

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

ABUTMENT & APPROACH SLAB GENERAL NOTES

- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 5,000 PSI.
- MIN. CONCRETE STRENGTH AT STRIPPING SHALL BE 3,500 PSI (UNLESS NOTED OTHERWISE).
- REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) LEVEL II (DUAL COATED) (ASTM A-1055) OR LEVEL I (BLACK STEEL), (AS NOTED ON SHOP DRAWINGS).
- THE TOP OF PRECAST CONCRETE UNITS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
- SHEAR KEY SURFACES SHALL BE SAND BLASTED CLEAN. REINFORCING STEEL PROJECTING FROM APPROACH SLABS WILL BE COVERED DURING SAND BLASTING SO THAT COATING IS NOT DAMAGED.
- 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.
- ABUTMENTS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. THE PINS OF THE SHACKLES SHALL BE PLACED THROUGH THE LIFTING LOOPS. SEE DETAIL, SHEET #4. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. ABUTMENTS SHALL BE STORED & TRANSPORTED WITH TIMBER SUPPORTS AT 5th POINTS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC. ONCE ABUTMENTS HAVE BEEN ERECTED, CUT LIFTING LOOPS AT RECESS, EPOXY PAINT AND PATCH AS REQUIRED (BY OTHERS).
- MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P510.02 AND P510.05 RESPECTIVELY.
DESIGN MIX:
APPROACH SLABS: J.P.C. BRIDGE MIX #446MSCC
ABUTMENTS: J.P.C. BRIDGE MIX #446MSCC
- 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. CURING SHALL CONTINUE UNTIL STRIPPING STRENGTH HAS BEEN ACHIEVED.
- A TEMPLATE SHALL BE USED TO LAYOUT THE ANCHOR BOLT DUCTS IN THE ABUTMENTS. THE SAME TEMPLATE SHALL BE USED TO LAYOUT THE ANCHOR BOLT DUCTS IN THE SOLID SLABS (REQUIRED PER NOTE 7, SHEET 27/69 OF CONTRACT PLANS). A TEMPLATE SHALL BE USED TO LAYOUT THE #6 APPROACH SLAB DONNELS IN THE ABUTMENTS. THE SAME TEMPLATE SHALL BE USED TO LAYOUT THE DONNEL DUCTS IN THE APPROACH SLABS (REQUIRED PER NOTE 2, SHEET 28/64 OF CONTRACT PLANS). ALL TEMPLATES SHALL BE CLEARLY MARKED TO IDENTIFY LOCATIONS AND ORIENTATION.

SOLID SLAB GENERAL NOTES

- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 8,000 PSI.
- MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 6,000 PSI.
- REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) LEVEL II (DUAL COATED) (ASTM A-1055).
- PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0.60" x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
- PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION OF 44.0 K AFTER ACCOUNTING FOR CHUCK SLIPPAGE. TENSION SHALL BE VERIFIED BY MEASURING STRAND ELONGATION (SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, THIS SHEET).
- ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF SOLID SLABS USING AN ABRASIVE WHEEL (UNLESS NOTED OTHERWISE) AND TWO PART EPOXY PAINTED.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" (UNLESS NOTED OTHERWISE).
- THE TOP OF SLABS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
- SHEAR KEY SURFACES SHALL BE SAND BLASTED CLEAN.
- SLABS SHALL BE HANDLED AND ERECTED USING THE LIFTING INSERTS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL FORCES ARE APPLIED TO EACH OF THE TWO LIFTING INSERTS AT EACH END OF THE SLAB. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. SLABS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 2'-0" OF THE SLAB ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
- MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P510.02 AND P510.05 RESPECTIVELY.
DESIGN MIX: J.P.C. BRIDGE MIX #426M1 (NO DCI)
- QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
- CURING METHOD: AS SOON AS THE TOP OF SLAB IS FINISHED, A COVER OF RIGID INSULATION AND POLY WILL BE PLACED OVER THE UNITS. 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 ACCELERATE EARLY AGE STRENGTH GAIN, LIVE STEAM MAY BE UTILIZED. ACCELERATED CURING PER PCI M116 4.19 REQUIREMENTS. CURING SHALL CONTINUE UNTIL RELEASE STRENGTH HAS BEEN ACHIEVED.
- TRANSVERSE POST-TENSIONING SEQUENCE:
 - ERECT SOLID SLABS, AND POST-TENSION TENDONS TO APPROXIMATELY 3,000 PSI.
 - GROUT SHEAR KEYS.
 - ONCE SHEAR KEY GROUT HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 1,500 PSI; POST TENSION TENDONS TO 47,000 LBS.
 - EXCESS TENDON LENGTH SHALL BE CUT USING AN ABRASIVE WHEEL.
 - APPLY TWO PART EPOXY TO EXPOSED TENDON AND CHUCK (BY OTHERS).
- 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.
- A TEMPLATE SHALL BE USED TO LAYOUT THE ANCHOR BOLT DUCTS IN THE ABUTMENTS. THE SAME TEMPLATE SHALL BE USED TO LAYOUT THE ANCHOR BOLT DUCTS IN THE SOLID SLABS (REQUIRED PER NOTE 7, SHEET 27/69 OF CONTRACT PLANS). A TEMPLATE SHALL BE USED TO LAYOUT THE #6 APPROACH SLAB DONNELS IN THE ABUTMENTS. THE SAME TEMPLATE SHALL BE USED TO LAYOUT THE DONNEL DUCTS IN THE APPROACH SLABS (REQUIRED PER NOTE 2, SHEET 28/64 OF CONTRACT PLANS). ALL TEMPLATES SHALL BE CLEARLY MARKED TO IDENTIFY LOCATIONS AND ORIENTATION.

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

SIZE & GRADE: 0.60" x 270 KSI
 AREA: 0.217 in²
 TENSION: 44,000 LB. EACH STRAND
 GRIP-TO-GRIP: 252'-0" = 252.00'
 E_s = 28,600,000 PSI (ASSUMED FOR THESE CALCULATIONS; VALUE TO BE OBTAINED FOR STRAND SPOOL ACTUALLY USED)

EXAMPLE:

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

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

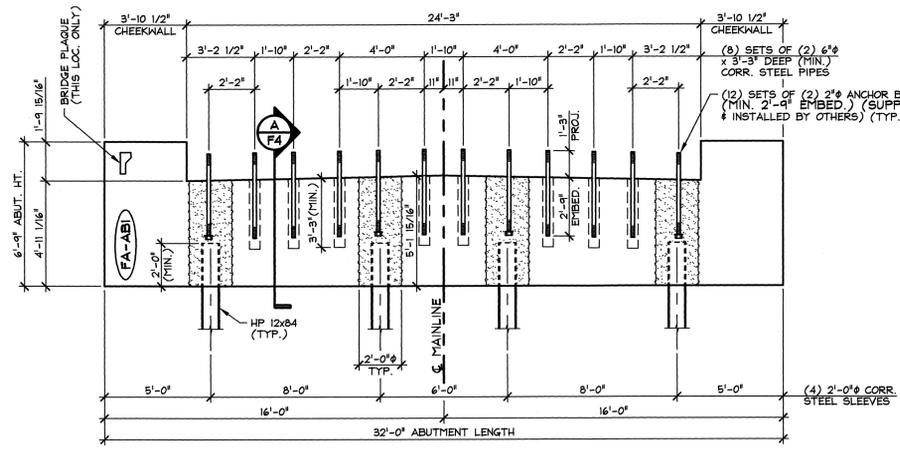
EXTRA FORCE REQUIRED TO COMPENSATE FOR 1/2" CHUCK SLIPPAGE:
 $\Delta P = \frac{0.5 \times 41,000}{19.977} = 1,026$ LBS.

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

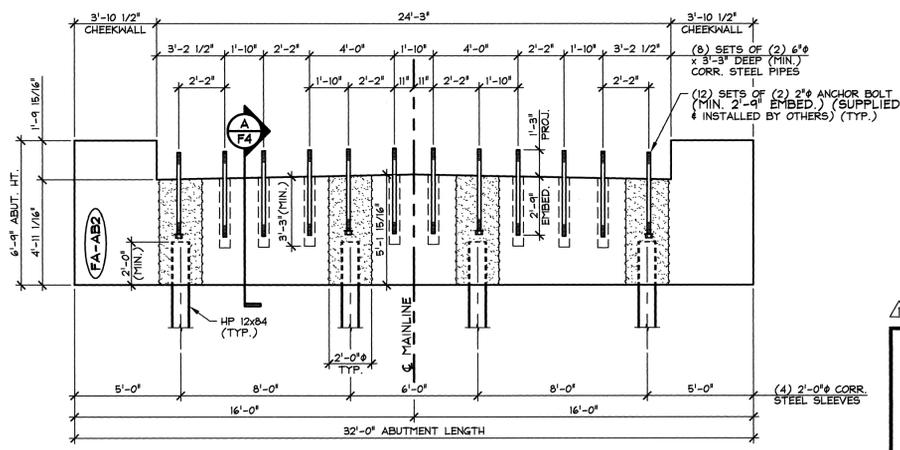
STRAND TENSIONING PROCEDURE:

- PULL EACH STRAND INITIALLY TO 3,000+ LBS. AND MARK STRAND.
 - THEN PULL EACH STRAND TO A TOTAL TENSION OF 45,026+ LBS. AND MEASURE ELONGATION AFTER SEATING. IT MUST BE BETWEEN 19" AND 21".
- *NOTE: FORCES READ ON STRESSING JACK GAUGES MUST BE MADE TO CORRESPOND TO ABOVE VALUES BASED ON CALIBRATION DATA FOR SPECIFIC JACK USED.

DESIGN LIVE LOAD: HL-93



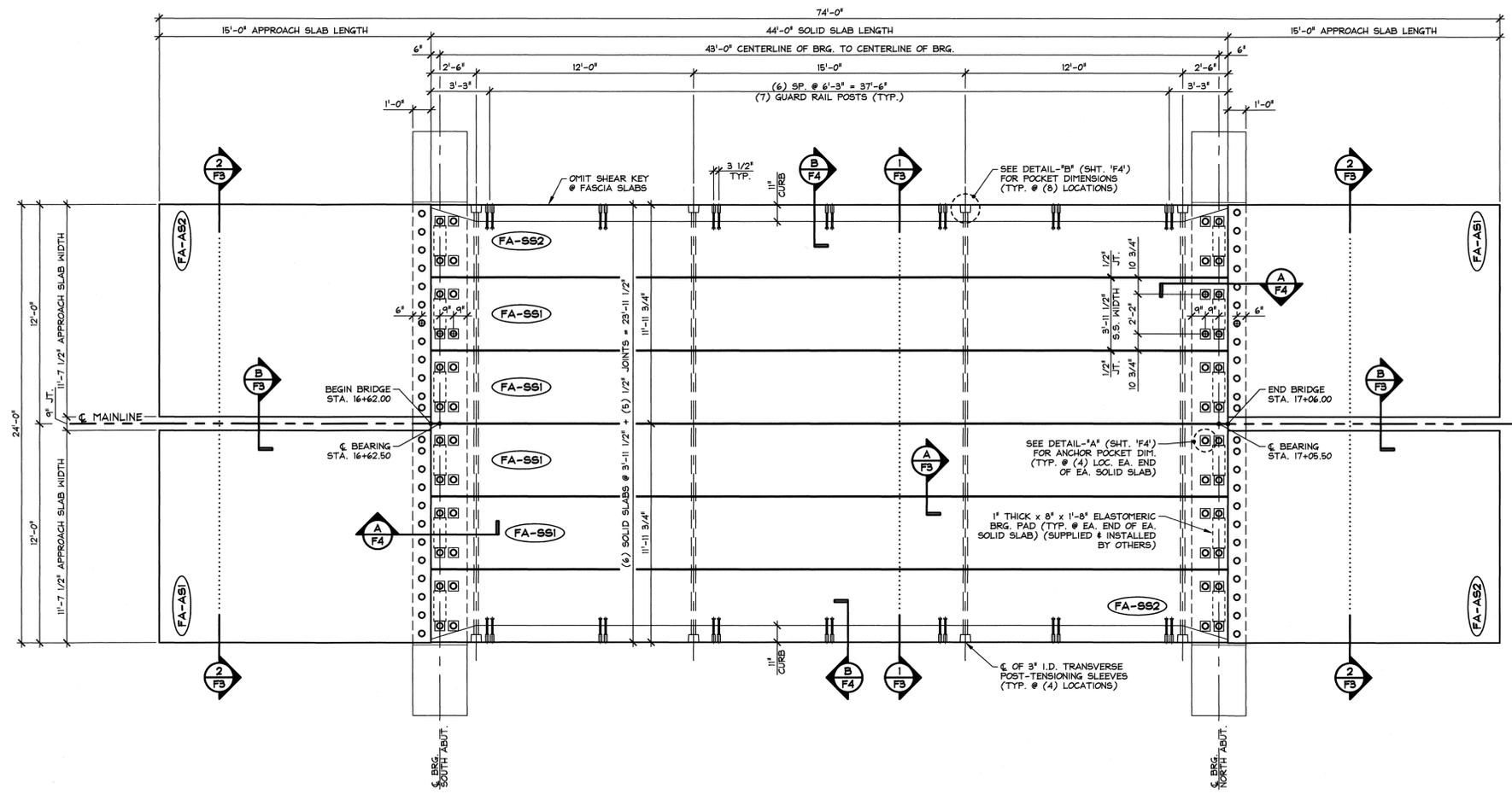
2 SOUTH ABUTMENT ELEVATION
1/4" = 1'-0"



3 NORTH ABUTMENT ELEVATION
1/4" = 1'-0"

2-10-15 REVISED PER VT AOT COMMENTS

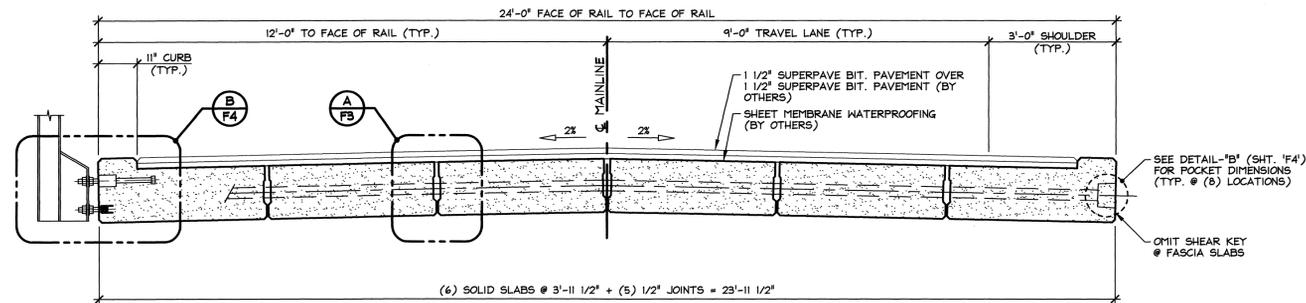
| | | |
|---|---|--|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 OSE STR. MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9810 | A.L. St. ONGE CONTRACTOR MONTGOMERY, VERMONT |
| STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | | DATE: NOV. 10, 2014 SCALE: NOTED |
| TOWN OF FAIRFIELD SOUTH ROAD, FAS 0281 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 14 PROJECT NO.: BRP 0281(25) | | CHKD: B.C. DFTM: B.L. JOB NO: 23446-014 |
| PRECAST ABUTMENT LAYOUT & ELEVATION | | DWG. NO: F1 |



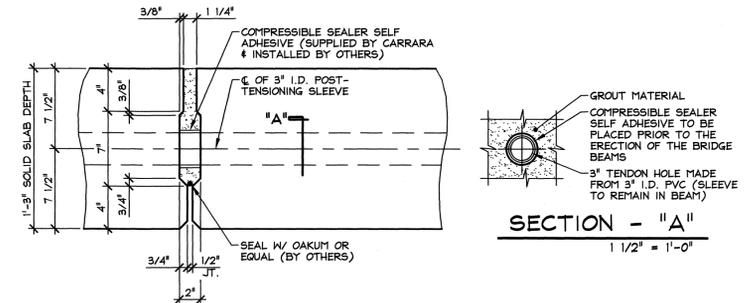
1 PRESTRESSED SOLID SLAB & PRECAST APPROACH SLAB LAYOUT
 F2 1/4" = 1'-0"

2-10-15 REVISED PER VT AOT COMMENTS

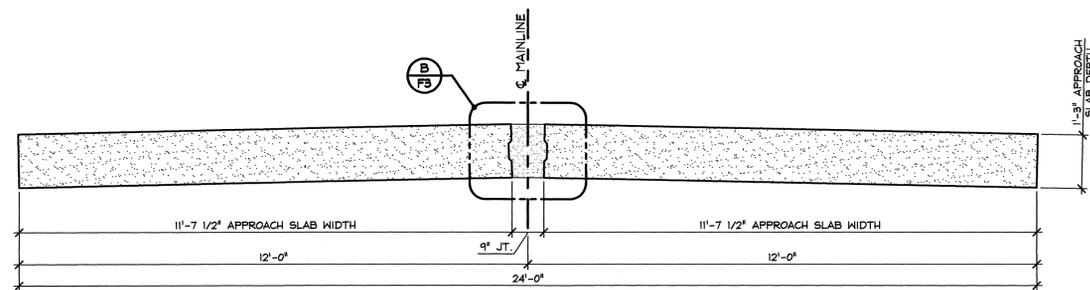
| | | | | |
|-----------------|---|--|--|-------------------|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 GAGE ST., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010 | | A.L. St. ONGE CONTRACTOR MONTGOMERY, VERMONT | |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | | DATE: NOV. 10, 2014 | SCALE: NOTED |
| | TOWN OF FAIRFIELD SOUTH ROAD, FAS 0281 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 14 PROJECT NO.: BRF 0281(25) | | CHKD: B.C. DFTM: B.L. | JOB NO: 23446-014 |
| | PRESTRESSED SOLID SLAB & PRECAST APPROACH SLAB LAYOUT | | DWG. NO: | F2 |



