NEXT BEAM GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 10,000 PSI.
2. MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 8,000 PSI.
3. REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) LEVEL II (DUAL COATED). PROJECTING #7 BARS AT EACH END OF NEXT BEAM SHALL CONFORM TO LEVEL I EPOXY COATED FINISH.
4. PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0.60"ϕ x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
5. PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION OF **44.0 K** AFTER ACCOUNTING FOR CHUCK SLIPPAGE. TENSION SHALL BE VERIFIED BY MEASURING STRAND ELONGATION. (SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, THIS SHEET.)
6. ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF NEXT BEAM STEMS (UNLESS NOTED OTHERWISE) AND EPOXY PAINTED.
7. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
8. THE TOP OF BEAMS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE). ⚠
9. SHEAR KEY SURFACES SHALL RECEIVE A SAND BLAST SURFACE.
10. BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL FORCES ARE APPLIED TO EACH OF THE TWO LIFTING LOOPS AT EACH END OF THE BEAM. **THE PINS OF THE SHACKLES SHALL BE PLACED THOUGH THE LIFTING LOOPS. SEE DETAIL, THIS SHEET.** BEAMS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 2'-0" OF THE BEAM ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
11. MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P510.02 AND P510.05 RESPECTIVELY.
    DESIGN MIX: J.P.C. BRIDGE MIX #430M
12. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
13. CURING METHOD: AS SOON AS THE TOP OF BEAM IS FINISHED, A COVER OF INSULATED POLY. THE DESIRED CURING TEMPERATURE RANGE SHALL NOT DROP BELOW 70°F. THE TEMPERATURE SHALL BE RECORDED BY AUTOMATIC SENSOR INSTRUMENTS ON GRAPH CHARTS, SPACED NOT MORE THAN 100' APART AND WILL CONTINUE UNTIL RELEASE STRENGTH IS ACHIEVED. EACH CHART SHALL BE MARKED WITH THE CASTING DATED AND LOCATION OF THE RECORDER. IF NECESSARY TO MAINTAIN CASTING BED TEMPERATURE PRIOR TO CONCRETE PLACEMENT OR TO ACCELERATE EARLY AGE STRENGTH GAIN, EXTERNAL RADIANT HEAT MAY BE EMPLOYED VIA HOT WATER DUCTS BENEATH AND WITHIN THE PERIPHERY OF THE CASTING BED. MAXIMUM CURING TEMPERATURE SHALL NOT EXCEED PCI SPECIFIED LIMITS.
14. OWNER SHALL PROVIDE APPROPRIATE WATERPROOFING TO GROUTED AND/OR EPOXIED SHEAR KEYS. J.P. CARRARA & SONS, INC. SHALL NOT BE HELD LIABLE FOR PROBLEMS ASSOCIATED WITH MOISTURE INFILTRATING GROUTED AND/OR EPOXIED SHEAR KEYS.
15. CAMBER AT RELEASE 2". FINAL CAMBER 2 3/4". ⚠

EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING

(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE: 0.60"ϕ x 270 KSI
AREA: 0.217 IN^2
TENSION: 44,000 LB. EACH STRAND
GRIP-TO-GRIP: 252'-0" = 252.00'
Es = 28,600,000 PSI (ASSUMED FOR THESE CALCULATIONS; VALUE TO BE OBTAINED FOR STRAND SPOOL ACTUALLY USED)

EXAMPLE:

$$\Delta = \frac{PL}{AE} = \frac{(44{,}000 - 3{,}000) \times 252.00 \times 12}{0.217 \times 28{,}600{,}000} = 19.977"$$

THEREFORE: (TOLERANCES ± 5%)
△ UPPER LIMIT = 1.05 x 19.977" = 20.98" = 21"
△ LOWER LIMIT = 0.95 x 19.977" = 18.98" = 19"

EXTRA FORCE REQUIRED TO COMPENSATE FOR 1/2" CHUCK SLIPPAGE:

$$\Delta P = \frac{0.5 \times 41{,}000}{19.977} = 1{,}026 \text{ LBS.}$$

TOTAL TENSIONING FORCE = 44,000 + 1,026 = 45,026 LBS.

STRAND TENSIONING PROCEDURE:

1. PULL EACH STRAND INITIALLY TO 3,000# LBS. AND MARK STRAND.
2. THEN PULL EACH STRAND TO A TOTAL TENSION OF 45,026# LBS. AND MEASURE ELONGATION AFTER SEATING. IT MUST BE BETWEEN 19"# AND 21"#.

NOTE: FORCES READ ON STRESSING JACK GAUGES MUST BE MADE TO CORRESPOND TO ABOVE VALUES BASED ON CALIBRATION DATA FOR SPECIFIC JACK USED.

DRAWING INDEX

SHT. #	DRAWING TITLE	REV. #	REV. DATE
C1	COVER SHEET		
F1	SUPERSTRUCTURE PLANS		
F2	ABUTMENT SECTION		
NB1	PRESTRESSED NEXT BEAM DETAILS "P-NB1"		
NB1A	PRESTRESSED NEXT BEAM REINF. DETAILS "P-NB1"		
NB1B	PRESTRESSED NEXT BEAM FLANGE REINF. DETAILS	⚠	
NB1C	PRESTRESSED NEXT BEAM FLANGE REINF. DETAILS		
NB1D	PRESTRESSED NEXT BEAM FLANGE REINF. DETAILS		
NB1E	PRESTRESSED NEXT BEAM FLANGE REINF. DETAILS		
NB2	PRESTRESSED NEXT BEAM DETAILS "P-NB2"		
NB2A	PRESTRESSED NEXT BEAM REINF. DETAILS "P-NB2"		
NB3	PRESTRESSED NEXT BEAM DETAILS "P-NB3"		
NB3A	PRESTRESSED NEXT BEAM REINF. DETAILS "P-NB3"		
NB4	PRESTRESSED NEXT BEAM DETAILS "P-NB4"		
NB4A	PRESTRESSED NEXT BEAM REINF. DETAILS "P-NB4"		
M1	MATERIALS LIST		

DESIGN LIVE LOAD: HL-93

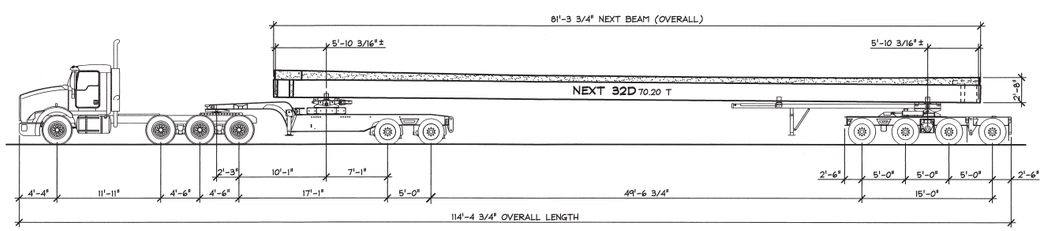
NEXT BEAM 32D HOLD-DOWN DETAIL FOR SHIPPING

3/4" = 1'-0"

NOTE: BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL FORCES ARE APPLIED TO EACH SET OF LIFTING LOOPS AT EACH END OF THE BEAM. SHACKLE BOLT/PIN SHALL BE PLACED UNDER LIFT LOOPS AS SHOWN. DESIGN AND CONFIGURATION OF RIGGING BY PURCHASER.

LIFTING SHACKLE DETAILS

N.T.S.



SHIPPING ELEVATION ⚠

N.T.S.

⚠ 4-21-14 REVISED AS PER ENGINEERS COMM. T.D.

Vermont Agency of Transportation
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May 13, 2014
RESUBMIT NO Approved
BY KH DATE 5-14-2014

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2484 OSE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

COVER SHEET

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013
DWG. NO: C1

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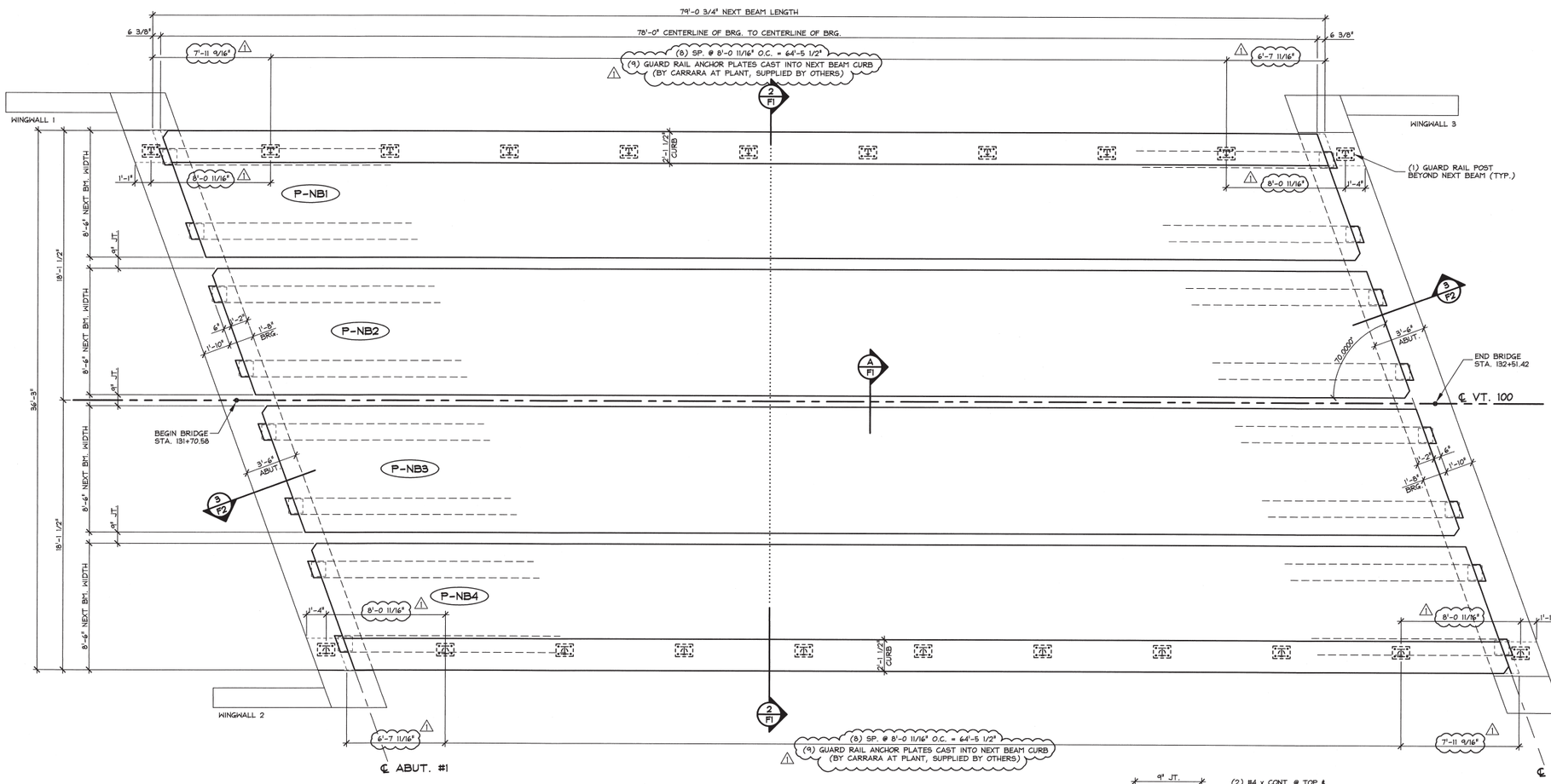
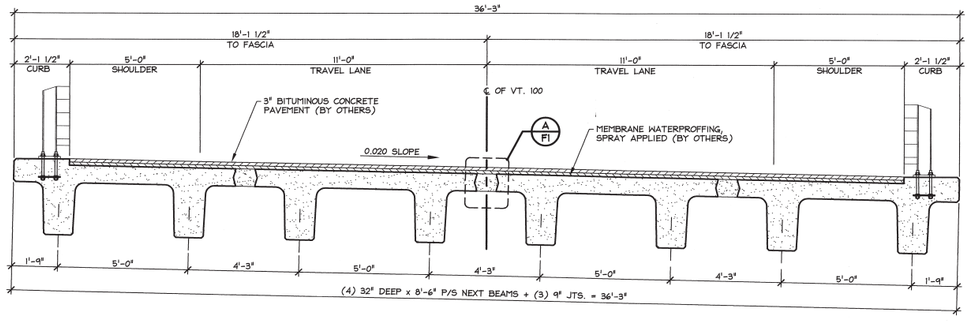


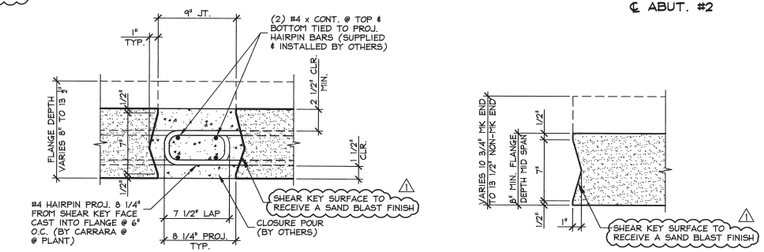
1 F1 PRESTRESSED NEXT BEAM LAYOUT

1/4" = 1'-0"



2 F1 NEXT BEAM TRANSVERSE SECTION

3/8" = 1'-0"



A F1 NEXT BEAM CLOSURE POUR

1 1/2" = 1'-0"

Vermont Agency of Transportation

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May 13, 2014

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⚠ 4-21-14 REVISED AS PER ENGINEERS COMM. T.D.

