

45'-0" Long By 15'-0" Wide Precast Concrete Bridge

Piscoe Creek Bridge

Yakima County, Washington

Pacific Bridge And Construction, Inc.

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| | | |
|------------------------------|------------------------------|--|
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| ----- | ----- | ----- |
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RENEWS: 01-05-2021

| | | | |
|--|------------------------|---|-------------------------|
| PROJECT: Piscoe Creek Bridge | | SHEET 1 OF 14 | |
| CLIENT: Pacific Bridge And Construction, Inc. -- Sandy, Oregon -- 503-668-4798 | | PROJECT NO. 20-2873 | |
| QUINCY ENGINEERING, INC 200 Hawthorne AVE SE, STE E-530 Salem, OR 97301 - 4996 | | VOICE: 503-763-9995 FAX: 503-763-9981 EMAIL: JOSH@QUINCYENG.COM | |
| DESIGNER: Liam Kucey | DRAFTER: Liam Kucey | CHECKER: Josh Goodall | REVIEWER: Jeff Olson |
| BY | | TITLE SHEET / DRAWING INDEX | |
| DATE | REVISION | DRAWING DATE: 2nd July 2020 | |
| ACCOMPANIED BY DWGS. | | | |

Bridge Structure General Notes #1



RENEWS: 01-05-2021

GENERAL NOTES

1. These Plans Contain Information Proprietary To Pacific Bridge And Construction, Inc. And Is Being Furnished For The Use Of The Confederated Tribes And Bands Of The Yakama Nation Only In Connection With This Project. The Information Contained Herein May Not Be Reused At Other Locations Unless Specifically Authorized By Pacific Bridge And Construction, Inc. And Quincy Engineering, Inc.

DESIGN CRITERIA AND LOADINGS

- Bridge Structure Designed To Comply With The American Association Of State Highway Officials Design Provisions -- AASHTO LRFD Bridge Design Specifications, Seventh Edition, 2014.
- Bridge Structure Design Dead Loads -- Being The Weight Of All Permanent Bridge Structure Components Plus
 - Future Asphalt Paving Wearing Surface Of 3" Thickness Weighing 35 Psf.
- Live Load Distribution Factors Were Calculated Using A Finite Element Model Of The Structure:

| | |
|------------------------------|------|
| Exterior Girder Shear | 0.70 |
| Exterior Girder Moment | 0.26 |
| Interior Girder Shear | 0.52 |
| Interior Girder Moment | 0.22 |
- Vehicular Live Load --
 - Service and Strength I Limit States: "HL-93" Design Truck
 - Strength II Limit State: OR-STP-5BW
- Soil Pressure Loadings On Abutments
 - Abutment Wall Backfill Soil Design Parameters
 - Failure State At Rest.
 - Density 125 Pcf.
 - Coefficient Of Internal Friction 33 Deg.
- Seismic Design Is Performed In Accordance With 2nd Edition Of The "AASHTO Guide Specifications For LRFD Seismic Bridge Design".
 - 1000 Year Return Period ("No Collapse" Criteria) AASHTO/USGS Seismic Site Parameters
 - Peak Ground Acceleration Coefficient (PGA) 0.398g.
 - Site Coefficient For Site Class "D" (Fpga) 1.102.
- Guardrails And/Or Handrails:

This Bridge Will Be Constructed Without Crash-Test Designed Guardrails And/Or Handrails With The Knowledge And At The Request Of The Owner. By Specifying That This Bridge Be Constructed Without The Life And Property Protections Afforded By Designed Guardrails And/Or Handrails, The Owner Acknowledges And Agrees That The Bridge Structural Engineer-Of-Record And Pacific Bridge And Construction Inc. Accepts No Responsibility And/Or Liability For Injury, Death, Or Property Damage, Due In Whole Or In Part, Because Of The Absence Crash-Test Designed Guardrails And/Or Handrails. .

SOILS, FOUNDATIONS, AND BACKFILLS

1. Because The Bridge Owner Has Not Provided The Bridge Structural Engineer-Of-Record With A Professionally-Qualified, Site-Specific, Geotechnical Report The Engineer Has Designed The Bridge Structure To Be Supported On Soils Having Adequate Strength And Consolidation Properties To Properly Perform Under The Assumed Footing Bearing Pressures Only As Stipulated In The Bridge Structural General Notes. In Addition, The Engineer Has Designed The Bridge To Be Compatible With Other On-Site And Imported Soil Properties Identified In The General Notes. The Owner Understands And Agrees That The Bridge Structural Engineer-Of-Record Accepts No Responsibility And/Or Liability For Injury, Death, Or Property Damage, Due In Whole Or In Part, Because The Foundation Design For This Bridge Structure Is Based On Assumed, Unconfirmed Soil Properties, Including Stream Scour.

SOILS, FOUNDATIONS, AND BACKFILLS, CONT.

- This Project Has Been Designed Assuming An Allowable Bearing Capacity = 4300 Psf. Ensure This Capacity Can Be Achieved Prior To Construction.
- Remove Existing Fill Or Soil Down To 6" Below Footing Units. Excavate A Minimum Width Of 4'-6" Extending At Least 6" Beyond Front And Back Faces Of Footing Units.
- Where Excavation Of Fill And/Or Silt Extends Below Bottom Elevation Of Abutment Blocks, Provide Imported Angular Crushed Rock Base Per Design Plans.
- Compact Imported Base Material To At Least 95% Relative Compaction.
- Provide A Non-Woven, Needle-Punched Soil Filter Fabric Of Minimum 4 Ounce Per Square Yard Weight Between Backfill Soil And Back Face Of Abutment Walls And Wing Wall Extensions.
 - Lap All Joints, Horizontal And Vertical, A Minimum Of 6 Inches.
 - Install As Shown On Drawings
- Use Only Free-Draining Granular Material As Backfill Behind Abutment Walls And Wingwalls. Compact Material Placed Behind Walls To 95% Relative Compaction Using Only Light Or Hand-Operated Compaction Equipment.
- Install Soil In Front Of Abutment Walls Simultaneously With Backfill Behind Abutment Walls To Prevent Unbalanced Lateral Loading Of Abutment Walls. Install Backfill Against Back Face Of Abutment Walls No More Than 4'-0" Above Elevation Of Soil Placed Against Front Face Until After Abutment Wall Vertical Reinforcement Has Been Grouted And Only After Bridge Deck Plank Units Have Been Dowel-Anchored-Grouted To Top Of Abutment Walls At Each End.

STEEL PLATES, PIPES, TUBES, ROLLED SHAPES, BOLTS, PINS, AND WELDS

- Plate ASTM A36.
- Pipe ASTM A53/Grade B Or ASTM A501.
- Rolled Shapes ASTM A992.
- Structural Bolts ASTM A325.
- Weld In Conformance With AWS D1.5 By Properly Certified Welders Using E70 Electrodes And AWS Prequalified Procedures.
- Do Not Weld Members After They Have Been Galvanized.
- Hot-Dip Galvanize All Steel Components That Are Not Protected Against Atmospheric Corrosion By A Minimum Of 1" Of Concrete Cover.
 - Provide A Minimum Zinc Coating Of 2.3 Ounces Per Square Foot Per ASTM A123 Or ASTM A385.
 - Treat Field Drilled Holes, Field Welds, And Abrasions With One Coat Of Pittsburgh "Waterspar" Or "Speedhide" Galvanizing Primer And Two Coats Of "Ironhide" Metal Protective Paint.
- Paint All Steel Not Encased In Concrete And Only Too Large To Be Hot-Dip Galvanized.
 - Shop-Apply (3) Paint Coatings Each 2.0 Mil Minimum Dry Thickness
 - 1st Coat - Rust-0-Crylic "5769 Rust Inhibiting Red Primer".
 - 2nd Coat - Rust-0-Crylic "5791 White Primer".
 - 3rd Coat - Rust-0-Crylic "5700 System Top Coat" (Color Per Owner).

STEEL PLATES, PIPES, TUBES, ROLLED SHAPES, BOLTS, PINS, AND WELDS -- CONTINUED

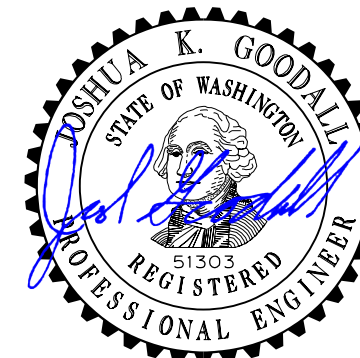
B. After Completing All Field Welding And Bolting, Field-Apply The Above Painting System Onto All Steel Surfaces Field-Welded, Scratched, Chipped, Or Otherwise Unprotected Against Atmospheric Corrosion.

CONCRETE

- General
 - Provide Concrete Complying With ACI 318 (Severe Marine Exposure).
 - Use Normal Weight (145 pcf +/- 5 pcf) Concrete.
 - Air-Entrainment Volume 5% +/- 1%.
 - Provide Concrete Having A Minimum Cement Content Of 6 Sacks Per Cubic Yard.
 - Cast Concrete Using A Maximum Water/Cement Ratio Of 5/2 Gals Per Sack Of Cement.
 - Do Not Use Any Concrete Unit Having Cracks Over 1/16" Wide.
 - Fabricate Block "Lugs" And "Recesses" And Plank "Recesses" Such That The Dimensions Detailed For Them On The Drawings Are Achieved To A Tolerance Of +/- 1/16".
- Precast Bridge Deck Planks
 - Prestressed Concrete Planks
 - Interior Plank
 - Minimum Strength At 28-Days F'c = 5500 Psi.
 - Strength At Removal From Form ... FcRemove = 4000 Psi.
 - Exterior Plank
 - Minimum Strength At 28-Days F'c = 5500 Psi.
 - Strength At Removal From Form ... FcRemove = 4000 Psi.
 - Use Aggregates No Larger Than 1".
 - Fabricate These Units To The Following Dimensional Tolerances:
 - Length +/- 1/2".
 - Width +/- 1/2".
 - Thickness +/- 1/4".
 - Twist, As Measured By "Lift" Of Corner, Where The Other (3) Corners Define A Horizontal Plane... +/- 1/4".
 - Supply These Units Having The Following Surface Finishes:
 - Bottom, Sides, And Ends "As-Cast In Steel Forms".
 - Top Surface Transverse "Rake" Finish. (1/4" Wide By 1/4" Deep Grooves Spaced At 1/2" On Center)
 - Provide Plank And Panel Units Having No "Honeycomb" Voids And No Corner Or Edge Chips Larger Than 1 Inch In Any Direction.
- Precast Abutment Block, Footing Plank, And/Or Closure Panel Units
 - Minimum Strength At 28-Days F'c = 3000 Psi.
 - Minimum Strength At Removal From Form FcRemove = 2000 Psi.
 - Use Aggregates No Larger Than 3".
 - Fabricate Units To The Following Dimensional Tolerances:
 - Overall Width, Length, And Thickness +/- 1/8".
 - Squareness On All (6) Sides, As Measured By Comparing Lengths Of Face Diagonal Distances +/- 1/8".
 - Supply Units Having "As-Cast In Steel Forms" Finish.
 - Provide Units Having No "Honeycomb" Voids And No Corner Or Edge Chips Larger Than 2 Inches In Any Direction.
- Mortars And Grouts
 - Provide Non-Corrosive Non-Shrink Cementitious Grout By The Euclid Chemical Company An RPM Company. Grout Should Be In Pourable Consistency When Placed In Longitudinal Joints Between Bridge Deck Planks.
 - Provide Pre-Molded Compressible Back Rods Along Bottom And At Ends Of Joints To Retain Dry Pack.
 - Fill Longitudinal Joints Flush With Top Surface Of Planks.
 - Provide Non-Corrosive Non-Shrink Cementitious Grout By The Euclid Chemical Company An RPM Company. Grout Should Be In Fluid Consistency When Placed Between Top Of Top Abutment Block Units And Underside Of Precast Deck Plank Units.
 - Provide Wood Setting Blocks, Pre-Molded Compressible Backer Rods, And/Or Expandable, Closed-Cell, Expandable Foam Around Perimeter Of Top Abutment Block(s) To Retain Grout.
 - Fill Vertical Cylindrical Voids
 - Around Abutment-To-Deck Anchor Dowel Pins.
 - Around Abutment Block Vertical Post Tensioning Rods.
 - Vibrate Grout, As Required, To Assure That All Voids Spaces Are Completely Filled.

| | | | | | | | | | | |
|------------------------------|--|--|---|----------------------|---------------------|-----------------------|----------------------|--|---------------------|---------------|
| PROJECT: Piscoe Creek Bridge | CLIENT: Pacific Bridge And Construction, Inc. -- Sandy, Oregon -- 503-668-4798 | QUINCY ENGINEERING, INC 200 Hawthorne AVE SE, STE E-530 Salem, OR 97301 - 4996 | VOICE: 503-763-9995 FAX: 503-763-9981 EMAIL: JOSH@QUINCYENG.COM | DESIGNER: Liam Kucey | DRAFTER: Liam Kucey | CHECKER: Josh Goodall | REVIEWER: Jeff Olson | TITLE: BRIDGE STRUCTURE GENERAL NOTES #1 | PROJECT NO. 20-2873 | SHEET 2 OF 14 |
| DRAWING DATE: 2nd July 2020 | | | | | | | | ACCOMPANIED BY DWGS. | | |

Bridge Structure General Notes #2



RENEWS: 01-05-2021

CONCRETE REINFORCING STEEL

1. Provide Deformed Steel Bars Complying With ASTM A615, Grade 60.
2. Provide All Bars Full Length.
 - A. Do Not Lap-Splice Any Bar.
 - B. Do Not Weld-Splice Any Bar.
3. Position Deck Plank Longitudinal Bars Not Required To Be Full Length Mid-Length Of Deck Planks.
4. Shop-Fabricate All Bars Required To Be Bent.
 - A. Cold-Bend All Bars.
 - B. Do Not Apply Heat To Any Bar Or "Tack Weld" Any Bar.
5. Provide Minimum Concrete Cover For Reinforcing Bars As Follows:
 - A. For All Precast Bridge Deck Plank Units
 - 1) At Bottom Surface And Sides Of Planks 1" +/- 1/4".
 - 2) At Ends Of Planks 2" +/- 1/4".
 - 3) At Top Surface Of Planks..... 1 1/2" +/- 1/4".
 - B. For All Precast Reinforced Abutment Block Units
 - 1) At Top And Bottom Surfaces Of Blocks 2 3/4" +/- 1/4".
 - 2) At Side Surfaces Of Blocks 2 1/4" +/- 1/4".
 - 3) At Ends Of Blocks 3" +/- 1/4".
6. Position Bars As Shown On The Drawings To The Following Tolerances:
 - A. Bar Location As Measured Perpendicular To Bar Length +/- 1/4".
 - B. Bar Location As Measured Parallel To Bar Length +/- 1/2".
 - C. Longitudinal Location Of Bends And Ends Of Bars +/- 1/2".

