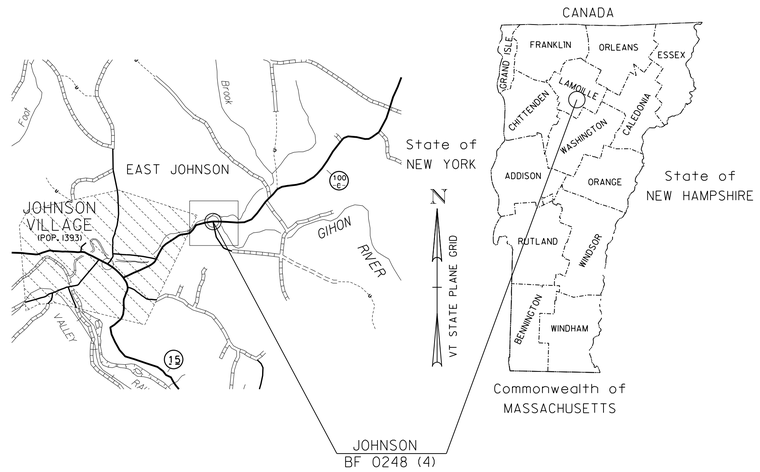
REVIEWER NOTES

1. THE RETAINING WALL NORTHEAST OF BRIDGE 2 HAS BEEN CHANGED. THE WALL TYPE HAS NOT BEEN DETERMINED, BUT VTRANS HAS DIRECTED US TO REFER TO "SPECIAL PROVISION (RETAINING WALL) AND PROVIDE A GENERIC CROSS SECTION. ADDITIONAL DETAILS WILL BE PROVIDED WITH A FUTURE SUBMISSION.
2. HYDRAULIC ANALYSIS OF BELL BROOK WILL BE REQUIRED. IT IS ASSUMED THAT STONE FILL, TYPE III WILL BE USED AS BACKFILL FROM TOP OF BEDROCK TO THE EXISTING GROUND ELEVATION ON THE OUTSIDE FACE OF THE REVISED RETAINING WALL NORTHEAST OF BRIDGE 2.

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF JOHNSON
COUNTY OF LAMOILLE

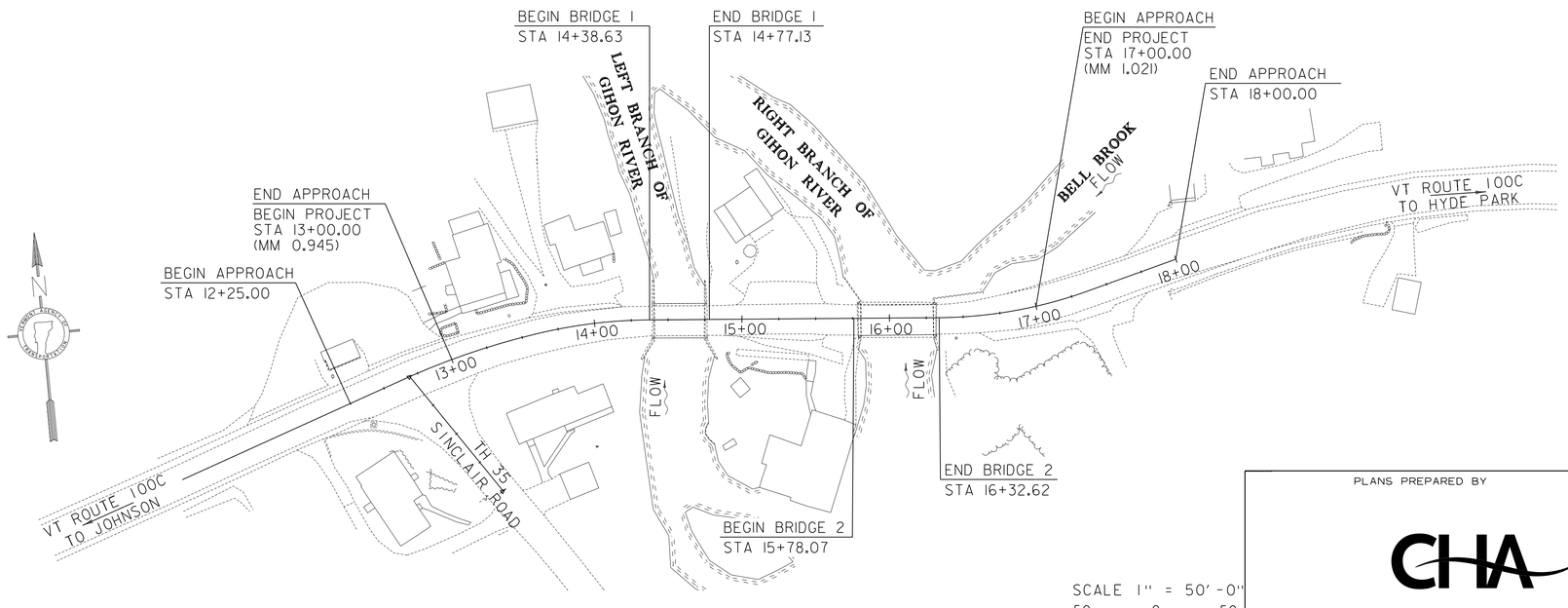
ROUTE NO : VT ROUTE 100C, RURAL MAJOR COLLECTOR. BRIDGE #1 & #2

PROJECT LOCATION: APPROXIMATELY 1 MILE NORTH OF THE INTERSECTION OF VT ROUTE 15 AND VT ROUTE 100C

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES REPLACEMENT OF THE EXISTING DECKS AND SUPERSTRUCTURES OF BOTH BRIDGE 1 AND BRIDGE 2 WITH SUBSTRUCTURE MODIFICATIONS, THE CONSTRUCTION OF A SOLDIER PILE RETAINING WALL AND ROADWAY APPROACH WORK.

LENGTH OF STRUCTURE BRIDGE 1:	38.50 FEET
LENGTH OF STRUCTURE BRIDGE 2:	54.55 FEET
LENGTH OF ROADWAY:	306.95 FEET
LENGTH OF PROJECT:	400.00 FEET

FINAL PLANS
MAY 4, 2016



SCALE 1" = 50'-0"
50 0 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 :	5/20/13
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD83 (96)

PLANS PREPARED BY

CHA

DIRECTOR OF PROJECT DELIVERY

APPROVED _____ DATE _____

PROJECT MANAGER : WENDY B. PELLETIER, P.E.

PROJECT NAME : JOHNSON
PROJECT NUMBER : BF 0248 (4)

SHEET 1 OF 93 SHEETS

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13x066\Consultants\Structures\z13x066title.dgn
DATE/TIME = 5/4/2016
USER = 3293

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE 1)

Version
LRFD

INDEX OF SHEETS

PLAN SHEETS

STANDARDS LIST

B-71	STANDARD FOR RESIDENTIAL AND COMMERCIAL DRIVES	07-08-2005
D-3	TREATED GUTTERS	06-01-1994
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
E-127	ROUTE MARKINGS AT RURAL INTERSECTIONS	08-08-1995
E-136B	STATE ROUTE MARKER SIGN DETAILS	08-08-1995
E-193	PAVEMENT MARKING DETAILS	08-18-1995
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	11-10-2015
G-1D	STEEL BEAM GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIAN)	02-10-2014
S-352A	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
S-352B	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
S-352C	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
S-367A	BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/STEEL TUBING	05-24-2012
S-367B	GUARDRAIL APPROACH SECTION, GALVANIZED HD STEEL BEAM	05-24-2012
T-1	TEMPORARY TRAFFIC CONTROL GENERAL NOTES	04-25-2016
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
T-42	BRIDGE NUMBER PLAQUE	04-09-2014
T-44	MILEMARKER DETAILS STATE AND TOWN HIGHWAYS	04-09-2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013
T-56	STANDARD SIGN PLACEMENT	10-26-2015
T-71	VERMONT REGULATORY SIGN DETAILS	04-25-2016

STRUCTURES DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-502.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	5/7/2010
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	5/7/2010

HIGHWAY SAFETY AND DESIGN SHEETS

HSD-400.01	SAFETY EDGE DETAILS	3/29/2016

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2016	2800	320	66	5.1	190
2036	2900	330	66	7.6	290

20 year ESAL for flexible pavement from 2016 to 2036 : 1841000
40 year ESAL for flexible pavement from 2016 to 2056 : 4370000
Design Speed : 25 mph

AS BUILT "REBAR" DETAIL

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

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: April 2015

DRAINAGE AREA : 56.8 sq. mi (Total for Gihon River at Bridges 1 and 2)
CHARACTER OF TERRAIN : Hilly to mountainous, mixed land cover
STREAM CHARACTERISTICS : Well defined banks, incised, semi-alluvial and sinuous
NATURE OF STREAMBED : Mostly gravel and cobbles with some boulders and ledge

PEAK FLOW DATA

Q 2.33 =	1,510 cfs *	Q 50 =	5,820 cfs
Q 10 =	3,325 cfs	Q 100 =	7,330 cfs
Q 25 =	4,600 cfs	Q 500 =	12,920 cfs

DATE OF FLOOD OF RECORD Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 9.8 fps
ICE CONDITIONS : Moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: 1.4%
HEADWATERS: X
UNIFORM:
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span concrete T-beam bridge
YEAR BUILT: 1929
CLEAR SPAN(NORMAL TO STREAM): 33'
VERTICAL CLEARANCE ABOVE STREAMBED: 13'
WATERWAY OF FULL OPENING: 410 sq. ft.
DISPOSITION OF STRUCTURE: Replace superstructure
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Fractured rock and ledge

WATER SURFACE ELEVATIONS AT:

Q2.33 =	569.6'	VELOCITY =	7.1 fps
Q10 =	571.7'	"	9.2 fps
Q25 =	572.8'	"	8.9 fps
Q50 =	574.1'	"	9.3 fps
Q100 =	576.0'	"	11.0 fps

LONG TERM STREAMBED CHANGES: None noted.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 579.8'
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Johnson
HIGHWAY # : TH 33
CLEAR SPAN: 37'
YEAR BUILT: 1870
STRUCTURE TYPE: Single span covered bridge
DISTANCE: 4,100'
STRUCTURE #: CB 30
CLEAR HEIGHT: 10'
FULL WATERWAY: 370 sq. ft.

DOWNSTREAM STRUCTURE

TOWN: Johnson
HIGHWAY # : TH 3
CLEAR SPAN: 54'
YEAR BUILT: 1959
STRUCTURE TYPE: Single span covered bridge on steel beams
DISTANCE: 4,100'
STRUCTURE #: 4
CLEAR HEIGHT: 19'
FULL WATERWAY: Unknown

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEM
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	1.63	1.04					
POSTING							
OPERATING	2.12	1.34	2.11	1.09	1.49	1.37	1.96
COMMENTS:							

PROPOSED STRUCTURE

STRUCTURE TYPE: Prestressed solid slab bridge

CLEAR SPAN(NORMAL TO STREAM): 33'
VERTICAL CLEARANCE ABOVE STREAMBED: 14'
WATERWAY OF FULL OPENING: 450 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	569.6	VELOCITY=	7.1 fps
Q10 =	571.6'	"	9.2 fps
Q25 =	572.8'	"	8.9 fps
Q50 =	574.1'	"	9.2 fps
Q100 =	575.9'	"	10.7 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 479.8'
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 579.3'
VERTICAL CLEARANCE: @ Q50 = 5.2'

SCOUR: Design for 6' minimum or to ledge.
REQUIRED CHANNEL PROTECTION: None

PERMIT INFORMATION

AVERAGE DAILY FLOW:	-	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	-	-
ORDINARY HIGH WATER:	-	Depth = 3.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: No temporary bridge required. An offsite detour will be used.
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

*The Gihon River splits into two channels that flow through Bridges 1 and 2. The flows listed are the total flows for the river upstream and through the bridges. Flows are higher downstream of the confluence of Bell Brook.

TRAFFIC MAINTENANCE NOTES

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

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_p:	3.0 INCH
3. DESIGN SPAN	L:	37.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	0.69 INCH
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f_y:	270 KSI
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	8.0 KIPS
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	6.0 KIPS
8. SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)	f'_c:	5.0 KSI
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	---
11. CONCRETE, CLASS C	f'_c:	---
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270	f_y:	-
14. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	---
15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
16. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	---
17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
18. PILE RESISTANCE FACTOR	ϕ:	---
19. LATERAL PILE DEFLECTION	Δ:	---
20. BASIC WIND SPEED	V_{3s}:	---
21. MINIMUM GROUND SNOW LOAD	p_g:	---
22. SEISMIC DATA PGA: 0.09	S_s:	---
	S_1:	---
23.		---
24.		---
25.		---
26.		---

PROJECT NAME: **JOHNSON**
PROJECT NUMBER: **BF 0248(4)**

FILE NAME: z13c066PI Sheet Builder_BR1.
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
PRELIMINARY INFORMATION SHEET (BRIDGE 1)
PLOT DATE: 5/2/2016
DRAWN BY: P. ROTH
CHECKED BY: R. HENDERSON
SHEET 2 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066pisheets.dgn
DATE/TIME = 5/4/2016
USER = 5237

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE 2)

Version
LRFD

INDEX OF SHEETS

SEE PRELIMINARY INFORMATION SHEET (BRIDGE 1) FOR INDEX, STANDARD SHEETS AND STRUCTURES DETAIL SHEETS.

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: August 2015

DRAINAGE AREA : 56.8 sq. mi (Total for Gihon River at Bridges 1 and 2)
CHARACTER OF TERRAIN : Hilly to mountainous, mixed land cover
STREAM CHARACTERISTICS : Well defined banks, incised, semi-alluvial and sinuous
NATURE OF STREAMBED : Mostly gravel and cobbles with some boulders and ledge

PEAK FLOW DATA

Q 2.33 =	1,510 cfs *	Q 50 =	5,820 cfs
Q 10 =	3,325 cfs	Q 100 =	7,330 cfs
Q 25 =	4,600 cfs	Q 500 =	12,920 cfs

DATE OF FLOOD OF RECORD Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 14.5 fps
ICE CONDITIONS : Moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: 1.4%
HEADWATERS: X
UNIFORM:
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span concrete T-beam bridge
YEAR BUILT: 1928
CLEAR SPAN(NORMAL TO STREAM): 50'
VERTICAL CLEARANCE ABOVE STREAMBED: 10'
WATERWAY OF FULL OPENING: 440 sq. ft.
DISPOSITION OF STRUCTURE: Replace superstructure
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Ledge

WATER SURFACE ELEVATIONS AT:

Q2.33 =	571.2'	VELOCITY =	9.6 fps
Q10 =	573.8'	"	12.4 fps
Q25 =	575.5'	"	13.6 fps
Q50 =	576.9'	"	14.6 fps
Q100 =	578.1'	"	15.3 fps

LONG TERM STREAMBED CHANGES: None noted.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 579.8'
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Johnson
HIGHWAY # : TH 33
CLEAR SPAN: 37'
YEAR BUILT: 1870
STRUCTURE TYPE: Single span covered bridge
DISTANCE: 4,100'
STRUCTURE #: CB 30
CLEAR HEIGHT: 10'
FULL WATERWAY: 370 sq. ft.

DOWNSTREAM STRUCTURE

TOWN: Johnson
HIGHWAY # : TH 3
CLEAR SPAN: 54'
YEAR BUILT: 1959
STRUCTURE TYPE: Single span covered bridge on steel beams
DISTANCE: 4,100'
STRUCTURE #: 4
CLEAR HEIGHT: 19'
FULL WATERWAY: Unknown

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEM
TONNAGE	**20**	**36**	**36**	**66**	**30**	**34.5**	**38**
INVENTORY	2.06	1.17					
POSTING							
OPERATING	2.68	1.52	2.51	1.37	1.8	1.64	1.97
COMMENTS:							

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span concrete NEXT Beam bridge

CLEAR SPAN(NORMAL TO STREAM): 50'
VERTICAL CLEARANCE ABOVE STREAMBED: 12'
WATERWAY OF FULL OPENING: 520 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	571.2'	VELOCITY=	9.6 fps
Q10 =	573.8'	"	12.4 fps
Q25 =	575.5'	"	13.6 fps
Q50 =	576.8'	"	14.6 fps
Q100 =	577.9'	"	15.3 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 579.8'
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 577.8'
VERTICAL CLEARANCE: @ Q50 = 1.0'

SCOUR: Calculated contraction scour is 0', up to Q200.
If new abutments are used, they should be designed for 6' minimum scour or to sound ledge.
REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV, as needed

PERMIT INFORMATION

AVERAGE DAILY FLOW:	-	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	-	-
ORDINARY HIGH WATER:	-	Depth = 3.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: No temporary bridge required. An offsite detour will be used.
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

*The Gihon River splits into two channels that flow through Bridges 1 and 2. The flows listed are the total flows for the river upstream and through the bridges. Flows are higher downstream of the confluence of Bell Brook.

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. THERE ARE NO SIDEWALKS

DESIGN VALUES

1.	DESIGN LIVE LOAD		HL-93
2.	FUTURE PAVEMENT	d_P:	3.0 INCH
3.	DESIGN SPAN	L:	51.55 FT
4.	MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	
5.	PRESTRESSING STRAND	f_y:	
6.	PRESTRESSED CONCRETE STRENGTH	f'_c:	
7.	PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	
8.	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)	f'_c:	5.0 KSI
9.	CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10.	CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	---
11.	CONCRETE, CLASS C	f'_c:	---
12.	REINFORCING STEEL	f_y:	60 KSI
13.	STRUCTURAL STEEL AASHTO M270 (WEATHERING)	f_y:	50 KSI
14.	NOMINAL BEARING RESISTANCE OF SOIL	q_n:	
15.	SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
16.	NOMINAL BEARING RESISTANCE OF ROCK	q_n:	
17.	ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
18.	PILE RESISTANCE FACTOR	ϕ:	---
19.	LATERAL PILE DEFLECTION	Δ:	---
20.	BASIC WIND SPEED	V_{3s}:	---
21.	MINIMUM GROUND SNOW LOAD	p_g:	---
22.	SEISMIC DATA PGA: 0.09	S_s:	---
		S_1:	---
23.			
24.			---
25.			---
26.			---

AS BUILT "REBAR" DETAIL

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

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2016	2800	320	66	5.1	190
2036	2900	330	66	7.6	290

20 year ESAL for flexible pavement from 2016 to 2036 : 1841000
40 year ESAL for flexible pavement from 2016 to 2056 : 4370000
Design Speed : 25 mph

PROJECT NAME: **JOHNSON**
PROJECT NUMBER: **BF 0248(4)**

FILE NAME: z13c066PI Sheet Builder_BR2.
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
PRELIMINARY INFORMATION SHEET (BRIDGE 2)
PLOT DATE: 5/2/2016
DRAWN BY: P. ROTH
CHECKED BY: R. HENDERSON
SHEET 3 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066pisheets.dgn
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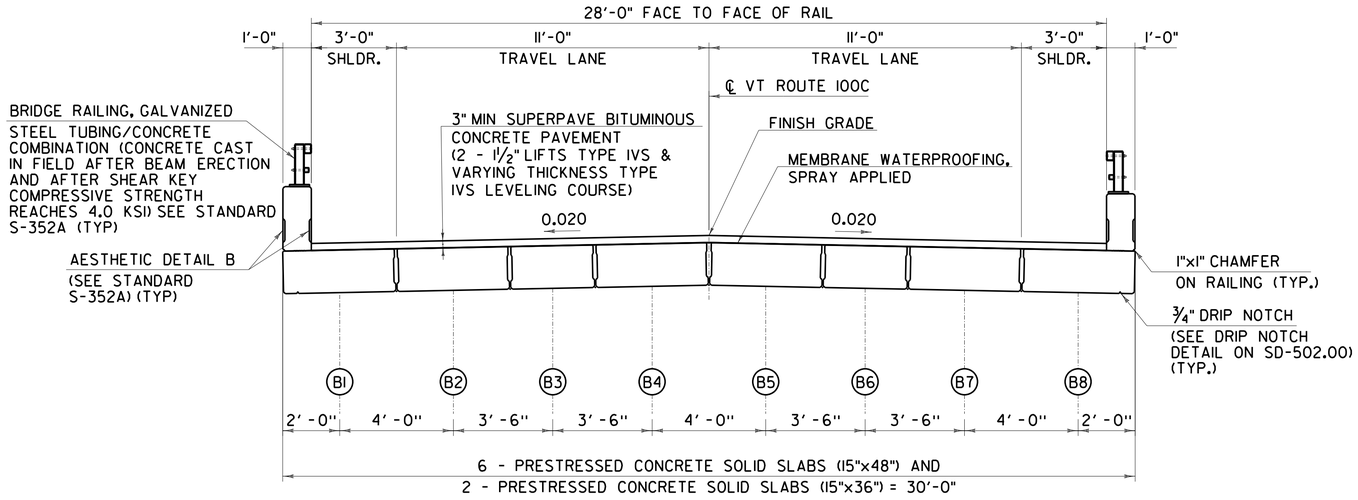
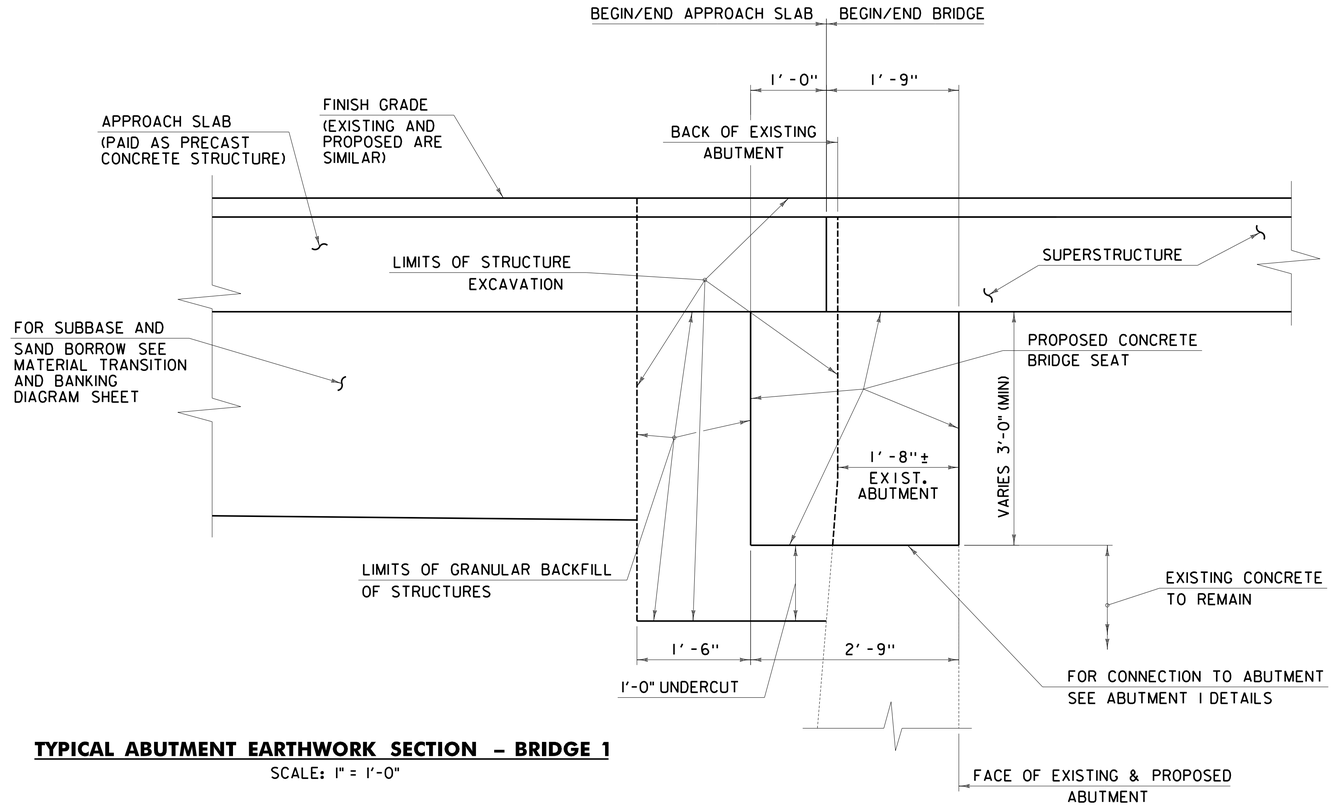
USER = 5237



BRIDGE 1 TYPICAL SECTION

SCALE: ⅜" = 1'-0"



TYPICAL ABUTMENT EARTHWORK SECTION – BRIDGE 1

SCALE: 1" = 1'-0"

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066typ_01.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
TYPICAL BRIDGE SECTION SHEET 1	SHEET 4 OF 93

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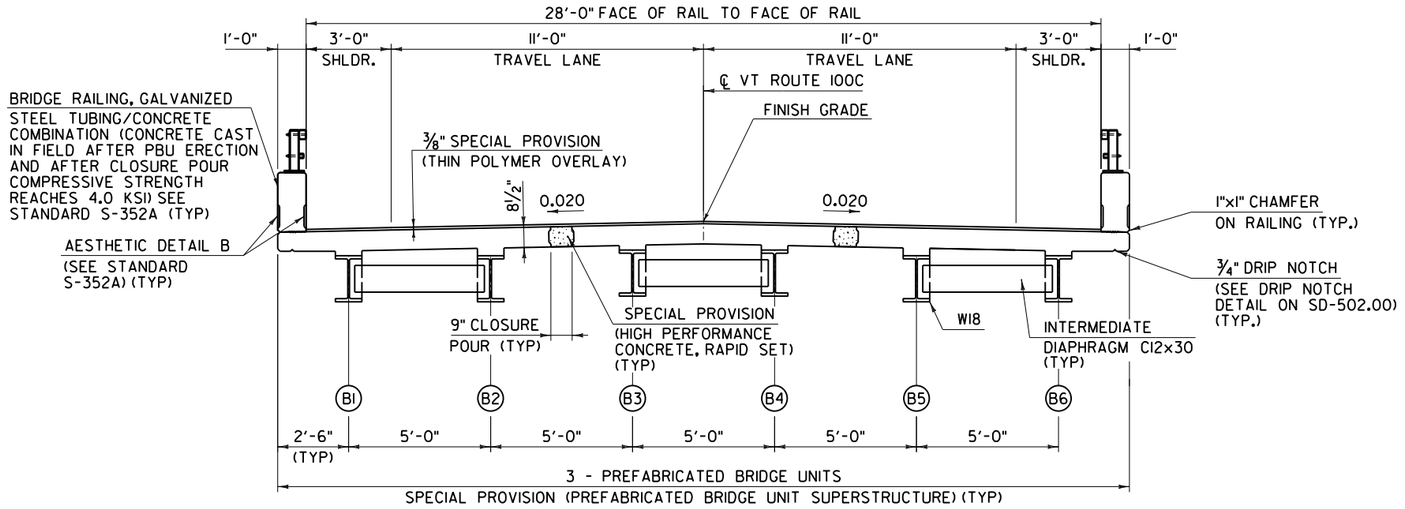
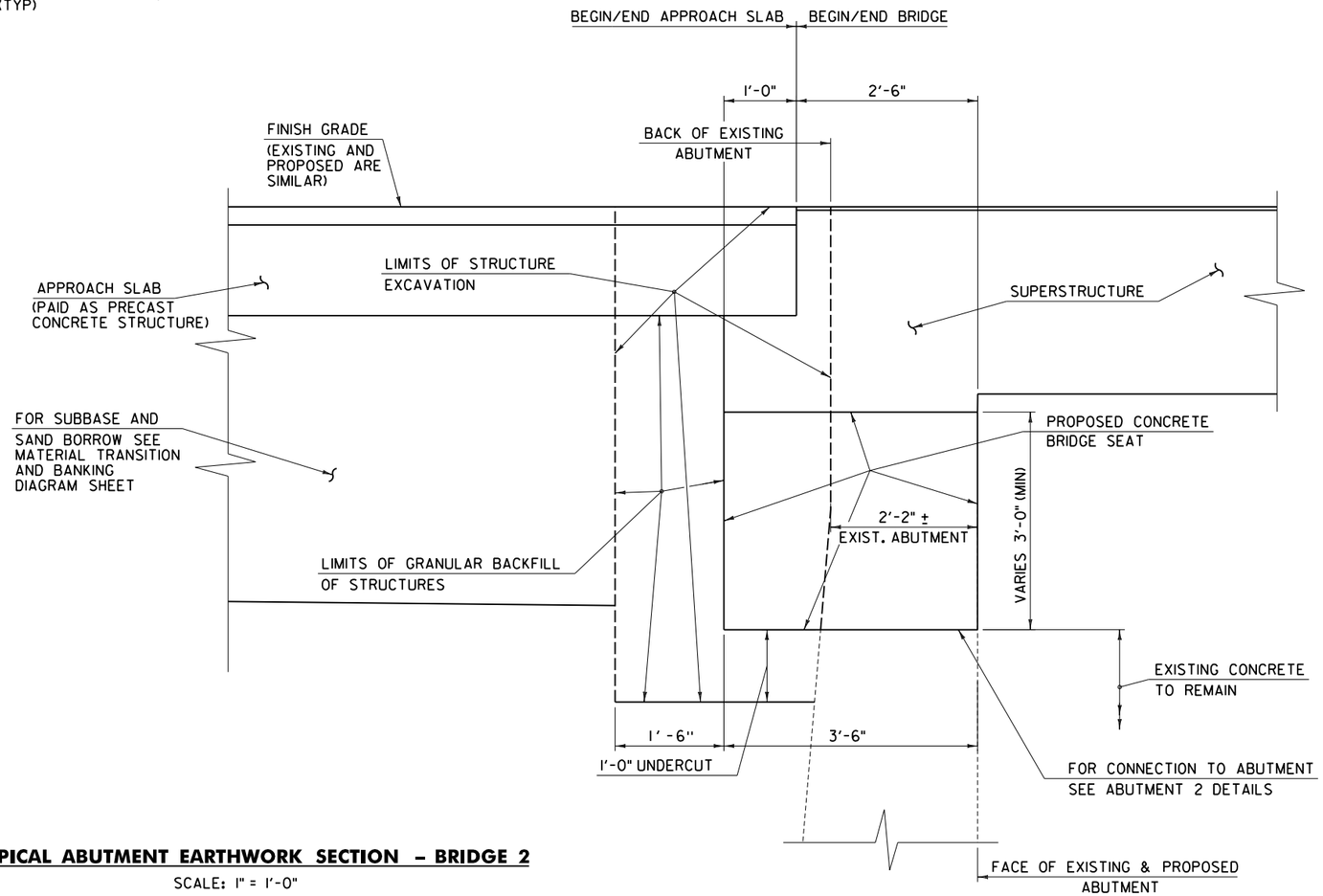
USER = 5237



BRIDGE 2 TYPICAL SECTION

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

NOTE: SEE BRIDGE 2 TYPICAL SECTIONS SHEET FOR ADDITIONAL INFORMATION



TYPICAL ABUTMENT EARTHWORK SECTION - BRIDGE 2

SCALE: 1" = 1'-0"

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066typ_02.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBRTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
TYPICAL BRIDGE SECTION SHEET 2	SHEET 5 OF 93

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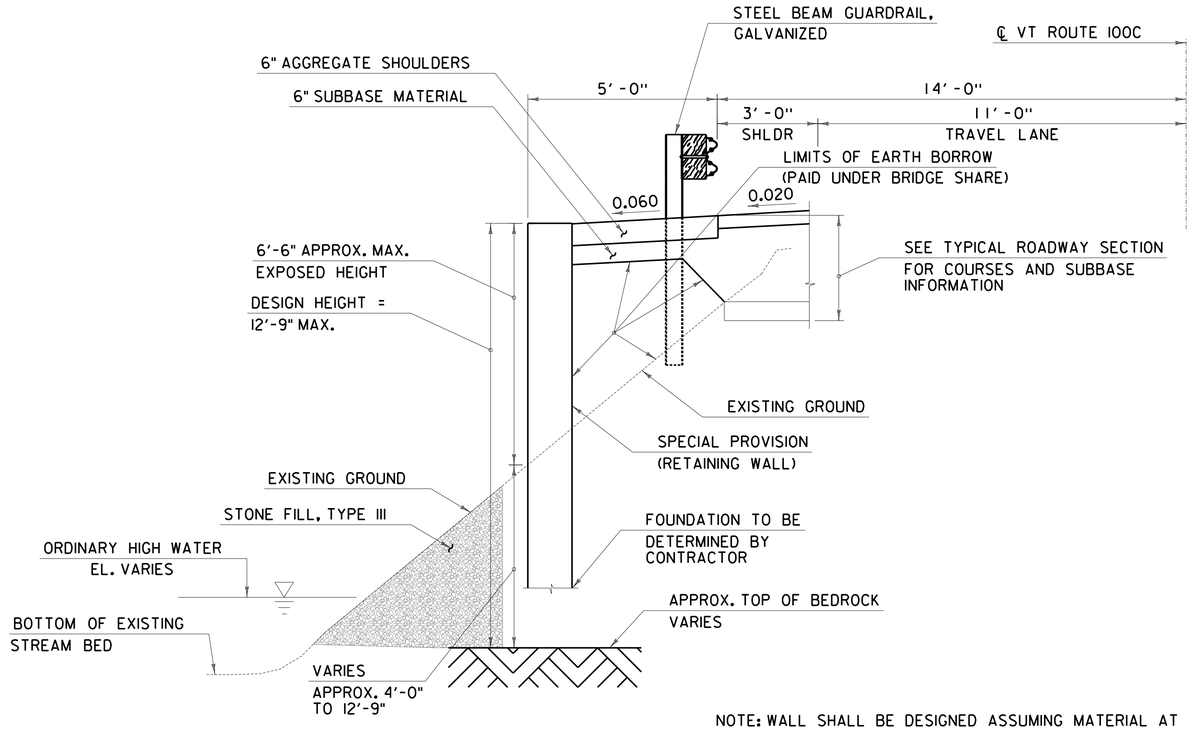
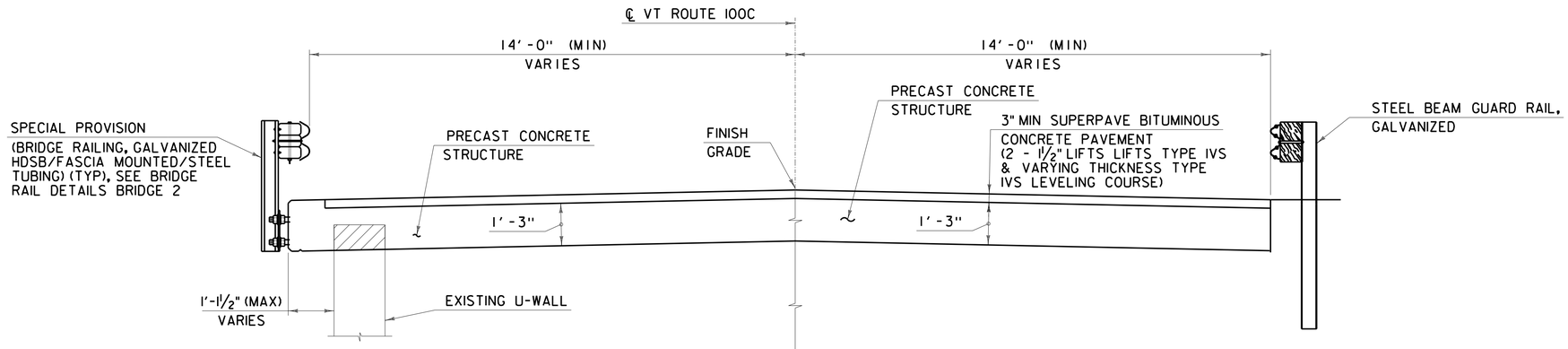
USER = 5237



NOTE: WALL SHALL BE DESIGNED ASSUMING MATERIAL AT OUTSIDE FACE WILL WASH AWAY, THEREFORE DESIGN HEIGHT WILL BE FROM TOP OF FINISH GRADE ON INSIDE FACE TO TOP OF BEDROCK.

TYPICAL RETAINING WALL AT NORTHEAST OF BRIDGE 2

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



APPROACH SLAB SECTION (BRIDGE 2) NORTHEAST CORNER ONLY

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

TYPICAL APPROACH SLAB SECTION

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

REMOVAL OF CONCRETE OR MASONRY

NOTE: PRECAST UNIT CLOSURE POURS NOT SHOWN.

PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BF 0248(4)
FILE NAME: zl3c066typ_03.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
TYPICAL BRIDGE SECTION SHEET 3	SHEET 6 OF 93

CHA

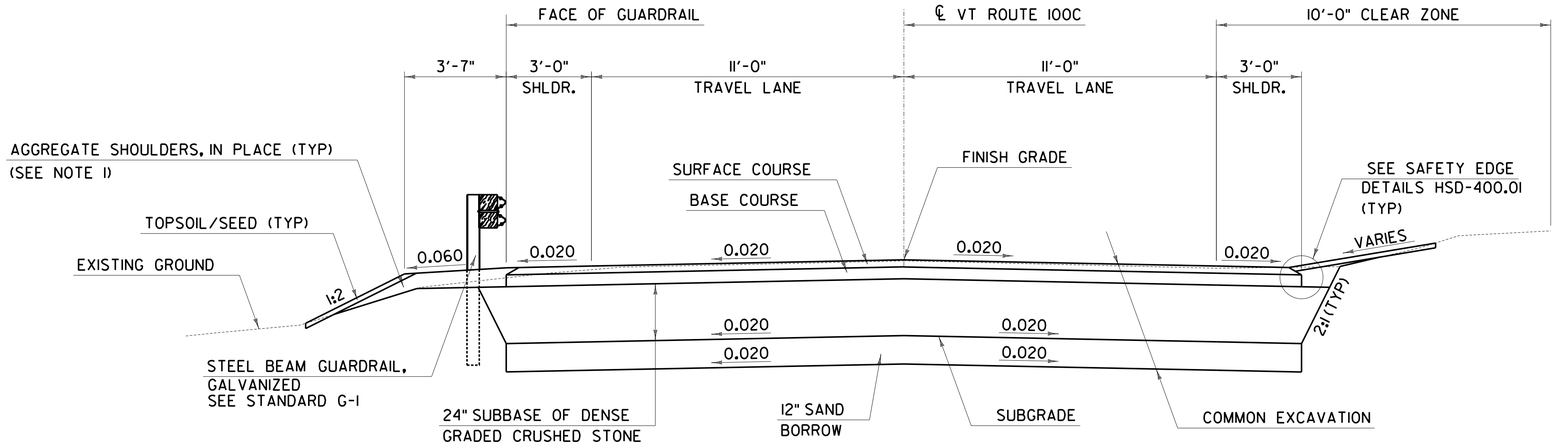
FILE NAME = Y:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066typ_03.dgn
DATE/TIME = 5/4/2016
USER = 5237

MATERIAL TOLERANCES
(IF USED ON PROJECT)

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

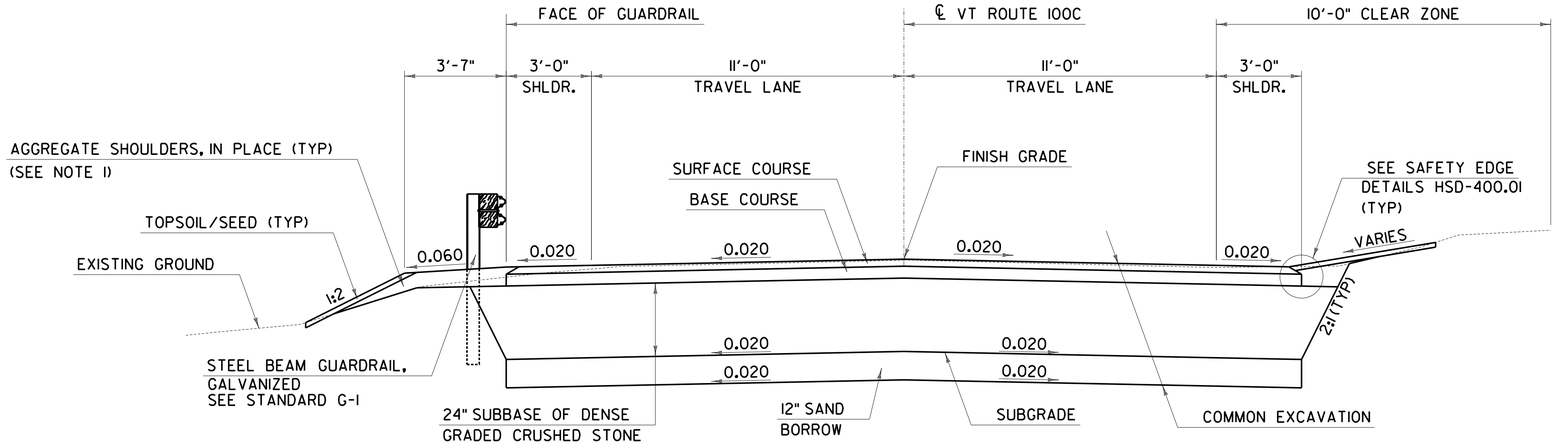
TYPICAL ROADWAY SECTION
VT ROUTE 100C

3" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IVS (2 - 1½" LIFTS)
5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IIS (2 - 2½" LIFTS)
24" SUBBASE OF DENSE GRADED CRUSHED STONE
12" SAND BORROW



SCALE: 3/8" = 1'-0"
STA 13+00.00 - STA 13+87.63
STA 16+83.62 - STA 17+00.00

3" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IVS (2 - 1½" LIFTS)
5" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IIS (2 - 2½" LIFTS)
31" SUBBASE OF DENSE GRADED CRUSHED STONE
12" SAND BORROW



SCALE: 3/8" = 1'-0"
STA 14+97.13 - STA 15+58.07

NOTES:

1. ALL EDGES OF PAVEMENT SHALL BE BACKED UP TO FULL HEIGHT WITH AGGREGATE SHOULDER MATERIAL AS DIRECTED BY THE ENGINEER AND WILL BE PAID FOR UNDER ITEM 402.12 AGGREGATE SHOULDERS.

2. SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1H OR CRS-1H) SHALL BE APPLIED AT A RATE OF 0.080 GAL/SY ON ALL EXISTING PAVEMENT SURFACES AND BETWEEN EACH LIFT OF PAVEMENT AT A RATE OF 0.040 GAL/SY.

CHA

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066typ.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
TYPICAL ROADWAY SECTION SHEET	SHEET 7 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066typ.dgn
DATE/TIME = 5/4/2016
USER = 5237

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, AND THEIR LATEST REVISIONS.
2. THE BRIDGES ARE DESIGNED FOR AN HL-93 LIVE LOADING WITH 3 INCH ALLOWANCE FOR FUTURE PAVEMENT.
3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
4. ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE", SHALL BE USED FOR THE REMOVAL OF THE SUPERSTRUCTURE, DECK, AND RAILINGS.
5. ITEM 529.25, "REMOVAL OF CONCRETE OR MASONRY", SHALL BE USED FOR CONCRETE REMOVAL OF ABUTMENTS AND WINGWALLS TO THE ELEVATIONS SHOWN IN THESE PLANS.
6. FOR TRAFFIC CONTROL NOTES, SEE TRAFFIC CONTROL PLAN LAYOUT SHEETS.

EARTHWORK

7. SUITABLE BACKFILL MATERIAL TO BE MATERIAL FROM COMMON EXCAVATION WHICH HAS BEEN APPROVED BY THE ENGINEER.
8. REMOVAL OF THE CGMP AT STATION 17+66 SHALL BE PAID FOR UNDER ITEM 204.20 TRENCH EXCAVATION OF EARTH.

CONCRETE

9. TEST BARS SHALL BE PROVIDED IN ACCORDANCE WITH THE "VERMONT AGENCY OF TRANSPORTATION MATERIAL SAMPLING MANUAL" AVAILABLE ON THE AGENCY WEBSITE.
10. ALL CONCRETE PLACED IN THE DECK CLOSURE POURS, ABUTMENT CLOSURE POURS, APPROACH SLAB CLOSURE POURS, AND ALL SUBSTRUCTURE CONCRETE SHALL BE ITEM 900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPO)".
11. ALL CONCRETE PLACED IN THE DECK OF THE PREFABRICATED BRIDGE UNITS SHALL MEET THE REQUIREMENTS OF ITEM 900.675 "SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE)". DIAMOND GRIND AND SHOT BLAST TOP OF BARE CONCRETE DECK PRIOR TO INSTALLING OVERLAY.
12. CONCRETE FOR BRIDGE RAILING SHALL BE AS PER SPECIFICATIONS AND SHALL NOT BE SUBSTITUTED FOR HIGH PERFORMANCE CONCRETE, RAPID SET.
13. ALL PRECAST APPROACH SLAB CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 540 - PRECAST CONCRETE.
14. ALL REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF SECTION 507 FOR REINFORCING STEEL, LEVEL I AND SHALL BE EPOXY COATED. ALL CAST-IN-PLACE REINFORCING STEEL WILL BE PAID FOR UNDER ITEM 507.11 REINFORCING STEEL, LEVEL I. ALL OTHER REINFORCING STEEL WILL BE INCLUDED IN THE UNIT BID PRICE FOR THE APPROPRIATE PRECAST CONCRETE PAY ITEM.
15. GROUT FOR SHEAR KEYS BETWEEN THE PRESTRESSED SLABS IN BRIDGE 1 SHALL BE MORTAR, TYPE IV IN ACCORDANCE WITH SECTION 510 - PRESTRESSED CONCRETE. GROUT FOR ANCHOR BOLTS SHALL BE MORTAR, TYPE IV IN ACCORDANCE WITH SECTION 531 - BRIDGE BEARING DEVICES. GROUT FOR SURFACES BETWEEN EXISTING CONCRETE AND PRECAST CONCRETE SHALL BE MORTAR, TYPE IV IN ACCORDANCE WITH SECTION 540 - PRECAST CONCRETE. GROUT SHALL BE PAID UNDER THE APPROPRIATE ITEM FROM THE AFOREMENTIONED SECTIONS. THE CONTRACTOR SHALL SUBMIT A GROUTING PROCEDURE PROPOSAL TO THE ENGINEER, INCLUDING A PREMIX NAME BRAND FOR APPROVAL.
16. CORRUGATED STEEL PIPES IN THE PRECAST ABUTMENTS FOR ANCHOR BOLT CAVITIES SHALL MEET THE REQUIREMENTS OF SUBSECTION 711.01, BE COATED IN ACCORDANCE WITH AASHTO M 218, AND BE TYPE 1. ALL COSTS ASSOCIATED WITH PLACING THE CORRUGATED STEEL PIPES SHALL BE INCLUDED IN THE BID PRICE FOR EACH 540.10 CONTRACT ITEM.
17. ITEM 514.10, "WATER REPELLENT, SILANE", SHALL BE APPLIED TO ALL NEW EXPOSED CONCRETE RAILING, SUPERSTRUCTURE, AND SUBSTRUCTURE SURFACES, EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES, AS WELL AS EXISTING SUBSTRUCTURE SURFACES ABOVE ORDINARY HIGH WATER.
18. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

ALONG BACK FACES OF WALLS AGAINST EARTH	2.0 IN.
ALONG TOP SURFACE OF DECK SLAB	2.5 IN.
ALONG BOTTOM SURFACE OF DECK SLAB	1.5 IN.
ELSEWHERE UNLESS OTHERWISE NOTED	3.0 IN.

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

PRESTRESSED SOLID SLABS

20. DESIGN VALUES:
    A. CONCRETE COMPRESSIVE STRENGTH: f'c = 8 KSI
    B. CONCRETE COMPRESSIVE STRENGTH AT RELEASE: f'ci = 6 KSI
    C. PRESTRESSING STRANDS: 0.6 IN. DIAMETER, 270 KSI, LOW-RELAXATION 7-WIRE STRANDS.
    D. JACKING FORCE PER PRESTRESSING STRAND AFTER ACCOUNTING FOR CHUCK SLIPPAGE = 44 KIPS
    E. POST-TENSIONING STRANDS: 0.5 IN. DIAMETER, 270 KSI, LOW-RELAXATION 7-WIRE STRANDS.
    F. JACKING FORCE PER POST-TENSIONING STRAND = 33 KIPS
    G. THERE SHALL BE 3 STRANDS PER POST-TENSIONING DUCT
    H. ASSUMED MODULUS OF ELASTICITY FOR THE STRAND IS 28,500 KSI
21. 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 MAY BE REQUIRED. IN NO CASE SHALL THE CONTRACTOR ATTACH ADDITIONAL FORM OR SCREED SUPPORTS BY DRILLING OR SIMILAR MEANS INTO ANY PRECAST/PRESTRESSED SUPERSTRUCTURE UNITS.
22. ALL POST-TENSIONING STRANDS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 510 - PRESTRESSED CONCRETE. PAYMENT FOR GALVANIZED ANCHOR ASSEMBLIES, DUCTS, AND POST-TENSIONING STRANDS SHALL BE INCLUDED UNDER EACH ITEM 900.640, "SPECIAL PROVISION (PRESTRESSED CONCRETE SOLID SLABS)", AS APPROPRIATE.

PREFABRICATED BRIDGE UNITS

23. PREFABRICATED BRIDGE UNITS SHALL BE PAID UNDER ITEM 900.675, "SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE)".
24. UNLESS OTHERWISE NOTED, ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270/M270M GRADE 50 AND SHALL BE PAID FOR UNDER ITEM 900.675, "SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE)".
25. BEAMS SHALL BE SUPPORTED AT BEARING POINTS ONLY. AFTER SUPERSTRUCTURE STEEL ELEMENTS HAVE BEEN SET UP AT THE SHOP, ELEVATIONS ALONG THE TOP OF THE GIRDERS SHALL BE TAKEN FOR USE IN DETERMINING FINISHED GRADES. ENDS OF BEAMS SHALL BE VERTICAL IN FINAL POSITION.
26. CONTRACTOR MAY SUBSTITUTE PLATE GIRDERS FOR ROLLED BEAMS AT NO ADDITIONAL COST TO THE STATE. CONTRACTOR MUST PROVIDE DRAWINGS AND CALCULATIONS STAMPED BY A PROFESSIONAL ENGINEER.

PRECAST APPROACH SLABS

27. SLAB EDGES TO BE IN CONTACT WITH HPC RAPID SET CONCRETE SHALL BE SANDBLASTED PRIOR TO DELIVERY AND POWER WASHED WITH WATER PRIOR TO INSTALLATION.
28. FILL CLOSURE POURS WITH HPC RAPID SET CONCRETE IN ACCORDANCE WITH ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)". CONCRETE SHALL HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.
29. THE FABRICATOR MAY ALTER THE DESIGN WITHIN THESE PLANS TO ACCOMMODATE THEIR SPECIFIC OPERATION. THIS ALTERATION SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER.
30. COST OF DETAILING, FABRICATING, SHIPPING AND INSTALLING CLOSURE POUR REINFORCEMENT IS INCLUDED WITH EACH 540.10 ITEM.

MISCELLANEOUS

31. ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, SPRAY APPLIED", SHALL BE APPLIED TO THE DECK OF BRIDGE 1 AS PER THE MANUFACTURER'S INSTRUCTIONS AND EXTEND ONTO THE APPROACH SLABS TWO FEET BEYOND THE BEGIN BRIDGE/END OF BRIDGE. IF TRAFFIC WILL BE DRIVING DIRECTLY IN THE MEMBRANE SURFACE, AN AGGREGATE WEARING SURFACE SHALL BE ADHERED TO THE TOP MEMBRANE COAT PER THE SPECIFICATIONS.
32. THERE IS AN EXISTING SEWER LINE BENEATH THE 18" PIPE TO BE REMOVED AND REPLACED AT STA. 17+66.0. CONTRACTOR SHALL TAKE ALL APPROPRIATE MEASURES TO AVOID DISTURBING THE SEWER LINE INCLUDING HAND EXCAVATION. COST OF THESE MEASURES IS INCLUDED WITH TRENCH EXCAVATION OF EARTH.

PROPOSED SEQUENCE OF CONSTRUCTION

PROPOSED SEQUENCE OF SUBSTRUCTURE CONSTRUCTION:

REMOVE SUPERSTRUCTURE AND EXCAVATE BEHIND ABUTMENTS.
REMOVE CONCRETE ON ABUTMENTS TO THE ELEVATIONS SHOWN IN THESE PLANS.
DRILL AND GROUT DOWELS INTO EXISTING ABUTMENT.
POWER WASH TOP OF EXISTING ABUTMENT.
PLACE ANCHOR BOLTS.
ERECT CAST-IN-PLACE CONCRETE ABUTMENT SECTIONS.
UNIT BLOCK RETAINING WALL CONSTRUCTION CAN OCCUR BEFORE, DURING, OR AFTER ABUTMENT CONSTRUCTION.
AFTER CLOSURE POUR CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3.5 KSI, PLACE BACKFILL.

PROPOSED SEQUENCE OF CONSTRUCTION (CONTINUED)

PROPOSED SEQUENCE OF SUPERSTRUCTURE CONSTRUCTION FOR BRIDGE 1:

PREPARE GRADE BEHIND ABUTMENTS FOR APPROACH SLABS.
VERIFY BRIDGE SEAT ELEVATIONS AND TAKE CORRECTIVE ACTION IF NECESSARY.
POWER WASH TOP OF ABUTMENT SEATS.
INSTALL BEARINGS.
INSTALL CORK MATERIAL.
ERECT PRESTRESSED SLABS.
INSTALL HARDWOOD WEDGES BETWEEN ADJACENT SLABS TO MAINTAIN PROPER JOINT OPENING (A MINIMUM OF ONE WEDGE AT EACH TRANSVERSE POST-TENSIONING LOCATION).
INSTALL BACKER ROD BELOW THE BOTTOM OF THE KEYWAY.
INSTALL POST-TENSIONING STRANDS AND TENSION TO 3 KIPS TO REMOVE SAG AND SEAT CHUCK.
INSTALL PRECAST APPROACH SLABS.
PUMP GROUT FROM LOW ENDS OF BRIDGE SEAT THROUGH ANCHOR BOLT DUCTS CLOSEST TO EACH FASCIA TO FILL VOID BETWEEN BRIDGE SEAT AND BOTTOM OF PRESTRESSED SLABS AND APPROACH SLABS. PUMP GROUT UNTIL ALL ANCHOR BOLT DUCTS AND APPROACH SLAB DOWEL DUCTS ARE FULL (DO NOT FILL 6½"x6½"x4" RECESS AT TOP OF ANCHOR BOLT DUCTS).
INSTALL ANCHOR PLATES, WASHERS, AND NUTS FOR ANCHOR BOLTS.
GROUT SHEAR KEY.
FULLY TENSION TRANSVERSE TENDONS PER SUBSECTION 510.14.
FILL ANCHOR BOLT AND TRANSVERSE POST-TENSIONING RECESSES WITH NON-SHRINK MORTAR, TYPE IV IN ACCORDANCE WITH SECTION 540.
FOR CLOSURE POUR BETWEEN APPROACH SLAB SECTIONS, PLACE REINFORCEMENT AND POUR CLOSURE POUR CONCRETE.
FORM AND POUR BRIDGE RAILING CONCRETE.
AFTER RAILING CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3.5 KSI, INSTALL STEEL RAILING.
PLACE WATERPROOFING AND PAVEMENT.

PROPOSED SEQUENCE OF SUPERSTRUCTURE CONSTRUCTION FOR BRIDGE 2:

PREPARE GRADE BEHIND ABUTMENTS FOR APPROACH SLABS.
VERIFY BRIDGE SEAT ELEVATIONS AND TAKE CORRECTIVE ACTION IF NECESSARY.
POWER WASH TOP OF ABUTMENT SEATS.
INSTALL BEARINGS.
ERECT PREFABRICATED BRIDGE UNITS.
FOR CLOSURE POUR ABOVE ABUTMENT SEATS, PLACE REINFORCEMENT AND POUR CONCRETE.
AFTER ABUTMENT SEAT CLOSURE POUR CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 4.0 KSI, PLACE APPROACH SLABS.
FOR CLOSURE POUR BETWEEN PREFABRICATED BRIDGE UNITS, PLACE REINFORCEMENT AND POUR CLOSURE POUR CONCRETE.
FOR CLOSURE POUR BETWEEN APPROACH SLAB SECTIONS, PLACE REINFORCEMENT AND POUR CLOSURE POUR CONCRETE.
AFTER PREFABRICATED BRIDGE UNIT CLOSURE POURS HAVE REACHED A MINIMUM COMPRESSIVE STRENGTH OF 4.0 KSI, FORM AND POUR BRIDGE RAILING CONCRETE.
AFTER RAILING CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 4.0 KSI, INSTALL STEEL RAILING.
DIAMOND GRIND AND PLACE OVERLAY.

ALTERNATE SEQUENCES OF CONSTRUCTION MAY BE SUBMITTED FOR APPROVAL BY THE RESIDENT ENGINEER.

FILE NAME = Y:\Projects\VANYK3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066gen.dgn
DATE/TIME = 5/4/2016
USER = 5237

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066gen.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
GENERAL NOTES

PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON

QUANTITY SHEET 1

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	RETAINING WALL	EROSION CONTROL	BRIDGE 1 SUPERSTRUCTURE	BRIDGE 2 SUPERSTRUCTURE	FULL C.E. ITEMS	BRIDGE 1 ABUTMENTS	BRIDGE 2 ABUTMENTS	BRIDGE 1 APPROACH SLABS	BRIDGE 2 APPROACH SLABS
1									
1450									
	60								
400									
40									
90									
1									
						40	50		
40						30	35		
900									
30									
						3700	5600		
						70	70		
			1			2	1		
			56	56					
			135						
			15						
			89	119					
			1	1					
						10	12		
			32						
				12					
								1	
								1	
									1
									1
							1		
74									
74									
74									
74									
1									
		6							
	60								
6									
3									
200									
9									
1									
335									
40									

TOTALS

GRAND TOTAL	FINAL
1	
1450	
60	
400	
40	
90	
1	
90	
105	
900	
30	
9300	
140	
4	
112	
135	
15	
208	
2	
22	
32	
12	
1	
1	
1	
1	
1	
74	
74	
74	
74	
1	
6	
60	
6	
3	
200	
9	
1	
335	
40	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	-
CY	COMMON EXCAVATION	203.15	88
CY	EARTH BORROW	203.30	4
CY	SAND BORROW	203.31	57
CY	GRANULAR BORROW	203.32	EST.
CY	TRENCH EXCAVATION OF EARTH	204.20	EST.
CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-
CY	STRUCTURE EXCAVATION	204.25	10
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	7
CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	26
CY	AGGREGATE SHOULDERS, IN PLACE	402.10	4
LB	REINFORCING STEEL, LEVEL I	507.11	91
LF	DRILLING AND GROUTING DOWELS	507.16	7
GAL	WATER REPELLENT, SILANE	514.10	EST.
LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	EST.
SY	MEMBRANE WATERPROOFING, SPRAY APPLIED	520.10	2
LF	JOINT SEALER, POLYURETHANE	524.21	1
LF	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	525.45	-
EACH	PARTIAL REMOVAL OF STRUCTURE	529.20	-
CY	REMOVAL OF CONCRETE OR MASONRY	529.25	0.7
EACH	BEARING DEVICE ASSEMBLY, PLAIN ELASTOMERIC PAD	531.16	-
EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17	-
LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB 1)	540.10	-
LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB 2)	540.10	-
LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB 3)	540.10	-
LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB 4)	540.10	-
LS	PRECAST CONCRETE STRUCTURE (HEADWALL)	540.10	-
	BEGIN OPTION AA		
LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215	-
LF	18" PCCSP(P1) .064 (2-2/3 X 1/2)	601.0615	-
LF	18" RCP CLASS III	601.0815	-
LF	18" CPEP(SL)	601.2615	-
	END OPTION AA		
MGAL	DUST CONTROL WITH WATER	609.10	EST.
CY	STONE FILL, TYPE II	613.11	0.9
CY	STONE FILL, TYPE III	613.12	EST.
TON	BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS	616.47	EST.
EACH	YIELDING MARKER POSTS	619.17	-
LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	11
EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	-
EACH	GUARDRAIL APPROACH SECTION, GALV HD STEEL BEAM	621.737	-
LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	8
HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORK SUMMARY
1362	CY	COMMON EXCAVATION
90	CY	TRENCH EXCAVATION OF EARTH
90	CT	STRUCTURE EXCAVATION
1542	CY	SUBTOTAL
65	CY	PLANIMETERED FILL
1.15		FACTOR
75	CY	PLANIMETERED FILL INCLUDING FACTOR
1542	CY	TOTAL MATERIAL AVAILABLE FOR FILL
75	CY	TOTAL FILL INCLUDING FACTOR
1467	CY	EXCESS EXCAVATION

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066qty.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
BRIDGE AND ROADWAY QUANTITY SHEET 1

PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: R. HENDERSON
SHEET 9 OF 93

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FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066qty.dgn
DATE/TIME = 5/4/2016
USER = 5237

QUANTITY SHEET 2

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	RETAINING WALL	EROSION CONTROL	BRIDGE 1 SUPERSTRUCTURE	BRIDGE 2 SUPERSTRUCTURE	FULL C.E. ITEMS	BRIDGE 1 ABUTMENTS	BRIDGE 2 ABUTMENTS	BRIDGE 1 APPROACH SLABS	BRIDGE 2 APPROACH SLABS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
800										800		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	-
1160										1160		LF	DURABLE 4 INCH WHITE LINE, TYPE A TAPE	646.4011	10
1120										1120		LF	DURABLE 4 INCH YELLOW LINE, TYPE A TAPE	646.4111	10
2310										2310		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	10
2230										2230		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	10
475										475		EACH	LINE STRIPING TARGETS	646.76	15
		130								130		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515	8
40										40		LB	SEED	651.15	EST.
80										80		LB	FERTILIZER	651.18	EST.
1										1		TON	AGRICULTURAL LIMESTONE	651.20	EST.
1										1		TON	HAY MULCH	651.25	EST.
20										20		CY	TOPSOIL	651.35	EST.
		1								1		LS	EPSC PLAN	652.10	-
		100								100		HR	MONITORING EPSC PLAN	652.20	EST.
		1								1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	-
						15	15			30		CY	VEHICLE TRACKING PAD	653.35	EST.
		1								1		EACH	INLET PROTECTION DEVICE, TYPE I	653.40	-
		650								650		LF	BARRIER FENCE	653.50	52
1										1		LS	TREE PROTECTION	656.85	-
38										38		SF	TRAFFIC SIGNS, TYPE A	675.20	0.15
160										160		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	6
24										24		EACH	REMOVING SIGNS	675.50	-
7										7		EACH	DELINEATOR WITH STEEL POST	676.10	-
1										1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-
						27	51			78		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPO)	900.608	1
6										6		EACH	SPECIAL PROVISION (CPM SCHEDULE)	900.620	-
			4	3						7		EACH	SPECIAL PROVISION (GUARDRAIL APPROACH SECTION TO CONCRETE BRIDGE RAILING)	900.620	-
									36	36		LF	SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/STEEL TUBING)	900.640	-
65										65		LF	SPECIAL PROVISION (BURIED GUARDRAIL END, GALVANIZED)	900.640	2.5
				160						160		LF	SPECIAL PROVISION (PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE)(FPO)	900.640	1
			77							77		LF	SPECIAL PROVISION (PRESTRESSED CONCRETE SOLID SLABS)(15"X36")	900.640	-
			231							231		LF	SPECIAL PROVISION (PRESTRESSED CONCRETE SOLID SLABS)(15"X48")	900.640	-
				1						1		LS	SPECIAL PROVISION (GALVANIZING STRUCTURAL STEEL)	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)	900.650	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)
301.0	TONS	TYPE IVS
283.4	TONS	TYPE IIS
584.4	TONS	SUBTOTAL
115.6	TONS	ROUNDING
700	TONS	TOTAL

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066qty.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
BRIDGE AND ROADWAY QUANTITY SHEET 2

PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: R. HENDERSON
SHEET 10 OF 93

FILE NAME = V:\Projects\VNYK\K313.28410\CADD_MSTN\13c066\Consultants\Structures\z13c066qty.dgn
DATE/TIME = 5/4/2016
USER = 5237

QUANTITY SHEET 3

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	RETAINING WALL	EROSION CONTROL	BRIDGE 1 SUPERSTRUCTURE	BRIDGE 2 SUPERSTRUCTURE	FULL C.E. ITEMS	BRIDGE 1 ABUTMENTS	BRIDGE 2 ABUTMENTS	BRIDGE 1 APPROACH SLABS	BRIDGE 2 APPROACH SLABS
1									
	600								
235									
				170					
						52	37		
700									
60									

TOTALS

GRAND TOTAL	FINAL
1	
600	
235	
170	
89	
700	
60	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650	-
SF	SPECIAL PROVISION (RETAINING WALL)	900.670	
SY	SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	900.675	5
SY	SPECIAL PROVISION (THIN POLYMER OVERLAY)	900.675	EST.
SY	SPECIAL PROVISION (UNIT BLOCK RETAINING WALL)	900.675	EST.
TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680	115.6
CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1H OR CRS-1H)	900.683	6

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

FILE NAME = W:\Projects\ANYK3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066qty.dgn
DATE/TIME = 5/4/2016
USER = 5237

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066qty.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
BRIDGE AND ROADWAY QUANTITY SHEET 3

PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: R. HENDERSON
SHEET 11 OF 93

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

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

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

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

COMMON TOPOGRAPHIC POINT SYMBOLS

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

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

PROPOSED GEOMETRY CODES

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

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

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

ABOVE GROUND UTILITIES (AERIAL)

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

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

CZ	CLEAR ZONE
	PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

	TOP OF CUT SLOPE
	TOE OF FILL SLOPE
	STONE FILL
	BOTTOM OF DITCH ℄
	CULVERT PROPOSED
	STRUCTURE SUBSURFACE
PDF	PROJECT DEMARCATION FENCE
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	SLOPE RIGHTS
6f	6F PROPERTY BOUNDARY
4f	4F PROPERTY BOUNDARY
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	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

FILE NAME = V:\Projects\VKY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066leg.dgn
DATE/TIME = 5/4/2016
USER = 5237

PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BF 0248(4)

FILE NAME: zl3c066leg.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: D. GOZALKOWSKI
CONVENTIONAL SYMBOLS LEGEND SHEET	SHEET 12 OF 93

CHA

GPS CONTROL POINTS

WILLOW JOHNSON
NORTH = 783529.516
EAST = 1576565.987
ELEV. = 468.400

JOHNSON, VT. SET 12 CM (5 INCHES) BELOW GROUND IN THE TOP OF A FENO STYLE MONUMENT. 6.5 M (21.3 FT) SOUTHWEST OF AND ABOUT 0.3 M (1.0 FT) LOWER THAN THE CL OF VT ROUTE 15, 12.7 M (41.7 FT) EAST NORTHEAST OF THE CL OF THE LAMOILLE VALLEY RAILROAD, 8.3 M (27.2 FT) EAST OF AN UNNUMBERED TELEGRAPH POLE, 40.8 M (133.9 FT) NORTHWEST OF POLE NO 1829, 49.4 M (162.1 FT) SOUTHEAST OF POLE NO 320T/1830, AND 0.3 M (1.0 FT) NORTHEAST OF A FIBERGLASS WITNESS. NOTE, MARK IS INTERVISIBLE WITH MARK A99012.

