



PO Box 508
Barton, VT 05822
Phone: (802) 525-9506
Fax: (802) 525-4616
www.jpsicard.com

Submittal Data Sheet

Submittal #: 6

Submission #: 2

Date: 5/29/2015

Project Name: Barton BRO (1449) Bridge Replacement

Owner: Town of Barton, VT

Engineer: VTrans

Contractor: J.P. Sicard Inc.

Item Number(s): 540.10, 900.640

Supplier: J.P. Carrara

Description of Item: Fabrication Drawings: Pre-Cast Abutments, NEXT Beams and Approach Slabs -Second Submission

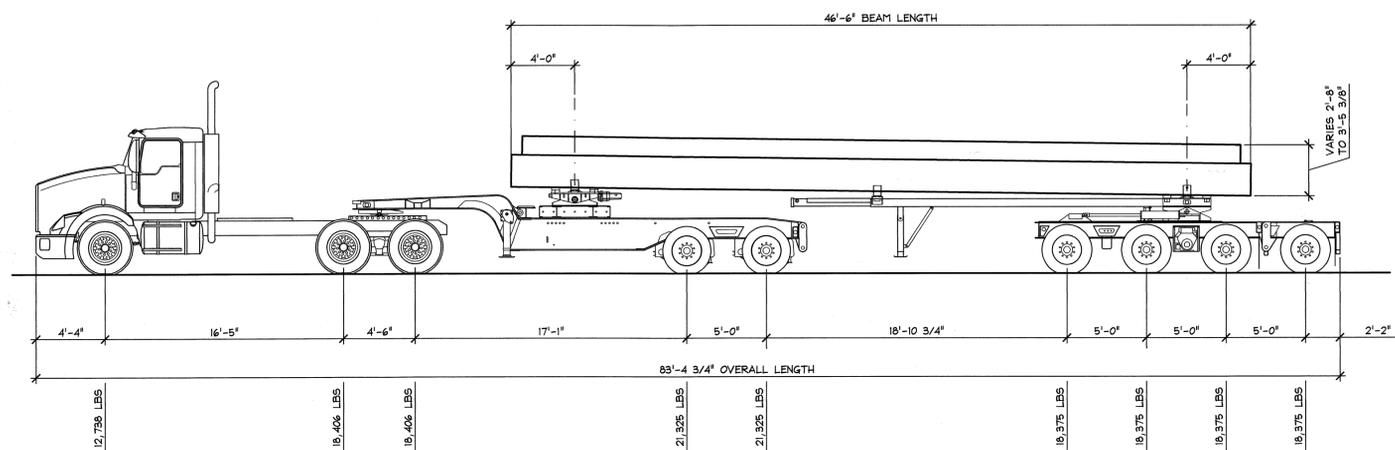
Substitution: NO

Engineers Review Comments: _____

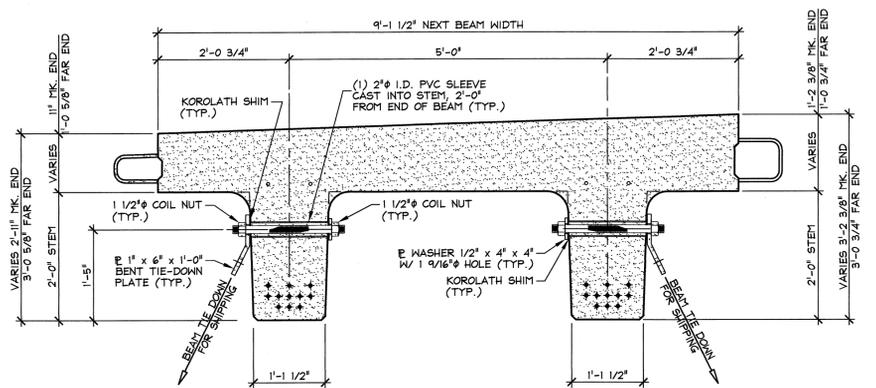
Submitted By: Brad Drake

Title: Project Manager

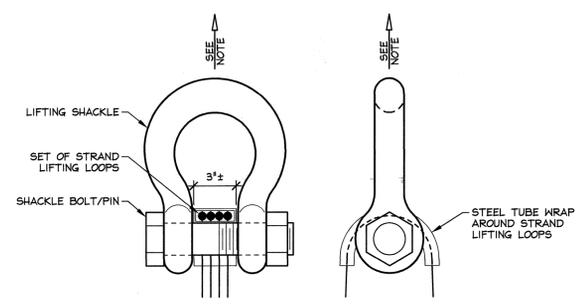
Company: JP Sicard Inc



SHIPPING ELEVATION
3/16" = 1'-0"



**MODIFIED 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 AND VERTICAL 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.

ABUTMENT & APPROACH SLAB GENERAL NOTES

- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 5,000 PSI.
- MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 3,500 PSI (UNLESS NOTED OTHERWISE).
- REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) LEVEL I (BLACK STEEL) (UNLESS NOTED OTHERWISE).
- THE TOP OF ABUTMENTS SHALL RECEIVE A 1/4" RAKED AMPLITUDE FINISH (UNLESS NOTED OTHERWISE). THE TOP OF ABUTMENT CHEEKWALLS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
- SHEAR KEY SURFACES SHALL HAVE 1/8" COURSE AGGREGATE EXPOSED.
- PRECAST CONCRETE UNITS SHALL BE HANDLED AND ERECTED USING THE LIFTING INSERTS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. NON-PRESTRESSED UNITS SHALL BE STORED & TRANSPORTED WITH TIMBER SUPPORTS AT 5ft POINTS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
- MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. PS10.02 AND PS10.05 RESPECTIVELY.
DESIGN MIX:
APPROACH SL : J.P.C. BRIDGE MIX #445MSCC (APPROVED 4-2-2015)
ABUTMENT : J.P.C. BRIDGE MIX #445M-NO DCI (APPROVED 3-21-2015)
- QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
- CURING METHOD: AS SOON AS THE TOP OF PRECAST CONCRETE UNITS ARE FINISHED, A COVER OF RIGID INSULATION AND POLY WILL BE PLACED OVER THE UNIT. NATURAL CURE WITH NO EXTERNAL HEAT APPLIED.
- ABUTMENT POST-TENSIONING SEQUENCE:
A. ERECT PRECAST ABUTMENTS AND INSTALL TRANSVERSE STRANDS.
B. APPLY EPOXY BONDING COMPOUND TO MATCH CAST FACES OF VERTICAL CONSTRUCTION JOINT.
C. TENSION STRANDS TO 3k TO REMOVE SAG.
D. CHECK ALIGNMENT OF PRECAST ELEMENTS.
E. POST TENSION TENDONS TO 32,000 LBS.

NEXT BEAM GENERAL NOTES

- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 6,000 PSI.
- MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 4,000 PSI.
- REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) LEVEL II (DUAL COATED).
- PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0.60" x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
- 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.)
- ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF NEXT BEAM STEMS (UNLESS NOTED OTHERWISE) AND COATED WITH TWO PART EPOXY PAINT SYSTEM.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" (UNLESS NOTED OTHERWISE).
- THE TOP OF BEAMS SHALL RECEIVE A SMOOTH SCREED FINISH (UNLESS NOTED OTHERWISE).
- SHEAR KEY SURFACES SHALL BE SAND BLASTED CLEAN.
- BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL AND VERTICAL FORCES ARE APPLIED TO EACH OF THE TWO LIFTING LOOPS AT EACH END OF THE BEAM. THE PINS OF THE SHACKLES SHALL BE PLACED THROUGH 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.
- MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. PS10.02 AND PS10.05 RESPECTIVELY.
DESIGN MIX: J.P.C. BRIDGE MIX #430M-NO DCI (SUBMITTED 3-21-2015)
- QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
- 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 60°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.
- CONTRACTOR 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.
- MANUFACTURING TOLERANCES SHALL COMPLY WITH PCI MNL-116. SINCE PRESTRESSED PRODUCT CAMBER IS A RESULT OF REQUIRED DESIGN LOADS AND SPAN LENGTH, CAMBER TOLERANCES SHALL NOT APPLY.

**EXAMPLE PRESTRESSING STRAND
ELONGATION CALC. AND TENSIONING**
(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE: 0.60" x 270 KSI
AREA: 0.217 IN²
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%)
 Δ UPPER LIMIT = 1.05 x 19.977" = 20.98" = 21"
 Δ 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.

ADDITIONALLY, INCREASED ELONGATION AND THE CORRESPONDING FORCE DUE TO FORM SHORTENING SHALL BE ACCOUNTED FOR IN THE CALCULATIONS USED FOR CONSTRUCTION PER PROVISION PCI MNL-116 5.3.11.3.

STRAND TENSIONING PROCEDURE:

- PULL EACH STRAND INITIALLY TO 3,000* LBS. AND MARK STRAND.
- 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.
- STRANDS IN BOTTOM TWO ROWS SHALL BE RE-PULLED TO VERIFY SHORTENING EFFECT OF SELF STRESSING BED. RE-PULL FORCE SHALL NOT INCLUDE OVER-PULL FOR SHORTENING.

DESIGN LIVE LOAD: HL-93

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

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

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

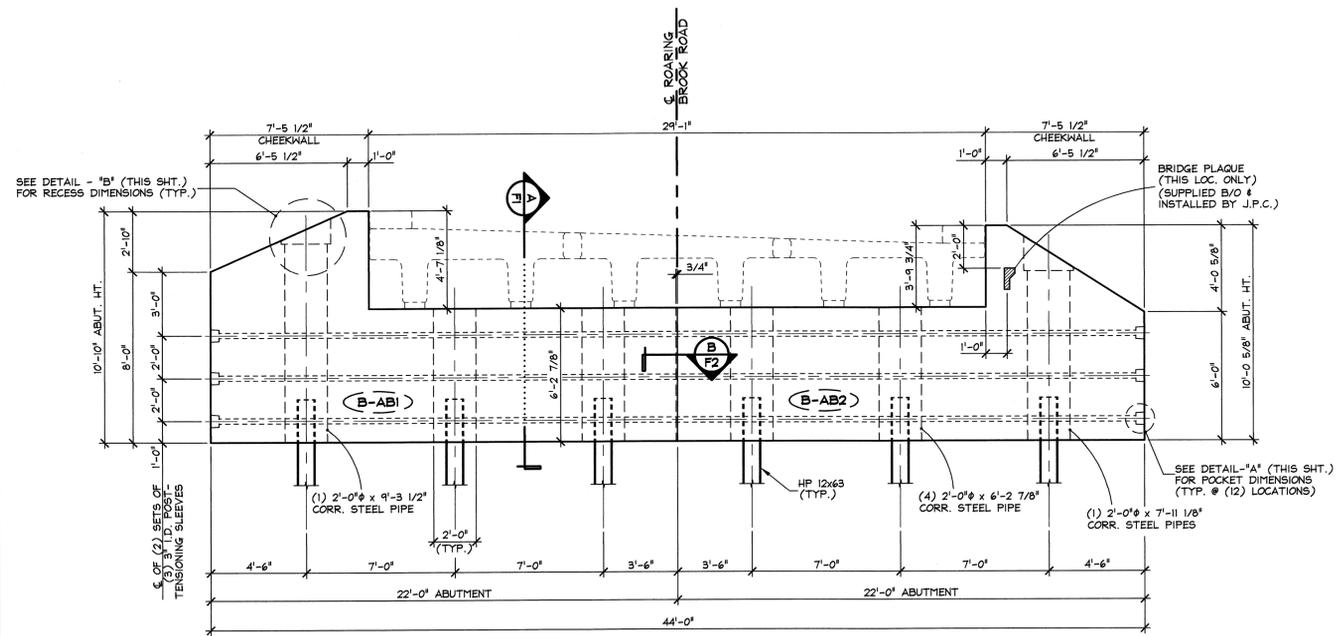
COVER SHEET

J.P. Sicard
CONTRACTOR
BARTON, VERMONT

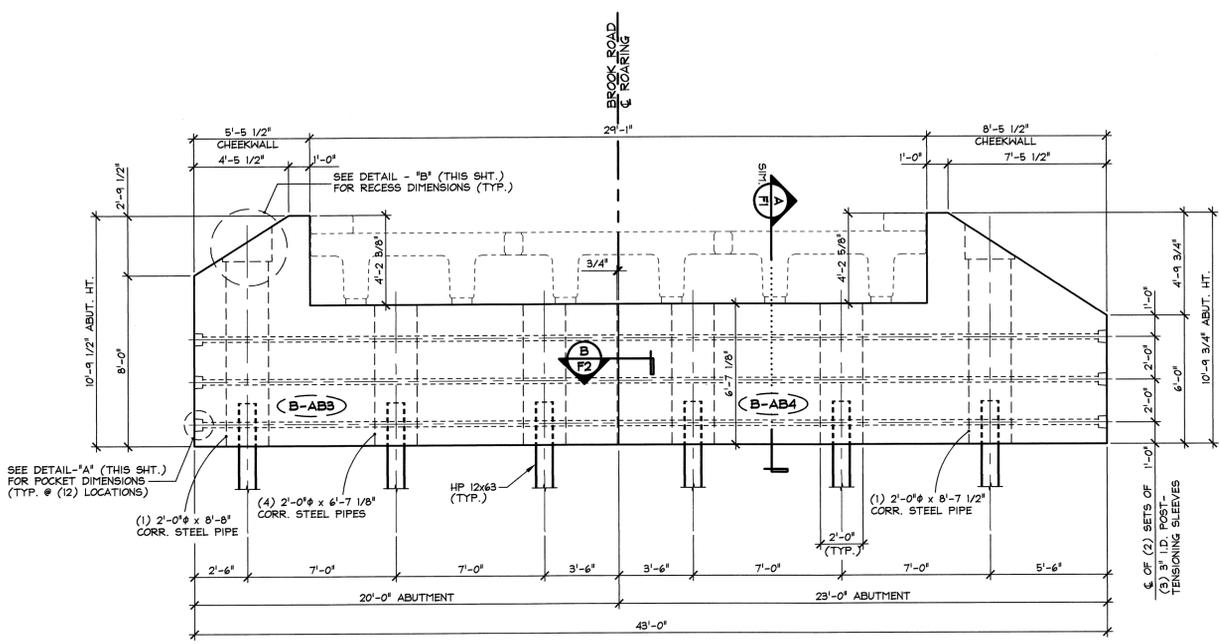
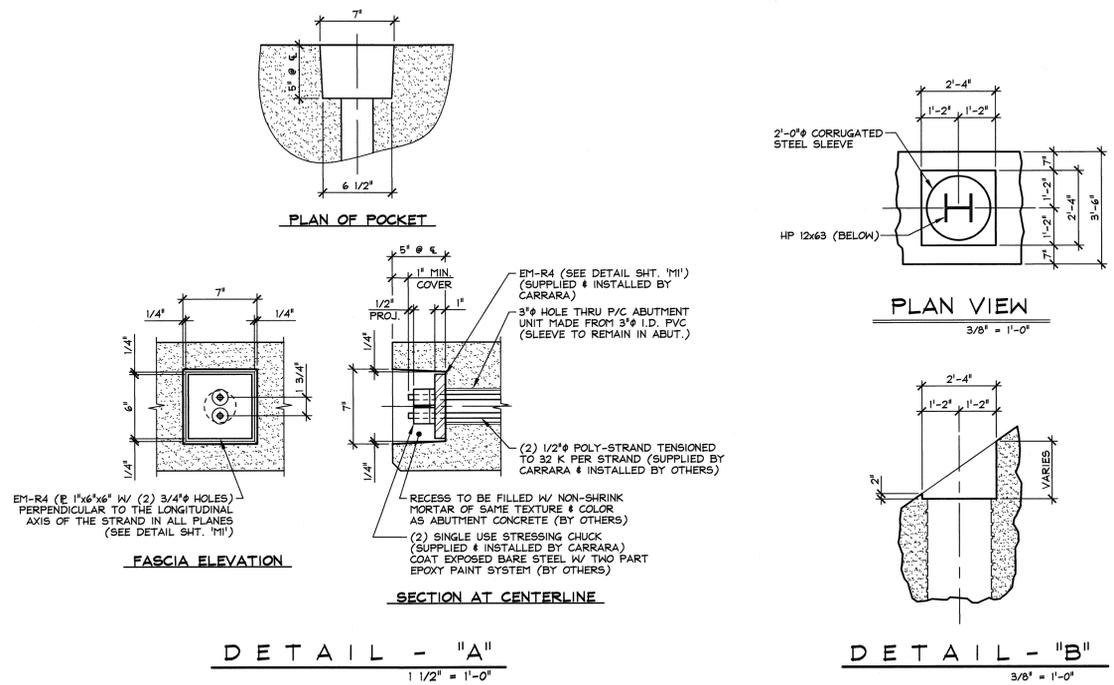
DATE: FEB. 25, 2015
SCALE: NOTED