SPECIAL INSPECTIONS AND TESTING

1. All Concrete Is Placed Under "Casting Plant" Conditions In Reusable Steel Forms. No Concrete Is Cast On-Site.
 - A. Provide Periodic Inspection Of Concrete Reinforcement. And Embedment's For Each Day Concrete Is Cast.
 - B. For Each Day Concrete Is Cast. Perform Standard Field Tests On Plastic Concrete And Mold 4 Minimum Standard Cylinders To Be Tested At 28 Days.
 - C. Inspection and Testing Reports Will Be Available From Pacific Bridge And Construction, Inc.

HORIZONTAL TRANSVERSE RODS FOR PRECAST BRIDGE PLANKS

1. Provide Transverse Tie Rods For Precast Bridge Planks At Elevations And Spacings As Shown On The Drawings.
2. Use 3/4" Diameter Grade 75 All-Thread Rebar.
3. Galvanize Transverse Rods, Steel Bearing Plates, And Heavy Hex Nuts To Provide A Minimum Zinc Coating Thickness Of 2.3 Oz./Sq.Ft.
4. Bring Nuts On Each End Of All Rods To Fully "Snug" Condition, Then Tighten Each Nut 1/2 Turns.
5. Note #1: Do Not Tighten Nuts At Ends Of Rods Until Grout In All Longitudinal Joints Has Cured To A Minimum Compressive Strength Of 5000 Psi.
6. After Nuts Have Been Properly Tightened, Install Lock Nut At Each End Of Rod. Rod Shall Extend 1/2" Minimum Beyond Lock Nut.

INSTALLATION NOTES

1. General
 - A. These Drawings And Bridge Structure General Notes Indicate The Intended Finished Constructed Structure.
 - B. Except As Specifically Indicated As "Required" Installation Procedures, Sequences, Means, And Methods Are The Sole Responsibility Of The Installation Contractor.
 - C. Plans, Sections, Details, And Bridge Structure General Notes Provided By Quincy Engineering, Inc. Pertain Only To The Bridge Structure. For All Other Project Requirements, Including Stream Channel And Street Improvements, Refer To Engineering Documents Prepared For This Project By The Confederated Tribes And Bands Of The Yakama Nation.
 - D. These Installation Notes May Not Be All-Inclusive. Installation Contractor Shall Perform All Work Required To Produce A Properly Constructed Bridge Structure.
2. Prepare Site For Installation Of Bridge
 - A. Construct Temporary Dams And Other Required Stream Diversions.
 - B. Provide Acceptable Required Dewatering And Sediment Controls.
 - C. Install Pumps, Pipes, And Other Required Apparatus.
 - D. Install "Required" Signage And Close Road To Traffic.
 - E. Remove Existing Culvert, Bridge Structure, And Abandoned Debris.
 - F. Remove Existing Trees, Including Root Systems, As Required.
 - G. Excavate For Placement Of Abutment And Wing Wall Footing Units.
 - H. Obtain Acceptance Of Foundation Bearing Subsurface.
 - I. Place And Compact Imported Granular Base For Abutment Footings.
 - J. Stability And Safety Of All Temporary Excavations And Structures Are The Sole Responsibility Of The Installation Contractor.
3. Install Abutments
 - A. Place Abutment Footing Units Level And At Proper Elevation(s).
 - B. Where Necessary, Provide Grout Plug In Bottom Of Grout Holes At Footing Vertical Voids "Required" To Contain Vertical Rebar.
 - C. Provide 8" To 10" Diameter Annular Grout Retainage Rings On Top Of Each Abutment Around Vertical Voids To Be Reinforced Using A Well-Bonding Insulating Spray Foam (To Retain Grout When Abutment Vertical Rebar Is Grouted Later).
 - D. Stack Abutment Units Plumb Onto Center Of Footings.
 - 1) Place Fill On Front And Back Sides Of Abutments.
 - 2) Limit Differential Height Of Fills On Front And Back Sides Of Abutment Walls To A "Required" Maximum Of 4'-0".
 - 3) Limit Weight Of Any Construction Equipment To 4000 Pounds Within 4'-0" Of Nearest Face Of Abutment Walls Until Plank-To-Abutment Dowel Connections Are Full Strength.
4. Complete All Stream Channel Work To Occur Between Abutments As Specified By The Project Requirements.
5. Place Precast Concrete Bridge Plank Units
 - A. Place Continuous Wood Bearing Strips Along Top Front Edge Or Top Back Edge Of Top Abutment Units.
 - B. See "Shipping and Handling" Notes For Plank Handling Requirements.
 - C. Use Only Proper Lifting Techniques Such As Spreader Bars, Etc.
 - D. Set Precast Deck Planks.
 - E. Install Premolded Compressible Backing Rod Full Length At Bottom And Vertically At Each End Of All Longitudinal Grout Joints.
 - F. Thread PVC Sleeves Thru Transverse Tie Rod Voids.
 - G. Fully Grout All Longitudinal Joints Full Depth And Full Length.
 - H. Allow Longitudinal Joint Grout In All Joints To Cure A "Required" Minimum Of 4 Hours.
6. Install Premolded Compressible Backer Rods Continuous Along (3) Edges Of Top Abutment Blocks (Under Deck Planks).
7. Install Rebar Dowels And/Or Verticals At Each End Of Planks Down Into Pre-Formed And/Or Field-Drilled Holes In Abutment Block Units.
8. Install Vertical Rebar Through Deck Planks To Bottom Of Footing Units.
9. Fully Grout (Under Pressure If Required) Voids Around Vertical Rebar And Simultaneously Fill Voids Under Deck Planks At Top Of Abutments Allow Grout To Cure A Minimum Of 4 Hours.

INSTALLATION NOTES -- CONTINUED

10. Install And Fully Tighten Transverse Tie Rods As "Required".
 11. Remove 4" (Minimum) Lengths Of Backer Rods Under Ends Of Planks At 2'-0" (Maximum) Intervals To Confirm Grout Void Has Been Filled. Confirming That At Least 80 Percent Of The Length Of The Grout Edge Has Full Contact Along Both The Top And Bottom Joint Surfaces.
 12. Complete Stream Channel, Roadway, And Other Work As "Required" And Specified In Contract Documents.
- SHIPPING AND HANDLING**
1. Precast Bridge Planks Shall Only Be Picked By Lifting Loops At The Ends Of The Plank. Contractor Shall Use Equipment Such That The Attachment To The Lifting Loops Remain Vertical Or No More Than 20° From Vertical.
 2. Inspect Lifting Loops For Damage Prior To Picking Up Planks. If Damage Has Occurred To Lifting Loops Do Not Proceed Without Engineers Approval.
 3. During Shipping Or Storage Of The Planks Place Wood Blocking Under The Plank Directly Under The Lifting Loops At Each End Of The Plank.

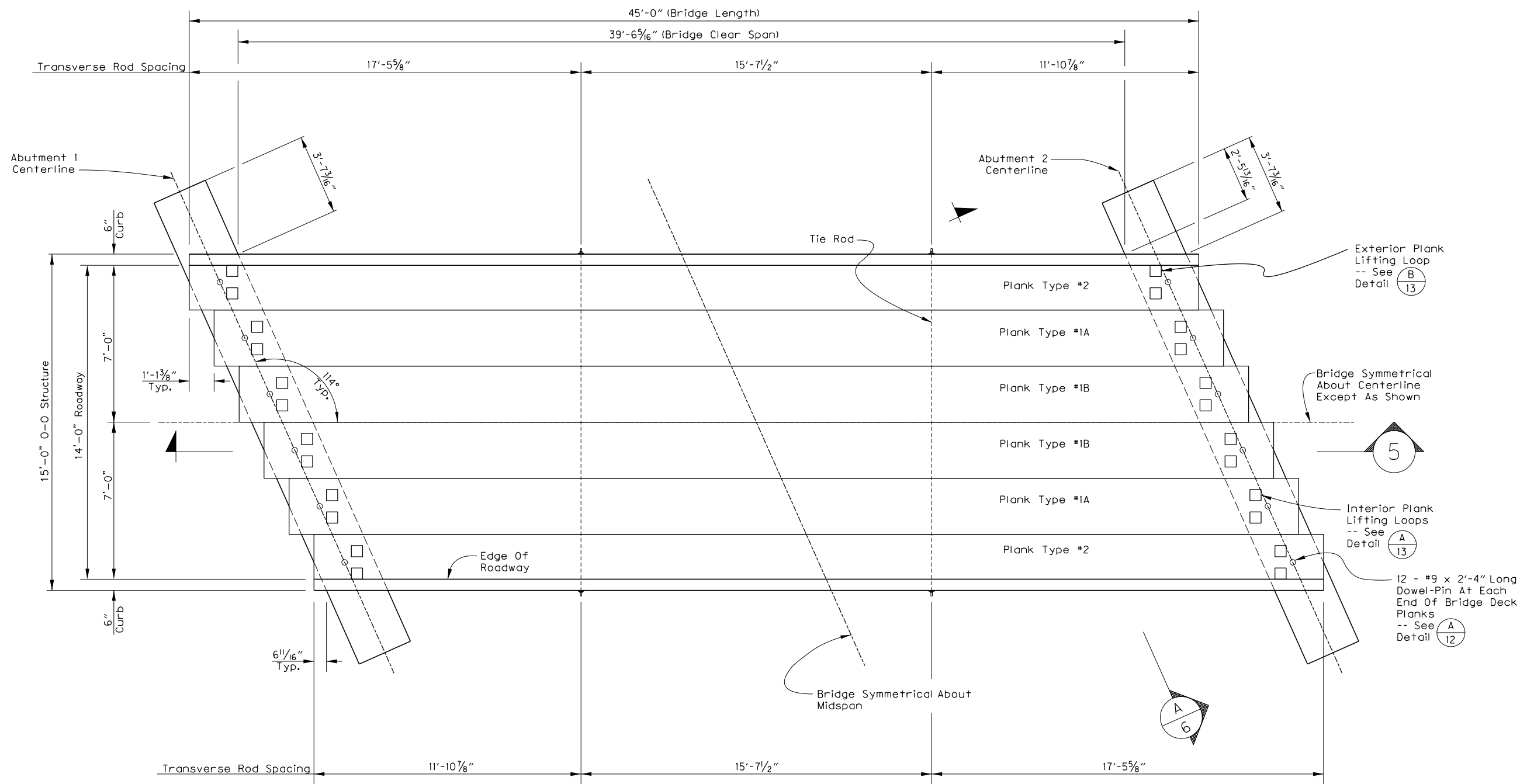
CONCRETE PRESTRESSING STRAND

1. Provide Uncoated 7-Wire, Grade 270, Low-Relaxation Prestress Strand Conforming To ASTM A416, Including Current Supplements Of 1/2" Diameter And Cross-Sectional Area 0.151 Sq.In.
2. Do Not Use Any Portion Of Strand Having Scratches, Gouges, Nicks, Or Any Other Abrasion, Or Any Portion Of Strand Previously Gripped By Jacking Chucks.
3. Run Strand Straight Between Jacking Chucks -- Do Not Harp Strands.
4. Jack Each 1/2" Diameter Strand To A Force Of 31,000 Lbs (75% Of Breaking Strength).
5. Confirm Jacking Force By Measuring Stretch Of Strand As It Is Jacked.
 - A. Strain At Initial Jacking Force = 0.00711 In./In.
 - B. Example: For A Distance Of 64'-4" Between Jacking Chucks And A Computed Shortening Of The Self-Stressing Forms Of 1/4", The Stressing Jack Will Move 5.75" Relative To The Bulkhead.
6. Recommended Jacking Sequence:
 - A. Apply Initial Jacking Force Of 5000 Lbs To Each Strand. To Seat Jacking Chucks (Will Stretch Strand 7/8").
 - B. Starting With Center Strands, Sequentially Stress Each Strand.
 - C. After Stressing All Strands, Confirm That The Required 31,000 Lb Force Has Been Achieved In Each Strand. (Center Strands May Require Additional Jacking.)
 - D. After Concrete Has Attained Its Required Release Strength De-Tension Strands In Reverse Order Of Stressing The Strands.
7. Prior To Moving Prestressed Concrete Unit From Manufacturing Plant Provide Corrosion Protection By Thoroughly Coating Ends Of Strands With A Self-Adhesive, Asphalt-Based, Corrosion Preventive Mastic (Henry "HE209 - Elastomeric" And "I04 Asphalt Primer", If Required).

