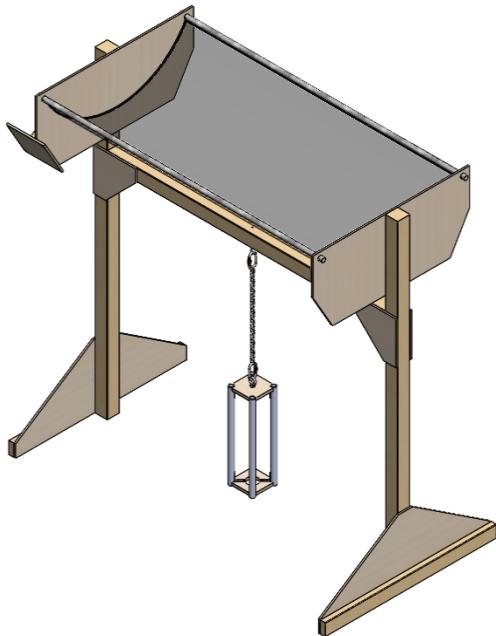


TE-25200 BARGE



Description: This is a Barge, designed so that teams can practice scoring Algae in the Net and hanging from a Cage. This design has a Cage and Net that can be made from parts at local hardware stores, but both real versions can be bought from AndyMark ([Cage Kit](#) and [Net](#)). You can also buy the parts to weld a Cage from [WestCoast Products](#). This Barge is designed for a paper or sticker April Tag to be added.

In this compressed folder, you will find all of the drawings, CAD Files and STEP Files for this design.

Drawings: For your convenience, all drawing files have been exported to PDF Format. Each major field assembly will have both assembly drawings and component drawings.

CAD Files: All SOLIDWORKS files required to build or modify the assembly.

STEP files: STEP files of the assembly are included for the convenience of non-SOLIDWORKS users.

Shopping List (if building multiple team element designs, plywood and lumber can be consolidated):

Plywood and Lumber and Pipes (Example Cut List is at end of Readme):

- 2" x 4" x 10' Lumber – 1 Piece
- 4" x 4" x 8' Lumber - 3 Pieces
- 4' x 8' x 1/2" Thick Plywood – 2 Sheets (only a 10.5" square is needed on the second sheet)
- 2' x 2' x 3/4" Thick Plywood – 1 Sheets (not necessary if purchasing a Cage from [AndyMark](#))
- 1" Schedule 40 Iron Pipe, 10 ft. long – 1 Piece
- 1" EMT Conduit, Galvanized Steel, 8 ft. long – 2 Pieces

Hardware/Other:

- Net – 1 Piece (see drawing package for detailed information, or purchase from [AndyMark](#))
- #8 Wood Screws x 1.5" long – Approximately 50 Pieces

- 2" Steel Angle Brackets – 8 Pieces (not necessary if purchasing a Cage from [AndyMark](#))
 - o 1.25" long bolts (diameter to match purchased brackets) – 16 Pieces
 - o 1.75" long bolts (diameter to match purchased brackets) – 16 Pieces
 - o Nylock Nuts (diameter to match purchased brackets) – 32 Pieces
 - o Flat Washer (diameter to match purchased brackets) – 16 Pieces
- Shoulder Eyebolt – ½-13, 1.5" shank (or similar) – 1 Piece (not necessary if purchasing a Cage Kit from [AndyMark](#))
- Eye Screw – 5/16" x 6" long (or similar) – 1 Piece
- ½-13 Nylock Nut – 1 Piece
- ½" Flat Washer – 2 Pieces
- 50lb Cable Ties – 8 Pieces
- Carabiner (McMaster 3216T41 or similar) – 2 Pieces (not necessary if purchasing a Cage Kit from [AndyMark](#))
- Chain (grade 43, ¼" trade size or similar) 22 links long – 1 Piece (not necessary if purchasing a Cage Kit from [AndyMark](#))
- 1-1/4" Spade Bit, Forstner Bit or Hole Saw
- 1-3/8" Spade Bit, Forstner Bit or Hole Saw

Notes about materials:

- Plywood and Hardboard Sheets – quality of plywood is up to the user. Plywood of lower qualities may contain voids and may warp more than high quality plywood. All dimensions listed are "nominal". For example, ½" plywood is typically 15/32".
- Lumber - quality of lumber is up to the user. Please keep in mind that lumber of lower qualities may warp more than high quality lumber. All dimensions below are the "mill cut" dimensions. For example, 2" x 4" lumber is really 1½" x 3½".

