

Vermont Agency of Transportation  
**RECEIVED**  
 ON: **June 18, 2014**  
 and Checked for  
**CONFORMANCE**  
 BY: Jennifer Fitch DATE: 6/24/2014

- ### NEXT BEAM GENERAL NOTES
- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 7,000 PSI.
  - MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 5,500 PSI.
  - REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) AND SHALL ADHERE TO THE REQUIREMENTS OF LEVEL II (DUAL COATED) REINFORCING STEEL IN ACCORDANCE WITH VERMONT SPECIFICATION SECTION 507.
  - 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).
  - ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
  - THE TOP OF BEAMS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
  - SHEAR KEY SURFACES SHALL BE SAND BLASTED CLEAN.
  - BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 90° (VERTICAL PICK). RIGGING SHALL BE CONFIGURED SUCH THAT THE BEAMS REMAIN PLUMB AND LEVEL AT ALL TIMES. A SPREADER BEAM OR FRAME MAY BE REQUIRED. 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 3'-0" OF THE BEAM ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
  - MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P510.02 AND P510.05 RESPECTIVELY.  
 DESIGN MIX: J.P.C. BRIDGE MIX #426M (3 GAL./CY DCI)
  - 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 70°. 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.
  - OWNER SHALL PROVIDE APPROPRIATE WATERPROOFING TO GROUTED SHEAR KEYS. J.P. CARRARA & SONS, INC. SHALL NOT BE HELD LIABLE FOR PROBLEMS ASSOCIATED WITH MOISTURE INFILTRATING GROUTED SHEAR KEYS.
  - PRECAST CONCRETE PARAPET SHALL HAVE A RUBBED FINISH IN ACCORDANCE WITH VERMONT SPECIFICATION SECTION 501.

- ### ABUTMENT, WING WALL, & APPROACH SLAB GENERAL NOTES
- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 5,000 PSI.
  - MIN. CONCRETE STRENGTH AT STRIPPING SHALL BE 3,500 PSI.
  - REINFORCING STEEL IN THE ABUTMENTS & APPROACH SLABS SHALL BE GR-60, ASTM A-615 (AASHTO M31) AND SHALL ADHERE TO THE REQUIREMENTS OF LEVEL I REINFORCING STEEL IN ACCORDANCE WITH VERMONT SPECIFICATION SECTION 507 (UNLESS NOTED OTHERWISE).  
 REINFORCING STEEL IN THE WING WALLS SHALL BE GR-60, ASTM A-615 (AASHTO M31) AND SHALL ADHERE TO THE REQUIREMENTS OF LEVEL II (DUAL COATED) REINFORCING STEEL IN ACCORDANCE WITH VERMONT SPECIFICATION SECTION 507 (UNLESS NOTED OTHERWISE).
  - THE TOP OF ABUTMENTS, APPROACH SLABS, & WING WALLS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
  - SHEAR KEY SURFACES SHALL BE SAND BLASTED CLEAN.
  - 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 5th POINTS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
  - MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPECIFICATION SECTION 540.  
 DESIGN MIX:  
 WING WALLS: J.P.C. BRIDGE MIX #445MSCC  
 APPROACH SLABS: J.P.C. BRIDGE MIX #445MSCC  
 ABUTMENTS: J.P.C. BRIDGE MIX #445MSCC
  - 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:
    - ERECT PRECAST CONCRETE ABUTMENTS. APPLY SIKADUR 32 HI-MOD EPOXY TO FIRST UNIT ERECTED AT MATCH CAST JOINT.
    - THREAD (2) 1/2" POLY STRAND TENDONS THROUGH EACH DUCT IN ABUTMENTS, AND POST-TENSION ALL TENDONS TO APPROXIMATELY 3,000 LBS.
    - AFTER 12 HOURS, POST-TENSION ALL TENDONS TO 32,000 LBS.

- ### 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.

### EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING

(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE: 0.60" x 270 KSI  
 AREA: 0.217 IN<sup>2</sup>  
 TENSION: 44,000 LB. EACH STRAND  
 GRIP-TO-GRIP: 252'-0" = 252.00'  
 E<sub>s</sub> = 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%)  
 $\Delta$  UPPER LIMIT = 1.05 x 19.977" = 20.98" = 21"  
 $\Delta$  LOWER LIMIT = 0.95 x 19.977" = 18.98" = 19"

EXTRA FORCE REQUIRED TO COMPENSATE FOR 1/2" CHUCK SLIPPAGE:  
 $\Delta P = \frac{0.5 \times 41,000}{19.977} = 1,026$  LBS.

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

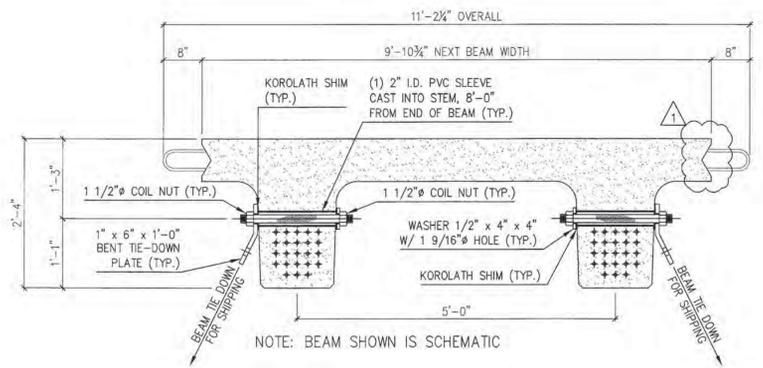
### SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.  
 REJECTED  REVISE AND RESUBMIT  FURNISH AS CORRECTED

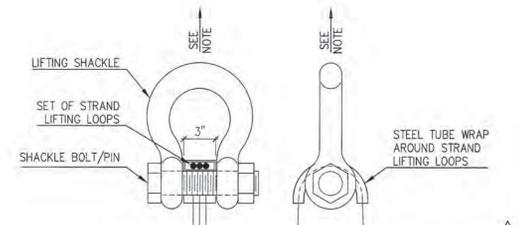
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**VHB** Job Number: 57927  
 Reviewed By: L. Ozerovchuk  
 Date: 6-23-14

- 6/16/14 REVISE & RESUBMIT
- 5/16/14 REVISE & RESUBMIT
- 4/30/14 REVISE & RESUBMIT
- 4/11/14 REVISE & RESUBMIT

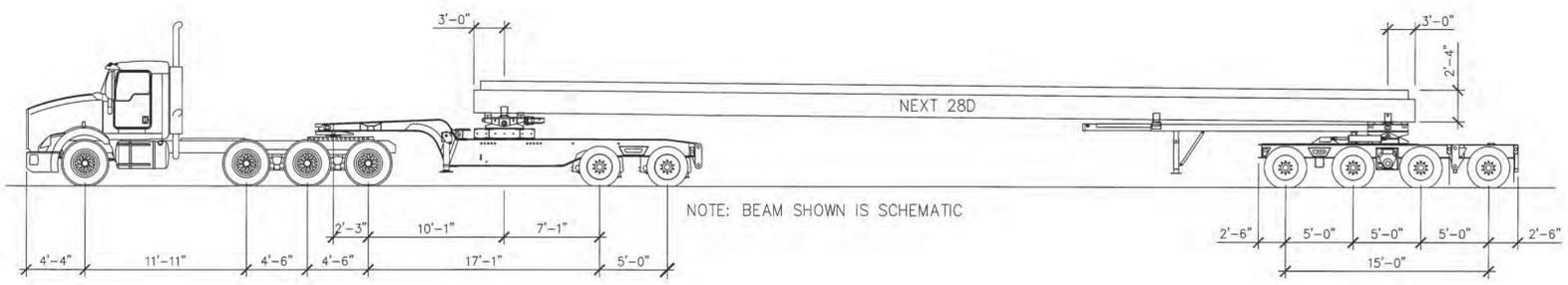


NEXT BEAM 28D HOLD-DOWN DETAIL FOR SHIPPING  
 N.T.S.



NOTE: BEAMS AND ABUTMENTS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. SHACKLE BOLT/PIN SHALL BE PLACED UNDER LIFT LOOPS AS SHOWN. DESIGN AND CONFIGURATION OF RIGGING BY PURCHASER.

LIFTING SHACKLE DETAILS  
 N.T.S.



NOTE: BEAM SHOWN IS SCHEMATIC

SHIPPING ELEVATION  
 N.T.S.

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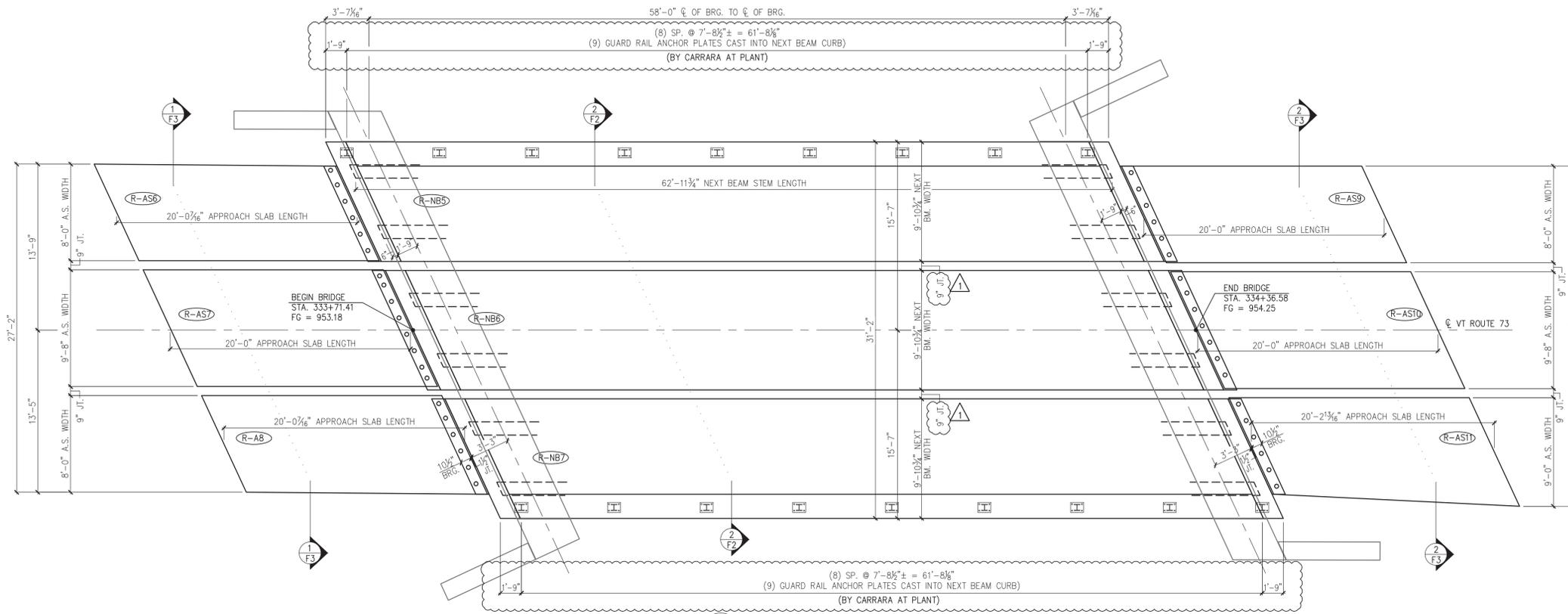
APPROVAL STAMP:

<b>J.P. CARRARA &amp; SONS INC.</b> Precast & Prestress Manufacturer 2484 CASE ST., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010		<b>W.M. SCHULTZ CONSTRUCTION, INC.</b> PO BOX 2620 BALLSTON SPA, NY 12020	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF WINDSOR		DATE: MAR. 14, 2014 SCALE: NOTED	
TOWN OF ROCHESTER VT ROUTE 73 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)		CHKD: DFTM, AAT/RWS JL/KLT JOB NO: 23419-013	
BRIDGE 16 COVER SHEET		DWG. NO: C1	

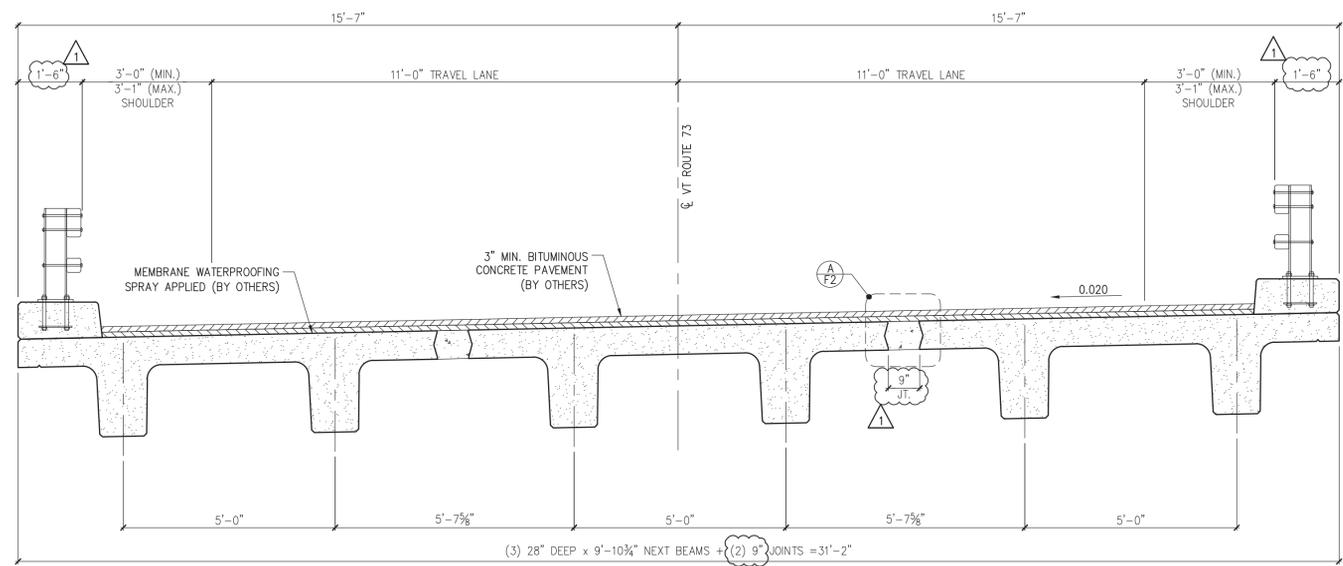
SUBMITTED  
**JUN 18 2014**  
 J.P. CARRARA & SONS, INC.  
 MIDDLEBURY, VT 05753



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1 APPROACH SLAB & PRESTRESSED NEXT BEAM LAYOUT  
3/16" = 1'-0"



2 NEXT BEAM TRANSVERSE SECTION  
1/2" = 1'-0"

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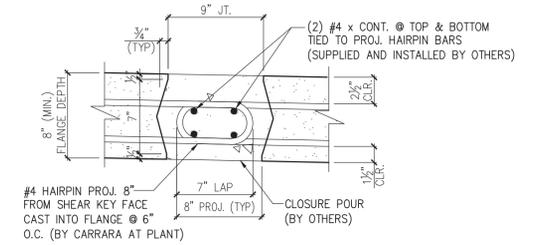
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**VHB** Job Number: 87527  
Reviewed By: L. Chervinsky  
Date: 6-23-14



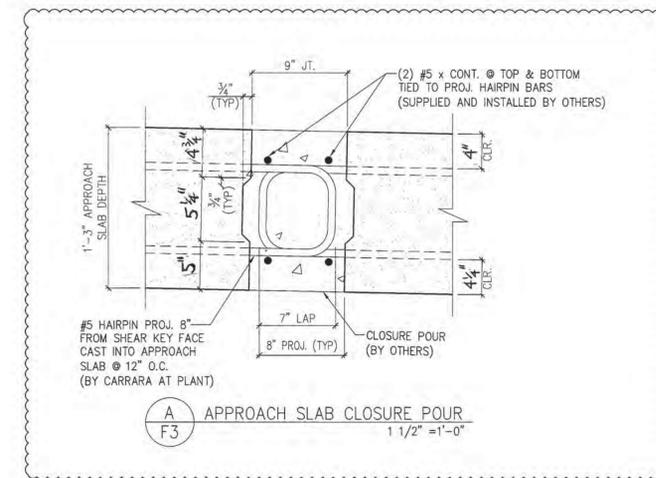
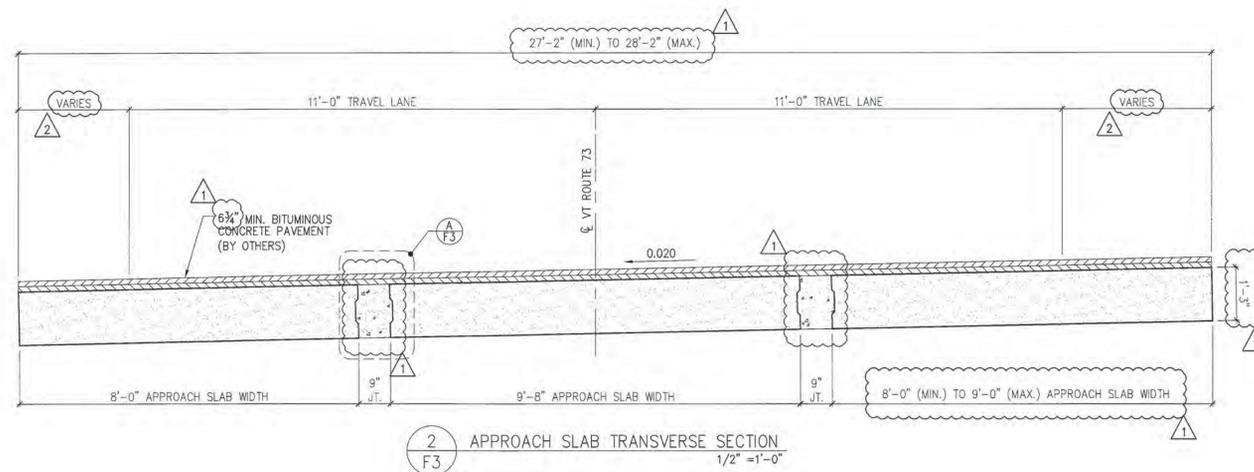
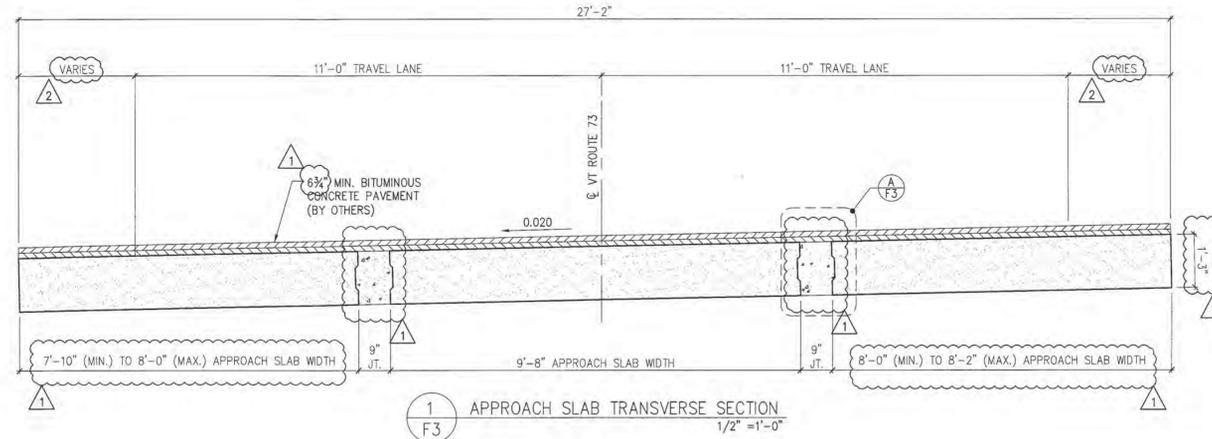
A NEXT BEAM CLOSURE POUR  
1 1/2" = 1'-0"

SUBMITTED  
JUN 18 2014  
J.P. CARRARA & SONS, INC.  
MIDDLEBURY, VT 05753

4/11/14 REVISE & RESUBMIT

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	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF WINDSOR	DATE: MAR. 14, 2014 SCALE: NOTED
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	<b>SUPERSTRUCTURE PLANS &amp; SECTIONS</b>	DWG. NO: <b>F2</b>

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- ① 5/27/14 REVISE & RESUBMIT
- ② 4/30/14 REVISE & RESUBMIT
- ③ 4/11/14 REVISE & RESUBMIT

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<input checked="" type="checkbox"/> FURNISH AS CORRECTED	
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<b>VHB</b>	Job Number: 97927 Reviewed By: L. Chernicky Date: 6-23-14

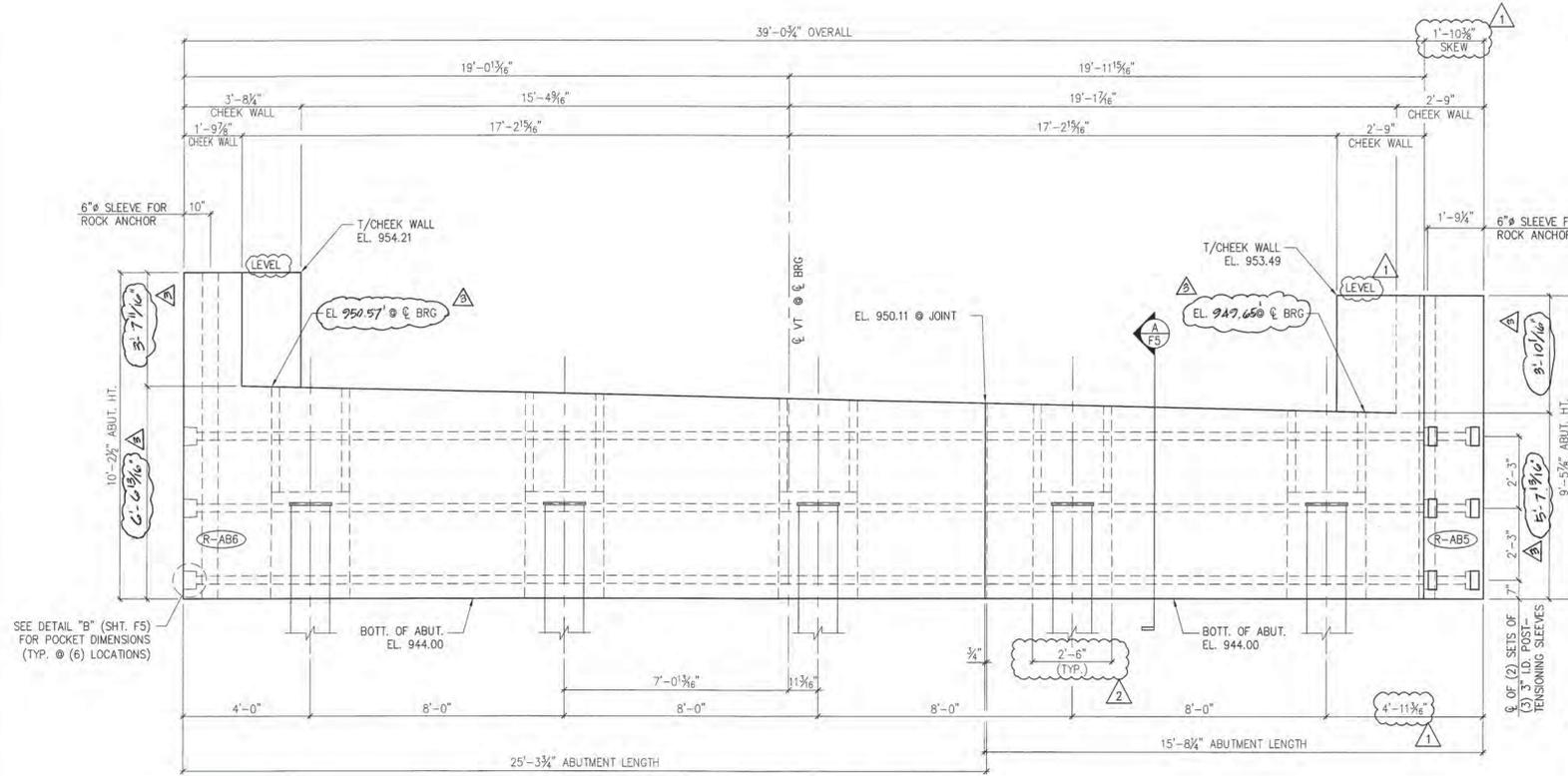
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	TRANSVERSE SECTIONS & DETAILS		DWG. NO: F3	

