Clean Water Act Section 401 Water Quality Certification Application

Please refer to the "Clean Water Act Section 401 Water Quality Certification Application Guidance" document for assistance with completing this application.

A. Pre-Filing Meeting	
Please provide the date that a pre-filing meeting was requested from Nevada Division of Environmental Protection (NDEP) Bureau of Water Quality Planning (BWQP). *Note: If a pre-filing meeting has not been requested, please schedule a pre-filing meeting with NDEP BWQP.*	**February 26, 2025**

B. Contact Information			
Project Proponent Information			
Company Name: Humboldt-Toiyabe National Forest		Address: 1200 Franklin Way	
Applicant Name: Jordan Burge		City: Sparks	
Phone: 775-233-1850	Fax:	State: NV	
Email: jordan.burge@usda.gov		Zip Code: 89431	
Agent Information			
Company Name: Same		Address:	
Agent Name:		City:	
Phone:	Fax:	State:	
Email:		Zip Code:	

C. Project General Information			
Project Location			
Project/Site Name: Thomas Creek Bridge Replacement		Name of receiving waterbody: Thomas Creek	
Address: N Timberline Dr (no specific address)		Type of waterbody present at project location (*select all that apply*): ☒ Perennial River or Stream ☐ Intermittent River or Stream ☐ Ephemeral River or Stream ☐ Lake/Pond/Reservoir ☐ Wetland ☐ Other: _____	
City: Reno			
County: Washoe			
State: NV			
Zip Code: 89511			
Latitude (UTM or Dec/Deg): 39.392		Longitude (UTM or Dec/Deg): -119.838	
Township: 18N	Range: 19E	Section: 27	¼ Section: SW

Project Details	
Project purpose:	To replace a failing road bridge
Describe current site conditions: Attachments can include, but are not limited to, relevant site data, photographs that represent current site conditions, or other relevant documentation.	The bridge is located on an aggregate-surfaced road that accesses private homes and popular trailheads. Thomas Creek is a typical mountain perennial stream. See photos in attached inspection report.
Describe the proposed activity including methodology of each project element:	Overview: the new bridge will be located approximately 30 feet downstream to keep the current bridge open during construction. This new bridge with new road approaches will be constructed, and when complete, the existing bridge will be removed. Construction limits: the new bridge will over-span the high-water mark boundary, so most construction will take place outside this boundary. Work within the boundary will include rock riprap armoring, temporary excavation to form the concrete footers, and removal of the existing bridge concrete abutments. Construct new bridge: see attached plans. Construct concrete abutments and install prefabricated steel superstructure. Construct new road approaches: approximately 200’ of new road will be constructed to tie into new bridge and other road intersections. Most of this road will be fill, and all of it will be outside the high-water mark boundary. Remove existing bridge: remove the existing bridge, along with its concrete abutments. The area will be re-graded to match surrounding conditions.
Estimate the nature, specific location, and number of discharge(s) expected to be authorized by the proposed activity:	The only anticipated discharges below the ordinary high-water mark will be concrete for the abutments and footers, along with rock riprap to protect the new structure. See attached plans for specific locations.
Provide the date(s) on which the proposed activity is planned to begin and end and the approximate date(s) when any discharge(s) may commence:	August 1, 2025 – October 31, 2025, immediately
Provide a list of the federal permit(s) or license(s) required to conduct the activity which may result in a discharge into regulated waters (see mandatory attachments):	USACE Nationwide Permit #14
Provide a list of all other federal, state, interstate, tribal, territorial, or local agency authorizations required for the proposed activity and the current status of each authorization:	NEPA assessment is in process, and USF&W was consulted. SHPO consultation is in process.

Total area of impact to regulated waterbodies (acres):	Total Project: 0.75 acres To regulated waterbodies: 0.02 acres	
Total distance of impact to regulated waterbodies (linear feet):	95 feet total	
Amount excavation and/or fill discharged within regulated waters (acres, linear feet, and cubic yards):	Temporary: See spreadsheet	Permanent:
Amount of dredge material discharged within regulated waters (acres, linear feet, and cubic yards):	Temporary: See spreadsheet	Permanent:
Describe the reason(s) why avoidance of temporary fill in regulated waters is not practicable (if applicable):	NA	
Describe the Best Management Practices (BMPs) to be implemented to avoid and/or minimize impacts to regulated waters: Examples include sediment and erosion control measures, habitat preservation, flow diversions, dewatering, hazardous materials management, water quality monitoring, equipment or plans to treat, control, or manage discharges, etc.	The Forest Service National BMP guide will be utilized (and is required) for all aspects of this project. Some examples include: The most important BMP will be scheduling. The weather forecast will be monitored daily. If precipitation is predicted, ground will not be disturbed to the greatest extent possible. Straw wattles will be placed along the downhill side of all loose and uncompacted soils. Silt fence will be utilized while concrete abutments are constructed. Dewatering will likely be required for abutment footer construction, and water will be pumped to an area where it will infiltrate. If needed, stockpiles will be covered with plastic and the downhill side will be lined with straw wattles. Construction limits will be delineated to avoid excessive disturbance. All excavated spoils will be hauled or placed in a location so they cannot re-enter the channel. This will be accomplished by hauling material off-site or placing in a plastic-covered stockpile a minimum of 100’ away from the channel, with lined straw wattles on the downstream side. Any equipment fueling, cleaning, or maintenance will take place off site or in the Thomas Creek Trailhead paved parking lot, approximately 500 feet north of the bridge site. Water Diversion Plan: a sandbag and plastic cofferdam will be hand-built to divert flows to the center of the channel, away from concrete forms on the new bridge, and away from the abutment walls on the existing bridge. Silt fence will also be installed to prevent disturbed material from entering the active channel. Standing groundwater in excavated areas will be pumped to an area where it will infiltrate. For the existing	

	bridge, a diversion will only have to be built if water is running up against the abutment wall (the portion of channel against the abutment walls is often dry at this proposed time of year). The diversion will be in place a maximum of 5 days, just long enough to excavate concrete abutments without allowing disturbed material into the active channel. For the new bridge, the diversion will likely have to remain in place while concrete footers and abutment walls form, a total of approximately 25 days. An estimated 3 cy of clean sand will be used to fill sandbags. At most, both diversions will be a total of 0.01 acres over 55 LF of channel. The diversions will be removed by hand, and the area will be restored to pre-existing conditions. As described above and shown on the plans, rock riprap will be placed to maintain the alignment of the channel directly adjacent to the bridge (and protect for scour).
Describe how the activity has been designed to avoid and/or minimize adverse effects, both temporary and permanent, to regulated waters:	For temporary effects, see the BMP description above. For permanent effects: the new bridge has been designed to pass the calculated 100-year recurrence interval flood, with additional room for freeboard. The depth of the concrete footers was designed to withstand severe scour. The banks immediately adjacent to the bridge will be protected with rock riprap. These design features will allow for significant flooding without adverse effects to the stream (or the new bridge).
Describe any compensatory mitigation planned for this project (if applicable):	To be determined by USACE

D. Signature		
Name and Title (Print): Jordan Burge	Phone Number: 775-233-1850	Date: 3/19/2025
Recoverable Signature X Jordan Burge Signature of Responsible Official Signed by: JORDAN BURGE		

Mandatory Attachments:

- **Federal Permit or License Application** - A copy of the federal permit or license application and any readily available water quality-related materials that informed the development of the federal license or permit application.

- **Site Map** - A map or diagram of the proposed project site including project boundaries in relation to regulated waters, local streets, roads, and highways.
- **Engineered Drawings** - Engineered drawings are preferred to be submitted at the 70% design level. If only conceptual designs are available at the time of application, plans for construction should be submitted prior to the start of the project. Specific locations of the proposed activities and details of specific work elements planned for the project should be identified (e.g., staging areas, concrete washouts, perimeter controls, water diversions, or other BMPs).

Submit the completed application materials to NDEP (ndep401@ndep.nv.gov) with the appropriate U.S. Army Corps of Engineers Regulatory Office copied on the communication (http://www.spk.usace.army.mil/Missions/Regulatory/Contacts/Contact-Your-Local-Office/).

Thomas Creek Bridge Replacement

March 2025

Attachment to the USACE Nationwide Permit PCN

Block 19:

Overview: the new bridge will be located approximately 30 feet downstream to keep the current bridge open during construction. This new bridge with new road approaches will be constructed, and when complete, the existing bridge will be removed.

Construction limits: the new bridge will over-span the high-water mark boundary, so most construction will take place outside this boundary. Work within the boundary will include rock riprap armoring, temporary excavation to form the concrete footers, and removal of the existing bridge concrete abutments.

Construct new bridge: see attached plans. Construct concrete abutments and install prefabricated steel superstructure.

Construct new road approaches: approximately 200' of new road will be constructed to tie into new bridge and other road intersections. Most of this road will be fill, and all of it will be outside the high-water mark boundary.

Remove existing bridge: remove the existing bridge, along with its concrete abutments. The area will be re-graded to match surrounding conditions.

Block 20:

Temporary Mitigation Measures:

The Forest Service National BMP guide will be utilized (and is required) for all aspects of this project. Some examples include:

The most important BMP will be scheduling. The weather forecast will be monitored daily. If precipitation is predicted, ground will not be disturbed to the greatest extent possible. Straw wattles will be placed along the downhill side of all loose and uncompacted soils. Silt fence will be utilized while concrete abutments are constructed. Dewatering will likely be required for abutment footer construction, and water will be pumped to an area where it will infiltrate. If needed, stockpiles will be covered with plastic and the downhill side will be lined with straw wattles. Construction limits will be delineated to avoid excessive disturbance.

All excavated spoils will be hauled or placed in a location so they cannot re-enter the channel. This will be accomplished by hauling material off-site or placing in a plastic-covered stockpile a minimum of 100' away from the channel, with lined straw wattles on the downstream side.

Any equipment fueling, cleaning, or maintenance will take place off site or in the Thomas Creek Trailhead paved parking lot, approximately 500 feet north of the bridge site.

Water Diversion Plan: a sandbag and plastic cofferdam will be hand-built to divert flows to the center of the channel, away from concrete forms on the new bridge, and away from the abutment walls on the existing bridge. Silt fence will also be installed to prevent disturbed material from entering the active channel. Standing groundwater in excavated areas will be pumped to an area where it will infiltrate. For the existing bridge, a diversion will only have to be built if water is running up against the abutment wall (the portion of channel against

the abutment walls is often dry at this proposed time of year). The diversion will be in place a maximum of 5 days, just long enough to excavate concrete abutments without allowing disturbed material into the active channel. For the new bridge, the diversion will likely have to remain in place while concrete footers and abutment walls form, a total of approximately 25 days. An estimated 3 cy of clean sand will be used to fill sandbags. At most, both diversions will be a total of 0.01 acres over 55 LF of channel. The diversions will be removed by hand, and the area will be restored to pre-existing conditions. As described above and shown on the plans, rock riprap will be placed to maintain the alignment of the channel directly adjacent to the bridge (and protect for scour).

