

- ### ABUTMENT & WING WALL GENERAL NOTES
- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE ABUTMENT & WING WALLS = 5,000 PSI.
 - MIN. CONCRETE STRENGTH FOR HANDLING OF WING WALLS SHALL BE 3,500 PSI (UNLESS NOTED OTHERWISE).
 - MIN. CONCRETE STRENGTH FOR HANDLING OF ABUTMENTS SHALL BE 5,000 PSI.
 - ALL REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) ~~LEVEL II (DUAL COATED)~~ **LEVEL II (DUAL COATED)**
 - THE TOP OF ABUTMENTS SHALL RECEIVE A RAKE FINISH ROUGHENED TO 1/4" AMPLITUDE (UNLESS NOTED OTHERWISE).
 - THE TOP OF WING WALLS SHALL RECEIVE A SMOOTH SCREED FINISH (UNLESS NOTED OTHERWISE).
 - PRECAST CONCRETE UNITS SHALL BE HANDLED AND ERECTED USING THE LIFTING INSERTS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. NON-PRESTRESSED UNITS SHALL BE STORED & TRANSPORTED WITH TIMBER SUPPORTS AT 5TH POINTS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
 - MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P540.02 AND P540.05 RESPECTIVELY.
DESIGN MIX:
WING WALLS: J.P.C. BRIDGE MIX #445MSCC
ABUTMENTS: J.P.C. BRIDGE MIX #425M-NO DO
 - QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
 - CURING METHOD: AS SOON AS THE TOP OF PRECAST CONCRETE UNITS ARE FINISHED, A COVER OF POLY WILL BE PLACED OVER THE UNIT. NATURAL CURE WITH NO EXTERNAL HEAT APPLIED. AMBIENT ENCLOSURE TEMPERATURE SHALL BE MONITORED. UNITS SHALL NOT BE EXPOSED TO TEMPERATURE DIFFERENTIAL GREATER THAN 40°F UNTIL DESIGN STRENGTH IS ACHIEVED.
 - ABUTMENT LIFTING NOTES:
PRECAST ABUTMENTS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS AND LIFTING INSERTS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60 DEGREES, EXCEPT WHERE NOTED IN THE ERECTION PLAN. THE PINS OF THE SHACKLES SHALL BE PLACED THROUGH THE LIFTING LOOPS, SEE DETAIL THIS SHEET. NON PRESTRESSED UNITS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS AT FIFTH POINTS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.

- ### PREFABRICATED BRIDGE UNIT GENERAL NOTES
- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 4,000 PSI.
 - MIN. CONCRETE STRENGTH FOR HANDLING OF PREFABRICATED BRIDGE UNITS SHALL BE 3,500 PSI.
 - REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) **LEVEL II (DUAL COATED)**.
 - ALL EXPOSED CORNERS SHALL BE CHAMFERED 1".
 - THE TOP OF PBU'S SHALL RECEIVE A SMOOTH SCREED FINISH (UNLESS NOTED OTHERWISE).
 - SHEAR KEY SURFACES SHALL BE ROUGHENED TO PROVIDE 1/8" AMPLITUDE SURFACE PROFILE WITH SOME EXPOSED AGGREGATE.
 - PBU'S SHALL BE HANDLED AND ERECTED AS PER THE ERECTION PLAN USING SLINGS THAT PASS THROUGH BLOCKOUTS CAST IN THE PRECAST DECK AT LOCATIONS SHOWN IN THE PRECAST SHOP DRAWINGS. THE PBUS SHALL BE TRANSPORTED WITH TIMBER SUPPORTS AT BLOCKOUT LOCATIONS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
 - MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P540.02 AND P540.05 RESPECTIVELY.
DESIGN MIX: VERMONT HIGH PERFORMANCE CLASS A (VT HPCA)
 - QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT FOR ADDITIONAL TOLERANCES REF. PROJECT SPECIAL PROVISION DATED OCTOBER 22, 2015 ITEM 62(K).
 - CURING SHALL MEET THE REQUIREMENTS OF SUB SECTION 501.17.
 - OWNER SHALL PROVIDE APPROPRIATE WATERPROOFING TO GROUTED AND/OR EPOXIED SHEAR KEYS. J.P. CARRARA & SONS, INC. SHALL NOT BE HELD LIABLE FOR PROBLEMS ASSOCIATED WITH MOISTURE INFILTRATING GROUTED AND/OR EPOXIED SHEAR KEYS.

DRAWING INDEX		REV. #	REV. DATE
SHT. #	DRAWING TITLE		
C1	COVER SHEET		
F1	PRECAST ABUTMENT LAYOUT		
F2	ABUTMENT #1 ELEVATIONS		
F3	ABUTMENT #2 ELEVATIONS		
F4	PREFABRICATED BRIDGE UNIT LAYOUT		
F5	TRANSVERSE SECTION & DETAILS		
PBU1A	PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU1"		
PBU1B	PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU1"		
PBU1C	PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU1"		
PBU2A	PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU2"		
PBU2B	PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU2"		
PBU3A	PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU3"		
PBU3B	PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU3"		
PBU3C	PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU3"		
AB1	PRECAST ABUTMENT DETAILS "CR-AB1"		
AB1.1	PRECAST ABUTMENT DETAILS "CR-AB1"		
AB2	PRECAST ABUTMENT DETAILS "CR-AB2"		
AB2.1	PRECAST ABUTMENT DETAILS "CR-AB2"		
WW1	PRECAST WINGWALL DETAILS "CR-WW1"		
WW2	PRECAST WINGWALL DETAILS "CR-WW2"		
WW3	PRECAST WINGWALL DETAILS "CR-WW3"		
WW4	PRECAST WINGWALL DETAILS "CR-WW4"		
M1	MATERIALS LIST (ABUTMENTS & WINGWALLS)		
M2	MATERIALS LIST (PREFABRICATED BRIDGE UNIT)		

if stripped prior to these moving strengths, cure must be maintained

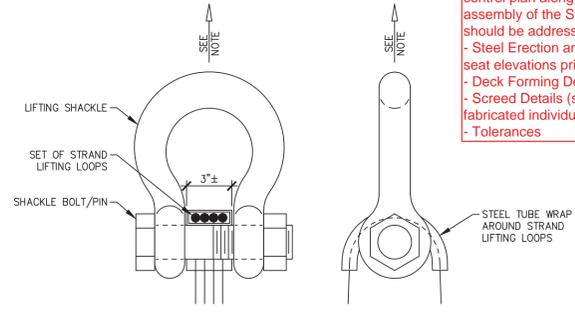
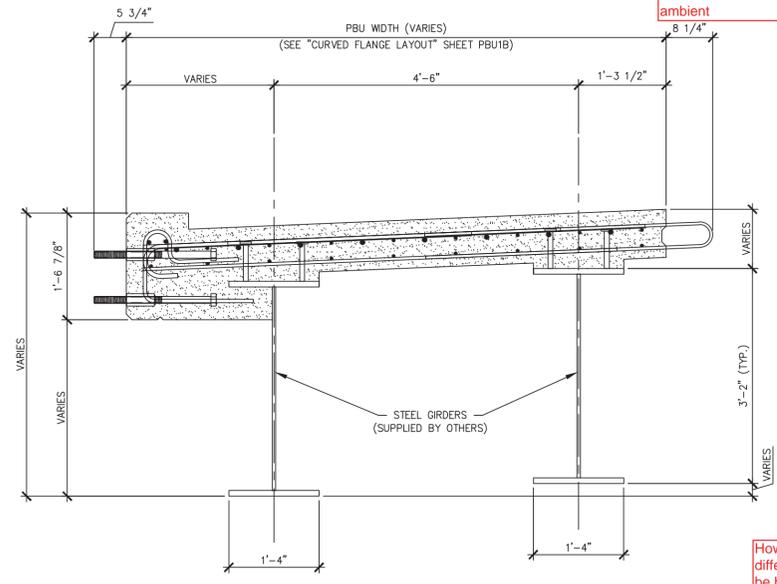
All exposed corners shall be chamfered 1" U.N.O.

Minimum Curing Temperature of 36 Degrees

at any time, the precast temperature shall be lowered in the recommended controlled temperature rate until less than 40 difference of the ambient

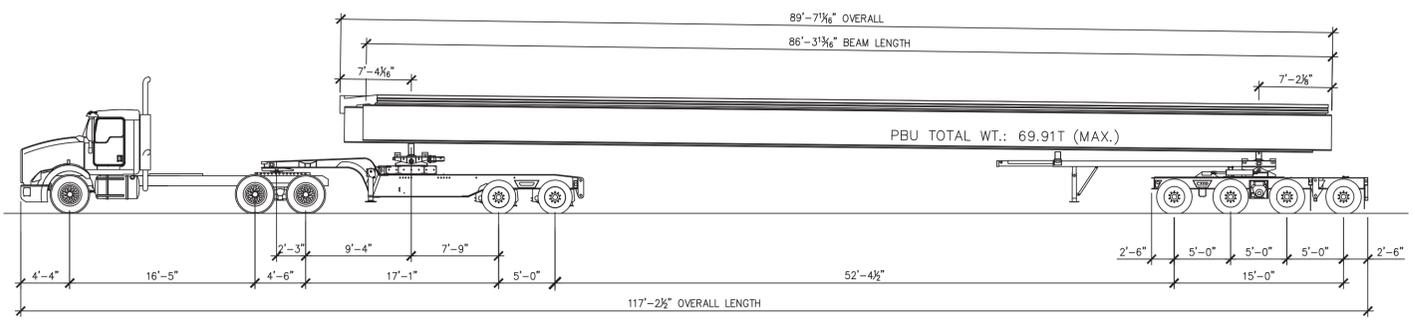
Materials shall meet the requirements of Subsections 501.01, 506.02, 507.02, 508.02 and 780.01-780.04.

Simply stating that "Quality Control Procedures are in accordance with PCI Requirements" is not sufficient for a quality control plan according to the Special Provision 59.(b). This lacks any sort of project specific quality control plan along with details and notes regarding the erection and assembly of the Structural Steel at the Concrete Plant. The following details should be addressed:
 - Steel Erection and Assembly including blocking and establishing bridge seat elevations prior to casting the deck for the PBU
 - Deck Forming Details and Pouring Sequence
 - Screed Details (screed size and support locations, will each unit be fabricated individually or all at the same time?)
 - Tolerances



NOTE: PRECAST ABUTMENTS SHALL BE HANDLED AND ERECTED USING LIFTING LOOPS AS PROVIDED. RIGGING SHALL BE CONFIGURED WITH LENGTHS AS PER THE ERECTION PLAN TO ENSURE THE INTENDED FORCES ARE APPLIED AT EACH LIFT LOCATION. SHACKLE BOLT/PIN SHALL BE PLACED UNDER LIFT LOOPS AS SHOWN. DESIGN AND CONFIGURATION OF RIGGING BY THE PURCHASER.

How will this difference in grade be handled during shipping and handling?



Vermont Agency of Transportation
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March 2, 2016

RESUBMIT YES **Rejected**
 BY RSY DATE 3/23/2016

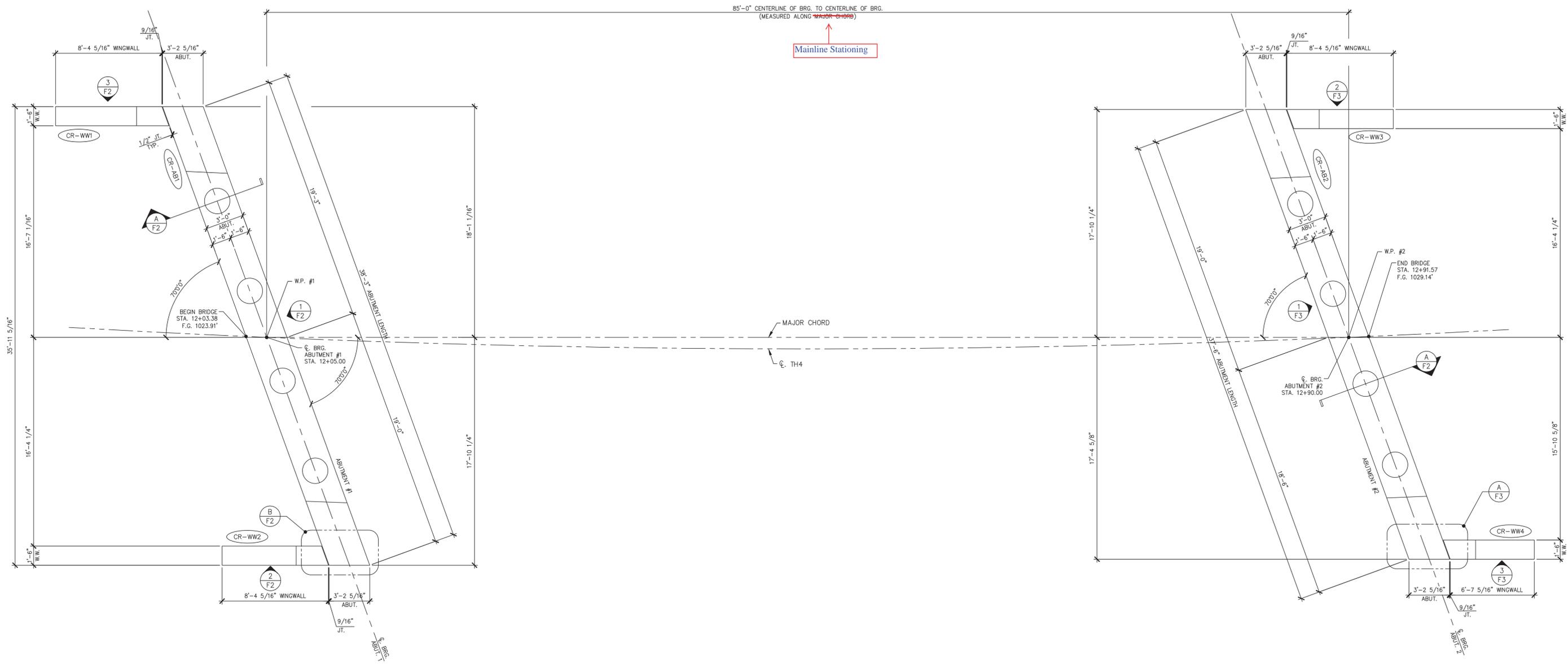
APPROVAL STAMP:

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

STATE OF VERMONT AGENCY OF TRANSPORTATION DATE: FEB 29, 2016
 COUNTY OF ORLEANS SCALE: NOTED

TOWN OF CRAFTSBURY CHKD: R.M. DFTM: PSS
 ROUTE NO. TH-4, RURAL MINOR COLLECTOR JOB NO.: 23478-015
 BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)

COVER SHEET DWG. NO: C1



Mainline Stationing

85'-0" CENTERLINE OF BRG. TO CENTERLINE OF BRG.
(MEASURED ALONG MAJOR CHORD)

MAJOR CHORD

CL TH4

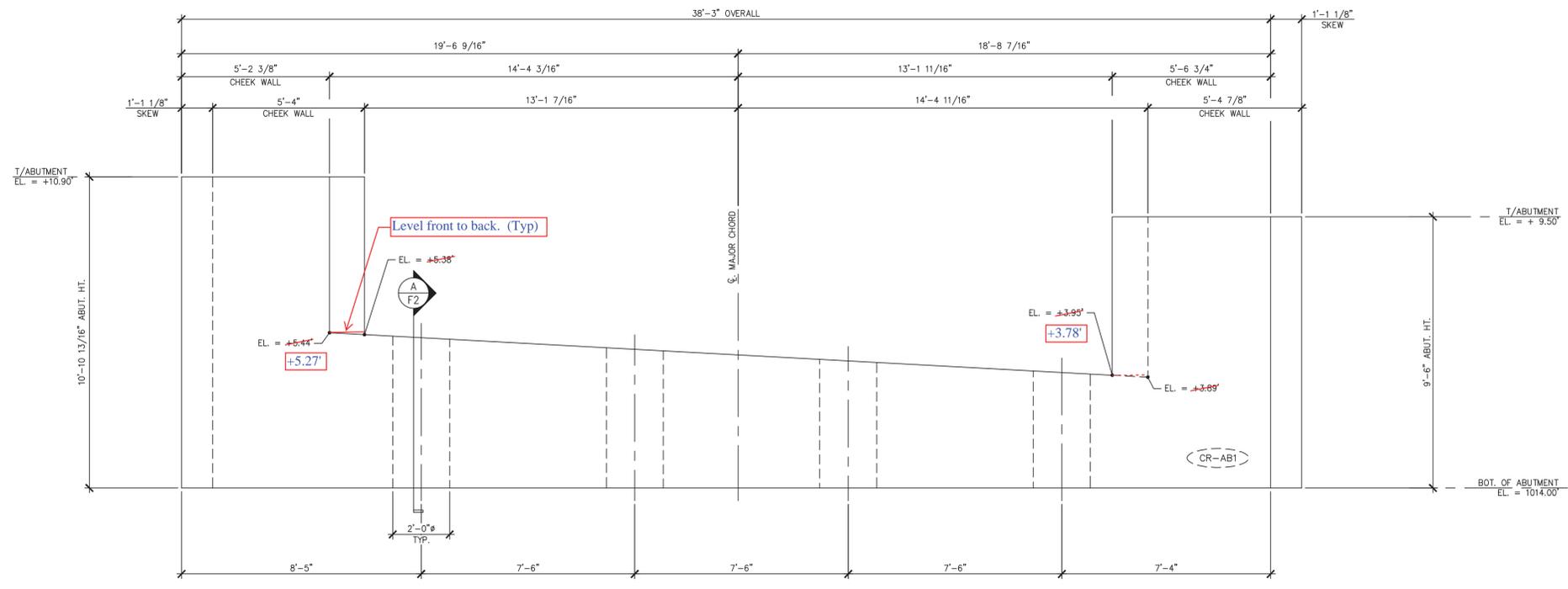


1 PRECAST ABUTMENT LAYOUT
F1
1/4" = 1'-0"

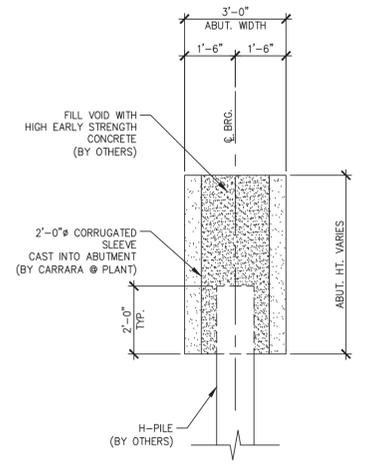
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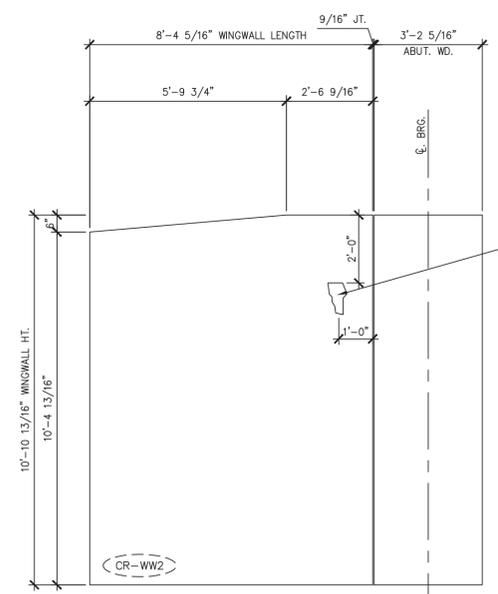
J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer <small>2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010</small>		CCS CONSTRUCTORS, INC CONTRACTOR <small>MORRISVILLE, VT</small>	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB 29, 2016	
TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)		SCALE: NOTED	CHKD: R.M. DFTM: PSS
PRECAST ABUTMENT LAYOUT		JOB NO: 23478-015	DWG. NO: F1



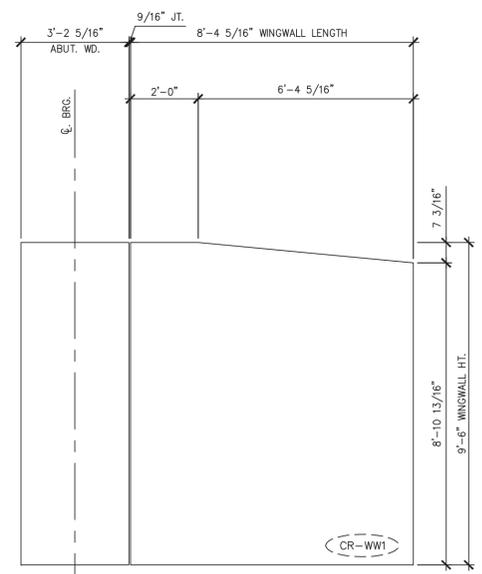
1 ABUTMENT #1 ELEVATION
F2 3/8" = 1'-0"



