



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION ONE



CONSTRUCTION PLANS FOR

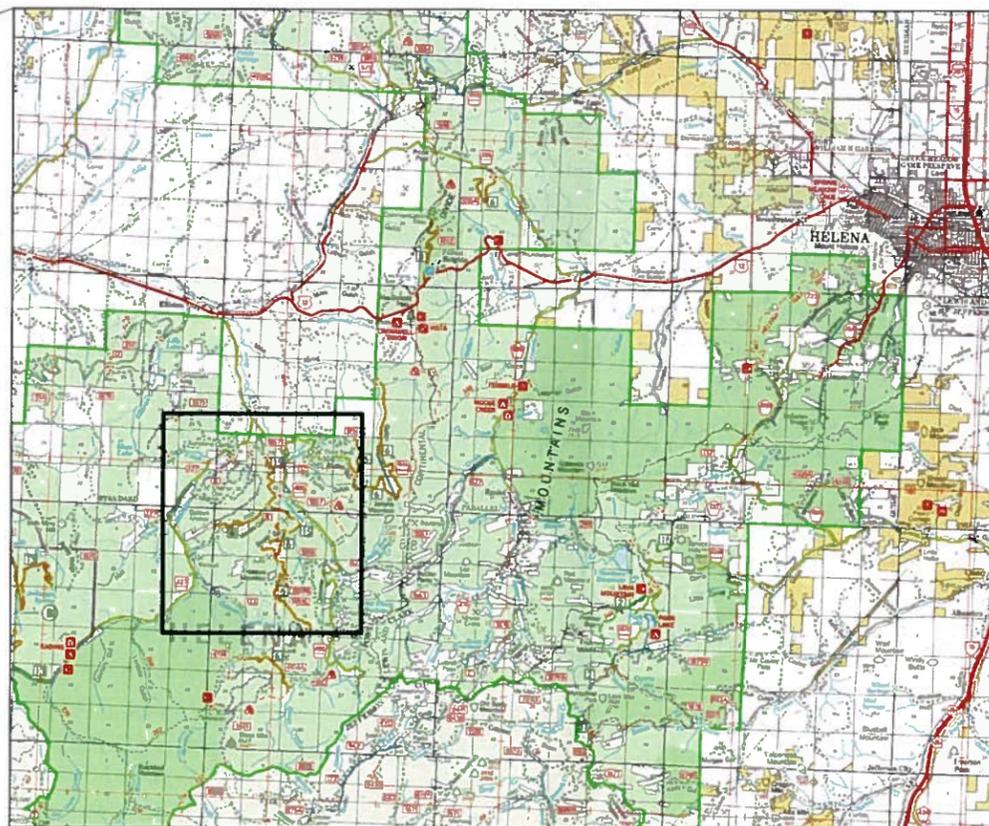
STANDARD GLUED-LAMINATED TIMBER BRIDGE CURB REPLACEMENT

ONTARIO #3 (123-2.653), TELGRAPH-TELEGRAPH (495-0.9) & ONTARIO-TELEGRAPH (495-4.3)

