

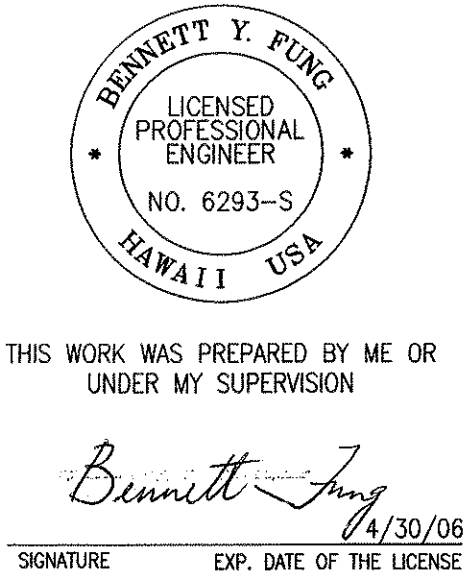
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	59	81

TRESTLE ACCESS PLATFORM SYSTEM NOTES:

1. The trestle access platform system shall be a pneumatically operated modular aluminum staging system with the following characteristics:
- a. A man-rated 24" wide aluminum modular staging system with walk through stirrups, aluminum side truss, deck guard rail, toe board and floor panels.
 - b. Capable of supporting a total live load of 1000 lbs. minimum, with the capacity of any one section not less than 750 lbs.
 - c. air powered hoists with 1500 lbs. total capacity, travel speed of 30 feet per minute (minimum), emergency breaking system, and 200 feet drop.
 - d. Welding will be performed on the suspended powered access platform system. Provide all accessories stated below. The platform shall be equipped with pig tail to be grounded to structure. All wire rope above and below the platform shall be insulated. Wire rope at suspension point shall be insulated, with suitable insulated thimble and wire rope shall not be in contact with the structure along its entire length, or cover the supporting wire rope with insulating material above and below the platform with split rubber tube tape in place around the cables. The system shall prevent the bitter end from touching the ground. Cover each hoist, brake and wire winder with protective cover made with insulating material.
2. Equipment known to meet requirements:
- Sky Stage Ultra, manufactured by Sky Climber, Inc., Stone Mountain, GA 30083

3. Provide the following Trestle Access Platform components:
- U-shape stage – provide components to construct two completely operational U-shape platforms. See details on plan sheets 62 & 63.
- Provide all components to construct one completely operational 29-foot long straight platform and one completely operational 36-foot long straight platform as shown on plan sheet 71.
- Assemble all components as necessary to make each platform system completely functional, safe and man-rated.
- Side trolleys – provide 10 side pipe trolleys (connected to vertical guide rails) as shown on drawing 72.
- Grounding and Insulation – provide all grounding, equipment covers and insulation required for welding operation on the access platform.
- Wall Rollers – provide 12 wall rollers required plus 12 spare.
- Air Hoist – provide 14 kits, 1500 lb minimum capacity, 30 feet per minute.
- Central Control – provide 6 central control.
- Wire Winder – provide 12 wire winder 400ft capacity
- Tube Assembly Wire Winder – provide 12.
- Departure Tube Kit – provide 12 for the air hoists.
- Steel Wire Rope – provide 2,000 steel wire rope, 9.5mm, Cut to length.
- Thimble – provide 12 thimble.
- Fist Grip – provide 48, 3/8 inch fist grip.
- Shackle – provide 12 shackle, 5/8 inch.
- Rope Grab – provide 14 rope grab, stainless, 5/8 inch.
- Lifeline – provide 3 each 5/8 inch x 1200ft bulk polyester rope with minimum 5000 pounds tensile strength.
4. Provide 5 days of on-site training for the assembly and use of the Trestle Access Platform components.
- One site training shall be done on Umauma Bridge.
5. Provide Trestle Access Platform System warranty and service for 3 years.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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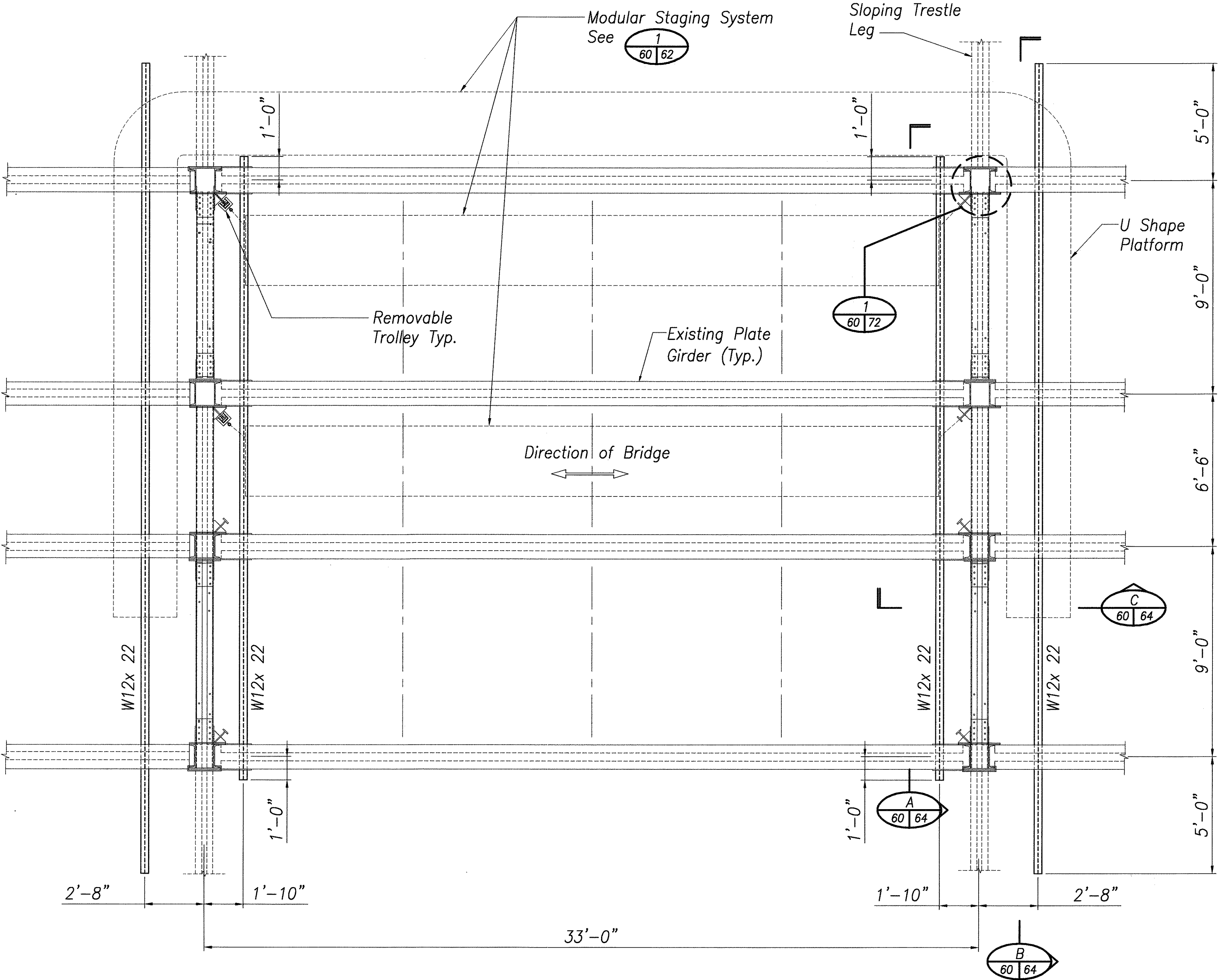
STATE OF HAWAII
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HIGHWAYS DIVISION

TRESTLE ACCESS PLATFORM
SYSTEM NOTES

MAINTENANCE PLATFORM ON VARIOUS BRIDGES
PROJECT NO. HWY-H-09-99M
Scale: 3/8" = 1'-0" Date: Apr. 2005

Sheet No. 59 Of 81 Sheets

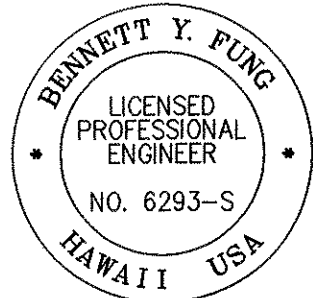
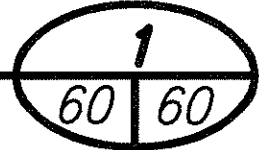
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	60	81



TYPICAL PLAN OF MONORAIL STEEL BEAMS

SCALE: 3/8"=1'-0" (KAPUE, PAHEEHIE, AND UMAUMA BRIDGES)

Note:
Plan shows configuration with straight and U shape platform.



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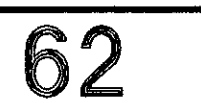
TYPICAL MONORAIL STEEL BEAM PLAN

MAINTENANCE PLATFORM ON VARIOUS BRIDGES

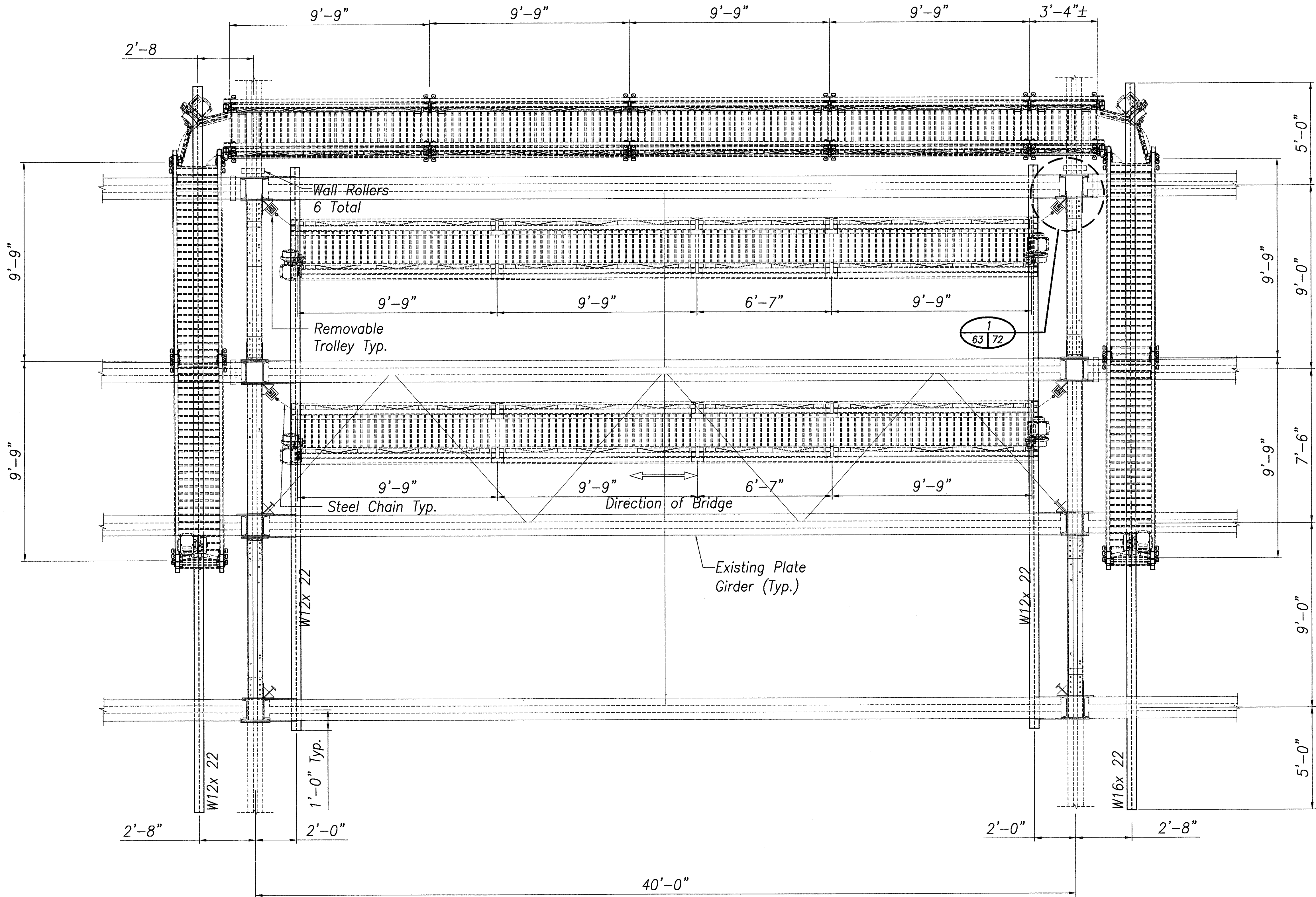
PROJECT NO. HWY-H-09-99M
Scale: 3/8" = 1'-0" Date: Apr. 2005

Sheet No. 60 Of 81 Sheets

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
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	TRACED BY _____	_____
	DESIGNED BY _____	_____
	QUANTITIES BY _____	_____
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	63	81

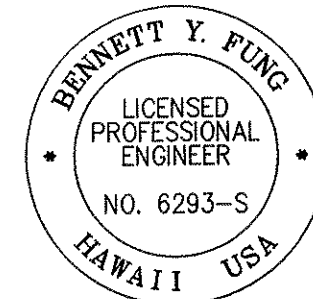


TYPICAL ACCESS PLATFORM PLAN TRESTLE

SCALE: 3/8"=1'-0" (HAKALAU BRIDGES)

38, 40, 41, 63

Note:
Plan shows configuration with straight platforms only. U shape platform not shown.



