STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

RILEY TOWNSHIP
OXFORD COUNTY
BRIDGE REPLACEMENTS

BULL BRANCH BRIDGE
OVER
BULL BRANCH STREAM
PIN 016743.00

BULL BRANCH BRIDGE NO. 2
OVER
BULL BRANCH STREAM
PIN 016744.00

HYDROLOGIC DATA

Drainage Area.....17.1 Square miles.
Design Discharge (Q50).....3,097 cfs
Check Discharge (Q100).....3,632 cfs
Headwater Elevation (Q50).....96.59 feet
Headwater Elevation (Q100).....97.03 feet
Discharge Velocity (Q50).....11.94 fps
Discharge Velocity (Q100).....12.41 fps
Headwater Elevation (Q1.1).....89.28 feet
Discharge Velocity (Q1.1).....8.39 fps.

SPECIFICATIONS

Design: AASHTO LFD Bridge Design Specifications
Sixteenth Edition 1996 and Interim Specifications.

MAINTENANCE OF TRAFFIC

Roadway will be closed to traffic during construction.

DESIGN LOADING

HS-25

MATERIALS

Concrete	Class "A"
Reinforcing Steel	ASTM A 615, Grade 60
Structural Steel	ASTM A 709, Grade 36 or 50
Anchor Bolts	ASTM F1554, Grade 55
Nuts	ASTM 563
Washers	ASTM F436

LIST of DRAWINGS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED
COMMISSIONER — DATE 9/30/10
CHIEF ENGINEER

STATE OF MAINE — JOHN E. BUXTON — No. 5374 — REGISTERED PROFESSIONAL ENGINEER
SIGNATURE
P.E. NUMBER 5374
DATE 8-30-2010

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	Bill Doukas
DESIGNER	Bill Doukas
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

RILEY TOWNSHIP
BULL BRANCH BRIDGES

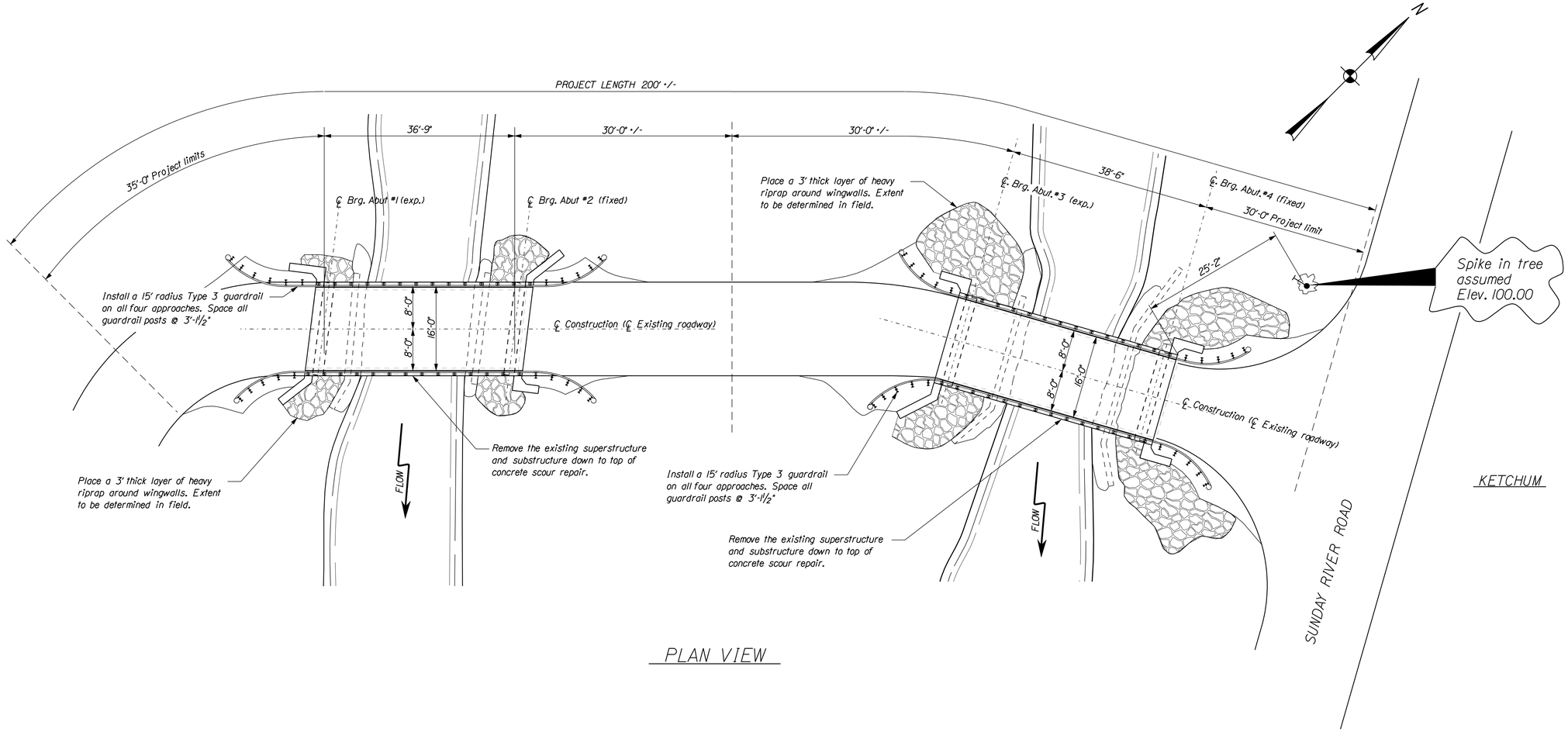
TITLE SHEET

SHEET NUMBER
1
OF 14

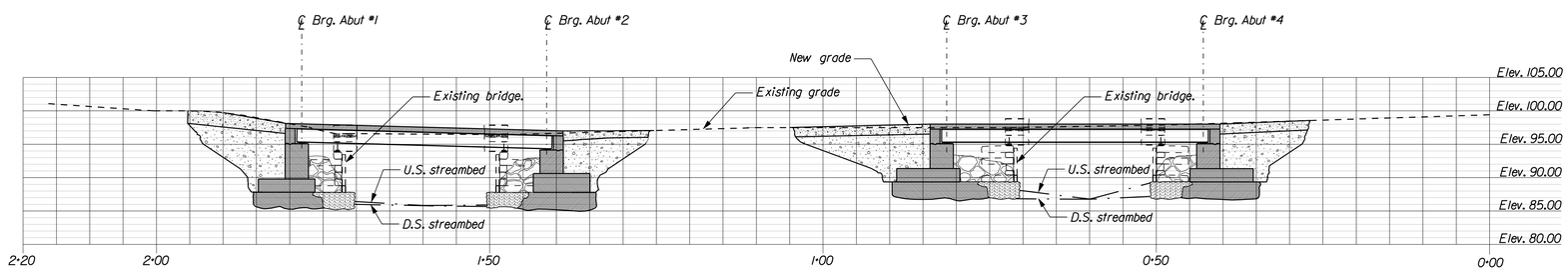
PIN 16743.00...Bridge No. 5855, PIN 16744.00...Bridge No. 0792

Filename: ...\riley\twp0792.dgn Division: MAINT Username: Lewis.Benner Date:8/30/2010

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Br.# 0792/5855	2	14



PLAN VIEW



PROFILE

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	$designer$	$sbetoler$	$sprojdate$
	CHECKED	$PDCF_CHECKED$	$PDCF_CHECKED2$	$PDCF_CHECKDATE$
	REVISIONS	$PDCF_REVISION1$	$PDCF_REVISION2$	$Revdate$
	FIELD CHANGES			

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BULL BRANCH/BULL BRANCH 2
OVER
BULL BRANCH STREAM
IN
RILEY TWP.
OXFORD COUNTY

PLAN & PROFILE

Filename: ...\Rileytwp0792.dgn Division: MAINT Username: Lewis.Benner Date:8/16/2010

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Br.# 0792/5855	3	14

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
	BULL BRANCH BRIDGE #5855		
202.19	REMOVE EXISTING BRIDGE	1	LS
203.24	COMMON BORROW	50	CY
203.25	GRANULAR BORROW	100	CY
304.10	AGGREGATE SUBBASE COURSE- GRAVEL	100	CY
502.219	STRUCTURAL CONCRETE, ABUTMENTS and RETAINING WALLS (85 CY)	1	LS
502.49	STRUCTURAL CONCRETE, CURBS and SIDEWALK (3 CY)	1	LS
502.56	CONCRETE FILL	50	CY
503.13	REINFORCING STEEL, PLACING	3,000	LB
504.71	STRUCTURAL STEEL ERECTION (24,000 LB)	1	LS
511.07	COFFERDAM ABUTMENT NO.1	1	LS
511.07	COFFERDAM ABUTMENT NO.2	1	LS
512.081	FRENCH DRAINS (45 LF)	1	LS
514.06	CURING BOX for CONCRETE CYLINDERS	1	EA
515.21	PROTECTIVE COATING for CONCRETE SURFACES (110 SY)	1	LS
535.30	PRECAST DECK PANEL-STATE SUPPLIED (19 CY)	1	LS
606.21	GUARDRAIL TYPE 3B-15 FOOT RADIUS and LESS	60	LF
606.265	TERMINAL END-SINGLE RAIL-GALVANIZED STEEL	4	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	6	EA
606.74	GUARDRAIL TYPE 3-SINGLE RAIL BRIDGE MOUNTED	87	LF
610.08	PLAIN RIPRAP	50	CY
610.16	HEAVY RIPRAP	100	CY
619.1401	EROSION CONTROL MIX	50	CY
620.58	NONWOVEN GEOTEXTILE	60	SY
629.05	HAND LABOR, STRAIGHT TIME	10	HR
631.12	ALL PURPOSE EXCAVATOR, INCLUDING OPERATOR	10	HR
631.13	BULLDOZER, INCLUDING OPERATOR	10	HR
631.172	TRUCK-LARGE, INCLUDING OPERATOR	10	HR
639.19	FIELD OFFICE	1	EA
652.312	TYPE III BARRICADE	2	EA
652.33	DRUM	10	EA
652.34	CONE	10	EA
652.35	CONSTRUCTION SIGNS	50	SF
652.36	MAINTENANCE of TRAFFIC ONTROL DEVICES	150	CD
656.75	TEMPORARY SOIL EROSION and WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS
	BULL BRANCH BRIDGE NO. 2 #0792		
202.19	REMOVE EXISTING BRIDGE	1	LS
203.24	COMMON BORROW	50	CY
203.25	GRANULAR BORROW	100	CY
304.10	AGGREGATE SUBBASE COURSE- GRAVEL	100	CY
502.219	STRUCTURAL CONCRETE, ABUTMENTS and RETAINING WALLS (85 CY)	1	LS
502.49	STRUCTURAL CONCRETE, CURBS and SIDEWALK (3 CY)	1	LS
502.56	CONCRETE FILL	50	CY
503.13	REINFORCING STEEL, PLACING	3,000	LB
504.71	STRUCTURAL STEEL ERECTION (24,000 LB)	1	LS
511.07	COFFERDAM ABUTMENT NO.3	1	LS
511.07	COFFERDAM ABUTMENT NO.4	1	LS
512.081	FRENCH DRAINS (45 LF)	1	LS
514.06	CURING BOX for CONCRETE CYLINDERS	1	EA
515.21	PROTECTIVE COATING for CONCRETE SURFACES (110 SY)	1	LS
535.30	PRECAST DECK PANEL-STATE SUPPLIED (19 CY)	1	LS
606.21	GUARDRAIL TYPE 3B-15 FOOT RADIUS and LESS	60	LF
606.265	TERMINAL END-SINGLE RAIL-GALVANIZED STEEL	4	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	6	EA
606.74	GUARDRAIL TYPE 3-SINGLE RAIL BRIDGE MOUNTED	87	LF
610.08	PLAIN RIPRAP	50	CY
610.16	HEAVY RIPRAP	100	CY
619.1401	EROSION CONTROL MIX	50	CY
620.58	NONWOVEN GEOTEXTILE	140	SY
629.05	HAND LABOR, STRAIGHT TIME	10	HR
631.12	ALL PURPOSE EXCAVATOR, INCLUDING OPERATOR	10	HR
631.13	BULLDOZER, INCLUDING OPERATOR	10	HR
631.172	TRUCK-LARGE, INCLUDING OPERATOR	10	HR
652.312	TYPE III BARRICADE	2	EA
652.33	DRUM	10	EA
652.34	CONE	10	EA
652.35	CONSTRUCTION SIGNS	50	SF
652.36	MAINTENANCE of TRAFFIC ONTROL DEVICES	150	CD
656.75	TEMPORARY SOIL EROSION and WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

1. During construction, the road will be closed to traffic.

2. Place a 30" wide strip of temporary erosion control blanket on the side slopes along the top of the riprap and behind the wingwalls.

