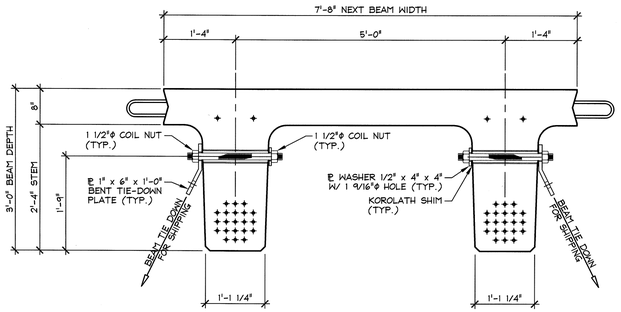
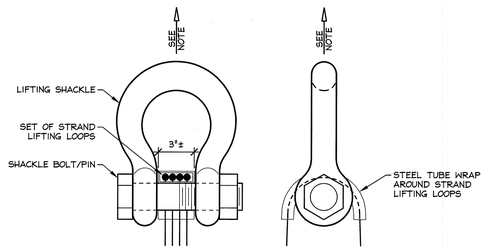


MODIFIED NEXT BEAM 36D HOLD-DOWN DETAIL FOR SHIPPING

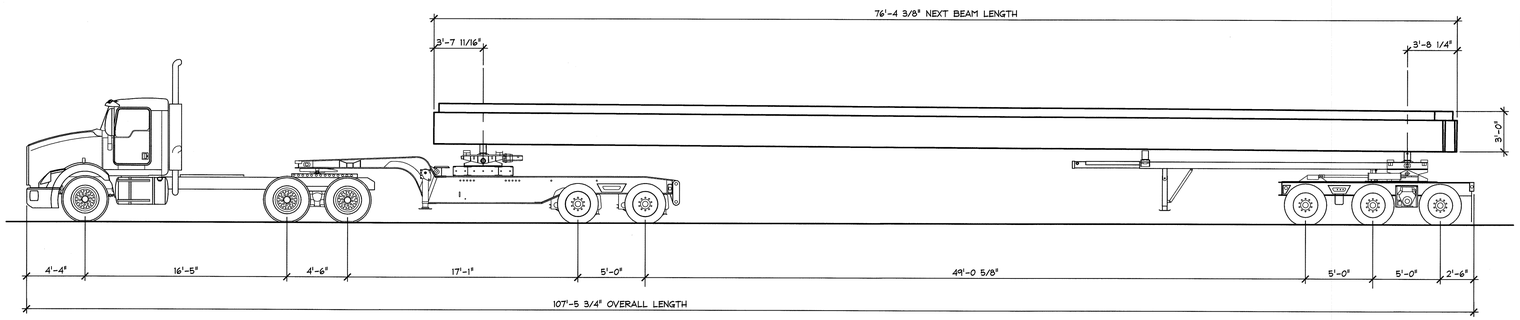
3/4" = 1'-0"



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

LIFTING SHACKLE DETAILS

N.T.S.



SHIPPING ELEVATION

3/16" = 1'-0"

ABUTMENT GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 5,000 PSI. △1
2. MIN. CONCRETE STRENGTH FOR HANDLING SHALL BE 5,000 PSI (UNLESS NOTED OTHERWISE).
3. REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) LEVEL I (BLACK) OR ASTM A-1055 (LEVEL II DUAL COATED) (AS NOTED ON SHOP DWGS). △1
4. THE TOP OF ABUTMENTS SHALL RECEIVE A RAKE FINISH ROUGHENED TO 1/4" AMPLITUDE (UNLESS NOTED OTHERWISE).
5. ABUTMENTS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL AND VERTICAL FORCES ARE APPLIED TO EACH OF THE LIFTING LOOPS AT EACH END OF THE ABUTMENT. **THE PINS OF THE SHACKLES SHALL BE PLACED THROUGH THE LIFTING LOOPS. SEE DETAIL, THIS SHEET.** ABUTMENTS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 2'-0" OF THE ABUTMENT ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
6. MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P540.02 AND P540.05 RESPECTIVELY. △1
   DESIGN MX: J.P.C. BRIDGE MIX #425M-NO DCI
   APPROVAL DATE: MARCH 21, 2015
7. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
8. CURING METHOD: AS SOON AS THE TOP OF ABUTMENTS IS FINISHED, A COVER OF POLY WILL BE PLACED OVER THE ABUTMENT. 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. UNITS SHALL NOT BE EXPOSED TO TEMP < 36° UNTIL DESIGN STRENGTH IS ACHIEVED. △1
9. DUNNAGE IS LOCATED UNDER LIFTER POSITIONS. △1

APPROACH SLAB GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 5,000 PSI.
2. MIN. CONCRETE STRENGTH FOR HANDLING SHALL BE 3,000 PSI (UNLESS NOTED OTHERWISE). △1
3. REINFORCING STEEL SHALL BE GR-60, ASTM A-1055 (AASHTO M31) LEVEL II (DUAL COATED) (AS NOTED ON SHOP DRAWINGS). △1
4. THE TOP OF APPROACH SLABS SHALL RECEIVE A SMOOTH SCREED FINISH (UNLESS NOTED OTHERWISE).
5. APPROACH SLABS SHALL BE HANDLED AND ERECTED USING THE LIFTING INSERTS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. APPROACH SLABS SHALL BE STORED & TRANSPORTED WITH TIMBER SUPPORTS AT 5th POINTS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
6. MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P540.02 AND P540.05 RESPECTIVELY. △1
   DESIGN MI : J.P.C. BRIDGE MIX #4425MSCC
   APPROVAL DATE: MARCH 26 2015
7. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
8. CURING METHOD: AS SOON AS THE TOP OF APPROACH SLABS ARE FINISHED, A COVER OF POLY WILL BE PLACED OVER THE APPROACH SLAB. NATURAL CURE WITH NO EXTERNAL HEAT APPLIED. UNITS SHALL NOT BE EXPOSED TO TEMPERATURE DIFFERENTIAL GREATER THAN 40°F. UNITS SHALL NOT BE EXPOSED TO TEMP < 36° UNTIL DESIGN STRENGTH IS ACHIEVED. △1
9. SHEAR KEY SURFACES SHALL BE ROUGHENED TO PROVIDE AN 1/8" AMPLITUDE EXPOSED AGGREGATE PROFILE. FABRICATOR MAY UTILIZE A SURFACE RETARDER WITH WATER BLAST, SAND BLAST, OR A COMBINATION OF BOTH TO ACHIEVE THE DESIRED SHEAR KEY SURFACE FINISH. PROJECTING REINFORCEMENT TO BE SHIELDED FROM DAMAGE; ANY INADVERTENT DAMAGE TO EPOXY COATING SHALL BE TOUCHED UP W/ 2-PART KITS FROM DUAL COATED BAR SUPPLIER. △1
10. DUNNAGE IS LOCATED UNDER LIFTER POSITIONS. △1

NEXT BEAM GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 10,000 PSI.
2. MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 8,000 PSI.
3. REINFORCING STEEL SHALL BE GR-60, ASTM A-1055 (AASHTO M31) LEVEL II (DUAL COATED). △1
4. PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0.60"ϕ x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
5. PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION OF **44.0 K** AFTER ACCOUNTING FOR CHUCK SLIPPAGE. TENSION SHALL BE VERIFIED BY MEASURING STRAND ELONGATION. (SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, THIS SHEET.)
6. ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF NEXT BEAM STEMS (UNLESS NOTED OTHERWISE) AND COATED WITH TWO PART EPOXY PAINT SYSTEM.
7. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" (UNLESS NOTED OTHERWISE).
8. THE TOP OF BEAMS SHALL RECEIVE A SMOOTH SCREED FINISH (UNLESS NOTED OTHERWISE). △1
9. SHEAR KEY SURFACES SHALL BE ROUGHENED TO PROVIDE AN 1/8" AMPLITUDE EXPOSED AGGREGATE PROFILE. PROJECTING REINFORCEMENT TO BE SHIELDED FROM DAMAGE; ANY INADVERTANT DAMAGE TO EPOXY COATING SHALL BE TOUCHED UP W/ 2-PART KITS FROM DUAL COATED BAR SUPPLIER.
10. BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. **THE PINS OF THE SHACKLES SHALL BE PLACED THROUGH THE LIFTING LOOPS. SEE DETAIL, THIS SHEET.** BEAMS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 2'-0" OF THE BEAM ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
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
    APPROVAL DATE: MARCH 21, 2015
12. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT. △1
13. CURING METHOD: AS SOON AS THE TOP OF BEAM IS FINISHED, COVER WITH INSULATION AND POLY. THE DESIRED CURING TEMPERATURE RANGE SHALL NOT DROP BELOW 50°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. UNITS SHALL NOT BE EXPOSED TO TEMPERATURE DIFFERENTIAL GREATER THAN 40°F. UNITS SHALL NOT BE EXPOSED TO TEMP < 36° UNTIL DESIGN STRENGTH IS ACHIEVED.
14. OWNER SHALL PROVIDE APPROPRIATE WATERPROOFING TO GROUTED AND/OR EPOXIED SHEAR KEYS. J.P. CARRARA & SONS, INC. SHALL NOT BE HELD LIABLE FOR PROBLEMS ASSOCIATED WITH MOISTURE INFILTRATING GROUTED AND/OR EPOXIED SHEAR KEYS.
15. MANUFACTURING TOLERANCES SHALL COMPLY WITH PCI MNL-116. △1

EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING

(NOT TO BE USED FOR CONSTRUCTION)

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

EXAMPLE:

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

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

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

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

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

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

STRAND TENSIONING PROCEDURE:

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.
3. STRANDS IN BOTTOM TWO ROWS SHALL BE RE-PULLED TO VERIFY SHORTENING EFFECT OF SELF STRESSING BED. RE-PULL FORCE SHALL NOT INCLUDE OVER-PULL FOR SHORTENING.
4. STRANDS SHALL BE DETENSIONED WITH A TORCH PER SEQUENCE ON DETENSIONING SCHEDULE SHOWN ON THE SHOP DRAWINGS. △1

DESIGN LIVE LOAD: HL-93

△1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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

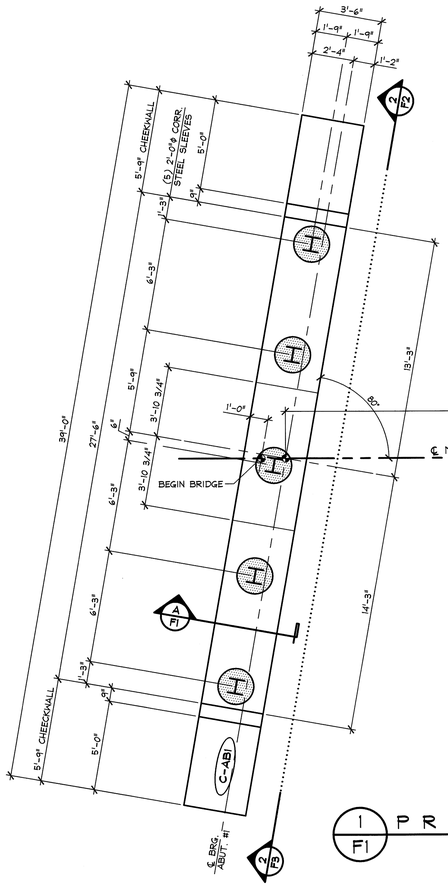
J.A. McDonald, Inc.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

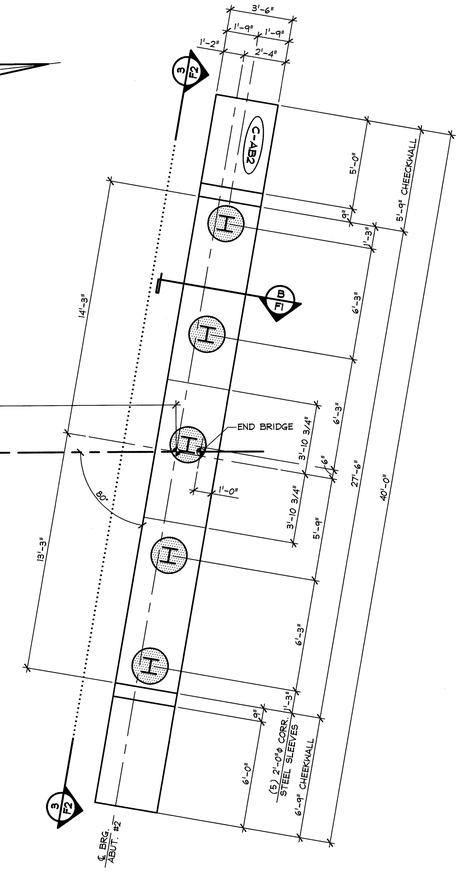
COVER SHEET

DATE:	JAN. 8, 2016
SCALE:	NOTED
CHKD: B.C.	DFTM: T.D.
JOB NO:	23476-015
DWG. NO:	C1



1 F1 PRECAST ABUTMENT LAYOUT

1/4" = 1'-0"

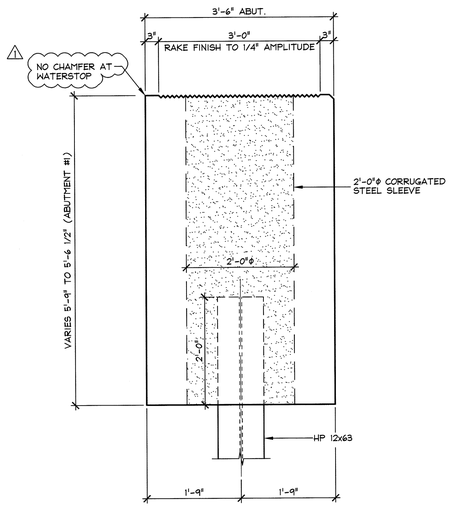


74'-0 1/16" CENTERLINE OF BRG. TO CENTERLINE OF BRG.

℄ MAINLINE

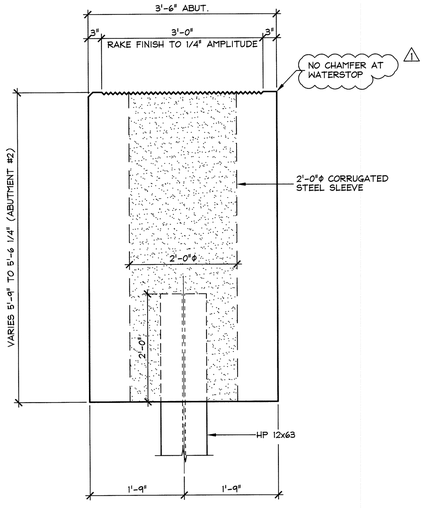
BEGIN BRIDGE

END BRIDGE



A F1 ABUTMENT SECTION (ABUT. #1)

3/4" = 1'-0"



B F1 ABUTMENT SECTION (ABUT. #2)

3/4" = 1'-0"

1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

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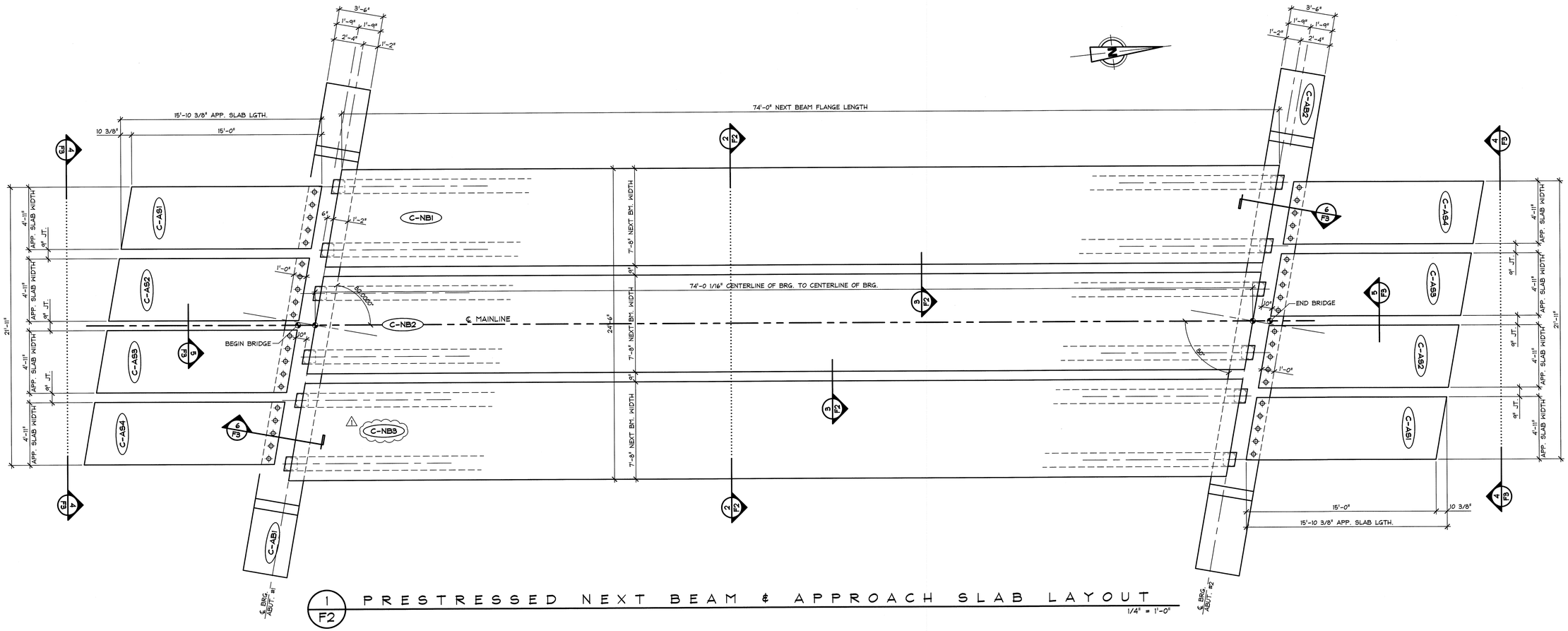
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

