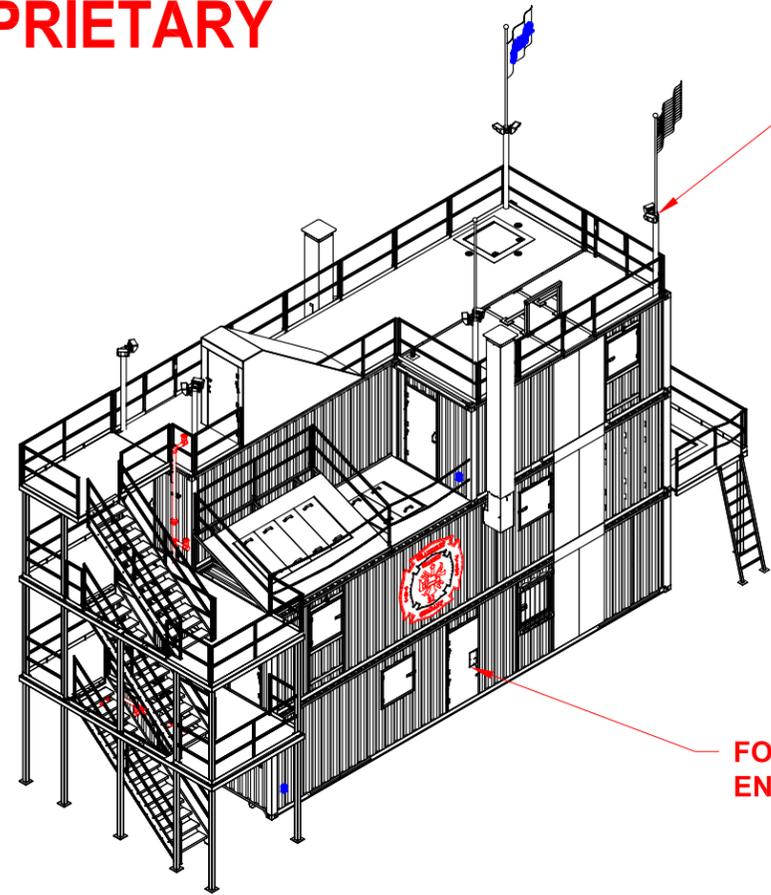
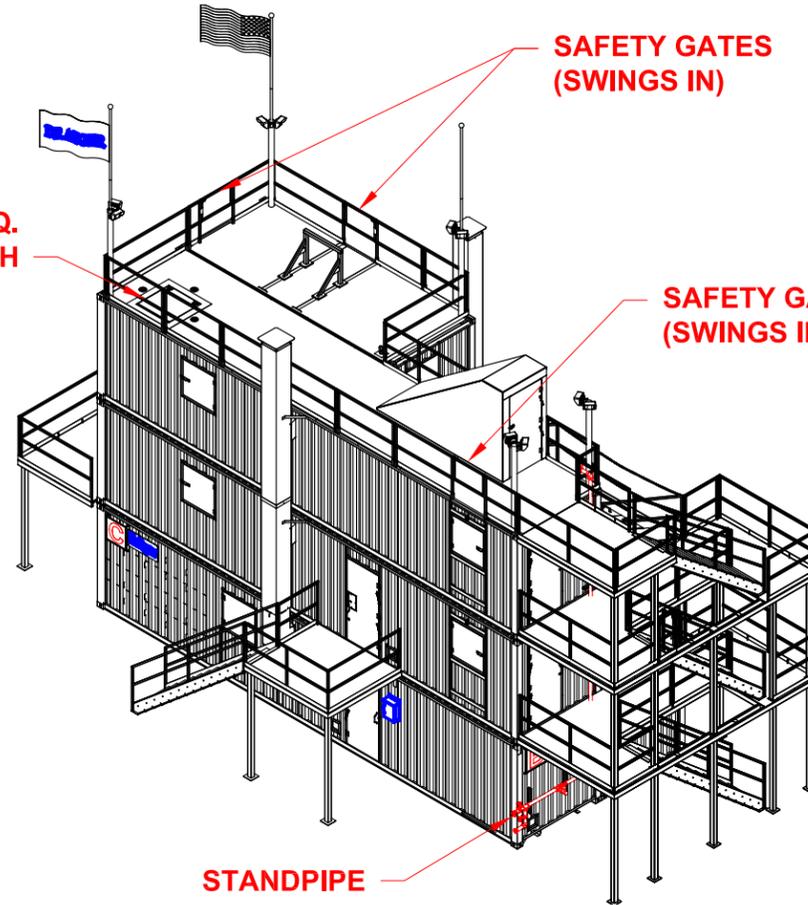