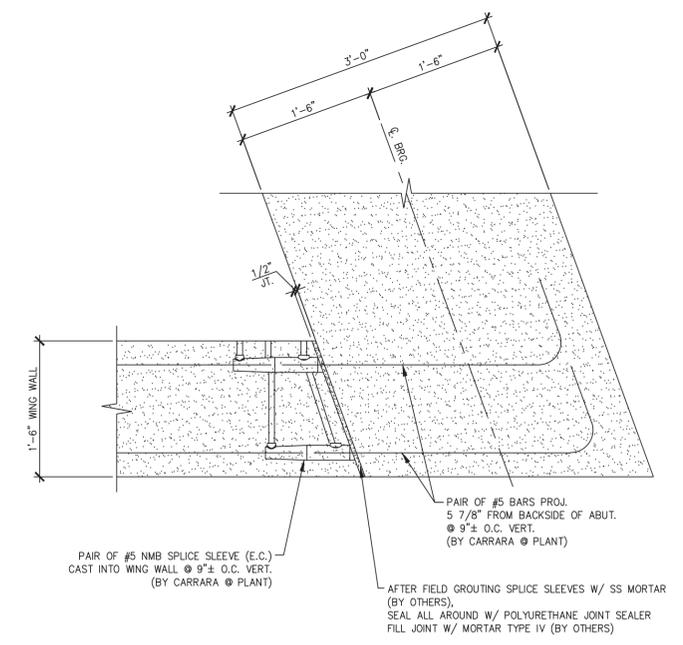
A ABUTMENT SECTION
F2 3/8" = 1'-0"



2 WINGWALL #2 ELEVATION
F2 3/8" = 1'-0"



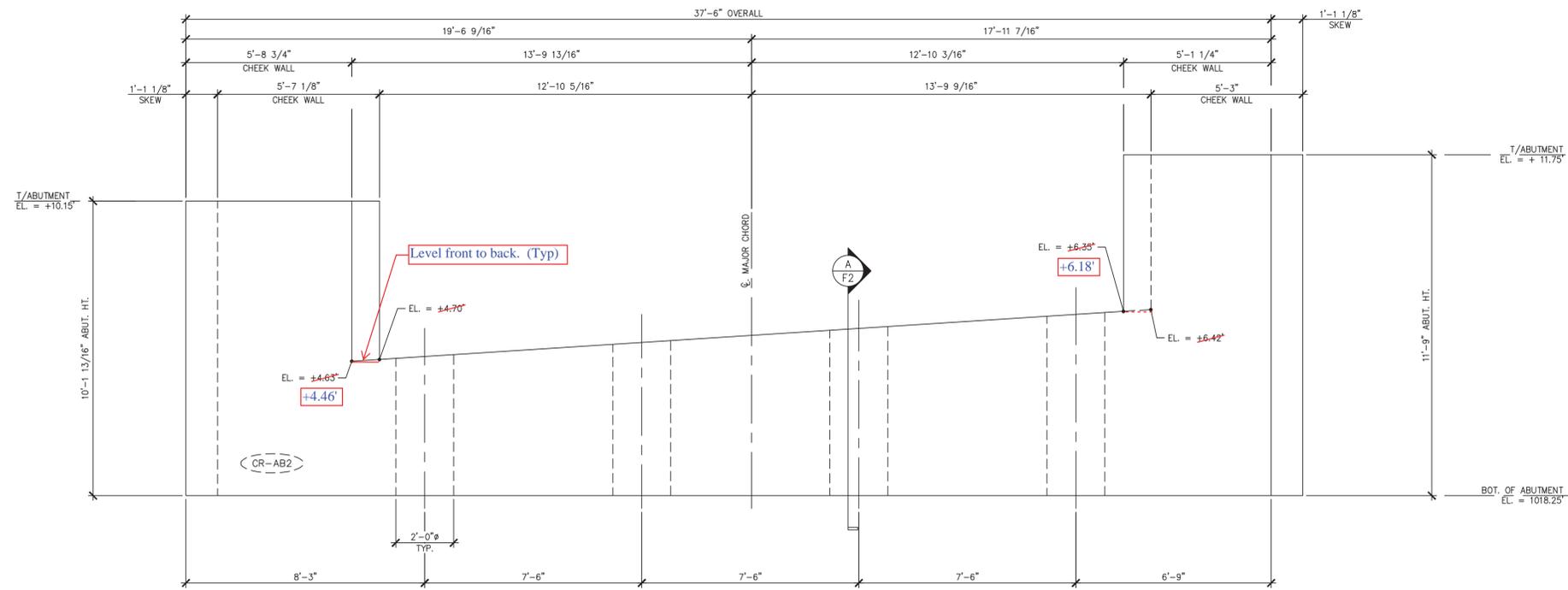
3 WINGWALL #1 ELEVATION
F2 3/8" = 1'-0"



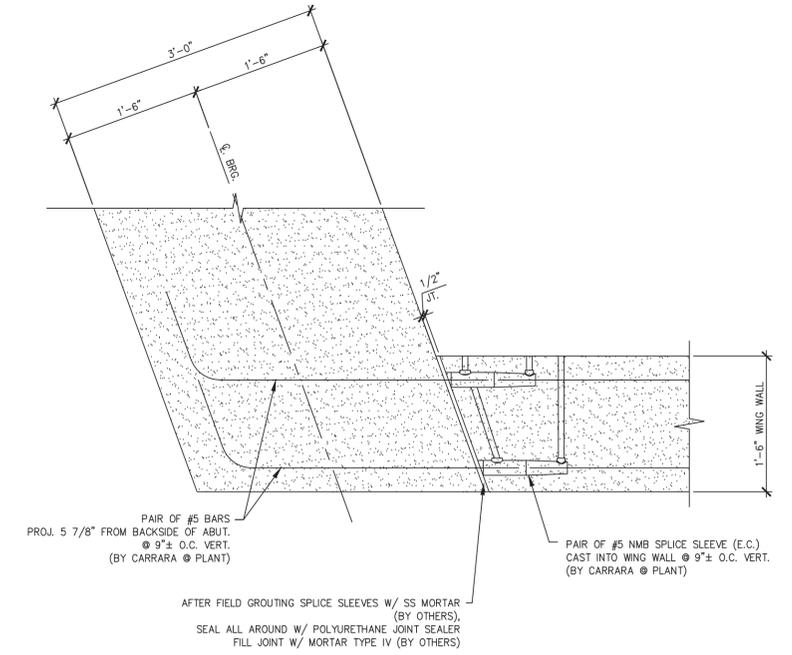
B WING WALL CONNECTION DETAIL
F2 1" = 1'-0"

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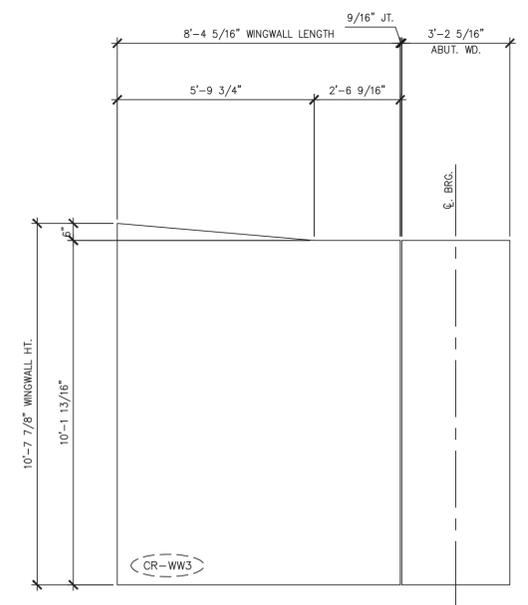
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	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS	DATE: FEB 29, 2016 SCALE: NOTED
	TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)	CHKD: R.M. DFTM: PSS JOB NO.: 23478-015
	ABUTMENT #1 ELEVATIONS	DWG. NO: F2



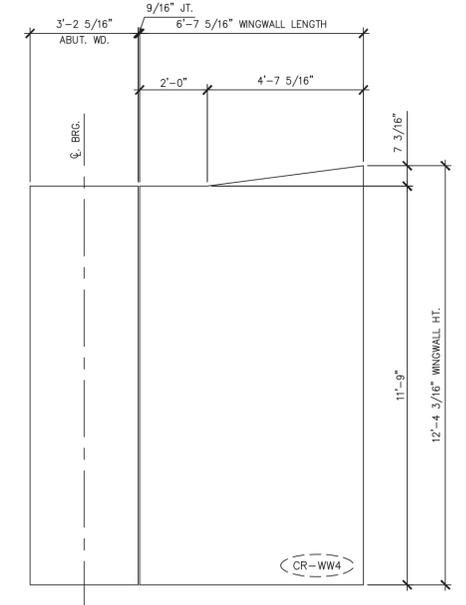
1 ABUTMENT # 2 ELEVATION
 F3 3/8" = 1'-0"



A WING WALL CONNECTION DETAIL
 F3 1" = 1'-0"



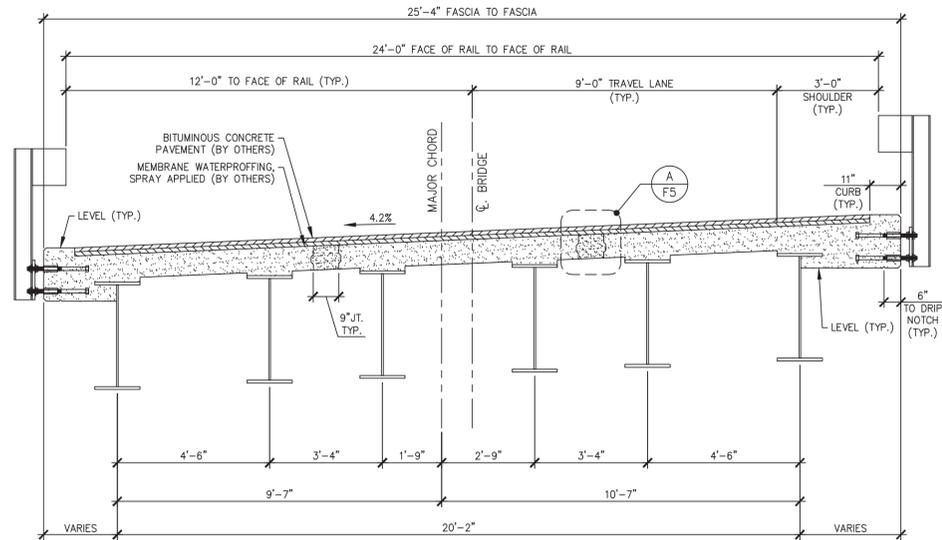
2 WINGWALL #3 ELEVATION
 F3 3/8" = 1'-0"



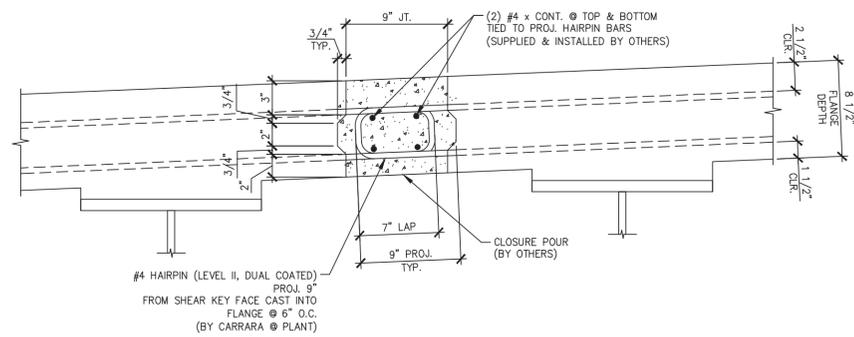
3 WINGWALL #4 ELEVATION
 F3 3/8" = 1'-0"

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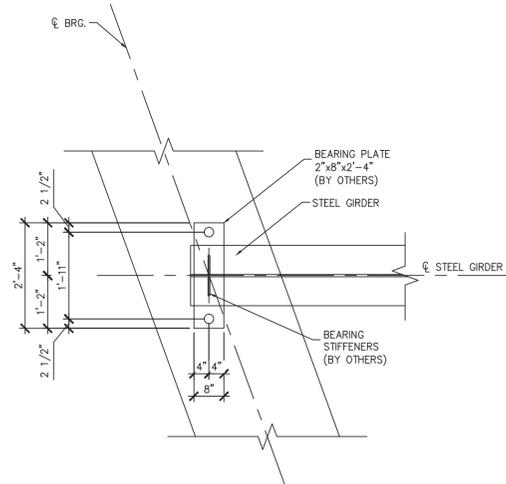
APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010	CCS CONSTRUCTORS, INC CONTRACTOR MORRISVILLE, VT
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS	DATE: FEB 29, 2016 SCALE: NOTED
	TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)	CHKD: R.M. DFTM: PSS JOB NO: 23478-015
	ABUTMENT #2 ELEVATION	DWG. NO: F3



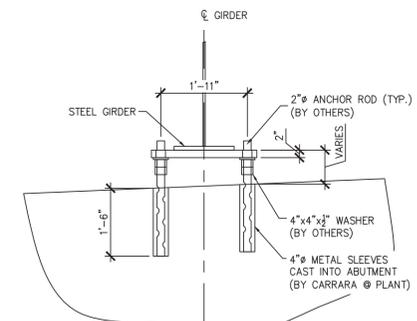
1
F5
PBU TRANSVERSE SECTION
3/8" = 1'-0"



A
F5
PBU CLOSURE POUR
1 1/2" = 1'-0"



B
F5
BEARING PLAN
1 1/2" = 1'-0"

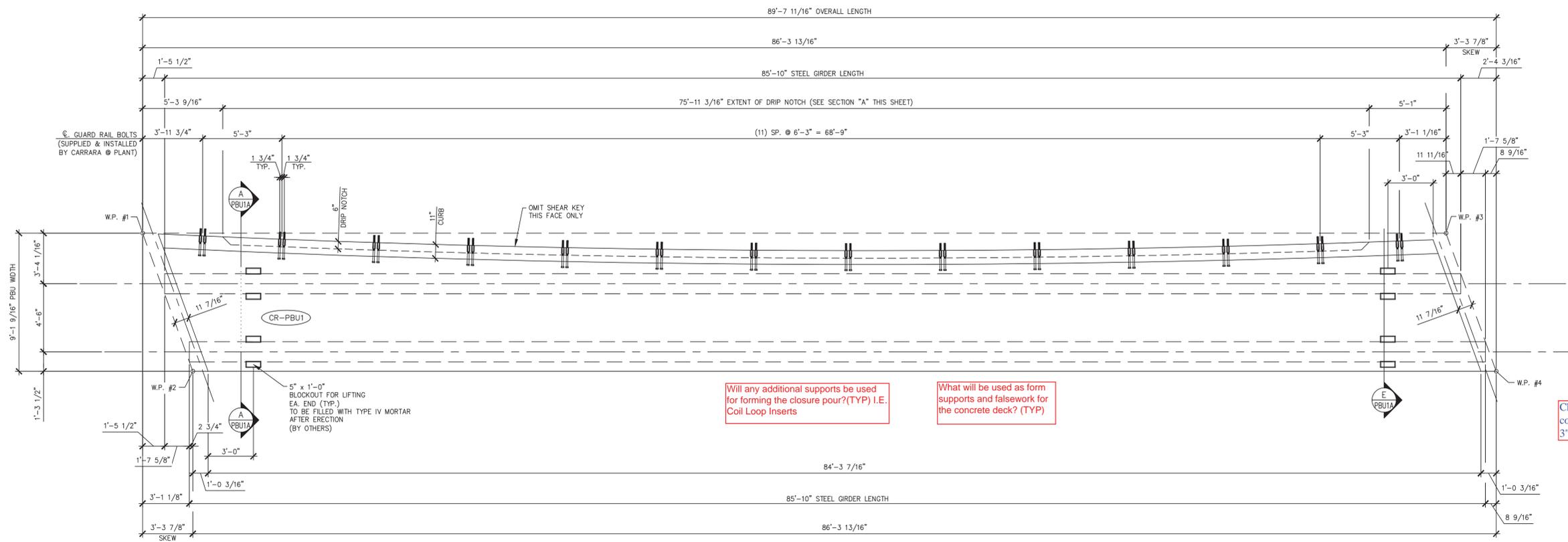


C
F5
BEARING ELEVATION
1 1/2" = 1'-0"

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Division of Bridge Planning/BI, Rev. 3-22-2016.pdf
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 BY RSY DATE 3/23/2016

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J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer <small>2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010</small>		CCS CONSTRUCTORS, INC CONTRACTOR MORRISVILLE, VT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB 29, 2016	
TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)		SCALE: NOTED	
TRANSVERSE SECTION & DETAILS		CHKD: R.M. DFTM: PSS	
		JOB NO: 23478-015	
		DWG. NO: F5	



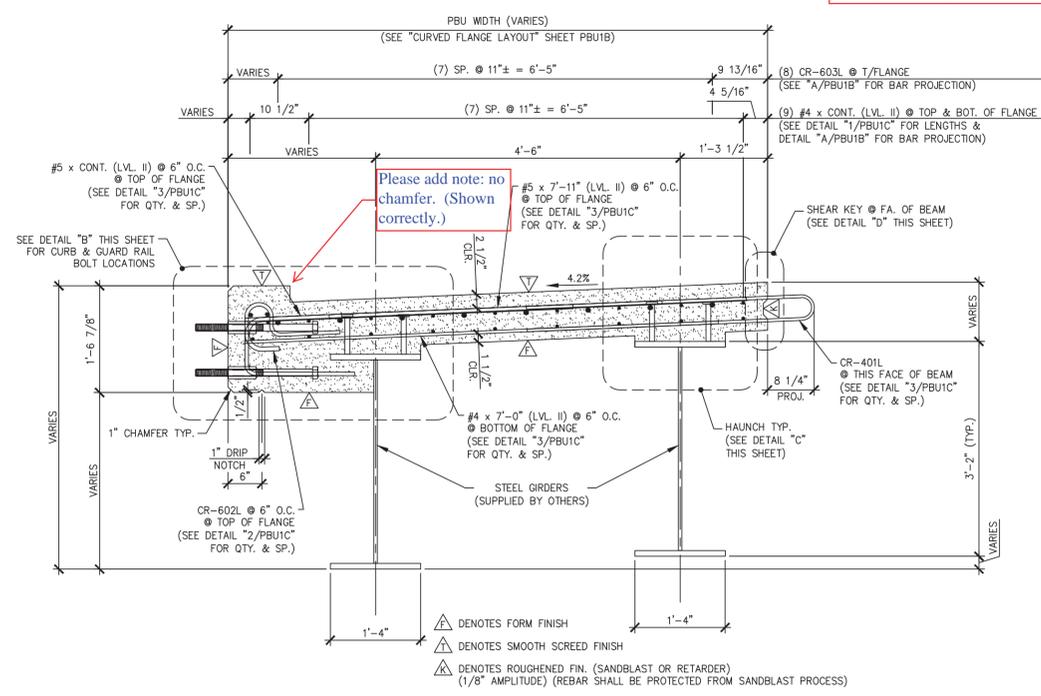
Will any additional supports be used for forming the closure pour? (TYP) I.E. Coil Loop Inserts

What will be used as form supports and falsework for the concrete deck? (TYP)

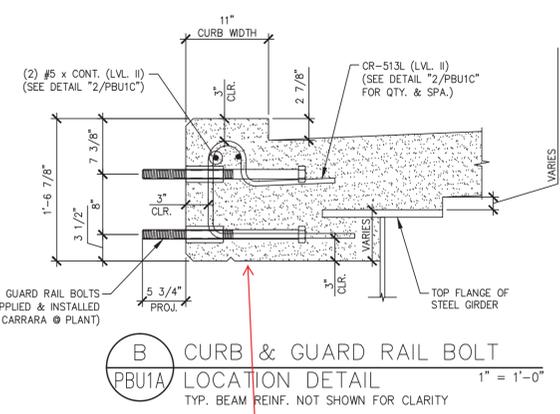
Chamfer acute corner on PBU 3\"/>

1 DIMENSIONAL PLAN VIEW IN FORM PBU1A 1/4\"/>

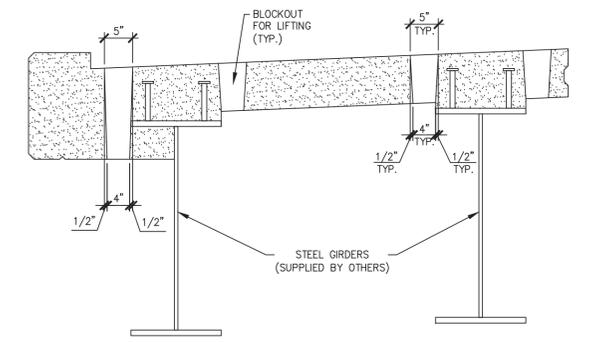
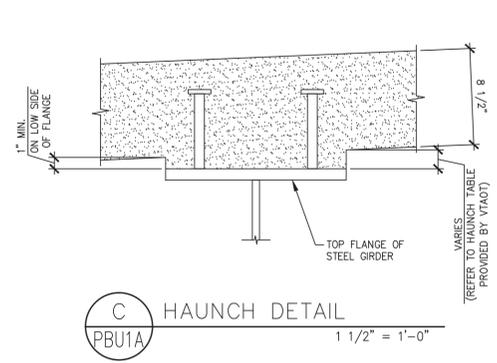
Bars should be fanned or additional bars added to ensure spacing. See note on Plan View 1/PBU1C



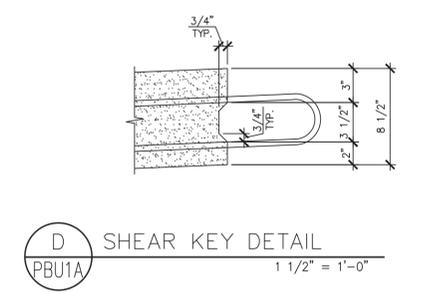
A DIMENSIONAL & REINFORCING SECTION PBU1A 3/4\"/>



Bolt Embedment Length?