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|--|--|---------------------|--------------|----------------------|-----------------------------------|
| PROJECT: | Piscose Creek Bridge | PROJECT NO.: | 20-2873 | SHEET | 3 OF 14 |
| CLIENT: | Pacific Bridge And Construction, Inc. -- Sandy, Oregon -- 503-668-4798 | DESIGNER: | Liam Kucey | DRAWING DATE: | 2nd July 2020 |
| QUINCY ENGINEERING, INC | 200 Hawthorne AVE SE, STE E-530 Salem, OR 97301 - 4996 | CHECKER: | Josh Goodall | REVIEWER: | Jeff Olson |
| VOICE: 503-763-9995 FAX: 503-763-9981 EMAIL: JOSH@QUINCYENG.COM | | DRAFTER: | Liam Kucey | TITLE: | BRIDGE STRUCTURE GENERAL NOTES #2 |
| ACCOMPANIED BY DWGS. | | | | | |



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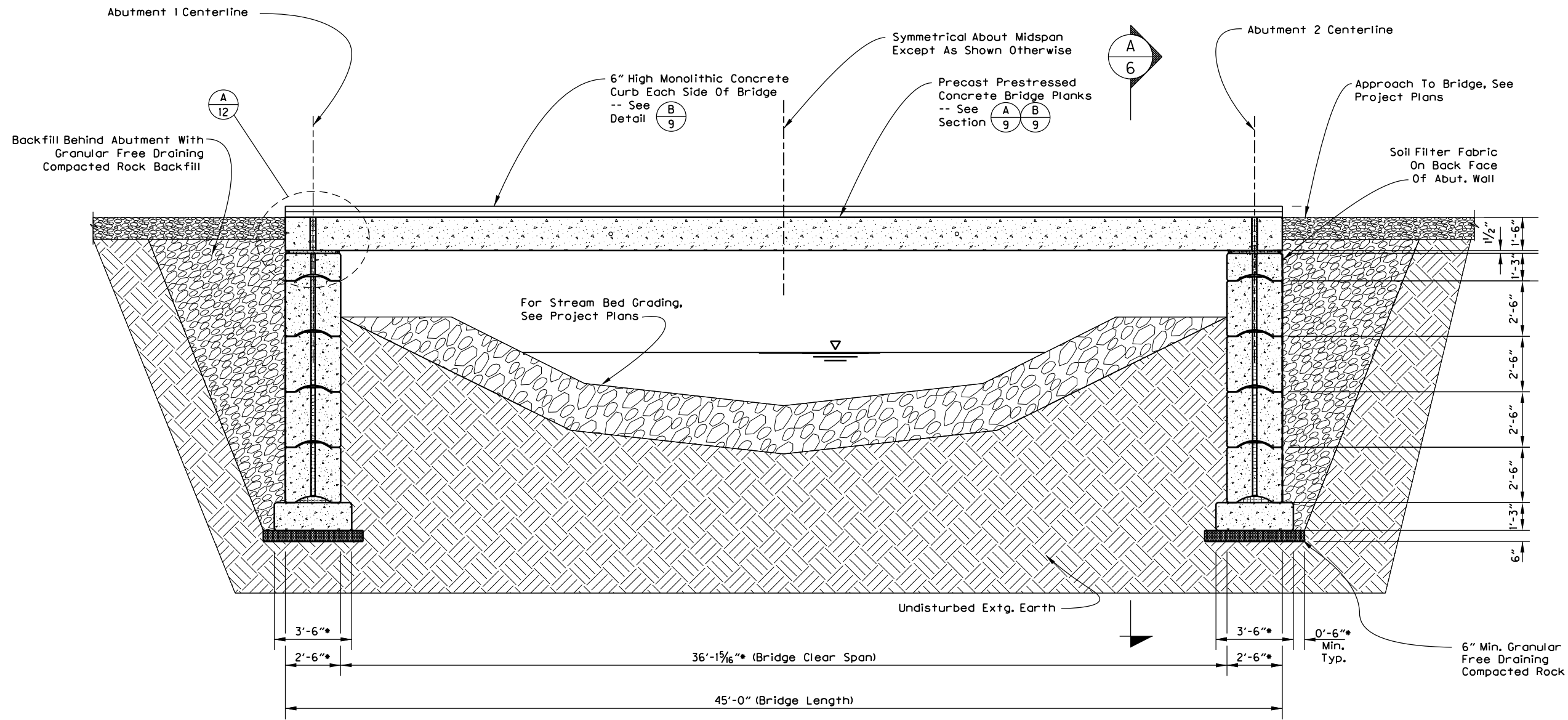


4 Bridge Layout Plan
1" = 5'-0"

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|--|--|-----------------------|--|-----------------------------|--|
| PROJECT: Piscoe Creek Bridge | | CHECKER: Josh Goodall | | REVIEWER: Jeff Olson | |
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| VOICE: 503-763-9995 FAX: 503-763-9981 EMAIL: JOSH@QUINCYENG.COM | | BY: | | SHEET 4 OF 14 | |
| DATE: | | REVISION: | | TITLE: BRIDGE LAYOUT PLAN | |
| ACCOMPANIED BY DWGS. | | | | | |



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Notes:
1. Structure Shown Flat. For Slope And Elevation, See Project Plans.

5 Longitudinal Section Thru Bridge Structure
3/16" = 1'-0"

* Dimension Measured Perpendicular to Abutment

| | | | | | | | | | |
|------------------------------|--|--|--|---|--|-----------------------|--|-----------------------------|--|
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| | | QUINCY ENGINEERING, INC | | FAX: 503-763-9981 | | DRAFTER: Liam Kucey | | PROJECT NO. 20-2873 | |
| | | 200 Hawthorne AVE SE, STE E-530 | | EMAIL: JOSH@QUINCYENG.COM | | DESIGNER: Liam Kucey | | DRAWING DATE: 2nd July 2020 | |
| | | Salem, OR 97301 - 4996 | | | | BY: Liam Kucey | | SHEET 5 OF 14 | |
| DATE | | REVISION | | TITLE: LONGITUDINAL SECTION THRU BRIDGE | | ACCOMPANIED BY DWGS. | | | |



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PROJECT: Piscoe Creek Bridge
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 EMAIL: JOSH@QUINCYENG.COM

DESIGNER: Liam Kucey
 DRAFTER: Liam Kucey
 CHECKER: Josh Goodall
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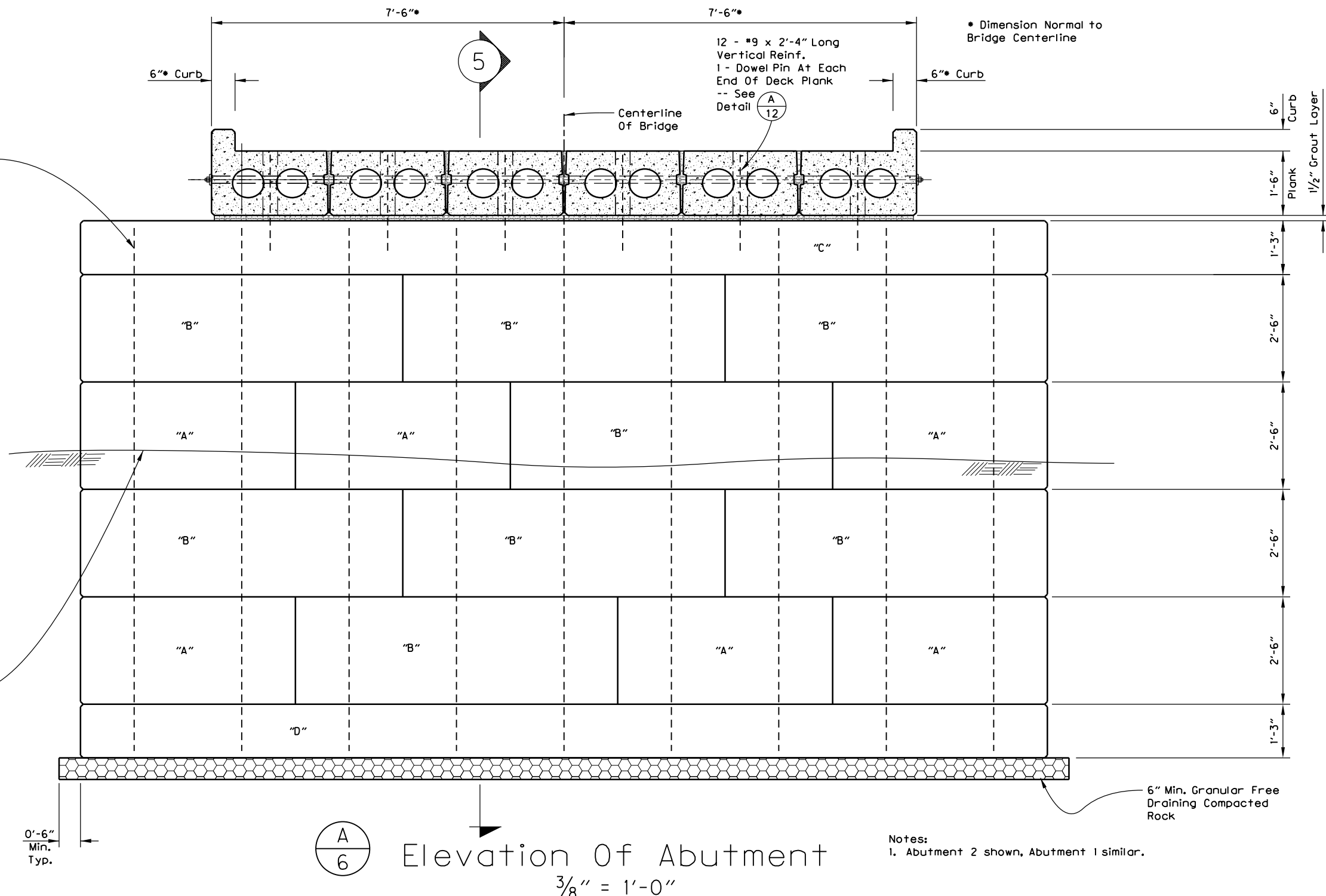
TITLE: TRANSVERSE ELEVATION THRU BRIDGE
 SHOWING ELEVATION OF ABUTMENT

DATE: _____
 REVISION: _____

BY: _____
 DATE: _____

PROJECT NO. 20-2873
 SHEET 6 OF 14
 DRAWING DATE: 2nd July 2020

ACCOMPANIED BY DWGS. _____



A
6

Elevation Of Abutment

$\frac{3}{8}'' = 1'-0''$

B
6

Abutment Block Schedule

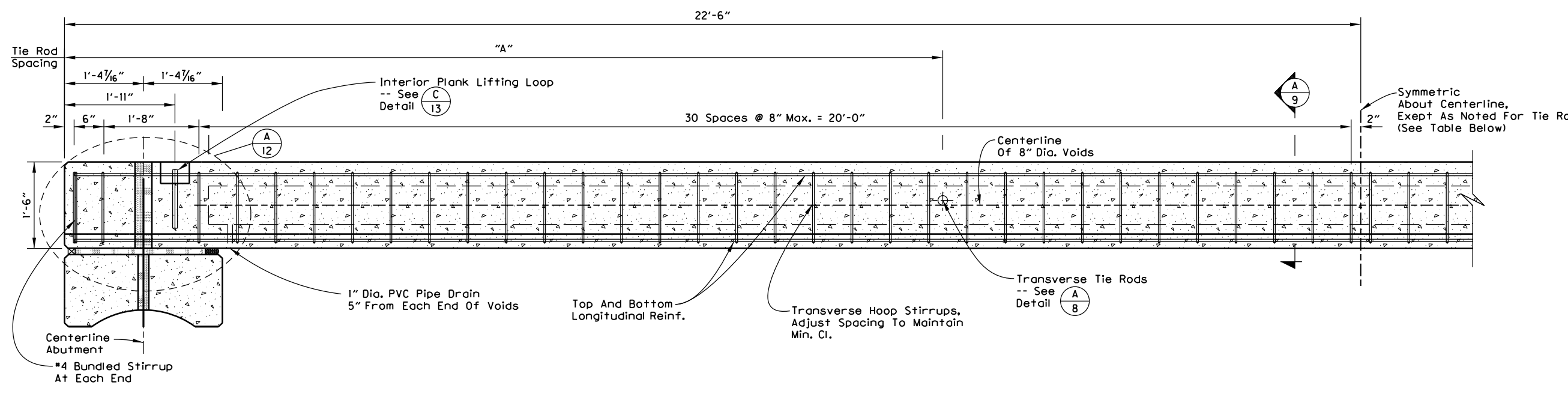
No Scale

| Precast Concrete Abutment Block Schedule | | | | | | | | | | |
|--|-------------|-----------|---------------|-----------|--------|-------|-----------|--------|------------|--------|
| Unit Mark | Total Count | Unit Type | Reference | Dimension | | | End Shape | | Reinf Bars | Notes |
| | | | | Length | Height | Width | Left | Right | | |
| "A" | 12 | Standard | Detail "A/10" | 5'-0" | 2'-6" | 2'-6" | Round | Round | No | (1) |
| "B" | 16 | Standard | Detail "A/10" | 7'-6" | 2'-6" | 2'-6" | Round | Round | No | (1) |
| "C" | 2 | Mono | Detail "A/11" | 22'-6" | 1'-3" | 2'-6" | Square | Square | Yes | (1)(2) |
| "D" | 2 | Footing | Detail "A/14" | 22'-6" | 1'-3" | 3'-6" | Square | Square | Yes | (1)(3) |

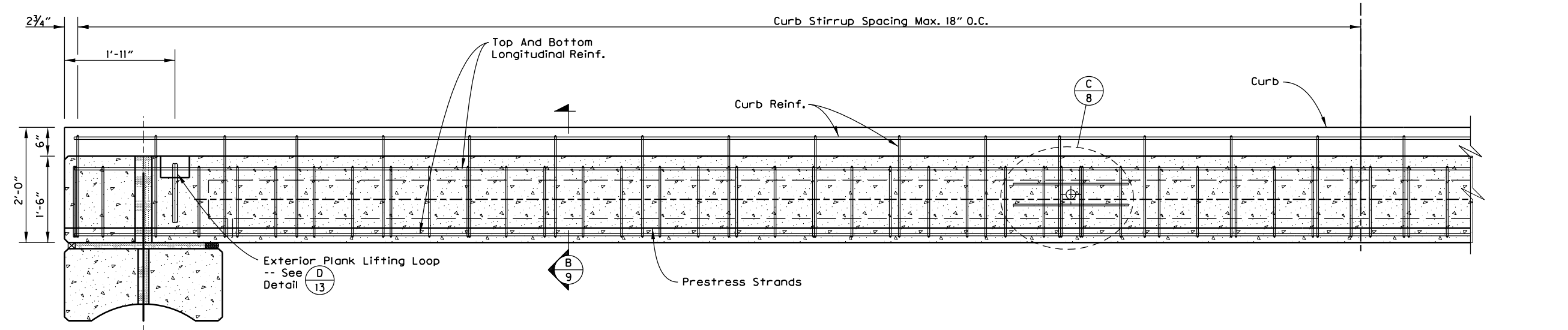
Notes:
 (1) These Units Are Reversible As Required By Project Layout (Left-To-Right).
 (2) Omit Lugs On Blocks.
 (3) Omit Recesses On Blocks.