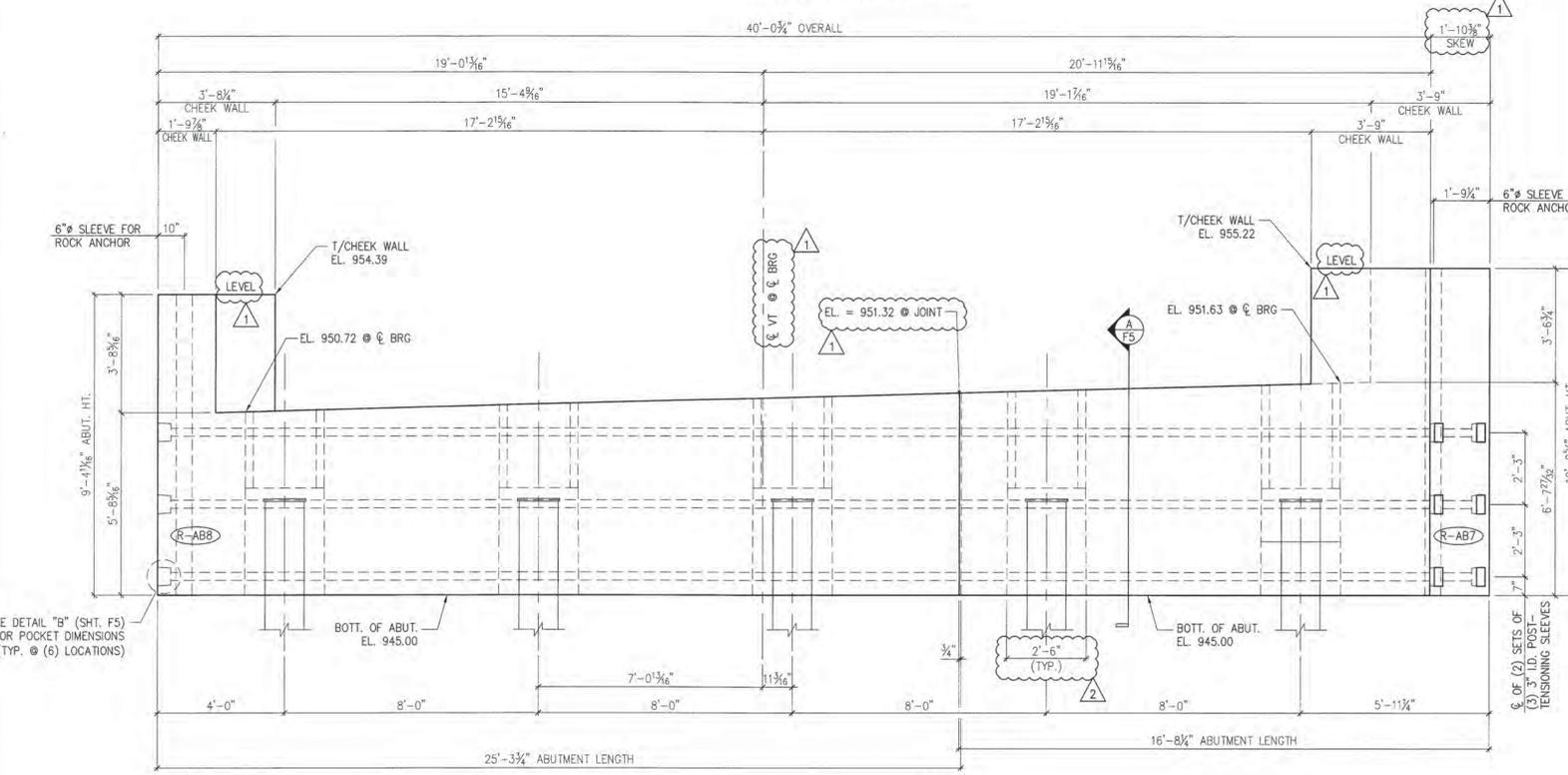
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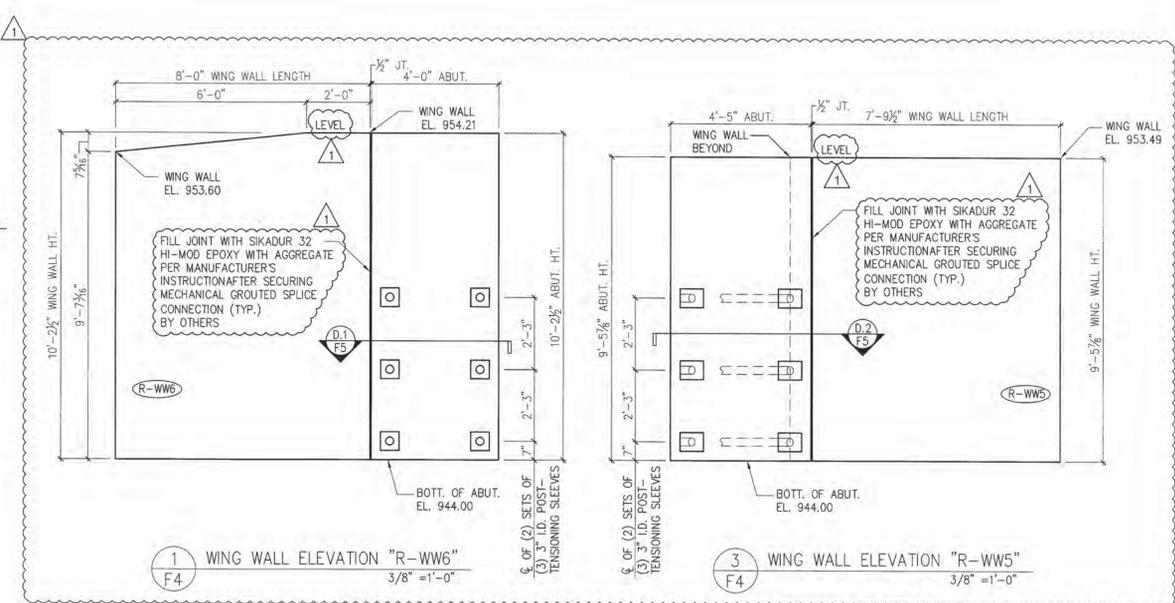
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2 ABUTMENT #1 ELEVATION  
3/8" = 1'-0"

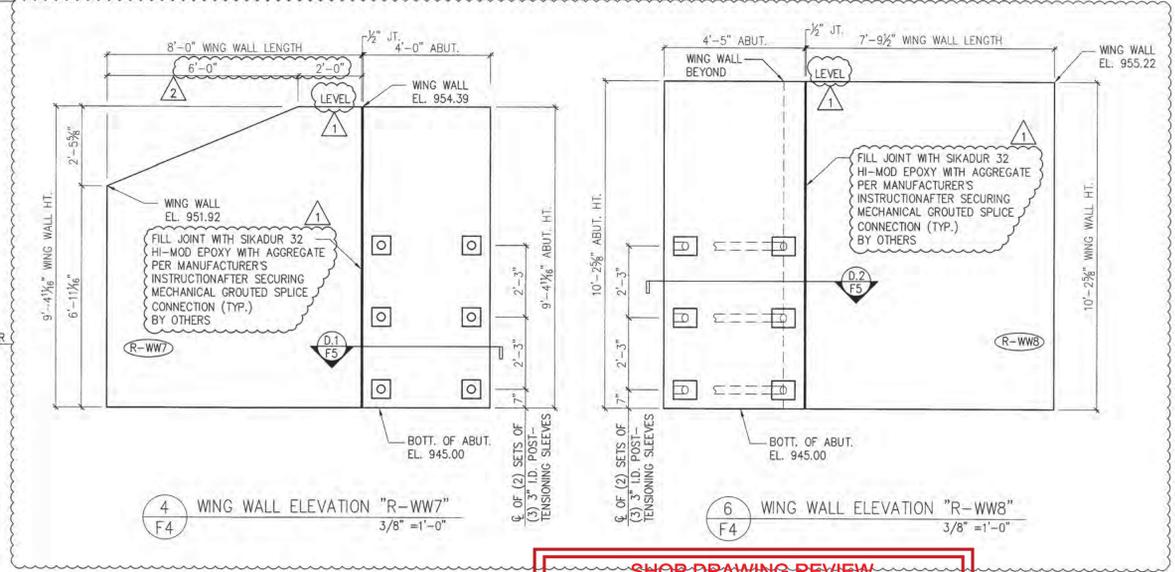


5 ABUTMENT #2 ELEVATION  
3/8" = 1'-0"



1 WING WALL ELEVATION "R-WW6"  
3/8" = 1'-0"

3 WING WALL ELEVATION "R-WW5"  
3/8" = 1'-0"



4 WING WALL ELEVATION "R-WW7"  
3/8" = 1'-0"

6 WING WALL ELEVATION "R-WW8"  
3/8" = 1'-0"

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- 6/18/14 REVISE & RESUBMIT
- 4/30/14 REVISE & RESUBMIT
- 4/11/14 REVISE & RESUBMIT

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**VHB** Job Number: 57521  
Reviewed By: L. Chervinsky  
Date: 6-23-14

SUBMITTED  
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ABUTMENT ELEVATIONS		DWG. NO: F4	

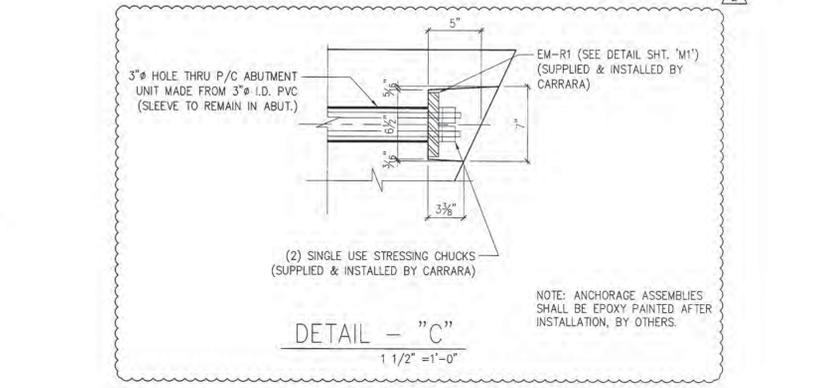
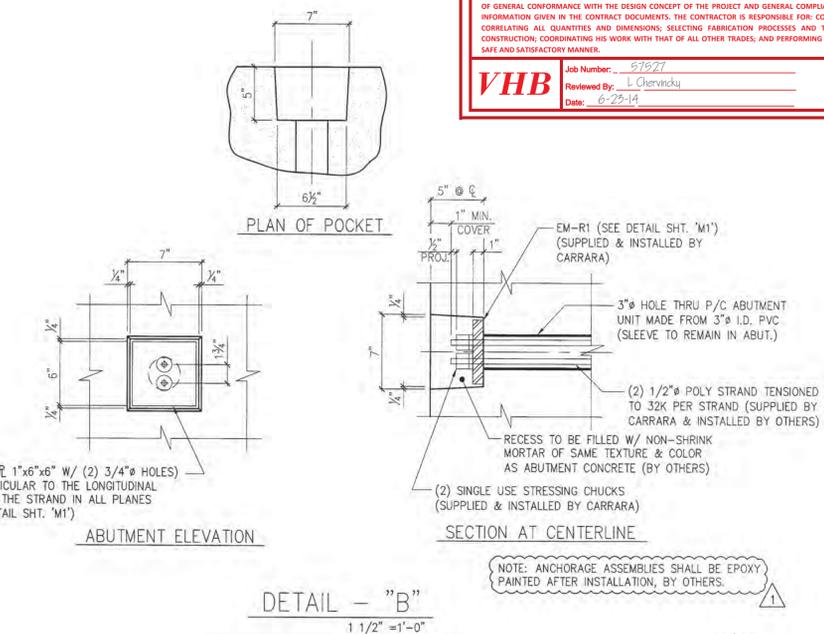
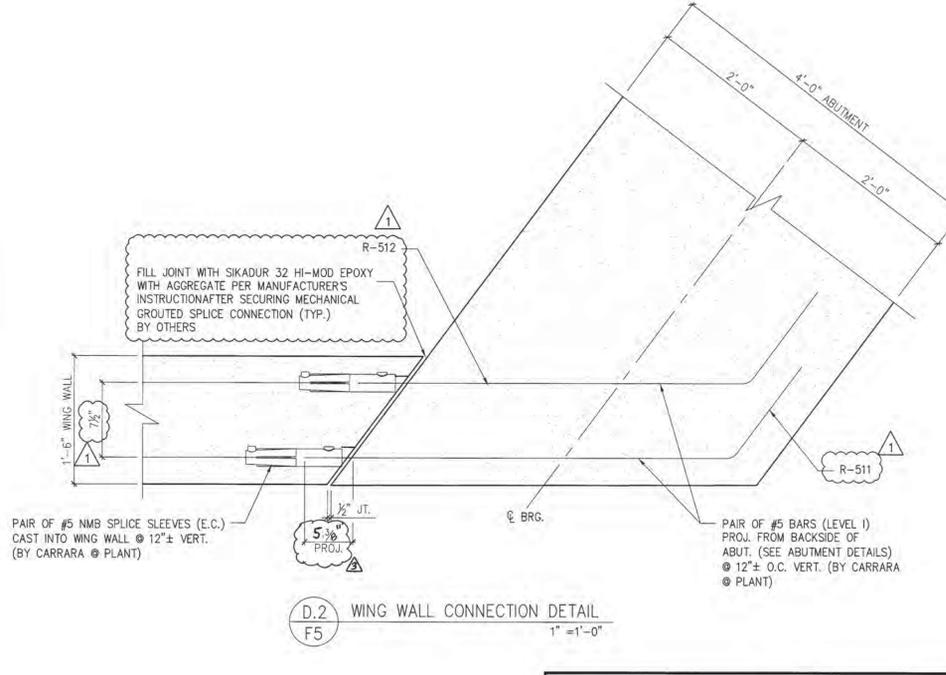
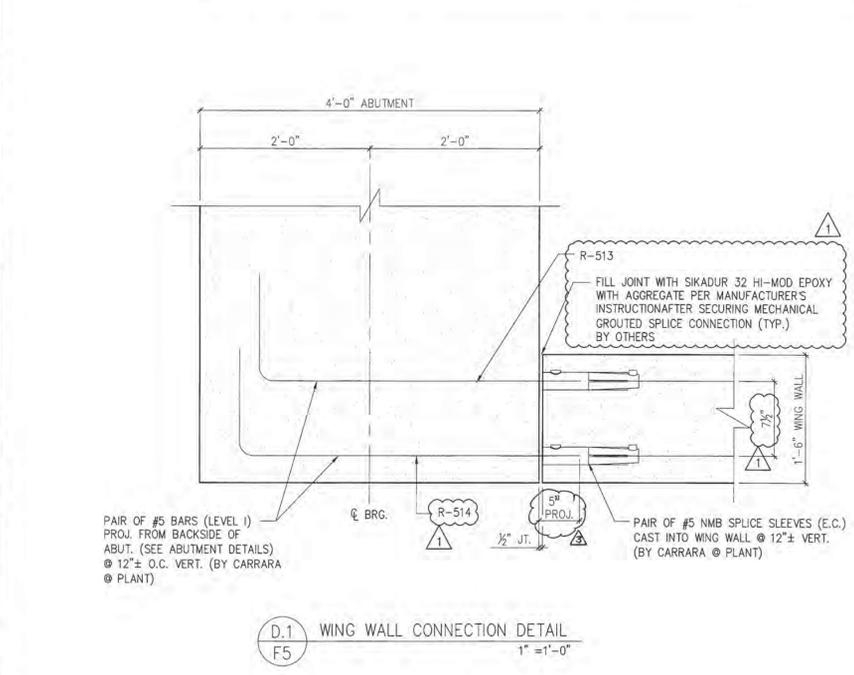
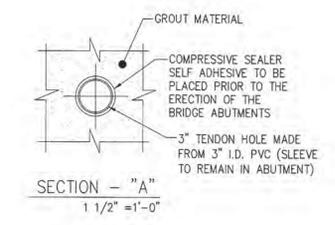
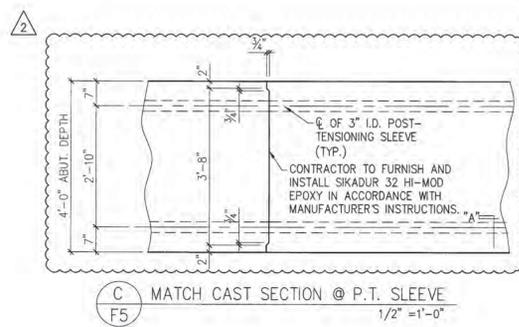
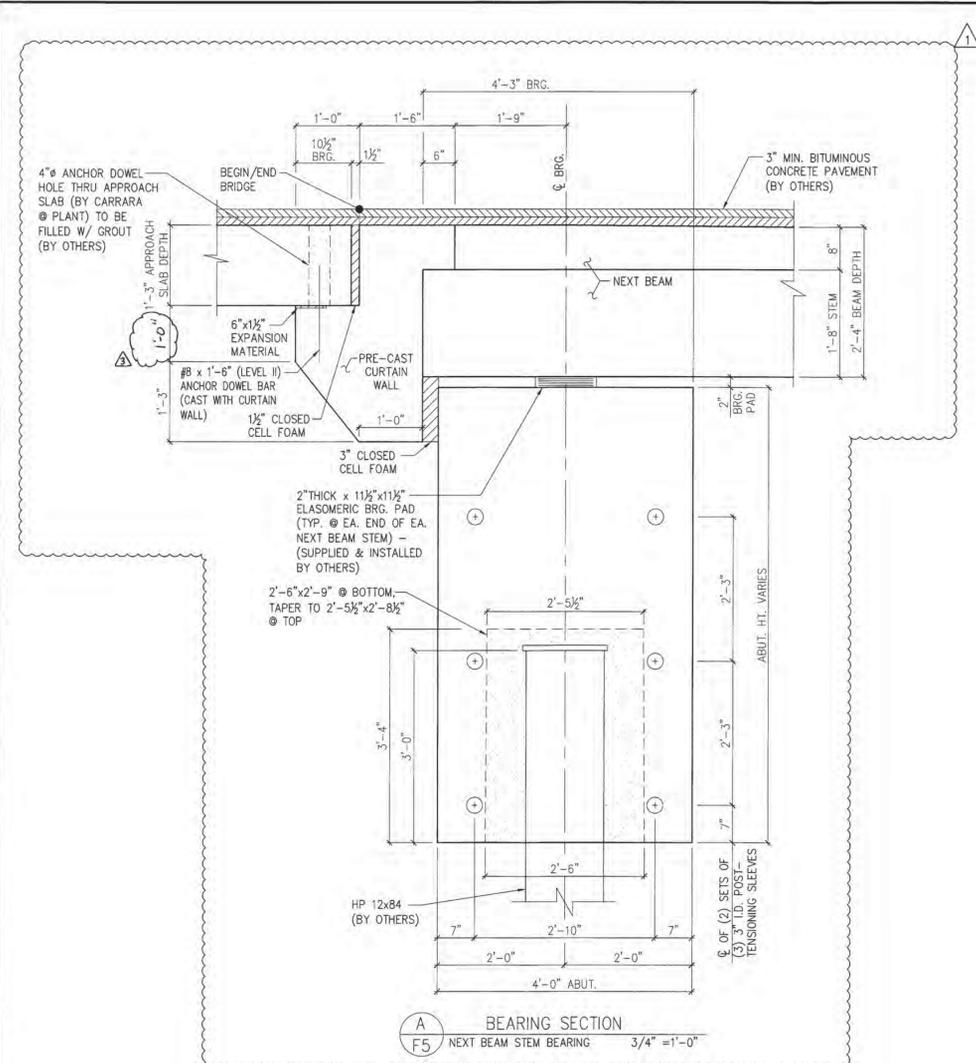
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 Precast & Prestress Manufacturer  
 2464 CASE ST., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

**W.M. SCHULTZ CONSTRUCTION, INC.**  
 PO BOX 2620  
 BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION  
 COUNTY OF WINDSOR

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DATE: MAR. 14, 2014  
 SCALE: NOTED  
 CHKD: DFTM, AAT/RWS, JJ/KLT  
 JOB NO: 23419-013

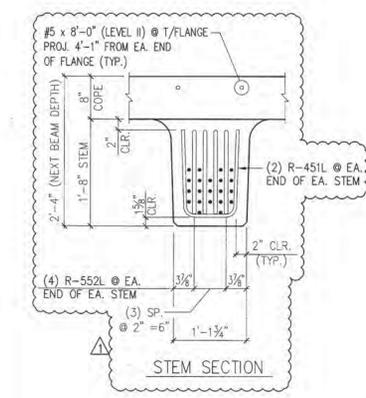
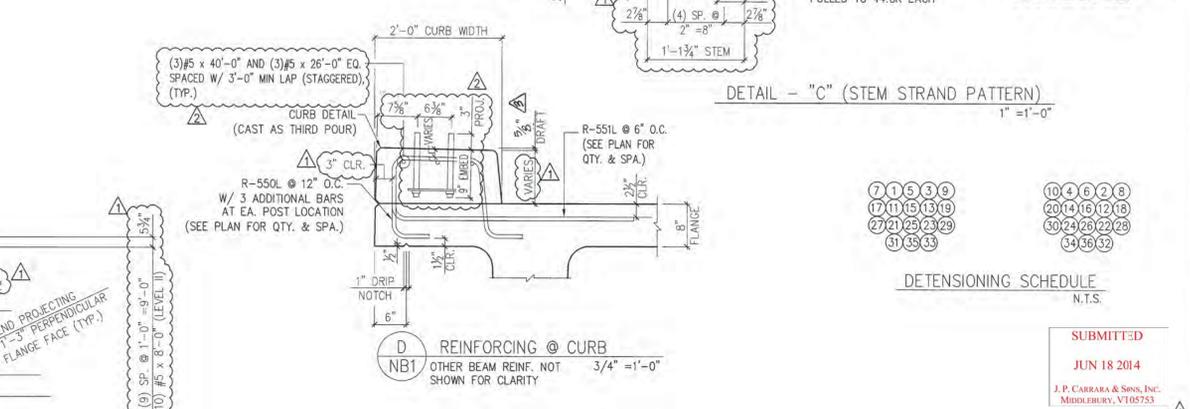
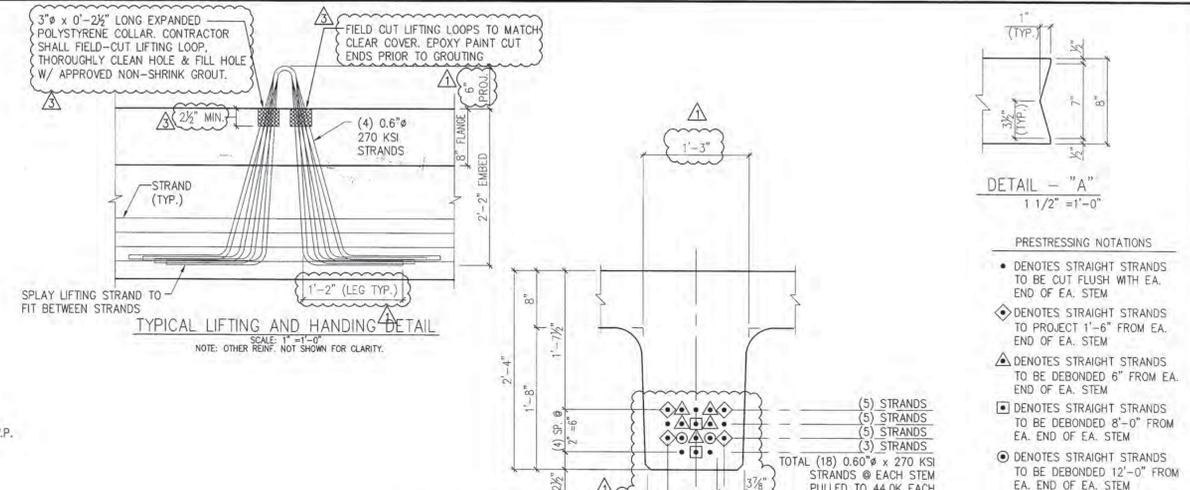
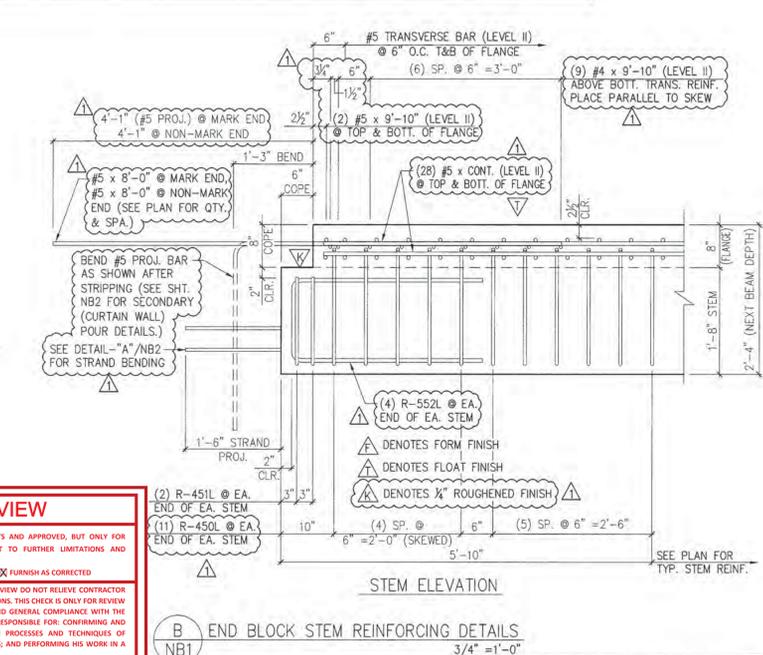
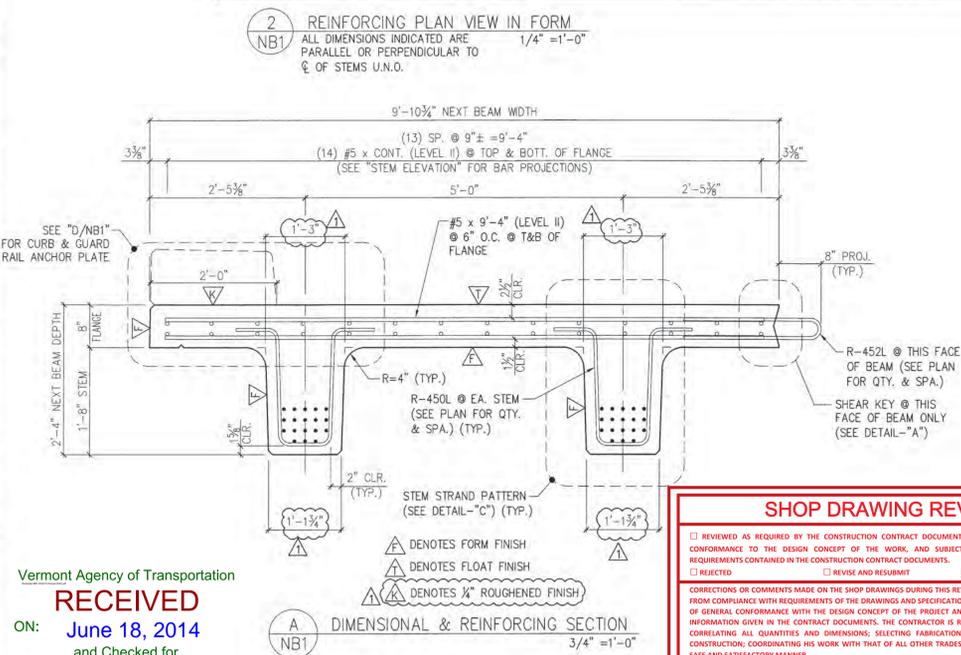
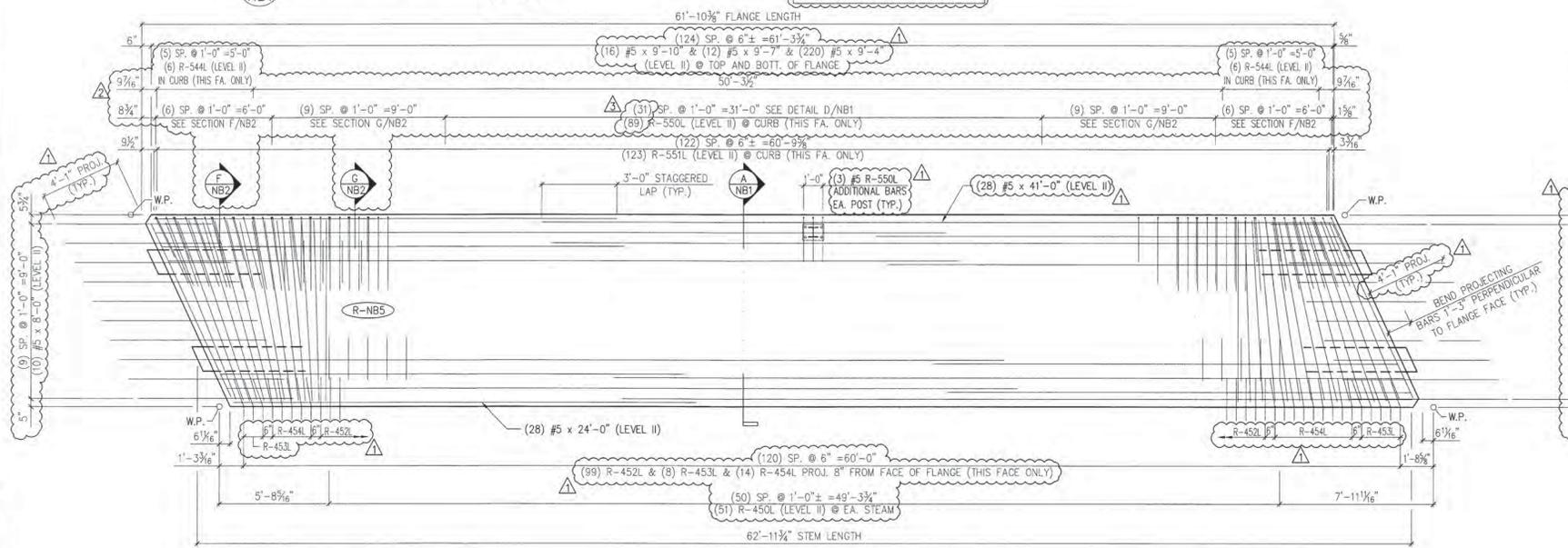
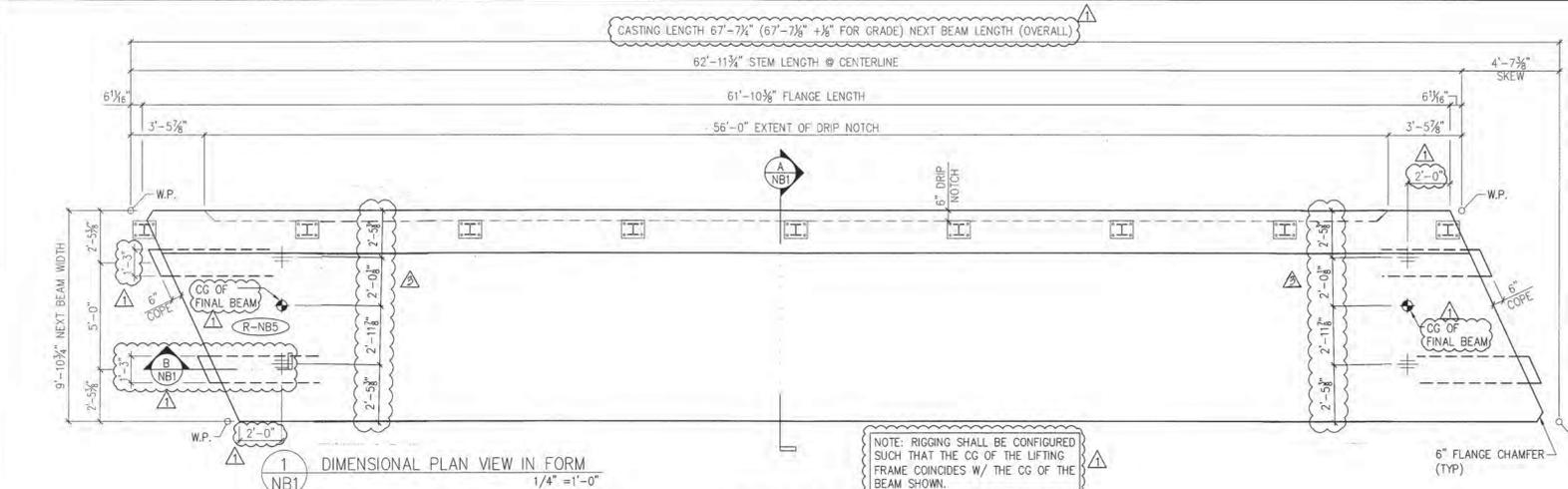
ABUTMENT DETAILS  
 DWG. NO: **F5**