PROPRIETARY



**EXTERIOR LIGHTING
(QTY & LOCATION TBD)**

**FORCIBLE
ENTRY DOOR**

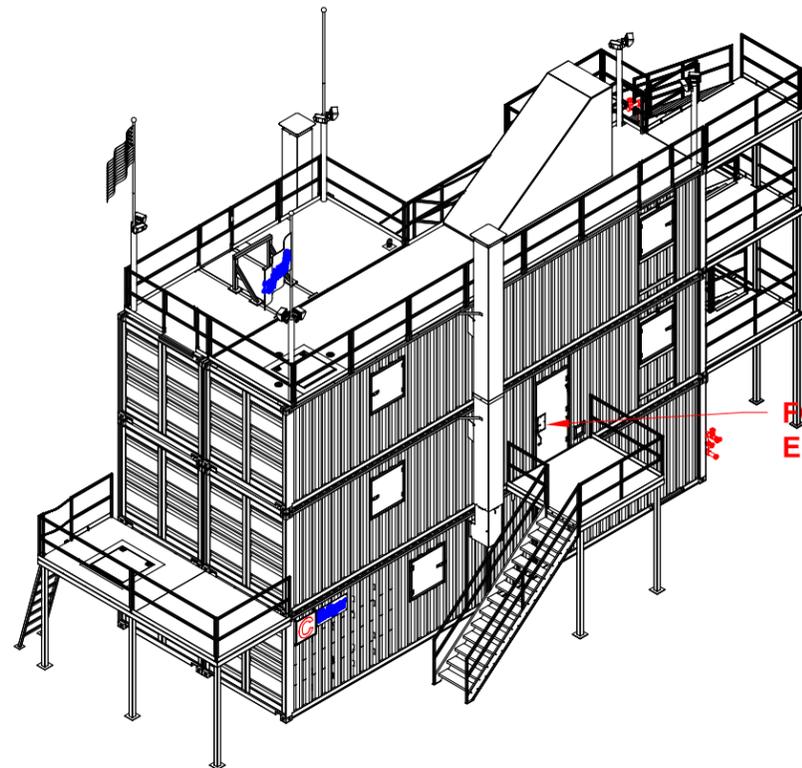


**SAFETY GATES
(SWINGS IN)**

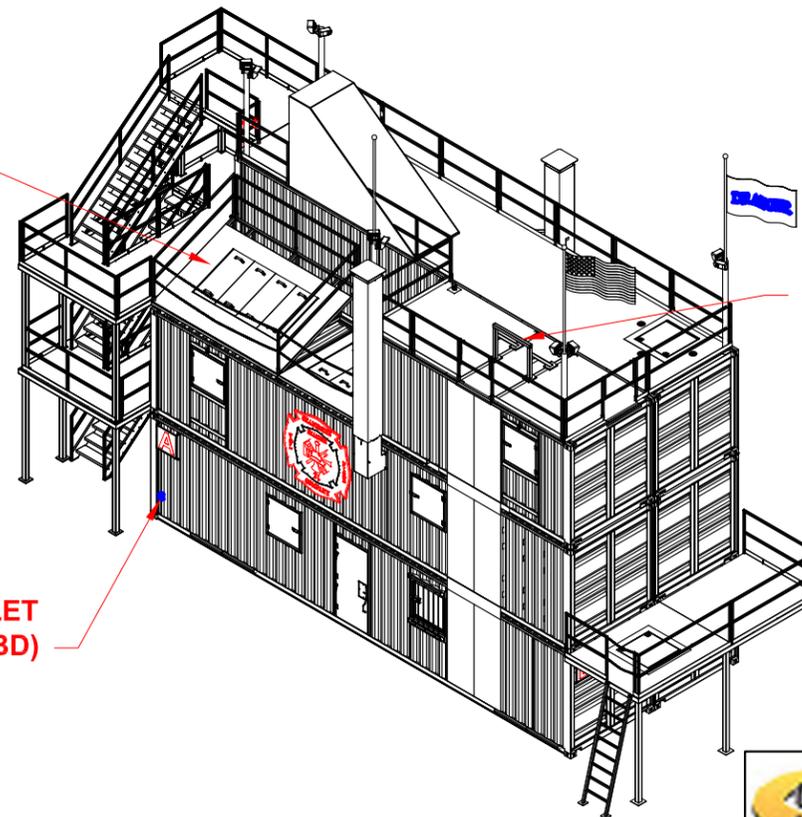
**SQ.
HATCH**

**SAFETY GATE
(SWINGS IN)**

STANDPIPE



**FORCIBLE
ENTRY DOOR**



**TILT ROOF
PROP**

**RAPPELLING
BAR**

**GFI OUTLET
(QTY & LOCATION TBD)**

ISO



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C	02/11/21	REVISED PER CUSTOMER
B	02/03/20	REVISED PER CUSTOMER
REV.#	DATE	DESCRIPTION

