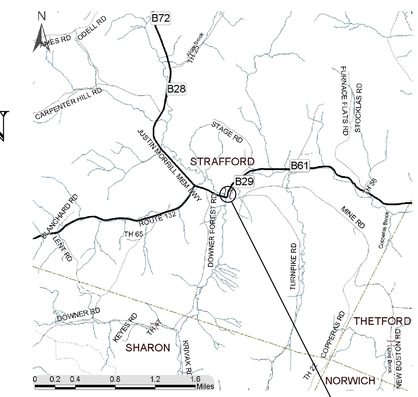
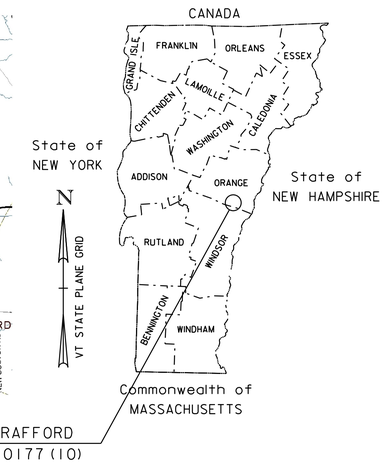
STATE OF VERMONT
AGENCY OF TRANSPORTATION





PROPOSED IMPROVEMENT
BRIDGE PROJECT

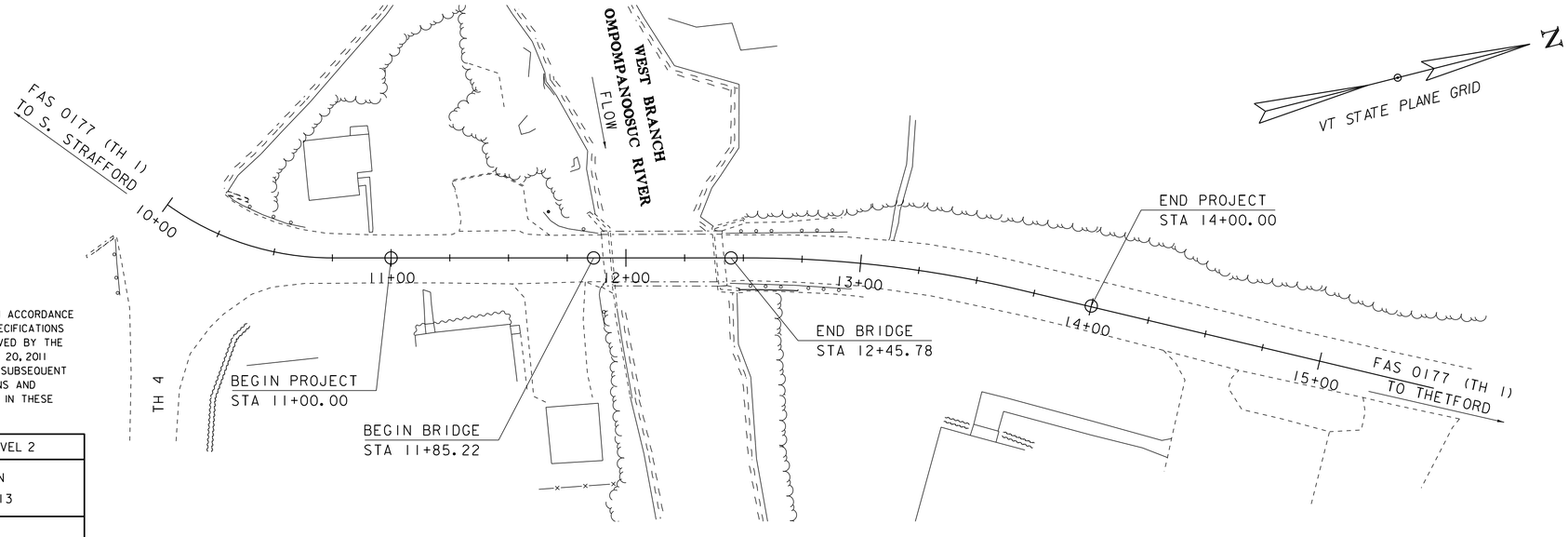
TOWN OF STRAFFORD
COUNTY OF ORANGE

ROUTE NO : FAS 0177 (TH 1), RURAL MAJOR COLLECTOR, CLASS 2 TOWN HIGHWAY BRIDGE NO : 29

PROJECT LOCATION: APPROXIMATELY 0.04 MILES NORTH OF THE INTERSECTION OF TOWN HIGHWAY 1 (FAS 0177) AND TOWN HIGHWAY 4.

PROJECT DESCRIPTION: REMOVAL OF THE EXISTING STRUCTURE AND REPLACEMENT WITH A NEW STRUCTURE.

LENGTH OF STRUCTURE: 60.56 FEET
LENGTH OF ROADWAY: 239.44 FEET
LENGTH OF PROJECT: 300.00 FEET



SCALE 1" = 30'-0"
30 0 30

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. GILMAN
SURVEYED DATE :	04/18/2013
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD 83 (2011)

CONTRACT PLANS
31-AUG-2016

DIRECTOR OF PROJECT DELIVERY
APPROVED _____ DATE _____

PROJECT MANAGER : KRISTIN HIGGINS, P.E.

PROJECT NAME : STRAFFORD
PROJECT NUMBER : BF 0177(10)

SHEET 1 OF 52 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version
LRFD

INDEX OF SHEETS

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D-15	PRECAST REINF CONC. MH-GRATES, CAST IRON GRATE WITH FRAME, TYPE D & E	06-01-1994
E-193	PAVEMENT MARKING DETAILS	08-18-1995
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T-24	TRAFFIC CONTROL FOR MAINTENANCE PAVEMENT MARKING OPERATION	08-06-2012
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SD-502.00	CONCRETE DETAILS AND NOTES	10/10/2012
SD-516.10	BRIDGE JOINT ASHPALTIC PLUG	8/29/2011
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	6/4/2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	5/2/2011
HSD-400.01	SAFETY EDGE DETAILS	3/29/2016
HSD-621.06	GUARDRAIL TERMINAL LABEL DETAIL	11/3/2015

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2016	1400	180	55	3.7	65
2036	1500	190	55	6	110

20 year ESAL for flexible pavement from 2016 to 2036 : 228000

40 year ESAL for flexible pavement from 2016 to 2056 : 542000

Design Speed : 25 mph

AS BUILT "REBAR" DETAIL

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

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: April 2015

DRAINAGE AREA : 34.7 sq. mi.
CHARACTER OF TERRAIN : Mostly forested, small ponds, rural
STREAM CHARACTERISTICS : Sinuous and alluvial
NATURE OF STREAMBED : Cobbles, gravel, and sand

PEAK FLOW DATA

Q 2.33 =	1125 cfs	Q 50 =	3900 cfs
Q 10 =	2350 cfs	Q 100 =	4700 cfs
Q 25 =	3150 cfs	Q 500 =	6500 cfs

DATE OF FLOOD OF RECORD : Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 8.4 fps
ICE CONDITIONS : Moderate
DEBRIS: Light to moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: <1%
HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span concrete t-beam
YEAR BUILT: 1923
CLEAR SPAN(NORMAL TO STREAM): 43'
VERTICAL CLEARANCE ABOVE STREAMBED: ~10'
WATERWAY OF FULL OPENING: 425 sq. ft.
DISPOSITION OF STRUCTURE: Remove and replace
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See borings

WATER SURFACE ELEVATIONS AT:

Q2.33 =	879.8'	VELOCITY =	5.2 fps
Q10 =	882.3'	"	7.5 fps
Q25 =	883.3'	"	9.5 fps
Q50 =	885.9'	"	9.5 fps
Q100 =	886.5'	"	11.2 fps

LONG TERM STREAMBED CHANGES: None noted

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes
FREQUENCY: Below Q50
RELIEF ELEVATION: 884.7'
DISCHARGE OVER ROAD @Q100: 645 cfs

UPSTREAM STRUCTURE

TOWN: Strafford
DISTANCE: 8600'
HIGHWAY # : TH 2
STRUCTURE #: 28
CLEAR SPAN: 26'
CLEAR HEIGHT:
YEAR BUILT: 1919
FULL WATERWAY:
STRUCTURE TYPE: Concrete t-beam

DOWNSTREAM STRUCTURE

TOWN: Strattford
DISTANCE: 4040'
HIGHWAY # : TH 39
STRUCTURE #: 61
CLEAR SPAN: 62'
CLEAR HEIGHT:
YEAR BUILT: 1919, Reconstructed in 1971
FULL WATERWAY:
STRUCTURE TYPE: Rolled beam

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	2.1	1.15					
POSTING							
OPERATING	2.73	1.49	2.46	1.51	1.96	1.76	2.03
COMMENTS:							

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span steel beam

CLEAR SPAN(NORMAL TO STREAM): 53'
VERTICAL CLEARANCE ABOVE STREAMBED: ~11.5'
WATERWAY OF FULL OPENING: 565 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	879.4'	VELOCITY=	5.2 fps
Q10 =	882.0'	"	7.0 fps
Q25 =	883.1'	"	8.3 fps
Q50 =	884.0'	"	9.6 fps
Q100 =	884.8'	"	11.4 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: N/A
RELIEF ELEVATION: 884.7'
DISCHARGE OVER ROAD @Q100: N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 885.0'
VERTICAL CLEARANCE: @ Q50 = 1.0'

SCOUR: 4' of contraction scour up to Q200
Piles should be freestanding up to 6' below streambed elevation.
REQUIRED CHANNEL PROTECTION: Stone Fill Type III

PERMIT INFORMATION

		DEPTH OR ELEVATION:
AVERAGE DAILY FLOW:		
ORDINARY LOW WATER:		
ORDINARY HIGH WATER:		

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: None required
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

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:	0.0 INCH
3. DESIGN SPAN	L:	57.00 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:	- - -
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	- - -
11. CONCRETE, CLASS C	f'_c:	- - -
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270(GALVANIZED OR METALLIZED)	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:	- - -
16. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	10.0 KSF
17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	- - -
18. PILE RESISTANCE FACTOR	ϕ:	0.65
19. LATERAL PILE DEFLECTION	Δ:	- - -
20. BASIC WIND SPEED	V_{3s}:	- - -
21. MINIMUM GROUND SNOW LOAD	p_g:	- - -
22. SEISMIC DATA PGA: 0.65	S_s:	- - -
	S_1:	- - -
23.		
24.		- - -
25.		- - -
26.		- - -

PROJECT NAME: **STRAFFORD**
PROJECT NUMBER: **BF 0177(10)**

FILE NAME: **s13j088excel.dgn**
PROJECT LEADER: **K. HIGGINS**
DESIGNED BY: **J. GRIGAS**
PRELIMINARY INFORMATION SHEET

PLOT DATE: 3/10/2016
DRAWN BY: **T. MATTHEWS**
CHECKED BY: **J. GRIGAS**
SHEET 2 OF 52

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE 2014 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, AND THEIR LATEST REVISIONS.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING CONSISTENCY BETWEEN THE FABRICATOR'S SHOP DRAWINGS AND ENSURING THAT ALL PRECAST AND RAIL COMPONENTS FIT TOGETHER.

3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

4. NO ADJUSTMENTS TO THE BITUMINOUS WEARING SURFACE ON THE BRIDGE SHALL BE MADE TO ACCOUNT FOR THE DIFFERENCE BETWEEN BEAM CAMBER AND THE THEORETICAL ROADWAY PROFILE.

5. THE REMOVAL OF EXISTING STRUCTURE WILL BE PAID FOR UNDER ITEM 529.15, "REMOVAL OF STRUCTURE". THIS WORK SHALL INCLUDE REMOVAL OF THE ENTIRE SUPERSTRUCTURE AND ANY PORTIONS OF THE EXISTING ABUTMENTS THAT FALL OUTSIDE THE LIMITS OF STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION.

TRAFFIC CONTROL

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR ALL STAGES OF CONSTRUCTION. THE PLAN SHALL CLEARLY DETAIL HOW TRAFFIC WILL BE MAINTAINED. THE PLAN SHALL SPECIFY ALL CONSTRUCTION ACTIVITIES REQUIRING ALTERNATING ONE WAY TRAFFIC, RELATE THOSE ACTIVITIES TO THE CONSTRUCTION SCHEDULE, AND SHOW APPROPRIATE TEMPORARY TRAFFIC CONTROL. THE CONTRACTOR SHALL SUBMIT DETAILED TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL PER SUBSECTION 105.03. ALL COSTS WILL BE INCLUDED IN ITEM 900.645 "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".

7. ALL ITEMS REQUIRED TO IMPLEMENT THE CONTRACTOR'S TRAFFIC CONTROL PLAN WILL NOT BE PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE BID PRICE FOR ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".

8. INSTALLATION OF TEMPORARY TRAFFIC CONTROL SIGNS SHALL NOT BLOCK ANY EXISTING TRAFFIC CONTROL SIGN ASSEMBLIES. THE CONTRACTOR SHALL TRY TO MAINTAIN AT LEAST 200 FEET BETWEEN SIGN ASSEMBLIES.

9. TH1, IN PROXIMITY OF THE PROJECT, WILL BE CLOSED DURING THE BRIDGE CLOSURE PERIOD. IF THE TOWN ELECTS TO SIGN A LOCAL DETOUR, THEN NO SIGNS WILL BE PERMITTED IN A STATE HIGHWAY RIGHT OF WAY WITHOUT ACQUIRING A VSA, TITLE 19, SECTION 1111 PERMIT. ANY DETOUR SIGNED IS THE SOLE RESPONSIBILITY OF THE TOWN OF STRAFFORD.

CONCRETE

10. ALL LIFTING POINTS IN THE SUPERSTRUCTURE SHALL BE REMOVABLE TO THE MINIMUM CLEAR COVER FOR REINFORCING STEEL SPECIFIED IN THE PLANS. THE LIFTING POINTS SHALL BE DETAILED IN THE APPROPRIATE FABRICATION DRAWING. PAYMENT FOR THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM "900.640 SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE) (FPQ)".

11. ALL RECESSED LIFTING POINTS AND BLOCK OUTS SHALL BE FILLED WITH A TYPE IV MORTAR PER SUBSECTION 707.03. PAYMENT WILL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PRECAST ITEM.

12. THE METHOD OF FORMING FOR SUBSEQUENT POURS AFTER PLACING THE PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR IS ENCOURAGED TO WORK WITH THE FABRICATOR IF ADDITIONAL SUPPORTS ARE REQUIRED. IN NO CASE SHALL THE CONTRACTOR ATTACH ADDITIONAL FORM OR SCREED SUPPORTS BY DRILLING OR SIMILAR MEANS INTO ANY PRECAST SUPERSTRUCTURE UNIT.

13. BRIDGE RAIL SHALL NOT BE POURED UNTIL THE CONCRETE IN THE LONGITUDINAL CLOSURE POUR BETWEEN THE BEAMS HAS REACHED A MINIMUM STRENGTH OF 4,000 PSI.

14. THE EFFECTIVE CURE TIME OF THE BRIDGE RAIL MAY BE REDUCED TO A MINIMUM OF (7) SEVEN DAYS PROVIDED THAT THE CONCRETE HAS REACHED 85% OF THE 28-DAY COMPRESSIVE STRENGTH. THE BRIDGE RAIL CONCRETE SHALL MEET ALL OTHER SPECIFICATIONS OF SECTION 501 OF THE STANDARD SPECIFICATIONS.

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

16. THE BRIDGE RAIL AND APPROACH SLAB CONCRETE SHALL OBTAIN 85 PERCENT OF THE SPECIFIED 28 DAY COMPRESSIVE STRENGTH PRIOR TO ANY VEHICULAR LOADING.

REINFORCING STEEL

17. TEST BARS SHALL BE PROVIDED IN ACCORDANCE WITH THE "VERMONT AGENCY OF TRANSPORTATION MATERIAL SAMPLING MANUAL" AVAILABLE ON THE AGENCY WEBSITE. A MINIMUM OF TWO TEST SECTIONS ARE REQUIRED FOR EACH SIZE, BRAND, AND GRADE OR TYPE OF REINFORCING. SEE THE MANUAL FOR ACCEPTABLE DIMENSIONS OF TEST SECTIONS. ALL COSTS ASSOCIATED WITH PROVIDING BARS FOR TESTING WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE PRECAST ITEM.

18. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

ALONG BACK FACES OF WALLS AGAINST EARTH	2 INCH
ALONG TOP SURFACE OF DECK SLAB:	2 ½ INCH
ALONG BOTTOM SURFACE OF PBU:	1 ½ INCH
ELSEWHERE UNLESS OTHERWISE INDICATED:	3 INCH

PRECAST ABUTMENTS AND POST-TENSIONING

19. IF A VERTICAL CONSTRUCTION JOINT IS REQUIRED BY THE CONTRACTOR FOR SHIPMENT OF THE ABUTMENTS, THE SECTIONS SHALL BE KEYED AND MATCH CAST. A JOINT DETAIL SHALL BE SHOWN ON THE FABRICATION DRAWINGS. EACH JOINT SHALL NOT BE LOCATED CLOSER THAN 1'-0" AWAY FROM THE EDGE OF PILE CAVITY. NO LESS THAN TWO PILES SHALL SUPPORT EACH PRECAST ABUTMENT SECTION.

20. EPOXY BONDING COMPOUND SHALL BE APPLIED TO ALL VERTICAL MATCH CAST CONSTRUCTION JOINTS. SEE AGENCY WEBSITE FOR A LIST OF APPROVED EPOXY BONDING COMPOUNDS. PAYMENT FOR EPOXY WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE PRECAST ITEM.

21. POST-TENSIONING AND ASSOCIATED ITEMS ARE ONLY REQUIRED IF THE PILE CAP IS CONSTRUCTED OF MORE THAN ONE UNIT. POST-TENSIONING STRANDS SHALL BE COVERED WITH SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITOR GREASE BETWEEN SHEATH AND STRAND) FOR THE LENGTH OF THE STRAND, EXCEPT AT ANCHORAGE LOCATIONS. ANY POST-TENSIONING STRANDS AND CONDUITS SHALL ADHERE TO THE REQUIREMENTS OF SECTION 510 – PRESTRESSED CONCRETE. GALVANIZED ANCHOR ASSEMBLIES, CONDUIT, POLYPROPYLENE SHEATH, AND POST-TENSIONING STRANDS WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE PRECAST ITEM.

	CONCRETE		**REINFORCING STEEL**	
STRUCTURAL ELEMENT	TO MEET THE REQUIREMENTS FOR:	PAYMENT TO BE INCLUDED IN:	TO MEET THE REQUIREMENTS FOR:	PAYMENT TO BE INCLUDED IN:
PREFABRICATED BRIDGE UNITS (INCLUDES REINFORCING STEEL LABELED SR2-SR6 AND ER1-ER5)	900.640 "SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE)"	ITEM 900.640 "SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE) (FPQ)"	507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED)"	ITEM 900.640 "SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE) (FPQ)"
SUPERSTRUCTURE LONGITUDINAL CLOSURE POURS (INCLUDES REINFORCING STEEL LABELED SR1)	900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)"	900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)"	507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED)"	507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED) (FPQ)"
PCU 1 (INCLUDES REINFORCING STEEL LABELED A1-A10)	540.10 "PRECAST CONCRETE STRUCTURE" OR 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE)"	ITEM 540.10 "PRECAST CONCRETE STRUCTURE (ABUTMENT #1)" OR ITEM 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #1)"	507.11 "REINFORCING STEEL, LEVEL I" FOR REINFORCING COMPLETELY BELOW BRIDGE SEAT. 507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED)" FOR REINFORCING STEEL EXTENDING ABOVE BRIDGE SEAT.	ITEM 540.10 "PRECAST CONCRETE STRUCTURE (ABUTMENT #1)" OR ITEM 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #1)"
PCU 2 (INCLUDES REINFORCING STEEL LABELED A1, A3-A6, AND A8-A10)	540.10 "PRECAST CONCRETE STRUCTURE" OR 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE)"	ITEM 540.10 "PRECAST CONCRETE STRUCTURE (ABUTMENT #2)" OR ITEM 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #2)"	507.11 "REINFORCING STEEL, LEVEL I" FOR REINFORCING COMPLETELY BELOW BRIDGE SEAT. 507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED)" FOR REINFORCING STEEL EXTENDING ABOVE BRIDGE SEAT.	ITEM 540.10 "PRECAST CONCRETE STRUCTURE (ABUTMENT #2)" OR ITEM 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #2)"
PCU 3 (INCLUDES REINFORCING STEEL LABELED WR1-WR3)	540.10 "PRECAST CONCRETE STRUCTURE" OR 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE)"	ITEM 540.10 "PRECAST CONCRETE STRUCTURE (ABUTMENT #1)" OR ITEM 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #1)"	507.11 "REINFORCING STEEL, LEVEL I" FOR REINFORCING COMPLETELY BELOW BRIDGE SEAT. 507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED)" FOR REINFORCING STEEL EXTENDING ABOVE BRIDGE SEAT.	ITEM 540.10 "PRECAST CONCRETE STRUCTURE (ABUTMENT #1)" OR ITEM 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #1)"
PCU 4-5 (INCLUDES REINFORCING STEEL LABELED WR1-WR3)	540.10 "PRECAST CONCRETE STRUCTURE" OR 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE)"	ITEM 540.10 "PRECAST CONCRETE STRUCTURE (ABUTMENT #2)" OR ITEM 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #2)"	507.11 "REINFORCING STEEL, LEVEL I" FOR REINFORCING COMPLETELY BELOW BRIDGE SEAT. 507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED)" FOR REINFORCING STEEL EXTENDING ABOVE BRIDGE SEAT.	ITEM 540.10 "PRECAST CONCRETE STRUCTURE (ABUTMENT #2)" OR ITEM 900.645 "SPECIAL PROVISION (CONTRACTOR FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #2)"
ABUTMENT PILE CAVITIES	900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)"	ITEM 900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)"	N/A	N/A
ABUTMENT CLOSURE/END DIAPHRAGM CLOSURE POUR (INCLUDES REINFORCING STEEL LABELED C1-C7)	900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)"	ITEM 900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)"	507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED)"	507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED) (FPQ)"
CAST-IN-PLACE APPROACH SLABS (INCLUDES REINFORCING STEEL DETAILED IN APPROACH SLAB DETAILS SHEET)	501.34 "CONCRETE, HIGH PERFORMANCE CLASS B"	ITEM "501.34 CONCRETE, HIGH PERFORMANCE CLASS B (FPQ)"	507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED)"	507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED) (FPQ)"
TEXAS STYLE BRIDGE RAIL (INCLUDES REINFORCING STEEL LABELED BR1-BR3)	501.34 "CONCRETE, HIGH PERFORMANCE CLASS A"	ITEM 900.640 "SPECIAL PROVISION (BRIDGE RAILING, TEXAS)"	507.11 "REINFORCING STEEL, LEVEL I (EPOXY COATED)"	ITEM 900.640 "SPECIAL PROVISION (BRIDGE RAILING, TEXAS)"

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088gen.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
PROJECT NOTES I

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE

22. POST-TENSIONING SHALL BE COMPLETED PRIOR TO POURING THE PILE CAVITY CLOSURE POUR.

23. GALVANIZE ANCHOR ASSEMBLIES AFTER FABRICATION ACCORDING TO AASHTO M232M/M 232.

24. DESIGN VALUES
    a. CONCRETE COMPRESSIVE STRENGTH: f'c = 5,000 PSI.
    b. POST-TENSIONING STRANDS: 0.5 INCH DIAMETER, 270 KSI, LOW RELAXATION 7-WIRE STRANDS.
    c. ASSUMED MODULUS OF ELASTICITY IS 28,500 KSI.
    d. THERE SHALL BE 2 STRANDS PER CONDUIT.
    e. THE JACKING FORCE PER STRAND = 32 KIPS

25. THE CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF SUBSECTION 711.01 AND SHALL BE GALVANIZED PER SUBSECTION 726.08 OF THE STANDARD SPECIFICATIONS. ALL COSTS ASSOCIATED WITH PLACING THE CORRUGATED STEEL PIPE, WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE PRECAST ABUTMENT ITEM.

26. WING WALLS SHALL NOT BE BACKFILLED UNTIL THE GROUT FOR THE MECHANICAL SPLICE CONNECTORS HAS REACHED 85% OF THE MANUFACTURER SPECIFIED DESIGN STRENGTH.

PREFABRICATED BRIDGE UNITS (PBU)

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

28. ALL PERMANENT STRUCTURAL STEEL SHALL BE GALVANIZED OR METALLIZED AND MEET THE REQUIREMENTS OF SECTION 506 OF THE STANDARD SPECIFICATIONS.

29. TEMPORARY DIAPHRAGMS SHALL ONLY BE REQUIRED DURING THE CASTING AND CURING OF THE PBU DECK. THE TEMPORARY DIAPHRAGMS SHALL CONFORM TO AASHTO M270M/M 270 GRADE 345 (GRADE 50). PAYMENT FOR TEMPORARY DIAPHRAGMS WILL BE INCLUDED IN ITEM 900.640 “SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE) (FPQ)”.

30. THE DECK FOR THE PREFABRICATED BRIDGE UNITS SHALL BE CAST SIMULTANEOUSLY.

31. ANY HOLES IN THE WEBS OF THE FASCIA BEAMS NOT OTHERWISE FILLED OR IN THE DIAPHRAGM STIFFENER PLATES AFTER REMOVAL OF THE TEMPORARY DIAPHRAGMS SHALL BE FILLED WITH BUTTON HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19.

32. ANY CONNECTIONS NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE PROJECT MANAGER FOR APPROVAL.

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

34. FLEMING BRACKETS OR SIMILAR FALSE WORK 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 WEB.

35. AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED AT THE DECK CASTING SITE, AND BEFORE ANY FORMWORK OR OTHER LOADS ARE ADDED TO THE GIRDERS, BEAM PROFILES SHALL BE TAKEN AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING DECK FORMWORK ELEVATIONS.

36. BEAM WEBS AND CROSS FRAMES SHALL BE PLUMB IN FINAL POSITION.

37. ALL WELDING TO THE STRUCTURAL STEEL SHALL BE COMPLETED PRIOR TO GALVANIZING OR METALLIZING.

38. DUE TO STABILITY CONCERNS, THE CONTRACTOR SHALL SUBMIT THE ERECTION PLAN A MINIMUM OF 30 CALENDAR DAYS PRIOR TO THE BRIDGE CLOSURE PERIOD. UNDER NO CIRCUMSTANCES SHALL A BRIDGE CLOSURE PERIOD BEGIN PRIOR TO HAVING AN ACCEPTED ERECTION PLAN.

39. THE FABRICATOR MAY ALTER THE DESIGN AS DETAILED IN THESE PLANS TO ACCOMMODATE THEIR SPECIFIC OPERATION. THIS ALTERATION SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN STATE OF VERMONT TO MEET SPECIFIED CRITERIA AND SHALL BE APPROVED BY THE PROJECT MANAGER.

SUPERSTRUCTURE LONGITUDINAL CLOSURE POURS

40. THE CONCRETE EDGES ALONG THE LONGITUDINAL CLOSURE POURS SHALL BE TREATED TO PROVIDE A ROUGHENED/ EXPOSED COURSE AGGREGATE SURFACE. THE AMPLITUDE OF THE EXPOSED COURSE AGGREGATE SHALL BE A MINIMUM OF 1/8” AND BE COMPLETED PRIOR TO ERECTION OF THE BEAMS. THE FABRICATOR SHALL INDICATE THE METHOD USED TO ACHIEVE THIS PROFILE ON THE FABRICATION DRAWINGS AND METHOD USED TO PROTECT THE REINFORCING STEEL.

41. PRIOR TO THE CONCRETE PLACEMENT OF THE LONGITUDINAL CLOSURE POUR, THE JOINT SHALL BE SATURATED WITH WATER IN ACCORDANCE WITH SECTION 501 OF THE STANDARD SPECIFICATIONS.

ABUTMENT CLOSURE/END DIAPHRAGM

42. AFTER THE CONCRETE HAS BEEN PLACED AND THE FINISHING OPERATIONS CONCLUDED IT SHALL NOT BE WALKED ON OR DISTURBED IN ANY MANNER, INCLUDING THE REMOVAL OF FORMS FOR 12 HOURS.

H-PILES

43. THE PILES SHALL BE HP 12X63.

44. TO PREVENT DAMAGE TO THE PILES, PILE SHOES ARE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04 (f).

45. THE CONTRACTOR MAY DRIVE THE PILES IN THE 14 DAY PERIOD PRIOR TO THE BRIDGE CLOSURE PERIOD. THIS WORK SHALL BE DONE DURING DAILY LANE CLOSURES.

46. PILES SHALL BE DRIVEN TO A NOMINAL PILE DRIVING RESISTANCE (R_{NDR}) OF 255 KIPS, PROVIDED A MINIMUM PENETRATION OF 18 FEET BELOW THE BOTTOM OF PILE CAP HAS BEEN REACHED.

47. A MINIMUM OF ONE DYNAMIC PILE TESTS SHALL BE CONDUCTED AT EACH ABUTMENT. PAYMENT WILL BE MADE UNDER ITEM 505.45, "DYNAMIC PILE LOADING TEST".

48. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.

49. THE TOPS OF THE PILES SHALL NOT VARY FROM THE POSITION SHOWN ON THE PLANS BY MORE THAN 3 INCHES. THE PILE ORIENTATION SHALL NOT VARY BY MORE THAN 5 DEGREES. THE CONTRACTOR SHALL DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER HOW THE TOLERANCES WILL BE MET. THESE MEASURES SHALL BE DEMONSTRATED IN A SUBMITTAL TO BE ACCEPTED BEFORE PILE PLACEMENT COMMENCES.

MISCELLANEOUS

50. THE “STONE FILL, TYPE III” UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE NEW BEAMS ARE SET.

51. IT IS ANTICIPATED THAT DEWATERING ACTIVITIES WILL BE REQUIRED DURING ABUTMENT EXCAVATION, PLACEMENT, AND BACKFILLING. THE CONTRACTOR’S ATTENTION IS DIRECTED TOWARDS SUBSECTION 204.10 OF THE STANDARD SPECIFICATIONS FOR PROPERLY CONSTRUCTING, IN THE DRY, A FOUNDATION OR STRUCTURAL COMPONENT.

52. EPSC EXISTING CONDITIONS SHEET AND EPSC PLAN SHEET HAVE BEEN INCLUDED AS A REFERENCE FOR SUBMITTALS.

53. ITEM 404.65 “EMULSIFIED ASPHALT” IS TO BE APPLIED AT A RATE OF 0.080 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AND ON ALL COLD PLANED SURFACES OR AS DIRECTED BY THE ENGINEER.

54. ITEM 520.10, “MEMBRANE WATERPROOFING, SPRAY APPLIED” SHALL BE APPLIED TO THE BRIDGE DECK AS PER THE MANUFACTURER’S INSTRUCTIONS AND EXTEND ONTO THE APPROACH SLABS 2 FEET BEYOND THE BEGIN BRIDGE/END OF BRIDGE ALONG WITH 2 INCHES VERTICALLY ONTO THE SURFACE OF THE BRIDGE RAIL.

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088gen.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
PROJECT NOTES 2

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 4 OF 52

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	ROADWAY (NO FED./STATE PART.)	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS
1				
1000				
10				
			250	
40				
55	50			
2				
1				
			275	
55	10		175	
325				
925				
5				
45				
15				
1				
85				
1				
1				
			50	
			1	
			450	
			2	
			8600	
			17	
			53	
			185	
			75	
			1	
			15	

TOTALS

GRAND TOTAL	FINAL
1	
1000	
10	
250	
40	
105	
2	
1	
275	
240	
325	
925	
5	
45	
15	
1	
85	
1	
1	
50	
1	
450	
2	
8600	
17	
53	
185	
75	
1	
15	
1	
1	
1	
1	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
CY	COMMON EXCAVATION	203.15	
CY	SOLID ROCK EXCAVATION	203.16	
CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	
CY	GRANULAR BORROW	203.32	
CY	TRENCH EXCAVATION OF EARTH	204.20	
CY	TRENCH EXCAVATION OF ROCK	204.21	
CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
CY	STRUCTURE EXCAVATION	204.25	
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
CY	SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	301.25	
CY	AGGREGATE SURFACE COURSE	401.10	
TON	AGGREGATE SHOULDERS	402.12	
CWT	EMULSIFIED ASPHALT	404.65	
LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	490.30	
LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	
LU	MAT DENSITY PAY ADJUSTMENT (N.A.B.I.)	490.32	
CY	CONCRETE, HIGH PERFORMANCE CLASS B (FPQ)	501.34	
LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10	
LF	STEEL PILING, HP 12 X 63	505.155	
EACH	DYNAMIC PILE LOADING TEST	505.45	
LB	REINFORCING STEEL, LEVEL I (EPOXY COATED) (FPQ)	507.11	
GAL	WATER REPELLENT, SILANE	514.10	
LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
SY	MEMBRANE WATERPROOFING, SPRAY APPLIED	520.10	
LF	JOINT SEALER, HOT POURED	524.11	
EACH	REMOVAL OF STRUCTURE (1210 SF - EST.)	529.15	
CY	REMOVAL OF CONCRETE OR MASONRY	529.25	
	BEGIN OPTION AA		
LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #1)	540.10	
LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURES)(ABUTMENT #1)	900.645	
	END OPTION AA		
	BEGIN OPTION BB		
LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #2)	540.10	
LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURES)(ABUTMENT #2)	900.645	
	END OPTION BB		

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORK SUMMARY
		FILL AVAILABLE
1000	CY	COMMON EXCAVATION(1000 x 1.0)
75	CY	CHANNEL EXCAVATION(250 x 0.3)
83	CY	STRUCTURE EXCAVATION(275 x 0.3)
95	CY	TRENCH EXCAVATION(105x 0.9)
2	CY	ROUNDING
1255	CY	TOTAL FILL AVAILABLE
		FILL REQUIRED
0	CY	FILL (0 CY EARTH)
0	CY	FACTORED FILL (x1.15)
0	CY	ROUNDING
0	CY	TOTAL FILL REQUIRED
1255	CY	TOTAL WASTE
		SUPERPAVE BITUMINOUS CONCRETE PAVEMENT
77	TONS	TYPE IIIS
8	TONS	ROUNDING
85	TONS	TOTAL
		BITUMINOUS CONCRETE PAVEMENT, TYPE IVB
209	TONS	TYPE IVB
16	TONS	ROUNDING
225	TONS	TOTAL

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: s13j088qs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
QUANTITY SHEET 1

PLOT DATE: 31-AUG-2016
DRAWN BY: T. MATTHEWS
CHECKED BY: J. GRIGAS
SHEET 5 OF 52

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES								TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	ROADWAY (NO FED./STATE PART.)	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS				GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
											BEGIN OPTION CC					
60								60		LF	18" CSP .064 (2-2/3 X 1/2)	601.0015				
60								60		LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215				
60								60		LF	18" PCCSP .079 (2-2/3 X 1/2)	601.0416				
60								60		LF	18" RCP CLASS III	601.0815				
60								60		LF	18" CPEP	601.0915				
60								60		LF	18" CPPP (SL)	601.2815				
											END OPTION CC					
											BEGIN OPTION DD					
	90							90		LF	18" CSP .064 (2-2/3 X 1/2)	601.0015				
	90							90		LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215				
	90							90		LF	18" PCCSP .079 (2-2/3 X 1/2)	601.0416				
	90							90		LF	18" RCP CLASS III	601.0815				
	90							90		LF	18" CPEP	601.0915				
	90							90		LF	18" CPPP (SL)	601.2815				
											END OPTION DD					
2	1							3		EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18				
		1						1		MGAL	DUST CONTROL WITH WATER	609.10				
90								90		CY	STONE FILL, TYPE I	613.10				
			170					170		CY	STONE FILL, TYPE III	613.12				
30								30		LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28				
2								2		EACH	WOOD MARKER POSTS	619.15				
1								1		EACH	REMOVING AND RESETTING PROPERTY MARKERS	619.20				
95								95		LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21				
1								1		EACH	MANUFACTURED TERMINAL SECTION, TANGENT	621.51				
1								1		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60				
4								4		EACH	GUARDRAIL APPROACH SECTION TO CONCRETE BRIDGE RAILING, TL-2	621.746				
150								150		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
20								20		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
500								500		HR	FLAGGERS	630.15				
				1				1		LS	FIELD OFFICE, ENGINEERS	631.10				
				1				1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
				1				1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
				3000				3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26				
1								1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
6								6		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15				
925								925		LF	4 INCH WHITE LINE	646.20				
900								900		LF	4 INCH YELLOW LINE	646.21				
1250								1250		SY	GEOTEXTILE FOR ROADBED SEPARATOR	649.11				
325			240					565		SY	GEOTEXTILE UNDER STONE FILL	649.31				