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TRESTLE ACCESS PLATFORM PLAN

MAINTENANCE PLATFORM ON VARIOUS BRIDGES

PROJECT NO. HWY-H-09-99M

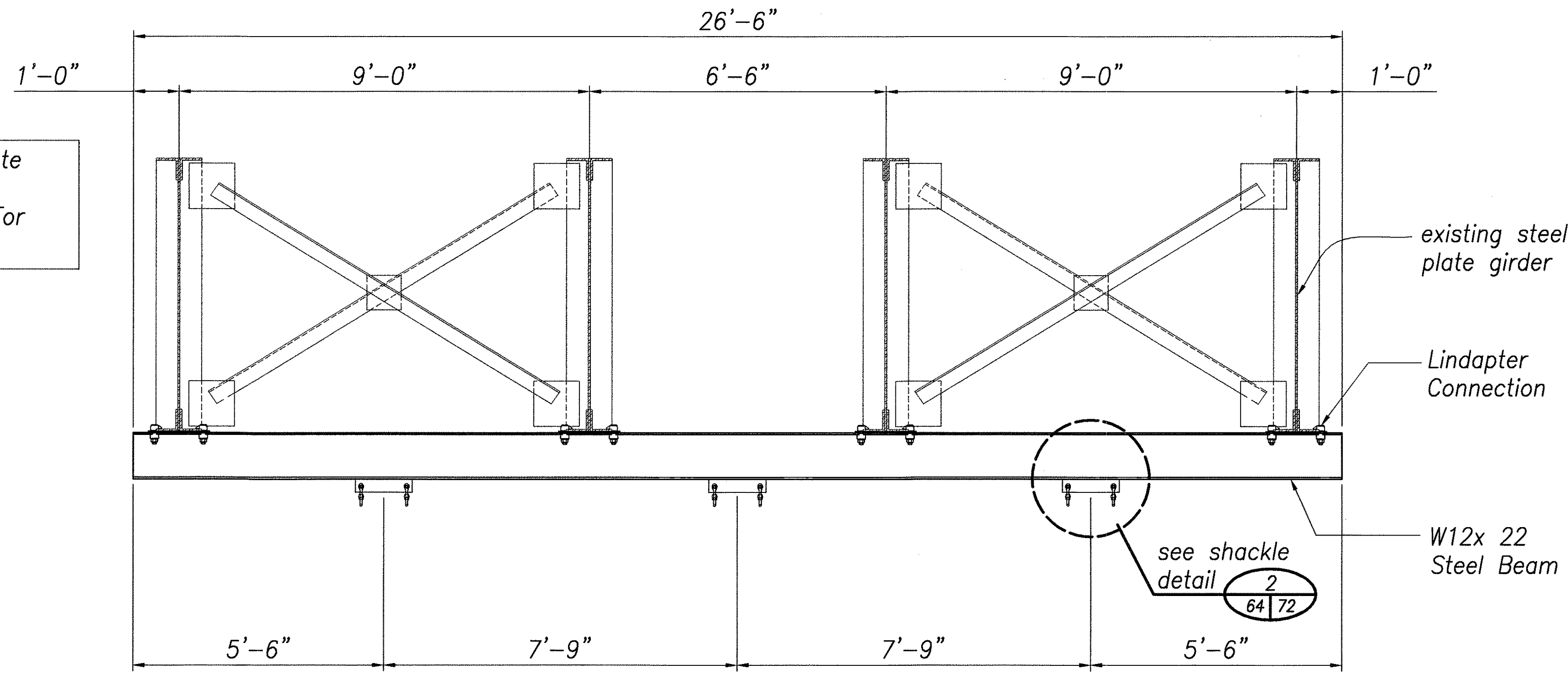
Scale: 3/8" = 1'-0"

Date: Apr. 2005

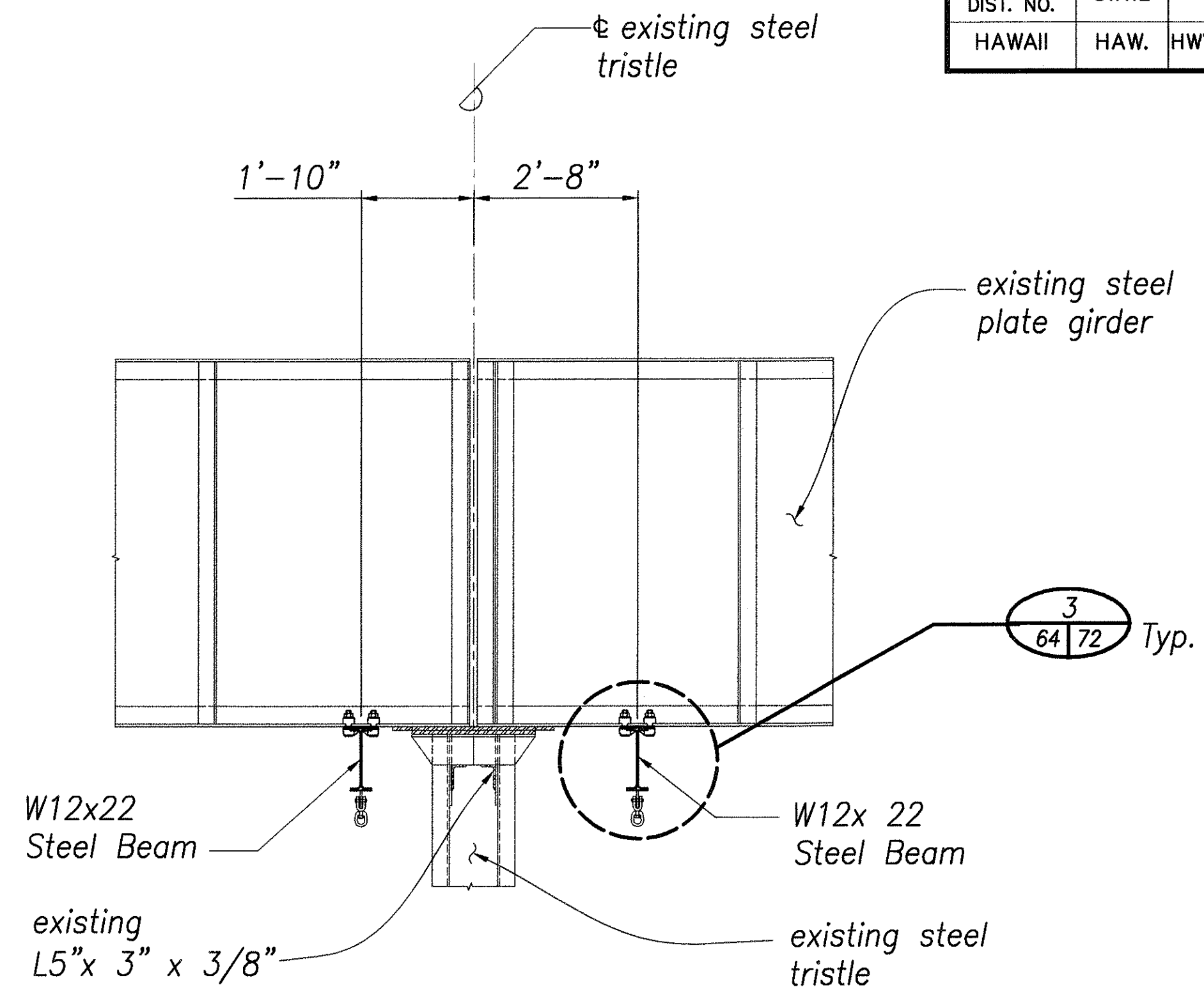
Sheet No. 63 Of 81 Sheets

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	64	81

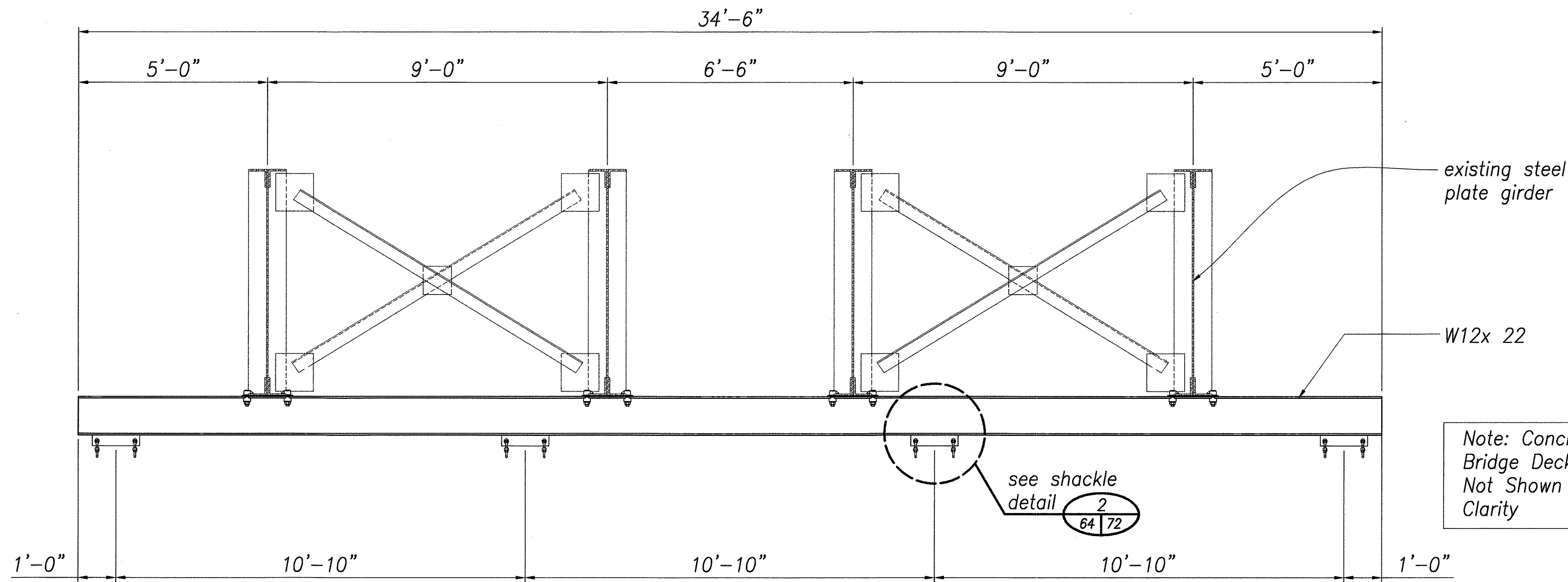
Note: Concrete Bridge Deck Not Shown For Clarity



SECTION DETAIL A
SCALE: 1/2" = 1'-0"



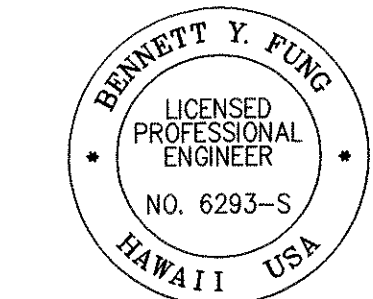
SECTION DETAIL C
SCALE: 1/2" = 1'-0"



SECTION DETAIL B
SCALE: 1/2" = 1'-0"

Note: Concrete Bridge Deck Not Shown For Clarity

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	DATE
DRAWN BY	DATE
DESIGNED BY	DATE
QUANTITIES BY	DATE
CHECKED BY	DATE



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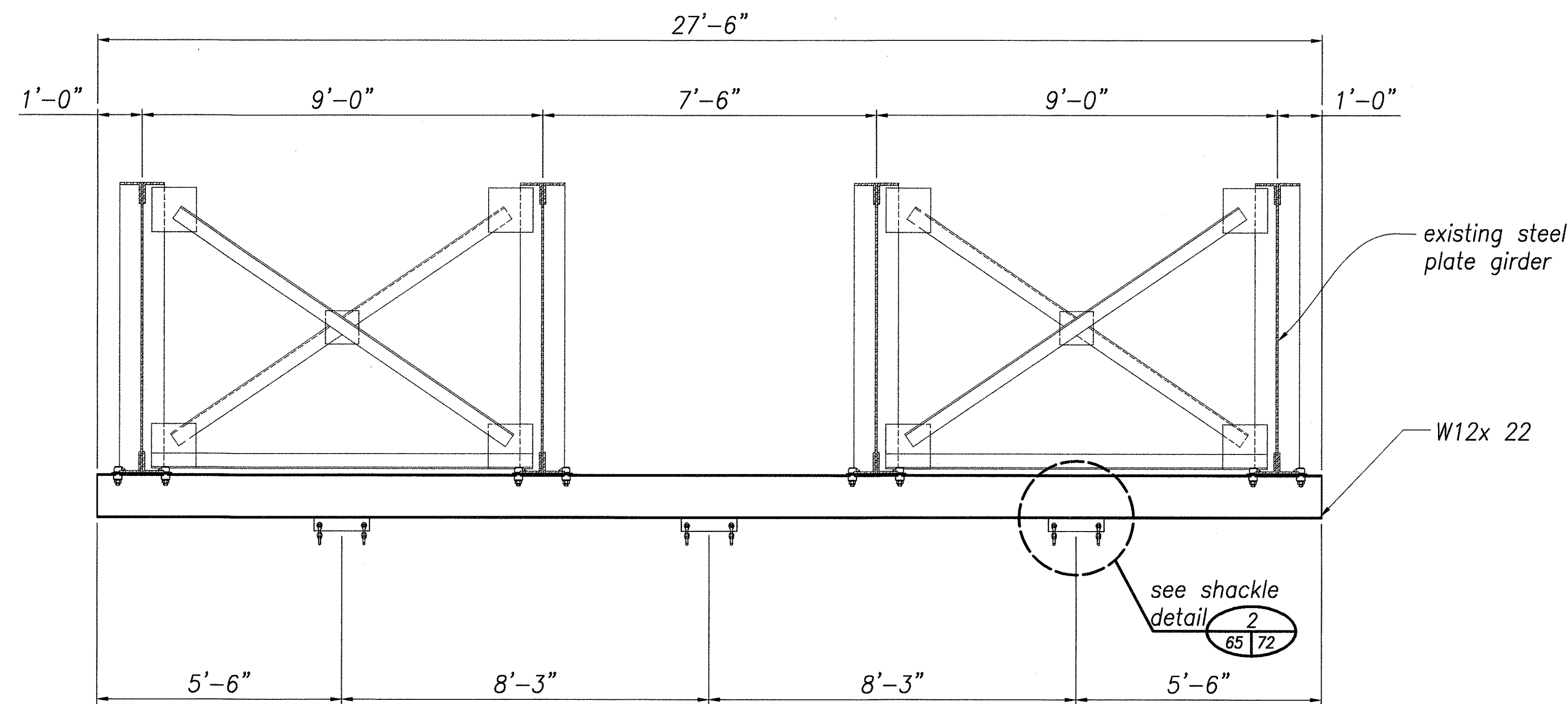
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MONORAIL BEAM
SECTION AND DETAILS

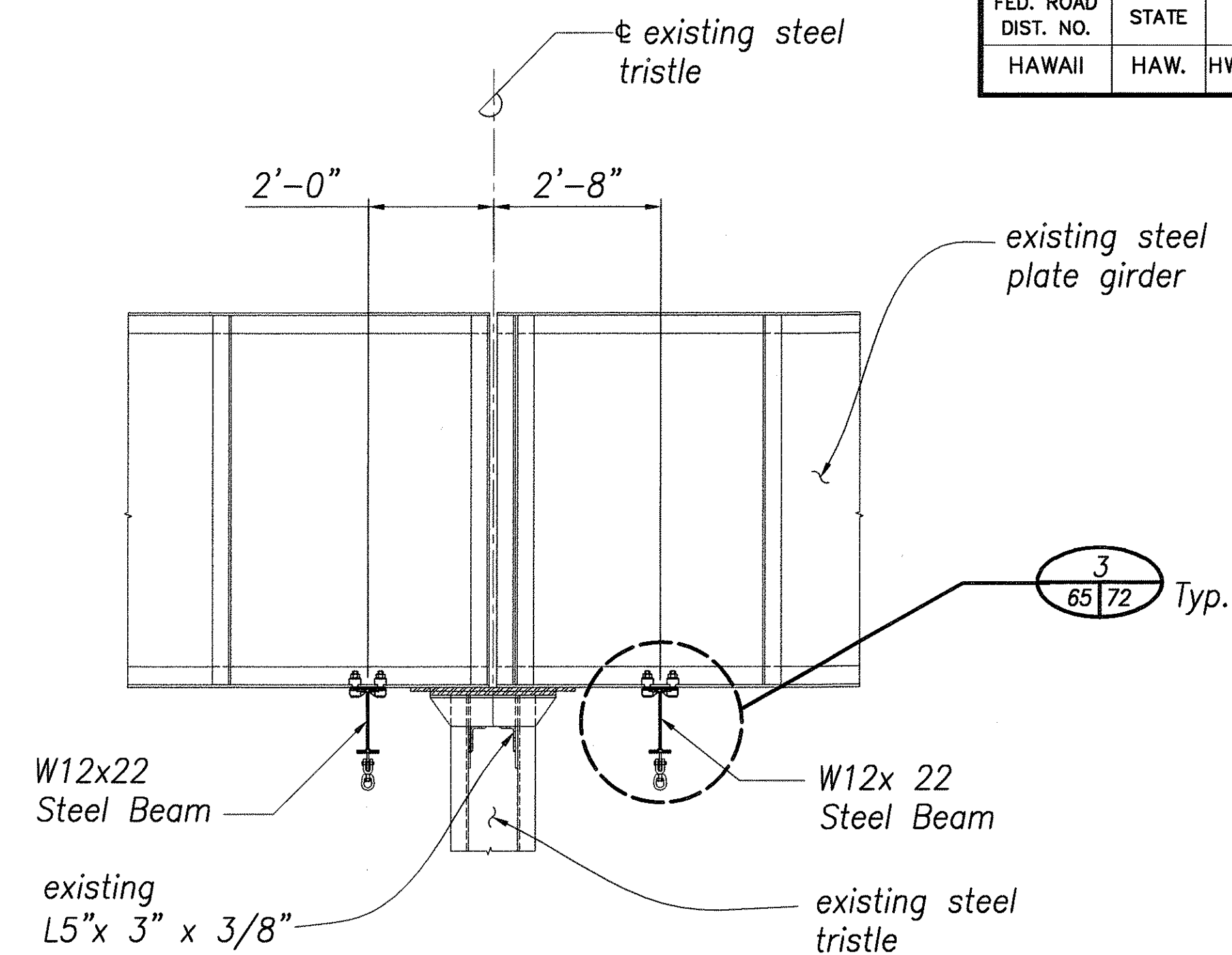
MAINTENANCE PLATFORM ON VARIOUS BRIDGES
PROJECT NO. HWY-H-09-99M
Scale: 1/2" = 1'-0" Date: Apr. 2005