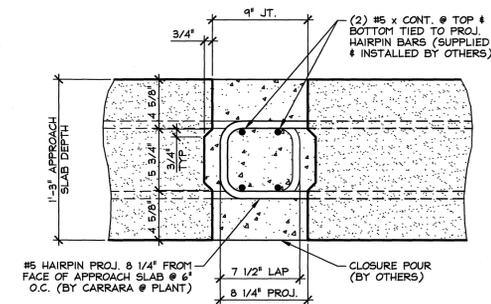
1
F3 PRESTRESSED SOLID SLAB TRANSVERSE SECTION
1/2" = 1'-0"



A
F3 SHEAR KEY SECTION @
P.T. SLEEVE 1/2" = 1'-0"



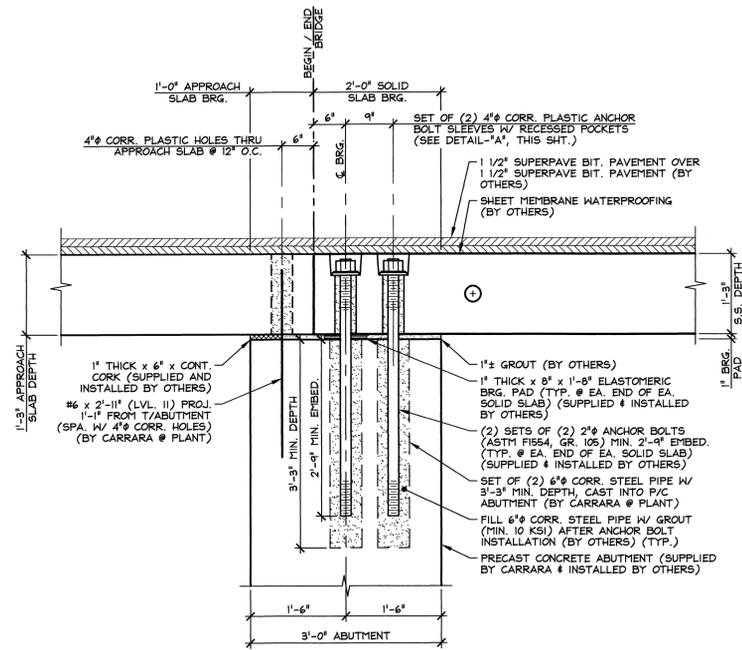
2
F3 PRECAST APPROACH SLAB TRANSVERSE SECTION
1/2" = 1'-0"



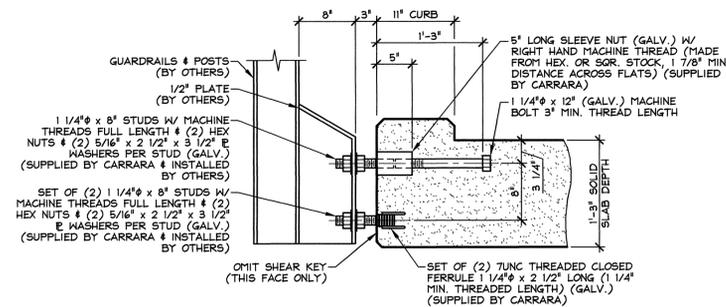
B
F3 SHEAR KEY SECTION @
APPROACH SLABS 1/2" = 1'-0"

2-10-15 REVISED PER VT AOT COMMENTS

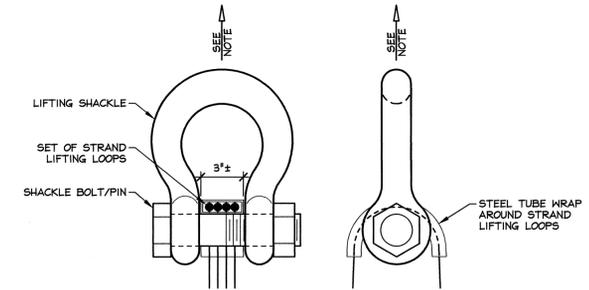
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|-----------------|---|--|--|-------------------|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CARR ST., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010 | | A.L. ST. ONGE CONTRACTOR MONTMERY, VERMONT | |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | | DATE: NOV. 10, 2014 | SCALE: NOTED |
| | TOWN OF FAIRFIELD SOUTH ROAD, FAS 0281 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 14 PROJECT NO.: BRF 0281(25) | | CHKD: B.C. DFTM: B.L. | JOB NO: 23446-014 |
| | TRANSVERSE SECTIONS | | DWG. NO: F3 | |



A BEARING SECTION
 F4 3/4" = 1'-0"

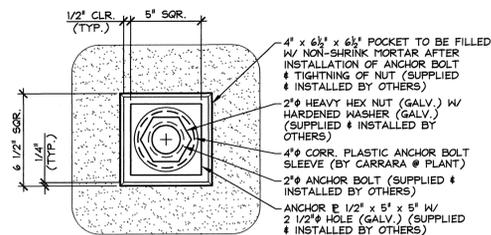


B GUARDRAIL ANCHORAGE SECTION
 F4 1" = 1'-0"

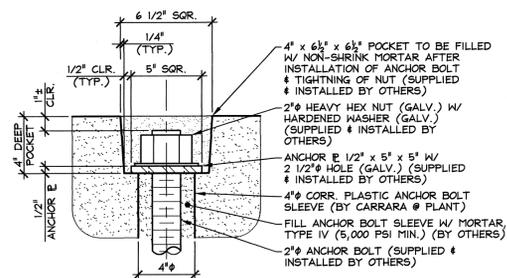


NOTE: ABUTMENTS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL FORCES ARE APPLIED TO EACH SET OF LIFTING LOOPS AT EACH END OF THE SLAB. SHACKLE BOLT/PIN SHALL BE PLACED UNDER LIFT LOOPS AS SHOWN. DESIGN AND CONFIGURATION OF RIGGING BY PURCHASER.

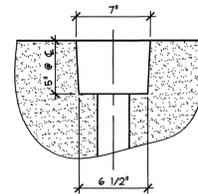
LIFTING SHACKLE DETAILS
 N.T.S.



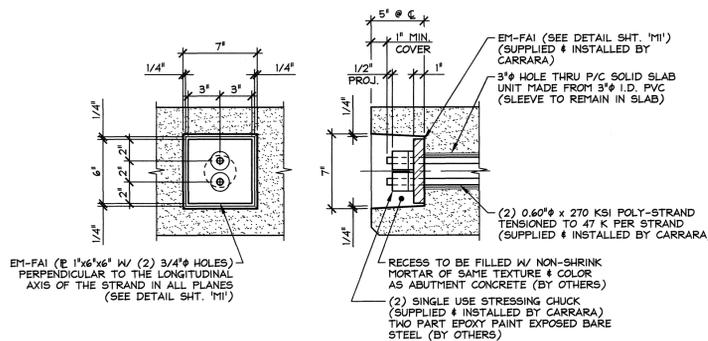
PLAN VIEW



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



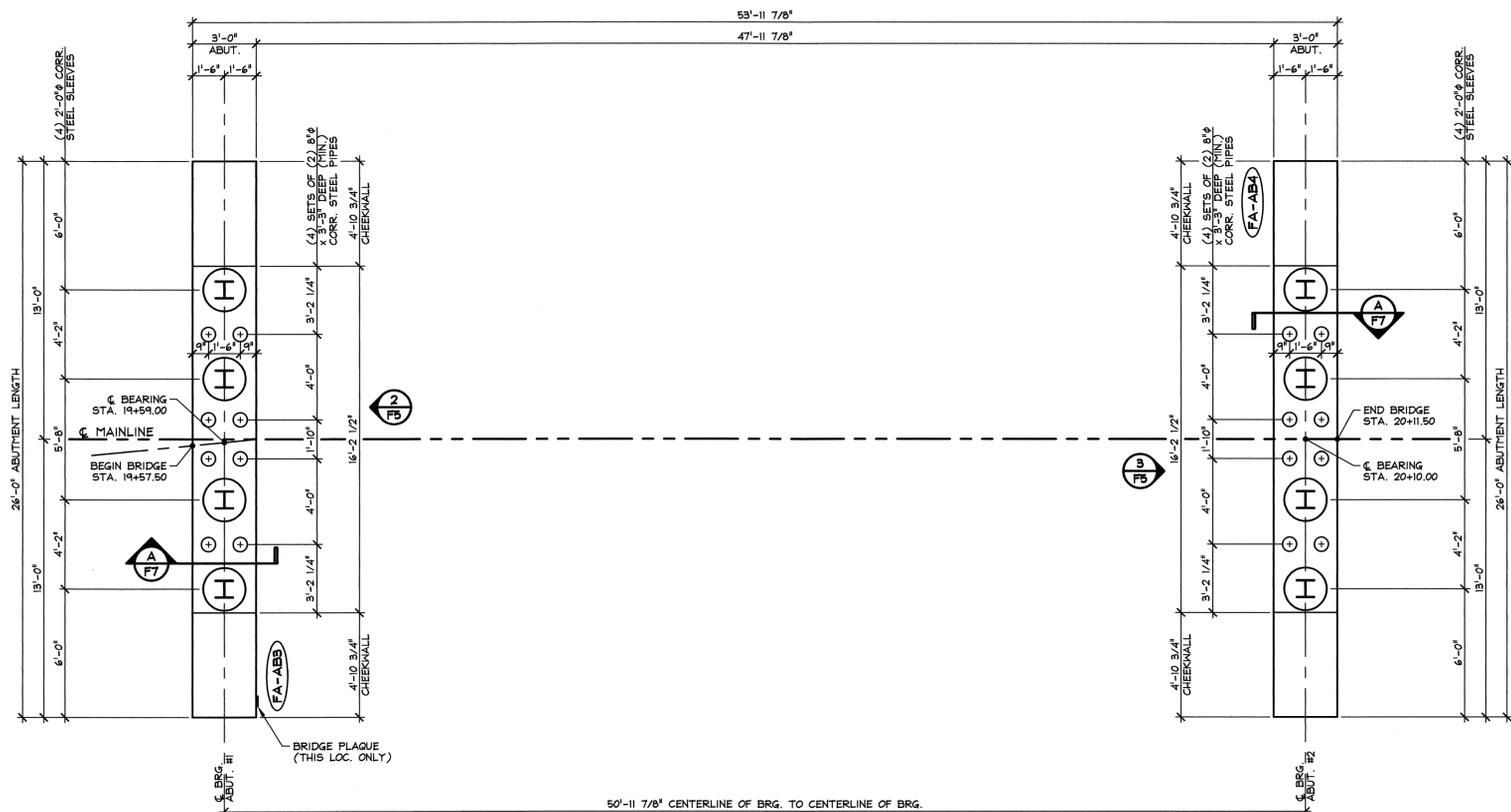
PLAN OF POCKET



FASCIA ELEVATION SECTION AT CENTERLINE DETAIL - "B"
 1 1/2" = 1'-0"

2-10-15 REVISED PER VT AOT COMMENTS

| | | | | |
|-----------------|---|--|--|-------------------|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE ST., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010 | | A.L. St. ONGE CONTRACTOR MONTMERY, VERMONT | |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | | DATE: NOV. 10, 2014 | SCALE: NOTED |
| | TOWN OF FAIRFIELD SOUTH ROAD, FAS 0281 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 14 PROJECT NO.: BRF 0281(25) | | CHKD: B.C. DFTM: B.L. | JOB NO: 23446-014 |
| | SECTIONS & DETAILS | | DWG. NO: | F4 |



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

- ### ABUTMENT GENERAL NOTES
- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 5,000 PSI.
 - MIN. CONCRETE STRENGTH AT STRIPPING SHALL BE 3,500 PSI (UNLESS NOTED OTHERWISE).
 - REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) LEVEL 1 (EPOXY COATED) (ASTM A-775) (AS NOTED ON SHOP DRAWINGS).
 - THE TOP OF ABUTMENTS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
 - ABUTMENTS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. THE PINS OF THE SHACKLES SHALL BE PLACED THROUGH THE LIFTING LOOPS. SEE DETAIL, SHEET 'F7'. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. ABUTMENTS SHALL BE STORED & TRANSPORTED WITH TIMBER SUPPORTS AT 5th POINTS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC. ONCE ABUTMENTS HAVE BEEN ERECTED, CUT LIFTING LOOPS AT RECESS, EPOXY PAINT AND PATCH AS REQUIRED (BY OTHERS).
 - MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. F510.02 AND F510.05 RESPECTIVELY.
 DESIGN MIX:
 ABUTMENTS: J.P.C. BRIDGE MIX #445MSCC
 - QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
 - CURING METHOD: AS SOON AS THE TOP OF PRECAST CONCRETE UNITS ARE FINISHED, A COVER OF POLY WILL BE PLACED OVER THE UNIT. NATURAL CURE WITH NO EXTERNAL HEAT APPLIED. CURING SHALL CONTINUE UNTIL STRIPPING STRENGTH HAS BEEN ACHIEVED.
 - A TEMPLATE SHALL BE USED TO LAYOUT THE ANCHOR BOLTS SLEEVES IN ABUTMENTS. THE SAME TEMPLATE SHALL BE USED TO LAYOUT THE ANCHOR BOLT SLEEVES IN THE SOLID SLABS (REQUIRED PER NOTE 7, SHEET 5A/6A OF CONTRACT PLANS). ALL TEMPLATES SHALL BE CLEARLY MARKED TO IDENTIFY LOCATIONS AND ORIENTATION.

- ### SOLID SLAB GENERAL NOTES
- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 8,000 PSI.
 - MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 6,000 PSI.
 - REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (UNLESS NOTED OTHERWISE) (AASHTO M31) LEVEL 1 (EPOXY COATED) (ASTM A-775).
 - PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0.60" x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
 - PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION OF 44.0 K AFTER ACCOUNTING FOR CHUCK SLIPPAGE. TENSION SHALL BE VERIFIED BY MEASURING STRAND ELONGATION. (SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, THIS SHEET.)
 - ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF SOLID SLABS USING AN ABRASIVE WHEEL (UNLESS NOTED OTHERWISE) AND TWO PART EPOXY PAINTED.
 - ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" (UNLESS NOTED OTHERWISE).
 - THE TOP OF SLABS SHALL RECEIVE A TURF DRAG FINISH AS SPECIFIED IN 501.16(4)(2) (UNLESS NOTED OTHERWISE).
 - SHEAR KEY SURFACES SHALL BE SAND BLASTED CLEAN.
 - SLABS SHALL BE HANDLED AND ERECTED USING THE LIFTING INSERTS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL FORCES ARE APPLIED TO EACH OF THE TWO LIFTING INSERTS AT EACH END OF THE SLAB. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. SLABS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 2'-0" OF THE SLAB ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
 - MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. F510.02 AND F510.05 RESPECTIVELY.
 DESIGN MIX: J.P.C. BRIDGE MIX #426M1 (NO DCL)
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 - CURING METHOD: AS SOON AS THE TOP OF SLAB IS FINISHED, A COVER OF RIGID INSULATION AND POLY WILL BE PLACED OVER THE UNITS. 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 ACCELERATE EARLY AGE STRENGTH GAIN, LIVE STEAM MAY BE UTILIZED. ACCELERATED CURING PER PCI MNL 116 4.14 REQUIREMENTS. CURING SHALL CONTINUE UNTIL RELEASE STRENGTH HAS BEEN ACHIEVED.
 - TRANSVERSE POST-TENSIONING SEQUENCE:
 - ERECT SOLID SLABS, AND POST-TENSION TENDONS TO APPROXIMATELY 3,000 PSI.
 - GROUT SHEAR KEYS.
 - ONCE SHEAR KEY GROUT HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 1,500 PSI; POST TENSION TENDONS TO 47,000 LBS.
 - EXCESS TENDON LENGTH SHALL BE CUT USING AN ABRASIVE WHEEL.
 - APPLY TWO PART EPOXY TO EXPOSED TENDON AND CHUCK.
 - 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.
 - A TEMPLATE SHALL BE USED TO LAYOUT THE ANCHOR BOLTS SLEEVES IN ABUTMENTS. THE SAME TEMPLATE SHALL BE USED TO LAYOUT THE ANCHOR BOLT SLEEVES IN THE SOLID SLABS (REQUIRED PER NOTE 7, SHEET 5A/6A OF CONTRACT PLANS). ALL TEMPLATES SHALL BE CLEARLY MARKED TO IDENTIFY LOCATIONS AND ORIENTATION.

EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING

(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE: 0.60" x 270 KSI
 AREA: 0.217 IN²
 TENSION: 44,000 LB. EACH STRAND
 GRIP-TO-GRIP: 252'-0" = 252.00'
 Es = 28,600,000 PSI (ASSUMED FOR THESE CALCULATIONS; VALUE TO BE OBTAINED FOR STRAND SPOOL ACTUALLY USED)

EXAMPLE:

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

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

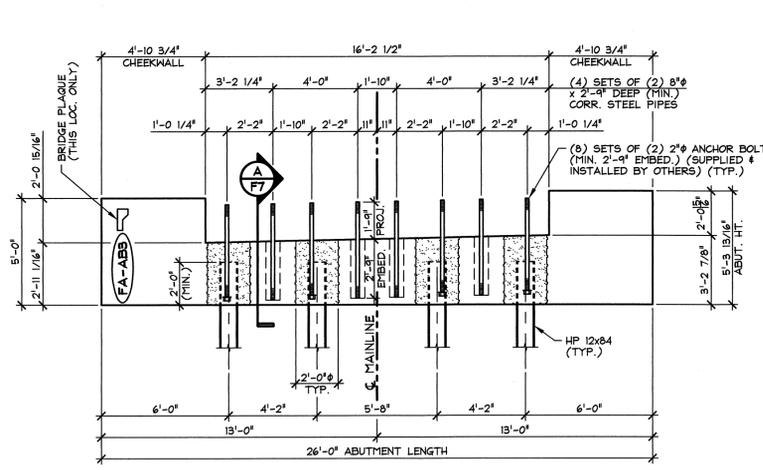
EXTRA FORCE REQUIRED TO COMPENSATE FOR 1/2" CHUCK SLIPPAGE:

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

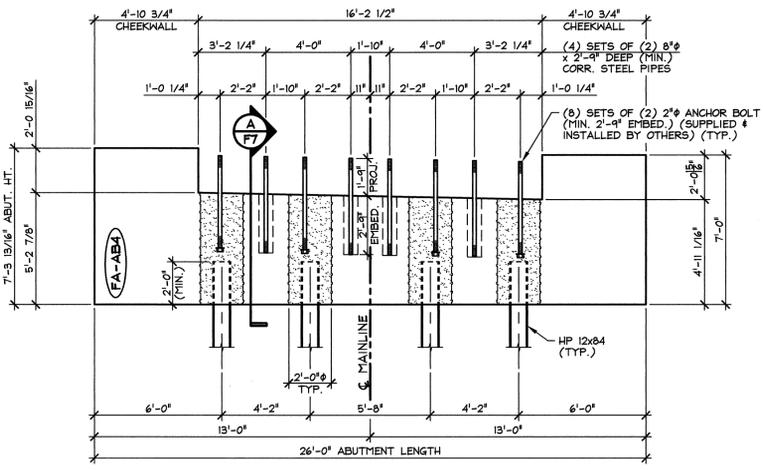
TOTAL TENSIONING FORCE = 44,000 + 1,026 = 45,026 LBS.