E LIFTING BLOCKOUT DETAIL PBU1A 3/4\"/>

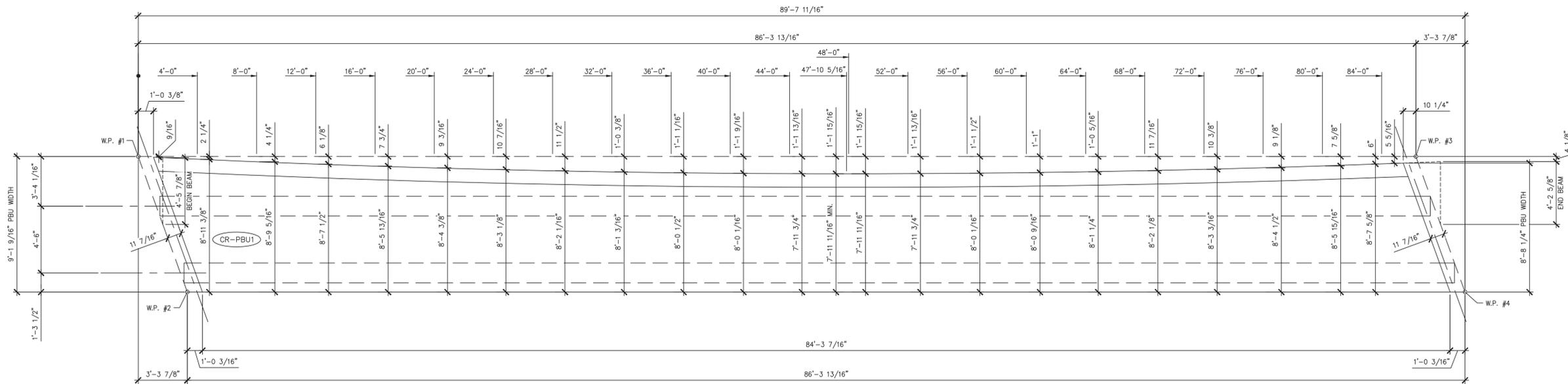


D SHEAR KEY DETAIL PBU1A 1 1/2\"/>

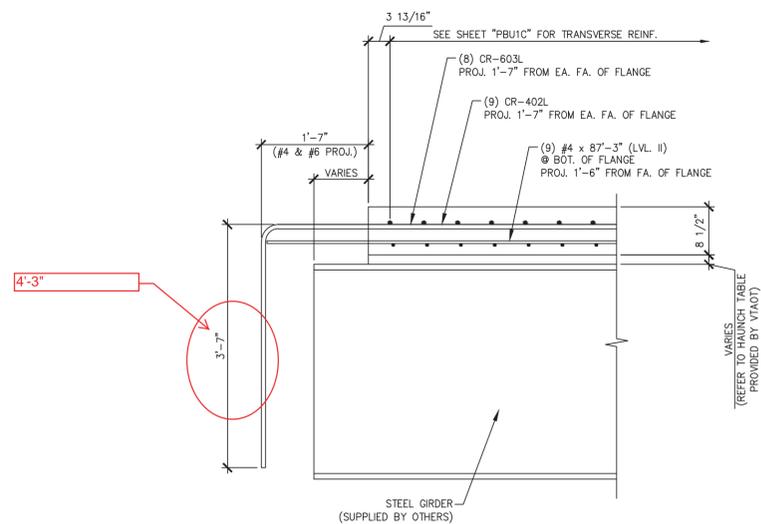
Vermont Agency of Transportation
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 CK'D BY JW/JDG/SMC OK'D BY WDL
 March 2, 2016
 RESUBMIT YES Rejected
 BY RSY DATE 3/23/2016

APPROVAL STAMP:

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 OAK ST., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010		CCS CONSTRUCTORS, INC CONTRACTOR MORRISVILLE, VT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB 29, 2016	SCALE: NOTED
TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)		CHKD: R.M. DFTM: PSS	JOB NO: 23478-015
PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU1"		DWG. NO: PBU1A	



1 CURVED FLANGE LAYOUT
 PBU1B 1/4" = 1'-0"



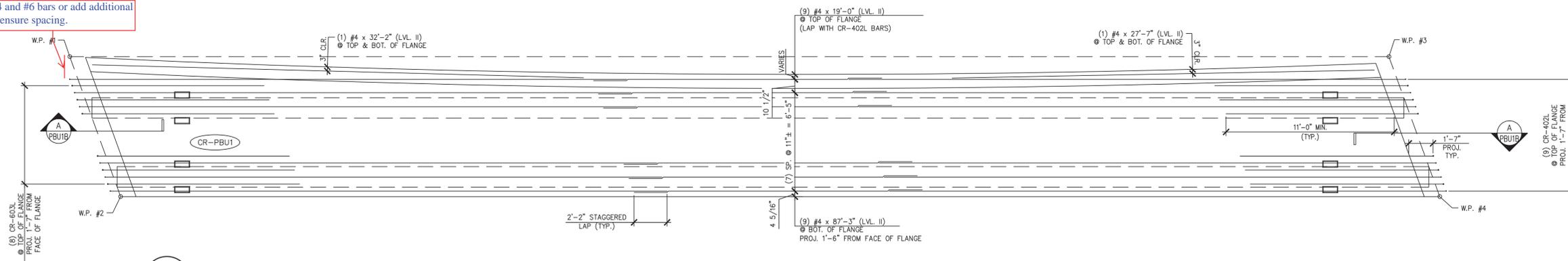
A END ELEVATION
 PBU1B 3/4" = 1'-0"

Vermont Agency of Transportation
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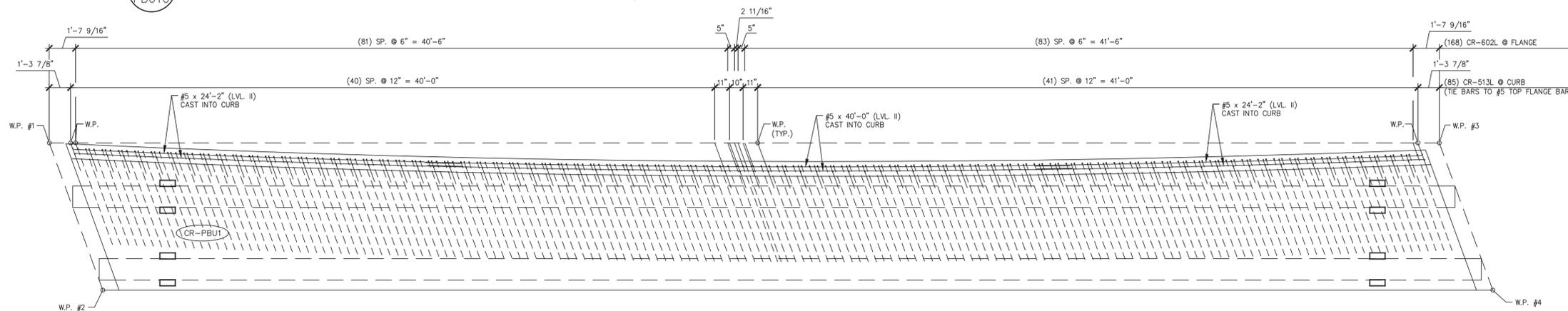
APPROVAL STAMP:

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer <small>2464 CASE STR., MOOREBURGH, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010</small>		CCS CONSTRUCTORS, INC CONTRACTOR <small>MORRISVILLE, VT</small>	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB 29, 2016	SCALE: NOTED
TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)		CHKD: R.M. DFTM: PSS	JOB NO: 23478-015
PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU1"		DWG. NO: PBU1B	

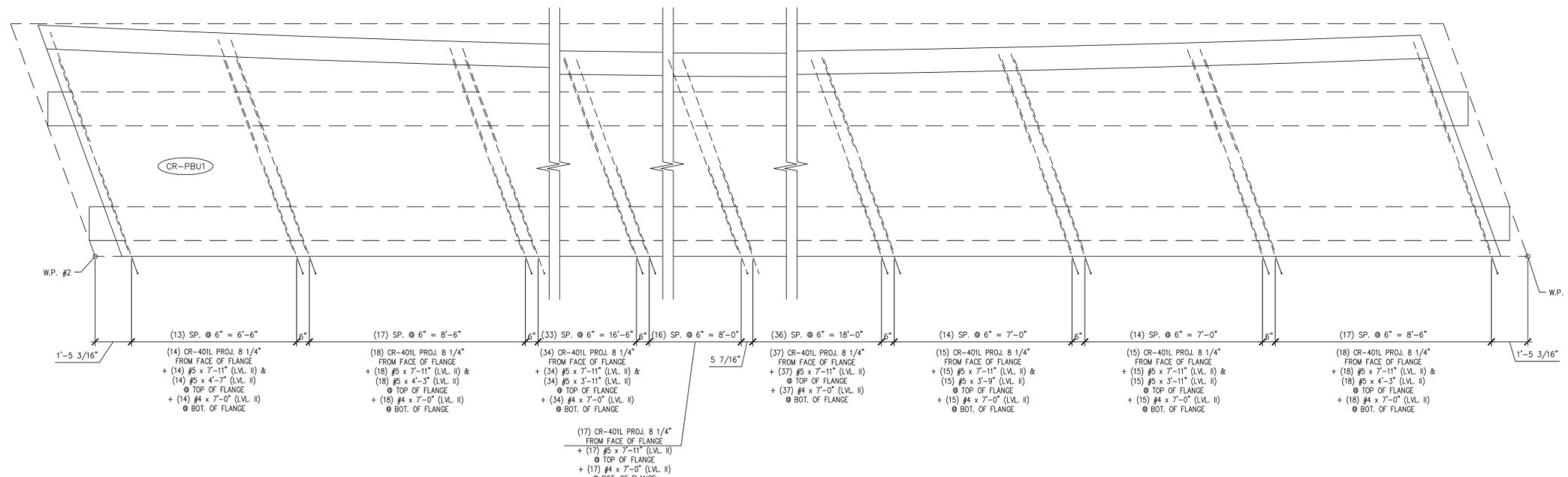
Fan #4 and #6 bars or add additional bar to ensure spacing.



1 REINFORCING PLAN VIEW IN FORM (FOR LONGITUDINAL BARS)
PBU1C
1/4" = 1'-0"



2 REINFORCING PLAN VIEW IN FORM (FOR CURB BARS)
PBU1C
1/4" = 1'-0"



3 REINFORCING PLAN VIEW IN FORM (FOR TRANSVERSE BARS)
PBU1C
3/8" = 1'-0"

Do not cut bars that interfere with lifting blockouts - bundle or bend out of the way. (TYP)

SHOP NOTE:
1. CUT BARS AS REQUIRED WHERE THE BARS INTERFERE WITH THE LIFTING BLOCKOUTS.
2. ENDS OF CUT BARS SHALL BE COATED WITH TOUCH UP PRODUCT SUPPLIED BY THE REBAR MANUFACTURER.

TOTAL PBU WT. (INCLUDING WT. OF STEEL GIRDERS): 67.70 T

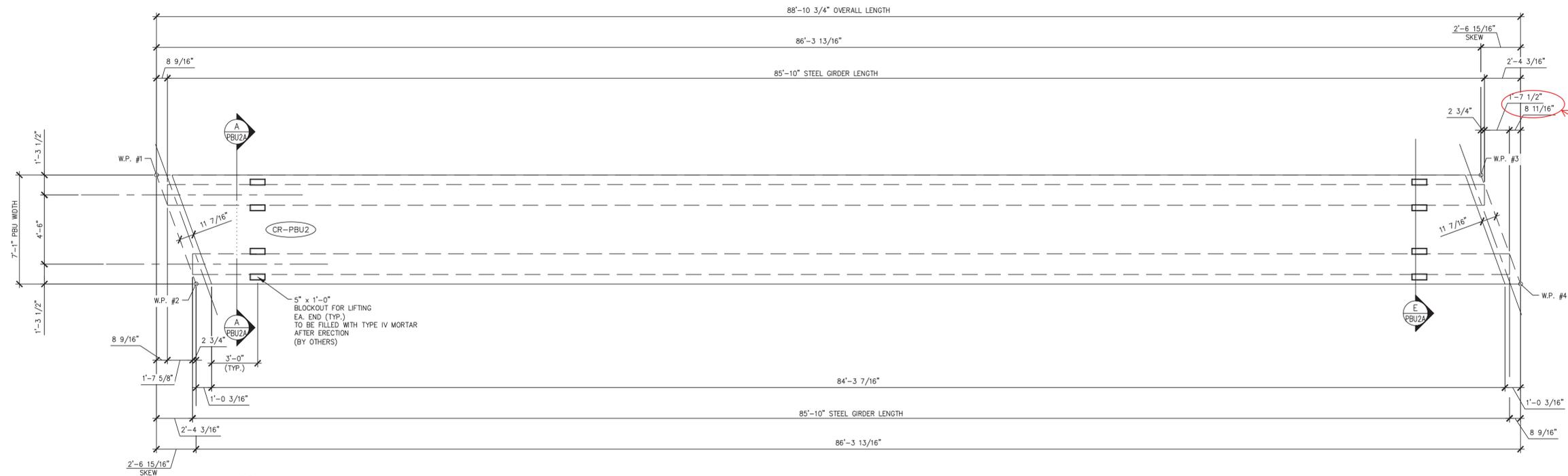
MARK: CR-PBU1	QTY.: 1	WT.: 49.39 T	VOL.: 24.39 cy
MATERIAL LIST / PREFABRICATED BRIDGE UNIT			
ITEM	MARK	DESCRIPTION	QTY.
1	CR-401L	#4 BENT BAR (LEVEL II, DUAL COATED)	168
2	CR-402L	#4 BENT BAR (LEVEL II, DUAL COATED)	18
3			
4	CR-513L	#5 BENT BAR (LEVEL II, DUAL COATED)	85
5			
6	CR-602L	#6 BENT BAR (LEVEL II, DUAL COATED)	168
7	CR-603L	#6 BENT BAR (LEVEL II, DUAL COATED)	16
8			
9		#4 x 87'-3" (W/ (2) 2'-2" STAGGERED LAP) (40' + 20' + 31'-7") (LVL. II, DUAL COATED)	9
10		#4 x 32'-2" (LEVEL II, DUAL COATED)	2
11		#4 x 27'-7" (LEVEL II, DUAL COATED)	2
12		#4 x 19'-0" (LEVEL II, DUAL COATED)	9
13		#4 x 7'-0" (LEVEL II, DUAL COATED)	168
14			
15		#5 x 40'-0" (LEVEL II, DUAL COATED)	2
16		#5 x 24'-2" (LEVEL II, DUAL COATED)	4
17		#5 x 7'-11" (LEVEL II, DUAL COATED)	168
18		#5 x 4'-7" (LEVEL II, DUAL COATED)	14
19		#5 x 4'-3" (LEVEL II, DUAL COATED)	36
20		#5 x 3'-11" (LEVEL II, DUAL COATED)	49
21		#5 x 3'-9" (LEVEL II, DUAL COATED)	15
22			
23		1 1/4" x 1'-9 3/4" GUARD RAIL BOLTS	56

Bolt Specifications

Vermont Agency of Transportation
RECEIVED
CK'D BY JW/JDG/SMC OK'D BY WDL
March 2, 2016
RESUBMIT YES Rejected
BY RSY DATE 3/23/2016

APPROVAL STAMP:

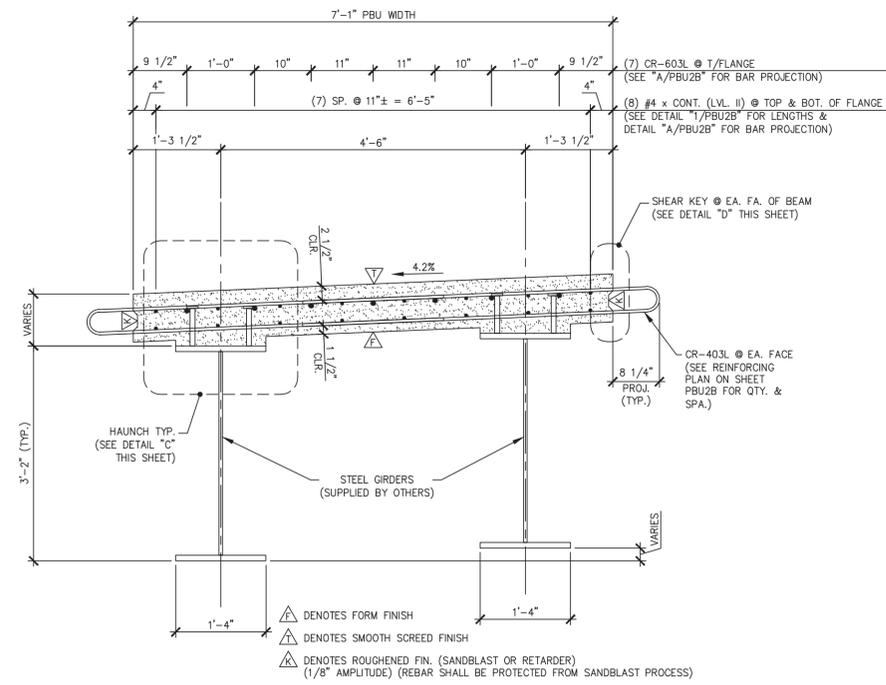
J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010
CONTRACTOR MORRISVILLE, VT
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS
TOWN OF CRAFTSBURY
ROUTE NO. TH-4, RURAL MINOR COLLECTOR
BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)
DATE: FEB 29, 2016
SCALE: NOTED
CHKD: R.M. DFTM: PSS
JOB NO: 23478-015
DWG. NO: PBU1C
PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU1"



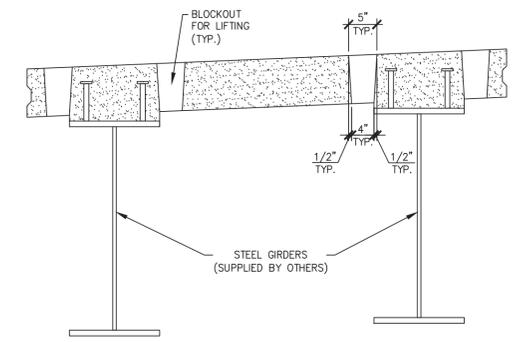
1 DIMENSIONAL PLAN VIEW IN FORM
 PBU2A 1/4" = 1'-0"

Drafting error?

