Installation of the Thammat (63.4)

Steps 1-7 occurred in November/December 2022
Steps 8-30 occurred January 17-18th, 2023

1. Base (#93)
    a. Placed on two dollies and wheeled to platform. Lifted onto platform with straps
    b. Wheels chocked
2. Secured detached florets (#100, #101)
    a. Used mat board shims and wire
3. Mounts placed on top flat surface of base
    a. Register with the holes where the columns would have come up through the base
4. Columns (sit in place in mount) (#80, #81, #86, #88, #105, #106)
    a. Insert vertical aluminum bars into mount to support columns
    b. Insert aluminum shims into mount for central columns
5. Apron panels (sit on top of base, in line with columns) (#73, #77, #78, #84, #87)
6. Apron panel trim (recessed area rests atop apron panels and ends fit into recesses on adjacent columns) (#66, #67, #74, #75, #76, #79, #83)
7. Flames (#62)
    a. Some have dovetails at the bottom and could be slotted into the existing track. Others were too wide/narrow and had to be shimmed with mat board.
    b. Flames were rearranged for best fit and are no longer situated in alphabetical order.
8. Cross pieces (slide into place through columns at each end) (#72, #108)
    a. Had to use mallet to get PL side cross piece through column, very tight join
9. Left and right uprights (#59b, #60b)
    a. Vertical piece (central part of triangles) that drops onto horizontal cross pieces at ends
10. Ceiling frame (drops into place over the uprights) (#70)
11. Central upright (slides into place) (#61b)
    a. Vertical piece in center triangle slots into ceiling, has a rebuilt epoxy dovetail
12. All rafters (left, right, center) (#60ac, #59ac, #61ac)
    a. Sloped sides of triangles
13. Ridge pole (#58)
    a. Central beam that locks onto top of triangles
14. Attach mending plates to PR and PL gable supports to secure
15. Drop ceiling panels/tiles/slats in place (#95, #96, #97, #98)
    a. Organize holes or cut outs around central upright holes
16. Left and right pediments (#11, #25)
17. Left and right sub roof ridge poles slide on to top of pediments and lock them in (#12, #24)
    a. Must be doweled on inside, pegged, and shimmed/chocked
18. Portico/sub roof purlins on right inserted through sides of pediment into rafters/sides of triangle (#13, #14)
    a. Must be shimmed
19. Main roof panels on front and back sides (#57, #50)
20. Main roof trim pieces hang in place over center peak of roof (#48, #54)
    a. These are currently connected to each other with wire

21. Main ridge cap sets in place over trim (#56)
22. Sub roof fascia/cornices (#34, #35, #36, #37, #38, #42, #43, #44)
    a. Insert cornice supports into columns (some are wedged into columns and don't come out, others do)
    b. Drop fascia board/cornice in place
    c. Secure the open cornice join at front on PR end with a mending plate from above
23. Main fascia/cornices (#46, #102)
    a. Attach cleats to cornice support pieces (already in column)
        i. These cleats are stamped with location indicators (L, M, R for left, middle, right)
    b. Drop fascia board/cornice onto cleats
    **When this section is deinstalled some of the cleats will have to come off the support pieces as they cannot fit through the openings in the columns when attached.
24. Barge/inner boards (#28, #29, #89, #90)
    a. Must be doweled and secured in place with wire at top
    b. The ends rest upon the cornice below
    c. End of both board on PL side secured with wire to cross piece
25. Portico ceiling panels (trapezoids) (#17, #30)
26. Portico/sub roof panels (hang in place) (#7, #8, #9/10, #21/21a, #22/23, #26)
    a. The wider pieces have cleats on the back so they can be hung on the purlins.
    b. The narrow pieces need dowels to hold in place
27. Naga/outer boards on sub roof (#2, #6, #19, #21b)
    a. Must be secured in place with wire at top
    b. PR side naga/outer boards could not be properly aligned with the sub roof ridge pole. The 2 boards come together at the center just above the sub roof ridge pole, rather than around it.
28. All chofas/finials (main roof and sub roof) (#1, #15, #18, #27)
    a. PR main roof chofa original dowel replaced with new and tied in place with wire
    b. PR sub roof chofa new dowel added
    c. PL sub roof chofa tied to new dowel with picture hanging wire
    d. PL main roof chofa new dowel added
29. Sub roof ridge caps (#4, #20)
    a. Rest atop sub roof ridge poles
30. Attach brackets to columns and fascia/cornice (#31, #32, #33, #39, #40, #41, #45, #90)
    a. Nub at top fits into fascia/cornice in some locations
    b. Tied in place with monofilament
    c. Some brackets also held in place with existing or new nails in old nail holes
31. Diagonal strut with floret on PR side returned to base
    a. One diagonal bar tied to other with monofilament
32. Stairs in place at what is now the back of the Thammat
    a. Mylar placed underneath the feet as a barrier