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010	COLD RIVER BRIDGES, LLC CONTRACTOR WALPOLE, NEW HAMPSHIRE
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF RUTLAND	DATE: FEB. 3, 2014 SCALE: NOTED
TOWN OF PITTSFIELD VT ROUTE 100, (MINOR ARTERIAL) BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)	CHKD: - DFTM: T.D. JOB NO:
PRESTRESSED NEXT BEAM LAYOUT	DWG. NO: F1

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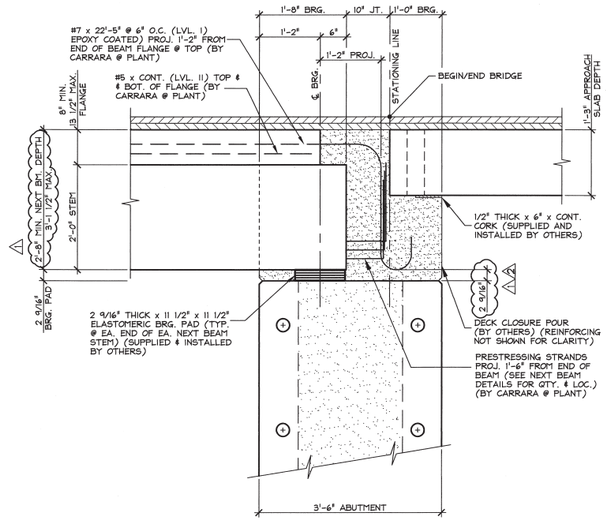

3 / F2 BEARING SECTION

NEXT BEAM STEM BEARING 3/4" = 1'-0"

Vermont Agency of Transportation

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May 13, 2014

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BY KH DATE 5-14-2014

2 5-12-14 REVISED AS PER ENGINEERS COMM. T.D.

1 4-21-14 REVISED AS PER ENGINEERS COMM. T.D.

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Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

SECTIONS & DETAILS

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23413-013
DWG. NO: F2

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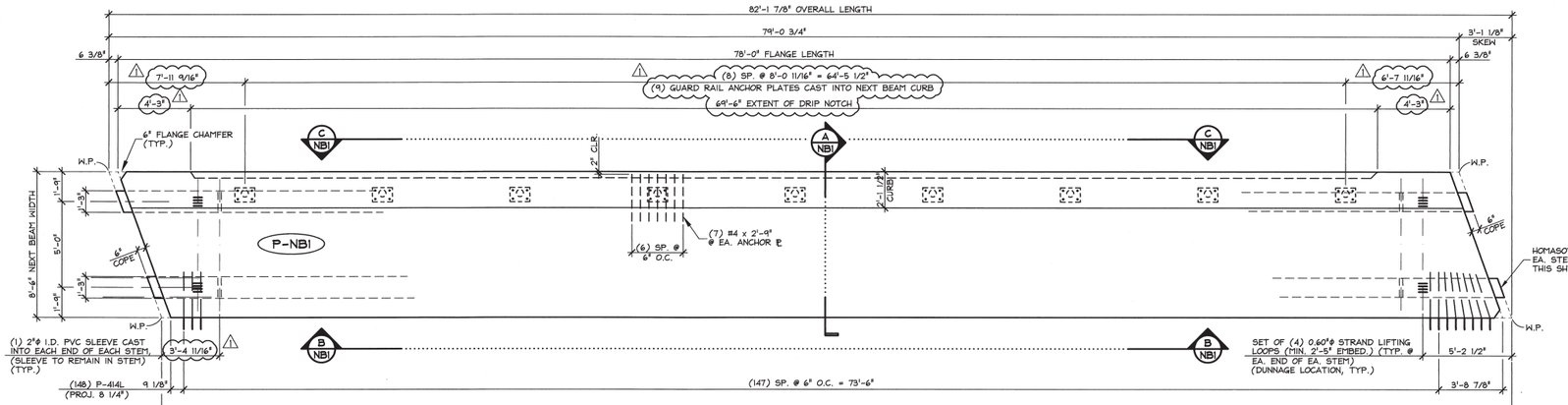
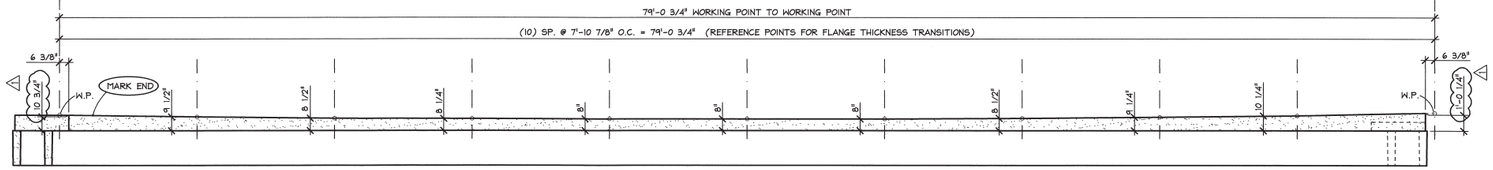
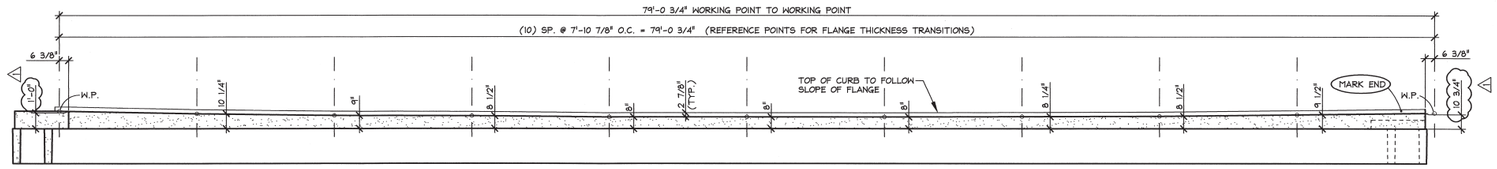


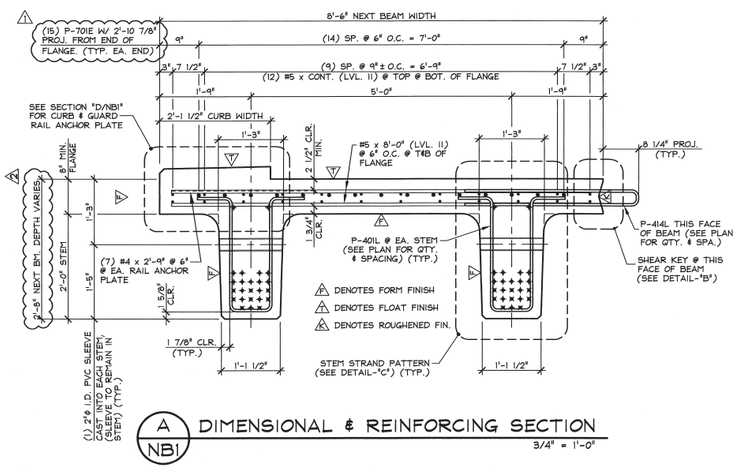
1 NBI DIMENSIONAL PLAN VIEW IN FORM
1/4" = 1'-0"



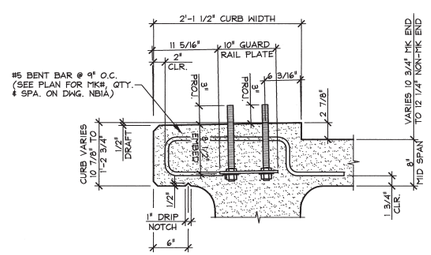
B NBI FLANGE ELEVATION VIEW IN FORM
1/4" = 1'-0"



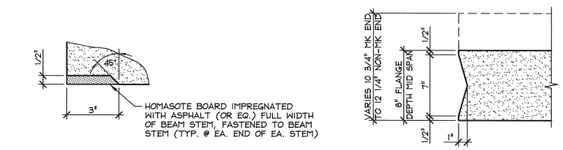
C NBI FLANGE ELEVATION VIEW IN FORM
1/4" = 1'-0"



A NBI DIMENSIONAL & REINFORCING SECTION
3/4" = 1'-0"

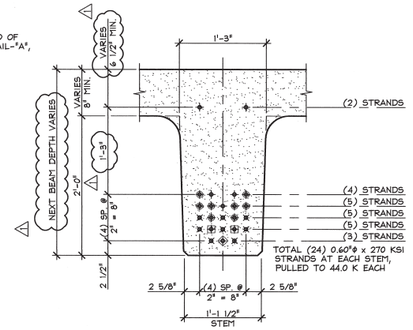


D NBI CURB & GUARD RAIL ANCHOR PLATE SECTION
TYP. BEAM REINF. NOT SHOWN FOR CLARITY
1" = 1'-0"



DETAIL - "A"
3" = 1'-0"

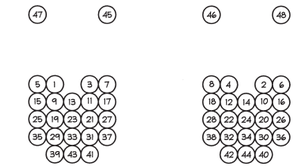
DETAIL - "B"
1 1/2" = 1'-0"



DETAIL - "C" (STEM STRAND PATTERN)
1" = 1'-0"

PRESTRESSING NOTATIONS

- ✦ DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- ✖ DENOTES STRAIGHT STRANDS TO PROJECT 2'-2" FROM EA. END OF EA. STEM, BEND UP 90° @ 8" FROM END OF STEM.
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- ⊞ DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
- ◈ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM



DETENSIONING SCHEDULE
N.T.S.

FOR REINFORCING PLAN AND ELEVATIONS SEE DWG. NB1A

Vermont Agency of Transportation
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May 13, 2014
RESUBMIT NO Approved
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MARK: P-NBI	QTY.: 1	WT.: 70.20 T	VOL.: 34.67 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	P-414L	#4 BENT BAR (LEVEL II, DUAL COATED)	(148)
2		#4 x 2'-9" (LEVEL II, DUAL COATED)	(63)
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13		GUARD RAIL ANCHOR PLATE (GALV.) (SUPPLIED BY OTHERS)	(9)
14		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4
15			

△2 5-12-14 REVISED AS PER ENGINEERS COMM. T.D.
△1 4-11-14 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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Precast & Prestress Manufacturer
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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

PRESTRESSED NEXT BEAM DETAILS

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013
DWG. NO: NB1

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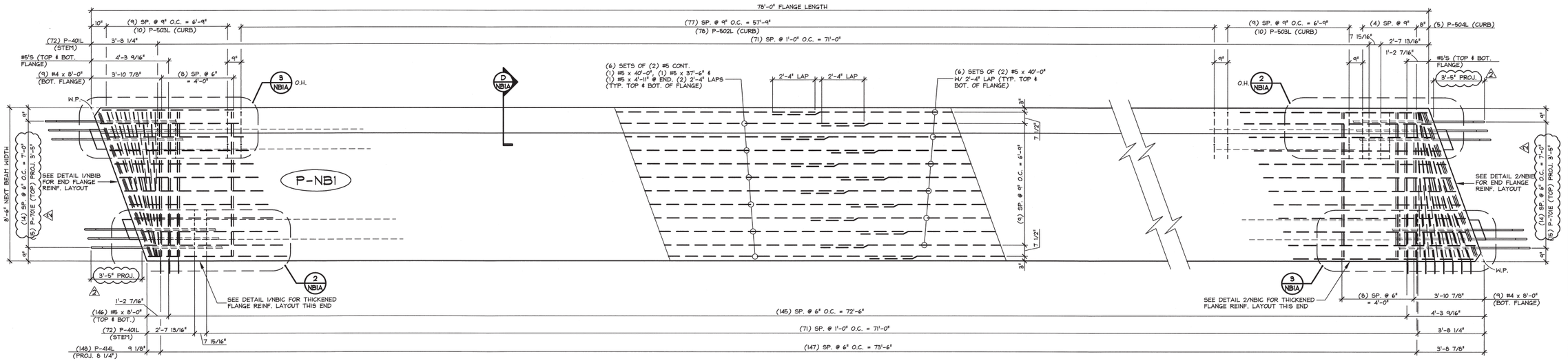
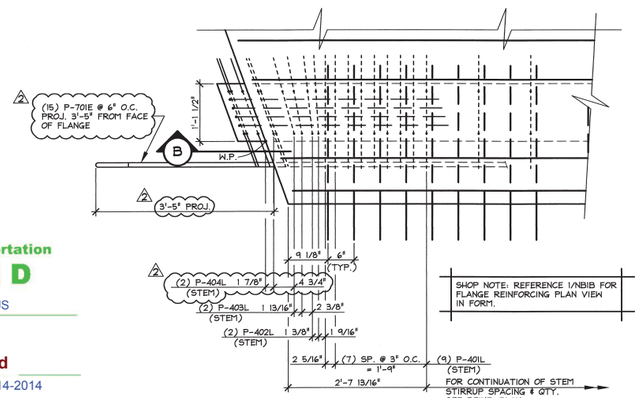
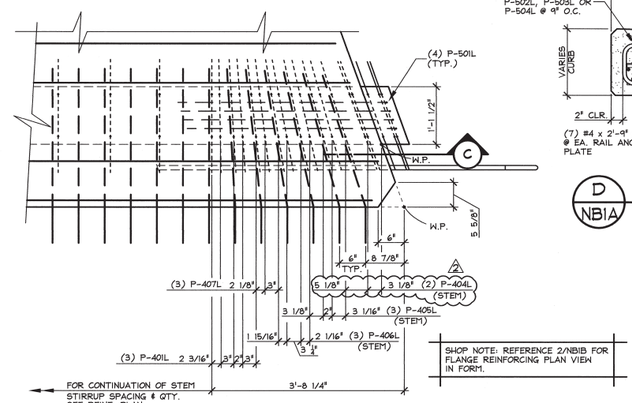
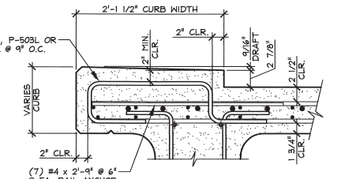