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**SUBMITTED**  
**JUN 18 2014**  
 J.P. CARRARA & SONS, INC.  
 MIDDLEBURY, VT 05753

S:\Engineering Services\Carrara\14002 Rochester BR 15 & 16\Production Drawings\AutoCAD Files\Bridge 16\BR-16 - FR-1 (2).dwg, 5/21/2014 4:35:20 PM

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- 5/16/14 REVISE & RESUBMIT
- 4/30/14 REVISE & RESUBMIT
- 4/11/14 REVISE & RESUBMIT

Vermont Agency of Transportation  
**RECEIVED**  
ON: June 18, 2014  
and Checked for  
**CONFIRMANCE**  
BY: Jennifer Fitch DATE: 6/24/2014

**SHOP DRAWING REVIEW**

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REVISED AND RESUBMIT  FURNISH AS CORRECTED

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Job Number: 57527  
Reviewed By: L. Charvinsky  
Date: 6-23-14

**VHB**

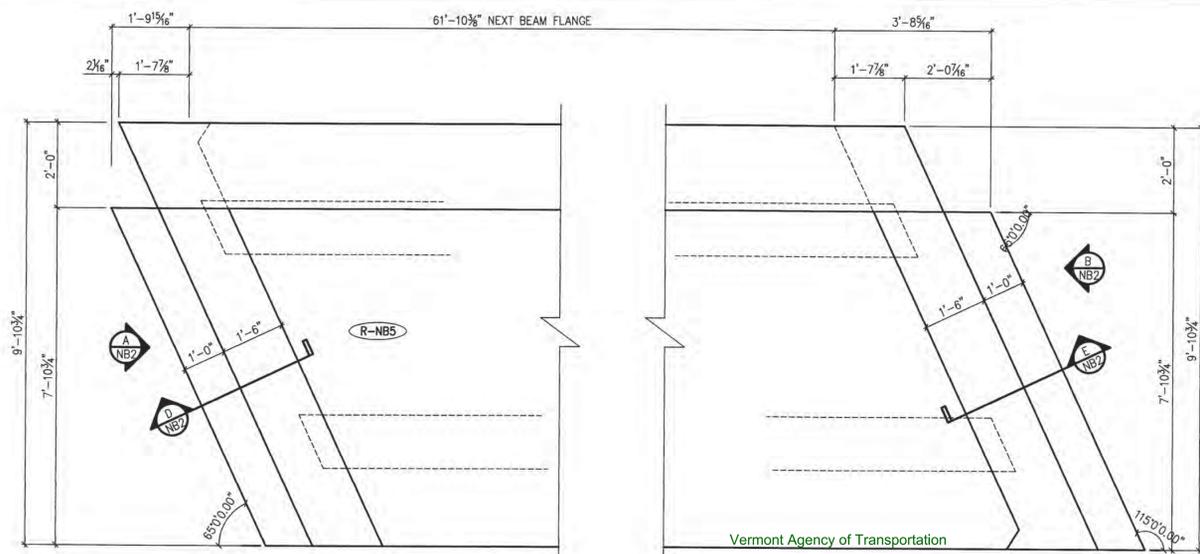
**Eriksson technologies**  
813.989.3317  
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APPROVAL STAMP:

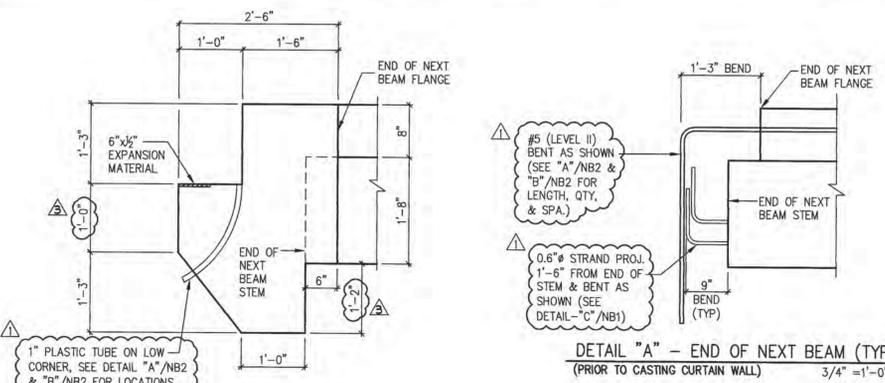
MARK: R-NB5	QTY.: 1	WT.: 49.3 T	VOL.: 24.33 cy
TOTAL WITH CURTAIN WALLS & CURB -		WT.: 67.5 T	VOL.: 33.4 cy

MATERIAL LIST / NEXT BEAM			
ITEM	MARK	DESCRIPTION	QTY.
1	R-450L	#4 BENT BAR (LEVEL II, DUAL COATED)	146
2	R-451L	#4 BENT BAR (LEVEL II, DUAL COATED)	8
3	R-452L	#4 BENT BAR (LEVEL II, DUAL COATED)	99
4	R-453L	#4 BENT BAR (LEVEL II, DUAL COATED)	8
5	R-454L	#4 BENT BAR (LEVEL II, DUAL COATED)	14
6			
7	R-544L	#5 BENT BAR (LEVEL II, DUAL COATED)	18
8	R-550L	#5 BENT BAR (LEVEL II, DUAL COATED)	85
9	R-551L	#5 BENT BAR (LEVEL II, DUAL COATED)	123
10	R-552L	#5 BENT BAR (LEVEL II, DUAL COATED)	16
11			
12		#4 x 9'-10" (LEVEL II, DUAL COATED)	18
13			
14		#5 x 8'-0" (LEVEL II, DUAL COATED)	20
15		#5 x 9'-4" (LEVEL II, DUAL COATED)	220
16		#5 x 9'-7" (LEVEL II, DUAL COATED)	12
17		#5 x 9'-10" (LEVEL II, DUAL COATED)	20
18		#5 x 24'-0" (LEVEL II, DUAL COATED)	28
19		#5 x 26'-0" (LEVEL II, DUAL COATED)	3
20		#5 x 40'-0" (LEVEL II, DUAL COATED)	3
21		#5 x 41'-0" (LEVEL II, DUAL COATED)	28
22			
23		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	4

<b>J.P. CARRARA &amp; SONS INC.</b> Precast & Prestress Manufacturer 2464 CASE STR., WOODLURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010	<b>W.M. SCHULTZ CONSTRUCTION, INC.</b> PO BOX 2620 BALLSTON SPA, NY 12020
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF WINDSOR	DATE: MAR. 14, 2014 SCALE: NOTED
TOWN OF ROCHESTER VT ROUTE 73 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)	CHKD: DFTM:AAT/RWS JJ/KLT JOB NO: 23419-013
	DWG. NO: NB1



1 CURTAIN WALL PLAN VIEW IN FORM  
NB2 (CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2\"/>



C DIMENSIONAL CURTAIN WALL SECTION  
NB2 3/4\"/>

**SHOP DRAWING REVIEW**

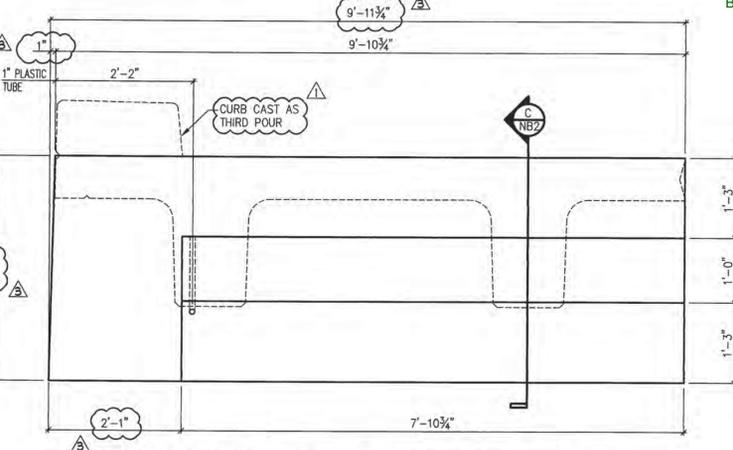
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REJECTED  REVISE AND RESUBMIT  FURNISH AS CORRECTED

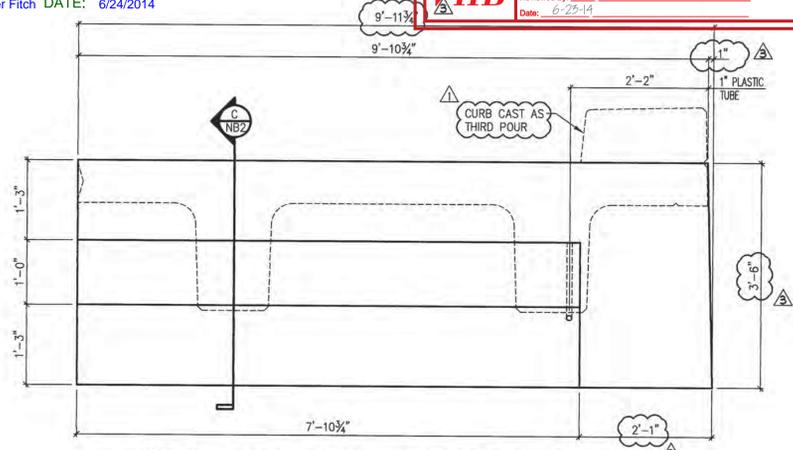
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**VHB**  
Job Number: 979277  
Reviewed By: J. Chernycki  
Date: 6-23-14

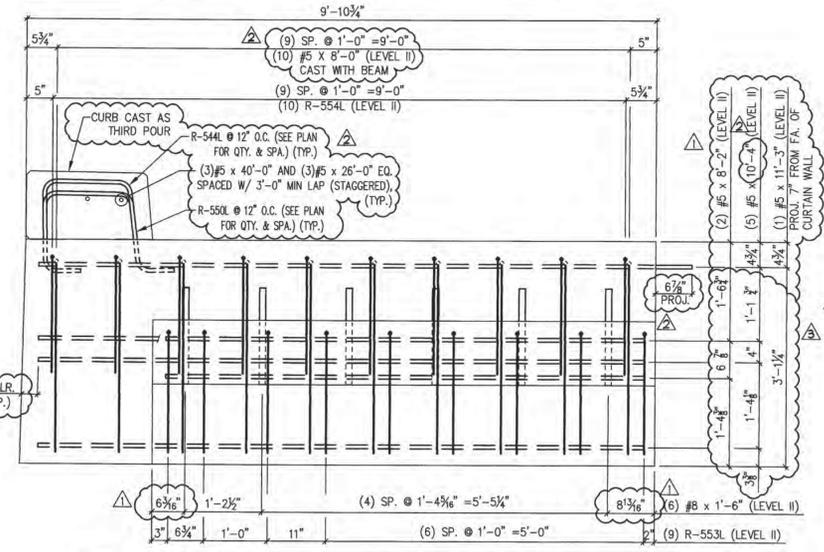
Vermont Agency of Transportation  
**RECEIVED**  
ON: June 18, 2014  
and Checked for  
**CONFIRMANCE**  
BY: Jennifer Fitch DATE: 6/24/2014



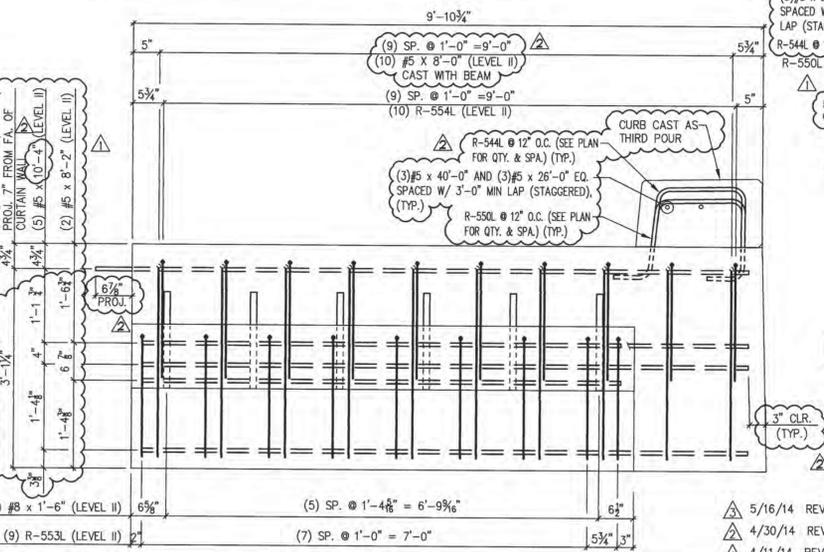
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NB2 3/4\"/>



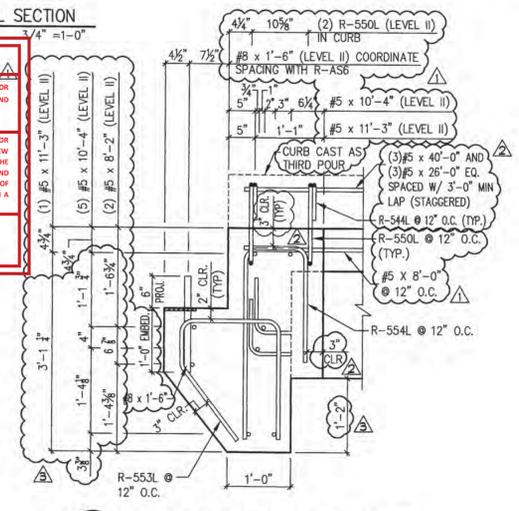
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NB2 3/4\"/>



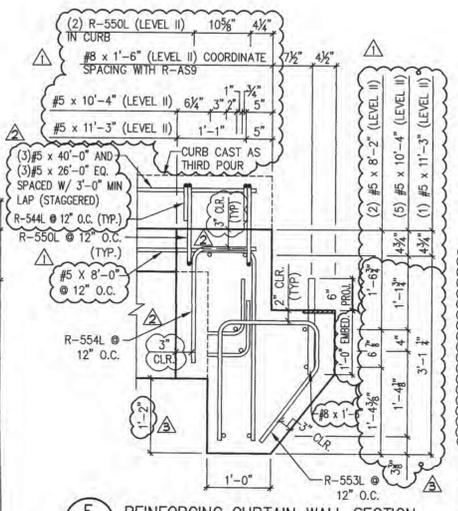
A REINFORCING CURTAIN WALL ELEVATION @ ABUT. #1  
NB2 3/4\"/>



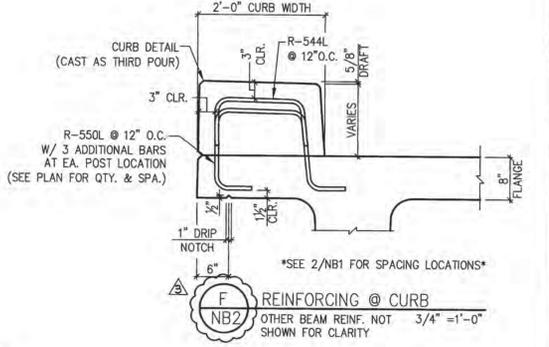
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NB2 3/4\"/>



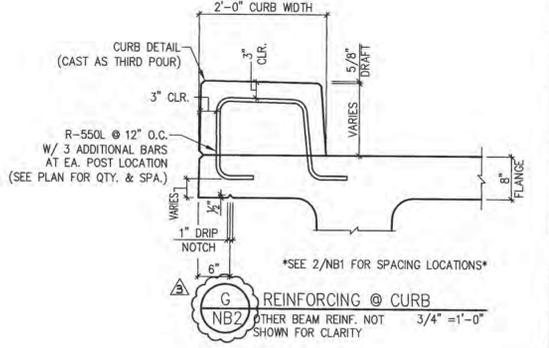
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NB2 3/4\"/>



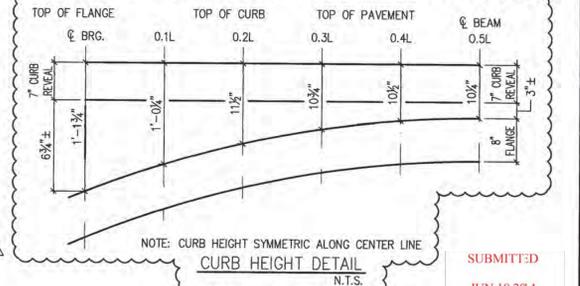
E REINFORCING CURTAIN WALL SECTION  
NB2 3/4\"/>



F REINFORCING @ CURB  
NB2 OTHER BEAM REINF. NOT SHOWN FOR CLARITY 3/4\"/>



G REINFORCING @ CURB  
NB2 OTHER BEAM REINF. NOT SHOWN FOR CLARITY 3/4\"/>



NOTE: CURB HEIGHT SYMMETRIC ALONG CENTER LINE  
CURB HEIGHT DETAIL  
N.T.S.

SUBMITTED  
JUN 18 2014  
J.P. CARRARA & SONS, INC.  
MIDDLEBURY, VT 05753

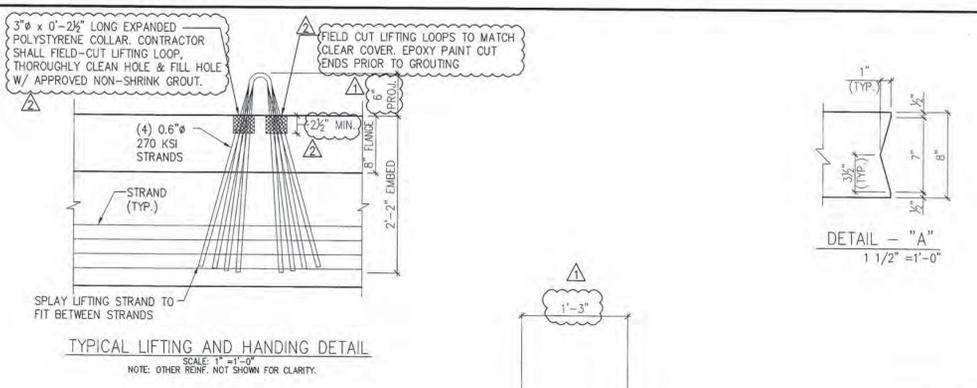
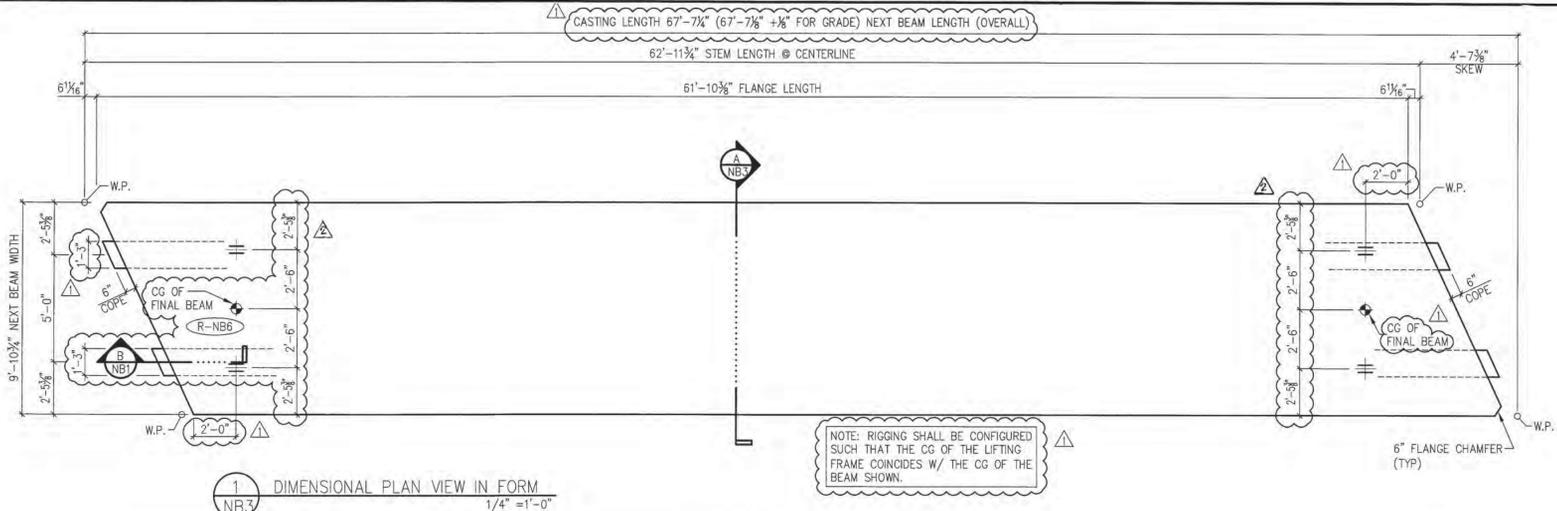
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2	R-554L	#5 BENT BAR (LEVEL II, DUAL COATED)					20
3							
4							
5		#5 x 8'-2" (LEVEL II, DUAL COATED)					4
6		#5 x 10'-4" (LEVEL II, DUAL COATED)					10
7		#5 x 11'-3" (LEVEL II, DUAL COATED)					2
8							
9		#5 x 1'-6" (LEVEL II, DUAL COATED)					12
10							
11		1" PLASTIC TUBE					2
12							
13							
14							

APPROVAL STAMP:  
5/16/14 REVISE & RESUBMIT  
4/30/14 REVISE & RESUBMIT  
4/11/14 REVISE & RESUBMIT

**J.P. CARRARA & SONS INC.** W.M. SCHULTZ CONSTRUCTION, INC.  
Precast & Prestress Manufacturer PO BOX 2620  
2644 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-8010 BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF WINDSOR DATE: MAR. 14, 2014  
TOWN OF ROCHESTER VT ROUTE 73 (RURAL MAJOR COLLECTOR) CHKD: DFTM, AAT/RWS, JJK/RLT  
BRIDGE NO.: 16 PROJECT NO.: BRF 0162(17) SCALE: NOTED  
JOB NO: 23419-013  
DWG. NO: NB2

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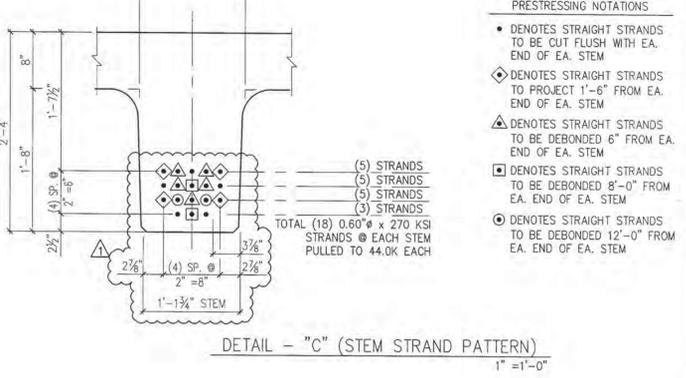
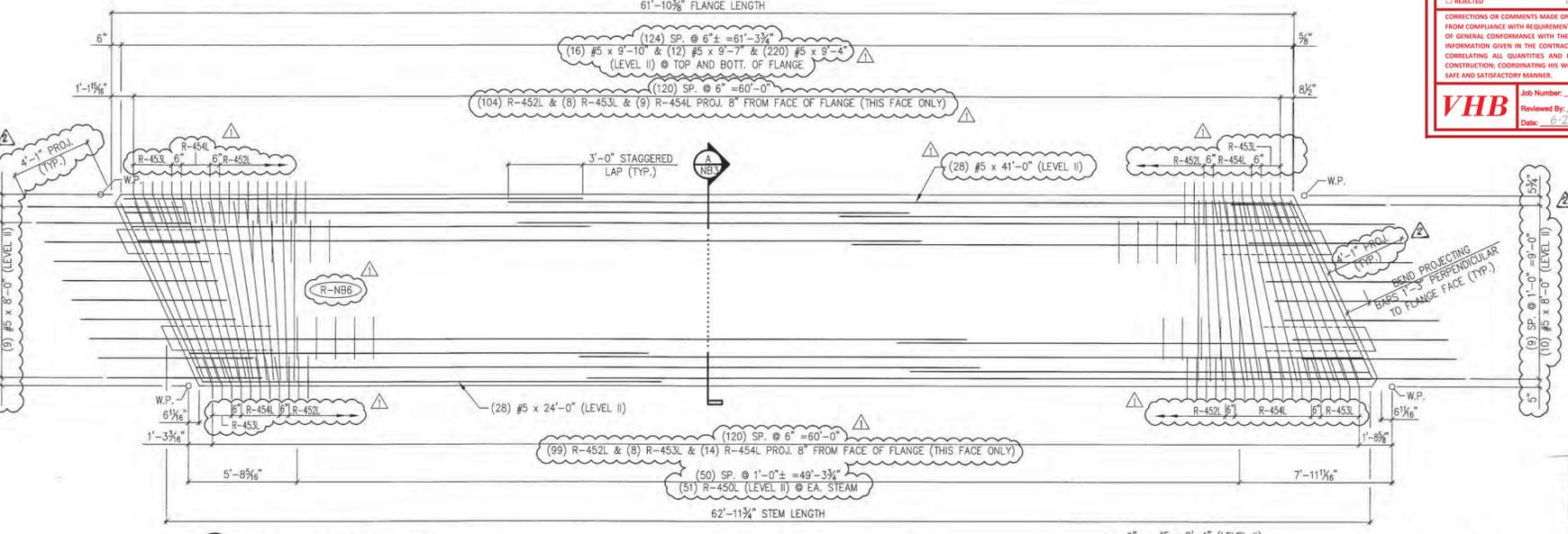
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**VHB** Job Number: 87827  
 Reviewed By: L. Chernivsky  
 Date: 6-23-14



