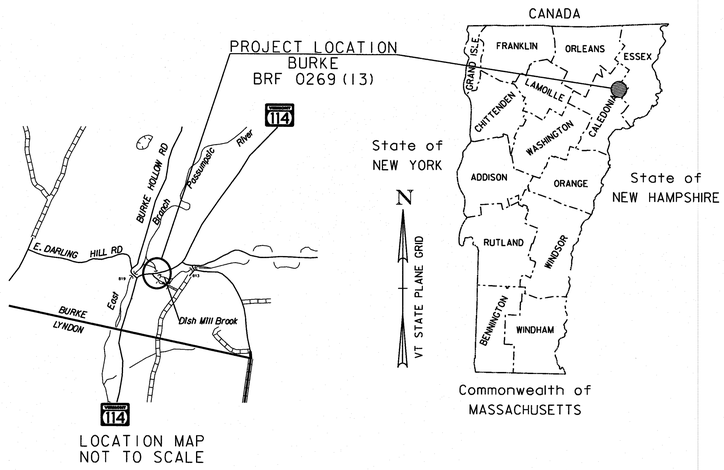
STATE OF VERMONT
AGENCY OF TRANSPORTATION



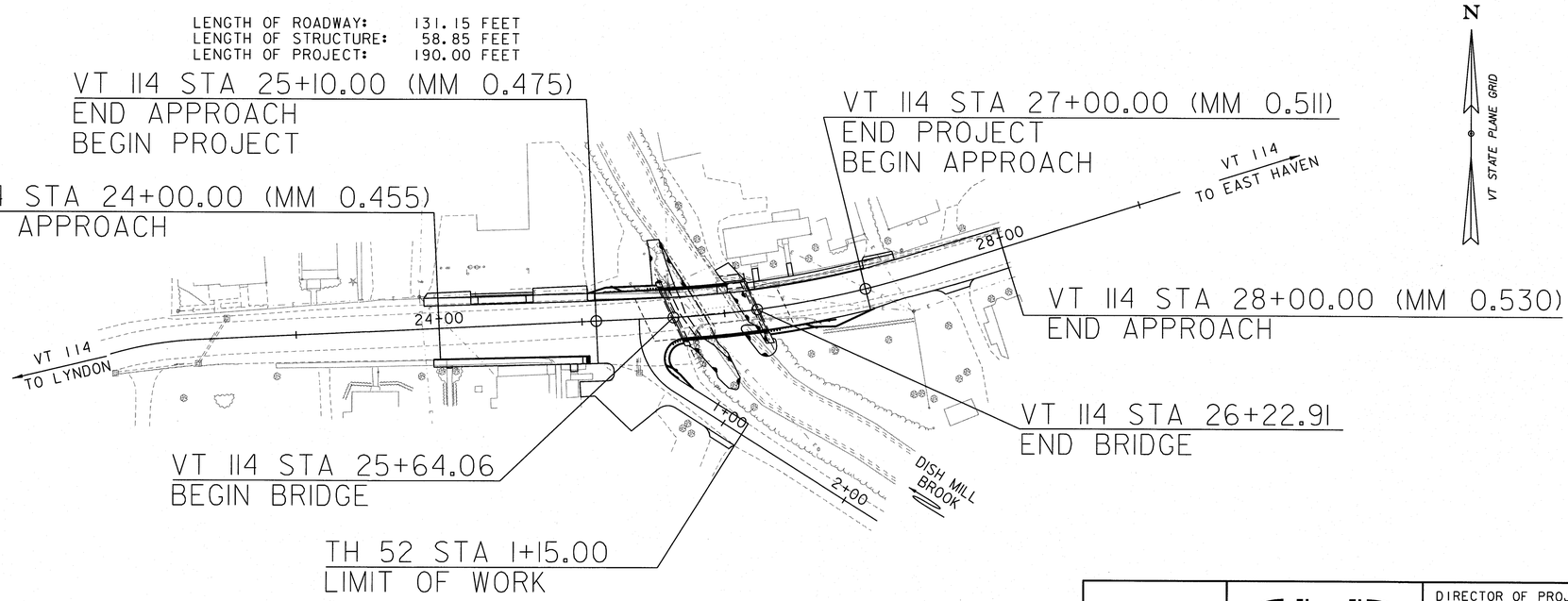
LOCATION MAP
NOT TO SCALE

PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF BURKE
COUNTY OF CALEDONIA
VT ROUTE 114 (MAJOR COLLECTOR) BRIDGE NO. 13

PROJECT LOCATION: LOCATED IN THE TOWN OF BURKE, ON VT ROUTE 114, APPROXIMATELY 0.47 MILE EASTERLY OF THE LYNDON/BURKE TOWN LINE AND EXTENDING EASTERLY FOR 190 FEET.

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES REPLACEMENT OF THE EXISTING STRUCTURE WITH A NEW STRUCTURE INCLUDING RELATED ROADWAY AND CHANNEL WORK.

LENGTH OF ROADWAY: 131.15 FEET
LENGTH OF STRUCTURE: 58.85 FEET
LENGTH OF PROJECT: 190.00 FEET



0 50 100
(SCALE 1" = 50')

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 : VTRANS SURVEYED DATE : 04/27/2011
DATUM VERTICAL NAVD 88 HORIZONTAL NAD 83 (96)

STATE OF VERMONT
JOHN F. STAFF
NO. 8478
Structural
LICENSED
PROFESSIONAL ENGINEER

CONSULTING ENGINEERS
540 Commercial Street
Manchester, NH 03101
(603) 668-8223
www.cldengineers.com

DIRECTOR OF PROJECT DELIVERY
APPROVED _____ DATE _____
PROJECT MANAGER : ROB YOUNG, P.E.
PROJECT NAME : BURKE
PROJECT NUMBER : BRF 0269(13)
SHEET 1 OF 73 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 11.06.15

LRFD

INDEX OF SHEETS

PLAN SHEETS

STANDARDS LIST

STRUCTURES DETAILS

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: January 2014

DRAINAGE AREA : 6.4 sq. mi.
CHARACTER OF TERRAIN : Rural, mostly forested
STREAM CHARACTERISTICS : Incised, sinuous, alluvial
NATURE OF STREAMBED : Cobbles, gravel, sand

PEAK FLOW DATA

Q 2.33 =	500 cfs	Q 50 =	1260 cfs
Q 10 =	840 cfs	Q 100 =	1460 cfs
Q 25 =	1060 cfs	Q 500 =	1970 cfs

DATE OF FLOOD OF RECORD : Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 13.9 cfs
ICE CONDITIONS : Moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

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

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span concrete T-beam
YEAR BUILT: 1925
CLEAR SPAN(NORMAL TO STREAM): 21.5'
VERTICAL CLEARANCE ABOVE STREAMBED: ~7'
WATERWAY OF FULL OPENING: 140 sq. ft.
DISPOSITION OF STRUCTURE: Replace - leave east abutment
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See borings

WATER SURFACE ELEVATIONS AT:

Q2.33 =	824.4'	VELOCITY =	13.3 fps
Q10 =	826.1'	"	15.3 fps
Q25 =	827.8'	"	13.0 fps
Q50 =	827.8'	"	13.9 fps
Q100 =	827.9'	"	13.4 fps

LONG TERM STREAMBED CHANGES: None noted

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes
FREQUENCY: Below Q10
RELIEF ELEVATION: 825.3'
DISCHARGE OVER ROAD @Q100: 800 cfs

UPSTREAM STRUCTURE

TOWN: Burke — DISTANCE: 1720'
HIGHWAY # : TH 8 — STRUCTURE #: 19
CLEAR SPAN: — CLEAR HEIGHT:
YEAR BUILT: — FULL WATERWAY:
STRUCTURE TYPE:

DOWNSTRUCTURE STRUCTURE

TOWN: Burke — DISTANCE: 470'
HIGHWAY # : — STRUCTURE #:
CLEAR SPAN: — CLEAR HEIGHT:
YEAR BUILT: — FULL WATERWAY:
STRUCTURE TYPE: Confluence with East Branch Passumpsic River

PROPOSED STRUCTURE

STRUCTURE TYPE: CONCRETE NEXT BEAM STRUCTURE ON INTEGRAL ABUTMENTS

CLEAR SPAN(NORMAL TO STREAM): ~38'
VERTICAL CLEARANCE ABOVE STREAMBED: ~7'
WATERWAY OF FULL OPENING: 207 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	823.0'	VELOCITY=	9.9 fps
Q10 =	824.9'	"	11.9 fps
Q25 =	825.9'	"	13.0 fps
Q50 =	826.7'	"	13.9 fps
Q100 =	826.9'	"	13.4 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: N/A
RELIEF ELEVATION: 828.3'
DISCHARGE OVER ROAD @Q100: N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 827.6' (on the upstream side)
VERTICAL CLEARANCE: @ Q50 = 0.9' (on the upstream side)

SCOUR: 0' of contaction scour up to Q500

REQUIRED CHANNEL PROTECTION: Stone Fill Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW:	15 cfs	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	10 cfs	~0.5'
ORDINARY HIGH WATER:	220 cfs	~2'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Detour will be used.
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:	56.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	1.57 INCH
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f_y:	270 KSI
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	10.0 KSI
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	8.0 KSI
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	4.0 KSI
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	3.5 KSI
11. CONCRETE, CLASS C	f'_c:	3.0 KSI
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270	f_y:	---
14. SOIL UNIT WEIGHT	γ:	0.120 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	8.0 KSF
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	0.45
17. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	---
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
19. NOMINAL AXIAL PILE RESISTANCE	q_p:	349.0 KIPS
20. PILE YIELD STRENGTH ASTM A572	f_y:	50 KSI
21. PILE SIZE		HP 12X63
22. EST. PILE LENGTH AT ABUTMENT #1	L_{p1}	50 FT
EST. PILE LENGTH AT ABUTMENT #2	L_{p2}	55 FT
23. PILE RESISTANCE FACTOR	ϕ:	0.50
24. LATERAL PILE DEFLECTION	Δ:	0.19 INCH
25. BASIC WIND SPEED	V_{3s}:	---
26. MINIMUM GROUND SNOW LOAD	p_g:	---
27. SEISMIC DATA PGA: 8 %g	S_s:	18 %g
	S_1:	6 %g

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	1.5	1.13					
POSTING							
OPERATING	1.87	1.46	1.77	1.03	1.34	1.21	1.42
COMMENTS:							

PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY	Rndr:	268.00 KIP
2. PILE TEST RESISTANCE FACTOR	ϕ:	0.65
3. MAXIMUM PILE TIP ELEVATION		ABUT. 1: 804 FT ABUT. 2: 806 FT

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2014	3600	460	55	5.9	240
2034	4100	530	55	8.6	410

20 year ESAL for flexible pavement from 2014 to 2034 : 2339000
40 year ESAL for flexible pavement from 2014 to 2054 : 5829000
Design Speed : 30 mph

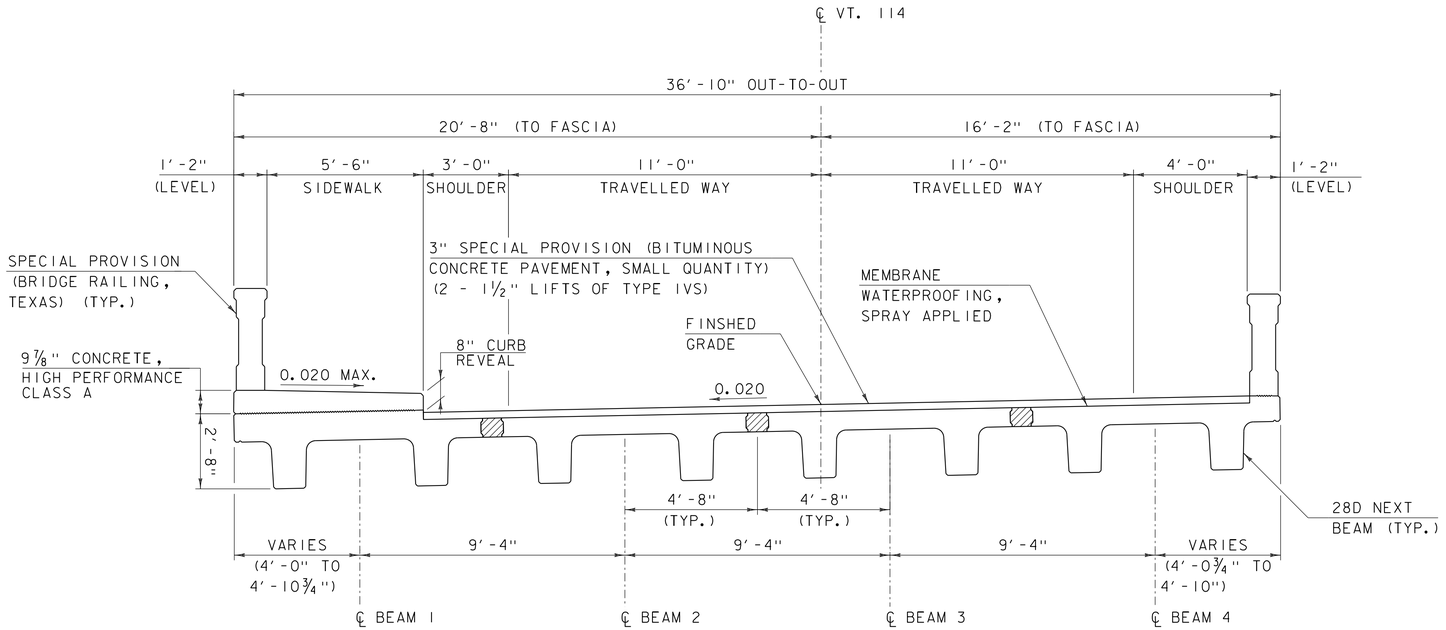
AS BUILT "REBAR" DETAIL

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

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: l0c4l2/cos/zl0c4l2pi.dgn — PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT — DRAWN BY: M. HALEY
DESIGNED BY: S. BEAUMONT — CHECKED BY: J. BYATT
PRELIMINARY INFORMATION SHEET — SHEET 2 OF 73

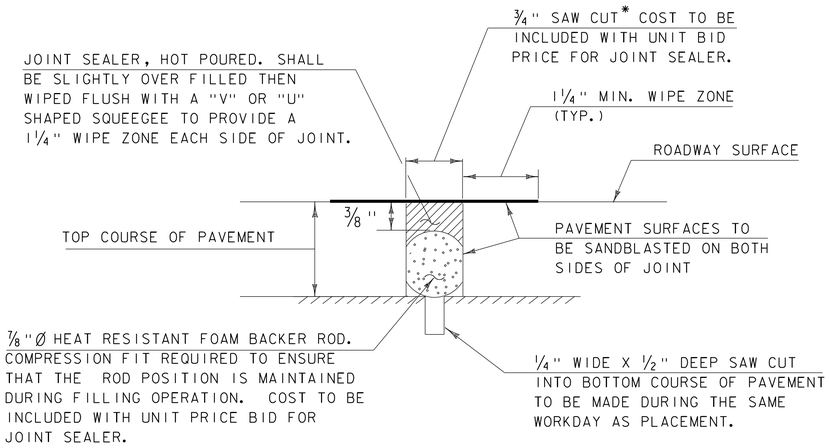
MODEL: PI
CLD 12-0121



TYPICAL BRIDGE SECTION

SCALE: ⅜" = 1′-0"

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ) (TYP.)



SAWED PAVEMENT JOINT DETAIL

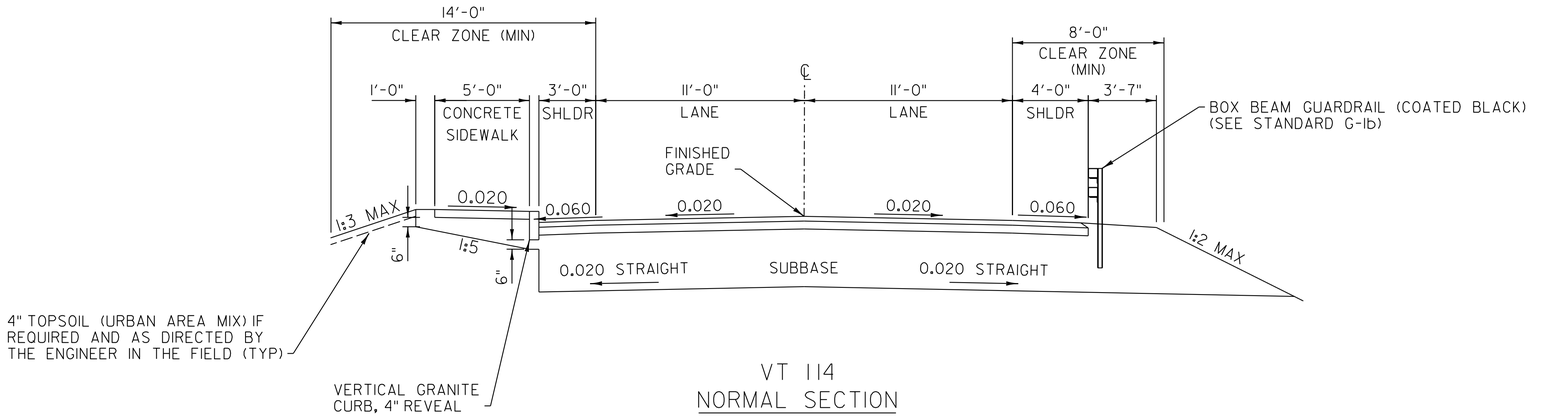
(NOT TO SCALE)

* JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUT 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. ALL WORK SHALL BE PAID UNDER ITEM 524.11, "JOINT SEALER, HOT POURED".

CLD 12-012I MODEL: Sup00

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: z10c412sup.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
TYPICAL BRIDGE SECTION	SHEET 3 OF 73

3" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) (2-1 1/2" LIFTS) (TYPE IVS)
5" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) (2-2 1/2" LIFTS) (TYPE IIS)
36" SUBBASE OF DENSE GRADED CRUSHED STONE



VT 114
NORMAL SECTION

SCALE: 1/4" = 1'-0"

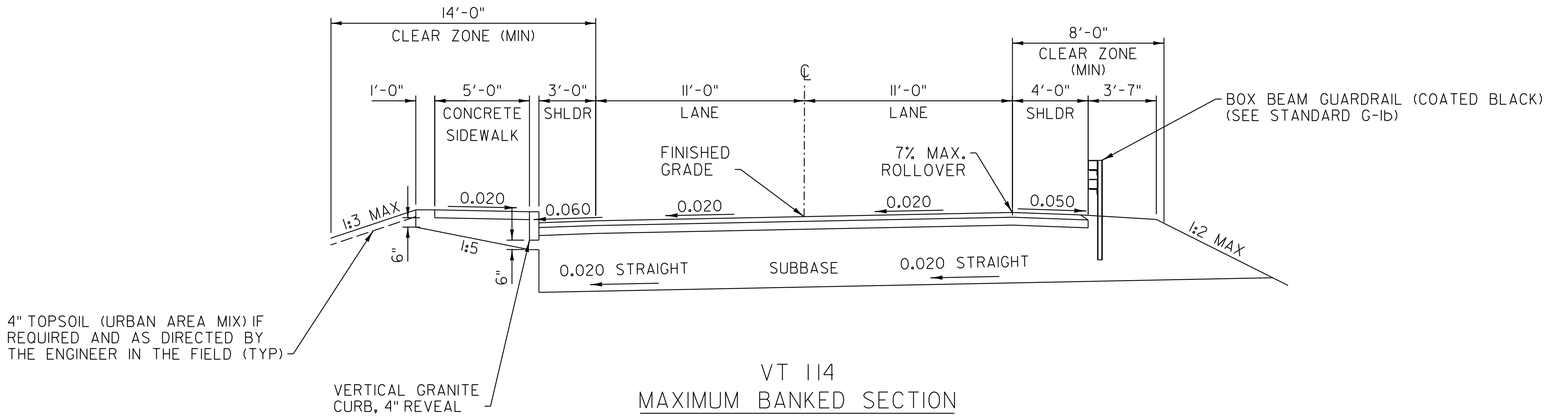
MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

NOTE

1. EMULSIFIED ASPHALT SHALL BE APPLIED TO ALL COLD PLANED SURFACES AT A RATE OF 0.080 GAL/SY AND BETWEEN EACH LIFT OF PAVEMENT AT A RATE OF 0.040 GAL/SY.

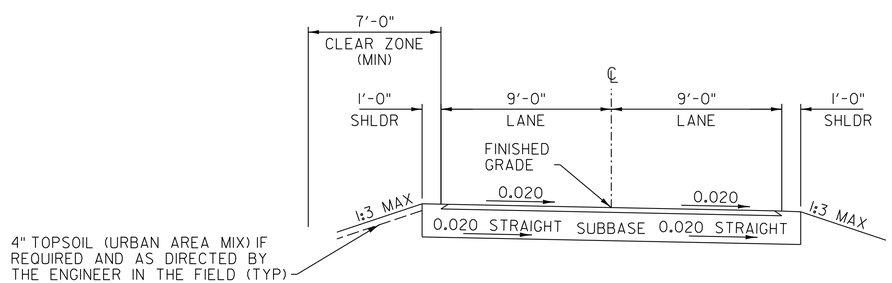
3" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) (2-1 1/2" LIFTS) (TYPE IVS)
5" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) (2-2 1/2" LIFTS) (TYPE IIS)
36" SUBBASE OF DENSE GRADED CRUSHED STONE



VT 114
MAXIMUM BANKED SECTION

SCALE: 1/4" = 1'-0"

3" SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) (2-1 1/2" LIFTS) (TYPE IVS)
18" SUBBASE OF DENSE GRADED CRUSHED STONE



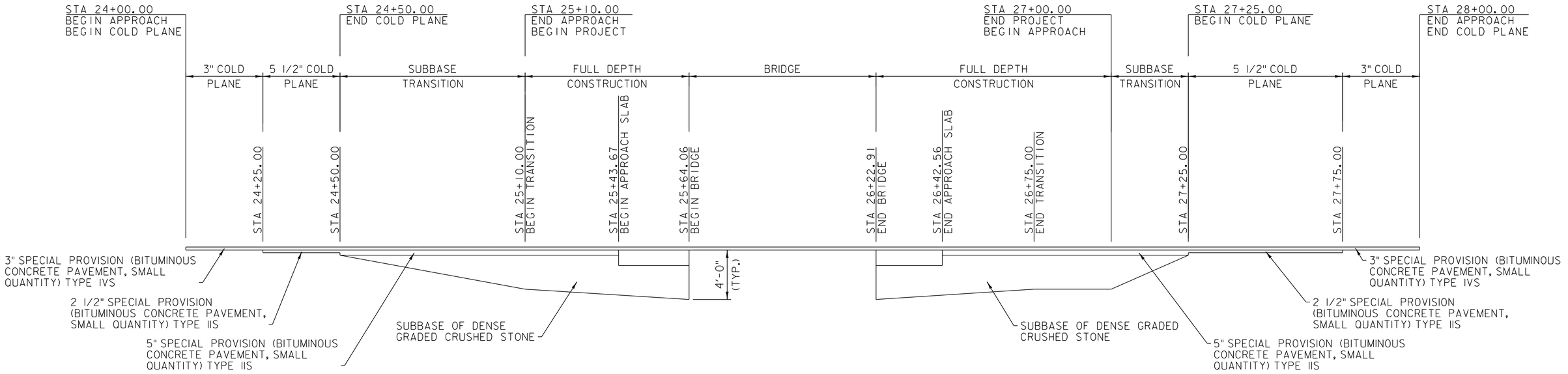
TH 52 (BELDEN HILL ROAD)
MAXIMUM BANKED SECTION

SCALE: 1/4" = 1'-0"

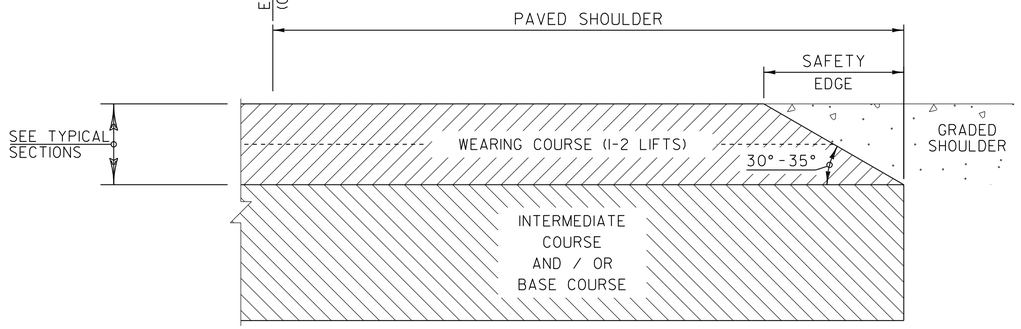
PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)

FILE NAME: 10c412/cos/z10c412frm.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: W. GORDON
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
TYPICAL ROADWAY SECTIONS SHEET 1	SHEET 4 OF 73

CLD 12-0121 MODEL: TYP01



MATERIAL TRANSITION DIAGRAM



SAFETY EDGE DETAIL

SAFETY EDGE NOTES

1. THE EDGE OF PAVMENT SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE 30 TO 35 DEGREE ANGLE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.

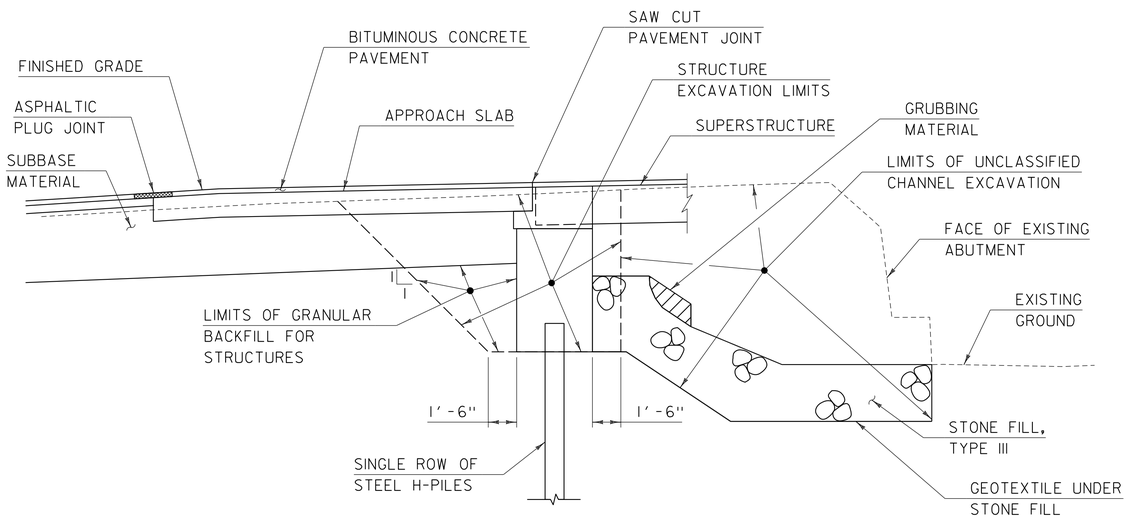
2. THE PAVED SHOULDER EXTENDS FROM THE EDGE OF TRAVELED WAY TO THE EDGE OF THE WEARING COURSE, INCLUDING THE "SAFETY EDGE".

NOT TO SCALE

CLD 12-0121 MODEL: TYP02

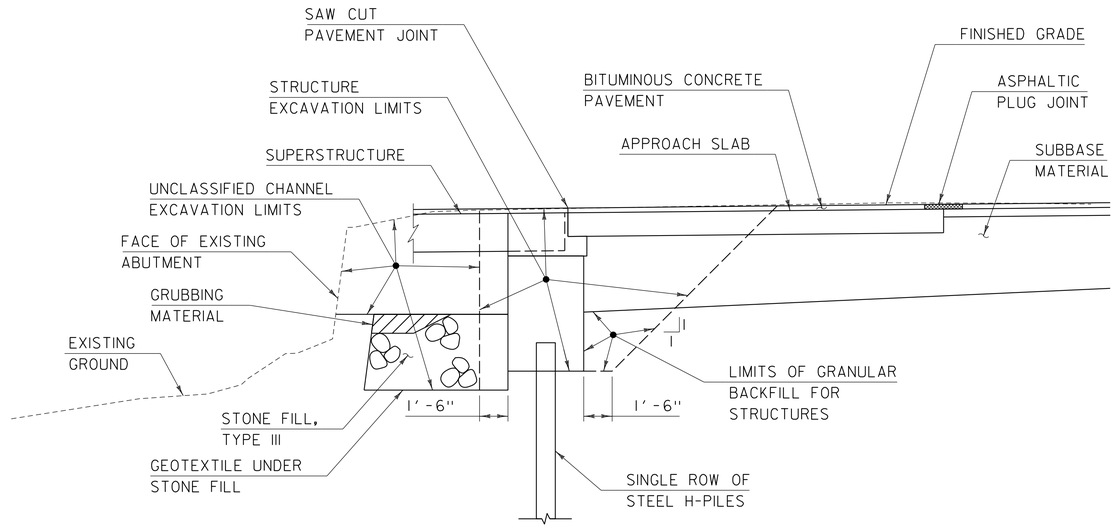
PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412frm.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
TYPICAL ROADWAY SECTIONS SHEET 2	SHEET 5 OF 73

CONSULTING ENGINEERS



TYPICAL ABUTMENT 1/WINGWALL EARTHWORKS SECTION

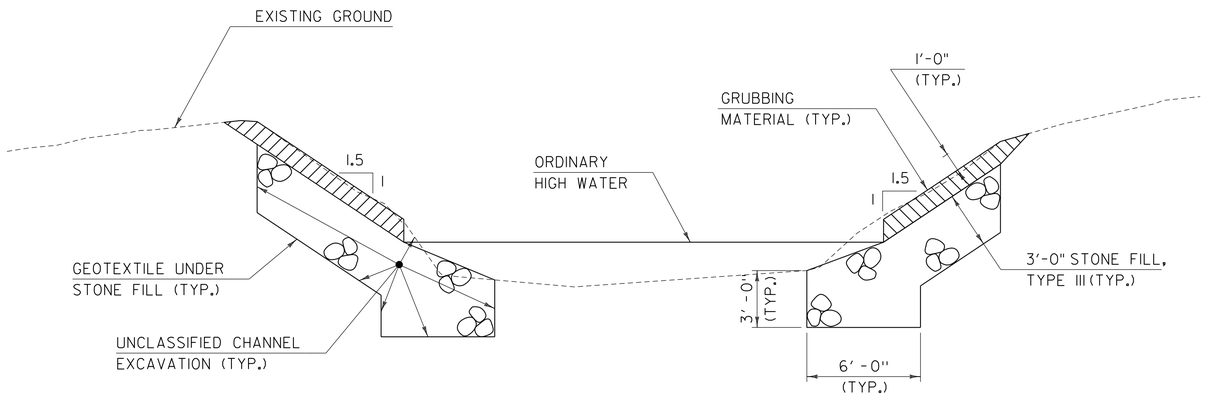
SCALE: 1/4" = 1'-0"



TYPICAL ABUTMENT 2/WINGWALL EARTHWORKS SECTION

SCALE: 1/4" = 1'-0"

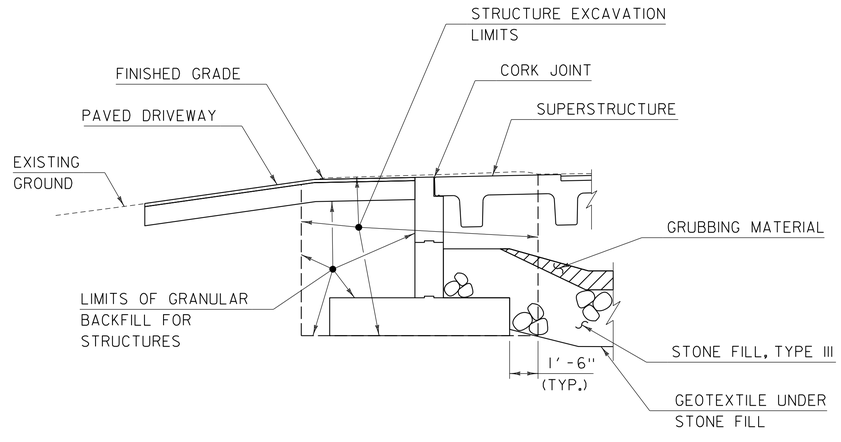
1. ACTUAL STRUCTURE EXCAVATION LIMITS SHALL BE DETERMINED BY THE CONTRACTOR. HOWEVER, ONLY THE STRUCTURE EXCAVATION BETWEEN THE LIMITS SHOWN WILL BE PAID FOR UNDER THE ITEM 204.25 "STRUCTURE EXCAVATION". ALL NECESSARY EXCAVATION OUTSIDE OF THESE LIMITS SHALL BE PAID UNDER ITEM 203.27, "UNCLASSIFIED CHANNEL EXCAVATION".



TYPICAL CHANNEL SECTION

SCALE: 1/4" = 1'-0"

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



TYPICAL RETAINING WALL EARTHWORKS SECTION (DRIVEWAY)

SCALE: 1/4" = 1'-0"

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412sub.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
TYPICAL EARTHWORK SECTIONS	SHEET 6 OF 73

CLD 12-0121 MODEL: Sub01

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 2012, AND ITS LATEST REVISIONS.

2. ALL PRECAST CONCRETE ELEMENTS TO BE FABRICATED TO THE SPECIFIED DIMENSIONS WITHIN THE TOLERANCES DICTATED IN THE PRECAST/PRESTRESSED CONCRETE INSTITUTE TOLERANCE MANUAL FOR PRECAST AND PRESTRESSED CONCRETE CONSTRUCTION, MNL 135-00, AND ITS LATEST REVISIONS.

3. DUE TO STABILITY CONCERNS AT THE ABUTMENTS DURING THE ERECTION OF THE SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT THE ERECTION PLAN A MINIMUM OF 30 WORKING DAYS PRIOR TO THE BRIDGE CLOSURE PERIOD. UNDER NO CIRCUMSTANCES SHALL A BRIDGE CLOSURE PERIOD BEGIN PRIOR TO HAVING AN ACCEPTED ERECTION PLAN.

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

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

6. THE CONTRACTOR SHALL BE MADE AWARE THAT EXISTING UTILITIES ARE WITHIN THE CONSTRUCTION LIMITS OF BRIDGE 13. THE UTILITIES WILL BE RELOCATED BY OTHERS PRIOR TO THE START OF CONSTRUCTION. THE LOCATION OF ANY UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. NO CLAIMS ARE MADE AS TO THE ACCURACY OR COMPLETENESS OF THE UTILITIES SHOWN. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR LOCATING AND PROTECTING FROM DAMAGE ALL UTILITIES ON SITE DURING ALL STAGES OF CONSTRUCTION. SEE UTILITY RELOCATION SHEET AND SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

7. NO SUBSTITUTION FOR PRECAST CONCRETE WILL BE PERMITTED.

8. ALL PG BINDER USED IN BITUMINOUS CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH SUBSECTION 490.03 b.

GENERAL (CONTINUED)

9. EMULSIFIED ASPHALT SHALL BE APPLIED ON ALL COLD PLANED SURFACES AT THE RATE OF 0.080 GAL/SY AND BETWEEN ALL COURSES OF PAVEMENT AT THE RATE OF 0.040 GAL/SY OR AS DIRECTED BY THE ENGINEER.

10. ANY REQUIRED SAWCUT OF EXISTING PAVEMENT SHALL BE INCIDENTAL TO THE WEARING COURSE PAY ITEM.

11. THE CONTRACTOR SHALL REVIEW AND UNDERSTAND ALL APPLICABLE ENVIRONMENTAL PERMITS AND ENSURE THAT ALL CONSTRUCTION CONDITIONS ARE MET.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTY CAUSED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

13. SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.

14. DRIVEWAYS: ALL DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SHEET B-71.

EARTHWORK

15. REMOVAL OF THE EXISTING STRUCTURE SHALL BE UNDER ITEM 529.15, "REMOVAL OF STRUCTURE". THIS WORK SHALL INCLUDE REMOVAL OF ANY PORTIONS OF THE EXISTING STRUCTURE, INCLUDING THE SUPERSTRUCTURE, ABUTMENTS, RETAINING WALLS, AND WINGWALLS, THAT FALL OUTSIDE THE LIMITS OF STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION. ABUTMENT #1 SHALL BE REMOVED TO THE TOP OF EXISTING FOOTING AT APPROXIMATE ELEVATION 822.00 FEET, AND ABUTMENT #2 SHALL BE REMOVED TO APPROXIMATE ELEVATION 825.00 FEET. ANY PORTIONS OF EXISTING ABUTMENT #2 THAT MAY INTERFERE WITH THE CONSTRUCTION OF THE NEW BRIDGE SHALL ALSO BE REMOVED.

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

EARTHWORK (CONTINUED)

17. CURRENTLY THERE IS AN INVASIVE WEED ON THE BANKS OF THE UPSTREAM CHANNEL WITHIN THE CONSTRUCTION LIMITS. ALL VEGETATION AND TOP SOIL EXCAVATED FROM THE UPSTREAM CHANNEL BANKS SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY. ALL EARTH DISTURBING EQUIPMENT SHALL BE WASHED BEFORE LEAVING THE UPSTREAM CHANNEL BANKS. THE EXCAVATED SECTION LEFT BELOW THE DESIRED LEVEL BY REMOVALS SHALL BE BACKFILLED WITH APPROVED MATERIAL. INVASIVE WEED REMOVAL AND ALL ASSOCIATED WORKS SHALL BE INCIDENTAL TO THE APPROPRIATE EXCAVATION AND BACKFILL ITEMS.

CONCRETE AND REINFORCING STEEL

18. AS DETAILED ON THE QUANTITY SUMMARY SHEETS ON SHEETS 9-13, THE PRECAST CONCRETE SUBSTRUCTURES AND APPROACH SLABS ARE OPTION ITEMS. THE CONTRACTOR SHALL CHOOSE EITHER CONTRACT ITEM 540.10 FOR ALL OPTIONS OR CONTRACT ITEM 900.645 FOR ALL OPTIONS. MIXING OPTION ITEMS SHALL NOT BE ALLOWED.

19. ITEM 514.10, "WATER REPELLENT, SILANE", SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE, INCLUDING THE TEXAS RAIL AND CONCRETE SIDEWALKS, WITH THE EXCEPTION OF THE BOTTOM OF THE PRECAST NEXT BEAMS BETWEEN DRIP NOTCHES.

20. THE CORK JOINT BETWEEN THE PRECAST CONCRETE BEAM FLANGE AND THE RETAINING WALL STEM SHALL BE INCIDENTAL TO PAY ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B".

21. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".

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

ALONG BACK FACES OF WALLS AGAINST EARTH:	2.00 INCHES
ALONG TOP SURFACE OF DECK SLAB:	2.50 INCHES
ALONG BOTTOM SURFACE OF DECK SLAB:	1.75 INCHES
BEAM-END CLOSURE POUR:	2.00 INCHES
ELSEWHERE UNLESS OTHERWISE INDICATED:	3.00 INCHES

23. TEST BARS SHALL BE PROVIDED IN ACCORDANCE WITH THE "VERMONT AGENCY OF TRANSPORTATION MATERIALS SAMPLING MANUAL".

CONCRETE		REINFORCING STEEL	
STRUCTURAL ELEMENT:	CONTRACT ITEM:	TO MEET THE REQUIREMENTS FOR:	PAYMENT TO BE INCLUDED IN:
NEXT BEAMS	ITEM 900.640, "SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT D BEAMS) (NEXT 28D)"	REINFORCING STEEL, LEVEL II	ITEM 900.640, "SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT D BEAMS) (NEXT 28D)"
CAST-IN-PLACE CONCRETE*	ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)"	REINFORCING STEEL, LEVEL II	ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)"
SUBSTRUCTURE	ITEM 540.10, "PRECAST CONCRETE STRUCTURE" OR ITEM 900.645, "SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE), AS APPROPRIATE.	REINFORCING STEEL, LEVEL I	ITEM 540.10, "PRECAST CONCRETE STRUCTURE" OR ITEM 900.645, "SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE), AS APPROPRIATE.
BRIDGE SIDEWALK	ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A"	REINFORCING STEEL, LEVEL II	ITEM 507.12, "REINFORCING STEEL, LEVEL II"
TEXAS BRIDGE RAIL	ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING, TEXAS)"	REINFORCING STEEL, LEVEL II	ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING, TEXAS)"
RETAINING WALL STEM	ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B"	REINFORCING STEEL, LEVEL I EPOXY COATED	ITEM 507.11, "REINFORCING STEEL, LEVEL I" EPOXY COATED
RETAINING WALL FOOTING	ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B"	REINFORCING STEEL, LEVEL I	ITEM 507.11, "REINFORCING STEEL, LEVEL I"
APPROACH SLABS	ITEM 540.10, "PRECAST CONCRETE STRUCTURE" OR ITEM 900.645, "SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE), AS APPROPRIATE.	REINFORCING STEEL, LEVEL I EPOXY COATED	ITEM 540.10, "PRECAST CONCRETE STRUCTURE" OR ITEM 900.645, "SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE), AS APPROPRIATE.

* CAST-IN-PLACE CONCRETE SHALL INCLUDE ALL CONCRETE PLACED INTEGRALLY WITH THE SUPERSTRUCTURE AND APPROACH SLABS INCLUDING BEAM-END CLOSURE POURS, DECK CLOSURE POURS, AND APPROACH SLAB CLOSURE POURS, AND SUBSTRUCTURE CONCRETE FOR PILE CAVITIES AS DETAILED IN THE PLANS.

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/zl10c412gennotes.dgn PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT CHECKED BY: J. BYATT
PROJECT NOTES (1 OF 2) SHEET 7 OF 73

CONSULTING ENGINEERS

CLD 12-012l MODEL: GeneralNotes (1of 2)

PRECAST ABUTMENTS AND POST-TENSIONING

24. WATERSTOPS SHALL BE PLACED AT THE JOINT BETWEEN THE PRECAST ABUTMENTS AND THE CAST-IN-PLACE CONCRETE BEAM-END CLOSURE POURS. THIS WORK SHALL BE PAID FOR UNDER THE APPROPRIATE PRECAST CONCRETE ABUTMENT PAY ITEM.

25. IF VERTICAL CONSTRUCTION JOINTS ARE REQUIRED BY THE CONTRACTOR FOR SHIPPING OF THE ABUTMENTS THEN THE SECTIONS SHALL BE KEYED AND MATCH CAST. A JOINT DETAIL SHALL BE SHOWN ON THE FABRICATION DRAWINGS.

26. POST-TENSIONING AND ASSOCIATED ITEMS ARE ONLY REQUIRED IF THE PRECAST ABUTMENT IS CONSTRUCTED OF MORE THAN ONE UNIT. ANY POST-TENSIONING STRANDS AND CONDUIT SHALL ADHERE TO THE REQUIREMENTS OF SECTION 510 - PRESTRESSED CONCRETE. GALVANIZED ANCHOR ASSEMBLIES, CONDUIT, AND POST-TENSIONING STRANDS SHALL BE INCLUDED UNDER THE APPROPRIATE PRECAST CONCRETE ABUTMENT PAY ITEM. 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.

27. GALVANIZE ANCHOR ASSEMBLIES AFTER FABRICATION ACCORDING TO AASHTO M232M/M232.

28. DESIGN VALUES: (ABUTMENTS AND APPROACH SLABS)
    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 TWO STRANDS PER CONDUIT.
    E. JACKING FORCE PER STRAND: 32 KIPS

29. THE CONCRETE FOR THE ABUTMENT #1 AND ABUTMENT #2 PILE CAVITIES SHALL MEET THE REQUIREMENTS OF ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)".

30. THE CORRUGATED STEEL PIPE SHALL BE TYPE I AND SHALL MEET THE REQUIREMENTS OF SUBSECTION 711.01 AND AASHTO M289. ALL COSTS ASSOCIATED WITH PLACING THE CORRUGATED STEEL PIPE SHALL BE INCLUDED UNDER THE APPROPRIATE PRECAST CONCRETE ABUTMENT PAY ITEM.

31. PROPOSED SEQUENCE OF CONSTRUCTION:
    A. PREPARE AND GRADE FOUNDATION TO REQUIRED ELEVATION.
    B. PRE-EXCAVATE PILES FOR ABUTMENT #2.
    C. DRIVE PILES.
    D. PLACE GEOTEXTILE FOR ROADBED SEPARATOR UNDER ABUTMENTS, BACKFILL TO BOTTOM OF ABUTMENT ELEVATION, AND WRAP GEOTEXTILE FOR ROADBED SEPARATOR OVER THE BACKFILL.
    E. PLACE PRECAST ABUTMENTS AND INSTALL TRANSVERSE STRANDS (IF MORE THAN ONE UNIT IS USED)
    F. APPLY EPOXY BONDING COMPOUND TO MATCH CAST FACES OF VERTICAL CONSTRUCTION JOINT.
    G. USE A CALIBRATED JACK TO TENSION TO 3 KIPS TO REMOVE SAG IN STRANDS.
    H. CHECK ALIGNMENT OF PRECAST ABUTMENT ELEMENTS.
    I. STRESS POST-TENSIONING STRANDS USING A CALIBRATED JACK.
    J. FILL PILE CAVITIES WITH ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)".
    K. BACKFILL MAY BE COMPLETED AFTER SPLICE CONNECTOR GROUT HAS REACHED 85% OF 5,000 PSI.

32. ALTERNATE SEQUENCE OF CONSTRUCTION MAY BE SUBMITTED TO THE VTRANS PROJECT MANAGER FOR APPROVAL.

NEXT D BEAMS

33. NEXT D BEAMS ARE A NON-PROPRIETARY SHAPE DEVELOPED BY PCI NORTHEAST (PCINE). STANDARDIZED SECTION PROPERTIES AND DETAILS MAY BE FOUND AT http://www.pcine.org.

34. DESIGN VALUES:
    A. CONCRETE DESIGN COMPRESSIVE STRENGTH: f`c = 10,000 PSI.
    B. CONCRETE COMPRESSIVE STRENGTH AT RELEASE: f`ci = 8,000 PSI.
    C. PRESTRESSING STRANDS: 0.6 INCH DIAMETER, 270 KSI, LOW-RELAXATION 7-WIRE STRANDS.
    D. ASSUMED MODULUS OF ELASTICITY: 28,500 KSI.
    E. THE JACKING FORCE PER STRAND: 44 KIPS.
    F. SERVICE LOADS:

MEMBER MOMENT	743.2 K-FT
SUPERIMPOSED DEAD LOAD MOMENT	277.3 K-FT
LIVE LOAD AND IMPACT MOMENT	434.6 K-FT
PEDESTRIAN LIVE LOAD MOMENT	40.4 K-FT
DEAD LOAD REACTION	72.9 KIPS
LIVE LOAD AND IMPACT REACTION	51.8 KIPS
PEDESTRIAN LIVE LOAD REACTION	2.9 KIPS
TOTAL REACTION	127.6 KIPS
CAMBER AT RELEASE	1 9/16 INCHES
ERECTION CAMBER	2 1/2 INCHES
RESIDUAL CAMBER	2 13/16 INCHES
FINAL CAMBER	1 13/16 INCHES

    DIMENSION TOLERANCES SHOULD BE INCLUDED IN FABRICATION DRAWINGS.

35. ENDS OF FLANGES IN CONTACT WITH GROUT SHALL BE SANDBLASTED PRIOR TO DELIVERY AND POWER WASHED WITH WATER PRIOR TO ERECTION OF THE BEAMS.

36. FILL THE FLANGE TO FLANGE CONNECTION WITH ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)".

37. METHOD OF FORMING FLANGE CONNECTION SHALL BE DETERMINED BY THE CONTRACTOR. THE FORMS SHALL BE REMOVABLE AND ABLE TO ACCOMMODATE DIFFERENTIAL CAMBER. FORM SUPPORTS SHALL NOT PENETRATE THROUGH THE TOP OF THE POUR UNLESS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL NOT DRILL INTO NEXT BEAMS.

38. THE FABRICATOR MAY ALTER THE DESIGN AS DETAILED IN THESE PLANS TO ACCOMMODATE THE FABRICATOR'S SPECIFIC OPERATION. THIS ALTERATION MUST BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT, MEET THE ABOVE CRITERIA, AND SHALL BE APPROVED BY THE PROJECT MANAGER.

39. PROPOSED SEQUENCE OF CONSTRUCTION:
    A. LAY OUT WORKING LINES THE ENTIRE WIDTH OF THE BRIDGE ALONG CENTERLINE OF BEARING, MEASURED FROM A SINGLE WORKING POINT. THE WORKING LINES SHALL BE BASED ON THE NOMINAL BEAM WIDTHS.
    B. VERIFY THE BEAM SEAT ELEVATIONS AND TAKE CORRECTIVE ACTION IF NECESSARY.
    C. INSTALL BEARINGS.
    D. ERECT THE BEAMS TO FIT WITHIN THE WORKING LINES.
    E. ADJUST BEAMS TO FIT SNUG AGAINST ½" CORK ON INTERIOR OF CHEEK WALLS.
    F. CONSTRUCT FORMS FOR THE FLANGE CONNECTION POUR AND BEAM-END CLOSURE POUR.
    G. GROUT CONNECTIONS BETWEEN BEAM FLANGES, APPLY LONGITUDINAL GROOVES IN ACCORDANCE WITH SECTION 509, AND CURE.
    H. COMPLETE BEAM-END CLOSURE POUR TO TOP OF DECK, APPLY LONGITUDINAL GROOVES IN ACCORDANCE WITH SECTION 509, AND CURE.

40. ALTERNATE SEQUENCE OF CONSTRUCTION MAY BE SUBMITTED TO THE VTRANS PROJECT MANAGER FOR APPROVAL.

H-PILES

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

42. THE TOPS OF THE PILES AFTER DRIVING SHALL NOT VARY FROM THE POSITION SHOWN ON THE PLANS BY MORE THAN THREE INCHES. THE PILE ORIENTATION SHALL NOT VARY BY MORE THAN FIVE 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 DRIVING COMMENCES.

43. THE PILES SHALL BE DRIVEN TO A NOMINAL PILE DRIVING RESISTANCE (RNDR) OF 268 KIPS, AS DETERMINED BY THE RESULTS OF DYNAMIC TESTING, AND AS INTERPRETED BY THE ENGINEER, AND TO A MINIMUM DEPTH OF 16 FEET BELOW THE BOTTOM OF THE PRECAST ABUTMENT. NO PILE SPLICES SHALL BE ALLOWED ABOVE THIS DEPTH.

44. TO ENSURE THAT THE NOMINAL CAPACITY HAS BEEN ATTAINED AND TO PREVENT THE OVERSTRESSING OF THE PILES DURING DRIVING OPERATIONS, DYNAMIC TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 505.04. A MINIMUM OF ONE DYNAMIC PILE TEST SHALL BE CONDUCTED ON THE FIRST PILE DRIVEN FOR EACH SUBSTRUCTURE UNIT, FOR A TOTAL OF TWO TESTS. MORE TESTS MAY BE ORDERED BY THE ENGINEER. ADDITIONAL TEST(S) ORDERED BY THE ENGINEER WILL BE PAID FOR AT THE UNIT PRICE BID FOR CONTRACT ITEM 505.45.

45. STRESSES IN THE PILE DURING DRIVING SHALL NOT EXCEED THE MAXIMUM DRIVING STRESS. THE MAXIMUM DRIVING STRESS SHALL BE DETERMINED AS 90 PERCENT OF THE PILE STEEL STRENGTH MULTIPLIED BY A RESISTANCE FACTOR OF 1.00.

46. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED TO BE AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTH MAY VARY.

47. DUE TO THE PROXIMITY OF AN ADJACENT BUILDING AND THE PRESENCE OF THE EXISTING ABUTMENT TO REMAIN IN PLACE, THE CONTRACTOR MAY PRE-EXCAVATE THE FOUNDATION MATERIALS PRIOR TO DRIVING ABUTMENT #2 PILES IN ORDER TO MEET THE REQUIREMENTS OF SPECIAL PROVISION (CONSTRUCTION AND VIBRATION CRACK MONITORING). THIS WORK SHALL BE COMPLETED PRIOR TO THE BRIDGE CLOSURE PERIOD. REFERENCE TRAFFIC CONTROL SHEET 20 FOR ADDITIONAL INFORMATION.

48. PAYMENT FOR PRE-EXCAVATION FOR PILES SHALL BE UNDER ITEM 900.640, "SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES)".

49. A MINIMUM OF 4 OF THE 6 ABUTMENT #2 PILES SHALL BE INSTALLED PRIOR TO THE BRIDGE CLOSURE PERIOD UTILIZING ONE-WAY ALTERNATING TRAFFIC. SEE TRAFFIC CONTROL SHEET 20 FOR ADDITIONAL INFORMATION.

MISCELLANEOUS

50. THE CONSTRUCTION OF THE CAST-IN-PLACE CONCRETE RETAINING WALL AND ABUTMENT #2 OCCURS IN CLOSE PROXIMITY TO THE BASEMENT OF THE ADJACENT ABUTTER AT THE NORTHEAST CORNER OF THE BRIDGE. VIBRATION AND CRACK MONITORING SHALL BE REQUIRED AND PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (CONSTRUCTION VIBRATION AND CRACK MONITORING)".

