

Group M1.02 – Team Up To Par

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Objective

- ❖ Design a new hole feature for Landa Park Minigolf Course
- ❖ Needs to have minimal to no maintenance and be long lasting.
- ❖ Must clearly reflect New Braunfels Heritage & Culture

History

- ❖ Used several sources of research such as: New Braunfels' Historic Landa Park 'It's Springs and its People' By Gregory Seals
- ❖ Water powered gristmill built in 1878 for commerce
- ❖ Early settlers found the land desirable due to the confluence of the Comal and Guadalupe
- ❖ Tubing first became popular as early 1968 and quickly became a thriving industry for New Braunfels

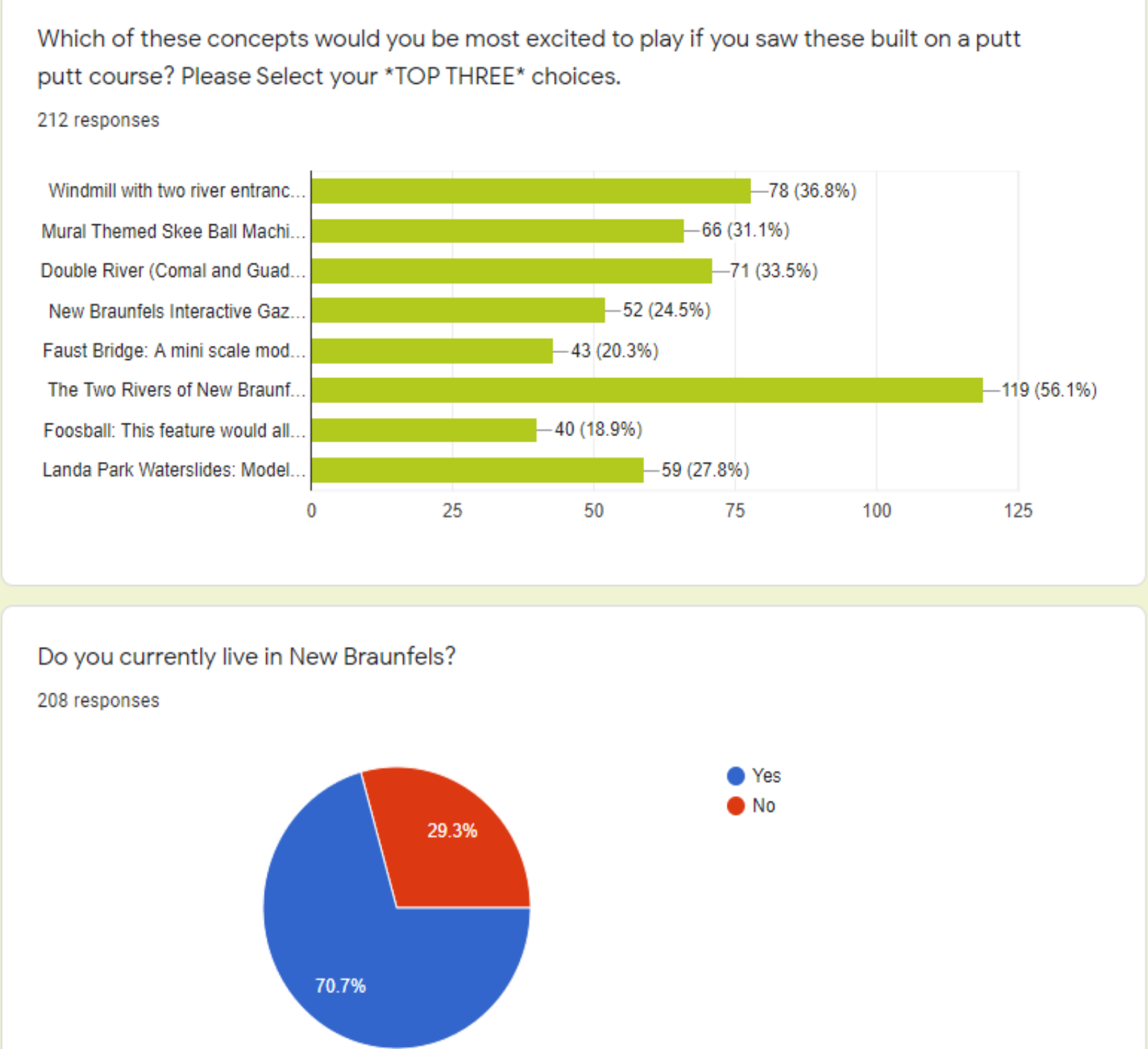
Hole Selection

- ❖ Selected Hole 14
- ❖ Dimensions: 33.5' x 4.5'
- ❖ Hole 14 currently has zero features and is geometrical
- ❖ Advantageous to creating a feature.



