System also provides an AUTOMATIC reduction of sound volume for night time operation to maintain compliance with cities that require lower operating sound levels after normal business hours. This feature assures compliance 24 hours a day.

To give you a reference of comparative audio levels, please peruse the attached list of typical sound levels. Be aware that acoustic barriers (shrubby, trees, fences, walls, etc) will reduce the distance faster than shown in the chart.

(* These level measurements assume the use of recommended 3M components.)



Building and Commercial Services Division

St. Paul, MN 55144-1000

1-800-328-0033

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Table of Sound Levels and Corresponding Sound Pressure and Sound Intensity

To get a feel for decibels, look at the table below which gives values for the sound pressure levels of common sounds in our environment. Also shown are the corresponding sound pressures and sound intensities.

From these, you can see that the decibel scale gives numbers in a much more manageable range.

Chart of sound levels L and corresponding sound pressure and sound intensity			
Examples	Sound Pressure Level dB SPL	Sound Pressure p $\text{N/m}^2 = \text{Pa}$	Sound Intensity I watts/m^2
Jet aircraft, 50 m away		200	100
Threshold of pain		63.2	10
Threshold of discomfort		20	1
Chainsaw 1 m distance	110	6.3	0.1
Disco, 1 m from speaker	100	2	0.01
Diesel truck, 10 m away	90	0.63	0.001
Curbside of busy road, 5 m	80	0.2	0.0001
Vacuum cleaner, distance 1 m	70	0.063	0.00001
Conversational speech, 1 m	60	0.02	0.000001
Average home	50	0.0063	1E-07
Quiet library	40	0.002	1E-08
Quiet bedroom at night	30	0.00063	1E-09
Background in TV studio	20	0.0002	1E-10
Rustling leaf	10	0.000063	1E-11
Threshold of hearing	0	0.00002	1E-12



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A given sound pressure level L_p in dBSPL without the distance of the measurement to the specific sound source is useless.

The reference for 0 dBSPL sound pressure level is $p = 20 \mu\text{Pa} = 2 * 10^{-5}$ pascal, the threshold of hearing.

The sound pressure level decreases in the free field with 6dB per distance doubling.

That is the $1/r$ law.

Often it is argued the sound pressure would decrease after the $1/r^2$ law (inverse square law).

That is wrong.

The sound pressure in a free field is inversely proportional to the distance from the mic to the source.

$p \sim 1/r$

Distance From Menu Post	3M Intercom SPL (dB)
4'	65
8'	59
16'	53
32'	47
64'	41
128'	35
256'	29
512'	23
1024'	17
2048'	11
4096'	5

Note: 20 dB is approximately the threshold of hearing. This occurs at approximately 700 feet from the speaker post in a very QUIET environment. In an environment of average traffic noise, a 35 dB limit is virtually inaudible and should be considered the practical limit. This occurs at approximately 125 feet from the speaker post.