51. ALL STEEL COMPONENTS OF APPROACH RAILING AND GUARDRAIL SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. COMPONENTS SHALL BE POWDER COATED BLACK IN ACCORDANCE WITH ASTM D 7803.

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412gennotes.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
PROJECT NOTES (2 OF 2)	SHEET 8 OF 73

CONSULTING ENGINEERS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES			TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	EROSION CONTROL	BRIDGE NO. 13	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
											EARTHWORK SUMMARY
1			1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	-			
875			875		CY	COMMON EXCAVATION	203.15	15	860	CY	COMMON EXCAVATION
									148	CY	UNCLASSIFIED CHANNEL EXCAVATION (ASSUME 25% SUITABLE
		590	590		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	0.7	326	CY	STRUCTURE EXCAVATION (ASSUME 100% SUITABLE)
65			65		CY	TRENCH EXCAVATION OF EARTH	204.20	3.9	1334	CY	TOTAL FILL AVAILABLE
1			1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-	0	CY	TOTAL FILL REQUIRED (INCLUDING 1.15 FILL FACTOR)
		326	326		CY	STRUCTURE EXCAVATION	204.25	1.2	1334	CY	TOTAL WASTE
10		92	102		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	2			
500			500		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	31			
925			925		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	8			
20			20		CWT	EMULSIFIED ASPHALT	404.65	4.8			
1			1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-			
		10	10		CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33	0.3			
		14	14		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	0.9			
		1	1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10	-			
		630	630		LF	STEEL PILING, HP 12 X 63	505.155	-			
		2	2		EACH	DYNAMIC PILE LOADING TEST	505.45	-			
		1304	1304		LB	REINFORCING STEEL, LEVEL I	507.11	0.8			
		838	838		LB	REINFORCING STEEL, LEVEL II	507.12	0.1			
		20	20		GAL	WATER REPELLENT, SILANE	514.10	2.6			
		64	64		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	1.4			
		190	190		SY	MEMBRANE WATERPROOFING, SPRAY APPLIED	520.10	0.3			
		63	63		LF	JOINT SEALER, HOT POURED	524.11	1.2			
		1	1		LS	MAINTENANCE OF STRUCTURES AND APPROACHES	527.10	-			
		1	1		EACH	REMOVAL OF STRUCTURE (1300 SF - EST.)	529.15	-			
		16	16		EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17	-			
						BEGIN OPTION AA					
		1	1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #1)	540.10	-			
		1	1		LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #1)	900.645	-			
						END OPTION AA					
						BEGIN OPTION BB					
		1	1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #2)	540.10	-			
		1	1		LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #2)	900.645	-			
						END OPTION BB					
						BEGIN OPTION CC					
		1	1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB #1)	540.10	-			
		1	1		LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE) (APPROACH SLAB #1)	900.645	-			
						END OPTION CC					

CLD 12-012I MODEL: QUANTITY SUMMARY 1

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412frm.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
QUANTITY SHEET 1

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
	ROADWAY	EROSION CONTROL	BRIDGE NO. 13	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
								BEGIN OPTION DD					
			1		1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB #2)	540.10	-			
			1		1		LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE) (APPROACH SLAB #2)	900.645	-			
								END OPTION DD					
	40				40		LF	15" CPEP(SL)	601.2610	-			
	56				56		LF	18" CPEP(SL)	601.2615	-			
	2				2		EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18	-			
	1				1		EACH	PRECAST REINFORCED CONCRETE MANHOLE WITH CAST IRON COVER	604.21	-			
	1				1		EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I	604.412	-			
		55			55		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST.			
	45				45		MGAL	DUST CONTROL WITH WATER	609.10	EST.			
			282		282		CY	STONE FILL, TYPE III	613.12	0.7			
	340				340		LF	VERTICAL GRANITE CURB	616.21	4			
	190				190		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10	7			
	40				40		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH	618.11	1			
	8				8		SF	DETECTABLE WARNING SURFACE	618.30	-			
	10				10		LF	BOX BEAM GUARDRAIL (COATED BLACK)	621.30	0.3			
	1				1		EACH	MANUFACTURED TERMINAL SECTION, TANGENT (COATED BLACK)	621.51	-			
			3		3		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 2 RAIL BOX BEAM (COATED BLACK)	621.72	-			
	125				125		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	-			
	300				300		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.			
	500				500		HR	FLAGGERS	630.15	EST.			
				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	-			
	3				3		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-			
	725				725		LF	DURABLE 4 INCH WHITE LINE, POLYUREA	646.404	5			
	725				725		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414	5			
	725				725		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	5			
	725				725		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	5			
	50				50		EACH	LINE STRIPING TARGETS	646.76	8			
			408		408		SY	GEOTEXTILE UNDER STONE FILL	649.31	0.8			
		50			50		SY	GEOTEXTILE FOR SILT FENCE	649.51	1			
		15			15		LB	SEED	651.15	2			
		40			40		LB	FERTILIZER	651.18	-			
		0.5			0.5		TON	AGRICULTURAL LIMESTONE	651.20	0.34			
		0.5			0.5		TON	HAY MULCH	651.25	0.34			
	45				45		CY	TOPSOIL	651.35	2			

CLD 12-012I MODEL: QUANTITY SUMMARY 2

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412frm.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
QUANTITY SHEET 2

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD
SHEET 10 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	EROSION CONTROL	BRIDGE NO. 13	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
		141		141		SY	GRUBBING MATERIAL	651.40	1
	1			1		LS	EPSC PLAN	652.10	-
	70			70		HR	MONITORING EPSC PLAN	652.20	6
	1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	-
	50			50		SY	TEMPORARY EROSION MATTING	653.20	2
	3			3		EACH	INLET PROTECTION DEVICE, TYPE I	653.40	-
	1			1		EACH	FILTER BAG	653.45	-
	625			625		LF	PROJECT DEMARCATION FENCE	653.55	19
10				10		EACH	TRANSPLANTING SHRUBS	656.50	-
10				10		CY	LANDSCAPE BACKFILL, TRUCK MEASUREMENT	656.80	3.3
25				25		SF	TRAFFIC SIGNS, TYPE A	675.20	0.66
98				98		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	-
15				15		EACH	REMOVING SIGNS	675.50	-
6				6		EACH	ERECTING SALVAGED SIGNS	675.60	-
3				3		EACH	SETTING SALVAGED POSTS	675.61	-
3				3		EACH	DELINEATOR WITH STEEL POST	676.10	-
8				8		EACH	REMOVAL OF EXISTING DELINEATOR	676.12	-
1				1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-
		65		65		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)	900.608	2.6
		110		110		LF	SPECIAL PROVISION (BRIDGE RAILING, TEXAS)	900.640	2.1
		330		330		LF	SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES)	900.640	-
		230		230		LF	SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT D BEAMS) (NEXT 28 D)	900.640	-
		1		1		LS	SPECIAL PROVISION (CONSTRUCTION VIBRATION AND CRACK MONITORING)	900.645	-
1				1		LS	SPECIAL PROVISION (CPM SCHEDULE)	900.645	-
1				1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645	-
			1	1		LU	SPECIAL PROVISION (INCENTIVE/DISINCENTIVE) (N.A.B.I.)	900.650	-
1				1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	900.650	-
1				1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650	-
230				230		SY	SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	900.675	5.5
540				540		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680	5

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)
245	TON	TYPE IIS (VT 114)
260	TON	TYPE IVS (VT 114)
30	TON	TYPE IVS (TH 52)
535	TON	SUBTOTAL
5	TON	ROUNDING
540	TON	TOTAL

CLD 12-012I MODEL: QUANTITY SUMMARY 3

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412frm.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
QUANTITY SHEET 3

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD
SHEET 11 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES

RETAINING WALL	APPROACH SLAB NO. 1	APPROACH SLAB NO. 2	ABUTMENT NO. 1	ABUTMENT NO. 2	SUPER-STRUCTURE	TOTALS BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER
			467	123		590	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27
			165	161		326	CY	STRUCTURE EXCAVATION	204.25
29			38	25		92	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30
					10	10	CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33
14						14	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34
			0.5	0.5		1	LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10
			300	330		630	LF	STEEL PILING, HP 12 X 63	505.155
			1	1		2	EACH	DYNAMIC PILE LOADING TEST	505.45
1304						1304	LB	REINFORCING STEEL, LEVEL I	507.11
					838	838	LB	REINFORCING STEEL, LEVEL II	507.12
1			3	3	13	20	GAL	WATER REPELLENT, SILANE	514.10
	33	31				64	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10
					190	190	SY	MEMBRANE WATERPROOFING, SPRAY APPLIED	520.10
	32	31				63	LF	JOINT SEALER, HOT POURED	524.11
					1	1	LS	MAINTENANCE OF STRUCTURES AND APPROACHES	527.10
					1	1	EACH	REMOVAL OF STRUCTURE (1300 SF - EST.)	529.15
					16	16	EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17
								BEGIN OPTION AA	
			1			1	LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #1)	540.10
			1			1	LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #1)	900.645
								END OPTION AA	
								BEGIN OPTION BB	
				1		1	LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #2)	540.10
				1		1	LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT #2)	900.645
								END OPTION BB	
								BEGIN OPTION CC	
	1					1	LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB #1)	540.10
	1					1	LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE) (APPROACH SLAB #1)	900.645
								END OPTION CC	
								BEGIN OPTION DD	
		1				1	LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB #2)	540.10
		1				1	LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE) (APPROACH SLAB #2)	900.645
								END OPTION DD	
			202	80		282	CY	STONE FILL, TYPE III	613.12
					3	3	EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 2 RAIL BOX BEAM (COATED BLACK)	621.72
			290	118		408	SY	GEOTEXTILE UNDER STONE FILL	649.31
			109	32		141	SY	GRUBBING MATERIAL	651.40
	3	3	28	27	4	65	CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)	900.608

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

CLD 12-012I MODEL: BRIDGE QUANTITY SUMMARY I

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: l0c412/cos/zl0c412frm.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
BRIDGE QUANTITY SHEET I

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 12 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 2

SUMMARY OF BRIDGE QUANTITIES

RETAINING WALL	APPROACH SLAB NO. 1	APPROACH SLAB NO. 2	ABUTMENT NO. 1	ABUTMENT NO. 2	SUPER-STRUCTURE	TOTALS BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER
					110	110	LF	SPECIAL PROVISION (BRIDGE RAILING, TEXAS)	900.640
				330		330	LF	SPECIAL PROVISION (PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES)	900.640
					230	230	LF	SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT D BEAMS) (NEXT 28 D)	900.640
				1		1	LS	SPECIAL PROVISION (CONSTRUCTION VIBRATION AND CRACK MONITORING)	900.645

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

CLD 12-0121 MODEL: BRIDGE QUANTITY SUMMARY 2

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412frm.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
BRIDGE QUANTITY SHEET 2

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 13 OF 73

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 RADIUS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

- 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)

- 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

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

CLD 12-0121 MODEL: LEGEND

CONSULTING ENGINEERS

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412frm.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. HALEY
DESIGNED BY: VTRANS	CHECKED BY: P. SHEDD
CONVENTIONAL SYMBOLOGY LEGEND SHEET	SHEET 14 OF 73

GPS CONTROL POINTS

HVCTRL #1

EAST BURKE AZ MK

NORTH = 759590.364
EAST = 1784022.331
ELEV. = 328.083

GENERAL LOCATION, LYNDON, VT.
TO REACH FROM THE INTERSECTION OF U.S. ROUTE 5 AND VT ROUTE 114 AT THE NORTH END OF LYNDONVILLE GO NORTH ALONG VT ROUTE 114 FOR 4.2 MI (6.8 KM) TO THE SITE OF MARK ON THE LEFT. IT IS JUST SOUTH OF THE LYNDON/BURKE TOWN LINE AND 0.3 MI (0.5 KM) SOUTH OF THE INTERSECTION OF VT ROUTE 114 AND THE ROAD TO BURKE HOLLOW AT THE WEST END OF EAST BURKE VILLAGE. THE MARK IS SET FLUSH WITH GROUND SURFACE IN THE TOP OF A FENO STYLE MONUMENT. IT IS 3.3 M (10.8 FT) WEST OF AND ABOUT 0.4 M (1.3 FT) LOWER THAN THE WEST EDGE OF PAVEMENT OF VT ROUTE 114, 14.4 M (47.2 FT) WEST OF THE LYNDON/BURKE TOWN LINE SIGN AND MILE MARKER 1140/0302/0000, 26.9 M (88.3 FT) SOUTH OF POLE NO. 93/12/158, 42.7 M (140.1 FT) NORTH OF POLE NO. 156/92, AND 0.3 M (1.0 FT) EAST OF A FIBERGLASS WITNESS POST.

HVCTRL #2

EAST BURKE

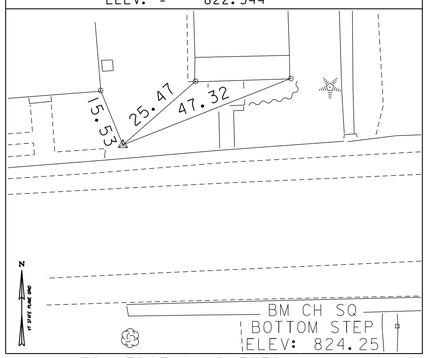
NORTH = 761496.518
EAST = 1784598.061
ELEV. = 819.359

GENERAL LOCATION, EAST BURKE, VT.
TO REACH FROM THE INTERSECTION OF U.S. ROUTE 5 AND VT ROUTE 114 AT THE NORTH END OF LYNDONVILLE GO NORTH ALONG VT ROUTE 114 FOR 4.5 MI (7.2 KM) TO THE INTERSECTION OF THE ROAD TO BURKE HOLLOW ON THE LEFT AND THE SITE OF MARK ON THE LEFT IN A GRASS TRIANGLE FORMED BY THE INTERSECTION. IT IS AT THE WEST END OF EAST BURKE VILLAGE. THE MARK IS SET FLUSH WITH GROUND SURFACE IN THE TOP OF A FENO STYLE MONUMENT. IT IS 5.4 M (17.7 FT) NORTHWEST OF AND ABOUT 0.4 M (1.3 FT) LOWER THAN THE NORTHWEST EDGE OF PAVEMENT OF VT ROUTE 114, 20.6 M (67.6 FT) NORTHEAST OF THE EAST CORNER OF THE EAST BURKE GARAGE, 21.3 M (69.9 FT) EAST OF THE NORTH CORNER OF THE GARAGE, 6.3 M (20.7 FT) NORTHEAST OF POLE NO. 12/169/12-13-1/105/127, AND 0.3 M (1.0 FT) SOUTHEAST OF A FIBERGLASS WITNESS POST.

TRAVERSE TIES

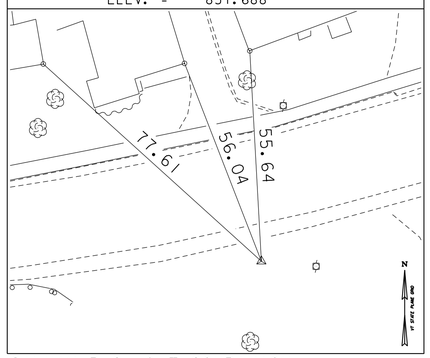
HVCTRL #3

NORTH = 761627.312
EAST = 1784884.485
ELEV. = 822.344



HVCTRL #4

NORTH = 761624.498
EAST = 1785316.828
ELEV. = 831.688



NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

* MAIN TRAVERSE COMPLETED 9/18/1998 BY R. GILMAN P.C. & T. COMPANION

ALIGNMENT TIES

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

DATUM

VERTICAL NAVD 88

HORIZONTAL NAD 83 (96)

ADJUSTMENT COMPASS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: survey\x10c412ti.dgn
PROJECT LEADER: CHRIS WILLIAMS
DESIGNED BY: VTRANS
TIE SHEET 1

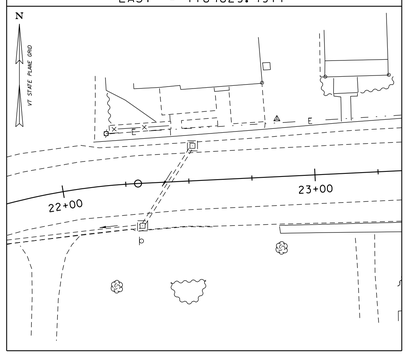
PLOT DATE: 11/24/2014
DRAWN BY: R. BULLOCK
CHECKED BY: VTRANS
SHEET 15 OF 73

MODEL: TIE01
CLD 12-012I

ALIGNMENT TIES

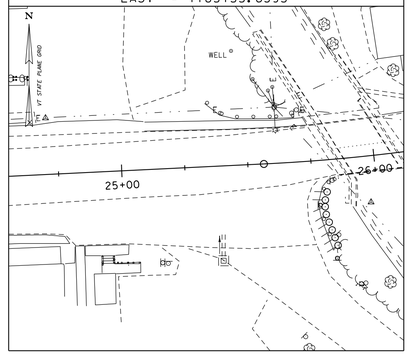
PT 22+29.83

NORTH = 761601.7900
EAST = 1784829.4977



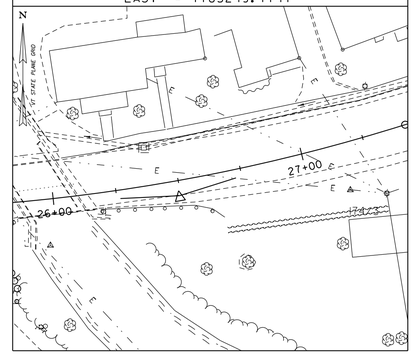
PC 25+56.36

NORTH = 761617.6718
EAST = 1785155.6393



PI 26+50.01

NORTH = 761622.2266
EAST = 1785249.1741



PT 27+42.63

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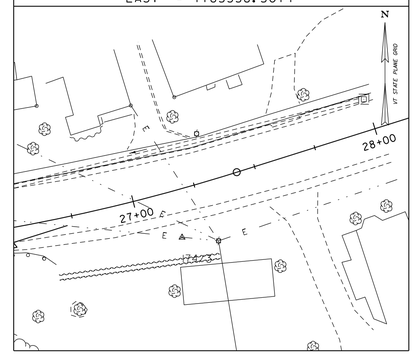
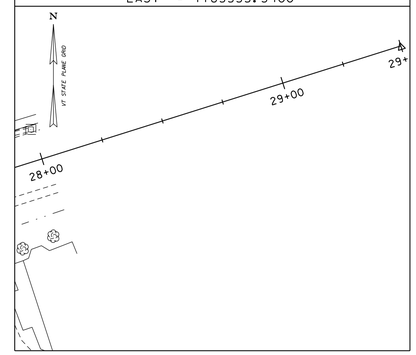
EAST = 1785338.5014



POT 29+48.98

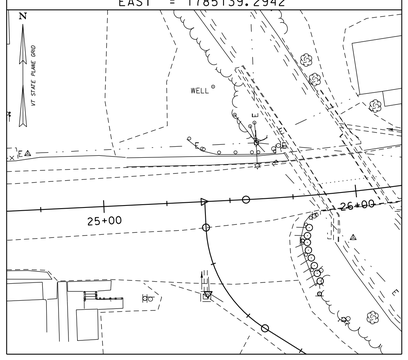
NORTH = 761712.2771
EAST = 1785535.3400



ALIGNMENT TIES

POT 0+00.00

NORTH = 761616.8759
EAST = 1785139.2942



PC 0+10.24

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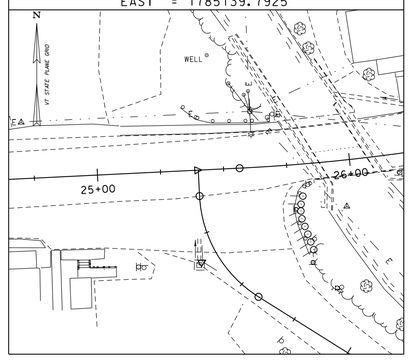
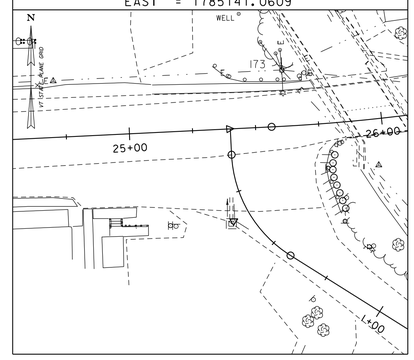
EAST = 1785139.7925



PI 0+36.32

NORTH = 761580.5968
EAST = 1785141.0609



PT 0+58.32

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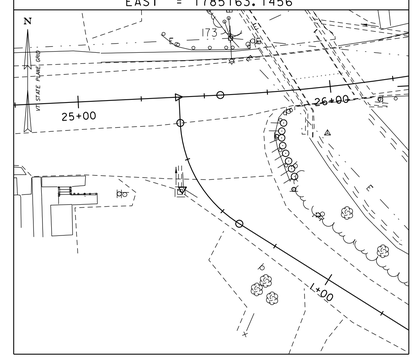
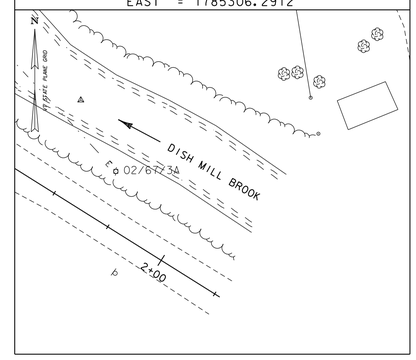
EAST = 1785163.1456



POT 2+27.34

NORTH = 761476.8511
EAST = 1785306.2912



PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)

CONSULTING ENGINEERS

FILE NAME: l0c412/cos/zl0c412tie.dgn		PLOT DATE:	11/24/2014
PROJECT LEADER:	J. BYATT	DRAWN BY:	M. HALEY
DESIGNED BY:	M. HALEY	CHECKED BY:	P. SHEDD
TIE SHEET 2		SHEET	16 OF 73

CLD 12-0121 MODEL: TIE02

CONSTRUCT DRIVES
24+00 LT (32.8 FT WIDE, PAVED, COMM.)
24+89 LT (38.0 FT WIDE, PAVED, COMM.)
26+11 LT (11.0 FT WIDE, PAVED, RES.)
27+14 LT (20.6 FT WIDE, PAVED, RES.)
27+60 RT (20.4 FT WIDE, PAVED, RES.)
0+45 RT (31.8 FT WIDE, PAVED, COMM.)
1+05 RT (16.0 FT WIDE, GRAVEL, RES.)

VERTICAL GRANITE CURB
23+95.0 TO 25+04.5 RT
24+22.9 TO 24+66.5 LT
24+22.9 TO 24+66.5 LT (BACK CURB)
25+04.5 TO 25+58.4 LT
26+18.2 TO 27+02.2 LT

PORTLAND CEMENT
CONCRETE SIDEWALK, 8 INCH
23+90.1 TO 24+22.9 LT
24+66.5 TO 25+04.5 LT

PORTLAND CEMENT
CONCRETE SIDEWALK, 5 INCH
23+95.0 TO 25+04.5 RT
24+09 RT (4.0 FT WIDE)
24+22.9 TO 24+66.5 LT
24+93 RT (5.0 FT WIDE)
25+04.5 TO 25+58.4 LT
26+03.3 TO 27+25.0 LT
26+25 LT (4.0 FT WIDE)
26+50 LT (3.2 FT WIDE)

DETECTABLE
WARNING SURFACE (DWS)
25+05 RT

BOX BEAM GUARDRAIL (COATED BLACK)
25+16.7 TO 25+21.5 LT
0+49.5 TO 0+55.4 LT (R = 14')

GUARDRAIL APPROACH SECTION, GALVANIZED
2 RAIL BOX BEAM (COATED BLACK)
25+21.5 TO 25+56.0 LT
25+70.3 RT TO 0+49.5 LT (R = 14')
26+27.4 TO 26+60.7 RT

MANUFACTURED TERMINAL SECTION,
TANGENT (COATED BLACK)
26+60.7 TO 26+74.4 RT

REMOVAL AND DISPOSAL OF GUARDRAIL
25+35 TO 25+75 LT
25+75 RT TO 0+66 LT
26+15 TO 26+65 RT

DELINEATOR WITH STEEL POST
25+16.7 LT
26+74.4 RT
0+55.4 LT (TH 52)

REMOVAL OF EXISTING DELINEATOR
0+21 TO 0+67 LT (8)

LANDSCAPE BACKFILL,
TRUCK MEASUREMENT
26+65 TO 26+80 RT - 15 FT LONG X 4 FT WIDE X 3 FT DEEP

TRANSPLANTING SHRUBS
26+65 TO 26+80 RT

VT 114 CURVE (1)
DELTA = 14° 40' 47"
D = 7° 52' 52"
R = 727.00'
T = 93.65'
L = 186.27'
E = 6.01'
BANK = 0.020

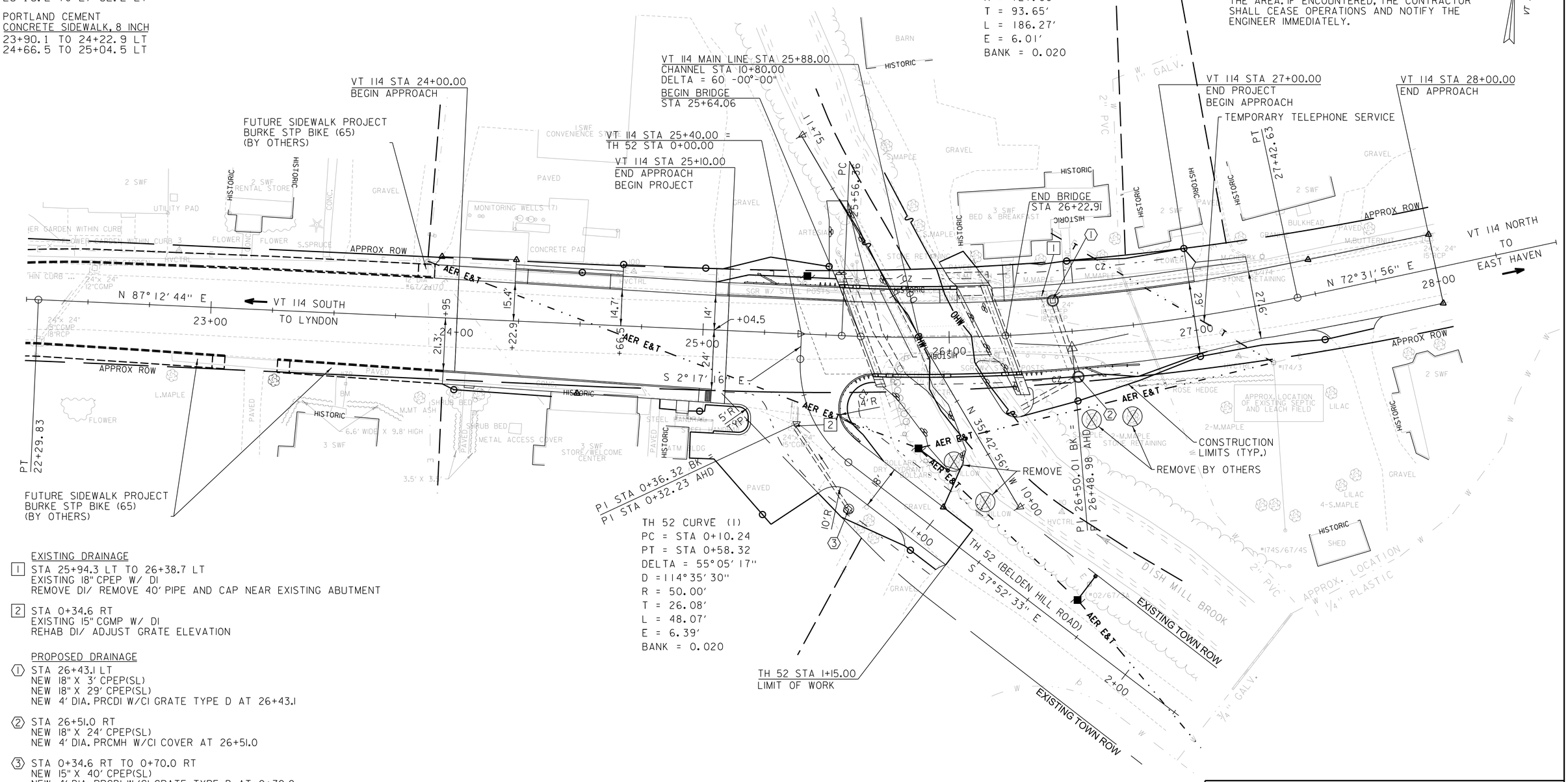
NOTES
1. REMOVE 4' WIDE PAVED SIDEWALK FROM 24+84.0 TO 25+01.5 RT. EXISTING STAIRS, HAND RAILS AND RAMP SHALL REMAIN UNDISTURBED.

2. ONE PARKING SPACE SHALL BE PROVIDED NEAR 26+75 LT FOR USE BY ABUTTING PROPERTY OWNER AT ALL TIMES DURING CONSTRUCTION.

3. A SEPTIC TANK AND PUMP TANK ARE LOCATED NEAR STA 24+25 RT. CONTRACTOR SHALL NOT DISTURB EITHER TANK.

4. THERE MAY BE EXISTING PRIVATE DRAINAGE IN THE AREA. IF ENCOUNTERED, THE CONTRACTOR SHALL CEASE OPERATIONS AND NOTIFY THE ENGINEER IMMEDIATELY.

N
VT STATE PLANE GRID



FUTURE SIDEWALK PROJECT
BURKE STP BIKE (65)
(BY OTHERS)

TH 52 CURVE (1)
PC = STA 0+10.24
PT = STA 0+58.32
DELTA = 55° 05' 17"
D = 114° 35' 30"
R = 50.00'
T = 26.08'
L = 48.07'
E = 6.39'
BANK = 0.020

EXISTING DRAINAGE
[1] STA 25+94.3 LT TO 26+38.7 LT
EXISTING 18" CPEP W/ DI
REMOVE DI/ REMOVE 40' PIPE AND CAP NEAR EXISTING ABUTMENT

[2] STA 0+34.6 RT
EXISTING 15" CGMP W/ DI
REHAB DI/ ADJUST GRATE ELEVATION

PROPOSED DRAINAGE
(1) STA 26+43.1 LT
NEW 18" X 3' CPEP(SL)
NEW 18" X 29' CPEP(SL)
NEW 4' DIA. PRCDI W/CI GRATE TYPE D AT 26+43.1

(2) STA 26+51.0 RT
NEW 18" X 24' CPEP(SL)
NEW 4' DIA. PRCMH W/CI COVER AT 26+51.0

(3) STA 0+34.6 RT TO 0+70.0 RT
NEW 15" X 40' CPEP(SL)
NEW 4' DIA. PRCDI W/CI GRATE TYPE D AT 0+70.0

EXISTING BRIDGE DATA
SINGLE 25-FOOT SPAN CONCRETE
T-BEAM BRIDGE BUILT IN 1925
ON PRE-EXISTING STONE ABUTMENTS
WITH CONCRETE FACING.

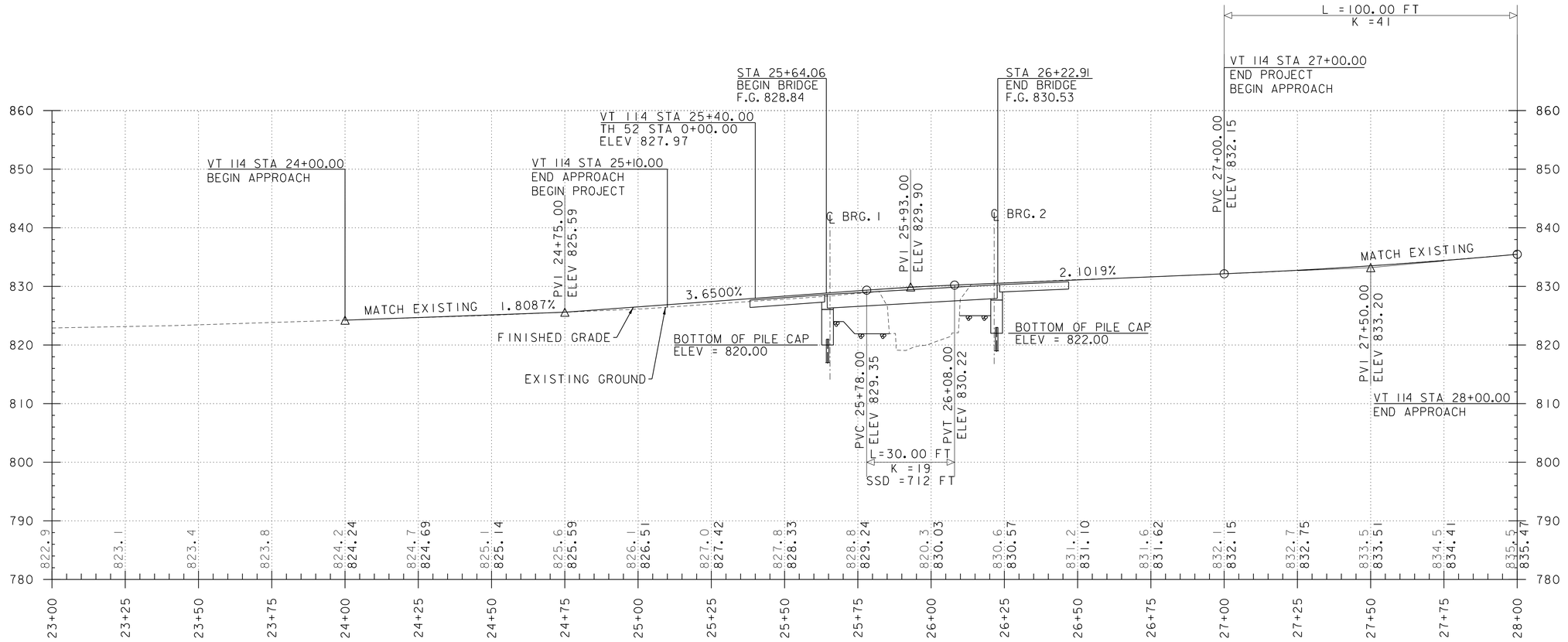
0 20 40
(SCALE 1" = 20')

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412bdrnu.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
LAYOUT SHEET
PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD
SHEET 17 OF 73

CLD 12-0121 MODEL: L01

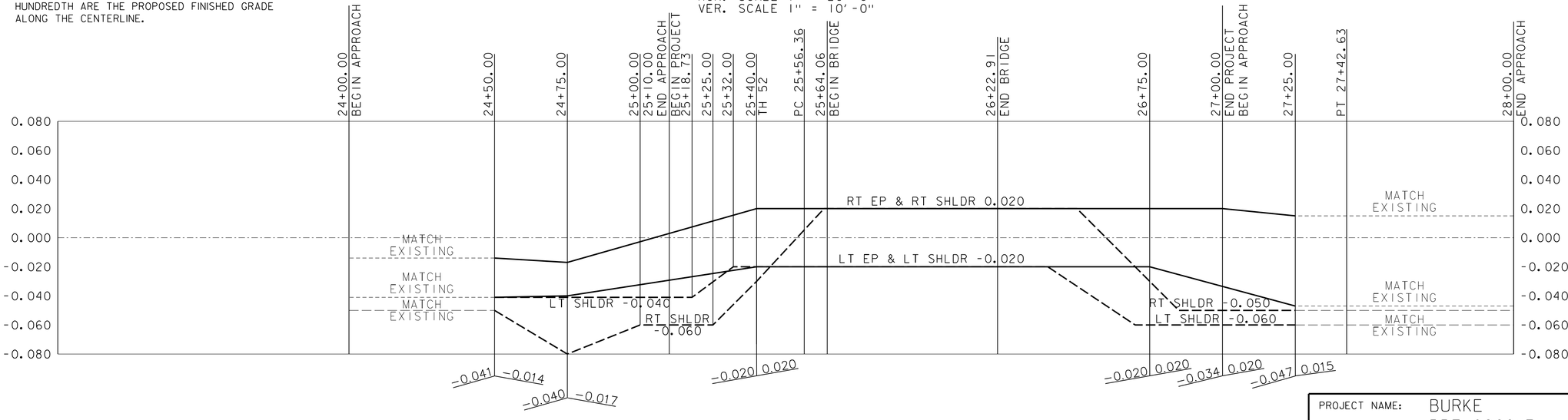


THE ELEVATIONS SHOWN TO THE NEAREST TENTH ARE THE OLD GROUND ALONG THE CENTERLINE.

THE ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED FINISHED GRADE ALONG THE CENTERLINE.

VT 114 PROFILE

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



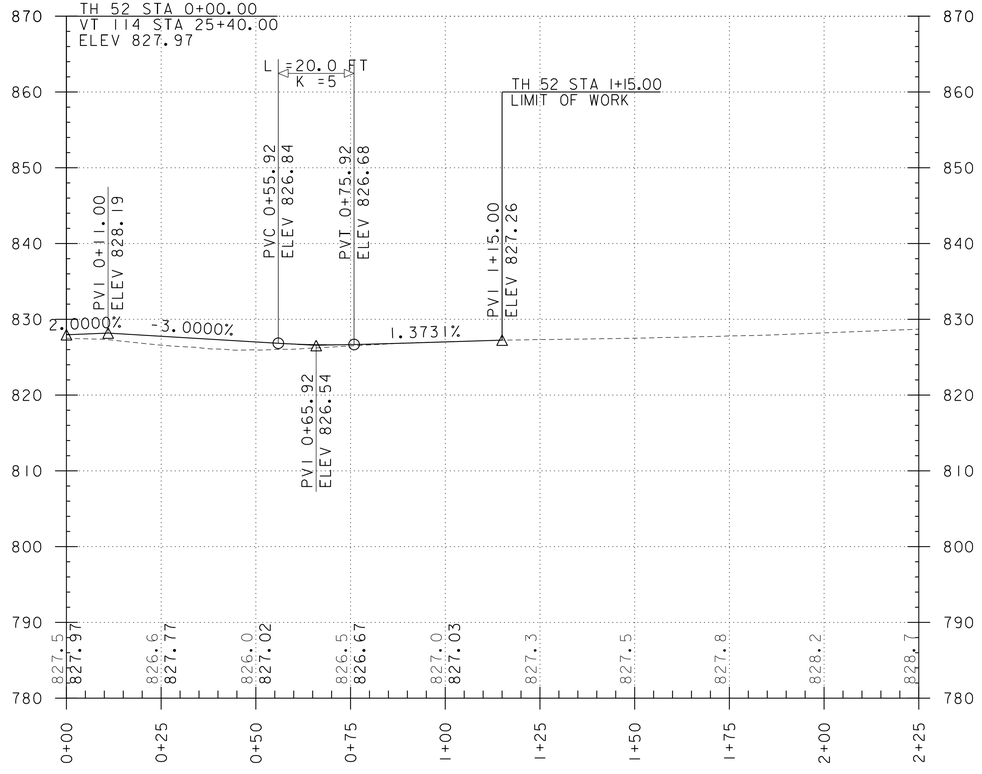
BANKING DIAGRAM

NOT TO SCALE

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412pro.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: W. GORDON
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
VT 114 PROFILE AND BANKING DIAGRAM	SHEET 18 OF 73

CLD CONSULTING ENGINEERS

CLD 12-0121 MODEL: PROOI



TH 52 (BELDEN HILL ROAD) PROFILE

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

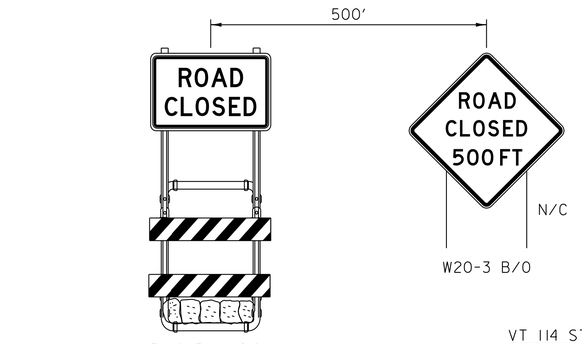
THE ELEVATIONS SHOWN TO THE NEAREST TENTH ARE THE OLD GROUND ALONG THE CENTERLINE.

THE ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED FINISHED GRADE ALONG THE CENTERLINE.

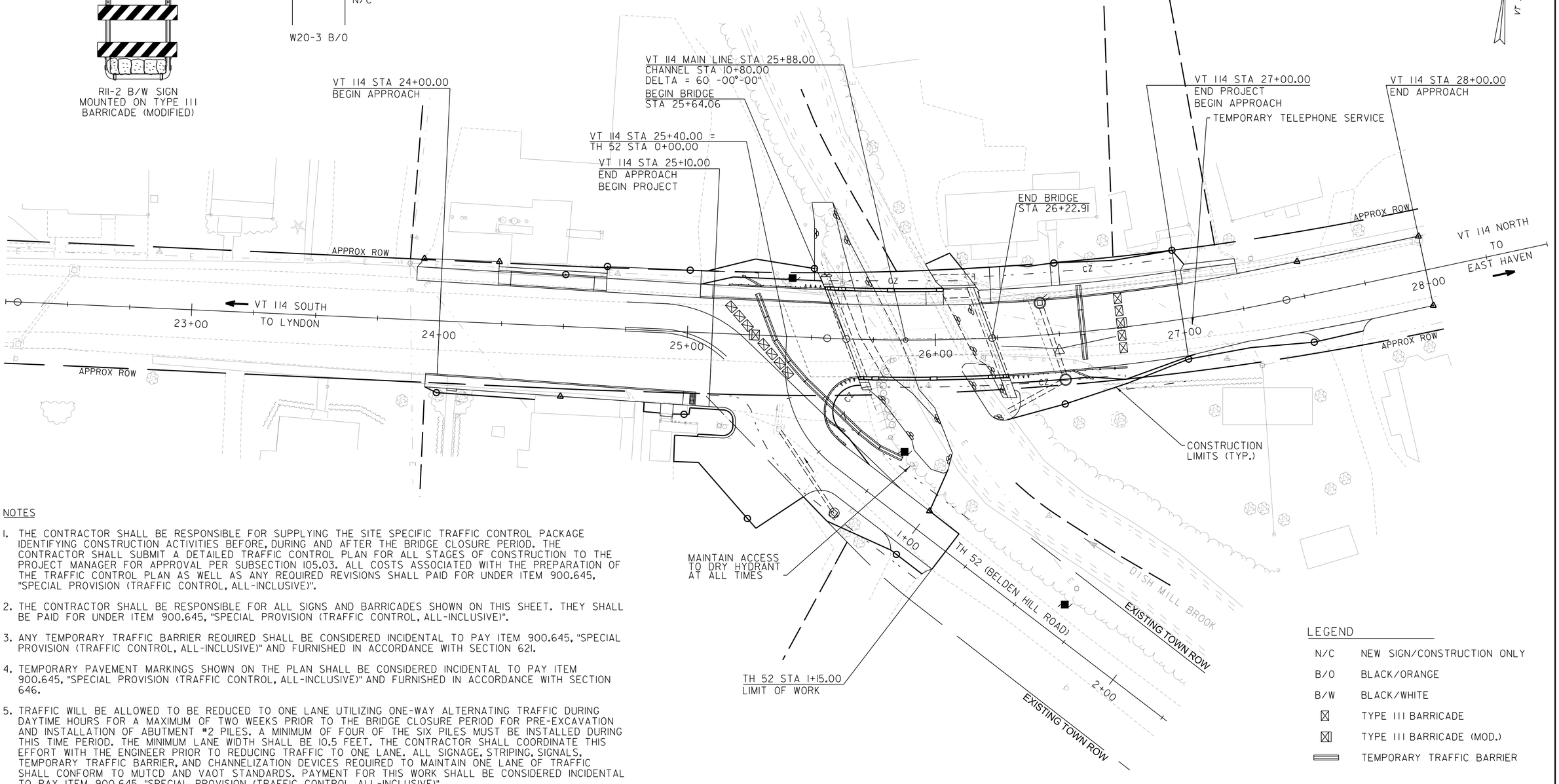
CONSULTING ENGINEERS

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412pro_th52.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: W. GORDON
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
TH 52 PROFILE SHEET	SHEET 19 OF 73

CLD 12-0121 MODEL: PR001



R11-2 B/W SIGN
MOUNTED ON TYPE III
BARRICADE (MODIFIED)



NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING THE SITE SPECIFIC TRAFFIC CONTROL PACKAGE IDENTIFYING CONSTRUCTION ACTIVITIES BEFORE, DURING AND AFTER THE BRIDGE CLOSURE PERIOD. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN FOR ALL STAGES OF CONSTRUCTION TO THE PROJECT MANAGER FOR APPROVAL PER SUBSECTION 105.03. ALL COSTS ASSOCIATED WITH THE PREPARATION OF THE TRAFFIC CONTROL PLAN AS WELL AS ANY REQUIRED REVISIONS SHALL PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SIGNS AND BARRICADES SHOWN ON THIS SHEET. THEY SHALL BE PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".

3. ANY TEMPORARY TRAFFIC BARRIER REQUIRED SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)" AND FURNISHED IN ACCORDANCE WITH SECTION 621.

4. TEMPORARY PAVEMENT MARKINGS SHOWN ON THE PLAN SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)" AND FURNISHED IN ACCORDANCE WITH SECTION 646.

5. TRAFFIC WILL BE ALLOWED TO BE REDUCED TO ONE LANE UTILIZING ONE-WAY ALTERNATING TRAFFIC DURING DAYTIME HOURS FOR A MAXIMUM OF TWO WEEKS PRIOR TO THE BRIDGE CLOSURE PERIOD FOR PRE-EXCAVATION AND INSTALLATION OF ABUTMENT #2 PILES. A MINIMUM OF FOUR OF THE SIX PILES MUST BE INSTALLED DURING THIS TIME PERIOD. THE MINIMUM LANE WIDTH SHALL BE 10.5 FEET. THE CONTRACTOR SHALL COORDINATE THIS EFFORT WITH THE ENGINEER PRIOR TO REDUCING TRAFFIC TO ONE LANE. ALL SIGNAGE, STRIPING, SIGNALS, TEMPORARY TRAFFIC BARRIER, AND CHANNELIZATION DEVICES REQUIRED TO MAINTAIN ONE LANE OF TRAFFIC SHALL CONFORM TO MUTCD AND VAOT STANDARDS. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".

6. SEE STANDARD T-10 FOR TYPICAL APPROACH SIGNING AND REGIONAL DETOUR MAP ON SHEET 21 FOR ADDITIONAL INFORMATION.

LEGEND

N/C	NEW SIGN/CONSTRUCTION ONLY
B/O	BLACK/ORANGE
B/W	BLACK/WHITE
☒	TYPE III BARRICADE
☒	TYPE III BARRICADE (MOD.)
═	TEMPORARY TRAFFIC BARRIER

0 20 40
(SCALE 1" = 20')

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

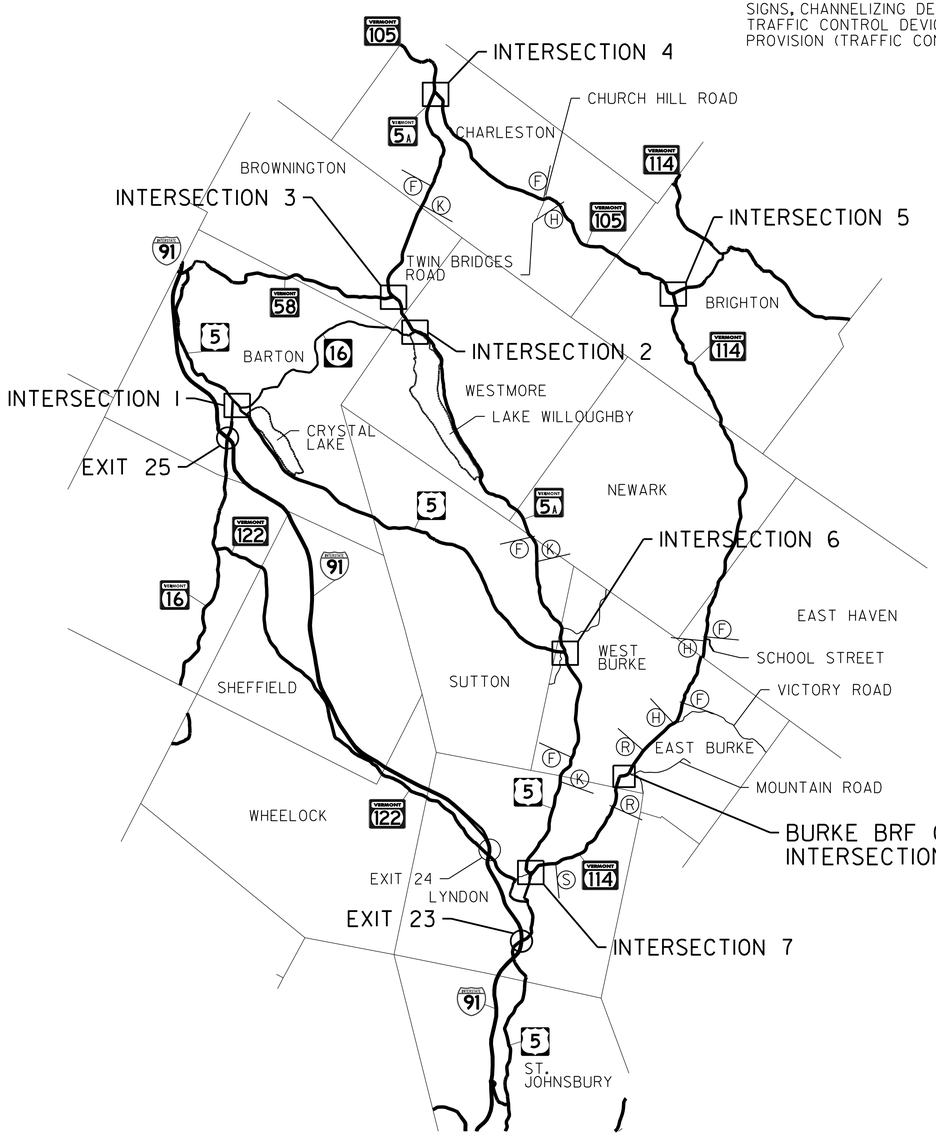
FILE NAME: 10c412/cos/z10c412bdrtcp.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
TRAFFIC CONTROL SHEET

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD
SHEET 20 OF 73

CLD 12-0121 MODEL: L01

PEDESTRIAN TEMPORARY TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN THROUGH MOVEMENTS FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER UTILIZING A SHUTTLE SERVICE OR PEDESTRIAN BRIDGE DURING CONSTRUCTION. THE PEDESTRIAN BRIDGE SHALL MEET THE REQUIREMENTS OF SECTION 528. ALL EASEMENTS AND APPLICABLE PERMITS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. PAYMENT FOR THIS WORK SHALL BE PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)". WHEN THE SHUTTLE SERVICE IS NOT NECESSARY, PEDESTRIAN THROUGH MOVEMENTS SHALL BE MAINTAINED ON AT LEAST ONE SIDE OF THE STREET. ANY SIDEWALK CLOSURES SHALL MEET THE REQUIREMENTS OF MUTCD, PART 6.
2. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES AND COMMERCIAL PROPERTIES AT ALL TIMES. THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.
3. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.
4. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS, EXCEPT WHERE PROPER PROTECTION AND A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) HAVE BEEN PROVIDED.
5. THE CONTRACTOR SHALL PROVIDE A TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN FOR REVIEW AND WRITTEN APPROVAL BY THE ENGINEER A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED. THIS PLAN SHALL DETAIL THE CONSTRUCTION PHASING, SCHEDULE AND THE SPECIFIC METHODS OF MAINTAINING SAFE PEDESTRIAN ACCESS THROUGHOUT THE CONSTRUCTION AREA. THIS PLAN SHALL PROVIDE THE LOCATION AND DETAILS OF TEMPORARY CONSTRUCTION SIGNING, MARKINGS, BARRICADES, RESIDENCES, ETC. IF A SHUTTLE SERVICE IS CHOSEN TO PROVIDE ACCESS, A SCHEDULE WITH STOPPING POINTS SHALL BE INCLUDED IN THE SUBMITTAL.
6. PROVISION OF THE TPAR AND ALL OF ITS ELEMENTS, INCLUDING BUT NOT LIMITED TO SIGNS, CHANNELIZING DEVICES, BARRICADES, TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES IS TO BE PAID FOR INCIDENTAL TO ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".

