# REVIEW NOTES
# ROCHESTER BRF 0162(16) & (17) – BRIDGES 15 & 16
# PRECAST FABRICATION DRAWINGS
# April 8, 2014

**RE:** Precast Fabrication Drawings received from Schultz Construction on 3/17/2014 (drawings dated 3/14/2014).

**VHB Project No.:** 57526.00 & 57527.00

*These notes accompany the review of the Precast Fabrication Drawings reviewed by VHB on 4/7/2014.*

1. Precast Joints: In an effort to avoid confusion in the field during construction, we are requesting that Schultz Construction indicate the proposed material required for the following precast abutment joints:

    a. Wingwall-to-abutment cap joint: This joint type shall be clarified on the fabrication plans and coordinated between J.P. Carrara and Schultz Construction with the approval of the Agency. Please indicate the type of material to be used at this joint location.

    b. Abutment cap match-cast joint: This joint requires an epoxy bonding compound. Please indicate type of epoxy to be used for this joint.

2. Transverse Tendons: The abutments utilize transverse post-tensioning with recessed anchors. The anchorages shall be painted with epoxy repair material after installation and stressing of the post-tensioning, prior to grouting the pockets.

Vermont Agency of Transportation

Rochester BRF 0162(16) - BR 15 Precast Shops (R and R) pr

RECEIVED

ON: March 17, 2014

and Checked for

CONFORMANCE

BY: Jennifer Fitch DATE: 04/08/2014

**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.

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VHB Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

Job Number 57526.00
Reviewed By J.J. WESCOTT
Date: 04-07-2014

Verify note with contract plans (VT)

## NEXT BEAM GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 9,000 PSI.
2. MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 7,000 PSI.
3. REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) AND SHALL ~~ADHERE TO THE REQUIREMENTS OF LEVEL I (DUAL COATED) REINFORCING~~ STEEL IN ACCORDANCE WITH SECTION 507 OF THE NEW JERSEY DOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
4. PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0.60"ø x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
5. PRESTRESSING STRANDS ~~SHALL EACH~~ BE PULLED TO HAVE A NET TENSION OF 44.0 K ~~AFTER ACCOUNTING~~ FOR CHUCK SLIPPAGE. TENSION SHALL BE ~~VERIFIED BY MEASURING STRAND ELONGATION.~~ (SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, THIS SHEET.)
6. ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF NEXT BEAM STEMS (UNLESS NOTED OTHERWISE) AND EPOXY PAINTED.
7. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
8. THE TOP OF BEAMS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
9. SHEAR KEY SURFACES SHALL BE BLASTED CLEAN. — sand?
10. BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL FORCES ARE APPLIED TO EACH OF THE TWO LIFTING LOOPS AT EACH END OF THE BEAM. THE PINS OF THE SHACKLES SHALL BE PLACED THOUGH THE LIFTING LOOPS. SEE DETAIL, THIS SHEET. BEAMS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 3'-0" OF THE BEAM ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
11. MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P510.02 AND P510.05 RESPECTIVELY.

    DESIGN MIX: J.P.C. BRIDGE MIX #430M (5 GAL./CY DCI)
12. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
13. CURING METHOD: AS SOON AS THE TOP OF BEAM IS FINISHED, A COVER OF INSULATED POLY. THE DESIRED CURING TEMPERATURE RANGE SHALL NOT DROP BELOW 70°F. THE TEMPERATURE SHALL BE RECORDED BY AUTOMATIC SENSOR INSTRUMENTS ON GRAPH CHARTS, SPACED NOT MORE THAN 100' APART AND WILL CONTINUE UNTIL RELEASE STRENGTH IS ACHIEVED. EACH CHART SHALL BE MARKED WITH THE CASTING DATED AND LOCATION OF THE RECORDER. IF NECESSARY TO MAINTAIN CASTING BED TEMPERATURE PRIOR TO CONCRETE PLACEMENT OR TO ACCELERATE EARLY AGE STRENGTH GAIN, EXTERNAL RADIANT HEAT MAY BE EMPLOYED VIA HOT WATER DUCTS BENEATH AND WITHIN THE PERIPHERY OF THE CASTING BED. MAXIMUM CURING TEMPERATURE SHALL NOT EXCEED PCI SPECIFIED LIMITS.
14. OWNER SHALL PROVIDE APPROPRIATE WATERPROOFING TO GROUTED SHEAR KEYS. J.P. CARRARA & SONS, INC. SHALL NOT BE HELD LIABLE FOR PROBLEMS ASSOCIATED WITH MOISTURE INFILTRATING GROUTED SHEAR KEYS.
15. PRECAST CONCRETE PARAPET SHALL HAVE A RUBBED FINISH IN ACCORDANCE WITH 507 OF THE NEW JERSEY DOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

Update note according to contract plans (typ.)

## ABUTMENT, WING WALL, & APPROACH SLAB GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 5,000 PSI.
2. MIN. CONCRETE STRENGTH AT STRIPPING SHALL BE 3,500 PSI.
3. 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 SECTION 507 OF THE NEW JERSEY DOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

   REINFORCING STEEL IN THE WING WALLS SHALL BE GR-60, ASTM A-615 ~~(AASHTO M31) AND SHALL ADHERE TO THE REQUIREMENTS OF LEVEL I (DUAL~~ COATED) REINFORCING STEEL IN ACCORDANCE WITH SECTION 507 OF THE NEW JERSEY DOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (UNLESS NOTED OTHERWISE
4. THE TOP OF ABUTMENTS, APPROACH SLABS, & WING WALLS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
5. SHEAR KEY SURFACES SHALL BE BLASTED CLEAN.
6. 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.
7. MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P510.02 AND P510.05 RESPECTIVELY.

   DESIGN MIX:
   - WING WALLS: J.P.C. BRIDGE MIX #425M NO DCI
   - APPROACH SLABS: J.P.C. BRIDGE MIX #425M NO DCI
   - ABUTMENTS: J.P.C. BRIDGE MIX #445M
8. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
9. 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.
10. ABUTMENT POST-TENSIONING SEQUENCE:
    - A. ERECT PRECAST CONCRETE ABUTMENTS, AND POST-TENSION CENTER TENDON TO APPROXIMATELY 5,000 LBS.
    - B. GROUT SHEAR KEY.
    - C. ONCE SHEAR KEY GROUT HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI; POST-TENSION TENDONS TO 32,000 LBS.

Define size of post tension tendons

## STRAND TENSIONING PROCEDURE:

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

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

## EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING

(NOT TO BE USED FOR CONSTRUCTION)

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

EXAMPLE:

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

THEREFORE: (TOLERANCES € 5%)

$\Delta$ 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:

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

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

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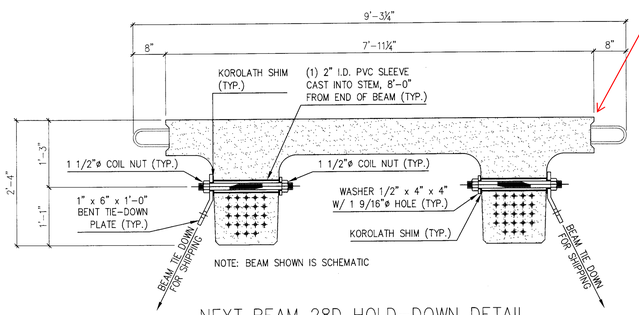
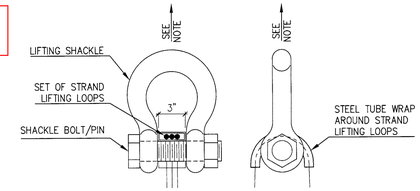



NEXT BEAM 28D HOLD-DOWN DETAIL FOR SHIPPING

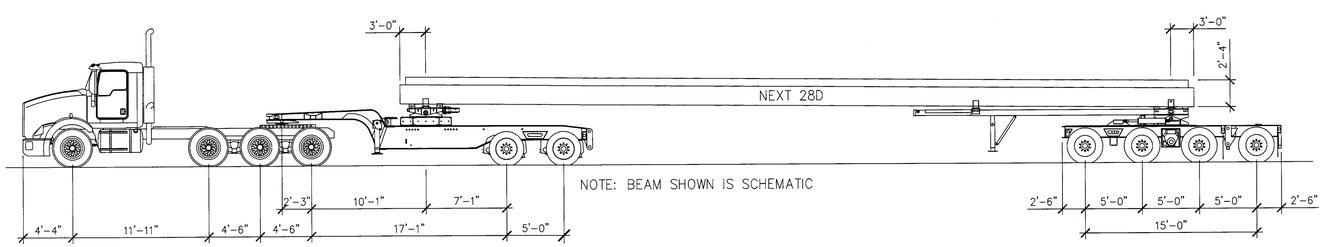
N.T.S.




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

LIFTING SHACKLE DETAILS

N.T.S.




SHIPPING ELEVATION

N.T.S.

SUBMITTED
MAR 14 2014
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

APPROVAL STAMP:

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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

BRIDGE 15 COVER SHEET

| | |
|---|---|
| DATE: | MAR. 14, 2014 |
| SCALE: | NOTED |
| CHKD: | DFTM: AAT/RWS JJJ/KLT |
| JOB NO: | 23419-013 |
| DWG. NO: | C1 |

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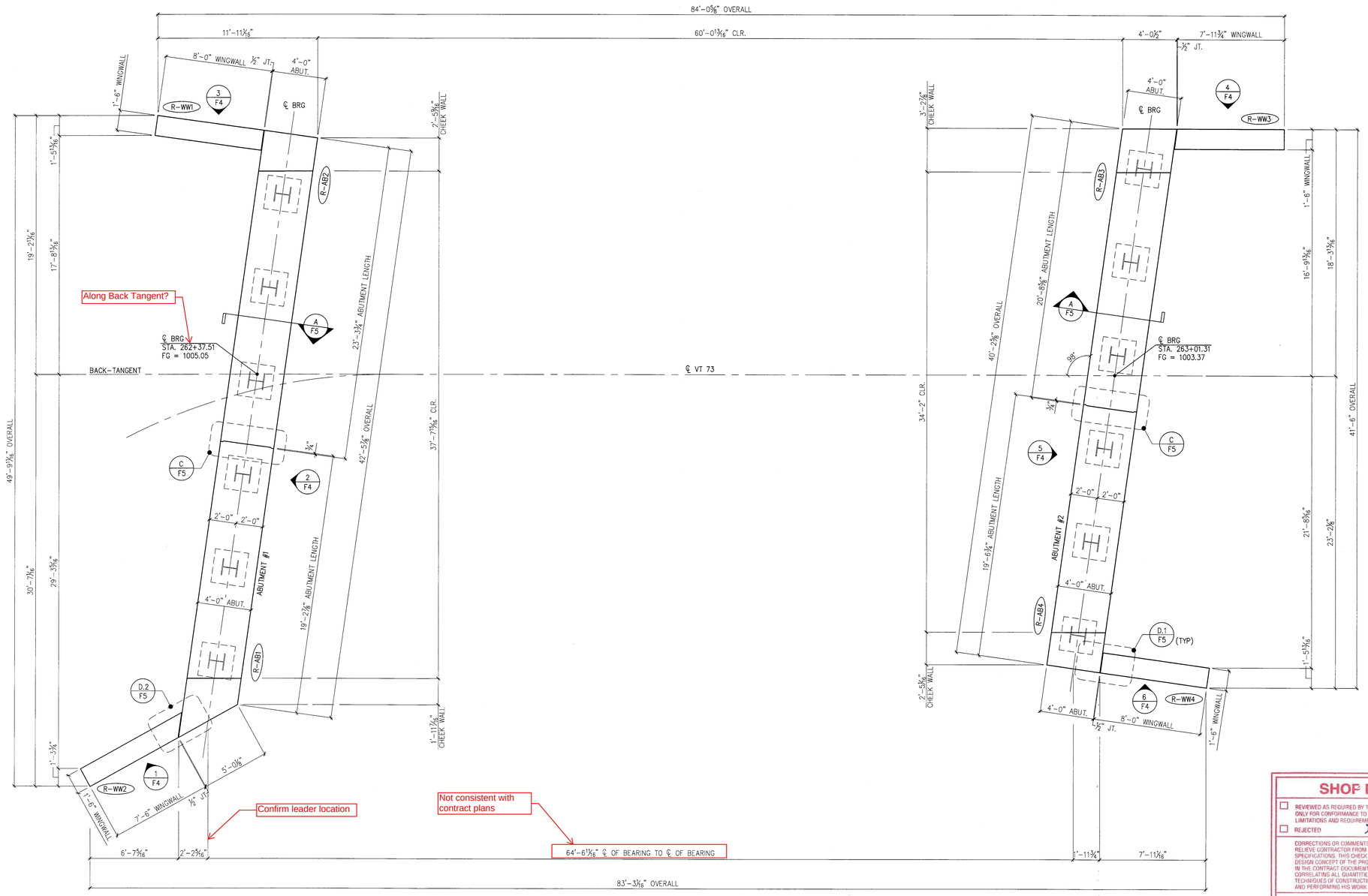


1 / F1 PRECAST CONCRETE ABUTMENT AND WINGWALL LAYOUT

1/4" =1'-0"

## SHOP DRAWING REVIEW

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Reviewed By: E.A. FIALA
Date: 04-07-2014

SUBMITTED
MAR 14 2014
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APPROVAL STAMP:

SUBSTRUCTURE PLANS?

J.P. CARRARA & SONS INC.
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VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

SUPERSTRUCTURE PLANS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JJ/KLT
JOB NO: 23419-013
DWG. NO: F1

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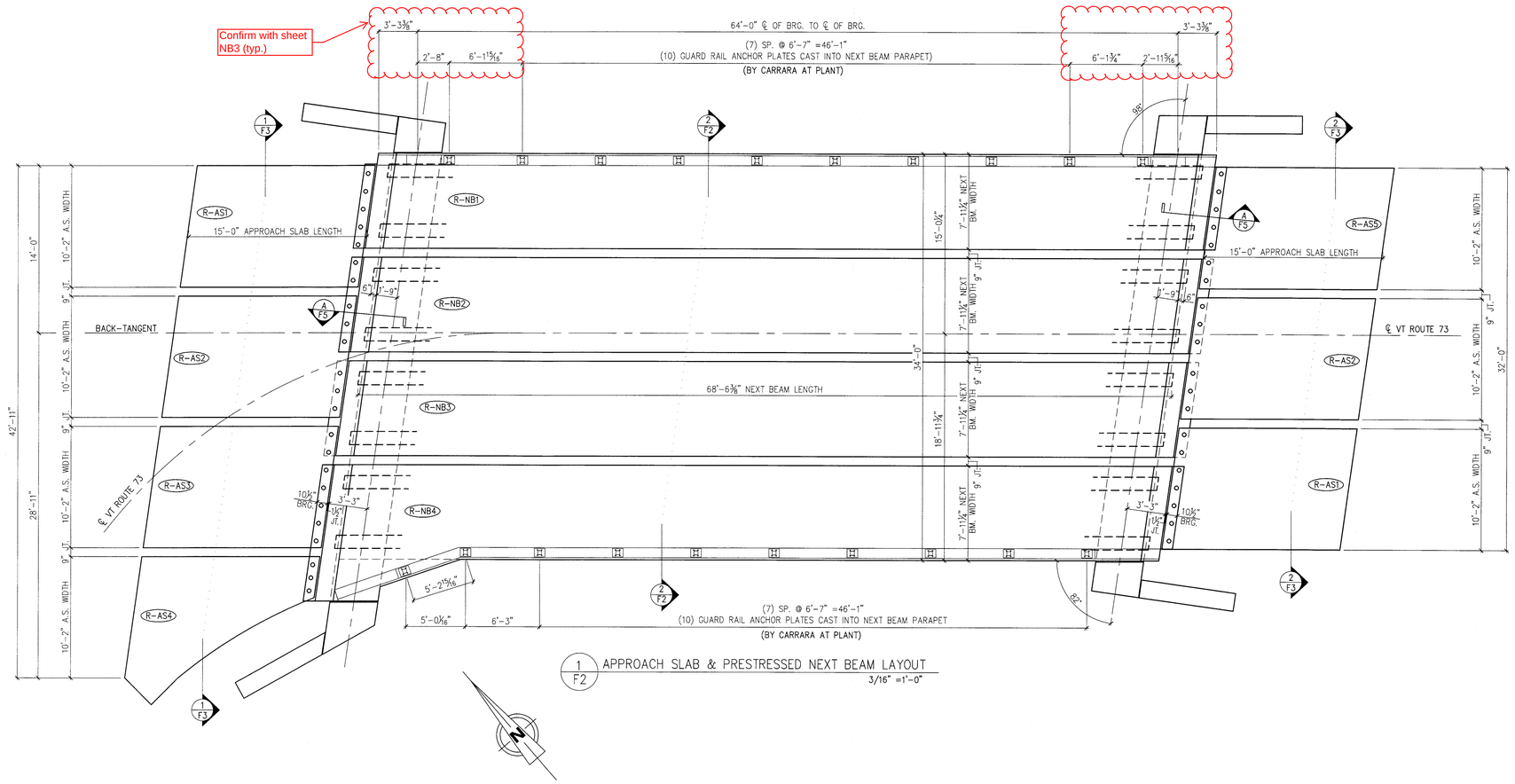
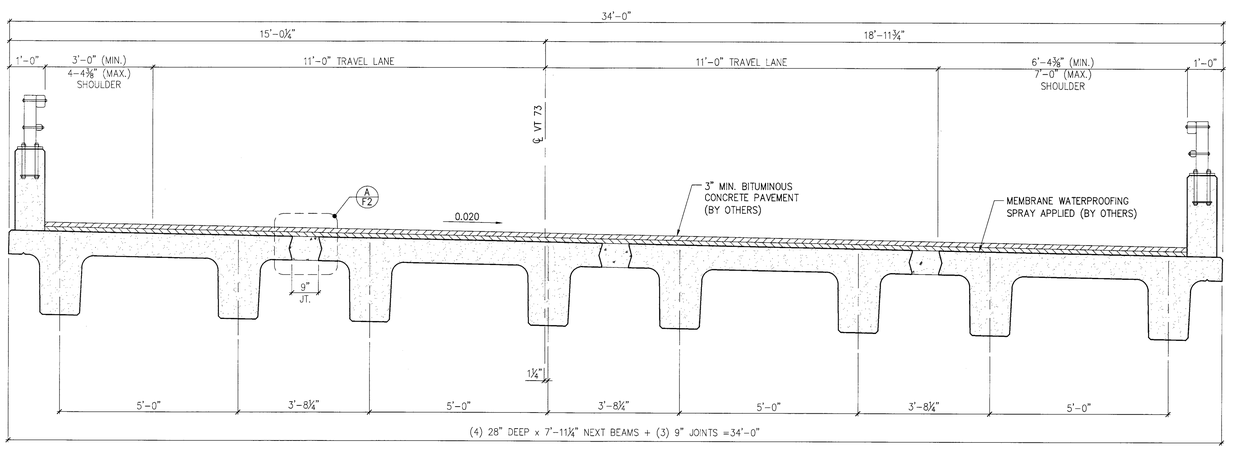



1 / F2 APPROACH SLAB & PRESTRESSED NEXT BEAM LAYOUT

3/16" =1'-0"




2 / F2 NEXT BEAM TRANSVERSE SECTION

1/2" =1'-0"

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Job Number: 57526.00
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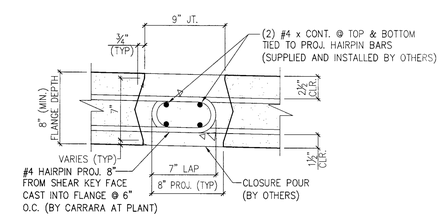
Date: 04-07-2014




A / F2 NEXT BEAM CLOSURE POUR

1 1/2" =1'-0"

SUBMITTED
MAR 14 2014
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

APPROVAL STAMP:

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BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

SUPERSTRUCTURE PLANS & SECTIONS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RPS JJ/KLT
JOB NO: 23419-013
DWG. NO: F2

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Rochester BRF 0162(16) - BR 15 Precast Shops (N and R) Lyn

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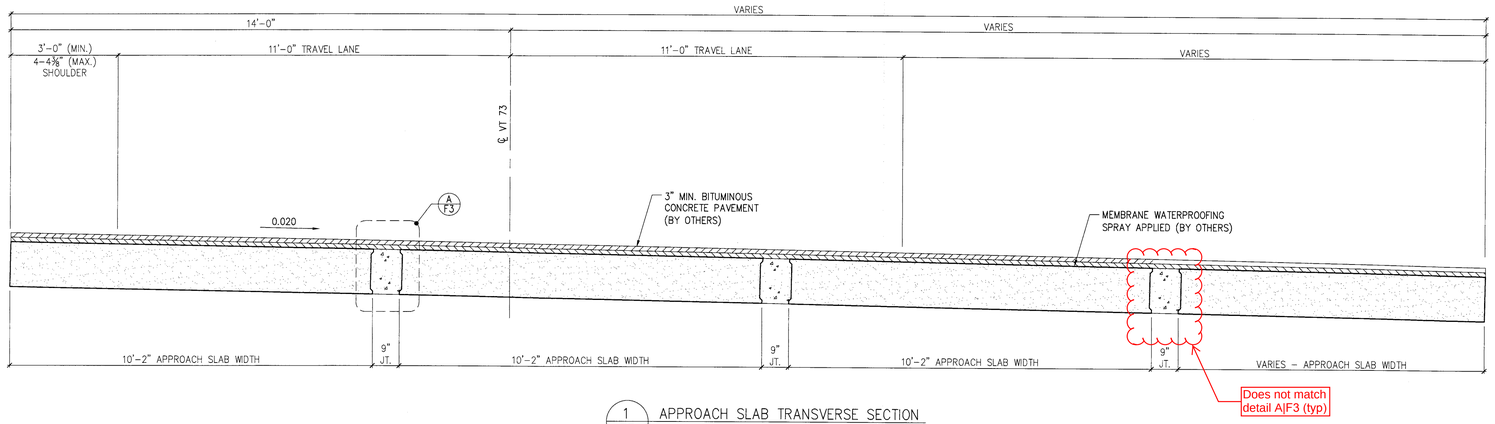
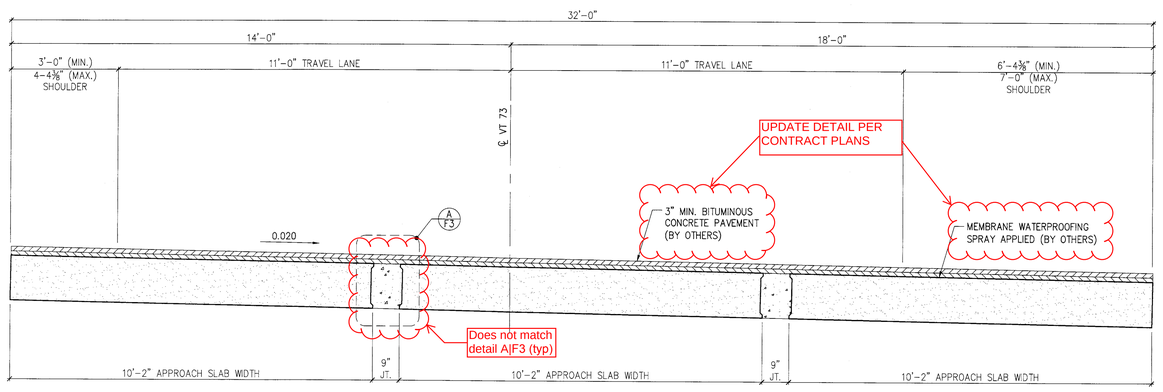
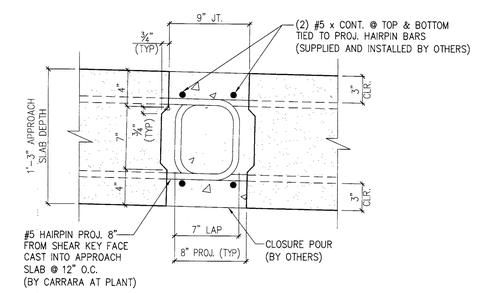



1 / F3 APPROACH SLAB TRANSVERSE SECTION
1/2" =1'-0"




2 / F3 APPROACH SLAB TRANSVERSE SECTION
1/2" =1'-0"




A / F3 APPROACH SLAB CLOSURE POUR
1 1/2" =1'-0"

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Job Number: 57536.00
Reviewed By: E.A. FIALA
Date: 04-07-2014

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MAR 14 2014
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APPROVAL STAMP:

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VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

TRANSVERSE SECTIONS & DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: F3

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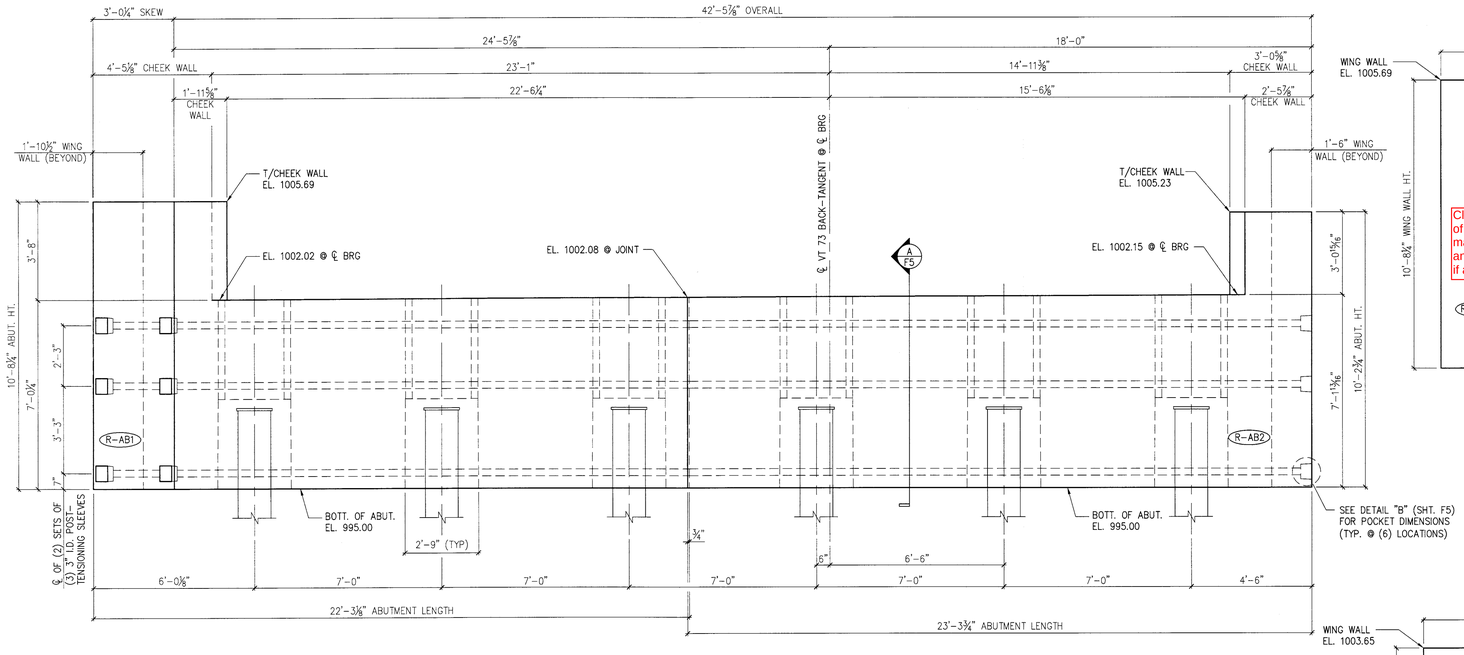
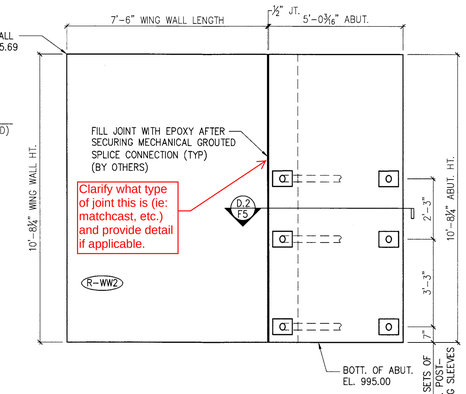
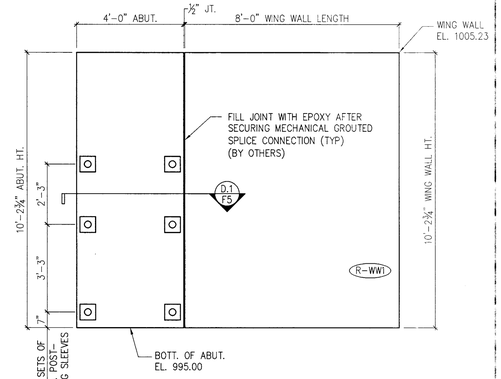