3. All embankment material shall be granular borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

4. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.

5. In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6" or less thick will be made under appropriate equipment rental items.

6. Stones which cannot be rolled or compacted into the surface of the shoulder shall be removed by hand raking. Payment for hand raking will be considered incidental to Item 304.10, Aggregate Subbase Course - Gravel.

7. Extended-use erosion control blanket, seeded gutters, riprap downspouts, and other gutters lined with stone ditch protection shall be constructed after paving and shoulder work is completed, where it is apparent that runoff will cause continual erosion. Payment will be made under appropriate Contract items.

8. Protective coating for concrete surfaces shall be applied to the following areas:
   - All exposed surfaces of concrete curbs.
   - Fascia down to drip notch.
   - Concrete wearing surfaces.

9. Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specification 619. Mulch. Payment will be made under Item 619.1401 Erosion Control Mix.

10. Payment for all excavation shall be considered incidental to related contract items.

11. At the direction of the Resident, any ledge encountered may be used as a foundation. Cleaning of ledge before placing concrete shall be considered incidental to Item 502.56, Concrete Fill.

12. Cutting and clearing of trees is expected to be minimal and shall be considered incidental to Item 610.16, Heavy Riprap.

13. The finished roadway grade shall be constructed as to match the grade at the top of the wearing surface at the backwall of the abutments, on one end, and match into the roadway at the project limits. Crown the roadway wherever possible.

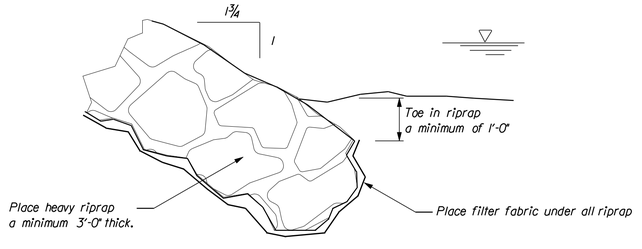
14. Place Plain Riprap outside of the limits of Heavy Riprap where soil has been disturbed and where there are new or reconstructed sideslopes or as directed by the Resident.

15. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid Amount with no addition or reduction in payment to the Contractor if the final quantities are different from the MaineDOT provided estimated quantities except as follows:

   a. If a Lump Sum pay item is eliminated the requirements of Standard Specifications Section 109.2, "Elimination of Items" will take precedence.

   b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.

   c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, "Equitable Adjustments to Compensation".



TYPICAL RIPRAP SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BULL BRANCH/BULL BRANCH 2
OVER
BULL BRANCH STREAM
IN
RILEY TWP.
OXFORD COUNTY

ESTIMATED QUANTITIES

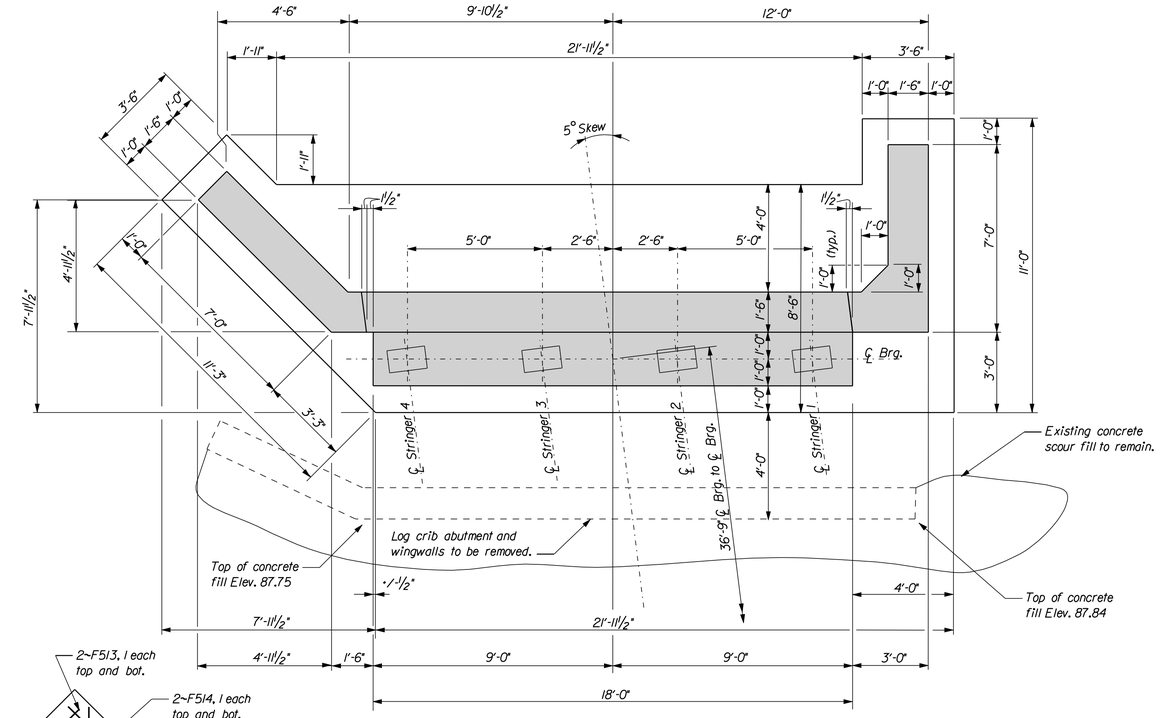
PLANS

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	$designer1$	$detailer1$
CHECKED	$PCF_CHECKED1$	$PCF_CHECKED2$
REVISIONS	$PCF_REVISION1$	$PCF_REVISION2$
FIELD CHANGES		

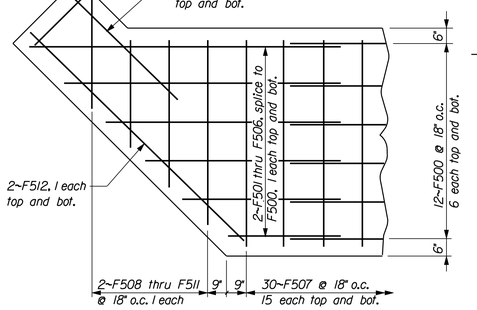
$projdate1$ (PROJECT DATE)
$PCF_CHECKDATE$ (CHECKDATE)
$revdate1$

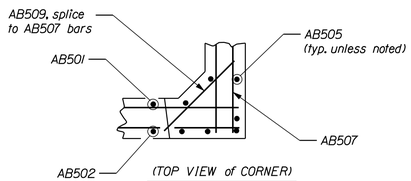
Filename: ...\rileytwp0792.dgn Division: MAINT Username: Lewis.Benner Date:8/16/2010

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Bridge #0792	4	14

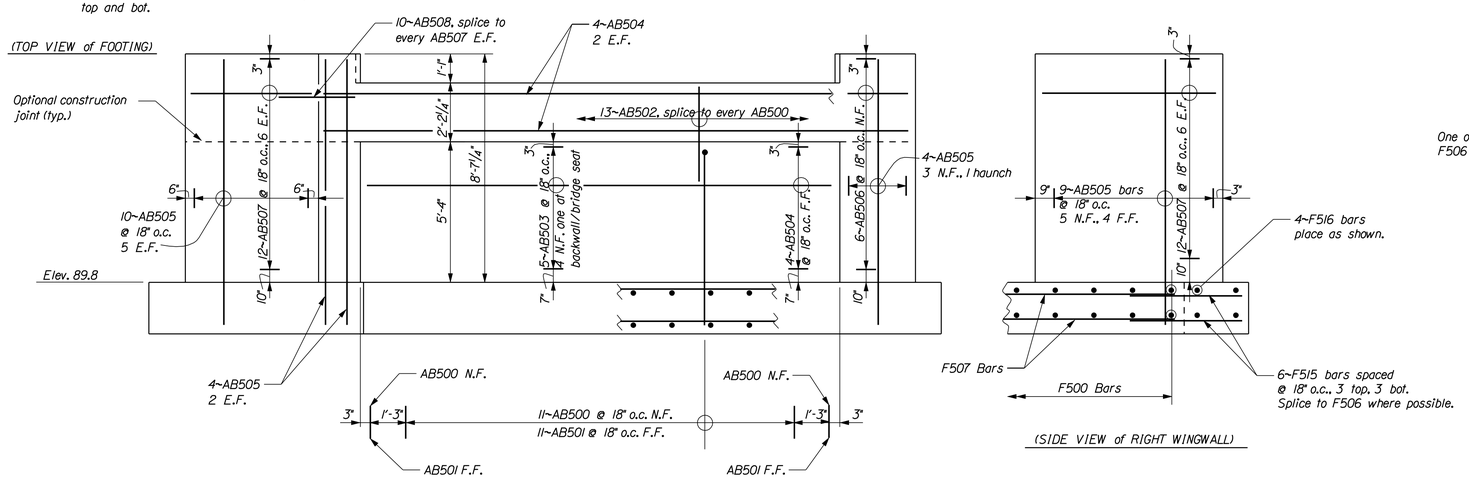


ABUTMENT NO. 1 PLAN VIEW



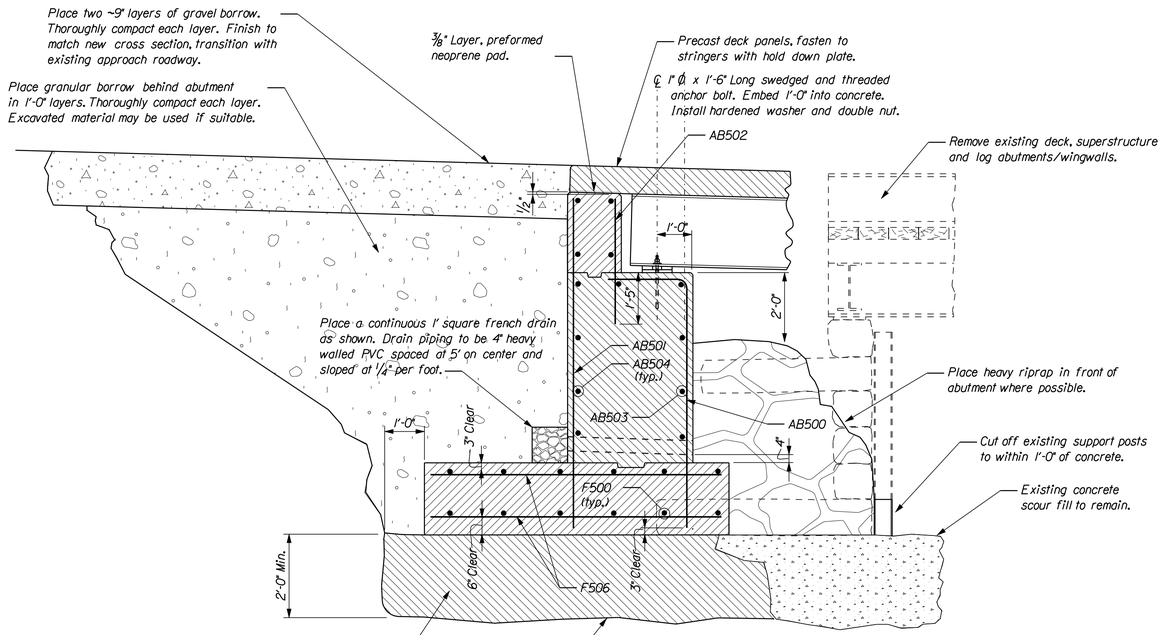


(TOP VIEW of CORNER)