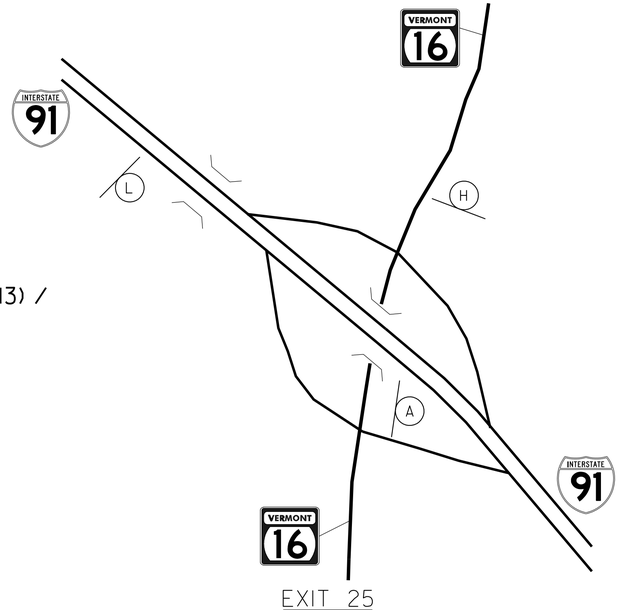


REGIONAL TRAFFIC CONTROL PLAN

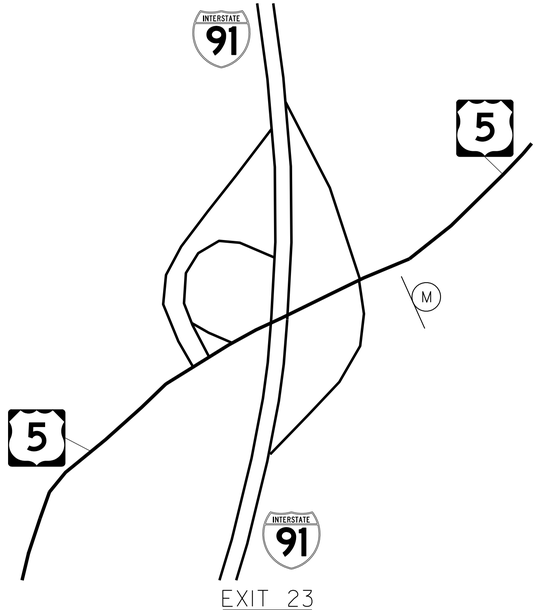
NOT TO SCALE

TRAFFIC CONTROL NOTES

1. TRAFFIC WILL BE MAINTAINED ON A REGIONAL DETOUR VIA ROUTES VT 114, VT 105, VT 5A, VT 16 AND US 5 BETWEEN EAST BURKE, BRIGHTON, CHARLESTON, WESTMORE, AND LYNDON. INTERSTATE 91 BETWEEN EXITS 23 AND 25 WILL ALSO BE USED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DETOUR AND CONSTRUCTION SIGNING. THE EXACT LOCATION WILL BE COORDINATED WITH THE ENGINEER AND SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD.
3. TRAFFIC CONTROL WARNING SIGNS SHALL BE PROVIDED PER STANDARDS T-1 AND T-10 AND THE LATEST EDITION OF THE MUTCD. ADDITIONAL PROJECT CONSTRUCTION SIGNS SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. ALL ON AND OFF PROJECT SIGNS AND BARRICADES AS REQUIRED FOR THE DETOUR WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PAID FOR UNDER THE ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)". ALL SIGNS AND BARRICADES SHALL BE INSPECTED DAILY AND REPAIRED AS NECESSARY. ALL SIGNS AND BARRICADES SHALL BE CLEARED OF DUST AND DEBRIS WEEKLY.
4. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PLACED AT THE APPROXIMATE LOCATIONS SHOWN ON THE PLANS OR WHERE DIRECTED BY THE ENGINEER. TWO PCMS SHALL BE PLACED AT THE PROJECT LOCATION 14 DAYS PRIOR TO THE START OF CONSTRUCTION TO WARN OF THE IMPENDING DETOUR. THESE PCMS SHALL THEN BE REMOVED AND DEPLOYED TO THE LOCATIONS SHOWN ONCE CONSTRUCTION HAS BEGUN. PAYMENT FOR THESE SIGNS, INCLUDING ANY RELOCATING REQUIRED, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.15 "PORTABLE CHANGEABLE MESSAGE SIGN".
5. THE ROUTE MARKERS USED FOR THE DETOUR AS SHOWN ON THE PLANS SHALL FOLLOW STANDARDS E-127 AND E-136B. THESE SIGNS SHALL BE REMOVED AT THE END OF THE CONSTRUCTION PERIOD. THESE SIGNS AND THEIR REMOVAL SHALL BE PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".
6. ACCESS TO ALL EXISTING DRIVES AND SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES DURING ALL PHASES OF CONSTRUCTION.
7. INSTALLATION OF DETOUR SIGNS SHALL NOT BLOCK ANY EXISTING TRAFFIC CONTROL SIGN ASSEMBLIES AND SHALL MODIFY OR BE PLACED ADJACENT TO EXISTING SIGN ASSEMBLIES WHEN POSSIBLE. THE CONTRACTOR SHALL MAINTAIN AT LEAST 200 FEET BETWEEN SIGN ASSEMBLIES WHENEVER POSSIBLE.
8. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE TRAFFIC FLOW OF THE DETOUR SHALL BE REMOVED OR COVERED BY THE CONTRACTOR. ALL SIGNS REMOVED OR COVERED SHALL BE REPLACED OR UNCOVERED WHEN THE TRAFFIC CONTROL PLAN IS DISASSEMBLED. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".
9. CONTACT DIG-SAFE AT LEAST 48 HOURS PRIOR TO BREAKING GROUND TO INSTALL ANY SIGN POSTS.
10. TEMPORARY TRAFFIC BARRIER SHALL BE PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)" AND SHALL BE USED FOR THE CLOSURE OF THE BRIDGE. CONTRACTOR SHALL INSTALL BARRIER AS NECESSARY TO PREVENT THE TRAVELLING PUBLIC FROM ENTERING THE CONSTRUCTION SITE.



EXIT 25

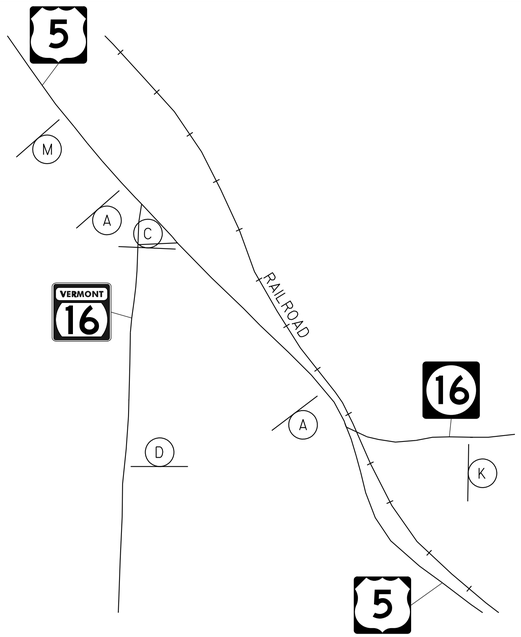


EXIT 23

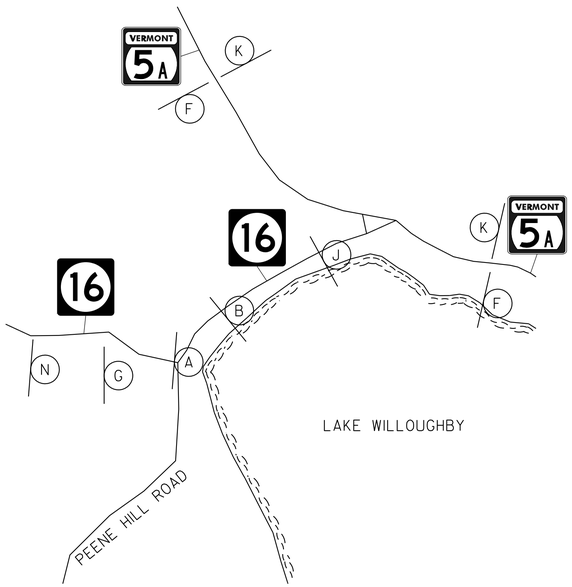
PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412regdtr.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. HALEY
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
REGIONAL DETOUR MAP	SHEET 21 OF 73

CONSULTING ENGINEERS

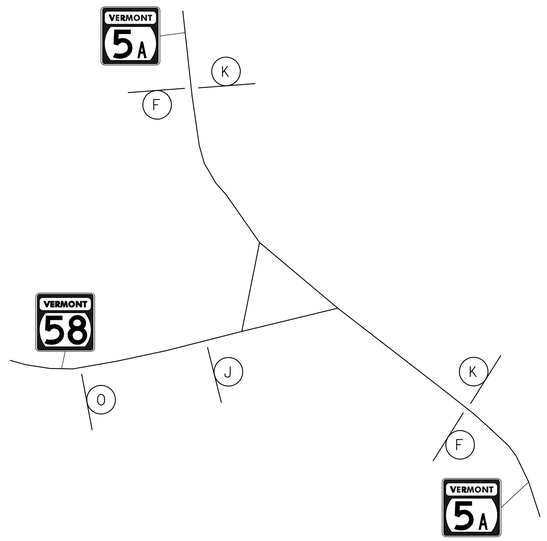
CLD 12-0121 MODEL: L01



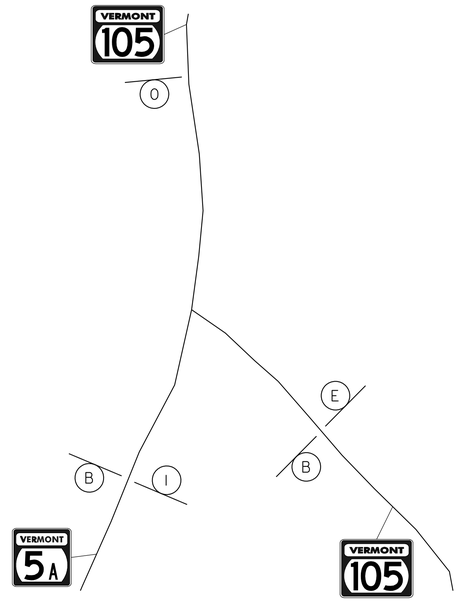
INTERSECTION 1
US 5 AND VT 16



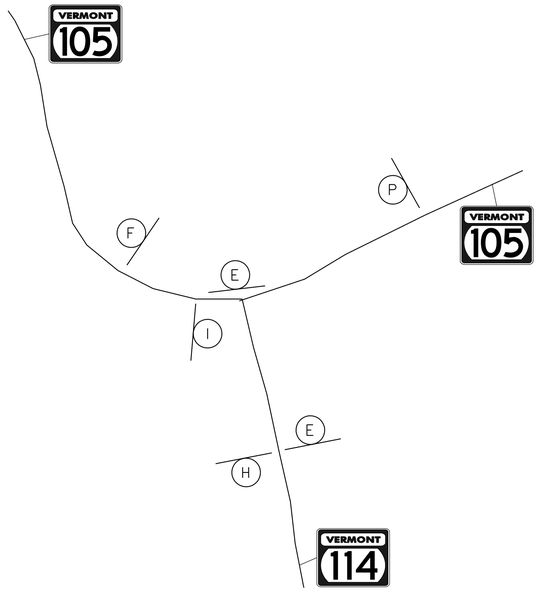
INTERSECTION 2
VT 16 AND VT 5A



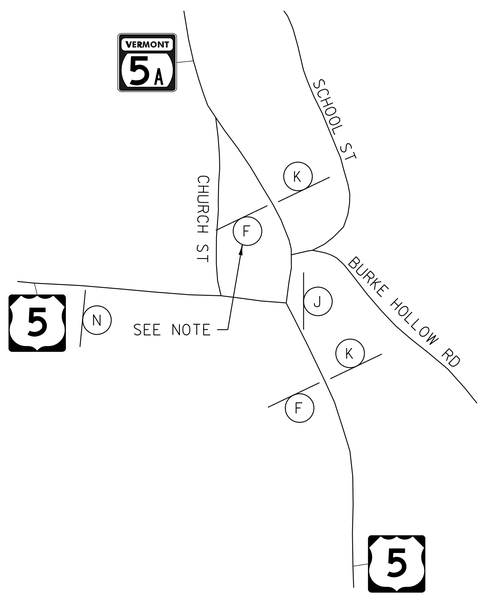
INTERSECTION 3
VT 5A AND VT 58



INTERSECTION 4
VT 5A AND VT 105

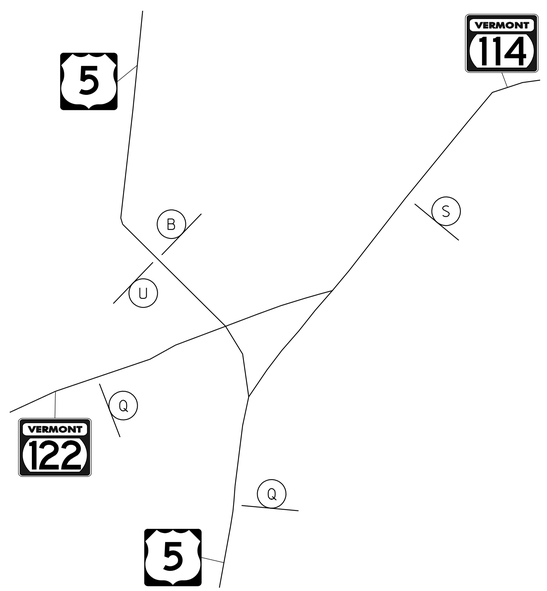


INTERSECTION 5
VT 105 AND VT 114

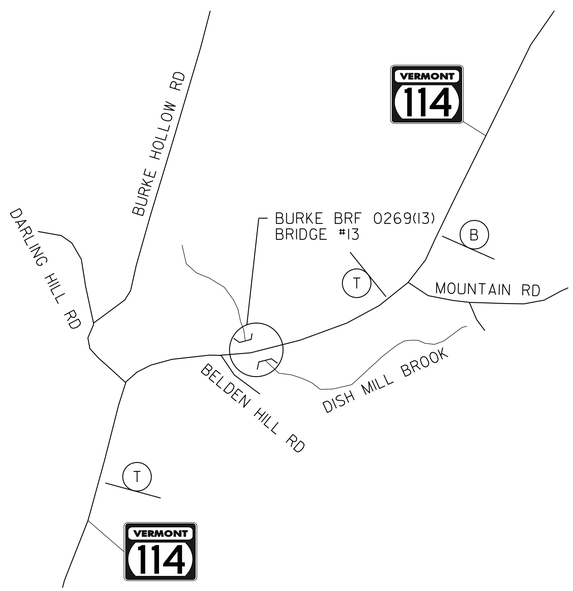


INTERSECTION 6
US 5 AND VT 5A

NOTE
CONTRACTOR TO COVER EXISTING DIRECTIONAL SIGN
TO EAST BURKE AT THIS LOCATION



INTERSECTION 7
US 5 AND VT 114



INTERSECTION 8
VT 114 AND MOUNTAIN ROAD

PROJECT NAME: BURKE	
PROJECT NUMBER: BRF 0269(13)	
FILE NAME: 10c412/cos/z10c412regdtr.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: W. GORDON
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
DETOUR DETAILS	SHEET 22 OF 73

CONSULTING ENGINEERS

CLD 12-0121 MODEL: L02

A (4)

B/O
G/W
G/W

B (5)

B/O
G/W
G/W

C (1)

B/O
G/W
G/W

D (1)

B/O
G/W
G/W

E (3)

B/O
G/W
G/W
B/O

F (13)

B/O
G/W
G/W
B/O

G (1)

B/O
G/W
G/W
B/O

H (5)

B/O
G/W
G/W
B/O

I (2)

B/O
G/W
G/W
B/O

J (3)

B/O
G/W
G/W
B/O
B/O

K (10)

B/O
G/W
G/W
B/O
B/O

L (1)

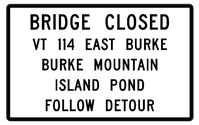
B	R	I	D	G	E			
C	L	O	S	E	D			
V	T		1	1	4			

PORTABLE CHANGEABLE SIGN – PHASE 1

B	U	R	K	E		M	T	N
U	S	E						
E	X	I	T		2	5		

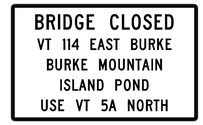
PORTABLE CHANGEABLE SIGN – PHASE 2

M (2)



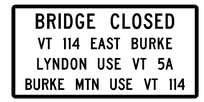
B/W

N (2)



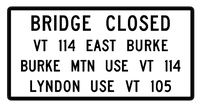
B/W

O (2)



B/W

P (1)



B/W

Q (2)

B	R	I	D	G	E			
C	L	O	S	E	D			
V	T		1	1	4			

PORTABLE CHANGEABLE SIGN – PHASE 1

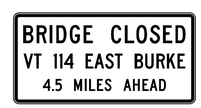
B	U	R	K	E		M	T	N
I	S	L	A	N	D		P	D
U	S	E		U	S		5	

PORTABLE CHANGEABLE SIGN – PHASE 2

R (2)

B/W

S (2)



B/W

T (2)

B/W

U (1)

B/O
G/W

SIGN COLORS

B/W: BLACK LETTERING ON WHITE BACKGROUND
G/W: GREEN LETTERING ON WHITE BACKGROUND
B/O: BLACK LETTERING ON ORANGE BACKGROUND

THE ESTIMATED NUMBER OF EACH SIGN PACKAGE REQUIRED IS REPRESENTED BY THE NUMBER UNDERNEATH EACH LETTER DESIGINATOR

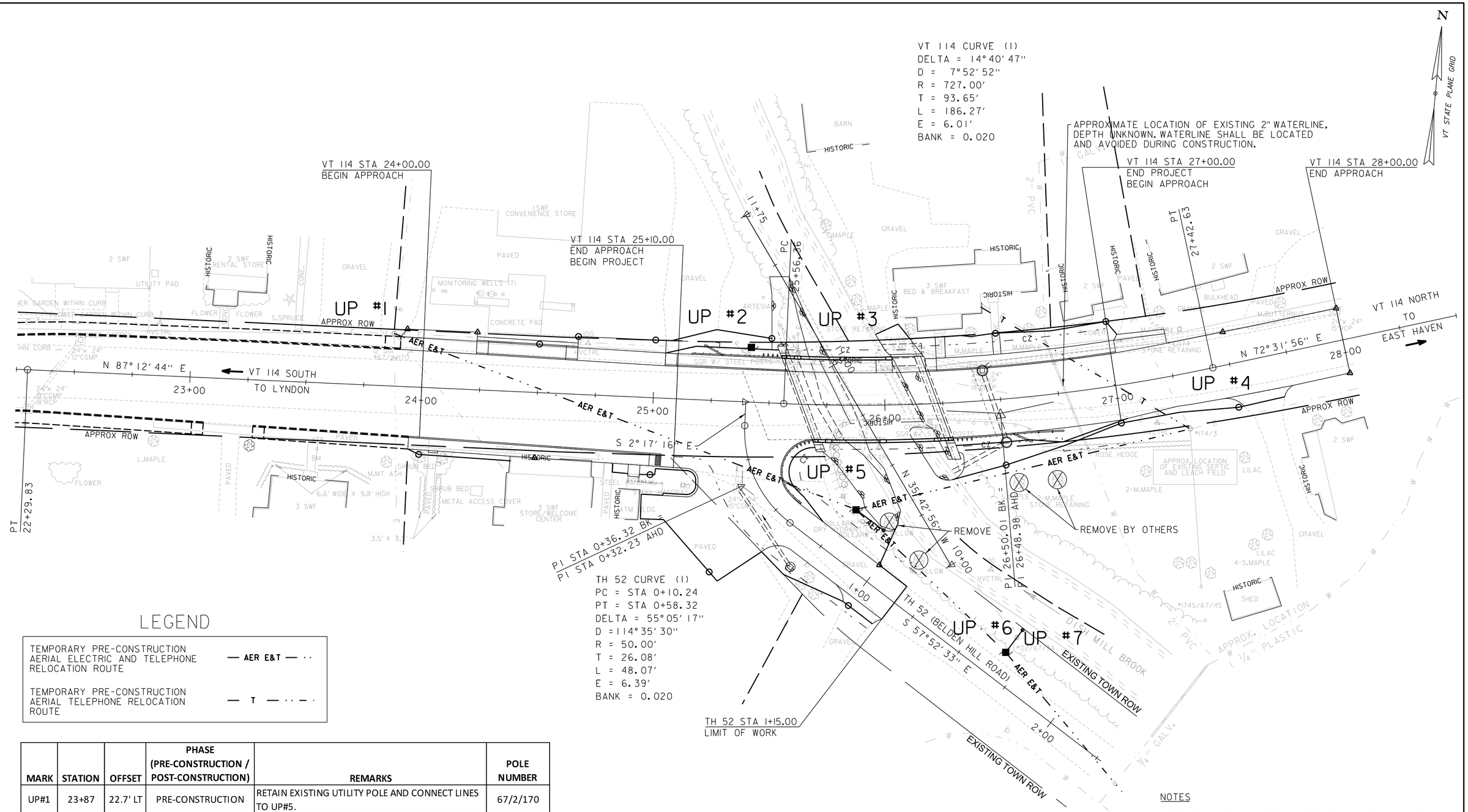
CLD 12-0121 MODEL: L03

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: l0c412/cos/zl0c412regdtr.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
DETOUR SIGNS

PLOT DATE: 11/24/2014
DRAWN BY: W. GORDON
CHECKED BY: P. SHEDD
SHEET 23 OF 73



LEGEND

TEMPORARY PRE-CONSTRUCTION AERIAL ELECTRIC AND TELEPHONE RELOCATION ROUTE	— AER E&T — ··
TEMPORARY PRE-CONSTRUCTION AERIAL TELEPHONE RELOCATION ROUTE	— T — ·· — ·

MARK	STATION	OFFSET	PHASE (PRE-CONSTRUCTION / POST-CONSTRUCTION)	REMARKS	POLE NUMBER
UP#1	23+87	22.7' LT	PRE-CONSTRUCTION	RETAIN EXISTING UTILITY POLE AND CONNECT LINES TO UP#5.	67/2/170
UP#3	25+62	22.3' LT	PRE-CONSTRUCTION	REMOVE EXISTING UTILITY POLE AND LINES	173
UP#4	27+28	23.9' RT	PRE-CONSTRUCTION	RETAIN EXISTING UTILITY POLE. CONNECT LINES TO UP#5 AND TELEPHONE SERVICE CONNECTION.	174/3
UP#5	0+77	21.8' LT	PRE-CONSTRUCTION	INSTALL NEW UTILITY POLE WITH 15 FT GUY AND ANCHOR. CONNECT LINES TO UP#1, UP#4 AND UP #6.	NEW
UP#6	1+66	12.3' LT	PRE-CONSTRUCTION	INSTALL NEW UTILITY POLE WITH 12 FT GUY AND ANCHOR. CONNECT LINES TO UP#5 AND EXISTING UTILITY POLE ON RIGHT.	NEW
UP#7	1+66	20.3' LT	PRE-CONSTRUCTION	REMOVE EXISTING UTILITY POLE AND LINES	02/67/3A

NOTES

1. SEE THE UTILITY SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

2. ACCESS TO EXISTING DRY HYDRANT ON TH 52 (BELDEN HILL ROAD) SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412bdrutl.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
UTILITY RELOCATION SHEET

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD
SHEET 24 OF 73

CONSULTING ENGINEERS

CLD 12-021 MODEL: L01

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE, POLYUREA
24+00 TO 28+00 SOLID LT
24+00 TO 25+00 SOLID RT
25+80 TO 28+00 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
24+00 TO 25+20 SOLID LT & RT
25+60 TO 28+00 SOLID LT & RT

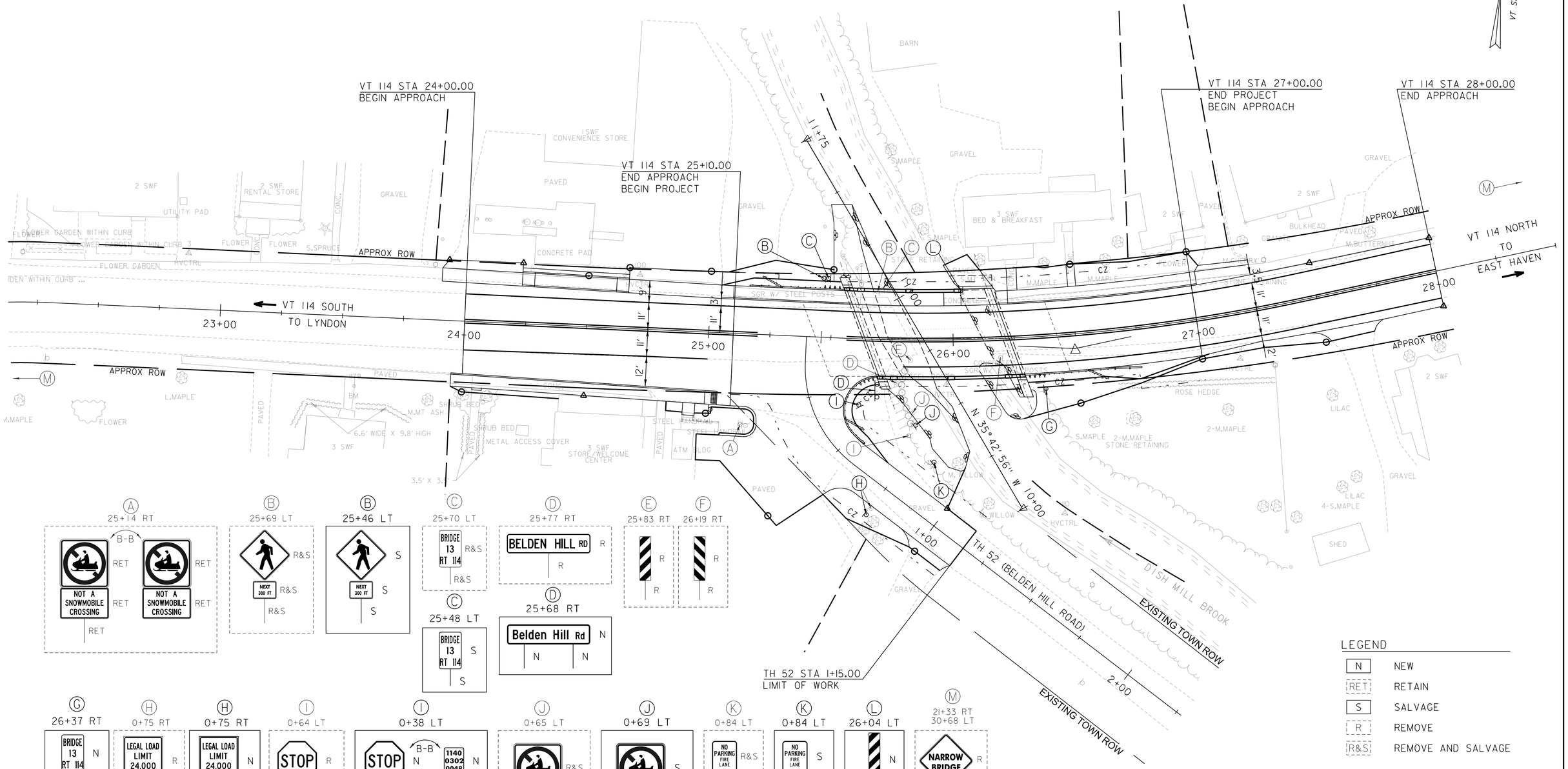
REMOVING SIGNS
AS SHOWN - 15

ERECTING SALVAGED SIGNS
AS SHOWN - 6

SQUARE TUBE SIGN POST AND ANCHOR
AS SHOWN - 7 (SEE TRAFFIC SIGN SUMMARY SHEET)

TRAFFIC SIGNS, TYPE A
AS SHOWN - 7 (SEE TRAFFIC SIGN SUMMARY SHEET)

N
VT STATE PLANE GRID



A
25+14 RT
B-B
NOT A SNOWMOBILE CROSSING — RET
NOT A SNOWMOBILE CROSSING — RET
RET

B
25+69 LT
NEXT 300 FT — R&S
R&S

B
25+46 LT
NEXT 300 FT — S
S

C
25+70 LT
BRIDGE 13 RT 114 — R&S
R&S

C
25+48 LT
BRIDGE 13 RT 114 — S
S

D
25+77 RT
BELDEN HILL RD — R
R

D
25+68 RT
Belden Hill Rd — N
N N

E
25+83 RT
R
R

F
26+19 RT
R
R

G
26+37 RT
BRIDGE 13 RT 114 — N
N

H
0+75 RT
LEGAL LOAD LIMIT 24,000 POUNDS — R
SPEED LIMIT 15 — R
R

H
0+75 RT
LEGAL LOAD LIMIT 24,000 POUNDS — N
SPEED LIMIT 25 — N
N

I
0+64 LT
STOP — R
1140 0302 0048 — R
R

I
0+38 LT
STOP — B-B — 1140 0302 0048 — N
N

J
0+65 LT
NOT A SNOWMOBILE CROSSING — R&S
R&S

J
0+69 LT
NOT A SNOWMOBILE CROSSING — S
S

K
0+84 LT
NO PARKING FIRE LANE — R&S
R

K
0+84 LT
NO PARKING FIRE LANE — S
N

L
26+04 LT
N
N

M
21+33 RT
30+68 LT
NARROW BRIDGE — R
R

LEGEND

N	NEW
RET	RETAIN
S	SALVAGE
R	REMOVE
R&S	REMOVE AND SALVAGE

0 20 40
(SCALE 1" = 20')

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412bdrts.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
TRAFFIC SIGNS AND STRIPING SHEET

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD
SHEET 25 OF 73

CLD 12-0121 MODEL: L01

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																REMARKS	SIGN DETAIL		
											NO. OF POSTS	SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)					W-SHAPE STEEL						
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE		1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE 24"	FTG. SIZE 30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED		SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												lb/ft					lb/ft				lb/ft										
												1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6								
25+46 LT							1			1																					
							1																									
25+48 LT							1			1																					
25+68 RT		1	51	12	4.25						2		X		X												D3-1		27	
26+04 LT		1	12	36	3.00						1		X		X												MOUNT SIGN WITH POST ON BRIDGE RAIL. SEE DETAIL ON SHEET 53.	OM-3R		
26+37 RT		1	6	10	0.42						1	X			X															T-42
TH 52 0+38 LT		1 1	30 6	30 10	6.25 0.42						1		X		X												BACK TO BACK	RI-1		T-44
0+69 LT							1			1																					
							1																									
0+75 RT		1	24	30	5.00						1		X		X												VR-017			E-141
		1	24	30	5.00																							R2-1		
0+84 LT							1			1			X		X																
	ROUNDING				0.66																											
												FT 8	FT 90	FT		EA	LB	LB	LB		LB	LB	LB	LB								
SHEET TOTALS		SF 25.00	SF	EA. 6	SF							FT 98					LB			EA.	LB				EA.	EA.	LB				

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: z10c412tsdet.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
TRAFFIC SIGN SUMMARY SHEET

PLOT DATE: 11/24/2014
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 26 OF 73

MODEL: TRAFFIC SIGN SUMMARY SHEET
CLD 12-0121

GENERAL NOTES

SIGN DESIGN AND FABRICATION NOTES

1. ALL SIGNS SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST REVISION OF THE 2009 MUTCD, THE 2004 STANDARD HIGHWAY SIGNS AND MARKINGS (SHSM), AND THE 2012 SUPPLEMENT TO THE 2004 EDITION (SHSM) DETAILS AS AVAILABLE, VAOT STANDARDS OR AS DETAILED IN THE PLANS.

2. ALL LETTERS AND NUMBERS USED FOR ALL SIGNS SHALL CONFORM TO THE APPLICABLE FONT AS DEFINED AND DETAILED IN THE 2004 SHSM AND THE 2012 SUPPLEMENT.

3. ALL ARROWS AND SYMBOLS SHALL CONFORM WITH THE 2004 SHSM AND THE 2012 SUPPLEMENT UNLESS OTHERWISE DETAILED IN THE PLANS.

4. COLORS USED ON ALL SIGNS SHALL CONFORM WITH THE REQUIREMENTS OF SECTION 1A.12 OF THE MUTCD.

5. SIGN SHEETING FOR FLUORESCENT YELLOW AND FLUORESCENT YELLOW GREEN SHALL BE AASHTO M268 (ASTM D4956) TYPE VII, VIII OR IX. ALL OTHER SIGN SHEETING SHALL BE TYPE III OR IV.

6. SHEETING TYPES AND MANUFACTURERS SHALL NOT BE MIXED ON A SINGLE SIGN ASSEMBLY. SHEETING COLOR/TYPE SHOULD BE BY THE SAME MANUFACTURER AND BE CONSISTENT THROUGHOUT THE PROJECT UNLESS OTHERWISE DETAILED ON THE PLANS.

7. SIGN BASE MATERIAL FOR DELINEATORS AND MILE MARKER PLAQUES (VD-700) SHALL BE 0.063" THICK FLAT SHEET ALUMINUM. ALL TOWN HIGHWAY SIGNS (D3-1) SHALL BE 0.125" THICK FLAT SHEET ALUMINUM OR EXTRUDED ALUMINUM WITH 0.25 INCH FLANGE AND 0.090 INCH WEB. UNLESS OTHERWISE NOTED ON THE PLANS, ALL OTHER SIGNS SHALL BE FLAT SHEET ALUMINUM WITH THE FOLLOWING MINIMUM THICKNESSES:

SIGN SIZE	12" X 12"		
	18" X 18"		
	21" X 15"		
	24" X 8"		
	24" X 10"		48" X 18"
	24" X 12"	36" X 12"	48" X 24"
	24" X 18"	36" X 15"	48" X 30"
	24" X 24"	36" X 18"	48" X 42"
	24" X 30"	36" X 24"	48" X 48"
	30" X 15"	36" X 36"	48" X 60"
	30" X 18"	36" X 42"	72" X 10"
	30" X 30"	36" X 48"	72" X 12"
	30" X 42"	36" X 54"	72" X 20"
THICKNESS	0.080"	0.100"	0.125"

SIGN POST NOTES

1. ALL SIGN POSTS SHALL BE INSTALLED IN A NEW ANCHOR. ALL SIGNS INSTALLED IN PAVED OR CONCRETE ISLANDS OR SIDEWALKS SHALL ALSO BE INSTALLED WITH AN 18" SLEEVE. PAYMENT FOR SLEEVE SHALL BE INCIDENTAL TO THE SIGN POST.

2. 1.75" SQUARE STEEL POSTS SHALL BE 14 GAUGE STEEL. 2.0" AND 2.5" SQUARE STEEL POSTS SHALL BE 12 GAUGE STEEL.

SIGN INSTALLATION NOTES

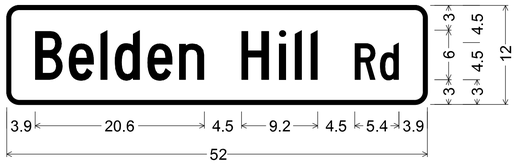
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTY CAUSED BY THE CONTRACTOR, AT THE CONTRACTORS EXPENSE.

2. ALL SIGNS WITHIN THE PROJECT LIMITS ARE TO BE REPLACED UNLESS OTHERWISE NOTED OR AS DIRECTED BY THE ENGINEER. SIGN LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD.

3. ALL SIGN PLACEMENT SHALL BE IN CONFORMANCE WITH VAOT STANDARD E-121 STANDARD SIGN PLACEMENT CONVENTIONAL ROADS, UNLESS OTHERWISE NOTED.

4. ALL SIGNS, FRAMES, MOUNTING HARDWARE, POSTS, AND ANCHORS FOR ANY SIGN ASSEMBLY SHALL BE REPLACED AT THE SAME TIME. MIXING OF OLD AND NEW SIGNS ON THE SAME ASSEMBLY WILL NOT BE ALLOWED EXCEPT AS NOTED ON THE PLANS.

5. NEW SIGNS WITH THEIR GREATER NIGHTTIME RETROREFLECTIVITY CAN OBSCURE OLDER SIGNS MOUNTED ADJACENT TO THEM. TO AVOID CONFUSION OF ROAD USERS, WORK SHALL BE COORDINATED SUCH THAT ALL SIGNS ASSOCIATED WITH A CURVE, INTERSECTION, OR SPEED CHANGE, SHALL BE REPLACED ON THE SAME DAY AND NOT LEFT INCOMPLETE NOR WITH A MIXTURE OF OLD AND NEW SIGNS WITHIN A GROUP OF ASSOCIATED SIGNS.



D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Belden Hill] C 2K; [Rd] C 2K;

TOWN HIGHWAY SIGNS D3-1

TOWN HIGHWAY SIGNS SHALL BE DOUBLE SIDED SIGNS AND SHALL BE INSTALLED WITH 12" BRACKETS.

NOT TO SCALE

CLD 12-012I MODEL: SIGN DETAIL SHEET

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)

FILE NAME: z10c412tsdet.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
SIGN DETAIL SHEET	SHEET 27 OF 73

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

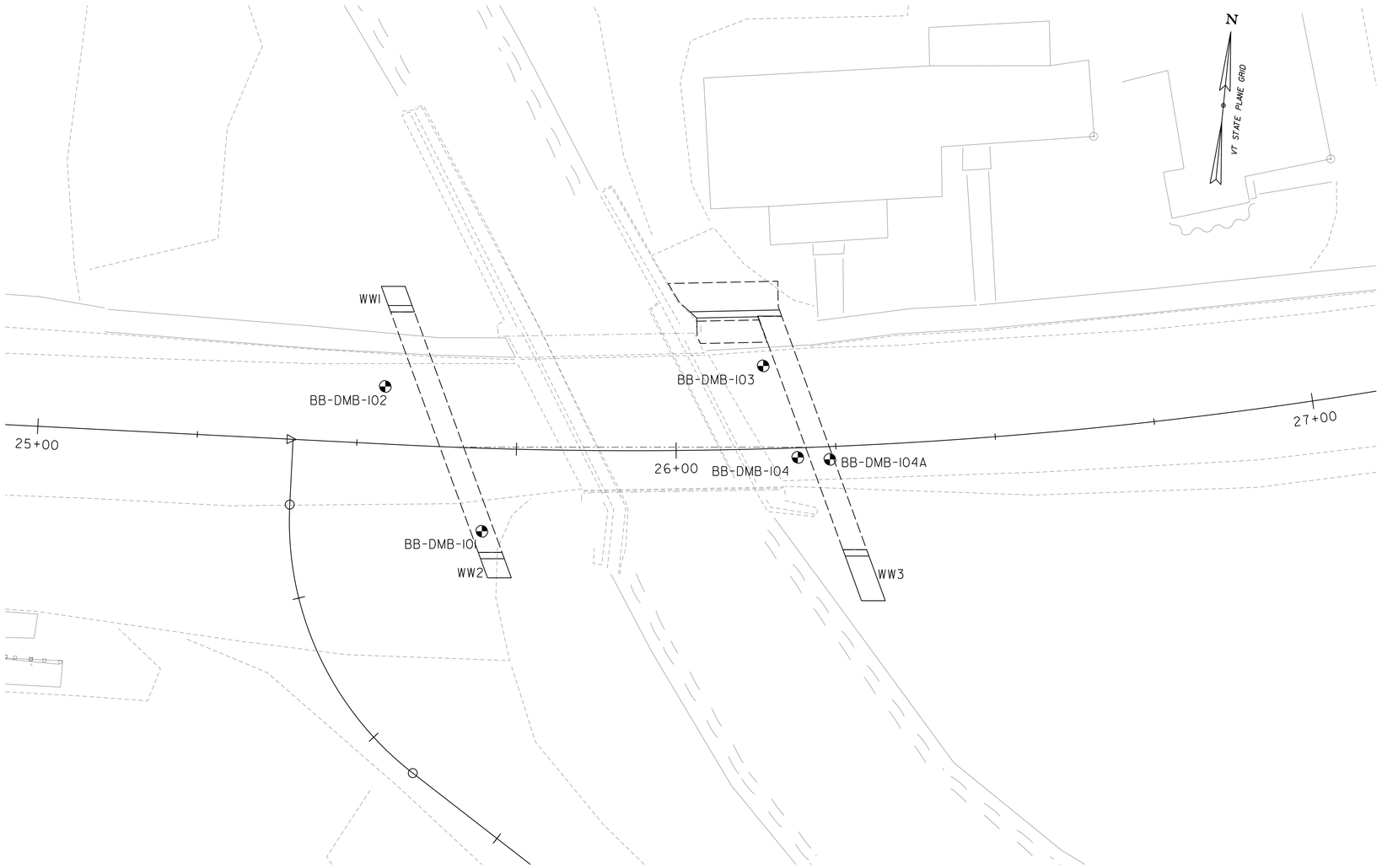
DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

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 PLAN

SCALE 1" = 10'-0"
0 10 20

BORING CHART

HOLE NO.	STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
BB-DMB-101	25+70	13 RT	828.5 FT	772.5
BB-DMB-102	25+54	9 LT	827.5 FT	772.4
BB-DMB-103	26+14	13 LT	830.5 FT	771.8
BB-DMB-104	26+19	1.5 RT	830.5 FT	N/A
BB-DMB-104A	26+24	2 RT	830.5 FT	769.8

DEFINITIONS (AASHTO)

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

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

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

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

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

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

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

VARVED - Alternate layers of silt and clay.

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

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

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

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

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

DIP - Inclination of bed with a horizontal plane.

GENERAL NOTES

1. The subsurface explorations shown herein were made between 11/5/12 and 11/9/12 by Golder Associates, Inc.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.
7. Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: z10c412bor.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
BORING INFORMATION SHEET

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 28 OF 73

CLD 12-0121 MODEL: Bor01

BOTTOM OF ABUT. I
EL. 820.0'

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

BORING NUMBER: BB-DMB-101
SHEET 1 of 3
DATE STARTED: 11/08/12
DATE COMPLETED: 11/08/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 25+70
OFFSET: 13 RT
VTSPG: N 761605.00 ft E 1785171.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 828.5 ft
GROUNDWATER DEPTH: 10.6 ft 11/08/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft - 0.4 ft, Asphalt					
		1.0 ft - 3.0 ft, A-1-B, GrSa, brown, Moist, Rec. = 1.58 ft	47-20-13-12 (33)				
2.5							
		4.0 ft - 6.0 ft, A-2-4, GrSiSa, Dark brown, Moist, Rec. = 0.66 ft	5-4-1-1 (5)				
5.0						11.0	70.0	19.0
		6.0 ft - 6.3 ft, A-2-4, Sa, brown, Moist, Rec. = 1.42 ft	1-2-1-1 (3)				
		6.3 ft - 8.0 ft, A-3, SiSa trace organics (wood), gray-brown, Moist					
7.5							
		8.0 ft - 10.0 ft, A-2-4, Sa, brown, Moist, Rec. = 0.17 ft	0-1-0-3 (1)				
10.0							
		10.0 ft - 12.0 ft, A-2-4, GrSa, Dark brown, Saturated, Rec. = 0.67 ft	14-21-29-41 (50)				
12.5							
		14.0 ft - 14.25 ft, A-2-4, SiSa, gray-brown, Saturated, Rec. = 0.91 ft	8-10-14-19 (24)				
15.0		14.25 ft - 16.0 ft, A-2-4, GrSiSa, gray-brown, Saturated		21.8	1.0	78.0	21.0
17.5							
		19.0 ft - 21.0 ft, A-2-4, GrSa, gray-brown, Saturated, Started open hole drilling, added polymer to drilling fluid., Rec. = 1.25 ft	14-18-19-20 (37)				
20.0							
22.5							
		24.0 ft - 26.0 ft, A-3, SiSa, Light brown, Saturated, Rec. = 1.17 ft	16-15-18-24				

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

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

BORING NUMBER: BB-DMB-101
SHEET 2 of 3
DATE STARTED: 11/08/12
DATE COMPLETED: 11/08/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 25+70
OFFSET: 13 RT
VTSPG: N 761605.00 ft E 1785171.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 828.5 ft
GROUNDWATER DEPTH: 10.6 ft 11/08/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
			(33)	20.3	0.0	93.0	7.0
		26.5 ft - 27.2 ft, Gravel zone based on drill behavior					
27.5							
		29.0 ft - 31.0 ft, A-4, SiSa 1-2" layers of medium sand, gray-brown, Saturated, Rec. = 1.33 ft	13-13-13-16 (26)				
30.0							
32.5							
		34.0 ft - 36.0 ft, A-4, SaSi, gray-brown, Saturated, Rec. = 1.92 ft	13-14-16-22 (30)				
35.0							
37.5							
		39.0 ft - 41.0 ft, A-2-4, SiGrSa, gray-brown, Saturated, Rec. = 1.33 ft	10-24-23-36 (47)				
40.0							
		41.5 ft - 42.5 ft, Gravel zone based on drill behavior					
42.5							
		44.0 ft - 46.0 ft, A-2-4, SiGrSa, gray-brown, Saturated, Rec. = 0.91 ft	13-21-11-12 (32)				
45.0							
47.5							
		49.0 ft - 51.0 ft, A-2-4, Sa, gray-brown, Saturated, Rec. = 1.58 ft	23-26-28-48				

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

APPROX.
PILE TIP
EL. 772.0'

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

BORING NUMBER: BB-DMB-101
SHEET 3 of 3
DATE STARTED: 11/08/12
DATE COMPLETED: 11/08/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 25+70
OFFSET: 13 RT
VTSPG: N 761605.00 ft E 1785171.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 828.5 ft
GROUNDWATER DEPTH: 10.6 ft 11/08/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
			(54)				
52.5							
		54.0 ft - 54.5 ft, A-2-4, GrSa, gray-brown, Saturated, Rec. = 1.83 ft	17-16-13-100 (29)				
55.0		54.5 ft - 56.0 ft, A-4, SiSa, gray, Saturated, Spoon refusal at 56.0 ft, assumed bedrock.					
		Top of Bedrock @ 56.0 ft					
		Hole stopped @ 56.0 ft					
57.5							
60.0							
62.5							
65.0							
67.5							
70.0							
72.5							

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

CLD 12-0121 MODEL: Bor02

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412bor.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
BORING LOGS (1 OF 5)

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 29 OF 73

BOTTOM OF ABUT. I
EL. 820.0'

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

BORING NUMBER: BB-DMB-102
SHEET 1 of 3
DATE STARTED: 11/05/12
DATE COMPLETED: 11/06/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 25+54
OFFSET: 9 LT
VTSPG: N 761633.00 ft E 1785127.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 827.5 ft
GROUNDWATER DEPTH: 11.0 ft 11/06/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft - 0.5 ft, Asphalt					
2.5		1.5 ft - 3.5 ft, A-1-B, SiGrSa, Dark brown, Moist, Rec. = 1.67 ft	NA (25)				
5.0		4.0 ft - 6.0 ft, A-1-B, SiGrSa, Light brown, Moist, Rec. = 1.33 ft	NA (13)				
7.5		6.0 ft - 8.0 ft, A-2-4, GrSiSa, brown, Moist, Rec. = 1.33 ft	NA (13)		8.0	79.0	13.0
		8.5 ft - 9.0 ft, Gravel zone based on drill behavior					
10.0		9.0 ft - 11.0 ft, A-1-B, SiGrSa, gray-brown, Saturated, Rec. = 1.08 ft	NA (84)				
12.5							
15.0		14.3 ft - 16.3 ft, A-1-B, SiGrSa, Dark brown, Saturated, Rec. = 1.08 ft	NA (17)				
17.5							
20.0		19.0 ft - 21.0 ft, A-1-B, SiGrSa, gray-brown, Saturated, Rec. = 1.0 ft	NA (43)	13.0	24.0	70.0	6.0
22.5							
		24.0 ft - 26.0 ft, A-2-4, GrSa, gray, Saturated, Rec. = 0.92 ft	NA (34)				

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

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

BORING NUMBER: BB-DMB-102
SHEET 2 of 3
DATE STARTED: 11/05/12
DATE COMPLETED: 11/06/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 25+54
OFFSET: 9 LT
VTSPG: N 761633.00 ft E 1785127.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 827.5 ft
GROUNDWATER DEPTH: 11.0 ft 11/06/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
27.5							
30.0		29.0 ft - 31.0 ft, A-4, SiSa, gray-brown, Saturated, Rec. = 1.08 ft	NA (35)				
		31.0 ft - 34.0 ft, Zone of fine sand based on cuttings					
32.5							
35.0		34.0 ft - 36.0 ft, A-4, SaSi, brown, Saturated, Rec. = 1.16 ft	NA (20)	27.1	0.0	26.0	74.0
37.5							
40.0		39.0 ft - 41.0 ft, A-4, Sa, Light brown, Saturated, Low recovery, suspected wash., Rec. = 0.16 ft	NA (29)				
42.5							
45.0		44.0 ft - 46.0 ft, A-4, Sa, brown, Saturated, Rec. = 0.67 ft	NA (41)				
		46.0 ft - 49.0 ft, Driller noted artesian conditions					
47.5							
		49.0 ft - 51.0 ft, A-4, Sa, gray-brown, Saturated, Rec. = 0.5 ft	NA (57)				

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

APPROX.
PILE TIP
EL. 772.0'

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

BORING NUMBER: BB-DMB-102
SHEET 3 of 3
DATE STARTED: 11/05/12
DATE COMPLETED: 11/06/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 25+54
OFFSET: 9 LT
VTSPG: N 761633.00 ft E 1785127.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 827.5 ft
GROUNDWATER DEPTH: 11.0 ft 11/06/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	RUN	REC (%)	RQD (%)	Drill Rate (min/ft)	UCS (psi)
52.5												
55.0		54.0 ft - 55.1 ft, A-1-B, SiGrSa, Light brown, Saturated, Rec. = 0.75 ft	NA (Refusal)						Top of Bedrock @ 55.1 ft			
		55.1 ft - 57.0 ft, Advanced roller cone to confirm bedrock.										
57.5		R1: 57.0 ft - 62.0 ft, Rec. = 5.0 ft, Light gray, Schist, R1: Light gray (N6) to light brownish gray (5 YR 6/1), very fine to fine grained, slightly weathered, strong (R4), biotite-muscovite-quartz SCHIST; strongly foliated/banded; discontinuities very close to closely spaced, generally parallel to foliation, dipping 35-45 degrees, planar to irregular, rough, tight to open. Minor pyrite and calcite on surfaces. Thin calcite veins parallel to foliation up to 0.25 inches thick. Rock Mass Quality = Fair (Waits River Formation) NQ core size						R1	100	1400	5:00, 5:10, 4:30, 6:45, 10:30	
60.0												
62.5		Hole stopped @ 62.0 ft										
65.0												
67.5												
70.0												
72.5												

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

CLD 12-012I MODEL: Bor03

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412bor.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
BORING LOGS (2 OF 5)

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 30 OF 73

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

BORING NUMBER: BB-DMB-103
SHEET 1 of 3
DATE STARTED: 11/08/12
DATE COMPLETED: 11/09/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 26+14
OFFSET: 13 LT
VTSPG: N 761634.00 ft E 1785207.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 830.5 ft
GROUNDWATER DEPTH: 13.9 ft 11/09/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft - 0.6 ft, Asphalt					
		1.0 ft - 2.0 ft, A-2-4, GrSa, gray-brown, Moist, Rec. = 1.83 ft	NA (84)				
2.5		2.0 ft - 3.0 ft, A-3, Sa, gray, Moist					
		4.0 ft - 6.0 ft, A-1-B, SiGrSa, gray-brown, Moist, Rec. = 1.58 ft	NA (18)				
5.0		6.0 ft - 6.5 ft, Cobble based on drill behavior					
7.5							
		9.5 ft - 10.0 ft, Wood in top 5" of spoon, Rec. = 1.08 ft	NA (13)				
10.0		10.0 ft - 11.5 ft, A-2-4, GrSiSa, brown-gray, Saturated			9.0	60.0	31.0
12.5							
15.0		14.5 ft - 16.5 ft, A-3, SiSa, brown-gray, Saturated, Started open hole drilling, added polymer to wash water., Rec. = 0.67 ft	NA (17)				
17.5							
20.0		19.5 ft - 21.5 ft, A-2-4, GrSiSa Lense of medium gravel 3-4" from top of spoon, brown-gray, Saturated, Rec. = 1.17 ft	NA (44)				
22.5							

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

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

BORING NUMBER: BB-DMB-103
SHEET 2 of 3
DATE STARTED: 11/08/12
DATE COMPLETED: 11/09/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 26+14
OFFSET: 13 LT
VTSPG: N 761634.00 ft E 1785207.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 830.5 ft
GROUNDWATER DEPTH: 13.9 ft 11/09/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
27.5							
30.0		29.5 ft - 31.5 ft, A-2-4, GrSiSa Lense of fine gravel 1-2" from top of spoon. Lense of silty fine sand 12-14" from top of spoon, brown-gray, Saturated, Rec. = 1.33 ft	NA (30)	17.2	9.0	74.0	17.0
32.5							
35.0							
37.5							
40.0		39.5 ft - 41.5 ft, A-3, Sa, Light brown, Saturated, Rec. = 0.83 ft	NA (41)				
42.5							
45.0							
47.5			NA				

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

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

BORING NUMBER: BB-DMB-103
SHEET 3 of 3
DATE STARTED: 11/08/12
DATE COMPLETED: 11/09/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 26+14
OFFSET: 13 LT
VTSPG: N 761634.00 ft E 1785207.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 830.5 ft
GROUNDWATER DEPTH: 13.9 ft 11/09/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		49.5 ft - 51.5 ft, A-1-B, SiGrSa Lense of coarse gravel 2-3" from top of spoon, brown, Saturated, Rec. = 1.0 ft	(41)	17.3	16.0	77.0	7.0
52.5							
55.0							
57.5		58.7 ft - 58.7 ft, Bedrock based on drill behavior at 58.7'. Hole stopped @ 58.7 ft					
60.0							
62.5							
65.0							
67.5							
70.0							
72.5							

Top of Bedrock @ 58.7 ft

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

CLD 12-012I MODEL: Bor04

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412bor.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
BORING LOGS (3 OF 5)