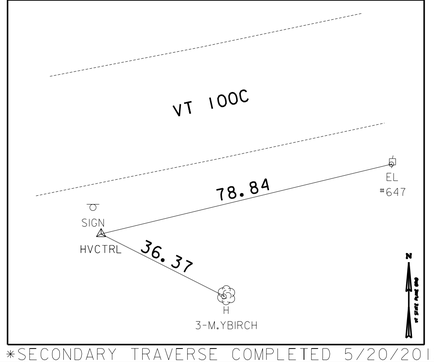
A99012
NORTH = 782485.886
EAST = 1579355.260
ELEV. = 517.970

JOHNSON, VT. THE MARK IS SET 5 CM (2 INCHES) BELOW GROUND, 9.2 M (30.2 FT) SOUTH OF AND ABOUT 0.2 M (0.7 FT) HIGHER THAN THE CENTERLINE OF VT ROUTE 15, 51.7 M (169.6 FT) SOUTHEAST OF POLE NO 1819, 62.2 M (204.1 FT) NORTHEAST OF THE NORTHEAST CORNER OF A ONE STORY HOUSE, AND 41.0 M (134.5 FT) SOUTHWEST OF POLE NO 1818 AND A FIBERGLASS WITNESS.
MARK IS INTERVISIBLE WITH MARK LIN DALE (LIN DALE IS NOT GPSABLE WITHOUT MAJOR BRUSH AND TREE CLEARING.) MARK IS INTERVISIBLE WITH MARK WILLOW JOHNSON.

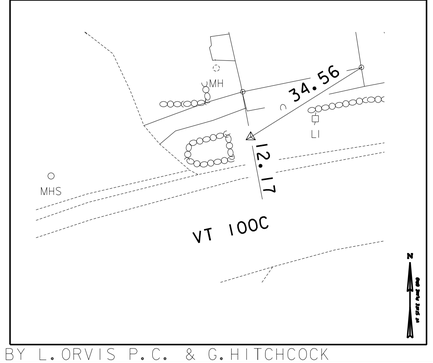
THIS TRAVERSE IS AN EXTENSION OF A TRAVERSE THAT WAS RUN FOR THE LVRR [04X503]

TRAVERSE TIES

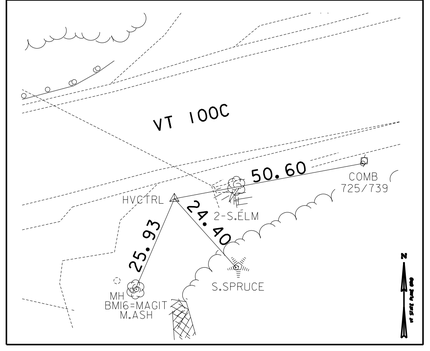
HVCTRL #14
NORTH = 779937.064
EAST = 1597854.921
ELEV. = 584.243



HVCTRL #15
NORTH = 780165.059
EAST = 1598450.002
ELEV. = 585.480



HVCRTL #16
NORTH = 780138.496
EAST = 1598917.027
ELEV. = 587.011



NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

*SECONDARY TRAVERSE COMPLETED 5/20/2013 BY L.ORVIS P.C. & G.HITCHCOCK

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: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: survey\x13C066t1.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: G.HITCHCOCK
TIE SHEET

PLOT DATE: 5/4/2016
DRAWN BY: G.HITCHCOCK
CHECKED BY: G.HITCHCOCK
SHEET 13 OF 89

END APPROACH
BEGIN PROJECT
VT ROUTE 100C
STA 13+00.00
(MM 0.945)

STATION EQUALITY
STA 12+69.23
VT ROUTE 100C =
STA 30+00.00
TH-35 (SINCLAIR ROAD)

PI STA 13+16.06 BK. =
PI STA 13+15.71 AHD.

BEGIN APPROACH
STA 12+25.00

PC
STA 12+65.13

R=10'
R=5'
R=20'
R=70'

3'-0"
11'-0"
4'-0"
11'-5"
3'-6"
7'-0"
PAVEBACK

N82° 46' 04" E
CURVE 1
N71° 01' 07" E
S33° 51' 33" E

MATCH LINE STA 13+50, SEE NEXT SHEET

POB
STA 11+00.00

VT ROUTE 100C
TO JOHNSON

12+00
11+00

POE
STA 31+00.00

TH-35
(SINCLAIR ROAD)

MANHOLE
HVCTRL #15
GRAVEL DRIVE
PAVED DRIVE
HISTORIC
DRIVE
ET
CZ
COMP
PLUGGED
P L

N
VT STATE PLANE GRID

CURVE 1 (VT ROUTE 100C)

△ = 11°44' 57" RT
D = 11°34' 30"
R = 495.00'
T = 50.93'
L = 101.51'
E = 2.61'
BANK = N.C.

LEGEND

ITEM 613.11
STONE FILL, TYPE II

NOTE:

1. ALL EXISTING TREES TO REMAIN UNLESS NOTED OR AS DIRECTED BY THE ENGINEER.

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

CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066bdr.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
PLAN LAYOUT SHEET 1

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 14 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066bdr.dgn
DATE/TIME = 5/4/2016
USER = 5237

SPECIAL PROVISION (BURIED GUARDRAIL END, GALVANIZED)
STA 13+59.3 - STA 14+21.8 RT

SPECIAL PROVISION (GUARDRAIL APPROACH SECTION TO CONCRETE BRIDGE RAILING)
STA 14+21.8 - STA 14+34.3 RT
STA 14+23.9 - STA 14+36.4 LT
STA 14+78.1 - STA 14+90.6 LT
STA 14+80.9 - STA 14+93.4 RT
STA 15+60.1 - STA 15+72.6 LT
STA 15+63.6 - STA 15+76.1 RT
STA 16+33.6 - STA 16+46.1 RT

ANCHOR FOR STEEL BEAM RAIL
STA 13+65.8 RT
STA 14+15.3 RT
STA 14+17.9 LT
STA 14+98.6 LT
STA 15+13.9 RT
STA 15+44.5 LT
STA 15+55.6 RT
STA 16+54.1 RT
STA 17+66.6 LT

STEEL BEAM GUARDRAIL, GALVANIZED
STA 14+11.4 - STA 14+23.9 LT
STA 14+90.6 - STA 15+05.1 LT
STA 14+93.4 - STA 15+20.4 RT
STA 15+38.0 - STA 15+60.1 LT
STA 15+49.1 - STA 15+63.6 RT
STA 16+46.1 - STA 16+60.6 RT
STA 16+96.1 - STA 17+73.1 LT

BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS
STA 16+65.0 - STA 17+45.0 LT

BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION
STA 14+34.3 - STA 14+80.9 RT
STA 14+36.4 - STA 14+78.1 LT
STA 15+72.6 - STA 16+33.6 LT
STA 15+76.1 - STA 16+33.6 RT

REMOVAL OF EXISTING DELINEATOR
STA 14+02.0 RT
STA 14+18.0 LT
STA 15+00.0 LT
STA 15+00.0 RT
STA 15+56.0 RT
STA 15+57.0 LT
STA 16+66.0 RT
STA 17+71.0 LT

STONE FILL, TYPE II
STA 17+30.0 LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 14+02.0 - STA 14+39.0 RT
STA 14+18.0 - STA 14+39.0 LT
STA 14+77.0 - STA 15+00.0 LT
STA 14+77.0 - STA 15+00.0 RT
STA 15+56.0 - STA 15+79.0 RT
STA 15+57.0 - STA 15+79.0 LT
STA 16+33.0 - STA 17+71.0 LT
STA 16+33.0 - STA 16+66.0 RT

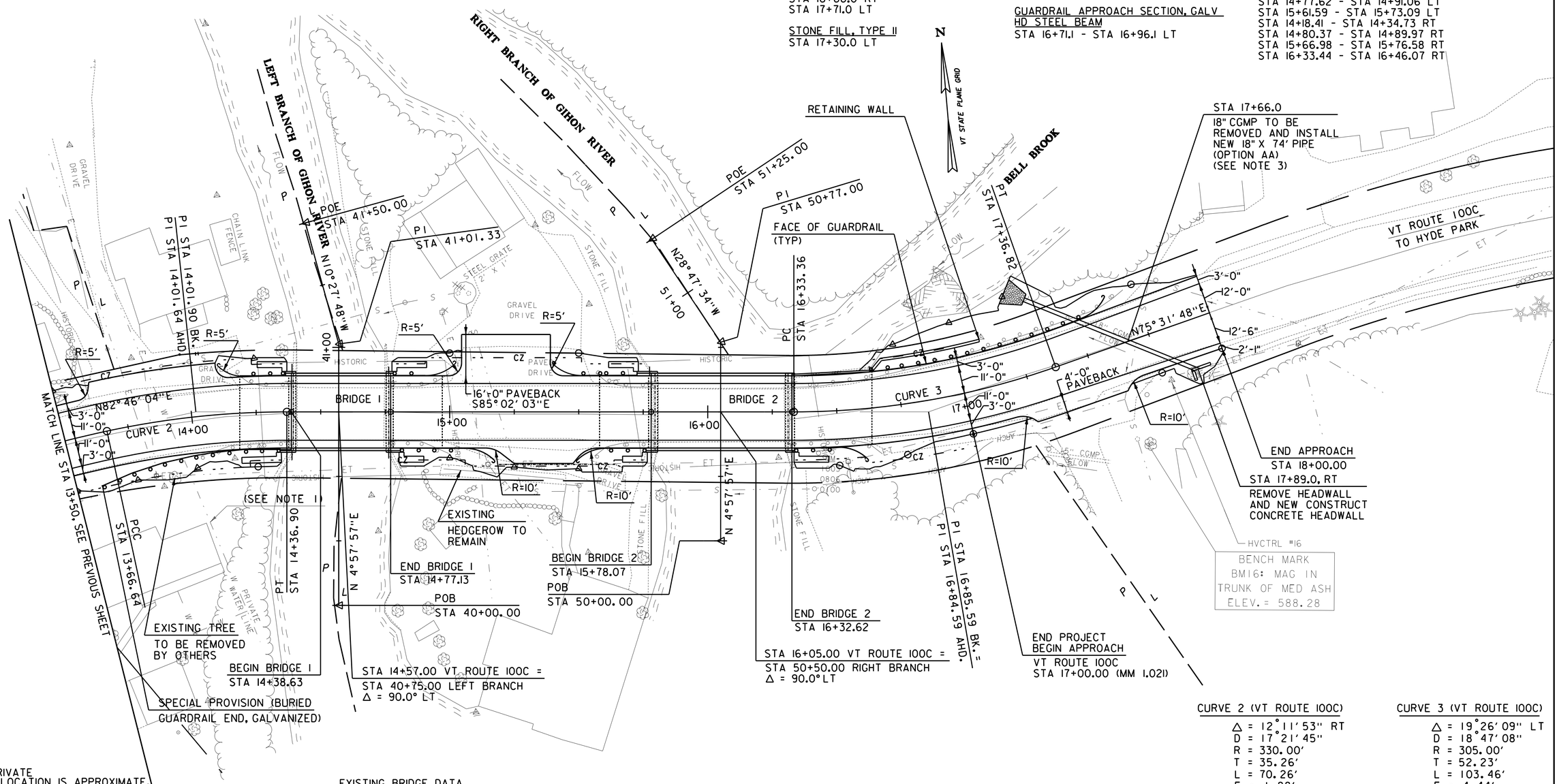
SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/ STEEL TUBING)
STA 16+33.6 - STA 16+71.1 LT

GUARDRAIL APPROACH SECTION, GALV HD STEEL BEAM
STA 16+71.1 - STA 16+96.1 LT

DELINEATOR WITH STEEL POST
STA 14+11.4 LT
STA 15+05.1 LT
STA 15+20.4 RT
STA 15+38.0 LT
STA 15+49.1 RT
STA 16+60.6 RT
STA 17+73.1 LT

SPECIAL PROVISION (RETAINING WALL)
STA 16+64.78 - STA 17+10.67 LT

SPECIAL PROVISION (UNIT BLOCK RETAINING WALL)
STA 14+26.04 - STA 14+36.90 LT
STA 14+77.62 - STA 14+91.06 LT
STA 15+61.59 - STA 15+73.09 LT
STA 14+18.41 - STA 14+34.73 RT
STA 14+80.37 - STA 14+89.97 RT
STA 15+66.98 - STA 15+76.58 RT
STA 16+33.44 - STA 16+46.07 RT



NOTES:

1. EXISTING PRIVATE WATERLINE LOCATION IS APPROXIMATE. ADDITIONAL EXCAVATION MAY BE NEEDED AS TO NOT INTERFERE WITH GUARDRAIL INSTALLATION.
2. ALL EXISTING TREES TO REMAIN UNLESS NOTED OR AS DIRECTED BY THE ENGINEER.
3. DRAINAGE OPTIONS ARE AS FOLLOWS: OPTION AA (18") PCCSP, CAAP, CPEP(SL), RCP

EXISTING BRIDGE DATA

BRIDGE 1:
CAST-IN-PLACE CONCRETE T-BEAMS
CONCRETE ABUTMENTS & WINGWALLS
CL BRG. - CL BRG. = 38'-3" +/-
OUT TO OUT WIDTH = 23'-9" +/-
CURB TO CURB WIDTH = 22'-1" +/-
LT/RT CURB WIDTH = 10"
CLEAR SIDEWALK WIDTH = N/A
VERTICAL CLEARANCE = N/A
YEAR BUILT - 1929

BRIDGE 2:
CAST-IN-PLACE CONCRETE T-BEAMS
CONCRETE ABUTMENTS & WINGWALLS
CL BRG. - CL BRG. = 54'-0" +/-
OUT TO OUT WIDTH = 23'-9" +/-
CURB TO CURB WIDTH = 22'-1" +/-
LT/RT CURB WIDTH = 10"
CLEAR SIDEWALK WIDTH = N/A
VERTICAL CLEARANCE = N/A
YEAR BUILT - 1928

LEGEND
ITEM 613.11 STONE FILL, TYPE II

CURVE 1 (VT ROUTE 100C)
Δ = 11° 44' 57" RT
D = 11° 34' 30"
R = 495.00'
T = 50.93'
L = 101.51'
E = 2.61'
BANK = N.C.

CURVE 2 (VT ROUTE 100C)
Δ = 12° 11' 53" RT
D = 17° 21' 45"
R = 330.00'
T = 35.26'
L = 70.26'
E = 1.88'
BANK = N.C.

CURVE 3 (VT ROUTE 100C)
Δ = 19° 26' 09" LT
D = 18° 47' 08"
R = 305.00'
T = 52.23'
L = 103.46'
E = 4.44'
BANK = N.C.

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

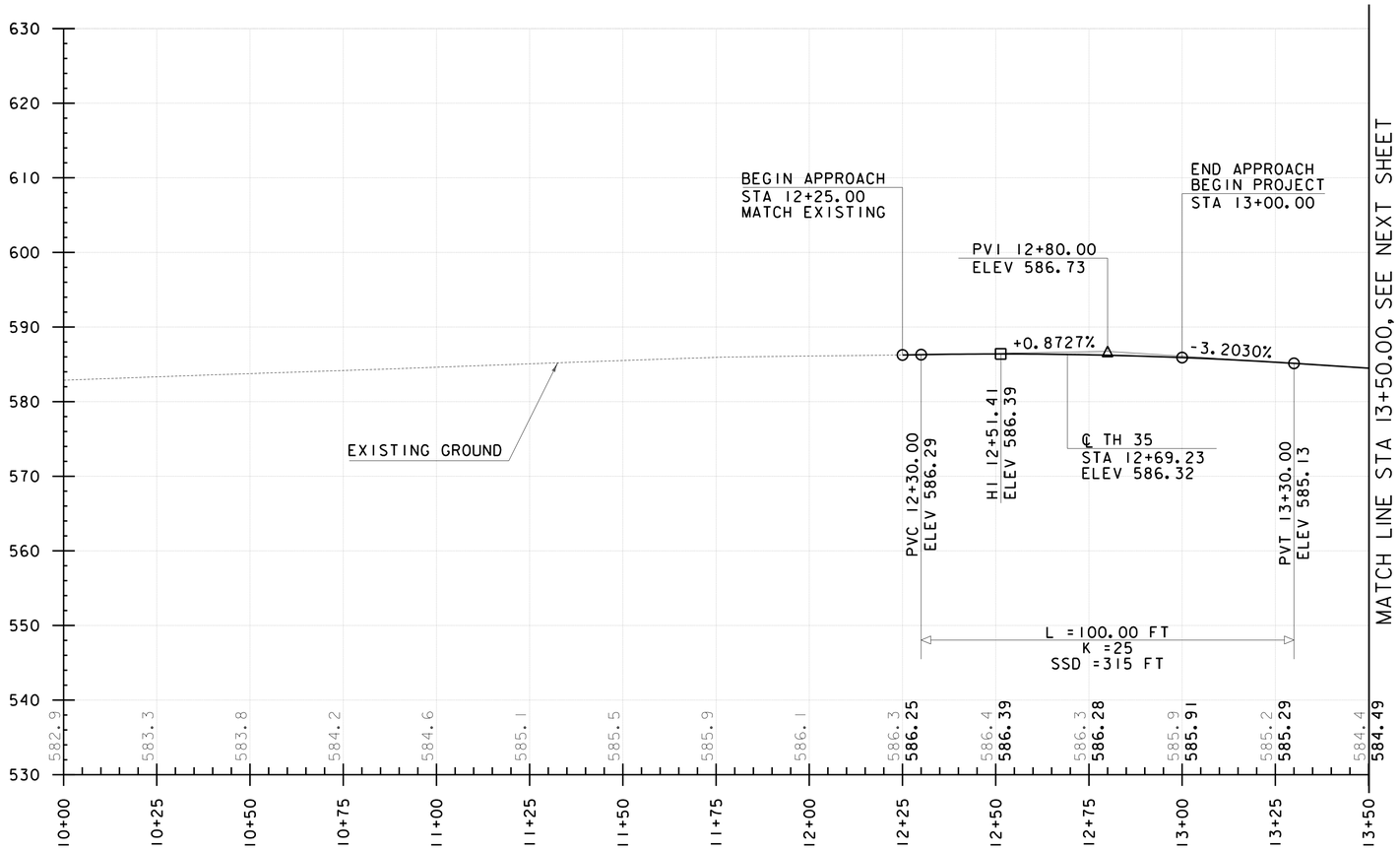
CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066bdr.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
PLAN LAYOUT SHEET 2

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 15 OF 93

FILE NAME = V:\Projects\ANYVK3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066bdr.dgn
DATE/TIME = 5/4/2016
USER = 5237



PROFILE - VT ROUTE 100C

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

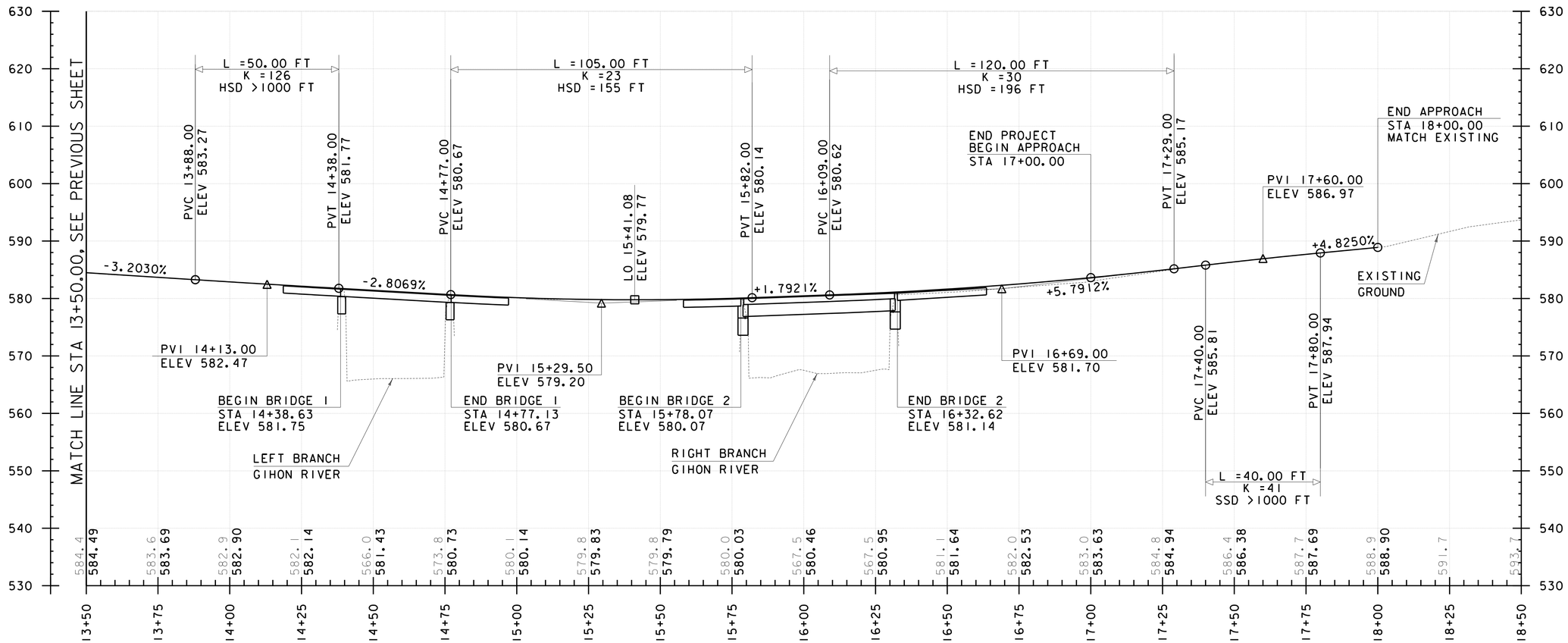
NOTES:

1. THE GRADES SHOWN TO THE NEAREST TENTH ARE THE EXISTING GROUND ELEVATIONS ALONG CENTERLINE. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES ALONG CENTERLINE.

2. SEE SHEET 74 FOR BANKING DIAGRAM.

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066pro.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
VT ROUTE 100C PROFILE SHEET 1	SHEET 16 OF 93

CHA



PROFILE - VT ROUTE 100C

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

NOTES:

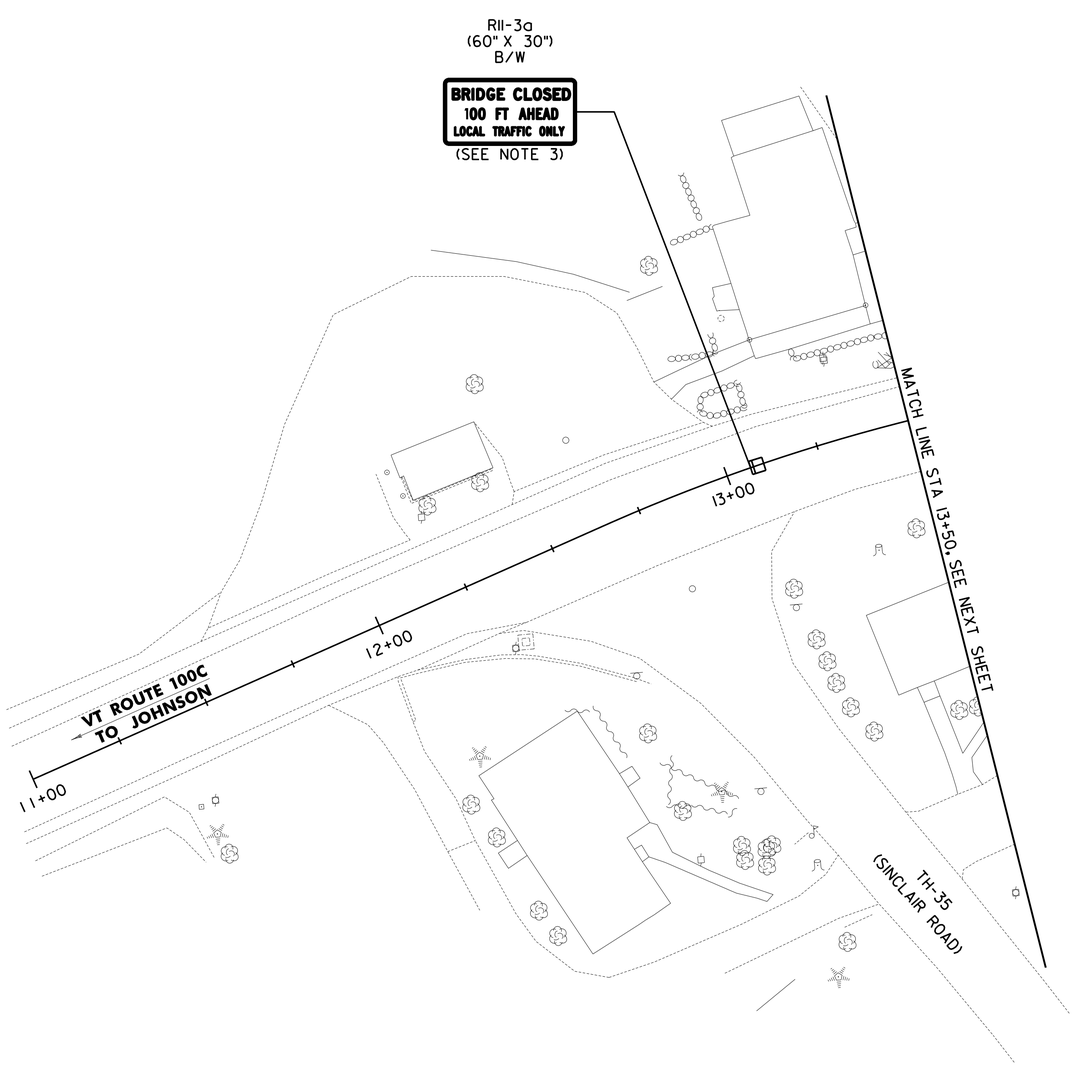
1. THE GRADES SHOWN TO THE NEAREST TENTH ARE THE EXISTING GROUND ELEVATIONS ALONG CENTERLINE. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES ALONG CENTERLINE.

2. SEE SHEET 74 FOR BANKING DIAGRAM.

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066pro.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
VT ROUTE 100C PROFILE SHEET 2	SHEET 17 OF 93

CHA

FILE NAME = V:\Projects\ANY\K23\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066pro.dgn
DATE/TIME = 5/4/2016
USER = 5237



NOTES:

1. SEE TRAFFIC CONTROL NOTES AND DETOUR MAP SHEET FOR ADDITIONAL TRAFFIC CONTROL AND CONSTRUCTION SEQUENCING INFORMATION.
2. SEE STANDARD T-10 FOR ADDITIONAL APPROACH SIGNING DETAILS.
3. SIGN TO BE MOUNTED ON TYPE III BARRICADE WITH TYPE B HIGH INTENSITY FLASHING WARNING LIGHTS.
4. THE CONTRACTOR SHALL FIELD VERIFY THE SIGN LOCATIONS WITH THE ENGINEER PRIOR TO INSTALLATION.

LEGEND

	WORK ZONE
	TYPE III BARRICADE
	TEMPORARY BARRIER
G/W	GREEN LETTERING ON WHITE BACKGROUND
B/W	BLACK LETTERING ON WHITE BACKGROUND
B/O	BLACK LETTERING ON ORANGE BACKGROUND

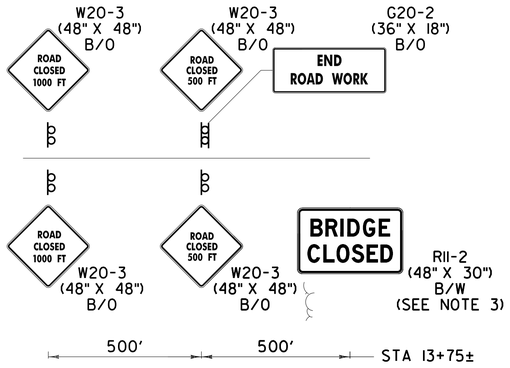
SCALE 1" = 20'-0"
20 0 20

CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

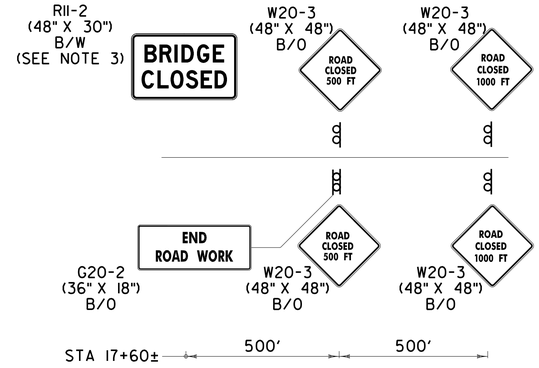
FILE NAME: z13c066bdr_tc.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
TRAFFIC CONTROL PLAN LAYOUT SHEET 1

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 18 OF 93



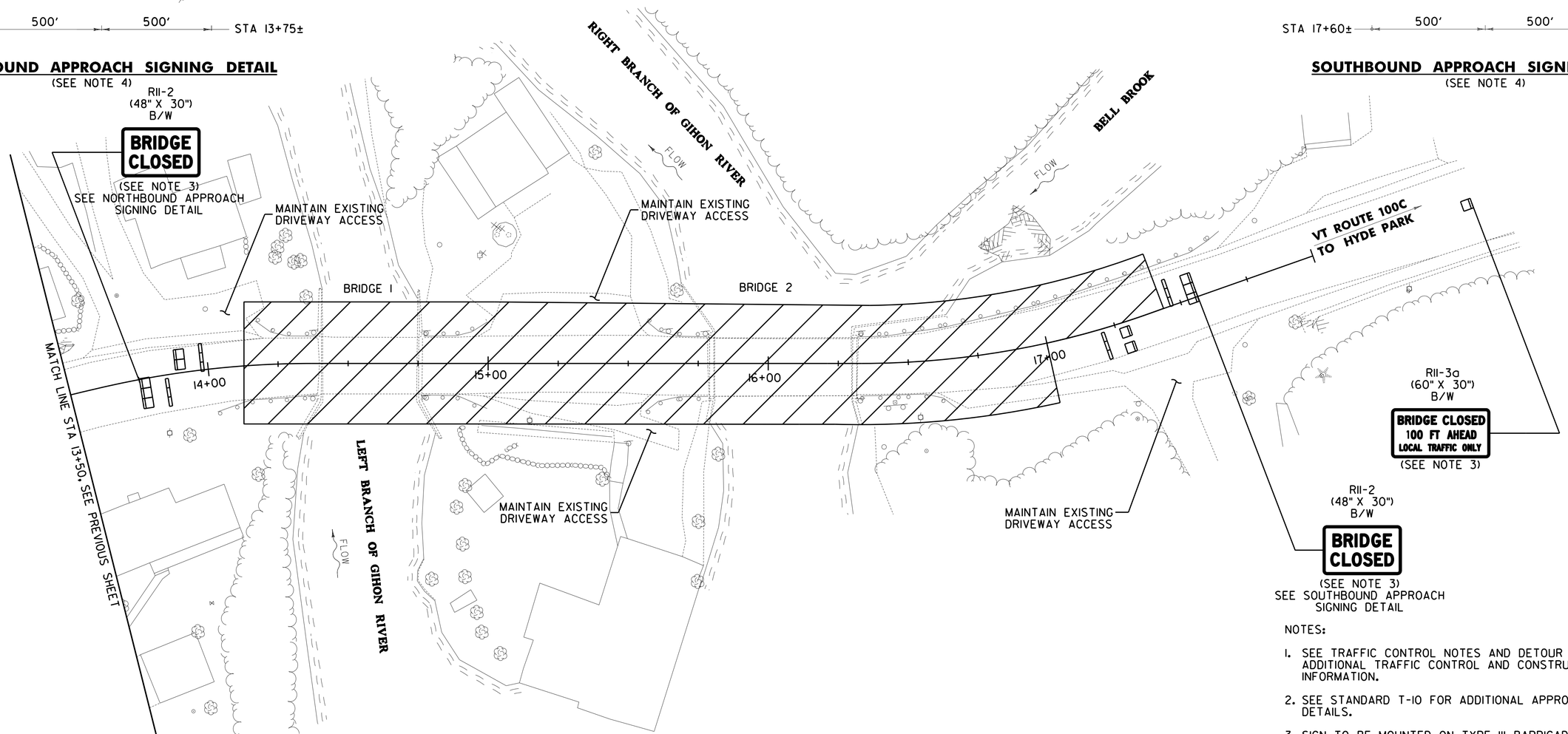
NORTHBOUND APPROACH SIGNING DETAIL

(SEE NOTE 4)



SOUTHBOUND APPROACH SIGNING DETAIL

(SEE NOTE 4)



LEGEND

	WORK ZONE
	TYPE III BARRICADE
	TEMPORARY BARRIER
G/W	GREEN LETTERING ON WHITE BACKGROUND
B/W	BLACK LETTERING ON WHITE BACKGROUND
B/O	BLACK LETTERING ON ORANGE BACKGROUND

NOTES:

1. SEE TRAFFIC CONTROL NOTES AND DETOUR MAP SHEET FOR ADDITIONAL TRAFFIC CONTROL AND CONSTRUCTION SEQUENCING INFORMATION.
2. SEE STANDARD T-10 FOR ADDITIONAL APPROACH SIGNING DETAILS.
3. SIGN TO BE MOUNTED ON TYPE III BARRICADE WITH TYPE B HIGH-INTENSITY FLASHING WARNING LIGHTS.
4. THE CONTRACTOR SHALL FIELD VERIFY THE SIGN LOCATIONS WITH THE ENGINEER PRIOR TO INSTALLATION.

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

CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066bdr_tc.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
TRAFFIC CONTROL PLAN LAYOUT SHEET 2

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 19 OF 93

TRAFFIC CONTROL NOTES:

TRAFFIC WILL BE MAINTAINED ON A REGIONAL DETOUR VIA VT ROUTE 100 AND VT ROUTE 15 BETWEEN JOHNSON AND HYDE PARK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DETOUR AND CONSTRUCTION SIGNING. THE EXACT LOCATION WILL BE COORDINATED BETWEEN THE ENGINEER AND THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH THE CURRENT M.U.T.C.D. AND ITS REVISIONS.

THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO START OF CONSTRUCTION. THE COST OF PREPARING THIS PLAN (AND MAKING CHANGES IF NECESSARY) SHALL NOT BE PAID SEPARATELY BUT WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE).

THE BID PRICE FOR ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE) SHALL INCLUDE ALL APPROACH, DETOUR AND ON-SITE CONSTRUCTION SIGNING, BARRELS, CONES, TYPE III BARRICADES, AND RELOCATING AND REMOVING OF THESE DEVICES AS NECESSARY. THE FOLLOWING ITEMS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEM NUMBERS:

ITEM 630.10 UNIFORM TRAFFIC OFFICERS
ITEM 630.15 FLAGGERS
ITEM 641.15 PORTABLE CHANGEABLE MESSAGE SIGN
ITEM 646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
ITEM 646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
ITEM 646.76 LINE STRIPING TARGETS

ALL SIGNS AND BARRICADES SHALL BE INSPECTED DAILY AND REPAIRED AS NECESSARY. ALL SIGNS AND BARRICADES SHALL BE CLEARED OF DUST AND DEBRIS AT A MINIMUM WEEKLY.

PORTABLE CHANGEABLE MESSAGES SIGNS "PCMS" SHALL BE PLACED AT THE APPROXIMATE LOCATIONS SHOWN ON THE PLANS OR WHERE DESIGNATED BY THE ENGINEER. TWO SIGNS SHALL ALSO BE PLACED AT THE PROJECT LOCATION 14 DAYS PRIOR TO THE START OF CONSTRUCTION FOR NOTIFICATION OF THE IMPENDING DETOURS. THESE SIGNS SHALL REMAIN IN PLACE FOR USE AT THE DISCRETION OF THE ENGINEER TO NOTIFY MOTORISTS OF CHANGING CONDITIONS. PAYMENT FOR THESE SIGNS SHALL BE INCLUDED IN ITEM 641.15 PORTABLE CHANGEABLE MESSAGE SIGN.

THE STATE 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 CLOSURE PERIOD. THESE SIGNS AND THEIR REMOVAL SHALL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE).

ACCESS TO ALL EXISTING DRIVES AND SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ANY CHANGES TO THE NORMAL FLOW OF TRAFFIC OR ACCESS TO EXISTING DRIVEWAYS WITH THE TOWN OF JOHNSON AND THE RESPECTIVE ADJOINING LANDOWNERS AFFECTED BY THE CHANGES. THE CONTRACTOR SHALL PROTECT ALL CONSTRUCTION ZONE DROP-OFFS WHILE MAINTAINING ACCESS TO THE RESPECTIVE EXISTING DRIVES OR SIDEROADS.

INSTALLATION OF DETOUR SIGNS SHALL NOT BLOCK ANY EXISTING TRAFFIC CONTROL SIGN ASSEMBLIES AND SHALL NOT MODIFY OR BE PLACED ADJACENT TO EXISTING SIGN ASSEMBLIES WHEN POSSIBLE. THE CONTRACTOR SHALL WHENEVER POSSIBLE MAINTAIN AT LEAST 100 FEET BETWEEN SIGN ASSEMBLIES.

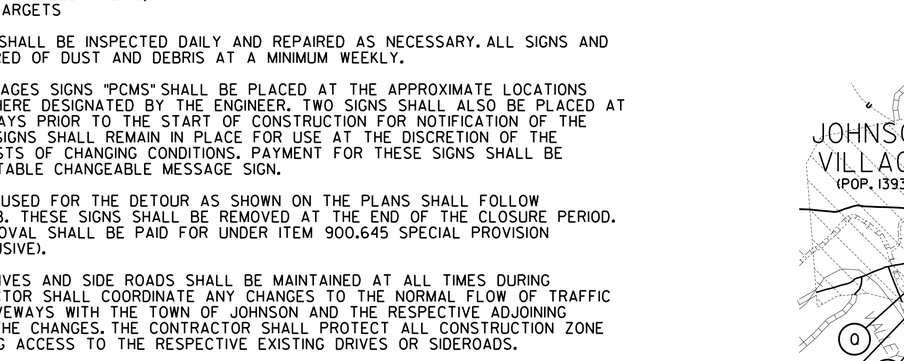
EXISTING SIGNS THAT ARE IN CONFLICT WITH THE TRAFFIC FLOW OF THE DETOUR SHALL BE REMOVED OR COVERED BY THE CONTRACTOR. ALL SIGNS REMOVED OR COVERED SHALL BE REPLACED OR UNCOVERED WHEN THE TRAFFIC CONTROL PLAN IS DISASSEMBLED. PAYMENT FOR THIS WORK WILL BE INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE).

CONTACT DIG-SAFE AT 1-888-344-7233 48 HOURS PRIOR TO BREAKING GROUND TO INSTALL ANY POSTS.

CONTRACTOR SHALL COORDINATE WITH THE TOWN OF JOHNSON TO ENSURE THAT VT 100C IS OPEN TO TRAFFIC FOR THE LAMOILLE COUNTY FIELD DAYS JULY 17-29, 2016.

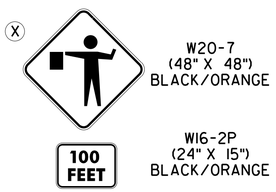
CONSTRUCTION SEQUENCING:

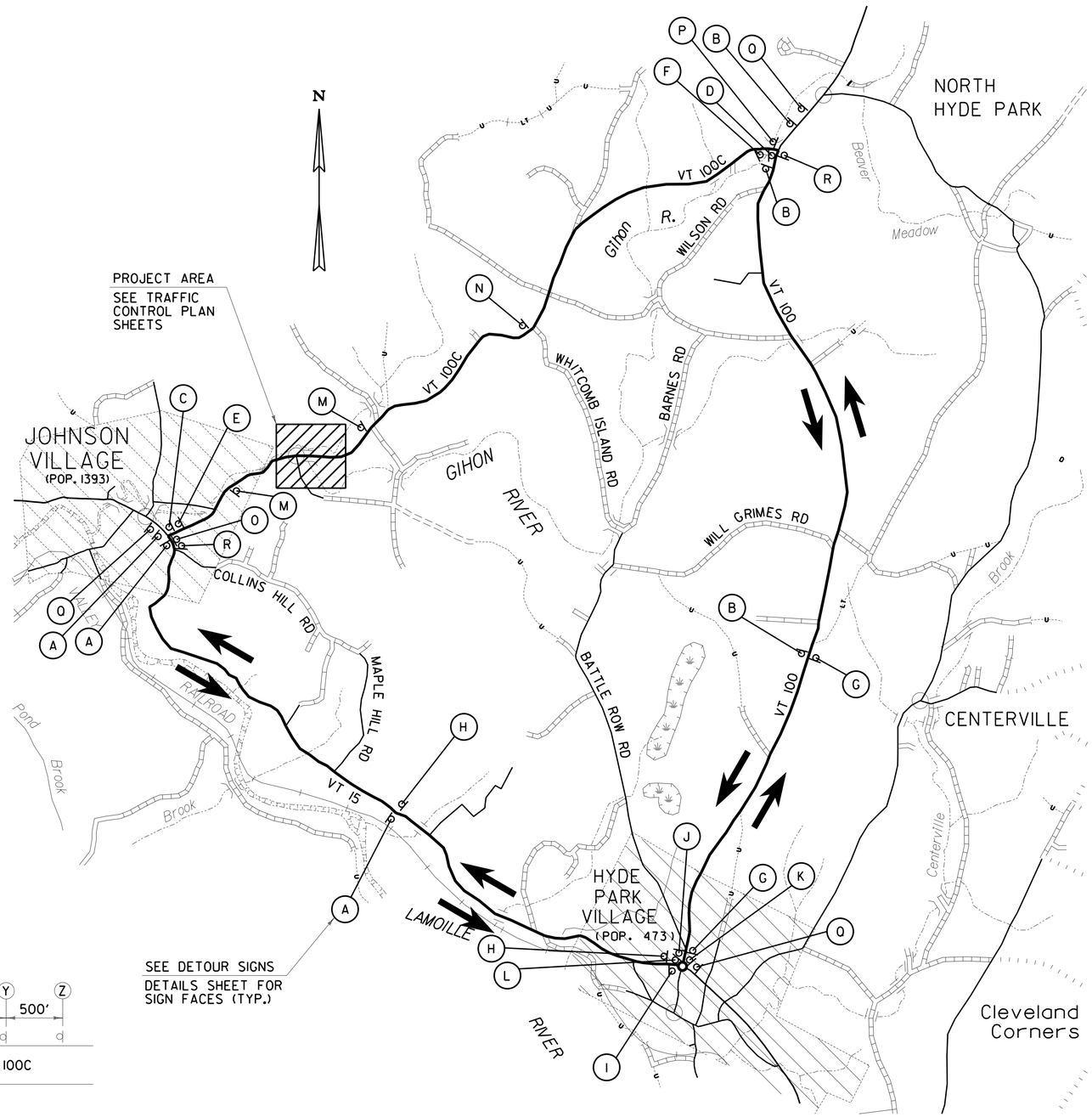
- INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
- INSTALL DETOUR SIGNS AND CLOSE BRIDGE 1 AND BRIDGE 2.
- MAINTAIN ACCESS TO ALL EXISTING DRIVES LOCATED IN THE WORK ZONE DURING THE CLOSURE.
- CONTRACTOR SHALL COMPLETE BRIDGE 1, BRIDGE 2, AND ALL ROADWAY WORK.
- CONSTRUCT PAVEMENT TOP COURSE, APPLY PERMANENT PAVEMENT MARKINGS AND COMPLETE GUARDRAIL INSTALLATION.
- REMOVE DETOUR SIGNS.
- COMPLETE ALL OTHER INCIDENTALS.



ROADWAY WORK APPROACH SIGNING

NOTE:
THE CONTRACTOR SHALL INSTALL THE APPROPRIATE ADVANCED WARNING AS SHOWN WHEN WORK IS BEING PERFORMED OUTSIDE OF THE BRIDGE CLOSURE WORK AREAS. THESE SIGNS SHALL BE COVERED OR REMOVED WHEN NOT IN USE.





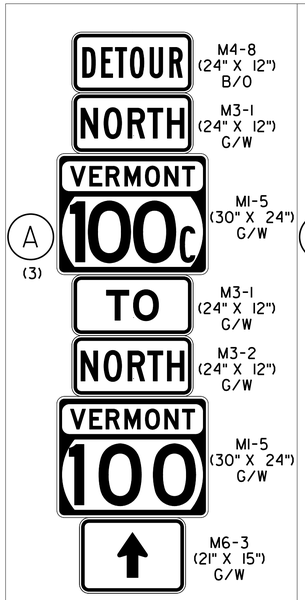
TEMPORARY DETOUR MAP

NOT TO SCALE

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066rdm.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
TRAFFIC CONTROL NOTES AND DETOUR MAP	SHEET 20 OF 93

CHA

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066rdm.dgn
DATE/TIME = 5/4/2016
USER = 5237



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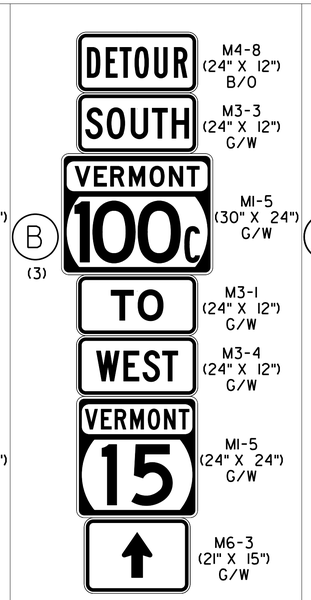
(3)



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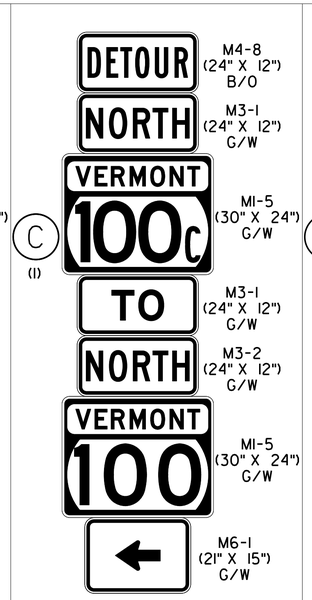
(3)



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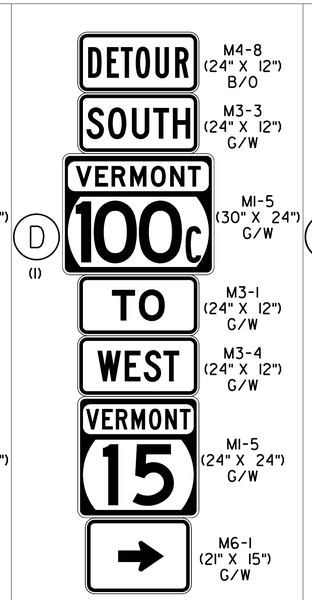
(1)



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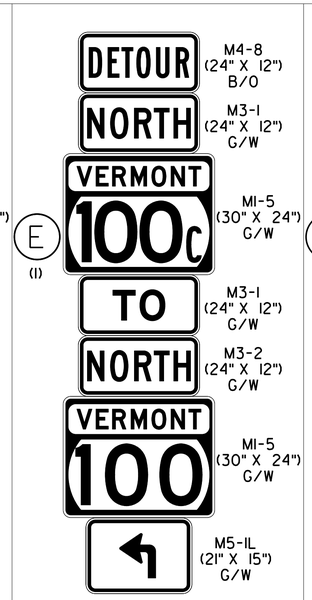

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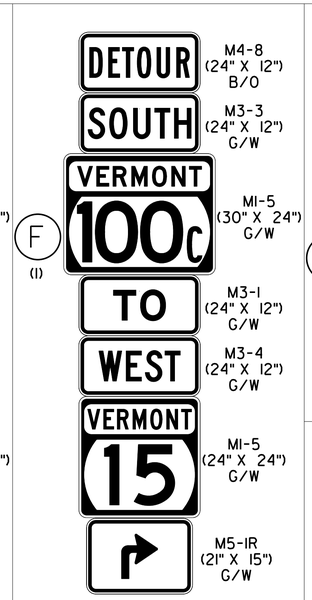
(1)



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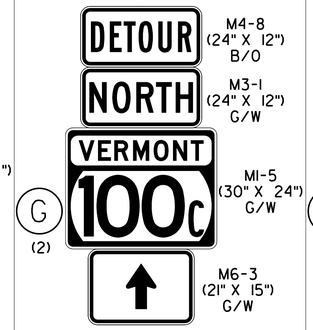
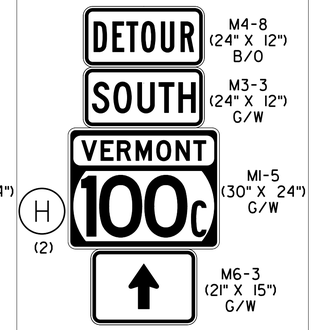


G
(2)



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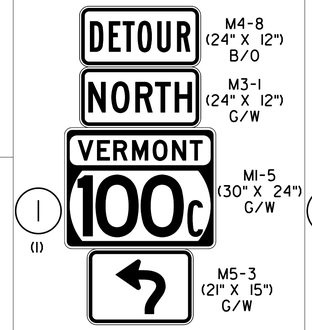
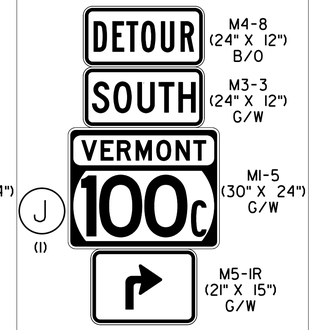
(2)



I
(1)



J
(1)

M
(2)

R11-3a (60" X 30") B/W

N
(1)

R11-3a (60" X 30") B/W

O
(1)

R11-3a (60" X 30") B/W

M4-10R (48" X 18") B/O

P
(1)

R11-3a (60" X 30") B/W

M4-10L (48" X 18") B/O

B	R	I	D	G	E		
C	L	O	S	E	D		
V	T		1	0	O	C	

Q
(3)

PORTABLE CHANGEABLE MESSAGE SIGN - PHASE 1

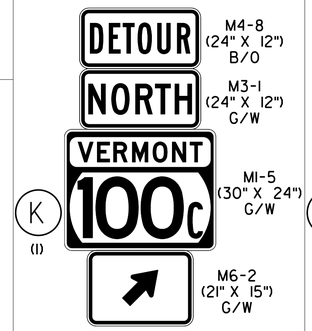
	J	O	H	N	S	O	N	
*	M	M	M	M		D	D	-
*	M	M	M	M		D	D	

PORTABLE CHANGEABLE MESSAGE SIGN - PHASE 2

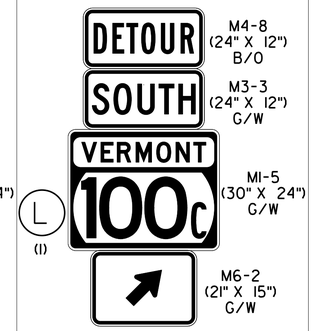
* M=MONTH
D=DAY

R
(2)

M4-8a (24" X 18") B/O



K
(1)



L
(1)

NOTES:

1. SIGN COLORS:
   B/W: BLACK LETTERING ON WHITE BACKGROUND
   G/W: GREEN LETTERING ON WHITE BACKGROUND
   B/O: BLACK LETTERING ON ORANGE BACKGROUND

2. THE ESTIMATED NUMBER OF EACH SIGN PACKAGE REQUIRED IS REPRESENTED BY THE NUMBER UNDERNEATH EACH LETTER DESIGNATOR.

3. SEE TRAFFIC CONTROL NOTES AND DETOUR MAP FOR SIGN LOCATIONS.

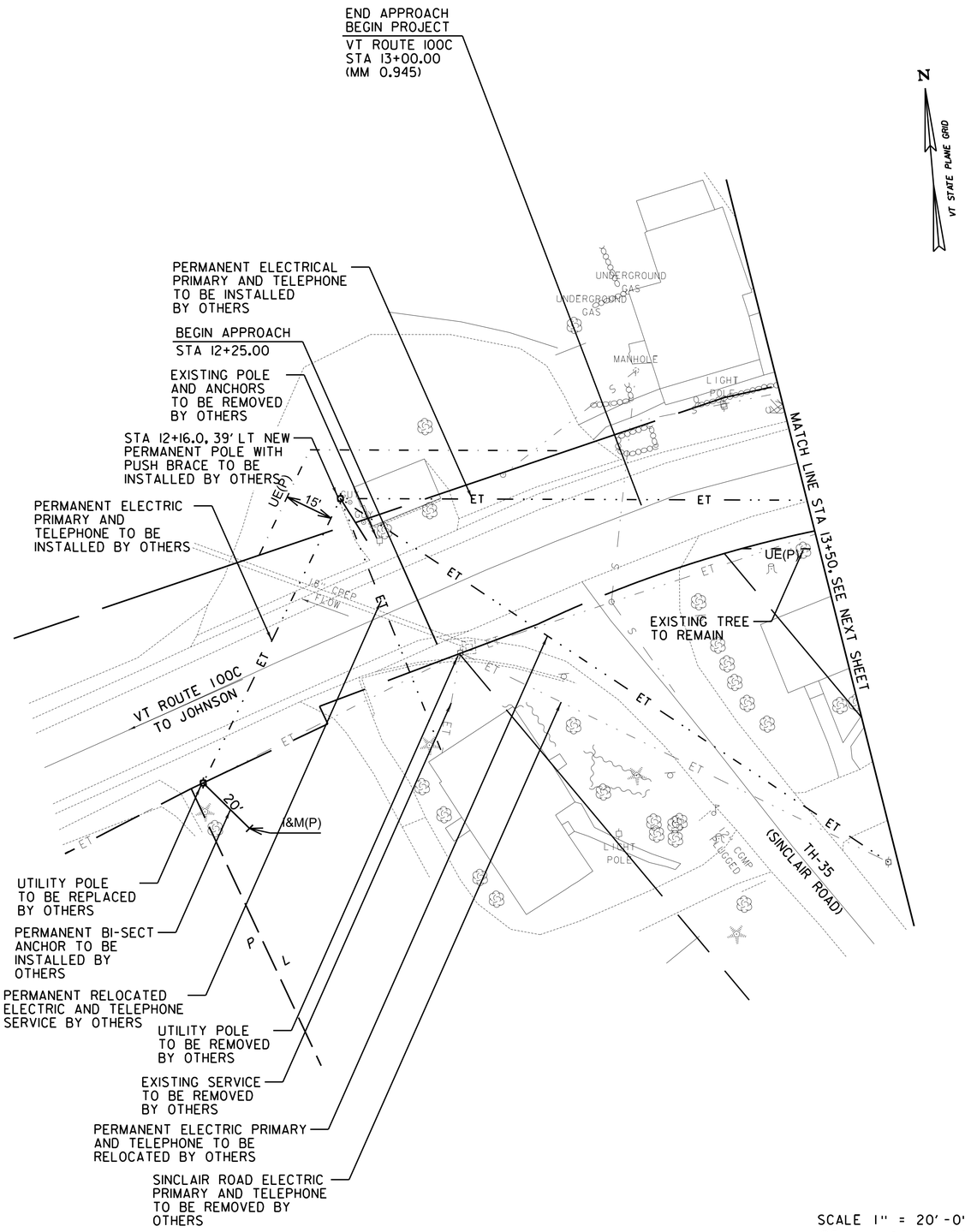
SIGN	ROAD TYPE	WIDTH	HEIGHT	LETTER SIZE
M-P	CONVENTIONAL	5'	2'-6"	6C 5C 4C

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zI3c066detsigns.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
DETOUR SIGNS DETAILS SHEET

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 21 OF 93

CHA



NOTE:

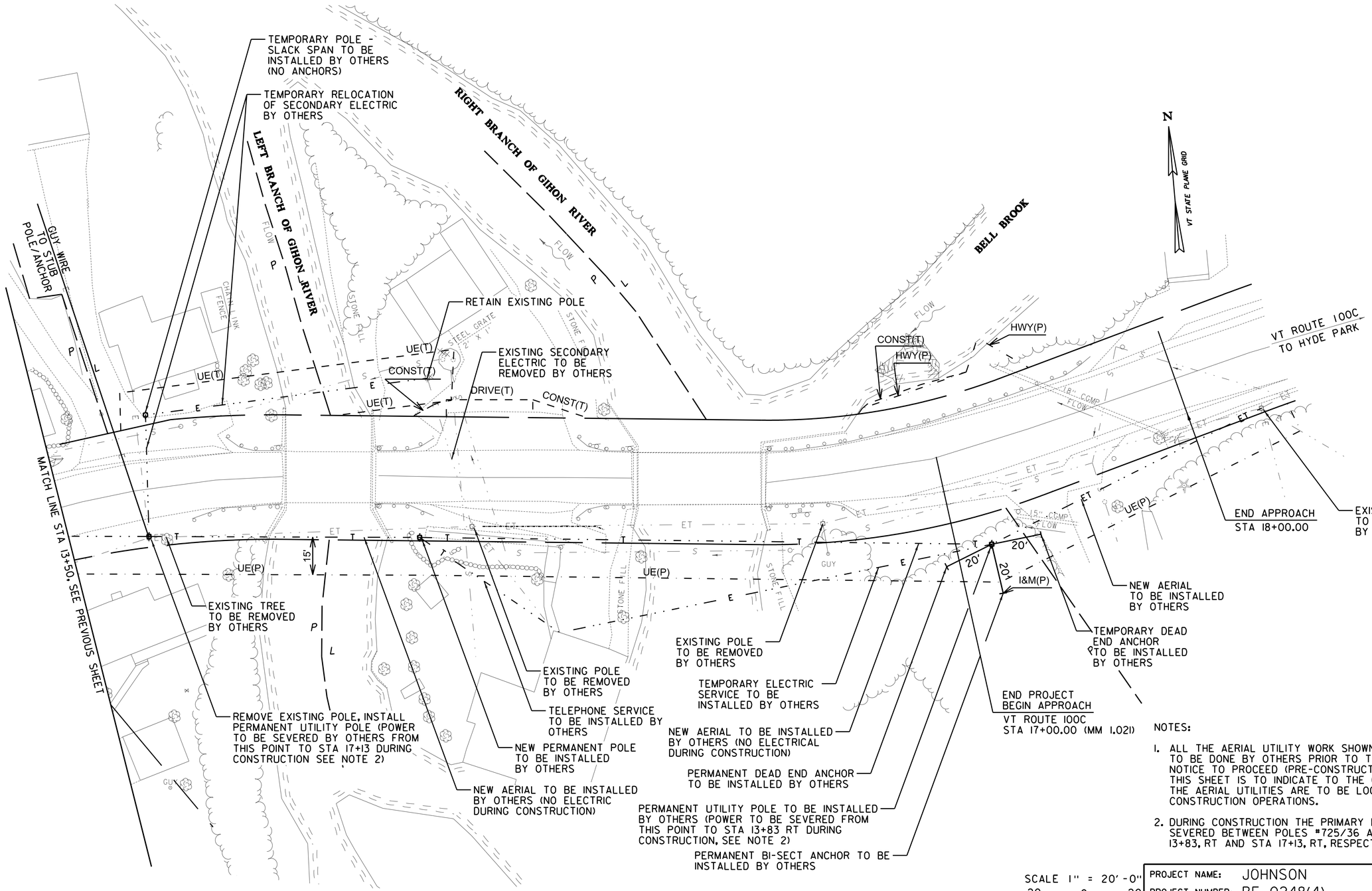
1. ALL THE AERIAL UTILITY WORK SHOWN ON THIS SHEET IS TO BE DONE BY OTHERS PRIOR TO THE CONTRACTORS NOTICE TO PROCEED (PRE-CONSTRUCTION). THE INTENT OF THIS SHEET IS TO INDICATE TO THE CONTRACTOR WHERE THE AERIAL UTILITIES ARE TO BE LOCATED DURING CONSTRUCTION OPERATIONS.

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

CHA

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066bdrut_pre.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: L. WHEELER	CHECKED BY: D. GOZALKOWSKI
PRE-CONSTRUCTION UTILITY LAYOUT SHEET 1	SHEET 22 OF 93

FILE NAME = V:\Projects\VNY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066bdrut_pre.dgn
DATE/TIME = 5/4/2016
USER = 5237



NOTES:

1. ALL THE AERIAL UTILITY WORK SHOWN ON THIS SHEET IS TO BE DONE BY OTHERS PRIOR TO THE CONTRACTORS NOTICE TO PROCEED (PRE-CONSTRUCTION). THE INTENT OF THIS SHEET IS TO INDICATE TO THE CONTRACTOR WHERE THE AERIAL UTILITIES ARE TO BE LOCATED DURING CONSTRUCTION OPERATIONS.

2. DURING CONSTRUCTION THE PRIMARY ELECTRIC SHALL BE SEVERED BETWEEN POLES #725/36 AND #725/739 (STA 13+83, RT AND STA 17+13, RT, RESPECTIVELY)

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

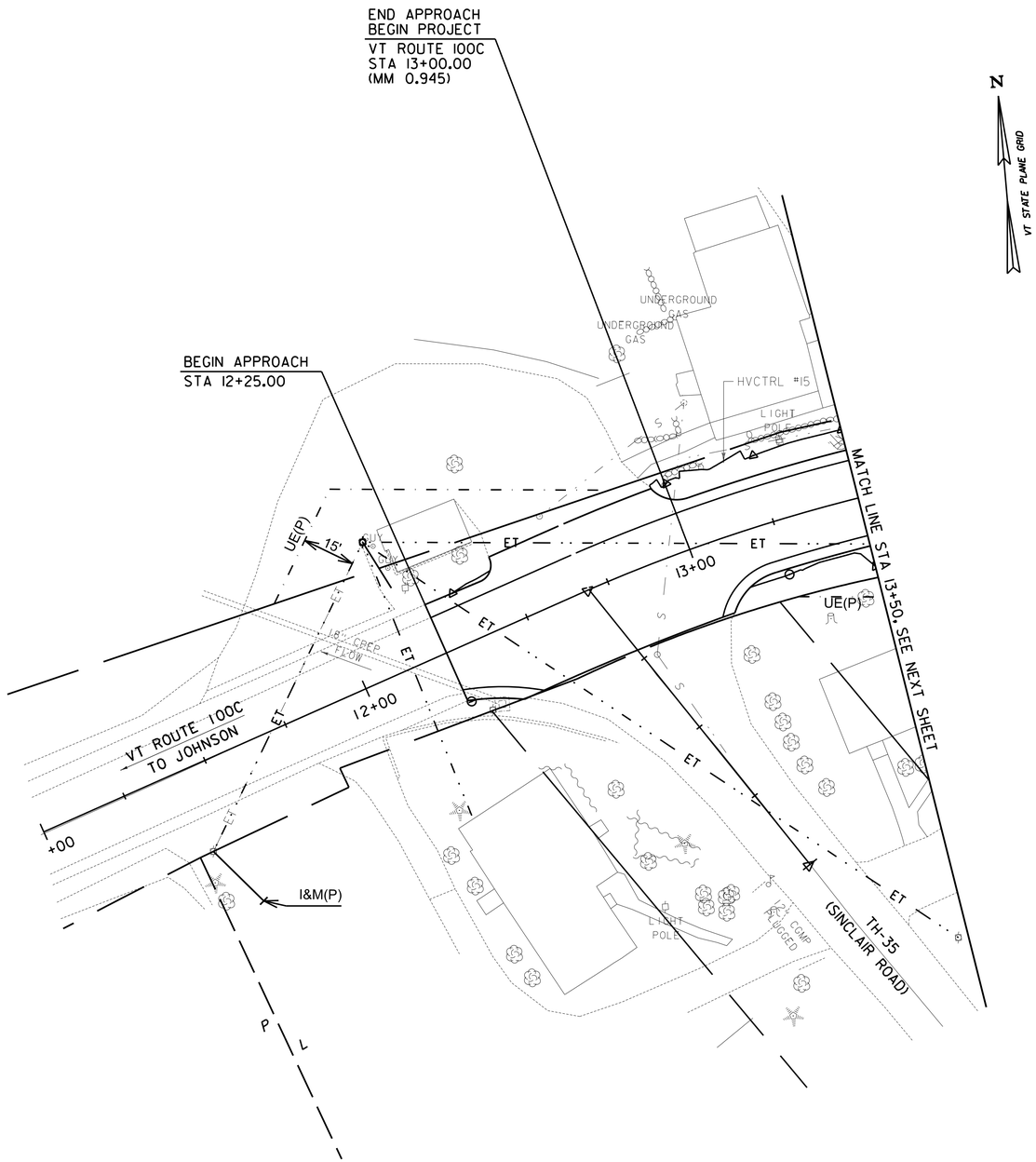
CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066bdrut_pre.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: L. WHEELER
PRE-CONSTRUCTION UTILITY LAYOUT SHEET 2

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 23 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066bdrut_pre.dgn
DATE/TIME = 5/4/2016
USER = 5237



NOTE:

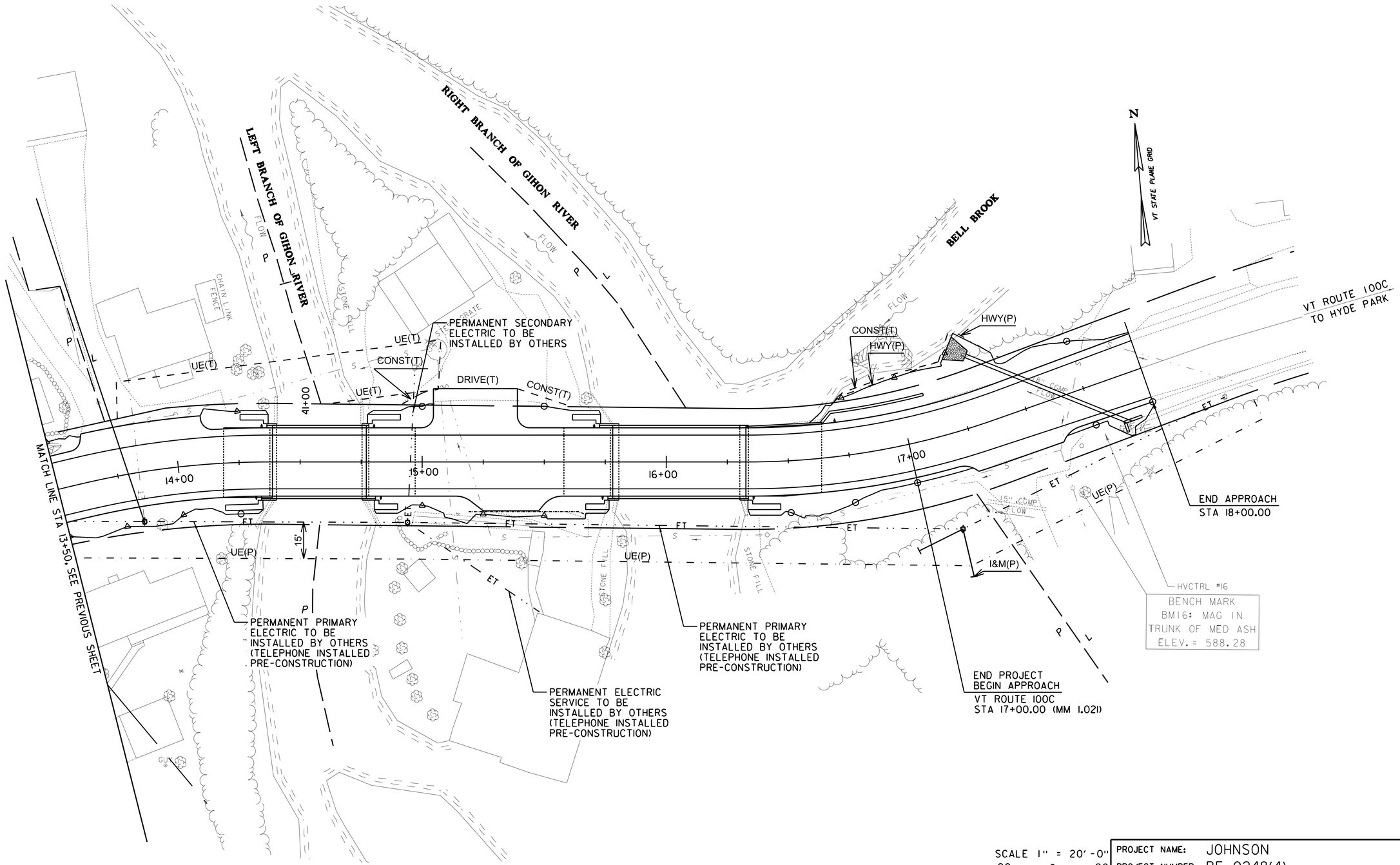
1. ALL THE AERIAL UTILITY WORK SHOWN ON THIS SHEET IS TO BE DONE BY OTHERS AFTER THE CONTRACTOR COMPLETES THE PROPOSED BRIDGES AND REMOVES THE DETOUR (POST CONSTRUCTION).