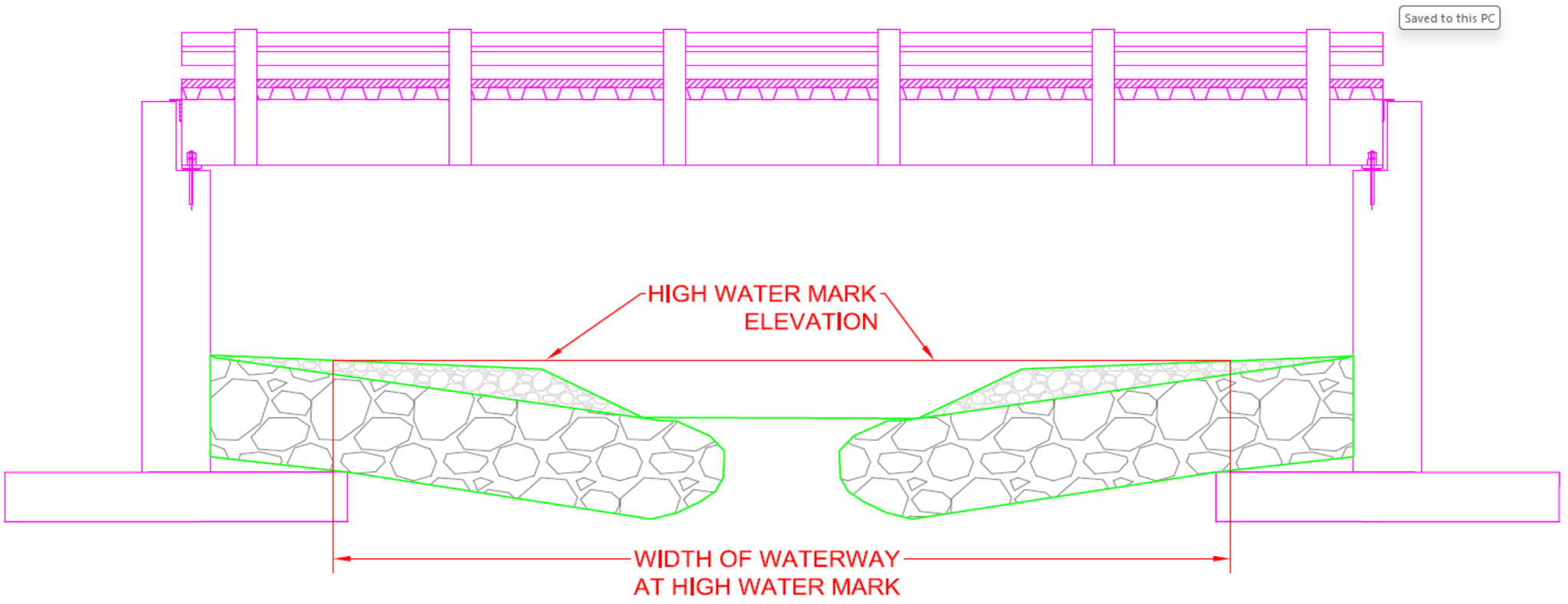
Permanent Mitigation Measures:

The new bridge has been designed to pass the calculated 100-year recurrence interval flood, with additional room for freeboard. The depth of the concrete footers was designed to withstand severe scour. The banks immediately adjacent to the bridge will be protected with rock riprap. These design features will allow for significant flooding without adverse effects to the stream (or the new bridge).

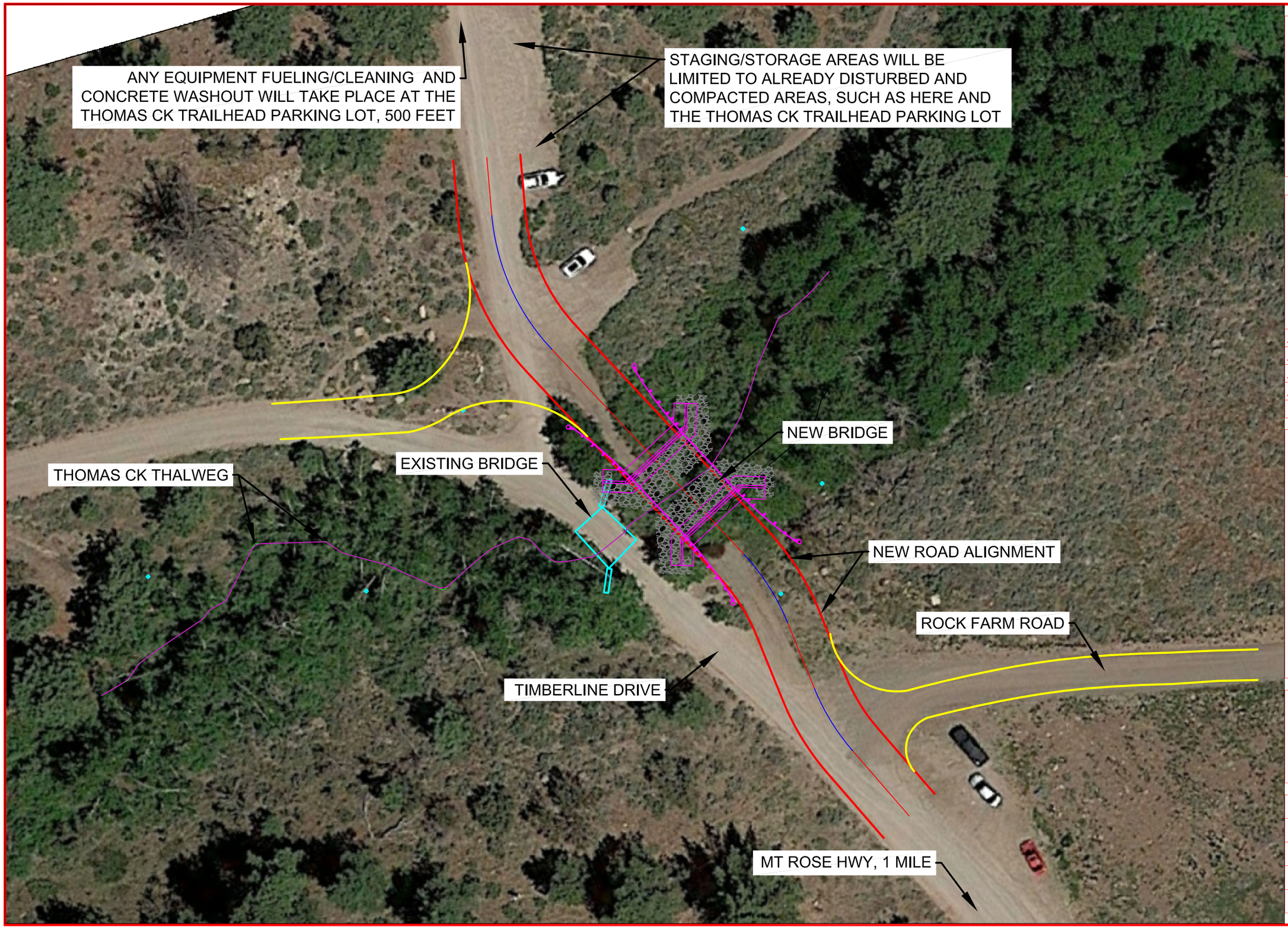
Thomas Creek Bridge Replacement

Excavation (CY)			
Whole Project		High-Water Mark Boundary	
Existing Bridge (concrete abutments)	New Bridge Site	Existing Bridge (concrete abutments)	New Bridge Site
30	310	4	105

Fill (CY)							
Whole Project				High-Water Mark Boundary			
Concrete	Riprap	Imported Aggregate	From On-Site Excavation	Concrete	Riprap	From On-Site Excavation	Temporary Fill (sandbag cofferdams)
160	170	205	310	2	67	105	3



NOTE: THESE LINES DELINEATE CALCULATIONS FOR THE HIGH WATER MARK BOUNDARY



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United States Department of Agriculture
Forest Service

REGION 4
INTERMOUNTAIN REGION

NO.	REVISION / ISSUE	DATE
4		
3		
2		
1		

PROJECT NAME

THOMAS CREEK BRIDGE REPLACMENT

HUMBOLDT-TOIYABE NATIONAL FOREST

CARSON RANGER DISTRICT

DRAWING TITLE

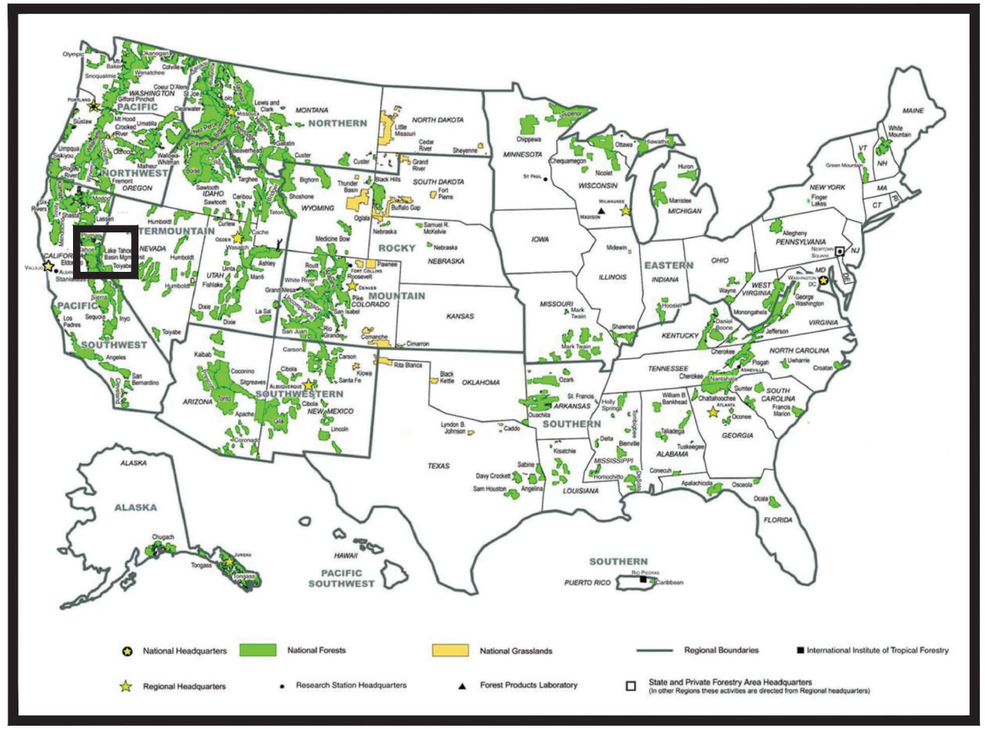
SITE MAP

DATE XX/XX/XXXX	ARCHIVE NO.
DESIGNER X.XXX	DRAWING SHEET NO. X-01
DRAWN X.XXX	
CHECKED X.XXX	
PROJECT NO.	SHEET 002 OF 100

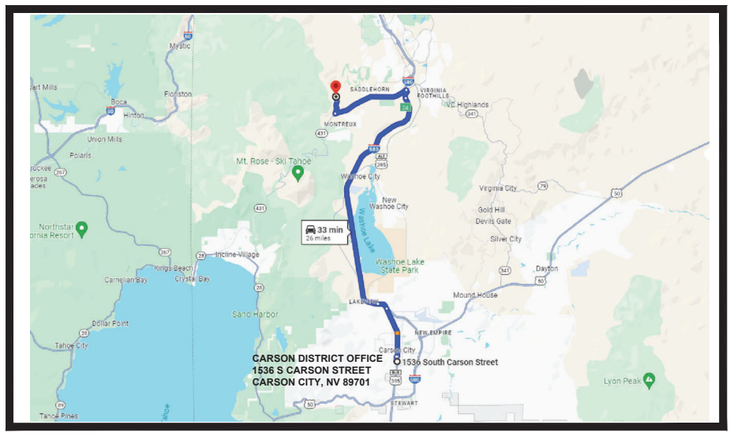
United States Department of Agriculture
Forest Service

NEVADA
WASHOE COUNTY
(R04) INTERMOUNTAIN REGION
HUMBOLDT-TOIYABE NATIONAL FOREST
CARSON RANGER DISTRICT

THOMAS CREEK BRIDGE REPLACEMENT
41049 - 0.2



FOREST LOCATION MAP



PROJECT LOCATION MAP

TRAVEL DIRECTIONS:

FROM THE CARSON RANGER DISTRICT OFFICE, GET ON I-580 FROM S CARSON STREET (4.2 MI.). FOLLOW I-580 TO NV-431 W / MOUNT ROSE HIGHWAY (15.8 MI.). CONTINUE ON NV-431 W / MOUNT ROSE HIGHWAY TO N TIMBERLINE DRIVE (4.8 MI.). TURN RIGHT ON N TIMBERLINE DRIVE, FOLLOW FOR 1.1 MILE. LATITUDE 39.391804° AND LONGITUDE -119.838152°.