Dräger

PRODUCT PHASE II MODIFIED

CUSTOMER RICHMOND FIRE ACADEMY

TITLE ISO

DWG NO. SHEET 01 OF 21

DATE DEC 12, 2020 SCALE NTS

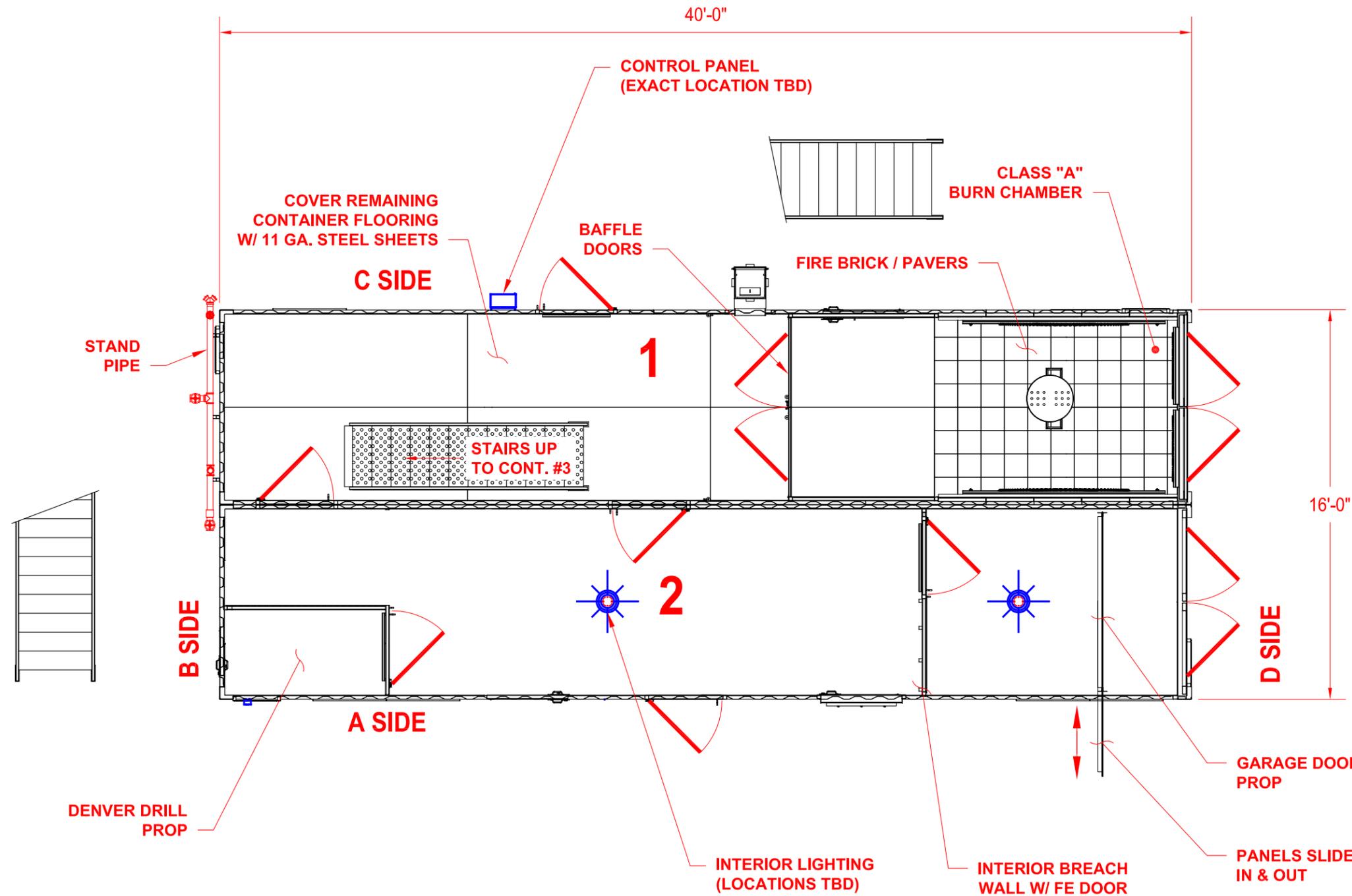
DWN BY J. HAWLEY REV. C

PO# 4302279950-00010

PROPRIETARY

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FIRST FLOOR

C	02/11/21	REVISED PER CUSTOMER
B	01/05/21	REVISED PER CUSTOMER
REV.#	DATE	DESCRIPTION



PRODUCT PHASE II MODIFIED

CUSTOMER RICHMOND FIRE ACADEMY

TITLE FIRST FLOOR

DWG NO. SHEET 19 OF 21

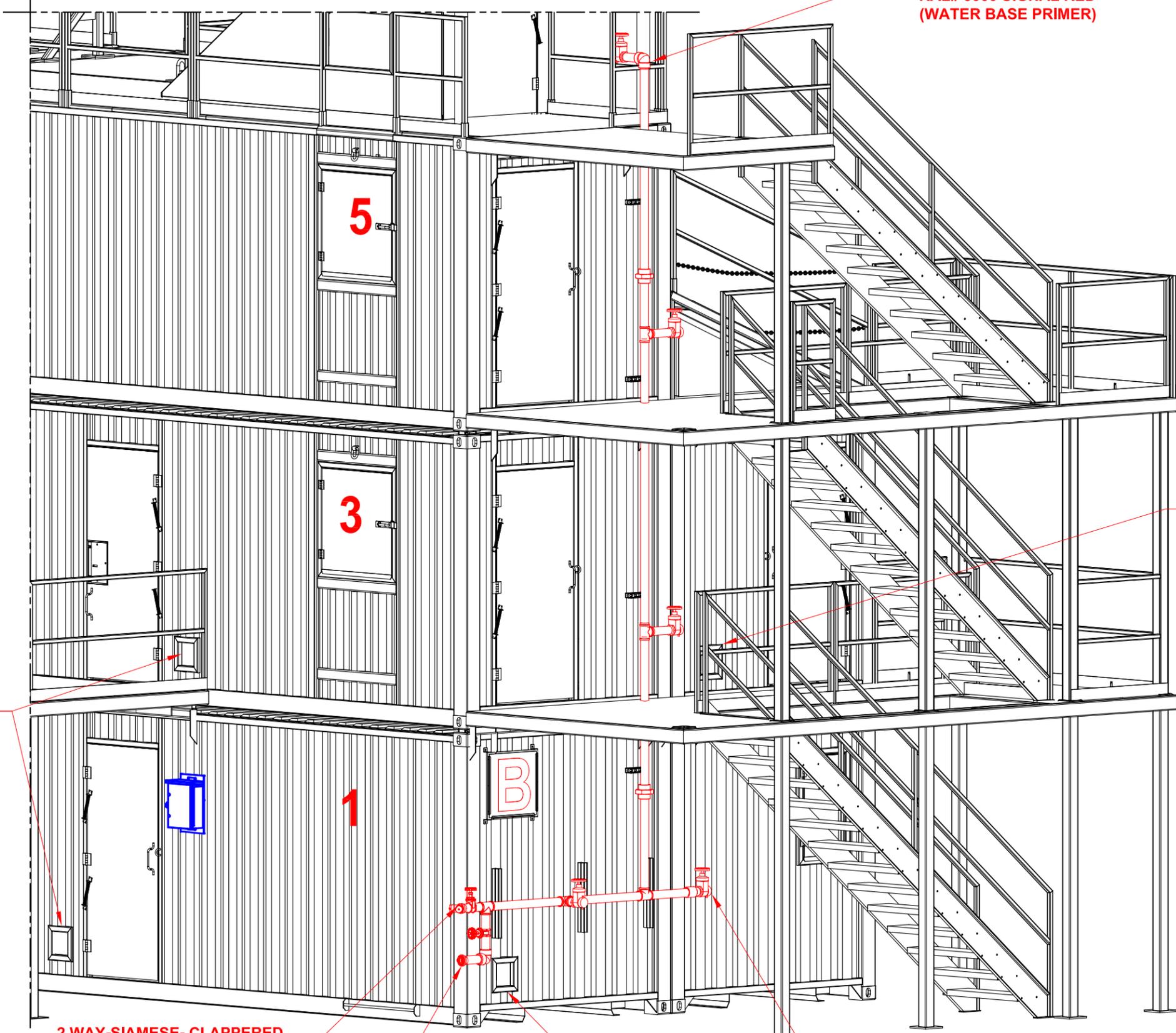
DATE DEC 12, 2020 SCALE NTS

DWN BY J. HAWLEY REV. C

PO# 4302279950-00010



PROPRIETARY



**STANDPIPE PAINTED
RAL# 3000 SIGNAL RED
(WATER BASE PRIMER)**

HOSE ACCESS

HOSE ACCESS

**2 WAY-SIAMESE- CLAPPERED
2.5" FEMALE NH**

**5" STORZ x
2.5" FEMALE NH**

**DIXON VALVE #WDGV251F
2.5" FNPT IN / 2.5" MALE
NST OUT INCLUDES PIN
LUG CAP
(5 PLACES)**

HOSE ACCESS

STANDPIPE

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GENERAL NOTES
ROUTING AND PARTS SHOWN AS GENERAL GUIDELINES. FINAL ARRANGEMENT AND DESIGN SHALL BE APPROVED BY THE CUSTOMER.

REV.#	DATE	DESCRIPTION
C	02/11/21	REVISED PER CUSTOMER
B	01/05/21	REVISED PER CUSTOMER



PRODUCT
PHASE II MODIFIED

CUSTOMER
RICHMOND FIRE ACADEMY

TITLE
STANDPIPE

DWG NO.
SHEET 20 OF 21

DATE
DEC 12, 2020

SCALE
NTS

DWN BY
J. HAWLEY

REV.
C

PO#
4302279950-00010



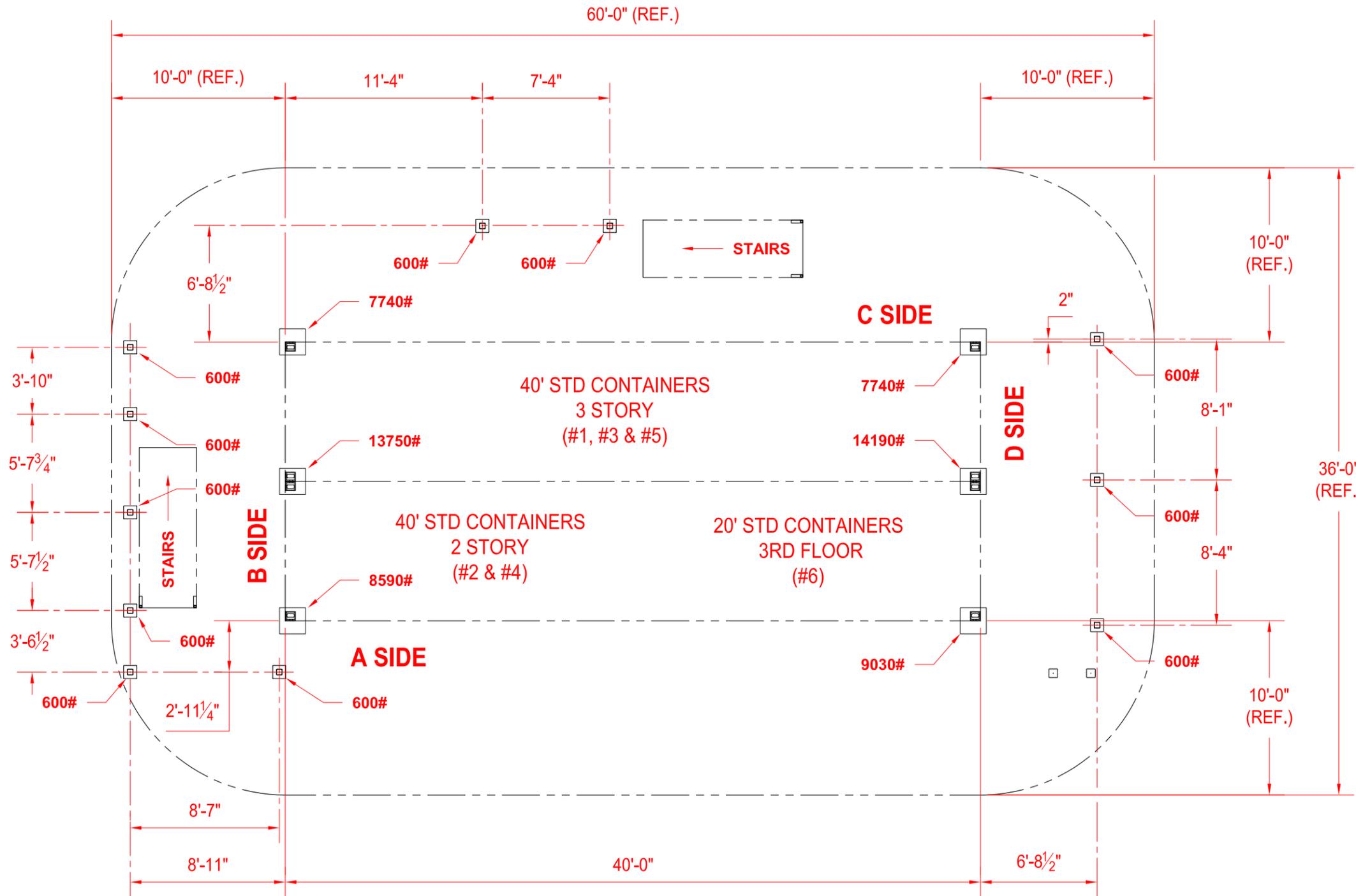
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THESE DRAWINGS ARE FOR CONCEPTUAL USE ONLY. NOT FOR FABRICATION.