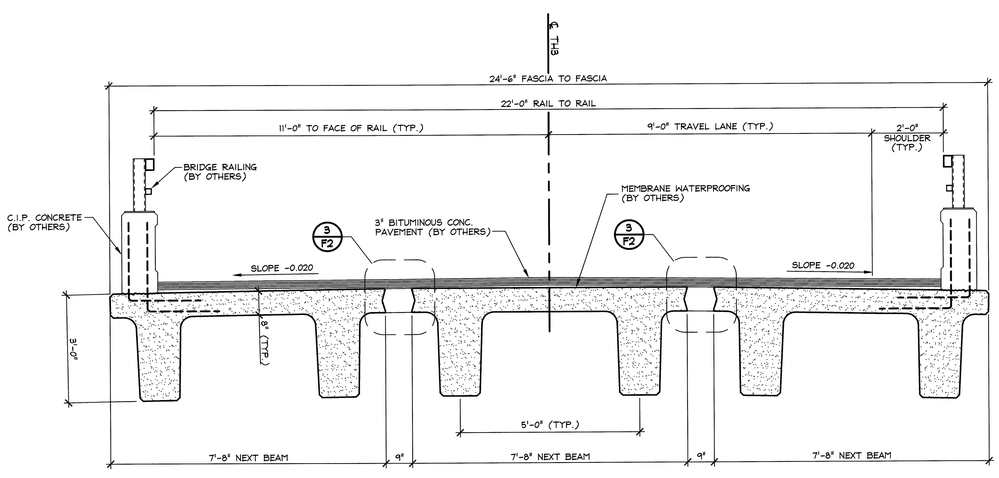
PRECAST ABUTMENT LAYOUT

DATE:	JAN. 8, 2016
SCALE:	NOTED
CHKD:	DFTM: T.D.
JOB NO:	23476-015
DWG. NO:	F1



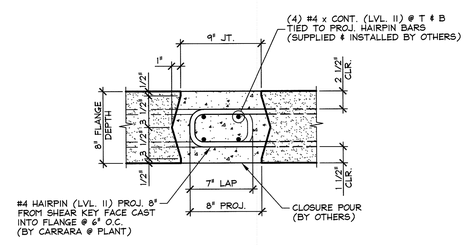
1 F2 PRESTRESSED NEXT BEAM & APPROACH SLAB LAYOUT

1/4" = 1'-0"



2 F2 TRANSVERSE SECTION THRU NEXT BEAMS

1/2" = 1'-0"



3 F2 NEXT BEAM CLOSURE POUR

1 1/2" = 1'-0"

⚠1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

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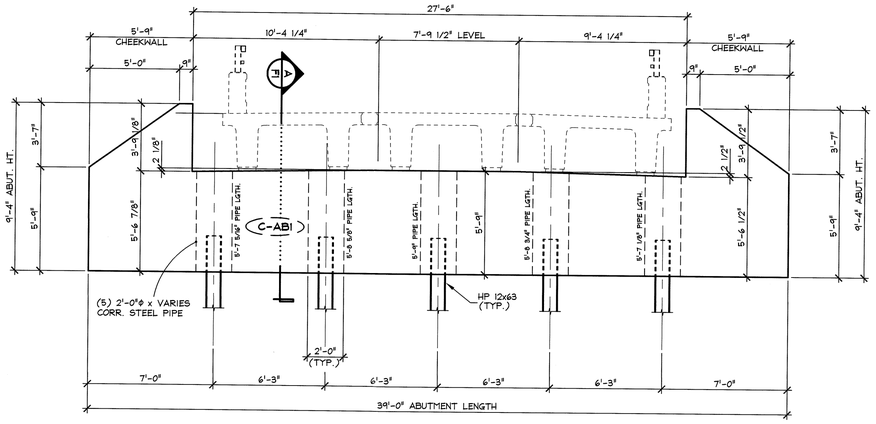
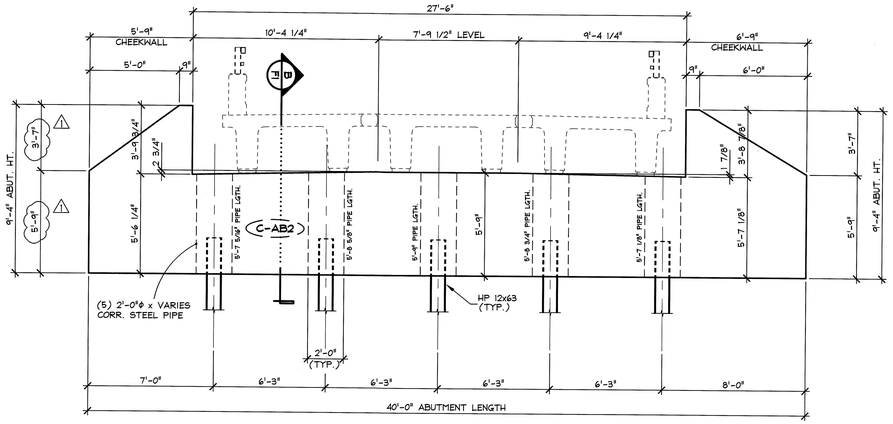
PRECAST NEXT BEAM LAYOUT

DATE:	JAN. 8, 2016
SCALE:	NOTED
CHKD: B.C.	DFTM: T.D.
JOB NO:	23476-015
DWG. NO:	F2



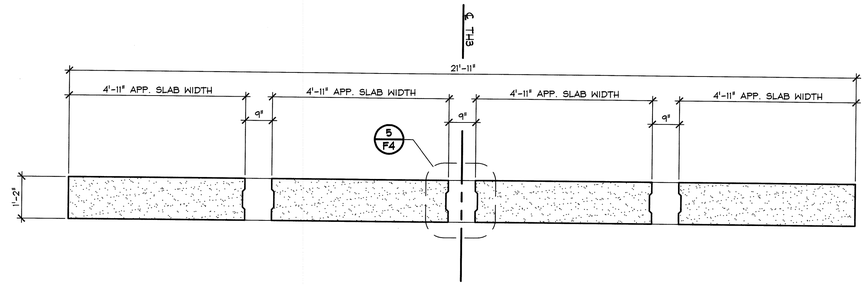
2/F3 PRECAST ABUTMENT #1 ELEVATION

1/4" = 1'-0"



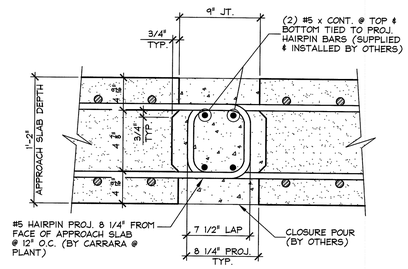
3/F3 PRECAST ABUTMENT #2 ELEVATION

1/4" = 1'-0"



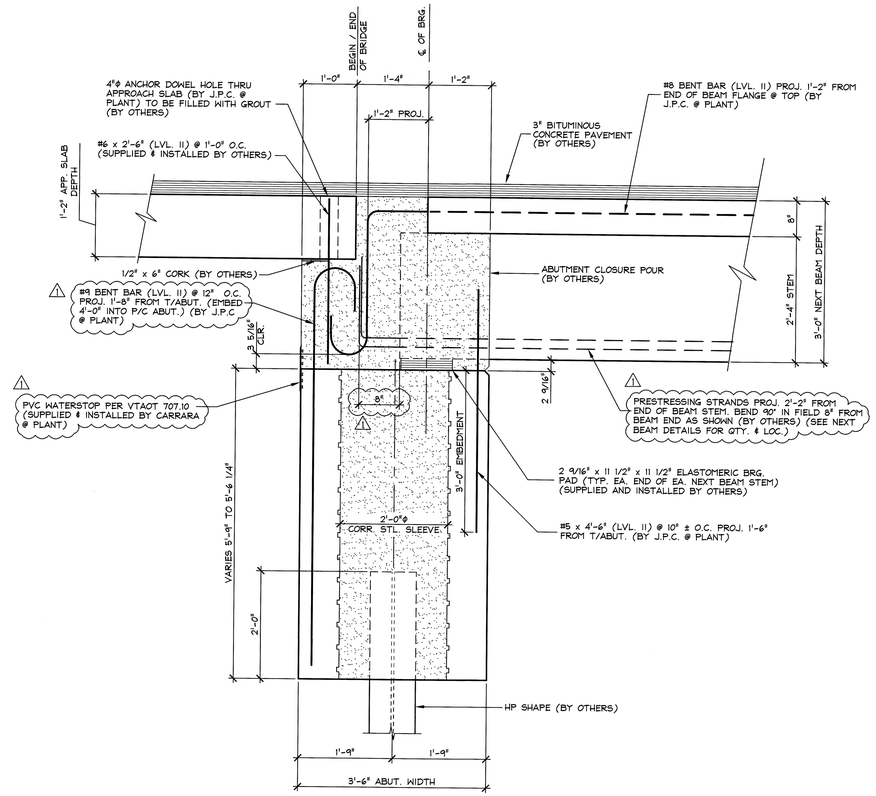
4/F3 SECTION AT APPROACH SLABS

1/2" = 1'-0"



5/F3 APPROACH SLAB CLOSURE POUR

1 1/2" = 1'-0"



6/F3 ABUTMENT SECTION

3/4" = 1'-0"

△1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

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LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

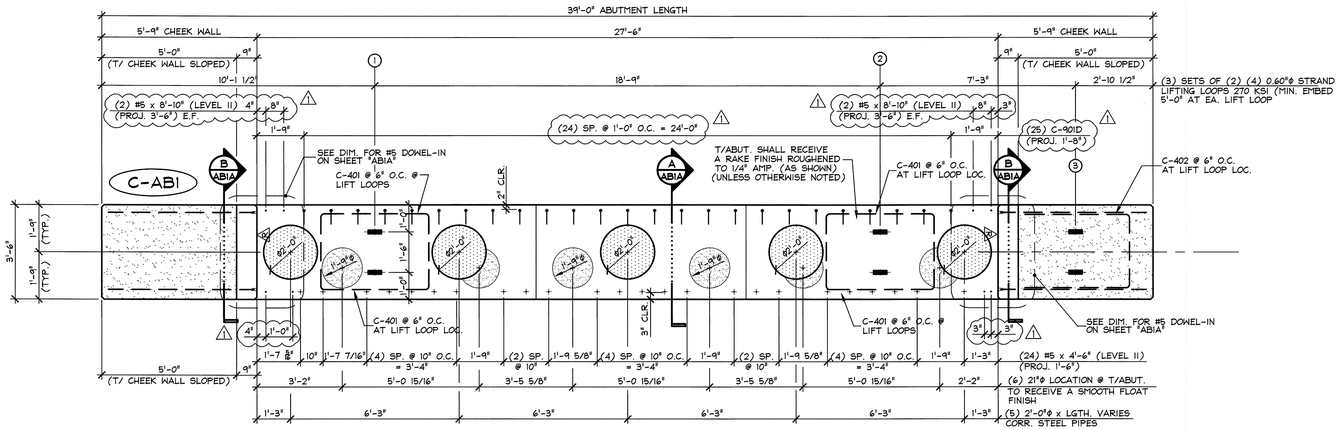
DATE: JAN. 8, 2016
SCALE: NOTED

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

CHKD: DFTM: T.D.
JOB NO: 23476-015

PRECAST ABUTMENT ELEVATIONS & DETAILS

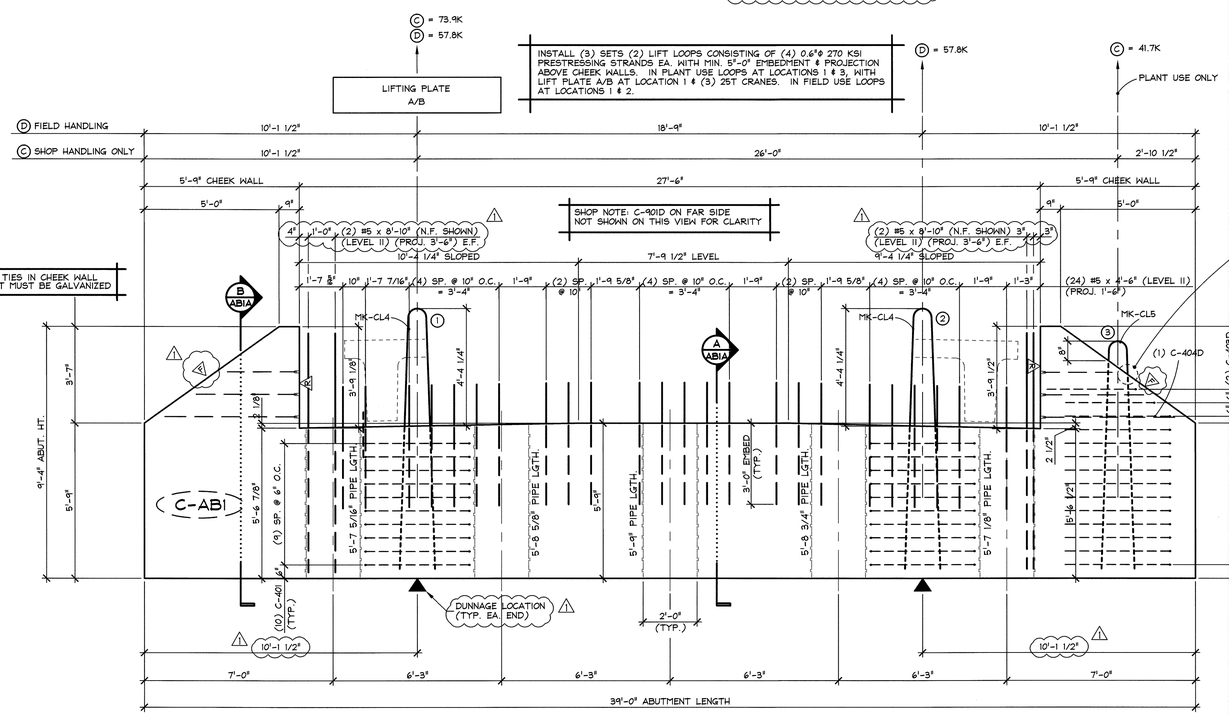
DWG. NO: F3



PLAN VIEW IN FORM

DENOTES ROUGHENED SURFACE AT INTERIOR VERTICAL FACE OF CHEEK WALL

FORM FINISH TOP OF CHEEK WALL

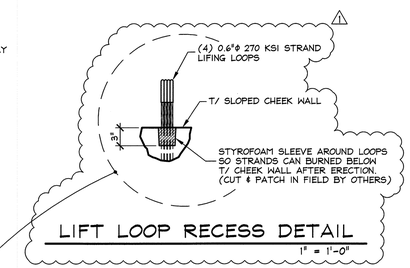


NON MARK FACE ELEVATION

SHOP NOTE: FORM TIES IN CHEEK WALL ABOVE BRIDGE SEAT MUST BE GALVANIZED

1 ABI — ABUTMENT DIMENSIONAL DETAILS

3/8" = 1'-0"



LIFT LOOP RECESS DETAIL

1" = 1'-0"

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

MIX DESIGN:
MIX NO. 425M-NO DCI

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

MARK: C-ABI	QTY.: 1	WT.: 57.71 T	VOL.: 28.5 cy

MATERIAL LIST / ABUTMENT

ITEM	MARK	DESCRIPTION	QTY.
1			
2	C-401	#4 BENT BAR (LEVEL 1)	20
3	C-402	#4 BENT BAR (LEVEL 1)	11
4	C-403D	#4 BENT BAR (LEVEL II, DUAL COATED)	2
5	C-404D	#4 BENT BAR (LEVEL II DUAL COATED)	1
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20		2'-0"ϕ x 5'-7 5/16" CORRUGATED STEEL PIPE (GALV.)	1
21		2'-0"ϕ x 5'-8 5/8" CORRUGATED STEEL PIPE (GALV.)	1
22		2'-0"ϕ x 5'-9" CORRUGATED STEEL PIPE (GALV.)	1
23		2'-0"ϕ x 5'-8 3/4" CORRUGATED STEEL PIPE (GALV.)	1
24		2'-0"ϕ x 5'-7 1/8" CORRUGATED STEEL PIPE (GALV.)	1
25			
26	MK-CL4	SET OF (4) 0.60"ϕ STRAND LIFTING LOOPS	4
27	MK-CL5	SET OF (4) 0.60"ϕ STRAND LIFTING LOOPS	2