Surveying

- ❖ 212 people participated in the survey
- ❖ 119 (56.1%) Votes for two River theme
- ❖ Collected Survey data from New Braunfels locals
- ❖ Received insightful historical feedback (77%)

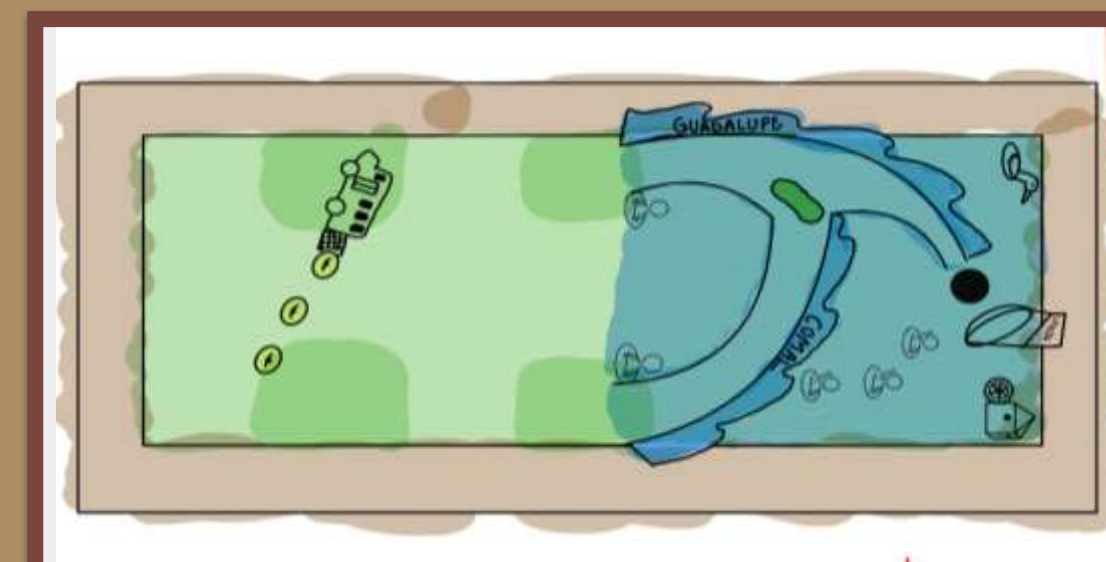


The Comal and Guadalupe Rivers Design Concept

Concept Generation

Conceptualization

- ❖ Themed after the confluence of the Comal and Guadalupe Rivers featuring themed obstacles and a ramp



Modeling

- ❖ Designed main feature through Solidworks
- ❖ Themed obstacles designed with AutoCAD



Rapid Prototyping

- ❖ Created various 3D models for testing to make necessary adjustments to the design



Current Overall Design



Close-up View Back of Hole



Player Perspective



Close-up View Front of Hole

Materials

Ramp:

Base of Structure – 1/8" 1018 LCS

Side Panels – 1/16" 1018 LCS

Top of Structure – 1/16" 1018 LCS

Thru Hole – 16" Diameter Steel Tubing (Cut in Half)

Structural Supports – 1015 LCS 1 OD x 1/8" Square Stock Tubing

Interior of Structure – Polyurethane Spray Foam (Noise Deadening Properties)

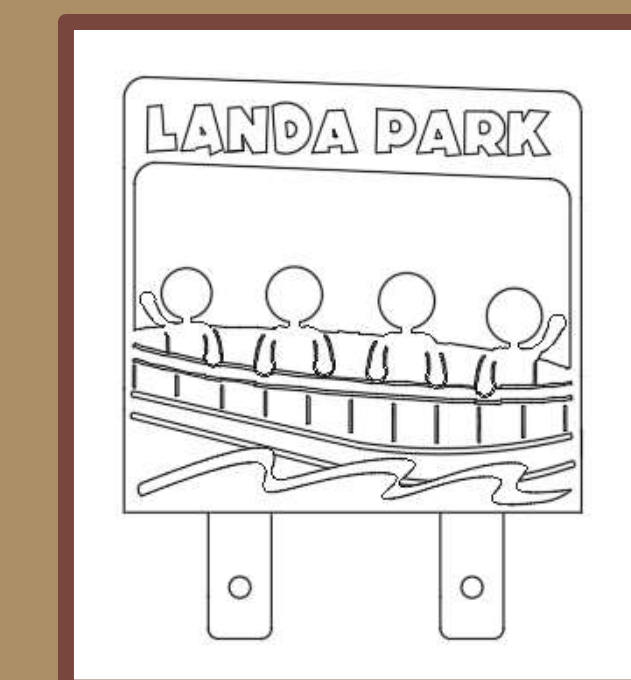
Obstacles:

All Designs – 1/4" 1018 LCS

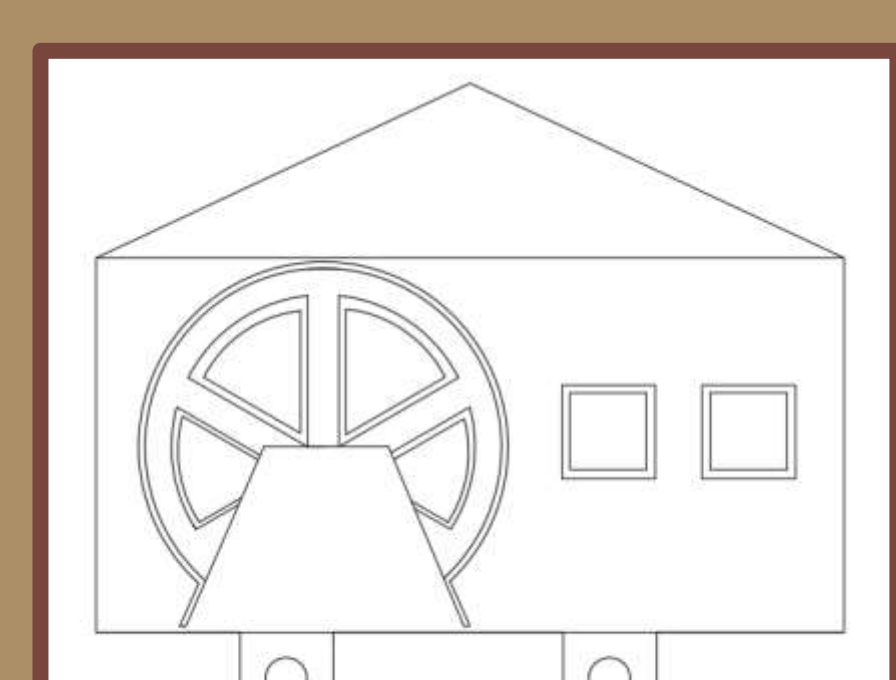
LCS = Low Carbon Steel OD = Outside Diameter