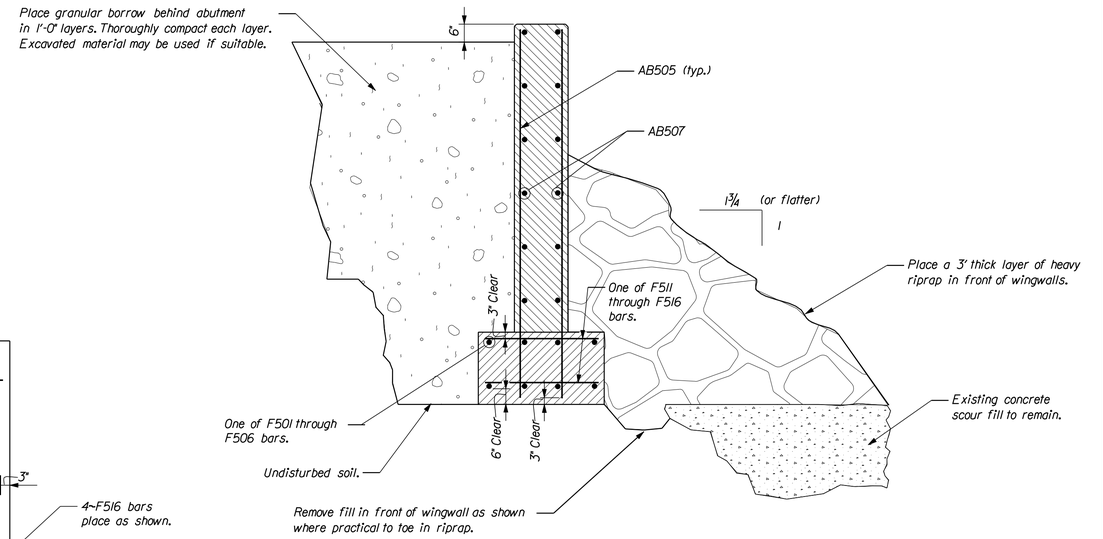


ABUTMENT NO. 1 ELEVATION VIEW

(SIDE VIEW of RIGHT WINGWALL)



TYPICAL SECTION THROUGH ABUTMENT



TYPICAL SECTION THROUGH WINGWALL

LEGEND

E.F. .....Each Face
N.F. .....Near Face
F.F. .....Far Face

Section view of new concrete

Section view of existing concrete

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	LSBenner	4/2010
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

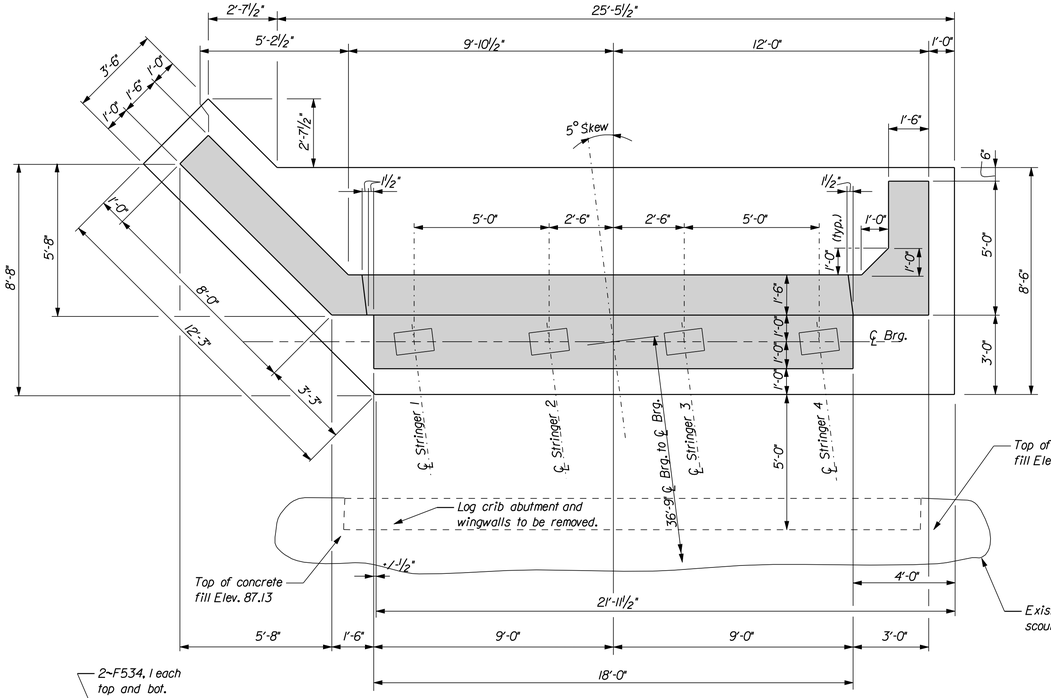
Filename: ...\rileywp0792.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

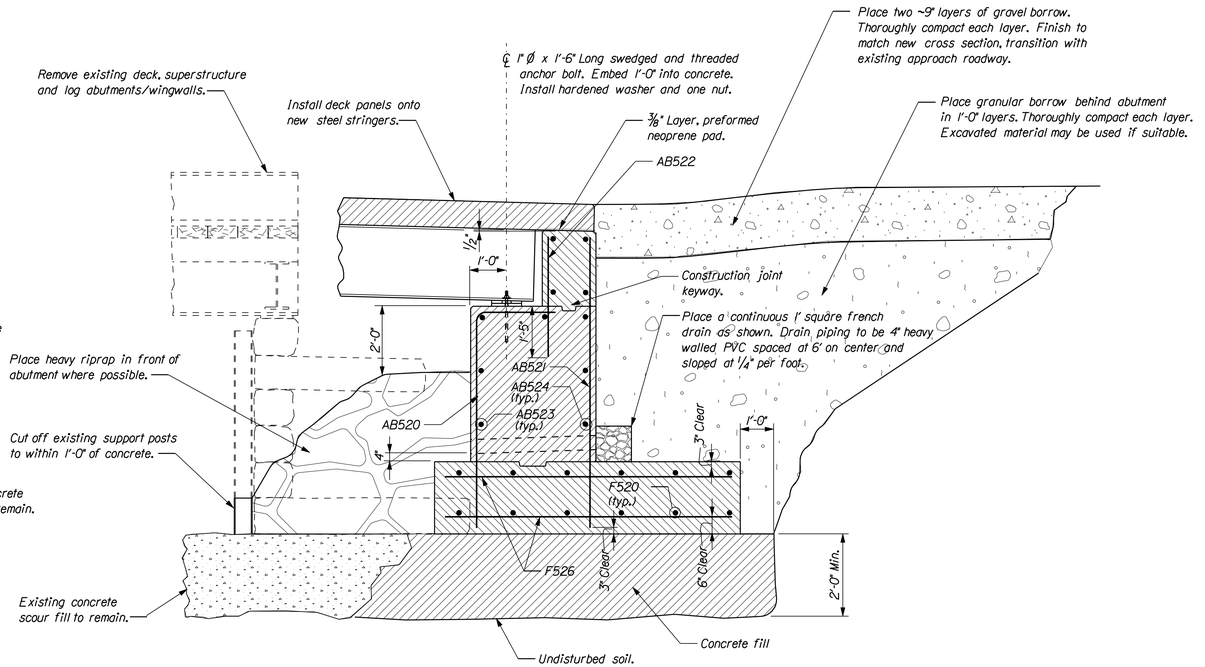
BULL BRANCH No. 2
OVER
BULL BRANCH STREAM
IN
RILEY TWP.
OXFORD COUNTY

ABUTMENT NO. 1

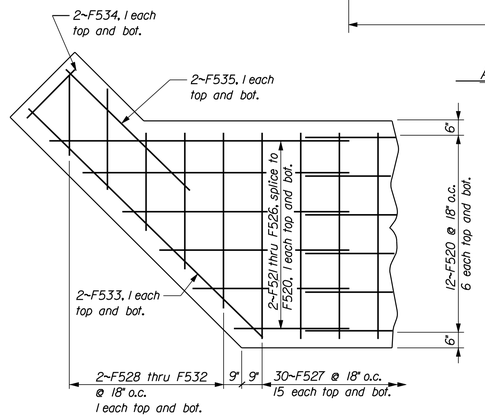
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Bridge #0792	5	14

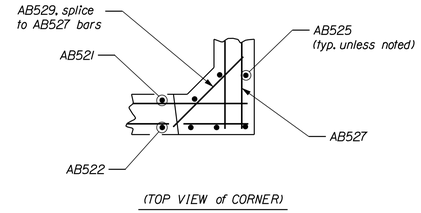


ABUTMENT NO. 2 PLAN VIEW

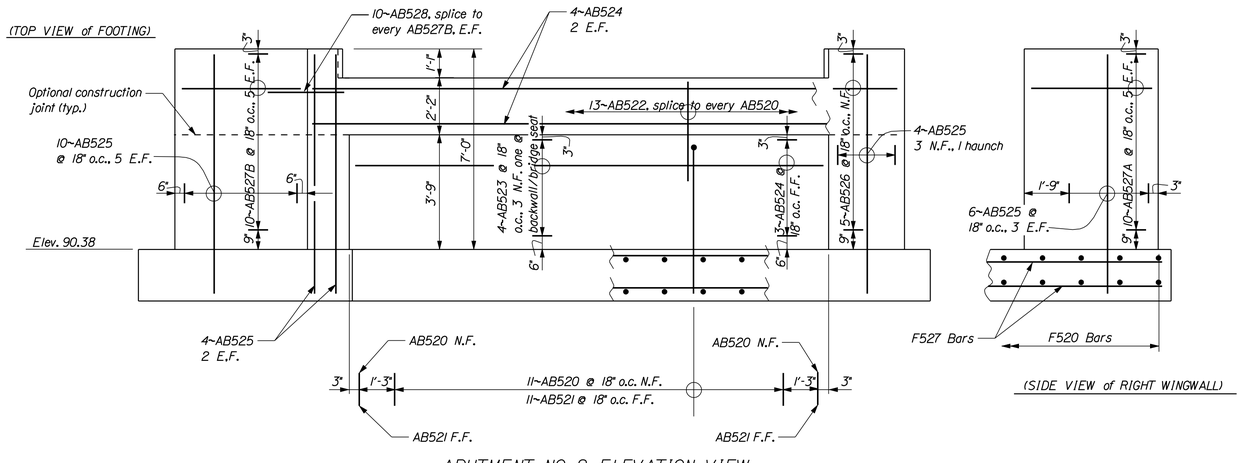


TYPICAL SECTION THROUGH ABUTMENT



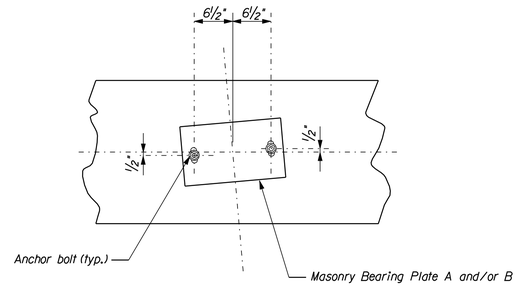


(TOP VIEW of CORNER)

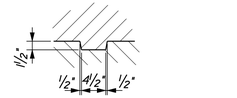


ABUTMENT NO. 2 ELEVATION VIEW

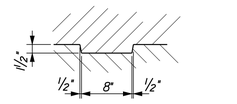
(SIDE VIEW of RIGHT WINGWALL)



BEARING PLAN VIEW



BACKWALL KEYWAY (TYP.)



FOOTING KEYWAY (TYP.)