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QUANTITY SHEET 2

PLOT DATE: 31-AUG-2016
DRAWN BY: T. MATTHEWS
CHECKED BY: J. GRIGAS
SHEET 6 OF 52

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES				TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	ROADWAY (NO FED./STATE PART.)	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
		175			175		SY	GEOTEXTILE FOR SILT FENCE	649.51				
		75			75		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
		20			20		LB	SEED	651.15				
		40			40		LB	FERTILIZER	651.18				
		1			1		TON	AGRICULTURAL LIMESTONE	651.20				
		1			1		TON	HAY MULCH	651.25				
		45			45		CY	TOPSOIL	651.35				
			120		120		SY	GRUBBING MATERIAL	651.40				
		1			1		LS	EPSC PLAN	652.10				
		40			40		HR	MONITORING EPSC PLAN	652.20				
		1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
		225			225		SY	TEMPORARY EROSION MATTING	653.20				
		36			36		CY	VEHICLE TRACKING PAD	653.35				
		3			3		EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
		700			700		LF	BARRIER FENCE	653.50				
		700			700		LF	PROJECT DEMARCATION FENCE	653.55				
0.66					0.66		SF	TRAFFIC SIGNS, TYPE A	675.20				
35					35		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
1					1		EACH	REMOVING SIGNS	675.50				
1					1		EACH	ERECTING SALVAGED SIGNS	675.60				
2					2		EACH	DELINEATOR WITH STEEL POST	676.10				
			52		52		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)	900.608				
36000					36000		DL	SPECIAL PROVISION (INCENTIVE/DISINCENTIVE) (N.A.B.I.)	900.615				
5					5		EACH	SPECIAL PROVISION (CPM SCHEDULE)	900.620				
			118		118		LF	SPECIAL PROVISION (BRIDGE RAILING, TEXAS)(FPQ)	900.640				
			177		177		LF	SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE)(FPQ)	900.640				
1					1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645				
1					1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, TYPE IVB) (N.A.B.I)	900.650				
225					225		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, TYPE IVB)	900.680				

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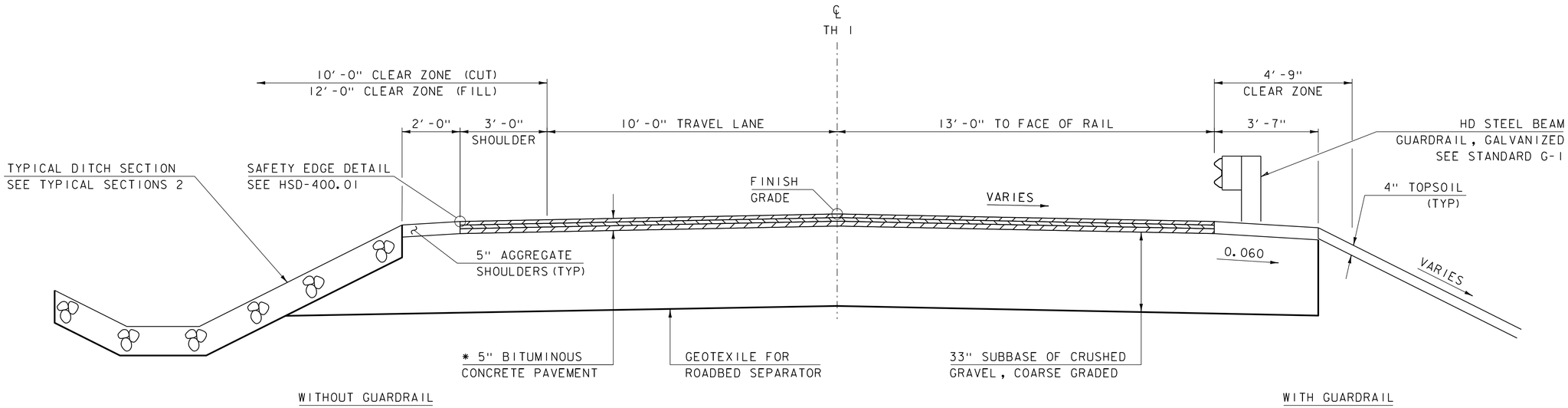
QUANTITY SHEET 3

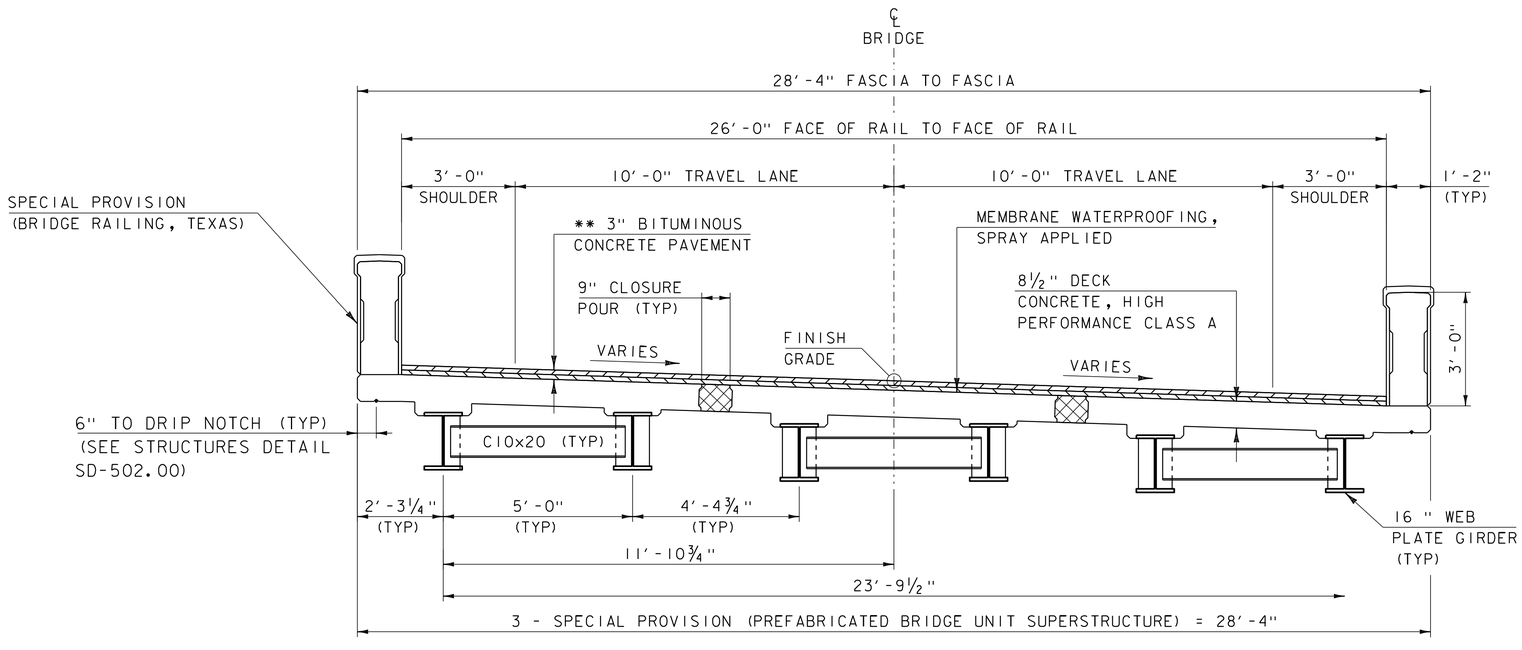
PLOT DATE: 31-AUG-2016
DRAWN BY: T. MATTHEWS
CHECKED BY: J. GRIGAS
SHEET 7 OF 52



* 1½" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT TYPE IVB), OVER
1½" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT TYPE IVB), OVER
2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IIIS

ROADWAY TYPICAL SECTION

SCALE ½" = 1′-0"



** 1½" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT TYPE IVB), OVER
1½" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT TYPE IVB

BRIDGE TYPICAL SECTION

SCALE ½" = 1′-0"

MATERIAL TOLERANCES

(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	+/- 1"

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088typ.dgn
PROJECT LEADER: K. HIGGINS
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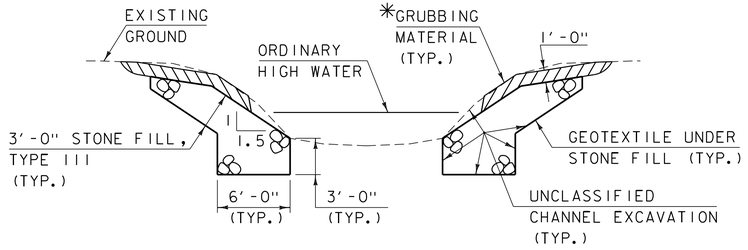
TYPICAL SECTIONS 1

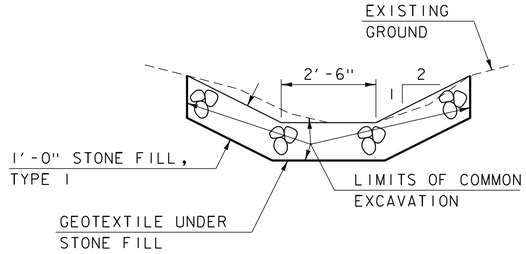
PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 8 OF 52



TYPICAL CHANNEL SECTION

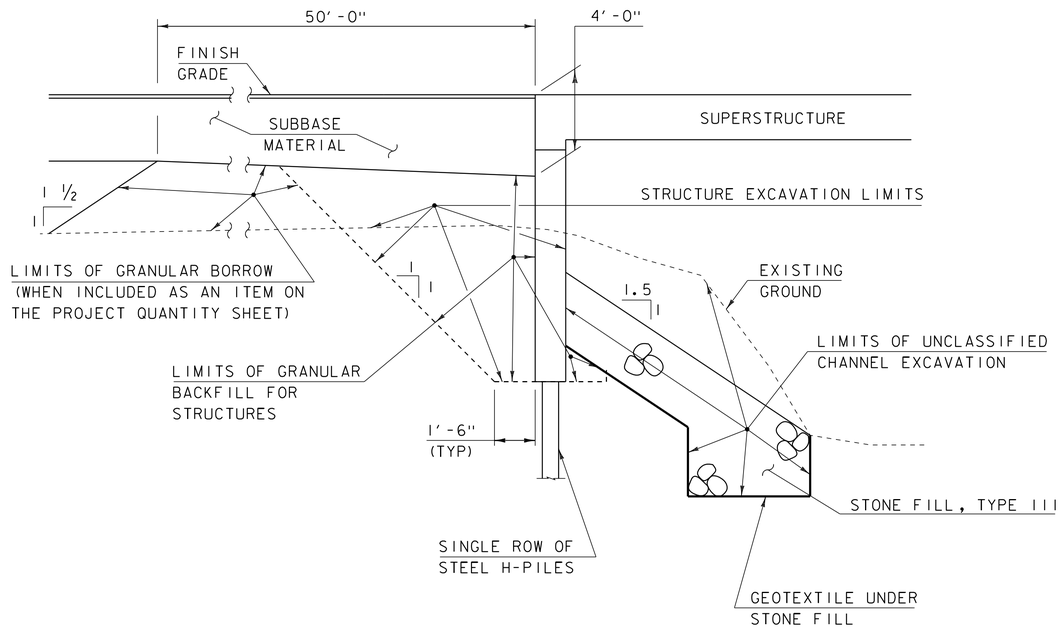
(NOT TO SCALE)

*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



TYPICAL DITCH SECTION

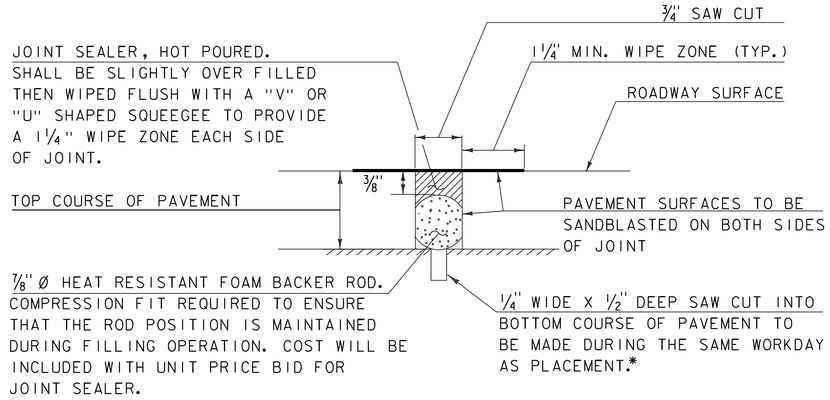
(NOT TO SCALE)



TYPICAL INTEGRAL ABUTMENT SECTION

NOT TO SCALE

ACTUAL LIMITS OF STRUCTURE EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR. HOWEVER, ONLY EXCAVATION BETWEEN THE LIMITS SHOWN WILL BE PAID FOR UNDER ITEM 204.25 "STRUCTURE EXCAVATION". EXCAVATION BY THE CONTRACTOR OUTSIDE OF THESE LIMITS WILL BE AT THE EXPENSE OF THE CONTRACTOR.



SAWED PAVEMENT JOINT DETAIL

(NOT TO SCALE)

1. JOINT SHALL 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.

2. SAWED PAVEMENT JOINTS SHALL BE LOCATED BETWEEN THE APPROACH SLABS AND EACH END OF THE BRIDGE AND BETWEEN THE APPROACH SLABS AND ANY PAVED APRONS FOR DRIVES.

* SAWED PAVEMENT JOINT AT APRON SHALL BE CUT TO FULL PAVEMENT DEPTH.

PROJECT NAME: STRAFFORD
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TYPICAL SECTIONS 2

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 9 OF 52

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: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088excel.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
LEGEND SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: M. LONGSTREET
CHECKED BY: J. GRIGAS
SHEET 10 OF 52

GPS CONTROL POINTS

HVCTRL #1

S STRAFFORD BR 25

NORTH = 486206.940
EAST = 1677367.840
ELEV. = 894.930

GENERAL LOCATION SOUTH STRAFFORD, VT.
THE MARK IS SET IN THE TOP OF THE ABUTMENT AT THE SOUTHWEST CORNER OF A BRIDGE OVER A STREAM FEEDING THE WEST BRANCH OF THE OMPOMPANOOSUC RIVER. IT IS ABOUT 100 M SOUTHWEST OF THE BARRETT MEMORIAL BRIDGE OVER THE WEST BRANCH.
IT IS 15 CM EAST OF THE WEST EDGE OF THE ABUTMENT, 15 CM WEST OF THE EAST EDGE OF THE ABUTMENT, 0.3 M SOUTH-SOUTHWEST OF THE SOUTH TIP OF THE BRIDGE RAIL, 0.8 M NORTH OF THE ABUTMENT VERTICAL ANGLE POINT AND 5.3 M NORTHWEST OF POLE NO 3.

HVCTRL #10

JB 1

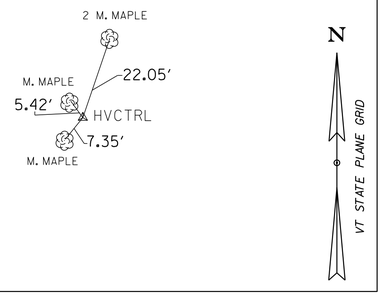
NORTH = 486660.580
EAST = 1684339.340
ELEV. = 829.260

GENERAL LOCATION, SOUTH STRAFFORD, VT.
1.6 MI (2.6 KM) EAST OF, AT DESERTED VILLAGE OF COPPER FLAT, 25 FT (7.6 M) SOUTHWEST OF CENTER OFROAD, 250 FT (76.2 M) NORTHWEST JUNCTION OF DISCONTINUED ROAD SOUTHWEST, IN EMBEDDED BOULDER.

TRAVERSE TIES

HVCTRL #2

NORTH = 486849.771
EAST = 1677602.196
ELEV. = 885.802



DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83(2011)
ADJUSTMENT COMPASS

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088ti.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
TIE SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: S. DONOVAN
CHECKED BY: J. GRIGAS
SHEET 11 OF 52

VT STATE PLANE GRID

WEST BRANCH OMPOMPANOOSUC RIVER FLOW

EXISTING R.O.W.

EXISTING CONDITIONS

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	STRAFFORD
PROJECT NUMBER:	BF 0177(10)
FILE NAME: sl3j088bdr_ex.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: T. MATTHEWS
DESIGNED BY: J. GRIGAS	CHECKED BY: J. GRIGAS
EXISTING CONDITIONS	SHEET 12 OF 52

MAINLINE CURVE #1:
DELTA = 35°47'00"
D = 47°44'47"
R = 120.00'
T = 38.74'
L = 74.94'
E = 6.10'

MAINLINE CURVE #2:
DELTA = 13°22'00"
D = 11°27'33"
R = 500.00'
T = 58.59'
L = 116.65'
E = 3.42'

CONSTRUCT DRIVE W/5'-0" PAVED APRON AND 3" AGGREGATE SURFACE COURSE BEYOND APRON
STA 11+24.65 - 11+62.99 LT
STA 11+51.96 - 11+87.03 RT

CONSTRUCT 5'-0" PAVED APRON
STA 14+36.73 - 14+69.72 RT

4" YELLOW LINE (DOUBLE)
STA 10+25 - 14+75 ℄

4" WHITE LINE
STA 10+25 - 14+75 LT
STA 10+25 - 14+75 RT

STONE FILL, TYPE I DITCH
STA 13+25 - 14+20 LT

REMOVAL OF CONCRETE OR MASONRY
STA 12+50 - 13+03 RT
STA 12+51 - 12+91 LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 11+65 - 11+88 LT
STA 11+89 - 11+91 RT
STA 12+43 - 12+93 LT
STA 12+44 - 12+97 RT

SAWED PAVEMENT JOINT ALONG APPROACH SLAB EDGE
STA 11+67.53 - 11+87.03 RT

CONCRETE CURB, TYPE B
STA 12+48 - 12+74 RT

REMOVING AND RESETTING PROPERTY MARKERS (GRANITE BOLLARD)
STA 11+65 LT
RELOCATE TO STA 11+67 LT
N=1677402.4105
E=486390.2366

VT STATE PLANE GRID

MAINLINE PT #1
STA 10+74.94
N = 486296.1699
E = 1677398.8689

MAINLINE POB/PC #1
STA 10+00.00
N = 486233.7153
E = 1677359.6785

BEGIN APPROACH
STA 10+25.00
MATCH EXISTING

CHANNEL POB
STA 50+00.00
N = 486439.7737
E = 1677333.6585

STA 11+87 RT
STA 12+54 LT

MAINLINE PC #2
STA 12+52.02
N = 486467.8201
E = 1677442.3562

MAINLINE PI #2
STA 13+10.61 BK=
STA 13+10.07 AHD
N = 486524.6148
E = 1677456.7451

MAINLINE PT #2
STA 13+68.66
N = 486576.5446
E = 1677483.8740

STA 13+10 LT

STONE FILL, TYPE III (TYP)

STONE FILL, TYPE I (TYP)

END PROJECT
STA 14+00.00
FG = 883.17

END APPROACH
STA 14+75.00
MATCH EXISTING

MAINLINE POE
STA 15+50.00
N = 486737.2697
E = 1677567.8396

BEGIN PROJECT
STA 11+00.00
FG = 890.48

MAINLINE PI #1
STA 10+38.74 BK=
STA 10+36.20 AHD
N = 486258.6167
E = 1677389.3548

BEGIN BRIDGE
STA 11+85.22
FG = 888.74

℄ BEARING
STA 11+87.00
FG = 888.72

SAVE

END BRIDGE
STA 12+45.78
FG = 887.68

℄ BEARING
STA 12+44.00
FG = 887.73

ML STA 12+15.50 =
CH STA 51+00.00
Δ = 180°00'00" RT

CHANNEL POE
STA 52+00.00
N = 486425.0680
E = 1677533.1172

BENCHMARK
CH. SO. BOT STEP
ELEV. 732.78

SIGN LEGEND

N = NEW
R = REMOVE
S = SALVAGE

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGN "A"	NEW & SALVAGED SIGN SALV SIGN	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS 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	SLEEVE	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
11+87 RT	BRIDGE 29	6	8	0.33				1	8			X		VD-701		T-42
12+54 LT	BRIDGE 29	6	8	0.33				1	8			X		VD-701		T-42
13+10 LT					X			1		15		X		WI-2		
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 15	FT		EA			
TOTALS				SF 0.66	EACH 1				FT 31					SHS = STANDARD HIGHWAY SIGNS (MUTCD)		

LAYOUT SHEET

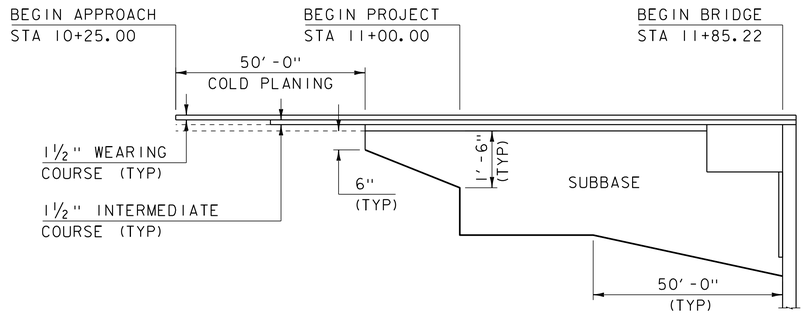
SCALE 1" = 20'-0"
20 0 20

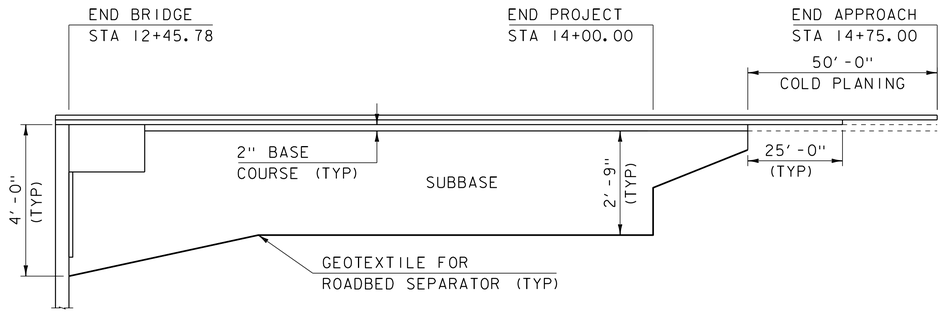
NOTE:
ADJUST NEW CENTERLINE AND EDGE LINES TO MATCH EXISTING LINES AT BEGIN/END APPROACH

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088bdr.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
LAYOUT SHEET

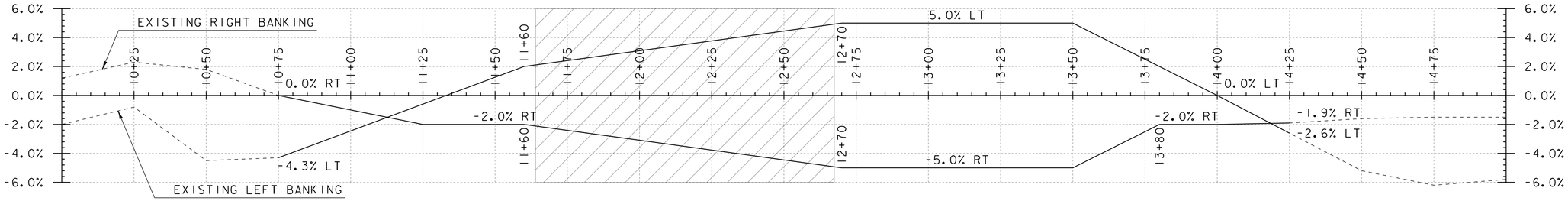
PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 13 OF 52





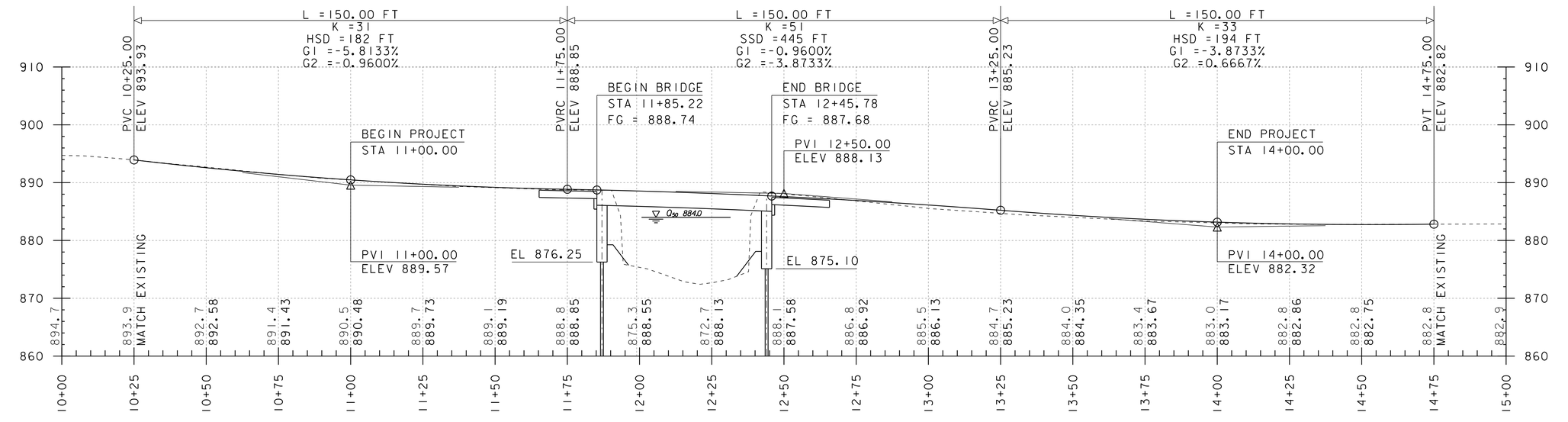
MATERIAL TRANSITION

SCALE: HORIZONTAL: 1"=20'-0"
NO VERTICAL SCALE



BANKING DIAGRAM

SCALE: HORIZONTAL: 1"=20'-0"
VERTICAL: 1"=1.0%



MAINLINE PROFILE

SCALE: HORIZONTAL: 1"=20'-0"
VERTICAL: 1"=10'-0"

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

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

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088pro.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
MAINLINE PROFILE & BANKING DIAGRAM

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 14 OF 52

RT 132
CLOSED

PHASE 1

EAST OF
SOUTH
STRAFFRD

PHASE 2

DAY M/DD *
6PM- DAY
*M/DD 6AM

PHASE 3

S-1 * DAY=DAY OF THE WEEK
M=MONTH
DD=DAY

RT 132
CLOSED

PHASE 1

WEST OF
THETFORD

PHASE 2

DAY M/DD *
6PM- DAY
*M/DD 6AM

PHASE 3

S-2 * DAY=DAY OF THE WEEK
M=MONTH
DD=DAY

LEGEND:

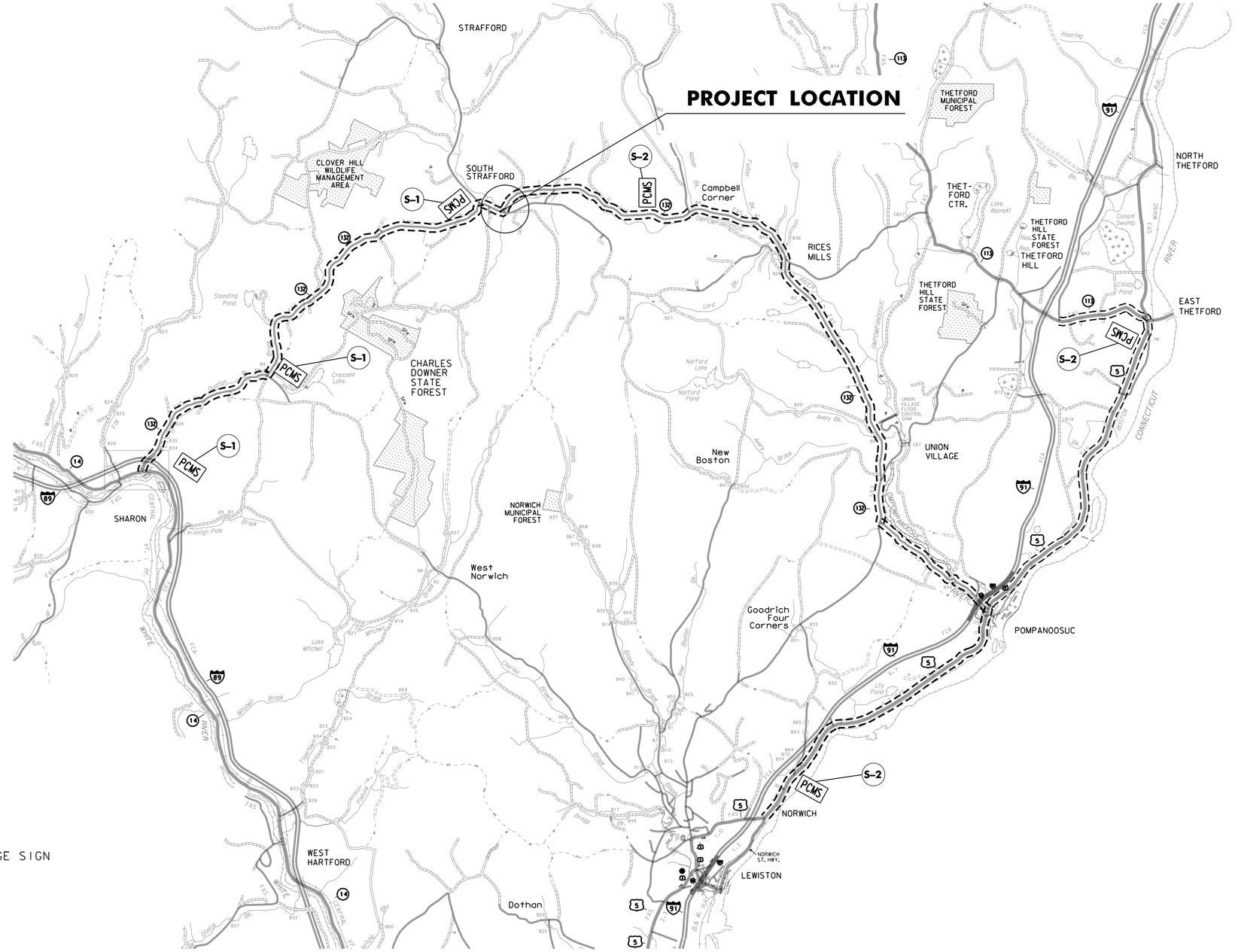
PROJECT THROUGH ROUTE

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

NOTES:

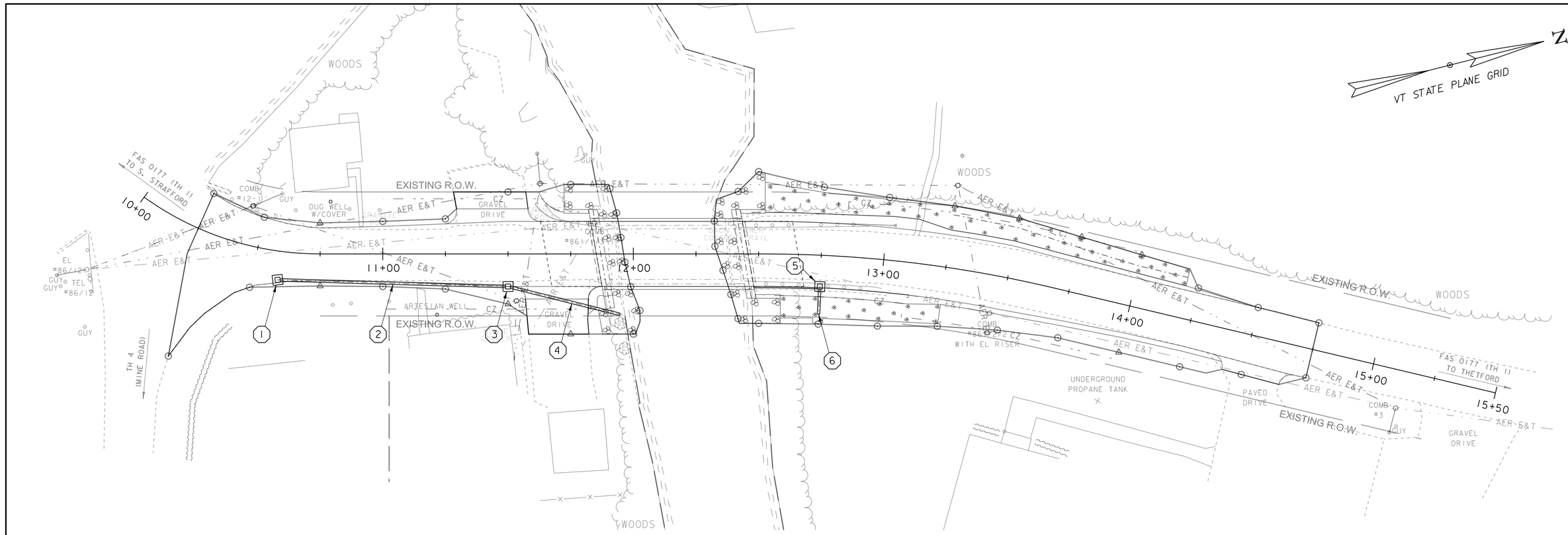
1. THE PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE OPERATIONAL A MINIMUM OF TWO WEEKS PRIOR TO THE BRIDGE CLOSURE.

2. DURING THE BRIDGE CLOSURE PERIOD, ELIMINATE PHASE 3 ONLY.



SCALE = NOT TO SCALE

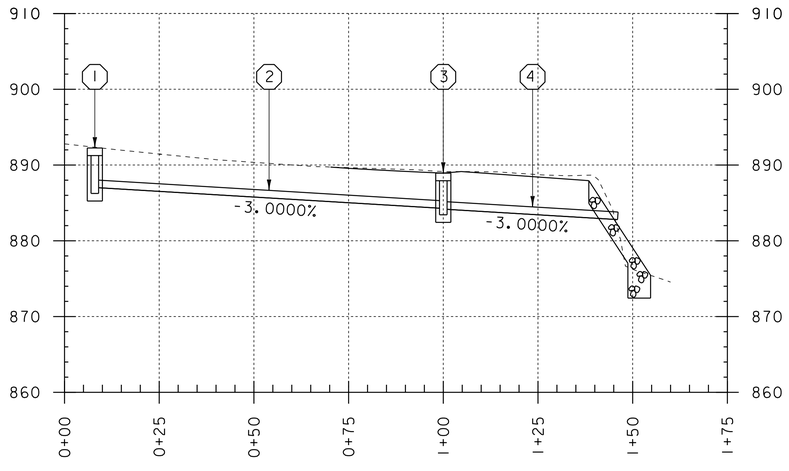
PROJECT NAME: STRAFORD	
PROJECT NUMBER: BF 0177(10)	
FILE NAME: sl2j088detour.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: M. LONGSTREET
DESIGNED BY: M. LONGSTREET	CHECKED BY: J. GRIGAS
TRAFFIC CONTROL PLAN	SHEET 15 OF 52



DRAINAGE LAYOUT

SCALE 1" = 20'-0"

20 0 20



DRAINAGE PROFILE #1

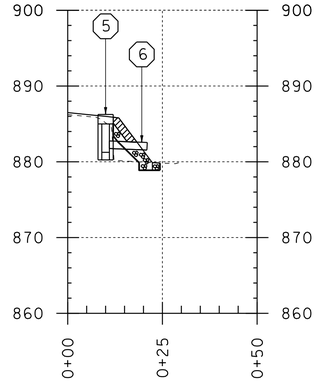
HOR. SCALE 1" = 20'-0"
VER. SCALE 1" = 10'-0"

(1) NEW PRECAST REINFORCED CONCRETE DROP INLET
WITH CAST IRON GRATE, TYPE D
PTOG EL 892.25
SUMP EL 886.25

(2) NEW 18" x 90' OPTION PIPE
INLET EL 887.00
OUTLET EL 884.30

(3) NEW PRECAST REINFORCED CONCRETE DROP INLET
WITH CAST IRON GRATE, TYPE D
PTOG EL 888.90
SUMP EL 883.40

(4) NEW 18" x 45' OPTION PIPE
INLET EL 884.15
OUTLET EL 882.80



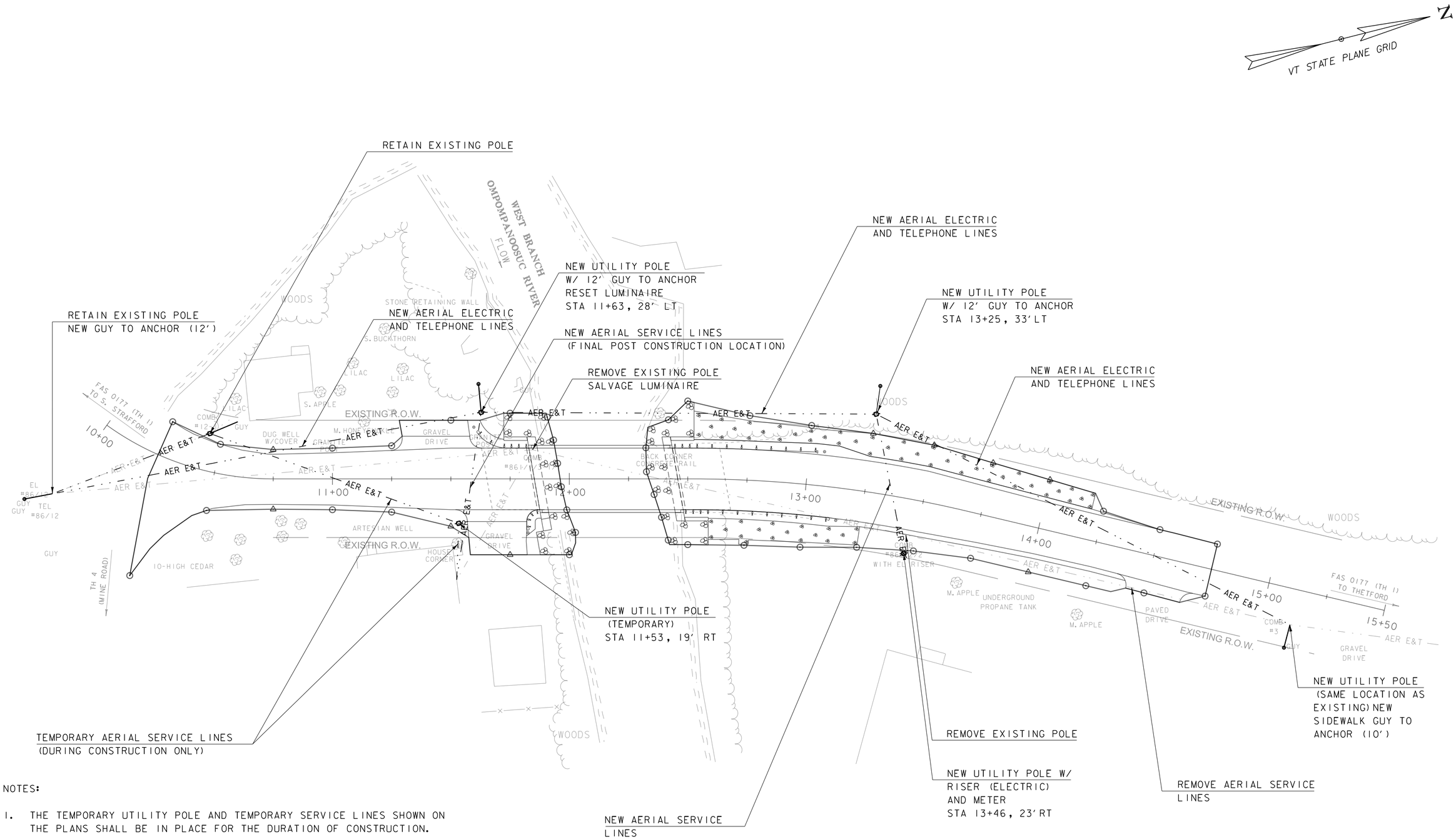
DRAINAGE PROFILE #2

HOR. SCALE 1" = 20'-0"
VER. SCALE 1" = 10'-0"

(5) NEW PRECAST REINFORCED CONCRETE DROP INLET
WITH CAST IRON GRATE, TYPE E
PTOG EL 886.25
SUMP EL 881.25

(6) NEW 18" x 10' OPTION PIPE WITH
4' WIDE x 2 LONG' STONE FILL, TYPE I PAD
INLET EL 881.75
OUTLET EL 881.50

PROJECT NAME:	STRAFFORD
PROJECT NUMBER:	BF 0177(10)
FILE NAME: sl3j088bdr_drain.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: T. MATTHEWS
DESIGNED BY: J. GRIGAS	CHECKED BY: J. GRIGAS
DRAINAGE LAYOUT SHEET	SHEET 16 OF 52



NOTES:

1. THE TEMPORARY UTILITY POLE AND TEMPORARY SERVICE LINES SHOWN ON THE PLANS SHALL BE IN PLACE FOR THE DURATION OF CONSTRUCTION.
2. ALL TEMPORARY UTILITY WORKS SHALL BE REMOVED NO LATER THAN 90 DAYS AFTER FINAL INSPECTION OF THE PROJECT.
3. UTILITY WORK TO BE DONE BY OTHERS.