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

CHA

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066bdrut_post.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
POST-CONSTRUCTION UTILITY LAYOUT SHEET 1	SHEET 24 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066bdrut_post.dgn
DATE/TIME = 5/4/2016
USER = 5237



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

CHA

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066bdrut_post.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
POST-CONSTRUCTION UTILITY LAYOUT SHEET 2	SHEET 25 OF 93

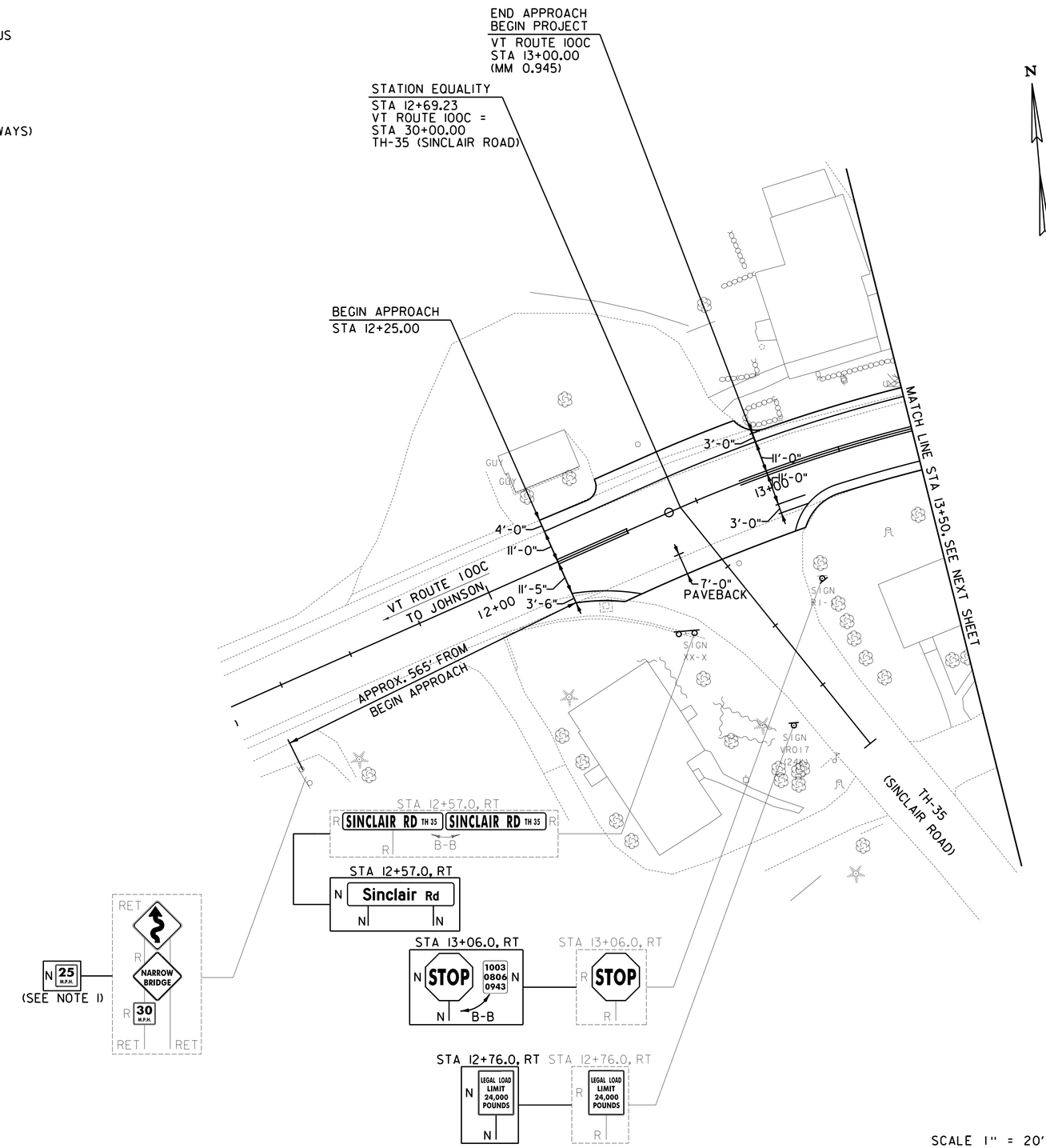
FILE NAME = V:\Projects\VNYX\3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066bdrut_post.dgn
DATE/TIME = 5/4/2016
USER = 5237

DURABLE 4 INCH WHITE LINE, TYPE A TAPE
AND TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADIUS FOR TOWN HIGHWAYS)
JOHNSON:
STA 12+25.0 - STA 13+50.0 EDGE LINE LT & RT

DURABLE 4 INCH YELLOW LINE, TYPE A TAPE
AND TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C/L BREAKS FOR TOWN HIGHWAYS)
S = SOLID

JOHNSON:	LT	℄	RT
STA 12+25.0 - STA 13+50.0	S	-	S

REMOVING SIGNS
AS SHOWN - 6



NOTE:
1. PROPOSED SIGN TO BE MOUNTED TO EXISTING SIGN POST.

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

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066bdrssp.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
TRAFFIC SIGNS AND LINES SHEET 1	SHEET 26 OF 93

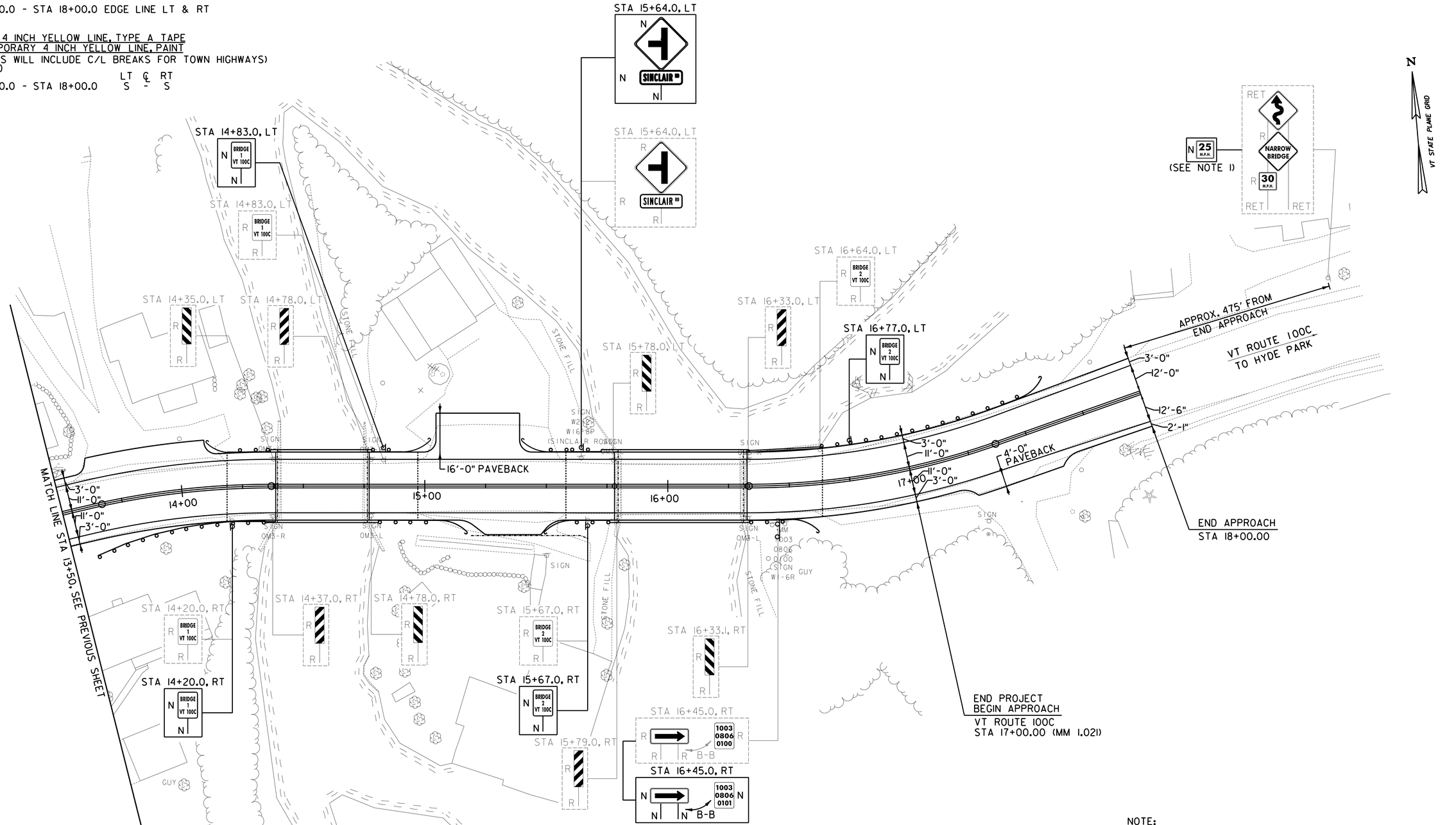
FILE NAME = V:\Projects\VNYX\X3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066bdrssp.dgn
DATE/TIME = 5/4/2016
USER = 5237

DURABLE 4 INCH WHITE LINE, TYPE A TAPE
AND TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADIUS FOR TOWN HIGHWAYS)
JOHNSON:
STA 13+50.0 - STA 18+00.0 EDGE LINE LT & RT

DURABLE 4 INCH YELLOW LINE, TYPE A TAPE
AND TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C/L BREAKS FOR TOWN HIGHWAYS)
S = SOLID

JOHNSON:	LT	℄	RT
STA 13+50.0 - STA 18+00.0	S	-	S

REMOVING SIGNS
AS SHOWN - 18



NOTE:
1. PROPOSED SIGN TO BE MOUNTED TO EXISTING SIGN POST.

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

CHA

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066bdrssp.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
TRAFFIC SIGNS AND LINES SHEET 2	SHEET 27 OF 93

FILE NAME = V:\Projects\ANY\K31\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066bdrssp.dgn
DATE/TIME = 5/4/2016
USER = 5237

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 1

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																	REMARKS	SIGN DETAIL		
											NO. OF	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft					TUBULAR STEEL • (in) lb/ft					W-SHAPE STEEL					SHSM = FHWA STANDARD HIGHWAY SIGNS BOOK	DETAIL IN SHSM	DETAIL ON DWG. NUMBER	STD. SHEET NUMBER
			WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE		1.1	2.0	3.0	1.8 / 1.88	2.0 / 2.42	2.5 / 3.35	ANCHOR	SLEEVE	FOUND-ATION	3.0 / 7.6	3.5 / 9.0	4.0 / 11	5.0 / 15	FTG. SIZE 24"	FTG. SIZE 30"	WEIGHT	POST SIZE				
APPROX. 565 FT FROM BEGIN APPROACH	25 M.P.H.	1	18	18	2.25																								SIGN TO MOUNTED ON EXISTING POST SIGN SHALL HAVE FLUORESCENT YELLOW BACKGROUND	W13-1P	-	-
12+57.0 RT	Sinclair Rd	1	48	12	4.00						2					X		X											DOUBLE SIDED SIGN, SIGN ID CODE D3-1 COSTS ASSOCIATED WITH THIS BRACKETS ARE INCIDENTAL TO THE SIGN POSTS	-	31	-
12+76.0 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1					X		X											SIGN ID CODE VR-017	-	-	T-71
13+06.0 RT	STOP 1003 0806 0943	1 1	30 6	30 10	6.25 0.42						1					X		X											SIGN ID CODE VD-700 BACK-TO-BACK	RI-1 -	- -	- T-44
14+20.0 RT	BRIDGE 1 VT 100C	1	6	10	0.42						1					X		X											SIGN ID CODE VD-701	-	-	T-42
14+83.0 LT	BRIDGE 1 VT 100C	1	6	10	0.42						1					X		X											SIGN ID CODE VD-701	-	-	T-42
15+64.0 LT		1	30	30	6.25						1					X		X												W2-2L	-	-
	SINCLAIR RD	1	24	8	1.33																								SIGN ID CODE W16-8	-	31	-
15+67.0 RT	BRIDGE 2 VT 100C	1	6	10	0.42						1					X		X											SIGN ID CODE VD-701	-	-	T-42
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."												LF	LF	LF	LF	LF 112	LF	EA			LB	LB	LB	LB								
TOTALS					SF 26.76	SF	EA.	SF				LF			LF 112			EA.			LB				EA.	EA.	LB					

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066tsss.dgn
DATE/TIME = 5/4/2016
USER = 5237

CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066tsss.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
TRAFFIC SIGN SUMMARY SHEET 1

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 28 OF 93

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 2

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																	REMARKS	SIGN DETAIL		
			WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft					TUBULAR STEEL • (in) lb/ft					W-SHAPE STEEL					SHSM = FHWA STANDARD HIGHWAY SIGNS BOOK	DETAIL IN SHSM	DETAIL ON DWG. NUMBER	STD. SHEET NUMBER
															1.8	2.0	2.5	ANCHOR	SLEEVE	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE 24"	FTG. SIZE 30"	WEIGHT	POST SIZE				
												1.1	2.0	3.0	1.88	2.42	3.35				7.6	9.0	11	15								
I6+45.0 RT	1003 0806 0101	1	48	24	8.00						2					X		X										SIGN ID CODE VD-700 BACK-TO-BACK	WI-6R -	- -	- T-44
		1	6	10	0.42																									
I6+77.0 LT	BRIDGE 2 VT 100C	1	6	10	0.42						1					X		X										SIGN ID CODE VD-701	-	-	T-42
APPROX. 475 FT FROM END APPROACH	25 M.P.H.	1	18	18	2.25																							SIGN TO MOUNTED ON EXISTING POST SIGN SHALL HAVE FLUORESCENT YELLOW BACKGROUND	WI3-IP	-	-
	PREVIOUS SHEET TOTAL				26.76											112															
	THIS SHEET SUBTOTAL				11.09											42															
	ROUNDING				0.15											6															
	TOTALS				SF 38.00	SF	EA.	SF				LF	LF	LF	LF	LF 160	LF	EA			LB	LB	LB	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 THE VTRANS "SIGN POST DESIGN GUIDELINE."

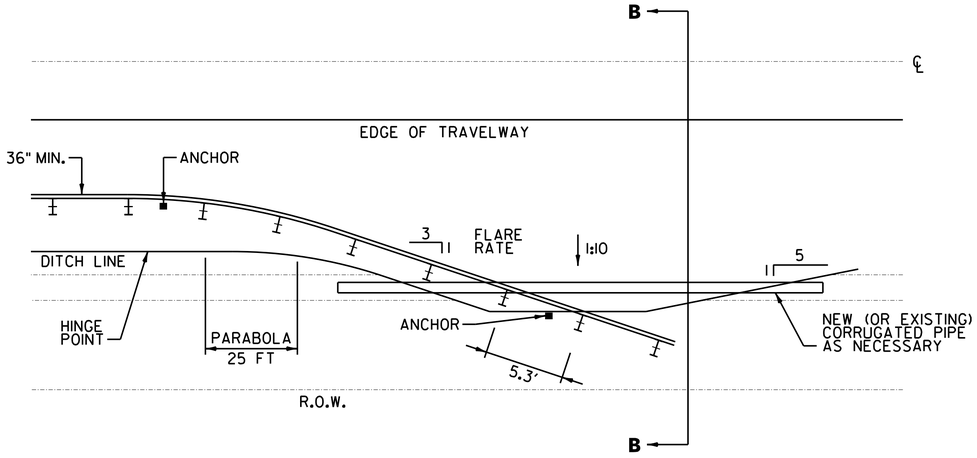
CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zI3c066tsss.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
TRAFFIC SIGN SUMMARY SHEET 2

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 29 OF 93

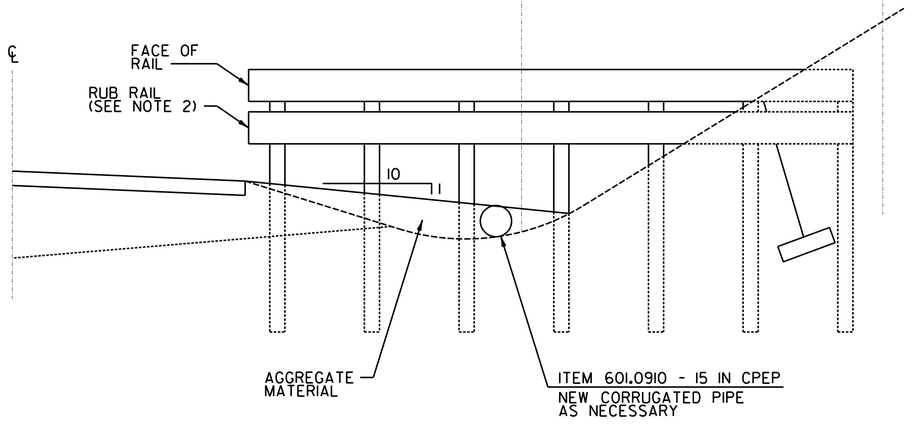
FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zI3c066tsss.dgn
DATE/TIME = 5/4/2016
USER = 5237



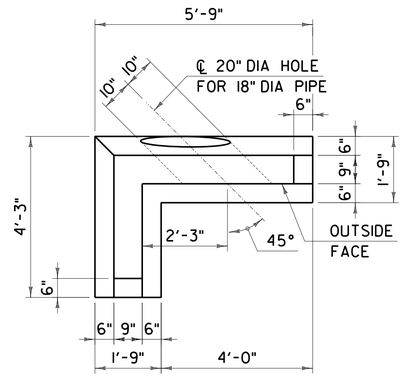
DETAIL FOR BURIED GUARDRAIL ENDS INTO BACKSLOPE

NOT TO SCALE

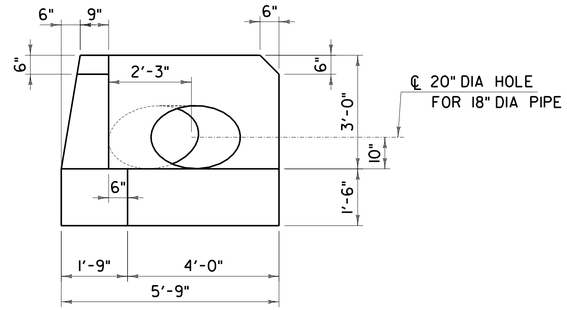
JOHNSON: STA 13+59.3 - STA 14+21.8 RT



SECTION B-B



CONCRETE HEADWALL PLAN



CONCRETE HEADWALL FRONT VIEW

CONCRETE HEADWALL DETAILS

AT STA. 17+89.0 RT

GUARDRAIL NOTES:

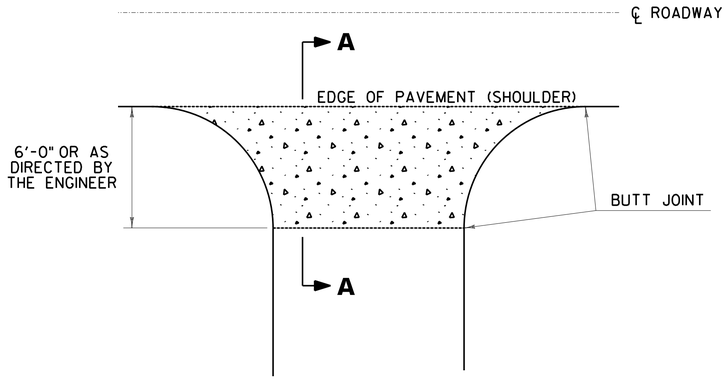
1. PRIMARY RAIL SHALL REMAIN AT A CONSTANT HEIGHT (LEVEL) RELATIVE TO THE HEIGHT OF RAIL AT THE EDGE OF SHOULDER.
2. ADDITION OF RUB RAIL IS REQUIRED WHEN OPENING BENEATH PRIMARY RAIL EXCEEDS 18 INCH RUB RAIL EXTENDS FROM THE EDGE OF SHOULDER TO THE BACK SLOPE.

CONCRETE HEADWALL NOTES:

1. HEADWALL IS PAID AS PRECAST CONCRETE STRUCTURE (HEADWALL).
2. SEE PLAN LAYOUT SHEET 2 FOR LOCATION.
3. CONTRACTOR MUST REMAIN WITHIN THE RIGHT-OF-WAY DURING EXCAVATION.
4. FILL IN VOIDS BETWEEN 18" DIA PIPE AND THE 20" DIA HOLE WITH MORTAR, TYPE IV. COST OF MORTAR INCLUDED WITH PRECAST CONCRETE STRUCTURE (HEADWALL).
5. CUT PIPE TO BE FLUSH WITH OUTSIDE FACE OF VERTICAL PORTION OF WALL.
6. USE #4 BARS AT 12" EACH FACE OF EACH WALL AND TOP AND BOTTOM OF FOOTING. CONTRACTOR TO PREPARE AND SUBMIT SHOP DRAWINGS DETAILING REINFORCEMENT LAYOUT.

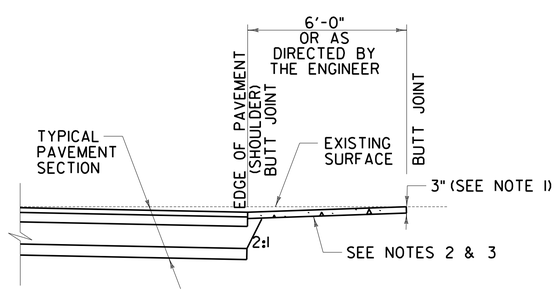
PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066md101.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
MISCELLANEOUS DETAILS SHEET 1	SHEET 30 OF 93

CHA

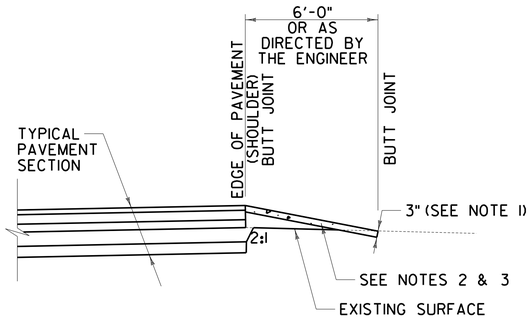


PLAN

STATION	POSITION	WIDTH (FT)	QUANTITY (SY)	TYPE OF HANDWORK
JOHNSON				
SINCLAIR RD	RT	95	57	ASPHALT
12+72	LT	50	35	GRAVEL DRIVE
13+81	LT	35	36	GRAVEL DRIVE
15+28	LT	25	62	GRAVEL DRIVE
15+38	RT	25	21	GRAVEL DRIVE
17+41	RT	40	19	GRAVEL DRIVE
SUBTOTAL:			230	
ROUNDING:			5	
TOTAL:			235	



SECTION A-A
CUT SECTION



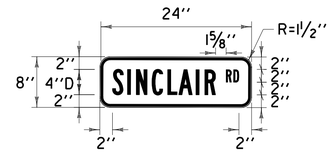
SECTION A-A
FILL SECTION

NOTE:

1. PAVING LIFT NOT TO EXCEED 3".
2. THE COST OF PLACING SUBBASE MATERIAL, SAW CUTTING, EMULSIFIED ASPHALT, CLEANING EXISTING PAVED SURFACES, INCLUDING POWER EQUIPMENT, AND FOR FILLING JOINTS, CRACKS AND HOLES WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES).
3. EXCAVATION NEEDED TO ACHIEVE PROPER DRIVE SLOPES WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES).

LEGEND

ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)

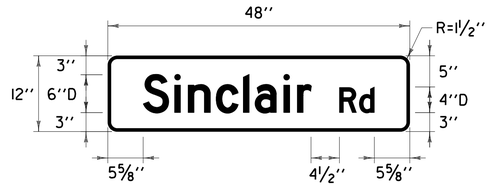


NOT TO SCALE

COLOR: BLACK BORDER & TEXT
YELLOW BACKGROUND (RETROREFLECTIVE)

MATERIAL: FLAT SHEET ALUMINUM WITH A MINIMUM THICKNESS OF 0.125 INCH

LOCATION: VT. ROUTE 100C
JOHNSON:
STA 15+64.0, LT



NOT TO SCALE

COLOR: WHITE BORDER & TEXT (RETROREFLECTIVE)
GREEN BACKGROUND (RETROREFLECTIVE)

MATERIAL: FLAT SHEET ALUMINUM WITH A MINIMUM THICKNESS OF 0.125 INCH

LOCATION: VT. ROUTE 100C
JOHNSON:
STA 12+57.0, RT - DOUBLE SIDED

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066md102.dgn
DATE/TIME = 5/4/2016
USER = 5237

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066md102.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
MISCELLANEOUS DETAILS SHEET 2

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 31 OF 93

SOIL CLASSIFICATION

AASHTO	
A1	GRAVEL AND SAND
A2	SILTY OR CLAYEY GRAVEL AND SAND
A3	FINE 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
25-50	POOR
51-75	FAIR
76-90	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 1⅛"
BX	CORE SIZE 1⅝"
NX	CORE SIZE 2 ⅛"
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		

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.

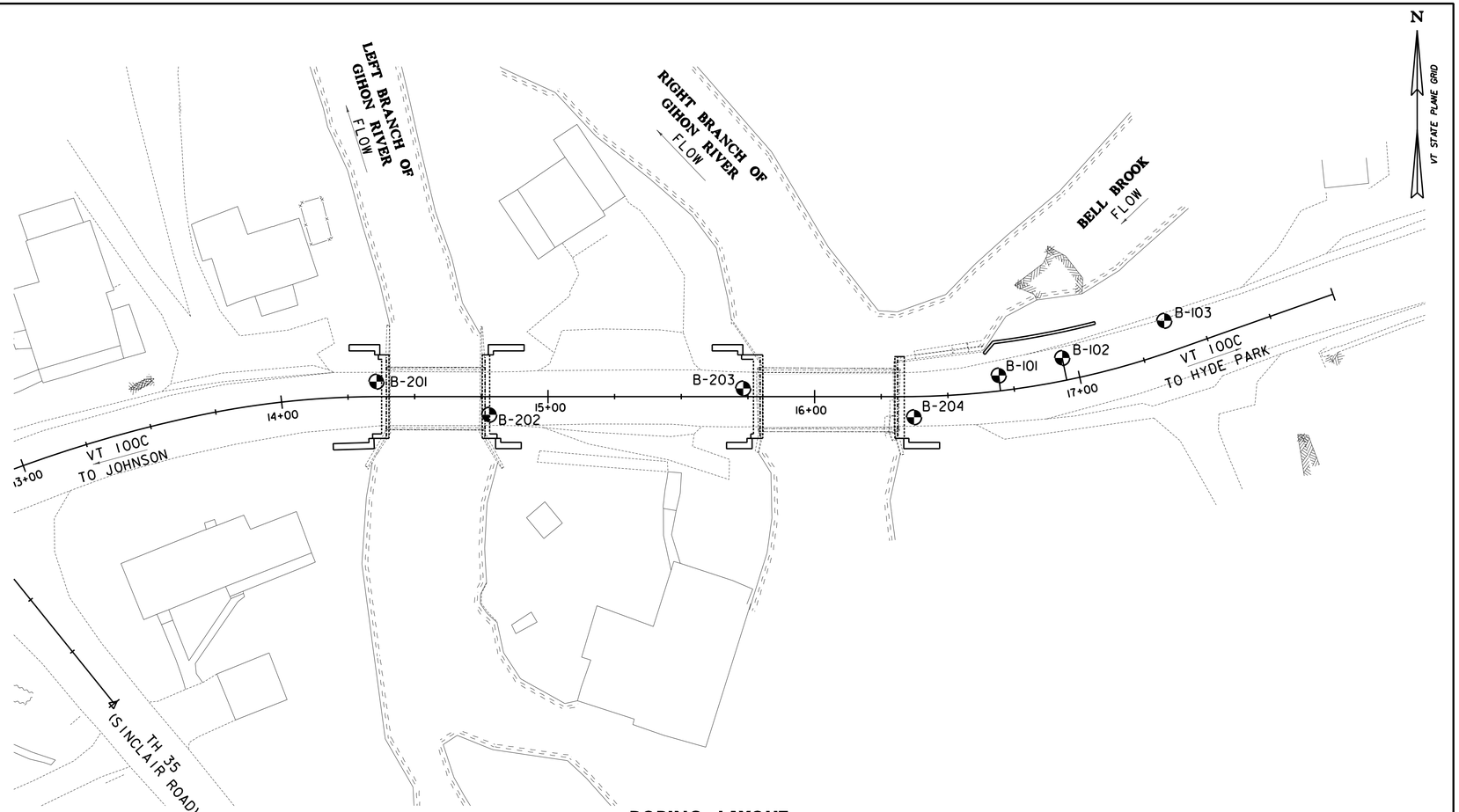
MUCK - SOFT ORGANIC SOIL (CONTAINING > 10% ORGANIC MATERIAL.

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.



BORING LAYOUT

25 0 25

SCALE 1" = 25'-0"

GENERAL NOTES

1. THE SUBSURFACE EXPLORATIONS SHOWN HEREIN WERE MADE ON AUGUST 11, 2014, AUGUST 12, 2014 AND JUNE 16 THROUGH 18, 2015 BY CLOUGH HARBOUR & ASSOCIATES, LLP.
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.

CHA

BORING CHART

HOLE NO.	SURVEY STATION	OFFSET (FT)	GROUND EL. (FT)	EL. TLOB (FT)
B-101	16+69.82	5.8 LT	581.0	571.5
B-102	16+95.00	8.5 LT	582.0	570.7
B-103	17+37.04	11.7 LT	584.5	573.5
B-201	14+35.72	5.6 LT	580.5	557.5
B-202	14+77.95	6.8 RT	580.0	557.5
B-203	15+73.22	3.1 LT	580.0	556.0
B-204	16+37.23	7.8 RT	580.5	564.5

PROJECT NAME: JOHNSON

PROJECT NUMBER: BF 0248 (4)

FILE NAME: zl3c066boringinfo.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: C. SYMMES
BORING INFORMATION SHEET

PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: R. HENDERSON
SHEET 32 OF 89

FILE NAME = V:\Projects\VNY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066boringinfo.dgn
DATE/TIME = 5/4/2016
USER = 5237

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

BORING LOG

Johnson BF 0248(4)
VT 100C Bridge 2 Improvements
Johnson, VT

Boring No.: **B-101**
Page No.: 1 of 1
Pin No.: 13c066
Checked By: CWS

Boring Crew: G. Leavitt, K. Owens
Date Started: 8/11/14 Date Finished: 8/11/14
VTSPG NAD83: N 780143.69 ft E 1598806.35 ft
Station: 16+69.82 Offset: 5.8L
Ground Elevation: 581.0 ft

	Casing	Sampler
Type:	FJC	SS
I.D.:	4 in	1.38 in
Hammer Wt:	300 lb.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Manual/NW	
Rig:	SS 15 TRUCK	C_E = 0.85

Groundwater Observations

Date	Depth (ft)	Notes
08/11/14	5.0	During Drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.7 ft								
		Subbase, 0.7 ft - 1.0 ft				26-24-19-17 (43)				
		(FILL), **f.c. SAND**, little f.c. gravel, trace silt, dense, brown, Moist, Rec. = 1.1 ft				18-25-25-20 (50)				
		(FILL), **f.c. GRAVEL**, Some f.c. Sand, little silt, dense, brown, Moist, Rec. = 0.6 ft				10-6-7-5 (13)				
5		A-2-4, **f.c. SAND**, Some Silt, medium dense, gray, Wet, Rec. = 0.5 ft, Mild organic odor				2-1-1-1 (2)	24.3	0.2	74.3	25.4
		A-2-4, **f.c. SAND**, Some Silt, very loose, brown, Wet, Rec. = 1.6 ft, Mild organic odor				7-40/2"				
		A-2-4, becomes very dense, Rec. = 0.4 ft				Top of Bedrock @ 9.5 ft				
10		9.5 ft - 10.0 ft	R-1	98 (87)	0.16	(R)				
		10.0 ft - 15.0 ft, Gray, Phyllite, quartz seams, close fracture spacing. Hard, Slightly weathered, Good rock, NXDC, 3" highly weathered seam 10.5'-10.8'								
15		15.0 ft - 20.0 ft, Gray, Phyllite, quartz seams, close fracture spacing. Hard, Slightly weathered, Good rock, NXDC, 1" highly weathered seam 15.9'-16.4'	R-2	96 (82)	0.18					
20		20.0 ft - 25.0 ft, Gray, Phyllite, quartz seams, medium close fracture spacing. Hard, Slightly weathered, Excellent Rock, NXDC	R-3	98 (95)	0.14					
25		Hole stopped @ 25.0 ft								
30										
35										

Remarks:
0': Rollerbit through asphalt pavement and subbase. Layers identified through visual observation of borehole sidewalls.

9.5': Rollerbit grinding 9.5' - 10', interpreted as top of bedrock.

11.5': Uniaxial Compressive Strength, qu=5,060 psi

AASHTO classifications are based on visual description of sample recovery at depths where lab testing not performed.

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. <SUB>N<SUB> is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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

BORING LOG

Johnson BF 0248(4)
VT 100C Bridge 2 Improvements
Johnson, VT

Boring No.: **B-102**
Page No.: 1 of 1
Pin No.: 13c066
Checked By: CWS

Boring Crew: G. Leavitt, K. Owens
Date Started: 8/11/14 Date Finished: 8/12/14
VTSPG NAD83: N 780148.21 ft E 1598830.66 ft
Station: 16+95.00 Offset: 8.5L
Ground Elevation: 582.0 ft

	Casing	Sampler
Type:	FJC	SS
I.D.:	4 in	1.38 in
Hammer Wt:	300 lb.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Manual/NW	
Rig:	SS 15 TRUCK	C_E = 0.85

Groundwater Observations

Date	Depth (ft)	Notes
08/11/14	8.0	During Drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.7 ft								
		Subbase, 0.7 ft - 1.0 ft				18-27-14-16 (41)				
		(FILL), **f.c. GRAVEL**, Some f.c. Sand, trace silt, dense, brown, Moist, Rec. = 0.9 ft				12-16-15-4 (31)				
		(FILL), **Similar Soil**, Rec. = 0.9 ft								
		A-2-4, **f. SAND**, little silt, dense, brown, Moist				10-8-5-7 (13)	10.5	13.5	28.0	50.8
5		A-4, **SILT**, Some f.c. Sand, little f.m.c. gravel, medium dense, brown, Moist, Rec. = 0.8 ft				10-8-5-3 (13)				
		A-2-4, **f. SAND**, Some Silt, medium dense, brown, MTW, Rec. = 1.3 ft, Mild organic odor				2-3-1-1 (4)	27.0	6.1	77.8	13.7
		A-2-4, **f.c. SAND**, little silt, trace f. gravel, very loose, brown, Wet, Rec. = 1.0 ft, Mild organic odor				50/4" (R)				
10		A-2-4, **f.c. SAND**, Some Silt, little f.c. gravel, very dense, brown, Wet, Rec. = 0.3 ft				Top of Bedrock @ 11.3 ft				
		11.3 ft - 12.0 ft	R-1	82 (73)	0.15					
		12.0 ft - 17.0 ft, Gray, Phyllite, close fracture spacing. Hard, Slightly weathered, Fair rock, NXDC								
15		17.0 ft - 21.5 ft, Gray, Phyllite, close fracture spacing. Hard, Slightly weathered, Excellent Rock, NXDC	R-2	93 (89)	0.13					
		21.5 ft - 22.0 ft								
20		22.0 ft - 27.0 ft, Gray, Phyllite, medium close fracture spacing. Hard, Slightly weathered, NXDC	R-3	100 (100)	0.2					
25		Hole stopped @ 27.0 ft								
30										
35										

Remarks:
0': Rollerbit through asphalt pavement and subbase. Layers identified through visual observation of borehole sidewalls.

14.5': Uniaxial Compressive Strength, qu=4,860 psi

21.5': Core barrel jammed at 21.5', rollerbit to 22' to ream out borehole prior to advancement of rock core R-3.

22.4': Uniaxial Compressive Strength, qu=5,950 psi

27': R-3 had 72% recovery initially, core barrel returned to hole and recovered the remaining portion of the core sample.

AASHTO classifications are based on visual description of sample recovery at depths where lab testing not performed.

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. <SUB>N<SUB> is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

2010 COPY 28828_JOHNSONBF0248_LOGS.GPJ VERMONT AOT.GDT 2/11/15

FILE NAME = V:\Projects\ANY\K23-28410\CADD_MSTN\13c066\Consultants\Structures\z13c066boringinfo.dgn
DATE/TIME = 5/4/2016
USER = 5237

PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BF 0248(4)
FILE NAME: z13c066boringinfo.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: C. SYMMES	CHECKED BY: R. HENDERSON
BORING LOG SHEET 1	SHEET 33 OF 93

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

BORING LOG

Johnson BF 0248(4)
VT 100C Bridge Improvements
Johnson, VT

Boring No.: **B-103**
Page No.: 1 of 1
Pin No.: 13c066
Checked By: CWS

Boring Crew: J. Leonhardt, K. Owens
Date Started: 6/16/15 Date Finished: 6/16/15
VTSPG NAD83: N 780158.78 ft E 1598870.02 ft
Station: 17+37.04 Offset: 11.7L
Ground Elevation: 584.5 ft

	Casing	Sampler
Type:	FJC	SS
I.D.:	4 in	1.38 in
Hammer Wt:	300 lb.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/NW	
Rig:	CME 550 ATV	C = 1.4

Groundwater Observations

Date	Depth (ft)	Notes
06/16/15		None observed

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.4 ft							
		(FILL), **f.c. GRAVEL**, Some f.c. Sand, little silt, dense, brown/gray, Moist Rec. = 0.7 ft			26-18-13 (31)	3.2	55.1	33.8	11.1
		(FILL)							
5		A-2-4 A-2-4, **f.c. SAND**,little silt, trace f.c. gravel, medium dense, brown, Moist, Rec. = 0.4 ft A-2-4			8-8-9-8 (17)				
		(Completely Weathered Bedrock)							
10		(Completely Weathered Bedrock), **f.c. GRAVEL**, Some f.c. Sand, little silt, very dense, gray, Moist, Rec. = 0.8 ft			18-67-100 (167)	6.7	53.1	29.2	17.7
		11.0 ft - 14.5 ft, Gray, Phyllite, very close fracture spacing. Hard, Severely weathered, Poor rock, NXDC	R-1	71 (37)	Top of Bedrock @ 11.0 ft				
15		14.5 ft - 17.0 ft, Gray, Phyllite, very close fracture spacing. Hard, Slightly weathered, Very Poor rock, NXDC	R-2	80 (20)					
		17.0 ft - 22.0 ft, Gray, Phyllite, close fracture spacing. Hard, Slightly weathered, Good rock, NXDC	R-3	100 (90)					
20									
25		22.0 ft - 27.0 ft, Gray, Phyllite, close fracture spacing. Hard, Moderately weathered, Fair rock, NXDC, 24'-25' mineral/quartz seam	R-4	100 (70)					
		Hole stopped @ 27.0 ft							
30		Remarks: 0': Auger through asphalt pavement. Layers identified through visual observation of borehole sidewalls. 14.5': Core barrel jam at 14.5' and 17'. 19.1': Uniaxial Compressive Strength, qu= 4,090 psi 25.7': Uniaxial Compressive Strength, qu= 5,680 psi AASHTO classifications are based on visual description of sample recovery at depths where lab testing not performed.							
35									
40									

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

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

BORING LOG

Johnson BF 0248(4)
VT 100C Bridge Improvements
Johnson, VT

Boring No.: **B-201**
Page No.: 1 of 1
Pin No.: 13c066
Checked By: CWS

Boring Crew: J. Leonhardt, K. Owens
Date Started: 6/17/15 Date Finished: 6/17/15
VTSPG NAD83: N 780161.59 ft E 1598573.68 ft
Station: 14+35.72 Offset: 5.6L
Ground Elevation: 581.0 ft

	Casing	Sampler
Type:	FJC	SS
I.D.:	4 in	1.38 in
Hammer Wt:	300 lb.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/NW	
Rig:	CME 550 ATV	C = 1.4

Groundwater Observations

Date	Depth (ft)	Notes
06/17/15	4.0	During drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.5 ft							
		(FILL), **f.c. GRAVEL**, little f.c. sand, trace silt, dense, brown/gray, Moist, Rec. = 0.6 ft			87-18-15 (33)				
5		(FILL), **f.c. SAND**, trace silt, trace f.c. gravel, loose, brown, Wet, Rec. = 0.5 ft			6-4-4-3 (8)	5.9	2.1	90.5	7.4
		(FILL)							
10		(FILL), **Similar Soil**, Rec. = 0.3 ft			5-3-2-2 (5)				
		(FILL)							
15		(FILL), Grades to little silt,becomes very loose, Rec. = 0.3 ft			3-1-0-1 (1)				
		(FILL), **f.c. SAND**, little f.c. gravel, trace silt, very loose, brown, Wet, Rec. = 0.6 ft			2-1-1-2 (2)				
		Rec. = 1.3 ft18.0 ft - 19.5 ft, Concrete, NXDC	R-1	87	50/0" (R)				
20		(Completely Weathered Bedrock), **SILT**, Some f.c. Sand,little f. gravel, very dense, gray, Wet, Rec. = 1.0 ft 21.0 ft - 23.0 ft			22-27-36 (63)	14.0	18.9	29.4	51.7
		23.0 ft - 28.0 ft, Gray, Phyllite, close fracture spacing, "6"" quartz seam at 25.5 ft.. Hard, Slightly weathered, Good rock, NXDC	R-2	94 (90)	Top of Bedrock @ 23.0 ft				
25									
		Hole stopped @ 28.0 ft							
30		Remarks: 0': Auger through asphalt pavement. Layers identified through visual observation of borehole sidewalls. 18': Uniaxial Compressive Strength, qu= 2,298 psi 19.3': Sudden decrease in drilling resistances at 19.3', interpreted as bottom of concrete. 19.3'-23': Consistent drilling resistance, interpreted as completely weathered bedrock. 23': Very hard drilling 24': Uniaxial Compressive Strength, qu= 5,200 psi							
35									
40									

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

2010 COPY 28828_JOHNSONBF0248_LOGS.GPJ VERMONT AOT.GDT 9/16/15

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066boringinfo.dgn
DATE/TIME = 5/4/2016
USER = 5237

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066boringinfo.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: C. SYMMES
BORING LOG SHEET 2

PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: R. HENDERSON
SHEET 34 OF 93

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

BORING LOG

Johnson BF 0248(4)
VT 100C Bridge Improvements
Johnson, VT

Boring No.: **B-202**
Page No.: 1 of 1
Pin No.: 13c066
Checked By: CWS

Boring Crew: J. Leonhardt, K. Owens
Date Started: 6/17/15 Date Finished: 6/18/15
VTSPG NAD83: N 780145.56 ft E 1598614.70 ft
Station: 14+77.95 Offset: 6.8R
Ground Elevation: 580.0 ft

	Casing	Sampler
Type:	FJC	SS
I.D.:	4 in	1.38 in
Hammer Wt:	300 lb.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/NW	
Rig:	CME 550 ATV	C = 1.4

Groundwater Observations

Date	Depth (ft)	Notes
06/17/15	8.0	During drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate min/usft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.4 ft								
		Subbase, 0.4 ft - 2.0 ft				14-10-12 (22)				
		Rec. = 0.5 ft (FILL)								
		(FILL), **f.c. SAND**, trace silt, loose, brown, Moist, Rec. = 0.7 ft				4-3-3-4 (6)				
5		(FILL)								
		(FILL), becomes very loose, wet, Rec. = 0.5 ft				2-2-2-2 (4)				
10		(FILL)								
		(FILL), grades to trace f. gravel, Rec. = 0.3 ft				1-1-1-1 (2)				
15		(FILL), becomes very dense, Rec. = 0.6 ft, Spoon bouncing at 16.0', interpreted as top of concrete.				2-2-50/0" (R)	18.4	7.2	86.7	6.1
		16.0 ft - 19.0 ft, Gray, Concrete. Severely weathered, NXDC, 0.8' of recovery was moderately weathered concrete, 0.3' of recovery was concrete aggregate.	R-1	37	0.25					
20		(Completely Weathered Bedrock), **SILT**, Some f.c. Sand, trace f. gravel, very dense, gray, Moist, Rec. = 1.1 ft				26-56-100 (R)	9.1	11.7	31.3	57.0
		(Completely Weathered Bedrock), **Similar Soil**, Rec. = 1.3 ft				61-88-100/3" (R)				
		22.5 ft - 27.5 ft, Gray, Phyllite, medium fracture spacing. Medium hard, Moderately to severely weathered, Poor rock, NXDC, Severely weathered and very close fracture spacing 25.0-25.5'.	R-2	60 (50)	0.42	Top of Bedrock @ 22.5 ft				
25										
		27.5 ft - 30.5 ft, Gray, Phyllite, very close fracture spacing. Medium hard, Severely weathered, Very Poor rock, NXDC	R-3	83 (20)	0.5					
30		Hole stopped @ 30.5 ft								

Remarks:
0': Auger through asphalt pavement. Layer identified through visual observation of borehole sidewalls.

16': Uniaxial Compressive Strength, qu= 4,810 psi

19': Drilling resistance suddenly decreased at 19', interpreted as bottom of concrete.

22.5': Rollerbit refusal at 22.5', interpreted as top of competent bedrock.

25': Less drilling resistance 25-26', 29-30'.

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

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

BORING LOG

Johnson BF 0248(4)
VT 100C Bridge Improvements
Johnson, VT

Boring No.: **B-203**
Page No.: 1 of 1
Pin No.: 13c066
Checked By: CWS

Boring Crew: J. Leonhardt, K. Owens
Date Started: 6/16/15 Date Finished: 6/17/15
VTSPG NAD83: N 780147.13 ft E 1598710.46 ft
Station: 15+73.22 Offset: 3.1L
Ground Elevation: 580.0 ft

	Casing	Sampler
Type:	FJC	SS
I.D.:	4 in	1.38 in
Hammer Wt:	300 lb.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/NW	
Rig:	CME 550 ATV	C = 1.4

Groundwater Observations

Date	Depth (ft)	Notes
06/16/15	14.0	During drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.5 ft							
		(FILL), **f.c. GRAVEL**, AND f.c. SAND, trace silt, dense, Moist, Rec. = 0.6 ft			27-14-12 (26)				
		(FILL)							
5		(FILL), **f.c. GRAVEL and f.c. SAND**, little silt, loose, brown, Moist, Rec. = 0.8 ft			5-3-3-2 (6)	11.2	43.1	44.8	12.1
		(FILL)							
10		(FILL), **Similar Soil**, Rec. = 0.6 ft			11-6-4-3 (10)				
		(FILL)							
15		(FILL), **f.c. SAND**, trace silt, trace f. gravel, loose, brown, Wet, Rec. = 0.4 ft			7-4-2-2 (6)				
		(FILL)							
20		(Completely Weathered Bedrock), **SILT**, Some f.c. Sand,Some f.c. Gravel, medium dense, gray, Moist, Rec. = 0.9 ft			6-6-14-51 (20)	14.3	30.9	30.7	38.4
		21.0 ft - 22.0 ft, Gray, Phyllite, Hard, Fair rock, NXDC	R-1	60					
		(Completely Weathered Bedrock), **f. SAND**, Some Silt, trace f. gravel very dense, gray, Moist, Rec. = 0.5 ft			44-100/2"				
		(Completely Weathered Bedrock)							
25		24.0 ft - 26.0 ft, Gray, Phyllite, Hard, Good rock, NXDC	R-2	100 (80)	Top of Bedrock @ 24.0 ft				
		(Completely Weathered Bedrock)							
		28.5 ft - 31.5 ft, Gray, Phyllite, highly weathered, very close fracture spacing. Hard, Poor rock, NXDC	R-3	100 (49)					
30		31.5 ft - 32.8 ft, becomes slightly weathered at 31.5'							
		Hole stopped @ 32.8 ft							

Remarks:
0': Auger through asphalt pavement. Layers identified through visual observation of borehole sidewalls.

19': Casing driving resistance increased at 19' interpreted as top of completely weathered bedrock.

26': Core barrel jammed at 26' and 32.8', likely due to high degree of weathering. Advanced roller bit 26'-28.5' to obtain rock core. Interpreted as completely weathered bedrock.

31.5': Uniaxial Compressive Strength, qu= 3,430 psi

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

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066boringinfo.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: C. SYMMES
BORING LOG SHEET 3

PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: R. HENDERSON
SHEET 35 OF 93

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

BORING LOG

Johnson BF 0248(4)
VT 100C Bridge Improvements
Johnson, VT

Boring No.: **B-204**
Page No.: 1 of 1
Pin No.: 13c066
Checked By: CWS

Boring Crew: J. Leonhardt, K. Owens
Date Started: 6/18/15 Date Finished: 6/18/15
VTSPG NAD83: N 780130.84 ft E 1598773.40 ft
Station: 16+37.23 Offset: 7.8R
Ground Elevation: 580.1 ft

	Casing	Sampler
Type:	FJC	SS
I.D.:	4 in	1.38 in
Hammer Wt:	300 lb.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/NW	
Rig:	CME 550 ATV	C_e = 1.4

Groundwater Observations

Date	Depth (ft)	Notes
06/18/15	4.0	During drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.5 ft							
		(FILL), **f.c. GRAVEL**, little f.c. sand,trace silt, dense, brown, Moist, Rec. = 0.7 ft			27-19-15 (34)				
		(FILL)							
5		(FILL), **f.c. SAND**,trace silt, trace f. gravel, loose, brown, Wet, Rec. = 0.7 ft			5-3-4-2 (7)	17.4	2.4	90.2	7.4
		(FILL)							
10		(FILL), **f.c. SAND**, little silt, little f.c. gravel, dense, brown, Wet, Rec. = 0.9 ft			6-15-10-17 (25)				
		(FILL)							
15		(FILL), **f.c. SAND**, trace silt, very loose, brown, Wet, Rec. = 0.6 ft			1-1-0-25 (1)				
		Wood fragments, 14.3 ft - 14.5 ft							
		(Completely Weathered Bedrock), **f.c. GRAVEL**, little silt, little f.c. sand, very loose, gray, Moist	R-1	86 (46)	Top of Bedrock @ 16.0 ft				
20		16.0 ft - 21.0 ft, Gray, Phyllite, very close fracture spacing. Medium hard, Slightly to moderately weathered, Poor rock, NXDC							
		Hole stopped @ 21.0 ft							
25									
30									
35									
40									

Remarks:
0': Auger through asphalt pavement. Layers identified through visual observation of borehole sidewalls.

9': Hard casing during 9'-14'.

16': Spoon bouncing at 16'.

18.5': Uniaxial Compressive Strength, qu= 3,720 psi

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

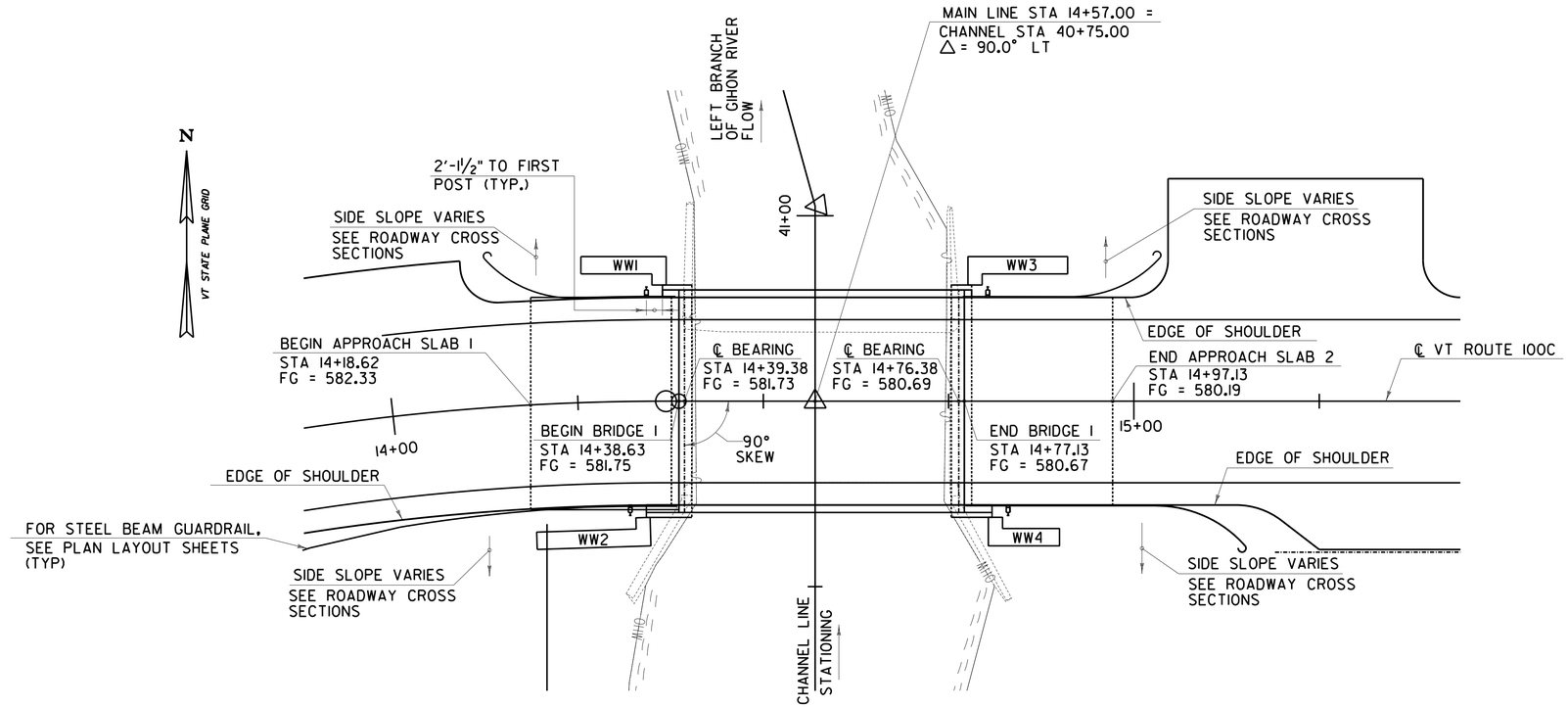
2010 COPY 28828_JOHNSONBF0248_LOGS.GPJ VERMONT AOT.GDT 9/16/15

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066boringinfo.dgn
DATE/TIME = 5/4/2016
USER = 5237

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066boringinfo.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: C. SYMMES
BORING LOG SHEET 4

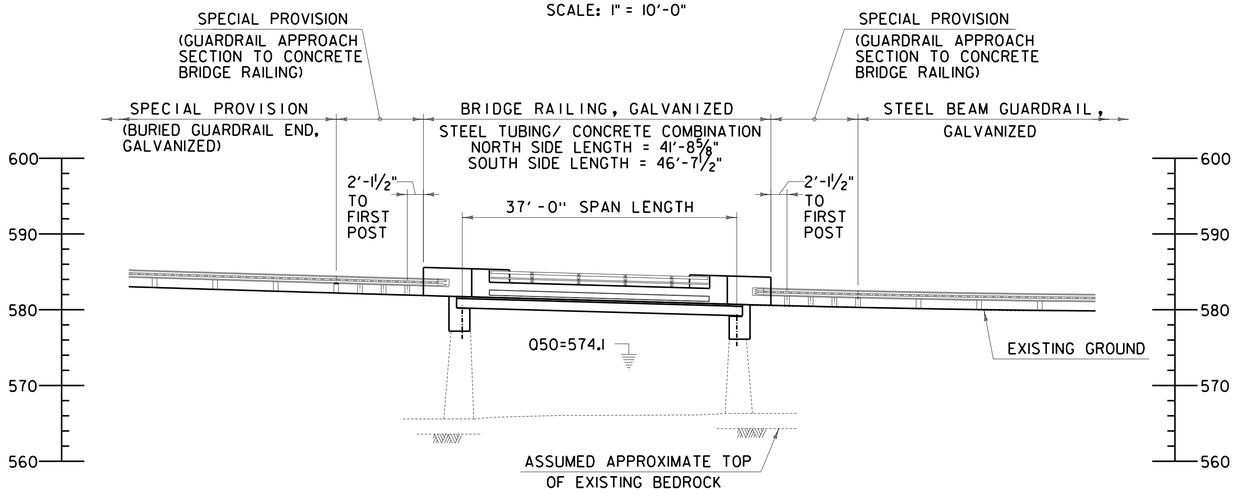
PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: R. HENDERSON
SHEET 36 OF 93



PLAN – BRIDGE 1

0 10 20

SCALE: 1" = 10'-0"



ELEVATION – BRIDGE 1

SCALE: 1" = 10'-0"

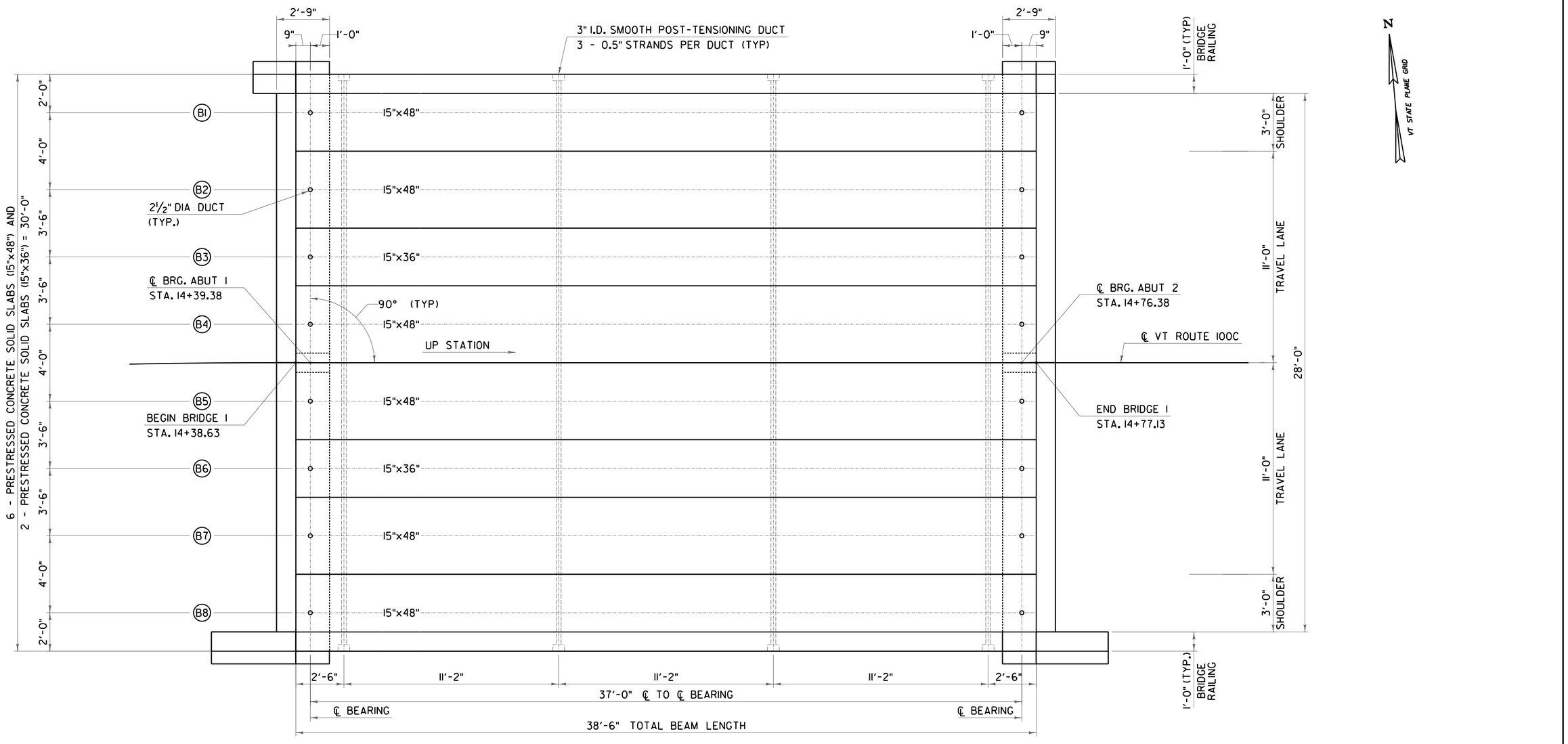
NOTE: SEE PLAN LAYOUT SHEETS FOR GUARDRAIL LIMITS

NOTES:

1. SEE UNIT BLOCK RETAINING WALL DETAILS FOR WINGWALL INFORMATION.

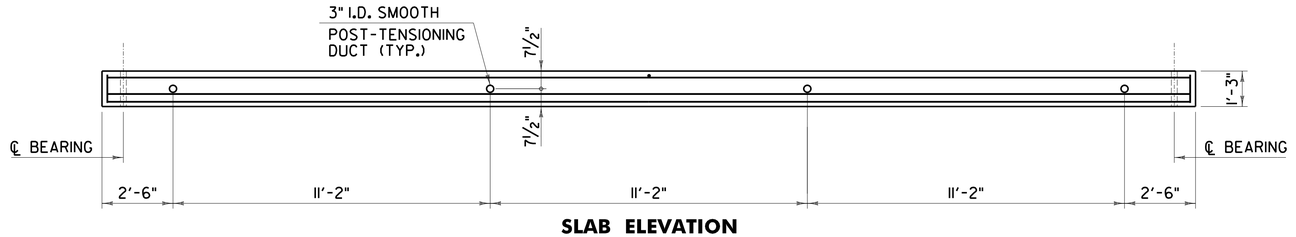
PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066pe_brl.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
PLAN AND ELEVATION BRIDGE 1	SHEET 37 OF 93

CHA



DECK AND FRAMING PLAN
SCALE : 3/8" = 1'-0"

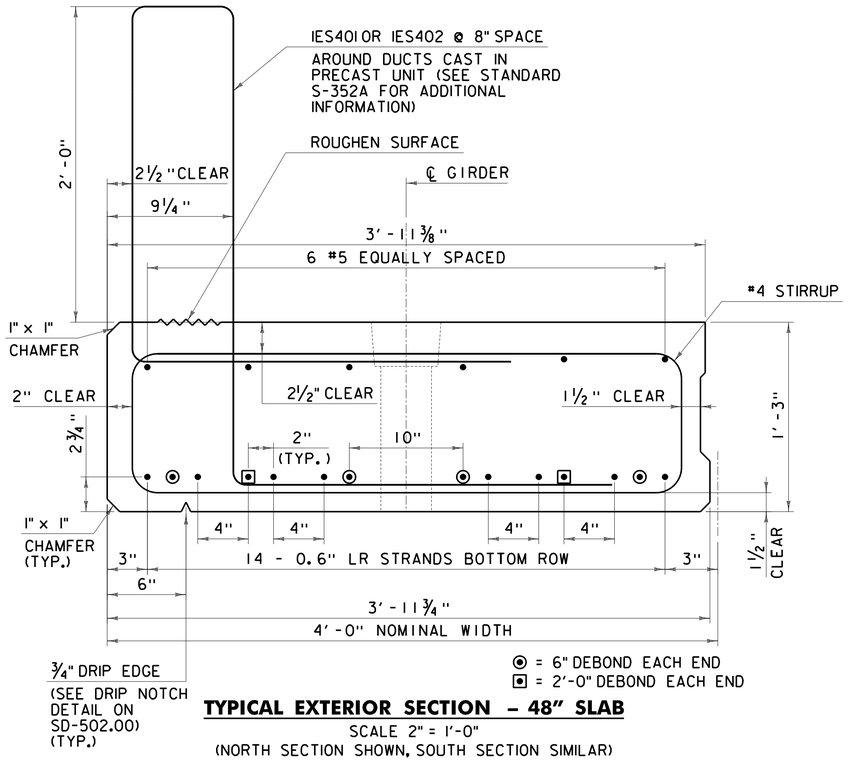
NOTE:
UNIT BLOCK RETAINING WALLS NOT SHOWN FOR CLARITY



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

NOTE: FOR REINFORCEMENT, SEE BRIDGE 1 SUPERSTRUCTURE DETAILS SHEET 1

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066frmpln_br1.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
BRIDGE 1 DECK AND FRAMING PLAN	SHEET 38 OF 93

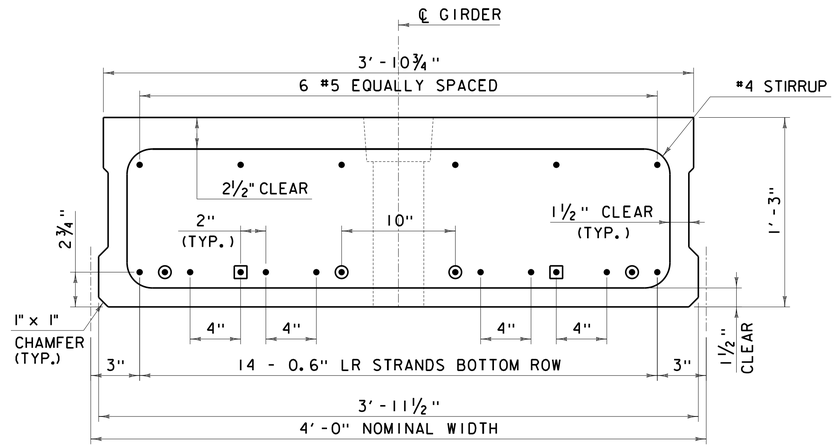


TYPICAL EXTERIOR SECTION – 48" SLAB

SCALE 2" = 1'-0"

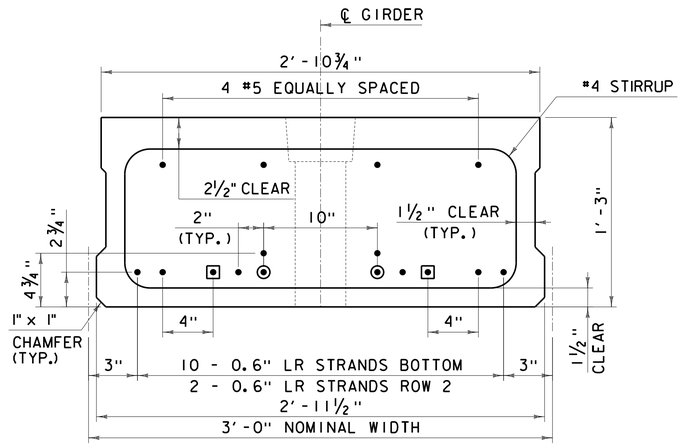
(NORTH SECTION SHOWN, SOUTH SECTION SIMILAR)

NOTE: STEEL TUBING AND OVERLAY NOT SHOWN FOR CLARITY.