Sheet No. 64 Of 81 Sheets

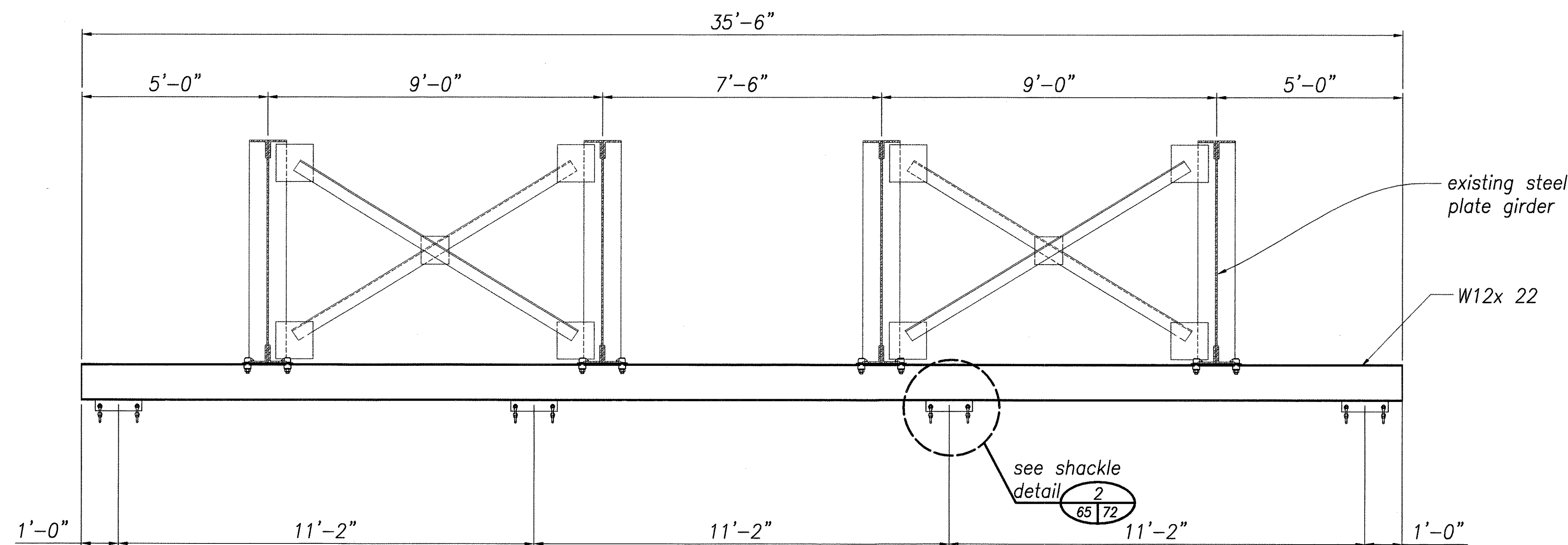
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	65	81



SECTION DETAIL A
SCALE: 1/2" = 1'-0" 61/65

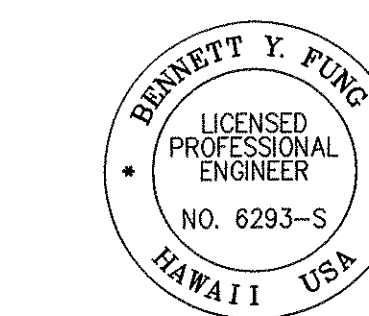


SECTION DETAIL C
SCALE: 1/2" = 1'-0" 61/65



SECTION DETAIL B
SCALE: 1/2" = 1'-0" 61/65

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	DESIGNED BY	" "
	QUANTITIES BY	" "
	CHECKED BY	" "
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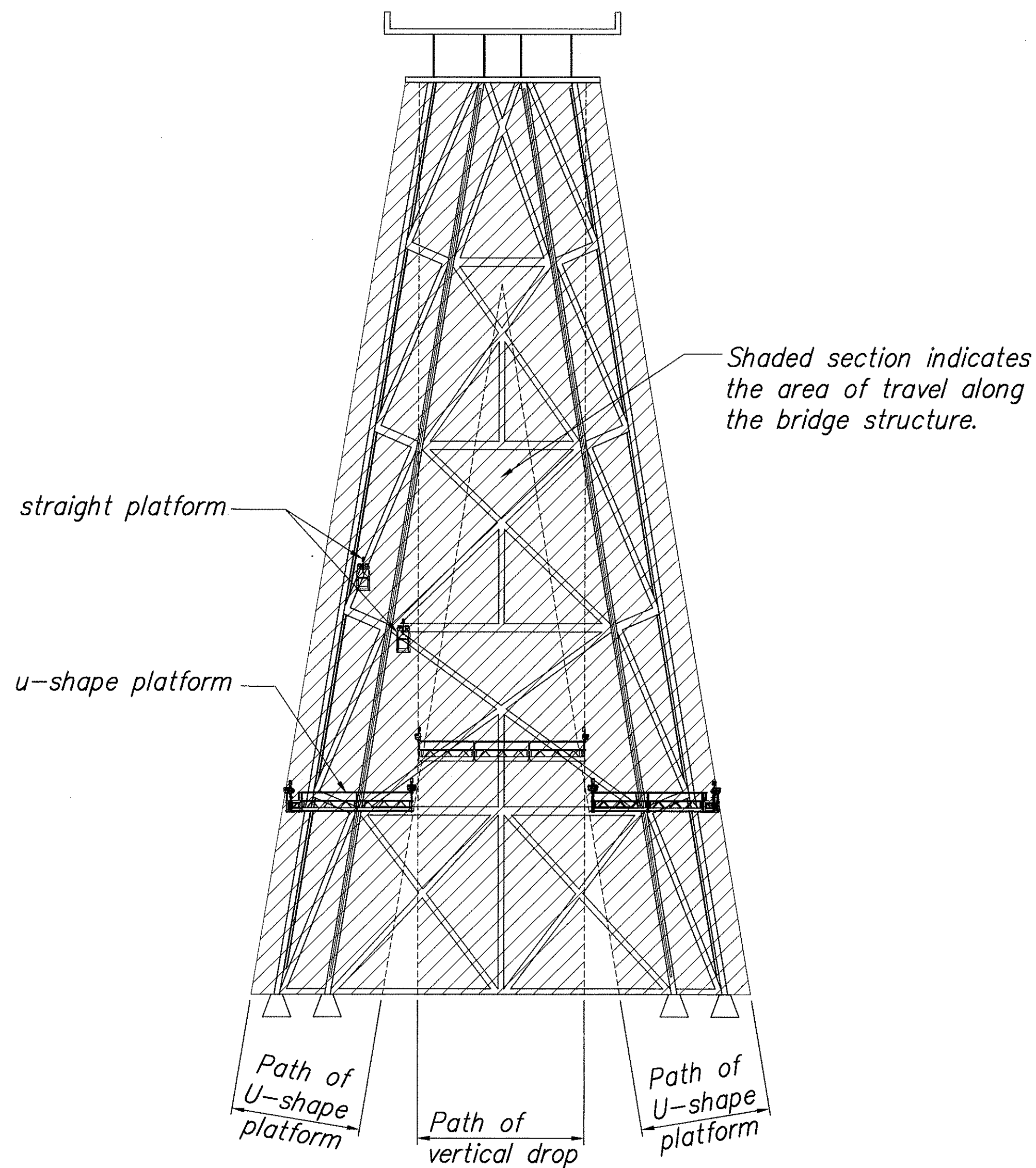
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MONORAIL BEAM
SECTION AND DETAILS

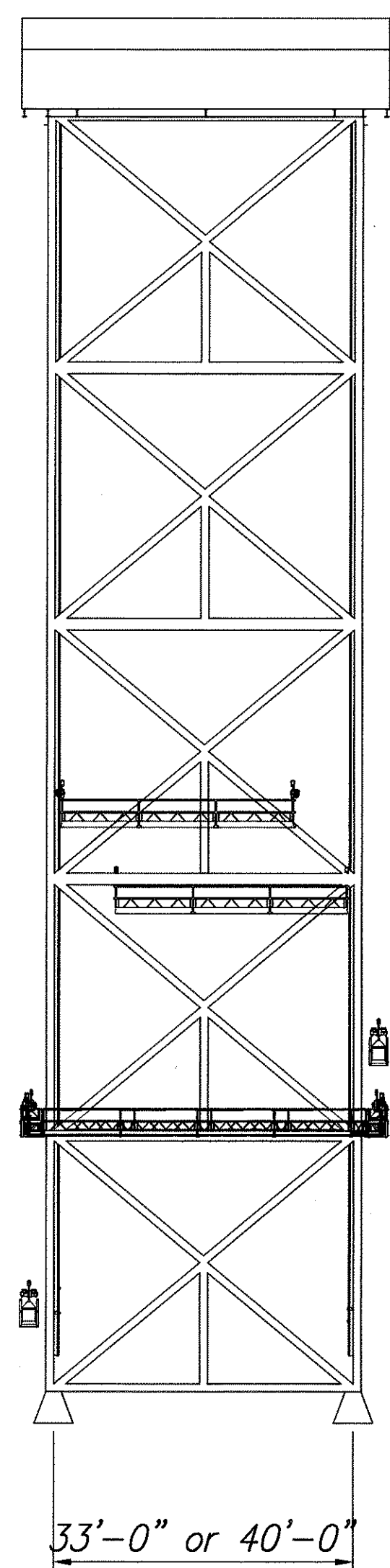
MAINTENANCE PLATFORM ON VARIOUS BRIDGES
PROJECT NO. HWY-H-09-99M
Scale: 1/2" = 1'-0" Date: Apr. 2005

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	66	81

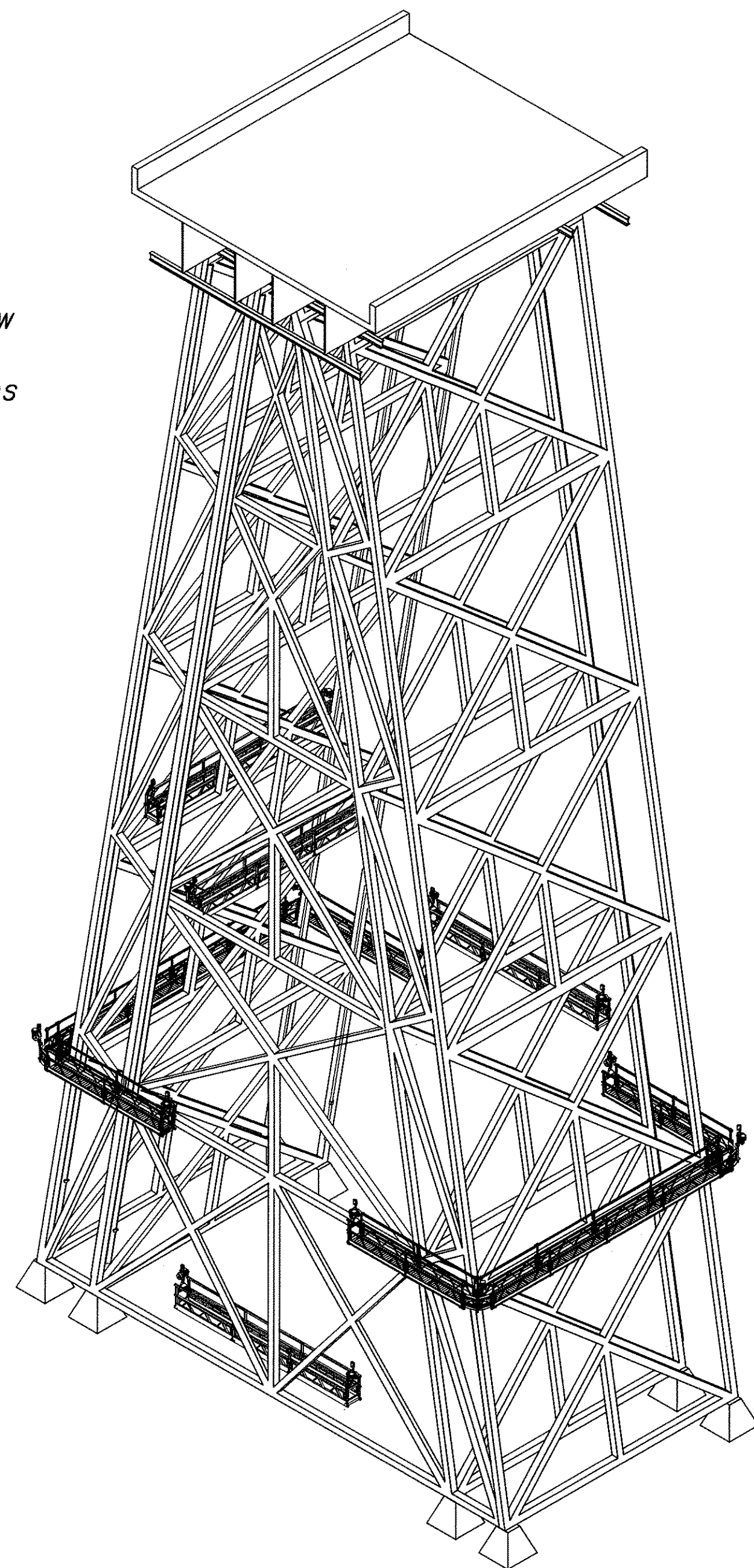


TYPICAL TRESTLE FRONT ELEVATION 1
66 | 66
Scale: 1/16" = 1'-0"



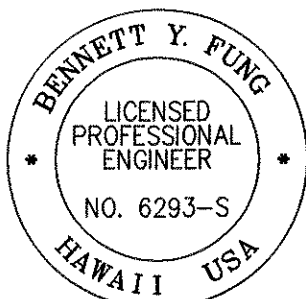
TYPICAL TRESTLE SIDE ELEVATION 2
66 | 66
Scale: 1/16" = 1'-0"

Note:
This illustration shows a few
of the many different
locations that the platforms
may be set up.