1 NBIA REINFORCING PLAN VIEW IN FORM

3/8" = 1'-0"

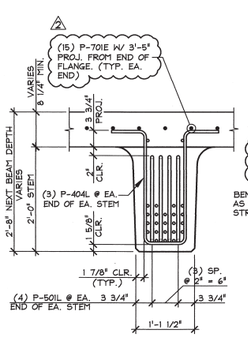


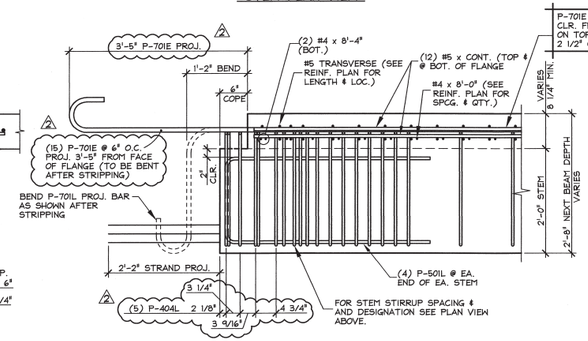


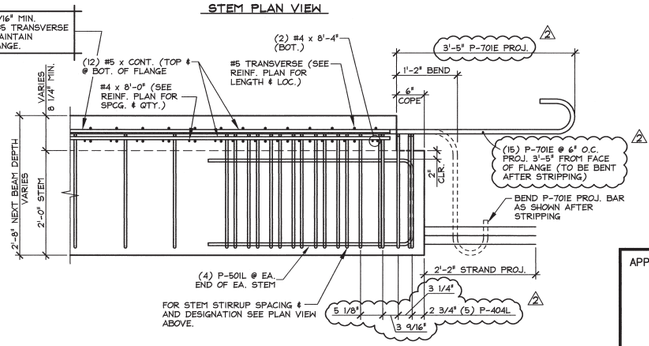


D NBIA SECTION THRU CURB

1" = 1'-0"







2 NBIA END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"

3 NBIA END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"

2 5-12-14 REVISED AS PER ENGINEERS COMM. T.D.
1 4-11-14 REVISED AS PER ENGINEERS COMM. T.D.

MARK: P-NB1 | QTY.: 1 | WT.: ____ T | VOL.: ____ cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	P-302L	#3 BENT BAR (LEVEL II, DUAL COATED) (THICKENED FLANGE)	15
2	P-401L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	168
3	P-402L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	4
4	P-403L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	4
5	P-404L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	20
6	P-405L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
7	P-406L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
8	P-407L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
9	P-408L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
10	P-409L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
11	P-410L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
12	P-411L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
13	P-412L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
14	P-413L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
15	P-414L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	148
16	P-501L	#5 BENT BAR (LEVEL II, DUAL COATED) (STEM)	16
17	P-502L	#5 BENT BAR (LEVEL II, DUAL COATED) (CURB)	78
18	P-503L	#5 BENT BAR (LEVEL II, DUAL COATED) (CURB)	20
19	P-504L	#5 BENT BAR (LEVEL II, DUAL COATED) (CURB)	5
20	P-701E	#7 BENT BAR (LEVEL I, EPOXY COATED) (FLANGE)	30
21		#3 x 8'-8" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	18
22		#3 x 12'-9" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	9
23		#3 x 15'-3" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	9
24			
25		#4 x 8'-4" (LEVEL II, DUAL COATED) (FLANGE)	4
26		#4 x 8'-1" (LEVEL II, DUAL COATED) (FLANGE)	2
27		#4 x 4'-1" (LEVEL II, DUAL COATED) (FLANGE)	10
28		#4 x 8'-0" (LEVEL II, DUAL COATED) (FLANGE)	18
29		#5 x 8'-4" (LEVEL II, DUAL COATED) (FLANGE)	4
30		#5 x 8'-3" (LEVEL II, DUAL COATED) (FLANGE)	4
31		#5 x 8'-1" (LEVEL II, DUAL COATED) (FLANGE)	4
32		#5 x 8'-0" (LEVEL II, DUAL COATED) (FLANGE)	296
33		#5 x 6'-2" (LEVEL II, DUAL COATED) (FLANGE)	16
34			
35		#5 x 37'-6" (LEVEL II, DUAL COATED) (FLANGE)	12
36		#5 x 40'-0" (LEVEL II, DUAL COATED) (FLANGE)	36
37		#5 x 4'-11" (LEVEL II, DUAL COATED) (FLANGE)	12

Vermont Agency of Transportation
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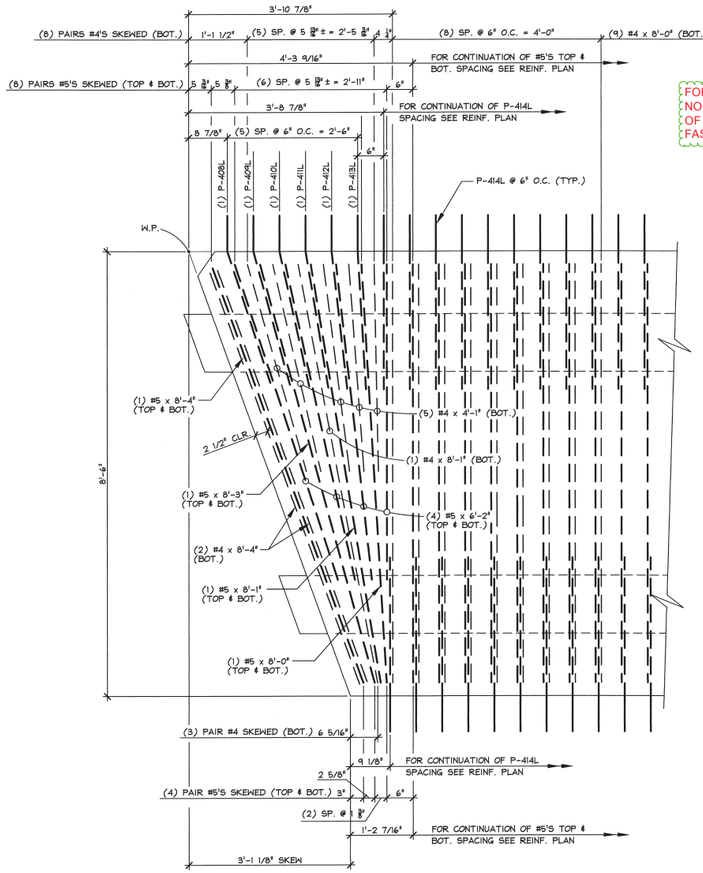
COUNTY OF RUTLAND

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

PRESTRESSED NEXT BEAM DETAILS

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013
DWG. NO: NB1A

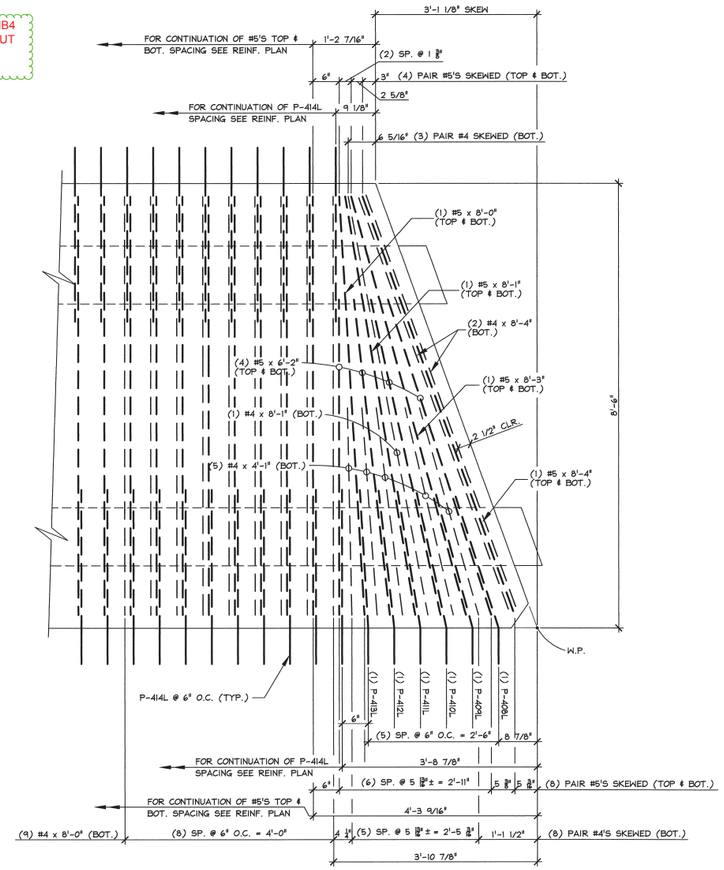
F:\VT-Bridges\23416-13 Pittsfield Vt. Rt. 100\23416-NB3.dwg, 5/13/2014 8:19:54 AM



1 NB1B FLANGE REINFORCING PLAN VIEW IN FORM

3/4" = 1'-0"

FOR BEAMS P-NB1 AND P-NB4 NO BARS SHALL EXTEND OUT OF THE FLANGE ON THE FASCIA SIDE ONLY



2 NB1B FLANGE REINFORCING PLAN VIEW IN FORM

3/4" = 1'-0"

APPROVAL STAMP:

Vermont Agency of Transportation

RECEIVED

CK'D BY JG/WL OK'D BY JS

May 13, 2014

RESUBMIT NO Approved AsNoted

BY KH DATE 5-14-2014

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 OSE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

FLANGE REINFORCEMENT DETAILS

DWG. NO: NB1B

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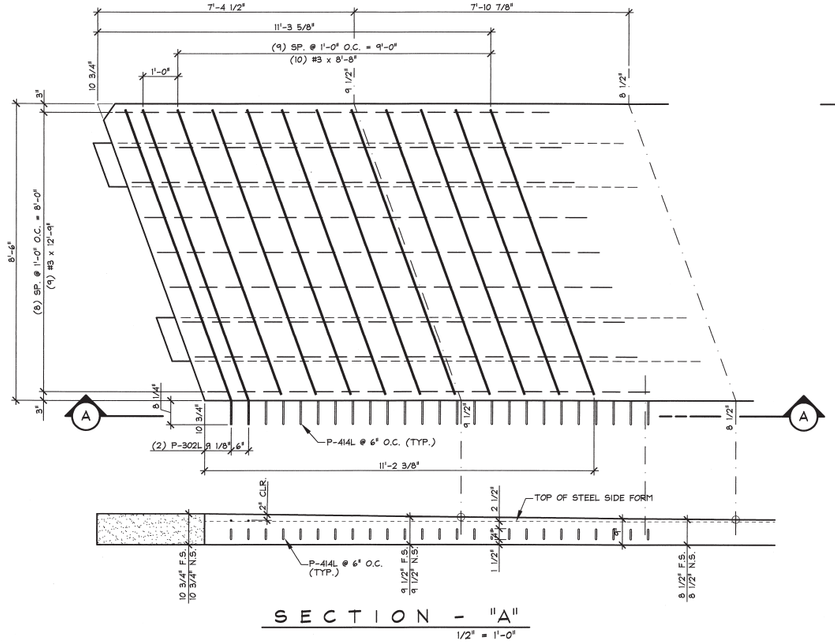
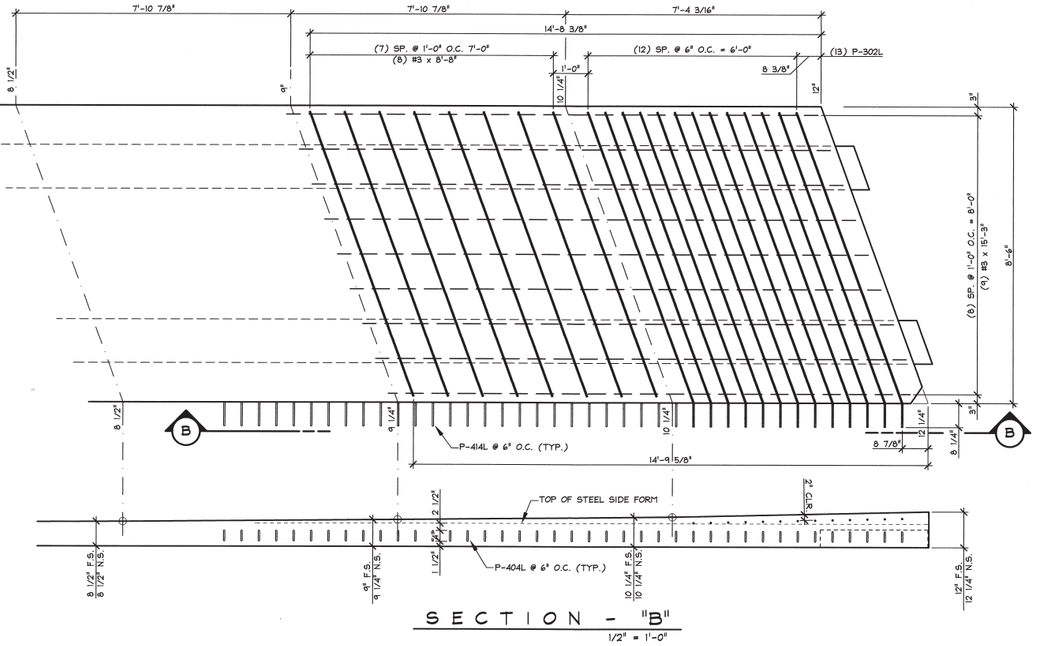