3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

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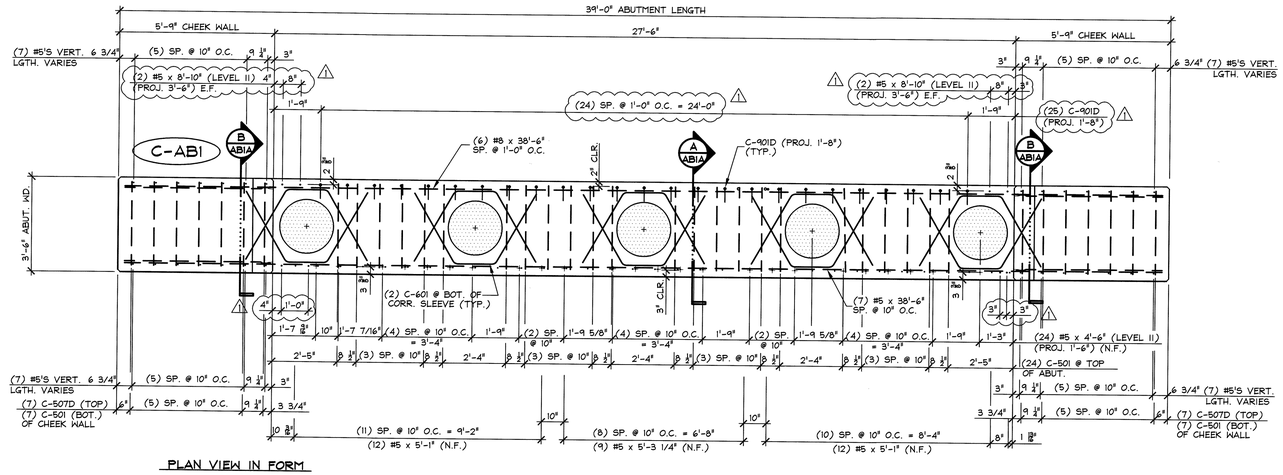
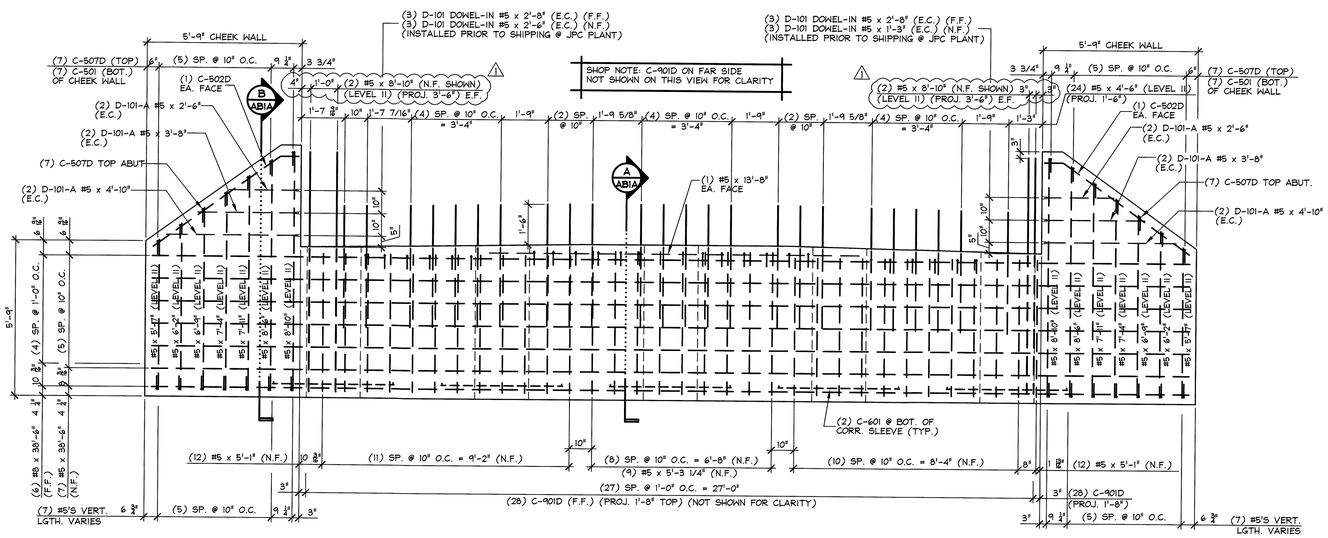
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

PRECAST ABUTMENT DETAILS

DATE: JAN. 8, 2016
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23476-015
DWG. NO: AB1



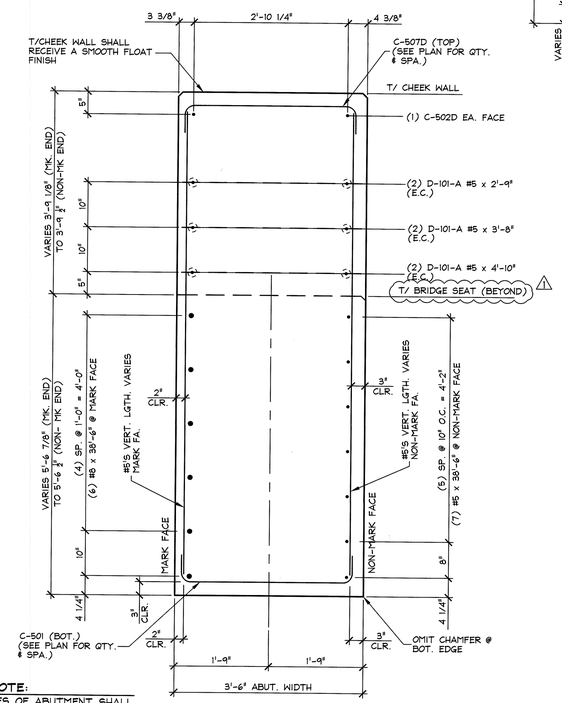
PLAN VIEW IN FORM



NON MARK FACE ELEVATION

1 / ABIA — ABUTMENT REINFORCING DETAILS

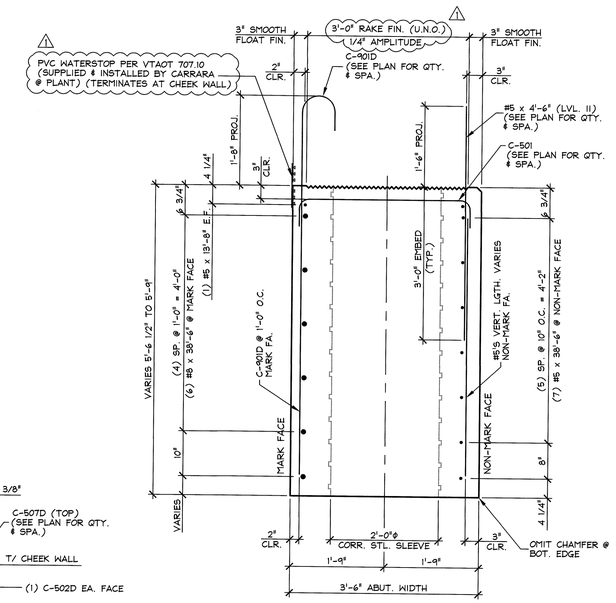
3/8" = 1'-0"



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

B / ABIA — ABUTMENT SECTION (C-ABI)

3/4" = 1'-0"



A / ABIA — ABUTMENT SECTION (C-ABI)

3/4" = 1'-0"

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

MARK: C-ABI	QTY.: 1	WT.: 57.71 T	VOL.: 28.50 cy

MATERIAL LIST / ABUTMENT

ITEM	MARK	DESCRIPTION	QTY.
1		DAYTON D-101-A #5 x 2'-6" (EPOXY COATED)	4
2		DAYTON D-101-A #5 x 3'-8" (EPOXY COATED)	4
3		DAYTON D-101-A #5 x 4'-10" (EPOXY COATED)	4
4			
5		DAYTON D-101 DOWEL-IN #5 x 2'-8" (EPOXY COATED)	6
6		DAYTON D-101 DOWEL-IN #5 x 2'-6" (EPOXY COATED)	3
7		DAYTON D-101 DOWEL-IN #5 x 1'-3" (EPOXY COATED)	3
8			
9	C-501	#5 BENT BAR (LEVEL I)	38
10	C-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	4
11	C-507D	#5 BENT BAR (LEVEL II, DUAL COATED)	14
12	C-601	#6 BENT BAR (LEVEL I)	10
13	C-901D	#9 BENT BAR (LEVEL II, DUAL COATED) 1	25
14		#8 x 38'-6" (LEVEL I)	6
15		#5 x 38'-6" (LEVEL I)	7
16		#5 x 13'-8" (LEVEL I)	2
17		#5 x 8'-10" (LEVEL II, DUAL COATED) 1	12
18		#5 x 8'-6" (LEVEL II DUAL COATED)	4
19		#5 x 7'-11" (LEVEL II, DUAL COATED)	4
20		#5 x 7'-4" (LEVEL II, DUAL COATED)	4
21		#5 x 6'-9" (LEVEL II, DUAL COATED)	4
22		#5 x 6'-2" (LEVEL II DUAL COATED)	4
23		#5 x 5'-7" (LEVEL II DUAL COATED)	4
24		#5 x 5'-3 1/4" (LEVEL I)	9
25		#5 x 5'-1" (LEVEL I)	24
26		#5 x 4'-6" (LEVEL II, DUAL COATED)	24
27			

1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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

J.A. McDonald, Inc.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

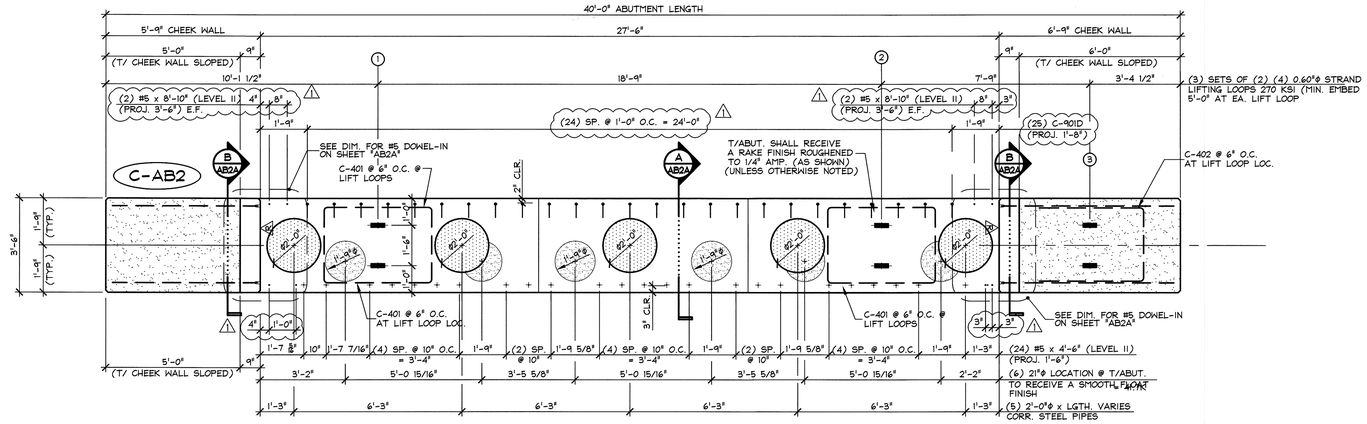
DATE: JAN. 8, 2016
SCALE: NOTED

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

CHKD: DFTM: T.D.
JOB NO: 23476-015

PRECAST ABUTMENT DETAILS

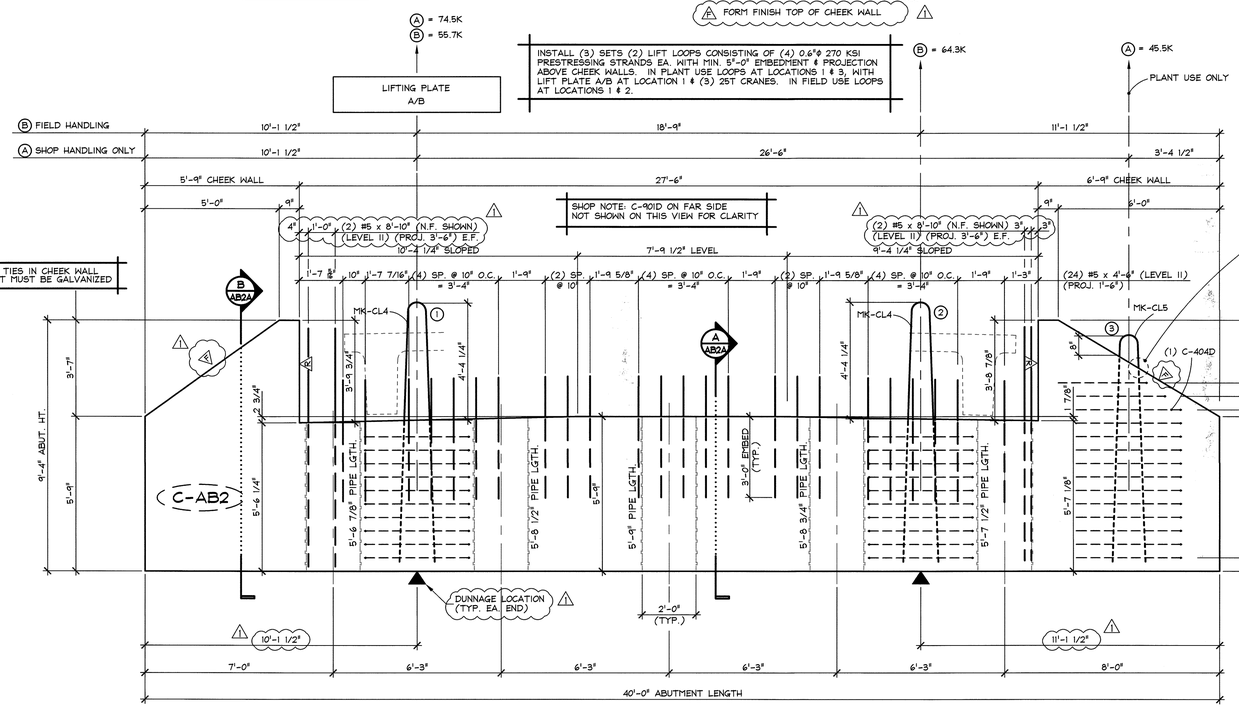
DWG. NO: AB1A



PLAN VIEW IN FORM

DENOTES ROUGHENED SURFACE AT INTERIOR VERTICAL FACE OF CHEEK WALL

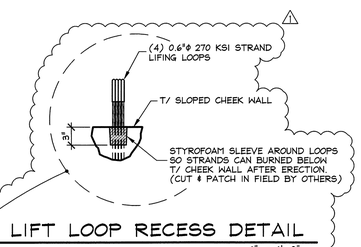
FORM FINISH TOP OF CHEEK WALL



NON MARK FACE ELEVATION

1 / AB2 ABUTMENT DIMENSIONAL DETAILS

3/8" = 1'-0"



LIFT LOOP RECESS DETAIL

1" = 1'-0"

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

MIX DESIGN:
MIX NO. 425M-NO DCI

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

MARK: C-AB2	QTY.: 1	WT.: 59.32 T	VOL.: 29.30 cy

MATERIAL LIST / ABUTMENT

ITEM	MARK	DESCRIPTION	QTY.
1			
2	C-401	#4 BENT BAR (LEVEL I)	20
3	C-402	#4 BENT BAR (LEVEL I)	11
4	C-403D	#4 BENT BAR (LEVEL II, DUAL COATED)	2
5	C-404D	#4 BENT BAR (LEVEL II, DUAL COATED)	1
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20		2'-0"ϕ x 5'-6 7/8" CORRUGATED STEEL PIPE (GALV.)	1
21		2'-0"ϕ x 5'-8 1/2" CORRUGATED STEEL PIPE (GALV.)	1
22		2'-0"ϕ x 5'-9" CORRUGATED STEEL PIPE (GALV.)	1
23		2'-0"ϕ x 5'-8 3/4" CORRUGATED STEEL PIPE (GALV.)	1
24		2'-0"ϕ x 5'-7 1/2" CORRUGATED STEEL PIPE (GALV.)	1
25			
26	MK-CL4	SET OF (4) 0.60"ϕ STRAND LIFTING LOOPS	4
27	MK-CL5	SET OF (4) 0.60"ϕ STRAND LIFTING LOOPS	2

1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

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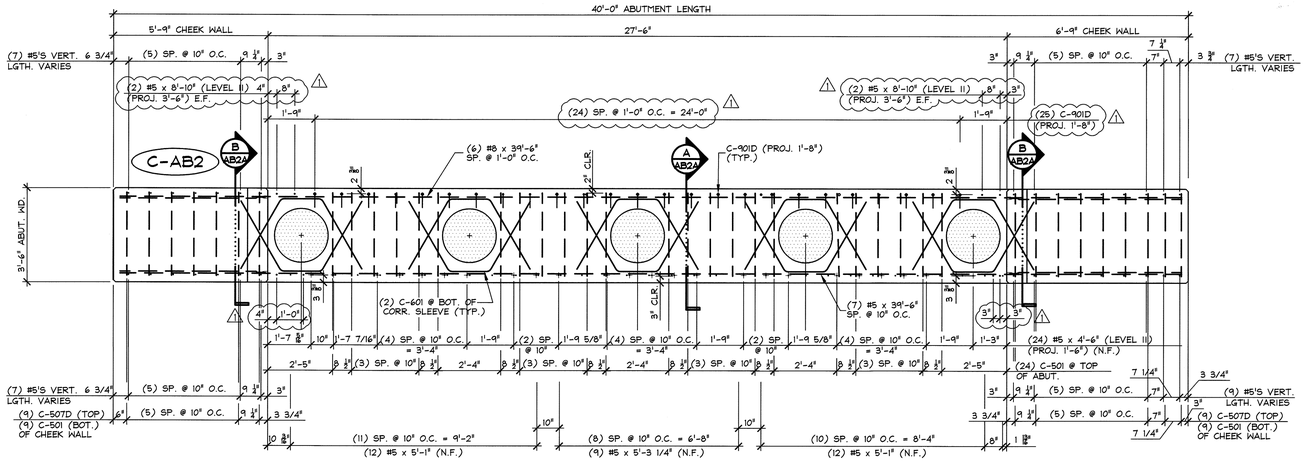
J.A. McDonald, Inc.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