Themed Obstacle Designs

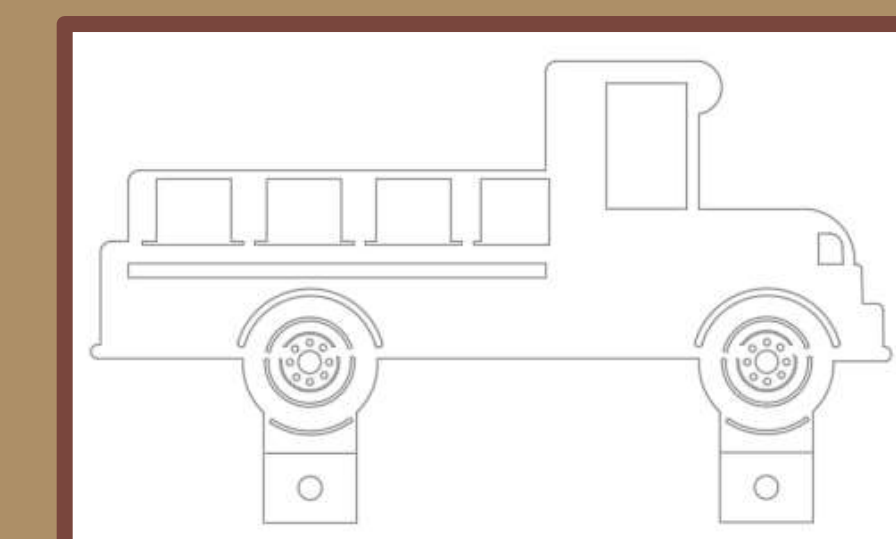
River Float



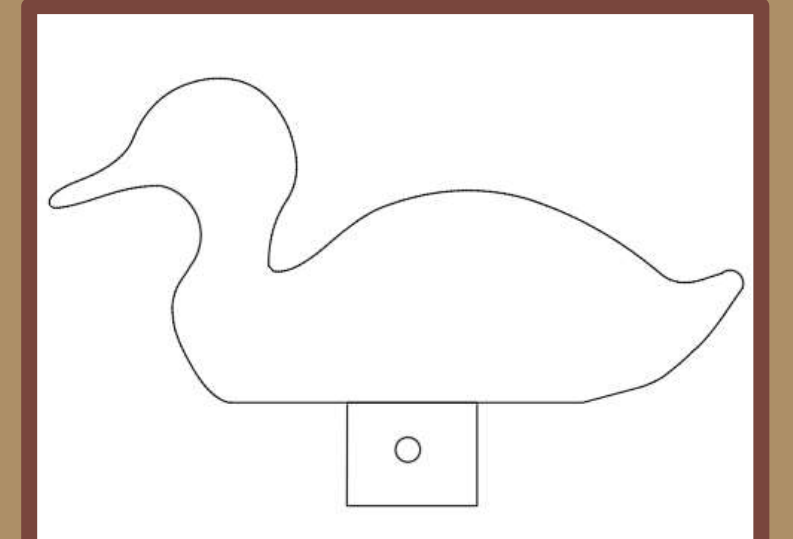
The Mill



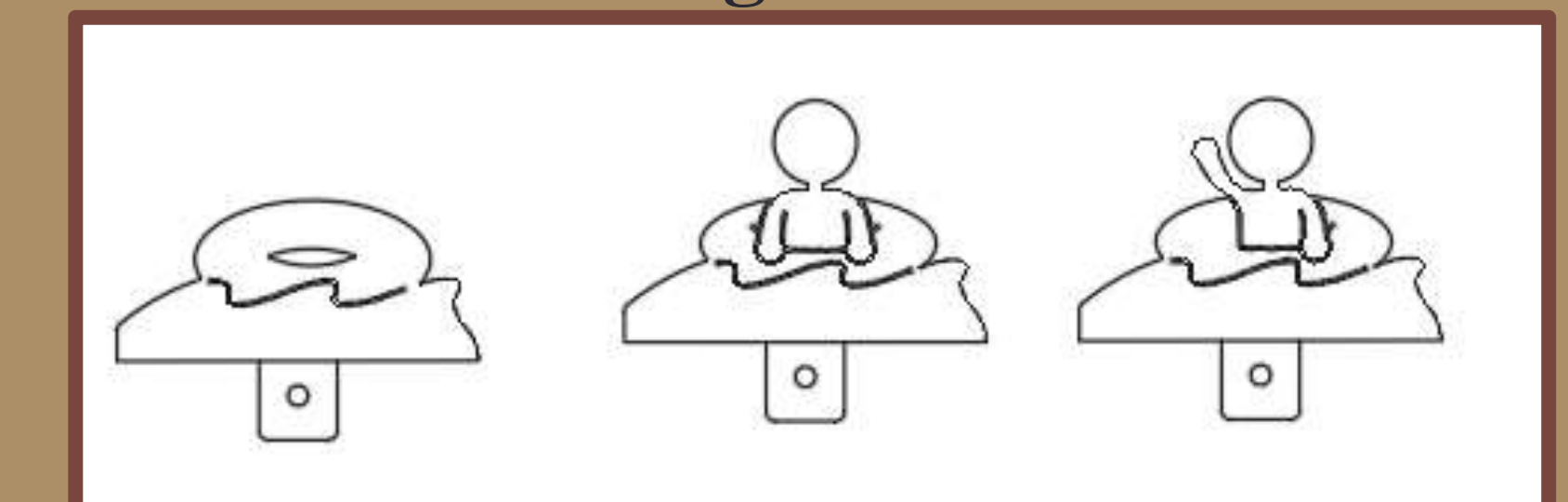
Tubing Bus



Duck



Tubing Models



Processing & Future Steps

- ❖ All structures will be powder-coated to prevent rust and protect the longevity of the product.
- ❖ Further testing to be done to ensure a hole in one, adjustable obstacles with model will allow determining best paths
- ❖ Need to consider alternate materials or processes to create the feature
- ❖ Testing will also be done on material to ensure integrity under impacts
- ❖ Research turfing; to assist in river aesthetics
- ❖ Finalize total cost estimate
- ❖ Install final layout onto hole using bolting method found on course
- ❖ Historical Plaque installed for context