TYPICAL TRESTLE ISOMETRIC 3
66 | 66
Scale: NOT TO SCALE

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	QUANTITIES BY	
	CHECKED BY	



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TYPICAL TRESTLE ELEVATION

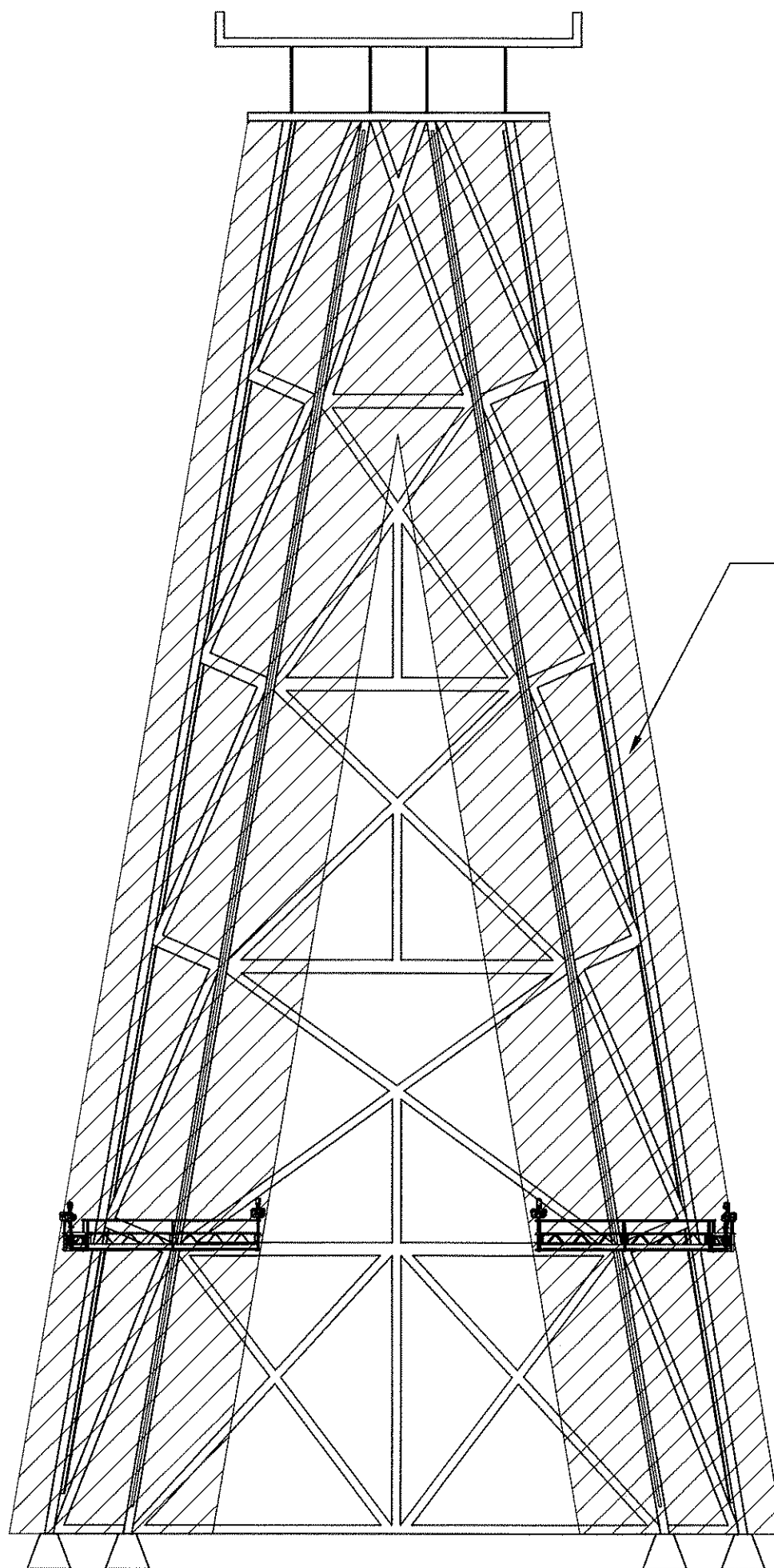
MAINTENANCE PLATFORM ON VARIOUS BRIDGES
PROJECT NO. HWY-H-09-99M
Scale: AS SHOWN Date: Apr. 2005

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	67	81

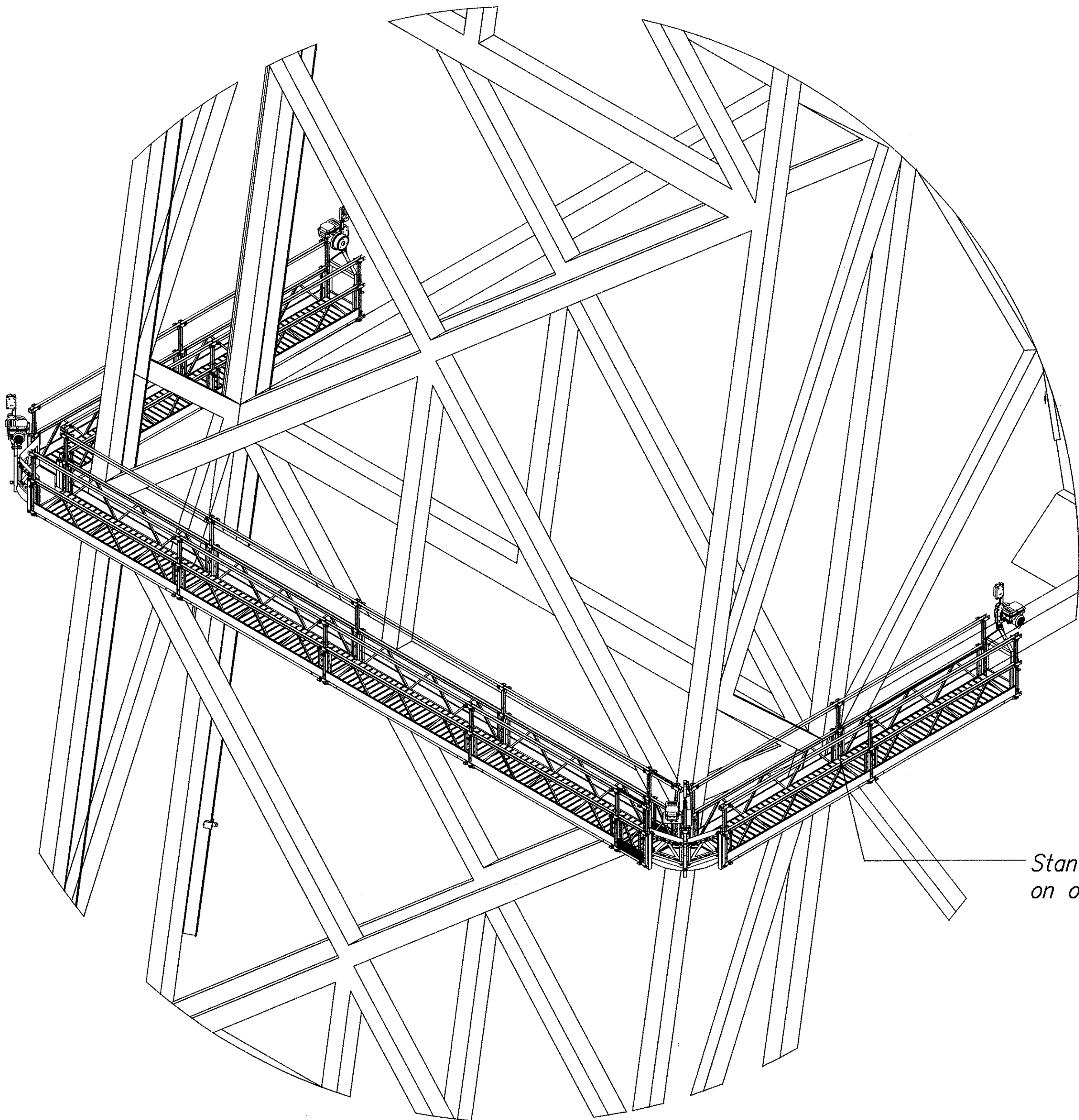
Note:
This illustration shows the U-shaped platform along one side of the bridge structure. It also shows the area of travel that is accessible using this plan.

No guide rails needed for this configuration.



Shaded section indicates the area of travel along the bridge structure.

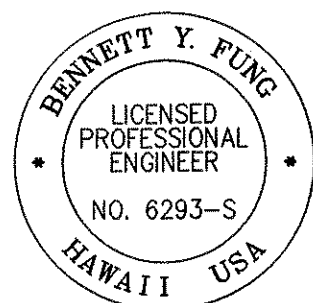
TYPICAL U-SHAPE PLATFORM ELEVATION 1
67 | 67
Scale: 1/16" = 1'-0"



Standard wall rollers riding on outer surfaces

TYPICAL U-SHAPE PLATFORM 2
67 | 67
Scale: NOT TO SCALE

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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TYPICAL U-SHAPE PLATFORM

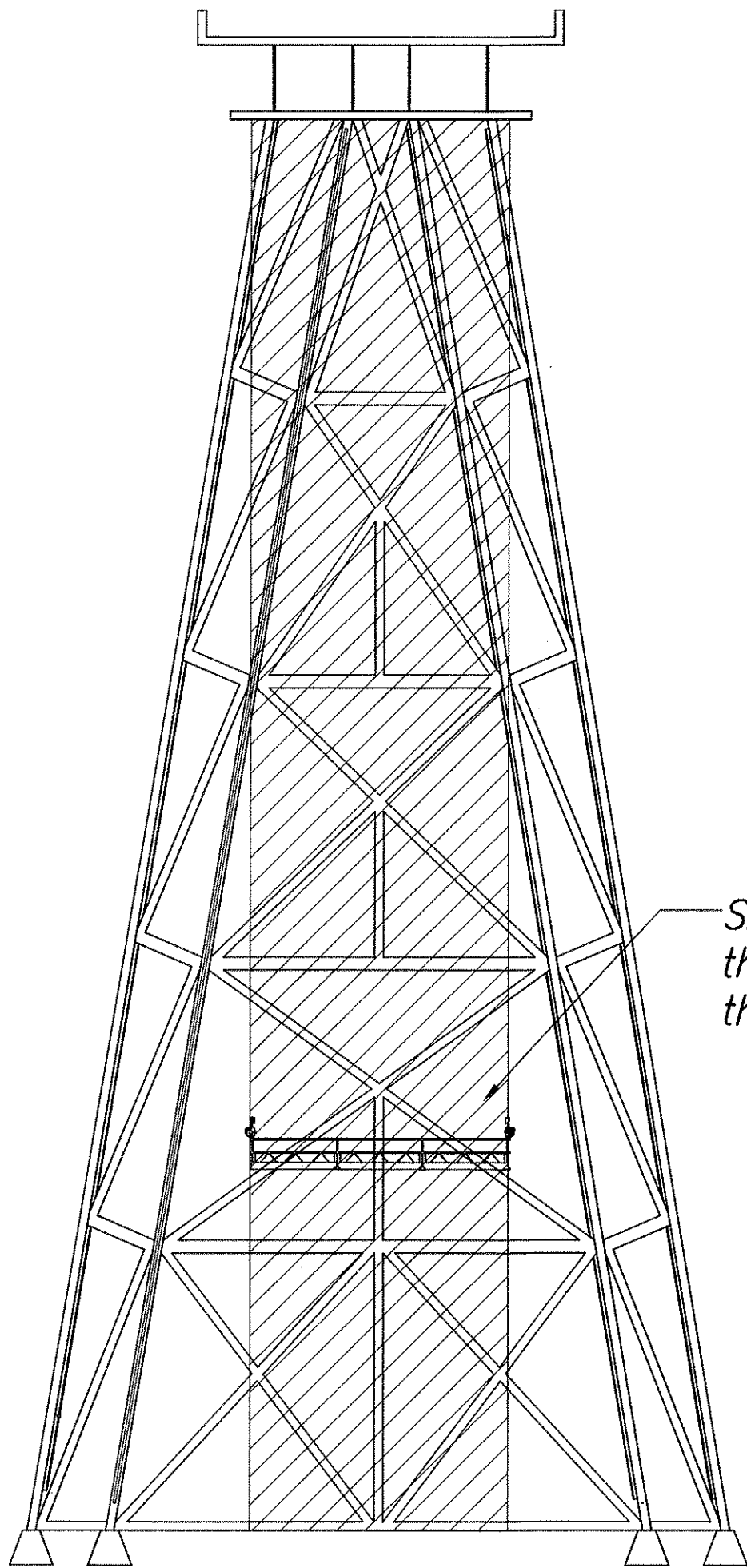
MAINTENANCE PLATFORM ON VARIOUS BRIDGES
PROJECT NO. HWY-H-09-99M
Scale: AS SHOWN Date: Apr. 2005

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	68	81

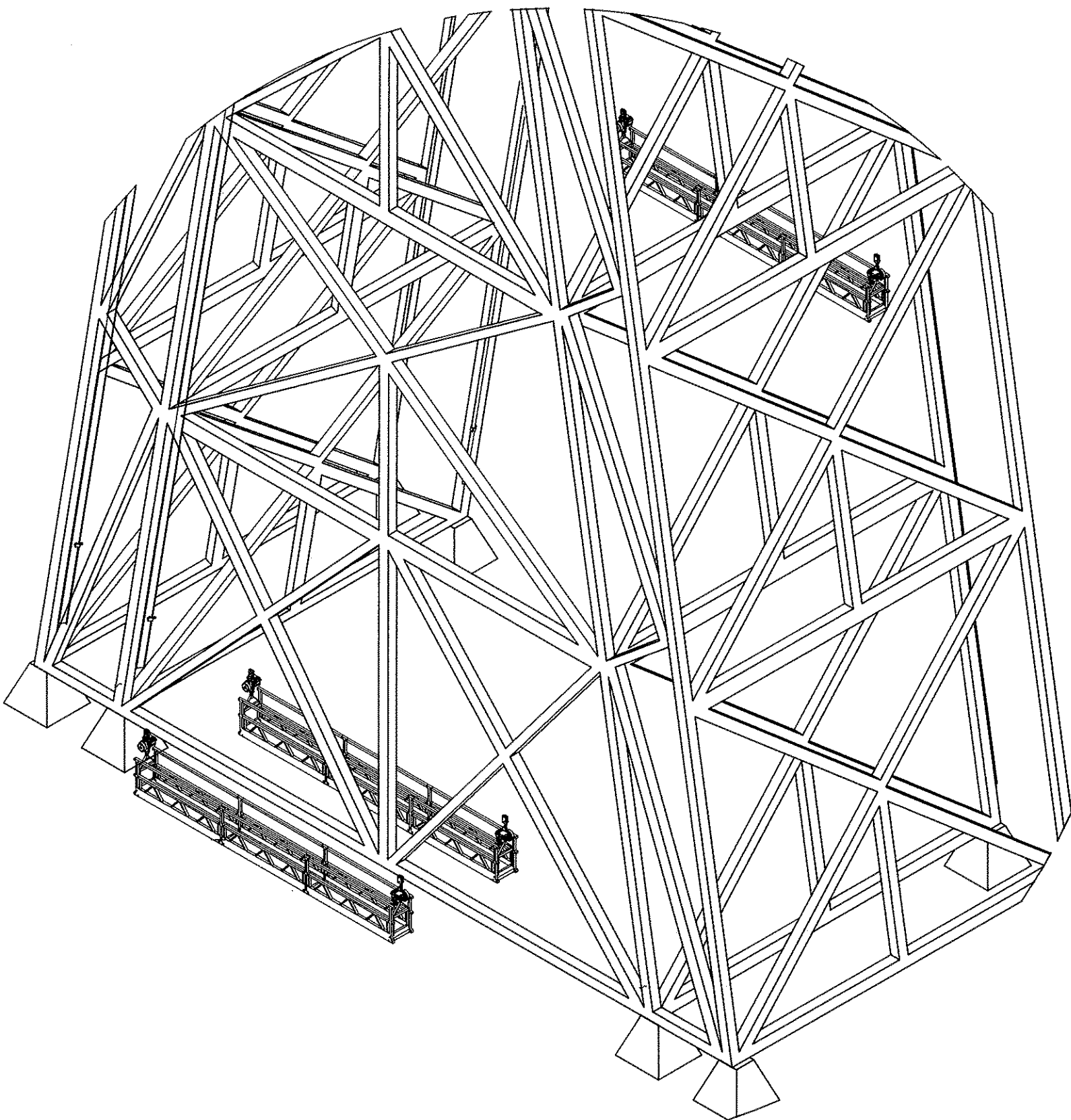
Note:
This illustration shows the front view of the bridge structure with one platform hanging down the side. The area of travel for this platform is also highlighted.