LEGEND

E.F. .....Each Face
N.F. .....Near Face
F.F. .....Far Face

Section view of new concrete

Section view of existing concrete

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	LSBenner	2/2010
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

Filename: ...\riley\wp0792.dgn

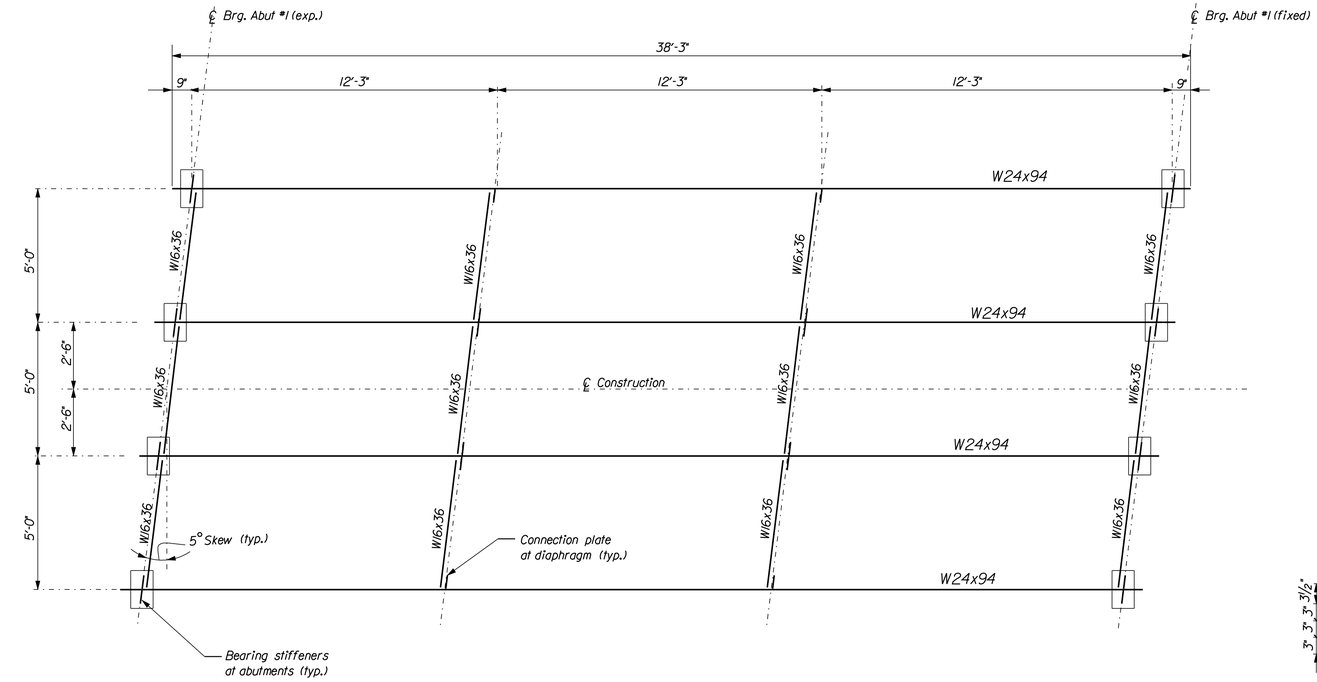
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BULL BRANCH No. 2
OVER
BULL BRANCH STREAM
IN
RILEY TWP.
OXFORD COUNTY

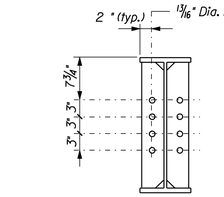
ABUTMENT NO. 2

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Bridge #0792	6	14

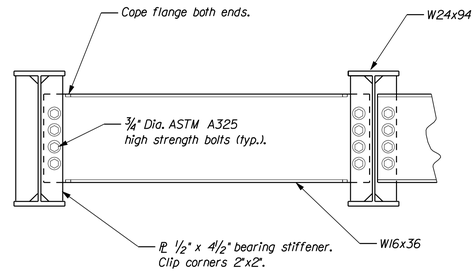
Date:8/16/2010



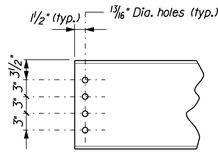
FRAMING PLAN



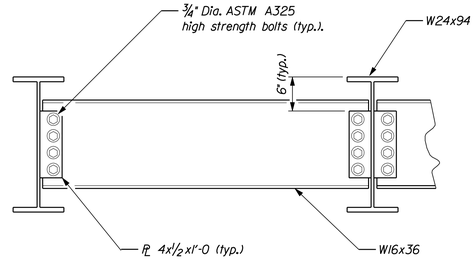
BEARING STIFFENER HOLE LAYOUT



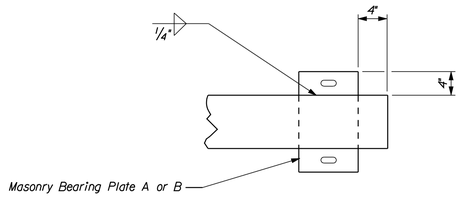
DIAPHRAGM ELEVATION
(At abutment bearings)



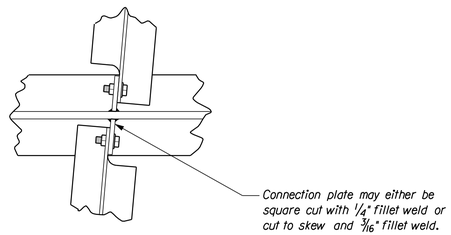
DIAPHRAGM (W16x36) HOLE LAYOUT



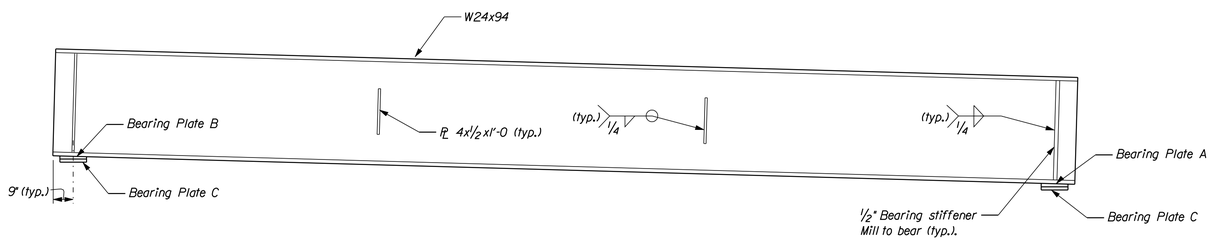
DIAPHRAGM ELEVATION
(At intermediate diaphragms)



TYPICAL BEAM END



DIAPHRAGM CONNECTION



STRINGER ELEVATION

GENERAL STEEL NOTES

1...W24x94 to be Charpy V notch tested with values of 15 foot/lbs. @ 40 degrees F. frequency H.

2...Fabrication shall conform to Section 504 of Maine Dept. of Transportation Specification Revision of December 2002.

3...All steel and hardware to be hot dipped galvanized in accordance with ASTM A123 and A153. Steel substrate shall be abrasive blast cleaned to a minimum of SSPC SP6/NACE 3 prior to galvanizing.

4...Beams to be fabricated with assumed natural camber up.

5...Material shall be properly packaged/labeled in order to distinguish Bull Branch bridge and Bull Branch No. 2 bridge.

6...Shop drawings will be required. Welding procedure specifications shall be submitted prior to fabrication.

7...Rubber/neoprene pads shall be placed under stub guardrail posts, under deck panels on top of both stringer flanges and backwall as well as under bearings.

8...Add 5% to hardware quantity needed including washers and nuts.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	B. Doukas	L.S.Benner	2/2010
CHECKED		
REVISIONS		
FIELD CHANGES		

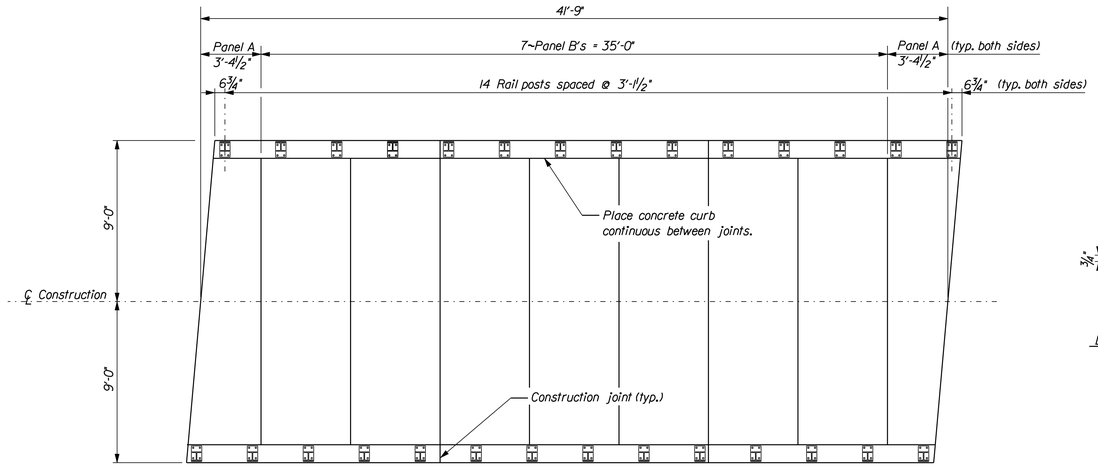
PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