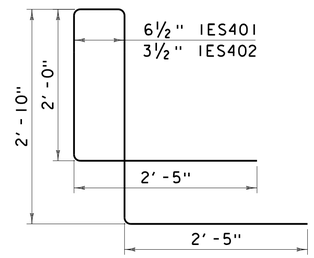
TYPICAL INTERIOR SECTION – 48" SLAB

SCALE 2" = 1'-0"



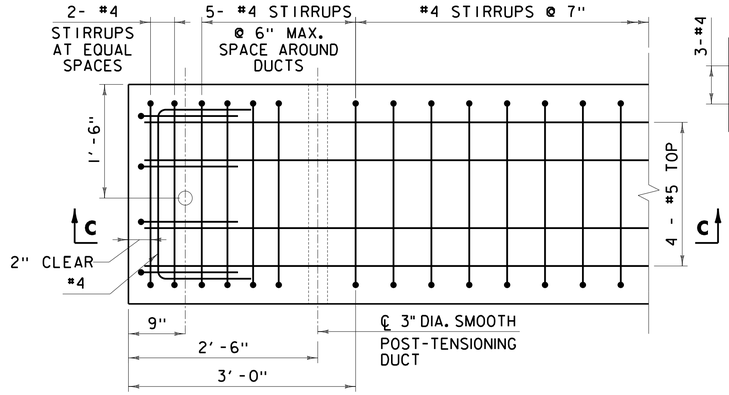
TYPICAL INTERIOR SECTION – 36" SLAB

SCALE 2" = 1'-0"



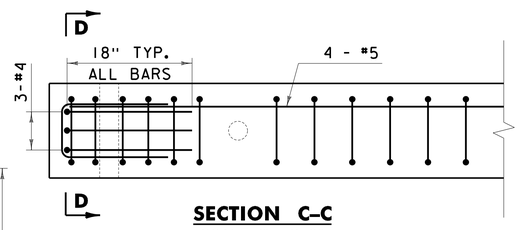
BARS 1ES401 & 1ES402

NOT TO SCALE



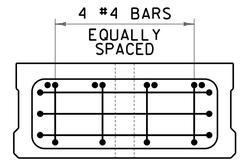
TYPICAL END REINFORCING PLAN – 36" SLAB

NOT TO SCALE



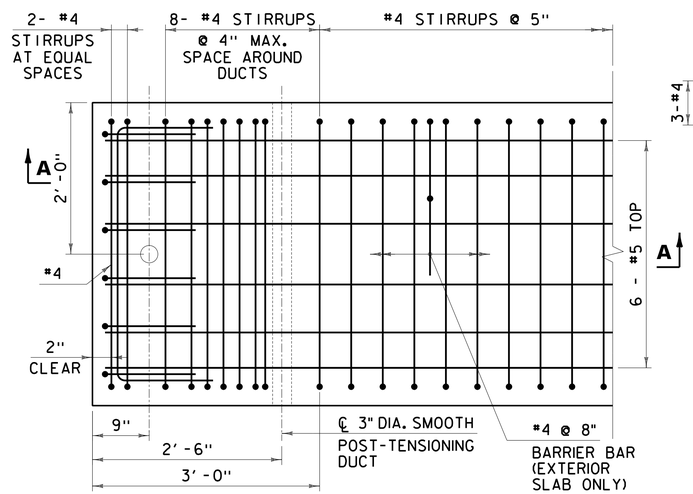
SECTION C–C

SCALE 1" = 1'-0"



SECTION D–D

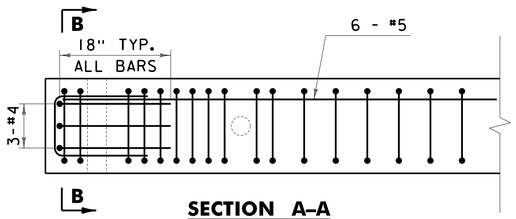
SCALE 1" = 1'-0"



TYPICAL END REINFORCING PLAN – 48" SLAB

(EXTERIOR SLAB SHOWN, INTERIOR SLAB SIMILAR.)

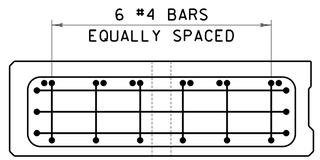
NOT TO SCALE



SECTION A–A

NOTE: #4 BARRIER BAR NOT SHOWN FOR CLARITY. (EXTERIOR SLAB ONLY)

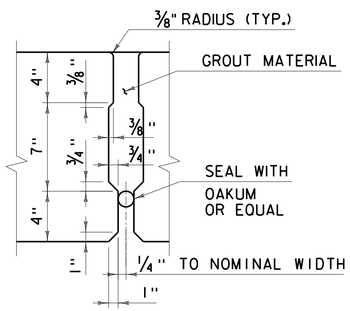
SCALE 1" = 1'-0"



SECTION B–B

(EXTERIOR SLAB SHOWN, INTERIOR SLAB SIMILAR.)

SCALE 1" = 1'-0"



TYPICAL SHEAR KEY DETAIL

SCALE 2" = 1'-0"

NOTES:

1. ALL REINFORCEMENT SHALL BE LEVEL I EPOXY COATED.
2. FOR TYPICAL SECTION OF ENTIRE BRIDGE, SEE TYPICAL BRIDGE SECTION SHEET 1.
3. ALL REINFORCEMENT DIMENSIONS ARE TO CENTERLINE OF BARS EXCEPT CLEAR DIMENSIONS, WHICH ARE TO THE OUTSIDE OF BAR.

PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BF 0248(4)
FILE NAME: z13c066supdtll_brl.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
BRIDGE I SUPERSTRUCTURE DETAILS SHEET I	SHEET 39 OF 93

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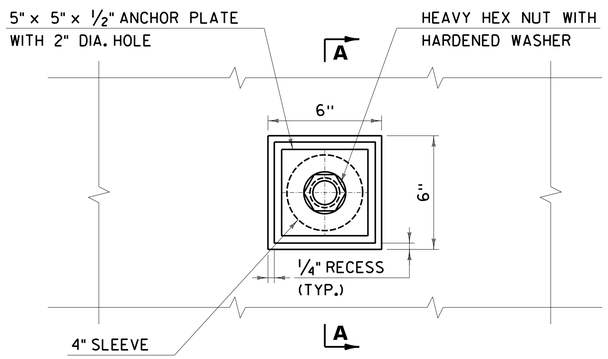
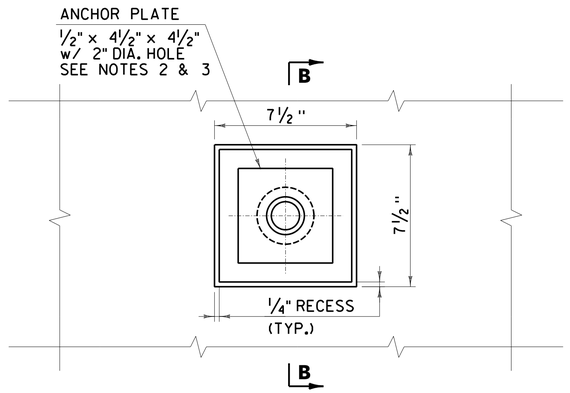
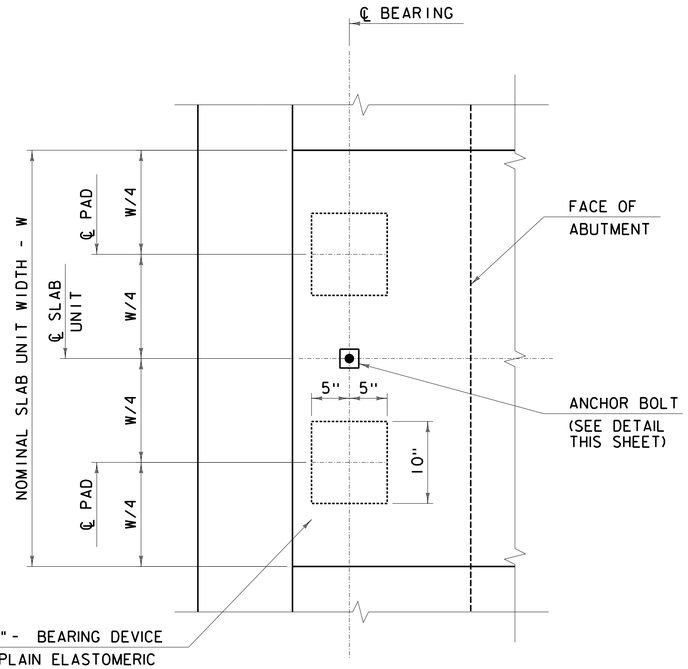


ANCHOR BOLT DETAIL
PLAN
SCALE 3" = 1'-0"

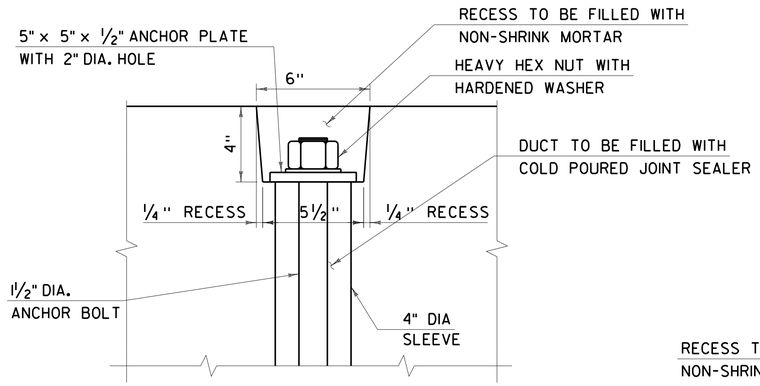


TRANSVERSE POST-TENSIONING DETAIL
ELEVATION
SCALE 3" = 1'-0"

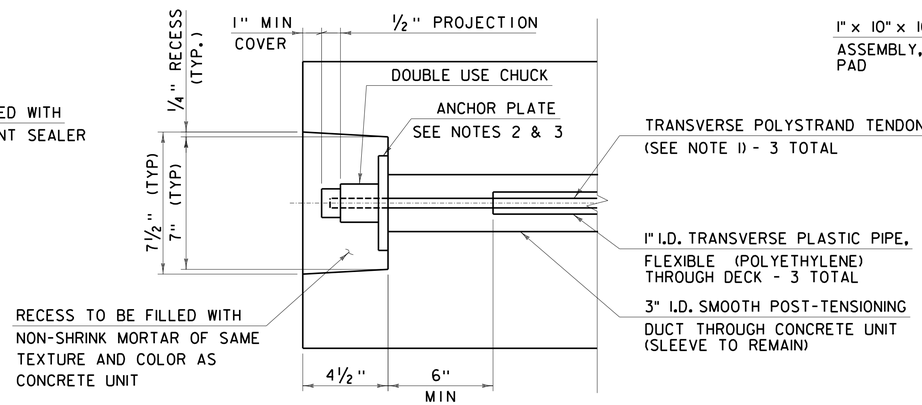


1" x 10" x 10" - BEARING DEVICE
ASSEMBLY, PLAIN ELASTOMERIC
PAD

TYPICAL BEARING DETAIL
SCALE 1½" = 1'-0"



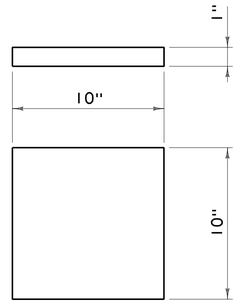
ANCHOR BOLT DETAIL
SECTION A-A
SCALE 3" = 1'-0"



TRANSVERSE POST-TENSIONING DETAIL
SECTION B-B
SCALE 3" = 1'-0"

NOTES:

1. TRANSVERSE TENDONS SHALL BE COVERED BY SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITER GREASE BETWEEN SHEATH AND STRAND) FOR THE LENGTH OF STRAND, EXCEPT AT ANCHORAGE LOCATIONS. EACH STRAND SHALL BE TENSIONED TO 33 KIPS FOR 0.5" DIA. STRAND.
2. ANCHOR PLATES SHALL CONFORM TO AASHTO M 270M/M 270, GRADE 345 (GRADE 50) AND BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111M/M 111.
3. ANCHOR BOLTS AND NUTS SHALL CONFORM TO AASHTO M164M AND SHALL BE ZINC COATED.
4. WASHERS SHALL BE AASHTO M270M GRADE 345 AND SHALL BE GALVANIZED USING AASHTO M111M.
5. ANCHOR PLATES FOR TRANSVERSE POST-TENSIONING ARE TO BE DESIGNED BY THE FABRICATOR FOR THE SPECIFIC POST-TENSIONING SYSTEM USED. DETAILS FOR THE ANCHOR PLATE SHALL BE PROVIDED ON THE FABRICATION DRAWINGS.
6. CONTRACTOR TO PULL TRANSVERSE TENDONS SYMMETRICALLY FROM BEARINGS TO MIDSPAN.
7. BEARING SHALL CONFORM TO THE APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.
8. THE ELASTOMER WAS DESIGNED WITH A SHEAR MODULUS OF 110 PSI +/- 15%.
9. THE CONTRACTOR SHALL HAVE A MINIMUM OF 32 - ¼" x 10" x 10" GALVANIZED STEEL SHIMS AVAILABLE FOR USE FOR ELEVATION ADJUSTMENTS UPON THE SETTING OF THE SUPERSTRUCTURE UNITS. THE SHIMS SHALL BE FABRICATED ACCORDING TO SECTION 531 AND SHALL BE INCLUDED WITH BEARING DEVICE ASSEMBLY, PLAIN ELASTOMERIC PAD.
10. ANCHOR BOLTS, PLATES, WASHERS, NUTS, SLEEVES, AND TENDONS ARE INCLUDED WITH THE APPROPRIATE PRESTRESSED CONCRETE SOLID SLAB ITEM.

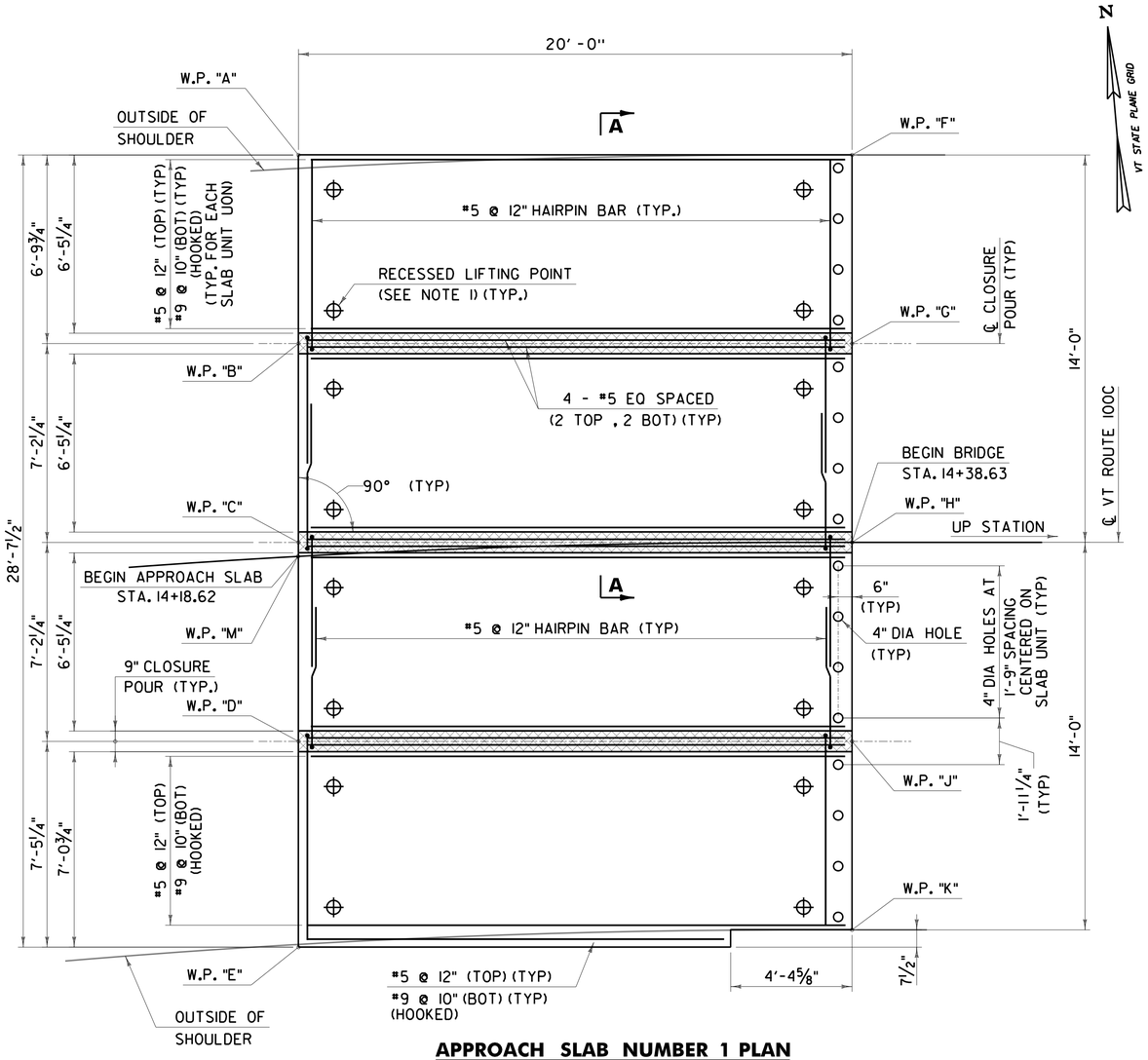


TYPICAL BEARING DETAIL
SCALE 3" = 1'-0"

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

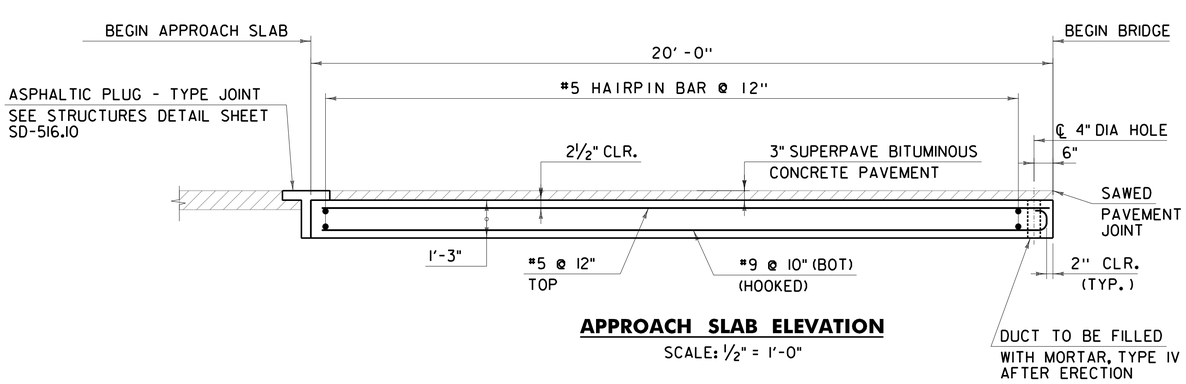
FILE NAME: zl3c066supdtl2_brl.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: N. BENNET
BRIDGE I SUPERSTRUCTURE DETAILS SHEET 2
PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON
SHEET 40 OF 93

CHA



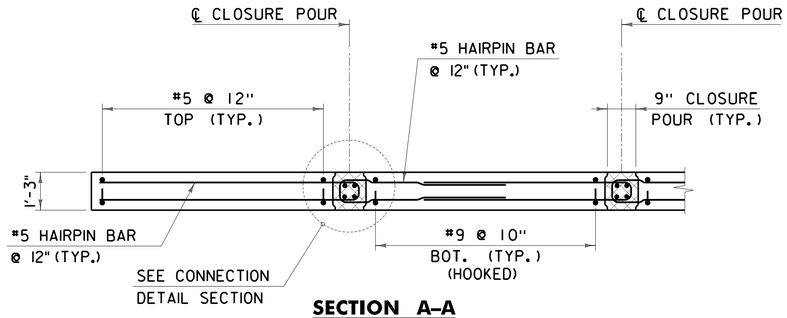
APPROACH SLAB NUMBER 1 PLAN

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



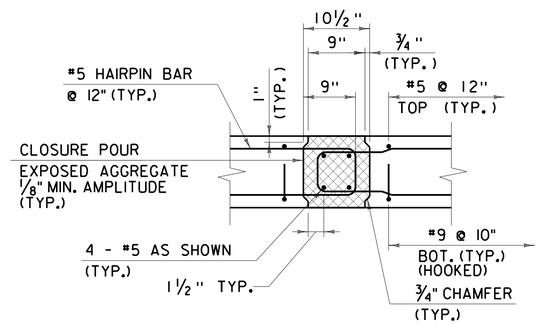
APPROACH SLAB ELEVATION

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



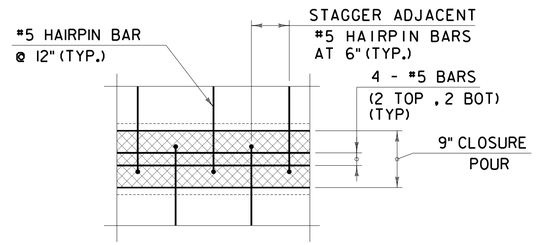
SECTION A-A

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



CONNECTION DETAIL SECTION

SCALE: 1" = 1'-0"



CONNECTION DETAIL PLAN

SCALE: 1" = 1'-0"

APPROACH SLAB ELEVATIONS					
APPROACH SLAB NO. 1					
W.P.	STATION	OFFSET (FT)		TOP OF APPROACH SLAB ELEV.	THICKNESS
A	14+19.39	14.48	LT	581.76	1'-3"
B	14+19.04	7.68	LT	581.91	1'-3"
C	14+18.65	0.50	LT	582.07	1'-3"
D	14+18.24	6.68	RT	581.95	1'-3"
E	14+17.80	14.10	RT	581.82	1'-3"
F	14+38.63	14.00	LT	581.22	1'-3"
G	14+38.63	7.18	LT	581.36	1'-3"
H	14+38.63	0.00		581.50	1'-3"
J	14+38.63	7.19	RT	581.36	1'-3"
K	14+38.63	14.00	RT	581.22	1'-3"
M	14+18.61	0.00		582.08	1'-3"

NOTES:

1. LIFTING POINTS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL LIFTING LOCATIONS SHALL BE DETERMINED BY THE FABRICATOR AND INDICATED ON THE FABRICATION DRAWINGS WITH CALCULATIONS.
2. THE TOP SURFACE OF THE PRECAST APPROACH SLAB PANELS SHALL HAVE A BROOM FINISH PARALLEL TO THE CENTERLINE OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING UNIFORM CONTACT BETWEEN THE APPROACH SLAB AND THE SUBBASE MATERIAL TO THE SATISFACTION OF THE ENGINEER. THE FABRICATION DRAWINGS SHALL INDICATE THE MEANS AND METHODS NECESSARY TO INSTALL THE APPROACH SLABS TO THE ELEVATIONS SPECIFIED.

LEGEND:

AREA OF CLOSURE POUR SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)

NOTES:

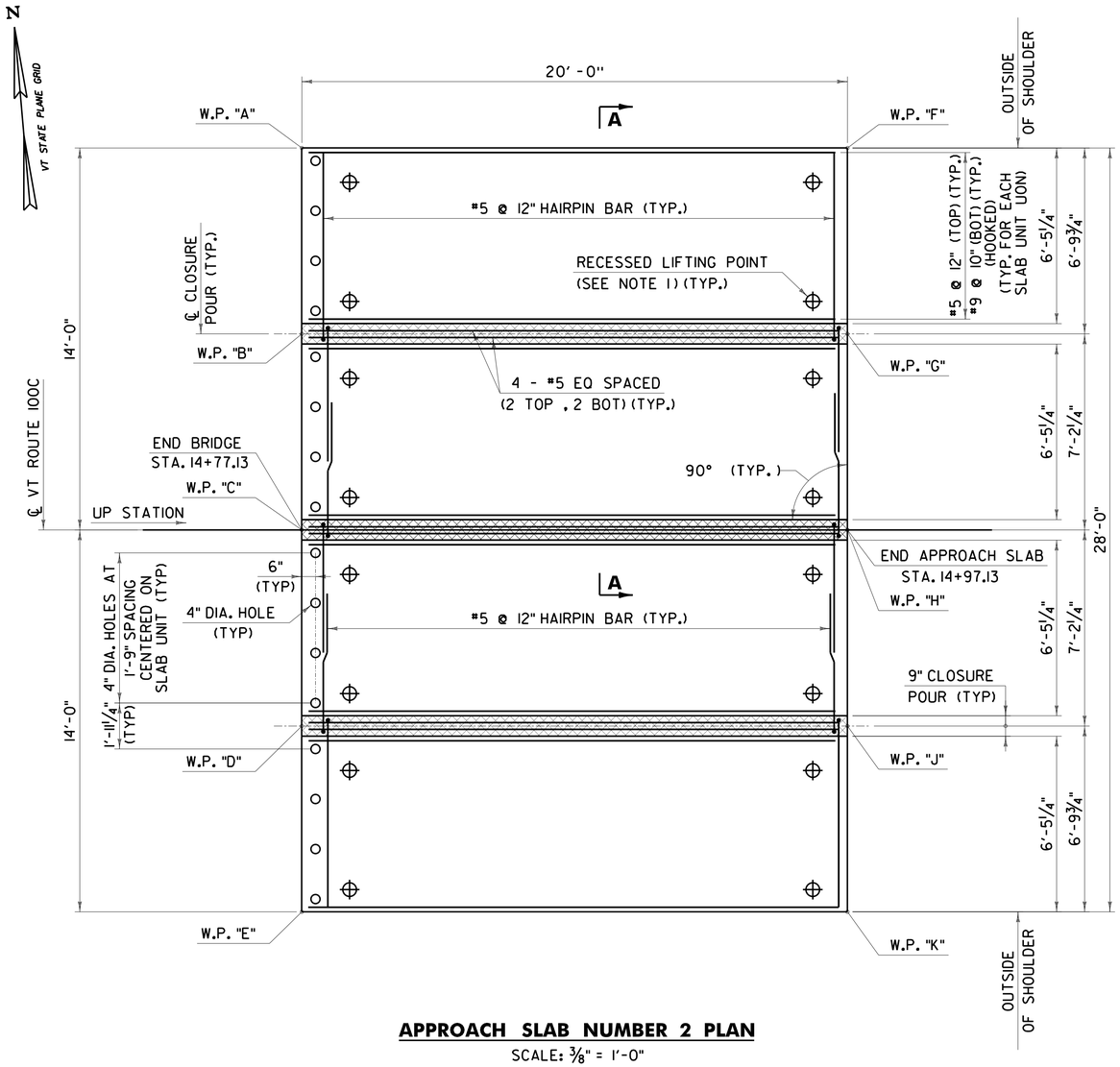
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON PLANS.
3'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
ALL REINFORCEMENT SHALL BE LEVEL 1 EPOXY COATED

CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

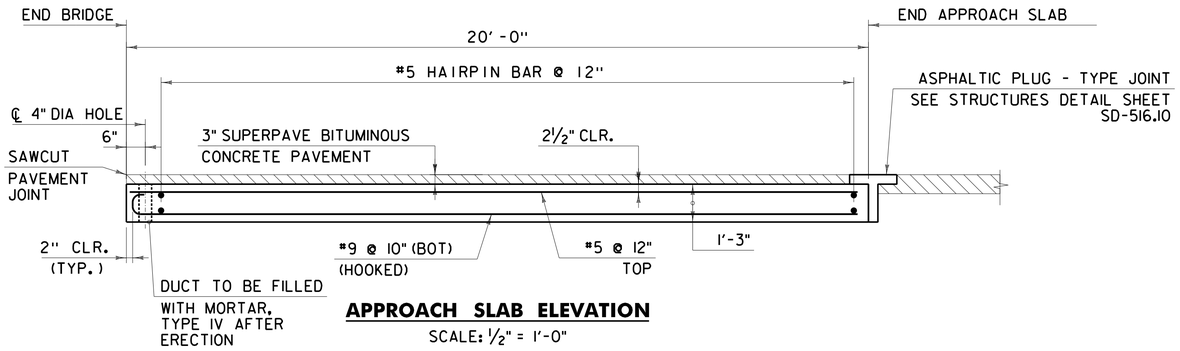
FILE NAME: z13c066supappl.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
APPROACH SLAB 1 DETAILS
PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON
SHEET 41 OF 93

FILE NAME = W:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066supappl.dgn
DATE/TIME = 5/4/2016
USER = 5237



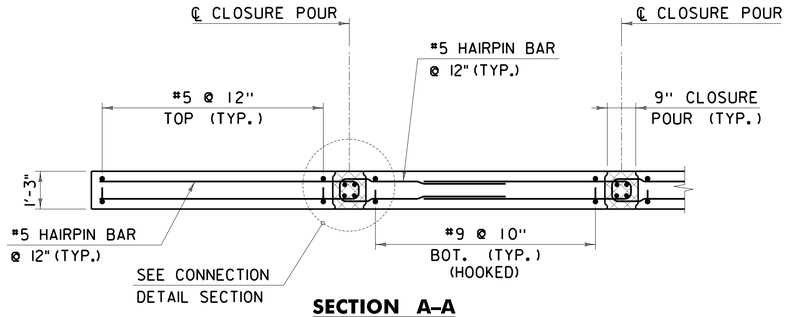
APPROACH SLAB NUMBER 2 PLAN

SCALE: ⅜" = 1'-0"



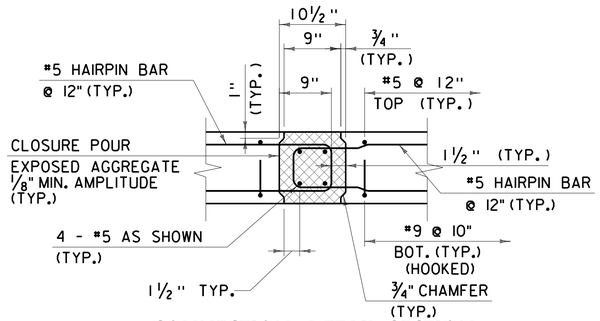
APPROACH SLAB ELEVATION

SCALE: ½" = 1'-0"



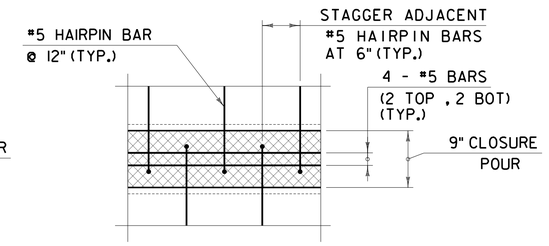
SECTION A-A

SCALE: ½" = 1'-0"



CONNECTION DETAIL SECTION

SCALE: 1" = 1'-0"



CONNECTION DETAIL PLAN

SCALE: 1" = 1'-0"

APPROACH SLAB ELEVATIONS					
APPROACH SLAB NO. 2					
W.P.	STATION	OFFSET (FT)		TOP OF APPROACH SLAB ELEV.	THICKNESS
A	14+77.13	14.00	LT	580.14	1'-3"
B	14+77.13	7.19	LT	580.27	1'-3"
C	14+77.13	0.00		580.42	1'-3"
D	14+77.13	7.19	RT	580.27	1'-3"
E	14+77.13	14.00	RT	580.14	1'-3"
F	14+97.13	14.00	LT	579.66	1'-3"
G	14+97.13	7.19	LT	579.80	1'-3"
H	14+97.13	0.00		579.94	1'-3"
J	14+97.13	7.19	RT	579.80	1'-3"
K	14+97.13	14.00	RT	579.66	1'-3"

NOTES:

1. LIFTING POINTS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL LIFTING LOCATIONS SHALL BE DETERMINED BY THE FABRICATOR AND INDICATED ON THE FABRICATION DRAWINGS WITH CALCULATIONS.
2. THE TOP SURFACE OF THE PRECAST APPROACH SLAB PANELS SHALL HAVE A BROOM FINISH PARALLEL TO THE CENTERLINE OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING UNIFORM CONTACT BETWEEN THE APPROACH SLAB AND THE SUBBASE MATERIAL TO THE SATISFACTION OF THE ENGINEER. THE FABRICATION DRAWINGS SHALL INDICATE THE MEANS AND METHODS NECESSARY TO INSTALL THE APPROACH SLABS TO THE ELEVATIONS SPECIFIED.

LEGEND:

AREA OF CLOSURE POUR SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON PLANS.
3'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
ALL REINFORCEMENT SHALL BE LEVEL 1 EPOXY COATED.

CHA

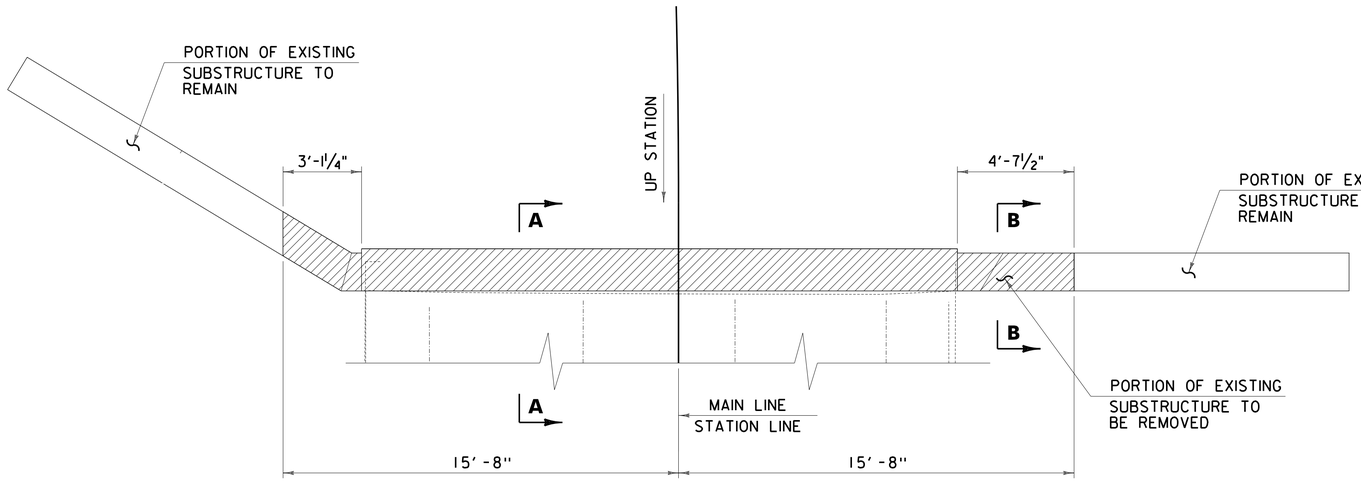
PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066supapp2.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
APPROACH SLAB 2 DETAILS

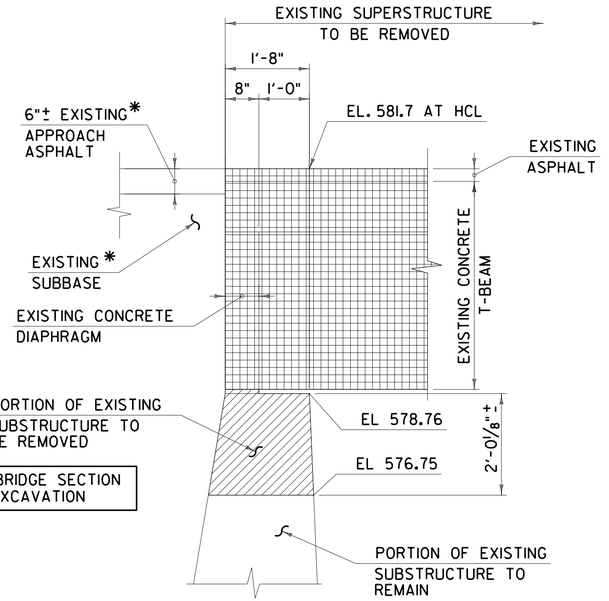
PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON
SHEET 42 OF 93

FILE NAME = V:\Projects\ANY\K23\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066supapp2.dgn
DATE/TIME = 5/4/2016
USER = 5237

VT STATE PLANE GRID

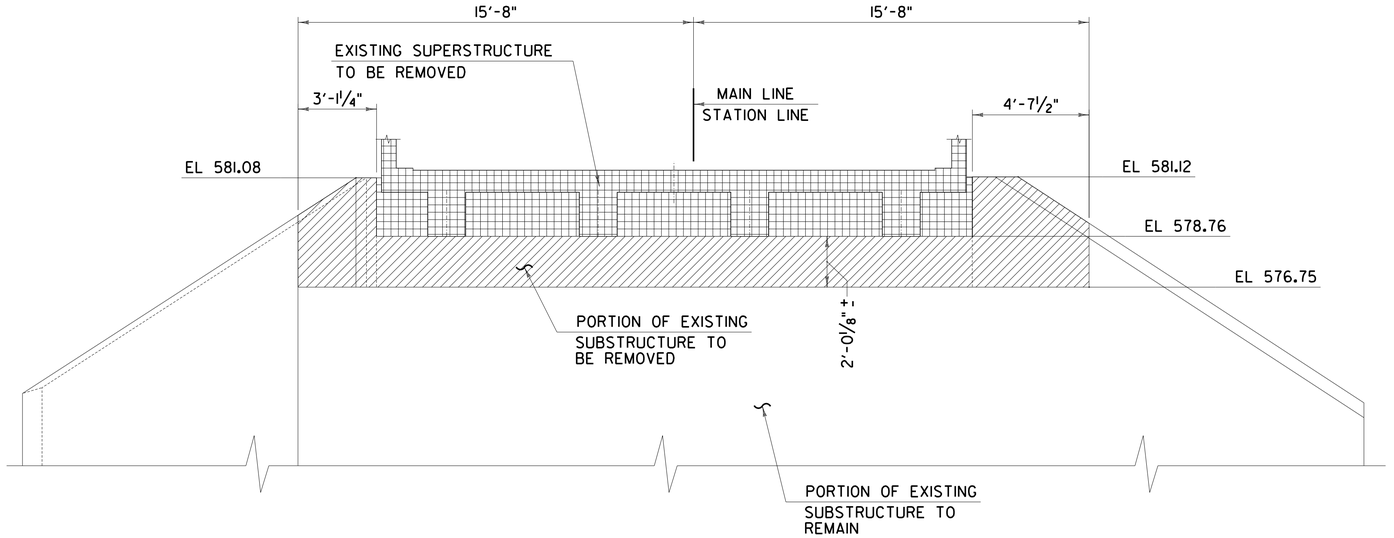


EXISTING ABUTMENT 1 REMOVAL PLAN – BRIDGE 1

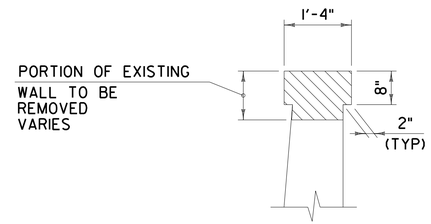


* - SEE TYPICAL BRIDGE SECTION SHEETS FOR EXCAVATION

SECTION A–A



EXISTING ABUTMENT 1 REMOVAL ELEVATION – BRIDGE 1



SECTION B–B

DENOTES LIMITS OF REMOVAL OF CONCRETE OR MASONRY.

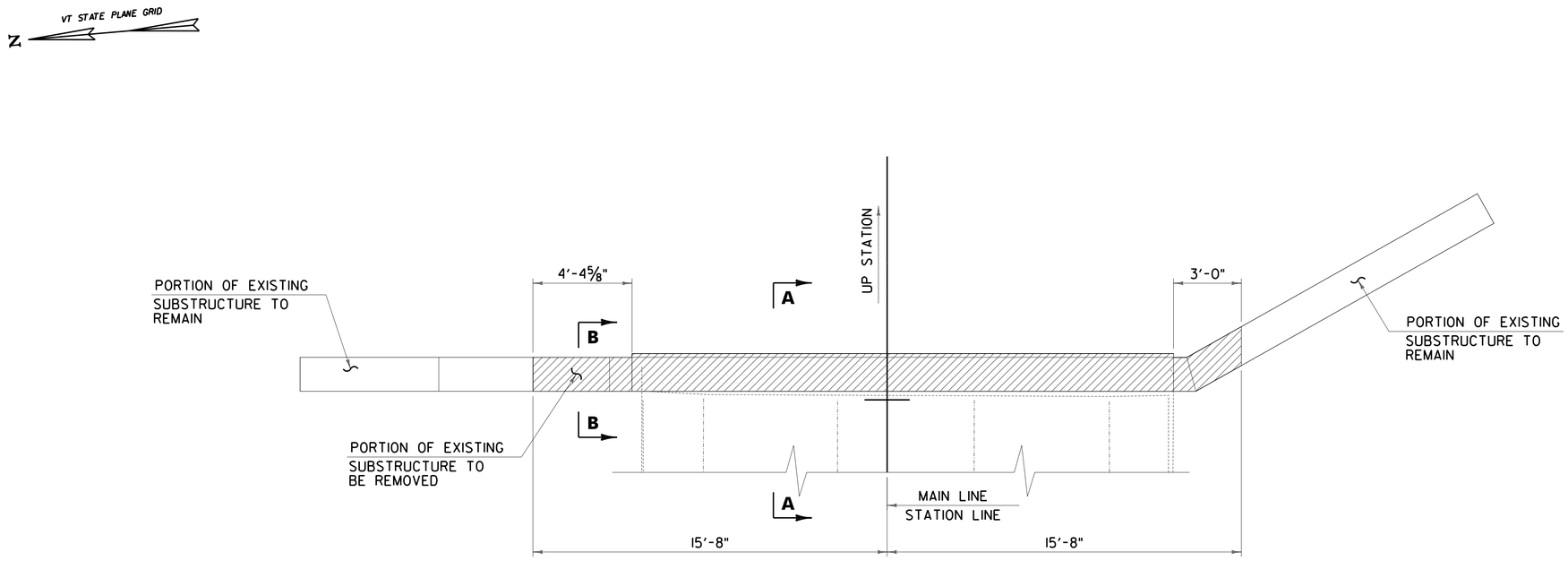
DENOTES LIMITS OF PARTIAL REMOVAL OF STRUCTURE.

0 3 6

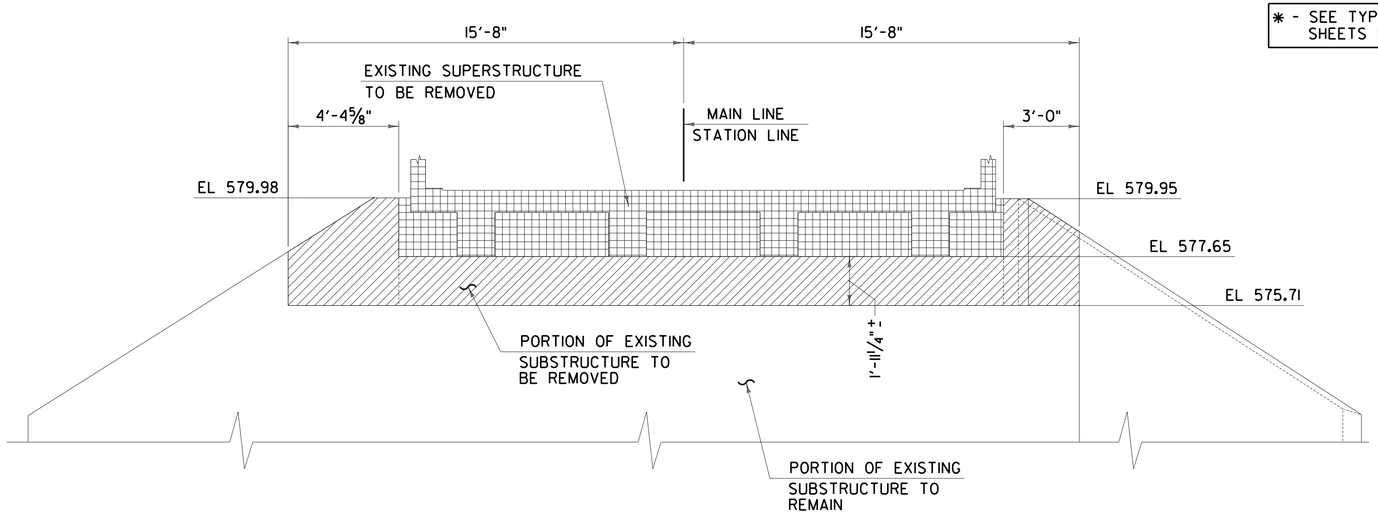
CHA

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066subreml_brl.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: J. NAJDOWSKI	CHECKED BY:
EXISTING ABUTMENT 1 REMOVAL DETAILS	SHEET 43 OF 93

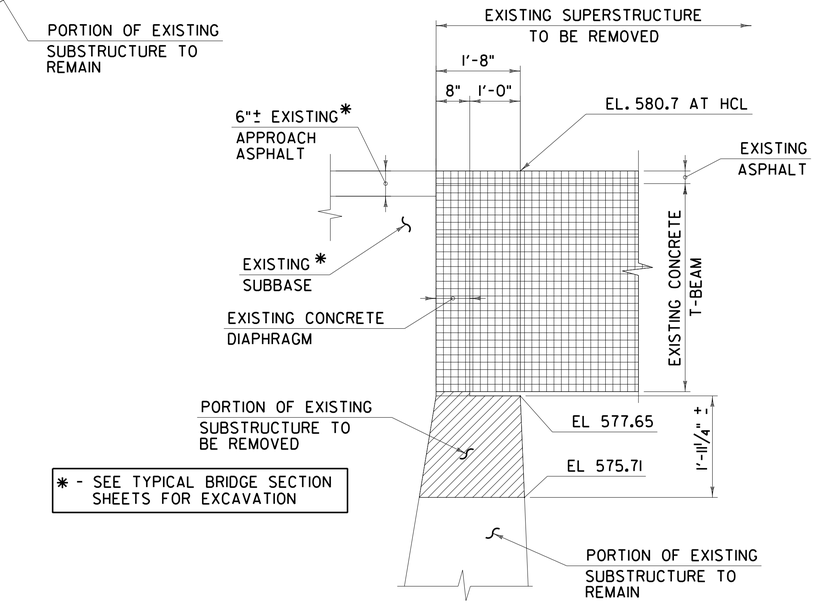
FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066subreml_brl.dgn
DATE/TIME = 5/4/2016
USER = 5237



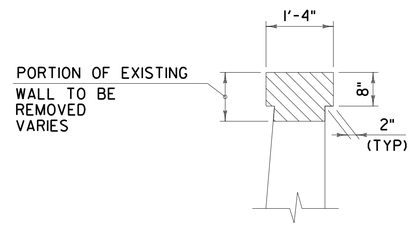
EXISTING ABUTMENT 2 REMOVAL PLAN – BRIDGE 1



EXISTING ABUTMENT 2 REMOVAL ELEVATION – BRIDGE 1



SECTION A–A



SECTION B–B

▨ DENOTES LIMITS OF REMOVAL OF CONCRETE OR MASONRY.

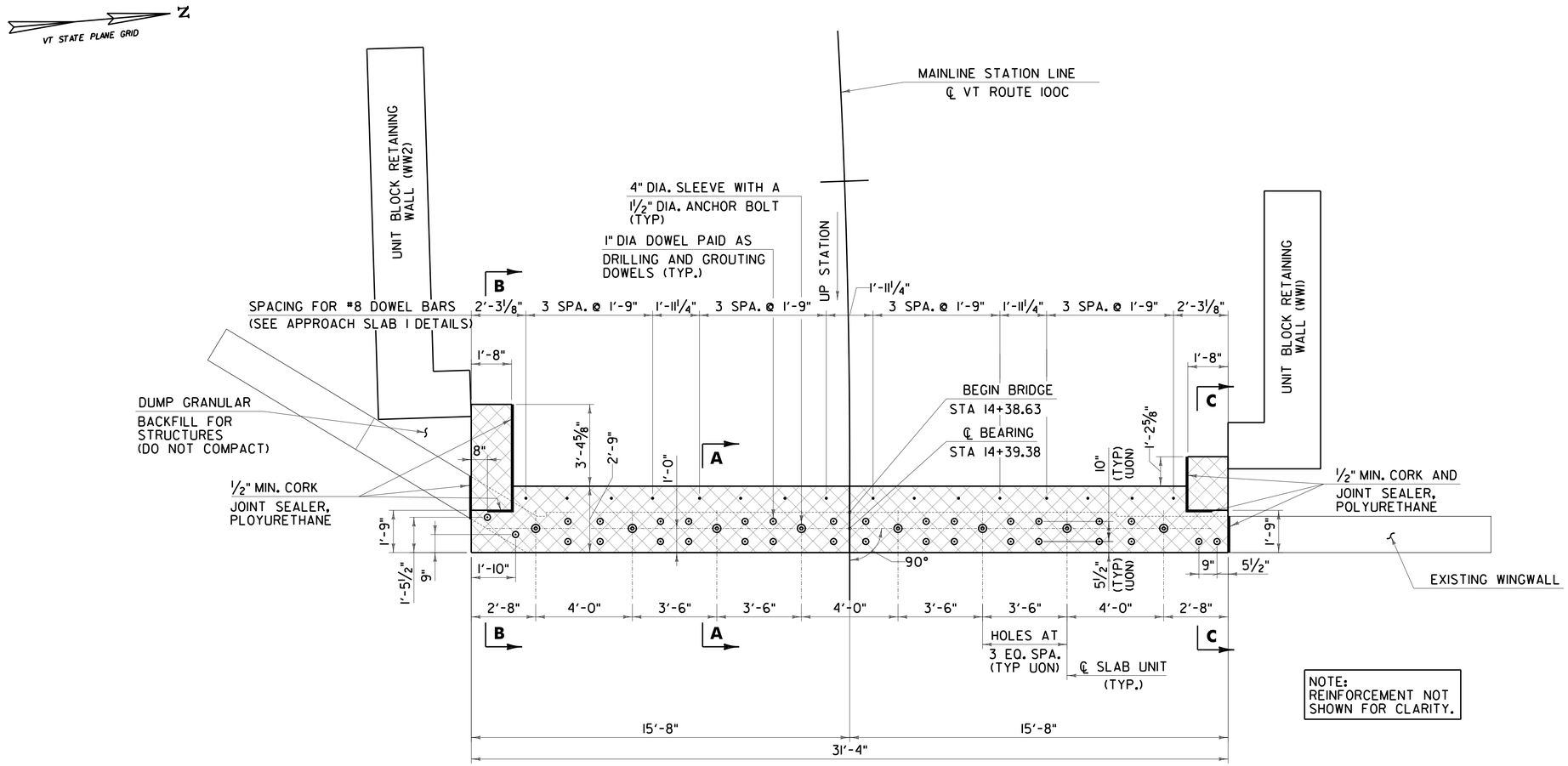
▦ DENOTES LIMITS OF PARTIAL REMOVAL OF STRUCTURE.

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066subrem2_br1.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: J. NAJDOWSKI	CHECKED BY:
EXISTING ABUTMENT 2 REMOVAL DETAILS	SHEET 44 OF 93

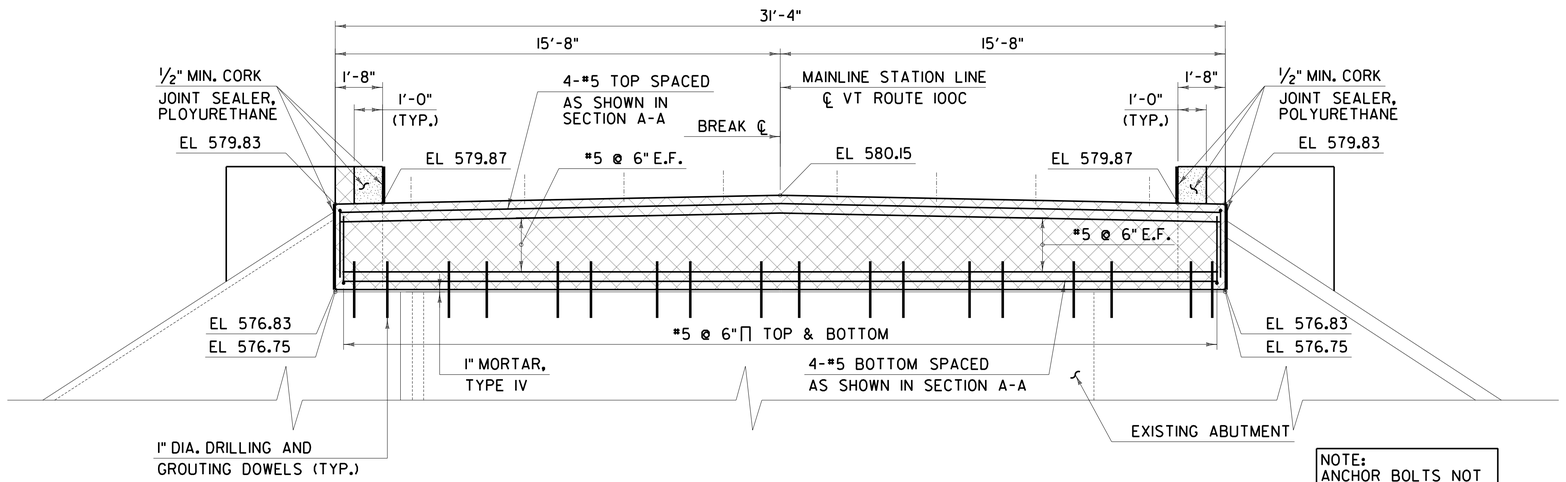
0 3 6

CHA

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066subrem2_br1.dgn
DATE/TIME = 5/4/2016
USER = 5237



ABUTMENT 1 PLAN – BRIDGE 1



ABUTMENT 1 ELEVATION – BRIDGE 1

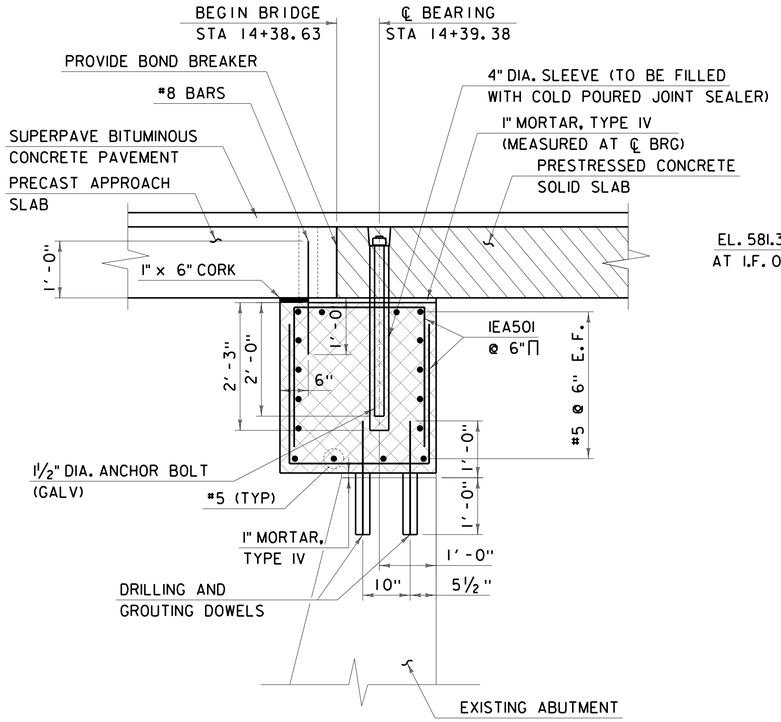
NOTES:

1. FOR SECTIONS A-A, B-B, AND C-C, SEE ABUTMENT 1 DETAILS.
2. COST OF REINFORCEMENT BARS USED FOR DRILLING AND GROUTING DOWELS INCLUDED WITH DRILLING AND GROUTING DOWELS.
3. 2'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
4. ALL ELEVATIONS GIVEN AT CENTERLINE OF BEARING.
5. CORK AND JOINT SEALER, POLYURETHANE ARE INCLUDED WITH SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET).

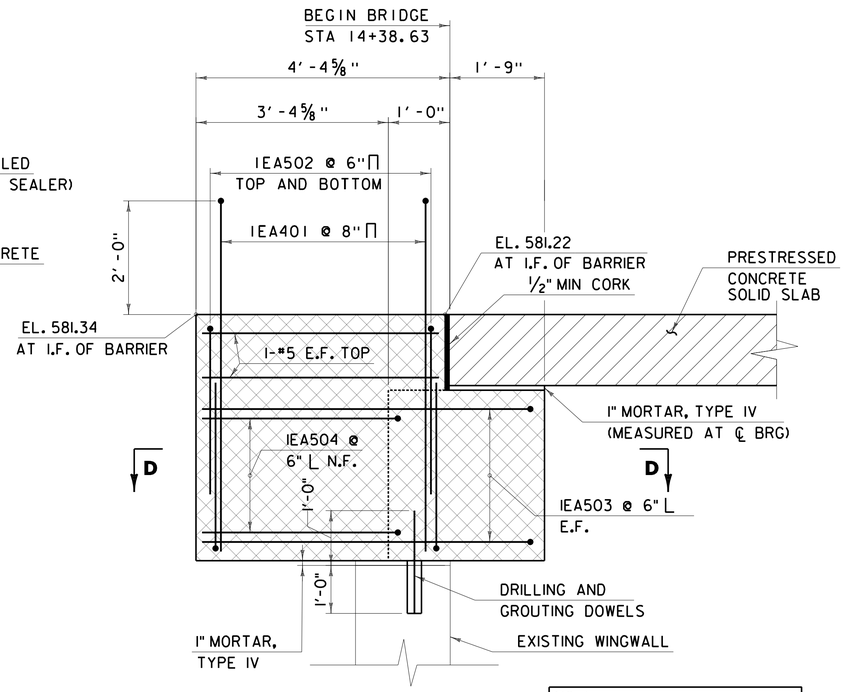
▨ SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPO)

PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BF 0248(4)
FILE NAME: zl3c066abut1_brl.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
ABUTMENT 1 PLAN AND ELEVATION	SHEET 45 OF 93

CHA

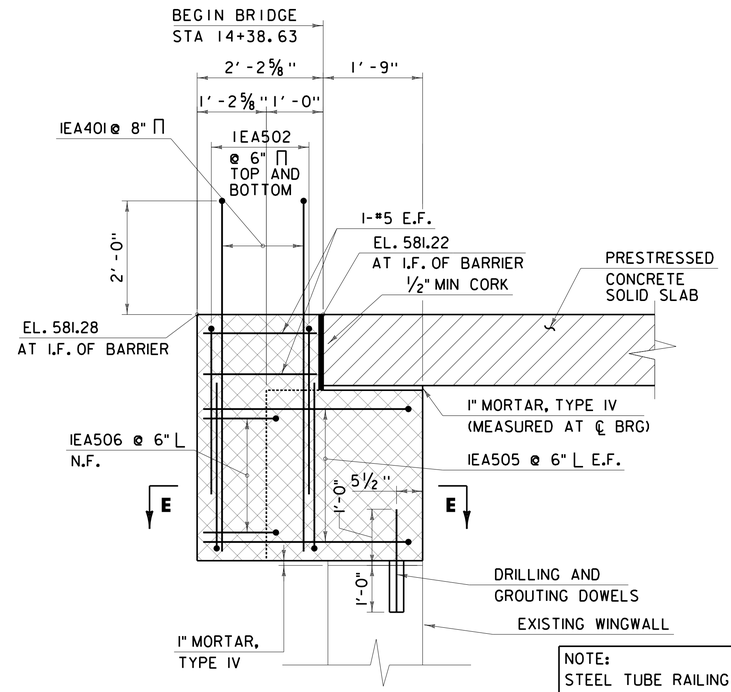


SECTION A–A



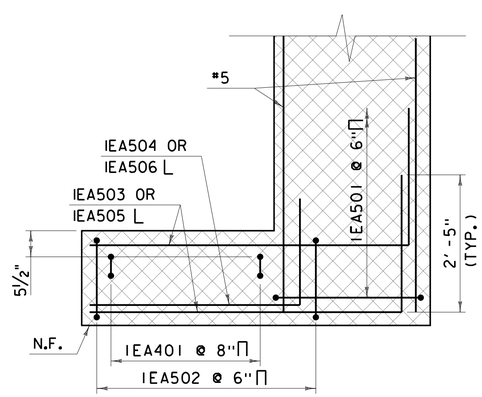
SECTION B–B

NOTE:
STEEL TUBE RAILING DETAILS
NOT SHOWN FOR CLARITY.



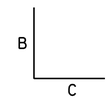
SECTION C–C

NOTE:
STEEL TUBE RAILING DETAILS
NOT SHOWN FOR CLARITY.



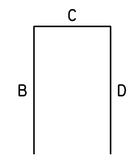
SECTION D–D
(SECTION E–E SIMILAR)

L BARS		
MARK	B	C
IEA503	2'-5"	5'-6"
IEA504	2'-5"	3'-8"
IEA505	2'-5"	3'-4"
IEA506	2'-5"	1'-6"



NOTE: "B" DIMENSION IS PARALLEL TO THE TRANSVERSE AXIS OF THE BRIDGE.
"C" DIMENSION IS PARALLEL TO THE LONGITUDINAL AXIS OF THE BRIDGE.

Π BARS (17)		
MARK	B/D	C
IEA501	2'-5"	2'-3"
IEA502	2'-11"	1'-2"
IEA401	5'-10"	4"



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

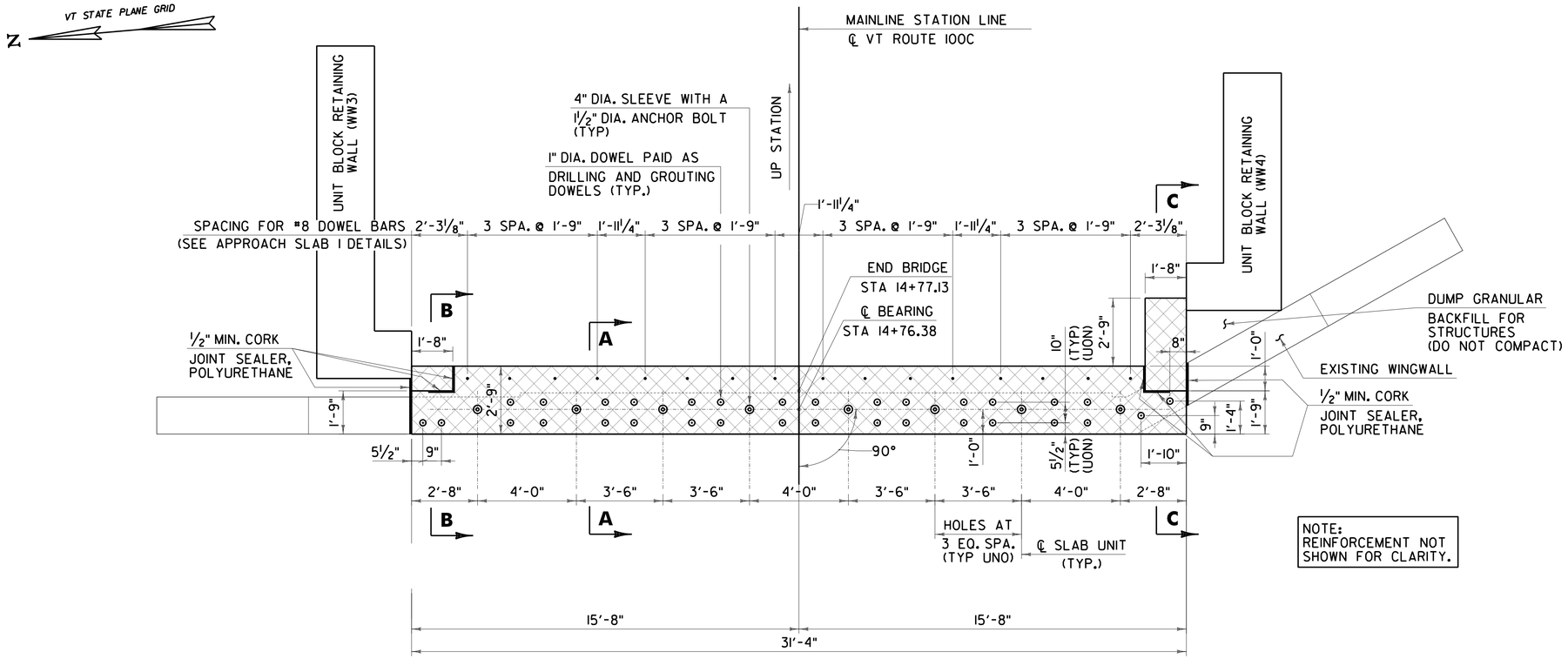
PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066abutdtll_brl.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
ABUTMENT 1 DETAILS

PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON
SHEET 46 OF 93

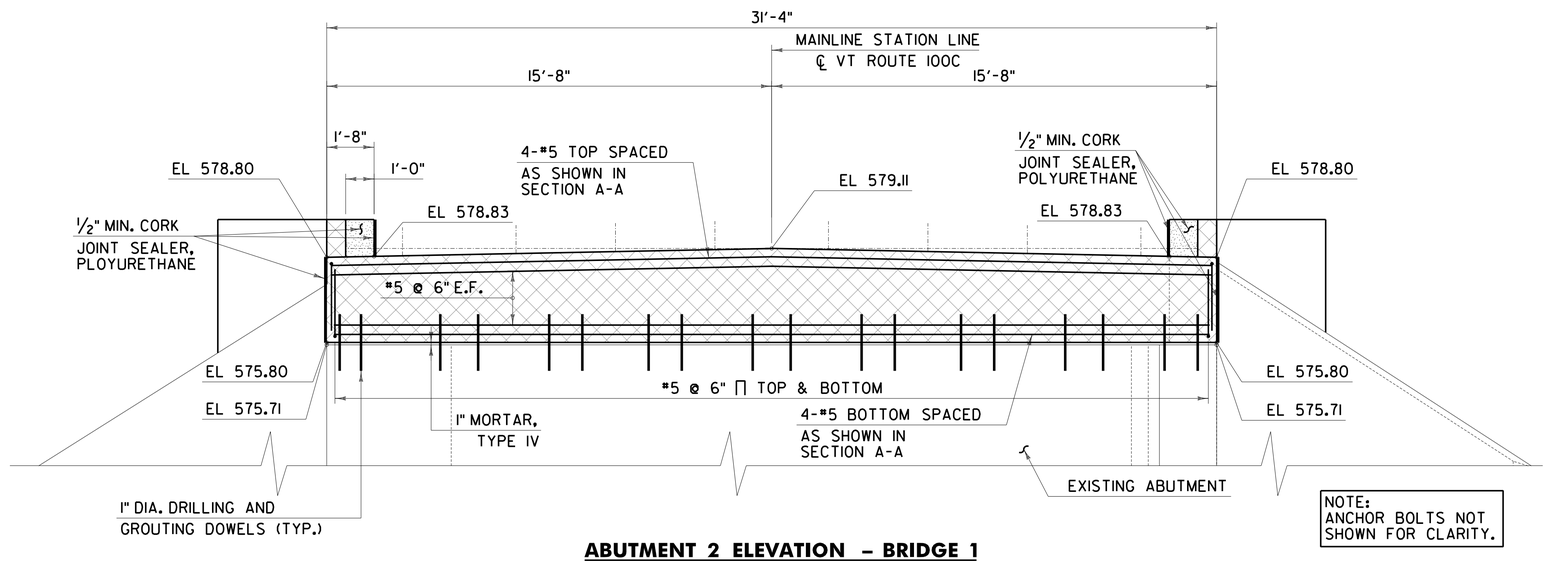
CHA

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066abutdtll_brl.dgn
DATE/TIME = 5/4/2016
USER = 5237



NOTE:
REINFORCEMENT NOT SHOWN FOR CLARITY.

ABUTMENT 2 PLAN – BRIDGE 1



NOTE:
ANCHOR BOLTS NOT SHOWN FOR CLARITY.