RENEWS: 01-05-2021



A
7
Longitudinal Section Of Concrete Interior Plank -- Type "1"
1/2" = 1'-0"



B
7
Longitudinal Section Of Concrete Edge Plank -- Type "2"
1/2" = 1'-0"

This Detail Similar To Detail "A/7" Except As Shown.

- Notes:
1. Structure Shown Flat, For Slope, See Project Plans.
 2. All Longitudinal Reinforcing Bars Extend Full Length Of Plank.
 3. Adjust Main Stirrups As Required To Place Transverse Tie Rods. Do Not Exceed Maximum Stirrup Spacing.

Precast Concrete Bridge Deck Plank Dimensions Schedule

| Unit Mark | Total Count | Detail | Plank Length | Transverse Tie Rod | | Main Stirrup Number | Curb Stirrup Number | Tie Rod Stirrup Number | Unit Weight |
|-----------|-------------|--------|--------------|--------------------|-------------|---------------------|---------------------|------------------------|-------------|
| | | | | "A" | | | | | |
| | | | | 1 | 2 | | | | |
| 1A | 4 | A/9 | 45'-0" | 16'-4 1/4" | 13'-0 1/4" | 68 | N/A | N/A | 20 kips |
| 1B | 4 | A/9 | 45'-0" | 15'-2 7/8" | 14'-1 5/8" | 68 | N/A | N/A | 20 kips |
| 2 | 2 | B/9 | 45'-0" | 17'-5 5/8" | 11'-10 7/8" | 68 | 32 | 4 | 22 kips |

C
7

PROJECT: Piscoe Creek Bridge

CLIENT: Pacific Bridge And Construction, Inc. -- Sandy, Oregon -- 503-668-4798

QUINCY ENGINEERING, INC
200 Hawthorne AVE SE, STE E-530
Salem, OR 97301 - 4996

VOICE: 503-763-9995
FAX: 503-763-9981
EMAIL: JOSH@QUINCYENG.COM

DESIGNER: Liam Kucey
DRAFTER: Liam Kucey
CHECKER: Josh Goodall
REVIEWER: Jeff Olson

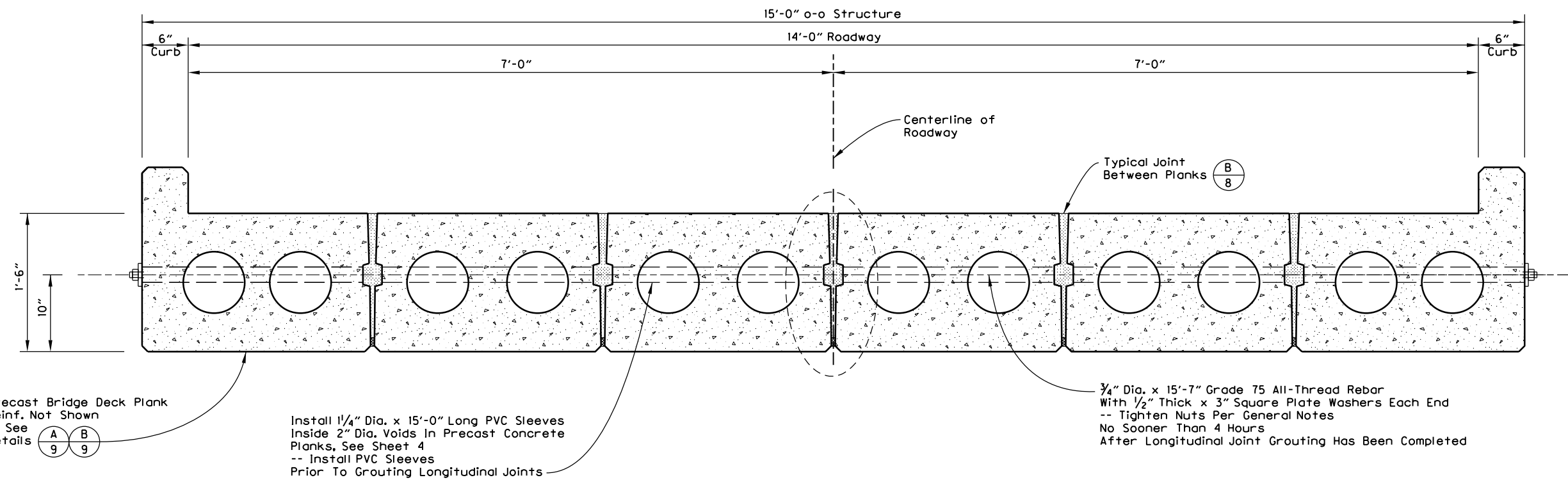
TITLE: LONGITUDINAL SECTION OF CONCRETE PLANKS

DRAWING DATE: 2nd July 2020
PROJECT NO: 20-2873
SHEET 7 OF 14

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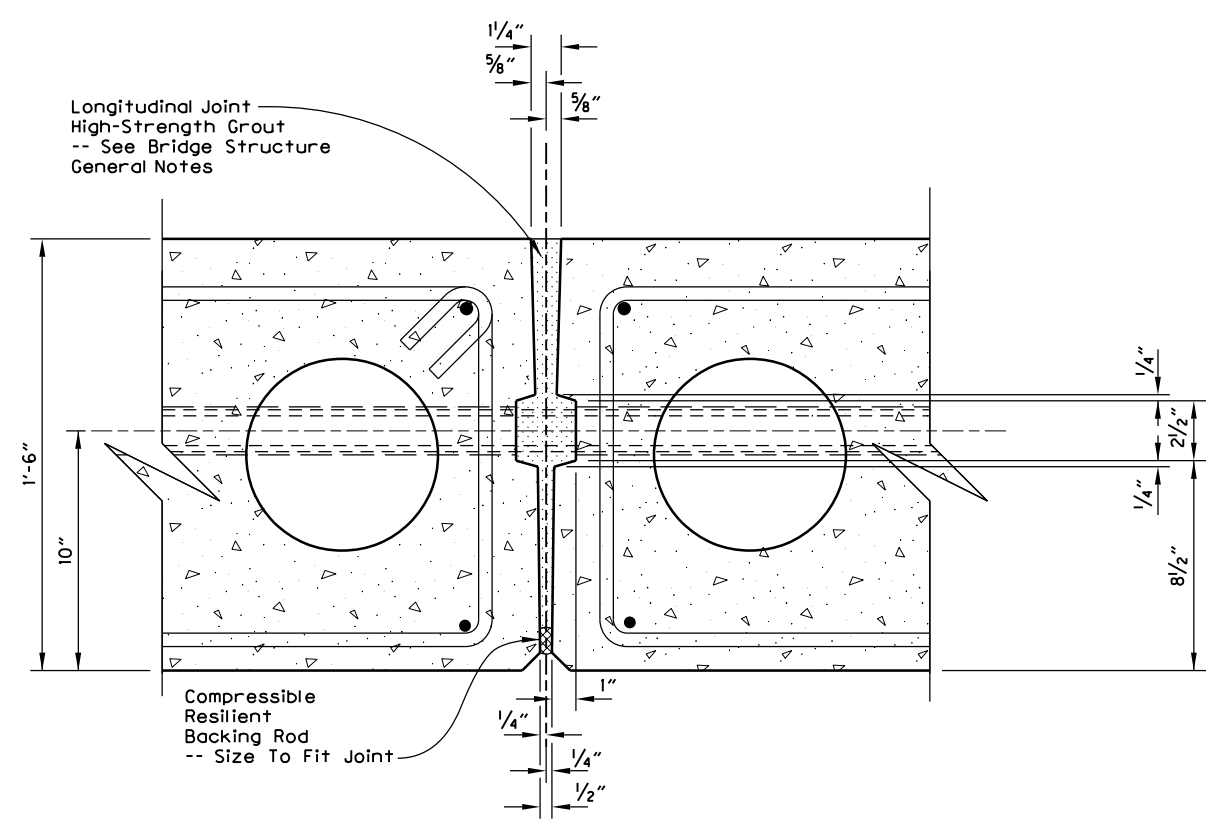


Precast Bridge Deck Plank
Reinf. Not Shown
-- See
Details (A/8) (B/8)

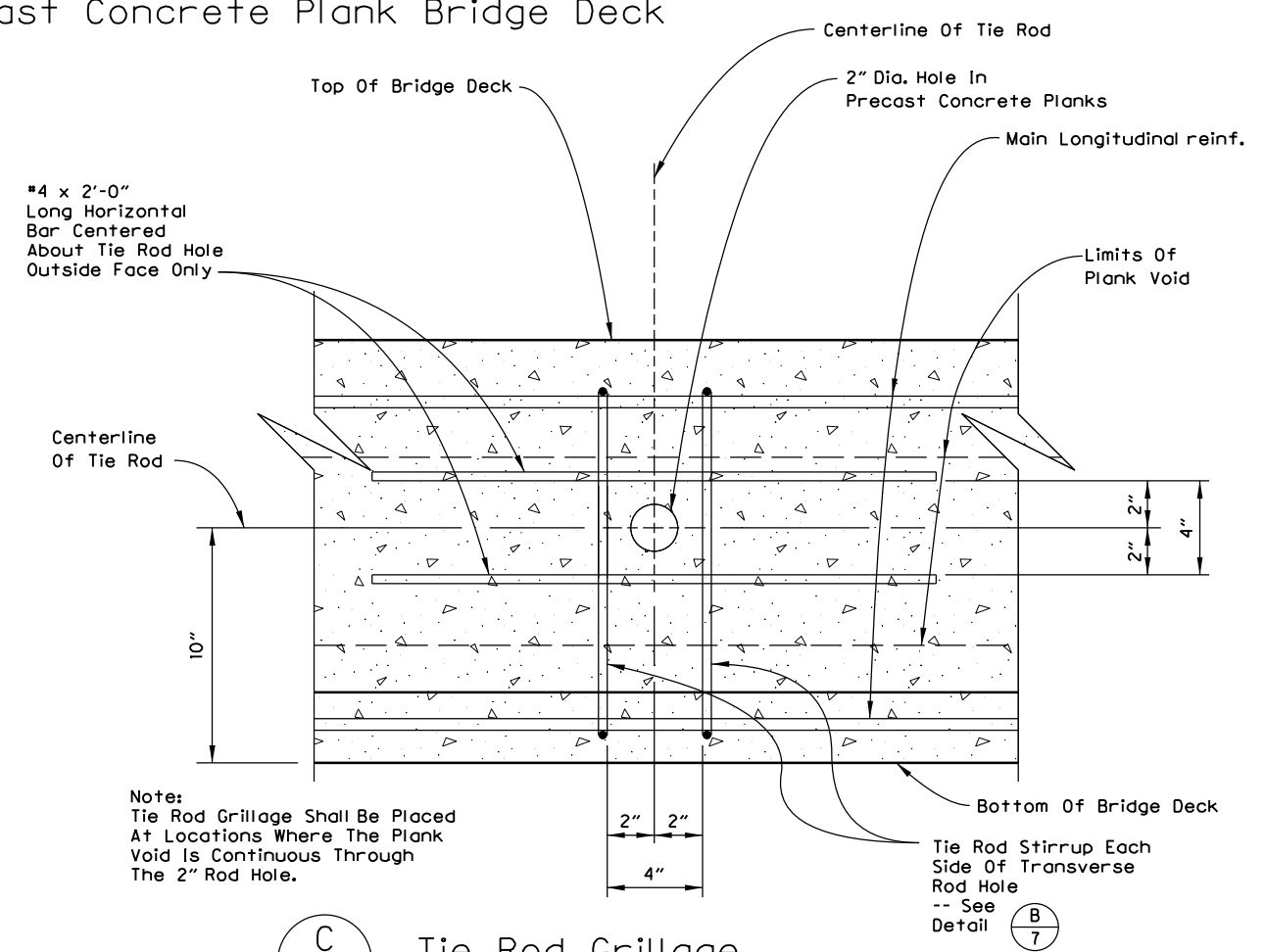
Install 1/4" Dia. x 15'-0" Long PVC Sleeves
Inside 2" Dia. Voids In Precast Concrete
Planks, See Sheet 4
-- Install PVC Sleeves
Prior To Grouting Longitudinal Joints

3/4" Dia. x 15'-7" Grade 75 All-Thread Rebar
With 1/2" Thick x 3" Square Plate Washers Each End
-- Tighten Nuts Per General Notes
No Sooner Than 4 Hours
After Longitudinal Joint Grouting Has Been Completed

(A/8) Typical Transverse Tie Rod Across Full Width Of Precast Concrete Plank Bridge Deck
3/4" = 1'-0"



(B/8) Typical Longitudinal Key Joint
Between 18" Thick Precast Concrete Bridge Planks
1/2" = 1'-0"



Note:
Tie Rod Grillage Shall Be Placed
At Locations Where The Plank
Void Is Continuous Through
The 2" Rod Hole.