CHKD: DFTM: T.D.
JOB NO: 23462-015

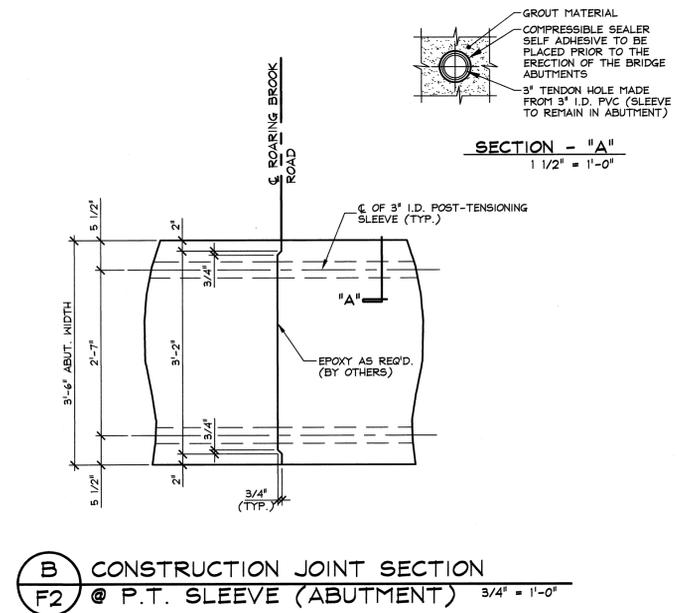
DWG. NO: C1



2 PRECAST ABUTMENT #1 ELEVATION
 F2
 1/4" = 1'-0"



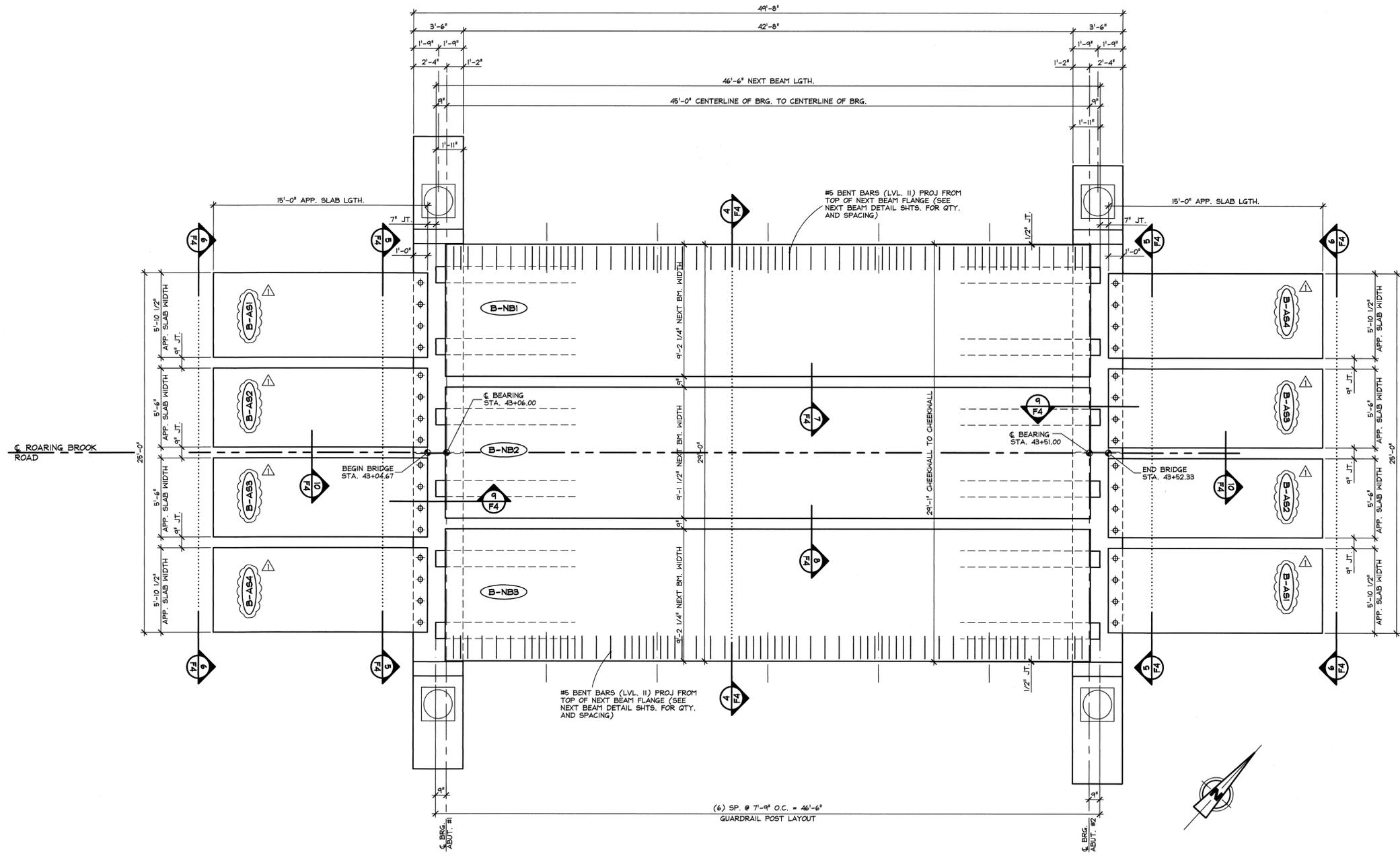
3 PRECAST ABUTMENT #2 ELEVATION
 F2
 1/4" = 1'-0"



B CONSTRUCTION JOINT SECTION
 F2 @ P.T. SLEEVE (ABUTMENT)
 3/4" = 1'-0"

APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 OSE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010		J.P. Sicard CONTRACTOR BARTON, VERMONT
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB. 25, 2015 SCALE: NOTED
	TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)		CHKD: DFTM: T.D. JOB NO: 23462-015
	PRECAST ABUTMENT ELEVATIONS & DETAILS		DWG. NO: F2

SUBMITTED
 5-29-15
 J.P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753



1 PRESTRESSED NEXT BEAM & APPROACH SLAB LAYOUT
 F3 1/4" = 1'-0"

F:\VT-Bridges\23462-14 Barton\23462-F3.dwg, 5/28/2015 9:12:50 AM

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

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

J.P. Sicard
 CONTRACTOR
 BARTON, VERMONT

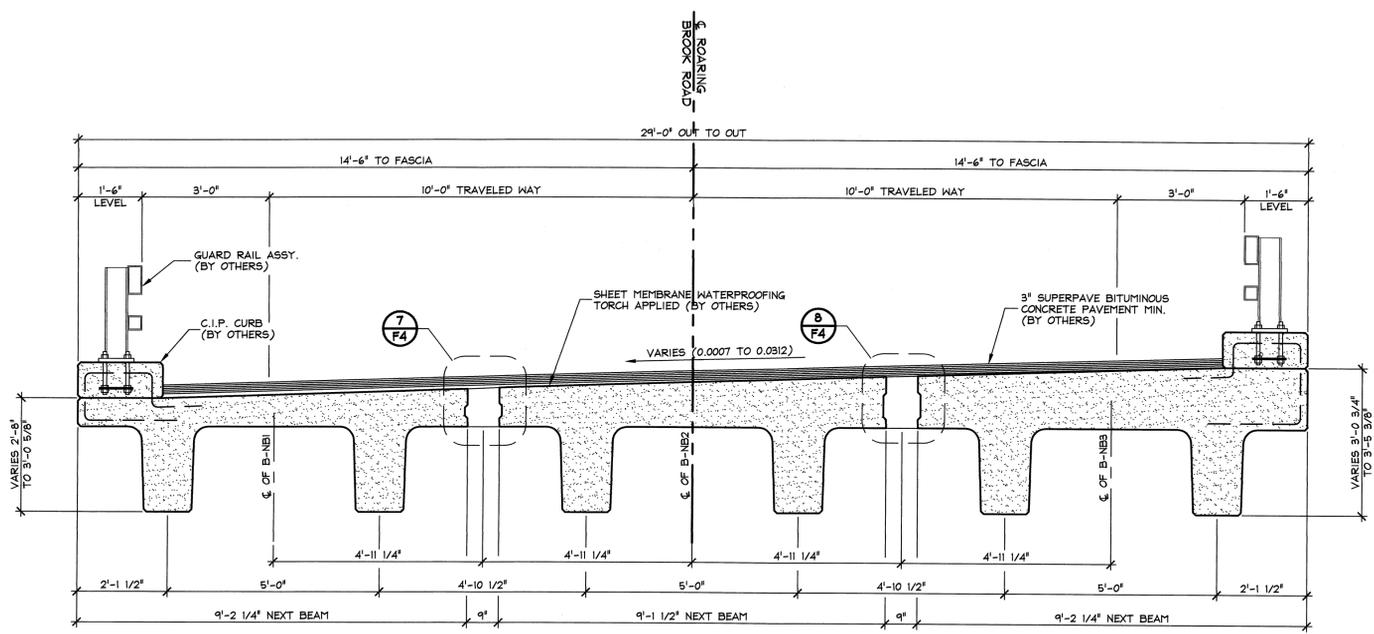
STATE OF VERMONT AGENCY OF TRANSPORTATION
 COUNTY OF ORLEANS

TOWN OF BARTON
 ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
 BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

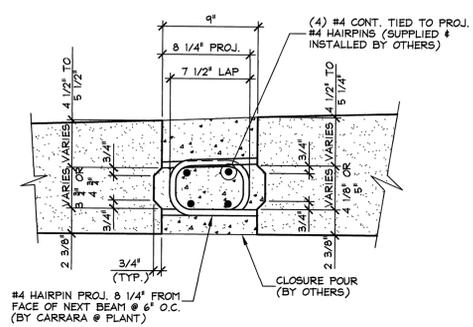
PRECAST NEXT BEAM & APPROACH SLAB LAYOUT

DATE: FEB. 25, 2015
 SCALE: NOTED
 CHKD: DFTM: T.D.
 JOB NO: 23462-015
 DWG. NO: **F3**

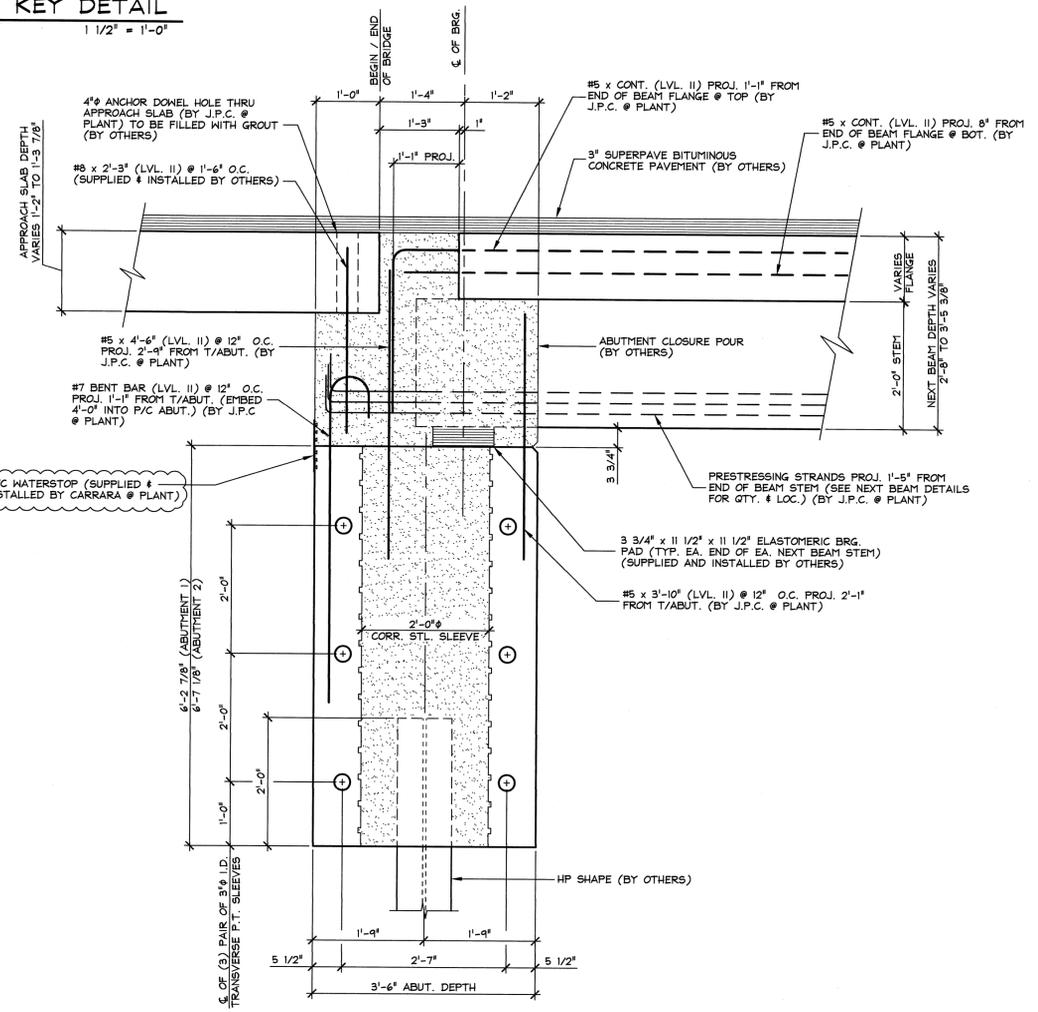
SUBMITTED
 5-29-15
 J. P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753



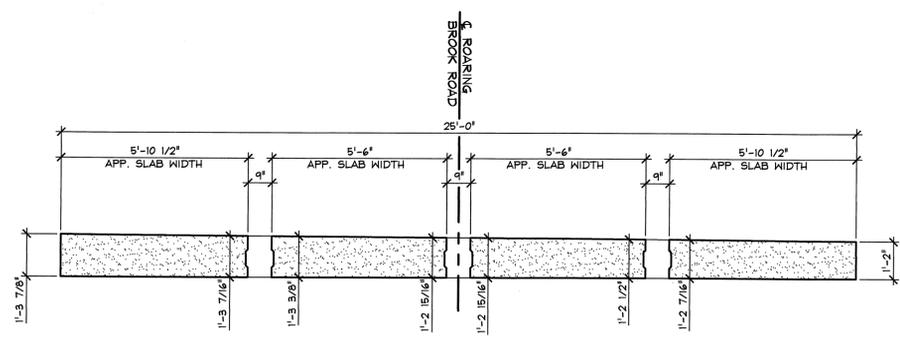
4 TRANSVERSE SECTION THRU NEXT BEAMS
F4 1/2" = 1'-0"



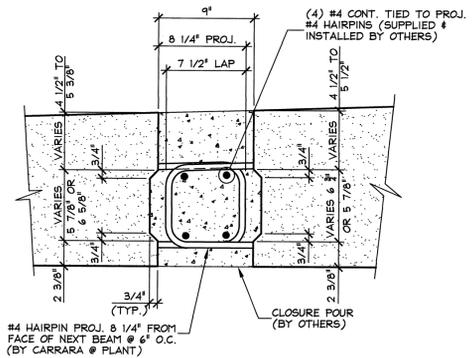
7 SHEAR KEY DETAIL
F4 1 1/2" = 1'-0"



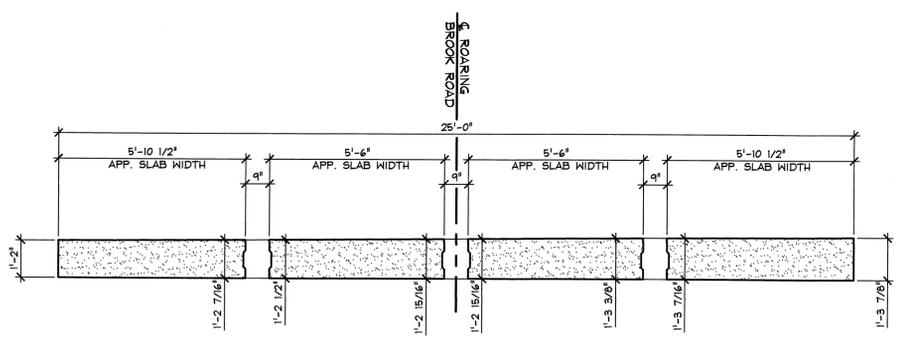
9 ABUTMENT SECTION
F4 3/4" = 1'-0"



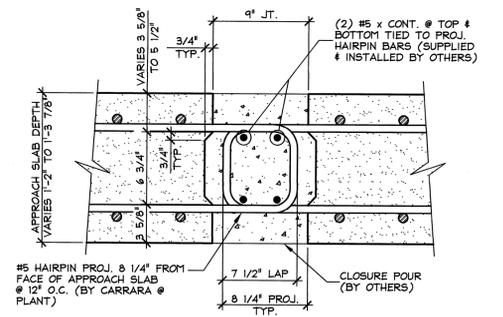
5 SECTION AT APPROACH SLABS
F4 (ABUT. #1 & ABUT. #2) 3/8" = 1'-0"



8 SHEAR KEY DETAIL
F4 1 1/2" = 1'-0"



6 SECTION AT APPROACH SLABS
F4 (ABUT. #1 & ABUT. #2) 3/8" = 1'-0"



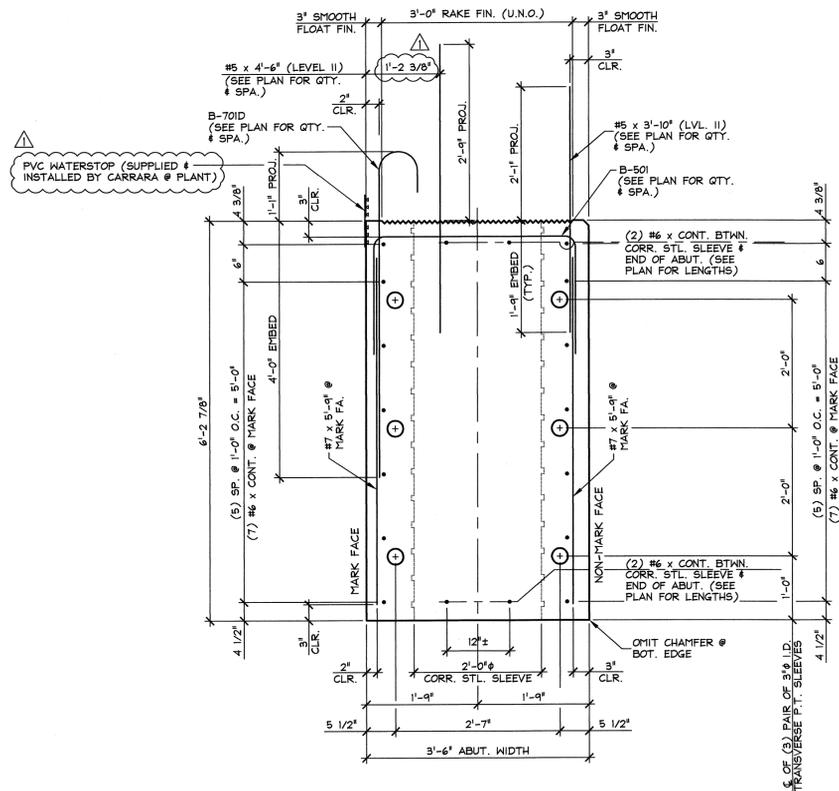
10 APPROACH SLAB CLOSURE POUR
F4 1 1/2" = 1'-0"