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 31 OF 73

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

BORING NUMBER: BB-DMB-104
SHEET 1 of 1
DATE STARTED: 11/06/12
DATE COMPLETED: 11/06/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 26+19
OFFSET: 1.5 RT
VTSPG: N 761621.00 ft E 1785191.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 830.5 ft
GROUNDWATER DEPTH:
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft - 0.5 ft, Asphalt					
		1.0 ft - 2.0 ft, A-1-B, GrSa, Dark brown, Moist, Rec. = 2.0 ft	NA (69)				
2.5		2.0 ft - 3.0 ft, A-1-B, SiGrSa, brown, Moist					
		4.0 ft - 6.0 ft, A-1-B, GrSa, brown, Moist, Rec. = 1.67 ft	NA (12)				
5.0							
		6.5 ft - 7.0 ft, Cobble based on drill behavior					
7.5							
		9.0 ft - 11.0 ft, A-1-B, SiGrSa Some organics (wood), gray, Saturated, Rec. = 0.83 ft	NA (38)				
10.0							
12.5							
		14.0 ft - 14.2 ft, Refusal on spoon - no recovery, Rec. = 0.0 ft	NA (Refusal)				
15.0							
17.5							
20.0		19.0 ft - 19.0 ft, Casing broke while advancing to 19.0 ft, hole abandoned with 5.0 ft of HW casing left in hole. Hole stopped @ 19.0 ft					
22.5							

BOTTOM OF
ABUT. 2
EL. 822.0'

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

CLD 12-0121 MODEL: Bor05

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412bor.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
BORING LOGS (4 OF 5)	SHEET 32 OF 73

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

BORING NUMBER: BB-DMB-104A
SHEET 1 of 3
DATE STARTED: 11/06/12
DATE COMPLETED: 11/07/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 26+24
OFFSET: 2.0 RT
VTSPG: N 761622.00 ft E 1785222.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 830.5 ft
GROUNDWATER DEPTH: 9.1 ft 11/07/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft, Note: Borehole advanced to depth of last sample interval at BB-DMB-104 before abandonment.					
8.0 ft - 8.5 ft, Cobble based on drill behavior							
13.0 ft - 13.5 ft, Wood chips in water return							
14.0 ft - 16.0 ft, A-1-B, SaGr, gray, Saturated, Rec. = 0.33 ft		NA (36)					
19.0 ft - 21.0 ft, A-1-B, SiGrSa, brown-gray, Saturated, Rec. = 0.75 ft		NA (30)		5.0	91.0	4.0	
24.0 ft - 26.0 ft, A-4, GrSaSi, brown, Saturated, Rec. = 0.66 ft		NA (30)					

BOTTOM OF ABUT. 2
EL. 822.0'

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

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

BORING NUMBER: BB-DMB-104A
SHEET 2 of 3
DATE STARTED: 11/06/12
DATE COMPLETED: 11/07/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 26+24
OFFSET: 2.0 RT
VTSPG: N 761622.00 ft E 1785222.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 830.5 ft
GROUNDWATER DEPTH: 9.1 ft 11/07/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
				24.6	2.0	38.0	60.0
29.0 ft - 31.0 ft, A-3, SiSa, brown, Saturated, Rec. = 1.16 ft		NA (41)					
34.0 ft - 36.0 ft, A-3, SiSa, brown, Saturated, Rec. = 1.08 ft		NA (46)		18.7	0.0	91.0	9.0
38.0 ft - 39.0 ft, Gravel based on drill behavior							
39.0 ft - 40.2 ft, A-4, GrSa, brown, Saturated, Rec. = 1.41 ft		NA (21)					
40.2 ft - 41.0 ft, A-3, SiSa, brown, Saturated							
44.0 ft - 46.0 ft, A-3, Sa, brown, Saturated, Rec. = 0.66 ft		NA (38)					
49.0 ft - 51.0 ft, A-3, SiSa, brown-gray, Saturated, Rec. = 0.33 ft		NA (40)					

APPROX.
PILE TIP
EL. 769.0'

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

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

BORING NUMBER: BB-DMB-104A
SHEET 3 of 3
DATE STARTED: 11/06/12
DATE COMPLETED: 11/07/12

PROJECT NAME: CLD Dish Mill Brook Bridge
SITE NAME: Burke, VT
STATION: 26+24
OFFSET: 2.0 RT
VTSPG: N 761622.00 ft E 1785222.00 ft

PROJECT NUMBER: 123-87446
SITE NUMBER: Burke BHF-0269(13)
GROUND ELEVATION: 830.5 ft
GROUNDWATER DEPTH: 9.1 ft 11/07/12
PROJECT PIN NUMBER:

BORING CREW:
DRILLER: W. Hoeckle
LOGGER: N. Chinburg
BORING RIG: Diedrich D-50 Track

BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE:
CHECKED BY:

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	RUN	REC (%)	RQD (%)	Drill Rate (min/ft)	UCS (psi)
54.0 ft - 56.0 ft, A-4, SiSa, brown-gray, Saturated, Rec. = 1.0 ft		NA (50)										
59.0 ft - 60.7 ft, A-1-B, SiGrSa, Light brown, Saturated, Refusal on spoon at 60.7'., Rec. = 1.66 ft		NA (74)										
Top of Bedrock @ 60.7 ft												
61.0 ft, Advanced roller cone to 62.0 ft.												
R1: 62.0 ft - 67.0 ft, Rec. = 4.91 ft, R1: Medium gray (N5) to medium dark gray (N4), very fine grained, slightly weathered, strong (R4), biotite-muscovite-quartz SCHIST; moderately to strongly foliated; discontinuities very close to closely spaced, generally parallel to foliation, dipping 35-45 degrees, planar to irregular to stepped, rough to smooth, tight to open. Calcite veins parallel to foliation up to 1 inch thick. Rock Mass Quality = Fair (Waits River Formation) NQ core size								R1	98	1320	6:30, 4:30, 5:00, 5:00, 5:35	
Hole stopped @ 67.0 ft												

LOG OF BORING & WELL 123-87446 CLD BURKE BRIDGE.GPJ VT AOT.GDT 8/25/14

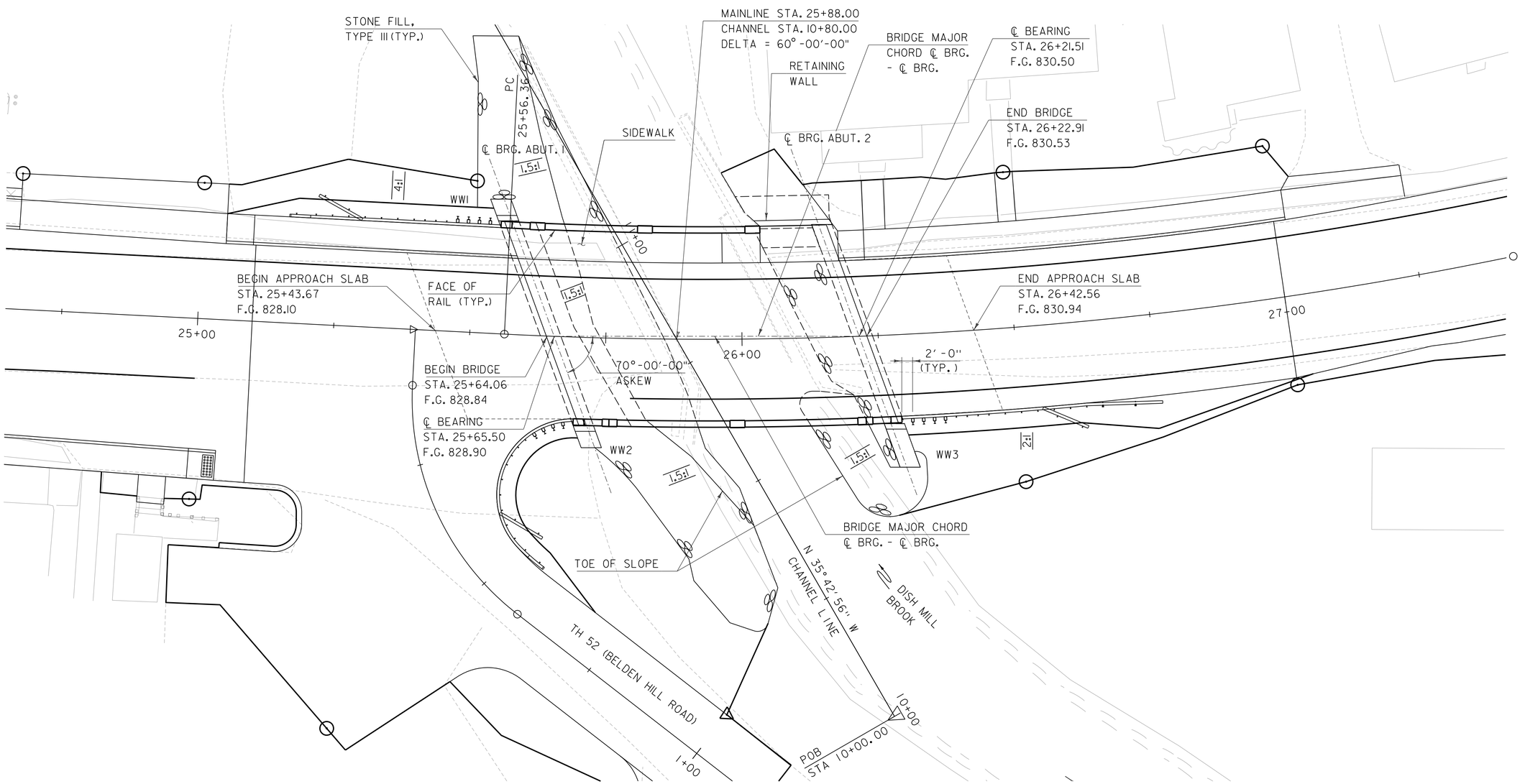
CLD 12-0121 MODEL: Bor06

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

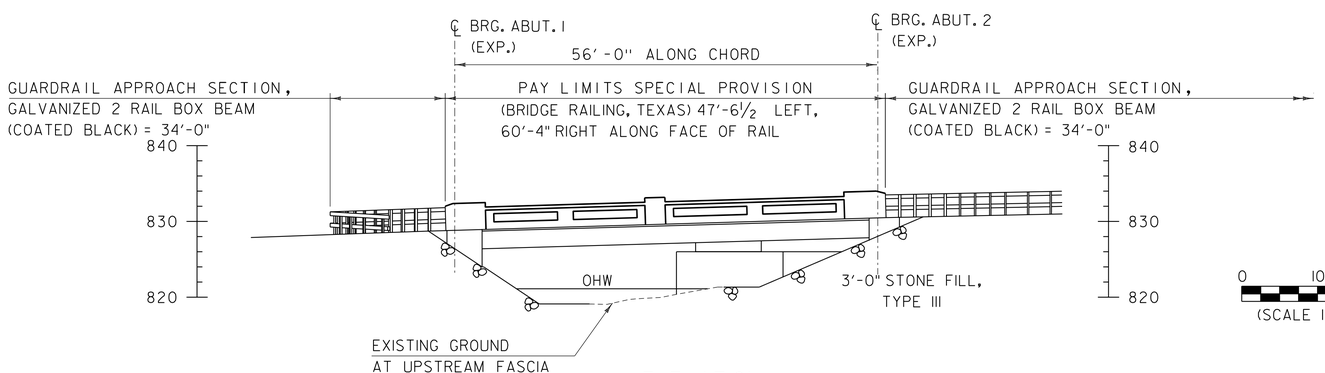
FILE NAME: 10c412/cos/z10c412bor.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
BORING LOGS (5 OF 5)

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 33 OF 73



PLAN VIEW

SCALE: 1" = 10'-0"



ELEVATION

SCALE: 1" = 10'-0"

0 10 20

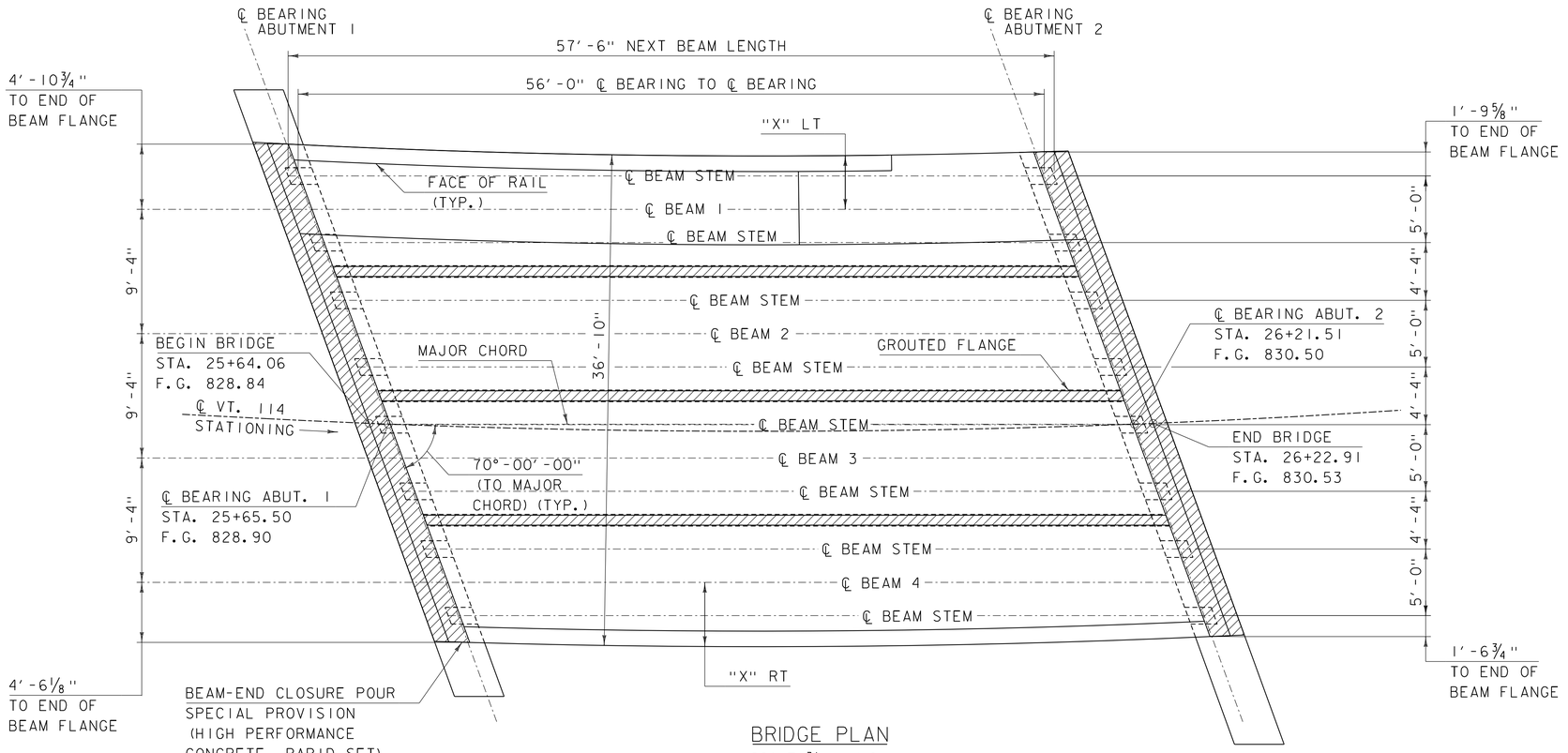
(SCALE 1" = 10')

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)

FILE NAME: 10c412/cos/z10c412pe.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
PLAN AND ELEVATION	SHEET 34 OF 73

CONSULTING ENGINEERS

CLD 12-0121 MODEL: PE01

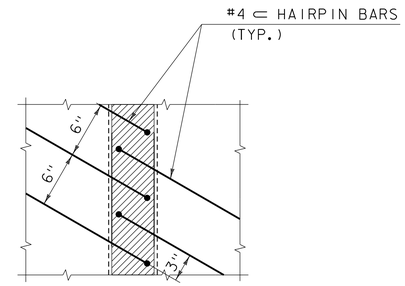


BRIDGE PLAN

SCALE: 3/16" = 1′-0"

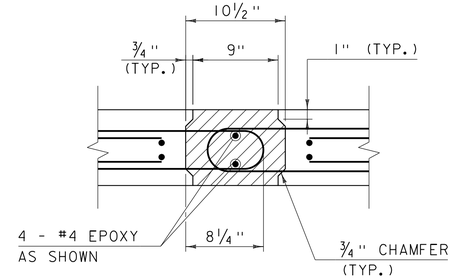
	"X" LT	"X" RT
BEGIN BEAM	4′-10¼"	4′-5⅛"
℄ BRG. ABUT. 1	4′-9¾"	4′-5⅜"
0.1 L	4′-6⅞"	4′-7⅜"
0.2 L	4′-4⅜"	4′-8¾"
0.3 L	4′-2½"	4′-9⅝"
0.4 L	4′-1⅛"	4′-10"
0.5 L	4′-0⅜"	4′-9¾"
0.6 L	4′-0"	4′-9⅛"
0.7 L	4′-0¼"	4′-8"
0.8 L	4′-1"	4′-6⅜"
0.9 L	4′-2⅜"	4′-4⅛"
℄ BRG. ABUT. 2	4′-4¼"	4′-1½"
END BEAM	4′-4½"	4′-1⅛"

L = SPAN ALONG ℄ BEAM 1 / BEAM 4 = 56′-0"



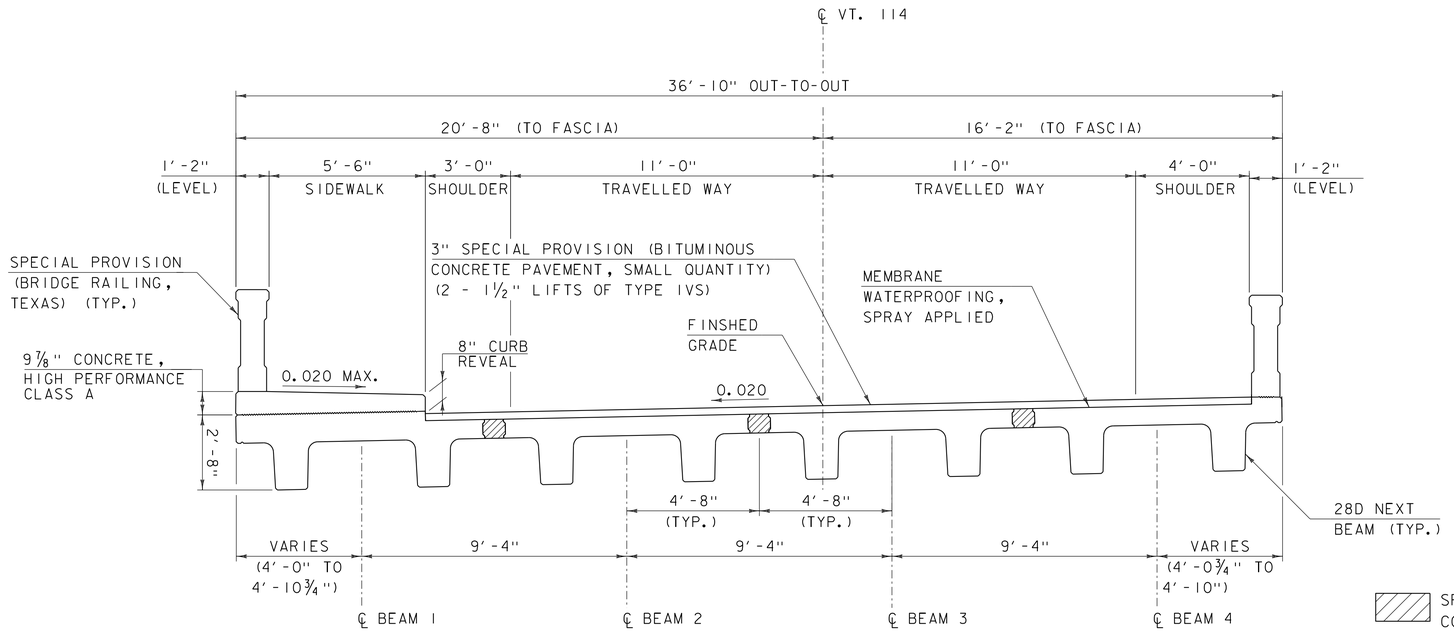
CONNECTION DETAIL PLAN

SCALE: 1½" = 1′-0"



CONNECTION DETAIL SECTION

SCALE: 1½" = 1′-0"



TYPICAL BRIDGE SECTION

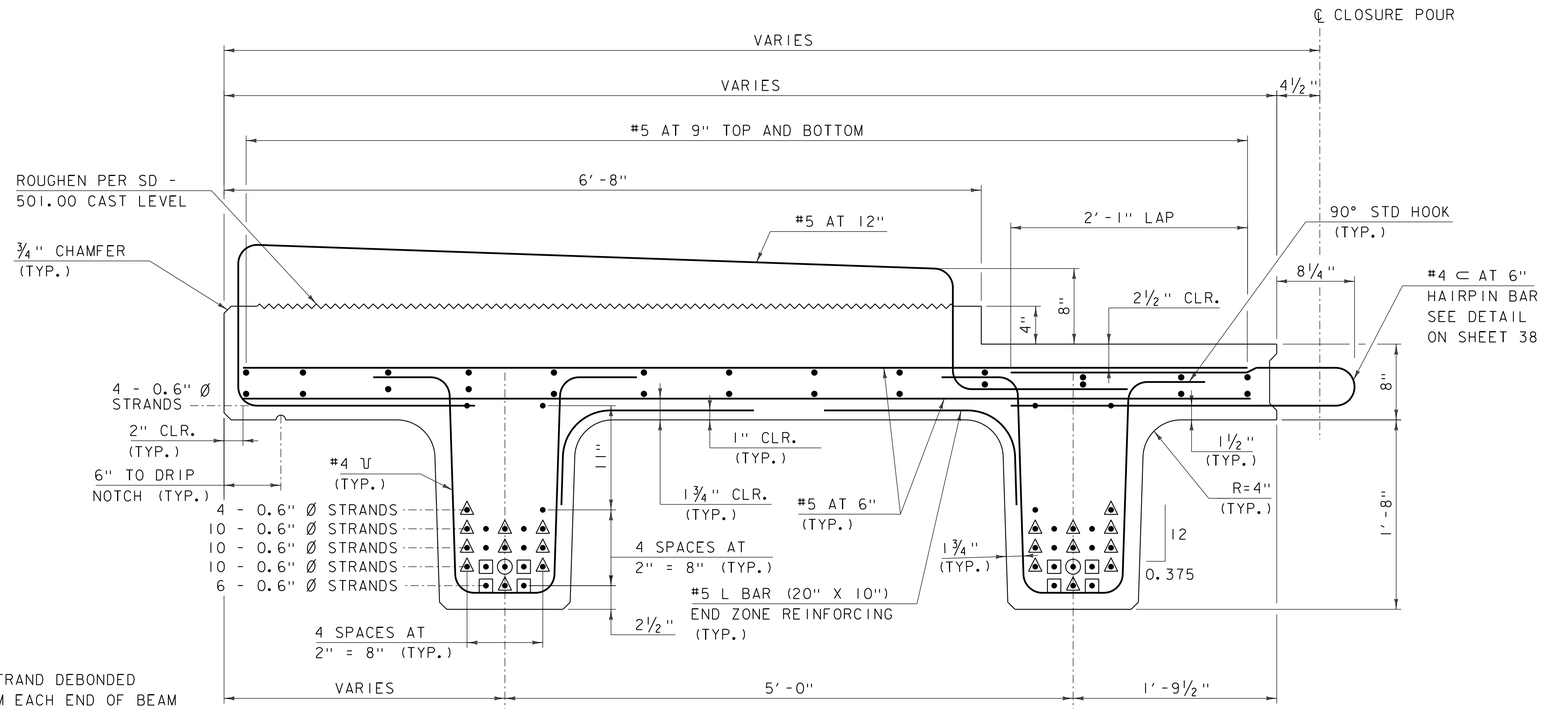
SCALE: 3/8" = 1′-0"

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ) (TYP.)

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: z10c412sup.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
BRIDGE PLAN AND TYPICAL SECTIONS	SHEET 35 OF 73

CONSULTING ENGINEERS

CLD 12-012 MODEL: Sup01



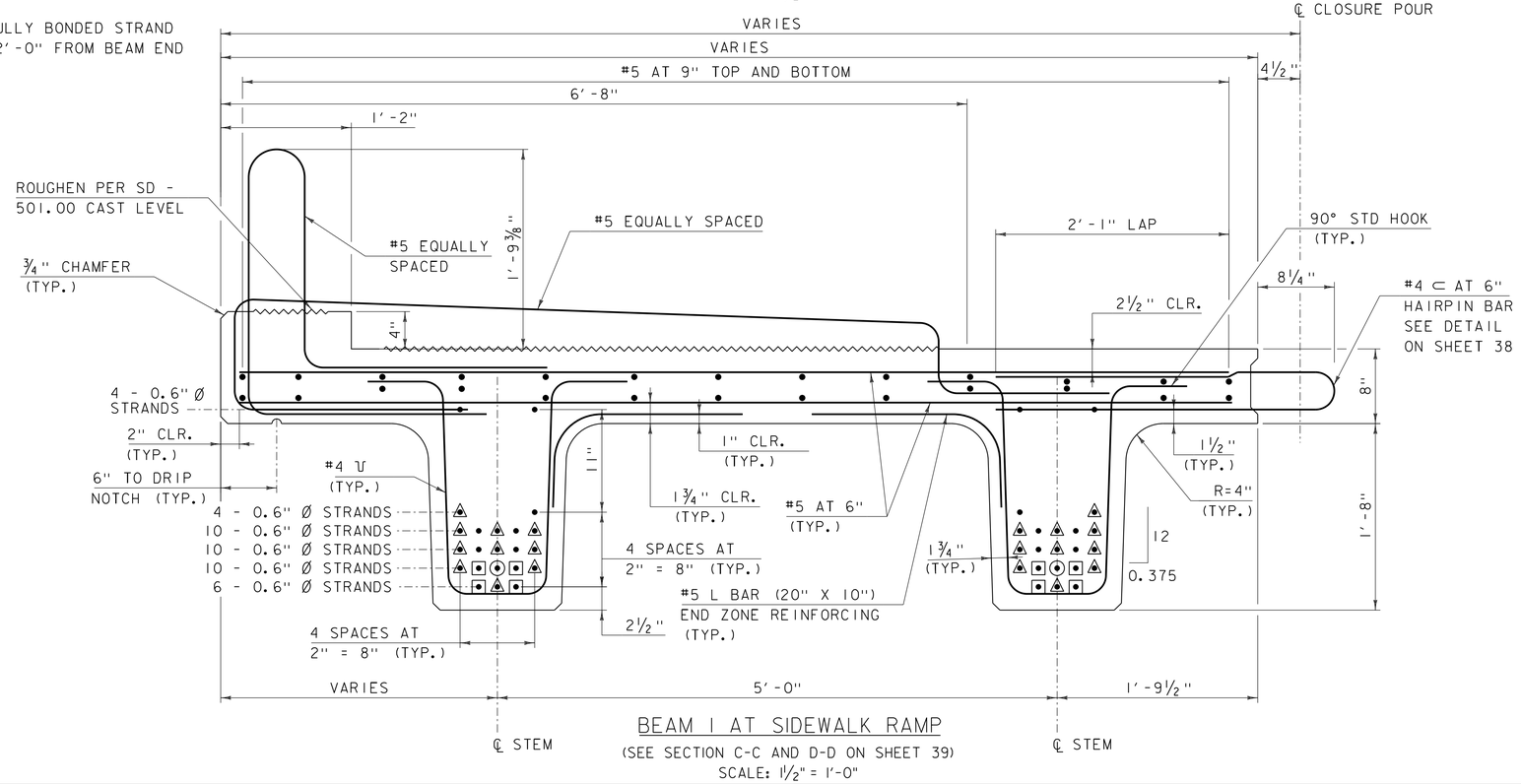
BEAM I

(SEE SECTION B-B ON SHEET 39
SCALE: 1½" = 1'-0"

○ DENOTES STRAND DEBONDED 2'-0" FROM EACH END OF BEAM

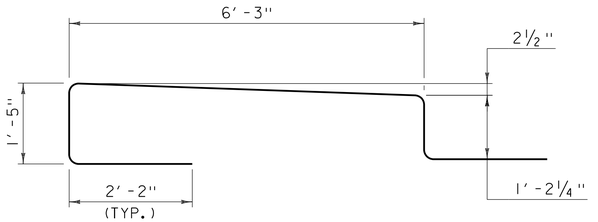
△ DENOTES STRAND DEBONDED 6" FROM EACH END OF BEAM

☐ DENOTES FULLY BONDED STRAND EXTENDED 2'-0" FROM BEAM END



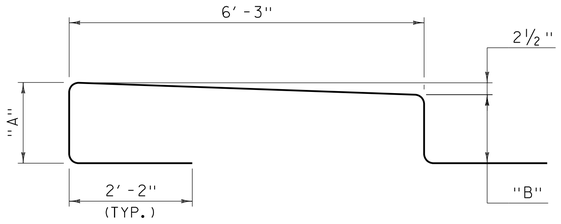
BEAM I AT SIDEWALK RAMP

(SEE SECTION C-C AND D-D ON SHEET 39)
SCALE: 1½" = 1'-0"



SIDEWALK BAR DETAIL

SCALE: ¾" = 1'-0"

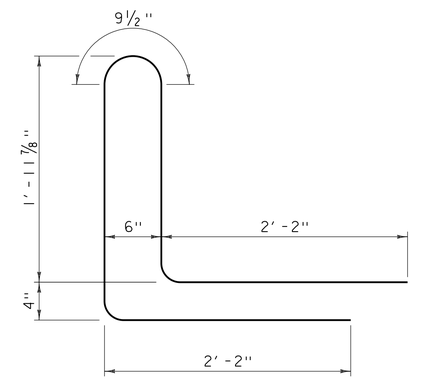


SIDEWALK RAMP BAR DETAIL

SCALE: ¾" = 1'-0"

SIDEWALK BARS IN RAMP	"A"	"B"
1	1'-3½"	1'-1¾"
2	1'-2¼"	1'-1"
3	1'-1¼"	1'-0"
4	1'-0"	11"
5	11"	10¼"
6	9¾"	9¼"
7	8¾"	8¼"
8	8½"	8¼"

SEE SHEET 39 FOR SIDEWALK RAMP AND RAILING SIDEWALK RAMP SECTIONS.



RAILING SIDEWALK RAMP BAR DETAIL

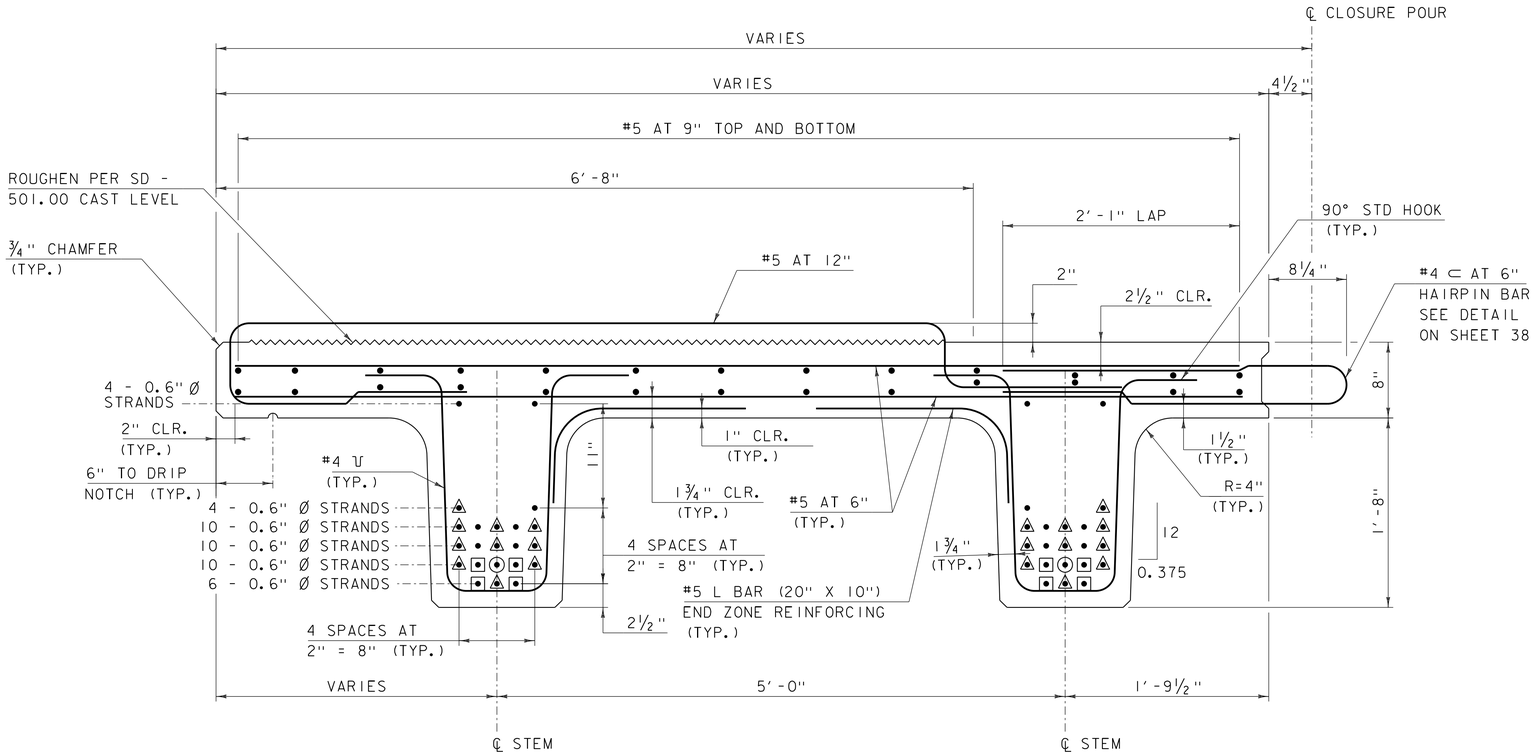
SCALE: 1½" = 1'-0"

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: z10c412sup.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
NEXT BEAM DETAILS (1 OF 5)

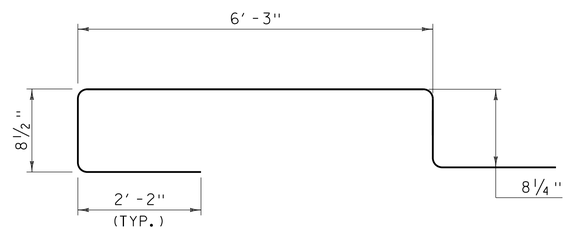
PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 36 OF 73

CLD 12-0121 MODEL: Sup02



BEAM I AT DRIVEWAY ENTRANCE

(SEE SECTION E-E ON SHEET 39)
SCALE: 1½" = 1'-0"



DRIVEWAY ENTRANCE BAR DETAIL

SCALE: ¾" = 1'-0"

NOTE: SEE SHEET 39 FOR DRIVEWAY ENTRANCE DETAILS.

○ DENOTES STRAND DEBONDED 2'-0" FROM EACH END OF BEAM

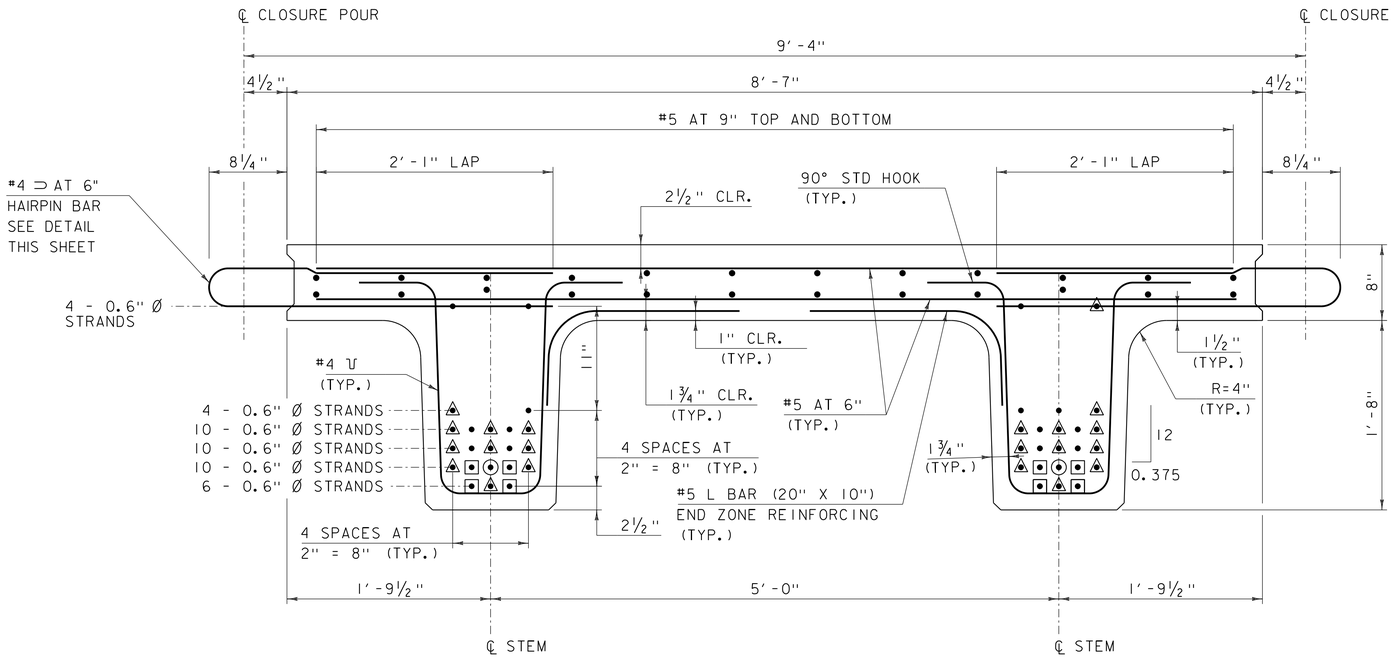
△ DENOTES STRAND DEBONDED 6" FROM EACH END OF BEAM

□ DENOTES FULLY BONDED STRAND EXTENDED 2'-0" FROM BEAM END

CLD I2-012I MODEL: Sup03

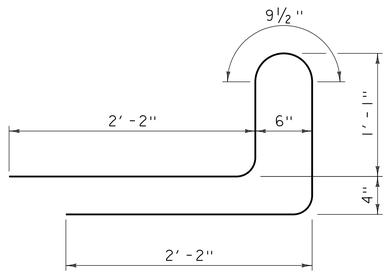
PROJECT NAME: BURKE	
PROJECT NUMBER: BRF 0269(13)	
FILE NAME: z10c412sup.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
NEXT BEAM DETAILS (2 OF 5)	SHEET 37 OF 73

CLD CONSULTING ENGINEERS



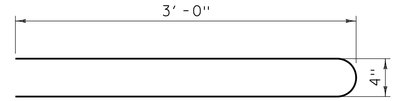
BEAMS 2 AND 3

SCALE: 1½" = 1′-0"



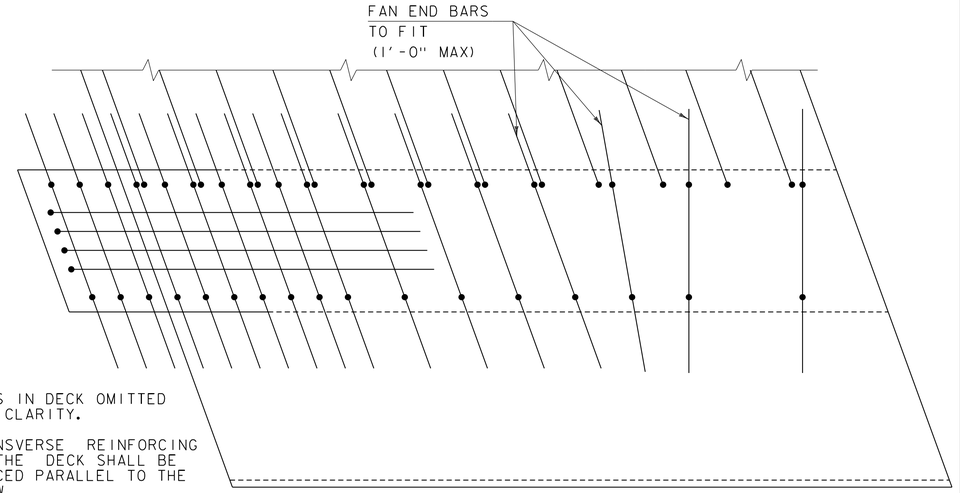
RAILING BAR DETAIL

SCALE: 1½" = 1′-0"



HAIRPIN BAR DETAIL

SCALE: 1½" = 1′-0"

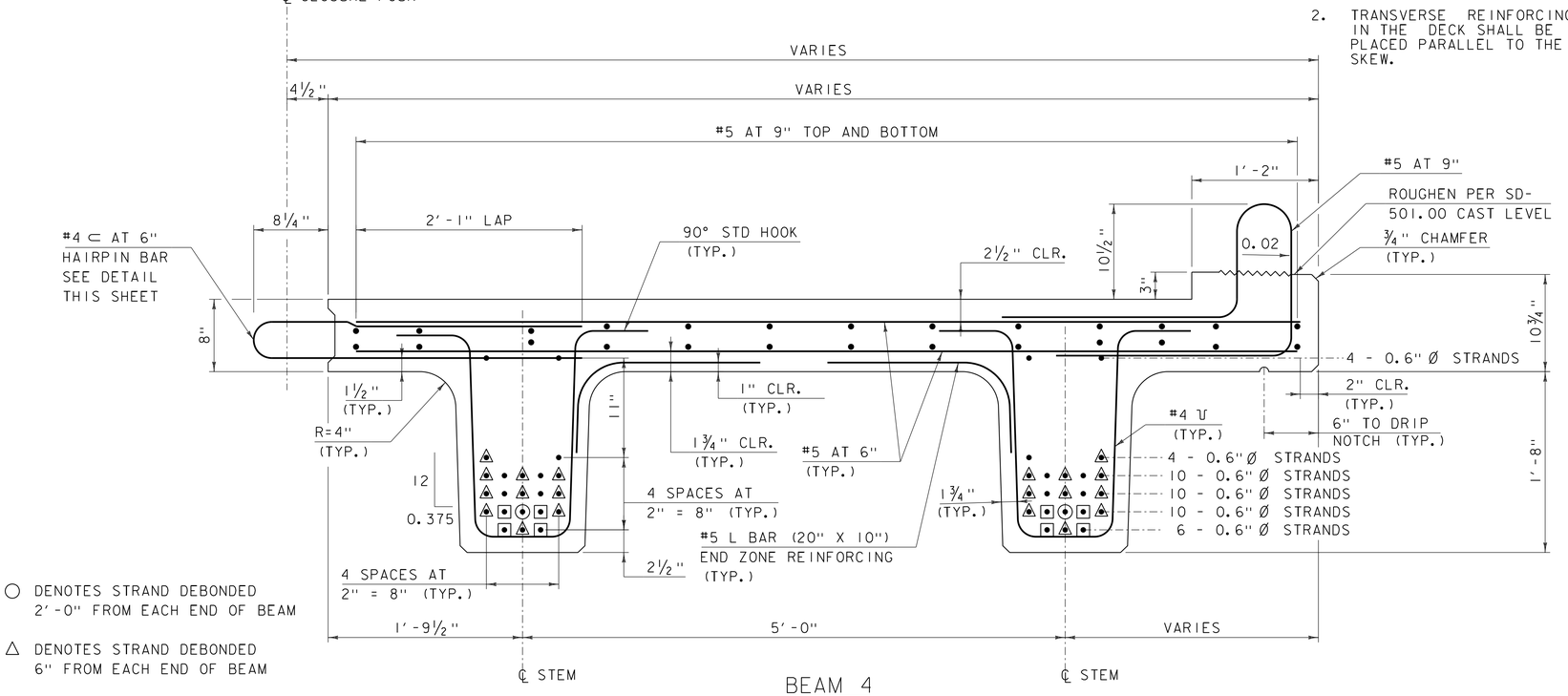


SKEWED END DETAIL

SCALE: 1½" = 1′-0"

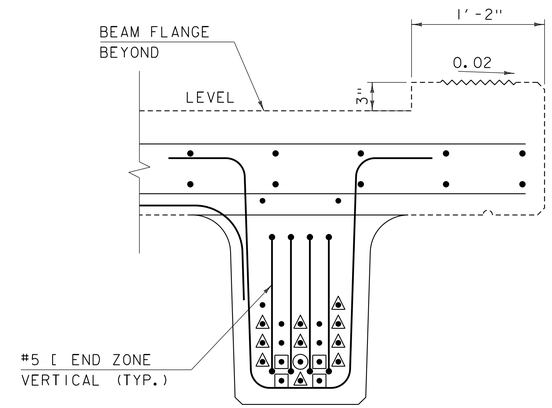
NOTE:

1. BARS IN DECK OMITTED FOR CLARITY.
2. TRANSVERSE REINFORCING IN THE DECK SHALL BE PLACED PARALLEL TO THE SKEW.



BEAM 4

SCALE: 1½" = 1′-0"



END SECTION DETAIL

SCALE: 1½" = 1′-0"

○ DENOTES STRAND DEBONDED 2′-0" FROM EACH END OF BEAM

△ DENOTES STRAND DEBONDED 6" FROM EACH END OF BEAM

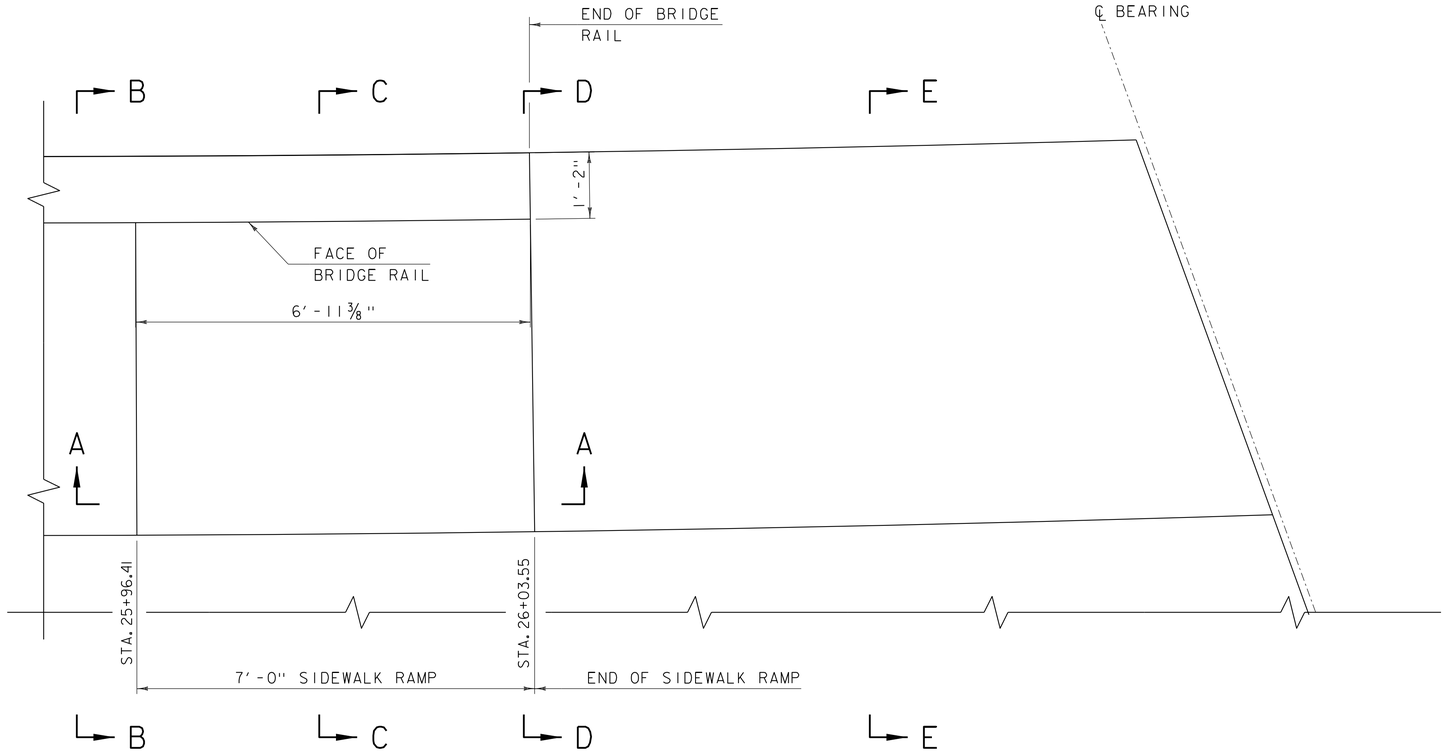
☐ DENOTES FULLY BONDED STRAND EXTENDED 2′-0" FROM BEAM END

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME:	z10c412sup.dgn
PROJECT LEADER:	J. BYATT
DESIGNED BY:	S. BEAUMONT
NEXT BEAM DETAILS (3 OF 5)	
PLOT DATE:	11/24/2014
DRAWN BY:	M. SMITH
CHECKED BY:	J. BYATT
SHEET	38 OF 73

CONSULTING ENGINEERS

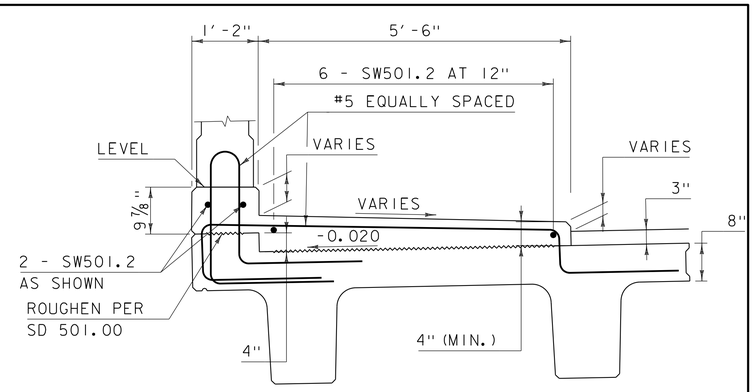
MODEL: Sup04

CLD 12-012I



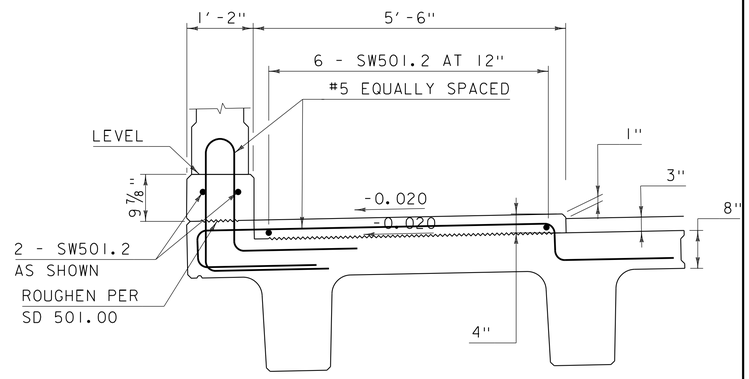
SIDEWALK RAMP PLAN

SCALE: 3/4" = 1'-0"



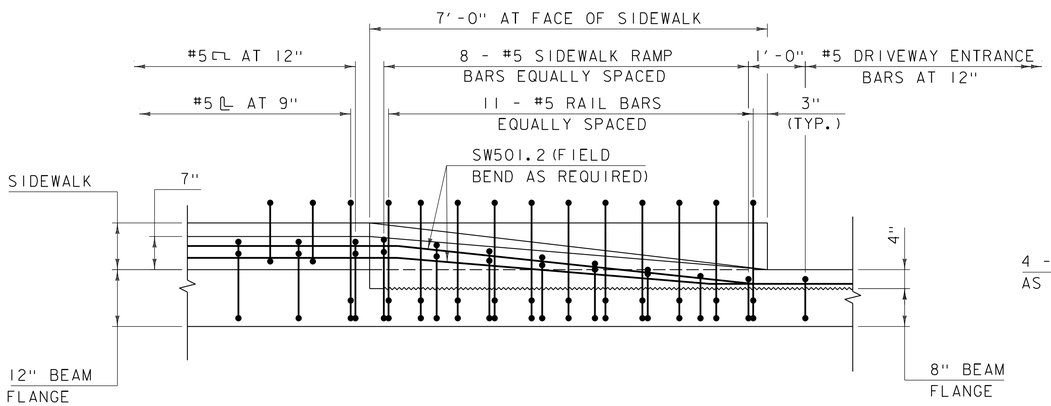
SECTION C-C

SCALE: 3/4" = 1'-0"



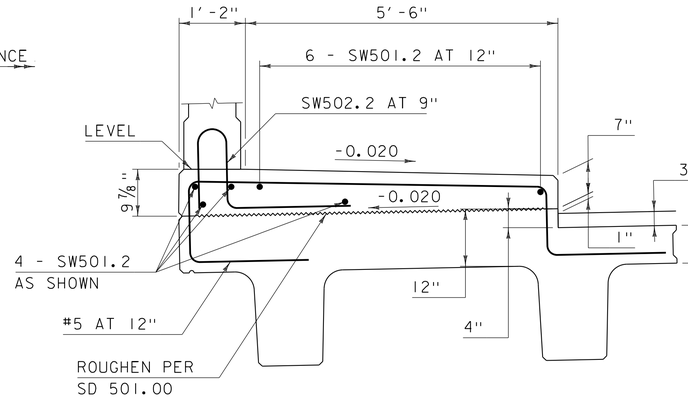
SECTION D-D

SCALE: 3/4" = 1'-0"