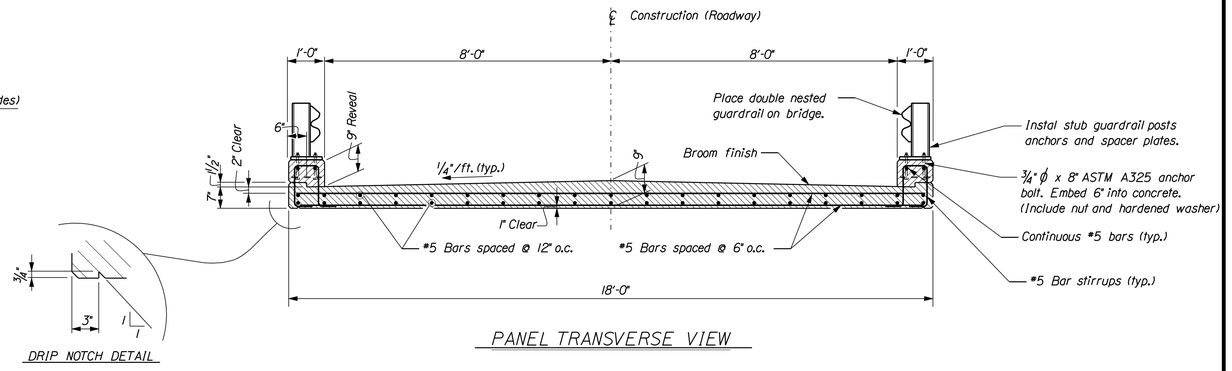
BULL BRANCH No. 2
OVER
BULL BRANCH STREAM
IN
RILEY TWP.
OXFORD COUNTY

FRAMING PLAN

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Bridge #0792	7	14

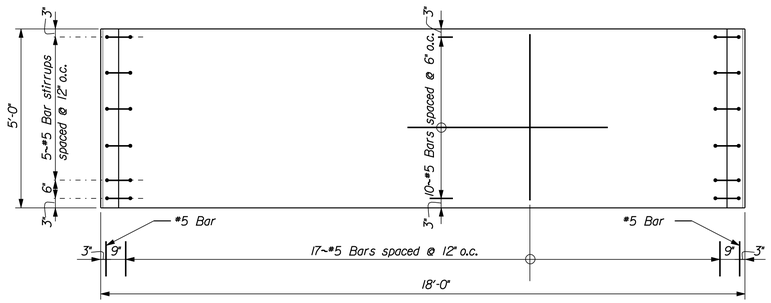


PLAN VIEW

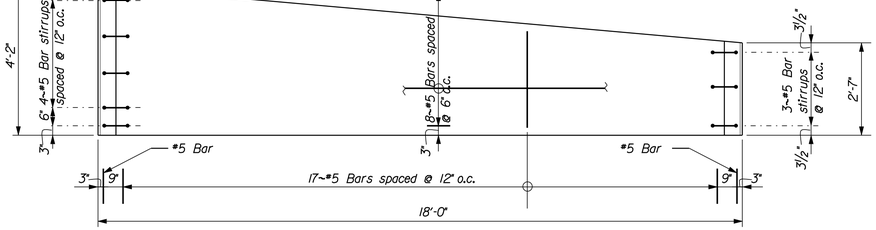


DRIP NOTCH DETAIL

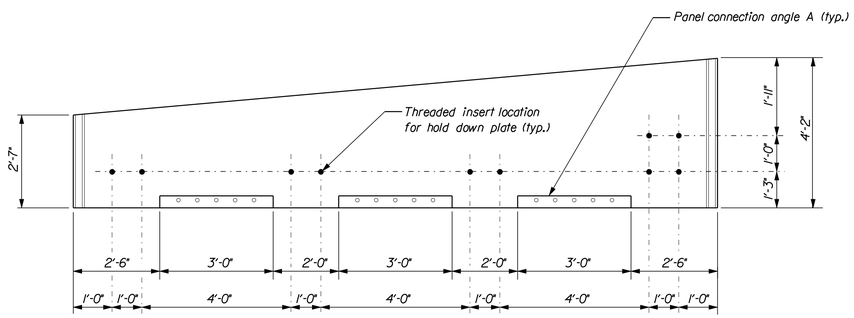
PANEL TRANSVERSE VIEW



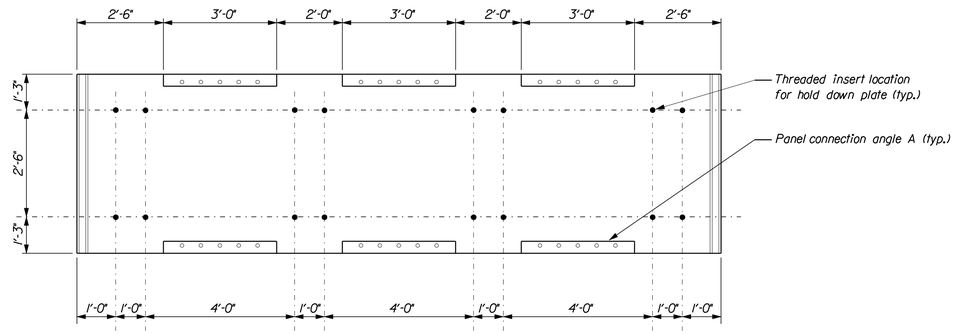
PANEL "B" TOP VIEW



PANEL "A" TOP VIEW



PANEL "A" BOTTOM VIEW



PANEL "B" BOTTOM VIEW

LEGEND

Section view of new concrete

GENERAL NOTES

1...Chamfer all exposed edges of concrete 3/4".

2...All reinforcing steel shall have a minimum of 2" of clearance.

3...Reinforcing steel splice lengths for #5 bar is 1'-9".

4...All steel material shall be hot-dipped galvanized.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

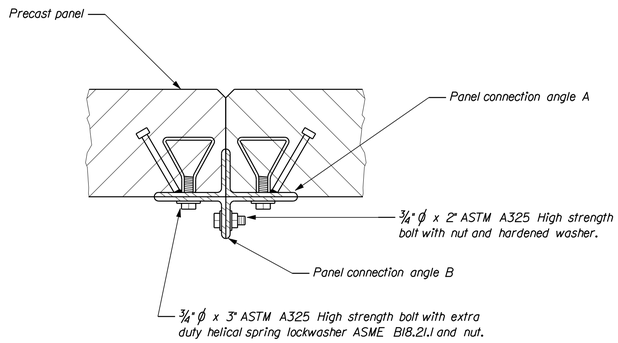
BULL BRANCH OVER BULL BRANCH STREAM IN RILEY TWP. OXFORD COUNTY

SUPERSTRUCTURE

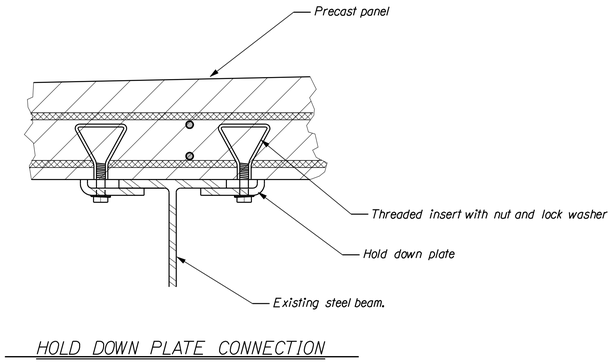
PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	Ben Foster	LSBenner	12/2008
	CHECKED			
	REVISIONS			
	FIELD CHANGES			

Filename: ...\rileytwp0792.dgn Username: Lewis.Benner

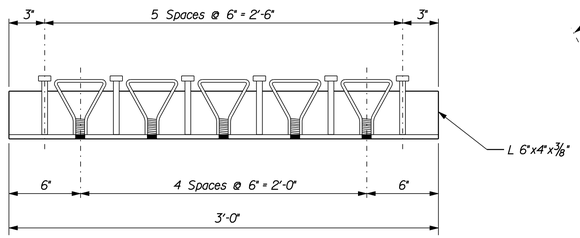
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Bridge #0792	8	14



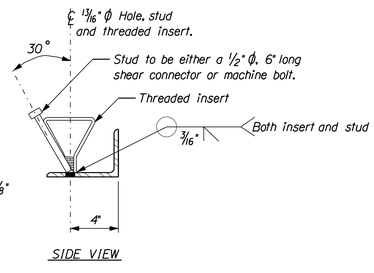
TYPICAL SECTION AT PANEL ENDS



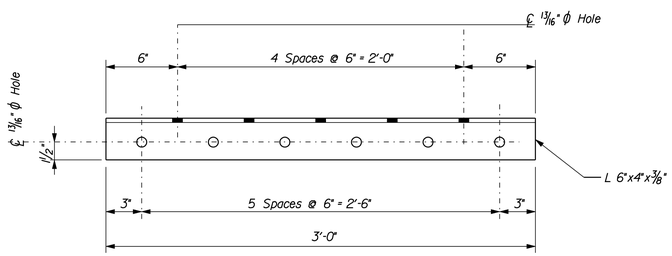
HOLD DOWN PLATE CONNECTION



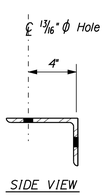
PANEL CONNECTION ANGLE A



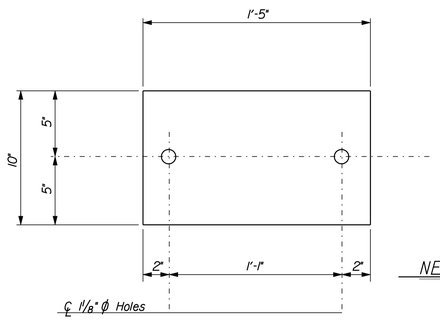
SIDE VIEW



PANEL CONNECTION ANGLE B

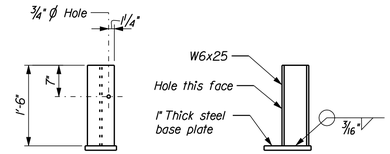


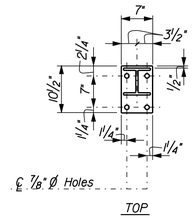
SIDE VIEW



NEOPRENE/RUBBER PAD

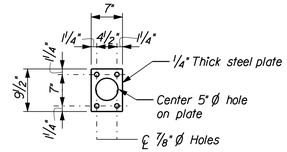
(8 Req'd)





STUB POST DETAILS

(28 Req'd)



SPACER PLATE DETAIL

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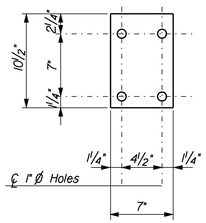
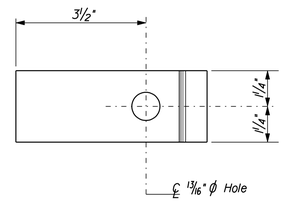
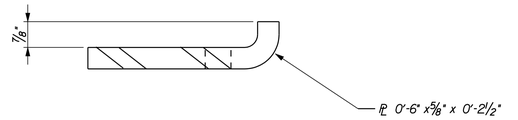


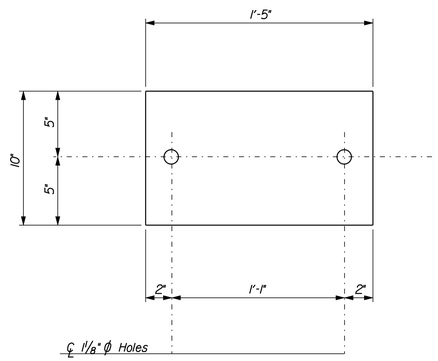
NEOPRENE/RUBBER POST PAD

(28 Req'd)



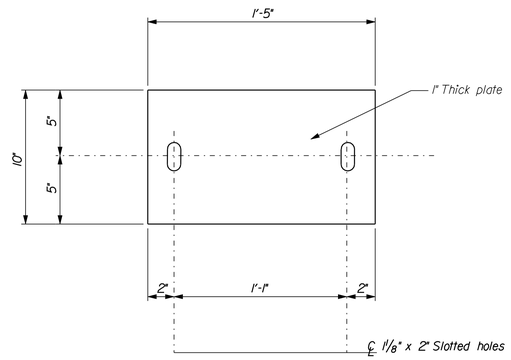


HOLD DOWN PLATE DETAIL



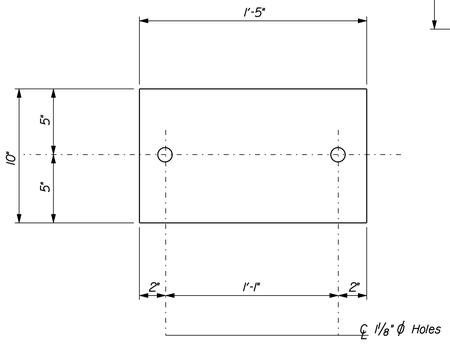
BEARING PLATE A

(4 Req'd)



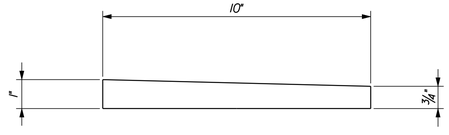
BEARING PLATE B

(4 Req'd)



BEARING PLATE C

(8 Req'd)



PROFILE for BEARING PLATES A & B

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	Ben Foster	12/2008
CHECKED	LSBenner	
REVISIONS		
FIELD CHANGES		

PLANS

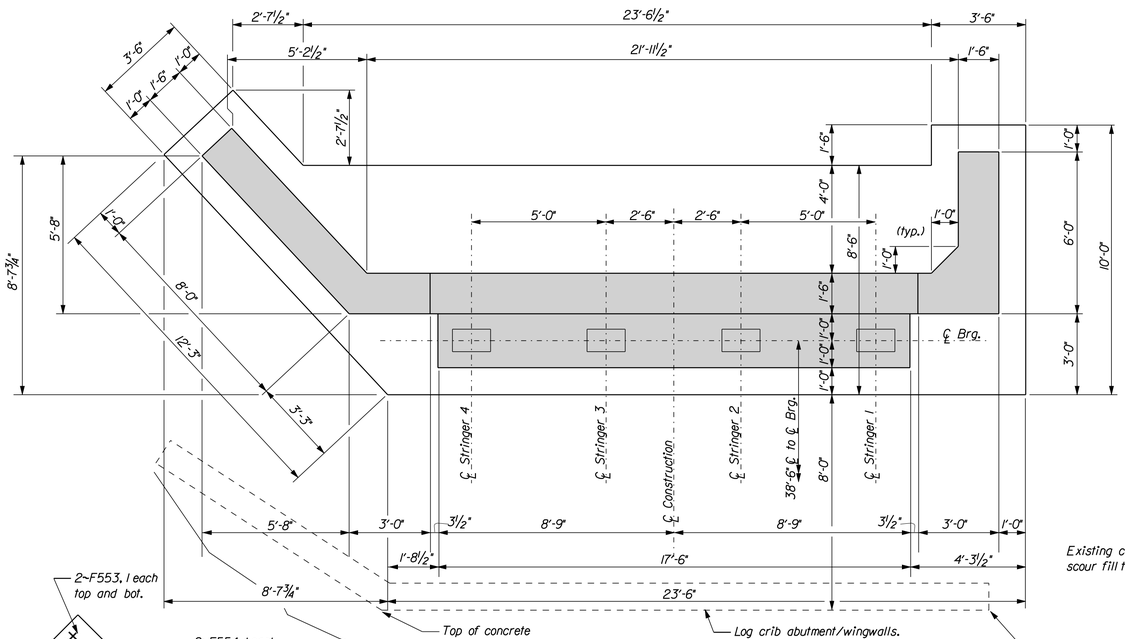
Filename: ...\riley\twp0792.dgn Username: Lewis.Benner