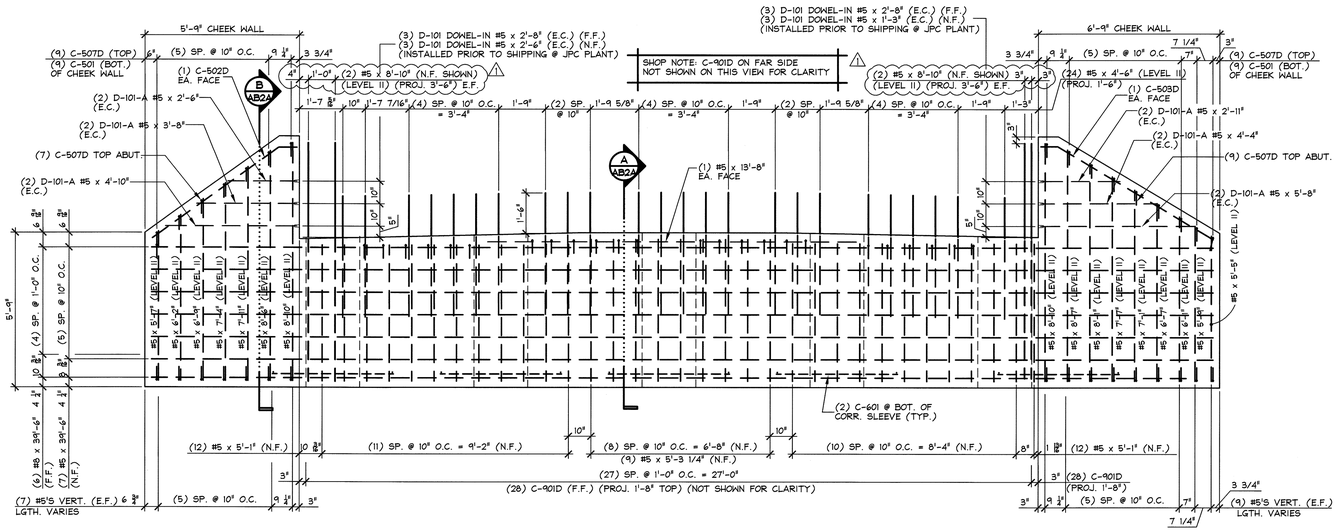
TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

PRECAST ABUTMENT DETAILS

DATE: JAN. 8, 2016
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23476-015
DWG. NO: AB2



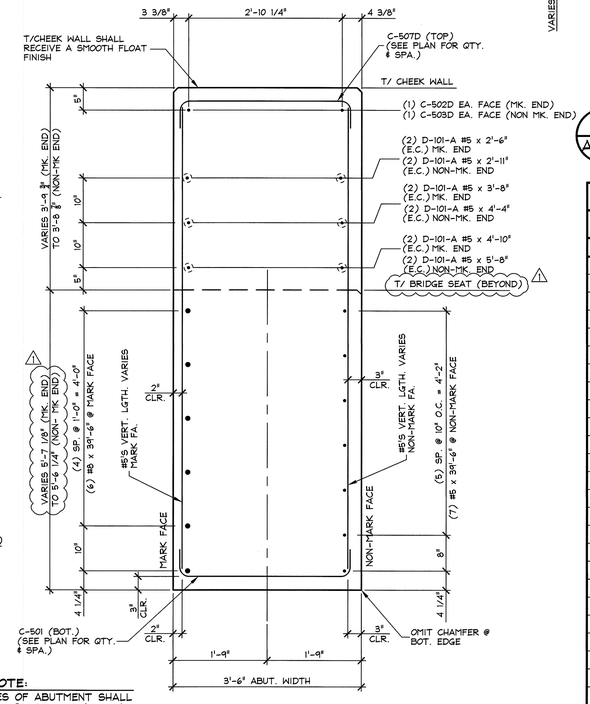
PLAN VIEW IN FORM



NON MARK FACE ELEVATION

1 / AB2A ABUTMENT REINFORCING DETAILS

3/8" = 1'-0"

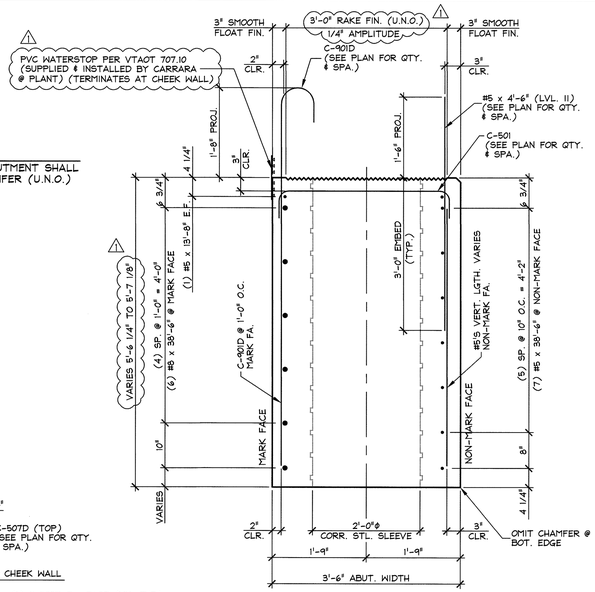


SHOP NOTE:
ALL EDGES OF ABUTMENT SHALL RECEIVE A 1" CHAMFER (U.N.O.)

B / AB2A ABUTMENT SECTION (C-AB2)

3/4" = 1'-0"

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



A / AB2A ABUTMENT SECTION (C-AB2)

3/4" = 1'-0"

MARK: C-AB2	QTY.: 1	WT.: 59.32 T	VOL.: 29.30 cy

MATERIAL LIST / ABUTMENT

ITEM	MARK	DESCRIPTION	QTY.
1		DAYTON D-101-A #5 x 2'-6" (EPOXY COATED)	2
2		DAYTON D-101-A #5 x 3'-8" (EPOXY COATED)	2
3		DAYTON D-101-A #5 x 4'-10" (EPOXY COATED)	2
4		DAYTON D-101-A #5 x 2'-11" (EPOXY COATED)	2
5		DAYTON D-101-A #5 x 4'-4" (EPOXY COATED)	2
6		DAYTON D-101-A #5 x 5'-8" (EPOXY COATED)	2
7	C-501	#5 BENT BAR (LEVEL I)	40
8	C-502D	#5 BENT BAR (LEVEL II DUAL COATED)	2
9	C-503D	#5 BENT BAR (LEVEL II DUAL COATED)	2
10 ⚠1	C-507D	#5 BENT BAR (LEVEL II DUAL COATED) ⚠1	16
11	C-601	#6 BENT BAR (LEVEL I)	10
12	C-901D	#9 BENT BAR (LEVEL II, DUAL COATED) ⚠1	25
13		#8 x 39'-6" (LEVEL I)	6
14		#5 x 39'-6" (LEVEL I)	7
15		#5 x 13'-8" (LEVEL I)	2
16		#5 x 8'-10" (LEVEL II DUAL COATED) ⚠1	12
17		#5 x 8'-6" (LEVEL II DUAL COATED)	2
18		#5 x 7'-11" (LEVEL II DUAL COATED)	2
19		#5 x 7'-4" (LEVEL II DUAL COATED)	2
20		#5 x 6'-9" (LEVEL II DUAL COATED)	2
21		#5 x 6'-2" (LEVEL II DUAL COATED)	2
22		#5 x 5'-7" (LEVEL II DUAL COATED)	2
23		#5 x 5'-3 1/4" (LEVEL I)	9
24		#5 x 5'-1" (LEVEL I)	24
25		#5 x 4'-6" (LEVEL II, DUAL COATED)	24
26		#5 x 8'-7" (LEVEL II DUAL COATED)	2
27		#5 x 8'-1" (LEVEL II DUAL COATED)	2
28		#5 x 7'-7" (LEVEL II DUAL COATED)	2
29		#5 x 7'-1" (LEVEL II DUAL COATED)	2
30		#5 x 6'-7" (LEVEL II DUAL COATED)	2
31		#5 x 6'-1" (LEVEL II DUAL COATED)	2

ITEM	MARK	DESCRIPTION	QTY.
32			
33		#5 x 5'-9" (LEVEL II DUAL COATED)	2
34		#5 x 5'-5" (LEVEL II DUAL COATED)	2
35			
36		DAYTON D-101 DOWEL-IN #5 x 2'-8" (EPOXY COATED)	6
37		DAYTON D-101 DOWEL-IN #5 x 2'-6" (EPOXY COATED)	3
38		DAYTON D-101 DOWEL-IN #5 x 1'-3" (EPOXY COATED)	3
39			
40			

⚠1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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J.A. McDonald, Inc.
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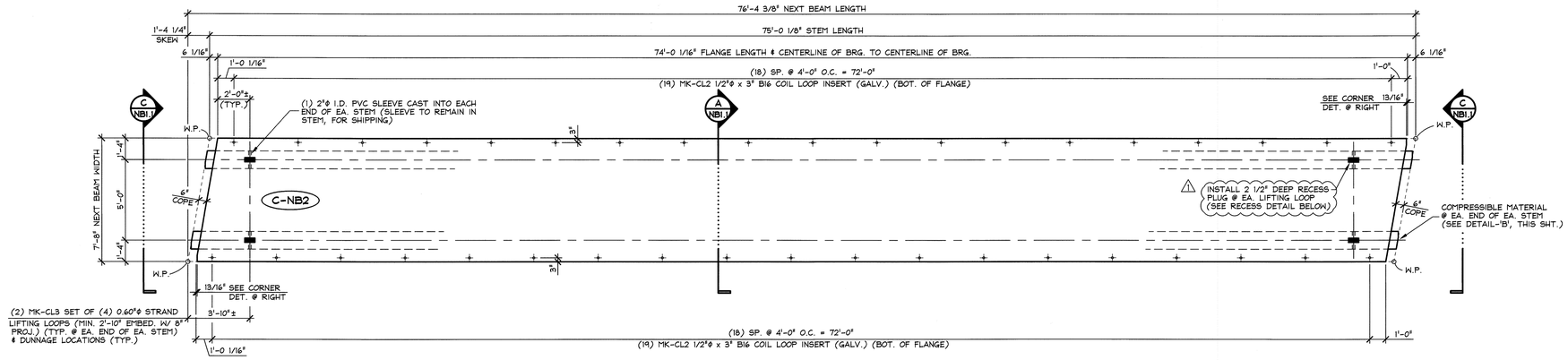
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

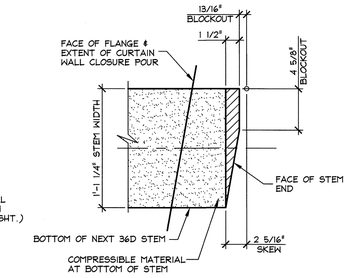
PRECAST ABUTMENT DETAILS

DATE: JAN. 8, 2016
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23476-015
DWG. NO: AB2A

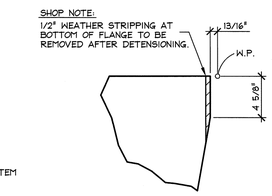


1 NB1 DIMENSIONAL PLAN VIEW IN FORM "C-NB2"

1/4" = 1'-0"

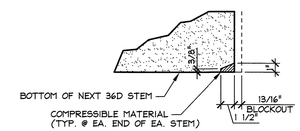


PLAN



CORNER FLANGE B/O

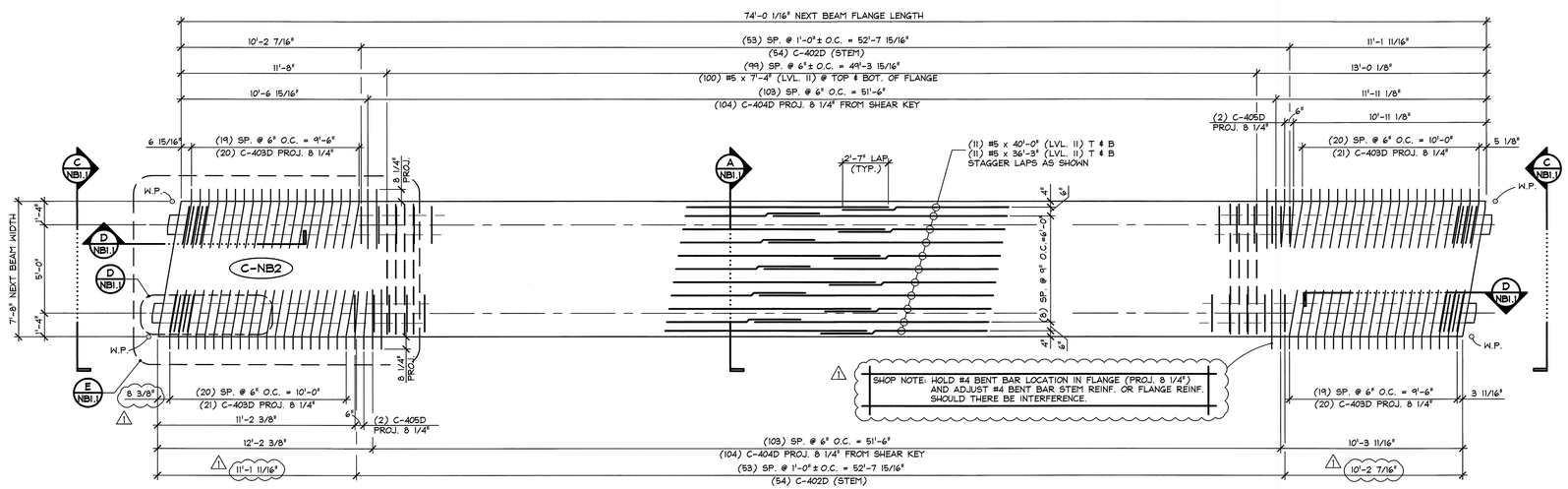
(TYP. AS SHOWN) 1 1/2" = 1'-0"



SECTION

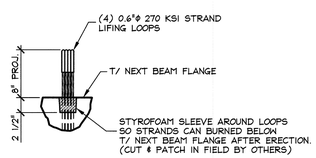
DETAIL - "B"

1 1/2" = 1'-0"



2 NB1 REINFORCING PLAN VIEW IN FORM "C-NB2"

1/4" = 1'-0"



LIFT LOOP RECESS DETAIL

1" = 1'-0"

SHOP NOTE:
f'c = 10,000 PSI
f'ci = 8,000 PSI
MIX #430M

MARK: C-NB2	QTY.: 1	WT.: 59.42 T	VOL.: 29.34 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1			
2	MK-CL2	1/2"φ x 3" B16 COIL LOOP INSERT (GALV.)	38
3	MK-CL3	SET OF (4) 0.60"φ STRAND LIFTING LOOPS x 3'-6" LONG	4
4			
5	C-401D	#4 BENT BAR (LEVEL II, DUAL COATED)	104
6	C-402D	#4 BENT BAR (LEVEL II, DUAL COATED)	108
7	C-403D	#4 BENT BAR (LEVEL II, DUAL COATED)	82
8	C-404D	#4 BENT BAR (LEVEL II, DUAL COATED)	208
9	C-405D	#4 BENT BAR (LEVEL II, DUAL COATED)	4
10			
11	C-501D	#5 BENT BAR (LEVEL II, DUAL COATED)	16
12	C-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	40
13			
14	C-801D	#8 BENT BAR (LEVEL II, DUAL COATED)	28
15			
16		#4 x 7'-5 1/2" (LEVEL II, DUAL COATED) △1	(20)
17		#5 x 7'-5 1/2" (LEVEL II, DUAL COATED)	84
18		#5 x 7'-4 1/2" (LEVEL II, DUAL COATED)	4
19		#5 x 7'-4 1/4" (LEVEL II, DUAL COATED)	4
20		#5 x 4'-6" (LEVEL II, DUAL COATED)	12
21		#5 x 7'-4" (LEVEL II, DUAL COATED)	200
22		#5 x 40'-0" (LEVEL II, DUAL COATED)	22
23		#5 x 36'-3" (LEVEL II, DUAL COATED)	22
24			
25			

△1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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

J.A. McDonald, Inc.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

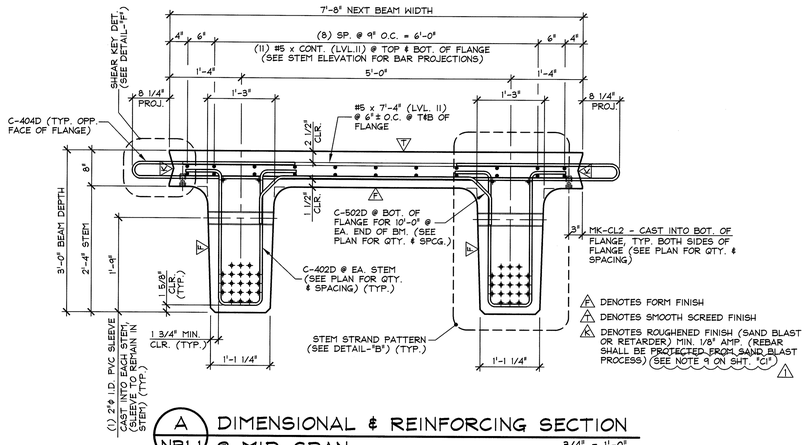
DATE: JAN. 8, 2016
SCALE: NOTED

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

CHKD: DFTM: T.D.
JOB NO: 23476-015

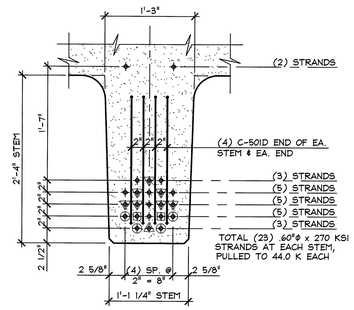
PRESTRESSED NEXT BEAM
PLAN VIEWS

DWG. NO: NB1



A NB1.1 DIMENSIONAL & REINFORCING SECTION @ MID-SPAN

3/4" = 1'-0"

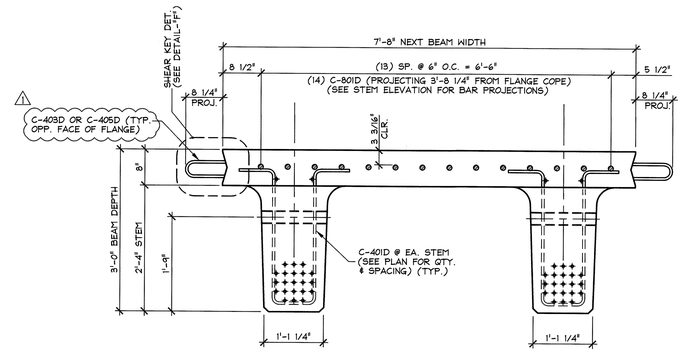


B NB1.1 STEM STRAND PATTERN

1" = 1'-0"

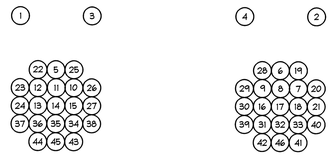
PRESTRESSING NOTATIONS

- DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM
- DENOTES FULLY BONDED STRAIGHT STRANDS EXTENDED 2'-2" FROM EA. END OF EA. STEM (90° BEND @ 8" OUT)
- DENOTES FULLY BONDED STRAIGHT STRANDS TO BE CUT FLUSH W/ EA. END OF EA. STEM



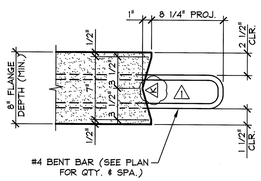
C NB1.1 DIMENSIONAL & REINFORCING SECTION @ BEAM END

3/4" = 1'-0"



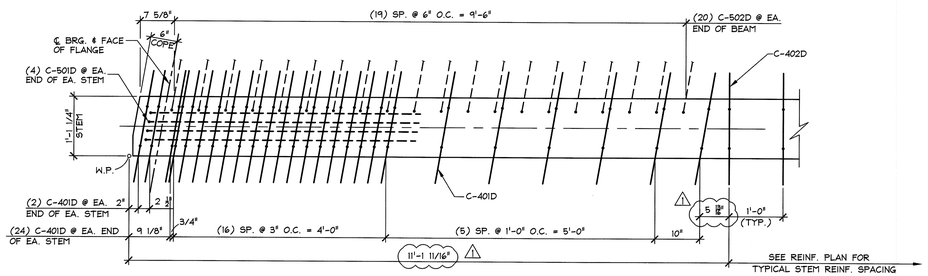
DETENSIONING SCHEDULE

N.T.S.