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

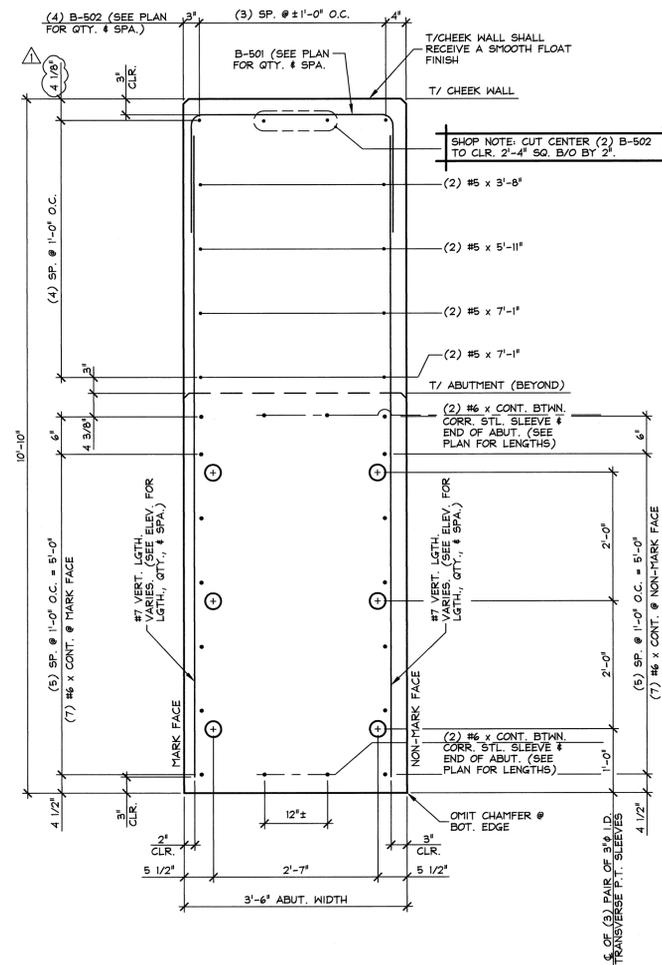
J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010		J.P. Sicard CONTRACTOR BARTON, VERMONT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB. 25, 2015	SCALE: NOTED
TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)		CHKD: _____	DFTM: T.D.
SECTIONS AND DETAILS		JOB NO: 23462-015	DWG. NO: F4

SUBMITTED
 5-29-15
 J.P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753



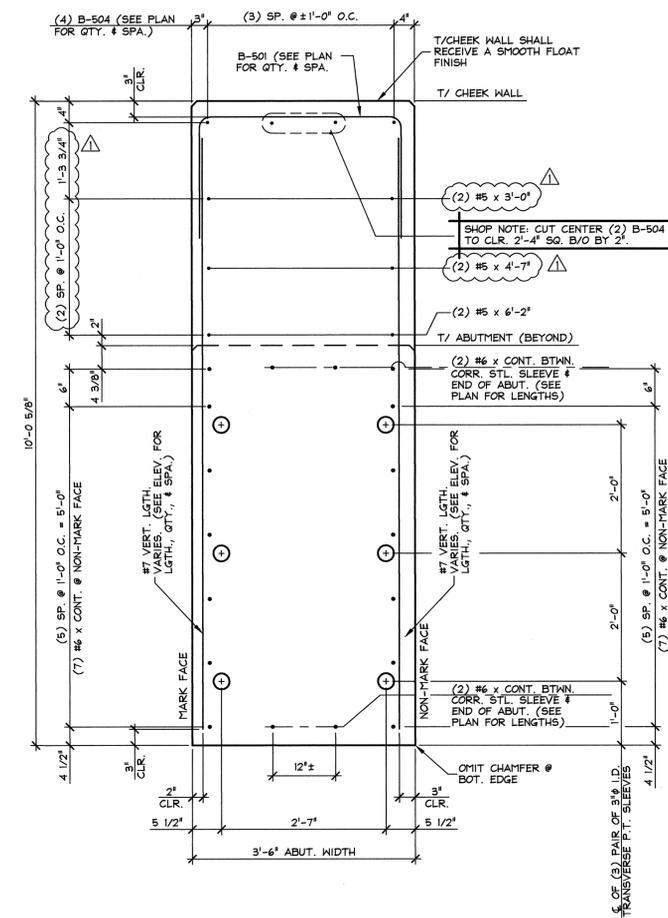
A ABUTMENT SECTION
 ABIA (B-AB1 & B-AB2) 3/4" = 1'-0"

SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL
 RECEIVE A 1" CHAMFER (U.N.O.)



B ABUTMENT SECTION
 ABIA (B-AB1) 3/4" = 1'-0"

SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL
 RECEIVE A 1" CHAMFER (U.N.O.)



C ABUTMENT SECTION
 ABIA (B-AB2) 3/4" = 1'-0"

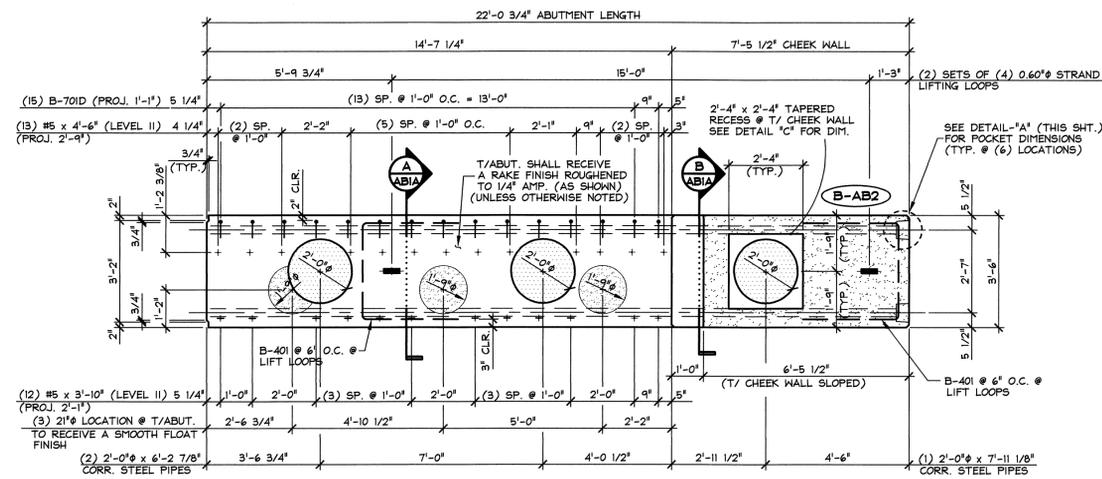
SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL
 RECEIVE A 1" CHAMFER (U.N.O.)

5/28/2015 REVISED AS NOTED T.D.

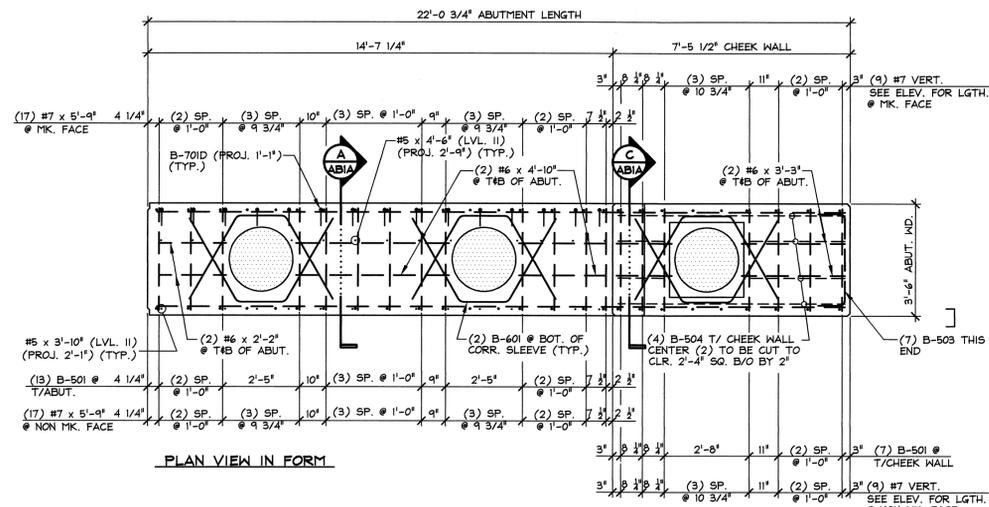
APPROVAL STAMP:

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 DAZE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6363 Fax:(802)388-8010		DATE: FEB. 25, 2015
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		SCALE: NOTED
TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)		CHKD: DFTM: T.D.
PRECAST ABUTMENT SECTIONS		JOB NO: 23462-015
		DWG. NO: ABIA

SUBMITTED
 5-29-15
 J.P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753

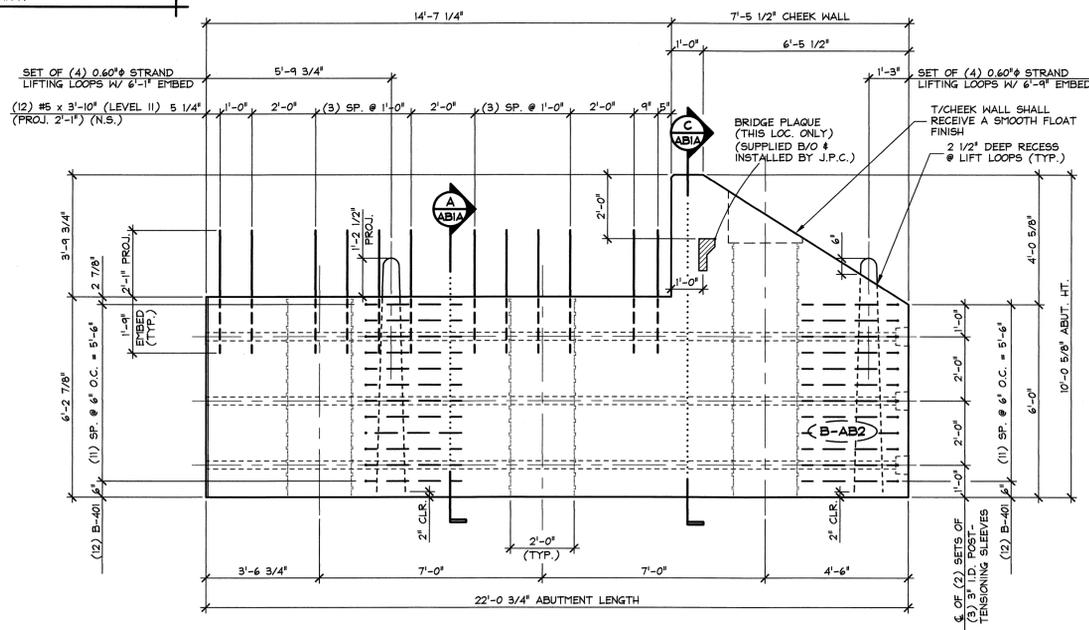


PLAN VIEW IN FORM

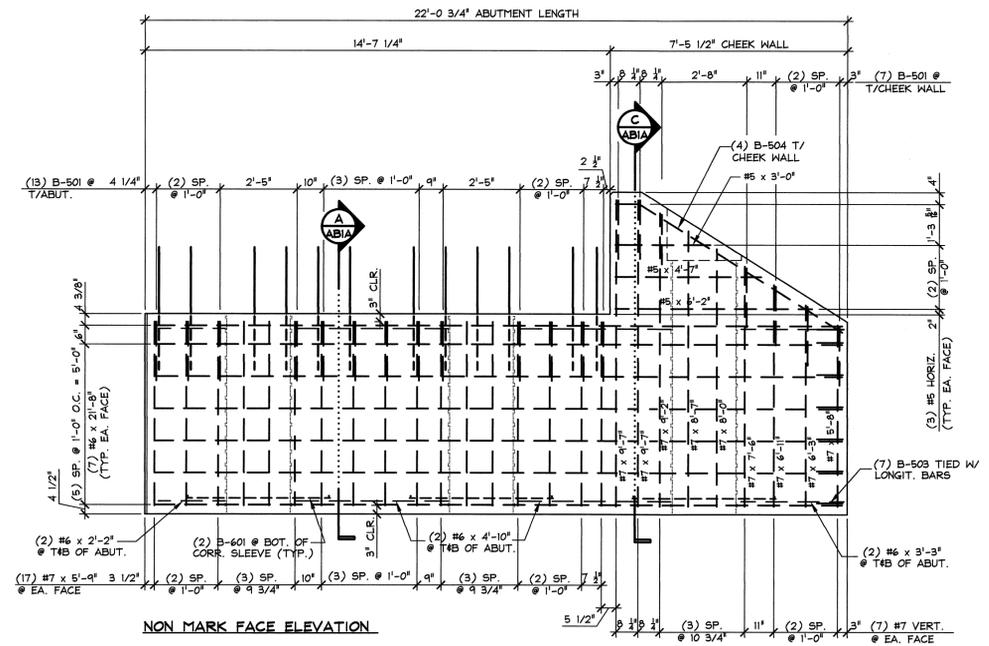


PLAN VIEW IN FORM

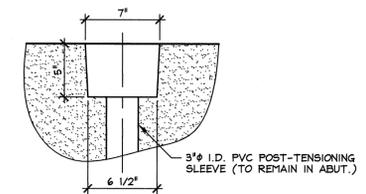
SHOP NOTE: B-701D & #5 PROJ. 2'-0\"/>



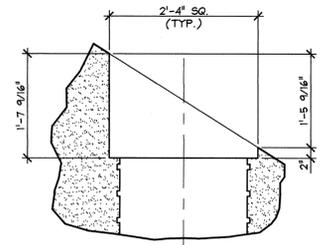
NON MARK FACE ELEVATION



NON MARK FACE ELEVATION



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



DETAIL - "C"
3/4" = 1'-0"

SHOP NOTE:
ALL EDGES OF ABUTMENT SHALL
RECEIVE A 1\"/>

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

MARK: B-AB2 QTY.: 1 WT.: 35.13 T VOL.: 17.14 cy

MATERIAL LIST / ABUTMENT			
ITEM	MARK	DESCRIPTION	QTY.
1	B-401	#4 BENT BAR (LEVEL 1)	24
2	B-501	#5 BENT BAR (LEVEL 1)	20
3	B-504	#5 BENT BAR (LEVEL 1)	4
4	B-505	#5 BENT BAR (LEVEL 1)	7
5	B-601	#6 BENT BAR (LEVEL 1)	6
6	B-701D	#5 BENT BAR (LEVEL II, DUAL COATED)	15
7		#5 x 3'-10" (LEVEL II, DUAL COATED)	12
8		#5 x 4'-6" (LEVEL II, DUAL COATED)	13
9		#5 x 3'-0" (LEVEL I)	2
10		#5 x 4'-7" (LEVEL I)	2
11		#5 x 6'-2" (LEVEL I)	2
12		#6 x 2'-2" (LEVEL I)	4
13		#6 x 3'-3" (LEVEL I)	4
14		#6 x 4'-10" (LEVEL I)	8
15		#6 x 2'-8" (LEVEL I)	14
16		#7 x 5'-9" (LEVEL I)	34
17		#7 x 5'-8" (LEVEL I)	2
18		#7 x 6'-3" (LEVEL I)	2
19		#7 x 6'-11" (LEVEL I)	2
20		#7 x 7'-6" (LEVEL I)	2
21		#7 x 9'-2" (LEVEL I)	2
22		#7 x 9'-7" (LEVEL I)	4
23		#7 x 8'-7" (LEVEL I)	2
24		#7 x 8'-0" (LEVEL I)	2
25		SET OF (4) 0.60" STRAND LIFTING LOOPS	2
26		2'-0" x 6'-2 7/8" CORRUGATED STEEL PIPE (GALV.)	2
27		2'-0" x 7'-1 1/8" CORRUGATED STEEL PIPE (GALV.)	1

1 ABUTMENT DIMENSIONAL DETAILS
3/8" = 1'-0"

SHOP NOTE:
28 DAYS = 5,000 PSI
RELEASE = 5,000 PSI

MIX DESIGN:
MIX NO. 425M-NO DCI
APPROVED 3-21-2015

2 ABUTMENT REINFORCING DETAILS
3/8" = 1'-0"

APPROVAL STAMP:

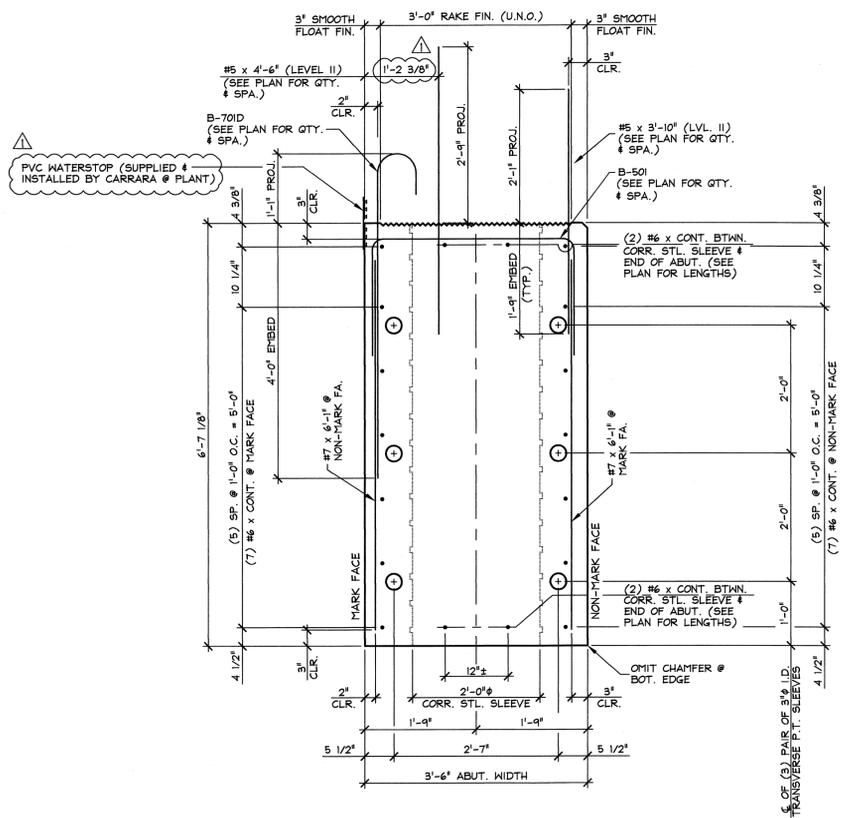
J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2444 DASE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