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

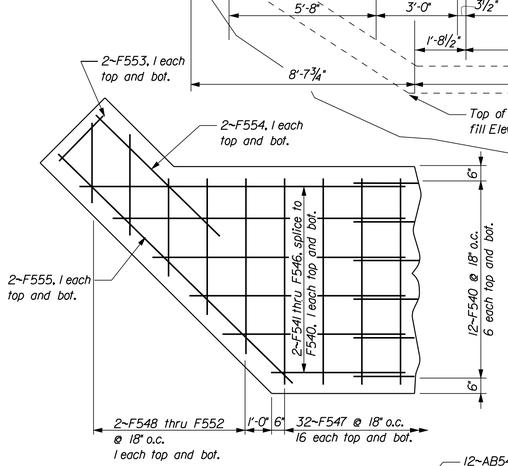
BULL BRANCH
OVER
BULL BRANCH STREAM
IN
RILEY TWP.
OXFORD COUNTY

ASSORTED DETAILS

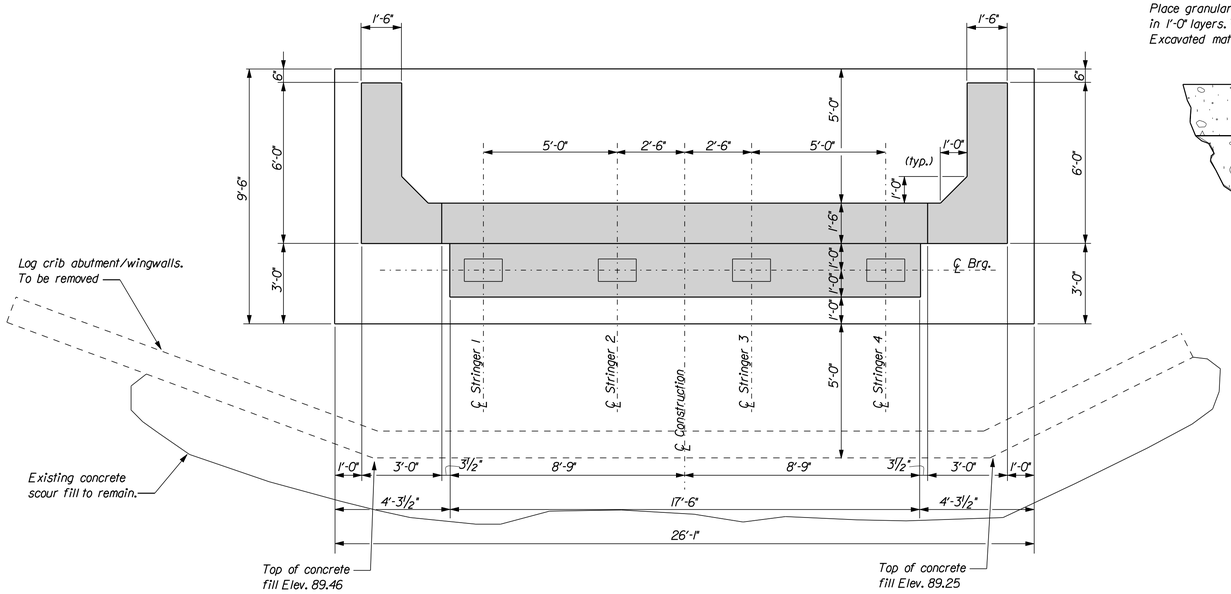
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Bridge #5855	9	14



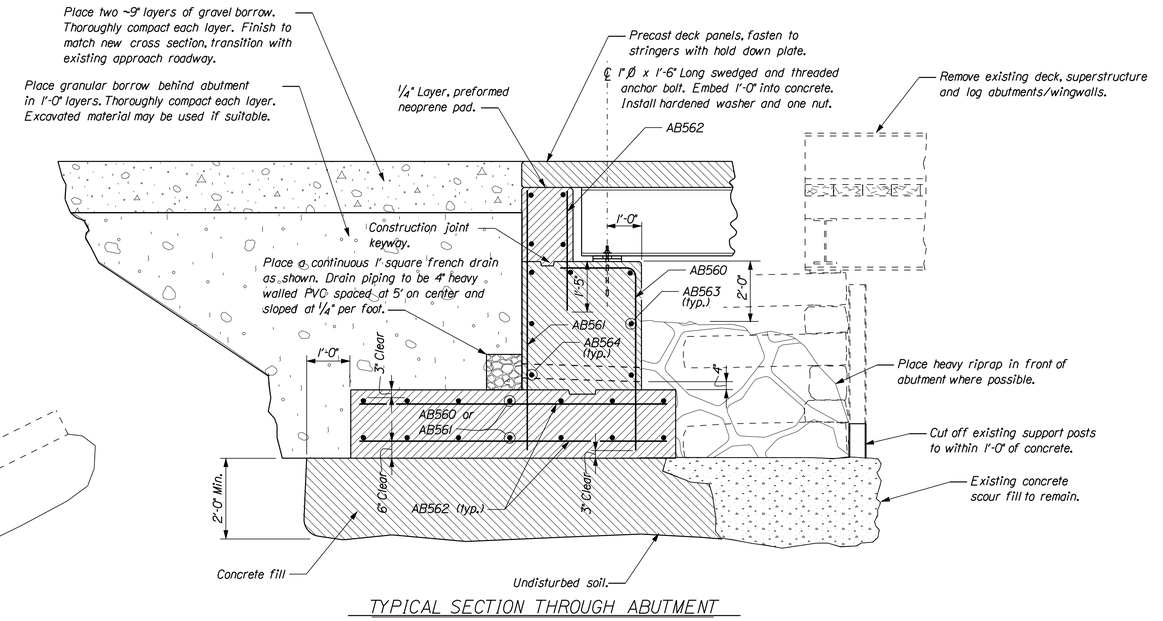
ABUTMENT NO. 3 PLAN VIEW



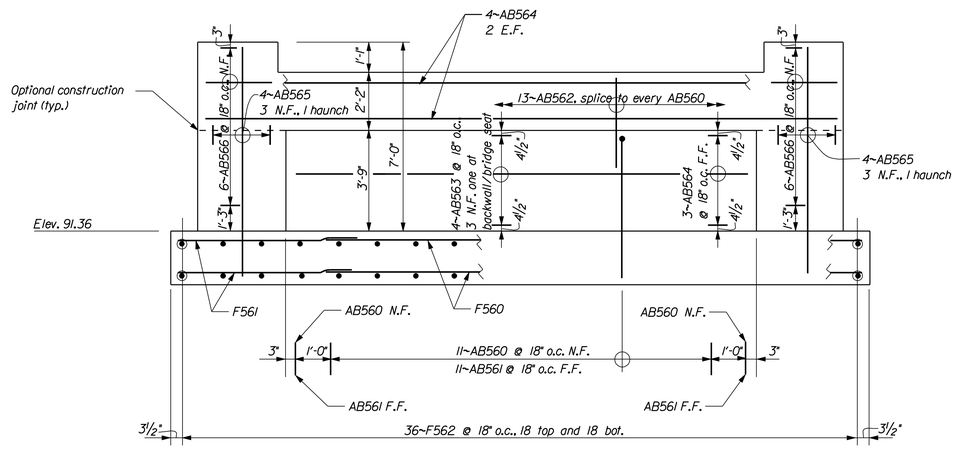
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Bridge #5855	10	14



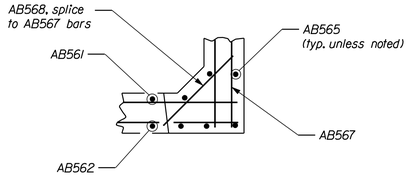
ABUTMENT NO. 4 PLAN VIEW



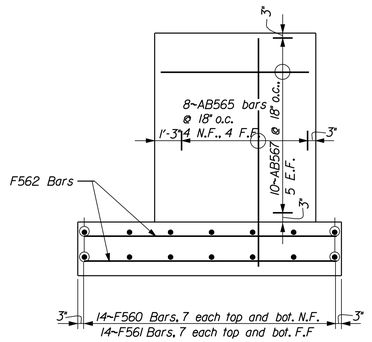
TYPICAL SECTION THROUGH ABUTMENT



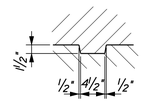
ABUTMENT NO. 4 ELEVATION VIEW



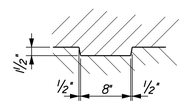
(TOP VIEW of CORNER)



(SIDE VIEW of RIGHT WINGWALL)
(Left wingwall is similar)



BACKWALL KEYWAY (TYP.)



FOOTING KEYWAY (TYP.)

LEGEND

E.F. .....Each Face
N.F. .....Near Face
F.F. .....Far Face

Section view of new concrete

Section view of existing concrete

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BULL BRANCH OVER BULL BRANCH STREAM IN RILEY TWP. OXFORD COUNTY

ABUTMENT NO. 4

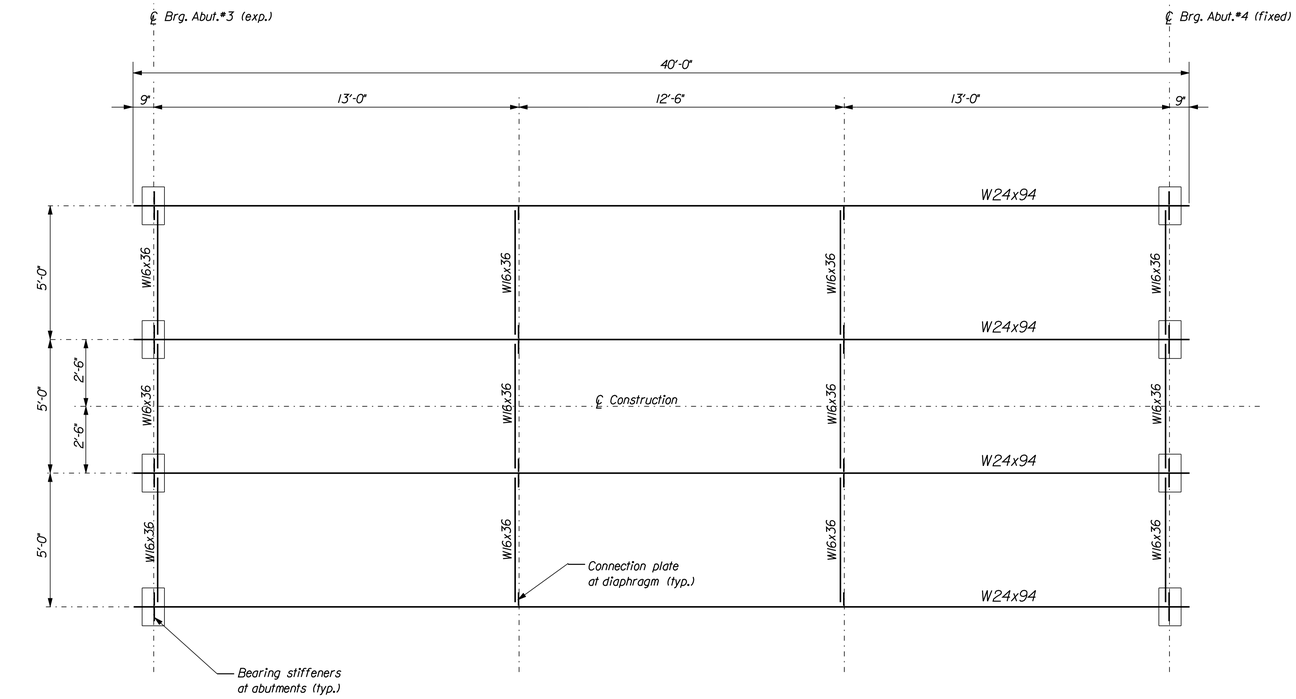
PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	LSBenner	2/2010
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