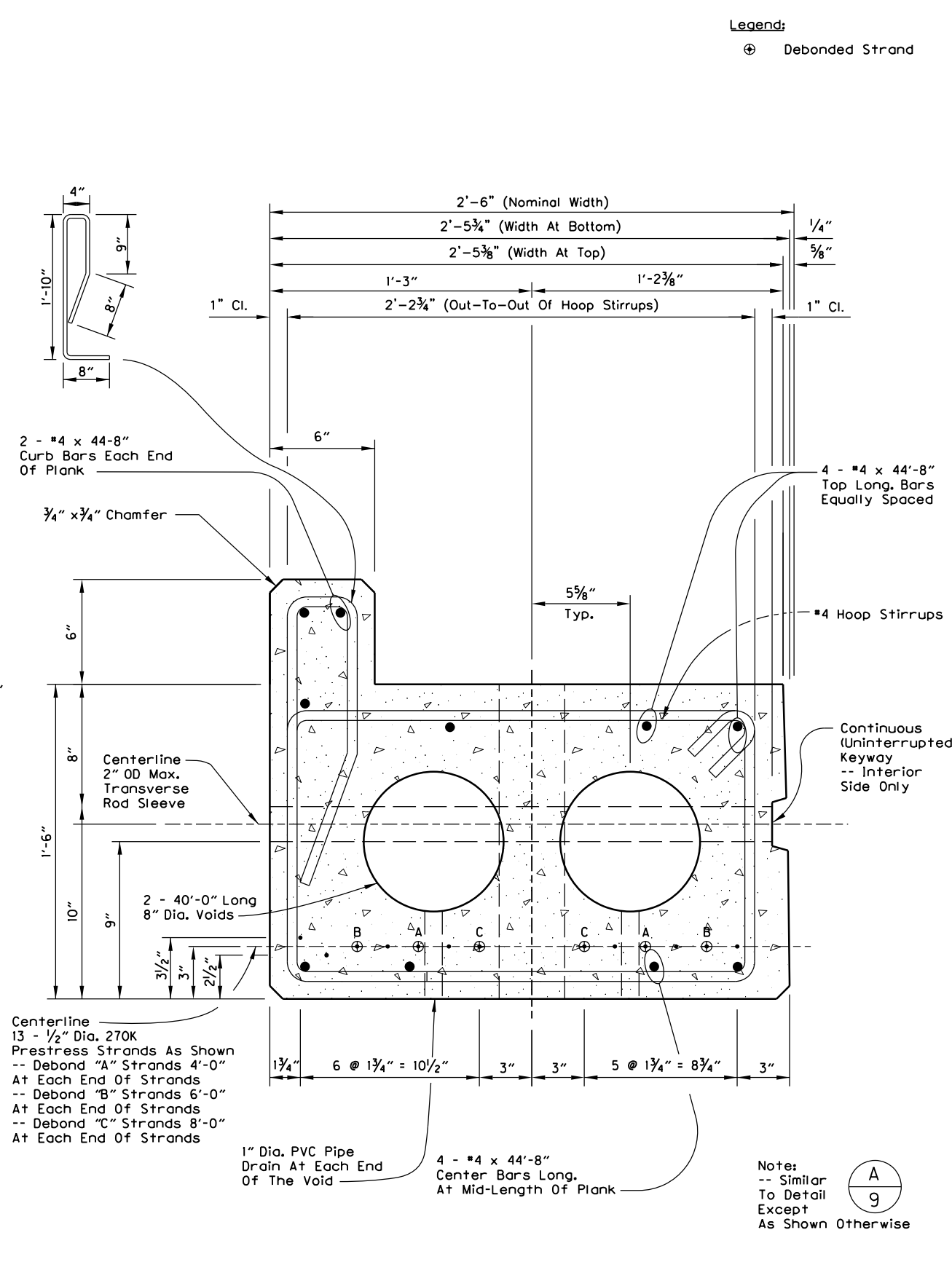
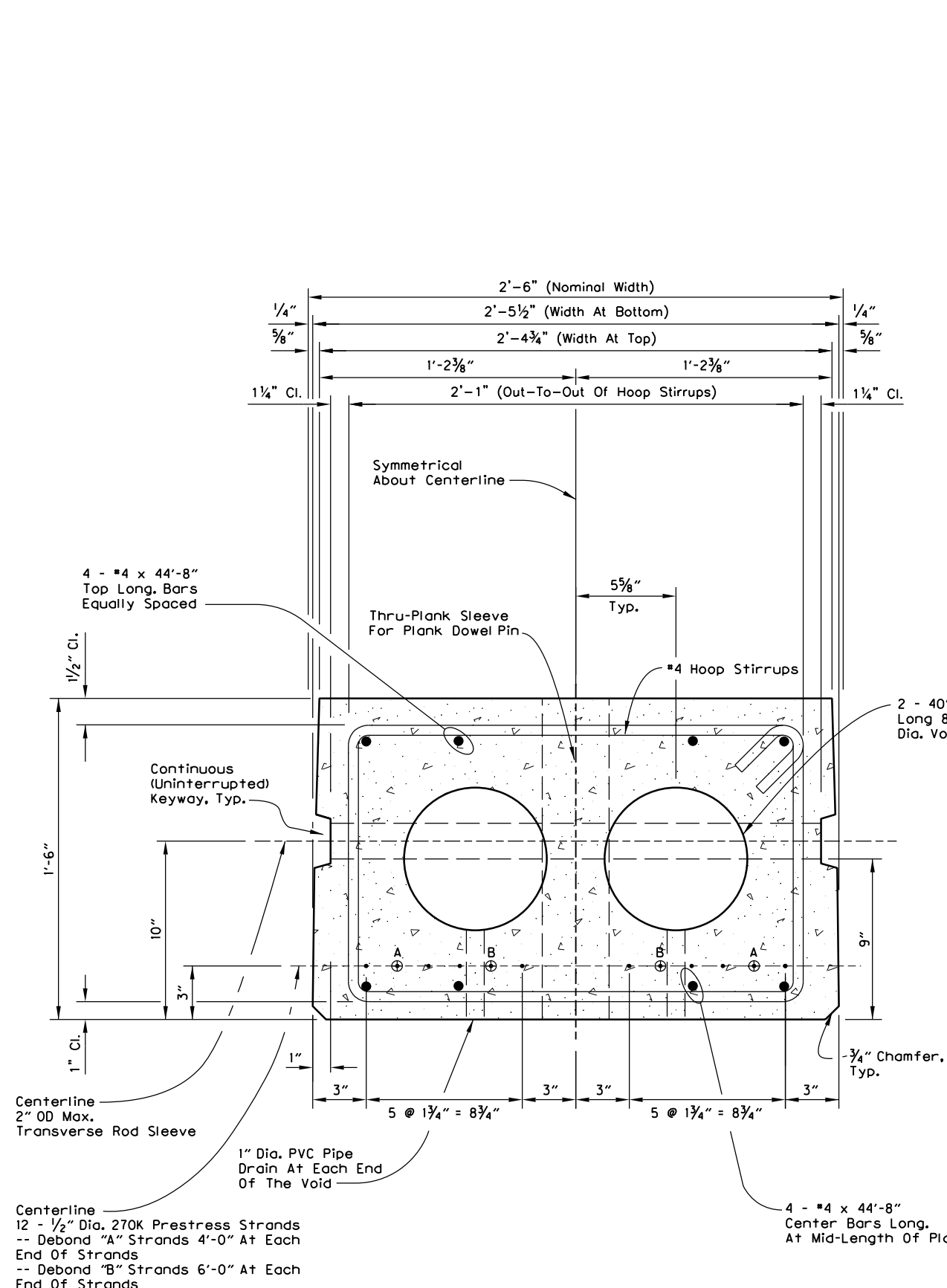
(C/8) Tie Rod Grillage
1 1/2" = 1'-0"

| | | | | | |
|--|----------|---|----------------------|--|--|
| PROJECT: Piscoe Creek Bridge | | PROJECT NO. 20-2873 | | SHEET 8 OF 14 | |
| CLIENT: Pacific Bridge And Construction, Inc. -- Sandy, Oregon -- 503-668-4798 | | CHECKER: Josh Goodall | | REVIEWER: Jeff Olson | |
| DESIGNER: Liam Kucey | | DRAFTER: Liam Kucey | | DRAWING DATE: 2nd July 2020 | |
| QUINCY ENGINEERING, INC 200 Hawthorne AVE SE, STE E-530 Salem, OR 97301 - 4996 | | VOICE: 503-763-9995 FAX: 503-763-9981 EMAIL: JOSH@QUINCYENG.COM | | TITLE: MISCELLANEOUS PRECAST BRIDGE DECK PLANK DETAILS | |
| DATE | REVISION | BY | ACCOMPANIED BY DWGS. | | |



RENEWS: 01-05-2021

| | | | | | |
|-----------|--|--------------|--------------------|-----------------|--|
| PROJECT: | Piscose Creek Bridge | PROJECT NO.: | 20-2873 | SHEET: | 9 OF 14 |
| CLIENT: | Pacific Bridge And Construction, Inc. -- Sandy, Oregon -- 503-668-4798 | CHECKER: | Josh Goodall | DRAWING DATE: | 2nd July 2020 |
| DESIGNER: | Liam Kucey | DRAFTER: | Liam Kucey | TITLE: | TRANSVERSE PRECAST CONCRETE BRIDGE DECK PLANK SECTIONS |
| REVISION: | | REVIEWER: | Jeff Olson | ACCOMPANIED BY: | DWGS. |
| DATE: | | VOICE: | 503-763-9995 | | |
| | | FAX: | 503-763-9981 | | |
| | | EMAIL: | JOSH@QUINCYENG.COM | | |

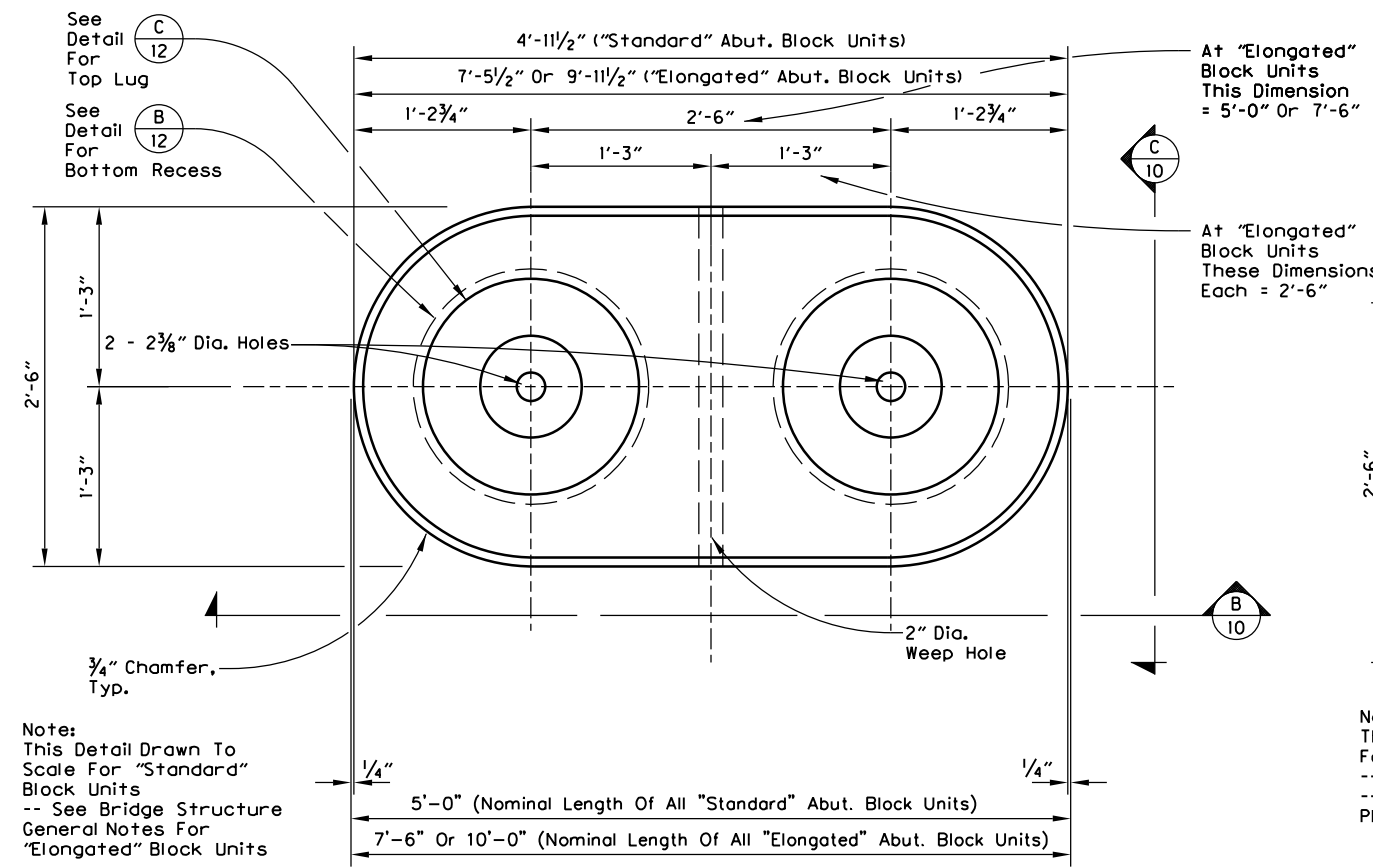


A
9
1 1/2" = 1'-0"

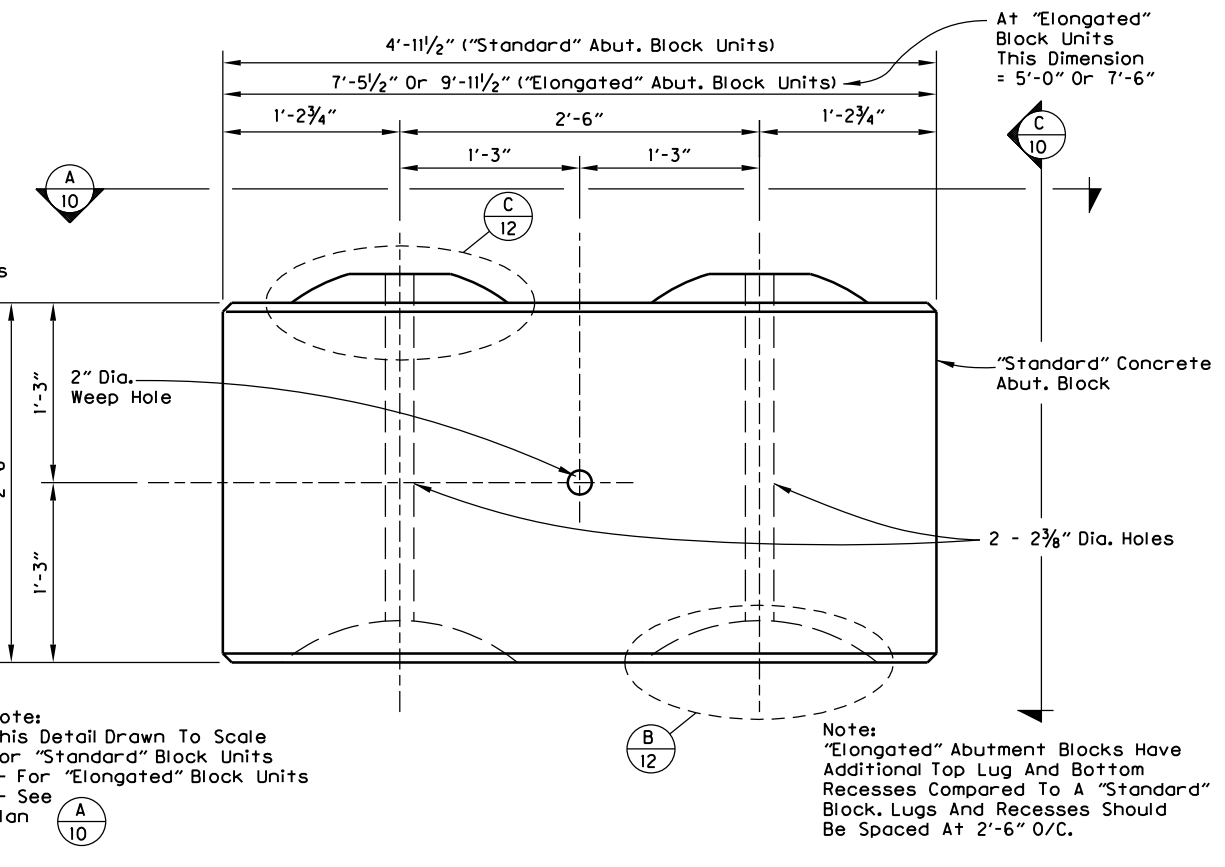
Transverse Section Thru Prestressed Interior Planks

