



# PUMP STATION PROJECT

April 22, 2016 - Modesto CA  
Pacific Coast Region - NMRA Convention



*Presented by Chip Meriam - Chico, CA - Sierra Division*

# Modeling a 1930s Vintage Pumping Station

Materials and Techniques for Simulating a Stucco Building with Tiled Roof

Presented at the May 2, 2015 Meet of the Sierra Division - PCNMRA

Modesto, CA

Chip Meriam - Presenter

The following photos illustrate the layout and construction of an HO scale model of a California Water Service pumping station in Willows, CA. The prototype was constructed in 1929 and remains in use today.

The model is constructed from common materials, readily available from local vendors or on line. Novice and experienced modelers are likely to have the requisite skills for such a project. Materials and supplies include:

Matt board - used for framing photos and prints

1/8" Balsa sheet

Rubber cement

White Glue

Squadron® Putty

Textured Spray Paint

Starbuck's® coffee gripper

Plastic hollow wall anchors

Plastic parts sprue

Door and window castings such as Grandt Line®

Finish color paint of choice

Masking tape

Tools include:

Hobby knife with extra blades, razor saw, files and emery boards, coffee stir, tweezers, MicroMark® Balsa Stripper (optional but quite useful), scale rule, straightedge, machinist's blocks.

*Note: This handout is designed as a supplement to the visual presentation and is not a complete set of instructions.*

You are welcome to direct questions or comments to Chip Meriam

[chipmeriam@comcast.net](mailto:chipmeriam@comcast.net)



The story stick (left) is made from 1/8" plywood hinged at the middle at the top of the 4 foot marker and the bottom of the 5 foot marker. Alternate foot markers are painted for ease of reading.

Somewhat unusual materials (right) are textured spray paint for simulating stucco siding, a coffee gripper for simulating fluted roof tiles, plastic hollow wall anchors to provide flanges for an output pipe, and Squadron® putty for filling and shaping the exterior walls.



**Portable Story Stick**



**Rubber cement is good for laminating paper to matt board.**



**Just a few of the many sizes of wall anchors available.**



**Squadron Putty**

<http://www.squadron.com/Squadron-Tools-Green-Putty-SQ9050-p/sq9050.htm>



**Textured spay paint simulates older style stucco surface.**



**Starbuck's® coffee gripper folder out makes fluted tile material**





The story stick (left) is made from 1/8" plywood hinged at the middle at the top of the 4 foot marker and the bottom of the 5 foot marker. Alternate foot markers are painted for ease of reading.

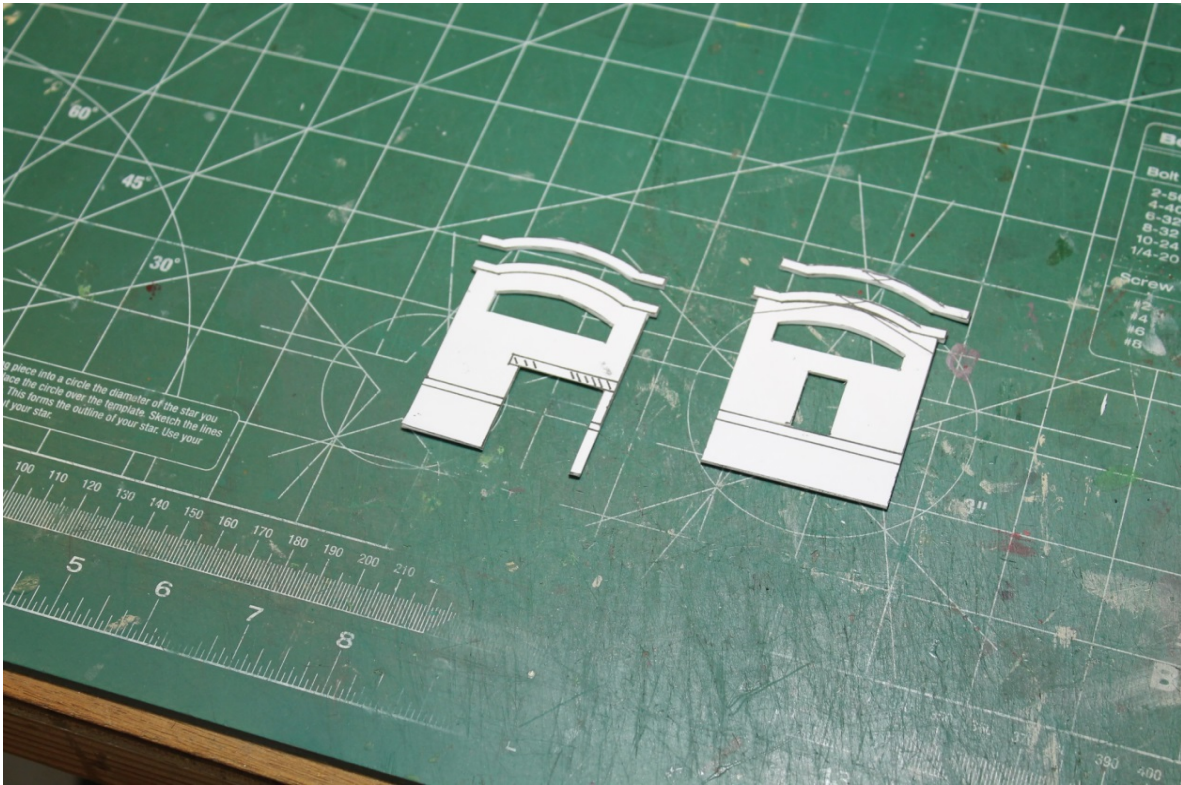
Somewhat unusual materials (right) are textured spray paint for simulating stucco siding, a coffee gripper for simulating fluted roof tiles, plastic hollow wall anchors to provide flanges for an output pipe, and Squadron® putty for filling and shaping the exterior walls.