DRAWING #: G-088

INDEX OF SHEETS

SHEET	SHEET TITLE	DATE
G-01	COVERSHEET	1/1/2024
C-1	SPECIFICATIONS AND SCHEDULE OF ITEMS	1/1/2024
C-2	SITE PLAN AND PROFILE	1/1/2024
C-3	TYPICAL ROAD SECTIONS	1/1/2024
C-4	STRUCTURE LAYOUT & DETAILS	1/1/2024
C-5	ABUTMENT ELEVATION DETAILS	1/1/2024
C-6	BRIDGE RAILING LAYOUT	1/1/2024
C-7	BRIDGE APPROACH RAILING DETAILS	1/1/2024

RECOMMENDED BY:

KEVIN WILMOT Digitally signed by KEVIN WILMOT Date: 2024.01.25 06:52:55 -08'00'
FOREST ENGINEER — DATE

MATTHEW ZUMSTEIN Digitally signed by MATTHEW ZUMSTEIN Date: 2024.01.25 14:22:13 -08'00'
DISTRICT RANGER — DATE

APPROVED:

CHAD PORTER Digitally signed by CHAD PORTER Date: 2024.01.24 16:21:43 -07'00'
DIRECTOR OF ENGINEERING — DATE

NOTES:

GENERAL
MATERIALS, CONSTRUCTION, & WORKMANSHIP SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS, FP-14 U.S. CUSTOMARY UNITS AND APPLICABLE FOREST SERVICE SUPPLEMENTAL SPECIFICATIONS.

DESIGN
1. THE SUPERSTRUCTURE DESIGN SHALL BE PERFORMED BY THE CONTRACTOR TO THE GEOMETRY SHOWN ON THESE DRAWINGS AND SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE DESIGN LOADS SHOWN ON THIS DRAWING.
2. DESIGN CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO FABRICATION.
3. FINAL BRIDGE SIZES AND DIMENSIONS TO BE PROVIDED IN MANUFACTURER SHOP DRAWINGS. CONTRACTOR MAY SUBMIT ALTERNATE SIZES AND DIMENSIONS OF BRIDGE COMPONENTS, INCLUDING AN ALTERNATE BEARING PLATE CONNECTION, FOR APPROVAL BY COR.
4. DESIGN LOADINGS:
   LIVE LOAD: HL-93
   LIVE LOAD DEFLECTION NOT TO EXCEED L/800
5. THE CONTRACTOR SHALL PROVIDE THE FOREST SERVICE WITH A LOAD RATING COMPLETED BY A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE AASHTO MANUAL FOR BRIDGE EVALUATION. THE LOAD RATING SHALL INCLUDE THE INVENTORY AND OPERATING RATING FACTORS FOR THE HL-93 DESIGN VEHICLE. IT SHALL ALSO INCLUDE THE SAFE LOAD CAPACITY IN TONS FOR THE TYPE 3, TYPE 3S2, TYPE 3-3, AND NRL LEGAL VEHICLES.

HARDWARE AND STRUCTURAL STEEL
1. ALL STEEL SHAPES, PLATES, AND BARS SHALL CONFORM TO AASHTO M270 GRADE 36 (ASTM A36).
2. ALL BOLTS AND NUTS SHALL CONFORM TO ASTM A307 EXCEPT AS NOTED.
3. HARDWARE AND STEEL ELEMENTS ARE TO BE UNCOATED (BLACK).

ELASTOMERIC BEARING PADS
1. BEARING PADS SHALL BE PLAIN ELASTOMERIC PAD 1" THICK, 60 DUROMETER, LOW TEMPERATURE, ZONE D.

CONCRETE
1. CLASS A(AE) f'c = 4000 psi MIN.
2. CONCRETE SHALL BE GIVEN A CLASS 1 "ORDINARY SURFACE FINISH" IN ACCORDANCE WITH FP-14 SECTION 552.
3. CONCRETE SHALL BE AIR ENTRAINED 5% ± 1%.
4. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
5. ALL CONCRETE SHALL BE MADE IN ACCORDANCE WITH AN APPROVED MIX DESIGN.

STEEL SUPERSTRUCTURE
1. WEATHER A588 STEEL GIRDERS
2. FIELD WELDS SHALL BE COMPLETED BY AISC CERTIFIED WELDER.

REINFORCING STEEL
1. ALL NON-PRESTRESSED REINFORCING SHALL BE OF THE DEFORMED BAR TYPE CONFORMING TO AASHTO M31 (ASTM A615), GRADE 60.
2. ALL DIMENSIONS TO REINFORCING STEEL ARE TO THE CENTERLINE OF BAR. CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING BAR SHALL BE 2" UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
3. REINFORCING STEEL SPLICE LENGTHS SHALL BE IN ACCORDANCE WITH ACI 315 AND AASHTO SPECIFICATIONS.

DIMENSIONS
1. ALL LONGITUDINAL DIMENSIONS FOR THE STRUCTURE ARE MEASURED HORIZONTALLY AND INCLUDE NO CORRECTION FOR GRADE.

STRUCTURE EXCAVATION
1. STRUCTURE EXCAVATION SHALL BE COMPLETED IN ACCORDANCE WITH FP-14, SECTION 208.
2. CONTRACTOR SHALL SUBMIT AN EXCAVATION PLAN TO THE CONTRACTING OFFICER (CO) FOR APPROVAL. PLAN SHALL INCLUDE DRAWINGS AND WRITTEN OUTLINE ILLUSTRATING AND DESCRIBING PROPOSED EXCAVATION LIMITS, METHODS, EQUIPMENT, LOCATION OF STOCKPILES, METHODS TO REMOVE THE EXISTING BRIDGE AND ESTIMATED QUANTITIES AND COMPLY WITH OSHA EXCAVATION SOIL TYPING AND REQUIREMENTS. CHANGES TO THE EXCAVATION LIMITS SHOWN ON THIS SHEET FOR CONTRACTOR'S DEWATERING METHODS OR OTHER CONTRACTOR CONVENIENCES, MUST BE SHOWN ON THE PLAN AND ARE THE RESPONSIBILITY OF THE CONTRACTOR AND INCIDENTAL TO THE WORK.

STRUCTURAL BACKFILL
1. SUITABLE STRUCTURE EXCAVATION MATERIAL MAY BE USED FOR STRUCTURAL BACKFILL MATERIAL. STRUCTURAL BACKFILL MATERIAL SHALL MEET FP-14, 704.04, STRUCTURAL BACKFILL. STRUCTURE BACKFILL SHALL BE PLACED AND BE COMPACTED IN ACCORDANCE WITH FP-14, 208.10 AND 208.11 (AASHTO T99, METHOD C AND AASHTO T310).

ROADWAY EMBANKMENT
1. USE MATERIAL FROM EXCAVATION THAT IS APPROVED BY COR.
2. CONSTRUCT ROADWAY EMBANKMENTS ACCORDING TO FP-14 SECTION 204.

DEWATERING AND SOIL EROSION CONTROL
1. PROTECT AGAINST SOIL EROSION AND SEDIMENTATION DURING CONSTRUCTION IN ACCORDANCE WITH FP-14, SECTION 157 AND THE PROJECT PERMITS. CONTRACTOR SHALL PREPARE AND SUBMIT A SOIL EROSION AND SEDIMENT CONTROL PLAN TO CO FOR APPROVAL. PLAN SHALL INCLUDE DRAWINGS AND WRITTEN OUTLINE ILLUSTRATING AND DESCRIBING PROPOSED LAYOUT, METHODS AND EQUIPMENT.
2. CONTRACTOR SHOULD ANTICIPATE WATER INFILTRATING THE EXCAVATIONS.
3. SUBGRADE EXCAVATION, FOOTING PLACEMENT, RIPRAP PLACEMENT, AND BACKFILL ARE TO BE COMPLETED PER THE CONTRACT SPECIFICATIONS AND STANDING OR RUNNING WATER IN THE WORK AREA DOES NOT RELIEVE THE CONTRACTOR FROM MEETING THE SPECIFICATIONS.

PERMITS
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS

CLEARING AND GRUBBING
1. CLEARING AND GRUBBING OF ALL SLASH AND TREES UNDER 6" DIAMETER SHALL BE DISPOSED OF OFF SITE. CONTRACTOR SHALL NOT REMOVE ANY TREES OVER 6" IN DIAMETER. APPROXIMATELY 12 TREES OVER 6" IN DIAMETER SHALL BE CUT, LIMBED, AND DECKED ON SITE IN A LOCATION APPROVED BY THE CONTRACTING OFFICER.