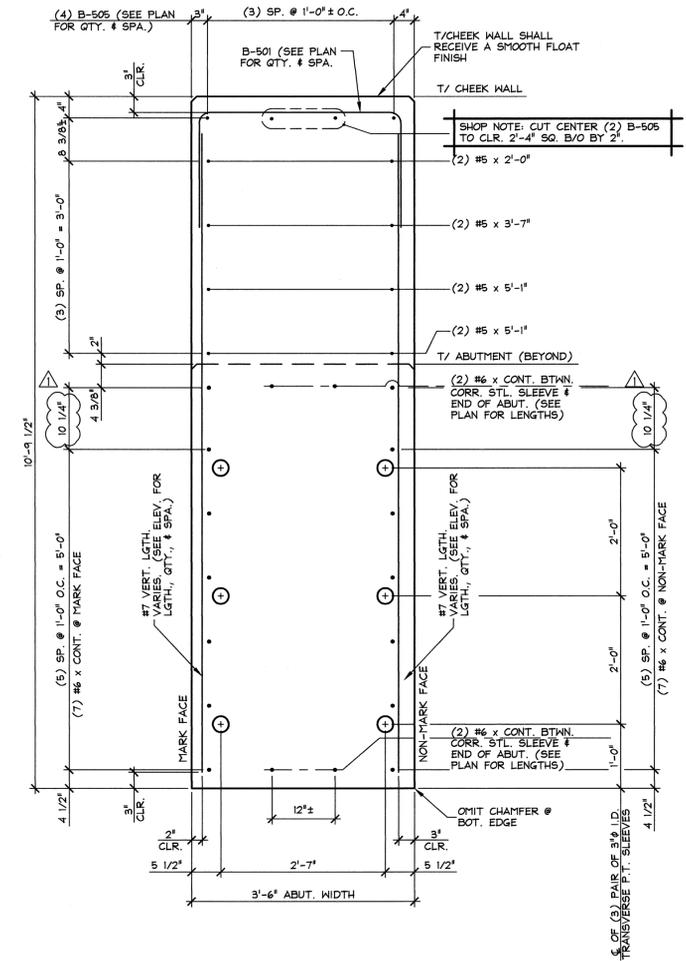
DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23462-015

PRECAST ABUTMENT DETAILS
DWG. NO: AB2



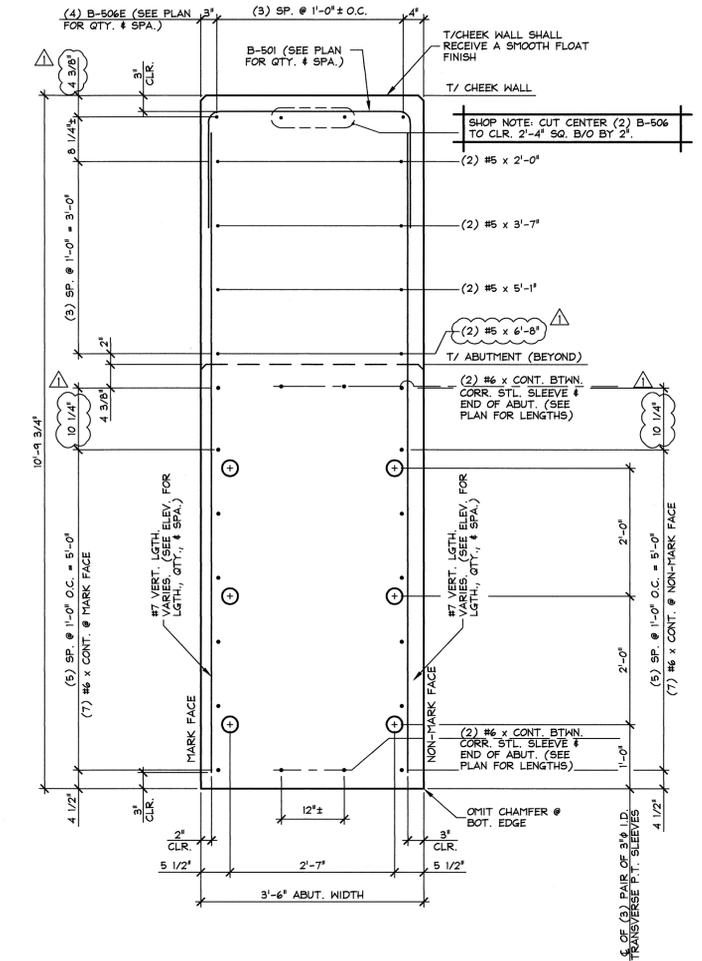
A ABUTMENT SECTION
 AB3A (B-AB3 & B-AB4) 3/4" = 1'-0"

SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL
 RECEIVE A 1" CHAMFER (U.N.O.)



B ABUTMENT SECTION
 AB3A (B-AB3) 3/4" = 1'-0"

SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL
 RECEIVE A 1" CHAMFER (U.N.O.)



C ABUTMENT SECTION
 AB3A (B-AB4) 3/4" = 1'-0"

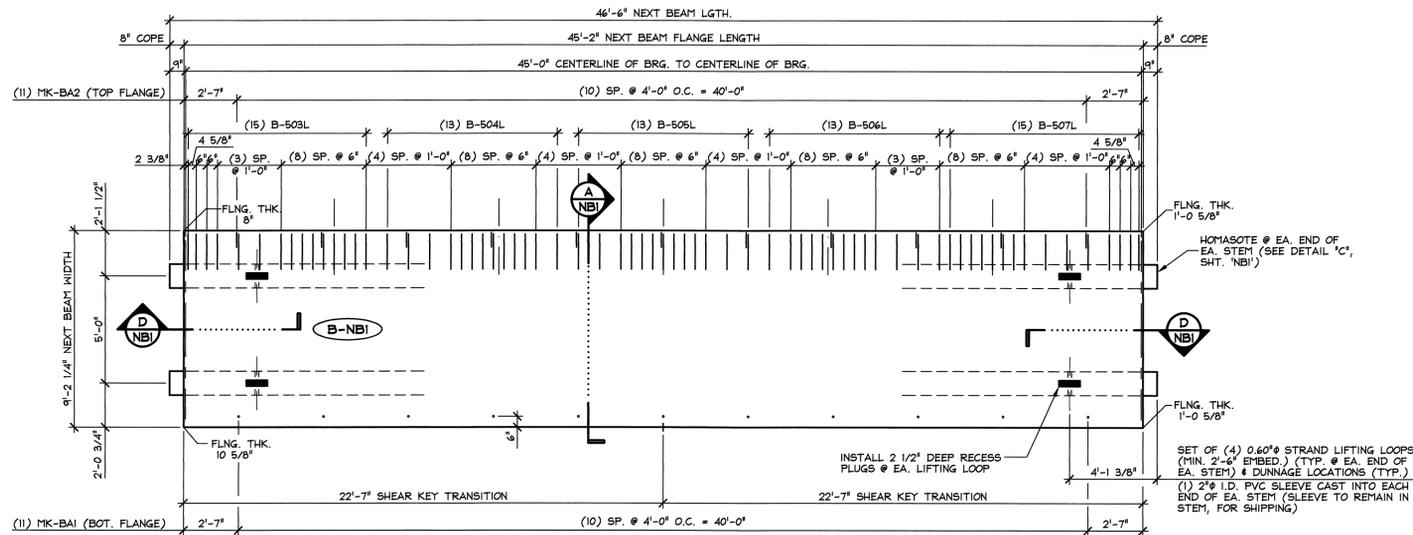
SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL
 RECEIVE A 1" CHAMFER (U.N.O.)

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

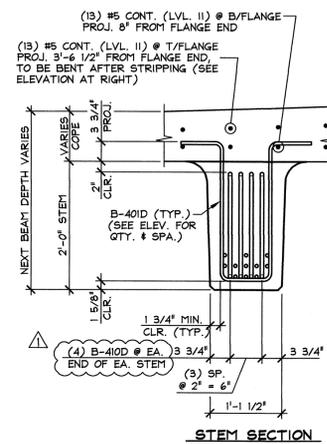
J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2444 CASE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS	DATE: FEB. 25, 2015
TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)	SCALE: NOTED
PRECAST ABUTMENT SECTIONS	CHKD: DFTM: T.D. JOB NO: 23462-015
	DWG. NO: AB3A

SUBMITTED
 5-29-15
 J.P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753

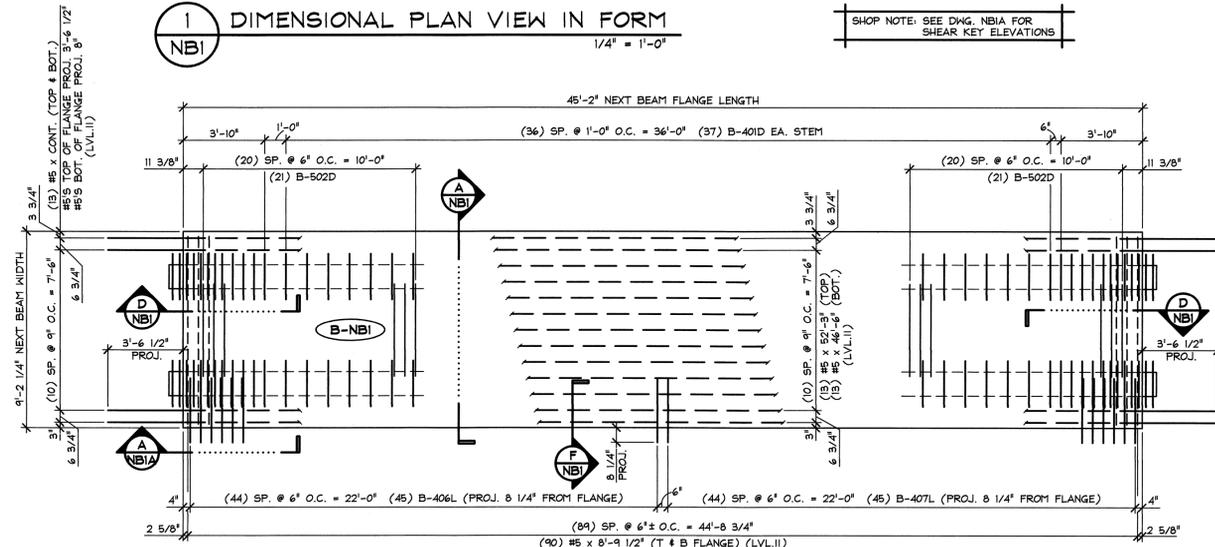


1 DIMENSIONAL PLAN VIEW IN FORM
NBI
1/4" = 1'-0"

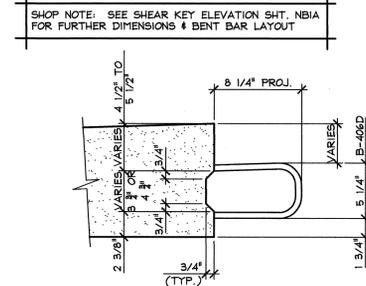
SHOP NOTE: SEE DWG. NBIA FOR SHEAR KEY ELEVATIONS



D END BLOCK STEM REINFORCING DETAILS
NBI
3/4" = 1'-0"



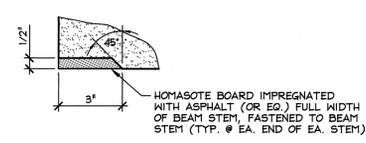
2 REINFORCING PLAN VIEW IN FORM
NBI
1/4" = 1'-0"



F SHEAR KEY DETAIL
NBI
1 1/2" = 1'-0"

SHOP NOTE: SEE SHEAR KEY ELEVATION SHT. NBIA FOR FURTHER DIMENSIONS & BENT BAR LAYOUT

DETENSIONING SCHEDULE
N.T.S.



C HOMASOTE DETAIL
NBI
3" = 1'-0"

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

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

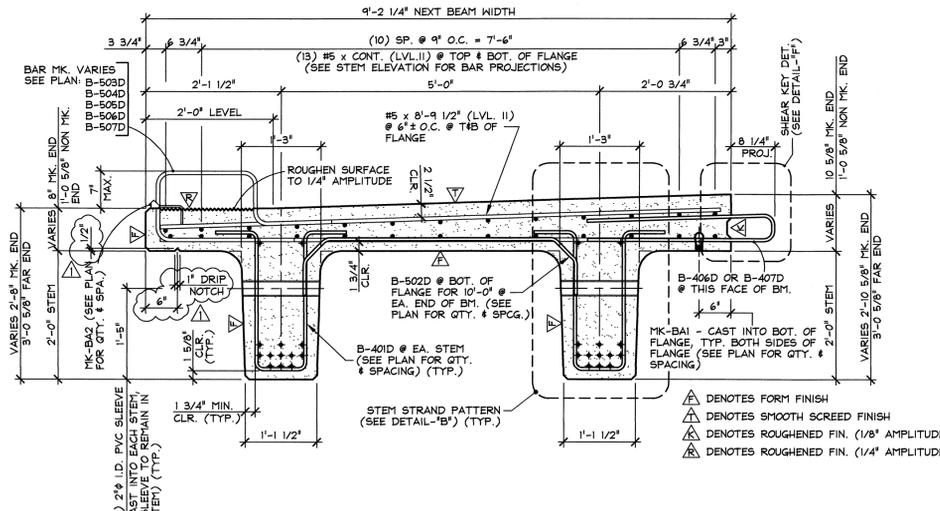
STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.P. Sicard
BARTON, VERMONT

TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

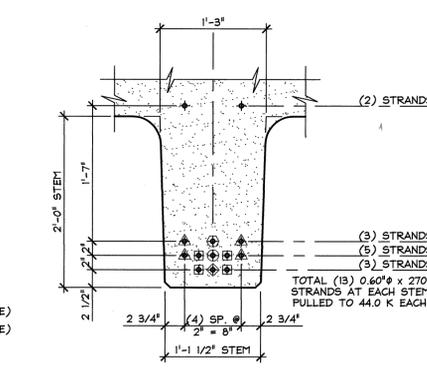
PRESTRESSED NEXT BEAM DETAILS
DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23462-015

MATERIAL LIST / NEXT BEAM			
ITEM	MARK	DESCRIPTION	QTY.
1	MK-BA1	3/4" F42 FERRULE INSERT (GALV.)	11
2	MK-BA2	DAYTON C-24 TYPE 4-APR DECK FORM HANGER (GALV.)	11
3			
4	B-40ID	#4 BENT BAR (LEVEL II, DUAL COATED)	122
5	B-406D	#4 BENT BAR (LEVEL II, DUAL COATED)	45
6	B-407D	#4 BENT BAR (LEVEL II, DUAL COATED)	45
7	B-410D	#4 BENT BAR (LEVEL II, DUAL COATED)	16
8	B-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	42
9	B-503D	#5 BENT BAR (LEVEL II, DUAL COATED)	15
10	B-504D	#5 BENT BAR (LEVEL II, DUAL COATED)	13
11	B-505D	#5 BENT BAR (LEVEL II, DUAL COATED)	13
12	B-506D	#5 BENT BAR (LEVEL II, DUAL COATED)	13
13	B-507D	#5 BENT BAR (LEVEL II, DUAL COATED)	15
14		#4 x 8'-9 1/2" (LEVEL II, DUAL COATED)	20
15		#5 x 8'-9 1/2" (LEVEL II, DUAL COATED)	180
16		#5 x 46'-6" (LEVEL II, DUAL COATED)	13
17		#5 x 52'-3" (LEVEL II, DUAL COATED)	13
18		SET OF (4) 0.60" STRAND LIFTING LOOPS	4

SUBMITTED
5-29-15
J.P. CARRARA & SONS INC.
MIDDLEBURY, VT 05753



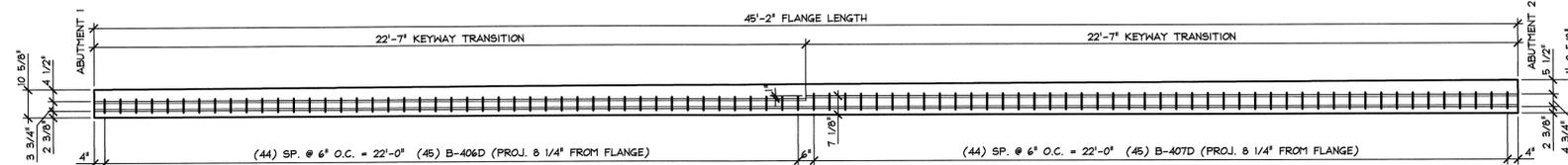
A DIMENSIONAL & REINFORCING SECTION
NBI
3/4" = 1'-0"



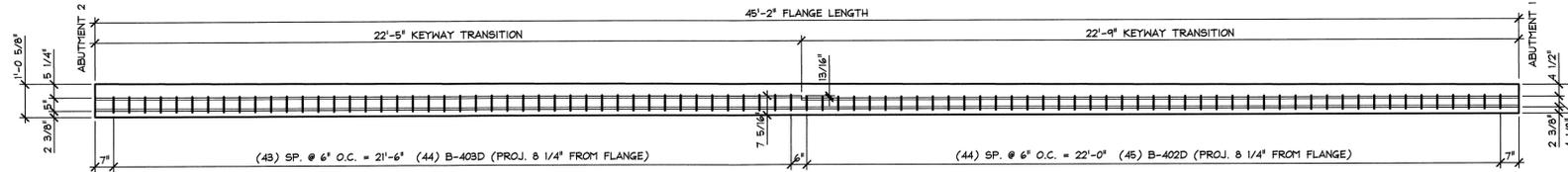
B STEM STRAND PATTERN
NBI
1" = 1'-0"