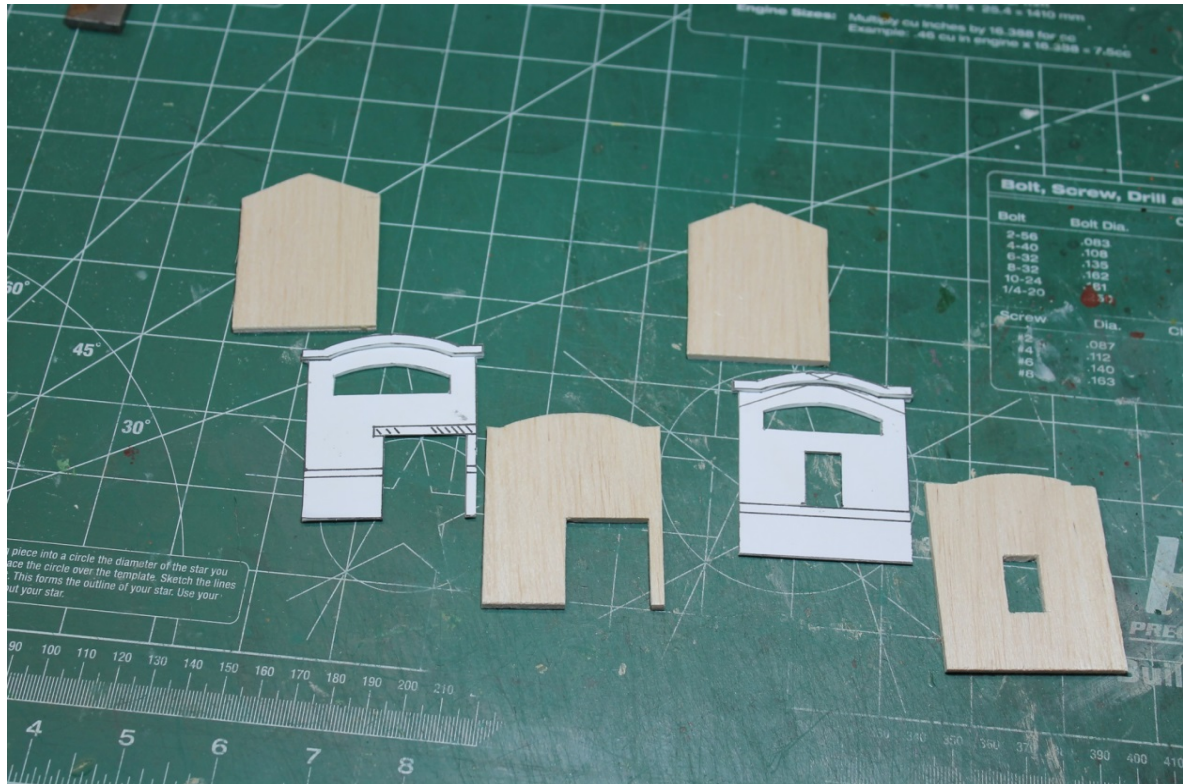
Photos and Measurements are Translated to a Scale Drawing.