SCHEDULE OF ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
15101	MOBILIZATION	LS	1
15221	CONSTRUCTION SURVEY AND STAKING	LS	1
15713	SOIL EROSION AND POLLUTION CONTROL	LS	1
20102	CLEARING AND GRUBBING, DEBRIS DISPOSAL METHODS FOR TOPS AND LIMBS (G), LOGS (I), AND STUMPS (A)	LS	1
20301	REMOVAL OF EXISTING BRIDGE, DISPOSAL METHOD (A)	LS	1
20401	ROADWAY EXCAVATION AND EMBANKMENT, PLACEMENT METHOD 2	LS	1
20806	STRUCTURE EXCAVATION AND BACKFILL	LS	1
25101	PLACED RIPRAP, CLASS 4 (COMMERCIAL SOURCE)	CY	170
32203	AGGREGATE BASE COURSE, GRADING (D), COMPACTION (D), (COMMERCIAL SOURCE).	CY	75
32204	AGGREGATE SURFACE COURSE, GRADING (S), COMPACTION (B), (COMMERCIAL SOURCE).	CY	130
40401	MINOR HOT ASPHALT, WEARING SURFACE ON DECK & APPROACHES, STA 1+11.10 TO 2+48.43.	TON	75
55201	STRUCTURAL CONCRETE, CLASS (AE)	CY	160
55601	BRIDGE APPROACH RAILING, TYPE II, CLASS A	FOOT	150
55602	TERMINAL SECTION, BTC END	EACH	4
57102	30'X35' PREFABRICATED BRIDGE SUPERSTRUCTURE- DESIGN, FABRICATE, TRANSPORT, & INSTALL (INCLUDES RAILING)	LS	1
62503	SEEDING WITH MULCH, METHOD (A) DRY METHOD, (GOVERNMENT PROVIDED).	LS	1
63306	OBJECT MARKERS, TYPE 3	EA	4

United States Department of Agriculture
Forest Service

(R04)
INTERMOUNTAIN REGION

STAMPS, LOGOS, AND SEALS

NO.	REVISION / ISSUE	DATE
4		
3		
2		
1		

PROJECT NAME
THOMAS CREEK BRIDGE REPLACEMENT

HUMBOLDT-TOIYABE NATIONAL FOREST

CARSON RANGER DISTRICT

DRAWING TITLE
SPECIFICATIONS AND SCHEDULE OF ITEMS

DATE 01/01/2024	ARCHIVE NO.
DESIGNER C. PORTER	DRAWING SHEET NO. C-01
DRAWN J. DODDS	
CHECKED C. PORTER	
PROJECT NO. G-088	SHEET 2 OF 8

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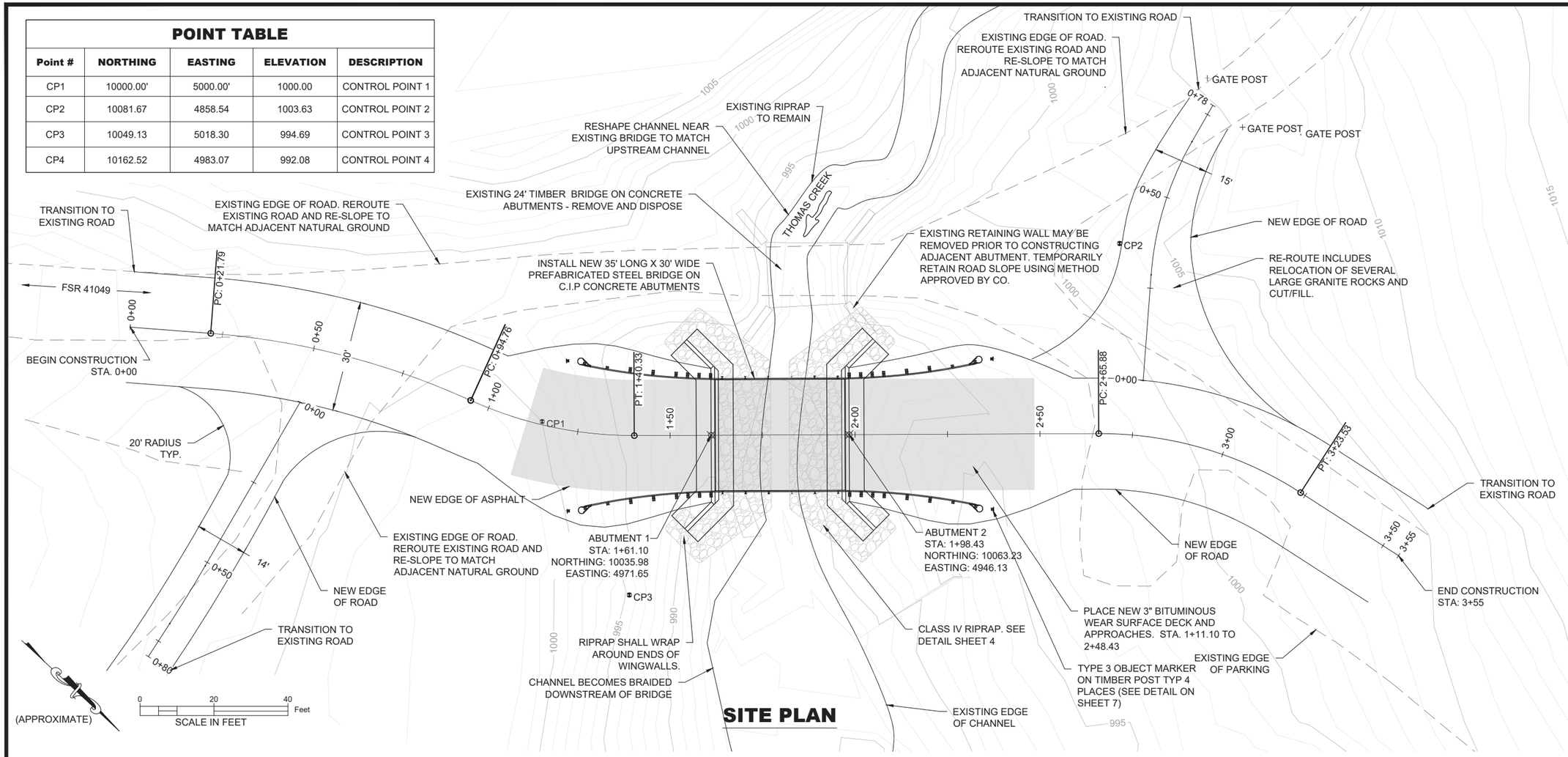
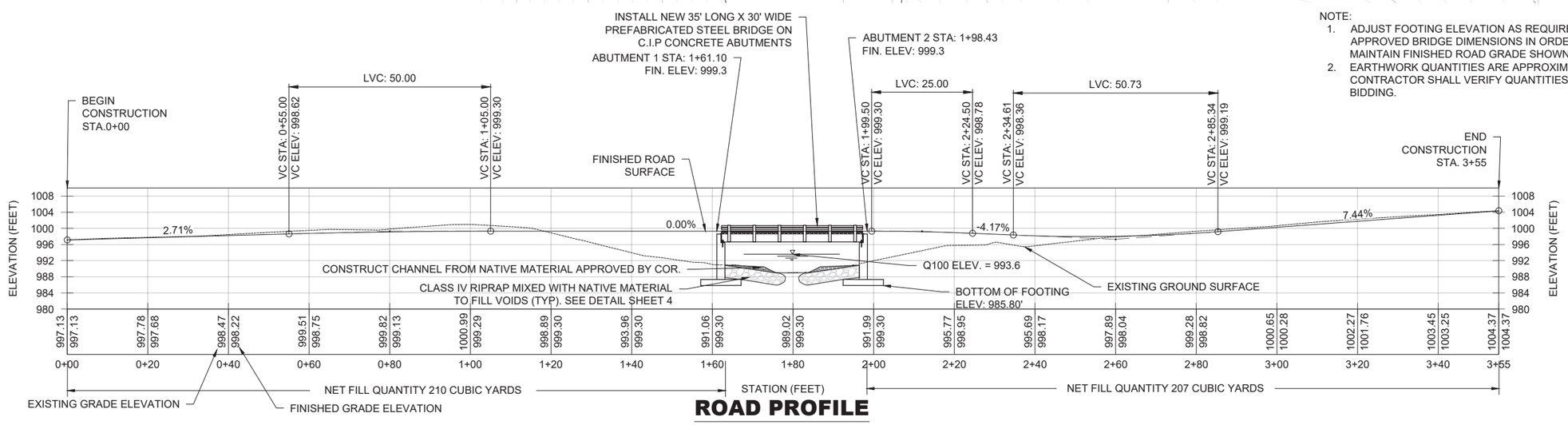
POINT TABLE

Point #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP1	10000.00'	5000.00'	1000.00	CONTROL POINT 1
CP2	10081.67	4858.54	1003.63	CONTROL POINT 2
CP3	10049.13	5018.30	994.69	CONTROL POINT 3
CP4	10162.52	4983.07	992.08	CONTROL POINT 4



SITE PLAN



ROAD PROFILE

NOTE:
1. ADJUST FOOTING ELEVATION AS REQUIRED BY FINAL APPROVED BRIDGE DIMENSIONS IN ORDER TO MAINTAIN FINISHED ROAD GRADE SHOWN
2. EARTHWORK QUANTITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY QUANTITIES PRIOR TO BIDDING.

USDA FOREST SERVICE — DEPARTMENT OF AGRICULTURE

United States Department of Agriculture
Forest Service

(R04)
INTERMOUNTAIN REGION

STAMPS, LOGOS, AND SEALS

NO.	REVISION / ISSUE	DATE
4		
3		
2		
1		

PROJECT NAME

THOMAS CREEK BRIDGE REPLACEMENT

HUMBOLDT-TOIYABE NATIONAL FOREST

CARSON RANGER DISTRICT

DRAWING TITLE

SITE PLAN AND PROFILE

DATE 01/01/2024	ARCHIVE NO.
DESIGNER C. PORTER	DRAWING SHEET NO. C-02
DRAWN J. DODDS	
CHECKED C. PORTER	
PROJECT NO. G-088	SHEET 3 OF 8

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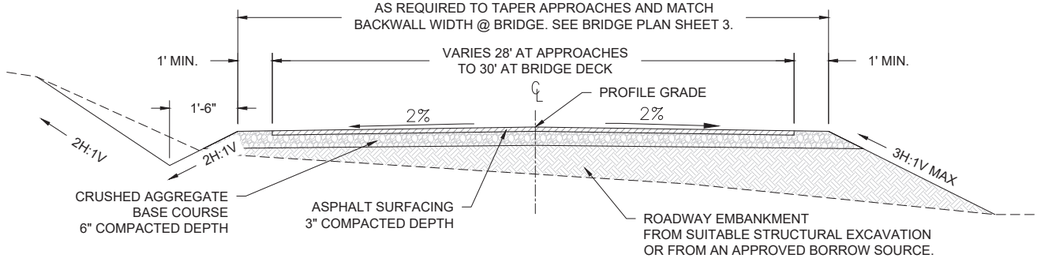
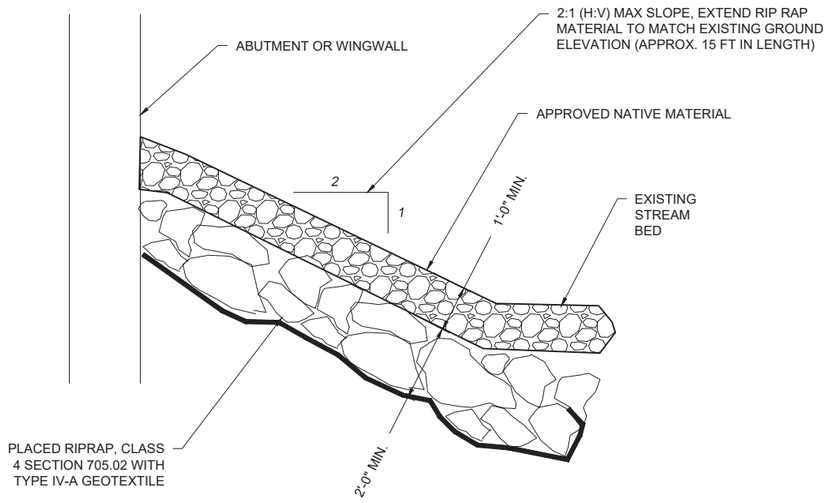