PRESTRESSING NOTATIONS

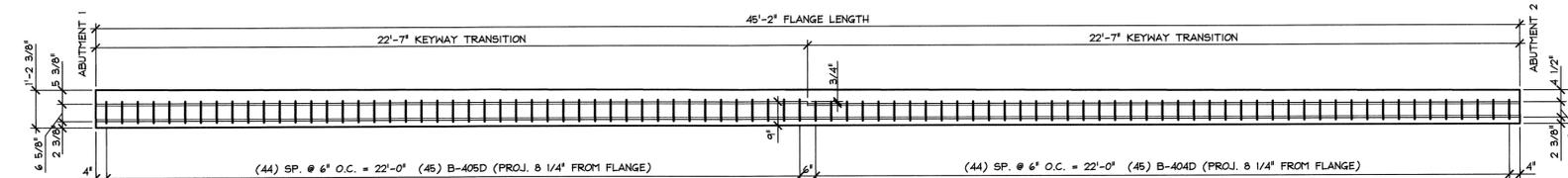
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- ⊕ DENOTES FULLY BONDED STRAIGHT STRANDS EXTENDED 2'-0" FROM EA. END OF EA. STEM
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 8'-0" FROM EA. END OF EA. STEM
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
- ⊕ DENOTES FULLY BONDED STRAIGHT STRANDS TO BE CUT FLUSH W/ EA. END OF EA. STEM



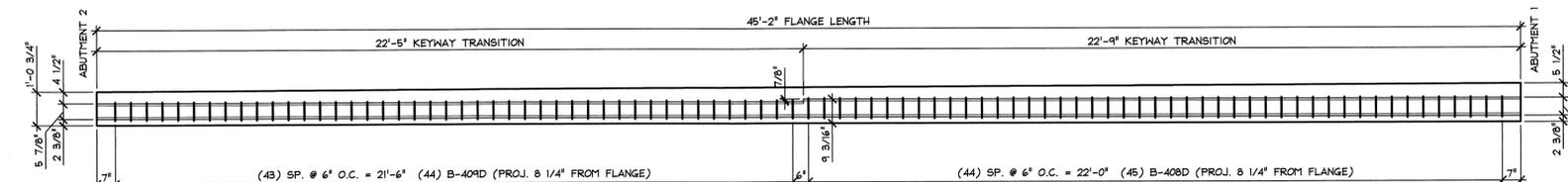
KEY ELEVATION - "A"
3/8" = 1'-0"



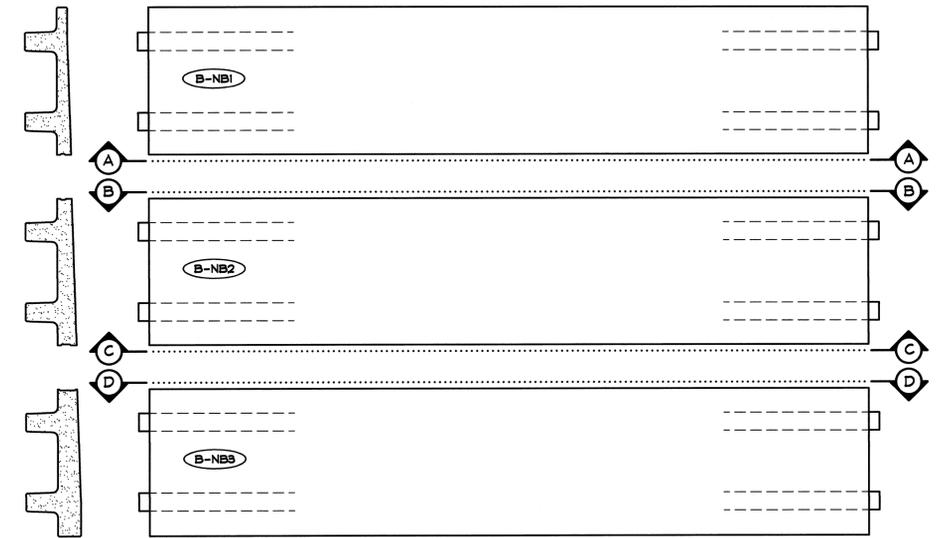
KEY ELEVATION - "B"
3/8" = 1'-0"



KEY ELEVATION - "C"
3/8" = 1'-0"



KEY ELEVATION - "D"
3/8" = 1'-0"

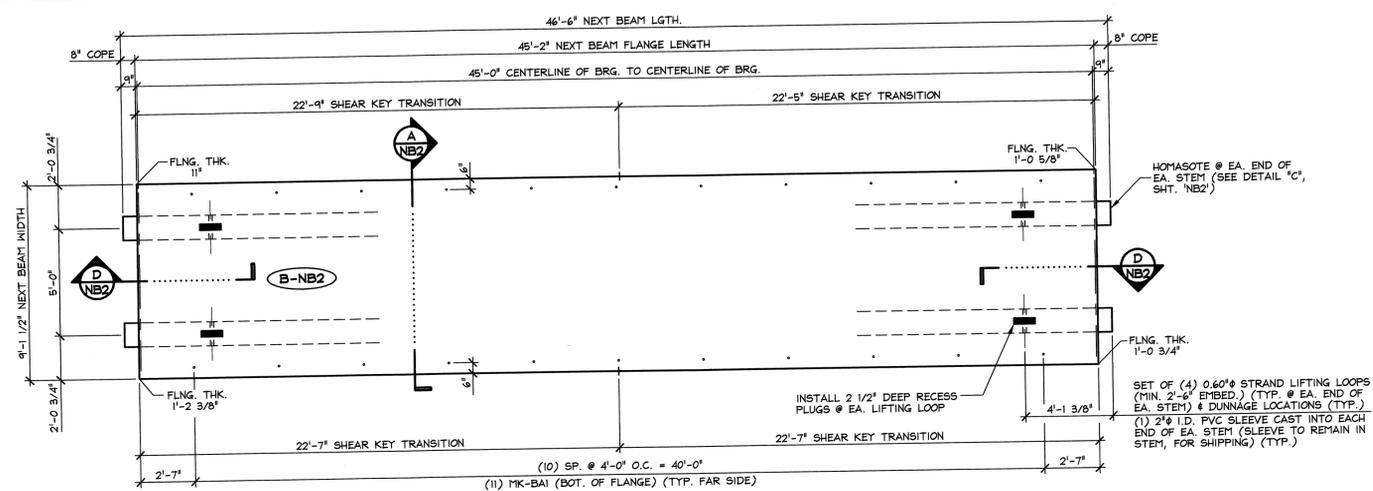


SCHEMATIC PLAN VIEW OF NEXT BEAMS
N.T.S.

F:\VT-Bridges\23462-14 Barton\23462-NB1A.dwg, 5/28/2015 1:26:57 PM

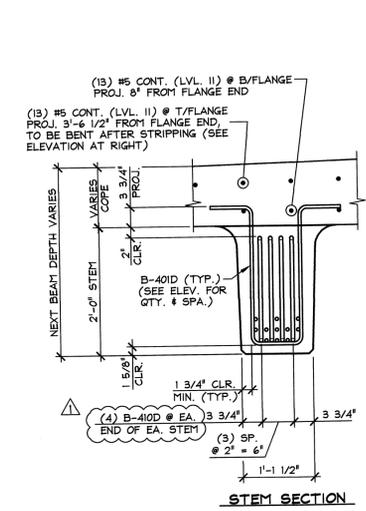
SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 OASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010	J.P. Sicard CONTRACTOR BARTON, VERMONT
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS	DATE: FEB. 25, 2015 SCALE: NOTED
	TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)	CHKD: DFTM: T.D. JOB NO: 23462-015
	SHEAR KEY ELEVATIONS	DWG. NO: NB1A

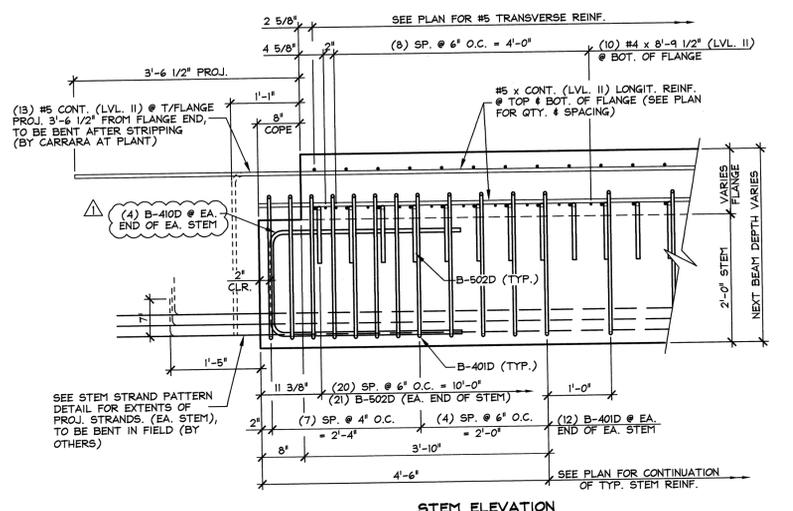


1 DIMENSIONAL PLAN VIEW IN FORM
NB2
1/4" = 1'-0"

SHOP NOTE: SEE DWG. NB1A FOR SHEAR KEY ELEVATIONS

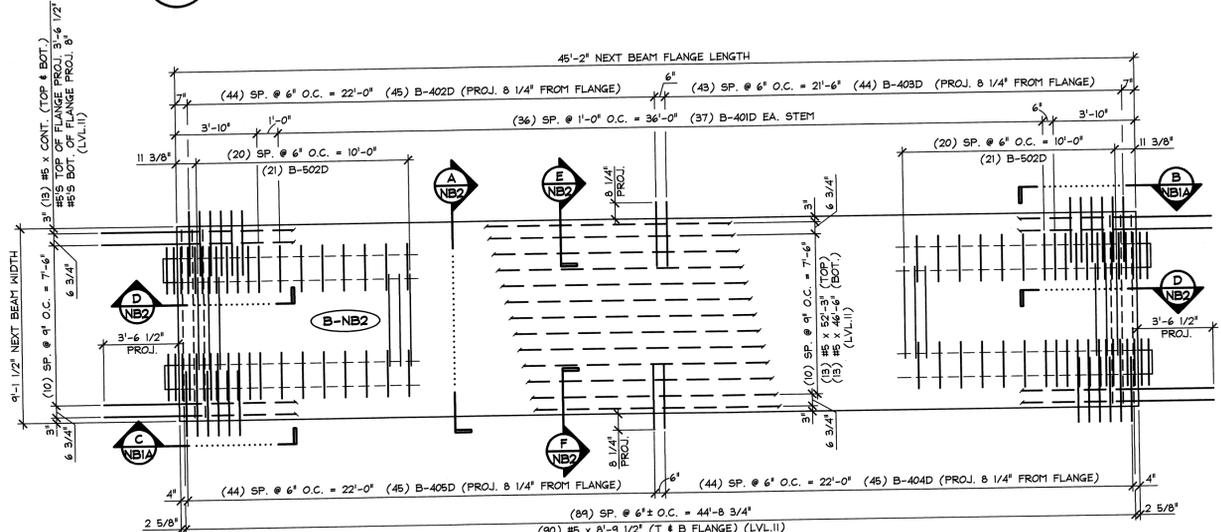


STEM SECTION

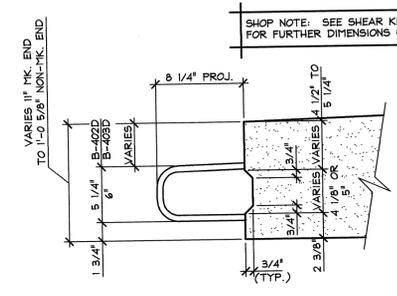


STEM ELEVATION ALONG C OF STEM

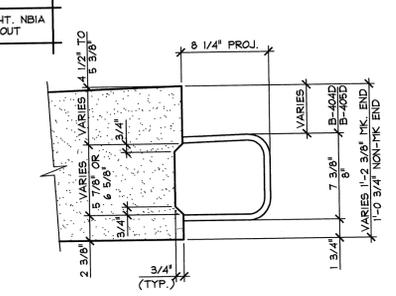
D END BLOCK STEM REINFORCING DETAILS
NB2
3/4" = 1'-0"



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



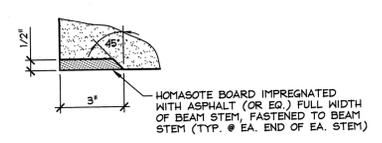
E SHEAR KEY DETAIL
NB2
1 1/2" = 1'-0"



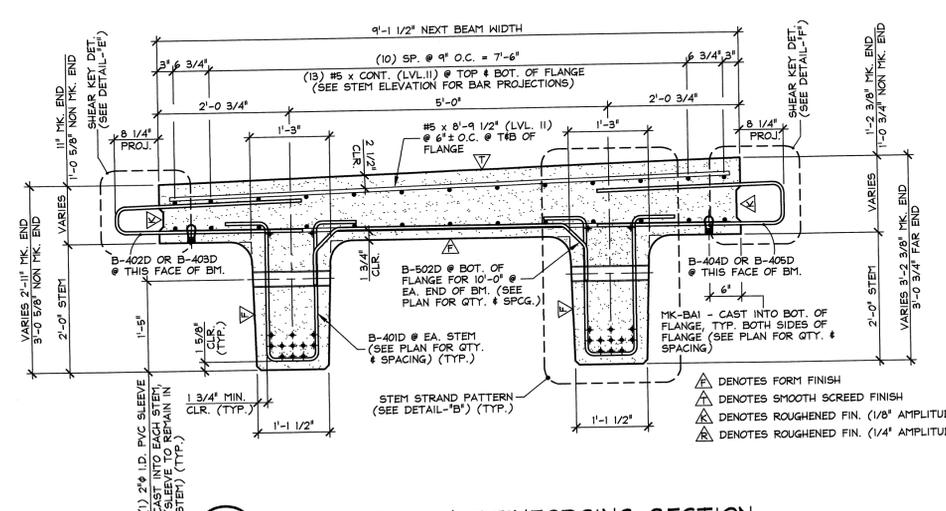
F SHEAR KEY DETAIL
NB2
1 1/2" = 1'-0"



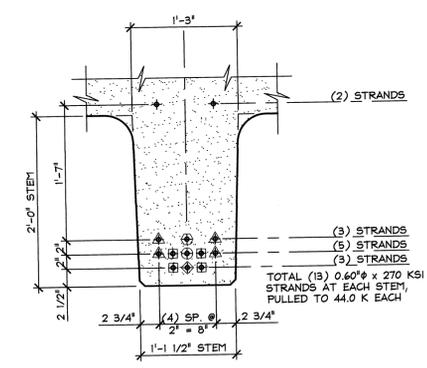
DETENSIONING SCHEDULE
N.T.S.



C HOMASOTE DETAIL
NB2
3" = 1'-0"



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



B STEM STRAND PATTERN
NB2
1" = 1'-0"

- PRESTRESSING NOTATIONS**
- ▲ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
 - DENOTES FULLY BONDED STRAIGHT STRANDS EXTENDED 2'-0" FROM EA. END OF EA. STEM
 - ◆ DENOTES STRAIGHT STRANDS TO BE DEBONDED 8'-0" FROM EA. END OF EA. STEM
 - ⊙ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
 - ⊖ DENOTES FULLY BONDED STRAIGHT STRANDS TO BE CUT FLUSH W/ EA. END OF EA. STEM

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
244 OASE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-5361 Fax: (802)388-9010

J.P. Sicard
CONTRACTOR
BARTON, VERMONT

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23462-015
PROJECT NO.: BRO 1449(31)

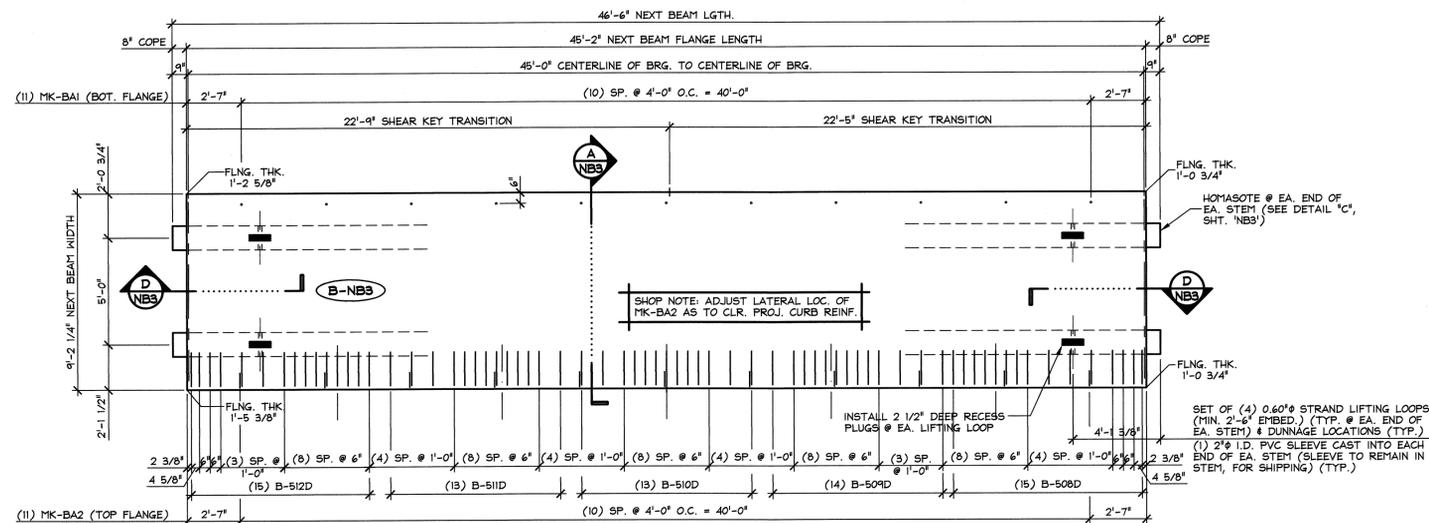
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