HELENA-LEWIS & CLARK NATIONAL FOREST
HELENA RANGER DISTRICT
POWELL COUNTY, MONTANA



LOCATION MAP



VICINITY MAP
NO SCALE



ONTARIO #3 BRIDGE
NFSR 123, MP 2.653
Section 17 T8N R6W

TELEGRAPH-TELEGRAPH BRIDGE
NFSR 495, MP 0.9
Section 29 T9N R6W

ONTARIO-TELEGRAPH BRIDGE
NFSR 495, MP 4.3
Section 10 T8N R6W

INDEX TO SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES
3	CURB DETAILS

APPROVED

Min G DATE 4/27/14
FOREST SUPERVISOR
HELENA-LEWIS & CLARK NATIONAL FOREST

RECOMMENDED

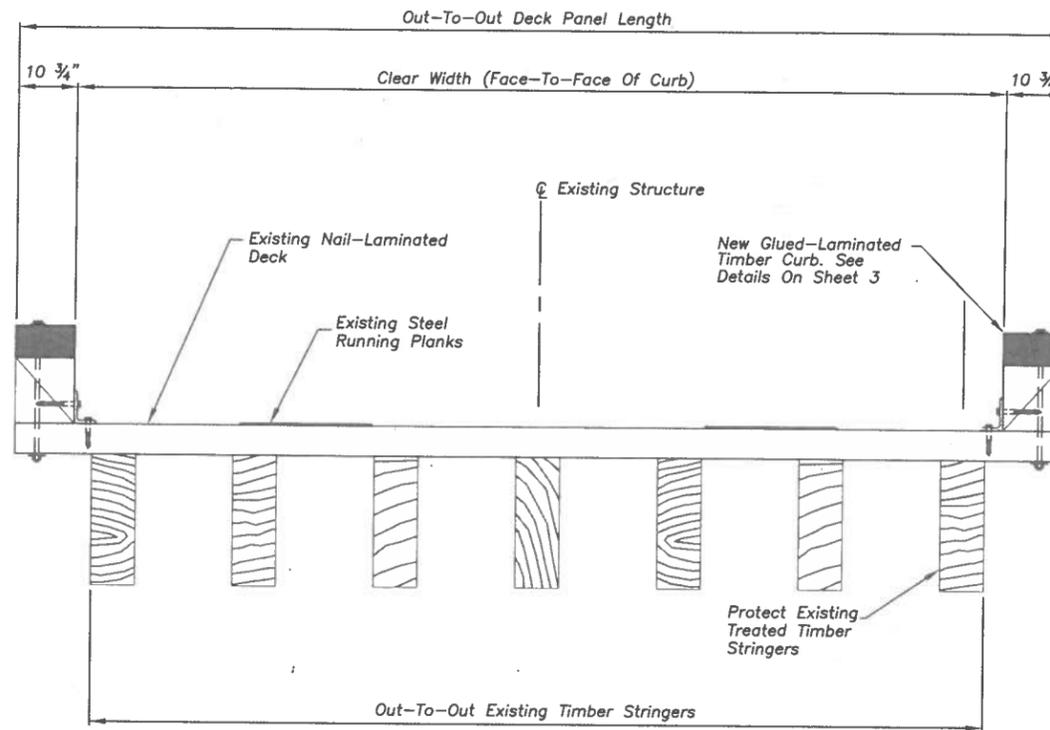
MA acting D.R. DATE 4-27-16
DISTRICT RANGER
HELENA RANGER DISTRICT
HELENA-LEWIS & CLARK NATIONAL FOREST

RECOMMENDED

DeEdool DATE 4/27/16
FOREST ENGINEER
HELENA-LEWIS & CLARK NATIONAL FOREST

SUBMITTED

Mary Smith DATE 4/27/16
CIVIL ENGINEER
HELENA-LEWIS & CLARK NATIONAL FOREST



TYPICAL DECK SECTION

NO SCALE

PROJECT INFORMATION

Timber Bridge Repair Work Shall Conform To The Existing Bridge Geometry And Abutment Orientation As Noted Below.
The Contractor Shall Field Verify Project Information.

CURB REPLACEMENTS

Ontario #3 (123-2.653)

Bridge Length = 20' - 0" (Out-To-Out Stringers)
 Bridge Deck Width = 15' - 3" (Out-To-Out)
 Existing Bridge Clear Width = 14' - 0" (Inside-To-Inside Face Of Curb)
 Abutment Skew = 0'

Ontario-Telegraph (495-4.3)

Bridge Length = 16' - 0" (Out-To-Out Stringers)
 Bridge Deck Width = 15' - 0" (Out-To-Out)
 Existing Bridge Clear Width = 14' - 0" (Inside-To-Inside Face Of Curb)
 Abutment Skew = 0'