Example Cut List (All units are Inches):

2x4 Lumber:

Layout ID	Processed	Repetition	Stock length	Part length / Label	Qty	Cuts in layout
A	0/1 <input checked="" type="checkbox"/>	1x	120"	48" / TE-25204	2	The number of cuts 3
				10 1/2" / TE-25216	1	Waste
						Material remnant 13 1/8"
						Cut 3/8"
48" TE-25204			48" TE-25204			10 1/2" TE-25216

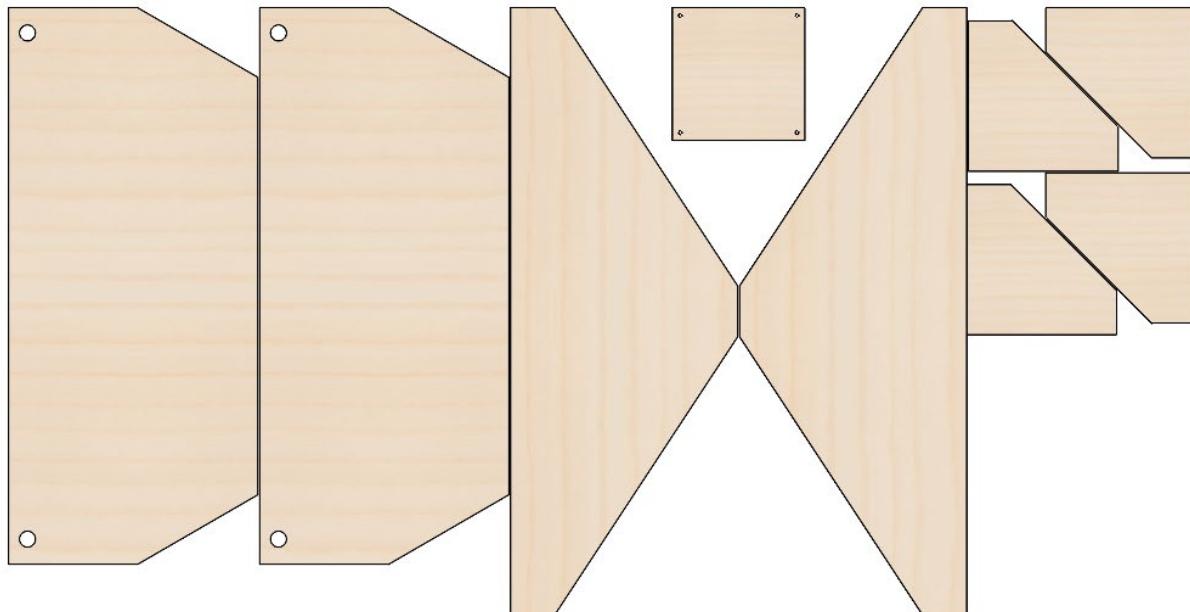
4x4 Lumber (Note that Layout A must be cut twice):

Layout ID	Processed	Repetition	Stock length	Part length / Label	Qty	Cuts in layout
A	0/2 <input checked="" type="checkbox"/>	2x	96"	89" / TE-25202	1	The number of cuts 1
						Waste
						Material remnant 6 7/8"
						Cut 1/8"
89" TE-25202						