B
9
1 1/2" = 1'-0"

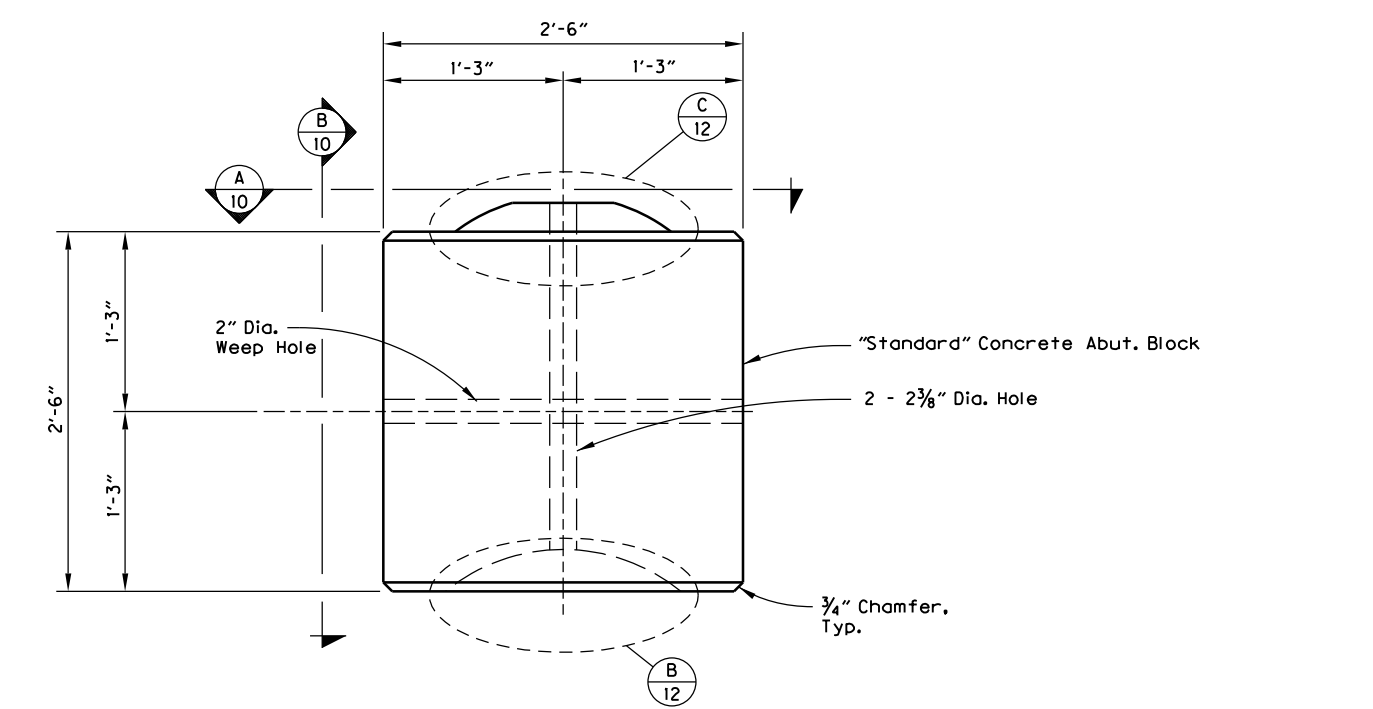
Transverse Section Thru Prestressed Edge Planks



A
10 Top View Of "Standard" And "Elongated" Abutment Blocks
3/4" = 1'-0"



B
10 Front View Of "Standard" And "Elongated" Abutment Blocks
3/4" = 1'-0"



C
10 Side View Of "Standard" Abutment Block
3/4" = 1'-0"

Note:
This Detail Drawn To Scale For "Standard" Block Units
-- See Bridge Structure General Notes For "Elongated" Block Units

Note:
This Detail Drawn To Scale For "Standard" Block Units
-- For "Elongated" Block Units -- See Plan

Note:
"Elongated" Abutment Blocks Have Additional Top Lug And Bottom Recesses Compared To A "Standard" Block. Lugs And Recesses Should Be Spaced At 2'-6" O/C.

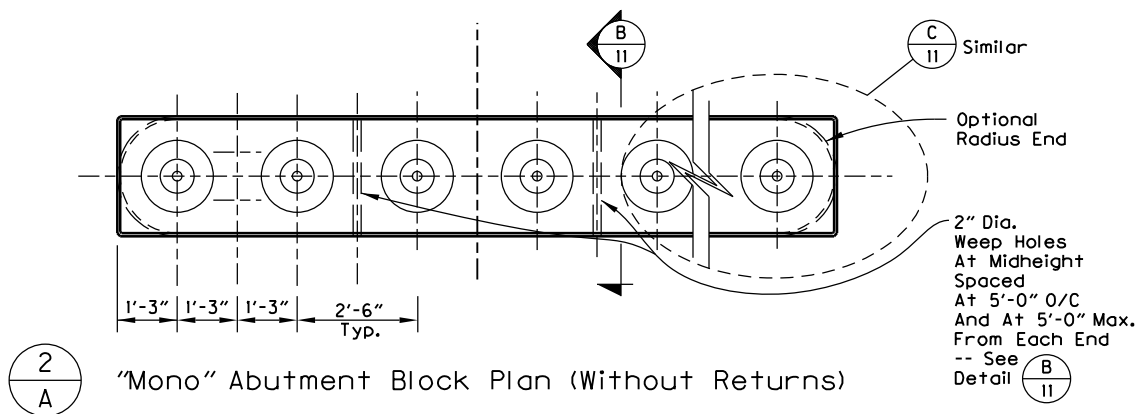


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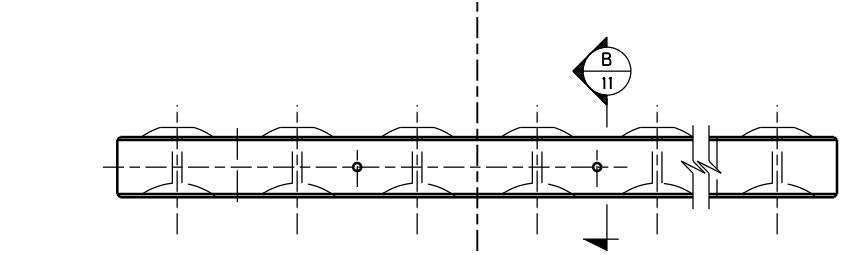
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| PROJECT: Piscoe Creek Bridge | | PROJECT NO.: 20-2873 | | SHEET 10 OF 14 | |
| CLIENT: Pacific Bridge And Construction, Inc. -- Sandy, Oregon -- 503-668-4798 | | CHECKER: Josh Goodall | | REVIEWER: Jeff Olson | |
| DESIGNER: Liam Kucey | | DRAFTER: Liam Kucey | | TITLE: TYPICAL "STANDARD" PRECAST CONCRETE ABUTMENT BLOCK DETAILS | |
| QUINCY ENGINEERING, INC 200 Hawthorne AVE SE, STE E-530 Salem, OR 97301 - 4996 | | VOICE: 503-763-9995 FAX: 503-763-9981 EMAIL: JOSH@QUINCYENG.COM | | DRAWING DATE: 2nd July 2020 | |
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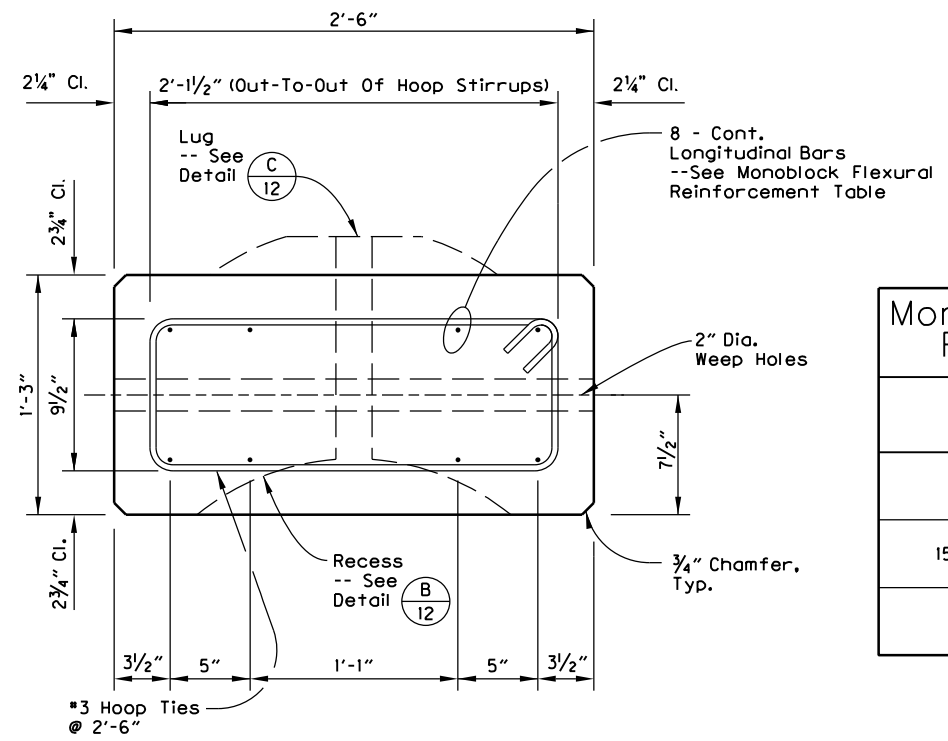


2/A "Mono" Abutment Block Plan (Without Returns)



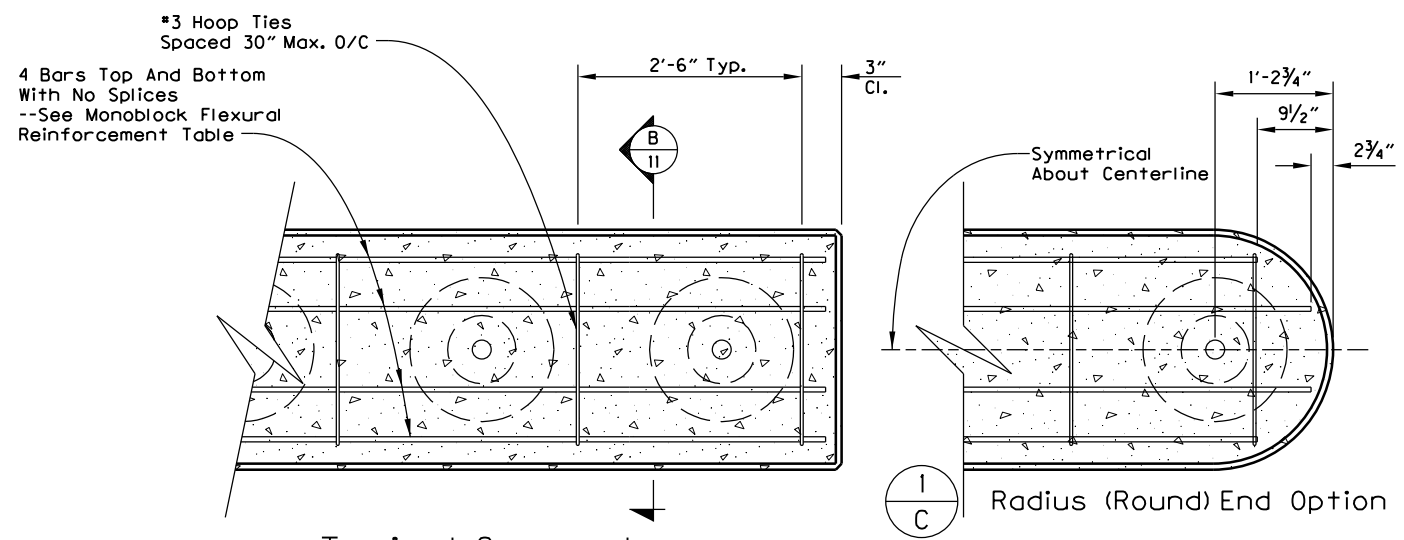
1/A Typical "Mono" Abutment Block Elevation

A/11 Plans And Elevation Of Modular Concrete "Mono" Abutment Block Units
1/4" = 1'-0"



B/11 Typical Section Thru "Mono" Abutment Block
1" = 1'-0"

| Monoblock Flexural Reinforcement | |
|----------------------------------|----------|
| Block Length | Bar Size |
| L ≤ 15'-0" | #4 |
| 15'-0" < L ≤ 22'-6" | #5 |
| L > 22'-6" | #6 |



C/11 Typical Concrete Mono Abutment Block Reinforcing
1/2" = 1'-0"