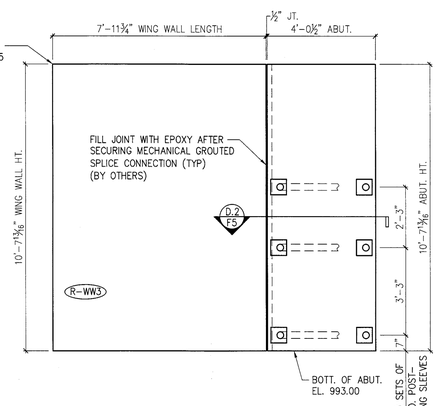

2 F4 ABUTMENT #1 ELEVATION
3/8" =1'-0"



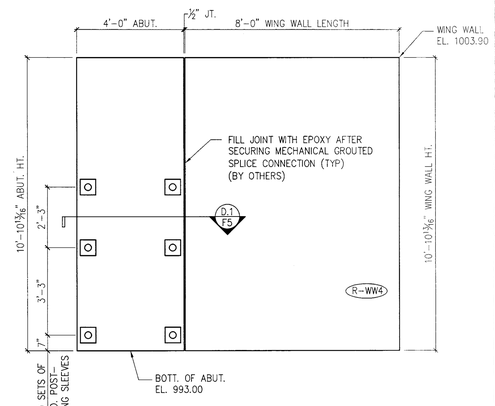

1 F4 WING WALL ELEVATION "R-WW2"
3/8" =1'-0"



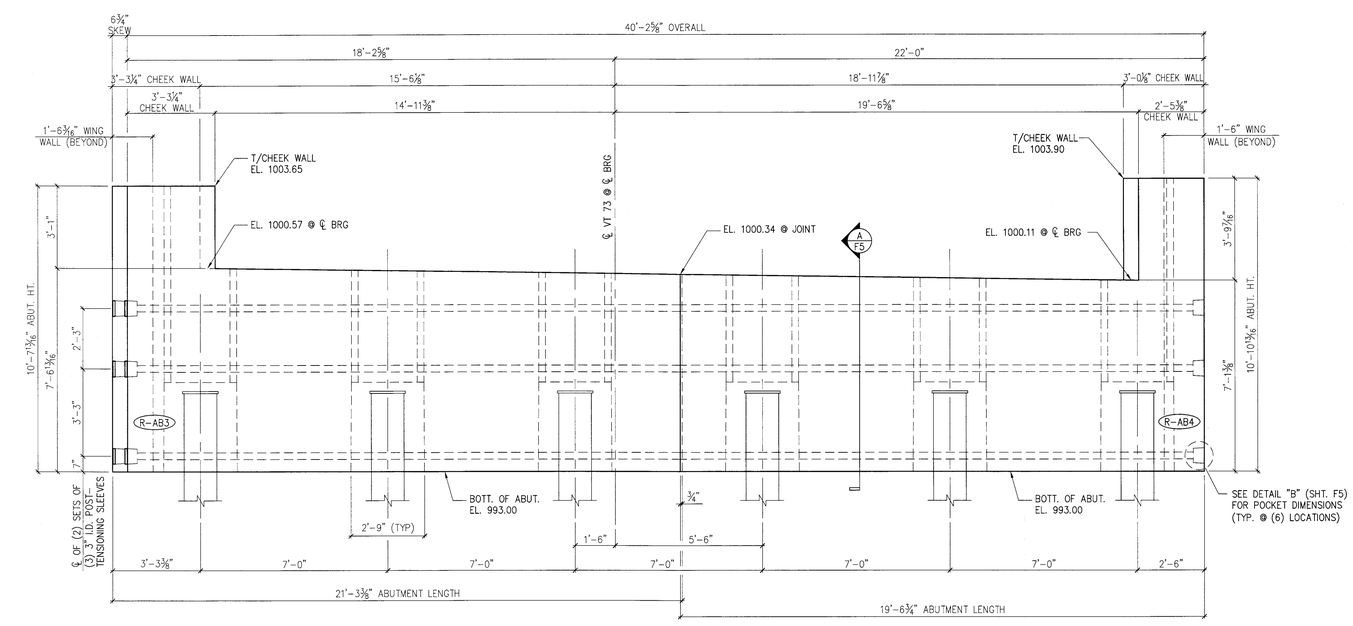

3 F4 WING WALL ELEVATION "R-WW1"
3/8" =1'-0"




4 F4 WING WALL, ELEVATION "R-WW3"
3/8" =1'-0"




6 F4 WING WALL ELEVATION "R-WW4"
3/8" =1'-0"




5 F4 ABUTMENT #2 ELEVATION
3/8" =1'-0"

Vermont Agency of Transportation

RECEIVED
ON: March 17, 2014
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CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

**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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Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

Job Number: 57526.00
Reviewed By: E.A. Fiala
Date: 04-07-2014

Eriksson technologies
813.989.3317
TAMPA, FL LRFD.COM
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J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 OSE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

ABUTMENT ELEVATIONS

| | |
|---|---|
| DATE: | MAR. 14, 2014 |
| SCALE: | NOTED |
| CHKD: | DFTM: AAT/RWS JJ/KLT |
| JOB NO: | 23419-013 |
| DWG. NO: | F4 |

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Vermont Agency of Transportation

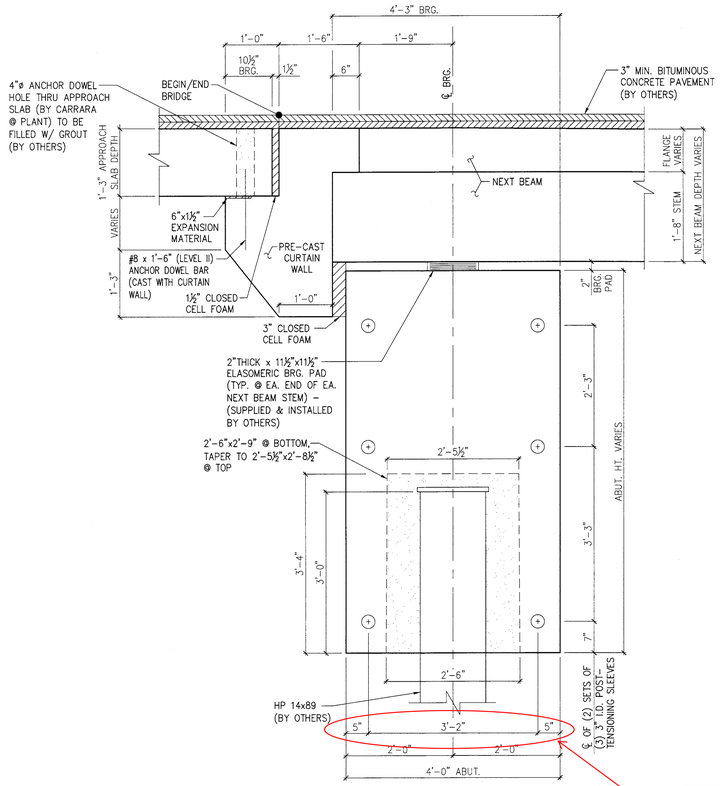
RECEIVED

ON: March 17, 2014

and Checked for

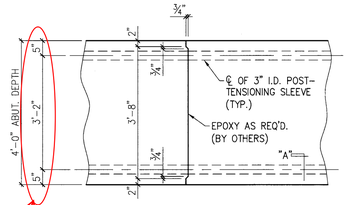
CONFORMANCE

BY: Jennifer Fitch DATE: 04/08/2014

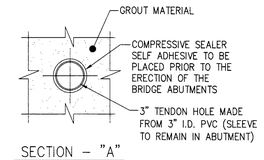



A / F5 BEARING SECTION
NEXT BEAM STEM BEARING 3/4" =1'-0"

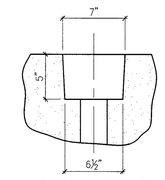
Revise dimensions, do not match sheet AB1



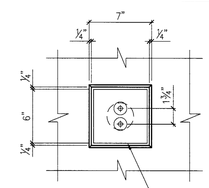

C / F5 MATCH CAST SECTION @ P.T. SLEEVE
1/2" =1'-0"



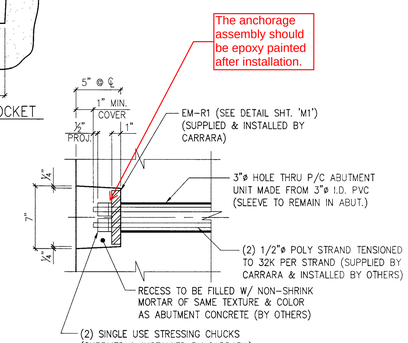

SECTION – "A"
1 1/2" =1'-0"




PLAN OF POCKET



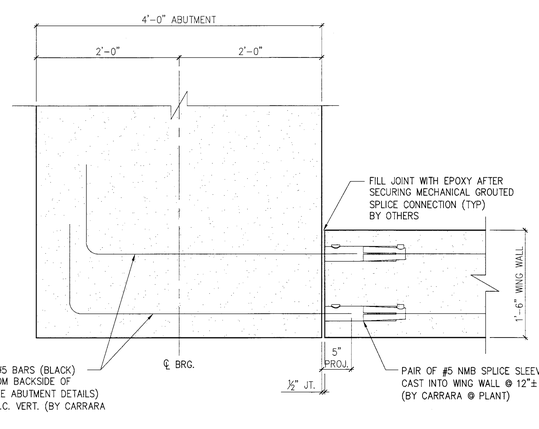

ABUTMENT ELEVATION



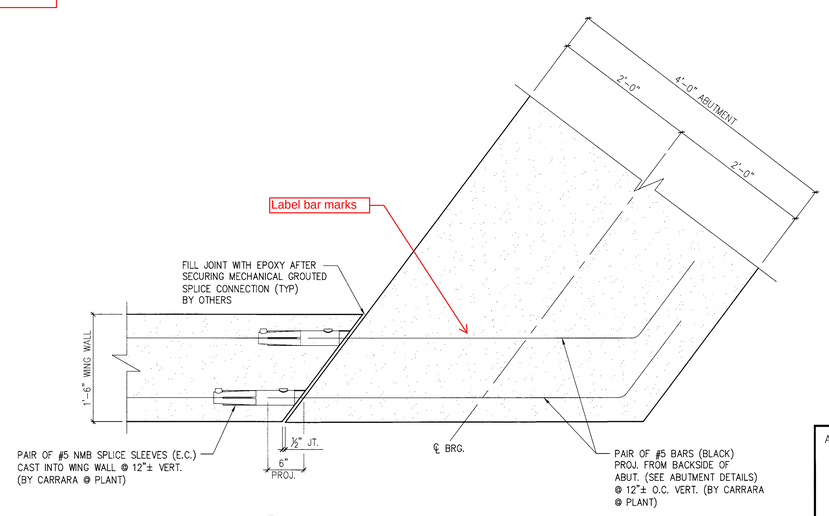

The anchorage assembly should be epoxy painted after installation.

SECTION AT CENTERLINE

DETAIL – "B"
1 1/2" =1'-0"




D.1 / F5 WING WALL CONNECTION DETAIL
1" =1'-0"




D.2 / F5 WING WALL CONNECTION DETAIL
1" =1'-0"

**SHOP DRAWING REVIEW**

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VHB Vanasse Hangen Brustlin, Inc.
7058 US Route 7
North Ferrisburgh, VT 05473
802.425.7798

Job Number: 57526.00
Reviewed By: E.A. FIALA
Date: 04-07-2014

SUBMITTED
MAR 14 2014
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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<br>COUNTY OF WINDSOR | DATE: MAR. 14, 2014<br>SCALE: NOTED |
| TOWN OF ROCHESTER<br>VT ROUTE 73 (RURAL MAJOR COLLECTOR)<br>BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16) | CHKD: DFTM: AAT/RWS JJ/KLT<br>JOB NO: 23419-013 |
| ABUTMENT DETAILS | DWG. NO: F5 |

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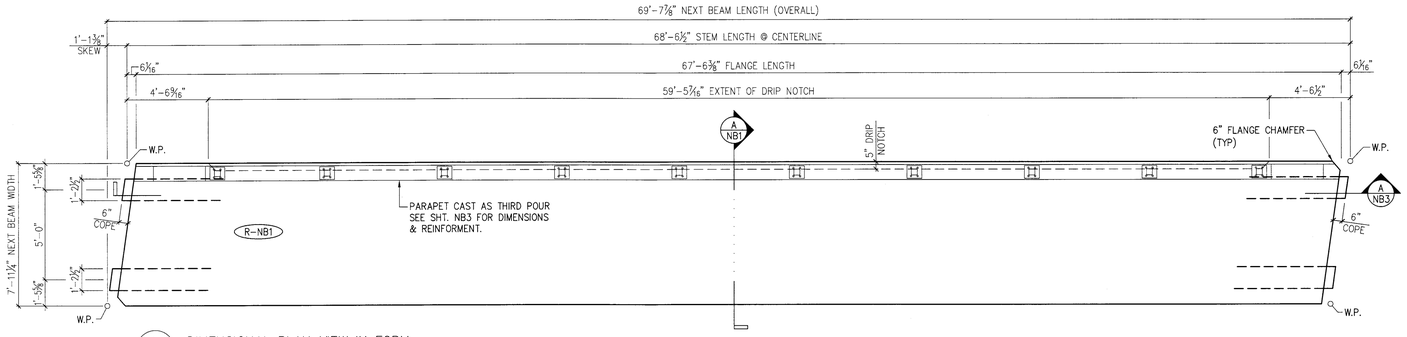
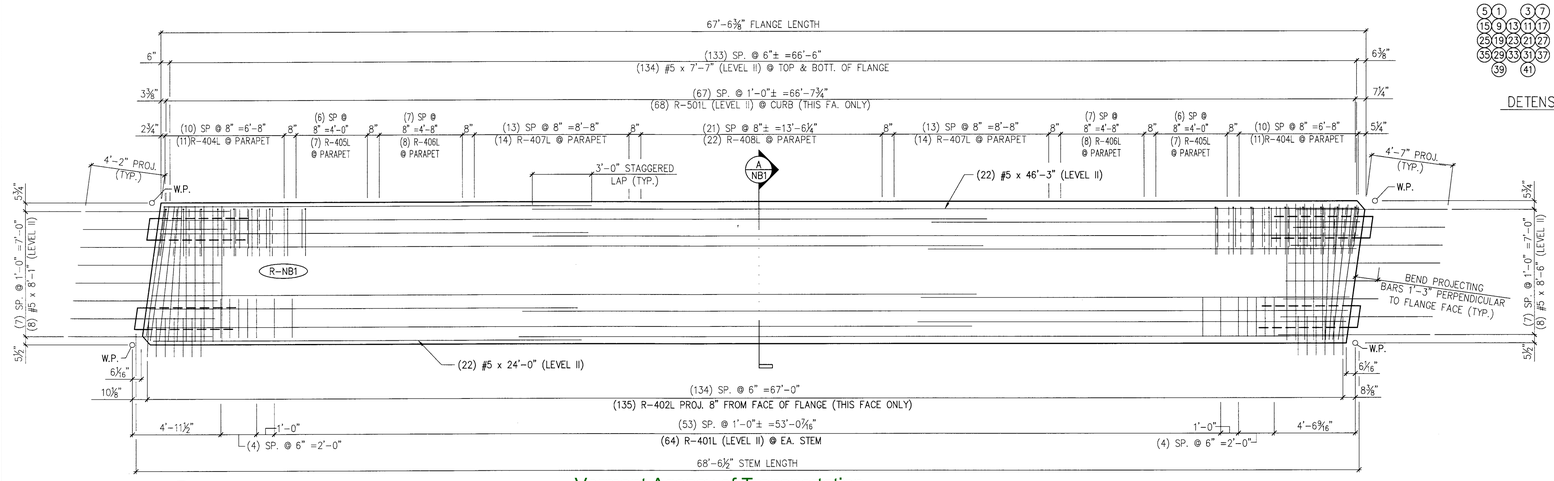
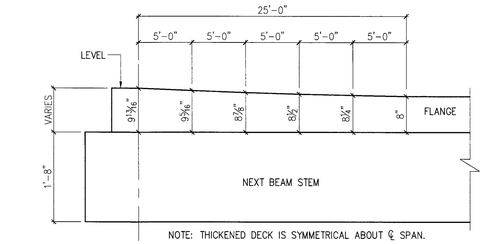



1 NB1 DIMENSIONAL PLAN VIEW IN FORM
1/4" =1'-0"




2 NB1 REINFORCING PLAN VIEW IN FORM
ALL DIMENSIONS INDICATED ARE PARALLEL OR PERPENDICULAR TO ℄ OF STEMS U.N.O.
1/4" =1'-0"



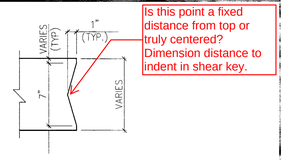

NOTE: THICKENED DECK IS SYMMETRICAL ABOUT ℄ SPAN.

THICKENED FLANGE @ BEAM ENDS
N.T.S.

DETENSIONING SCHEDULE
N.T.S.

PRESTRESSING NOTATIONS

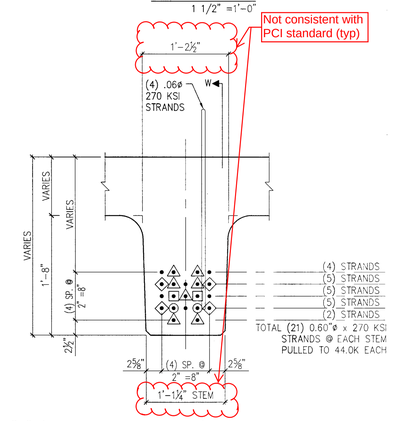
- • DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- ◇ DENOTES STRAIGHT STRANDS TO PROJECT 1'-6" FROM EA. END OF EA. STEM
- △ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- ▣ DENOTES STRAIGHT STRANDS TO BE DEBONDED 8'-0" FROM EA. END OF EA. STEM
- ⊙ DENOTES STRAIGHT STRANDS TO BE DEBONDED 10'-0" FROM EA. END OF EA. STEM



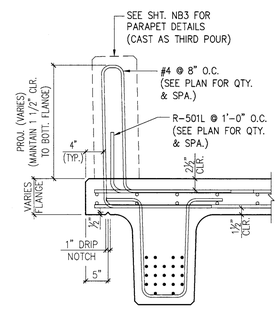

Is this point a fixed distance from top or truly centered? Dimension distance to indent in shear key.

DETAIL – "A"
1 1/2" =1'-0"

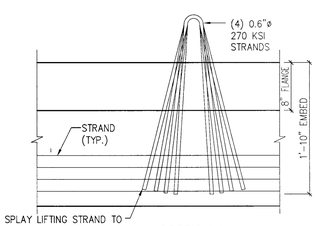
Not consistent with PCI standard (typ)




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




D NB1 REINFORCING @ PARAPET
3/4" =1'-0"




SECTION W
SCALE: 1" =1'-0"
NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.

Vermont Agency of Transportation
RECEIVED
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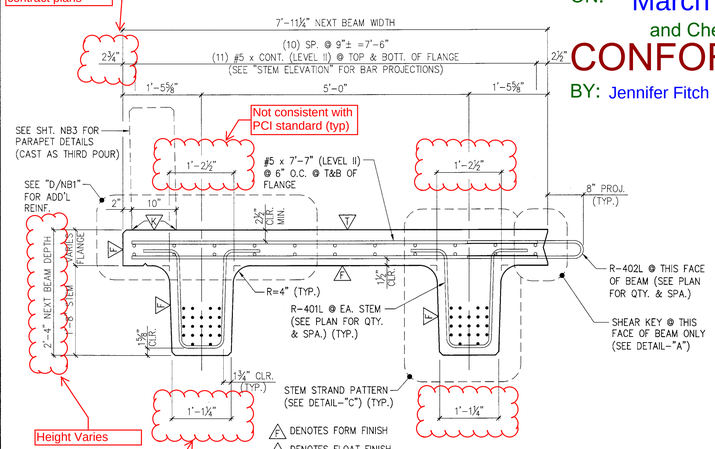
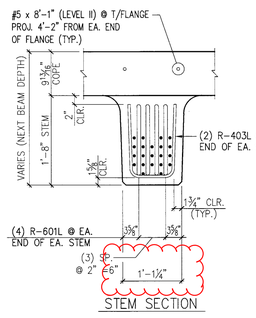
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

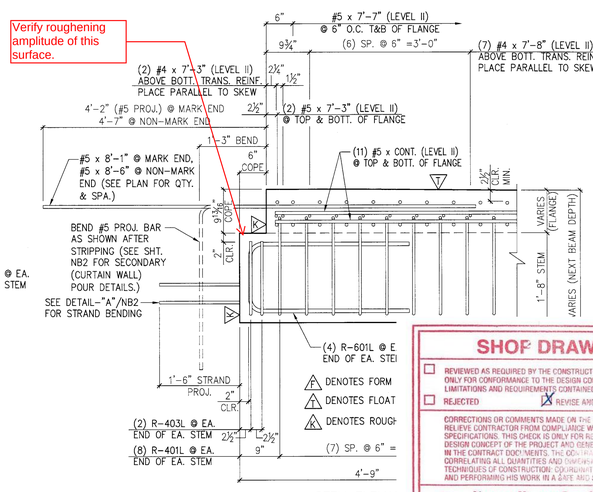
Provide proper clearance according to contract plans




A NB1 DIMENSIONAL & REINFORCING SECTION
3/4" =1'-0"




Verify roughening amplitude of this surface.




B NB1 END BLOCK STEM REINFORCING DETAILS
3/4" =1'-0"

Verify quantities, and bars. Provide bent bar diagrams and schedule

| MARK: | R-NB1 | QTY.: 1 | WT.: 49.7 T | VOL.: 24.12 cy |
|---|---|---|---|---|
| TOTAL WITH CURTAIN WALLS & PARAPET – WT.: | | | 69.2 T | VOL.: 34.28 cy |

MATERIAL LIST / NEXT BEAM

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-401L | #4 BENT BAR (LEVEL II, DUAL COATED) | 80 |
| 2 | R-402L | #4 BENT BAR (LEVEL II, DUAL COATED) | 135 |
| 3 | R-403L | #4 BENT BAR (LEVEL II, DUAL COATED) | 4 |
| 4 | R-404L | #4 BENT BAR (LEVEL II, DUAL COATED) | 22 |
| 5 | R-405L | #4 BENT BAR (LEVEL II, DUAL COATED) | 14 |
| 6 | R-406L | #4 BENT BAR (LEVEL II, DUAL COATED) | 16 |
| 7 | R-407L | #4 BENT BAR (LEVEL II, DUAL COATED) | 28 |
| 8 | R-408L | #4 BENT BAR (LEVEL II, DUAL COATED) | 22 |
| 9 | | | |
| 10 | R-501L | #5 BENT BAR (LEVEL II, DUAL COATED) | 68 |
| 11 | | #5 x 24'-0" (LEVEL II, DUAL COATED) | 22 |
| 12 | | #5 x 46'-3" (LEVEL II, DUAL COATED) | 22 |
| 13 | | | |
| 14 | R-601L | #6 BENT BAR (LEVEL II, DUAL COATED) | 8 |

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc. 7056 US Route 7 North Ferrisburgh, VT 05473 802.425.7788
Job Number: 57526.00
Reviewed By: J.J. WESTCOTT
Date: 04-07-2014

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STATE OF VERMONT AGENCY OF TRANSPORTATION
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VT ROUTE 73 (RURAL MAJOR COLLECTOR)
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DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JL./KLT
JOB NO: 23419-015
DWG. NO: NB1

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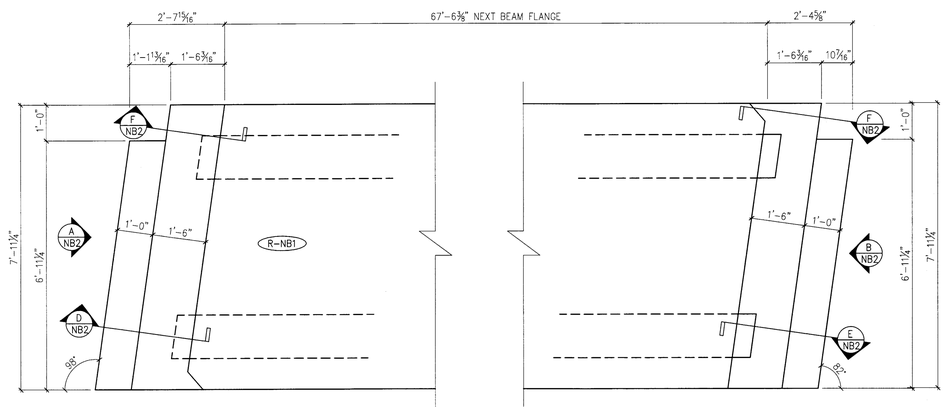
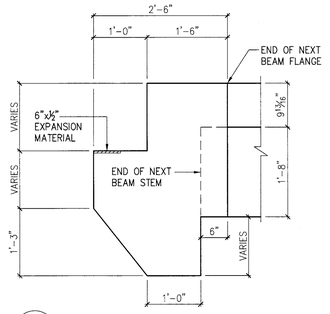
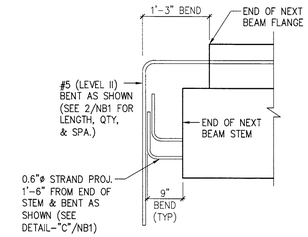


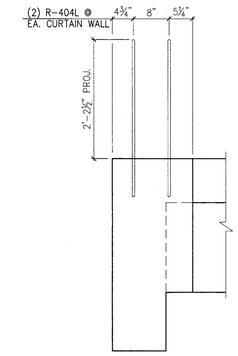

1 NB2 CURTAIN WALL PLAN VIEW IN FORM
(CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2" =1'-0"




C NB2 DIMENSIONAL CURTAIN WALL SECTION
3/4" =1'-0"

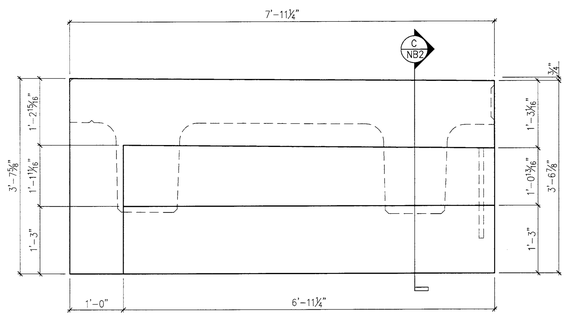



DETAIL "A" – END OF NEXT BEAM (TYP.)
(PRIOR TO CASTING CURTAIN WALL) 3/4" =1'-0"

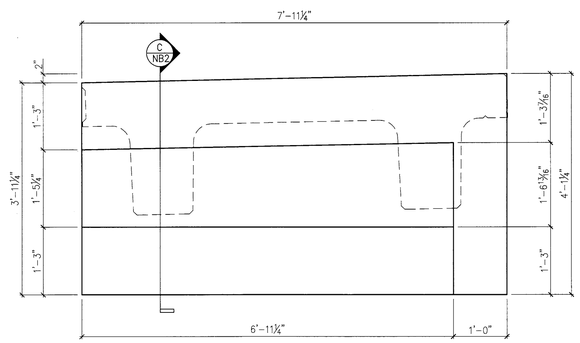



F NB2 CURTAIN WALL SECTION
3/4" =1'-0"

NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.