ABUTMENT 2 ELEVATION – BRIDGE 1

NOTES:

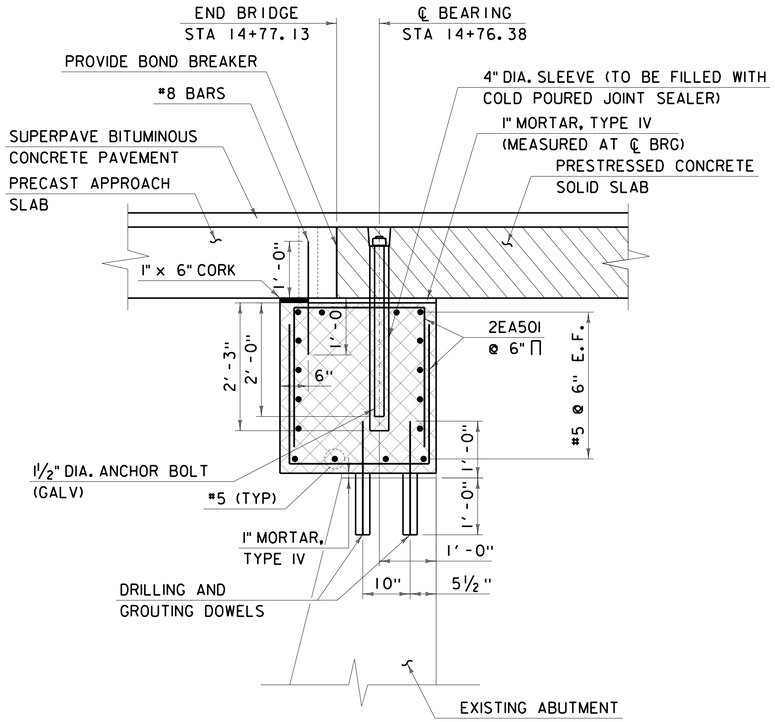
1. FOR SECTIONS A-A, B-B, AND C-C, SEE ABUTMENT 2 DETAILS.
2. COST OF REINFORCEMENT BARS USED FOR DRILLING AND GROUTING DOWELS INCLUDED WITH DRILLING AND GROUTING DOWELS.
3. 2'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
4. ALL ELEVATIONS GIVEN AT CENTERLINE OF BEARING.
5. CORK AND JOINT SEALER, POLYURETHANE ARE INCLUDED WITH SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET).

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

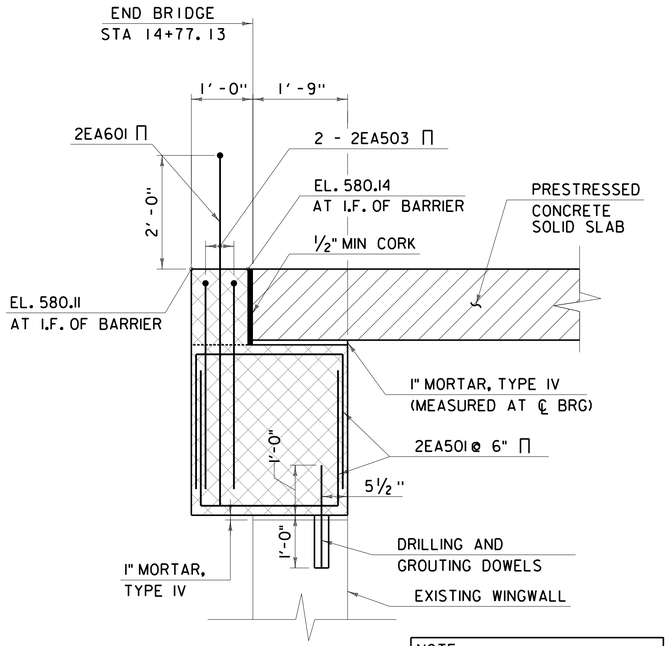
PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066abut2_brl.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
ABUTMENT 2 PLAN AND ELEVATION	SHEET 47 OF 93

CHA

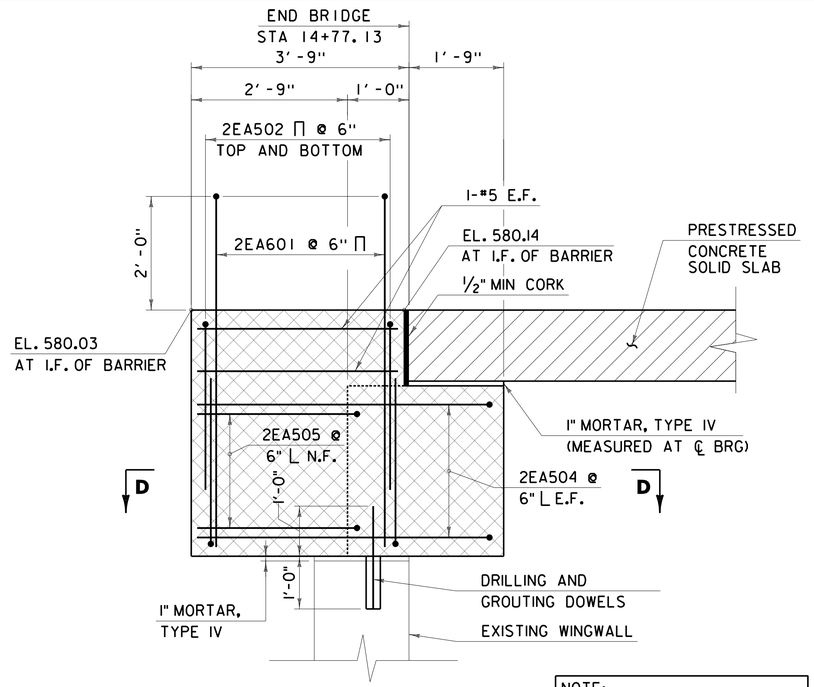


SECTION A–A



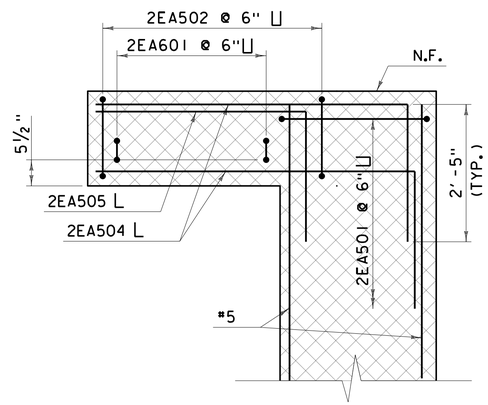
SECTION B–B

NOTE:
STEEL TUBE RAILING DETAILS NOT SHOWN FOR CLARITY.



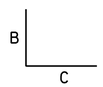
SECTION C–C

NOTE:
STEEL TUBE RAILING DETAILS NOT SHOWN FOR CLARITY.



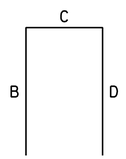
SECTION D–D

L BARS		
BAR ID	B	C
2EA504	2'-5"	4'-11"
2EA505	2'-5"	3'-1"



NOTE: "B" DIMENSION IS PARALLEL TO THE TRANSVERSE AXIS OF THE BRIDGE.
"C" DIMENSION IS PARALLEL TO THE LONGITUDINAL AXIS OF THE BRIDGE.

Π BARS		
BAR ID	B/D	C
2EA501	2'-5"	2'-3"
2EA502	2'-11"	1'-2"
2EA503	3'-10"	1'-2"
2EA601	6'-1"	4"



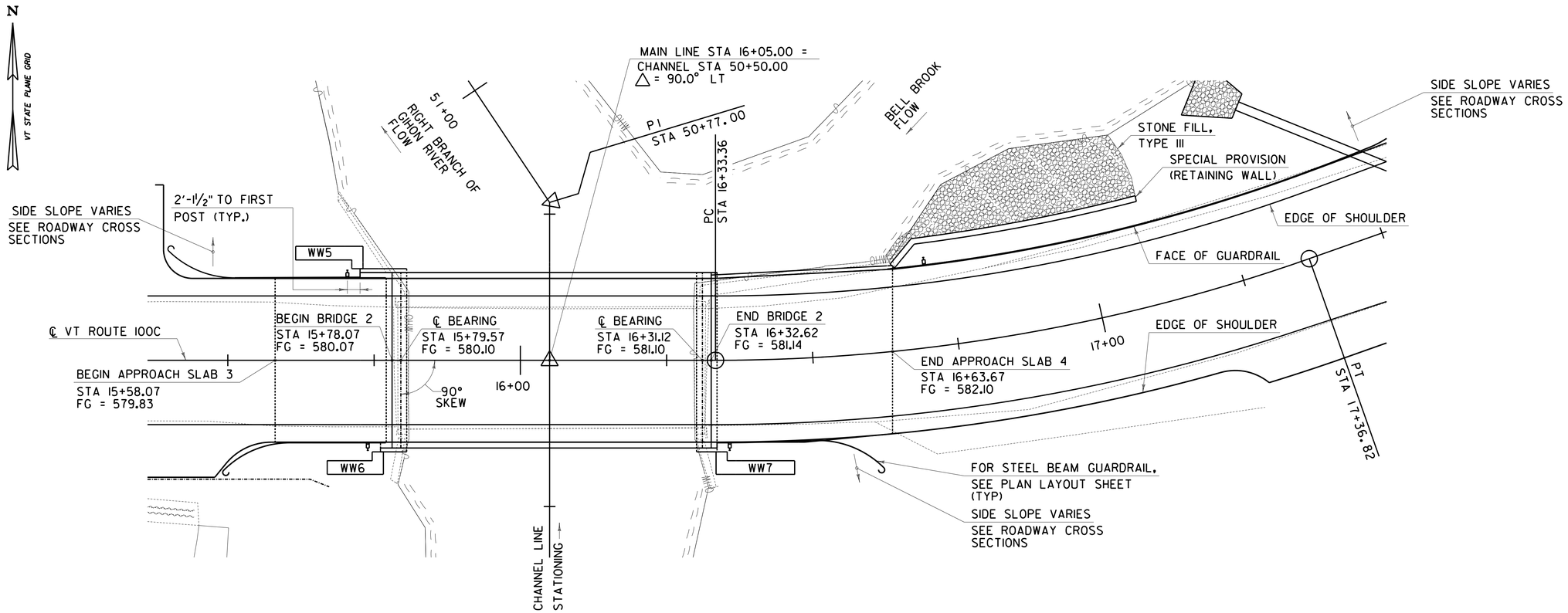
SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPO)

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066abutdtl2_brl.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
ABUTMENT 2 DETAILS

PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON
SHEET 48 OF 93

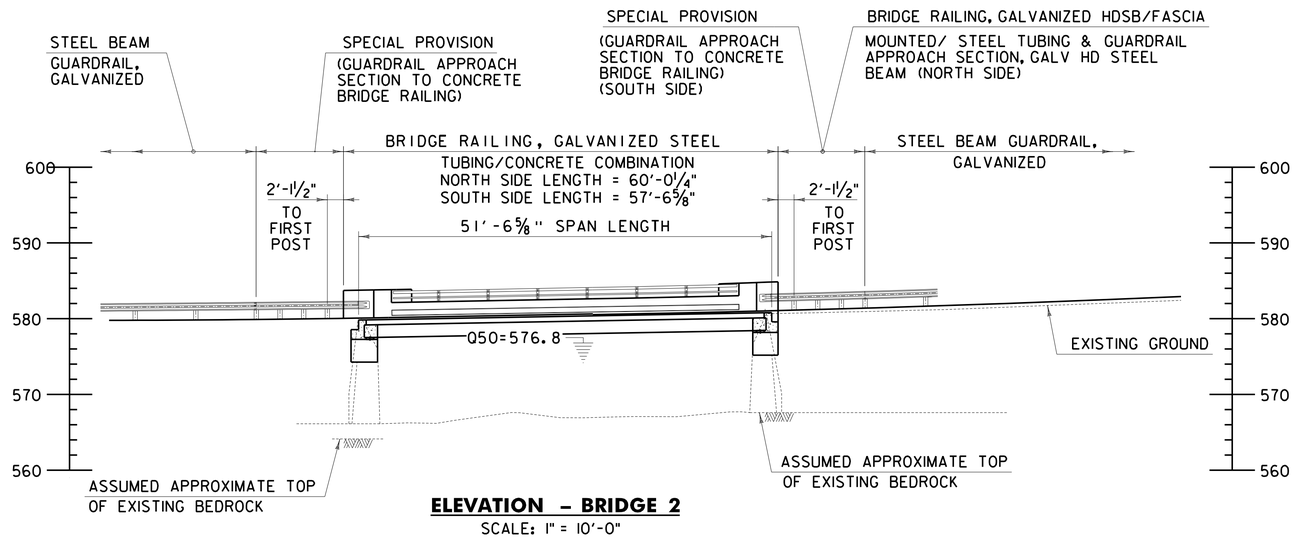
CHA



PLAN – BRIDGE 2

0 10 20

SCALE: 1" = 10'-0"



ELEVATION – BRIDGE 2

SCALE: 1" = 10'-0"

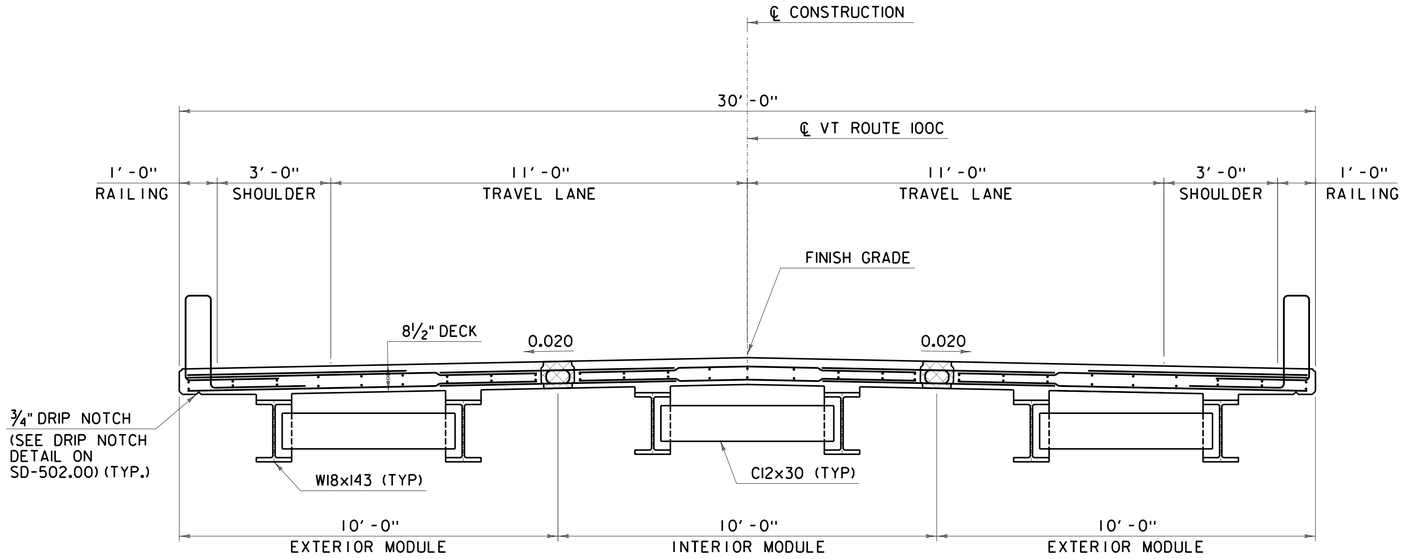
NOTE: SEE PLAN LAYOUT SHEETS FOR GUARDRAIL LIMITS

NOTES:

1. SEE UNIT BLOCK RETAINING WALL DETAILS FOR WINGWALL INFORMATION.

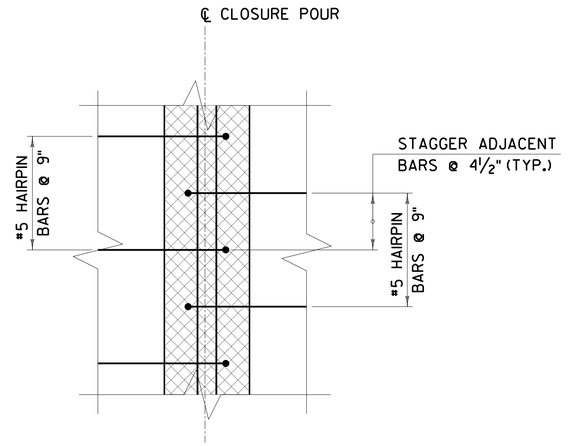
PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066pe_br2.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
PLAN AND ELEVATION BRIDGE 2	SHEET 49 OF 93

CHA



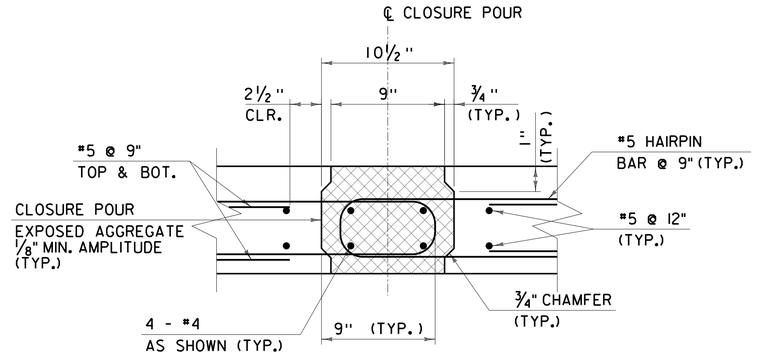
DECK TYPICAL SECTION

(SHOWN AFTER ERECTION, PRIOR TO CONSTRUCTION OF BRIDGE RAILING AND OVERLAY)
SCALE: ½" = 1′-0"



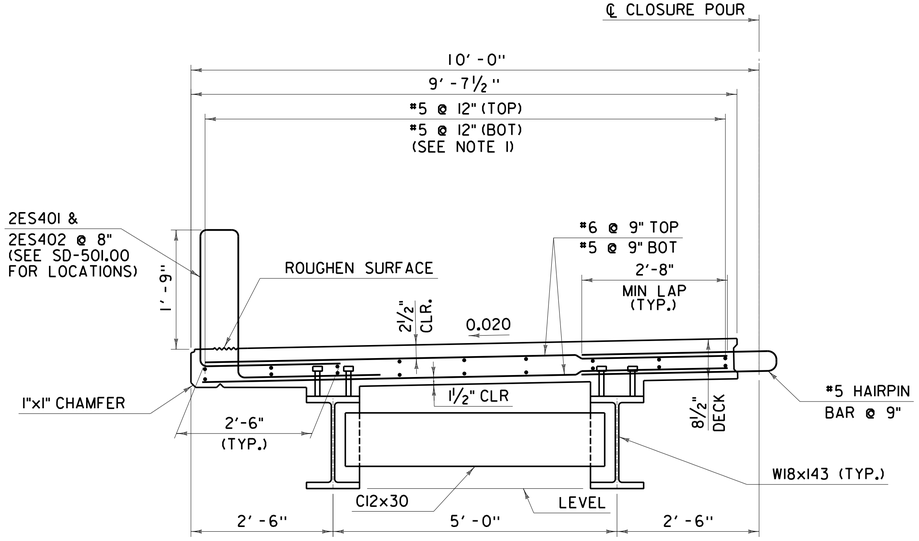
CONNECTION DETAIL PLAN

SCALE: 2" = 1′-0"



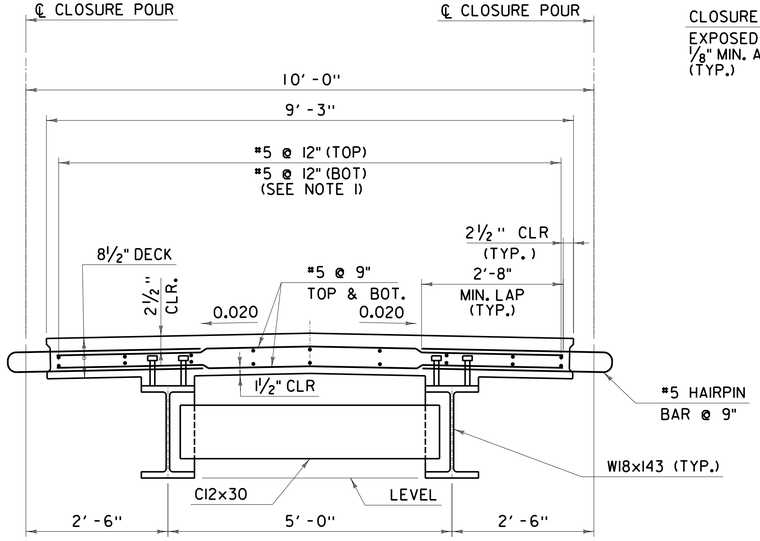
CONNECTION DETAIL SECTION

SCALE: 2" = 1′-0"



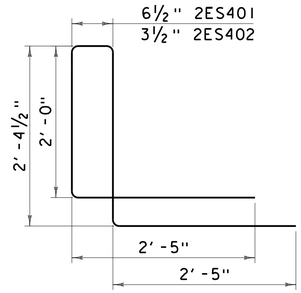
EXTERIOR MODULE DETAIL

SCALE: ¾" = 1′-0"
(LEFT PBU SHOWN, RIGHT MIRRORED)



INTERIOR MODULE DETAIL

SCALE: ¾" = 1′-0"



BARS 2ES401 & 2ES402

NOT TO SCALE

NOTES:

1. MINIMUM LONGITUDINAL LAP SPLICE IS 2′-5".
2. TRANSVERSE REINFORCING ORIENTED WITH ℄ BEARING. STAGGER BARS BETWEEN ADJACENT PBU'S.
3. PLACE THESE BARS PRIOR TO POURING DECK CONCRETE
4. ALL REINFORCEMENT SHALL BE LEVEL I EPOXY COATED.

▨ - SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)

NOTES:

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

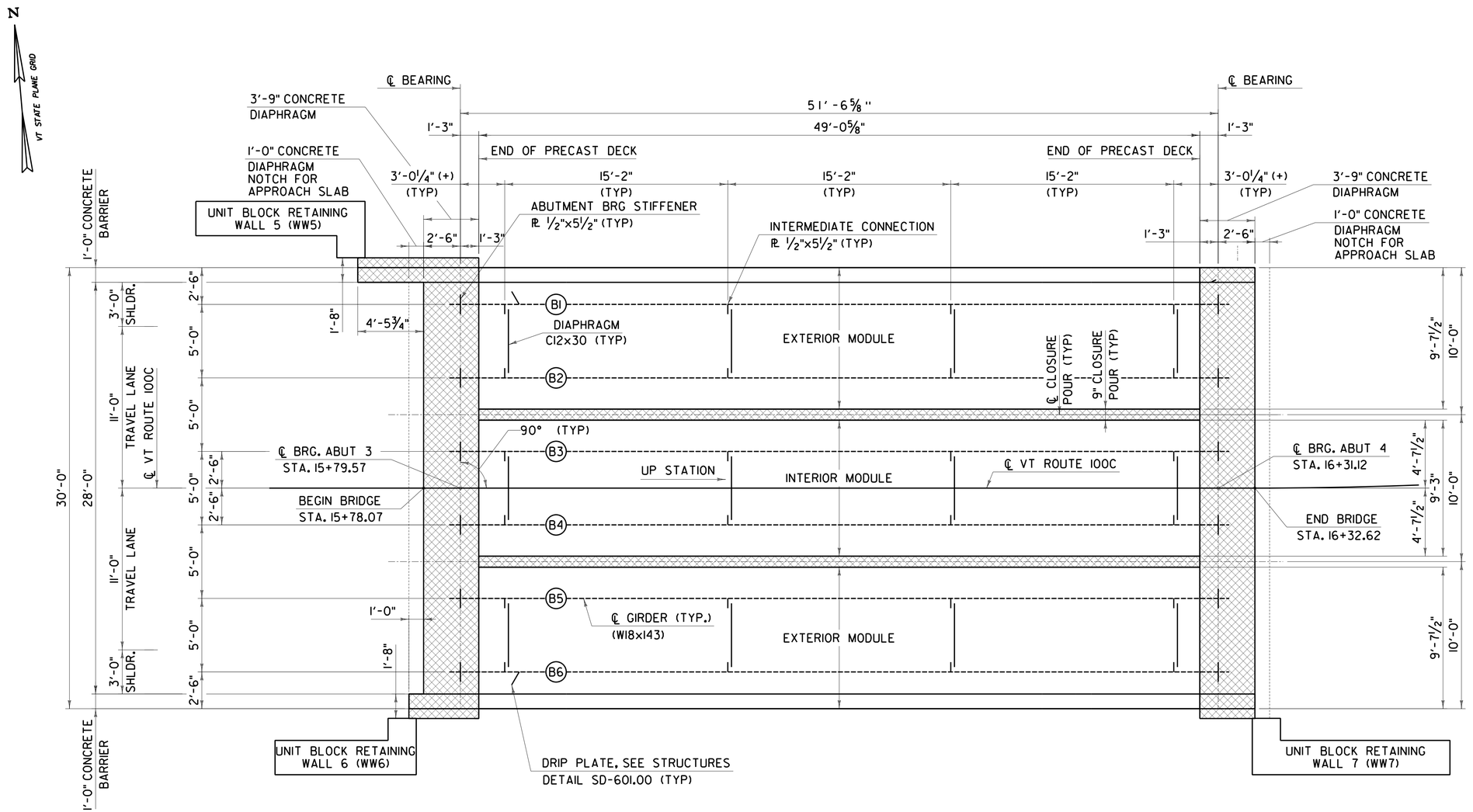
CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066suptyp_br2.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
BRIDGE 2 TYPICAL SECTIONS

PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON
SHEET 50 OF 93

FILE NAME = V:\Projects\ANY\K23\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066suptyp_br2.dgn
DATE/TIME = 5/4/2016
USER = 5237



DECK AND FRAMING PLAN

SCALE : 1/4" = 1'-0"
NOTE: APPROACH SLAB NOT SHOWN FOR CLARITY.

LEGEND:

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

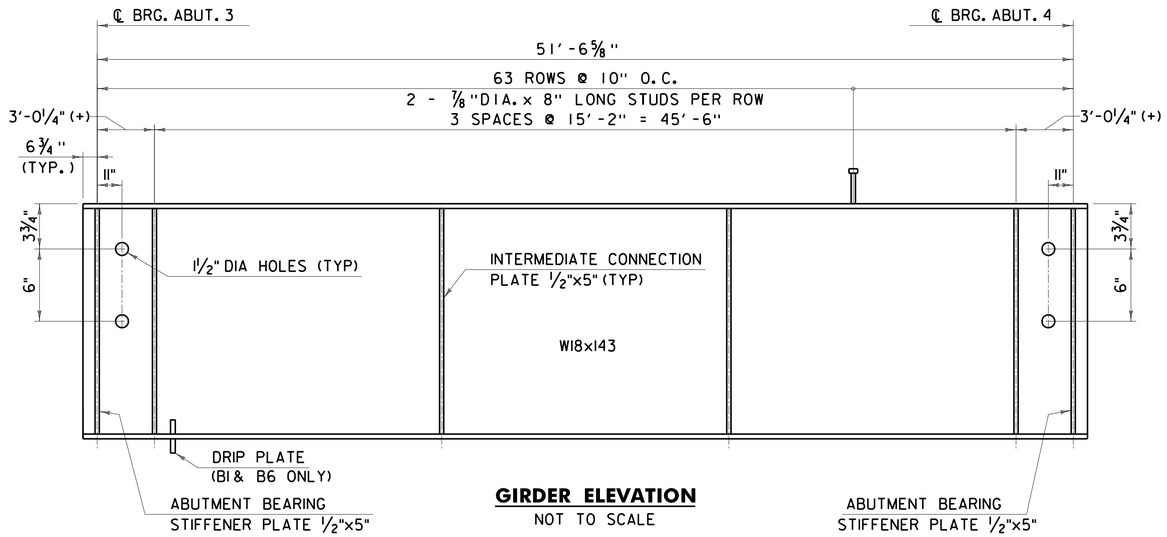
NOTES:

1. FOR DECK REINFORCEMENT, SEE BRIDGE 2 TYPICAL SECTIONS.
2. SEE CONCRETE DIAPHRAGM DETAILS FOR REINFORCING TO EXTEND FROM THE CONCRETE DECK INTO THE DIAPHRAGMS.

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066frmpln_br2.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
BRIDGE 2 DECK AND FRAMING PLAN	SHEET 51 OF 93

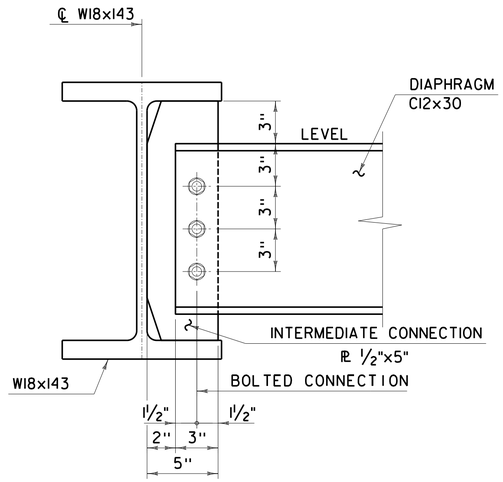
CHA

FILE NAME = V:\Projects\ANYK3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066frmpln_br2.dgn
DATE/TIME = 5/4/2016
USER = 5237

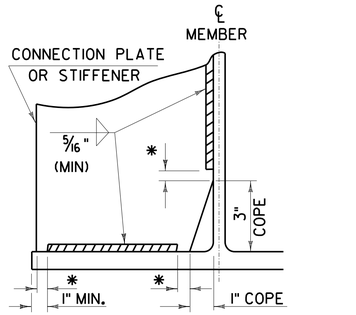


GIRDER ELEVATION
NOT TO SCALE

CAMBER TABLE - ALL BEAMS (INCHES)											
POINT ON GIRDER	CL BRG. ABUT 3	0.10 L	0.20 L	0.30 L	0.40 L	0.50 L	0.60 L	0.70 L	0.80 L	0.90 L	CL BRG. ABUT 4
STEEL DL	0.00	0.10	0.19	0.25	0.30	0.31	0.30	0.25	0.19	0.10	0.00
CONCRETE SLAB	0.00	0.36	0.68	0.93	1.09	1.15	1.09	0.93	0.68	0.36	0.00
SUPERIMPOSED DL	0.00	0.06	0.11	0.15	0.18	0.19	0.18	0.15	0.11	0.06	0.00
TOTAL CAMBER DUE TO DEAD LOAD	0.00	0.52	0.98	1.34	1.57	1.65	1.57	1.34	0.98	0.52	0.00
SAG CURVE	0.00	-0.01	-0.14	-0.27	-0.29	-0.42	-0.67	-0.56	-0.58	-0.35	0.00
RESIDUAL CAMBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CAMBER	0.00	0.51	0.83	1.06	1.28	1.23	0.89	0.78	0.40	0.17	0.00

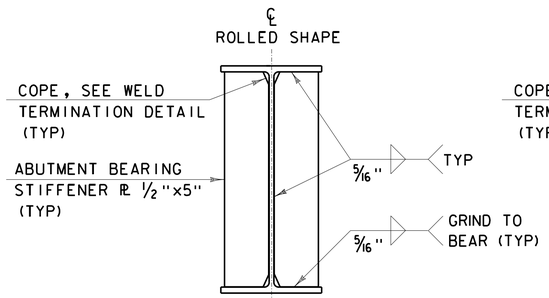


INTERMEDIATE DIAPHRAGMS

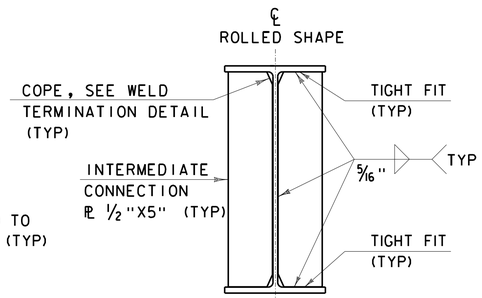


WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

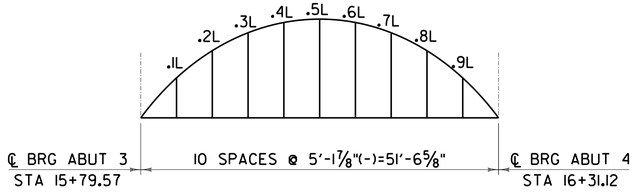
* NO WELD FOR ⅜" MIN. ⅞" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)



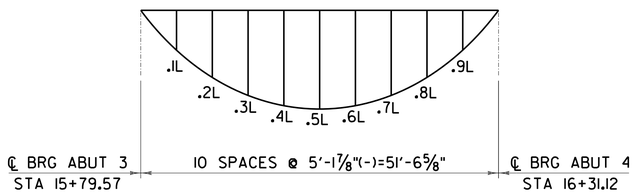
ABUTMENT BEARING STIFFENERS



INTERMEDIATE CONNECTION PLATES



CAMBER DIAGRAM
SEE CAMBER TABLES



DEAD LOAD DEFLECTION DIAGRAM
SEE CAMBER TABLES

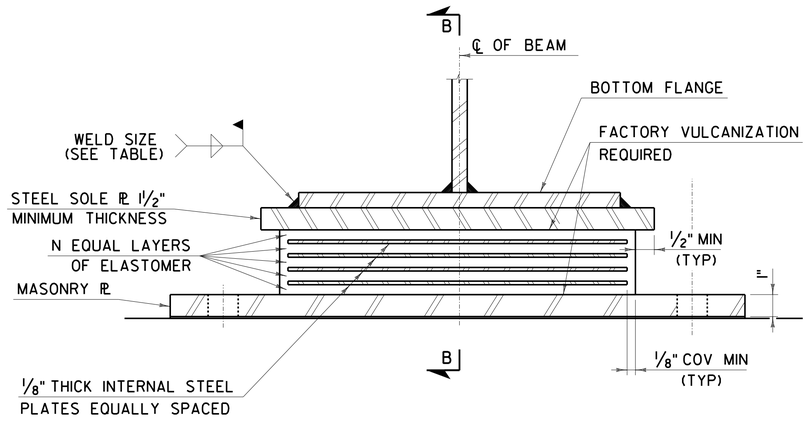
NOTE:
FOR STRUCTURAL STEEL GENERAL NOTES AND DETAILS INCLUDING HAUNCH DETAILS SEE STRUCTURAL DETAIL SD-601.00.

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

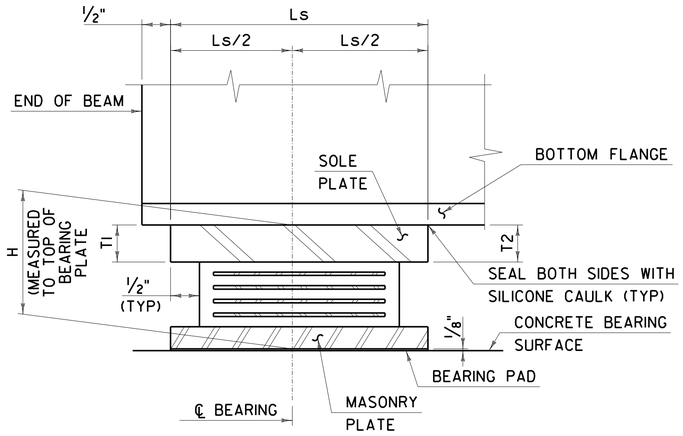
FILE NAME: z13c066girder_br2.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
BRIDGE 2 GIRDER DETAILS

PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON
SHEET 52 OF 93

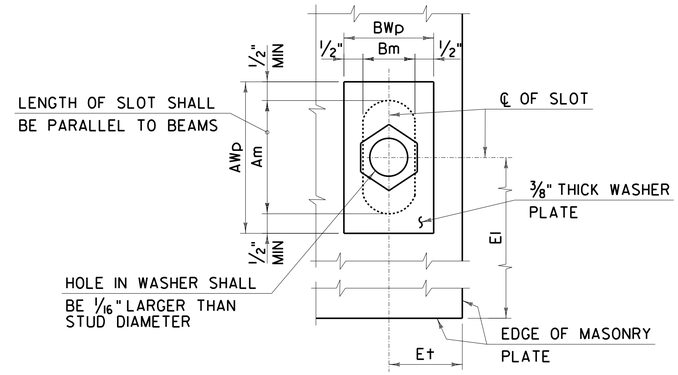
CHA



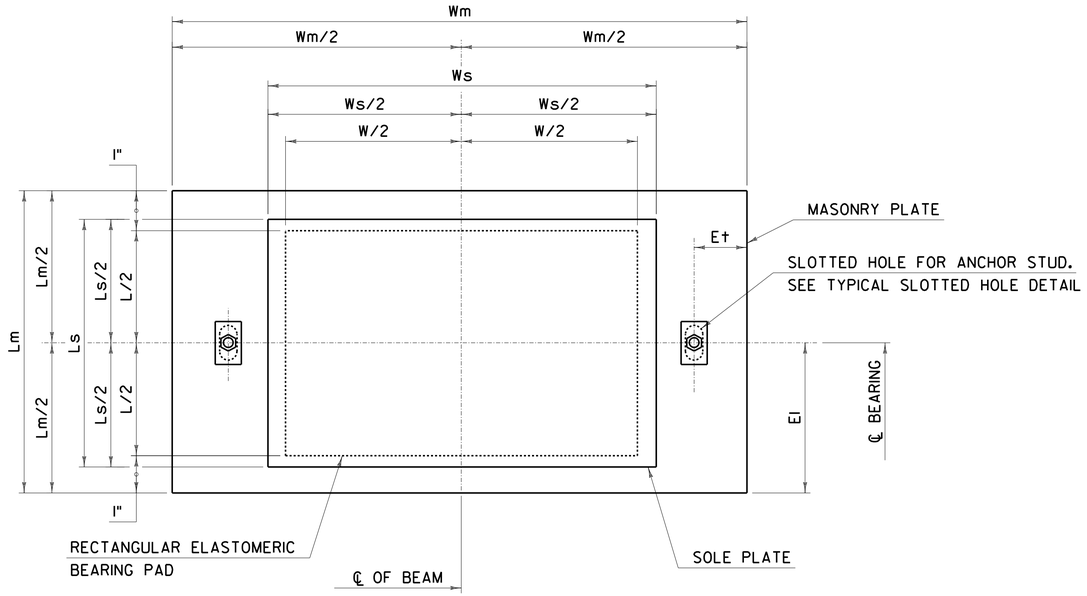
TYPICAL BEARING ELEVATION



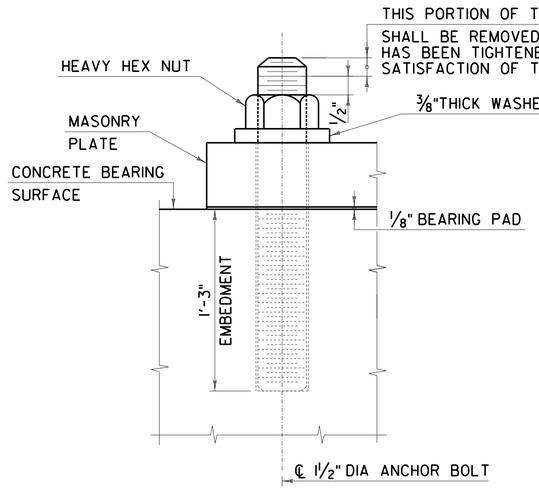
SECTION B–B



TYPICAL SLOTTED HOLE DETAIL
MASONRY PLATE



TYPICAL BEARING PLAN



ANCHOR STUD

BEARING NOTES:

1. BEARINGS SHALL CONFORM TO SECTION 531 OF THE STANDARD SPECIFICATIONS.
2. BEARING DEVICE ASSEMBLIES SHALL BE PAID UNDER BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD. SOLE PLATES, MASONRY PLATES, ANCHOR BOLTS AND PLATE WASHERS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED UNDER BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD.
3. SOLE PLATES, MASONRY PLATES, NUTS AND PLATE WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH STANDARD SPECIFICATION SUBSECTION 726.08.
4. THE CENTERLINE OF ALL BEARING COMPONENTS SHALL BE IN LINE AT 45° F.
5. THE CONTRACTOR SHALL INCLUDE THE BEARING INSTALLATION PROCEDURE WITH THE FABRICATION DRAWING PACKAGE REQUIRED UNDER STANDARD SPECIFICATION SUBSECTION 531.03. PROCEDURE SHALL INCLUDE BEARING ADJUSTMENT SETTING DEPENDING UPON TEMPERATURE AT TIME OF ERECTION.
6. ELASTOMERIC MATERIAL SHALL BE GRADE 4 AND HAVE A DUROMETER HARDNESS OF 50.
7. THE CONTRACTOR SHALL HAVE A MINIMUM OF 12 - ¼" x Lm x Wm GALVANIZED STEEL SHIMS WITH SLOTTED HOLES AT SAME LOCATIONS AS ON MASONRY PLATE AVAILABLE FOR USE FOR ELEVATION ADJUSTMENTS UPON THE SETTING OF THE SUPERSTRUCTURE UNITS. THE SHIMS SHALL BE FABRICATED ACCORDING TO SECTION 531 AND COST SHALL BE INCLUDED WITH BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD.

STEEL LAMINATED ELASTOMERIC BEARING TABLE

LOCATION	QUANTITY REQUIRED	D.L. + S.D.L. (kips)	L.L. WITHOUT IMPACT (kips)	TOTAL DESIGN REACTION (kips)	SHAPE FACTOR	ELASTOMER LAYER				HRT	COMP. AREA (SQ. IN.)	SHEAR AREA (SQ. IN.)	MASONRY PLATE						ANCHOR BOLTS		WELD SIZE	WASHER PLATE		SOLE PLATE				BRG. H
						THK/LAYER	NO. LAYERS (n)	L	W				Wm	Lm	Et	EI	Am	Bm	DIA.	BOLTS/BRG.		AWp	BWp	Ls	Ws	TI	T2	
ABUTMENT 3	6	28.3	40.8	69	5.318	0.5	3	9	13	1.5	111.56	117.00	23.000	11.000	2.875	5.500	3.000	1.875	1.5	2.00	5/16	4	2.875	12.50	14.00	1.500	1.750	4.375
ABUTMENT 4	6	28.3	40.8	69	5.318	0.5	3	9	13	1.5	111.56	117.00	23.000	11.000	2.875	5.500	3.000	1.875	1.5	2.00	5/16	4	2.875	12.50	14.00	1.500	1.875	4.313

* - ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED

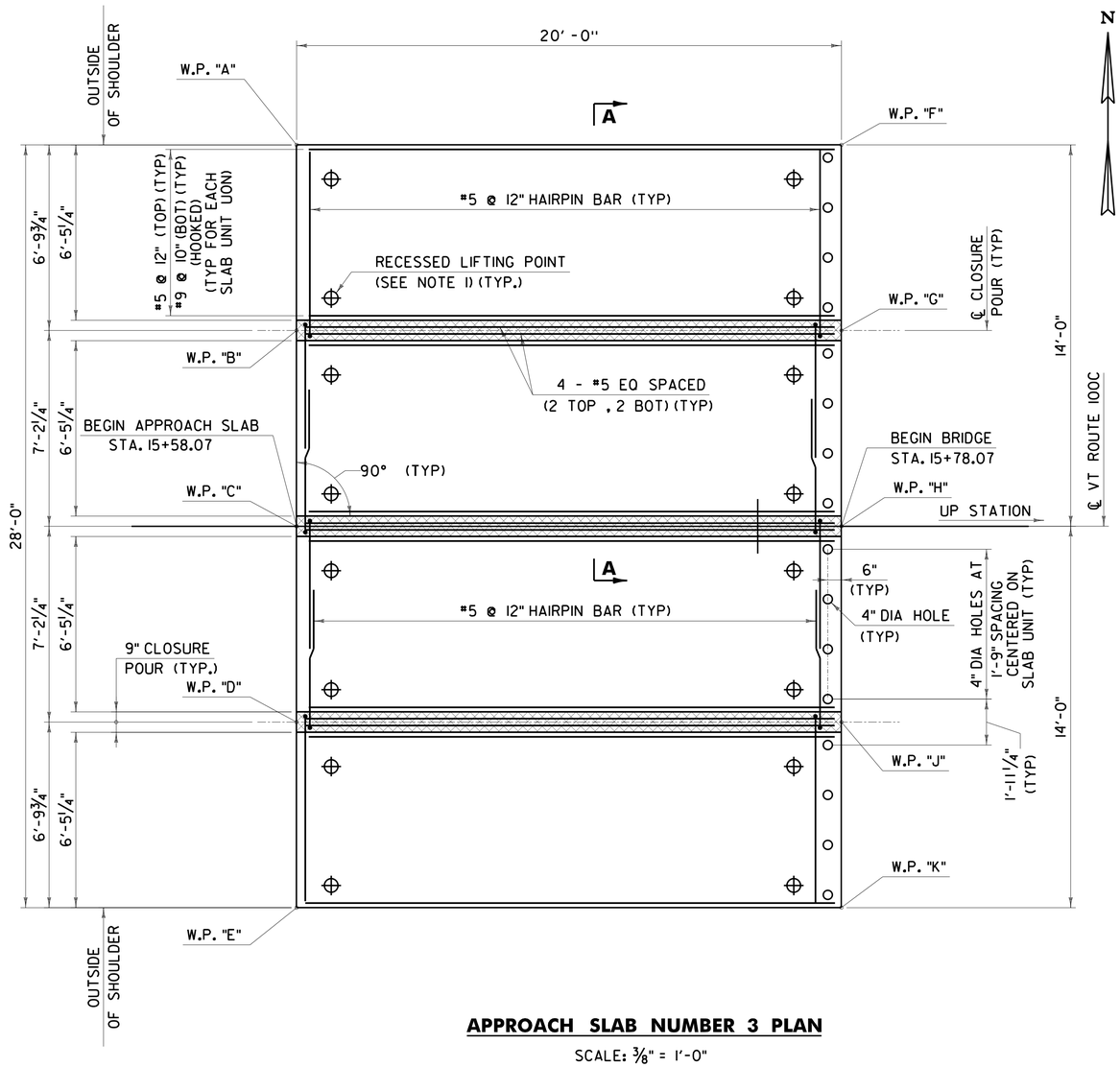
** - T2 IS UPSTATION OF T1.

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066bearing_br2.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
BRIDGE 2 BEARING DETAILS

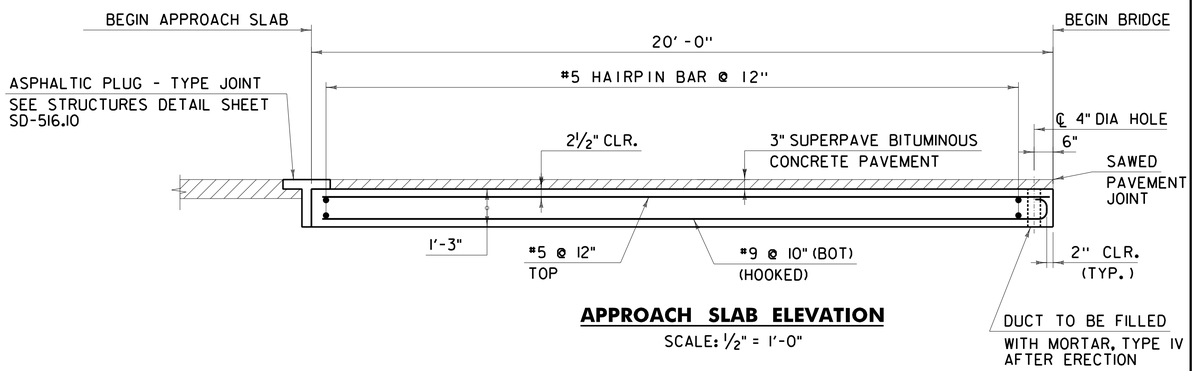
PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: R. HENDERSON
SHEET 53 OF 93

CHA



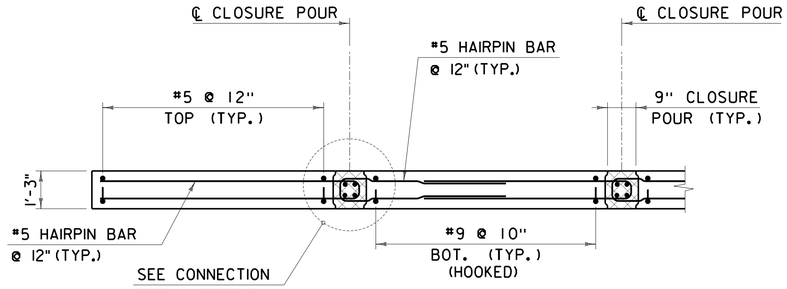
APPROACH SLAB NUMBER 3 PLAN

SCALE: ⅜" = 1'-0"



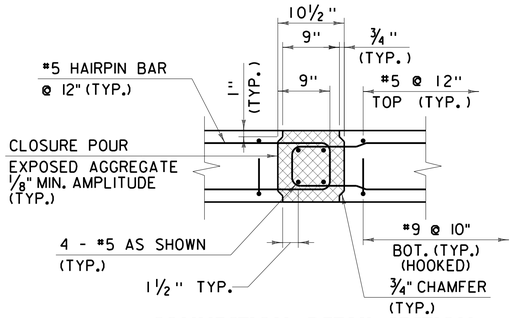
APPROACH SLAB ELEVATION

SCALE: ½" = 1'-0"



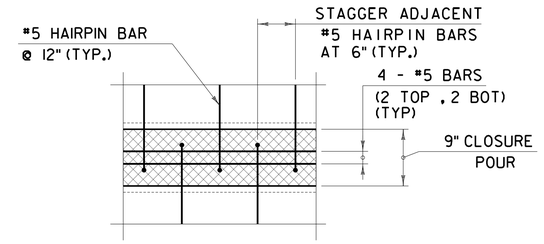
SECTION A-A

SCALE: ½" = 1'-0"



CONNECTION DETAIL SECTION

SCALE: 1" = 1'-0"



CONNECTION DETAIL PLAN

SCALE: 1" = 1'-0"

APPROACH SLAB ELEVATIONS					
APPROACH SLAB NO. 3					
W.P.	STATION	OFFSET (FT)		TOP OF APPROACH SLAB ELEV.	THICKNESS
A	15+58.07	14.00	LT	579.30	1'-3"
B	15+58.07	7.19	LT	579.44	1'-3"
C	15+58.07	0.00		579.58	1'-3"
D	15+58.07	7.19	RT	579.44	1'-3"
E	15+58.07	14.00	RT	579.30	1'-3"
F	15+78.07	14.00	LT	579.54	1'-3"
G	15+78.07	7.19	LT	579.68	1'-3"
H	15+78.07	0.00		579.82	1'-3"
J	15+78.07	7.19	RT	579.68	1'-3"
K	15+78.07	14.00	RT	579.54	1'-3"

NOTES:

1. LIFTING POINTS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL LIFTING LOCATIONS SHALL BE DETERMINED BY THE FABRICATOR AND INDICATED ON THE FABRICATION DRAWINGS WITH CALCULATIONS.
2. THE TOP SURFACE OF THE PRECAST APPROACH SLAB PANELS SHALL HAVE A BROOM FINISH PARALLEL TO THE CENTERLINE OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING UNIFORM CONTACT BETWEEN THE APPROACH SLAB AND THE SUBBASE MATERIAL TO THE SATISFACTION OF THE ENGINEER. THE FABRICATION DRAWINGS SHALL INDICATE THE MEANS AND METHODS NECESSARY TO INSTALL THE APPROACH SLABS TO THE ELEVATIONS SPECIFIED.

LEGEND:

AREA OF CLOSURE POUR SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON PLANS,
3'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
ALL REINFORCEMENT SHALL BE LEVEL 1 EPOXY COATED.

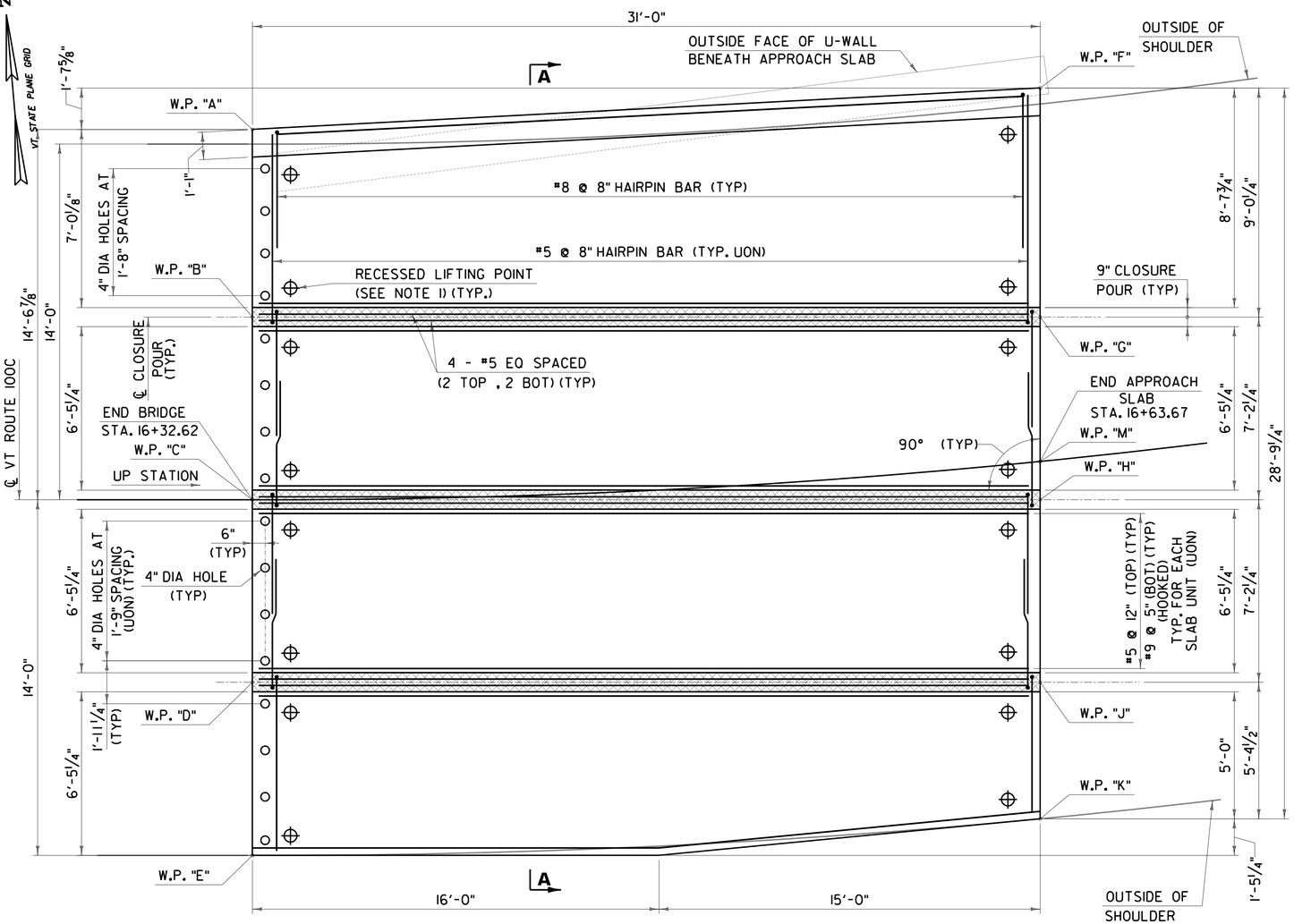
CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066supapp3.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
APPROACH SLAB 3 DETAILS

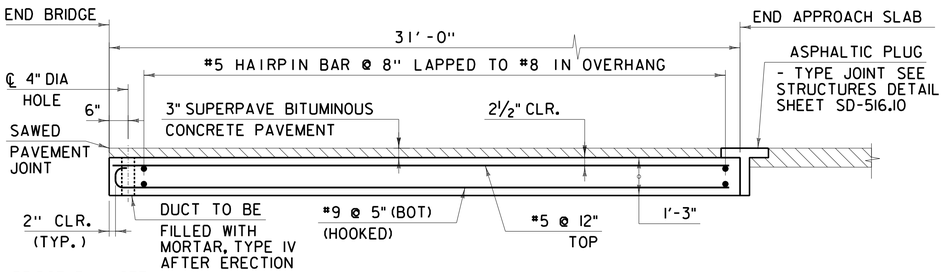
PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R HENDERSON
SHEET 54 OF 93

FILE NAME = V:\Projects\ANY\K23\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066supapp3.dgn
DATE/TIME = 5/4/2016
USER = 5237



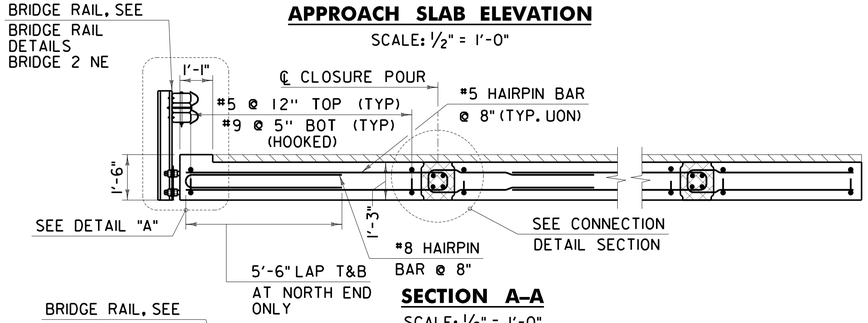
APPROACH SLAB NUMBER 4 PLAN

SCALE: ⅜" = 1'-0"



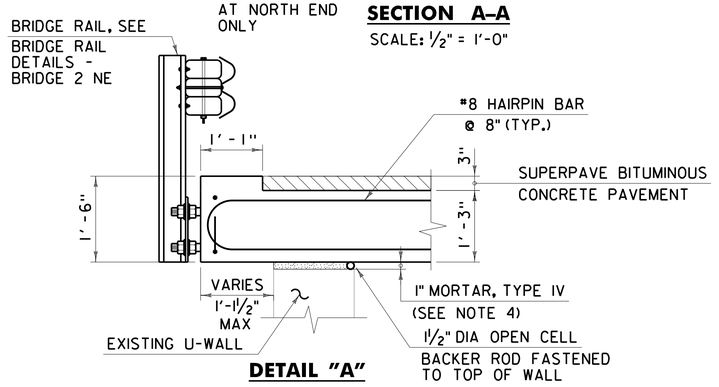
APPROACH SLAB ELEVATION

SCALE: ½" = 1'-0"



SECTION A–A

SCALE: ½" = 1'-0"



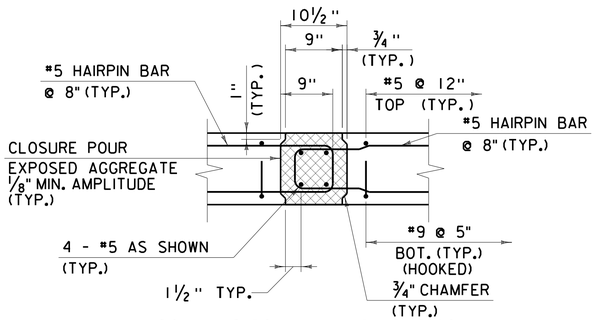
DETAIL "A"

SCALE: 1" = 1'-0"

NOTES:

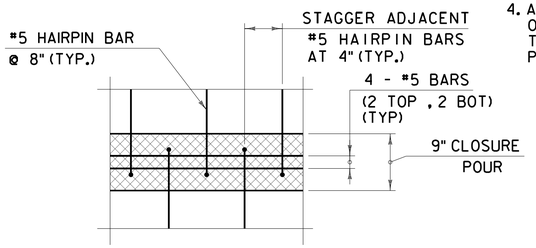
1. LIFTING POINTS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL LIFTING LOCATIONS SHALL BE DETERMINED BY THE FABRICATOR AND INDICATED ON THE FABRICATION DRAWINGS WITH CALCULATIONS.
2. THE TOP SURFACE OF THE PRECAST APPROACH SLAB PANELS SHALL HAVE A BROOM FINISH PARALLEL TO THE CENTERLINE OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING UNIFORM CONTACT BETWEEN THE APPROACH SLAB AND THE SUBBASE MATERIAL TO THE SATISFACTION OF THE ENGINEER. THE FABRICATION DRAWINGS SHALL INDICATE THE MEANS AND METHODS NECESSARY TO INSTALL THE APPROACH SLABS TO THE ELEVATIONS SPECIFIED.
4. AFTER CUTTING EXISTING U-WALL, PLACE BACKER ROD AT INSIDE EDGE OF TOP OF U-WALL. MORTAR SHALL FILL ALL GAPS BETWEEN BOTTOM OF SLAB AND TOP OF U-WALL. COST OF MORTAR TYPE IV AND BACKER ROD INCLUDED WITH PRECAST CONCRETE STRUCTURE (APPROACH SLAB 4).

APPROACH SLAB ELEVATIONS				
APPROACH SLAB NO. 4				
W.P.	STATION	OFFSET (FT)	TOP OF APPROACH SLAB ELEV.	THICKNESS
A	16+32.62	14.62 LT	580.84	1'-6"
B	16+32.62	7.19 LT	580.74	1'-3"
C	16+32.62	0.00	580.89	1'-3"
D	16+32.62	7.19 RT	580.74	1'-3"
E	16+32.62	14.00 RT	580.61	1'-3"
F	16+65.20	14.63 LT	581.86	1'-6"
G	16+64.24	5.65 LT	581.76	1'-3"
H	16+63.52	1.50 RT	581.81	1'-3"
J	16+62.83	8.65 RT	581.64	1'-3"
K	16+62.33	14.00 RT	581.52	1'-3"
M	16+63.67	0.00	581.85	1'-3"



CONNECTION DETAIL SECTION

SCALE: 1" = 1'-0"



CONNECTION DETAIL PLAN

SCALE: 1" = 1'-0"

LEGEND:

AREA OF CLOSURE POUR SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)

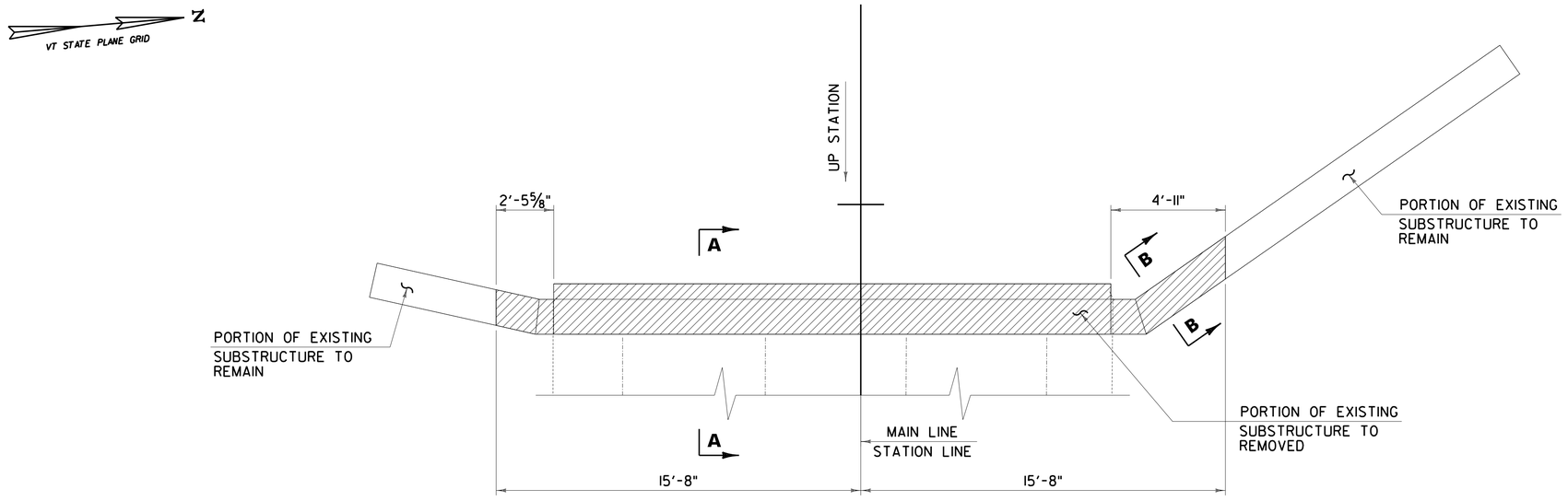
NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON PLANS, 3'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL REINFORCEMENT SHALL BE LEVEL I EPOXY COATED.

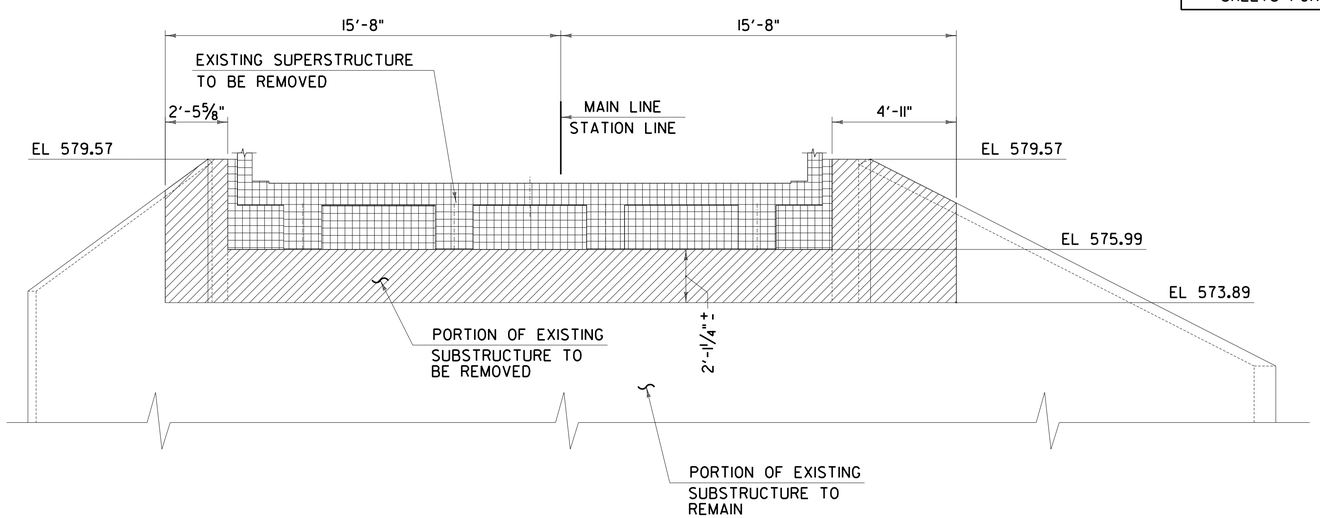
PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BF 0248(4)
FILE NAME: z13c066supapp4.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
APPROACH SLAB 4 DETAILS	SHEET 55 OF 93

CHA

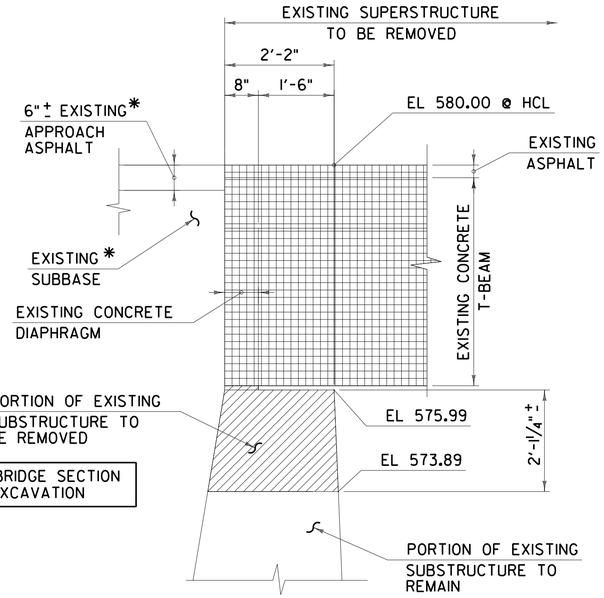
FILE NAME = V:\Projects\VNY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066supapp4.dgn
DATE/TIME = 5/4/2016
USER = 5237



EXISTING ABUTMENT 3 REMOVAL PLAN – BRIDGE 2

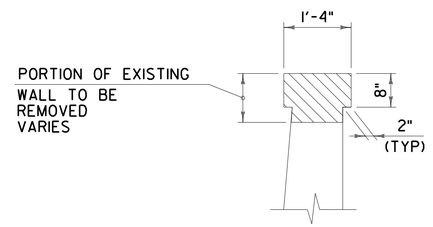


EXISTING ABUTMENT 3 REMOVAL ELEVATION – BRIDGE 2



* - SEE TYPICAL BRIDGE SECTION SHEETS FOR EXCAVATION

SECTION A–A



SECTION B–B

▨ DENOTES LIMITS OF REMOVAL OF CONCRETE OR MASONRY.

