RECORD PLANS	
CONTRACTOR:	A.L. ST. ONGE CONTRACTOR,INC.– MONTGOMERY, VT
RESIDENT ENGINEER:	JOSH HULETT
CONSTRUCTION BEGAN:	APRIL 13, 2015
CONSTRUCTION COMPLETE:	OCTOBER 1, 2015
RECORD PLANS BY:	JOSH HULETT & AARON JAMES

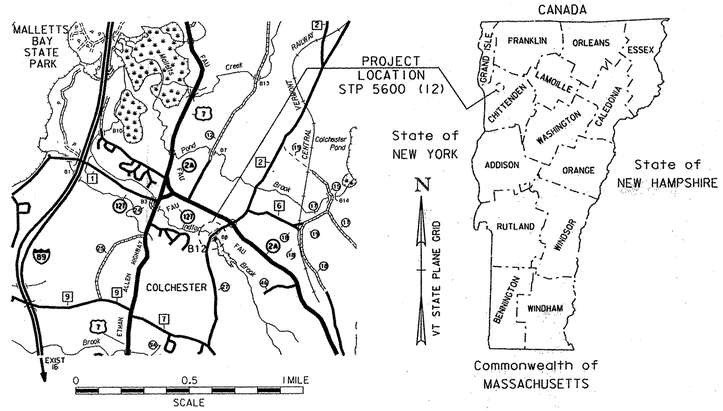
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEGUN ACCOMPLISHED AS INDICATED HEREIN.

BY Josh Hulett RESIDENT ENGINEER

DATE June 20, 2016

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF COLCHESTER

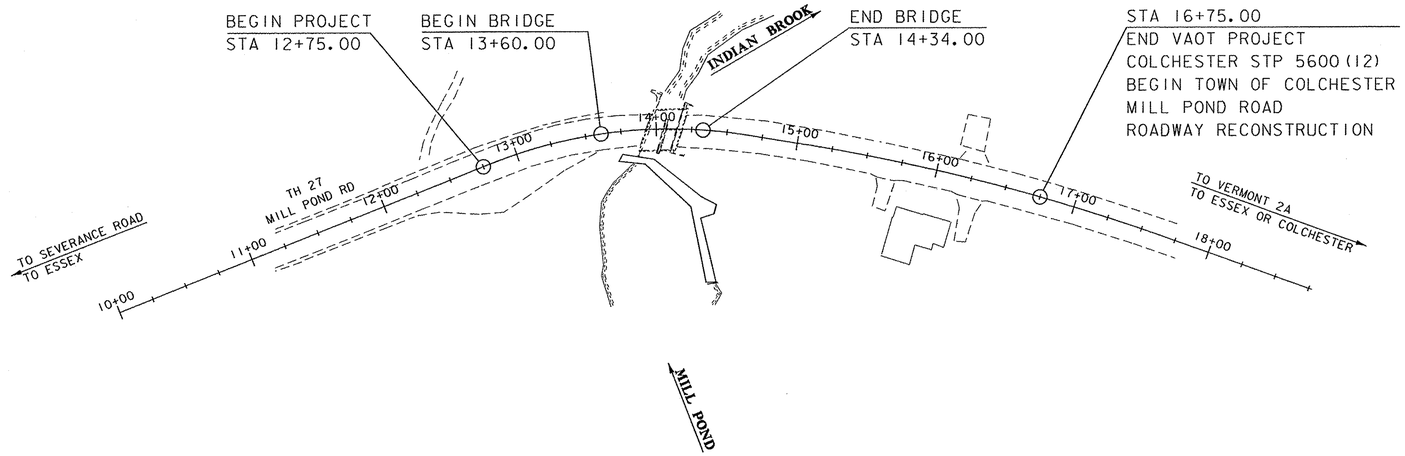
COUNTY OF CHITTENDEN

ROUTE NO : TH 27 (URBAN COLLECTOR) BRIDGE NO : 12

PROJECT LOCATION : PROJECT IS LOCATED AT THE TH27 CROSSING OVER THE INDIAN BROOK ON THE NORTH END OF MILL POND ROAD AND ADJACENT TO THE MILL POND DAM. THE BRIDGE IS 0.4 MILES SOUTH OF THE VERMONT 2A & TH27 INTERSECTION.

PROJECT DESCRIPTION : PROJECT IS FOR REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE :	74.00 FEET
LENGTH OF ROADWAY :	326.00 FEET
LENGTH OF PROJECT :	400.00 FEET



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	R.D. GILMAN
SURVEYED DATE :	07-09-1997
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (1992)

DIRECTOR OF PROJECT DELIVERY

APPROVED [signature] DATE 1/9/2015

PROJECT MANAGER : CAROLYN CARLSON, P.E.

PROJECT NAME : COLCHESTER

PROJECT NUMBER : STP 5600 (12)

SHEET 1 OF 53 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version
LRFD

INDEX OF SHEETS

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STANDARDS LIST

C-10	CURBING	02-11-2008
E-153	WARNING SIGN DETAILS	05-01-2004
E-193	PAVEMENT MARKING DETAILS	08-18-1995
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	02-10-2014
G-1D	STEEL BEAM GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIAN)	02-10-2014
S-352A	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
S-352B	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
S-352C	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
S-352D	GUARDRAIL APPROACH SECTION TO CONCRETE COMBINATION BRIDGE RAILING, TL-3	08-22-2012
T-1	TRAFFIC CONTROL GENERAL NOTES	08-06-2012
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
T-28	CONSTRUCTION SIGN DETAILS	08-06-2012
T-29	CONSTRUCTION SIGN DETAILS	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
T-31	CONSTRUCTION SIGN DETAILS	08-06-2012
T-42	BRIDGE NUMBER PLAQUE	04-09-2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013

STRUCTURES DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	02-09-2012
SD-502.00	CONCRETE DETAILS AND NOTES	10-10-2012
SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	08-29-2011
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	06-04-2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	05-02-2011

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: July 2011

DRAINAGE AREA : 10.29 sq mi
CHARACTER OF TERRAIN : Hilly to Mountainous
STREAM CHARACTERISTICS : Meandering
NATURE OF STREAMBED : Cobbles With Some Ledge Through Structure

PEAK FLOW DATA

Q 2.33 =	310 cfs	Q 50 =	1300
Q 10 =	775	Q 100 =	1550
Q 25 =	1025	Q 500 =	2125

DATE OF FLOOD OF RECORD
ESTIMATED DISCHARGE:
WATER SURFACE ELEV.:
NATURAL STREAM VELOCITY: @ Q50 =
ICE CONDITIONS :
DEBRIS:
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY?
IS ORDINARY RISE RAPID?
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS?
IF YES, DESCRIBE:

WATERSHED STORAGE:
HEADWATERS:
UNIFORM:
IMMEDIATELY ABOVE SITE: X

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Two Span Concrete Slab Bridge
YEAR BUILT:
CLEAR SPAN(NORMAL TO STREAM): 19 ft
VERTICAL CLEARANCE ABOVE STREAMBED: 11 ft
WATERWAY OF FULL OPENING: 200 sq ft
DISPOSITION OF STRUCTURE: To be removed
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Ledge

WATER SURFACE ELEVATIONS AT:

Q2.33 =	**See Additional Information**	VELOCITY =	
Q10 =		"	
Q25 =		"	
Q50 =		"	
Q100 =		"	

LONG TERM STREAMBED CHANGES:

IS THE ROADWAY OVERTOPPED BELOW Q100:
FREQUENCY:
RELIEF ELEVATION:
DISCHARGE OVER ROAD @Q100:

UPSTREAM STRUCTURE

TOWN: Essex — DISTANCE: 14,700 ft
HIGHWAY # : TH3 — STRUCTURE #: Br22
CLEAR SPAN: 10 ft — CLEAR HEIGHT: 10 ft
YEAR BUILT: 1994 — FULL WATERWAY: 64 sq ft
STRUCTURE TYPE: CGMPP

DOWNSTRUCTURE STRUCTURE

TOWN: Colchester — DISTANCE: 5,000 ft
HIGHWAY # : US7 — STRUCTURE #: Br155
CLEAR SPAN: 18 ft — CLEAR HEIGHT: 20 ft
YEAR BUILT: 1929 — FULL WATERWAY: 358 sq ft
STRUCTURE TYPE: Concrete Box

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
TONNAGE	**20**	**36**	**36**	**66**	**30**	**34.5**	**38**
INVENTORY	2.29	1.25					
POSTING							
OPERATING	2.97	1.62	2.38	1.69	2.25	2.03	2.11
COMMENTS:							

AS BUILT "REBAR" DETAIL

LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2015	2300	370	76	3.3	70
2035	2500	400	46	4.1	100

20 year ESAL for flexible pavement 2015 to 2035 : 198000
40 year ESAL for flexible pavement 2015 to 2055 : 449000
Design Speed : 35 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Single Span Curved Girder Bridge

CLEAR SPAN(NORMAL TO STREAM): 70 ft
VERTICAL CLEARANCE ABOVE STREAMBED: 12.5 ft
WATERWAY OF FULL OPENING: 530 sq ft

WATER SURFACE ELEVATIONS AT:

Q2.33 =	**See Additional Information**	VELOCITY=	
Q10 =		"	
Q25 =		"	
Q50 =		"	
Q100 =		"	

IS THE ROADWAY OVERTOPPED BELOW Q100:
FREQUENCY:
RELIEF ELEVATION:
DISCHARGE OVER ROAD @Q100:

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE:
VERTICAL CLEARANCE: @ Q50 =

SCOUR:

REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW:
ORDINARY LOW WATER:
ORDINARY HIGH WATER: 3.5'
DEPTH OR ELEVATION: Depth

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: N/A
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

**No water surface elevations were calculated due to the proximity of the dam upstream.
It is assumed elevations and velocities will be decreased by the proposed longer and higher single span bridge.

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY

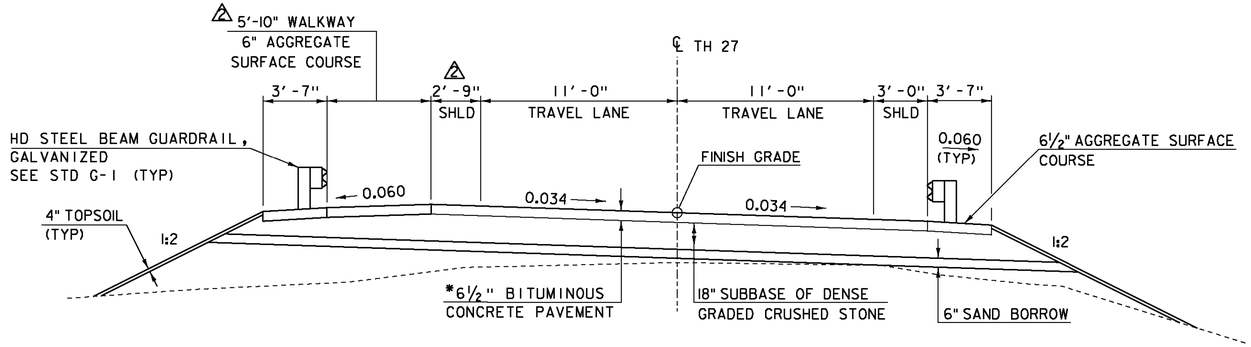
DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_p:	3.0 INCH
3. DESIGN SPAN	L:	70.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND	f_y:	---
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	---
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	---
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	3.5 KSI
11. CONCRETE, CLASS C	f'_c:	3.0 KSI
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270	f_y:	50 KSI
14. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	4.0 KSF
15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	0.45
16. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	20.0 KSF
17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	0.45
18. PILE RESISTANCE FACTOR	ϕ:	---
19. LATERAL PILE DEFLECTION	Δ:	---
20. BASIC WIND SPEED	V_{3s}:	90 MPH
21. MINIMUM GROUND SNOW LOAD	p_g:	---
22. SEISMIC DATA PGA: 0	S_s:	---
	S_1:	---
23.		
24.		---
25.		---
26.		---

PROJECT NAME: **COLCHESTER**
PROJECT NUMBER: **STP 5600 (12)**

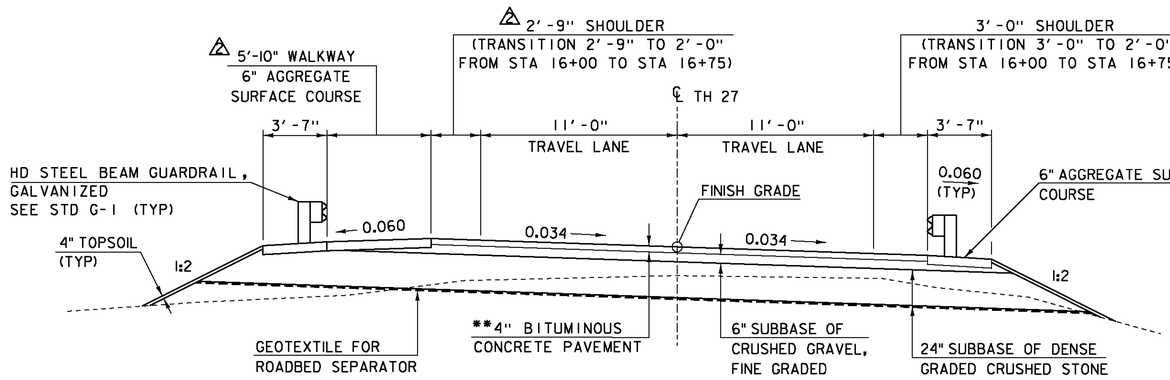
FILE NAME: **s95j298pi.xls**
PROJECT LEADER: **C. CARLSON**
DESIGNED BY: **N. VANDENBERG**
PRELIMINARY INFORMATION SHEET

PLOT DATE: 1/30/2015
DRAWN BY: **R. PELLETT**
CHECKED BY: **N. VANDENBERG**



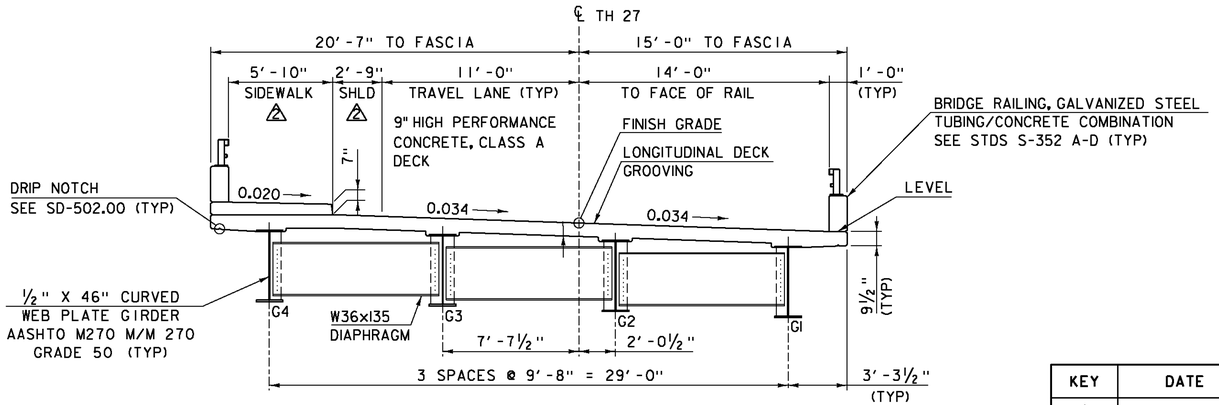
TYPICAL ROADWAY SECTION
STA 11+75.00 - STA 13+60.00 ⚠

SCALE ¼" = 1'-0"



TYPICAL ROADWAY SECTION
STA 14+34.00 - STA 16+75.00 ⚠

SCALE ¼" = 1'-0"



TYPICAL BRIDGE SECTION

SCALE ¼" = 1'-0"

*STA 11+75.00 - STA 13+60.00

2 LIFTS OF 1½" TYPE IVS OVER 1 LIFT OF 3½" TYPE IIS

⚠ **STA 14+34.00 - STA 16+75.00

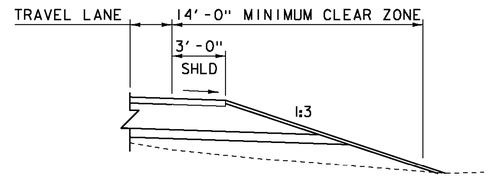
***1 LIFT OF 1½" TYPE IIIS OVER 1 LIFT OF 2½" TYPE IIS

***TOP 1½" LIFT DONE BY OTHERS (SEE SPECIAL PROVISIONS)

MATERIAL TOLERANCES (IF USED ON PROJECT)	
SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

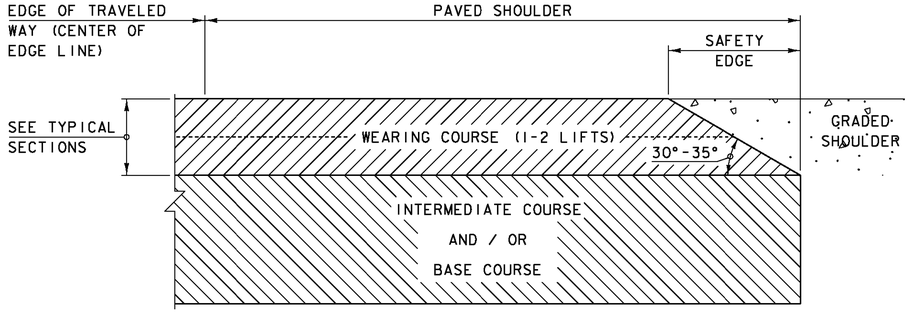
PAVEMENT SHALL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)".

TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT A RATE OF 0.025 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AND 0.080 GAL/SY ON COLD PLANED SURFACES AS DIRECTED BY THE ENGINEER.



DETAIL OF TYPICAL WITHOUT GUARDRAIL

SCALE ¼" = 1'-0"



SAFETY EDGE DETAIL

NOT TO SCALE

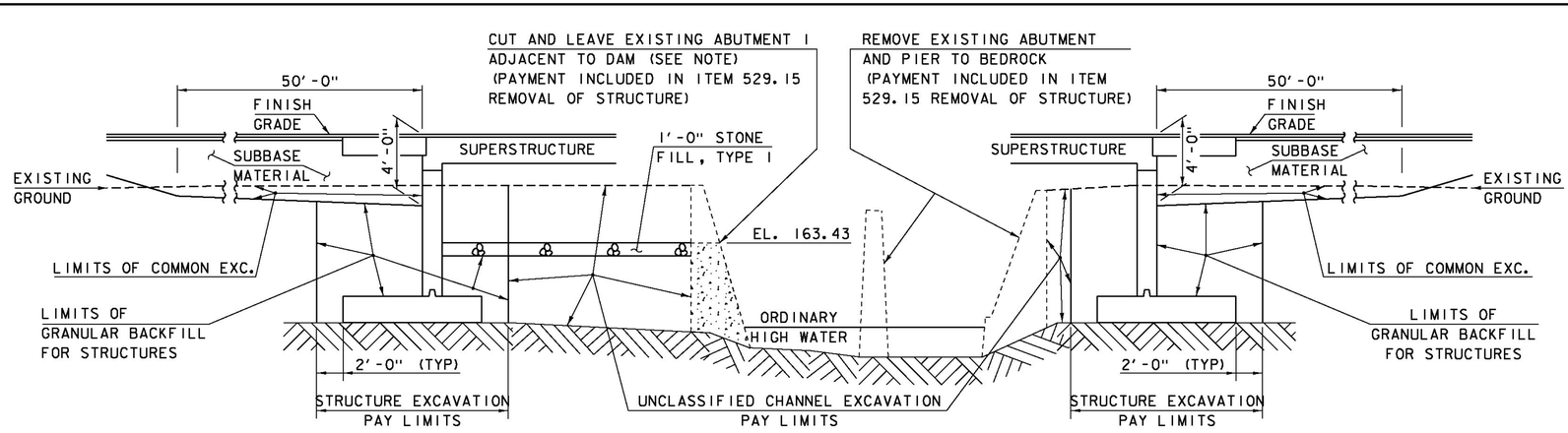
1. THE EDGE OF PAVEMENT SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE 30 TO 35 DEGREE ANGLE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.
2. THE PAVED SHOULDER EXTENDS FROM THE EDGE OF TRAVELED WAY TO THE EDGE OF THE WEARING COURSE, INCLUDING THE "SAFETY EDGE".

KEY	DATE	BY	REVISION
⚠	02/23/2015	VAOT	ADDED ROADWAY TYPICAL SECTION.
2	09/01/2015	VAOT	MODIFIED SIDEWALK AND WALKWAY WIDTHS.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298typ.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDERBERG
TYPICAL SECTIONS 1

PLOT DATE: 01-SEP-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 3 OF 53



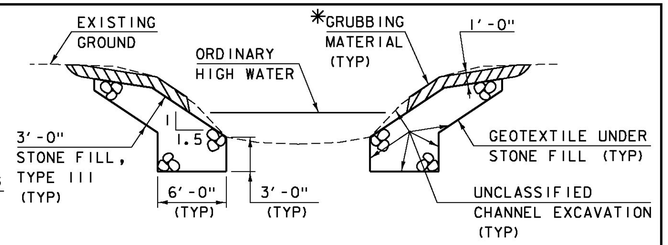
ABUTMENT 1 AND WINGWALL 1 SECTION (NEAR DAM)

(NOT TO SCALE)

ABUTMENT 2 SECTION

(NOT TO SCALE)

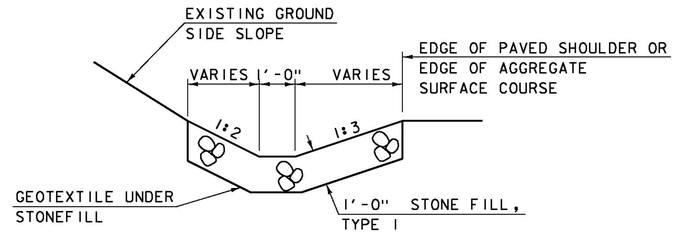
NOTE : SEE "FRONT VIEW OF ABUTMENT 1 STRUCTURE REMOVAL" THIS SHEET



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

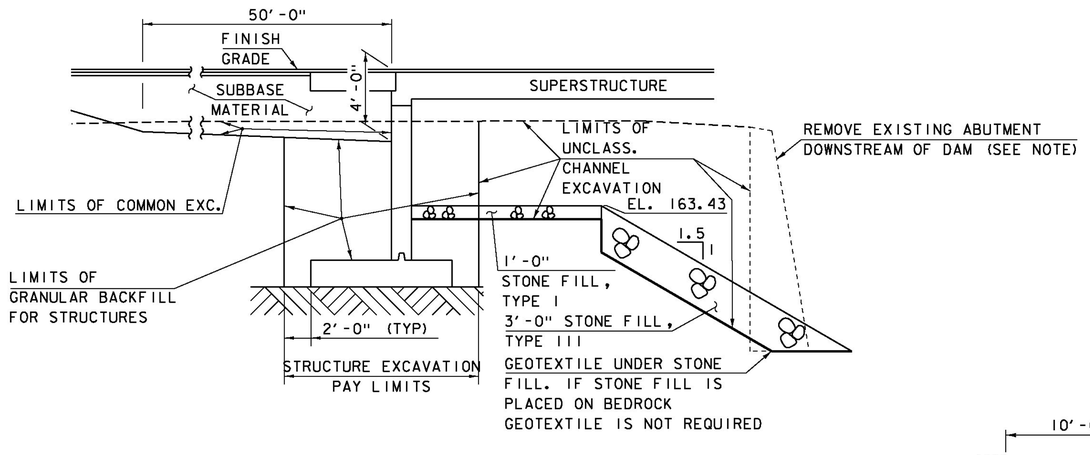
*WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



DITCH TYPICAL

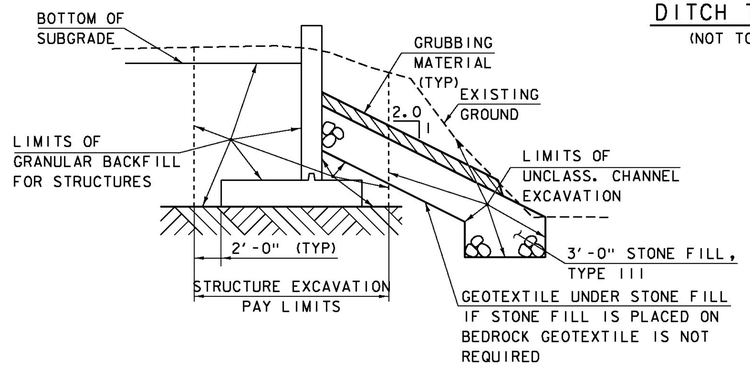
(NOT TO SCALE)

NOTE: STA 12+64.00LT - STA 13+73.75LT



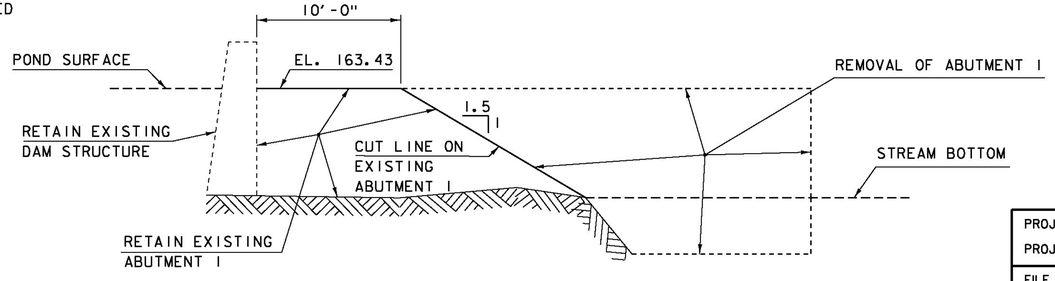
ABUTMENT 1 AND WINGWALL 2 SECTION (DOWNSTREAM OF DAM)

(NOT TO SCALE)



TYPICAL WINGWALL 3 & 4 SECTION

(NOT TO SCALE)



FRONT VIEW OF ABUTMENT 1 STRUCTURE REMOVAL

(NOT TO SCALE)

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	STP 5600 (12)
FILE NAME: s9512981typ.dgn	PLOT DATE: 29-JAN-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: G. ROKES
DESIGNED BY: N. VANDERBERG	CHECKED BY: D. PETERSON
TYPICAL SECTIONS 2	SHEET 4 OF 53

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 2010, AND ITS LATEST REVISIONS.

2. DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED ON AN OFF SITE DETOUR. THE CONTRACTOR SHALL ERECT AND MAINTAIN ALL TEMPORARY ON-PROJECT SIGNS AND BARRICADES AS SHOWN IN THE PLANS AND AS DIRECTED BY THE RESIDENT ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO SPECIAL PROVISION ITEM 900.645 (TRAFFIC CONTROL, ALL-INCLUSIVE). THE TOWN WILL BE RESPONSIBLE FOR ALL OFF-PROJECT DETOUR SIGNS.

3. FULL ACCESS TO DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. IF THE CONTRACTOR NEEDS TO MINIMIZE ACCESS, THE PROPERTY OWNERS MUST BE NOTIFIED TWO DAYS IN ADVANCE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO SPECIAL PROVISION ITEM 900.645 (TRAFFIC CONTROL, ALL-INCLUSIVE).

4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DOCUMENT THE CONDITION OF THE ADJACENT MILL POND DAM, WHICH HAS THE POTENTIAL FOR DAMAGE FROM CONSTRUCTION ACTIVITIES. THIS DOCUMENTATION SHALL BE IN THE FORM OF VIDEO OR PICTURES, WITH SUFFICIENT DESCRIPTION, AND SHALL BE SUPPLIED TO THE ENGINEER PRIOR TO ANY EXCAVATION OR REMOVAL OF EXISTING STRUCTURES. THE COST OF PREPARING THIS DOCUMENTATION WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED INCIDENTAL TO ALL CONTRACT ITEMS. ANY DAMAGE TO THE EXISTING DAM AS THE RESULT OF THE CONTRACTOR'S OPERATIONS, AS DETERMINED BY THE ENGINEER SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE OR MUNICIPALITY.

5. ITEM 529.15 REMOVAL OF STRUCTURE SHALL INCLUDE THE REMOVAL AND DISPOSAL OF EXISTING BRIDGE SUPERSTRUCTURE AND THE REMOVAL OF THE ABUTMENTS AND PIER AS SHOWN IN THE PLANS, WHERE THEIR REMOVAL IS NOT COVERED BY ANY OF THE EXCAVATION ITEMS.

6. FOR INFORMATION REGARDING UTILITIES, SEE THE 'UTILITIES LAYOUT' SHEET AND THE SPECIAL PROVISIONS.

7. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

8. ALL EXISTING SIGNS AND SIGN POSTS NOT RE-USED SHALL REMAIN THE PROPERTY OF THE TOWN. THE CONTRACTOR SHALL CONTACT THE TOWN WHEN THESE ITEMS ARE READY FOR REMOVAL FROM THE PROJECT SITE. CONTACT INFORMATION FOR THE COLCHESTER PUBLIC WORKS DEPARTMENT (802) 264-5620.

9. THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE REMOVED EXISTING STRUCTURAL STEEL.

10. THE ELEVATION AND LOCATION OF MUNICIPAL WATER LINE SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ANY WORK IN THE AREA OF THE WATER LINE. THERE WILL BE NO EXTRA COMPENSATION PAID TO THE CONTRACTOR FOR ANY INCONVENIENCE CAUSED BY WORKING AROUND AND WITH THE MUNICIPALITY AND UTILITY COMPANIES. SEE UTILITIES SPECIAL PROVISION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

EARTHWORK AND RELATED ITEMS

11. THE CONTRACTOR MAY SUBSTITUTE SUBBASE MATERIAL FOR THE SAND BORROW SHOWN ON THE PLANS. THE SUBBASE MATERIAL SHALL BE THE TYPE SPECIFIED IN THE CONTRACT AND SHALL BE PLACED TO MEET THE SUBBASE SPECIFICATIONS. IF SUBBASE IS PLACED IN LIEU OF SAND BORROW, A GEOTEXTILE MEETING THE REQUIREMENTS OF SECTION 649 "GEOTEXTILE FOR ROAD BED SEPARATOR" SHALL BE PLACED BETWEEN THE SUBGRADE AND THE SUBBASE MATERIAL. ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING THE GEOTEXTILE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 203.31 "SAND BORROW".

12. THE HEIGHT OF FILL BEHIND ABUTMENTS WILL BE LIMITED TO THE BRIDGE SEAT ELEVATION UNTIL THE DECK HAS BEEN POURED AND THE CURING PERIOD IS UP.

13. THE STONE FILL ITEMS LOCATED UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE NEW SUPERSTRUCTURE IS SET.

STRUCTURAL STEEL

14. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.

15. ANY HOLES IN THE WEBS OF THE FASCIA GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH BUTTON HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19.

16. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SECTION 506 UNLESS OTHERWISE NOTED.

17. FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE PLACED AT A MAXIMUM SPACING OF 4 FEET. THE BRACKETS SHALL BEAR NEAR THE BOTTOM FLANGE AND IN NO CASE SHALL THEY BEAR ABOVE THE BOTTOM QUARTER OF THE WEB.

18. AFTER THE GIRDERS HAVE BEEN ERECTED, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF THE GIRDERS, AS DIRECTED BY THE RESIDENT ENGINEER, FOR USE IN DETERMINING THE REQUIRED HAUNCH DIMENSIONS.

19. STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01.

20. ALL STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE FINAL COLOR SHALL BE BROWN IN ACCORDANCE WITH SUBSECTION 708.03. GREASE SHALL BE APPLIED FOR A DISTANCE OF 10'-0" STARTING AT THE ABUTMENT #1 END OF THE SPAN. ALL CHANNELS AND CONNECTION PLATES LOCATED IN THIS AREA SHALL ALSO BE GREASED. THE GREASE SHALL BE BROWN. THIS WORK WILL BE PAID FOR UNDER ITEM 900.645 "SPECIAL PROVISION QC/QA CLEANING AND PAINTING STRUCTURAL COMPONENTS". ANY DAMAGE CAUSED TO THE PAINT, INCLUDING THAT CAUSED BY THE CONCRETE OPERATIONS, SHALL BE REPAIRED AND THE COST SHALL BE INCIDENTAL TO ITEM 506.56, STRUCTURAL STEEL, CURVED PLATE GIRDER.

CONCRETE

21. NO TRAFFIC SHALL BE ALLOWED ON THE NEW DECK UNTIL THE CURE PERIOD IS UP AND THE 28 DAY DESIGN STRENGTH IS ATTAINED, AS EVIDENCED BY TEST CYLINDERS CURED UNDER FIELD CONDITIONS AND IN ACCORDANCE WITH SUBSECTION 501.18(B).

22. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL; OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 4.0% TOWARDS MID-SPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTHED WITH A MAGNESIUM FLOAT.

23. WATER REPELLENT SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN THE DRIP NOTCHES.

24. NO CONCRETE IN THE ABUTMENTS OR WINGWALLS SHALL BE PLACED ABOVE THE BRIDGE SEAT ELEVATIONS UNTIL THE GIRDERS HAVE BEEN PROFILED AND THE FINISHED GRADE OF THE DECK HAS BEEN DETERMINED.

25. ALL APPROACH SLAB AND SUBSTRUCTURE CONCRETE SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B UNLESS OTHERWISE NOTED AND WILL BE PAID FOR UNDER ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B". THE DECK AND BRIDGE SIDEWALK CONCRETE SHALL BE CONCRETE, HIGH PERFORMANCE CLASS A AND WILL BE PAID FOR UNDER ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A". ANY CONCRETE REQUIRED FOR SUBFOOTINGS SHALL BE CONCRETE, CLASS C AND WILL BE PAID FOR UNDER ITEM 541.30 "CONCRETE, CLASS C. BRIDGE RAILING CONCRETE SHALL BE CONCRETE, HIGH PERFORMANCE CLASS A AND WILL BE PAID FOR UNDER ITEM 525.45 BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION.

26. ALL REINFORCING STEEL ABOVE THE BRIDGE SEAT SHALL BE CORROSION PROTECTION LEVEL II AND ALL REINFORCING STEEL BELOW THE BRIDGE SEAT, IN WINGWALLS AND IN THE APPROACH SLABS SHALL BE CORROSION PROTECTION LEVEL I. PAYMENT FOR REINFORCING STEEL, WITH THE EXCEPTION OF BRIDGE RAILING REINFORCING STEEL, WILL BE MADE UNDER THE APPROPRIATE 507 CONTRACT ITEM. SUBFOOTING DOWEL BARS WILL BE PAID SEPARATELY UNDER CONTRACT ITEM 507.11.

27. BRIDGE RAILING REINFORCING STEEL, INCLUDING THOSE BARS THAT CONNECT THE BRIDGE RAILING TO THE DECK OR SIDEWALK, SHALL BE PAID FOR UNDER ITEM 525.45 BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION.

28. RELATIVE TO GRADE, ALL DECK POURS SHALL BEGIN FROM THE LOW ELEVATION END AND PROCEED TOWARDS THE HIGH ELEVATION END.

29. THE DECK IS TO BE POURED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A TRANSVERSE CONSTRUCTION JOINT SHALL BE USED BETWEEN ADJACENT POURS. A MINIMUM 96 HOUR DELAY BETWEEN ADJACENT POURS SHALL BE OBSERVED.

30. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.

31. THE VERTICAL KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT.

32. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:
    SPACING: +/- 1 INCH
    CLEARANCE: +/- 1/4 INCH

SUBSTRUCTURES ON BEDROCK

33. FOOTINGS OR SUBFOOTINGS FOR SUBSTRUCTURES FOUNDED ON BEDROCK SHALL BE PLACED ON CLEAN COMPETENT ROCK. ALL LOOSE ROCK AND DEBRIS SHALL BE REMOVED.

34. UPON COMPLETION OF THE EXCAVATION FOR SUBSTRUCTURES FOUNDED ON BEDROCK AND PRIOR TO PLACING FORMWORK, THE RESIDENT ENGINEER SHALL NOTIFY THE PROJECT MANAGER AND THE VTRANS GEOTECHNICAL ENGINEERING MANAGER. THE GEOTECHNICAL ENGINEERING MANAGER WILL DETERMINE IF THE BEDROCK IS COMPETENT TO OBTAIN THE NOMINAL BEARING RESISTANCE AS SHOWN ON THE PLANS. FIVE (5) WORKING DAYS FROM NOTIFICATION SHALL BE ALLOWED TO MAKE THE INSPECTION AND THE DETERMINATION FOR THE COMPETENCY OF THE BEDROCK.

35. ONCE THE ELEVATION OF COMPETENT BEDROCK HAS BEEN DETERMINED, THE CONTRACTOR SHALL PROVIDE A BEDROCK PROFILE TO THE PROJECT MANAGER TO DETERMINE WHETHER THE DESIGN BOTTOM OF FOOTING ELEVATION SHALL BE RAISED OR LOWERED AND WHETHER A SUBFOOTING SHALL BE REQUIRED. FOOTING ELEVATIONS SHALL NOT BE ADJUSTED WITHOUT APPROVAL OF THE PROJECT MANAGER. THREE (3) WORKING DAYS FROM RECEIPT OF THE BEDROCK PROFILE SHALL BE ALLOWED TO MAKE THIS DETERMINATION. NO WORK SHALL BE DONE ON THE FOOTINGS UNTIL A REPLY IS RECEIVED.

36. THE LIMITS OF SUBFOOTINGS SHALL BE 12" OUTSIDE OF THE HORIZONTAL LIMITS OF THE FOOTING. THE TOP SURFACE OF ALL SUBFOOTINGS SHALL BE INTENTIONALLY ROUGHENED TO 1/4" AMPLITUDE.

37. ANY BEDROCK THAT NEEDS TO BE REMOVED SHALL BE PAID FOR WITH THE CORRESPONDING EXCAVATION ITEM INCLUDED IN THE CONTRACT.

38. OVERBREAKAGE BEYOND THE AVERAGE MAXIMUM ALLOWANCE SPECIFIED IN SUBSECTION 204.09(B) (1) SHALL BE AT THE CONTRACTOR'S EXPENSE.

39. DOWELS SHALL BE DRILLED AND GROUTED INTO BEDROCK WHEN SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER. THE DOWELS SHALL HAVE A 1'-6" MINIMUM EMBEDMENT IN THE BEDROCK AND SHALL EXTEND IN THE FOOTING OR SUBFOOTING A MINIMUM OF 1'-6", UNLESS NOTED OTHERWISE.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298gnotes.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
PROJECT NOTES

PLOT DATE: 30-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

	ROADWAY	ROADWAY (NO FED/STATE PARTICIPATION)	EROSION CONTROL	BRIDGE	FULL C. E. ITEMS
	1				
⚠	910				
	10				
				420	
⚠	30				
	60				
	5				
	1				
	110			600	
	60			410	
	160				
⚠	150				
⚠	1010		10		
	60				
⚠	2				
	1				
				148	
	16			209	
				81100	
	1480			19180	
				30910	
				54	
				1	
				231	
	2			41	
				28	
				28	
				150	
				1	
				8	
				48	
	126				
	1				
	60			50	
	90			180	
	50				
	1				
	10				
	21				
	2				

TOTALS

GRAND TOTAL	FINAL
1	
910	
10	
420	
30	
60	
5	
1	
710	
470	
160	
150	
1020	
60	
2	
1	
148	
225	
81100	
20660	
30910	
54	
1	
231	
43	
28	
28	
150	
1	
8	
48	
126	
1	
110	
270	
50	
1	
10	
21	
2	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	-
CY	COMMON EXCAVATION	203.15	6.03
CY	SOLID ROCK EXCAVATION	203.16	EST.
CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	5.6
CY	SAND BORROW	203.31	1.47
CY	TRENCH EXCAVATION OF EARTH	204.20	4.78
CY	TRENCH EXCAVATION OF ROCK	204.21	EST.
CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-
CY	STRUCTURE EXCAVATION	204.25	11.17
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	16.82
SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	2.81
CY	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.26	7.76
CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	2.11
CY	AGGREGATE SURFACE COURSE	401.10	8.42
CWT	EMULSIFIED ASPHALT	404.65	0.05
LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-
CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33	0.98
CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	2.65
LB	STRUCTURAL STEEL, CURVED PLATE GIRDER	506.56	15.88
LB	REINFORCING STEEL, LEVEL I	507.11	25.12
LB	REINFORCING STEEL, LEVEL II	507.12	17.57
LF	DRILLING AND GROUTING DOWELS	507.16	-
LS	SHEAR CONNECTORS (860 - 7/8" X 7")	508.15	-
SY	LONGITUDINAL DECK GROOVING	509.10	0.68
GAL	WATER REPELLENT, SILANE	514.10	0.82
LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	-
LF	JOINT SEALER, HOT POURED	524.11	-
LF	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	525.45	0.85
EACH	REMOVAL OF STRUCTURE (725 SF - EST.)	529.15	-
EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17	-
CY	CONCRETE, CLASS C	541.30	0.03
LF	18" CPEP(SL)	601.2615	-
MGAL	DUST CONTROL WITH WATER	609.10	EST.
CY	STONE FILL, TYPE I	613.10	15.41
CY	STONE FILL, TYPE III	613.12	16.4
LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28	-
EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10	-
TON	BITUMINOUS CONCRETE SIDEWALK	618.15	0.75
SF	DETECTABLE WARNING SURFACE	618.30	0.74
EACH	YIELDING MARKER POSTS	619.17	-

DETAILED SUMMARY OF QUANTITIES

	QUANTITIES	UNIT	ITEMS
			EARTHWORKS SUMMARY
			FILL AVAILABLE
⚠	546	CY	COMMON EXCAVATION (910 x 0.6)
	126	CY	UNCLASSIFIED CHANNEL EXCAVATION (420 x 0.3)
	36	CY	TRENCH EXCAVATION OF EARTH (60 x 0.6)
	213	CY	STRUCTURE EXCAVATION (710 x 0.3)
⚠	9	CY	ROUNDING
⚠	**930**	**CY**	**TOTAL FILL AVAILABLE**
			FILL REQUIRED
	242	CY	FACTORED FILL (210 x 1.15)
	8	CY	ROUNDING
	250	**CY**	**TOTAL FILL REQUIRED**
⚠	**680**	**CY**	**TOTAL WASTE**

N.A.B.I. = NOT A BID ITEM

KEY	DATE	BY	REVISION
⚠	02/23/2015	VAOT	REVISED QUANTITIES AND ADDED PAY ITEM 301.26.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
QUANTITY SHEET 1

PLOT DATE: 23-FEB-2015
DRAWN BY: G. ROKES
CHECKED BY: N. VANDENBERG
SHEET 6 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	ROADWAY (NO FED/STATE PARTICIPATION)	EROSION CONTROL	BRIDGE	FULL C. E. ITEMS
310				
4				
4				
250				
500				
				1
				1
				1
				3000
1				
520				
520				
⚠ 1060				
		570		
		100		
		70		
		100		
		10		
		10		
		70		
		0.3		
		0.3		
		80		
		250		
		1		
		40		
		1		
		230		
		10		
		30		
		750		
		230		
6.91				
46				
2				
	2			
	40			
1				
			1	
1				

TOTALS

GRAND TOTAL	FINAL
310	
4	
4	
250	
500	
1	
1	
1	
3000	
1	
520	
520	
1060	
570	
100	
70	
100	
10	
10	
70	
0.3	
0.3	
80	
250	
1	
40	
1	
230	
10	
30	
750	
230	
6.91	
46	
2	
2	
40	
1	
1	
1	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21	2
EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	-
EACH	GUARDRAIL APPROACH SECTION, CONC COMB BRIDGE RAILING TL-3	621.748	-
LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	1
HR	FLAGGERS	630.15	EST.
LS	FIELD OFFICE, ENGINEERS	631.10	-
LS	TESTING EQUIPMENT, CONCRETE	631.16	-
LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-
DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	EST.
LS	MOBILIZATION/DEMOBILIZATION	635.11	-
LF	4 INCH WHITE LINE	646.20	2
LF	4 INCH YELLOW LINE	646.21	2
SY	GEOTEXTILE FOR ROADBED SEPARATOR	649.11	8.06
SY	GEOTEXTILE UNDER STONE FILL	649.31	7.13
SY	GEOTEXTILE FOR SILT FENCE	649.51	0.46
SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515	9.08
SY	GEOTEXTILE FOR FILTER CURTAIN	649.61	9.5
LB	SEED	651.15	2.55
LB	SEED, WINTER RYE	651.17	2.55
LB	FERTILIZER	651.18	7.92
TON	AGRICULTURAL LIMESTONE	651.20	0.05
TON	HAY MULCH	651.25	0.05
CY	TOPSOIL	651.35	5.3
SY	GRUBBING MATERIAL	651.40	2.53
LS	EPSC PLAN	652.10	-
HR	MONITORING EPSC PLAN	652.20	EST.
LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	-
SY	TEMPORARY EROSION MATTING	653.20	7.38
CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25	EST.
CY	VEHICLE TRACKING PAD	653.35	-
LF	BARRIER FENCE	653.50	1.87
LF	PROJECT DEMARCATION FENCE	653.55	1.88
SF	TRAFFIC SIGNS, TYPE A	675.20	-
LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	-
EACH	REMOVING SIGNS	675.50	-
EACH	SPECIAL PROVISION (PRECAST REINFORCED CONCRETE PERFORATED CATCH BASIN WITH CAST IRON GRATE)	900.620	-
LF	SPECIAL PROVISION (15 INCH UNDERDRAIN PIPE)	900.640	-
LS	SPECIAL PROVISION (CPM SCHEDULE)	900.645	-
LS	SPECIAL PROVISION (QC/QA CLEANING AND PAINTING STRUCTURAL COMPONENTS)	900.645	-
LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

N.A.B.I. = NOT A BID ITEM

KEY	DATE	BY	REVISION
⚠	02/23/2015	VAOT	ADDED PAY ITEM 649.11.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
QUANTITY SHEET 2

PLOT DATE: 23-FEB-2015
DRAWN BY: G. ROKES
CHECKED BY: N. VANDENBERG
SHEET 7 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	ROADWAY (NO FED/STATE PARTICIPATION)	EROSION CONTROL	BRIDGE	FULL C. E. ITEMS
1				
1				
⚠ 262				

TOTALS

GRAND TOTAL	FINAL
1	
1	
262	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650	-
LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650	-
TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680	0.01

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

KEY	DATE	BY	REVISION
⚠	02/23/2015	VAOT	REVISED QUANTITY.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
QUANTITY SHEET 3

PLOT DATE: 23-FEB-2015
DRAWN BY: G. ROKES
CHECKED BY: N. VANDENBERG
SHEET 8 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES						TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
SUPER STRUCTURE	ABUTMENT #1	ABUTMENT #2	APPROACH SLAB #1	APPROACH SLAB #2	CHANNEL	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
					420	420	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27			
	220	380				600	CY	STRUCTURE EXCAVATION	204.25			
	150	260				410	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30			
97	18	33				148	CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33			
	55	100	27	27		209	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			
81100						81100	LB	STRUCTURAL STEEL, CURVED PLATE GIRDER	506.56			
	3990	9110	3010	3070		19180	LB	REINFORCING STEEL, LEVEL I	507.11			
28190	1330	1390				30910	LB	REINFORCING STEEL, LEVEL II	507.12			
	21	33				54	LF	DRILLING AND GROUTING DOWELS	507.16			
1						1	LS	SHEAR CONNECTORS (860 - 7/8" X 7")	508.15			
231						231	SY	LONGITUDINAL DECK GROOVING	509.10			
29	7	5				41	GAL	WATER REPELLENT, SILANE	514.10			
	28					28	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
			28			28	LF	JOINT SEALER, HOT POURED	524.11			
150						150	LF	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	525.45			
1						1	EACH	REMOVAL OF STRUCTURE (725 SF - EST.)	529.15			
	4	4				8	EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17			
	48					48	CY	CONCRETE, CLASS C	541.30			
	50					50	CY	STONE FILL, TYPE I	613.10			
	90	90				180	CY	STONE FILL, TYPE III	613.12			
1						1	LS	SPECIAL PROVISION (QC/QA CLEANING AND PAINTING STRUCTURAL COMPONENTS)	900.645			

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
BRIDGE QUANTITY SHEET

PLOT DATE: 29-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: N. VANDENBERG
SHEET 9 OF 53

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	HWY	HIGHWAY EASEMENT
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⧈	BNDNS	BOUND TO BE SET
●	IPNS	IRON PIN SET
◎	IPNS	IRON PIN TO BE SET
⊠	CALC	EXISTING ROW POINT
○	PROW	PROPOSED ROW POINT
[LENGTH]		LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
	APL	BOUND APPARENT LOCATION
	BM	BENCHMARK
	BND	BOUND
	CB	CATCH BASIN
	COMB	COMBINATION POLE
	DITHR	DROP INLET THROATED DNC
	EL	ELECTRIC POWER POLE
	FPOLE	FLAGPOLE
	GASFIL	GAS FILLER
	GP	GUIDE POST
	GSO	GAS SHUT OFF
	GUY	GUY POLE
	GUYW	GUY WIRE
	GV	GATE VALUE
	H	TREE HARDWOOD
	HCTRL	CONTROL HORIZONTAL
	HVCTRL	CONTROL HORIZ. & VERTICAL
	HYD	HYDRANT
	IP	IRON PIN
	IPIPE	IRON PIPE
	LI	LIGHT - STREET OR YARD
	MB	MAILBOX
	MH	MANHOLE (MH)
	MM	MILE MARKER
	PM	PARKING METER
	PMK	PROJECT MARKER
	POST	POST STONE/WOOD
	RRSIG	RAILROAD SIGNAL
	RRSL	RAILROAD SWITCH LEVER
	S	TREE SOFTWOOD
	SAT	SATELLITE DISH
	SHRUB	SHRUB
	SIGN	SIGN
	STUMP	STUMP
	TEL	TELEPHONE POLE
	TIE	TIE
	TSIGN	SIGN W/DOUBLE POST
	VCTRL	CONTROL VERTICAL
	WELL	WELL
	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

- UGU — UTILITY (GENERIC-UNKNOWN)
- UT — TELEPHONE
- UE — ELECTRIC
- UC — CABLE (TV)
- UEC — ELECTRIC+CABLE
- UET — ELECTRIC+TELEPHONE
- UCT — CABLE+TELEPHONE
- UECT — ELECTRIC+CABLE+TELEP.
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

- AGU — UTILITY (GENERIC-UNKNOWN)
- T — TELEPHONE
- E — ELECTRIC
- C — CABLE (TV)
- EC — ELECTRIC+CABLE
- ET — ELECTRIC+TELEPHONE
- AER E&T — ELECTRIC+TELEPHONE
- CT — CABLE+TELEPHONE
- ECT — ELECTRIC+CABLE+TELEP.
- UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

- TOP OF CUT SLOPE
- TOE OF FILL SLOPE
- STONE FILL
- BOTTOM OF DITCH ℄
- CULVERT PROPOSED
- STRUCTURE SUBSURFACE
- PDF — PDF — PROJECT DEMARCATION FENCE
- BF — BF — BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

- TOWN LINE — TOWN BOUNDARY LINE
- COUNTY LINE — COUNTY BOUNDARY LINE
- STATE LINE — STATE BOUNDARY LINE
- PROPOSED STATE R.O.W. (LIMITED ACCESS)
- PROPOSED STATE R.O.W.
- STATE ROW (LIMITED ACCESS)
- STATE ROW
- TOWN ROW
- PERMANENT EASEMENT LINE (P)
- TEMPORARY EASEMENT LINE (T)
- SURVEY LINE
- P/L — PROPERTY LINE (P/L)
- SR SR SR — SLOPE RIGHTS
- 6F — 6F — 6F PROPERTY BOUNDARY
- 4F — 4F — 4F PROPERTY BOUNDARY
- HAZ — HAZ — HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- WETLAND BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- HAZ — HAZ — HAZARDOUS WASTE AREA
- AG — AGRICULTURAL LAND
- HABITAT — FISH & WILDLIFE HABITAT
- FLOOD PLAIN — FLOOD PLAIN
- OHW — ORDINARY HIGH WATER (OHW)
- STORM WATER
- USDA FOREST SERVICE LANDS
- WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

- ARCH — ARCHEOLOGICAL BOUNDARY
- HISTORIC DIST — HISTORIC DISTRICT BOUNDARY
- HISTORIC — HISTORIC AREA
- (H) HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298legend.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
CONVENTIONAL SYMBOLOGY - LEGEND

PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 10 OF 53

GPS CONTROL POINTS

HVCTRL #1

STANDARD DISK STAMPED

Union Memorial School

N = 747263.8860
E = 1468506.5380
ELEV. = 235.1308

DESCRIBED BY VERMONT AGENCY OF TRANSPORTATION 1996 (CHR) GENERAL LOCATION, COLCHESTER, VT. TO REACH FROM THE INTERSECTION OF VT ROUTE 2A AND U.S. ROUTES 2+7 JUST WEST OF COLCHESTER VILLAGE GO SOUTHEAST ALONG VT ROUTE 2A FOR 0.3 MI (0.5 KM) TO THE MOST SOUTHEASTERLY DRIVE TO THE UNION MEMORIAL SCHOOL AND THE MARK ON THE LEFT, IMMEDIATELY SOUTHEAST OF THE SCHOOL, BETWEEN A SIDEWALK AND A PAVED PARKING AREA. THE MARK IS A CENTERPUNCHED 6 CM DIAMETER BLANK BRASS DISK SET IN THE TOP OF A 30 CM DIAMETER CONCRETE MONUMENT, 1.2 M (3.9 FT) DEEP, AND ABOUT 3 CM BELOW GROUND SURFACE. IT IS 5.9 M (19.4FT) NORTHEAST OF THE NORTHEAST EDGE OF PAVEMENT OF VT ROUTE 2A, 39.6 M (129.9 FT) NORTHWEST OF THE NORTHWEST EDGE OF MIDDLE ROAD, 0.9 M (3.0FT) NORTHEAST OF THE NORTHEAST EDGE OF A CONCRETE SIDEWALK, AND 6.7 M (22.0 FT) SOUTHEAST OF A FIBERGLASS WITNESS POST AND POLE NO. 11-01GMP.

HVCTRL # 2

STANDARD DISK STAMPED

Burnham Library

N = 745757.4225
E = 1471170.2138
ELEV. = 271.2134

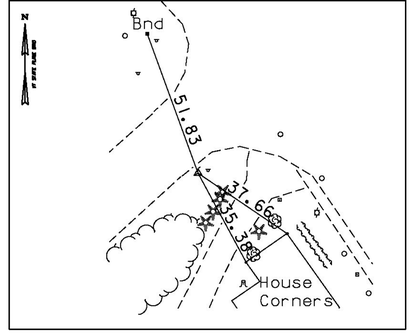
DESCRIBED BY VERMONT AGENCY OF TRANSPORTATION 1996 (CHR) GENERAL LOCATION, COLCHESTER, VT. TO REACH FROM THE INTERSECTION OF VT ROUTE 2A AND U.S. ROUTES 2+7 JUST WEST OF COLCHESTER VILLAGE GO SOUTHEAST ALONG VT ROUTE 2A FOR 0.9 MI (1.4 KM) TO THE MARK ON THE RIGHT, IMMEDIATELY NORTHWEST OF A PAVED DRIVE TO THE BURNHAM MEMORIAL LIBRARY AND COLCHESTER UNITED CHURCH. THE MARK IS A CENTERPUNCHED 6CM DIAMETER BLANK BRASS DISK SET IN THE TOP OF A 30 CM DIAMETER CONCRETE MONUMENT, 1.2 M (3.9 FT) DEEP, AND 6 CM BELOW GROUND SURFACE IN A LAWN. IT IS 7.0 M (23.0 FT) SOUTHWEST OF AND ABOUT LEVEL WITH THE CENTERLINE OF VT ROUTE 2A, 6.5 M (21.3 FT) NORTHWEST OF THE CENTERLINE OF THE PAVED DRIVE TO THE LIBRARY AND CHURCH, 1.5 M (4.9FT) NORTHWEST OF THE NORTHWEST EDGE OF A CONCRETE SIDEWALK, 31.1 M (102.0 FT) NORTH OF THE NORTH CORNER OF THE CHURCH, AND 34.8 M (114.2FT) EAST OF THE EAST CORNER OF THE LIBRARY.

• DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT

TRAVERSE TIES

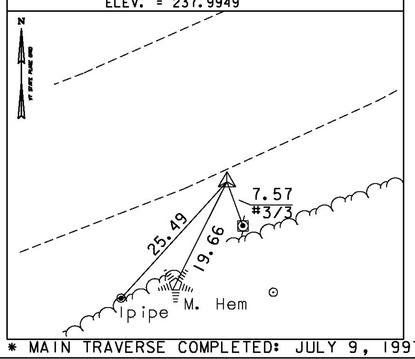
HVCTRL #3

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ELEV. = 268.8085



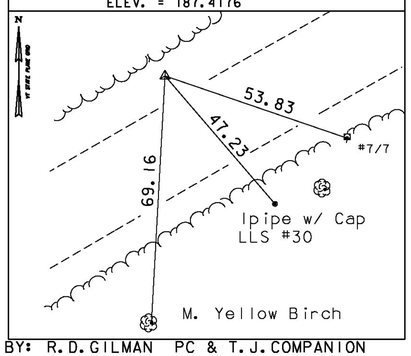
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ELEV. = 237.9949



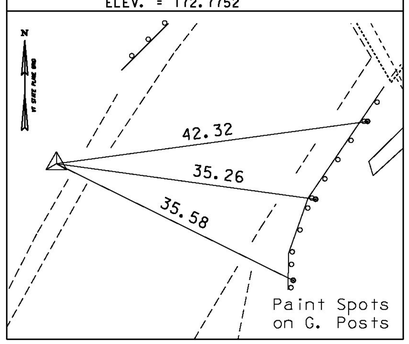
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ELEV. = 187.4176



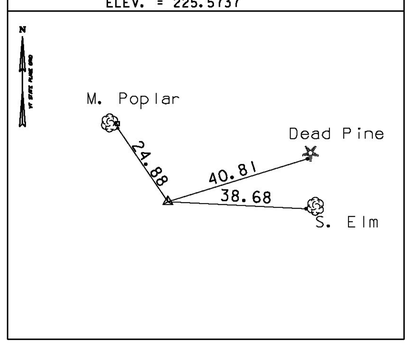
HVCTRL #6

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ELEV. = 172.7752



HVCTRL #7

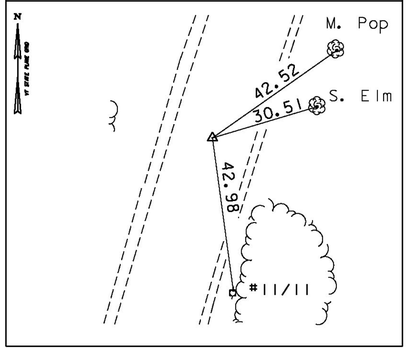
NORTH = 743950.6545
EAST = 1469944.4512
ELEV. = 225.5737



ALIGNMENT TIES

POB 10+00.00

NORTH = 744563.7316
EAST = 1470108.7217

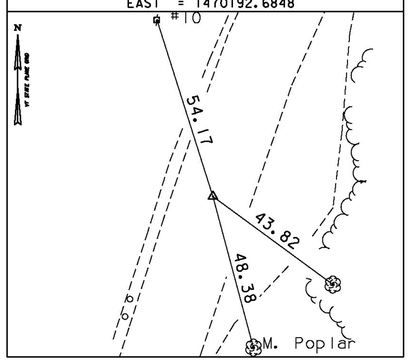


* MAIN TRAVERSE COMPLETED: JULY 9, 1997 BY: R.D.GILMAN PC & T.J.COMPANION

ALIGNMENT TIES

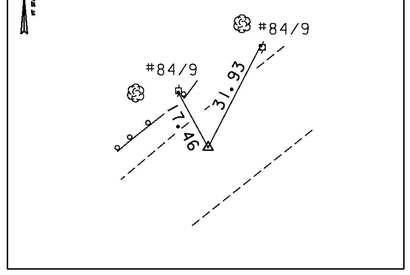
PC 12+68.34

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EAST = 1470192.6848



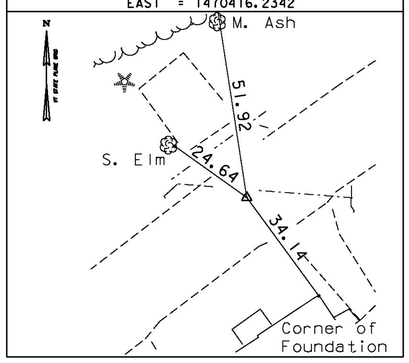
PT 15+17.27

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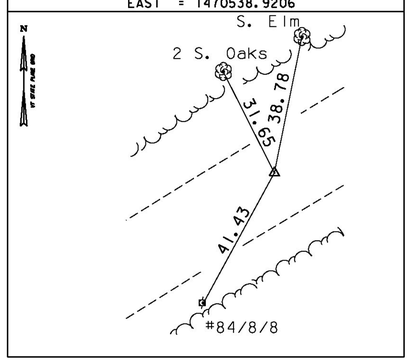
PC 16+18.39

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EAST = 1470416.2342



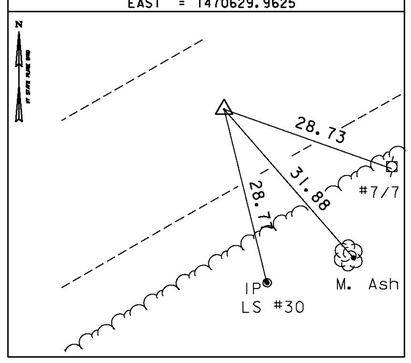
PT 17+65.32

NORTH = 745159.3498
EAST = 1470538.9206



POE 18+70.08

NORTH = 745211.1896
EAST = 1470629.9625



* ALIGNMENT STAKED: ON DEC. 21, 2004 BY R.GILMAN PC & P.WINTERS

DATUM

VERTICAL NAVD 88
HORIZONTAL NAD 83(92)
ADJUSTMENT COMPASS

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: x95j298t1 e.dgn
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: VTRANS
TIE SHEET

PLOT DATE: 12-JAN-2015
DRAWN BY: R. Bullock
CHECKED BY: M. LONGSTREET
SHEET 11 OF 53

CONSTRUCT BITUMINOUS CONCRETE APRON

DRIVE @ 15+67.00 RT (LENGTH 18'-0")
DRIVE @ 16+21.00 LT (LENGTH 9'-6")
DRIVE @ 16+27.00 RT (LENGTH 9'-3")

COLD PLANING, BITUMINOUS PAVEMENT

~~11+75.00~~ - 12+25.00 ⚠3
10+63.00

BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION

13+60.95 RT - 14+33.05 RT
13+61.05 LT - 14+32.95 LT

CAST-IN-PLACE CONCRETE CURB, TYPE B

13+48.36 LT - 13+60.00 LT
14+34.00 LT - 14+45.64 LT
13+46.97 RT - 13+60.00 RT
14+34.00 RT - 14+47.03 RT

RELOCATE MAILBOX, SINGLE SUPPORT

15+54.00 RT - 15+75.00 RT

BITUMINOUS CONCRETE SIDEWALK

13+48.36 LT - 13+60.00 LT
14+34.00 LT - 14+45.64 LT

DETECTABLE WARNING SURFACE

13+48.85 LT - 13+50.76 LT
14+43.24 LT - 14+45.15 LT

HD STEEL BEAM GUARDRAIL, GALV.

12+47.45 RT - 13+42.80 RT
13+16.16 LT - 13+42.90 LT
14+51.20 RT - 15+32.30 RT
14+51.10 LT - 15+40.82 LT

ANCHOR FOR STEEL BEAM RAIL

12+54.84 RT
13+23.00 LT
15+24.95 RT
15+33.70 LT

TH 27 CURVE (1)
DELTA = 31°05'40"
D = 17°06'12"
R = 335.00'
T = 93.20'
L = 181.81'
E = 12.72'

CONSTRUCT STONE-LINED DITCH, TYPE I

12+64.0 LT - 13+77.6 LT
⚠1 15+53.4 LT - 16+04.0 LT

① 16+04.43 LT - 16+42.46 RT
REMOVE EXISTING 18" PIPE AND CONCRETE HEADWALLS AT INLET AND OUTLET

② 16+04.48 LT - 16+36.62 LT
REMOVE EXISTING 24" CGMP

① 16+03.15 LT - 16+61.38 RT ⚠1
NEW 18" X 70' CPEP (SL)

② 16+63.00 RT
NEW PRECAST REINFORCED CONCRETE PERFORATED CATCH BASIN WITH BEE-HIVE TYPE GRATE

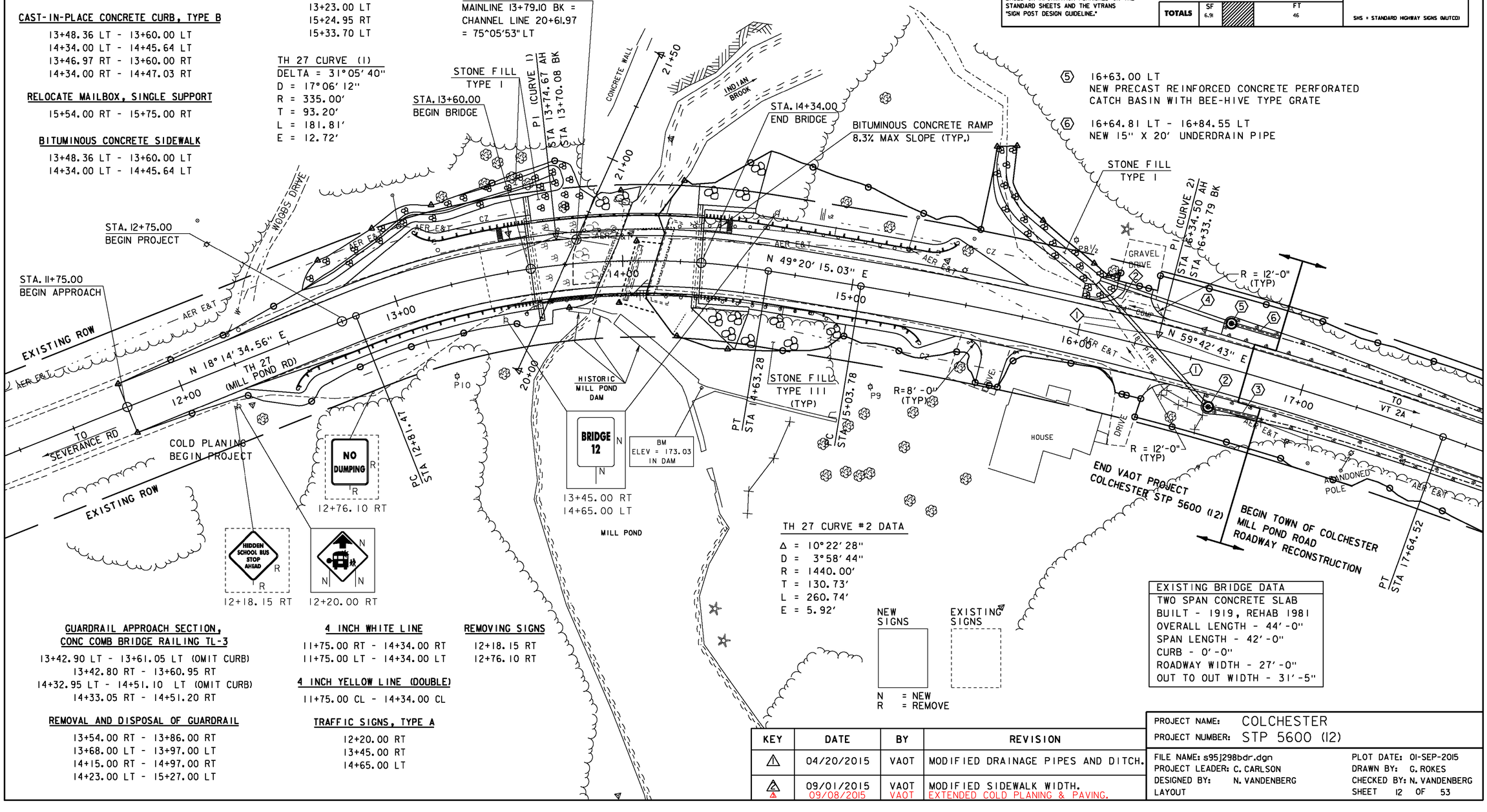
③ 16+64.85 RT - 16+85.07 RT
NEW 15" X 20' UNDERDRAIN PIPE

④ 16+04.21 LT - 16+61.19 LT ⚠1
NEW 18" X 58' CPEP (SL)

⑤ 16+63.00 LT
NEW PRECAST REINFORCED CONCRETE PERFORATED CATCH BASIN WITH BEE-HIVE TYPE GRATE

⑥ 16+64.81 LT - 16+84.55 LT
NEW 15" X 20' UNDERDRAIN PIPE

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW SIGN "A"	EXIST POST RETAIN	EXIST POST SALVAGE	NO. OF POSTS	NEW SIGN POSTS SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLIPBASE	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
12+20.00 RT		30	30	6.25			2		15		X		S3-1		E-153
13+45.00 RT	BRIDGE 12	6	8	0.33			1	8			X		VD-701		T-42
14+65.00 LT	BRIDGE 12	6	8	0.33			1	8			X		VD-701		T-42
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."								FT 16	FT 30	FT		EA			
	TOTALS			SF 6.91					FT 46				SHS = STANDARD HIGHWAY SIGNS (MUTCD)		



TH 27 CURVE #2 DATA

Δ = 10°22'28"
D = 3°58'44"
R = 1440.00'
T = 130.73'
L = 260.74'
E = 5.92'

NEW SIGNS
EXISTING SIGNS
N = NEW
R = REMOVE

EXISTING BRIDGE DATA
TWO SPAN CONCRETE SLAB
BUILT - 1919, REHAB 1981
OVERALL LENGTH - 44'-0"
SPAN LENGTH - 42'-0"
CURB - 0'-0"
ROADWAY WIDTH - 27'-0"
OUT TO OUT WIDTH - 31'-5"

GUARDRAIL APPROACH SECTION, CONC COMB BRIDGE RAILING TL-3

13+42.90 LT - 13+61.05 LT (OMIT CURB)
13+42.80 RT - 13+60.95 RT
14+32.95 LT - 14+51.10 LT (OMIT CURB)
14+33.05 RT - 14+51.20 RT

REMOVAL AND DISPOSAL OF GUARDRAIL

13+54.00 RT - 13+86.00 RT
13+68.00 LT - 13+97.00 LT
14+15.00 RT - 14+97.00 RT
14+23.00 LT - 15+27.00 LT

4 INCH WHITE LINE

11+75.00 RT - 14+34.00 RT
11+75.00 LT - 14+34.00 LT

4 INCH YELLOW LINE (DOUBLE)

11+75.00 CL - 14+34.00 CL

TRAFFIC SIGNS, TYPE A

12+20.00 RT
13+45.00 RT
14+65.00 LT

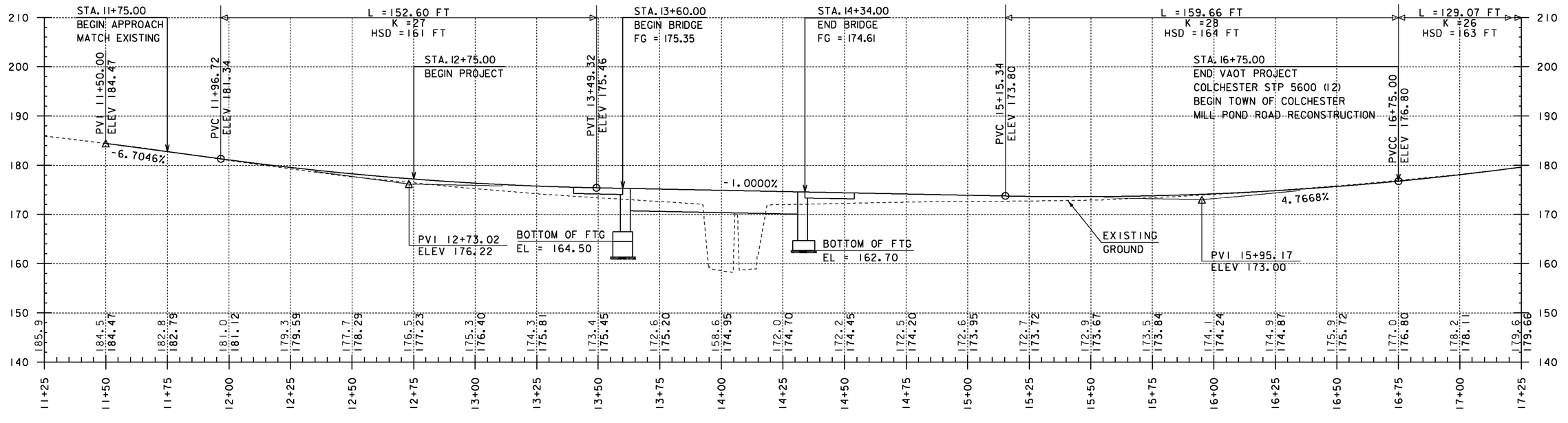
REMOVING SIGNS

12+18.15 RT
12+76.10 RT

KEY	DATE	BY	REVISION
⚠1	04/20/2015	VAOT	MODIFIED DRAINAGE PIPES AND DITCH.
⚠2 ⚠3	09/01/2015 09/08/2015	VAOT VAOT	MODIFIED SIDEWALK WIDTH. EXTENDED COLD PLANING & PAVING.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
LAYOUT
PLOT DATE: 01-SEP-2015
DRAWN BY: G. ROKES
CHECKED BY: N. VANDENBERG
SHEET 12 OF 53



TH 27 PROFILE

HORIZONTAL SCALE = 1" = 20'
VERTICAL SCALE = 1" = 10'

THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

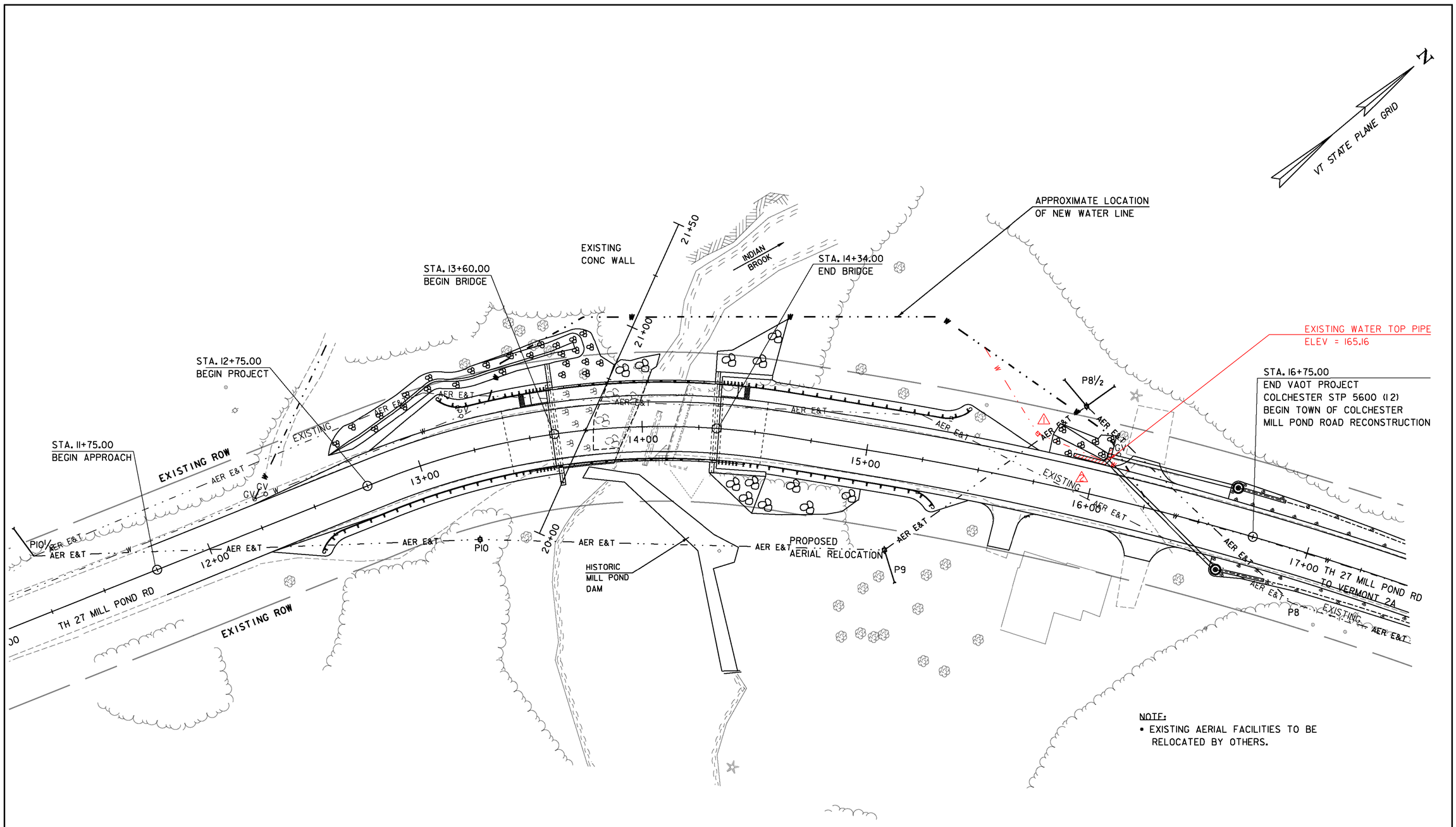
THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

KEY	DATE	BY	REVISION
⚠	08/21/2015	VAOT	MODIFIED VERTICAL ALIGNMENT.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298pro.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
PROFILE

PLOT DATE: 01-SEP-2015
DRAWN BY: G. ROKES
CHECKED BY: N. VANDENBERG
SHEET 13 OF 53



NOTE:
- EXISTING AERIAL FACILITIES TO BE RELOCATED BY OTHERS.

KEY	DATE	BY	REVISION
1	05/15/2015	VAOT	HYDRANT @ 15+70 LT. BY OTHERS
2	04/21/2015	VAOT	HEADWALL ELIMINATED

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s9529Butilbdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDERBERG
UTILITIES LAYOUT

PLOT DATE: 26-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 14 OF 53

SOIL CLASSIFICATION

AASHTO	
A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

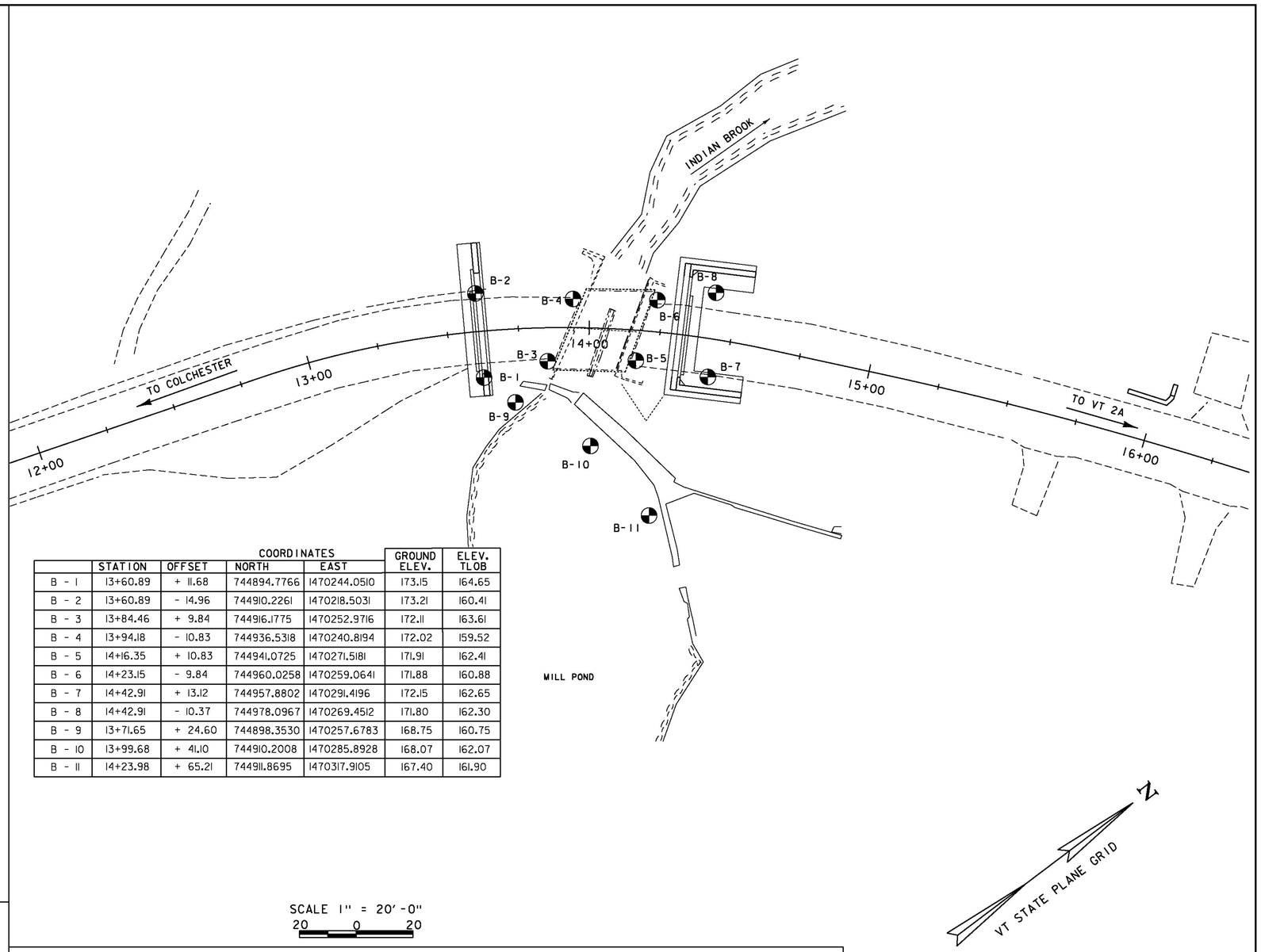
DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

▼	Water Elevation
⊙	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	Top of Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)
VTSPG	NAD83 - See Note 7

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		



	STATION	OFFSET	COORDINATES NORTH	COORDINATES EAST	GROUND ELEV.	ELEV. TLOB
B - 1	13+60.89	+ 11.68	744894.7766	1470244.0510	173.15	164.65
B - 2	13+60.89	- 14.96	744910.2261	1470218.5031	173.21	160.41
B - 3	13+84.46	+ 9.84	744916.1775	1470252.9716	172.11	163.61
B - 4	13+94.18	- 10.83	744936.5318	1470240.8194	172.02	159.52
B - 5	14+16.35	+ 10.83	744941.0725	1470271.5181	171.91	162.41
B - 6	14+23.15	- 9.84	744960.0258	1470259.0641	171.88	160.88
B - 7	14+42.91	+ 13.12	744957.8802	1470291.4196	172.15	162.65
B - 8	14+42.91	- 10.37	744978.0967	1470269.4512	171.80	162.30
B - 9	13+71.65	+ 24.60	744898.3530	1470257.6783	168.75	160.75
B - 10	13+99.68	+ 41.10	744910.2008	1470285.8928	168.07	162.07
B - 11	14+23.98	+ 65.21	744911.8695	1470317.9105	167.40	161.90

SCALE 1" = 20'-0"
20 0 20

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.

GENERAL NOTES

1. The subsurface explorations shown herein were made between 03-01-2002 and 03-22-2005 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.
7. Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
BORING LAYOUT

PLOT DATE: 26-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 15 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-01
SHEET 1 of 1
DATE STARTED: 3/01/02
DATE COMPLETED: 3/01/02

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 13+60.89
OFFSET: 11.68

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 173.15 ft
GROUNDWATER DEPTH: 10.1 ft 3/01/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

ABUTMENT #1
ON BEDROCK
TOP OF FTG
ELEV. 166.50

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
5		A-4, SaSi, brn-gry, Moist, Rec. = 1.0 ft	6	24.3	1.1	33.9	65.0
		Visual Class: Broken Cobbles with Wood, gry, Moist, Rec. = 0.3 ft, 6.2 ft - 8.2 ft	R				
					Top of Bedrock @ 8.5 ft		
10		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 8.5 ft - 13.5 ft, Rec. = 5.0 ft	1	100	61		
15		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 13.5 ft - 18.5 ft, Rec. = 4.7 ft	2	94	94		
		Hole stopped @ 18.5 ft					
20							
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT_AOT.GDT 9/2/05

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-02
SHEET 1 of 1
DATE STARTED: 3/20/02
DATE COMPLETED: 3/20/02

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 13+60.89
OFFSET: -14.96

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 173.21 ft
GROUNDWATER DEPTH:

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: MILES

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

ABUTMENT #1
ON BEDROCK
TOP OF FTG
ELEV. 166.50

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
5		Visual Class: A-4, Sa Sl with Wood, gry, Moist, Rec. = 1.4 ft, 4.9 ft - 6.9 ft	3	50.7			
10		A-4, SaSi, gry, Moist, Rec. = 1.1 ft	3	26.0	1.7	40.7	57.6
					Top of Bedrock @ 12.8 ft		
		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 12.8 ft - 17.8 ft, Rec. = 5.0 ft	1	100	95		
15							
		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 17.8 ft - 22.8 ft, Rec. = 5.0 ft	2	100	87		
20		Hole stopped @ 22.8 ft					
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT_AOT.GDT 9/2/05

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s9512980or.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
BORING LOG 1

PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 16 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-03
SHEET 1 of 1
DATE STARTED: 3/06/02
DATE COMPLETED: 3/07/02

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 13+84.46
OFFSET: 9.84

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 172.11 ft
GROUNDWATER DEPTH: 10.2 ft 3/07/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		Asphalt, 0.0 ft – 0.1 ft					
		Boulder, 1.5 ft – 2.5 ft					
5		Boulders, 3.9 ft – 5.9 ft					
		Boulder, 5.9 ft – 7.9 ft					
		Top of Bedrock @ 8.5 ft					
10		Light gray, Limestone, Poor RQD, Moderately hard, Unweathered, NXMDC, 8.5 ft – 11.0 ft, Rec. = 2.2 ft	1	88	0		
		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 11.0 ft – 16.0 ft, Rec. = 5.0 ft	2	100	100		
15		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 16.0 ft – 18.4 ft, Rec. = 2.4 ft	3	100	100		
		Hole stopped @ 18.4 ft					
20							
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT AOT.GDT 9/2/05

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-04
SHEET 1 of 1
DATE STARTED: 3/21/02
DATE COMPLETED: 3/22/02

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 13+94.18
OFFSET: -10.83

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 172.02 ft
GROUNDWATER DEPTH: 9.8 ft 3/22/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: MILES

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
5		Boulders, No sample, Cleaned out casing, 3.2 ft – 5.2 ft					
		Boulders, No sample, Cleaned out casing, 6.2 ft – 8.2 ft					
10		Boulders, No sample, Cleaned out casing, 9.8 ft – 11.8 ft					
		Top of Bedrock @ 12.5 ft					
		Light gray, Limestone, Fair Competency, Moderately hard, Unweathered, NXMDC, 12.5 ft – 17.5 ft, Rec. = 5.0 ft	1	100	57		
15		Light gray, Limestone, Fair Competency, Moderately hard, Unweathered, NXMDC, 17.5 ft – 22.5 ft, Rec. = 3.0 ft	2	60	36		
		Hole stopped @ 22.5 ft					
20							
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT AOT.GDT 9/2/05

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
BORING LOG 2

PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 17 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-05
SHEET 1 of 1
DATE STARTED: 3/14/02
DATE COMPLETED: 3/14/02

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 14+16.35
OFFSET: 10.83

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 171.91 ft
GROUNDWATER DEPTH: No Water Showing 3/14/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

ABUTMENT #2
ON BEDROCK
TOP OF FTG
ELEV. 164.70

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		Asphalt, 0.0 ft – 0.1 ft					
5		Boulders with various small breaks, No sample, 1.5 ft – 9.3 ft					
					Top of Bedrock @ 9.5 ft		
10		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 9.5 ft – 14.5 ft, Rec. = 5.0 ft	1	100	96		
15		Light gray, Limestone, Competent, Last bottom of core in hole, Poor Recovery due to equipment failure, Moderately hard, Unweathered, NXMDC, 14.5 ft – 19.5 ft, Rec. = 2.3 ft	2	46	46		
20		Hole stopped @ 19.5 ft					
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT ADT.GDT 9/2/05

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-06
SHEET 1 of 1
DATE STARTED: 3/25/02
DATE COMPLETED: 3/26/02

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 14+23.15
OFFSET: -9.84

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 171.88 ft
GROUNDWATER DEPTH: 8.5 ft 3/26/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

ABUTMENT #2
ON BEDROCK
TOP OF FTG
ELEV. 164.70

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		Asphalt, 0.0 ft – 0.07 ft					
5		Boulder, Cleaned out casing, 6.5 ft – 8.0 ft					
10		Boulder, Cleaned out casing, 9.8 ft – 10.8 ft					
					Top of Bedrock @ 11.0 ft		
		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 11.0 ft – 16.0 ft, Rec. = 5.0 ft	1	100	100		
15		Light gray, Limestone, Competent, Last bottom of core in hole, Poor Recovery due to equipment failure, Moderately hard, Unweathered, NXMDC, 16.0 ft – 21.0 ft, Rec. = 2.3 ft	2	46	46		
20		Hole stopped @ 21.0 ft					
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT ADT.GDT 9/2/05

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
BORING LOG 3

PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 18 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-07
SHEET 1 of 1
DATE STARTED: 3/07/02
DATE COMPLETED: 3/11/02

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 14+42.91
OFFSET: 13.12

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 172.15 ft
GROUNDWATER DEPTH: 8.0 ft 3/11/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

ABUTMENT #2
ON BEDROCK
TOP OF FTG
ELEV. 164.70

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		Asphalt, 0.0 ft – 0.1 ft					
5		A-4, SlSa, Lt/gry, Moist, Rec. = 0.8 ft	6	15.5	6.8	54.4	38.8
					Top of Bedrock @ 9.5 ft		
10		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 9.5 ft – 14.5 ft, Rec. = 4.2 ft	1	84	65		
15		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 14.5 ft – 19.5 ft, Rec. = 4.2 ft	2	84	70		
20		Hole stopped @ 19.5 ft					
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT_AOT.GDT 9/2/05

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-08
SHEET 1 of 1
DATE STARTED: 3/11/02
DATE COMPLETED: 3/13/02

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 14+42.91
OFFSET: -10.37

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 171.8 ft
GROUNDWATER DEPTH: 8.5 ft 3/13/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

ABUTMENT #2
ON BEDROCK
TOP OF FTG
ELEV. 164.70

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
5		Boulders, No sample, 1.8 ft – 6.0 ft					
		Boulder, Cleaned out casing, 7.0 ft – 9.0 ft					
					Top of Bedrock @ 9.5 ft		
10		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 9.5 ft – 14.5 ft, Rec. = 5.0 ft	1	100	96		
15		Light gray, Limestone, Competent, Moderately hard, Unweathered, NXMDC, 14.5 ft – 19.5 ft, Rec. = 4.9 ft	2	98	70		
20		Hole stopped @ 19.5 ft					
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT_AOT.GDT 9/2/05

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
BORING LOG 4

PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 19 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-09
SHEET 1 of 1
DATE STARTED: 3/22/05
DATE COMPLETED: 3/22/05

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 13+71.65
OFFSET: 24.60

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 168.75 ft
GROUNDWATER DEPTH: 0.0 ft 3/22/05

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: PUALWAN

BORING RIG: LAG TRACK RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / ROD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
5		Wood with a few stone chips, brn, MTW, Rec. = 0.6 ft, 5.0 ft – 7.0 ft	43				
		Advanced casing, Possible boulders or broken rock, 7.0 ft – 8.0 ft					
					Top of Bedrock @ 8.0 ft		
10		White, Marble, Competent, Hard, Unweathered, BXMDC, 8.0 ft – 13.0 ft, Rec. = 5.0 ft	1	100	92		5 5 9 9 10
15		White to white gray, Marble, Competent, Hard, Unweathered, BXMDC, 13.0 ft – 18.0 ft, Rec. = 4.4 ft	2	88	88		3 5 2 5 5
		Hole stopped @ 18.0 ft					
20		DRILLER'S NOTES: Static Water (pond) Elevation: 168.86 ft. on 04/19/05.					
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT ADT.GDT 6/7/05

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-10
SHEET 1 of 1
DATE STARTED: 3/18/05
DATE COMPLETED: 3/18/05

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 13+99.68
OFFSET: 41.10

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 168.07 ft
GROUNDWATER DEPTH:

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LAG TRACK RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / ROD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
5		A-4, SaSi with a small amount of wood particles, gry, Moist, Rec. = 0.3 ft	7	41.8	13.3	30.5	56.2
					Top of Bedrock @ 6.0 ft		
10		White to gray, Marble, Competent, Hard, Unweathered, BXMDC, 6.0 ft – 11.0 ft, Rec. = 5.0 ft	1	100	90		6 5 6 7 5
15		White to gray, Marble, Competent, Hard, Unweathered, BXMDC, 11.0 ft – 16.0 ft, Rec. = 5.0 ft	2	100	100		
		Hole stopped @ 16.0 ft					
20		DRILLER'S NOTES: Static Water (pond) Elevation: 168.86 ft. on 04/19/05.					
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT ADT.GDT 6/7/05

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s9sj298bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
BORING LOG 5

PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 20 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-11
SHEET 1 of 1
DATE STARTED: 3/21/05
DATE COMPLETED: 3/21/05

PROJECT NAME: COLCHESTER
SITE NAME: BR-12
STATION: 14+23.98
OFFSET: 65.21

PROJECT NUMBER: TH3-9521
SITE NUMBER: TH-27
GROUND ELEVATION: 167.4 ft
GROUNDWATER DEPTH: 0.0 ft 3/21/05

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: PUALWAN

BORING RIG: LAG TRACK RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

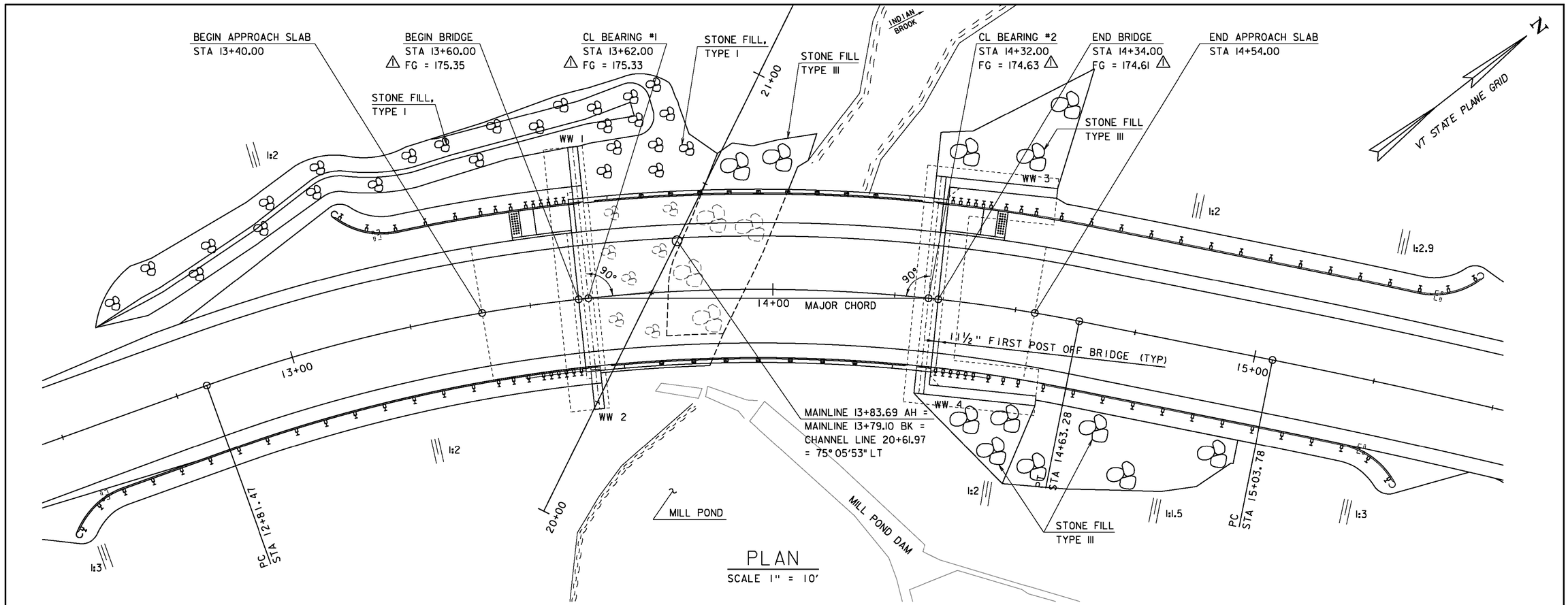
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
			R	45.0 21.7			
		Visual Class: A-4, SaSi, Dk/gry, MTW, Rec. = 0.2 ft, 3.5 ft - 3.7 ft, insufficient sample for testing. Visual Class: Weathered Concrete, gry, Moist, Rec. = 0.3 ft, 3.7 ft - 4.0 ft, Chemical tested: Ph 11.0					
5					Top of Bedrock @ 5.5 ft		
		White to gray, Marble, Competent, Hard, Unweathered, BXMDC, 5.5 ft - 10.5 ft, Rec. = 5.0 ft	1	100	98		11 9 5 11
10							12
		White to gray, Marble, Competent, Hard, Unweathered, BXMDC, 10.5 ft - 15.5 ft, Rec. = 5.0 ft	2	100	97		7 8 6 4
15							8
		Hole stopped @ 15.5 ft					
		DRILLER'S NOTES: Static Water (pond) Elevation: 168.86 ft. on 04/19/05.					
20							
25							

LOG OF BORING COLCHESTER TH3 9521.GPJ VT AOT.GDT 6/7/05

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s9512980r.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
BORING LOG 6

PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 21 OF 53

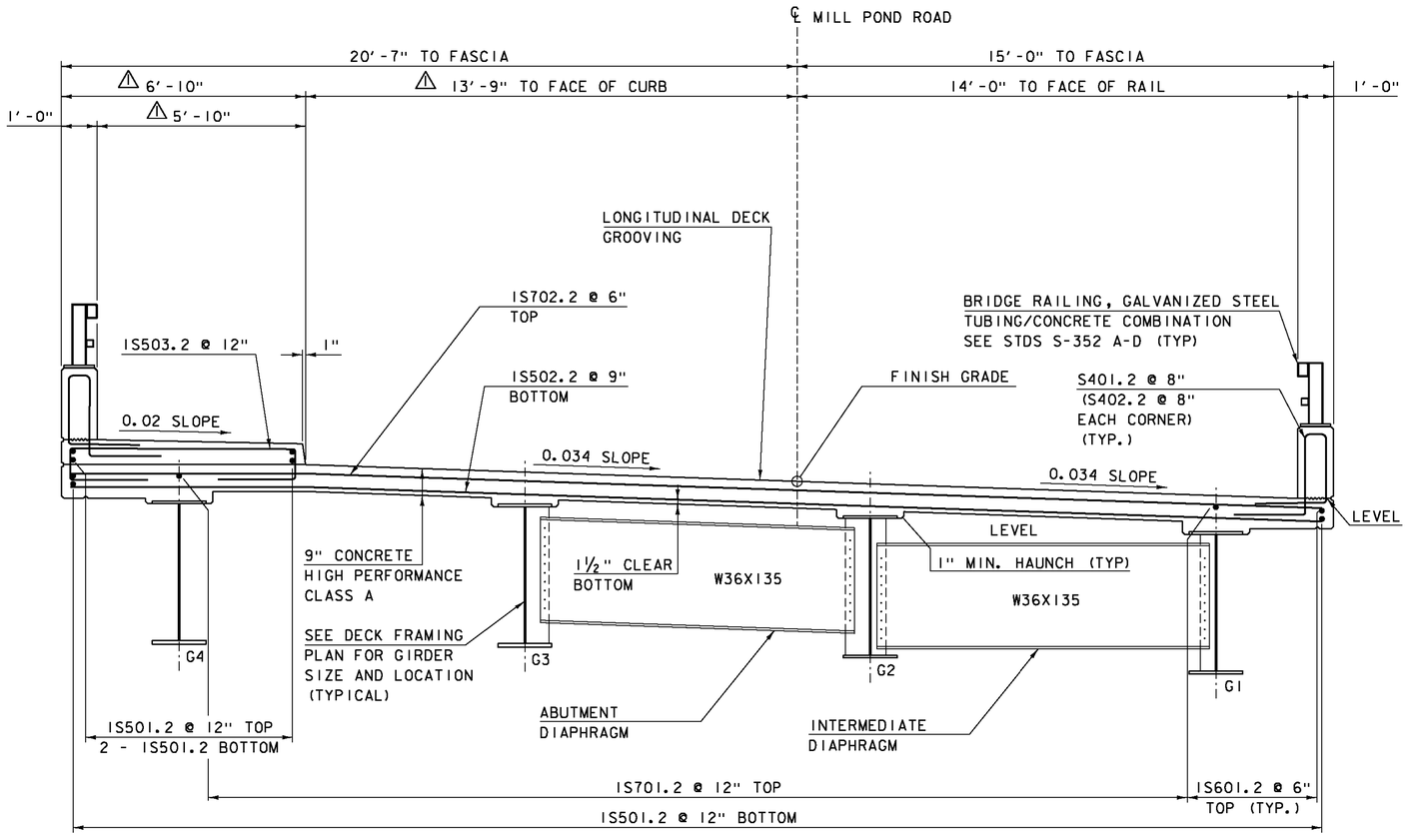


KEY	DATE	BY	REVISION
⚠	09/01/2015	VAOT	MODIFIED FINISH GRADES & SIDEWALK WIDTH.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

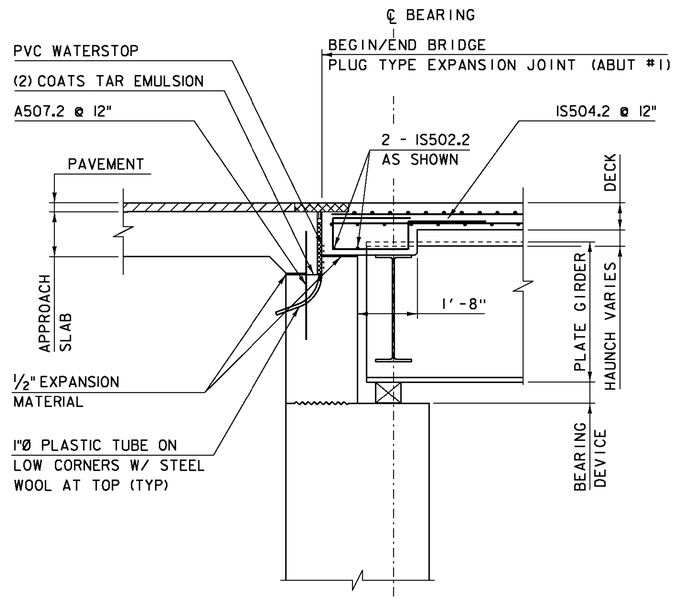
FILE NAME: s95j298pe.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
PLAN AND ELEVATION

PLOT DATE: 01-SEP-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 22 OF 53



DECK TYPICAL

SCALE ½" = 1'-0"



BEGIN/END BRIDGE DETAIL

SCALE ½" = 1'-0"

NOTE:

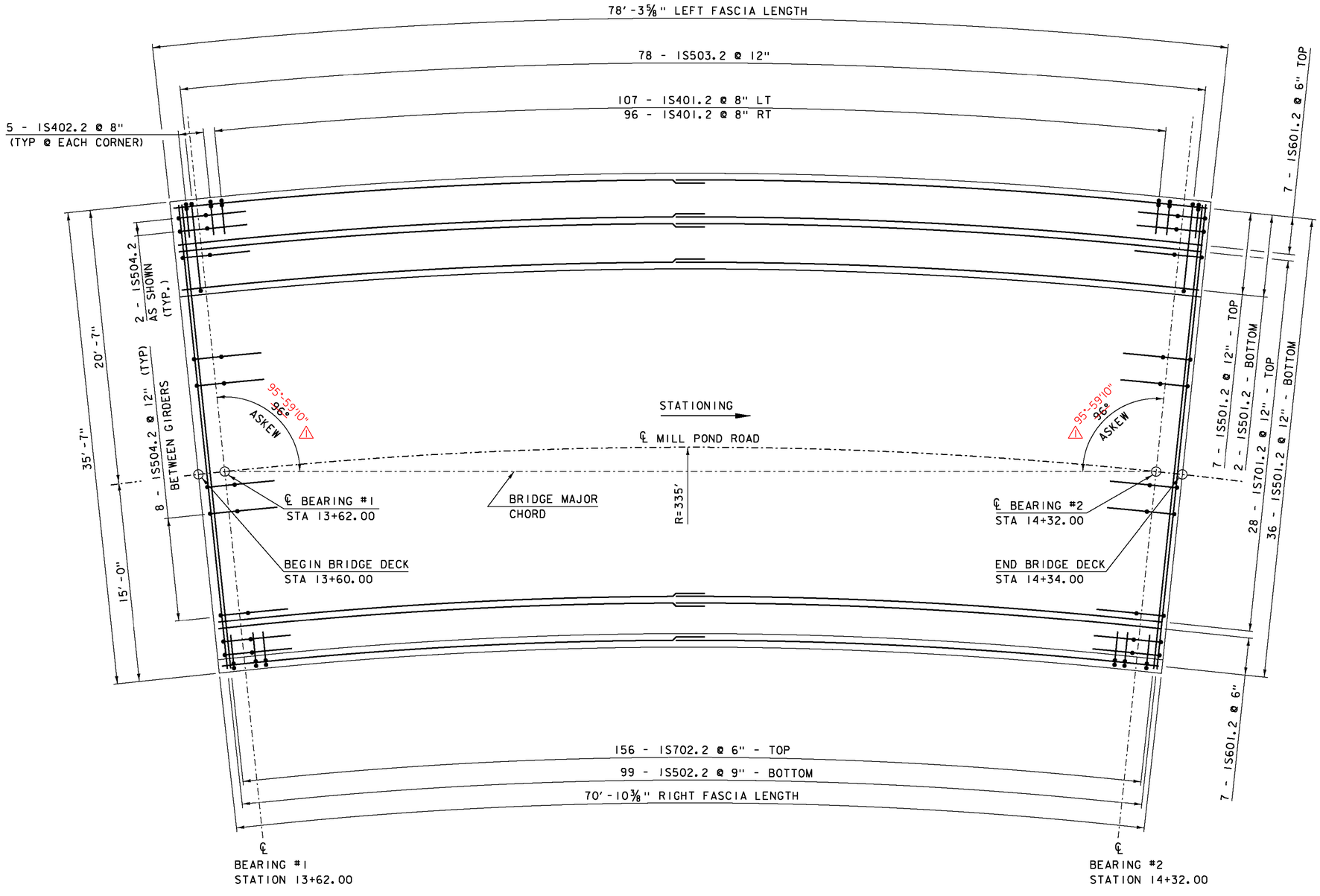
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

KEY	DATE	BY	REVISION
⚠	09/01/2015	VAOT	MODIFIED SIDEWALK WIDTH.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
DECK TYPICAL

PLOT DATE: 01-SEP-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET
SHEET 23 OF 53



NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

DECK REINFORCING PLAN

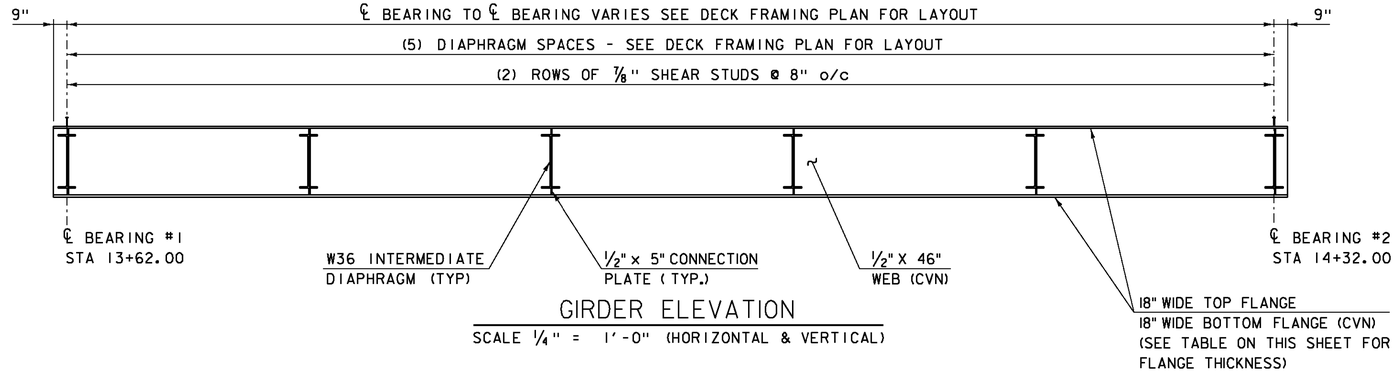
SCALE ¼" = 1'-0"

KEY	DATE	BY	REVISION
⚠	03/26/2015	VAOT	CORRECTED GIRDER DIMENSIONS

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

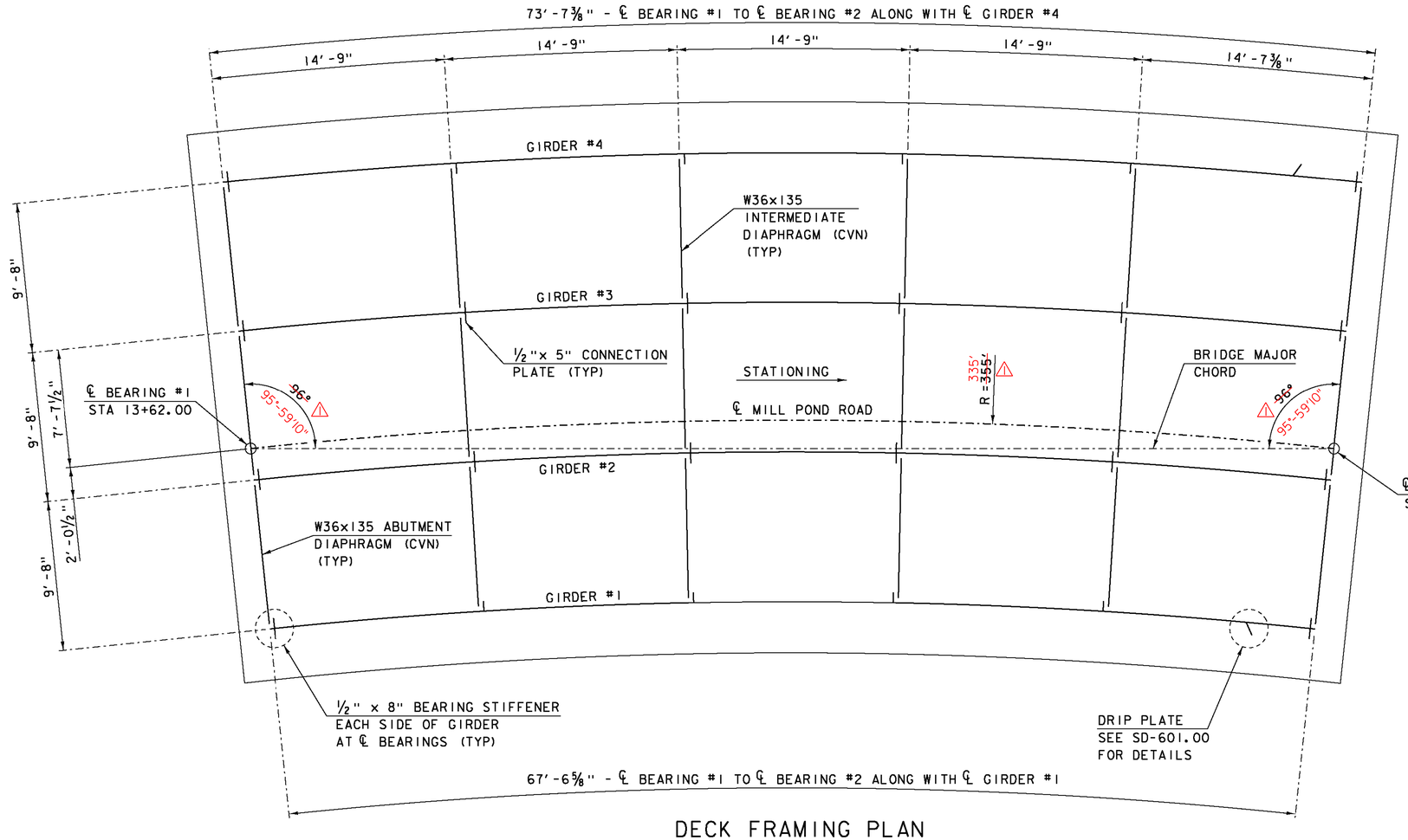
FILE NAME: s95j298sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
DECK REINFORCING PLAN

PLOT DATE: 12-JAN-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET
SHEET 24 OF 53



GIRDER ELEVATION

SCALE 1/4" = 1'-0" (HORIZONTAL & VERTICAL)



DECK FRAMING PLAN

SCALE 1/4" = 1'-0"

GIRDER DIMENSION TABLE				
GIRDER	RADIUS	(LENGTH)	TOP FLANGE PLATE THICKNESS	BOTTOM FLANGE PLATE THICKNESS
#1	323.292' ~~323.284'~~ ⚠	69'-05/8"	7/8"	7/8"
#2	332.958' ~~332.950'~~ ⚠	71'-0 7/8" ~~71'-13/16"~~ ⚠	7/8"	7/8"
#3	342.625' ~~342.617'~~ ⚠	73'-1 1/8" ~~73'-13/16"~~ ⚠	7/8"	1 1/4"
#4	352.292' ~~352.284'~~ ⚠	75'-1 3/8" ~~75'-17/16"~~ ⚠	7/8"	1 1/4"

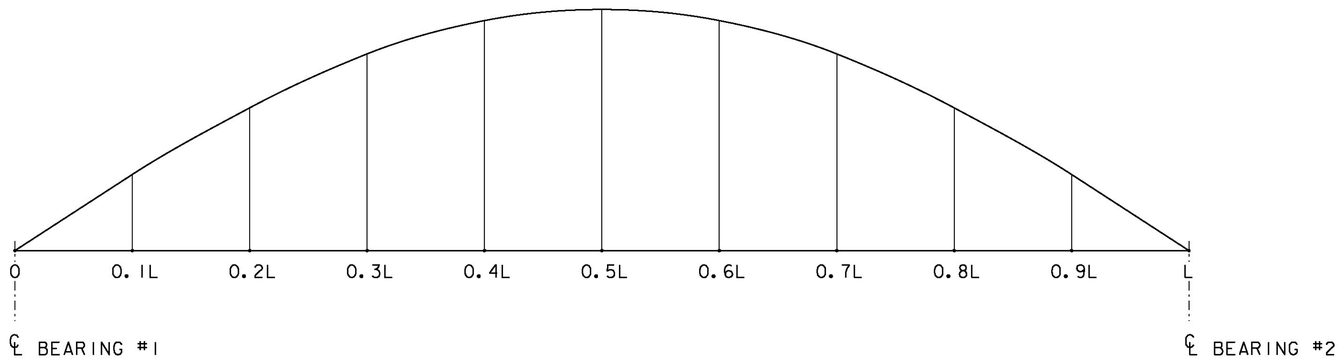
NOTE:
CVN - SHALL MEET CHARPY V-NOTCH REQUIREMENTS FOR MAIN MEMBERS AS INDICATED IN SECTION 714 OF THE STANDARD SPECIFICATION

KEY	DATE	BY	REVISION
⚠	03/26/2015	VAOT	CORRECTED GIRDER DIMENSIONS

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
DECK FRAMING PLAN

PLOT DATE: 12-JAN-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET
SHEET 25 OF 53



CAMBER DIAGRAM

NOT TO SCALE

CAMBER (INCHES)									
GIRDER	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L
#1	12/16	1 5/16	1 12/16	2	2 1/16	2	1 12/16	1 5/16	12/16
#2	14/16	1 8/16	2	2 4/16	2 6/16	2 4/16	2	1 8/16	14/16
#3	15/16	1 11/16	2 3/16	2 8/16	2 10/16	2 8/16	2 3/16	1 11/16	15/16
#4	1 1/16	1 14/16	2 7/16	2 13/16	2 15/16	2 13/16	2 7/16	1 14/16	1 1/16

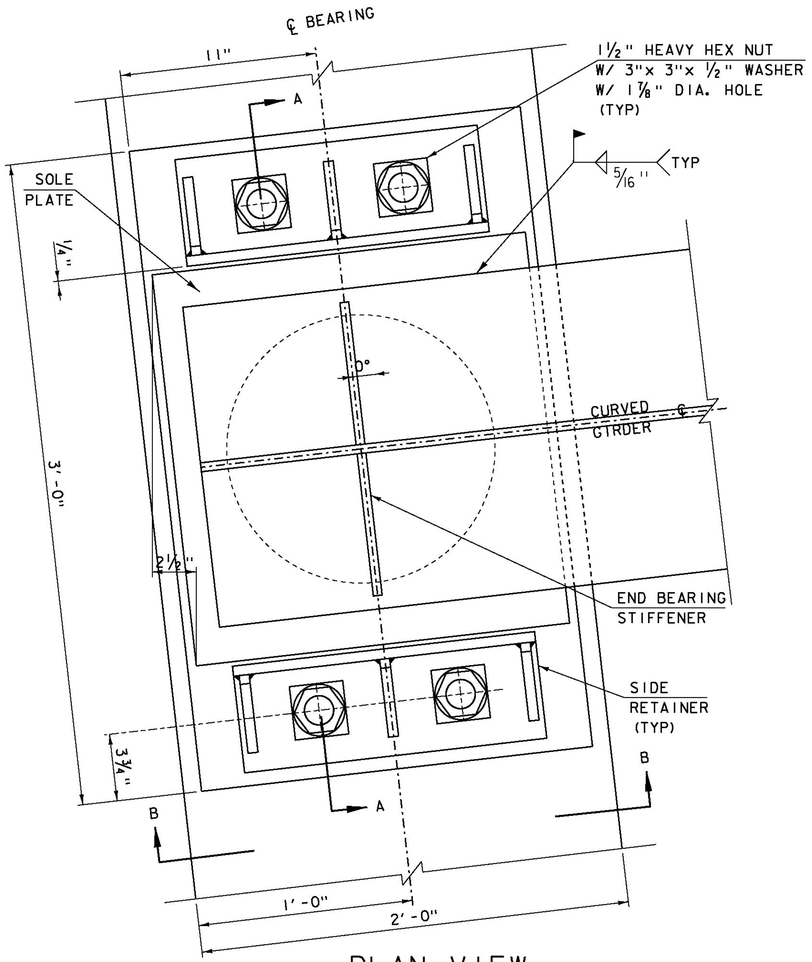
DEAD LOAD DEFLECTION INCLUDING GIRDER SELF WEIGHT (INCHES)									
GIRDER	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L
#1	- 6/16	- 10/16	- 14/16	-1	-1 1/16	-1	- 14/16	- 10/16	- 6/16
#2	- 7/16	- 13/16	-1 2/16	-1 5/16	-1 6/16	-1 5/16	-1 2/16	- 13/16	- 7/16
#3	- 8/16	- 15/16	-1 5/16	-1 9/16	-1 10/16	-1 9/16	-1 5/16	- 15/16	- 8/16
#4	- 10/16	-1 2/16	-1 9/16	-1 13/16	-1 15/16	-1 13/16	-1 9/16	-1 2/16	- 10/16

NOTES:
1. DIMENSIONS SHOWN ARE ALONG THE ARC OF THE GIRDER.
2. GIRDERS AND CROSSFRAMES SHALL BE WEB-PLUMB AT FULL DEAD LOAD CONDITION.