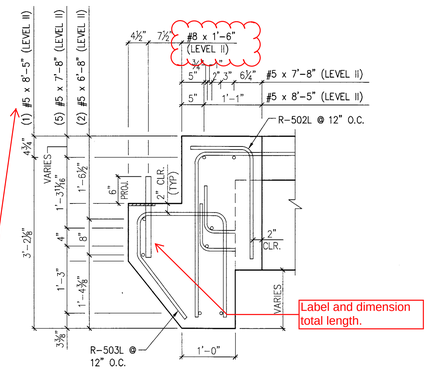



A NB2 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1'-0"




B NB2 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1'-0"

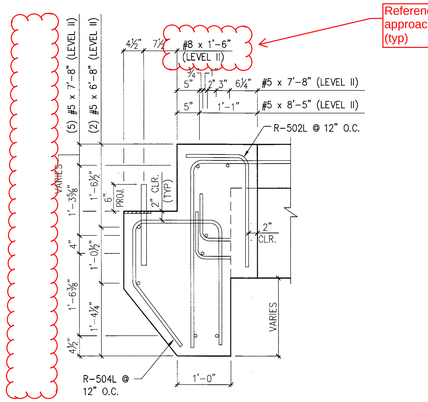
Confirm detail different from D/NB2




Label and dimension total length.

D NB2 REINFORCING CURTAIN WALL SECTION
3/4" =1'-0"

Reference approach sheet (typ)



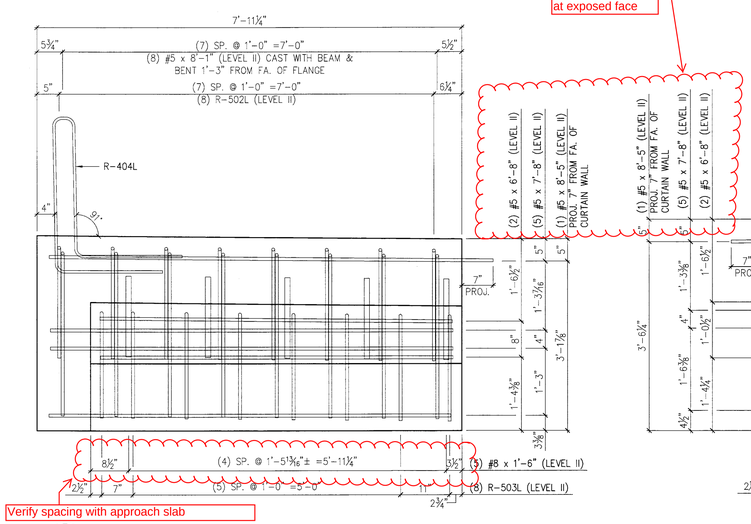

E NB2 REINFORCING CURTAIN WALL SECTION
3/4" =1'-0"

Vermont Agency of Transportation
Rochester BRF 0162(16) - BR 15 Precast Shops (R and R) ps

RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

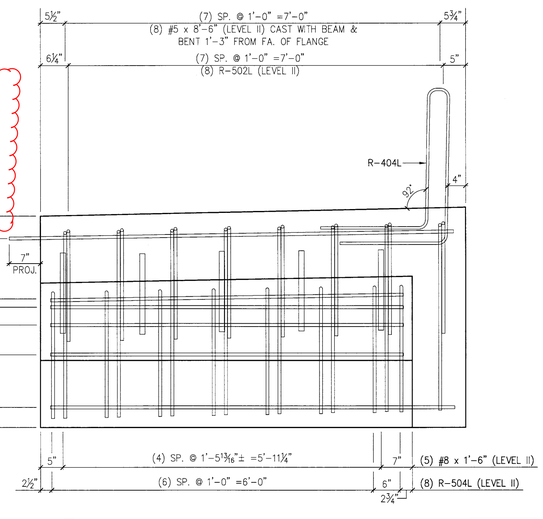
SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.

Confirm clearance at exposed face




Verify spacing with approach slab

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




B NB2 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1'-0"

| MARK: | R-NB1 | QTY.: 1 | WT.: 8.0 T | VOL.: 3.96 cy |
|---|---|---|---|---|

MATERIAL LIST / CURTAIN WALLS

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-404L | #4 BENT BAR (LEVEL II, DUAL COATED) | 4 |
| 2 | | | |
| 3 | R-502L | #5 BENT BAR (LEVEL II, DUAL COATED) | 16 |
| 4 | R-503L | #5 BENT BAR (LEVEL II, DUAL COATED) | 8 |
| 5 | R-504L | #5 BENT BAR (LEVEL II, DUAL COATED) | 8 |
| 6 | | | |
| 7 | | #5 x 6'-8" (LEVEL II, DUAL COATED) | 4 |
| 8 | | #5 x 7'-8" (LEVEL II, DUAL COATED) | 10 |
| 9 | | #5 x 8'-5" (LEVEL II, DUAL COATED) | 2 |
| 10 | | | |
| 11 | | #8 x 1'-6" (LEVEL II, DUAL COATED) | 10 |
| 12 | | | |
| 13 | | | |
| 14 | | | |

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 Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.2788

Job Number: 57526.00
Reviewed By: J.J. WESCOTT
Date: 04-07-2014

J.P. CARRARA & SONS, INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

| | |
|---|---|
| DATE: | MAR. 14, 2014 |
| SCALE: | NOTED |
| CHKD: | DFTM: AAT/RWS JJJ/KLT |
| JOB NO: | 23419-013 |
| DWG. NO: | NB2 |

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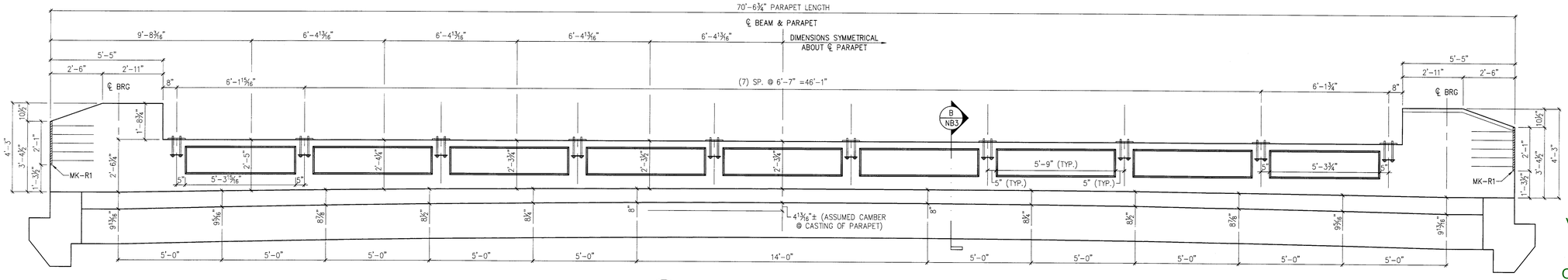
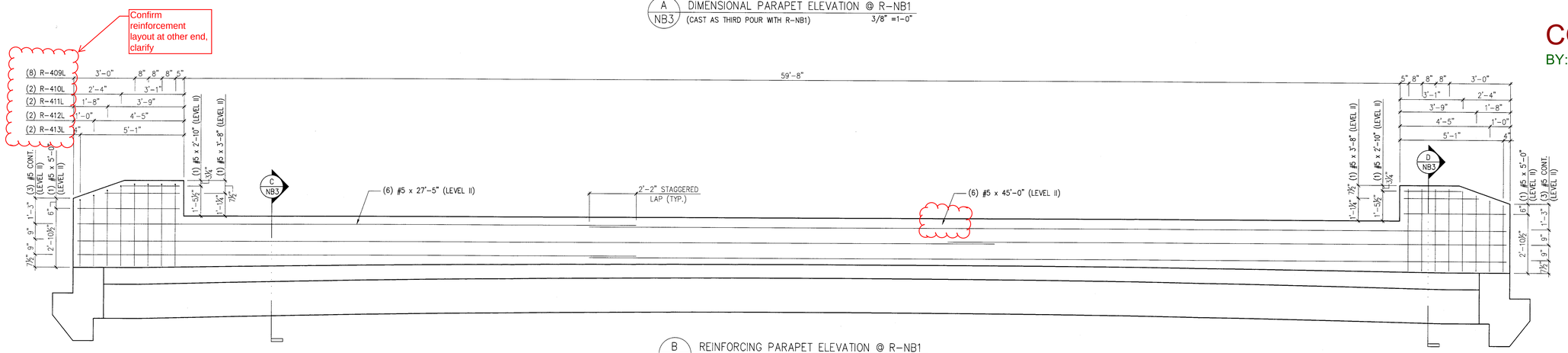
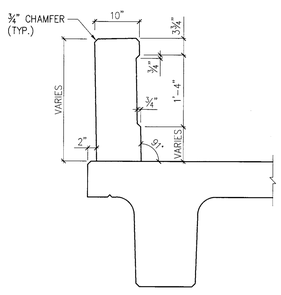


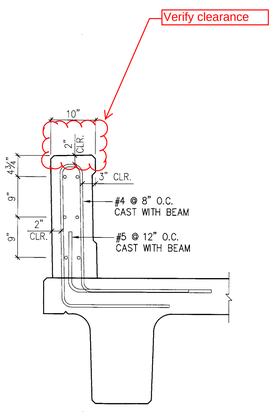

A NB3 DIMENSIONAL PARAPET ELEVATION @ R-NB1
(CAST AS THIRD POUR WITH R-NB1) 3/8" =1-0"



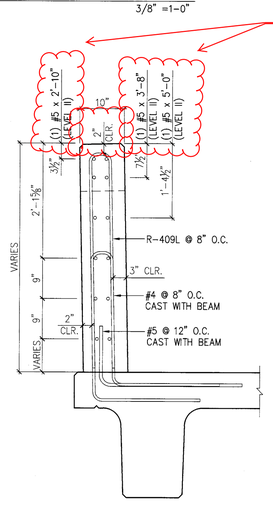

B NB3 REINFORCING PARAPET ELEVATION @ R-NB1
3/8" =1-0"




B NB3 DIMENSIONAL PARAPET SECTION
3/4" =1'-0"




C NB3 REINFORCING @ PARAPET
3/4" =1'-0"




D NB3 REINFORCING @ PARAPET
3/4" =1'-0"

Vermont Agency of Transportation
RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

SUBMITTED
MAR 14 2014
MIDDLEBURY, VT 05753

**SHOP DRAWING REVIEW**

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VHB Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

Job Number: 57526.00
Reviewed By: J.J. WESTCOTT
Date: 04-07-2014

| MARK: | R-NB1 | QTY.: 1 | WT.: 11.5 T | VOL.: 5.40 cy |
|---|---|---|---|---|

MATERIAL LIST / PARAPET

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-409L | #4 BENT BAR (LEVEL II, DUAL COATED) | 8 |
| 2 | R-410L | #4 BENT BAR (LEVEL II, DUAL COATED) | 2 |
| 3 | R-411L | #4 BENT BAR (LEVEL II, DUAL COATED) | 2 |
| 4 | R-412L | #4 BENT BAR (LEVEL II, DUAL COATED) | 2 |
| 5 | R-413L | #4 BENT BAR (LEVEL II, DUAL COATED) | 2 |
| 6 | | | |
| 7 | | #5 x 2'-10" (LEVEL II, DUAL COATED) | 2 |
| 8 | | #5 x 3'-8" (LEVEL II, DUAL COATED) | 2 |
| 9 | | #5 x 5'-0" (LEVEL II, DUAL COATED) | 2 |
| 10 | | #5 x 27'-5" (LEVEL II, DUAL COATED) | 6 |
| 11 | | #5 x 45'-0" (LEVEL II, DUAL COATED) | 6 |
| 12 | | | |
| 13 | | | |
| 14 | | | |

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

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

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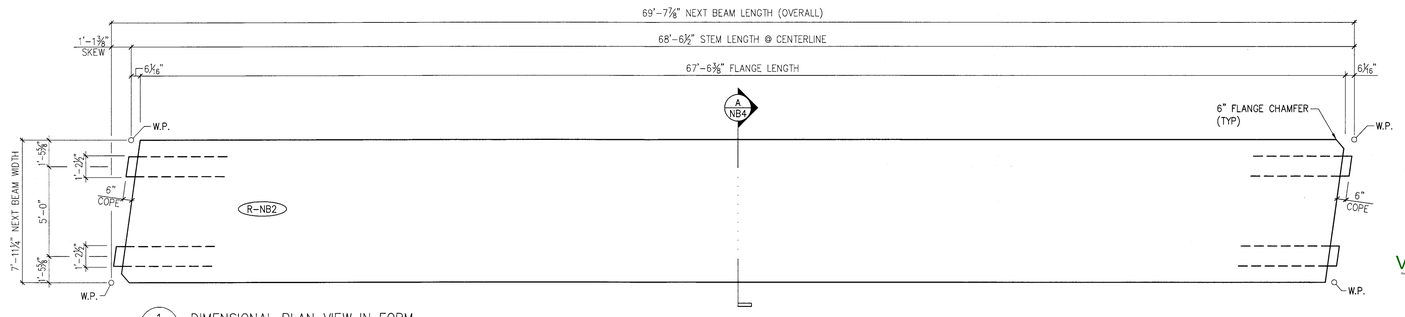
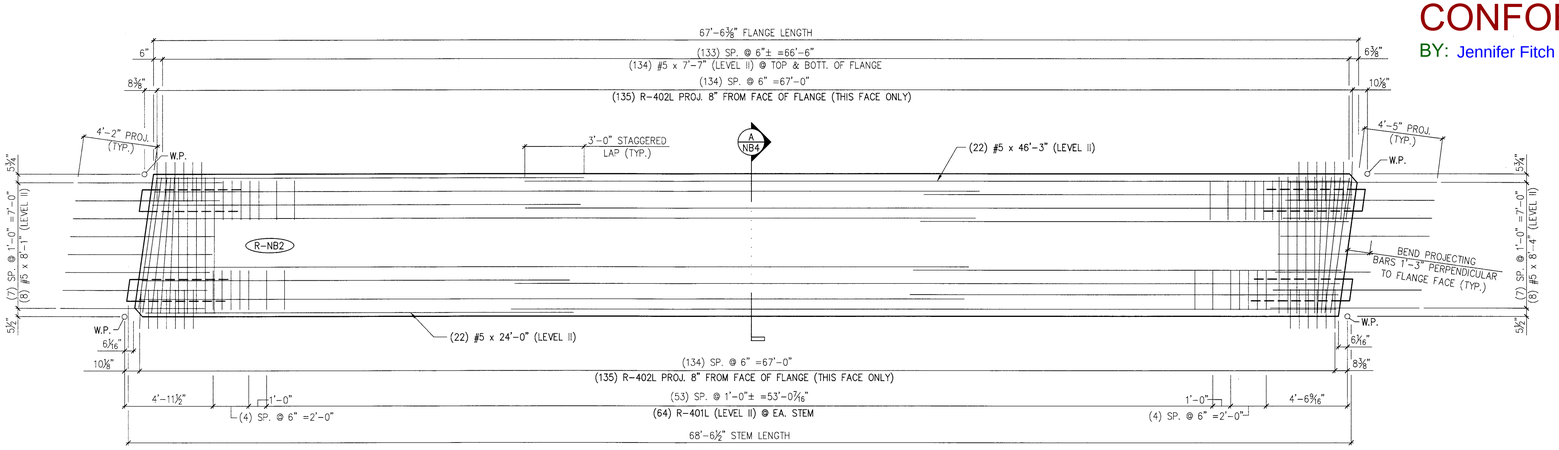
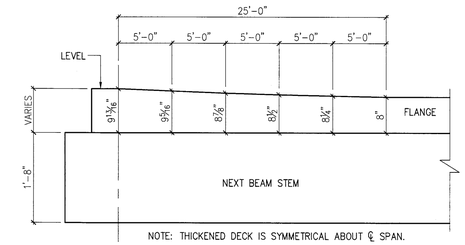


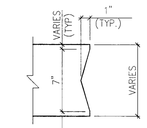

1 NB4 DIMENSIONAL PLAN VIEW IN FORM
1/4" =1'-0"




2 NB4 REINFORCING PLAN VIEW IN FORM
ALL DIMENSIONS INDICATED ARE PARALLEL OR PERPENDICULAR TO ℄ OF STEMS U.N.O.
1/4" =1'-0"




THICKENED FLANGE @ BEAM ENDS
N.T.S.

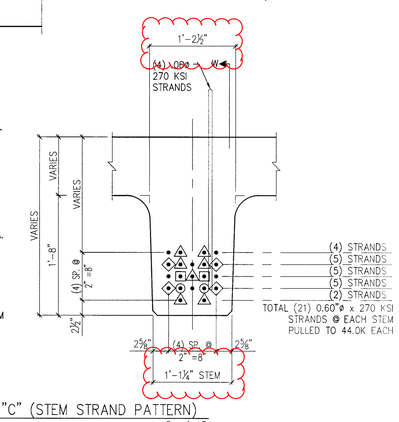



DETAIL – "A"
1 1/2" =1'-0"

Vermont Agency of Transportation
RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

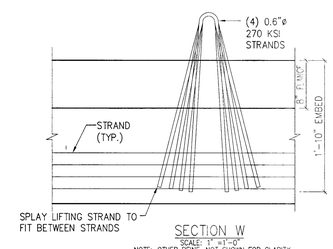
PRESTRESSING NOTATIONS

- DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO PROJECT 1'-6" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" 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 10'-0" FROM EA. END OF EA. STEM



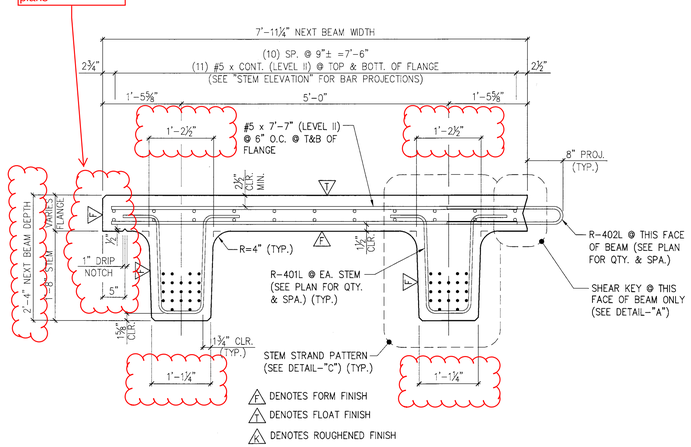

DETAIL – "C" (STEM STRAND PATTERN)
1" =1'-0"

DETENSIONING SCHEDULE
N.T.S.



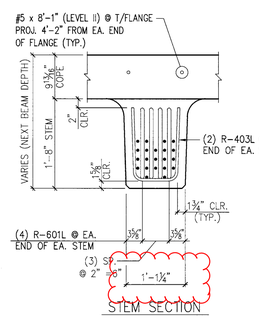

SECTION W
SCALE: 1" =1'-0"
NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.

Verify with contract plans

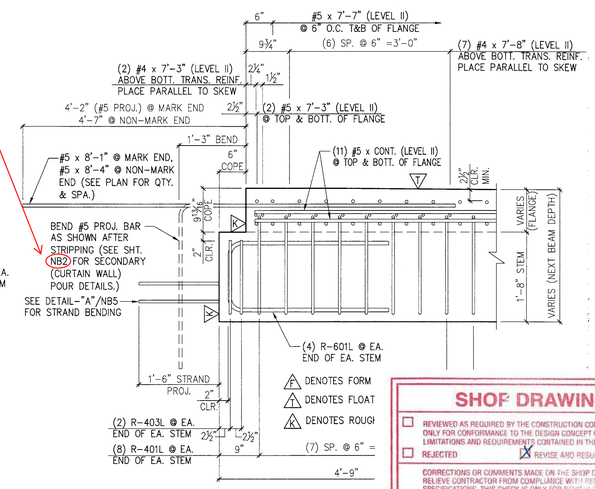



A NB4 DIMENSIONAL & REINFORCING SECTION
3/4" =1'-0"

Verify sheet number with detail




STEM SECTION




STEM ELEVA

B NB4 END BLOCK STEM REINFORCING DETAILS
3/4" =1'-0"

SUBMITTED
MAR 14 2014
J. P. CARRARA & SONS, INC.

SHOP DRAWING REVIEW

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Vanessa Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788
Job Number: 57526.00
Reviewed By: J.J. WESTCOTT
Date: 04-07-2014

| MARK: | R-NB2 | QTY.: | 1 | WT.: | 49.7 T | VOL.: | 24.12 cy |
|---|---|---|---|---|---|---|---|
| TOTAL WITH CURTAIN WALLS – | | | | WT.: | 57.7 T | VOL.: | 32.48 cy |

MATERIAL LIST / NEXT BEAM

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-401L | #4 BENT BAR (LEVEL II, DUAL COATED) | 80 |
| 2 | R-402L | #4 BENT BAR (LEVEL II, DUAL COATED) | 135 |
| 3 | R-403L | #4 BENT BAR (LEVEL II, DUAL COATED) | 4 |
| 4 | R-404L | #4 BENT BAR (LEVEL II, DUAL COATED) | 22 |
| 5 | R-405L | #4 BENT BAR (LEVEL II, DUAL COATED) | 14 |
| 6 | R-406L | #4 BENT BAR (LEVEL II, DUAL COATED) | 16 |
| 7 | R-407L | #4 BENT BAR (LEVEL II, DUAL COATED) | 28 |
| 8 | R-408L | #4 BENT BAR (LEVEL II, DUAL COATED) | 22 |
| 9 | | | |
| 10 | R-501L | #5 BENT BAR (LEVEL II, DUAL COATED) | 68 |
| 11 | | #5 x 24'-0" (LEVEL II, DUAL COATED) | 22 |
| 12 | | #5 x 46'-3" (LEVEL II, DUAL COATED) | 22 |
| 13 | | | |
| 14 | R-601L | #6 BENT BAR (LEVEL II, DUAL COATED) | 8 |

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
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BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

| | |
|---|---|
| DATE: | MAR. 14, 2014 |
| SCALE: | NOTED |
| CHKD: | DFTM: AAT/RWS JAJ/KLT |
| JOB NO: | 23419-013 |
| DWG. NO: | NB4 |

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Vermont Agency of Transportation

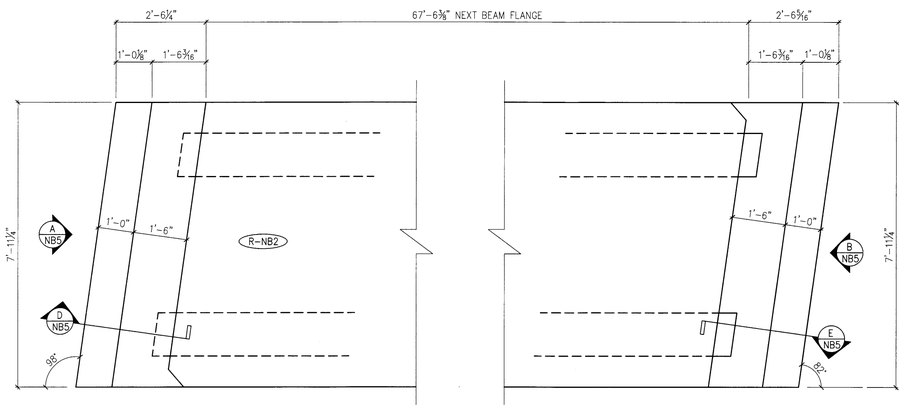
RECEIVED

ON: March 17, 2014

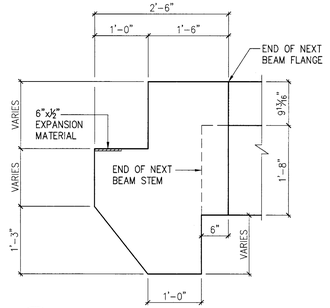
and Checked for

CONFORMANCE

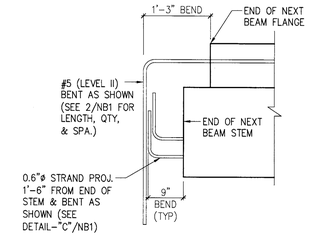
BY: Jennifer Fitch DATE: 04/08/2014




1 NB5 CURTAIN WALL PLAN VIEW IN FORM
(CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2" =1'-0"

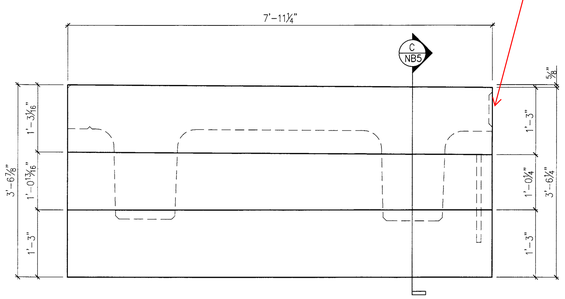



C NB5 DIMENSIONAL CURTAIN WALL SECTION
3/4" =1'-0"

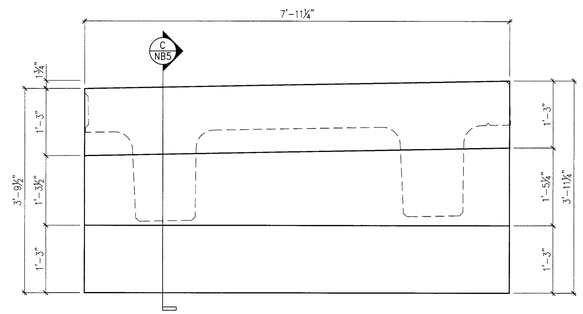



DETAIL "A" – END OF NEXT BEAM (TYP.)
(PRIOR TO CASTING CURTAIN WALL) 3/4" =1'-0"

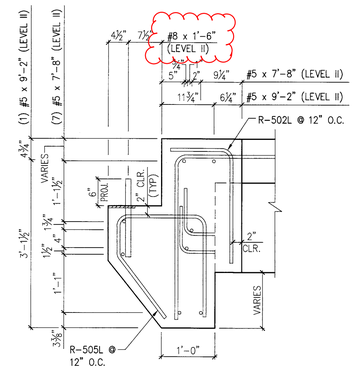
Does not match shear key details on other sheets (typ)



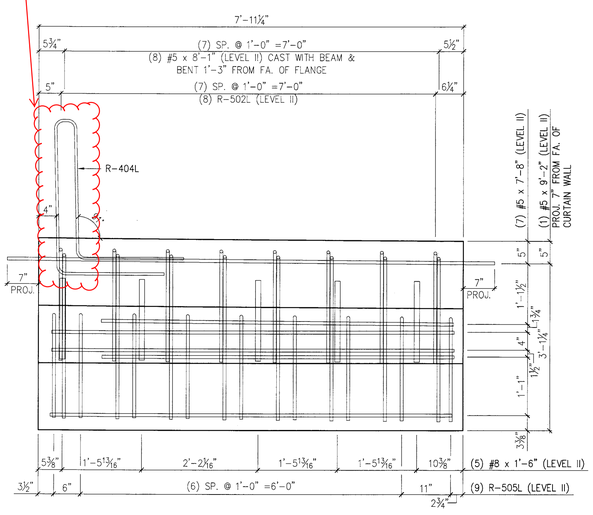

A NB5 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1'-0"



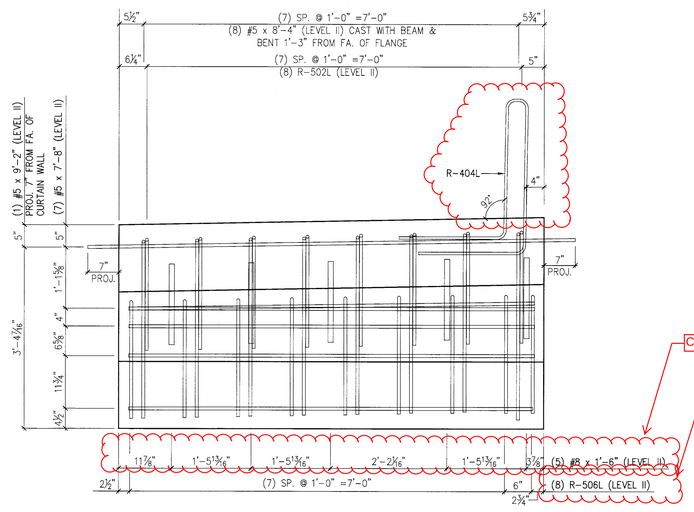

B NB5 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1'-0"