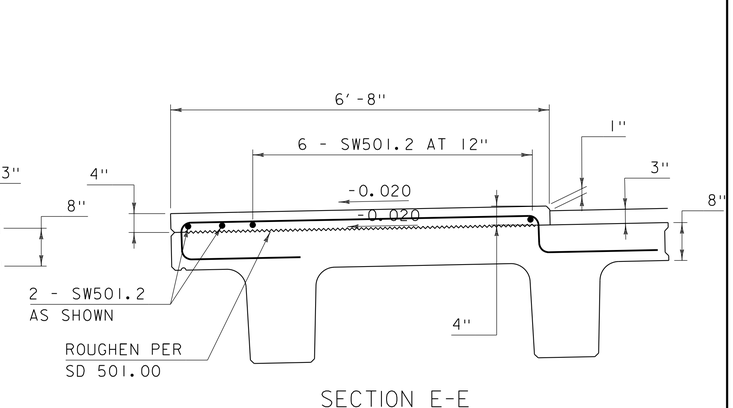
SECTION A-A

SCALE: 3/4" = 1'-0"



SECTION B-B

SCALE: 3/4" = 1'-0"



SECTION E-E

SCALE: 3/4" = 1'-0"

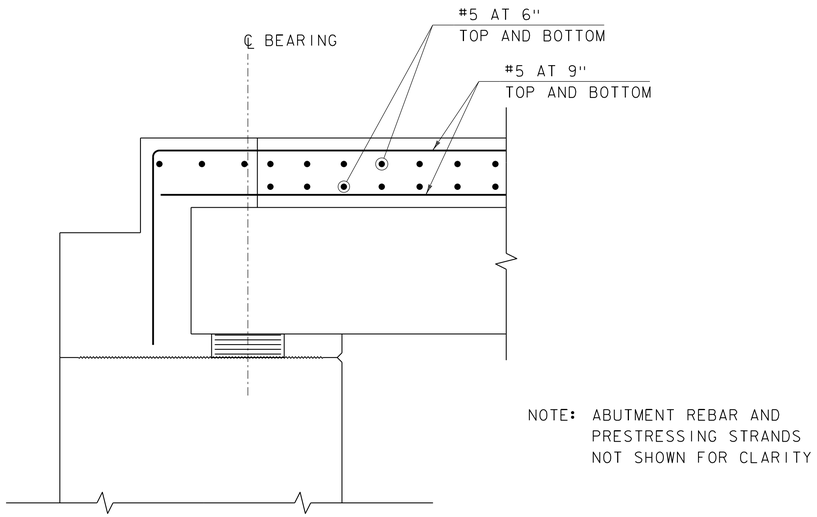
NOTE:

1. SEE SHEETS 36 AND 37 FOR SIDEWALK RAMP, RAIL, AND DRIVEWAY ENTRANCE BAR DETAILS.

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: z10c412sup.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
NEXT BEAM DETAILS (4 OF 5)	SHEET 39 OF 73

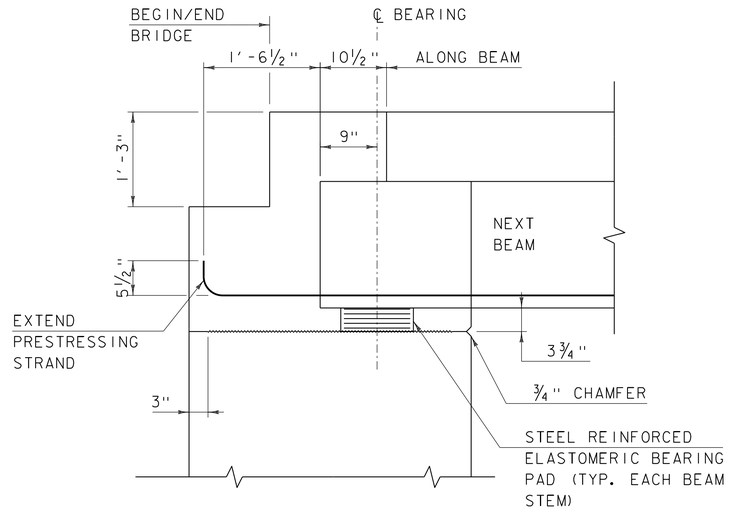
CONSULTING ENGINEERS

CLD 12-0121 MODEL: Sup05



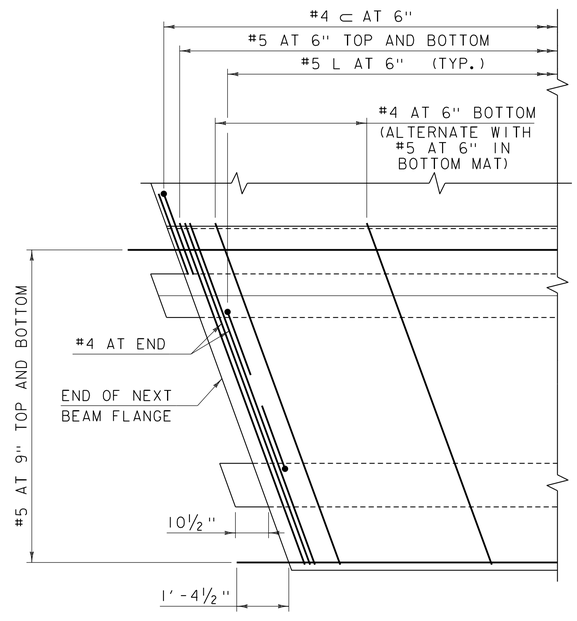
TYPICAL DECK REINFORCING AT BEAM END

SCALE: 1" = 1'-0"



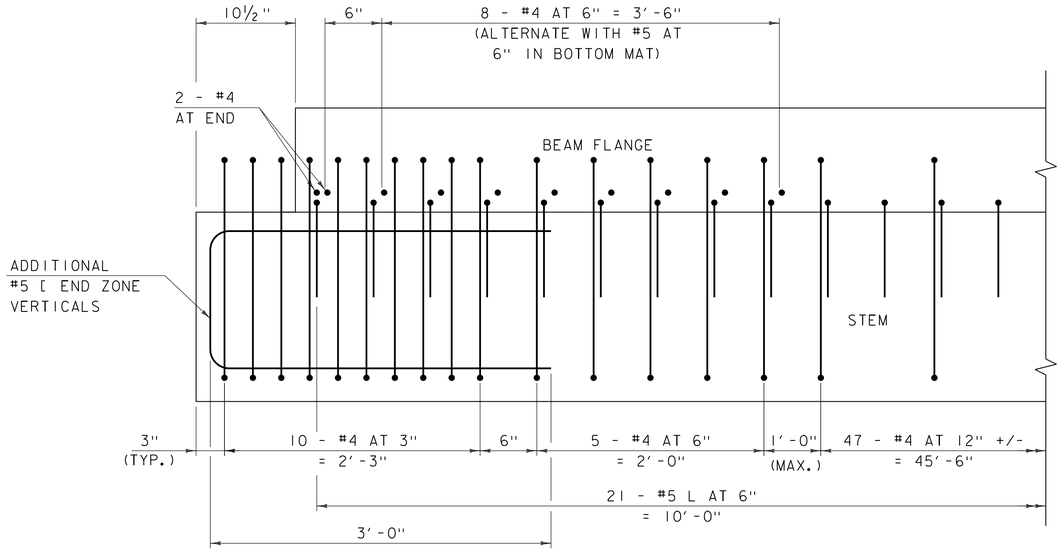
TYPICAL BEAM END DETAIL

SCALE: 1" = 1'-0"



PARTIAL BEAM FLANGE PLAN

SCALE: ½" = 1'-0"



LONGITUDINAL SECTION

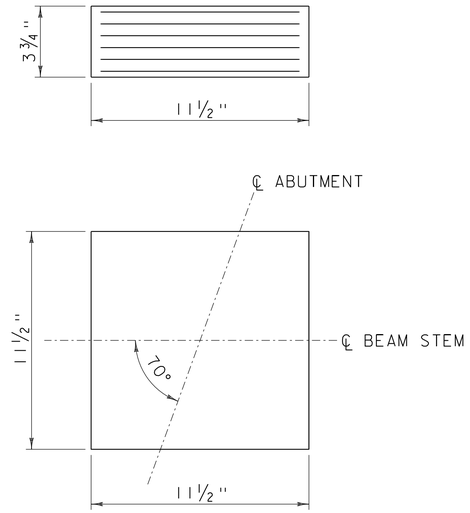
SCALE: 1½" = 1'-0"

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)

FILE NAME: z10c412sup.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
NEXT BEAM DETAILS (5 OF 5)	SHEET 40 OF 73

CONSULTING ENGINEERS

CLD 12-0121 MODEL: Sup06



ELASTOMERIC BEARING DETAIL

SCALE: 3" = 1'-0"

2 - ¼" EXTERIOR LAYERS OF ELASTOMER
5 - ½" INTERIOR LAYERS OF ELASTOMER
6 - ⅛" STEEL REINFORCING PLATES

BEARING NOTES

1. BEARINGS SHALL CONFORM TO THE APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731 AND WILL BE PAID FOR UNDER CONTRACT ITEM 531.17.

2. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMER SHALL BE STEEL MEETING THE REQUIREMENTS OF SUBSECTION 714.02. ALL INTERNAL STEEL PLATES SHALL BE SAND BLASTED AND FREE OF COATINGS, RUST AND MILL SCALE. THE PLATES SHALL BE FREE OF SHARP EDGES AND BURRS.

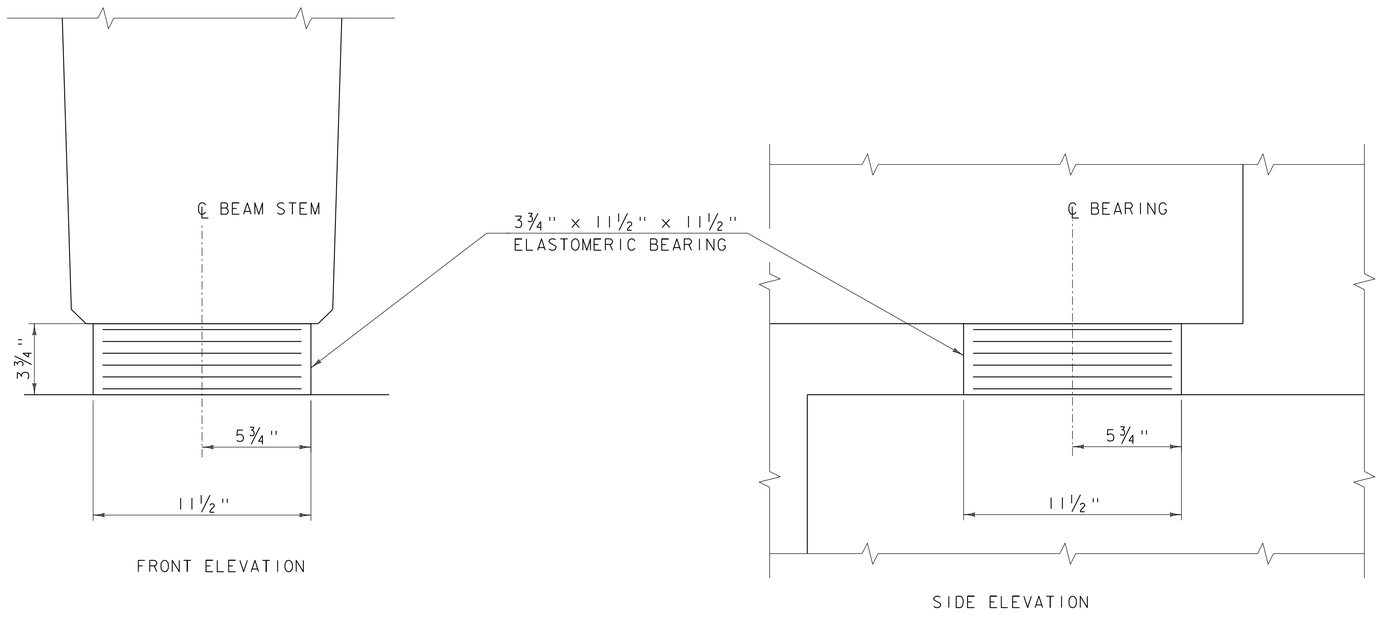
3. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM ¼" EDGE SEAL OF ELASTOMER INTEGRAL WITH BEARING OVER ALL INTERNAL PLATES.

4. THE ELASTOMER WAS DESIGNED WITH A SHEAR MODULUS RANGE OF 130 PSI - 200 PSI.

5. THE ELASTOMER SHALL MEET THE REQUIREMENTS OF LOW TEMPERATURE ZONE D AND HAVE A HARDNESS OF 60 ON THE SHORE A SCALE.

6. THE CONTRACTOR IS ADVISED TO HAVE A MINIMUM OF 16 - ¼" x 12½" x 12½" GALVANIZED STEEL SHIMS AVAILABLE FOR ELEVATION ADJUSTMENTS UPON THE SETTING OF THE SUPERSTRUCTURE UNITS. THE SHIMS SHALL BE FABRICATED ACCORDING TO SECTION 531 AND SHALL BE INCLUDED IN THE UNIT BID PRICE FOR CONTRACT ITEM 531.17.

7. DESIGN SERVICE LOADS PER BEARING: (DESIGN METHOD A)
   MAX DEAD LOAD: 36.5 K
   MAX LIVE LOAD: 25.9 K



FRONT ELEVATION

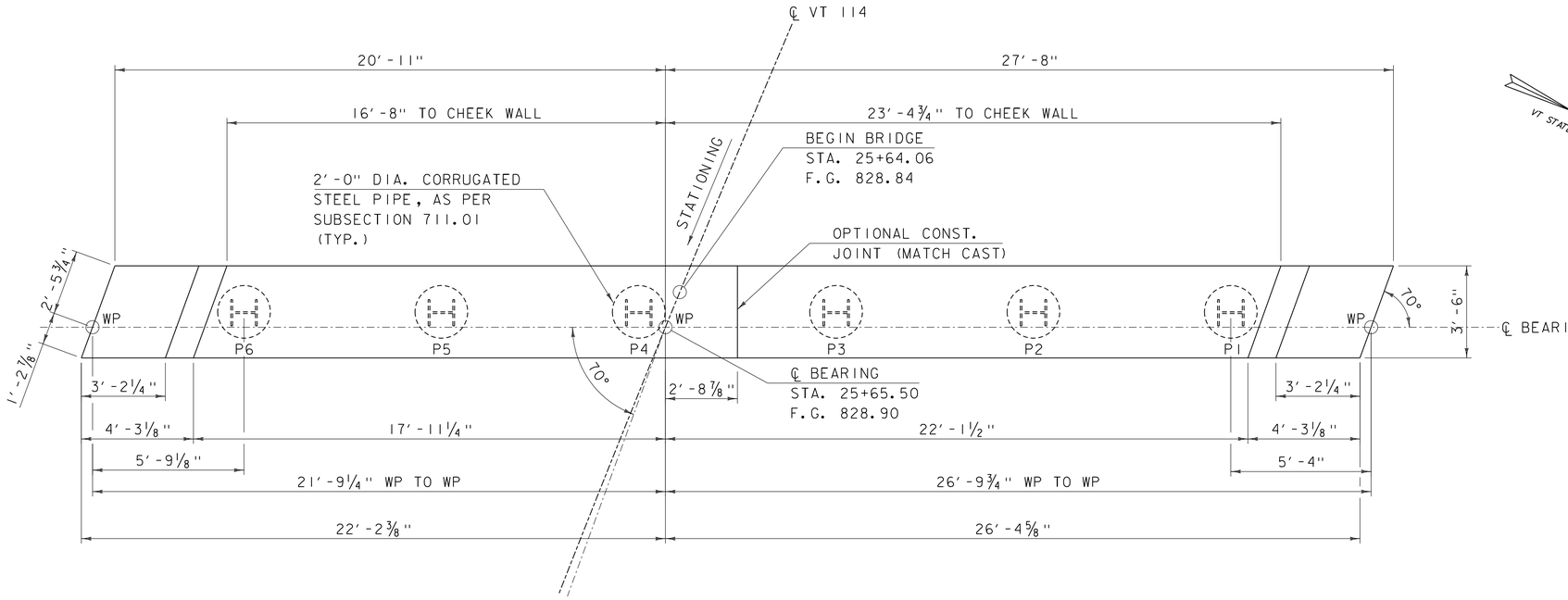
SIDE ELEVATION

ELASTOMERIC BEARING DETAIL

SCALE: 3" = 1'-0"

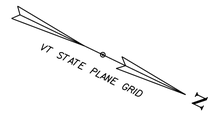
CLD 12-0121 MODEL: Sup07

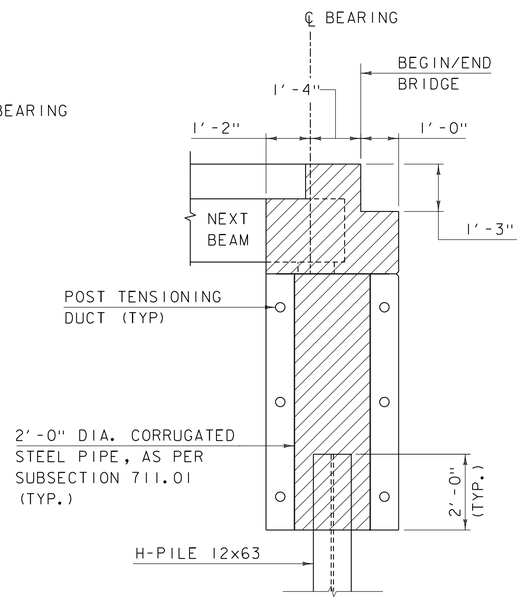
PROJECT NAME: BURKE	
PROJECT NUMBER: BRF 0269(13)	
FILE NAME: z10c412sup.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
BEARING DETAILS	SHEET 41 OF 73



ABUTMENT 1 PLAN (PCU 1)

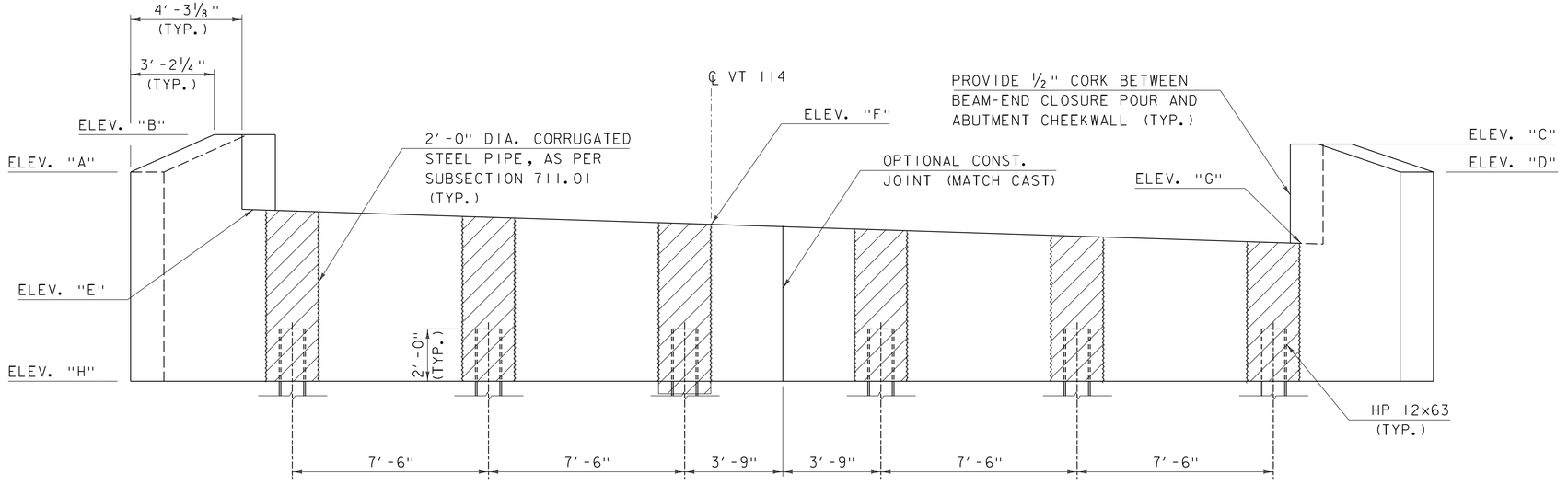
SCALE: ⅜" = 1'-0"





ABUTMENT TYPICAL

SCALE: ½" = 1'-0"



ABUTMENT 1 ELEVATION (PCU 1)

SCALE: ⅜" = 1'-0"

PCU ELEVATIONS

	AB1
ELEV "A"	828.00
ELEV "B"	829.43
ELEV "C"	829.07
ELEV "D"	828.00
ELEV "E"	826.56
ELEV "F"	826.00
ELEV "G"	825.27
ELEV "H"	820.00

NOTE: ELEVATIONS ARE AT CENTERLINE BEARING

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ) (TYP.)

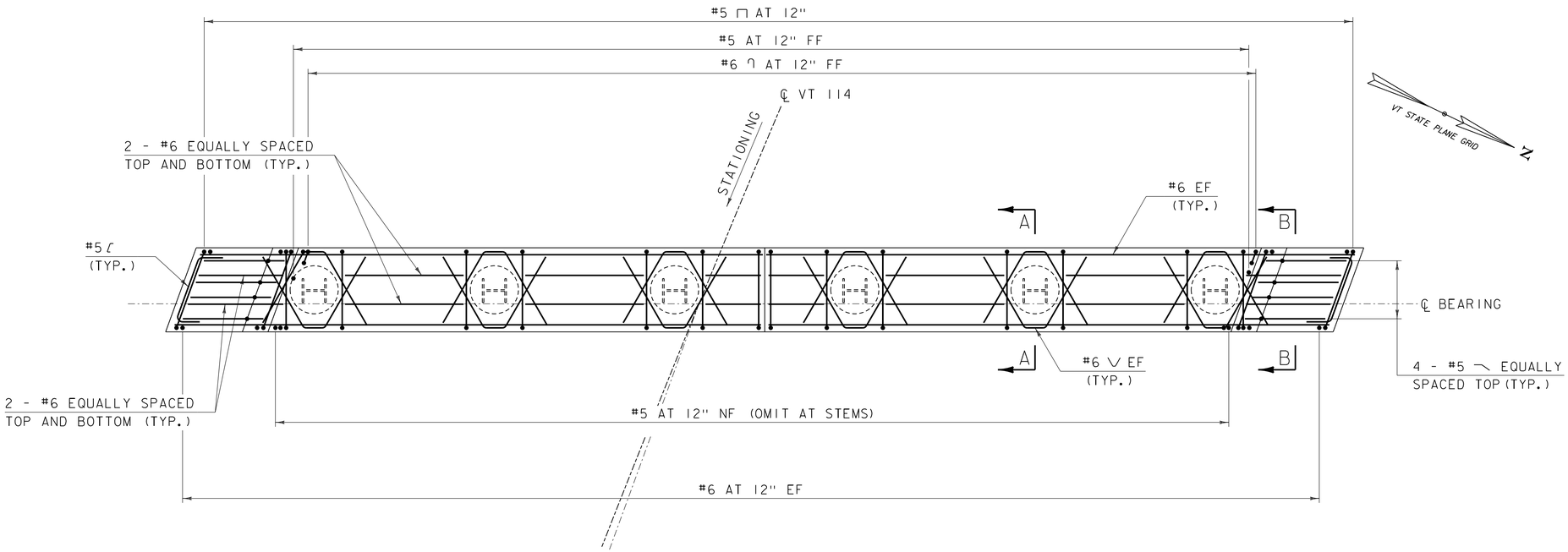
CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: z10c412abut1.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
ABUTMENT 1 PLAN

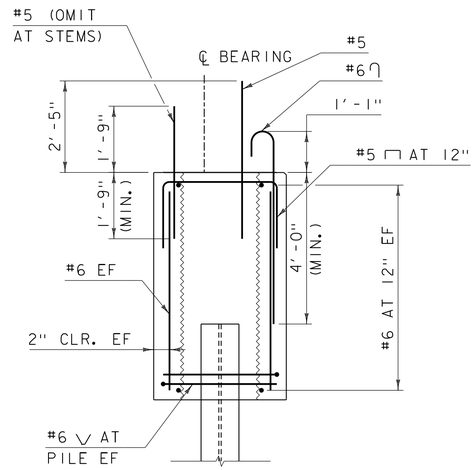
PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 42 OF 73

CLD 12-012 MODEL: Sheet01



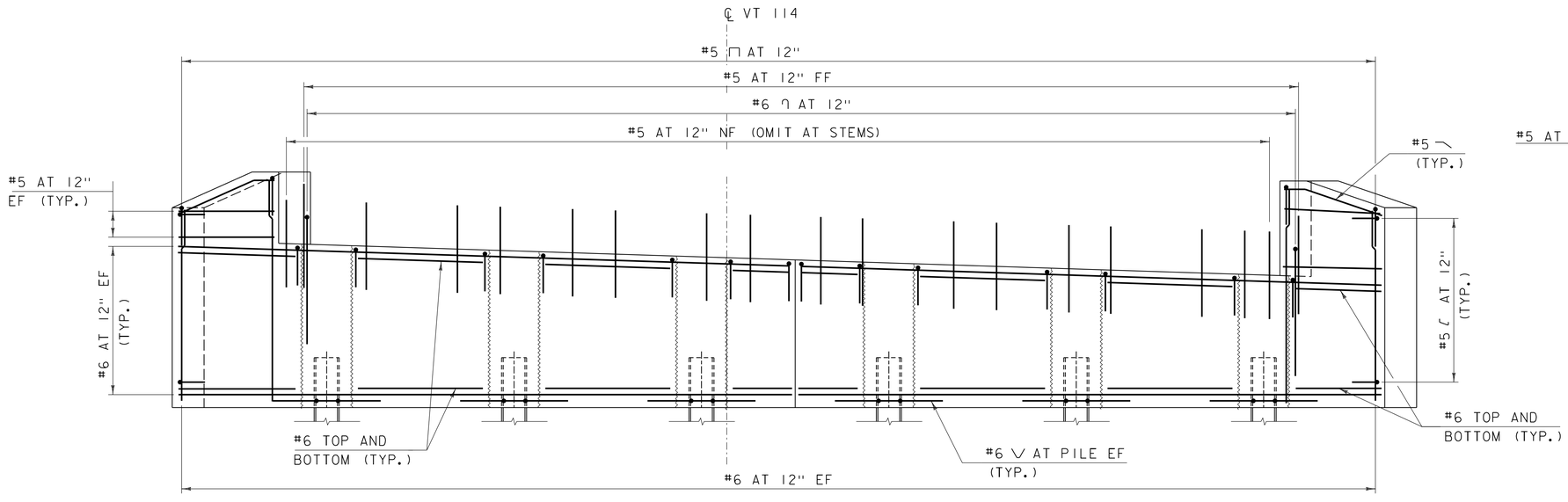
ABUTMENT 1 REINFORCING PLAN (PCU 1)

SCALE: 3/8" = 1'-0"



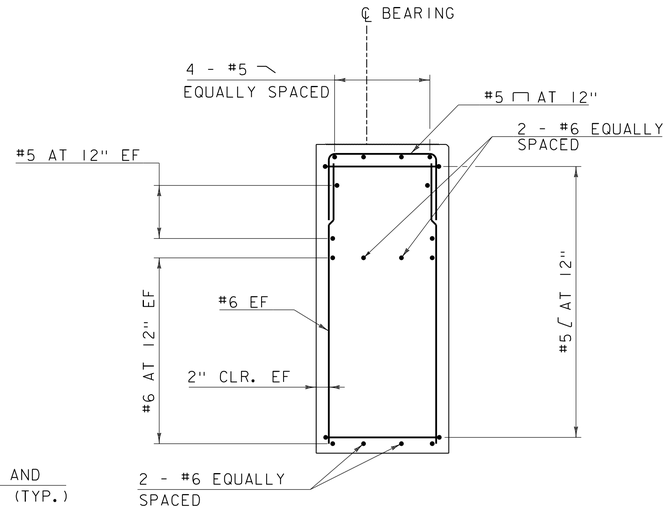
SECTION A-A

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



ABUTMENT 1 REINFORCING ELEVATION (PCU 1)

SCALE: 3/8" = 1'-0"



SECTION B-B

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

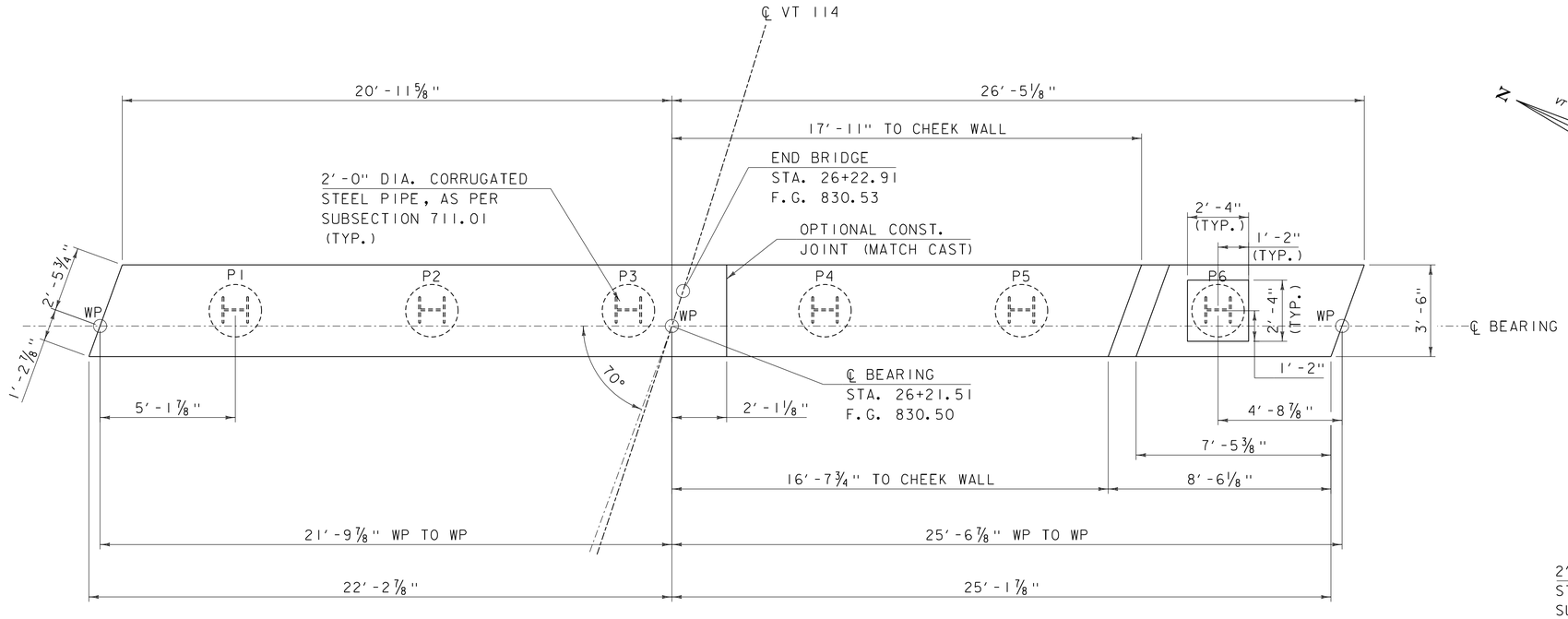
NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE THE PLANS.
2'-6" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME:	z10c412abut1.dgn
PROJECT LEADER:	J. BYATT
DESIGNED BY:	S. BEAUMONT
ABUTMENT 1 REINFORCING	
PLOT DATE:	11/24/2014
DRAWN BY:	M. SMITH
CHECKED BY:	J. BYATT
SHEET	43 OF 73

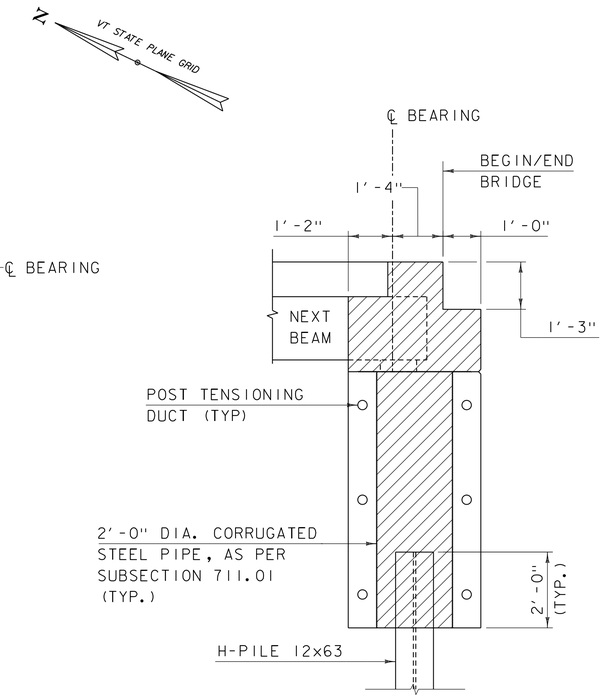
CONSULTING ENGINEERS

CLD 12-0121 MODEL: Sheet02



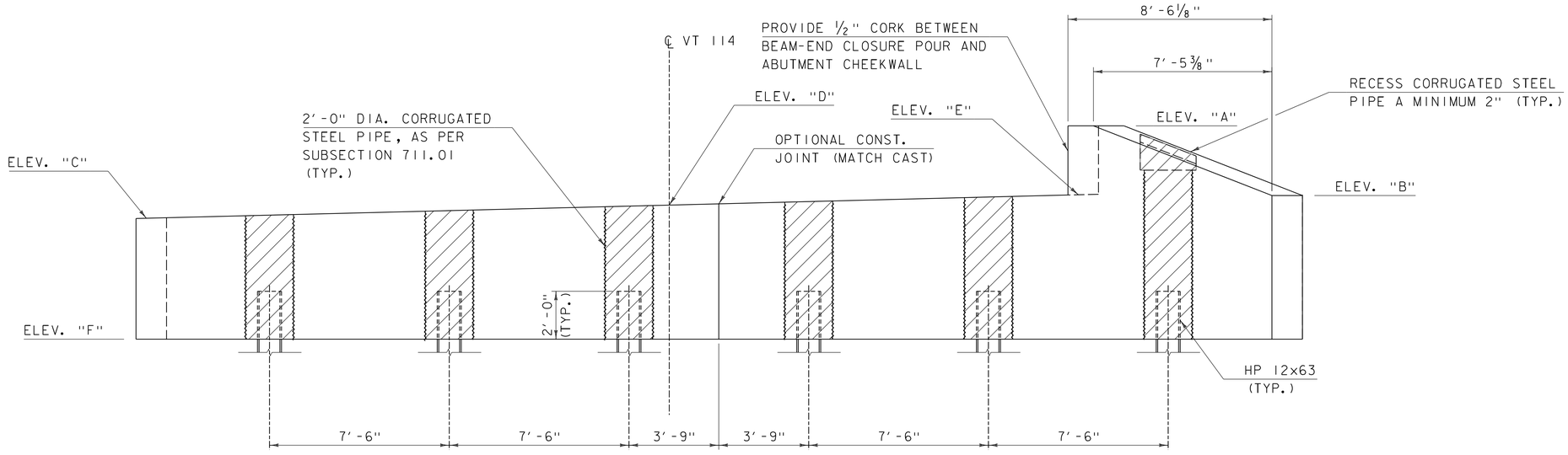
ABUTMENT 2 PLAN (PCU 2)

SCALE: ⅜" = 1′-0"



ABUTMENT TYPICAL

SCALE: ½" = 1′-0"



ABUTMENT 2 ELEVATION (PCU 2)

SCALE: ⅜" = 1′-0"

PCU ELEVATIONS

	AB2
ELEV "A"	830.91
ELEV "B"	828.00
ELEV "C"	827.05
ELEV "D"	827.60
ELEV "E"	828.03
ELEV "F"	822.00

NOTE: ELEVATIONS ARE AT CENTERLINE BEARING

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ) (TYP.)

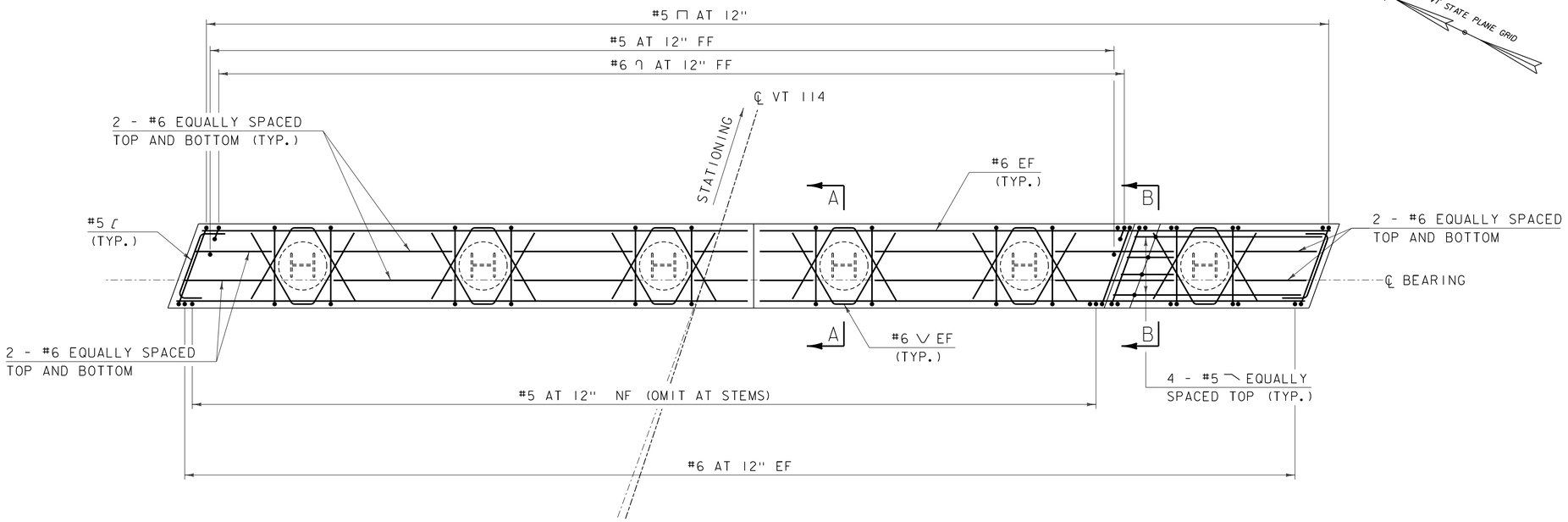
CLD CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: z10c412abut2.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
ABUTMENT 2 PLAN

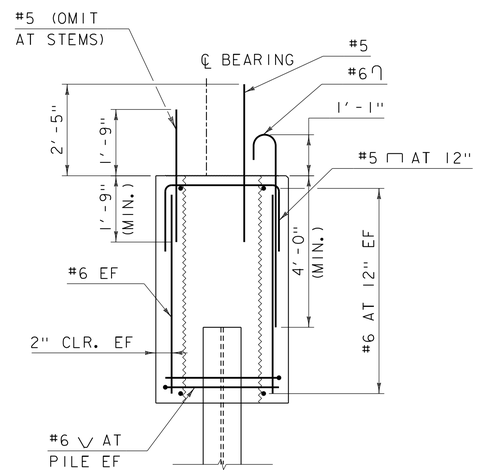
PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 44 OF 73

CLD 12-0121 MODEL: Sheet01



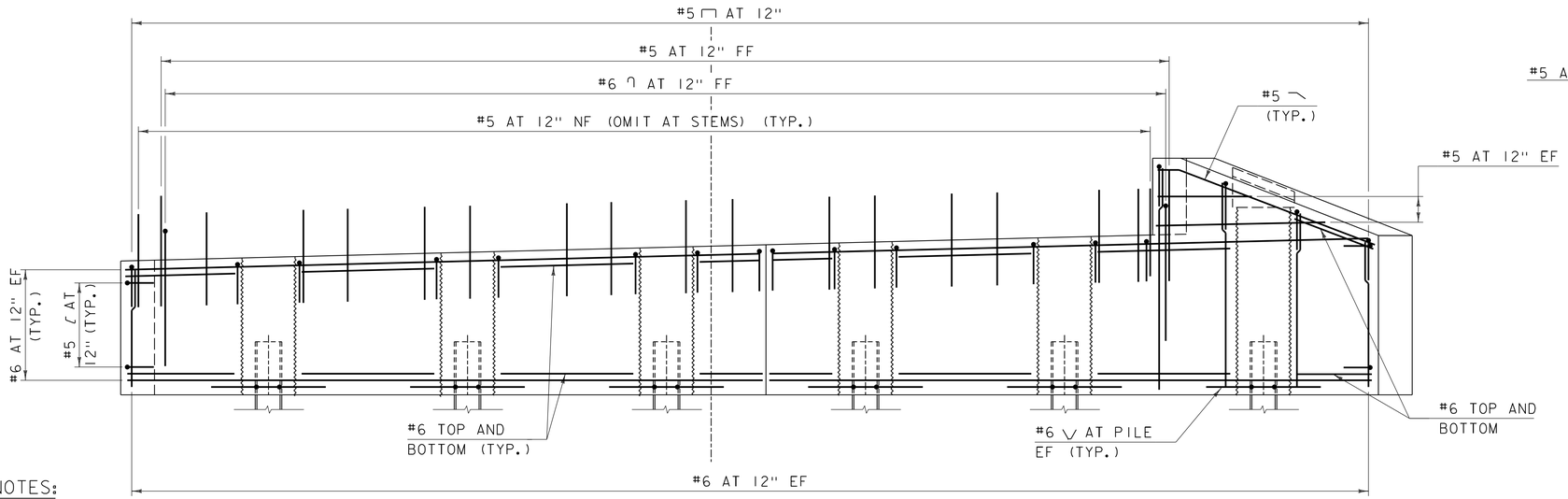
ABUTMENT 2 REINFORCING PLAN (PCU 2)

SCALE: 3/8" = 1'-0"



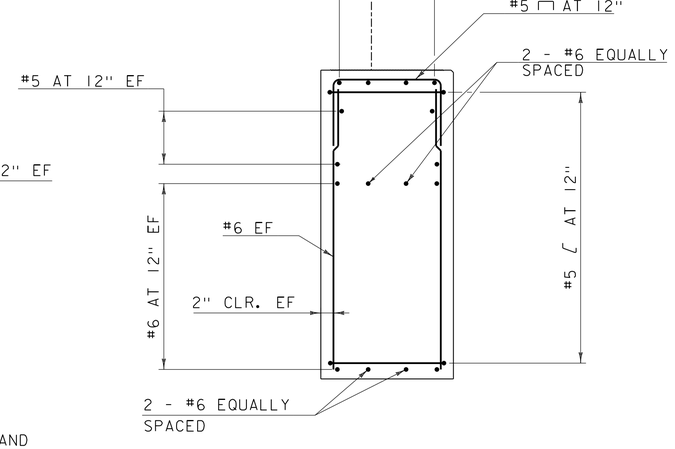
SECTION A-A

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



ABUTMENT 2 REINFORCING ELEVATION (PCU 2)

SCALE: 3/8" = 1'-0"



SECTION B-B

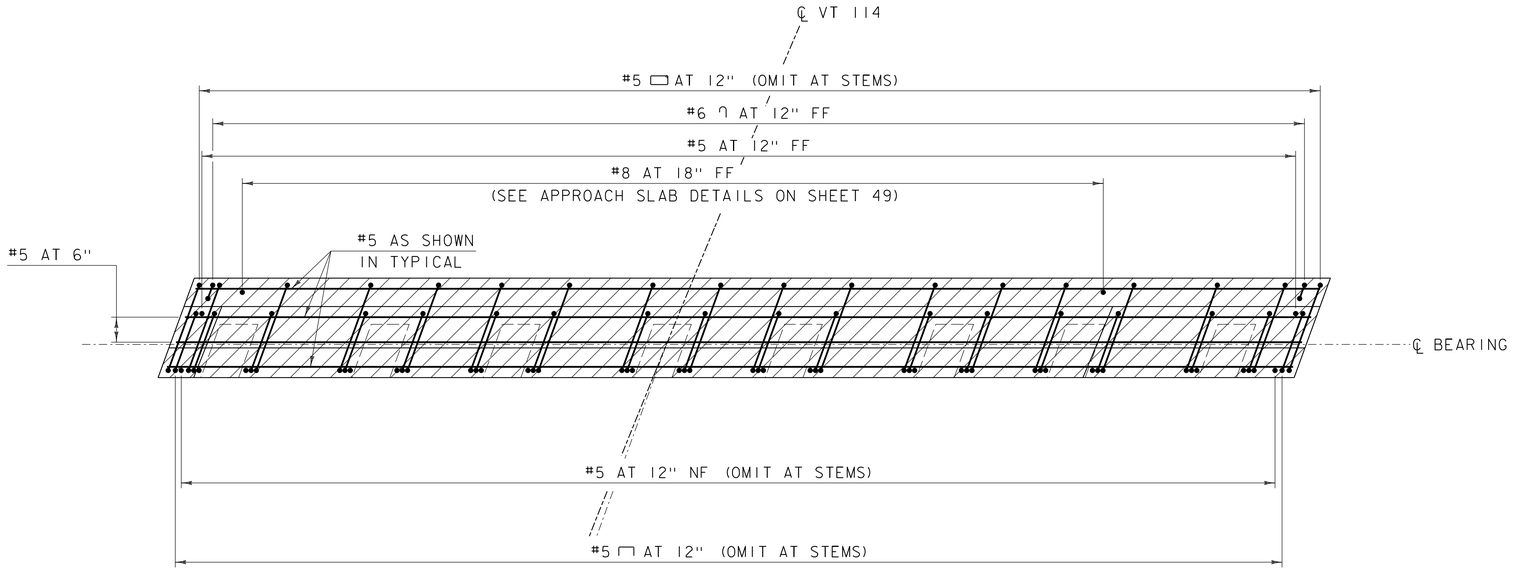
SCALE: 1/2" = 1'-0"

NOTES:

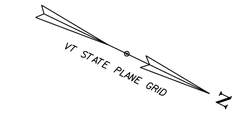
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE THE PLANS.
2'-6" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS

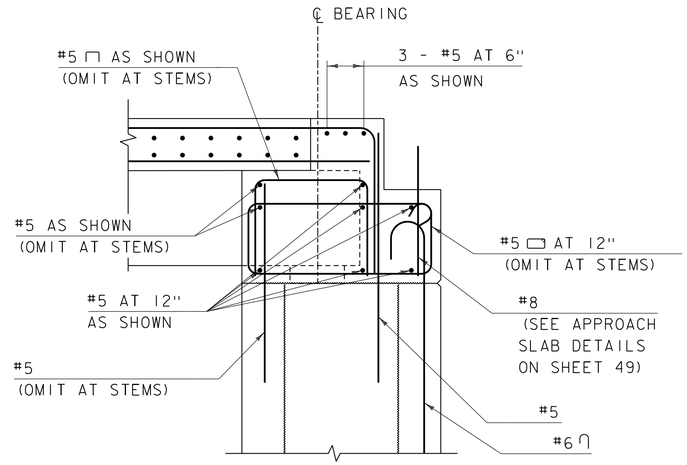
PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: z10c412abut2.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
ABUTMENT 2 REINFORCING	SHEET 45 OF 73

CLD 12-0121 MODEL: Sheet02

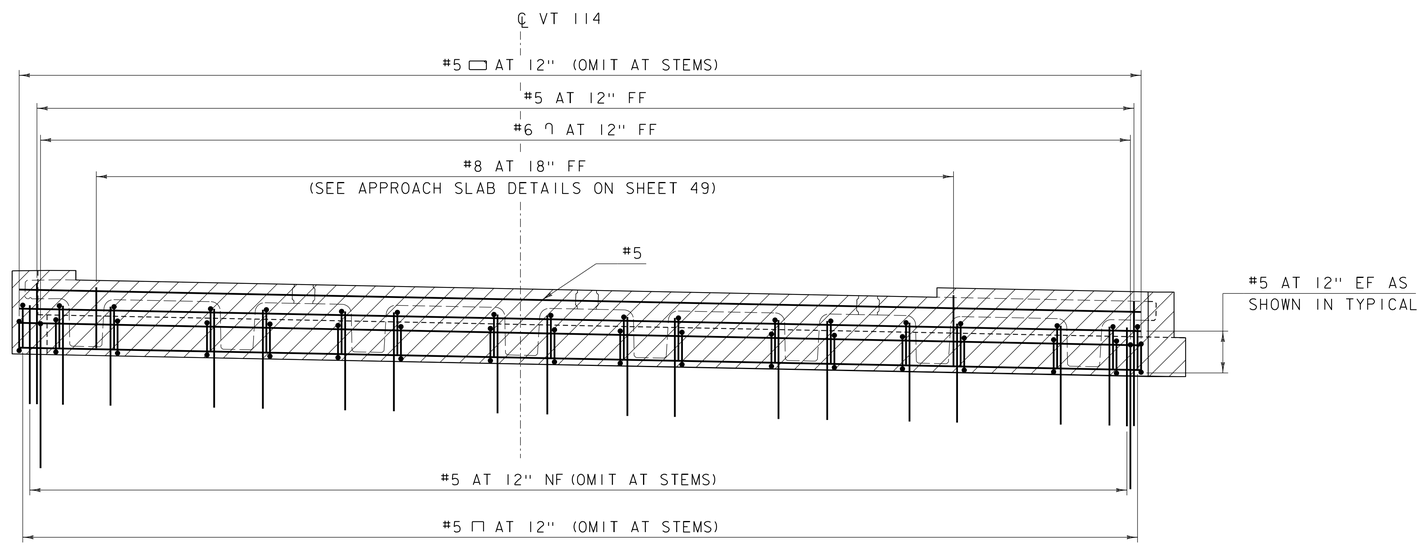


BEAM-END CLOSURE POUR
REINFORCING PLAN
SCALE: 3/8" = 1'-0"





REINFORCING TYPICAL
SCALE: 3/4" = 1'-0"



NOTE: REINFORCEMENT STEEL FOR ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR

BEAM-END CLOSURE POUR
REINFORCING ELEVATION
SCALE: 3/8" = 1'-0"

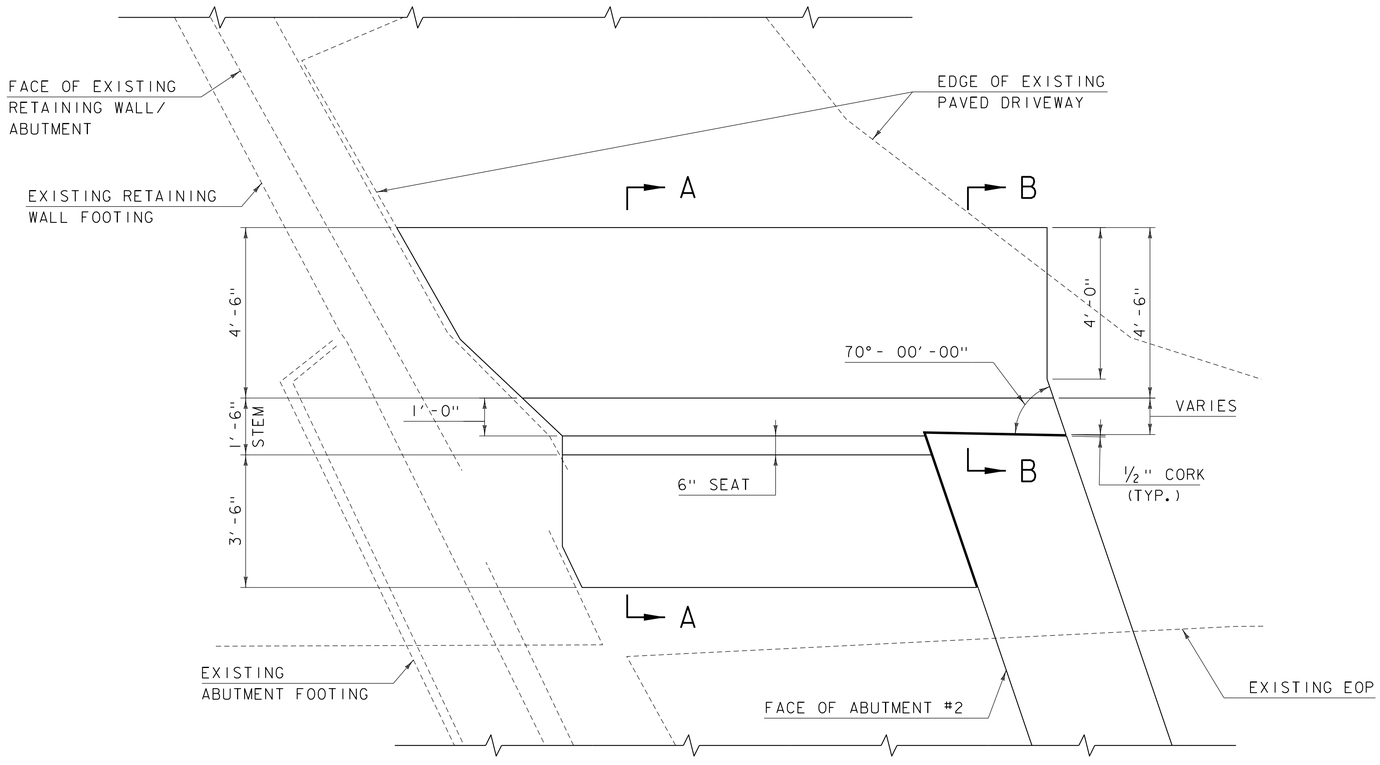
SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPO) (TYP.)