UTILITY LAYOUT SHEET

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

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: s13j088util.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
UTILITY LAYOUT SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 17 OF 52

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

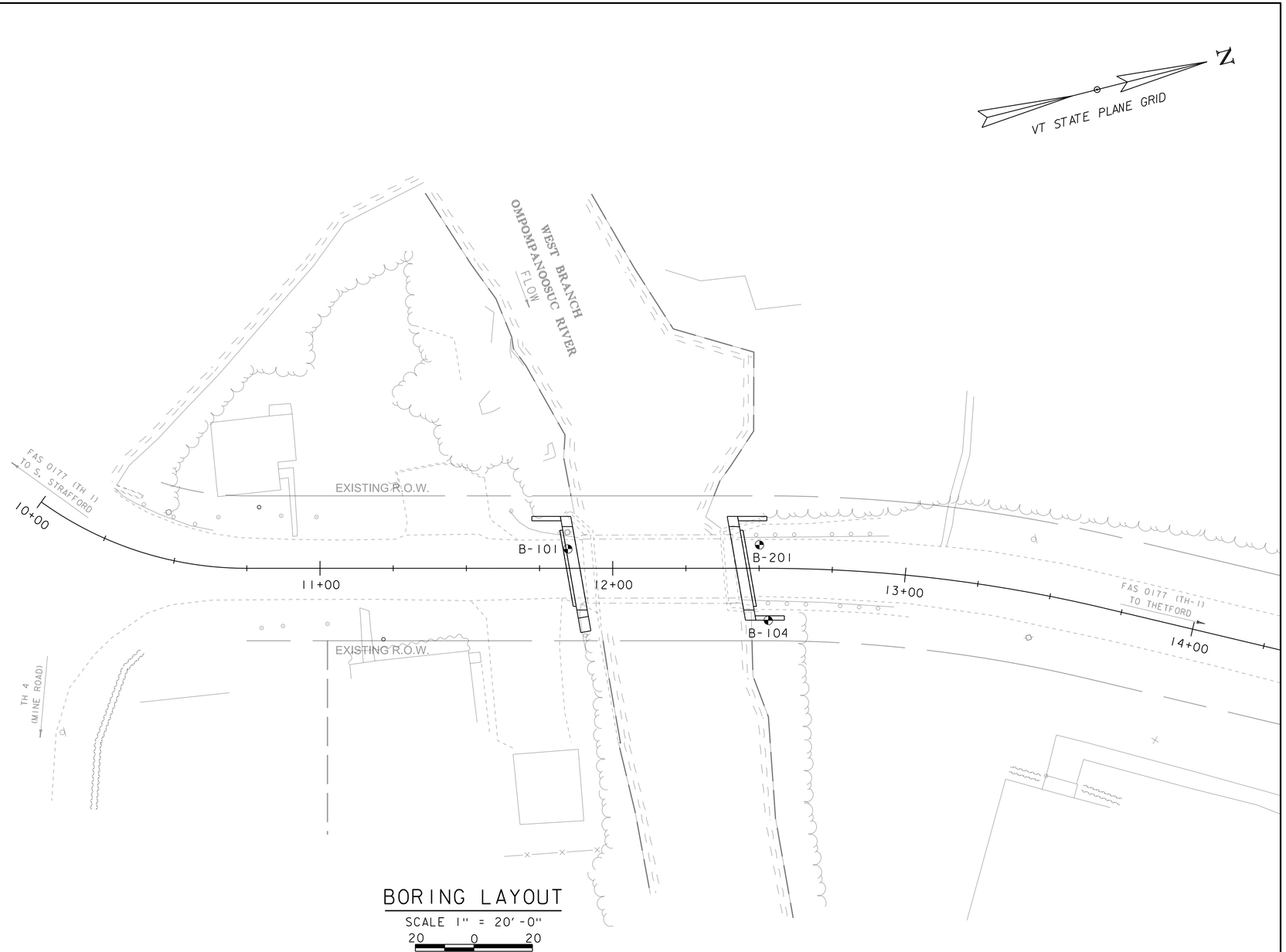
CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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
ROD	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		



BORING LAYOUT

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.

1. The subsurface explorations shown herein were made between 12/12/2013 and 01/16/2014 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.

GENERAL NOTES

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: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088boring.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
BORING LAYOUT SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 18 OF 52

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

BORING LOG

STRAFFORD
BF 0177(10)
VT-132 BR-29

Boring No.: **B-101**
Page No.: 1 of 2
Pin No.: 13J088
Checked By: CEE

Boring Crew: GARROW, HOOK, DAIGNEAULT
Date Started: 12/12/13 Date Finished: 1/10/14
VTSPG NAD83: N 486404.17 ft E 1677419.41 ft
Station: 11+85 Offset: -7.00
Ground Elevation: 888.0 ft

	Casing	Sampler
Type:	WB	SPLIT BARREL
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID	C_E = 1.33

Groundwater Observations		
Date	Depth (ft)	Notes
12/23/13	12.9	After 10 days.
01/09/14	9.6	AM
01/14/14	12.6	AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 1.15 ft								
		A-2-4, GrSa, Lt/brn, Moist, Rec. = 1.2 ft, Cleaned out with roller cone.				10-6-4-6 (10)	13.5	24.7	56.7	18.6
5		A-2-4, Sa, brn, Moist, Rec. = 0.8 ft				5-3-4-6 (7)	17.6	18.7	61.5	19.8
		Field Note:, No Recovery Field Note:, NXDC, Cleaned out casing.				R@5.0"				
		A-1-b, SaGr, brn, Moist, Rec. = 0.3 ft, Lab Note: Lots of Broken Rock was within sample.				44-R@1.0"	9.3	56.0	30.7	13.3
10		Field Note:, NXDC, Cleaned out casing. Field Note:, No Recovery				R@1.0"				
		Field Note:, NXDC, Cleaned out casing.								
		A-2-4, SiSa, gry-brn, MTW, Rec. = 0.5 ft, NXDC, Cleaned out casing.				10-2-1-3 (3)	39.8	8.4	67.9	23.7
15		A-1-a, SaGr, gry-brn, MTW, Rec. = 0.3 ft, Lab Note: Sample was mostly Broken Rock.				12-10-8-12 (18)	10.7	60.3	29.1	10.6
		A-1-b, GrSa, brn, Moist, Rec. = 1.2 ft				14-22-20-22 (42)	12.0	32.2	49.7	18.1
		A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft				17-15-13-13 (28)	13.1	25.5	60.6	13.9
20		A-1-b, GrSa, brn, Moist, Rec. = 0.9 ft				24-15-13-R@5.0" (28)	12.5	36.9	50.5	12.6
		Field Note:, NXDC, Cleaned out casing.								
25		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft, Lab Note: Broken Rock was within sample.				4-12-17-31 (29)	13.5	20.1	66.5	13.4
30		Visual Description:, Broken Rock, gry, Moist, Rec. = 0.3 ft				3-R@3.5"	11.4			
		Field Note:, Pulled casing and changed bit								
		Field Note:, NXDC, Cleaned out casing.								
35		A-2-4, GrSa, brn, Moist, Rec. = 1.0 ft, Lab Note: Broken Rock was within sample.				29-44-R@2.5" (R)	13.9	32.6	49.4	18.0

ABUT 1 BTM.
EL 876.25

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 STRAFFORD BF 0177(10).GPJ VERMONT AOT.GDT 1/21/14

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

BORING LOG

STRAFFORD
BF 0177(10)
VT-132 BR-29

Boring No.: **B-101**
Page No.: 2 of 2
Pin No.: 13J088
Checked By: CEE

Boring Crew: GARROW, HOOK, DAIGNEAULT
Date Started: 12/12/13 Date Finished: 1/10/14
VTSPG NAD83: N 486404.17 ft E 1677419.41 ft
Station: 11+85 Offset: -7.00
Ground Elevation: 888.0 ft

	Casing	Sampler
Type:	WB	SPLIT BARREL
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID	C_E = 1.33

Groundwater Observations		
Date	Depth (ft)	Notes
12/23/13	12.9	After 10 days.
01/09/14	9.6	AM
01/14/14	12.6	AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Field Note:, NXDC, Cleaned out casing.								
40		A-2-4, Sa, brn, Moist, Rec. = 1.1 ft				26-34-R@2.5" (R)	17.8	7.4	74.6	18.0
45		A-1-b, GrSa, Dk/brn, Moist, Rec. = 1.1 ft				16-8-22-R@2.5" (30)	18.2	27.8	52.8	19.4
		Field Note:, NXDC, Cleaned out casing.								
50		A-1-b, GrSa, Dk/brn, Moist, Rec. = 1.0 ft				39-43-R@2.5" (R)	14.9	30.3	53.9	15.8
		Field Note:, NXDC, Cleaned out casing.								
55		Field Note:, No Recovery				R@6.0"				
		57.1 ft - 59.1 ft, Gray, Micaceous quartz-rich Limestone, Hard, Unweathered, Fair rock, NXDC, RMR = 57	1 (60)	65 (0)	5 5	Top of Bedrock @ 57.1 ft				
60		59.1 ft - 63.1 ft, Gray, Micaceous quartz-rich Limestone, Hard, Unweathered, Good rock, NXMDC, RMR = 65	2 (60)	90 (50)	11 13 7 6					
65		63.1 ft - 67.1 ft, Gray, Micaceous quartz-rich Limestone, Hard, Unweathered, Good rock, NXMDC, RMR = 74	3 (60)	100 (93)	10 7 8 7					
70		Hole stopped @ 67.1 ft								
75		Remarks: 1. Inclement weathered hindered the days able to drill within the start and finish date. 2. Hole collapsed at 16.3 ft. (01/14/14)								

EST. PILE TIP
EL 830.9

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 STRAFFORD BF 0177(10).GPJ VERMONT AOT.GDT 1/21/14

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088boring.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
BORING LOGS 1

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS

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

BORING LOG

STRAFFORD
BF 0177(10)
VT-132 BR-29

Boring No.: **B-104**
Page No.: 1 of 1
Pin No.: 13J088
Checked By: CEE

Boring Crew: HOOK, DAIGNEAULT
Date Started: 1/15/14 Date Finished: 1/16/14
VTSPG NAD83: N 486464.52 ft E 1677459.89 ft
Station: 12+52 Offset: 17.50
Ground Elevation: 881.0 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C TRACK	C_E = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
01/16/14	7.5	AM
01/16/14	5.3	Casing removed.

ABUT 2 BTM.
EL 875.10

EST. PILE TIP
EL 851.0

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-3, Sa, brn, Moist, Rec. = 0.2 ft				2-1-WH-1 (1)	38.4	5.5	86.9	7.6
		A-2-4, Sa, brn, Moist, Rec. = 1.1 ft, Lab Note: Wood chunks were within sample.				1-2-2-3 (4)	19.9	11.7	76.6	11.7
5		A-1-b, SaGr, Lt/brn, Moist, Rec. = 0.5 ft, Lab Note: Broken Rock was within sample.				2-5-10-7 (15)	9.0	50.0	43.3	6.7
		A-1-b, GrSa, gry-brn, MTW, Rec. = 1.5 ft, Lab Note: Broken Rock was within sample.				5-8-9-7 (17)	16.5	34.0	56.7	9.3
		A-1-b, GrSa, brn, Wet, Rec. = 2.0 ft, Cleaned out with roller cone.				6-6-8-9 (14)	18.7	25.5	65.3	9.2
10		A-2-4, GrSa, brn, Moist, Rec. = 0.9 ft, Cleaned out with roller cone.				5-7-7-11 (14)	15.8	25.4	56.6	18.0
		A-1-b, GrSa, brn, Moist, Rec. = 1.1 ft, Cleaned out with roller cone.				12-15-27-23 (42)	12.2	30.5	54.8	14.7
		A-1-b, GrSa, brn, Moist, Rec. = 1.1 ft, Lab Note: Broken Rock was within sample.				9-21-31-R@1.0" (52)	10.9	38.6	46.1	15.3
15		Field Note:, NXDC, Cleaned out casing.								
		A-2-4, GrSa, brn, Moist, Rec. = 1.2 ft, NXDC, Cleaned out casing.				15-14-22-20 (36)	13.5	32.6	51.5	15.9
		A-1-b, GrSa, brn, Moist, Rec. = 1.1 ft, Lab Note: Broken Rock was within sample.				12-11-16-28 (27)	12.7	34.5	52.3	13.2
20										
		Field Note:, NXDC, Cleaned out casing.								
25		A-2-4, SiGrSa, brn, Moist, Rec. = 0.9 ft				45-R@6.0" (R)	15.5	28.1	51.4	20.5
		Field Note:, Cobble/Hardpan, NXDC, Cleaned out casing.								
30		30.0 ft - 32.0 ft, Gray, Micaceous quartz-rich Limestone, Hard, Unweathered, Fair rock, NXDC, RMR = 57	1 (60)	100 (0)	6 5	Top of Bedrock @ 30.0 ft				
		32.0 ft - 35.0 ft, Gray, Micaceous quartz-rich Limestone, Hard, Unweathered, Good rock, NXMDC, RMR = 71	2 (60)	100 (87)	7 8 7					
35		35.0 ft - 40.0 ft, Gray, Micaceous quartz-rich Limestone, Hard, Unweathered, Good rock, NXMDC, RMR = 71	3 (60)	86 (80)	6 7 5 6 5					
40		Hole stopped @ 40.0 ft								

Remarks:
Hole collapsed at 7.6 ft.

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 STRAFFORD BF 0177(10).GPJ VERMONT AOT.GDT 1/21/14

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

STRAFFORD
BF 0177(10)
VT-132 BR-29

Boring No.: **B-201**
Page No.: 1 of 1
Pin No.: 13j088
Checked By: MLM

Boring Crew: GARROW, JUDKINS, COLETTI
Date Started: 6/02/16 Date Finished: 6/03/16
VTSPG NAD83: N 486467.83 ft E 1677434.11 ft
Station: 12+50 Offset: -8.00
Ground Elevation: 888.3 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID	C_E = 1.42

Groundwater Observations

Date	Depth (ft)	Notes
06/03/16	10.5	W.T. during drilling
06/03/16	13.1	W.T. before drilling

ABUT 2 BTM.
EL 875.10

EST. PILE TIP
EL 844.8

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.7 ft								
		Field Note:, NXDC, Cleaned out casing, Cobbles, Lost water return at 6.0 feet								
10		Field Note:, NXDC, Cleaned out casing, cobbles and boulders								
20										
		Field Note:, NXDC, Cleaned out casing, Cobbles								
30		Field Note:, Changed to 3.0 inch casing, Started mud drilling with bentonite due to sand								
40										
		Field Note:, NXDC, Cleaned out casing								
		43.5 ft - 48.5 ft, Gray, Phyllitic muscovite-biotite-quartz META-LIMESTONE, with rare pyrite. Hard, Unweathered, Good rock, BX, RMR=66	1 (60)	94 (80)	11 9 8 7 8	Top of Bedrock @ 43.5 ft				
50		48.5 ft - 53.5 ft, Gray, Phyllitic muscovite-biotite-quartz META-LIMESTONE, with rare pyrite. Some joint surfaces are brown, rust stained, and slightly vuggy. Hard, Very slightly weathered, Fair rock, BX, RMR=52	2 (60)	98 (47)	8 7 7 5 7					
		Hole stopped @ 53.5 ft								

Remarks:
Hole Collapsed at 16.9 feet.

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 STRAFFORD BF 0177(10).GPJ VERMONT AOT.GDT 6/13/16

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

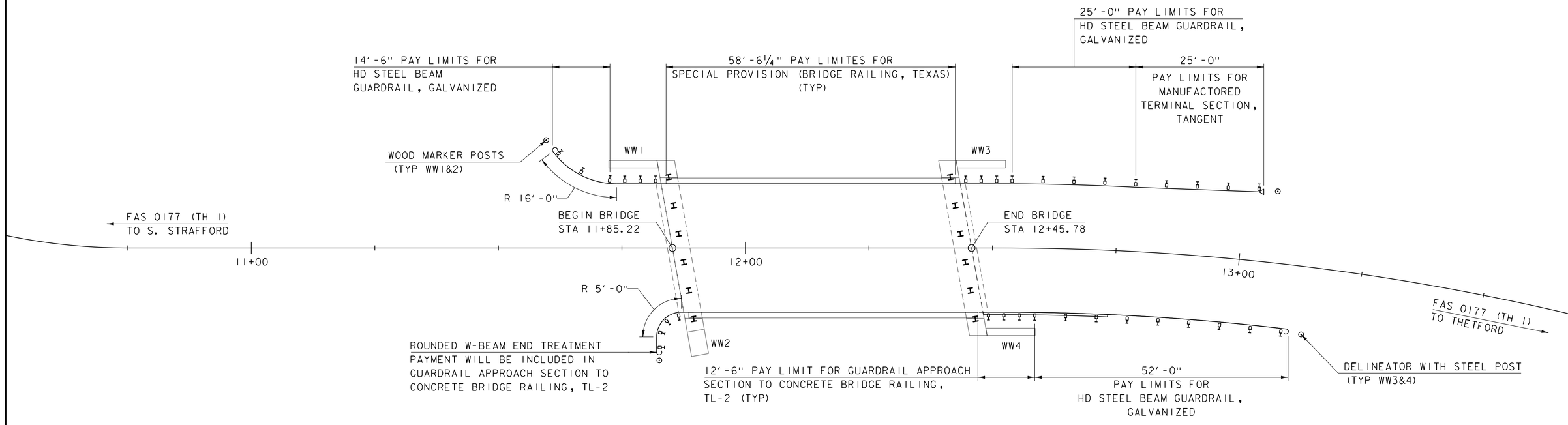
FILE NAME: s13j088boring.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
BORING LOGS 2

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 20 OF 52

WOOD MARKER POSTS
STA 11+59 LT
STA 11+82 RT

DELINEATOR WITH STEEL POST
STA 13+20 LT (BLUE)
STA 13+35 RT (GREEN)

ANCHOR FOR STEEL BEAM GUARDRAIL
STA 12+97 RT



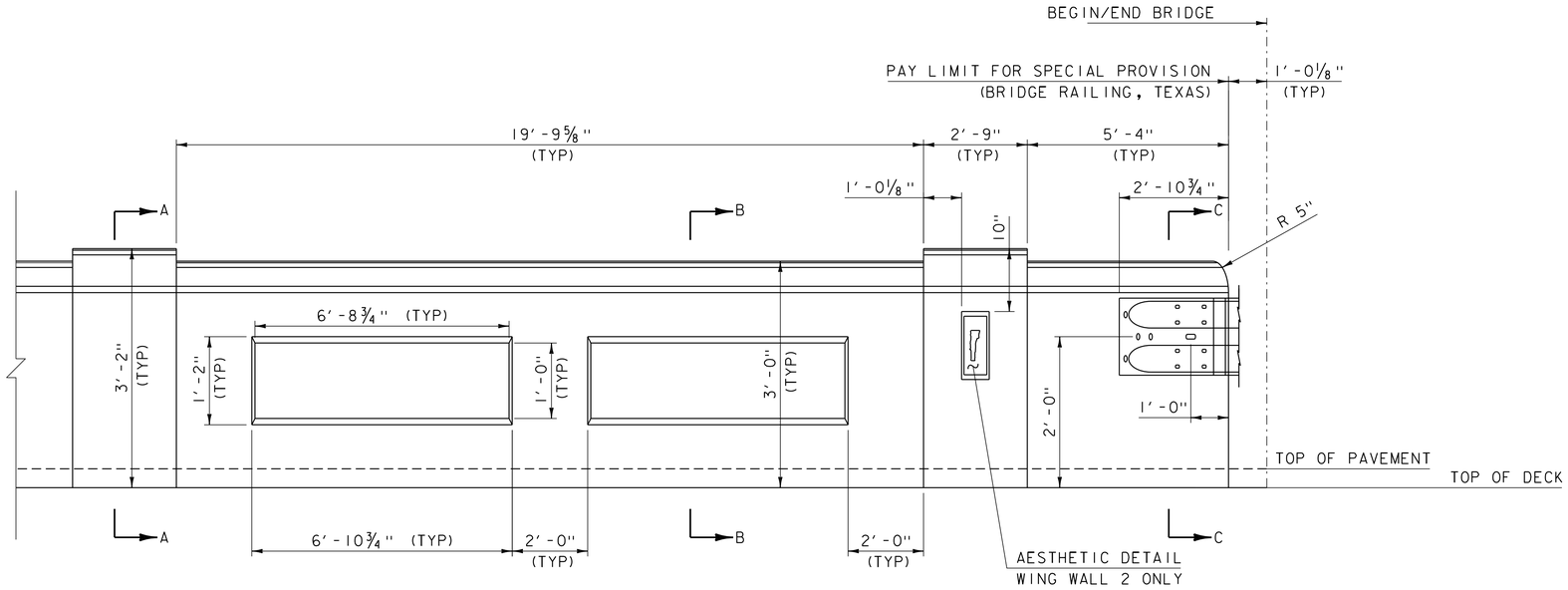
RAIL LAYOUT SHEET

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

NOTES:

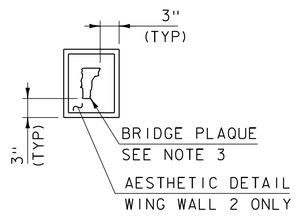
1) SEE STANDARDS G-1, G-1D, G-4, G-19, T-40, T-45, AND SHEETS 22-23 FOR ADDITIONAL DETAILS.

PROJECT NAME:	STRAFFORD
PROJECT NUMBER:	BF 0177(10)
FILE NAME: s13j088rail.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: S. COLEY
DESIGNED BY: J. GRIGAS	CHECKED BY: J. GRIGAS
RAIL LAYOUT SHEET	SHEET 21 OF 52



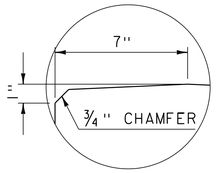
ROADWAY ELEVATION OF RAIL

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



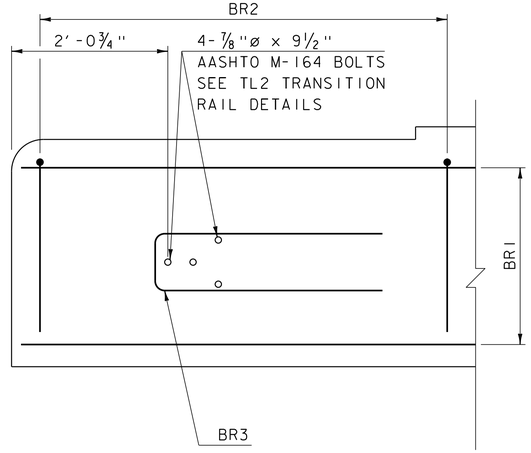
BRIDGE PLAQUE

SCALE 1" = 1'-0"



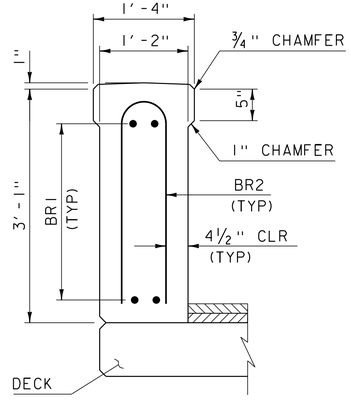
DETAIL "A"

SCALE 3" = 1'-0"



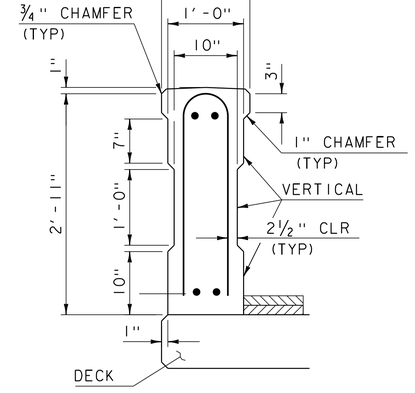
TYPICAL REINFORCING PLACEMENT

SCALE 1" = 1'-0"



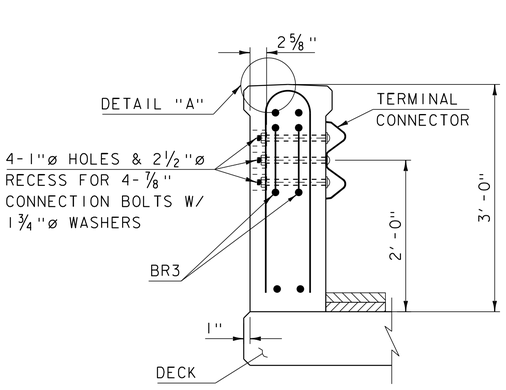
SECTION A-A

SCALE 1" = 1'-0"



SECTION B-B

SCALE 1" = 1'-0"



SECTION C-C

SCALE 1" = 1'-0"

HOLES AND RECESSES ARE TO BE FORMED OR CORED, PERCUSSION DRILLING IS NOT PERMITTED.

BRIDGE RAIL REINFORCING CHART

BAR	SIZE	SPACING	TYPE
BR1	4	10"	STR
BR2	4	8"	2
BR3	4	AS SHOWN	2

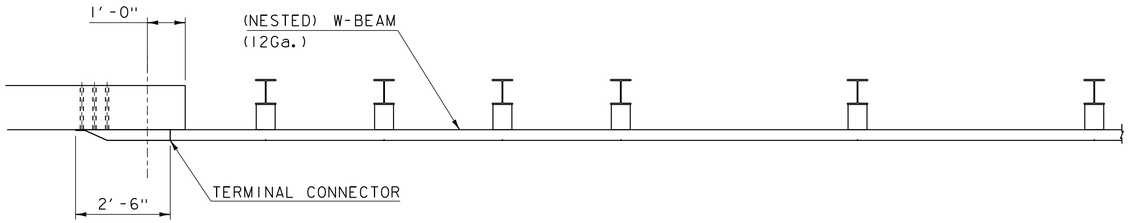
NOTES:

1. 2'-1" NUMBER 4 BAR LAP LENGTH.
2. SUPERSTRUCTURE BRIDGE RAIL CONNECTION REINFORCING STEEL OMITTED FOR CLARITY.
3. BRIDGE PLAQUE IS TO BE PLACED ON THE PARAPET OFF OF WINGWALL 2. A BRIDGE PLAQUE AS SHOWN IN SD 502.00 WILL NOT BE REQUIRED. THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND WILL BE CONSIDERED INCIDENTAL TO SPECIAL PROVISION BRIDGE RAIL.
4. BRIDGE PLAQUE TO HAVE A 3" BORDER FOR THE AESTHETIC DETAIL.

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

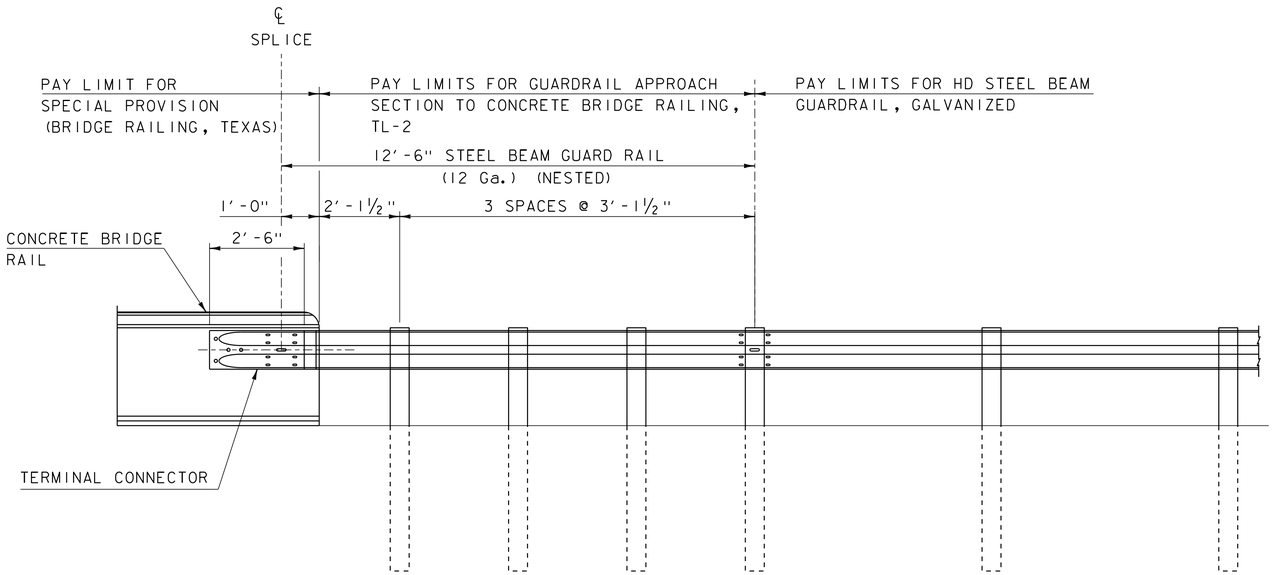
FILE NAME: sl3j088raildet.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: S. COLEY
BRIDGE RAIL DETAIL SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: S. COLEY
CHECKED BY: J. GRIGAS
SHEET 22 OF 52



TYPICAL PLAN VIEW

SCALE 1/2" = 1'-0"

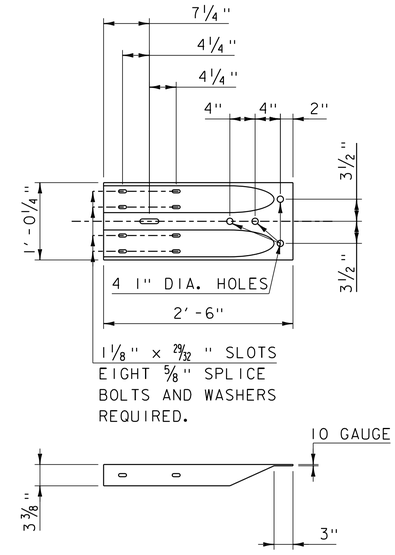


TYPICAL ELEVATION VIEW

SCALE 1/2" = 1'-0"

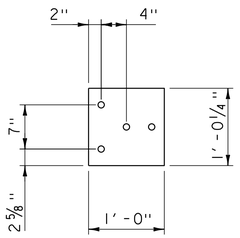
GENERAL NOTES

1. A COMPOSITE MATERIAL POST AND/ OR BLOCKOUT FROM THE AGENCY'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED FOR A POST AND/ OR BLOCKOUT OF SIMILAR DIMENSIONS
2. REFER TO STANDARD DRAWINGS G-1 AND G-1D FOR ADDITIONAL DETAILS.
3. THE TERMINAL CONNECTOR WILL BE INCLUDED IN THE BID PRICE FOR ITEM 621.746 "GUARDRAIL APPROACH SECTION TO CONCRETE BRIDGE RAILING, TL-2". THE CONNECTION PLATE WILL BE INCLUDED IN THE BID PRICE FOR ITEM 900.640 "SPECIAL PROVISION (BRIDGE RAILING TEXAS)".