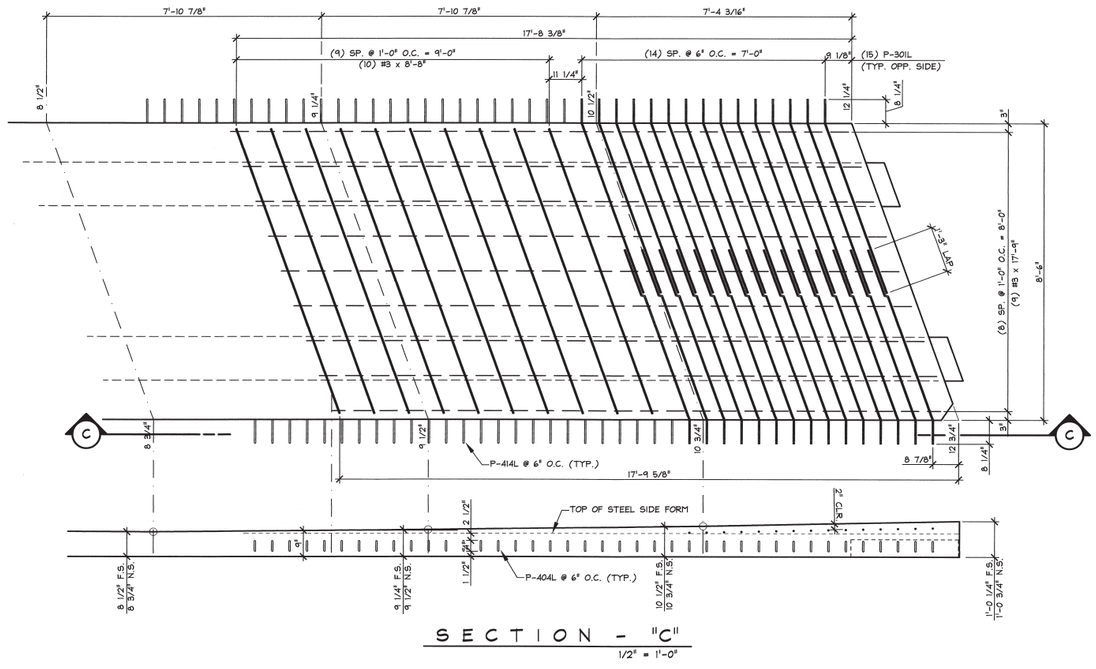
SECTION - "A"
1/2" = 1'-0"

1 NBIC THICKENED FLANGE REINFORCING PLAN VIEW IN FORM (MARK END P-NB1)
1/2" = 1'-0"



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

2 NBIC THICKENED FLANGE REINFORCING PLAN VIEW IN FORM (NON-MARK END P-NB1)
1/2" = 1'-0"



SECTION - "C"
1/2" = 1'-0"

3 NBIC THICKENED FLANGE REINFORCING PLAN VIEW IN FORM (NON-MARK END P-NB2)
1/2" = 1'-0"

APPROVAL STAMP:
Vermont Agency of Transportation
RECEIVED
CK'D BY JG/WL OK'D BY JS
May 13, 2014
RESUBMIT NO Approved
BY KH DATE 5-14-2014

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

FLANGE REINFORCEMENT DETAILS

DWG. NO: NBIC

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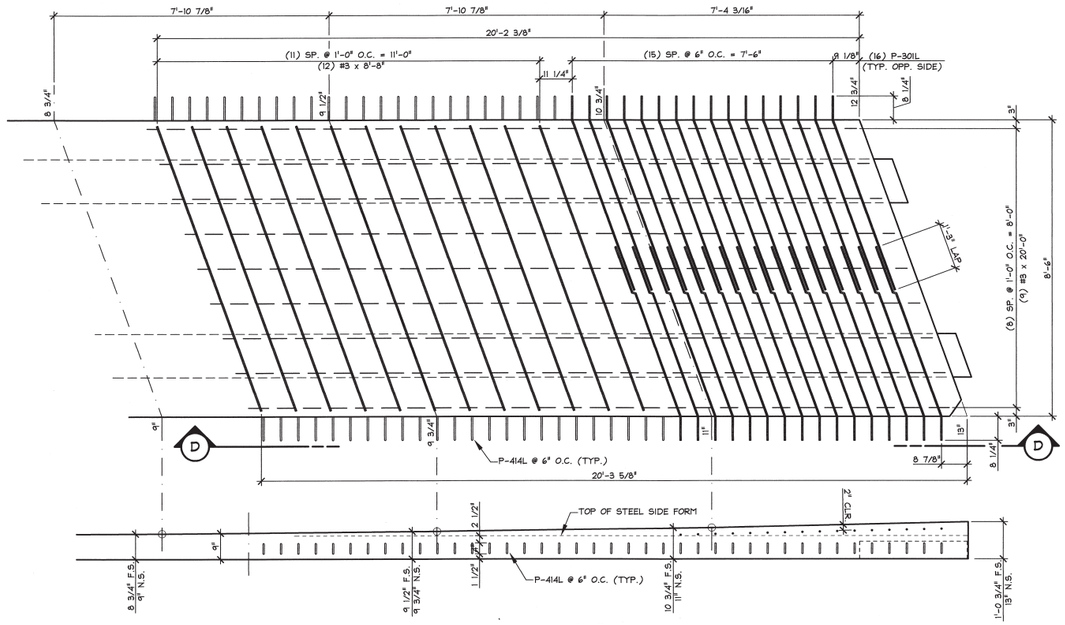
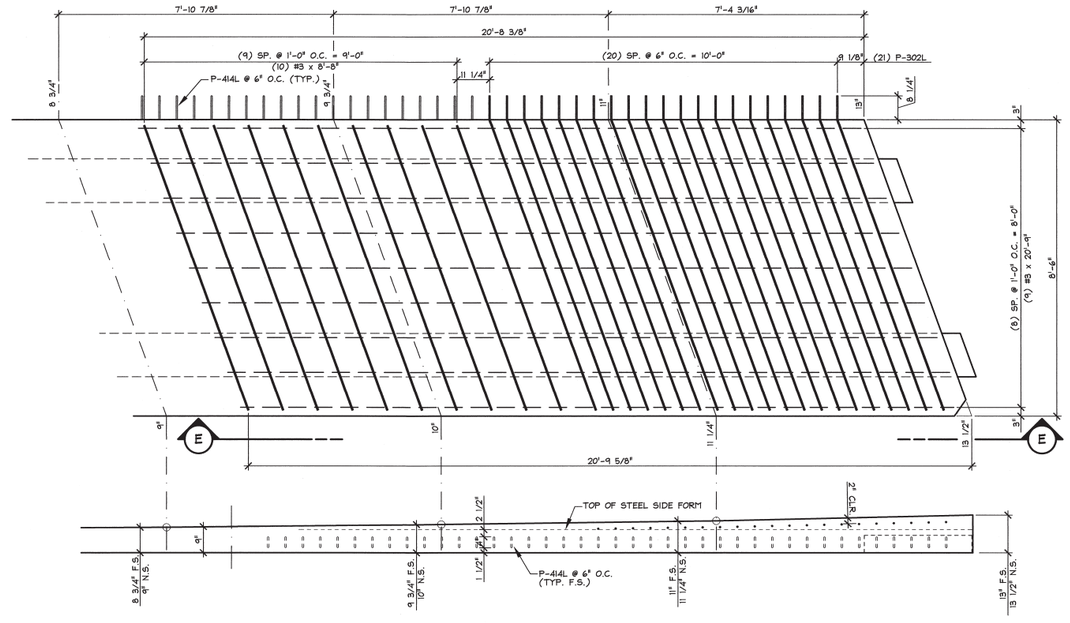


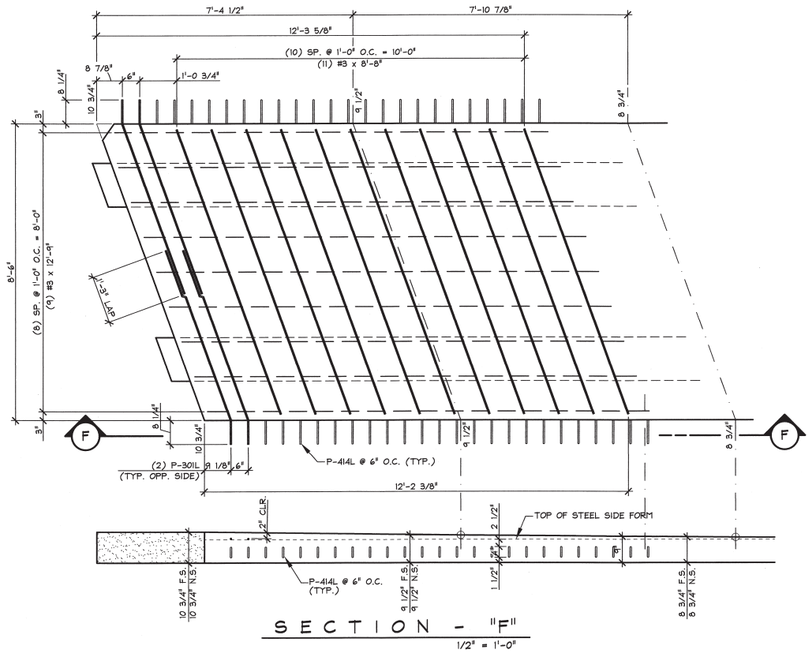
SECTION - "D"
1/2" = 1'-0"

4 NBID THICKENED FLANGE REINFORCING PLAN VIEW IN FORM (NON-MARK END P-NB3)
1/2" = 1'-0"



SECTION - "E"
1/2" = 1'-0"

5 NBID THICKENED FLANGE REINFORCING PLAN VIEW IN FORM (NON-MARK END P-NB4)
1/2" = 1'-0"



SECTION - "F"
1/2" = 1'-0"

6 NBID THICKENED FLANGE REINFORCING PLAN VIEW IN FORM (MARK END P-NB2, P-NB3)
1/2" = 1'-0"

APPROVAL STAMP:
Vermont Agency of Transportation
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CK'D BY JG/WL OK'D BY JS
May 13, 2014
RESUBMIT NO Approved
BY KH DATE 5-14-2014

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 OGE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

FLANGE REINFORCEMENT DETAILS

DWG. NO: NB1D

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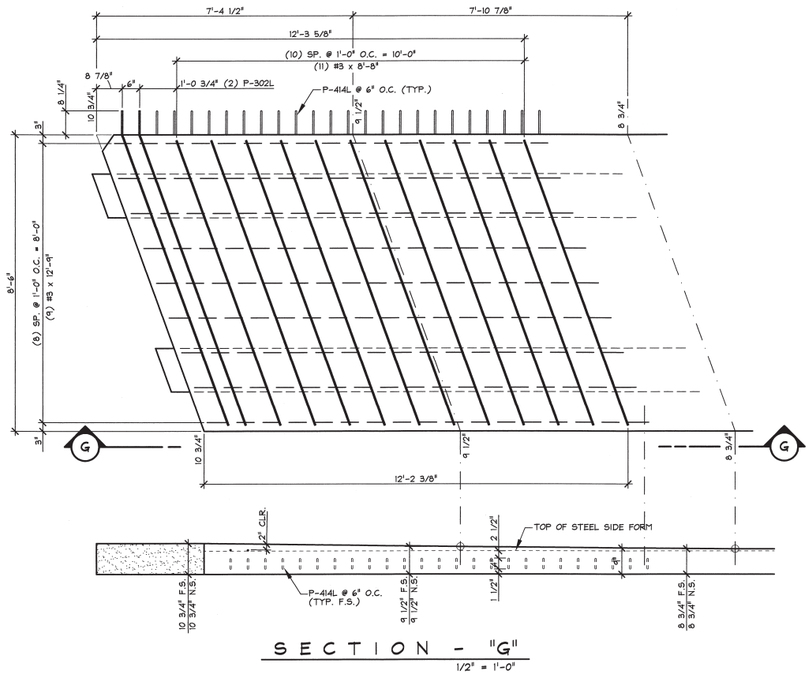

SECTION - "G"
1/2" = 1'-0"

7 NBIE THICKENED FLANGE REINFORCING PLAN VIEW IN FORM (MARK END P-NB4)
1/2" = 1'-0"

APPROVAL STAMP:
Vermont Agency of Transportation
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May 13, 2014
RESUBMIT NO Approved
BY KH DATE 5-14-2014

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COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