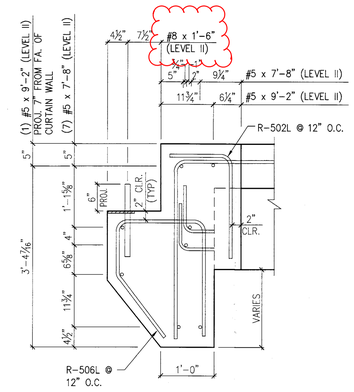

D NB5 REINFORCING CURTAIN WALL SECTION
3/4" =1'-0"




A NB5 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1'-0"




B NB5 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1'-0"




E NB5 REINFORCING CURTAIN WALL SECTION
3/4" =1'-0"

Confirm spacing with approach slab

Verify quantity

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

Job Number: 57536.00
Reviewed By: J.J. WESTCOTT
Date: 04-07-2014

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

| MARK: | R-NB2 | QTY.: 1 | WT.: 8.0 T | VOL.: 3.96 cy |
|---|---|---|---|---|

MATERIAL LIST / CURTAIN WALLS

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-404L | #4 BENT BAR (LEVEL II, DUAL COATED) | 4 |
| 2 | | | |
| 3 | R-502L | #5 BENT BAR (LEVEL II, DUAL COATED) | 16 |
| 4 | R-505L | #5 BENT BAR (LEVEL II, DUAL COATED) | 8 |
| 5 | R-506L | #5 BENT BAR (LEVEL II, DUAL COATED) | 8 |
| 6 | | | |
| 7 | | #5 x 7'-8" (LEVEL II, DUAL COATED) | 14 |
| 8 | | #5 x 9'-2" (LEVEL II, DUAL COATED) | 2 |
| 9 | | | |
| 10 | | #8 x 1'-6" (LEVEL II, DUAL COATED) | 10 |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2454 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

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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.: 15 PROJECT NO.: BRF 0162 (16)

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

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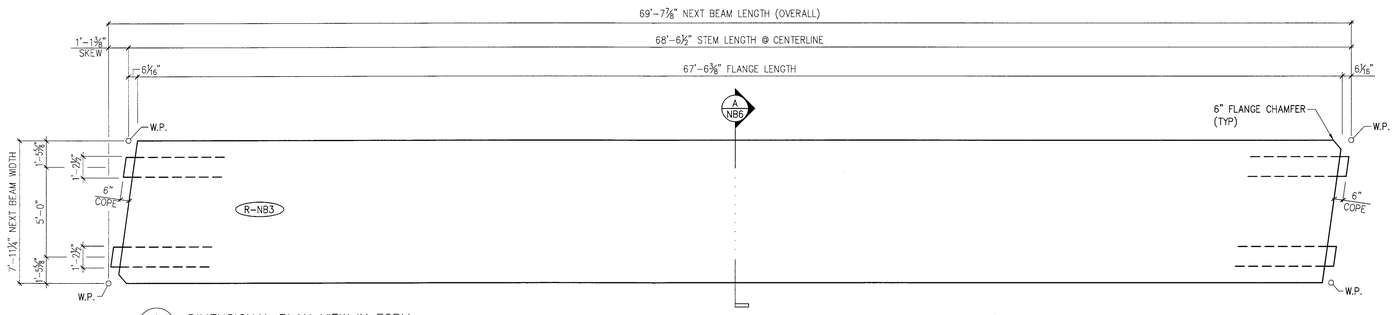
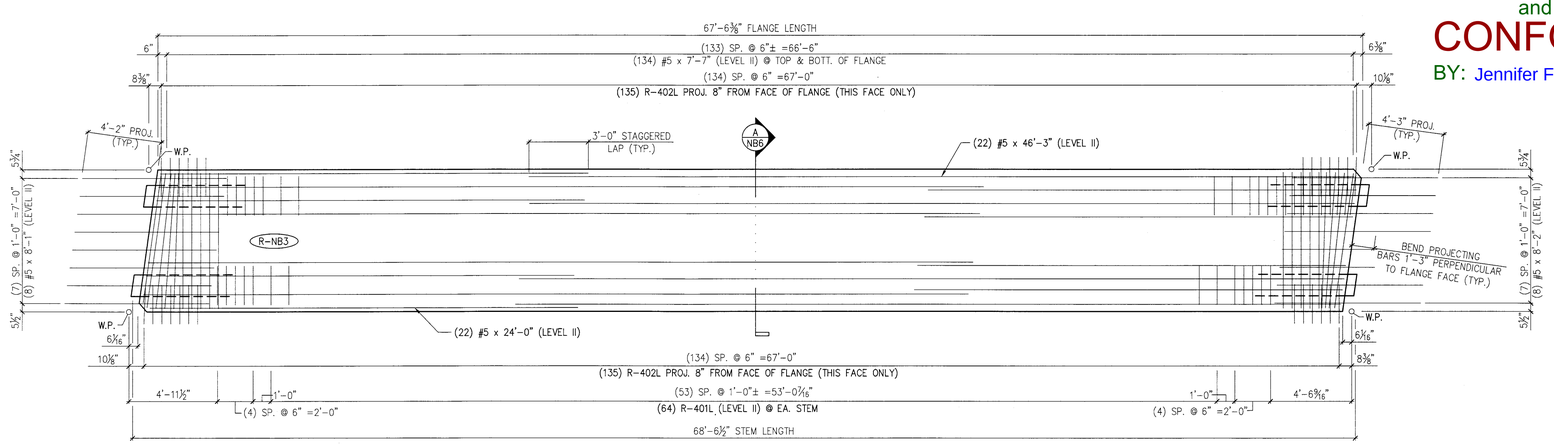
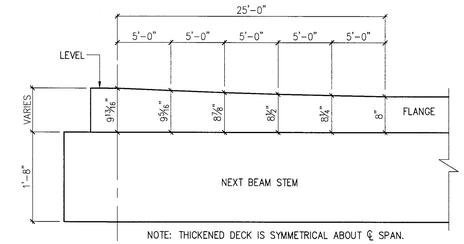



1 NB6 DIMENSIONAL PLAN VIEW IN FORM
1/4" =1'-0"

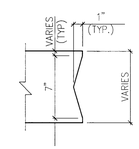



2 NB6 REINFORCING PLAN VIEW IN FORM
ALL DIMENSIONS INDICATED ARE PARALLEL OR PERPENDICULAR TO ℄ OF STEMS U.N.O.
1/4" =1'-0"




NOTE: THICKENED DECK IS SYMMETRICAL ABOUT ℄ SPAN.

THICKENED FLANGE @ BEAM ENDS
N.T.S.

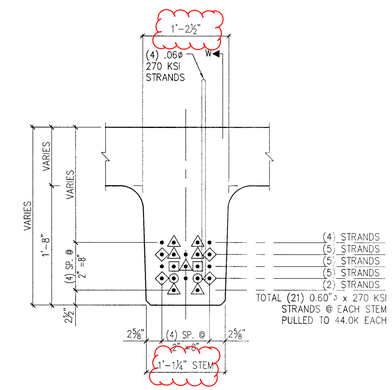



DETAIL – "A"
1 1/2" =1'-0"

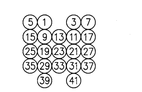
Vermont Agency of Transportation
Number BRF 0162(16) Rochester BRIDGE
RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

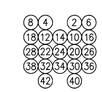
PRESTRESSING NOTATIONS

- • DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- ◇ DENOTES STRAIGHT STRANDS TO PROJECT 1'-6" FROM EA. END OF EA. STEM
- △ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" 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 10'-0" FROM EA. END OF EA. STEM

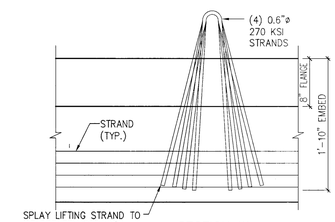



DETAIL – "C" (STEM STRAND PATTERN)
1" =1'-0"

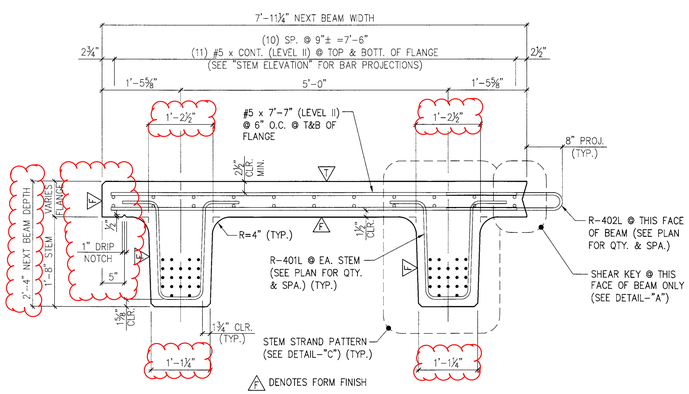


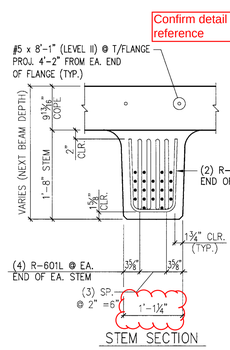

DETENSIONING SCHEDULE
N.T.S.



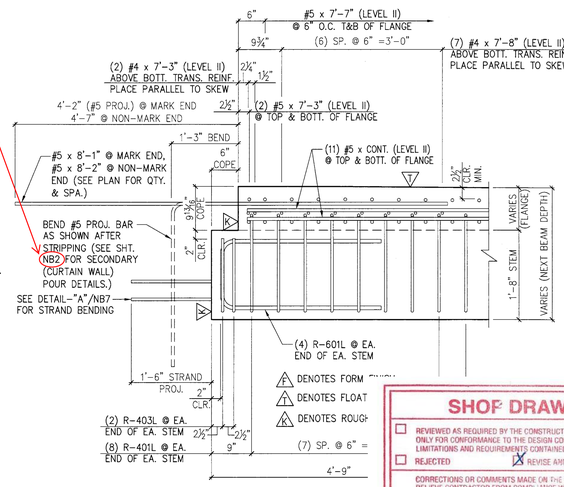

SECTION W
SCALE: 1" =1'-0"
NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.




A NB6 DIMENSIONAL & REINFORCING SECTION
3/4" =1'-0"




STEM SECTION




STEM ELEVA

B NB6 END BLOCK STEM REINFORCING DETAILS
3/4" =1'-0"

SUBMITTED
MAR 14 2014
J. P. CARRARA & SONS, INC.

| MARK: | R-NB3 | QTY.: | 1 | WT.: | 49.7 T | VOL.: | 24.12 cy |
|---|---|---|---|---|---|---|---|
| TOTAL WITH CURTAIN WALLS – | | | | WT.: | 57.7 T | VOL.: | 32.48 cy |

MATERIAL LIST / NEXT BEAM

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-401L | #4 BENT BAR (LEVEL II, DUAL COATED) | 80 |
| 2 | R-402L | #4 BENT BAR (LEVEL II, DUAL COATED) | 135 |
| 3 | R-403L | #4 BENT BAR (LEVEL II, DUAL COATED) | 4 |
| 4 | R-404L | #4 BENT BAR (LEVEL II, DUAL COATED) | 22 |
| 5 | R-405L | #4 BENT BAR (LEVEL II, DUAL COATED) | 14 |
| 6 | R-406L | #4 BENT BAR (LEVEL II, DUAL COATED) | 16 |
| 7 | R-407L | #4 BENT BAR (LEVEL II, DUAL COATED) | 28 |
| 8 | R-408L | #4 BENT BAR (LEVEL II, DUAL COATED) | 22 |
| 9 | | | |
| 10 | R-501L | #5 BENT BAR (LEVEL II, DUAL COATED) | 68 |
| 11 | | #5 x 24'-0" (LEVEL II, DUAL COATED) | 22 |
| 12 | | #5 x 46'-3" (LEVEL II, DUAL COATED) | 22 |
| 13 | | | |
| 14 | R-601L | #6 BENT BAR (LEVEL II, DUAL COATED) | 8 |

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 THIS WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

VHB Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788
Job Number: 57526.00
Reviewed By: J.J. WESTCOTT
Date: 04-07-2014

Eriksson technologies

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

| | |
|---|---|
| DATE: | MAR. 14, 2014 |
| SCALE: | NOTED |
| CHKD: | DFTM: AAT/RWS JJJ/KLT |
| JOB NO: | 23419-013 |
| DWG. NO: | NB6 |

S:\Engineering Services\Carrara\14002 Rochester BR 15 & 16\Production Drawings\AutoCAD Files\R-NB3.dwg, 3/14/2014 4:26:25 PM

Vermont Agency of Transportation

Rochester BRF 0162(16) - BR 15 Precast Shops (N and R) pc

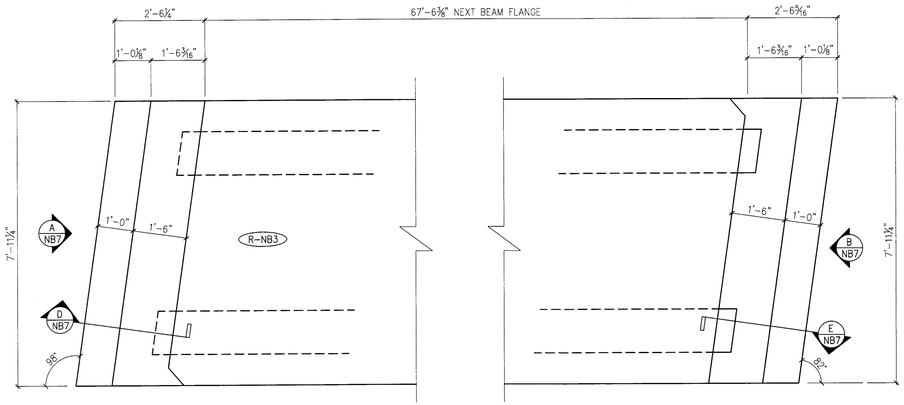
RECEIVED

ON: March 17, 2014

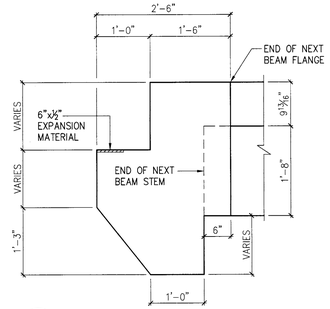
and Checked for

CONFORMANCE

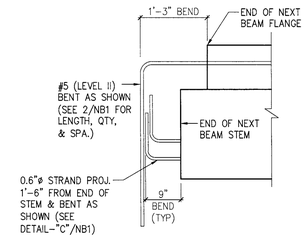
BY: Jennifer Fitch DATE: 04/08/2014



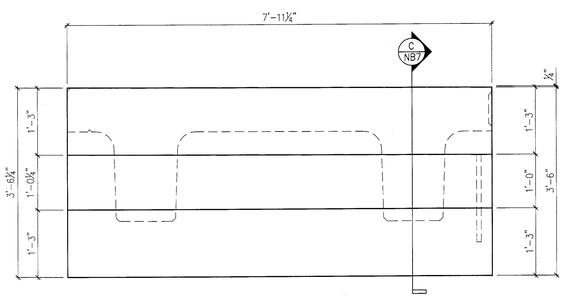

1 NB7 CURTAIN WALL PLAN VIEW IN FORM (CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2" =1'-0"



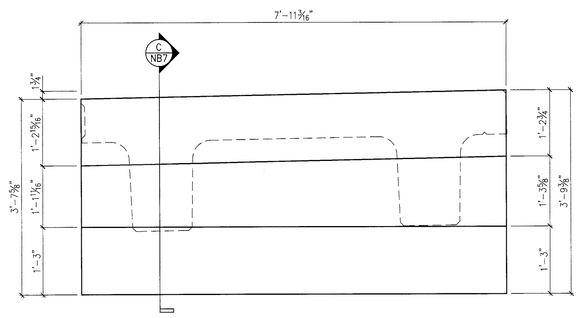

C NB7 DIMENSIONAL CURTAIN WALL SECTION 3/4" =1-0"



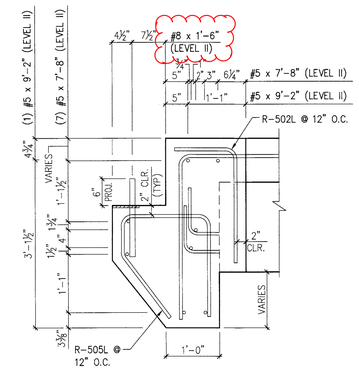

DETAIL "A" – END OF NEXT BEAM (TYP.) (PRIOR TO CASTING CURTAIN WALL) 3/4" =1'-0"



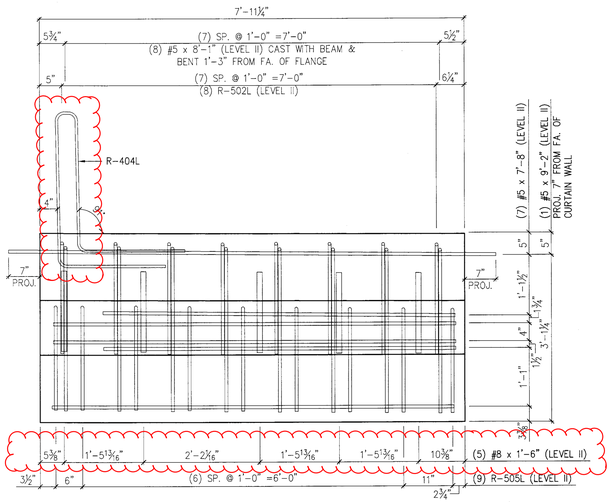

A NB7 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #1 3/4" =1-0"



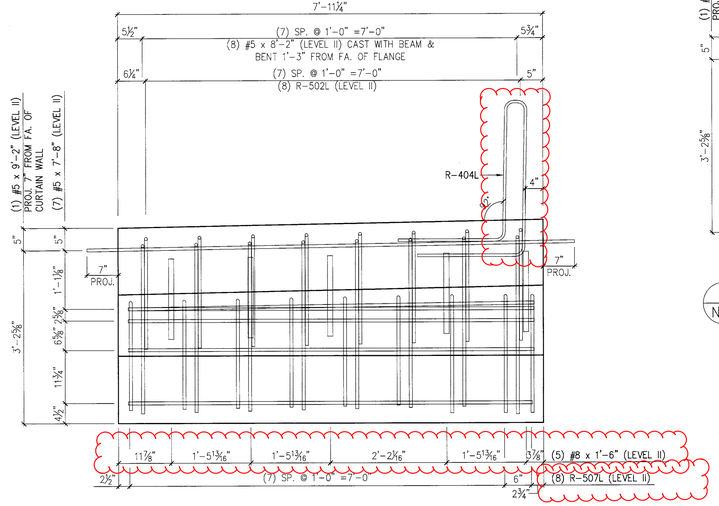

B NB7 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #2 3/4" =1-0"



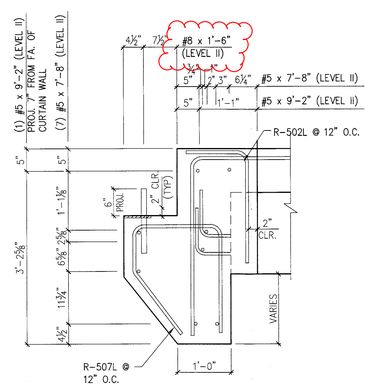

D NB7 REINFORCING CURTAIN WALL SECTION 3/4" =1-0"




A NB7 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #1 3/4" =1-0"




B NB7 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #2 3/4" =1-0"




E NB7 REINFORCING CURTAIN WALL SECTION 3/4" =1-0"

## SHOP DRAWING REVIEW

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Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

Job Number 57526.00
Reviewed By J.J. WESCOTT
Date: 04-07-2014

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.

| MARK: | R-NB1 | QTY.: 1 | WT.: 8.0 T | VOL.: 3.96 cy |
|---|---|---|---|---|

MATERIAL LIST / CURTAIN WALLS

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-404L | #4 BENT BAR (LEVEL II, DUAL COATED) | 4 |
| 2 | | | |
| 3 | R-502L | #5 BENT BAR (LEVEL II, DUAL COATED) | 16 |
| 4 | R-505L | #5 BENT BAR (LEVEL II, DUAL COATED) | 8 |
| 5 | R-507L | #5 BENT BAR (LEVEL II, DUAL COATED) | 8 |
| 6 | | | |
| 7 | | #5 x 7'-8" (LEVEL II, DUAL COATED) | 14 |
| 8 | | #5 x 9'-2" (LEVEL II, DUAL COATED) | 2 |
| 9 | | | |
| 10 | | #8 x 1'-6" (LEVEL II, DUAL COATED) | 10 |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RYS JJ/KLT
JOB NO: 23419-013
DWG. NO: NB7

Eriksson technologies
813.989.3317
TAMPA, FL LRFD.COM
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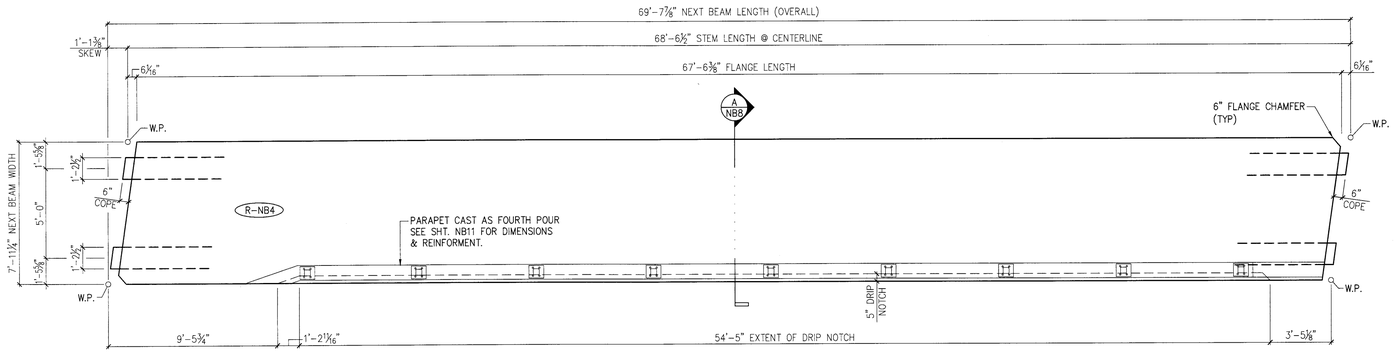
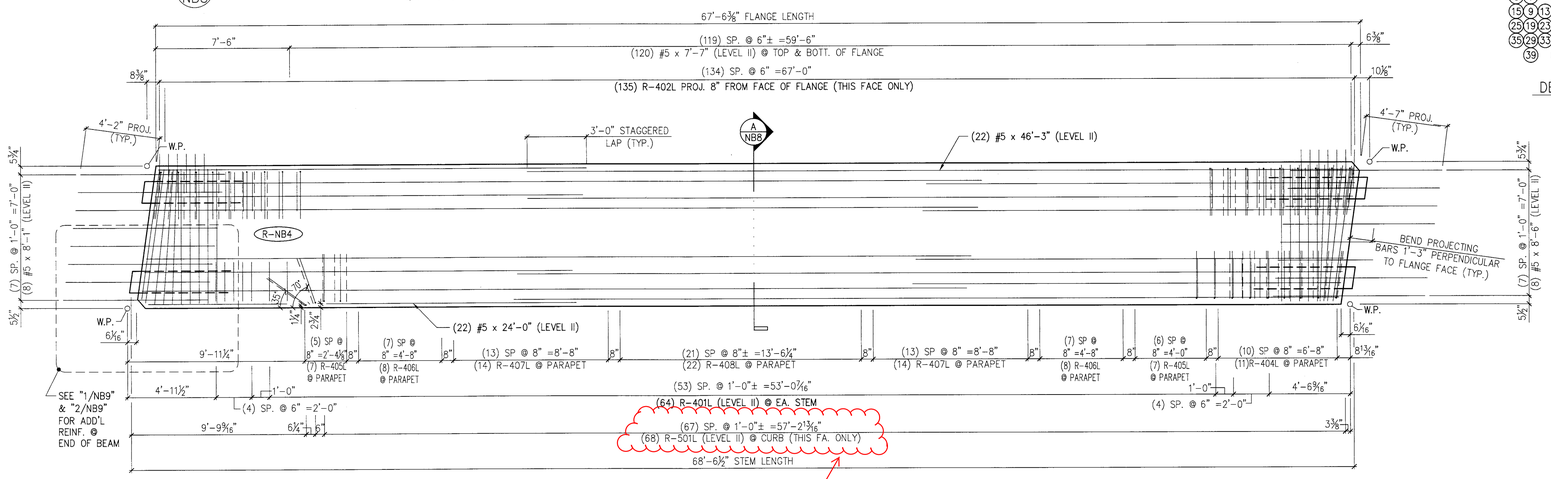
S:\Engineering Services\Carrara\14002 Rochester BR 15 & 16\Production Drawings\AutoCAD Files\R-NB3.dwg, 3/14/2014 4:26:26 PM

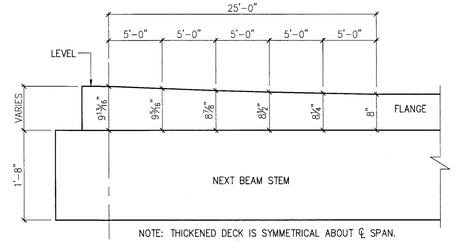



1 NB8 DIMENSIONAL PLAN VIEW IN FORM
1/4" =1'-0"



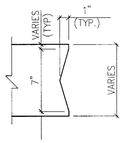

2 NB8 REINFORCING PLAN VIEW IN FORM
ALL DIMENSIONS INDICATED ARE PARALLEL OR PERPENDICULAR TO ℄ OF STEMS U.N.O.
1/4" =1'-0"

Verify quantity and spacing with sheet NB9




NOTE: THICKENED DECK IS SYMMETRICAL ABOUT ℄ SPAN.

THICKENED FLANGE @ BEAM ENDS
N.T.S.

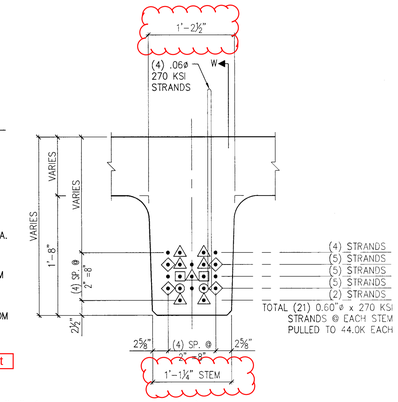



DETAIL – "A"
1 1/2" =1'-0"

PRESTRESSING NOTATIONS

- DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- ◇ DENOTES STRAIGHT STRANDS TO PROJECT 1'-6" FROM EA. END OF EA. STEM
- △ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" 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 10'-0" FROM EA. END OF EA. STEM

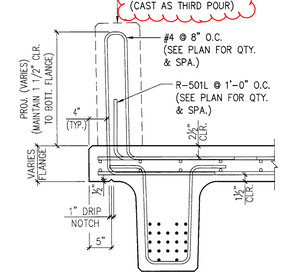
DETENSIONING SCHEDULE
N.T.S.