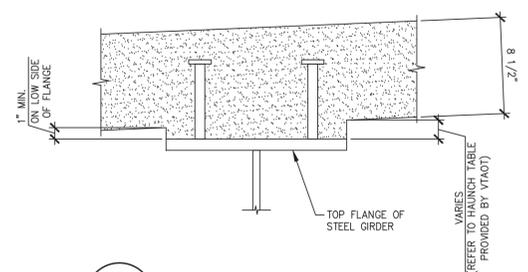
Chamfer Acute Edges 3"x3"



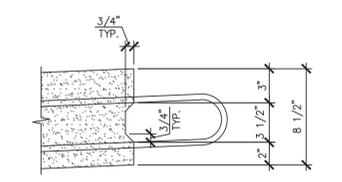
A DIMENSIONAL & REINFORCING SECTION
 PBU2A 3/4" = 1'-0"



E LIFTING BLOCKOUT DETAIL
 PBU2A 3/4" = 1'-0"



C HAUNCH DETAIL
 PBU2A 1 1/2" = 1'-0"

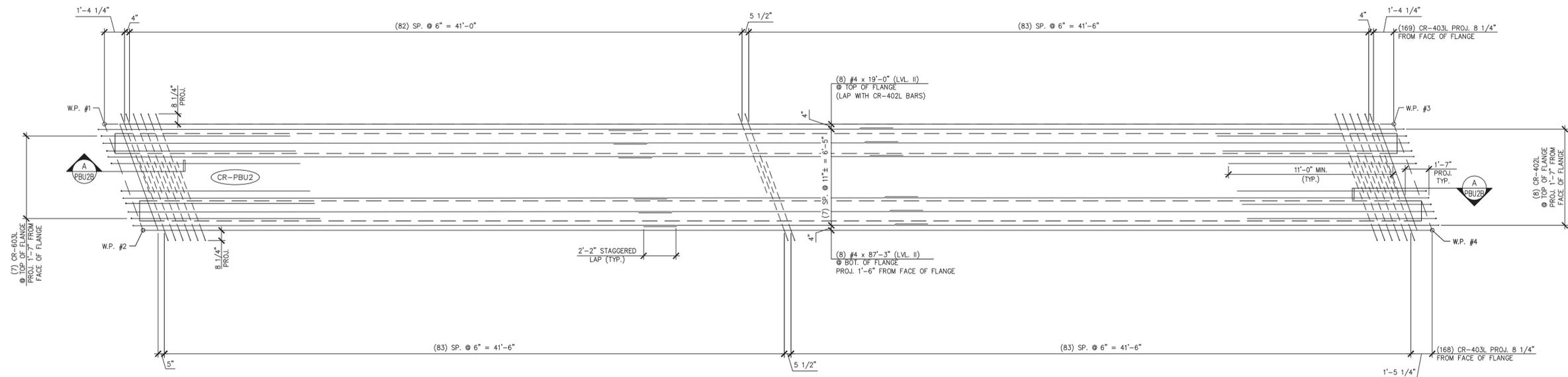


D SHEAR KEY DETAIL
 PBU2A 1 1/2" = 1'-0"

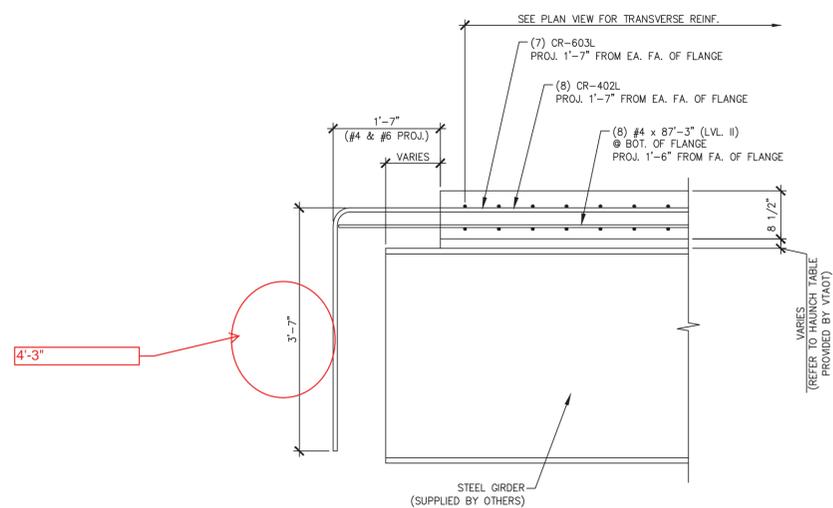
- ▲ DENOTES FORM FINISH
- ▲ DENOTES SMOOTH SCREED FINISH
- ▲ DENOTES ROUGHENED FIN. (SANDBLAST OR RETARDER) (1/8" AMPLITUDE) (REBAR SHALL BE PROTECTED FROM SANDBLAST PROCESS)

APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2444 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010		CCS CONSTRUCTORS, INC CONTRACTOR MORRISVILLE, VT	
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB 29, 2016	SCALE: NOTED
	TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)		CHKD: R.M. DFTM: PSS	JOB NO: 23478-015
	PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU2"		DWG. NO: PBU2A	

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1 REINFORCING PLAN VIEW IN FORM
PBU2B
1/4" = 1'-0"



A END ELEVATION
PBU2B
3/4" = 1'-0"

SHOP NOTE:
~~1. CUT BARS AS REQUIRED WHERE THE BARS INTERFERE WITH THE LIFTING BLOCKS.~~
~~2. ENDS OF CUT BARS SHALL BE COATED WITH TOUCH UP PRODUCT SUPPLIED BY THE REBAR MANUFACTURER.~~

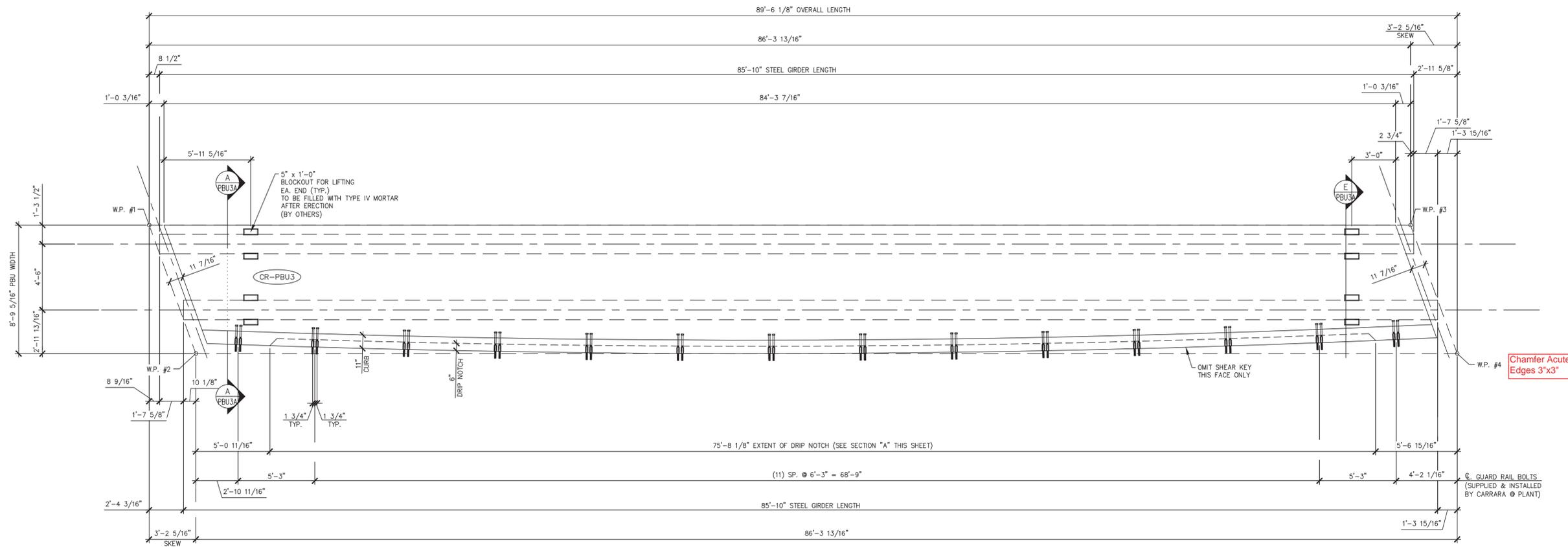
TOTAL PBU WT. (INCLUDING WT. OF STEEL GIRDERS): 51.74 T

MARK: CR-PBU2 QTY.: 1 WT.: 33.43 T VOL.: 16.51 cy

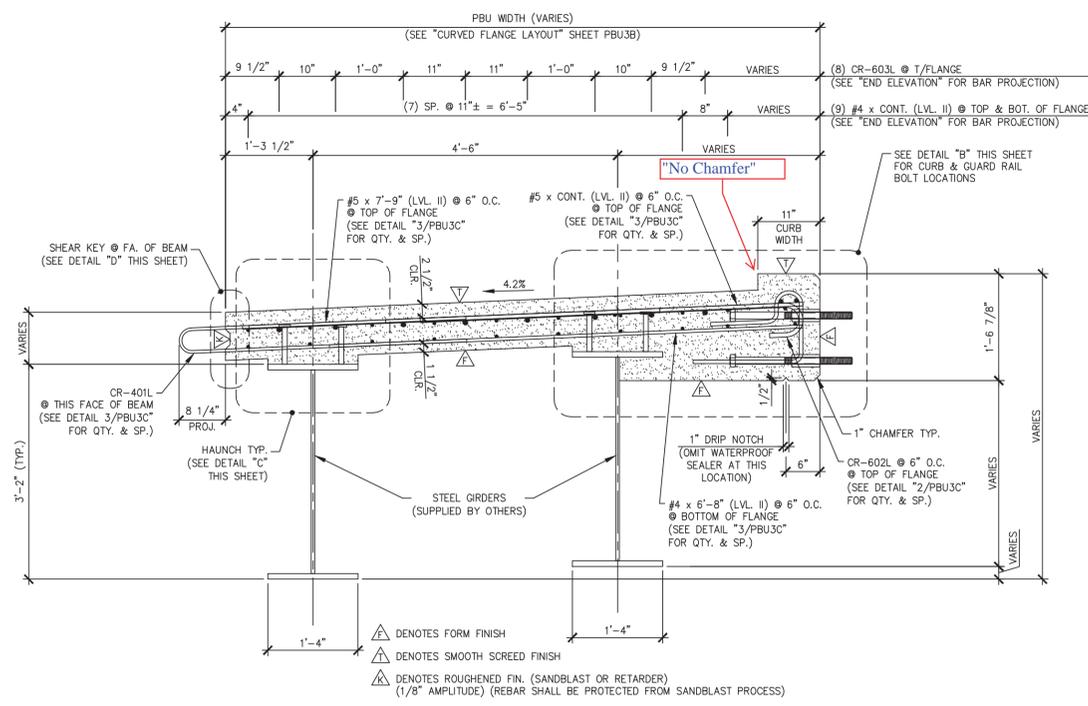
MATERIAL LIST / PREFABRICATED BRIDGE UNIT			
ITEM	MARK	DESCRIPTION	QTY.
1	CR-402L	#4 BENT BAR (LEVEL II, DUAL COATED)	16
2	CR-403L	#4 BENT BAR (LEVEL II, DUAL COATED)	337
3			
4	CR-603L	#6 BENT BAR (LEVEL II, DUAL COATED)	14
5			
6			
7		#4 x 87'-3" (W/ (2) 2'-2" STAGGERED LAP) (40' + 20' + 31'-7") (LVL. II, DUAL COATED)	8
8		#4 x 19'-0" (LEVEL II, DUAL COATED)	8
9			
10			
11			
12			

Vermont Agency of Transportation
RECEIVED
Colbury VT Bridge Project/PA, Issue 123-2016.pdf
 CK'D BY JW/JDG/SMC OK'D BY WDL
 March 2, 2016
 RESUBMIT YES Rejected
 BY RSY DATE 3/23/2016

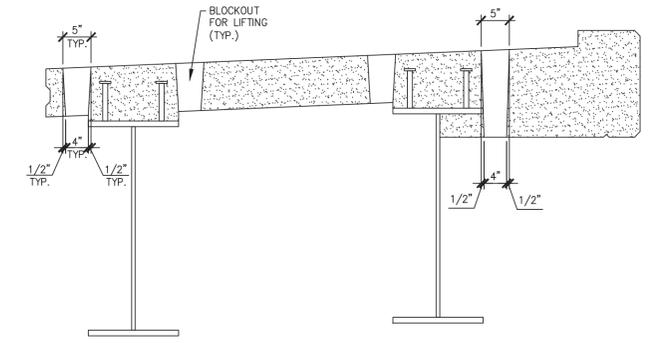
APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010	CCS CONSTRUCTORS, INC CONTRACTOR MORRISVILLE, VT
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS	DATE: FEB 29, 2016 SCALE: NOTED
	TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)	CHKD: R.M. DFTM: PSS JOB NO: 23478-015 DWG. NO:
PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU2"		PBU2B



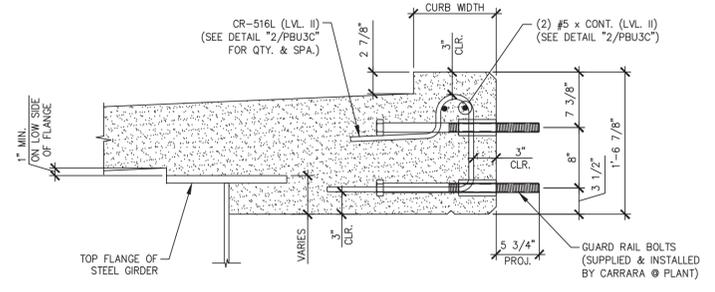
1 DIMENSIONAL PLAN VIEW IN FORM
PBU3A 1/4" = 1'-0"



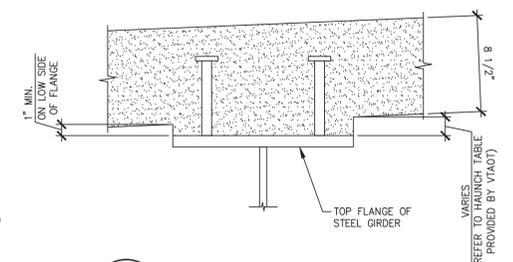
A DIMENSIONAL & REINFORCING SECTION
PBU3A 3/4" = 1'-0"



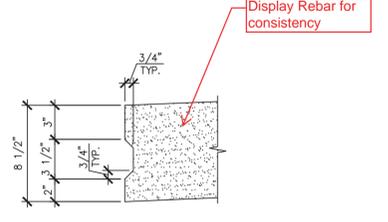
E LIFTING BLOCKOUT DETAIL
PBU3A 3/4" = 1'-0"



B CURB & GUARD RAIL BOLT LOCATION DETAIL
PBU3A 1" = 1'-0"



C HAUNCH DETAIL
PBU3A 1 1/2" = 1'-0"

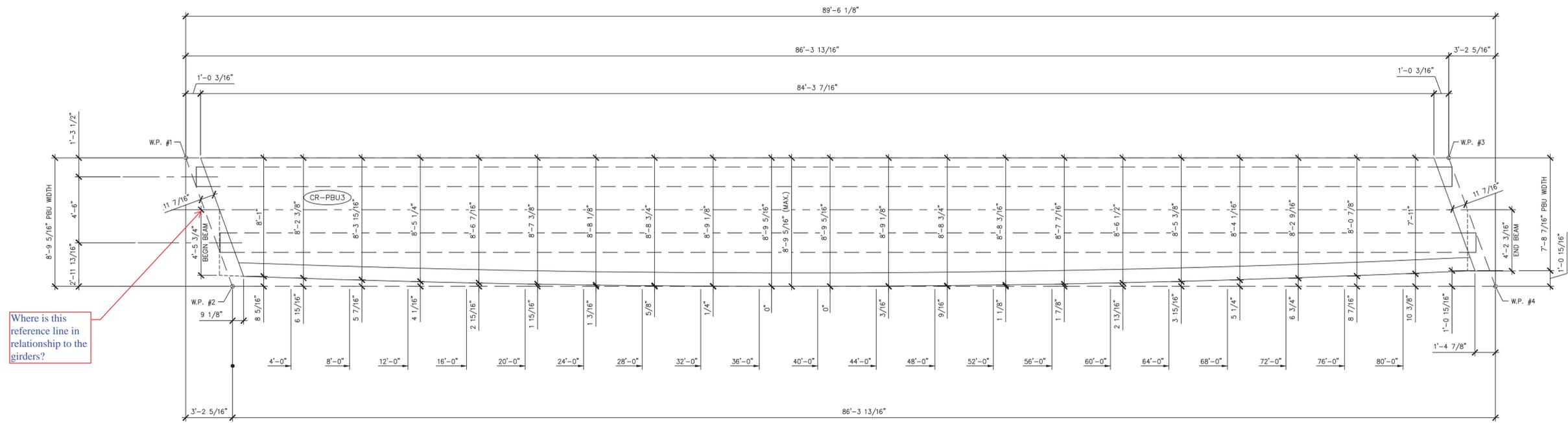


D SHEAR KEY DETAIL
PBU3A 1 1/2" = 1'-0"

Vermont Agency of Transportation
RECEIVED
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March 2, 2016
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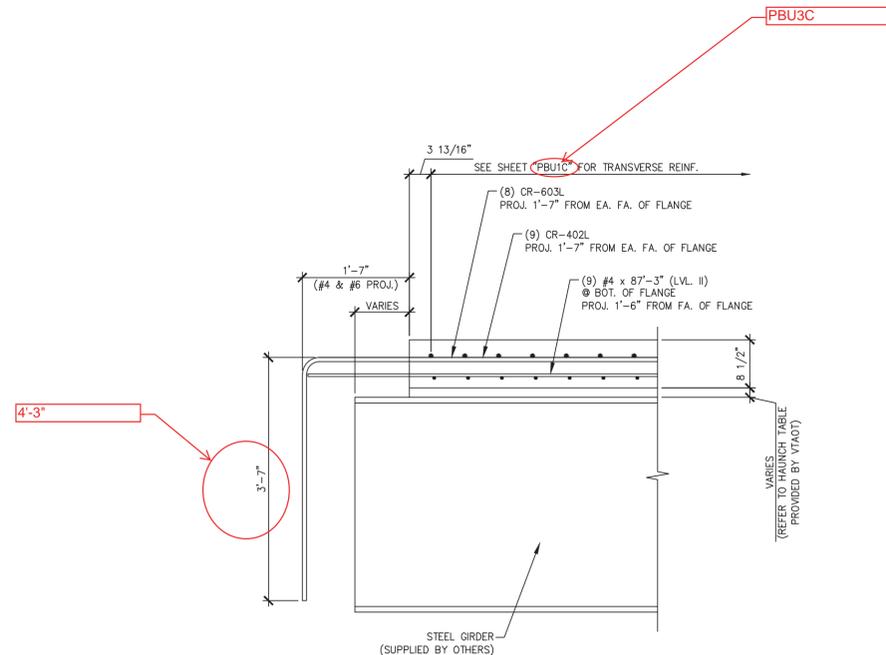
APPROVAL STAMP:

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010	CCS CONSTRUCTORS, INC CONTRACTOR MORRISVILLE, VT	
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS	DATE: FEB 29, 2016 SCALE: NOTED
TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)	CHKD: R.M. DFTM: PSS JOB NO: 23478-015 DWG. NO:	
PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU3"		PBU3A



Where is this reference line in relationship to the girders?

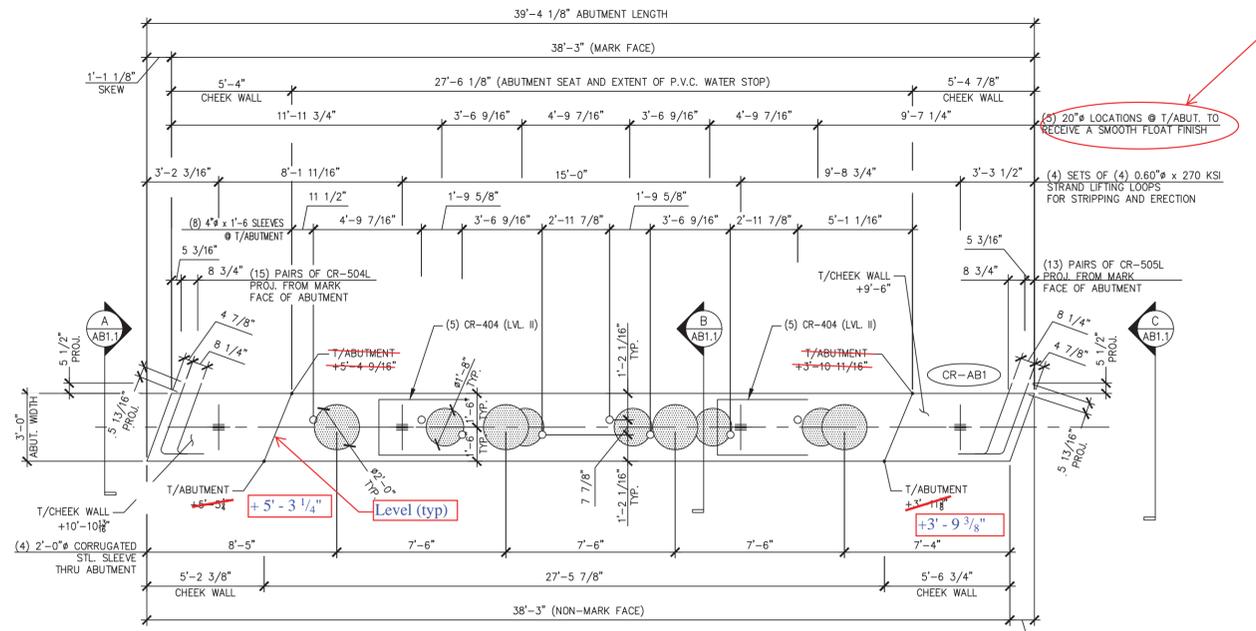
1 CURVED FLANGE LAYOUT
PBU3B 1/4" = 1'-0"



A END ELEVATION
PBU3B 3/4" = 1'-0"

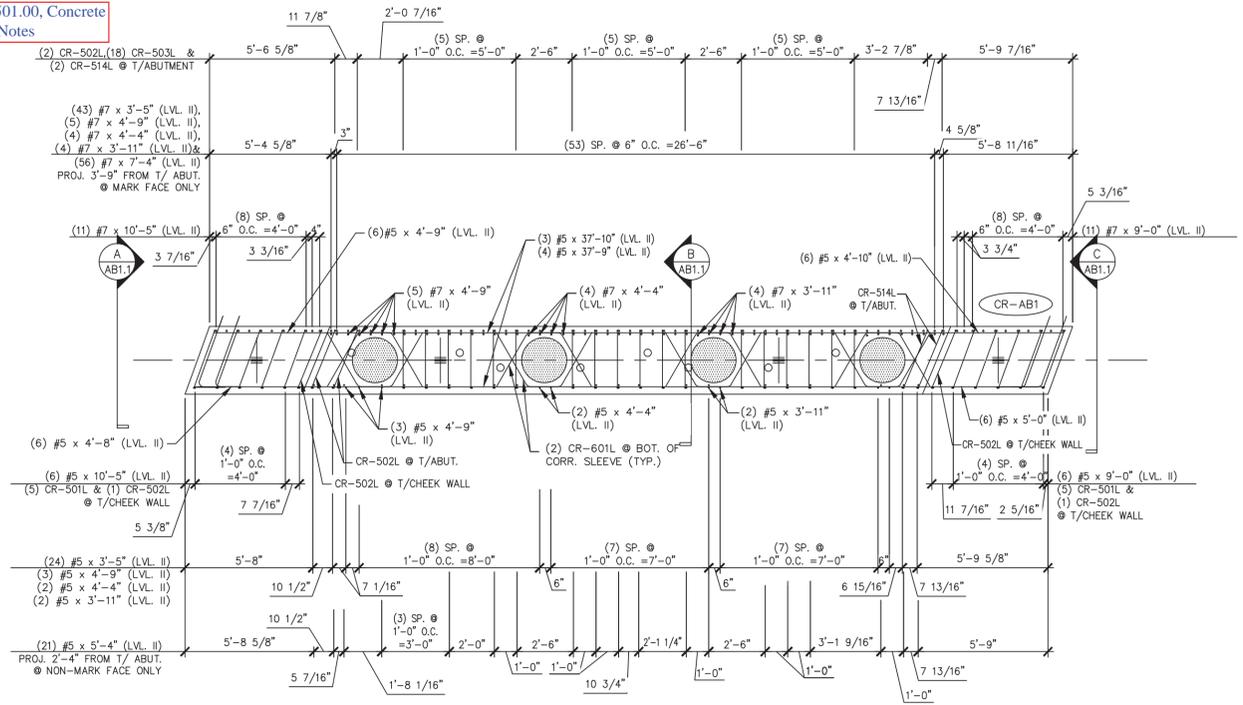
Vermont Agency of Transportation
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APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010	CCS CONSTRUCTORS, INC CONTRACTOR MORRISVILLE, VT
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB 29, 2016 SCALE: NOTED
TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)		CHKD: R.M. DFTM: PSS JOB NO: 23478-015
PREFABRICATED BRIDGE UNIT DETAILS "CR-PBU3"		DWG. NO: PBU3B