No guide rail needed for this configuration.



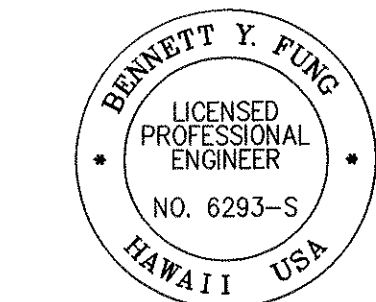
Shaded section indicates the area of travel along the bridge structure.

TYPICAL STRAIGHT PLATFORM (FRONT COVERAGE) 1
68 | 68
Scale: 1/16" = 1'-0"



TYPICAL STRAIGHT PLATFORM 2
68 | 68
Scale: NOT TO SCALE

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	QUANTITIES BY	" "
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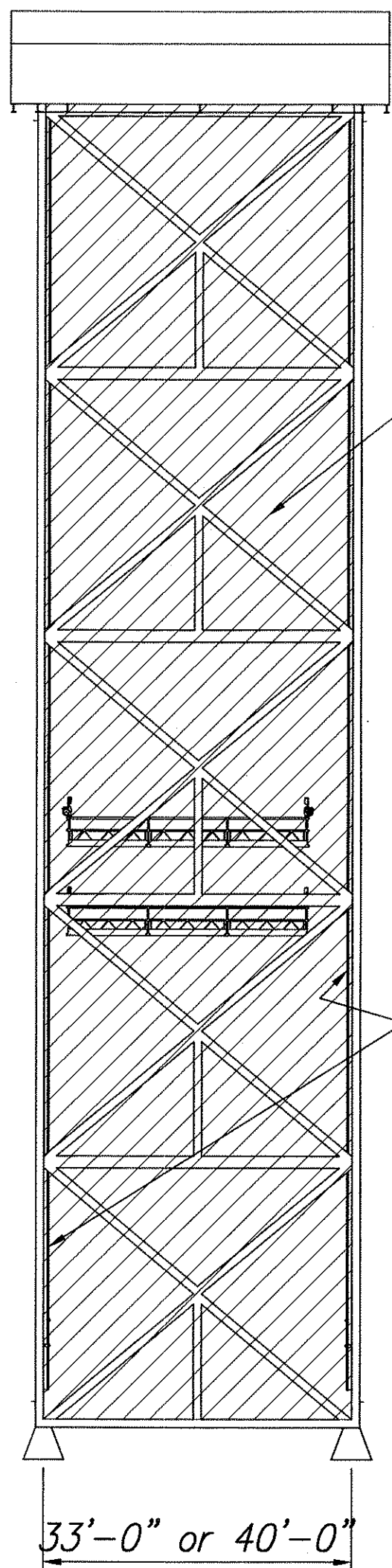
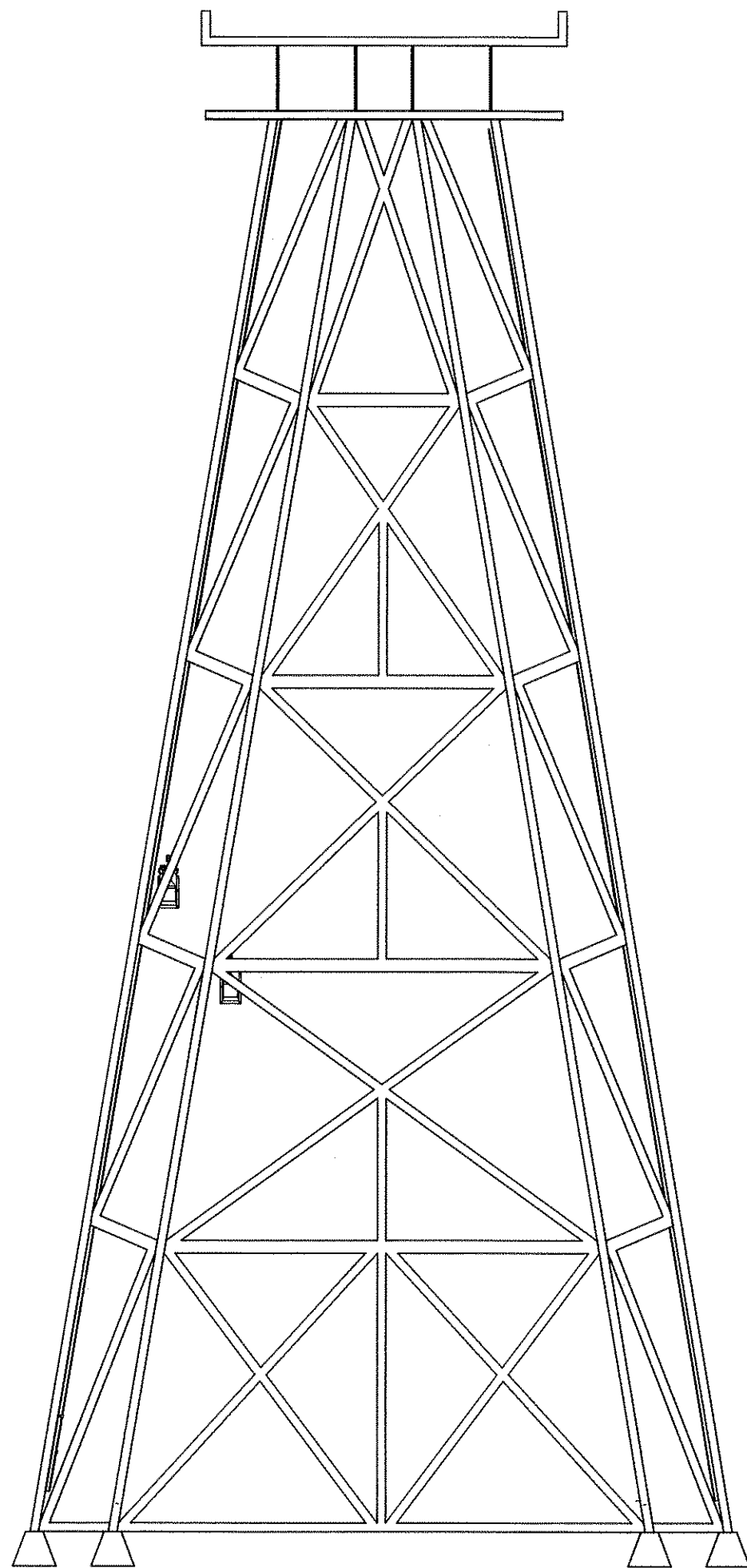
TYPICAL STRAIGHT PLATFORM

MAINTENANCE PLATFORM ON VARIOUS BRIDGES
PROJECT NO. HWY-H-09-99M
Scale: AS SHOWN Date: Apr. 2005

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	69	81

Note:
This illustration shows the side view of the bridge structure with one platform hanging next to an inside structure member. Guide rails will need to be installed to keep the stage next to the structure face.



Shaded section indicates the area of travel along the bridge structure.

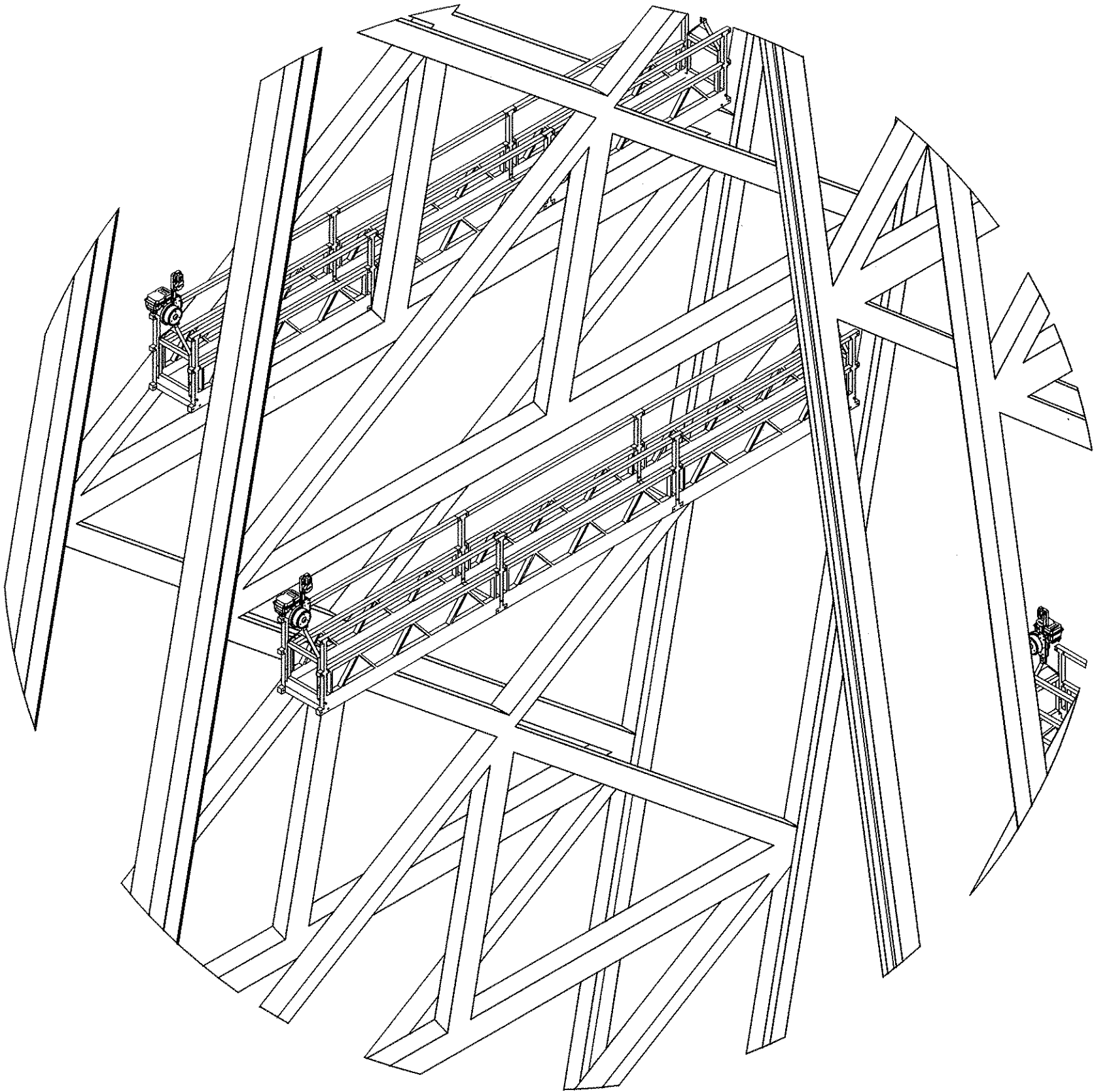
guide rails to be installed

33'-0" or 40'-0"

TYPICAL TRESTLE PLATFORM (SIDE COVERAGE)

Scale: 1/16" = 1'-0"