▦ DENOTES LIMITS OF PARTIAL REMOVAL OF STRUCTURE.

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066subrem3_br2.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
EXISTING ABUTMENT 3 REMOVAL DETAILS	SHEET 56 OF 93

0 3 6

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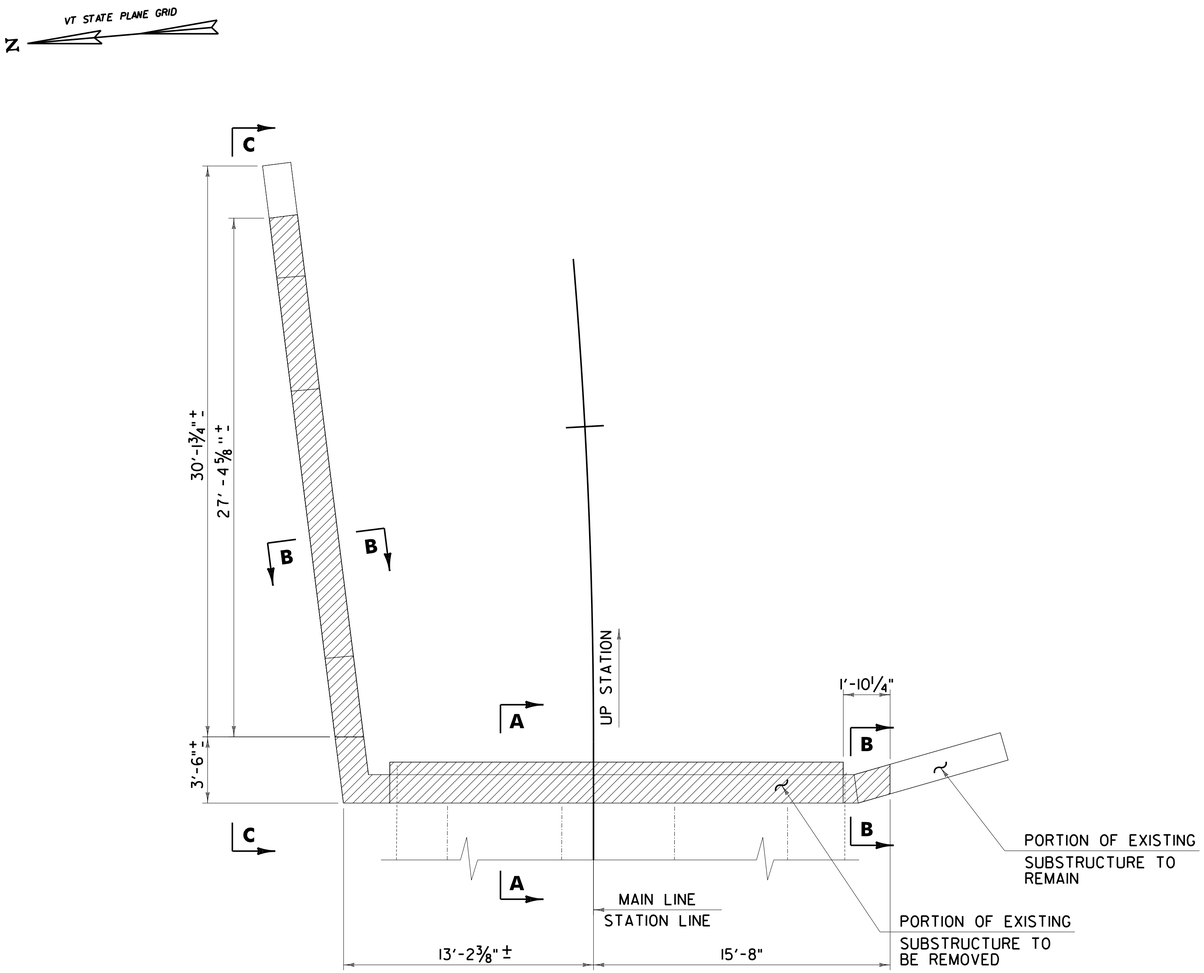
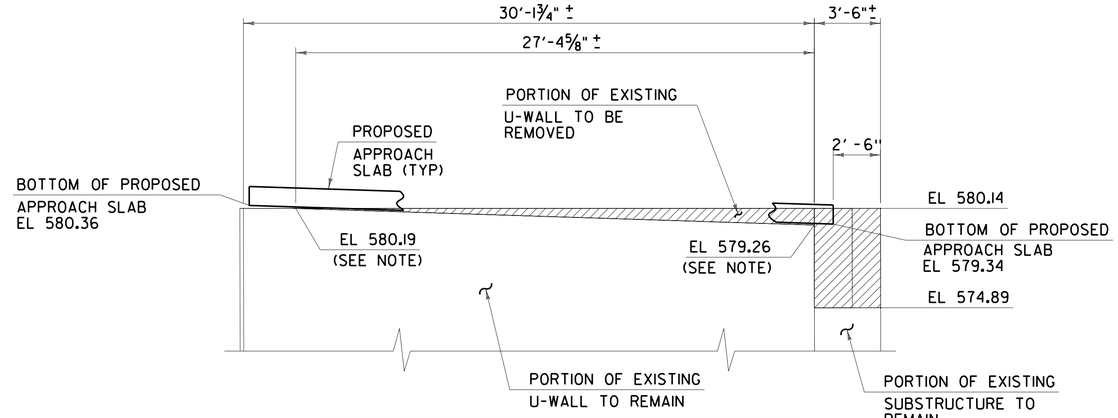


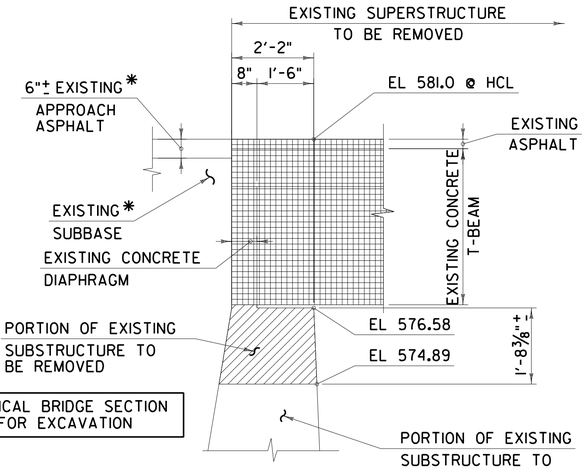
EXISTING ABUTMENT 4 REMOVAL PLAN – BRIDGE 2

EXISTING ABUTMENT 4 REMOVAL ELEVATION – BRIDGE 2



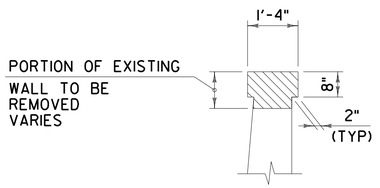
NOTE:
REMOVE EXISTING U-WALL TO 1" BELOW THE BOTTOM OF PROPOSED APPROACH SLAB (TOLERANCE OF ½").
SEE APPROACH SLAB 4 DETAILS FOR MORE INFORMATION.

SECTION C–C



* - SEE TYPICAL BRIDGE SECTION SHEETS FOR EXCAVATION

SECTION A–A



SECTION B–B

▨ DENOTES LIMITS OF REMOVAL OF CONCRETE OR MASONRY.

▦ DENOTES LIMITS OF PARTIAL REMOVAL OF STRUCTURE.

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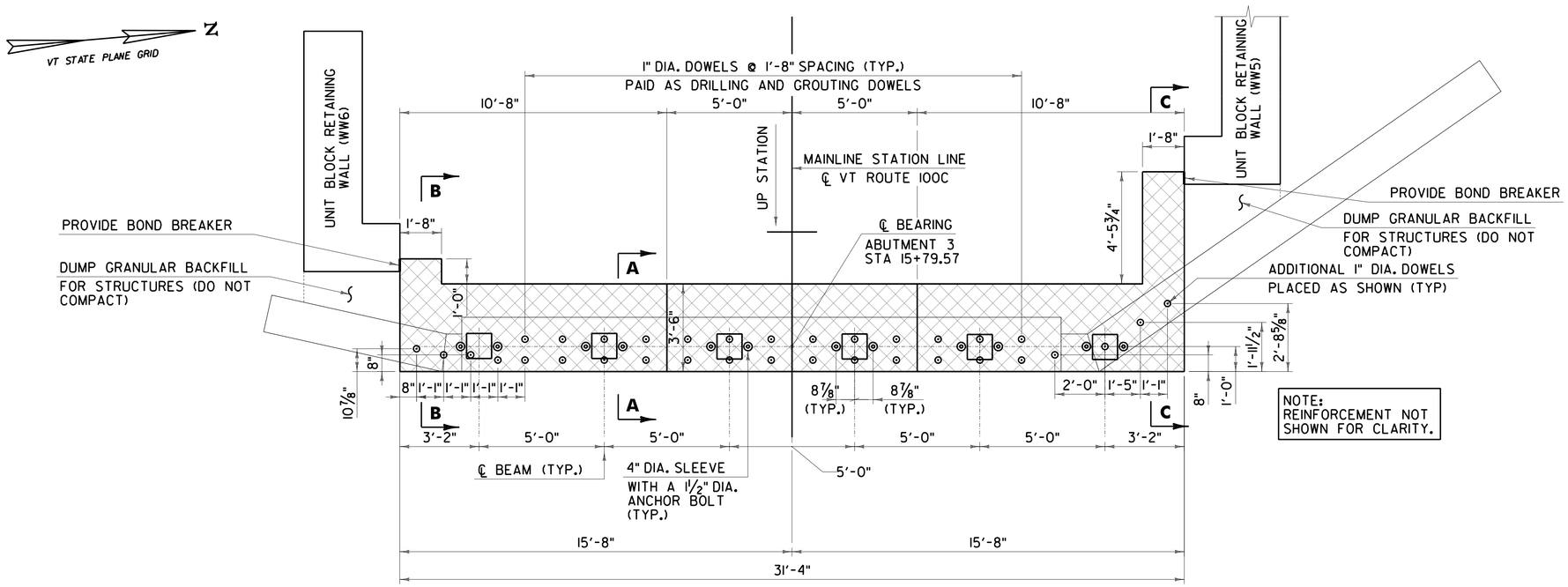
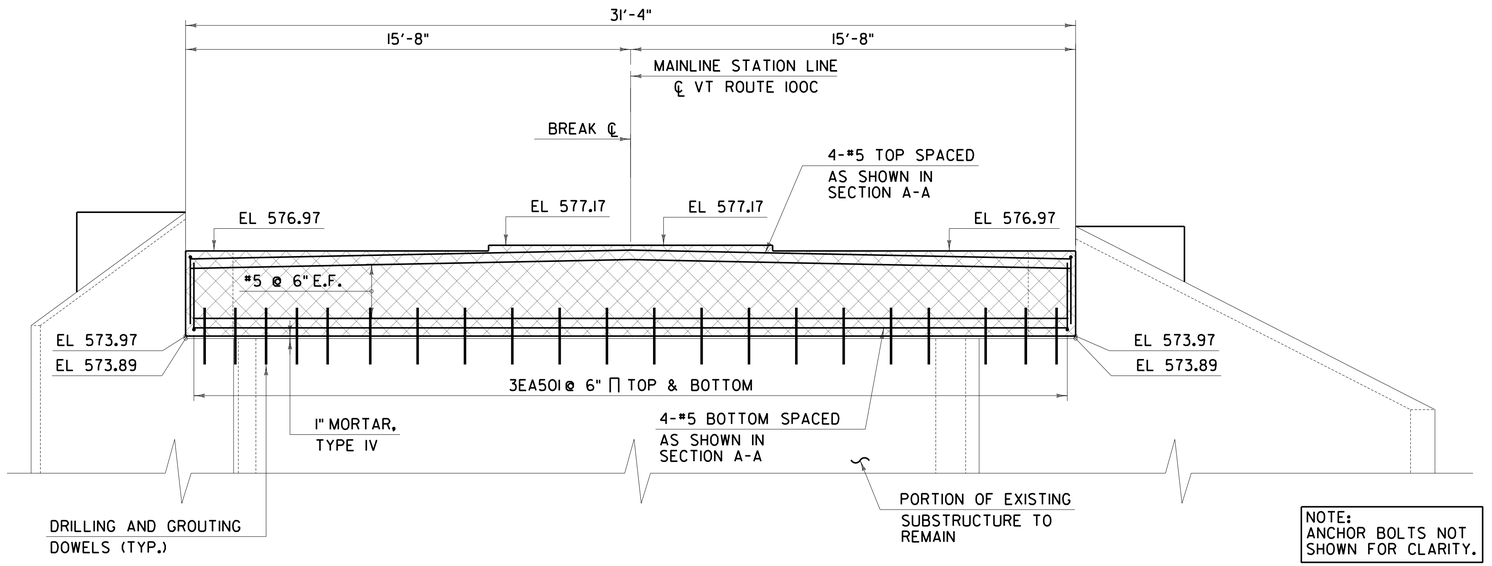
CHA

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066subrem4_br2.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
EXISTING ABUTMENT 4 REMOVAL DETAILS	SHEET 57 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066subrem4_br2.dgn
DATE/TIME = 5/4/2016
USER = 5237



ABUTMENT 3 PLAN – BRIDGE 2



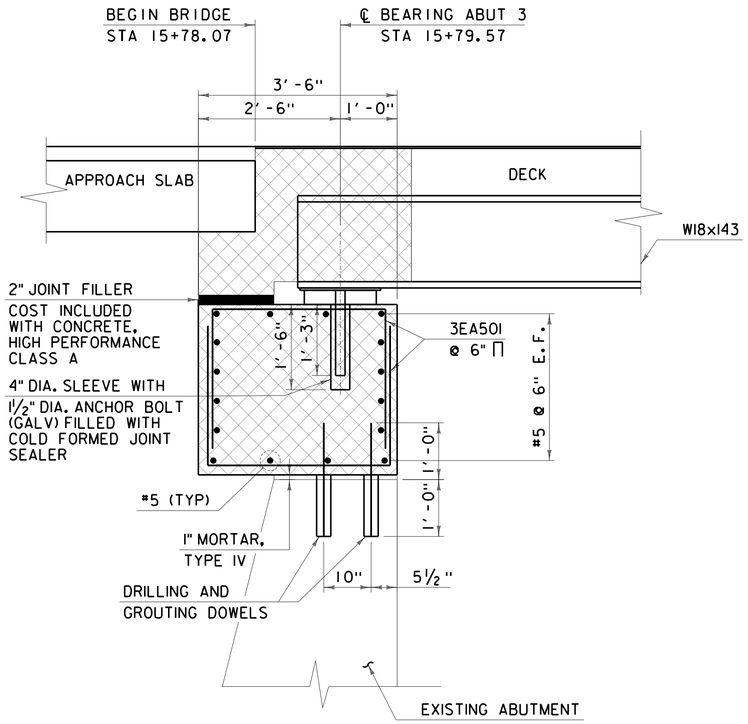
ABUTMENT 3 ELEVATION – BRIDGE 2

NOTES:

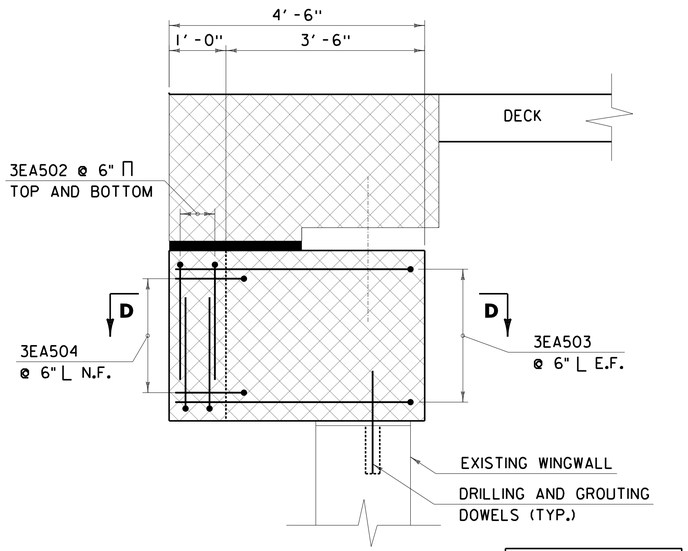
1. FOR SECTIONS A-A, B-B, AND C-C, SEE ABUTMENT 3 DETAILS.
2. COST OF REINFORCEMENT BARS USED FOR DRILLING AND GROUTING DOWELS INCLUDED WITH DRILLING AND GROUTING DOWELS.
3. 2'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066abut3_br2.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
ABUTMENT 3 PLAN AND ELEVATION	SHEET 58 OF 93

CHA

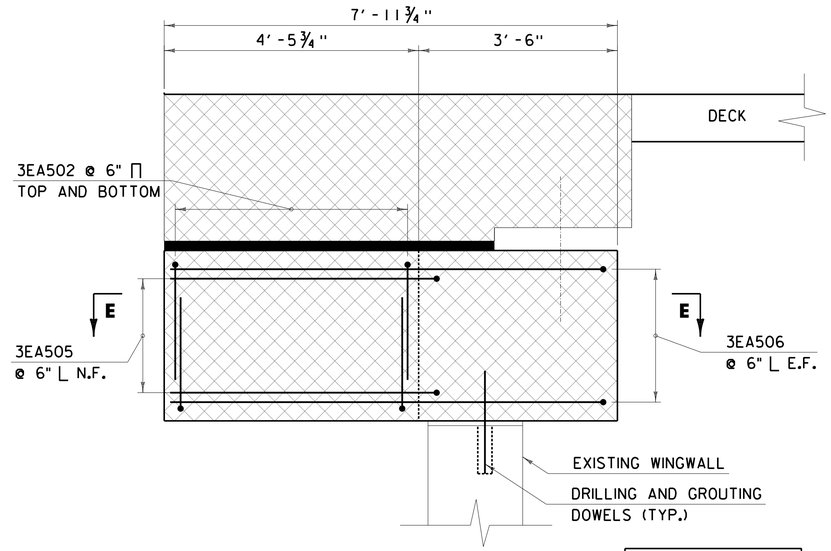


SECTION A–A



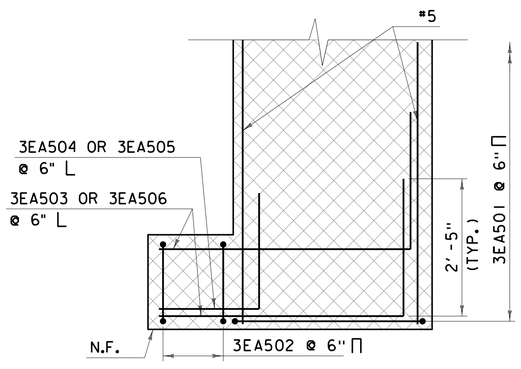
SECTION B–B

NOTE:
STEEL TUBE RAILING DETAILS NOT SHOWN FOR CLARITY



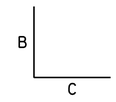
SECTION C–C

NOTE:
STEEL TUBE RAILING DETAILS NOT SHOWN FOR CLARITY



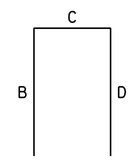
SECTION D–D
(SECTION E–E SIMILAR)

L BARS		
MARK	B*	C*
3EA503	2'-5"	4'-0"
3EA504	2'-5"	1'-0"
3EA505	2'-5"	4'-5"
3EA506	2'-5"	7'-5"



* NOTE: "B" DIMENSION IS PARALLEL TO THE TRANSVERSE AXIS OF THE BRIDGE.
"C" DIMENSION IS PARALLEL TO THE LONGITUDINAL AXIS OF THE BRIDGE.

Π BARS (17)		
MARK	B/D	C
3EA501	2'-5"	3'-0"
3EA502	2'-5"	1'-2"



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

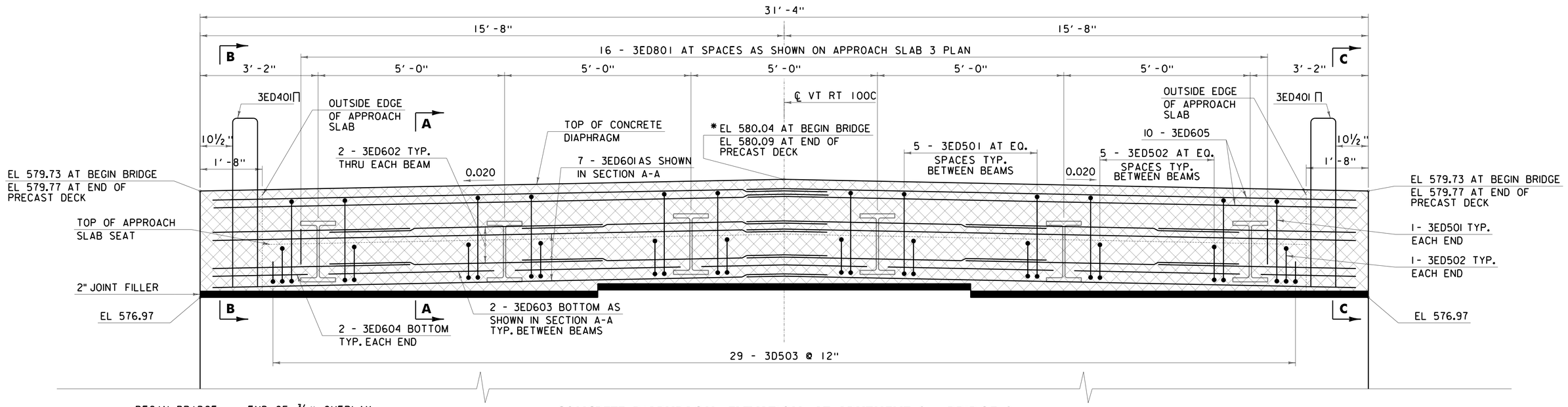
PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066abutdtll_br2.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
ABUTMENT 3 DETAILS

PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON
SHEET 59 OF 93

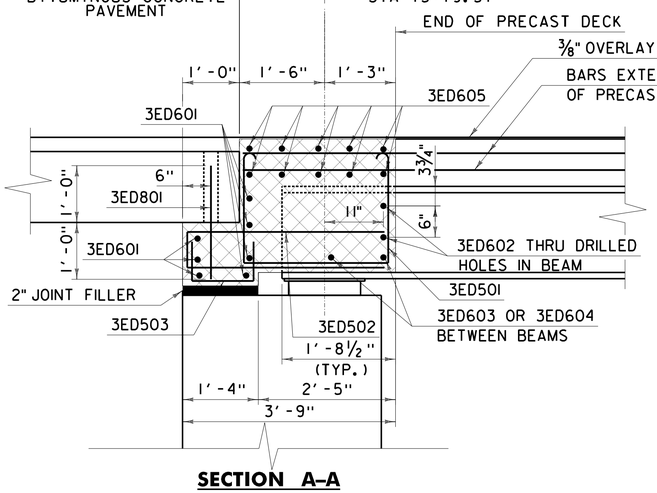
CHA

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066abutdtll_br2.dgn
DATE/TIME = 5/4/2016
USER = 5237

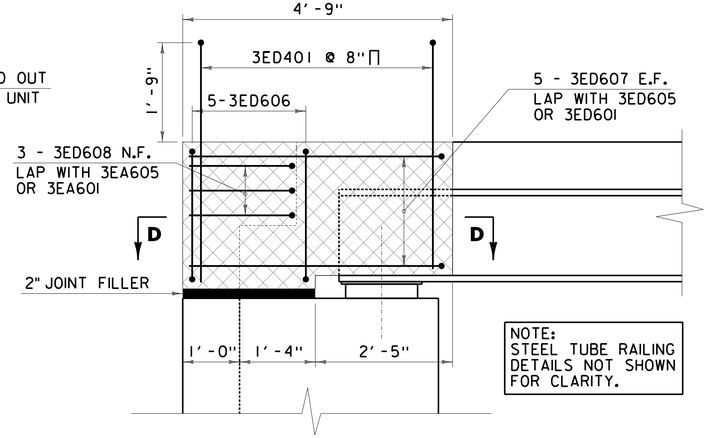


CONCRETE DIAPHRAGM ELEVATION AT ABUTMENT 3 – BRIDGE 2

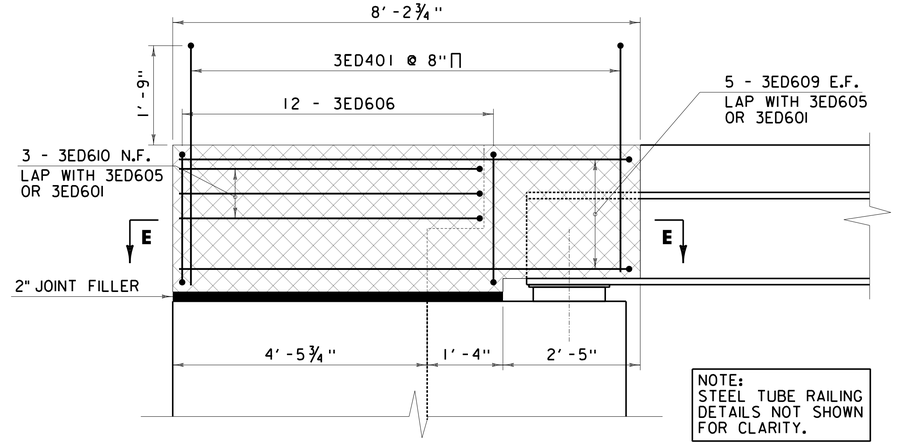
*FOR F.C. ELEVATIONS AT TOP OF OVERLAY, ADD ⅜"



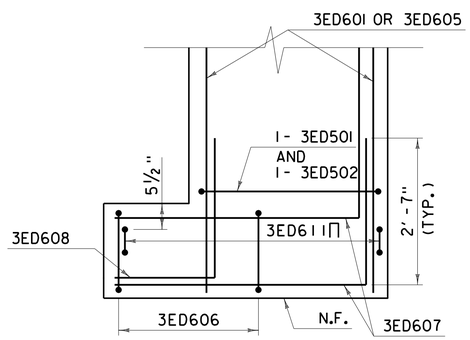
SECTION A–A



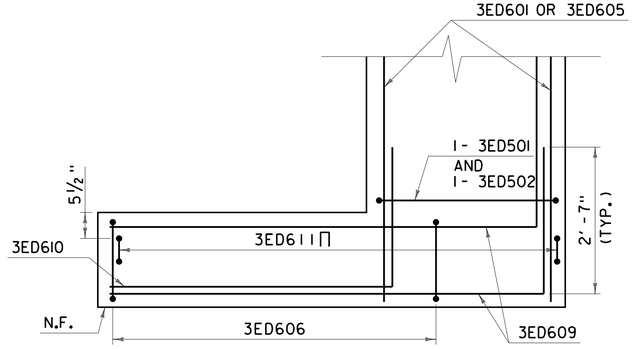
SECTION B–B



SECTION C–C



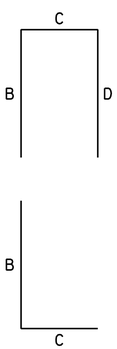
SECTION D–D



SECTION E–E

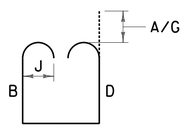
Π BARS		
MARK	B/D	C
3ED502	3'-3"	4"
3ED503	6"	10"
3ED401	3'-10"	4"

L BARS		
MARK	B*	C*
3ED607	3'-5"	4'-4"
3ED608	2'-2"	1'-2"
3ED609	3'-5"	8'-4"
3ED610	2'-2"	4'-8"



*NOTE: "B" DIMENSION IS PARALLEL TO THE TRANSVERSE AXIS OF THE BRIDGE.
"C" DIMENSION IS PARALLEL TO THE LONGITUDINAL AXIS OF THE BRIDGE.

⊓ BARS				
MARK	B/D	C	A/G	J
3ED501	2'-1"	2'-3"	7"	5"
3ED606	2'-1"	1'-2"	8"	6"



NOTES:

1. 3'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2. FOR ABUTMENT 3 ELEVATIONS AND DETAILS SEE ABUTMENT 3 PLAN AND ELEVATION.
3. ALL REINFORCEMENT SHALL BE LEVEL 1 EPOXY COATED.
4. SEE BRIDGE 2 DECK AND FRAMING PLAN FOR ADDITIONAL DETAILS.

CHA

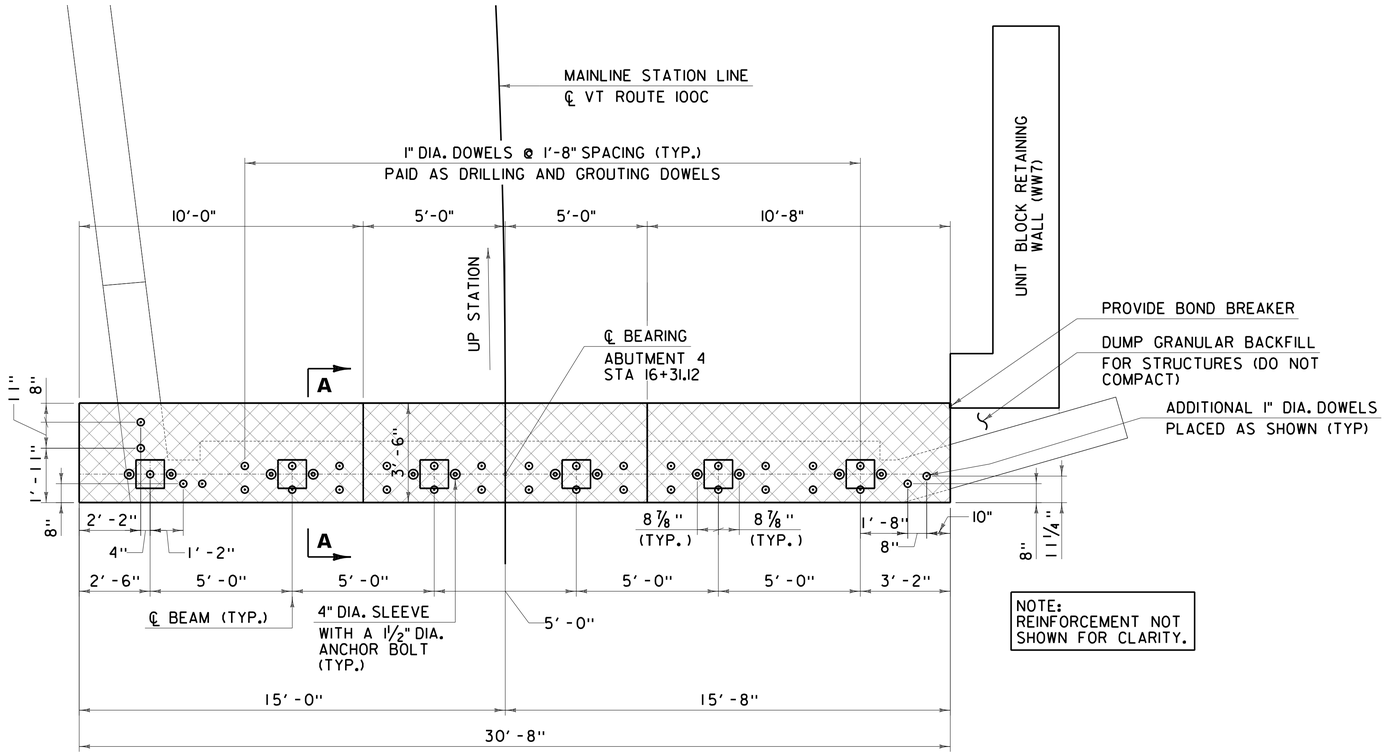
PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066abutdtl3_br2.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
ABUTMENT 3 CONCRETE DIAPHRAGM DETAILS

PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON
SHEET 60 OF 93

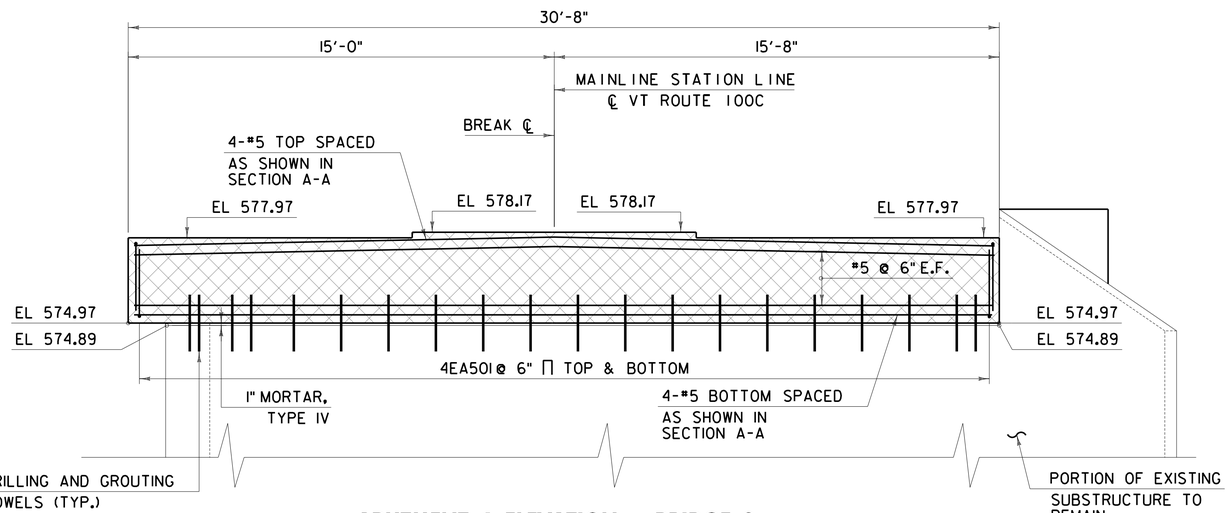
FILE NAME = V:\Projects\VNYW\13z8410\CADD_MSTN\13c066\Consultants\Structures\zl3c066abutdtl3_br2.dgn
DATE/TIME = 5/4/2016
USER = 5237

VT STATE PLANE GRID



NOTE:
REINFORCEMENT NOT SHOWN FOR CLARITY.

ABUTMENT 4 PLAN – BRIDGE 2



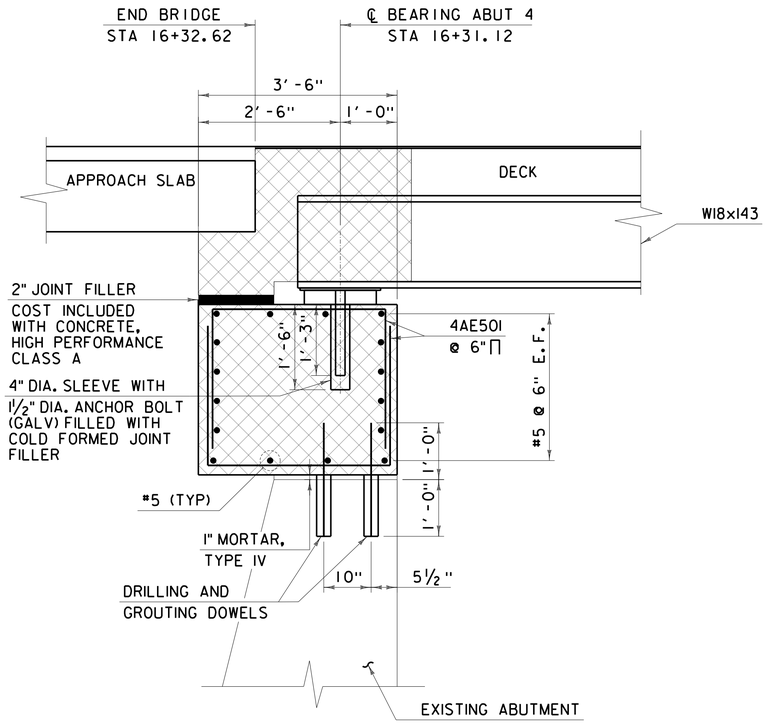
ABUTMENT 4 ELEVATION – BRIDGE 2

NOTES:

1. FOR SECTION A-A, SEE ABUTMENT 4 DETAILS.
2. COST OF REINFORCEMENT BARS USED FOR DRILLING AND GROUTING DOWELS INCLUDED WITH DRILLING AND GROUTING DOWELS.
3. 2'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

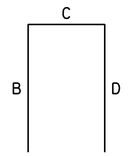
PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066abut4_br2.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: P. ROTH
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
ABUTMENT 4 PLAN AND ELEVATION	SHEET 61 OF 93

CHA



SECTION A–A

Π BARS		
BAR ID	B/D	C
4EA501	2'-5"	3'-0"



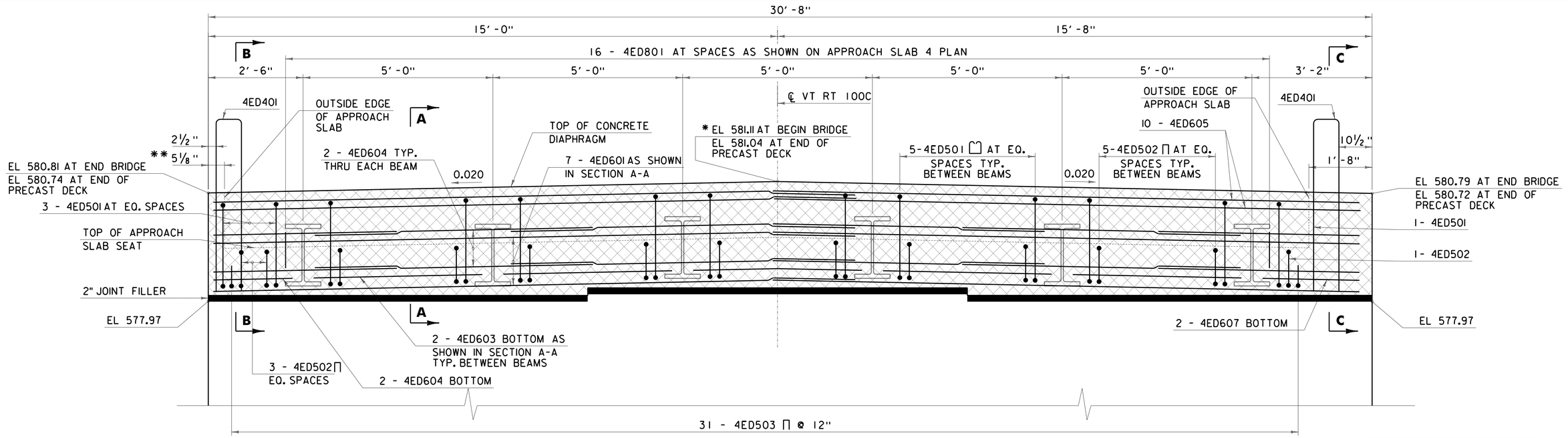
SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPO)

PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BF 0248(4)

FILE NAME: zl3c066abutdtl2_br2.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
ABUTMENT 4 DETAILS	SHEET 62 OF 93

CHA

FILE NAME = V:\Projects\ANYK3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066abutdtl2_br2.dgn
DATE/TIME = 5/4/2016
USER = 5237

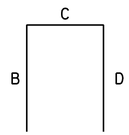


CONCRETE DIAPHRAGM ELEVATION AT ABUTMENT 4 – BRIDGE 2

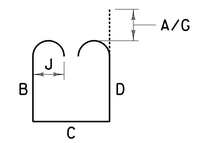
*FOR F.G. ELEVATIONS AT TOP OF OVERLAY, ADD ⅜"

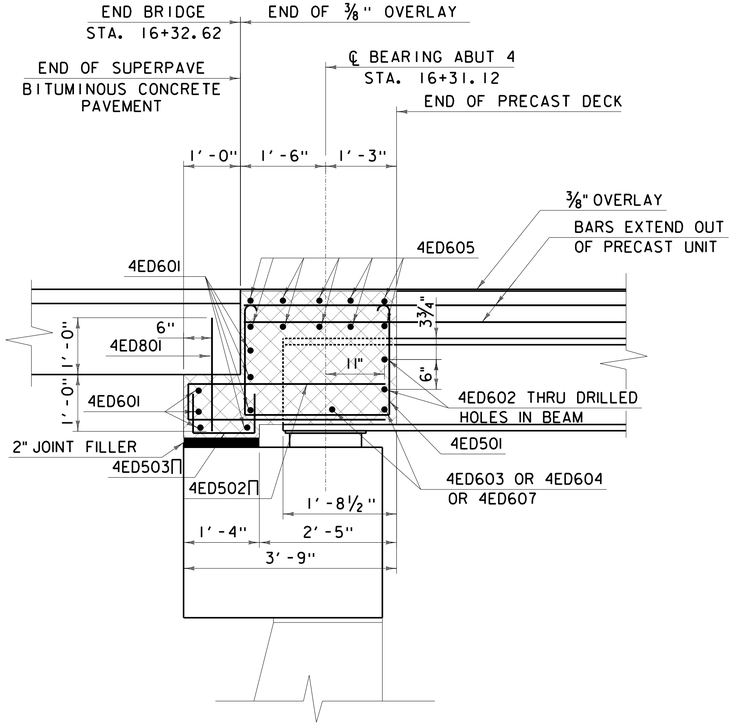
**PLACE CONCRETE IN 5⅛"x1'-0" AREA OUTSIDE OF APPROACH SLAB

⊔ BARS		
MARK	B/D	C
4ED502	3'-3"	4"
4ED503	6"	10"
4ED401	3'-10"	5"
4ED401	2'-1"	1'-2"

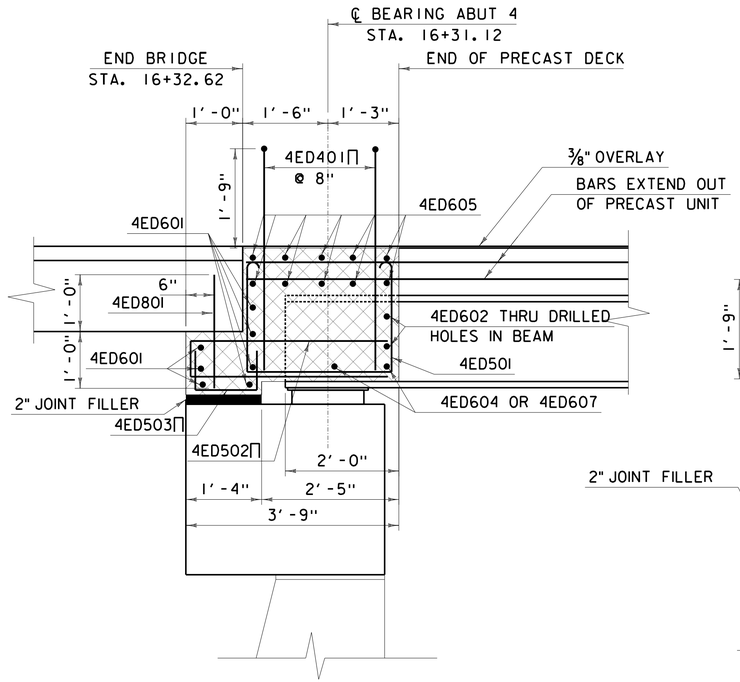


⊓ BARS				
MARK	B/D	C	A/G	J
4ED501	2'-1"	2'-3"	7"	5"

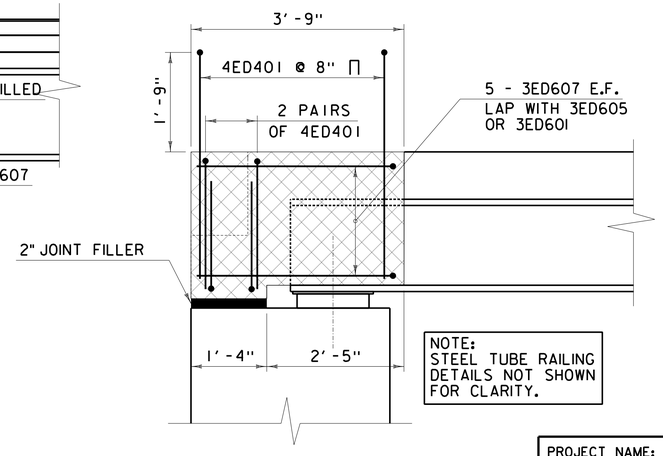




SECTION A–A



SECTION B–B



SECTION C–C

NOTES:

1. 3'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2. FOR ABUTMENT 4 ELEVATIONS AND DETAILS SEE ABUTMENT 4 PLAN AND ELEVATION.
3. ALL REINFORCEMENT SHALL BE LEVEL 1 EPOXY COATED.
4. SEE BRIDGE 2 DECK AND FRAMING PLAN FOR ADDITIONAL DETAILS.

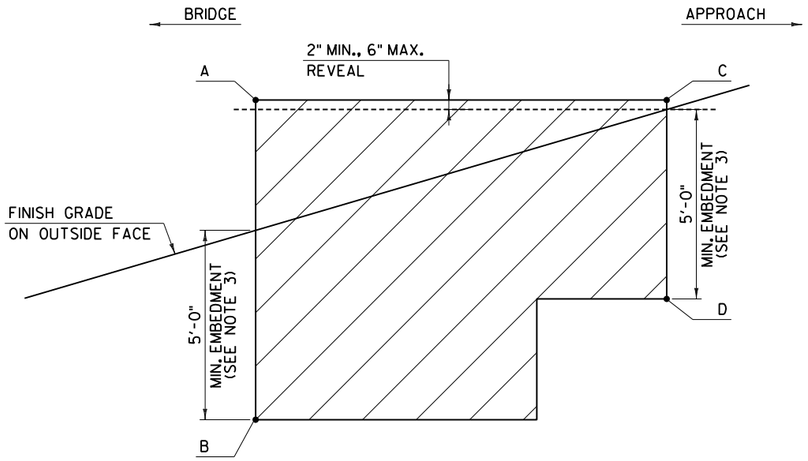
CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

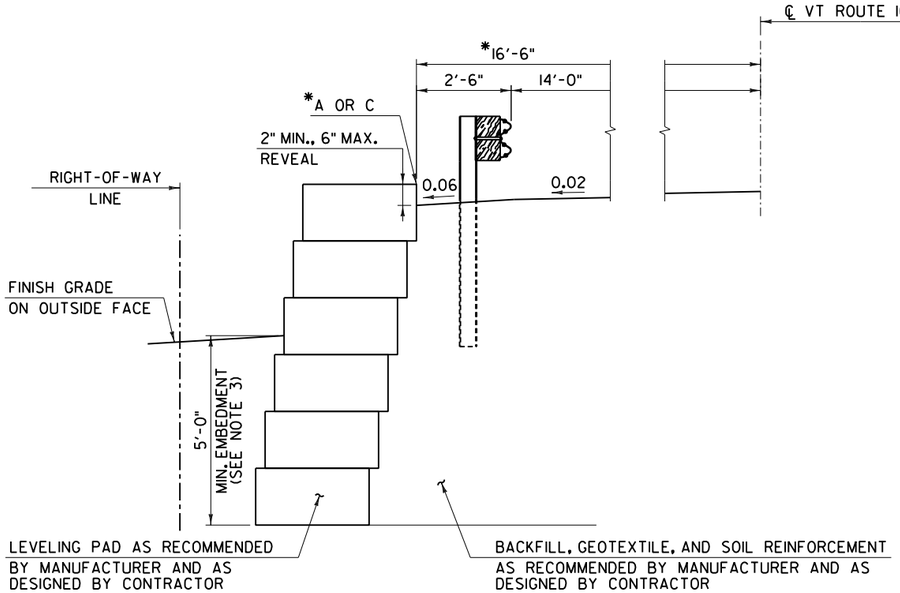
FILE NAME: zl3c066abutdtl4_br2.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. NAJDOWSKI
ABUTMENT 4 CONCRETE DIAPHRAGM DETAILS

PLOT DATE: 5/4/2016
DRAWN BY: L. ROBERTS
CHECKED BY: R. HENDERSON
SHEET 63 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066abutdtl4_br2.dgn
DATE/TIME = 5/4/2016
USER = 5237



UNIT BLOCK RETAINING WALL
TYPICAL ELEVATION
NOT TO SCALE



UNIT BLOCK RETAINING WALL
TYPICAL SECTION
NOT TO SCALE

UNIT BLOCK RETAINING WALL #1			
PT.	STA.	ELEV.	
A	14+36.90	581.54	*
B	14+36.90	573.00	
C	14+26.04	581.85	*
D	14+26.04	576.50	
Overall Length:		10.9	

UNIT BLOCK RETAINING WALL #2			
PT.	STA.	ELEV.	
A	14+34.73	581.60	*
B	14+34.73	572.00	
C	14+18.41	582.07	*
D	14+18.41	575.25	
Overall Length:		16.4	

UNIT BLOCK RETAINING WALL #3			
PT.	STA.	ELEV.	
A	14+77.62	580.39	*
B	14+77.62	571.00	
C	14+91.06	580.31	*
D	14+91.06	574.00	
Overall Length:		13.5	

UNIT BLOCK RETAINING WALL #4			
PT.	STA.	ELEV.	
A	14+80.37	580.31	*
B	14+80.37	571.00	
C	14+89.97	580.08	*
D	14+89.97	574.00	
Overall Length:		9.7	

UNIT BLOCK RETAINING WALL #5			
PT.	STA.	ELEV.	
A	15+73.09	579.73	*
B	15+73.09	570.25	
C	15+61.59	579.60	*
D	15+61.59	573.00	
Overall Length:		11.5	

UNIT BLOCK RETAINING WALL #6			
PT.	STA.	ELEV.	
A	15+76.58	579.78	*
B	15+76.58	570.50	
C	15+66.98	579.65	*
D	15+66.98	574.50	
Overall Length:		9.6	

UNIT BLOCK RETAINING WALL #7			
PT.	STA.	ELEV.	
A	16+33.44	580.89	*
B	16+33.44	570.50	
C	16+46.07	581.25	*
D	16+46.07	570.50	
Overall Length:		12.7	

NOTES:

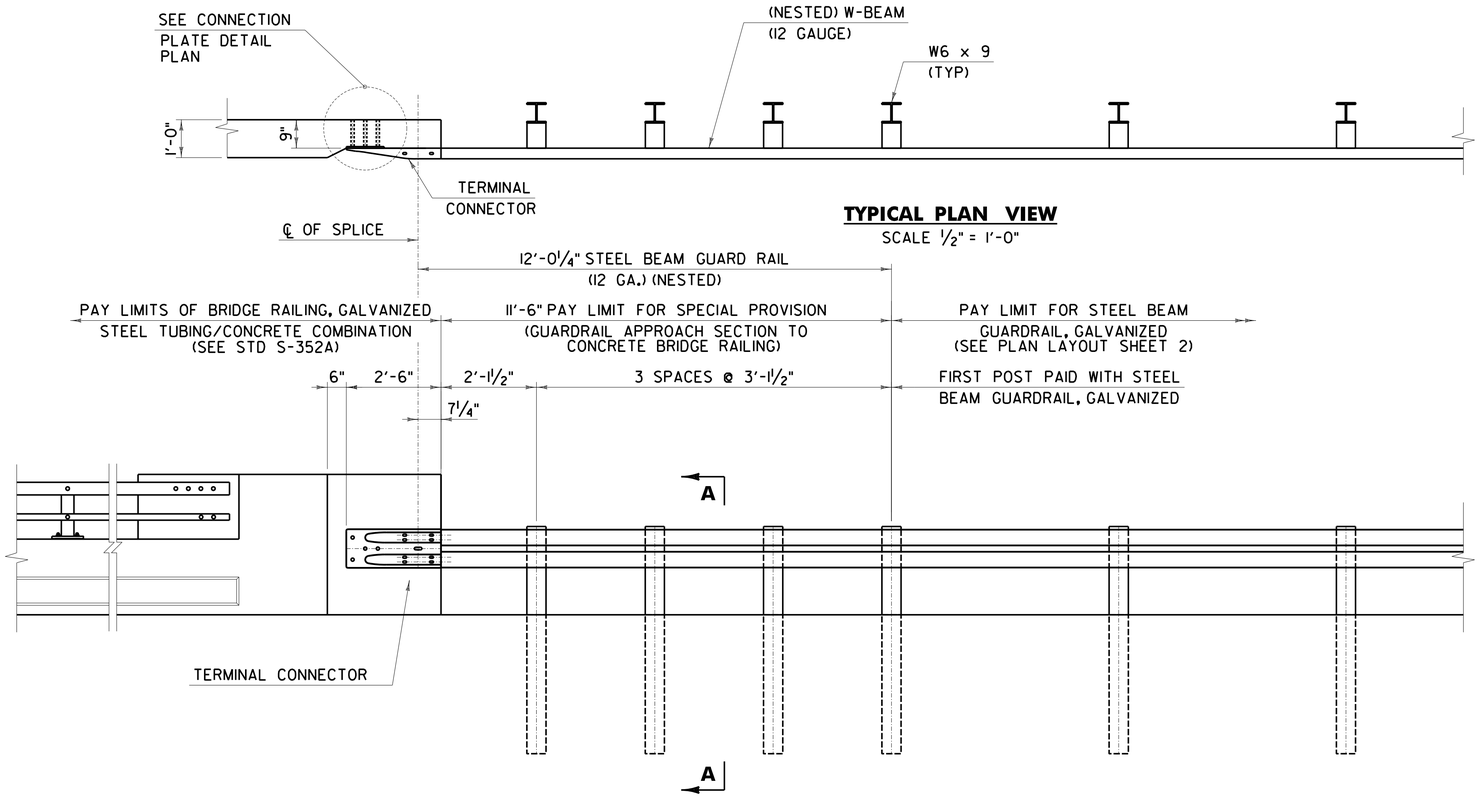
1. STATIONS AND ELEVATIONS ARE IN FEET, ARE APPROXIMATE AND REPRESENT ANTICIPATED WALL DIMENSIONS. ACTUAL DIMENSIONS WILL DEPEND ON WALL MATERIALS USED.
2. STEP IN WALL MAY BE USED TO DECREASE EXCAVATION DEPTH. LOCATION AND HEIGHT OF STEP TO BE DETERMINED BY CONTRACTOR.
3. EXCAVATION MUST STAY WITHIN RIGHT-OF-WAY, WHICH WILL NECESSITATE TEMPORARY SHORING.
4. COST OF ALL WORK SHOWN ON THIS SHEET, INCLUDING EXCAVATION, SHORING, AND BACKFILL, SHALL BE INCLUDED IN THE COST FOR SPECIAL PROVISION (UNIT BLOCK RETAINING WALL).

* ALL TOP OF WALL ELEVATIONS ARE PROVIDED AT 16'-6" ASSUMED INSIDE FACE OFFSET WITH A 2" REVEAL. ACTUAL INSIDE FACE OFFSET AND TOP OF WALL ELEVATION MAY VARY DEPENDING UPON WALL MANUFACTURER. CONTRACTOR MAY MAKE TOP OF WALL LEVEL BUT IT IS CONTRACTOR'S RESPONSIBILITY TO ENSURE TOP OF WALL IS WITHIN MINIMUM AND MAXIMUM REVEAL. COST INCLUDED WITH SPECIAL PROVISION (UNIT BLOCK RETAINING WALL).

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066wall.dgn
DATE/TIME = 5/4/2016
USER = 5237

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066wall.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: N. BENNETT	CHECKED BY: R. HENDERSON
UNIT BLOCK RETAINING WALL DETAILS	SHEET 66 OF 93

CHA



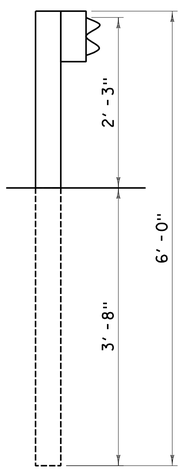
TYPICAL PLAN VIEW
SCALE 1/2" = 1'-0"

TYPICAL ELEVATION VIEW
SCALE 1/2" = 1'-0"

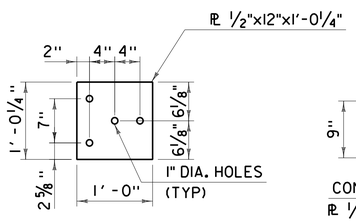
NOTES:

1. A COMPOSITE MATERIAL POST AND/OR BLOCKOUT FROM THE APPROVED PRODUCTS LIST MAY BE SUBSTITUTED FOR A POST AND/OR BLOCKOUT OF SIMILAR DIMENSION.
2. REFER TO STANDARD DRAWINGS G-1 AND G-1D FOR ADDITIONAL DETAILS.
3. THE TERMINAL CONNECTOR SHALL BE INCLUDED IN THE BID PRICE FOR SPECIAL PROVISION (GUARDRAIL APPROACH SECTION TO CONCRETE BRIDGE RAILING). THE CONNECTION PLATE SHALL BE INCLUDED IN THE BID PRICE FOR BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION.
4. PAY LIMIT STATIONS OF THE SEVEN LOCATIONS OF SPECIAL PROVISION (GUARDRAIL APPROACH SECTION TO CONCRETE BRIDGE RAILING) ARE SHOWN ON PLAN LAYOUT SHEET 2.

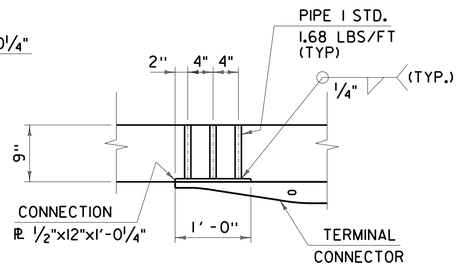
BLOCK OUT TO POST DETAIL
NOT TO SCALE



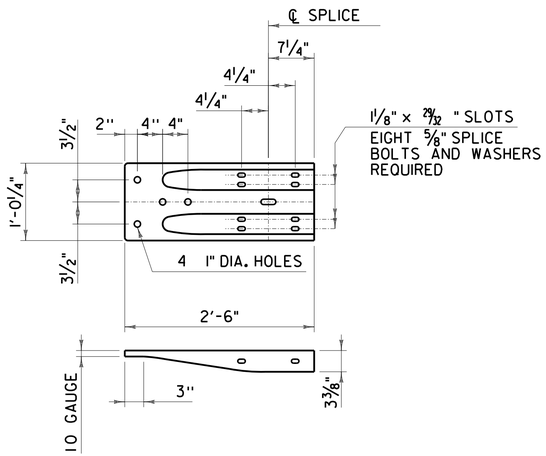
SECTION A–A
SCALE 1" = 1'-0"



CONNECTION PLATE DETAIL ELEVATION
SCALE 1" = 1'-0"



CONNECTION PLATE DETAIL PLAN
SCALE 1" = 1'-0"

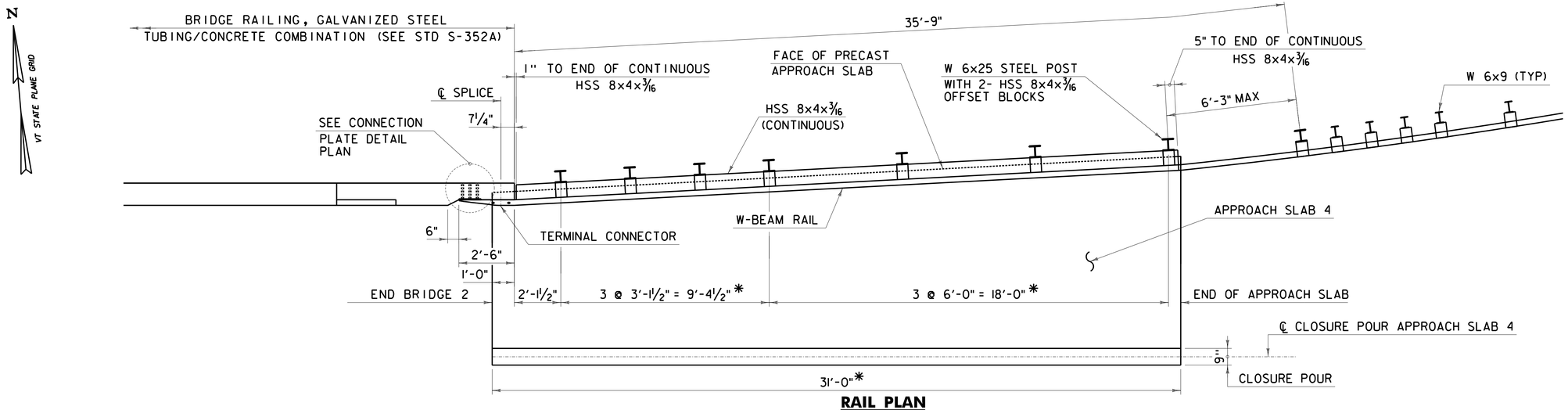


TERMINAL CONNECTOR
SCALE 1" = 1'-0"

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066rlgdtl3.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
TYPICAL BRIDGE RAIL DETAILS	SHEET 67 OF 93

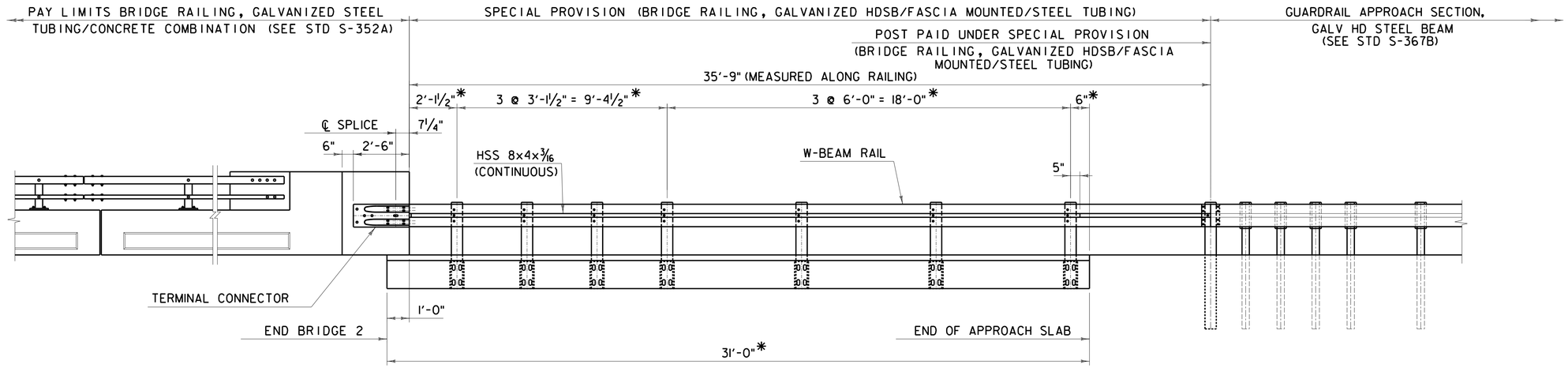
CHA

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066rlgdtl3.dgn
DATE/TIME = 5/4/2016
USER = 5237



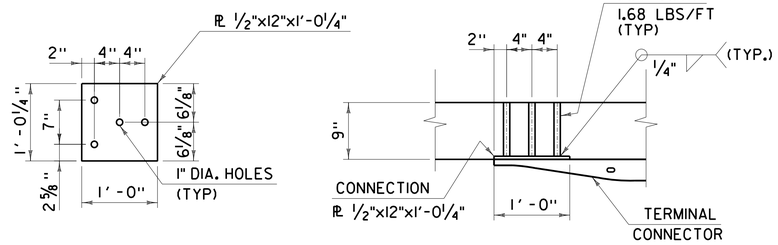
RAIL PLAN

RAIL AT NORTHEAST CORNER OF BRIDGE 2



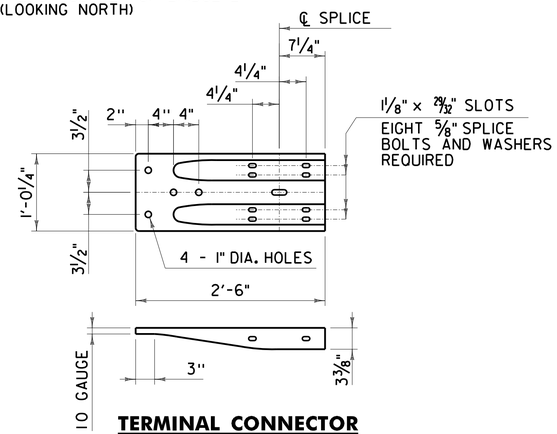
RAIL ELEVATION

RAIL AT NORTHEAST CORNER OF BRIDGE 2
(LOOKING NORTH)



CONNECTION PLATE DETAIL ELEVATION

CONNECTION PLATE DETAIL PLAN



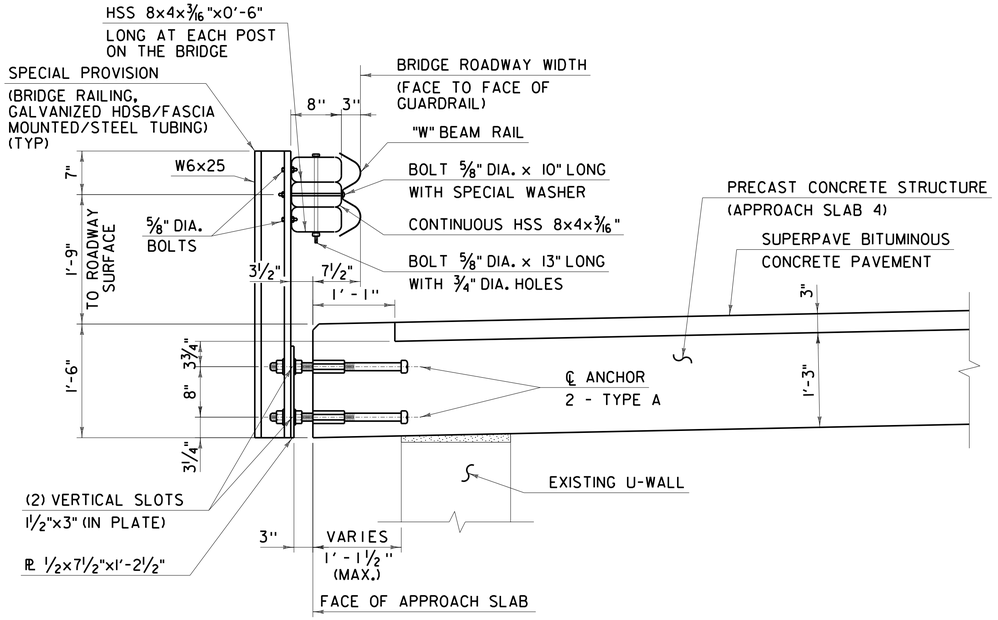
TERMINAL CONNECTOR

NOTES:

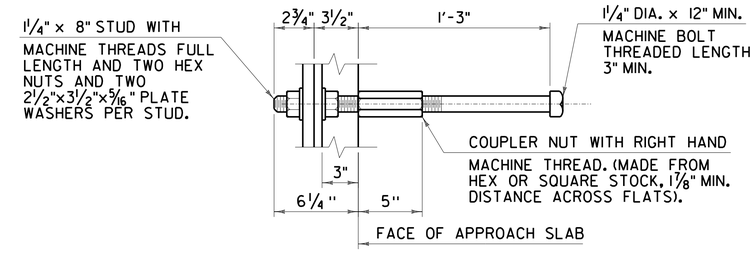
* - DIMENSION MEASURED ALONG ℄ CLOSURE POUR APPROACH SLAB 4.
1. FOR DETAILS AND SECTIONS, SEE BRIDGE RAIL DETAILS BRIDGE 2 NE.
2. PAY LIMIT STATIONS OF SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/STEEL TUBING) ARE SHOWN ON PLAN LAYOUT SHEET 2.

PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BF 0248(4)
FILE NAME: z13c066rlgdtll.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
BRIDGE RAIL PLAN & ELEV - BRIDGE 2 NE	SHEET 68 OF 93

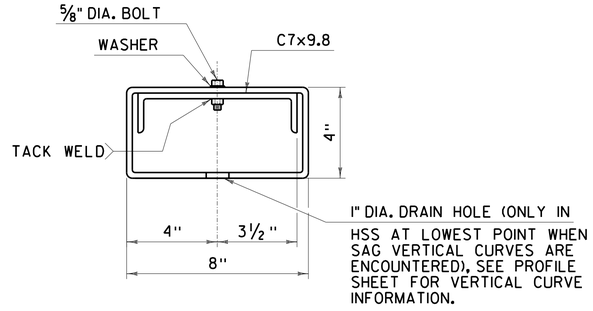
CHA



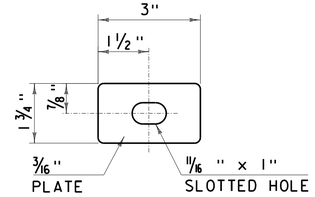
SECTION B–B
(TYPE I POST)
NOT TO SCALE



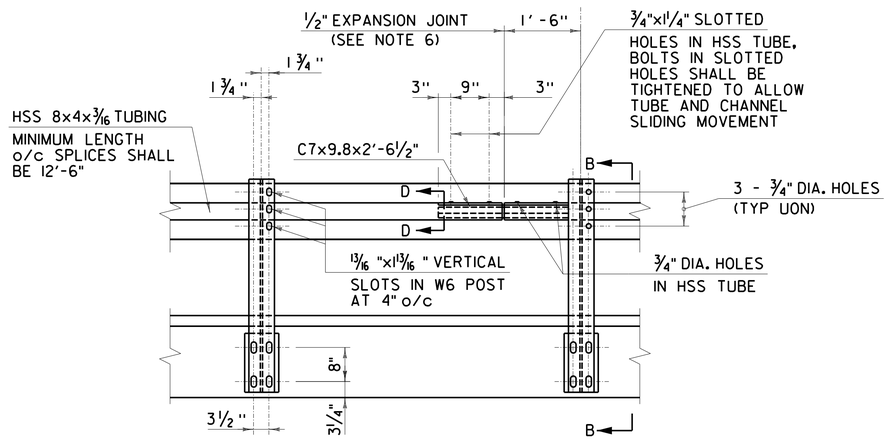
TYPE A ANCHOR DETAIL



SECTION D–D



SPECIAL WASHER
PLACE WASHER BETWEEN BOLT HEAD AND FACE OF RAIL.
NOT TO SCALE



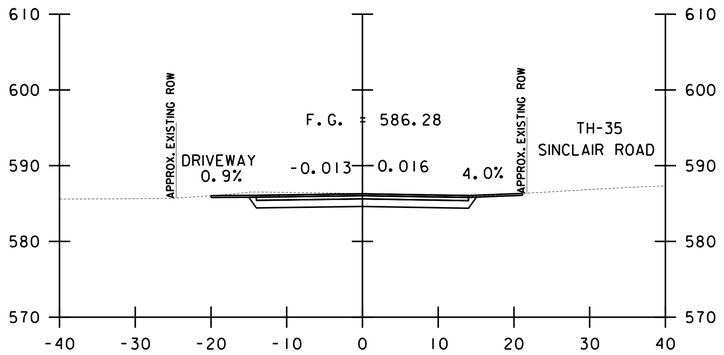
TYPICAL RAILING ELEVATION
(TYPE I POSTS SHOWN)

NOTES:

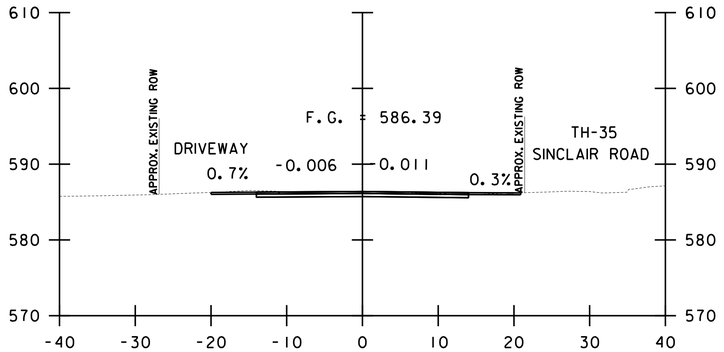
1. ALL WORK AND MATERIALS SHALL CONFORM TO SECTION 525.
2. PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
3. ALL POSTS SHALL BE SET NORMAL TO GRADE.
4. SPLICES FOR THE STEEL BEAM GUARDRAIL SHALL LAP IN THE DIRECTION OF TRAFFIC.
5. SEE STANDARD DRAWING G-1 FOR DETAILS OF DELINEATORS. A DELINEATOR SHALL BE INSTALLED AT 30 FOOT SPACING OR THE NEAREST POST. WHITE IS TO BE INSTALLED ON THE DRIVER'S RIGHT.
6. THE 1/2" EXPANSION JOINT SHOWN IN THE RAILING ELEVATION IS DESIGNED FOR BRIDGE LENGTHS UP TO 80 FEET.
7. THE MINIMUM DISTANCE FROM THE LAST POST TO THE END OF SLAB IS 1'-6".
8. FERRULES SHALL BE 12L14 COLD DRAWN CARBON STEEL.
9. HOLES IN RAIL FOR RAIL TUBE ATTACHMENT MAY BE FIELD DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
10. THIS RAILING MEETS THE REQUIREMENTS FOR A TL-2 SERVICE LEVEL.
11. REFER TO STANDARD DRAWINGS G-1A AND G-1D FOR ADDITIONAL DETAILS.
12. THE TERMINAL CONNECTOR SHALL BE INCLUDED IN THE BID PRICE FOR SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED HSBD/FASCIA MOUNTED/STEEL TUBING). THE CONNECTION PLATE SHALL BE INCLUDED IN THE BID PRICE FOR BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION.
13. BRIDGE RAIL DETAILS ON THIS SHEET AND ON BRIDGE RAIL PLAN AND ELEVATION - BRIDGE 2 NE ARE MODIFIED FROM STD S-367A. FOR ADDITIONAL INFORMATION NOT SHOWN IN THESE PLANS, SEE STD S-367A.

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066rlgdt12.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: L. ROBERTS
DESIGNED BY: J. NAJDOWSKI	CHECKED BY: R. HENDERSON
BRIDGE RAIL DETAILS - BRIDGE 2 NE	SHEET 69 OF 93

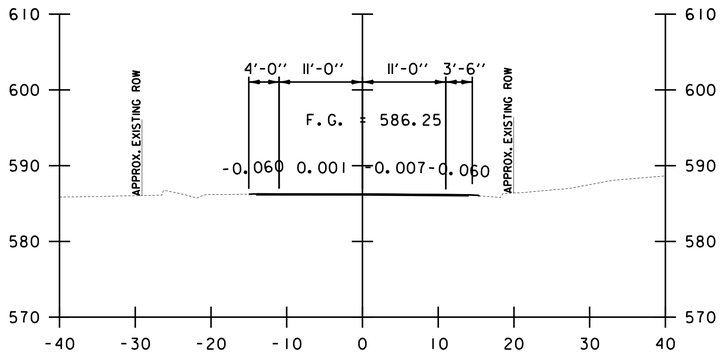
CHA



12+75

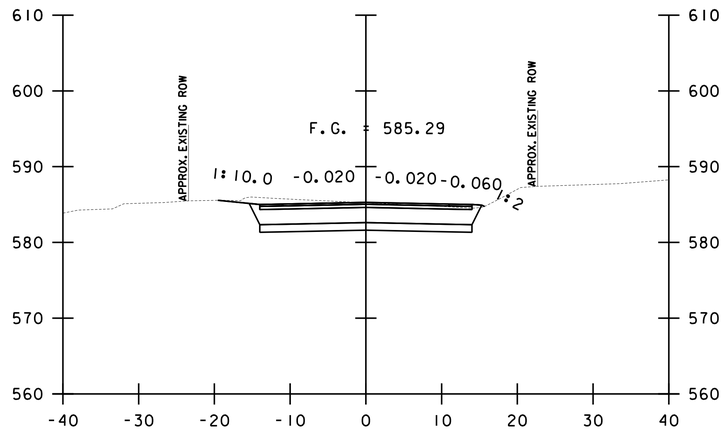


12+50

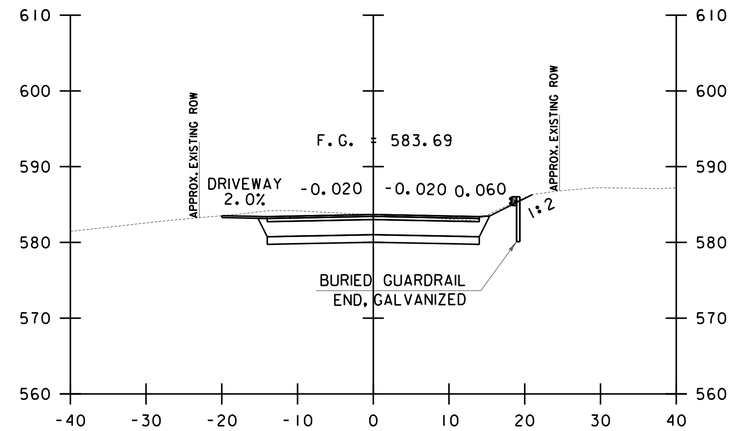


12+25

BEGIN APPROACH STA 12+25.00



13+25



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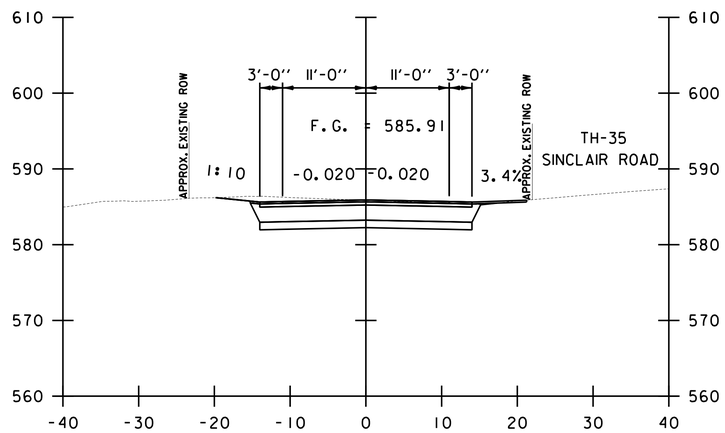
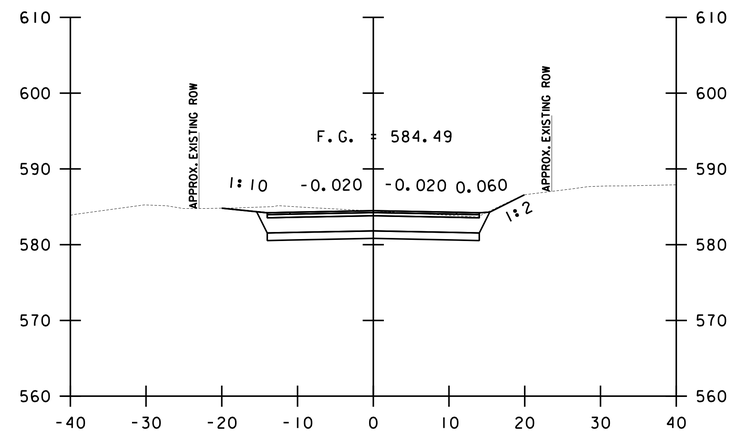


13+00

BEGIN PROJECT STA 13+00.00



13+50

STA. 12+25 TO STA. 13+75

0 10 20
SCALE IN FEET

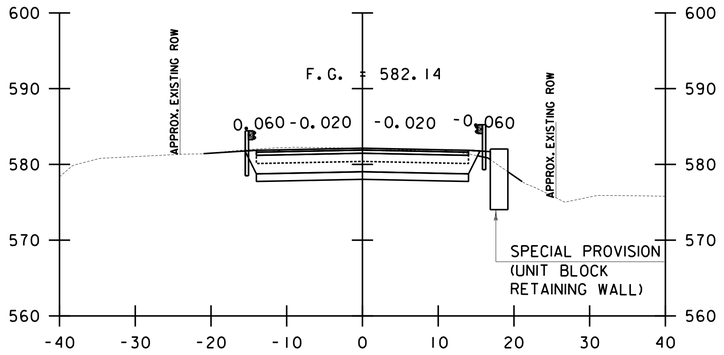
CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

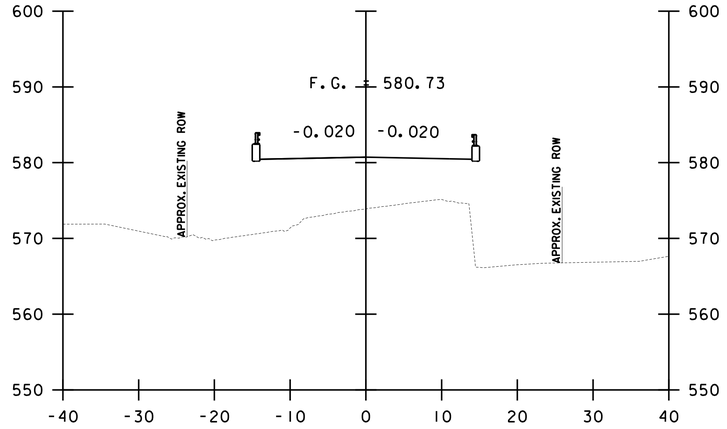
FILE NAME: z13c066xsc.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
MAINLINE CROSS SECTIONS SHEET 1

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 70 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066xsc.dgn
DATE/TIME = 5/4/2016
USER = 5237

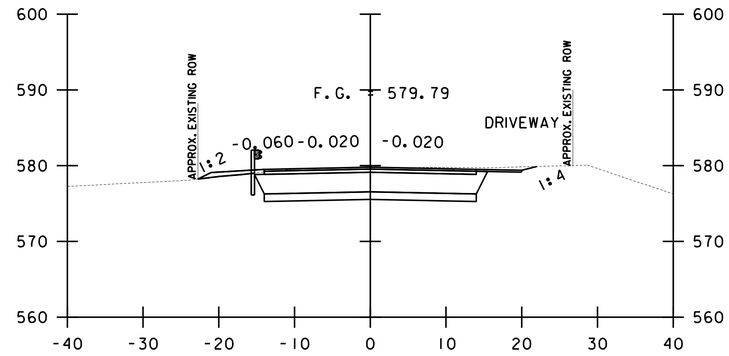


14+25

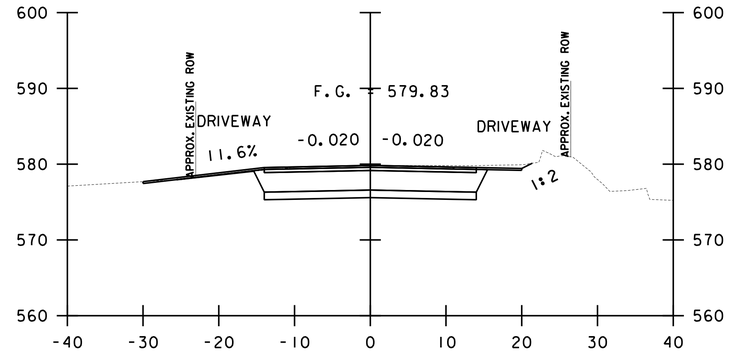


14+75

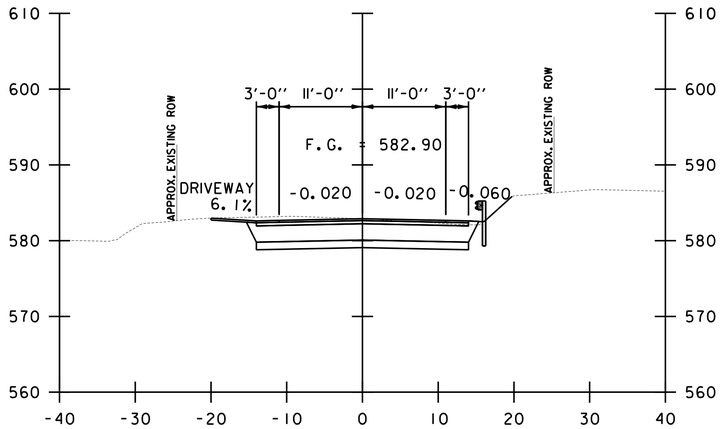
END BR 1 STA 14+77.13



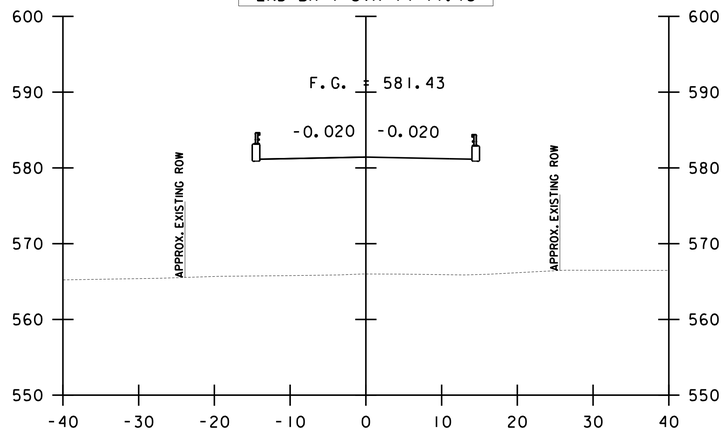
15+50



15+25

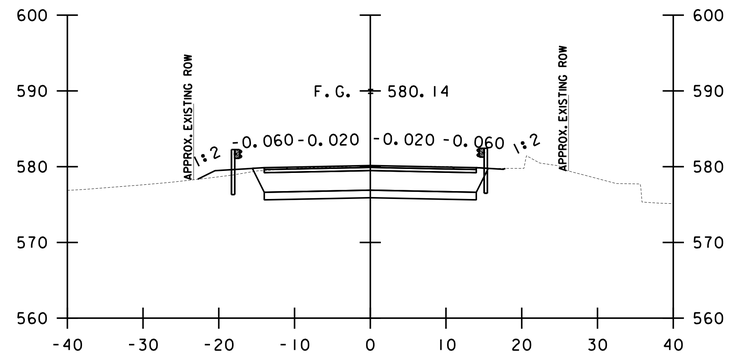


14+00



14+50

BEGIN BR 1 STA 14+38.63



15+00

STA. 14+00 TO STA. 15+50

0 10 20
SCALE IN FEET

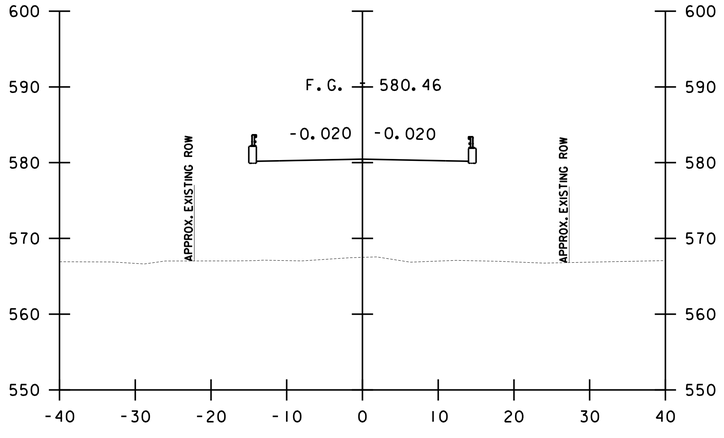
CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

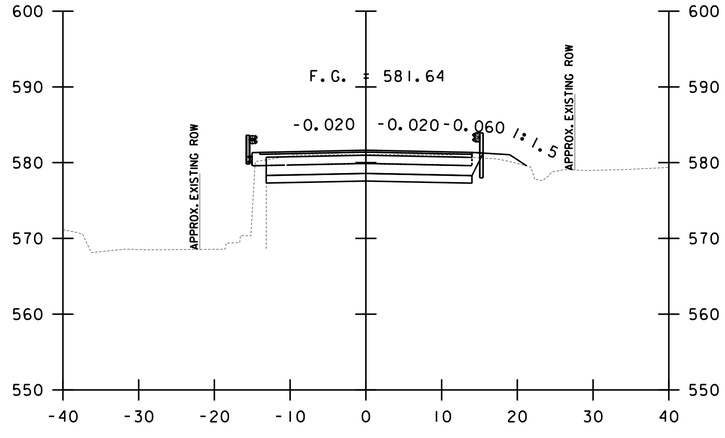
FILE NAME: z13c066xsc.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
MAINLINE CROSS SECTIONS SHEET 2

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 71 OF 93

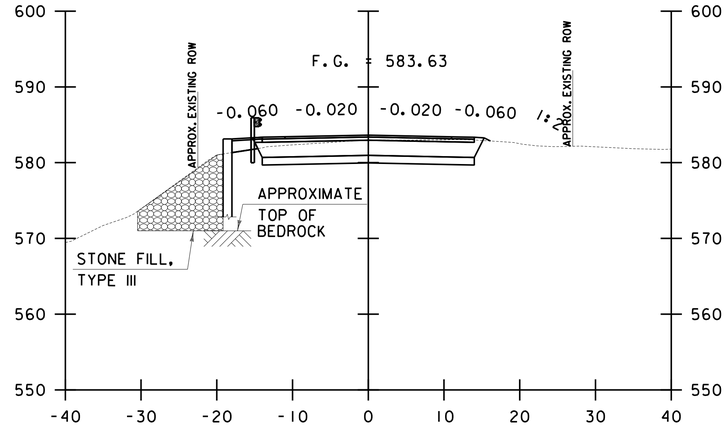
FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066xsc.dgn
DATE/TIME = 5/4/2016
USER = 5237



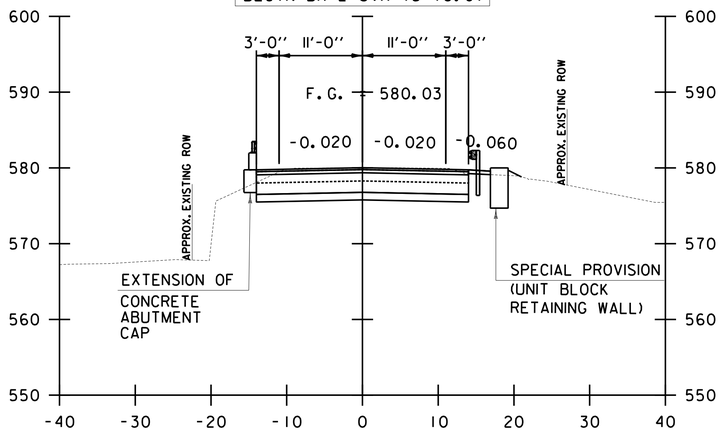
15+75



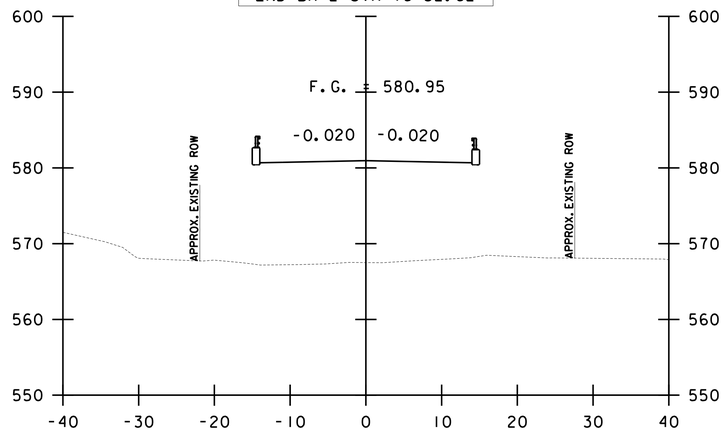
16+25



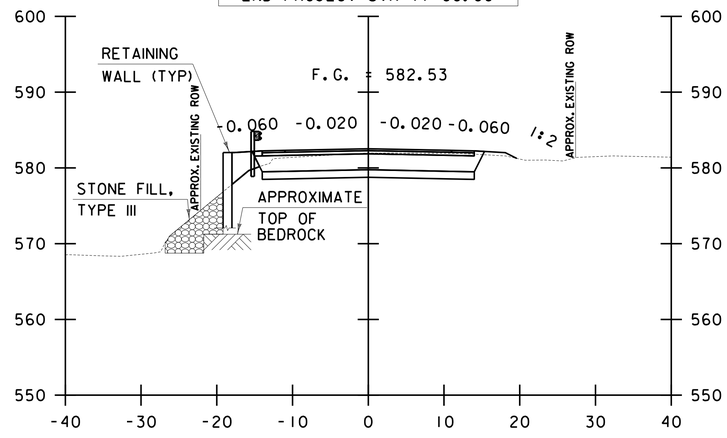
16+75



16+00



16+50



17+00

STA. 15+75 TO STA. 17+00

0 10 20
SCALE IN FEET

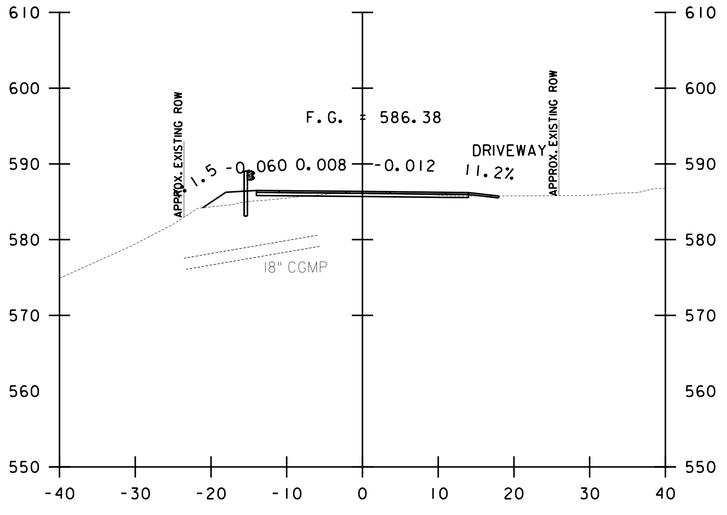
CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

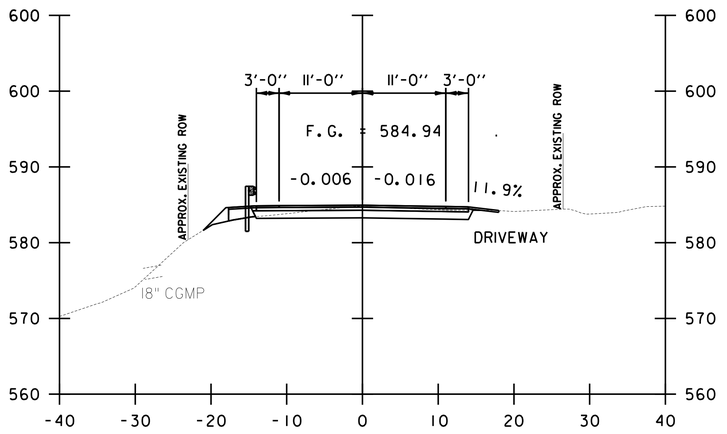
FILE NAME: zl3c066xsc.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
MAINLINE CROSS SECTIONS SHEET 3

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 72 OF 93

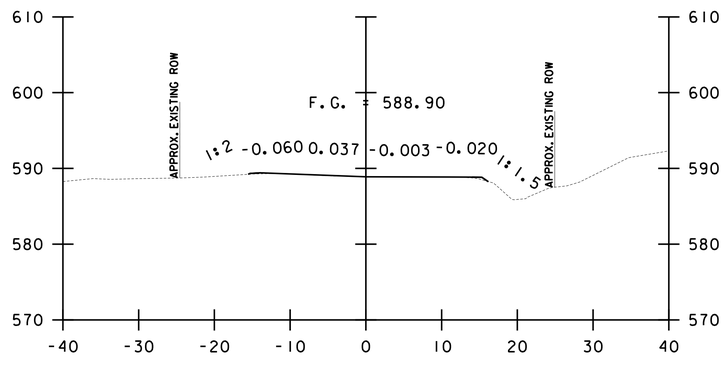
FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066xsc.dgn
DATE/TIME = 5/4/2016
USER = 5237



17+50

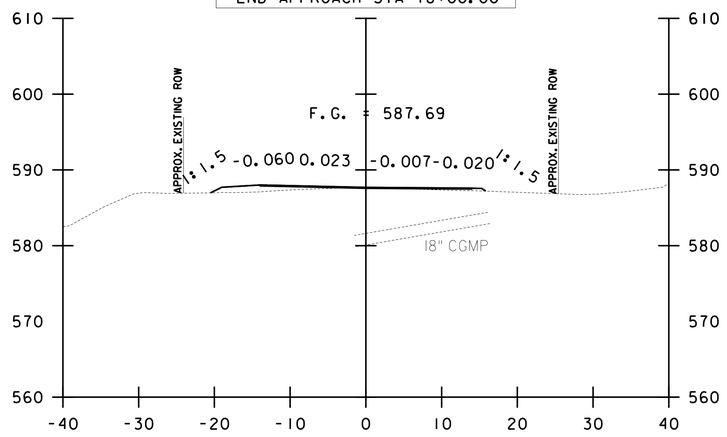


17+25



18+00

END APPROACH STA 18+00.00



17+75

STA. 17+25 TO STA. 18+00

0 10 20
SCALE IN FEET

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066xsc.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
MAINLINE CROSS SECTIONS SHEET 4	SHEET 73 OF 93

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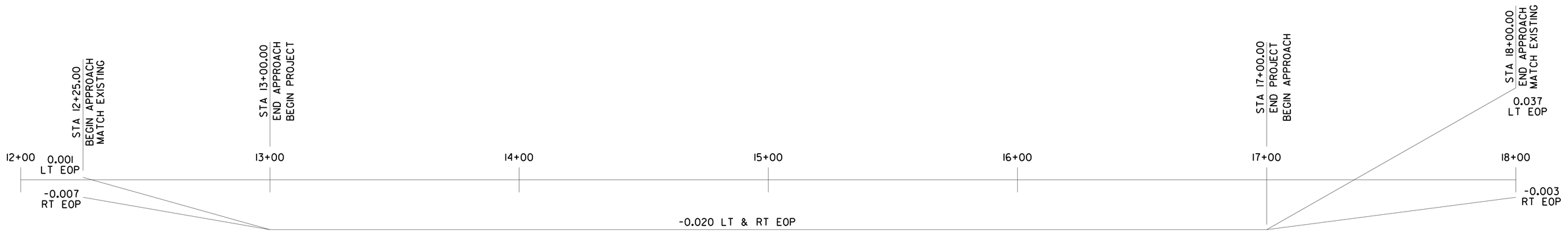
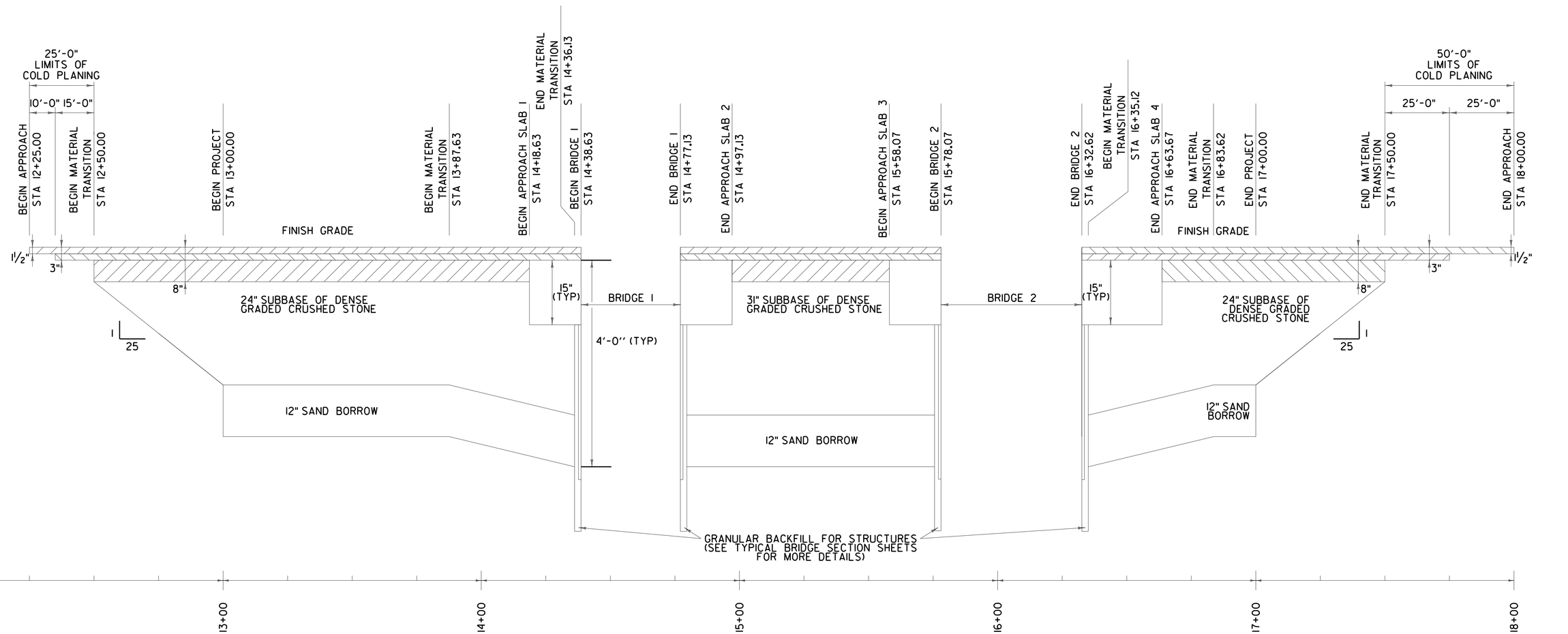
USER = 5237



VT ROUTE 100C BANKING DIAGRAM

N.T.S.



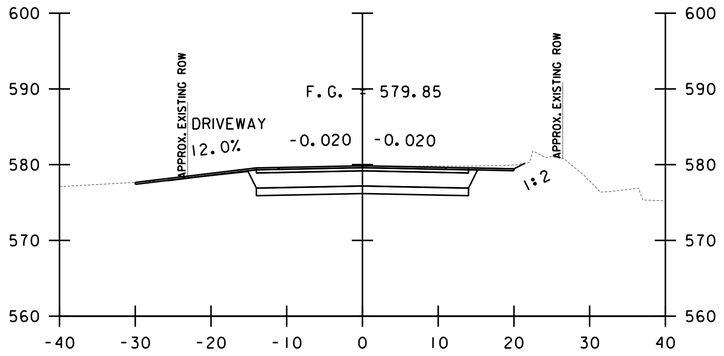
VT ROUTE 100C MATERIAL TRANSITION DIAGRAM

N.T.S.

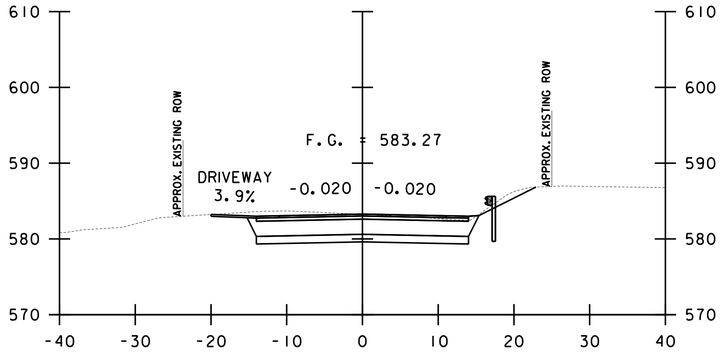
PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066mts.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
MATERIAL TRANSITION AND BANKING DIAGRAM	SHEET 74 OF 93

CHA

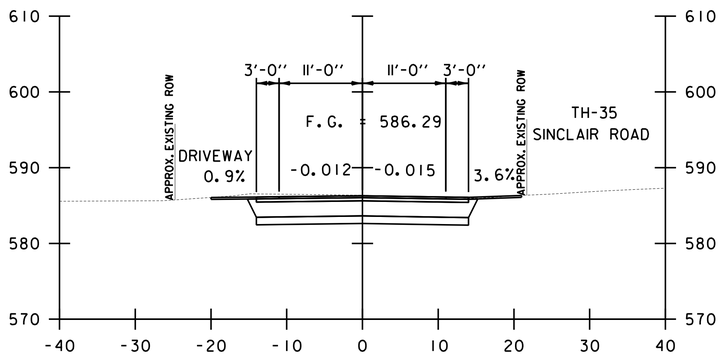
FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066mts.dgn
DATE/TIME = 5/4/2016
USER = 5237



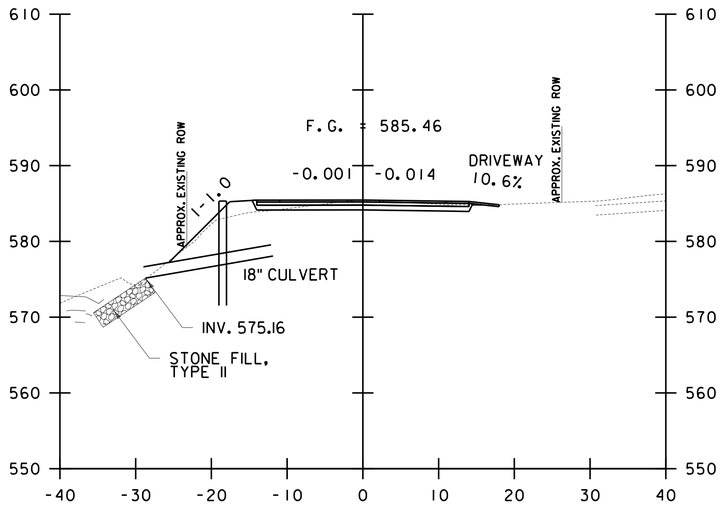
15+22



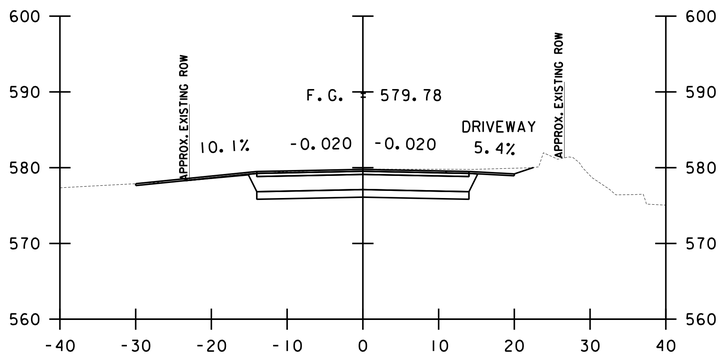
13+88



12+73



17+34



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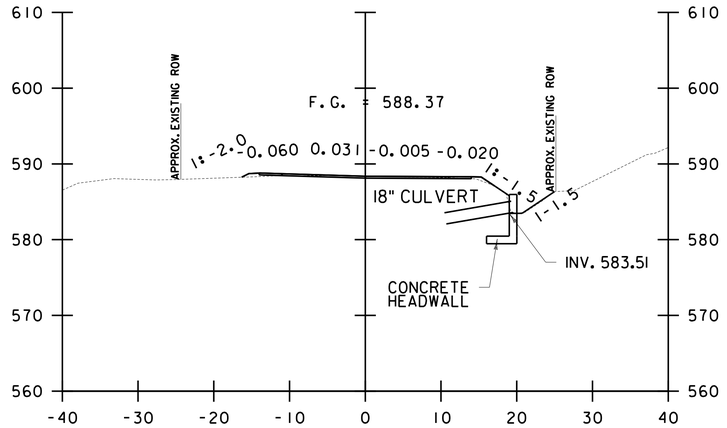

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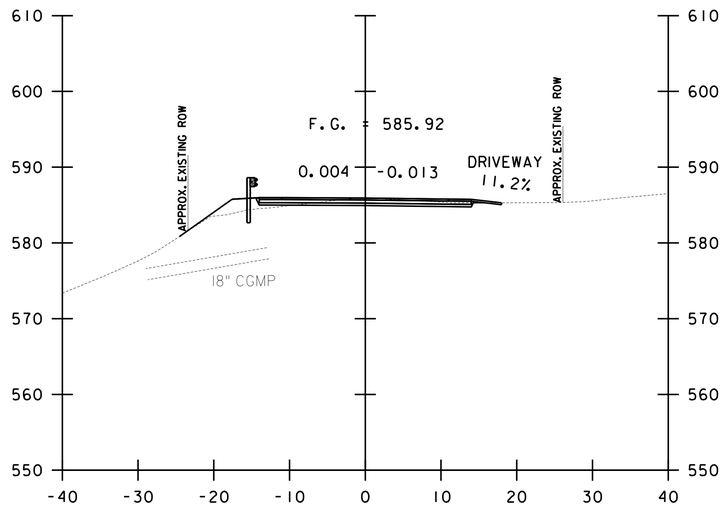

17+42

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DATE/TIME = 5/4/2016
USER = 5237

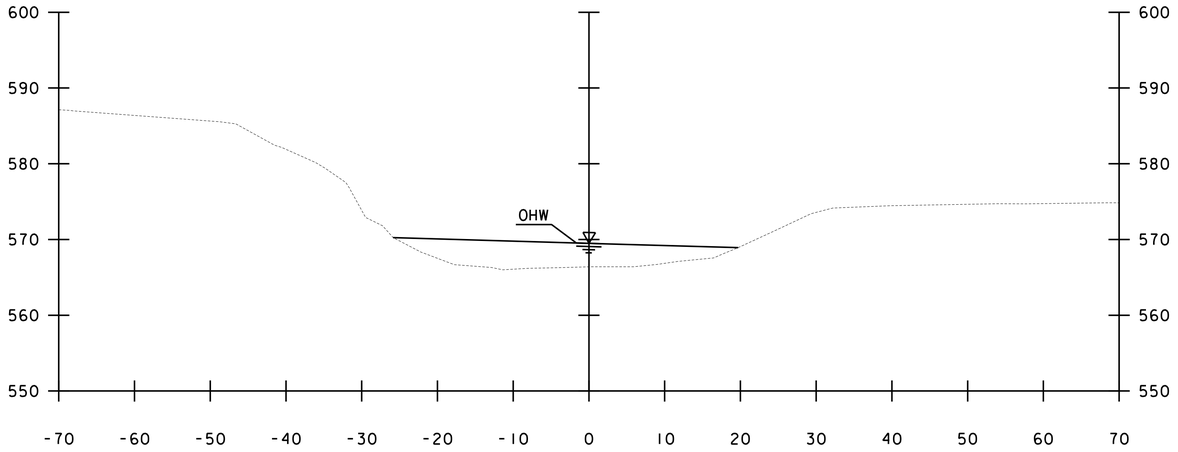
0 10 20
SCALE IN FEET

CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066xsc.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
DRIVEWAY & CULVERT CROSS SECTIONS SHEET

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 75 OF 93



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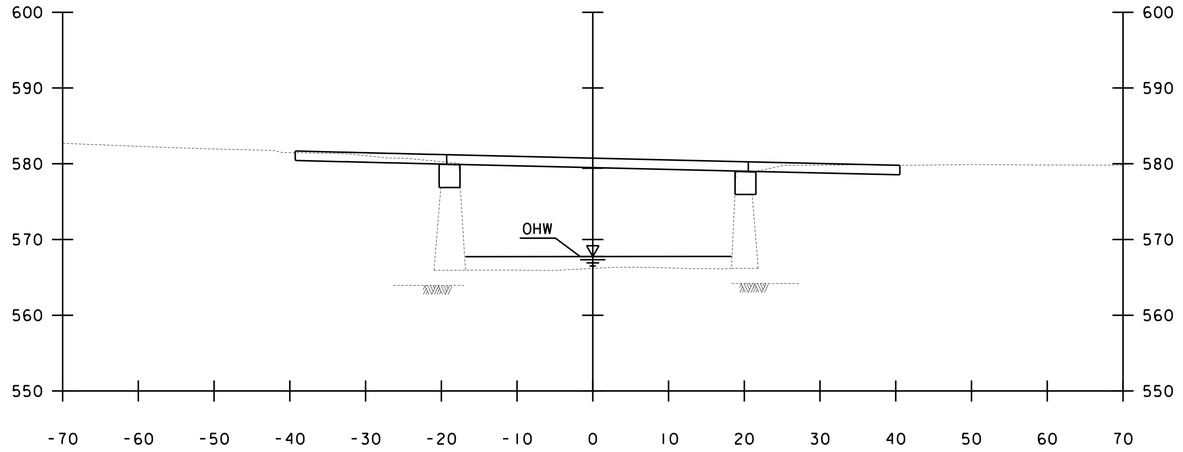

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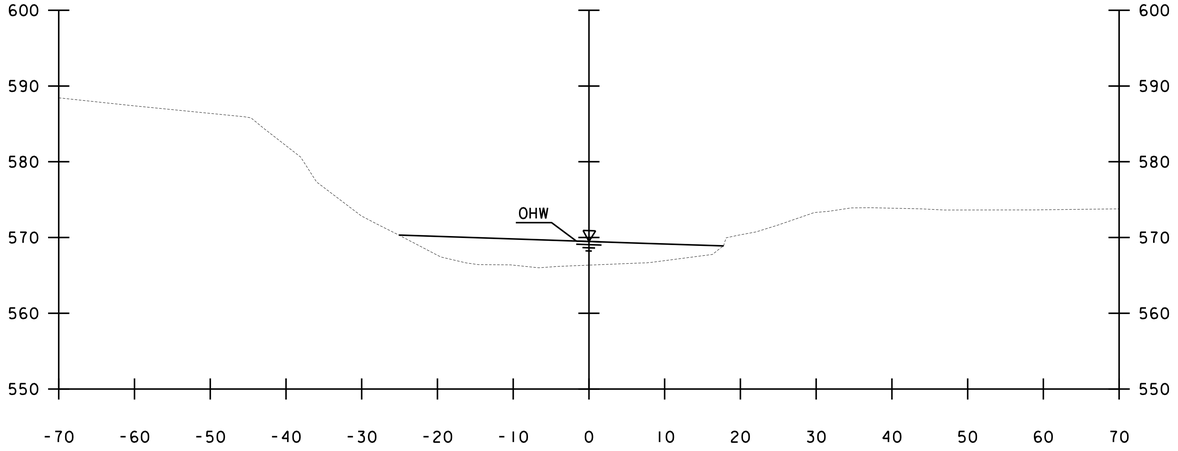

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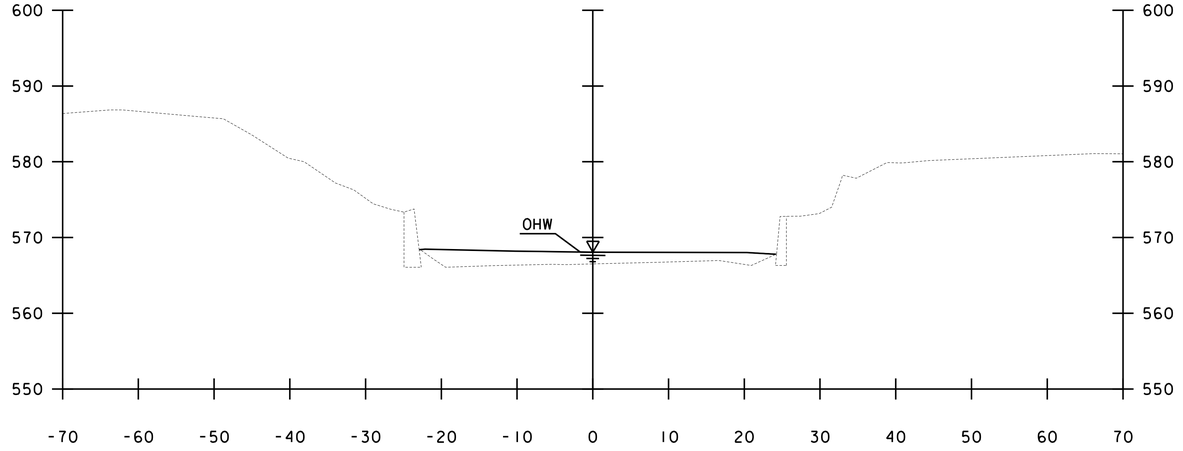

40+50

STA. 40+00 TO STA. 40+60

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

0 10 20
SCALE IN FEET

CHA

FILE NAME: zl3c066xsc.dgn | PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER | DRAWN BY: P. ROTH
DESIGNED BY: J. PARKER | CHECKED BY: D. GOZALKOWSKI
LEFT BRANCH GIHON RIVER SECTIONS SHEET 1 | SHEET 76 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066xsc.dgn
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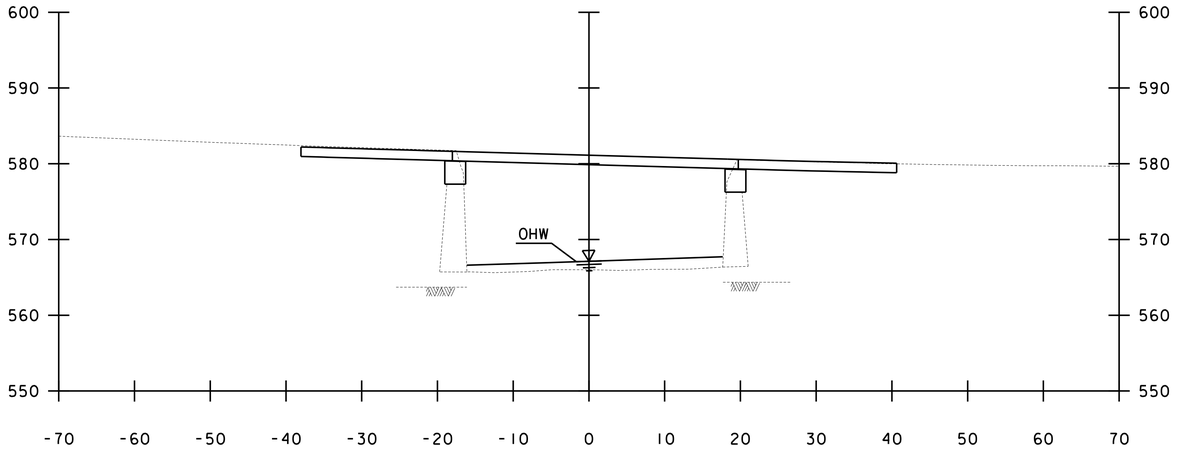

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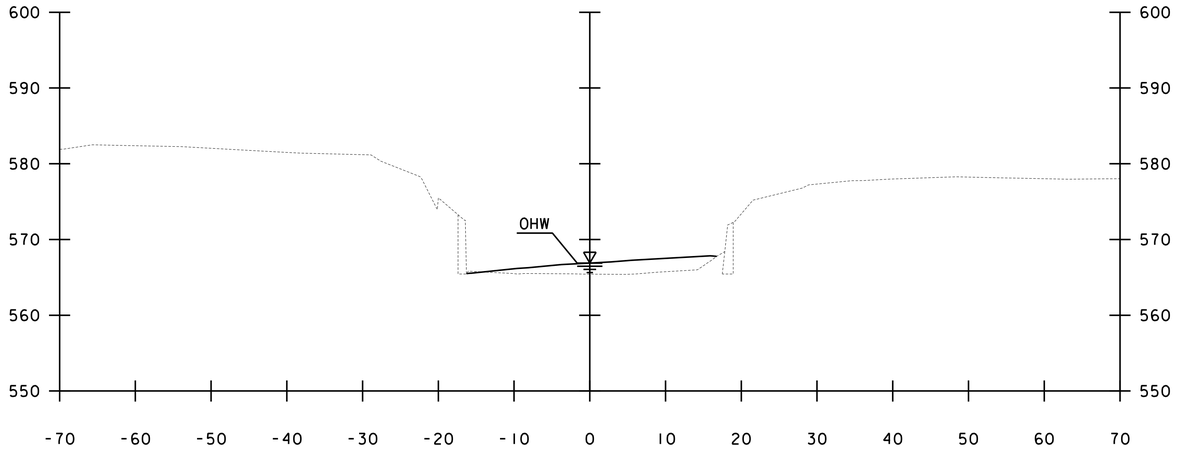

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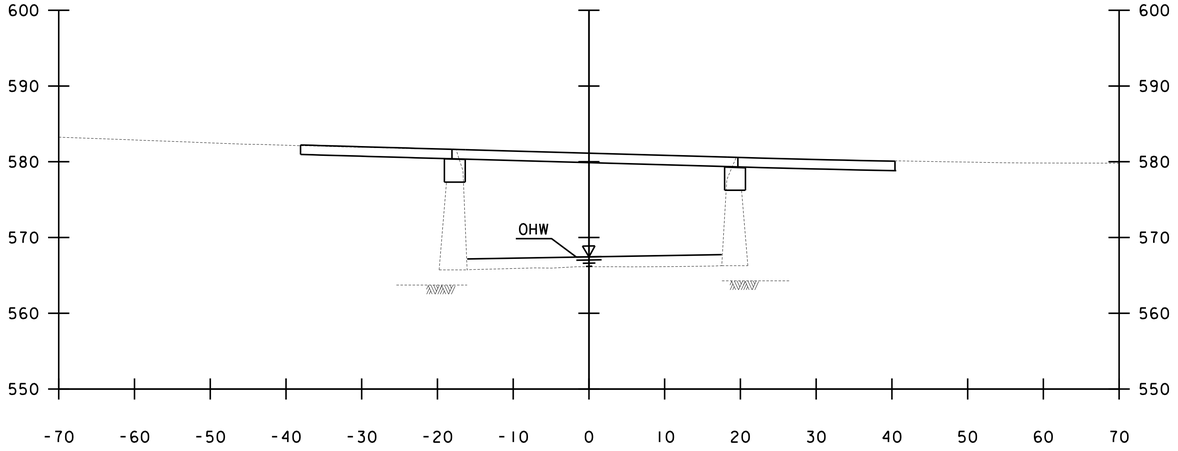

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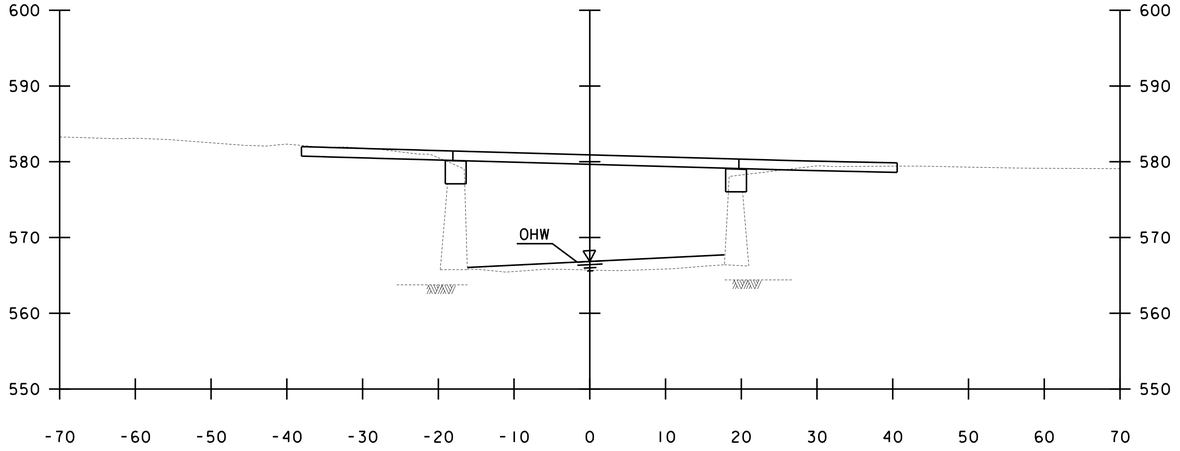


40+90

STA. 40+70 TO STA. 41+00

0 10 20
SCALE IN FEET

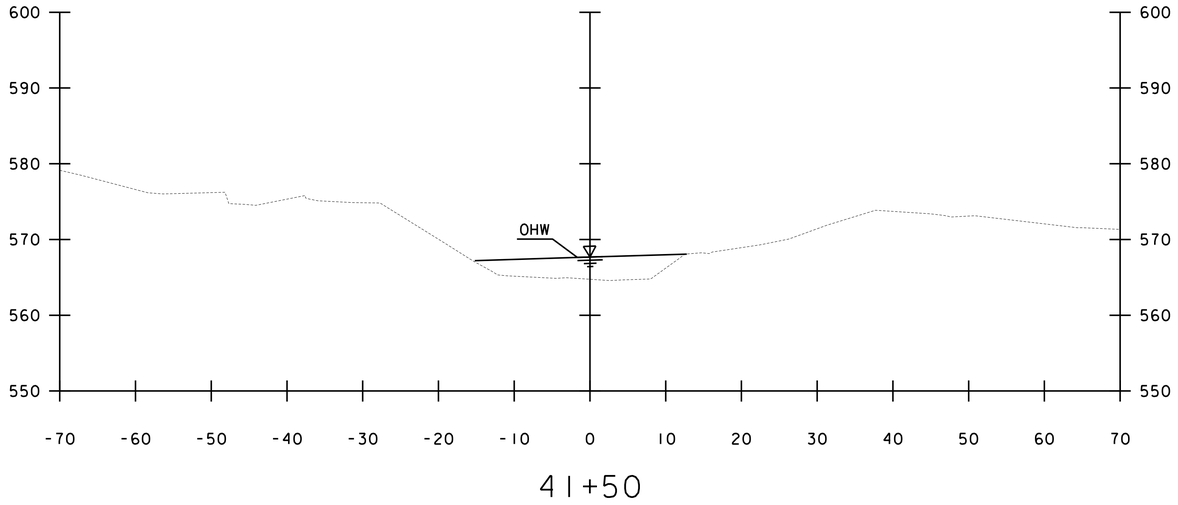
CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066xsc.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. PARKER
LEFT BRANCH GIHON RIVER SECTIONS SHEET 2

PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: D. GOZALKOWSKI
SHEET 77 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066xsc.dgn
DATE/TIME = 5/4/2016
USER = 5237



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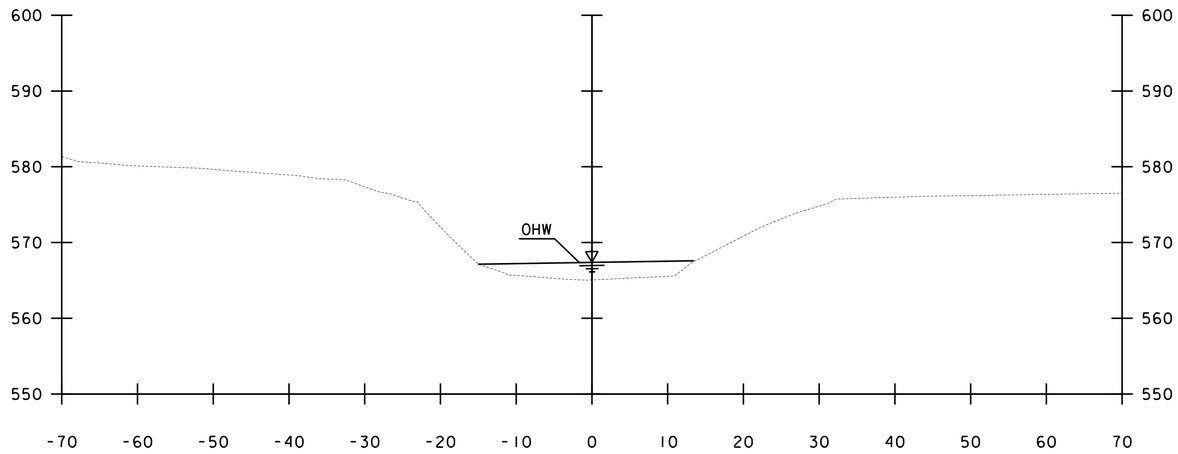

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0 10 20

SCALE IN FEET

STA. 41+25 TO STA. 41+50

PROJECT NAME: JOHNSON

PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066xsc.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. PARKER
LEFT BRANCH GIHON RIVER SECTIONS SHEET 3

PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: D. GOZALKOWSKI
SHEET 78 OF 93

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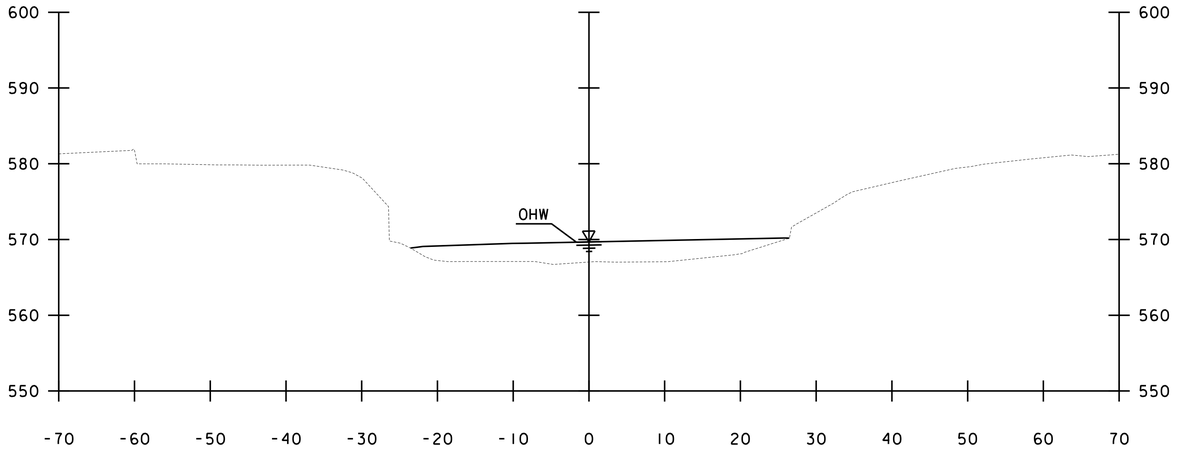

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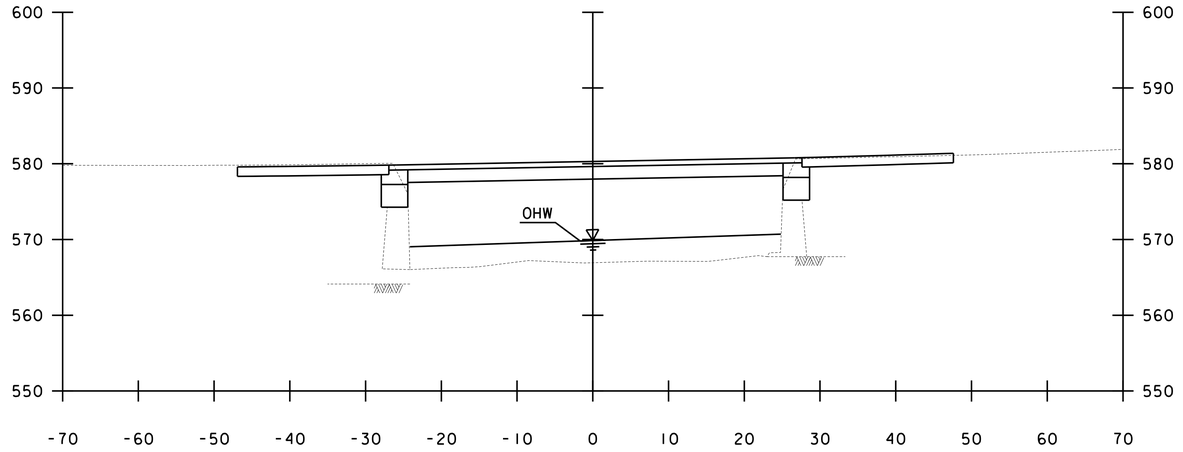

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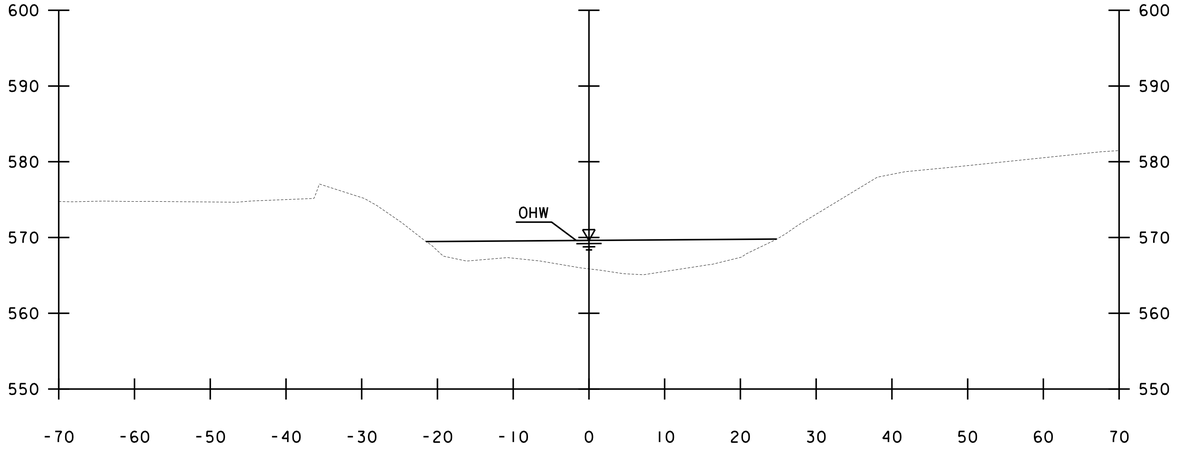
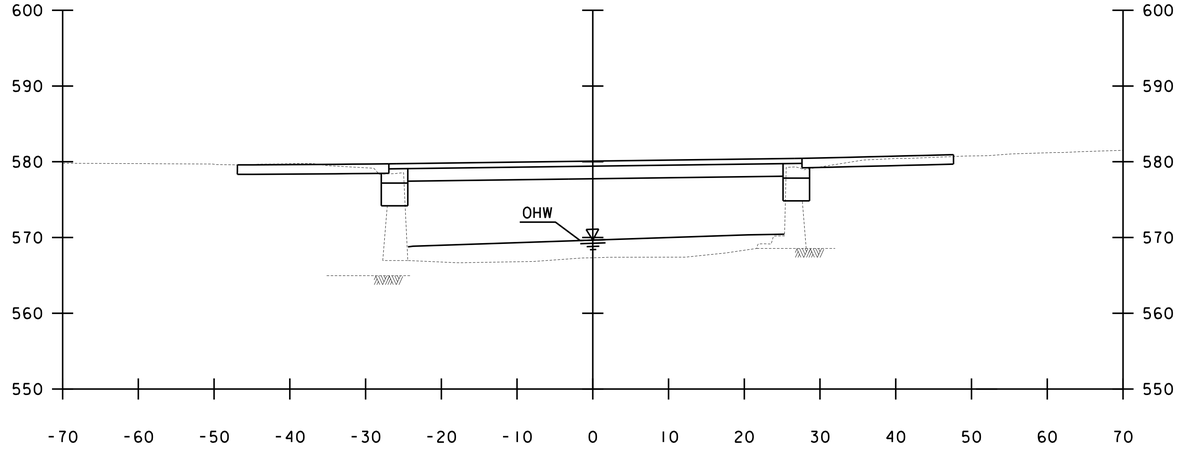