TERMINAL CONNECTOR

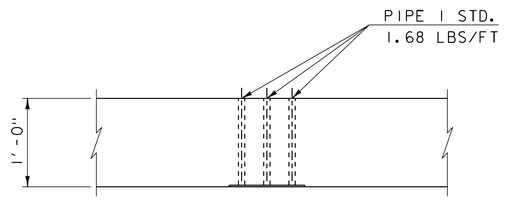
SCALE 1" = 1'-0"



CONNECTION PLATE

DETAIL - ELEVATION

SCALE 1" = 1'-0"

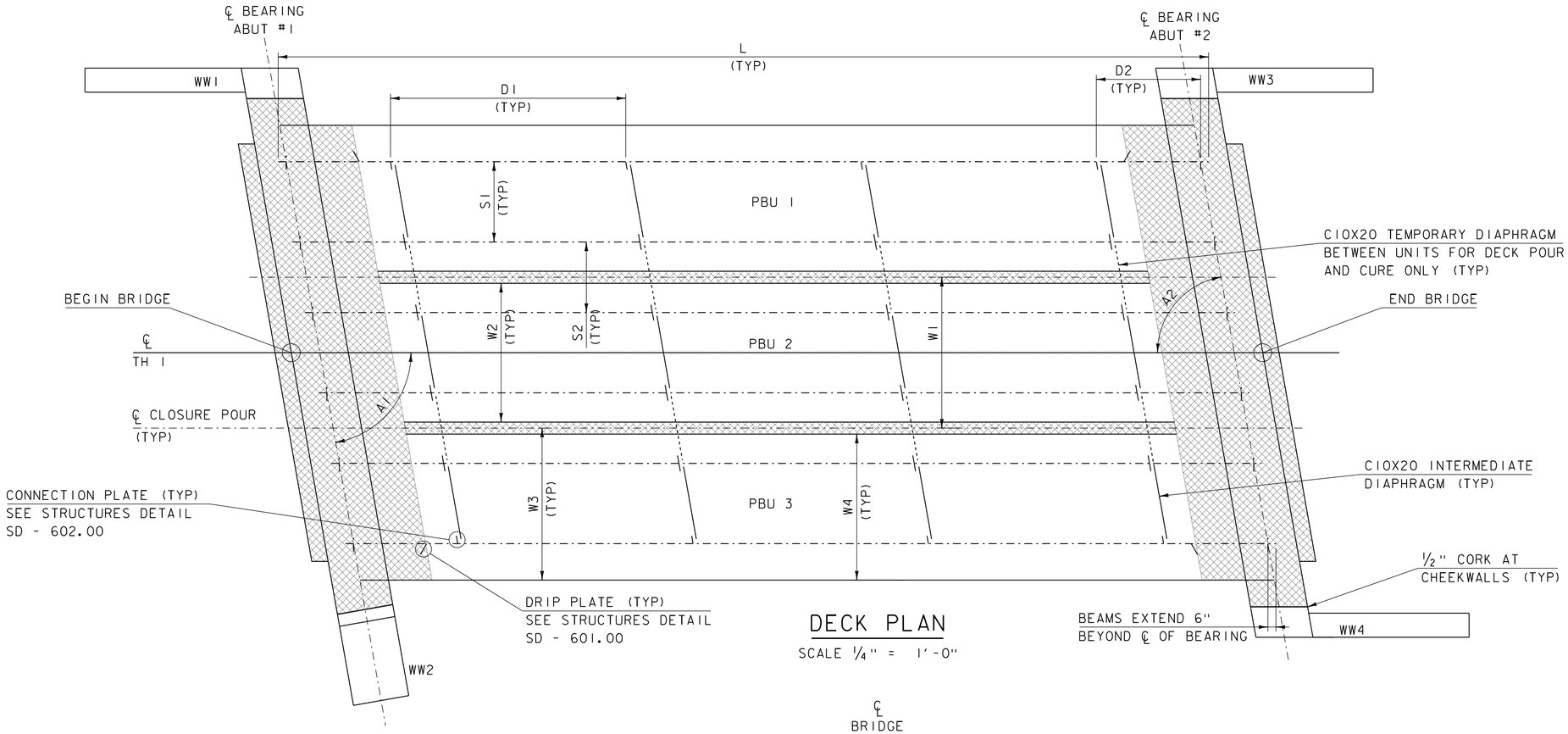


CONNECTION PLATE

DETAIL - PLAN

SCALE 1" = 1'-0"

PROJECT NAME:	STRAFFORD
PROJECT NUMBER:	BF 0177(10)
FILE NAME: sl3j088raildet	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: S. COLEY
DESIGNED BY: J. GRIGAS	CHECKED BY: J. GRIGAS
TRANSITION RAIL DETAILS SHEET	SHEET 23 OF 52

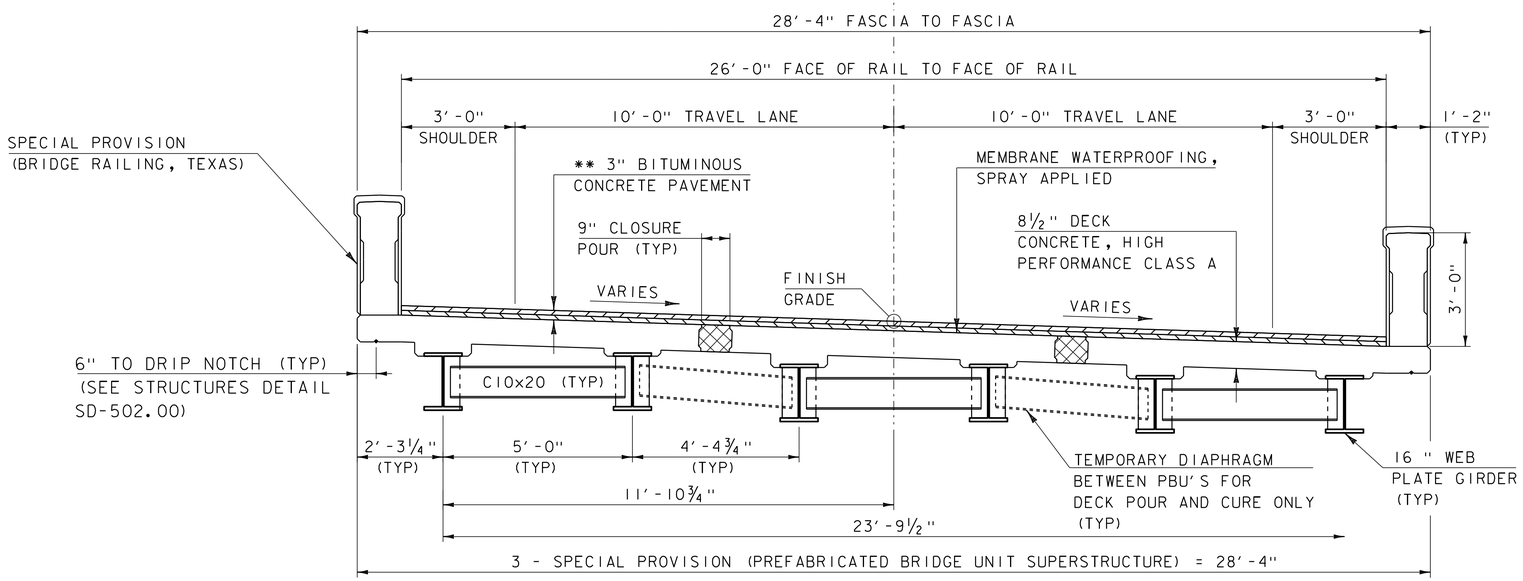


DECK PLAN

SCALE 1/4" = 1'-0"

L	58' - 0"
W1	9' - 4 3/4"
W2	8' - 7 3/4"
W3	9' - 5 5/8"
W4	9' - 1 1/8"
S1	5' - 0"
S2	4' - 4 3/4"
D1	14' - 8"
D2	6' - 6"

SKEW	A1	80°
	A2	80°



BRIDGE TYPICAL SECTION

SCALE 1/2" = 1'-0"

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)

SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, TYPE IVB)*

NOTE:

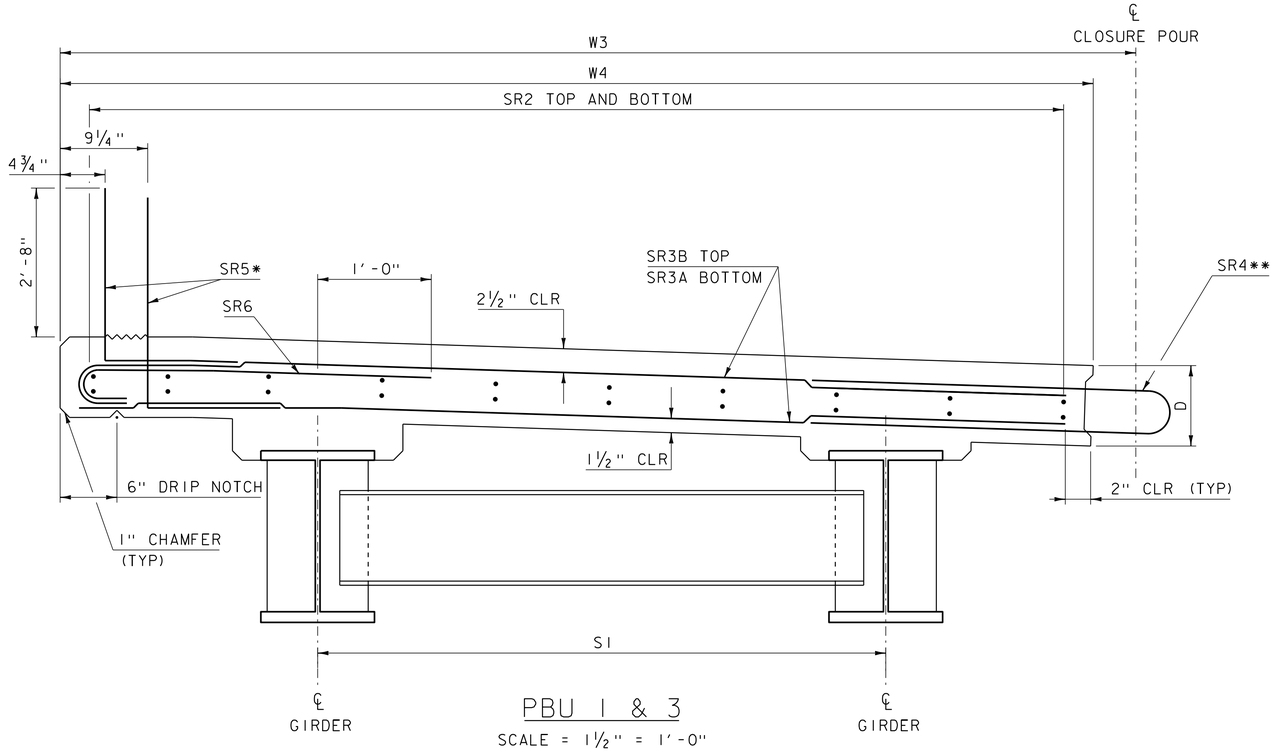
*BITUMINOUS CONCRETE PAVEMENT IN DECK PLAN VIEW IS OMITTED FOR CLARITY

** 1 1/2" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT TYPE IVB), OVER 1 1/2" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT TYPE IVB

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088sup.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: T. MATTHEWS
FRAMING PLAN SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: T. MATTHEWS
CHECKED BY: J. GRIGAS
SHEET 24 OF 52

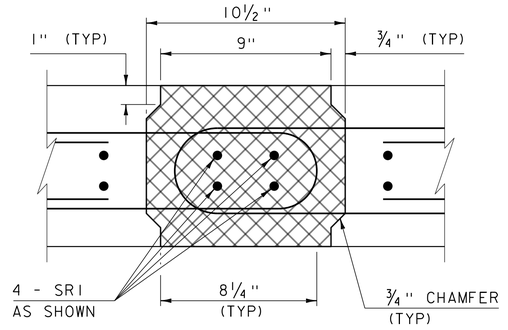


PBU 1 & 3

SCALE = 1½" = 1'-0"

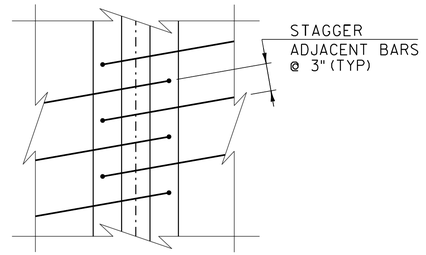
NOTE:

1. PBU 1 SHOWN, PBU 3 IS SIMILAR



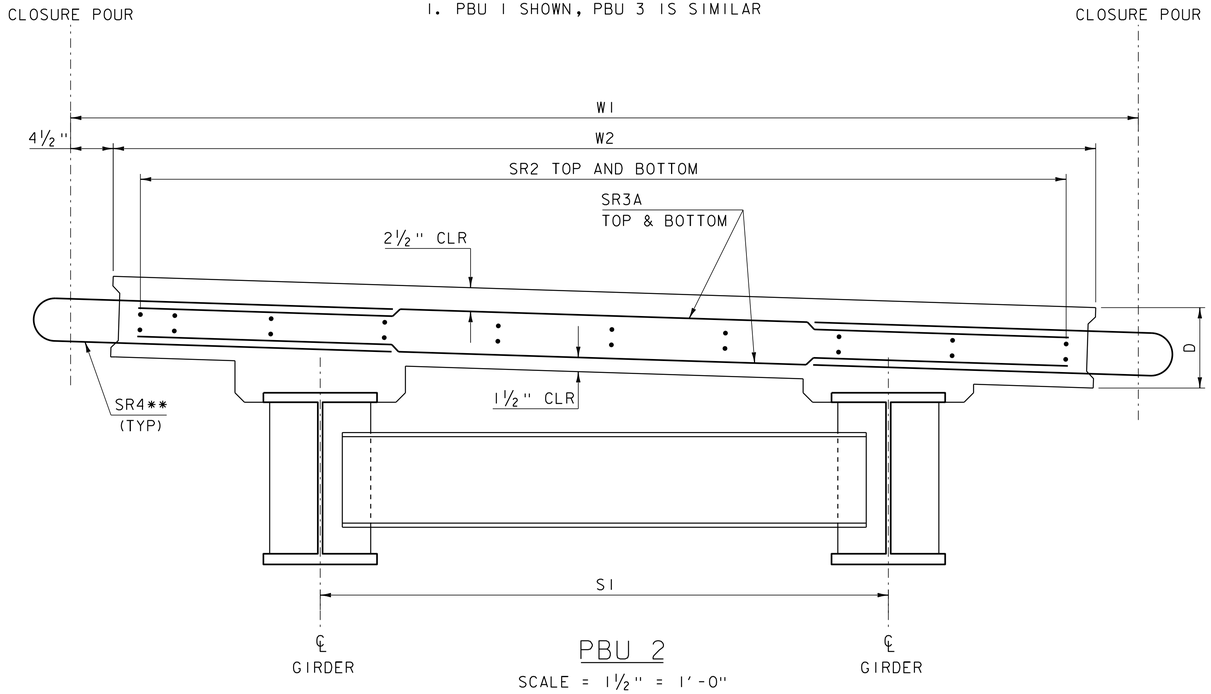
CONNECTION DETAIL SECTION

NOT TO SCALE



CONNECTION DETAIL PLAN

NOT TO SCALE



PBU 2

SCALE = 1½" = 1'-0"

PBU BEAM REINFORCING CHART

BAR	SIZE	SPACING	TYPE
SR1	4	AS SHOWN	STR
SR2	5	9"	STR
SR3A	4	6"	STR
SR3B	4	6"	1
SR4	4	6"	S11
SR5	4	8"	2
SR6	4	6"	1

PBU BEAM DIMENSIONS

D	8½"
W1	9'-4¾"
W2	8'-7¾"
W3	9'-5⅝"
W4	9'-1⅛"
S1	5'-0"

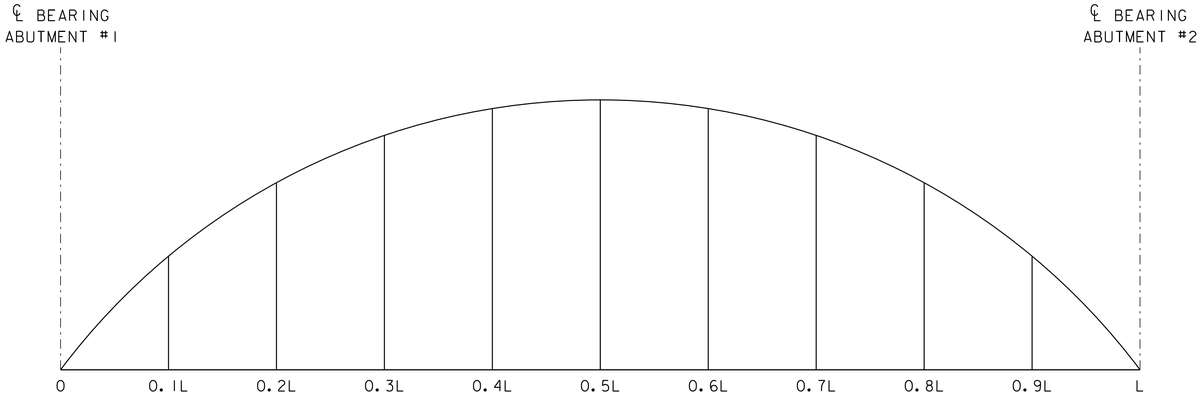
NOTE:

* VERTICAL LEGS TO BE SET PLUM IN FINAL CONDITION
** TO BE STAGGERED WITH ADJACENT BEAM
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS
2' - 7" #5 BAR LAP LENGTH
2' - 1" #4 BAR LAP LENGTH

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

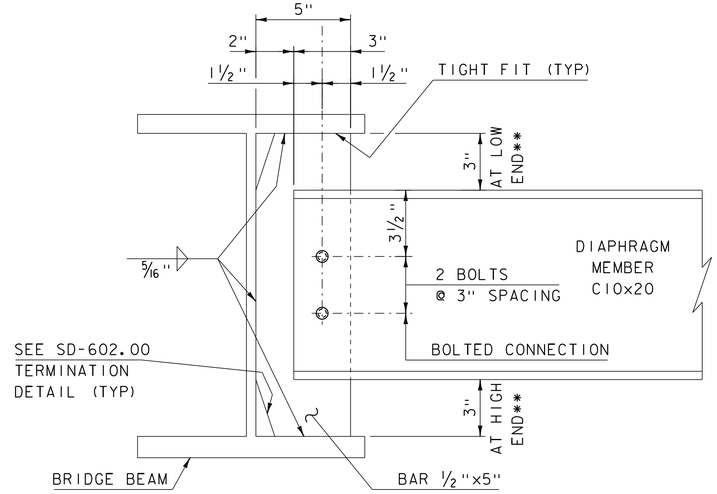
FILE NAME: sl3j088sup.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: T. MATTHEWS
PBU DETAILS SHEET 1

PLOT DATE: 31-AUG-2016
DRAWN BY: T. MATTHEWS
CHECKED BY: J. GRIGAS
SHEET 25 OF 52



CAMBER DIAGRAM

NOT TO SCALE
SEE TABLES BELOW



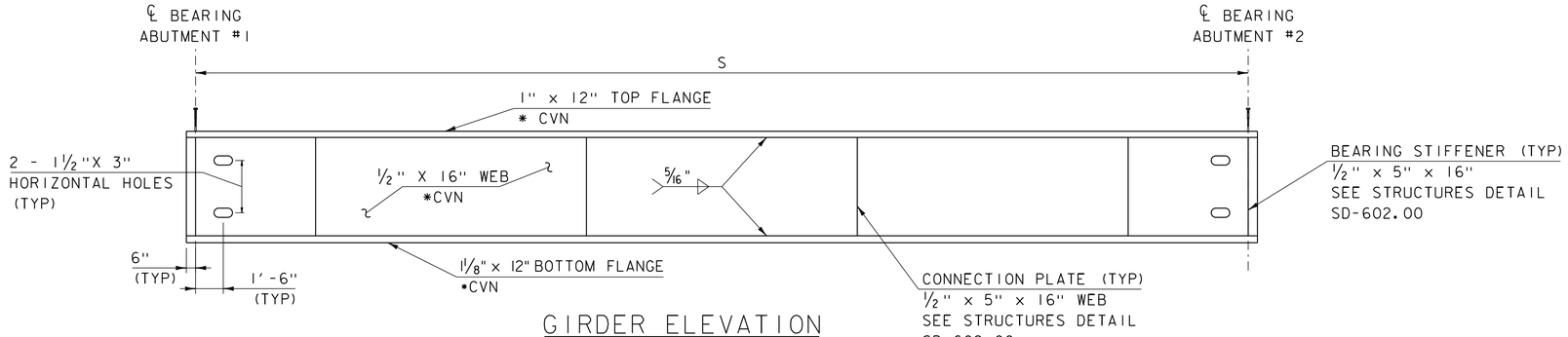
DIAPHRAGM DETAIL

SCALE 3" = 1'-0"

	0	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	L
Steel Deflection	0	3/16	5/16	7/16	1/2	1/2	1/2	7/16	5/16	3/16	0
Slab & Super Deflection	0	13/16	1 1/2	2 1/16	2 3/8	2 1/2	2 3/8	2 1/16	1 1/2	13/16	0
Total Deflection	0	15/16	1 13/16	2 1/2	2 7/8	3 1/16	2 7/8	2 1/2	1 13/16	15/16	0
Residual Camber	0	3/8	5/8	13/16	15/16	1	15/16	13/16	5/8	3/8	0
Total Camber	0	1 5/16	2 7/16	3 5/16	3 7/8	4 1/16	3 7/8	3 5/16	2 7/16	1 5/16	0

WELDED SHEAR STUD CONNECTOR TABLE (S)

GIRDER	SIZE	SPACING
G1	7/8" X 9"	10"
G2	7/8" X 7"	10"
G3	7/8" X 9"	10"
G4	7/8" X 7"	10"
G5	7/8" X 9"	10"
G6	7/8" X 7"	10"



GIRDER ELEVATION

SCALE: HORIZ: ¼" = 1'-0"
VERT: 1" = 1'-0"

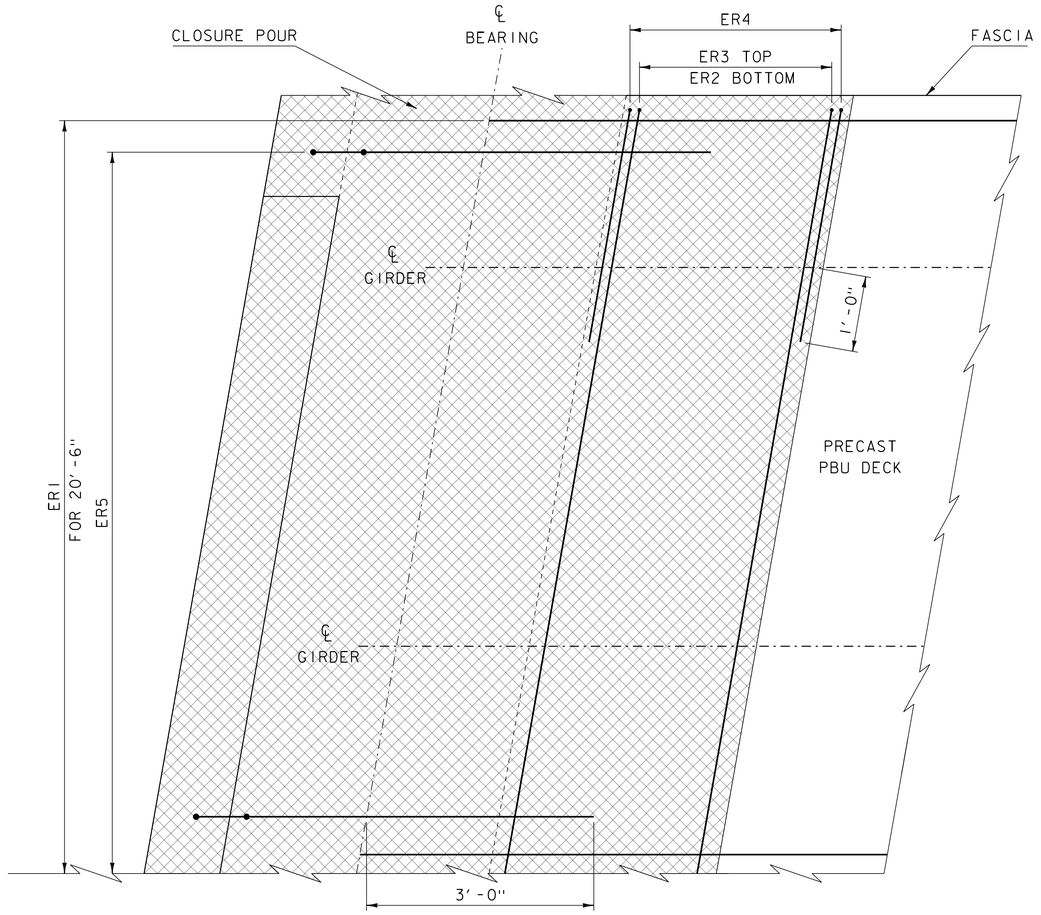
* CVN DENOTES THAT CHARPY V-NOTCH TEST IS REQUIRED

** TEMPORARY DIAPHRAGMS TO BE SLOPED IN ORDER TO MAINTAIN CLEARANCE

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

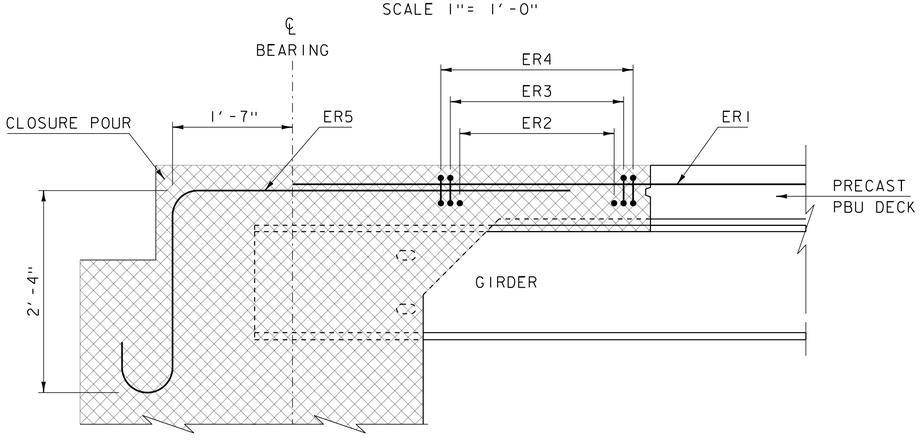
FILE NAME: sl3j088sup.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: T. MATTHEWS
PBU DETAILS SHEET 2

PLOT DATE: 31-AUG-2016
DRAWN BY: T. MATTHEWS
CHECKED BY: J. GRIGAS
SHEET 26 OF 52



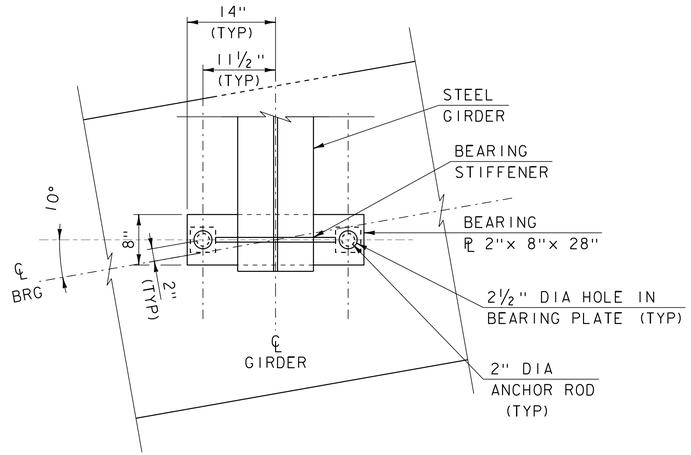
ADDITIONAL END REINFORCING PLAN VIEW

SCALE 1"= 1'-0"



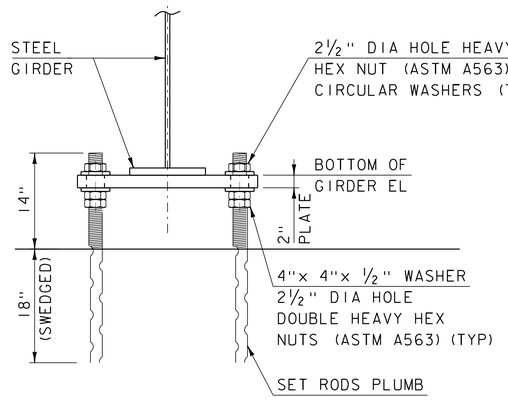
ADDITIONAL END REINFORCING ELEVATION VIEW

SCALE 1"= 1'-0"



TEMPORARY BEARING ASSEMBLY PLAN

SCALE 1"= 1'-0"



TEMPORARY BEARING ASSEMBLY ELEVATION

SCALE 1"= 1'-0"

TEMPORARY BEARING NOTES

1. PAYMENT FOR TEMPORARY BEARING ASSEMBLIES WILL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PRECAST CONCRETE ABUTMENT ITEMS.
2. BEARING PLATES SHALL BE LEVEL PRIOR TO SETTING PREFABRICATED BRIDGE UNITS. ELEVATIONS SHALL BE ADJUSTED TO WITHIN 0.01FT OF ELEVATIONS NOTED DURING OFF-SITE FABRICATION OF THE UNITS.
3. BEARING PLATE STEEL SHALL CONFORM TO SUBSECTION 714.03. ANCHOR RODS SHALL MEET THE REQUIREMENTS OF SUBSECTION 714.08, AND SHALL BE GRADE 55.

BOTTOM OF GIRDER ELEVATIONS		
GIRDER	ABUTMENT #1	ABUTMENT #2
G1	886.28	885.39
G2	886.28	885.39
G3	886.00	884.95
G4	886.00	884.95
G5	885.72	884.50
G6	885.72	884.50

ADDITIONAL END REINFORCING CHART

BAR	SIZE	SPACING	TYPE
ER1	5	9"	STR
ER2	4	6"	STR
ER3	4	6"	1
ER4	4	6"	1
ER5	8	6"	18

* BAR LABELED SR2 IS OMITTED FOR CLARITY ALONG WITH BARS DETAILED IN PBU ABUTMENT REINFORCING SHEET AND PBU CLOSURE POUR REINFORCING SHEET.

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)

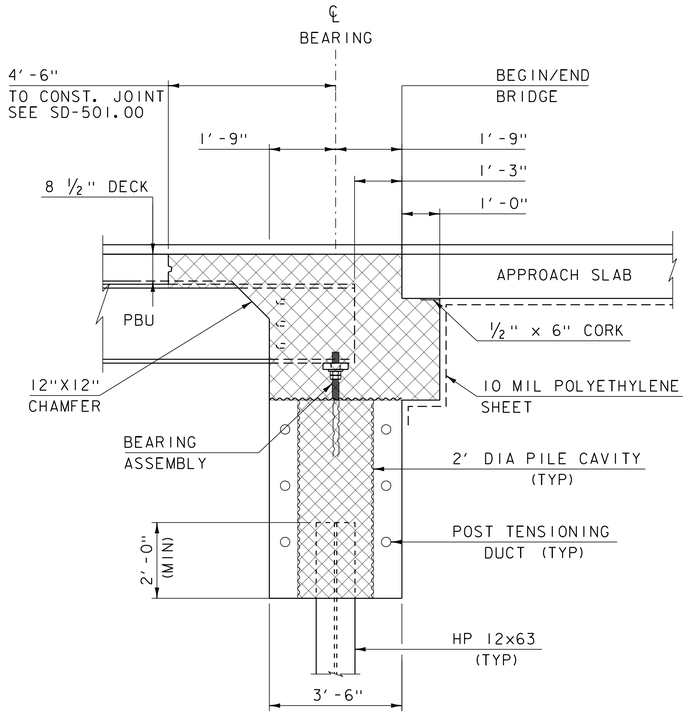
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-7" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

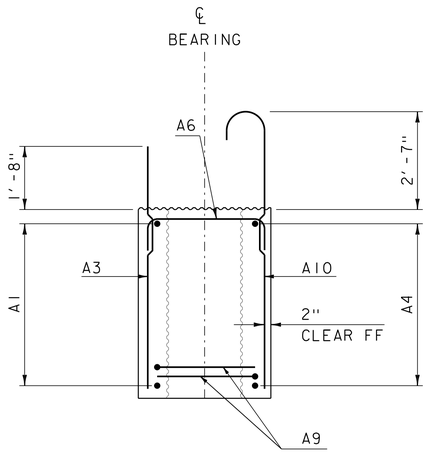
PROJECT NAME: STRAFFORD
PROJECT NUMBER: 0177(10)

FILE NAME: sl3j088sup.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: T. MATTHEWS
PBU AND BEARING DETAILS SHEET

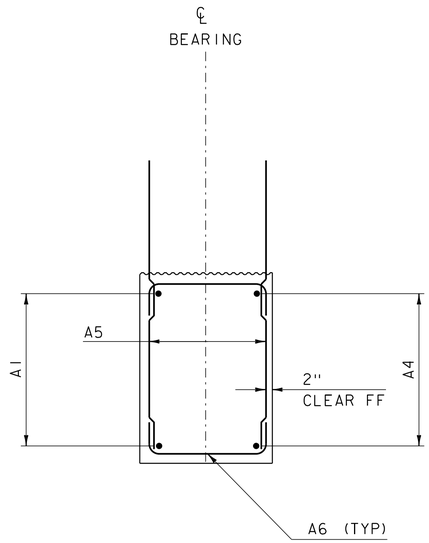
PLOT DATE: 31-AUG-2016
DRAWN BY: T. MATTHEWS
CHECKED BY: J. GRIGAS
SHEET 27 OF 52



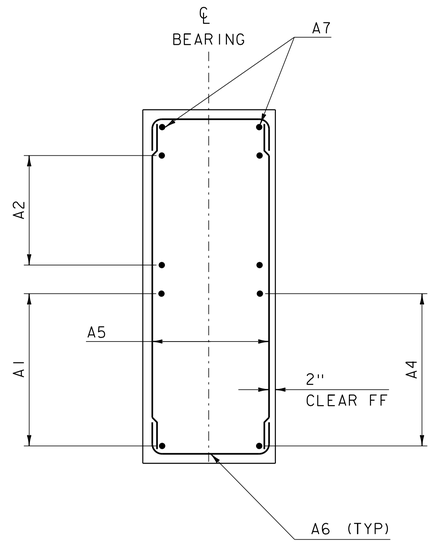
ABUTMENT TYPICAL
NOT TO SCALE



ABUTMENT REINFORCING
AT BRIDGE SEAT
NOT TO SCALE



ABUTMENT REINFORCING
AT CAST IN PLACE CHEEK WALL
NOT TO SCALE



ABUTMENT REINFORCING
AT PRECAST CHEEK WALL
NOT TO SCALE

NOTE:

1. SEE ABUTMENT REINFORCING SHEET FOR REINFORCING TABLE.
2. 10 MIL POLYETHYLENE SHEET WILL BE CONSIDERED INCIDENTAL TO PAY ITEM 501.34 "HIGH PERFORMANCE CONCRETE, CLASS B (FPQ)"

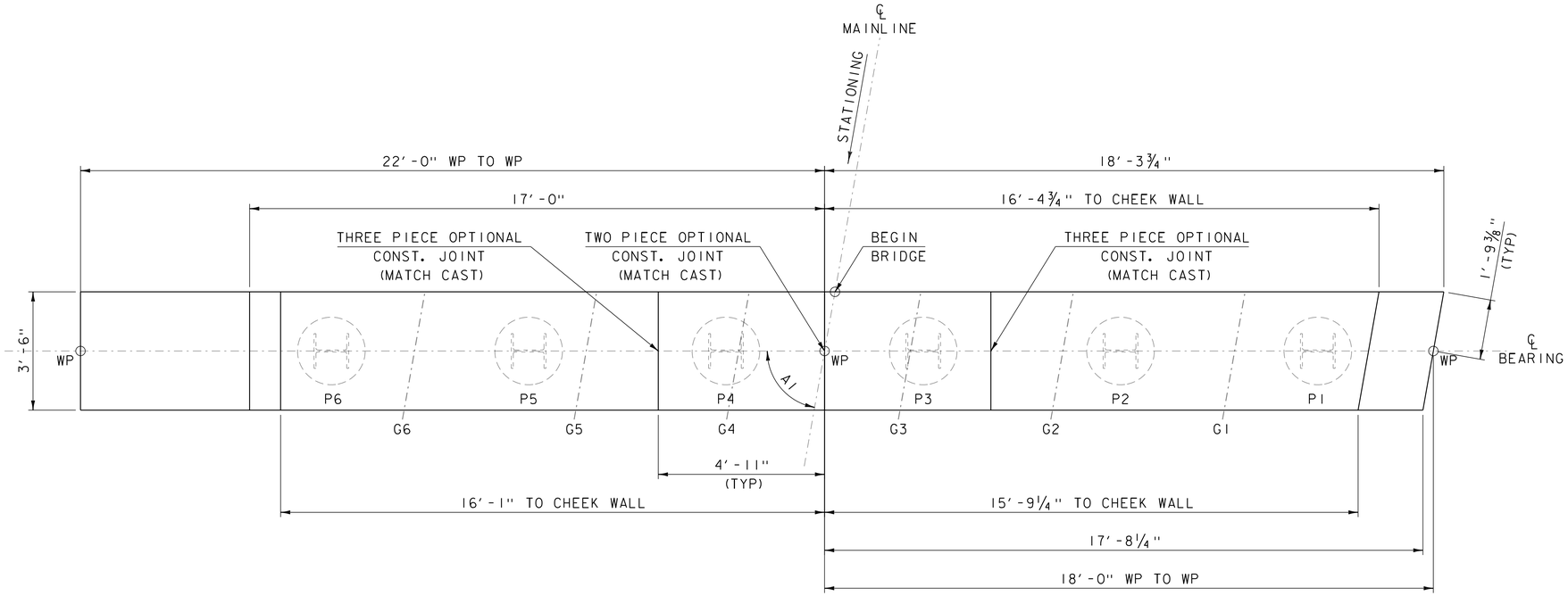
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE
SPECIFIED ON THE PLANS.