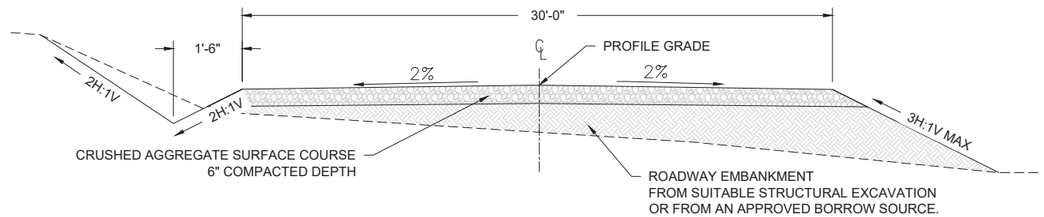
PAVED DOUBLE LANE ROAD

STA 1+11.10 TO 1+61.10 &
STA 1+98.43 TO 2+48.43
(NO SCALE)



TYPICAL RIPRAP INSTALLATION

NO SCALE



AGGREGATE DOUBLE LANE ROAD

STA 0+00 TO 1+11.10 &
STA 2+48.43 TO 3+55
(NO SCALE)

United States Department of Agriculture
Forest Service

(R04)
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3		
2		
1		

PROJECT NAME

THOMAS CREEK BRIDGE REPLACEMENT

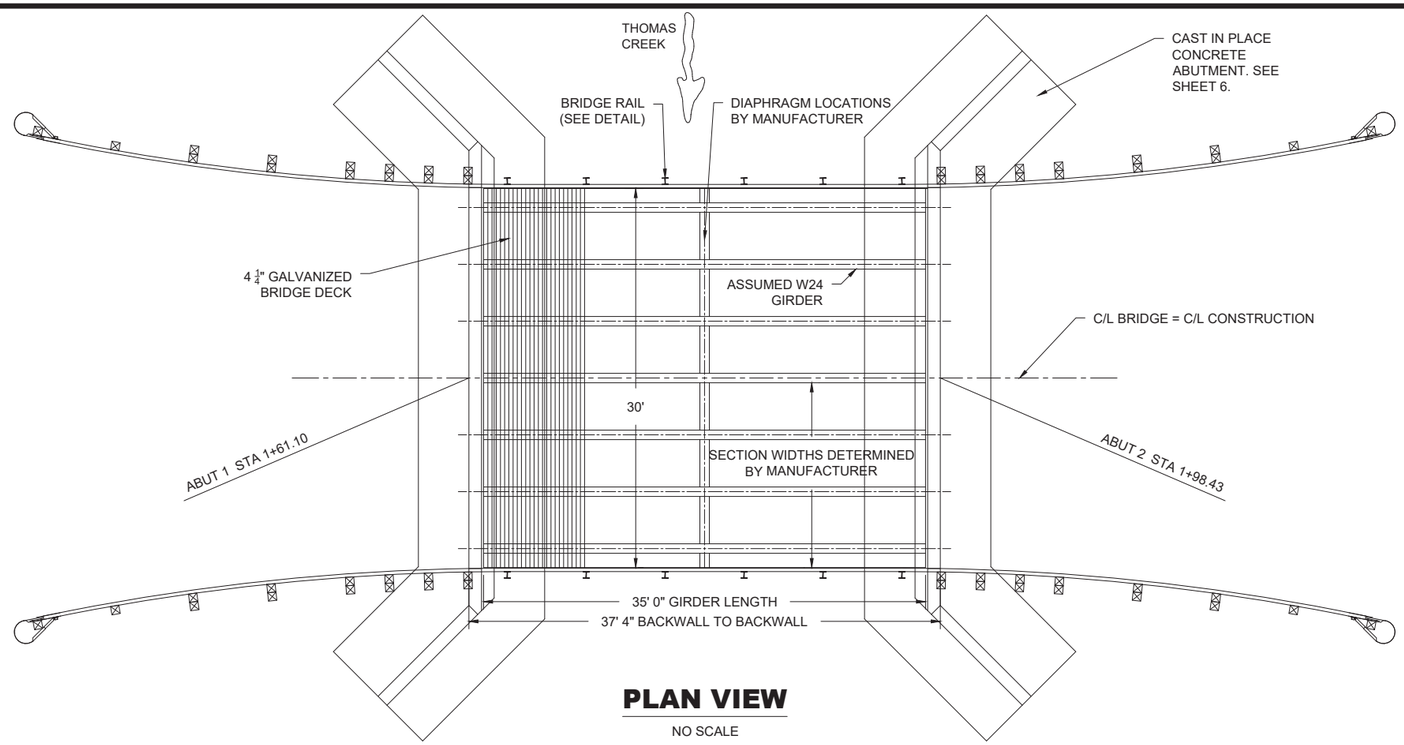
HUMBOLDT-TOIYABE
NATIONAL FOREST

CARSON RANGER DISTRICT

DRAWING TITLE

TYPICAL ROAD SECTIONS

DATE: 01/01/2024	ARCHIVE NO.
DESIGNER: C. PORTER	DRAWING SHEET NO. C-03
DRAWN: J. DODDS	
CHECKED: C. PORTER	
PROJECT NO.: G-088	SHEET 4 OF 8

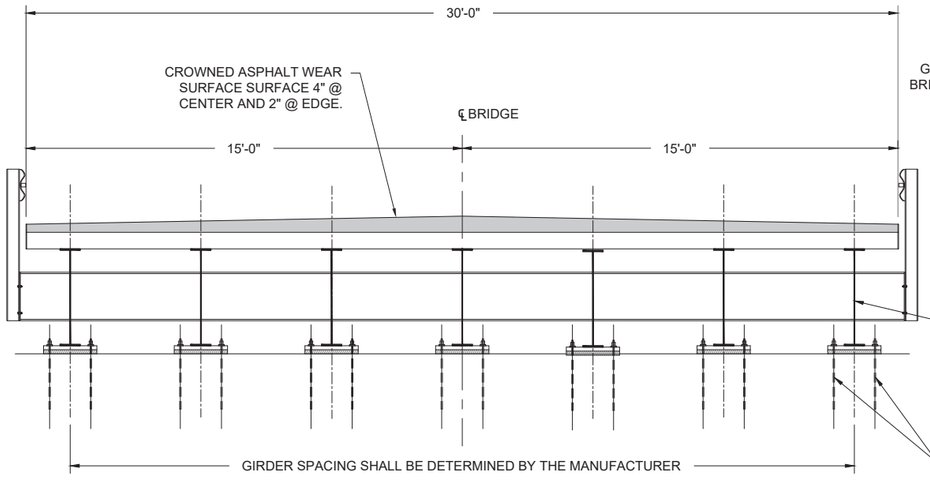


PLAN VIEW

NO SCALE

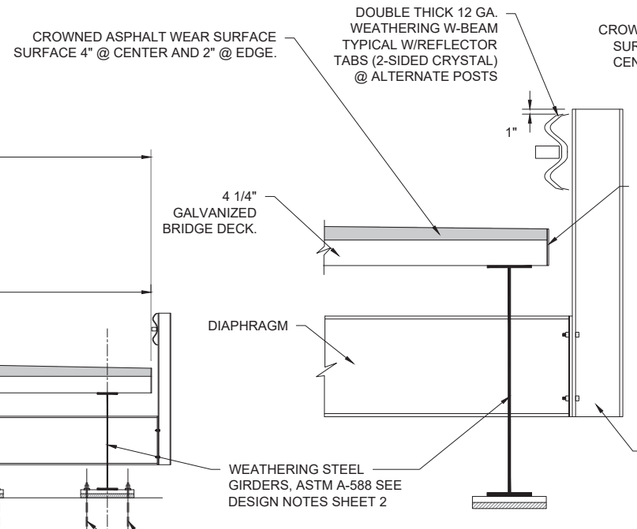
* NOTE:
FINAL BRIDGE SIZES AND DIMENSIONS TO BE PROVIDED IN MANUFACTURER SHOP DRAWINGS. CONTRACTOR MAY SUBMIT ALTERNATE SIZES AND DIMENSIONS OF BRIDGE COMPONENTS, INCLUDING AN ALTERNATIVE BEARING PLATE CONNECTION, FOR APPROVAL BY COR. CONTRACTOR TO COORDINATE FOOTING ELEVATIONS AND BRIDGE DEPTH TO OBTAIN THE SHOWN FINISH ROAD ELEVATIONS.

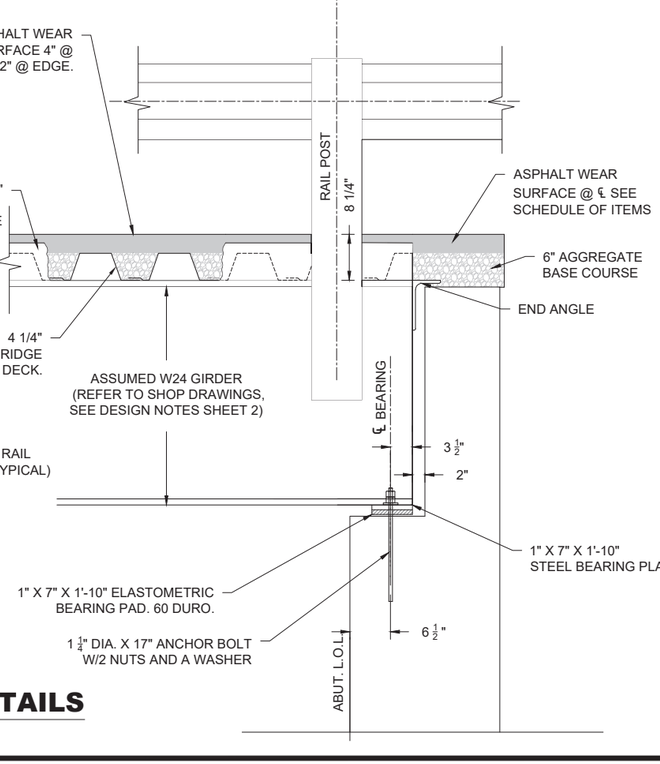
*NOTE: LIFTING LUG DESIGN BY MANUFACTURER.