CURB MODIFICATION

Telegraph-Telegraph (495-0.9)

Bridge Length = 24' - 0" (Out-To-Out Stringers)
 Bridge Deck Width = 16' - 0" (Out-To-Out)
 Existing Bridge Clear Width = 14' - 0" (Inside-To-Inside Face Of Curb)
 Abutment Skew = 0'

GENERAL NOTES:

SPECIFICATIONS: Materials And Construction Of This Structure Shall Be In Accordance With The Standard Specifications For Construction Of Roads And Bridges On Federal Highway Projects, FP-03, As Modified For This Contract.

GLUED-LAMINATES: Glued-Laminated Members Shall Be Of Coastal Region Douglas-Fir Conforming To The American Institute Of Timber Construction (AITC) 117-2001, Combination Symbol 3, 4, Or 5, And Shall Be Manufactured For Wet Condition Use And Industrial Appearance.

SAWN LUMBER: All Timber And Lumber Shall Be Coastal Region Douglas-Fir Or Southern Pine No. 1 Or Better, Conforming To Current WWPA, WCLIB, Or SPIB Grading Rules. Inland Douglas-Fir Shall Not Be Used On This Project.

TREATMENT: After Fabrication, All Members Shall Be Incised And Pressure Treated In Accordance With AWPA C-28 (Soil Contact), Using Pentachlorophenol Meeting AWPA P-8 With Type A Solvent Meeting AWPA P-9. Treatment Will Comply With The Requirements Of The Current Edition Of WWPA's "Best Management Practices For The Use Of Treated Wood In Aquatic Environments".

FIELD TREATMENT: Copper Naphthenate (2% Solution) Shall Be Furnished For Field Treating Of Wood. All Abrasions, Field Drilled Holes, And Field Cuts -Approved By The Contracting Officer- Shall Be Carefully Trimmed And Given Three Brush Coats Of The Field Preservative Treatment Solution.

INSPECTION AND CERTIFICATION:

The Following Compliance Certificates Shall Be Furnished Upon Delivery:

- A) Supplier Certification, From A WWPA Or WCLIB Approved Supplier, That All Wood Material Meet Requirements As To Species And Grade.
- B) Certification Of Preservative, Penetration In Inches, And Retention In Pounds Per Cubic Foot (Assay Method) By Either A Qualified Testing And Inspection Agency Or Supplier Certification. Supplier Certification Requires Each Solid Piece To Be Stamped Or Branded With The ALSC Quality Mark.
- C) Certification From A Qualified Inspection And Testing Agency Indicating Conformance Of All Glued-Laminated Members With AITC 117-2001.
- D) Supplier Certification That All Treated Wood Materials Were Treated In Accordance With And Meet The Requirements Of WWPA's "Best Management Practices For The Use Of Treated Wood In Aquatic Environments".

HARDWARE AND STRUCTURAL STEEL: Steel Shapes, Plates And Bars Shall Be Structural Steel Conforming To AASHTO M183 (ASTM A36). All Bolts And Nuts Shall Conform To A307, Unless Noted Otherwise, And Need Not Be Galvanized. Install Malleable Iron Washers Against Wood Unless Noted Otherwise.

FABRICATION: Field Verify All Member Dimensions And Bolt Spacing -New And Existing- Before Ordering Materials. Submit Shop Drawings For All Treated Timber. Show All Dimensions And Fabrication Details For All Cut Or Bored Timber. All Lumber Fabrication Shall Be Completed Before Treatment. Field Drilling Of Holes Shall Not Be Allowed Unless Otherwise Noted On The Drawings.

LAG BOLT INSTALLATION: Prebore Lag Bolt Holes Using Two Diameters, One For The Shank And One For The Threads. The Lead Hole For The Shank Is To Be 1/16" Larger Than The Shank Diameter And Is To Be Bored To The Depth Of Penetration Of The Shank. The Lead Hole For The Threaded Portion Is To Be 70% Of The Bolt Diameter As Shown On The PLANS And Is To Be Bored At Least To The Length Of The Threads. DO NOT DRIVE LAG BOLTS WITH A HAMMER.