- ### STRAND TENSIONING PROCEDURE:
- PULL EACH STRAND INITIALLY TO 3,000+ LBS. AND MARK STRAND.
 - THEN PULL EACH STRAND TO A TOTAL TENSION OF 45,026+ LBS. AND MEASURE ELONGATION AFTER SEATING. IT MUST BE BETWEEN 19" AND 21".
- *NOTE: FORCES READ ON STRESSING JACK GAUGES MUST BE MADE TO CORRESPOND TO ABOVE VALUES BASED ON CALIBRATION DATA FOR SPECIFIC JACK USED.

DESIGN LIVE LOAD: HL-93



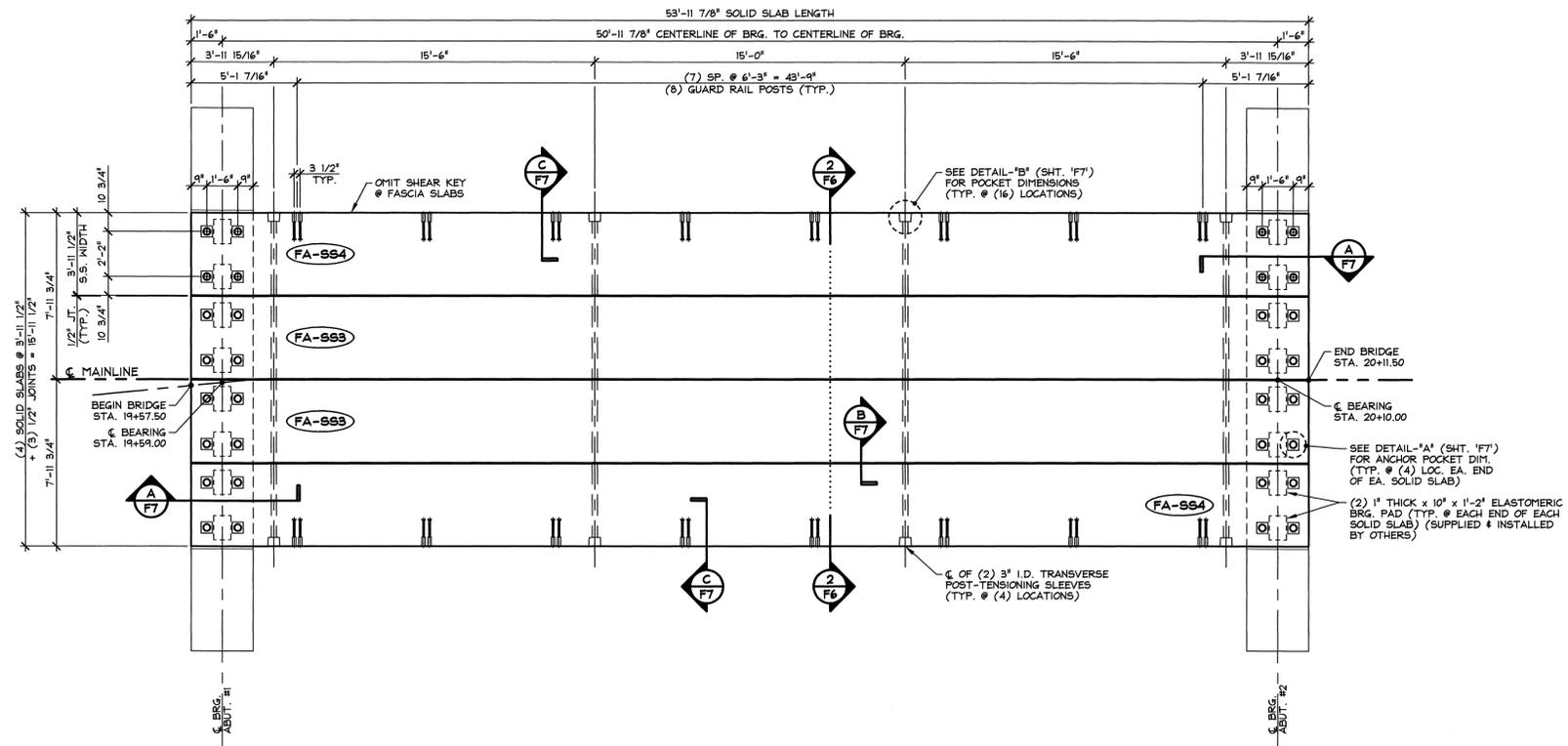
2 ABUTMENT #1 ELEVATION
 1/4" = 1'-0"



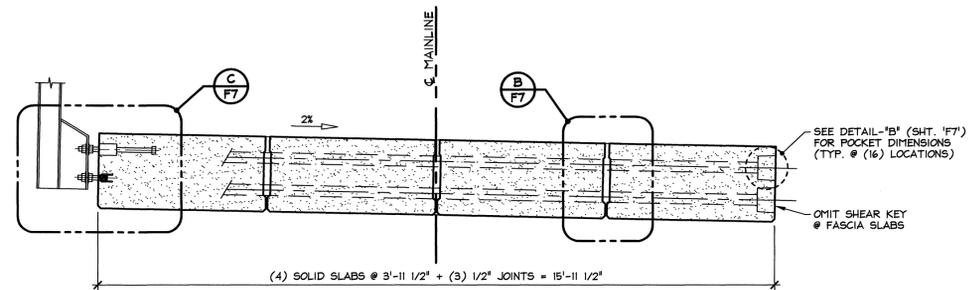
3 ABUTMENT #2 ELEVATION
 1/4" = 1'-0"

2-10-15 REVISED PER VT AOT COMMENTS

| | | |
|--|---|--|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 GSE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010 | A.L. St. ONGE CONTRACTOR MONTMERY, VERMONT |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | DATE: NOV. 10, 2014 SCALE: NOTED |
| TOWN OF FAIRFIELD ELM BROOK ROAD, TOWN HIGHWAY 47 (CLASS B) BRIDGE NO.: 46 PROJECT NO.: BRO 1448(41) | | CHKD: B.C. DFTM: B.L. JOB NO: 23446-014 |
| PRECAST ABUTMENT LAYOUT & ELEVATIONS | | DWG. NO: F5 |



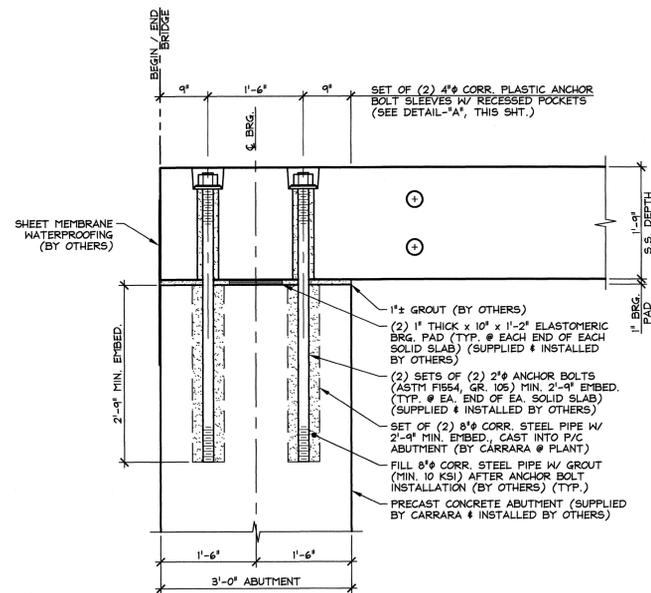
1 PRESTRESSED SOLID SLAB LAYOUT
 F6 1/4" = 1'-0"



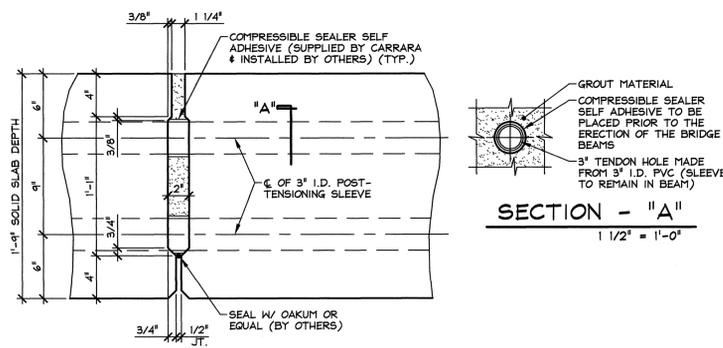
2 PRESTRESSED SOLID SLAB TRANSVERSE SECTION
 F6 1/2" = 1'-0"

2-10-15 REVISED PER VT AOT COMMENTS

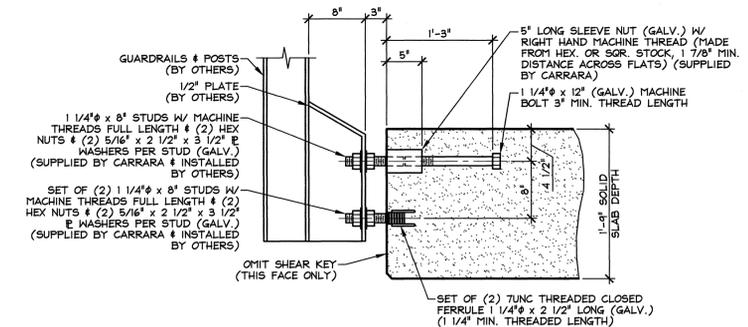
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|-----------------|---|--|--|--------------|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2444 CASE ST., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010 | | A.I. St. ONGE CONTRACTOR MONTMERY, VERMONT | |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | | DATE: NOV. 10, 2014 | SCALE: NOTED |
| | TOWN OF FAIRFIELD ELM BROOK ROAD, TOWN HIGHWAY 47 (CLASS 3) BRIDGE NO.: 46 PROJECT NO.: BRO 1448(41) | | CHKD: B.C. | DFTM: B.L. |
| | PRESTRESSED SOLID SLAB LAYOUT & SECTION | | JOB NO: 23446-014 | DWG. NO: F6 |



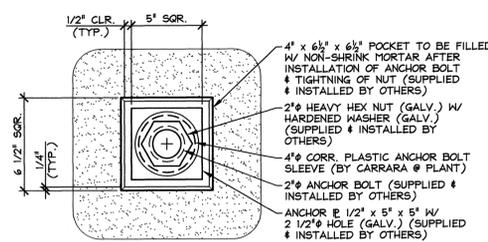
A BEARING SECTION
F7 3/4" = 1'-0"



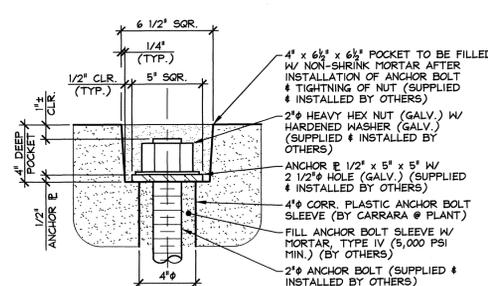
B SHEAR KEY SECTION @ P.T. SLEEVE
F7 1 1/2" = 1'-0"



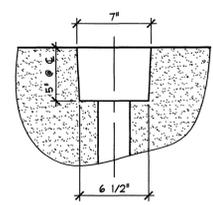
C GUARDRAIL ANCHORAGE SECTION
F7 1" = 1'-0"



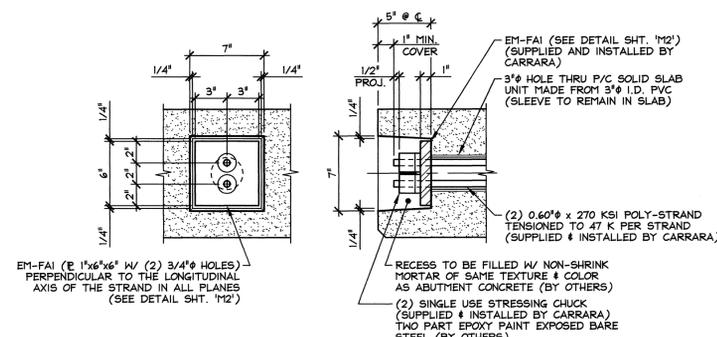
PLAN VIEW



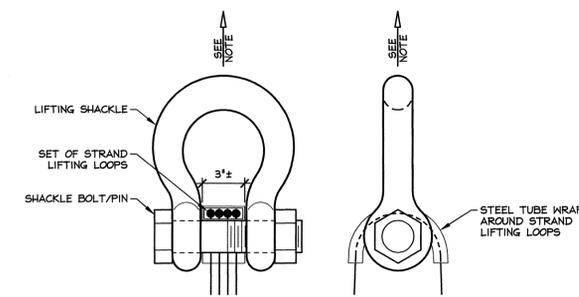
SECTION
DETAIL - "A"
2" = 1'-0"



PLAN OF POCKET



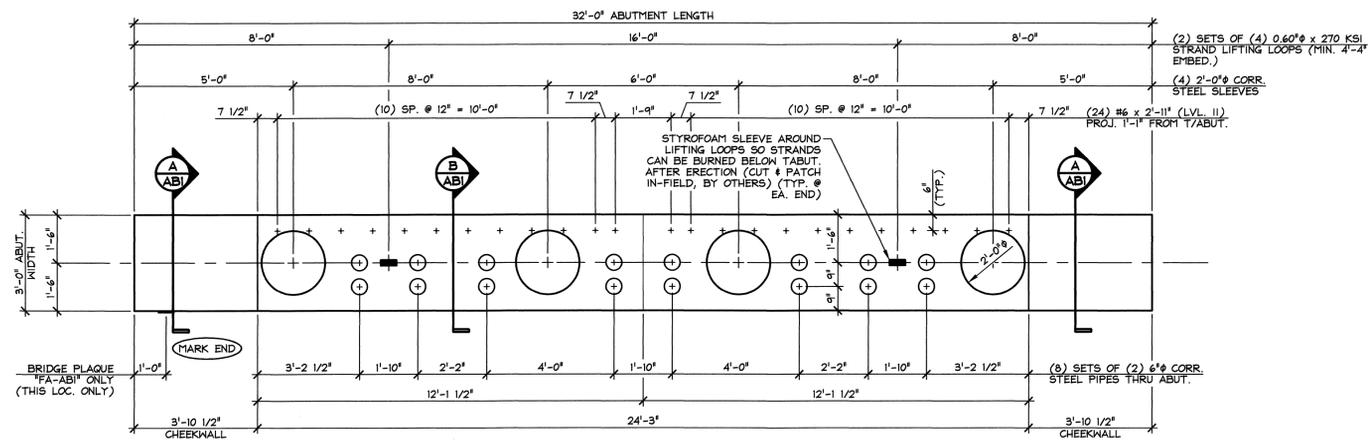
FASCIA ELEVATION
SECTION AT CENTERLINE
DETAIL - "B"
1 1/2" = 1'-0"



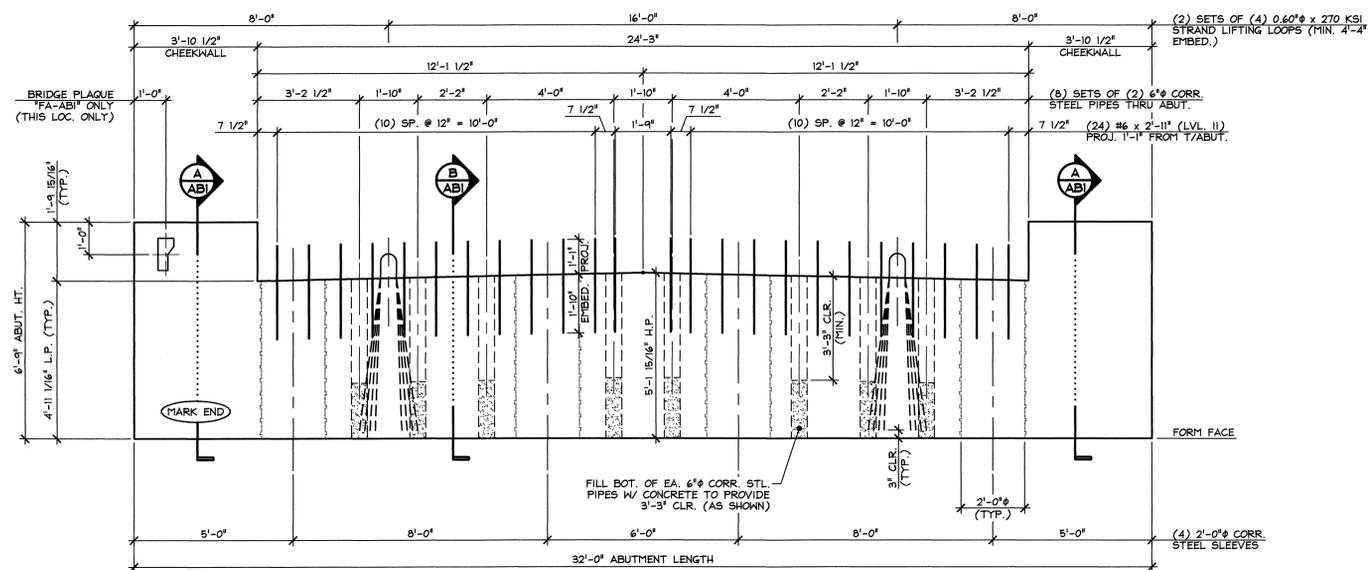
LIFTING SHACKLE DETAILS
N.T.S.