TYPICAL SECTION

NO SCALE





BRIDGE SECTION DETAILS

NO SCALE

United States Department of Agriculture
Forest Service

(R04)
INTERMOUNTAIN REGION

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PROJECT NAME

THOMAS CREEK BRIDGE REPLACEMENT

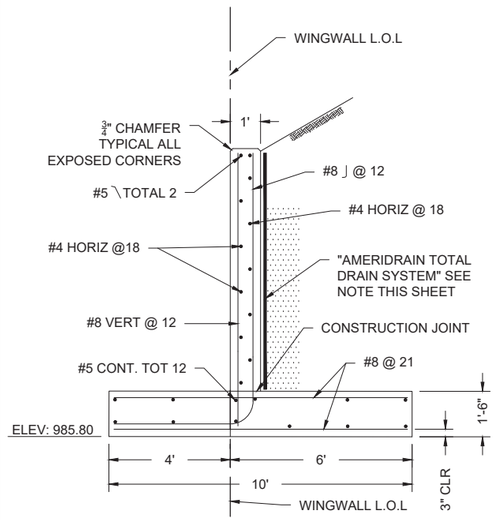
HUMBOLDT-TOIYABE NATIONAL FOREST

CARSON RANGER DISTRICT

DRAWING TITLE

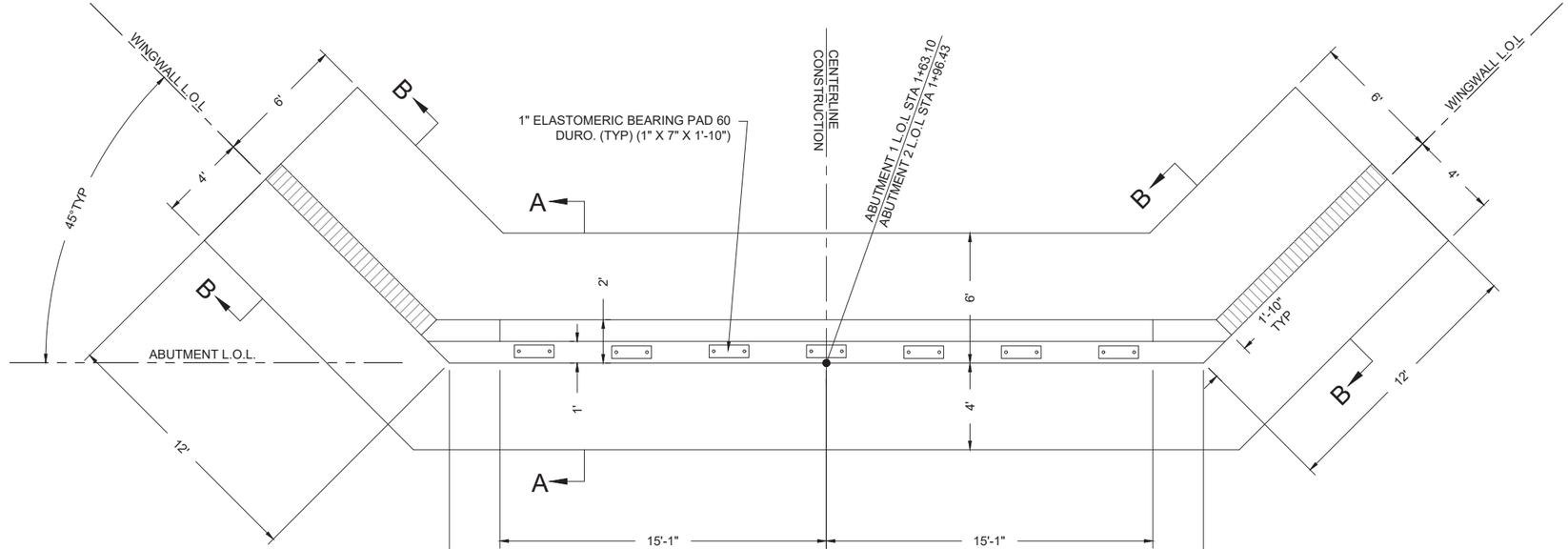
STRUCTURE LAYOUT & DETAILS

DATE 01/01/2024	ARCHIVE NO.
DESIGNER C. PORTER	DRAWING SHEET NO. C-04
DRAWN J. DODDS	
CHECKED C. PORTER	
PROJECT NO. G-088	SHEET 5 OF 8



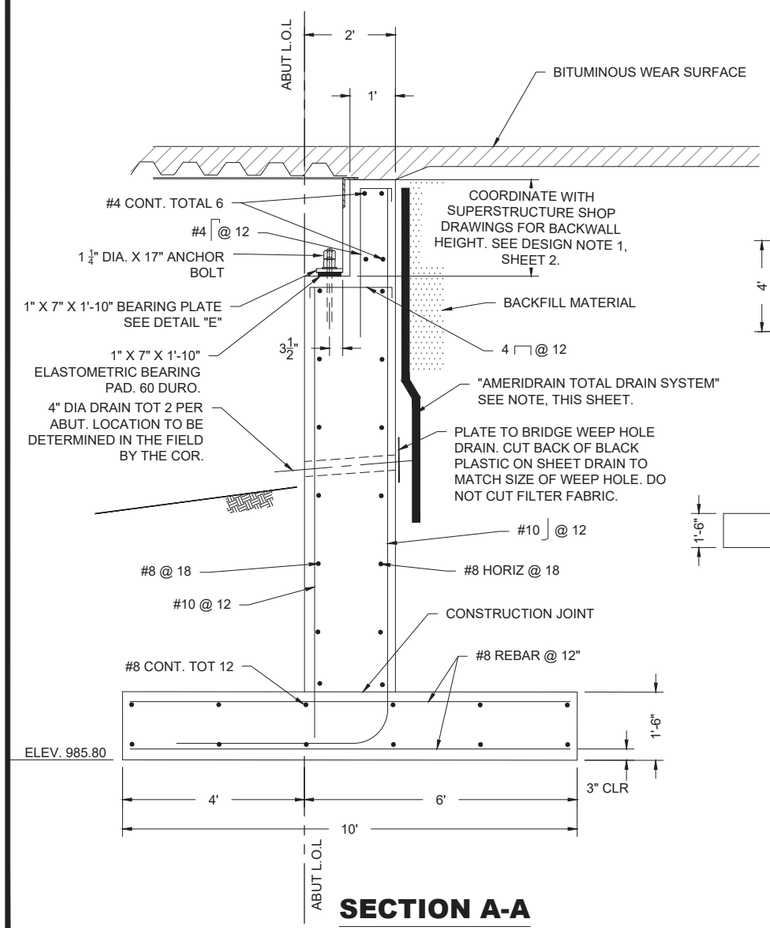
SECTION B-B

NO SCALE



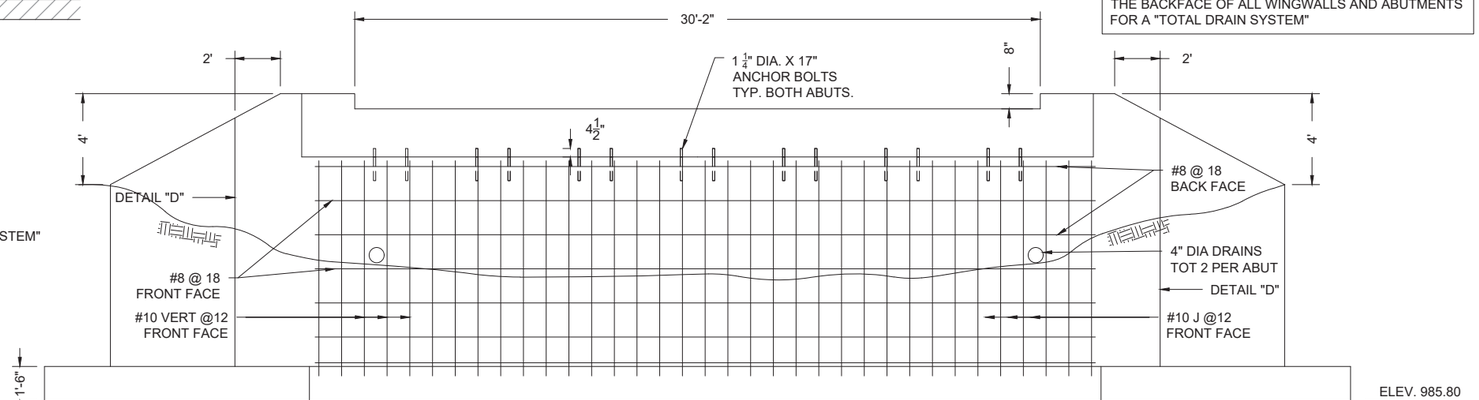
PLAN VIEW - ABUTMENT

NO SCALE



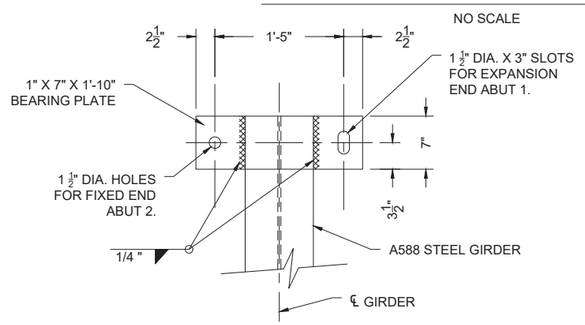
SECTION A-A

NO SCALE

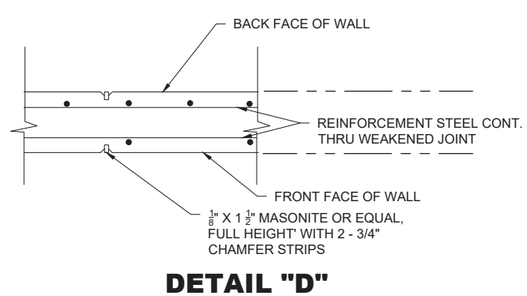


ELEVATION VIEW - ABUTMENT

NO SCALE



DETAIL "E"



DETAIL "D"

* NOTE:
"AMERIDRAIN" PREFABRICATED SHEET DRAIN AS MANUFACTURED BY A.W.D AMERICAN WICK DRAIN CORPORATION OR EQUAL. INSTALL IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS ON THE BACKFACE OF ALL WINGWALLS AND ABUTMENTS FOR A "TOTAL DRAIN SYSTEM"