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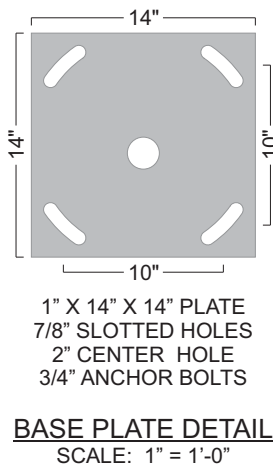
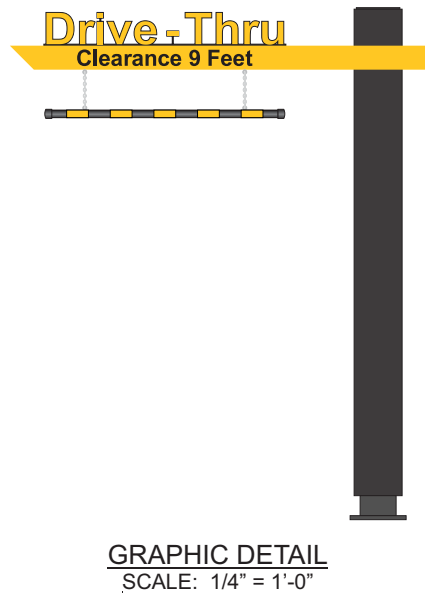
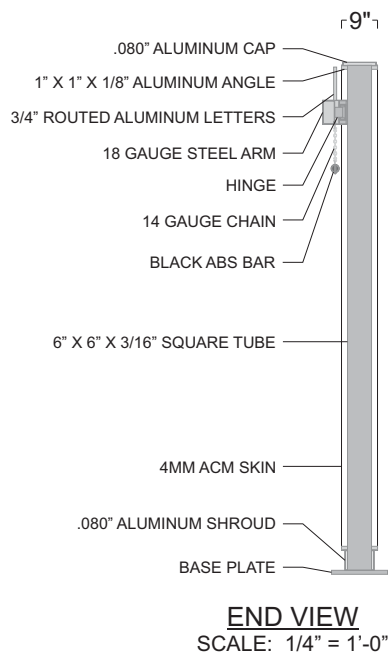
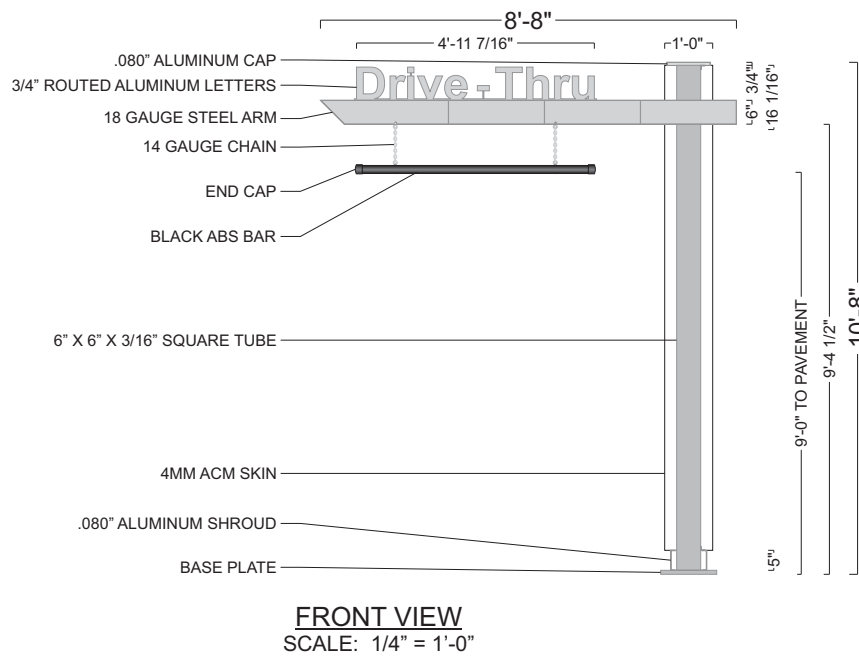
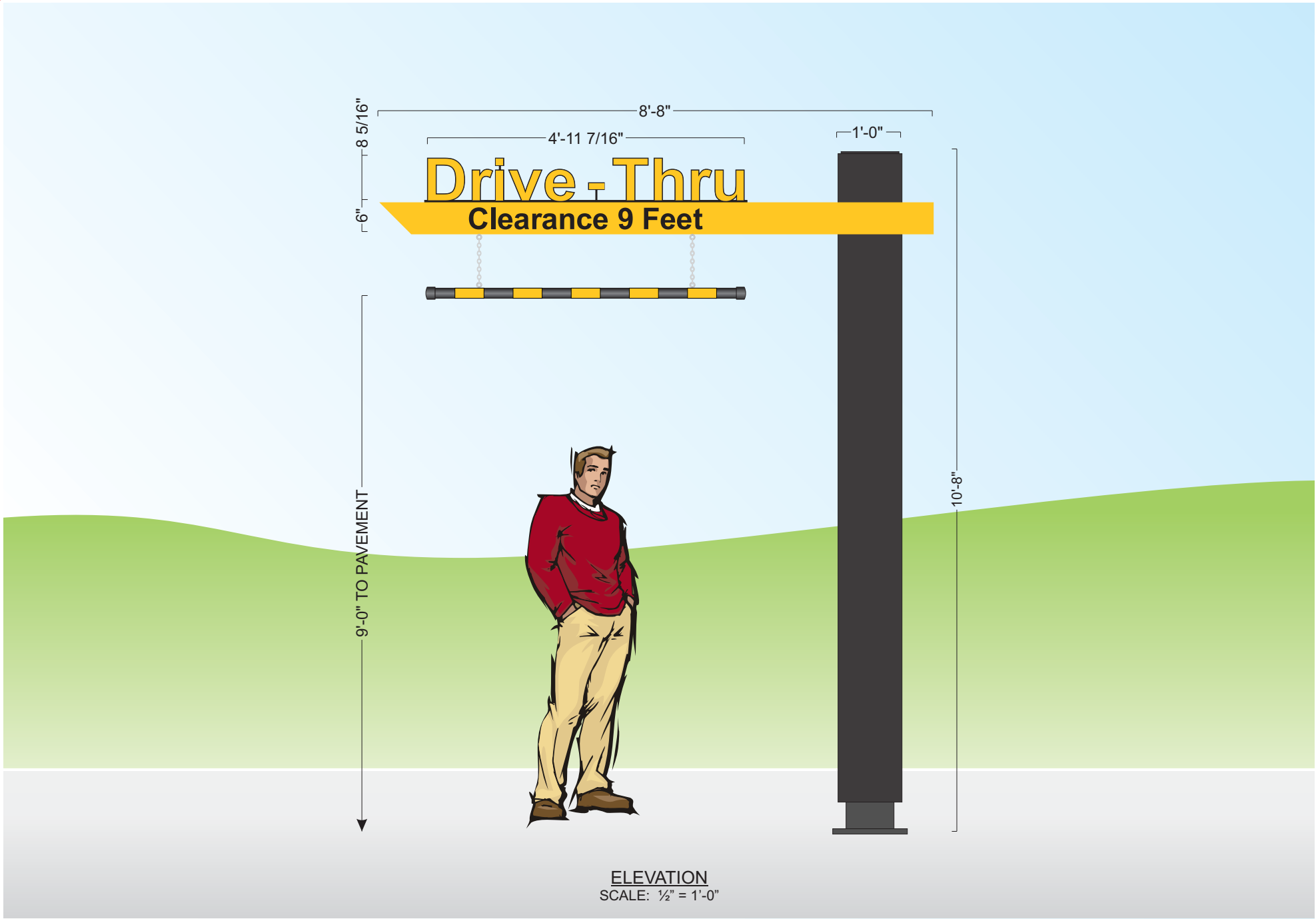
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POLE COVER DETAIL
DESIGN FACTOR: TBD
4MM CHARCOAL ACM POLE COVER
.080" ALUMINUM CAP AND SHROUD
EXTERIOR FINISH:
POLE COVER - PRE-FINISHED CHARCOAL
SHROUD AND BASE PLATE - MATCH B.M. 1631 MIDNIGHT OIL