PROJECT: Piscoe Creek Bridge
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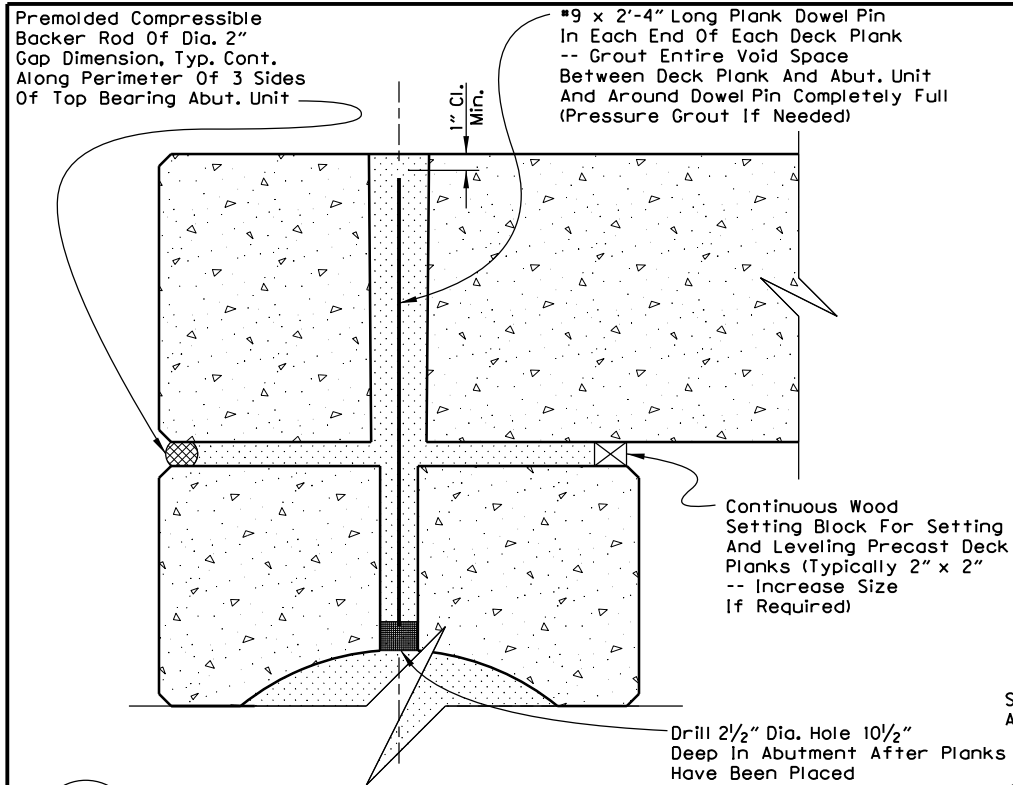
DESIGNER: Liam Kucey
 DRAFTER: Liam Kucey
 CHECKER: Josh Goodall
 REVIEWER: Jeff Olson

TITLE: TYPICAL "MONO" PRECAST CONCRETE ABUTMENT BLOCK DETAILS

PROJECT NO. 20-2873
 SHEET 11 OF 14
 DRAWING DATE: 2nd July 2020

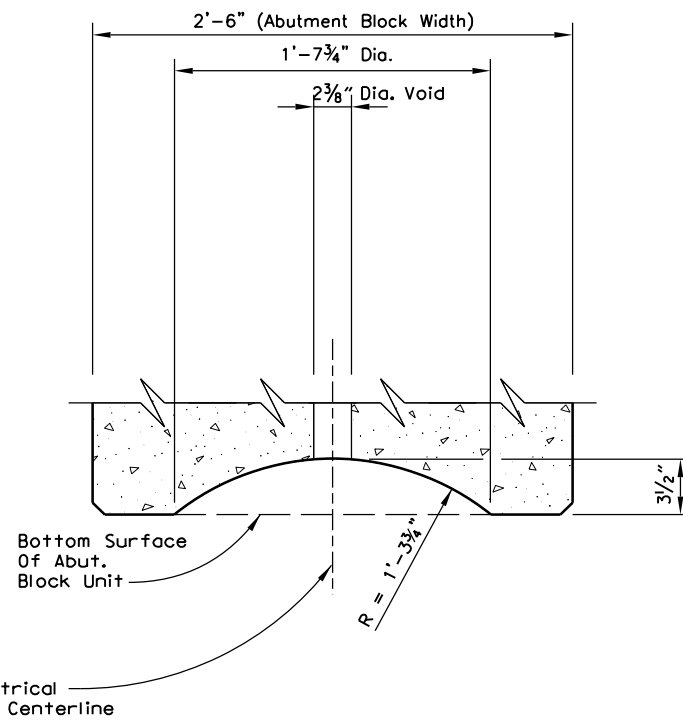
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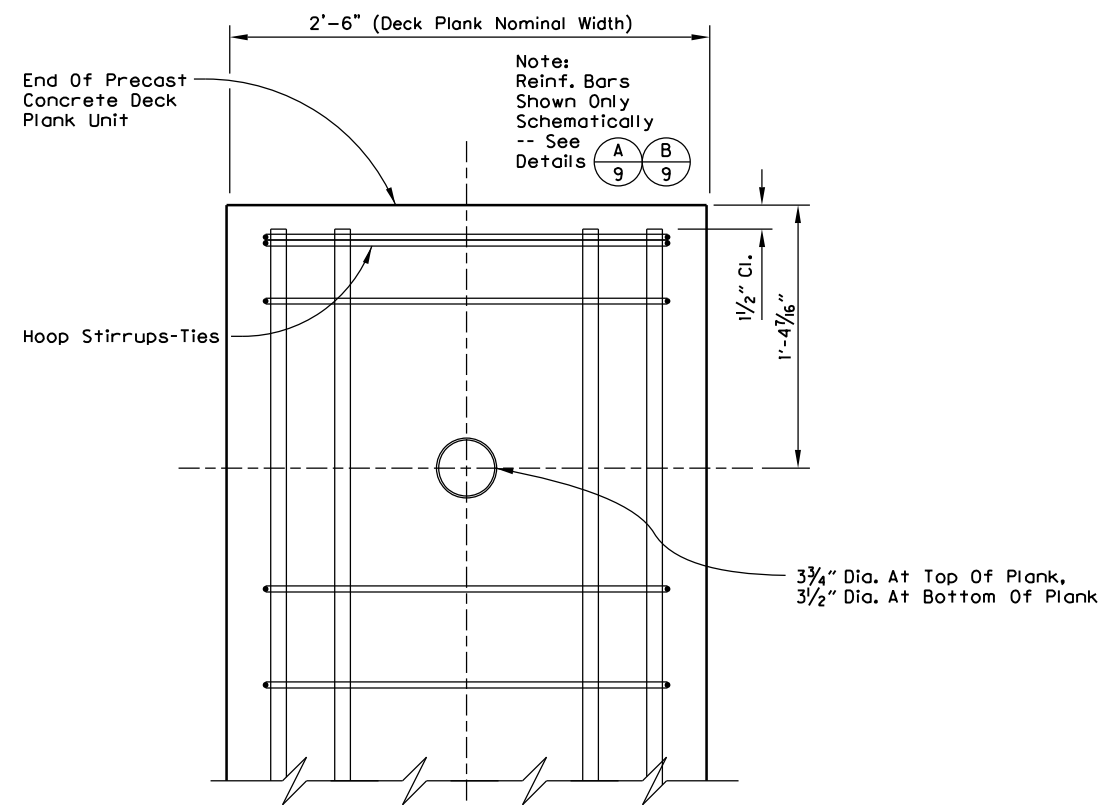
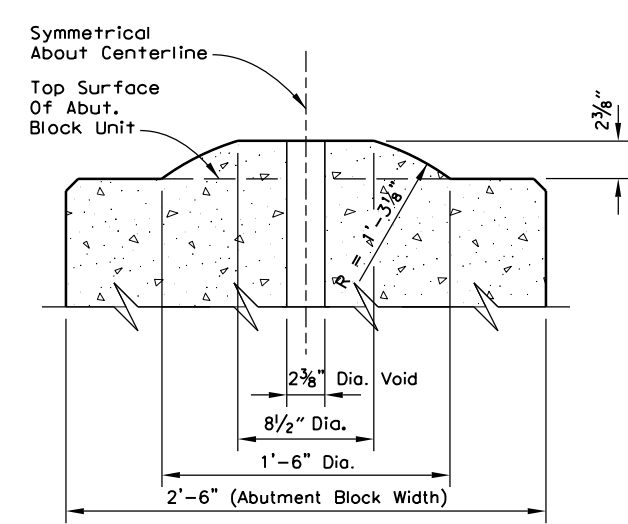


A
12 Bridge Plank To Abutment Connection
1" = 1'-0"

B
12 Typical Abutment Block Recess
On Bottom Of All Abutment Blocks
1" = 1'-0"



C
12 Typical Abutment Block Lug
On Top Of All Abutment Blocks
1" = 1'-0"

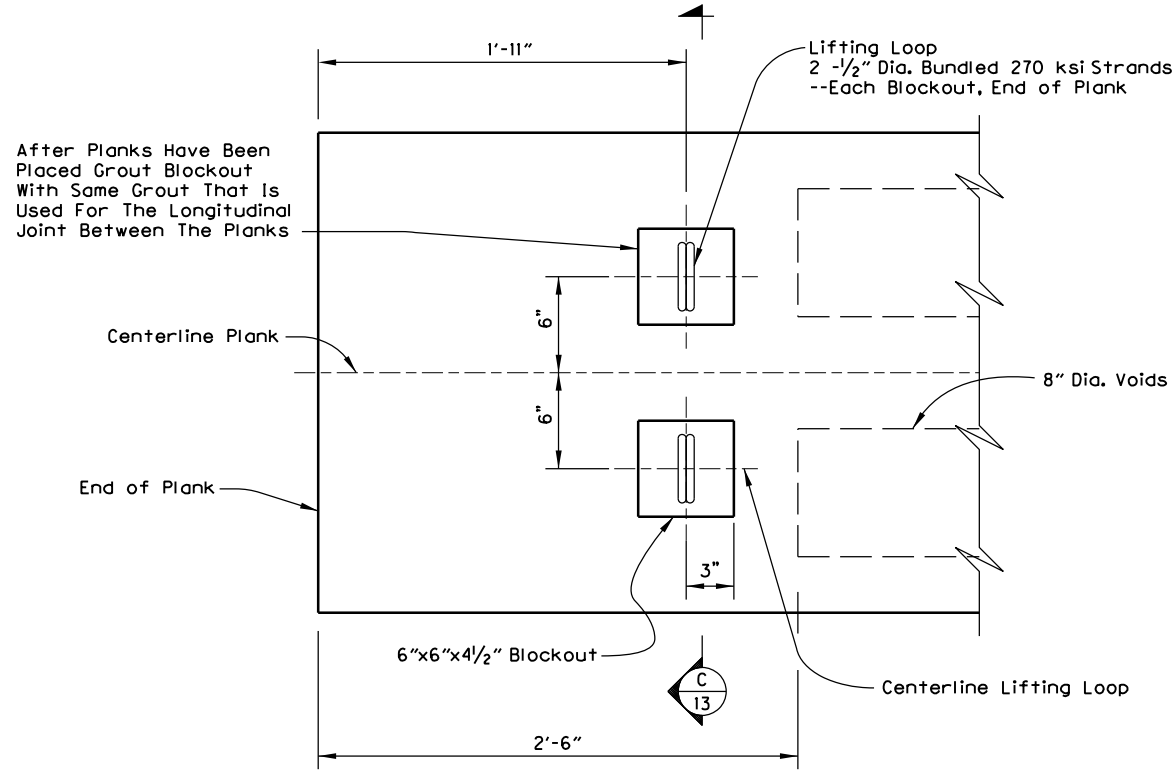


D
12 Plan View Of Each End Of Interior
Deck Plank Unit
1" = 1'-0"