1
69 69

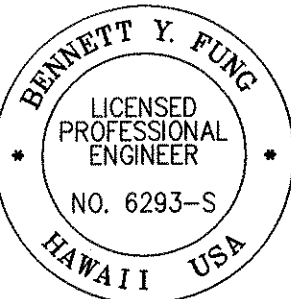


TYPICAL TRESTLE PLATFORM

Scale: NOT TO SCALE

2
69 69

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TYPICAL TRESTLE PLATFORM

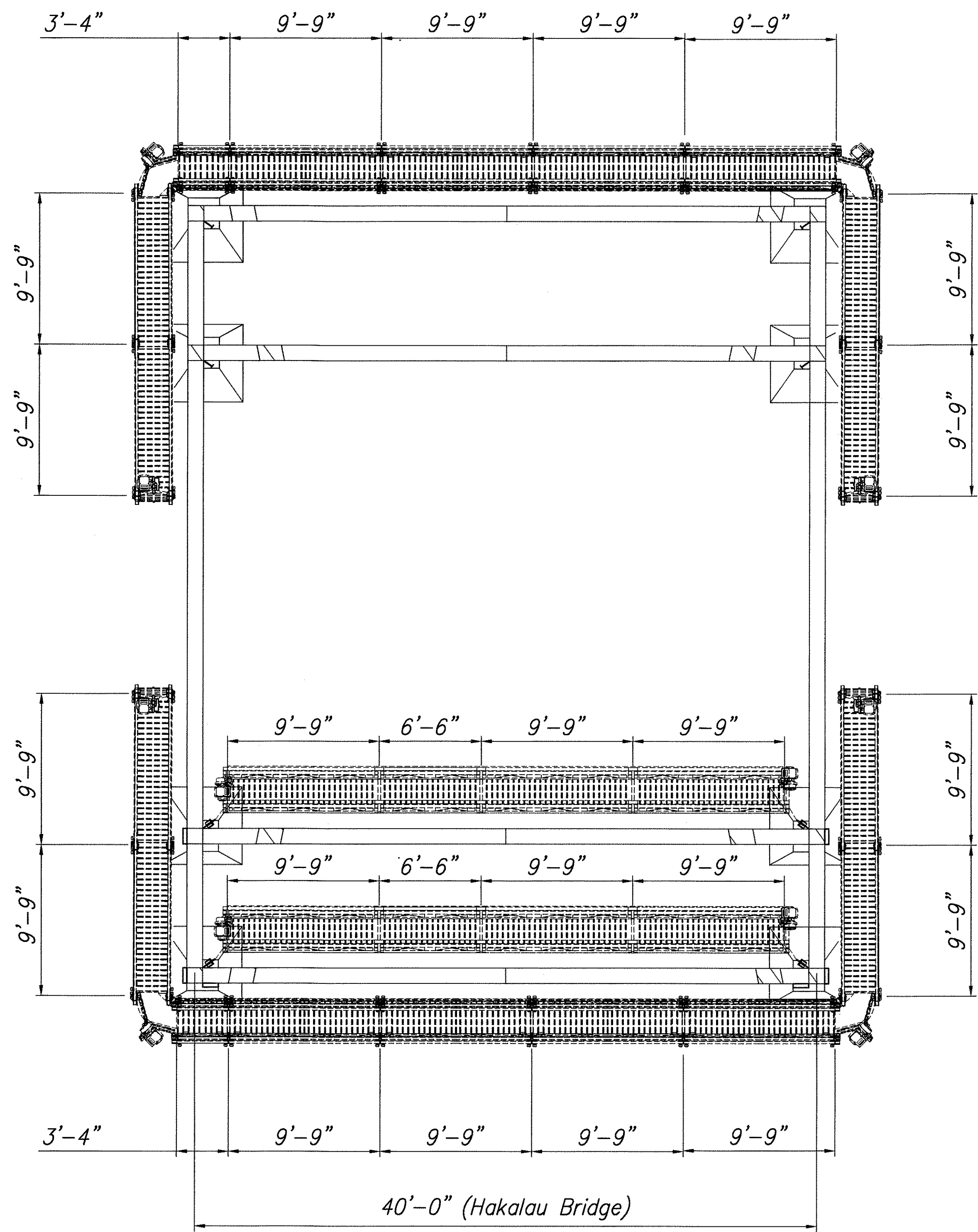
MAINTENANCE PLATFORM ON VARIOUS BRIDGES

PROJECT NO. HWY-H-09-99M

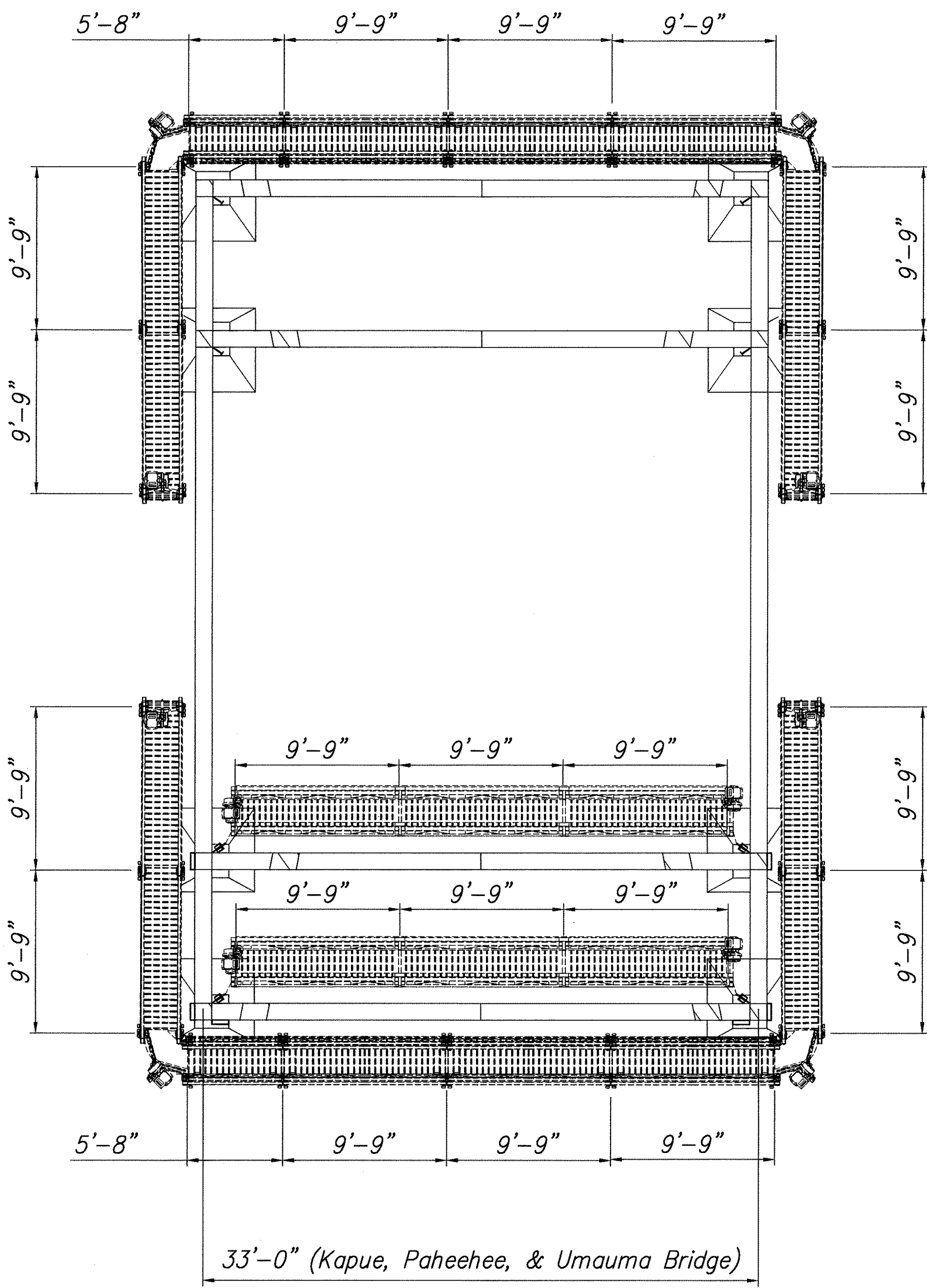
Scale: AS SHOWN Date: Apr. 2005

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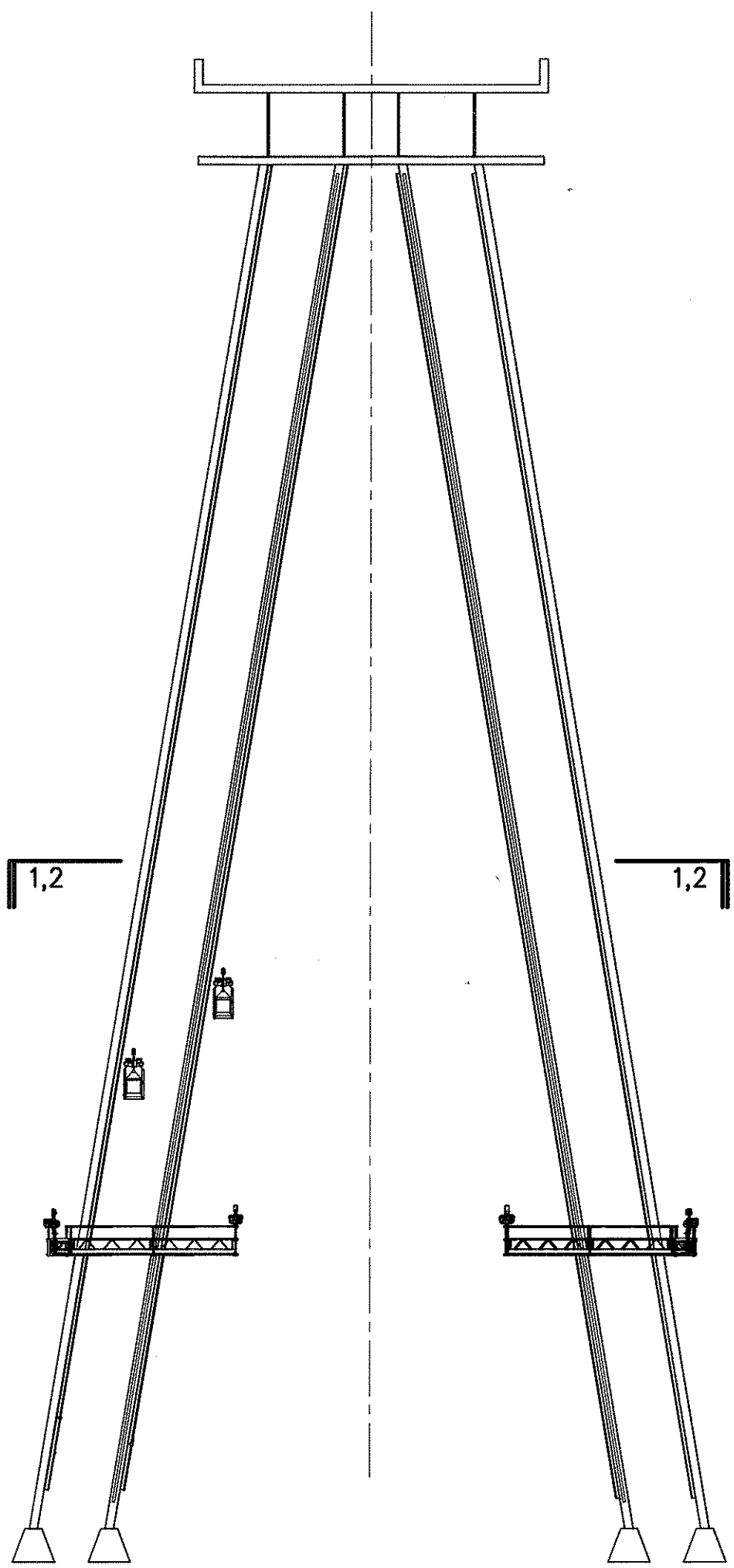
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	70	81



TRESTLE PLAN VIEW 1
70 | 70
Scale: 3/16" = 1'-0"

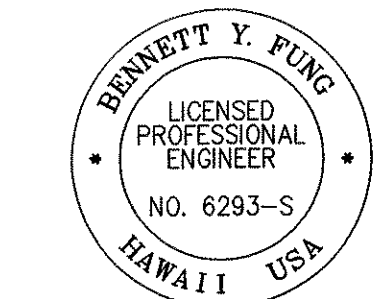


TRESTLE PLAN VIEW 2
70 | 70
Scale: 3/16" = 1'-0"



TRESTLE SECTION A
70 | 70
Scale: 1/16" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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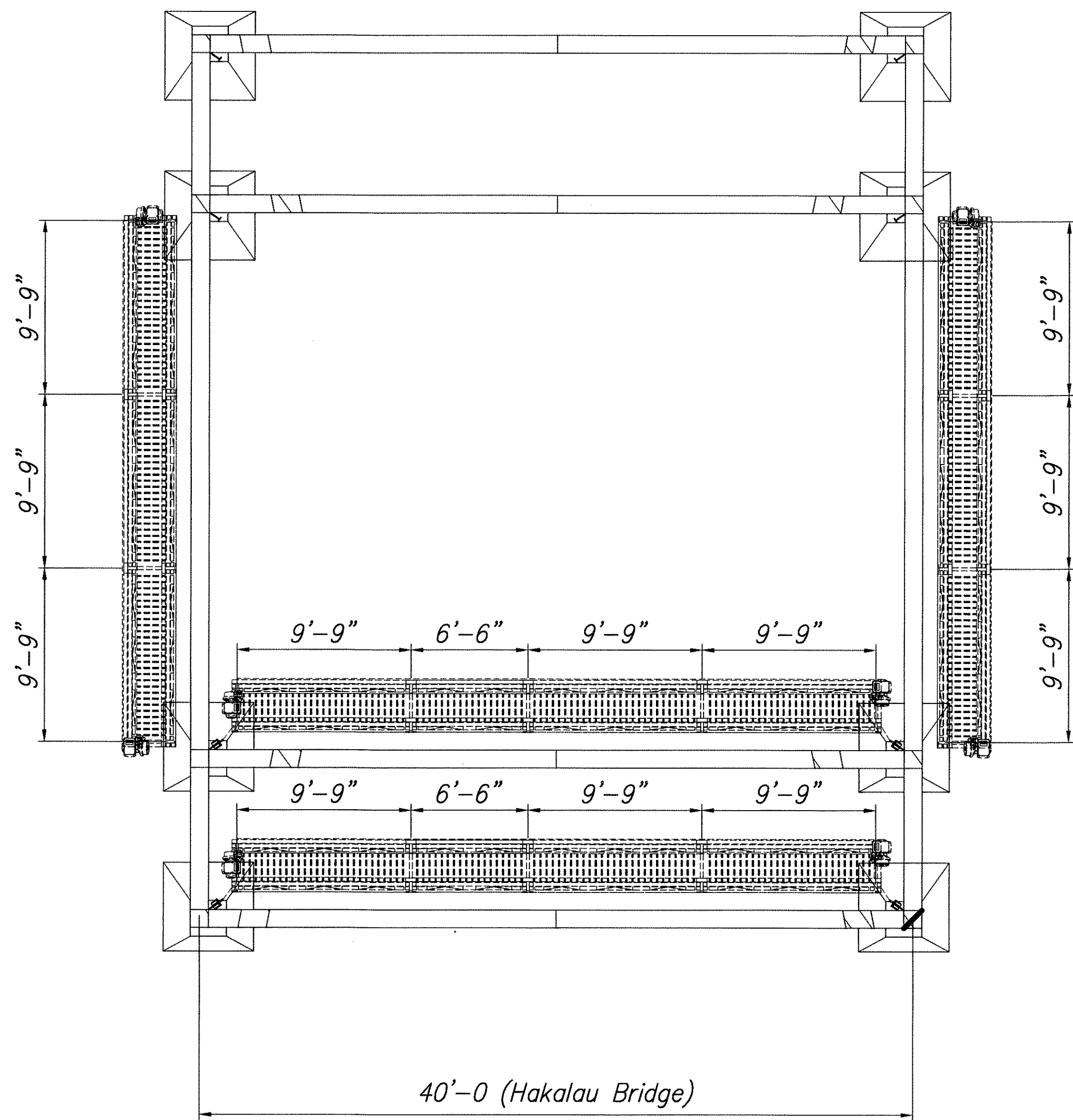
STATE OF HAWAII
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HIGHWAYS DIVISION

TRESTLE PLAN & SECTION

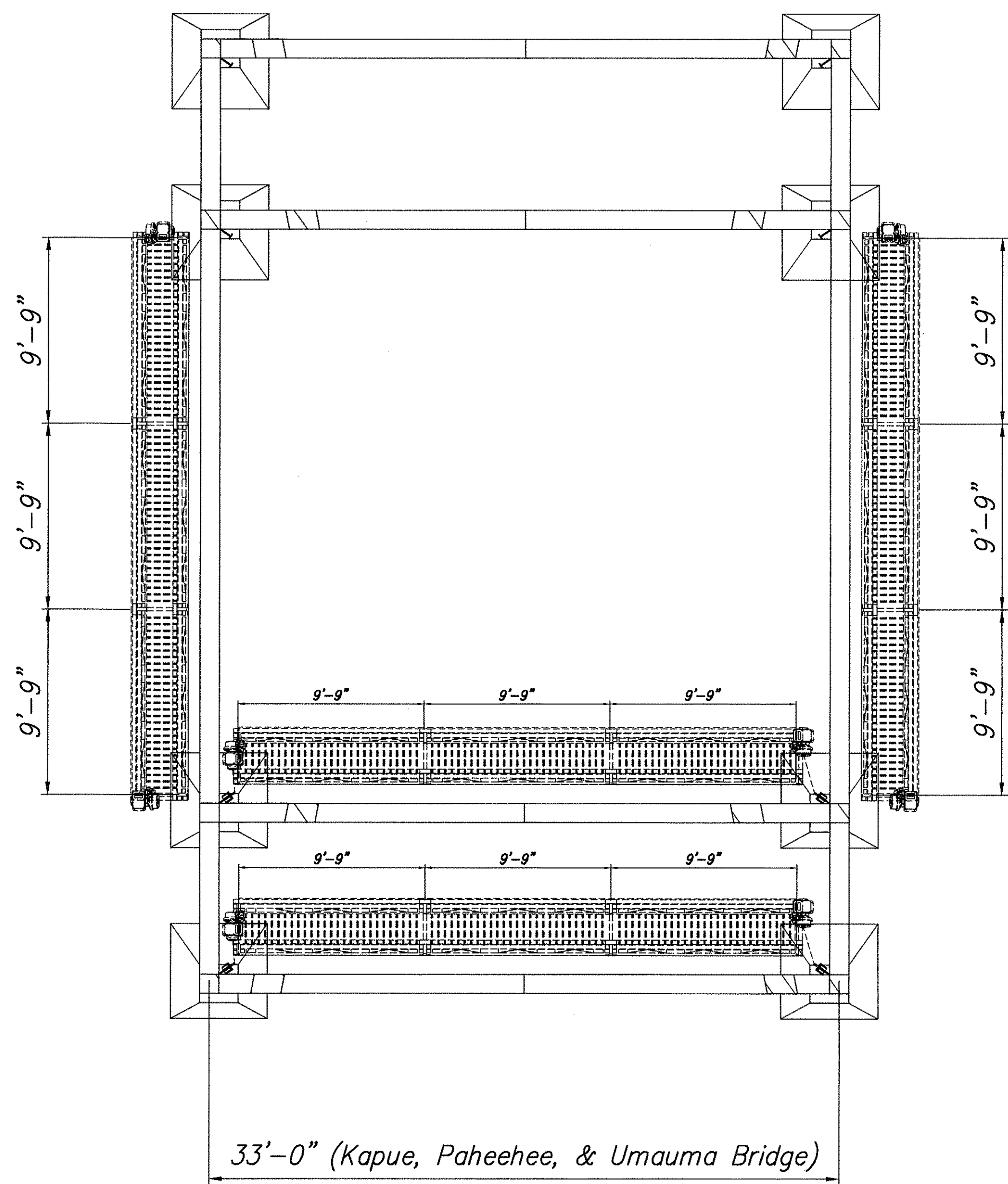
MAINTENANCE PLATFORM ON VARIOUS BRIDGES
PROJECT NO. HWY-H-09-99M
Scale: AS SHOWN Date: Apr. 2005