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
2" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE THE PLANS.
2'-6" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: z10c412abut1.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
BEAM-END CLOSURE POUR REINFORCING	SHEET 46 OF 73

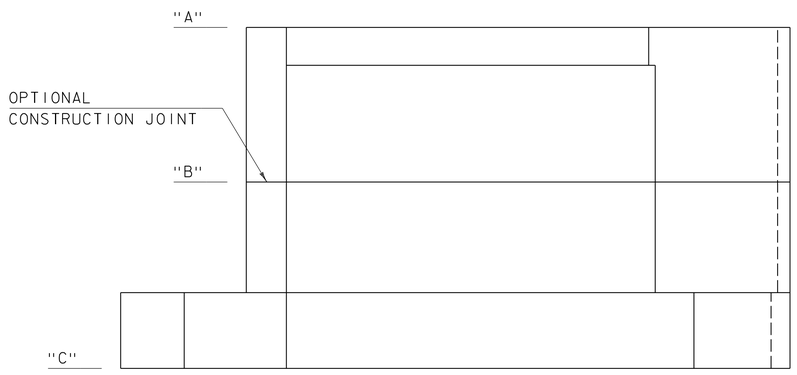
CLD 12-0121 MODEL: Sheet03



RETAINING WALL PLAN

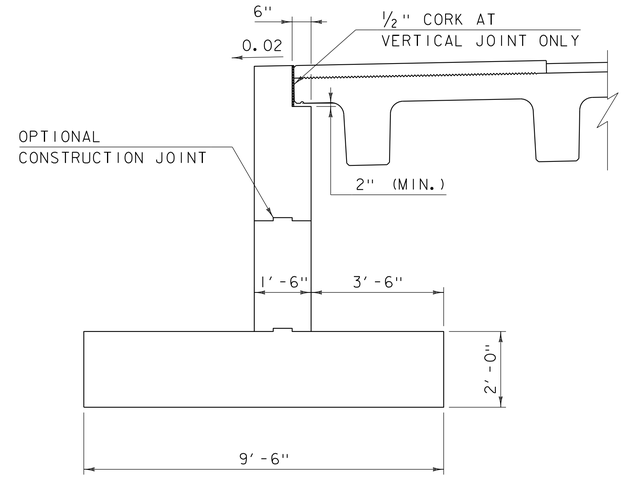
SCALE: 1/2" = 1'-0"

RETAINING WALL ELEVATIONS	
ELEV. "A"	SEE NOTE #2
ELEV. "B"	826.50
ELEV. "C"	821.58



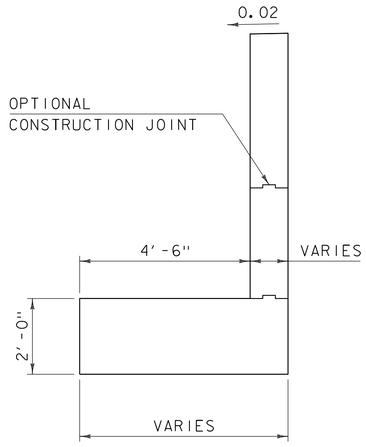
RETAINING WALL ELEVATION

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



SECTION A-A

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



SECTION B-B

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

NOTE:

1. THE CAST-IN-PLACE CONCRETE RETAINING WALL SHALL BE CAST DIRECTLY AGAINST THE BACK OF THE EXISTING RETAINING WALL.

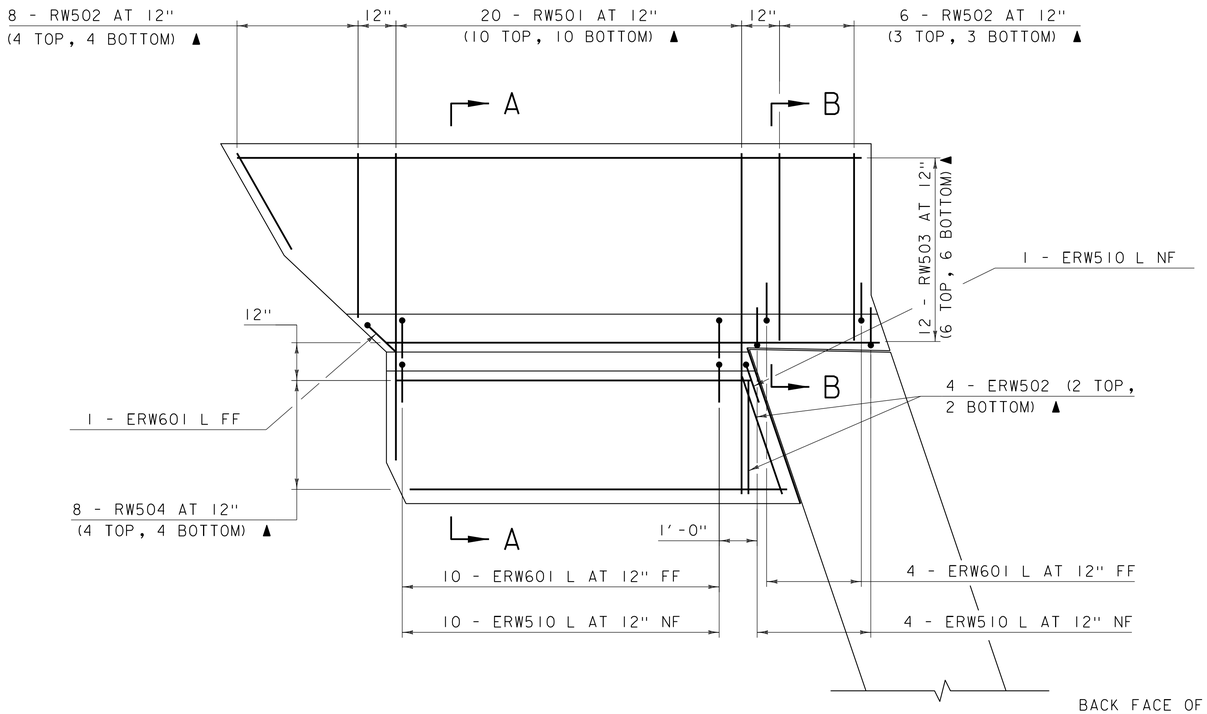
2. THE TOP OF THE RETAINING WALL ABOVE OPTIONAL CONSTRUCTION JOINT SHALL BE POURED AFTER THE BEAMS ARE SET TO ENSURE IT IS LEVEL WITH THE TOP OF THE BEAM. THE SHELF SHALL BE SET A MINIMUM OF 2" BELOW THE BOTTOM OF THE BEAM FLANGE.

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412sub.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
RETAINING WALL DETAILS

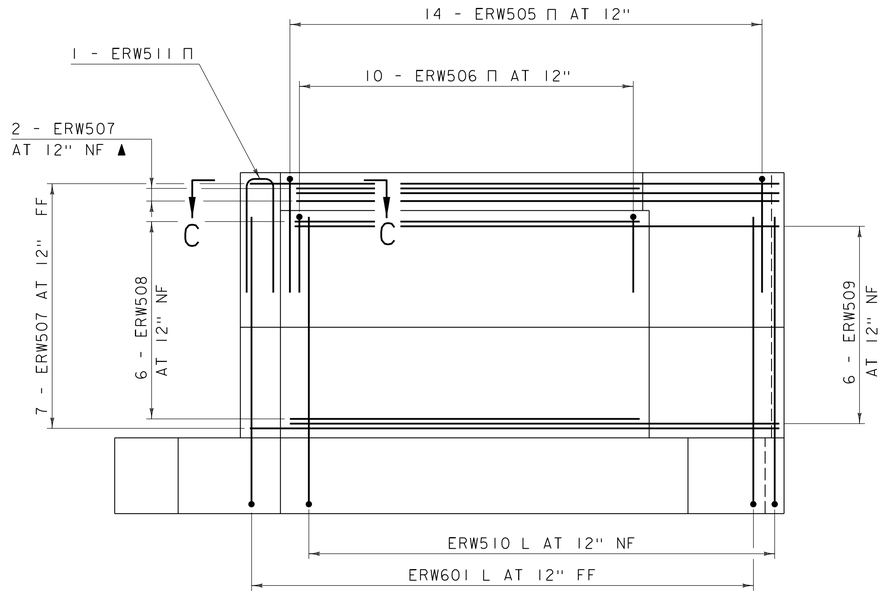
PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 47 OF 73

CLD 12-012 MODEL: Sub02



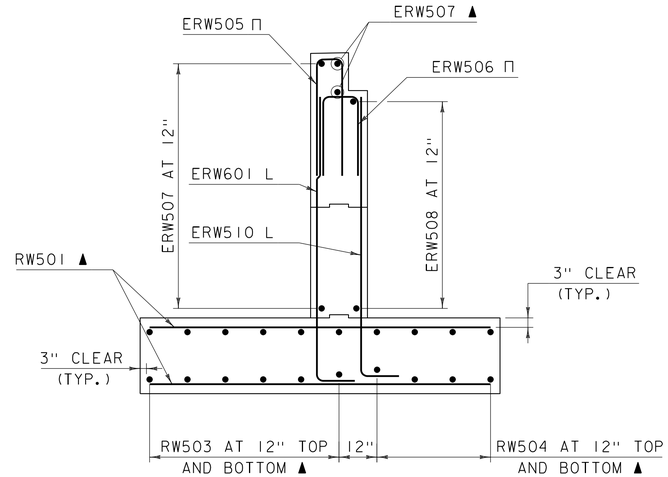
RETAINING WALL FOOTING REINFORCING PLAN

SCALE: ½" = 1'-0"



RETAINING WALL REINFORCING ELEVATION

SCALE: ½" = 1'-0"

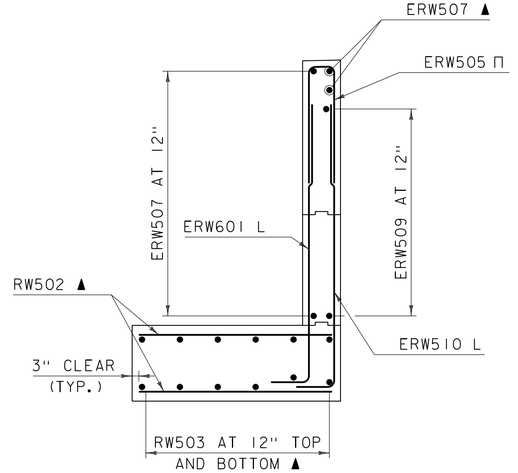


SECTION A-A

SCALE: ½" = 1'-0"

SECTION C-C

SCALE: 1" = 1'-0"



SECTION B-B

SCALE: ½" = 1'-0"

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
2" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE THE PLANS.
2'-1" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS

THE BAR SPACINGS SHOWN ARE A MAXIMUM AND MAY BE REDUCED TO FIT THE DESIGNATED NUMBER OF BARS AND REQUIRED CLEAR COVER.

NOTE: REBAR LAYOUT IS APPROXIMATE BASED ON SURVEY, BAR LENGTHS AND QUANTITIES MAY CHANGE BASED ON ACTUAL GEOMETRY OF EXISTING RETAINING WALL AND ABUTMENT.

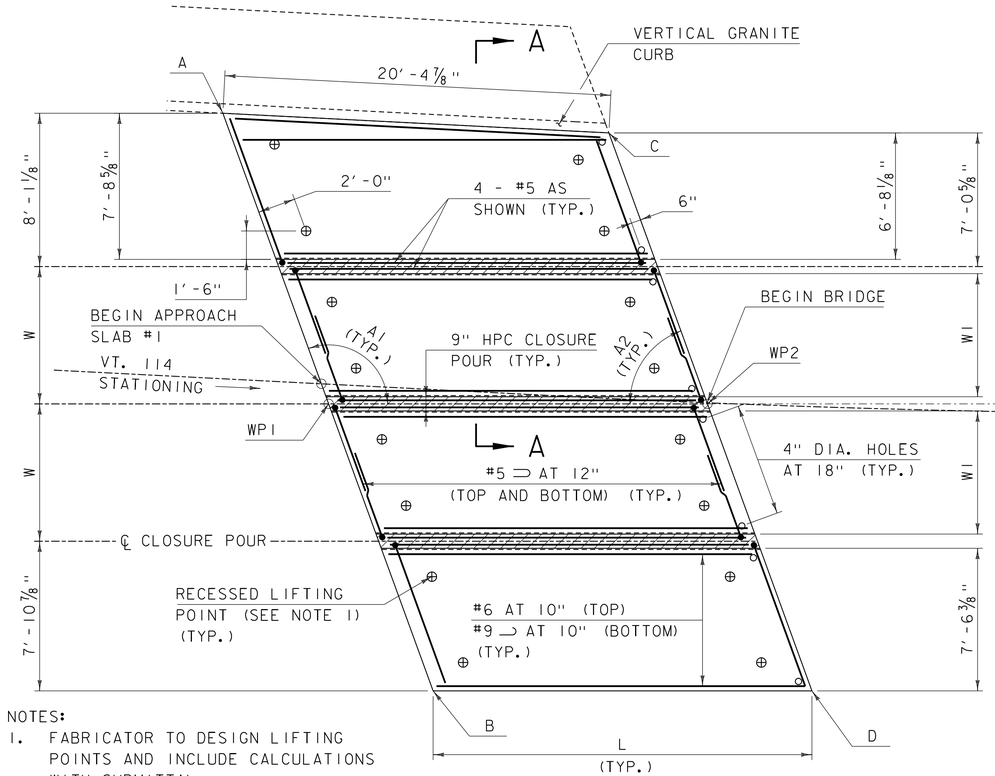
CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412sub.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
RETAINING WALL REINFORCING DETAILS

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 48 OF 73

CLD 12-012I MODEL: Sub03



NOTES:

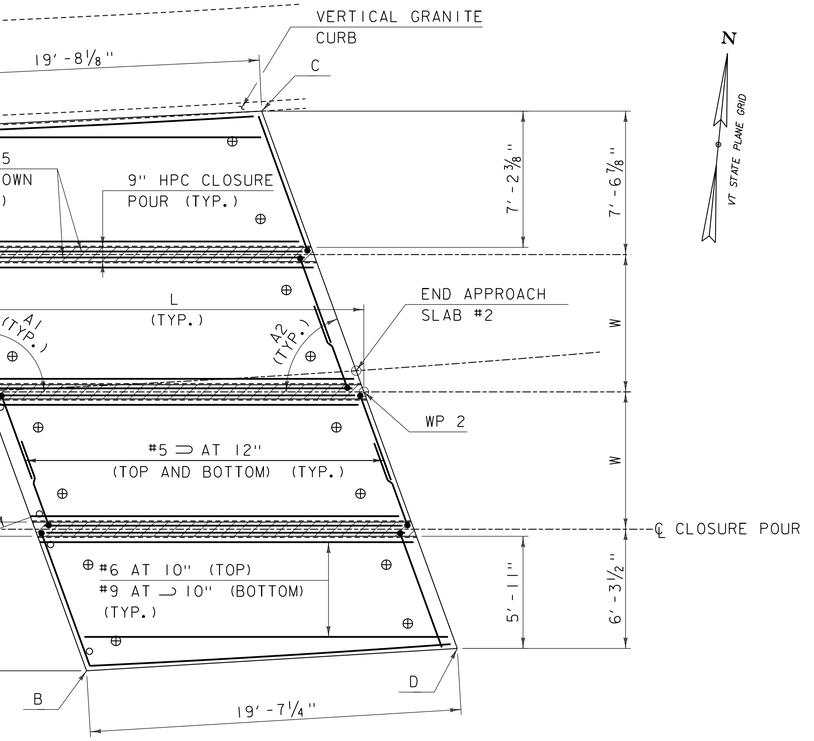
1. FABRICATOR TO DESIGN LIFTING POINTS AND INCLUDE CALCULATIONS WITH SUBMITTAL.
2. 2" CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS.
3. 2'-6" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

APPROACH SLAB 1 PLAN VIEW

SCALE: 1/4" = 1'-0"

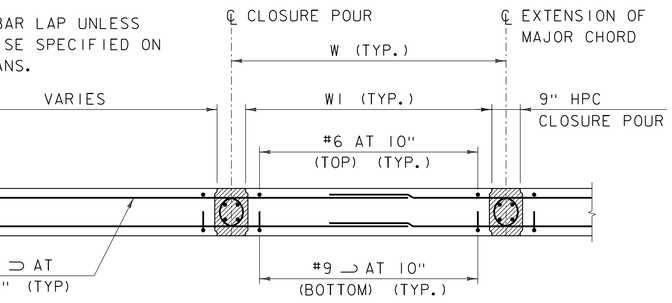
EXTENSION OF MAJOR CHORD

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPO) (TYP.)



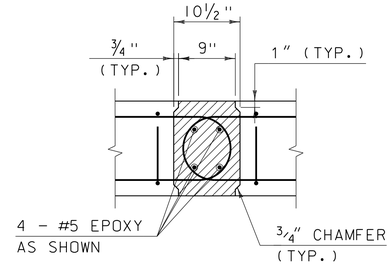
APPROACH SLAB 2 PLAN VIEW

SCALE: 1/4" = 1'-0"



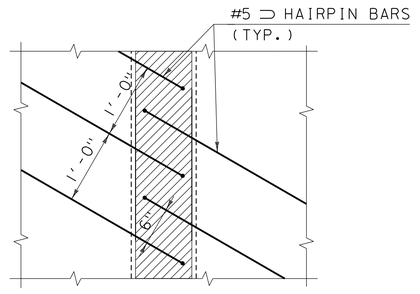
SECTION A-A

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



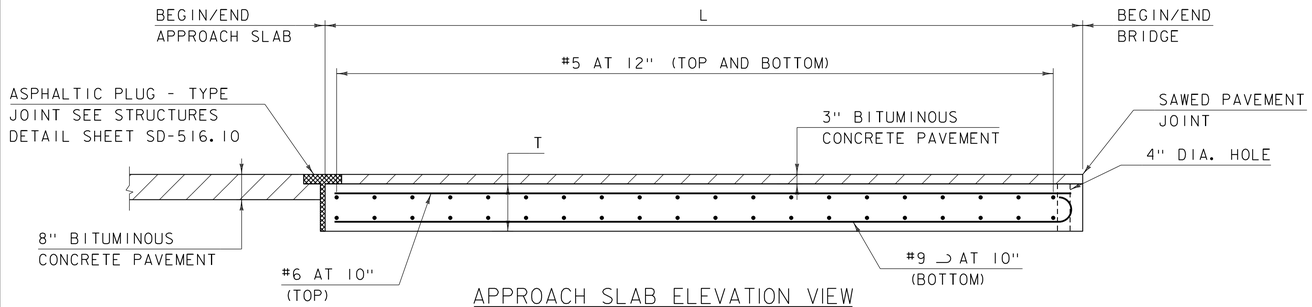
JOINT DETAIL SECTION

SCALE: 1" = 1'-0"



JOINT DETAIL PLAN

SCALE: 1" = 1'-0"



APPROACH SLAB ELEVATION VIEW

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

APPROACH SLAB DIMENSIONS

APPROACH SLAB #1	A1	110°
	A2	70°
APPROACH SLAB #2	A1	110°
	A2	70°

T	1.25
L	20.00
W	7.25
W1	6.50

APPROACH SLAB ELEVATIONS

	STATION	OFFSET	TOP OF SLAB ELEVATION
1A	25+37.75	-14.00	827.35
BEGIN AS #1	25+43.67	0.00	827.85
WP1 AS #1	25+44.11	1.04	827.89
1B	25+50.39	15.89	828.39
1C	25+58.19	-14.00	828.77
BEGIN BRIDGE	25+64.06	0.00	828.59
WP2 AS #1	25+64.08	0.06	828.60
1D	25+70.08	15.00	829.11
2A	26+18.36	-14.00	830.57
END BRIDGE	26+22.91	0.00	830.28
WP1 AS #2	26+42.89	1.14	830.72
2B	26+27.59	15.00	830.68
2C	26+38.42	-14.00	830.99
END AS #2	26+42.56	0.00	830.69
WP2 AS #2	26+22.93	0.06	830.28
2D	26+46.81	15.00	831.08

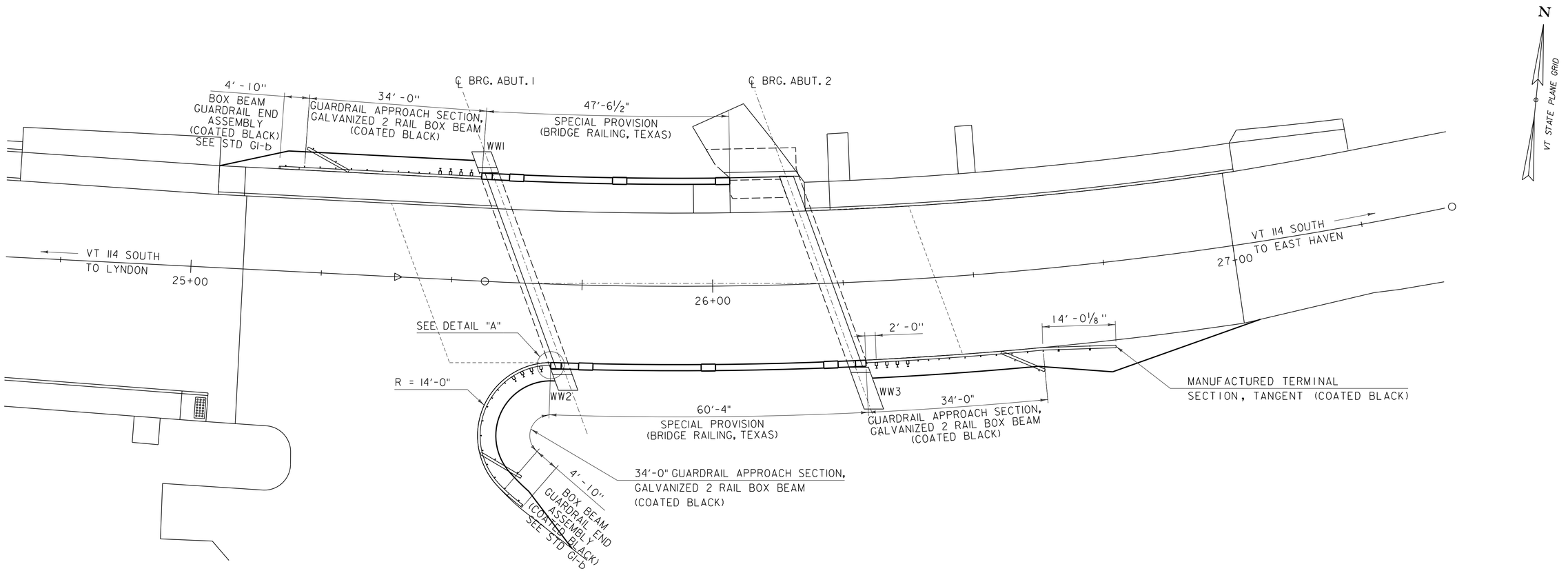
PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: z10c412slab.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
APPROACH SLAB DETAILS

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 49 OF 73

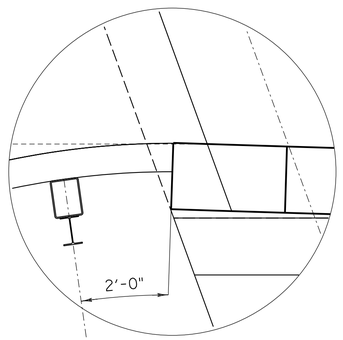
CLD CONSULTING ENGINEERS

CLD 12-0121 MODEL: Slab01



RAIL LAYOUT PLAN

SCALE: 1" = 10'-0"



DETAIL "A"

SCALE: 1½" = 1'-0"

NOTES:

1. SEE STANDARDS G-1b AND BRIDGE AND APPROACH RAIL DETAIL SHEETS 51 THROUGH 55.

0 10 20

(SCALE 1" = 10')

PROJECT NAME: BURKE

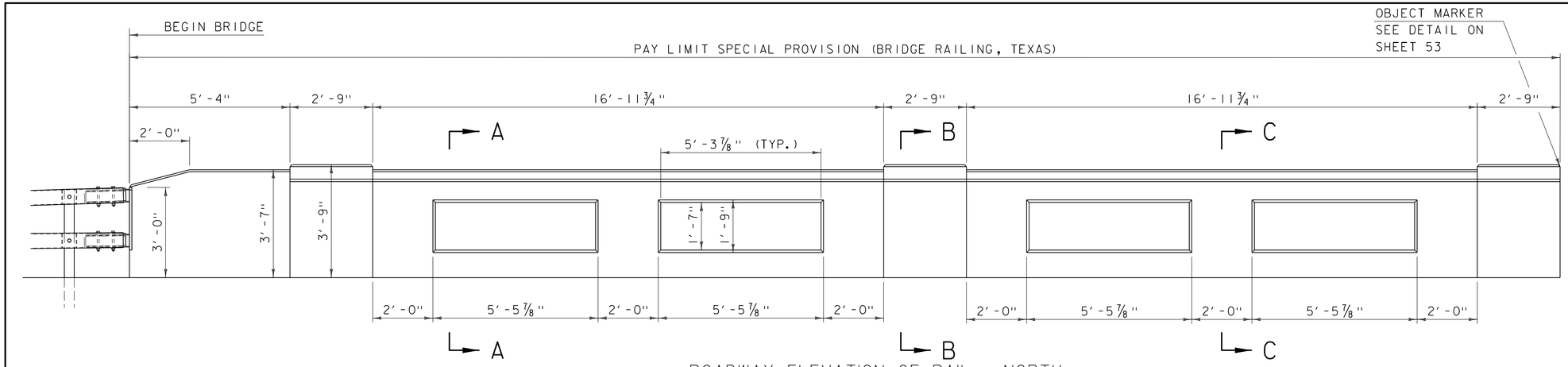
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412rail.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
RAIL LAYOUT SHEET

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 50 OF 73

MODEL: Rail00

CLD 12-012I z10c412rail.dgn

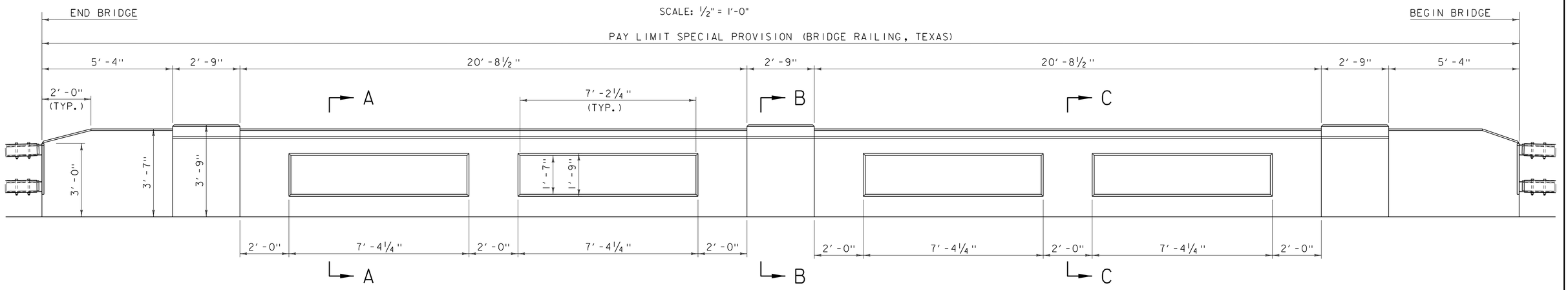


ROADWAY ELEVATION OF RAIL - NORTH

SCALE: ½" = 1'-0"

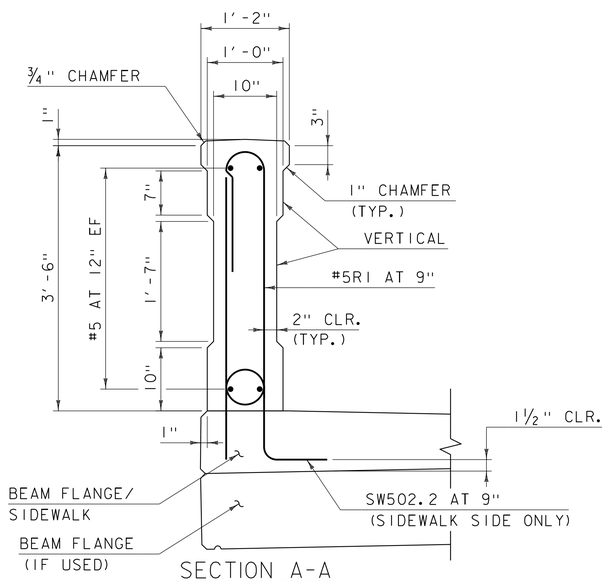
NOTES:

1. THE BRIDGE PLAQUE FURNISHED BY THE AGENCY SHALL BE CAST INTO THE FACE OF THE CONCRETE TEXAS RAIL AT THE SOUTHWEST CORNER OF THE BRIDGE. ALL WORK TO INSTALL THE PLAQUE SHALL BE INCIDENTAL TO CONTRACT ITEM 900.640 "SPECIAL PROVISION (BRIDGE RAILING, TEXAS)". SEE SD-502.00 FOR FURTHER DETAILS.
2. THE BRIDGE RAIL SHALL HAVE A RUBBED FINISH IN ACCORDANCE WITH SECTION 501.
3. SEE SHEET 53 FOR END SECTION AND SECTION AT APPROACH RAIL CONNECTION.



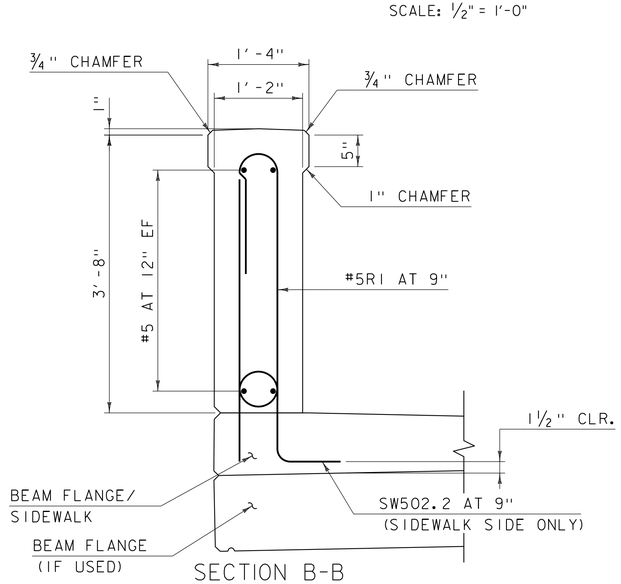
ROADWAY ELEVATION OF RAIL - SOUTH

SCALE: ½" = 1'-0"



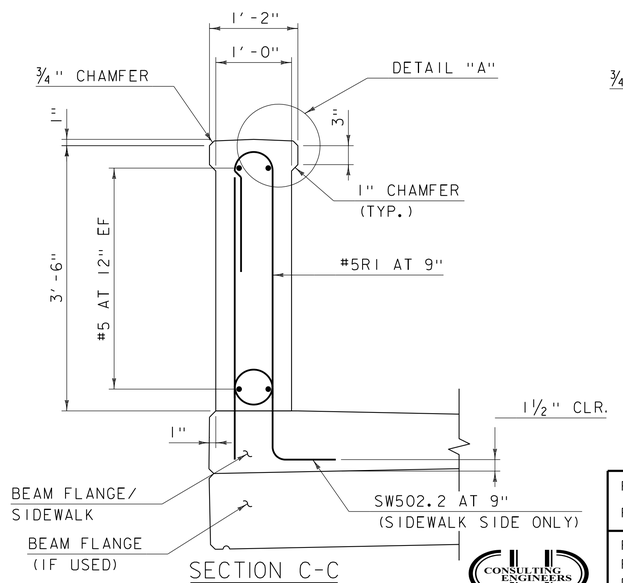
SECTION A-A

SCALE: 1" = 1'-0"



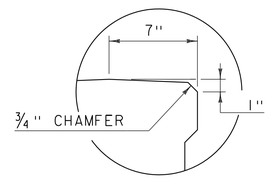
SECTION B-B

SCALE: 1" = 1'-0"



SECTION C-C

SCALE: 1" = 1'-0"

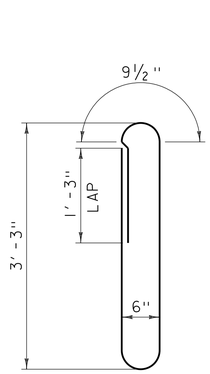


DETAIL "A"

NOTE TO SCALE

NOTES:

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



BAR #5R1

SCALE: 1" = 1'-0"

55 - REQUIRED

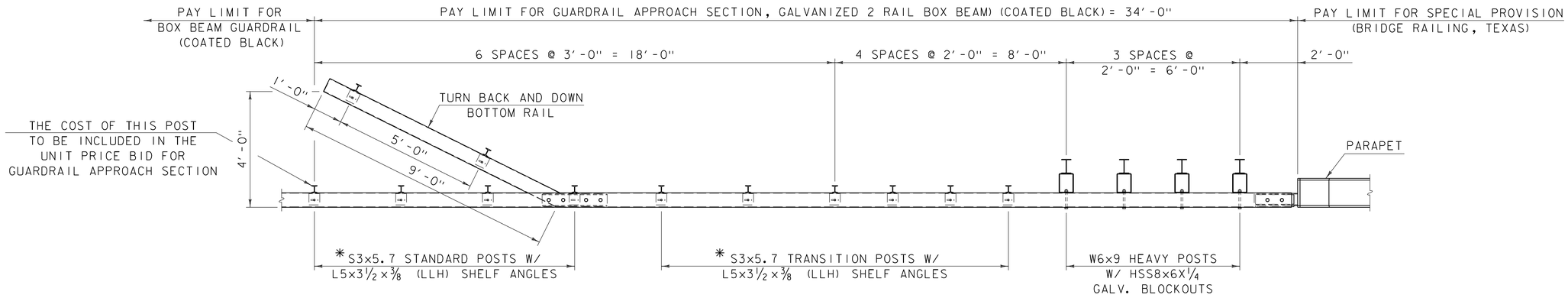
PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: z10c412rail.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
BRIDGE RAIL DETAILS

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 51 OF 73

CLD 12-02|

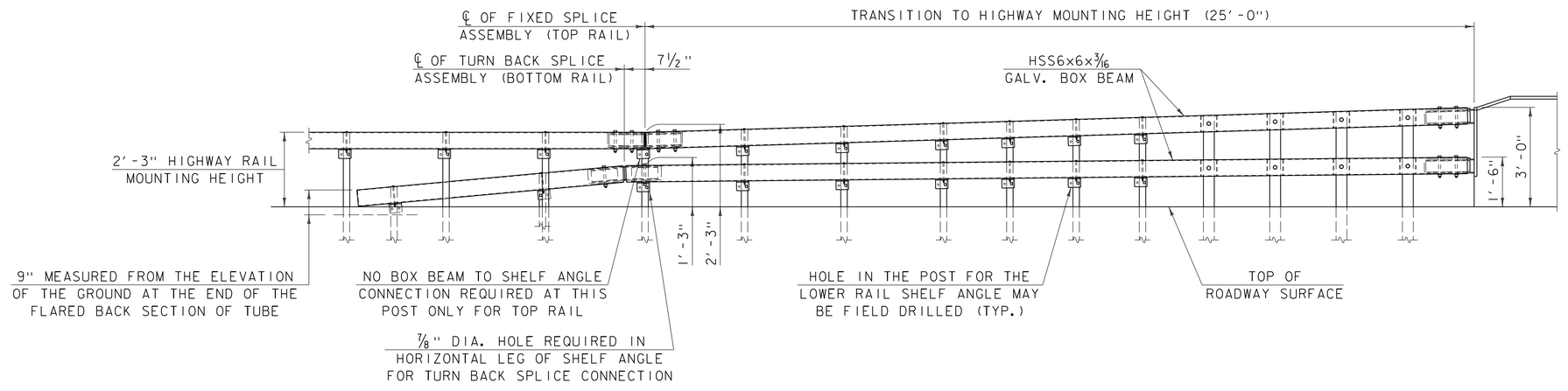
MODEL: Rail01



* SEE STD. GI-B FOR POST CONNECTION DETAILS

APPROACH RAIL PLAN

NOT TO SCALE

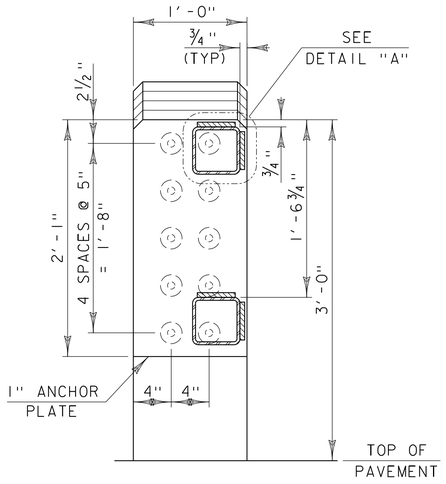


APPROACH RAIL ELEVATION

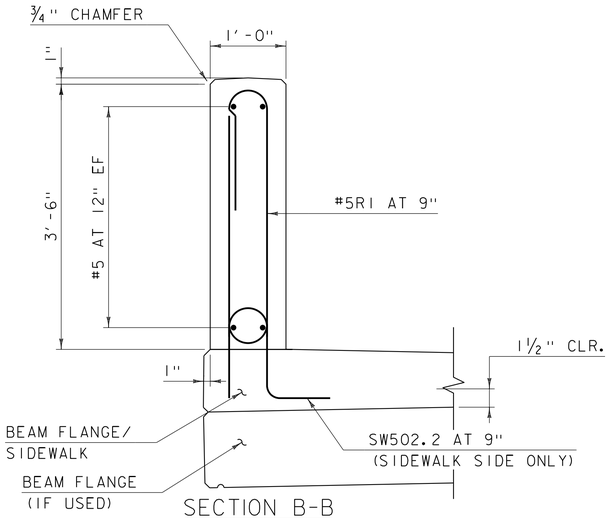
NOT TO SCALE

CLD 12-0121 MODEL: Rail02

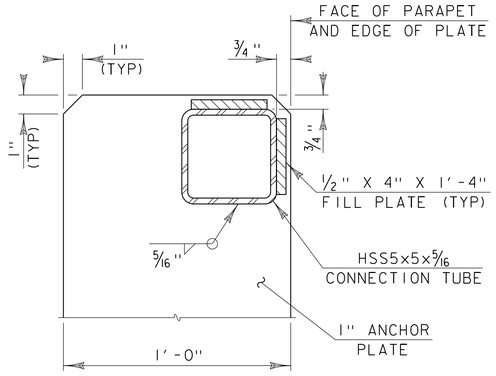
PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: z10c412rail.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
APPROACH RAIL DETAILS (1 OF 4)	SHEET 52 OF 73



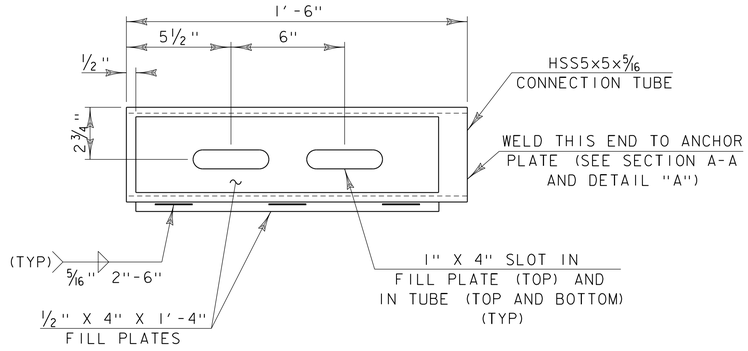
SECTION A-A
NOT TO SCALE



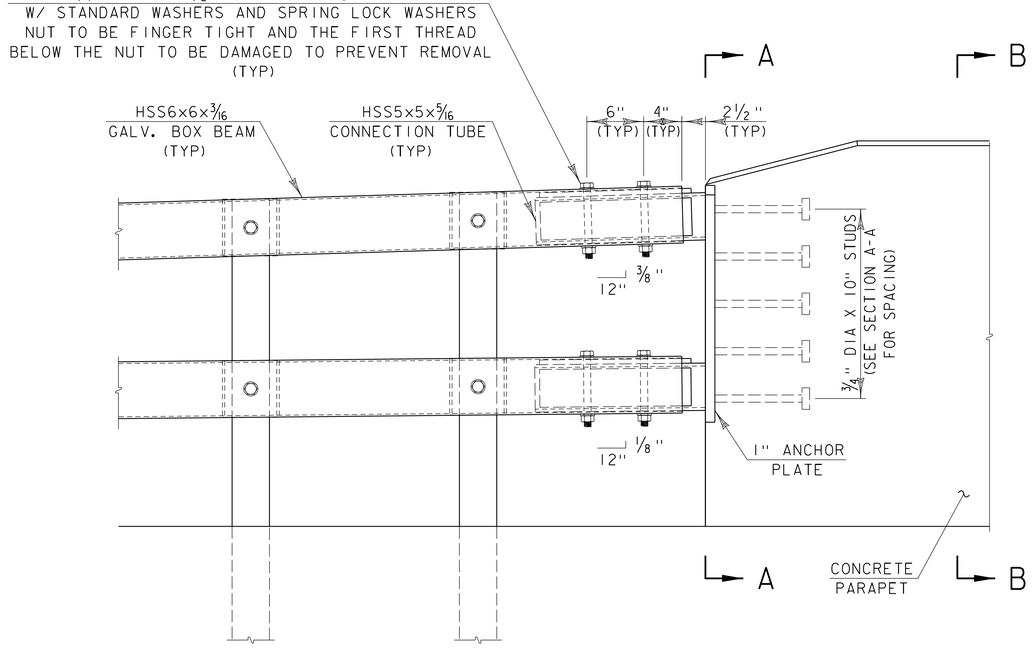
SECTION B-B
SCALE: 1" = 1'-0"



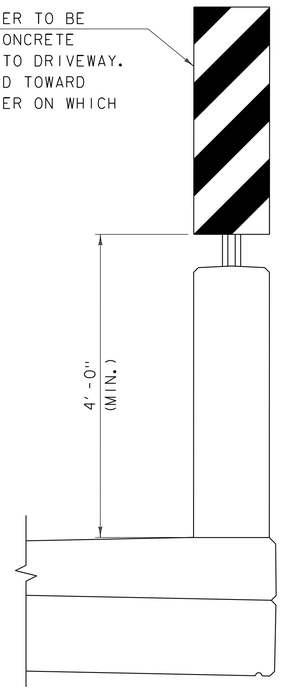
DETAIL "A"
NOT TO SCALE



CONNECTION TUBE DETAIL PLAN
NOT TO SCALE



APPROACH RAIL CONNECTION DETAIL
NOT TO SCALE



OBJECT MARKER
NOT TO SCALE

NOTES:

1. THE OBJECT MARKER POST SHALL BE CAST INTO THE TOP OF THE CONCRETE RAIL PER THE CONTRACTOR'S DETAIL AT THE LOCATION SHOWN ON SHEETS 25 AND 51. PAYMENT FOR THE DETAILING AND INSTALLATION OF THE RAIL POST INTO THE CONCRETE RAIL SHALL BE INCIDENTAL TO ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING, TEXAS)".

2. SEE TRAFFIC SIGN SUMMARY ON SHEET 26 FOR OBJECT MARKER DETAILS.

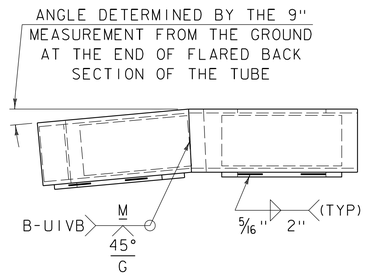
CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

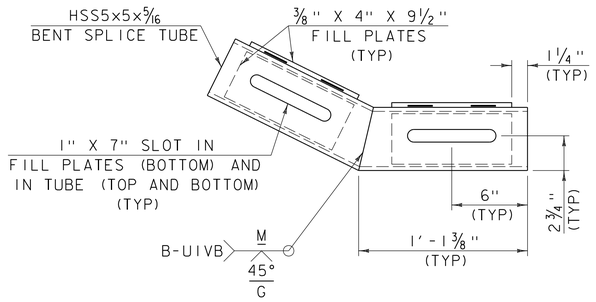
FILE NAME: z10c412rail.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
APPROACH RAIL DETAILS (2 OF 4)

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 53 OF 73

CLD 12-0121 MODEL: Rail03



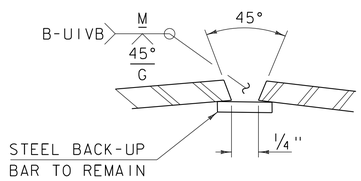
ELEVATION



PLAN

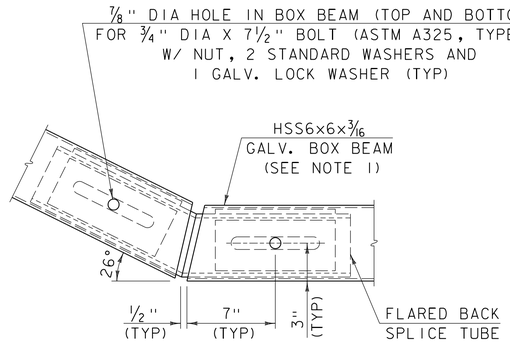
FLARED BACK SPLICE TUBE DETAIL

NOT TO SCALE



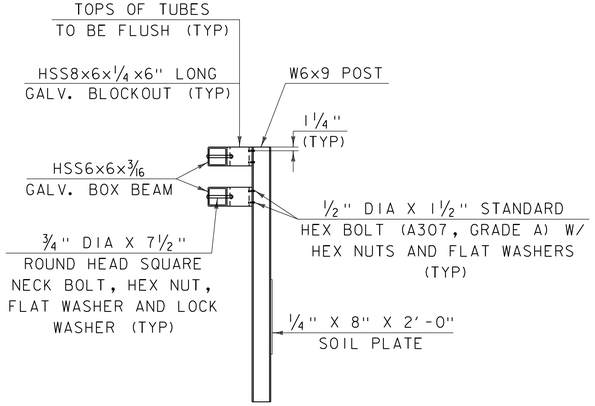
WELD DETAIL FOR SPLICE TUBE

NOT TO SCALE



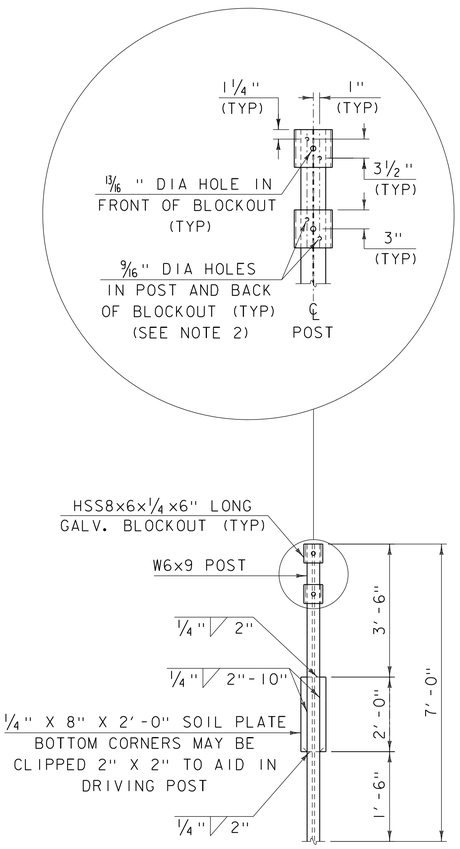
PLAN BOTTOM RAIL FLARE BACK DETAIL

NOT TO SCALE



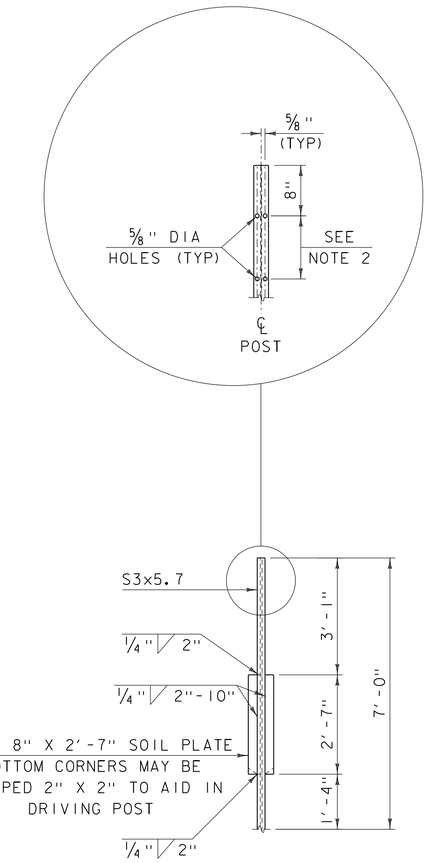
HEAVY POST ELEVATION

NOT TO SCALE



HEAVY POST DETAIL

NOT TO SCALE



TRANSITION POST DETAIL

NOT TO SCALE

NOTES:

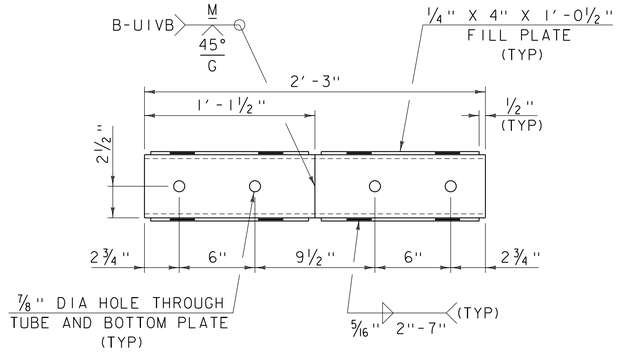
1. PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.