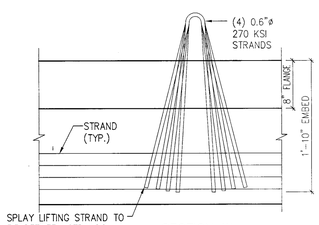

DETAIL – "C" (STEM STRAND PATTERN)
1" =1'-0"

SEE SHT. NB3 FOR PARAPET DETAILS (CAST AS THIRD POUR)

Verify detail sheet

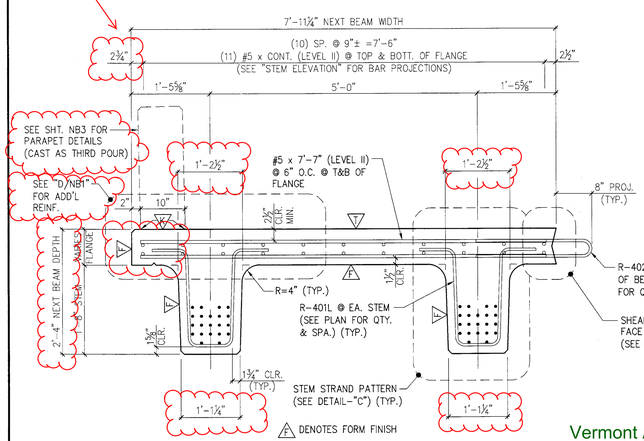



D NB8 REINFORCING @ PARAPET
3/4" =1'-0"

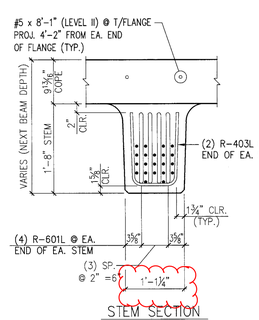



SECTION W
SCALE: 1" =1'-0"
NOTE: OTHER PARTS NOT SHOWN FOR CLARITY

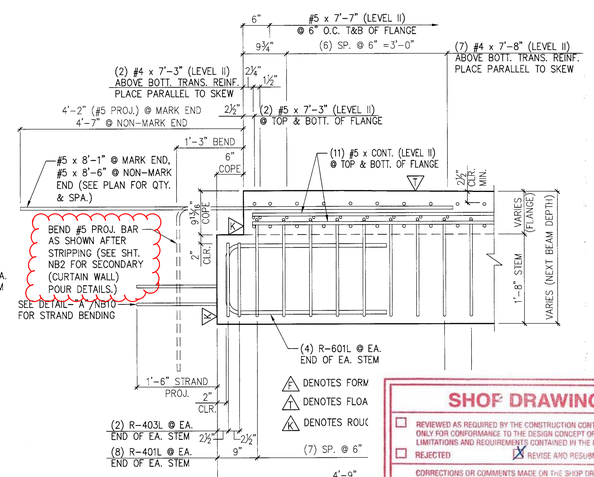
Confirm clearance




A NB8 DIMENSIONAL & REINFORCING SECTION
3/4" =1'-0"




STEM SECTION




STEM ELEVA

B NB8 END BLOCK STEM REINFORCING DETAILS
3/4" =1'-0"

| MARK: | R-NB4 | QTY.: 1 | WT.: 47.1 T | VOL.: 23.12 cy |
|---|---|---|---|---|
| TOTAL WITH CURTAIN WALLS & PARAPET – WT.: | | | 71.6 T | VOL.: 35.20 cy |

MATERIAL LIST / NEXT BEAM

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-401L | #4 BENT BAR (LEVEL II, DUAL COATED) | 80 |
| 2 | R-402L | #4 BENT BAR (LEVEL II, DUAL COATED) | 135 |
| 3 | R-403L | #4 BENT BAR (LEVEL II, DUAL COATED) | 4 |
| 4 | R-404L | #4 BENT BAR (LEVEL II, DUAL COATED) | 22 |
| 5 | R-405L | #4 BENT BAR (LEVEL II, DUAL COATED) | 14 |
| 6 | R-406L | #4 BENT BAR (LEVEL II, DUAL COATED) | 16 |
| 7 | R-407L | #4 BENT BAR (LEVEL II, DUAL COATED) | 28 |
| 8 | R-408L | #4 BENT BAR (LEVEL II, DUAL COATED) | 22 |
| 9 | | | |
| 10 | R-501L | #5 BENT BAR (LEVEL II, DUAL COATED) | 68 |
| 11 | | #5 x 24'-0" | 22 |
| 12 | | #5 x 46'-3" | 22 |
| 13 | | | |
| 14 | R-601L | #6 BENT BAR (LEVEL II, DUAL COATED) | 8 |

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS INC.

SHOP DRAWING REVIEW

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☐ REJECTED ☒ REVISE AND RESUBMIT ☐ FURNISH AS CORRECTED

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Reviewed By J.J. WESCOTT
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BY: Jennifer Fitch DATE: 04/08/2014

Eriksson technologies

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J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JJJ/KLT
JOB NO: 23419-013
DWG. NO: NB8

S:\Engineering Services\Carrara\14002 Rochester BR 15 & 16\Production Drawings\AutoCAD Files\R-NB4.dwg, 3/14/2014 4:26:30 PM

Vermont Agency of Transportation

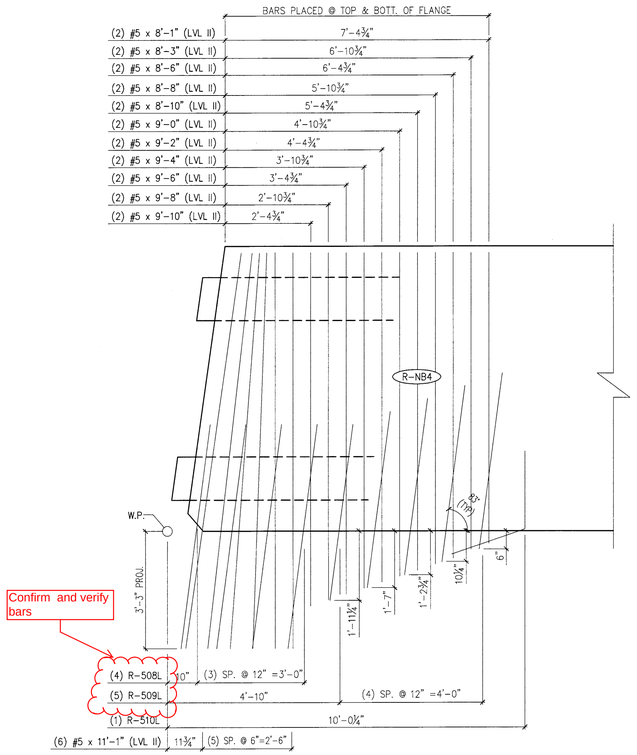
RECEIVED

ON: March 17, 2014

and Checked for

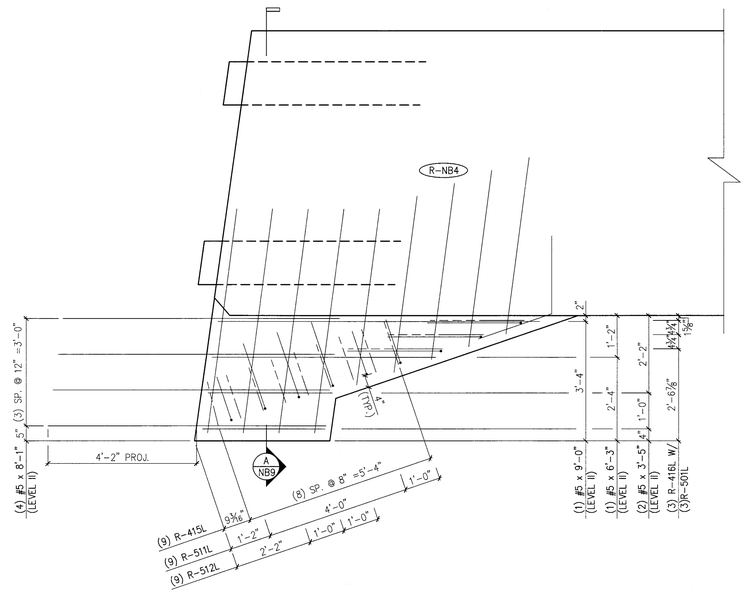
CONFORMANCE

BY: Jennifer Fitch DATE: 04/08/2014



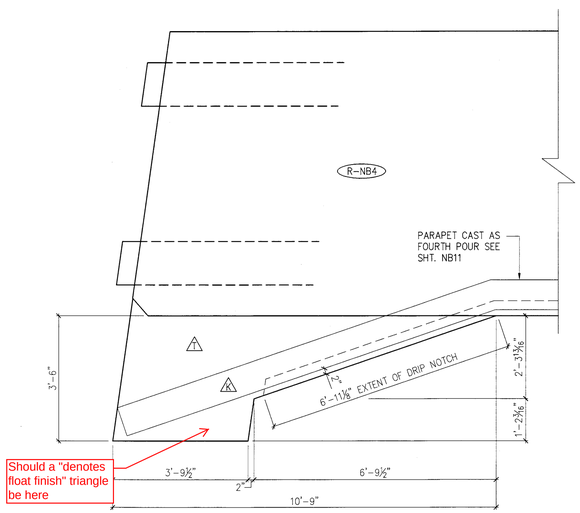

1 NB9 END OF BEAM DETAIL 1/2" =1'-0"

NOTE: BARS SHOWN IN THIS DETAIL TO BE CAST WITH BEAM.




3 NB9 REINFORCING FLARED OVERHANG PLAN IN FORM 1/2" =1'-0"

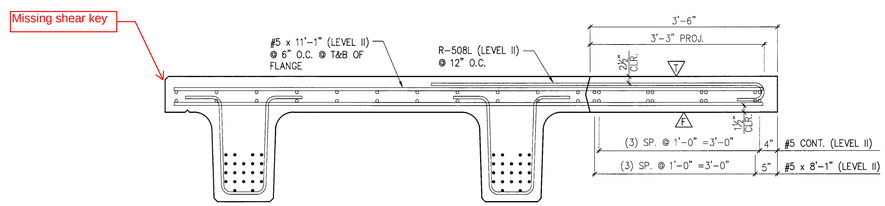
NOTE: STRAIGHT BARS PROJ. FROM BEAM NOT SHOWN FOR CLARITY.




△ DENOTES FLOAT FINISH

△ DENOTES ROUGHENED FINISH

2 NB9 DIMENSIONAL FLARED OVERHANG PLAN IN FORM (CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2" =1'-0"




△ DENOTES FORM FINISH

△ DENOTES FLOAT FINISH

△ DENOTES ROUGHENED FINISH

A NB9 DIMENSIONAL & REINFORCING SECTION 3/4" =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.

☐ REJECTED ☒ REVISE AND RESUBMIT ☐ FURNISH AS CORRECTED

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VHB Vanasse Hangen Brustlin, Inc. 7056 US Route 7 North Ferrisburgh, VT 05473 802.425.7788

Job Number: 57526.00
Reviewed By: J.J. WESTCOTT
Date: 04-07-2014

| MARK: | R-NB4 | QTY.: 1 | WT.: 1.3 T | VOL.: 0.5 cy |
|---|---|---|---|---|

MATERIAL LIST / OVERHANG

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-401L | #4 BENT BAR (LEVEL II, DUAL COATED) | 80 |
| 2 | R-402L | #4 BENT BAR (LEVEL II, DUAL COATED) | 135 |
| 3 | R-403L | #4 BENT BAR (LEVEL II, DUAL COATED) | 4 |
| 4 | R-404L | #4 BENT BAR (LEVEL II, DUAL COATED) | 22 |
| 5 | R-405L | #4 BENT BAR (LEVEL II, DUAL COATED) | 14 |
| 6 | R-406L | #4 BENT BAR (LEVEL II, DUAL COATED) | 16 |
| 7 | R-407L | #4 BENT BAR (LEVEL II, DUAL COATED) | 28 |
| 8 | R-408L | #4 BENT BAR (LEVEL II, DUAL COATED) | 22 |
| 9 | | | |
| 10 | R-501L | #5 BENT BAR (LEVEL II, DUAL COATED) | 68 |
| 11 | | #5 x 24'-0" | 22 |
| 12 | | #5 x 46'-3" | 22 |
| 13 | | | |
| 14 | R-601L | #6 BENT BAR (LEVEL II, DUAL COATED) | 8 |

SUBMITTED

MAR 14 2014

J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

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Eriksson technologies 813.989.3317 TAMPA, FL LRFD.COM

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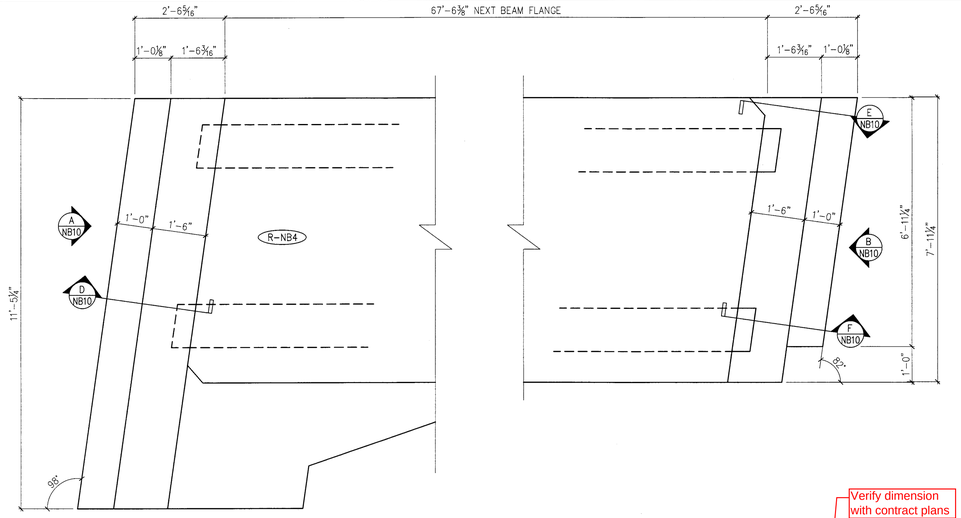
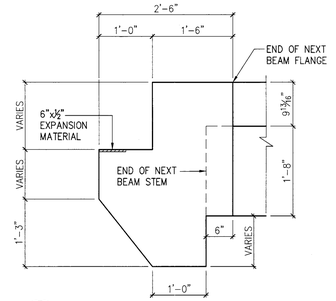
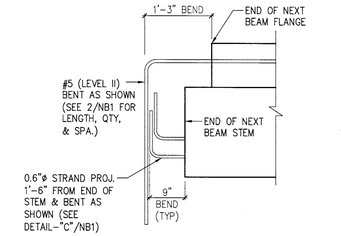


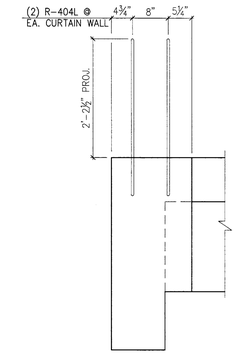

1 NB10 CURTAIN WALL PLAN VIEW IN FORM (CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2" =1'-0"




C NB10 DIMENSIONAL CURTAIN WALL SECTION 3/4" =1'-0"




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




F NB10 CURTAIN WALL SECTION 3/4" =1'-0"

NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.

Vermont Agency of Transportation
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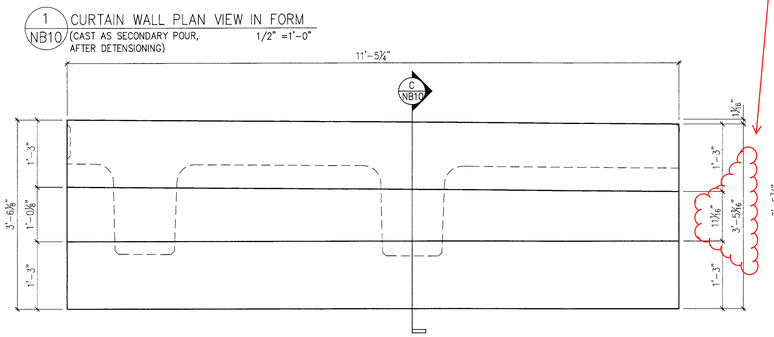
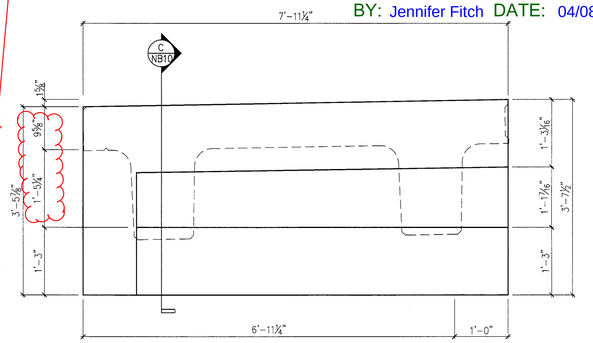
BY: Jennifer Fitch DATE: 04/08/2014

Verify dimension with contract plans

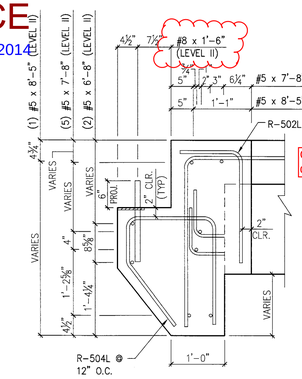



A NB10 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #1 3/4" =1'-0"



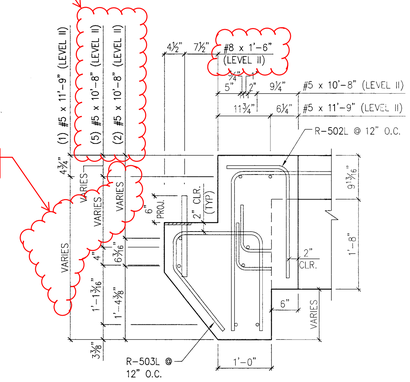

B NB10 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #2 3/4" =1'-0"

Confirm bars with detail A/NB10



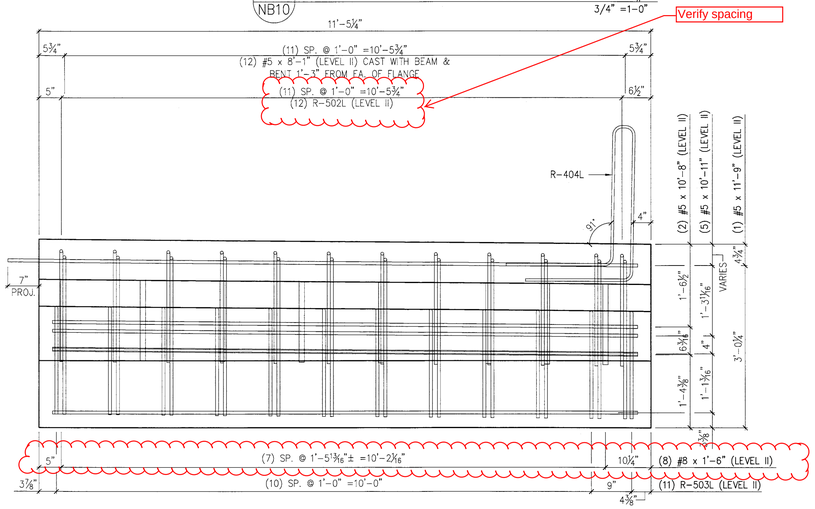

E NB10 REINFORCING CURTAIN WALL SECTION 3/4" =1'-0"

Confirm bars with detail A/NB10

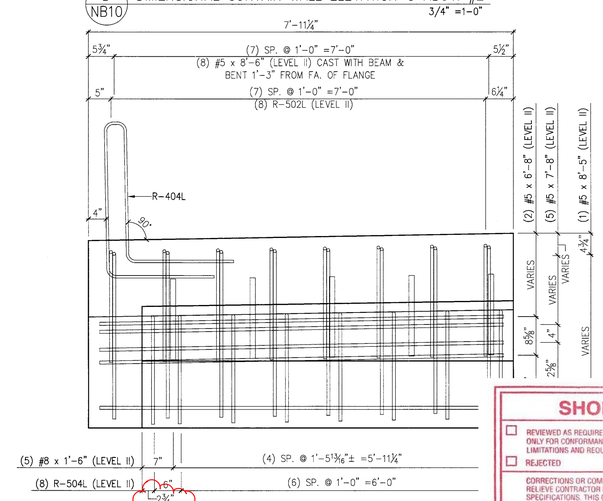



D NB10 REINFORCING CURTAIN WALL SECTION 3/4" =1'-0"

Verify spacing




A NB10 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #1 3/4" =1'-0"




Verify clearance

B NB10 REINFORCING CURTAIN WALL ELEVATION @ ABUT. 3/4" =1'-

| MARK: R-NB1 | QTY.: 1 | WT.: 8.0 T | VOL.: 3.96 cy |
|---|---|---|---|

MATERIAL LIST / NEXT BEAM

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-404L | #4 BENT BAR (LEVEL II, DUAL COATED) | 4 |
| 2 | | | |
| 3 | R-502L | #5 BENT BAR (LEVEL II, DUAL COATED) | 16 |
| 4 | R-503L | #5 BENT BAR (LEVEL II, DUAL COATED) | 8 |
| 5 | R-504L | #5 BENT BAR (LEVEL II, DUAL COATED) | 8 |
| 6 | | | |
| 7 | | #5 x 6'-8" | 4 |
| 8 | | #5 x 7'-8" | 10 |
| 9 | | #5 x 8'-5" | 2 |
| 10 | | | |
| 11 | | #8 x 1'-6" | 10 |
| 12 | | | |
| 13 | | | |
| 14 | | | |

SUBMITTED
MAR 14 2014
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

**SHOP DRAWING REVIEW**

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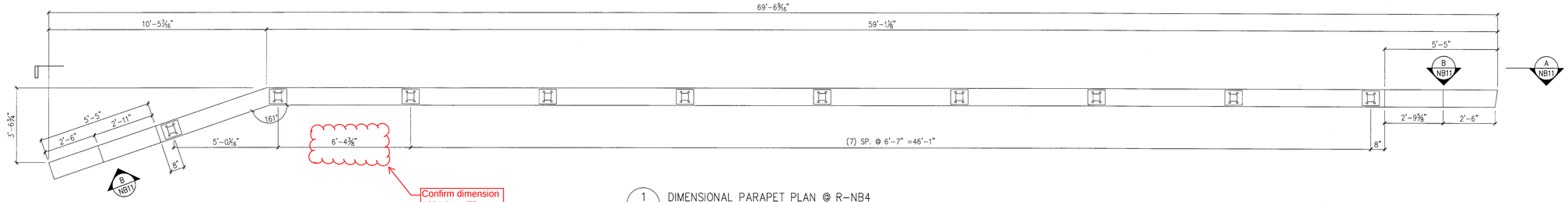
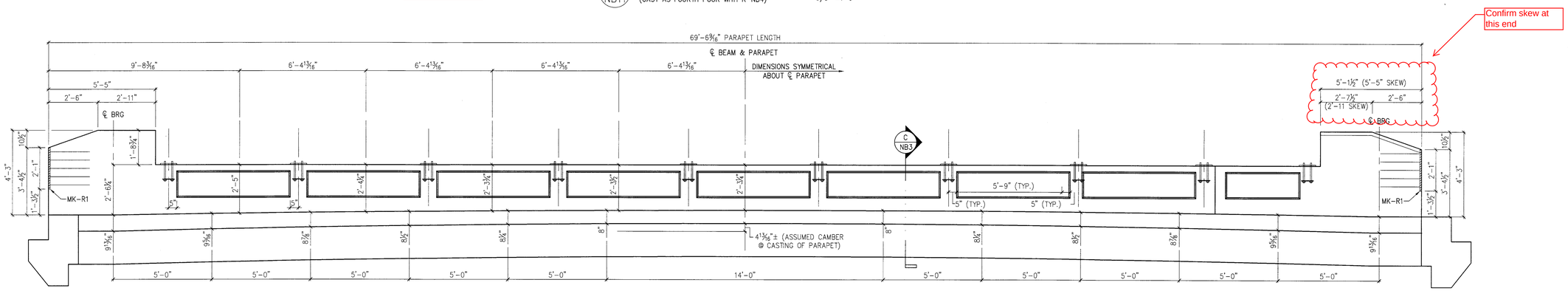



1 NB11 DIMENSIONAL PARAPET PLAN @ R-NB4
(CAST AS FOURTH POUR WITH R-NB4) 3/8" =1-0"




A NB11 DIMENSIONAL PARAPET ELEVATION @ R-NB4
(CAST AS THIRD POUR WITH R-NB1) 3/8" =1-0"

Vermont Agency of Transportation

RECEIVED
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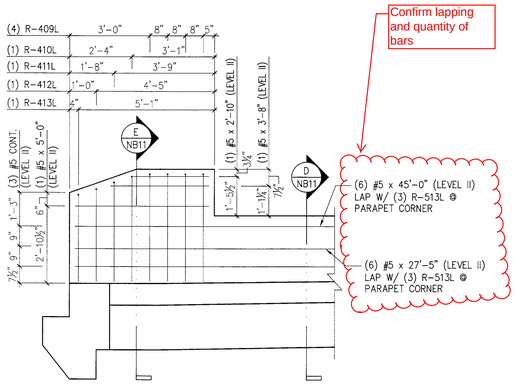
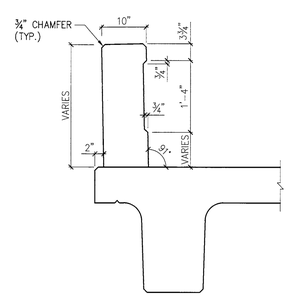
Date 04-07-2014

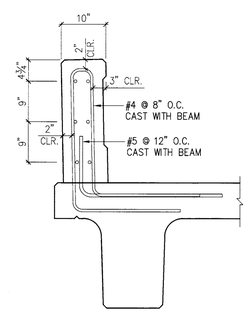



B NB11 PARAPET END ELEVATION @ R-NB4
3/8" =1-0"

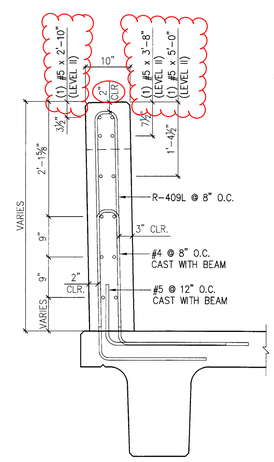
Is this the same at both ends?