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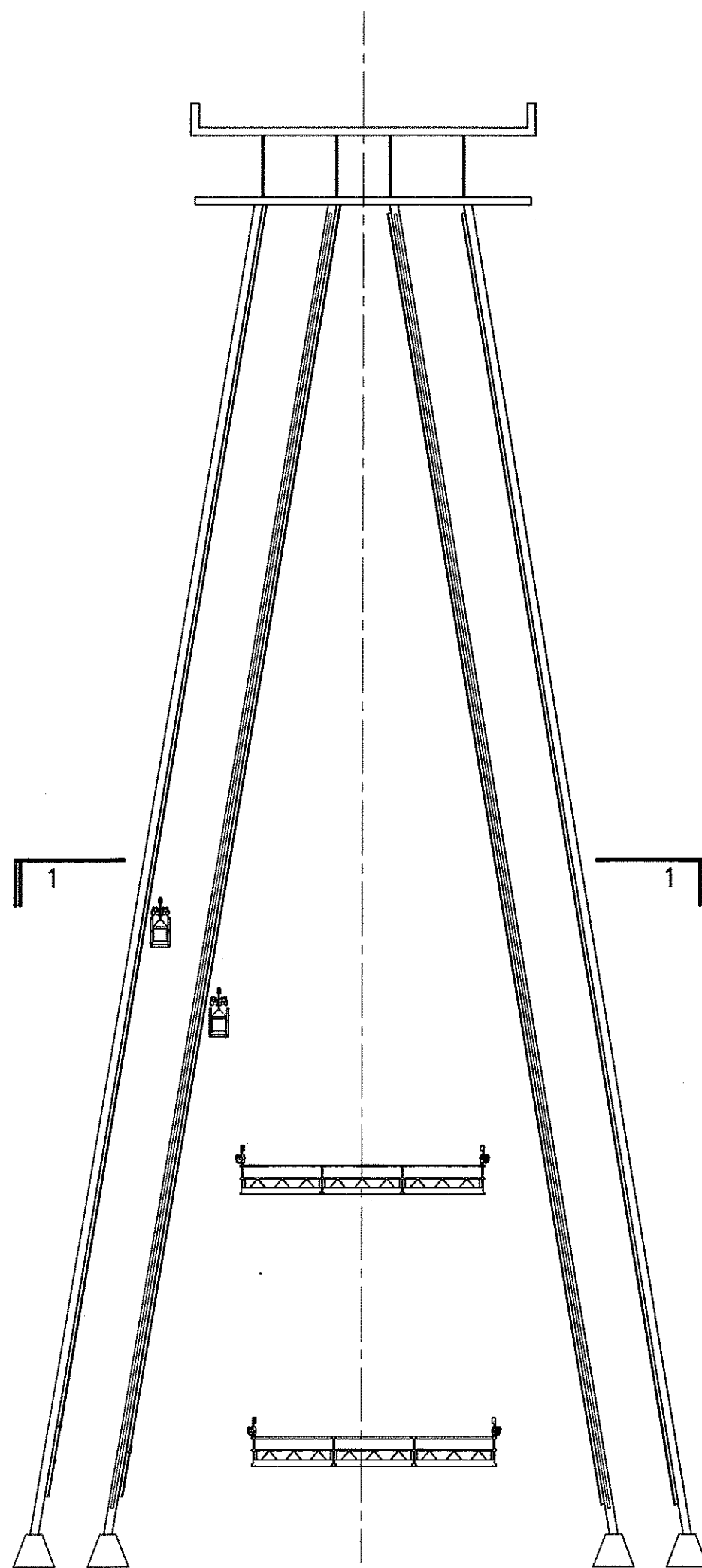
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	71	81



TRESTLE PLAN VIEW 1
71 | 71
Scale: 3/16" = 1'-0"

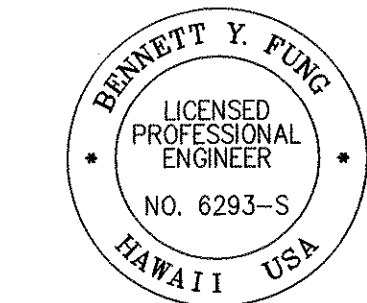


TRESTLE PLAN VIEW 2
71 | 71
Scale: 3/16" = 1'-0"



TRESTLE SECTION A
71 | 71
Scale: 1/16" = 1'-0"

ORIGINAL PLAN	SURVEY LOCATED BY	DATE
NOTE BOOK	DRAWN BY	
No.	DESIGNED BY	
	CHECKED BY	



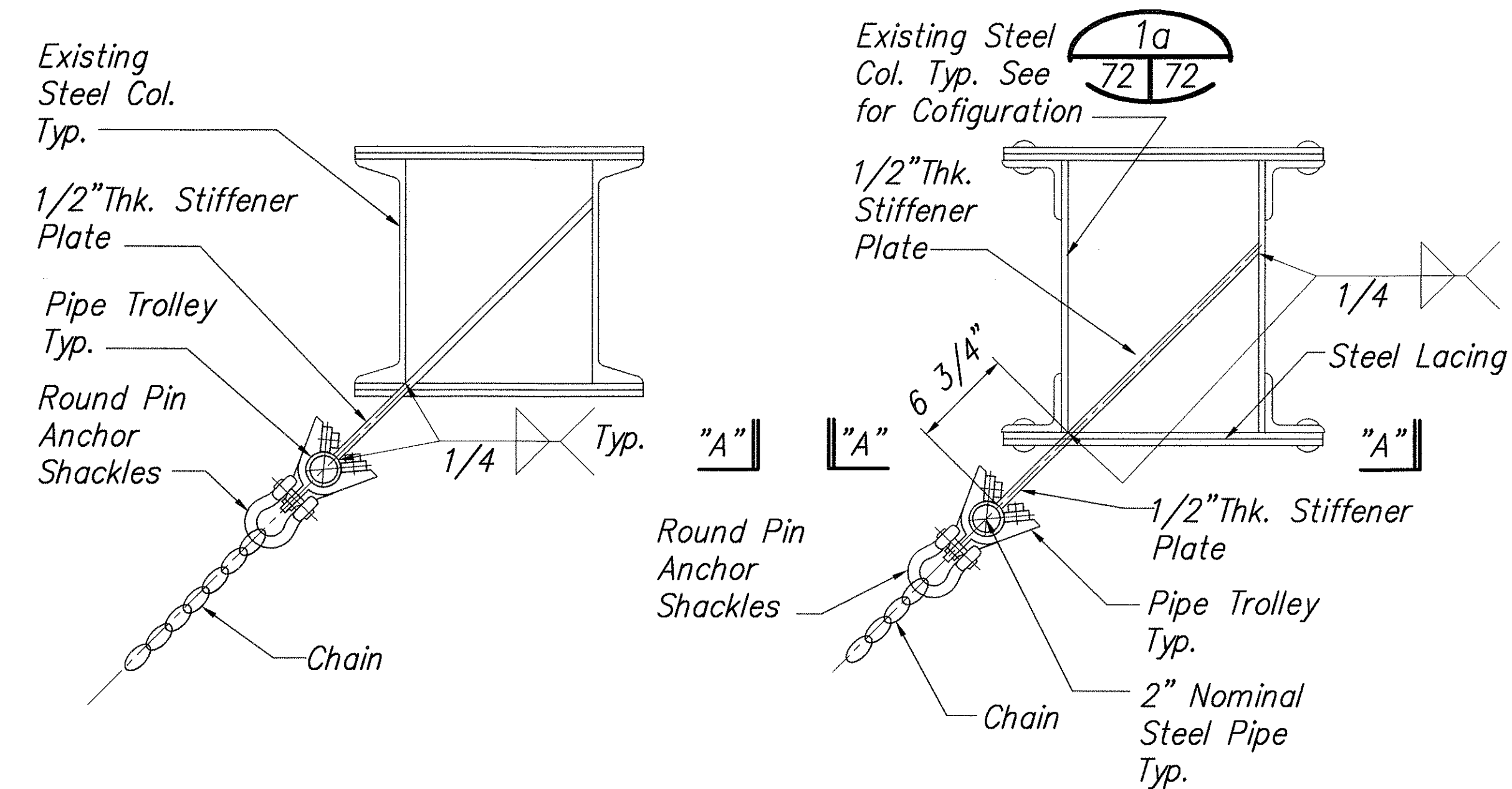
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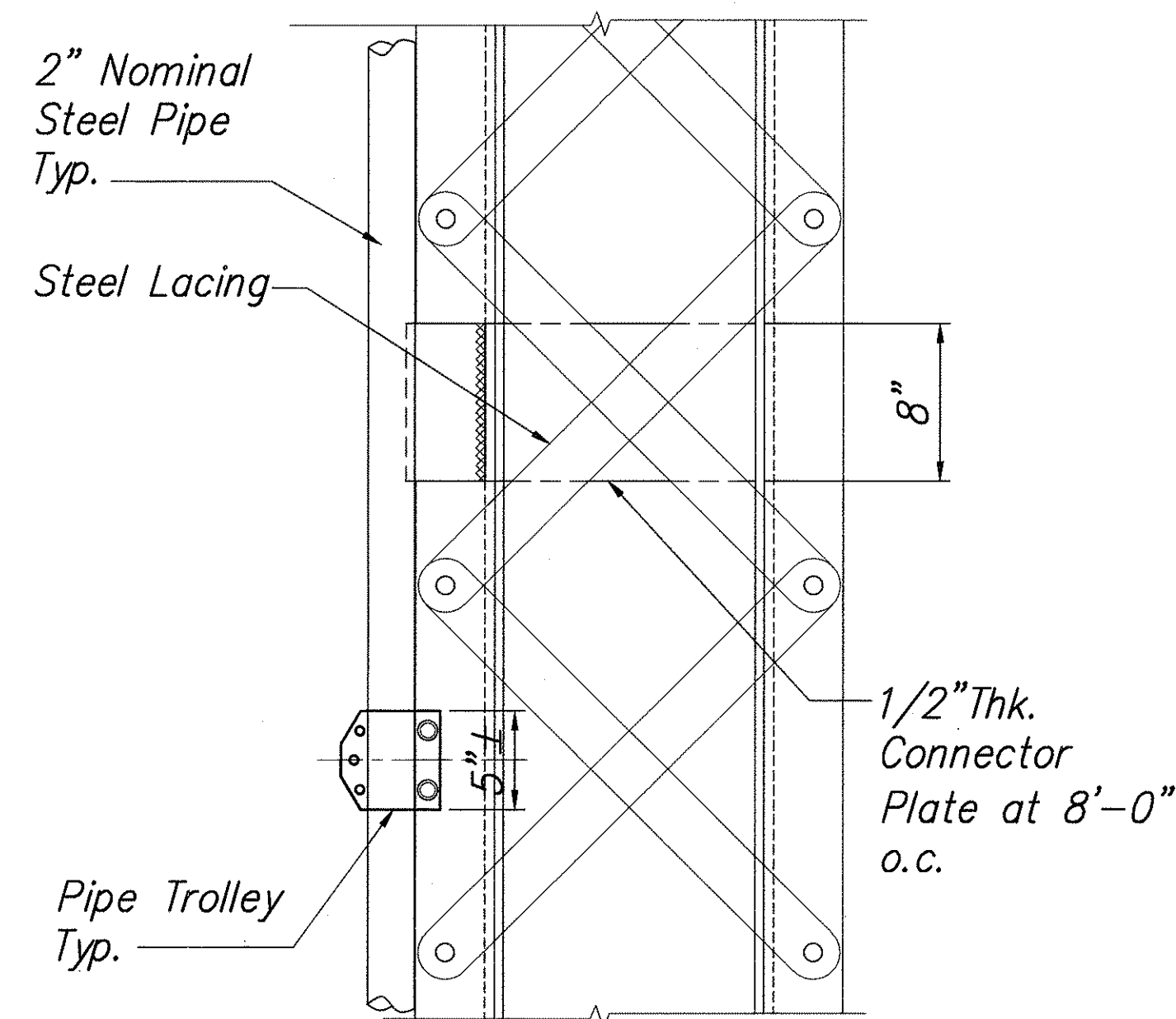
TRESTLE PLAN & SECTION