Mounts

The Thammat has six columns which would have originally extended from the base up through the ceiling frame/bottom of the roof; however, the columns were cut where they meet the top flat surface of the base and now exist independent of that structure. In order to assemble the Thammat, it was necessary to mount the columns to the base.

Two aluminum mounts to hold the columns atop the base were created by Paul Daniel. Each mount is L-shaped and sits along the interior perimeter of the top surface of the base. At three points on the mount (each end and at the center of the L) is a square section into which the base of the column fits. The underside of the mount in these locations registers with the holes where the columns would have come up through the base. The undersides of the mounts were padded with black Volara attached with double sided tape.

The columns sit in the mount and were shimmed with black mat board for a tight fit. The mount is stamped with the associated column number adjacent to the square where it sits. The columns at the corners are supported on two sides with vertical aluminum bars that slot into the mount. The columns at the center are supported on the back side with a single aluminum bar that has short arms at the top that hug the column, and is further secured into the mount with custom aluminum shims. The support bars are half the height of the column and are stamped with the number of the column to which they belong.

When columns were inserted into the mount they were tied with twill tape for additional security during assembly.

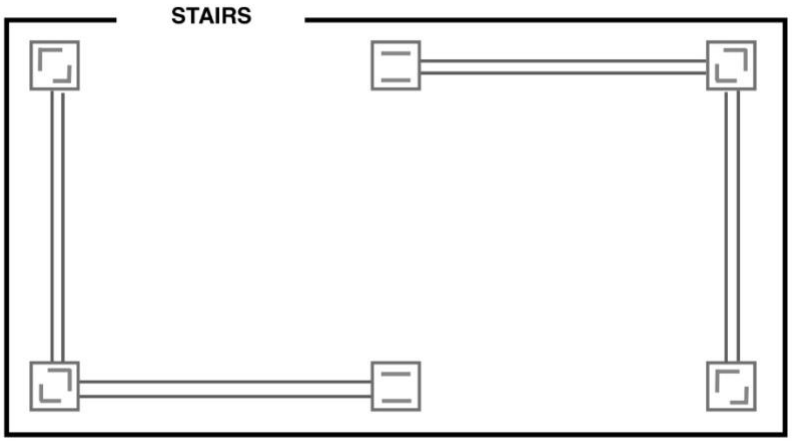
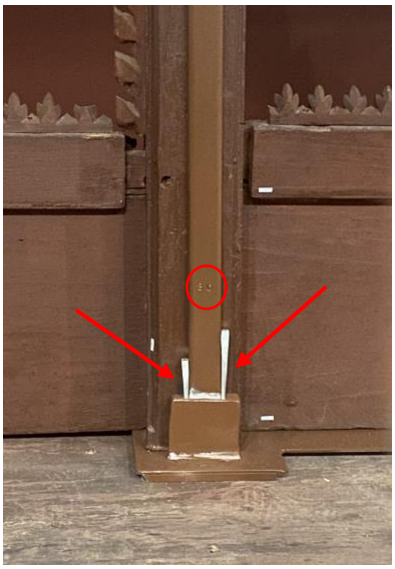


Diagram of mount placement on Thammat base

View of L-shaped mount at one end of the Thammat

Central column sitting in its mount with vertical support bar at back. Note arms that extend from top of support bar and hug the sides of the column.



Aluminum shims securing vertical support bar in mount (arrows). Note stamped number on bar which corresponds to the column number (circled).