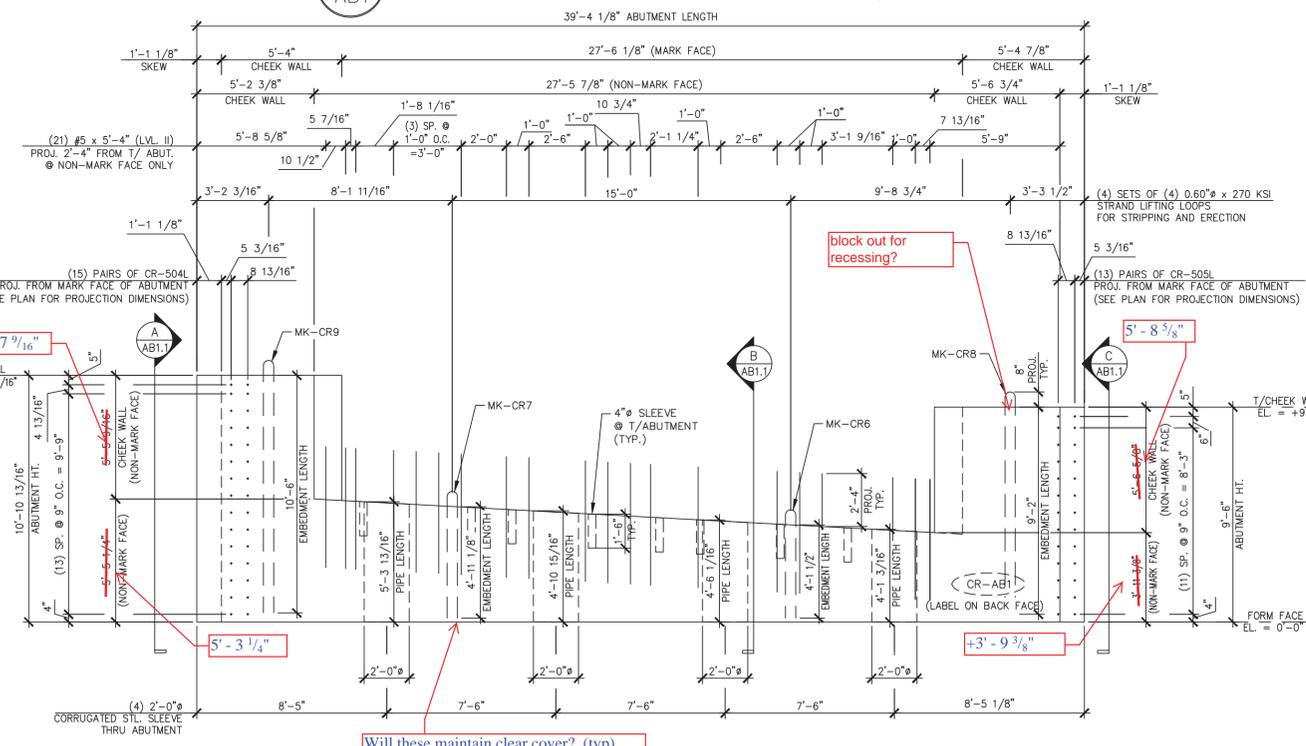


1 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
AB1
1/4" = 1'-0"

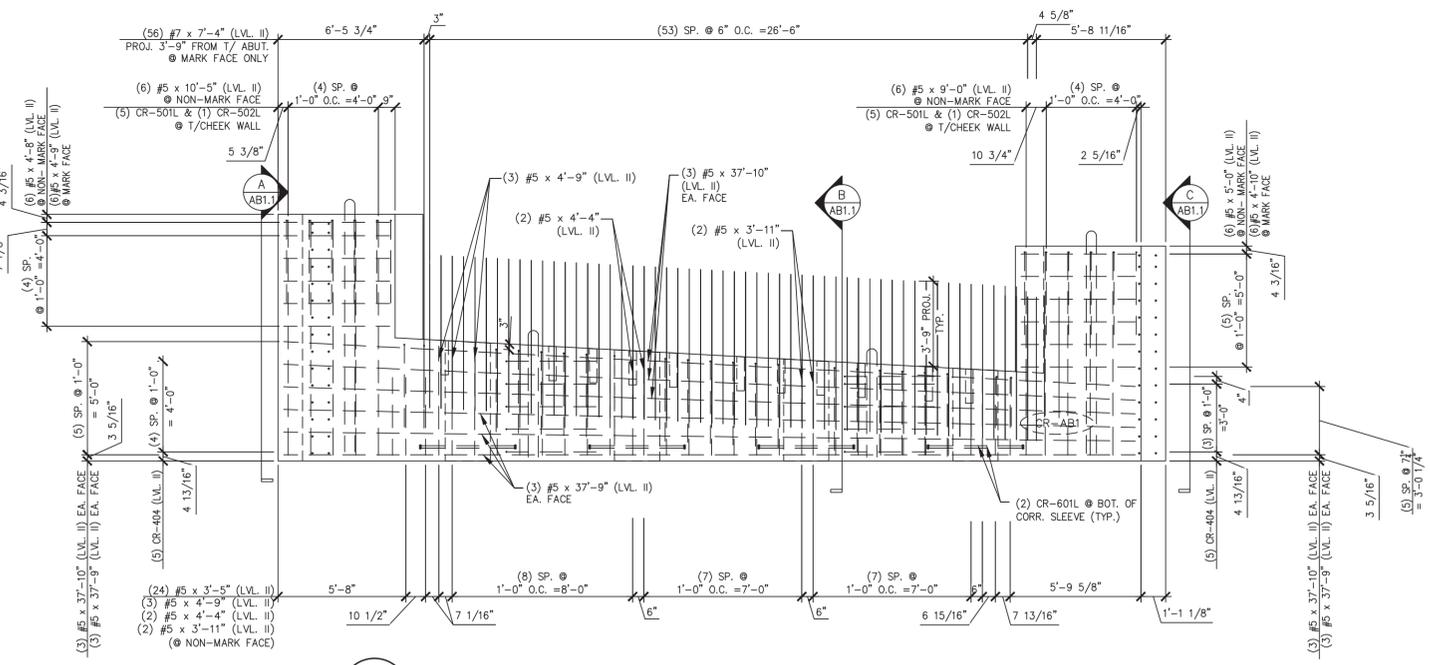
leave a roughened surface underneath PBU beams, bearing plates are above surface.
Follow SD 501.00, Concrete Details and Notes



3 ABUTMENT REINFORCING PLAN VIEW IN FORM
AB1
1/4" = 1'-0"



2 ABUTMENT DIMENSIONAL NON-MARK FACE ELEVATION
AB1
1/4" = 1'-0"



4 ABUTMENT REINFORCING NON-MARK FACE ELEVATION
AB1
1/4" = 1'-0"

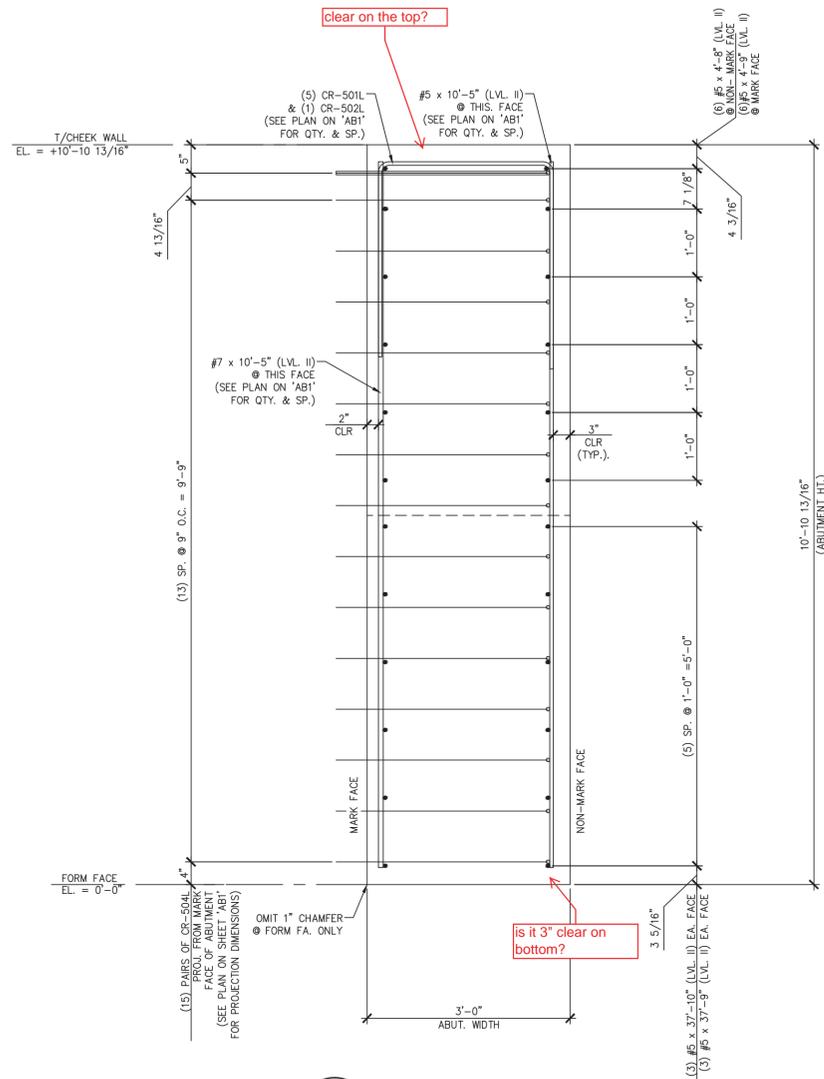
Will these maintain clear cover? (typ)

block out for recessing?

Vermont Agency of Transportation
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March 2, 2016
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BY RSY DATE 3/23/2016

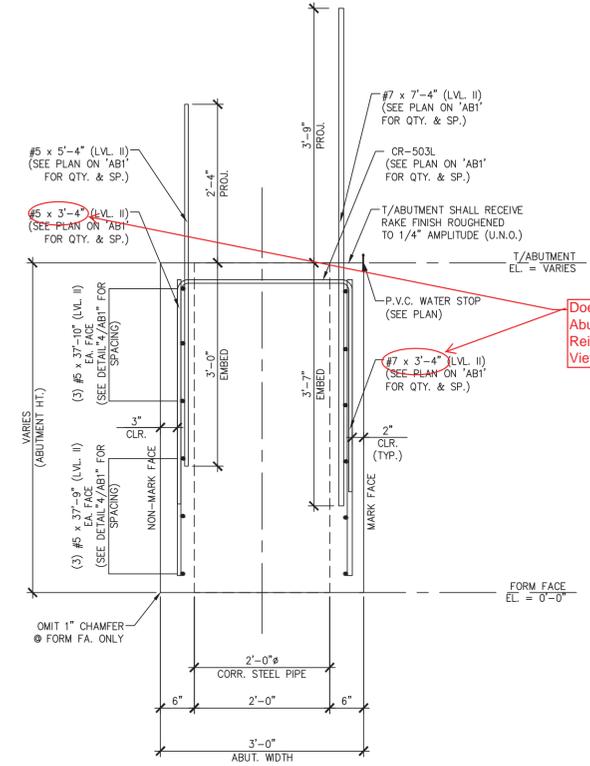
APPROVAL STAMP:

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010		CCS CONSTRUCTORS, INC CONTRACTOR MORRISVILLE, VT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB 29, 2016	SCALE: NOTED
TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)		CHKD: R.M. DFTM: PSS	JOB NO: 23478-015
PRECAST ABUTMENT DETAILS "CR-AB1"			DWG. NO: AB1



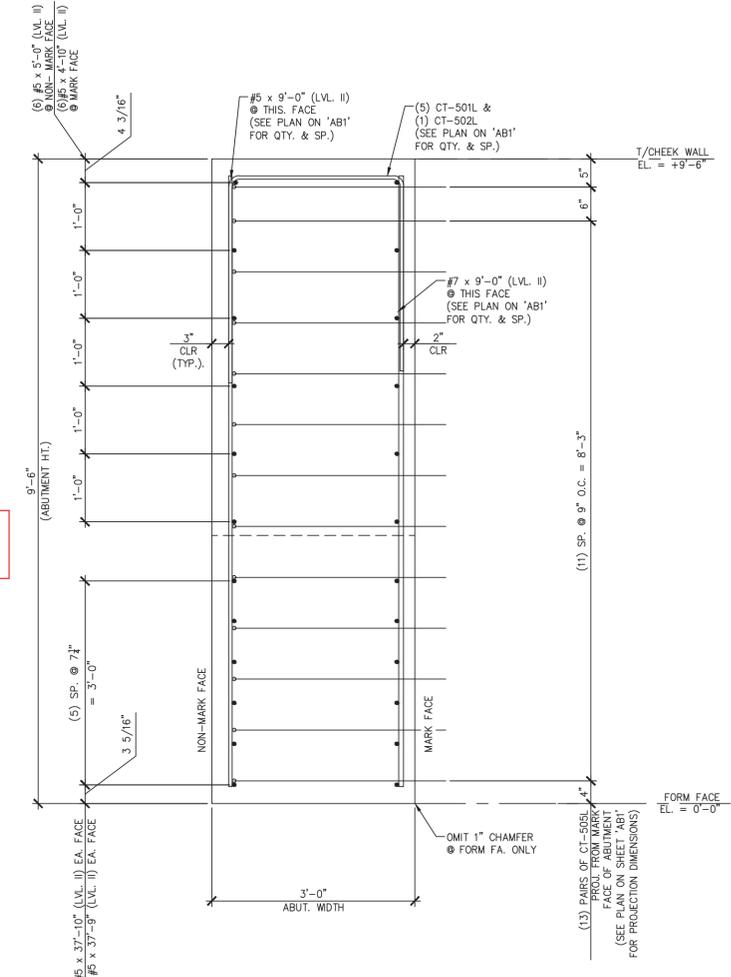
A ABUTMENT SECTION
AB1.1 3/4" = 1'-0"

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



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

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



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

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

clear on the top?

is it 3" clear on bottom?

Does not match Abutment Reinforcing Plan View in Form

SHOP NOTE:
f_c = 5,000 PSI
f_{ci} = 5,000 PSI
MIX: #425M-NO DCI

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

MARK: CR-AB1 QTY.: 1 WT.: 53.40 VOL.: 26.41 cy

MATERIAL LIST / ABUTMENT			
ITEM	MARK	DESCRIPTION	QTY.
1	CR-601L	#6 BENT BAR (LEVEL II, DUAL COATED)	8
2	CR-501L	#5 BENT BAR (LEVEL II, DUAL COATED)	10
3	CR-502L	#5 BENT BAR (LEVEL II, DUAL COATED)	4
4	CR-503L	#5 BENT BAR (LEVEL II, DUAL COATED)	18
5	CR-504L	#5 BENT BAR (LEVEL II, DUAL COATED)	30
6	CR-505L	#5 BENT BAR (LEVEL II, DUAL COATED)	26
7	CR-514L	#5 BENT BAR (LEVEL II, DUAL COATED)	2
8	CR-404L	#4 BENT BAR (LEVEL II, DUAL COATED)	10
9		#5 x 3'-5" (LEVEL II, DUAL COATED)	24
10		#5 x 3'-11" (LEVEL II, DUAL COATED)	2
11		#5 x 4'-4" (LEVEL II, DUAL COATED)	2
12		#5 x 4'-8" (LEVEL II, DUAL COATED)	6
13		#5 x 4'-9" (LEVEL II, DUAL COATED)	9
14		#5 x 4'-10" (LEVEL II, DUAL COATED)	6
15		#5 x 5'-0" (LEVEL II, DUAL COATED)	6
16		#5 x 5'-4" (LEVEL II, DUAL COATED)	21
17		#5 x 9'-0" (LEVEL II, DUAL COATED)	6
18		#5 x 10'-5" (LEVEL II, DUAL COATED)	6
19		#5 x 37'-9" (LEVEL II, DUAL COATED)	6
20		#5 x 37'-10" (LEVEL II, DUAL COATED)	6
21		#7 x 3'-5" (LEVEL II, DUAL COATED)	43
22		#7 x 3'-11" (LEVEL II, DUAL COATED)	4
23		#7 x 4'-4" (LEVEL II, DUAL COATED)	4
24		#7 x 4'-9" (LEVEL II, DUAL COATED)	5
25		#7 x 7'-4" (LEVEL II, DUAL COATED)	56
26		#7 x 9'-0" (LEVEL II, DUAL COATED)	11
27		#7 x 10'-5" (LEVEL II, DUAL COATED)	11
28		2'-0" φ x 5'-3 13/16" CORRUGATED STEEL PIPE (GALV.)	1
29		2'-0" φ x 4'-10 15/16" CORRUGATED STEEL PIPE (GALV.)	1
30		2'-0" φ x 4'-6 1/16" CORRUGATED STEEL PIPE (GALV.)	1
31		2'-0" φ x 4'-1 3/16" CORRUGATED STEEL PIPE (GALV.)	1
32		4" φ x 1'-6" METAL SLEEVES (GALV.)	8
33	MK-CR6	SET OF (4) 0.60" φ x 4'-9 1/2" STRAND LIFTING LOOPS	1
34	MK-CR7	SET OF (4) 0.60" φ x 5'-7 1/8" STRAND LIFTING LOOPS	1
35	MK-CR8	SET OF (4) 0.60" φ x 9'-10" STRAND LIFTING LOOPS	1
36	MK-CR9	SET OF (4) 0.60" φ x 11'-2" STRAND LIFTING LOOPS	1
37		P.V.C. WATER STOP (SUPPLIED BY OTHERS)	27.5 LF.