2-10-15 REVISED PER VT AOT COMMENTS

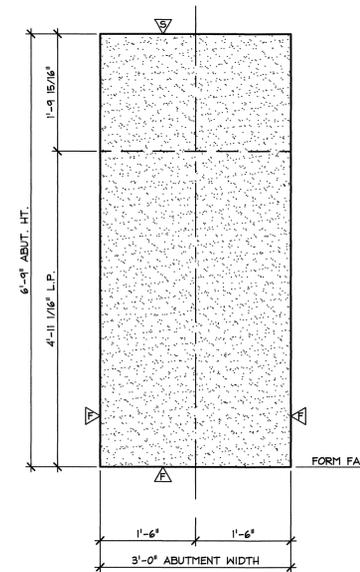
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|-----------------|---|--|--|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 OISE ST., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010 | | A.L. St. ONGE CONTRACTOR MONTMERY, VERMONT |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | | DATE: NOV. 10, 2014 SCALE: NOTED |
| | TOWN OF FAIRFIELD ELM BROOK ROAD, TOWN HIGHWAY 47 (CLASS 3) BRIDGE NO.: 46 PROJECT NO.: BRO 1448(41) | | CHKD: B.C. DFTM: B.L. JOB NO: 23446-014 |
| | SECTIONS & DETAILS | | DWG. NO: F7 |



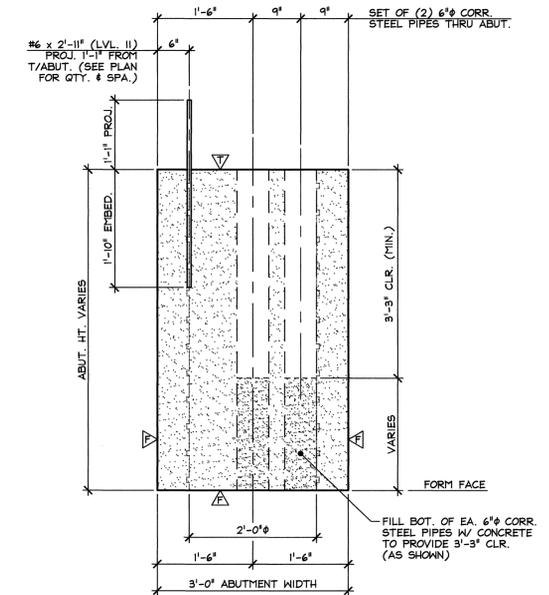
1 DIMENSIONAL PLAN VIEW IN FORM
3/8" = 1'-0"



2 DIMENSIONAL ELEVATION VIEW IN FORM
3/8" = 1'-0"



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



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

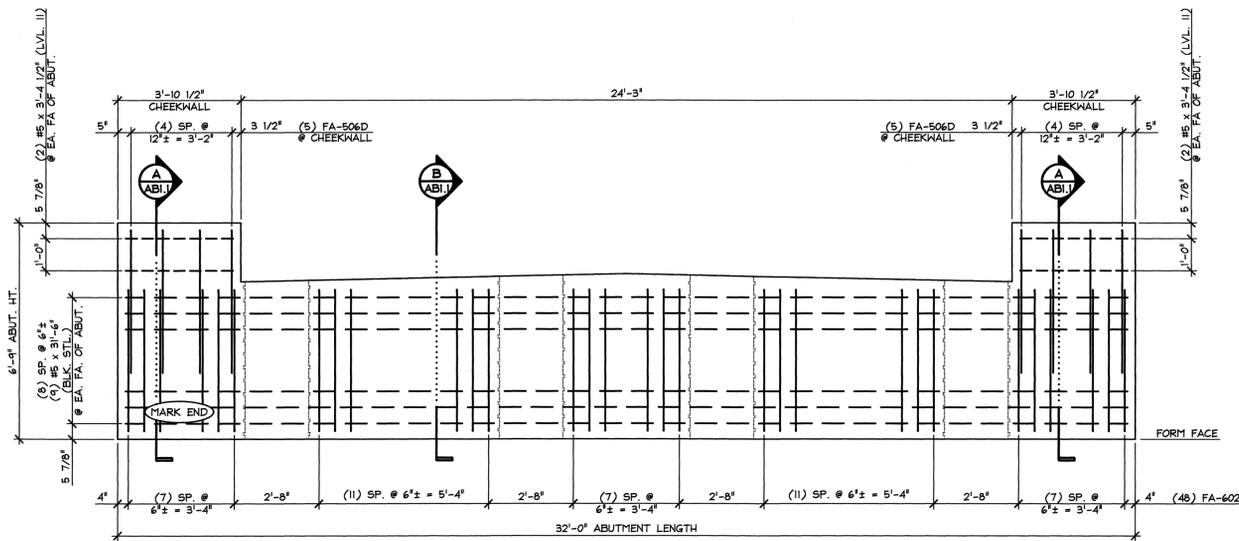
- △ DENOTES FORM FINISH
- △ DENOTES FLOAT FINISH
- △ DENOTES SMOOTH TROWEL FINISH

| | | | |
|--------------|---------|--------------|----------------|
| MARK: FA-AB1 | QTY.: 1 | WT.: 34.54 T | VOL.: 17.06 cy |
| MARK: FA-AB2 | QTY.: 1 | WT.: 34.54 T | VOL.: 17.06 cy |

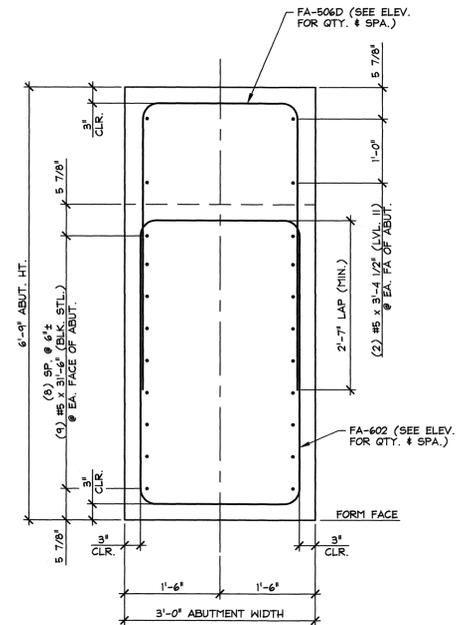
| MATERIAL LIST / ABUTMENT | | | | |
|--------------------------|------|---|--------------|--------|
| ITEM | MARK | DESCRIPTION | QTY. / ABUT. | |
| | | | FA-AB1 | FA-AB2 |
| 1 | | #6 x 2'-11" (LEVEL II, DUAL COATED) | 24 | 24 |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | BRIDGE PLAQUE (SUPPLIED BY OTHERS) | 1 | |
| 7 | | SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS | 2 | 2 |
| 8 | | 6" x 5'-1 3/4" (MAX.) CORRUGATED STEEL SLEEVE (GALV.) | 16 | 16 |
| 9 | | 2'-0" x 5'-1 1/2" CORRUGATED STEEL SLEEVE (GALV.) | 4 | 4 |
| 10 | | | | |

△ 2-10-15 REVISED PER VT AOT COMMENTS

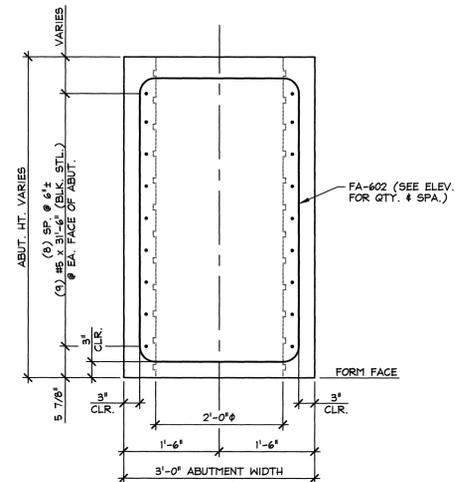
| | | |
|-----------------|---|---|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 244 GAGE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010 | A.L. ST. ONGE CONTRACTOR MONTMERY, VERMONT |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | DATE: NOV. 10, 2014 SCALE: NOTED |
| | TOWN OF FAIRFIELD SOUTH ROAD, FAS 0281 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 14 PROJECT NO.: BRP 0281(25) | CHKD: B.C. DFTM: B.L. JOB NO: 23446-014 |
| | PRECAST ABUTMENT DIMENSIONAL DETAILS | DWG. NO: AB1 |



1 REINFORCING ELEVATION VIEW IN FORM
ABI.1 3/8" = 1'-0"



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



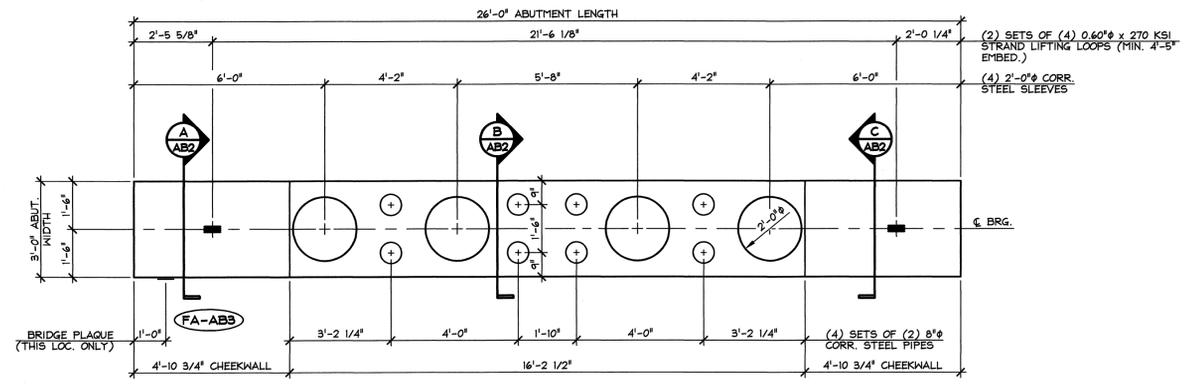
B ABUTMENT SECTION
ABI.1 3/4" = 1'-0"

| | |
|--------------|---------|
| MARK: FA-AB1 | QTY.: 1 |
| MARK: FA-AB2 | QTY.: 1 |

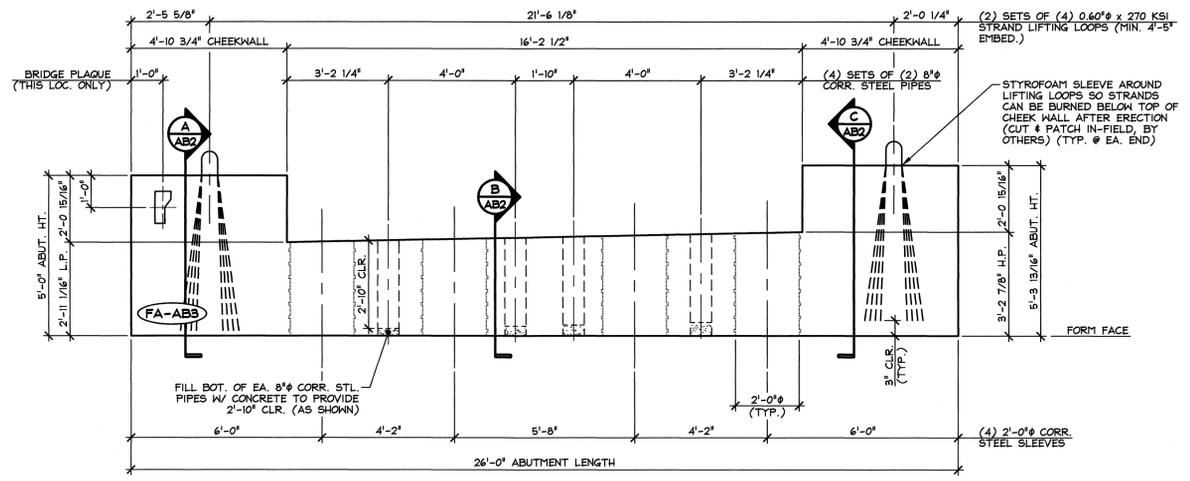
| MATERIAL LIST / ABUTMENT | | | |
|--------------------------|---------|--|------|
| ITEM | MARK | DESCRIPTION | QTY. |
| 1 | | #5 x 3'-6" (LEVEL I, BLACK STEEL) | 18 |
| 2 | | #5 x 3'-4 1/2" (LEVEL II, DUAL COATED) | 8 |
| 3 | | | |
| 4 | FA-506D | #5 BENT BAR (LEVEL II, DUAL COATED) | 10 |
| 5 | | | |
| 6 | FA-602 | #6 BENT BAR (LEVEL I, BLACK STEEL) | 48 |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

2-10-15 REVISED PER VT AOT COMMENTS

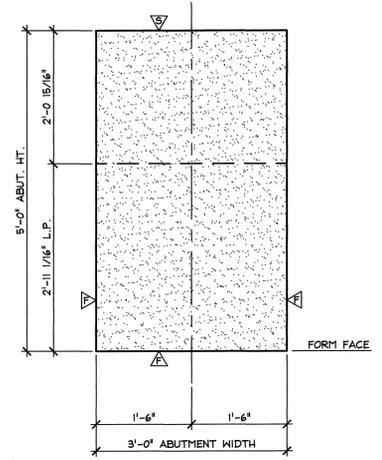
| | | | | |
|-----------------|--|--|---|--|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010 | | A.L. ST. ONGE CONTRACTOR MONTOMERY, VERMONT | |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | | DATE: NOV. 10, 2014 SCALE: NOTED | |
| | TOWN OF FAIRFIELD SOUTH ROAD, FAS 0281 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 14 PROJECT NO.: BRF 0281(25) | | CHKD: B.C. DFTM: B.L. JOB NO: 23446-014 | |
| | PRECAST ABUTMENT REINFORCING DETAILS | | DWG. NO: ABI.1 | |



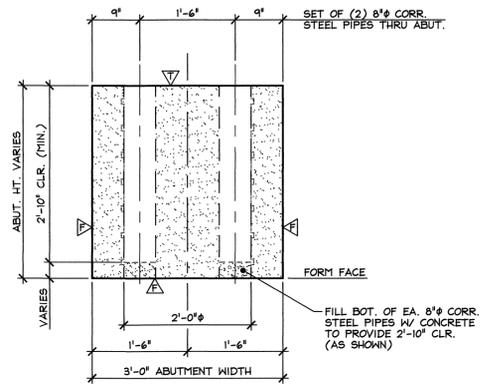
1 DIMENSIONAL PLAN VIEW IN FORM
AB2 3/8" = 1'-0"



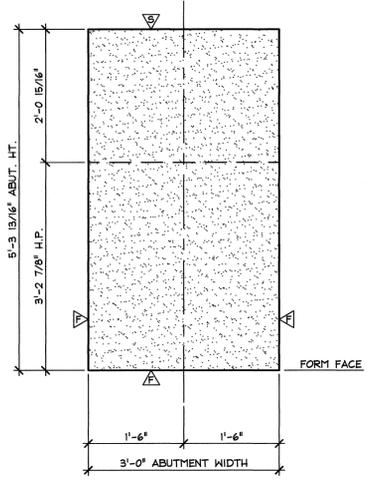
2 DIMENSIONAL ELEVATION VIEW IN FORM
AB2 3/8" = 1'-0"



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



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



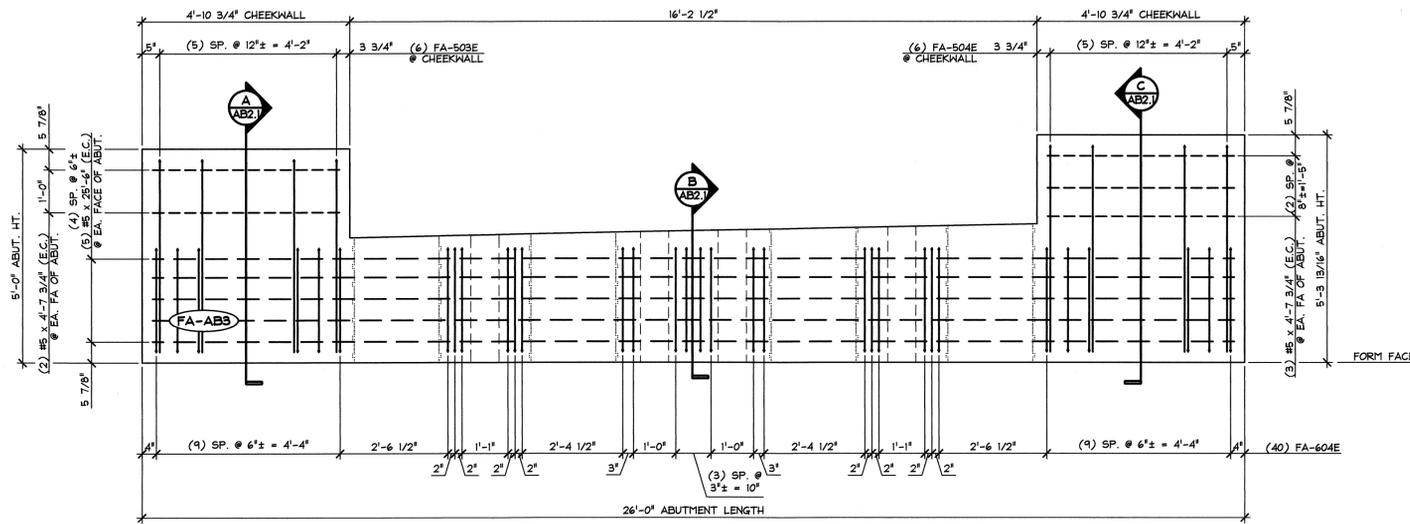
C ABUTMENT SECTION
AB2 3/4" = 1'-0"