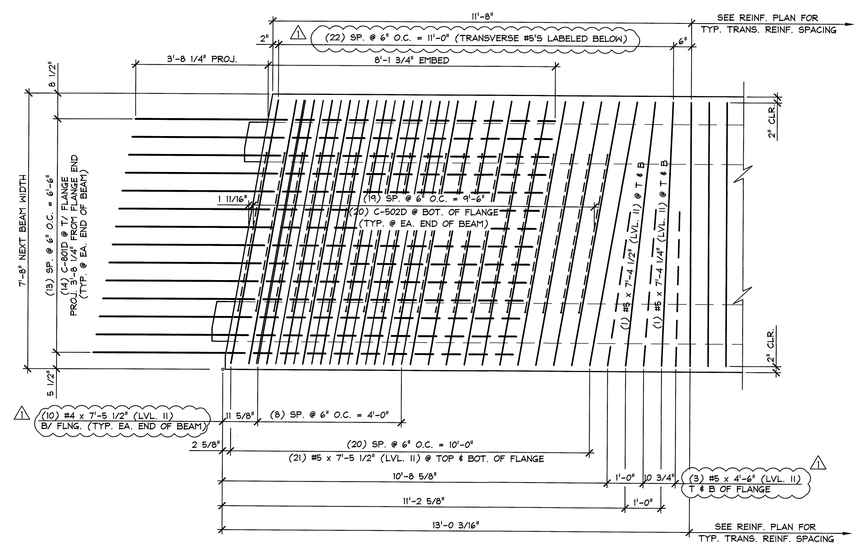


F NB1.1 SHEAR KEY DETAIL

1 1/2" = 1'-0"



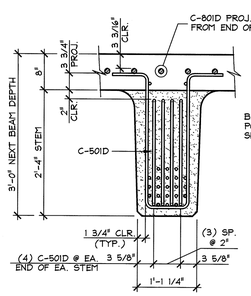
STEM PLAN



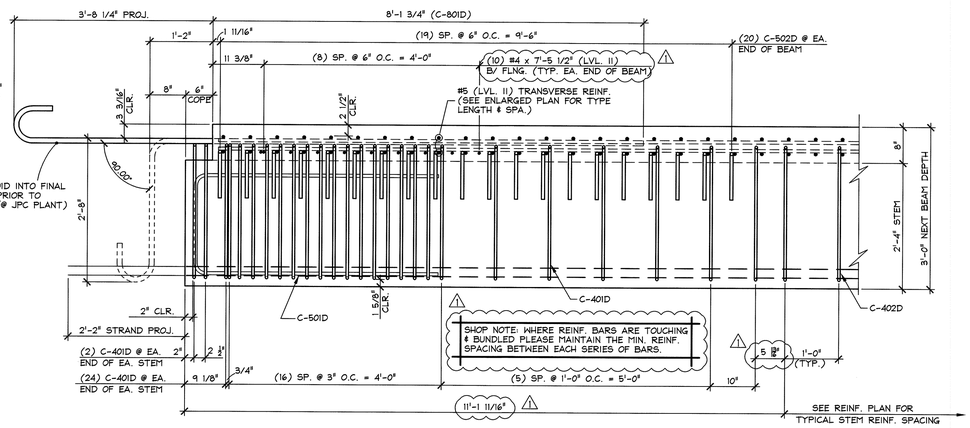
E NB1.1 ENLARGED TRANSVERSE REINFORCING PLAN

LONGITUDINAL REINFORCING & STEM STIRRUPS NOT SHOWN FOR CLARITY

1/2" = 1'-0"



STEM SECTION



STEM ELEVATION

D NB1.1 END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"

3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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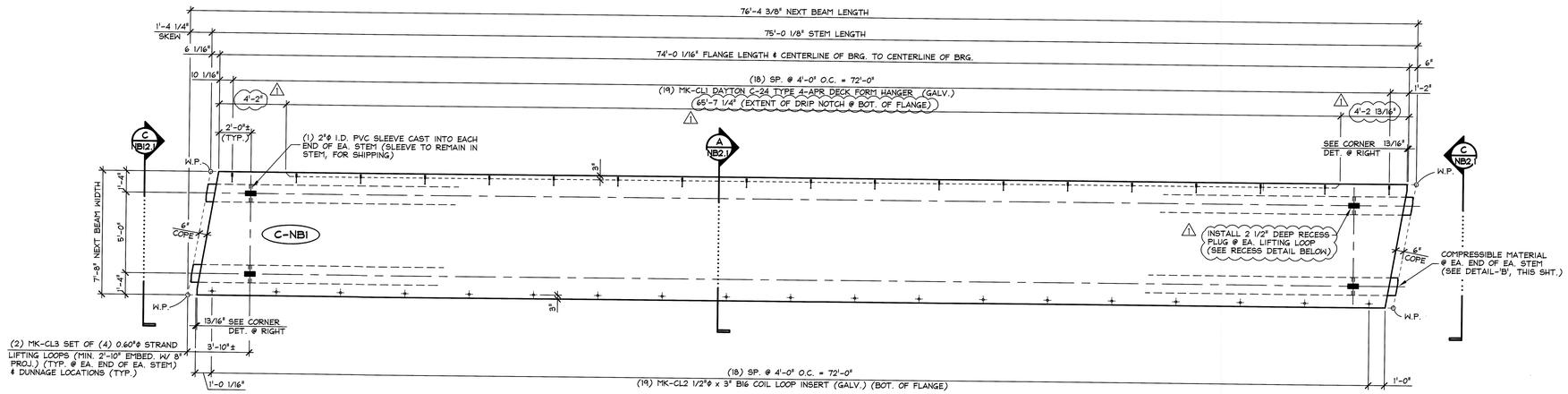
COUNTY OF RUTLAND

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

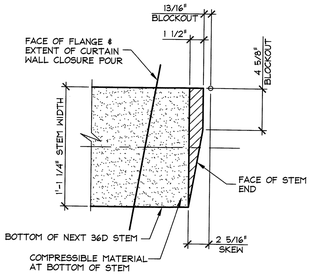
PRESTRESSED NEXT BEAM DETAILS

DATE:	JAN. 8, 2016
SCALE:	NOTED
CHKD:	DFTM: T.D.
JOB NO:	23476-015
DWG. NO:	NB1.1



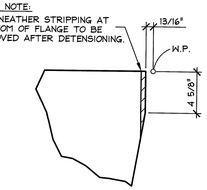
1 / NB2 DIMENSIONAL PLAN VIEW IN FORM "C-NB1"

1/4" = 1'-0"



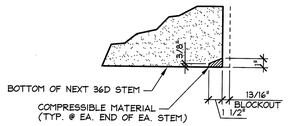
PLAN

SHOP NOTE:
1/2" WEATHER STRIPPING AT BOTTOM OF FLANGE TO BE REMOVED AFTER DETENSIONING.



CORNER FLANGE B/O

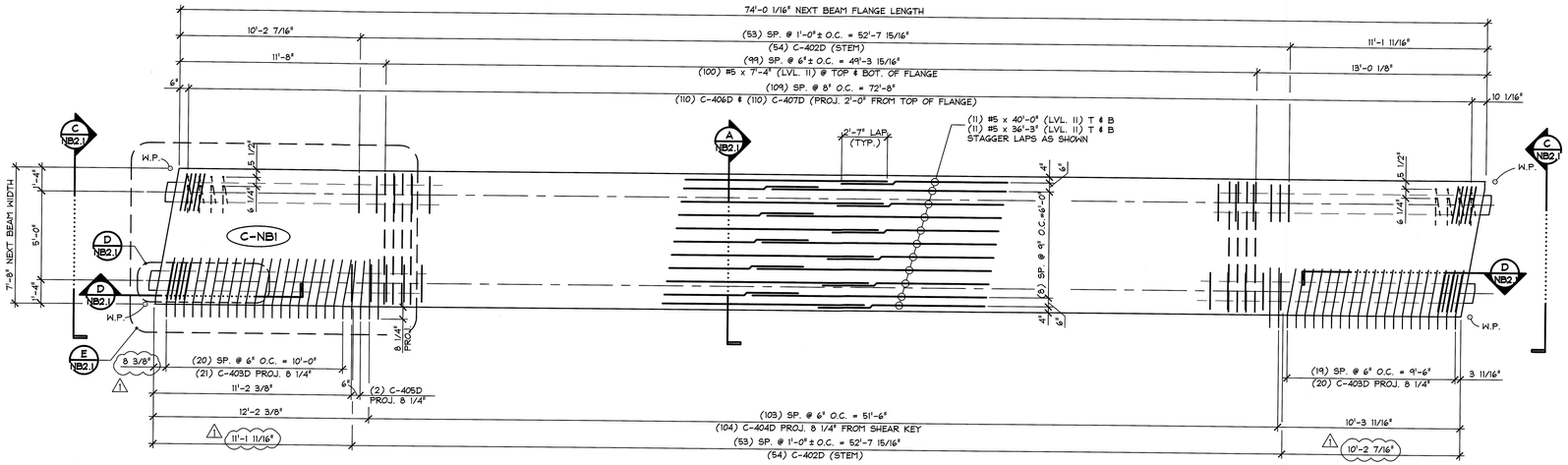
(TYP. AS SHOWN) 1 1/2" = 1'-0"



SECTION

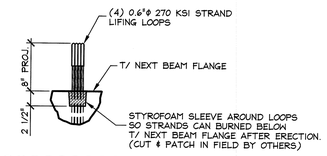
DETAIL - "B"

1 1/2" = 1'-0"



2 / NB2 REINFORCING PLAN VIEW IN FORM "C-NB1"

1/4" = 1'-0"



LIFT LOOP RECESS DETAIL

1" = 1'-0"

SHOP NOTE:
f'c = 10,000 PSI
f'ci = 8,000 PSI
MIX #430M

MARK: C-NB1	QTY.: 1	WT.: 59.42 T	VOL.: 29.34 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	MK-CL1	DAYTON C-24 TYPE 4-APR DECK FORM HANGER (GALV.)	19
2	MK-CL2	1/2"ϕ x 3" B16 COIL LOOP INSERT (GALV.)	19
3	MK-CL3	SET OF (4) 0.60"ϕ STRAND LIFTING LOOPS x 3'-6" LONG	4
4			
5	C-401D	#4 BENT BAR (LEVEL II, DUAL COATED)	104
6	C-402D	#4 BENT BAR (LEVEL II, DUAL COATED) △1	108
7	C-403D	#4 BENT BAR (LEVEL II, DUAL COATED)	41
8	C-404D	#4 BENT BAR (LEVEL II, DUAL COATED)	104
9	C-405D	#4 BENT BAR (LEVEL II, DUAL COATED)	2
10	C-406D	#4 BENT BAR (LEVEL II, DUAL COATED)	110
11	C-407D	#4 BENT BAR (LEVEL II, DUAL COATED)	110
12			
13	C-501D	#5 BENT BAR (LEVEL II, DUAL COATED)	16
14	C-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	40
15			
16	C-801D	#8 BENT BAR (LEVEL II, DUAL COATED)	28
17			
18		#4 x 7'-5 1/2" (LEVEL II, DUAL COATED) △1	20
19		#5 x 7'-5 1/2" (LEVEL II, DUAL COATED)	84
20		#5 x 7'-4 1/2" (LEVEL II, DUAL COATED)	4
21		#5 x 7'-4 1/4" (LEVEL II, DUAL COATED)	4
22		#5 x 4'-6" (LEVEL II, DUAL COATED)	12
23		#5 x 7'-4" (LEVEL II, DUAL COATED)	200
24		#5 x 40'-0" (LEVEL II, DUAL COATED)	22
25		#5 x 36'-3" (LEVEL II, DUAL COATED)	22

△1 3/11/16 REVISED AS PER ENGR. COMM. T.D.

APPROVAL STAMP:

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

J.A. McDonald, Inc.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

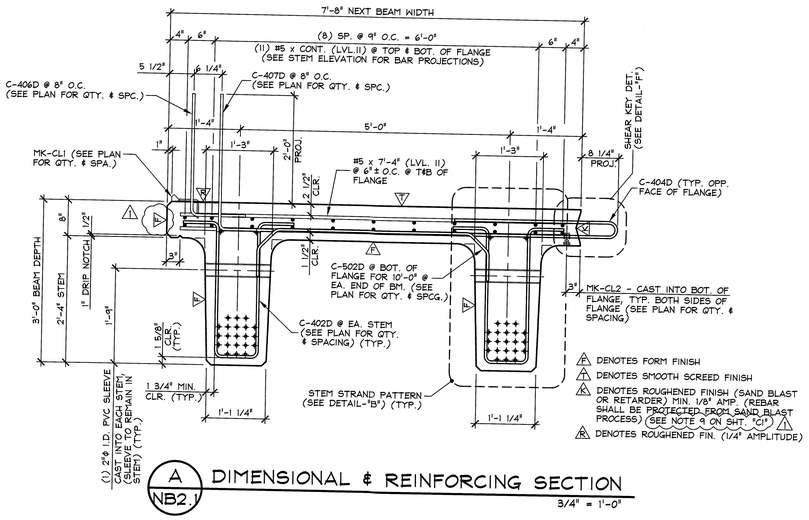
DATE: JAN. 8, 2016
SCALE: NOTED

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

CHKD: DFTM: T.D.
JOB NO: 23476-015

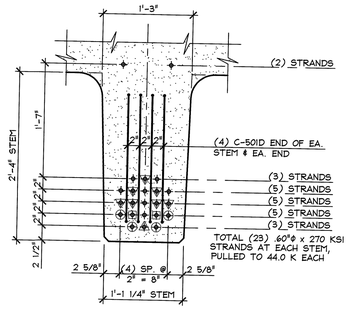
PRESTRESSED NEXT BEAM
PLAN VIEWS

DWG. NO: NB2



A NB2.1 DIMENSIONAL & REINFORCING SECTION

3/4" = 1'-0"

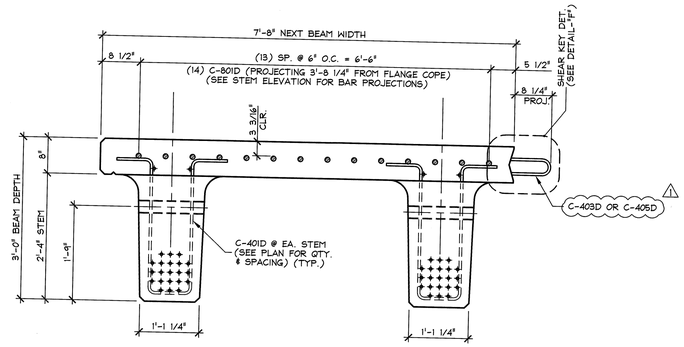


B NB2.1 STEM STRAND PATTERN

1" = 1'-0"

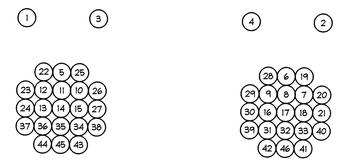
PRESTRESSING NOTATIONS

- DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM
- DENOTES FULLY BONDED STRAIGHT STRANDS EXTENDED 2'-2" FROM EA. END OF EA. STEM (90° BEND @ 8" OUT)
- DENOTES FULLY BONDED STRAIGHT STRANDS TO BE CUT FLUSH W/ EA. END OF EA. STEM



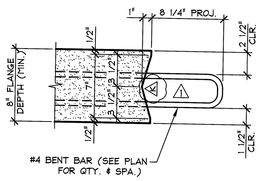
C NB2.1 DIMENSIONAL & REINFORCING SECTION

3/4" = 1'-0"



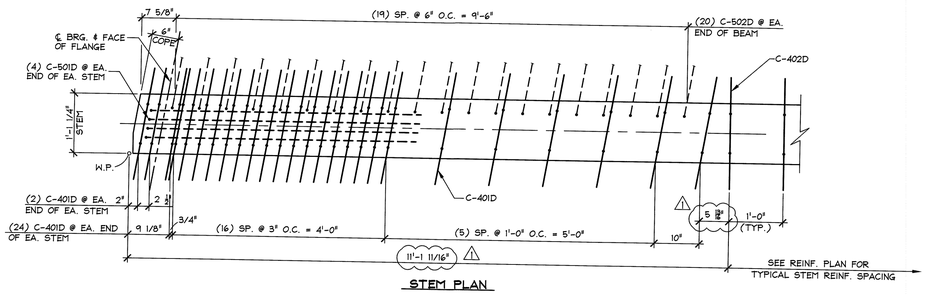
DETENSIONING SCHEDULE

N.T.S.