Vermont Agency of Transportation
RECEIVED
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March 2, 2016
RESUBMIT YES Rejected
BY RSY DATE 3/23/2016

APPROVAL STAMP:

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

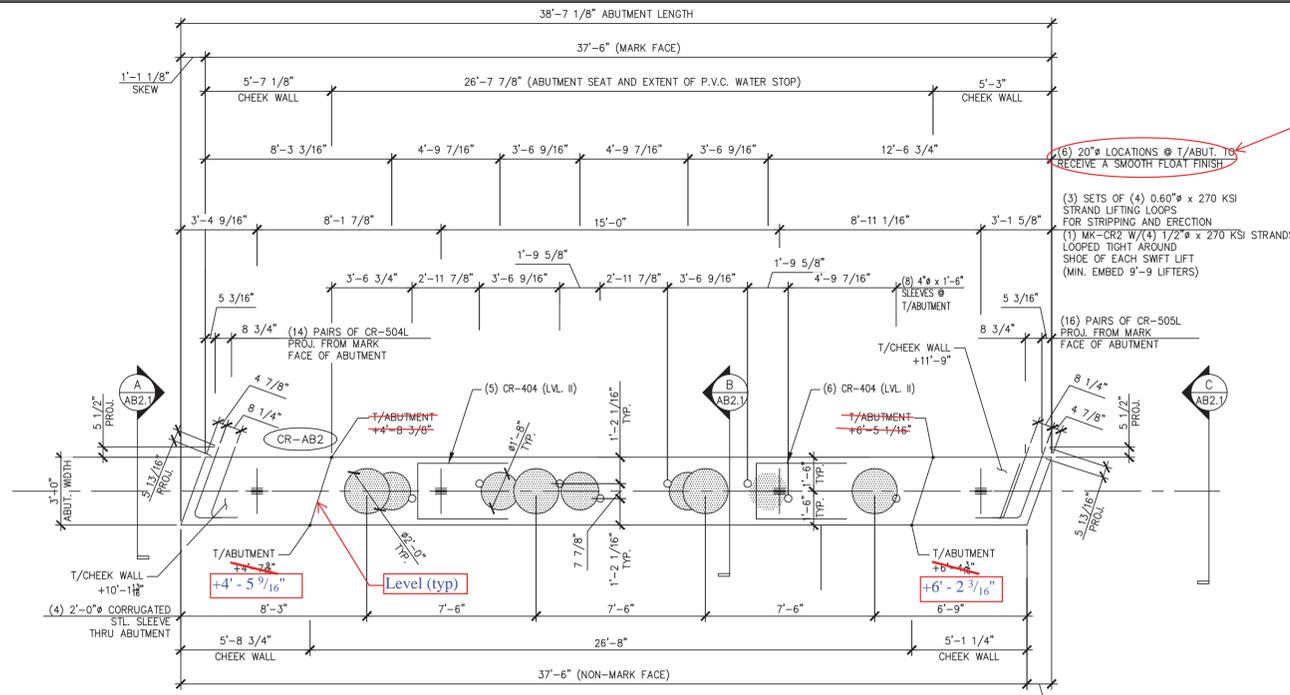
CCS CONSTRUCTORS, INC.
CONTRACTOR
MORRISVILLE, VT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

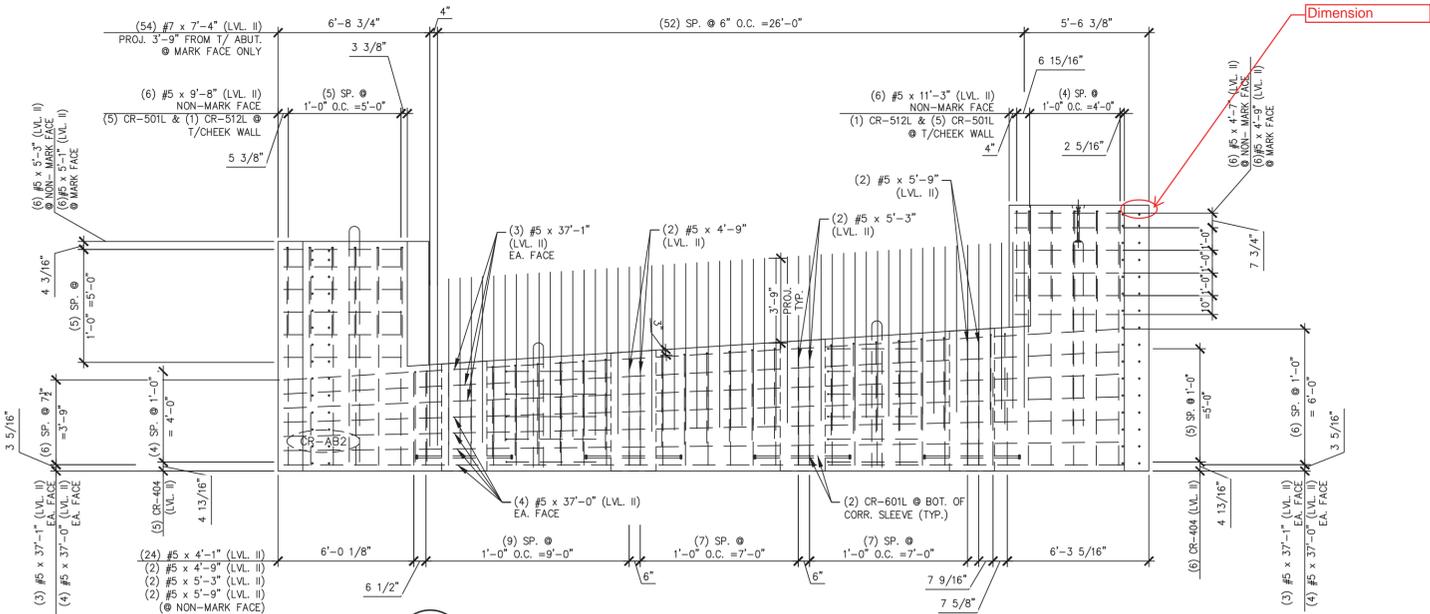
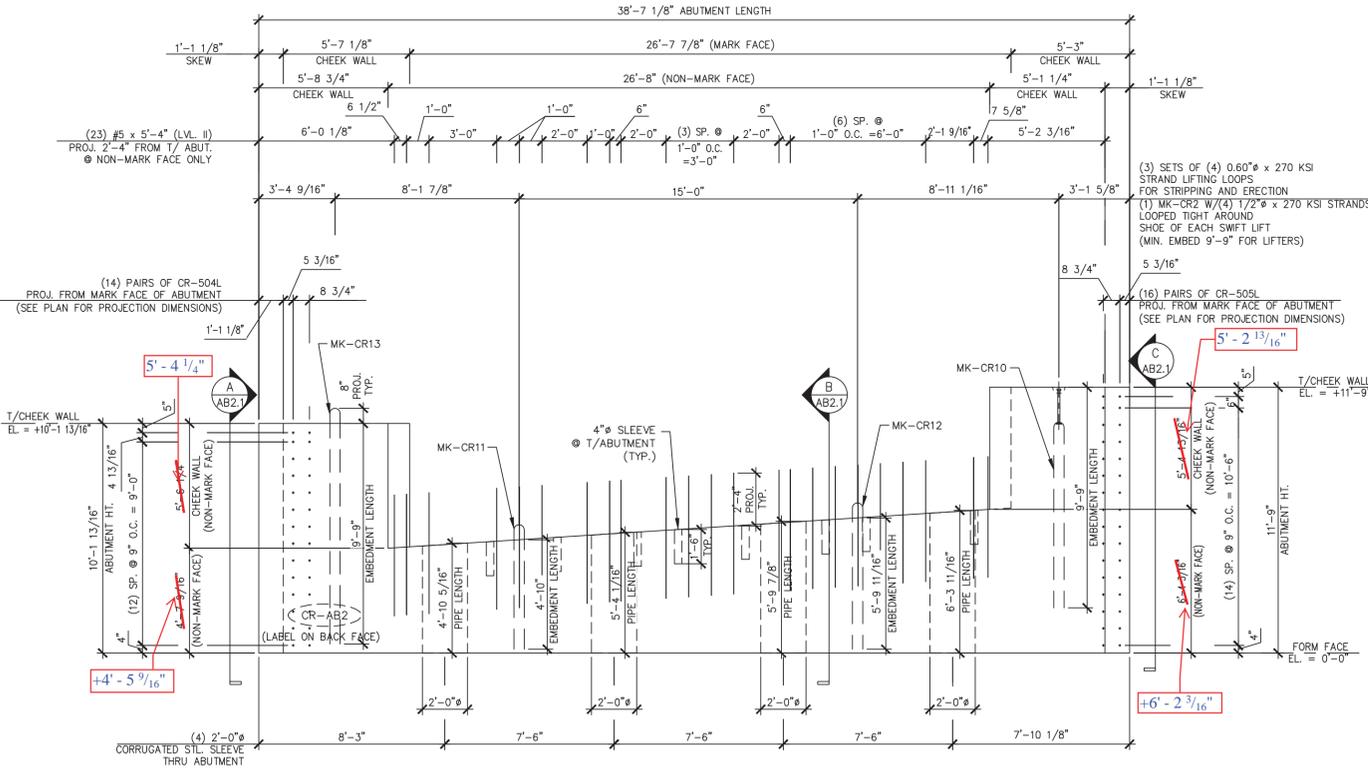
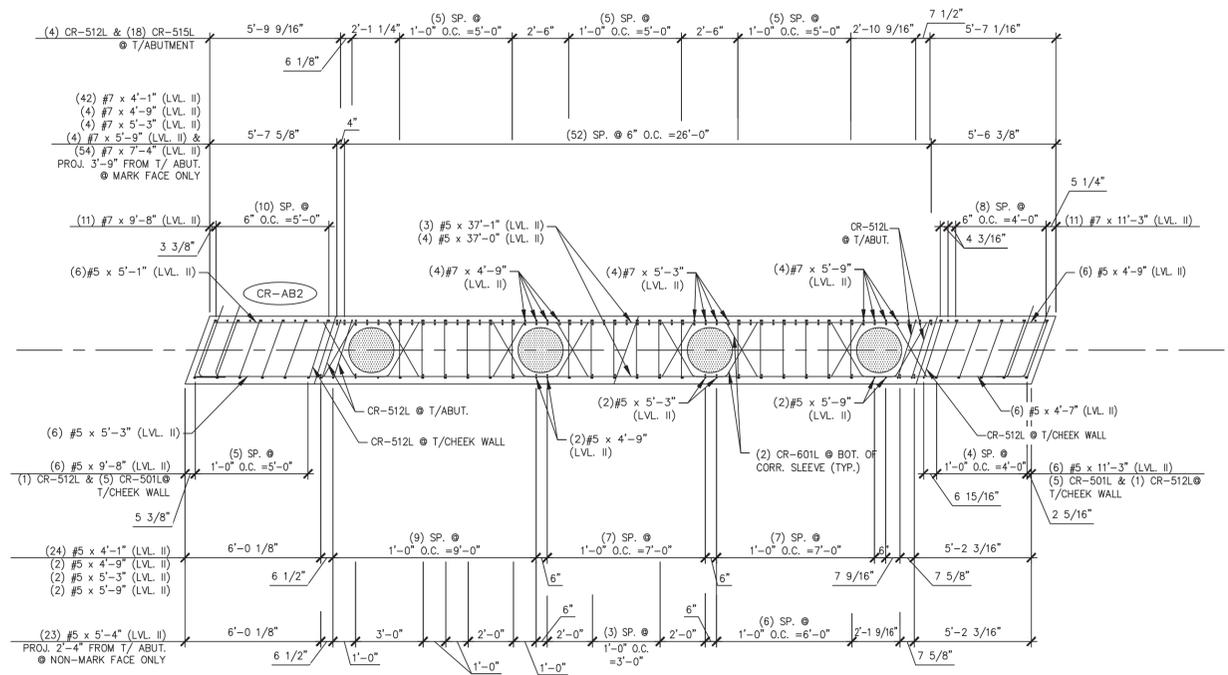
TOWN OF CRAFTSBURY
ROUTE NO. TH-4, RURAL MINOR COLLECTOR
BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)

DATE: FEB 29, 2016
SCALE: NOTED
CHKD: R.M. DFTM: PSS
JOB NO: 23478-015

PRECAST ABUTMENT DETAILS 'CR-AB1' DWG. NO: AB1.1



leave a roughened surface underneath PBU beams, bearing plates are above surface.

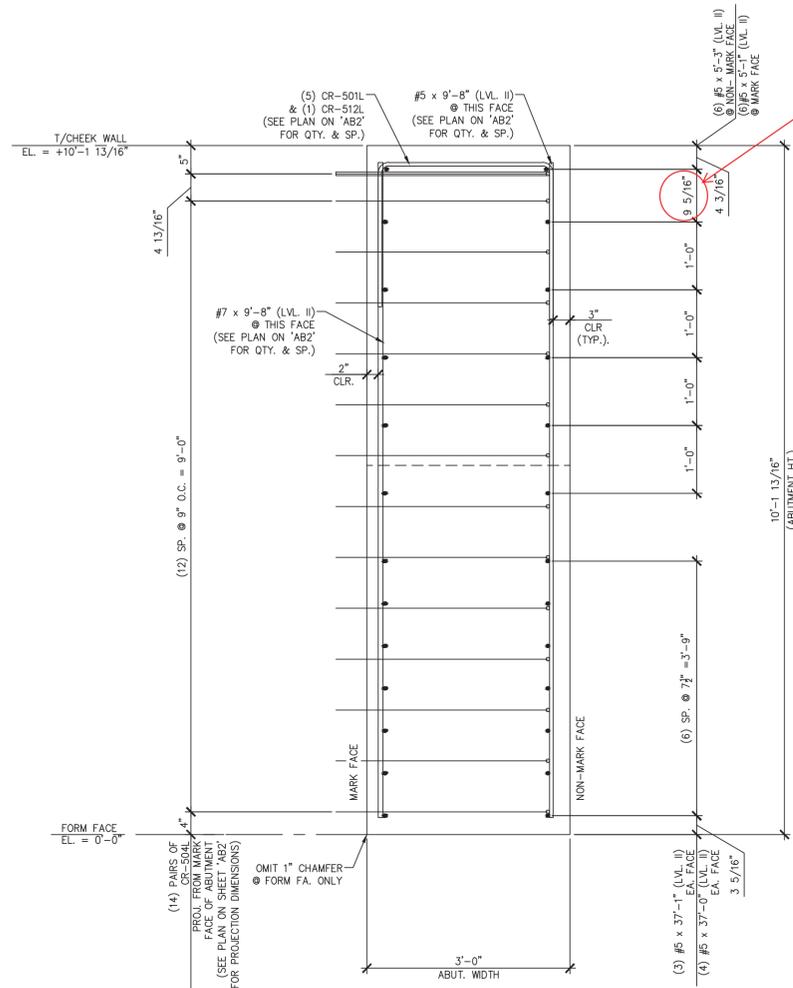


Dimension

Vermont Agency of Transportation
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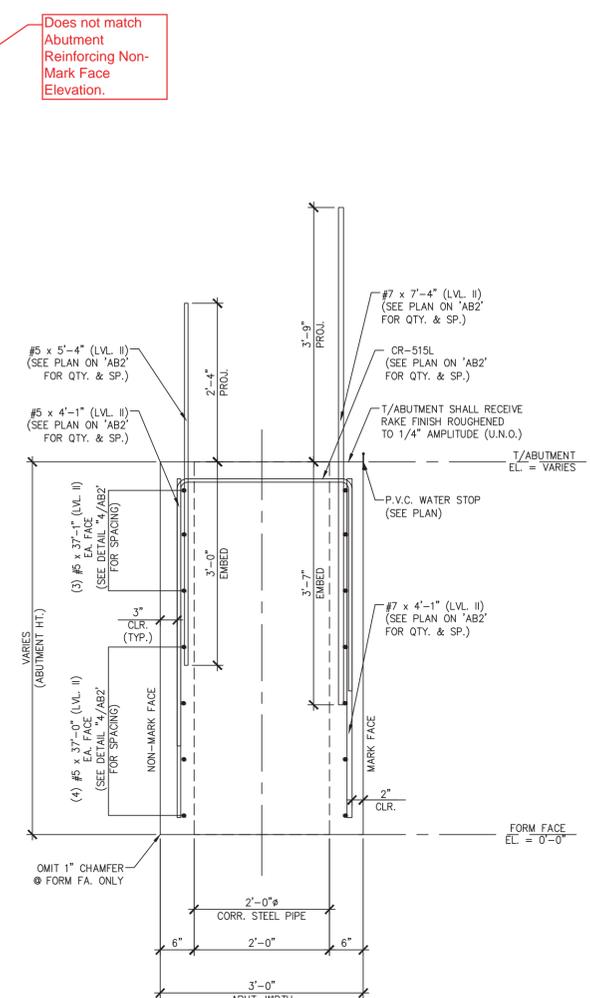
APPROVAL STAMP:

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR. WOODBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010		CCS CONSTRUCTORS, INC CONTRACTOR MORRISVILLE, VT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB 29, 2016	SCALE: NOTED
TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)		CHKD: R.M. DFTM: PSS	JOB NO: 23478-015
PRECAST ABUTMENT DETAILS "CR-AB2"			DWG. NO: AB2



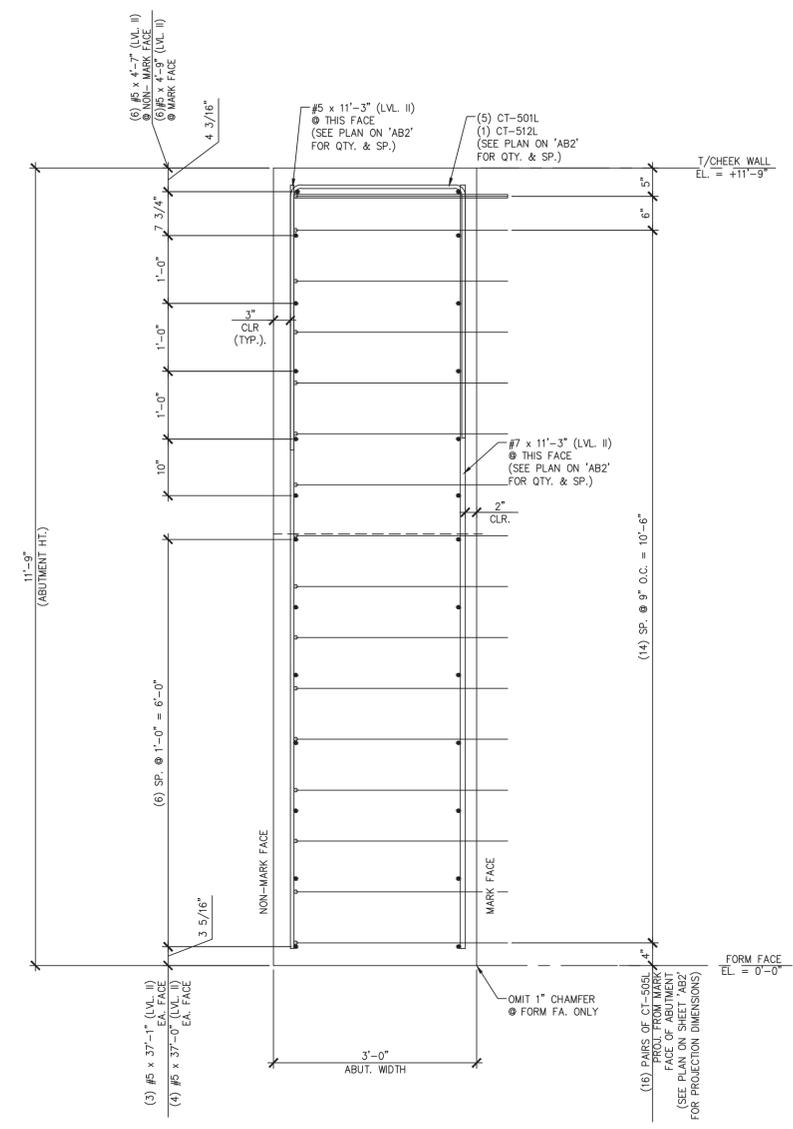
A ABUTMENT SECTION
AB2.1 3/4" = 1'-0"

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



B ABUTMENT SECTION
AB2.1 3/4" = 1'-0"

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



C ABUTMENT SECTION
AB2.1 3/4" = 1'-0"

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

Does not match Abutment Reinforcing Non-Mark Face Elevation.

does not match weight in lifting calculations

Verify

SHOP NOTE:
f_c = 5,000 PSI
f_{ci} = 5,000 PSI
MIX: #425M-NO DCI

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

MARK: CR-AB2 QTY.: 1 WT.: 54.53 VOL.: 26.93 cy

MATERIAL LIST / ABUTMENT			
ITEM	MARK	DESCRIPTION	QTY.
1	CR-601L	#6 BENT BAR (LEVEL II, DUAL COATED)	8
2	CR-501L	#5 BENT BAR (LEVEL II, DUAL COATED)	10
3	CR-504L	#5 BENT BAR (LEVEL II, DUAL COATED)	28
4	CR-505L	#5 BENT BAR (LEVEL II, DUAL COATED)	32
5	CR-512L	#5 BENT BAR (LEVEL II, DUAL COATED)	6
6	CR-515L	#5 BENT BAR (LEVEL II, DUAL COATED)	18
7	CR-404L	#4 BENT BAR (LEVEL II, DUAL COATED)	11
8		#5 x 4'-1" (LEVEL II, DUAL COATED)	24
9		#5 x 4'-7" (LEVEL II, DUAL COATED)	6
10		#5 x 4'-9" (LEVEL II, DUAL COATED)	8
11		#5 x 5'-1" (LEVEL II, DUAL COATED)	6
12		#5 x 5'-4" (LEVEL II, DUAL COATED)	23
12		#5 x 5'-3" (LEVEL II, DUAL COATED)	8
13		#5 x 5'-9" (LEVEL II, DUAL COATED)	2
14		#5 x 9'-8" (LEVEL II, DUAL COATED)	6
15		#5 x 11'-3" (LEVEL II, DUAL COATED)	6
16		#5 x 37'-1" (LEVEL II, DUAL COATED)	6
17		#5 x 37'-0" (LEVEL II, DUAL COATED)	8
18		#7 x 4'-1" (LEVEL II, DUAL COATED)	42
19		#7 x 4'-9" (LEVEL II, DUAL COATED)	4
20		#7 x 5'-3" (LEVEL II, DUAL COATED)	4
21		#7 x 5'-9" (LEVEL II, DUAL COATED)	4
22		#7 x 7'-4" (LEVEL II, DUAL COATED)	54
23		#7 x 9'-8" (LEVEL II, DUAL COATED)	11
24		#7 x 11'-3" (LEVEL II, DUAL COATED)	11
25		2'-0" ø x 4'-10 5/16" CORRUGATED STEEL PIPE (GALV.)	1
26		2'-0" ø x 5'-4 1/16" CORRUGATED STEEL PIPE (GALV.)	1
27		2'-0" ø x 5'-9 7/8" CORRUGATED STEEL PIPE (GALV.)	1
28		2'-0" ø x 6'-3 11/16" CORRUGATED STEEL PIPE (GALV.)	1
29		4" ø x 1'-6" METAL SLEEVES (GALV.)	8
30			
31	MK-CR2	20T x 19 3/4" SWFT LIFT LIFTER	1
32	MK-CR10	SET OF (4) 1/2" ø x 8'-3" STRANDS FOR SWFT LIFTS	1
33	MK-CR11	SET OF (4) 0.60" ø x 5'-6" STRAND LIFTING LOOPS	1
34	MK-CR12	SET OF (4) 0.60" ø x 6'-5 11/16" STRAND LIFTING LOOPS	1
35	MK-CR13	SET OF (4) 0.60" ø x 10'-5" STRAND LIFTING LOOPS	1
36		P.V.C. WATER STOP (SUPPLIED BY OTHERS)	26.5 LF.