GENERAL NOTES

1. THE POINT LOADS SHOWN ARE BASED ON CONTAINER TARE WEIGHTS WITH ALLOWANCES MADE FOR ANCILLARY STRUCTURES. NO WIND LOADS OR SOIL ANALYSIS WERE TAKEN INTO CONSIDERATION FOR THESE LOADS.
2. THE EXACT LOCATION OF THE CONTAINERS ON THE PADS / SLAB TO BE AS PER THE DESIGN OF THE FOUNDATION. ALL DIMENSIONS TO BE VERIFIED.
3. ALL CONTACT POINTS / PADS MUST HAVE THE SAME ELEVATION TO ENSURE TRUE-LEVEL OF ALL STRUCTURE.



POINT LOAD LAYOUT

C	02/11/21	REVISED PER CUSTOMER
B	01/05/21	REVISED PER CUSTOMER
REV.#	DATE	DESCRIPTION



PRODUCT PHASE II MODIFIED

CUSTOMER RICHMOND FIRE ACADEMY

TITLE FOUNDATION POINT LOAD LAYOUT

DWG NO. SHEET 21 OF 21

DATE DEC 12, 2020 SCALE NTS

DWN BY J. HAWLEY REV. C

PO# 4302279950-00010



AEGIS II[®]



INDUSTRIAL ORNAMENTAL STEEL FENCE

Aegis II is the obvious front-runner in *strength and durability for fence and gates*. With a dual wall ForeRunner rail and *multi-layer coating*, this fence system is unmatched in overall product performance. In addition, the superior component design of Aegis II makes it *easy to customize for any project application*.



PRIMARY APPLICATIONS

- ▶ *Stadiums & Event Centers*
- ▶ *Schools & Universities*
- ▶ *Airports*
- ▶ *Water Treatment & Storage*
- ▶ *Public Housing Authorities*
- ▶ *State Facilities*
- ▶ *Municipal Facilities*
- ▶ *Parks & Recreation*
- ▶ *Hospitals*



FENCE PRODUCTS

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Experience a safer and more open world

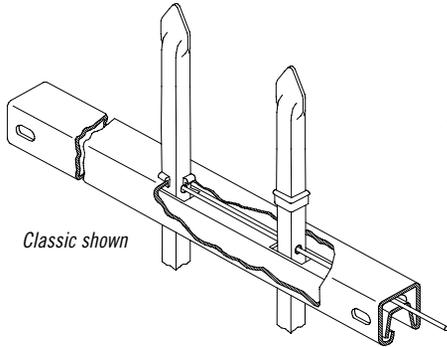
AMERISTAR[®]

ASSA ABLOY

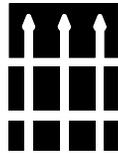
AEGIS II[®]

INDUSTRIAL ORNAMENTAL STEEL FENCE

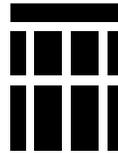
1"sq x 14ga PICKETS | 1.75"sq x 1.75"sq x 14ga ForeRunner™ RAILS | 2.5"sq x 12ga & 3"sq x 12ga POSTS



STYLE OPTIONS



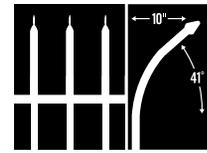
CLASSIC™



MAJESTIC™



GENESIS™



INVINCIBLE™



FABRICATION & DESIGN

Ameristar crafted the ForeRunner rail to increase strength through architecture. The innovative design of the ForeRunner rail contains an internally secured rod that allows for variable pitch connection, high angle biasability and eliminates the need for visually unappealing external fasteners. Galvanized inside and out; to protect against internal corrosion; puts the ForeRunner rail in the upper echelon of fencing options.



PERMACOAT™ PROTECTIVE FINISH

Ameristar's production facilities use a state-of-the-art polyester powder coating system that provides a durable and scratch resistant finish. Aegis II is protected with Ameristar's PermaCoat multi-layer coating process. The combination of these layers delivers a system that increases weathering resistance and product durability. The Ameristar coating system results in finished surfaces with unmatched performance.



10 YEAR LIMITED WARRANTY

The family of Aegis steel fencing products are manufactured from the highest quality materials by skilled craftsmen to meet the highest standards of workmanship in the industry. This is why Ameristar proudly offers a limited 10 year warranty.



DOMESTIC MANUFACTURING

Ameristar is committed to providing products that are manufactured in the USA. We have made significant investments in technology, process improvement, and employee training in an effort to secure American jobs and combat inferior import products.



FENCE PRODUCTS

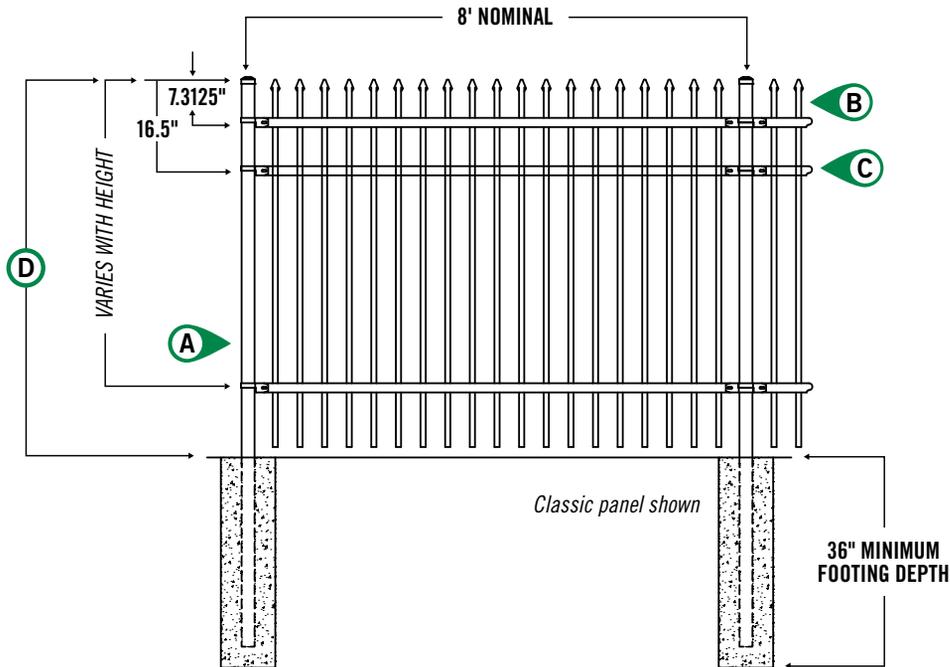
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AEGIS II® | 2 & 3-RAIL OPTIONS | 4" AIR-SPACE