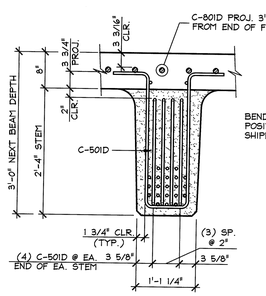


F NB2.1 SHEAR KEY DETAIL

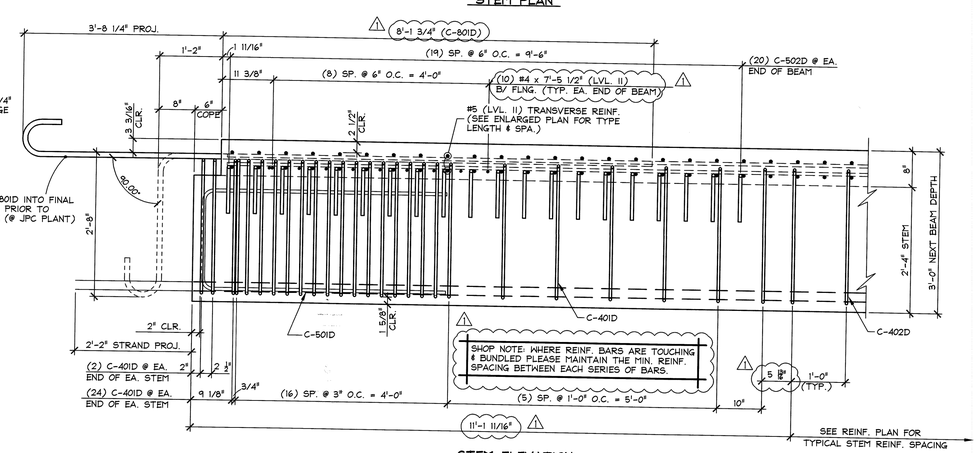
1 1/2" = 1'-0"



STEM PLAN



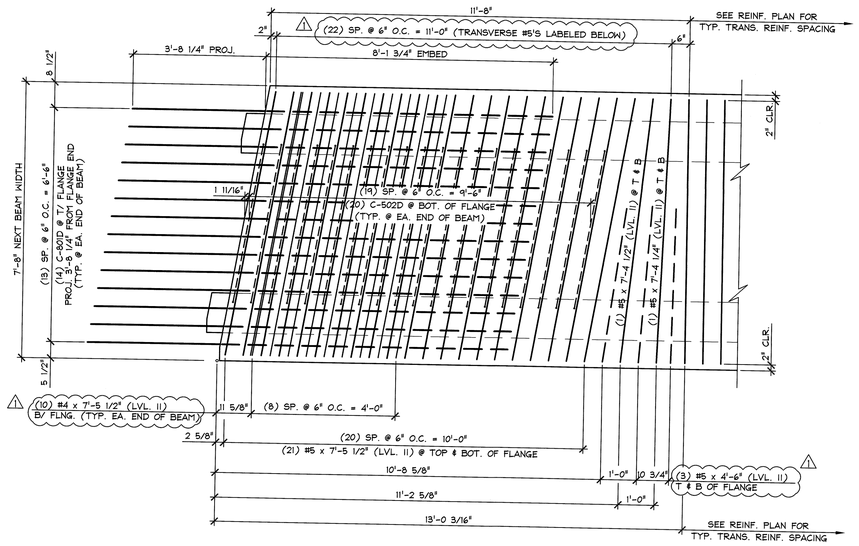
STEM SECTION



STEM ELEVATION

D NB2.1 END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"



E NB2.1 ENLARGED TRANSVERSE REINFORCING PLAN

LONGITUDINAL REINFORCING & STEM STIRRUPS NOT SHOWN FOR CLARITY

1/2" = 1'-0"

3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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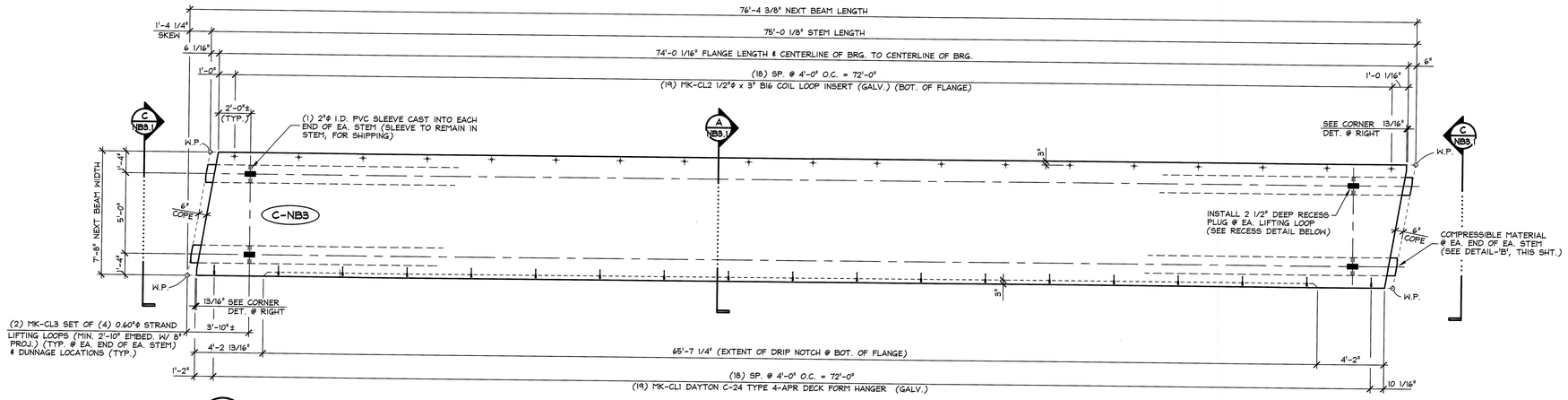
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

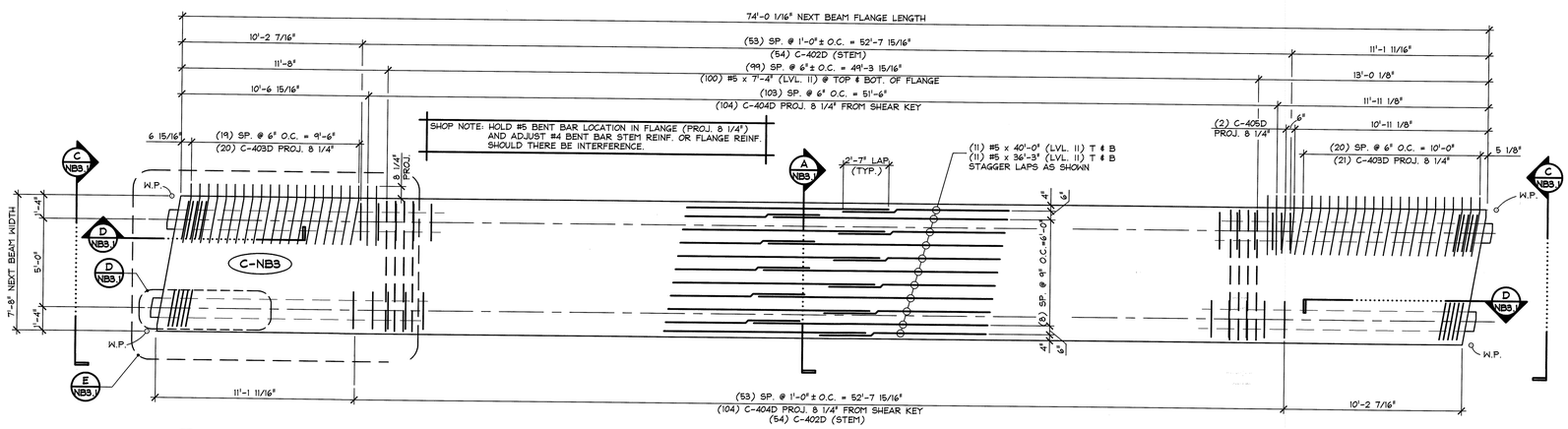
PRESTRESSED NEXT BEAM DETAILS

DATE:	JAN. 8, 2016
SCALE:	NOTED
CHKD:	DFTM: T.D.
JOB NO:	23476-015
DWG. NO:	NB2.1



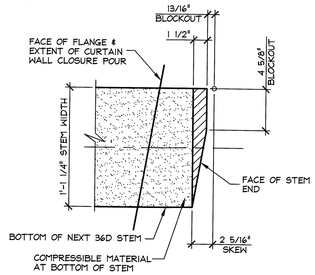
1 / NB3 DIMENSIONAL PLAN VIEW IN FORM "C-NB1"

1/4" = 1'-0"

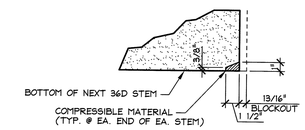


2 / NB3 REINFORCING PLAN VIEW IN FORM "C-NB3"

1/4" = 1'-0"



PLAN

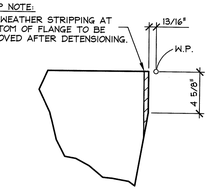


SECTION

DETAIL - "B"

1 1/2" = 1'-0"

SHOP NOTE:
1/2" WEATHER STRIPPING AT BOTTOM OF FLANGE TO BE REMOVED AFTER DETENSIONING.



CORNER FLANGE B/O

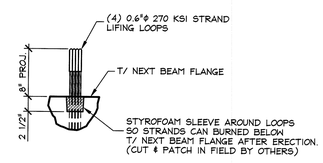
(TYP. AS SHOWN) 1 1/2" = 1'-0"

SHOP NOTE:
f'c = 10,000 PSI
f'ci = 8,000 PSI
MIX #480M

MARK: C-NB3	QTY.: 1	WT.: 59.42 T	VOL.: 29.34 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	MK-CL1	DAYTON C-24 TYPE 4-APR DECK FORM HANGER (GALV.)	19
2	MK-CL2	1/2"ϕ x 3" B16 COIL LOOP INSERT (GALV.)	19
3	MK-CL3	SET OF (4) 0.60"ϕ STRAND LIFTING LOOPS x 3'-6" LONG	4
4			
5	C-401D	#4 BENT BAR (LEVEL II, DUAL COATED)	104
6	C-402D	#4 BENT BAR (LEVEL II, DUAL COATED)	108
7	C-403D	#4 BENT BAR (LEVEL II, DUAL COATED)	41
8	C-404D	#4 BENT BAR (LEVEL II, DUAL COATED)	104
9	C-405D	#4 BENT BAR (LEVEL II, DUAL COATED)	2
10	C-406D	#4 BENT BAR (LEVEL II, DUAL COATED)	110
11	C-407D	#4 BENT BAR (LEVEL II, DUAL COATED)	110
12			
13	C-501D	#5 BENT BAR (LEVEL II, DUAL COATED)	16
14	C-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	40
15			
16	C-801D	#8 BENT BAR (LEVEL II, DUAL COATED)	28
17			
18		#4 x 7'-5 1/2" (LEVEL II, DUAL COATED)	20
19		#5 x 7'-5 1/2" (LEVEL II, DUAL COATED)	84
20		#5 x 7'-4 1/2" (LEVEL II, DUAL COATED)	4
21		#5 x 7'-4 1/4" (LEVEL II, DUAL COATED)	4
22		#5 x 4'-6" (LEVEL II, DUAL COATED)	12
23		#5 x 7'-4" (LEVEL II, DUAL COATED)	200
24		#5 x 40'-0" (LEVEL II, DUAL COATED)	22
25		#5 x 36'-3" (LEVEL II, DUAL COATED)	22



LIFT LOOP RECESS DETAIL

1" = 1'-0"

1 3/11/16 ADDED THIS SHEET T.D.

APPROVAL STAMP:

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

J.A. McDonald, Inc.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

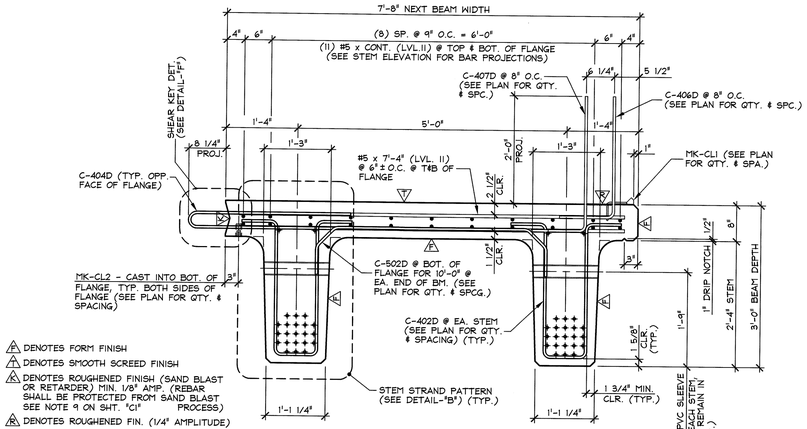
DATE: JAN. 8, 2016
SCALE: NOTED

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

CHKD: DFTM: T.D.
JOB NO: 23476-015

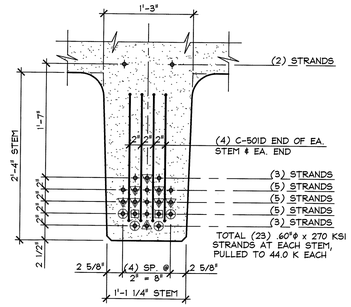
PRESTRESSED NEXT BEAM
PLAN VIEWS

DWG. NO: NB3



A NB3.1 DIMENSIONAL & REINFORCING SECTION

3/4" = 1'-0"

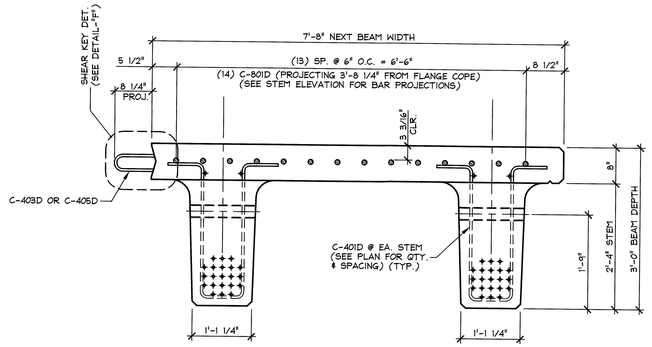


B NB3.1 STEM STRAND PATTERN

1" = 1'-0"

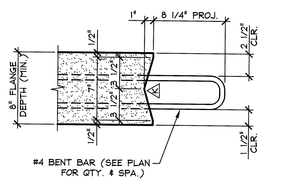
PRESTRESSING NOTATIONS

- DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM
- DENOTES FULLY BONDED STRAIGHT STRANDS EXTENDED 2'-2" FROM EA. END OF EA. STEM (90° BEND @ 8" OUT)
- DENOTES FULLY BONDED STRAIGHT STRANDS TO BE CUT FLUSH W/ EA. END OF EA. STEM



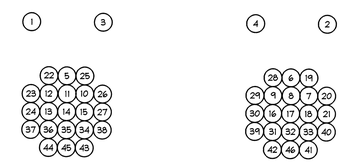
C NB3.1 DIMENSIONAL & REINFORCING SECTION

3/4" = 1'-0"



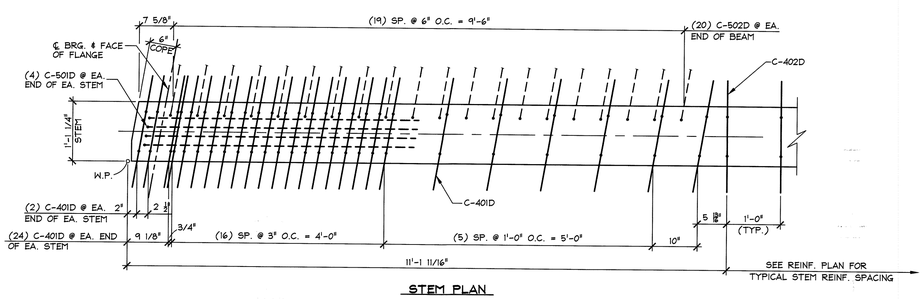
F NB3.1 SHEAR KEY DETAIL

1 1/2" = 1'-0"

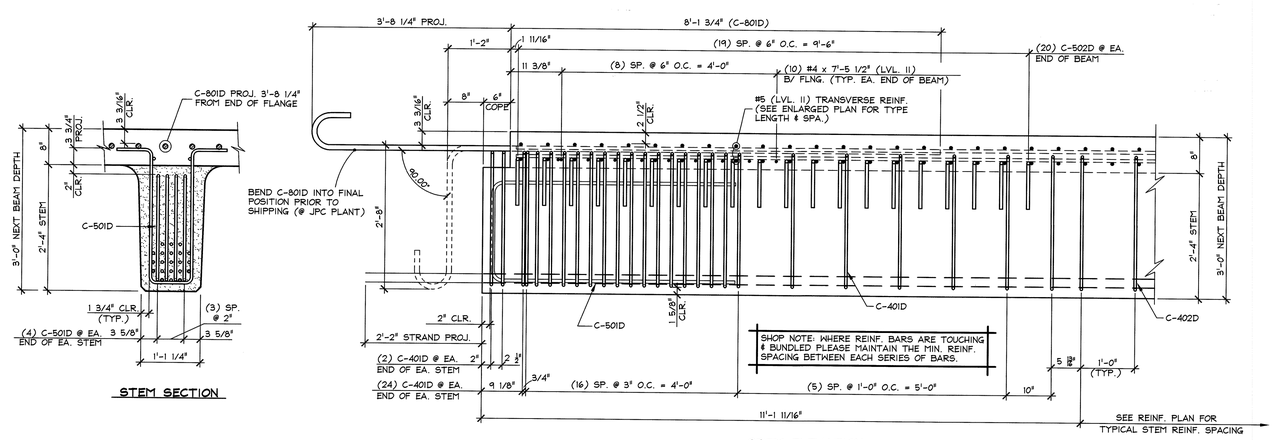


DETENSIONING SCHEDULE

N.T.S.