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)

PROJECT NAME:	STRAFFORD
PROJECT NUMBER:	BF 0177(10)

FILE NAME: sl3j088subl.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY: G. LAROCHE
ABUTMENT TYPICALS SHEET	SHEET 28 OF 52

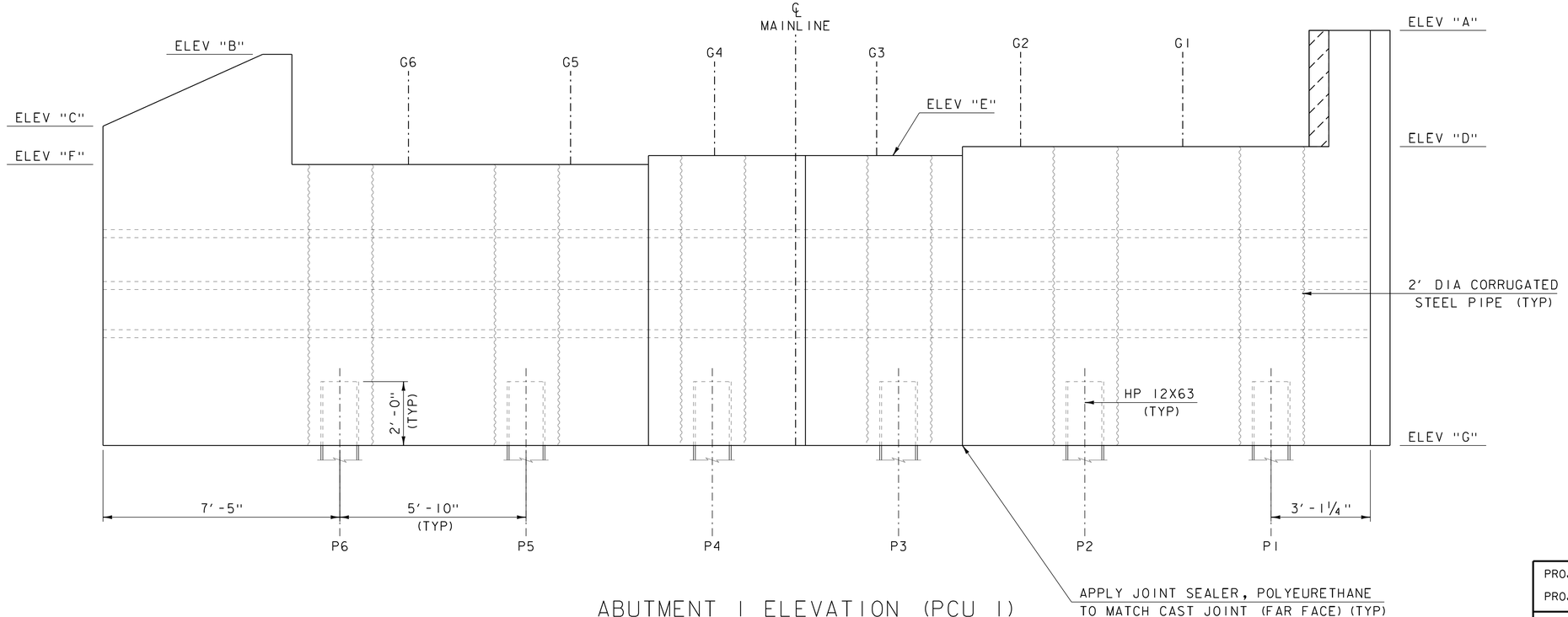


ABUTMENT I PLAN (PCU 1)

SCALE ½" = 1′-0

ABUTMENT ELEVATIONS

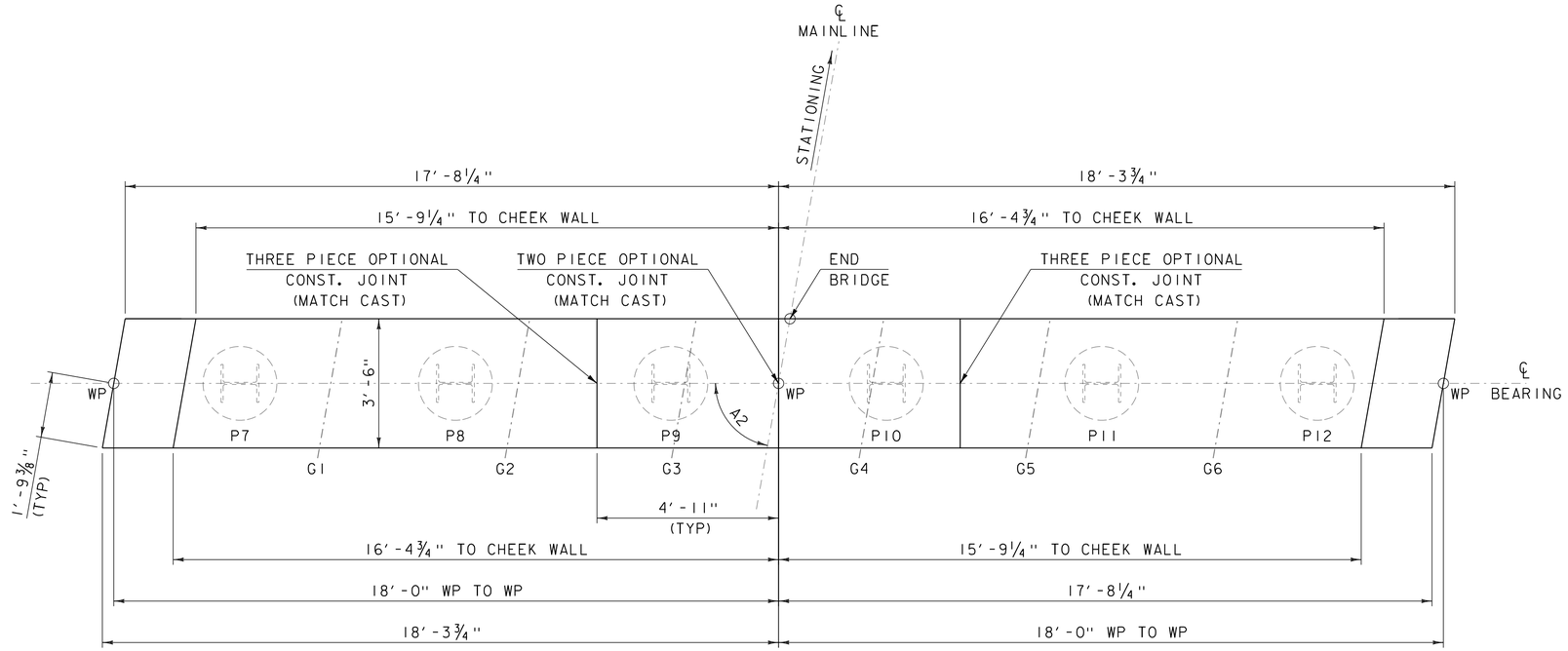
	AB 1
ANGLE "A1"	80°
ELEV "A"	889.25
ELEV "B"	888.50
ELEV "C"	886.25
ELEV "D"	885.61
ELEV "E"	885.33
ELEV "F"	885.05
ELEV "G"	876.25



ABUTMENT 1 ELEVATION (PCU 1)

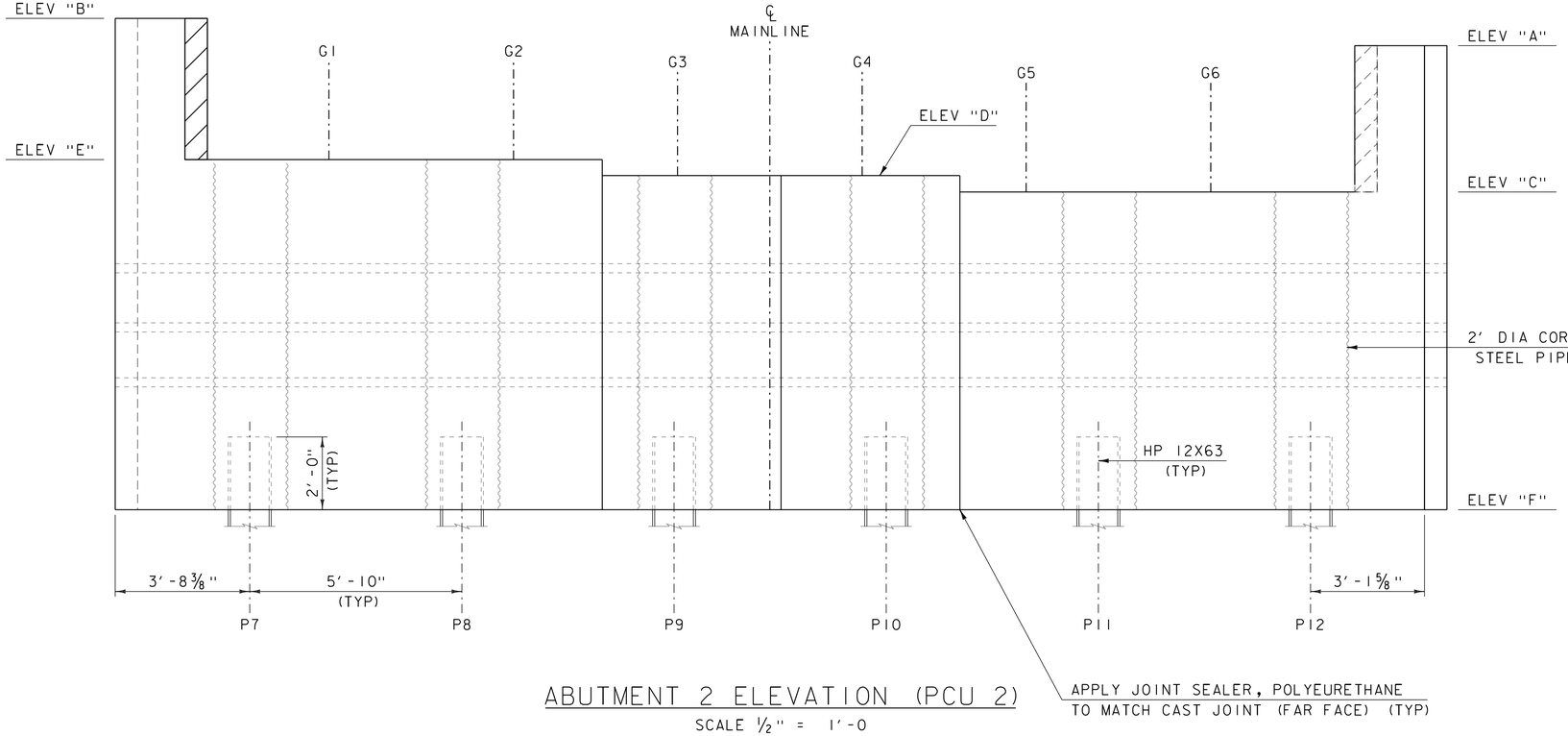
SCALE ½" = 1′-0

PROJECT NAME:	STRAFFORD
PROJECT NUMBER:	BF 0177(110)
FILE NAME: sl3j088subl.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY: G. LAROCHE
ABUTMENT 1 PLAN SHEET	SHEET 29 OF 52



ABUTMENT 2 PLAN (PCU 2)

SCALE ½" = 1′-0



ABUTMENT 2 ELEVATION (PCU 2)

SCALE ½" = 1′-0

ABUTMENT ELEVATIONS

	AB 2
ANGLE "A2"	80°
ELEV "A"	887.85
ELEV "B"	888.60
ELEV "C"	883.83
ELEV "D"	884.28
ELEV "E"	884.72
ELEV "F"	875.10

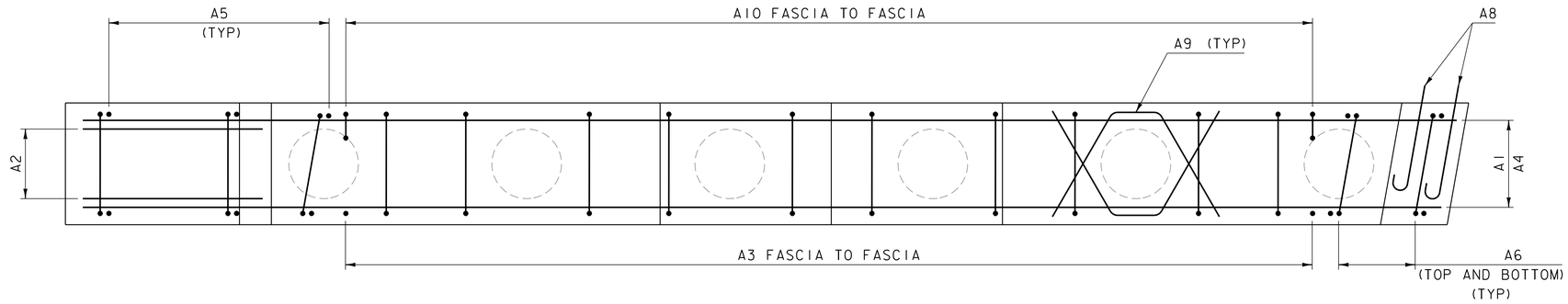
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
1′-9" A6 LEG LENGTH
2′-7" #5 LAP LENGTH
TRANSVERSE BARS SHALL NOT EXTEND THROUGH VERTICAL CONSTRUCTION JOINTS

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088sub2.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
ABUTMENT 2 PLAN SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 30 OF 52

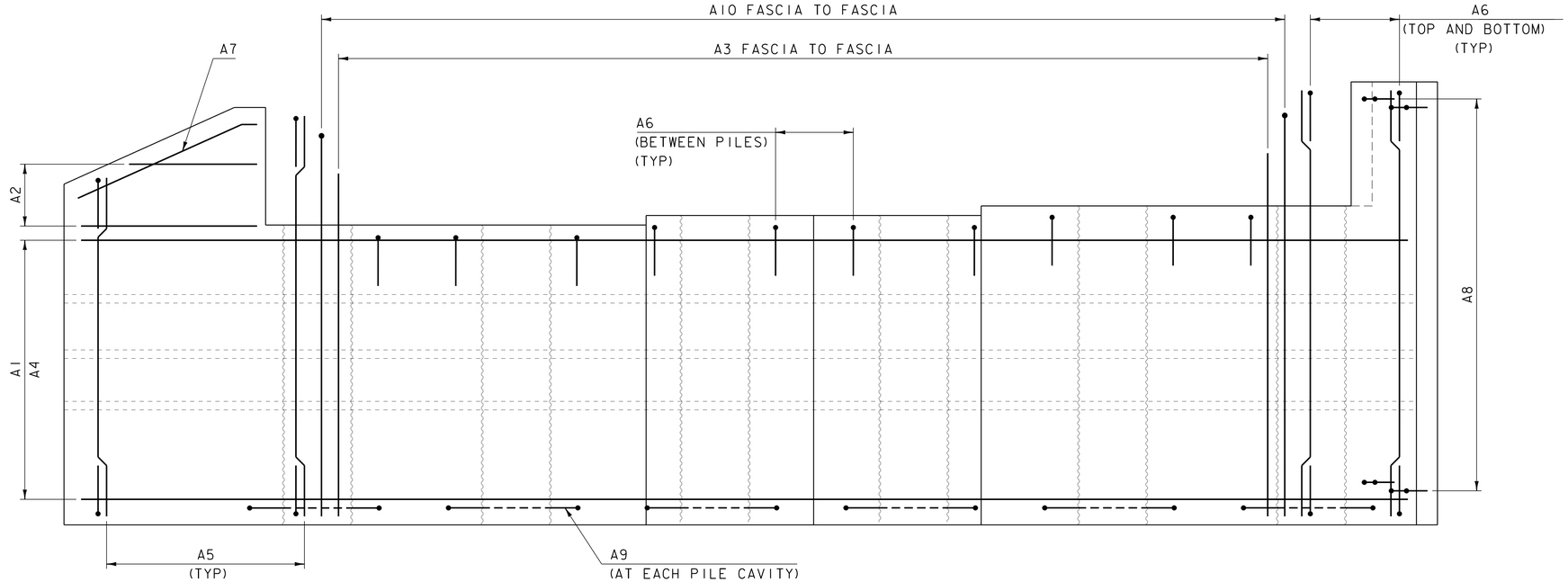


ABUTMENT I REINFORCING PLAN (PCU 1)

SCALE ½" = 1'-0

ABUTMENT REINFORCING

BAR	SIZE	SPACING	FACE	TYPE
A1	5	9"	NF	STR
A2	5	9"	EF	STR
A3	5	9"	NF	STR
A4	5	9"	FF	STR
A5	5	9"	EF	STR
A6	5	9"	---	S10
A7	5	AS SHOWN	EF	19
A8	5	9"	EF	1
A9	6	AS SHOWN	EF	14
A10	8	6	FF	1



ABUTMENT I REINFORCING ELEVATION (PCU 1)

SCALE ½" = 1'-0

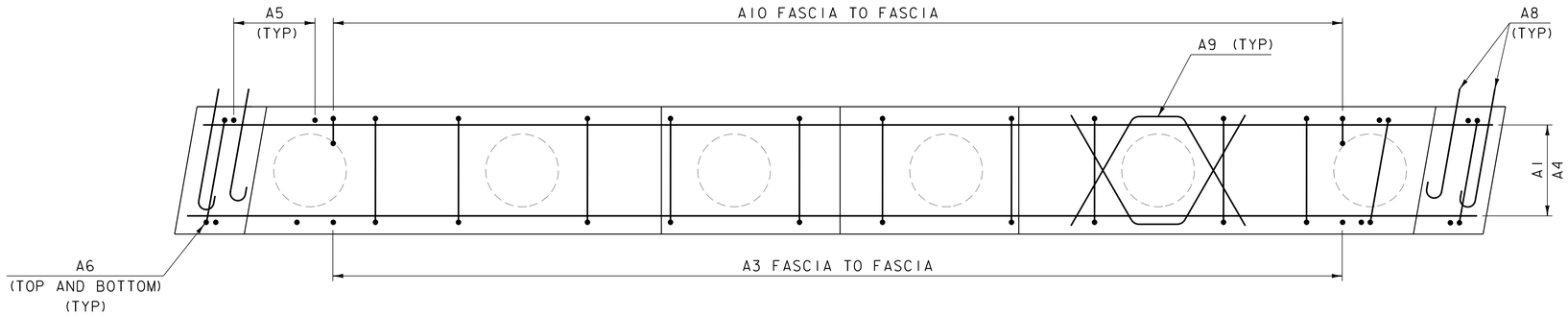
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE
SPECIFIED ON THE PLANS.
1'-9" A6 LEG LENGTH
2'-7" #5 LAP LENGTH
TRANSVERSE BARS SHALL NOT EXTEND
THROUGH VERTICAL CONSTRUCTION JOINTS

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

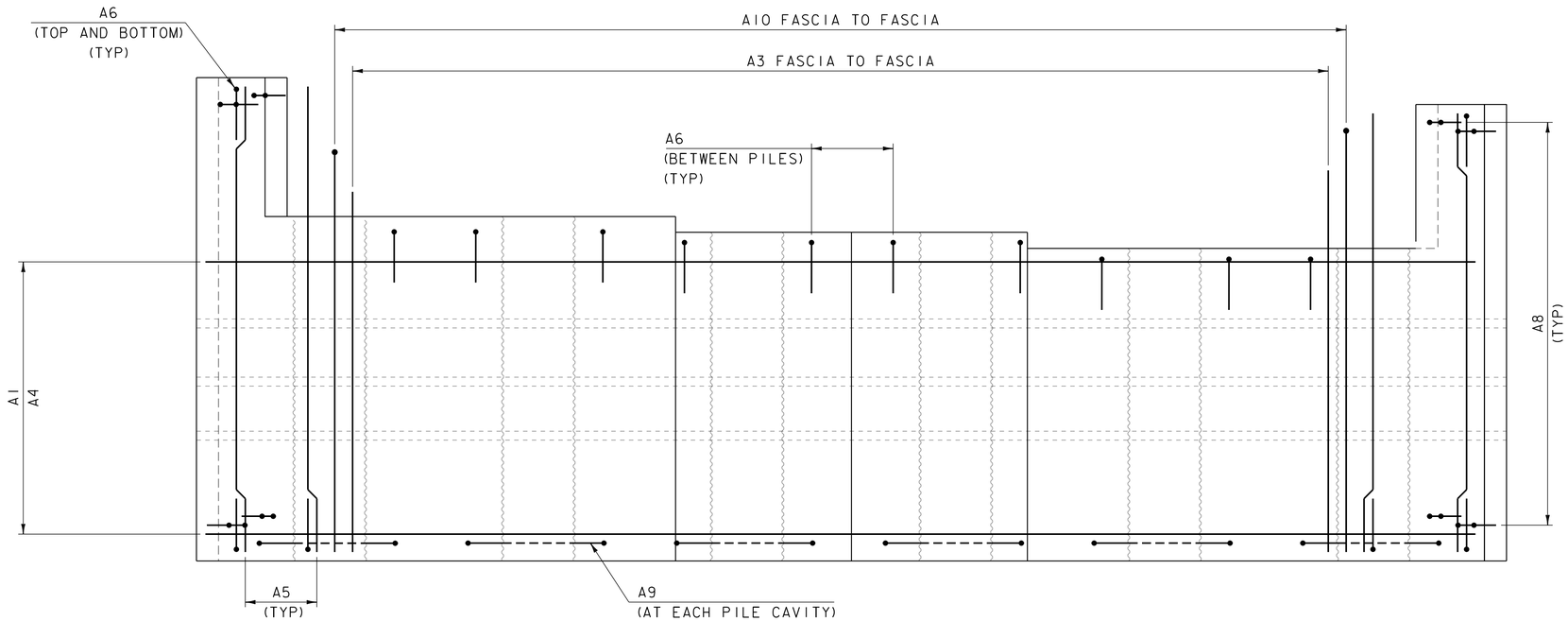
FILE NAME: sl3j088subl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
ABUTMENT I REINFORCING SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 31 OF 52



ABUTMENT 2 REINFORCING PLAN (PCU 1)

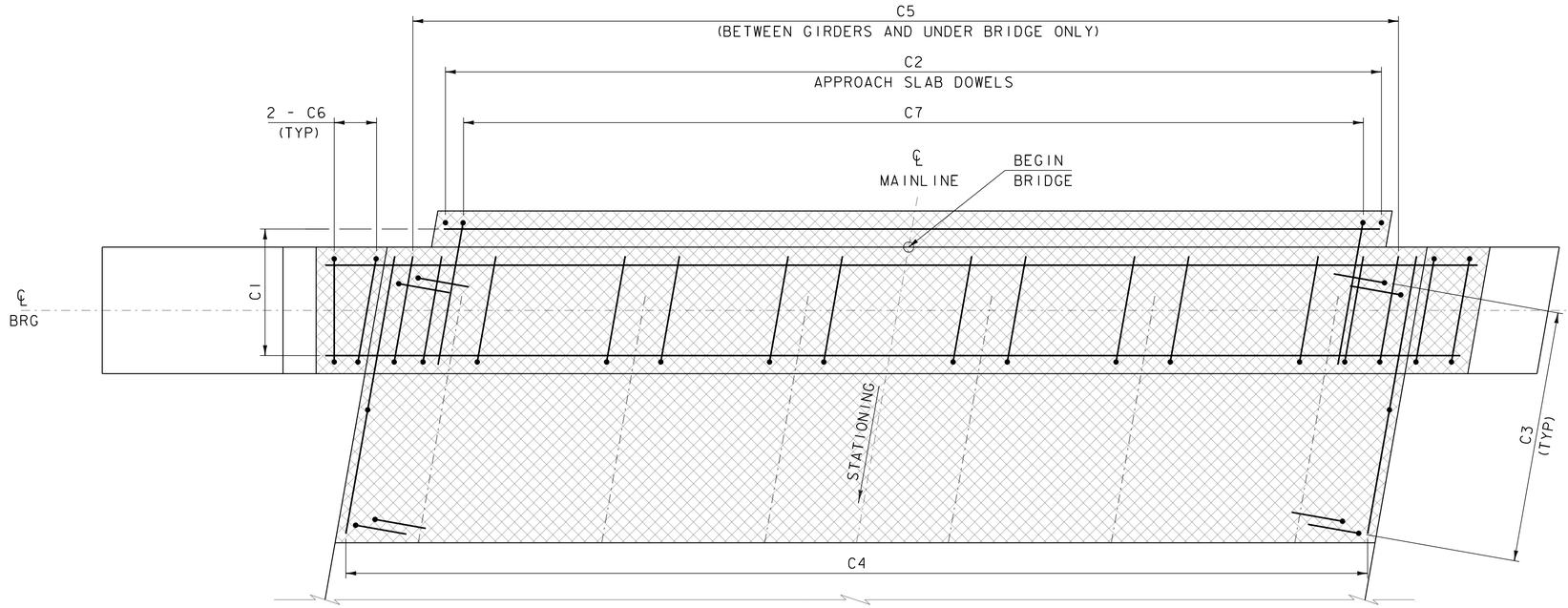
SCALE ½" = 1'-0



ABUTMENT 2 REINFORCING ELEVATION (PCU 2)

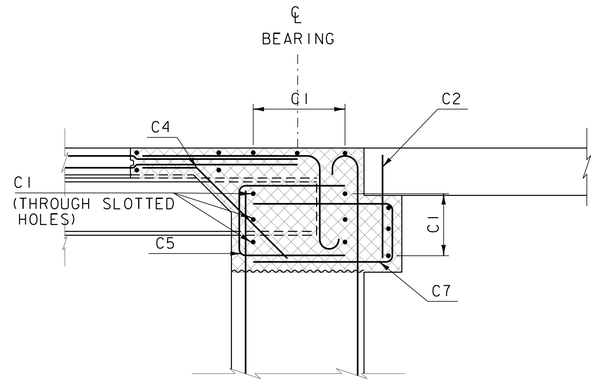
SCALE ½" = 1'-0

PROJECT NAME: STRAFFORD	
PROJECT NUMBER: BF 0177(10)	
FILE NAME: sl3j088sub2.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY: G. LAROCHE
ABUTMENT 2 REINFORCING SHEET	SHEET 32 OF 52



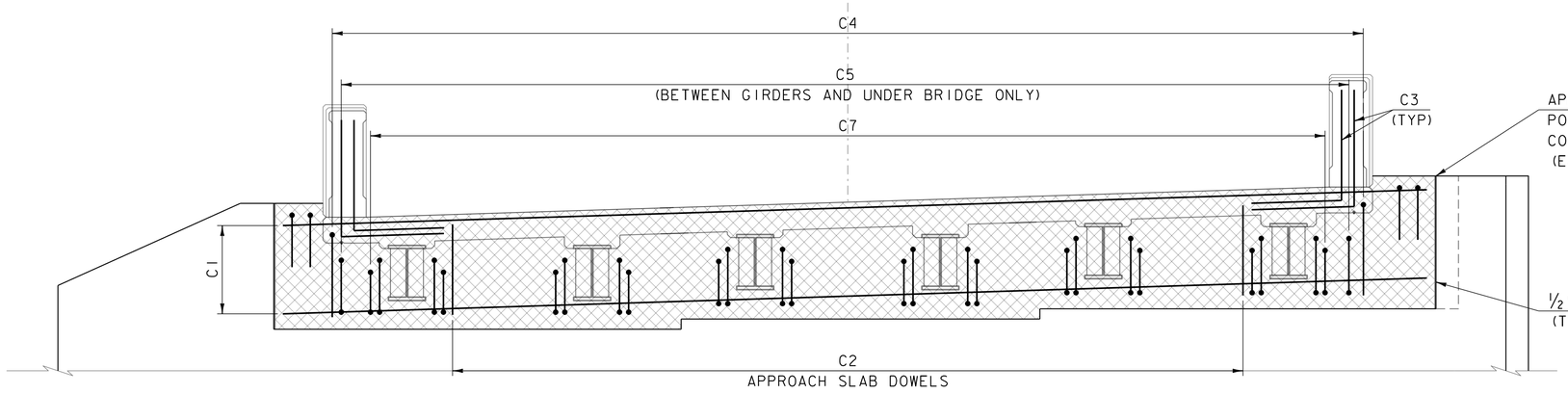
DECK CLOSURE POUR REINFORCING PLAN

SCALE ½" = 1'-0



ABUTMENT ELEVATION AT BRIDGE

SCALE ½" = 1'-0

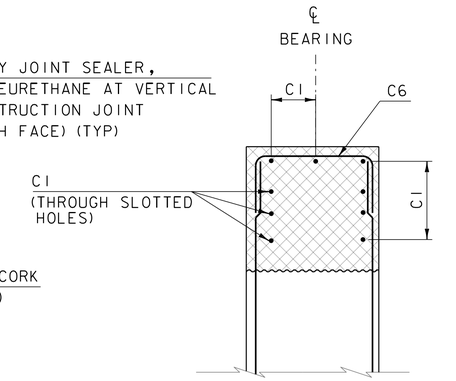


CLOSURE POUR REINFORCING

BAR	SIZE	SPACING	FACE	TYPE
C1	5	AS SHOWN	EF	STR
C2	5	12"	FF	STR
C3	4	8"	---	20
C4	5	9"	---	19
C5	5	12"	---	S10
C6	5	9"	---	S10
C7	6	9"	---	S10

DECK CLOSURE POUR REINFORCING ELEVATION

SCALE ½" = 1'-0



ABUTMENT ELEVATION AT CHEEKWALL

SCALE ½" = 1'-0

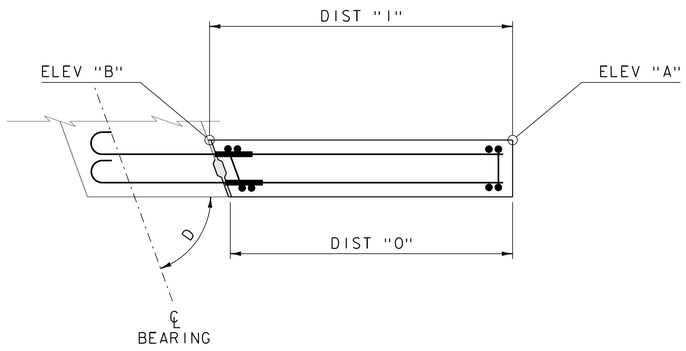
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-7" #5 LAP LENGTH
1'-9" C6 LEG LENGTH

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

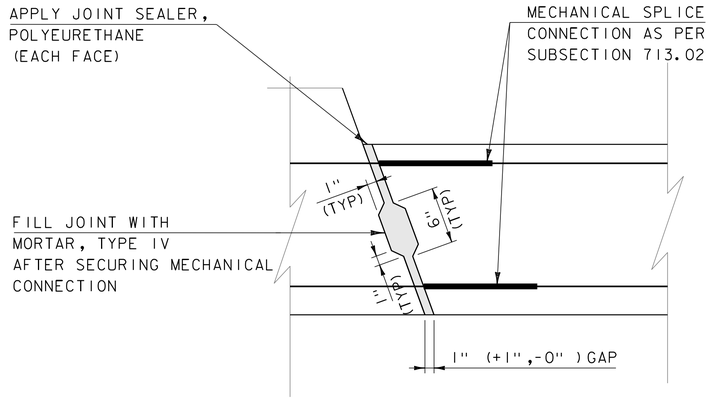
FILE NAME: sl3j088closurepour.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
CLOSURE POUR SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 33 OF 52



WING WALL PLAN

SCALE ½" = 1'-0"



WING WALL CONNECTION DETAIL

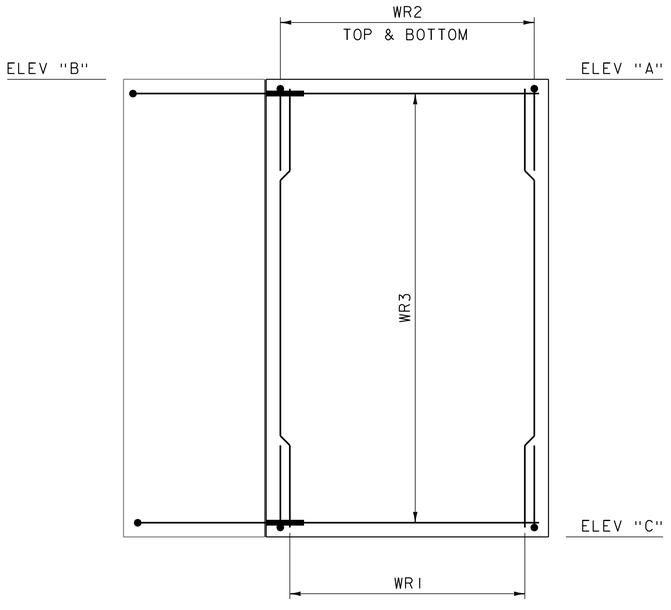
SCALE ½" = 1'-0"

PCU 3-5 ELEVATIONS

	WW1 (PCU 3)	WW3 (PCU 4)	WW4 (PCU 5)
ELEV "A"	889.25	888.10	887.35
ELEV "B"	889.25	888.60	887.85
ELEV "C"	876.25	875.10	875.10
DIST "W"	1'-6"	1'-6"	1'-6"
DIST "I"	9'-11"	9'-7⅞"	9'-11"
DIST "O"	9'-7⅞"	9'-11"	9'-7⅞"
ANGLE "D"	80°	100°	80°

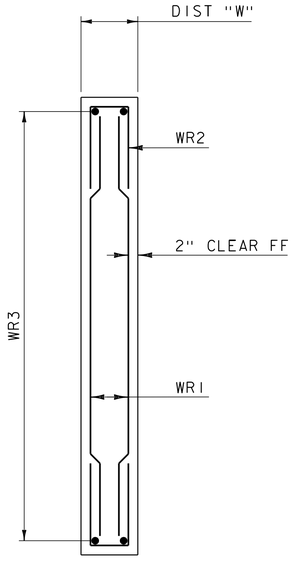
WING WALL REINFORCING

BAR	SIZE	SPACING	FACE	TYPE
WR1	5	9"	EF	STR
WR2	5	9"	EF	S10
WR3	5	9"	EF	STR



WING WALL ELEVATION

SCALE ½" = 1'-0"



WING WALL TYPICAL

SCALE ½" = 1'-0"

MORTAR, TYPE IV*

* PAYMENT FOR MORTAR, TYPE IV WILL BE INCLUDED IN THE APPROPRIATE PRECAST BID ITEM

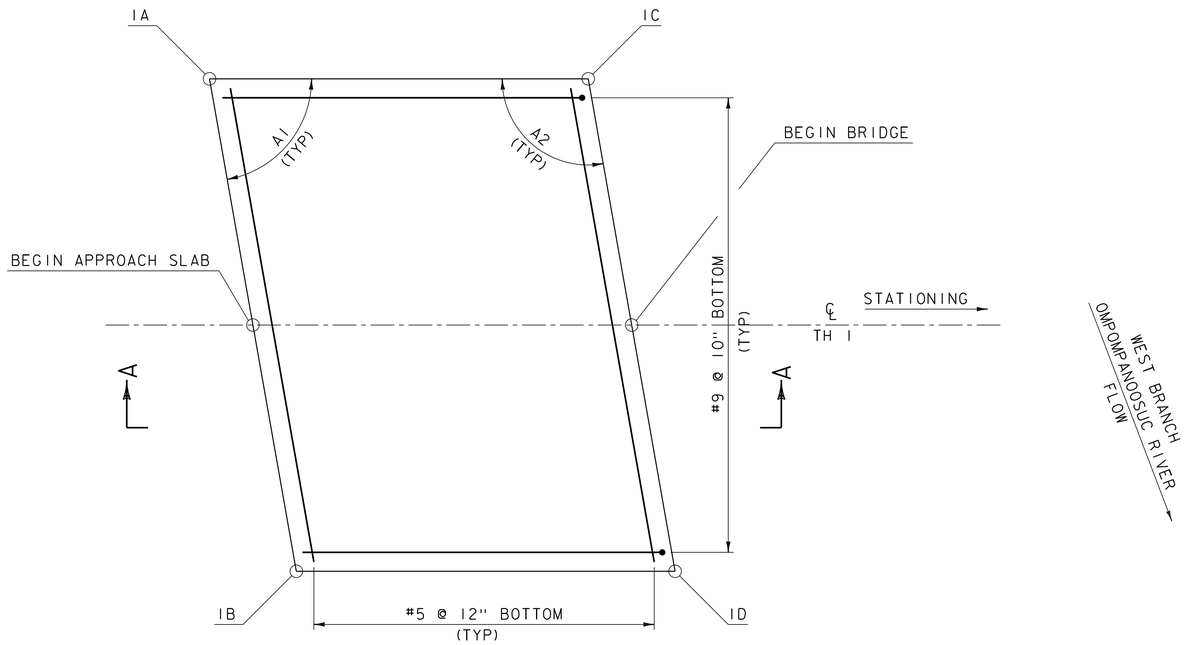
NOTE:

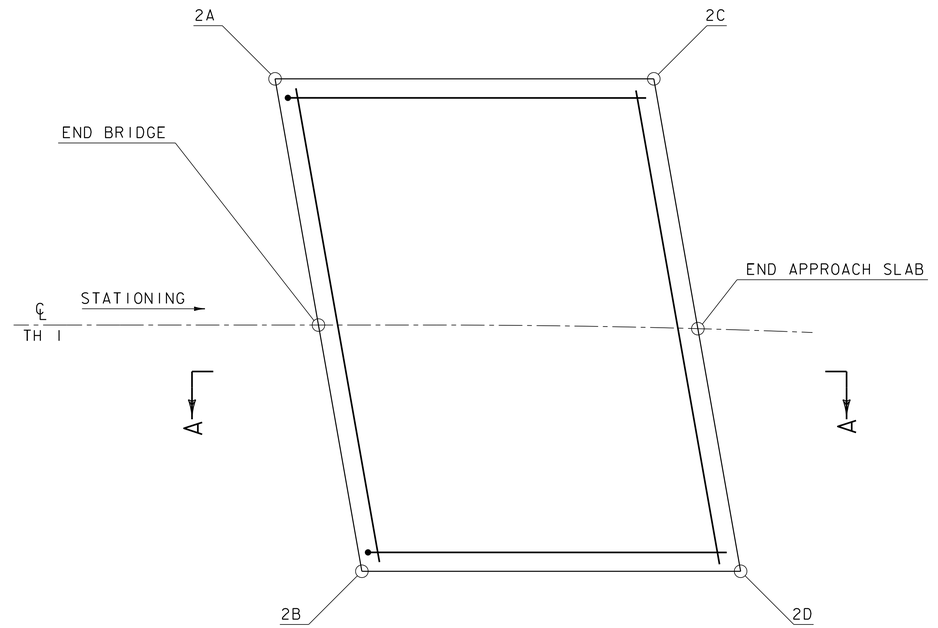
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-7" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

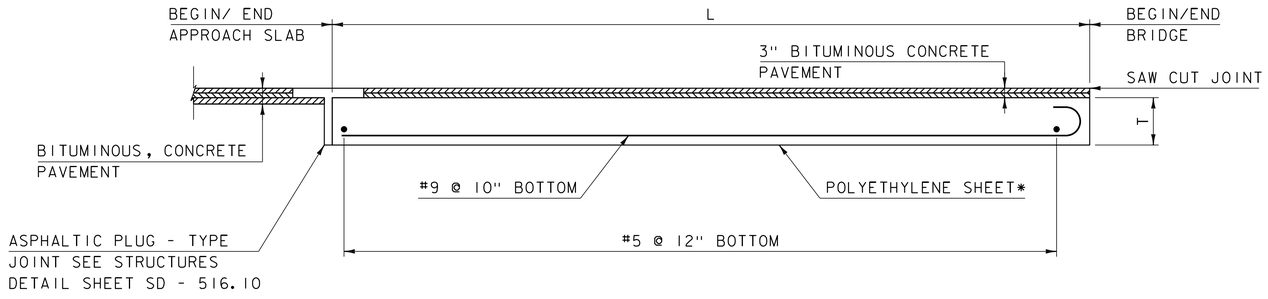
PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088ww.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
WING WALL DETAILS SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 34 OF 52







CAST-IN-PLACE APPROACH SLAB ELEVATION VIEW

SCALE ½" = 1'-0"

* POLYETHYLENE SHEET WILL BE CONSIDERED INCIDENTAL TO PAY ITEM 501.34 "HIGH PERFORMANCE CONCRETE, CLASS B (FPQ)"

ABUTMENT CLOSURE POUR REINFORCING "C2" NOT SHOWN FOR CLARITY

APPROACH SLAB #1			
	STATION	OFFSET	ELEVATION
1A	11+62.93	13'-0" LT	889.01
BEGIN AS #1	11+65.22	℄	888.71
1B	11+67.52	13'-0" RT	888.39
1C	11+82.93	13'-0" LT	888.86
END AS #1	11+85.22	℄	888.49
1D	11+87.51	13'-0" RT	888.10
APPROACH SLAB #2			
	STATION	OFFSET	ELEVATION
2A	12+43.48	13'-0" LT	888.05
BEGIN AS #2	12+45.78	℄	887.43
2B	12+48.07	13'-0" RT	886.81
2C	12+63.19	13'-1½" LT	887.63
END AS #2	12+65.81	℄	886.93
2D	12+68.49	12'-8⅞" RT	886.22

TOP OF SLAB ELEVATIONS

A1	80°
A2	100°
L	20'-0"
T	1'-3"

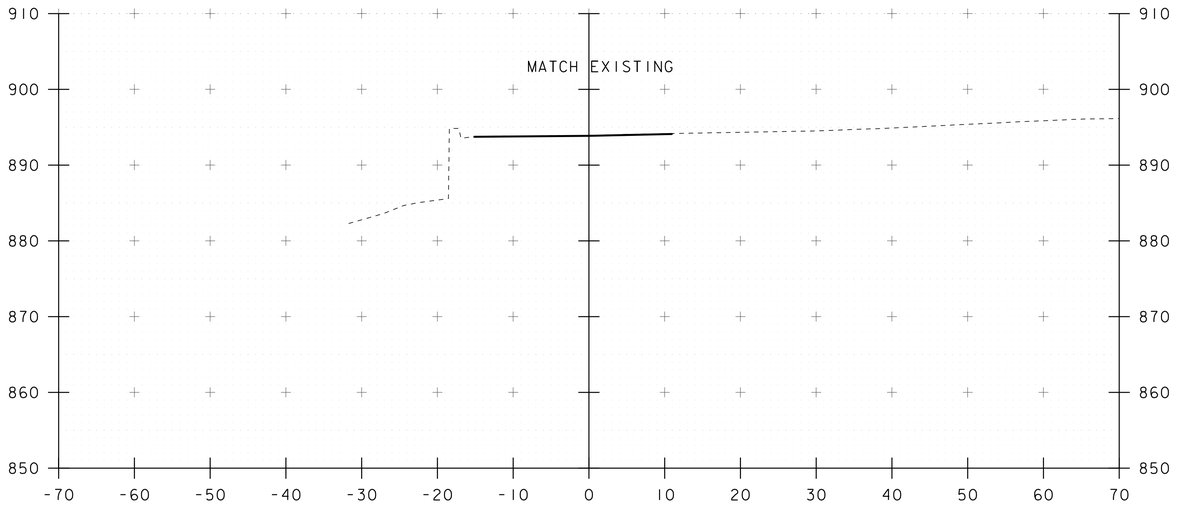
APPROACH SLAB DIMENSIONS

NOTES:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON PLANS.