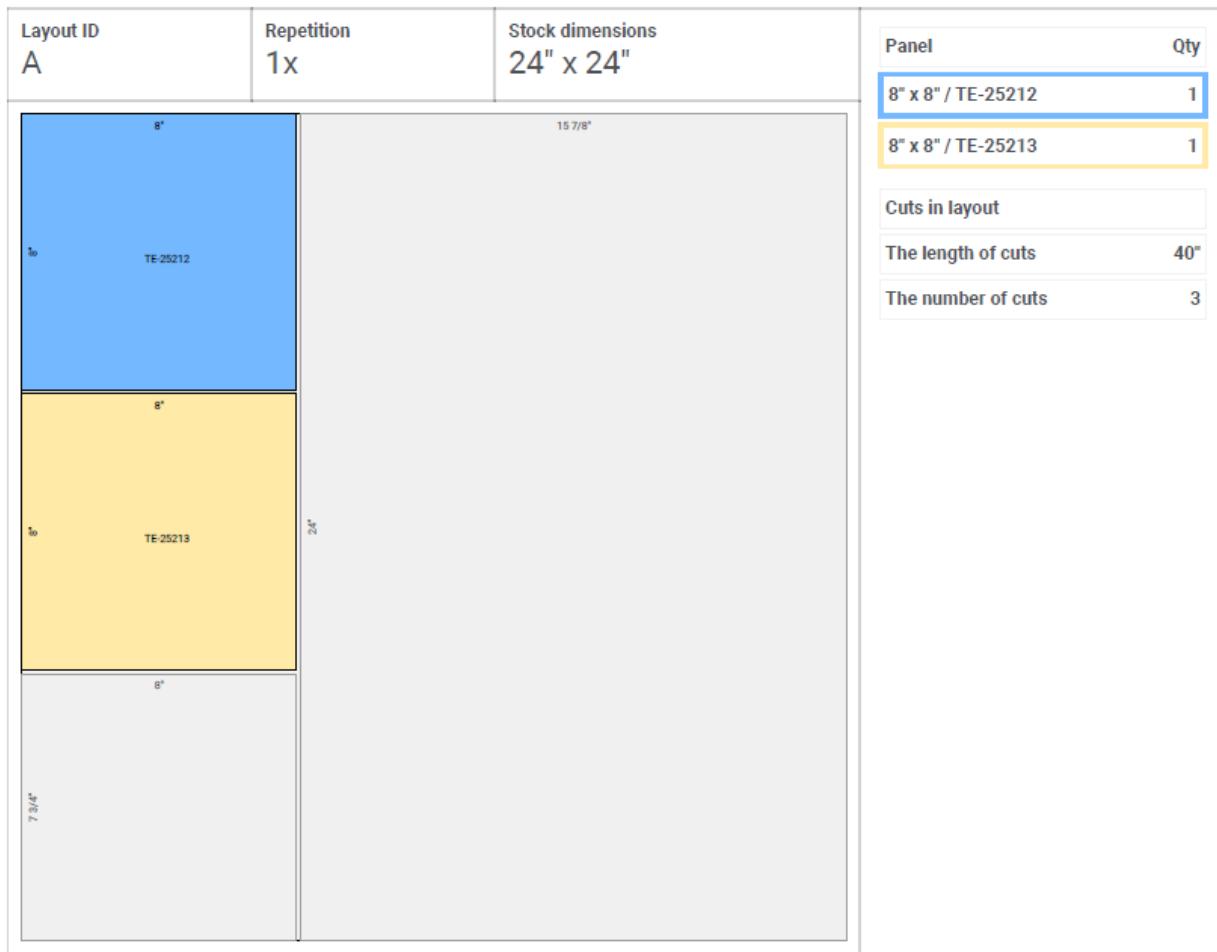
Layout ID	Processed	Repetition	Stock length	Part length / Label	Qty	Cuts in layout
B	0/1 <input checked="" type="checkbox"/>	1x	96"	78" / TE-25207	1	The number of cuts 1
						Waste
						Material remnant 17 7/8"
						Cut 1/8"
78" TE-25207						

1/2" Plywood (TE-25215 can fit into the scrap leftover from angled cuts, as shown below):

Layout ID	Processed	Repetition	Stock dimensions	Panel	Qty
A	0/1 <input checked="" type="checkbox"/>	1x	96" x 48"		
				18" x 48" / TE-25205	2
				19 3/4" x 44" / TE-25206	2
				11 7/8" x 11 7/8" / TE-25203	4
				Cuts in layout	
				The length of cuts	323 1/8"
				The number of cuts	10



3/4" Plywood:


1" Schedule 40 Iron Pipe:

Layout ID A	Processed 0/1 <input checked="" type="checkbox"/>	Repetition 1x	Stock length 120"	Part length / Label 24" / TE-25211	Qty 4	Cuts in layout
				24" TE-25211	24" TE-25211	24" TE-25211

1" EMT Conduit, Galvanized Steel (Note that you must cut two of these):

Layout ID	Processed	Repetition	Stock length	Part length / Label	Qty	Cuts in layout
A	0/2 <input checked="" type="checkbox"/>	2x	96"	80" / TE-25208	1	The number of cuts 1
80" TE-25208						Waste
						Material remnant 15 3/4"
						Cut 1/4"