- △ DENOTES FORM FINISH
- △ DENOTES FLOAT FINISH
- △ DENOTES SMOOTH TROWEL FINISH

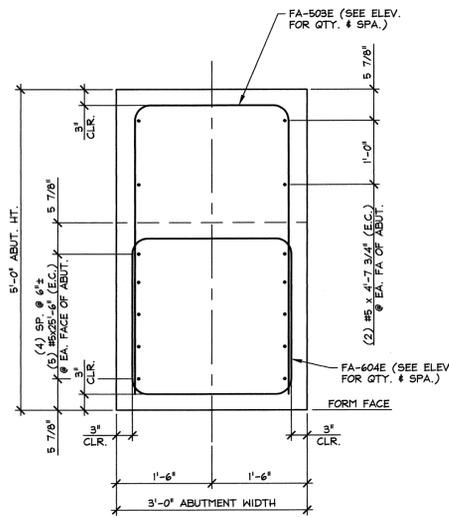
| MARK: FA-AB3 | QTY.: 1 | WT.: 19.12 T | VOL.: 9.44 cy |
|--------------------------|---------|---|---------------|
| MATERIAL LIST / ABUTMENT | | | |
| ITEM | MARK | DESCRIPTION | QTY. |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | BRIDGE PLAQUE (SUPPLIED BY OTHERS) | 1 |
| 7 | | SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS | 2 |
| 8 | | 8" x 3'-2" (MAX.) CORRUGATED STEEL SLEEVE (GALV.) | 8 |
| 9 | | 2'-0" x 3'-2 3/4" CORRUGATED STEEL SLEEVE (GALV.) | 4 |
| 10 | | | |

△ 2-10-15 REVISED PER VT AOT COMMENTS

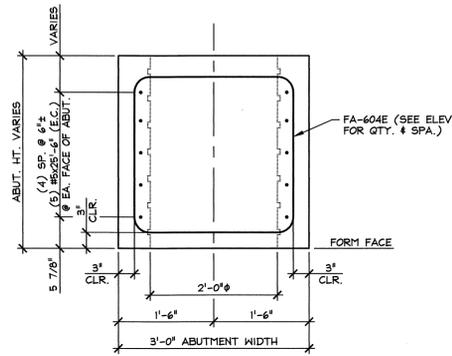
| | | |
|-----------------|---|---|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 GEE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010 | A.L. ST. ONGE CONTRACTOR MONTMERY, VERMONT |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | DATE: NOV. 10, 2014 SCALE: NOTED |
| | TOWN OF FAIRFIELD ELM BROOK ROAD, TOWN HIGHWAY 47 (CLASS 3) BRIDGE NO.: 46 PROJECT NO.: BRO 1448(41) | CHKD: B.C. DFTM: B.L. JOB NO: 23446-014 |
| | PRECAST ABUTMENT DIMENSIONAL DETAILS | DWG. NO: AB2 |



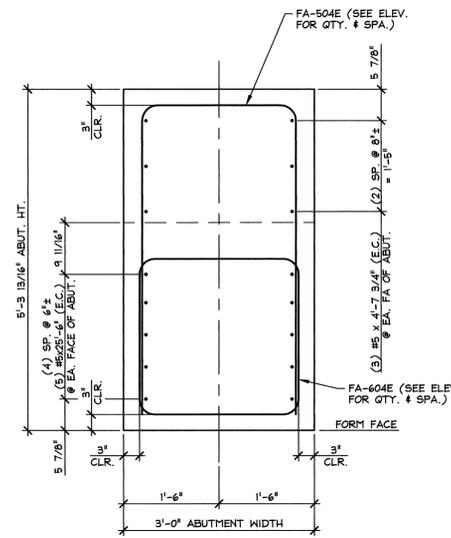
1 REINFORCING ELEVATION VIEW IN FORM
 AB2.1 1/2" = 1'-0"



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



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

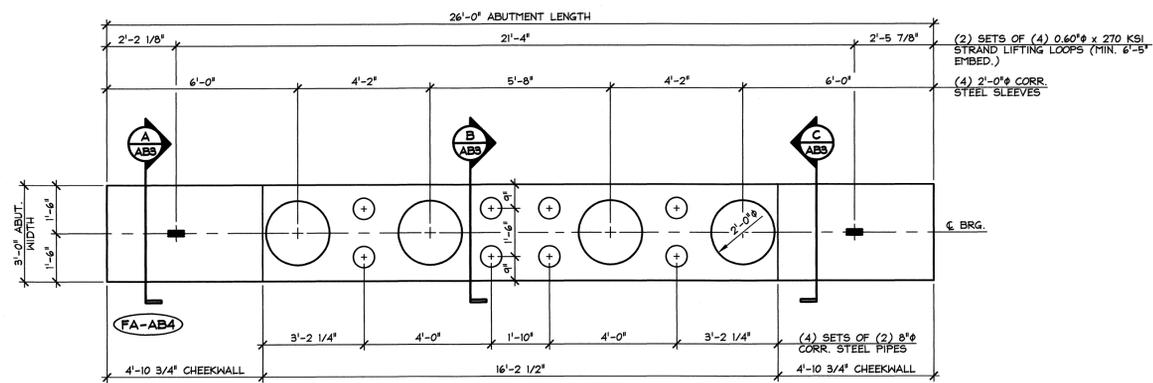


C ABUTMENT SECTION
 AB2.1 3/4" = 1'-0"

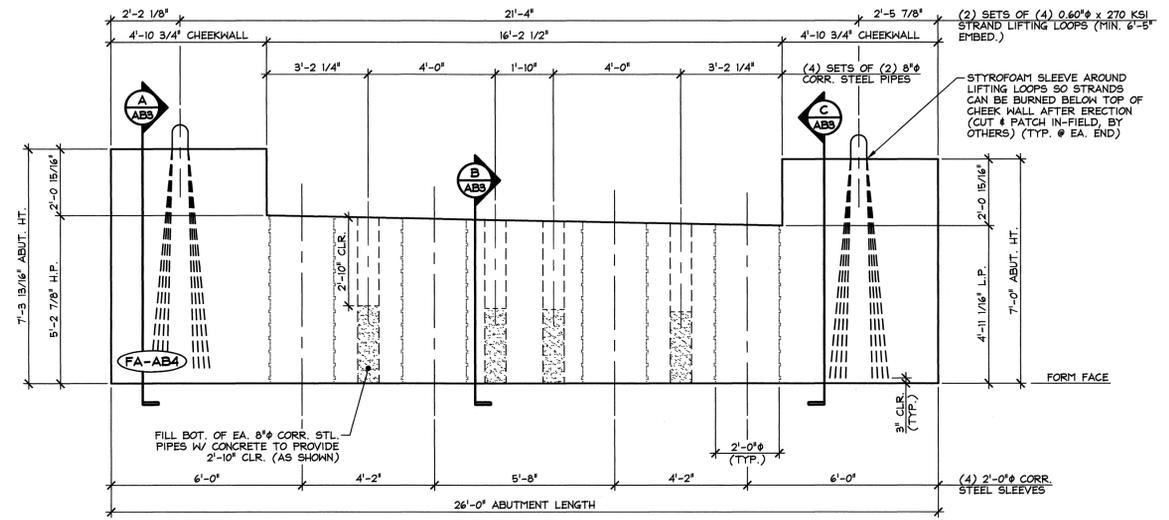
| MARK: FA-AB3 QTY.: 1 | | | |
|--------------------------|---------|--|------|
| MATERIAL LIST / ABUTMENT | | | |
| ITEM | MARK | DESCRIPTION | QTY. |
| 1 | FA-503E | #5 BENT BAR (LEVEL I, EPOXY COATED) | 6 |
| 2 | FA-504E | #5 BENT BAR (LEVEL I, EPOXY COATED) | 6 |
| 3 | | #5 x 25'-6" (LEVEL I, EPOXY COATED) | 10 |
| 4 | | #5 x 4'-7 3/4" (LEVEL I, EPOXY COATED) | 10 |
| 5 | | | |
| 6 | FA-604E | #6 BENT BAR (LEVEL I, EPOXY COATED) | 40 |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

2-10-15 REVISED PER VT AOT COMMENTS

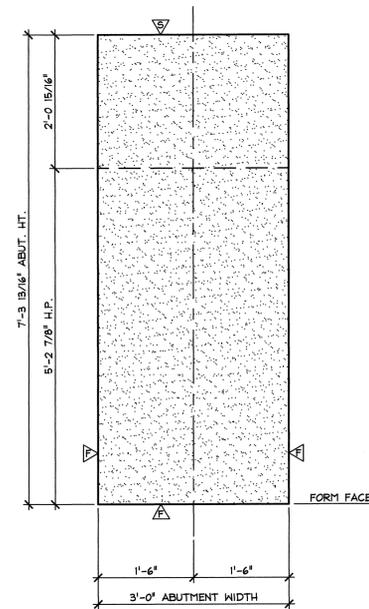
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| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 GISE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010 | A.L. St. ONGE CONTRACTOR MONTMERY, VERMONT |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | |
| | TOWN OF FAIRFIELD ELM BROOK ROAD, TOWN HIGHWAY 47 (CLASS 3) BRIDGE NO.: 46 PROJECT NO.: BRO 1448(41) | |
| | PRECAST ABUTMENT REINFORCING DETAILS | |
| | DATE: NOV. 10, 2014 | |
| | SCALE: NOTED | |
| | CHKD: B.C. DFTM: B.L. | |
| | JOB NO: 23446-014 | |
| | DWG. NO: AB2.1 | |



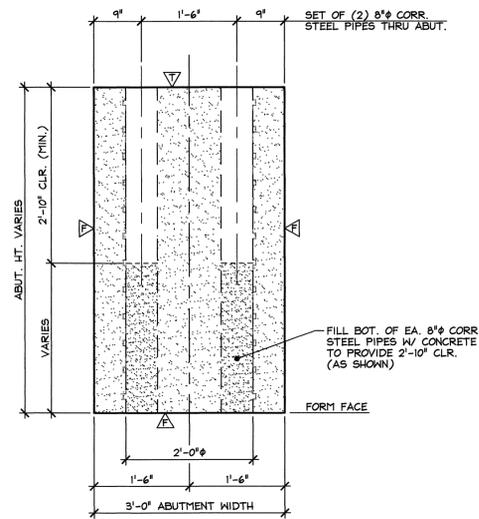
1 DIMENSIONAL PLAN VIEW IN FORM
AB3 3/8" = 1'-0"



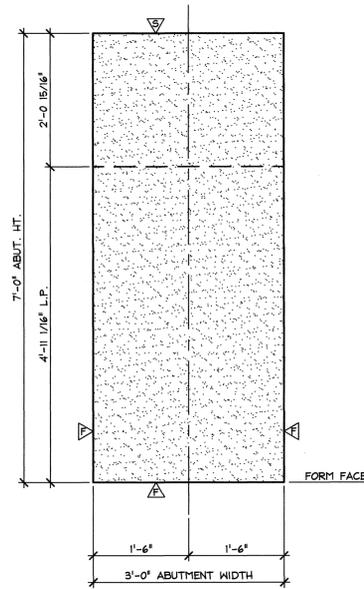
2 DIMENSIONAL ELEVATION VIEW IN FORM
AB3 3/8" = 1'-0"



A ABUTMENT SECTION
AB3 3/4" = 1'-0"



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



C ABUTMENT SECTION
AB3 3/4" = 1'-0"

- △ DENOTES FORM FINISH
- △ DENOTES FLOAT FINISH
- △ DENOTES SMOOTH TROWEL FINISH

| MARK: FA-AB4 | QTY.: 1 | WT.: 28.94 T | VOL.: 14.29 cy |
|--------------------------|---------|---|----------------|
| MATERIAL LIST / ABUTMENT | | | |
| ITEM | MARK | DESCRIPTION | QTY. |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS | 2 |
| 8 | | 8" x 5'-2" (MAX.) CORRUGATED STEEL SLEEVE (GALV.) | 8 |
| 9 | | 2'-0" x 5'-2 3/4" CORRUGATED STEEL SLEEVE (GALV.) | 4 |
| 10 | | | |

△ 2-10-15 REVISED PER VT AOT COMMENTS

APPROVAL STAMP:

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

A.L. ST. ONGE
CONTRACTOR
MONTMERY, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF FRANKLIN

DATE: NOV. 10, 2014

SCALE: NOTED

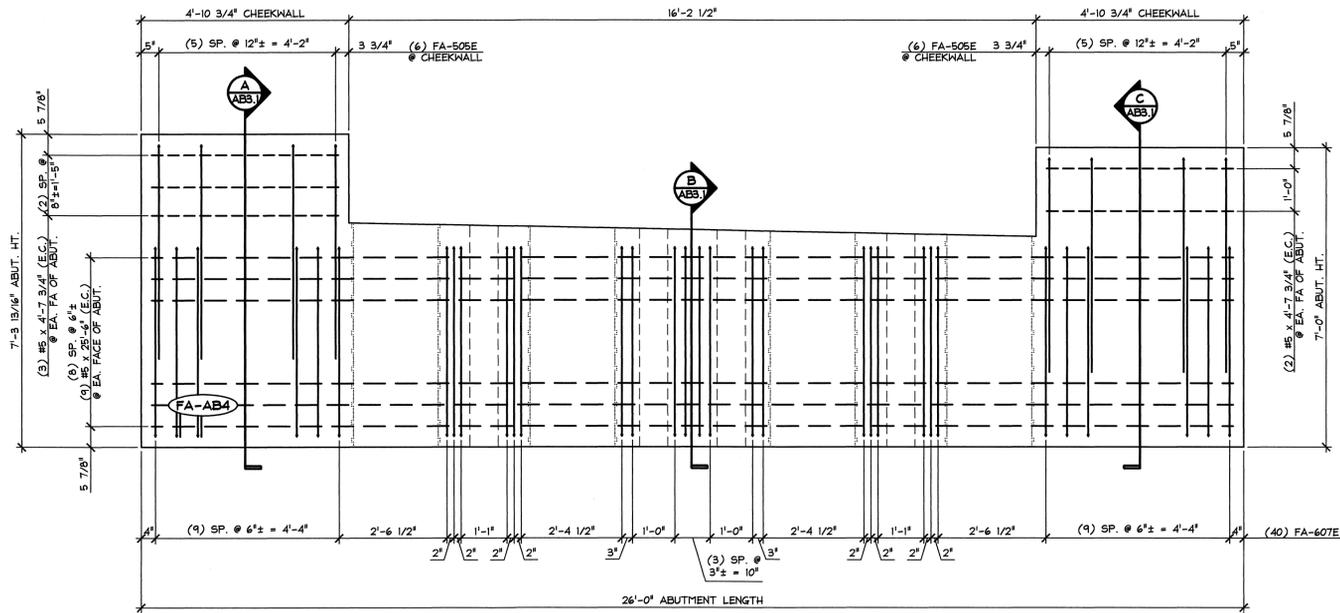
TOWN OF FAIRFIELD
ELM BROOK ROAD, TOWN HIGHWAY 47 (CLASS 3)
BRIDGE NO.: 46 PROJECT NO.: BRO 1448(41)

CHKD: B.C. DFTM: B.L.

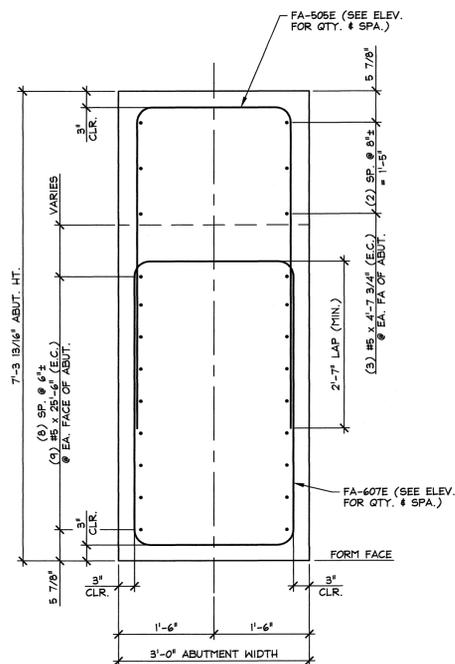
JOB NO: 23446-014

PRECAST ABUTMENT
DIMENSIONAL DETAILS

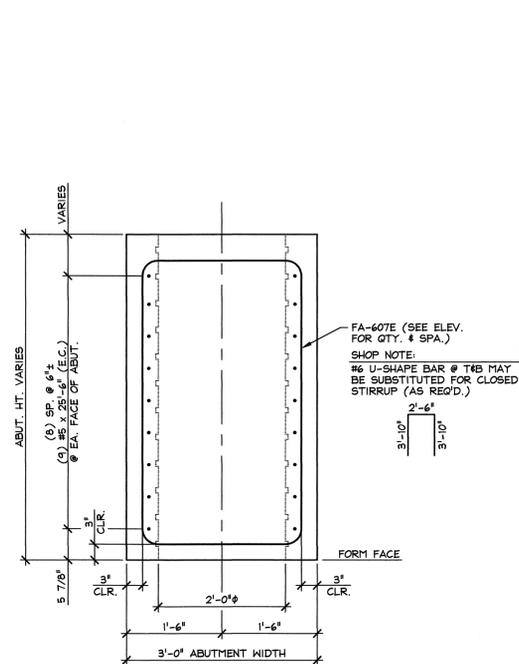
DWG. NO: AB3



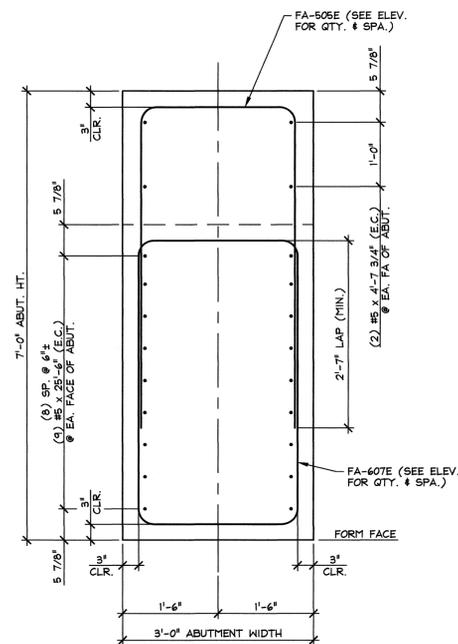
1 REINFORCING ELEVATION VIEW IN FORM
ABB.1
1/2" = 1'-0"