FLANGE REINFORCEMENT DETAILS

DWG. NO: NB1E

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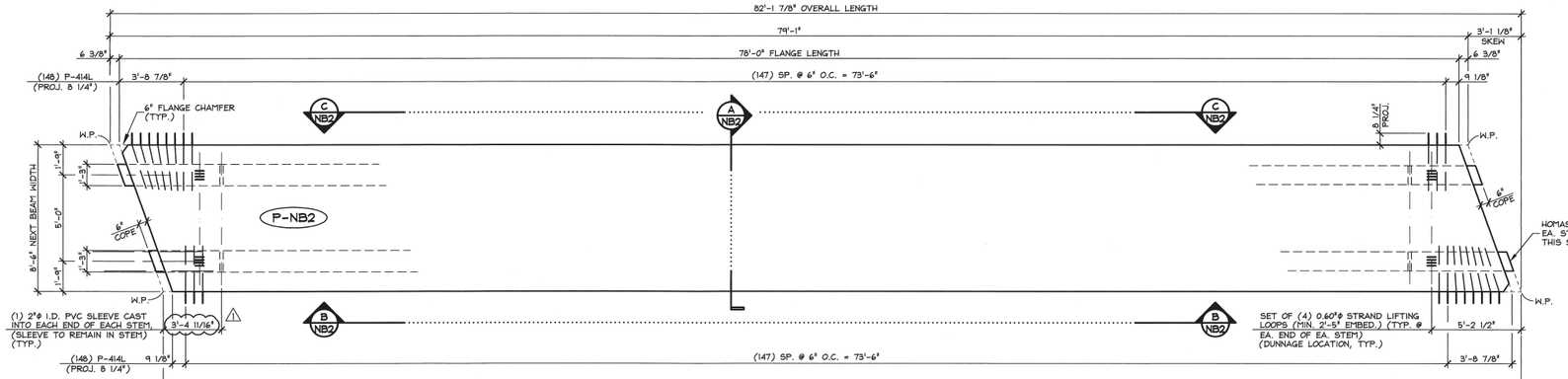
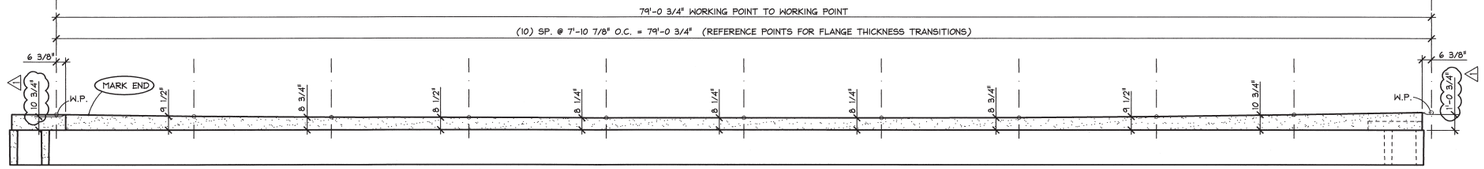
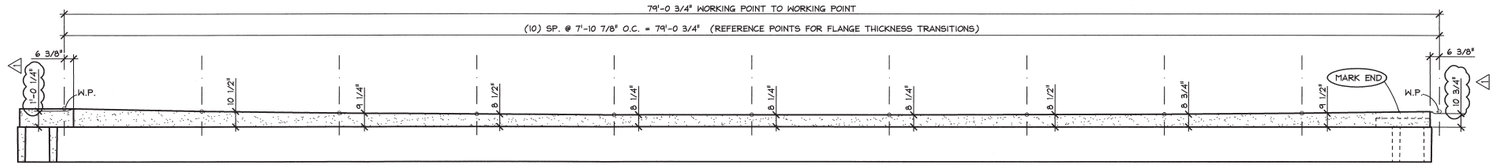


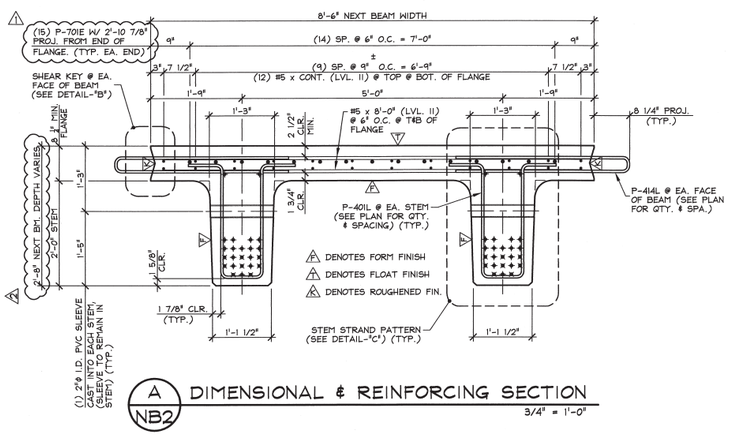
1 NB2 DIMENSIONAL PLAN VIEW IN FORM
1/4" = 1'-0"



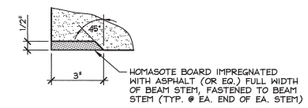
B NB2 FLANGE ELEVATION VIEW IN FORM
1/4" = 1'-0"



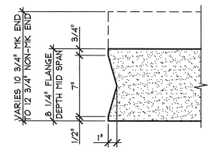
C NB2 FLANGE ELEVATION VIEW IN FORM
1/4" = 1'-0"



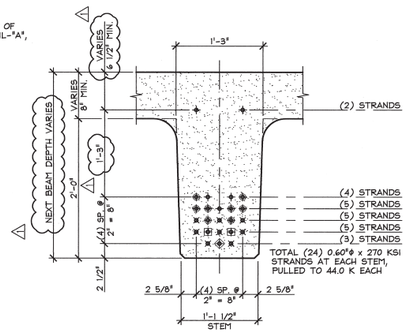
A NB2 DIMENSIONAL & REINFORCING SECTION
3/4" = 1'-0"



DETAIL - "A"
3" = 1'-0"



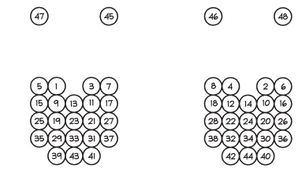
DETAIL - "B"
1 1/2" = 1'-0"



DETAIL - "C" (STEM STRAND PATTERN)
1" = 1'-0"

PRESTRESSING NOTATIONS

- ✦ DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- ✖ DENOTES STRAIGHT STRANDS TO PROJECT 2"-2" FROM EA. END OF EA. STEM, BEND 90° UP @ 8" FROM END OF STEM.
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- ⊞ DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
- ◈ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM



DETENSIONING SCHEDULE
N.T.S.

FOR REINFORCING PLAN AND ELEVATIONS SEE DWG. NB2A

MARK: P-NB2	QTY.: 1	WT.: 66.9 T	VOL.: 33.04 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	P-414L	#4 BENT BAR (LEVEL II, DUAL COATED) ⚠1	296
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4
15			

Vermont Agency of Transportation
RECEIVED
CK'D BY JG/WL OK'D BY JS
May 13, 2014
RESUBMIT NO Approved
BY KH DATE 5-14-2014

⚠2 5-12-14 REVISED AS PER ENGINEERS COMM. T.D.
⚠1 4-21-14 REVISED AS PER ENGINEERS COMM. T.D.

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 OSE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

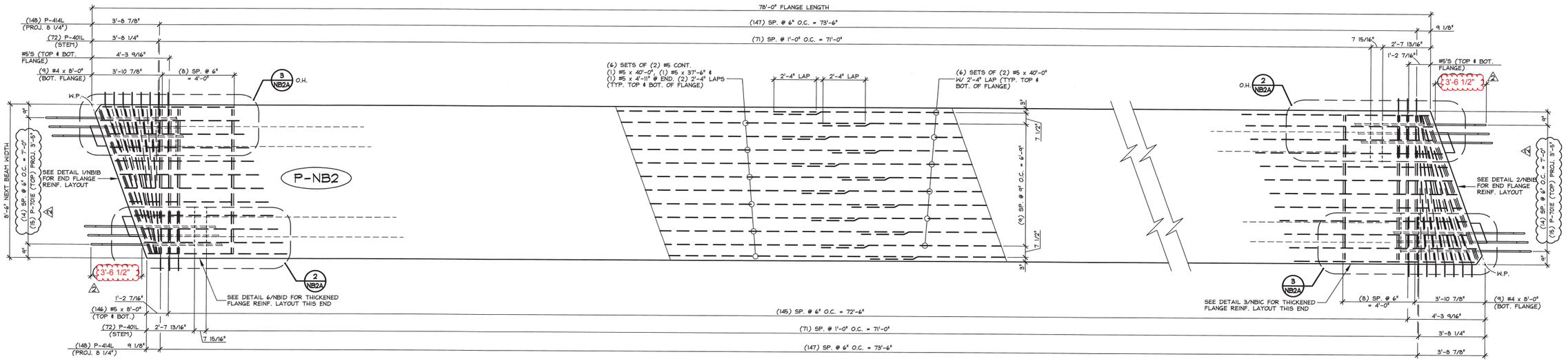
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

PRESTRESSED NEXT BEAM DETAILS

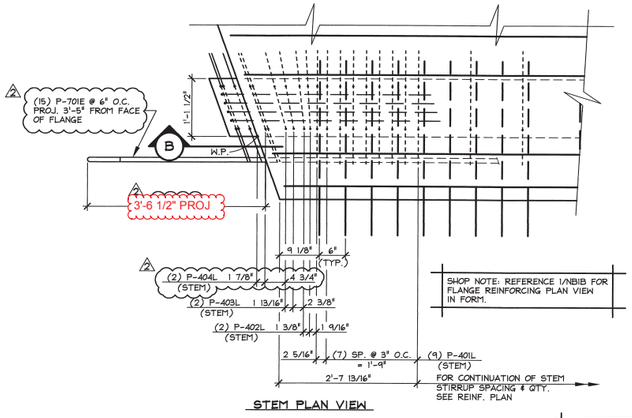
DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013
DWG. NO: NB2

F:\VT-Bridges\23416-13 Pittsfield Vt. Rt. 100\23416-NB1.dwg, 5/12/2014 3:15:58 PM

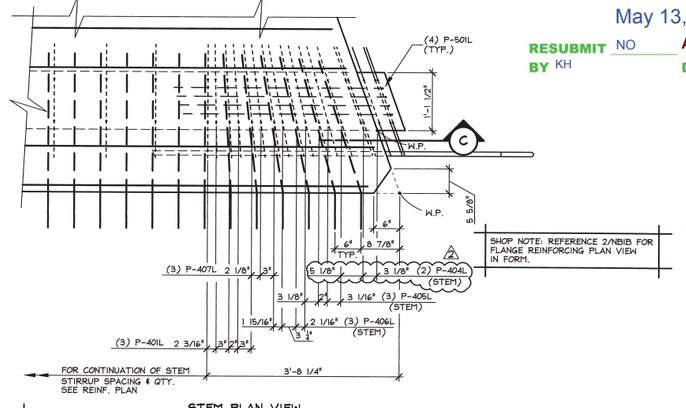


1 NB2A REINFORCING PLAN VIEW IN FORM

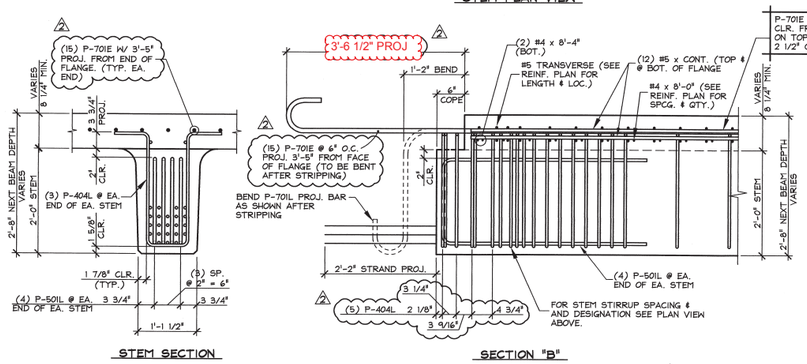
3/8" = 1'-0"

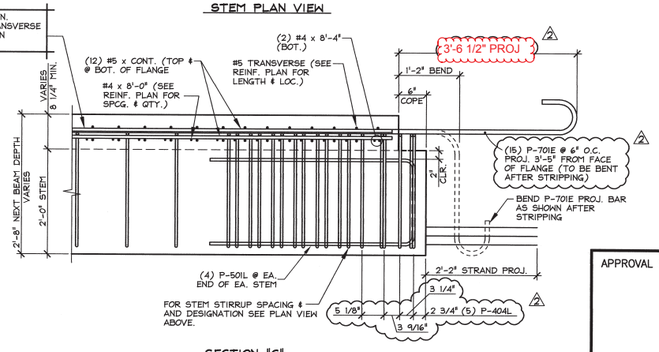


STEM PLAN VIEW



STEM PLAN VIEW





2 NB2A END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"

3 NB2A END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"

5-12-14 REVISED AS PER ENGINEERS COMM. T.D.

4-21-14 REVISED AS PER ENGINEERS COMM. T.D.