STANDARD BOTTOM OPTION AVAILABLE

PATENT NUMBERS: 6254064, 7461833, D566292, D573270



- Ⓐ 2.5"sq x 12ga / 3"sq x 12ga POSTS
- Ⓑ 1"sq x 14ga PICKETS
- Ⓒ 1.75" x 1.75" x 14ga ForeRunner RAILS
- Ⓓ 3', 3½', 4', 5', 6', 7', 8', 9' & 10' PANEL HEIGHTS

PANELS REQUIRE ASSEMBLY

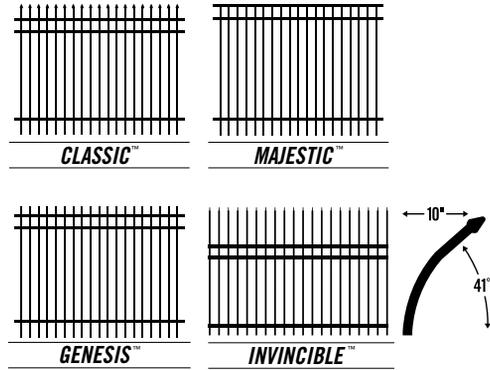
Refer to construction specification & tables within this section for recommended post space by bracket type

Effective: 01-26-22

AEGIS II® | 3-RAIL PANELS | 8' PANEL LENGTH

STANDARD BOTTOM | 8' PANEL LENGTH (92.625" / 91.25"† actual width) | 19 / 20† PICKETS PER PANEL | ASSEMBLY REQUIRED

PANEL	ITEM NUMBER	WEIGHT	STOCKING
3'	2☒☒30348	103	☉
3.5'	2☒☒30408	112	☉
4'	2☒☒30468	120	☉
5'	2☒☒30588	137	☉
6'	2☒☒30708	154	☉
7'	2☒☒30828	171 / 177†	☉
8'	2☒☒30948	188 / 196†	☉
9'	2☒☒31068	206 / 214†	☉
10'	2☒☒31188	224 / 233†	☉

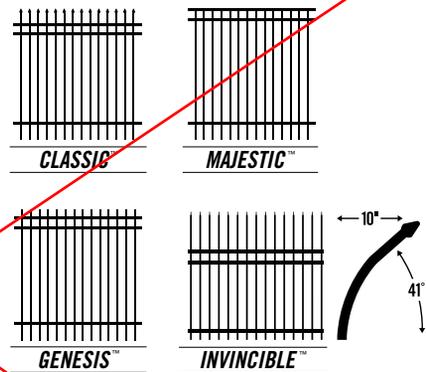


☒ = FENCE STYLES AVAILABLE | **C** = Classic **M** = Majestic **G** = Genesis
I = Invincible†
 ☒ = COLOR OPTIONS AVAILABLE | **B** = Black **N** = Bronze **W** = White
S = Sand
 ☉ = NON-STOCKED PRODUCT
 For details, see Ameristar's Sales Policy in the catalog guide.

~~AEGIS II® | 3-RAIL PANELS | 6' PANEL LENGTH~~

~~STANDARD BOTTOM | 6' PANEL LENGTH (67.75" / 71.375"† actual width) | 14 / 15† PICKETS PER PANEL | ASSEMBLY REQUIRED~~

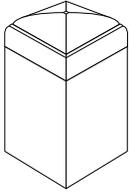
PANEL	ITEM NUMBER	WEIGHT	STOCKING
3'	2☒☒30346	76	☉
3.5'	2☒☒30406	83	☉
4'	2☒☒30466	89	☉
5'	2☒☒30586	102	☉
6'	2☒☒30706	114	☉
7'	2☒☒30826	126 / 140†	☉
8'	2☒☒30946	139 / 155†	☉
9'	2☒☒31066	151 / 169†	☉
10'	2☒☒31186	164 / 184†	☉



~~☒ = FENCE STYLES AVAILABLE | **C** = Classic **M** = Majestic **G** = Genesis
I = Invincible†
 ☒ = COLOR OPTIONS AVAILABLE | **B** = Black **N** = Bronze **W** = White
S = Sand
 ☉ = NON-STOCKED PRODUCT
 For details, see Ameristar's Sales Policy in the catalog guide.~~

Effective: 03-26-22

AEGIS II® | STEEL SQUARE POSTS



STEEL POSTS

6"sq. x .1875" wall

8"sq. x .25" wall

POST LENGTH	ITEM NUMBER	WEIGHT
7'	PⓈ60084	102 lbs
8'	PⓈ60096	116 lbs
9'	PⓈ60108	131 lbs
10'	PⓈ60120	145 lbs
11'	PⓈ60132	160 lbs
12'	PⓈ60144	174 lbs
13'	PⓈ60156	189 lbs
14'	PⓈ60168	203 lbs
15'	PⓈ60180	218 lbs
16'	PⓈ60192	232 lbs
9'	PⓈ80108	233 lbs
10'	PⓈ80120	259 lbs
11'	PⓈ80132	285 lbs
12'	PⓈ80144	311 lbs
13'	PⓈ80156	336 lbs
14'	PⓈ80168	370 lbs
15'	PⓈ80180	390 lbs
16'	PⓈ80192	415 lbs
20'	PⓈ80240	517 lbs
24'	PⓈ80288	620 lbs

Ⓢ = COLOR OPTIONS AVAILABLE | **B** = Black **N** = Bronze **W** = White **S** = Sand

NOTE: When installed in a location subject to freezing, where posts are grouted into core-drilled holes, a .25" diameter hole should be drilled in the post approximately .5" above elevation to allow for drainage of built-up ground water. The drilled hole must be wiped clean and dry before applying Ameristar zinc primer and color finish.

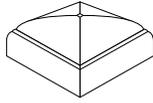
Effective: 01-26-22

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AMERISTAR
ASSA ABLOY

Ⓢ = COLOR OPTIONS AVAILABLE | **B** = Black **N** = Bronze **W** = White
S = Sand

AEGIS II® | POST CAPS



STANDARD FLAT CAP
 Steel

CAP SIZE	ITEM NUMBER	WEIGHT
2.5"sq.	A⊗ 507	0.3 lbs
3"sq.	A⊗ 508	0.3 lbs
4"sq.	A⊗ 509	0.4 lbs
6"sq.	A⊗ 515	0.8 lbs
8"sq.	A⊗ 801	2.0 lbs



BALL CAP
 Aluminum

CAP SIZE	ITEM NUMBER	WEIGHT
2.5"sq.	A⊗ 513R1	0.7 lbs
3"sq.	A⊗ 516R1	0.8 lbs
4"sq.	A⊗ 517	2.0 lbs
6"sq.	A⊗ 521	8.0 lbs