C NB11 DIMENSIONAL PARAPET SECTION
3/4" =1'-0"




D NB11 REINFORCING @ PARAPET
3/4" =1'-0"




E NB11 REINFORCING @ PARAPET
3/4" =1'-0"

| MARK: R-NB1 | QTY.: 1 | WT.: 11.4 T | VOL.: 5.30 cy |
|---|---|---|---|

MATERIAL LIST / PARAPET

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-409L | #4 BENT BAR (LEVEL II, DUAL COATED) | 8 |
| 2 | R-410L | #4 BENT BAR (LEVEL II, DUAL COATED) | 2 |
| 3 | R-411L | #4 BENT BAR (LEVEL II, DUAL COATED) | 2 |
| 4 | R-412L | #4 BENT BAR (LEVEL II, DUAL COATED) | 2 |
| 5 | R-413L | #4 BENT BAR (LEVEL II, DUAL COATED) | 2 |
| 6 | | | |
| 7 | | #5 x 2'-10" (LEVEL II, DUAL COATED) | 2 |
| 8 | | #5 x 3'-8" (LEVEL II, DUAL COATED) | 2 |
| 9 | | #5 x 5'-0" (LEVEL II, DUAL COATED) | 2 |
| 10 | | #5 x 27'-5" (LEVEL II, DUAL COATED) | 6 |
| 11 | | #5 x 45'-0" (LEVEL II, DUAL COATED) | 6 |
| 12 | | | |
| 13 | | | |
| 14 | | | |

SUBMITTED
MAR 14 2014
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

APPROVAL STAMP:

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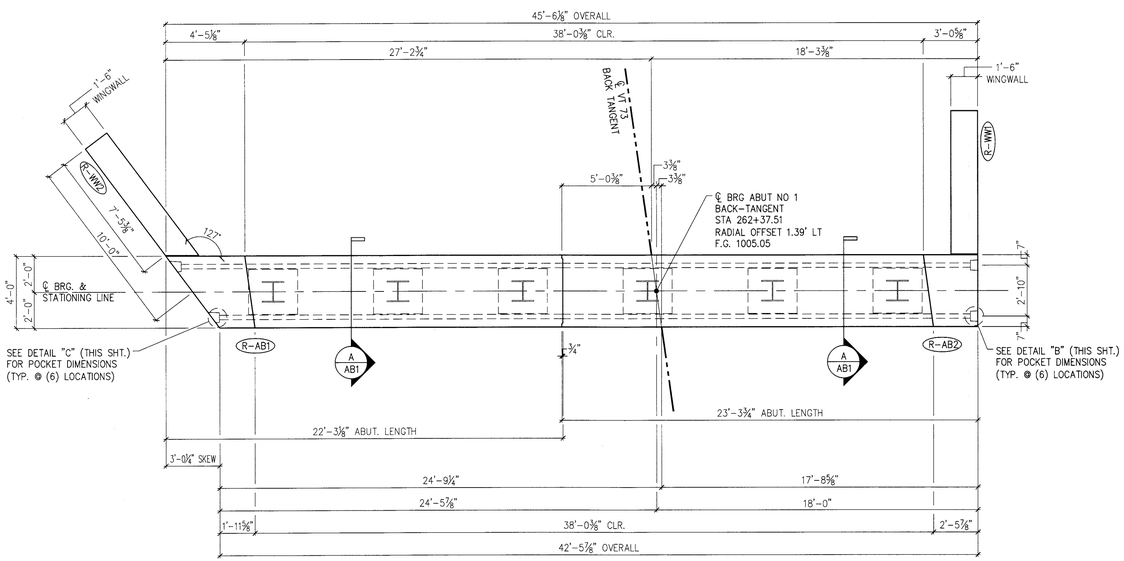
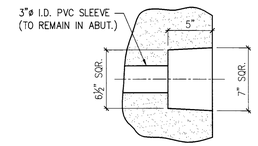
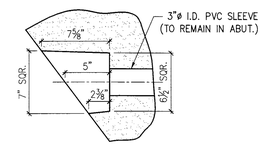


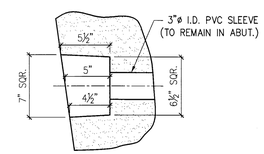

1 / AB1 ABUTMENT ASSEMBLY PLAN
1/4" =1'-0"



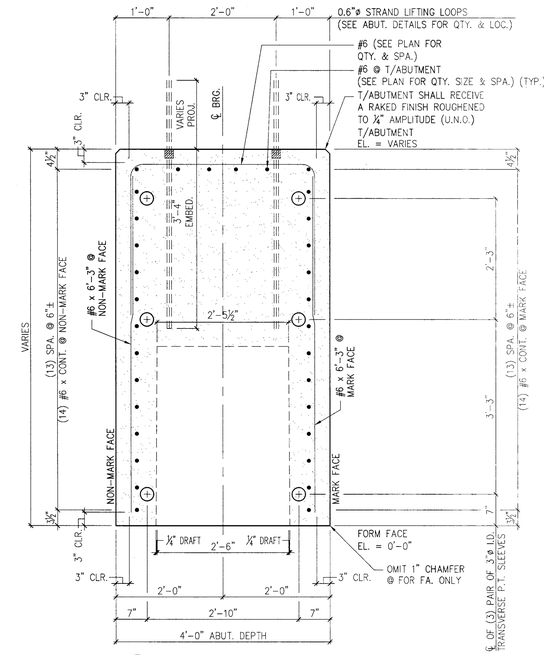

DETAIL – "B"
1 1/2" =1'-0"




DETAIL – "C"
1 1/2" =1'-0"

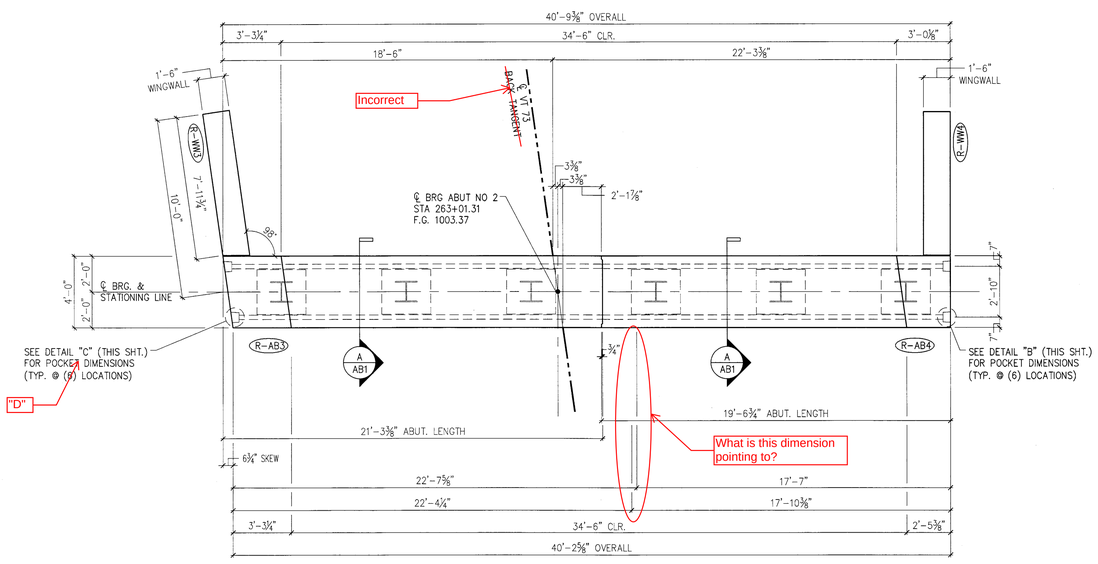



DETAIL – "D"
1 1/2" =1'-0"




A / AB1 ABUTMENT SECTION
3/4" =1'-0"

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




2 / AB1 ABUTMENT ASSEMBLY PLAN
1/4" =1'-0"

Vermont Agency of Transportation
Rochester BRF 0162(16) - BR 15 Precast Shops (R and R) jw
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VHB Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788
Job Number: 57536.00
Reviewed By: E.A. FINLA
Date: 04-07-2014

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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<br>COUNTY OF WINDSOR | DATE: MAR. 14, 2014<br>SCALE: NOTED |
| TOWN OF ROCHESTER<br>VT ROUTE 73 (RURAL MAJOR COLLECTOR)<br>BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16) | CHKD: DFTM: AAT/RWS JJ/KLT<br>JOB NO: 23419-013 |
| PRECAST ABUTMENT<br>PLAN, SECTION & DETAILS | DWG. NO: AB1 |

Eriksson technologies
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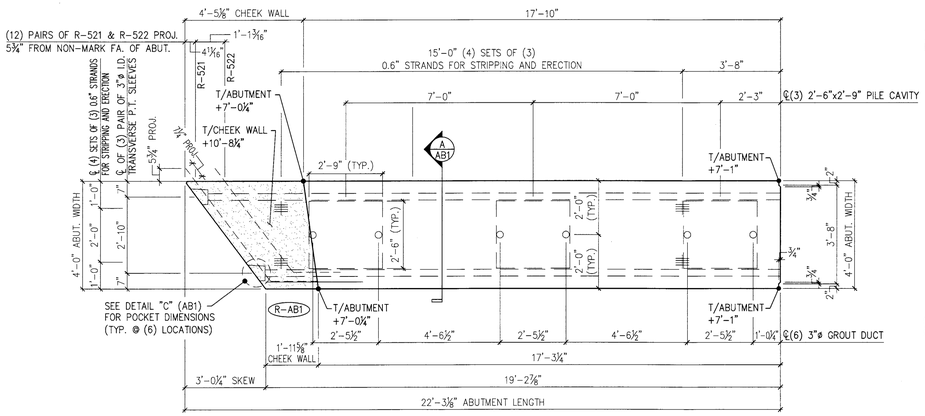
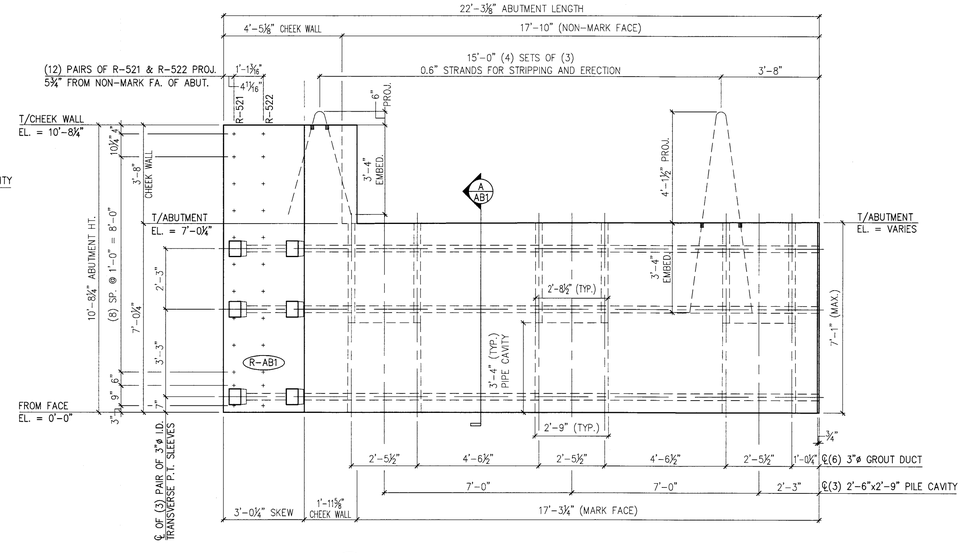



1 AB2 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"




2 AB2 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"

Elevation View? (typ)

## 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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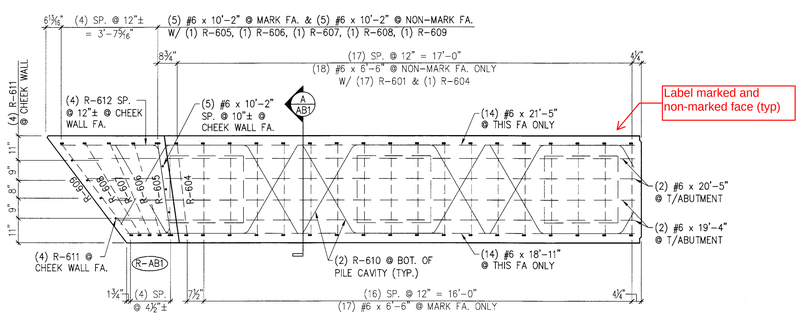
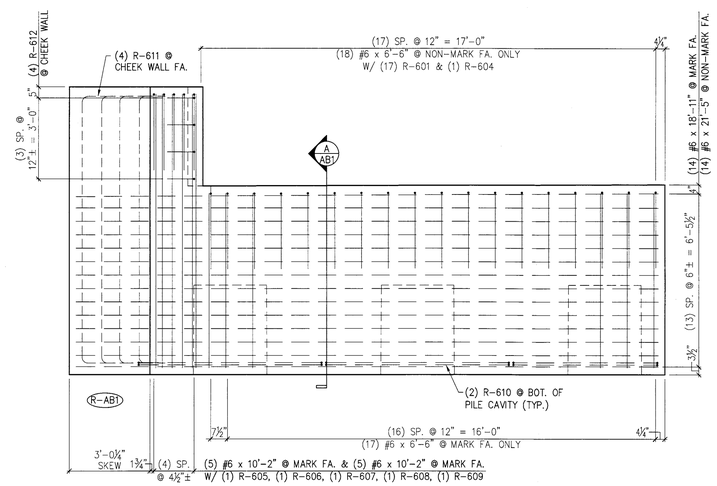
VHB Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

Job Number: 57526.00
Reviewed By: E.A. FIALA
Date: 04-07-2014




3 AB2 ABUTMENT REINFORCING PLAN VIEW IN FORM
3/8" =1'-0"




4 AB2 ABUTMENT REINFORCING MARK FACE ELEV.
3/8" =1'-0"

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

| MARK: R-AB1 | QTY.: 1 | WT.: 42.7 T | VOL.: 23.4 cy |
|---|---|---|---|

MATERIAL LIST / ABUTMENT

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-521 | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 12 |
| 2 | R-522 | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 12 |
| 3 | | | |
| 4 | R-601 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 17 |
| 5 | R-604 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 6 | R-605 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 7 | R-606 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 8 | R-607 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 9 | R-608 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 10 | R-609 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 11 | R-610 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 6 |
| 12 | R-611 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 4 |
| 13 | R-612 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 4 |
| 14 | | | |
| 15 | | #6 x 6'-6" (LEVEL I, BLACK REINFORCEMENT) | 35 |
| 16 | | #6 x 10'-2" (LEVEL I, BLACK REINFORCEMENT) | 15 |
| 17 | | #6 x 18'-11" (LEVEL I, BLACK REINFORCEMENT) | 14 |
| 18 | | #6 x 19'-4" (LEVEL I, BLACK REINFORCEMENT) | 2 |
| 19 | | #6 x 20'-5" (LEVEL I, BLACK REINFORCEMENT) | 2 |
| 20 | | #6 x 21'-5" (LEVEL I, BLACK REINFORCEMENT) | 14 |

Vermont Agency of Transportation
Rochester BRF 0162(16) - BR 15 Precast Shops (R and R) jpt
RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

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APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST ABUTMENT DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: MT/RWS JJ/KLT
JOB NO: 23419-013
DWG. NO: AB2

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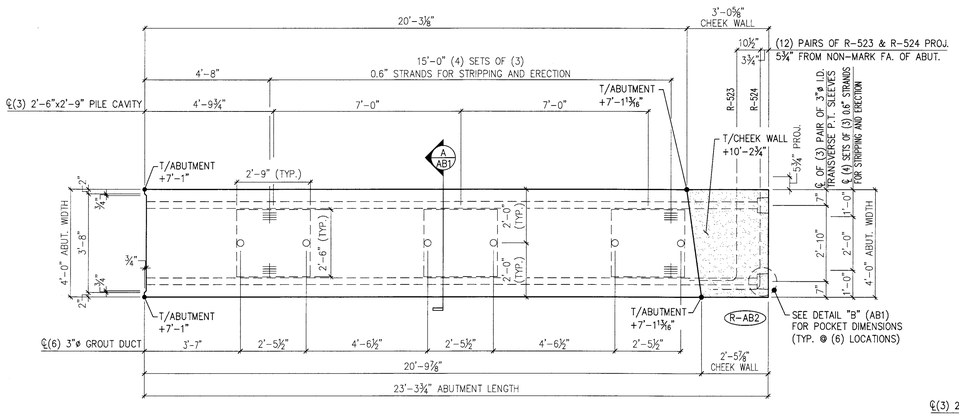
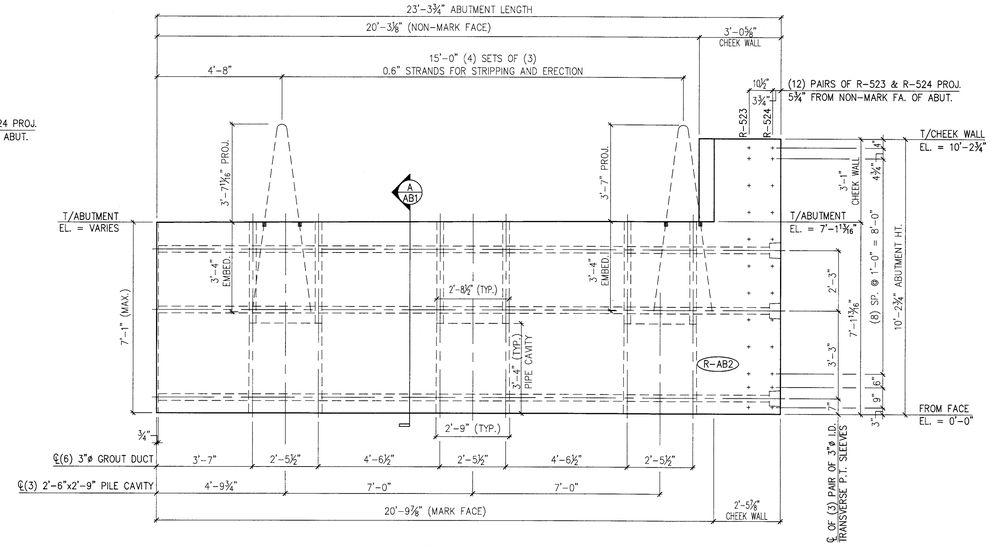
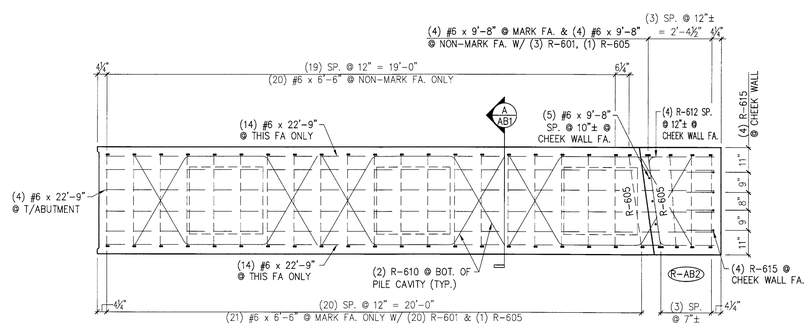


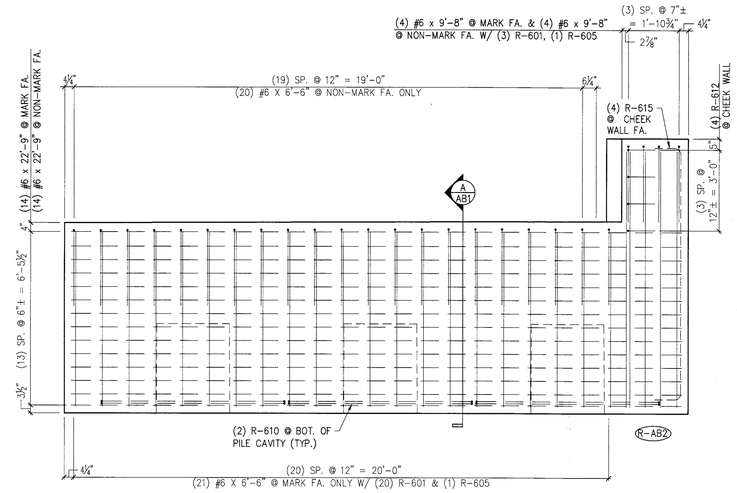

1 AB3 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"




2 AB3 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"




3 AB3 ABUTMENT REINFORCING PLAN VIEW IN FORM
3/8" =1'-0"




4 AB3 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 WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

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VHB Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7798

Job Number: 57526.00
Reviewed By: E.A. FALA
Date: 04-07-2014

SUBMITTED
MAR 14 2014
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

| MARK: | R-AB2 | QTY.: | 1 | WT.: | 47.6 T | VOL.: | 25.79 cy |
|---|---|---|---|---|---|---|---|

MATERIAL LIST / ABUTMENT

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-523 | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 12 |
| 2 | R-524 | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 12 |
| 3 | | | |
| 4 | R-601 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 23 |
| 5 | R-605 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 2 |
| 6 | R-610 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 6 |
| 7 | R-612 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 4 |
| 8 | R-615 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 4 |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | #6 x 6'-6" (LEVEL I, BLACK REINFORCEMENT) | 41 |
| 16 | | #6 x 9'-8" (LEVEL I, BLACK REINFORCEMENT) | 13 |
| 17 | | #6 x 22'-9" (LEVEL I, BLACK REINFORCEMENT) | 32 |
| 18 | | | |
| 19 | | | |
| 20 | | | |

Vermont Agency of Transportation
Accession #08-1500231 - BR 15 Project Group #1 and #2
RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST ABUTMENT DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JJ/KLT
JOB NO: 23419-013
DWG. NO: AB3

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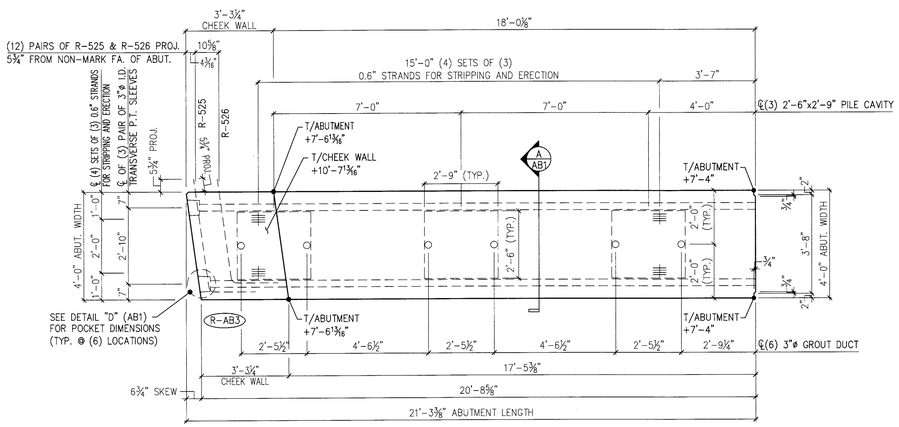
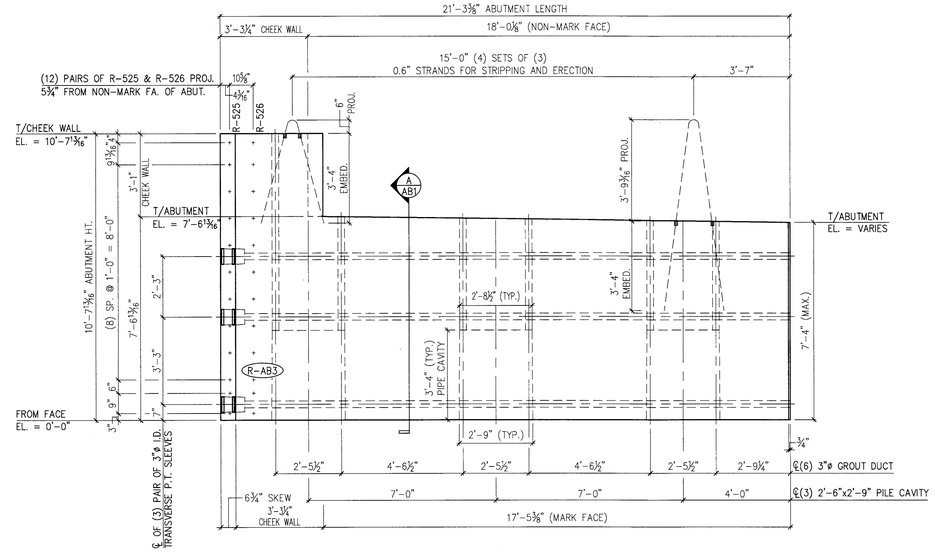
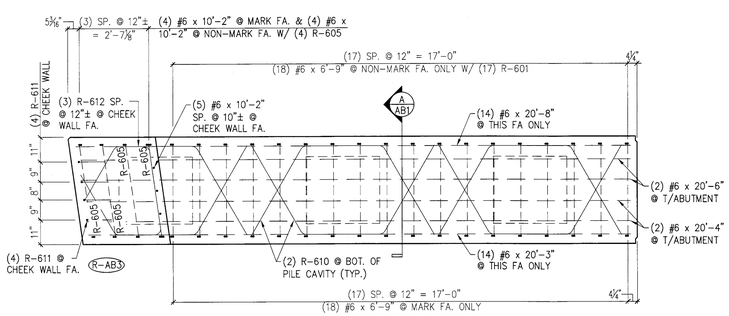


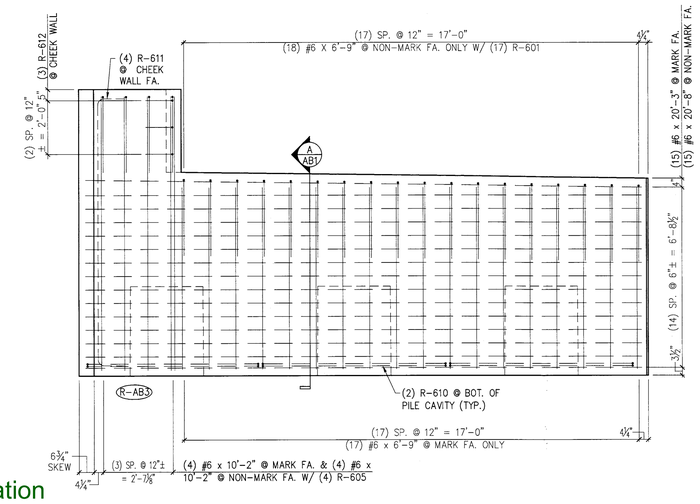

1 / AB4 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"




2 / AB4 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"




3 / AB4 ABUTMENT REINFORCING PLAN VIEW IN FORM
3/8" =1'-0"




4 / AB4 ABUTMENT REINFORCING MARK FACE ELEV.
3/8" =1'-0"

## SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

Job Number: 57526.00
Reviewed By: E.A. FIALA
Date: 04-07-2014

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

| MARK: | R-AB3 | QTY.: 1 | WT.: 45.4 T | VOL.: 24.74 cy |
|---|---|---|---|---|

MATERIAL LIST / ABUTMENT

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-525 | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 12 |
| 2 | R-526 | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 12 |
| 3 | | | |
| 4 | R-601 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 17 |
| 5 | R-605 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 4 |
| 6 | R-610 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 6 |
| 7 | R-611 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 4 |
| 8 | R-612 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 3 |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | #6 x 6'-9" (LEVEL I, BLACK REINFORCEMENT) | 36 |
| 16 | | #6 x 10'-2" (LEVEL I, BLACK REINFORCEMENT) | 13 |
| 17 | | #6 x 20'-3" (LEVEL I, BLACK REINFORCEMENT) | 14 |
| 18 | | #6 x 20'-4" (LEVEL I, BLACK REINFORCEMENT) | 2 |
| 19 | | #6 x 20'-6" (LEVEL I, BLACK REINFORCEMENT) | 2 |
| 20 | | #6 x 20'-8" (LEVEL I, BLACK REINFORCEMENT) | 14 |

Vermont Agency of Transportation
Rochester BRF 0162(16) - BR 15 Precast Shops (R and R) pc
RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

Eriksson technologies
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TAMPA, FL LRFD.COM
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APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST ABUTMENT DETAILS

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

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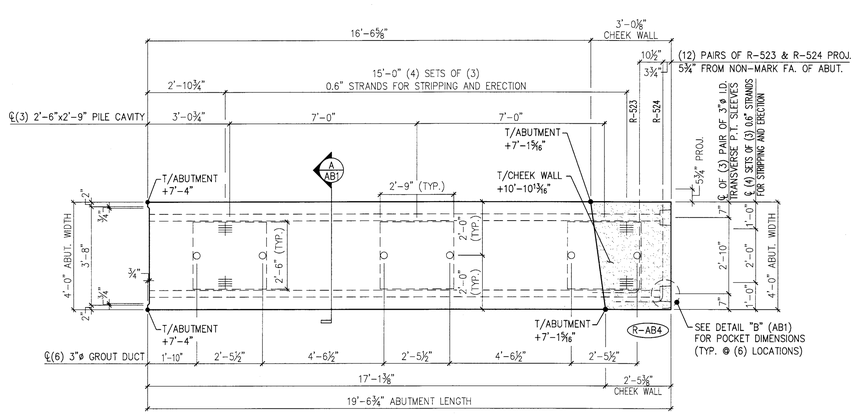
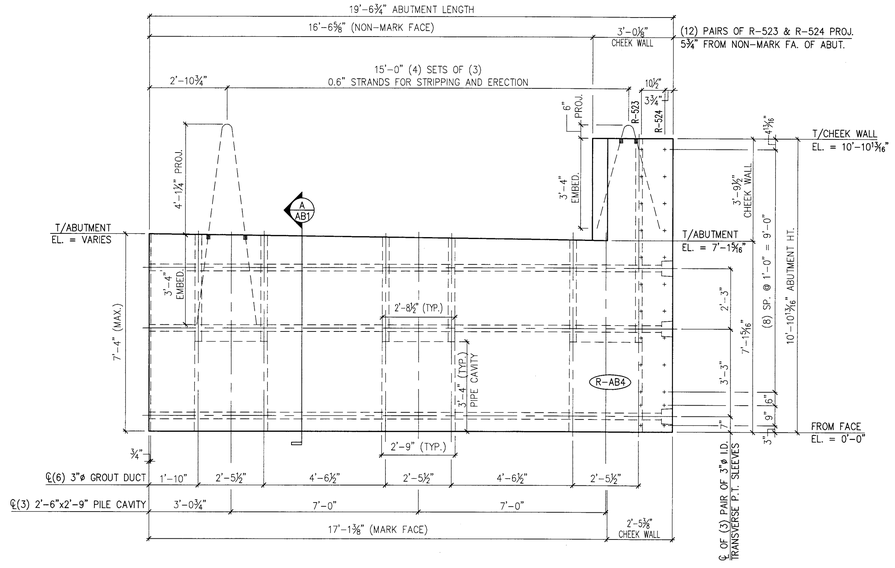