Additional Materials/Methods Used for Assembly

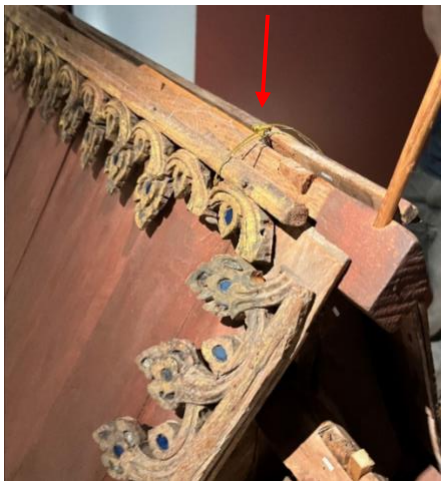
In instances where existing joins were not sufficient, additional methods were used for securing pieces of the Thammat during assembly. Plastic coated braided picture hanging wire, dowels, wood shims and mending plates were used in various locations. Any wires or dowels that were visible once installed were inpainted with Golden Fluid Acrylics.

Below are the instances/locations in which additional materials were used:

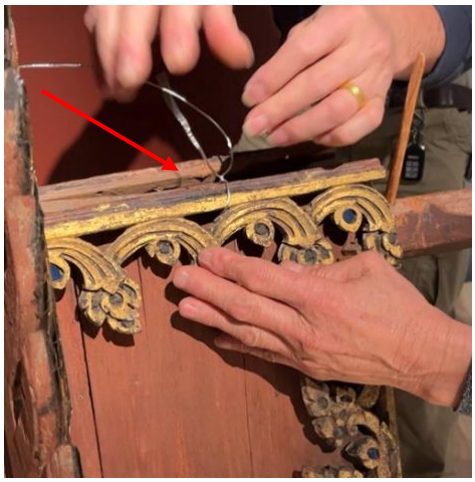
- Mending plates were attached to the PL and PR gable supports to secure the left and right sides together.
- Portico/sub roof purlins and sub roof ridge poles were shimmed with wood for a tight fit into gables.
- Main roof trim pieces were tied together with wire so they could be hung in place over the main roof ridge pole.
- PR sub roof panel trim tied in place with wire through panel.
- Barge/inner boards were doweled at the mid-point and secured in place with wire tied around the board and the main ridge pole.
- The ends of the PL barge/inner boards were secured to the cross piece below with wire.
- Naga/outer boards were secured in place with wire tied around the board and the sub roof ridge pole. On the PR side of the Thammat the naga boards were too high and did not align properly with the sub roof ridge pole. They were tied in place as is.
- Custom fit cleats were attached to some cornice supports to aid in assembly. The associated fascia boards/cornice pieces were then dropped onto the cleats.
- A mending plate was used to secure the open join of the front PR sub roof cornice.
- Cleats were added to the back/underside of the wide sub roof panels (#7, #9/10, #21/21a, #22/23) so they could easily be hung on the sub roof purlins.
- Narrow sub roof panels are held in place with dowels at mid-point (#8, #26)
- Chofas: PR main roof chofa original dowel replaced with new and tied in place with wire, PR sub roof chofa new dowel added, PL sub roof chofa tied to new dowel with picture hanging wire, PL main roof chofa new dowel added.

Mending plate attached to PR gable support.

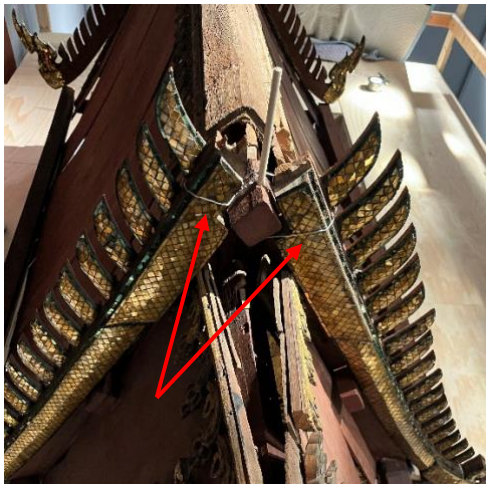
Sub roof purlins shimmed for a tight fit.