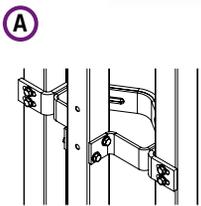
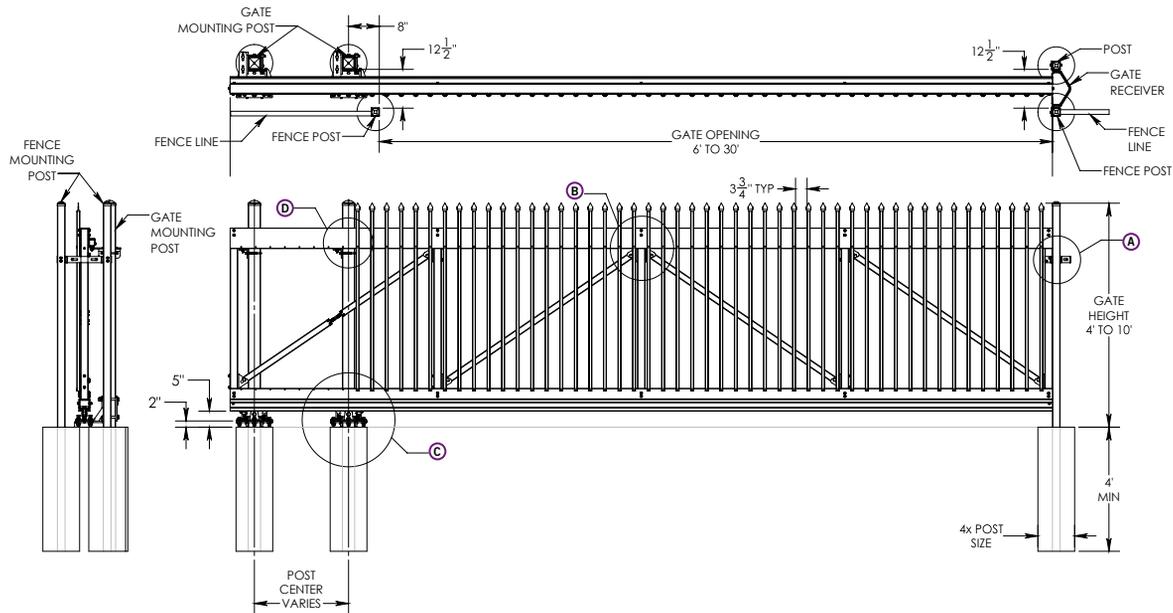
⊗ = **COLOR OPTIONS AVAILABLE** | **B** = Black **N** = Bronze **W** = White
S = Sand

Effective: 01-26-22

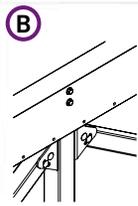
TRANSPORT TRAVERSE II®

2-1/2"sq x 16 GA. STEEL UPRIGHTS | 2"sq x 16 GA. STEEL DIAGONAL BRACES | 1"sq PICKETS

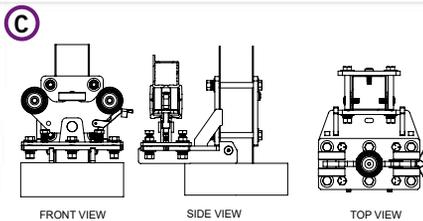
PATENT NUMBER: D609951



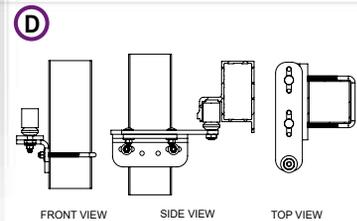
ISO VIEW



ISO VIEW



FRONT VIEW SIDE VIEW TOP VIEW
 BOTTOM SUPPORT CARRIAGE
 (POST MOUNT OPTION)



FRONT VIEW SIDE VIEW TOP VIEW
 GUIDE ROLLER
 (TOP POST MOUNT)



AUTOMATED GATE WARNING

Warning! It is the responsibility of the gate installer to ensure the gate installation meets ASTM F2200, UL325, and any local standards, for gates that are to be automated. Ameristar assumes no responsibility for automated gate installations. Post close out shields, for closing voids greater than 2-1/4" between gate/fence posts and gate, and screening material covering the entire gate opening and tail section, including equal distance of the adjacent fence line when the gate is in the full open position, are NOT included with the gate. The gate installer may supply their own or see appropriate catalog section for separate kit pricing.

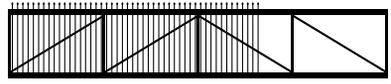
NOTE: Customer supplied screening material not to exceed .36 lbs per square foot.

Refer to construction specification & tables within this section for more details.

Effective: 8/30/22

TRANSPORT TRAVERSE II® | CANTILEVER GATES

GATE HARDWARE & POST NOT INCLUDED | REVERSIBLE FOR RIGHT / LEFT OPENING | ASSEMBLY REQUIRED

	OPENING	LENGTH	ITEM NUMBER	WEIGHT	PICKET QTY	
7' HEIGHT	6'-8'	154.5"	2TT☒Ⓞ08408	375 lbs	22	 <p>CLASSIC™</p>  <p>MAJESTIC™</p>  <p>GENESIS™</p>  <p>INVINCIBLE™</p> 
	8'-10'	187.8"	2TT☒Ⓞ08410	425 lbs	27	
	10'-12'	216.3"	2TT☒Ⓞ08412	461 lbs	32	
	12'-14'	244.8"	2TT☒Ⓞ08414	520 lbs	38	
	14'-16'	268.5"	2TT☒Ⓞ08416	575 lbs	43	
	16'-18'	287.5"	2TT☒Ⓞ08418	620 lbs	48	
	18'-20'	316"	2TT☒Ⓞ08420	759 lbs	53	
	20'-22'	344.5"	2TT☒Ⓞ08422	814 lbs	58	
	22'-24'	358.8"	2TT☒Ⓞ08424	723 lbs	63	
	24'-26'	401.5"	2TT☒Ⓞ08426	801 lbs	68	
8' HEIGHT	26'-28'	430"	2TT☒Ⓞ08428	847 lbs	73	
	28'-30'	458.5"	2TT☒Ⓞ08430	925 lbs	78	
	6'-8'	154.5"	2TT☒Ⓞ09608	355 lbs	22	
	8'-10'	187.8"	2TT☒Ⓞ09610	435 lbs	27	
	10'-12'	216.3"	2TT☒Ⓞ09612	485 lbs	32	
	12'-14'	244.8"	2TT☒Ⓞ09614	550 lbs	38	
	14'-16'	268.5"	2TT☒Ⓞ09616	625 lbs	43	
	16'-18'	287.5"	2TT☒Ⓞ09618	670 lbs	48	
	18'-20'	306.5"	2TT☒Ⓞ09620	773 lbs	53	
	20'-22'	335"	2TT☒Ⓞ09622	851 lbs	58	
22'-24'	358.8"	2TT☒Ⓞ09624	772 lbs	63		
24'-26'	406.3"	2TT☒Ⓞ09626	841 lbs	68		
26'-28'	430"	2TT☒Ⓞ09628	904 lbs	73		
	28'-30'	458.5"	2TT☒Ⓞ09630	952 lbs	78	

9' & 10' HEIGHTS ON NEXT PAGE

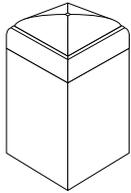
☒ = FENCE STYLES AVAILABLE | C = Classic M = Majestic G = Genesis I = Invincible†
 Ⓞ = COLOR OPTIONS AVAILABLE | B = Black N = Bronze W = White S = Sand