Vermont Agency of Transportation  
**RECEIVED**  
 ON: June 18, 2014  
 and Checked for  
**CONFORMANCE**  
 BY: Jennifer Fitch DATE: 6/24/2014

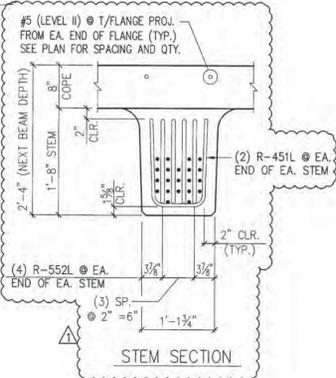
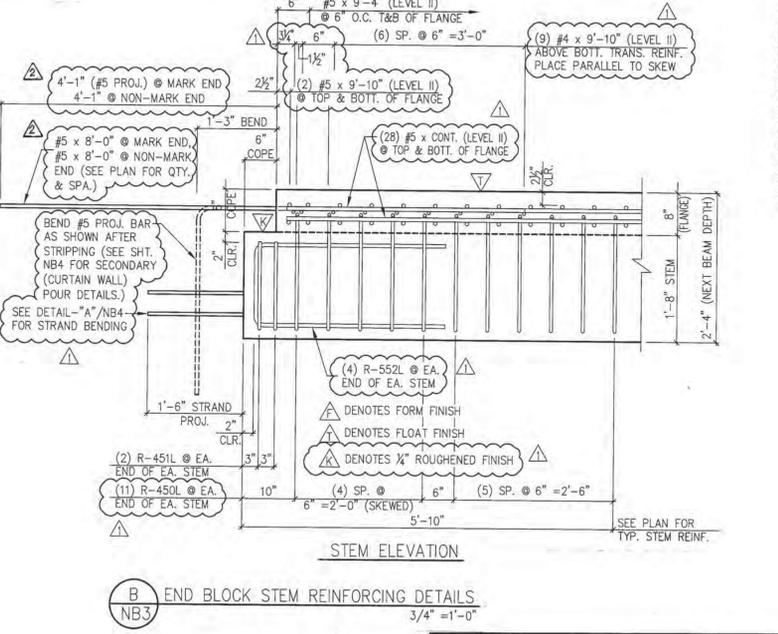
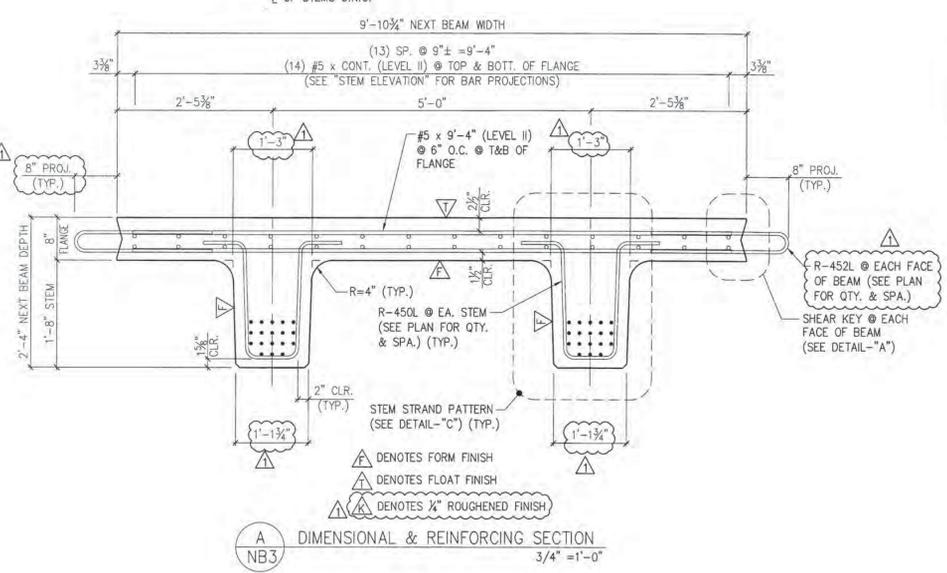
SUBMITTED  
 JUN 18 2014  
 J.P. CARRARA & SONS, INC.  
 MIDDLEBURY, VT 05753

Verify Weight

71539	104629
171191319	2014161218
2721292329	3024282228
913933	343632

DETENSIONING SCHEDULE  
 N.T.S.

MARK:	R-NB6	QTY.:	1	WT.:	49.3 T	VOL.:	24.33 cy
TOTAL WITH CURTAIN WALLS -				WT.:	29.91 T	VOL.:	29.54 cy
MATERIAL LIST / NEXT BEAM							
ITEM	MARK	DESCRIPTION	QTY.				
1	R-450L	#4 BENT BAR (LEVEL II, DUAL COATED)	146				
2	R-451L	#4 BENT BAR (LEVEL II, DUAL COATED)	8				
3	R-452L	#4 BENT BAR (LEVEL II, DUAL COATED)	203				
4	R-453L	#4 BENT BAR (LEVEL II, DUAL COATED)	16				
5	R-454L	#4 BENT BAR (LEVEL II, DUAL COATED)	23				
6							
7	R-552L	#5 BENT BAR (LEVEL II, DUAL COATED)	16				
8							
9		#4 x 9'-10" (LEVEL II, DUAL COATED)	18				
10		#5 x 8'-0" (LEVEL II, DUAL COATED)	20				
11		#5 x 9'-4" (LEVEL II, DUAL COATED)	220				
12		#5 x 9'-7" (LEVEL II, DUAL COATED)	12				
13		#5 x 9'-10" (LEVEL II, DUAL COATED)	20				
14		#5 x 24'-0" (LEVEL II, DUAL COATED)	28				
15		#5 x 41'-0" (LEVEL II, DUAL COATED)	28				
16							
17							
18		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	4				



5/16/14 REVISE & RESUBMIT  
 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

**J.P. CARRARA & SONS INC.**  
 Precast & Prestress Manufacturer  
 2464 ONE STR., MIDDLEBURY, VERMONT 05751 Phone: (802)388-6361 Fax: (802)388-9010

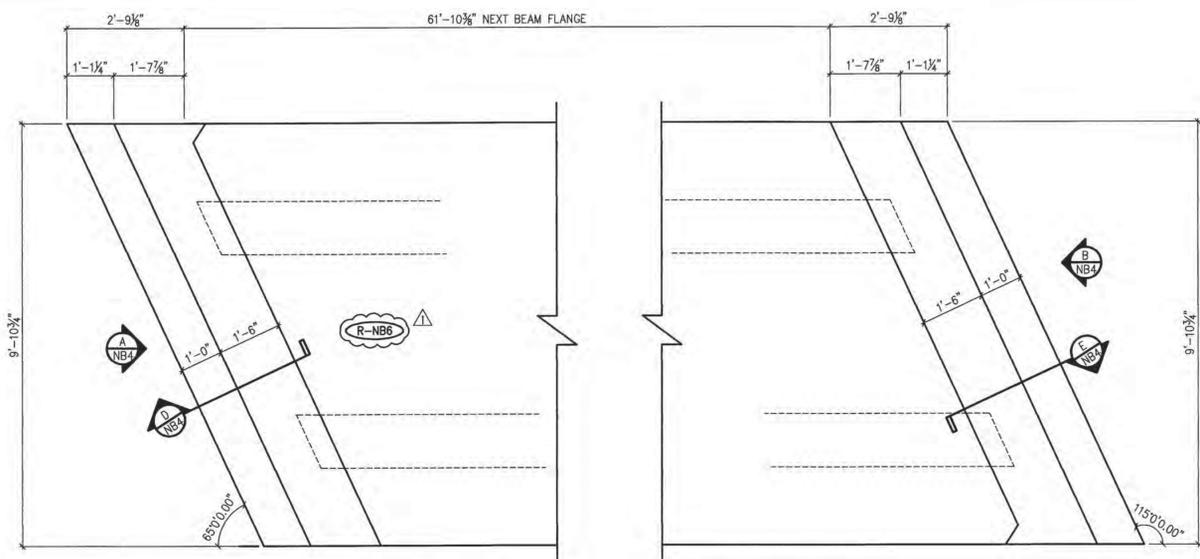
**W.M. SCHULTZ CONSTRUCTION, INC.**  
 PO BOX 2620  
 BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION  
 COUNTY OF WINDSOR

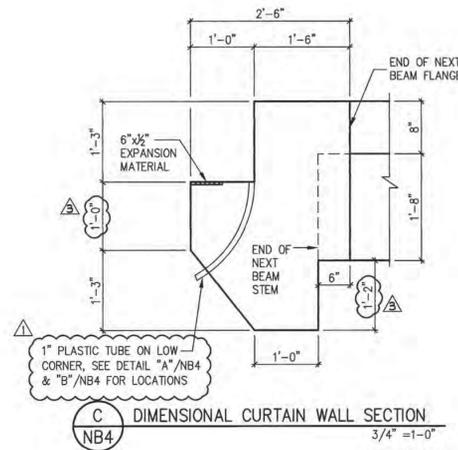
TOWN OF ROCHESTER  
 VT ROUTE 73 (RURAL MAJOR COLLECTOR)  
 BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)

DATE: MAR. 14, 2014  
 SCALE: NOTED  
 CHKD: DFTM/AAT/RWS  
 JJU/KLT  
 JOB NO: 23419-013  
 DWG. NO: NB3

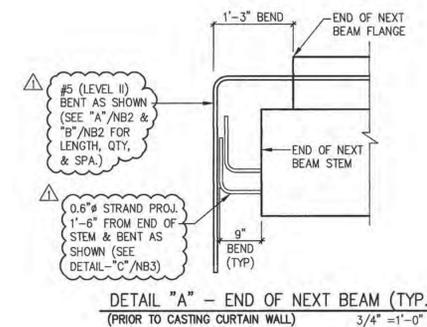
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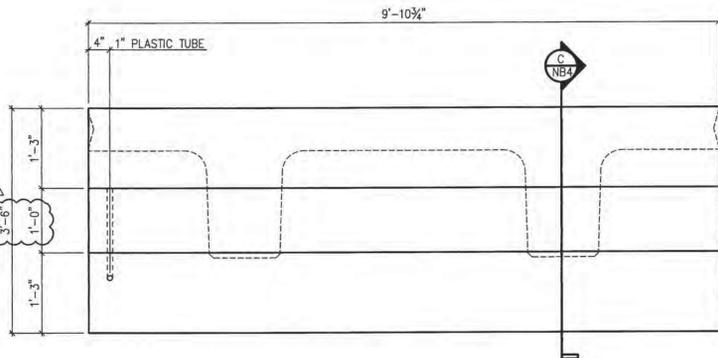
1 CURTAIN WALL PLAN VIEW IN FORM  
NB4 (CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2" = 1'-0"



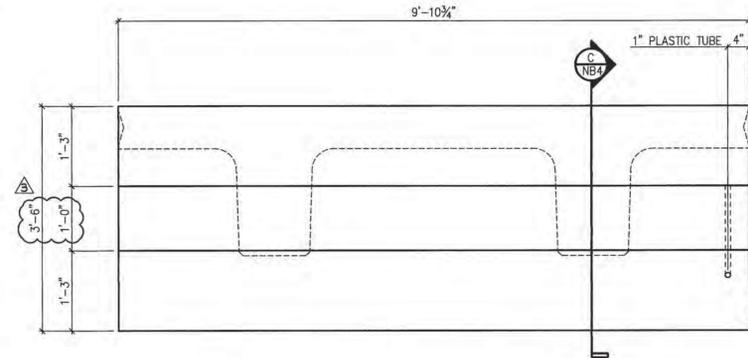
C DIMENSIONAL CURTAIN WALL SECTION  
NB4 3/4" = 1'-0"



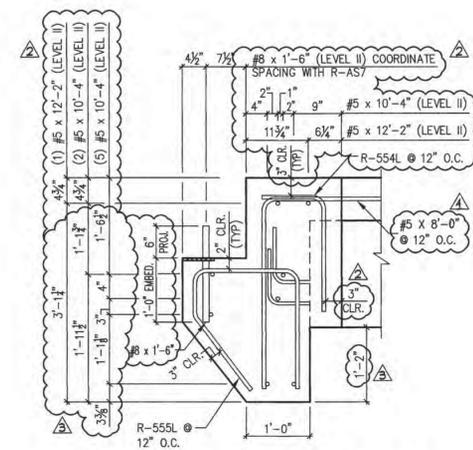
DETAIL "A" - END OF NEXT BEAM (TYP.)  
(PRIOR TO CASTING CURTAIN WALL) 3/4" = 1'-0"



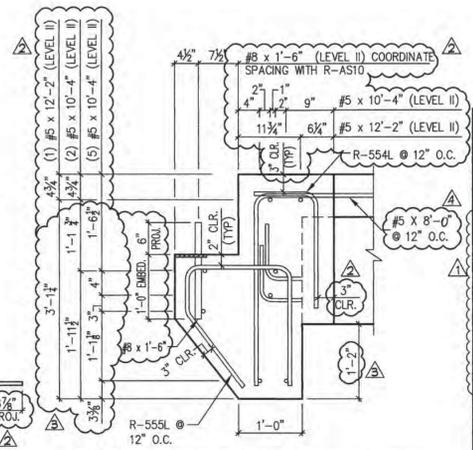
A DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #1  
NB4 3/4" = 1'-0"



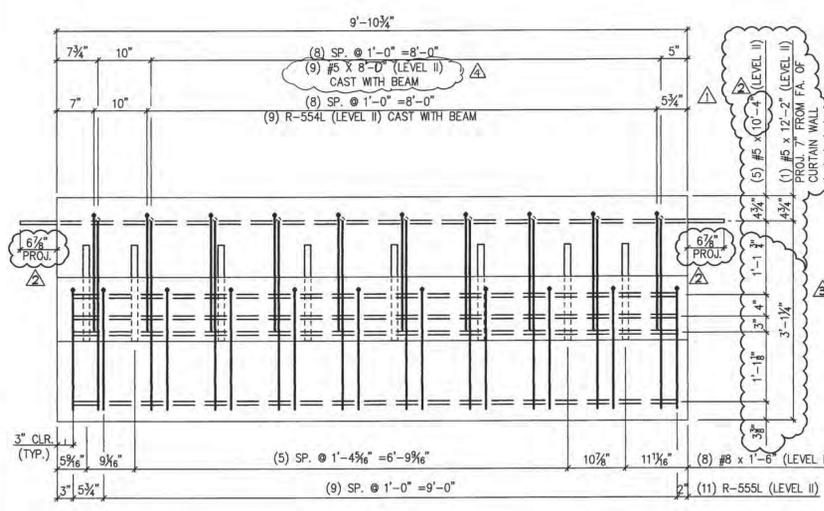
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NB4 3/4" = 1'-0"



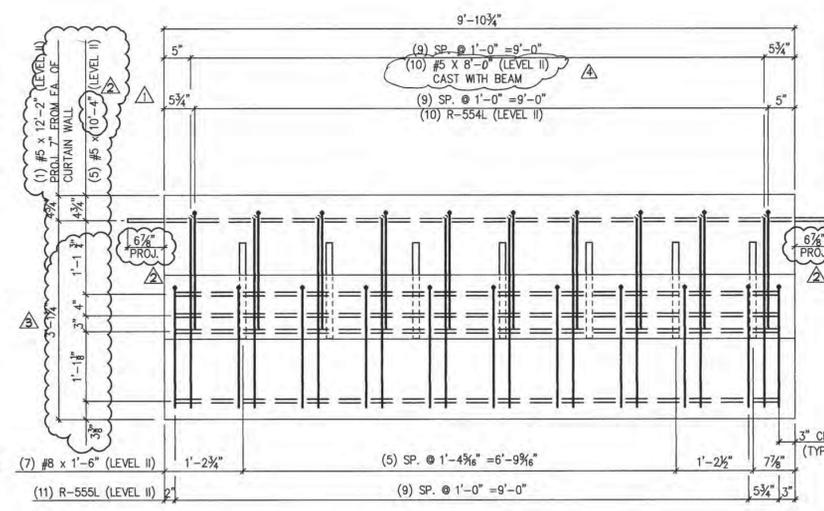
D REINFORCING CURTAIN WALL SECTION  
NB4 3/4" = 1'-0"



E REINFORCING CURTAIN WALL SECTION  
NB4 3/4" = 1'-0"



A REINFORCING CURTAIN WALL ELEVATION @ ABUT. #1  
NB2 3/4" = 1'-0"



B REINFORCING CURTAIN WALL ELEVATION @ ABUT. #1  
NB4 3/4" = 1'-0"

Vermont Agency of Transportation  
**RECEIVED**  
ON: June 18, 2014  
and Checked for  
**CONFORMANCE**  
BY: Jennifer Fitch DATE: 6/24/2014

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**VHB** Job Number: 57521  
Reviewed By: L. Chernycky  
Date: 6/25/14

REVISIONS:

- 4/10/14 REVISE BAR LENGTH
- 5/16/14 REVISE & RESUBMIT
- 4/30/14 REVISE & RESUBMIT
- 4/11/14 REVISE & RESUBMIT

APPROVAL: SUBMITTED JUN 18 2014 J.P. CARRARA & SONS, INC. MIDDLEBURY, VT 05753

MARK:	R-NB6	QTY.:	1	WT.:	0.6 T	VOL.:	5.22 cy
MATERIAL LIST / CURTAIN WALLS							
ITEM	MARK	DESCRIPTION					QTY.
1	R-554L	#5 BENT BAR (LEVEL II, DUAL COATED)					20
2	R-555L	#5 BENT BAR (LEVEL II, DUAL COATED)					22
3							
4							
5		#5 x 10'-4" (LEVEL II, DUAL COATED)					14
6		#5 x 12'-2" (LEVEL II, DUAL COATED)					2
7							
8		#5 x 1'-6" (LEVEL II, DUAL COATED)					15
9							
10		1" PLASTIC TUBE					2
11							
12							
13							
14							

APPROVAL STAMP:

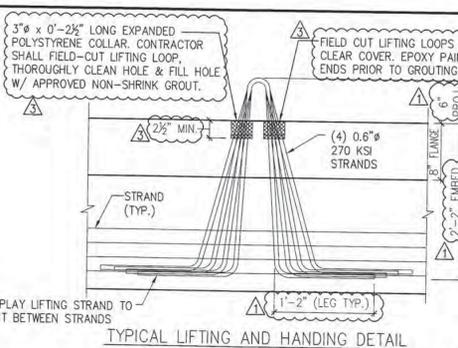
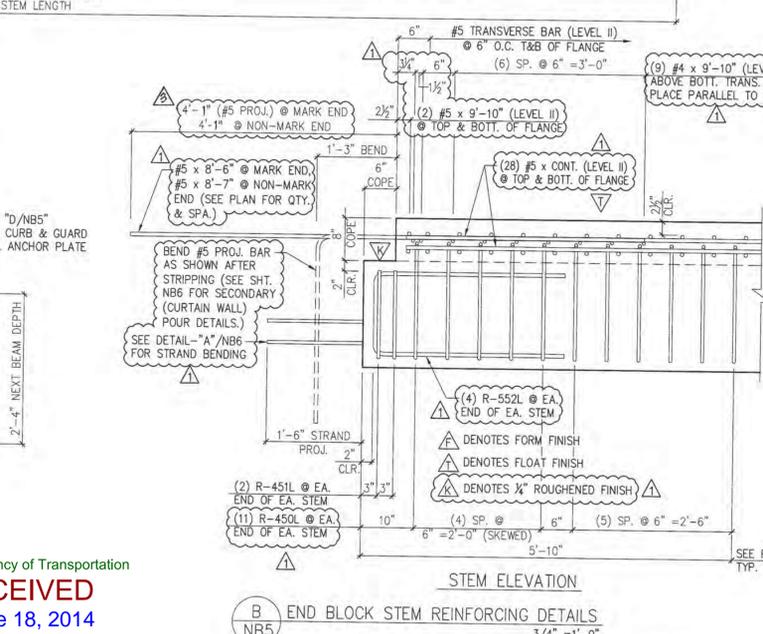
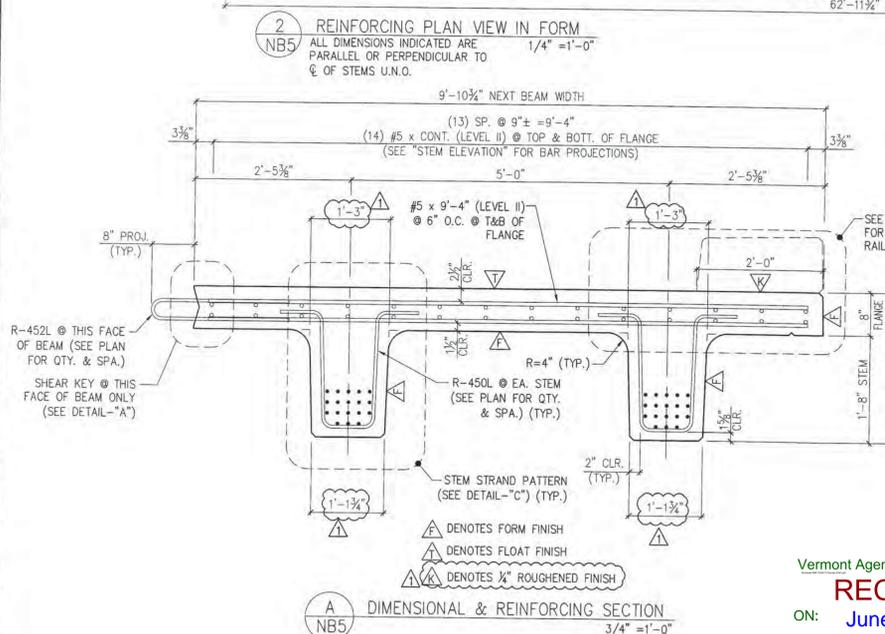
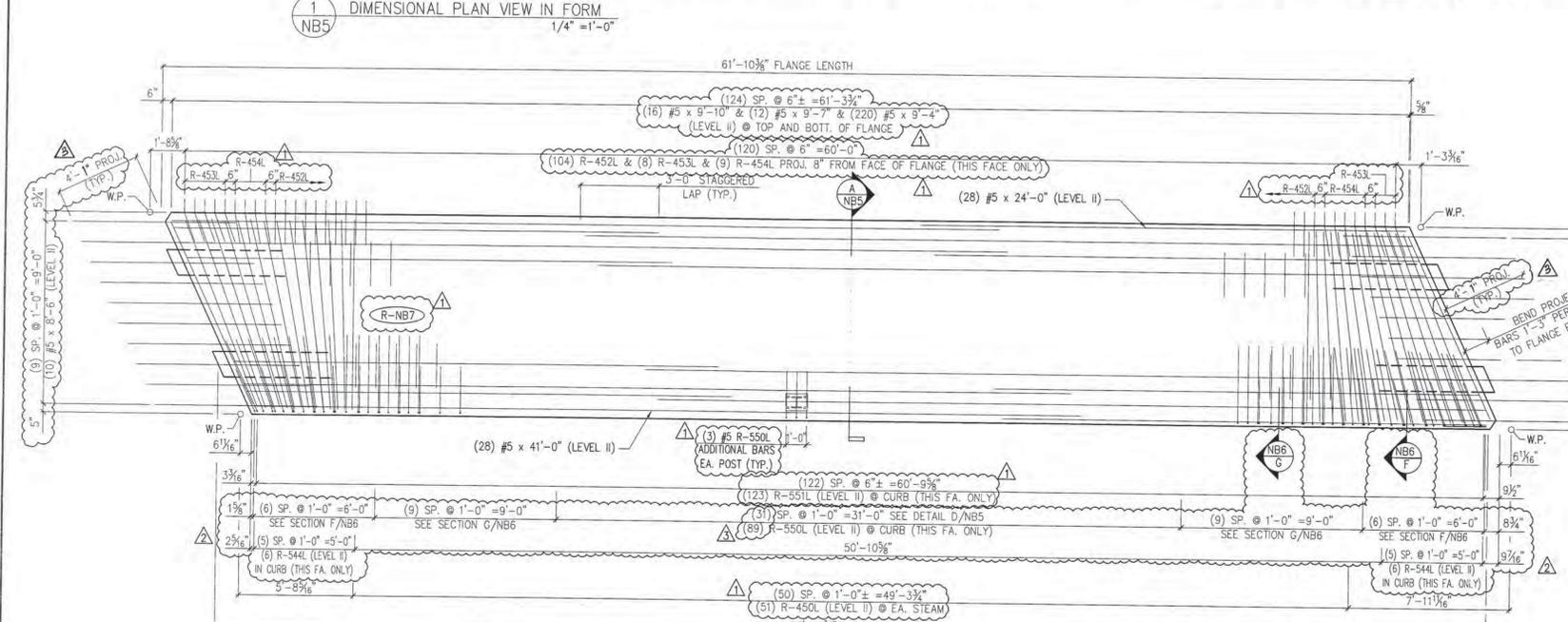
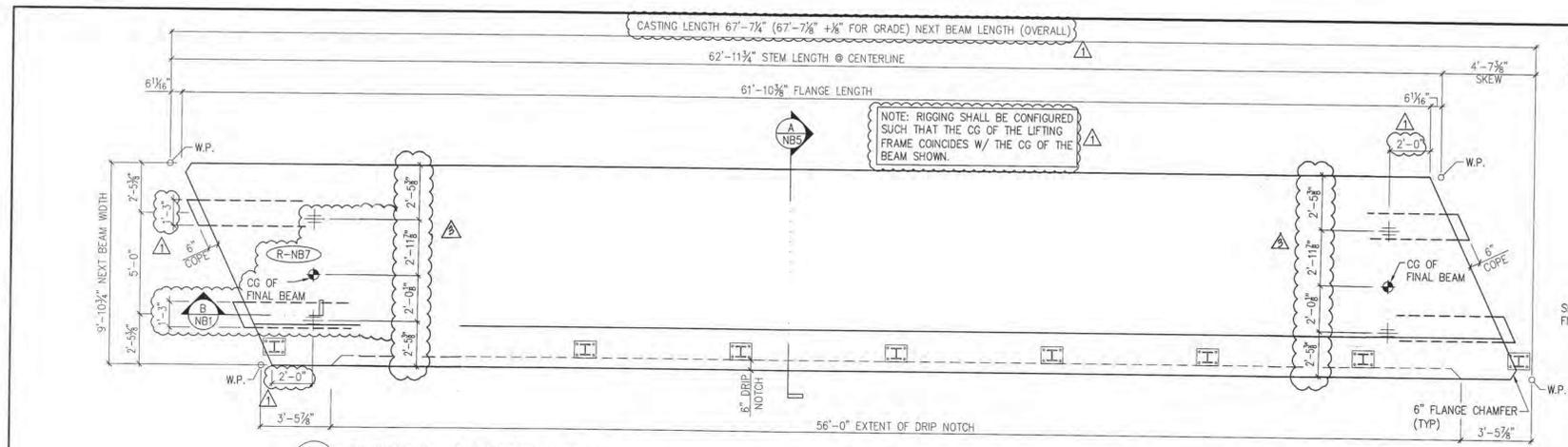
**J.P. CARRARA & SONS INC.** W.M. SCHULTZ CONSTRUCTION, INC.  
Precast & Prestress Manufacturer PO BOX 2620  
2846 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010 BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF WINDSOR DATE: MAR. 14, 2014  
SCALE: NOTED