Vermont Agency of Transportation

RECEIVED

CK'D BY JG/WL OK'D BY JS

May 13, 2014

RESUBMIT NO Approved AsNoted

BY KH DATE 5-14-2014

MARK: P-NB2	QTY.: 1	WT.: ____ T	VOL.: ____ cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	P-301L	#3 BENT BAR (LEVEL II, DUAL COATED) (THICKENED FLANGE)	34
2	P-401L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	168
3	P-402L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	4
4	P-403L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	4
5	P-404L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	20
6	P-405L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
7	P-406L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
8	P-407L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
9	P-408L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
10	P-409L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
11	P-410L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
12	P-411L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
13	P-412L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
14	P-413L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
15	P-414L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	296
16			
17	P-501L	#5 BENT BAR (LEVEL II, DUAL COATED) (STEM)	16
18			
19	P-701E	#7 BENT BAR (LEVEL I, EPOXY COATED) (FLANGE)	30
20			
21		#3 x 8'-8" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	21
22		#3 x 12'-9" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	9
23		#3 x 17'-9" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	9
24			
25		#4 x 8'-4" (LEVEL II, DUAL COATED) (FLANGE)	4
26		#4 x 8'-1" (LEVEL II, DUAL COATED) (FLANGE)	2
27		#4 x 4'-1" (LEVEL II, DUAL COATED) (FLANGE)	10
28		#4 x 8'-0" (LEVEL II, DUAL COATED) (FLANGE)	18
29		#5 x 8'-4" (LEVEL II, DUAL COATED) (FLANGE)	4
30		#5 x 8'-3" (LEVEL II, DUAL COATED) (FLANGE)	4
31		#5 x 8'-1" (LEVEL II, DUAL COATED) (FLANGE)	4
32		#5 x 8'-0" (LEVEL II, DUAL COATED) (FLANGE)	296
33		#5 x 6'-2" (LEVEL II, DUAL COATED) (FLANGE)	16
34			
35		#5 x 37'-6" (LEVEL II, DUAL COATED) (FLANGE)	12
36		#5 x 40'-0" (LEVEL II, DUAL COATED) (FLANGE)	36
37		#5 x 4'-11" (LEVEL II, DUAL COATED) (FLANGE)	12

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

PRESTRESSED NEXT BEAM DETAILS

DWG. NO: NB2A

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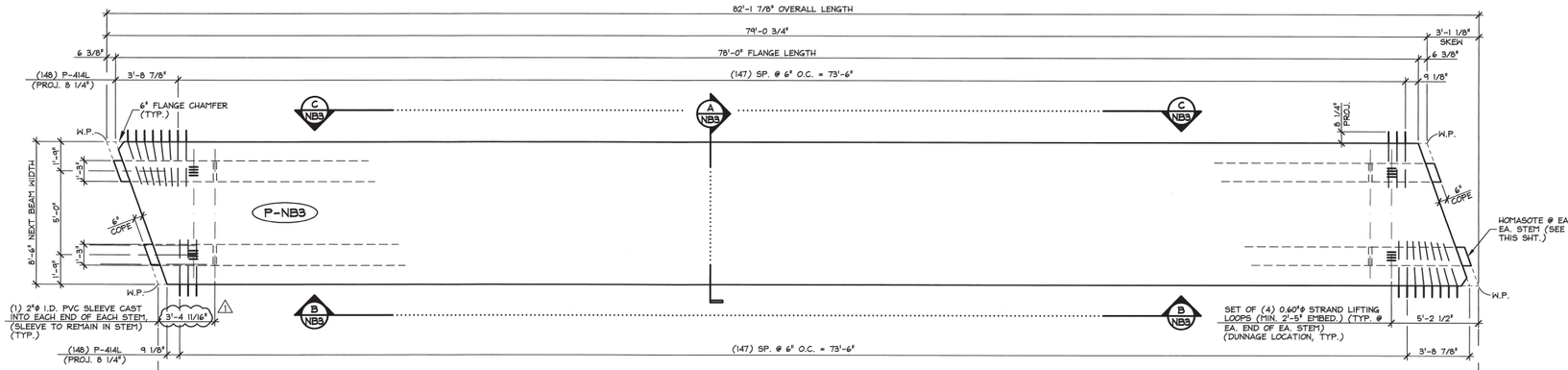
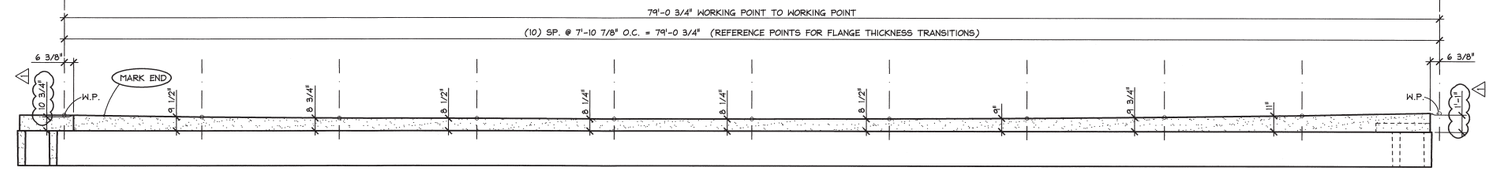


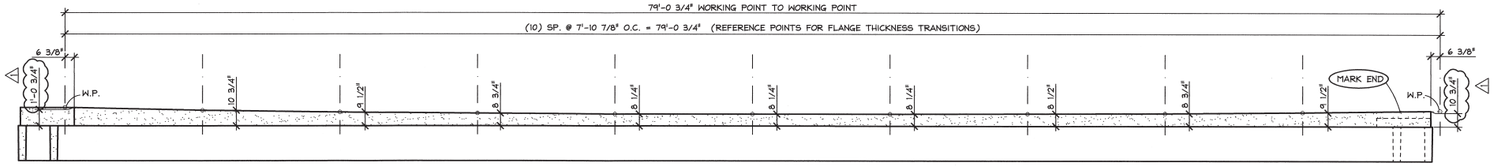
1 NB3 DIMENSIONAL PLAN VIEW IN FORM

1/4" = 1'-0"



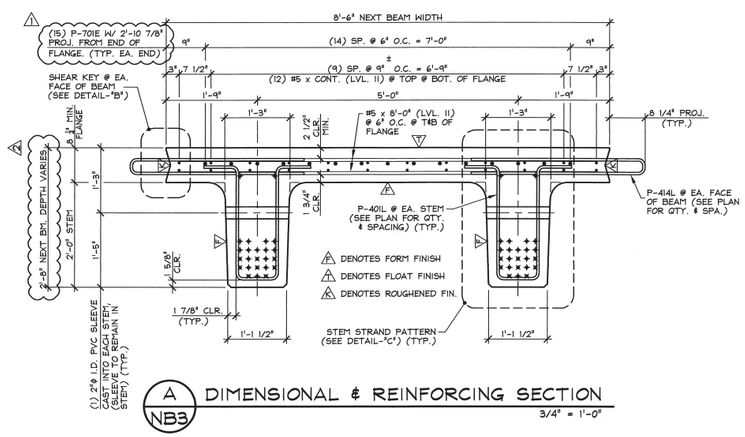
B NB3 FLANGE ELEVATION VIEW IN FORM

1/4" = 1'-0"



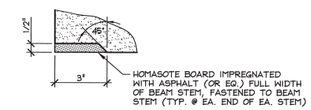
C NB3 FLANGE ELEVATION VIEW IN FORM

1/4" = 1'-0"



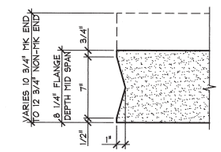
A NB3 DIMENSIONAL & REINFORCING SECTION

3/4" = 1'-0"



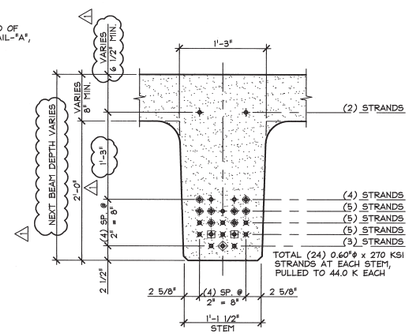
DETAIL - "A"

3" = 1'-0"



DETAIL - "B"

1 1/2" = 1'-0"



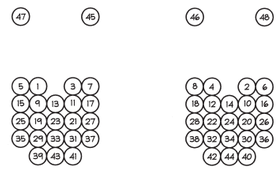
TOTAL (24) 0.60"ø x 270 KSI STRANDS AT EACH STEM, PULLED TO 44.0 K EACH

DETAIL - "C" (STEM STRAND PATTERN)

1" = 1'-0"

PRESTRESSING NOTATIONS

- ✦ DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- ✖ DENOTES STRAIGHT STRANDS TO PROJECT 2'-2" FROM EA. END OF EA. STEM, BEND 90° UP @ 8" FROM END OF STEM.
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- ⊞ DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
- ✦ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM



DETENSIONING SCHEDULE

N.T.S.

FOR REINFORCING PLAN AND ELEVATIONS SEE DWG. NB3A

MARK: P-NB3	QTY.: 1	WT.: 69.9 T	VOL.: 33.04 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	P-414L	#4 BENT BAR (LEVEL II, DUAL COATED) ⚠1	(296)
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4
15			

APPROVAL STAMP:
Vermont Agency of Transportation
RECEIVED
CK'D BY JG/WL OK'D BY JS
May 13, 2014
RESUBMIT NO Approved
BY KH DATE 5-14-2014

⚠2 5-12-14 REVISED AS PER ENGINEERS COMM. T.D.
⚠1 4-21-14 REVISED AS PER ENGINEERS COMM. T.D.

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

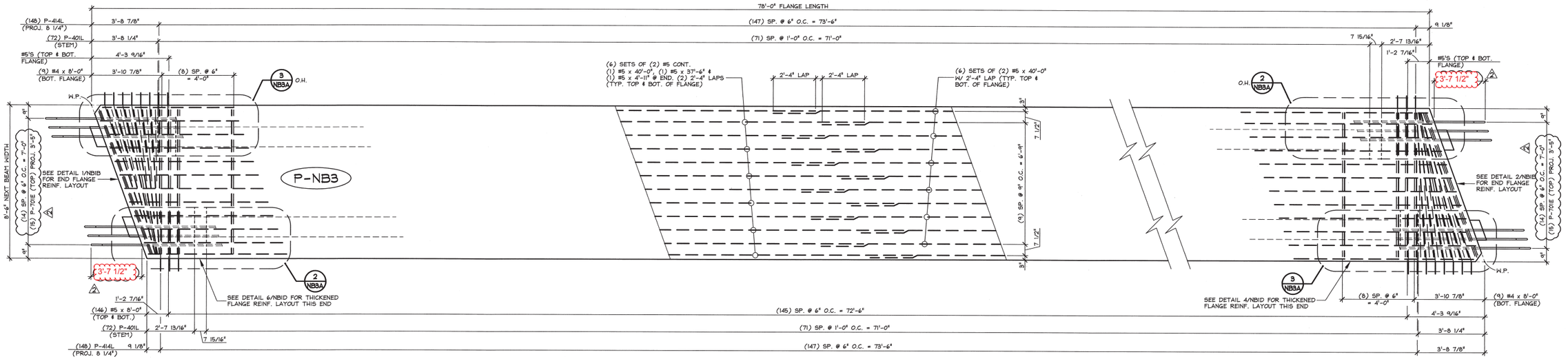
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

PRESTRESSED NEXT BEAM DETAILS

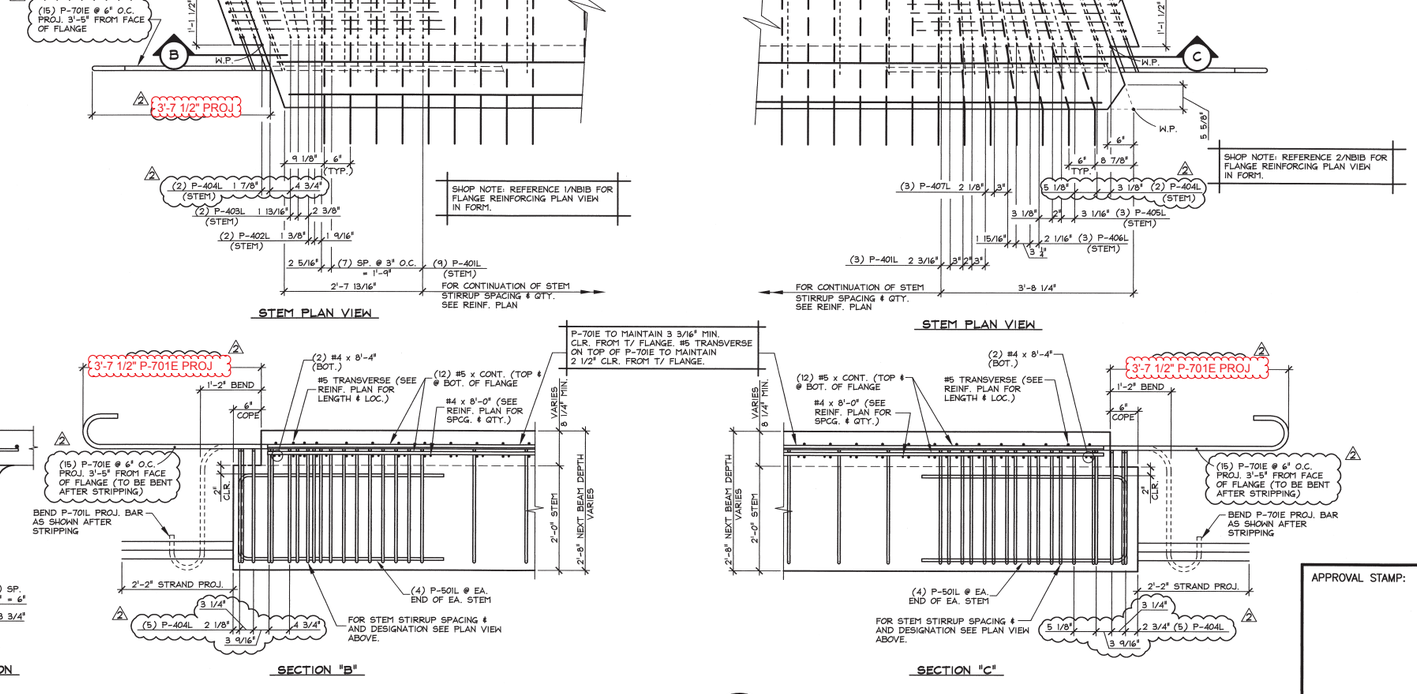
DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013
DWG. NO: NB3

F:\VT-Bridges\23416-13 Pittsfield Vt. Rt. 100\23416-NB2.dwg, 5/12/2014 2:42:05 PM



1 NB3A REINFORCING PLAN VIEW IN FORM

3/8" = 1'-0"



2 NB3A END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"

3 NB3A END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"

Δ 5-12-14 REVISED AS PER ENGINEERS COMM. T.D.
Δ 4-21-14 REVISED AS PER ENGINEERS COMM. T.D.