Effective: 8/30/22

TRANSPORT TRAVERSE II® | POST SIZE CHART

OPENING	HEIGHT						
	4'	5'	6'	7'	8'	9'	10'
6'-10' THRU 20'-22'	4"	4"	4"	4"	4"	6"	6"
22'-24' THRU 24'-26'	4"	4"	4"	4"	6"	6"	6"
26'-28' THUR 28'-30'	4"	4"	4"	6"	6"	6"	6"

TRANSPORT TRAVERSE II® | GATE POSTS & POST CAPS



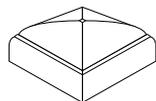
STEEL POSTS

POST LENGTH	ITEM NUMBER	WEIGHT
8'	P@40096	54 lbs
9'	P@40108	61 lbs
10'	P@40120	67 lbs
11'	P@40132	74 lbs
12'	P@40144	81 lbs
13'	P@40156	87 lbs
14'	P@40168	94 lbs
15'	P@40180	101 lbs
16'	P@40192	108 lbs
8'	P@60096	116 lbs
9'	P@60108	131 lbs
10'	P@60120	145 lbs
11'	P@60132	160 lbs
12'	P@60144	174 lbs
13'	P@60156	189 lbs
14'	P@60168	204 lbs
15'	P@60180	218 lbs
16'	P@60192	232 lbs

4"sq. x 11ga.

6"sq. x .1875 wall

Ⓧ = COLOR OPTIONS AVAILABLE | **B** = Black **N** = Bronze
W = White **S** = Sand



STANDARD FLAT CAP

Steel

CAP SIZE	ITEM NUMBER	WEIGHT
4"sq.	A@509	.4 lbs
6"sq.	A@515	.8 lbs

Note: Cap is included with post.

Effective: 8/30/22

North Carolina
Extension Gardener
 Plant Toolbox

Juniperus virginiana

Common Name(s): Eastern Redcedar; Eastern Red Cedar

Phonetic Spelling

jew-NIP-er-us ver-jin-ee-AY-nah

⚠️ This plant has low severity poison characteristics.

[See below](#)

Description

Eastern red cedar is an evergreen tree in the Cypress (Cupressaceae) family. This conifer is native to North America and grows from Maine south to Florida and west to South Dakota and Texas. It is a juniper and not, despite its common names, a cedar.

This juniper is easily grown in average, dry to moist, well-drained soils in full sun. In good conditions it will grow to 30 to 40 feet in height and reach a width of 10 to 20 feet. It will tolerate a variety of soils and growing conditions, from swamps to dry, rocky ground. It can even grow on seemingly barren soils that few other plants can tolerate, although it may never grow bigger than a bush in those conditions. It prefers moist conditions but is intolerant of continuously wet soil. It only tolerates shade when it is extremely young. It has the best drought resistance of any conifer native to the eastern United States. This tree is easy to transplant and a tough, dependable tree—but considered weedy by many gardeners. It is highly salt tolerant. This colorful tree needs airy space to grow. Plant 12 to 24 feet apart.

Eastern red cedar has blue-green, scale-like leaves. The bark is red-brown in color and peels off in long, narrow, fibrous strips, often leaving ashy gray areas exposed. Small, light blue-green clusters of flowers mature in late winter or early spring. The tree produces a small, round blue fruit that matures in the fall on female trees.

The heartwood is light brown and aromatic, contrasted by the white sapwood, and is commonly used for cedar chests. The wood is also often used to make fence posts and rails, as it is naturally rot-resistant. It also repels insects, lending to its appeal for use in clothing storage and pet bedding.

Eastern red cedar makes an excellent specimen and does well in a grouping or as a screen or windbreak. It provides cover, habitat and food for wildlife. This tree is also resistant to damage by deer. It is sometimes grown for Christmas trees, especially in warmer areas of North Carolina.

Fire Risk: This plant has a high flammability rating and should not be planted within the defensible space of your home. Select plants with [low flammability](#) rating for the sites nearest your home.

Quick ID Hints:

- Plant has grayish to reddish-brown bark that exfoliates in long strips
- Scale leaves are in a four-rank arrangement
- Small, oval, glandular depressions are on the backs of leaves
- Male cones are yellow and occur at branch tips
- Female cones are blue, frosted looking, and 1/4 inch in size
- Leaf color is sage green to blue-green in the summer
- Leaf color is bronze to yellow-brown in winter
- Juvenile, awl-shaped leaves are often present in pairs

Insects, Diseases, and Other Plant Problems: This tree is susceptible to twig blight and scale. Bagworms are also a problem. Mites may occur. It shares with apple trees susceptibility to a rust fungus called [Gymnosporangium juniperi - virginianae](#). This fungus causes "cedar apples" on red cedar twigs and dark leaf spots on apple leaves.

VIDEO Created by [Homegrown](#) featuring [Jeff Owen](#), Area Extension Forestry Specialist for [NC State Extension](#)

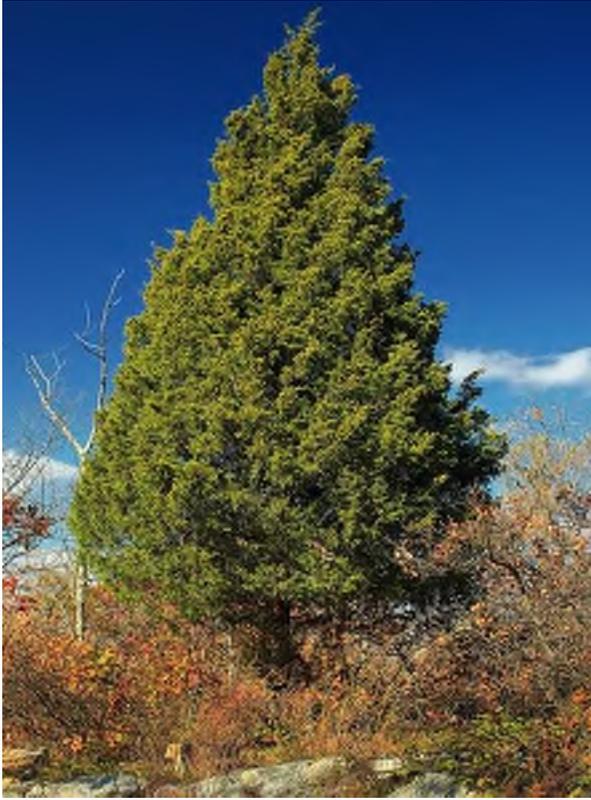
Woodland Backyard Garden Walk

Mountain Ridge Top Garden - West Lawn and Border

Native/ Woodland Garden

Cultivars / Varieties:

'Canaertii', 'Glauca Compacta', 'Globosa', 'Grey Owl', 'Manhattan Blue', 'Silver Spreader', 'Taylor', var. *silicicola*



Juniperus virginiana
Nicholas A. Tonelli
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Juniperus virginiana
plantsforpermaculture
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Juniperus virginiana
Forest and Kim Starr
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Juniperus virginiana
CameliaTWU
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Ilex glabra

Common Name(s): Appalachian Tea; Gallberry; Inkberry.

Previously known as: *Winterlia glabra*

Phonetic Spelling

EYE-leks GLAY-bruh

⚠️ This plant has low severity poison characteristics.