STEM PLAN

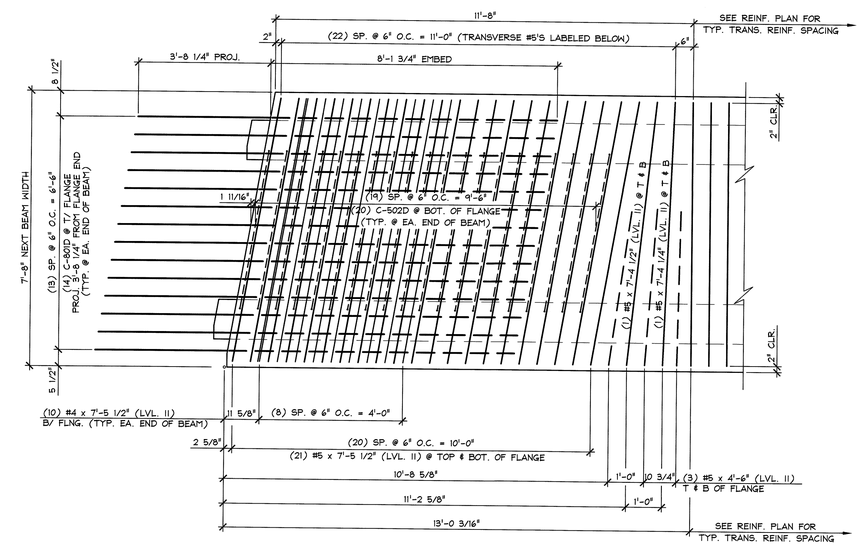


STEM SECTION

STEM ELEVATION

D NB3.1 END BLOCK STEM REINFORCING DETAILS

3/4" = 1'-0"



E NB3.1 ENLARGED TRANSVERSE REINFORCING PLAN

LONGITUDINAL REINFORCING & STEM STIRRUPS NOT SHOWN FOR CLARITY

1/2" = 1'-0"

3/11/16 ADDED THIS SHEET T.D.

APPROVAL STAMP:

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

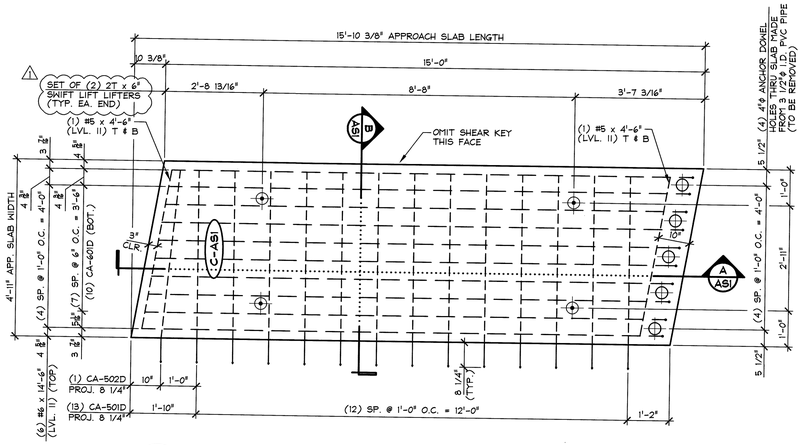
J.A. McDonald, Inc.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

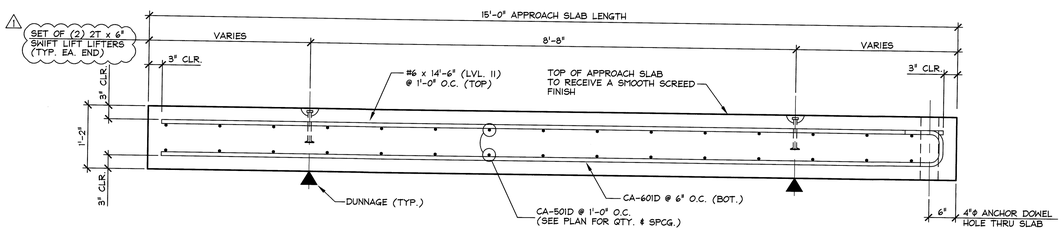
PRESTRESSED NEXT BEAM DETAILS

DATE:	JAN. 8, 2016
SCALE:	NOTED
CHKD:	DFTM: T.D.
JOB NO:	23476-015
DWG. NO:	NB3.1



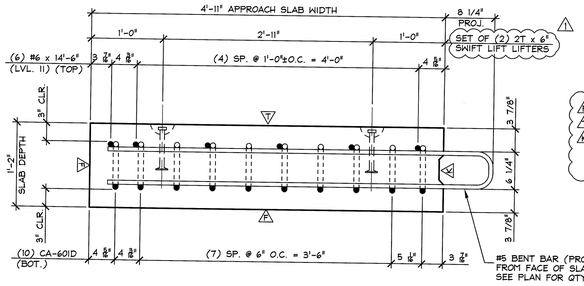
1 ASI PLAN VIEW IN FORM

1/2" = 1'-0"



A ASI LONGITUDINAL SECTION

3/4" = 1'-0"



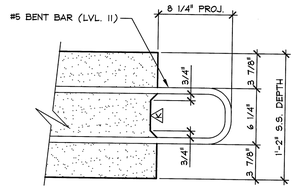
B ASI SECTION

1" = 1'-0"

△1 DENOTES FORM FINISH

△2 DENOTES SMOOTH SCREED FINISH

△3 DENOTES ROUGHENED FINISH (SAND BLAST OR RETARDER) MIN. 1/8" AMP. (REBAR SHALL BE PROTECTED FROM SAND BLAST PROCESS) SEE NOTE 9 ON SHT. #ci#



SHEAR KEY DETAIL

1 1/2" = 1'-0"

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

MARK: C-ASI	QTY.: 2	WT.: 6.45 T	VOL.: 3.19 cy

MATERIAL LIST / APPROACH SLAB

ITEM	MARK	DESCRIPTION	QTY.
1	CA-501D	#5 BENT BAR (LEVEL II, DUAL COATED)	13
2	CA-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	1
3	CA-601D	#6 BENT BAR (LEVEL II, DUAL COATED	10
4			
5			
6		#6 x 14'-6" (LEVEL II DUAL COATED)	6
7		#5 x 4'-6" (LEVEL II DUAL COATED)	4
8			
9			
10			
11			
12			
13			
14		DAYTON 2T x 6" SWIFT LIFT (DOMESTIC)	4
15			

△1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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STATE OF VERMONT AGENCY OF TRANSPORTATION
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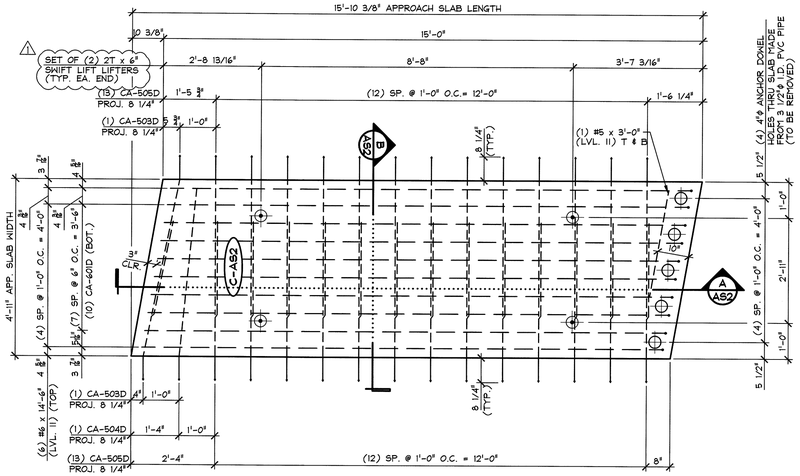
DATE: JAN. 8, 2016
SCALE: NOTED

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

CHKD: DFTM: T.D.
JOB NO: 23476-015

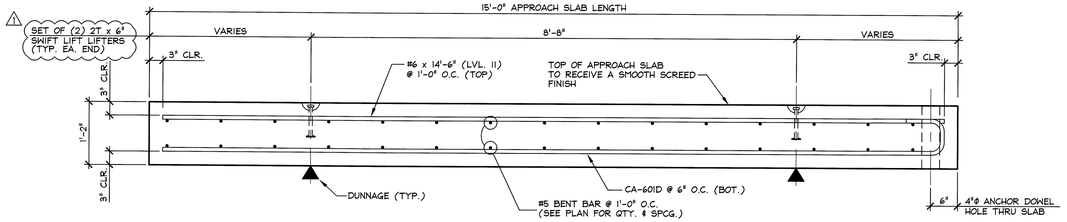
APPROACH SLAB DETAILS

DWG. NO: ASI



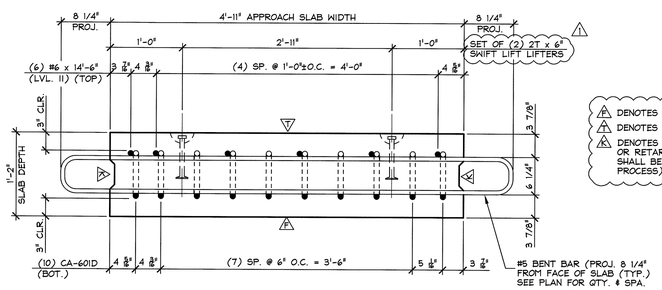
1 AS2 PLAN VIEW IN FORM

1/2" = 1'-0"



A AS2 LONGITUDINAL SECTION

3/4" = 1'-0"



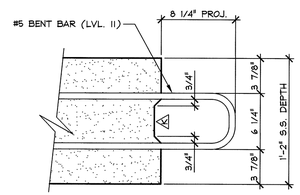
DENOTES FORM FINISH

DENOTES SMOOTH SCREED FINISH

DENOTES ROUGHENED FINISH (SAND BLAST OR RETARDER) MIN. 1/8" AMP. (REBAR SHALL BE PROTECTED FROM SAND BLAST PROCESS) SEE NOTE 9 ON SHT. 1C1"

B AS2 SECTION

1" = 1'-0"



SHEAR KEY DETAIL

1 1/2" = 1'-0"

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

3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

MARK: C-AS2	QTY.: 2	WT.: 6.45 T	VOL.: 3.19 cy

MATERIAL LIST / APPROACH SLAB

ITEM	MARK	DESCRIPTION	QTY.
1	CA-503D	#5 BENT BAR (LEVEL II, DUAL COATED)	2
2	CA-504D	#5 BENT BAR (LEVEL II, DUAL COATED)	1
3	CA-505D	#5 BENT BAR (LEVEL II, DUAL COATED)	26
4	CA-601D	#6 BENT BAR (LEVEL II, DUAL COATED	10
5			
6		#6 x 14'-6" (LEVEL II DUAL COATED)	6
7		#5 x 3'-0" (LEVEL II DUAL COATED)	2
8			
9			
10			
11			
12			
13			
14		DAYTON 2T x 6" SWIFT LIFT (DOMESTIC)	4
15			

3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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

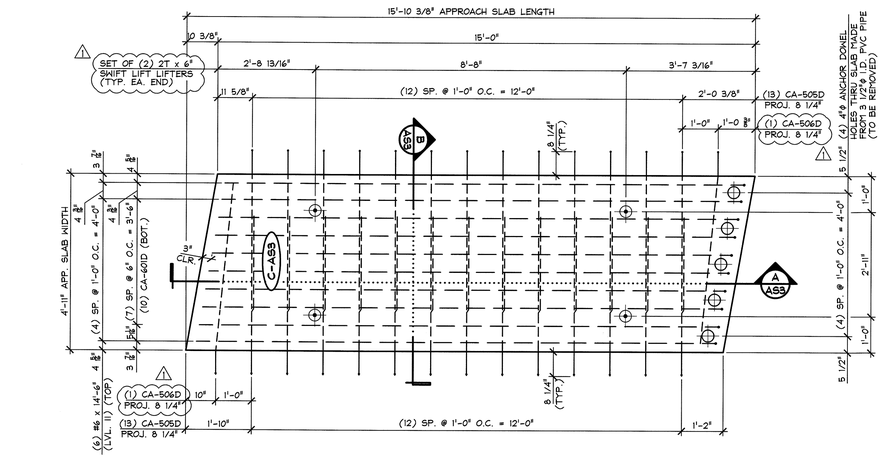
J.A. McDonald, Inc.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

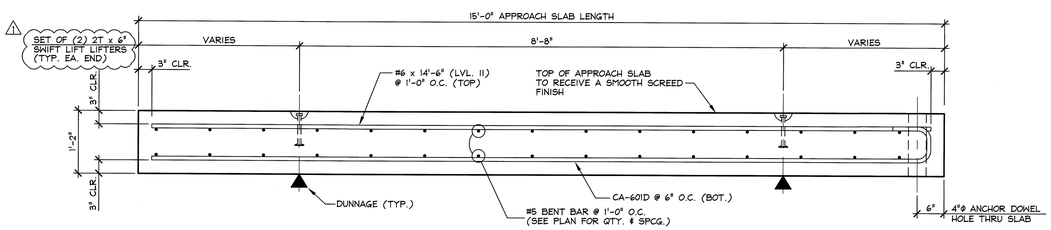
APPROACH SLAB DETAILS

DATE: JAN. 8, 2016
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23476-015
DWG. NO: AS2



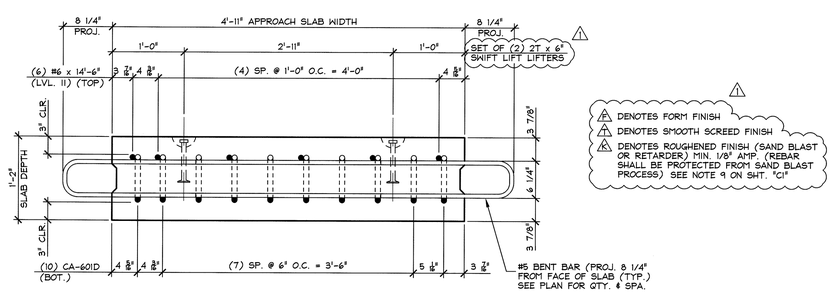
1 / AS3 PLAN VIEW IN FORM

1/2" = 1'-0"



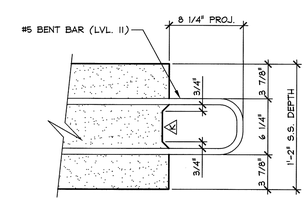
A / AS3 LONGITUDINAL SECTION

3/4" = 1'-0"



B / AS3 SECTION

1" = 1'-0"



SHEAR KEY DETAIL

1 1/2" = 1'-0"

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

MARK: C-AS3	QTY.: 2	WT.: 6.45 T	VOL.: 3.19 cy

MATERIAL LIST / APPROACH SLAB

ITEM	MARK	DESCRIPTION	QTY.
1	CA-506D	#5 BENT BAR (LEVEL II, DUAL COATED)	2
2			
3	CA-505D	#5 BENT BAR (LEVEL II, DUAL COATED)	26
4	CA-601D	#6 BENT BAR (LEVEL II, DUAL COATED	10
5			
6		#6 x 14'-6" (LEVEL II DUAL COATED)	6
7			
8			
9			
10			
11			
12			
13			
14		DAYTON 2T x 6" SWIFT LIFT (DOMESTIC)	4
15			

3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

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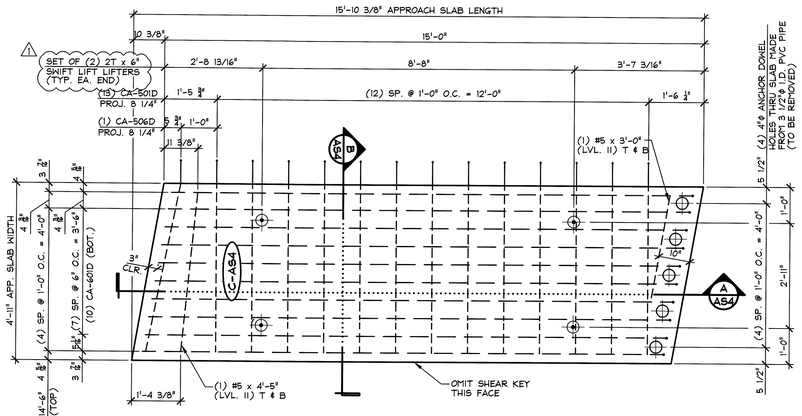
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

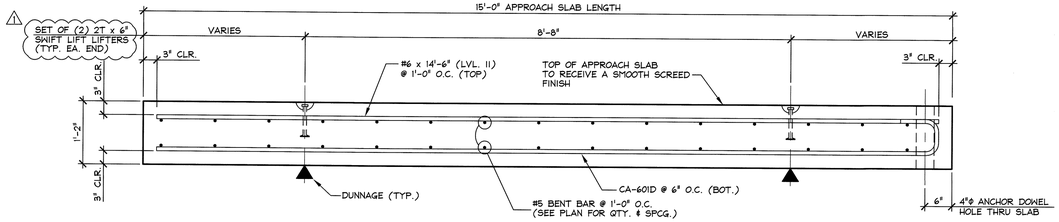
APPROACH SLAB DETAILS

DATE: JAN. 8, 2016
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23476-015
DWG. NO: AS3



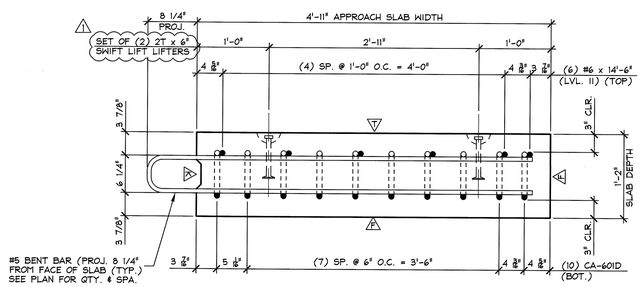
1 AS4 PLAN VIEW IN FORM

1/2" = 1'-0"



A AS4 LONGITUDINAL SECTION

3/4" = 1'-0"



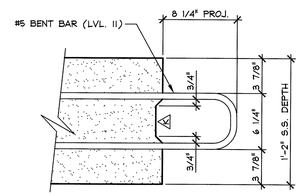
B AS4 SECTION

1" = 1'-0"

△1 DENOTES FORM FINISH

△2 DENOTES SMOOTH SCREED FINISH

△3 DENOTES ROUGHENED FINISH (SAND BLAST OR RETARDER) MIN. 1/8" AMP. (REBAR SHALL BE PROTECTED FROM SAND BLAST PROCESS) SEE NOTE 9 ON SHT. "C1"



SHEAR KEY DETAIL

1 1/2" = 1'-0"

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

MARK: C-AS4	QTY.: 2	WT.: 6.45 T	VOL.: 3.19 cy

MATERIAL LIST / APPROACH SLAB

ITEM	MARK	DESCRIPTION	QTY.
1	CA-501D	#5 BENT BAR (LEVEL II, DUAL COATED)	13
2	CA-506D	#5 BENT BAR (LEVEL II, DUAL COATED)	1
3	CA-601D	#6 BENT BAR (LEVEL II, DUAL COATED	10
4			
5			
6		#6 x 14'-6" (LEVEL II DUAL COATED)	6
7		#5 x 4'-5" (LEVEL II DUAL COATED)	2
8		#5 x 3'-0" (LEVEL II DUAL COATED)	2
9			
10			
11			
12			
13			
14		DAYTON 2T x 6" SWIFT LIFT (DOMESTIC)	4
15			

△1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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

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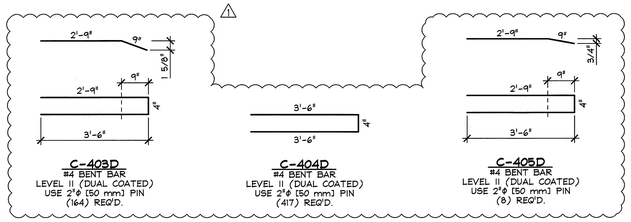
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

APPROACH SLAB DETAILS

DATE:	JAN. 8, 2016
SCALE:	NOTED
CHKD:	DFTM: T.D.
JOB NO:	23476-015
DWG. NO:	AS4

C-401D
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"Φ [50 mm] PIN
(312) REQ'D.