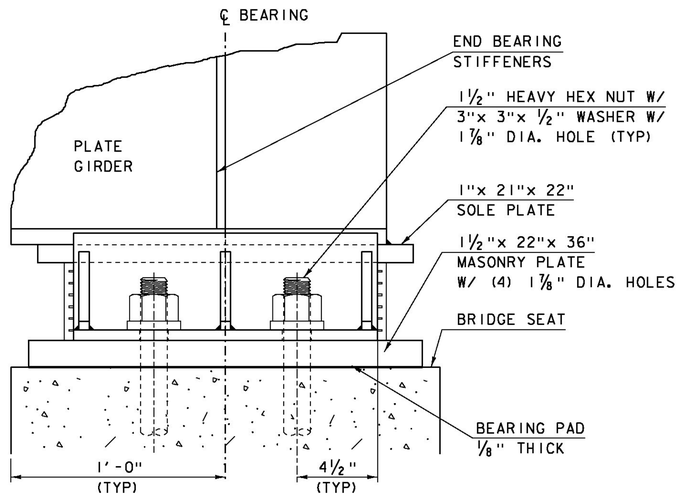
PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
CAMBER DIAGRAM

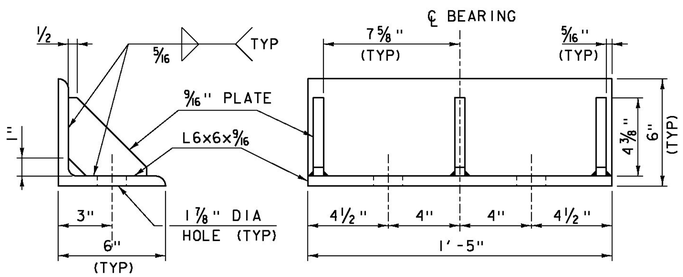
PLOT DATE: 12-JAN-2015
DRAWN BY: N. VANDENBERG
CHECKED BY: M. LONGSTREET
SHEET 26 OF 53



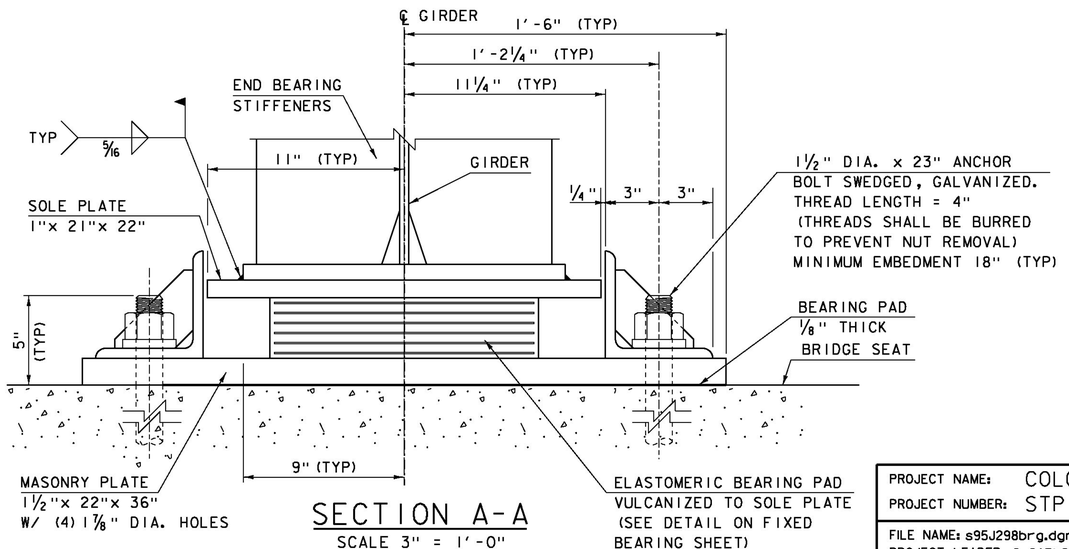
PLAN VIEW
SCALE 3" = 1'-0"



SECTION B-B
SCALE 3" = 1'-0"



SIDE RETAINER DETAIL
SCALE 3" = 1'-0"



SECTION A-A
SCALE 3" = 1'-0"

NOTE: EXPANSION BEARINGS LOCATED AT BEGIN BRIDGE

BEARING NOTES

1. BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.17 "BEARINGS DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD" AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.
2. THE FIELD WELD CONNECTING THE BOTTOM FLANGE WITH THE BEARING DEVICE SHALL BE MADE WITH E7018 RODS. AREAS OF METALIZING DAMAGED BY WELDING AND/OR HANDLING SHALL BE REPAIRED IN ACCORDANCE WITH SUBSECTION 726.09.
3. ALL STEEL COMPONENTS SHALL BE METALIZED AS PER SUBSECTIONS 531.04 (b) AND 506.14.
4. DESIGN CRITERIA, LOADS GIVEN AS PER BEARING:

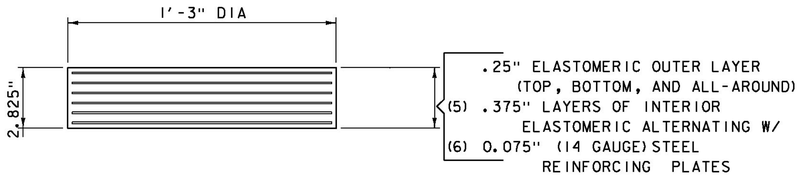
DESIGN LOAD EFFECTS (KIP)	SERVICE LIMIT STATE	VERTICAL	DEAD	52.0
			SUPER DEAD	21.0
			LIVE LOAD	114.0
		TRANSVERSE		14.6
		LONGITUDINAL		22.8
ROTATION (RAD)	SERVICE LIMIT STATE	IRREVERSIBLE	TRANSVERSE	0.000
			LONGITUDINAL	0.007
		REVERSIBLE	TRANSVERSE	0.005
			LONGITUDINAL	0.006
TRANSLATIONS (in)	SERVICE LIMIT STATE	IRREVERSIBLE	TRANSVERSE	*
			LONGITUDINAL	*
		REVERSIBLE	TRANSVERSE	0.070
			LONGITUDINAL	0.687

5. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMER SHALL BE SAND BLASTED AND FREE OF COATINGS, RUST, AND MILL SCALE. THE PLATES SHALL BE FREE OF SHARP EDGES AND BURRS.
6. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM OF 1/8" EDGE SEAL OF ELASTOMER INTEGRAL WITH THE BEARING OVER ALL INTERNAL PLATES.
7. BRIDGE SEAT ELEVATIONS MAY BE REVISED TO ACCOMMODATE AN ALTERNATE CONFIGURATION. THE CONCRETE SURFACES UNDER THE BEARING DEVICES SHALL BE LEVEL.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95J298brg.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
EXPANSION BEARING DETAILS

PLOT DATE: 30-JAN-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET
SHEET 27 OF 53

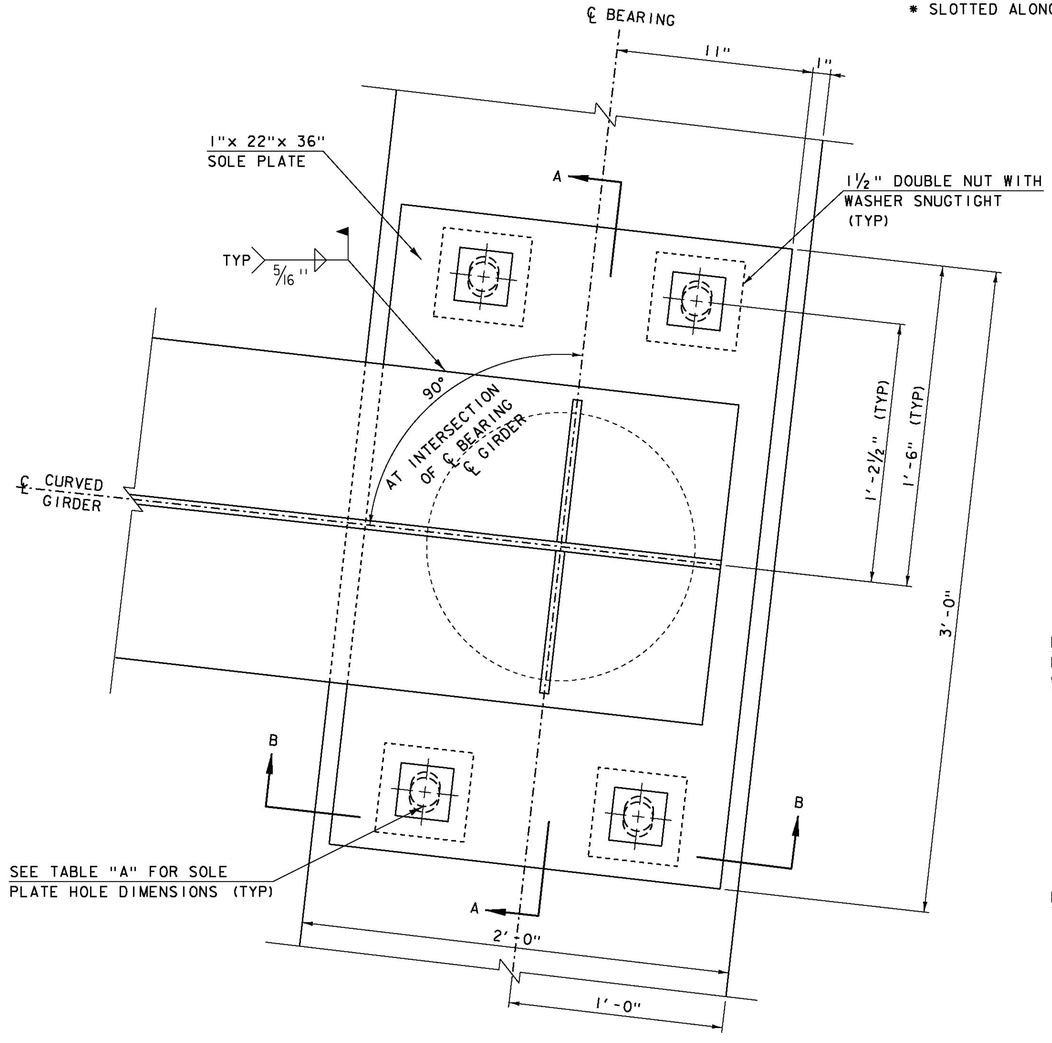


ELASTOMERIC BEARING PAD MAKE-UP

SCALE 3" = 1'-0"

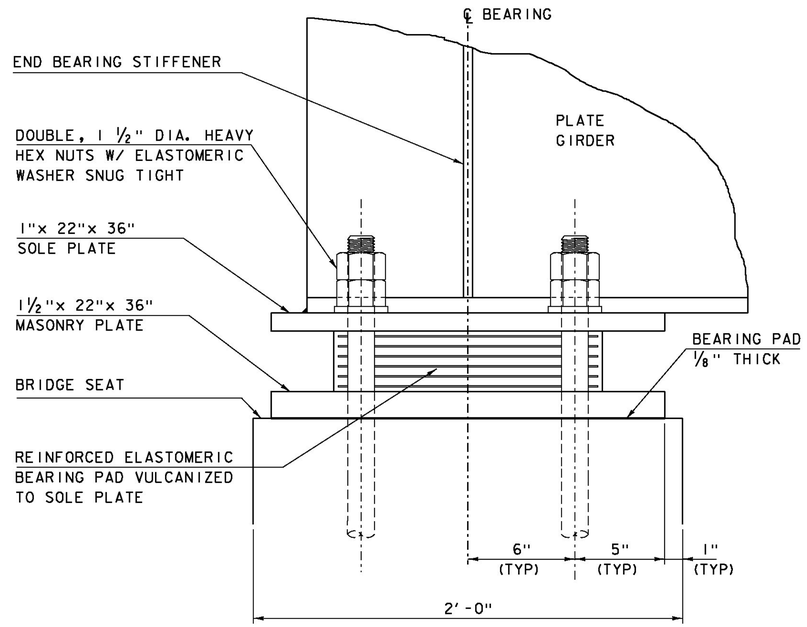
TABLE A	
GIRDER	HOLE DIMENSIONS
1	2" X 1⅞" *SLOTTED
2	1⅞"
3	1⅞"
4	2" X 1⅞" *SLOTTED

NOTE:
* SLOTTED ALONG THE CENTER LINE OF BEARING



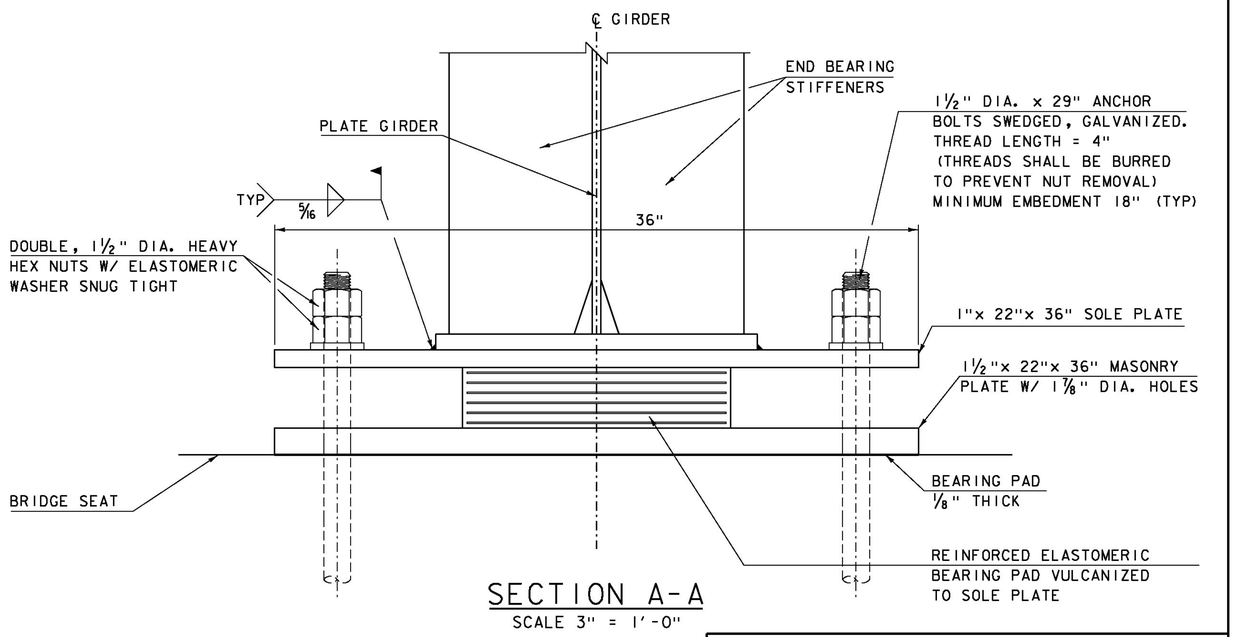
PLAN VIEW

SCALE 3" = 1'-0"



SECTION B-B

SCALE 3" = 1'-0"

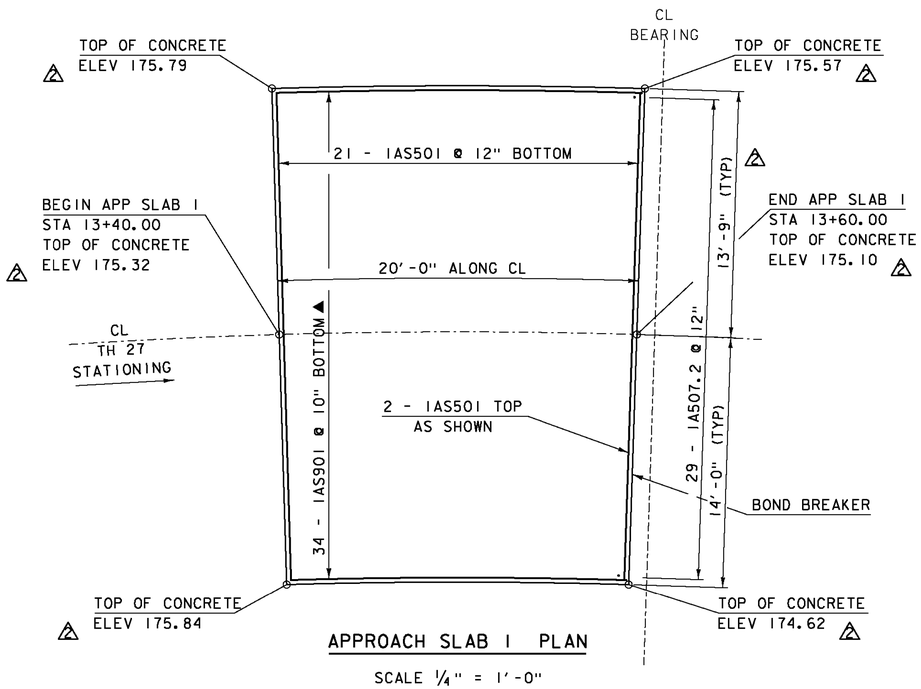


SECTION A-A

SCALE 3" = 1'-0"

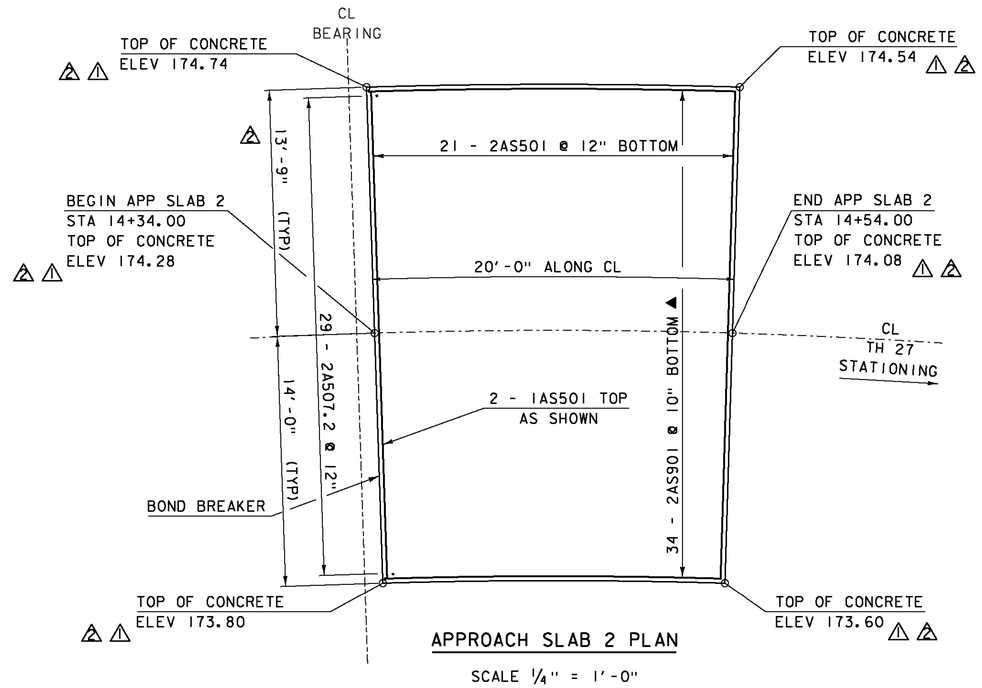
NOTE: FIXED BEARINGS LOCATED AT END BRIDGE

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	STP 5600 (12)
FILE NAME: s95J298brg.dgn	PLOT DATE: 12-JAN-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: D. KARABEGOVIC
DESIGNED BY: N. VANDERBERG	CHECKED BY: M. LONGSTREET
FIXED BEARING DETAILS	SHEET 28 OF 53



APPROACH SLAB 1 PLAN

SCALE 1/4" = 1'-0"

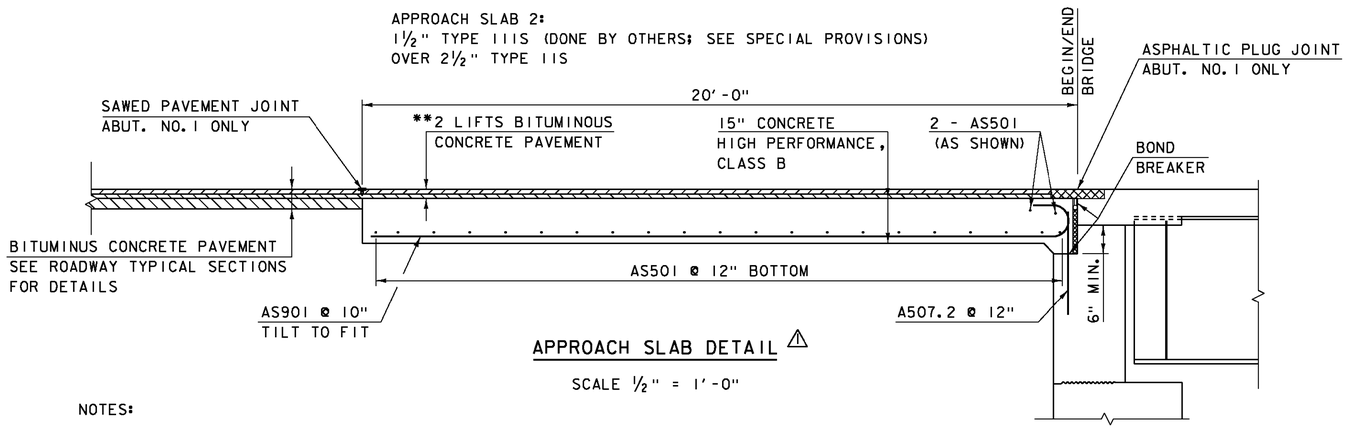


APPROACH SLAB 2 PLAN

SCALE 1/4" = 1'-0"

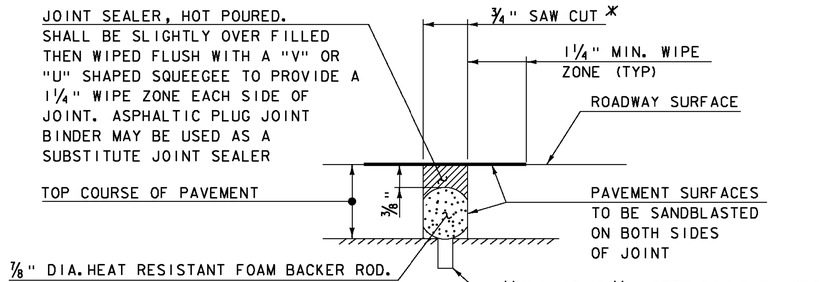
** APPROACH SLAB 1:
1 1/2" TYPE IVS OVER 1 1/2" TYPE IVS

APPROACH SLAB 2:
1 1/2" TYPE IIIS (DONE BY OTHERS; SEE SPECIAL PROVISIONS)
OVER 2 1/2" TYPE IIS



APPROACH SLAB DETAIL ⚠

SCALE 1/2" = 1'-0"



SAWED PAVEMENT JOINT DETAIL

(NOT TO SCALE)

* JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER.

NOTES:

1. COMPACT THE SUBBASE IN THE AREA UNDER THE APPROACH SLAB TO A SMOOTH SURFACE.
2. POUR APPROACH SLAB CONCRETE IN THE EARLY MORNING BEFORE THE SUPERSTRUCTURE EXPANDS.
3. PLACE HOOKED ENDS OF BOTTOM STEEL AT ABUTMENT END OF SLAB.

NOTE:

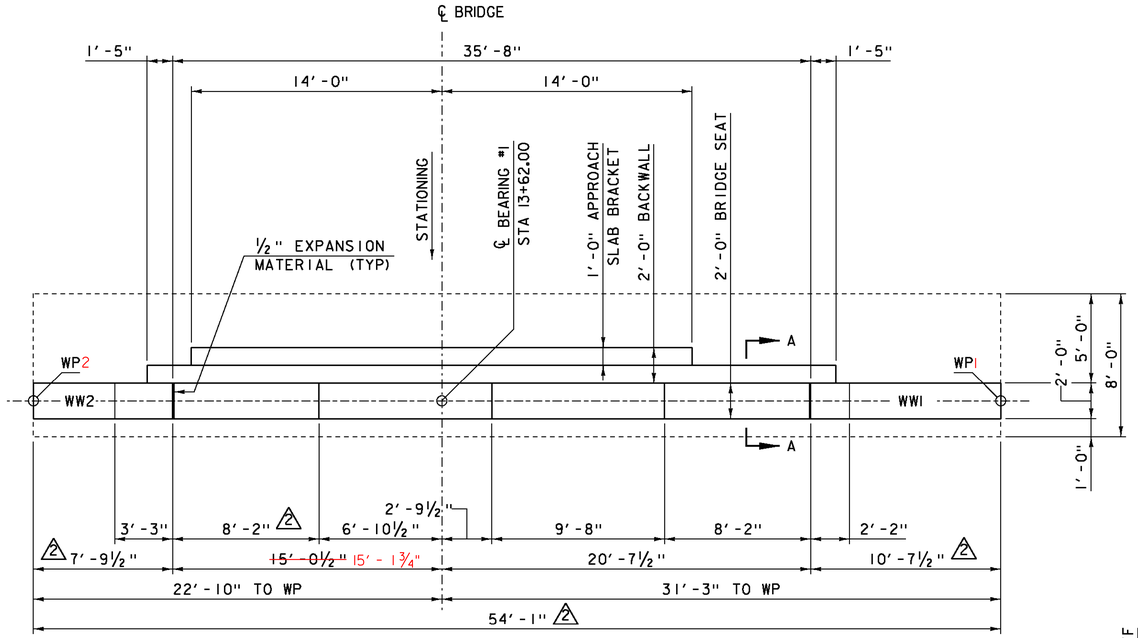
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

KEY	DATE	BY	REVISION
⚠	02/23/2015	VAOT	MODIFIED APPROACH SLAB 2 ELEVATIONS.
⚠	09/01/2015	VAOT	MODIFIED APPROACH SLAB WIDTHS & ELEV.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

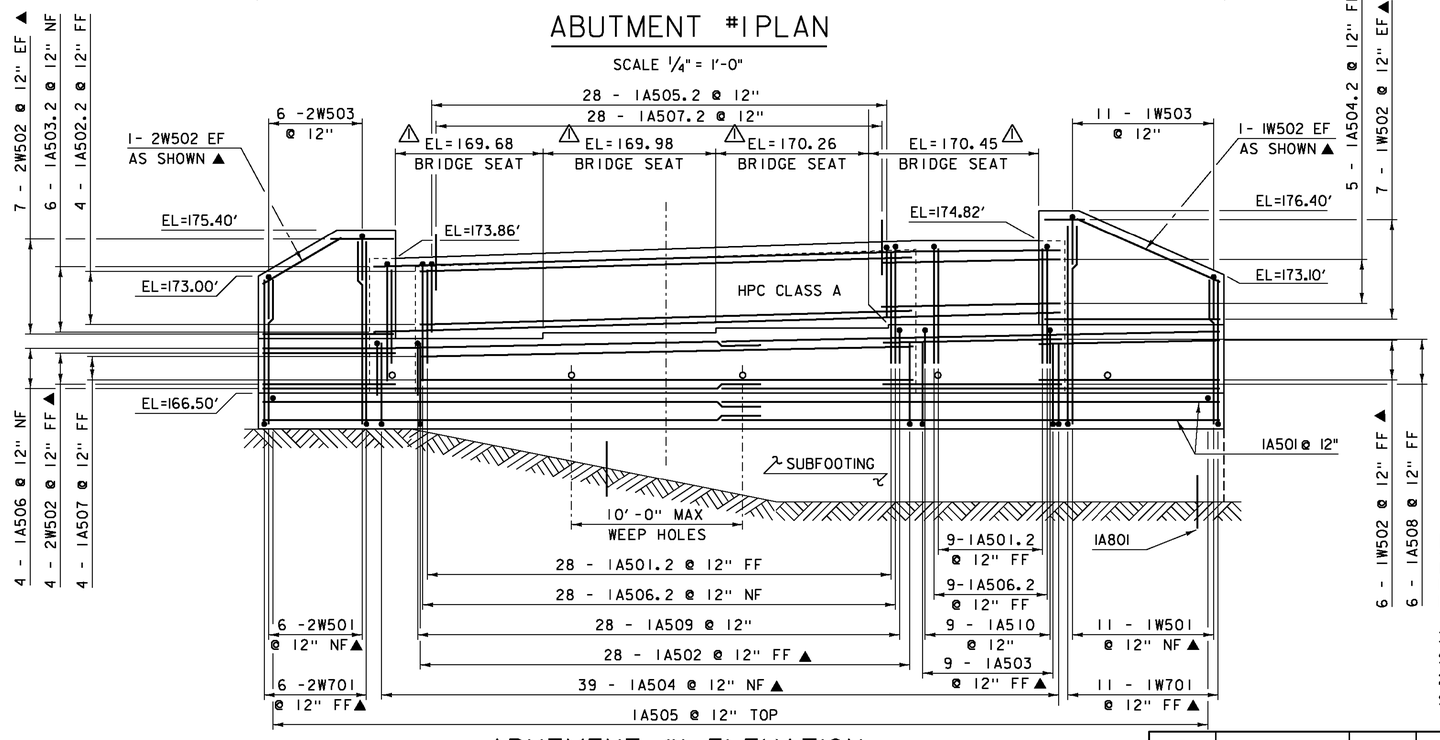
FILE NAME: s9512985up.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
APPROACH SLABS

PLOT DATE: 01-SEP-2015
DRAWN BY: D. KARABEGOVIC
CHECKED BY: M. LONGSTREET
SHEET 29 OF 53



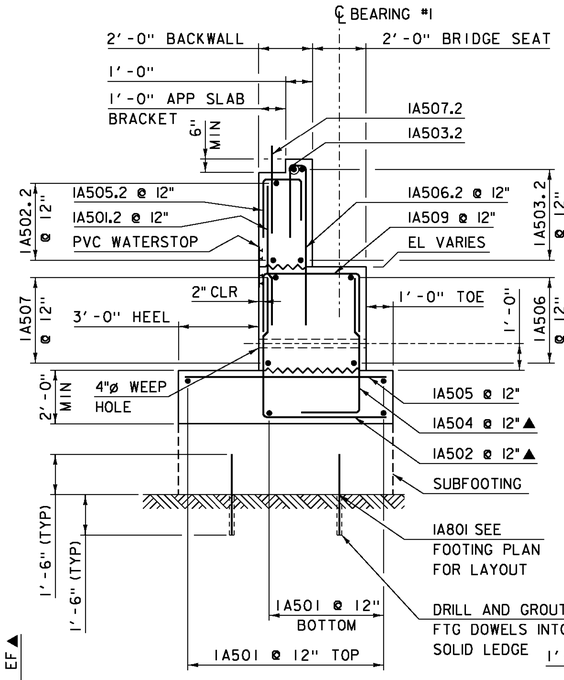
ABUTMENT #1 PLAN

SCALE 1/4" = 1'-0"



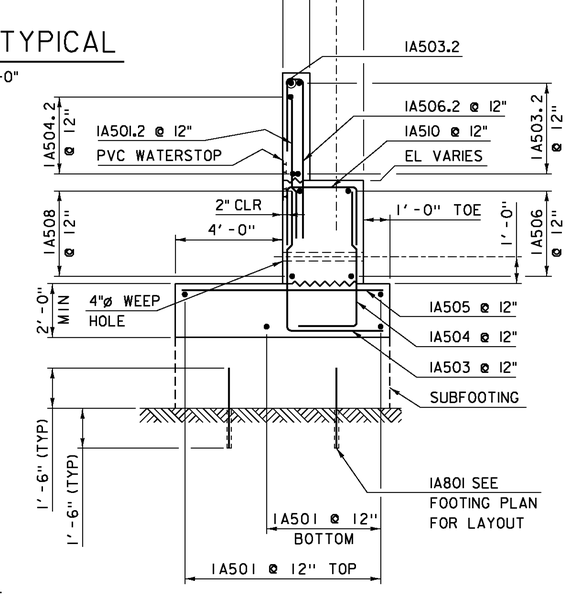
ABUTMENT #1 ELEVATION

SCALE 1/4" = 1'-0"



ABUTMENT #1 TYPICAL

SCALE 3/8" = 1'-0"



SECTION A-A

SCALE 3/8" = 1'-0"

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

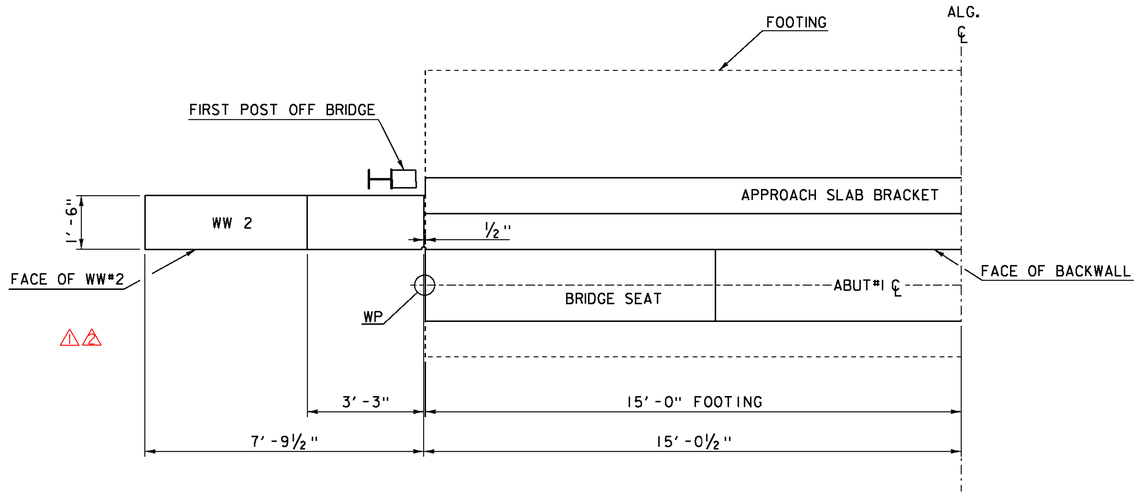
KEY	DATE	BY	REVISION
1	04/20/2015	VAOT	MODIFIED BRIDGE SEAT ELEVATIONS.
2	06/11/2015	VAOT	MODIFIED ABUTMENT DIMENSIONS.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: J. GRIFFIN
ABUTMENT #1 PLAN & ELEVATION

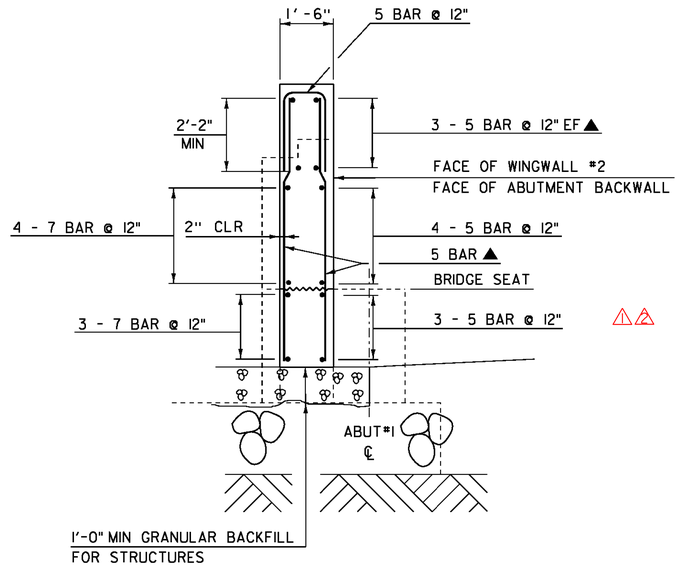
PLOT DATE: 11-JUN-2015
DRAWN BY: M. UMBERGER
CHECKED BY: N. VANDENBERG
SHEET 30 OF 53

SEE SHEET 30A FOR WINGWALL #2 DETAILS.



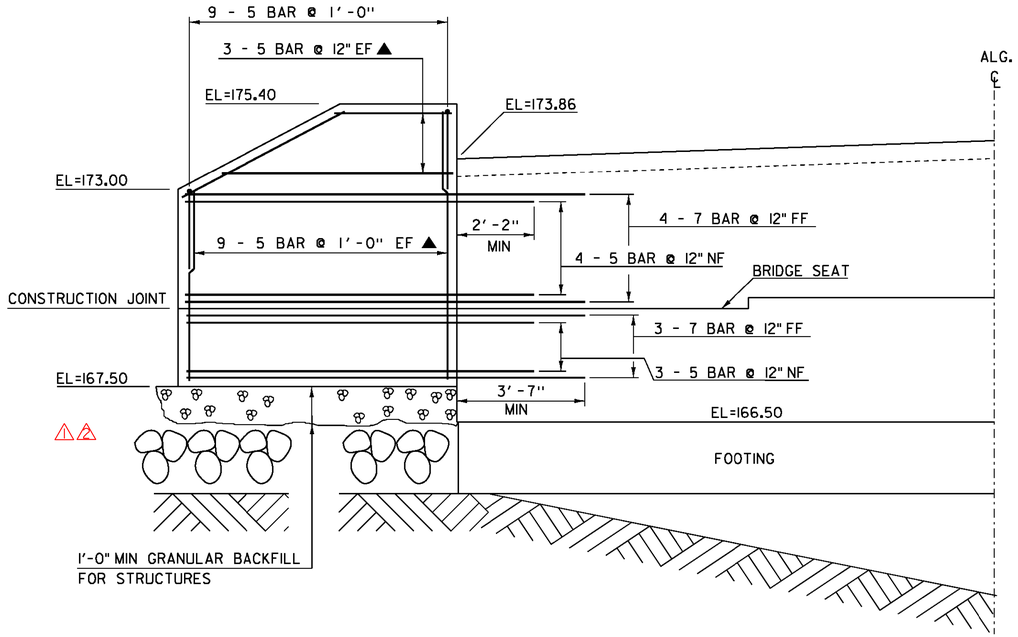
WINGWALL #2 PLAN

SCALE 1/2 = 1'-0"



WINGWALL #2 TYPICAL

SCALE 1/2 = 1'-0"



WINGWALL #2 ELEVATION

SCALE 1/2 = 1'-0"

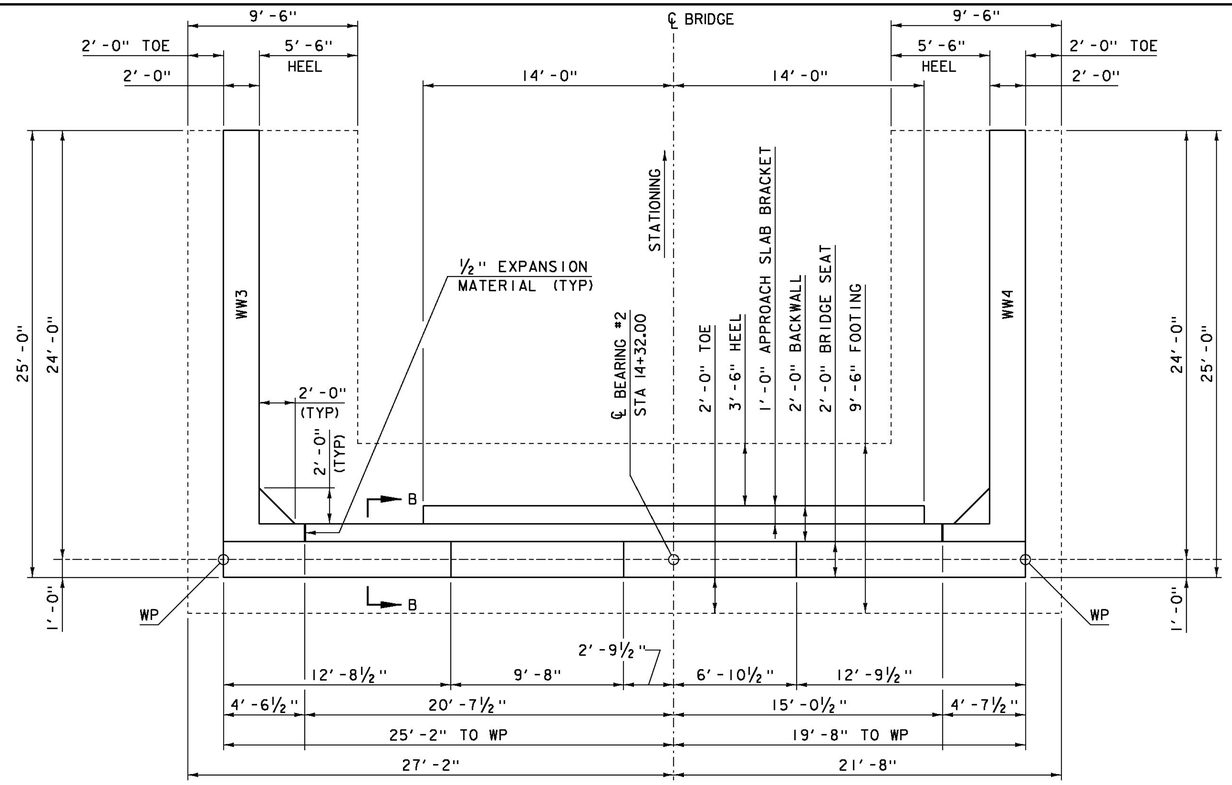
KEY	DATE	BY	REVISION
1	05/13/2015	VAOT	ELIMINATED 4 1A801'S @ ABUTMENT #1 WINGWALL #2.
2	05/13/2015	VAOT	MODIFIED ABUTMENT #1 WINGWALL #2.

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

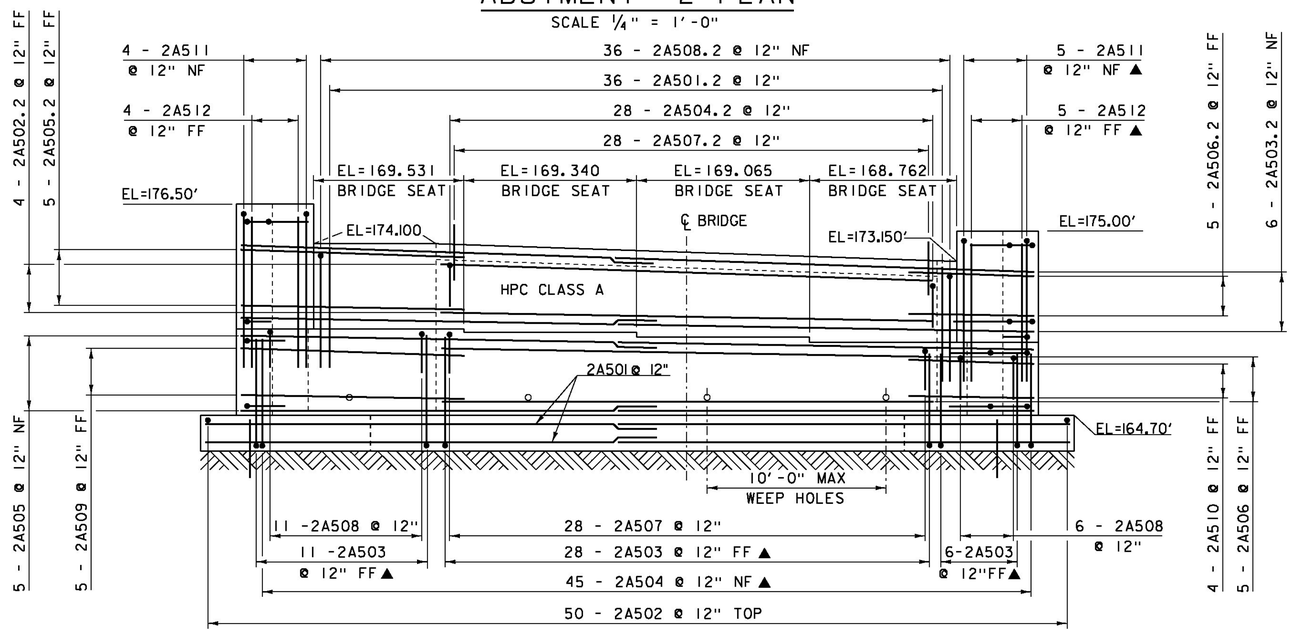
PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: J. GRIFFIN
WINGWALL #1 PLAN & ELEVATION
PLOT DATE: 20-MAY-2015
DRAWN BY: M. UMBERGER
CHECKED BY: N. VANDENBERG
SHEET 30A1 OF 153



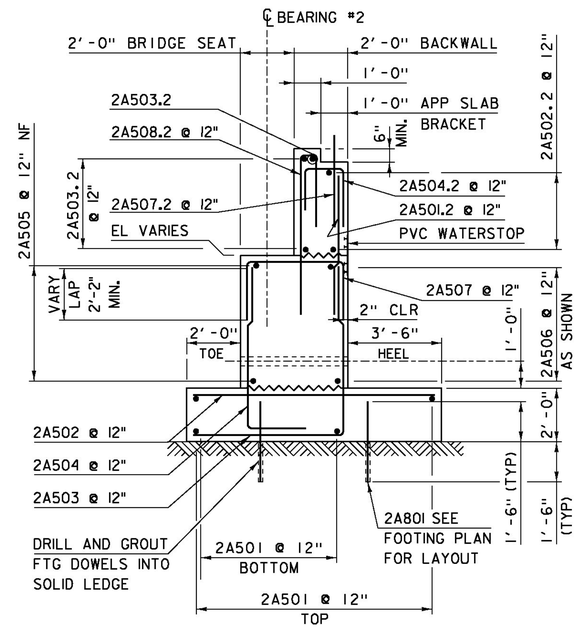
ABUTMENT #2 PLAN

SCALE ¼" = 1'-0"



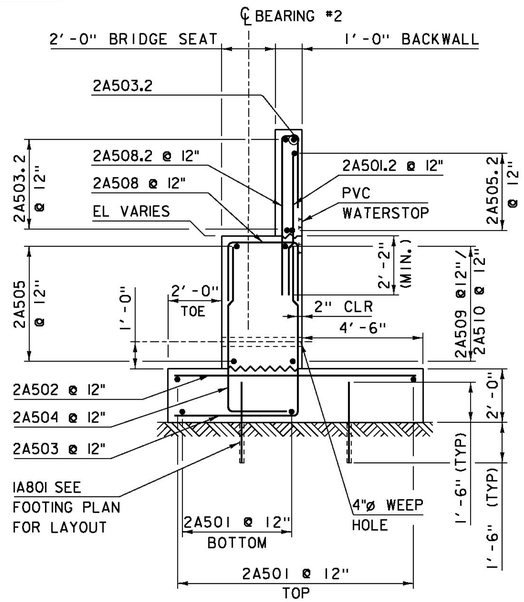
ABUTMENT #2 ELEVATION

SCALE ¼" = 1'-0"



ABUTMENT #2 TYPICAL

SCALE ⅜" = 1'-0"



SECTION B-B

SCALE ⅜" = 1'-0"

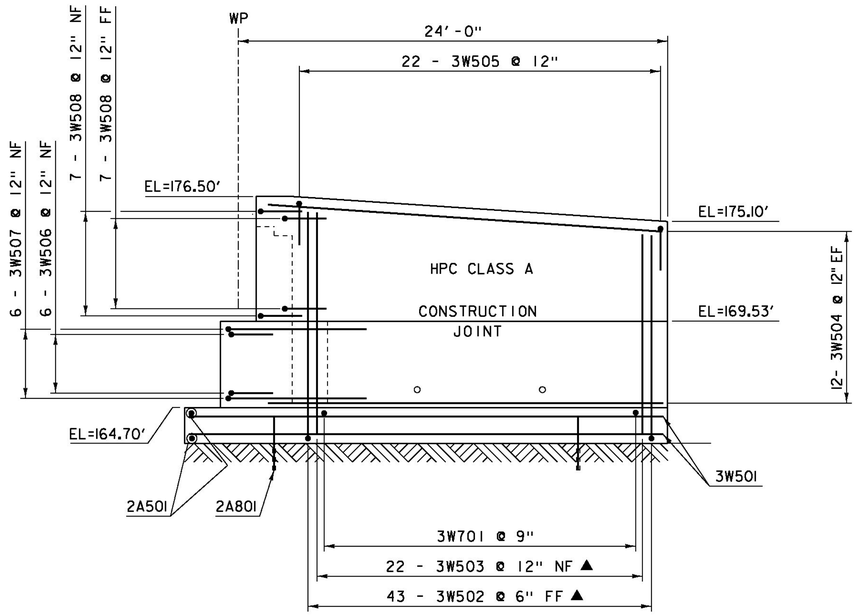
NOTE:

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2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

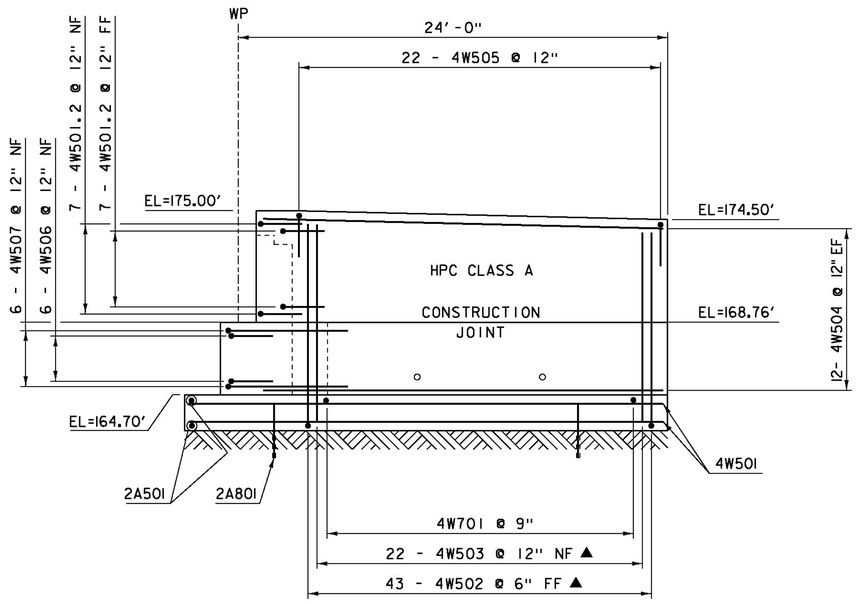
FILE NAME: s95j298sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: J. GRIFFIN
ABUTMENT #2 PLAN & ELEVATION

PLOT DATE: 12-JAN-2015
DRAWN BY: M. UMBERGER
CHECKED BY: N. VANDENBERG
SHEET 31 OF 53



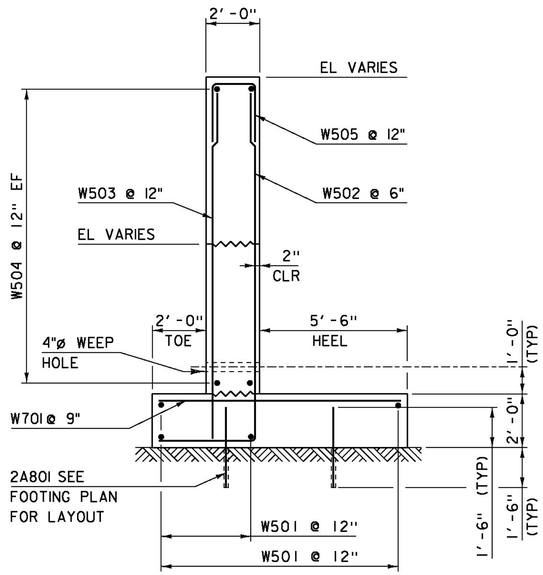
WINGWALL #3 REINFORCING ELEVATION

SCALE 1/4" = 1'-0"



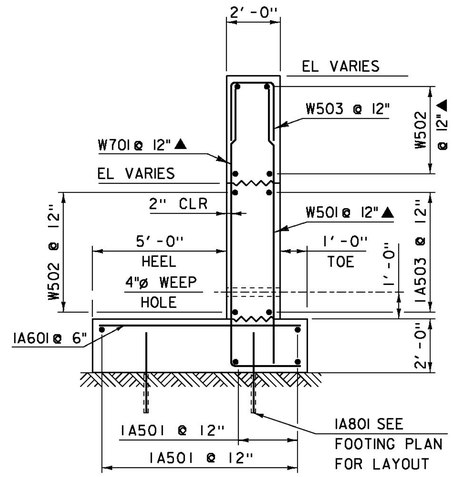
WINGWALL #4 REINFORCING ELEVATION

SCALE 1/4" = 1'-0"



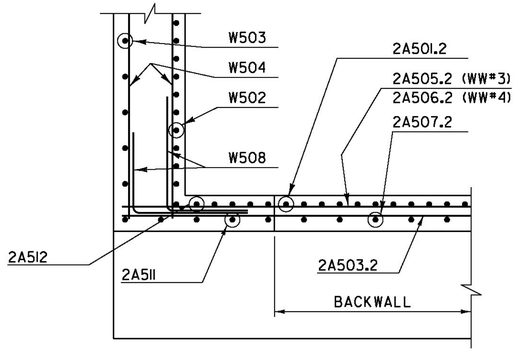
WINGWALL #3 &#4 TYPICAL

SCALE 3/8" = 1'-0"



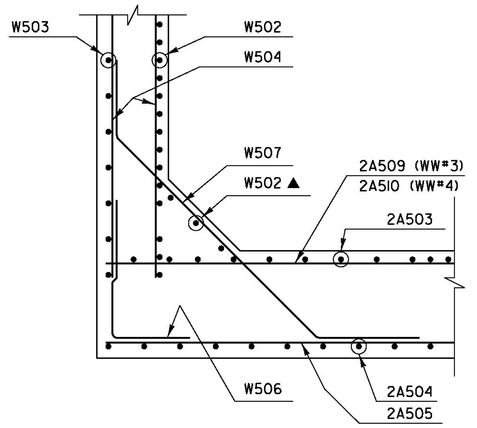
WINGWALL #1 &#2 TYPICAL

SCALE 3/8" = 1'-0"



WINGWALL #3 & #4 CORNER DETAIL (ABOVE BRIDGE SEAT)

SCALE: 1/2"=1'-0"



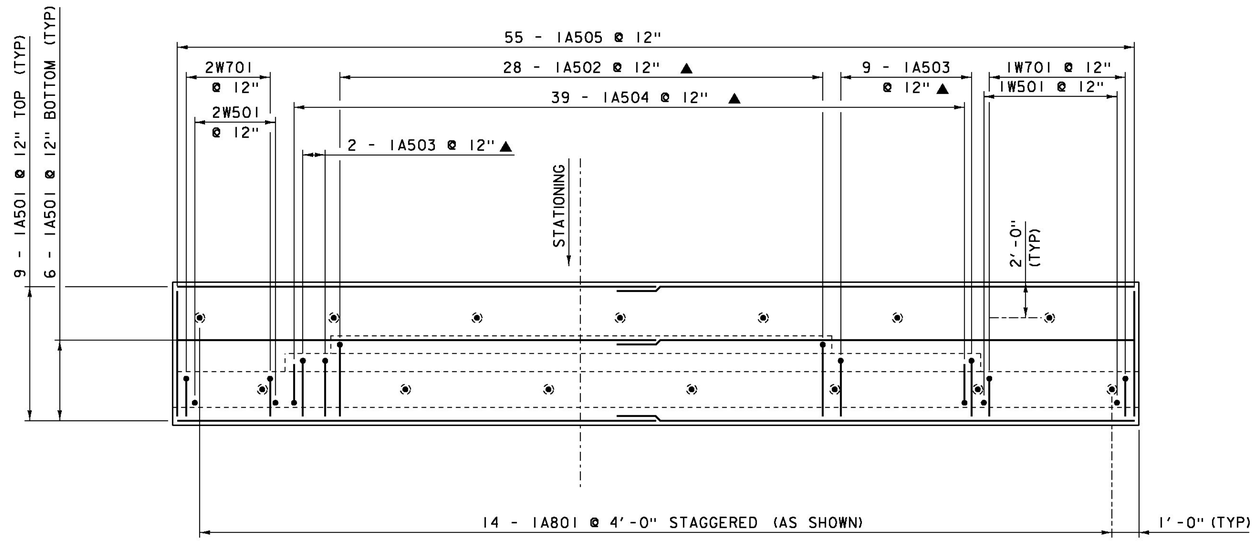
WINGWALL #3,#4 CORNER DETAIL (BELOW BRIDGE SEAT)

SCALE: 1/2"=1'-0"

NOTE:

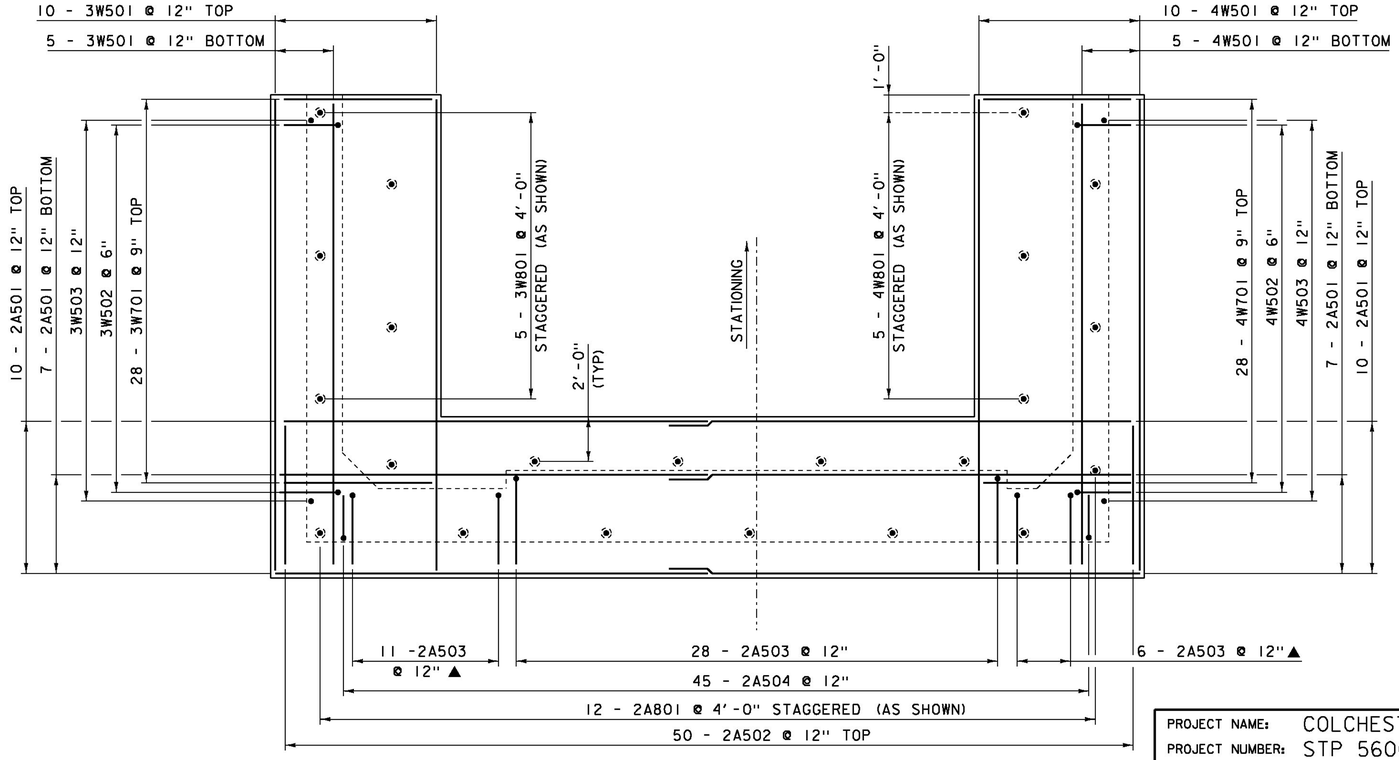
NF = NEAR FACE
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EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	STP 5600 (12)
FILE NAME: s95J298sub.dgn	PLOT DATE: 26-JAN-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: M. UMBERGER
DESIGNED BY: J. GRIFFIN	CHECKED BY: N. VANDENBERG
WINGWALL #3 & #4 ELEVATIONS	SHEET 32 OF 53



ABUTMENT #1 FOOTING REINFORCING PLAN

SCALE 1/4" = 1'-0"



ABUTMENT #2 FOOTING REINFORCING PLAN

SCALE 1/4" = 1'-0"

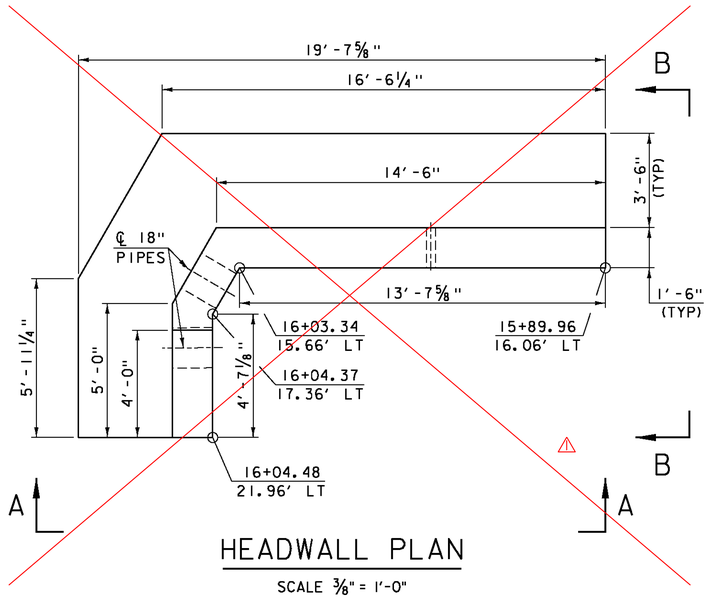
NOTE:

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FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

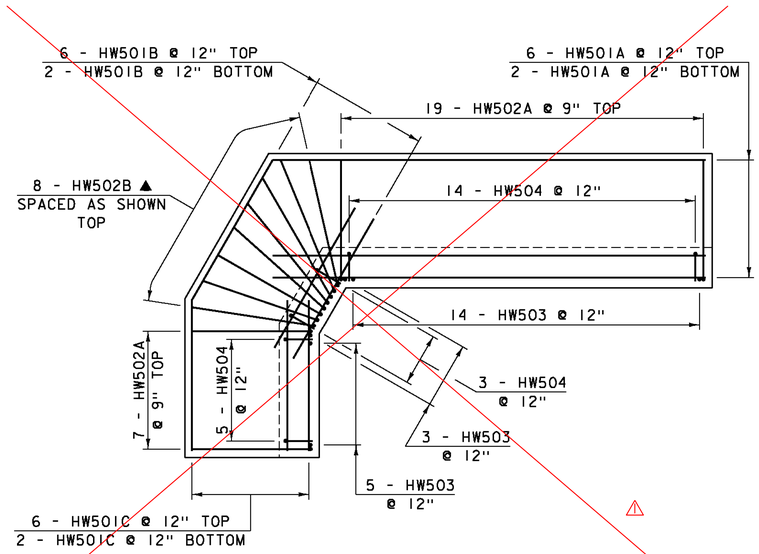
FILE NAME: s95j298sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: J. GRIFFIN
ABUTMENT #1 & #2 FOOTING PLANS

PLOT DATE: 12-JAN-2015
DRAWN BY: M. UMBERGER
CHECKED BY: N. VANDENBERG
SHEET 33 OF 53



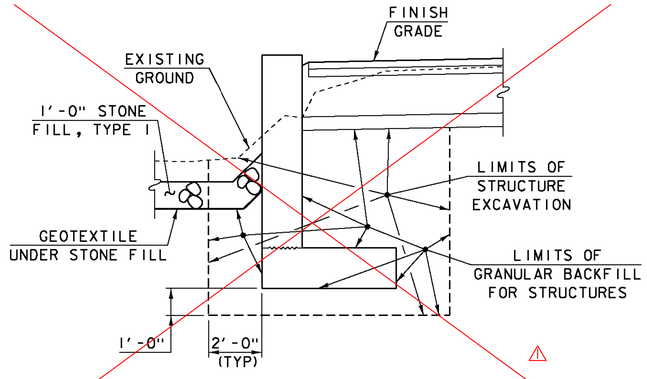
HEADWALL PLAN

SCALE ⅜" = 1′-0"



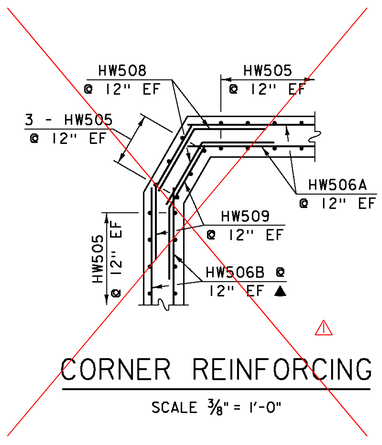
HEADWALL FOOTING REINFORCING

SCALE ⅜" = 1′-0"



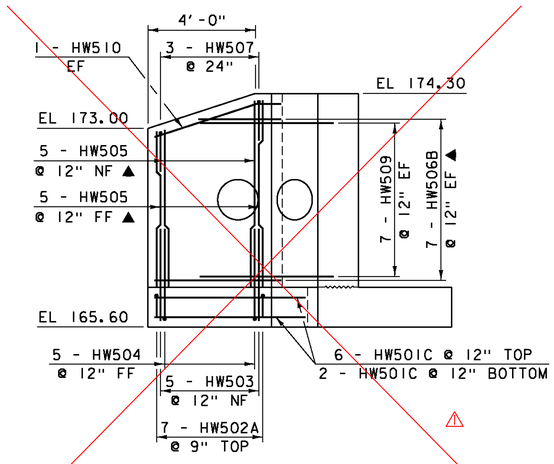
HEADWALL EARTHWORK TYPICAL

SCALE ⅜" = 1′-0"



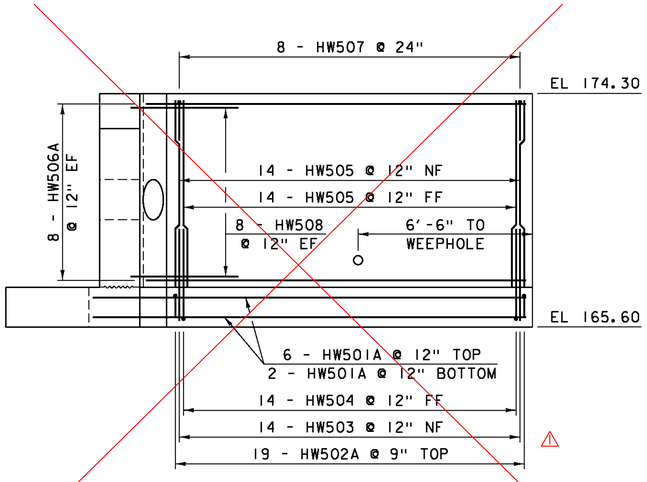
CORNER REINFORCING

SCALE ⅜" = 1′-0"



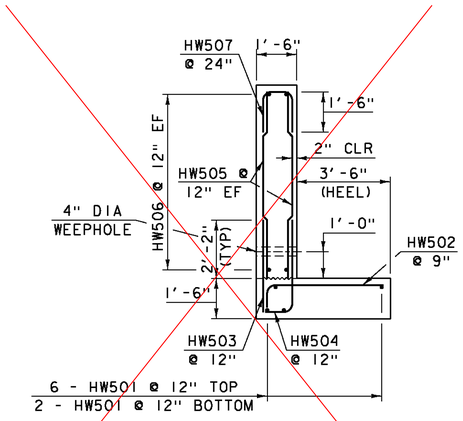
VIEW "B-B"

SCALE ⅜" = 1′-0"



VIEW "A-A"

SCALE ⅜" = 1′-0"



HEADWALL TYPICAL

SCALE ⅜" = 1′-0"

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2′-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

KEY	DATE	BY	REVISION
⚠	04/21/2015	VAOT	ELIMINATE HEADWALL

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298xs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: G. ROY
HEADWALL DETAILS

PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROY
CHECKED BY: H. SALLS
SHEET 34 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION

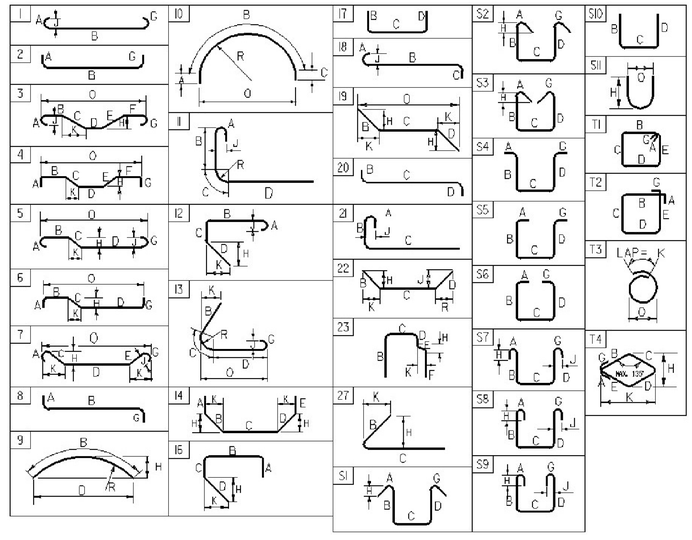
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	APPROACH SLAB #1																
	23	5	27'- 6"	1AS501	STR	27'- 6"											
▲	34	9	20'- 3"	1AS901	1	1'- 3"	19'- 0"					---		0'- 9"			
	APPROACH SLAB #2																
	23	5	27'- 6"	2AS501	STR	27'- 6"											
✳ ▲	35	9	20'- 3"	2AS901	1	1'- 3"	19'- 0"					---		0'- 9"			
	DECK																
	90	5	40'- 0"	1S501.2	STR	40'- 0"											
	103	5	35'- 1"	1S502.2	STR	35'- 1"											
✳	29	6	40'- 0"	1S601.2	STR	40'- 0"											
	58	7	40'- 0"	1S701.2	STR	40'- 0"											
✳	157	7	35'- 1"	1S702.2	STR	35'- 1"											
	203	4	9'- 4"	1S401.2	S5	2'- 2"	2'- 1"	0'- 7"	2'- 4"			2'- 2"					
	20	4	9'- 1"	1S402.2	S5	2'- 2"	2'- 1"	0'- 4"	2'- 4"			2'- 2"					
	78	5	12'- 4"	1S503.2	S6	2'- 2"	0'- 10"	6'- 4"	0'- 10"			2'- 2"					
	56	5	9'- 1"	1S504.2	S5	2'- 2"	0'- 9"	2'- 2"	0'- 6"			2'- 2"					
	ABUTMENT #1																
	30	5	27'- 10"	1A501	STR	27'- 10"											
△	56	5	7'- 6"	1A505	STR	7'- 6"											
	8	5	27'- 10"	1A506	STR	27'- 10"											
	4	5	27'- 6"	1A507	STR	27'- 6"											
	4	5	10'- 0"	1A508	STR	10'- 0"											
	~~14~~ 10	8	3'- 0"	1A801	STR	3'- 0"											
▲	28	5	9'- 10"	1A502	2	5'- 3"	4'- 7"					---					
▲	11	5	8'- 10"	1A503	2	5'- 3"	3'- 7"					---					
▲	39	5	7'- 5"	1A504	2	5'- 3"	2'- 2"					---					
	28	5	7'- 11"	1A509	S10		2'- 2"	3'- 7"	2'- 2"								
	11	5	6'- 11"	1A510	S10		2'- 2"	2'- 7"	2'- 2"								
	39	5	5'- 11"	1A501.2	STR	5'- 11"											
	4	5	27'- 6"	1A502.2	STR	27'- 6"											
	6	5	38'- 0"	1A503.2	STR	38'- 0"											
✳	6	5	10'- 0"	1A504.2	STR	10'- 0"											
	28	5	3'- 0"	1A507.2	STR	3'- 0"											
	28	5	6'- 11"	1A505.2	S10		3'- 2"	1'- 7"	2'- 2"								
	39	5	9'- 3"	1A506.2	S10		2'- 8"	0'- 7"	6'- 0"								
	WINGWALL #1																
▲	11	5	11'- 3"	1W501	STR	11'- 3"											
▲	22	5	10'- 0"	1W502	STR	10'- 0"											
	11	5	5'- 11"	1W503	S10		2'- 2"	1'- 7"	2'- 2"								
✳ ▲	12	7	13'- 10"	1W701	17		2'- 7"	11'- 3"				---					
	WINGWALL #2																
▲	6	5	10'- 3"	2W501	STR	10'- 3"											
▲	20	5	7'- 2"	2W502	STR	7'- 2"											
	6	5	5'- 11"	2W503	S10		2'- 2"	1'- 7"	2'- 2"								
▲	6	7	12'- 10"	2W701	17		2'- 7"	10'- 3"				---					

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	ABUTMENT #2																
	34	5	25'- 3"	2A501	STR	25'- 3"											
✳	50	5	8'- 6"	2A502	STR	8'- 6"											
	10	5	23'- 3"	2A505	STR	23'- 3"											
	5	5	27'- 6"	2A506	STR	27'- 6"											
	5	5	12'- 6"	2A509	STR	12'- 6"											
	4	5	7'- 0"	2A510	STR	7'- 0"											
▲	9	5	8'- 10"	2A512	STR	8'- 10"											
	12	8	3'- 0"	2A801	STR	3'- 0"											
▲	45	5	11'- 11"	2A503	2	6'- 4"	5'- 7"					---					
▲	45	5	8'- 6"	2A504	2	6'- 4"	2'- 2"					---					
	28	5	7'- 11"	2A507	S10		2'- 2"	3'- 7"	2'- 2"								
	17	5	6'- 11"	2A508	S10		2'- 2"	2'- 7"	2'- 2"								
	9	5	12'- 5"	2A511	S10		8'- 10"	0'- 7"	3'- 0"								
	36	5	5'- 9"	2A501.2	STR	5'- 9"											
	4	5	27'- 6"	2A502.2	STR	27'- 6"											
	12	5	23'- 3"	2A503.2	STR	23'- 3"											
	5	5	12'- 6"	2A505.2	STR	12'- 6"											
	5	5	7'- 0"	2A506.2	STR	7'- 0"											
	28	5	3'- 6"	2A507.2	STR	3'- 6"											
	28	5	5'- 11"	2A504.2	S10		2'- 2"	1'- 7"	2'- 2"								
	36	5	10'- 3"	2A508.2	S10		6'- 8"	0'- 7"	3'- 0"								
	WINGWALL #3																
	15	5	26'- 6"	3W501	STR	26'- 6"											
▲	22	5	13'- 0"	3W503	STR	13'- 0"											
	24	5	21'- 0"	3W504	STR	21'- 0"											
✳	29	7	9'- 0"	3W701	STR	9'- 0"											
	5	8	3'- 0"	3W801	STR	3'- 0"											
▲	43	5	16'- 7"	3W502	2	13'- 0"	3'- 7"					---					
	22	5	5'- 11"	3W505	S10		2'- 2"	1'- 7"	2'- 2"								
	6	5	6'- 4"	3W506	2		2'- 2"	4'- 2"				---					
	6	5	12'- 1"	3W507	22		2'- 2"	7'- 9"	2'- 2"				1'- 7"	1'- 7"	1'- 7"	1'- 7"	
	14	5	5'- 8"	3W508	2	2'- 2"	3'- 6"					---					
	WINGWALL #4																
	15	5	26'- 6"	4W501	STR	26'- 6"											
▲	22	5	11'- 9"	4W503	STR	11'- 9"											
	24	5	21'- 0"	4W504	STR	21'- 0"											
	28	7	9'- 0"	4W701	STR	9'- 0"											
	5	8	3'- 0"	4W801	STR	3'- 0"											
▲	43	5	15'- 4"	4W502	2	11'- 9"	3'- 7"					---					
	22	5	5'- 11"	4W505	S10		2'- 2"	1'- 7"	2'- 2"								
	6	5	6'- 4"	4W506	2		2'- 2"	4'- 2"				---					
	6	5	12'- 1"	4W507	22		2'- 2"	7'- 9"	2'- 2"				1'- 7"	1'- 7"	1'- 7"	1'- 7"	
	14	5	5'- 8"	4W508	2	2'- 2"	3'- 6"					---					
	HEADWALL																
	8	5	16'- 1"	HW501A	STR	16'- 1"											
	8	5	6'- 0"	HW501B	STR	6'- 0"											
✳	9	5	5'- 7"	HW501C	STR	5'- 7"											
	22	5	3'- 5"	HW503	STR	3'- 5"											
▲	44	5	7'- 0"	HW505	STR	7'- 0"											
	16	5	14'- 3"	HW506A	STR	14'- 3"											
▲	14	5	4'- 11"	HW506B	STR	4'- 11"											
	26	5	5'- 4"	HW502A	17		0'- 10"	4'- 6"	---								
▲	8	5	6'- 2"	HW502B	17		0'- 10"	5'- 4"	---								
	22	5	4'- 6"	HW504	17		1'- 1"	3'- 5"	---								
	13	5	4'- 1"	HW507	17		1'- 6"	1'- 1"	1'- 6"								
	16	5	5'- 4"	HW508	19		2'- 8"	2'- 8"	---				2'- 4"		1'- 4"		
	14	5	5'- 4"	HW509	19		2'- 8"	2'- 8"	---				1'- 4"		2'- 4"		
	2	5	4'- 11"	HW510	19		0'- 11"	4'- 0"	---				0'- 3"		0'- 10"		

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION NO.	NOMINAL WEIGHT PER FOOT	NOMINAL DIMENSIONS — DIAMETER	NOMINAL DIMENSIONS — CROSS-SECTIONAL AREA	NOMINAL DIMENSIONS — PERIMETER
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.04	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.14
#9	3.400	1.13	1.00	3.54
#10	4.3	1.270	1.27	3.990
#11	5.31	1.410	1.56	4.430
#14	7.65	1.69	2.25	5.32
#18	13.60	2.26	4.00	7.09

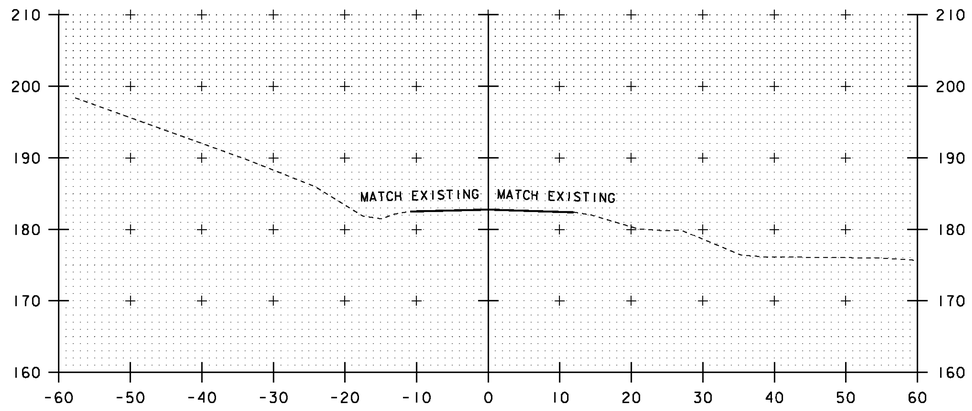
~ REINFORCING STEEL CORROSION RESISTANCE LEVEL ~

THE REINFORCING STEEL MARKS IN THIS SCHEDULE INDICATE THE REQUIRED BAR CORROSION RESISTANCE LEVEL. CORROSION RESISTANCE LEVEL IS DENOTED WITH A .2 FOR LEVEL TWO SUFFIX OR .3 FOR LEVEL THREE SUFFIX , .1 FOR LEVEL ONE IS TO BE OMITTED. THE BAR MATERIAL TYPE AND BAR STEEL GRADE PROVIDED FOR EACH CORROSION LEVEL WILL BE RECORDED ON THE PLAN SET PI SHEET FOR AS-BUILT RECORD PLAN ARCHIVES.

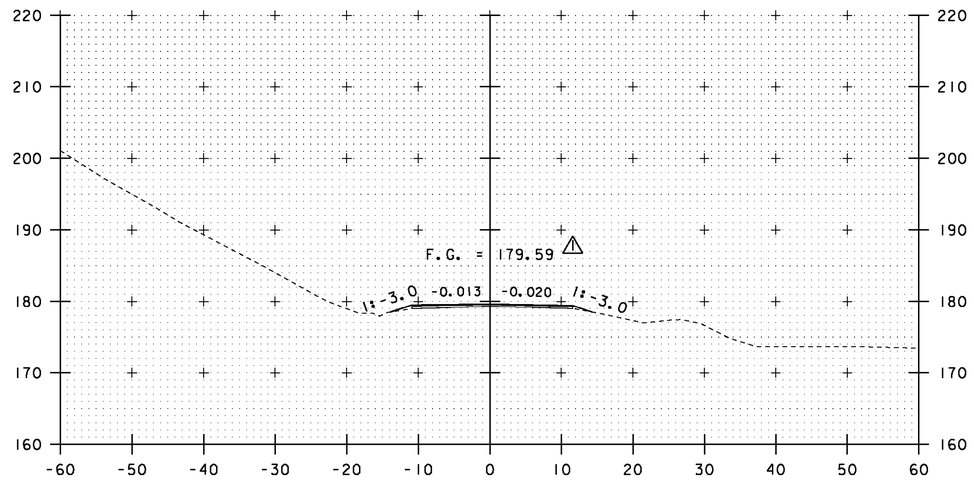
PROJECT NAME: **COLCHESTER**
PROJECT NUMBER: **STP 5600 (12)**

FILE NAME: **s95j298rss.xls**
PROJECT MANAGER: **C. CARLSON**
DESIGNED BY: **N. VANDENBURG**
REINFORCING STEEL SCHEDULE

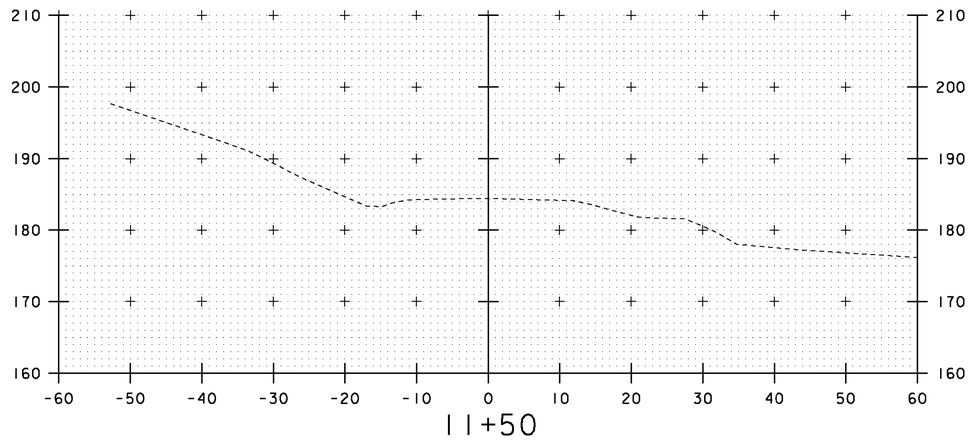
PLOT DATE: **12-JAN-2015**
DRAWN BY: **R. PELLETT**
CHECKED BY: **N. VANDENBURG**
SHEET **35** OF **53**



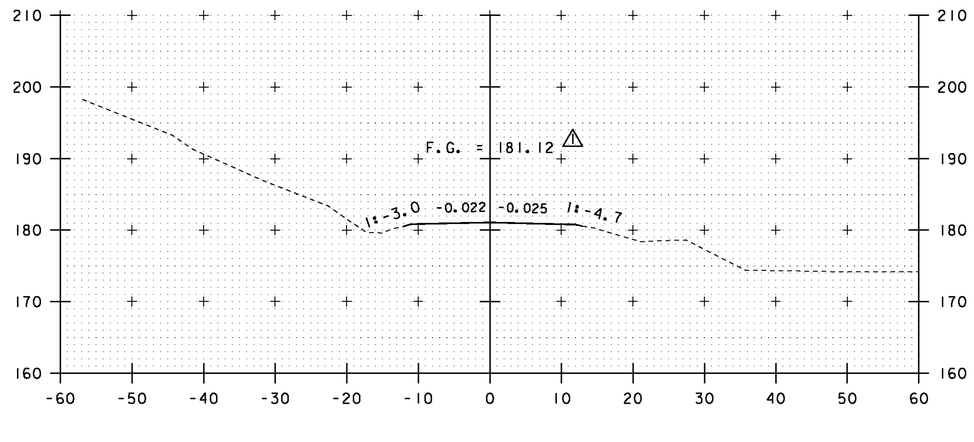
BEGIN APPROACH
11+75



12+25



11+50



12+00

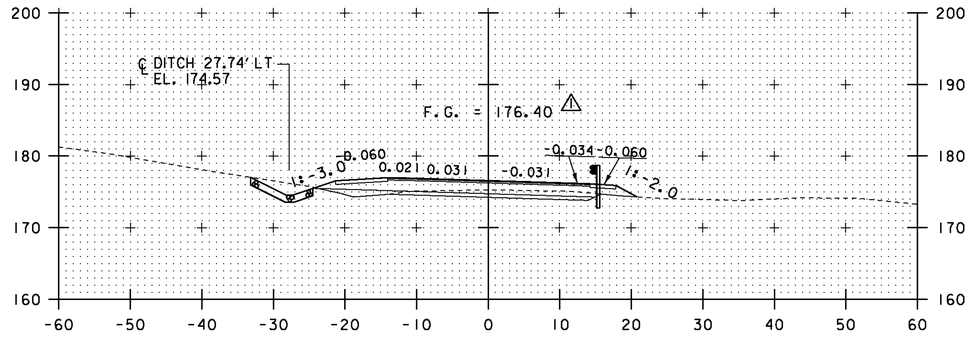
KEY	DATE	BY	REVISION
⚠	09/01/2015	VAOT	MODIFIED FINISH GRADE.

STA. 11+50 TO STA. 12+25

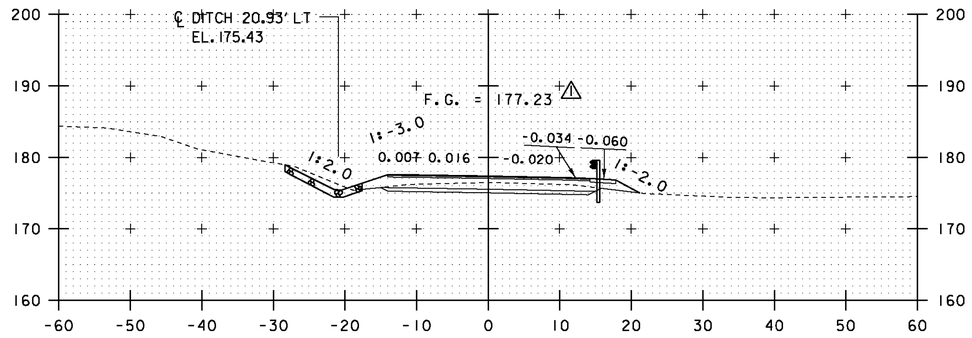
PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s9512298xs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDERBERG
ROADWAY CROSS SECTIONS 1

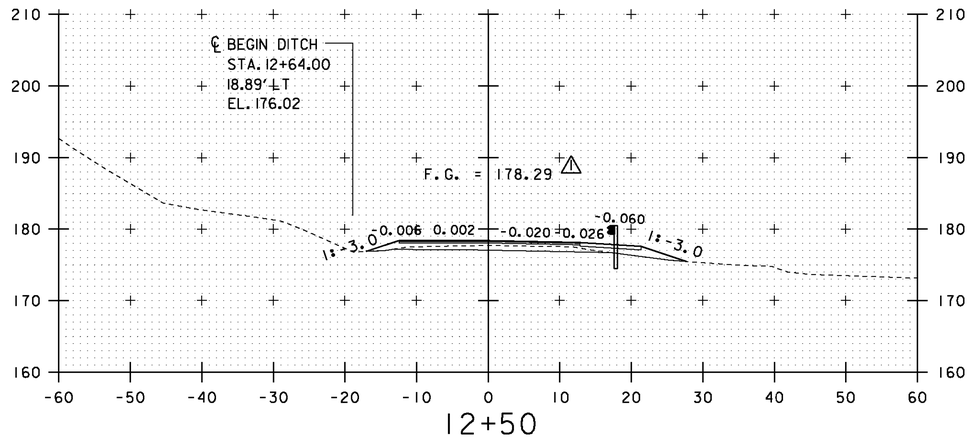
PLOT DATE: 01-SEP-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 36 OF 53



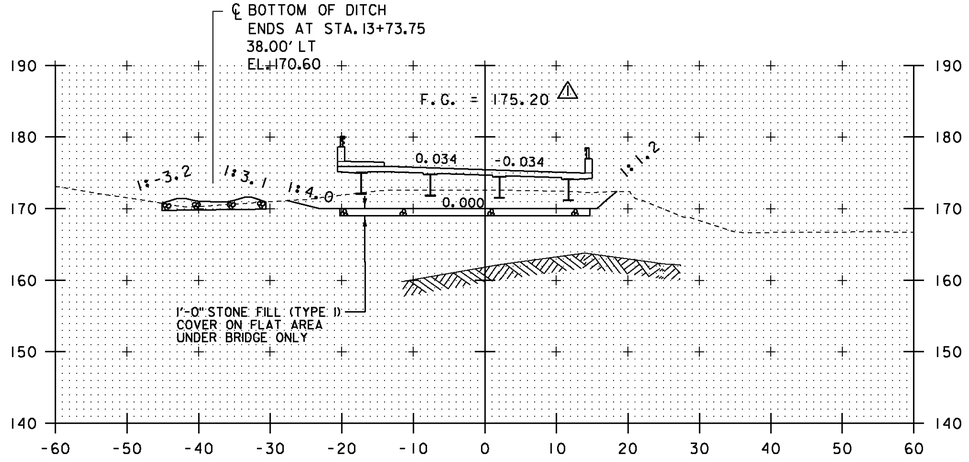
13+00



BEGIN PROJECT
12+75

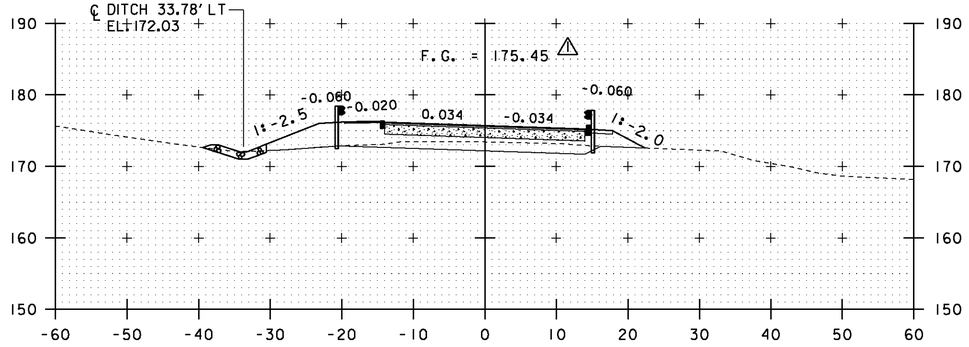


12+50

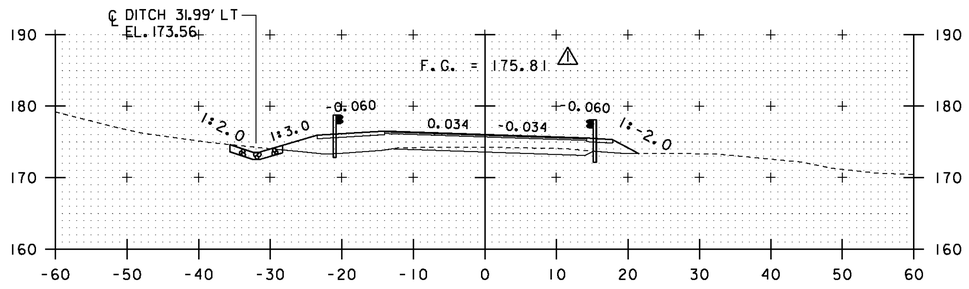


13+75

BEGIN BRIDGE STA. 13+60.00



13+50



13+25

STA. 12+50 TO STA. 13+75

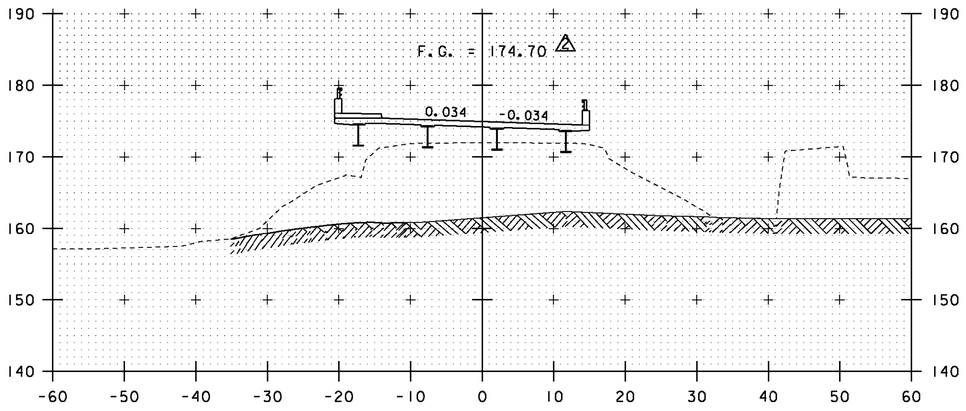
KEY	DATE	BY	REVISION
⚠	09/01/2015	VAOT	MODIFIED FINISH GRADE.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

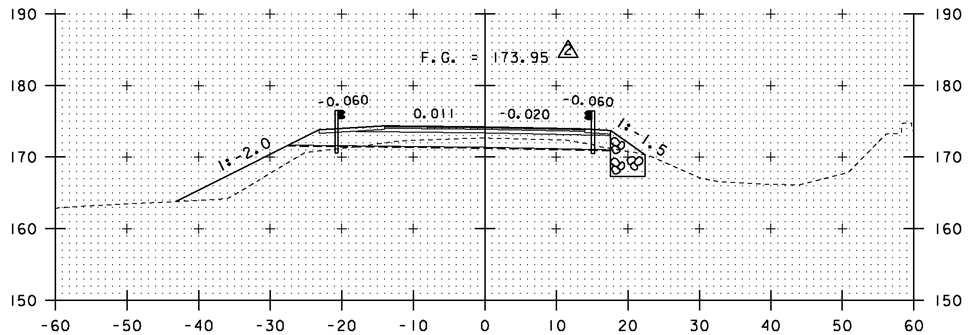
FILE NAME: s95j298xs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDERBERG
ROADWAY CROSS SECTIONS 2

PLOT DATE: 01-SEP-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 37 OF 53

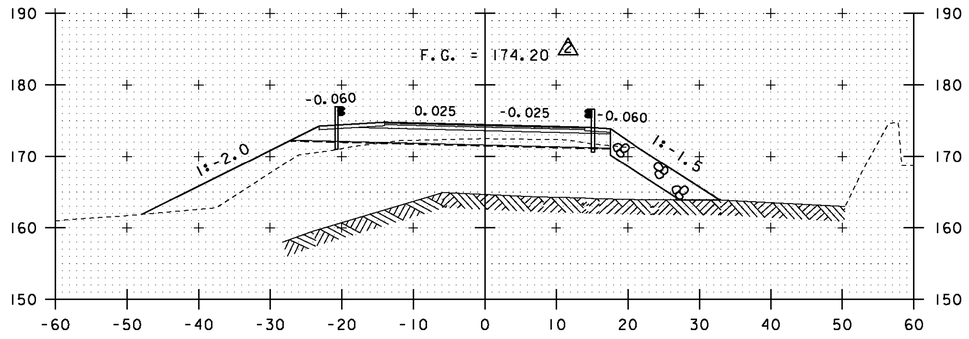
END BRIDGE STA. 14+34.00



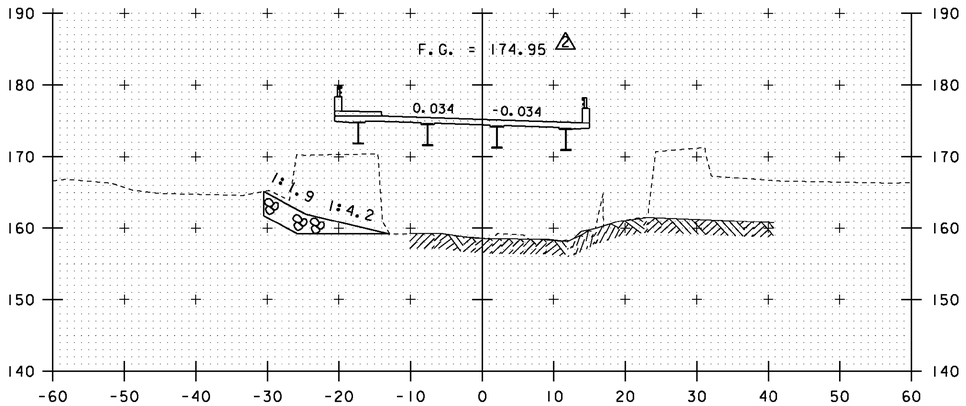
14+00



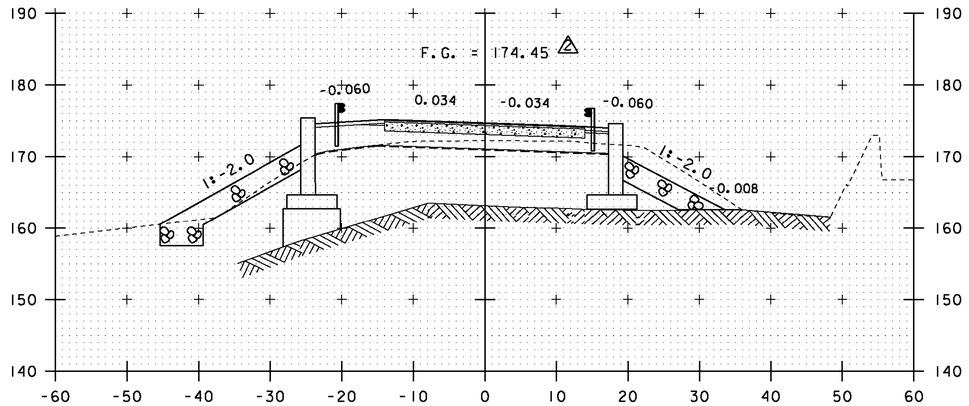
15+00 ⚠1



14+25



14+75 ⚠1



14+50 ⚠1

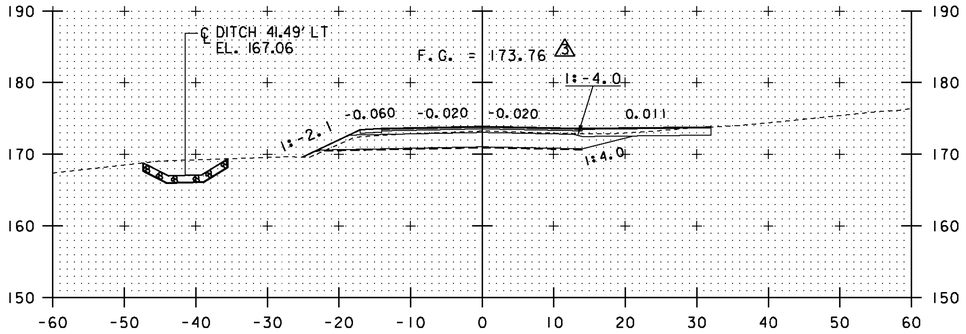
STA. 14+00 TO STA. 15+00

KEY	DATE	BY	REVISION
⚠1	02/23/2015	VAOT	MODIFIED ROADWAY MATERIAL DEPTHS.
⚠2	09/01/2015	VAOT	MODIFIED FINISH GRADE.

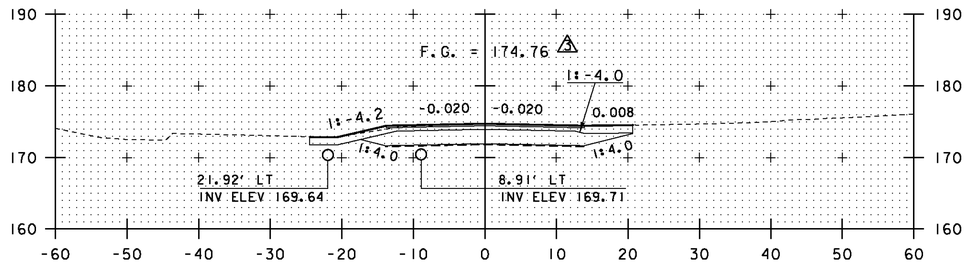
PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298xs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDERBERG
ROADWAY CROSS SECTIONS 3

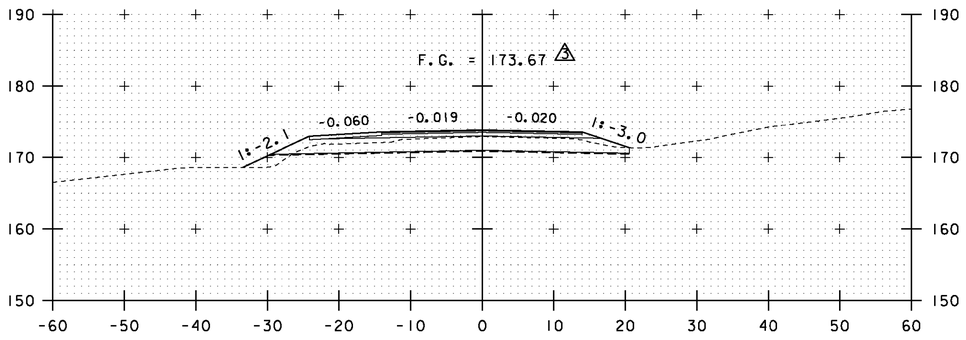
PLOT DATE: 01-SEP-2015
DRAWN BY: G. ROKES
CHECKED BY: D PETERSON
SHEET 38 OF 53



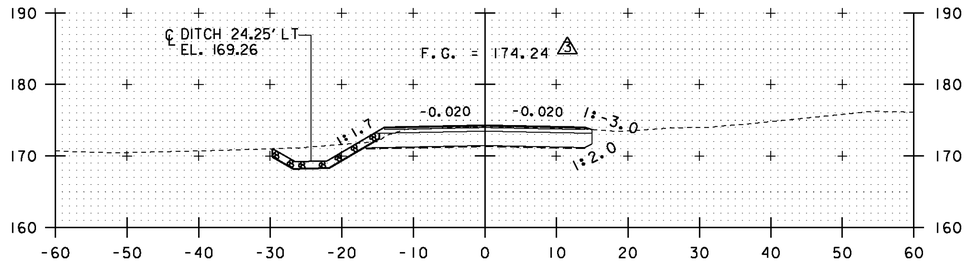
15+67 1 2
DRIVE RIGHT



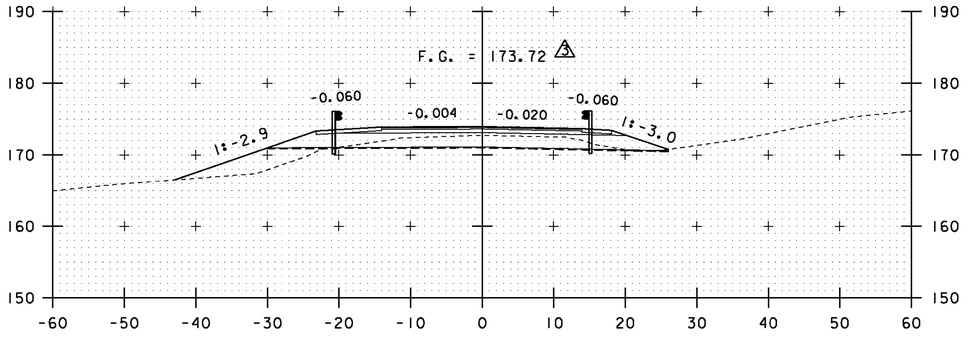
16+21 1 2
DRIVE LEFT



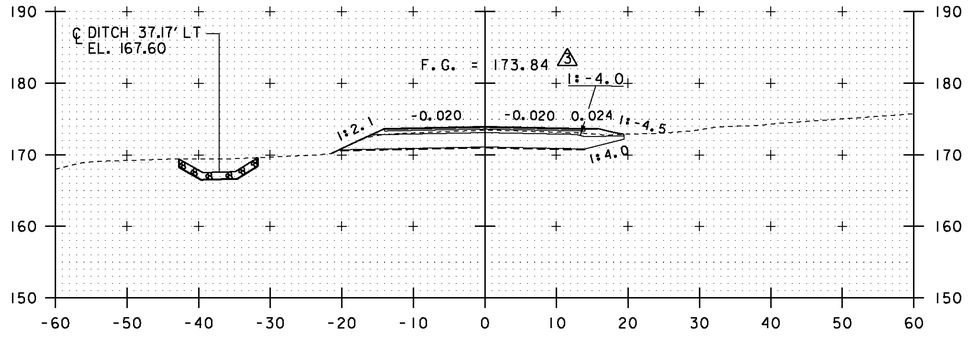
15+50 1 2



16+00 1 2



15+25 1



15+75 1 2

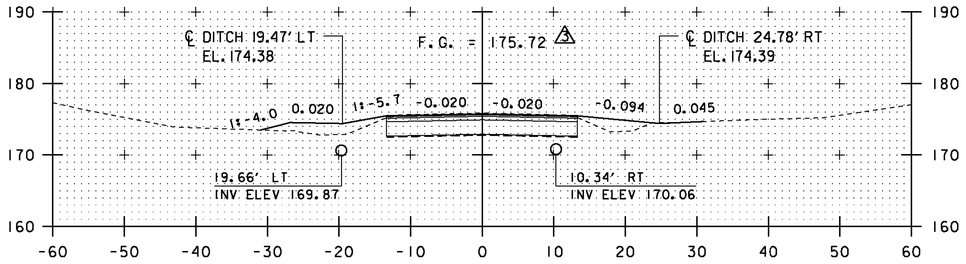
KEY	DATE	BY	REVISION
1	02/23/2015	VAOT	MODIFIED ROADWAY MATERIAL DEPTHS.
2	04/20/2015	VAOT	MODIFIED DRAINAGE PIPES AND DITCH.
3	09/01/2015	VAOT	MODIFIED FINISH GRADE.

STA. 15+25 TO STA. 16+21

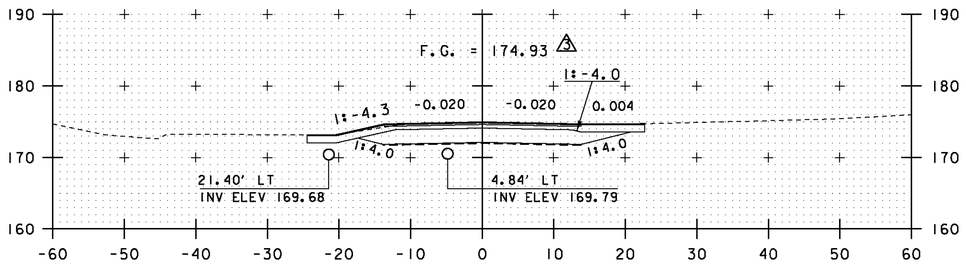
PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298xs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDERBERG
ROADWAY CROSS SECTIONS 4

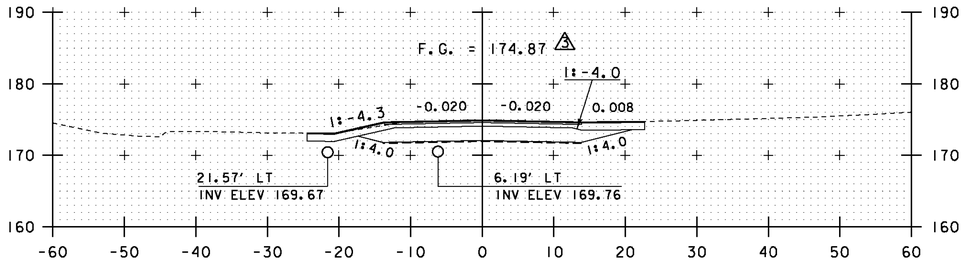
PLOT DATE: 01-SEP-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 39 OF 53



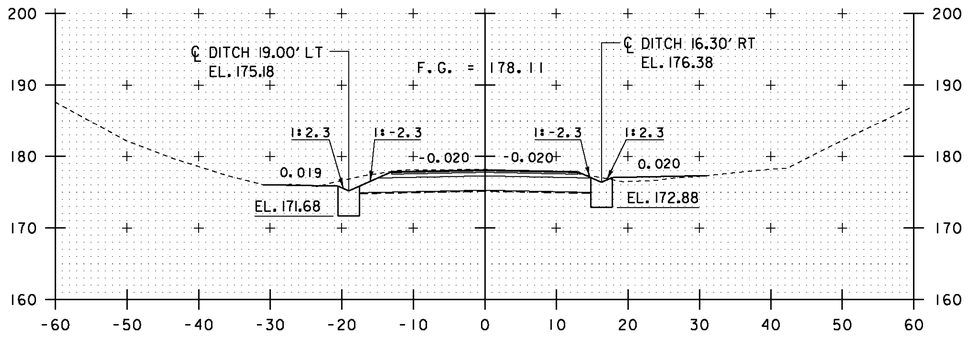
16+50 1 2



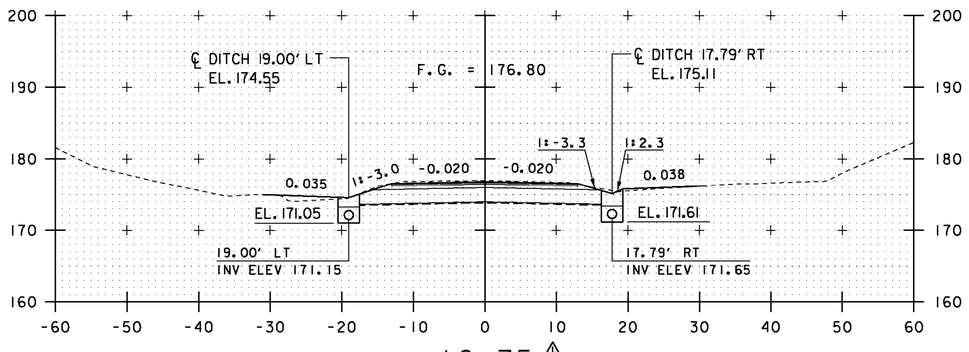
16+27 1 2
DRIVE RIGHT



16+25 1 2



17+00



16+75 1

END VAOT PROJECT
COLCHESTER STP 5600(12)
BEGIN TOWN OF COLCHESTER
MILL POND ROAD
ROADWAY RECONSTRUCTION

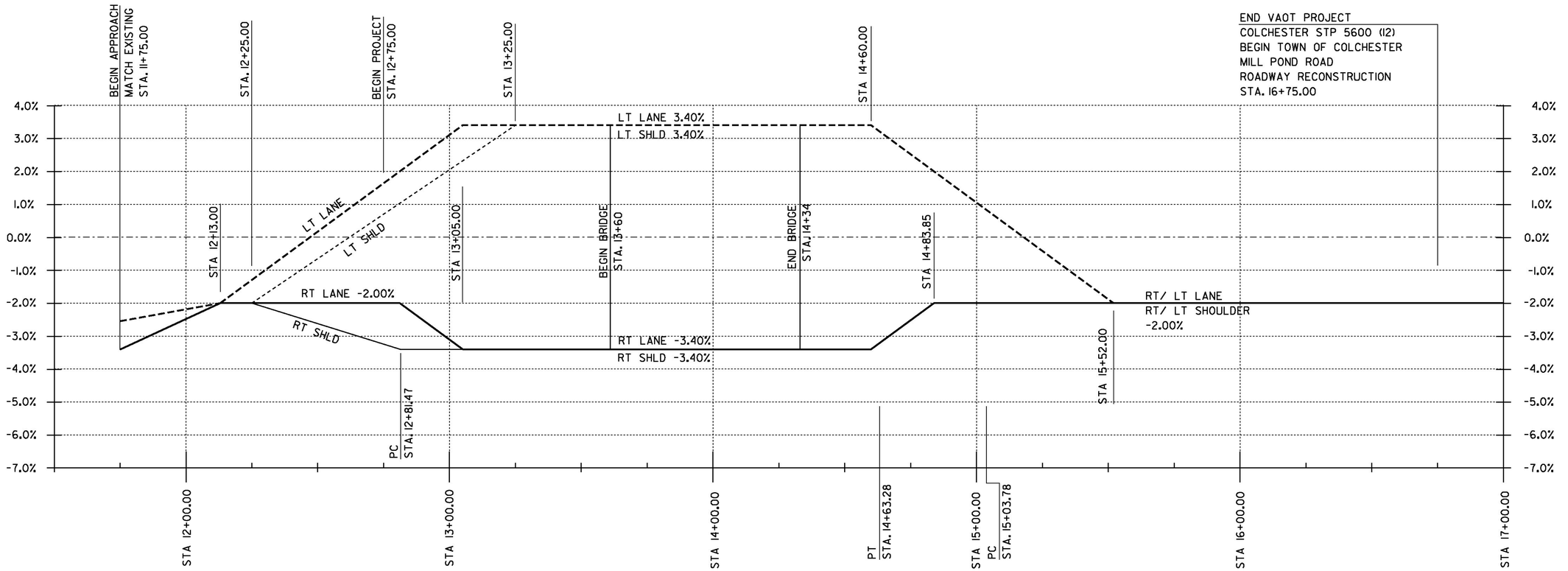
STA. 16+25 TO STA. 17+00

KEY	DATE	BY	REVISION
1	02/23/2015	VAOT	MODIFIED ROADWAY MATERIAL DEPTHS.
2	04/20/2015	VAOT	MODIFIED DRAINAGE PIPES AND DITCH.
3	09/01/2015	VAOT	MODIFIED FINISH GRADE.

