

GENERAL NOTES

A. MATERIALS

1. Structural steel shapes and plates shall conform to ASTM A36 (latest issue) or as otherwise noted.
2. High strength bolts, nuts and washers for the temporary bracing shall conform to ASTM A490.
3. High strength bolts used for replacement of Pratt Truss members shall be ASTM A325 button-head, interference body bolts. Heavy hexagon nuts and washers shall conform to ASTM A325.
4. Steel for expansion anchor bolts shall be cold-rolled, high strength 84,000 psi., Brinell hardness 156, carbon .15%, yield 70,000 psi., elongation 2" 15%. Reduction of area 55%.
5. All added 6"x16" timber stringers and replaced 4"x12" transverse timber decking shall be Douglas Fir select structural grade. All 2"x12" replaced timber planks shall be Douglas Fir No.1 grade.
6. All drilled holes in abutment walls shall be filled with grout having a minimum compressive strength of 4000 psi @ 28 days after the removal of anchor bolts.
7. Minimum thickness of plates used in the repair of remaining Pratt Truss members shall be 3/8" unless otherwise shown in the drawings or as directed by the Engineer.

B. DETAILING, FABRICATION AND ERECTION

1. All work shall be detailed, fabricated and erected to conform with the AASHTO "Standard Specifications for Highway Bridges" (12th Edition with subsequent interim revisions) and to the State of Hawaii "Standard Specifications for Road and Bridge Construction", 1976 edition by the Department of Transportation.
2. All work shall be fabricated to shape and size with sharp line and angles and smooth surfaces. Connections shall be securely bolted or welded as indicated. Exposed ends and edges of metal shall be smooth.
3. Surfaces in contact of bolted connections shall be blast cleaned prior to the bolting operation. (Temporary bracing members only.)

C. PAINTING

1. Exclude shop painting all contact surfaces of field splices to be connected by high strength bolts.

D. TRAFFIC

1. No more than one vehicle shall be allowed on the structure at any time during construction.
2. When any temporary bracing or falsework is on the structure the limit of the vehicle shall be 8 tons.

D. TRAFFIC

3. Traffic shall be limited to the middle 11'-0" of the roadway.
4. The Contractor shall install suitable timber bumpers as directed by the Engineer.

E. GENERAL

1. All repairs and additions shall be made in a symmetrical pattern.
2. Hanalei bridge shall be kept open to the public while undergoing repairs.
3. All dimensions & elevations shown shall be verified in the field.
4. Contractor shall take all necessary precautions for protection of existing or new work and safety of the public (especially during welding and removal of materials).
5. All temporary erection platforms, shoring, scrap metal, etc. shall be removed from the site after completion of work.
6. Disposal of all old steel members removed in the repair operation shall be the Contractor's responsibility.
7. All temporary bracing members shall become the property of the State.
8. The Engineer shall be the sole judge in determining the adequacy of the welding connections and repair.
9. The numbers in parenthesis () after the temporary bracing member indicate the total number of pieces required for the project.

F. MISCELLANEOUS

- The following items of work shall be considered incidental to the various pay items and shall not be paid for separately.
1. Existing 2"x12" longitudinal timber wearing surface planks and all removed 4"x12" transverse timber deck beams shall be stockpiled at the Kauai District baseyard as directed by the Engineer.
 2. Miscellaneous hardware including turnbuckles and clevises used in the temporary bracing.
 3. Upon completion of repair operations, all temporary bracing members shall be stockpiled at the Kauai District baseyard as directed by the Engineer.
 4. Cleaning of debris, loose material and foreign matter from the truss joints and other connection points.
 5. All lag screws and other fasteners used in the timber work.
 6. Any straightening of existing Pratt Truss members.
 7. All bolts, nuts and washers.
 8. Grout used to fill drilled holes in abutment walls.

G. CONSTRUCTION SEQUENCE

See Special Provisions.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56D-01-81M	1981	2	21

INDEX

SHEET NO.	DESCRIPTION
1	INDEX; GENERAL NOTES; SYMBOLS & ABBREVIATIONS
2	PRATT TRUSS: PLAN - TOP & BOTTOM CHORD DIAGRAM, ELEVATION & DECK SECTION
3	WARREN TRUSS: PLAN & ELEVATION DIAGRAM TYP. TRUSS BRACING AT LINES ② & ④
4	WARREN TRUSS: TYP. TRUSS BRACING AT LINES ①, ③ & ⑤
5	WARREN TRUSS: DETAILS
6	PRATT TRUSS: TYP. SECTION, TYP. ADDED STRINGER BEARING DETAILS & EXISTING ABUT. DETAILS
7	PRATT TRUSS: BOTTOM CHORD DETAILS AT LINES ① & ⑤
8	PRATT TRUSS: BOTTOM CHORD DETAILS AT LINES ② & ④
9	PRATT TRUSS: BOTTOM CHORD DETAILS AT LINES ②, ③ & ④
10	PRATT TRUSS: BOTTOM CHORD DETAILS AT LINES ③
11	PRATT TRUSS: TYP. CONNECTION TO EXISTING S15 x 42.9 TYP. BM. STIFFENER DETAILS
12	PRATT TRUSS: TOP CHORD DETAILS AT LINES ① & ⑤
13	PRATT TRUSS: TOP CHORD DETAILS AT LINES ② & ④
14	PRATT TRUSS: TOP CHORD DETAILS AT LINE ③
15	PRATT TRUSS: PORTAL & SWAY FRAME DETAILS

SYMBOLS AND ABBREVIATIONS

Detail or section designation
A
12/13
Sht. no. sec- tion is cut or detail location
Sht. no. detail is drawn.

Anch. - Anchor
Hd. - Head
H.S. - High strength
M.F.B.M. - Thousand (feet) board measure
S15 - Surfaced one side

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
KUHIO HIGHWAY REPAIRS TO HANALEI BRIDGE
GENERAL NOTES SYMBOLS AND ABBREVIATIONS
Proj. No. 56D-01-81M
Scale: No Scale Date: Aug. 1980
SHEET No. 1 OF 15 SHEETS

ORIGINAL PLAN	DATE
NO. 1	Aug. 1980
DESIGNED BY	L.M.A.
CHECKED BY	D.C.O.
DATE	" "
BY	" "
DATE	" "
BY	" "