PRESTRESSED NEXT BEAM DETAILS
DWG. NO: NB2

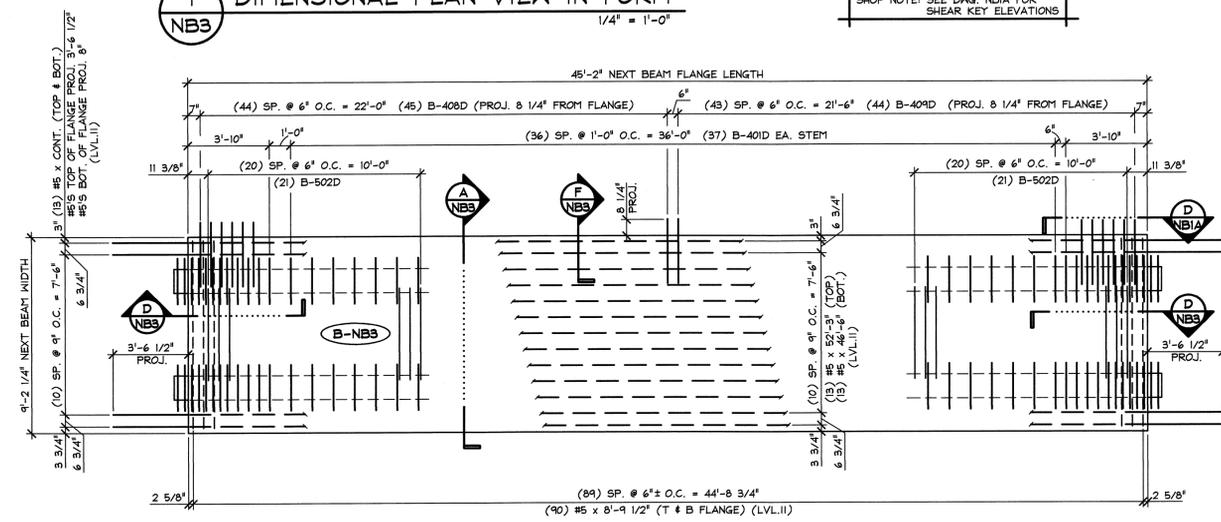
MARK: B-NB2 QTY.: 1 WT.: 49.36 T VOL.: 24.38 cy

MATERIAL LIST / NEXT BEAM			
ITEM	MARK	DESCRIPTION	QTY.
1	MK-BA1	3/4" F42 FERRULE INSERT (GALV.)	22
2	B-401D	#4 BENT BAR (LEVEL II, DUAL COATED)	122
3	B-402D	#4 BENT BAR (LEVEL II, DUAL COATED)	45
4	B-403D	#4 BENT BAR (LEVEL II, DUAL COATED)	44
5	B-404D	#4 BENT BAR (LEVEL II, DUAL COATED)	45
6	B-405D	#4 BENT BAR (LEVEL II, DUAL COATED)	45
7	B-410D	#4 BENT BAR (LEVEL II, DUAL COATED)	16
8	B-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	42
9			
10		#4 x 8'-9 1/2" (LEVEL II, DUAL COATED)	20
11		#5 x 8'-9 1/2" (LEVEL II, DUAL COATED)	180
12		#5 x 46'-6" (LEVEL II, DUAL COATED)	13
13		#5 x 52'-3" (LEVEL II, DUAL COATED)	13
14			
15		SET OF (4) 0.60" STRAND LIFTING LOOPS	4

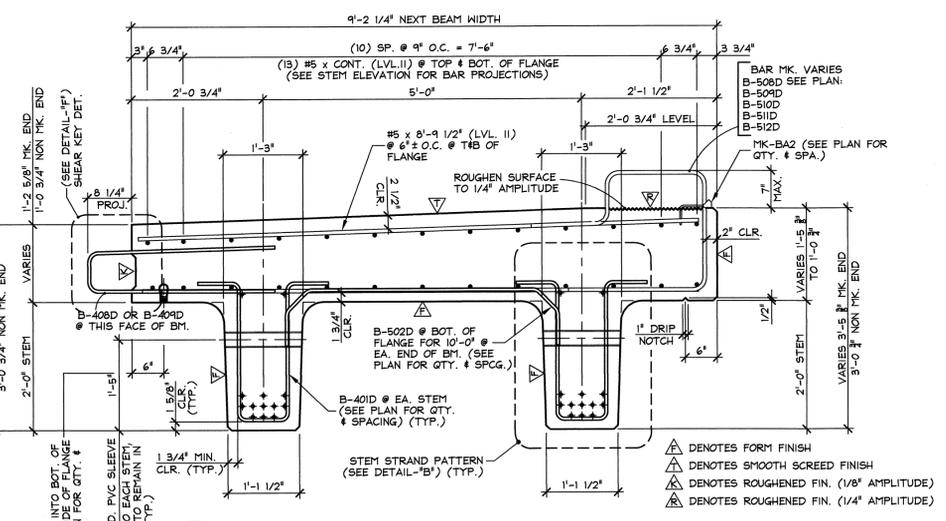


1 DIMENSIONAL PLAN VIEW IN FORM
NBS
1/4" = 1'-0"

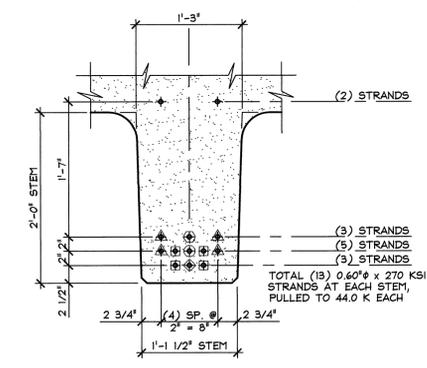
SHOP NOTE: SEE DWG. NBSIA FOR SHEAR KEY ELEVATIONS



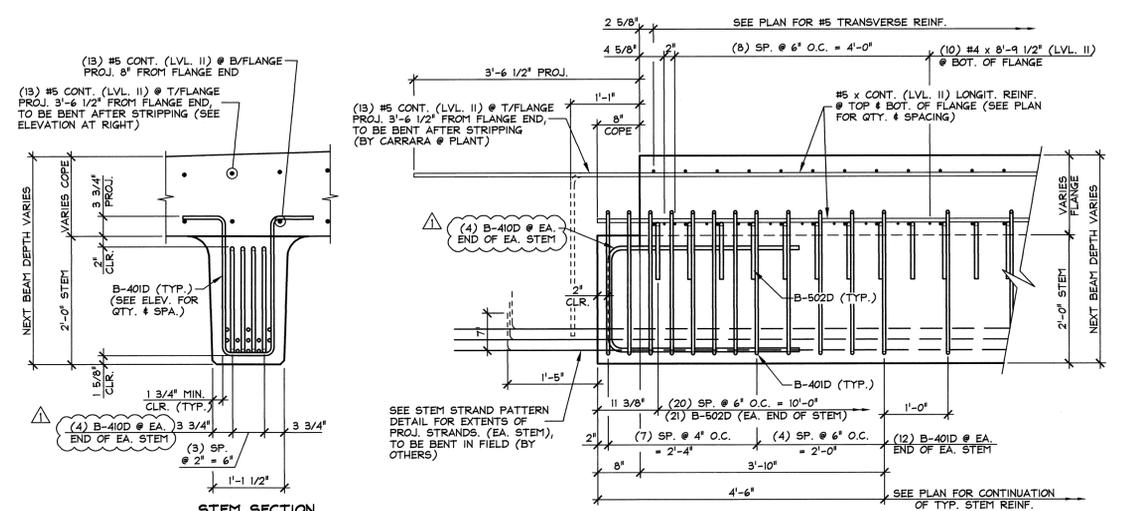
2 REINFORCING PLAN VIEW IN FORM
NBS
1/4" = 1'-0"



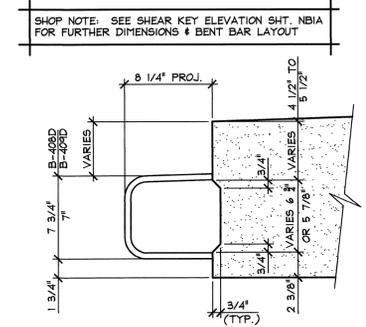
A DIMENSIONAL & REINFORCING SECTION
NBS
3/4" = 1'-0"



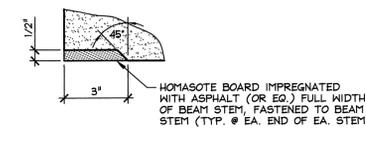
B STEM STRAND PATTERN
NBS
1" = 1'-0"



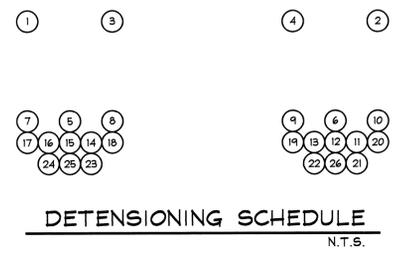
D END BLOCK STEM REINFORCING DETAILS
NBS
3/4" = 1'-0"



F SHEAR KEY DETAIL
NBS
1 1/2" = 1'-0"



C HOMASOTE DETAIL
NBS
3" = 1'-0"



DETENSIONING SCHEDULE
N.T.S.

- PRESTRESSING NOTATIONS**
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
 - ⊕ DENOTES FULLY BONDED STRAIGHT STRANDS EXTENDED 2'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 8'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES FULLY BONDED STRAIGHT STRANDS TO BE CUT FLUSH W/ EA. END OF EA. STEM

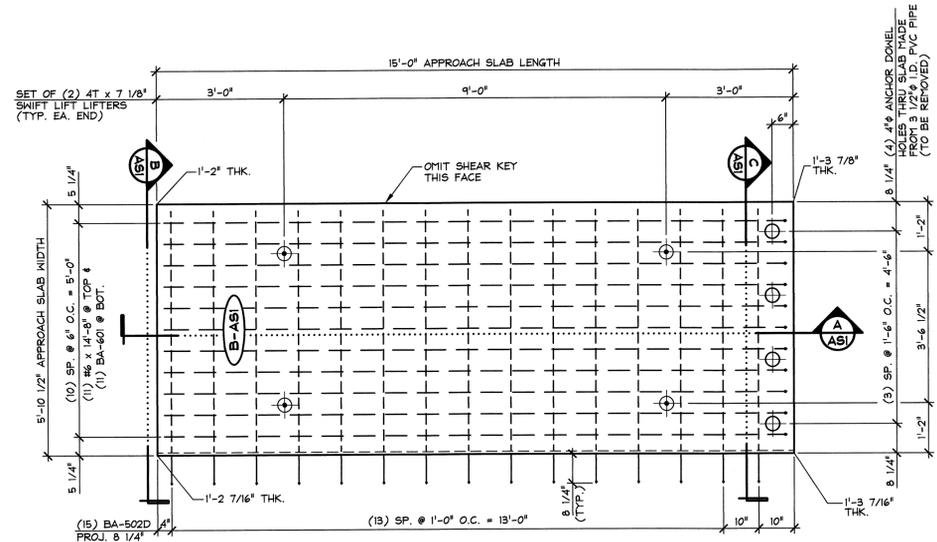
5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

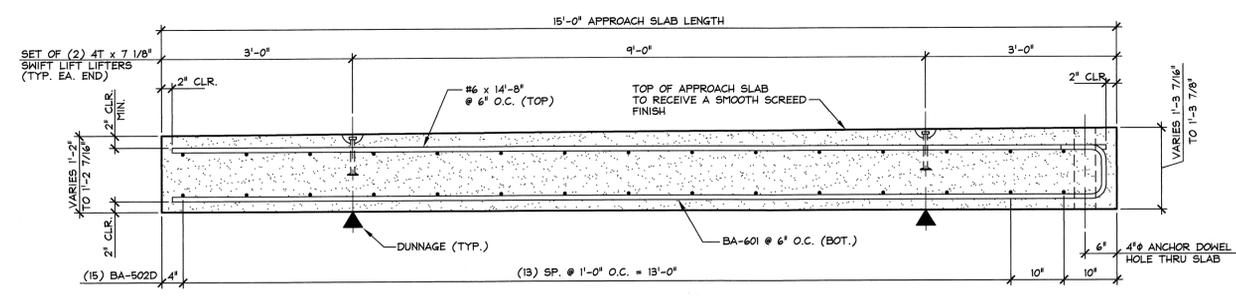
J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 244 GASE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010		J.P. Sicard CONTRACTOR BARTON, VERMONT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB. 25, 2015	
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 6 PROJECT NO.: BRO 1449(31)		SCALE: NOTED	
PRESTRESSED NEXT BEAM DETAILS		CHKD: - DFTM: T.D.	
		JOB NO: 23462-015	
		DWG. NO: NBS	

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

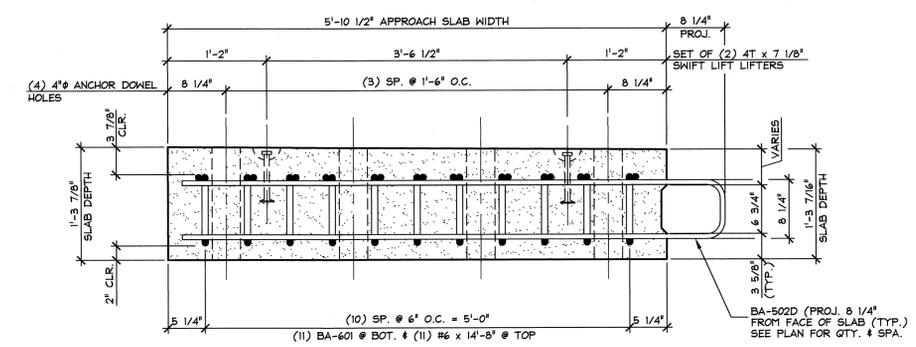
MATERIAL LIST / NEXT BEAM			
ITEM	MARK	DESCRIPTION	QTY.
1	MK-BA1	3/4" F42 FERRULE INSERT (GALV.)	11
2	MK-BA2	DAYTON C-24 TYPE 4-APR DECK FORM HANGER (GALV.)	11
3			
4	B-401D	#4 BENT BAR (LEVEL II, DUAL COATED)	122
5	B-408D	#4 BENT BAR (LEVEL II, DUAL COATED)	45
6	B-409D	#4 BENT BAR (LEVEL II, DUAL COATED)	44
7	B-410D	#4 BENT BAR (LEVEL II, DUAL COATED)	16
8	B-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	42
9	B-508D	#5 BENT BAR (LEVEL II, DUAL COATED)	15
10	B-509D	#5 BENT BAR (LEVEL II, DUAL COATED)	14
11	B-510D	#5 BENT BAR (LEVEL II, DUAL COATED)	13
12	B-511D	#5 BENT BAR (LEVEL II, DUAL COATED)	13
13	B-512D	#5 BENT BAR (LEVEL II, DUAL COATED)	15
14		#4 x 8'-9 1/2" (LEVEL II, DUAL COATED)	20
15		#5 x 8'-9 1/2" (LEVEL II, DUAL COATED)	180
16		#5 x 46'-6" (LEVEL II, DUAL COATED)	13
17		#5 x 52'-3" (LEVEL II, DUAL COATED)	13
18		SET OF (4) 0.60" STRAND LIFTING LOOPS	4



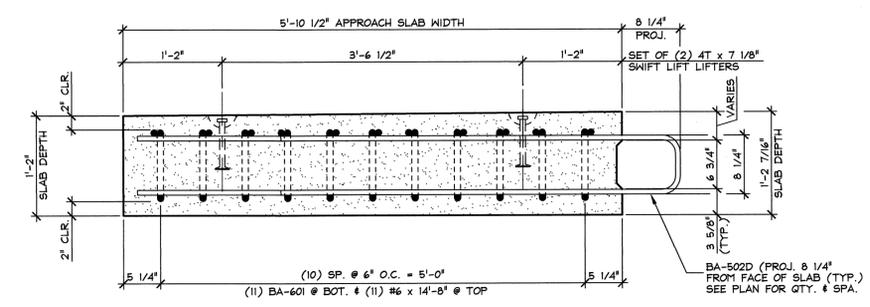
1 PLAN VIEW IN FORM
 ASI
 1/2" = 1'-0"



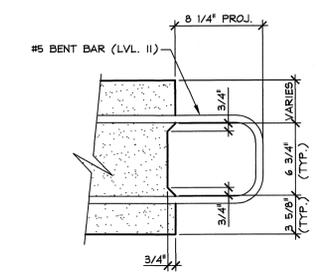
A LONGITUDINAL SECTION
 ASI
 3/4" = 1'-0"



C SECTION
 ASI
 1" = 1'-0"



B SECTION
 ASI
 1" = 1'-0"



SHEAR KEY DETAIL
 1 1/2" = 1'-0"

SUBMITTED
 5-29-15
 J.P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753

MATERIAL LIST / APPROACH SLAB			
ITEM	MARK	DESCRIPTION	QTY.
1			
2	BA-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	15
3	BA-601	#6 BENT BAR (LEVEL I)	11
4			
5			
6		#6 x 14'-8" (LEVEL I)	11
7			
8			
9			
10			
11			
12			
13			
14	DAYTON	4T x 7 1/8" SWIFT LIFT (DOMESTIC)	4
15			