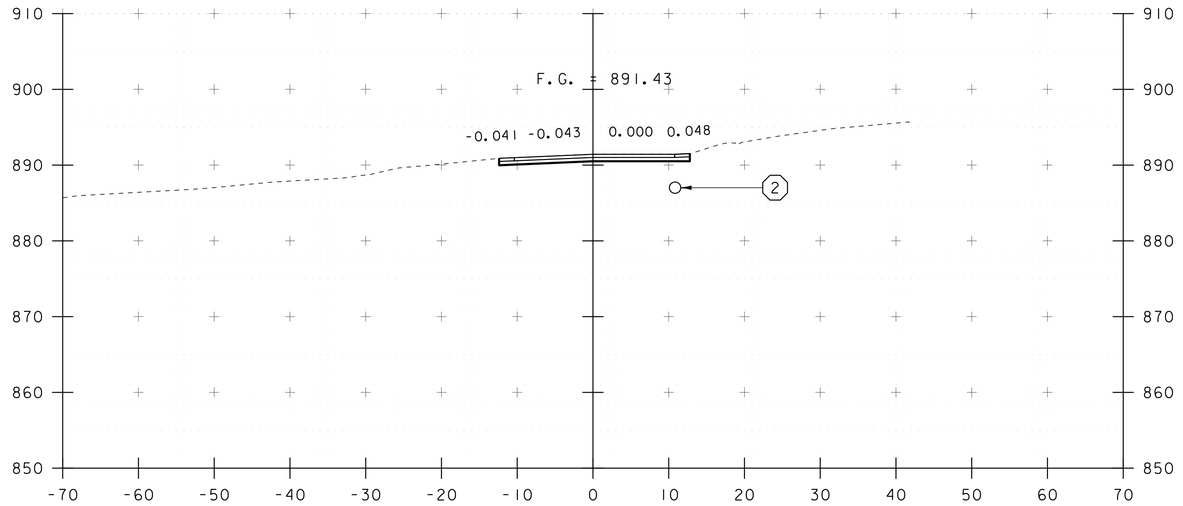
PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088appslab.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: S. COLEY
APPROACH SLAB DETAILS SHEET

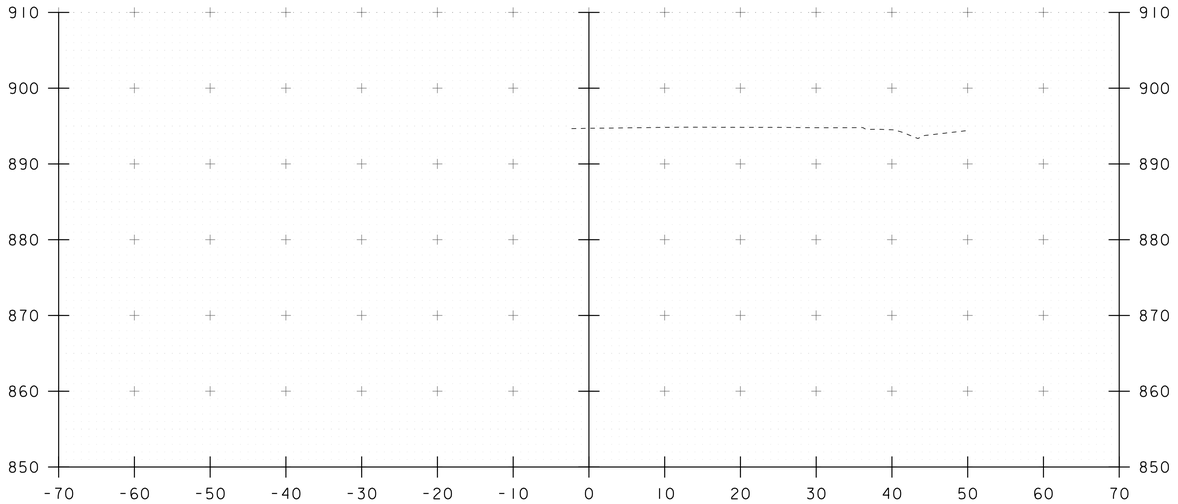
PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: G. LAROCHE
SHEET 35 OF 52



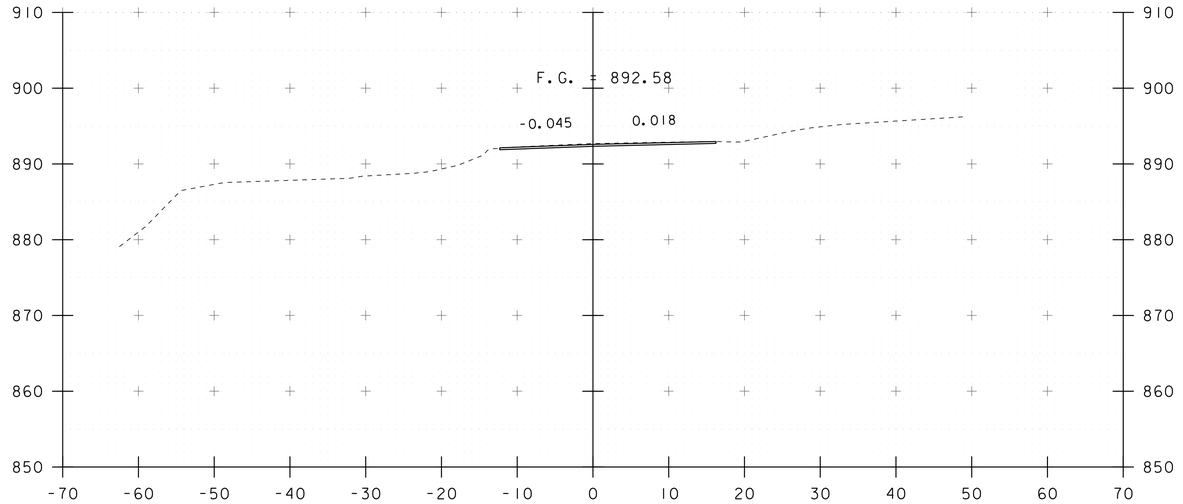
10+25
BEGIN APPROACH



10+75



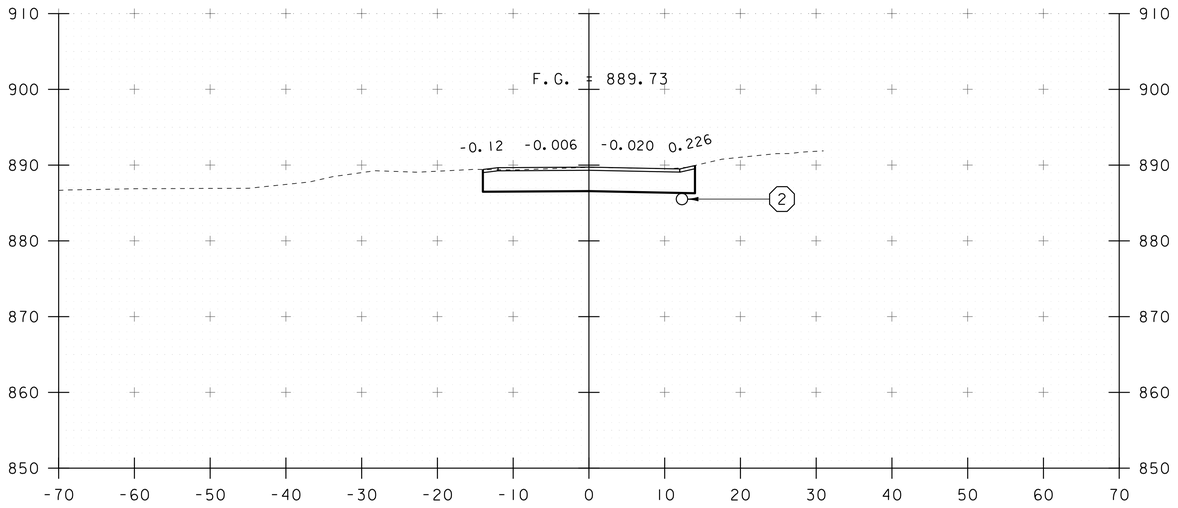
10+00



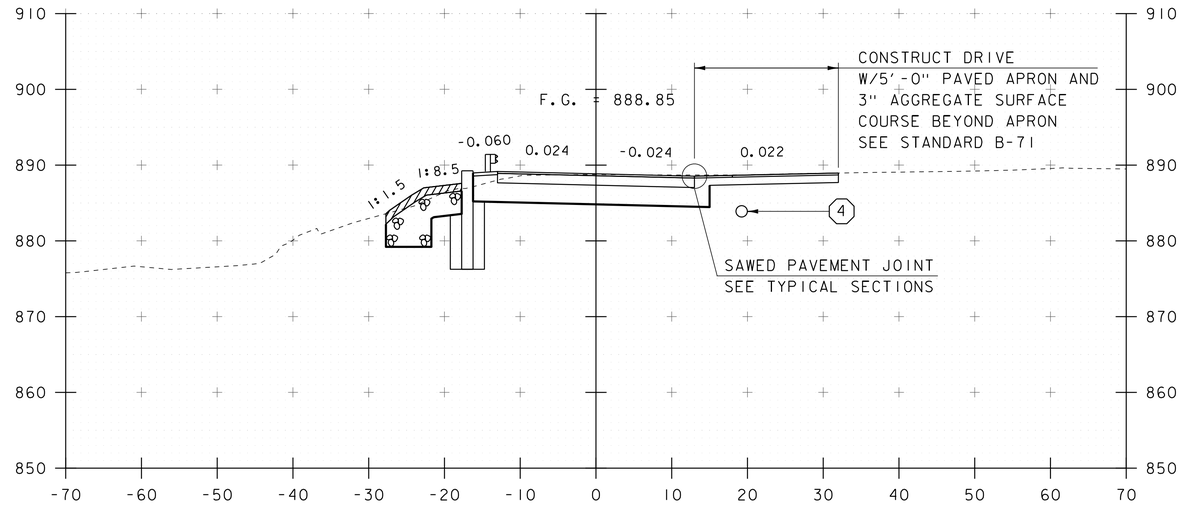
10+50

STA. 10+00 TO STA. 10+75

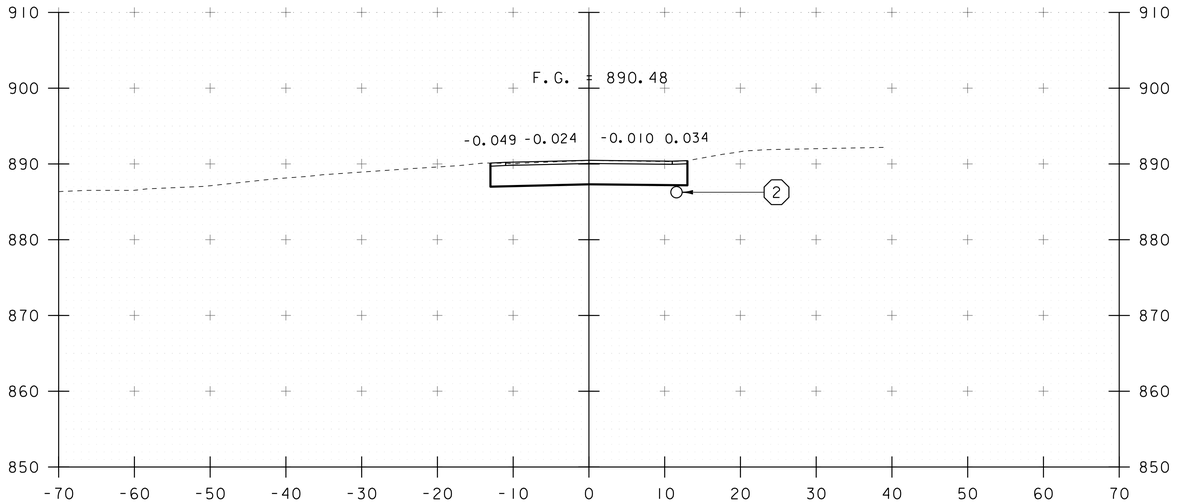
PROJECT NAME: STRAFFORD	
PROJECT NUMBER: BF 0177(10)	
FILE NAME: sl3j088xsl.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY: T. MATTHEWS
MAINLINE SECTIONS 1	SHEET 36 OF 52



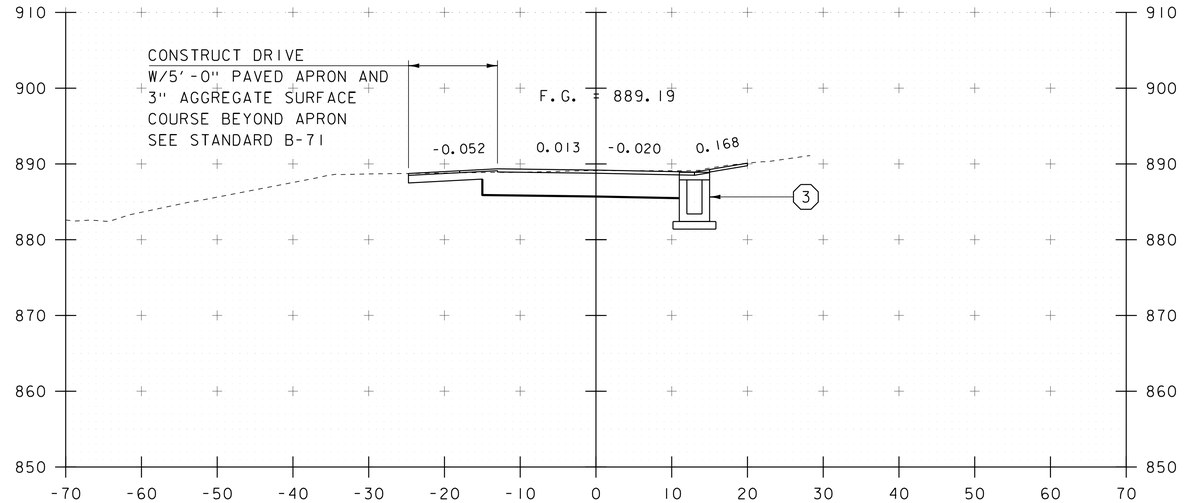
11+25



11+75
BEGIN BRIDGE STA 11+85.22



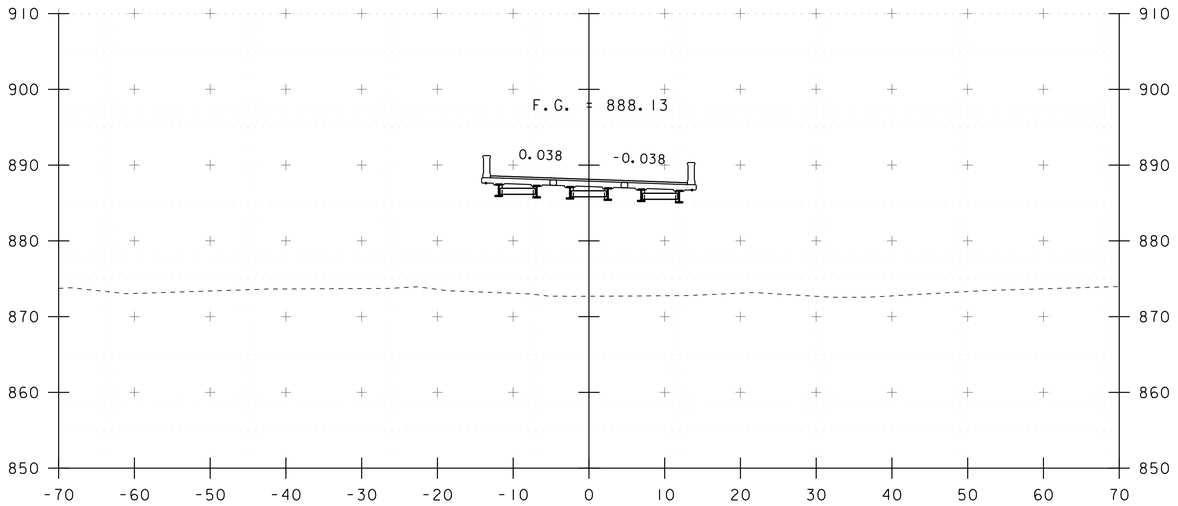
11+00
BEGIN PROJECT



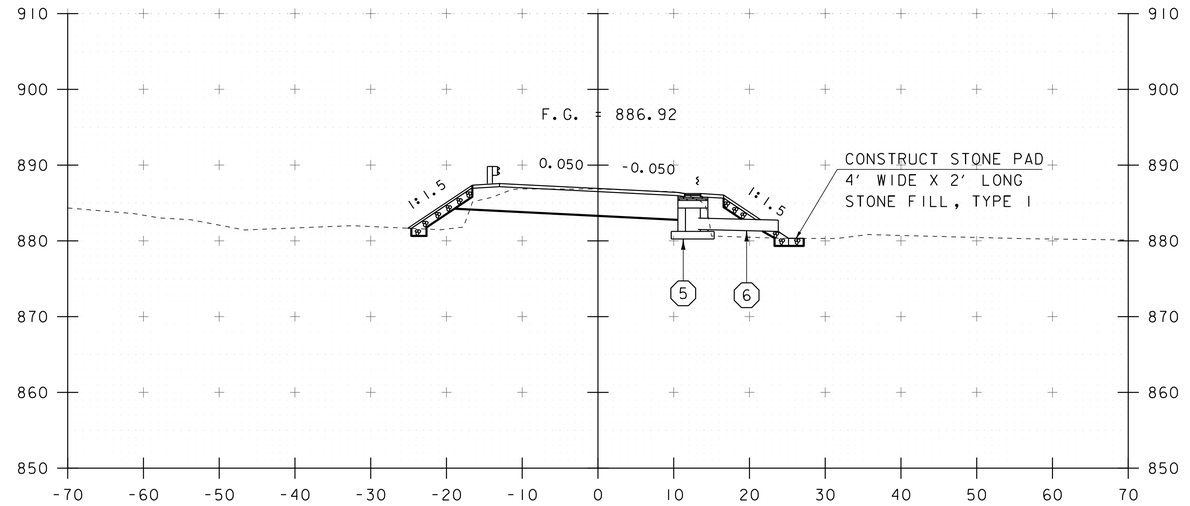
11+50

STA. 11+00 TO STA. 11+75

PROJECT NAME: STRAFFORD	
PROJECT NUMBER: BF 0177(10)	
FILE NAME: sl3j088xsl.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY: T. MATTHEWS
MAINLINE SECTIONS 2	SHEET 37 OF 52



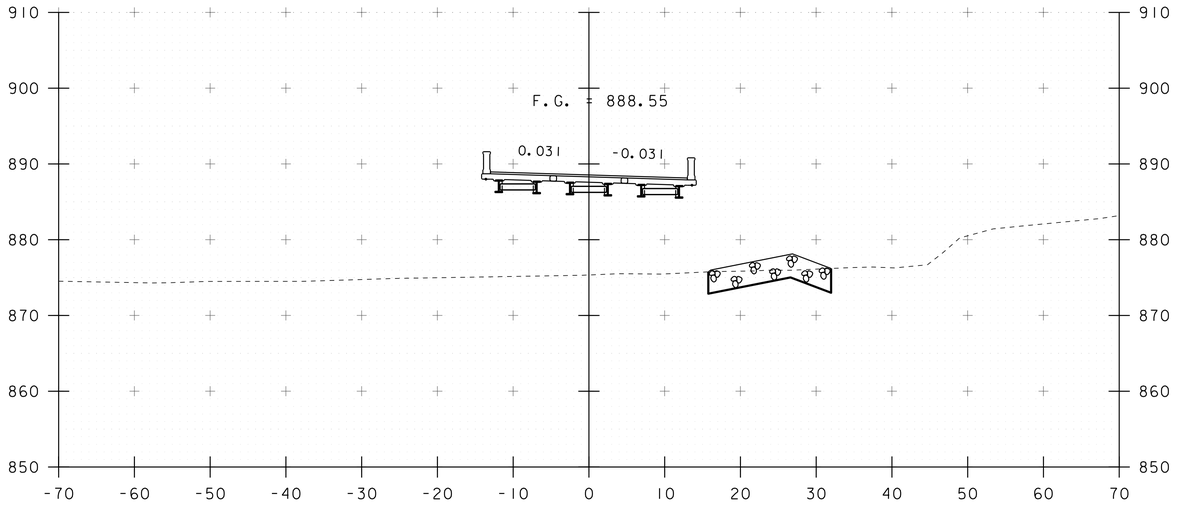
12+25
END BRIDGE STA 12+45.78



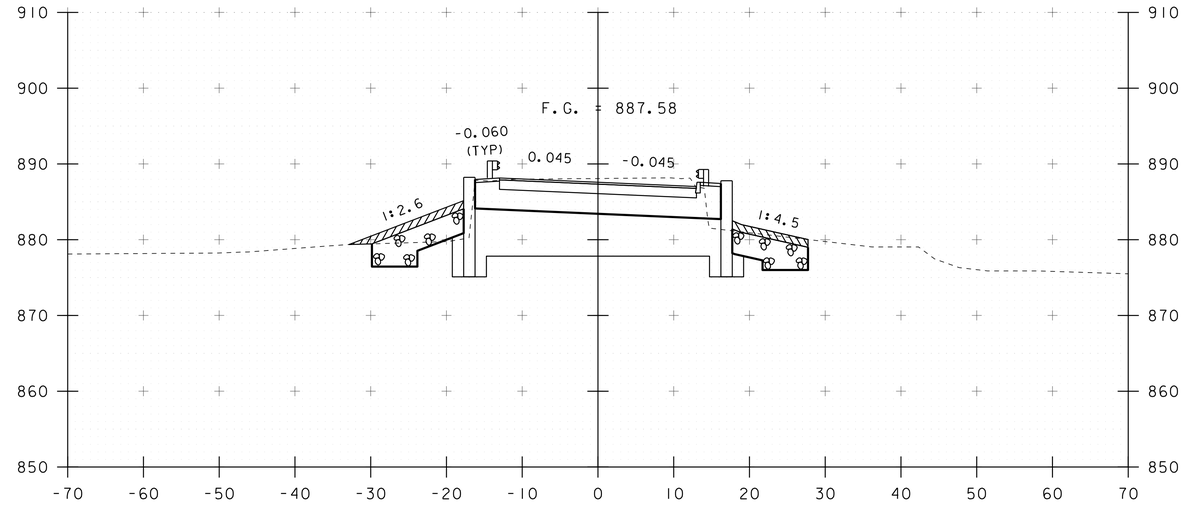
STA 12+53 LT
BEGIN STONE FILL, TYPE I
GEOTEXTILE UNDER STONE FILL

12+75

STA 12+59 RT
BEGIN STONE FILL, TYPE I
GEOTEXTILE UNDER STONE FILL



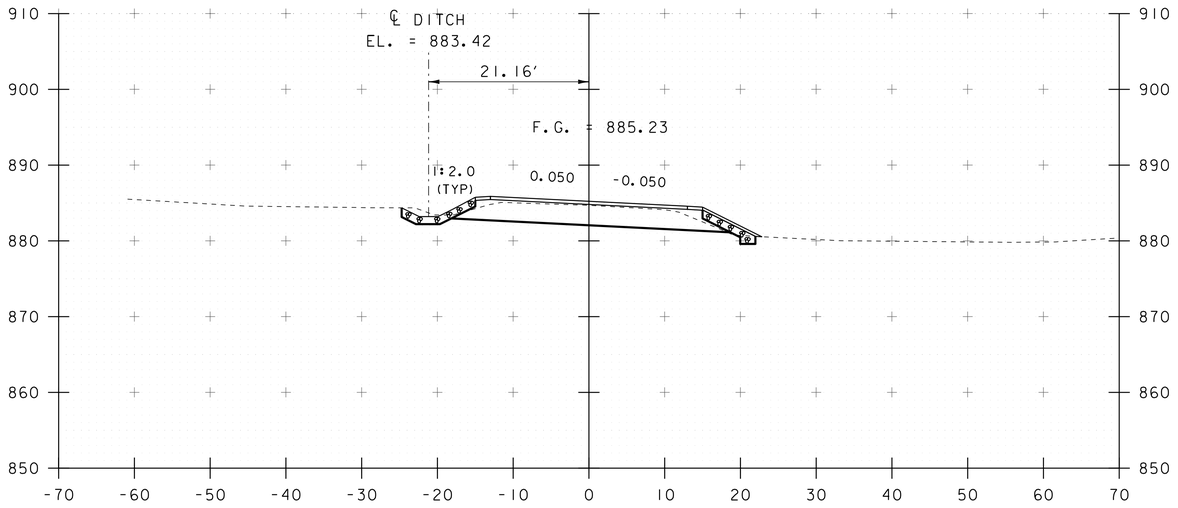
12+00



12+50

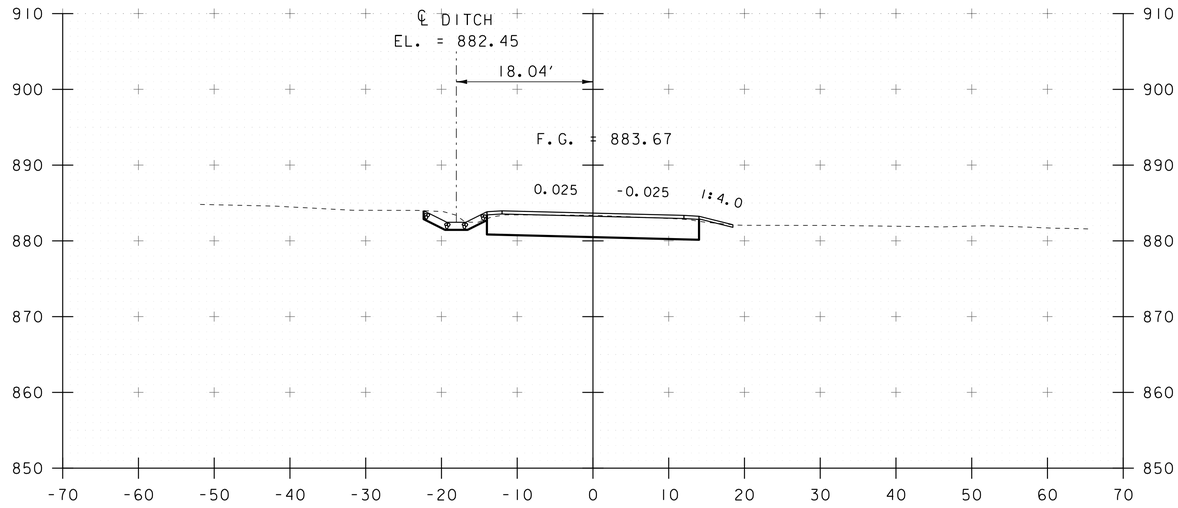
PROJECT NAME:	STRAFFORD
PROJECT NUMBER:	BF 0177(10)
FILE NAME: sl3j088xsl.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY: T. MATTHEWS
MAINLINE SECTIONS 3	SHEET 38 OF 52

STA. 12+00 TO STA. 12+75

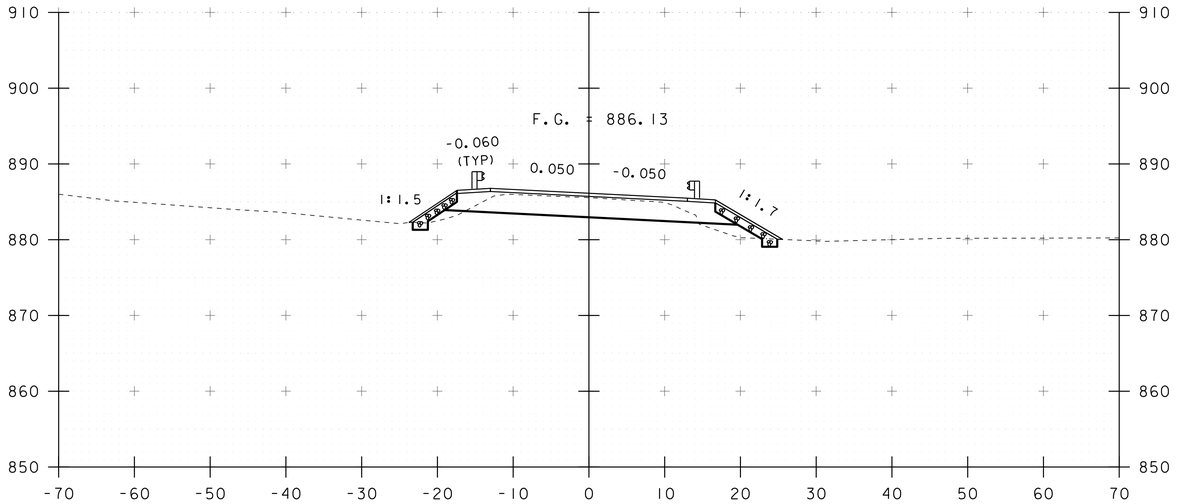


13+25

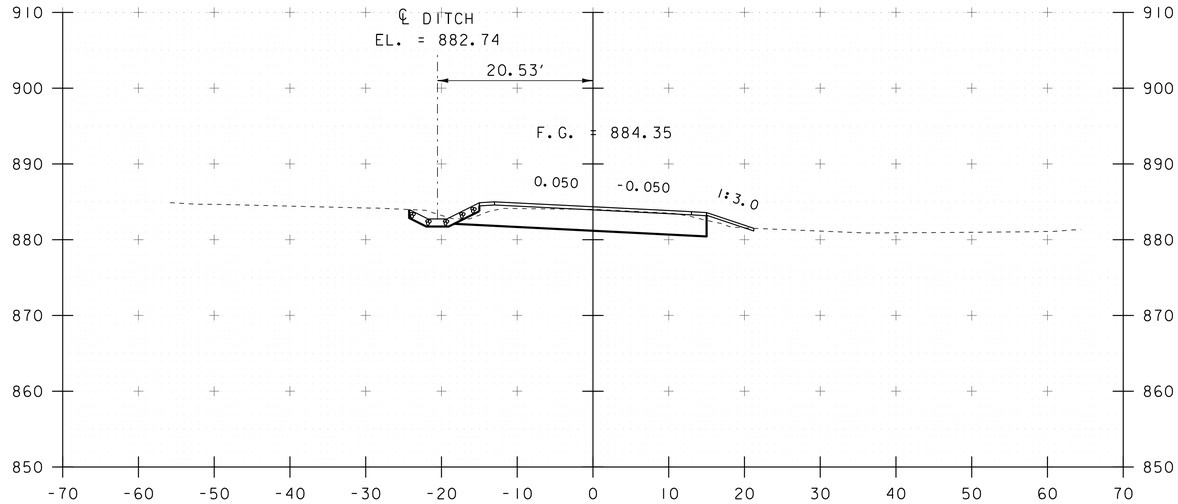
STA 13+25 RT
END STONE FILL, TYPE I
GEOTEXTILE UNDER STONE FILL



13+75



13+00



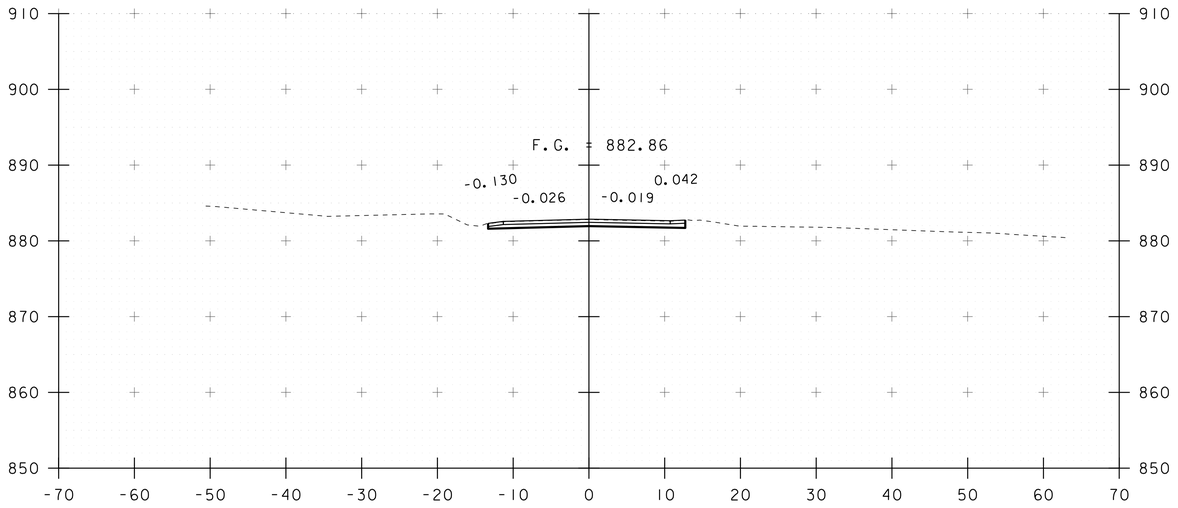
13+50

STA. 13+00 TO STA. 13+75

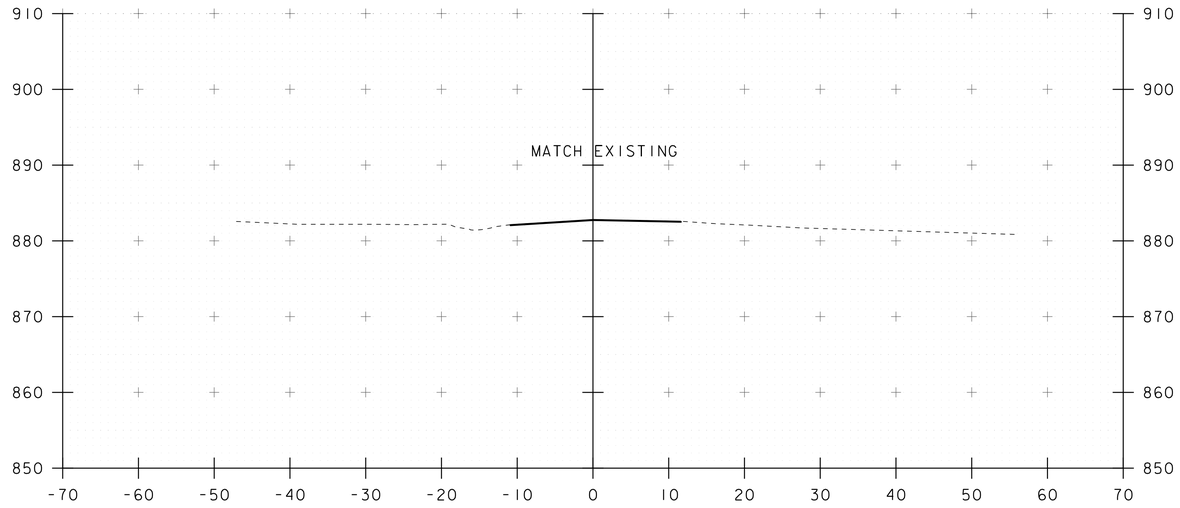
PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
MAINLINE SECTIONS 4