TOWN OF ROCHESTER CHKD: DFTM: AAT/RMS  
VT ROUTE 73 (RURAL MAJOR COLLECTOR) PROJECT NO.: BRF 0162(17) JOB NO: 23419-013  
BRIDGE NO.: 16 DWG. NO: NB4

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S:\Engineering Services\Carrara\14002 Rochester BR 15 & 16\Production Drawings\AutoCAD Files\BR-15 - R-NB3.dwg, 5/21/2014, 4:25:38 PM



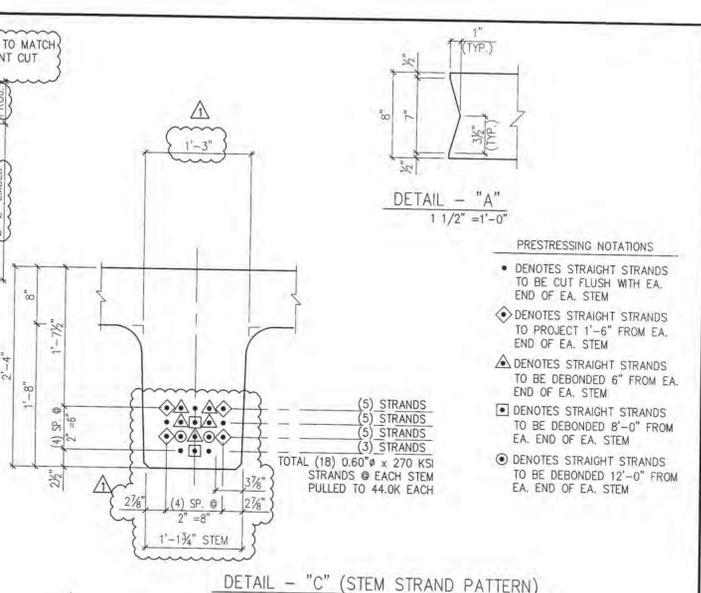
**SHOP DRAWING REVIEW**

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED:  REVISE AND RESUBMIT  FINISH AS CORRECTED

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**VHB** Job Number: 57527  
Reviewed By: L. Chervacka  
Date: 6/25/14



**DETENSIONING SCHEDULE**  
N.T.S.

7	15	39	10	4	2	8			
17	11	15	13	19	20	14	16	12	18
27	21	23	23	29	30	24	26	22	28
31	35	33	34	36	32				

**MATERIAL LIST / NEXT BEAM**

MARK:	R-NB7	QTY.:	1	WT.:	49.3 T	VOL.:	24.33 cy
TOTAL WITH CURTAIN WALLS & CURB -		WT.:	69.2 T	VOL.:	34.16 cy		

ITEM	MARK	DESCRIPTION	QTY.
1	R-450L	#4 BENT BAR (LEVEL II, DUAL COATED)	146
2	R-451L	#4 BENT BAR (LEVEL II, DUAL COATED)	8
3	R-452L	#4 BENT BAR (LEVEL II, DUAL COATED)	104
4	R-453L	#4 BENT BAR (LEVEL II, DUAL COATED)	8
5	R-454L	#4 BENT BAR (LEVEL II, DUAL COATED)	9
6			
7	R-544L	#5 BENT BAR (LEVEL II, DUAL COATED)	18
8	R-550L	#5 BENT BAR (LEVEL II, DUAL COATED)	89
9	R-551L	#5 BENT BAR (LEVEL II, DUAL COATED)	123
10	R-552L	#5 BENT BAR (LEVEL II, DUAL COATED)	16
11			
12		#4 x 9'-10" (LEVEL II, DUAL COATED)	18
13			
14			
15		#5 x 8'-6" (LEVEL II, DUAL COATED)	10
16		#5 x 8'-7" (LEVEL II, DUAL COATED)	10
17		#5 x 9'-4" (LEVEL II, DUAL COATED)	220
18		#5 x 9'-7" (LEVEL II, DUAL COATED)	12
19		#5 x 9'-10" (LEVEL II, DUAL COATED)	20
20		#5 x 24'-0" (LEVEL II, DUAL COATED)	28
21		#5 x 26'-0" (LEVEL II, DUAL COATED)	3
22		#5 x 40'-0" (LEVEL II, DUAL COATED)	3
23		#5 x 41'-0" (LEVEL II, DUAL COATED)	28
24			
25		SET OF (4) 0.60" $\phi$ x 270 KSI STRAND LIFTING LOOPS	4

APPROVAL STAMP:

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

**W.M. SCHULTZ CONSTRUCTION, INC.**  
PO BOX 2620  
BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION  
COUNTY OF WINDSOR

TOWN OF ROCHESTER  
VT ROUTE 73 (RURAL MAJOR COLLECTOR)  
BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)

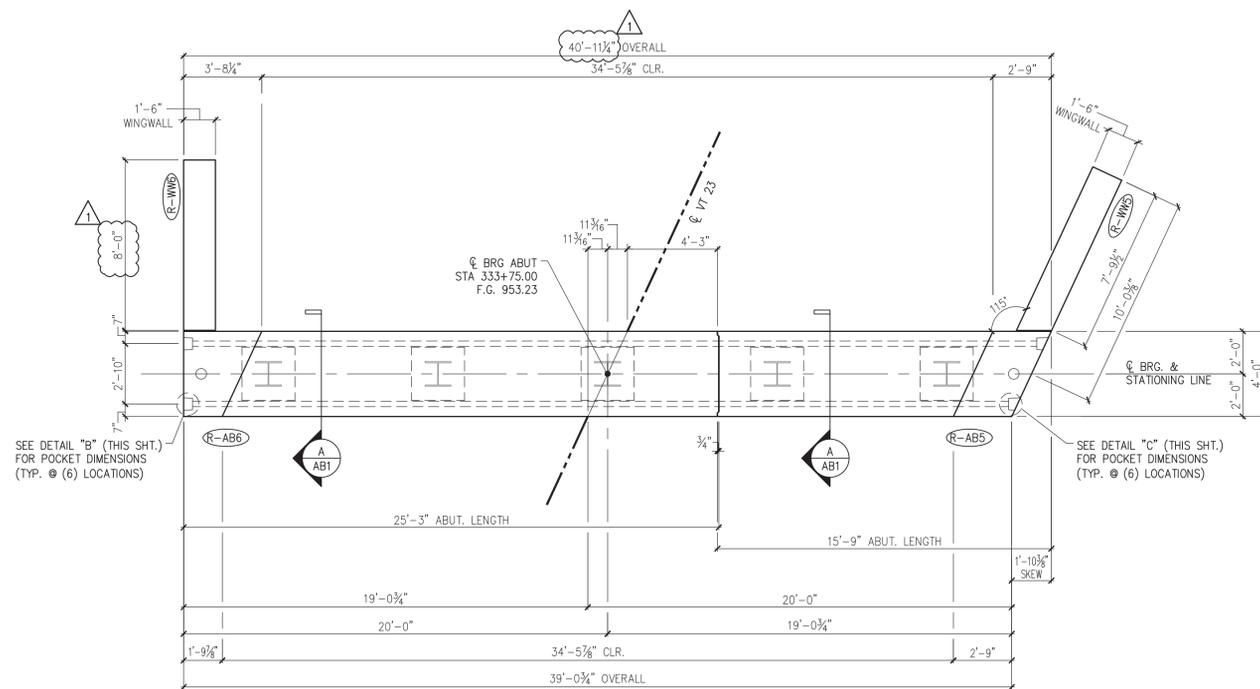
DATE: MAR. 14, 2014  
SCALE: NOTED  
CHKD: DFTM/AAT/RWS  
JOB NO: 23419-013  
DWG. NO: NB5

Vermont Agency of Transportation  
**RECEIVED**  
ON: June 18, 2014  
and Checked for  
**CONFORMANCE**  
BY: Jennifer Fitch DATE: 6/24/2014

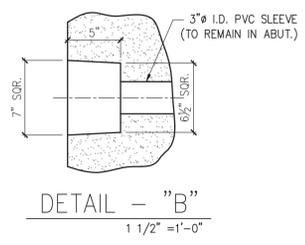
**Eriksson technologies**  
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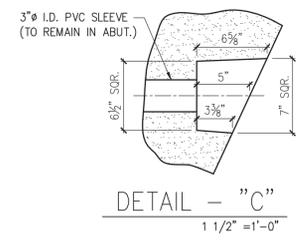
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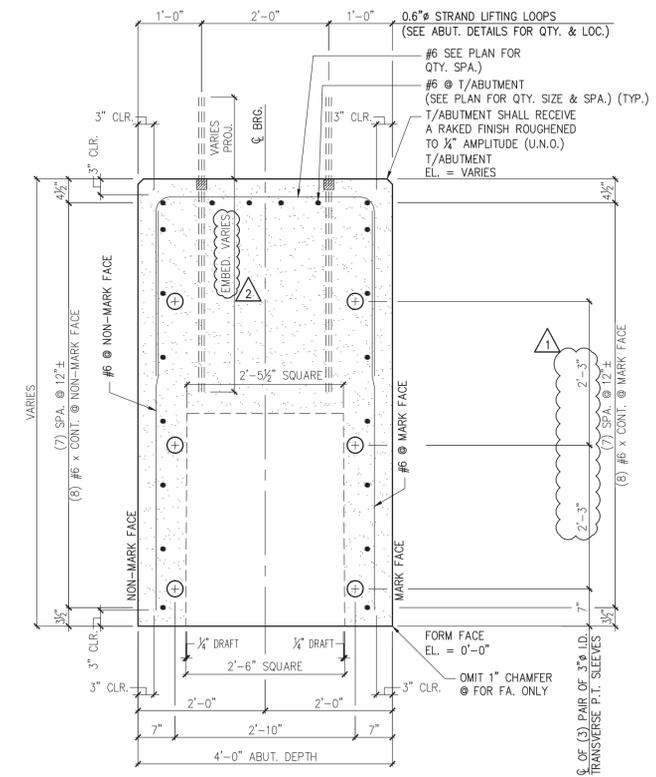
1 ABUTMENT 1 ASSEMBLY PLAN  
1/4" = 1'-0"



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

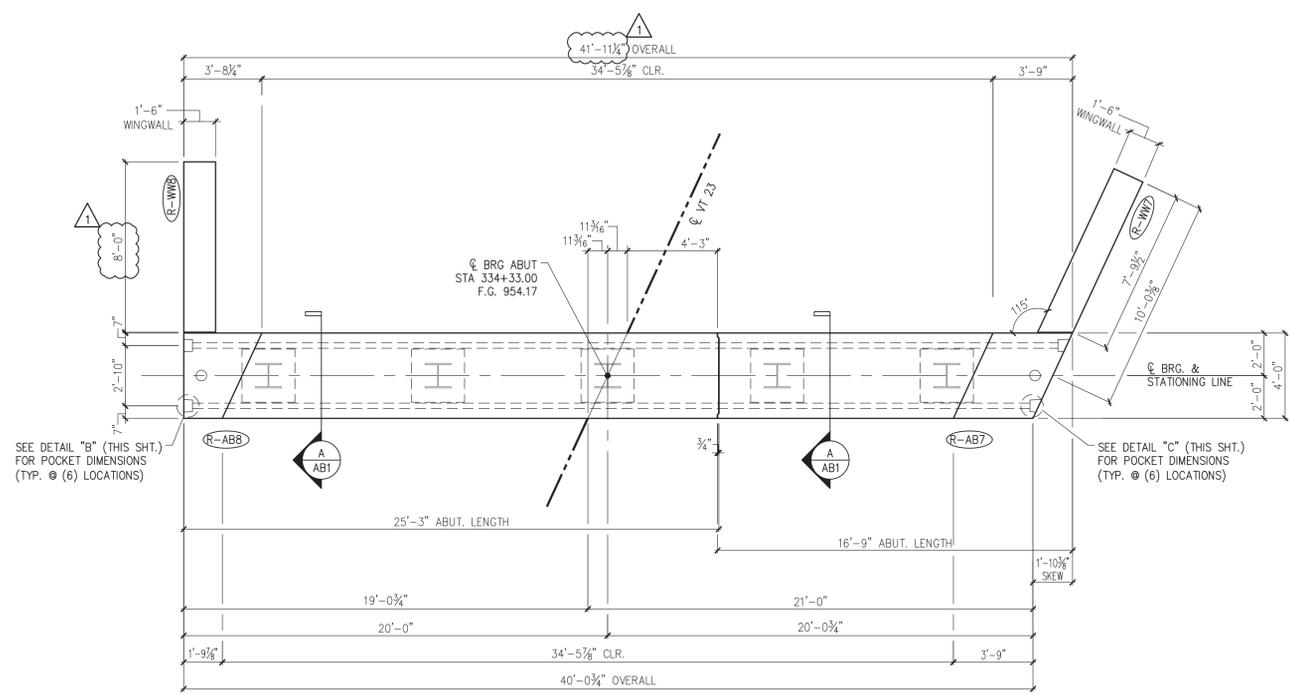


DETAIL - "C"  
1 1/2" = 1'-0"



A ABUTMENT SECTION  
3/4" = 1'-0"

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



2 ABUTMENT 2 ASSEMBLY PLAN  
1/4" = 1'-0"

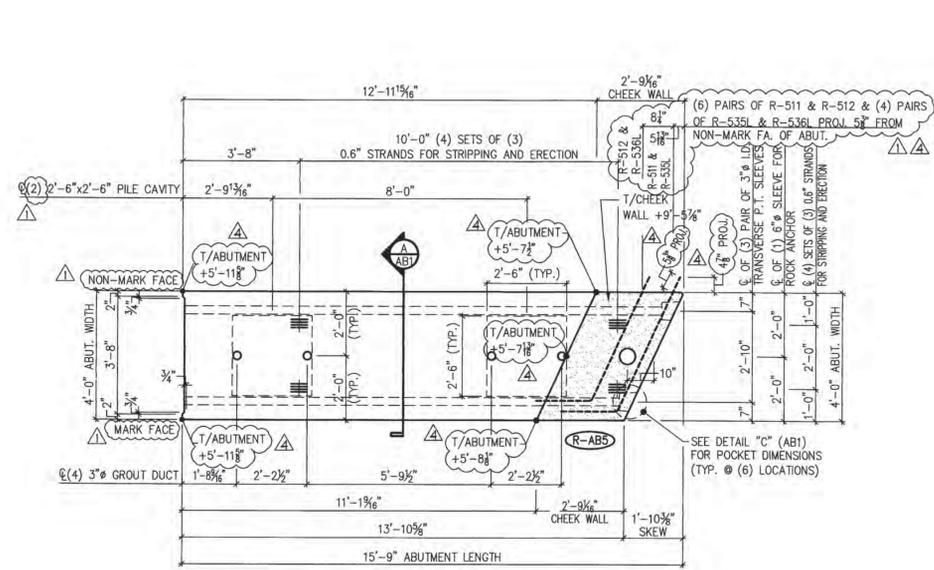
Vermont Agency of Transportation  
**RECEIVED**  
ON: June 18, 2014  
and Checked for  
**CONFORMANCE**  
BY: Jennifer Fitch DATE: 6/24/2014

SHOP DRAWING REVIEW	
<input type="checkbox"/> REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.	<input type="checkbox"/> FURNISH AS CORRECTED
<input type="checkbox"/> REJECTED	<input checked="" type="checkbox"/> REVISE AND RESUBMIT
CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.	
<b>VHB</b>	Job Number: 97927 Reviewed By: L. Chervinsky Date: 6-25-14
SUBMITTED JUN 18 2014 J. P. CARRARA & SONS, INC. MIDDLEBURY, VT 05753	

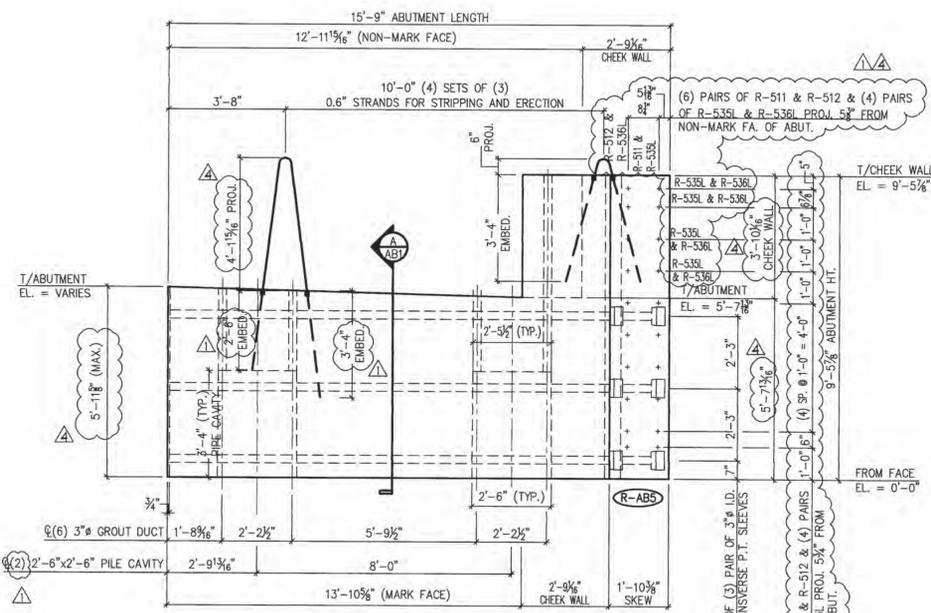
4/30/14 REVISE & RESUBMIT  
4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:	<b>J.P. CARRARA &amp; SONS INC.</b> Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010	<b>W.M. SCHULTZ CONSTRUCTION, INC.</b> PO BOX 2620 BALLSTON SPA, NY 12020
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF WINDSOR	DATE: MAR. 14, 2014 SCALE: NOTED	CHKD: DFTM/AAT/RWS JJ/KLT JOB NO: 23419-013
TOWN OF ROCHESTER VT ROUTE 73 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)	PRECAST ABUTMENT PLAN, SECTION & DETAILS	
DWG. NO: AB1		

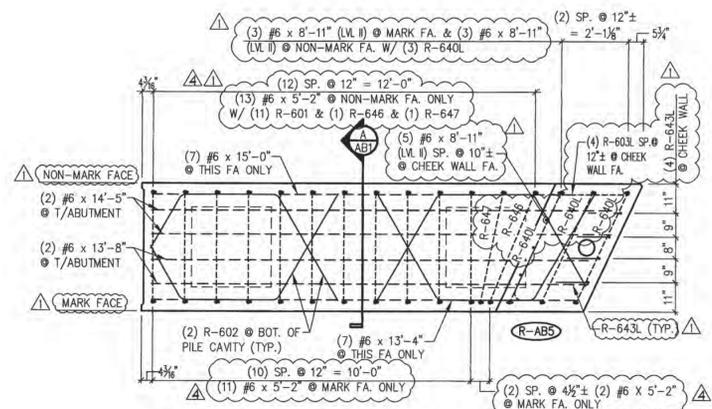
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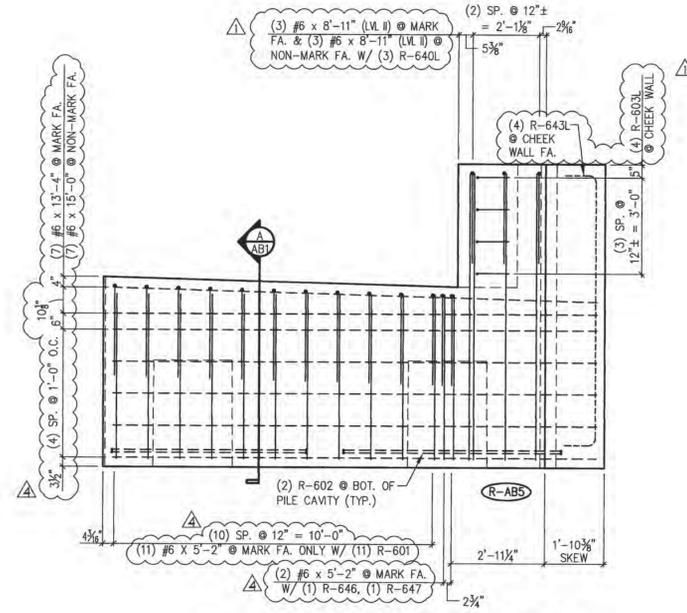
1 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM  
3/8" = 1'-0"



2 ABUTMENT DIMENSIONAL MARK FACE ELEV.  
3/8" = 1'-0"



3 ABUTMENT REINFORCING PLAN VIEW IN FORM  
3/8" = 1'-0"



4 ABUTMENT REINFORCING MARK FACE ELEV.  
3/8" = 1'-0"

Vermont Agency of Transportation  
**RECEIVED**  
ON: June 18, 2014  
and Checked for  
**CONFORMANCE**  
BY: Jennifer Fitch DATE: 6/24/2014

**SHOP DRAWING REVIEW**

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REVISION AND RESUBMIT  FURNISH AS CORRECTED

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**VHB** Job Number: 57527  
Reviewed By: L. Chernivsky  
Date: 6-25-14

SUBMITTED  
JUN 18 2014  
J.P. CARRARA & SONS, INC.  
MIDDLEBURY, VT 05753

MARK:	R-ABS	QTY.:	1	WT.:	26.3 T	VOL.:	12.99 cy
ITEM	MARK	MATERIAL LIST / ABUTMENT				QTY.	
1	R-511	#5 BENT BAR (LEVEL I - BLACK REINFORCEMENT)				6	
2	R-512	#5 BENT BAR (LEVEL I - BLACK REINFORCEMENT)				6	
3	R-535L	#5 BENT BAR (LEVEL II - DUAL COATED)				4	
4	R-536L	#5 BENT BAR (LEVEL II - DUAL COATED)				4	
5							
6	R-601	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)				11	
7	R-602	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)				4	
8	R-603L	#6 BENT BAR (LEVEL II - DUAL COATED)				4	
9	R-640L	#6 BENT BAR (LEVEL II - DUAL COATED)				3	
10	R-643L	#6 BENT BAR (LEVEL II - DUAL COATED)				4	
11	R-645	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)				3	
12	R-646	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)				1	
13	R-647	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)				1	
14							
15							
16		#6 x 5'-2" (LEVEL I - BLACK REINFORCEMENT)				26	
17		#6 x 8'-11" (LEVEL II - DUAL COATED)				11	
18		#6 x 13'-4" (LEVEL I - BLACK REINFORCEMENT)				7	
19		#6 x 15'-0" (LEVEL I - BLACK REINFORCEMENT)				2	
20		#6 x 14'-5" (LEVEL I - BLACK REINFORCEMENT)				2	
21		#6 x 15'-0" (LEVEL I - BLACK REINFORCEMENT)				7	
22							
23		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS				3	

- △ 6/18/14 REVISED AS NOTED
- △ 5/16/14 REVISE & RESUBMIT
- △ 4/30/14 REVISE & RESUBMIT
- △ 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

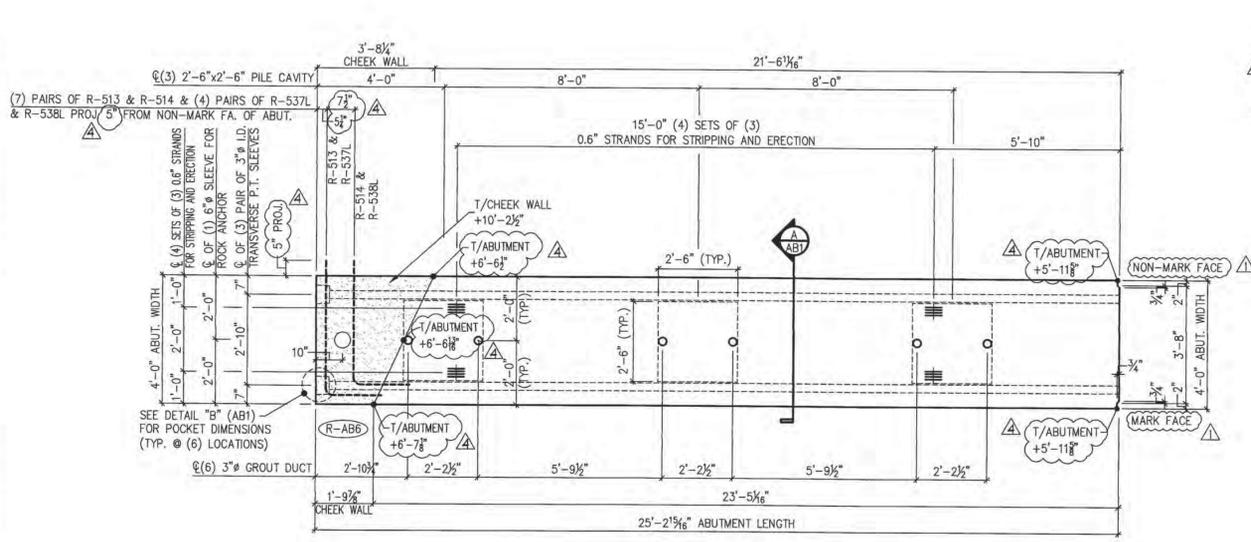
**J.P. CARRARA & SONS INC.** W.M. SCHULTZ CONSTRUCTION, INC.  
Precast & Prestress Manufacturer P.O. BOX 2620  
2444 CASE ST., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010 BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF WINDSOR DATE: MAR. 14, 2014  
SCALE: NOTED

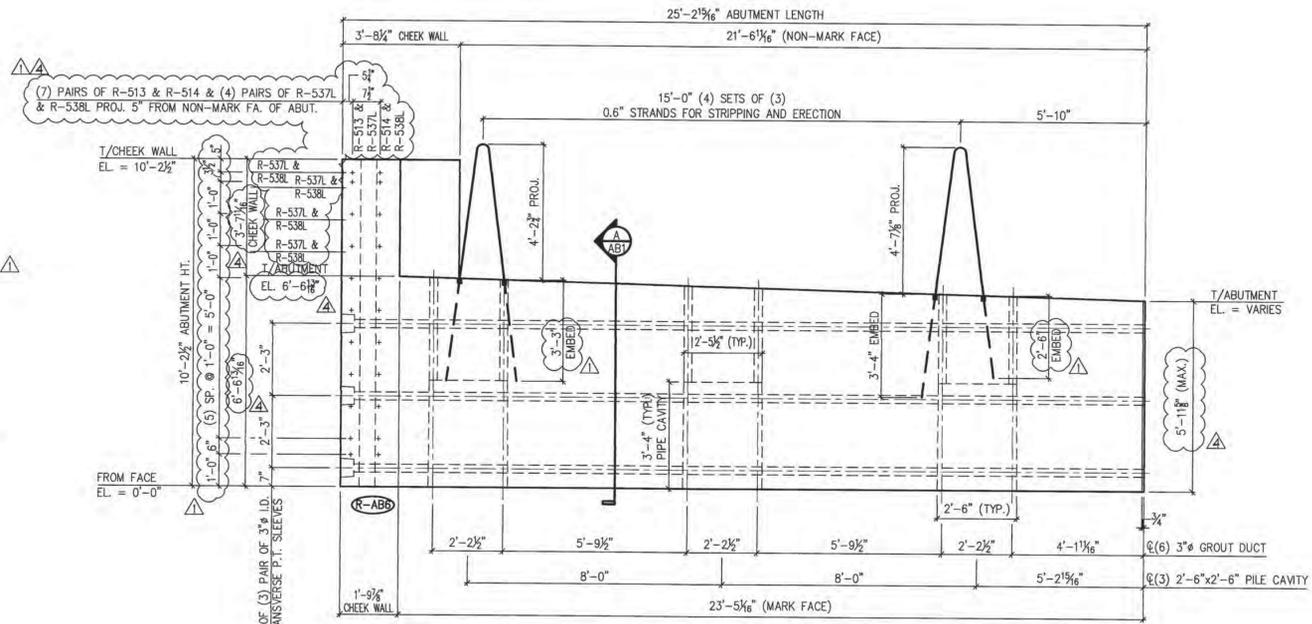
TOWN OF ROCHESTER VT ROUTE 73 (RURAL MAJOR COLLECTOR) CHKD: DFTM: AAT/RWS  
BRIDGE NO.: 16 PROJECT NO.: BRF 0162(17) JOB NO: 23419-013