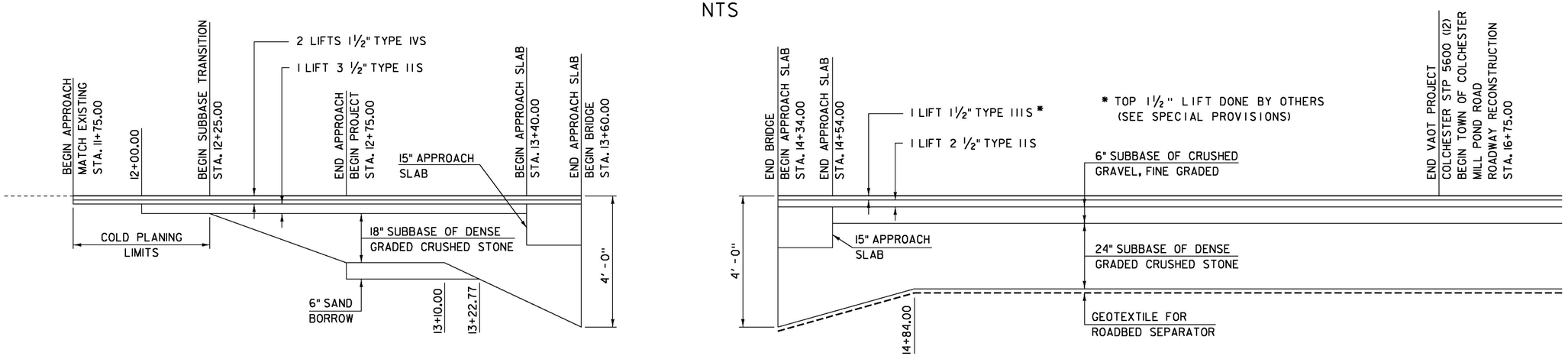
PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298xs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDERBERG
ROADWAY CROSS SECTIONS 5

PLOT DATE: 01-SEP-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 40 OF 53



BANKING DIAGRAM
NTS



MATERIAL TRANSITION ⚠
NTS

KEY	DATE	BY	REVISION
⚠	02/23/2015	VAOT	MODIFIED MATERIAL TRANSITION AFTER BRIDGE.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

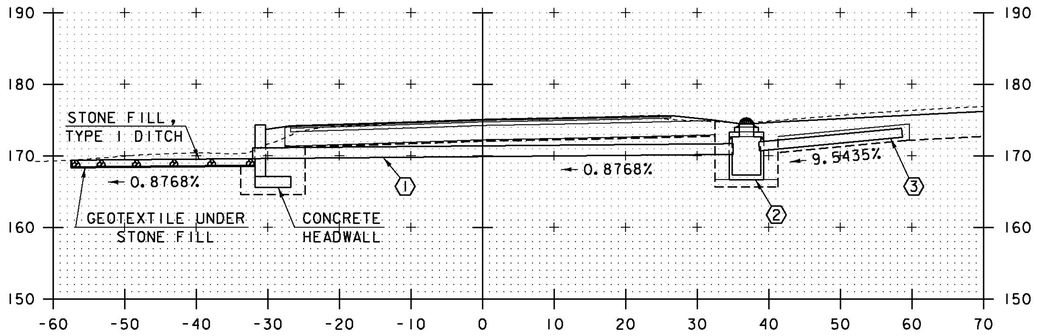
FILE NAME: s95j298xs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDERBERG
MATERIAL TRANSITION AND BANKING DIAGRAM

PLOT DATE: 23-FEB-2015
DRAWN BY: G. ROKES
CHECKED BY: N. VANDERBERG

① STA 16+03.58, 16.69' LT - STA 16+61.38, 17.60' RT
NEW 18" X 68' CPEP (SL)
INLET INV ELEV 170.19; OUTLET INV ELEV 169.60

② STA 16+63.00, 18.50' RT
NEW PRECAST REINFORCED CONCRETE PERFORATED CATCH BASIN WITH BEE-HIVE TYPE GRATE
RIM ELEV 174.50; SUMP ELEV 167.34

③ STA 16+64.85, 18.40' RT - STA 16+85.07, 17.24' RT
NEW 15" X 20' UNDERDRAIN PIPE
INLET INV ELEV 172.60; OUTLET INV ELEV 170.69



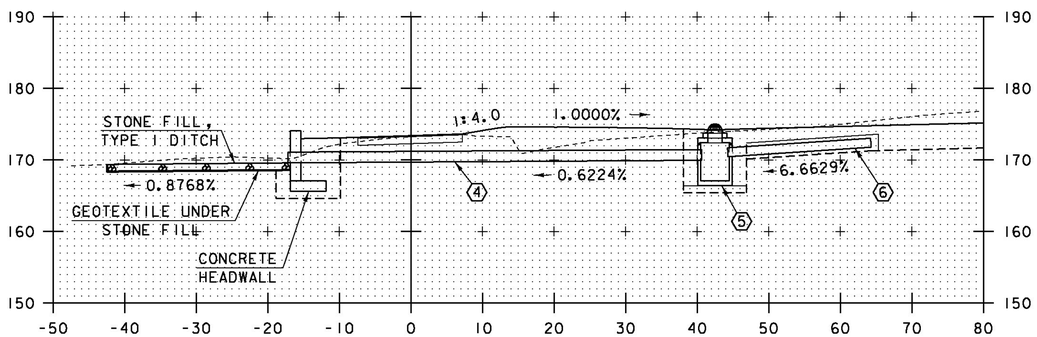
DRAINAGE 1 PROFILE ⚠

SCALE: 1" = 10'-0"
10 0 10

④ STA 16+04.08, 18.62' LT - STA 16+61.19, 18.95' LT
NEW 18" X 58' CPEP (SL)
INLET INV ELEV 169.96; OUTLET INV ELEV 169.60

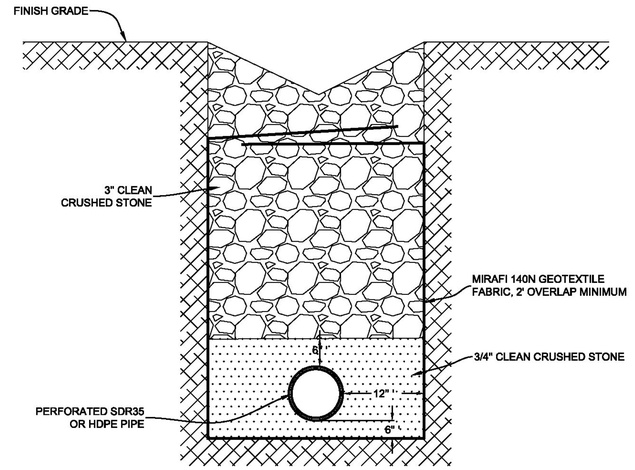
⑤ STA 16+63.00, 19.00' LT
NEW PRECAST REINFORCED CONCRETE PERFORATED CATCH BASIN WITH BEE-HIVE TYPE GRATE
RIM ELEV 174.25; SUMP ELEV 167.09

⑥ STA 16+64.81, 18.99' LT - STA 16+84.55, 18.95' LT
NEW 15" X 20' UNDERDRAIN PIPE
INLET INV ELEV 171.79; OUTLET INV ELEV 170.46



DRAINAGE 2 PROFILE

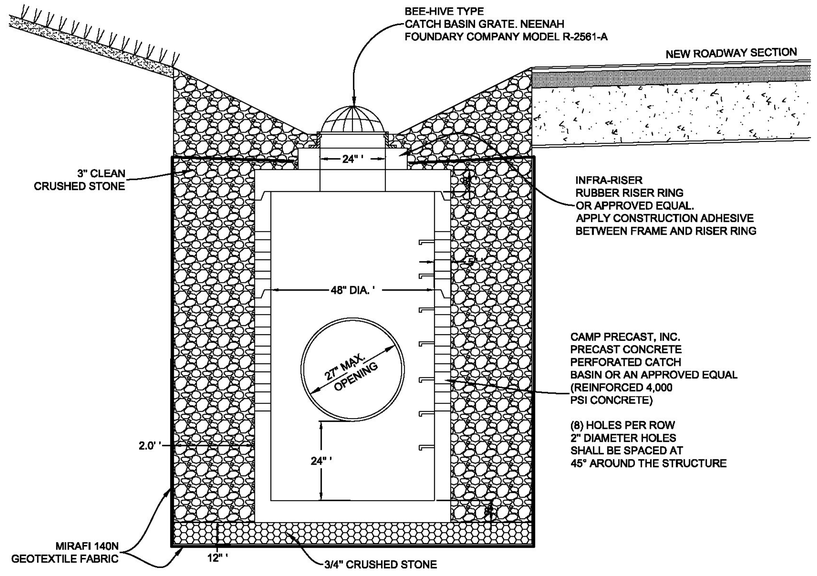
SCALE: 1" = 10'-0"
10 0 10



TYPICAL TRENCH DETAIL UNDERDRAIN PIPE

NTS

PAY ITEM 900.640, SPECIAL PROVISION (15 INCH UNDERDRAIN PIPE)



TYPICAL 48" DIA. CATCH BASIN

NTS

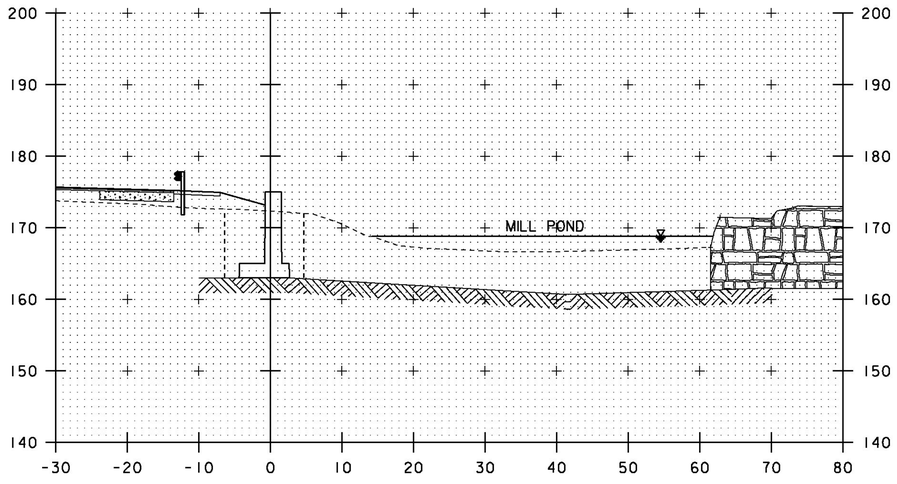
PAY ITEM 900.620, SPECIAL PROVISION (PRECAST REINFORCED CONCRETE PERFORATED CATCH BASIN WITH CAST IRON GRATE)

KEY	DATE	BY	REVISION
⚠	02/23/2015	VAOT	MODIFIED ROADWAY MATERIAL DEPTHS.

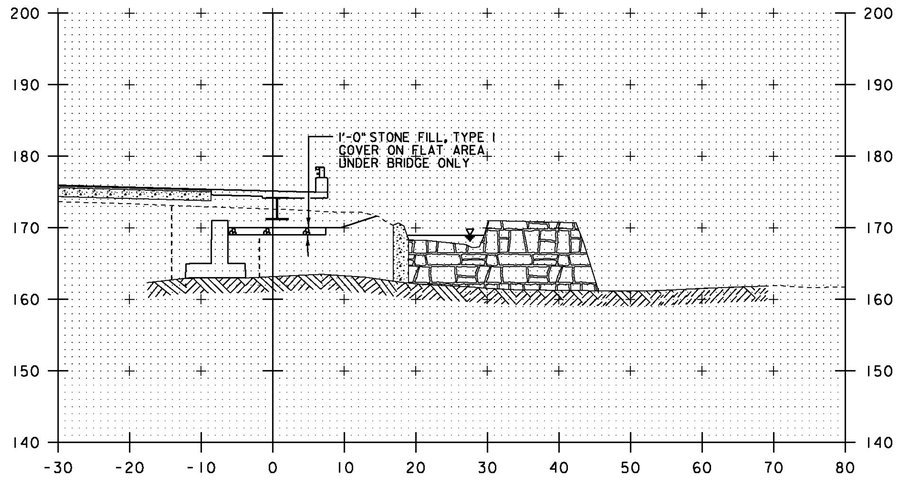
PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298xs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: G. ROY
DRAINAGE PROFILES

PLOT DATE: 23-FEB-2015
DRAWN BY: G. ROY
CHECKED BY: D. PETERSON
SHEET 42 OF 53

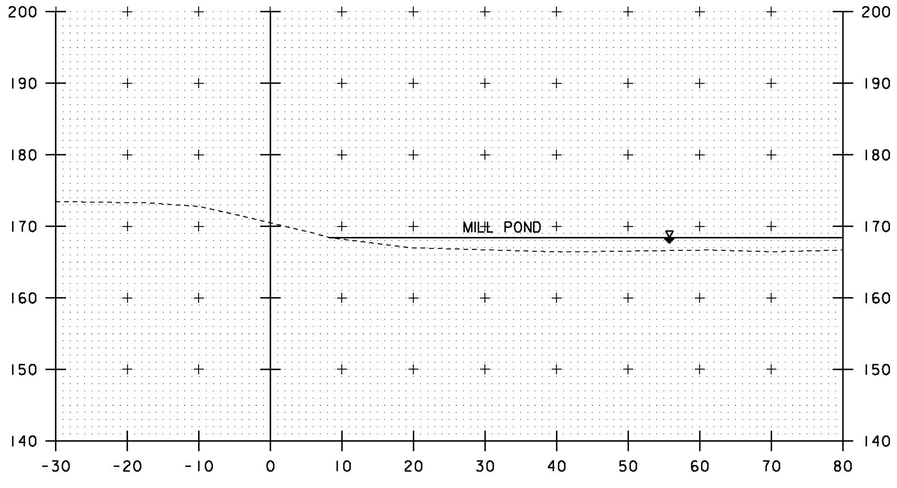


20+25

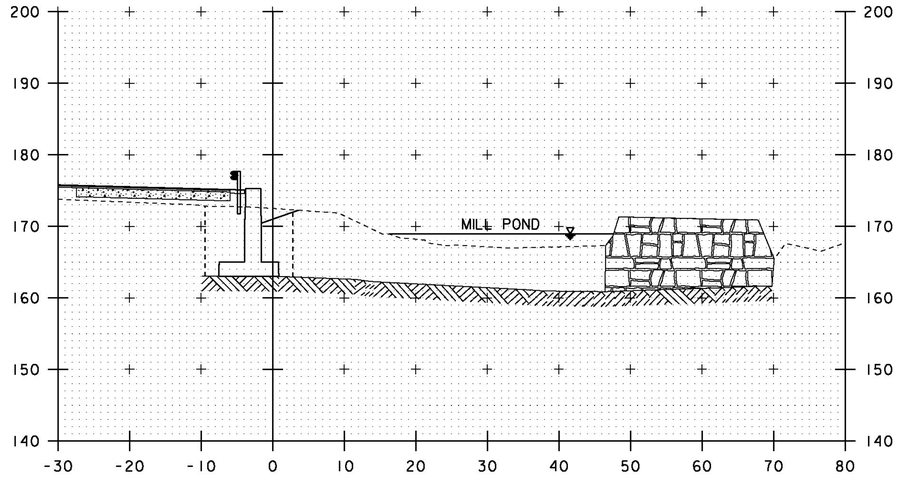


STA. 20+34.50 BEGIN ITEMS LT
UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL, TYPE I
GEOTEXTILE UNDER STONE FILL

20+37



20+00



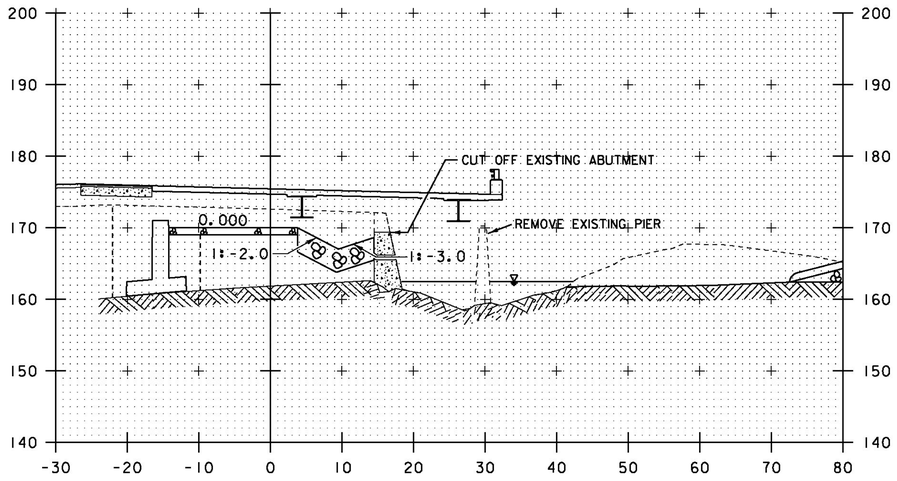
20+30

STA. 20+00 TO STA. 20+37

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298xs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDERBERG
CHANNEL CROSS SECTIONS I

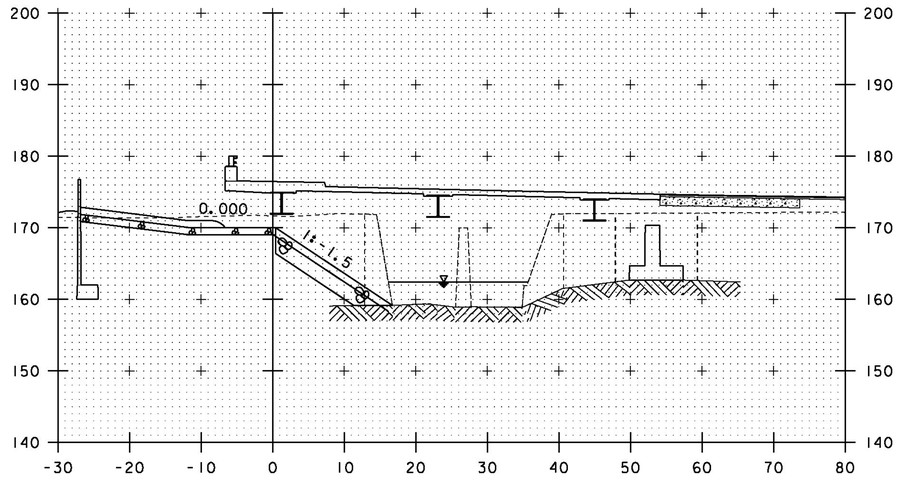
PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 43 OF 53



STA. 20+43.48 BEGIN ITEMS LT
STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL

20+50

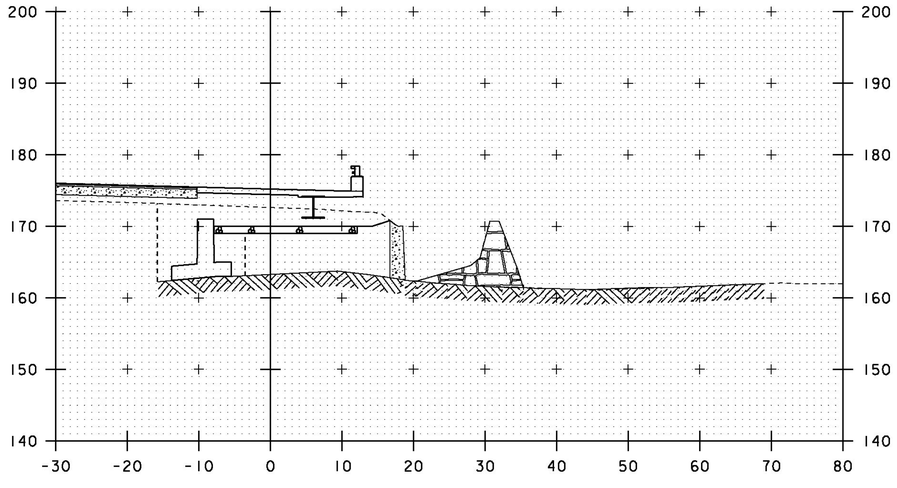
STA 20+46.68 BEGIN ITEMS RT
MATCH EXISTING GROUND AND TRANSITION
UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL



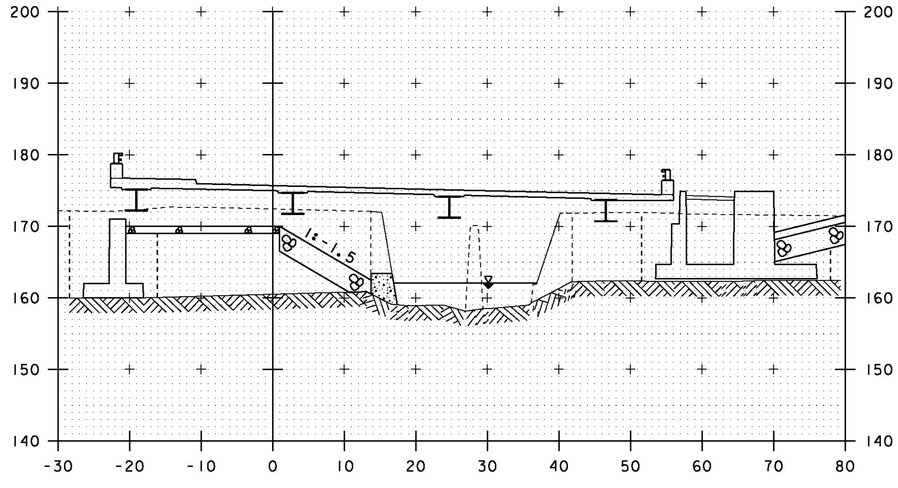
STA. 20+61.25 BEGIN ITEM LT
GRUBBING MATERIAL

20+70

STA. 20+63.97 END ITEMS RT
STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL



20+40



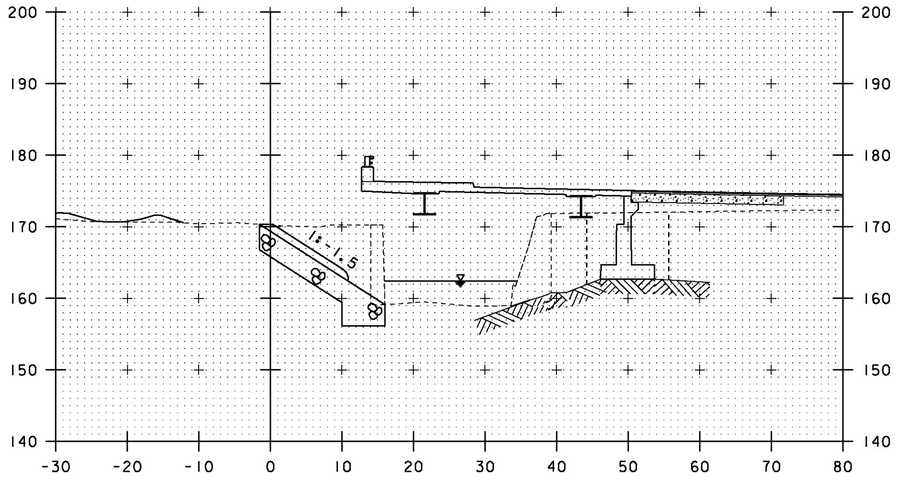
20+60

STA. 20+40 TO STA. 20+70

PROJECT NAME: COLCHESTER	
PROJECT NUMBER: STP 5600 (12)	
FILE NAME: s95j298xs.dgn	PLOT DATE: 12-JAN-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: G. ROKES
DESIGNED BY: N. VANDERBERG	CHECKED BY: D. PETERSON
CHANNEL CROSS SECTIONS 2	SHEET 44 OF 53

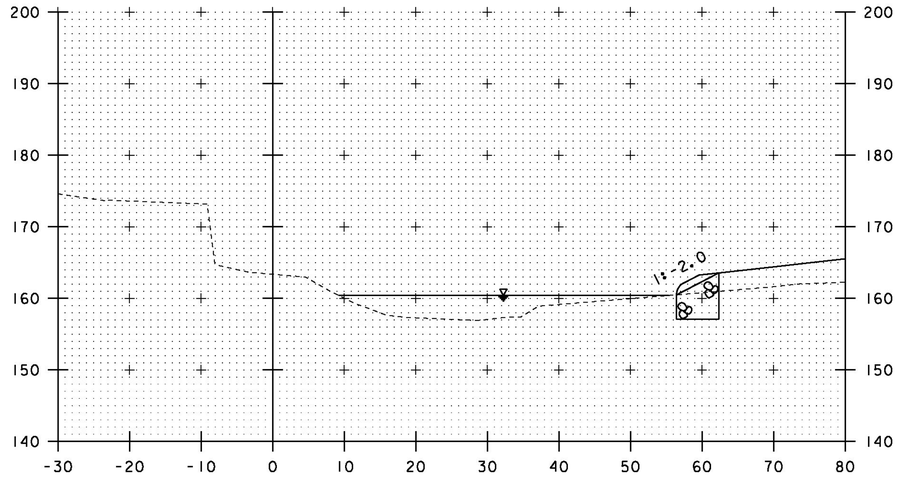
STA. 20+94.32 END ITEMS LT
UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL,TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL

STA. 20+81.30 BEGIN ITEMS RT
UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL,TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL

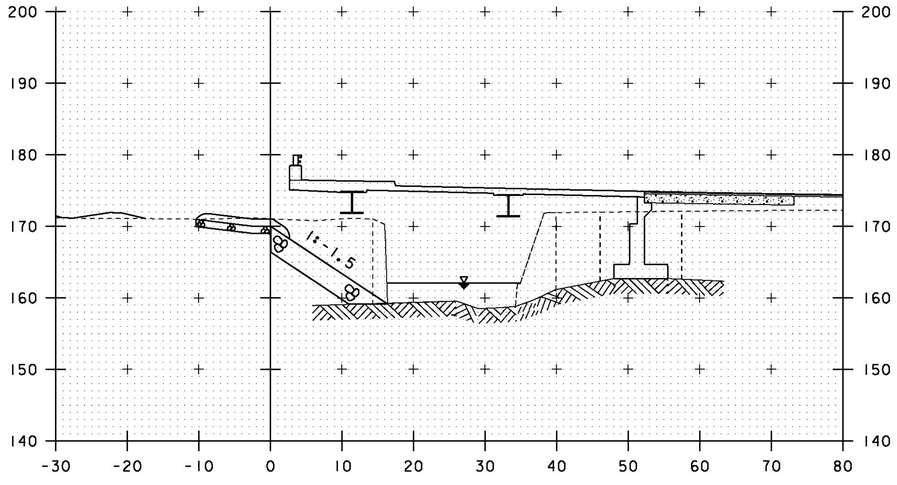


20+80

STA. 21+31.54 END ITEMS RT
UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL,TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL

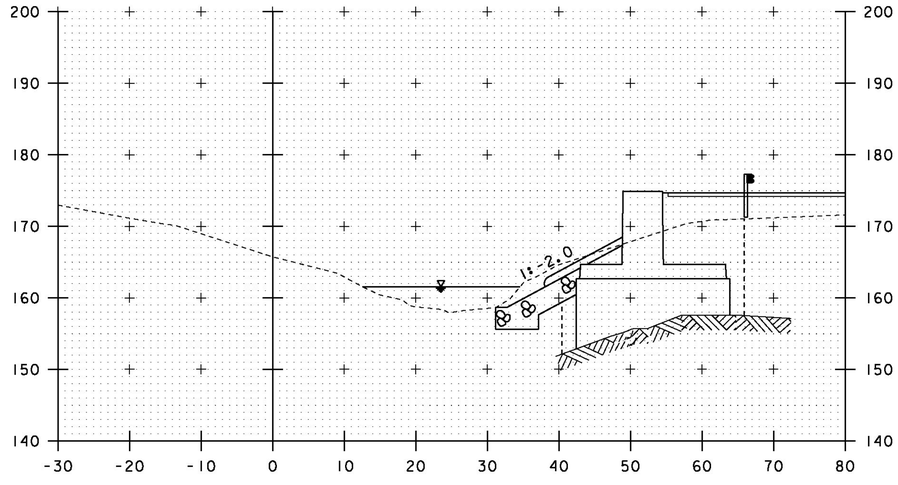


21+25



STA. 20+73.70 BEGIN ITEM LT
GRUBBING MATERIAL

20+75



21+00

STA. 20+75 TO STA. 21+25

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298xs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDERBERG
CHANNEL CROSS SECTIONS 3

PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 45 OF 53

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF A TWO SPAN CONCRETE BRIDGE OVER THE INDIAN BROOK. THE PROJECT IS ON TH 27 (MILL POND ROAD) A PAVED, RURAL COLLECTOR IN THE TOWN OF COLCHESTER. NO TEMPORARY BRIDGE WILL BE CONSTRUCTED. A DETOUR WILL BE SIGNED TO REROUTE TRAFFIC ONTO US ROUTE 7 AND TH 7 (SEVERANCE ROAD). THE DETOUR ROUTE WILL BE APPROXIMATELY 3.4 MILES IN LENGTH. WORK INCLUDING BOTH APPROACHES IS APPROXIMATELY 500.00 FEET.THE LIMITS OF CONSTRUCTION APPROACH BUILDINGS AND OTHER STRUCTURES. AN EXISTING ABUTMENT RESTS AGAINST A HISTORIC DAM, THE HISTORIC DAM IS SHOWN IN THE EPSC FINAL CONDITIONS SHEET.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.57 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY
THE TOPOGRAPHY OF THE PROJECT SITE IS RELATIVELY FLAT. AFTER THE BRIDGE AT APPROXIMATELY STA. 16+00 THERE ARE THREE DRIVES, ONE ON THE LEFT AND TWO ON THE RIGHT. THERE IS A RESIDENCE LOCATED APPROXIMATELY 160 FEET TO THE NORTHEAST OF THE BRIDGE. THERE IS A SLIGHT HORIZONTAL CURVE OVER THE BRIDGE AND A SIGNIFICANT VERTICAL SAG CURVE OVER THE BRIDGE. THERE ARE UTILITIY POLES ON THE WEST SIDE OF THE ROAD, BOTH NORTH AND SOUTH OF THE BRIDGE WITH OVERHEAD LINES PASSING DIRECTLY OVER THE BRIDGE. IMMEDIATELY ADJACENT TO THE BRIDGE IS THE MILL POND DAM.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES
THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, MODERATE TO STEEPLY SLOPING, MIXED SOFTWOOD AND HARDWOOD FOREST WITH WELL DEFINED DRAINAGE WAYS. DUE TO THE NATURE OF THE SURROUNDING TERRAIN, RUNOFF WATER ENTERING THE PROJECT SITE WILL BE PRIMARILY LIMITED TO THAT WHICH IS CONVEYED ALONG ROADWAY DITCHES, AND THAT WHICH FOLLOWS MILL POND ROAD ALONG THE GRADE AT THE END OF THE PROJECT LIMITS. THE CURRENT ROADWAY DITCHES ARE NOT WELL DEFINED AND ARE LINED WITH STONE IN SOME AREAS.

INDIAN BROOK IS LOCATED IN THE PROJECT AREA. THE ONLY OTHER WATER BODY NEAR THE PROJECT AREA IS MILL POND. THE INDIAN BROOK IS CLASSIFIED AS PERENNIAL, SINUOUS, NOT BRAIDED AND EQUIWIDTH CONTAINING A STREAMBED OF SOME LEDGE WITH SOME BOULDERS, COBBLES AND GRAVEL. THE CONTRIBUTING DRAINAGE AREA AT THE BRIDGE CROSSING IS 10.3 SQ. MI.

DISTURBANCE OF SOILS NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO CONSTRUCT TWO NEW CONCRETE BRIDGE ABUTMENTS AND APPLICABLE ROADWAY APPROACHES AS WELL AS THE REMOVAL OF THE EXISTING CROSSING. STABILIZATION OF DISTURBANCES TO STREAM BANKS WILL BE ACCOMPLISHED WITH STONE FILL, TYPE I AND TYPE III.

1.2.3 VEGETATION
A MIX OF HARDWOOD AND SOFTWOOD TREES OF ALL SIZES EXIST ALONG TH27. THE RESIDENCE NEAR THE BRIDGE SITE HAS SMALL AREAS OF LAWN. IMPACTS TO VEGETATION WILL BE LIMITED TO THOSE WHICH ARE EFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE.

FOLLOWING REMOVAL OF THE EXISTING BRIDGE, ROADWAY APPROACHES WILL BE REBUILT AND THE SLOPES STABILIZED WITH STONE FILL AND VEGETATION REESTABLISHED WITH STANDARD SEED & MULCH PRACTICES.

1.2.4 SOILS
ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF CHITTENDEN, VERMONT. SOILS ON THE PROJECT SITE ARE UDORTHENTS N/A SLOPES, "K FACTOR" = N/A; THE SOIL IS CONSIDERED UNKNOWN FOR ERODIBILITY. ADAMS/WINDSOR 12% TO 30% SLOPES, "K FACTOR" = 0.17; THE SOIL IS CONSIDERED LOW ERODIBLE. LIMERICK 0% TO 3% SLOPES, "K FACTOR" = 0.49; THE SOIL IS CONSIDERED HIGHLY ERODIBLE. AND SCANTIC 2% TO 6% SLOPES, "K FACTOR" = 0.32; THE SOIL IS CONSIDERED MODERATELY ERODIBLE.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS
CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: YES
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: YES
WATER RESOURCE: INDIAN BROOK
WETLANDS: YES, CLASS II WETLANDS ARE LOCATED ON ALL SIDES OF THE PROJECT SLOPES.

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES
SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

1.4.2 LIMIT DISTURBANCE AREA
PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION
TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS
SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

1.4.5 DIVERT UPLAND RUNOFF
DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN, AT A MINIMUM.

1.4.7 CONSTRUCT PERMANENT CONTROLS
PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION
ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE
EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES
DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

TREATMENT OF DEWATERING IS ANTICIPATED. A LOCATION FOR TREATMENT HAS BEEN PROPOSED AND IS SHOWN ON THE PLANS. HOWEVER THE SPECIFIC MEANS FOR TREATMENT OF DISCHARGE SHALL BE PROVIDED BY THE CONTRACTOR.

1.4.12 INSPECT YOUR SITE
INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 OFF-SITE ACTIVITIES
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

N

VT STATE PLANE GRID

SOIL INFORMATION:
UDORTHENTS
SLOPES N/A
"K FACTOR" N\A
ERODIBILITY NOT RATED.

SOIL INFORMATION:
LIMERICK
SLOPES 0-3%
"K FACTOR" 0.49
HIGH ERODIBILITY

SOIL INFORMATION:
SCANTIC
SLOPES 2-6%
"K FACTOR" 0.32
MODERATE ERODIBILITY

SOIL INFORMATION:
ADAMS/WINDSOR
SLOPES 12-30%
"K FACTOR" 0.17
LOW ERODIBILITY

EXISTING ROW
TH 27
(MILL POND RD)
TO
SEVERANCE RD
EXISTING ROW
CLASS 2 WETLAND
CLASS 2 WETLAND
CLASS 2 WETLAND
CONCRETE WALK
INDIAN BROOK
HISTORIC
MILL POND
DAM
BM
ELEV = 173.03
IN DAM
MILL POND
Indian Brook
P10
P9
P8
GRAVEL
DRIVE
DRIVE
HOUSE
DRIVE
24" CMP
18" PIPE
TO
VT 2A
ABANDONED
POLE
ARCH
HDWL

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	STP 5600 (12)
FILE NAME: s95j298eroExst.dgn	PLOT DATE: 12-JAN-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: G. ROKES
DESIGNED BY: N. VANDENBERG	CHECKED BY: N. VANDENBERG
EPSC EXISTING CONDITIONS	SHEET 47 OF 53

N

VT STATE PLANE GRID

STABILIZED CONSTRUCTION ENTRANCE (TYP)

DEWATERING AREA

DO NOT DISTURB FOUNDATION REMAINS IN THIS AREA

DO NOT DISTURB EXISTING DAM STRUCTURE

EXISTING ROW

TO SEVERANCE RD

TO VT 2A

SCALE 1" = 20'-0"
20 0 20

SEE SHEET 10 FOR SYMBOLOGY LEGEND.

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	STP 5600 (12)

FILE NAME: s95j298eroConst.dgn	PLOT DATE: 30-JAN-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: G. ROKES
DESIGNED BY: N. VANDENBERG	CHECKED BY: D. PETERSON
EPSC CONSTRUCTION CONDITIONS	SHEET 48 OF 53

N

VT STATE PLANE GRID

CONCRETE WALK

INDIAN BROOK

21+50

21+00

14+00

15+00

16+00

17+00

13+00

12+00

20+00

AER E&T

EXISTING ROW

TO SEVERANCE RD

TO VT 2A

HISTORIC MILL POND DAM

MILL POND

HOUSE

190

180

170

160

210

200

220

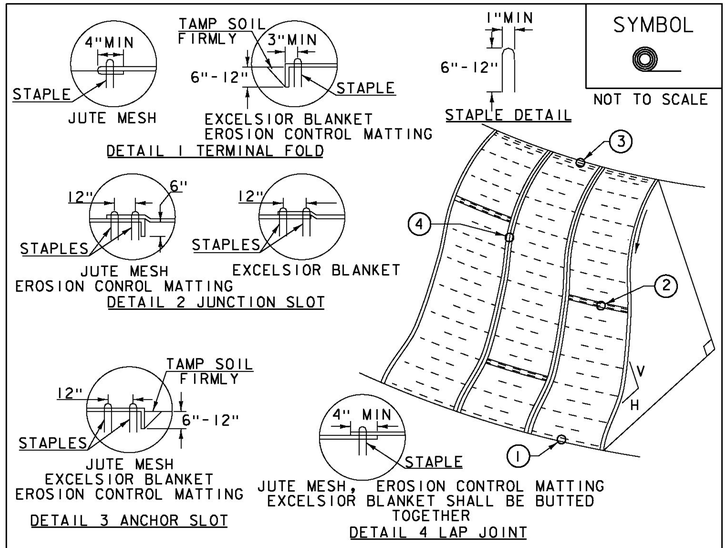
SEE SHEET 10 FOR SYMBOLOGY LEGEND.

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	STP 5600 (12)

FILE NAME: s95j298erofinal.dgn	PLOT DATE: 26-JAN-2015
PROJECT LEADER: C. CARLSON	DRAWN BY: G. ROKES
DESIGNED BY: N. VANDENBERG	CHECKED BY: D. PETERSON
EPSC FINAL CONDITIONS	SHEET 49 OF 53



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

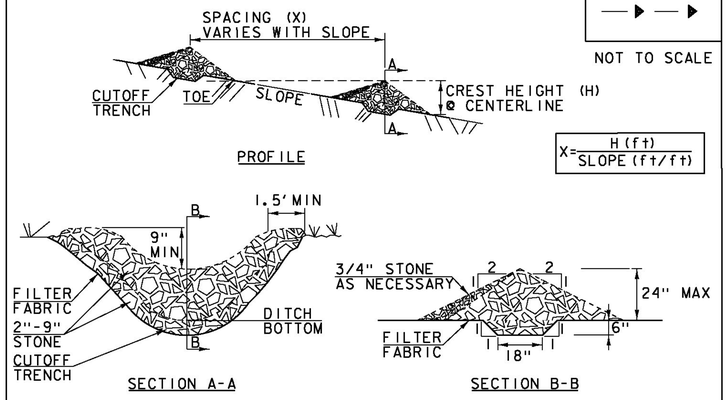
ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CHECK DAM

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF

VAOT LOW GROW/FINE FESCUE MIX

LBS/AC						
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
38%	57	95	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90%	98%
29%	43.5	72.5	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95%
15%	22.5	37.5	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%
15%	22.5	37.5	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90%	95%
3%	4.5	7.5	INERTS			
100%	150	250				

VAOT RURAL AREA MIX

LBS/AC						
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
37.5%	22.5	45	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
37.5%	22.5	45	TALL FESCUE	FESTUCA ARUNDINACEA	90%	95%
5.0%	3	6	RED TOP	AGROSTIS GIGANTEA	90%	95%
15.0%	9	18	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%	60	120				

GENERAL AMENDMENT GUIDANCE

FERTILIZER	LIME	
10/20/10	AG LIME	PELLITIZED
500 LBS/AC	2 TONS/AC	1 TONS/AC

CONSTRUCTION GUIDANCE

1. SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
2. SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED PROPOSED FOR USE WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED.
7. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

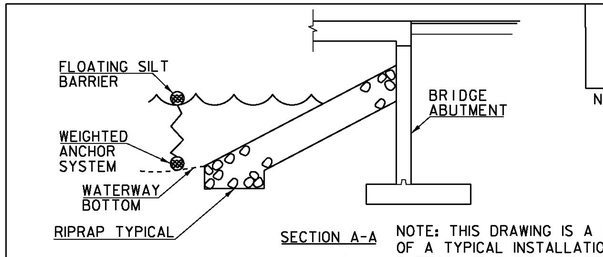
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651

REVISIONS	
JANUARY 12, 2015	WHF

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298eroDetails.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
EPSC DETAILS 1

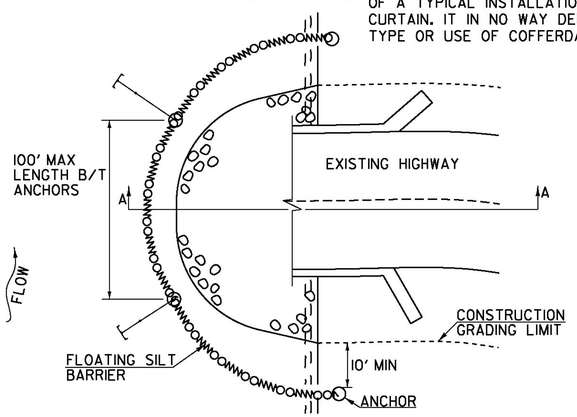
PLOT DATE: 26-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 50 OF 53



SYMBOL

NOT TO SCALE

NOTE: THIS DRAWING IS A DEPICTION OF A TYPICAL INSTALLATION OF FILTER CURTAIN. IT IN NO WAY DEFINES THE TYPE OR USE OF COFFERDAM IF USED.



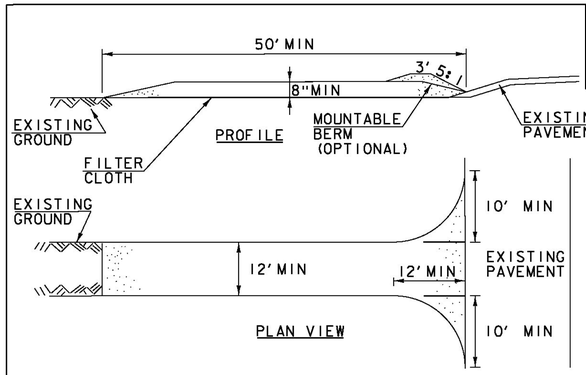
CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF
SEPTEMBER 4, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

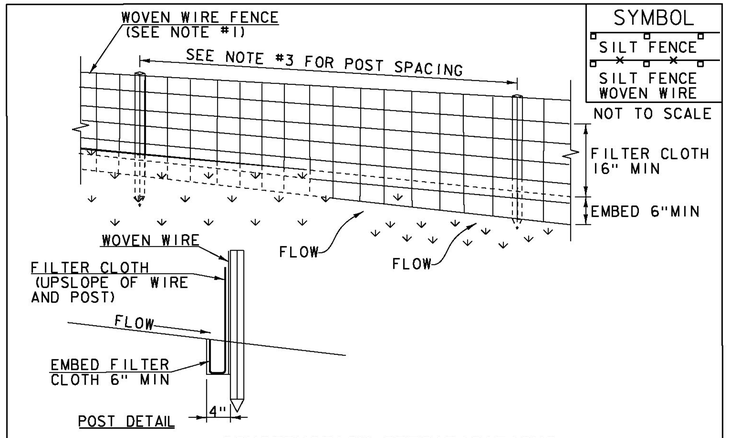
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600 (12)

FILE NAME: s95j298eroDetails.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBERG
EPSC DETAILS 2

PLOT DATE: 12-JAN-2015
DRAWN BY: G. ROKES
CHECKED BY: D. PETERSON
SHEET 51 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	ROW LAYOUT NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	T / P	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1A	GREGOIRE, GARY L.	1	12+25 RT	12+99 RT			CONSTRUCTION	T	200 SF	WDOE		COLCHESTER			INCL. EC & BF
			12+47 RT	15+46 RT			UTILITY	P	0.15 A						6,490 SF±
			14+23 RT	15+34 RT			CONSTRUCTION	T	370 SF						INCL. EC & BF
			14+28 RT	14+75 RT			SLOPE	P	90 SF						INCL. STONE FILL
1B		1	13+00 LT	13+84 LT			DITCH & DRAINAGE	P	560 SF						STONE LINED DITCH
			13+53 LT	14+11 LT			CONSTRUCTION	T	330 SF						INCL. EC & BF
			14+23 LT	15+65 LT			CONSTRUCTION	T	1,050 SF						INCL. EC & BF
			14+24 LT	15+57 LT			SLOPE	P	1,320 SF						INCL. STONE FILL
			15+67 LT	16+27 LT			UTILITY	P	740 SF						

TABLE OF REVISIONS

REVISION NO.	ROW SET SHEET #	DESCRIPTION	DATE
1	3, 4	PARCEL 1, PARE - CHANGE OWNER	04/29/14
		NAME TO: VERMONT STATE EMPLOYEES	
		CREDIT UNION, AS AGENT FOR FEDERAL	
		NATIONAL MORTGAGE ASSOCIATION.	
		COMP BY: MT C.O. 9879 APPR BY: RC	
2	3, 4	PARCEL 1, VSECU - CHANGE OWNER	11/24/14
		TO GREGOIRE, GARY L.	
		COMP BY: MT C.O. 9943 APPR BY: RC	

APPROVED: RYAN CLOUTIER DATE: 03-12-14
CHIEF, PLANS & TITLES

PROJECT NAME: **COLCHESTER**
PROJECT NUMBER: **STP 5600(12)**

FILE NAME: **r95j298detail.xls**
PROJECT LEADER: **C. CARLSON**
DESIGNED BY: **R. WHITE**
R.O.W. DETAIL SHEET #1

PLOT DATE: **12-JAN-2015**
DRAWN BY: **M. TROTTIER**
CHECKED BY: **E. PIERCE**
SHEET **52** OF **53**

CONSTRUCT BITUMINOUS CONCRETE APRON

DRIVE @ 15+67.00 RT (LENGTH 18'-0")
DRIVE @ 16+21.00 LT (LENGTH 9'-6")
DRIVE @ 16+27.00 RT (LENGTH 9'-3")

COLD PLANING, BITUMINOUS PAVEMENT

11+75.00 - 12+25.00

BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION

13+60.95 RT - 14+33.05 RT
13+61.05 LT - 14+32.95 LT

CAST-IN-PLACE CONCRETE CURB, TYPE B

13+48.36 LT - 13+60.00 LT
14+34.00 LT - 14+45.64 LT
13+46.97 RT - 13+60.00 RT
14+34.00 RT - 14+47.03 RT

RELOCATE MAILBOX, SINGLE SUPPORT

15+54.00 RT - 15+75.00 RT

BITUMINOUS CONCRETE SIDEWALK

13+48.36 LT - 13+60.00 LT
14+34.00 LT - 14+45.64 LT

DETECTABLE WARNING SURFACE

13+48.85 LT - 13+50.76 LT
14+43.24 LT - 14+45.15 LT

HD STEEL BEAM GUARDRAIL, GALV.

12+47.45 RT - 13+42.80 RT
13+16.16 LT - 13+42.90 LT
14+51.20 RT - 15+32.30 RT
14+51.10 LT - 15+40.82 LT

ANCHOR FOR STEEL BEAM RAIL

12+54.84 RT
13+23.00 LT
15+24.95 RT
15+33.70 LT

TH 27 CURVE (1)
DELTA = 31°05'40"
D = 17°06'12"
R = 335.00'
T = 93.20'
L = 181.81'
E = 12.72'

CONSTRUCT STONE-LINED DITCH, TYPE I

12+64.0 LT - 13+77.6 LT
15+79.1 LT - 16+06.1 LT

① 16+04.43 LT - 16+42.46 RT
REMOVE EXISTING 18" PIPE AND CONCRETE HEADWALLS AT INLET AND OUTLET

② 16+04.48 LT - 16+36.62 LT
REMOVE EXISTING 24" CGMP

① 16+03.58 LT - 16+61.38 RT
NEW 18" X 68' CPEP(SL) WITH CONCRETE HEADWALL AT OUTLET

② 16+63.00 RT
NEW PRECAST REINFORCED CONCRETE PERFORATED CATCH BASIN WITH BEE-HIVE TYPE GRATE

③ 16+64.85 RT - 16+85.07 RT
NEW 15" X 20' UNDERDRAIN PIPE

④ 16+04.08 LT - 16+61.19 LT
NEW 18" X 58' CPEP(SL) WITH CONCRETE HEADWALL AT OUTLET

MAINLINE 13+83.69 AH =
MAINLINE 13+79.10 BK =
CHANNEL LINE 20+61.97
= 75°05'53" LT

EXISTING PERMANENT EASEMENTS TO CHAMPLAIN WATER DISTRICT

EXISTING TEMPORARY EASEMENT TO CHAMPLAIN WATER DISTRICT

(1B) GREGOIRE, GARY L.

⑤ 16+63.00 LT
NEW PRECAST REINFORCED CONCRETE PERFORATED CATCH BASIN WITH BEE-HIVE TYPE GRATE

⑥ 16+64.81 LT - 16+84.55 LT
NEW 15" X 20' UNDERDRAIN PIPE

VT STATE PLANE GRID

TOWN OF COLCHESTER

STA. 12+75.00
BEGIN PROJECT

STA. 11+75.00
BEGIN APPROACH

WOODS DRIVE

EXISTING ROW

N 18° 14' 34.56" E

TH 27
(MILL POND RD)

STONE FILL TYPE I

STA. 13+60.00
BEGIN BRIDGE

P.I. (CURVE 1)
STA 13+74.67 AH
STA 13+70.08 BK

CONST(T)

DIT.DR(P)

SR(P)

UE(P)

15'

10'

STA. 14+34.00
END BRIDGE

BITUMINOUS CONCRETE RAMP
8.3% MAX SLOPE (TYP.)

N 49° 20' 15.03" E

PROPOSED AERIAL RELOCATION (TYP)

R=8'-0" (TYP)

P9

P8

PI STA 14+63.28

PC STA 15+03.78

PT STA 12+81.47

BM
ELEV = 173.03
IN DAM

PIO

R = 12'-0" (TYP)

P.I. (CURVE 2)
STA 16+34.50 AH
STA 16+33.79 BK

MILL POND ROAD
4 RODS (66.00') WIDE
FKA "OLD STAGE ROAD"
ROADS VOL. 1 PAGE 208
JUNE 11, 1832
PLOTTED ON EXISTING CENTERLINE

66.00'

END ROW PROJECT
STP 5600(12)
16+27 33'LT

BEGIN ROW PROJECT
STP 5600(12)
12+25 33'RT

(1A) GREGOIRE, GARY L.

END VAOT PROJECT
COLCHESTER STP 5600 (12)

BEGIN TOWN OF COLCHESTER
MILL POND ROAD
ROADWAY RECONSTRUCTION

PT STA 17+64.52

N/F HOWARD

TH 27 CURVE #2 DATA
Δ = 10°22'28"
D = 3°58'44"
R = 1440.00'
T = 130.73'
L = 260.74'
E = 5.92'

NEW SIGNS
EXIST SIGNS

N = NEW
R = REMOVE

SCALE 1" = 20'-0"
20 0 20

GUARDRAIL APPROACH SECTION, CONC COMB BRIDGE RAILING TL-3

13+42.90 LT - 13+61.05 LT (OMIT CURB)
13+42.80 RT - 13+60.95 RT
14+32.95 LT - 14+51.10 LT (OMIT CURB)
14+33.05 RT - 14+51.20 RT

REMOVAL AND DISPOSAL OF GUARDRAIL

13+54.00 RT - 13+86.00 RT
13+68.00 LT - 13+97.00 LT
14+15.00 RT - 14+97.00 RT
14+23.00 LT - 15+27.00 LT

4 INCH WHITE LINE

11+75.00 RT - 14+34.00 RT
11+75.00 LT - 14+34.00 LT

4 INCH YELLOW LINE (DOUBLE)

11+75.00 CL - 14+34.00 CL

TRAFFIC SIGNS, TYPE A

12+20.00 RT
13+45.00 RT
14+65.00 LT

REMOVING SIGNS

12+18.15 RT
12+76.10 RT

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

FOR R.O.W. USE ONLY

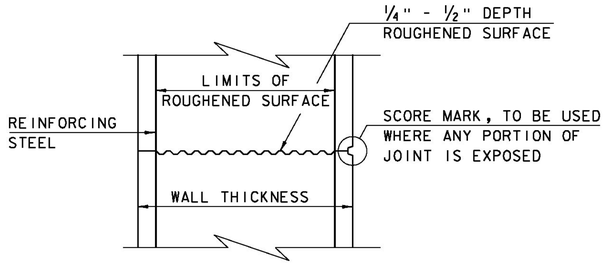
PROJECT NAME: COLCHESTER
PROJECT NUMBER: STP 5600(12)

FILE NAME: r95j298lay.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: N. VANDENBURG
R.O.W. LAYOUT SHEET 1 OF 1

PLOT DATE: 12-JAN-2015
DRAWN BY: E. PIERCE
CHECKED BY: R. CLOUTIER
SHEET 53 OF 53

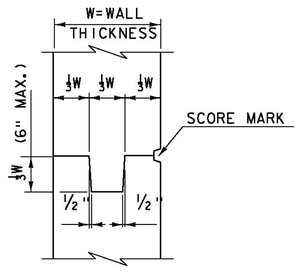
CONCRETE GENERAL NOTES

1. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1"
2. REINFORCING STEEL SIZE AND SPACING SHOWN IN THE PLANS IS BASED ON 60 KSI STEEL, UNLESS NOTED OTHERWISE. WITH THE ENGINEER'S PERMISSION, BAR SIZE AND SPACING MAY BE MODIFIED ACCORDING TO THE LATEST AASHTO LRFD BRIDGE DESIGN SPECIFICATION AND STRUCTURES DESIGN MANUAL WHEN USING HIGHER STRENGTH STEEL.

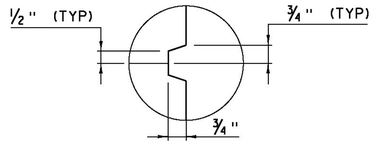


TYPICAL HORIZONTAL CONSTRUCTION JOINT
(NOT TO SCALE)

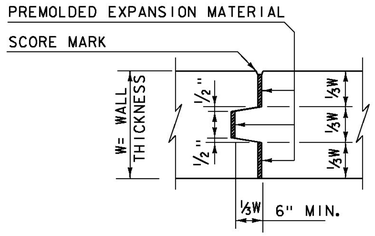
1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



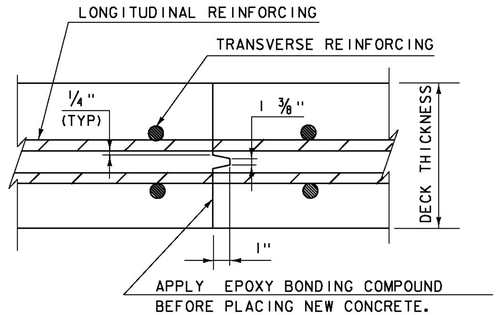
TYPICAL CONCRETE CONSTRUCTION JOINT
(NOT TO SCALE)



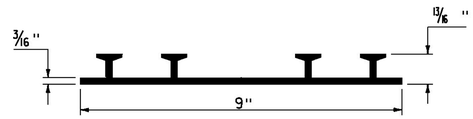
SCORE MARK DETAIL
(NOT TO SCALE)



TYPICAL CONCRETE EXPANSION JOINT
(NOT TO SCALE)



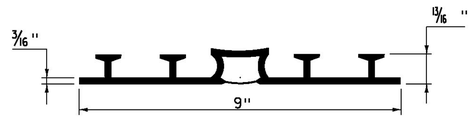
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS
(NOT TO SCALE)



P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

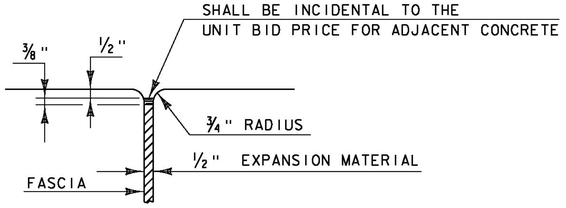
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



P.V.C. WATERSTOP FOR EXPANSION JOINTS
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



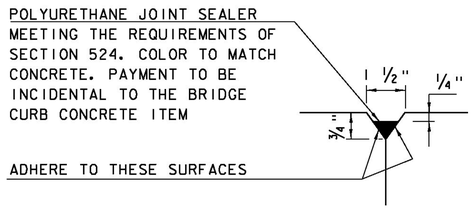
JOINT BETWEEN FASCIA AND WINGWALL
(NOT TO SCALE)

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
FEBRUARY 9, 2012	REBAR SUBSTITUTION ALLOWANCE ADDED TO CONCRETE GENERAL NOTES.

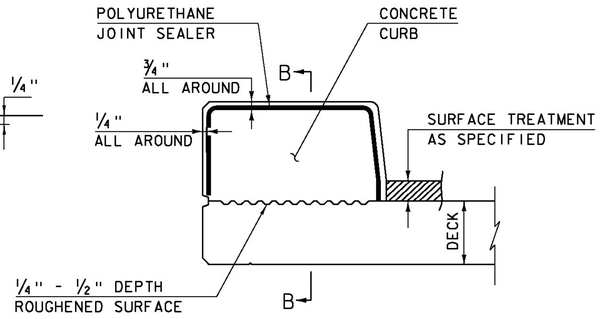
CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES SECTION

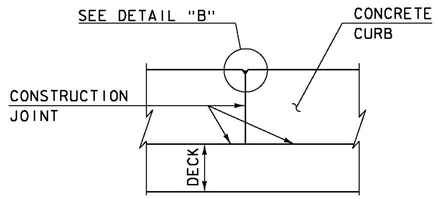
STRUCTURES DETAIL
SD-501.00



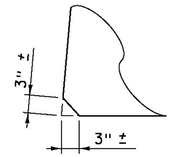
DETAIL "B"
(NOT TO SCALE)



CONCRETE CURB JOINT SECTION
(NOT TO SCALE)



SECTION B - B
(NOT TO SCALE)



ACUTE ANGLE CLIP DETAIL
(NOT TO SCALE)

1. SEE TYPICAL HORIZONTAL CONSTRUCTION JOINT DETAIL FOR ADDITIONAL INFORMATION

CONCRETE CURB JOINT NOTES

1. CONCRETE CURBS MAY BE PLACED IN ONE CONTINUOUS OPERATION IF AN APPROVED SHRINKAGE REDUCING ADMIXTURE LISTED IN THE SPECIAL PROVISIONS IS USED WITH THE CONCRETE MIX DESIGN. PAYMENT FOR THE SHRINKAGE REDUCING ADMIXTURE WILL BE INCIDENTAL TO THE BRIDGE CURB CONCRETE ITEM.

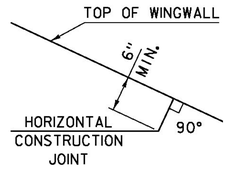
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.

3. ON MULTI-SPAN CONTINUOUS SUPERSTRUCTURES, REGARDLESS OF WHETHER APPROVED SHRINKAGE REDUCING ADMIXTURE IS USED, CURB JOINTS SHALL BE LOCATED OVER THE CENTERLINE OF PIERS AND 7'-0" EACH SIDE OF THE CENTERLINE OF EACH PIER.

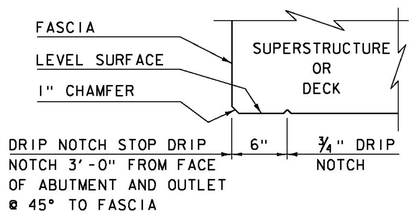
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.

5. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH CURB CONSTRUCTION JOINTS. CURB STIRRUP BARS SHALL BE TURNED AS NECESSARY TO MAINTAIN COVER IN THE FLARED CURB ENDS.

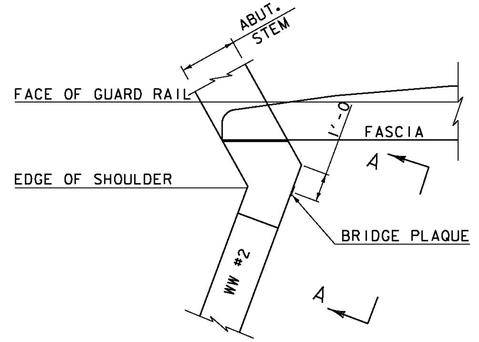
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.



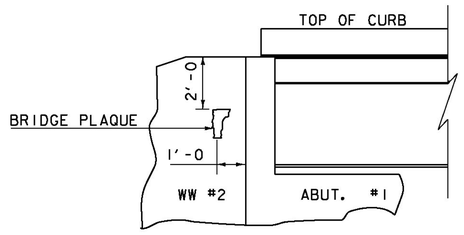
HORIZONTAL WINGWALL CONSTRUCTION JOINT
(NOT TO SCALE)



DRIP NOTCH DETAIL
(NOT TO SCALE)



PLAN



VIEW "A - A"

BRIDGE PLAQUE
(NOT TO SCALE)

THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.