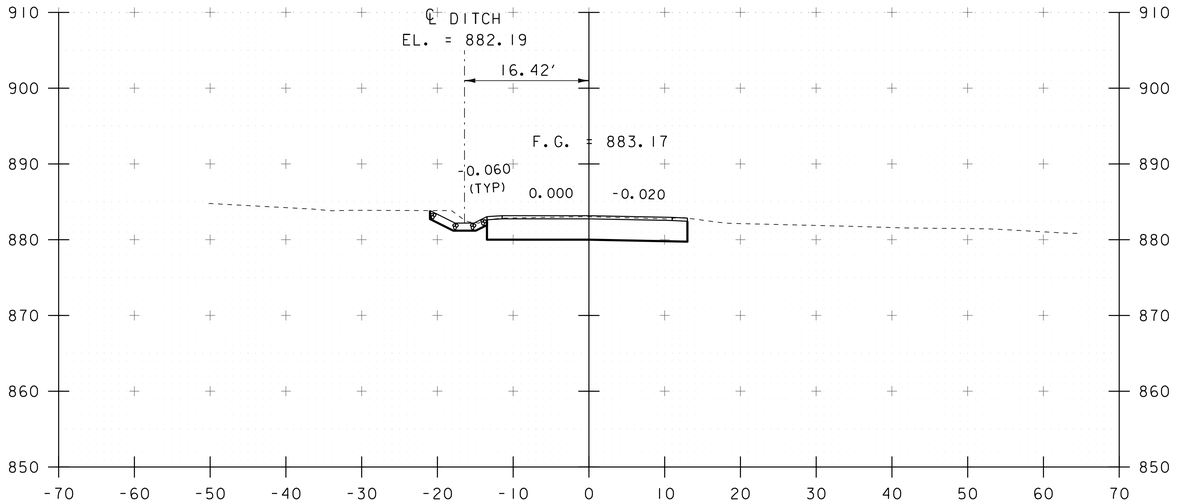
PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 39 OF 52



14+25

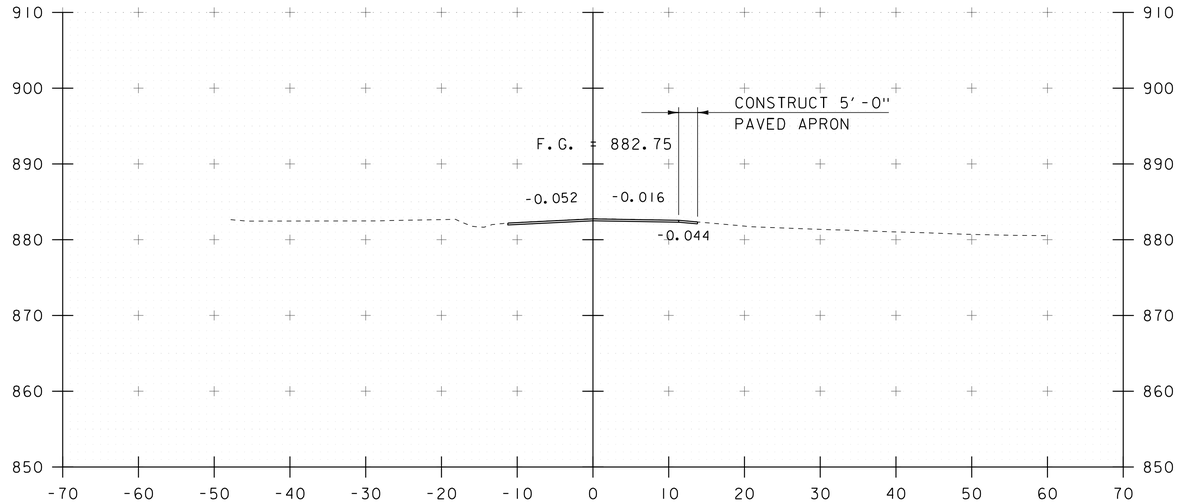


14+75
END APPROACH



STA 14+20.00 LT
END STONE FILL, TYPE I
GEOTEXTILE UNDER STONE FILL

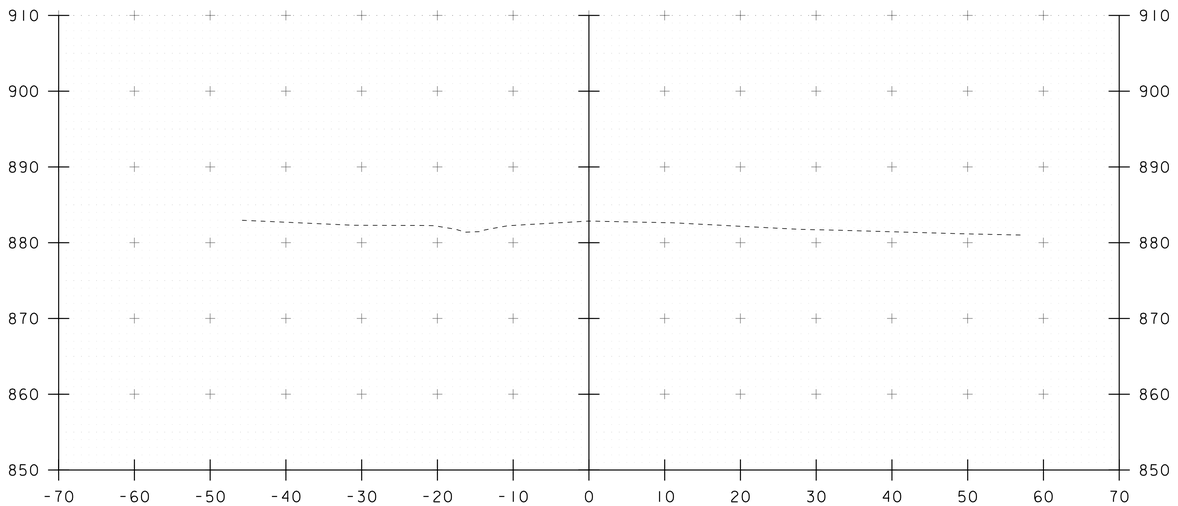
14+00
END PROJECT



14+50

STA. 14+00 TO STA. 14+75

PROJECT NAME: STRAFFORD	
PROJECT NUMBER: BF 0177(10)	
FILE NAME: sl3j088xsl.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY: T. MATTHEWS
MAINLINE SECTIONS 5	SHEET 40 OF 52



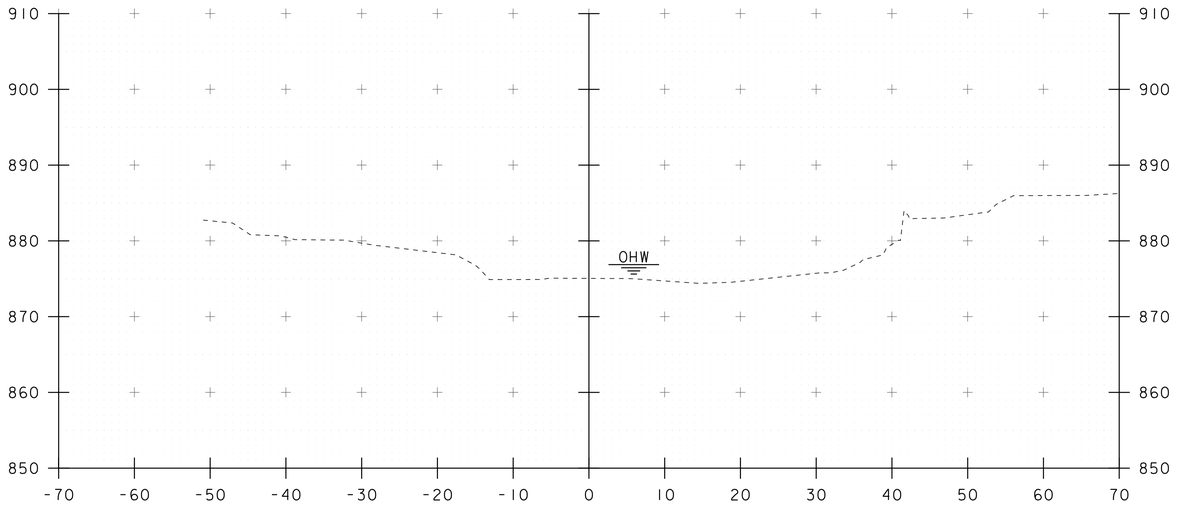
15+00

STA. 15+00 TO STA. 15+00

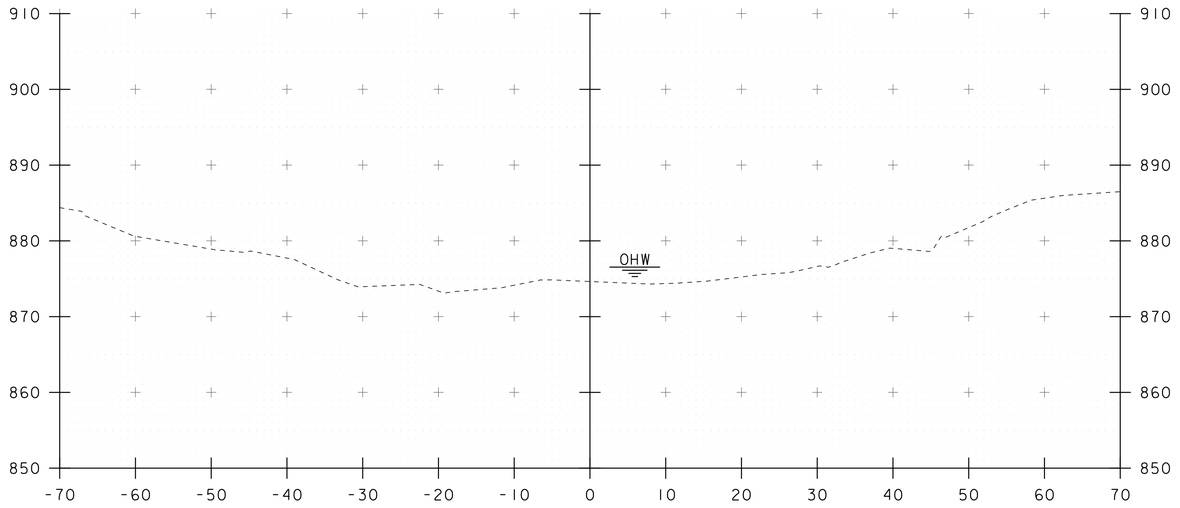
PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
MAINLINE SECTIONS 6

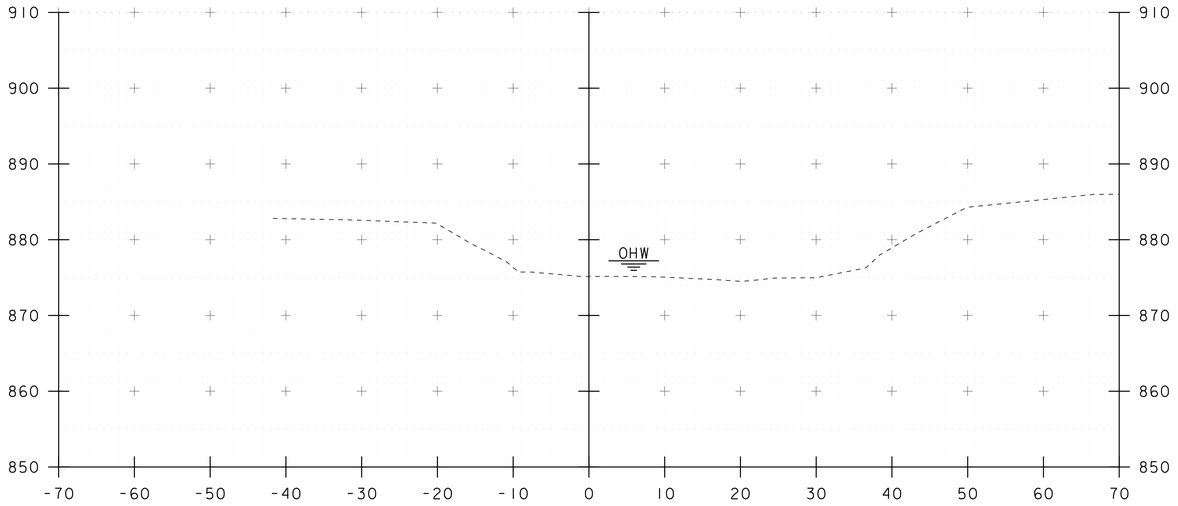
PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 41 OF 52



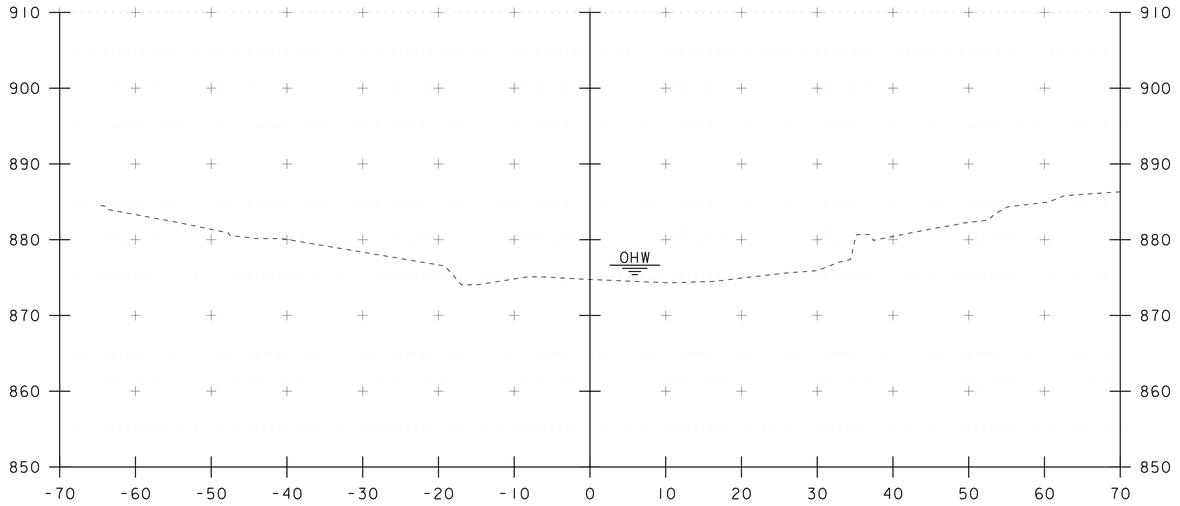
50+10



50+30



50+00



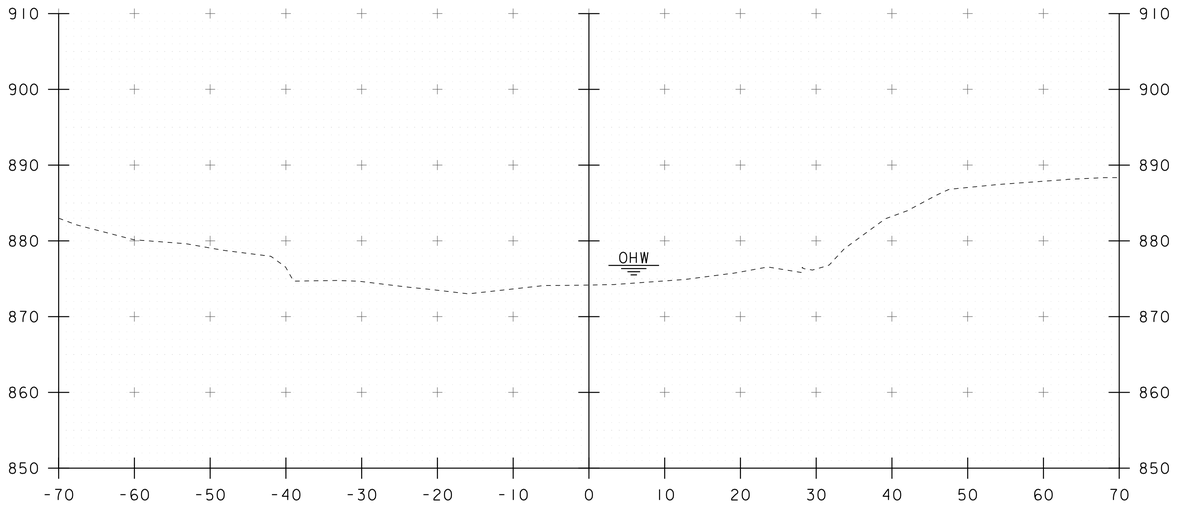
50+20

STA. 50+00 TO STA. 50+30

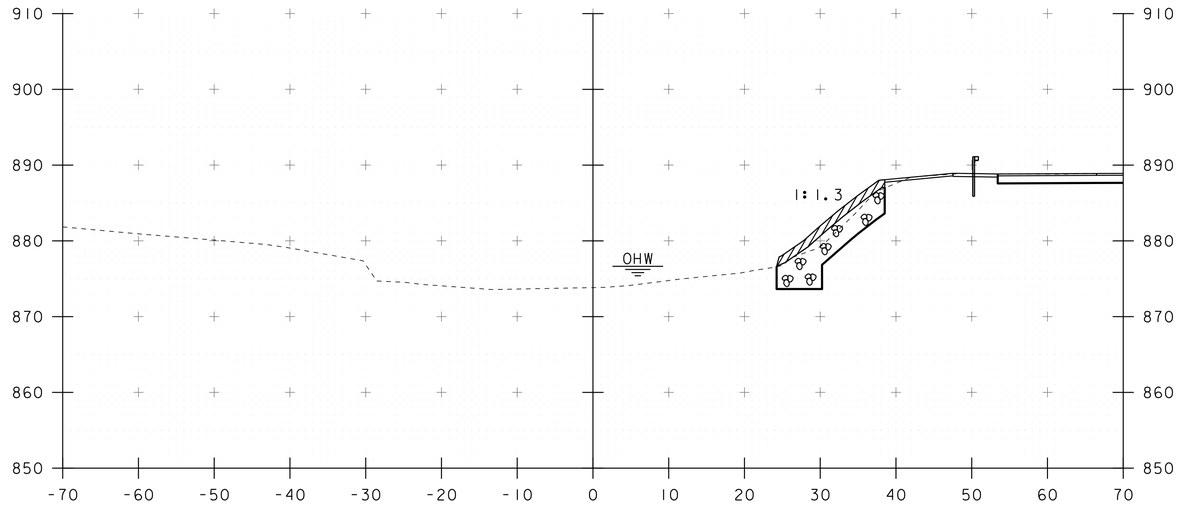
PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
CHANNEL SECTIONS 1

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 42 OF 52

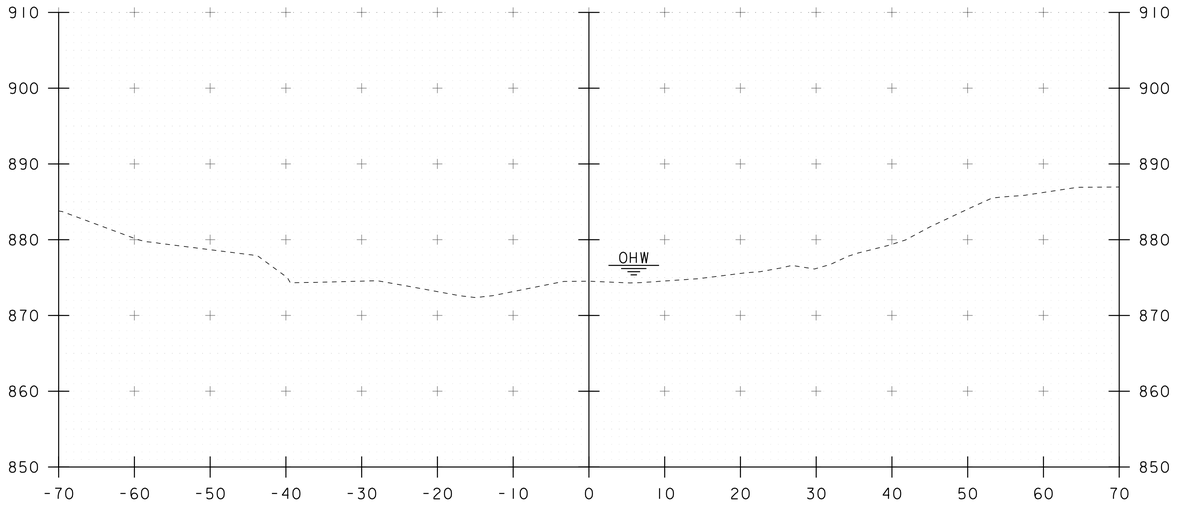


50+50

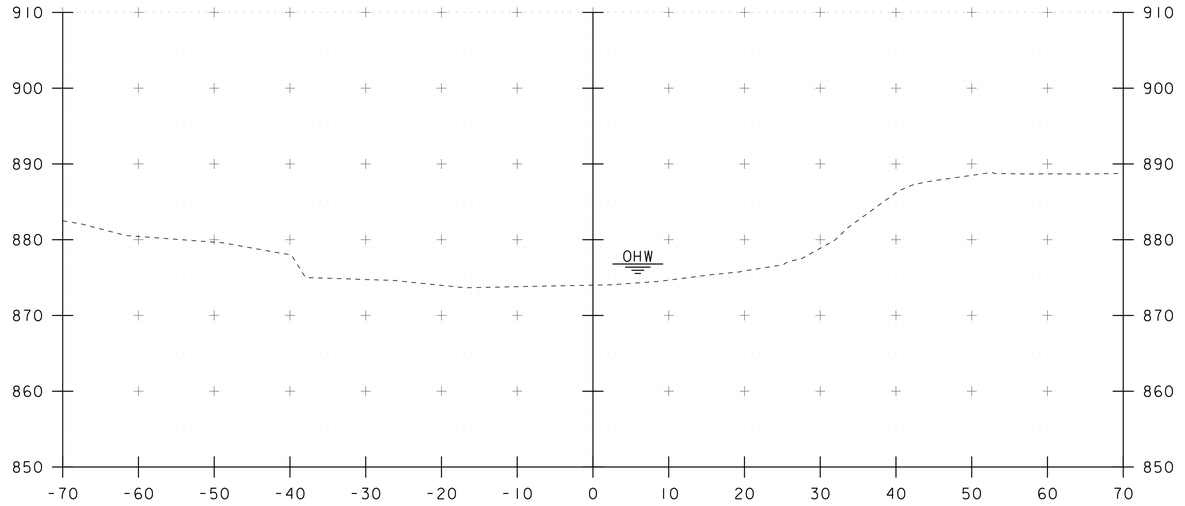


STA 50+76.00 LT
BEGIN STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL
UNCLASSIFIED CHANNEL EXCAVATION

50+70



50+40



STA 50+65.00 RT
BEGIN STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL
UNCLASSIFIED CHANNEL EXCAVATION

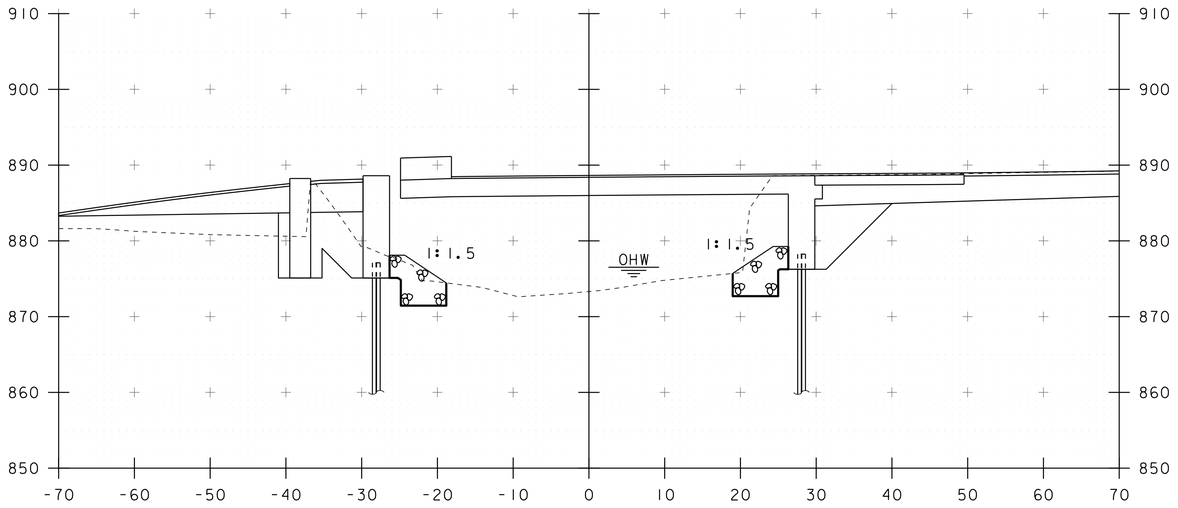
50+60

STA. 50+40 TO STA. 50+70

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
CHANNEL SECTIONS 2

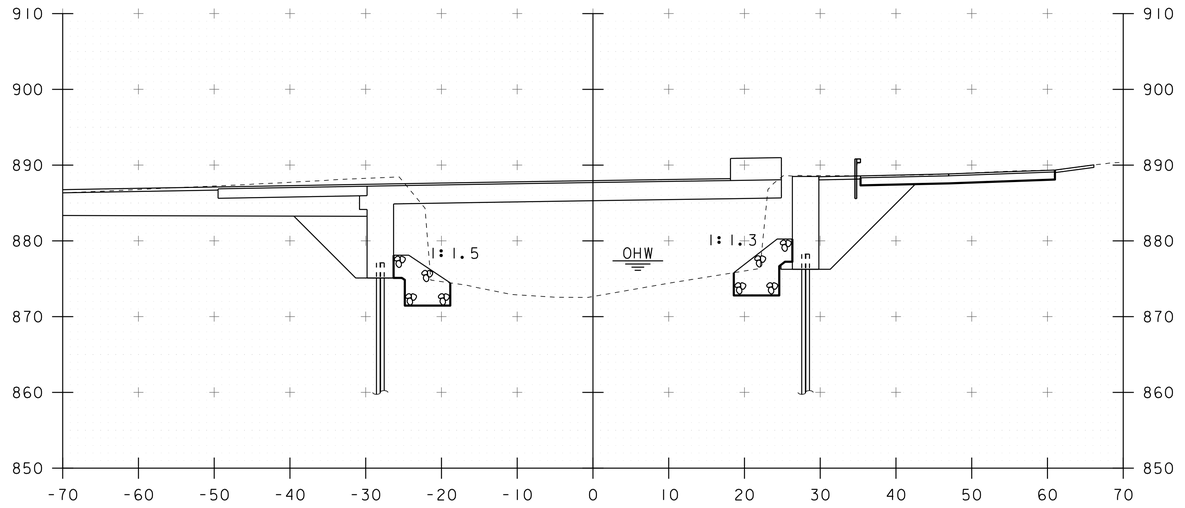
PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 43 OF 52



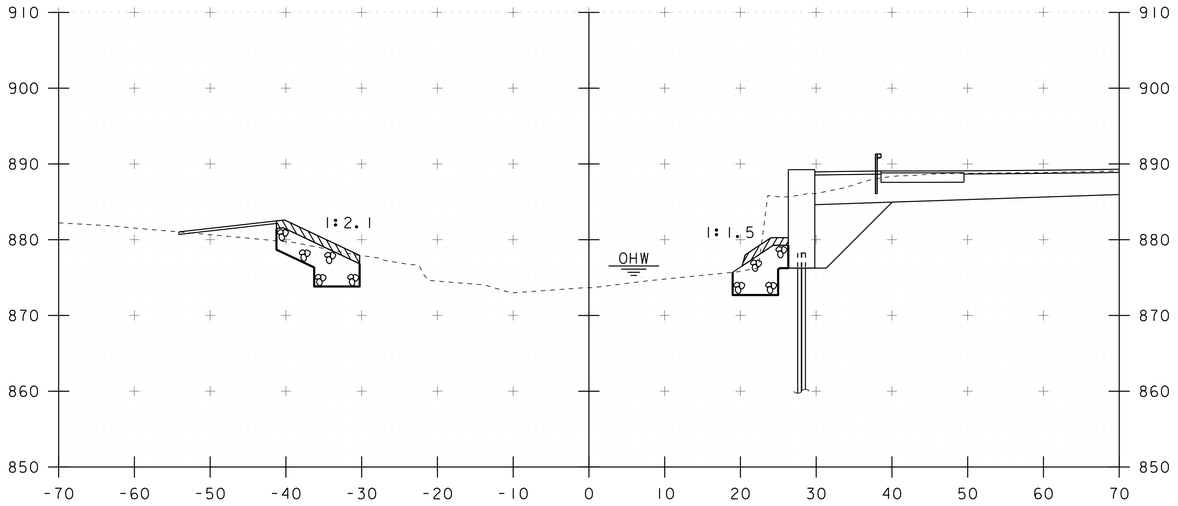
STA 50+89.00 LT
END GRUBBING MATERIAL

50+90

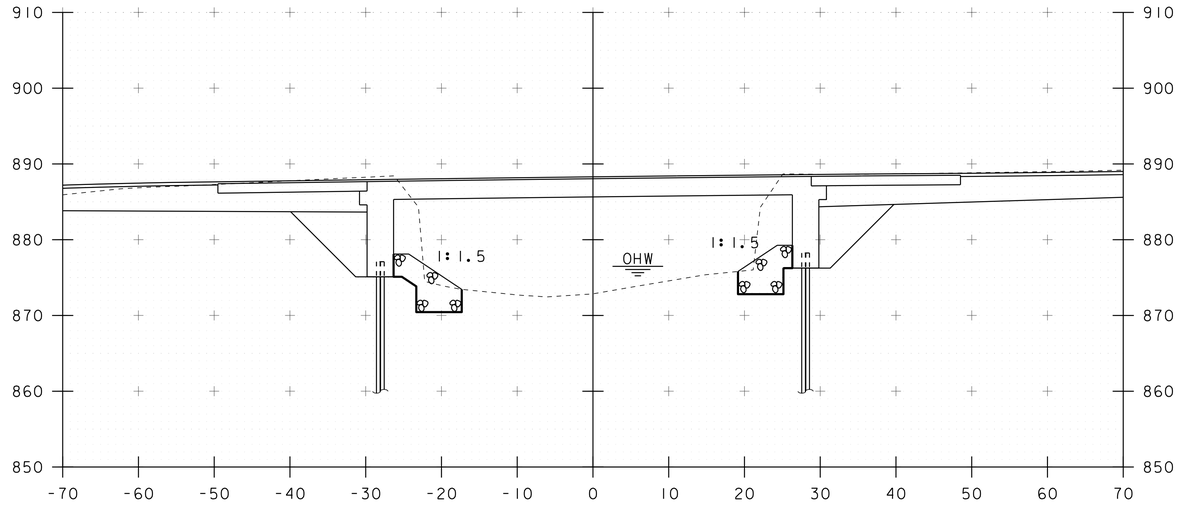
STA 50+83.00 RT
END GRUBBING MATERIAL



51+10



50+80



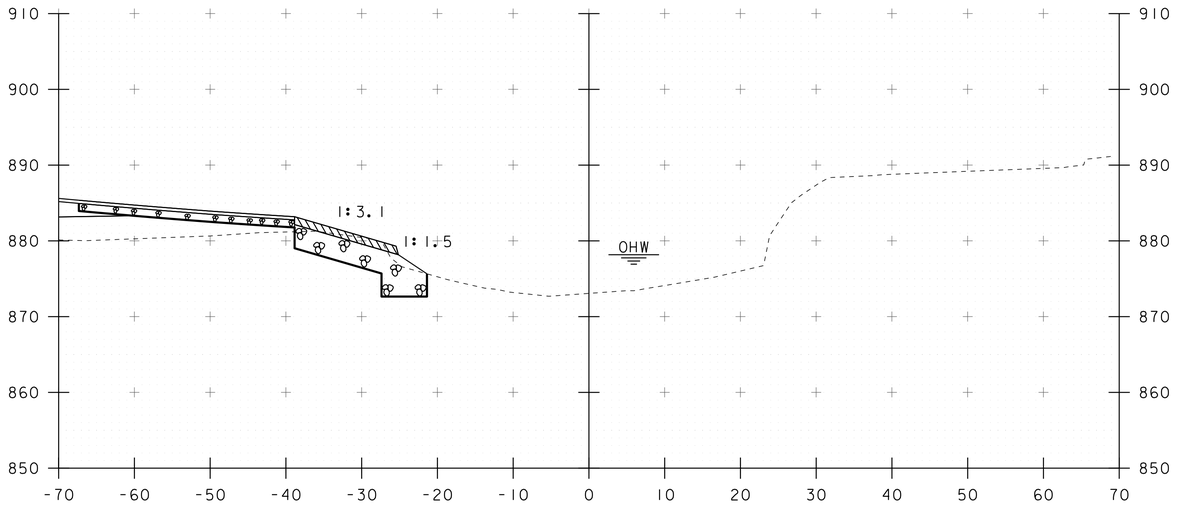
51+00

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
CHANNEL SECTIONS 3

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 44 OF 52

STA. 50+80 TO STA. 51+10



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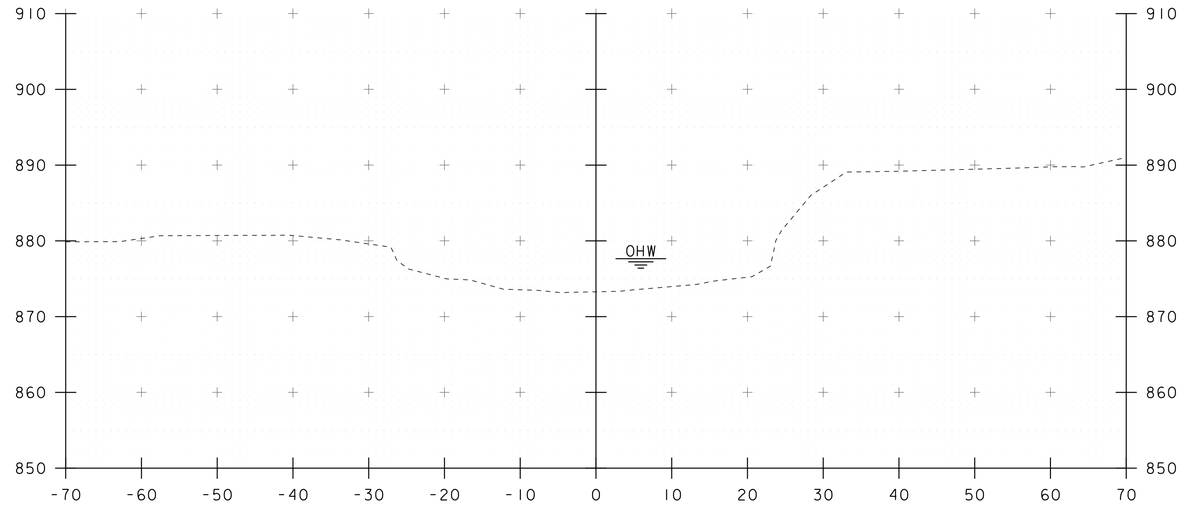
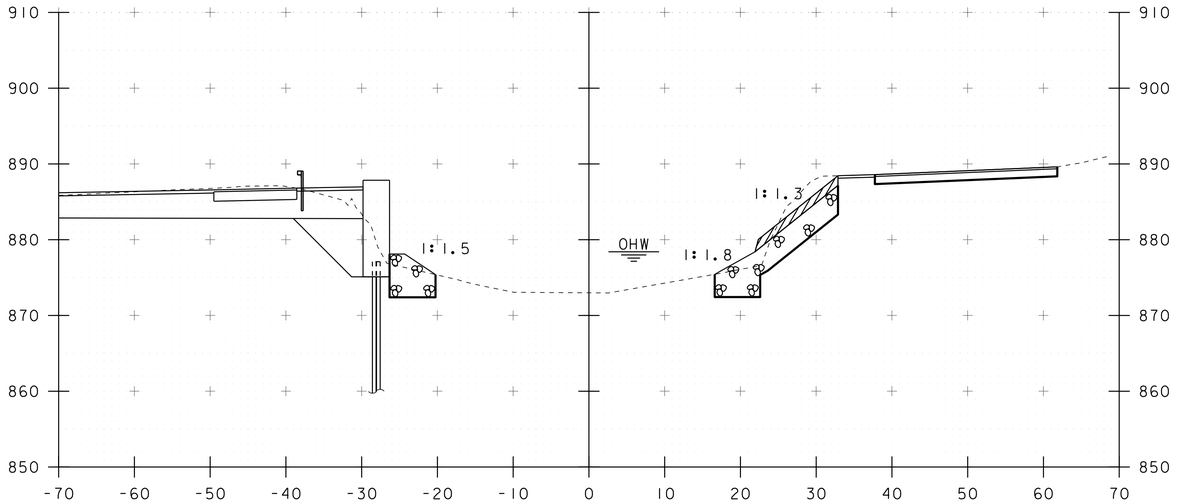
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL
UNCLASSIFIED CHANNEL EXCAVATION