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

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

J.P. Sicard
 CONTRACTOR
 BARTON, VERMONT

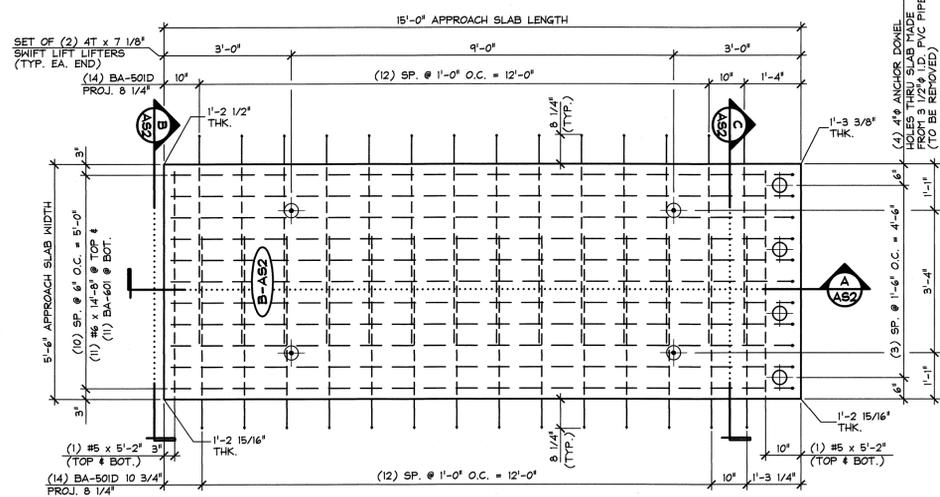
DATE: FEB. 25, 2015
 SCALE: NOTED

STATE OF VERMONT AGENCY OF TRANSPORTATION
 COUNTY OF ORLEANS

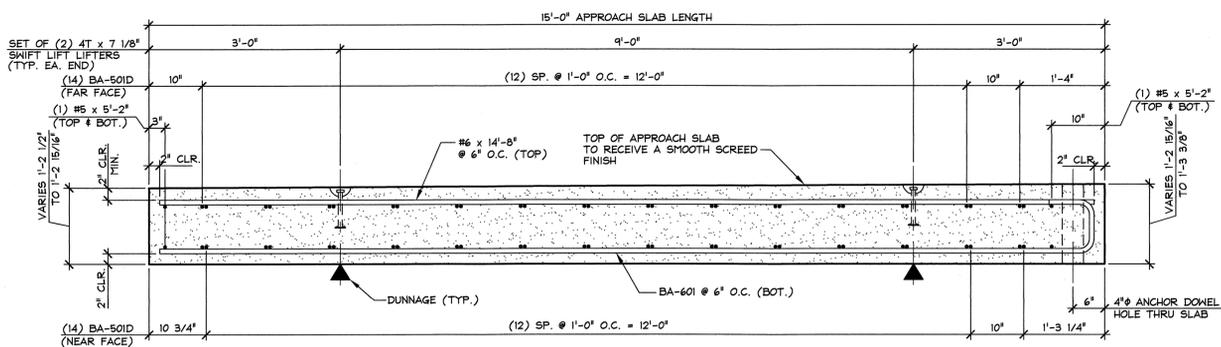
TOWN OF BARTON
 ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
 BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

CHKD: DFTM: T.D.
 JOB NO: 23462-015

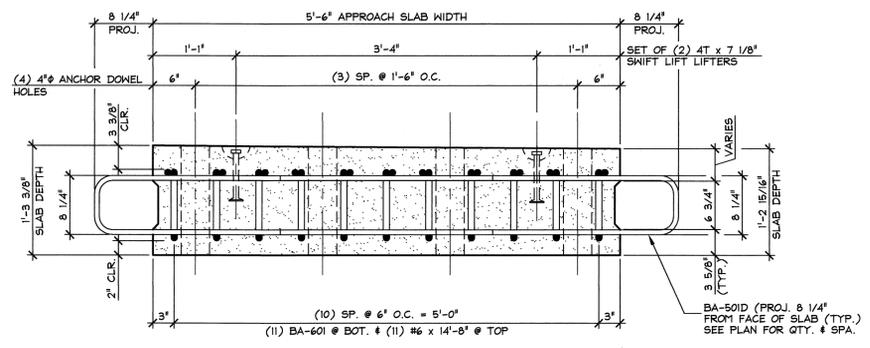
APPROACH SLAB DETAILS
 DWG. NO: ASI



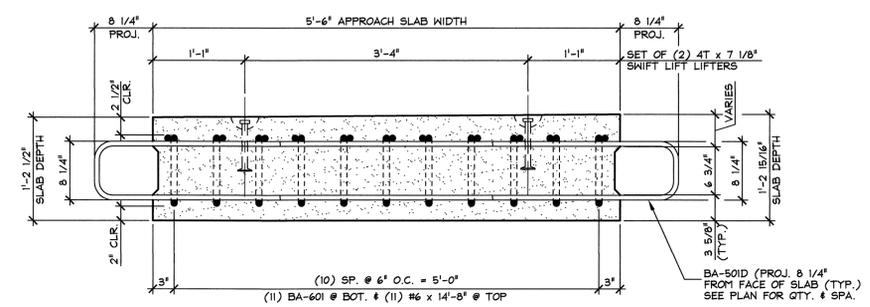
1 PLAN VIEW IN FORM
AS2 1/2" = 1'-0"



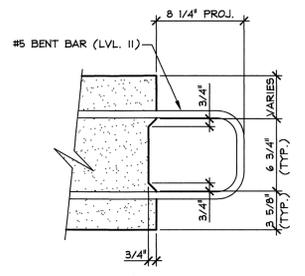
A LONGITUDINAL SECTION
AS2 3/4" = 1'-0"



C SECTION
AS2 1" = 1'-0"



B SECTION
AS2 1" = 1'-0"



SHEAR KEY DETAIL
1 1/2" = 1'-0"

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

MARK: B-AS2	QTY.: 2	WT.: 7.73 T	VOL.: 3.82 cy
MATERIAL LIST / APPROACH SLAB			
ITEM	MARK	DESCRIPTION	QTY.
1			
2	BA-501D	#5 BENT BAR (LEVEL II, DUAL COATED)	26
3	BA-601	#6 BENT BAR (LEVEL I)	11
4			
5			
6		#6 x 14'-8" (LEVEL I)	11
7		#5 x 5'-2" (LEVEL I)	4
8			
9			
10			
11			
12			
13			
14		DAYTON 4T x 7 1/8" SHIFT LIFT (DOMESTIC)	4
15			

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

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

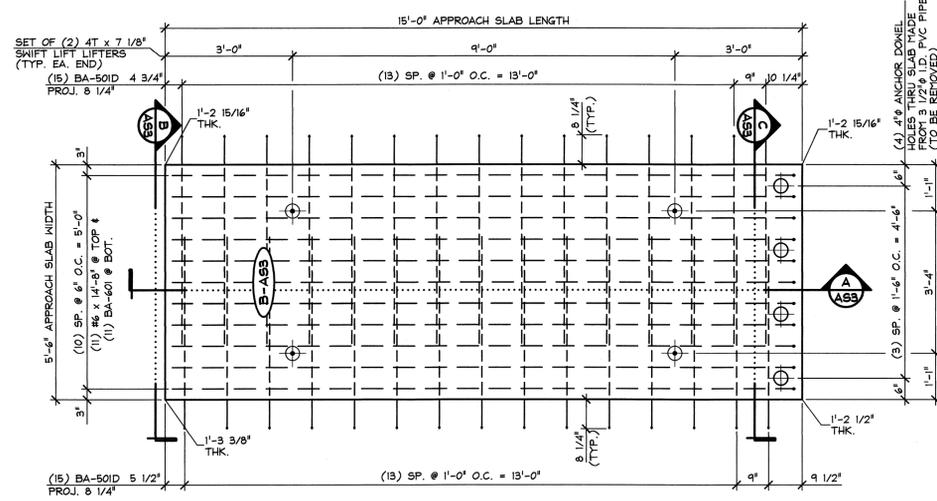
J.P. Sicard
CONTRACTOR
BARTON, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

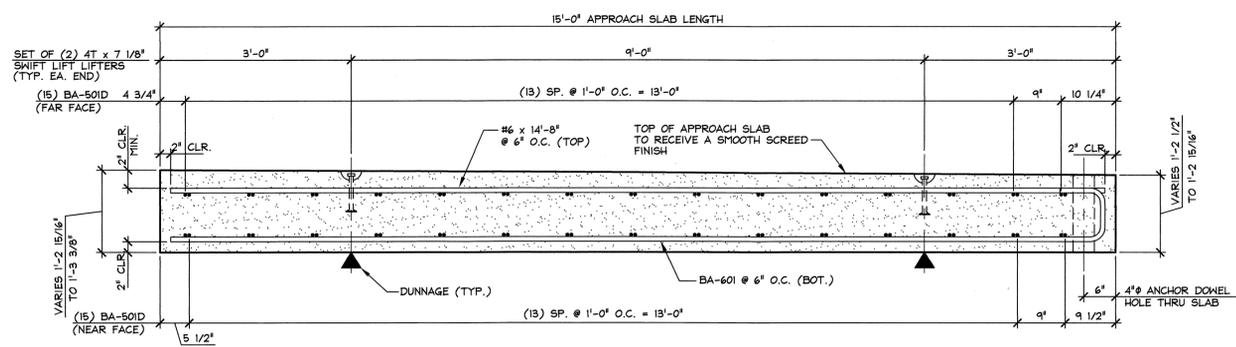
TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23462-015

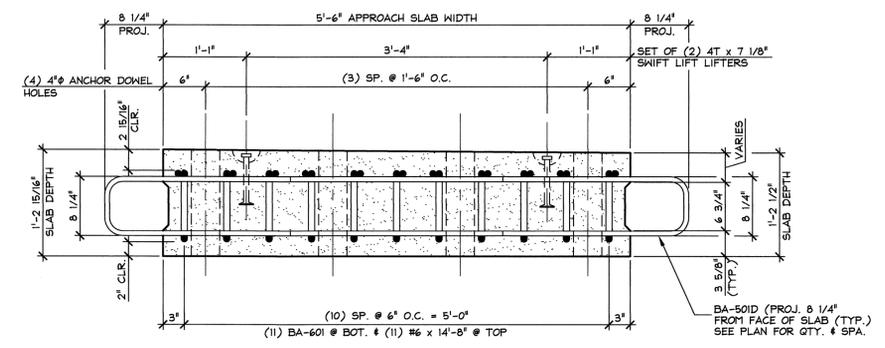
APPROACH SLAB DETAILS
DWG. NO: AS2



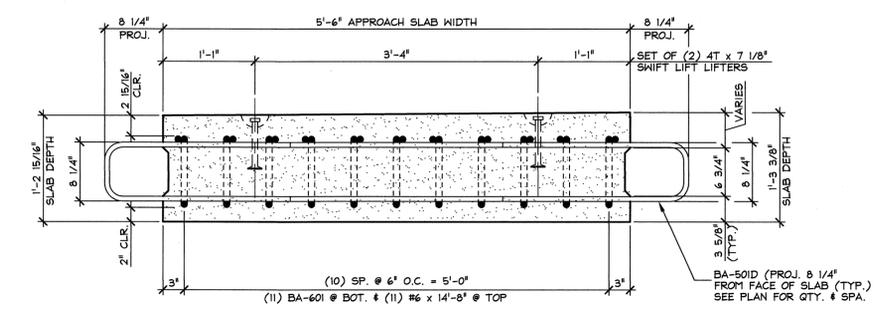
1 PLAN VIEW IN FORM
AS3
1/2" = 1'-0"



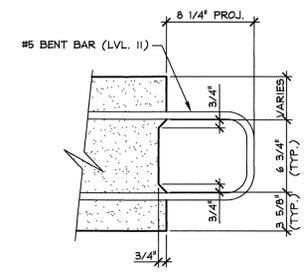
A LONGITUDINAL SECTION
AS3
3/4" = 1'-0"



C SECTION
AS2
1" = 1'-0"



B SECTION
AS2
1" = 1'-0"



SHEAR KEY DETAIL
1 1/2" = 1'-0"

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

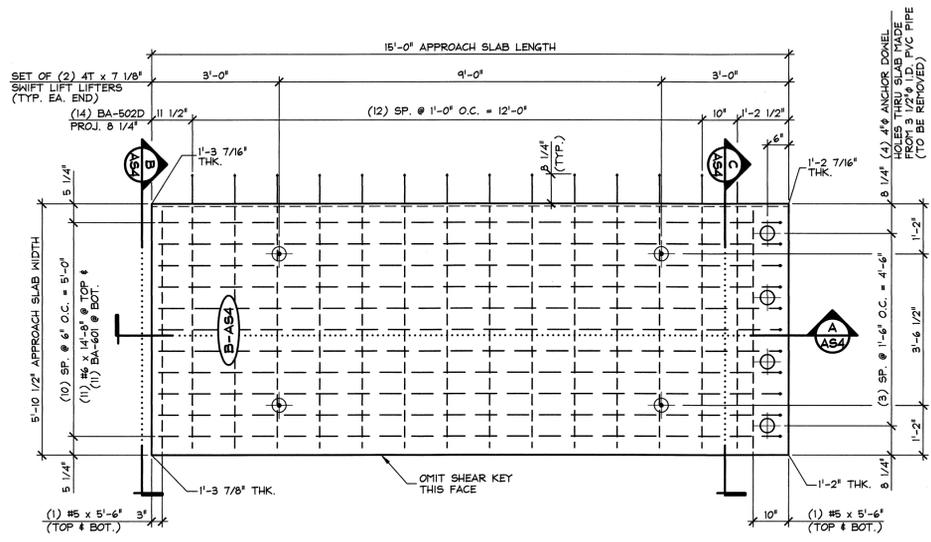
MARK: B-AS3		QTY.: 2	WT.: 7.73 T	VOL.: 3.82 cy
MATERIAL LIST / APPROACH SLAB				
ITEM	MARK	DESCRIPTION	QTY.	
1				
2	BA-501D	#5 BENT BAR (LEVEL II, DUAL COATED)	30	
3	BA-601	#6 BENT BAR (LEVEL I)	11	
4				
5				
6		#6 x 14'-8" (LEVEL I)	11	
7				
8				
9				
10				
11				
12				
13				
14		DAYTON 4T x 7 1/8" SWIFT LIFT (DOMESTIC)	4	
15				

5/28/2015 REVISED AS NOTED T.D.

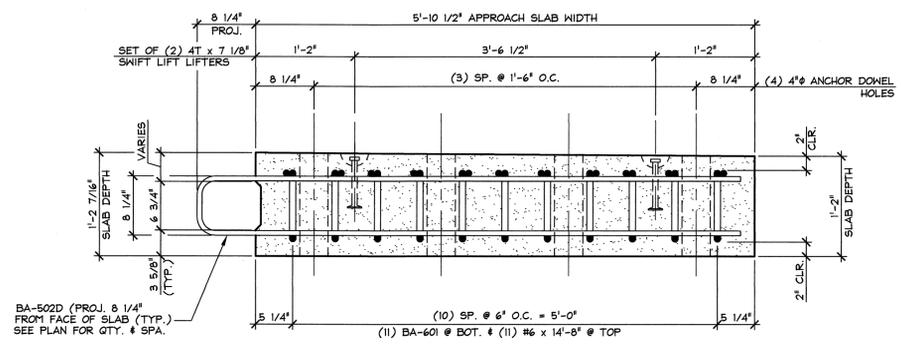
APPROVAL STAMP:

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2484 OSE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010		J.P. Sicard CONTRACTOR BARTON, VERMONT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB. 25, 2015	
TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)		SCALE: NOTED	CHKD: DFTM: T.D.
APPROACH SLAB DETAILS		JOB NO: 23462-015	
		DWG. NO: AS3	

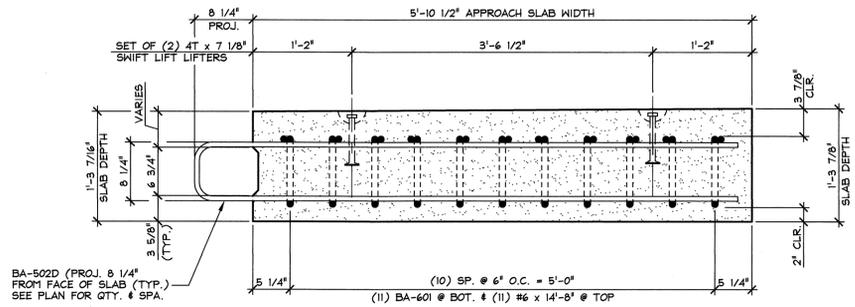
SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753



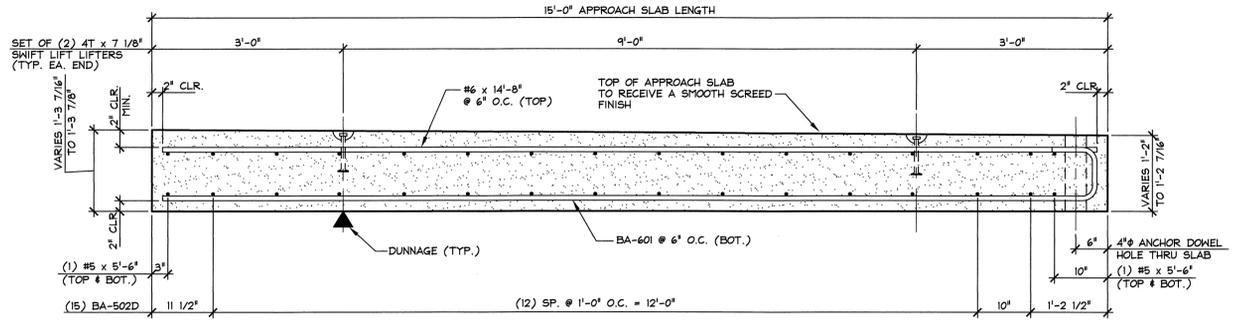
1 PLAN VIEW IN FORM
AS4
1/2" = 1'-0"



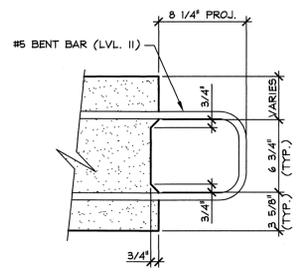
C SECTION
AS4
1" = 1'-0"



B SECTION
AS4
1" = 1'-0"



A LONGITUDINAL SECTION
AS4
3/4" = 1'-0"



SHEAR KEY DETAIL
1 1/2" = 1'-0"

MARK: B-AS4		QTY.: 2	WT.: 8.26 T	VOL.: 4.08 cy
MATERIAL LIST / APPROACH SLAB				
ITEM	MARK	DESCRIPTION	QTY.	
1				
2	BA-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	14	
3	BA-601	#6 BENT BAR (LEVEL I)	11	
4				
5				
6		#6 x 14'-8" (LEVEL I)	11	
7		#5 x 5'-6" (LEVEL I)	4	
8				
9				
10				
11				
12				
13				
14	△	DAYTON 4T x 7 1/8" SWIFT LIFT (DOMESTIC)	4	
15				

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

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

J.P. Sicard
CONTRACTOR
BARTON, VERMONT

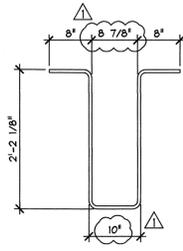
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

DATE: FEB. 25, 2015
SCALE: NOTED

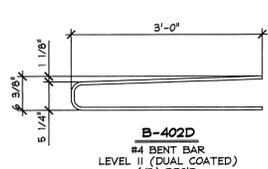
TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

CHKD: DFTM: T.D.
JOB NO: 23462-015

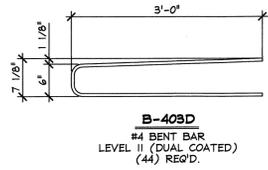
APPROACH SLAB DETAILS
DWG. NO: AS4



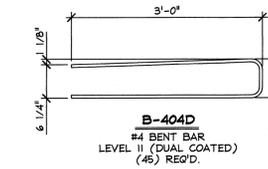
B-401D
#4 BENT BAR
LEVEL II (DUAL COATED)
(366) REQ'D.