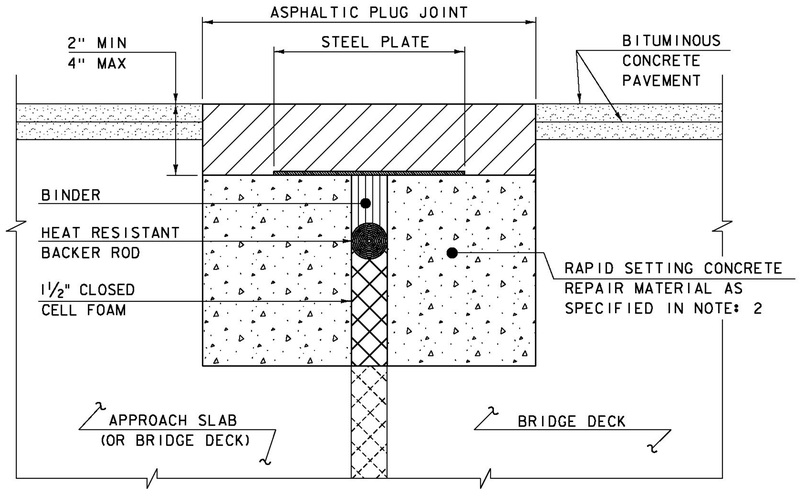
PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED AND ADDED TWO DETAILS
OCTOBER 10, 2012	MODIFIED HORZ. JOINT WINGWALL ADD 6" MIN. DIMENSION

CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-502.00



ASPHALTIC PLUG JOINT DETAIL - REHAB

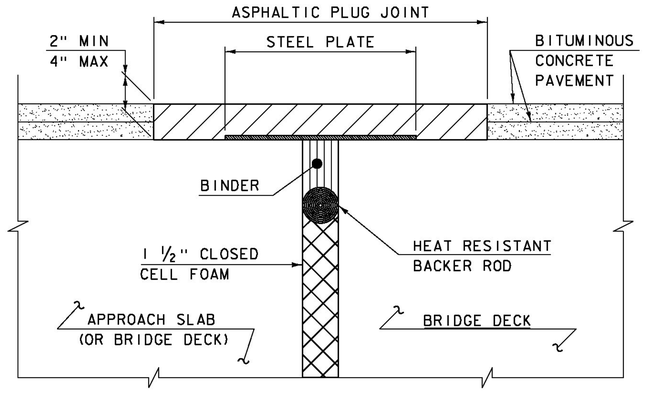
NOTES:

1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL BE INCLUDED IN THE BID PRICE OF ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.

2. THE CONTRACTOR SHALL REPLACE REMOVED MATERIAL THAT IS LESS THAN 4" FROM FINISHED GRADE WITH ASPHALTIC PLUG JOINT MATERIAL MEETING THE REQUIREMENTS OF SUBSECTION 707.15. ALL REMOVED MATERIAL THAT IS GREATER THAN 4 INCHES FROM FINISHED GRADE SHALL BE REPLACED WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.

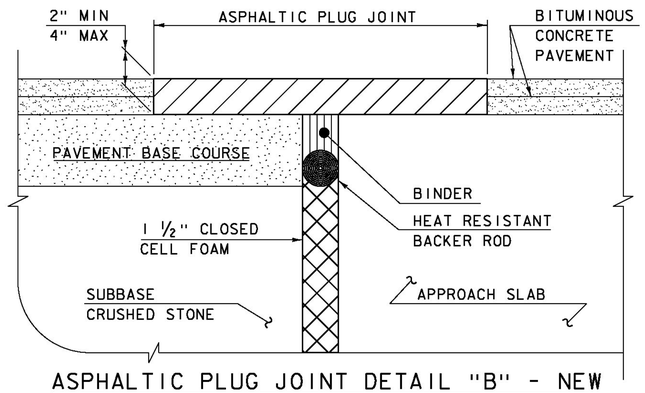
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.

4. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

NOTE:
PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
5. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
6. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

WEATHER LIMITATIONS

APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

DETAILS ON THIS SHEET ARE NOT TO SCALE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
AUGUST 29, 2011	ADD DETAIL "B" AND REV. NOTES

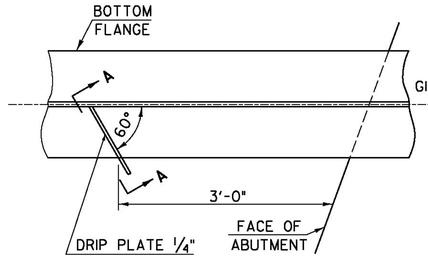
BRIDGE JOINT
ASPHALTIC PLUG

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - DIVISION

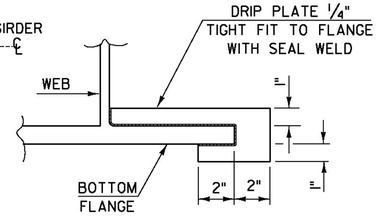
STRUCTURES DETAIL
SD-516.10

STRUCTURAL STEEL GENERAL NOTES:

1. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH-STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SUBSECTION 506.19, UNLESS OTHERWISE SPECIFIED.
2. ALL HOLES IN THE WEBS OF THE FASCIA GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19.
3. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10.
4. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
5. STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01 OF THE STANDARD SPECIFICATIONS.
6. ENDS OF GIRDERS ARE TO BE VERTICAL IN THEIR FINAL POSITION.
7. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF THE GIRDERS SHALL BE TAKEN AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING FINISHED GRADES.

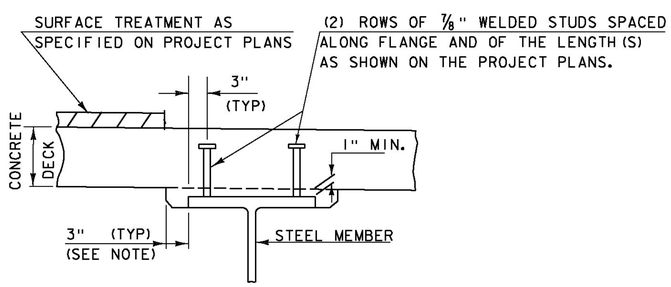


PLAN DRIP PLATE



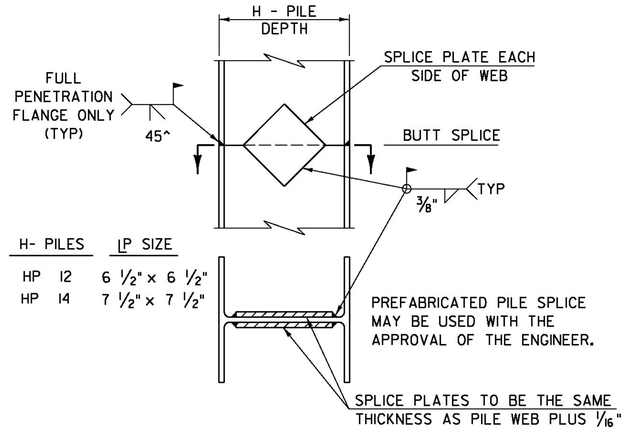
SECTION A - A

NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS OR AS INDICATED ON PROJECT PLANS.



NOTE:
THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. ANY VOIDS RESULTING FROM FORMING SYSTEM ELEMENTS SHALL BE FILLED WITH JOINT SEALER, POLYURETHANE MEETING THE REQUIREMENTS OF SECTION 524. THE COST OF THE JOINT SEALER, POLYURETHANE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

HAUNCH AND SHEAR CONNECTOR DETAIL



H- PILES	LP SIZE
HP 12	6 1/2" x 6 1/2"
HP 14	7 1/2" x 7 1/2"

DETAIL OF PILE SPLICE

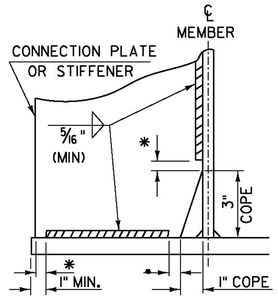
DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED NOTES

STRUCTURAL STEEL DETAILS & NOTES

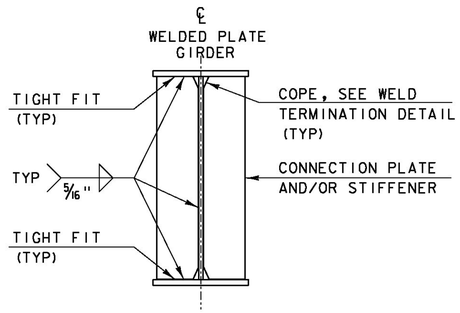
VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-601.00



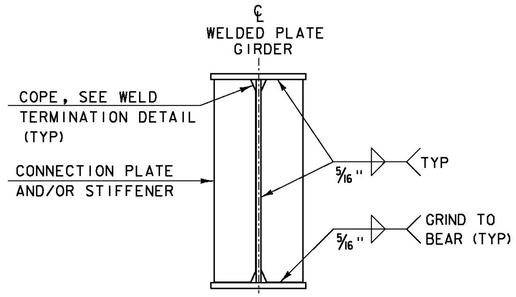
WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

*NO WELD FOR 3/8" MIN. 7/8" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

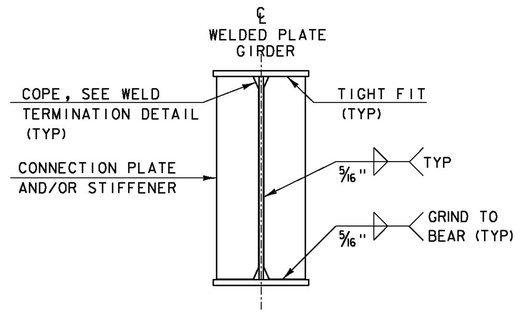


INTERMEDIATE CONNECTION PLATES AND/OR STIFFENERS FOR WELDED PLATE GIRDERS

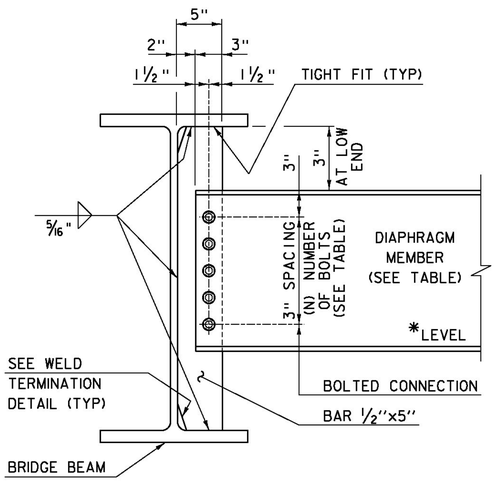
INTERMEDIATE DETAIL IS ONLY USED WHEN PLATE DOES NOT OCCUR AT AN ABUTMENT OR PIER.



ABUTMENT BEARING STIFFENERS AND/OR CONNECTION PLATES FOR WELDED PLATE GIRDERS



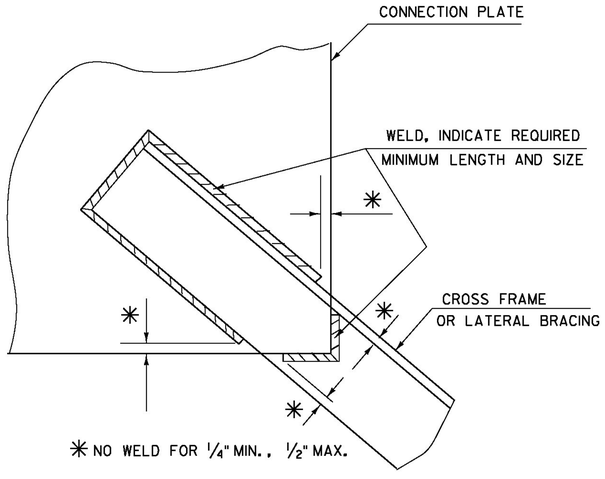
PIER BEARING STIFFENERS AND/OR CONNECTION PLATES FOR WELDED PLATE GIRDERS



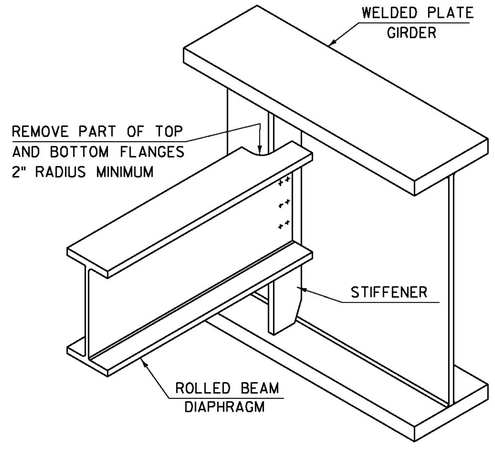
DEPTH		DIAPHRAGM MEMBER	(N) BOLTS
ROLLED BEAM	24" 30"	C15x33.9	4
	31" 36"	MC18x42.7	5
	37" 42"	W21x44	6
PLATE GIRDER WEB	31" 36"	W27x84	7
	37" 42"	W33x118	9
	43" 48"	W36x135	10

INTERMEDIATE DIAPHRAGMS FOR 24" TO 48" BRIDGE BEAMS

*IF CLEARANCE CANNOT BE MET, DIAPHRAGM MAY BE SLOPED.



WELD LOCATION DETAIL AT CROSS FRAMES AND LATERAL BRACING



SEE CONTRACT DRAWINGS FOR SIZES OF MEMBERS AND CONNECTION DETAILS

ROLLED BEAM USED AS DIAPHRAGM

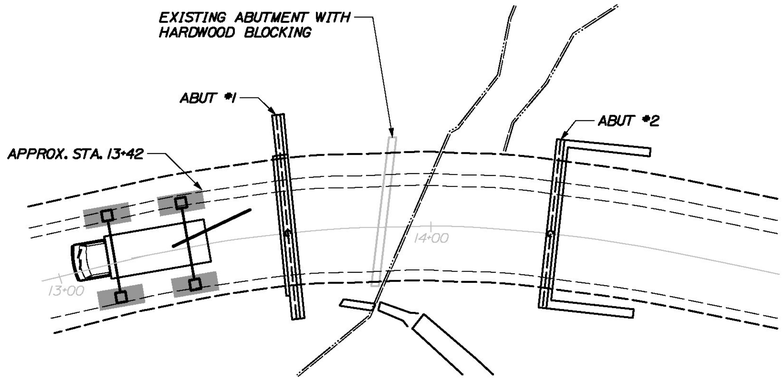
DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
MAY 2, 2011	ADD INTERMEDIATE DIAPHRAGMS DETAIL & ADD NOT TO SCALE NOTE

STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-602.00



STAGE 1 - INSTALL TEMPORARY BEARING PLATFORMS

1. ONCE SITE PREPARATION IS COMPLETE, BEGIN INSTALLATION OF CRANE MATS FOR THE PLACEMENT OF BOTH ABUTMENTS.
2. IT IS IMPERATIVE THAT THE CRANE OPERATORS FAMILIARIZE THEMSELVES WITH THE LOCATION OF THE OVERHEAD UTILITIES. THESE UTILITIES ARE NOT TO BE MOVED OR ALTERED IN ANY WAY.
3. ENSURE ELEVATION AND POSITION OF CRANE MATS ARE APPROPRIATE FOR THE PLACEMENT OF ALL STEEL GIRDERS. HL150 MAXIMUM RADIUS = 120 FEET
5. IF UNDESIRABLE SOIL PRESENT IN THE LOCATIONS OF THE CRANE MATS, EXCAVATE 5 FEET, FILL AND COMPACT GRANULAR MATERIAL FOR APPLICABLE AREA.
6. THE CONTRACTOR SHALL VERIFY THE STABILITY AND LOCATION OF CRANE MATS.
7. INSTALL AND SECURE HARDWOOD BLOCKING ON EXISTING ABUTMENT IN ORDER TO TEMPORARILY SUPPORT NEW GIRDERS.

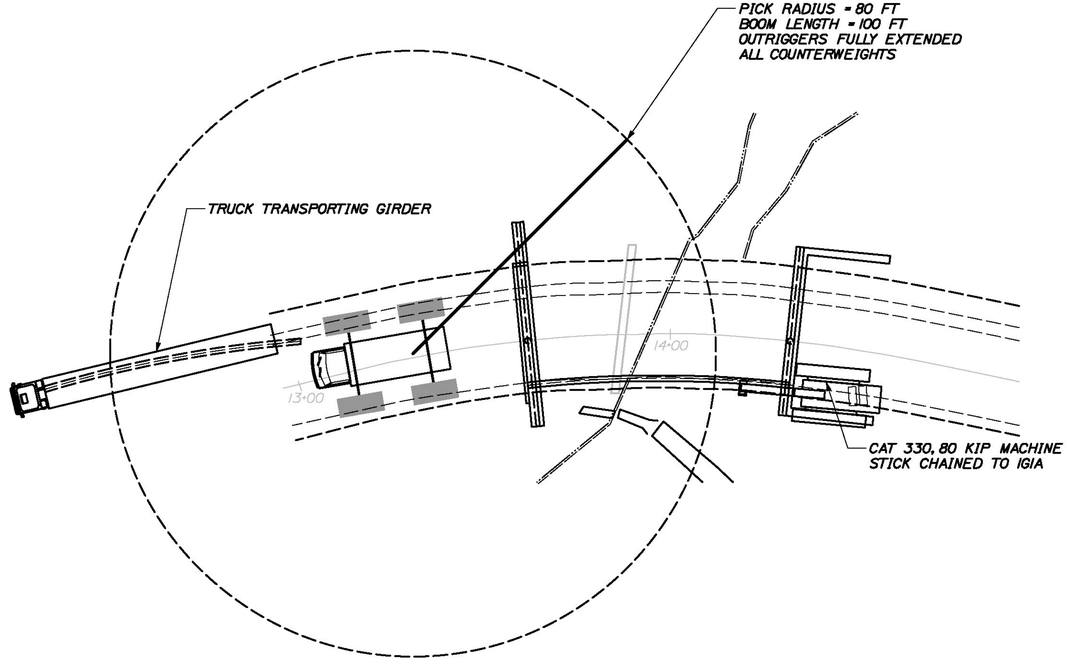
NOTES:
CRANE MATS: 5'-0" x 12'-0" x 8" REINFORCED CONCRETE

(2) CRANE MATS STACKED PER OUTRIGGER REQUIRED

DIFFERENTLY SIZED CRANE MATS ORGANIZED TO ACHIEVE THE SAME BEARING AREA AND DEPTH MAY BE SUBSTITUTED AT THE DISCRETION OF THE CONTRACTOR'S ENGINEER. THE PROPOSED SUBSTITUTION SHALL MEET OR EXCEED THE ASSUMED REINFORCEMENT (SEE CALCULATION PACKAGE).

THE GIVEN STATIONING FOR THE CRANE MATS IS APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR'S ENGINEER.

DURING ALL PICKS, ENSURE WEATHER FOR THE FORSEEABLE DURATION DOES NOT PREDICT WIND IN EXCESS OF 20 MPH.



STAGE 2 - INSTALLATION OF IGIA

1. ENSURE WEATHER FOR THE FORSEEABLE DURATION DOES NOT PREDICT WIND IN EXCESS OF 20 MPH. BEGIN INSTALLATION OF GIRDER IGIA, 13.1 KIP, WITH HL150.
2. WHEN IGIA IS IN PLACE, CHAIN GIRDER TO THE CAT 330 EXCAVATOR TO STABILIZE. THE CAT 330 SHALL BE AT ABUTMENT #2. USE HARDWOOD BLOCKS BETWEEN THE STICK AND GIRDER TO AVOID METAL-TO-METAL CONTACT.
3. CHAIN IGIA TO ABUTMENT #1 AS REQUIRED. THE CONTRACTOR SHALL VERIFY THE STABILITY OF IGIA PRIOR TO UNHOOKING THE HL150.
4. DISCONNECT THE HL150 FROM IGIA.

CALDERWOOD ENGINEERING, ETC.
STRUCTURAL ENGINEERING • DETAILING SERVICES
222 RIVER RD, RICHMOND, ME 04357 PH/FX (207)737-2007/(207) 737-2008

PREPARED FOR:
A.L. ST. ONGE CONTRACTOR, INC
VTAOT PROJ. NUMBER STP 5600 (12)
CEE 38-MI-15

STATE OF VERMONT ENG. & CALCULATION CERTIFICATE NO. 8711 Struggen LICENSED PROFESSIONAL ENGINEER

P.E. NUMBER 8711
DATE

BY	DATE
TEPA	8/15
QM	8/15

DESIGN-DETAILED
CHECKED-REVIEWED

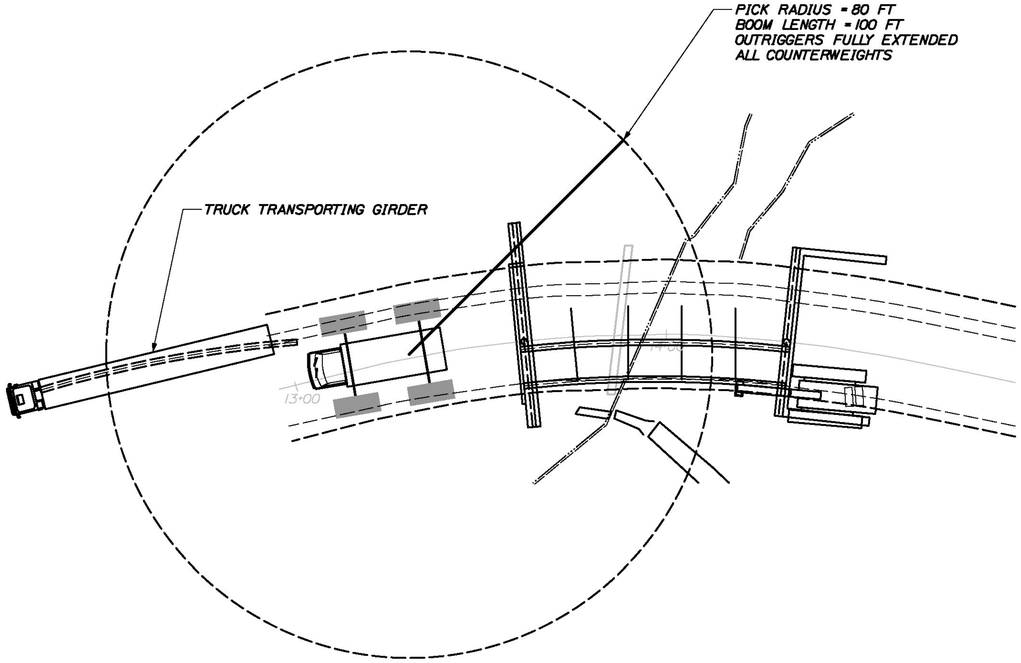
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

COLCHESTER, VT - TH 27
OVER INDIAN BROOK

ASSEMBLY PLAN

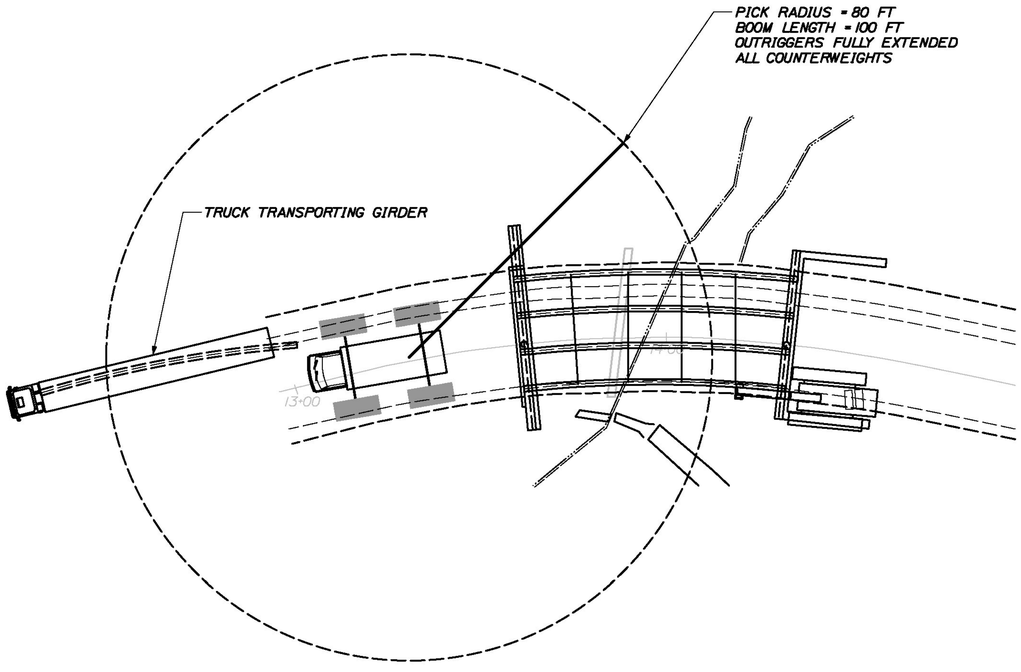
SHEET NUMBER
1

CALDERWOOD ENGINEERING, ETC. 222 RIVER ROAD RICHMOND, ME 04357 PH: (207)737-2007 FAX (207)737-2008



STAGE 3 - INSTALLATION OF 2G2A

1. INSTALL ALL INTERMEDIATE DIAPHRAGMS ON 2G2A FOR CONNECTION TO IGIA AND 3G3A.
2. ENSURE WEATHER FOR THE FORSEEABLE DURATION DOES NOT PREDICT WIND IN EXCESS OF 20 MPH. BEGIN INSTALLATION OF GIRDER 2G2A, 23.2I KIP. WITH HLI50.
3. WHEN 2G2A IS IN PLACE, ATTACH ALL INTERMEDIATE DIAPHRAGMS TO IGIA PRIOR TO DISCONNECTING HLI50.
4. INTSTALL ABUTMENT DIAPHRAGMS BETWEEN IGIA AND 2G2A.



STAGE 4 - INSTALLATION OF 3G3A & 4G4A

1. ENSURE WEATHER FOR THE FORSEEABLE DURATION DOES NOT PREDICT WIND IN EXCESS OF 20 MPH. BEGIN INSTALLATION OF GIRDER 3G3A, 15.7 KIP, WITH HLI50.
2. WHEN 3G3A IS IN PLACE, ATTACH ALL INTERMEDIATE DIAPHRAGMS TO 2G2A PRIOR TO DISCONNECTING HLI50.
3. INTSTALL ABUTMENT DIAPHRAGMS BETWEEN 3G3A AND 2G2A.
4. INSTALL INTERMEDIATE DIAPHRAGMS BETWEEN 3G3A AND 4G4A TO 3G3A.
5. ENSURE WEATHER FOR THE FORSEEABLE DURATION DOES NOT PREDICT WIND IN EXCESS OF 20 MPH. BEGIN INSTALLTION OF GIRDER 4G4A, 16.0 KIP, WITH HLI50.
6. WHEN 4G4A IS IN PLACE, ATTACH ALL INTERMEDIATE DIAPHRAGMS TO 3G3A PRIOR TO DISCONNECTING HLI50.
7. INSTALL ABUTMENT DIAPHRAGMS BETWEEN 3G3A AND 4G4A.

CALDERWOOD ENGINEERING, ETC.
STRUCTURAL ENGINEERING • DETAILING SERVICES
222 RIVER RD, RICHMOND, ME 04357 PH/FX (207)737-2007/(207) 737-2008

PREPARED FOR:
A.L. ST. ONGE CONTRACTOR, INC

VTAOT PROJ. NUMBER STP 5600 (12)
CEE 38-MI-15

STATE OF VERMONT ENG. R. CALDERWOOD NO. 8711 Struggen LICENSED PROFESSIONAL ENGINEER

8711
P.E. NUMBER

DATE

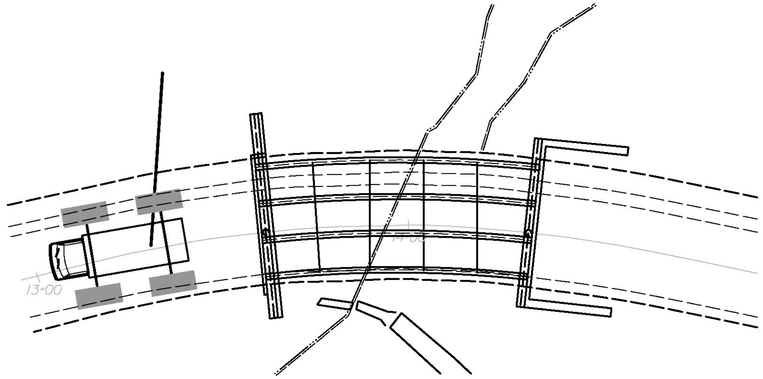
	BY	DATE
REVISIONS 1	TEPA	8/15
REVISIONS 2	QM	8/15
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		
DESIGN-DETAILED		
CHECKED-REVIEWED		

COLCHESTER, VT - TH 27
OVER INDIAN BROOK

ASSEMBLY PLAN

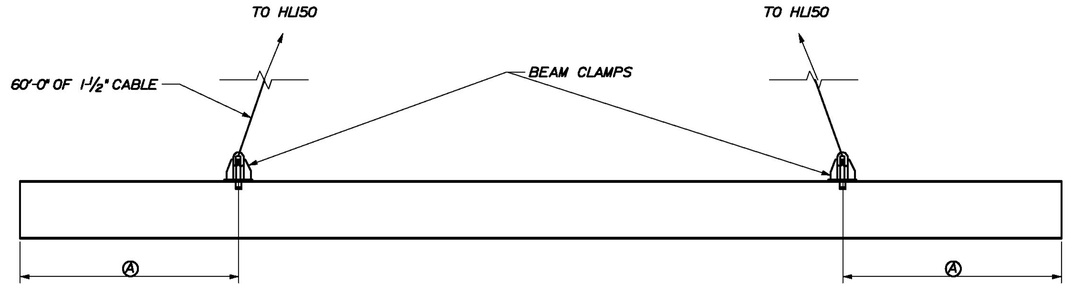
SHEET NUMBER
2

CALDERWOOD ENGINEERING 222 River Rd. ME Richmond, ME 04357 PH (207)737-2007 FAX (207)737-2008



STAGE 5 - FINISH BRIDGE

1. UNCHAIN GIRDER IGIA FROM ABUTMENT AND CAT 330.
2. REMOVE TIMBER BLOCKING AND OLD ABUTMENT AS REQUIRED BY CONTRACT.
3. FINISH BRIDGE AS REQUIRED BY CONTRACT.



GIRDER LIFTING SCHEME

NOT TO SCALE

Ⓐ - 1G1A) 14'-5"±
2G2A) 14'-10"±
3G3A) 15'-2"±
4G4A) 15'-9"±

CALDERWOOD ENGINEERING, ETC.
STRUCTURAL ENGINEERING • DETAILING SERVICES
222 RIVER RD, RICHMOND, ME 04357 PH/FX (207)737-2007/(207) 737-2008

PREPARED FOR:
A.L. ST. ONGE CONTRACTOR, INC

VTAOT PROJ. NUMBER STP 5600 (12)
CEE 38-MI-15

STATE OF VERMONT ENG. L. CALDERWOOD NO. 8711 Struggan LICENSED PROFESSIONAL ENGINEER

P.E. NUMBER 8711

DATE

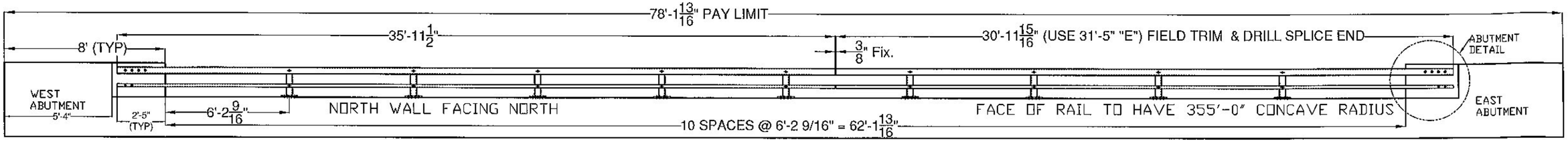
	BY	DATE
DESIGN-DETAILED	TEPA	8/15
CHECKED-REVIEWED	QM	8/15
REVISIONS 1		
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REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

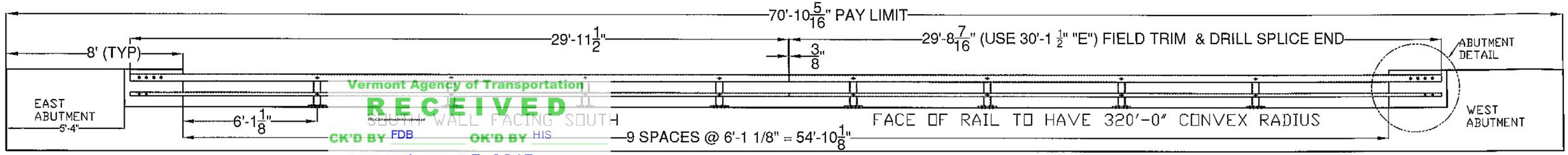
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OVER INDIAN BROOK

ASSEMBLY PLAN

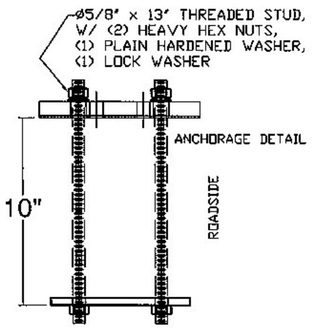
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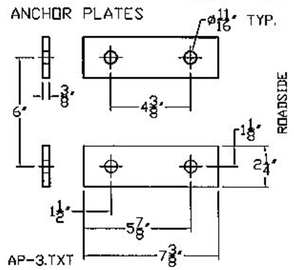
CALDERWOOD ENGINEERING L.L.C.
222 RIVER ROAD
RICHMOND, ME 04357
PH. (207)737-2007 FAX (207)737-2008

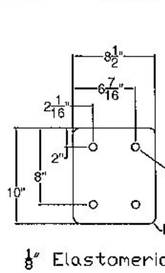




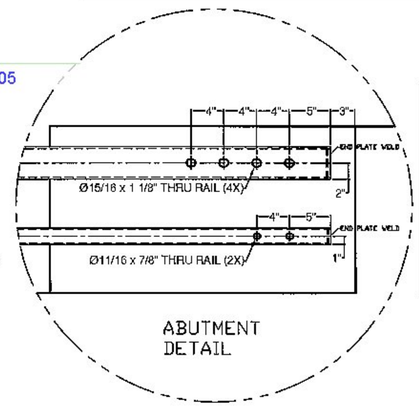
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RECEIVED
CK'D BY FDB OK'D BY HIS
August 5, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 05/08/05



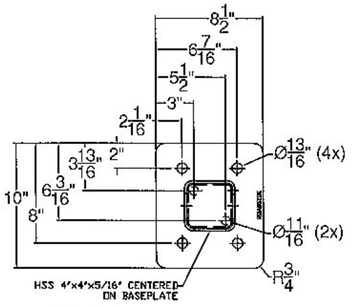


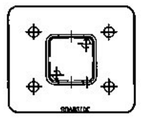


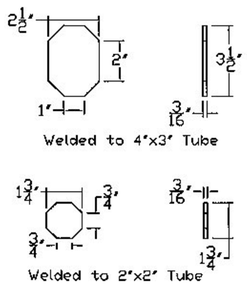
1/8" Elastomeric Pad

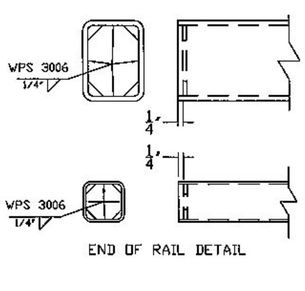


ABUTMENT DETAIL

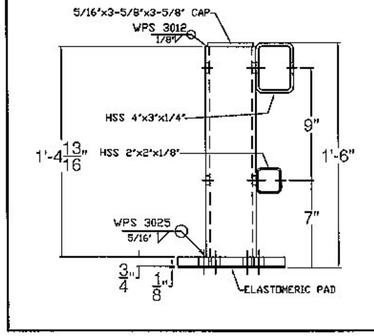


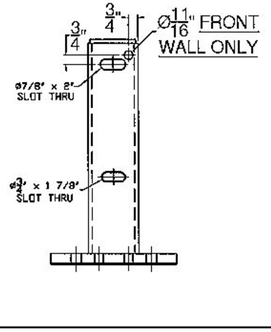






END OF RAIL DETAIL





NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO SECTION 525.
2. PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
3. ALL POSTS SHALL BE SET NORMAL TO GRADE.
4. SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO BRIDGE POSTS AND PREFERABLY TO AT LEAST 4 POSTS.
5. HOLES IN RAILS FOR TUBE ATTACHMENT, WILL BE SHOP-DRILLED.
6. BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
7. RAIL TUBES SHALL BE ATTACHED USING FULL DIAMETER BODY ASTM A449 (TYPE 1) ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE TUBE.
8. SEE STANDARD DRAWING G-1 FOR DETAILS OF DELINEATORS. A DELINEATOR SHALL BE INSTALLED AT 30 FOOT SPACING OR THE NEAREST POST. WHITE IS TO BE INSTALLED ON THE DRIVER'S RIGHT. FOR ONE WAY BRIDGES, YELLOW IS TO BE INSTALLED ON THE DRIVER'S LEFT. PAYMENT FOR DELINEATORS SHALL BE INCIDENTAL TO OTHER ITEMS.
9. AESTHETIC TREATMENT TYPE SHALL BE APPLIED AS SPECIFIED IN THE CONTRACT PLANS. IF NONE IS SPECIFIED IT SHALL NOT BE USED. AESTHETIC TREATMENT DETAILED ON THIS SHEET MAY ALSO BE APPLIED ON THE FASCIA SIDE OF THE RAIL, IF SPECIFIED IN THE CONTRACT PLANS.
10. BRIDGE RAILING SHALL HAVE A RUBBED FINISH IN ACCORDANCE WITH SECTION 501.
11. THIS RAILING MEETS THE REQUIREMENTS FOR A NCHRP REPORT 350 TL-4 SERVICE LEVEL.
12. HOLES FOR MOUNTING DELINEATORS TO BE FIELD DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
13. ALL STEEL COMPONENTS OF BRIDGE RAILING AND BOX BEAM GUARDRAIL, INCLUDING THE RAIL CONNECTION TO THE BRIDGE RAIL SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

BILL OF MATERIAL

ITEM #	QTY	PART #	DESCRIPTION	ASTM DESIGNATION
1	17	0033.90017	TWO RAIL POST & BASE PLATE ASSEMBLY	A572 Gr. 50, A500 Gr. B
2	1	0033.900025	2" X 2" X 1/8" RAIL @ 35'-11 1/2" W/ 355' CONCAVE R. & END PLATES	A500 Gr. B
3	1	0033.900026	2" X 2" X 1/8" RAIL @ 31'-5" 'E' W/ 355' CONCAVE R. & END PLATES	A500 Gr. B
4	1	0033.900027	2" X 2" X 1/8" RAIL @ 29'-11 1/2" W/ 320' CONVEX R. & END PLATES	A500 Gr. B
5	1	0033.900028	2" X 2" X 1/8" RAIL @ 30'-1 1/2" 'E' W/ 320' CONVEX R. & END PLATES	A500 Gr. B
6	1	0033.900029	4" X 3" X 1/4" RAIL @ 35'-11 1/2" W/ 355' CONCAVE R. & END PLATES	A500 Gr. B
7	1	0033.900030	2" X 2" X 1/8" RAIL @ 31'-5" 'E' W/ 355' CONCAVE R. & END PLATES	A500 Gr. B
8	1	0033.900031	4" X 3" X 1/4" RAIL @ 29'-11 1/2" W/ 320' CONVEX R. & END PLATES	A500 Gr. B
9	1	0033.900032	4" X 3" X 1/4" RAIL @ 30'-1 1/2" 'E' W/ 320' CONVEX R. & END PLATES	A500 Gr. B
10	2	0033.90069	1-1/2" X 1-1/2" FIX. SPL BAR @ 2' 4"	A572 Gr. 50
11	2	0033.90071	2-1/4" X 3-1/4" FIX. SPL. BAR @ 2' 4"	A572 Gr. 50
12	34	0033.00295	3/8" X 2 1/4" X 7 3/8" ANCHOR PLATES	A36
13	70*	0042.05813	Ø 5/8" X 13" ANCHOR STUDS	A449
14	138*	0080.15901	Ø 5/8" HEAVY HEX NUTS	A563
15	70*	0080.15911	Ø 5/8" FLAT WASHERS	F436
16	68	0080.15920	Ø 5/8" LOCK WASHERS	ASME D18.2
17	17	0080.05565	Ø 5/8" X 7 1/2" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	A449, A563 DH, F436, & ASME D18.21.1
18	17	0080.06410	Ø 3/4" X 8 1/2" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	A449, A563 DH, F436, & ASME D18.21.1
19	8	0080.05275	Ø 5/8" X 3" HEX BOLT, NUT, F.W., & L.W.	A325, A563 DH, F436, & ASME D18.21.1
20	8	0080.07330	Ø 7/8" X 5 1/2" HEX BOLT, NUT, F.W., & L.W.	A325, A563 DH, F436, & ASME D18.21.1
21	8	0080.05760	Ø 5/8" X 13" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	A449, A563 DH, F436, & ASME D18.21.1
22	16	0080.07710	Ø 7/8" X 14" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	A449, A563 DH, F436, & ASME D18.21.1
23	17	0033.00053	1/8" ELASTOMERIC PAD	D2240
24	6		DELINEATORS (SUPPLIED BY F.R. LaFAYETTE)	ALUMINUM

*-2 EXTRA FOR VOAT TESTING

NOTE: FIELD TRIM & DRILL OF SPLICE END IS DUE TO FIX JOINT WITH MINIMAL TOLERANCE FOR LENGTH CHANGES IN THE RAIL DUE TO FORMING RADIUS.

HARDWARE NOTES

ITEM #	FUNCTION
17	BOLT BOTTOM RAIL TO POST (ITEM #1)
18	BOLT TOP RAIL TO POST (ITEM #1)
19	BOLT BOTTOM SPLICE BARS (ITEM #6) TO BOTTOM RAIL
20	BOLT TOP SPLICE BARS (ITEM #7) TO TOP RAIL
21	BOLT BOTTOM RAIL TO END ABUTMENT
22	BOLT TOP RAIL TO END ABUTMENT

ITEM #: 525.45

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

SHEET 1 OF 6

BRIDGE RAIL DETAILS SHEET

T.H. 27 (URBAN COLLECTOR), BRIDGE # 12
TOWN OF COLCHESTER, CHITTENDEN COUNTY

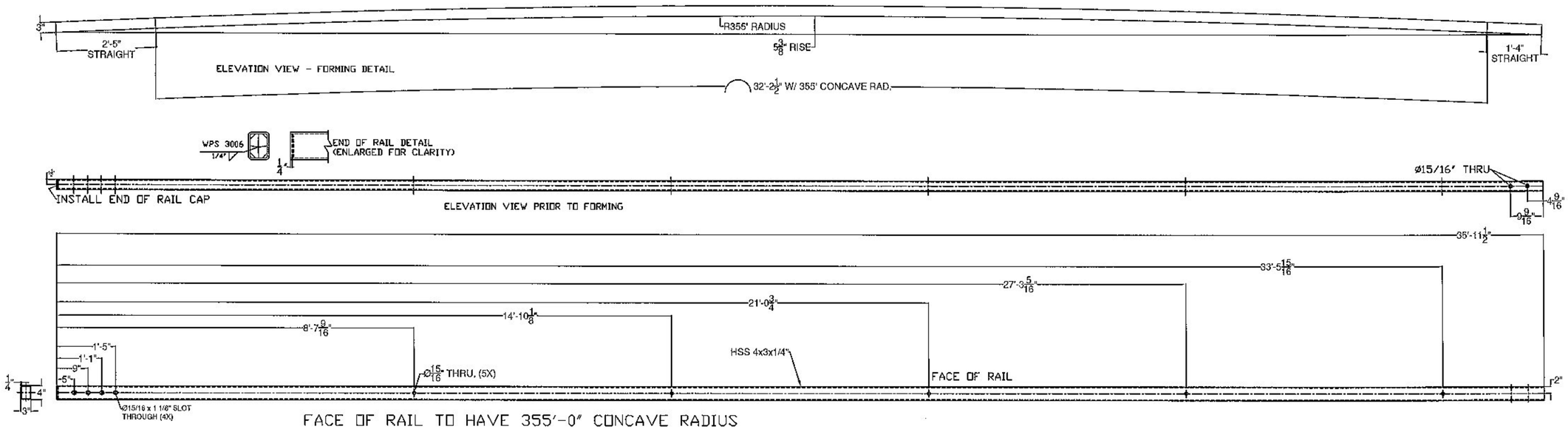
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V				

R	NO.	DATE	DESCRIPTION	BY
E				
V				

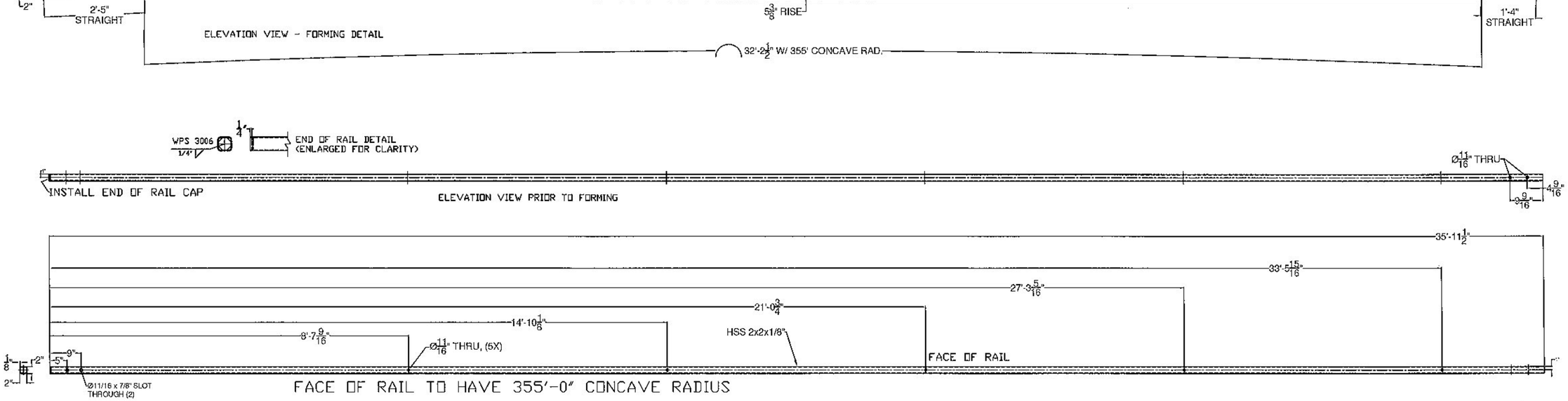
ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6616

AISC CERTIFIED FABRICATOR

DRAWN	E.P.	4/9/15
CHECKED	D.L.	4/9/15
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	FR L - COLCHESTER	



FACE OF RAIL TO HAVE 355'-0" CONCAVE RADIUS



FACE OF RAIL TO HAVE 355'-0" CONCAVE RADIUS

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY HIS

August 5, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 05/08/05

ITEM #: 525.45

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

BRIDGE RAIL DETAILS SHEET

T.H. 27 (URBAN COLLECTOR), BRIDGE # 12
TOWN OF COLCHESTER, CHITTENDEN COUNTY

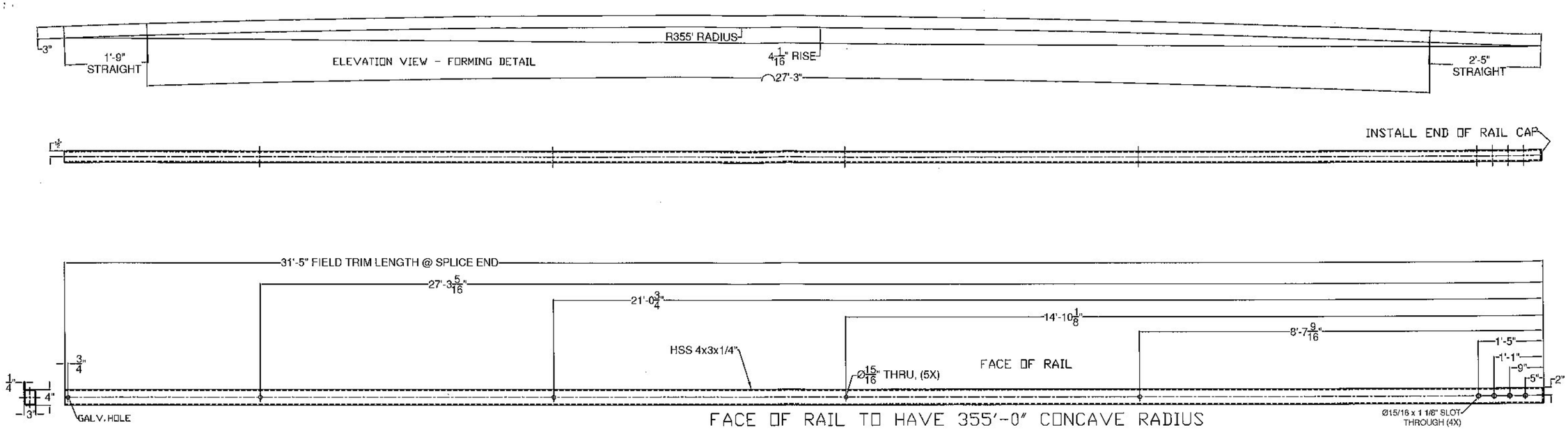
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V				

R	NO.	DATE	DESCRIPTION	BY
E				
V				

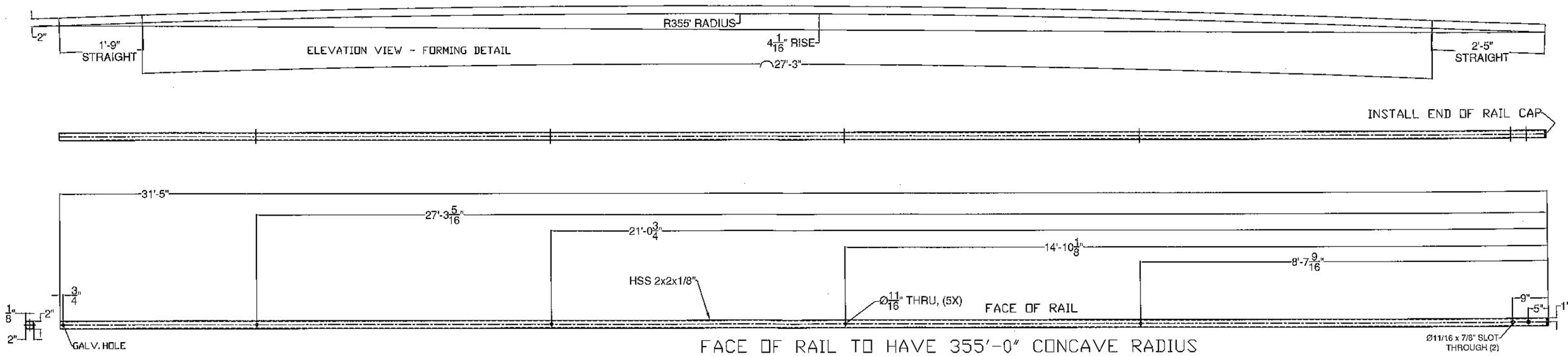
ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

AISC CERTIFIED FABRICATOR

DRAWN	E.P.	4/9/15
CHECKED	D.L.	4/9/15
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	FR1 - COLCHESTER	



FACE OF RAIL TO HAVE 355'-0" CONCAVE RADIUS



FACE OF RAIL TO HAVE 355'-0" CONCAVE RADIUS

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY HIS

August 5, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 05/08/05

ITEM #: 525.45

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

SHEET 3 OF 6

BRIDGE RAIL DETAILS SHEET

T.H. 27 (URBAN COLLECTOR), BRIDGE # 12
TOWN OF COLCHESTER, CHITTENDEN COUNTY

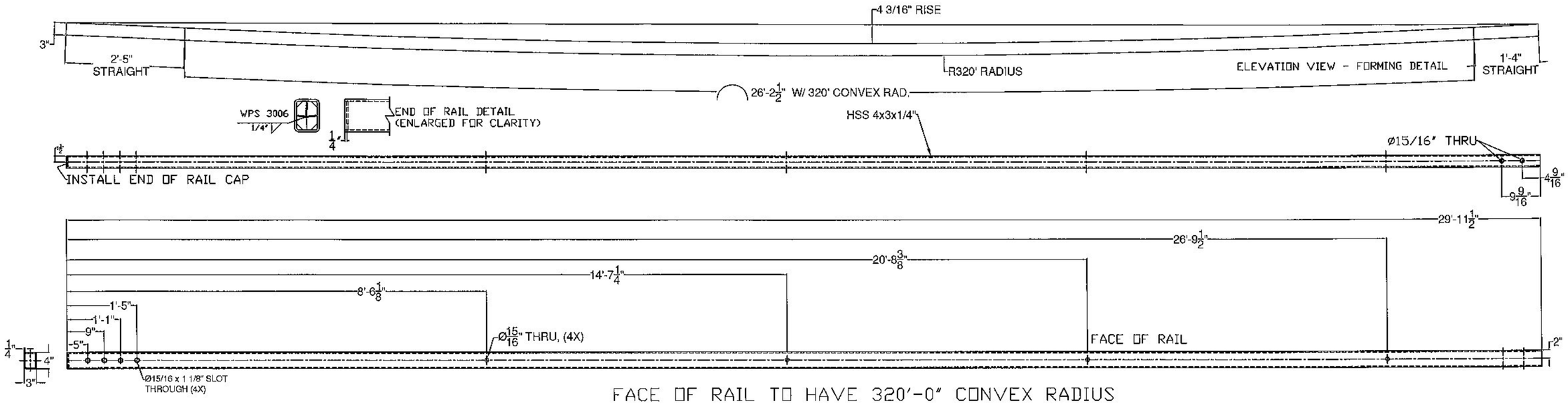
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R E V	NO.	DATE	DESCRIPTION	BY

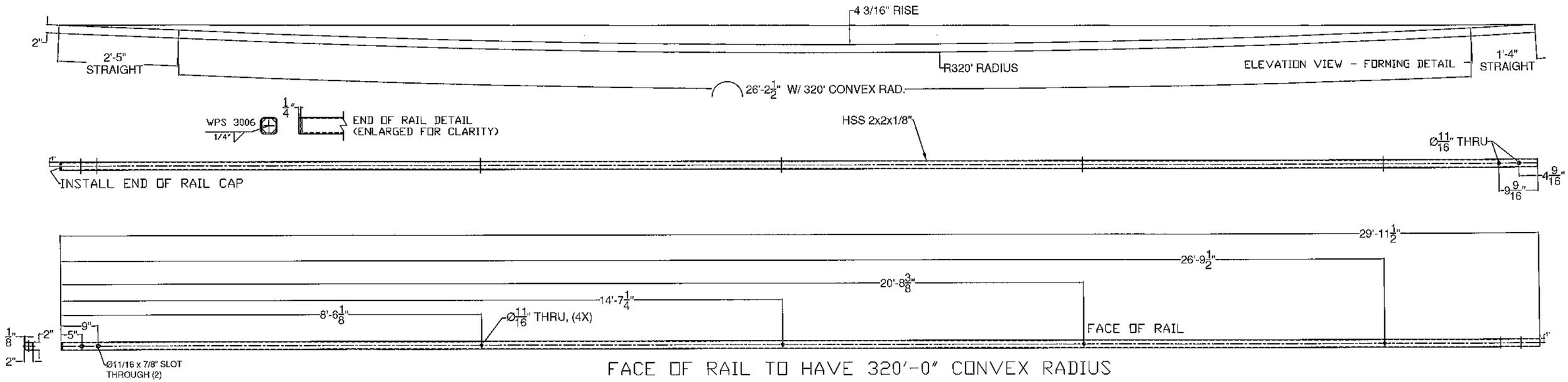
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OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeck@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

CERTIFIED FABRICATOR

DRAWN	E.P.	4/9/15
CHECKED	D.L.	4/9/15
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	TL - COLCHESTER	



FACE OF RAIL TO HAVE 320'-0" CONVEX RADIUS



FACE OF RAIL TO HAVE 320'-0" CONVEX RADIUS

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY HIS

August 5, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 05/08/05

ITEM #: 525.45

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

SHEET 4 OF 6

BRIDGE RAIL DETAILS SHEET

T.H. 27 (URBAN COLLECTOR), BRIDGE # 12
TOWN OF COLCHESTER, CHITTENDEN COUNTY

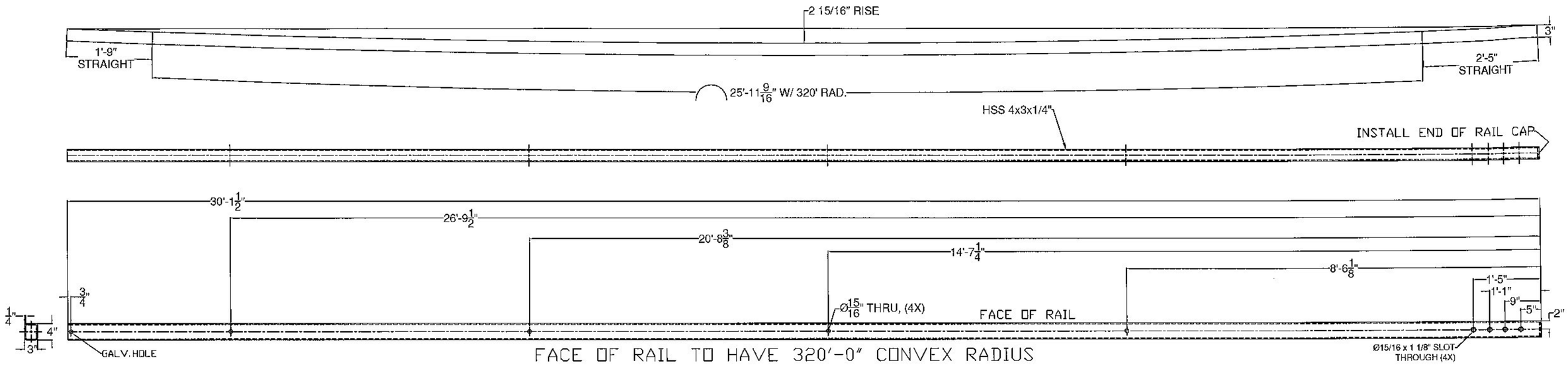
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R E V	NO.	DATE	DESCRIPTION	BY

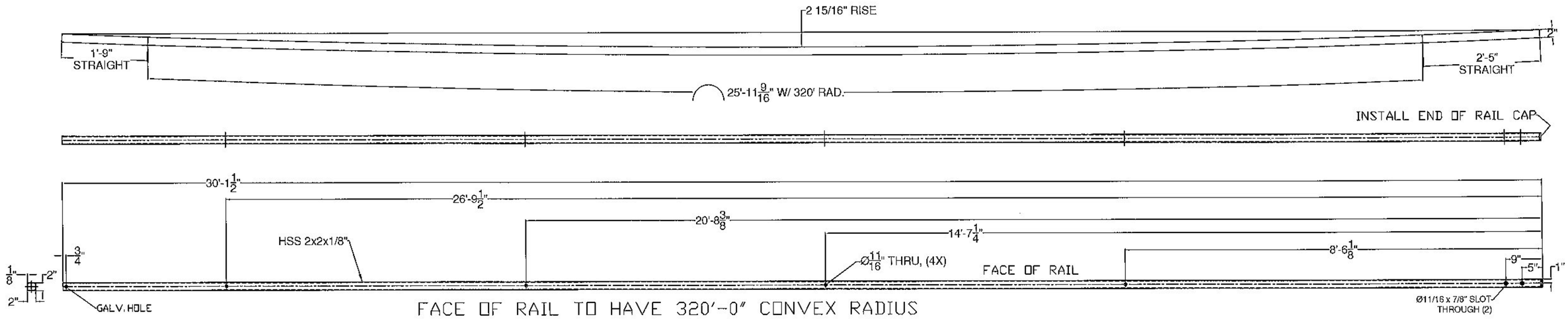
ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6616

CERTIFIED FABRICATOR

DRAWN	E.P.	4/9/15
CHECKED	D.L.	4/9/15
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	FR L - COLCHESTER	



FACE OF RAIL TO HAVE 320'-0" CONVEX RADIUS



FACE OF RAIL TO HAVE 320'-0" CONVEX RADIUS

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY HIS

August 5, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 05/08/05

ITEM #: 525.45

SHEET 5 OF 6

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2"
DIAMETERS = ± 1/32"

BRIDGE RAIL DETAILS SHEET

T.H. 27 (URBAN COLLECTOR), BRIDGE # 12
TOWN OF COLCHESTER, CHITTENDEN COUNTY

R E V	NO.	DATE	DESCRIPTION	BY
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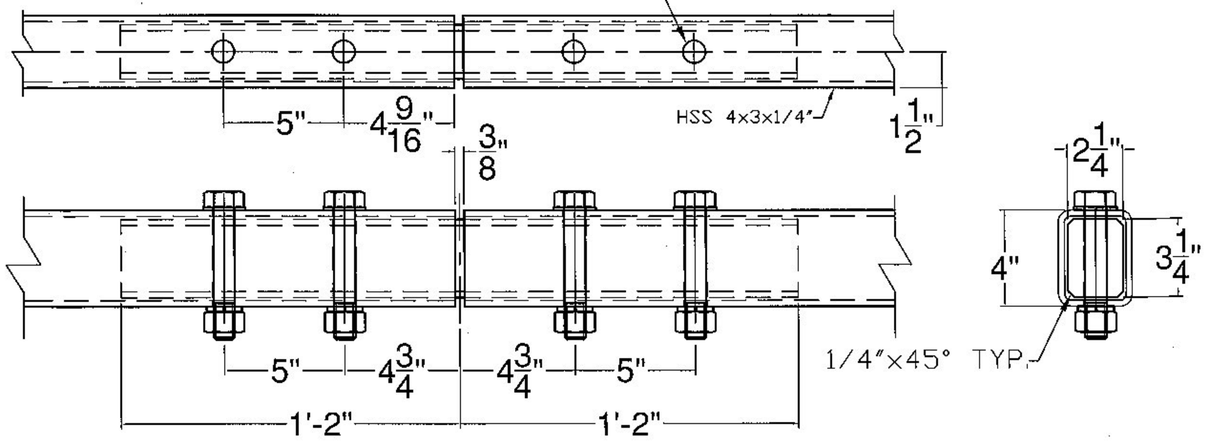
R E V	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
CERTIFIED FABRICATOR
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

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APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	FR L - COLCHESTER	

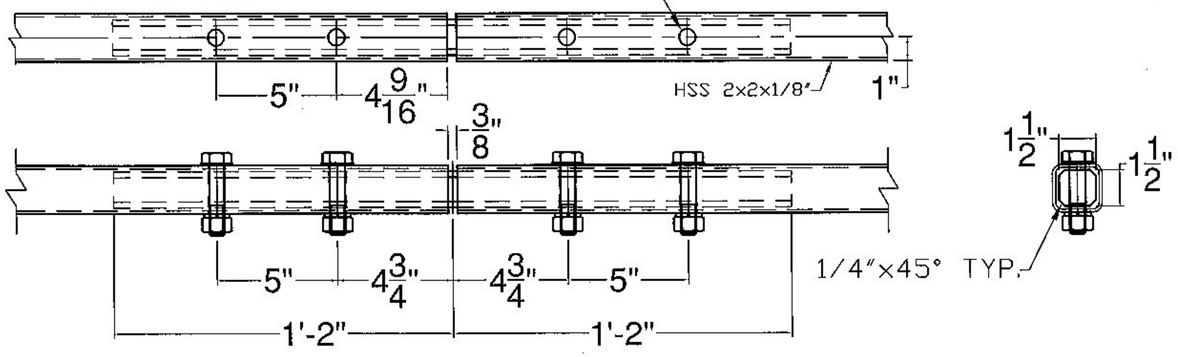
Ø15/16" THRU TUBE & SPLICE BAR,
Ø7/8"X5 1/2" HEX BOLT & NUT,
W/ (1) PLAIN HARDENED WASHER &
(1) LOCK WASHER (4 PLACES)

TOP RAIL FIXED SPLICE DETAIL



Ø11/16" THRU TUBE & SPLICE BAR,
Ø5/8"X3" HEX BOLT & NUT,
W/ (1) PLAIN HARDENED WASHER &
(1) LOCK WASHER (4 PLACES)

BOTTOM RAIL FIXED SPLICE DETAIL



Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY HIS

August 5, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 05/08/05

ITEM #: 525.45

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

SHEET 6 OF 6

BRIDGE RAIL DETAILS SHEET

T.H. 27 (URBAN COLLECTOR), BRIDGE # 12
TOWN OF COLCHESTER, CHITTENDEN COUNTY

REV	NO.	DATE	DESCRIPTION	BY
	1	4/27/15	REVISE PER 4/22/15 MARK-UP	E.P.