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



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



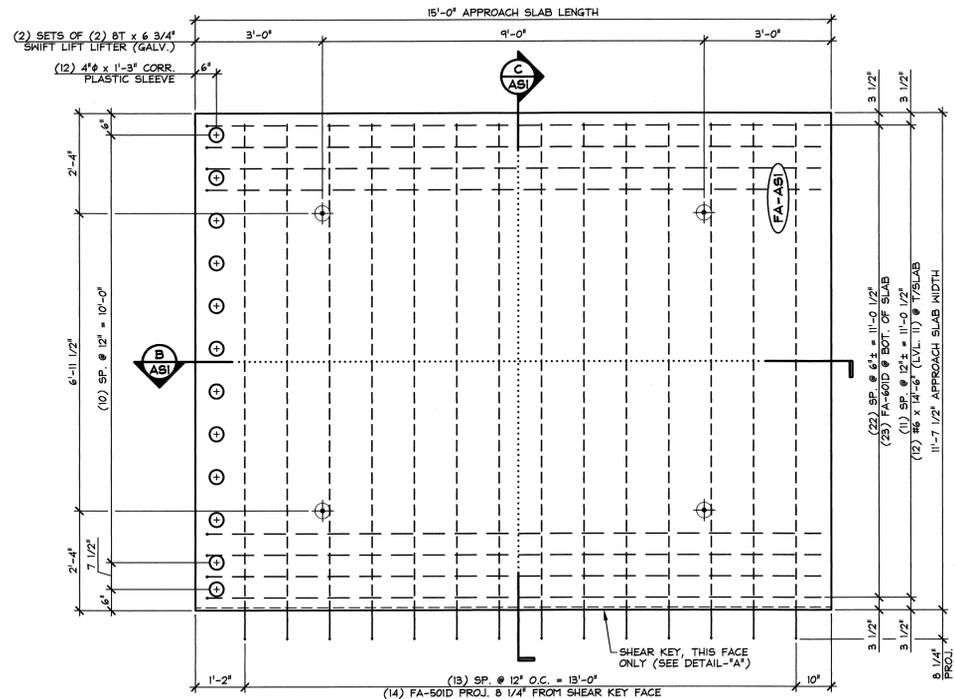
C ABUTMENT SECTION
ABB.1
3/4" = 1'-0"

2-10-15 REVISED PER VT AOT COMMENTS

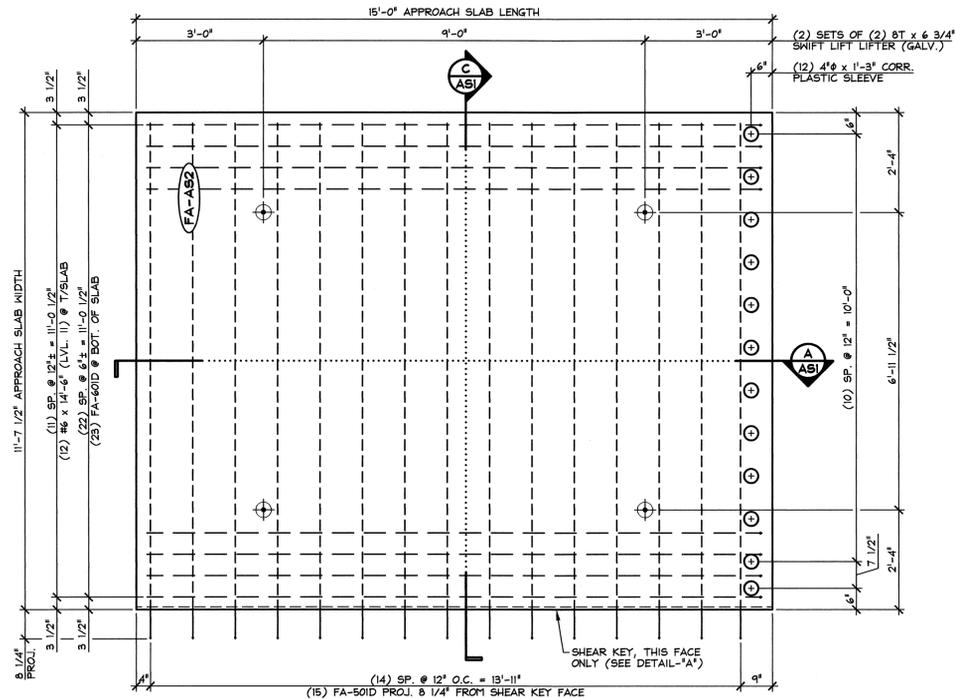
| MARK: FA-AB4 | | QTY.: 1 | |
|--------------------------|---------|--|------|
| MATERIAL LIST / ABUTMENT | | | |
| ITEM | MARK | DESCRIPTION | QTY. |
| 1 | FA-505E | #5 BENT BAR (LEVEL 1, EPOXY COATED) | 12 |
| 2 | | #5 x 25'-6" (LEVEL 1, EPOXY COATED) | 18 |
| 3 | | #5 x 4'-7 3/4" (LEVEL 1, EPOXY COATED) | 10 |
| 4 | | | |
| 5 | FA-607E | #6 BENT BAR (LEVEL 1, EPOXY COATED) | 40 |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

APPROVAL STAMP:

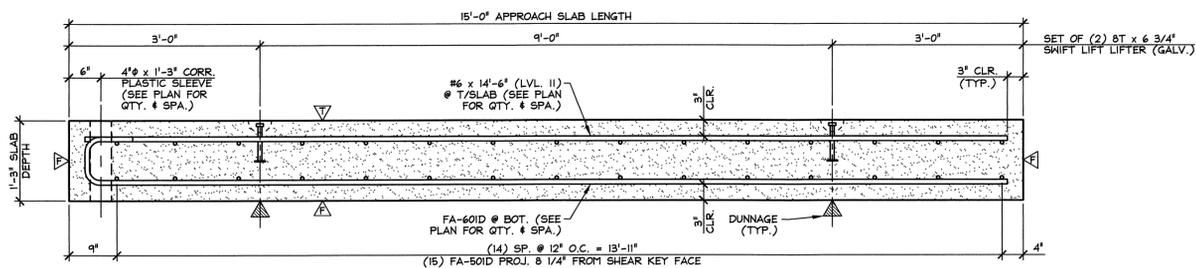
| | | |
|---|---|--|
| <p>J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 OISE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010</p> | <p>A.L. St. ONGE CONTRACTOR MONTMERY, VERMONT</p> | |
| | <p>STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN</p> | <p>DATE: NOV. 10, 2014 SCALE: NOTED</p> |
| | <p>TOWN OF FAIRFIELD ELM BROOK ROAD, TOWN HIGHWAY 47 (CLASS 3) BRIDGE NO.: 46 PROJECT NO.: BRO 1448(41)</p> | <p>CHKD: B.C. DFTM: B.L. JOB NO: 23446-014</p> |
| | <p>PRECAST ABUTMENT REINFORCING DETAILS</p> | <p>DWG. NO: AB3.1</p> |



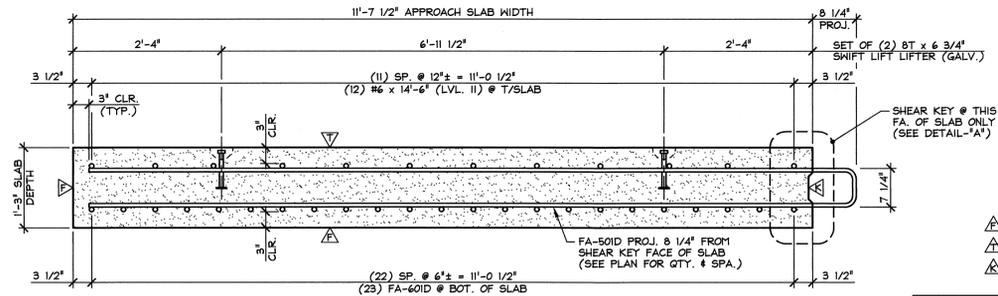
1 DIMENSIONAL PLAN VIEW IN FORM
ASI
1/2" = 1'-0"



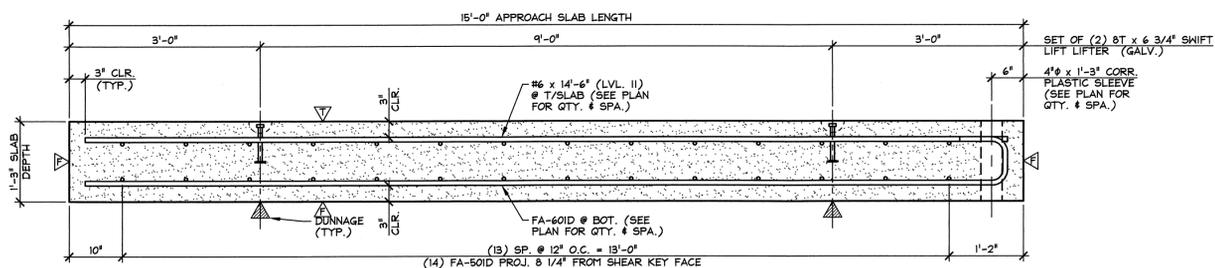
2 DIMENSIONAL PLAN VIEW IN FORM
ASI
1/2" = 1'-0"



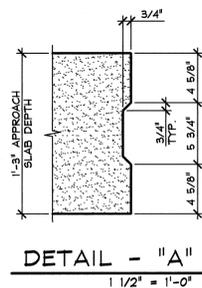
A LONGITUDINAL SECTION
ASI
3/4" = 1'-0"



C TRANSVERSE SECTION
ASI
3/4" = 1'-0"



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



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

- △ DENOTES FORM FINISH
- △ DENOTES FLOAT FINISH
- △ DENOTES ROUGHENED FINISH

| MARK: FA-ASI | QTY.: 2 | WT.: 16.32 T | VOL.: 8.06 cy | |
|-------------------------------|---------|---------------------------------------|---------------|-----|
| MARK: FA-AS2 | QTY.: 2 | WT.: 16.32 T | VOL.: 8.06 cy | |
| MATERIAL LIST / APPROACH SLAB | | | | |
| ITEM | MARK | DESCRIPTION | QTY./SLAB | |
| | | | ASI | AS2 |
| 1 | FA-501D | #5 BENT BAR (LEVEL II, DUAL COATED) | 14 | 15 |
| 2 | | | | |
| 3 | FA-601D | #6 BENT BAR (LEVEL II, DUAL COATED) | 23 | 23 |
| 4 | | #6 x 14'-6" (LEVEL II, DUAL COATED) | 12 | 12 |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | 4" x 1'-3" CORRUGATED PLASTIC SLEEVE | 12 | 12 |
| 9 | | 8T x 6 3/4" SWIFT LIFT LIFTER (GALV.) | 4 | 4 |
| 10 | | | | |

2-10-15 REVISED PER VT AOT COMMENTS

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 GAGE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-8010

A.L. ST. ONGE
CONTRACTOR
MONTMERY, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF FRANKLIN

DATE: NOV. 10, 2014

SCALE: NOTED

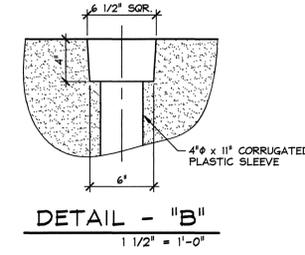
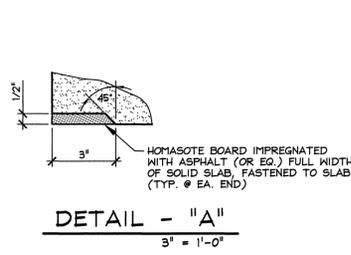
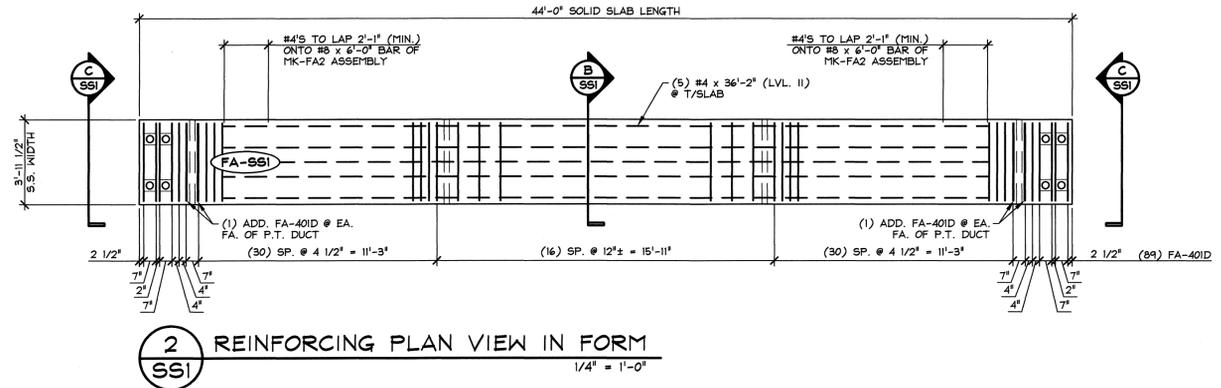
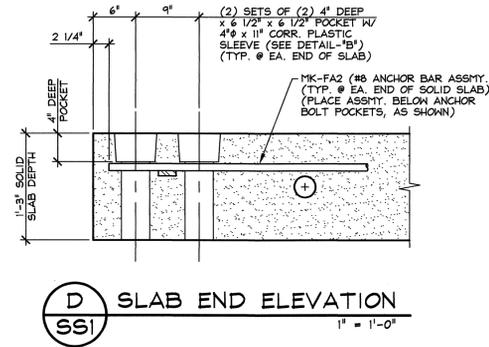
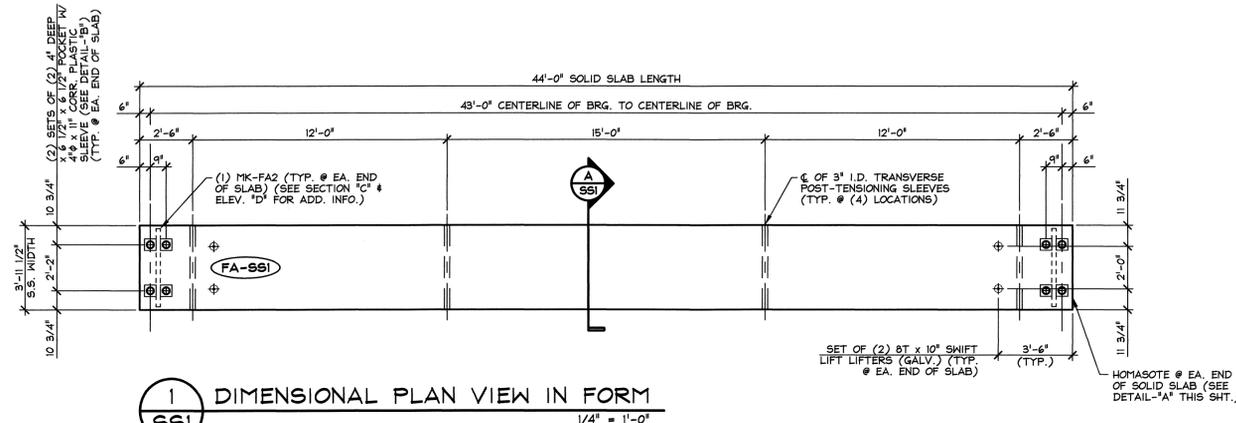
TOWN OF FAIRFIELD
SOUTH ROAD, FAS 0281 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 14 PROJECT NO.: BRF 0281(25)

CHKD: B.C. DFTM: B.L.

JOB NO: 23446-014

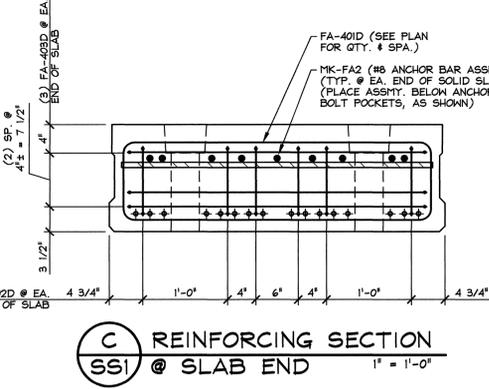
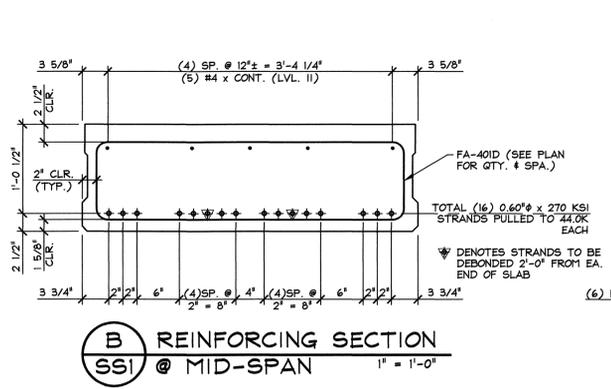
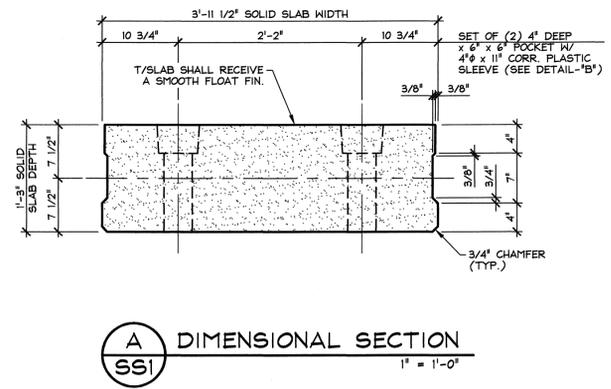
PRECAST APPROACH SLAB DETAILS

DWG. NO: ASI



1 3 5 7 9 11 13 15 16 14 12 10 8 6 4 2

DETENSIONING SCHEDULE
N.T.S.