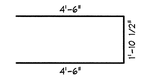
C-402D
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"Φ [50 mm] PIN
(318) REQ'D.



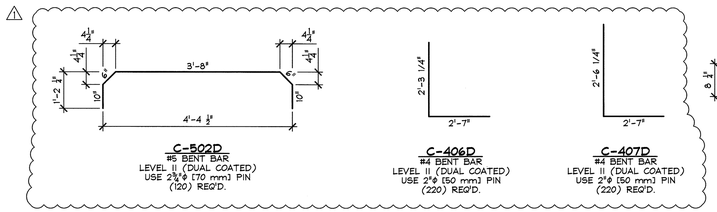
C-403D
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"Φ [50 mm] PIN
(164) REQ'D.

C-404D
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"Φ [50 mm] PIN
(417) REQ'D.

C-405D
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"Φ [50 mm] PIN
(8) REQ'D.



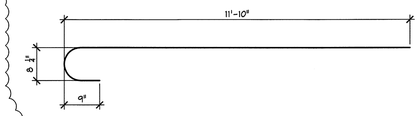
C-501D
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4"Φ [70 mm] PIN
(48) REQ'D.



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

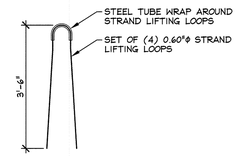
C-406D
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"Φ [50 mm] PIN
(220) REQ'D.

C-407D
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"Φ [50 mm] PIN
(220) REQ'D.



C-801D
#8 BENT BAR
LEVEL II (DUAL COATED)
USE 6"Φ [152 mm] PIN
(84) REQ'D.

PRESTRESSED NEXT BEAMS

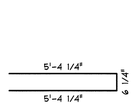


MK-CL3

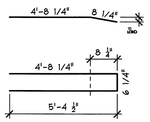
N.T.S.

MISCELLANEOUS MATERIALS

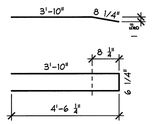
ITEM	MARK	QTY.	DESCRIPTION	REMARKS	
1	MK-CL1	38	DAYTON C-24 TYPE 4-APR DECK FORM HANGER (GALV.)	DOMESTIC ORIGIN (BUY AMERICAN)	PRESTRESSED NEXT BEAMS
2	MK-CL2	76	1/2"Φ x 3" B16 COIL LOOP INSERT (GALV.)	DOMESTIC ORIGIN (BUY AMERICAN)	
3	MK-CL3	12	SET OF (4) 0.60"Φ STRAND LIFTING LOOPS x 3'-6" LONG		
4	C-401D	312	#4 BENT BAR (LEVEL II, DUAL COATED)		
5	C-402D	324	#4 BENT BAR (LEVEL II, DUAL COATED)		
6	C-403D	125	#4 BENT BAR (LEVEL II, DUAL COATED)		
7	C-404D	417	#4 BENT BAR (LEVEL II, DUAL COATED)	+(1) SAMPLE	
8	C-405D	8	#4 BENT BAR (LEVEL II, DUAL COATED)		
9	C-406D	220	#4 BENT BAR (LEVEL II, DUAL COATED)		
10	C-407D	220	#4 BENT BAR (LEVEL II, DUAL COATED)		
11					
12	C-501D	48	#5 BENT BAR (LEVEL II, DUAL COATED)		
13	C-502D	120	#5 BENT BAR (LEVEL II, DUAL COATED)		
14					
15	C-801D	84	#8 BENT BAR (LEVEL II, DUAL COATED)		
16		2	#8 x 2'-6" (LEVEL II, DUAL COATED)	SAMPLES	
17	△1	60	#4 x 7'-5 1/2" (LEVEL II, DUAL COATED)		
18		252	#5 x 7'-5 1/2" (LEVEL II, DUAL COATED)		
19		12	#5 x 7'-4 1/2" (LEVEL II, DUAL COATED)		
20		12	#5 x 7'-4 1/4" (LEVEL II, DUAL COATED)		
21		37	#5 x 4'-6" (LEVEL II, DUAL COATED)	+(1) SAMPLE	
22		600	#5 x 7'-4" (LEVEL II, DUAL COATED)		
23		66	#5 x 40'-0" (LEVEL II, DUAL COATED)		
24		66	#5 x 36'-3" (LEVEL II, DUAL COATED)		
25					



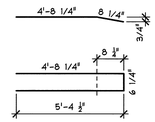
CA-501D
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4"Φ [70 mm] PIN
(52) REQ'D.



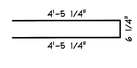
CA-502D
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4"Φ [70 mm] PIN
(2) REQ'D.



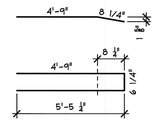
CA-503D
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4"Φ [70 mm] PIN
(8) REQ'D.



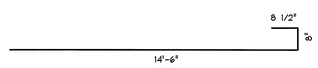
CA-504D
#5 BENT BAR
LEVEL II (DUAL COATED)
USE 2 3/4"Φ [70 mm] PIN
(2) REQ'D.



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



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



CA-601D
#6 BENT BAR
LEVEL II (DUAL COATED)
USE 3 3/4"Φ [95 mm] PIN
(80) REQ'D.

APPROACH SLABS

MISCELLANEOUS MATERIALS

ITEM	MARK	QTY.	DESCRIPTION	REMARKS	
1	CA-501D	52	#5 BENT BAR (LEVEL II, DUAL COATED)		APPROACH SLABS
2	CA-502D	2	#5 BENT BAR (LEVEL II, DUAL COATED)		
3	CA-503D	8	#5 BENT BAR (LEVEL II, DUAL COATED)		
4	CA-504D	2	#5 BENT BAR (LEVEL II, DUAL COATED)		
5	CA-505D	104	#5 BENT BAR (LEVEL II, DUAL COATED)		
6	CA-506D	6	#5 BENT BAR (LEVEL II, DUAL COATED)		
7	CA-601D	80	#6 BENT BAR (LEVEL II, DUAL COATED)		
8					
9					
10		48	#6 x 14'-6" (LEVEL II, DUAL COATED)		
11		4	#5 x 4'-5" (LEVEL II, DUAL COATED)		
12		8	#5 x 4'-6" (LEVEL II, DUAL COATED)		
13		4	#5 x 3'-0" (LEVEL II, DUAL COATED)		
14					
15		2	#6 x 2'-6" (LEVEL II, DUAL COATED)	SAMPLES	
16					
17					
18		32	DAYTON 2T x 6" SWIFT LIFT	DOMESTIC ORIGIN (BUY AMERICAN)	
19					
20					

△1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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Precast & Prestress Manufacturer
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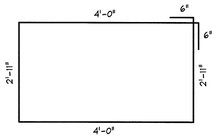
COUNTY OF RUTLAND

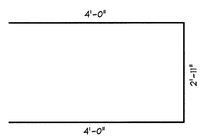
TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

MATERIALS LIST
NEXT BEAMS & APPROACH SLABS

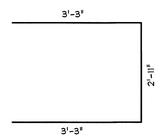
DATE:	JAN. 8, 2016
SCALE:	NOTED
CHKD:	DFTM: T.D.
JOB NO:	23476-015
DWG. NO:	M1



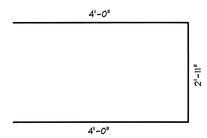
C-401
#4 BENT BAR
LEVEL I (BLACK)
USE 2"ϕ (50 mm) PIN
(40) REQ'D.



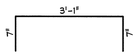
C-402
#4 BENT BAR
LEVEL I (BLACK)
USE 2"ϕ (50 mm) PIN
(21) REQ'D.



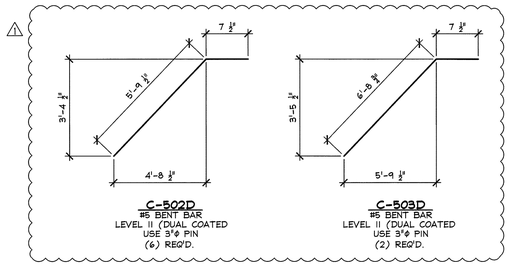
C-403D
#4 BENT BAR
LEVEL II (DUAL COATED)
USE 2"ϕ (50 mm) PIN
(4) REQ'D.



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

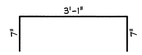


C-501
#5 BENT BAR
LEVEL I (BLACK)
USE 3"ϕ PIN
(78) REQ'D.

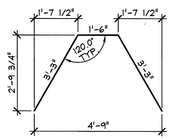


C-502D
#5 BENT BAR
LEVEL II (DUAL COATED
USE 3"ϕ PIN
(6) REQ'D.

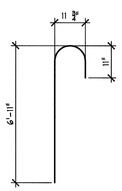
C-503D
#5 BENT BAR
LEVEL II (DUAL COATED
USE 3"ϕ PIN
(2) REQ'D.



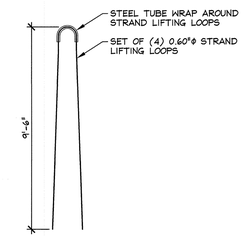
C-507D
#5 BENT BAR
LEVEL II (DUAL COATED
USE 3"ϕ PIN
(30) REQ'D.



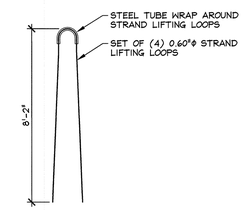
C-601
#6 BENT BAR
LEVEL I (BLACK)
USE 4"ϕ PIN
(21) REQ'D.



C-901D
#9 BENT BAR
LEVEL II (DUAL COATED)
USE 9 1/2"ϕ PIN
(56) REQ'D.



MK-CL4
N.T.S.



MK-CL5
N.T.S.

MISCELLANEOUS MATERIALS

ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1		9	DAYTON D-101-A #5 x 2'-6" (EPOXY COATED)	+(3) SAMPLES
2		6	DAYTON D-101-A #5 x 3'-8" (EPOXY COATED)	
3		6	DAYTON D-101-A #5 x 4'-10" (EPOXY COATED)	
4		2	DAYTON D-101-A #5 x 2'-11" (EPOXY COATED)	
5		2	DAYTON D-101-A #5 x 4'-4" (EPOXY COATED)	
6		2	DAYTON D-101-A #5 x 5'-8" (EPOXY COATED)	
7		12	DAYTON D-101 DOWEL-IN #5 x 2'-8" (EPOXY COATED)	
8		6	DAYTON D-101 DOWEL-IN #5 x 2'-6" (EPOXY COATED)	
9		9	DAYTON D-101 DOWEL-IN #5 x 1'-3" (EPOXY COATED)	+(3) SAMPLES
10				
11	C-401	40	#4 BENT BAR (LEVEL I)	+(1) SAMPLE
12	C-402	21	#4 BENT BAR (LEVEL I)	
13	C-403D	4	#4 BENT BAR (LEVEL II DUAL COATED)	
14	C-404D	2	#4 BENT BAR (LEVEL II DUAL COATED)	
15	C-501	78	#5 BENT BAR (LEVEL I)	
16	C-502D	6	#5 BENT BAR (LEVEL II DUAL COATED)	
17	C-503D	2	#5 BENT BAR (LEVEL II DUAL COATED)	
18	C-507D	30	#5 BENT BAR (LEVEL II DUAL COATED)	
19	C-601	21	#6 BENT BAR (LEVEL I)	+(1) SAMPLE
20	C-901D	56	#9 BENT BAR (LEVEL II, DUAL COATED)	SAMPLES TO BE SHOP CUT
21		6	#8 x 38'-6" (LEVEL I)	
22		7	#5 x 38'-6" (LEVEL I)	
23		6	#8 x 39'-6" (LEVEL I)	
24		7	#5 x 39'-6" (LEVEL I)	
25		4	#5 x 13'-8" (LEVEL I)	
26	1	24	#5 x 8'-10" (LEVEL I DUAL COATED)	
27		6	#5 x 8'-6" (LEVEL II DUAL COATED)	
28		6	#5 x 7'-11" (LEVEL II DUAL COATED)	
29		6	#5 x 7'-4" (LEVEL II DUAL COATED)	
30		6	#5 x 6'-9" (LEVEL II DUAL COATED)	
31		6	#5 x 6'-2" (LEVEL II DUAL COATED)	
32		6	#5 x 5'-7" (LEVEL II DUAL COATED)	
33		18	#5 x 5'-3 1/4" (LEVEL I)	
34		49	#5 x 5'-1" (LEVEL I)	+(1) SAMPLE
35		48	#5 x 4'-6" (LEVEL II, DUAL COATED)	
36		2	#5 x 8'-7" (LEVEL II DUAL COATED)	
37		2	#5 x 8'-1" (LEVEL II DUAL COATED)	
38		2	#5 x 7'-7" (LEVEL II DUAL COATED)	
39		2	#5 x 7'-1" (LEVEL II DUAL COATED)	
40		2	#5 x 6'-7" (LEVEL II DUAL COATED)	
41		2	#5 x 6'-1" (LEVEL II DUAL COATED)	
42		2	#5 x 5'-9" (LEVEL II DUAL COATED)	
43		2	#5 x 5'-5" (LEVEL II DUAL COATED)	
44		2	#9 x 2'-6" (LEVEL II DUAL COATED)	SAMPLES
45		1	2'-0"ϕ x 5'-7 5/16" CORRUGATED STEEL PIPE (GALV.)	DOMESTIC ORIGIN (BY AMERICAN)
46		1	2'-0"ϕ x 5'-8 5/8" CORRUGATED STEEL PIPE (GALV.)	DOMESTIC ORIGIN (BY AMERICAN)
47		1	2'-0"ϕ x 5'-8 3/4" CORRUGATED STEEL PIPE (GALV.)	DOMESTIC ORIGIN (BY AMERICAN)
48		1	2'-0"ϕ x 5'-7 1/8" CORRUGATED STEEL PIPE (GALV.)	DOMESTIC ORIGIN (BY AMERICAN)
49		1	2'-0"ϕ x 5'-7 5/16" CORRUGATED STEEL PIPE (GALV.)	DOMESTIC ORIGIN (BY AMERICAN)
50		1	2'-0"ϕ x 5'-8 5/8" CORRUGATED STEEL PIPE (GALV.)	DOMESTIC ORIGIN (BY AMERICAN)
51		2	2'-0"ϕ x 5'-9" CORRUGATED STEEL PIPE (GALV.)	DOMESTIC ORIGIN (BY AMERICAN)
52		1	2'-0"ϕ x 5'-8 3/4" CORRUGATED STEEL PIPE (GALV.)	DOMESTIC ORIGIN (BY AMERICAN)
53		1	2'-0"ϕ x 5'-7 1/8" CORRUGATED STEEL PIPE (GALV.)	DOMESTIC ORIGIN (BY AMERICAN)
54	MK-CL4	8	SET OF (4) 0.60"ϕ STRAND LIFTING LOOPS	
55	MK-CL5	4	SET OF (4) 0.60"ϕ STRAND LIFTING LOOPS	

PRECAST ABUTMENTS

1 3/11/16 REVISED AS PER ENGINEERS COMM. T.D.

APPROVAL STAMP:

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

J.A. McDonald, Inc.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF RUTLAND

TOWN OF CLARENDON
WALKER MOUNTAIN ROAD, TH #3, RURAL COLLECTOR
BRIDGE NO.: 11 PROJECT NO.: BRO 1443(48)

MATERIALS LIST
ABUTMENTS

DATE: JAN. 8, 2016
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23476-015
DWG. NO: M2