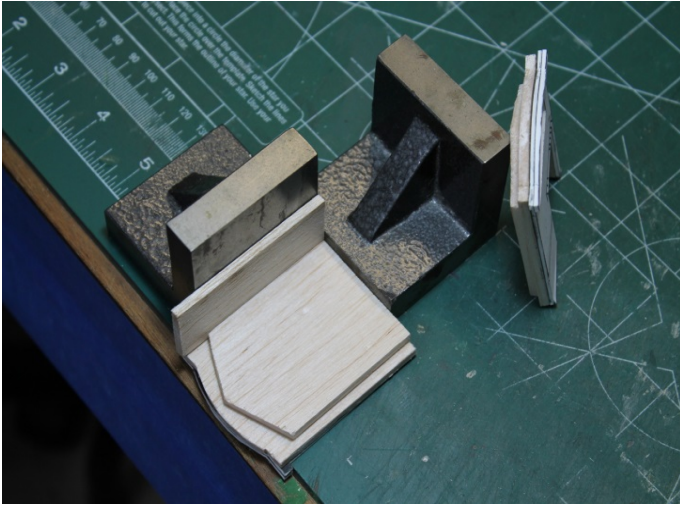
Scale Drawing is Laminated to Matt Board with Rubber Cement.



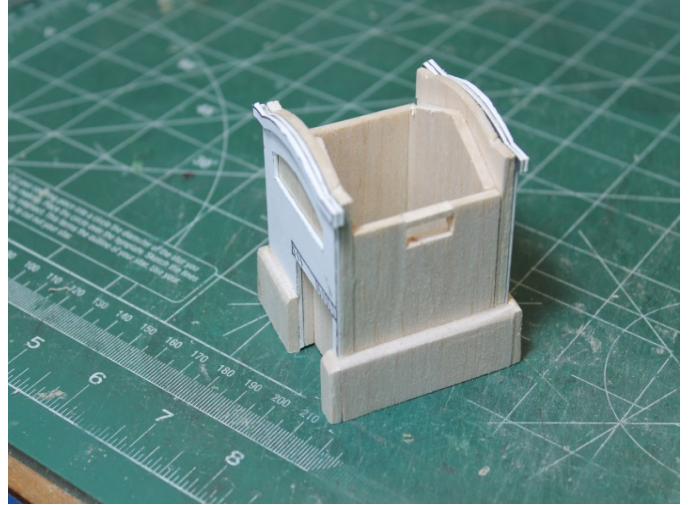
Front and Rear Elevations and Façade Strips are Cut from Matt Board.



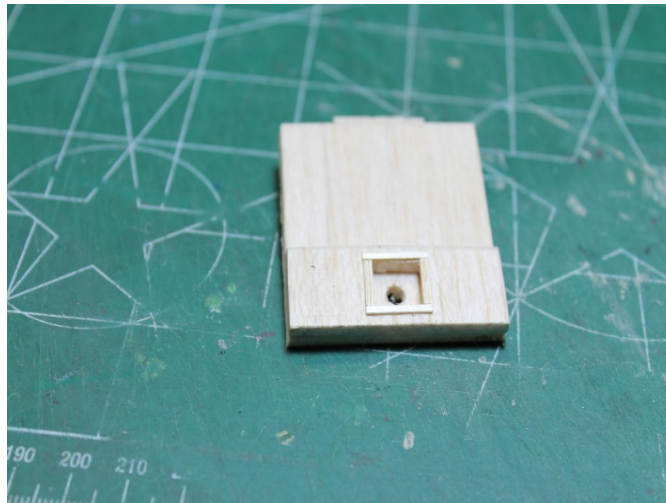
Front and Rear Walls with Facades Added, Backer Boards, and Roof Countour Panels.



Front and Rear Walls are Laminated to Their Backing Boards and the Roof Contour Panels are Laminated to the Inside of the Backing Boards.



The Four Walls are Assembled and the Pony Walls are Applied.



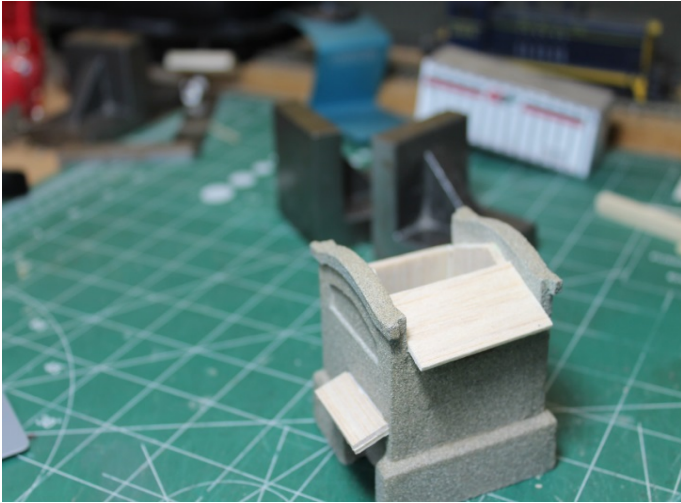
A Square Opening Cut in One Pony Wall is Framed with Balsa Strips. A Hole for the Output Pipe is Drilled Through the Main Wall.