2. HOLES IN POST FOR LOWER RAIL MAY BE LOCATED AND DRILLED IN THE FIELD. IF SO, GALVANIZING SHALL BE REPAIRED.

CONSULTING ENGINEERS

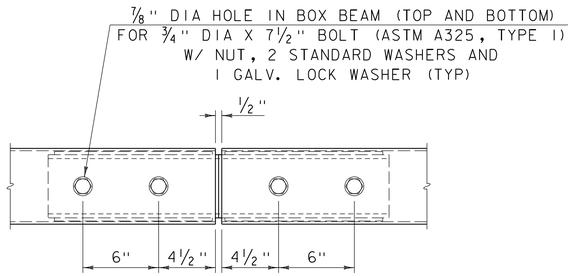
PROJECT NAME: BURKE	
PROJECT NUMBER: BRF 0269(13)	
FILE NAME: z10c412rail.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
APPROACH RAIL DETAILS (3 OF 4)	SHEET 54 OF 73

CLD 12-012I MODEL: Rail04



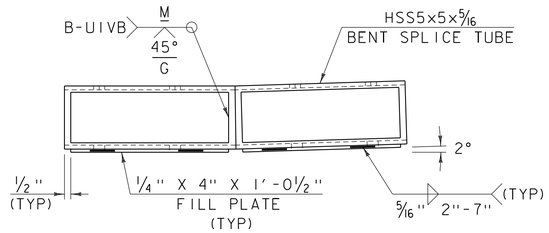
FIXED SPLICE TUBE PLAN

NOT TO SCALE



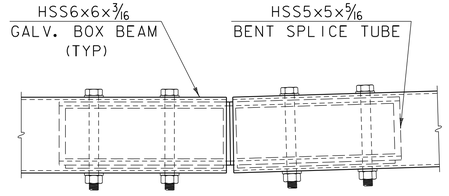
FIXED SPLICE ASSEMBLY PLAN

NOT TO SCALE



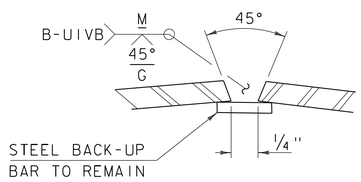
FIXED SPLICE TUBE ELEVATION

NOT TO SCALE



FIXED SPLICE ASSEMBLY ELEVATION

NOT TO SCALE



WELD DETAIL
FOR SPLICE TUBE

NOT TO SCALE

CLD 12-012I MODEL: Rail05

PROJECT NAME: BURKE	
PROJECT NUMBER: BRF 0269(13)	
FILE NAME: z10c412rail.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. SMITH
DESIGNED BY: S. BEAUMONT	CHECKED BY: J. BYATT
APPROACH RAIL DETAILS (4 OF 4)	SHEET 55 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

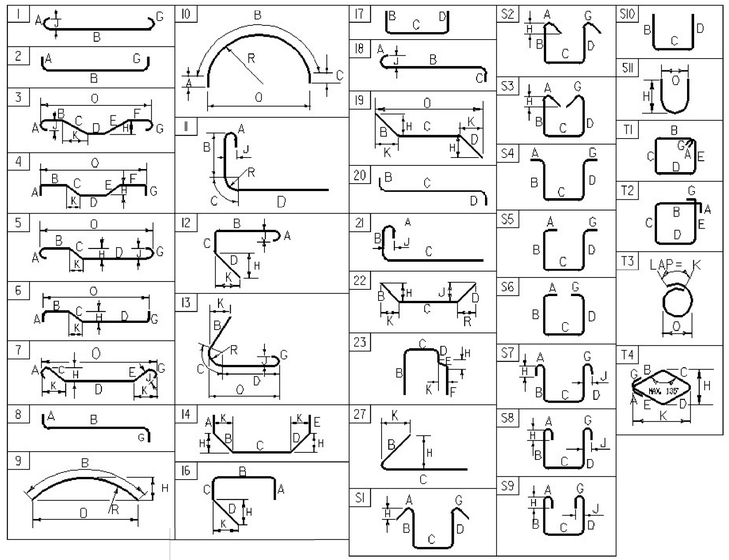
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	SIDEWALK																
	30	5	21'- 4"	SW501.2	STR	21'- 4"											
✳	56	5	4'- 2"	SW502.2	S7	0'- 10"	1'- 3"	0'- 10"	---			---	1'- 3"	0'- 6"			
	RETAINING WALL																
✳ ▲	21	5	9'- 0"	RW501	STR	9'- 0"											
▲	18	5	5'- 0"	RW502	STR	5'- 0"											
▲	12	5	16'- 8"	RW503	STR	16'- 8"											
▲	8	5	10'- 0"	RW504	STR	10'- 0"											
✳	15	5	8'- 0"	ERW505	17		3'- 8"	0'- 8"	3'- 8"								
	10	5	5'- 4"	ERW506	17		2'- 1"	1'- 2"	2'- 1"								
✳ ▲	10	5	13'- 6"	ERW507	STR	13'- 6"											
	6	5	9'- 4"	ERW508	STR	9'- 4"											
	6	5	5'- 10"	ERW509	STR	5'- 10"											
	15	5	7'- 4"	ERW510	17		0'- 10"	6'- 6"	---								
	1	5	8'- 4"	ERW511	17		3'- 8"	1'- 0"	3'- 8"								
✳	16	6	7'- 6"	ERW601	17		1'- 0"	6'- 6"	---								

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O

~ NOTES ~

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



ASTM STANDARD REINFORCING BARS

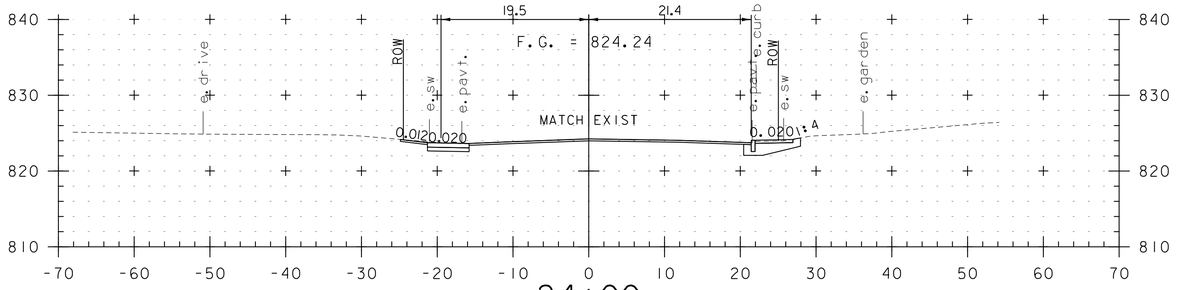
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ^{2}	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

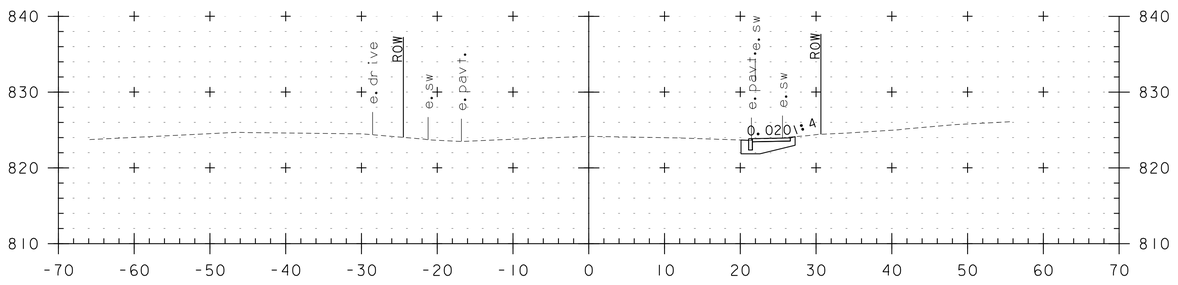
FILE NAME: l0c412/cos/zl0c412schedule.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
REINFORCING STEEL SCHEDULE

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 56 OF 73

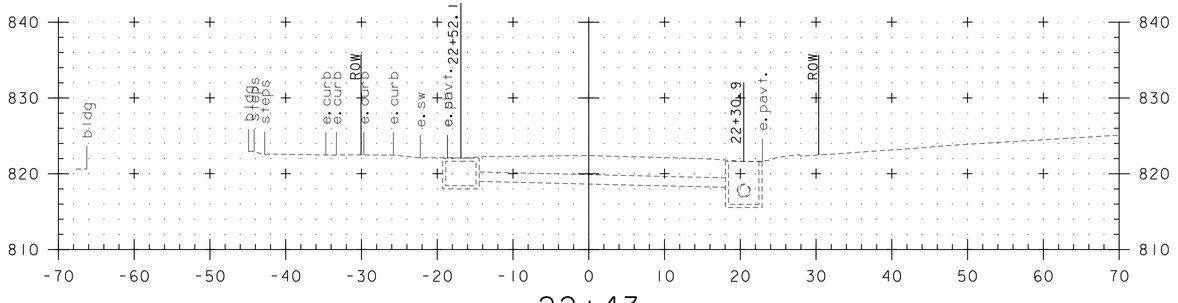
MODEL: Schedule
CLD 12-0121



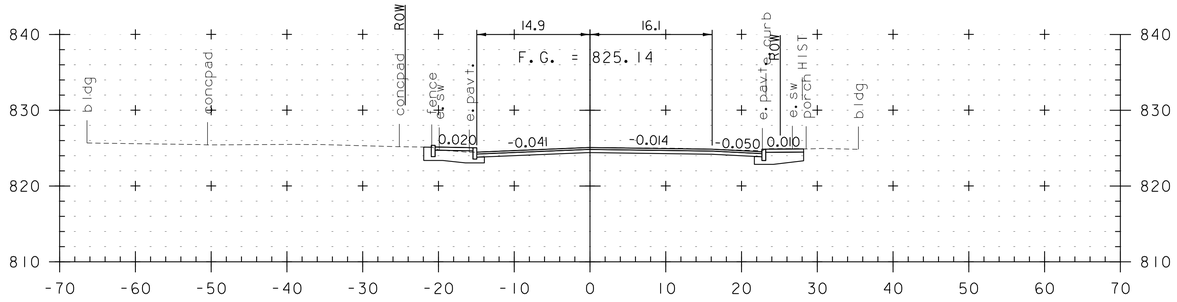
24+00
DRIVE LT
BEGIN APPROACH



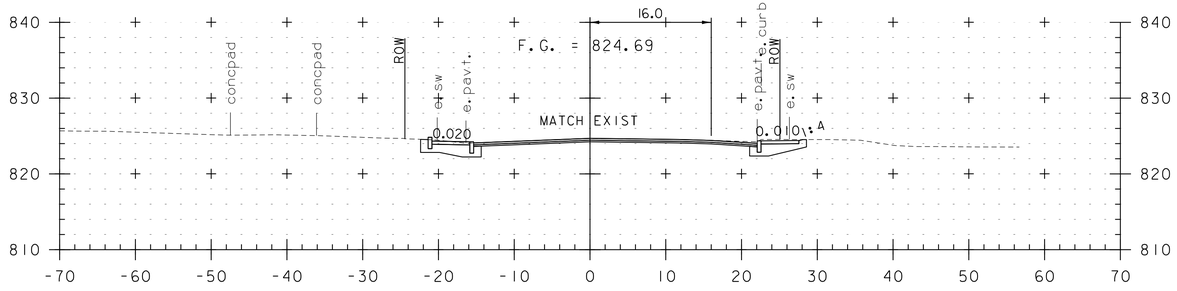
23+95
BEGIN SIDEWALK



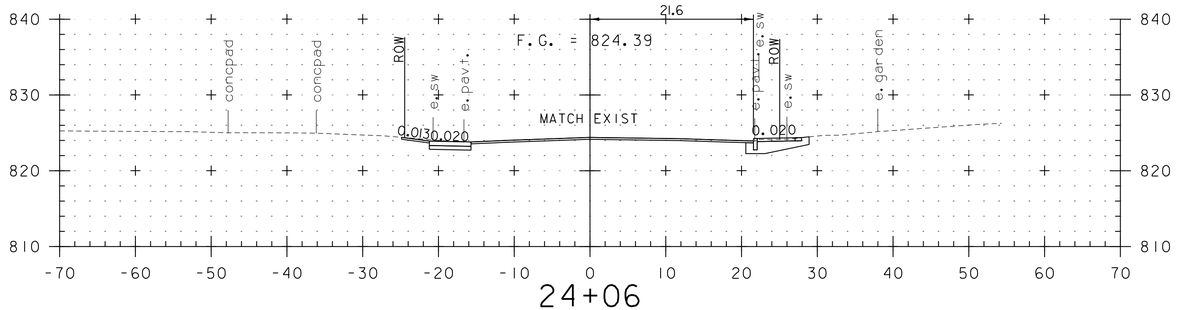
22+43
ASKEW



24+50



24+25



24+06
WALKWAY RT

STA. 22+43 TO STA. 24+50

0 10 20
(SCALE 1" = 10')

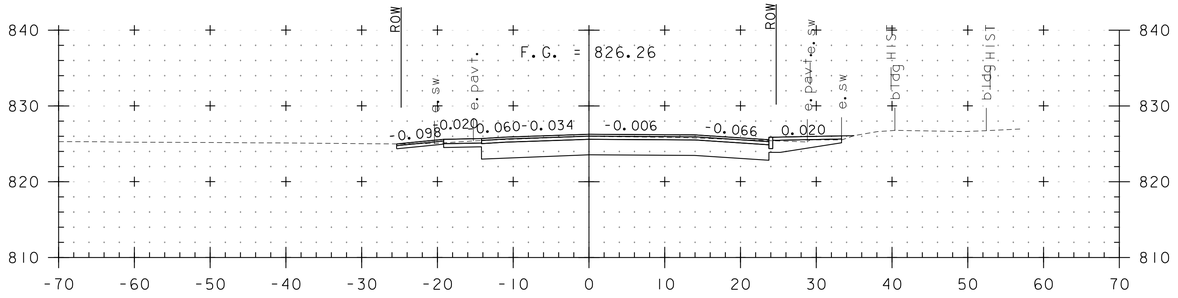
CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

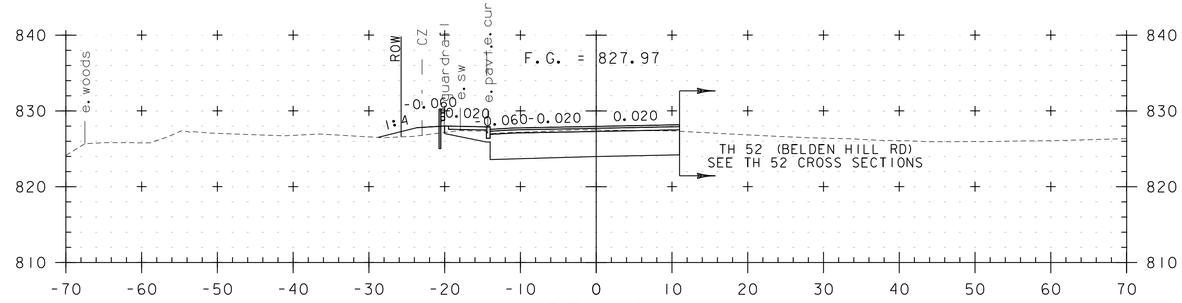
FILE NAME: 10c412/cos/z10c412xsl.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
VT 114 CROSS SECTIONS 1

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD
SHEET 57 OF 73

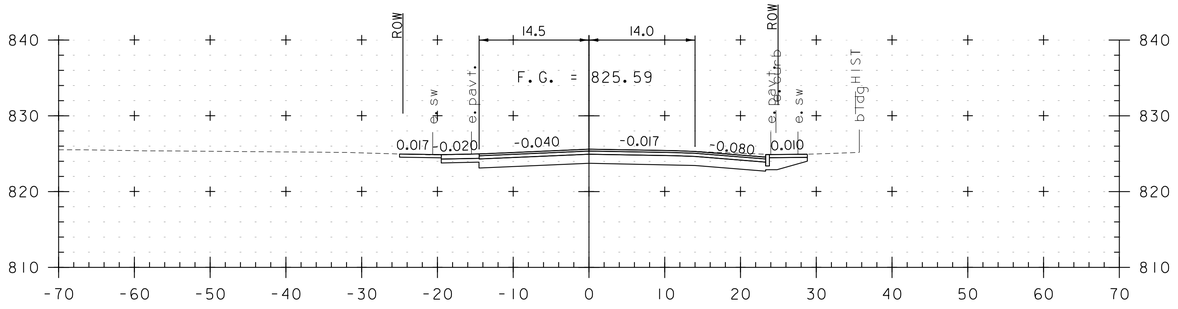
CLD 12-012I MODEL: XS01



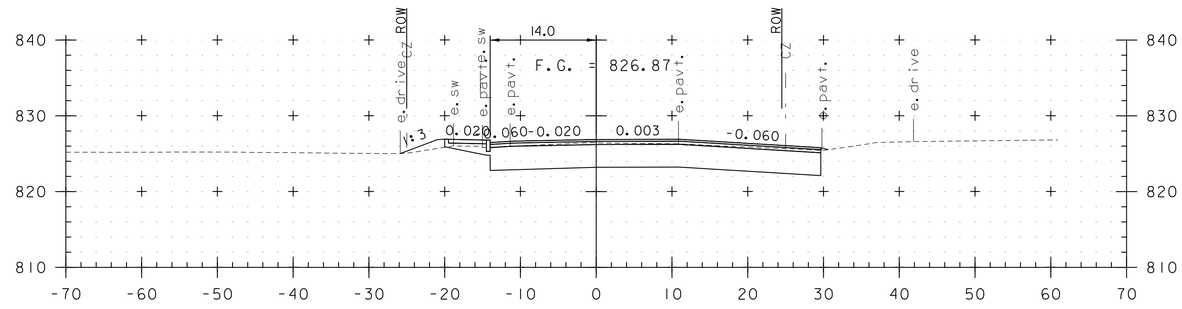
24+93
WALKWAY RT



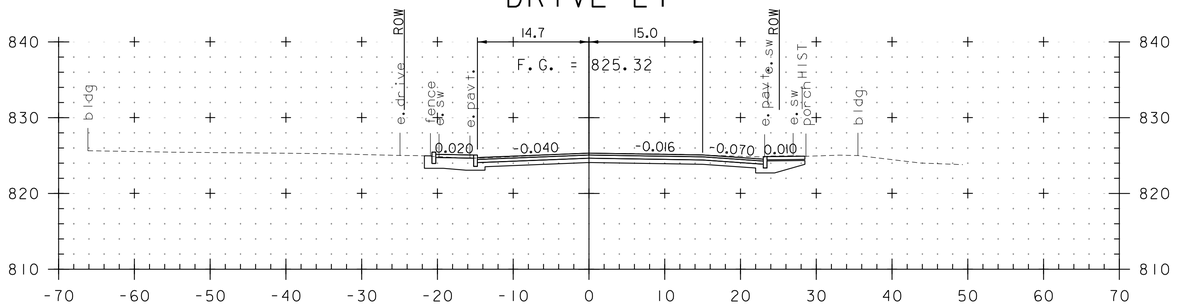
25+40
TH 52 RT



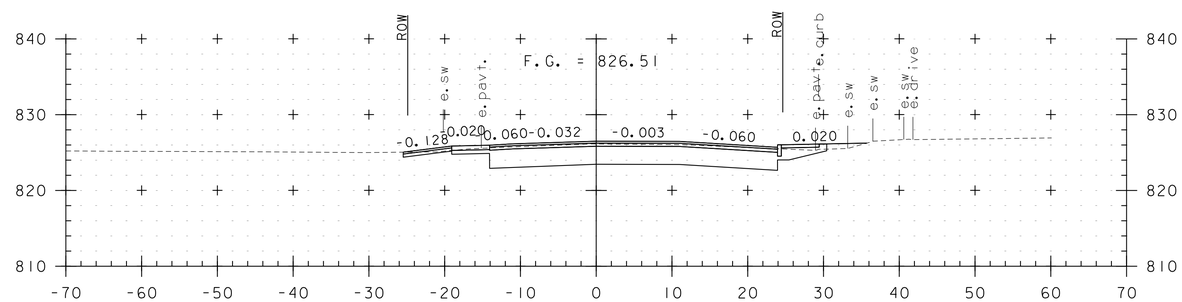
24+75
DRIVE LT



25+10
BEGIN PROJECT



24+62



25+00
DRIVE LT

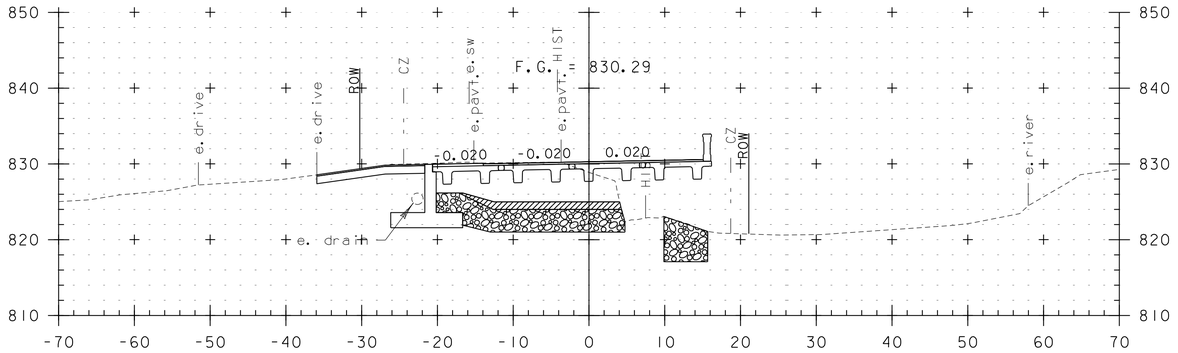
STA. 24+62 TO STA. 25+40

0 10 20
(SCALE 1" = 10')

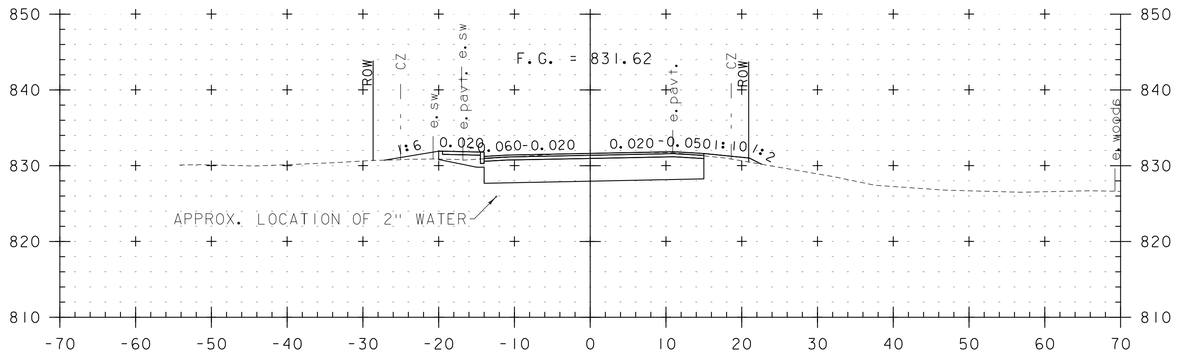
CONSULTING ENGINEERS

PROJECT NAME: BURKE	
PROJECT NUMBER: BRF 0269(13)	
FILE NAME: 10c412/cos/z10c412xsl.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. HALEY
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
VT 114 CROSS SECTIONS 2	SHEET 58 OF 73

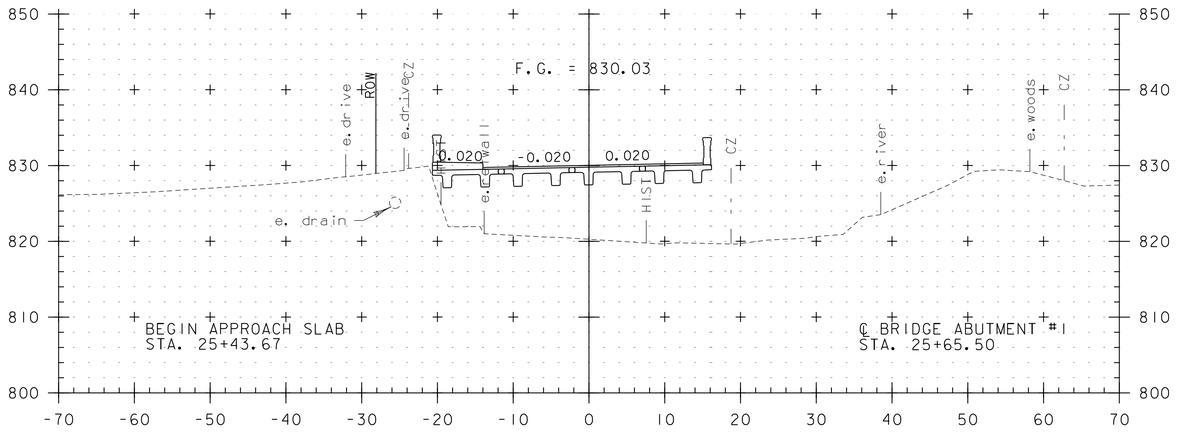
MODEL: XS02
CLD 12-0121



26+12
DRIVE LT

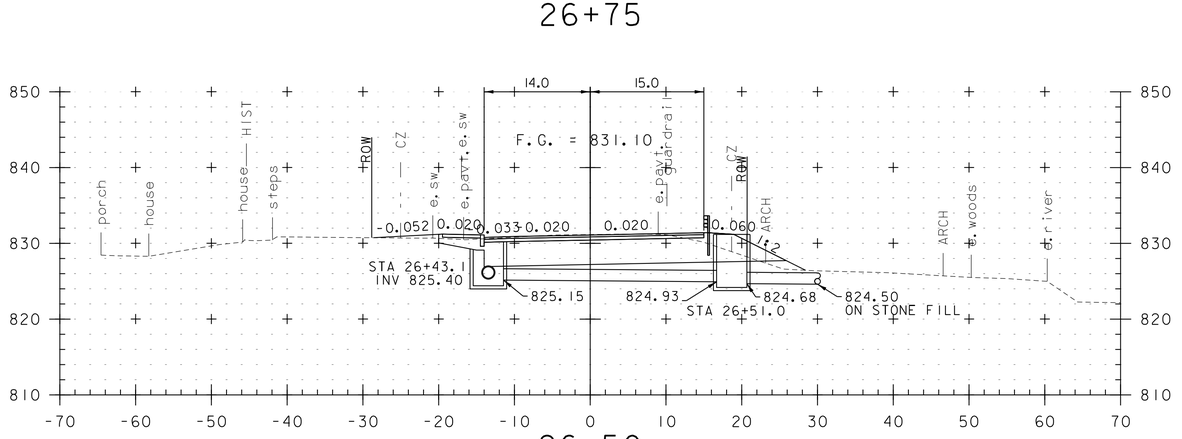


26+75

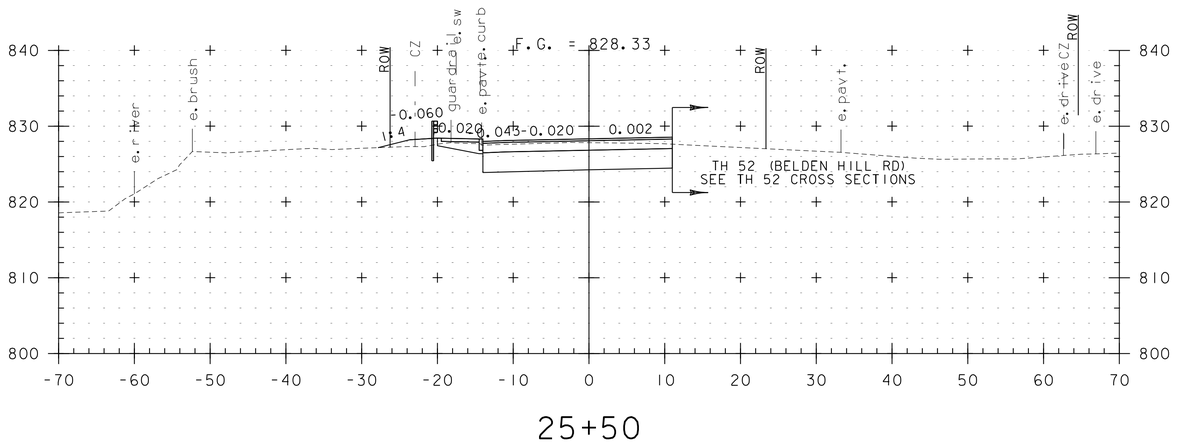


26+00

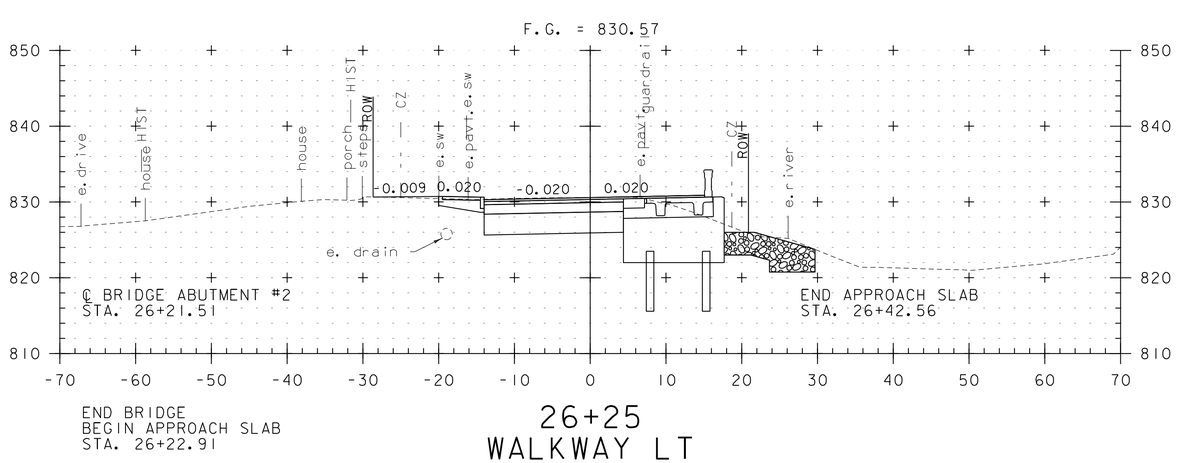
END APPROACH SLAB
BEGIN BRIDGE
STA. 25+64.06



26+50
WALKWAY LT



25+50



END BRIDGE
BEGIN APPROACH SLAB
STA. 26+22.91

26+25
WALKWAY LT

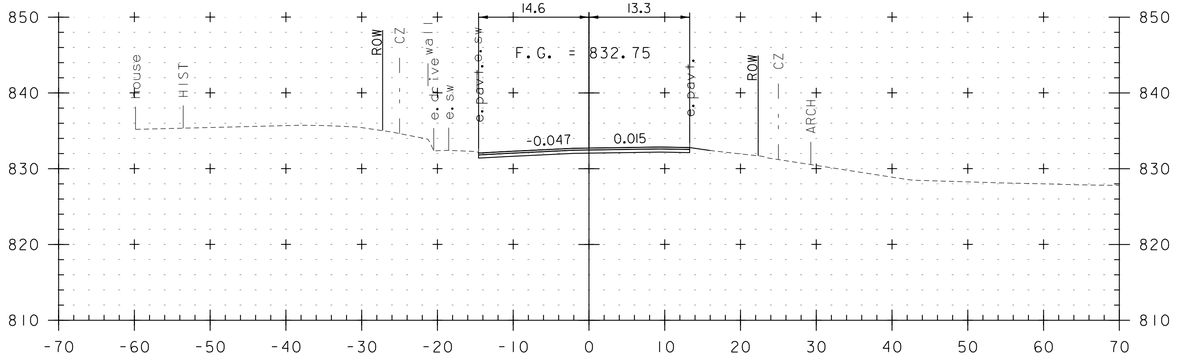
STA. 25+50 TO STA. 26+75

0 10 20
(SCALE 1" = 10')

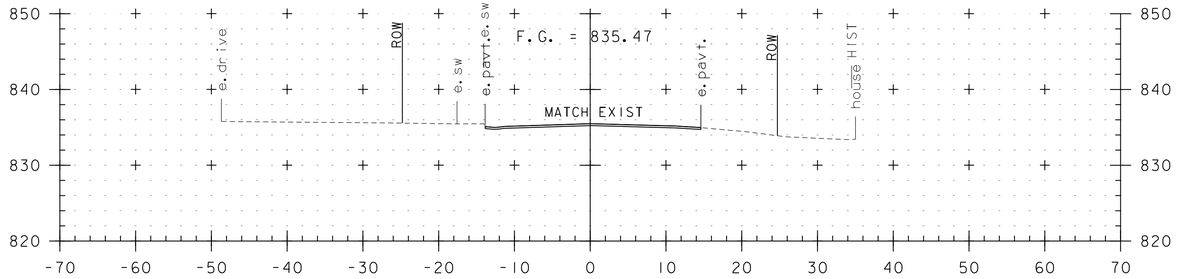
CONSULTING ENGINEERS

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412xsl.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. HALEY
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
VT 114 CROSS SECTIONS 3	SHEET 59 OF 73

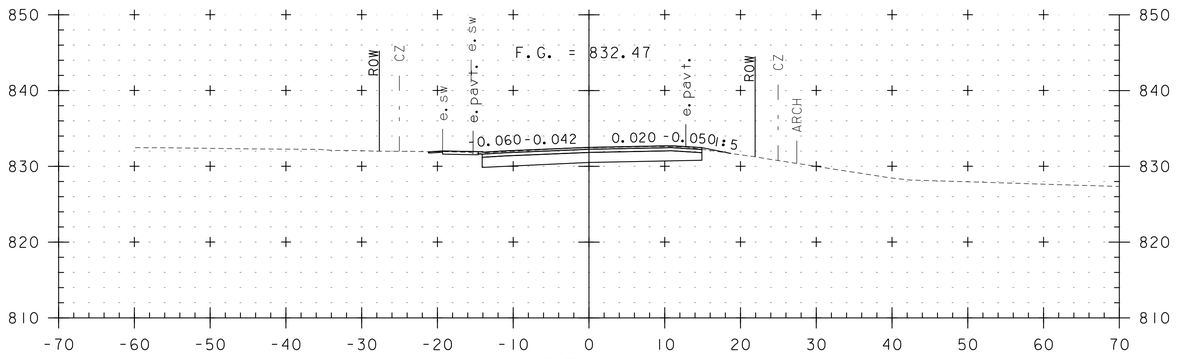
CLD 12-012I MODEL: XS03



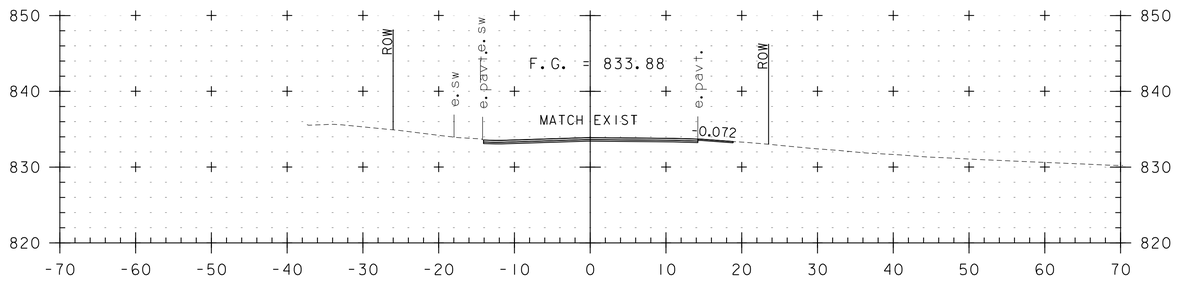
27+25



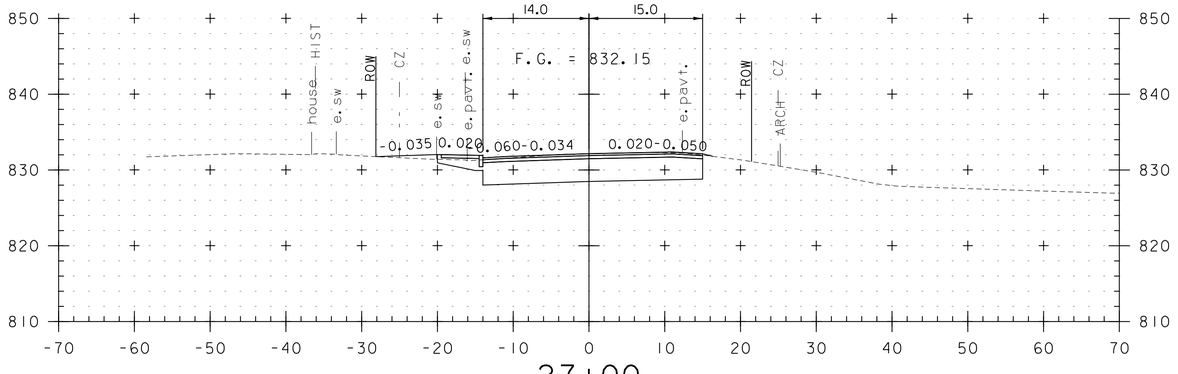
28+00
END APPROACH



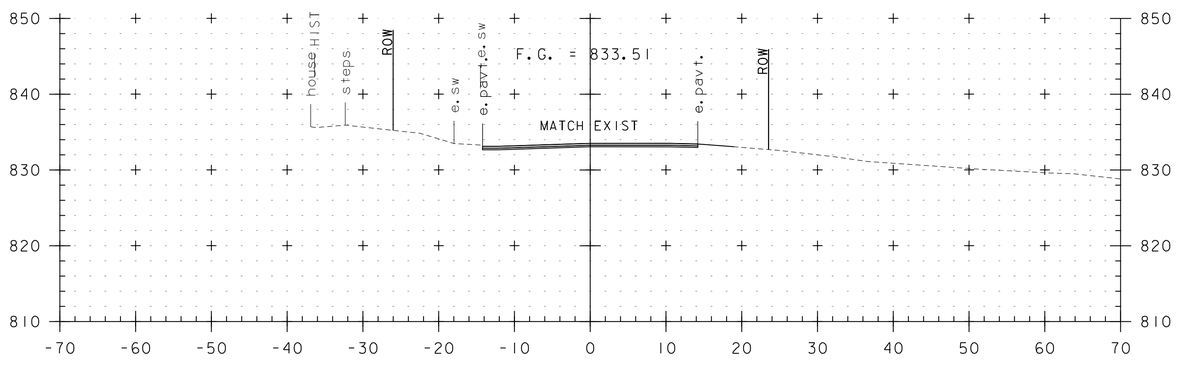
27+14
DRIVE LT



27+60
DRIVE RT



27+00
END PROJECT



27+50

STA. 27+00 TO STA. 28+00

0 10 20
(SCALE 1" = 10')

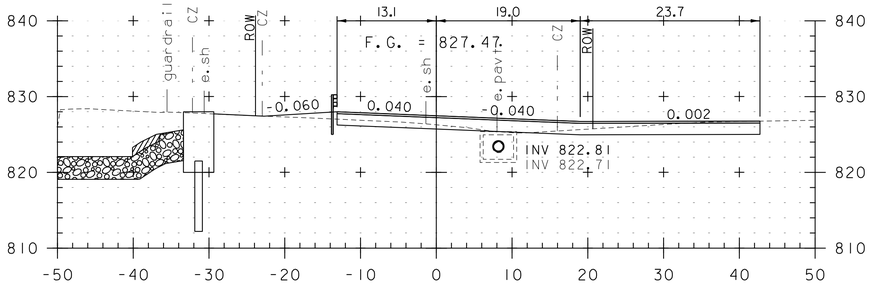
CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

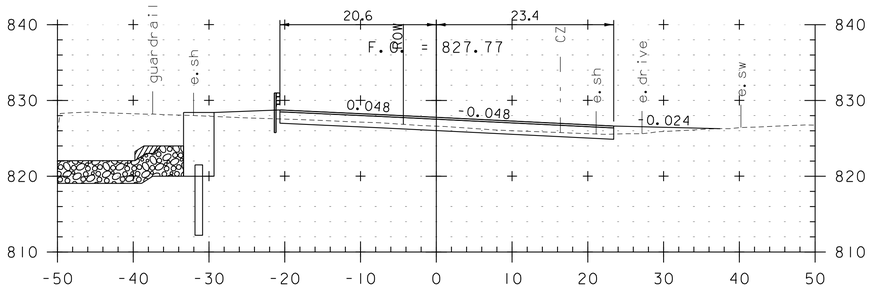
FILE NAME: 10c412/cos/z10c412xsl.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
VT 114 CROSS SECTIONS 4

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD
SHEET 60 OF 73

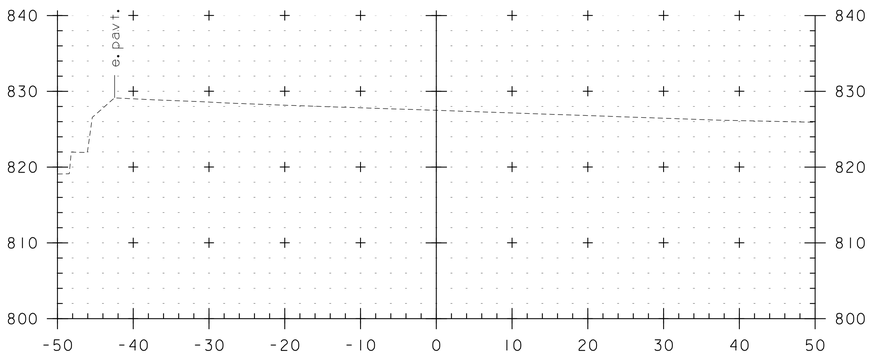
CLD 12-0121 MODEL: XS04



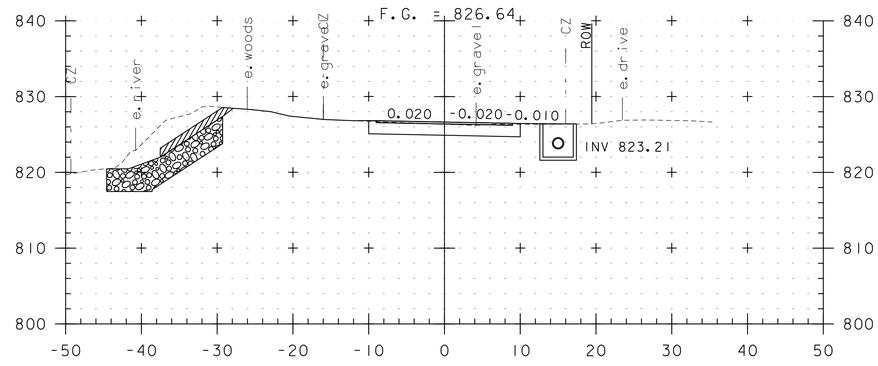
0+35



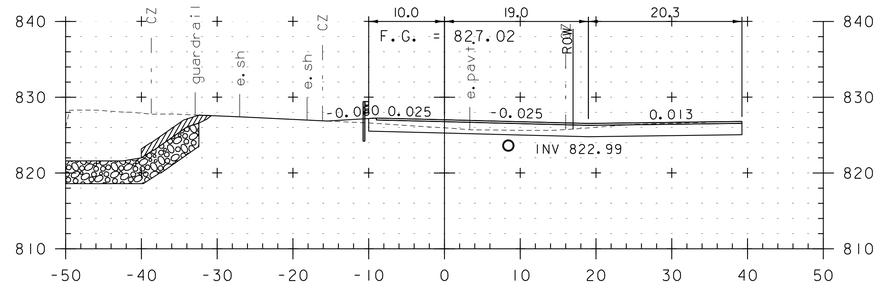
0+25



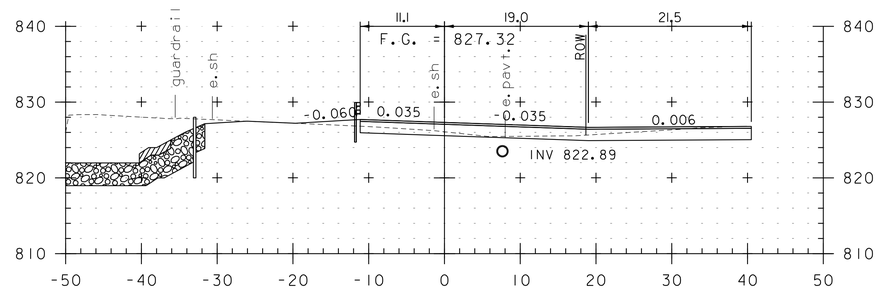
0+00



0+70



0+50
DRIVE RT



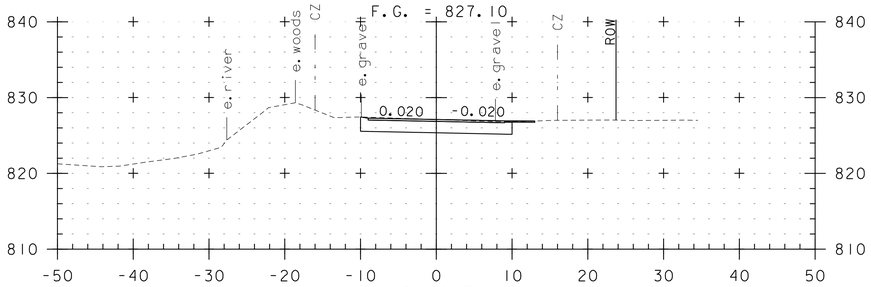
0+40
DRIVE RT

STA. 0+00 TO STA. 0+70

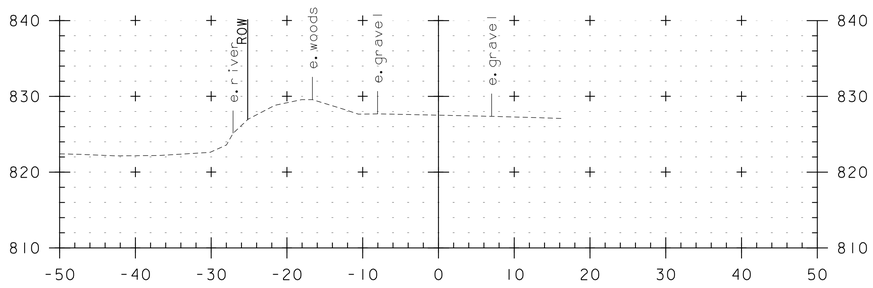
0 10 20
(SCALE 1" = 10')

CONSULTING ENGINEERS

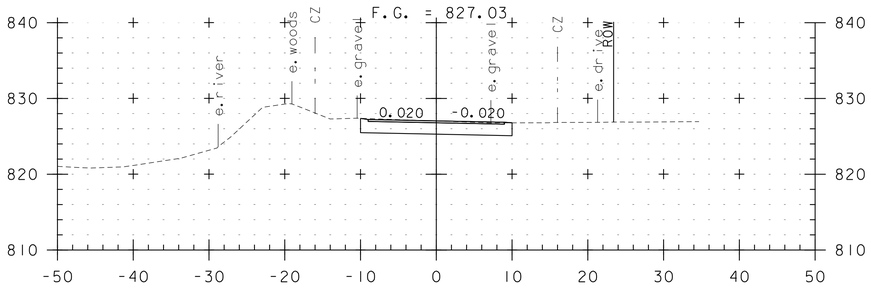
PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412xslth52.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. HALEY
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
TH 52 CROSS SECTIONS 1	SHEET 61 OF 73



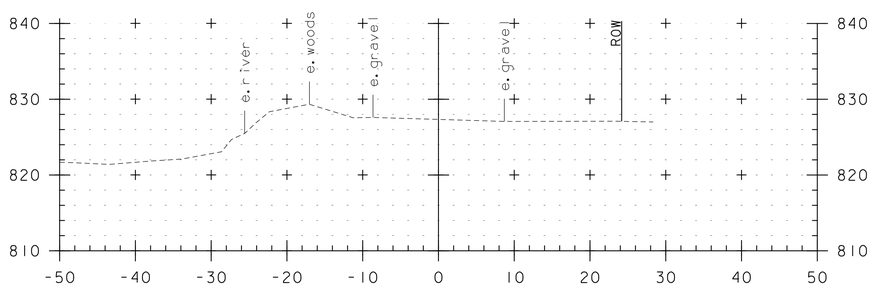
1+05
DRIVE RT



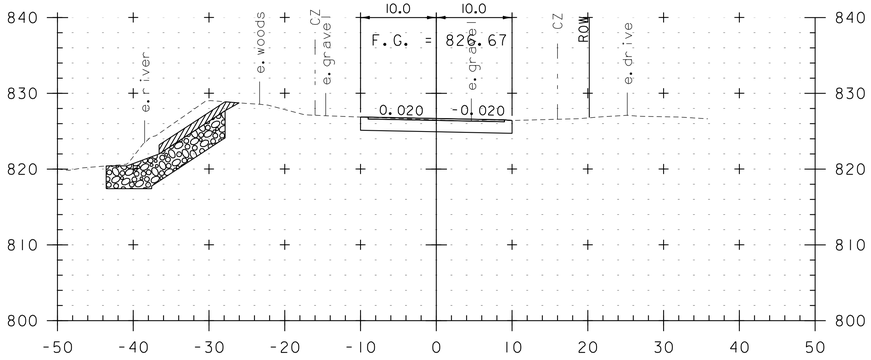
1+50



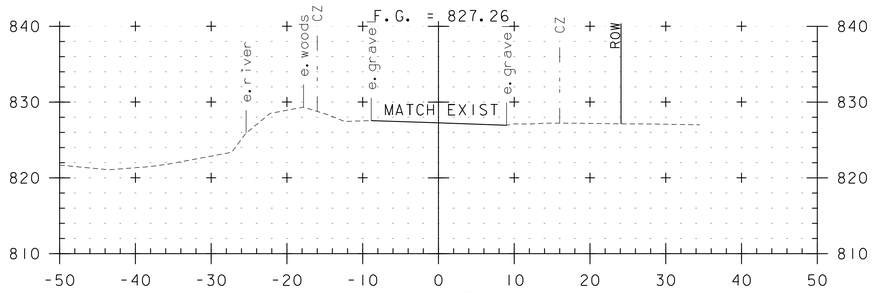
1+00



1+25



0+75



1+15
LIMIT OF WORK

STA. 0+75 TO STA. 1+50

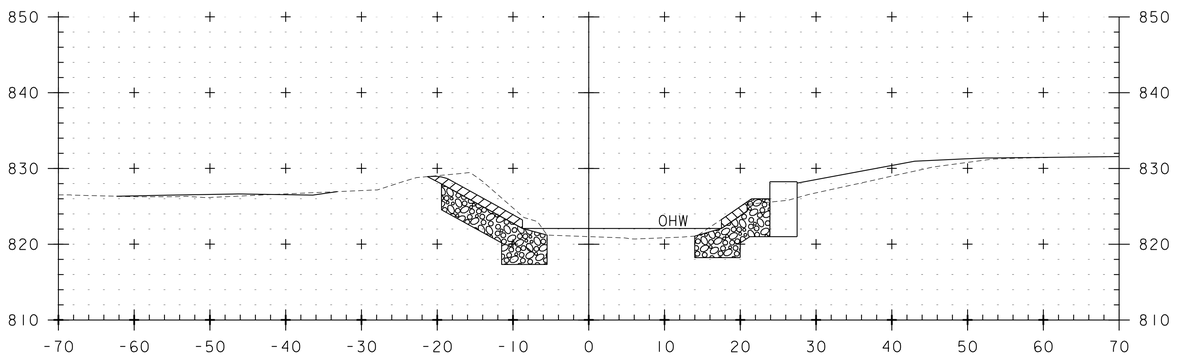
0 10 20
(SCALE 1" = 10')

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

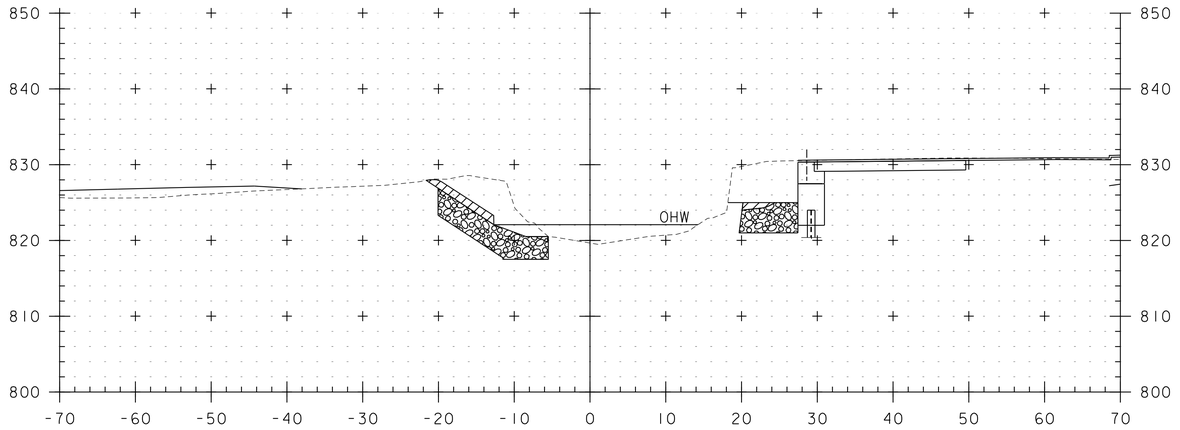
FILE NAME: 10c412/cos/z10c412xslth52.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
TH 52 CROSS SECTIONS 2

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD
SHEET 62 OF 73

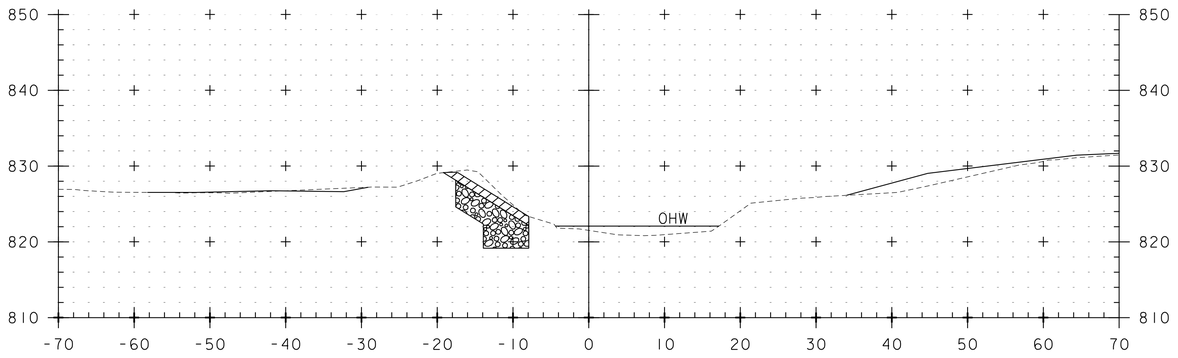


10+40

STA. 10+31 RT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL

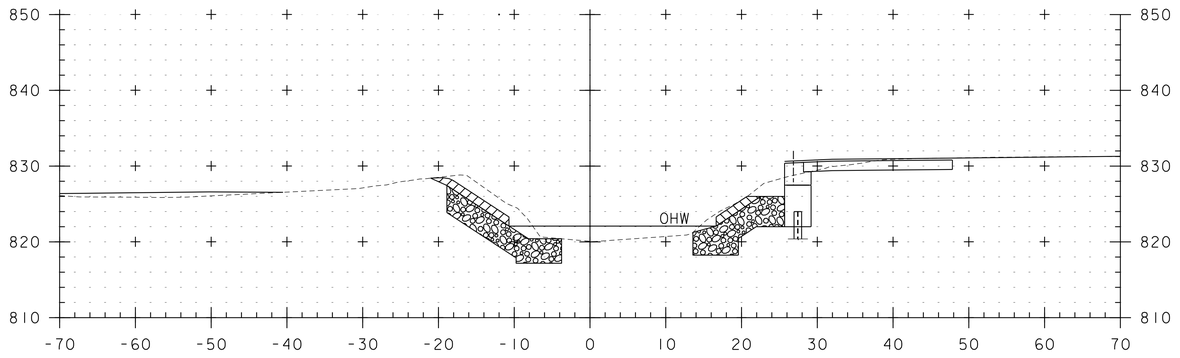


10+60



STA. 10+26 LT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL

10+30



10+50

STA. 10+30 TO STA. 10+60

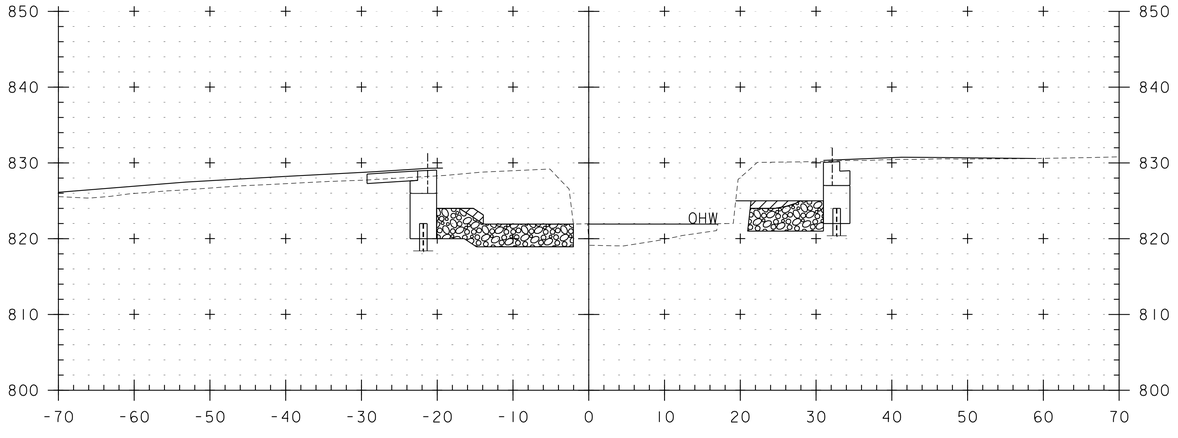
0 10 20
(SCALE 1" = 10')