Two pieces of main roof trim tied together with wire and placed over main roof ridge pole.



PR sub roof panel trim tied in place with wire through panel.

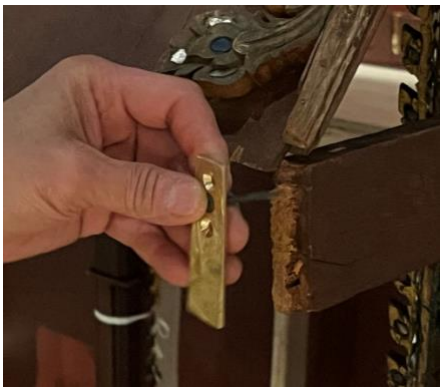


Barge/inner boards secured with wire tied around fins on boards and ridge pole.

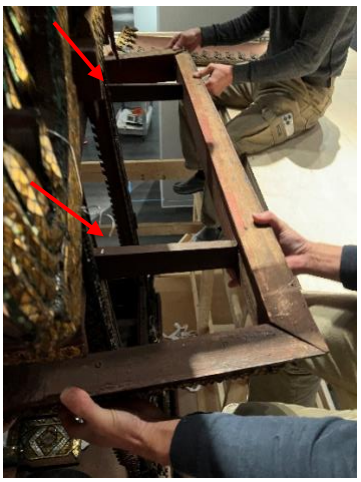
View from behind of barge/inner boards secured with wire around fin and ridge pole.

PR side naga/outer boards were too high and did not align properly with the sub roof ridge pole. They were tied in place with wire as is.

End of front PL barge/inner board secured to the cross piece below with wire.



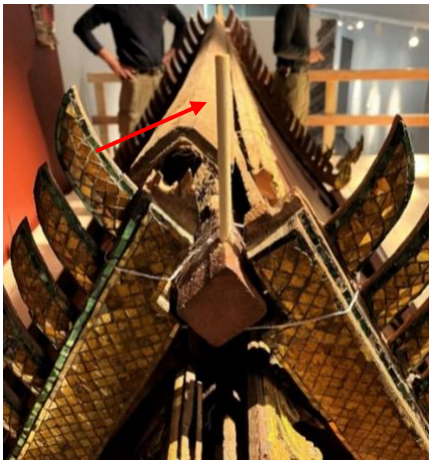
Attaching cleat to cornice support beam (left), dropping fascia board/cornice onto cleat (right).



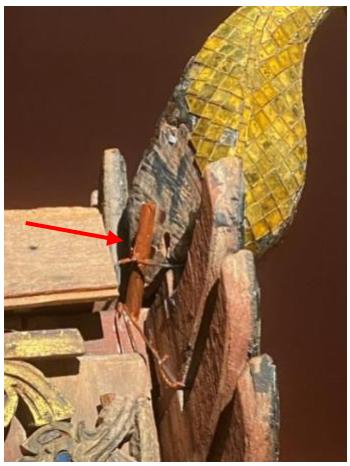
Sub roof cornice dropped onto cornice support pieces (indicated with arrows).

The open join of the front PR sub roof cornice was secured with a mending plate.

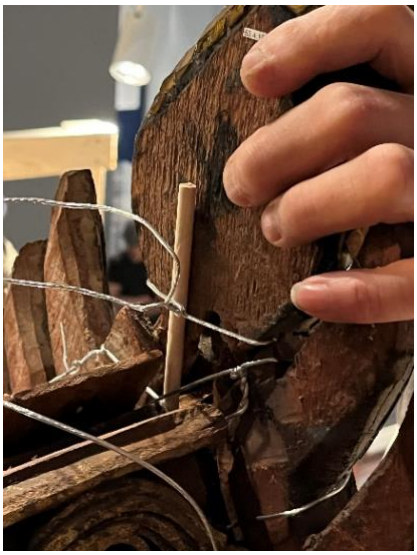
Cleats were added to the backs of the wide sub roof panels so they could be hung on the purlins.



New dowel added to main roof ridge pole to support PL main roof chofa.



PR main roof chofa dowel replaced and tied in place with wire.



PL sub roof chofa secured to new dowel at back with wire.

Bracket held in place with monofilament at top and mid-section