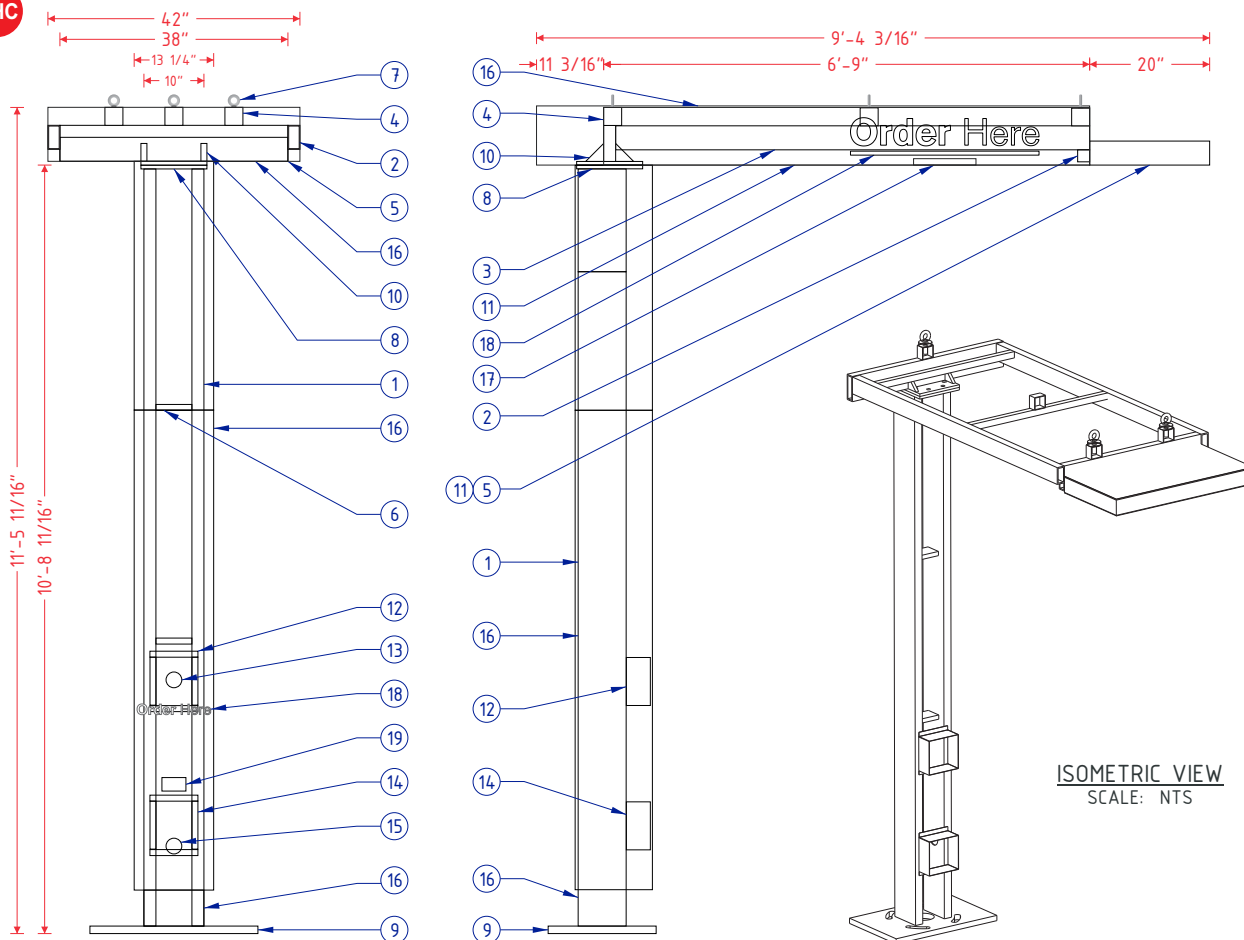
CLEARANCE BAR DETAIL
BLACK ACM PIPE W/ 180-25 GOLD VINYL STRIPES APPLIED TO 1ST SURFACE