2-10-15 REVISED PER VT AOT COMMENTS

APPROVAL STAMP:

| MARK: FA-SSI | QTY.: 4 | WT.: 16.02 T | VOL.: 7.91 cy |
|----------------------------|---------|--|---------------|
| MATERIAL LIST / SOLID SLAB | | | |
| ITEM | MARK | DESCRIPTION | QTY. |
| 1 | FA-401D | #4 BENT BAR (LEVEL II, DUAL COATED) | 93 |
| 2 | FA-402D | #4 BENT BAR (LEVEL II, DUAL COATED) | 12 |
| 3 | FA-403D | #4 BENT BAR (LEVEL II, DUAL COATED) | 6 |
| 4 | | #4 x 36'-2" (LEVEL II, DUAL COATED) | 5 |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | MK-FA2 | ANCHOR BAR 3/4" THICK x 2 1/2" x 3'-8" (ASTM A36) W/ (3) #8 x 12'-0" & (6) #8 x 6'-0" (ASTM A-706) (GALV. ASSM.) | 2 |
| 9 | | 8T x 10' SWIFT LIFT LIFTERS (GALV.) | 4 |
| 10 | | 4" x 11" CORRUGATED PLASTIC SLEEVE | 8 |

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

A.L. St. ONGE
CONTRACTOR
MONTMERY, VERMONT

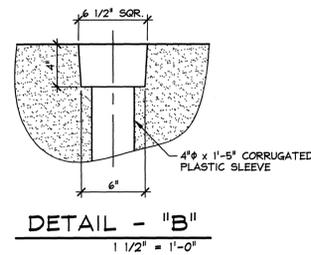
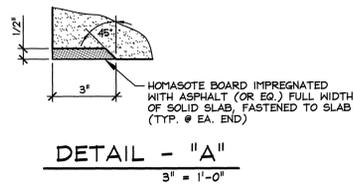
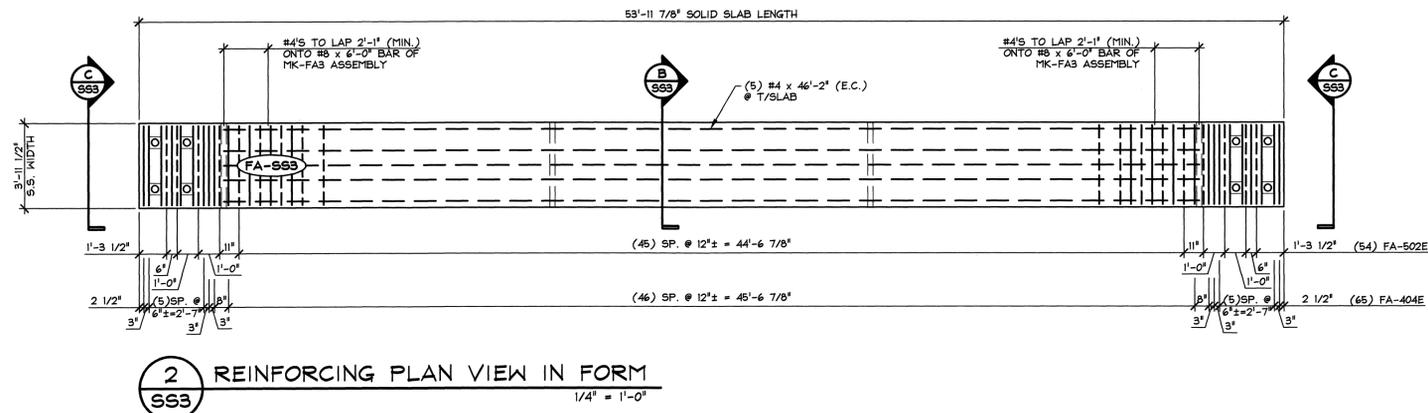
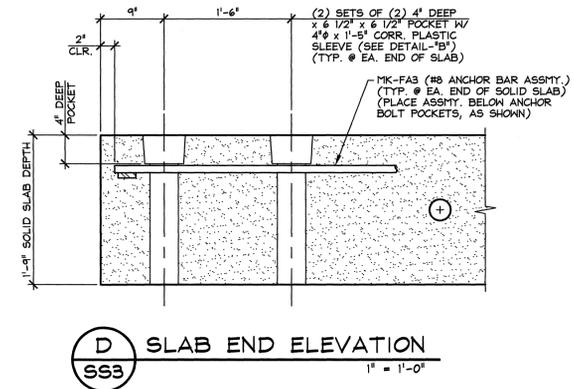
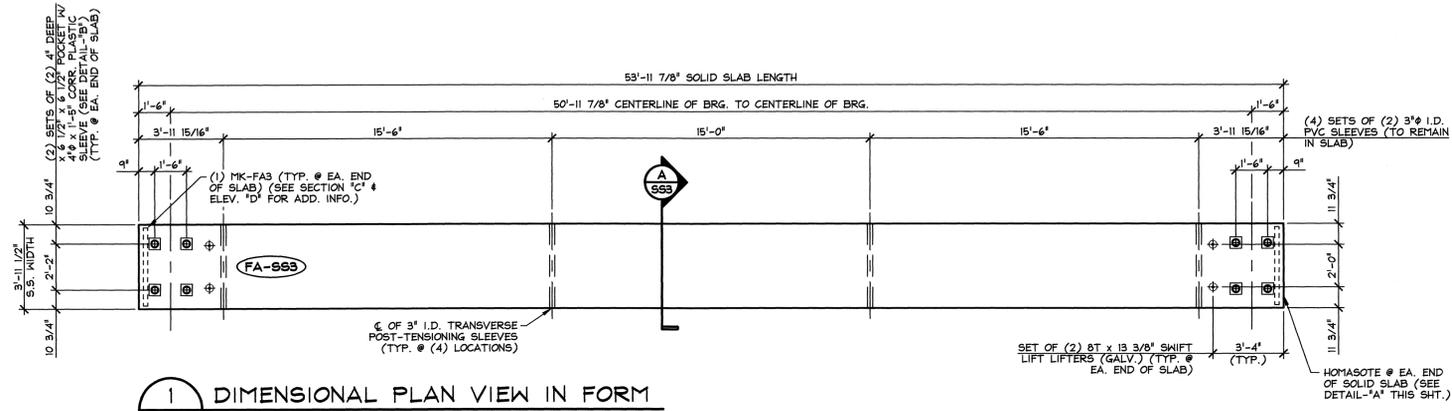
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF FRANKLIN

DATE: NOV. 10, 2014
SCALE: NOTED

TOWN OF FAIRFIELD
SOUTH ROAD, FAS 0281 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 14 PROJECT NO.: BRF 0281(25)

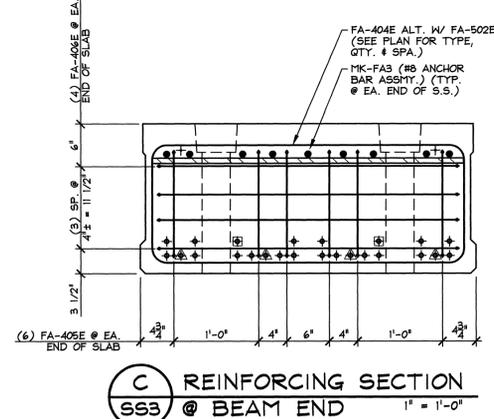
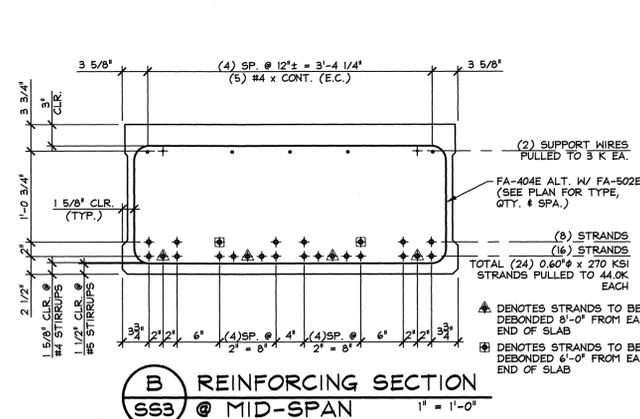
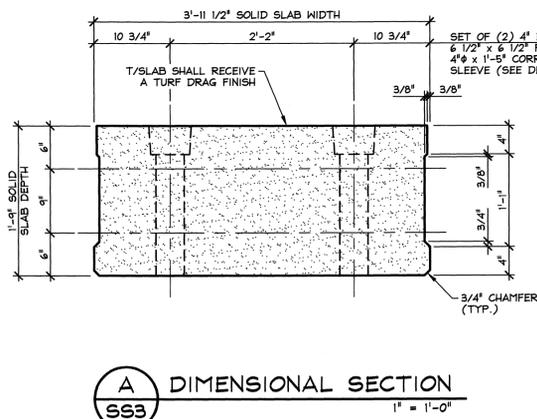
CHKD: B.C. DFTM: B.L.
JOB NO: 23446-014

PRESTRESSED SOLID SLAB DETAILS
DWG. NO: SSI



DETENSIONING SCHEDULE N.T.S.

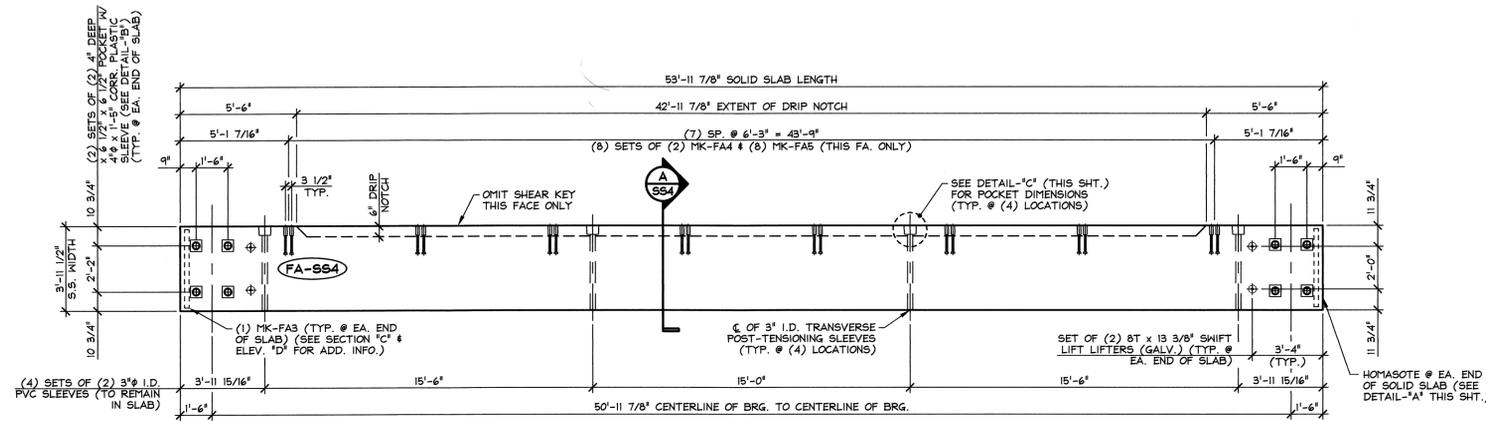
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|----|----|----|----|----|----|----|----|
| 1 | 7 | 11 | 21 | 22 | 12 | 8 | 2 |
| 3 | 5 | 9 | 13 | 15 | 17 | 19 | 23 |
| 24 | 20 | 20 | 16 | 16 | 14 | 10 | 6 |
| 4 | | | | | | | |



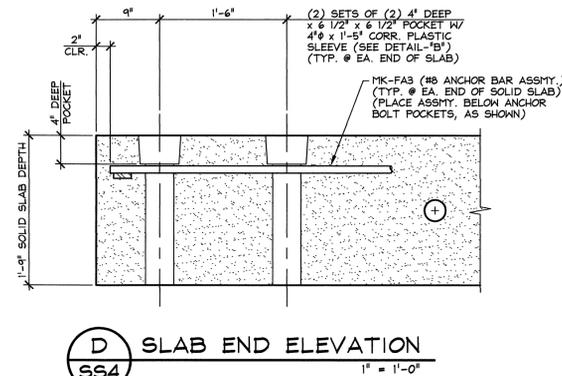
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|----------------------------|---------|-------------------------------------|----------------|
| MATERIAL LIST / SOLID SLAB | | | |
| ITEM | MARK | DESCRIPTION | QTY. |
| 1 | FA-404E | #4 BENT BAR (LEVEL 1, EPOXY COATED) | 65 |
| 2 | FA-405E | #4 BENT BAR (LEVEL 1, EPOXY COATED) | 12 |
| 3 | FA-406E | #4 BENT BAR (LEVEL 1, EPOXY COATED) | 8 |
| 4 | | #4 x 46'-2\"/> | |
| 5 | | | |
| 6 | FA-502E | #5 BENT BAR (LEVEL 1, EPOXY COATED) | 54 |
| 7 | | | |
| 8 | MK-FAS | ANCHOR BAR 3/4\"/> | |
| 9 | | 8T x 13 3/8\"/> | |
| 10 | | 4\"/> | |

2-10-15 REVISED PER VT AOT COMMENTS

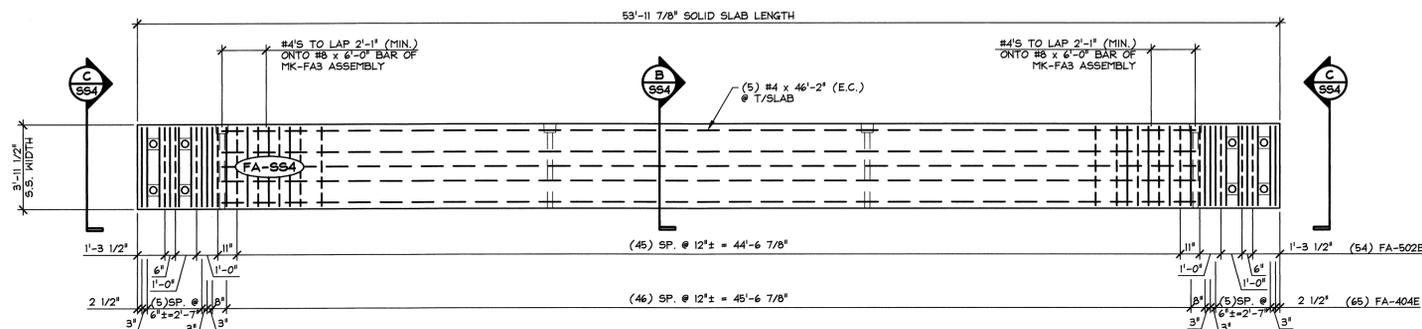
| | | | | |
|-----------------|--|--|---|--|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2444 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010 | | A.L. ST. ONGE CONTRACTOR MONTOMERY, VERMONT | |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | | DATE: NOV. 10, 2014 SCALE: NOTED | |
| | TOWN OF FAIRFIELD ELM BROOK ROAD, TOWN HIGHWAY 47 (CLASS 3) BRIDGE NO.: 46 PROJECT NO.: BRO 1448(41) | | CHKD: B.C. DFTM: B.L. JOB NO: 23446-014 | |
| | PRESTRESSED SOLID SLAB DETAILS | | DWG. NO: S53 | |



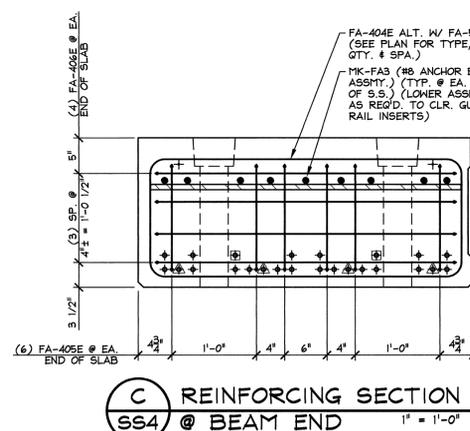
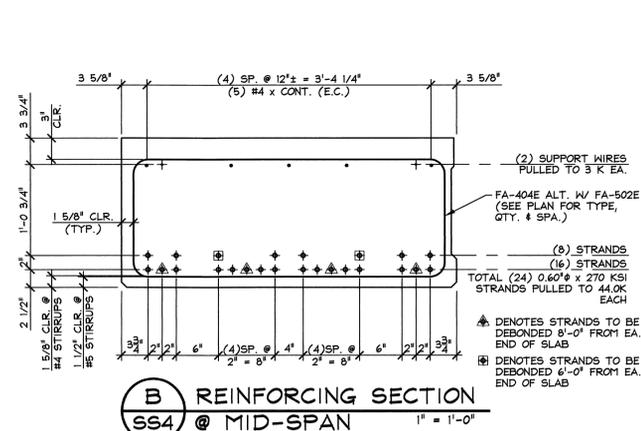
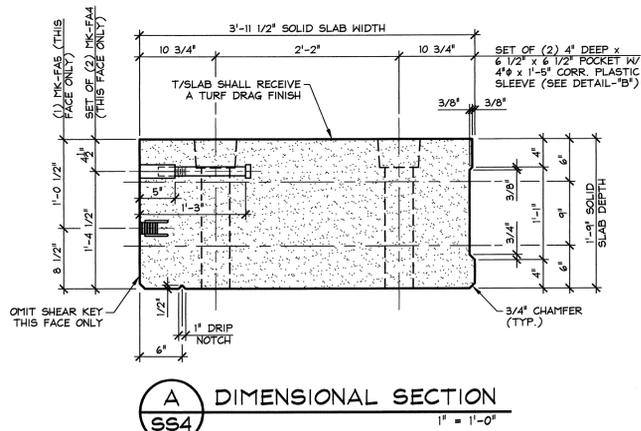
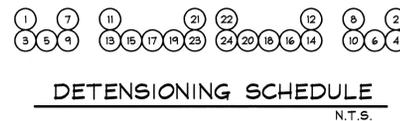
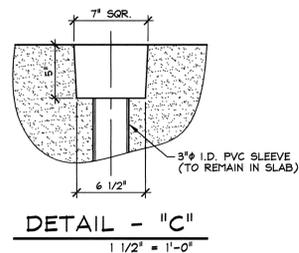
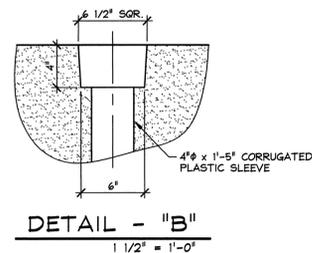
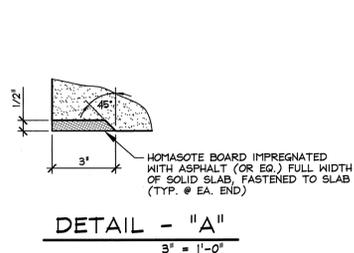
1 DIMENSIONAL PLAN VIEW IN FORM
SS4
1/4" = 1'-0"