STANDARD GLUED-LAMINATED
 TIMBER BRIDGE CURB REPLACEMENT
 ONTARIO #3 (123-2.653), TELEGRAPH-TELEGRAPH (495-0.9)
 & ONTARIO-TELEGRAPH (495-4.3)

Date: _____

Approved: _____

Forest Engineer

GENERAL NOTES
 DRAWING NO. R1913

SHEET 2 OF 3

NOTES:

CURB REPLACEMENT

Existing Curbs on Ontario #3 And Ontario-Telegraph Shall Be Dismantled And Removed. All Curb Components Shall Be Disposed Of Per FSSS 203.05, Incidental To Item 557(05).

All Materials, Including Curb Blocks, Curb Rails, And Hardware Are Incidental To Item 557(05).

CURB BLOCK SPACING

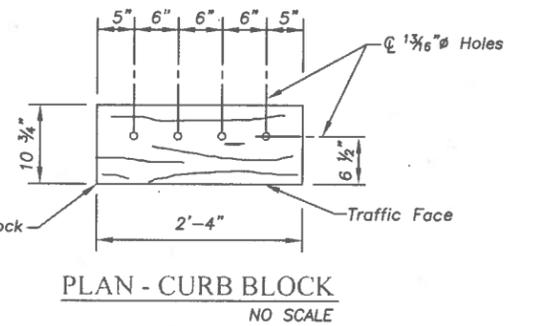
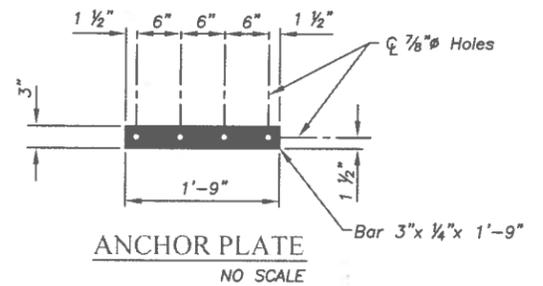
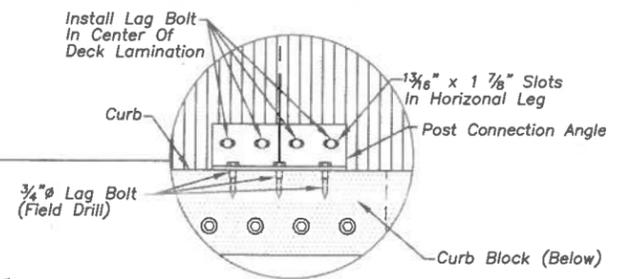
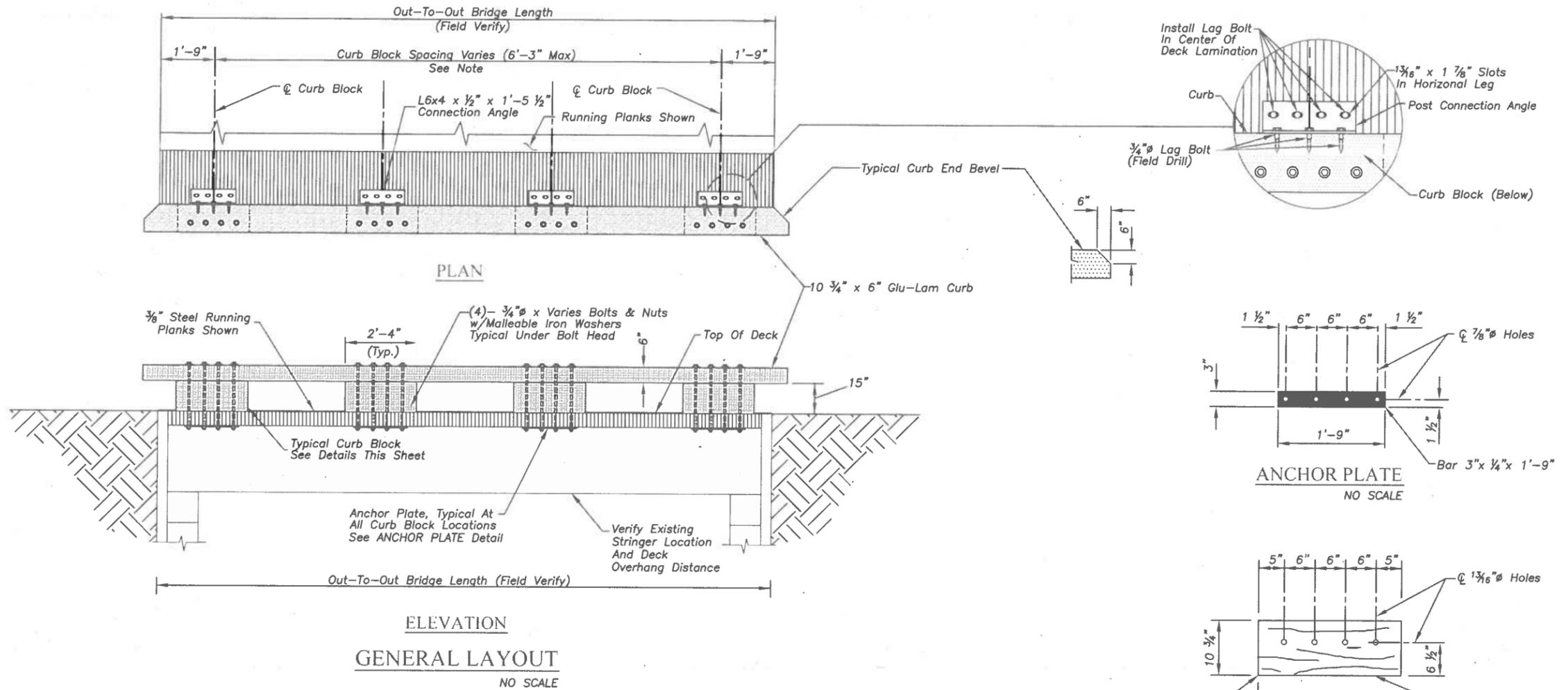
Ontario #3 (123-2.653)
 Bridge Length = 20'-0" (Out-Out)
 Curb Blocks = 3 spaces @ 5'-6"