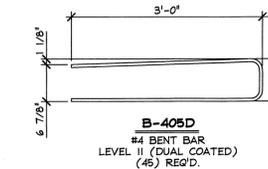
B-402D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



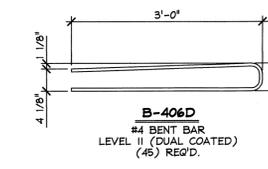
B-403D
#4 BENT BAR
LEVEL II (DUAL COATED)
(44) REQ'D.



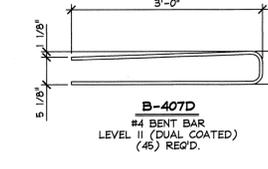
B-404D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



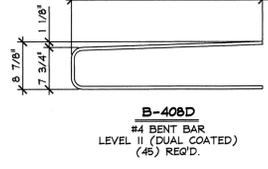
B-405D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



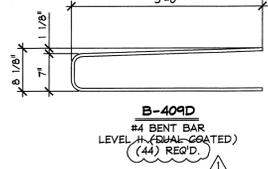
B-406D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



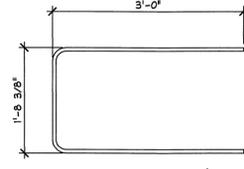
B-407D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



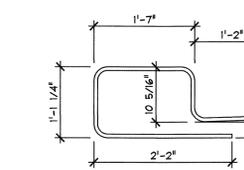
B-408D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



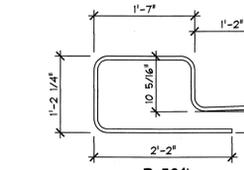
B-409D
#4 BENT BAR
LEVEL II (DUAL COATED)
(44) REQ'D.



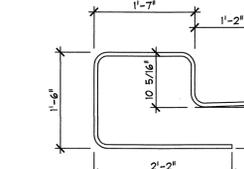
B-410D
#4 BENT BAR
LEVEL II (DUAL COATED)
(48) REQ'D.



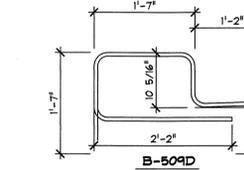
B-503L
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



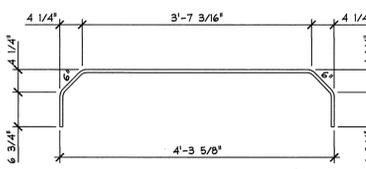
B-504L
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



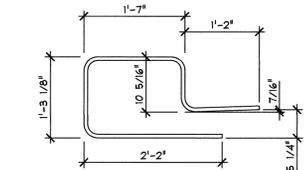
B-508D
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



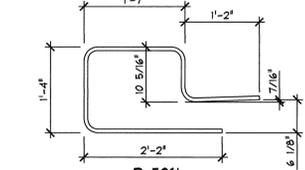
B-509D
#5 BENT BAR
LEVEL II (DUAL COATED)
(14) REQ'D.



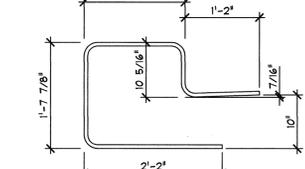
B-502D
#5 BENT BAR
LEVEL II (DUAL COATED)
(126) REQ'D.



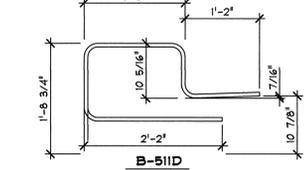
B-505L
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



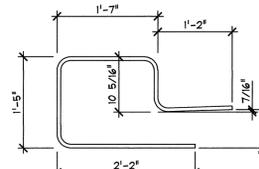
B-506L
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



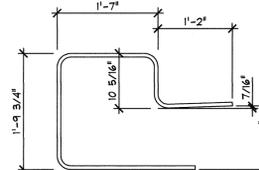
B-510D
#5 BENT BAR
LEVEL II (DUAL COATED)
(13) REQ'D.



B-511D
#5 BENT BAR
LEVEL II (DUAL COATED)
(13) REQ'D.



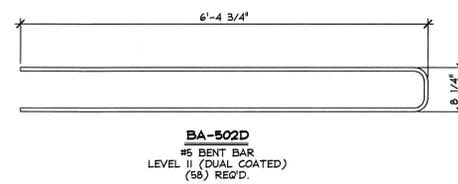
B-507L
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



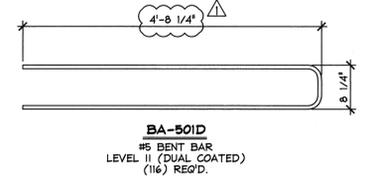
B-512D
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.

MISCELLANEOUS MATERIALS				P/S NEXT BEAMS
ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1	B-401D	366	#4 BENT BAR (LEVEL II, DUAL COATED)	
2	B-402D	46	#4 BENT BAR (LEVEL II, DUAL COATED)	
3	B-403D	44	#4 BENT BAR (LEVEL II, DUAL COATED)	
4	B-404D	46	#4 BENT BAR (LEVEL II, DUAL COATED)	
5	B-405D	46	#4 BENT BAR (LEVEL II, DUAL COATED)	
6	B-406D	46	#4 BENT BAR (LEVEL II, DUAL COATED)	
7	B-407D	46	#4 BENT BAR (LEVEL II, DUAL COATED)	
8	B-408D	46	#4 BENT BAR (LEVEL II, DUAL COATED)	
9	B-409D	44	#4 BENT BAR (LEVEL II, DUAL COATED)	
10	B-410D	48	#4 BENT BAR (LEVEL II, DUAL COATED)	
11	B-502D	126	#5 BENT BAR (LEVEL II, DUAL COATED)	
12	B-503D	15	#5 BENT BAR (LEVEL II, DUAL COATED)	
13	B-504D	15	#5 BENT BAR (LEVEL II, DUAL COATED)	
14	B-505D	15	#5 BENT BAR (LEVEL II, DUAL COATED)	
15	B-506D	15	#5 BENT BAR (LEVEL II, DUAL COATED)	
16	B-507D	15	#5 BENT BAR (LEVEL II, DUAL COATED)	
17	B-508D	15	#5 BENT BAR (LEVEL II, DUAL COATED)	
18	B-509D	14	#5 BENT BAR (LEVEL II, DUAL COATED)	
19	B-510D	13	#5 BENT BAR (LEVEL II, DUAL COATED)	
20	B-511D	13	#5 BENT BAR (LEVEL II, DUAL COATED)	
21	B-512D	15	#5 BENT BAR (LEVEL II, DUAL COATED)	
22				
23		61	#4 x 8'-9 1/2" (LEVEL II, DUAL COATED)	(+1 SAMPLE) ⚠
24		54	#5 x 8'-9 1/2" (LEVEL II, DUAL COATED)	(+1 SAMPLE) ⚠
25		39	#5 x 46'-6" (LEVEL II, DUAL COATED)	
26		39	#5 x 52'-3" (LEVEL II, DUAL COATED)	
27		12	SET OF (4) 0.60" STRAND LIFTING LOOPS	
28	MK-BA1	44	3/4" F42 FERRULE INSERT (GALV.)	
29	MK-BA2	22	DAYTON C-24 TYPE 4-APR DECK FORM HANGER (GALV.)	

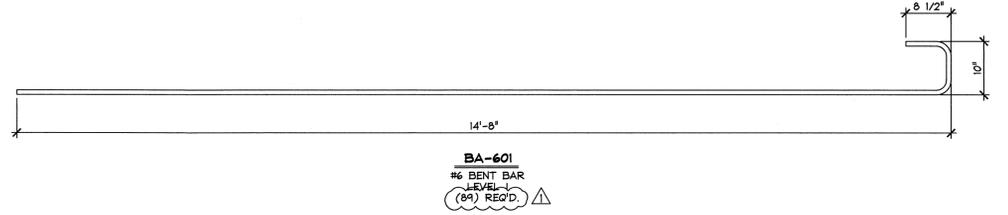
MISCELLANEOUS MATERIALS				P/C APPROACH SLABS
ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1	BA-501D	116	#5 BENT BAR (LEVEL II, DUAL COATED)	
2	BA-502D	58	#5 BENT BAR (LEVEL II, DUAL COATED)	
3	BA-601	84	#5 BENT BAR (LEVEL I)	(+1 SAMPLE) ⚠
4				
5				
6		88	#6 x 14'-8" (LEVEL I)	
7		8	#5 x 5'-2" (LEVEL I)	
8		8	#5 x 5'-6" (LEVEL I)	
9				
10		32	DAYTON 4T x 7 1/8" SWIFT LIFT (DOMESTIC)	



BA-502D
#5 BENT BAR
LEVEL II (DUAL COATED)
(58) REQ'D.



BA-501D
#5 BENT BAR
LEVEL II (DUAL COATED)
(116) REQ'D.



BA-601
#6 BENT BAR
LEVEL I
(84) REQ'D.

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

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

J.P. Sicard
CONTRACTOR
BARTON, VERMONT

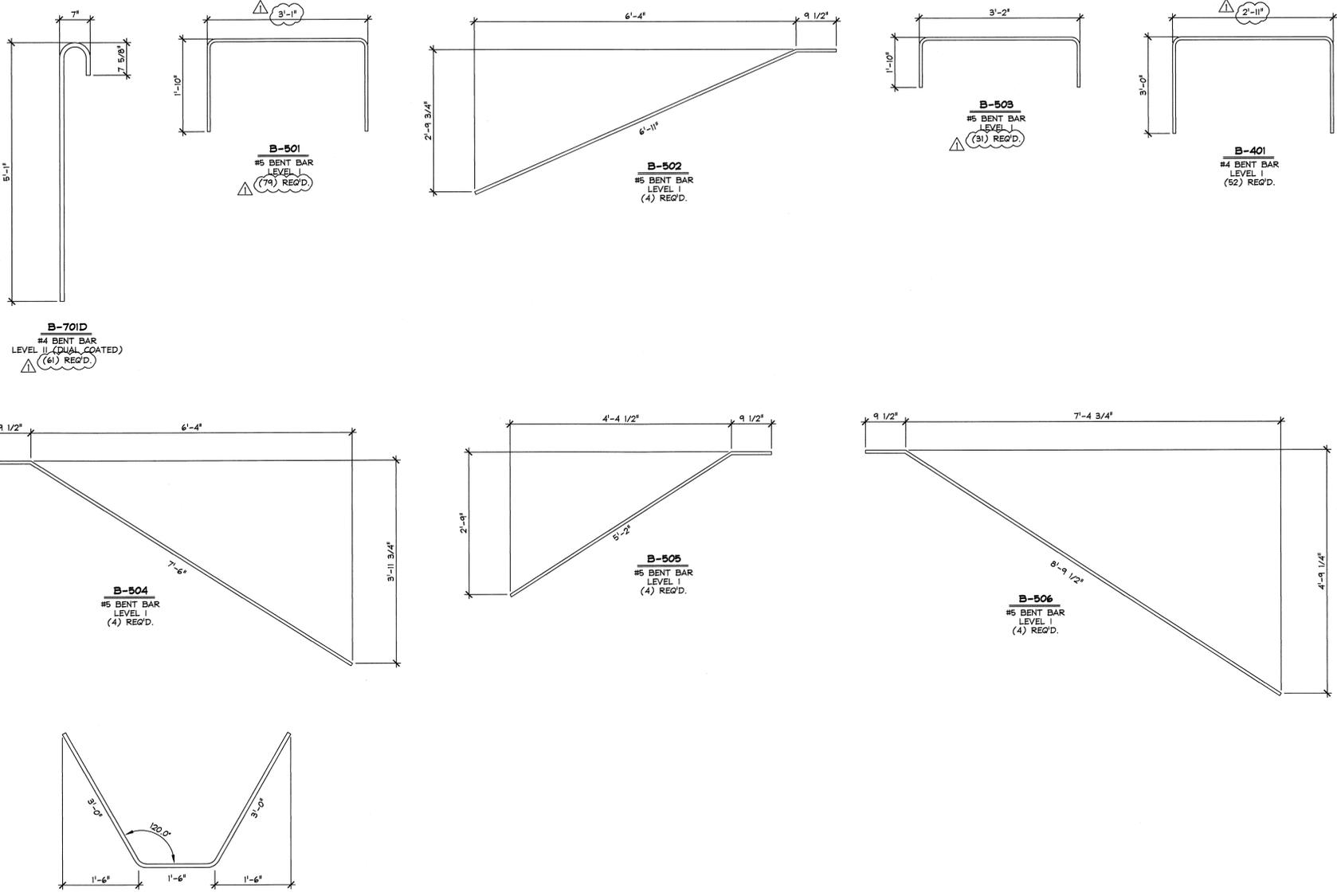
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23462-015
DWG. NO: M1

NEXT BEAM MATERIAL LIST

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753



MISCELLANEOUS MATERIALS				
ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1	B-401	52	#4 BENT BAR (LEVEL I)	
2	B-501	(79)	#5 BENT BAR (LEVEL I)	
3	B-502	4	#5 BENT BAR (LEVEL I)	
4	B-503	(31)	#5 BENT BAR (LEVEL I)	
5	B-504	4	#5 BENT BAR (LEVEL I)	
6	B-505	4	#5 BENT BAR (LEVEL I)	
7	B-506	4	#5 BENT BAR (LEVEL I)	
8	B-601	24	#6 BENT BAR (LEVEL I)	
9	B-701D	(61)	#7 BENT BAR (LEVEL II, DUAL COATED)	(+1 SAMPLE) ⚠
10				
11		48	#5 x 3'-10" (LEVEL II, DUAL COATED)	
12		(52)	#5 x 4'-6" (LEVEL II, DUAL COATED)	
13				
14		4	#5 x 2'-0" (LEVEL I)	
15		4	#5 x 3'-7" (LEVEL I)	
16		2	#5 x 3'-8" (LEVEL I)	
17		2	#5 x 3'-0" (LEVEL I) ⚠	
18		2	#5 x 4'-7" (LEVEL I)	
19		6	#5 x 5'-1" (LEVEL I)	
20		2	#5 x 5'-11" (LEVEL I)	
21		2	#5 x 6'-2" (LEVEL I)	
22		2	#5 x 6'-8" (LEVEL I)	
23		4	#5 x 7'-1" (LEVEL I)	
24				
25		4	#6 x 1'-3" (LEVEL I)	
26		(8)	#6 x 2'-1" (LEVEL I)	
27		(8)	#6 x 2'-2" (LEVEL I)	
28		8	#6 x 3'-3" (LEVEL I)	
29		4	#6 x 4'-3" (LEVEL I) ⚠	
30		32	#6 x 4'-10" (LEVEL I)	
31		14	#6 x 1'-9" (LEVEL I)	
32		14	#6 x 2'-7" (LEVEL I)	
33		14	#6 x 2'-8" (LEVEL I)	
34		12	#6 x 2'-7" (LEVEL I)	
35		2	#6 x 2'-11" (LEVEL I)	
36				
37		68	#7 x 5'-9" (LEVEL I)	
38		68	#7 x 6'-1" (LEVEL I)	
39		4	#7 x 5'-8" (LEVEL I)	
40		2	#7 x 6'-3" (LEVEL I)	
41		2	#7 x 7'-8" (LEVEL I)	
42		4	#7 x 7'-7" (LEVEL I)	
43		4	#7 x 6'-11" (LEVEL I)	
44		2	#7 x 6'-4" (LEVEL I)	
45		2	#7 x 7'-6" (LEVEL I)	
46		2	#7 x 8'-2" (LEVEL I)	
47		2	#7 x 8'-3" (LEVEL I)	
48		4	#7 x 8'-0" (LEVEL I)	
49		2	#7 x 8'-6" (LEVEL I)	
50		2	#7 x 8'-7" (LEVEL I)	
51		4	#7 x 8'-9" (LEVEL I)	
52		2	#7 x 8'-10" (LEVEL I)	
53		2	#7 x 9'-3" (LEVEL I)	
54		2	#7 x 9'-2" (LEVEL I)	
55		4	#7 x 9'-4" (LEVEL I)	
56		4	#7 x 9'-7" (LEVEL I)	
57		2	#7 x 9'-8" (LEVEL I)	
58		4	#7 x 9'-11" (LEVEL I)	
59		4	#7 x 10'-3" (LEVEL I)	
60		8	#7 x 10'-4" (LEVEL I)	
61		2	#7 x 10'-0" (LEVEL I)	
62				
63		4	2'-0" x 6'-2 7/8" CORRUGATED STEEL PIPE (GALV.)	
64		4	2'-0" x 6'-7 1/8" CORRUGATED STEEL PIPE (GALV.)	
65		1	2'-0" x 9'-3 1/2" CORRUGATED STEEL PIPE (GALV.)	
25		1	2'-0" x 7'-11 1/8" CORRUGATED STEEL PIPE (GALV.)	
25		1	2'-0" x 8'-8" CORRUGATED STEEL PIPE (GALV.)	
25		1	2'-0" x 8'-7 1/2" CORRUGATED STEEL PIPE (GALV.)	
25		(8)	SET OF (4) 0.60% STRAND LIFTING LOOPS	

APPROVAL STAMP:

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

J.P. Sicard
CONTRACTOR
BARTON, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23462-015
DWG. NO: M2

PRECAST ABUTMENT MATERIAL LIST

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753
5/28/2015 REVISED AS NOTED T.D.