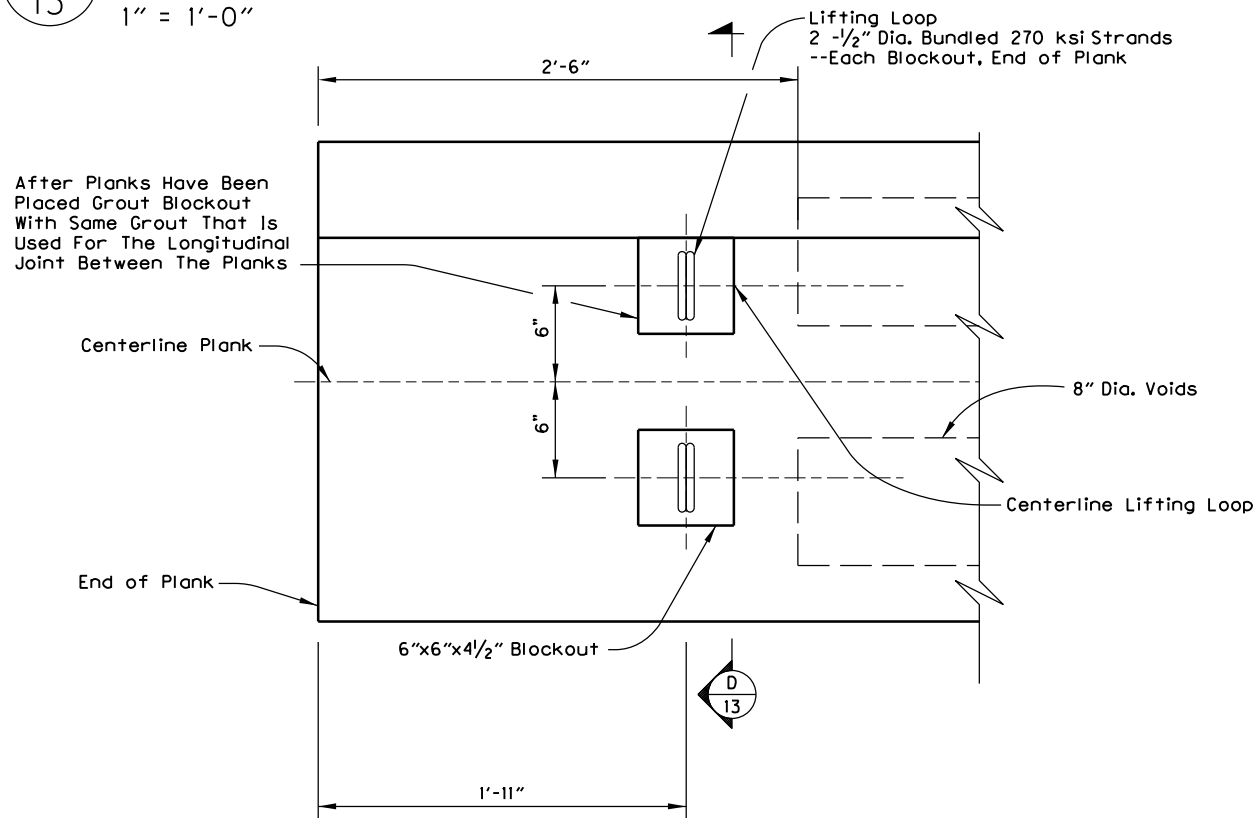


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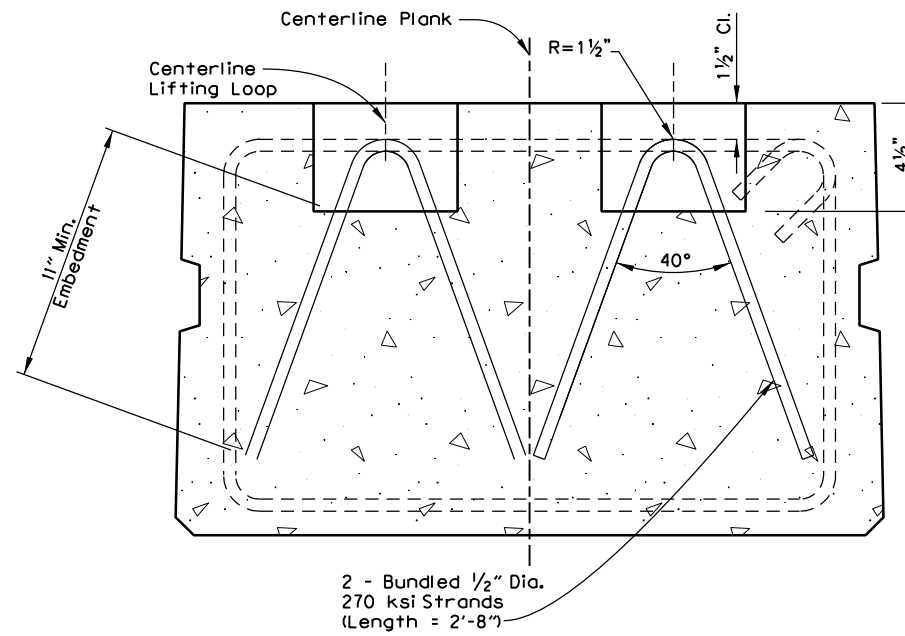
| | | | | | |
|--|--|---|--|---|--|
| PROJECT: Piscoe Creek Bridge | | PROJECT NO. 20-2873 | | SHEET 12 OF 14 | |
| CLIENT: Pacific Bridge And Construction, Inc. -- Sandy, Oregon -- 503-668-4798 | | PROJECT NO. 20-2873 | | DRAWING DATE: 2nd July 2020 | |
| DESIGNER: Liam Kucey | | CHECKER: Josh Goodall | | REVIEWER: Jeff Olson | |
| BY: Liam Kucey | | DRAFTER: Liam Kucey | | TITLE: BRIDGE PLANK AND ABUTMENT DETAILS #1 | |
| DATE: _____ | | REVISION: _____ | | ACCOMPANIED BY DWGS. _____ | |
| QUINCY ENGINEERING, INC 200 Hawthorne AVE SE, STE E-530 Salem, OR 97301 - 4996 | | VOICE: 503-763-9995 FAX: 503-763-9981 EMAIL: JOSH@QUINCYENG.COM | | PROJECT NO. 20-2873 | |



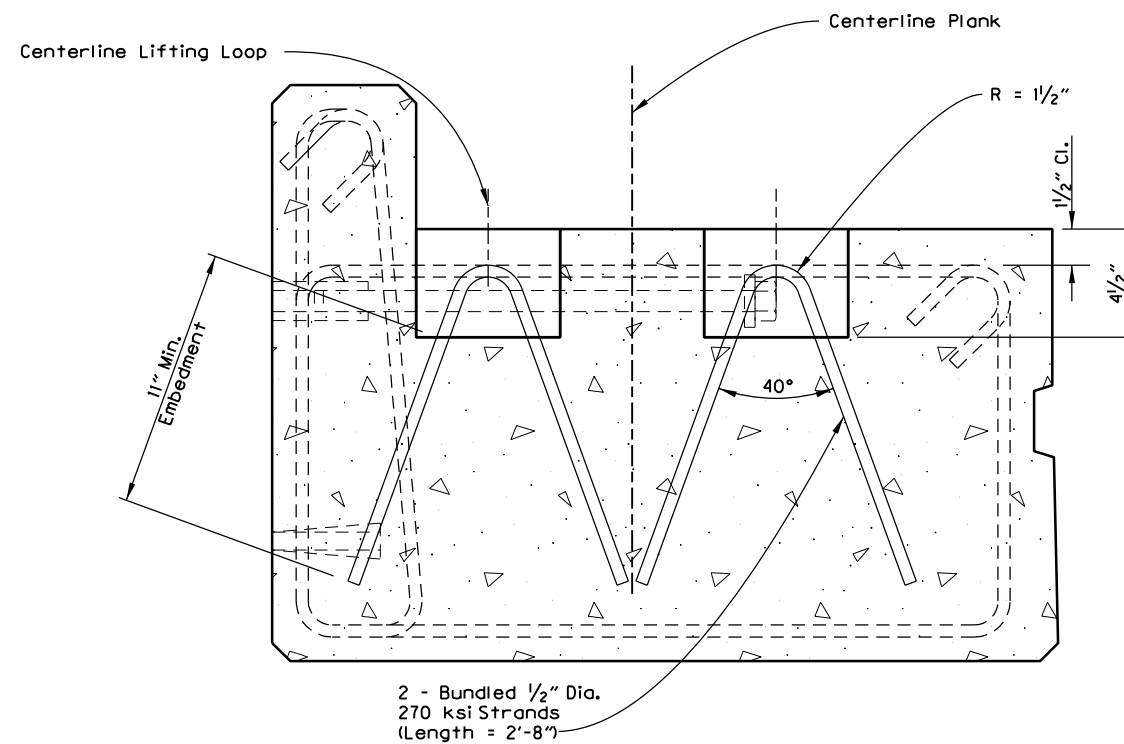
A
13
Lifting Loop Plan View
Interior Plank
1" = 1'-0"



B
13
Lifting Loop Plan View
Exterior Plank
1" = 1'-0"



C
13
Lifting Loop Section View
Interior Plank
1 1/2" = 1'-0"



D
13
Lifting Loop Elevation View
Exterior Plank
1 1/2" = 1'-0"

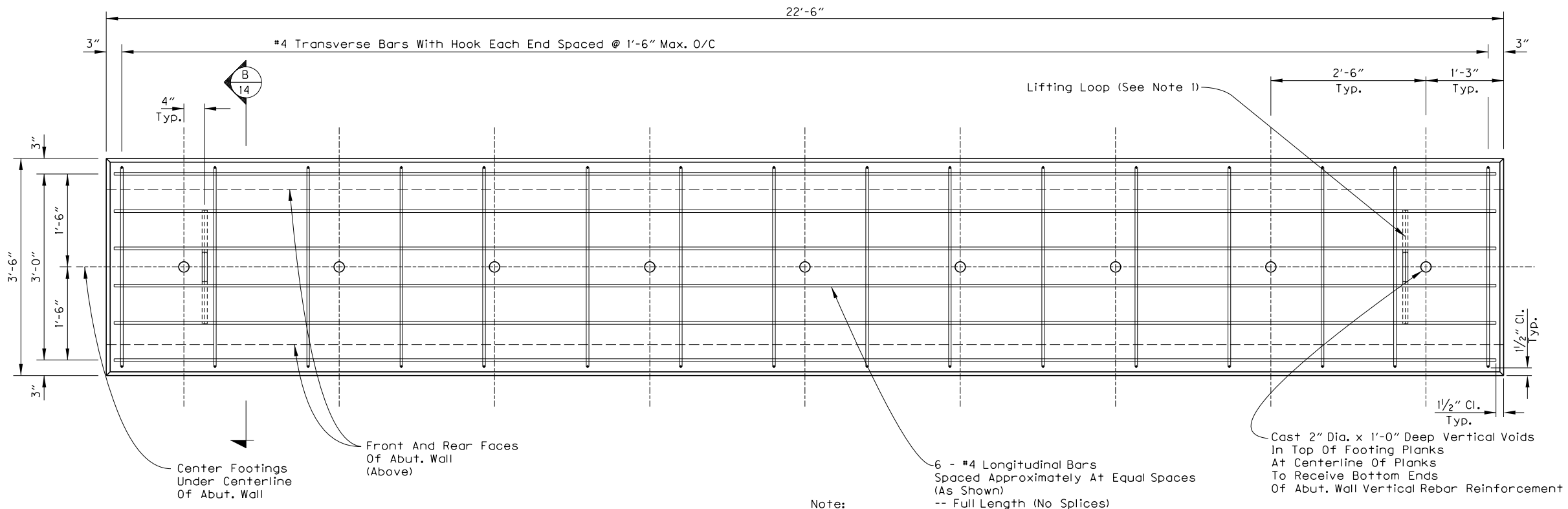


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| | | | | | | | | | | | |
|------------------------------|--|--|--|---|--|---------------------|--|-----------------------|--|-----------------------------|--|
| PROJECT: Piscoe Creek Bridge | | CLIENT: Pacific Bridge And Construction, Inc. -- Sandy, Oregon -- 503-668-4798 | | DESIGNER: Liam Kucey | | DRAFTER: Liam Kucey | | CHECKER: Josh Goodall | | REVIEWER: Jeff Olson | |
| QUINCY ENGINEERING, INC | | 200 Hawthorne AVE SE, STE E-530 | | Salem, OR 97301 - 4996 | | VOICE: 503-763-9995 | | FAX: 503-763-9981 | | EMAIL: JOSH@QUINCYENG.COM | |
| DATE | | REVISION | | BY | | TITLE | | PROJECT NO. 20-2873 | | SHEET 13 OF 14 | |
| ACCOMPANIED BY DWGS. | | DRAWING DATE: 2nd July 2020 | | TITLE: BRIDGE PLANK AND ABUTMENT BLOCK DETAILS #2 | | PROJECT NO. 20-2873 | | SHEET 13 OF 14 | | DRAWING DATE: 2nd July 2020 | |



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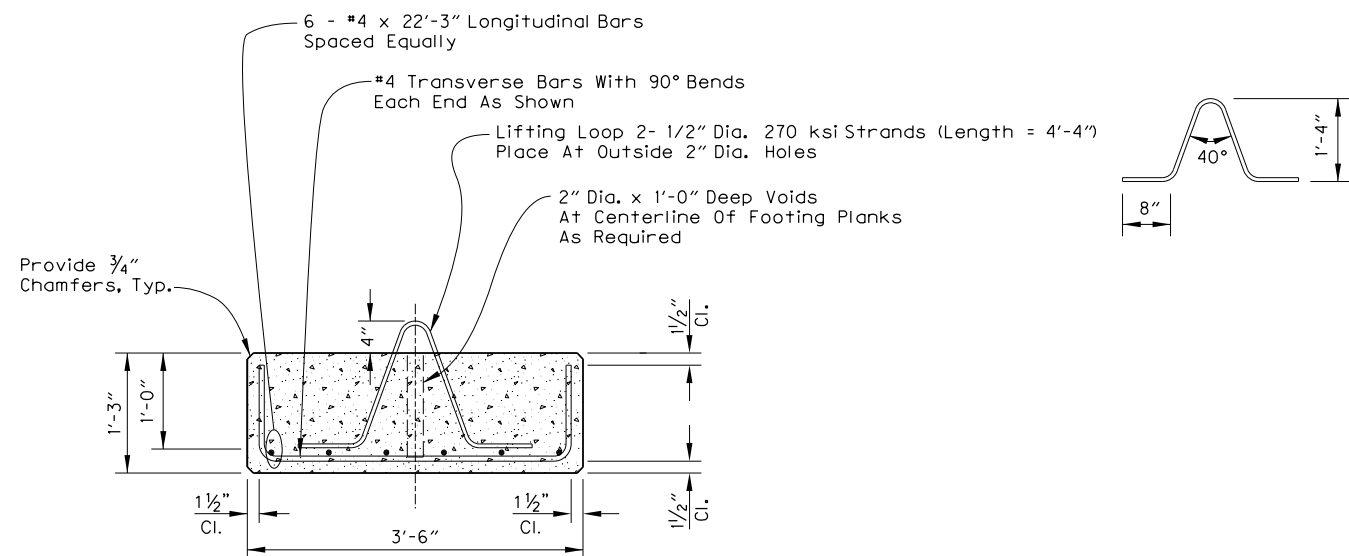


A
14

Plan View - Precast Concrete Footing Planks
1/2" = 1'-0"

Note:

1. After Placement of Footing Plank Cut Lifting Loop Flush With Top Of Concrete. If Another Abutment Block Is Placed Over The Top Of Lifting Loop The Abutment Block Recess Shall Be Grouted. If No Abutment Block Is Placed Above Lifting Loop Remove Lifting Loop 1/2" Below Top Of Concrete And Fill Void With Grout.



B
14

Section View
Precast Concrete Footing Planks
1/2" = 1'-0"

| | | | | | |
|--|--|-----------------------|--|--|--|
| PROJECT: Piscoe Creek Bridge | | CHECKER: Josh Goodall | | REVIEWER: Jeff Olson | |
| CLIENT: Pacific Bridge And Construction, Inc. -- Sandy, Oregon -- 503-668-4798 | | DRAFTER: Liam Kucey | | PROJECT NO. 20-2873 | |
| QUINCY ENGINEERING, INC 200 Hawthorne AVE SE, STE E-530 Salem, OR 97301 - 4996 | | DESIGNER: Liam Kucey | | DRAWING DATE: 2nd July 2020 | |
| VOICE: 503-763-9995 FAX: 503-763-9981 EMAIL: JOSH@QUINCYENG.COM | | BY: | | SHEET 14 OF 14 | |
| DATE: | | REVISION: | | TITLE: BRIDGE FOOTING PRECAST CONCRETE PLANKS | |
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