PRECAST ABUTMENT DETAILS DWG. NO: AB2

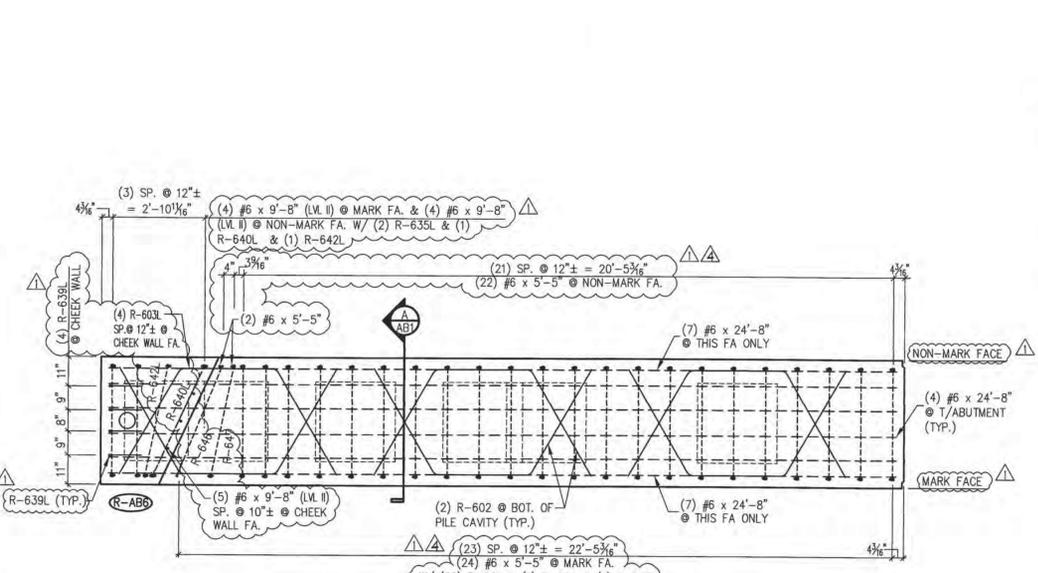
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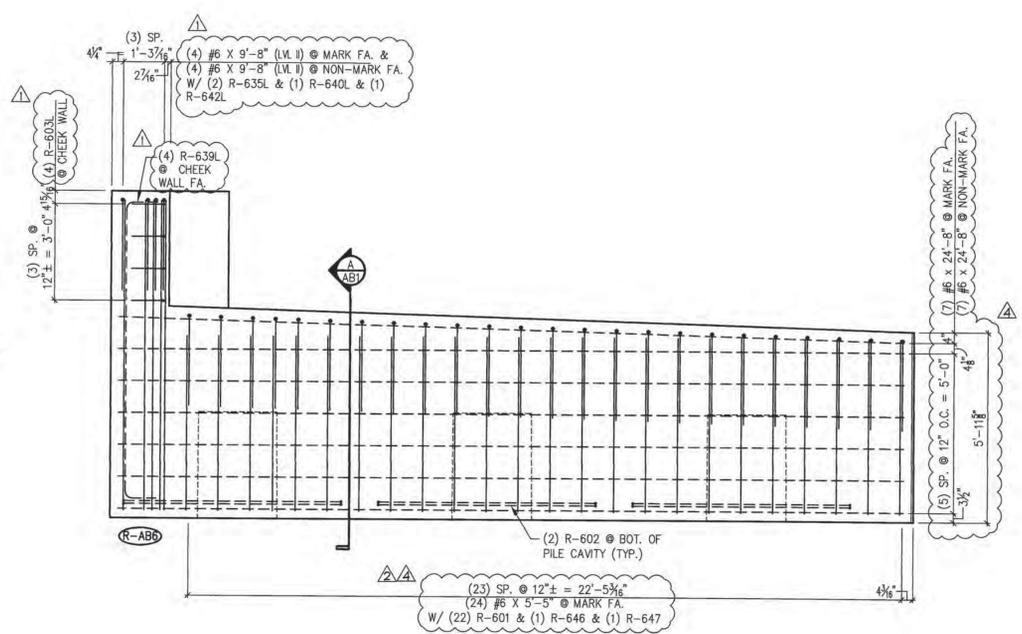
1 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM  
3/8" = 1'-0"



2 ABUTMENT DIMENSIONAL MARK FACE ELEV.  
3/8" = 1'-0"



3 ABUTMENT REINFORCING PLAN VIEW IN FORM  
3/8" = 1'-0"



4 ABUTMENT REINFORCING MARK FACE ELEV.  
3/8" = 1'-0"

**SHOP DRAWING REVIEW**

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**VHB** Job Number: 57827  
Reviewed By: L. Chernivsky  
Date: 6-25-14

Submitted: JUN 18 2014  
CARRARA & SONS, INC. MIDDLEBURY, VT 05753

MARK:	R-AB6	QTY.:	1	WT.:	46.8 T	VOL.:	21.10 cy
MATERIAL LIST / ABUTMENT							
ITEM	MARK	DESCRIPTION	QTY.				
1	R-513	#5 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	7				
2	R-514	#5 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	7				
3	R-537L	#5 BENT BAR (LEVEL II - DUAL COATED)	3				
4	R-538L	#5 BENT BAR (LEVEL II - DUAL COATED)	4				
5							
6	R-601	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	24				
7	R-602	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	6				
8	R-646	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	1				
9	R-635L	#6 BENT BAR (LEVEL II - DUAL COATED)	4				
10	R-635L	#6 BENT BAR (LEVEL II - DUAL COATED)	2				
11	R-639L	#6 BENT BAR (LEVEL II - DUAL COATED)	4				
12	R-640L	#6 BENT BAR (LEVEL II - DUAL COATED)	1				
13	R-642L	#6 BENT BAR (LEVEL II - DUAL COATED)	1				
14	R-645	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	1				
15	R-646	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	1				
16	R-647	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	1				
17							
18							
19		#6 x 5'-5" (LEVEL I - BLACK REINFORCEMENT)	48				
20		#6 x 9'-8" (LEVEL II - DUAL COATED)	13				
21		#6 x 24'-8" (LEVEL I - BLACK REINFORCEMENT)	18				
22							
23		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	4				

Vermont Agency of Transportation  
**RECEIVED**  
ON: June 18, 2014  
and Checked for  
**CONFIRMANCE**  
BY: Jennifer Fitch DATE: 6/24/2014

**Eriksson** technologies  
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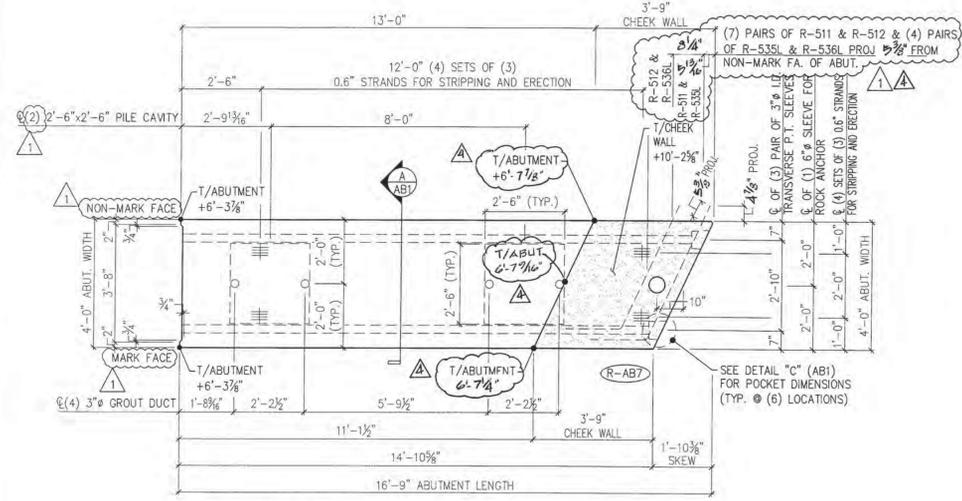
**J.P. CARRARA & SONS INC.** W.M. SCHULTZ CONSTRUCTION, INC.  
Precast & Prestress Manufacturer PO BOX 2620  
2664 OKE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010 BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF WINDSOR DATE: MAR. 14, 2014  
SCALE: NOTED

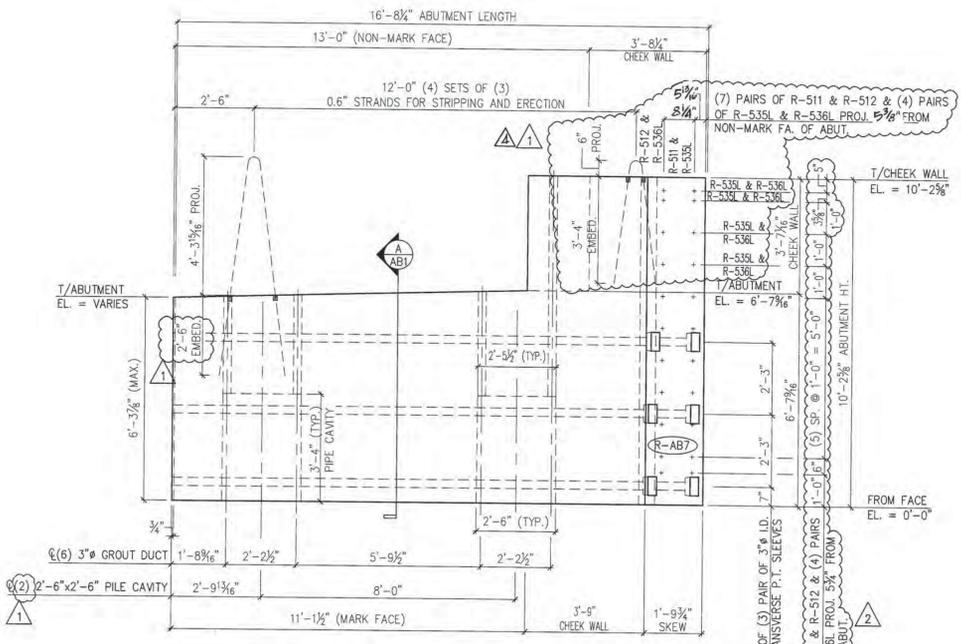
TOWN OF ROCHESTER VT ROUTE 73 (RURAL MAJOR COLLECTOR) CHKD: DFTM, AAT/RWS, JJ/KLT  
BRIDGE NO.: 16 PROJECT NO.: BRF 0162(17) JOB NO: 23419-013

PRECAST ABUTMENT DETAILS DWG. NO: AB3

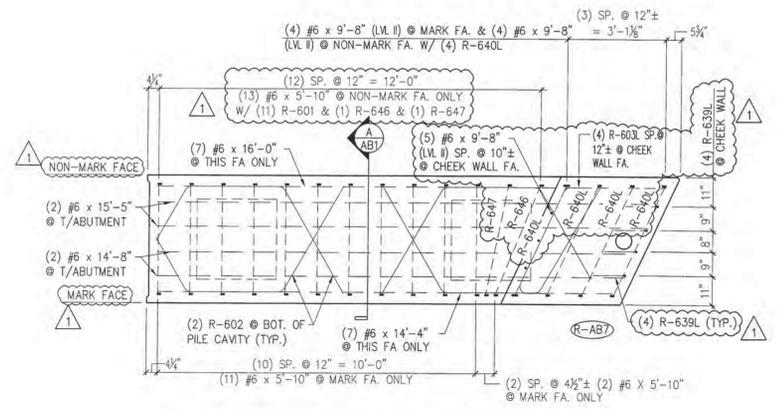
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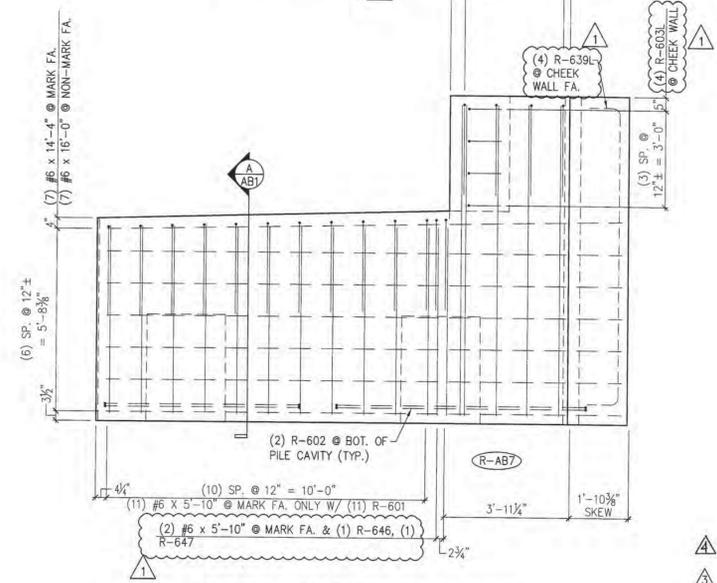
1 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM  
3/8" = 1'-0"



2 ABUTMENT DIMENSIONAL MARK FACE ELEV.  
3/8" = 1'-0"



3 ABUTMENT REINFORCING PLAN VIEW IN FORM  
3/8" = 1'-0"



4 ABUTMENT REINFORCING MARK FACE ELEV.  
3/8" = 1'-0"

**SHOP DRAWING REVIEW**

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE PROJECT, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED  REVISE AND RESUBMIT  FURNISH AS CORRECTED

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Job Number: 37927  
 Reviewed By: L. Chernyck  
 Date: 6-23-14

SUBMITTED  
JUN 18 2014  
J.P. CARRARA & SONS, INC.  
MIDDLEBURY, VT 05753

MARK: R-AB7 QTY.: 1 WT.: 31.7 T VOL.: 15.65 cy

**MATERIAL LIST / ABUTMENT**

ITEM	MARK	DESCRIPTION	QTY.
1	R-511	#5 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	7
2	R-512	#5 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	7
3	R-535L	#5 BENT BAR (LEVEL II - DUAL COATED)	4
4	R-536L	#5 BENT BAR (LEVEL II - DUAL COATED)	4
5			
6	R-601	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	11
7	R-602	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	4
8	R-603L	#6 BENT BAR (LEVEL II - DUAL COATED)	4
9	R-639L	#6 BENT BAR (LEVEL II - DUAL COATED)	4
10	R-640L	#6 BENT BAR (LEVEL II - DUAL COATED)	4
11	R-645	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	4
12	R-646	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	1
13	R-647	#6 BENT BAR (LEVEL I - BLACK REINFORCEMENT)	1
14			
15		#6 x 5'-10" (LEVEL I - BLACK REINFORCEMENT)	26
16		#6 x 9'-8" (LEVEL II - DUAL COATED)	13
17		#6 x 14'-4" (LEVEL I - BLACK REINFORCEMENT)	7
18		#6 x 14'-8" (LEVEL I - BLACK REINFORCEMENT)	2
19		#6 x 15'-5" (LEVEL I - BLACK REINFORCEMENT)	2
20		#6 x 16'-0" (LEVEL I - BLACK REINFORCEMENT)	7

- △ 6/18/14 REVISE & RESUBMIT
- △ 5/16/14 REVISE & RESUBMIT
- △ 4/30/14 REVISE & RESUBMIT
- △ 4/11/14 REVISE & RESUBMIT

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 PO BOX 2620  
 BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION  
 COUNTY OF WINDSOR

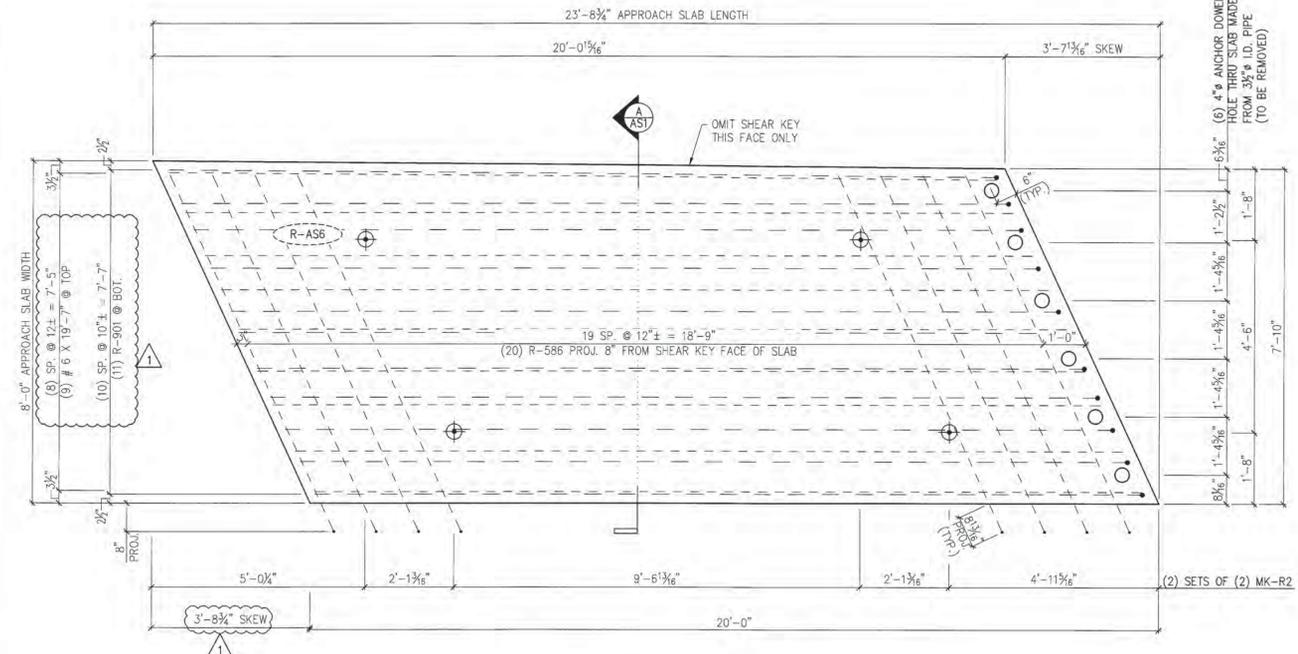
TOWN OF ROCHESTER  
 VT ROUTE 73 (RURAL MAJOR COLLECTOR)  
 BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)

DATE: MAR. 14, 2014  
 SCALE: NOTED  
 CHKD: DFTM, AAT/RWS  
 JJJ/KLT  
 JOB NO: 23419-013  
 DWG. NO: AB4

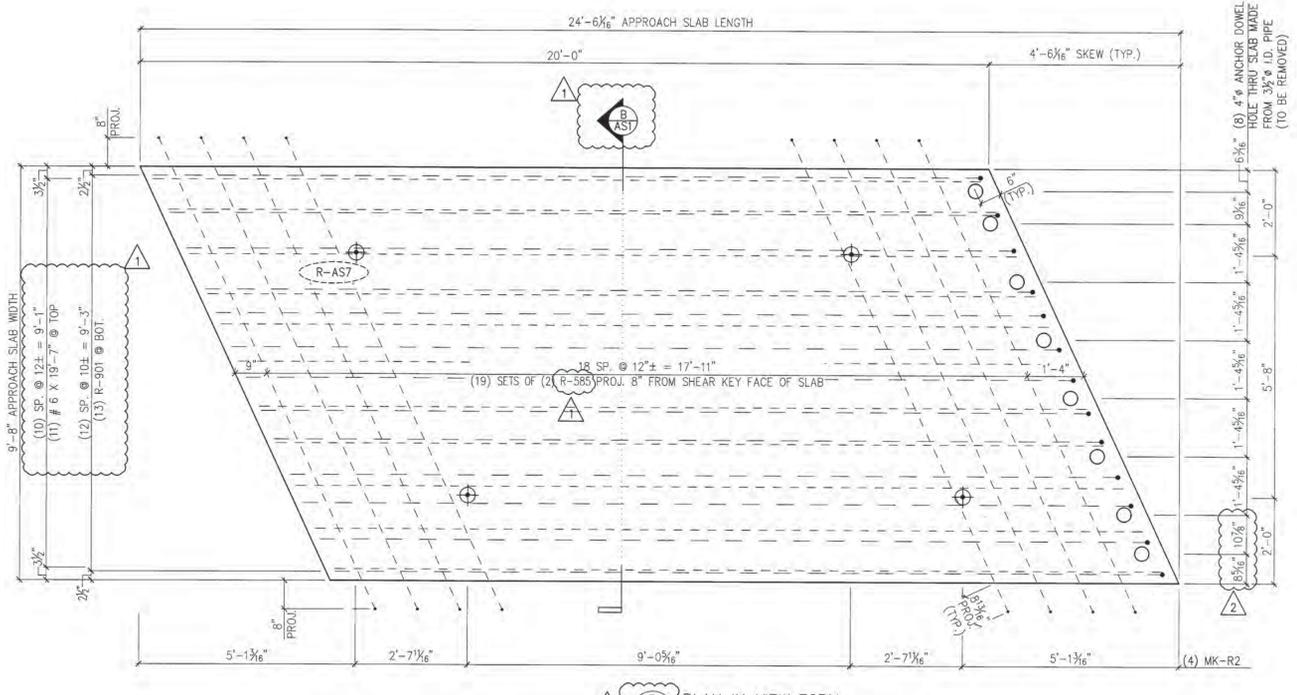
**PRECAST ABUTMENT DETAILS**



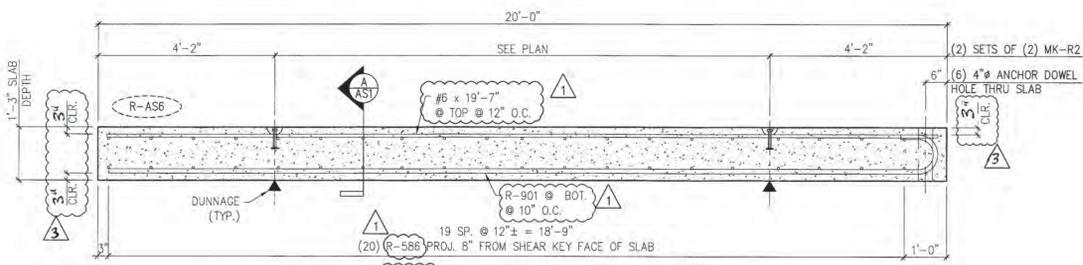
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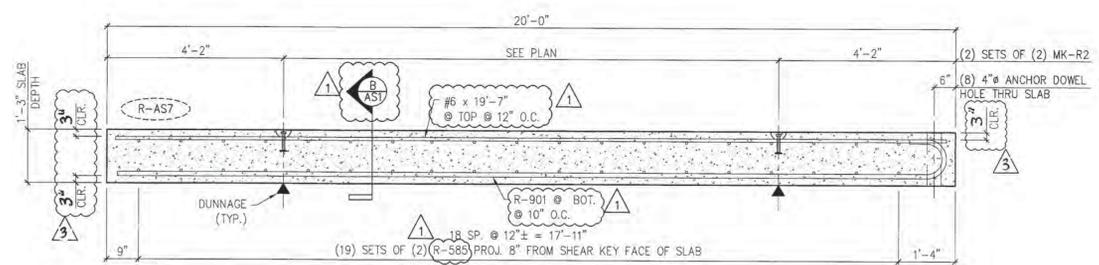
1 PLAN IN VIEW FORM  
AS1  
1/2" = 1'-0"



3 PLAN IN VIEW FORM  
AS1  
1/2" = 1'-0"

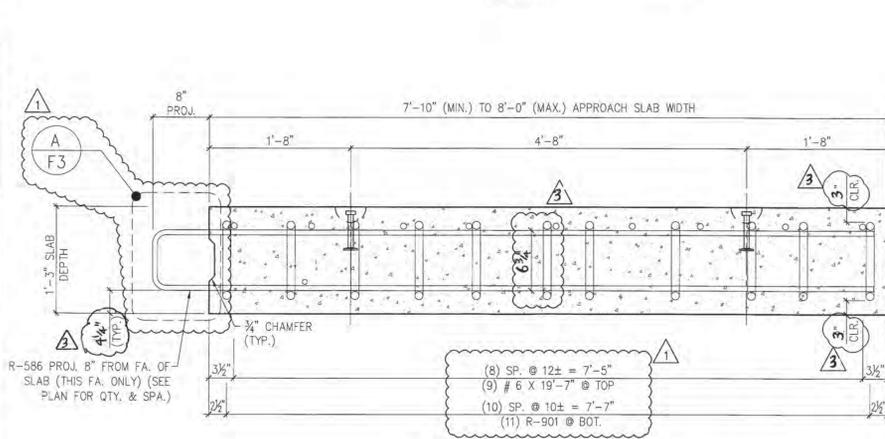


2 LONGITUDIAL SECTION  
AS1  
1/2" = 1'-0"

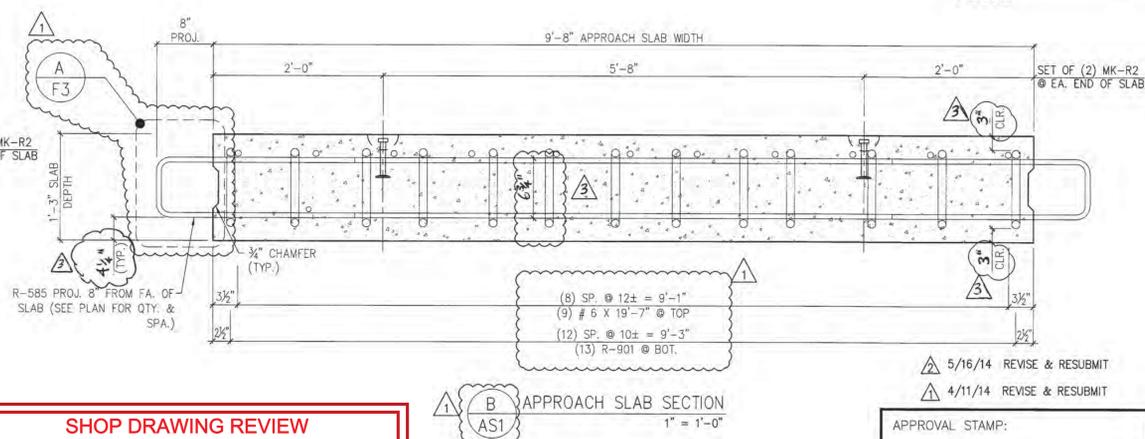


4 LONGITUDIAL SECTION  
AS1  
1/2" = 1'-0"

NOTE: FABRICATOR SHALL ROTATE THE #9 BARS TO PROVIDE THE REQUIRED 3" CLEARANCE



A APPROACH SLAB SECTION  
AS1  
1" = 1'-0"