CONSULTING ENGINEERS

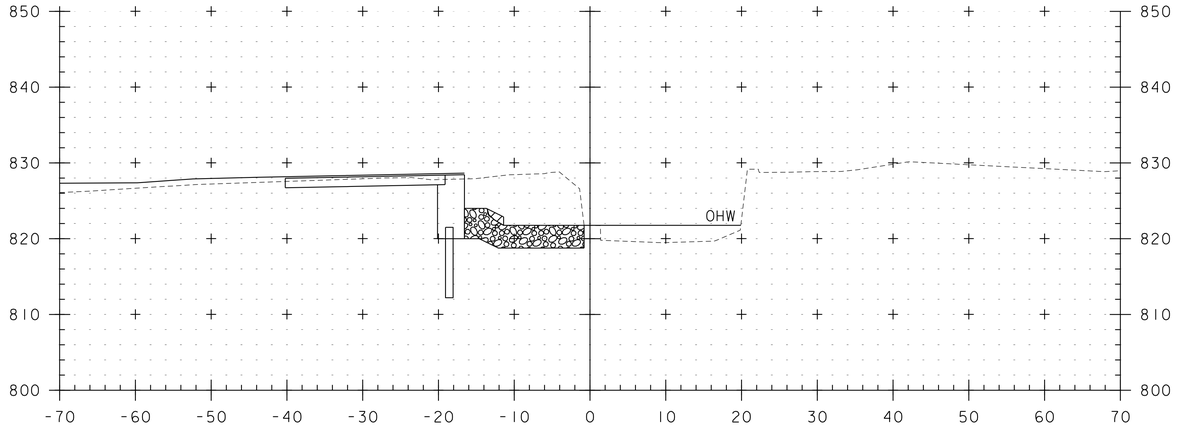
PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412xslchan.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
CHANNEL CROSS SECTIONS 1

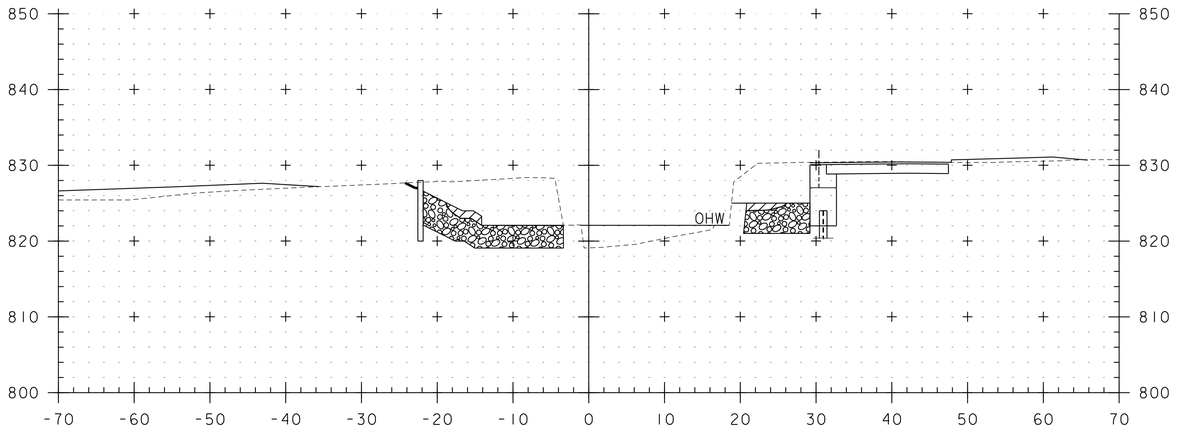
PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 63 OF 73



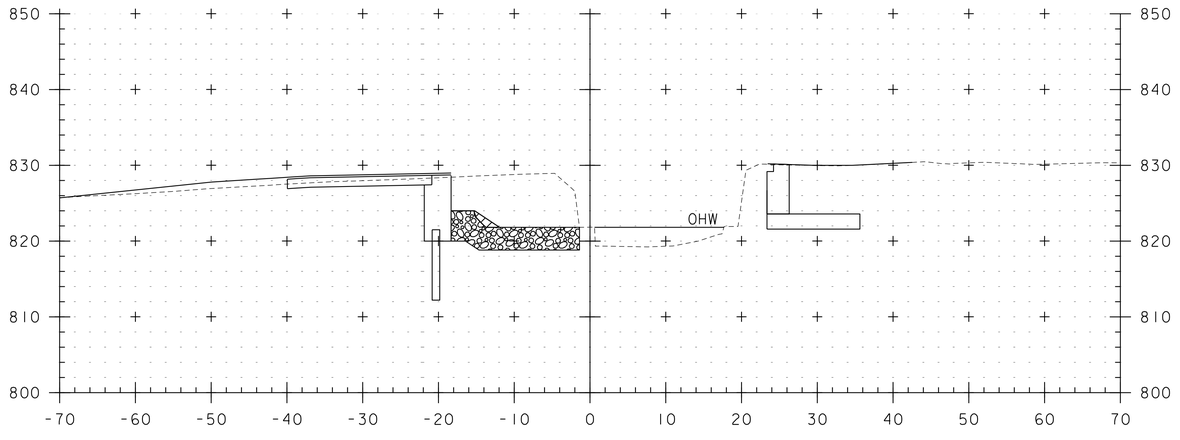
10+80



11+00



10+70



10+90

STA. 10+86 RT
END UNCLASSIFIED CHANNEL EXCAVATION

STA. 10+90 RT
END STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL

STA. 10+70 TO STA. 11+00

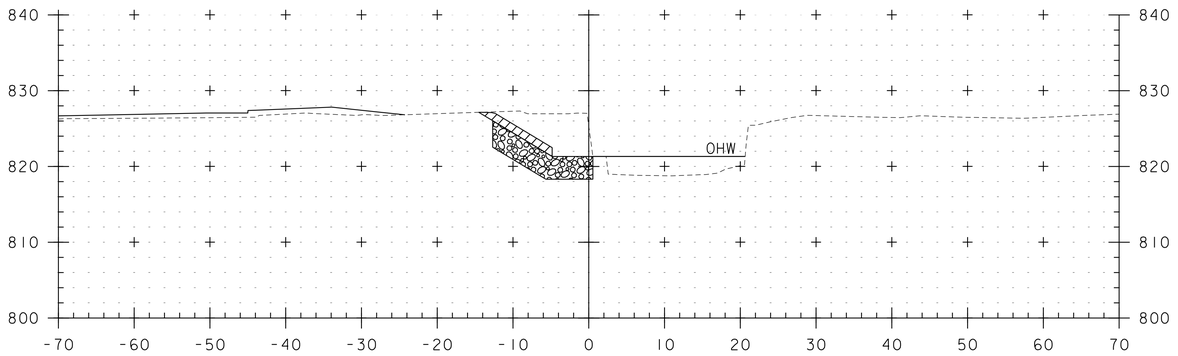
0 10 20
(SCALE 1" = 10')

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

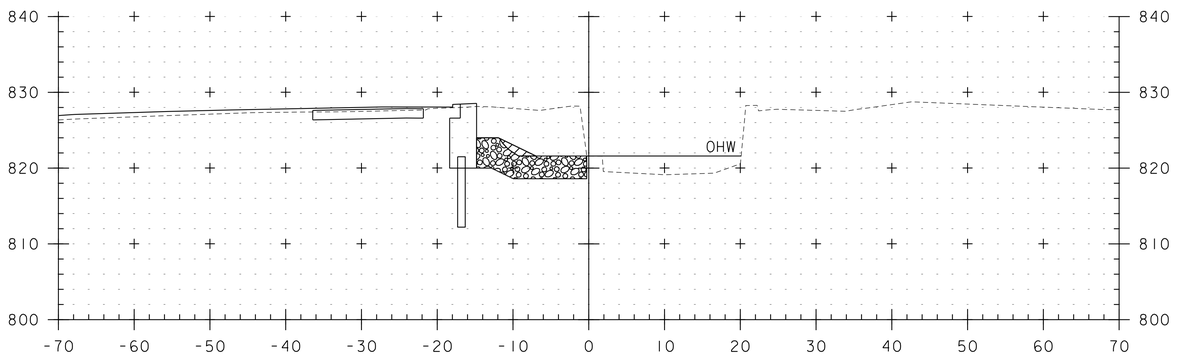
FILE NAME: 10c412/cos/z10c412xslchan.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
CHANNEL CROSS SECTIONS 2

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 64 OF 73

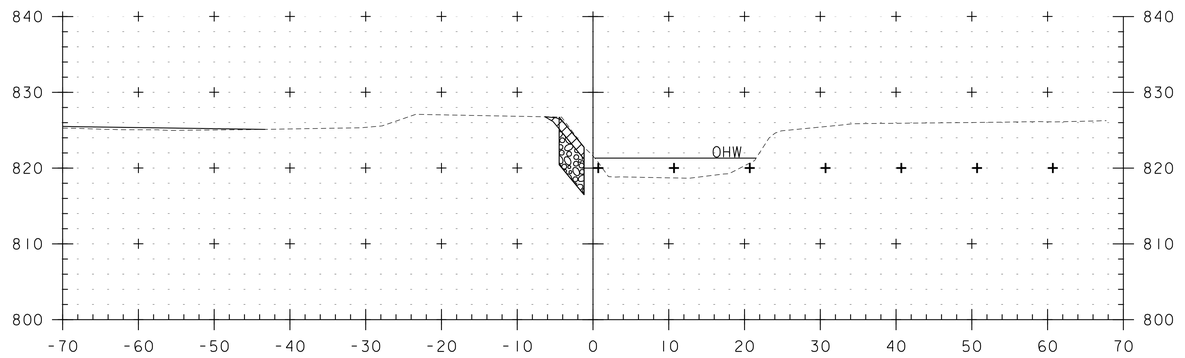


11+25

STA. 11+47 LT
END UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL



11+10



11+45

STA. 11+10 TO STA. 11+45

0 10 20
(SCALE 1" = 10')

CONSULTING ENGINEERS

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412xslchan.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. BEAUMONT
CHANNEL CROSS SECTIONS 3

PLOT DATE: 11/24/2014
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 65 OF 73

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REMOVAL OF BRIDGE 13 AND PORTIONS OF ITS ABUTMENTS AND FOUNDATION. BRIDGE 13 WILL BE REPLACED WITH A PRECAST STRUCTURE, SPANNING 56 FEET OVER DISH MILL BROOK, ON NEW FOOTINGS ALONG THE SAME ALIGNMENT. BRIDGE 13 IS LOCATED IN THE TOWN OF BURKE, ON VT ROUTE 114, APPROXIMATELY 0.47 MILE EASTERLY OF THE LYNDON/BURKE TOWN LINE. THE WIDTH OF THE BRIDGE WILL BE INCREASED TO 36 FEET-10 INCHES.

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 0.53 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 IS A SADDLE THAT IS MOSTLY DEVELOPED WITH OCCASIONAL OPEN AREAS. VT ROUTE 114, BELDEN HILL ROAD (TH 52), AND GRAVEL AND PAVED DRIVEWAYS ARE WITHIN THE PROJECT SITE. THERE ARE RESIDENCES AND BUSINESSES ON BOTH SIDES OF THE PROJECT, WITH A FEW GRASS AND TREE BUFFERS.

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

THE DISH MILL BROOK, TWO ARTISAN WELLS, AND AN EXISTING WATER MAIN ARE THE ONLY WATER SOURCES ON THE PROJECT SITE. THE BROOK IS CLASSIFIED AS INCISED, SINUOUS, AND ALLUVIAL WITH A CONFINED AND ARMORED CHANNEL AT THE SITE. THE STREAM BED CONSISTS OF GRAVEL, COBBLES AND BOULDERS. THE TRIBUTARY AREA AT THE BRIDGE CROSSING IS 6.4 SQUARE MILES. THERE ARE A NUMBER OF DROP INLETS ON SITE DRAINING FROM THE ROADWAY TO THE BROOK. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF FEW HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING BRIDGE AND SLOPE GRADING. 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 CALEDONIA, VERMONT. SOILS ON THE PROJECT SITE ARE COLTON-DUXBURY COMPLEX, 0% TO 3% AND 15% TO 25% SLOPES, “K FACTOR” = 0.24. THE SOIL IS CONSIDERED NOT HIGHLY ERODIBLE AT 0% TO 3% SLOPES AND HIGHLY ERODIBLE AT 15% TO 25% SLOPES.

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. BRIDGE 13 IS A CONTRIBUTING RESOURCE TO AN EXISTING HISTORIC DISTRICT. A NUMBER OF THE EXISTING BUILDINGS WITHIN THE PROJECT AREA ARE CONSIDERED HISTORIC RESOURCES. THE NORTHWEST AND SOUTHEAST QUADRANTS OF THE PROJECT MAY CONTAIN REMAINS OF HISTORIC STRUCTURES. THE SOUTHEAST QUADRANT IN PARTICULAR MAY BE SENSITIVE FOR HISTORIC ARCHAEOLOGY.
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: DISH MILL BROOK
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.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA

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

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

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR’S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES ARE NOT ANTICIPATED ON THIS PROJECT. THE EXISTING ROADWAY WILL BE UTILIZED TO ACCESS THE BRIDGE.

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 AND INLET PROTECTION DEVICES 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.

THIS PROJECT WILL HAVE AN OFF-SITE DETOUR AND CONSTRUCTION VEHICLES WILL BE ABLE TO UTILIZE THE EXISTING ROADWAY TO ACCESS THE BRIDGE. THEREFORE, IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

STONE CHECK DAMS ARE NOT ANTICIPATED FOR THIS PROJECT AS THERE ARE NO DEFINED CHANNELS WITHIN THE PROJECT LIMTS.

1.4.7 CONSTRUCT PERMANENT CONTROLS

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

PERMANENT STORMWATER TREATMENT DEVICES ARE NOT ANTICIPATED ON THIS PROJECT.

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.

TEMPORARY EROSION CONTROL MATTING SHALL BE USED TO STABILIZE ROADWAY SLOPES AND STONE FILL SHALL BE USED TO STABILIZE THE CHANNEL AS SHOWN ON THE PLANS.

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 DISCHARGE FROM DEWATERING ACTIVITIES IS ANTICIPATED. THE SPECIFIC MEANS FOR TREATMENT OF DISCHARGE SHALL BE PROVIDED BY THE CONTRACTOR. ALL COSTS FOR TREATMENT OF DISCHARGE SHALL BE PAID FOR UNDER CONTRACT ITEM 653.45.

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 SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

1.5.3 UPDATES

CLD 12-0121 MODEL: EC01

PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412erodet.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
EPSC NARRATIVE

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD

SOIL INFORMATION:
COLTON-DUXBURY COMPLEX
K = 0.24, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: A

SOIL INFORMATION:
COLTON-DUXBURY COMPLEX
K = 0.24, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: A

SOIL INFORMATION:
COLTON-DUXBURY COMPLEX
K = 0.24, NOT HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: A

SOIL INFORMATION:
COLTON-DUXBURY COMPLEX
K = 0.24, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: A

SOIL INFORMATION:
COLTON-DUXBURY COMPLEX
K = 0.24, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: A

N
VT STATE PLANE GRID

0 20 40
(SCALE 1" = 20')

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412bdreroex.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. HALEY
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
EPSC EXISTING PLAN SHEET	SHEET 67 OF 73

CLD CONSULTING ENGINEERS

CLD 12-021 MODEL: L01

GEOTEXTILE FOR SILT FENCE
25+42 TO 25+49 LT
26+29 TO 26+34 RT
26+40 TO 26+45 RT
26+63 TO 26+76 RT
26+91 TO 27+25 RT
27+22 TO 27+51 RT
0+96 TO 1+05 LT

PROJECT DEMARCATION FENCE
23+95 TO 24+04 RT
24+08 TO 24+39 RT
24+82 TO 24+90 RT
24+96 TO 25+19 RT
25+04 TO 25+47 LT
26+11 TO 26+23 LT
26+27 TO 26+49 RT
26+34 TO 27+55 RT
26+52 TO 27+06 LT
27+20 TO 27+64 LT
27+69 TO 28+00 RT
27+74 TO 28+00 LT
0+56 TO 0+99 RT
1+05 TO 1+15 LT

INLET PROTECTION DEVICE, TYPE I
26+39 LT
26+43 LT
0+35 RT

N
VT STATE PLANE GRID

VT 114 STA 24+00.00
BEGIN APPROACH

VT 114 STA 25+10.00
END APPROACH
BEGIN PROJECT

VT 114 STA 27+00.00
END PROJECT
BEGIN APPROACH

VT 114 STA 28+00.00
END APPROACH

VT 114 NORTH TO EAST HAVEN

VT 114 SOUTH TO LYNDON

TH 52 STA 1+15.00
LIMIT OF WORK

TH 52 (BELDEN HILL ROAD)

REMOVE

REMOVE BY OTHERS

EXISTING TOWN ROW

50' RIPARIAN BUFFER (TYP)

NOTE
SEE CROSS SECTIONS FOR FINISHED GRADING.

0 20 40
(SCALE 1" = 20')

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME:	10c412/cos/z10c412bdrerocn.dgn
PLOT DATE:	11/24/2014
PROJECT LEADER:	J. BYATT
DRAWN BY:	M. HALEY
DESIGNED BY:	M. HALEY
CHECKED BY:	P. SHEDD
EPSC CONSTRUCTION PLAN SHEET	SHEET 68 OF 73

CLD 12-021 MODEL: L01

STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
25+50 LT TO 26+06 RT (CHANNEL)
25+95 LT TO 26+35 RT (CHANNEL)

TEMPORARY EROSION MATTING
26+25 TO 26+75 RT

GRUBBING MATERIAL
25+50 TO 25+74 LT (EXCLUDES UNDER BRIDGE)
25+77 TO 25+94 RT (EXCLUDES UNDER BRIDGE)
26+08 TO 26+35 RT (EXCLUDES UNDER BRIDGE)

N
VT STATE PLANE GRID

VT 114 STA 24+00.00
BEGIN APPROACH

VT 114 STA 25+10.00
END APPROACH
BEGIN PROJECT

VT 114 STA 27+00.00
END PROJECT
BEGIN APPROACH

VT 114 STA 28+00.00
END APPROACH

VT 114 NORTH TO EAST HAVEN

VT 114 SOUTH TO LYNDON

TH 52 STA 1+15.00
LIMIT OF WORK

TH 52 (BELDEN HILL ROAD)

BRIDGE #13

50' RIPARIAN BUFFER (TYP)

REMOVE

REMOVE BY OTHERS

EXISTING TOWN ROW

NOTE
SEE CROSS SECTIONS FOR FINISHED GRADING.

0 20 40
(SCALE 1" = 20')

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412bdrerofl.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. HALEY
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
EPSC FINAL PLAN SHEET	SHEET 69 OF 73

CONSULTING ENGINEERS

CLD 12-0121 MODEL: L01

VAOT RURAL AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

SOIL AMENDMENT GUIDANCE

FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	*FOLLOW*	PELLETIZED	*FOLLOW*
500 LBS/AC	*MANUFACTURER*	2 TONS/AC	*MANUFACTURER*

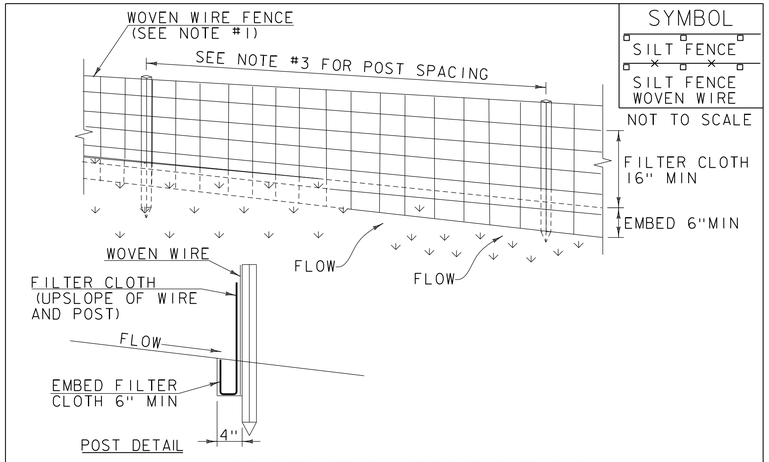
CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN 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. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. 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

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF
FEBRUARY 16, 2011	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.

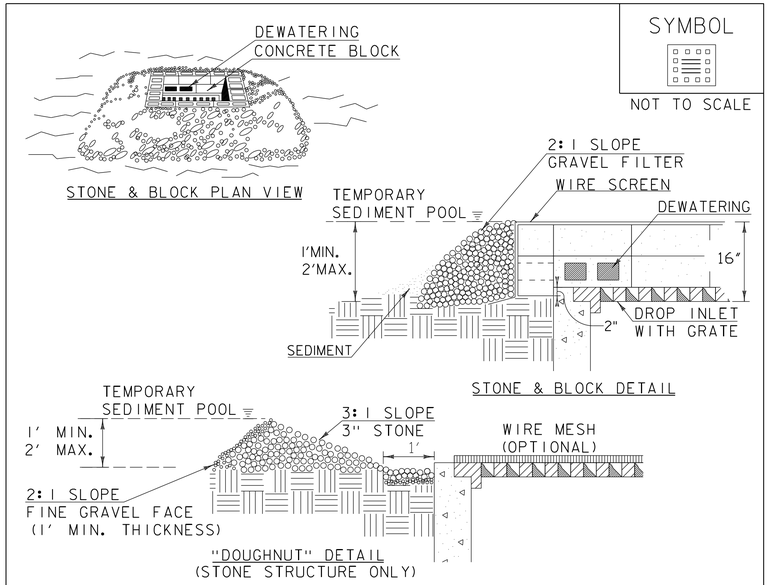
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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



CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2" MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR ½" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL ½"- ¾" IN DIAMETER PLACED 2" BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1' THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3" STONE AS SHOWN ON THE DRAWINGS.
5. MAXIMUM DRAINAGE AREA 1 ACRE

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

STONE & BLOCK 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 WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

CLD 12-012I MODEL: EC02

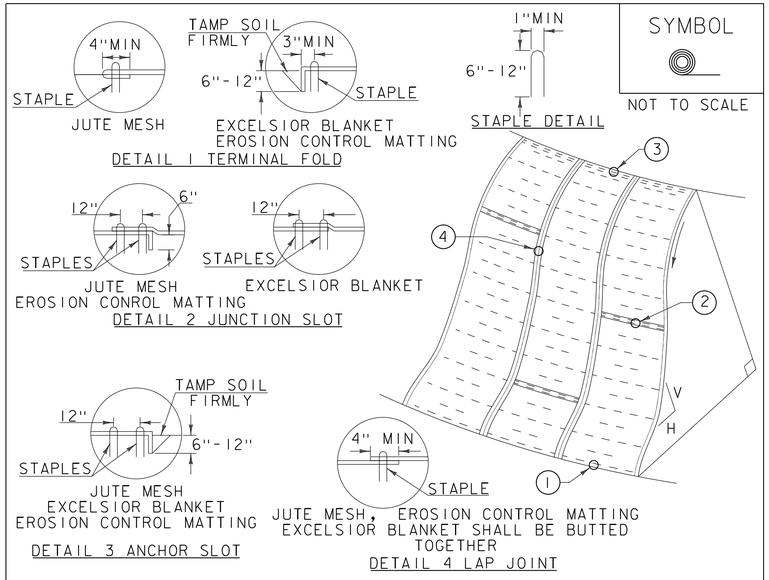
PROJECT NAME: BURKE
PROJECT NUMBER: BRF 0269(13)

FILE NAME: 10c412/cos/z10c412erodet.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: M. HALEY
EPSC DETAILS 1

PLOT DATE: 11/24/2014
DRAWN BY: M. HALEY
CHECKED BY: P. SHEDD
SHEET 70 OF 73

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

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

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

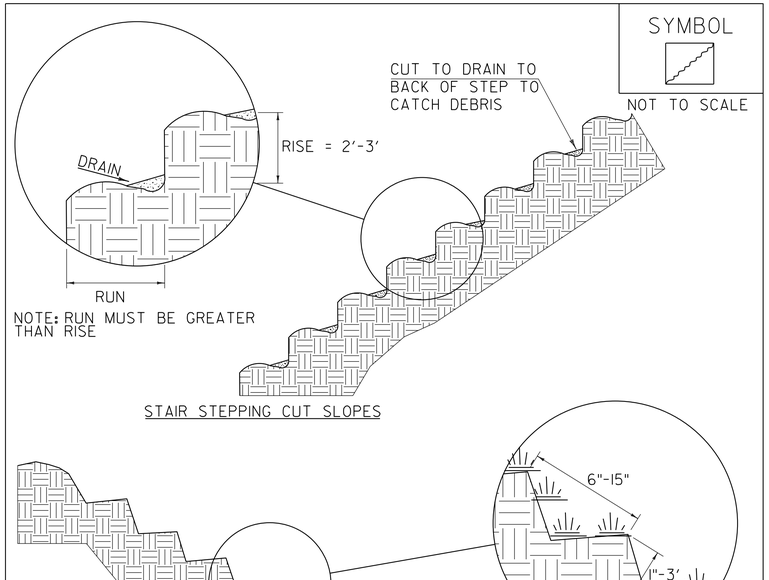
ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

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

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

SYMBOL

NOT TO SCALE



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

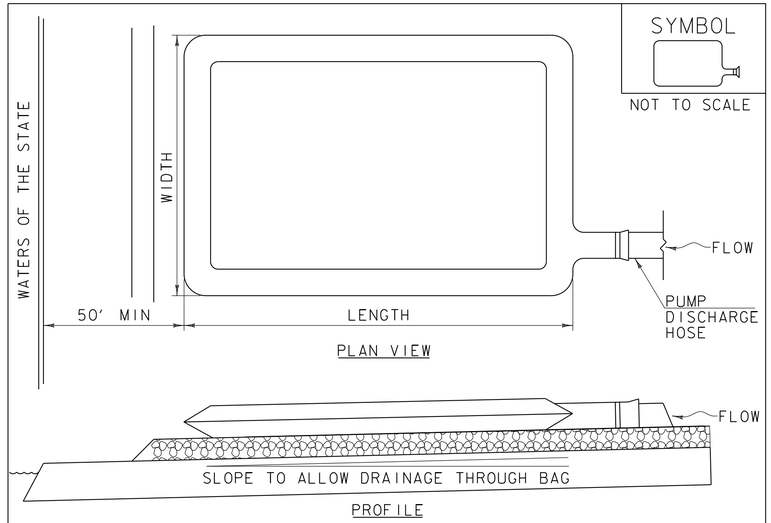
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. THE PRIMARY PURPOSE OF FILTER BAG IS TO RETAIN SILT, SAND, AND FINES DURING DEWATERING OPERATIONS.
2. FILTER BAGS SHALL BE INSTALLED ON A VEGETATED SLOPE GRADED TO ALLOW INCOMING WATER TO FLOW THROUGH THE BAG.
3. FILTER BAGS MAY ALSO BE PLACED ON COARSE AGGREGATE, STONE, OR HAYBALES TO INCREASE FILTRATION EFFICIENCY.
4. FILTER BAGS SHALL BE LOCATED A MINIMUM OF 50' FROM WATERS OF THE STATE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. THE NECK OF THE FILTER BAG SHALL BE STRAPPED TIGHTLY TO THE DISCHARGE HOSE.
6. A FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A REASONABLE RATE.
7. FILTER BAG SHALL BE DISPOSED OF AS APPROVED IN THE EPSC PLAN OR AS DIRECTED BY THE ENGINEER.

FILTER BAG

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 FILTER BAG (PAY ITEM 653.45) AND AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

CLD 12-012I MODEL: EC03

CONSULTING ENGINEERS

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME: 10c412/cos/z10c412erodet.dgn	PLOT DATE: 11/24/2014
PROJECT LEADER: J. BYATT	DRAWN BY: M. HALEY
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
EPSC DETAILS 2	SHEET 71 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET 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	QUIRK, WILLIAM D.	1	25+05 LT	25+54 LT			CONSTRUCTION	T	753 SF	WDOE		BURKE			INCL. PDF & EC
			25+05 LT	25+50 LT			SLOPE	T	191 SF						
			25+26 LT	25+66 LT			UTILITY	P	1535 SF						
			25+46 LT				MONITOR WELL								W-1
			25+48 LT	25+71 LT			CHANNEL	P	390 SF						INCL. STONE FILL
			25+54 LT	25+69 LT			REMOVE	T							BRIDGE SUBSTRUCTURE
2	D.J. COMMERCIAL, LLC	1	23+95.21 RT	25+13.12 RT			HIGHWAY	P	513 SF	WDOE		BURKE			
			23+99 RT	24+39 RT			CONSTRUCTION	T	253 SF						INCL. PDF
			24+82 RT	24+91 RT			CONSTRUCTION	T	50 SF						INCL. PDF
			24+83 RT	25+21 RT			UTILITY	P	162 SF						
			24+96 RT	25+18 RT			CONSTRUCTION	T	100 SF						INC. PDF
			TH 52 0+27 RT	TH 52 0+57 RT			DRIVE	T	958 SF						31.8' WIDE PAVED MM 0488
			24+93 RT				REMOVE & REPLACE	T							INCL. SIDEWALK & ACCESS TO ATM
3	MATHERS, HOLLY S.	1	26+11 LT				DRIVE	T		GTR		BURKE			11' WIDE PAVED MM 0498
4	TOWN OF BURKE		25+08 RT	26+07 RT			APPROACH	T	3,746 SF	WDOE		BURKE			INCL. PDF
			25+33 RT	25+64 RT			CULVERT	P							CULVERT & DROP INLET
			25+56 RT	25+64 RT			INSTALL	P							GUARDRAIL
			25+77 RT	25+82 RT			REMOVE	T							GUARDRAIL
			25+80 RT	26+04 RT			CHANNEL	P	96 SF						INCL. STONE FILL
			25+97 RT	26+18 RT			CONSTRUCTION	T	306 SF						INCL. PDF & EC
5	GOULD, SHIRLEY E.	1	25+76.30 RT	26+28.22 RT	1,020 SF					WD		BURKE			
			TH 52 1+17 RT	TH 52 1+76 RT			UTILITY	P	242 SF						
6	JAMES, SAMUEL G.	1	26+06.64 RT	27+50.00 RT			HIGHWAY	P	1,338 SF	WDOE		BURKE			
			26+14 RT	27+43 RT			UTILITY	P	1,624 SF						EXCEPT & RESERVE SEPTIC SYSTEM
			26+31 RT	26+53 RT			CONSTRUCTION	T	90SF						INCL. PDF & EC
7	TELEPHONE OPERATING COMPANY OF VERMONT, LLC														UTILITY
8	SOVERNET, INC.														UTILITY
9	LYNDONVILLE ELECTRIC DEPARTMENT, VILLAGE OF (D&G)														UTILITY
10	CHARTER COMMUNICATIONS														UTILITY

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1		CHANGE PROJECT NAME FROM BHF TO BRF.	05/06/14
		PER C.O. 9880	
		APPROVED BY: RC MADE BY:MR	
2	3,4	PARCEL NO. 2 D.J. COMMERCIAL, LLC. DELETE SLOPE (T)	05/06/14
		AT STA. 24+75 ~ 25+21. DELETE REMOVE & RESET (T) AT	
		STA. 25+14. DELETE CONST. (T) AT STA. 24+76~25+06. ADD	
		REMOVE & RESET (T) AT STA. 24+93 RT. REMARKS-	
		INCLUDES SIDEWALK & ACCESS TO ATM. ADD CONST. (T)	
		AT STA. 24+82 RT.~24+91 RT. ADD CONST. (T) AT STA.	
		24+96 RT.~25+18 RT. CHANGE ENDING STA. OF HWY (P) TO	
		STA. 25+13.12 PER C.O. 9881	
		APPROVED BY: RC MADE BY:MR	
3	3,4	PARCEL NO. 3 MATHERS. DELETE ALL CONST (T)	05/06/14
		EASEMENTS. PER C.O. 9882	

PLOT DATE 05/08/14

PLAN LEGEND

- EXISTING RIGHT-OF-WAY
- TAKING WITH ACCESS
- TAKING WITHOUT ACCESS
- CLEAR ZONE (CZ)
- PROPERTY LINE (P / L)
- TOE OF SLOPE
- TOP OF CUT
- SLOPE RIGHT (SR (P))
- CONSTRUCTION RIGHT (CONST. (T))
- PROJECT DEMARCATION FENCE (PDF)

EC	-EROSION CONTROL
(P)	-PERMANENT
(T)	-TEMPORARY
DR.	-DRAINAGE RIGHT
DIT.	-DITCHING RIGHT
CH.	-CHANNEL RIGHT
DRIVE	-DRIVE RIGHT
CUL.	-CULVERT RIGHT
C&T	-CLEARING & TRIMMING RIGHT
SR	-SLOPE RIGHT
UE	-UTILITY EASEMENT

APPROVED: RYAN CLOUTIER DATE: 3-31-14
CHIEF, PLANS & TITLES

PROJECT NAME: **BURKE**
PROJECT NUMBER: **BRF 0269 (13)**

FILE NAME: **r10c412detail.xls**
PROJECT LEADER: **R. YOUNG**
DESIGNED BY: **A. EGIZI**
R.O.W. DETAIL SHEET

PLOT DATE:
DRAWN BY: **M. RYAN**
CHECKED BY: **R. CLOUTIER**
SHEET 72 OF 73

CONSTRUCT DRIVES
24+00 LT (32.8 FT WIDE, PAVED, COMM.)
24+89 LT (38.0 FT WIDE, PAVED, COMM.)
26+11 LT (11.0 FT WIDE, PAVED, RES.)
27+14 LT (20.6 FT WIDE, PAVED, RES.)
27+60 RT (20.4 FT WIDE, PAVED, RES.)
0+45 RT (31.8 FT WIDE, PAVED, COMM.)
1+05 RT (16.0 FT WIDE, GRAVEL, RES.)

VERTICAL GRANITE CURB
23+95.0 TO 25+04.5 RT
24+22.9 TO 24+66.5 LT
24+22.9 TO 24+66.5 LT (BACK CURB)
25+04.5 TO 25+58.4 LT
26+18.2 TO 27+02.2 LT

PORTLAND CEMENT
CONCRETE SIDEWALK, 8 INCH
23+90.1 TO 24+22.9 LT
24+66.5 TO 25+04.5 LT

PORTLAND CEMENT
CONCRETE SIDEWALK, 5 INCH
23+95.0 TO 25+04.5 RT
24+09 RT (4.0 FT WIDE)
24+22.9 TO 24+66.5 LT
24+93 RT (5.0 FT WIDE)
25+04.5 TO 25+58.4 LT
26+03.3 TO 27+25.0 LT
26+25 LT (4.0 FT WIDE)
26+50 LT (3.2 FT WIDE)

DETECTABLE
WARNING SURFACE (DWS)
25+05 RT

BOX BEAM GUARDRAIL
25+16.7 TO 25+21.5 LT
0+49.5 TO 0+55.4 LT (R = 14')

SPECIAL PROVISION (GUARDRAIL APPROACH SECTION, GALVANIZED 2 RAIL BOX BEAM)
25+21.5 TO 25+56.0 LT
25+70.3 RT TO 0+49.5 LT (R = 14')
26+27.4 TO 26+60.7 RT

MANUFACTURED
TERMINAL SECTION, TANGENT
26+60.7 TO 26+74.4 RT

REMOVAL AND DISPOSAL OF GUARDRAIL
25+35 TO 25+75 LT
25+75 RT TO 0+66 LT
26+15 TO 26+65 RT

DELINEATOR WITH STEEL POST
25+16.7 LT
26+74.4 RT
0+55.4 LT (TH 52)

REMOVAL OF EXISTING DELINEATOR
0+21 TO 0+67 LT (8)

LANDSCAPE BACKFILL, TRUCK MEASUREMENT
26+65 TO 26+80 RT - 15 FT LONG X 4 FT WIDE X 3 FT DEEP

TRANSPLANTING SHRUBS
26+65 TO 26+80 RT

NOTES
1. REMOVE 4' WIDE PAVED SIDEWALK 24+84.0 TO 25+01.5 RT. EXISTING STAIRS, HAND RAILS AND RAMP SHALL REMAIN UNDISTURBED.

2. ONE PARKING SPACE SHALL BE PROVIDED NEAR 26+75 LT FOR USE BY ABUTTING PROPERTY OWNER AT ALL TIMES DURING CONSTRUCTION.

3. A SEPTIC TANK AND PUMP TANK ARE LOCATED NEAR STA 24+25 RT. CONTRACTOR SHALL NOT DISTURB EITHER TANK.

4. THERE MAY BE EXISTING PRIVATE DRAINAGE IN THE AREA. IF ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.

N
VT STATE PLANE GRID

VT 114 CURVE (1)
DELTA = 14°40'47"
D = 7°52'52"
R = 727.00'
T = 93.65'
L = 186.27'
E = 6.01'
BANK = 0.020

VT 114 STA 24+50.00
END APPROACH
BEGIN PROJECT

VT 114 STA 24+00.00
BEGIN APPROACH

VT 114 MAIN LINE STA 25+88.00
CHANNEL STA 10+80.00
DELTA = 60°00'00"

APPROXIMATE LOCATION OF EXISTING 2" WATERLINE. WATERLINE SHALL BE LOCATED AND AVOIDED DURING CONSTRUCTION.

VT 114 STA 27+25.00
END PROJECT
BEGIN APPROACH

VT 114 STA 28+00.00
END APPROACH

FUTURE SIDEWALK PROJECT
BURKE STP BIKE (65)
(BY OTHERS)

1
QUIRK, WILLIAM D.

N/F
WORTH, JOHN &
JACOB, VINCENT

N=761629.81
E=1784898.38
23+00.00 24.63' LT

N=761580.36
E=1784900.79
23+00.00 24.87' RT

N=761677.36
E=1785337.73
27+50.00 26.02' LT

N=761630.10
E=1785352.60
27+50.00 23.54' RT

3
MATHERS, HOLLY S.

N/F
SINGER,
VICTORIA

N/F
TOWER, THELMA E.

6
JAMES, SAMUEL G.

4
TOWN OF
BURKE

5
GOULD, SHIRLEY E.

2
D.J. COMMERCIAL, LLC

N/F
ORMISTON,
DAVID & VALERY

FUTURE SIDEWALK PROJECT
BURKE STP BIKE (65)
(BY OTHERS)

N/F
WORTH, JOHN &
JACOB, VINCENT

TH 52 CURVE (1)
PC = STA 0+10.24
PT = STA 0+58.32
DELTA = 55°05'17"
D = 114°35'30"
R = 50.00'
T = 26.08'
L = 48.07'
E = 6.39'
BANK = 0.020

TH 52 STA 1+15.00
LIMIT OF WORK

EXISTING DRAINAGE
[1] STA 25+94.3 LT TO 26+38.7 LT
EXISTING 18" CPEP W/ DI
REMOVE DI/ REMOVE 40' PIPE AND CAP NEAR EXISTING ABUTMENT

[2] STA 0+34.6 RT
EXISTING 15" CGMP W/ DI
REHAB DI/ ADJUST GRATE ELEVATION

PROPOSED DRAINAGE
(1) STA 26+43.1 LT
NEW 18" X 3' CPEP(SL)
NEW 18" X 29' CPEP(SL)
NEW 4' DIA. PRCDI W/CI GRATE TYPE D AT 26+43.1

(2) STA 26+51.0 RT
NEW 18" X 24' CPEP(SL)
NEW 4' DIA. PRCMH W/CI COVER AT 26+51.0

(3) STA 0+34.6 RT TO 0+70.0 RT
NEW 15" X 40' CPEP(SL)
NEW 4' DIA. PRCDI W/CI GRATE TYPE D AT 0+70.0

EXISTING BRIDGE DATA
SINGLE 25-FOOT SPAN CONCRETE
T-BEAM BRIDGE BUILT IN 1925
ON PRE-EXISTING STONE ABUTMENTS
WITH CONCRETE FACING.

BEGIN R.O.W. PROJECT
BURKE BRF 0269 (13)
STA. VT 114 23+95.21
25.03' RT

END R.O.W. PROJECT
BURKE BRF 0269 (13)
STA. VT 114 27+50.00
23.54' RT

FOR ROW PURPOSES ONLY

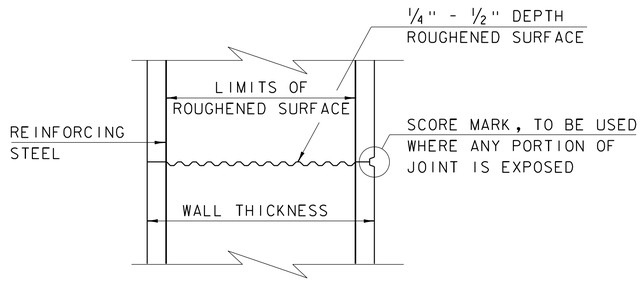
LINE SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S AQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

0 20 40
(SCALE 1" = 20')

PROJECT NAME:	BURKE
PROJECT NUMBER:	BRF 0269(13)
FILE NAME:	I0c412/cos/NAME$DGN
PROJECT LEADER:	J. BYATT
DESIGNED BY:	A. EGIZI
ROW LAYOUT	
PLOT DATE:	16-JUL-2014
DRAWN BY:	M. RYAN
CHECKED BY:	R. CLOUTIER
SHEET	73 OF 73

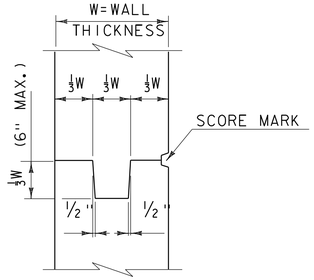
CONCRETE GENERAL NOTES

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

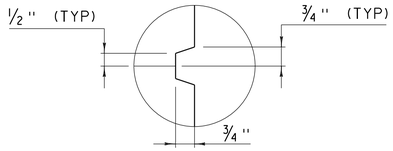


TYPICAL HORIZONTAL CONSTRUCTION JOINT
(NOT TO SCALE)

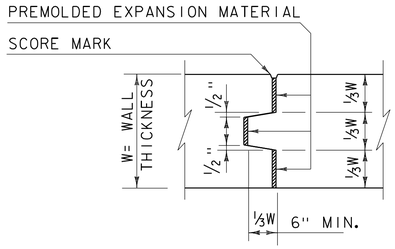
1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



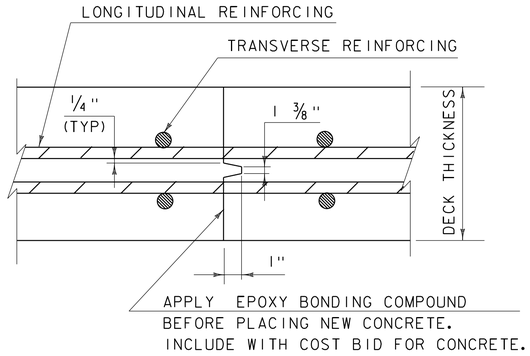
TYPICAL CONCRETE CONSTRUCTION JOINT
(NOT TO SCALE)



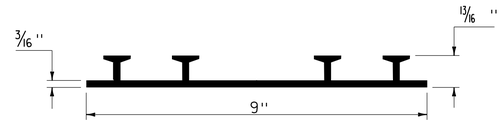
SCORE MARK DETAIL
(NOT TO SCALE)



TYPICAL CONCRETE EXPANSION JOINT
(NOT TO SCALE)



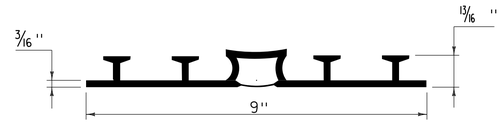
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS
(NOT TO SCALE)



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

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

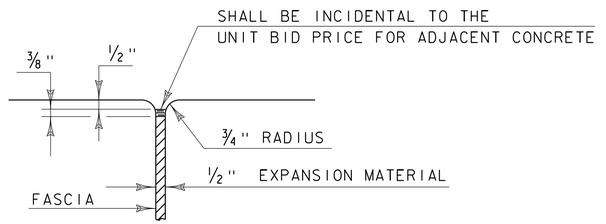
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



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

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

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



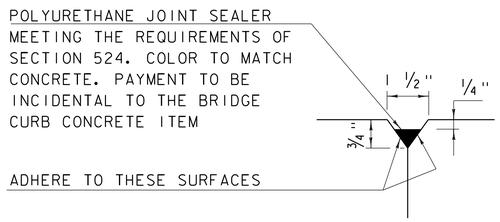
JOINT BETWEEN FASCIA AND WINGWALL
(NOT TO SCALE)

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

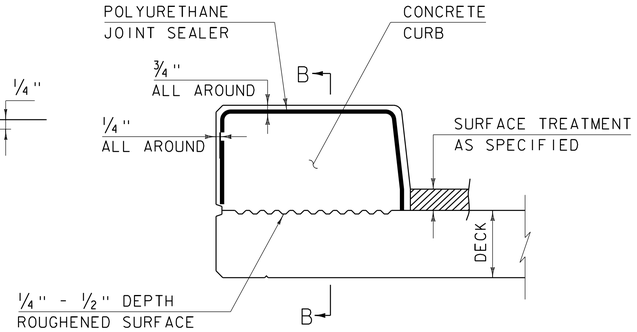
CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-501.00

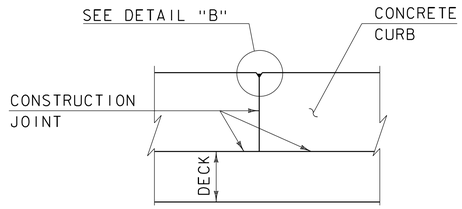


DETAIL "B"
(NOT TO SCALE)

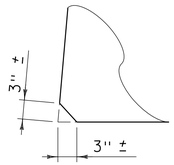


CONCRETE CURB JOINT SECTION
(NOT TO SCALE)

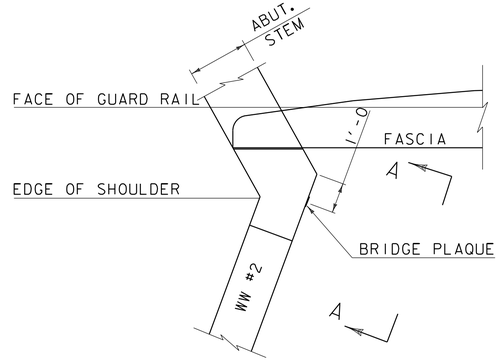
1. SEE TYPICAL HORIZONTAL CONSTRUCTION JOINT DETAIL FOR ADDITIONAL INFORMATION



SECTION B - B
(NOT TO SCALE)



ACUTE ANGLE CLIP DETAIL
(NOT TO SCALE)



PLAN

CONCRETE CURB JOINT NOTES

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

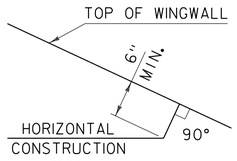
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.

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

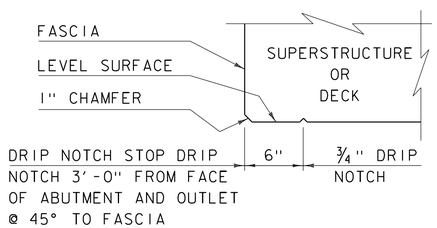
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.

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

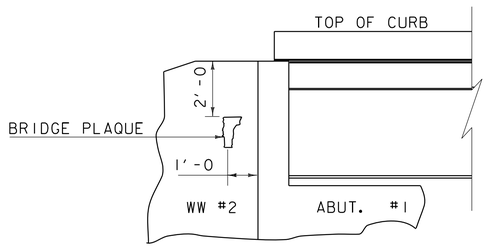
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.



HORIZONTAL WINGWALL CONSTRUCTION JOINT
(NOT TO SCALE)



DRIP NOTCH DETAIL
(NOT TO SCALE)



VIEW "A - A"

BRIDGE PLAQUE
(NOT TO SCALE)

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

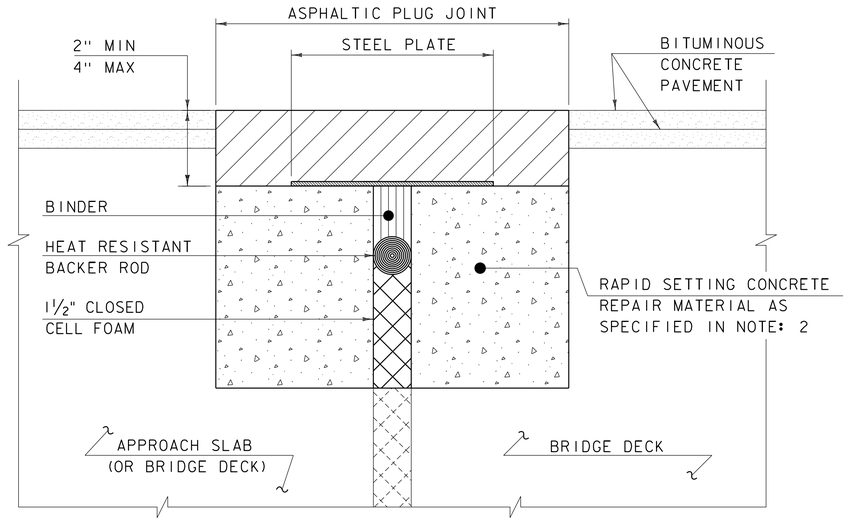
PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

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

CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL SD-502.00



ASPHALTIC PLUG JOINT DETAIL - REHAB

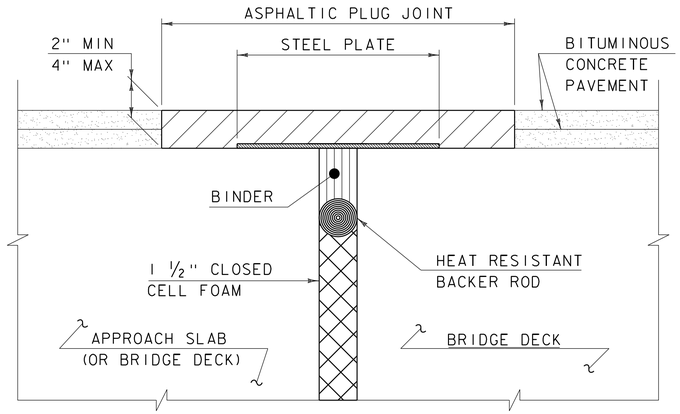
NOTES:

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

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

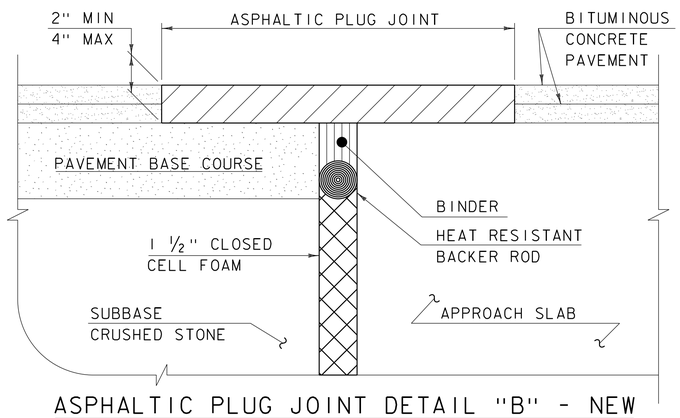
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.

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



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

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



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

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

WEATHER LIMITATIONS

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

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

DETAILS ON THIS SHEET ARE NOT TO SCALE.

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

BRIDGE JOINT
ASPHALTIC PLUG

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - DIVISION

STRUCTURES DETAIL
SD-516.10