Vermont Agency of Transportation
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March 2, 2016
RESUBMIT YES Rejected
BY RSY DATE 3/23/2016

APPROVAL STAMP:

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

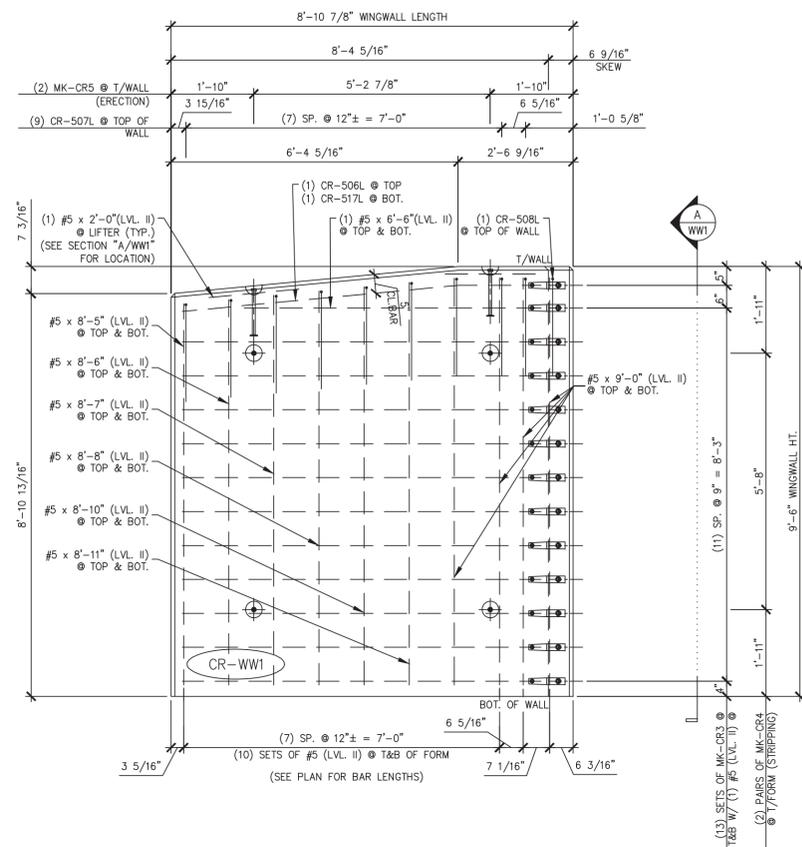
CCS CONSTRUCTORS, INC
CONTRACTOR
MORRISVILLE, VT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

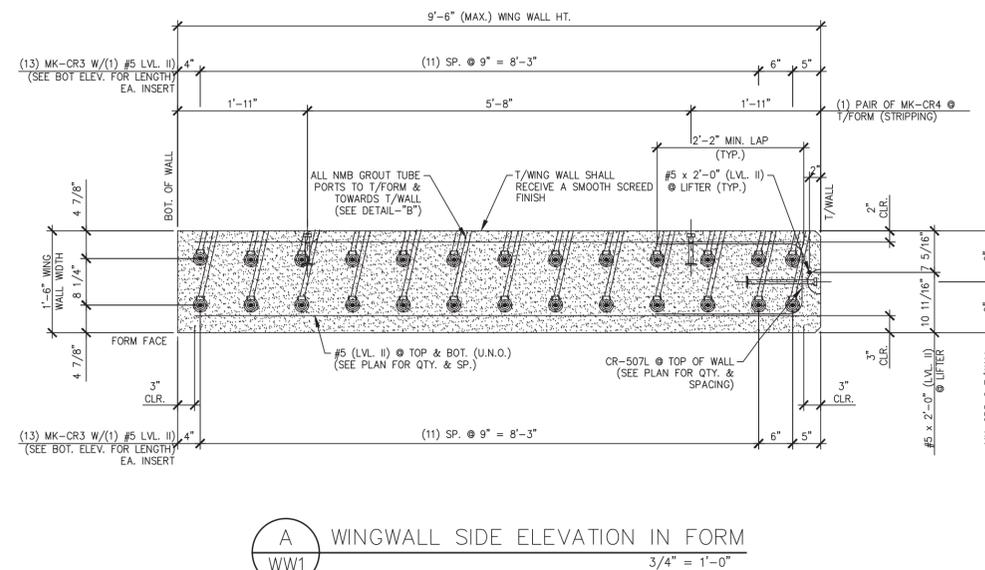
TOWN OF CRAFTSBURY
ROUTE NO. TH-4, RURAL MINOR COLLECTOR
BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)

DATE: FEB 29, 2016
SCALE: NOTED
CHKD: R.M. DFTM: PSS
JOB NO: 23478-015

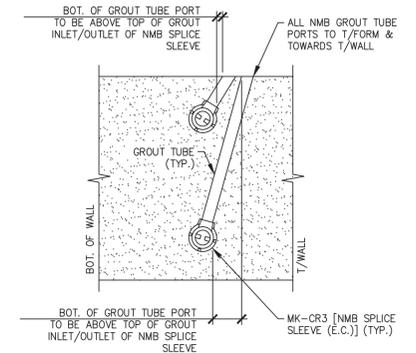
PRECAST ABUTMENT DETAILS 'CR-AB2' DWG. NO: AB2.1



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



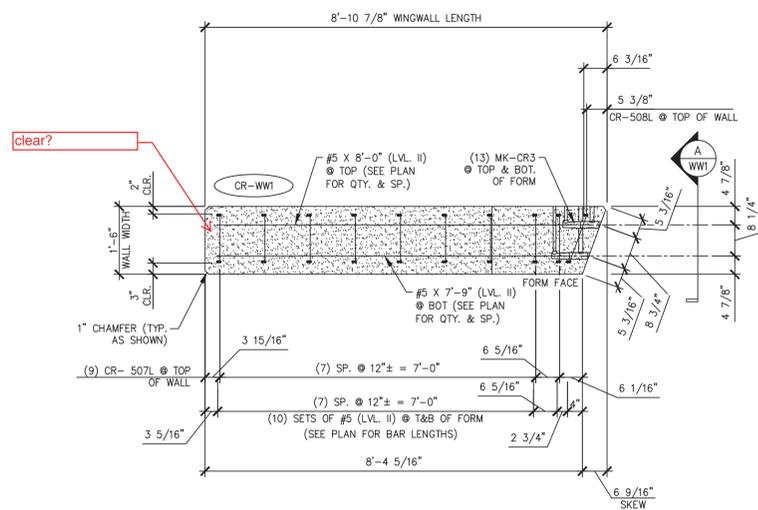
A WINGWALL SIDE ELEVATION IN FORM
3/4" = 1'-0"



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

SHOP NOTES:
1. ALL EDGES OF WING WALLS, FORM FACE & T/WALL FACE, SHALL RECEIVE A 1" CHAMFER (UNLESS NOTED OTHERWISE)

SHOP NOTE:
f'c = 5,000 PSI
f'ci = 3,500 PSI
MIX: #445MSCC



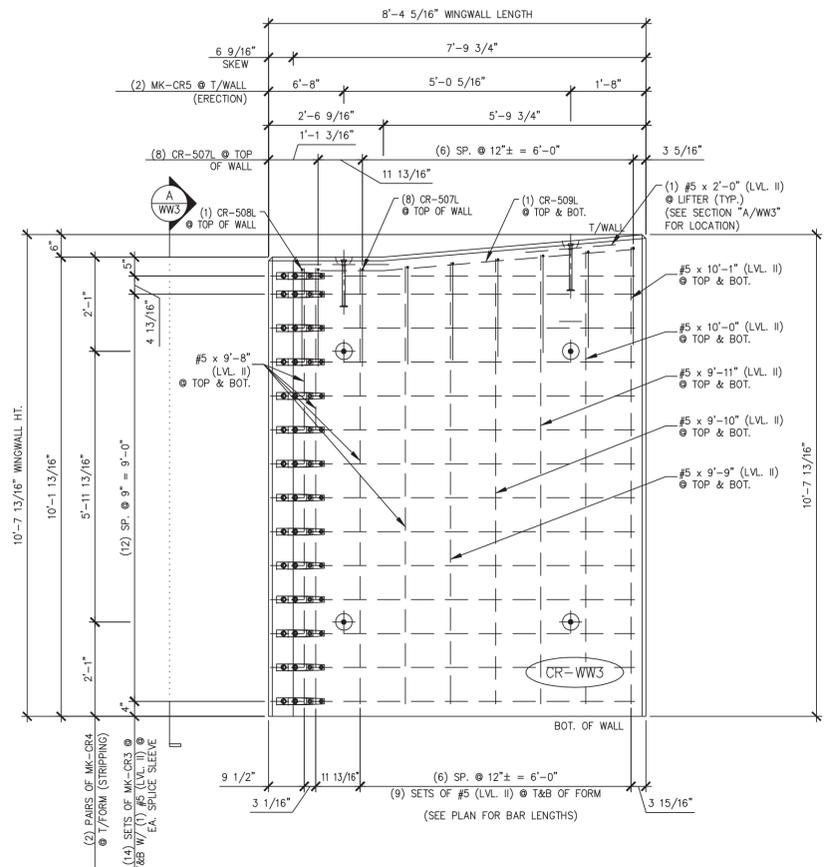
WING WALL BOTTOM ELEVATION
1/2" = 1'-0"

MARK:	CR-WW1	QTY.:	1	WT.:	9.0 T	VOL.:	4.45 cy
MATERIAL LIST / WINGWALL							
ITEM	MARK	DESCRIPTION				QTY.	
1	CR-506L	#5 BENT BAR (LEVEL II, DUAL COATED)				1	
2	CR-507L	#5 BENT BAR (LEVEL II, DUAL COATED)				9	
3	CR-508L	#5 BENT BAR (LEVEL II, DUAL COATED)				1	
4	CR-517L	#5 BENT BAR (LEVEL II, DUAL COATED)				1	
5		#5 x 9'-0" (LEVEL II, DUAL COATED)				8	
6		#5 x 8'-11" (LEVEL II, DUAL COATED)				2	
7		#5 x 8'-10" (LEVEL II, DUAL COATED)				2	
8		#5 x 8'-8" (LEVEL II, DUAL COATED)				2	
9		#5 x 8'-7" (LEVEL II, DUAL COATED)				2	
10		#5 x 8'-6" (LEVEL II, DUAL COATED)				2	
11		#5 x 8'-5" (LEVEL II, DUAL COATED)				2	
12		#5 x 8'-0" (LEVEL II, DUAL COATED)				11	
13		#5 x 7'-9" (LEVEL II, DUAL COATED)				11	
14		#5 x 6'-6" (LEVEL II, DUAL COATED)				2	
15		#5 x 2'-0" (LEVEL II, DUAL COATED)				2	
16	MK-CR3	NMB SPLICE SLEEVE SU-(PG) (EPOXY COATED)				26	
17	MK-CR4	4T x 7 1/8" SWIFT LIFT LIFTER				4	
18	MK-CR5	8T x 13 3/8" SWIFT LIFT LIFTER				2	

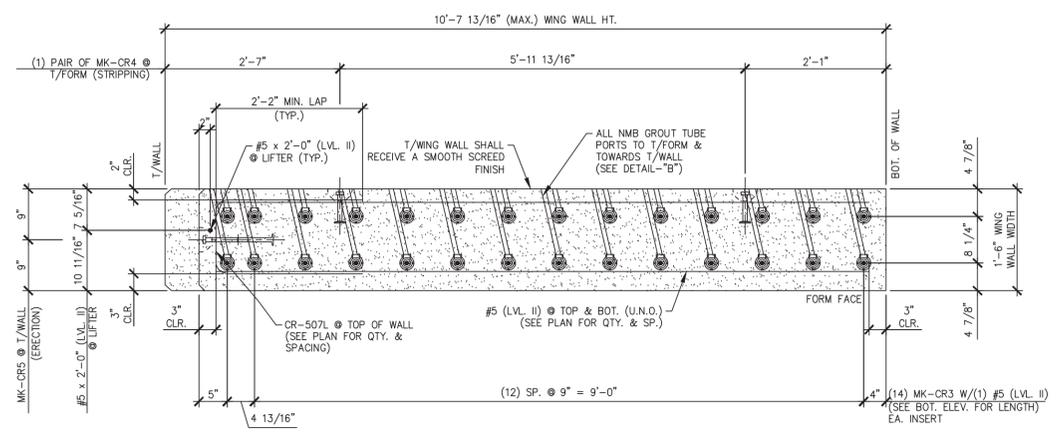
APPROVAL STAMP:

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2444 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010		CCS CONSTRUCTORS, INC CONTRACTOR MORRISVILLE, VT	
STATE OF VERMONT AGENCY OF TRANSPORTATION		DATE:	FEB 29, 2016
COUNTY OF ORLEANS		SCALE:	NOTED
TOWN OF CRAFTSBURY		CHKD: R.M.	DFTM: PSS
ROUTE NO. TH-4, RURAL MINOR COLLECTOR		JOB NO.:	23478-015
BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)		DWG. NO.:	WW1
PRECAST WINGWALL DETAILS "CR-WW1"			

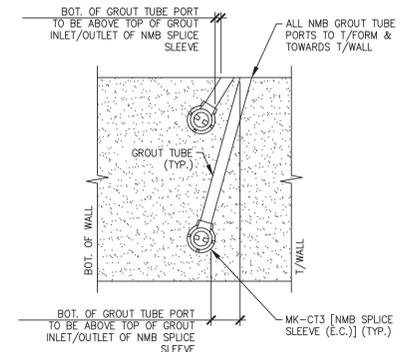
Vermont Agency of Transportation
RECEIVED
 CK'D BY JW/JDG/SMC OK'D BY WDL
 March 2, 2016
 RESUBMIT YES Rejected
 BY RSY DATE 3/23/2016



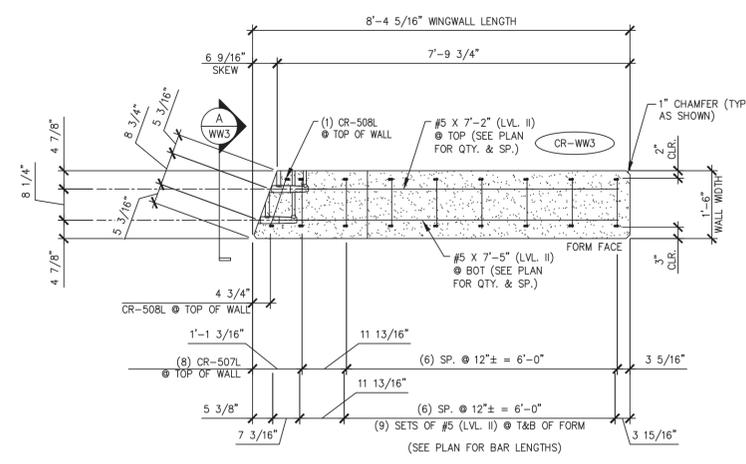
1 PLAN VIEW IN FORM
WW3
1/2" = 1'-0"



A WINGWALL SIDE ELEVATION IN FORM
WW3
3/4" = 1'-0"



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



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

SHOP NOTES:
1. ALL EDGES OF WING WALLS, FORM FACE & T/WALL FACE, SHALL RECEIVE A 1" CHAMFER (UNLESS NOTED OTHERWISE)

SHOP NOTE:
f_c = 5,000 PSI
f_{cl} = 3,500 PSI
MIX: #445MSCC

MARK:	CR-WW3	QTY.:	1	WT.:	9.40 T	VOL.:	4.65 C.Y.
MATERIAL LIST / WINGWALL							
ITEM	MARK	DESCRIPTION				QTY.	
1	CR-507L	#5 BENT BAR (LEVEL II, DUAL COATED)				8	
2	CR-508L	#5 BENT BAR (LEVEL II, DUAL COATED)				1	
3	CR-509L	#5 BENT BAR (LEVEL II, DUAL COATED)				2	
4		#5 x 10'-1" (LEVEL II, DUAL COATED)				2	
5		#5 x 10'-0" (LEVEL II, DUAL COATED)				2	
6		#5 x 9'-11" (LEVEL II, DUAL COATED)				2	
7		#5 x 9'-10" (LEVEL II, DUAL COATED)				2	
8		#5 x 9'-9" (LEVEL II, DUAL COATED)				2	
9		#5 x 9'-8" (LEVEL II, DUAL COATED)				8	
10		#5 x 7'-2" (LEVEL II, DUAL COATED)				14	
11		#5 x 7'-5" (LEVEL II, DUAL COATED)				14	
12		#5 x 2'-0" (LEVEL II, DUAL COATED)				2	
13	MK-CR3	NMB SPLICE SLEEVE SU-X(PC) (EPOXY COATED)				28	
14	MK-CR4	4T x 7 1/8" SWIFT LIFT LIFTER				4	
15	MK-CR5	8T x 13 3/8" SWIFT LIFT LIFTER				2	
16							

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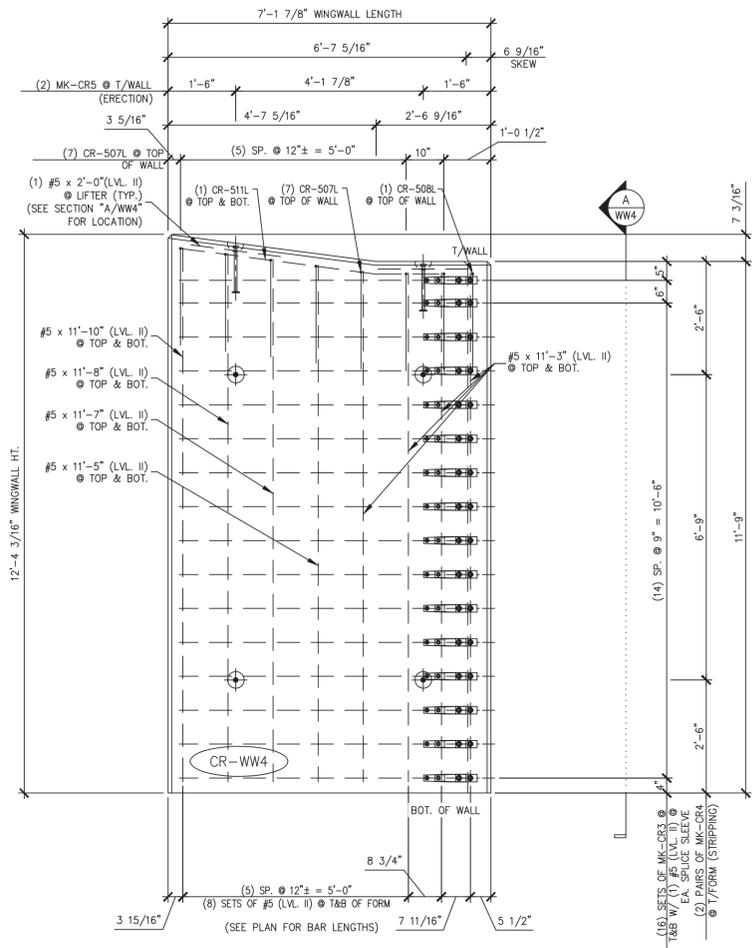
J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

CCS CONSTRUCTORS, INC
CONTRACTOR
MORRISVILLE, VT

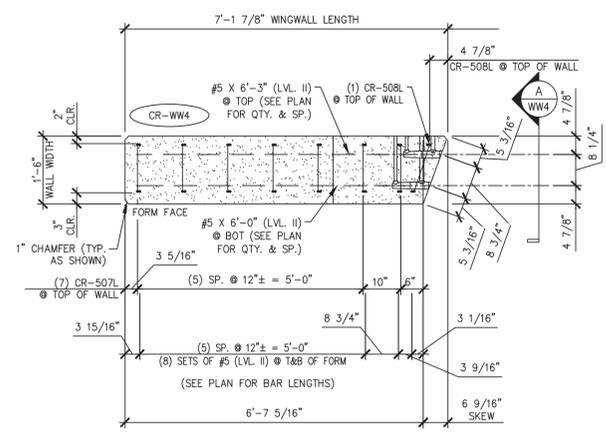
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

TOWN OF CRAFTSBURY
ROUTE NO. TH-4, RURAL MINOR COLLECTOR
BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)