D SLAB END ELEVATION
SS4
1" = 1'-0"



2 REINFORCING PLAN VIEW IN FORM
SS4
1/4" = 1'-0"

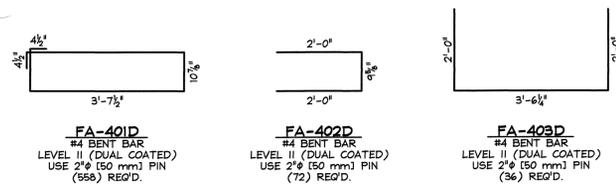


| MARK: FA-SS4 QTY.: 2 WT.: 27.73 T VOL.: 13.69 cy | | | |
|--|---------|--|------|
| MATERIAL LIST / SOLID SLAB | | | |
| ITEM | MARK | DESCRIPTION | QTY. |
| 1 | FA-404E | #4 BENT BAR (LEVEL 1, EPOXY COATED) | 65 |
| 2 | FA-405E | #4 BENT BAR (LEVEL 1, EPOXY COATED) | 12 |
| 3 | FA-406E | #4 BENT BAR (LEVEL 1, EPOXY COATED) | 8 |
| 4 | | #4 x 46'-2" (LEVEL 1, EPOXY COATED) | 5 |
| 5 | | | |
| 6 | FA-502E | #5 BENT BAR (LEVEL 1, EPOXY COATED) | 54 |
| 7 | | | |
| 8 | | | |
| 9 | MK-FAS | ANCHOR BAR 3/4" THICK x 2 1/2" x 3'-8" (ASTM A36) W/ (3) #8 x 18'-0" # (6) #8 x 6'-0" (ASTM A-706) (GALV. ASSY.) | 2 |
| 10 | MK-FA4 | 5" LG. SLEEVE NUT (GALV.) # 1 1/4" x 12" MACHINE BOLT (GALV.) | 16 |
| 11 | MK-FAS | 2-BOLT FERRULE GUARD RAIL INSERT 1 1/4" #-TUNC (GALV.) | 8 |
| 12 | | 8T x 13 3/8" SWIFT LIFT LIFTERS (GALV.) | 4 |
| 13 | | 4" x 1'-5" CORRUGATED PLASTIC SLEEVE | 8 |
| 14 | | | |
| 15 | | | |

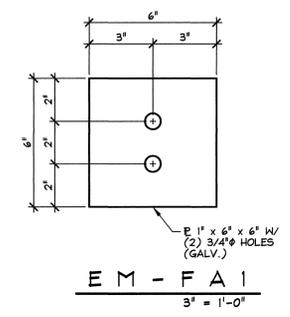
2-10-15 REVISED PER VT AOT COMMENTS

APPROVAL STAMP:

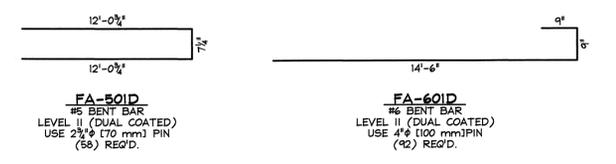
| | |
|---|---|
| <p>J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 244 GISE STR. MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010</p> | <p>A.I. St. ONGE CONTRACTOR MONTOMERY, VERMONT</p> |
| | <p>STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN</p> |
| <p>TOWN OF FAIRFIELD ELM BROOK ROAD, TOWN HIGHWAY 47 (CLASS 3) BRIDGE NO.: 46 PROJECT NO.: BRO 1448(41)</p> | |
| <p>PRESTRESSED SOLID SLAB DETAILS</p> | |
| <p>DATE: NOV. 10, 2014 SCALE: NOTED CHKD: B.C. DFTM: B.L. JOB NO: 23446-014 DWG. NO: SS4</p> | |



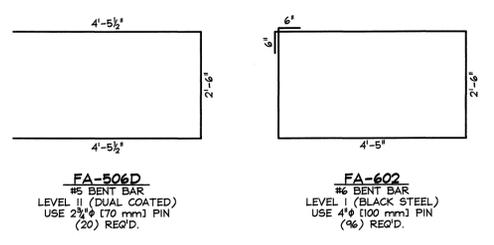
PRESTRESSED SOLID SLABS



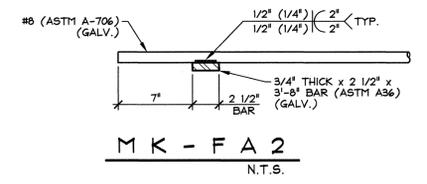
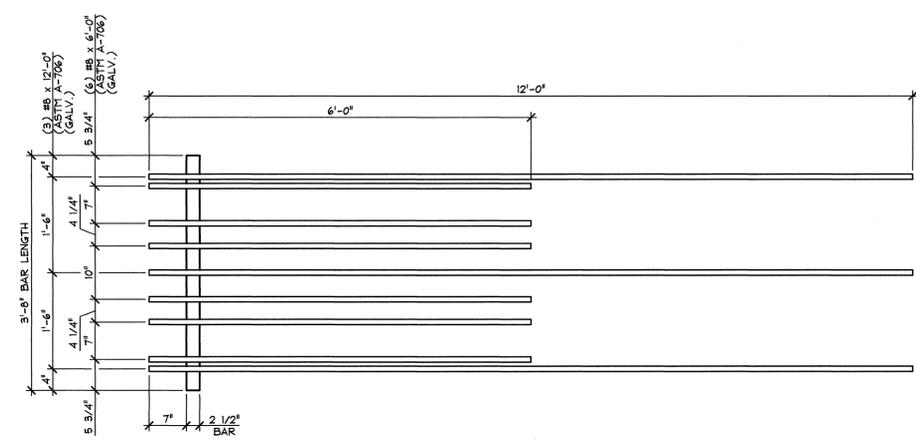
EM - FA 1
3' = 1'-0"



PRECAST APPROACH SLABS

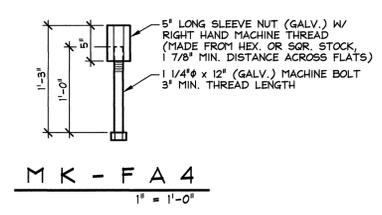


PRECAST ABUTMENTS

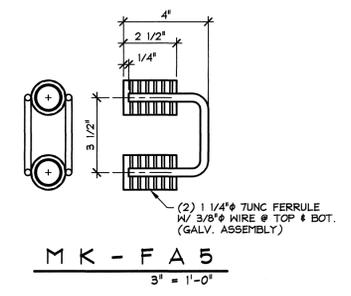


M K - F A 2
N.T.S.

NOTE:
AFTER MK-FA2 ASSEMBLY HAS BEEN GALVANIZED,
ENTIRE ASSEMBLY SHALL BE COATED WITH TWO
PART EPOXY REPAIR MATERIAL IN ACCORDANCE
WITH LEVEL II, DUAL COATED REINFORCING STEEL
MANUFACTURER INSTRUCTIONS.



M K - F A 4
1' = 1'-0"

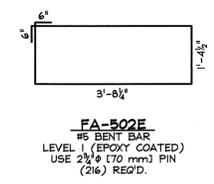
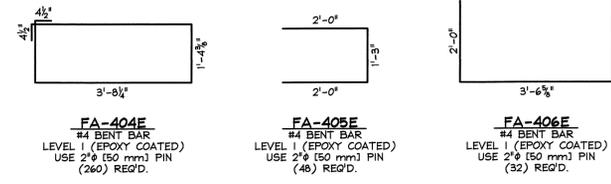


M K - F A 5
3' = 1'-0"

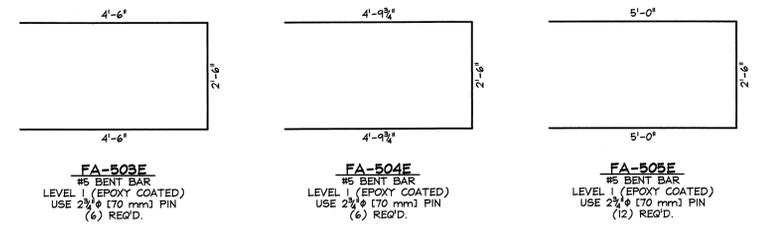
| MISCELLANEOUS MATERIALS | | | | |
|-------------------------|--------|------|--|--|
| ITEM | MARK | QTY. | DESCRIPTION | REMARKS |
| 1 | EM-FA1 | 8 | 2' 1" x 6" x 6" W/ (2) 3/4" HOLES (GALV.) | FOR ERECTION, SEE DETAIL THIS SHEET |
| 2 | | 8 | 0.60" x 270 KSI x 26'-9" LONG POLY-STRAND | FOR ERECTION |
| 3 | | 16 | 0.60" SINGLE USE STRESSING CHUCK | FOR ERECTION |
| 4 | | | | |
| 5 | | | | |
| 6 | | 30 | #4 x 36'-2" (LEVEL II, DUAL COATED) | |
| 7 | | | | |
| 8 | MK-FA2 | 12 | ANCHOR BAR 3/4" THICK x 2 1/2" x 3'-8" (ASTM A36) W/ (3) #8 x 12'-0" & (6) #8 x 6'-0" (ASTM A-706) | GALVANIZED ASSEMBLY, 2 PART EPOXY COATED (SEE DETAIL THIS SHEET) |
| 9 | MK-FA4 | 28 | 5" LG. SLEEVE NUT (GALV.) & 1 1/4" x 12" MACHINE BOLT | GALVANIZED, SEE DETAIL THIS SHEET |
| 10 | MK-FA5 | 14 | 2-BOLT FERRULE GUARD RAIL INSERT 1 1/4" x 7UNC | GALVANIZED, SEE DETAIL THIS SHEET |
| 11 | | 24 | 8T x 10" SWIFT LIFT LIFTERS | |
| 12 | | 48 | 4" x 11" CORRUGATED PLASTIC SLEEVE | |
| 13 | | | | |
| 14 | | 48 | #6 x 14'-6" (LEVEL II, DUAL COATED) | |
| 15 | | | | |
| 16 | | 16 | 8T x 6 3/4" SWIFT LIFT LIFTER | GALVANIZED |
| 17 | | | | |
| 18 | | 48 | 4" x 1'-3" CORRUGATED PLASTIC SLEEVE | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | | |
| 22 | | | | |
| 23 | | 36 | #5 x 31'-6" (LEVEL I, BLACK STEEL) | |
| 24 | | 16 | #5 x 3'-4 1/2" (LEVEL II, DUAL COATED) | |
| 25 | | | | |
| 26 | | 48 | #6 x 2'-11" (LEVEL II, DUAL COATED) | |
| 27 | | | | |
| 28 | | 1 | BRIDGE PLAQUE | SUPPLIED BY OTHERS |
| 29 | | 32 | 6" x 5'-1 3/4" (MAX.) CORRUGATED STEEL SLEEVE | GALVANIZED, AASHTO M 36, TYPE I |
| 30 | | 8 | 2'-0" x 5'-1 1/2" CORRUGATED STEEL SLEEVE | GALVANIZED, AASHTO M 36, TYPE I |
| 31 | | 4 | SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS | |
| 32 | | | | |
| 33 | | | | |
| 34 | | | | |
| 35 | | | | |

2-10-15 REVISED PER VT AOT COMMENTS

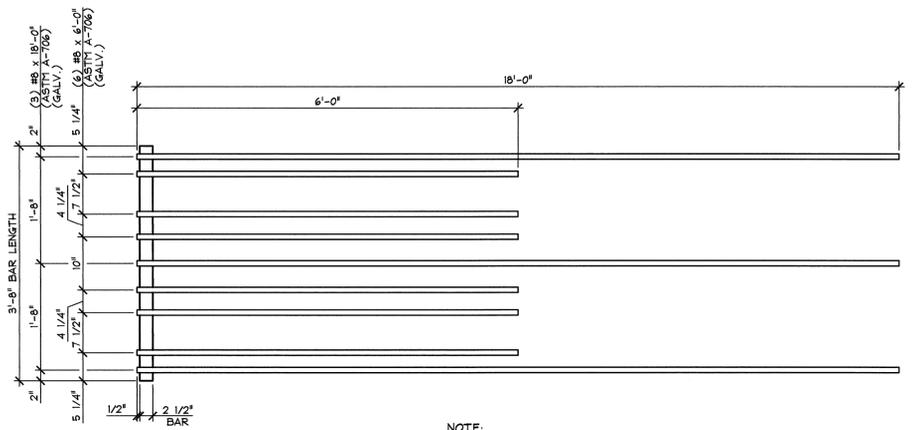
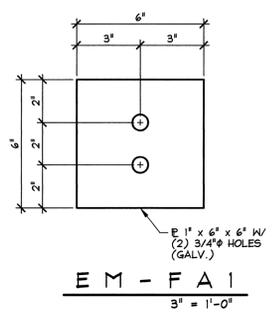
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| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 GEE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010 | | A.L. St. ONGE CONTRACTOR MONTMERY, VERMONT | |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | | DATE: NOV. 10, 2014 | |
| | TOWN OF FAIRFIELD SOUTH ROAD, FAS 0281 (RURAL MAJOR COLLECTOR) BRIDGE NO.: 14 PROJECT NO.: BRF 0281(25) | | SCALE: NOTED | |
| | MATERIALS LIST | | CHKD: B.C. DFTM: B.L. JOB NO: 23446-014 DWG. NO: M1 | |



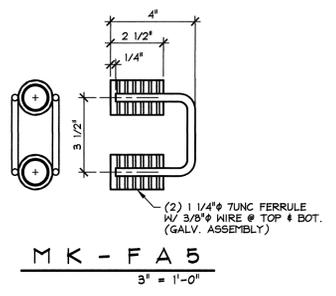
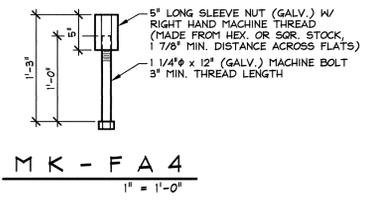
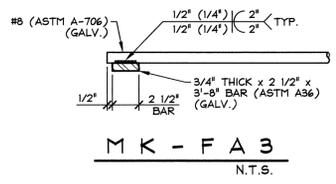
PRESTRESSED SOLID SLABS



PRECAST ABUTMENTS



NOTE:
AFTER MK-FAS ASSEMBLY HAS BEEN GALVANIZED,
ENTIRE ASSEMBLY SHALL BE COATED WITH TWO
PART EPOXY REPAIR MATERIAL IN ACCORDANCE
WITH LEVEL II, DUAL COATED REINFORCING STEEL
MANUFACTURER INSTRUCTIONS.



| MISCELLANEOUS MATERIALS | | | | |
|-------------------------|--------|------|--|--|
| ITEM | MARK | QTY. | DESCRIPTION | REMARKS |
| 1 | EM-FA1 | 16 | E 1" x 6" x 6" W/ (2) 3/4" HOLES (GALV.) | FOR ERECTION; SEE DETAIL THIS SHEET |
| 2 | | 16 | 0.60" x 270 KSI x 18'-9" LONG POLY-STRAND | FOR ERECTION |
| 3 | | 32 | 0.60" SINGLE USE STRESSING CHUCK | FOR ERECTION |
| 4 | | | | |
| 5 | | | | |
| 6 | | 20 | #4 x 46'-2" (LEVEL I, EPOXY COATED) | |
| 7 | | | | |
| 8 | | | | |
| 9 | MK-FAS | 8 | ANCHOR BAR 3/4" THICK x 2 1/2" x 3'-8" (ASTM A36) W/ (3) #8 x 18'-0" & (6) #8 x 6'-0" (ASTM A-706) (GALV.) | GALVANIZED ASSEMBLY; SEE DETAIL THIS SHEET |
| 10 | MK-FA4 | 32 | 5" LG. SLEEVE NUT (GALV.) & 1 1/4" x 12" MACHINE BOLT | GALVANIZED; SEE DETAIL THIS SHEET |
| 11 | MK-FAS | 16 | 2-BOLT FERRULE GUARD RAIL INSERT 1 1/4" TUNC | GALVANIZED; SEE DETAIL THIS SHEET |
| 12 | | 16 | 8T x 13 3/8" SHIFT LIFT LIFTER | GALVANIZED |
| 13 | | 32 | 4" x 1'-5" CORRUGATED PLASTIC ANCHOR DOWEL SLEEVE | |
| 14 | | | | |
| 15 | | | | |
| 16 | | 28 | #5 x 25'-6" (LEVEL I, EPOXY COATED) | |
| 17 | | 20 | #5 x 4'-7 3/4" (LEVEL I, EPOXY COATED) | |
| 18 | | | | |
| 19 | | 1 | BRIDGE PLAGUE | SUPPLIED BY OTHERS |
| 20 | | 8 | 8" x 3'-2" (MAX.) CORRUGATED STEEL SLEEVE | GALVANIZED, AASHTO M 36, TYPE 1 |
| 21 | | 8 | 8" x 5'-2" (MAX.) CORRUGATED STEEL SLEEVE | GALVANIZED, AASHTO M 36, TYPE 1 |
| 22 | | 4 | 2'-0" x 3'-2 3/4" CORRUGATED STEEL SLEEVE | GALVANIZED, AASHTO M 36, TYPE 1 |
| 23 | | 4 | 2'-0" x 5'-2 3/4" CORRUGATED STEEL SLEEVE | GALVANIZED, AASHTO M 36, TYPE 1 |
| 24 | | 4 | SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS | |
| 25 | | | | |

2-10-15 REVISED PER VT AOT COMMENTS

| | | | |
|-----------------|---|--|---|
| APPROVAL STAMP: | J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 244 ONE STR. MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010 | | A.L. St. ONGE CONTRACTOR MONTGOMERY, VERMONT |
| | STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF FRANKLIN | | DATE: NOV. 10, 2014 |
| | TOWN OF FAIRFIELD ELM BROOK ROAD, TOWN HIGHWAY 47 (CLASS 3) BRIDGE NO.: 46 PROJECT NO.: BRO 1448(41) | | SCALE: NOTED |
| | MATERIALS LIST | | CHKD: B.C. DFTM: B.L. JOB NO: 23446-014 DWG. NO: M2 |