MAINTENANCE PLATFORM ON VARIOUS BRIDGES
PROJECT NO. HWY-H-09-99M
Scale: AS SHOWN Date: Apr. 2005
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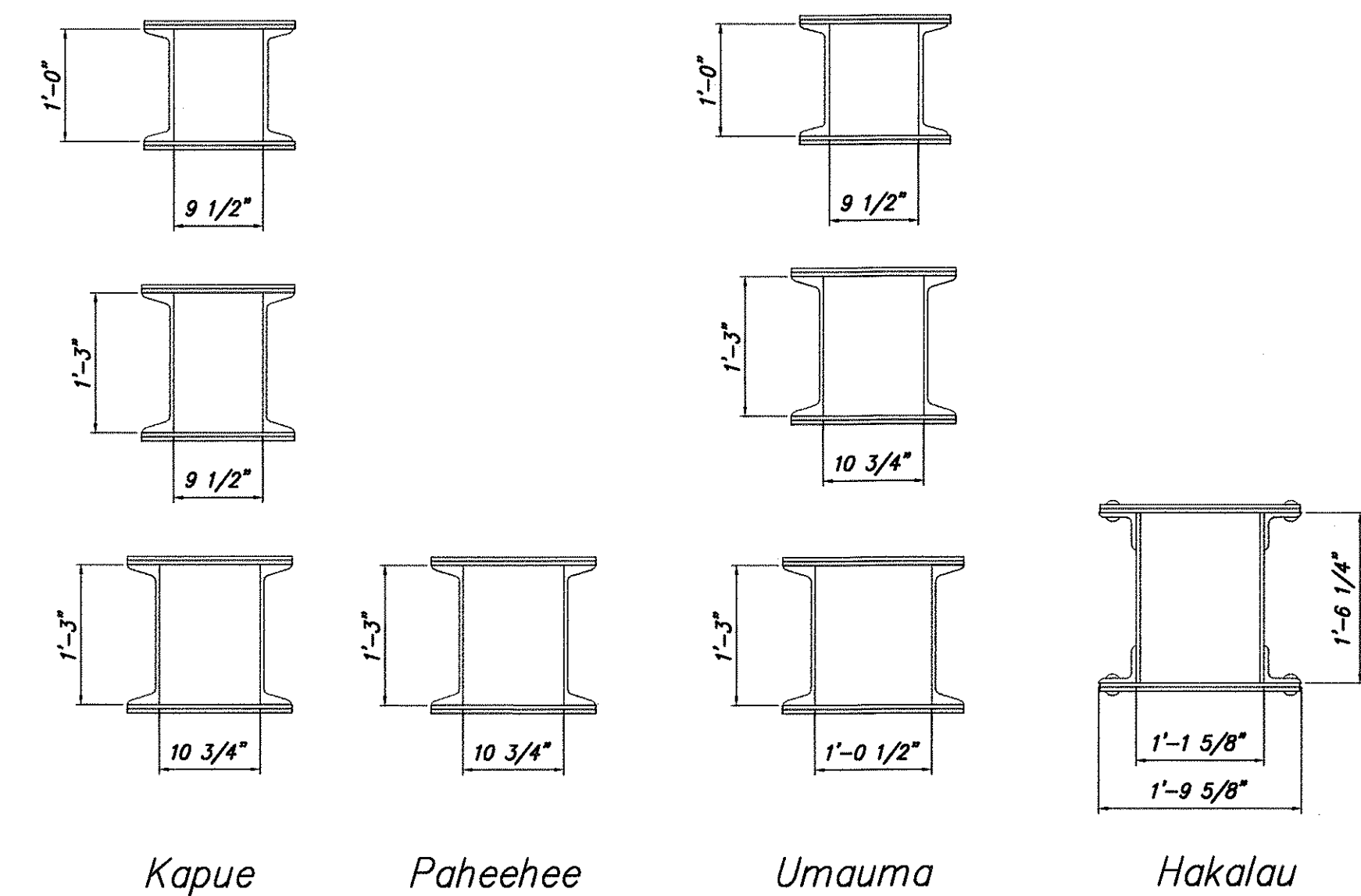
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	72	81



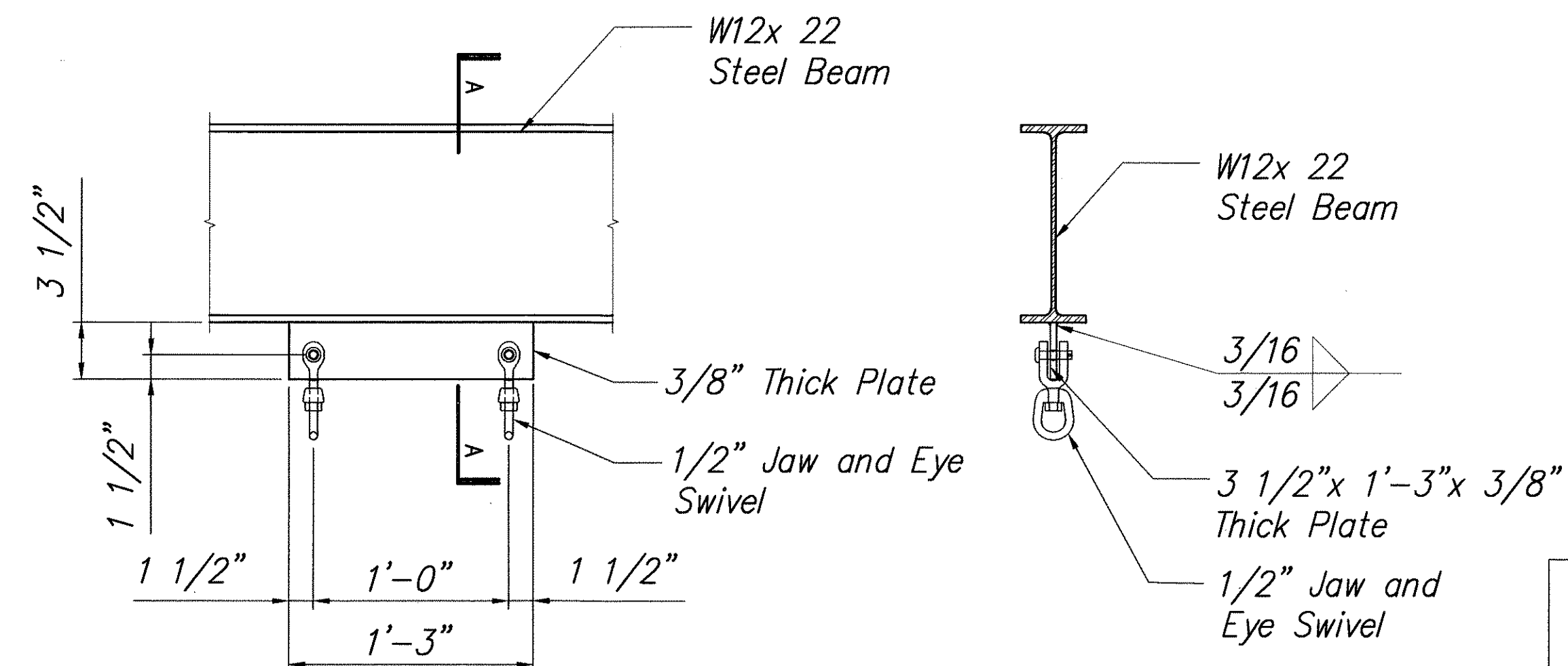
DETAIL
1 1/2"=1'-0" 60, 61, 62, 63 72



SECTION "A-A"



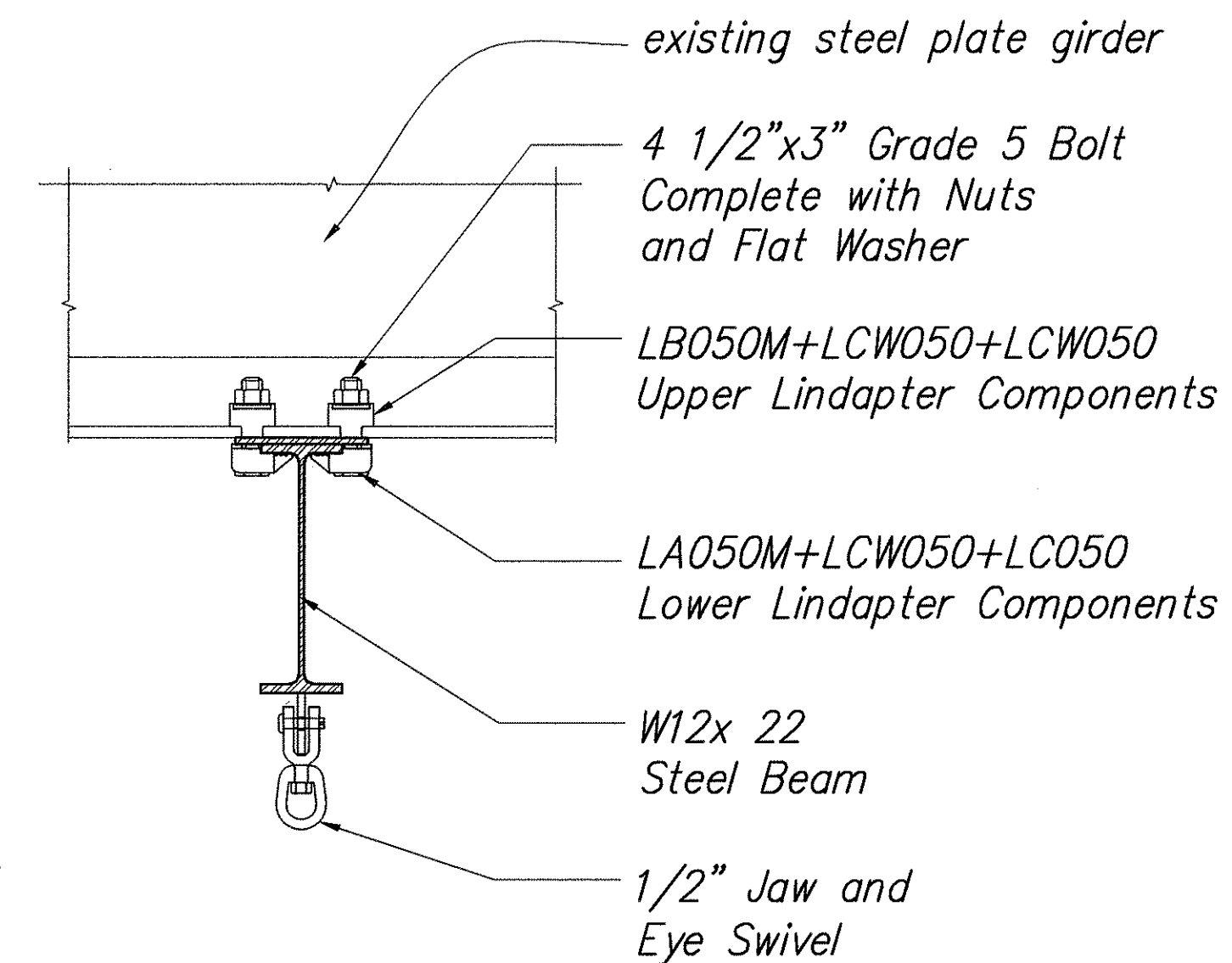
VARIOUS COLUMN CONFIGURATIONS
1 1/2"=1'-0" 72 72



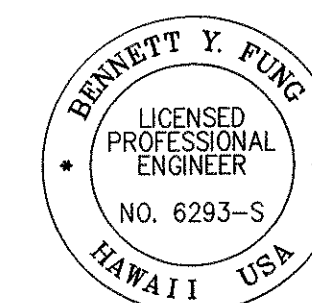
TYPICAL SHACKLE DETAIL
1 1/2"=1'-0" 64, 65 72

SECTION A-A

Note:
All Steel Beams, Steel Pipes,
Pipe Trolley, Components,
Connections and Connectors
Shall be Hot Dipped Galvanized
and Painted in Accordance with
the Specifications.



DETAIL
SCALE: 1 1/2"=1'-0" 64, 65 72



THIS WORK WAS PREPARED BY ME OR
UNDER MY SUPERVISION
Bennett Y. Fung
4/30/06
SIGNATURE EXP. DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TRESTLE ACCESS
PLATFORM DETAILS**

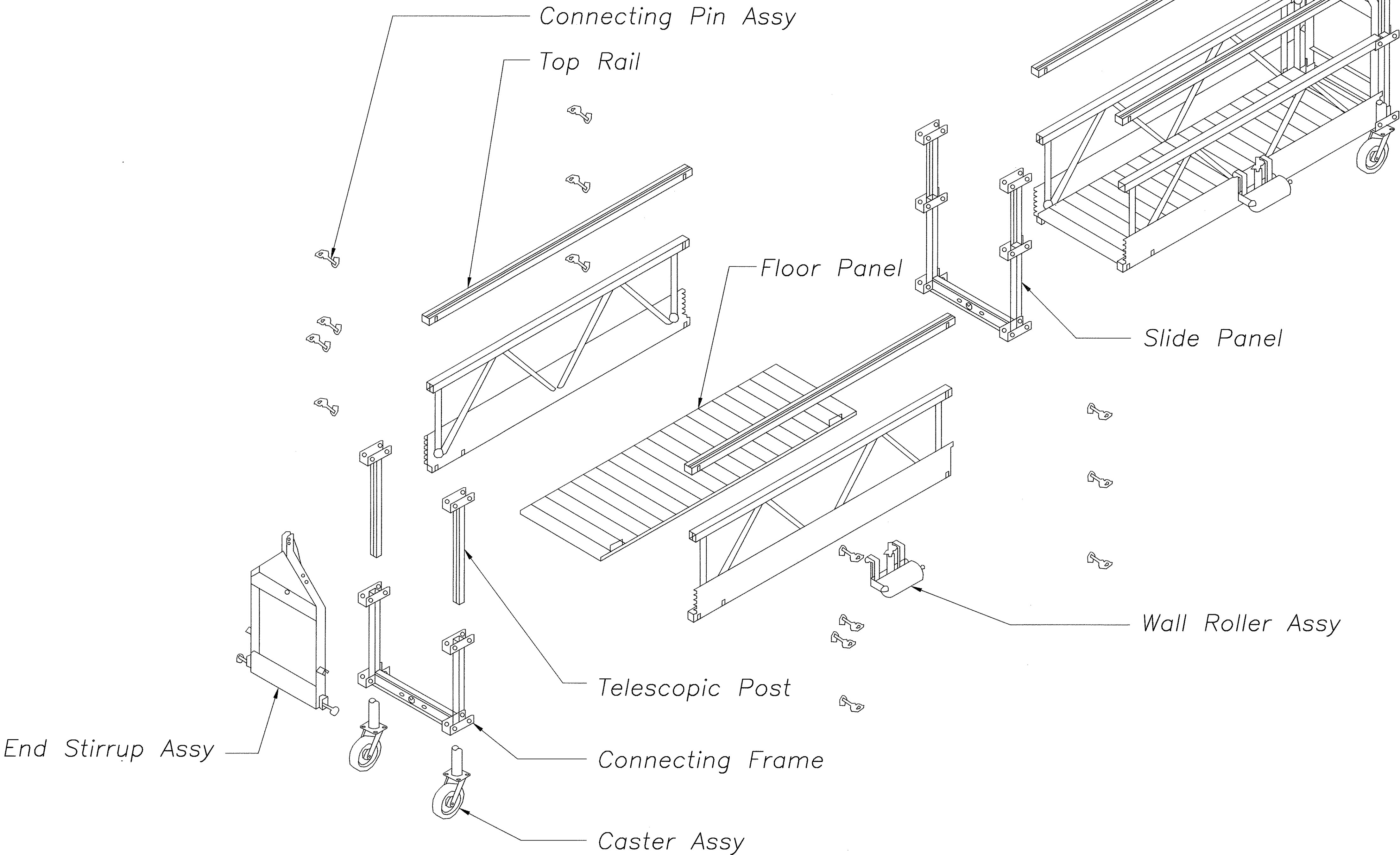
MAINTENANCE PLATFORM ON VARIOUS BRIDGES

PROJECT NO. HWY-H-09-99M

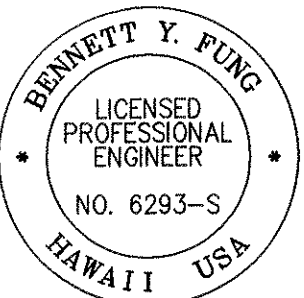
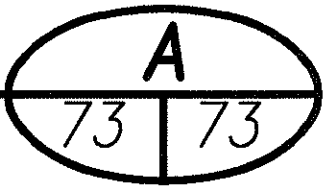
Scale: 1 1/2"=1'-0" Date: Apr. 2005

Sheet No. 72 Of 81 Sheets

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-99M	2005	73	81



TRESTLE PLATFORM SYSTEM COMPONENTS
Scale: 3" = 1'-0"



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UNDER MY SUPERVISION

Bennett Y. Fung
SIGNATURE

4/30/06
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HIGHWAYS DIVISION

**TRESTLE PLATFORM SYSTEM
COMPONENTS**

MAINTENANCE PLATFORM ON VARIOUS BRIDGES
PROJECT NO. HWY-H-09-99M
Scale: 3" = 1'-0" Date: Apr. 2005

Sheet No. 73 Of 81 Sheets

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
ORIGINAL PLAN	
NO.	