[See below](#)

Description

Ilex glabra, commonly called inkberry or gallberry, is a slow-growing, upright-rounded, stoloniferous, broadleaf evergreen shrub in the holly family. It typically matures to 5 to 10 feet tall, and can spread by root suckers to form colonies. It is native to the coastal plain from Nova Scotia to Florida to Louisiana where it is most commonly found in sandy woods and peripheries of swamps and bogs. This plant is moderately salt-tolerant and adaptable to both light and heavy soils.

Inkberry is an upright, erect, rounded, much-branched shrub that becomes open with age. Prune to shape in early spring just before new growth begins. Plants generally need minimal pruning unless used as a hedge (perhaps it is best grown as an informal hedge). Remove root suckers regularly if spread is not desired.

The honey produced from the plant is a highly-rated honey that results from bees feeding on inkberry flowers. This honey is locally produced in certain parts of the Southeastern U.S. in areas where beekeepers release bees from late April to early June to coincide with inkberry flowering time. White-tailed deer may browse the leaves and twigs, although this plant is somewhat resistant to damage by deer and is rabbit resistant. The species is dioecious (meaning individual flowers are either male or female, but only one sex is to be found on any one plant, thus both male and female plants must be grown if seed is required). It is pollinated by bees and is not self-fertile.

Habitat: Savannas, pine flatwoods, pocosin margins, swamps, primarily in wetlands, but extending upslope even into sandhills, with a clay lens or spodic horizon below to maintain additional moisture

Fire Risk: This plant has a high flammability rating and should not be planted within the defensible space of your home. Select plants with a [low flammability](#) rating for the sites nearest your home.

Insects, Diseases, or Other Plant Problems:

Leaf spot is an occasional problem. Spider mites may appear, especially in dry conditions. Susceptible to chlorosis (yellowing of leaves) in high pH (alkaline) soils. Prone to Phytophthora root rot– look for resistant alternative species if this disease is in your area.

Entryway Garden, Cabarrus County Extension Office

Cultivars / Varieties:

Gem Box®, 'Nigra', 'Shamrock', Strongbox®



Leaves
Phillip Merritt
[CC BY-NC-SA 2.0](#)



Fruits
John Brandauer
[CC BY-NC-ND 2.0](#)



Flowers
Mary Keim
[CC BY-NC-SA 2.0](#)



Leaf and branch structure
Debbie Roos



Form
Jim Robbins
[CC BY-NC-ND 4.0](#)



Itea virginica

Common Name(s): Itea; Virginia Sweetspire; Virginia Sweet Spire; Virginia Willow

Phonetic Spelling

eye-TEE-ah ver-JIN-ih-kah

Description

Virginia Sweetspire is a native deciduous to a semi-evergreen shrub that is found in the southeast USA on streambanks and wet pine barrens. It is found in most areas of NC. It can grow up to 8 feet tall and has graceful arching branches. In early summer, small, fragrant, white flowers occur in terminal arching racemes. Fall color is red to purple and lasts well into winter.

Virginia Sweetspire prefers moist, rich, slightly acidic humusy soils in partial sun to partial shade, but tolerates a wide range of soil conditions and pHs. Best flowering occurs with 4 hours of sun per day. It can form dense colonies by root suckering and can be used for erosion control in wet areas or on wet banks. This plant blooms on previous season's wood, so pruning should be done after flowering. Use en masse for spectacular spring flowers.

The species is rarely sold and the cultivar 'Henry's Garnet' is what is easiest to find for sale. The genus name, *Itea*, comes from the Greek word meaning "willow", which is in reference to the similarity of the leaves or flower clusters to those of some willow plants.

Fire Risk: This plant has a low flammability rating.

Insects, Diseases, and Other Plant Problems: Avoid over-fertilization. Resistant to Phytophthora root rot.

Quick ID Hints:

- 2-6 inch long raceme of small, white flowers; is very showy.
- Has pubescent petiole with a groove on the upper side.
- Green to reddish-purple stem (on sun side) with crescent-shaped leaf scars.
- Short branches have a superposed bud, are imbricate, and reddish-green.
- Leaves are 1½"-4" long, with a finely serrated margin.

VIDEO created by [Andy Pulte](#) for "Landscape Plant Identification, Taxonomy and Morphology" a plant identification course offered by the [Department of Plant Sciences, University of Tennessee](#).

Pinehurst Greenway Pollinator Habitat Garden, Moore County

Native/ Woodland Garden

Cultivars / Varieties:

'Henry's Garnet', 'Little Henry', 'Sarah Eve', 'Saturnalia', 'Shirleys Compact'



Form
Joy Weese Moll
[CC BY-NC 2.0](#)



Itea virginica "Little Henry"
Elsa Pexio
[CC-BY-SA 2.0](#)



Flower
Eleanor
[CC BY-NC 2.0](#)



Flowers close up
Eleanor
[CC BY-NC 2.0](#)



Magnolia grandiflora

Common Name(s): Bull Bay; Large Tree Magnolia; Southern Magnolia

Previously known as: *Magnolia angustifolia*; *Magnolia elliptica*; *Magnolia foetida*

Phonetic Spelling

mag-NO-lee-ah gran-dih-FLOR-ah

Description

Southern magnolia, is a large, broadleaf evergreen tree that is noted for its attractive glossy dark green leaves and its large, extremely fragrant flowers. It is native to the bottomlands and moist wooded areas in the central and southeastern coastal plains from North Carolina to Florida and Texas. It is the only evergreen in the Magnoliaceae (magnolia) family and typically grows to 60 to 80 feet tall with a pyramidal to rounded crown, a spread of 20 to 40 feet wide, and a trunk diameter of 3 feet. Magnolias are one of the oldest known tree species in the world (based on data from USNA).

This is a magnificent tree for planting as a specimen in the South in large yards, parks, or commercial sites. Be sure to provide plenty of space to grow. Lower branches tend to reach the ground and can be pruned out to appear more tree-like. Nothing will grow underneath the tree, and it requires a mulch to prevent erosion problems.

Giant fragrant white flowers are borne in the summer months and are extremely ornamental. The woody brown fruits with bright red seeds are used in dried arrangements.

It prefers rich soil with partial shade and, in nature, is usually an understory tree. However, when grown as an ornamental, it maintains heavily leaved limbs almost to the ground. Tolerates high moisture levels, but is intolerant to overly wet or swampy soils and prolonged flooding.

Fire Risk: This plant has a medium flammability rating.

Insects, Diseases, or Other Plant Problems: Scale is an occasional pest problem. Leaf drop in both fall and spring. Leaves can be chopped with a rotary mower and blown back under the branches to recycle nutrients. A frequent escapee from cultivation. In many suburban yards, the mature size of this tree is way too large, consider a smaller cultivar.

Quick ID Hints:

- Stiff, leathery, laurel-like leaves
- Giant white flowers appear in the summer
- Leaves are rusty-brown and tomentose below

Hydrangeas in the Garden

Mountain Ridge Top Garden - North Woods

Cultivars / Varieties:

'Alta', 'Blanchard', 'Brackens Brown Beauty', 'Claudia Wannamaker', 'Edith Bogue', 'Greenback', 'Kay Parris', 'Little Gem', 'Miss Chloe', 'Teddy Bear'



Flower
Arthur Chapman
[CC BY-NC-SA 2.0](#)



'Alta' Form
Jim Robbins
[CC BY-NC-ND 4.0](#)



'Alta' Leaf
Jim Robbins
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'Brackens Brown Beauty' Leaf
Jim Robbins
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