1 / AB5 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"




2 / AB5 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"

## SHOP DRAWING REVIEW

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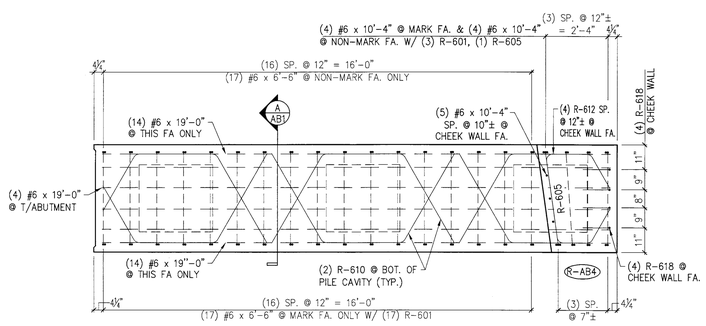
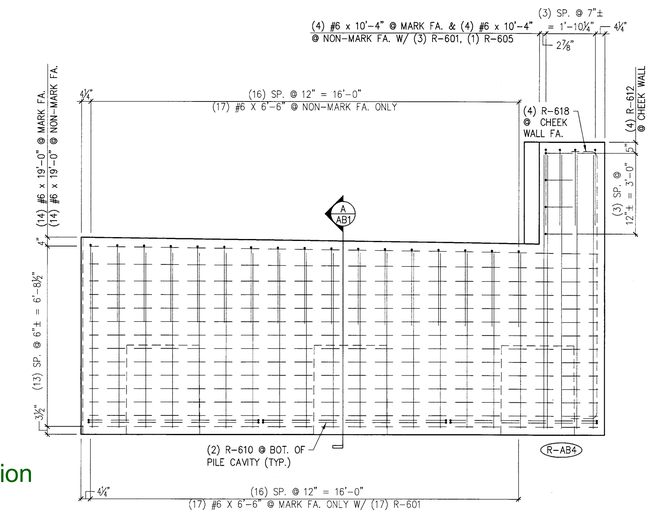
VHB Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

Job Number: 57526.00
Reviewed By: E.A. Field
Date: 04-07-2014

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753




3 / AB5 ABUTMENT REINFORCING PLAN VIEW IN FORM
3/8" =1'-0"




4 / AB5 ABUTMENT REINFORCING MARK FACE ELEV.
3/8" =1'-0"

| MARK: R-AB4 | QTY.: 1 | WT.: 40.6 T | VOL.: 22.34 cy |
|---|---|---|---|

MATERIAL LIST / ABUTMENT

| ITEM | MARK | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | R-523 | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 12 |
| 2 | R-524 | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 12 |
| 3 | | | |
| 4 | R-601 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 20 |
| 5 | R-605 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 6 | R-610 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 6 |
| 7 | R-612 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 4 |
| 8 | R-618 | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 4 |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | #6 x 6'-6" (LEVEL I, BLACK REINFORCEMENT) | 34 |
| 16 | | #6 x 10'-4" (LEVEL I, BLACK REINFORCEMENT) | 13 |
| 17 | | #6 x 19'-0" (LEVEL I, BLACK REINFORCEMENT) | 32 |
| 18 | | | |
| 19 | | | |
| 20 | | | |

Vermont Agency of Transportation
Rochester BRF 0162(16) - BR 15 Precast Shops (R and R) pc
RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

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APPROVAL STAMP:

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

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

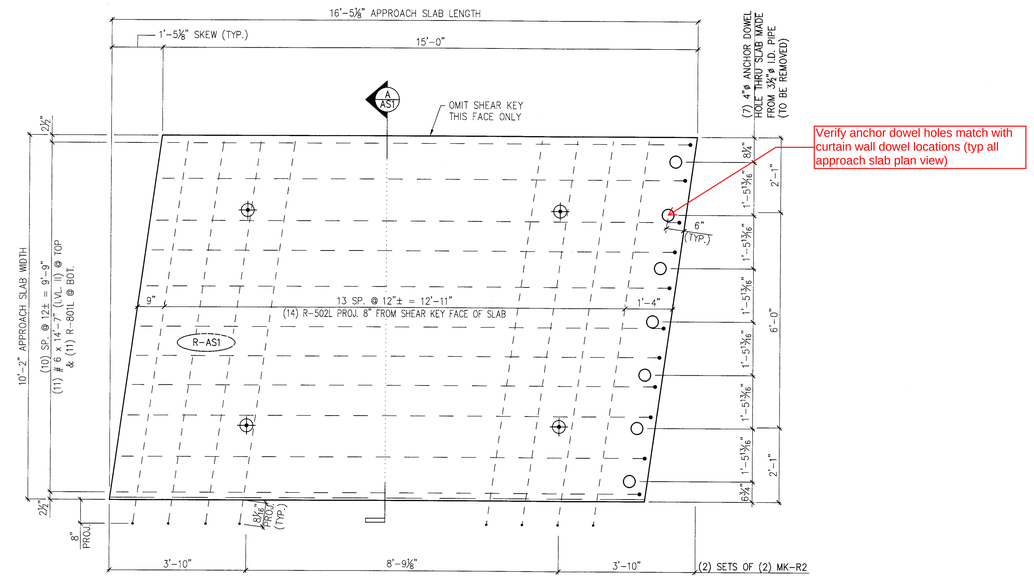
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

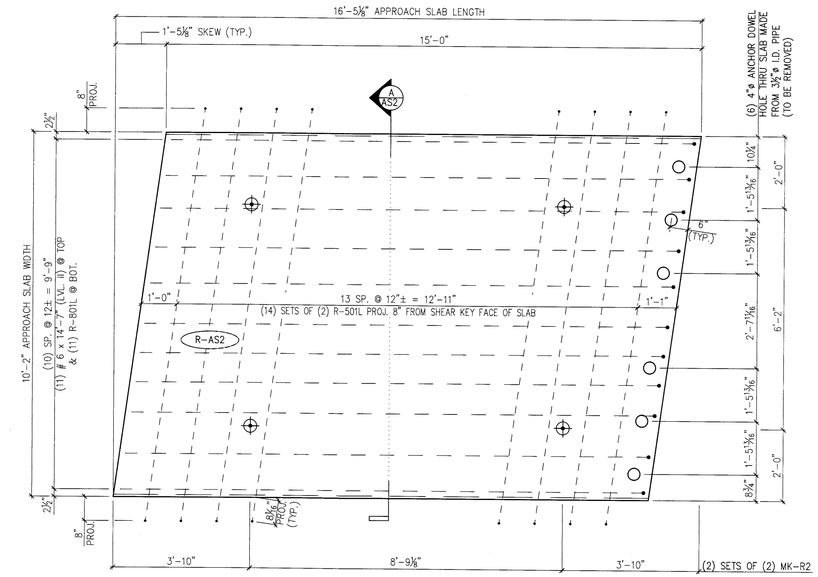
PRECAST ABUTMENT DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RJS JJ/KLT
JOB NO: 23419-013
DWG. NO: AB5

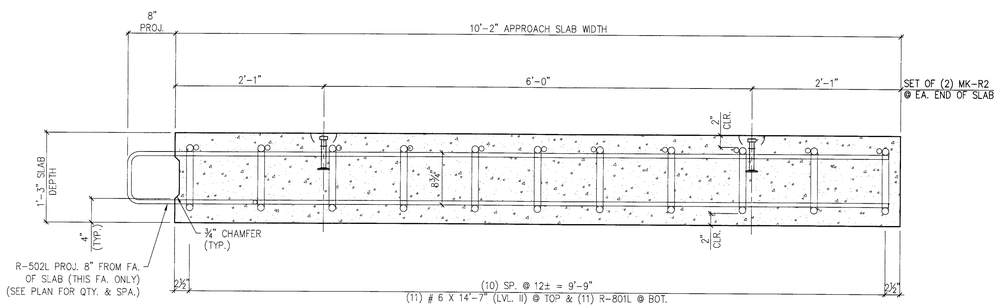
S:\Engineering Services\Carrara\14002 Rochester BR 15 & 16\Production Drawings\AutoCAD Files\R-AB1.dwg, 3/14/2014 4:26:50 PM



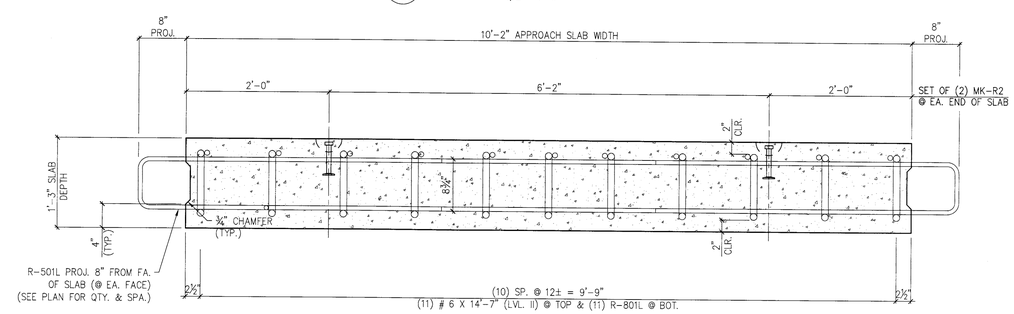

1 AS1 PLAN IN VIEW FORM
1/2" =1'-0"




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

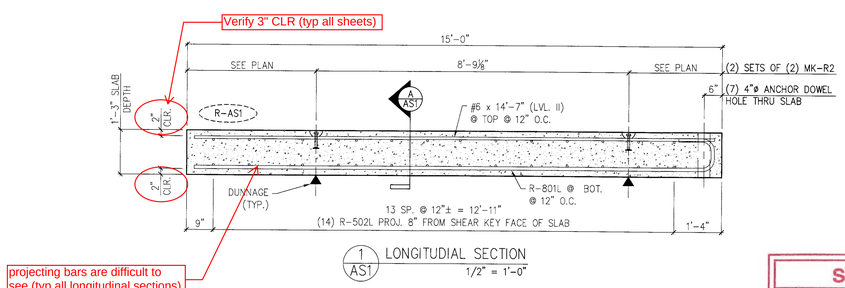



A AS1 APPROACH SLAB SECTION
1" = 1'-0"

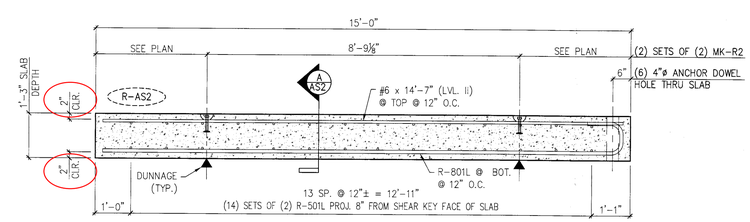



A AS2 APPROACH SLAB SECTION
1" = 1'-0"

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753




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




1 AS2 LONGITUDIAL SECTION
1/2" = 1'-0"

| MARK: | R-AS1 | QTY.: 2 | WT.: 14.3 T | VOL.: 5.99 cy |
|---|---|---|---|---|
| MARK: | R-AS2 | QTY.: 2 | WT.: 14.3 T | VOL.: 7.04 cy |

MATERIAL LIST / APPROACH SLAB

| ITEM | MARK | DESCRIPTION | QTY./WING WALL R-AS1 | QTY./WING WALL R-AS2 |
|---|---|---|---|---|
| 1 | R-501L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 0 | 28 |
| 2 | R-502L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 14 | 0 |
| 3 | | | | |
| 4 | | #6 x 14'-7" (LEVEL I, BLACK REINFORCEMENT) | 11 | 11 |
| 5 | | | | |
| 6 | R-801L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 11 | 11 |
| 7 | | | | |
| 8 | MK-R2 | 4T x 7 1/2" SWIFT LIFT LIFTER | 4 | 4 |

Vermont Agency of Transportation
Rochester BRF 0162(16) - BR 15 Precast Strips (R and R) jw

RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

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.

Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

Job Number 57526.00
Reviewed By: E.A. FIALA
Date: 04-07-2014

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BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST APPROACH SLAB DETAILS

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

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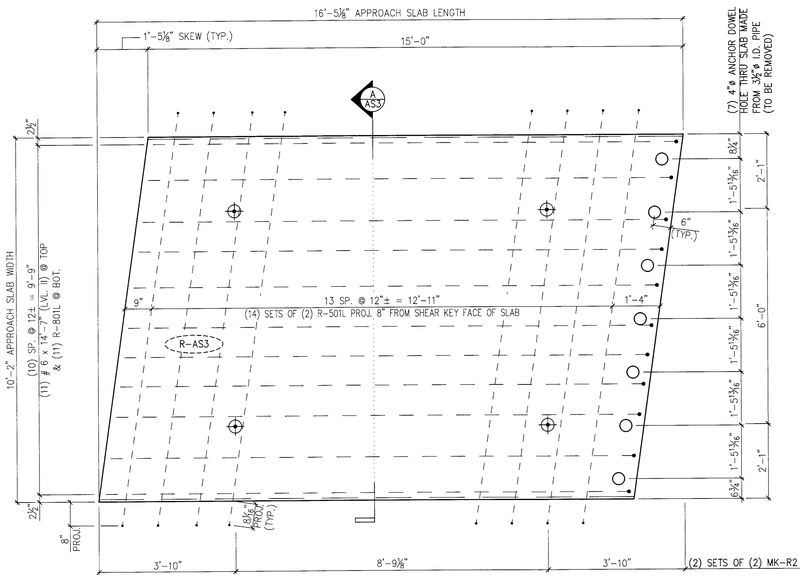
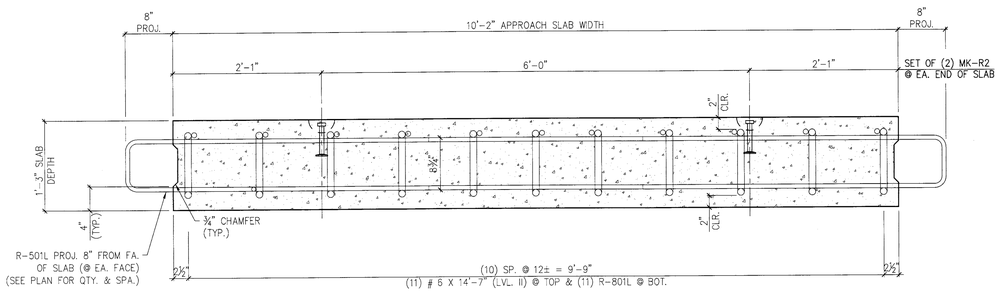
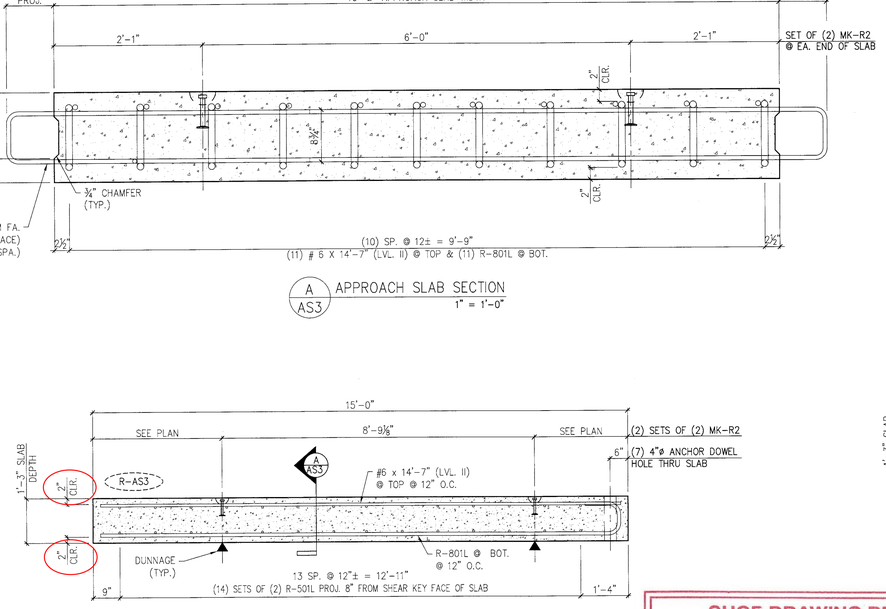


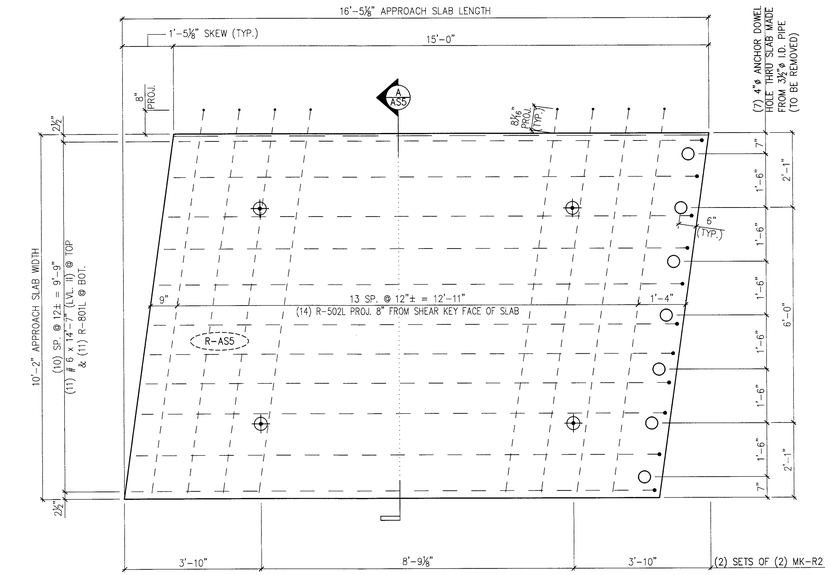

1 AS3 PLAN IN VIEW FORM
1/2" =1'-0"



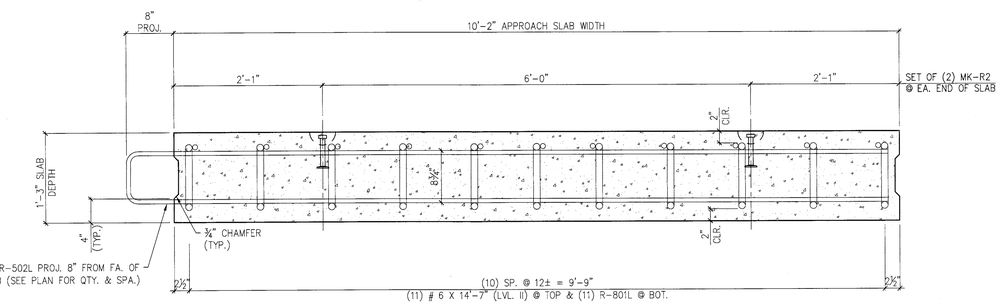

A AS3 APPROACH SLAB SECTION
1" = 1'-0"



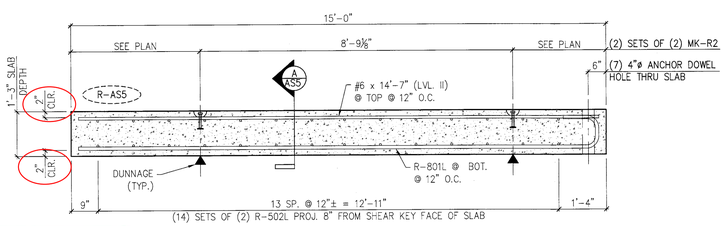

1 AS3 LONGITUDIAL SECTION
1/2" = 1'-0"




1 AS5 PLAN IN VIEW FORM
1/2" =1'-0"




A AS5 APPROACH SLAB SECTION
1" = 1'-0"




1 AS5 LONGITUDIAL SECTION
1/2" = 1'-0"

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

| MARK: | R-AS3 | QTY.: 1 | WT.: 14.3 T | VOL.: 5.99 cy |
|---|---|---|---|---|
| MARK: | R-AS5 | QTY.: 1 | WT.: 14.3 T | VOL.: 5.99 cy |

MATERIAL LIST / APPROACH SLAB

| ITEM | MARK | DESCRIPTION | QTY./WING WALL R-AS3 | QTY./WING WALL R-AS5 |
|---|---|---|---|---|
| 1 | R-501L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 28 | 0 |
| 2 | R-502L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 0 | 14 |
| 3 | | | | |
| 4 | | #6 x 14'-7" (LEVEL I, BLACK REINFORCEMENT) | 11 | 11 |
| 5 | | | | |
| 6 | R-801L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 11 | 11 |
| 7 | | | | |
| 8 | MK-R2 | 4T x 7 1/2" SWFT LIFT LIFTER | 4 | 4 |

Vermont Agency of Transportation
Rochester BRF 0162(16) - BR 15 Precast Shops (R and R) jpc

RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

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VHB Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7798
Job Number: 57526.00
Reviewed By: E.A. FIALA
Date: 04-07-2014

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BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST APPROACH SLAB DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JJ/KLT
JOB NO: 23419-013
DWG. NO: AS2

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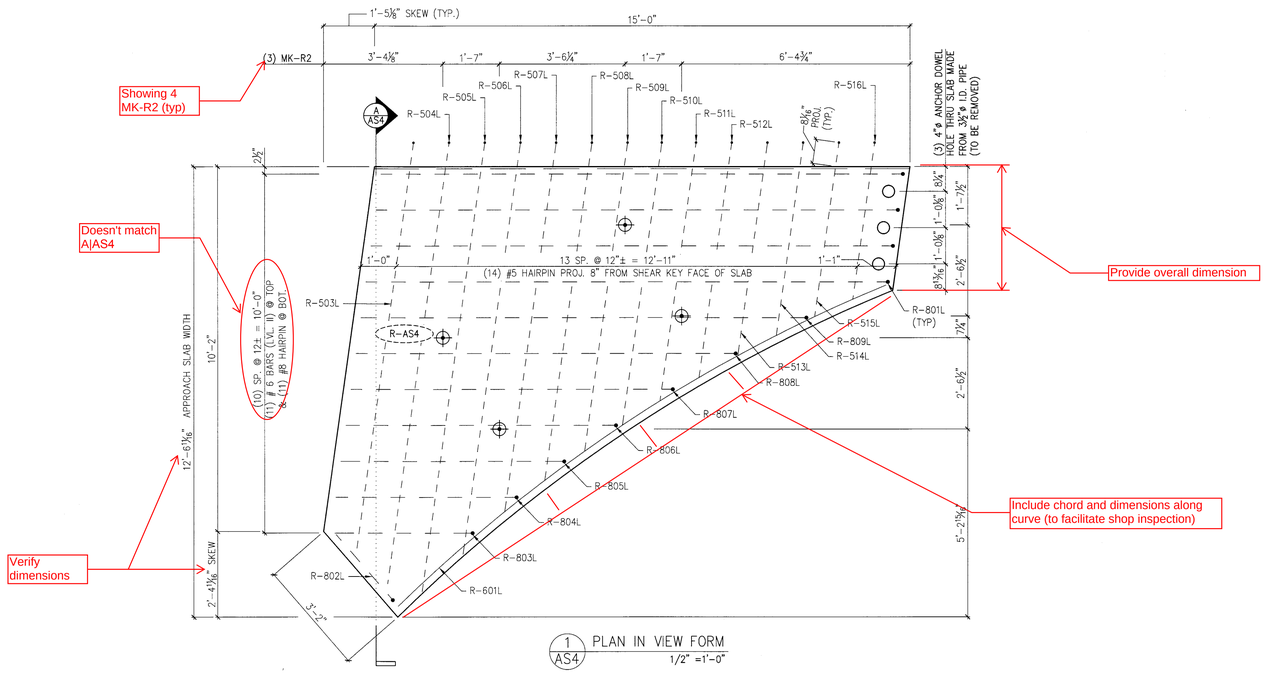
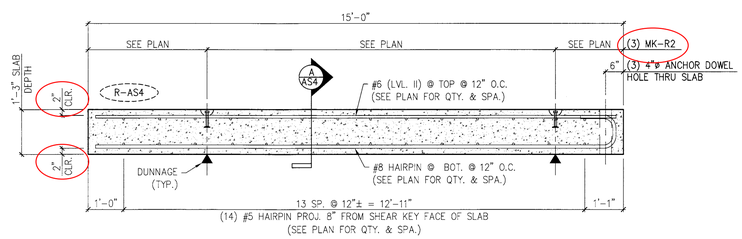
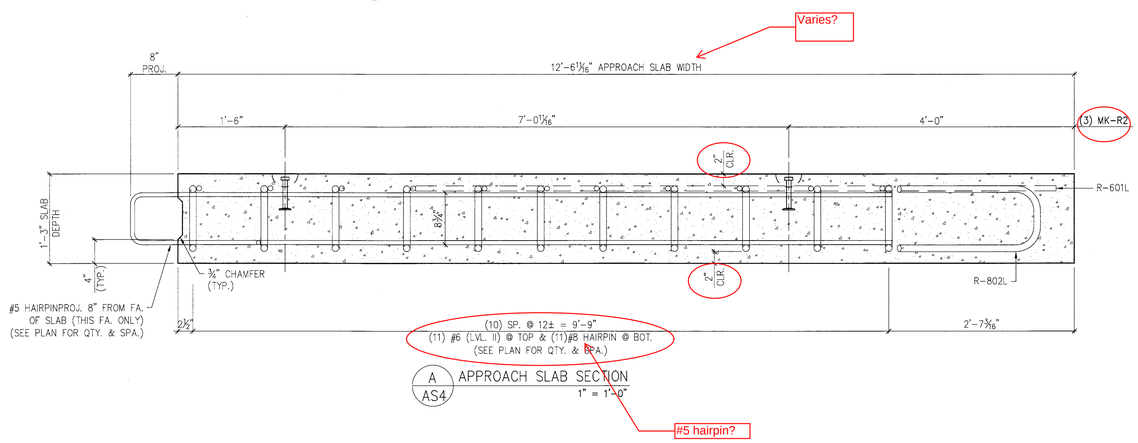



1 AS4 PLAN IN VIEW FORM
1/2" =1'-0"




1 AS4 LONGITUDIAL SECTION
1/2" = 1'-0"




A AS4 APPROACH SLAB SECTION
1" = 1'-0"

Vermont Agency of Transportation

RECEIVED

ON: March 17, 2014

and Checked for

CONFORMANCE

BY: Jennifer Fitch DATE: 04/08/2014

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*Vanasse Hangen Brustlin, Inc.*
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

Job Number 57526.00
Reviewed By: E.A. FIALA
Date: 04-07-2014

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

| MARK: R-AS5 | QTY.: 1 | WT.: 11.2 T | VOL.: 5.51 cy |
|---|---|---|---|

MATERIAL LIST / APPROACH SLAB

| ITEM | MARK | DESCRIPTION | QTY./WING WALL R-AS4 |
|---|---|---|---|
| 1 | R-503L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 2 | R-504L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 3 | R-505L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 4 | R-506L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 5 | R-507L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 6 | R-508L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 7 | R-509L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 8 | R-510L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 9 | R-511L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 10 | R-512L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 11 | R-513L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 12 | R-514L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 13 | R-515L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 14 | R-516L | #5 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 15 | | | |
| 16 | R-601L | #6 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 17 | | | |
| 18 | | #6 x 3'-10" (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 19 | | #6 x 5'-0" (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 20 | | #6 x 6'-3" (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 21 | | #6 x 7'-6" (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 22 | | #6 x 9'-0" (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 23 | | #6 x 10'-7" (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 24 | | #6 x 12'-5" (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 25 | | #6 x 14'-7" (LEVEL I, BLACK REINFORCEMENT) | 4 |
| 26 | | | |
| 27 | R-801L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 4 |
| 28 | R-802L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 29 | R-803L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 30 | R-804L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 31 | R-805L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 32 | R-806L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 33 | R-807L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 34 | R-808L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 35 | R-809L | #8 BENT BAR (LEVEL I, BLACK REINFORCEMENT) | 1 |
| 36 | | | |
| 37 | | | |
| 38 | MK-R2 | 4T x 7 1/2" SWIFT LIFT LIFTER | 3 |

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
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COUNTY OF WINDSOR

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BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST APPROACH SLAB DETAILS