USDA FOREST SERVICE

United States Department of Agriculture
Forest Service

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PROJECT NAME

THOMAS CREEK BRIDGE REPLACEMENT

HUMBOLDT-TOIYABE NATIONAL FOREST

CARSON RANGER DISTRICT

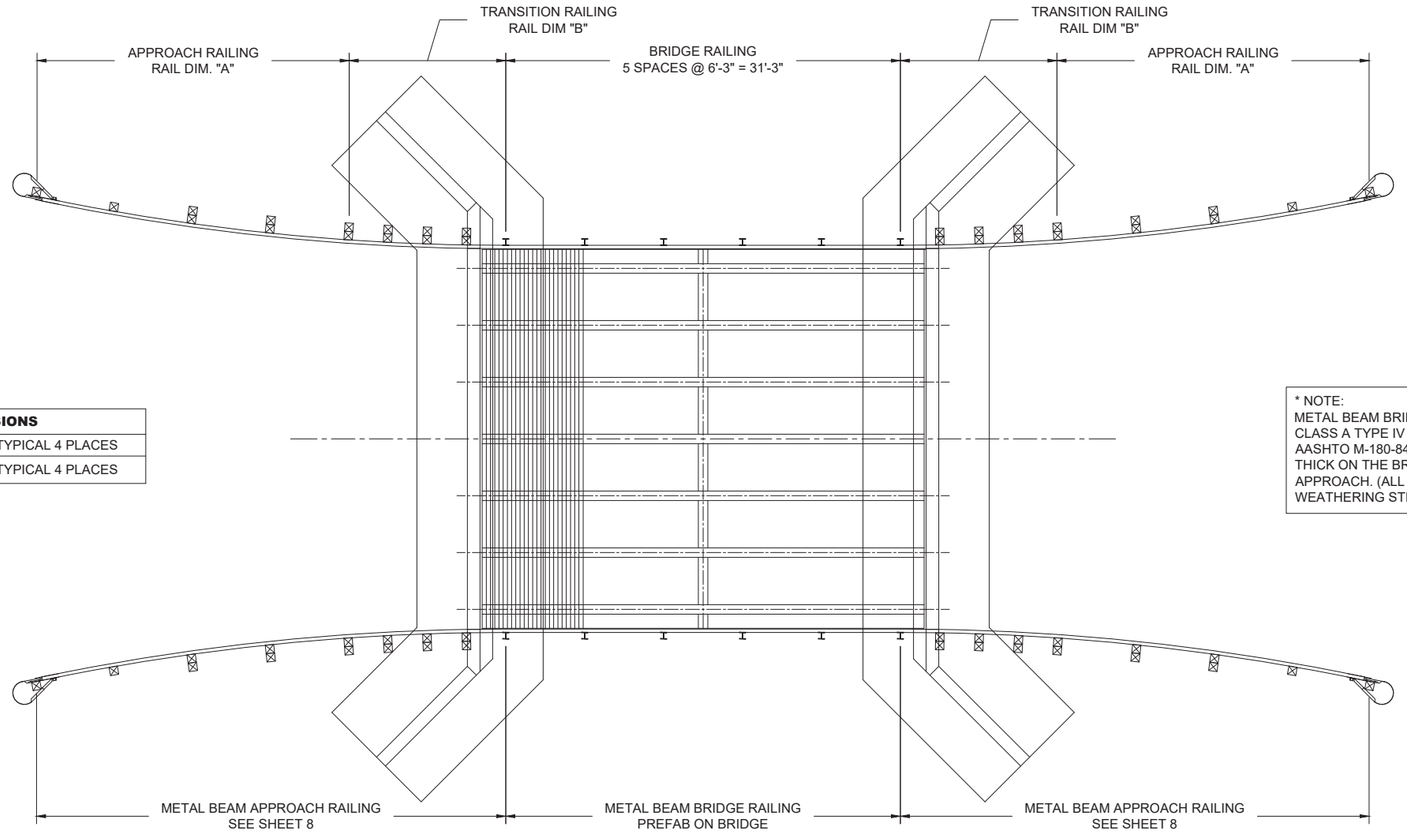
DRAWING TITLE

ABUTMENT ELEVATION DETAILS

DATE 01/01/2024	ARCHIVE NO.
DESIGNER C. PORTER	DRAWING SHEET NO. C-05
DRAWN J. DODDS	
CHECKED C. PORTER	
PROJECT NO. G-088	SHEET 6 OF 8

1/24/24 09:44 JDODDS C:\USERS\JDODDS\ONEDRIVE - USDA\DOCUMENTS\PROJECTS\OFF - FOREST\THOMAS CREEK\THOMAS CREEK BRIDGE.DWG;

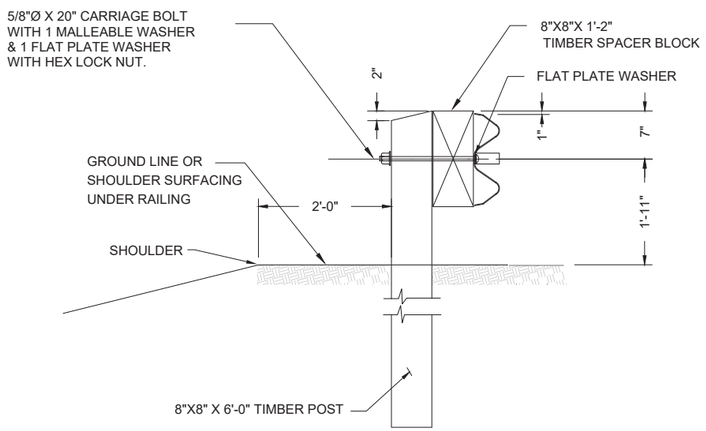
RAIL POST SPACING DIMENSIONS		
"A"	4 SPACES @ 6'-3" = 25' 0"	TYPICAL 4 PLACES
"B"	4 SPACES @ 3'-1 $\frac{1}{2}$" = 12'-6"	TYPICAL 4 PLACES



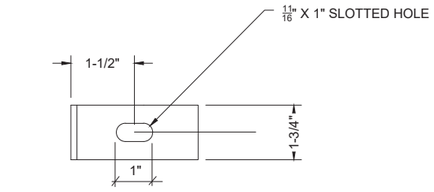
RAILING LAYOUT PLAN VIEW

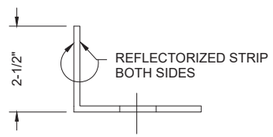
(NO SCALE)

* NOTE:
METAL BEAM BRIDGE & APPROACH RAIL SHALL BE CLASS A TYPE IV STEEL GUARDRAIL AS SPECIFIED IN AASHTO M-180-84. THE BEAM SHALL BE DOUBLE THICK ON THE BRIDGE & A SINGLE SECTION ON THE APPROACH. (ALL ELEMENTS ARE A-588 SELF WEATHERING STEEL).



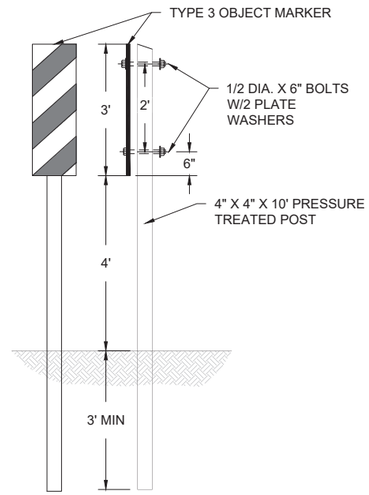
RAIL ASSEMBLY
METAL BEAM APPROACH RAIL





FLAT PLATE WASHER

MFG. FROM 7 GAGE STEEL PLATE TYPE 2
GALVANIZE PER AASHTO M-180



OBJECT MARKER DETAIL

R.H. MARKER SHOWN (NO SCALE)

OBJECT MARKERS, TYPE 3, SHALL BE 12" X 36" WITH RETROREFLECTIVE STRIP BONDED TO A 16 GAGE GALVANIZED STEEL OR 14 GAGE ALUMINUM SHEET. REFLECTIVE STRIPS SHALL BE ASTM TYPE III, HIGH INTENSITY.

INSTALL POSTS AT LOCATION AND ANGLE DIRECTED BY THE ENGINEER.

United States Department of Agriculture
Forest Service

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PROJECT NAME

THOMAS CREEK BRIDGE REPLACEMENT

HUMBOLDT-TOIYABE NATIONAL FOREST

CARSON RANGER DISTRICT

DRAWING TITLE

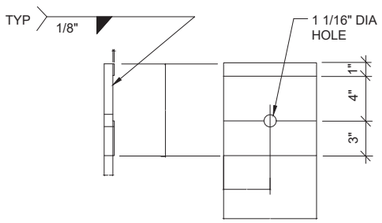
BRIDGE RAILING LAYOUT

DATE 01/01/2024	ARCHIVE NO.
DESIGNER C. PORTER	DRAWING SHEET NO. C-06
DRAWN J. DODDS	
CHECKED C. PORTER	
PROJECT NO. G-088	SHEET 7 OF 8

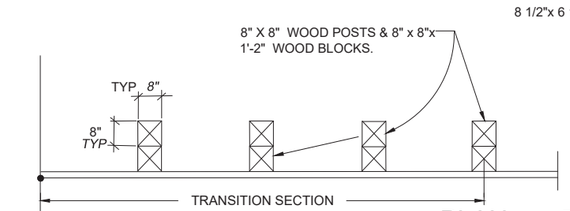
1/24/24 09:44 JDODDS C:\USERS\JDODDS\ONEDRIVE - USDA\DOCUMENTS\PROJECTS\OFF - FOREST\THOMAS CREEK\THOMAS CREEK BRIDGE.DWG;

TIMBER TREATMENT

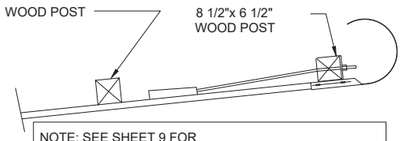
ALL LUMBER SHALL BE COAST DOUGLAS FIR GRADED IN ACCORDANCE WITH STANDARD No. 17 WCLB PARA GRAPH No. 131b, No 1 STRUCTURAL. ALL POSTS AND BLOCKS SHALL BE INCISED PRIOR TO TREATMENT AND PRESSURE TREATED BY THE EMPTY CELL PROCESS WITH AN OIL BORNE PRESERVATIVE PER AASHTO M133, & AWPA P8, P9, C1, C2, & C28 AND IN ACCORDANCE WITH "BEST MANAGEMENT PRACTICES FOR THE USE OF WOOD IN AQUATIC ENVIRONMENTS, CURRENT EDITION". (PENTACHLOROPHENOL OR COPPER NAPTHENATE TREATMENT). POST BLOCKS SHALL BE FREE OF HEART CENTER.



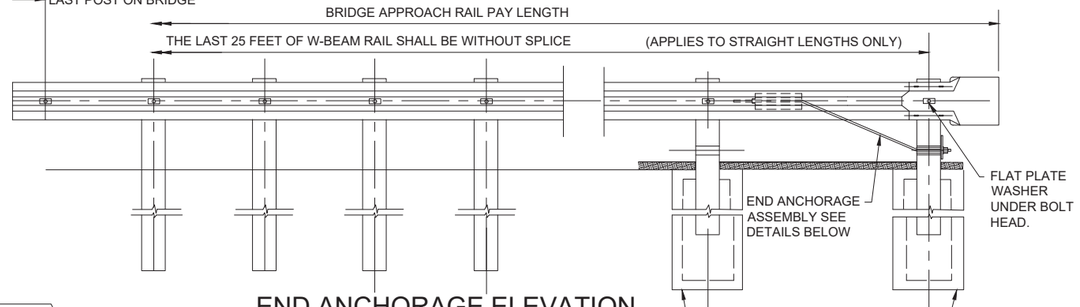
BEARING PLATE DETAIL



PLAN



END ANCHORAGE



END ANCHORAGE ELEVATION

GENERAL NOTES

1. END ANCHOR SHALL CONSIST OF A TERMINAL SECTION ANCHOR PLATE CABLE ASSY, AND ALL MISCELLANEOUS HARDWARE NECESSARY FOR A COMPLETE INSTALLATION.

2. CONNECTIONS TO BRIDGE RAIL OR OTHER RIGID STRUCTURES WILL NOT BE CONSIDERED AS AN END ANCHORAGE FOR PAYMENT PURPOSES.

3. CONCRETE FOR THE ANCHOR SHALL BE CLASS"A".

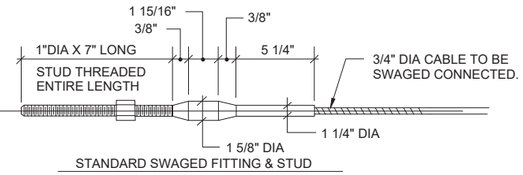
4. CABLE AND CONNECTING HARDWARE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 30 EXCEPT THAT THE CABLE SHALL BE 3/4 INCH 6X19 INDEPENDENT WIREROPE CORE (IWRC), CLASS A, GALVANIZED, RIGHT REGULAR LAY, MANUFACTURED OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,000 POUNDS. OTHER TYPE OF CABLE MAY BE SPECIFIED UNDER SPECIAL PROVISIONS.