B APPROACH SLAB SECTION  
AS1  
1" = 1'-0"

**SHOP DRAWING REVIEW**

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

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**VHB** Job Number: 57527  
Reviewed By: L. Chervinsky  
Date: 6-23-14

5/16/14 REVISE & RESUBMIT  
4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

6/16/14 REVISE REV #  
5/27/14 REVISE & RESUBMIT

MARK: R-AS6 QTY.: 1 WT.: 14.9 T VOL.: 7.33 cy  
MARK: R-AS7 QTY.: 1 WT.: 18.2 T VOL.: 8.95 cy

**MATERIAL LIST / APPROACH SLAB**

ITEM	MARK	DESCRIPTION	QTY. / WING WALL	
			R-AS6	R-AS7
1	R-585	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	0	38
2	R-586	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	20	0
3				
4		#6 X 19'-7" (LEVEL I, BLACK REINFORCEMENT)	9	9
5				
6	R-901	#9 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	11	13
7				
8	MK-R2	8T X 10" SWIFT LIFT LIFTER	4	4

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Precast & Prestress Manufacturer  
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PO BOX 2620 BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION  
COUNTY OF WINDSOR

TOWN OF ROCHESTER  
VT ROUTE 73 (RURAL MAJOR COLLECTOR)  
BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)

DATE: MAR. 14, 2014  
SCALE: NOTED  
CHKD: DFTM: AAT/RWS JJJ/KLT  
JOB NO: 23419-013  
DWG. NO: AS1

**PRECAST APPROACH SLAB DETAILS**

Vermont Agency of Transportation  
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BY: Jennifer Fitch DATE: 6/24/2014

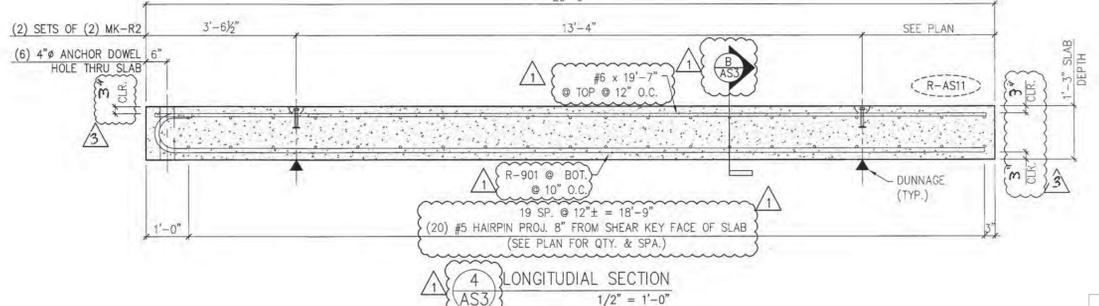
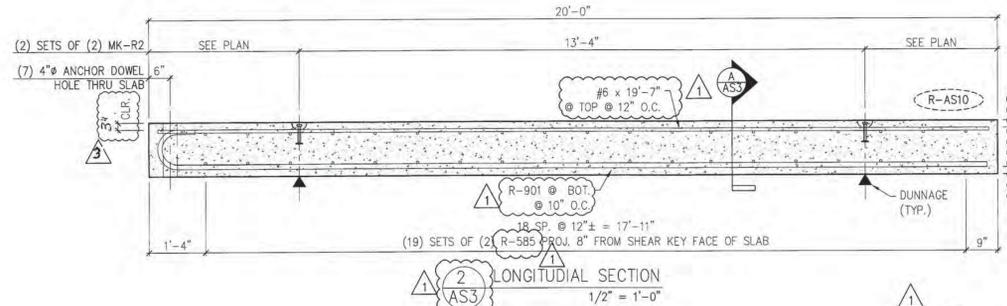
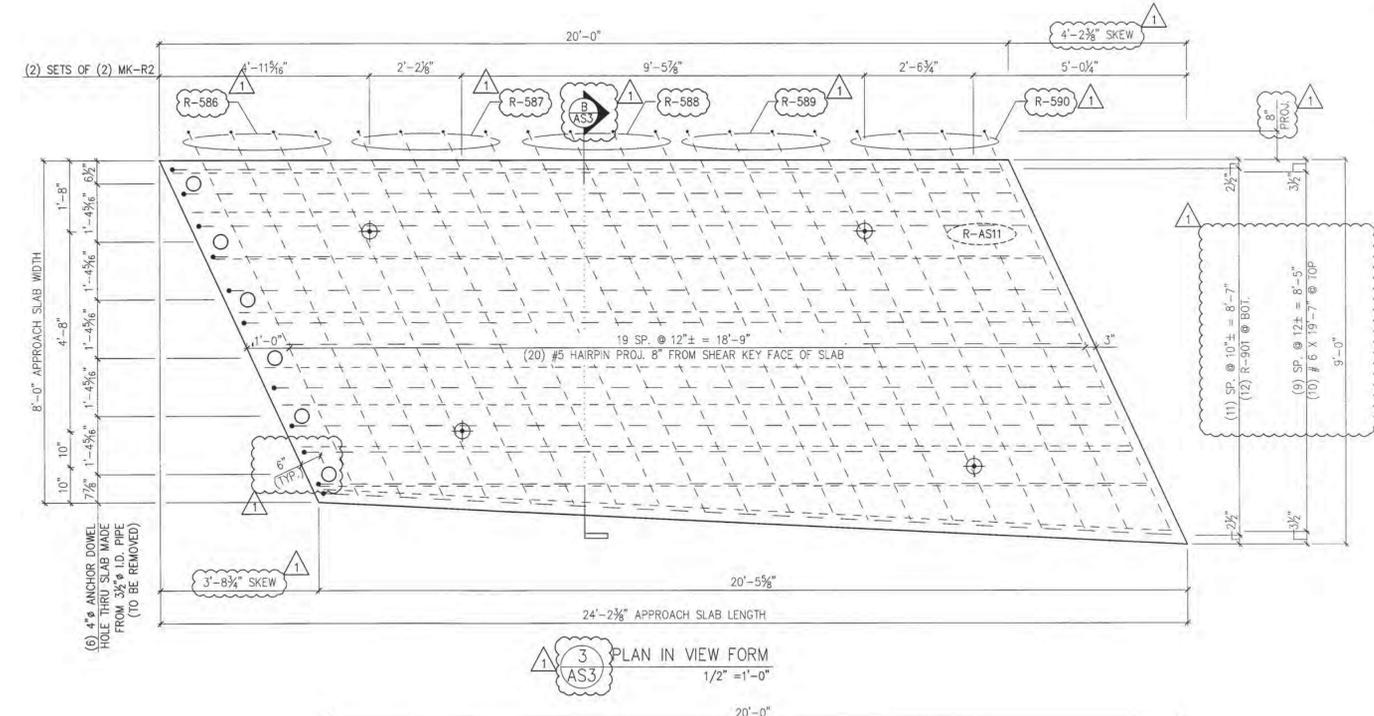
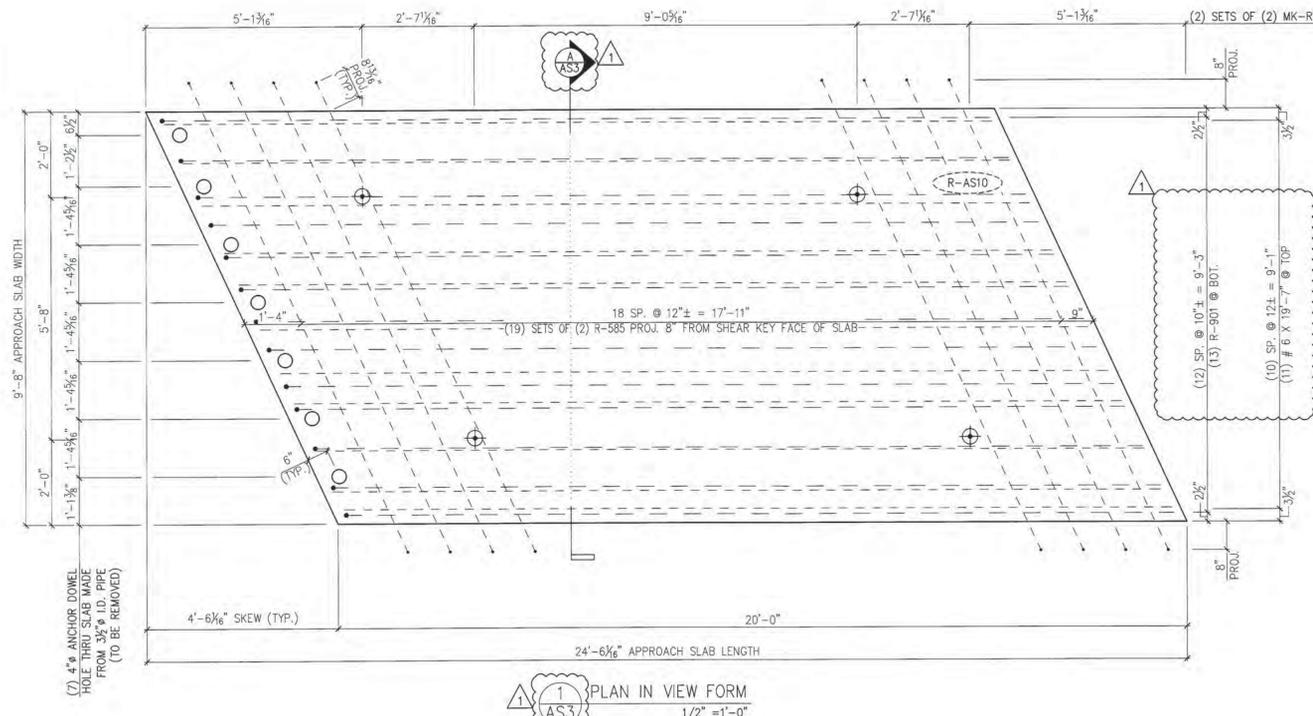
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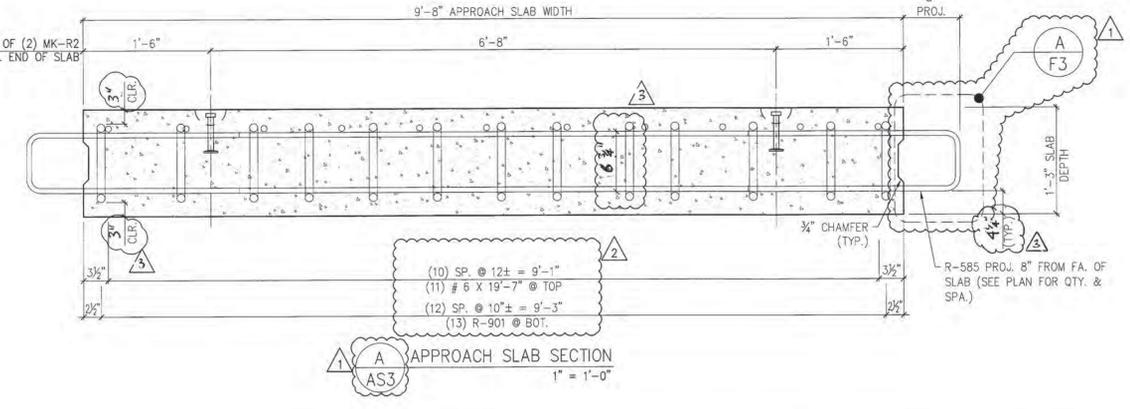
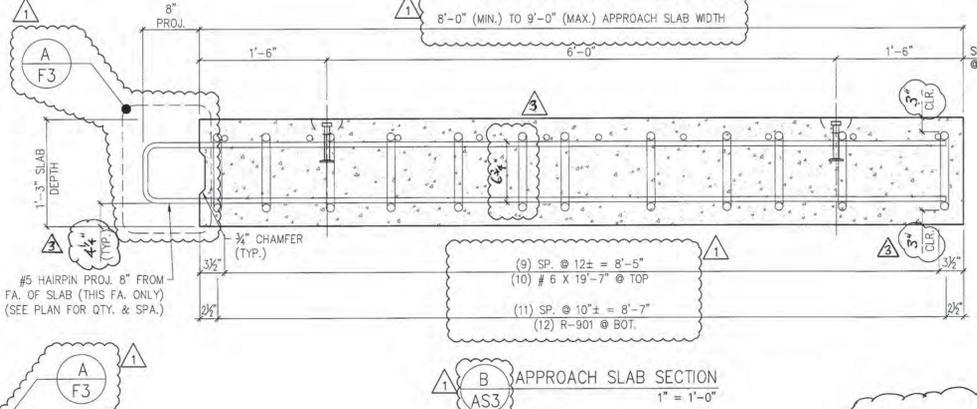


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 ON: **June 18, 2014**  
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 BY: Jennifer Fitch DATE: 6/24/2014



NOTE: FABRICATOR SHALL ROTATE THE #9 BARS TO PROVIDE THE REQUIRED 3" CLEARANCE



**SHOP DRAWING REVIEW**

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Job Number: 91927  
 Reviewed By: L. Chavirsky  
 Date: 6-27-14

6/16/14 REVISE & RESUBMIT  
 4/30/14 REVISE & RESUBMIT  
 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

MARK	QTY.	WT.	VOL.
R-AS10	1	18.2 T	8.95 cy
R-AS11	1	16.0 T	7.87 cy

**MATERIAL LIST / APPROACH SLAB**

ITEM	MARK	DESCRIPTION	QTY./WING WALL	
			R-AS10	R-AS11
1	R-585	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	36	0
2	R-586	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	0	4
3	R-587	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	0	4
4	R-588	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	0	4
5	R-589	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	0	4
6	R-590	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	0	4
7				
8		#6 x 19'-7" (LEVEL I, BLACK REINFORCEMENT)	11	10
8	R-901	#9 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	13	12
8	MK-R2	8T x 10" SWIFT LIFT LIFTER	4	4

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 COUNTY OF WINDSOR

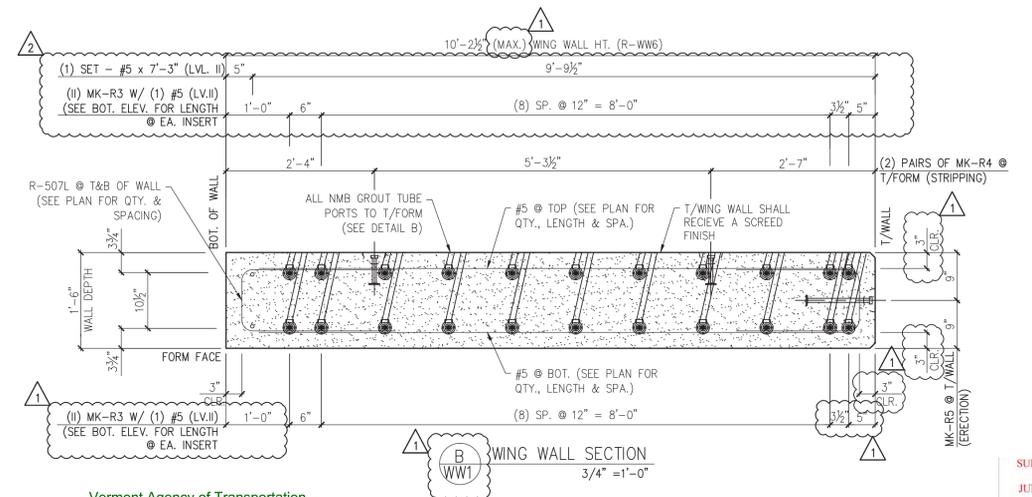
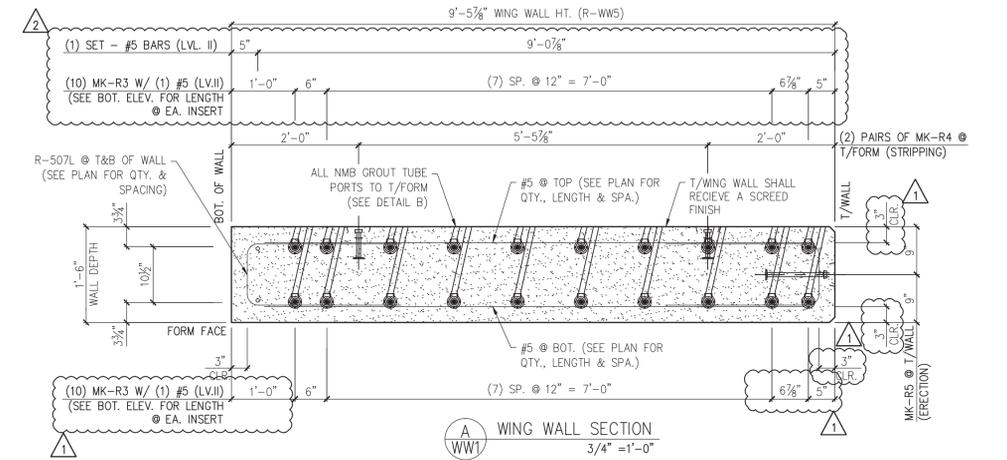
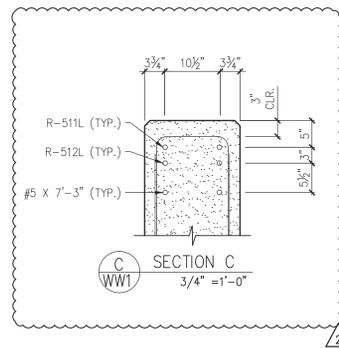
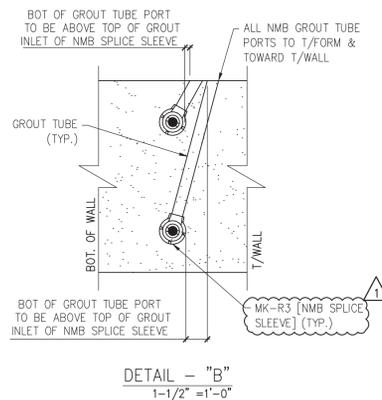
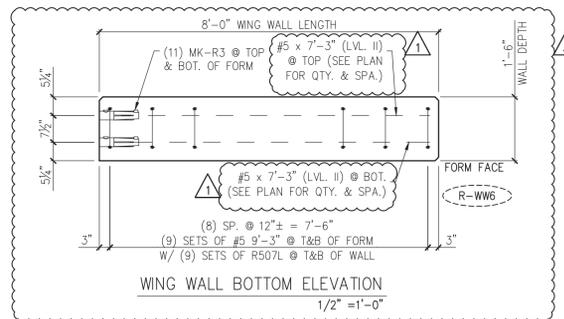
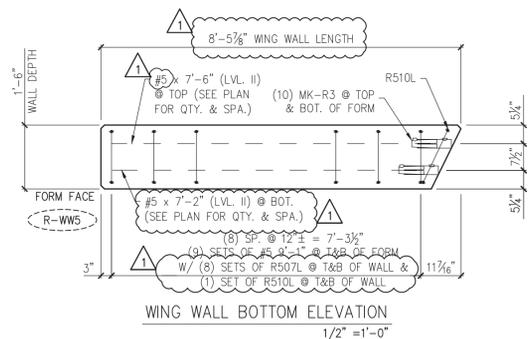
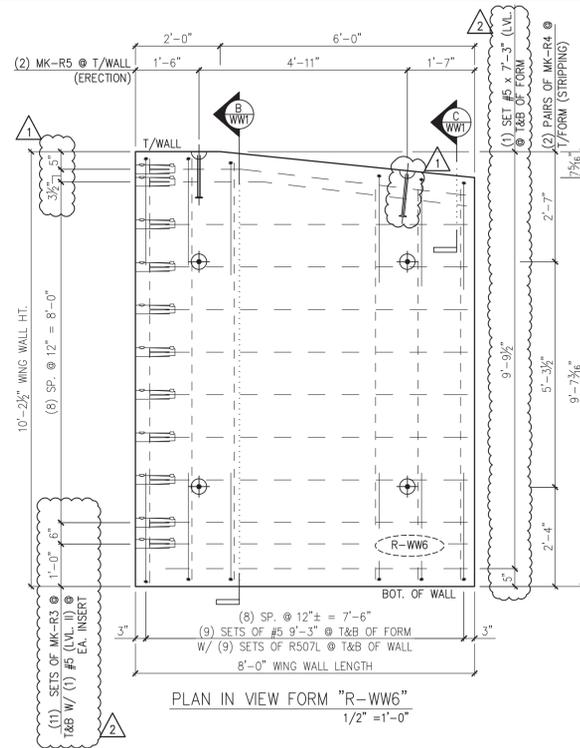
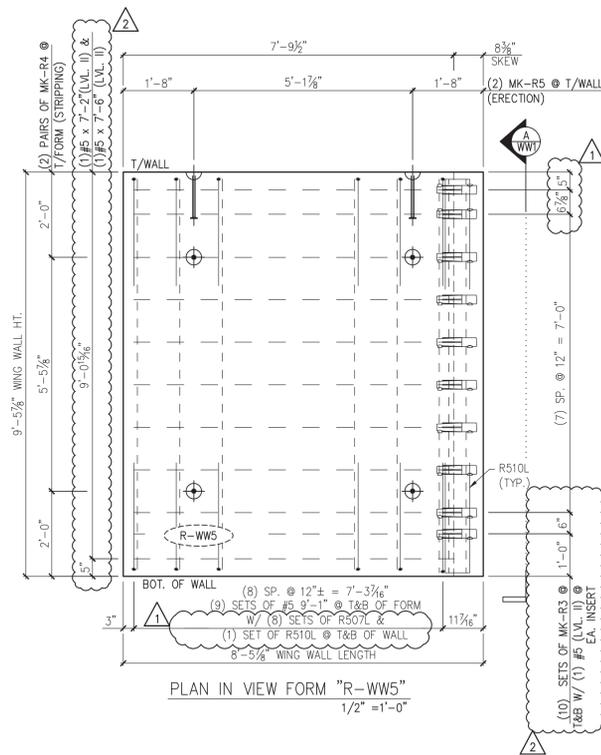
TOWN OF ROCHESTER  
 VT ROUTE 73 (RURAL MAJOR COLLECTOR)  
 BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)

DATE: MAR. 14, 2014  
 SCALE: NOTED  
 CHKD: DFTM/AAT/RWS  
 JWB/KLT  
 JOB NO: 23419-013  
 DWG. NO: AS3

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**SHOP DRAWING REVIEW**

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**VHB** Job Number: 57527  
Reviewed By: L. Chernycky  
Date: 6-23-14

- △ 5/16/14 ADJUSTED VIEW
- △ 4/30/14 REVISE & RESUBMIT
- △ 4/11/14 REVISE & RESUBMIT

MARK: R-WW5	QTY.: 1	WT.: 8.8 T	VOL.: 4.30 cy
MARK: R-WW6	QTY.: 1	WT.: 9.0 T	VOL.: 4.44 cy

**MATERIAL LIST / WING WALL**

ITEM	MARK	DESCRIPTION	QTY./WING WALL	
			R-WW5	R-WW6
1	R-507L	#5 BENT BAR (LEVEL II, DUAL COATED)	16	18
2	R-510L	#5 BENT BAR (LEVEL II, DUAL COATED)	2	0
3	R-511L	#5 BENT BAR (LEVEL II, DUAL COATED)	0	2
4	R-512L	#5 BENT BAR (LEVEL II, DUAL COATED)	0	2
5				
6				
7		#5 x 7'-2" (LEVEL II, DUAL COATED)	11	0
8		#5 x 7'-3" (LEVEL II, DUAL COATED)	0	20
9		#5 x 7'-6" (LEVEL II, DUAL COATED)	11	0
10		#5 x 9'-1" (LEVEL II, DUAL COATED)	18	0
11		#5 x 9'-3" (LEVEL II, DUAL COATED)	0	18
12				
13				
14	MK-R3	NMB SPICE SLEEVE #5 U-(YPC) (EPOXY COATED)	20	22
15	MK-R4	4T x 9 1/2" SWIFT LIFT LIFTER	4	4
16	MK-R5	20T x 19 3/4" SWIFT LIFT LIFTER	2	2