Ontario-Telegraph (495-4.3)
 Bridge Length = 16'-0" (Out-Out)
 Curb Blocks = 2 spaces @ 6'-3"

CURB MODIFICATION

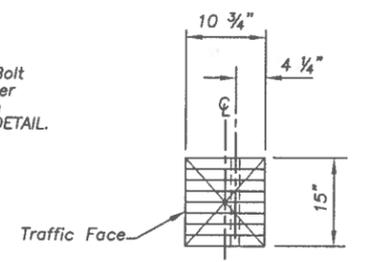
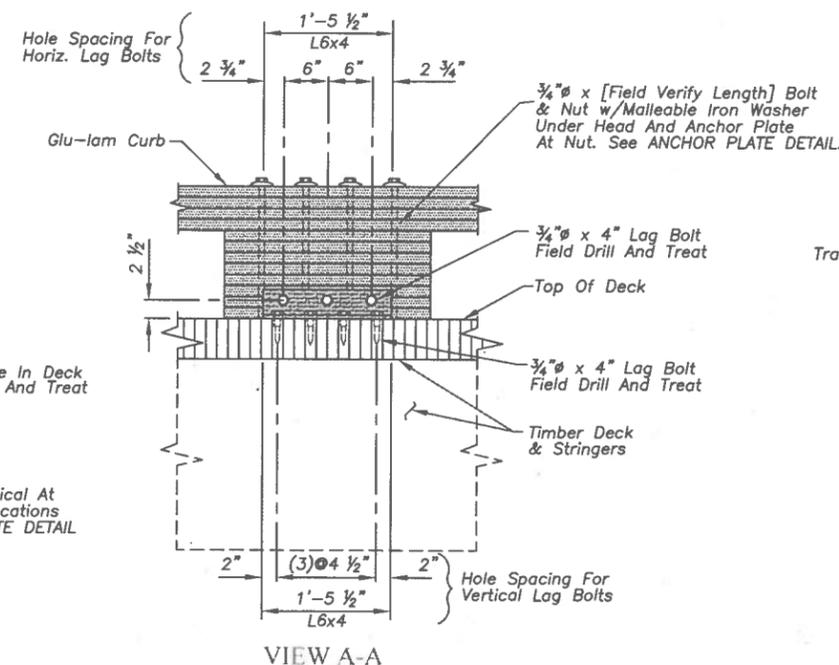
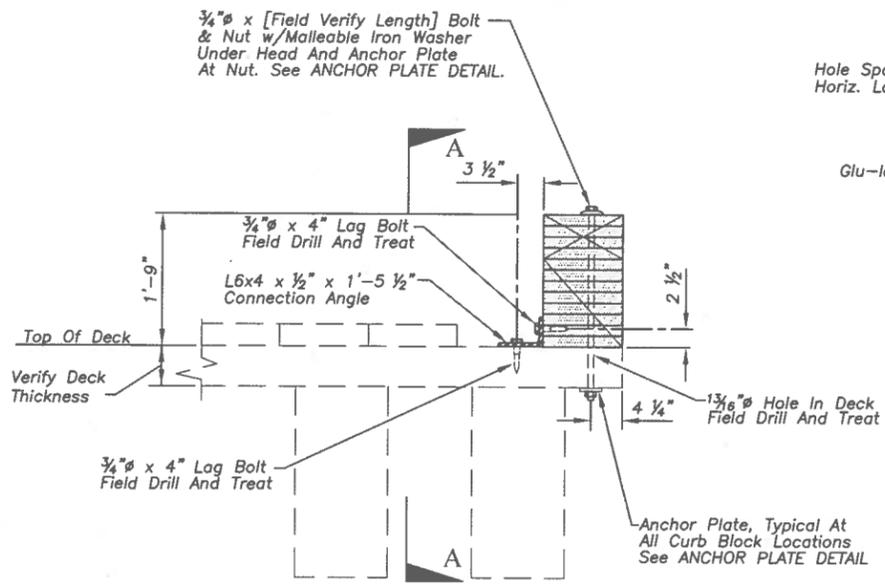
Add 3"x Rough Sawn Timber Plank To Top Of Each Existing Curb Rail. Match Existing Rail Width And Length. Fasten With 2 Rows Of 6" Ring Shank Nails Spaced At 24" Alternating Centers And 2 At Each End. Field Drilling To Countersink Existing Bolts May Be Required.

All Labor and Materials, Including Hardware, Are Incidental to Item 557(03).



Glu-Lam Curb Block See CURB NOTE.

NOTE:
 CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS, MEMBER DIMENSIONS, AND BOLT SPACING - BOTH NEW AND EXISTING - PRIOR TO ORDERING MATERIALS.



GLUED-LAMINATED CURB DETAIL
 NO SCALE

SECTION - CURB BLOCK



**STANDARD GLUED-LAMINATED
 TIMBER BRIDGE CURB REPLACEMENT**
 ONTARIO #3 (123-2.653), TELEGRAPH-TELEGRAPH (495-0.9)
 & ONTARIO-TELEGRAPH (495-4.3)

Date: _____	CURB DETAILS
Approved: _____	DRAWING NO. R1913
Forest Engineer	SHEET 3 OF 3