DATE: MAR 14, 2014
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JOB NO: 23419-013
DWG. NO: AS3

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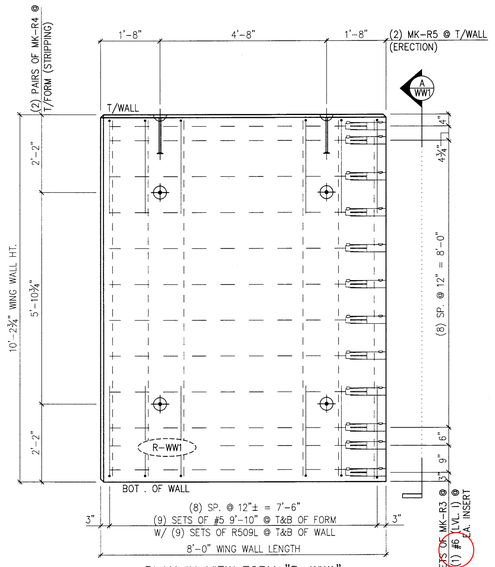
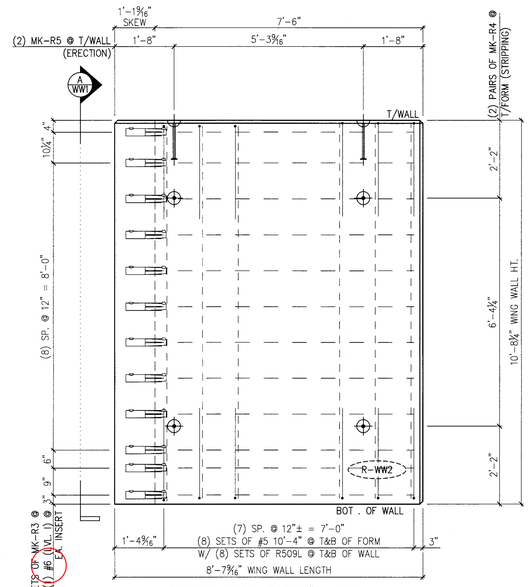
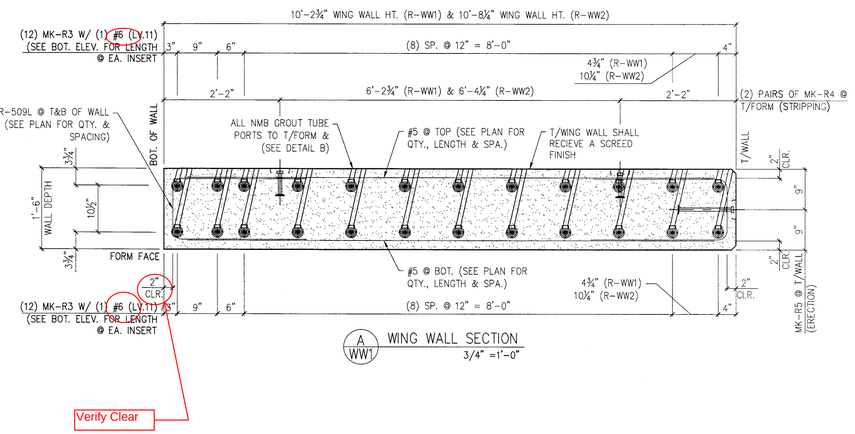



PLAN IN VIEW FORM "R-WW1"
1/2" =1'-0"




PLAN IN VIEW FORM "R-WW2"
1/2" =1'-0"

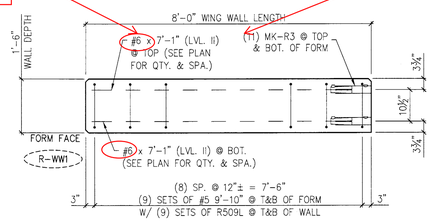



A WW1 WING WALL SECTION
3/4" =1'-0"

Verify Clear

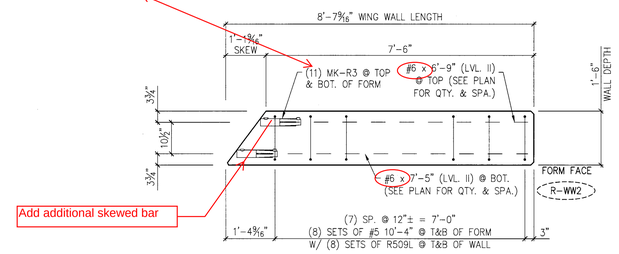
#5? Not consistent with abutment drawings and contract plans

Verify



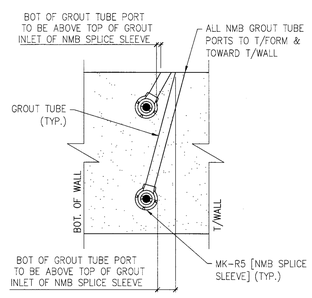

WING WALL BOTTOM ELEVATION
1/2" =1'-0"

Add additional skewed bar




WING WALL BOTTOM ELEVATION
1/2" =1'-0"

Where is detail A|WW2?




DETAIL – "B"
1-1/2" =1'-0"

Vermont Agency of Transportation
RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

SHOP DRAWING REVIEW

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Job Number 57526.00
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Date: 04-07-2014

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MARK: | R-WW1 | QTY.: | 1 | WT.: | 9.2 T | VOL.: | 4.54 cy |
| MARK: | R-WW2 | QTY.: | 1 | WT.: | 9.7 T | VOL.: | 4.78 cy |

MATERIAL LIST / WING WALL

| ITEM | MARK | DESCRIPTION | QTY./WING WALL R-WW1 | QTY./WING WALL R-WW2 |
|---|---|---|---|---|
| 1 | R-517L | #5 BENT BAR (LEVEL II, DUAL COATED) | 18 | 16 |
| 2 | | | | |
| 3 | | #5 x 9'-10" (LEVEL II, DUAL COATED) | 18 | 0 |
| 4 | | #5 x 10'-4" (LEVEL II, DUAL COATED) | 0 | 16 |
| 5 | | | | |
| 6 | | #6 x 6'-9" (LEVEL II, DUAL COATED) | 0 | 11 |
| 7 | | #6 x 7'-1" (LEVEL II, DUAL COATED) | 22 | 0 |
| 8 | | #6 x 7'-5" (LEVEL II, DUAL COATED) | 0 | 11 |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | MK-R3 | NMB SPLICE SLEEVE 6U-X(PG) (EPOXY COATED) | 22 | 22 |
| 13 | MK-R4 | 4T x 9 1/2" SWFT LIFT LIFTER | 4 | 4 |
| 14 | MK-R5 | 20T x 19 3/4" SWFT LIFT LIFTER | 2 | 2 |

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST WING WALL DETAILS

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

Eriksson technologies
813.989.3317
TAMPA, FL LRFD.COM
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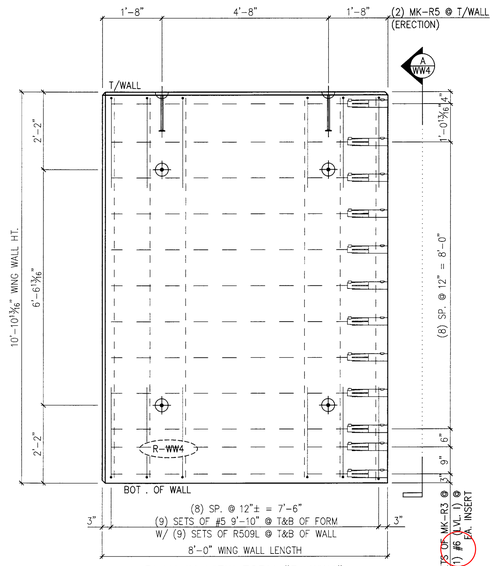
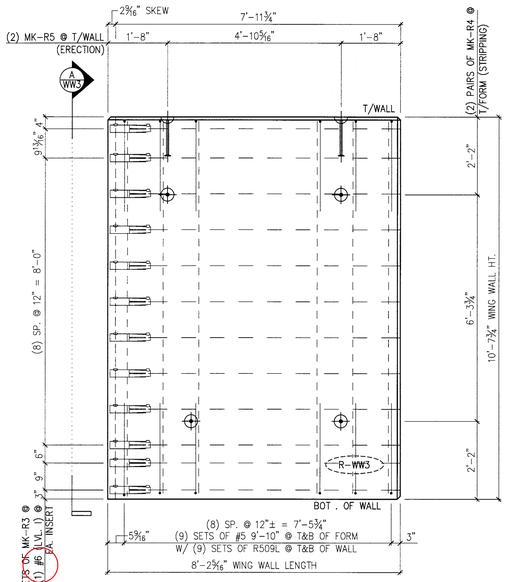
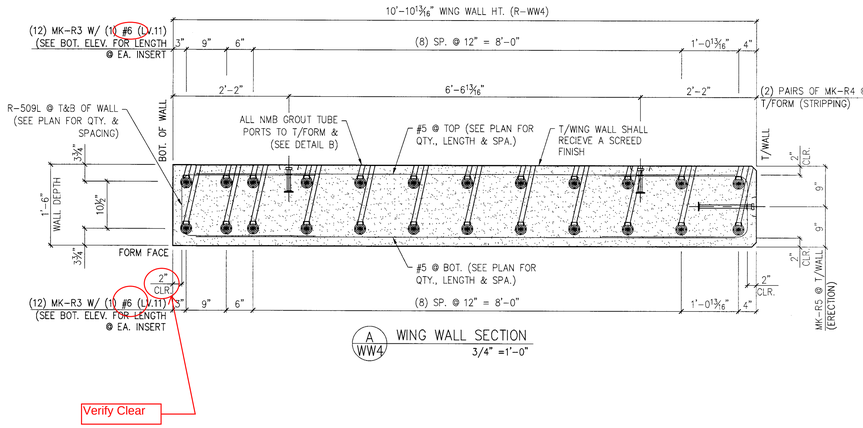
S:\Engineering Services\Carrara\14002 Rochester BR 15 & 16\Production Drawings\AutoCAD Files\R-WW.dwg, 3/14/2014 4:27:01 PM

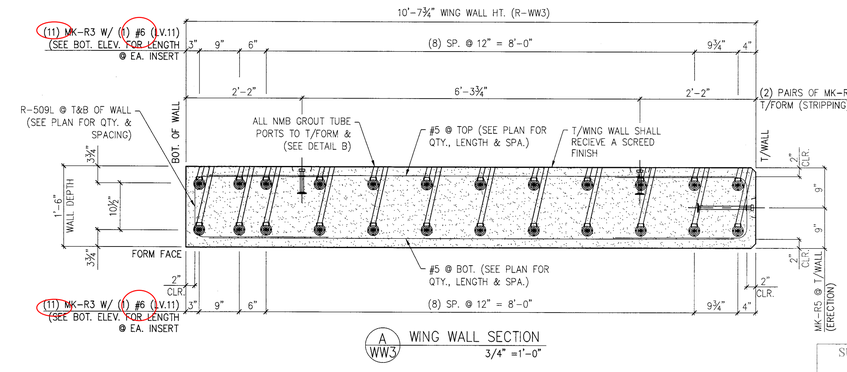



PLAN IN VIEW FORM "R-WW4"
1/2" =1'-0"



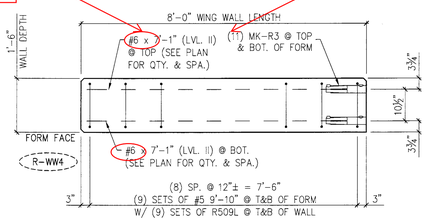

PLAN IN VIEW FORM "R-WW3"
1/2" =1'-0"



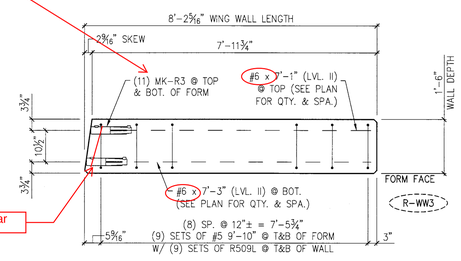

#5? Not consistent with abutment drawings and contract plans

Verify

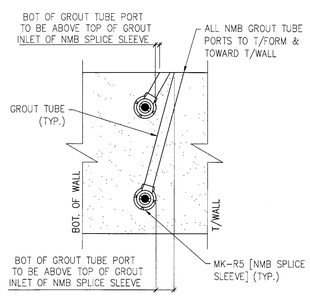



WING WALL BOTTOM ELEVATION
1/2" =1'-0"

Add additional skewed bar




WING WALL BOTTOM ELEVATION
1/2" =1'-0"




DETAIL – "B"
1-1/2" =1'-0"

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

| MARK: | R-WW4 | QTY.: | 1 | WT.: | 9.9 T | VOL.: | 4.84 cy |
|---|---|---|---|---|---|---|---|
| MARK: | R-WW3 | QTY.: | 1 | WT.: | 9.7 T | VOL.: | 4.78 cy |

MATERIAL LIST / WING WALL

| ITEM | MARK | DESCRIPTION | QTY./WING WALL R-WW4 | QTY./WING WALL R-WW3 |
|---|---|---|---|---|
| 1 | R-517L | #5 BENT BAR (LEVEL II, DUAL COATED) | 18 | 18 |
| 2 | | | | |
| 3 | | #5 x 10'-3" (LEVEL II, DUAL COATED) | 0 | 18 |
| 4 | | #5 x 10'-6" (LEVEL II, DUAL COATED) | 18 | 0 |
| 5 | | | | |
| 6 | | | | |
| 7 | | #6 x 7'-1" (LEVEL II, DUAL COATED) | 24 | 11 |
| 8 | | #6 x 7'-3" (LEVEL II, DUAL COATED) | 0 | 11 |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | MK-R3 | NMB SPLICE SLEEVE 6U-X(PG) (EPOXY COATED) | 24 | 22 |
| 13 | MK-R4 | 4T x 9 1/2" SWIFT LIFT LIFTER | 4 | 4 |
| 14 | MK-R5 | 20T x 19 3/4" SWIFT LIFT LIFTER | 2 | 2 |

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 Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7798

Job Number: 57526.00
Reviewed By: E.A. FIALA
Date: 04-07-2014

Vermont Agency of Transportation
Increase BRF 0162(16) BR 15 Precast Wings W and W Ex

RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

Eriksson technologies
813.989.3317
TAMPA, FL LRFD.COM
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APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., 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.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST WING WALL DETAILS

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

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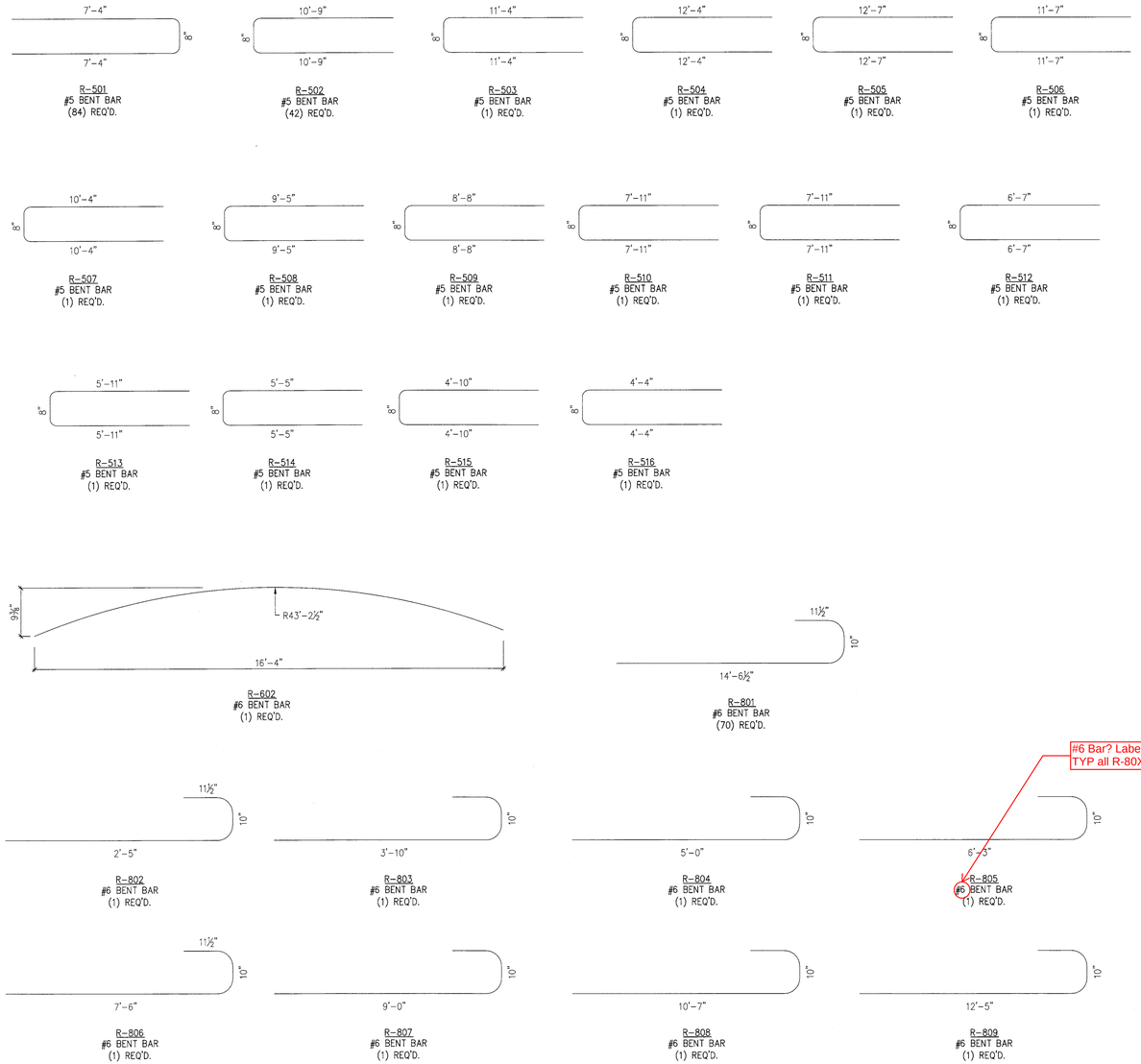


#6 Bar? Labeled as R-805. TYP all R-80X bars

PRECAST APPROACH SLABS

PRECAST WINGWALLS

## MISCELLANEOUS MATERIALS

| ITEM | MARK | QTY. | DESCRIPTION | REMARKS | |
|---|---|---|---|---|---|
| 1 | | ONE | #6 x 3'-10" (LEVEL I, BLACK REINFORCEMENT) | | PRECAST APPROACH SLABS |
| 2 | | ONE | #6 x 5'-0" (LEVEL I, BLACK REINFORCEMENT) | | |
| 3 | | ONE | #6 x 6'-3" (LEVEL I, BLACK REINFORCEMENT) | | |
| 4 | | ONE | #6 x 7'-6" (LEVEL I, BLACK REINFORCEMENT) | | |
| 5 | | ONE | #6 x 9'-0" (LEVEL I, BLACK REINFORCEMENT) | | |
| 6 | | ONE | #6 x 10'-7" (LEVEL I, BLACK REINFORCEMENT) | | |
| 7 | | ONE | #6 x 12'-5" (LEVEL I, BLACK REINFORCEMENT) | | |
| 8 | | 70 | #6 x 14'-7" (LEVEL I, BLACK REINFORCEMENT) | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | MK-R2 | 28 | 4T x 7 1/2" SWIFT LIFT LIFTER | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | PRECAST WING WALLS |
| 21 | | | | | |
| 22 | | 18 | #5 x 9'-10" (LEVEL II, DUAL COATED) | | |
| 23 | | 18 | #5 x 10'-3" (LEVEL II, DUAL COATED) | | |
| 24 | | 16 | #5 x 10'-4" (LEVEL II, DUAL COATED) | | |
| 25 | | 18 | #5 x 10'-6" (LEVEL II, DUAL COATED) | | |
| 26 | | | | | |
| 27 | | | | | |
| 28 | | 11 | #6 x 6'-9" (LEVEL II, DUAL COATED) | | |
| 29 | | 57 | #6 x 7'-1" (LEVEL II, DUAL COATED) | | |
| 30 | | 11 | #6 x 7'-3" (LEVEL II, DUAL COATED) | | |
| 31 | | 11 | #6 x 7'-5" (LEVEL II, DUAL COATED) | | |
| 32 | | | | | |
| 33 | | | | | |
| 34 | | | | | |
| 35 | | | | | |
| 36 | | | | | |
| 37 | | | | | |
| 38 | MK-R3 | 90 | NMB SPLICE SLEEVE 6U-X(PG) (EPOXY COATED) | | |
| 39 | MK-R4 | 16 | 4T x 9 1/2" SWIFT LIFT LIFTER | | |
| 40 | MK-R3 | 8 | 20T x 19 3/4" SWIFT LIFT LIFTER | | |
| 41 | | | | | |

Vermont Agency of Transportation
Rochester BRF 0162(16) - BR 15 Precast Slabs (P and R)&
RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

**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

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Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788
Job Number 57526.00
Reviewed By E.A. FIALA
Date 04-01-2014

SUBMITTED
MAR 14 2014
J. P. CARRARA & SONS, INC
MIDDLEBURY, VT 05753

APPROVAL STAMP:

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

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BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

MATERIALS LIST

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RVS JJ/KLT
JOB NO: 23419-013
DWG. NO: M1

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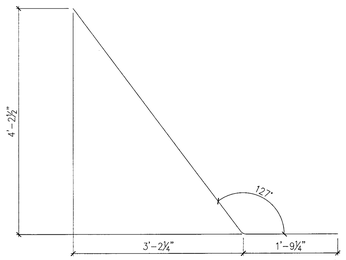
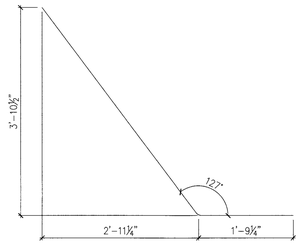
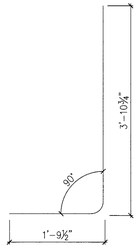



R-521
#5 BENT BAR
(12) REQ'D.




R-522
#5 BENT BAR
(12) REQ'D.

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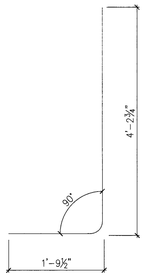


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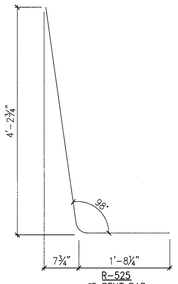


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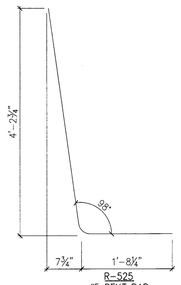


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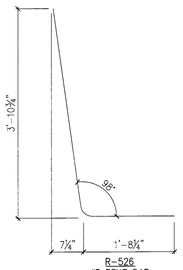


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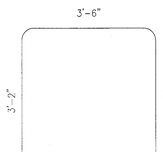


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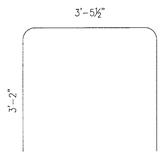


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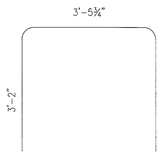


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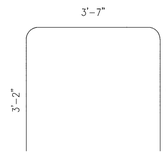


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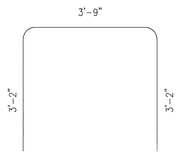


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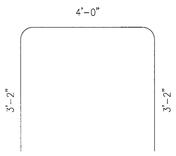


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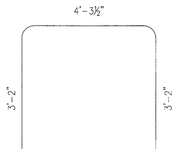


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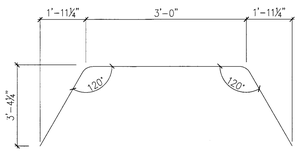


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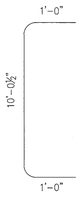
(77) REQ'D.

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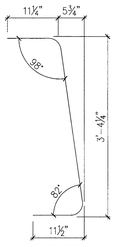


R-612
#6 BENT BAR
(77) REQ'D.

R-615
#6 BENT BAR
(77) REQ'D.

R-618
#6 BENT BAR
(77) REQ'D.

PRECAST ABUTMENT

## MISCELLANEOUS MATERIALS

| ITEM | MARK | QTY. | DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 1 | | 110 | #6 x 6'-6" (LEVEL I, BLACK REINFORCEMENT) | |
| 2 | | 36 | #6 x 6'-9" (LEVEL I, BLACK REINFORCEMENT) | |
| 3 | | 13 | #6 x 9'-8" (LEVEL I, BLACK REINFORCEMENT) | |
| 4 | | 28 | #6 x 10'-2" (LEVEL I, BLACK REINFORCEMENT) | |
| 5 | | 13 | #6 x 10'-4" (LEVEL I, BLACK REINFORCEMENT) | |
| 6 | | 14 | #6 x 18'-11" (LEVEL I, BLACK REINFORCEMENT) | |
| 7 | | 32 | #6 x 19'-0" (LEVEL I, BLACK REINFORCEMENT) | |
| 8 | | 2 | #6 x 19'-4" (LEVEL I, BLACK REINFORCEMENT) | |
| 9 | | 14 | #6 x 20'-3" (LEVEL I, BLACK REINFORCEMENT) | |
| 10 | | 2 | #6 x 20'-4" (LEVEL I, BLACK REINFORCEMENT) | |
| 11 | | 2 | #6 x 20'-5" (LEVEL I, BLACK REINFORCEMENT) | |
| 12 | | 2 | #6 x 20'-6" (LEVEL I, BLACK REINFORCEMENT) | |
| 13 | | 14 | #6 x 20'-8" (LEVEL I, BLACK REINFORCEMENT) | |
| 14 | | 14 | #6 x 21'-5" (LEVEL I, BLACK REINFORCEMENT) | |
| 15 | | 32 | #6 x 22'-9" (LEVEL I, BLACK REINFORCEMENT) | |
| 16 | | | | |
| 17 | | | | |
| 18 | MK-R2 | 28 | 4T x 7 1/2" SWIFT LIFT LIFTER | |
| 19 | | | | |

PRECAST ABUTMENT

Vermont Agency of Transportation
Rochester BRF 0162(16) - BR 15 Precast Grays (R and R) Ab

RECEIVED
ON: March 17, 2014
and Checked for
CONFORMANCE
BY: Jennifer Fitch DATE: 04/08/2014

**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 Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7798

Job Number: 57526.00
Reviewed By: E.A. FIALA
Date: 04-01-2014

SUBMITTED
MAR 14 2014
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR, 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.: 15 PROJECT NO.: BRF 0162 (16)

MATERIALS LIST

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: RAT/PWS JJ/KLT
JOB NO: 23419-013
DWG. NO: M2

Eriksson technologies
813.989.3317
TAMPA, FL LRFD.COM
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## MISCELLANEOUS MATERIALS

| ITEM | MARK | QTY. | DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 1 | | 2 | #5 x 2'-10" (LEVEL II, DUAL COATED) | |
| 2 | | 2 | #5 x 3'-8" (LEVEL II, DUAL COATED) | |
| 3 | | 2 | #5 x 5'-0" (LEVEL II, DUAL COATED) | |
| 4 | | 4 | #5 x 6'-8" (LEVEL II, DUAL COATED) | |
| 5 | | 10 | #5 x 7'-8" (LEVEL II, DUAL COATED) | |
| 6 | | 2 | #5 x 8'-5" (LEVEL II, DUAL COATED) | |
| 7 | | 22 | #5 x 24'-0" (LEVEL II, DUAL COATED) | |
| 8 | | 6 | #5 x 27'-5" (LEVEL II, DUAL COATED) | |
| 9 | | 6 | #5 x 45'-0" (LEVEL II, DUAL COATED) | |
| 10 | | 22 | #5 x 46'-3" (LEVEL II, DUAL COATED) | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | 10 | #8 x 1'-6" (LEVEL II, DUAL COATED) | |
| 15 | | | | |
| 16 | | | | |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |

PRECAST ABUTMENT

WHERE ARE THE REBAR DETAILS?

PRECAST BEAM

Vermont Agency of Transportation

RECEIVED

ON: March 17, 2014

and Checked for

CONFORMANCE

BY: Jennifer Fitch DATE: 04/08/2014

**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.

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