REV	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

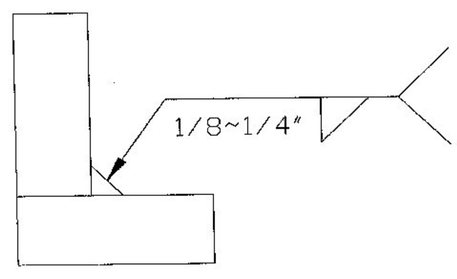
AISC CERTIFIED FABRICATOR

DRAWN	E.P.	4/9/15
CHECKED	D.L.	4/9/15
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	FR L - COLCHESTER	

WELDING PROCEDURE SPECIFICATION

Material Specification	A36 TO A500 COLCHESTER STP 5600(12), Bridge 12
Welding Process	FCAW
Manual or Machine	SEMAUTOMATIC
Position of Welding	FLAT / HORIZONTAL
Filler Metal Specification	A5.20 - 95
Filler Metal Classification	E81T1-Ni1C-JH4
Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50CFH
Single or Multiple Pass	SINGLE
Single or Multiple Arc	SINGLE
Welding Current	DC
Polarity	REVERSE ELECTRODE POSITIVE
Welding Progression	STRINGER
Root Treatment	PER D1.5
Preheat and Interpass Temperature	PER D1.5
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
1	1/16	300	26	14	
Variable	LIMITS	270 TO 330	24 TO 28	12.6 TO 15.4	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3006
Revision No. _____

Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 8/4/2014

Form III-2

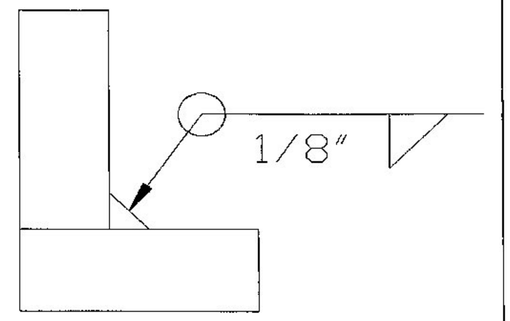
Vermont Agency of Transportation
RECEIVED
CK'D BY FDB OK'D BY HIS
August 5, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 05/08/05

WELDING PROCEDURE SPECIFICATION

PQR ELDERLEE #3

Material Specification	ASTM-A500-A53-GRADE B TO A36	COLCHESTER STP 5600(12), Bridge 12
Welding Process	FCAW-G	
Manual or Machine	SEMAUTOMATIC	
Position of Welding	1G	
Filler Metal Specification	A5.29	
Filler Metal Classification	E81T1-Ni1C-JH4	
Flux	N/A	
Shielding Gas	CO 2	Dew Point -40DEG F FLOW RATE 50 CFH
Single or Multiple Pass	SINGLE	
Single or Multiple Arc	SINGLE	
Welding Current	DC	
Polarity	REVERSE ELECTRODE POSITIVE	
Welding Progression	STRINGER	
Root Treatment	PER D1.5	
Preheat and Interpass Temperature	PER. D1.5	
Postheat Temperature	NONE	
Heat Input	Min	Max

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
1	1/16	310	25	11	
Variable	LIMITS	341 TO 269	27 TO 23	12 TO 10	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3012
Revision No.

Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 3/20/2014

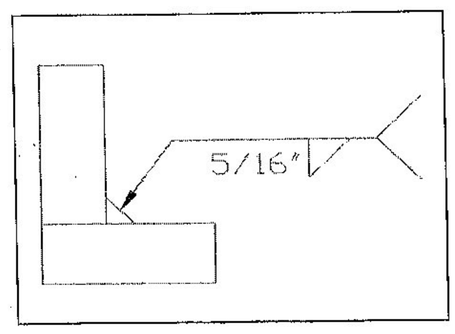
Vermont Agency of Transportation
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CK'D BY FDB OK'D BY HIS
August 5, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 05/08/05

WELDING PROCEDURE SPECIFICATION

PQR ELDERLEE #3

Material Specification	A572 TO A500 COLCHESTER STP 5600(12), Bridge 12
Welding Process	FCAW-G
Manual or Machine	SEMAUTOMATIC
Position of Welding	FLAT/HORIZONTAL
Filler Metal Specification	A5.29
Filler Metal Classification	E81T1-Ni1C-JH4
Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50CFH
Single or Multiple Pass	SINGLE
Single or Multiple Arc	SINGLE
Welding Current	DC ELECTRODE POSITIVE
Polarity	REVERSE
Welding Progression	STRINGER
Root Treatment	PER D1.5
Preheat and Interpass Temperature	PER D1.5
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

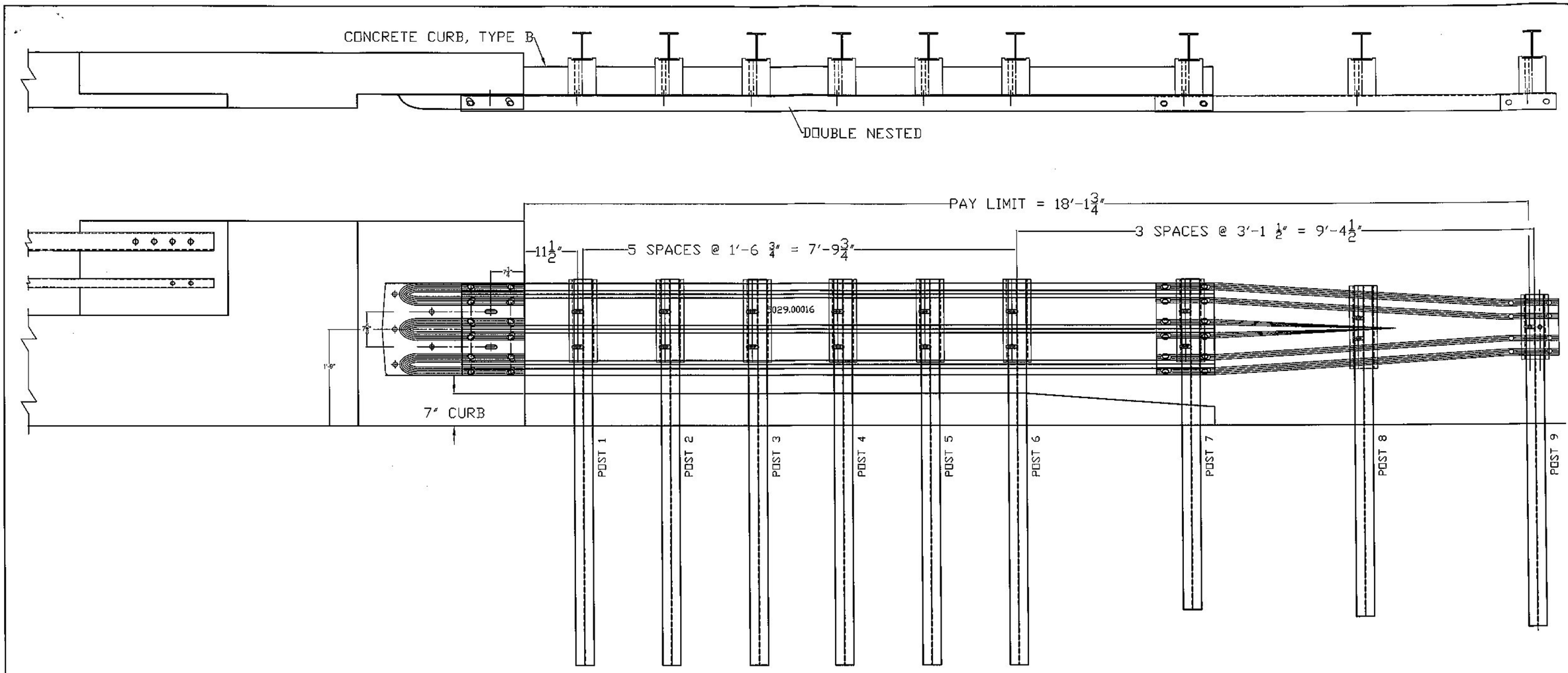
Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
1	1/16	310	25	11	
Variable	LIMITS	341 TO 269	27 TO 23	12 TO 10	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

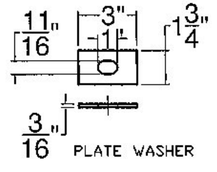
Procedure No. 3025
Revision No. _____

Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 12/1/2014

Vermont Agency of Transportation
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CK'D BY FDB OK'D BY HIS
August 5, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 05/08/05



BILL OF MATERIAL (EACH CORNER)				
ITEM #	QTY	PART #	DESCRIPTION	ASTM DESIGNATION
1	6	0013.850000	W6X9 POST @ 7' (POST 1~6)	A36
2	1	0013.850001	W6X9 POST @ 6' (POST 7)	A36
3	1	0013.850002	W6X9 POST @ 6' (POST 8)	A36
4	1	0013.850003	W6X9 POST @ 6' (POST 9)	A36
5	7	0009.00006	6X8" BLOCKOUT @ 18" (FOR POST 1~7)	POLY
6	1	0009.00007	6X8" BLOCKOUT @ 18" (FOR POST 8)	POLY
7	1	0009.00005	6X8" BLOCKOUT @ 14" (FOR POST 9)	POLY
8	1	5143.40056	12'-6"THRIE BEAM END TERMINAL, 10 Ga.	AASHTO M180
9	2	5029.00016	THRIE BEAM W/ 1'-6 3/4" C-C, 12 Ga.	AASHTO M180
10	1	6029.01133	12'-6" THRIE BEAM TO "W" PANEL, 10 Ga.	AASHTO M180
11	5	T.B.D.	ø 3/4" X 12" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	SUPPLIED BY OTHERS
12	24	0080.05020	ø 5/8"x1-1/4" SPLICE BOLT/RECESSED NUT (PANEL ASS'Y)	A307
13	17	0080.05720	ø 5/8"x10" CARRIAGE BOLT, LW, FW, & NUT	A307



Vermont Agency of Transportation

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August 5, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 05/08/05

SHEET 1 OF 2

ITEM #: 621.748

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

GUIDE RAIL TRANSITION DETAILS SHEET

T.H. 27 (URBAN COLLECTOR), BRIDGE # 12
TOWN OF COLCHESTER, CHITTENDEN COUNTY

REV	NO.	DATE	DESCRIPTION	BY

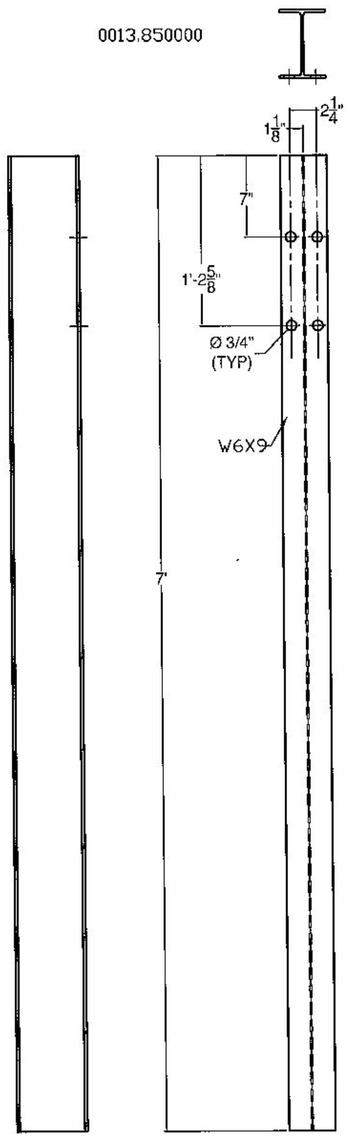
REV	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

AISC CERTIFIED FABRICATOR

DRAWN	E.P.	4/9/15
CHECKED	D.L.	
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	FR L - COLCHESTER	

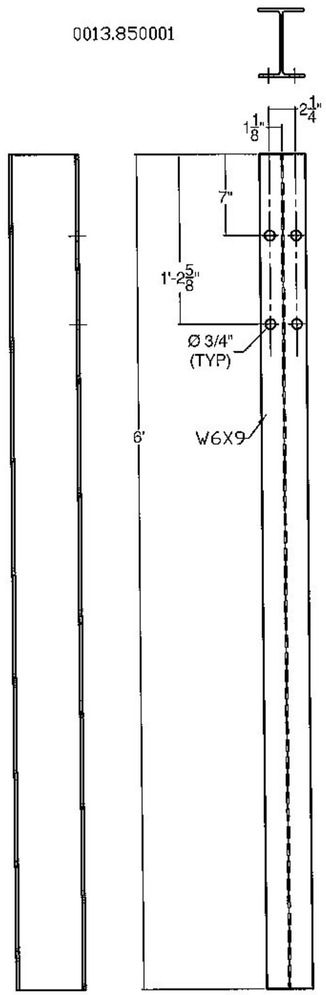
0013.850000



SIDE FRONT ONLY

POST 1~6

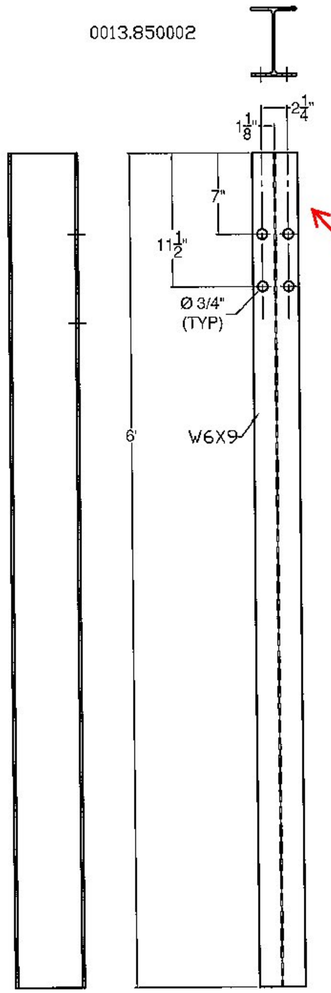
0013.850001



SIDE FRONT ONLY

POST 7

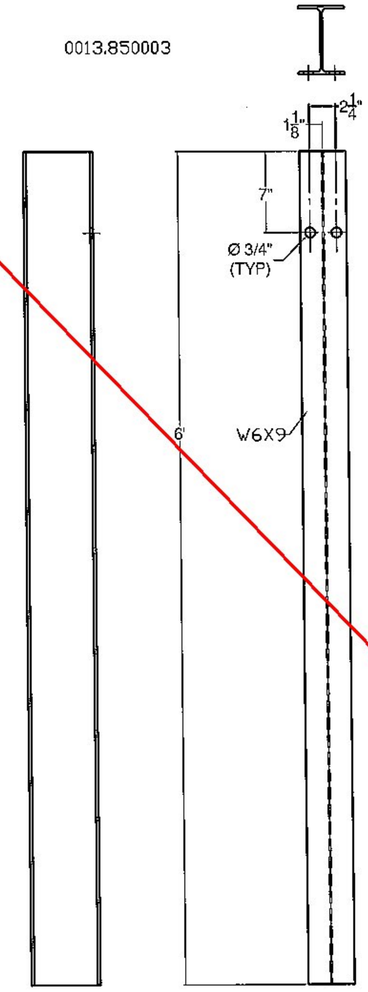
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SIDE FRONT ONLY

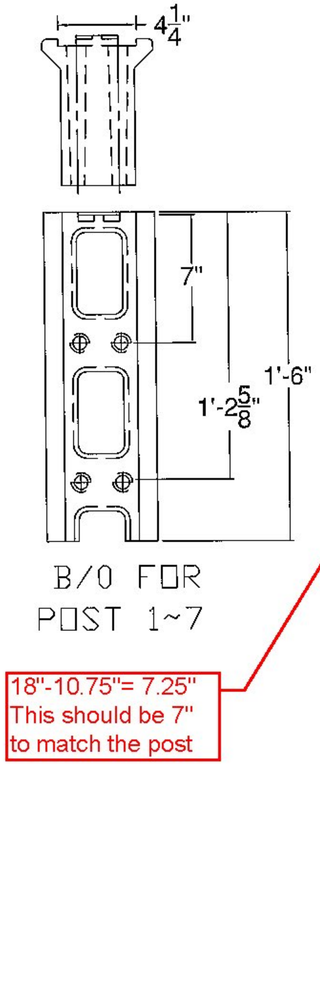
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0013.850003

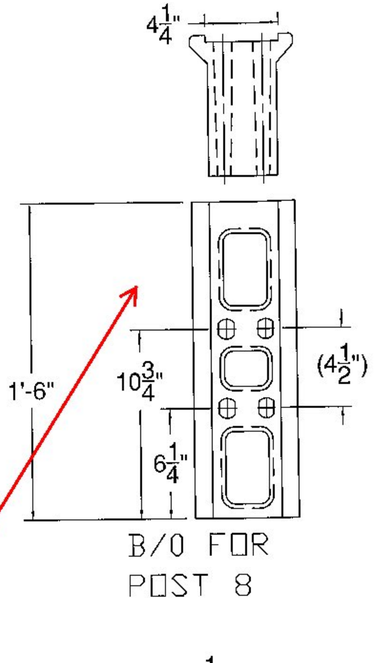


SIDE FRONT ONLY

POST 9

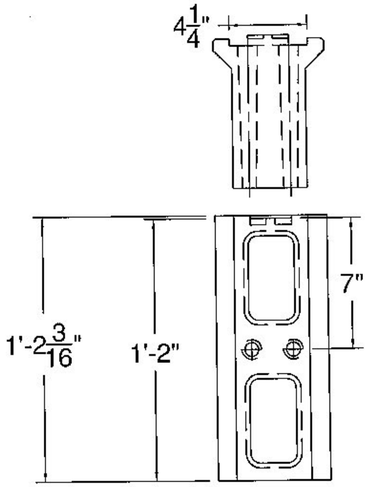


B/O FOR POST 1~7



B/O FOR POST 8

18"-10.75"= 7.25"
This should be 7"
to match the post



B/O FOR POST 9

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY HIS

August 5, 2015

RESUBMIT No Approved AsNoted

BY Carolyn Carlson DATE 08/05/2015

ITEM #: 621.748

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

SHEET 2 OF 2

GUIDE RAIL TRANSITION DETAILS SHEET

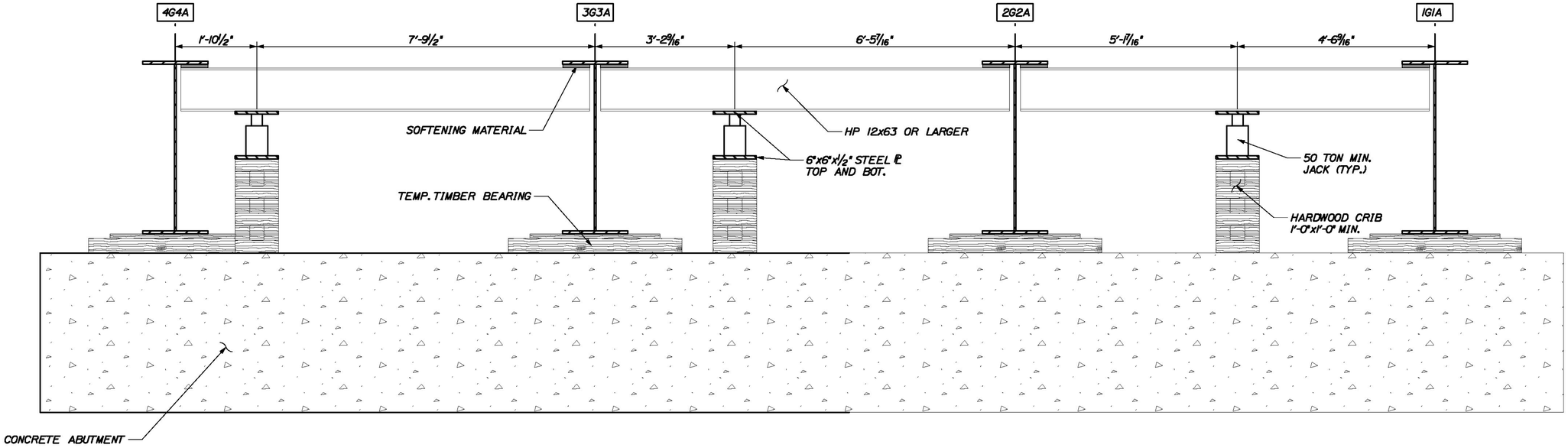
T.H. 27 (URBAN COLLECTOR), BRIDGE # 12
TOWN OF COLCHESTER, CHITTENDEN COUNTY

R E V	NO.	DATE	DESCRIPTION	BY	R E V	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeck@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

CERTIFIED FABRICATOR

DRAWN	E.P.	4/9/15
CHECKED	D.L.	.
APPROVED	.	.
SCALE	SCHEMATIC	
DRAWING NO.	FR I. - COLCHESTER	



SECTION A-A
NOT TO SCALE

NOTE: SECTION VIEW LOOKING DOWN STATION AT BOTH ABUTMENTS

JACKING PROCEDURE - ABUTMENT

1) INSTALL JACKS CENTERED BENEATH HP 12x63 JACKING GIRDERS AS SHOWN.

2) USE LOCKING COLLAR OR SOLIDLY BLOCK BEAMS ONCE DESIRED ELEVATION IS REACHED. DO NOT RELY ON HYDRAULIC FLUID PRESSURE ALONE TO SUPPORT THE BEAMS DURING CONSTRUCTION ACTIVITIES OR FOR AN EXTENDED PERIOD OF TIME.

3) REMOVE EXISTING BEARINGS AND REPLACE WITH NEW BEARING ASSEMBLY AS SHOWN IN CONTRACT DETAILS.

4) UNLOCK LOCKING COLLAR, RELEASE HYDRAULIC PRESSURE AND LOWER THE BRIDGE GIRDER ONTO THE NEW BEARINGS.

GENERAL NOTES

1) ALL STRUCTURAL STEEL SHALL BE IN NEW OR GOOD USED CONDITION

2) STRUCTURAL STEEL PLATE SHALL BE GRADE 36

3) REPORT ANY DISCREPANCY BETWEEN THESE PLANS AND ACTUAL OBSERVED FIELD CONDITIONS TO THE JACKING PLAN ENGINEER OF RECORD IMMEDIATELY.

4) DO NOT PROCEED WITH ANY DEPENDENT WORK UNTIL ANY SUCH REPORTED DISCREPANCY IS ADDRESSED TO THE SATISFACTION OF THE JACKING PLAN ENGINEER OF RECORD.

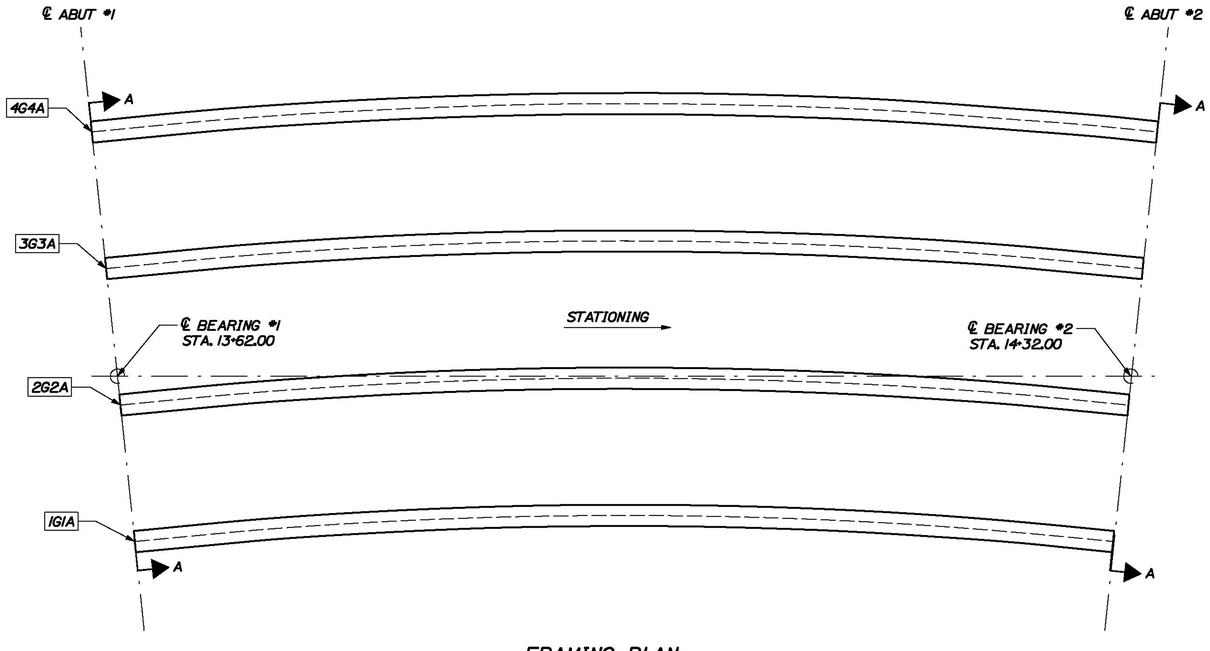
5) THESE PLANS ARE NOT INTENDED TO BE USED ALONE, BUT ARE INTENDED TO BE WORKED IN CONJUNCTION WITH CONTRACT DETAILS AND SPECIFICATIONS FOR THE BRIDGE No. 12, PROJECT NUMBER STP 5600 (12), COLCHESTER.

6) HP 12X63 SHALL BE GRADE 50

7) ALL TIMBER SHALL BE MIXED OAK No. 2 OR BETTER.

8) JACK ALL GIRDERS SIMULTANEOUSLY AT EACH ABUTMENT.

9) THESE PLANS ARE INTENDED TO BE USED WITH THE STRUCTURAL STEEL DEAD LOAD ONLY. NO DECK MAY BE PRESENT AT THE TIME OF JACKING.



FRAMING PLAN
NOT TO SCALE

CALDERWOOD ENGINEERING, ETC.
STRUCTURAL ENGINEERING • DETAILING SERVICES
222 RIVER RD, RICHMOND, ME 04357 PH/FX (207)737-2007/(207) 737-2008

PREPARED FOR:
A.L. ST. ONGE CONTRACTOR, INC
VTAOT PROJ. NUMBER STP 5600 (12)
CEE 38-MI-15

STATE OF VERMONT ENG. CALDERWOOD
NO. 8711 Struggan
LICENSED PROFESSIONAL ENGINEER

P.E. NUMBER 8711
DATE

BY	DATE
TEPA	8/15
GM	8/15

DESIGN-DETAILED
CHECKED-REVIEWED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

COLCHESTER, VT - TH 27
OVER INDIAN BROOK

JACKING PLAN

SHEET NUMBER
1

CALDERWOOD ENGINEERING 222 River Rd. ME Richmond, ME 04357 PH: (207)737-2007 FAX (207)737-2008

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

1). ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS, AND THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (A.A.S.H.T.O.) BRIDGE DESIGN SPECIFICATIONS DATED 2010, AND ITS LATEST REVISIONS.

MATERIAL SPECIFICATIONS

1). UNLESS NOTED, ALL NEW STRUCTURAL STEEL CONFORM TO AASHTO M270 GRADE 50 (ASTM A709-50).

2). MATERIAL NOTED "T2" ON DETAIL DRAWINGS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF VERMONT STANDARD SPECIFICATIONS (SUBSECTION 714.01).

3). HIGH STRENGTH BOLTS: AASHTO M164 (ASTM A325) TYPE 1, 7/8" DIA. IN 15/16" DIAMETER HOLES. BOLT, NUT AND WASHER SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH AASHTO M 298, CLASS 50, TYPE 1.

4). DIRECT TENSION INDICATOR (DTI) WASHERS CONFORMING TO ASTM F959 SHALL BE INSTALLED WITH ALL HIGH STRENGTH BOLTS.

FABRICATION

1). BOLT HOLES SHALL BE FABRICATED TO THE REQUIREMENTS OF THE 2012 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, SECTION 11.4.8, EXCEPT THAT HOLES SHALL NOT BE PUNCHED FULL SIZE.

2). EACH MEMBER SHALL BE IDENTIFIED WITH AN ERECTION MARK CORRESPONDING WITH THE MEMBER IDENTIFICATION MARK ON THE APPROVED SHOP DRAWINGS.

3). TIGHT FIT (WELDED ENDS ONLY). 50% OF THE PROJECTED BEARING AREA SHALL BE IN CONTACT WITHIN 0.5mm (0.02") WITH A PERMISSIBLE VARIATION OF 1.6mm (1/16") FOR THE REMAINING 50% OF THE PROJECTED AREA.

4). GRIND TO BEAR. 75% OF THE PROJECTED AREA SHALL BE IN CONTACT WITHIN 0.25mm (0.01") WITH A PERMISSIBLE VARIATION OF 0.8mm (1/32") FOR THE PROJECTED AREA.

5). MILL TO BEAR. 100% OF THE PROJECTED AREA SHALL BE IN FULL CONTACT.

WELDING

1). THE CONFIGURATION OF THE WELD JOINTS AND ALL WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO/AWS 2010 D1.5 BRIDGE WELDING CODE AND WITH SPECIFICATIONS SHOWN BESIDE. ALL WELDING WILL BE DETAILED TO PRE-QUALIFIED JOINTS, UNLESS PROHIBITED BY THE DESIGNER.

2). WELDING OF MAIN LOAD CARRYING MEMBERS AND ATTACHMENTS SHALL BE PERFORMED USING THE AUTOMATIC SUBMERGE ARC & SHIELDED METAL ARC PROCESS. ALL WELDS ARE CONTINUOUS U.N.

3). NON-DESTRUCTIVE TESTING OF WELDS SHALL BE IN ACCORDANCE WITH THE REFERENCED SPECIFICATIONS.

FIELD CONNECTIONS

1). ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH BOLTS AASHTO M164 (ASTM A325) TYPE 1, IN 15/16" DIAMETER HOLES UNLESS OTHERWISE NOTED. INSTALLED PER 506.19(c) AND SPECIAL PROVISIONS.

2). BOLTS SHALL HAVE HEAVY HEX. NUT, HEX. HEAD AND ONE DTI'S/LOAD INDICATOR FLAT WASHER AND 1 HARDENED WASHER EACH (HARDENED WASHER TO BE PLACED UNDER TURNED ELEMENT (NUT), DTI TO BE PLACED UNDER THE HEAD OF THE BOLT WITH THE PROTRUSIONS FACING THE HEAD OF THE BOLT). BOLT, NUT AND WASHER SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH AASHTO M 298, CLASS 50,TYPE 1.

3). PIECE MARKS WILL BE LOCATED AS SHOWN ON ERECTION DRAWING.

4). BOLTS INSTALLED WITH THE STEM VERTICAL SHALL HAVE HEADS UP. BOLTS INSTALLED WITH THE STEM HORIZONTAL SHALL HAVE HEADS TOWARDS THE WEATHER UNLESS CLEARANCE RESTRICTIONS DICTATE OTHERWISE.

CLEANING:

1). ALL STEEL SHALL BE BLAST CLEANED AS PER SSPC SP-10 (NEAR WHITE) PER SPEC. 506.14(c).

PAINTING:

1). ALL STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

2). THE FINAL COLOR SHALL BE BROWN IN ACCORDANCE WITH SUBSECTION 708.03 (FED. STD 595, COLOR CHIP 20059).

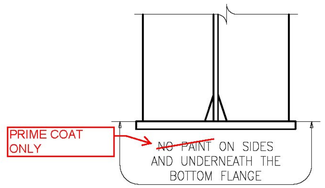
3). GREASE SHALL BE APPLIED FOR A DISTANCE OF 10'-0" STARTING AT THE ABUTMENT #1 END OF THE SPAN. ALL CHANNELS AND CONNECTION PLATES LOCATED IN THIS AREA SHALL ALSO BE GREASED. THE GREASE SHALL BE BROWN.

4). PAINT SYSTEM SHALL BE AS FOLLOWS FROM CARBOLINE COMPANY:
PRIME COAT: CARBOZINC 859 ORGANIC ZINC RICH EPOXY PRIMER (3.5-5 MILS DFT)
INTERMEDIATE COAT: CARBOGUARD 893 EPOXY INTERMEDIATE (3-6 MILS DFT)
TOP COAT: CARBOTHANE 133 VOC ALIPHATIC POLYURETHANE (2.5-4 MILS DFT)
TOTAL THICKNESS SHALL BE BETWEEN 5.5 AND 10.0 MILS

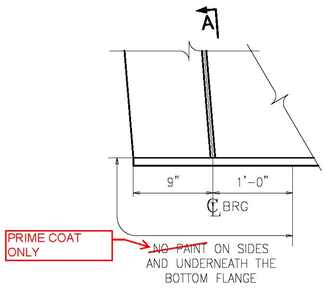
5). TOP OF GIRDER TOP FLANGES SHALL ONLY RECEIVE A PRIME COAT (LESS THAN 1.5 MILS OF PRIMER). (SEE DETAIL 1)

6). FAYING SURFACES OF BOLTED CONNECTION (BOTH SIDES OF ALL PLIES) SHALL ONLY RECEIVE A PRIME COAT FOR A DISTANCE OF $1\frac{1}{2}$" AROUND HOLES.

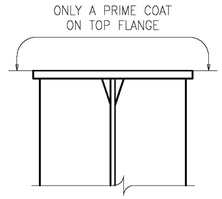
7). FIELD WELD AREAS AT BEARING SOLE PLATES SHALL BE LEFT UNPAINTED (SEE SKETCH P1).



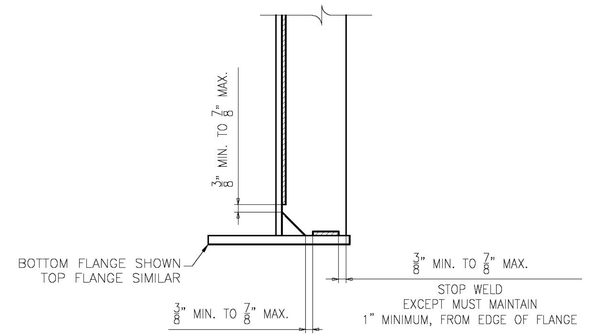
SECTION A



SKETCH P1



DETAIL 1



DETAIL "WS1"
STIFF. WELD TERMINATION

Vermont Agency of Transportation
RECEIVED
CBSS 629 Colchester, VT - REV1.pdf
CK'D BY FDB OK'D BY HIS
June 10, 2015
RESUBMIT No Approved AsNoted
BY Carolyn Carlson DATE 06/11/05

ENGINEERING REVIEW STAMP

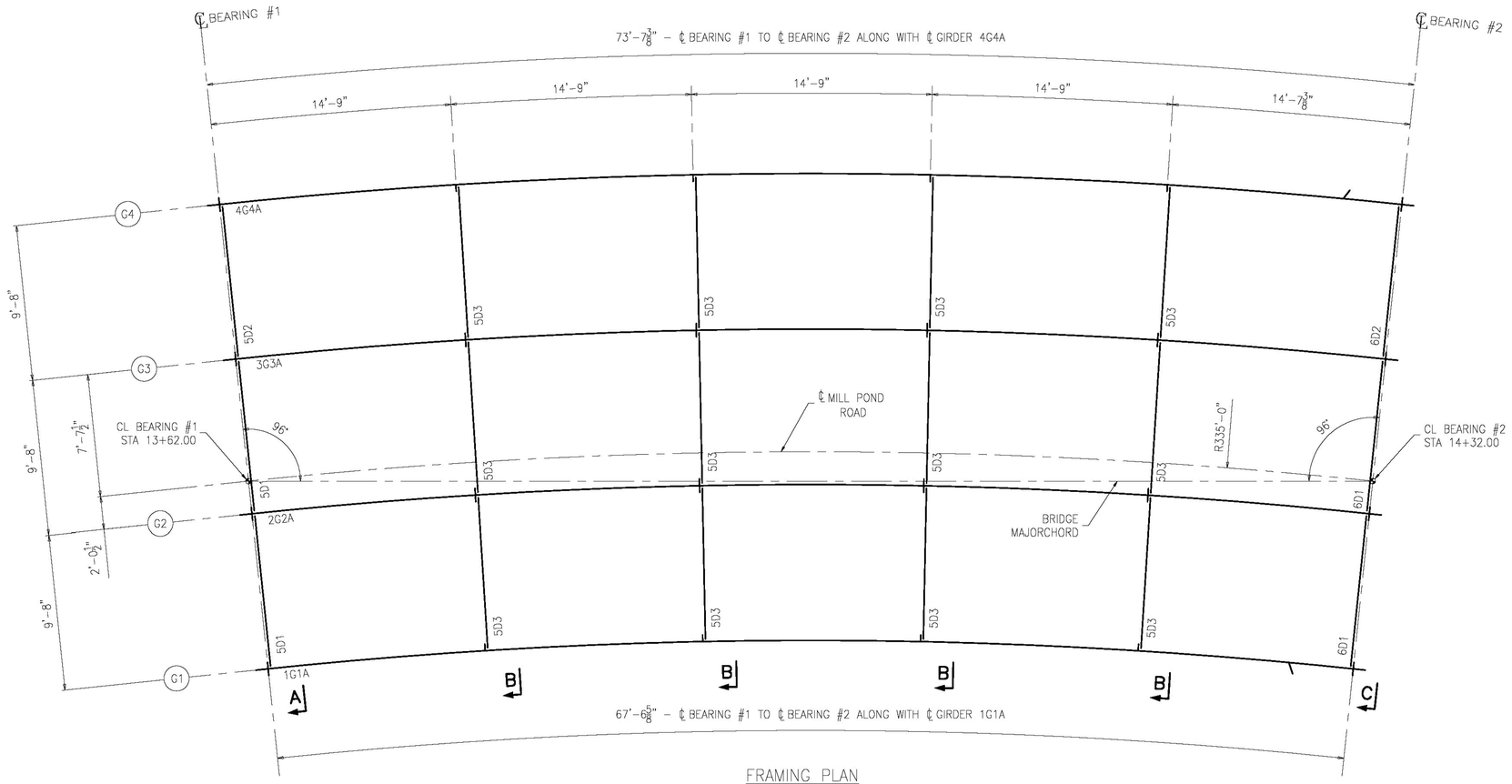
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	06/05/15	PER APPROVAL COMMENTS	EG	YT		
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
		AS NOTED	AS NOTED

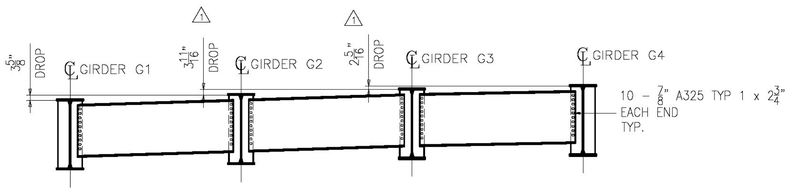
DESCRIPTION: GENERAL NOTES

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

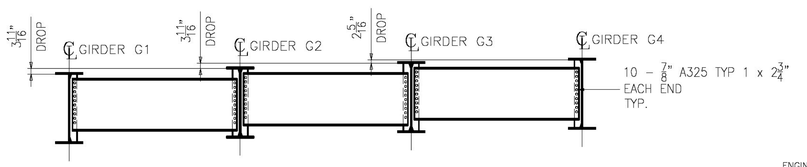
STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	04/21
	CHKD: YT	DATE: 04/28
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO. STP 5600(12)	629-1	GN1
CUSTOMER: A.L. ST. ONGE		REV. 1



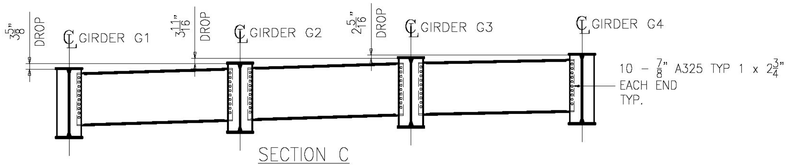
FRAMING PLAN



SECTION A



SECTION B



SECTION C

ENGINEERING REVIEW STAMP

Vermont Agency of Transportation

RECEIVED

CBSS 526 C:\Active\tec_VT - REVI..approved as noted.pdf

CK'D BY FDB OK'D BY HIS

June 10, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 06/11/15

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN1.

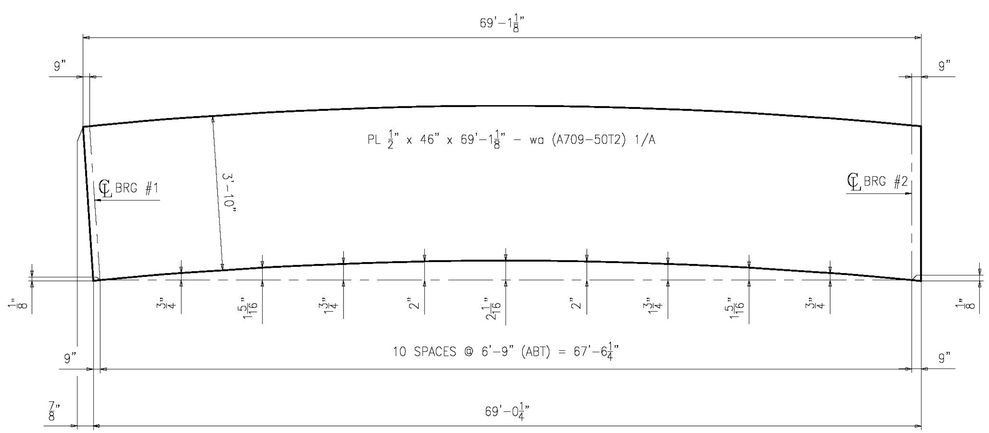
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	06/05/15	PER APPROVAL COMMENTS	EG	YT		
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MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
		–	NONE

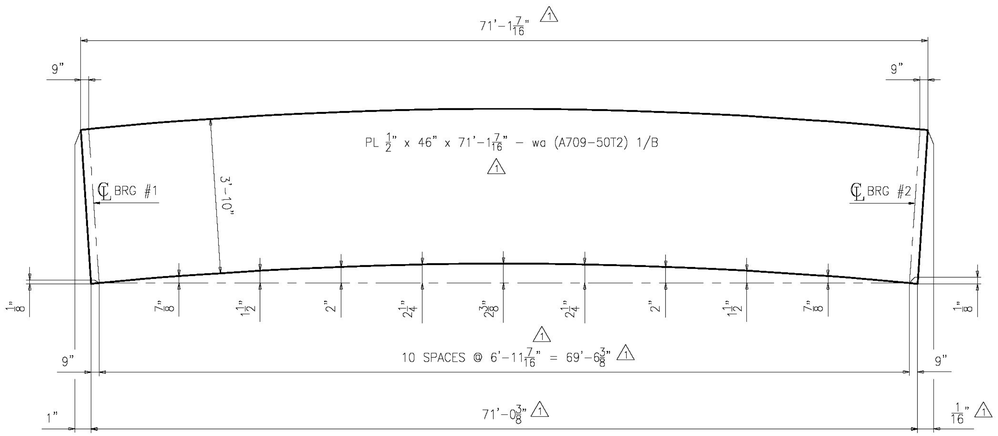
DESCRIPTION: FRAMING PLAN

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

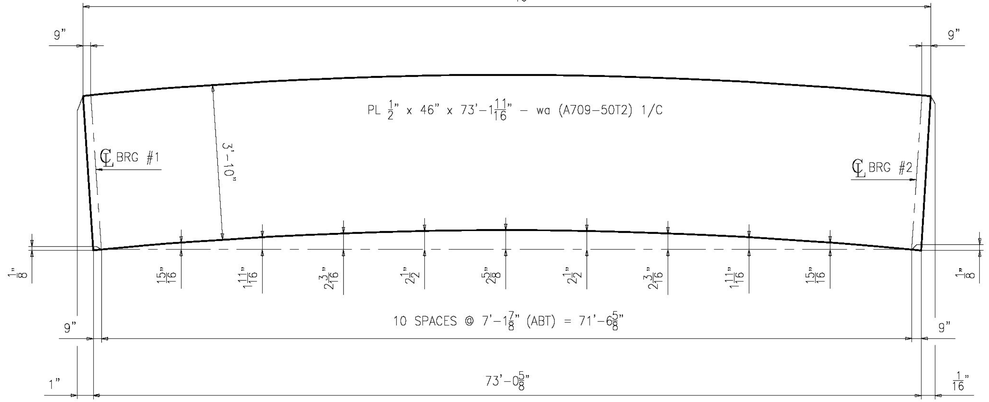
STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	04/21
	CHKD: YT	DATE: 04/28
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO. STP 5600(12)	629–1	E1
CUSTOMER: A.L. ST. ONGE		REV. ⚠1



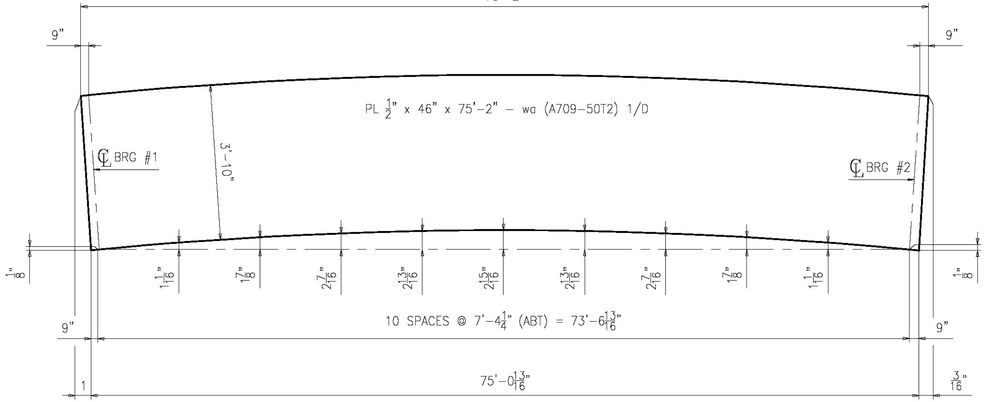
CAMBER DIAGRAM FOR 1G1A



CAMBER DIAGRAM FOR 2G2A



CAMBER DIAGRAM FOR 3G3A



CAMBER DIAGRAM FOR 4G4A

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN1.
2. T2 – DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	06/05/15	PER APPROVAL COMMENTS	EG	YT		
0						

MATERIAL:	SURFACE PREP. & PAINT: SEE DWG GN1	HOLES: 15/16"	SHOP BOLTS: NONE

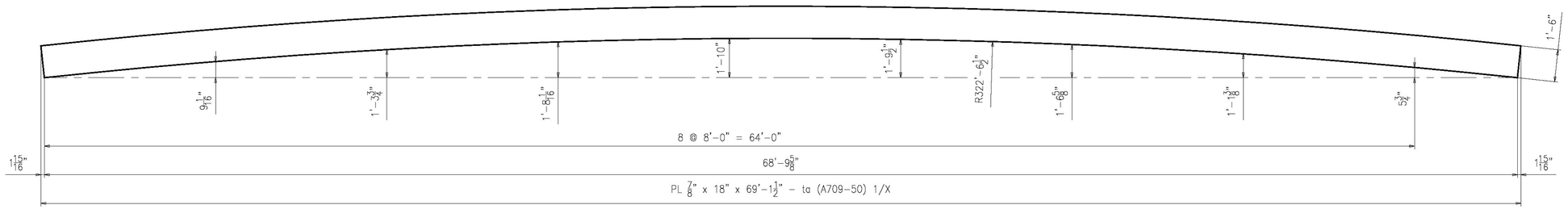
DESCRIPTION: CAMBER DIAGRAMS

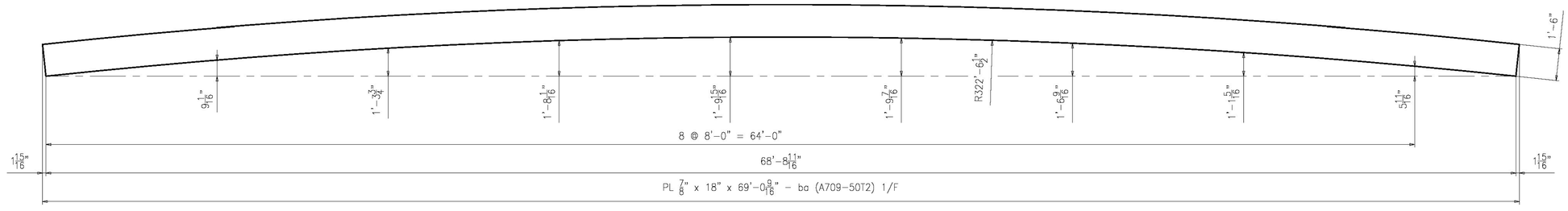
ENGINEERING REVIEW STAMP

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CBSS 626 Colchester, VT - REV1.approved.ai.indd.pdf
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June 10, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 06/11/15

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	04/22
	CHKD: YT	DATE: 04/28
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO. STP 5600(12)	629-1	C1
CUSTOMER: A.L. ST. ONGE		REV. 1





FLANGE DIAGRAMS FOR 1G1A

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN1.
2. T2 - DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL:	SURFACE PREP. & PAINT: SEE DWG GN1	HOLES: AS NOTED	SHOP BOLTS: AS NOTED

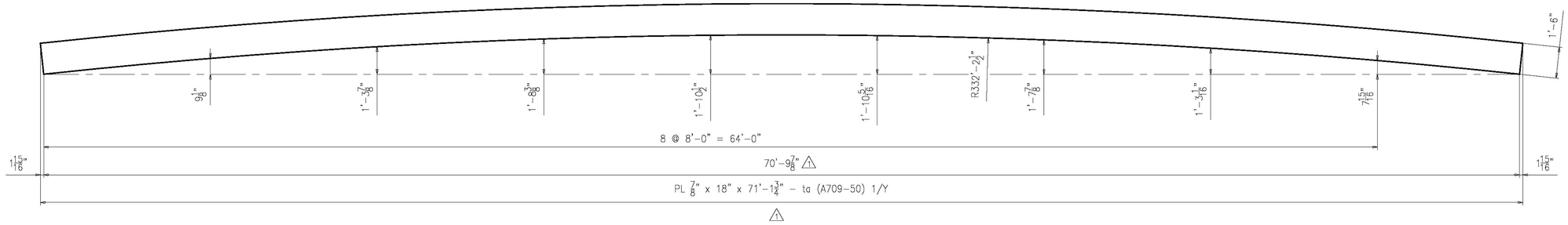
DESCRIPTION: FLANGE DIAGRAMS FOR 1G1A

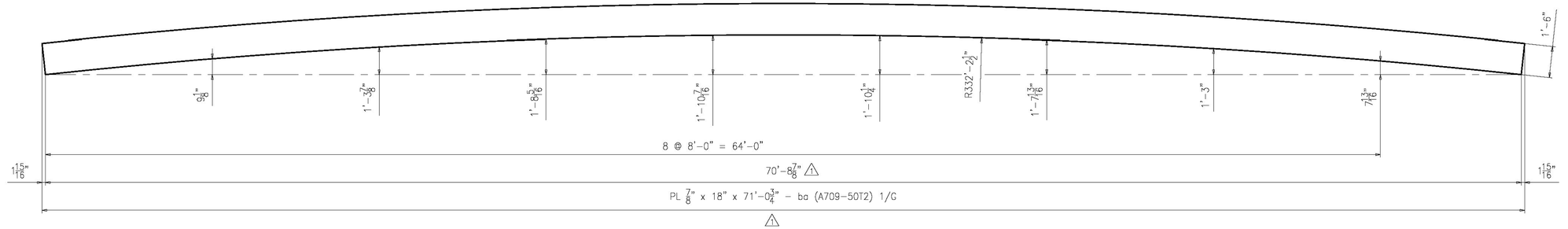
Vermont Agency of Transportation
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CBSS1526 Colchester, VT - REV1 approved as noted.pdf
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June 10, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 06/11/15

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CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. SOUTH PORTLAND, ME 04106
PHONE (207) 780-6722 FAX. (207) 780-6726
TENCA 1415

STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	04/22
	CHKD: YT	DATE: 04/28
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO. STP 5600(12)	629-1	C2
CUSTOMER: A.L. ST. ONGE		REV. 1





FLANGE DIAGRAMS FOR 2G2A

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN1.
2. T2 - DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	06/05/15	PER APPROVAL COMMENTS	EG	YT		
0						

MATERIAL:	SURFACE PREP. & PAINT: SEE DWG GN1	HOLES: AS NOTED	SHOP BOLTS: AS NOTED

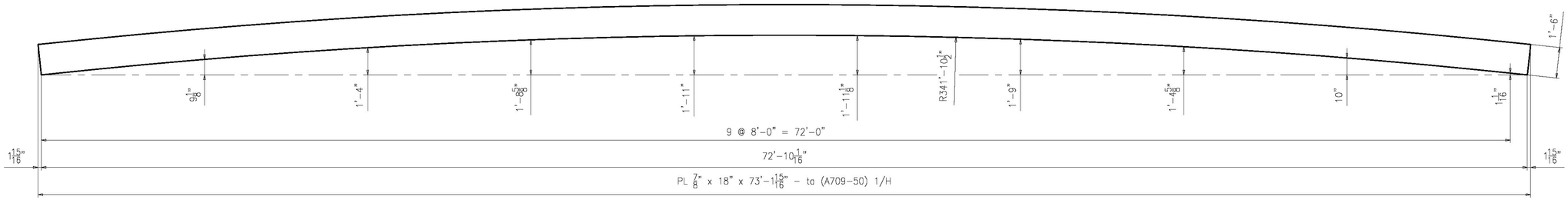
DESCRIPTION: FLANGE DIAGRAMS FOR 2G2A

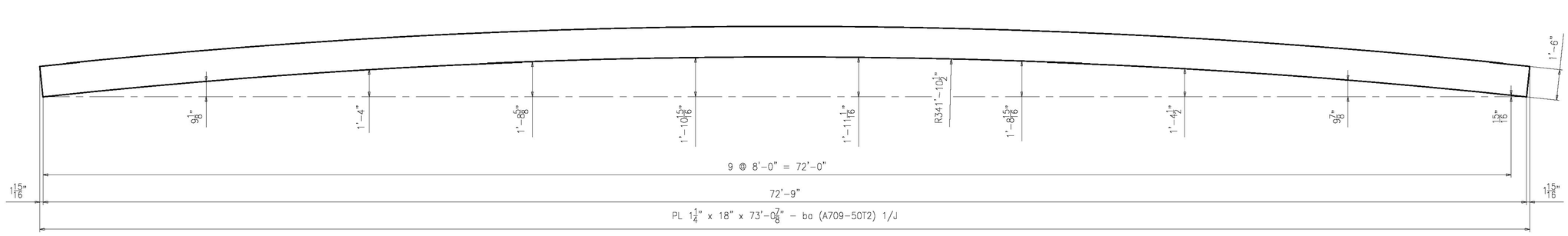
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CBSS:EDB Colchester, VT - REV1. approved as noted.pdf
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June 10, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 06/11/15

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1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	04/23
	CHKD: YT	DATE: 04/28
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO. 629-1	DWG NO. C3
PROJ NO. STP 5600(12)		REV. 1
CUSTOMER: A.L. ST. ONGE		





FLANGE DIAGRAMS FOR 3G3A

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN1.
2. T2 - DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL:	SURFACE PREP. & PAINT: SEE DWG GN1	HOLES: AS NOTED	SHOP BOLTS: AS NOTED

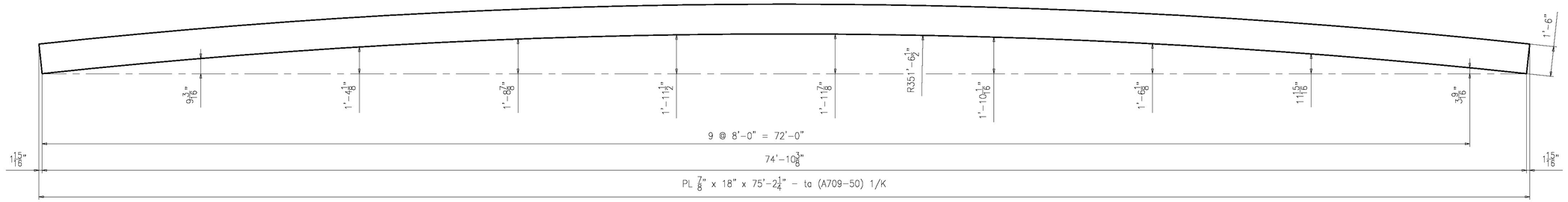
DESCRIPTION: FLANGE DIAGRAMS FOR 3G3A

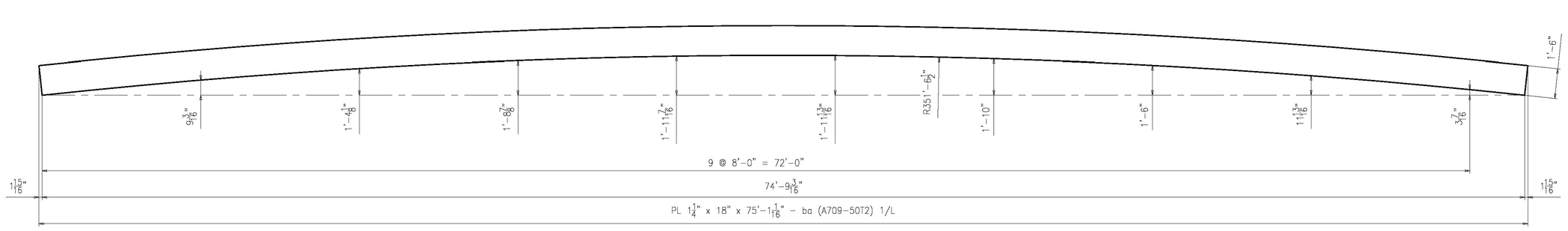
Vermont Agency of Transportation
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June 10, 2015
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BY Carolyn Carlson DATE 06/11/15

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CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	04/22
	CHKD: YT	DATE: 04/28
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO. 629-1	DWG NO. C4
PROJ NO. STP 5600(12)		REV. 1
CUSTOMER: A.L. ST. ONGE		





FLANGE DIAGRAMS FOR 4G4A

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN1.
2. T2 - DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL:	SURFACE PREP. & PAINT: SEE DWG GN1	HOLES: AS NOTED	SHOP BOLTS: AS NOTED

DESCRIPTION: FLANGE DIAGRAMS FOR 4G4A

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	04/22
	CHKD: YT	DATE: 04/28
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO. STP 5600(12)	629-1	C5
CUSTOMER: A.L. ST. ONGE		REV. 1

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CBS5528 Colchester, VT - REV1 approved as noted.pdf
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BY Carolyn Carlson DATE 06/11/15

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								629	FB1	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
			360		A325 TYP 1 7/8ø		2 3/4	1FL DTIS WASHER		
								+ 1 FL WASHER		

FIELD BOLT LIST						A325 TYPE 1 BOLTS								
LINE	NO REQ'D	BOLT DIAM.	BOLT LEN.	BOLTS /CONN.	NO OF /CONN.	GRIP*	THICK. OF PCS. CONNECTED						WASH CODE	PIECES CONNECTED AND REMARKS
1	360	7/8"ø	2 3/4"	10	36	1 1/8"	5/8"	1/2"					3	DIAPHRAGM TO GIRDER CONNECTION PLATE

* GRIP LENGTHS EXCLUDE WASHER THICKNESS

1: 1 HARD DTI'S/LOAD INDICATOR FLAT WASHER
2: 2 HARD DTI'S/LOAD INDICATOR FLAT WASHERS
3: 1 HARD DTI'S/LOAD INDICATOR FLAT WASHER AND 1 HARDENED WASHER.