51+30



51+50



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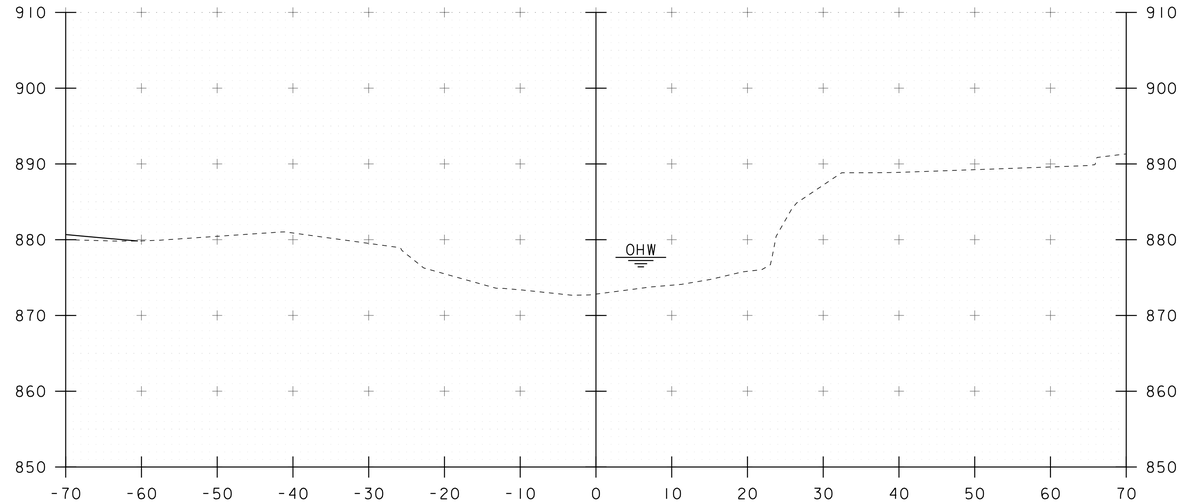
51+20



51+40

STA 51+11.00 RT
BEGIN GRUBBING MATERIAL

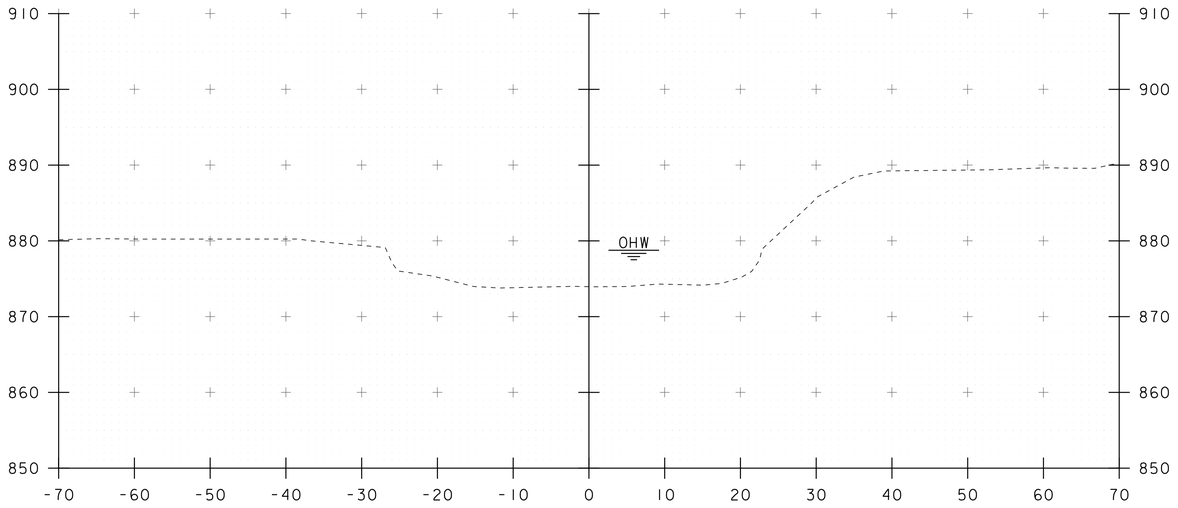
STA 51+29.00 RT
END STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL
UNCLASSIFIED CHANNEL EXCAVATION

STA. 51+20 TO STA. 51+50

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
CHANNEL SECTIONS 4

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 45 OF 52



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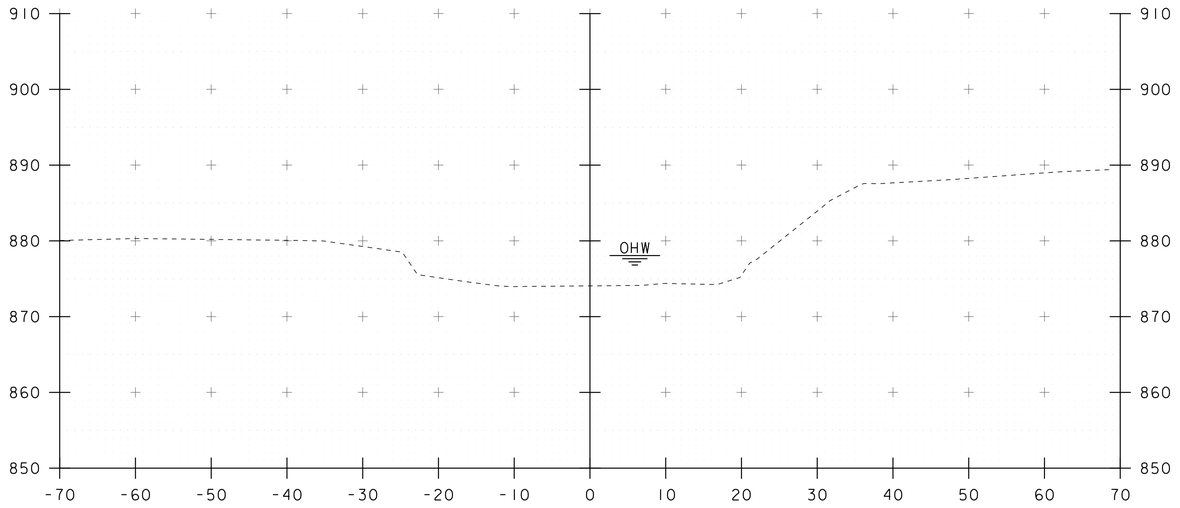

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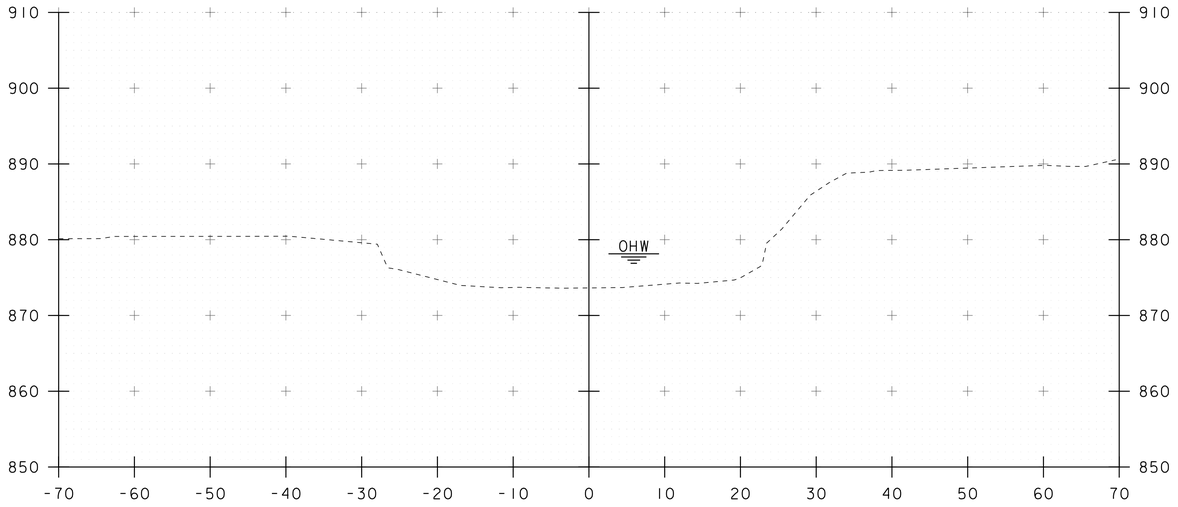

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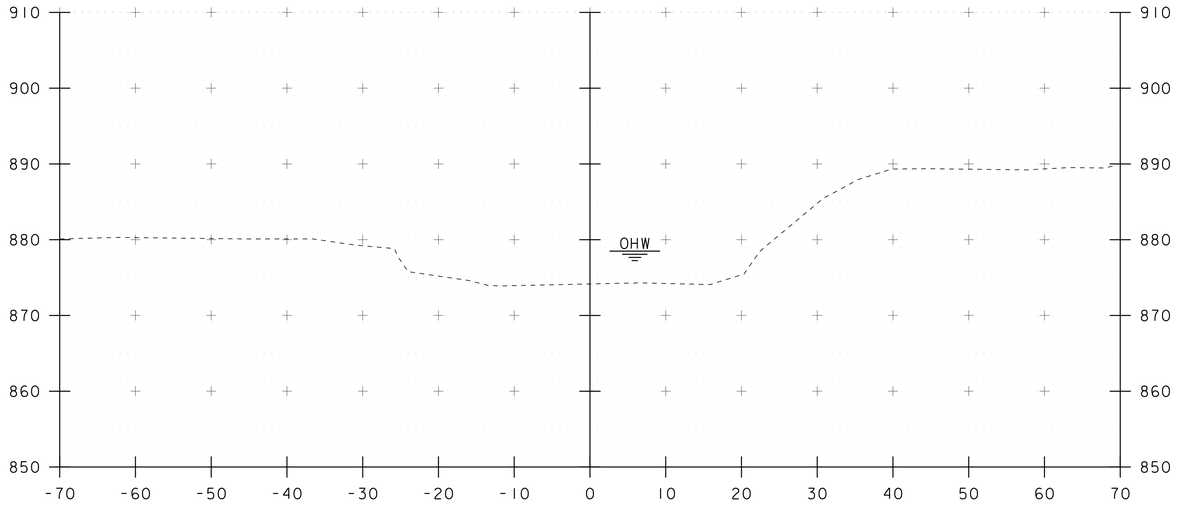
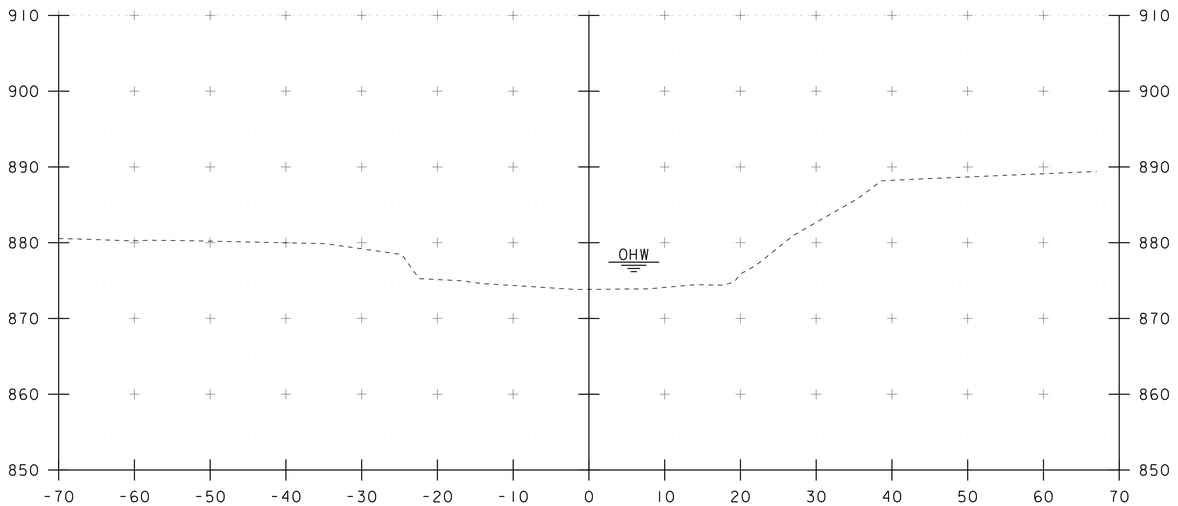


51+80

STA. 51+60 TO STA. 51+90

PROJECT NAME: STRAFFORD	
PROJECT NUMBER: BF 0177(10)	
FILE NAME: sl3j088xsl.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY: T. MATTHEWS
CHANNEL SECTIONS 5	SHEET 46 OF 52



52+00

STA. 52+00 TO STA. 52+00

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
CHANNEL SECTIONS 6

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 47 OF 52

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REMOVAL OF BRIDGE 29 IN ITS ENTIRETY. BRIDGE 29 WILL BE REPLACED WITH A NEW STRUCTURE, SPANNING 53 FEET OVER THE WEST BRANCH OMPOMPANOOSUC RIVER, ON NEW ABUTMENTS ALONG THE EXISTING ALIGNMENT. BRIDGE 29 IS LOCATED IN THE TOWN OF STRAFFORD, ON TOWN HIGHWAY 1 (FAS 0177), APPROXIMATELY 0.04 MILES NORTH OF THE INTERSECTION OF TOWN HIGHWAY 1 AND TOWN HIGHWAY 4.

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 0.45 ACRES.

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA INCLUDES FORESTED ROLLING HILLS WITH OCCASIONAL OPEN AREAS FOR RESIDENTIAL AND AGRICULTURAL USE. TOWN HIGHWAY 1 (FAS 0177), MINE ROAD (TH4), AND THREE DRIVEWAYS ARE WITHIN THE PROJECT SITE. THERE ARE TWO RESIDENCES ON THE SOUTH SIDE OF THE PROJECT AND A CHURCH ON THE NORTH SIDE OF THE PROJECT.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE WEST BRANCH OMPOMPANOOSUC RIVER AND AN UNNAMED TRIBUTARY THAT CROSSES BENEATH TOWN HIGHWAY 1 TO THE SOUTH OF THE PROJECT ARE THE ONLY WATER SOURCES ON THE PROJECT SITE. THE WEST BRANCH OMPOMPANOOSUC RIVER IS CLASSIFIED AS SINUOUS AND ALLUVIAL. THE STREAM BED CONSISTS OF COBBLES, GRAVEL, AND SAND. THE TRIBUTARY AREA AT THE BRIDGE CROSSING IS 34.7 MILES^2.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD AND SOFTWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING BRIDGE. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF ORANGE, VERMONT. SOILS ON THE PROJECT SITE ARE BUCKLAND LOAM, 3% TO 8% SLOPES, “K FACTOR” = 0.32 AND WINOOSKI VERY FINE SANDY LOAM, “K FACTOR” = 0.37. BOTH OF THESE SOILS ARE CONSIDERED TO HAVE MODERATE TO HIGH EROSION POTENTIAL.

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, HISTORICAL AREA ON SOUTH SIDE OF PROJECT AND ARCHAEOLOGICAL AREA IN SOUTHWEST QUADRANT.
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NORTHERN LONG-EARED BAT
WATER RESOURCE: WEST BRANCH OMPOMPANOOSUC RIVER
WETLANDS: NO

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.

BARRIER FENCE (BF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES AS PROPOSED ON THE EPSC PLAN.

PROJECT DEMARCATION FENCE SHALL BE PLACED TO VISIBLY DEPICT LIMITS OF CLEARING. THE PROJECT DEMARCATION FENCE MUST BE PLACED AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO ANY CLEARING ACTIVITIES.

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 CONTRACTORS 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.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

FILTER CURTAIN WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

FILTER FABRIC DROP INLET PROTECTION WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

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.

NO DIVERSIONARY MEASURES ARE ANTICIPATED ON THIS PROJECT.

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.

NO CHECK STRUCTURES ARE ANTICIPATED ON THIS PROJECT.

1.4.7 CONSTRUCT PERMANENT CONTROLS

DROP INLETS, OPTION PIPES AND STONE LINED DITCHES 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 CONTROL 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 CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

BIODEGRADABLE EROSION CONTROL SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

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 COFFERDAM IS NOT ANTICIPATED.

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

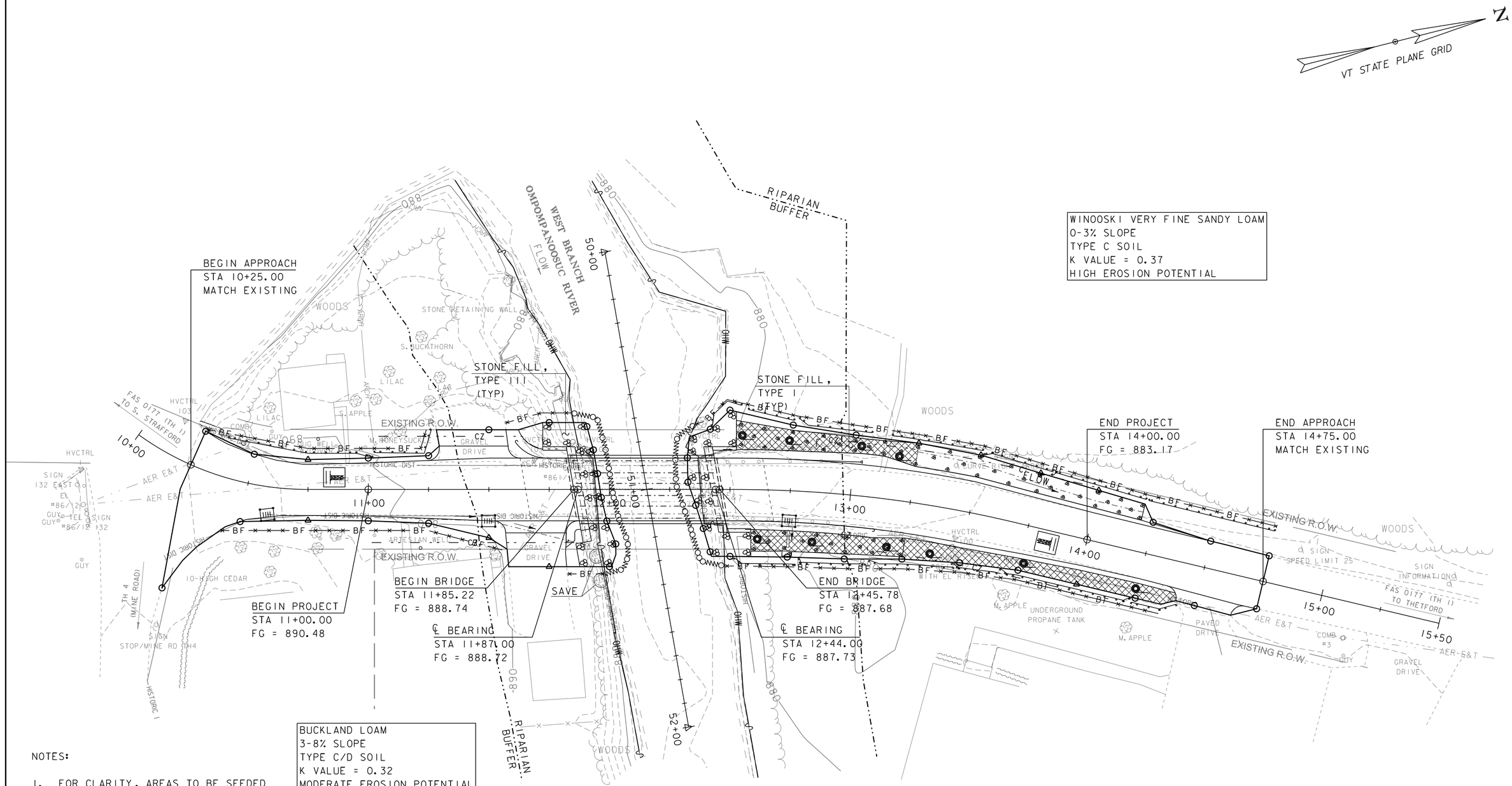
THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

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

PROJECT NAME:	STRAFFORD
PROJECT NUMBER:	BF 0177(10)
FILE NAME: sl3j088ero_narrative.dgn	PLOT DATE: 31-AUG-2016
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY: T. MATTHEWS
EPSC NARRATIVE	SHEET 48 OF 52



NOTES:

1. FOR CLARITY, AREAS TO BE SEEDED AND MULCHED ARE NOT SHOWN; HOWEVER, ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS APPLICABLE.

2. EXISTING CONTOURS ARE SHOWN. SEE CROSS SECTIONS FOR FINAL CONTOURS.

3. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TERMPORARY EROSION CONTROL PLAN FOR APPROVAL.

4. THE CONTRACTOR SHALL USE OTHER EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON-SITE COORDINATOR.

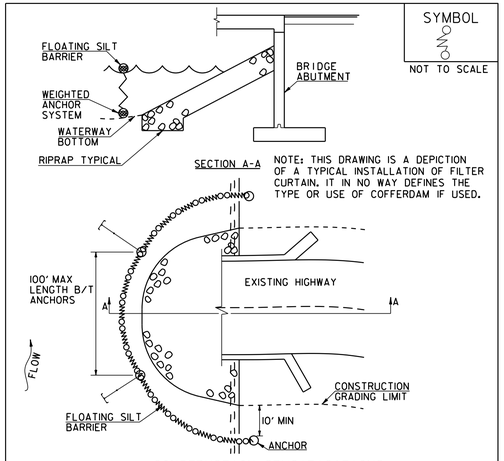
EPSC PLAN

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

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088bdr_ero.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
EPSC PLAN SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: J. GRIGAS
CHECKED BY: T. MATTHEWS
SHEET 49 OF 52



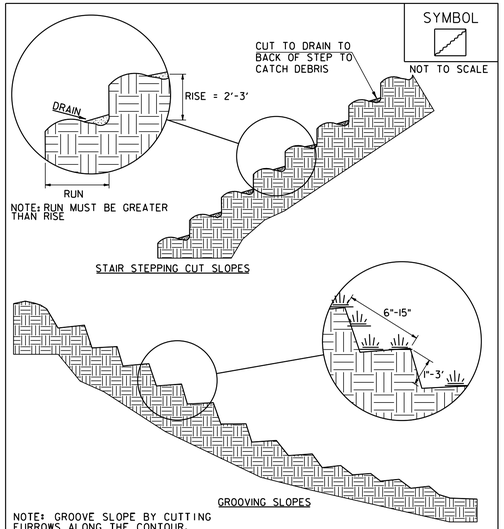
CONSTRUCTION SPECIFICATIONS

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



NOTE: GROOVE SLOPE BY CUTTING FURROWS ALONG THE CONTOUR. IRREGULARITIES IN THE SOIL SURFACE CATCH RAINWATER AND RETAIN LIME, FERTILIZER AND SEED.

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

SURFACE ROUGHENING

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 WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 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

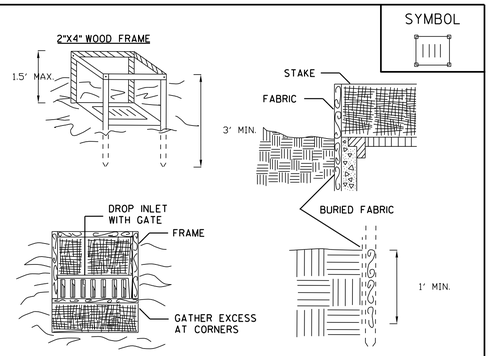
1. SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
2. SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT 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 FOR SEED (PAY ITEM 651.15)

REVISIONS	
JANUARY 12, 2015	WHF



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA 1ACRE

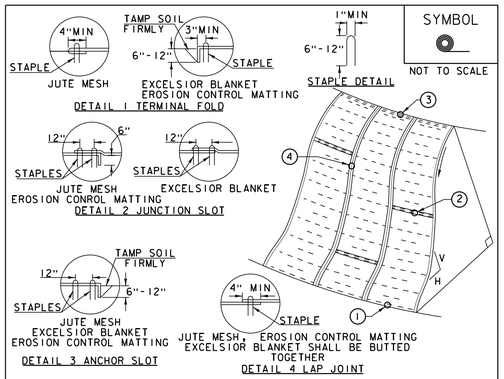
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FILTER FABRIC DROP INLET PROTECTION

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.40 INLET PROTECTION DEVICE, TYPE I

REVISIONS	
MARCH 8, 2007	JMF



CONSTRUCTION SPECIFICATIONS

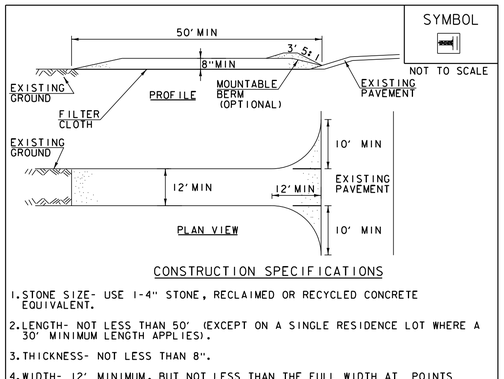
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 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



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.

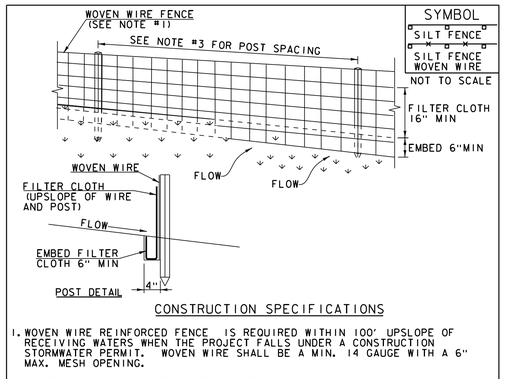
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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



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: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: sl3j088ero_details.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. GRIGAS
EPSC DETAILS SHEET

PLOT DATE: 31-AUG-2016
DRAWN BY: T. MATTHEWS
CHECKED BY: J. GRIGAS
SHEET 50 OF 52

BEGIN R.O.W. PROJECT
STRAFFORD BF 0177(10)
STA. 10+91.52, 24.75' LT

MAINLINE PT #1
STA 10+74.94
N = 486296.1699
E = 1677398.8689

MAINLINE POB/PC #1
STA 10+00.00
N = 486233.7153
E = 1677359.6785

BEGIN APPROACH
STA 10+25.00
MATCH EXISTING

MAINLINE CURVE #1:
DELTA = 35°47'00"
D = 47°44'47"
R = 120.00'
T = 38.74'
L = 74.94'
E = 6.10'

MAINLINE CURVE #2:
DELTA = 13°22'00"
D = 11°27'33"
R = 500.00'
T = 58.59'
L = 116.65'
E = 3.42'

CONSTRUCT DRIVE W/5'-0" PAVED APRON AND 3" AGGREGATE SURFACE COURSE BEYOND APRON
STA 11+24.65 - 11+62.99 LT
STA 11+51.96 - 11+87.03 RT

CONSTRUCT 5'-0" PAVED APRON
STA 14+36.73 - 14+69.72 RT

4" YELLOW LINE (DOUBLE)
STA 10+25 - 14+75 ℄

4" WHITE LINE
STA 10+25 - 14+75 LT
STA 10+25 - 14+75 RT

STONE FILL, TYPE I DITCH
STA 13+25 - 14+20 LT

REMOVAL OF CONCRETE OR MASONRY
STA 12+50 - 13+03 RT
STA 12+51 - 12+91 LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 11+65 - 11+88 LT
STA 11+89 - 11+91 RT
STA 12+43 - 12+93 LT
STA 12+44 - 12+97 RT

SAWED PAVEMENT JOINT ALONG APPROACH SLAB EDGE
STA 11+67.53 - 11+87.03 RT

VT STATE PLANE GRID

CONCRETE CURB, TYPE B
STA 12+48 - 12+74 RT

REMOVING AND RESETTING PROPERTY MARKERS (GRANITE BOLLARD)
STA 11+65 LT
RELOCATE TO STA 11+67 LT
N=1677402.4105
E=486390.2366

MAINLINE PC #2
STA 12+52.02
N = 486467.8201
E = 1677442.3562

MAINLINE PI #2
STA 13+10.61 BK=
STA 13+10.07 AHD
N = 486524.6148
E = 1677456.7451

MAINLINE PT #2
STA 13+68.66
N = 486576.5446
E = 1677483.8740

END PROJECT
STA 14+00.00
FG = 883.17

END APPROACH
STA 14+75.00
MATCH EXISTING

MAINLINE POE
STA 15+50.00
N = 486737.2697
E = 1677567.8396

MAINLINE PI #1
STA 10+38.74 BK=
STA 10+36.20 AHD
N = 486258.6167
E = 1677389.3548

BEGIN PROJECT
STA 11+00.00
FG = 890.48

BEGIN BRIDGE
STA 11+85.22
FG = 888.74

℄ BEARING
STA 11+87.00
FG = 888.72

END BRIDGE
STA 12+45.78
FG = 887.68

℄ BEARING
STA 12+44.00
FG = 887.73

ML STA 12+15.50 =
CH STA 51+00.00
Δ = 180°00'00" RT

1
RUTLEDGE, BARTLEY W.

2
ESTATE OF BRINTON D. SHOEMAKER

3
FINN, ROSALIND E.

4
CHRISTOPHER J. COYNE TRUSTEE OF THE OUR LADY OF LIGHT PARISH CHARITABLE TRUST

N/F
WYLIE, ALLAN & JANICE

STATE OF VERMONT

STATE OF VERMONT

REMOVE(T)
11+72.36 27.73' LT
11+72.36 24.75' LT
I&M(P)
11+61.84 38.10' LT
10+91.52 24.75' LT
UE(P)
SR(P)
CONST(T)
EXISTING R.O.W.
W-1
11+61.66 24.75 LT
R&R (T)
11+83± 38'± LT
CH(P)
11+85± 28'± LT
11+86± 24.75' LT
CH(P)
12+41.29 24.75' LT
12+45± 42.72' LT
12+35± 24.75' LT
12+50.00 32.87' LT
12+52.61 32.21' LT
12+52.62 24.75' LT
UE(P)
SR(T)
15'
CONST(T)
13+26.29 48.35' LT
13+24.34 24.75' LT
UE(P)
CONST(T)
14+11.67 24.75' LT
EXISTING R.O.W.
N 27°35'00.00" E
W-2
EXISTING R.O.W.
12+48± 24.75' RT
12+82.90 24.75' RT
12+87.11 24.75' RT
SR(T)
SR(T)
CONST(T)
12+87.12 27.23' RT
DIT & DR(P)
12+82.89 27.37' RT
DRIVE(T)
11+86.48 24.75' RT
11+87.76 32.00' RT
CONST(T)
CH(P)
11+97± 24.75' RT
11+98± 32'± RT
CH(P)
12+48± 28'± RT
12+58.98 24.74' RT
12+59.03 27.79' RT
EXISTING R.O.W.
I&M(P)
END R.O.W. PROJECT
STRAFFORD BF 0177(10)
STA. 15+12.43, 25.11' RT

WEST BRANCH OMPOMPANOOSUC RIVER FLOW

N 14°13'00.00" E

10+00
11+00
12+00
13+00
14+00
15+00
15+50

LAYOUT SHEET

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

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 TOWN OF STRAFFORD'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

FOR R.O.W. USE ONLY

NOTE:
ADJUST NEW CENTERLINE AND EDGE LINES TO MATCH EXISTING LINES AT BEGIN/END APPROACH

PROJECT NAME: STRAFFORD
PROJECT NUMBER: BF 0177(10)

FILE NAME: r13j088lay.dgn
PROJECT LEADER: K. HIGGINS, P.E.
DESIGNED BY: R. KLINEFELTER
R.O.W. LAYOUT SHEET 1 OF 1

PLOT DATE: 31-AUG-2016
DRAWN BY: A. EGIZI
CHECKED BY: R. CLOUTIER
SHEET 51 OF 52

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 TAKEN	DATE	TOWN / CITY	BOOK	PAGE	
1	RUTLEDGE, BARTLEY W.	1	10+91.52 LT	11+86± LT			UTILITY	P	771 SF	WDOE	12/28/15	STRAFFORD	90	241-243	
			10+79 LT												W-1 MONITOR WELL
			11+57 LT	11+85± LT			CONSTRUCTION	T	111 SF						INCL. BF
			11+61 LT	11+63 LT			INSTALL & MAINTAIN	P							GUYWIRE & ANCHOR
			11+61.66 LT	11+72.36 LT			SLOPE	P	16 SF						
			11+65 LT				REMOVE & RESET	T							GRANITE BOLLARD
			11+72.36 LT	11+86± LT			CHANNEL	P	39 SF						INCL. STONE FILL
			11+81 LT				REMOVE	T							GUYWIRE & ANCHOR
2	ESTATE OF BRINTON DAWSON	1	12+35± LT	14+11.67 LT			UTILITY	P	2,769 SF	WD	06/06/16	STRAFFORD	90	532-534	
	SHOEMAKER		12+35± LT	14+04 LT			CONSTRUCTION	T	538 SF						INCL. BF & EC
			12+41.29 LT	12+52.62 LT			CHANNEL	P	56 SF						INCL. STONE FILL
			12+52.61 LT	13+04 LT			SLOPE	T	148 SF						
3	FINN, ROSALIND E.	1	11+22 RT							WDOE	12/14/15	STRAFFORD	38	224-225	W-2 MONITOR WELL
			11+58 RT	11+82 RT			DRIVE	T	212 SF						25' WIDE PAVED; MM 0257
			11+82 RT	11+98 RT			CONSTRUCTION	T	84 SF						INCL. BF
			11+86.48 RT	11+98± RT			CHANNEL	P	73 SF						INCL. STONE FILL
4	CHRISTOPHER J. COYNE TRUSTEE	1	12+48± RT	12+59.03 RT			CHANNEL	P	33 SF	WDOE	06/20/16	STRAFFORD	90	572-574	INCL. STONE FILL
	OF THE OUR LADY OF LIGHT		12+48 RT	13+59 RT			CONSTRUCTION	T	347 SF						INCL. BF & EC
	PARISH CHARITABLE TRUST		12+58.98 RT	12+82.90 RT			SLOPE	T	65 SF						
			12+87.11 RT	13+18 RT			SLOPE	T	43 SF						
			15+12.43 RT				INSTALL & MAINTAIN	P							GUY WIRE & ANCHOR
			12+82.89 RT	12+87.12 RT			DITCH & DRAINAGE	P	10 SF						INCL. STONE FILL
5	GREEN MOUNTAIN POWER CORPORATION		10+91.52 LT	15+12.43 RT											UTILITY
6	ECFIBER		10+91.52 LT	15+12.43 RT											UTILITY
7	TELEPHONE OPERATING COMPANY OF VERMONT LLC		10+91.52 LT	15+12.43 RT											UTILITY
			12+87.11 RT	13+18 RT			SLOPE	T	43 SF						
			15+12.43 RT				INSTALL & MAINTAIN	P							GUY WIRE & ANCHOR
			12+82.89 RT	12+87.12 RT			DITCH & DRAINAGE	P	10 SF						INCL. STONE FILL

TABLE OF REVISIONS

REVISION NO.	ROW SET SHEET #	DESCRIPTION	DATE

APPROVED: RYAN CLOUTIER DATE: 09-10-15
CHIEF, PLANS & TITLES

PROJECT NAME: **Strafford**
PROJECT NUMBER: **BF 0177(10)**

FILE NAME: **r13j088detail.xls**
PROJECT LEADER: **K. Higgins, P.E.**
DESIGNED BY: **A. Egizi**
R.O.W. DETAIL SHEET #1

PLOT DATE: 31-AUG-2016
DRAWN BY: **M. Trottier**
CHECKED BY: **R. Cloutier**
SHEET 52 OF 52