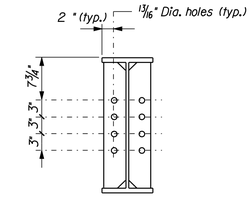
Filename: ...\rileytwp0792.dgn

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Bridge #5855	11	14

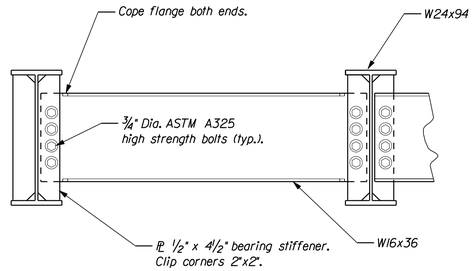
Date:8/16/2010



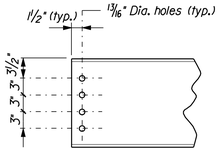
FRAMING PLAN



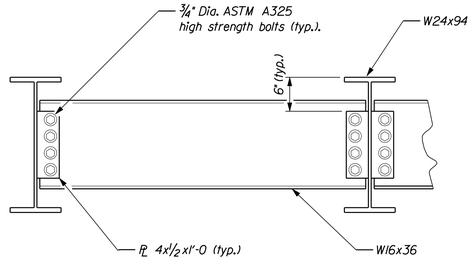
BEARING STIFFENER HOLE LAYOUT



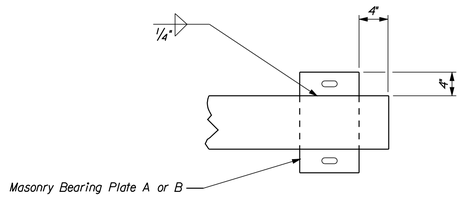
DIAPHRAGM ELEVATION
(At abutment bearings)



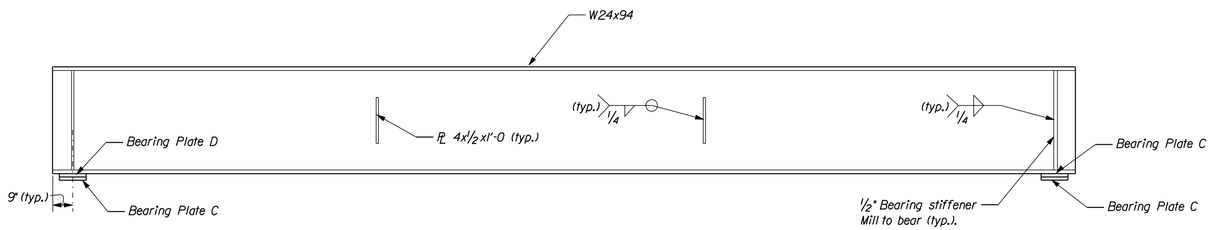
DIAPHRAGM (W16x36) HOLE LAYOUT



DIAPHRAGM ELEVATION
(At intermediate diaphragms)



TYPICAL BEAM END



STRINGER ELEVATION

GENERAL STEEL NOTES

1...W24x94 to be Charpy V notch tested with values of 15 foot/lbs. @ 40 degrees F. frequency H.

2...Fabrication shall conform to Section 504 of Maine Dept. of Transportation Specification Revision of December 2002.

3...All steel and hardware to be hot dipped galvanized in accordance with ASTM A123 and A153. Steel substrate shall be abrasive blast cleaned to a minimum of SSPC SP6/NACE 3 prior to galvanizing.

4...Beams to be fabricated with assumed natural camber up.

5...Material shall be properly packaged/labeled in order to distinguish Bull Branch bridge and Bull Branch No. 2 bridge.

6...Shop drawings will be required. Welding procedure specifications shall be submitted prior to fabrication.

7...Rubber/neoprene pads shall be placed under stub guardrail posts, under deck panels on top of both stringer flanges and backwall as well as under bearings.

8...Add 5% to hardware quantity needed including washers and nuts.

PROJECT DESIGN ENGINEER		BY	DATE
DESIGN DETAILED	B. Doukas	L.S.Benner	2/2010
CHECKED			
REVISIONS			
FIELD CHANGES			

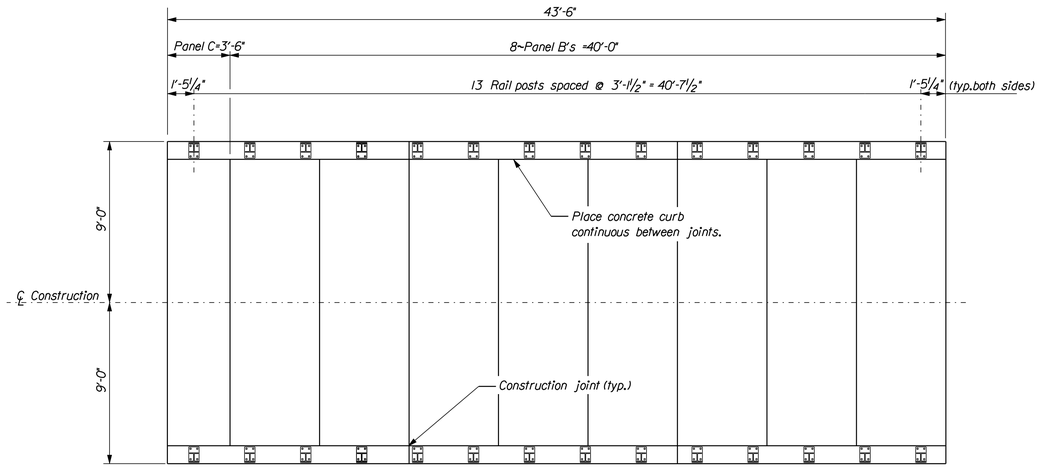
PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

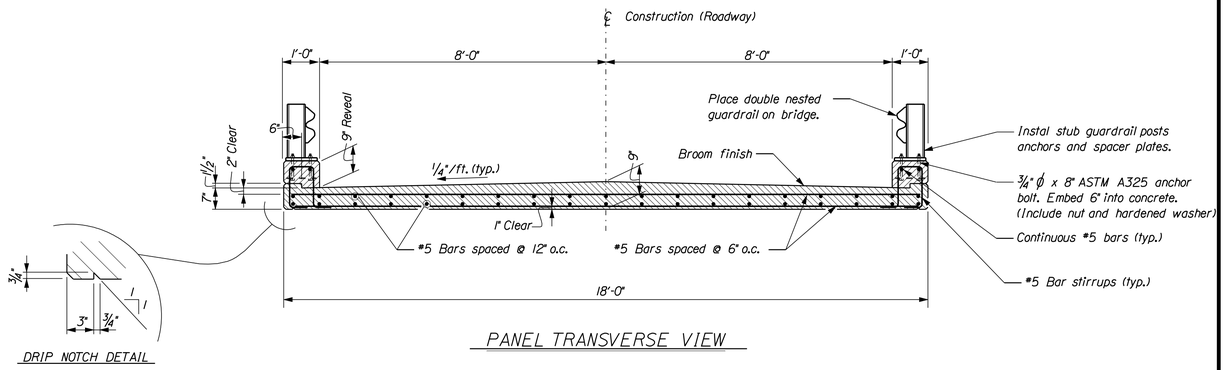
BULL BRANCH
OVER
BULL BRANCH STREAM
IN
RILEY TWP.
OXFORD COUNTY

FRAMING PLAN

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Bridge #5855	12	14

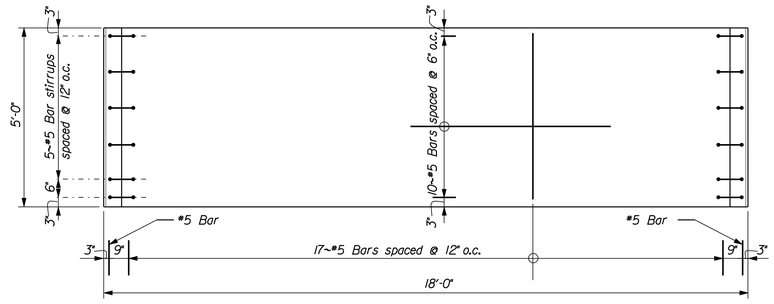


PLAN VIEW

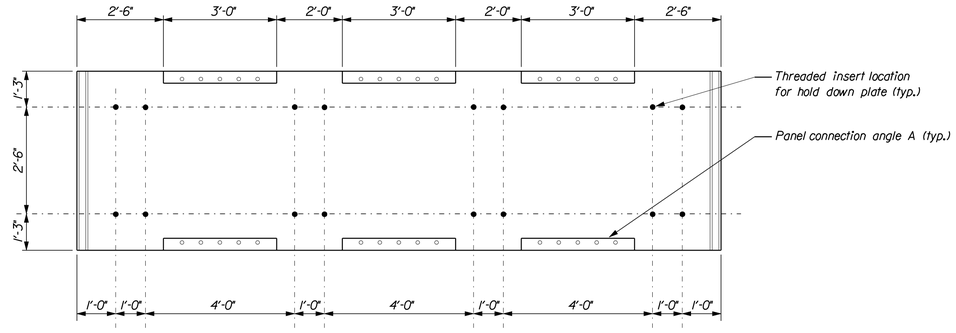


DRIP NOTCH DETAIL

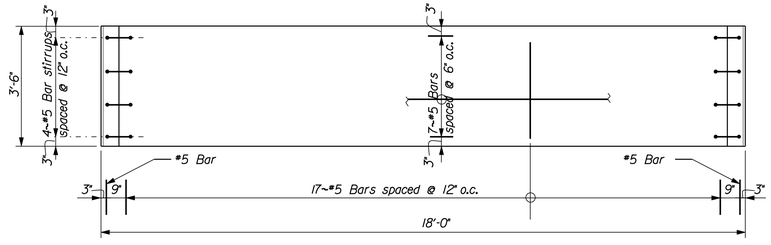
PANEL TRANSVERSE VIEW



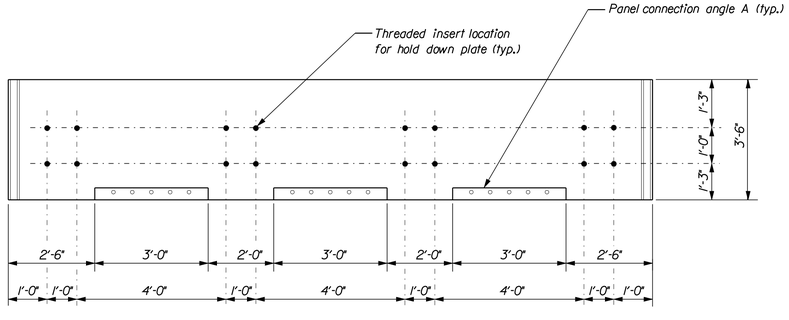
PANEL "B" TOP VIEW



PANEL "B" BOTTOM VIEW



PANEL "C" TOP VIEW



PANEL "C" BOTTOM VIEW

LEGEND

Section view of new concrete

GENERAL NOTES

1...Chamfer all exposed edges of concrete 3/4"

2...All reinforcing steel shall have a minimum of 2" of clearance.

3...Reinforcing steel splice lengths for #5 bar is 1'-9".