Vermont Agency of Transportation
RECEIVED
CK'D BY JG/WL OK'D BY JS
May 13, 2014
RESUBMIT NO Approved AsNoted
BY KH DATE 5-14-2014

MARK: P-NB3 | QTY.: 1 | WT.: ____ T | VOL.: ____ cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	P-301L	#3 BENT BAR (LEVEL II, DUAL COATED) (THICKENED FLANGE)	36
2	P-401L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	168
3	P-402L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	4
4	P-403L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	4
5	P-404L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	20
6	P-405L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
7	P-406L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
8	P-407L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
9	P-408L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
10	P-409L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
11	P-410L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
12	P-411L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
13	P-412L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
14	P-413L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2
15	P-414L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	2%
16			
17	P-501L	#5 BENT BAR (LEVEL II, DUAL COATED) (STEM)	16
18			
19	P-701E	#7 BENT BAR (LEVEL I, EPOXY COATED) (FLANGE)	30
20			
21		#3 x 8'-8" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	23
22		#3 x 12'-9" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	9
23		#3 x 20'-0" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	9
24			
25		#4 x 8'-4" (LEVEL II, DUAL COATED) (FLANGE)	4
26		#4 x 8'-1" (LEVEL II, DUAL COATED) (FLANGE)	2
27		#4 x 4'-1" (LEVEL II, DUAL COATED) (FLANGE)	10
28		#4 x 8'-0" (LEVEL II, DUAL COATED) (FLANGE)	18
29		#5 x 8'-4" (LEVEL II, DUAL COATED) (FLANGE)	4
30		#5 x 8'-3" (LEVEL II, DUAL COATED) (FLANGE)	4
31		#5 x 8'-1" (LEVEL II, DUAL COATED) (FLANGE)	4
32		#5 x 8'-0" (LEVEL II, DUAL COATED) (FLANGE)	2%
33		#5 x 6'-2" (LEVEL II, DUAL COATED) (FLANGE)	16
34			
35		#5 x 37'-6" (LEVEL II, DUAL COATED) (FLANGE)	12
36		#5 x 40'-0" (LEVEL II, DUAL COATED) (FLANGE)	36
37		#5 x 4'-11" (LEVEL II, DUAL COATED) (FLANGE)	12

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

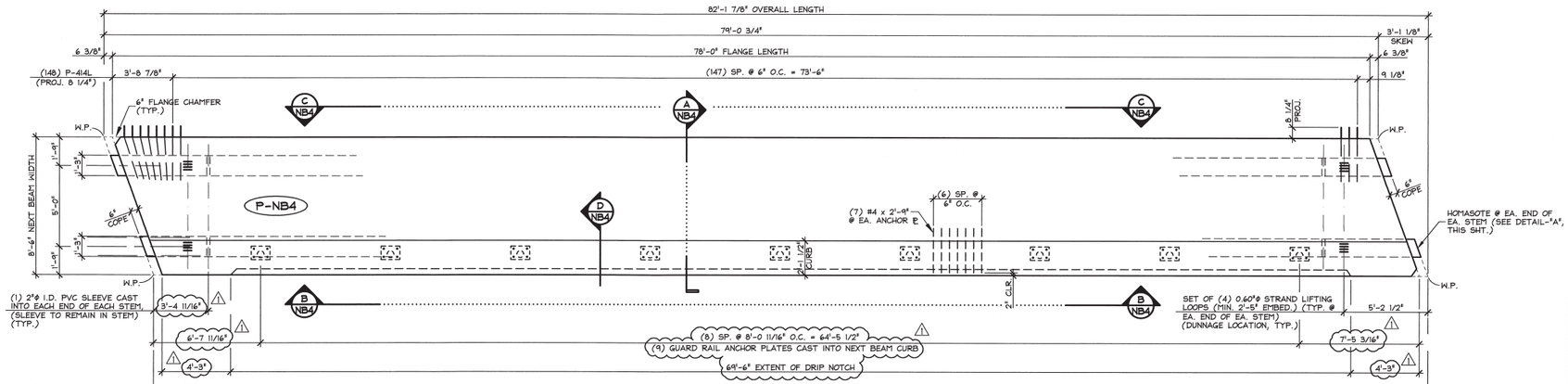
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

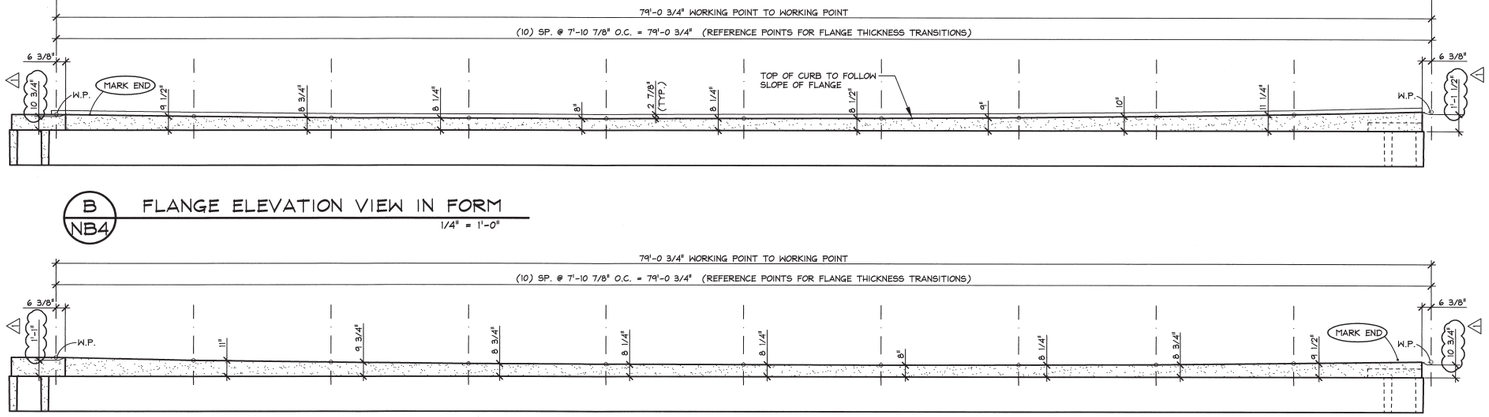
PRESTRESSED NEXT BEAM DETAILS

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013
DWG. NO: NB3A

F:\VT-Bridges\23416-13 Pittsfield Vt. Rt. 100\23416-NB2.dwg, 5/12/2014 2:41:49 PM

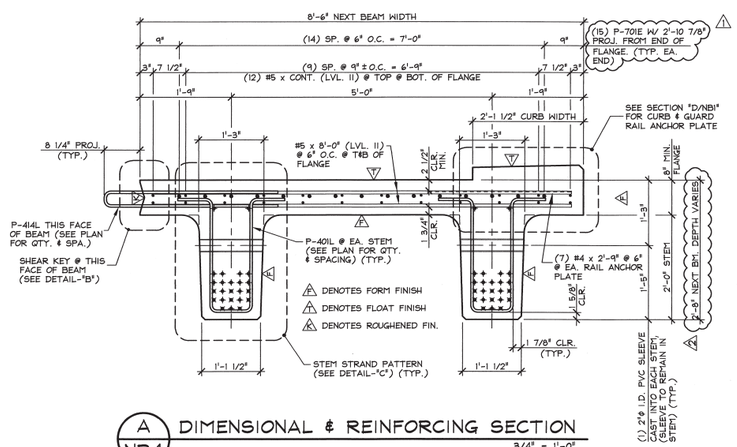


1 NB4 DIMENSIONAL PLAN VIEW IN FORM
1/4" = 1'-0"

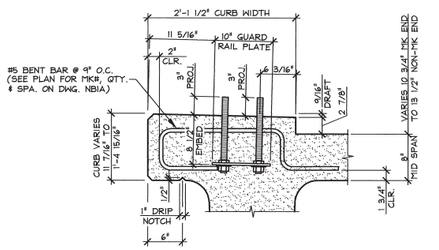


B NB4 FLANGE ELEVATION VIEW IN FORM
1/4" = 1'-0"

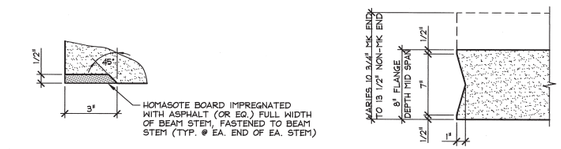
C NB4 FLANGE ELEVATION VIEW IN FORM
1/4" = 1'-0"



A NB4 DIMENSIONAL & REINFORCING SECTION
3/4" = 1'-0"

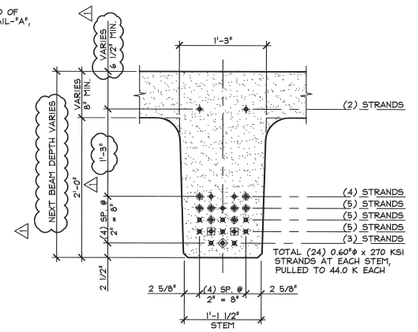


D NB4 CURB & GUARD RAIL ANCHOR PLATE SECTION
TYP. BEAM REINF. NOT SHOWN FOR CLARITY
1" = 1'-0"



DETAIL - "A"
3" = 1'-0"

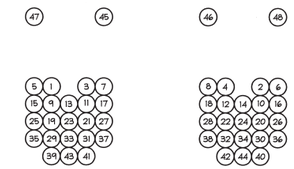
DETAIL - "B"
1 1/2" = 1'-0"



DETAIL - "C" (STEM STRAND PATTERN)
1" = 1'-0"

PRESTRESSING NOTATIONS

- ✦ DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- ✖ DENOTES STRAIGHT STRANDS TO PROJECT 2'-2" FROM EA. END OF EA. STEM, BEND 90° UP @ 8" FROM END OF STEM.
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- ⊞ DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
- ⊛ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM



DETENSIONING SCHEDULE
N.T.S.

FOR REINFORCING PLAN AND ELEVATIONS SEE DWG. NB4A

MARK: P-NB4	QTY.: 1	WT.: 70.20 T	VOL.: 34.67 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	P-414L	#4 BENT BAR (LEVEL II, DUAL COATED) ⚠1	(148)
2		#4 x 2'-9" (LEVEL II, DUAL COATED) ⚠1	(63)
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13		GUARD RAIL ANCHOR PLATE (GALV.) (SUPPLIED BY OTHERS) ⚠1	(9)
14		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4
15			

⚠2 5-12-14 REVISED AS PER ENGINEERS COMM. T.D.
⚠1 4-21-14 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:
Vermont Agency of Transportation
RECEIVED
CK'D BY JG/WL OK'D BY JS
May 13, 2014
RESUBMIT NO Approved
BY KH DATE 5-14-2014

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2484 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

PRESTRESSED NEXT BEAM DETAILS

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23416-013
DWG. NO: NB4

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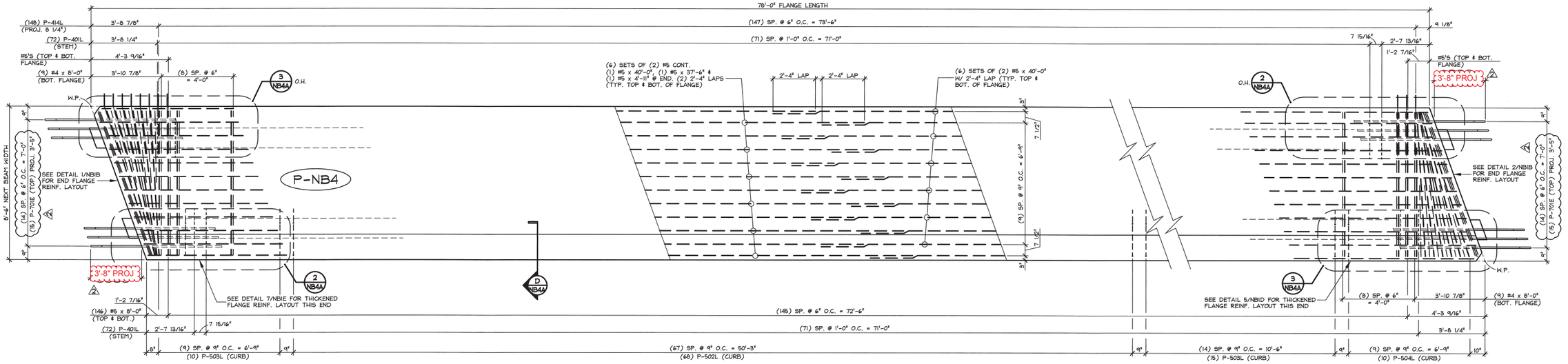
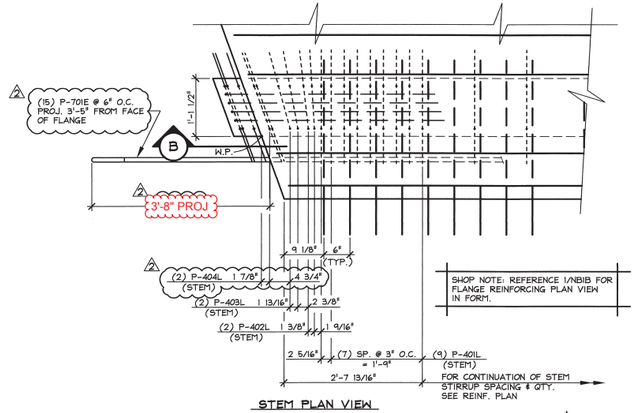
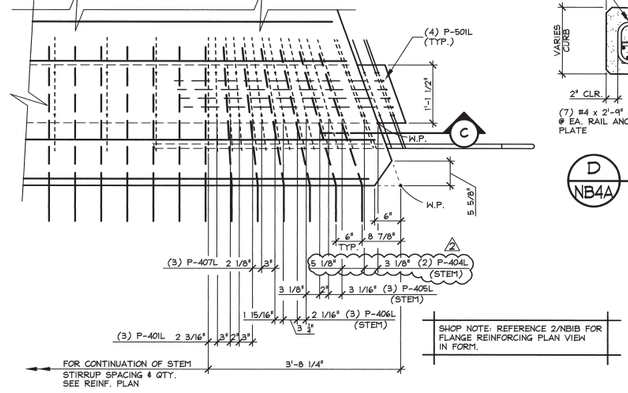
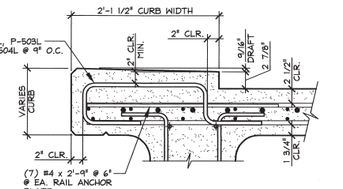