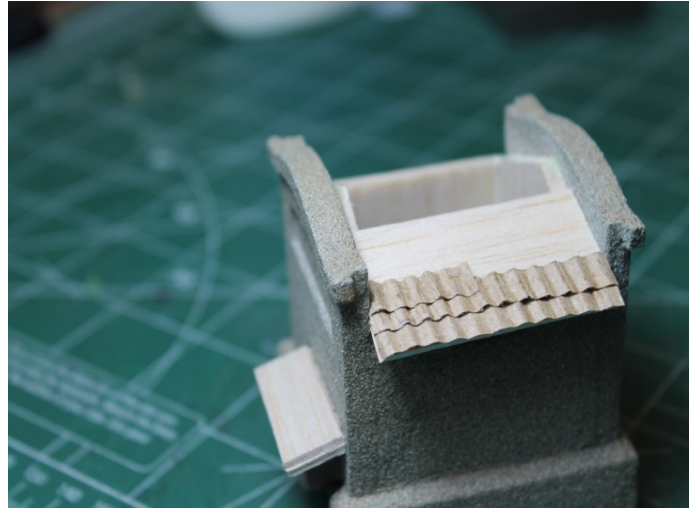
Putty is Used to Fill and Shape the Exterior Walls and Door & Window Openings.



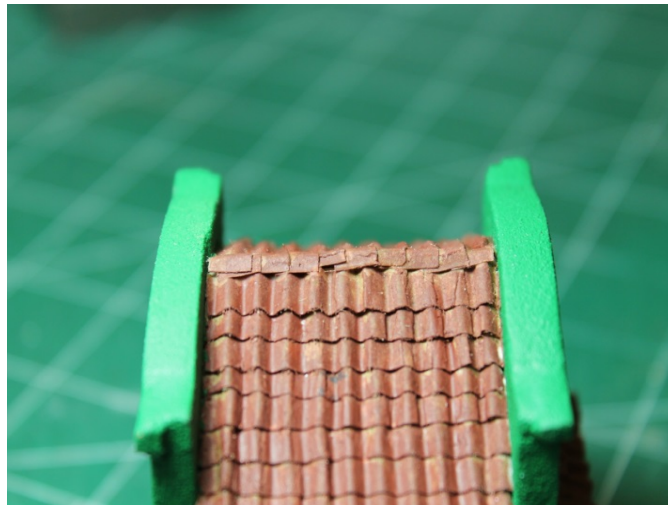
After Filing to Final Shape with Emery Boards, the Textured Paint is Applied.



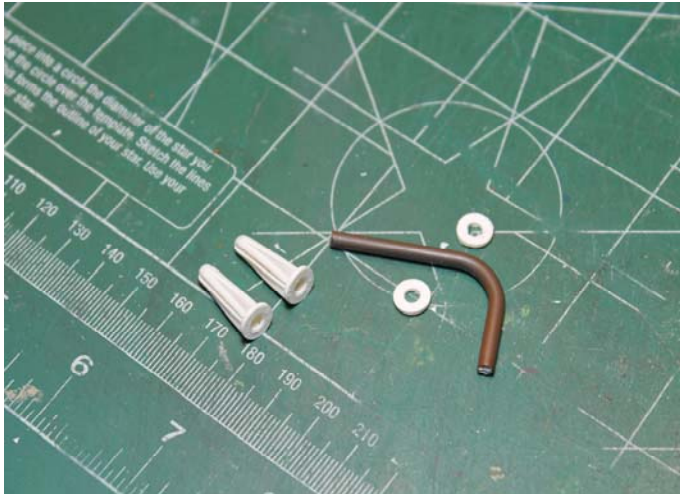
Roof Sheathing is Affixed to Contour Panels.



Fluted Tiles are Cut from Coffee Gripper.  
Courses of "Tiles" are Applied from the  
Bottom Up - Overlapping by About 50%.



The Completed Tile Roof is Painted to  
Look Like Terra Cotta.  
Note the Cap Course Runs Parallel to the Ridge.



A Left-Over Sprue and Some Plastic Hollow Wall Anchors are Used to Form The Output Pipe.



The Round Tops of the Wall Anchors Are Sliced off and Slid Onto the Sprue To Form a Flanged Elbow.



The Output Pipe As Installed at the Site.



**Installation at Vecino**

---