4...All steel material shall be hot-dipped galvanized.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BULL BRANCH OVER BULL BRANCH STREAM IN RILEY TWP. OXFORD COUNTY

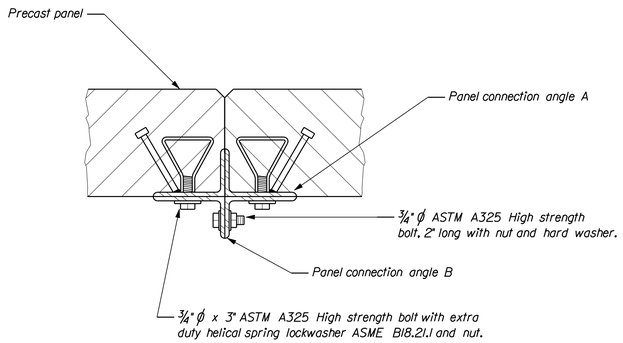
SUPERSTRUCTURE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	Ben Foster	LSBenner	12/2008
CHECKED			
REVISIONS			
FIELD CHANGES			

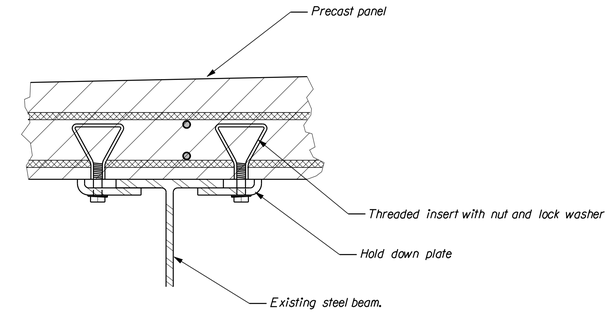
PLANS

Filename: ...\riley\twp0792.dgn Username: Lewis.Benner

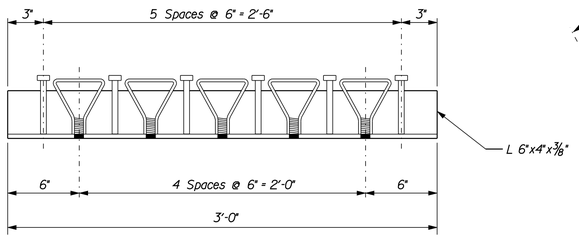
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Bridge #5855	13	14



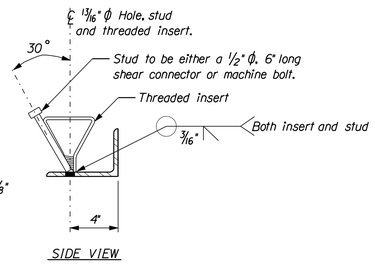
TYPICAL SECTION AT PANEL ENDS



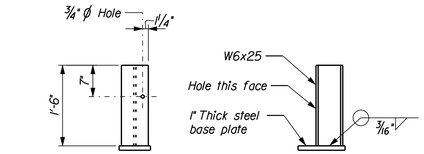
HOLD DOWN PLATE CONNECTION



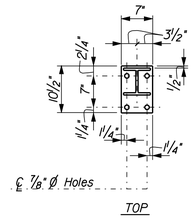
PANEL CONNECTION ANGLE A

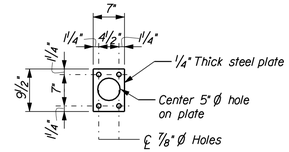


SIDE VIEW

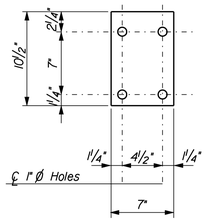


STUB POST DETAILS
(26 Req'd)

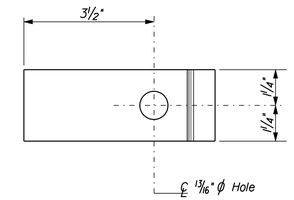


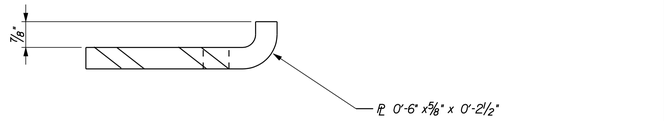


SPACER PLATE DETAIL
(26 Req'd)

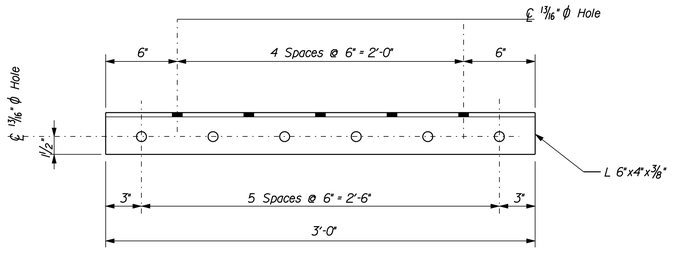


NEOPRENE/RUBBER POST PAD
(26 Req'd)

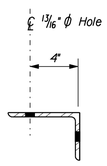


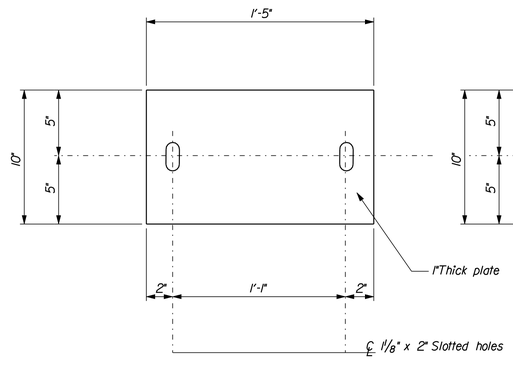


HOLD DOWN PLATE DETAIL

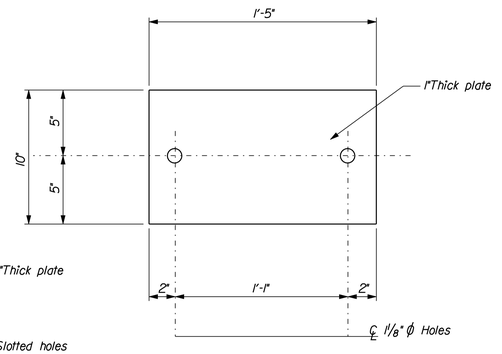


PANEL CONNECTION ANGLE B

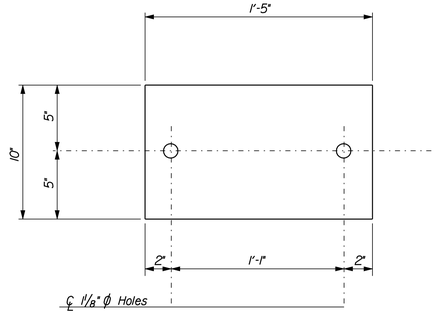




BEARING PLATE D
(4 Req'd)



BEARING PLATE C
(12 Req'd)



NEOPRENE/RUBBER PAD
(8 Req'd)

PROJECT DESIGN ENGINEER		BY	DATE
	DESIGN-DETAILED	Ben Foster	LSBenner	12/2008
PLANS	CHECKED			
	REVISIONS			
	FIELD CHANGES			

Filename: ...\rileytwp0792.dgn Username: Lewis.Benner

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BULL BRANCH OVER BULL BRANCH STREAM IN RILEY TWP. OXFORD COUNTY

ASSORTED DETAILS

REINFORCING STEEL SCHEDULE

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	Br.# 0792/5855	14	14

STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION
F500	12	20'-0"	Abutment No. 1 Footing	F540	12	20'-0"	Abutment No. 3 Footing
F501	2	3'-9"		F541	2	3'-6"	
F502	2	5'-3"		F542	2	5'-0"	
F503	2	6'-9"		F543	2	6'-6"	
F504	2	8'-3"		F544	2	8'-0"	
F505	2	9'-9"		F545	2	9'-6"	
F506	2	11'-3"		F546	2	11'-0"	
F507	30	8'-0"		F547	32	8'-0"	
F508	2	7'-3"		F548	2	7'-0"	
F509	2	5'-9"		F549	2	5'-6"	
F510	2	4'-3"		F550	2	4'-0"	
F511	2	4'-3"		F551	2	2'-6"	
F512	2	11'-3"		F552	2	2'-0"	
F513	2	3'-0"		F553	2	3'-0"	
F514	2	4'-6"		F554	2	6'-0"	
F515	6	4'-3"		F555	2	12'-0"	
F516	4	3'-0"		F556	2	3'-0"	
AB501	13	9'-1"	Abutment No. 1	F557	6	3'-3"	
AB502	13	3'-5"		AB541	13	7'-6"	Abutment No. 3
AB503	5	17'-8"		AB542	13	3'-5"	
AB504	8	22'-0"		AB543	4	17'-2"	
AB505	28	10'-2"		AB544	7	23'-9"	
AB506	6	2'-8"		AB545	30	8'-7"	
AB507	24	6'-6"		AB546	6	2'-8"	
AB509	6	4'-0"		AB547	10	5'-8"	
				AB548	12	7'-8"	
				AB550	5	4'-0"	
F520	12	20'-0"	Abutment No. 2 Footing				
F521	2	3'-9"					
F522	2	5'-3"		F560	14	20'-0"	Abutment No. 4 Footing
F523	2	6'-9"		F561	14	7'-6"	
F524	2	8'-3"		F562	36	9'-0"	
F525	2	9'-9"		AB561	13	7'-6"	Abutment No. 4
F526	2	11'-3"		AB562	13	3'-5"	
F527	30	8'-0"		AB563	4	17'-2"	
F528	2	7'-3"		AB564	7	23'-9"	
F529	2	5'-9"		AB565	24	8'-7"	
F530	2	4'-3"		AB566	12	2'-8"	
F531	2	2'-9"		AB567	10	5'-8"	
F532	2	2'-6"		AB568	5	4'-0"	
F533	2	12'-3"					
F534	2	3'-0"					
F535	2	6'-0"					
AB521	13	7'-6"	Abutment No. 2				
AB522	13	3'-9"					
AB523	4	17'-8"					
AB524	3	22'-0"					
AB525	4	8'-7"					
AB526	5	2'-8"					
AB527A	10	4'-8"					
AB527B	10	6'-6"					
AB529	5	4'-0"					

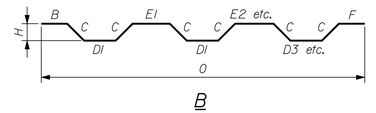
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION

BENT BARS

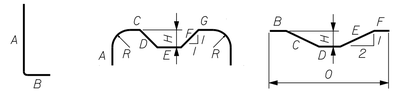
MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
AB500	13	9'-1"	L	6'-11"	2'-2"									Abutment No. 1
AB508	12	4'-0"	V				2'-0"	2'-0"			1'-5"			Abutment No. 1
AB520	13	7'-6"	L	5'-4"	2'-2"									Abutment No. 2
AB528	10	4'-0"	V				2'-0"	2'-0"			1'-5"			Abutment No. 2
AB540	13	7'-6"	L	5'-4"	2'-2"									Abutment No. 3
AB549	12	4'-0"	V				2'-0"	2'-0"			1'-5"			Abutment No. 3
AB560	13	7'-6"	L	5'-4"	2'-2"									Abutment No. 4

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

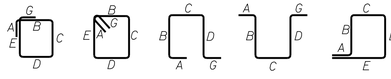
TYPE - BENDING DIAGRAMS



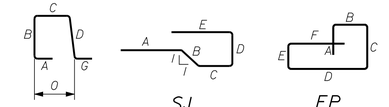
B



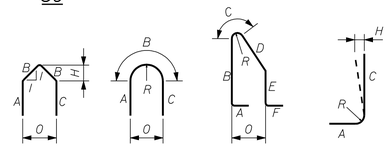
L W M



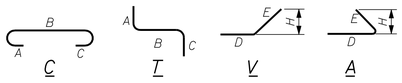
HB H S SL SB



SC SJ EP



PA PR CB J



C T V A

All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 420

GENERAL NOTES

The first digit following the letter(s) of the mark indicate the size of the bar:

Mark "F520" = bar size #5
Mark "AB545" = bar size #5

PROJECT DESIGN ENGINEER		BY	DATE
	DESIGN-DETAILED	B. Doukas	LSBenner	3/2010
PLANS	CHECKED			
	REVISIONS			
	FIELD CHANGES			

Division: MAINT

Filename: ...\rileytwp0792.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BULL BRANCH/BULL BRANCH 2
OVER
BULL BRANCH STREAM
IN
RILEY TWP.
OXFORD COUNTY

REINFORCING-SCHEDULE