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COUNTY OF WINDSOR

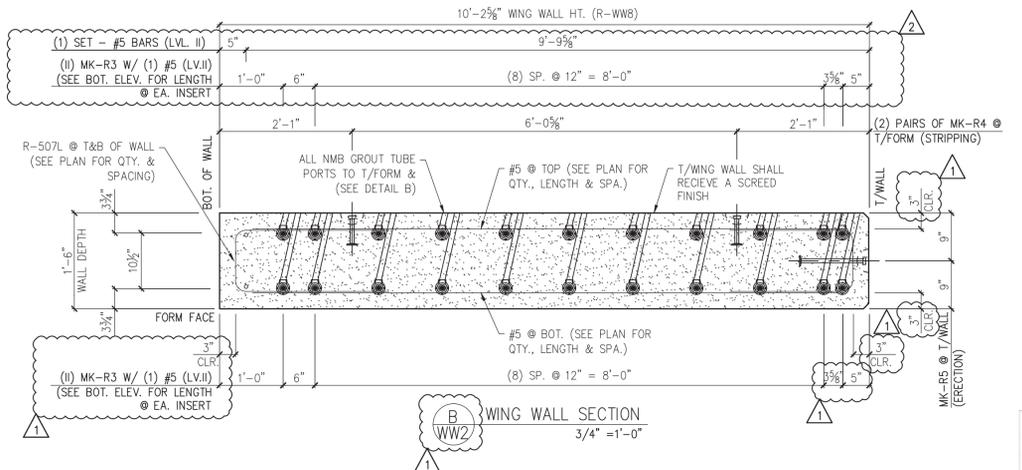
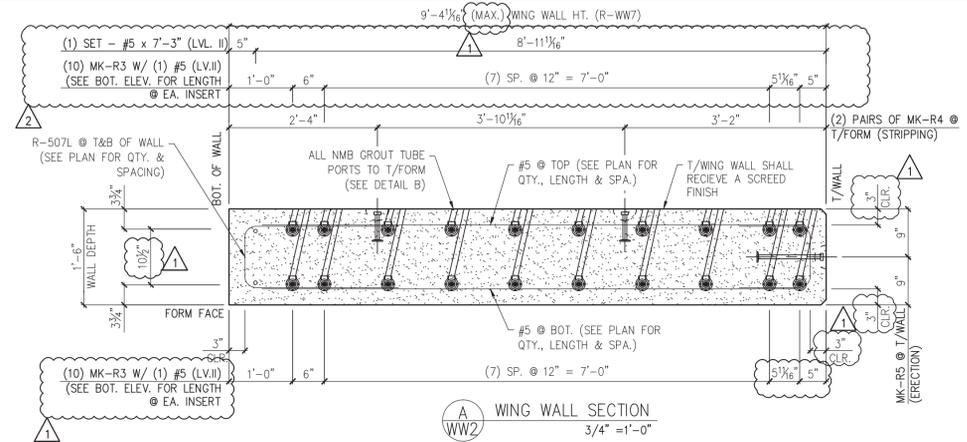
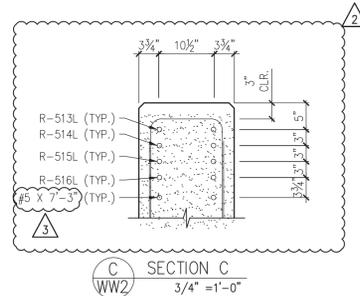
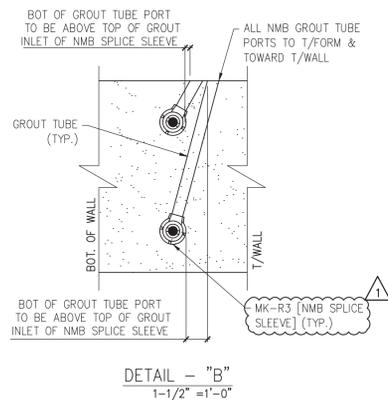
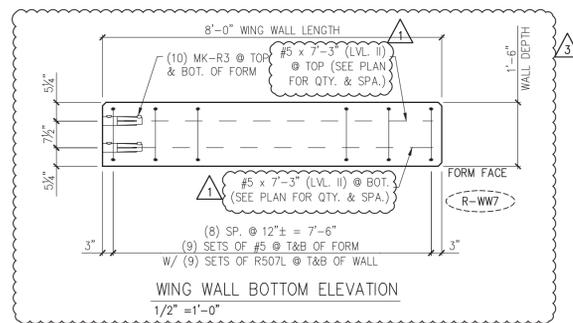
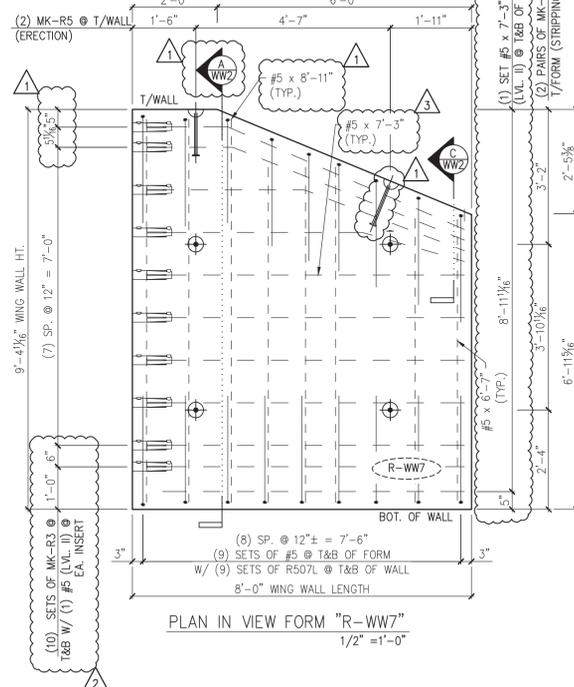
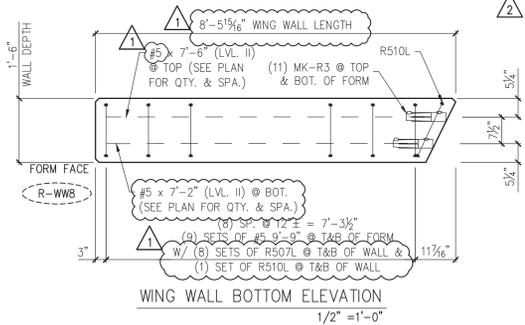
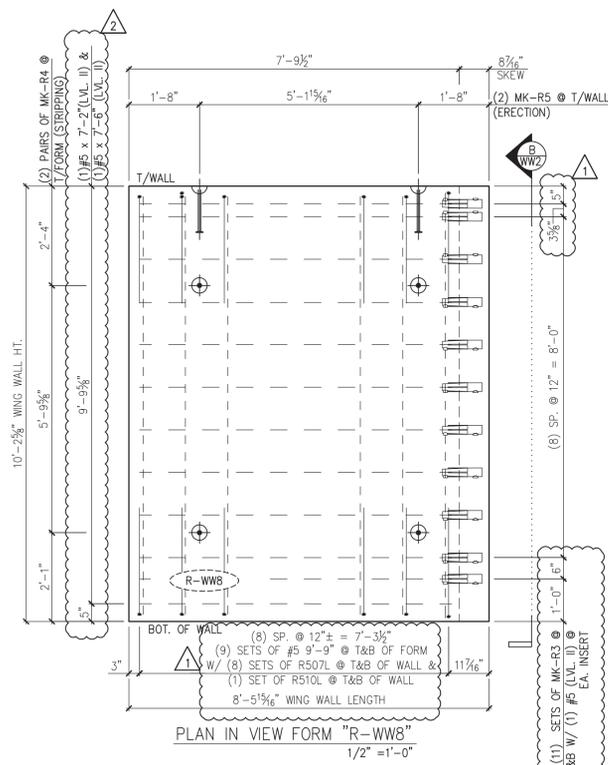
TOWN OF ROCHESTER  
VT ROUTE 73 (RURAL MAJOR COLLECTOR)  
BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)

DATE: MAR. 14, 2014  
SCALE: NOTED  
CHKD: DFTM: AAT/RWS JJ/KLT  
JOB NO: 23419-013  
DWG. NO: WW1

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**CONFORMANCE**  
 BY: Jennifer Fitch DATE: 6/24/2014

**SHOP DRAWING REVIEW**

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**VHB** Job Number: 87927  
 Reviewed By: L. Chernycki  
 Date: 6-23-14

- △ 5/16/14 REVISE & RESUBMIT. ADJUST VIEW
- △ 4/30/14 REVISE & RESUBMIT
- △ 4/11/14 REVISE & RESUBMIT

MARK:	R-WW8	QTY.:	1	WT.:	9.4 T	VOL.:	4.63 cy
MARK:	R-WW7	QTY.:	1	WT.:	7.7 T	VOL.:	3.76 cy

ITEM	MARK	DESCRIPTION	QTY./WING WALL	
			R-WW8	R-WW7
1	R-507L	#5 BENT BAR (LEVEL II, DUAL COATED)	16	18
2	R-510L	#5 BENT BAR (LEVEL II, DUAL COATED)	2	0
3	R-513L	#5 BENT BAR (LEVEL II, DUAL COATED)	0	2
4	R-514L	#5 BENT BAR (LEVEL II, DUAL COATED)	0	2
5	R-515L	#5 BENT BAR (LEVEL II, DUAL COATED)	0	2
6	R-516L	#5 BENT BAR (LEVEL II, DUAL COATED)	0	2
7				
8				
9		#5 x 6'-7" (LEVEL II, DUAL COATED)	0	6
10		#5 x 7'-2" (LEVEL II, DUAL COATED)	12	0
11		#5 x 7'-3" (LEVEL II, DUAL COATED)	0	14
12		#5 x 7'-6" (LEVEL II, DUAL COATED)	12	0
13		#5 x 7'-10" (LEVEL II, DUAL COATED)	0	6
14		#5 x 8'-11" (LEVEL II, DUAL COATED)	0	6
15		#5 x 9'-9" (LEVEL II, DUAL COATED)	18	0
16				
17				
18				
19	MK-R3	NMB SPLICE SLEEVE #5 U-X(PC) (EPOXY COATED)	22	20
	MK-R4	4T x 9 1/2" SWIFT LIFT LIFTER	4	4
	MK-R5	20T x 19 3/4" SWIFT LIFT LIFTER	2	2

APPROVAL STAMP:

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 PO BOX 2630 BALLSTON SPA, NY 12020

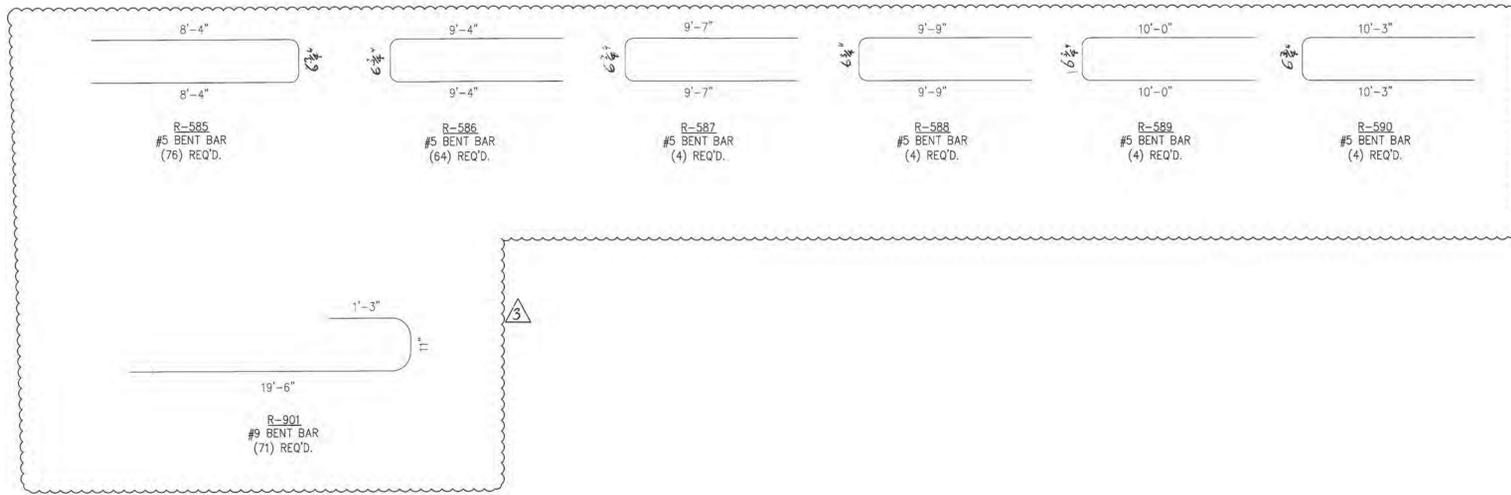
STATE OF VERMONT AGENCY OF TRANSPORTATION  
 COUNTY OF WINDSOR

TOWN OF ROCHESTER  
 VT ROUTE 73 (RURAL MAJOR COLLECTOR)  
 BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)

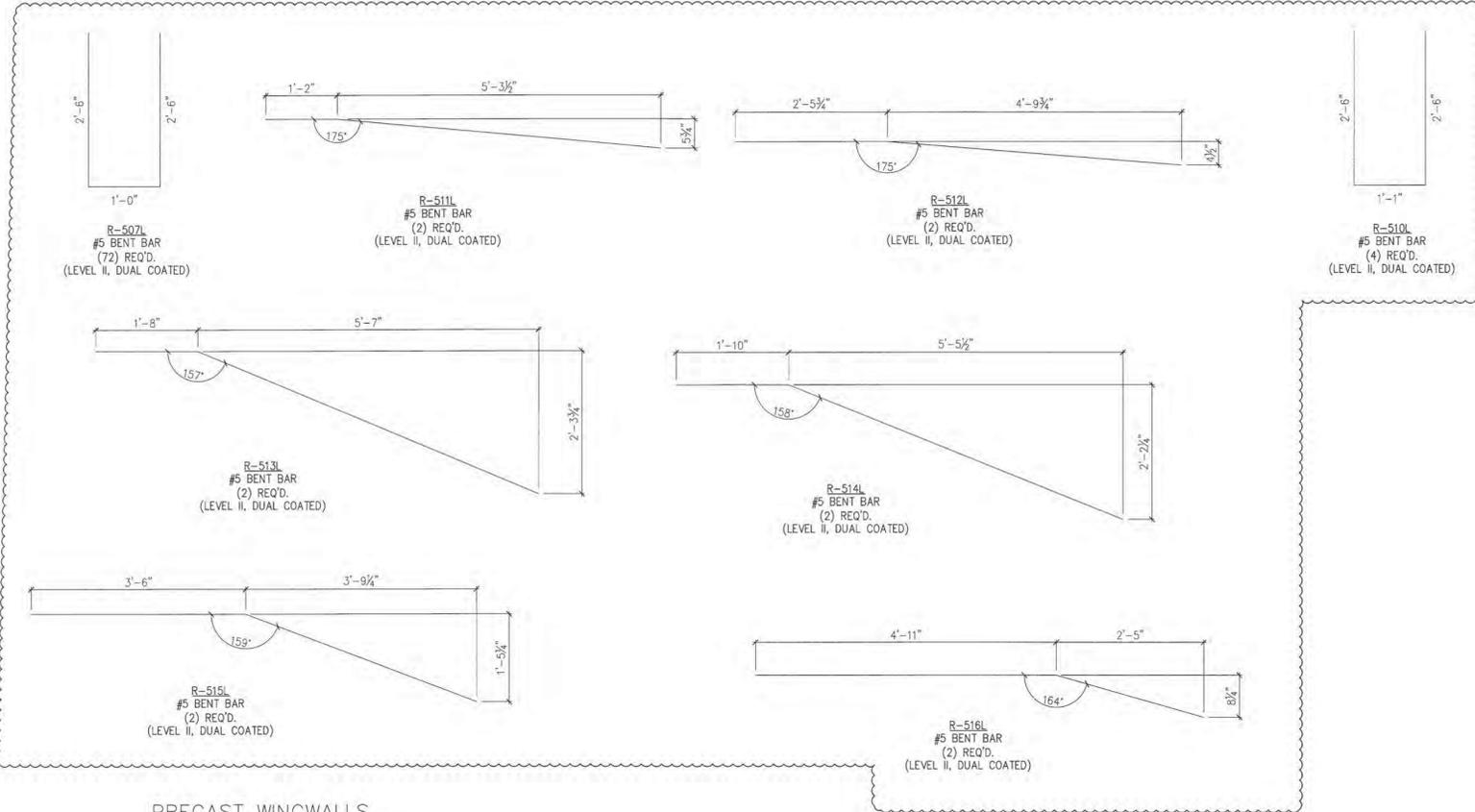
DATE: MAR. 14, 2014  
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 CHKD: DFTM/AAT/RWS  
 JJ/KLT  
 JOB NO: 23419-013  
 DWG. NO: WW2

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 JUN 18 2014  
 J.P. CARRARA & SONS, INC.  
 WOODBURY, VT 05753



PRECAST APPROACH SLABS



PRECAST WINGWALLS

MISCELLANEOUS MATERIALS				
ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1				
2	2	57	#6 x 19'-7" (LEVEL I, BLACK REINFORCEMENT)	
3				
4				
5				
6	MK-R2	24	BT x 10" SWIFT LIFT LIFTER	
7				
8				
9				
10		8	#5 x 6'-7" (LEVEL II, DUAL COATED)	
11		23	#5 x 7'-2" (LEVEL II, DUAL COATED)	
12		34	#5 x 7'-3" (LEVEL II, DUAL COATED)	
13		23	#5 x 7'-6" (LEVEL II, DUAL COATED)	
14		6	#5 x 7'-10" (LEVEL II, DUAL COATED)	
15		6	#5 x 8'-11" (LEVEL II, DUAL COATED)	
16		18	#5 x 9'-1" (LEVEL II, DUAL COATED)	
17		18	#5 x 9'-3" (LEVEL II, DUAL COATED)	
18		18	#5 x 9'-9" (LEVEL II, DUAL COATED)	
19				
20				
21				
22	MK-R3	84	NMB SPLICE SLEEVE #5 U-X(PG) (EPOXY COATED)	
23	MK-R4	16	4T x 9 1/2" SWIFT LIFT LIFTER	
24	MK-R5	8	20T x 19 3/4" SWIFT LIFT LIFTER	
25				

PRECAST APPROACH SLABS  
PRECAST WING WALLS

Vermont Agency of Transportation  
**RECEIVED**  
 ON: **June 18, 2014**  
 and Checked for  
**CONFIRMANCE**  
 BY: Jennifer Fitch DATE: 6/24/2014

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED       REVISE AND RESUBMIT       FURNISH AS CORRECTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

**VHB** Job Number: 57527  
 Reviewed By: L. Chernivsky  
 Date: 6-23-14

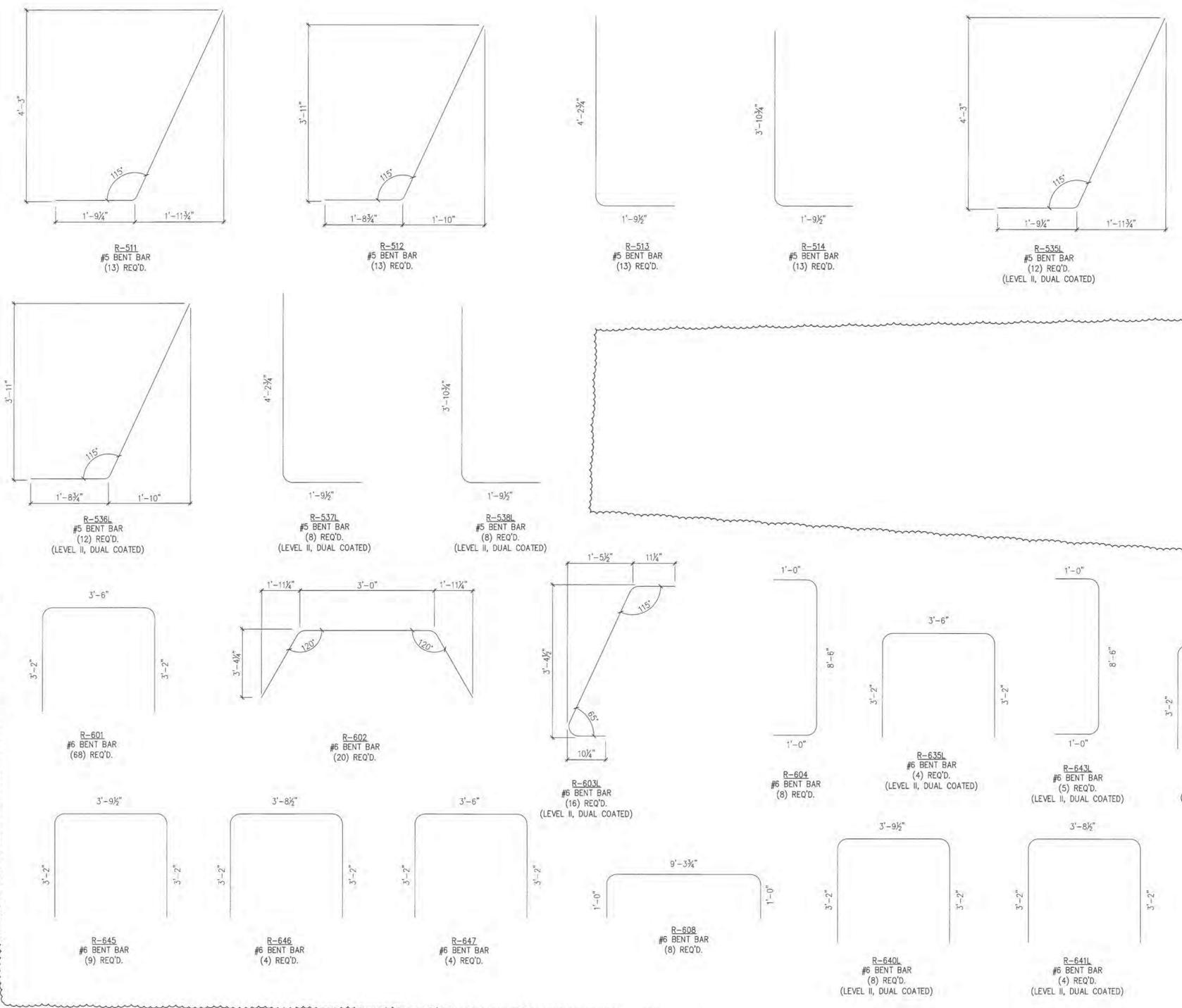
SUBMITTED  
 JUN 18 2014  
 J. P. CARRARA & SONS, INC.  
 MIDDLEBURY, VT 05753

- △ 5/27/14 REVISE & RESUBMIT
- △ 5/16/14 REVISE & RESUBMIT
- △ 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:	<b>J.P. CARRARA &amp; SONS INC.</b> Precast & Prestress Manufacturer <small>2464 ONE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-8361 Fax: (802)388-9010</small>		<b>W.M. SCHULTZ CONSTRUCTION, INC.</b> <small>PO BOX 2820 BALLSTON SPA, NY 12020</small>
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF WINDSOR		DATE: MAR. 14, 2014 SCALE: NOTED
	TOWN OF ROCHESTER VT ROUTE 73 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)		CHKD: DFTM/AA1/RWS JLJ/KLT JOB NO: 23419-013
	MATERIALS LIST		DWG. NO: M1

**Eriksson** technologies  
 813.989.3317  
 TAMPA, FL LRFD.COM  
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S:\Engineering Services\Carrara\14002 Rochester BR 15 & 16\Production Drawings\AutoCAD Files\Bridge 16\BR 15-M-1.dwg, 5/21/2014, 4:26:16 PM



MISCELLANEOUS MATERIALS				REMARKS
ITEM	MARK	QTY.		
1		48	#6 x 5'-2" (LEVEL I - BLACK REINFORCEMENT)	
2		26	#6 x 5'-2" (LEVEL I - BLACK REINFORCEMENT) <sup>3</sup>	
3		48	#6 x 5'-5" (LEVEL I - BLACK REINFORCEMENT)	
4		26	#6 x 5'-10" (LEVEL I - BLACK REINFORCEMENT)	
5		13	#6 x 8'-10" (LEVEL II - DUAL COATED)	
6		11	#6 x 8'-11" (LEVEL II - DUAL COATED)	
7		26	#6 x 9'-8" (LEVEL II - DUAL COATED) <sup>2</sup>	
8		7	#6 x 13'-4" (LEVEL I - BLACK REINFORCEMENT)	
9		2	#6 x 13'-8" (LEVEL I - BLACK REINFORCEMENT)	
10		7	#6 x 14'-4" (LEVEL I - BLACK REINFORCEMENT)	
11		2	#6 x 14'-5" (LEVEL I - BLACK REINFORCEMENT)	
12		2	#6 x 14'-8" (LEVEL I - BLACK REINFORCEMENT)	
13		7	#6 x 15'-0" (LEVEL I - BLACK REINFORCEMENT)	
14		2	#6 x 15'-5" (LEVEL I - BLACK REINFORCEMENT)	
15		7	#6 x 16'-0" (LEVEL I - BLACK REINFORCEMENT)	
16		36	#6 x 24'-8" (LEVEL I - BLACK REINFORCEMENT)	
17				
18				
19		16	SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	

**SHOP DRAWING REVIEW**

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**VHB** Job Number: 91927  
 Reviewed By: L. Chernovcky  
 Date: 6-23-14

Vermont Agency of Transportation  
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 BY: Jennifer Fitch DATE: 6/24/2014

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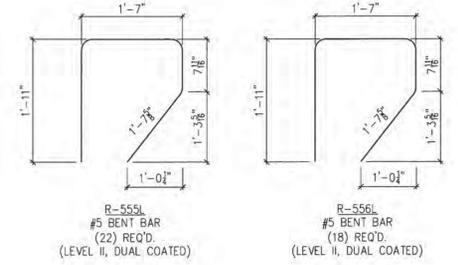
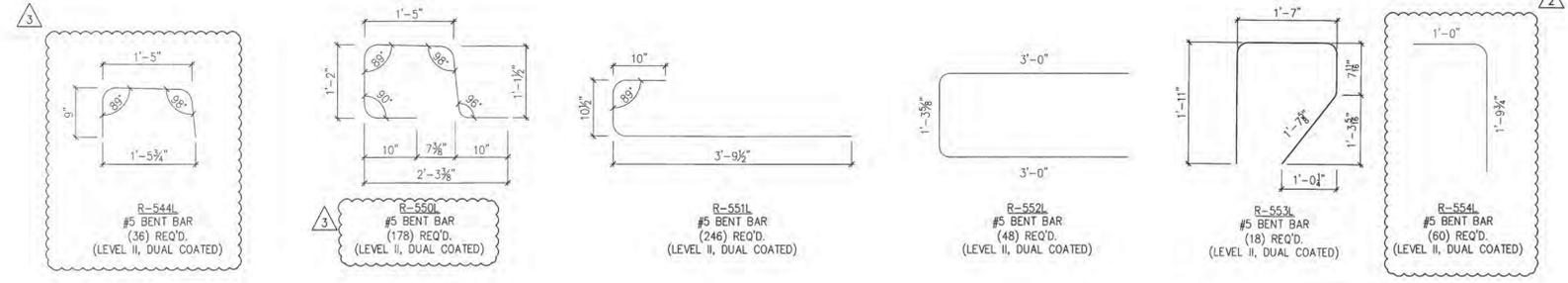
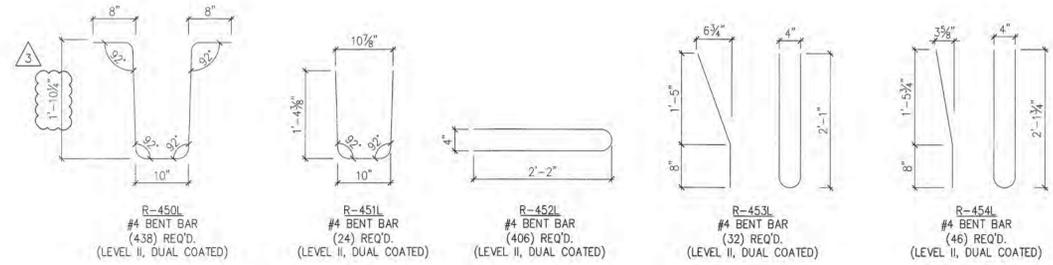
5/16/14 REVISE & RESUBMIT  
 4/11/14 REVISE & RESUBMIT  
 6/19/14 REVISE & RESUBMIT

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	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF WINDSOR		DATE: MAR. 14, 2014 SCALE: NOTED
	TOWN OF ROCHESTER VT ROUTE 73 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 16 PROJECT NO.: BRF 0162 (17)		CHKD: DFTM, AAT/RWS, JJ/KLT JOB NO: 23419-013
	MATERIALS LIST		DWG. NO: M2

PRECAST ABUTMENT

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PRECAST BEAMS

MISCELLANEOUS MATERIALS				REMARKS
ITEM	MARK	QTY.		
1		54	#4 x 9'-10" (LEVEL II, DUAL COATED)	
2				
3		20	#5 x 8'-0" (LEVEL II, DUAL COATED)	
4		8	#5 x 8'-2" (LEVEL II, DUAL COATED)	
5		20	#5 x 8'-3" (LEVEL II, DUAL COATED)	
6		10	#5 x 8'-6" (LEVEL II, DUAL COATED)	
7		10	#5 x 8'-7" (LEVEL II, DUAL COATED)	
8		660	#5 x 9'-4" (LEVEL II, DUAL COATED)	
9		36	#5 x 9'-7" (LEVEL II, DUAL COATED)	
10		60	#5 x 9'-10" (LEVEL II, DUAL COATED)	
11		34	#5 x 10'-4" (LEVEL II, DUAL COATED) 2	
12		4	#5 x 11'-3" (LEVEL II, DUAL COATED)	
13		2	#5 x 12'-2" (LEVEL II, DUAL COATED)	
14		84	#5 x 24'-0" (LEVEL II, DUAL COATED)	
15		12	#5 x 26'-0" (LEVEL II, DUAL COATED)	
16		12	#5 x 40'-0" (LEVEL II, DUAL COATED)	
17		84	#5 x 41'-0" (LEVEL II, DUAL COATED)	
18				
19		39	#8 x 1'-6" (LEVEL II, DUAL COATED)	
20				
21		12	SET OF (4) 0.60"φ x 270 KSI STRAND LIFTING LOOPS	

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**VHB** Job Number: 87527  
 Reviewed By: L. Chervinsky  
 Date: 6-23-14

- △ 5/16/14 REVISE & RESUBMIT
- △ 4/30/14 REVISE & RESUBMIT
- △ 4/11/14 REVISE & RESUBMIT

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