Vermont Agency of Transportation

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June 10, 2015

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BY Carolyn Carlson DATE 06/11/15

WORK THIS DRAWING WITH E1

ENGINEERING REVIEW STAMP

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES: 15/16"ø	SHOP BOLTS: NONE

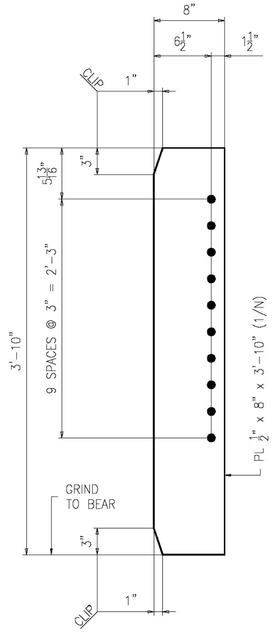
DESCRIPTION: FIELD BOLT LIST

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

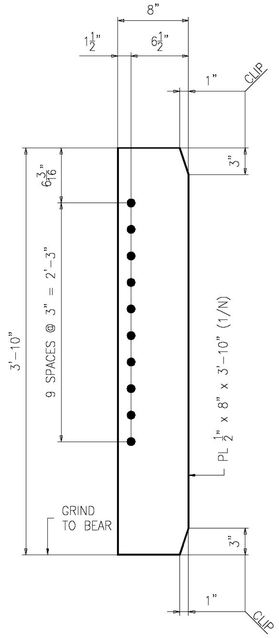
STRUCTURE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK
TOWN OF COLCHESTER, COUNTY OF CHITTENDEN
STATE OF VERMONT AGENCY OF TRANSPORTATION

DRAWN:	DATE:
BK	04/22
CHKD: YT	DATE: 04/28

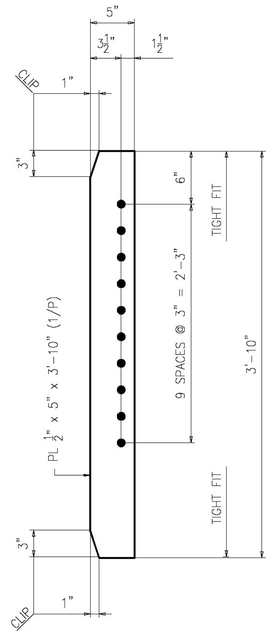
LOCATION:	COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO.	STP 5600(12)	629-1	FB1
CUSTOMER:	A.L. ST. ONGE		REV. 0



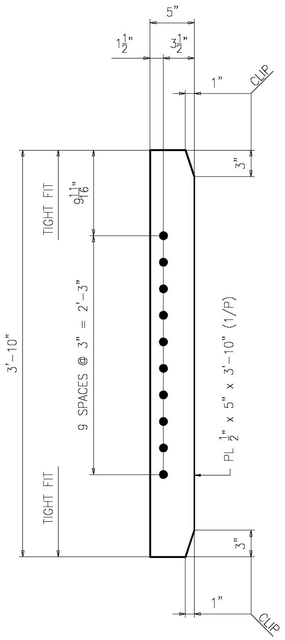
6 ~ BEARING STIFFENER ~ x1a



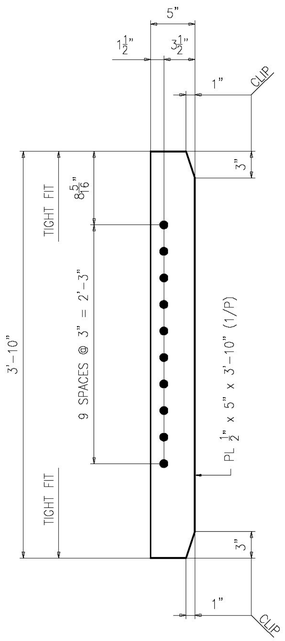
6 ~ BEARING STIFFENER ~ x1b



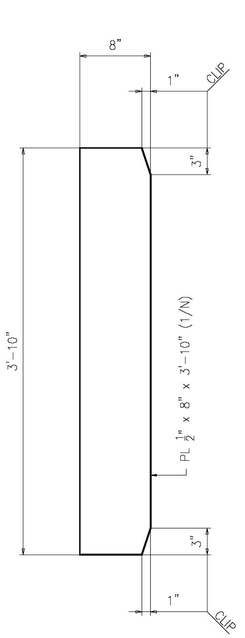
12 ~ INTERMEDIATE STIFFENER ~ x1c



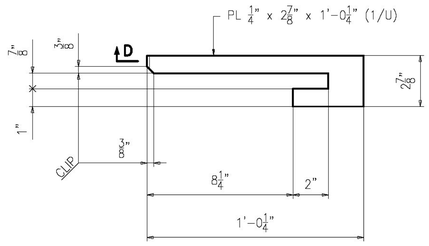
8 ~ INTERMEDIATE STIFFENER ~ x1d



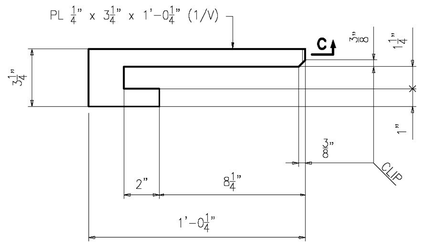
4 ~ INTERMEDIATE STIFFENER ~ x1f



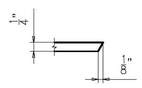
4 ~ BEARING STIFFENER ~ x1g



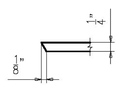
1 ~ DRIP PLATE ~ x1h



1 ~ DRIP PLATE ~ x1k



SECTION C



SECTION D

Vermont Agency of Transportation

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June 10, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 06/11/15

ENGINEERING REVIEW STAMP

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN1.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
A709-50 U.N.	SEE DWG GN1	15/16"ø	NONE

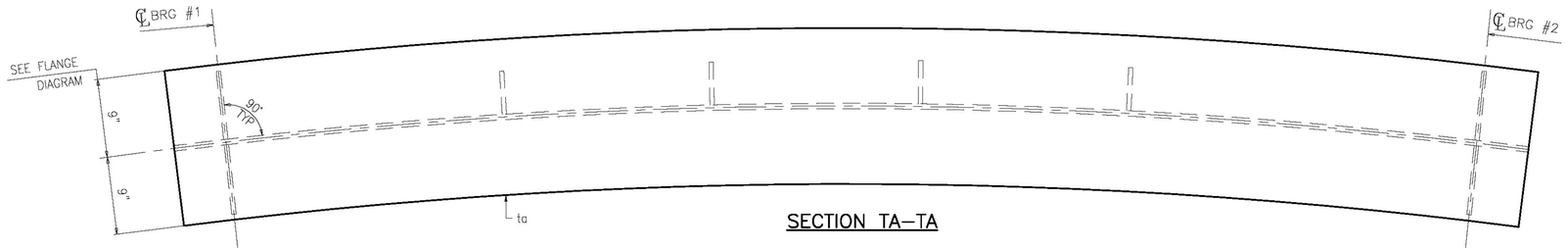
DESCRIPTION: GIRDER STANDARD DETAILS

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

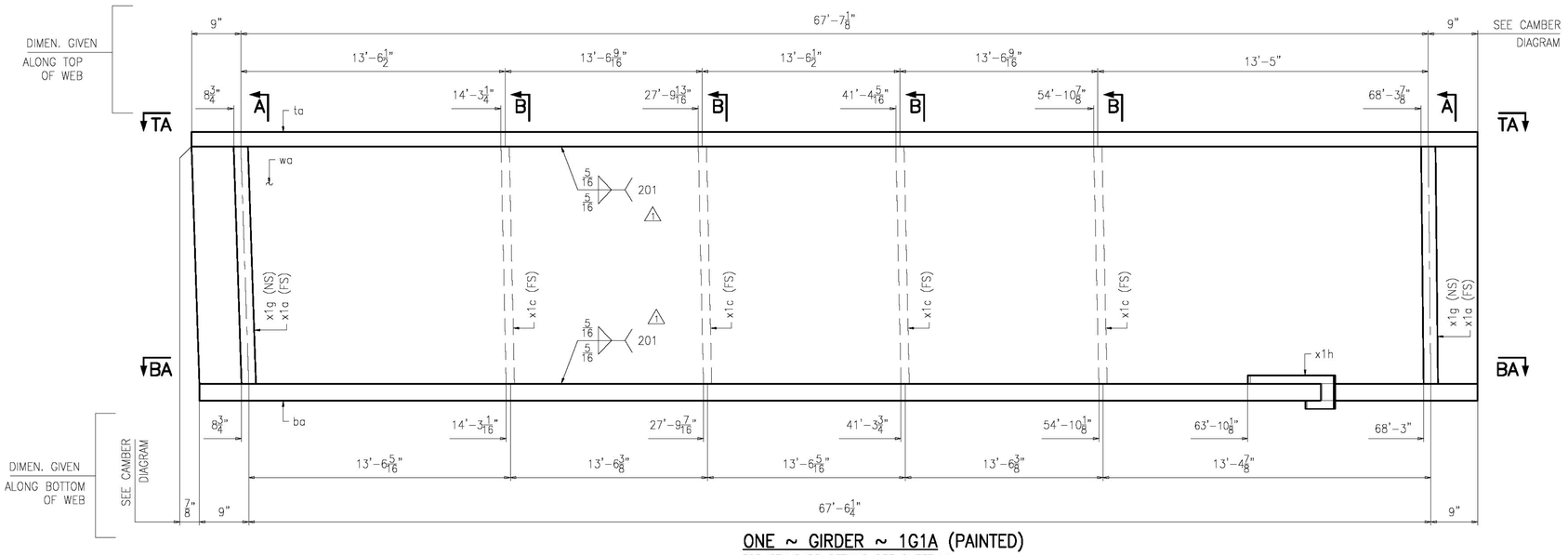
STRUCTURE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK
TOWN OF COLCHESTER, COUNTY OF CHITTENDEN
STATE OF VERMONT AGENCY OF TRANSPORTATION

DRAWN:	BK	DATE:	04/22
CHKD:	YT	DATE:	04/28
LOCATION:	COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO.	STP 5600(12)	629-1	X1
CUSTOMER:	A.L. ST. ONGE		REV. 0

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								629	1	⚠1
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
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1	X		1	ta	PL 7/8 x 18	69	1 1/2		3702	
1	F		1	ba	PL 7/8 x 18	69	0 9/16	A709-50T2	3697	
1	N		2	x1a	PL 1/2 x 8	3	10	M1E	104	
1	P		4	x1c	PL 1/2 x 5	3	10		130	
1	N		2	x1g	PL 1/2 x 8	3	10	M1E	104	
1	U		1	x1h	PL 1/4 x 2 7/8	1	0 1/4		2	

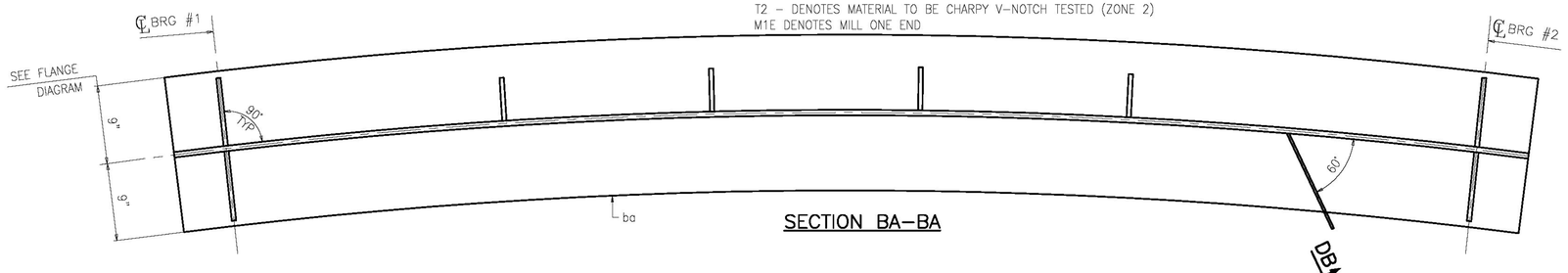


SECTION TA–TA

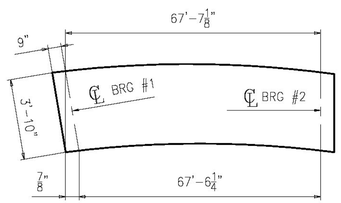


ONE ~ GIRDER ~ 1G1A (PAINTED)

FOR STANDARD DETAILS SEE SHEET X1
FOR CAMBER DIAGRAM SEE SHEET C1
FOR FLANGE DIAGRAM SEE SHEET C2
FOR GENERAL NOTES SEE SHEET GN1
T2 – DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)
M1E DENOTES MILL ONE END



SECTION BA–BA



ORIENTATION DIAGRAM

Vermont Agency of Transportation

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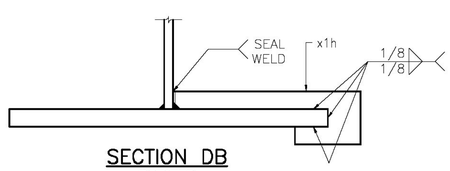
CBS1526 Colchester, VT - REV1 approved as noted.pdf

CK'D BY FDB OK'D BY HIS

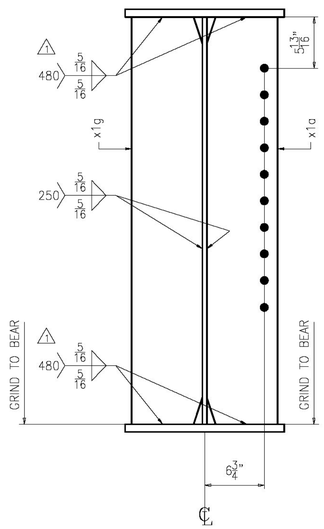
June 10, 2015

RESUBMIT No Approved

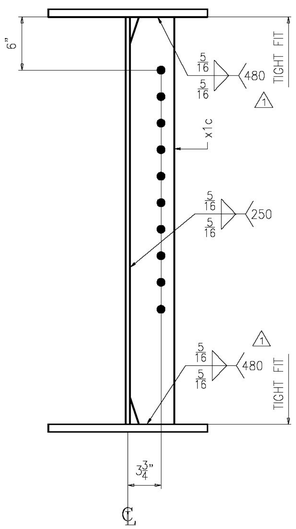
BY Carolyn Carlson DATE 06/11/15



SECTION DB
ROTATED



SECTION A



SECTION B

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	06/05/15	PER APPROVAL COMMENTS	EG	YT		
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
A709-50 U.N.	SEE DWG GN1	15/16"ø	NONE

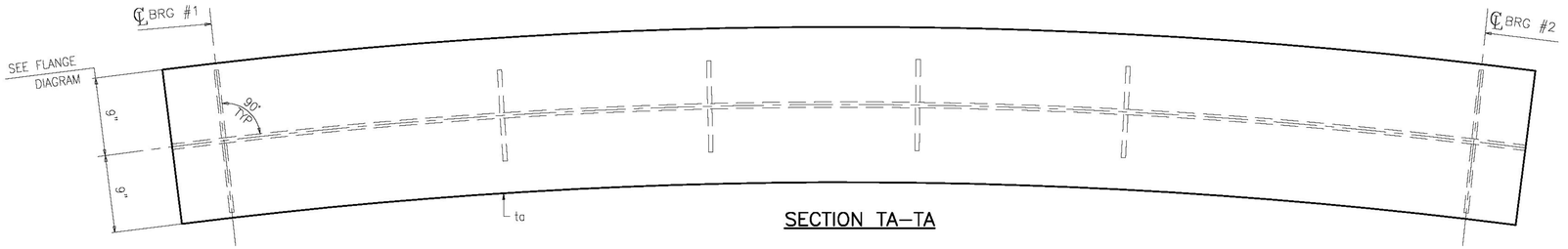
DESCRIPTION: GIRDER 1G1A

ENGINEERING REVIEW STAMP

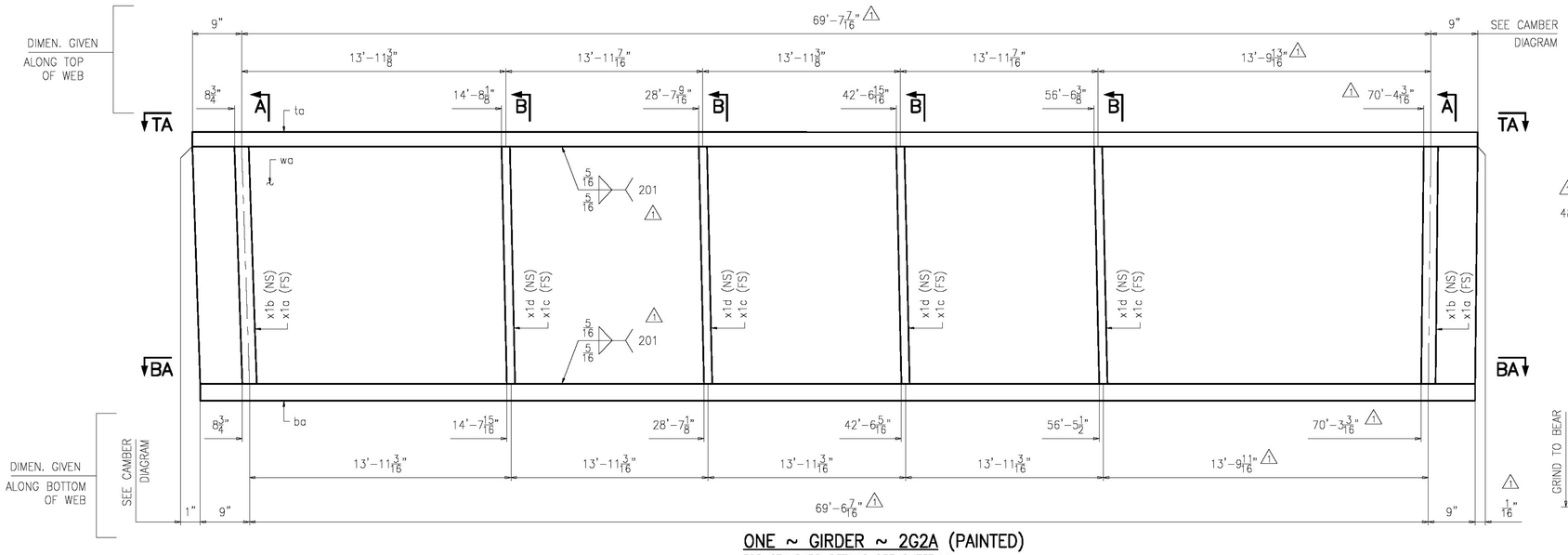
CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. SOUTH PORTLAND, ME 04106
PHONE (207) 780-6722 FAX. (207) 780-6726
TENCA 1415

STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	04/22
	CHKD: YT	DATE: 04/23
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO. STP 5600(12)	629-1	1
CUSTOMER: A.L. ST. ONGE		REV. ⚠1

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								629	2	1
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		2G2A	1		GIRDER			PAINTED	13646	
1	B		1	wa	PL 1/2 x 46	71	1 7/16	A709-50T2	5562	
1	Y		1	ta	PL 7/8 x 18	71	1 3/4		3810	
1	G		1	ba	PL 7/8 x 18	71	0 3/4	A709-50T2	3806	
1	N		2	x1a	PL 1/2 x 8	3	10	M1E	104	
1	N		2	x1b	PL 1/2 x 8	3	10	M1E	104	
1	P		4	x1c	PL 1/2 x 5	3	10		130	
1	P		4	x1d	PL 1/2 x 5	3	10		130	

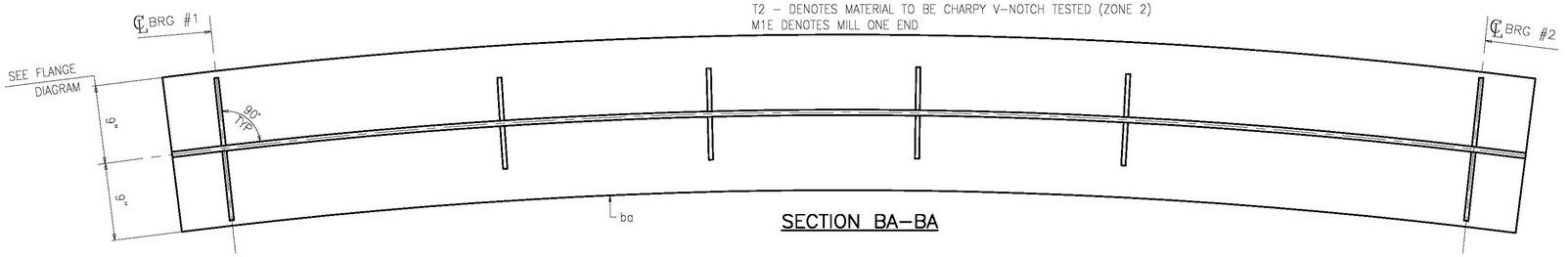


SECTION TA–TA

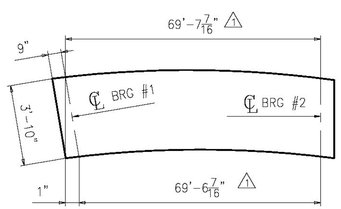


ONE ~ GIRDER ~ 2G2A (PAINTED)

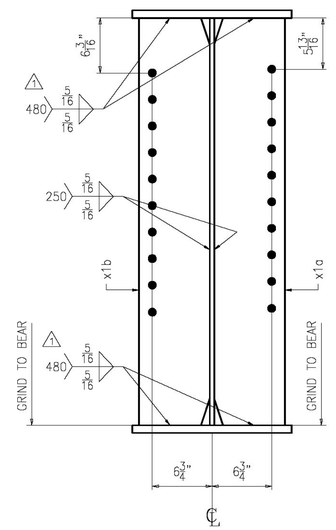
FOR STANDARD DETAILS SEE SHEET X1
FOR CAMBER DIAGRAM SEE SHEET C1
FOR FLANGE DIAGRAM SEE SHEET C3
FOR GENERAL NOTES SEE SHEET GN1
T2 – DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)
M1E DENOTES MILL ONE END



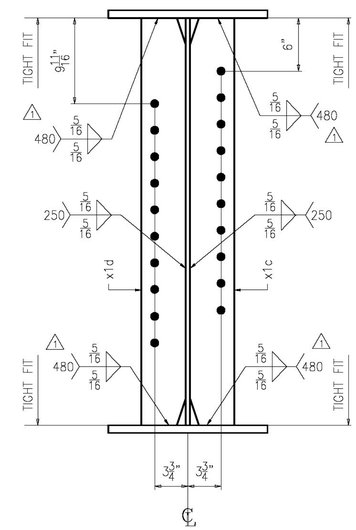
SECTION BA–BA



ORIENTATION DIAGRAM



SECTION A



SECTION B

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	06/05/15	PER APPROVAL COMMENTS	EG	YT		
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
A709-50 U.N.	SEE DWG GN1	15/16"ø	NONE

DESCRIPTION: GIRDER 2G2A

ENGINEERING REVIEW STAMP

Vermont Agency of Transportation
RECEIVED
CBGS B26 Colchester, VT - REV1 approved as noted.pdf

CK'D BY FDB OK'D BY HIS

June 10, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 06/11/15

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

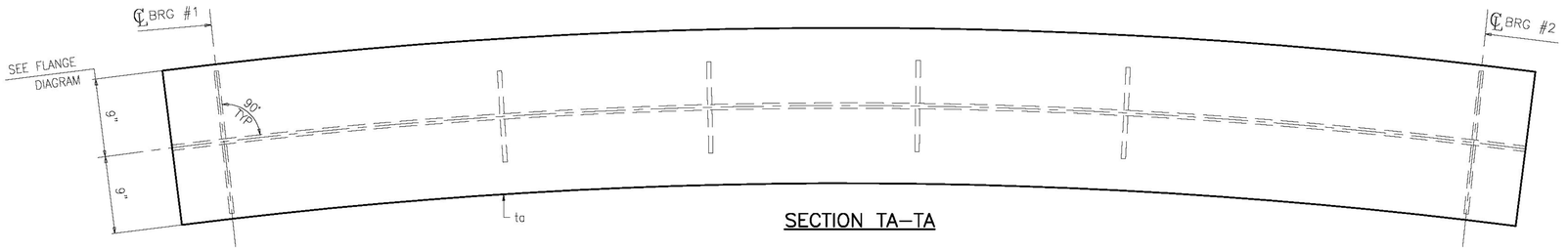
STRUCTURE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK
TOWN OF COLCHESTER, COUNTY OF CHITTENDEN
STATE OF VERMONT AGENCY OF TRANSPORTATION

DRAWN: BK DATE: 04/23
CHKD: YT DATE: 04/23

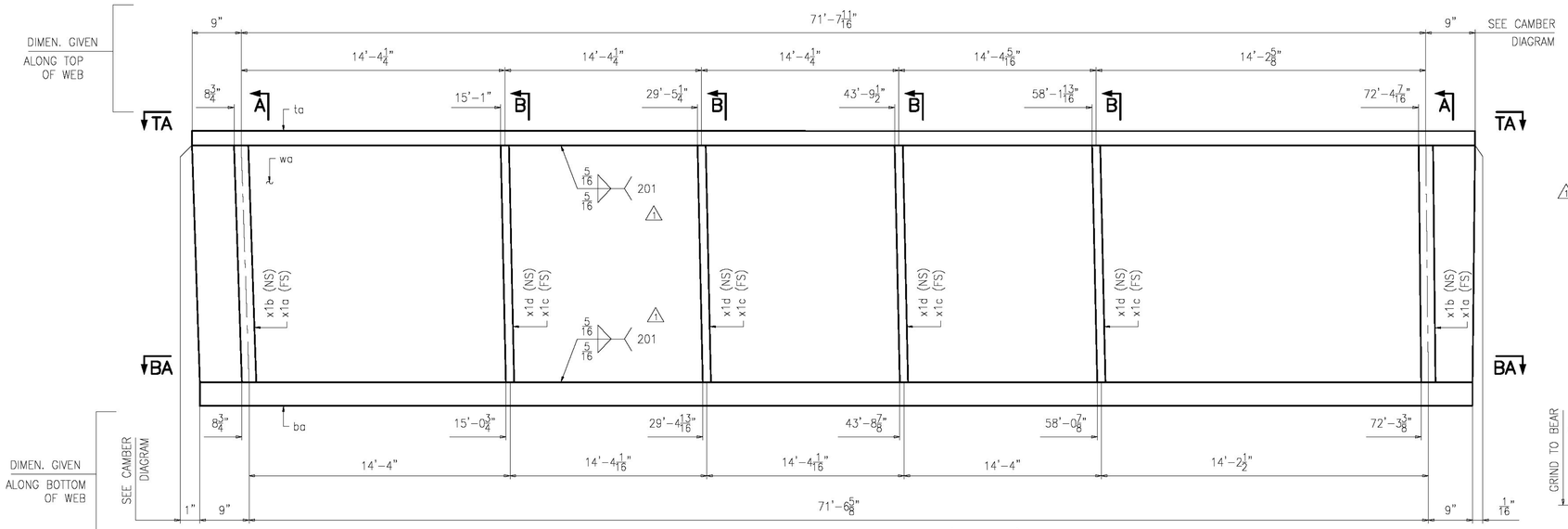
LOCATION: COLCHESTER / CHITTENDEN, VT
PROJ NO. STP 5600(12)
CUSTOMER: A.L. ST. ONGE

JOB NO. 629-1
DWG NO. 2
REV. 1

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								629	3	1
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		3G3A	1		GIRDER			PAINTED	15696	
1	C		1	wa	PL 1/2 x 46	73	1 11/16	A709-50T2	5720	
1	H		1	ta	PL 7/8 x 18	73	1 15/16		3918	
1	J		1	ba	PL 1 1/4 x 18	73	0 7/8	A709-50T2	5590	
1	N		2	x1a	PL 1/2 x 8	3	10	M1E	104	
1	N		2	x1b	PL 1/2 x 8	3	10	M1E	104	
1	P		4	x1c	PL 1/2 x 5	3	10		130	
1	P		4	x1d	PL 1/2 x 5	3	10		130	

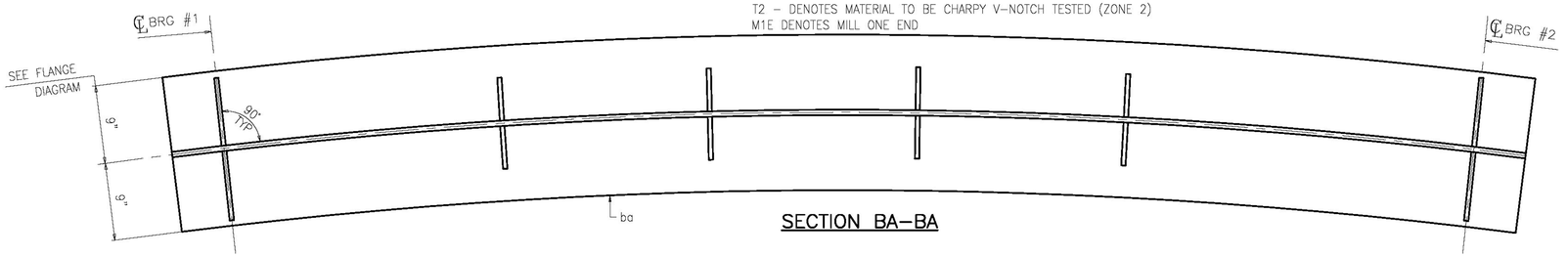


SECTION TA–TA

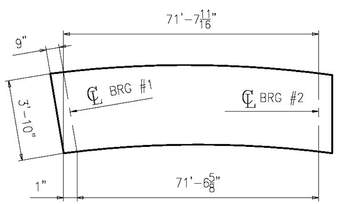


ONE ~ GIRDER ~ 3G3A (PAINTED)

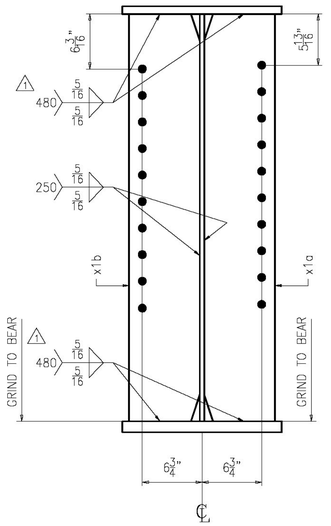
FOR STANDARD DETAILS SEE SHEET X1
FOR CAMBER DIAGRAM SEE SHEET C1
FOR FLANGE DIAGRAM SEE SHEET C4
FOR GENERAL NOTES SEE SHEET GN1
T2 – DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)
M1E DENOTES MILL ONE END



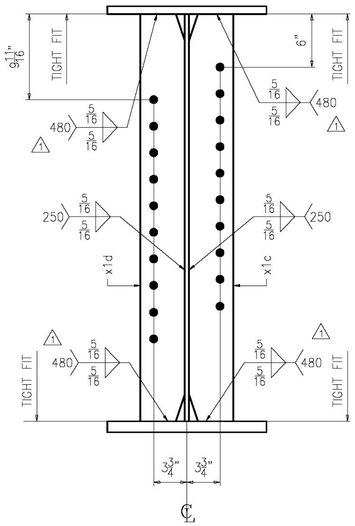
SECTION BA–BA



ORIENTATION DIAGRAM



SECTION A



SECTION B

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	06/05/15	PER APPROVAL COMMENTS	EG	YT		
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
A709-50 U.N.	SEE DWG GN1	15/16"ø	NONE

DESCRIPTION: GIRDER 3G3A

ENGINEERING REVIEW STAMP

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY HIS

June 10, 2015

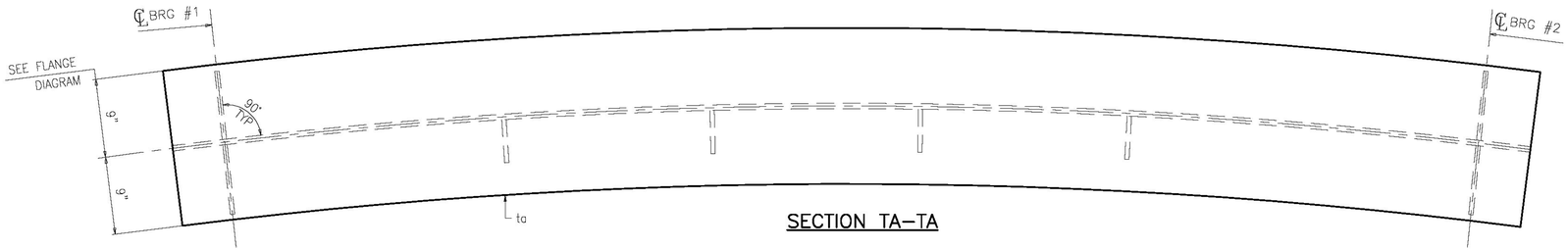
RESUBMIT No Approved

BY Carolyn Carlson DATE 06/11/15

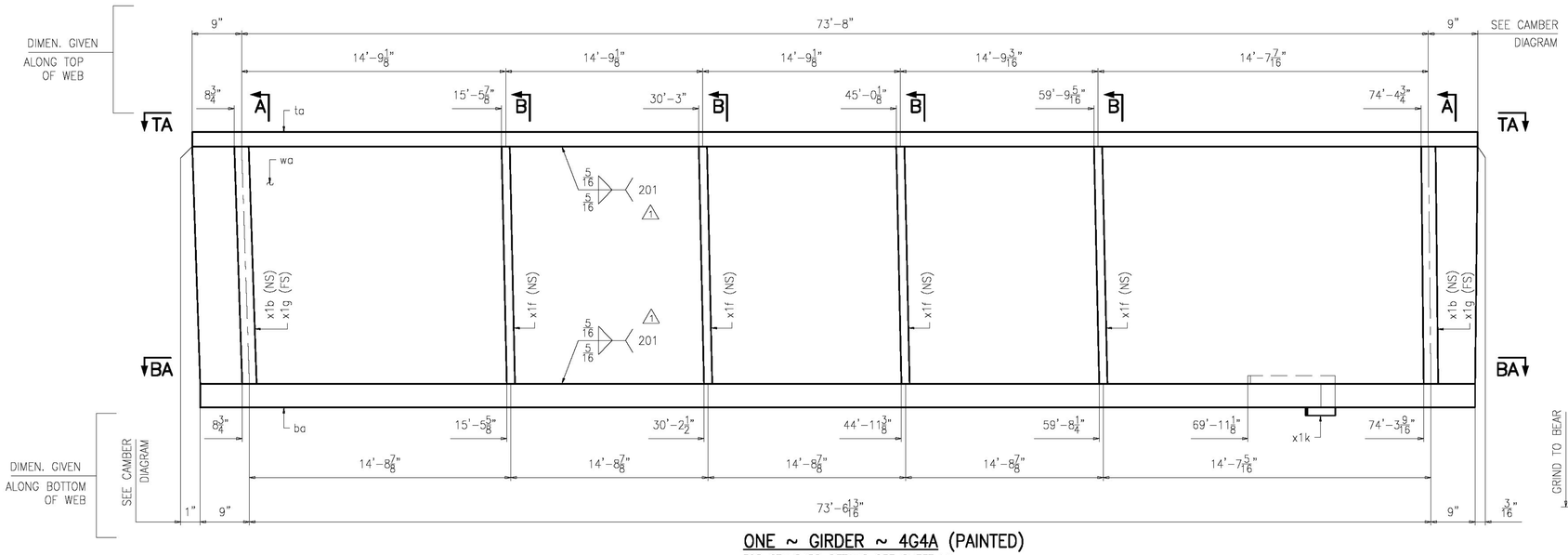
CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. SOUTH PORTLAND, ME 04106
PHONE (207) 780-6722 FAX. (207) 780-6726
TENCA 1415

STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	04/23
	CHKD: YT	DATE: 04/23
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO. STP 5600(12)	629-1	3
CUSTOMER: A.L. ST. ONGE		REV. 1

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								629	4	1
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		4G4A	1		GIRDER			PAINTED	15989	
1	D		1	wa	PL 1/2 x 46	75	2	A709-50T2	5878	
1	K		1	ta	PL 7/8 x 18	75	2 1/4		4026	
1	L		1	ba	PL 1 1/4 x 18	75	1 1/16	A709-50T2	5744	
1	N		2	x1b	PL 1/2 x 8	3	10	M1E	104	
1	N		2	x1g	PL 1/2 x 8	3	10	M1E	104	
1	P		4	x1f	PL 1/2 x 5	3	10		130	
1	V		1	x1k	PL 1/4 x 3 1/4	1	0 1/4		3	

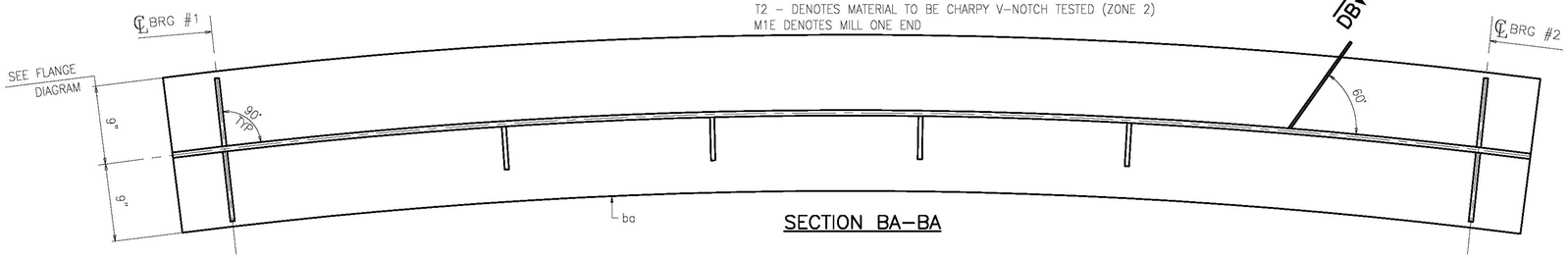


SECTION TA–TA

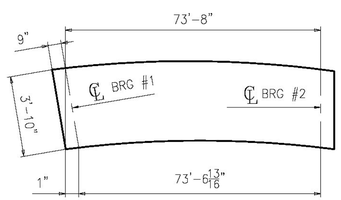


ONE ~ GIRDER ~ 4G4A (PAINTED)

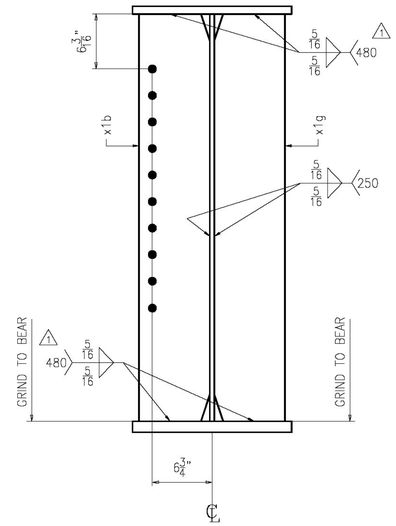
FOR STANDARD DETAILS SEE SHEET X1
FOR CAMBER DIAGRAM SEE SHEET C1
FOR FLANGE DIAGRAM SEE SHEET C5
FOR GENERAL NOTES SEE SHEET GN1
T2 – DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)
M1E DENOTES MILL ONE END



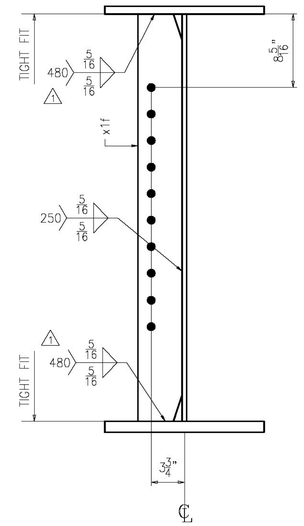
SECTION BA–BA



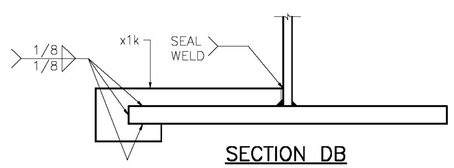
ORIENTATION DIAGRAM



SECTION A



SECTION B



SECTION DB
ROTATED

Vermont Agency of Transportation
RECEIVED
CBGS 629 Colchester, VT - R1V1 approved as noted.pdf
CK'D BY FDB OK'D BY HIS
June 10, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 06/11/15

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	06/05/15	PER APPROVAL COMMENTS	EG	YT		
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
A709-50 U.N.	SEE DWG GN1	15/16"ø	NONE

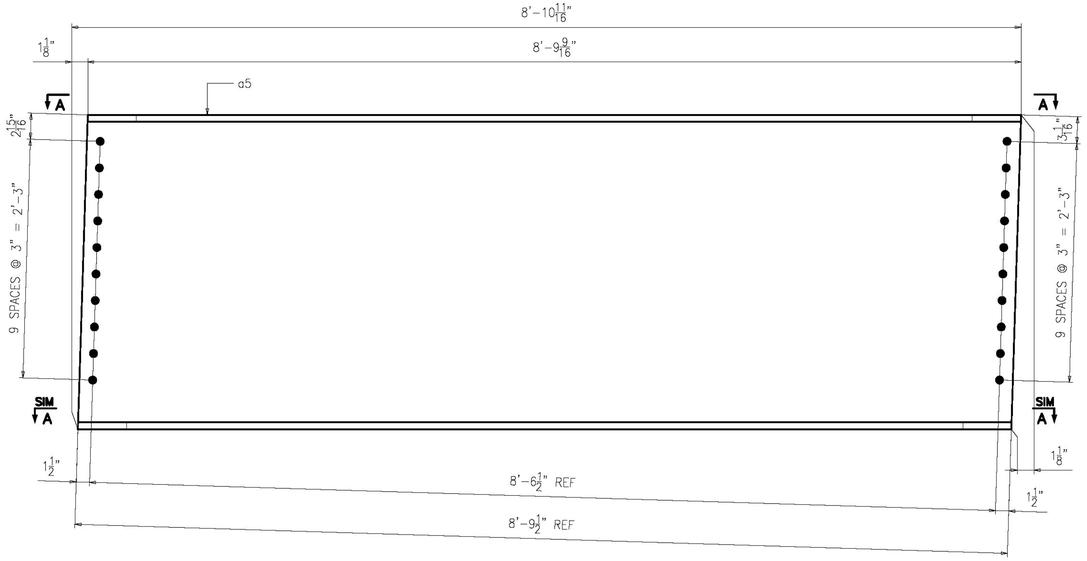
DESCRIPTION: GIRDER 4G4A

ENGINEERING REVIEW STAMP

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. SOUTH PORTLAND, ME 04106
PHONE (207) 780-6722 FAX. (207) 780-6726
TENCA 1415

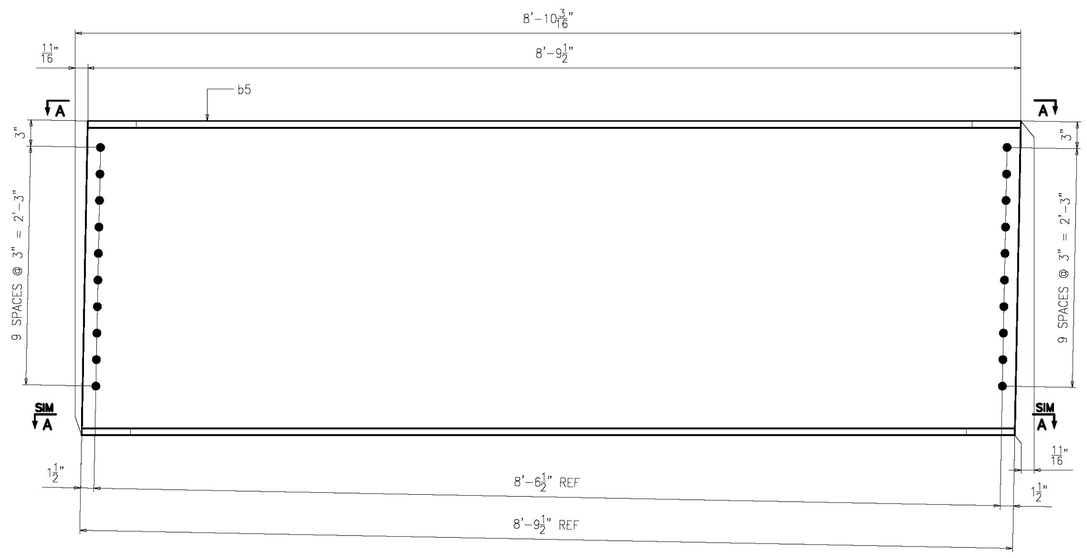
STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	04/23
	CHKD: YT	DATE: 04/23
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO. STP 5600(12)	629-1	4
CUSTOMER: A.L. ST. ONGE		REV. 1

ABM INFO		SHIP	BILL OF MATERIAL						JOB NO.	DRAWING NO.	REV.
									629	5	1
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES	
		5D1	2		DIAPHRAGM			PAINTED	2400		
1	R		2	a5	W 36 x 135	8	10 11/16	A709-50T2	2400		
		5D2	1		DIAPHRAGM			PAINTED	1195		
1	R		1	b5	W 36 x 135	8	10 3/16	A709-50T2	1195		
		5D3	12		DIAPHRAGM			PAINTED	15053		
1	S		12	c5	W 36 x 135	9	3 1/2	A709-50T2	15053		



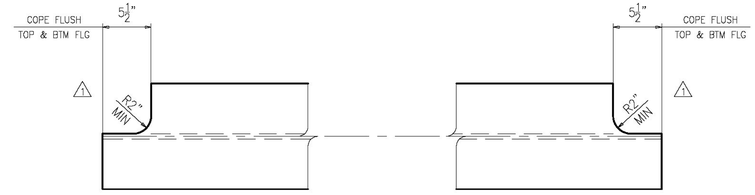
2 ~ DIAPHRAGM ~ 5D1 (PAINTED)

BEARING #1

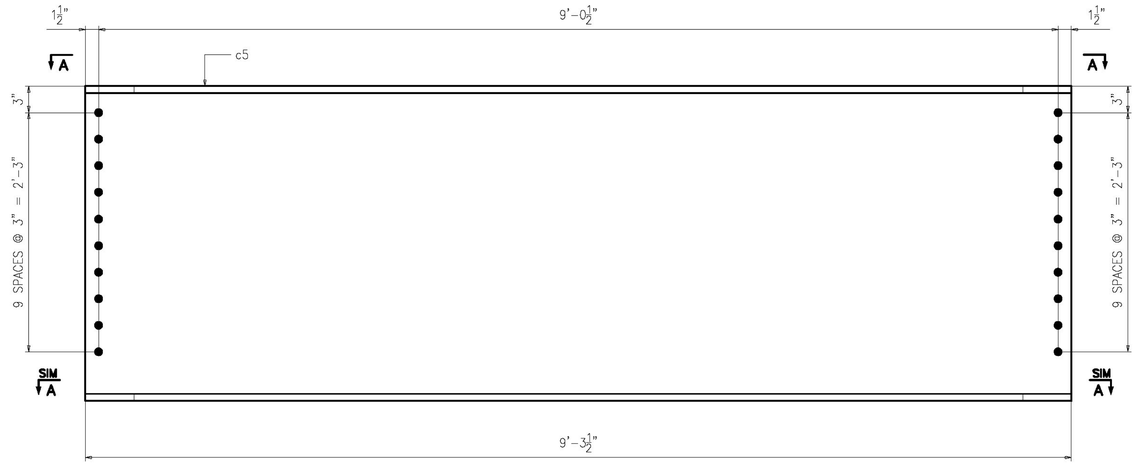


ONE ~ DIAPHRAGM ~ 5D2 (PAINTED)

BEARING #1



SECTION A-A



12 ~ DIAPHRAGM ~ 5D3 (PAINTED)

INTERMEDIATE

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN1.
2. T2 – DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY HIS

June 10, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 06/11/15

ENGINEERING REVIEW STAMP

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	06/05/15	PER APPROVAL COMMENTS	EG	YT		
0						

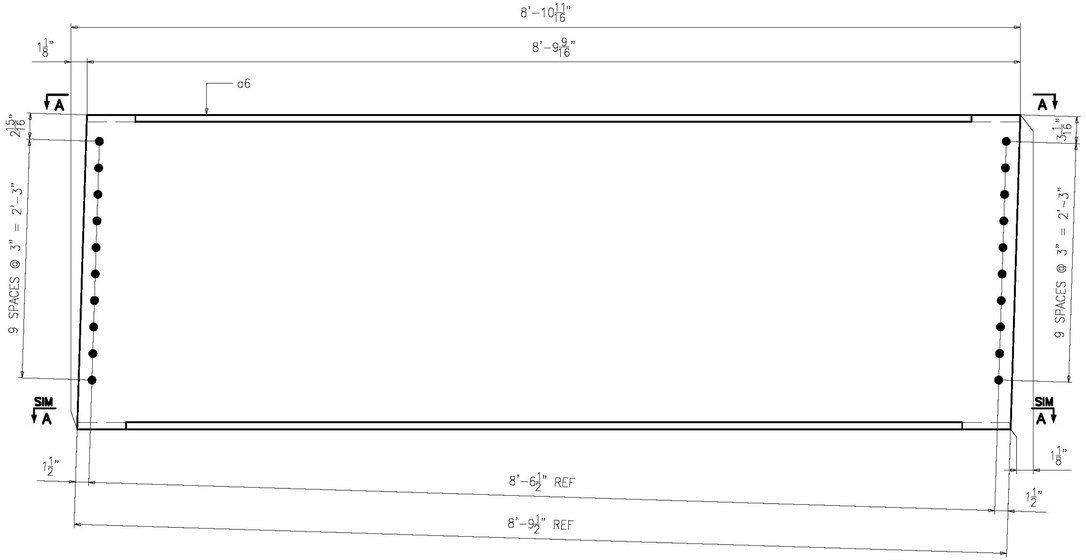
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
A709-50 U.N.	SEE DWG GN1	15/16"ø	NONE

DESCRIPTION: DIAPHRAGMS

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

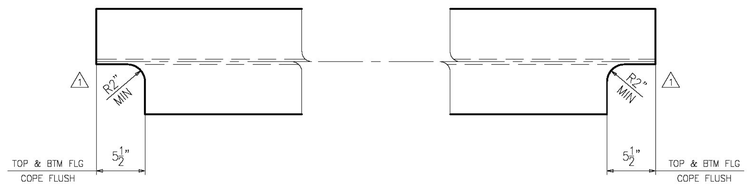
STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	02/24
	CHKD: YT	DATE: 04/28
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO.	DWG NO.
PROJ NO. STP 5600(12)	629-1	5
CUSTOMER: A.L. ST. ONGE		REV. 1

ABM INFO		SHIP	BILL OF MATERIAL						JOB NO.	DRAWING NO.	REV.
									629	6	1
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES	
		6D1	2		DIAPHRAGM			PAINTED	2400		
1	R		2	a6	W 36 x 135	8	10 11/16	A709-50T2	2400		
		6D2	1		DIAPHRAGM			PAINTED	1195		
1	R		1	b6	W 36 x 135	8	10 3/16	A709-50T2	1195		

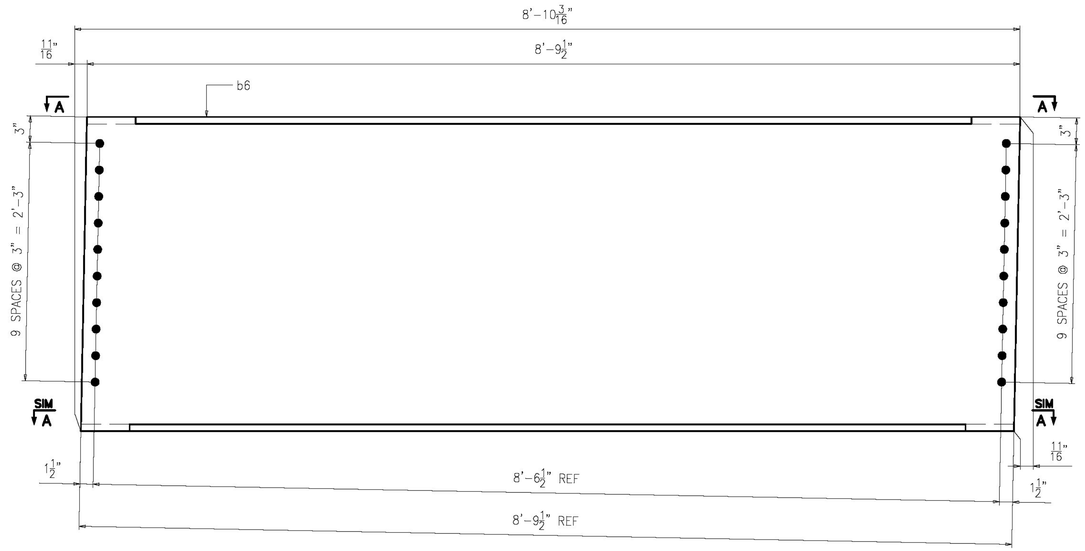


2 ~ DIAPHRAGM ~ 6D1 (PAINTED)

BEARING #2



SECTION A–A



ONE ~ DIAPHRAGM ~ 6D2 (PAINTED)

BEARING #2

NOTES:

1. FOR GENERAL NOTES SEE SHEET GN1.
2. T2 – DENOTES MATERIAL TO BE CHARPY V-NOTCH TESTED (ZONE 2)

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	06/05/15	PER APPROVAL COMMENTS	EG	YT		
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
A709-50 U.N.	SEE DWG GN1	15/16"ø	NONE

DESCRIPTION: DIAPHRAGMS

Vermont Agency of Transportation
RECEIVED
CB5502B Colchester, VT - REV1 approved as noted.pdf

CK'D BY FDB OK'D BY HIS

June 10, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 06/11/15

ENGINEERING REVIEW STAMP

CASCO BAY STEEL STRUCTURES, INC.
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SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENCA 1415

STRUCTURE:	DRAWN:	DATE:
REPLACEMENT OF BRIDGE NO. 12 ON TH27 INCLUDING APPROACH ROADWAY AND CHANNEL WORK TOWN OF COLCHESTER, COUNTY OF CHITTENDEN STATE OF VERMONT AGENCY OF TRANSPORTATION	BK	02/24
	CHKD: YT	DATE: 04/28
LOCATION: COLCHESTER / CHITTENDEN, VT	JOB NO. 629-1	DWG NO. 6
PROJ NO. STP 5600(12)		REV. 1
CUSTOMER: A.L. ST. ONGE		