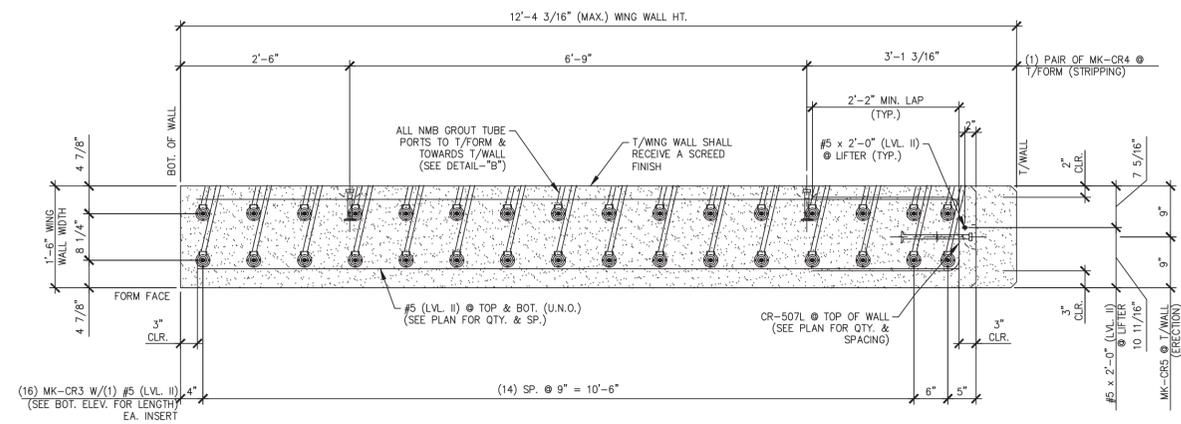
DATE: FEB 29, 2016
SCALE: NOTED
CHKD: R.M. DFTM: PSS
JOB NO: 23478-015
PRECAST WINGWALL DETAILS "CR-WW3" DWG. NO: WW3



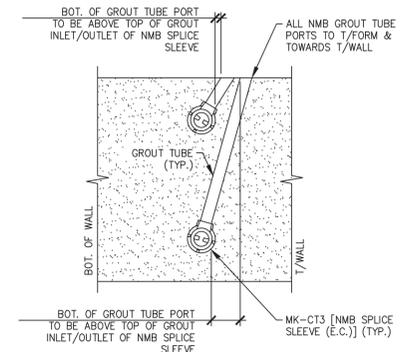
1 PLAN VIEW IN FORM
WW4 1/2" = 1'-0"



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



A WINGWALL SIDE ELEVATION IN FORM
WW4 3/4" = 1'-0"



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

SHOP NOTES:
1. ALL EDGES OF WING WALLS, FORM FACE & T/WALL FACE, SHALL RECEIVE A 1" CHAMFER (UNLESS NOTED OTHERWISE)

SHOP NOTE:
f_c = 5,000 PSI
f_{ci} = 3,500 PSI
MIX: #445MSCC

MARK:	CR-WW4	QTY.:	1	WT.:	9.25 T	VOL.:	4.57 C.Y.
MATERIAL LIST / WINGWALL							
ITEM	MARK	DESCRIPTION				QTY.	
1	CR-507L	#5 BENT BAR (LEVEL II, DUAL COATED)				7	
2	CR-508L	#5 BENT BAR (LEVEL II, DUAL COATED)				1	
3	CR-511L	#5 BENT BAR (LEVEL II, DUAL COATED)				2	
4		#5 x 11'-10" (LVL. II) (LEVEL II, DUAL COATED)				2	
5		#5 x 11'-8" (LEVEL II, DUAL COATED)				2	
6		#5 x 11'-7" (LEVEL II, DUAL COATED)				2	
7		#5 x 11'-5" (LEVEL II, DUAL COATED)				2	
8		#5 x 11'-3" (LEVEL II, DUAL COATED)				8	
9		#5 x 6'-3" (LEVEL II, DUAL COATED)				16	
10		#5 x 6'-0" (LEVEL II, DUAL COATED)				16	
11		#5 x 2'-0" (LEVEL II, DUAL COATED)				2	
12	MK-CR3	NMB SPLICE SLEEVE SU-X(PC) (EPOXY COATED)				32	
13	MK-CR4	4T x 7 1/8" SWIFT LIFT LIFTER				4	
14	MK-CR5	8T x 13 3/8" SWIFT LIFT LIFTER				2	
15							

Vermont Agency of Transportation
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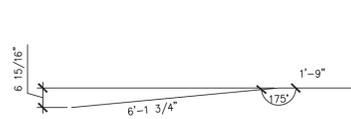
J.P. CARRARA & SONS INC.
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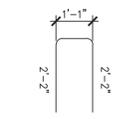
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

TOWN OF CRAFTSBURY
ROUTE NO. TH-4, RURAL MINOR COLLECTOR
BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)

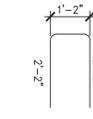
DATE: FEB 29, 2016
SCALE: NOTED
CHKD: R.M. DFTM: PSS
JOB NO: 23478-015
PRECAST WINGWALL DETAILS "CR-WW4" DWG. NO: WW4



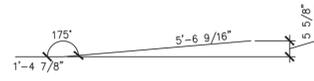
CR-506L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(1) REQ'D.



CR-507L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(32) REQ'D.



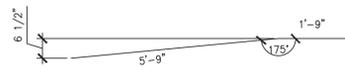
CR-508L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(4) REQ'D.



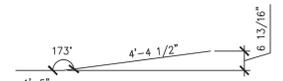
CR-509L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(2) REQ'D.



CR-510L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(2) REQ'D.

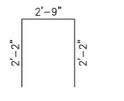


CR-517L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(1) REQ'D.

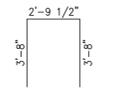


CR-511L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(2) REQ'D.

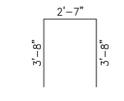
PRECAST WINGWALLS



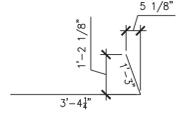
CR-501L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(20) REQ'D.



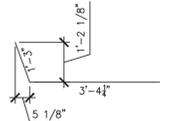
CR-502L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(4) REQ'D.



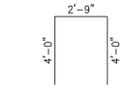
CR-503L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(18) REQ'D.



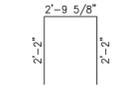
CR-504L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(58) REQ'D.



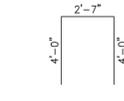
CR-505L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(58) REQ'D.



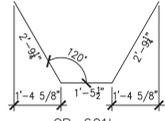
CR-512L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(6) REQ'D.



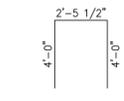
CR-514L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(2) REQ'D.



CR-515L
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4" [70 mm] PIN
(18) REQ'D.



CR-601L
#6 BENT BAR
LEVEL II (DUAL COATED)
USE 4" [100 mm] PIN
(16) REQ'D.



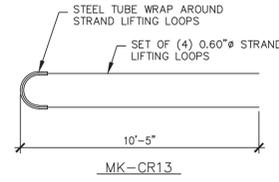
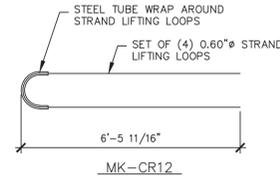
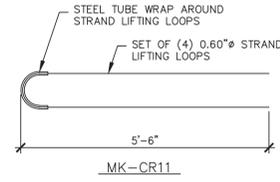
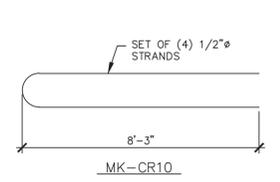
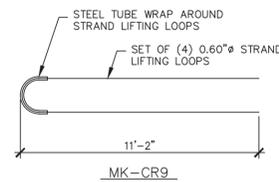
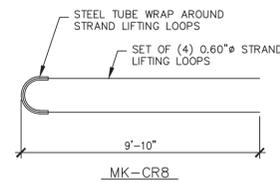
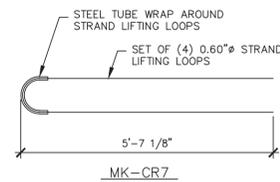
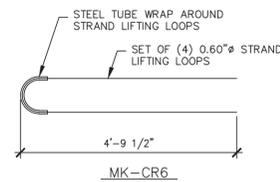
CR-404L
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 3" [75 mm] PIN
(21) REQ'D.

PRECAST ABUTMENTS

any #4 and #6 marked for sampling?

WINGWALLS MISCELLANEOUS MATERIALS				
ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1		8	#5 x 2'-0" (LEVEL II, DUAL COATED)	
2		2	#5 x 5'-9" (LEVEL II, DUAL COATED)	
3		16	#5 x 6'-3" (LEVEL II, DUAL COATED)	
4		17	#5 x 6'-0" (LEVEL II, DUAL COATED)	INCLUDES (1) ADDITIONAL SAMPLE
5		2	#5 x 6'-6" (LEVEL II, DUAL COATED)	
6		27	#5 x 7'-2" (LEVEL II, DUAL COATED)	
7		27	#5 x 7'-5" (LEVEL II, DUAL COATED)	
8		11	#5 x 7'-9" (LEVEL II, DUAL COATED)	
9		11	#5 x 8'-0" (LEVEL II, DUAL COATED)	
10		2	#5 x 8'-5" (LEVEL II, DUAL COATED)	
11		2	#5 x 8'-6" (LEVEL II, DUAL COATED)	
12		2	#5 x 8'-7" (LEVEL II, DUAL COATED)	
13		2	#5 x 8'-8" (LEVEL II, DUAL COATED)	
14		2	#5 x 8'-10" (LEVEL II, DUAL COATED)	
15		2	#5 x 8'-11" (LEVEL II, DUAL COATED)	
16		8	#5 x 9'-0" (LEVEL II, DUAL COATED)	
17		8	#5 x 9'-8" (LEVEL II, DUAL COATED)	
18		2	#5 x 9'-9" (LEVEL II, DUAL COATED)	
19		2	#5 x 9'-10" (LEVEL II, DUAL COATED)	
20		4	#5 x 9'-11" (LEVEL II, DUAL COATED)	
21		4	#5 x 10'-0" (LEVEL II, DUAL COATED)	
22		4	#5 x 10'-1" (LEVEL II, DUAL COATED)	
23		2	#5 x 10'-2" (LEVEL II, DUAL COATED)	
24		2	#5 x 10'-3" (LEVEL II, DUAL COATED)	
25		2	#5 x 10'-4" (LEVEL II, DUAL COATED)	
26		6	#5 x 10'-5" (LEVEL II, DUAL COATED)	
27		8	#5 x 11'-3" (LEVEL II, DUAL COATED)	
28		2	#5 x 11'-5" (LEVEL II, DUAL COATED)	
29		2	#5 x 11'-7" (LEVEL II, DUAL COATED)	
30		2	#5 x 11'-8" (LEVEL II, DUAL COATED)	
31		2	#5 x 11'-10" (LEVEL II, DUAL COATED)	
32				
33	MK-CR3	119	NMB SPLICE SLEEVE 5U-(PG) (EPOXY COATED)	INCLUDES (3) ADDITIONAL SAMPLES
34	MK-CR4	16	4T x 7 1/8" SWIFT LIFT LIFTER	
35	MK-CR5	8	8T x 13 3/8" SWIFT LIFT LIFTER	
36				

ABUTMENT MISCELLANEOUS MATERIALS				
ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1		43	#7 x 3'-5" (LEVEL II, DUAL COATED)	
2		4	#7 x 3'-11" (LEVEL II, DUAL COATED)	
3		42	#7 x 4'-1" (LEVEL II, DUAL COATED)	
4		4	#7 x 4'-4" (LEVEL II, DUAL COATED)	
5		9	#7 x 4'-9" (LEVEL II, DUAL COATED)	
6		4	#7 x 5'-3" (LEVEL II, DUAL COATED)	
7		4	#7 x 5'-9" (LEVEL II, DUAL COATED)	
8		111	#7 x 7'-4" (LEVEL II, DUAL COATED)	INCLUDES (1) ADDITIONAL SAMPLE
9		11	#7 x 9'-0" (LEVEL II, DUAL COATED)	
10		11	#7 x 9'-8" (LEVEL II, DUAL COATED)	
11		11	#7 x 10'-5" (LEVEL II, DUAL COATED)	
12		11	#7 x 11'-3" (LEVEL II, DUAL COATED)	
13				
14		24	#5 x 3'-5" (LEVEL II, DUAL COATED)	
15		2	#5 x 3'-11" (LEVEL II, DUAL COATED)	
16		24	#5 x 4'-1" (LEVEL II, DUAL COATED)	
17		2	#5 x 4'-4" (LEVEL II, DUAL COATED)	
18		6	#5 x 4'-7" (LEVEL II, DUAL COATED)	
19		6	#5 x 4'-8" (LEVEL II, DUAL COATED)	
20		17	#5 x 4'-9" (LEVEL II, DUAL COATED)	
21		6	#5 x 4'-10" (LEVEL II, DUAL COATED)	
22		6	#5 x 5'-0" (LEVEL II, DUAL COATED)	
23		6	#5 x 5'-1" (LEVEL II, DUAL COATED)	
24		8	#5 x 5'-3" (LEVEL II, DUAL COATED)	
25		44	#5 x 5'-4" (LEVEL II, DUAL COATED)	
26		2	#5 x 5'-9" (LEVEL II, DUAL COATED)	
27		6	#5 x 9'-0" (LEVEL II, DUAL COATED)	
28		6	#5 x 9'-8" (LEVEL II, DUAL COATED)	
29		6	#5 x 10'-5" (LEVEL II, DUAL COATED)	
30		6	#5 x 11'-3" (LEVEL II, DUAL COATED)	
31		8	#5 x 37'-0" (LEVEL II, DUAL COATED)	
32		6	#5 x 37'-1" (LEVEL II, DUAL COATED)	
33		6	#5 x 37'-9" (LEVEL II, DUAL COATED)	
34		6	#5 x 37'-10" (LEVEL II, DUAL COATED)	
35				
36				
37		1	2'-0" x 4'-1 3/16" CORRUGATED STEEL PIPE (GALV.)	
38		1	2'-0" x 4'-6 1/16" CORRUGATED STEEL PIPE (GALV.)	
39		1	2'-0" x 4'-4-10 5/16" CORRUGATED STEEL PIPE (GALV.)	
40		1	2'-0" x 4'-10 15/16" CORRUGATED STEEL PIPE (GALV.)	
41		1	2'-0" x 5'-3 13/16" CORRUGATED STEEL PIPE (GALV.)	
42		1	2'-0" x 5'-4 1/16" CORRUGATED STEEL PIPE (GALV.)	
43		1	2'-0" x 5'-9 7/8" CORRUGATED STEEL PIPE (GALV.)	
44		1	2'-0" x 6'-3 11/16" CORRUGATED STEEL PIPE (GALV.)	
45		16	4" x 1'-6" METAL SLEEVES (GALV.)	
46				
47	MK-CR2	1	20T x 19 3/4" SWIFT LIFT LIFTER	
48	MK-CR10	1	SET OF (4) 1/2" X 8'-3" STRANDS FOR SWIFT LIFTS	
49	MK-CR6	1	SET OF (4) 0.60" X 4'-9 1/2" STRAND LIFTING LOOPS	
49	MK-CR7	1	SET OF (4) 0.60" X 5'-7 1/8" STRAND LIFTING LOOPS	
49	MK-CR8	1	SET OF (4) 0.60" X 9'-10" STRAND LIFTING LOOPS	
49	MK-CR9	1	SET OF (4) 0.60" X 11'-2" STRAND LIFTING LOOPS	
49	MK-CR11	1	SET OF (4) 0.60" X 5'-6" STRAND LIFTING LOOPS	
49	MK-CR12	1	SET OF (4) 0.60" X 6'-5 11/16" STRAND LIFTING LOOPS	
49	MK-CR13	1	SET OF (4) 0.60" X 10'-5" STRAND LIFTING LOOPS	
50				
51		54.2 LF.	P.V.C. WATER STOP	(SUPPLIED BY OTHERS)
52				



Vermont Agency of Transportation
RECEIVED
 CK'D BY JW/JDG/SMC OK'D BY WDL
 March 2, 2016
 RESUBMIT YES Rejected
 BY RSY DATE 3/23/2016

APPROVAL STAMP:

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

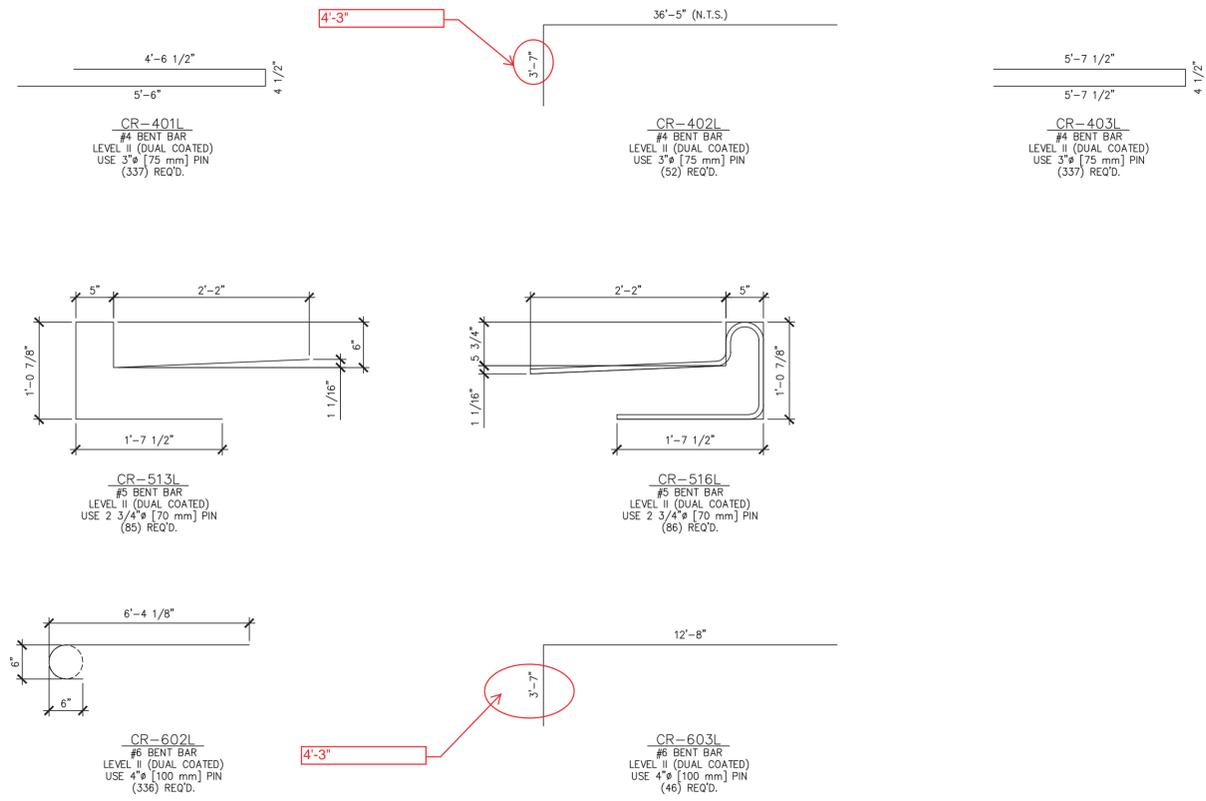
CCS CONSTRUCTORS, INC
 CONTRACTOR
 MORRISVILLE, VT

STATE OF VERMONT AGENCY OF TRANSPORTATION
 COUNTY OF ORLEANS

TOWN OF CRAFTSBURY
 ROUTE NO. TH-4, RURAL MINOR COLLECTOR
 BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)

MATERIALS LIST
 (ABUTMENTS & WING WALLS)

DATE: FEB 29, 2016
 SCALE: NOTED
 CHKD: R.M. DFTM: PSS
 JOB NO: 23478-015
 DWG. NO: M1



PREFABRICATED BRIDGE UNITS

PREFABRICATED BRIDGE UNITS MISCELLANEOUS MATERIALS				
ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1		26	#4 x 87'-3" (W/ (2) 2'-2" STAGGERED LAP) (40' + 20' + 31'-7") (LVL II, DUAL COATED)	
2		2	#4 x 32'-2" (LEVEL II, DUAL COATED)	
3		2	#4 x 27'-7" (LEVEL II, DUAL COATED)	
4		4	#4 x 22'-1" (LEVEL II, DUAL COATED)	
5		26	#4 x 19'-0" (LEVEL II, DUAL COATED)	
6		168	#4 x 7'-0" (LEVEL II, DUAL COATED)	
7		170	#4 x 6'-8" (LEVEL II, DUAL COATED)	INCLUDES (1) ADDITIONAL SAMPLE
8				
9		4	#5 x 40'-0" (LEVEL II, DUAL COATED)	
10		4	#5 x 24'-2" (LEVEL II, DUAL COATED)	
11		4	#5 x 24'-1" (LEVEL II, DUAL COATED)	
12		168	#5 x 7'-11" (LEVEL II, DUAL COATED)	
13		169	#5 x 7'-9" (LEVEL II, DUAL COATED)	
14		97	#5 x 4'-7" (LEVEL II, DUAL COATED)	
15		55	#5 x 4'-4" (LEVEL II, DUAL COATED)	
16		36	#5 x 4'-3" (LEVEL II, DUAL COATED)	
17		24	#5 x 4'-0" (LEVEL II, DUAL COATED)	
18		49	#5 x 3'-11" (LEVEL II, DUAL COATED)	
19		15	#5 x 3'-9" (LEVEL II, DUAL COATED)	
20				
21		112	1 1/4" x 1'-9 3/4" GUARD RAIL BOLTS (GALV.)	
22				
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37				
38				

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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	CCS CONSTRUCTORS, INC. CONTRACTOR MORRISVILLE, VT
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS	DATE: FEB 29, 2016 SCALE: NOTED
	TOWN OF CRAFTSBURY ROUTE NO. TH-4, RURAL MINOR COLLECTOR BRIDGE NO.: 4 PROJECT NO.: BO 1449(34)	CHKD: R.M. DFTM: PSS JOB NO: 23478-015
	MATERIALS LIST (PREFABRICATED BRIDGE UNITS)	DWG. NO: M2