SQUARE FEET: BOXED = 92.44
ACTUAL = 15.68

SWING ARM DETAIL
DESIGN FACTOR: TBD
18 GAUGE STEEL ARM WITH HINGE W/ 1ST SURFACE PAINT AND VINYL DECORATION:
MATCH PMS 123 C YELLOW - SWING ARM
7725-12 BLACK - "CLEARANCE 9 FEET" COPY

"DRIVE-THRU" LETTER DETAIL
3/4" ROUTED ALUMINUM LETTERS W/ 1ST SURFACE VINYL DECORATION:
180-25 GOLD - "DRIVE-THRU" COPY
BLACK - COPY OUTLINE

OHC



FRAME & LAMP DETAIL

SCALE: 3/8" = 1'-0"

18" X 28" X 1 1/4" PLATE
1 3/8" SLOTTED HOLES
1" BOLTS

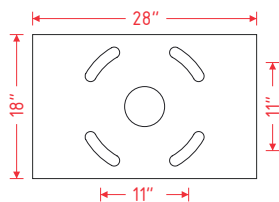


PLATE DETAIL

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

11" X 11" X 5/8" PLATE
3/4" HOLES
5/8" BOLTS

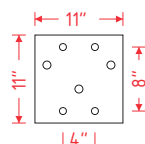


PLATE DETAIL

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

CROSS SECTION A-A

SCALE: 3/8" = 1'-0"

ISOMETRIC VIEW
SCALE: NTS

Order Here

GRAPHIC DETAIL
SCALE: 3/16" = 1'-0"

MCDONALD'S SPRINGBOARD OHC SPECIFICATIONS

NO.	PART/DESCRIPTION
1	2" X 8" X 3/16" RECTANGULAR TUBE
2	2" X 6" X 1/4" RECTANGULAR TUBE
3	2" X 4" X 1/4" RECTANGULAR TUBE
4	3" X 3" X 3/16" SQUARE TUBE
5	1" X 4" X 1/8" RECTANGULAR TUBE
6	C4 ALUMINUM C-CHANNEL
7	1/2" EYEBOLTS (3)
8	11" X 11" X 5/8" TOP PLATES (2) (SEE PLATE DETAILS)
9	18" X 28" X 1 1/4" BASE PLATE (SEE PLATE DETAILS)
10	3" X 3" X 3/4" GUSSETS
11	.063" ALUMINUM SKIN
12	.063" ALUMINUM BENT SP10 SPEAKER BOX HOLDER
13	SPEAKER OPENING
14	.063" ALUMINUM BENT DM 4/DM 5 MICROPHONE BOX HOLDER
15	MICROPHONE OPENING
16	ACM CLADDING
17	SLOAN LED LIGHT WITH POWER SUPPLY
18	REFLECTIVE WHITE 680-10 VINYL
19	ADA STICKER

NOTES:

- DESIGN FACTOR: TO BE DETERMINED
- 2" X 8" X 3/16 RECTANGULAR TUBE FRAME
- ACM AND .063" ALUMINUM SKIN
- EXTERIOR FINISH:
 - BASE PLATE - PAINT BM 1631 MIDNIGHT OIL
 - TUBE AND TOP ACM - PAINT CHARCOAL
 - SPRINGBOARD TIP AND UNDERSIDE - PAINT PMS 123 C GOLD
- ACM/SKIN REMOVABLE FOR SERVICE
- U.L. LISTED
- ELECTRICAL: 0.64 AMPS/120 VOLTS

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