5. THE ANCHOR PLATE, ANCHOR ASSEMBLY, AND OTHER MISC. HARDWARE SHALL BE FABRICATED FROM STEEL CONFORMING TO THE SPECIFICATIONS OF ASTM A36 AND BE GALVANIZED IN ACCORDANCE WITH AASHTO M232, & M-111.

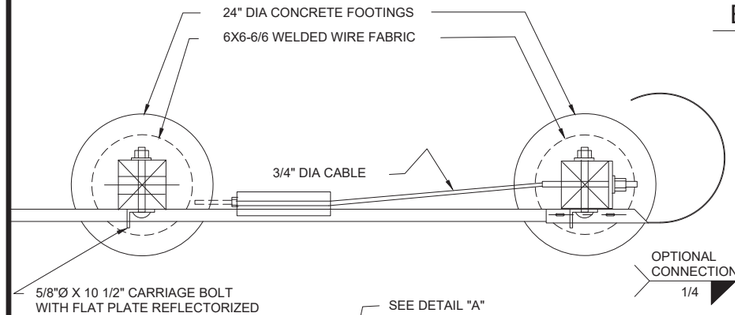
6. BOLTS, NUTS, WASHERS, TERMINAL SECTIONS, AND RAIL ELEMENTS SHALL CONFORM TO THE SPECIFICATIONS OF AASHTO M180 AND THE DETAILS CONTAINED IN THE AASHTO-AGC-ARTBA PUBLICATION "A GUIDE TO STANDARDIZED HIGHWAY BARRIER RAIL HARDWARE".

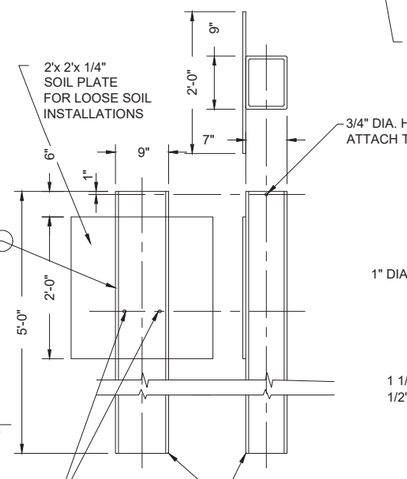
7. EACH TERMINAL SECTION SHALL BE OF THE SAME CLASS AND TYPE OF MATERIAL AS THE BEAM TO WHICH IT ATTACHES.

8. WOOD POSTS SHALL BE FREE OF HEART CENTER.

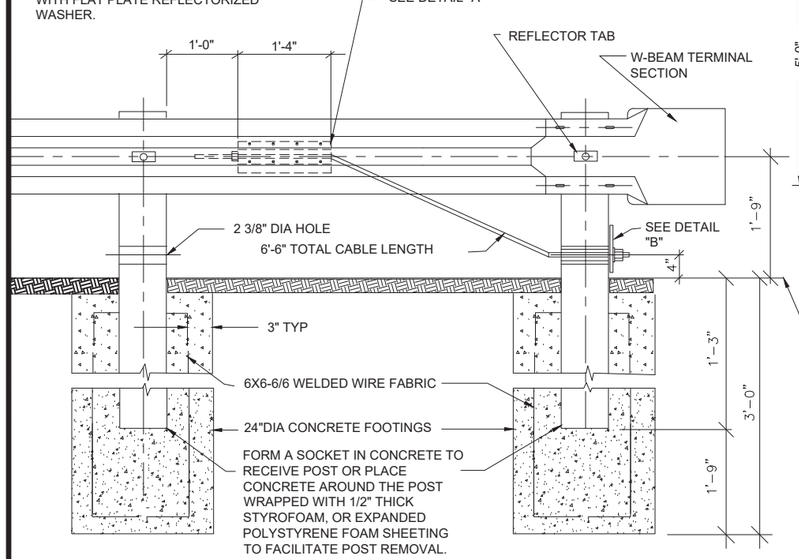


CABLE DETAIL

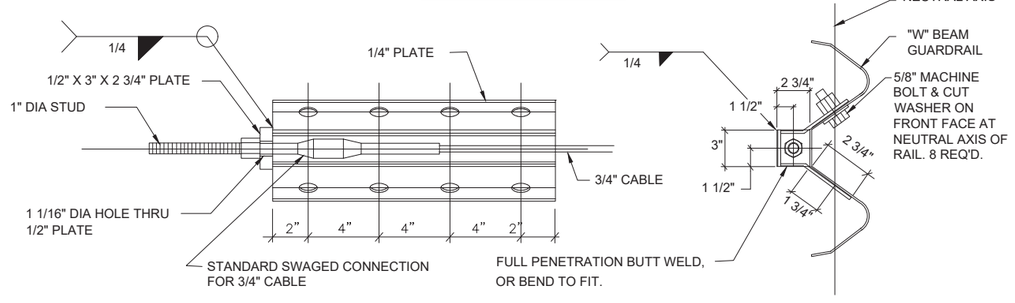




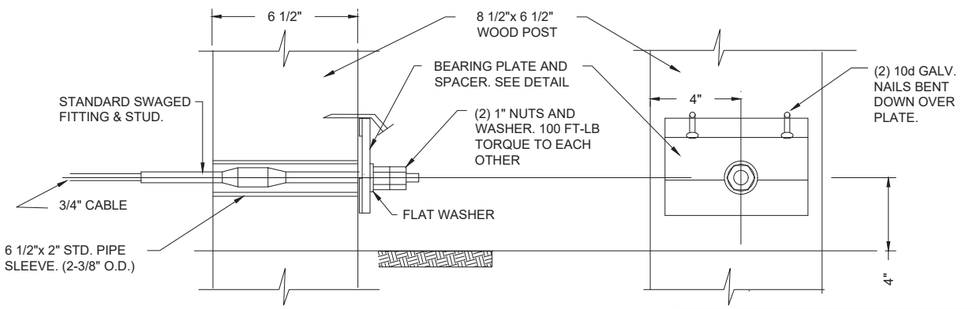
STEEL TUBE



END ANCHORAGE ASSEMBLY



DETAIL "A" ANCHOR PLATE



DETAIL "B"

STANDARD DRAWING

NOTE: DRAWINGS SHOWN ARE PICTORIAL AND MAY NOT BE TO SCALE.

USDA FOREST SERVICE

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PROJECT NAME

THOMAS CREEK BRIDGE REPLACEMENT

HUMBOLDT-TOIYABE NATIONAL FOREST

CARSON RANGER DISTRICT

DRAWING TITLE

BRIDGE APPROACH RAILING DETAILS

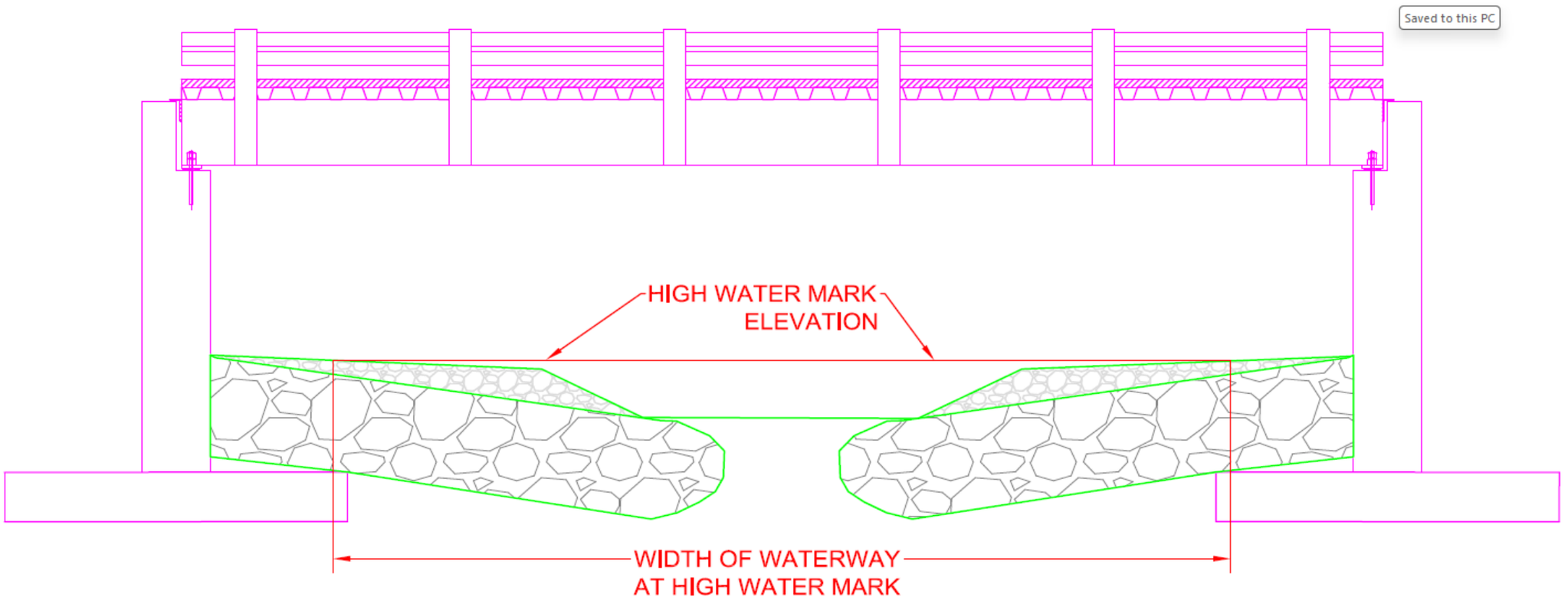
DATE 01/01/2024	ARCHIVE NO.
DESIGNER C. PORTER	DRAWING SHEET NO. C-07
DRAWN J. DODDS	
CHECKED C. PORTER	
PROJECT NO. G-088	SHEET 8 OF 8

1/24/24 09:44 JDODDS C:\USERS\JDODDS\ONEDRIVE - USDA\DOCUMENTS\PROJECTS\OFF_FOREST\THOMAS CREEK\THOMAS CREEK BRIDGE.DWG;

Thomas Creek Bridge Replacement

Excavation (CY)			
Whole Project		High-Water Mark Boundary	
Existing Bridge (concrete abutments)	New Bridge Site	Existing Bridge (concrete abutments)	New Bridge Site
30	310	4	105

Fill (CY)							
Whole Project				High-Water Mark Boundary			
Concrete	Riprap	Imported Aggregate	From On-Site Excavation	Concrete	Riprap	From On-Site Excavation	Temporary Fill (sandbag cofferdams)
160	170	205	310	2	67	105	3



NOTE: THESE LINES DELINEATE CALCULATIONS FOR THE HIGH WATER MARK BOUNDARY