1 NB4A REINFORCING PLAN VIEW IN FORM

3/8" = 1'-0"

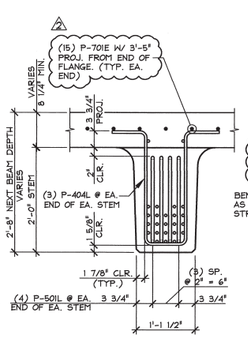


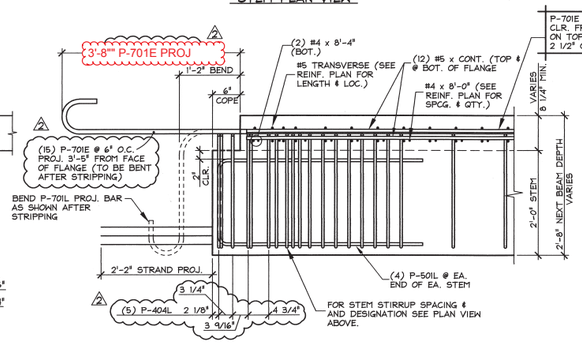


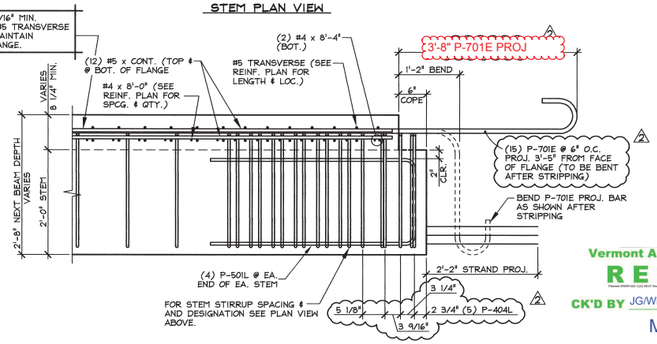


D NB4A SECTION THRU CURB

1" = 1'-0"







2 NB4A END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"

3 NB4A END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"

MARK: P-NB4	QTY.: 1	WT.: _____ T	VOL.: _____ cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	P-302L	#3 BENT BAR (LEVEL II, DUAL COATED) (THICKENED FLANGE)	23
2	P-401L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	168
3	P-402L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	4
4	P-403L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	4
5	P-404L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	20
6	P-405L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
7	P-406L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
8	P-407L	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	6
9	P-408L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
10	P-409L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
11	P-410L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
12	P-411L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
13	P-412L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
14	P-413L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	1
15	P-414L	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	148
16	P-501L	#5 BENT BAR (LEVEL II, DUAL COATED) (STEM)	16
17	P-502L	#5 BENT BAR (LEVEL II, DUAL COATED) (CURB)	68
18	P-503L	#5 BENT BAR (LEVEL II, DUAL COATED) (CURB)	25
19	P-504L	#5 BENT BAR (LEVEL II, DUAL COATED) (CURB)	10
20	P-701E	#7 BENT BAR (LEVEL I, EPOXY COATED) (FLANGE)	30
21		#3 x 8'-8" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	21
22		#3 x 12'-9" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	9
23		#3 x 20'-9" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	9
24			
25		#4 x 8'-4" (LEVEL II, DUAL COATED) (FLANGE)	4
26		#4 x 8'-1" (LEVEL II, DUAL COATED) (FLANGE)	2
27		#4 x 4'-1" (LEVEL II, DUAL COATED) (FLANGE)	10
28		#4 x 8'-0" (LEVEL II, DUAL COATED) (FLANGE)	18
29		#5 x 8'-4" (LEVEL II, DUAL COATED) (FLANGE)	4
30		#5 x 8'-3" (LEVEL II, DUAL COATED) (FLANGE)	4
31		#5 x 8'-1" (LEVEL II, DUAL COATED) (FLANGE)	4
32		#5 x 8'-0" (LEVEL II, DUAL COATED) (FLANGE)	296
33		#5 x 6'-2" (LEVEL II, DUAL COATED) (FLANGE)	16
34			
35		#5 x 37'-6" (LEVEL II, DUAL COATED) (FLANGE)	12
36		#5 x 40'-0" (LEVEL II, DUAL COATED) (FLANGE)	36
37		#5 x 4'-11" (LEVEL II, DUAL COATED) (FLANGE)	12

Vermont Agency of Transportation
RECEIVED
CK'D BY JG/WL OK'D BY JS
May 13, 2014
RESUBMIT NO Approved AsNoted
BY KH DATE 5-14-2014

2 5-12-14 REVISED AS PER ENGINEERS COMM. T.D.
1 4-21-14 REVISED AS PER ENGINEERS COMM. T.D.

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
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COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

DATE: FEB. 3, 2014
SCALE: NOTED

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

CHKD: - DFTM: T.D.
JOB NO: 23416-013

PRESTRESSED NEXT BEAM DETAILS

DWG. NO: NB4A

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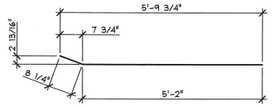
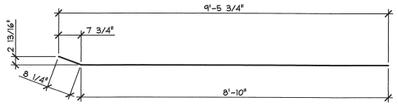
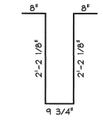


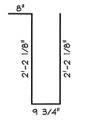
P-301L
#3 BENT BAR
LEVEL II (DUAL COATED)
USE 2"ϕ (50 mm) PIN
(70) REQ'D.



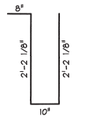
P-302L
#3 BENT BAR
LEVEL II (DUAL COATED)
USE 2"ϕ (50 mm) PIN
(38) REQ'D.



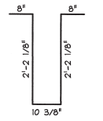
P-401L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"ϕ (50 mm) PIN
(672) REQ'D.



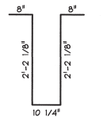
P-402L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"ϕ (50 mm) PIN
(16) REQ'D.



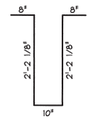
P-403L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"ϕ (50 mm) PIN
(16) REQ'D.



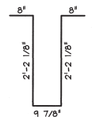
P-404L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"ϕ (50 mm) PIN
(80) REQ'D.



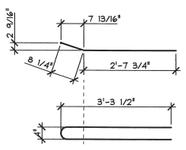
P-405L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"ϕ (50 mm) PIN
(24) REQ'D.



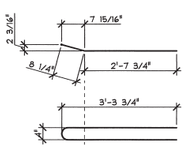
P-406L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"ϕ (50 mm) PIN
(24) REQ'D.



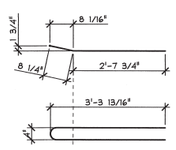
P-407L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"ϕ (50 mm) PIN
(24) REQ'D.



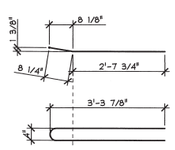
P-408L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(6) REQ'D.



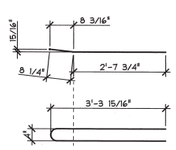
P-409L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(6) REQ'D.



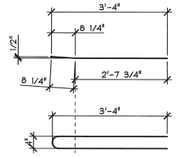
P-410L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(6) REQ'D.



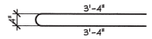
P-411L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(6) REQ'D.



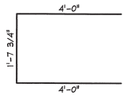
P-412L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(6) REQ'D.



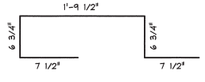
P-413L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(6) REQ'D.



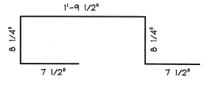
P-414L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(888) REQ'D.



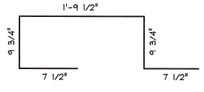
P-501L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(64) REQ'D.



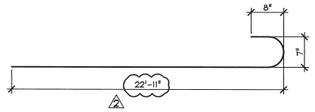
P-502L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(146) REQ'D.



P-503L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(45) REQ'D.



P-504L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2½"ϕ (70 mm) PIN
(15) REQ'D.



P-701E
#7 BENT BAR
LEVEL I (EPOXY COATED)
USE 5 1/4"ϕ PIN
(120) REQ'D.

MISCELLANEOUS MATERIALS

ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1				
2				
3				
4		18	GUARD RAIL ANCHOR PLATE (GALV.)	SUPPLIED BY OTHERS
5		16	SET OF (4) 0.60"ϕ x 270 KSI STRAND LIFTING LOOPS	
6				
7				
8	P-301L	70	#3 BENT BAR (LEVEL II, DUAL COATED) (THICKENED FLANGE)	
9	P-302L	38	#3 BENT BAR (LEVEL II, DUAL COATED) (THICKENED FLANGE)	
10				
11	P-401L	672	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	
12	P-402L	16	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	
13	P-403L	16	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	
14	P-404L	80	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	
15	P-405L	24	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	
16	P-406L	24	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	
17	P-407L	24	#4 BENT BAR (LEVEL II, DUAL COATED) (STEM)	
18	P-408L	6	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	
19	P-409L	6	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	
20	P-410L	6	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	
21	P-411L	6	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	
22	P-412L	6	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	
23	P-413L	6	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	
24	P-414L	888	#4 BENT BAR (LEVEL II, DUAL COATED) (FLANGE)	
25				
26	P-501L	64	#5 BENT BAR (LEVEL II, DUAL COATED) (STEM)	
27	P-502L	146	#5 BENT BAR (LEVEL II, DUAL COATED) (CURB)	
28	P-503L	45	#5 BENT BAR (LEVEL II, DUAL COATED) (CURB)	
29	P-504L	15	#5 BENT BAR (LEVEL II, DUAL COATED) (CURB)	
30				
31	P-701E	120	#7 BENT BAR (LEVEL I, EPOXY COATED) (FLANGE)	
32				
33				
34		83	#3 x 8'-8" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	
35		36	#3 x 12'-9" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	
36		9	#3 x 17'-9" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	
37		9	#3 x 15'-3" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	
38		9	#3 x 20'-0" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	
39		9	#3 x 20'-9" (LEVEL II, DUAL COATED) (THICKENED FLANGE)	
40				
41		126	#4 x 2'-9" (LEVEL II, DUAL COATED) (FLANGE)	
42		16	#4 x 8'-4" (LEVEL II, DUAL COATED) (FLANGE)	
43		8	#4 x 8'-1" (LEVEL II, DUAL COATED) (FLANGE)	
44		40	#4 x 4'-1" (LEVEL II, DUAL COATED) (FLANGE)	
45		72	#4 x 8'-0" (LEVEL II, DUAL COATED) (FLANGE)	
46		16	#5 x 8'-4" (LEVEL II, DUAL COATED) (FLANGE)	
47		16	#5 x 8'-3" (LEVEL II, DUAL COATED) (FLANGE)	
48		16	#5 x 8'-1" (LEVEL II, DUAL COATED) (FLANGE)	
49		1184	#5 x 8'-0" (LEVEL II, DUAL COATED) (FLANGE)	
50		64	#5 x 6'-2" (LEVEL II, DUAL COATED) (FLANGE)	
51				
52		48	#5 x 37'-6" (LEVEL II, DUAL COATED) (FLANGE)	
53		144	#5 x 40'-0" (LEVEL II, DUAL COATED) (FLANGE)	
54		48	#5 x 4'-11" (LEVEL II, DUAL COATED) (FLANGE)	
55				

2 5-12-14 REVISED AS PER [illegible] T.D.
1 4-21-14 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:
Vermont Agency of Transportation
RECEIVED
CK'D BY JG/WL OK'D BY JS
May 13, 2014
RESUBMIT NO Approved
BY KH DATE 5-14-2014

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

COLD RIVER BRIDGES, LLC
CONTRACTOR
WALPOLE, NEW HAMPSHIRE

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF PITTSFIELD
VT ROUTE 100, (MINOR ARTERIAL)
BRIDGE NO.: 124 PROJECT NO.: ER BRF 022-1 (23)

MATERIALS LIST

DATE: FEB. 3, 2014
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO:
DWG. NO: M1

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