50+00



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STA. 50+00 TO STA. 50+45

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

0 10 20
SCALE IN FEET

CHA

FILE NAME: zl3c066xsc.dgn | PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER | DRAWN BY: P. ROTH
DESIGNED BY: J. PARKER | CHECKED BY: D. GOZALKOWSKI
RIGHT BRANCH GIHON RIVER SECTIONS SHEET 1 | SHEET 79 OF 93

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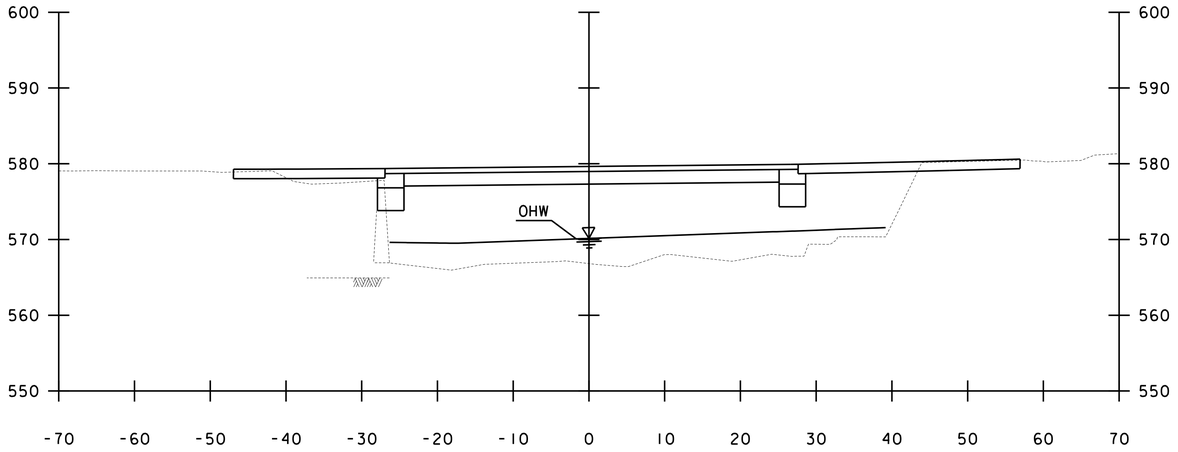

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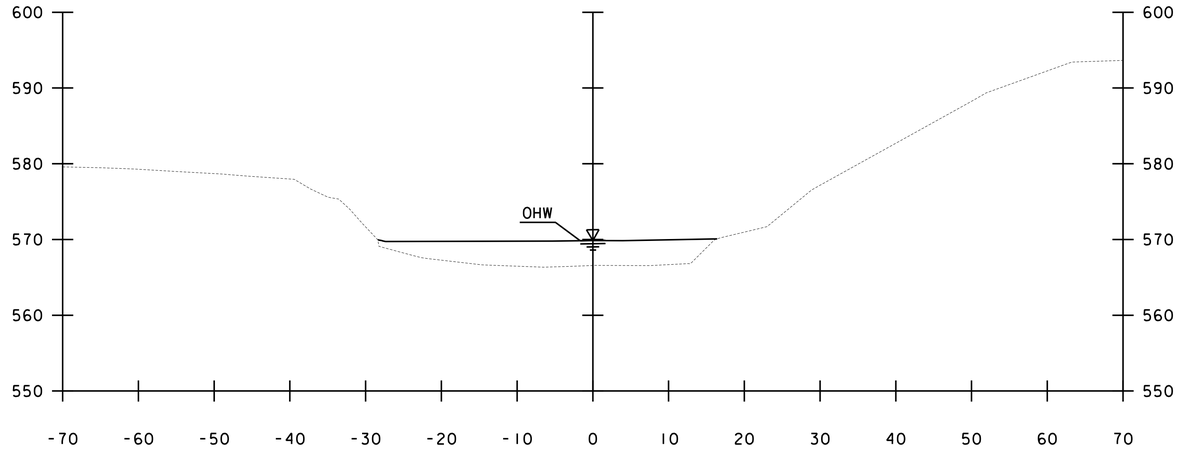

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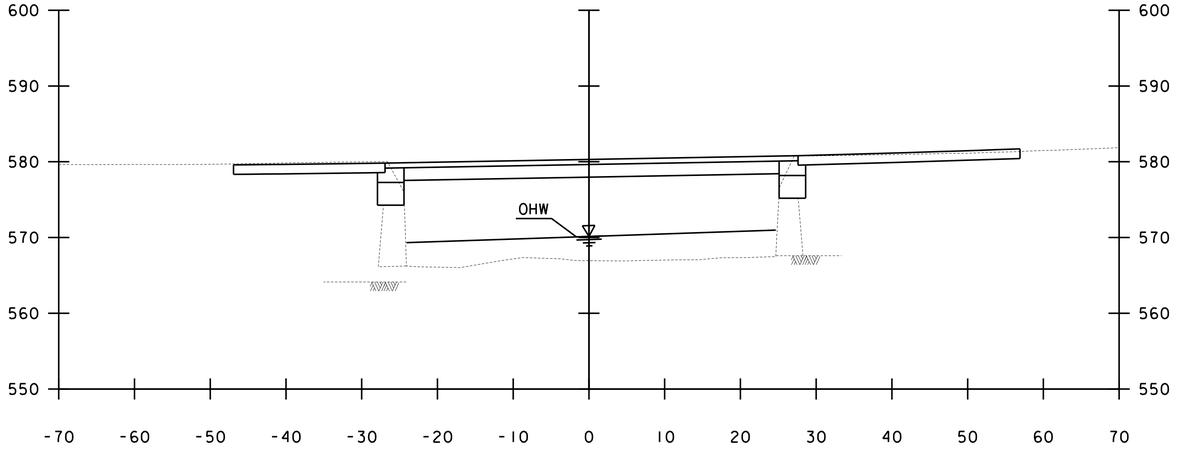

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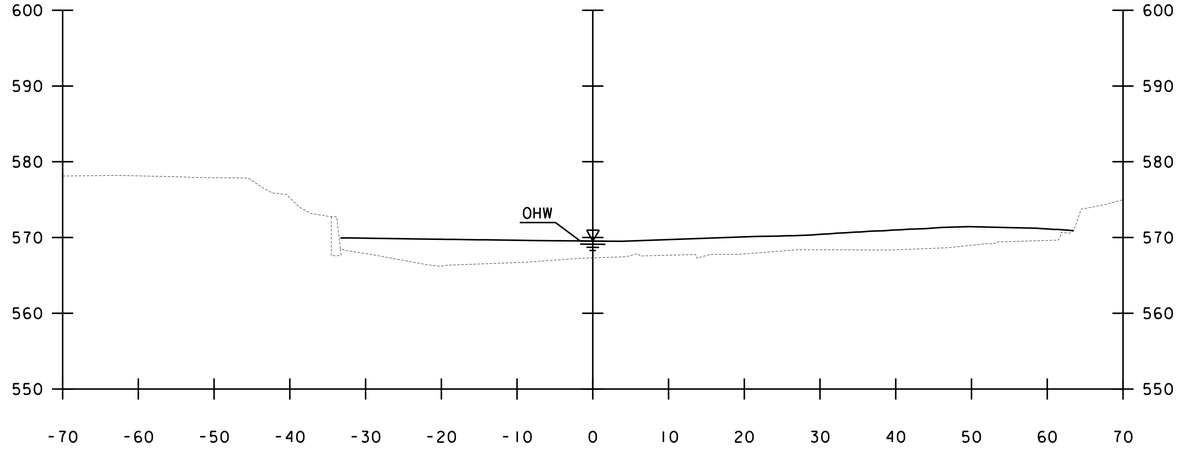

50+75

STA. 50+55 TO STA. 51+00

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066xsc.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: J. PARKER
RIGHT BRANCH GIHON RIVER SECTIONS SHEET 2

PLOT DATE: 5/4/2016
DRAWN BY: P. ROTH
CHECKED BY: D. GOZALKOWSKI
SHEET 80 OF 93

0 10 20
SCALE IN FEET

CHA

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066xsc.dgn
DATE/TIME = 5/4/2016
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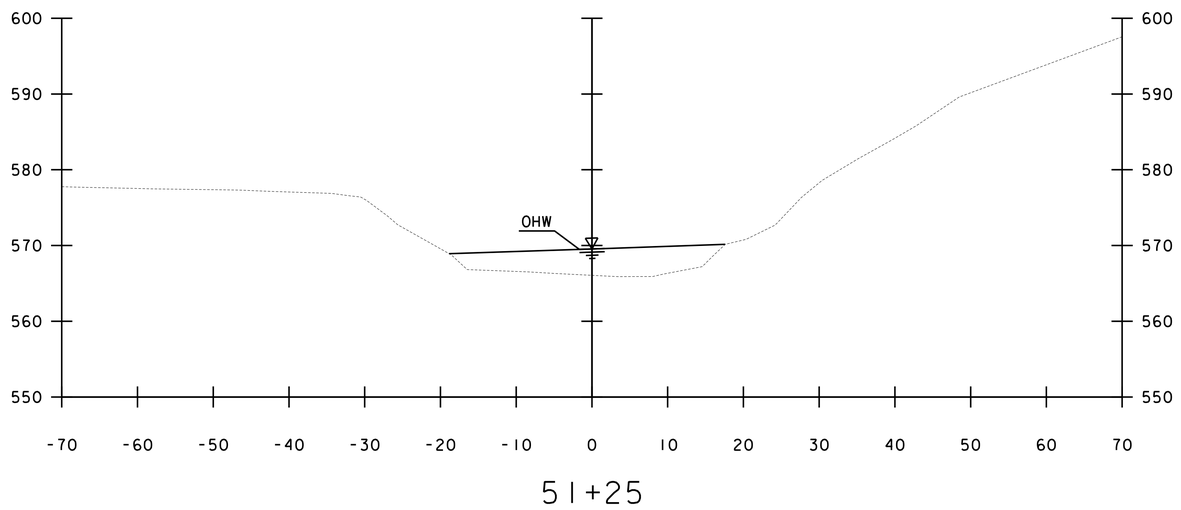


51+25

0 10 20

SCALE IN FEET

STA. 51+25

PROJECT NAME: JOHNSON

PROJECT NUMBER: BF 0248(4)

FILE NAME: zl3c066xsc.dgn PLOT DATE: 5/4/2016

PROJECT LEADER: W. PELLETIER DRAWN BY: P. ROTH

DESIGNED BY: J. PARKER CHECKED BY: D. GOZALKOWSKI

RIGHT BRANCH GIHON RIVER SECTIONS SHEET 3SHEET 81 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066xsc.dgn
DATE/TIME = 5/4/2016
USER = 5237

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

BRIDGE 1 AND BRIDGE 2 ARE LOCATED ALONG ON VT ROUTE 100C OVER THE LEFT BRANCH AND RIGHT BRANCH OF THE GIHON RIVER, RESPECTIVELY. THE PROJECT CONSISTS OF REMOVING THE EXISTING DECK AND SUPERSTRUCTURE OF BOTH BRIDGES AND REPLACING THEM WITH A NEW DECK AND SUPERSTRUCTURE USING ACCELERATED BRIDGE CONSTRUCTION METHODS. DURING CONSTRUCTION TRAFFIC WILL BE MAINTAINED ON AN OFF-SITE DETOUR.

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 0.37 ACRE.

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAHY OF THE PROJECT SITE IS HILLY WITH STEEP SLOPES ADJACENT TO THE GIHON RIVER BRANCHES. THE PROJECT AREA CONSISTS OF WELL ESTABLISHED VEGETATION WITH A MIXTURE OF TREES, SHRUBS, GRASS AND LAWN AREAS. VT ROUTE 100C, SINCLAIR ROAD (TH-35), AND FIVE DRIVEWAYS ARE WITHIN THE PROJECT LIMITS. THERE ARE SEVEN RESIDENCES ALONG VT ROUTE 100C WITHIN THE LIMITS OF THE PROJECT. ONE RESIDENCE IS LOCATED IN BETWEEN THE TWO BRIDGES.

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

THERE ARE TWO WATER SOURCES ON THE PROJECT SITE; GIHON RIVER AND BELL BROOK. THE VANR BANK FULL WIDTH (BFW) EQUATION ESTIMATES THE BFW OF THE GIHON RIVER TO BE APPROXIMATELY 78 FEET. THE STREAMBED CONSISTS OF GRAVEL AND COBBLES WITH SOME BOULDERS IN THE STREAM CHANNEL AND ALONG BOTH BANKS BASED ON FIELD AND PHOTOGRAPHIC OBSERVATIONS OF THE STUDY AREA. THE OVERBANK CONDITIONS IMMEDIATELY ADJACENT TO THE STREAM WERE TYPICALLY ARMORED WITH LARGE ROCKS, DENSE BRUSH, AND SMALL TREES. THE OVERBANK CONDITIONS IN THE ISLAND BETWEEN THE RIGHT AND LEFT BRANCHES OF THE GIHON RIVER ARE LESS VEGETATED WITH BRUSH ALONG THE STREAM BANKS AND LAWN AND GRAVEL AREAS FURTHER UPLAND. THREE CULVERTS AND ONE DROP INLET ARE LOCATED WITHIN THE LIMITS.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF FOREST, SHRUBBERY AND LAWN AREAS. 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 LAMOILLE, VERMONT. SOILS ON THE PROJECT SITE ARE AS LISTED:
ADAMS LOAMY FINE SAND, 2-8% SLOPES, "K FACTOR" = .20
POTSDAM SILT LOAM, 15-25% SLOPES, "K FACTOR" = .37
SALMON VARIANT, 8-15%, "K FACTOR" = .32
SALMON VERY FINE SANDY LOAM, 25-50% SLOPES, "K FACTOR" = .32
THE SOIL IS CONSIDERED MODERATELY ERODIBLE.

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

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: YES, BOTH BRIDGES ARE HISTORICAL ALONG WITH SOME PROPERTY NORTHWEST OF THE START OF THE PROJECT.THERE ARE ARCHEOLOGICAL AREAS ON THE SOUTHEASTERN SIDE OF THE BRIDGE WHICH ARE TO BE AVOIDED DURING CONSTRUCTION.
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NORTHERN LONG-EARED BAT
WATER RESOURCE: GIHON RIVER, BELL 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.

BARRIER FENCE SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. DUE TO SITE CONSTRAINTS, BARRIER FENCE SHALL BE PLACED AS SHOWN IN THE EPSC PLANS.

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.

DUE TO THE LIMITED PROJECT WORK SITE, FORMAL STABILIZED CONSTRUCTION ENTRANCES WILL NOT BE REQUIRED.

1.4.4 INSTALL SEDIMENT BARRIERS

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

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN. DUE TO THE SITE CONSTRAINTS, SILT FENCE MAY NEED TO BE PLACED AS CLOSE AS TWO FEET TO THE TOE OF SLOPE. FILTER FABRIC DROP INLET PROTECTION SHALL 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.

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

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

NO CHANNELIZED FLOW CONDITIONS ARE PROPOSED IN THE DESIGN AND THEREFORE NO STONE CHECK DAMS ARE SHOWN IN THE EPSC PLANS.

1.4.7 CONSTRUCT PERMANENT CONTROLS

NO PERMANENT STORMWATER TREATMENT DEVICES ARE PROPOSED.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS.

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.

1.4.11 DE-WATERING ACTIVITIES

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

TREATMENT OF DEWATERING COFFERDAM IS NOT ANTICIPATED.

1.4.12 INSPECT YOUR SITE

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

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES.

1.5 SEQUENCE AND STAGING

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

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

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

1.5.3 UPDATES

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066epscgn.dgn
DATE/TIME = 5/4/2016
USER = 5237

PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BF 0248(4)

FILE NAME: zl3c066epscgn.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
EPSC PLAN NARRATIVE	SHEET 82 OF 93

CHA

SOIL TYPE: WATER

N

VT STATE PLANE GRID

ADAMS LOAMY FINE SAND
2%-8% SLOPES
NOT HIGHLY ERODIBLE
K = 0.17

HISTORIC

GRAVEL DRIVE

080

VANDERVEER, CHASE & APRIL

HISTORIC

GRAVEL DRIVE

MATCH LINE STA 13+50. SEE NEXT SHEET

GRAVEL DRIVE

18" CREEK FLOW

2' X 2' DI

I" PVC UNDERDRAIN

VT ROUTE 100C TO JOHNSON

TOWN OF JOHNSON SINCLAIR RD. TH-35

PAVED DRIVE

HISTORIC

HISTORIC

065

COMBS, WILLIAM G. & KRISTIANNA L.

060

PAVED DRIVE

THOMPSON, PHILIP W.; THOMPSON, MICHAEL J.

P L

HISTORIC

POTSDAM SILT LOAM
15%-25% SLOPES
HIGHLY ERODIBLE
K = 0.49

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

CHA

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: z13c066eroBdr_ex.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
EPSC EXISTING SITE PLAN SHEET 1	SHEET 83 OF 93

FILE NAME = V:\Projects\VNY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\z13c066eroBdr_ex.dgn
DATE/TIME = 5/4/2016
USER = 5237

SOIL TYPE: WATER

SALMON VERY FINE SANDY LOAM,
ERODED
25%-50% SLOPES
HIGHLY ERODIBLE
K = 0.49

N
VT STATE PLANE GRID

ADAMS LOAMY FINE SAND
2%-8% SLOPES
NOT HIGHLY ERODIBLE
K = 0.17

VANDERVEER, CHASE & APRIL

NADEAU, ALBERT M.

LEFT BRANCH OF GIHON RIVER

RIGHT BRANCH OF GIHON RIVER

ROMERO, ROBERT H. & CASEY - TRUSTEES

PEINERT, JOHN C. - TRUSTEE

BELL BROOK

PEINERT, JOHN C. - TRUSTEE

SUBLOT LINE

VT ROUTE 100C
TO HYDE PARK

MATCH LINE STA 13+50, SEE PREVIOUS SHEET

**THOMPSON, PHILIP W.;
THOMPSON, MICHAEL J.**

**COMBS, WILLIAM G. & KRISTIANNA L.;
THOMPSON, PHILIP W.;
THOMPSON, MICHAEL J.;
BURTON, JENNIFER;
SIEGEL, MARA H.**

**ROMERO, ROBERT H.
& CASEY - TRUSTEES**

MARSH, GREGORY K.

SALMON VARIANT
SALMON VERY FINE SANDY LOAM,
ROCKY
8%-15% SLOPES
HIGHLY ERODIBLE
K = 0.49

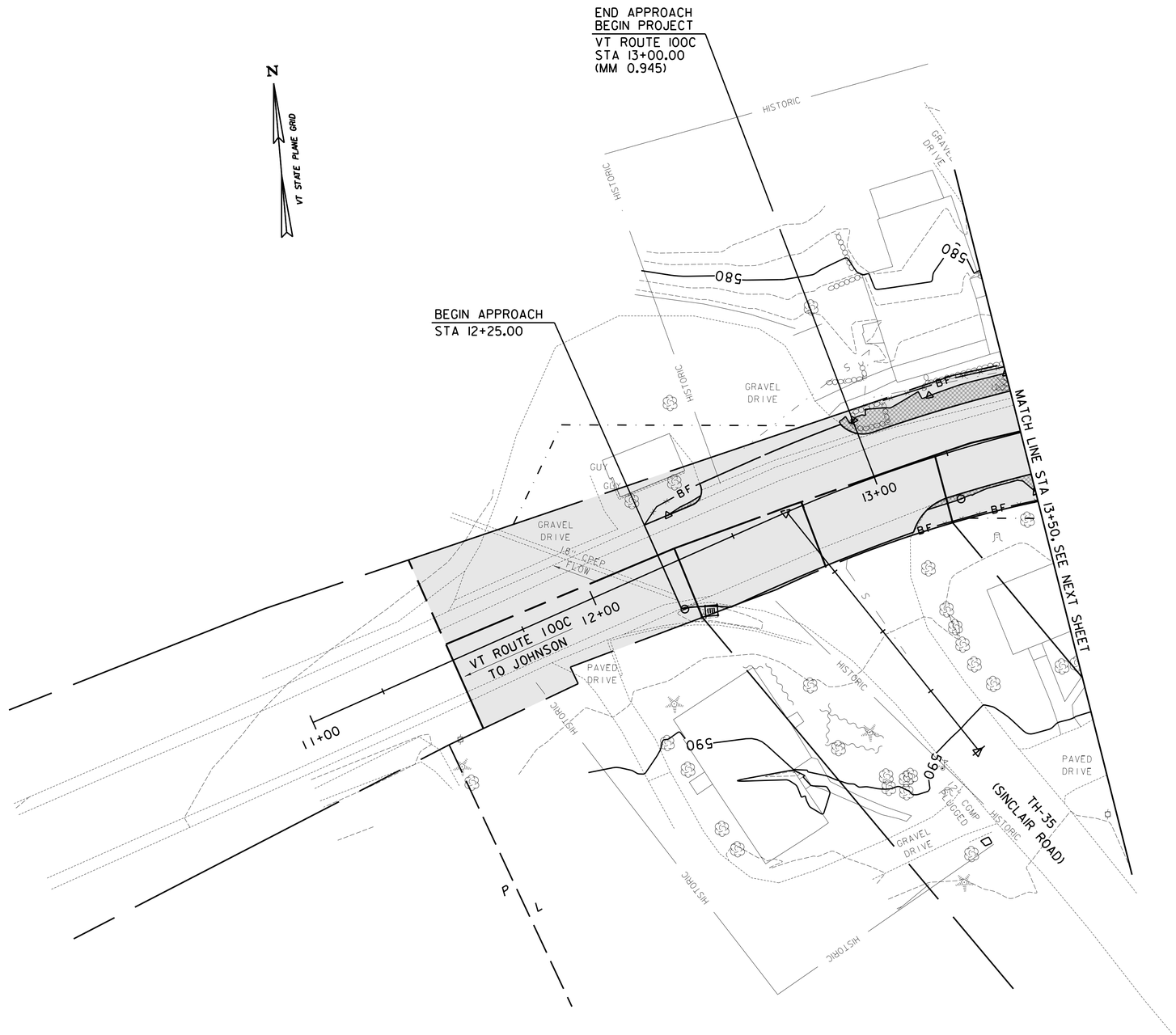
POTSDAM SILT LOAM
15%-25% SLOPES
HIGHLY ERODIBLE
K = 0.49

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

CHA

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066eroBdr_ex.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
EPSC EXISTING SITE PLAN SHEET 2	SHEET 84 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066eroBdr_ex.dgn
DATE/TIME = 5/4/2016
USER = 5237



LEGEND

BF ——— BF ——— BARRIER FENCE

RIPARIAN BUFFER ZONE

FILTER FABRIC DROP INLET PROTECTION

DISTURBED AREAS REQUIRING VEGETATION

SILT FENCE

INLET PROTECTION DEVICE, TYPE I
STA 12+33.0 RT

BARRIER FENCE
STA 12+25.0 - STA 12+47.0 LT
STA 13+06.4 - STA 13+50.0 RT
STA 13+10.5 - STA 13+50.0 LT

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

CHA

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066eroBdr_con.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
EPSC CONSTRUCTION SITE PLAN SHEET 1	SHEET 85 OF 93

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066eroBdr_con.dgn
DATE/TIME = 5/4/2016
USER = 5237

BARRIER FENCE
STA 13+50.0 - STA 13+64.7 LT
STA 13+50.0 - STA 14+33.5 RT
STA 14+16.0 - STA 14+33.8 LT
STA 14+75.8 - STA 15+00.4 LT
STA 14+81.4 - STA 15+26.0 RT
STA 15+39.1 - STA 15+73.5 LT
STA 15+50.3 - STA 15+79.0 RT
STA 16+32.4 - STA 17+23.4 RT
STA 16+76.0 - STA 17+86.8 LT
STA 17+60.2 - STA 18+00.0 RT

GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED
STA 14+11.7 - STA 14+21.3 RT
STA 14+13.6 - STA 14+32.6 LT
STA 14+19.8 - STA 14+25.8 RT
STA 14+24.6 - STA 14+32.5 RT
STA 14+32.7 - STA 14+39.3 LT
STA 14+75.7 - STA 14+89.9 LT
STA 14+82.1 - STA 14+90.5 RT
STA 14+90.0 - STA 15+02.4 LT
STA 14+91.9 - STA 15+24.2 RT
STA 15+40.0 - STA 15+74.5 LT
STA 15+50.3 - STA 15+75.0 RT
STA 15+74.9 - STA 15+77.8 RT
STA 16+33.4 - STA 16+39.1RT
STA 16+39.3 - STA 16+45.6 RT
STA 16+46.9 - STA 16+95.8 RT
STA 17+49.5 - STA 17+79.3 LT
STA 17+62.2 - STA 17+87.9 RT
STA 17+90.0 - STA 17+99.2 RT

N
VT STATE PLANE GRID

RIGHT BRANCH OF GIHON RIVER
LEFT BRANCH OF GIHON RIVER
BELL BROOK
SUBLOT LINE
VT ROUTE 100C TO HYDE PARK
MATCH LINE STA 13+50, SEE PREVIOUS SHEET
END APPROACH STA 18+00.00
END PROJECT BEGIN APPROACH VT ROUTE 100C STA 17+00.00 (MM 1.021)
VILLAGE SEWER PUMP STATION
GRAVEL DRIVE
CHAIN LINK FENCE
STONE FILL
STEEL GRATE
HISTORIC
FLOW
DITCH
GUARDRAIL
14+00
15+00
16+00
17+00
41+00
51+00

LEGEND

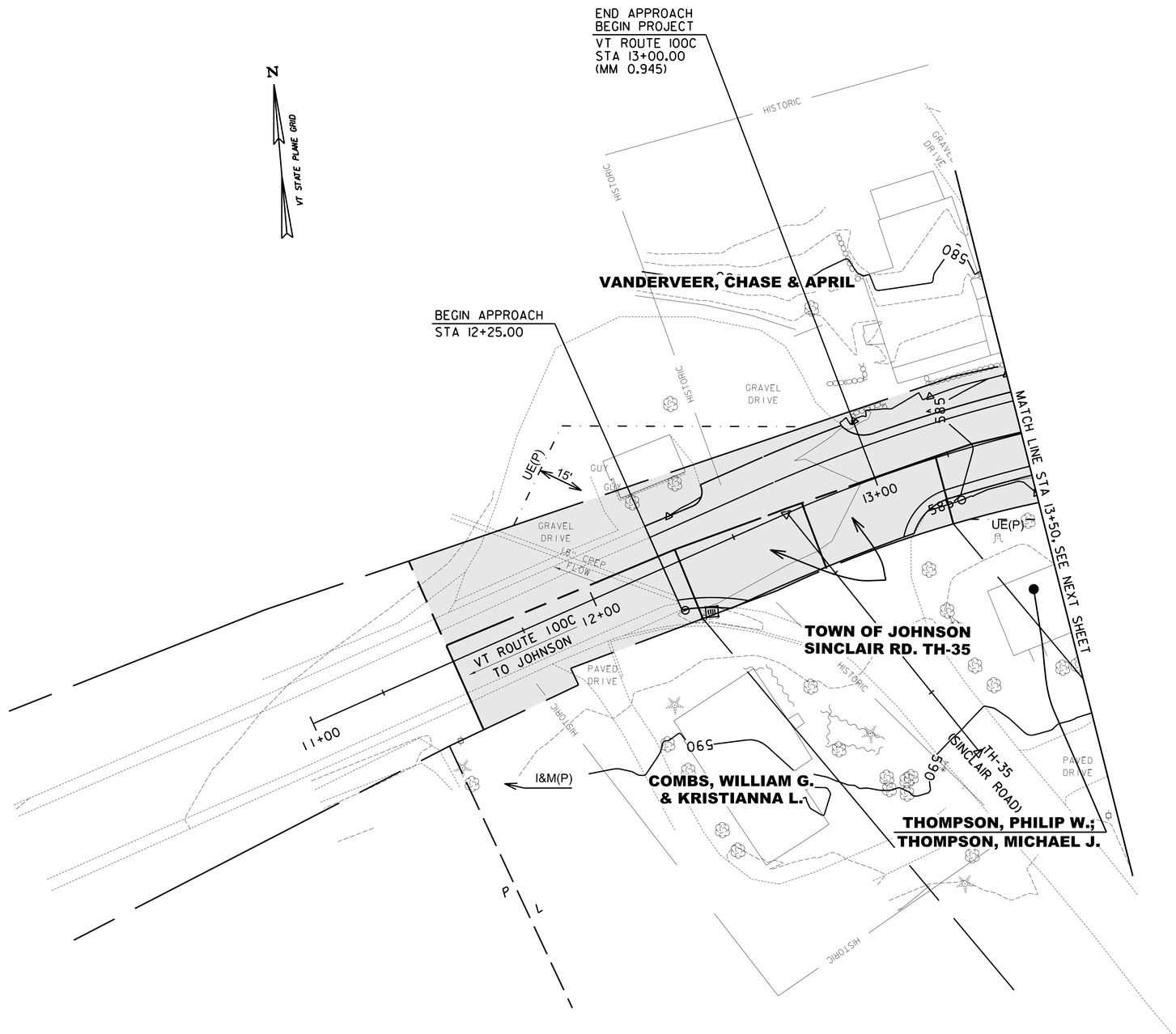
BF —— BF —— BARRIER FENCE
RIPARIAN BUFFER ZONE
FILTER FABRIC DROP INLET PROTECTION
DISTURBED AREAS REQUIRING VEGETATION
SILT FENCE

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

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066eroBdr_con.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
EPSC CONSTRUCTION SITE PLAN SHEET 2	SHEET 86 OF 93

CHA

FILE NAME = V:\Projects\VNYX3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066eroBdr_con.dgn
DATE/TIME = 5/4/2016
USER = 5237



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

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066eroBdr_fin.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
EPSC FINAL SITE PLAN SHEET 1	SHEET 87 OF 93

FILE NAME = V:\Projects\VANYVK3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066eroBdr_fin.dgn
DATE/TIME = 5/4/2016
USER = 5237

N

VT STATE PLANE GRID

VANDERVEER, CHASE & APRIL

NADEAU, ALBERT M.

LEFT BRANCH OF GIHON RIVER

RIGHT BRANCH OF GIHON RIVER

ROMERO, ROBERT H. & CASEY - TRUSTEES

PEINERT, JOHN C. - TRUSTEE

BELL BROOK

PEINERT, JOHN C. - TRUSTEE

SUBLOT LINE

VT ROUTE 100C TO HYDE PARK

MATCH LINE STA 13+50. SEE PREVIOUS SHEET

END APPROACH
STA 18+00.00

MARSH, GREGORY K.

END PROJECT
BEGIN APPROACH
VT ROUTE 100C
STA 17+00.00 (MM 1.021)

THOMPSON, PHILIP W.;
THOMPSON, MICHAEL J.

COMBS, WILLIAM G. & KRISTIANNA L.;
THOMPSON, PHILIP W.;
THOMPSON, MICHAEL J.;
BURTON, JENNIFER;
SIEGEL, MARA H.

ROMERO, ROBERT H.
& CASEY - TRUSTEES

LEGEND

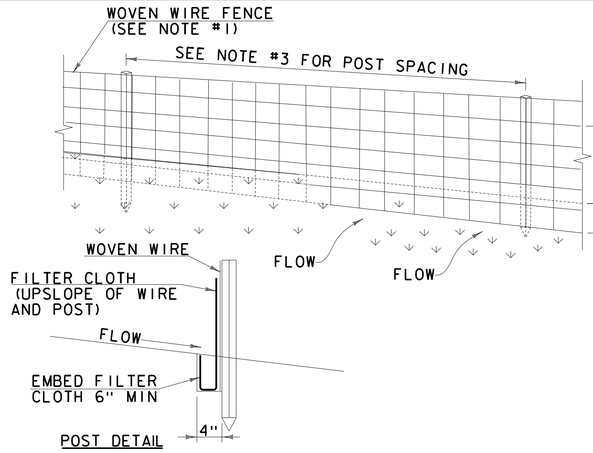
ITEM 613.11
STONE FILL, TYPE II

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

PROJECT NAME: JOHNSON	
PROJECT NUMBER: BF 0248(4)	
FILE NAME: zl3c066eroBdr_fin.dgn	PLOT DATE: 5/4/2016
PROJECT LEADER: W. PELLETIER	DRAWN BY: A. KIRBY
DESIGNED BY: A. HAWKINS	CHECKED BY: D. GOZALKOWSKI
EPSC FINAL SITE PLAN SHEET 2	SHEET 88 OF 93

CHA

FILE NAME = V:\Projects\ANY\K3\28410\CADD_MSTN\13c066\Consultants\Structures\zl3c066eroBdr_fin.dgn
DATE/TIME = 5/4/2016
USER = 5237



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

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

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

SILT FENCE

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

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

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

VAOT LOW GROW/FINE FESCUE MIX

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

VAOT RURAL AREA MIX

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

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

CONSTRUCTION GUIDANCE

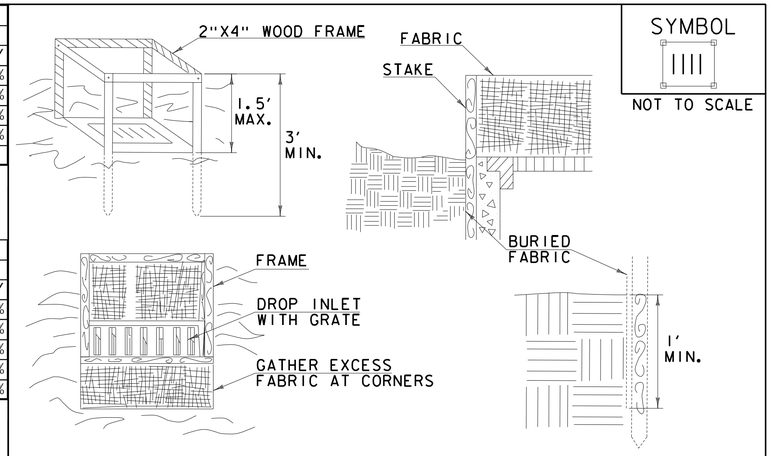
1. SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
2. SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT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

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

REVISIONS	
JANUARY 12, 2015	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

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

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

FILTER FABRIC DROP INLET PROTECTION

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

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

REVISIONS	
MARCH 7, 2008	WHF
JANUARY 13, 2009	WHF

CHA

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: z13c066erodet.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: A. HAWKINS
EPSC DETAILS SHEET

PLOT DATE: 5/4/2016
DRAWN BY: A. KIRBY
CHECKED BY: D. GOZALKOWSKI
SHEET 89 OF 93

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	ROW LAYOUT NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	T / P	AREA ±	TITLE TAKEN	DATE	TOWN / CITY	BOOK	PAGE	
1A	VANDERVEER, CHASE & APRIL	1, 2	11+85.97 LT	12+85.01 LT			UTILITY	P	1,293 SF						
			13+22 LT				REMOVE & RESET	T							BOULDER
			13+50 LT				REMOVE	T							LEDGE
			12+22 LT	12+44 LT			ALL R. T. & I.								CONCRETE PAD
			12+99 LT	13+11 LT			ALL R. T. & I.								STONE FLOWER GARDEN
1B		1, 2	11+50.00 LT	13+73.87 LT	0.13 A		ALL R. T. & I.								VT 100C HWY EASEMENT; 5,564 SF±
2A	COMBS, WILLIAM G. & KRISTIANNA L.	1	11+42 RT	11+51 RT			INSTALL & MAINTAIN	P							POLE, GUYWIRE & ANCHOR
2B		1	11+50.00 RT	12+74.85 LT	3,137 SF		ALL R. T. & I.								VT 100C HWY EASEMENT
3	TOWN OF JOHNSON	1	12+30.10 RT	13+21.00 RT	2,056 SF		ALL R. T. & I.								VT 100C HWY EASEMENT
4A	NADEAU, ALBERT M.	2	13+79 LT	14+59± LT			UTILITY	T	1,237 SF						
4B		2	13+73.03 LT	14+59± LT	2,125 SF		ALL R. T. & I.								VT 100C HWY EASEMENT
5A	THOMPSON, PHILLIP W.;	1, 2	13+25.70 RT	14+58± RT			UTILITY	P	1,252 SF						
	THOMPSON, MICHAEL J.		13+90 RT				REMOVE	T							MAPLE TREE
5B		1, 2	13+19.90 RT	14+58.27 RT	4,270 SF		ALL R. T. & I.								VT 100C HWY EASEMENT

APPROVED: RYAN CLOUTIER DATE: 01-06-16
CHIEF, PLANS & TITLES

TABLE OF REVISIONS

REVISION NO.	ROW SET SHEET #	DESCRIPTION	DATE
1	4, 6	PARCEL 7, PEINERT - DELETE CULVERT &	04/25/16
		DRAINAGE(T) EASEMENT; ADD HWY(P)	
		EASEMENT AT 16+71.31 TO 17+46.54 LT;	
		ADJUST CONSTRUCTION(T) EASEMENT	
		AT STA. 16+73.27 TO 17+21.02 LT.	
		REV BY: MT CO 10098 APPR BY: RC	
2	3, 5	PARCEL 1, VANDERVEER - PARCELS 1C &	05/04/16
		1D HAVE BEEN COMBINED WITH 1A.	
		REV BY: MT CO 10104 APPR BY: RC	

PROJECT NAME: **JOHNSON**
PROJECT NUMBER: **BF 0248(4)**

FILE NAME: **r13c066detail.xls**
PROJECT LEADER: **W. PELLETIER**
DESIGNED BY: **A. EGIZI**
R.O.W. DETAIL SHEET #1

PLOT DATE: 04-MAY-2016
DRAWN BY: **M. TROTTIER**
CHECKED BY: **R. CLOUTIER**
SHEET 90 OF 93

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	ROW LAYOUT NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	T / P	AREA ±	TITLE TAKEN	DATE	TOWN / CITY	BOOK	PAGE	
6A	ROMERO, ROBERT H. & CASEY B.	2	14+52 LT	15+08 LT			UTILITY	T	1,042 SF						
	TRUSTEES		14+91 LT	15+05 LT			CONSTRUCTION	T	48 SF						INCL. BF & EC
			15+39 LT	15+61 LT			CONSTRUCTION	T	79 SF						INCL. BF & EC
			15+05 LT	15+39 LT			DRIVE	T	238 SF						
6B		2	14+56± RT	17+28± RT			UTILITY	P	4,425 SF						
			17+11 RT	17+13 RT			INSTALL & MAINTAIN	P							GUYWIRE & ANCHOR
6C		2	14+58± RT	17+21± LT	0.24 A		ALL R. T. & I.								VT 100C HWY EASEMENT; 10,303 SF±
7A	PEINERT, JOHN C. - TRUSTEE	2	16+71.31 LT	17+46.54 LT	470 SF		HIGHWAY	P							
			16+73.27 LT	17+21.02 LT			CONSTRUCTION	T	39 SF						INCL. BF
7B		2	16+07.76 RT	18+50.00 LT	0.14 A		ALL R. T. & I.								VT 100C HWY EASEMENT; 5,921 SF±
8A	MARSH, GREGORY K.	2	17+21± RT	18+41.23 RT			UTILITY	P	2,154 SF						
8B		2	17+20.36 RT	18+50.00 RT	3,210 SF		ALL R. T. & I.								VT 100C HWY EASEMENT
9	COMBS, WILLIAM G. & KRISTIANNA L.;	2	13+85± LT	13+98± RT			ALL R. T. & I.								PRIVATE WATER LINE
	THOMPSON, PHILLIP W.;														
	THOMPSON, MICHAEL J.;														
	BURTON, JENNIFER;														
	SIEGEL, MARA H.														
10	VILLAGE OF JOHNSON ELECTRIC,		11+42 RT	18+50 RT											UTILITY
	WATER AND SEWER														
11	COMCAST OF CONNECTICUT/GEORGIA/		11+42 RT	18+50 RT											UTILITY
	MASSACHUSETTS/NEW HAMPSHIRE/														
	NEW YORK/NORTH CAROLINA/VIRGINIA/														
	VERMONT, LLC														
12	TELEPHONE OPERATING COMPANY OF		11+42 RT	18+50 RT											UTILITY
	VERMONT LLC														

APPROVED: RYAN CLOUTIER DATE: 01-06-16
CHIEF, PLANS & TITLES

TABLE OF REVISIONS

REVISION NO.	ROW SET SHEET #	DESCRIPTION	DATE

PROJECT NAME: **JOHNSON**
PROJECT NUMBER: **BF 0248(4)**

FILE NAME: **r13c066detail.xls**
PROJECT LEADER: **W. PELLETIER**
DESIGNED BY: **A. EGIZI**
R.O.W. DETAIL SHEET #2

PLOT DATE: 25-APR-2016
DRAWN BY: **M. TROTTIER**
CHECKED BY: **R. CLOUTIER**
SHEET 91 OF 93

END APPROACH
BEGIN PROJECT
VT ROUTE 100C
STA 13+00.00
(MM 0.945)

STATION EQUALITY
STA 12+69.23
VT ROUTE 100C =
STA 30+00.00
TH-35 (SINCLAIR ROAD)

P.I. STA 13+16.06 BK. =
P.I. STA 13+15.71 AHD.

N

VT STATE PLANE GRID

1A

VANDERVEER, CHASE & APRIL

BEGIN APPROACH
STA 12+25.00

P.C. STA 12+65.13

[67.69']
N82°26'12"E

MATCH LINE STA 13+50. SEE NEXT SHEET

12+13.51
55.90' LT

12+85.01
23.84' LT

REMOVE(T)

13+21.00
0.51' LT

187.60'
S76°14'11"W

1B

3'-0"

R&R(T)

11'-0"

N82° 46' 04"E

CURVE I

5B

13+00

13+19.90
22.30' RT

UE(P)
13+25.70
22.44' RT

UE(P)
15'

12+74.85
1.20' LT

11+85.97
32.55' LT

N=780128.00
E=1598285.05
11+50.00, 35.84' LT

12+30.85
4.06' LT

11'-0"

S76°14'07"E

EXISTING R.O.W.

EXISTING TOWN R.O.W.

R=[384.65']
L=[173.11']

3

7'-0"

12+73.99
21.67' RT

POB
STA 11+00.00

11+50.00
5.71' LT

VT ROUTE 100C
TO JOHNSON

12+00

2B

71.98'
N74°21'14"E

TOWN OF JOHNSON
SINCLAIR RD. TH-35

12+30.10
20.26' RT

6.00'
S20°22'25"E

34.25'
N69°37'43"E

S33°51'23"E

STATE OF VERMONT PROJECT
JOHNSON-HYDE PARK F 119(4)
(1950)

11+00

N=780071.03
E=1598304.65
11+50.00, 24.41' RT

2A

EXISTING TOWN R.O.W.

I&M(P)

COMBS, WILLIAM G.
& KRISTIANNA L.

5A

THOMPSON, PHILIP W.;
THOMPSON, MICHAEL J.

EXISTING R.O.W.

4" x 4" CONCRETE BOUND
18" ABOVE GROUND

4" x 4" CONCRETE BOUND
21" ABOVE GROUND

POE
STA 31+00.

P
L

BEGIN R.O.W. PROJECT
JOHNSON BF 0248(4)
STA. 11+42, 24.64' RT

5 ROD R.O.W.
BASED ON 1827 HISTORIC ROAD SURVEY
BOOK 1, PAGE 122

NOTE:

1. ALL EXISTING TREES TO REMAIN UNLESS NOTED OR AS DIRECTED BY THE ENGINEER.

CURVE I (VT ROUTE 100C)
△ = 11°44'57" RT
D = 11°34'30"
R = 495.00'
T = 50.93'
L = 101.51'
E = 2.61'
BANK = N.C.

LEGEND
ITEM 613.11
STONE FILL, TYPE II

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

FOR R.O.W. USE ONLY

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

PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: r13c066layl.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: CHA
R.O.W. LAYOUT SHEET 1OF 2

PLOT DATE: 04-MAY-2016
DRAWN BY: A. EGIZI
CHECKED BY: R. CLOUTIER
SHEET 92 OF 93

SPECIAL PROVISION (BURIED GUARDRAIL END, GALVANIZED)
STA 13+59.3 - STA 14+21.8 RT

SPECIAL PROVISION (GUARDRAIL APPROACH SECTION TO CONCRETE BRIDGE RAILING)
STA 14+21.8 - STA 14+34.3 RT
STA 14+23.9 - STA 14+36.4 LT
STA 14+78.1 - STA 14+90.6 LT
STA 14+80.9 - STA 14+93.4 RT
STA 15+60.1 - STA 15+72.6 LT
STA 15+63.6 - STA 15+76.1 RT
STA 16+33.6 - STA 16+46.1 RT

ANCHOR FOR STEEL BEAM RAIL
STA 13+65.8 RT
STA 14+15.3 RT
STA 14+17.9 LT
STA 14+98.6 LT
STA 15+13.9 RT
STA 15+44.5 LT
STA 15+55.6 RT
STA 16+54.1 RT
STA 17+66.6 LT

STEEL BEAM GUARDRAIL, GALVANIZED
STA 14+11.4 - STA 14+23.9 LT
STA 14+90.6 - STA 15+05.1 LT
STA 14+93.4 - STA 15+20.4 RT
STA 15+38.0 - STA 15+60.1 LT
STA 15+49.1 - STA 15+63.6 RT
STA 16+46.1 - STA 16+60.6 RT
STA 16+96.1 - STA 17+73.1 LT

BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS
STA 16+65.0 - STA 17+45.0 LT

BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION
STA 14+34.3 - STA 14+80.9 RT
STA 14+36.4 - STA 14+78.1 LT
STA 15+72.6 - STA 16+33.6 LT
STA 15+76.1 - STA 16+33.6 RT

REMOVAL OF EXISTING DELINEATOR
STA 14+02.0 RT
STA 14+18.0 LT
STA 15+00.0 LT
STA 15+00.0 RT
STA 15+56.0 RT
STA 15+57.0 LT
STA 16+66.0 RT
STA 17+71.0 LT

STONE FILL, TYPE II
STA 17+30.0 LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 14+02.0 - STA 14+39.0 RT
STA 14+18.0 - STA 14+39.0 LT
STA 14+77.0 - STA 15+00.0 LT
STA 14+77.0 - STA 15+00.0 RT
STA 15+56.0 - STA 15+79.0 RT
STA 15+57.0 - STA 15+79.0 LT
STA 16+33.0 - STA 17+71.0 LT
STA 16+33.0 - STA 16+66.0 RT

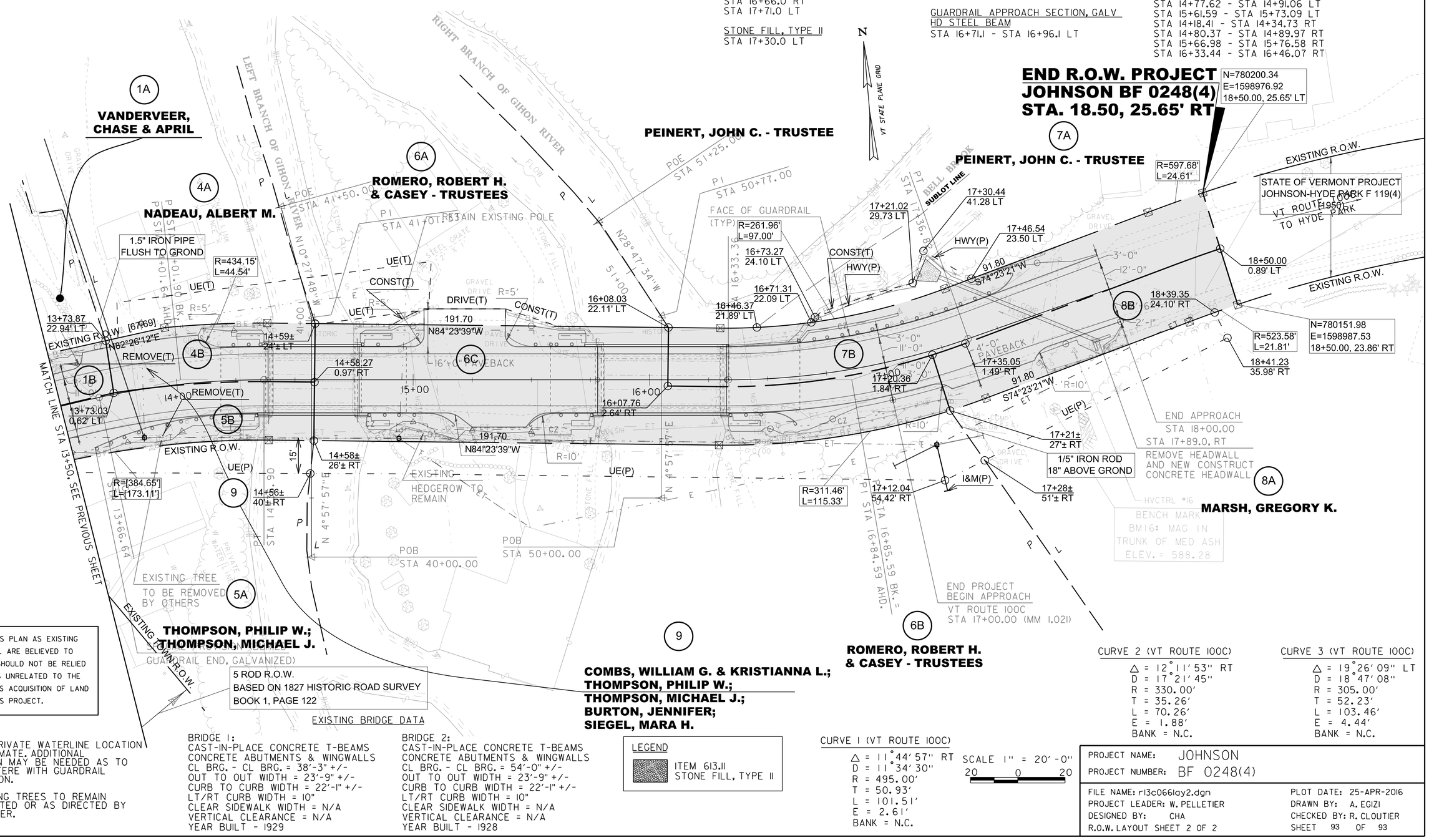
SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/ STEEL TUBING)
STA 16+33.6 - STA 16+71.1 LT

GUARDRAIL APPROACH SECTION, GALV HD STEEL BEAM
STA 16+71.1 - STA 16+96.1 LT

DELINEATOR WITH STEEL POST
STA 14+11.4 LT
STA 15+05.1 LT
STA 15+20.4 RT
STA 15+38.0 LT
STA 15+49.1 RT
STA 16+60.6 RT
STA 17+73.1 LT

RETAINING WALL
STA 16+64.78 - STA 17+10.67 LT

SPECIAL PROVISION (UNIT BLOCK RETAINING WALL)
STA 14+26.04 - STA 14+36.90 LT
STA 14+77.62 - STA 14+91.06 LT
STA 15+61.59 - STA 15+73.09 LT
STA 14+18.41 - STA 14+34.73 RT
STA 14+80.37 - STA 14+89.97 RT
STA 15+66.98 - STA 15+76.58 RT
STA 16+33.44 - STA 16+46.07 RT



FOR R.O.W. USE ONLY

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

NOTES:

1. EXISTING PRIVATE WATERLINE LOCATION IS APPROXIMATE. ADDITIONAL EXCAVATION MAY BE NEEDED AS TO NOT INTERFERE WITH GUARDRAIL INSTALLATION.
2. ALL EXISTING TREES TO REMAIN UNLESS NOTED OR AS DIRECTED BY THE ENGINEER.

EXISTING BRIDGE DATA

BRIDGE 1:
CAST-IN-PLACE CONCRETE T-BEAMS
CONCRETE ABUTMENTS & WINGWALLS
CL BRG. - CL BRG. = 38'-3" +/-
OUT TO OUT WIDTH = 23'-9" +/-
CURB TO CURB WIDTH = 22'-1" +/-
LT/RT CURB WIDTH = 10"
CLEAR SIDEWALK WIDTH = N/A
VERTICAL CLEARANCE = N/A
YEAR BUILT - 1929

BRIDGE 2:
CAST-IN-PLACE CONCRETE T-BEAMS
CONCRETE ABUTMENTS & WINGWALLS
CL BRG. - CL BRG. = 54'-0" +/-
OUT TO OUT WIDTH = 23'-9" +/-
CURB TO CURB WIDTH = 22'-1" +/-
LT/RT CURB WIDTH = 10"
CLEAR SIDEWALK WIDTH = N/A
VERTICAL CLEARANCE = N/A
YEAR BUILT - 1928

LEGEND
ITEM 613.11
STONE FILL, TYPE II

CURVE 1 (VT ROUTE 100C)
△ = 11°44'57" RT
D = 11°34'30"
R = 495.00'
T = 50.93'
L = 101.51'
E = 2.61'
BANK = N.C.

CURVE 2 (VT ROUTE 100C)
△ = 12°11'53" RT
D = 17°21'45"
R = 330.00'
T = 35.26'
L = 70.26'
E = 1.88'
BANK = N.C.

CURVE 3 (VT ROUTE 100C)
△ = 19°26'09" LT
D = 18°47'08"
R = 305.00'
T = 52.23'
L = 103.46'
E = 4.44'
BANK = N.C.

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

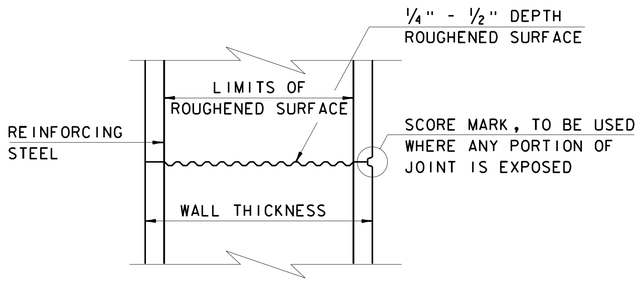
PROJECT NAME: JOHNSON
PROJECT NUMBER: BF 0248(4)

FILE NAME: rl3c066lay2.dgn
PROJECT LEADER: W. PELLETIER
DESIGNED BY: CHA
R.O.W. LAYOUT SHEET 2 OF 2

PLOT DATE: 25-APR-2016
DRAWN BY: A. EGIZI
CHECKED BY: R. CLOUTIER
SHEET 93 OF 93

CONCRETE GENERAL NOTES

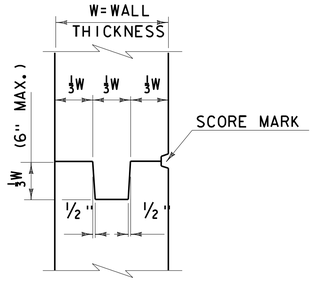
1. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1"



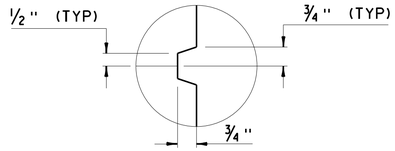
TYPICAL HORIZONTAL CONSTRUCTION JOINT
(NOT TO SCALE)

1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.

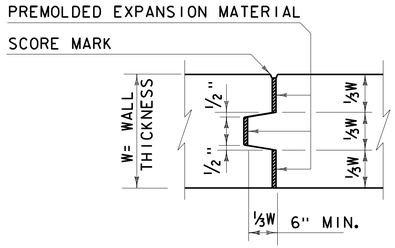
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



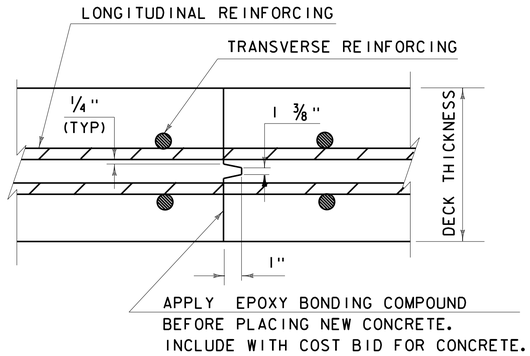
TYPICAL CONCRETE CONSTRUCTION JOINT
(NOT TO SCALE)



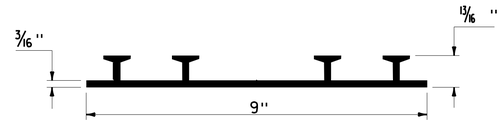
SCORE MARK DETAIL
(NOT TO SCALE)



TYPICAL CONCRETE EXPANSION JOINT
(NOT TO SCALE)



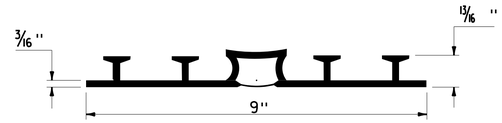
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS
(NOT TO SCALE)



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.

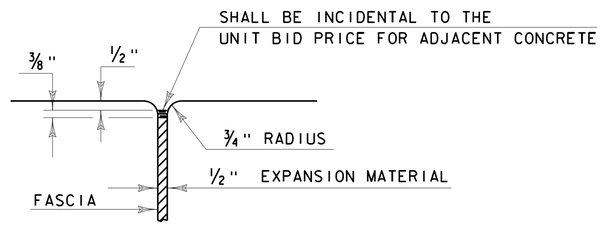
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



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.



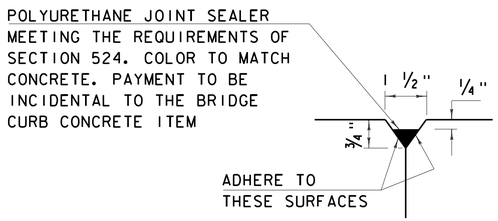
JOINT BETWEEN FASCIA AND WINGWALL
(NOT TO SCALE)

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION

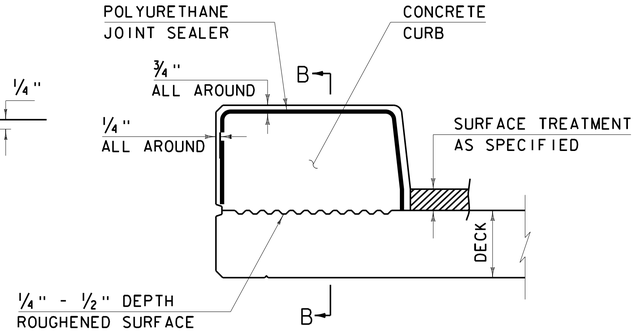
CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL SD-501.00

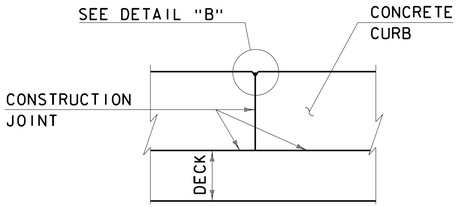


DETAIL "B"
(NOT TO SCALE)

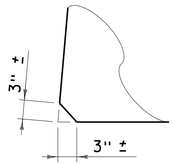


CONCRETE CURB JOINT SECTION
(NOT TO SCALE)

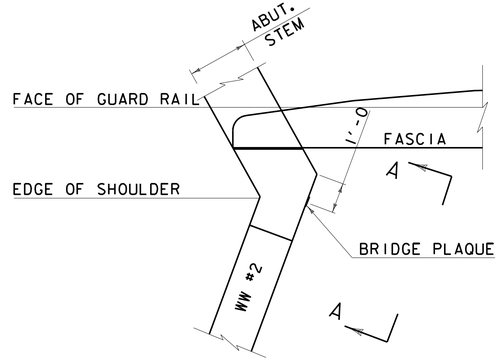
1. SEE TYPICAL HORIZONTAL CONSTRUCTION JOINT DETAIL FOR ADDITIONAL INFORMATION



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.

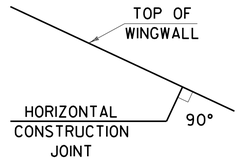
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.

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.

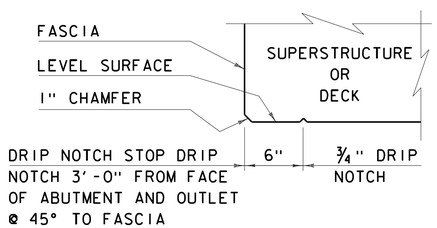
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.

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.

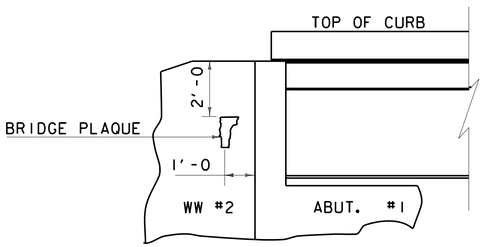
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.



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.

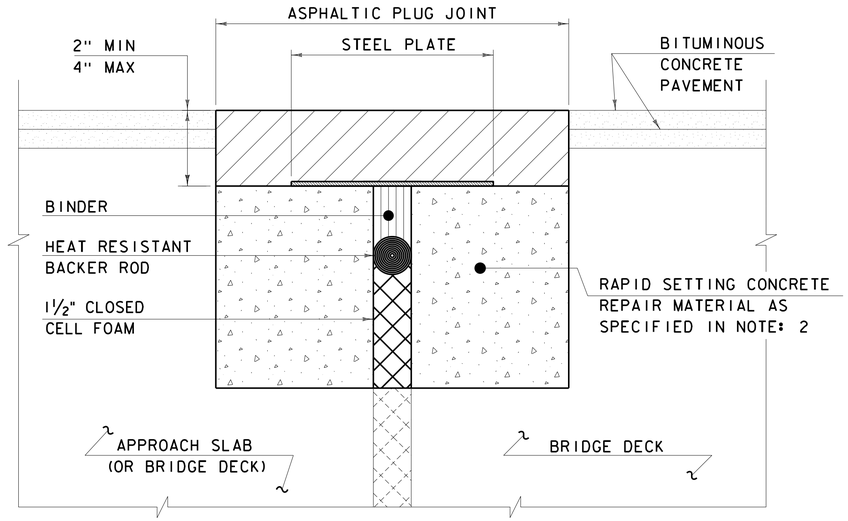
PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED AND ADDED TWO DETAILS

CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-502.00



ASPHALTIC PLUG JOINT DETAIL - REHAB

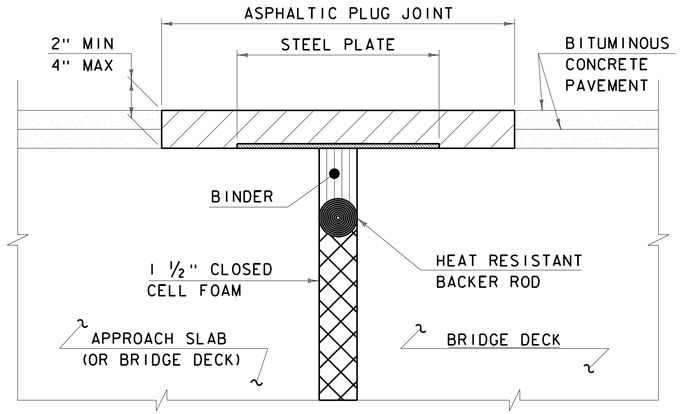
NOTES:

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

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

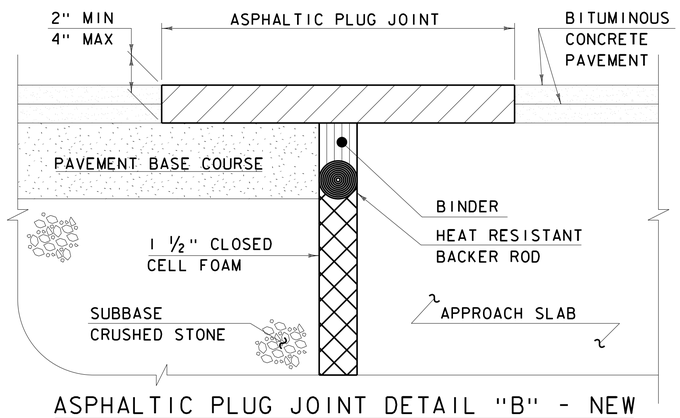
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.

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



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

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



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

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

WEATHER LIMITATIONS

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

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

DETAILS ON THIS SHEET ARE NOT TO SCALE.

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

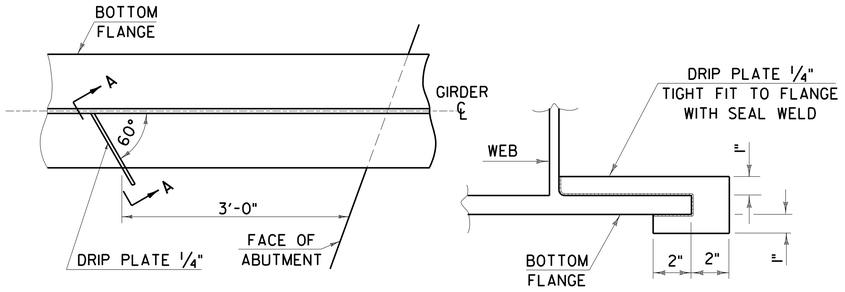
BRIDGE JOINT
ASPHALTIC PLUG

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - DIVISION

STRUCTURES DETAIL
SD-516.10

STRUCTURAL STEEL GENERAL NOTES:

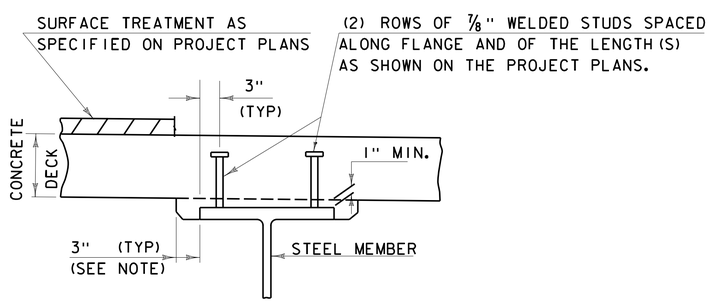
1. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH-STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SUBSECTION 506.19, UNLESS OTHERWISE SPECIFIED.
2. ALL HOLES IN THE WEBS OF THE FASCIA GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS. THESE BOLTS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



PLAN DRIP PLATE

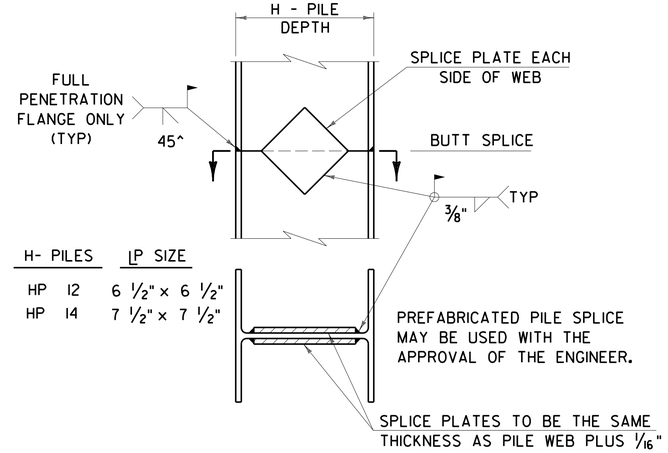
SECTION A - A

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



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

HAUNCH AND SHEAR CONNECTOR DETAIL



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

DETAIL OF PILE SPLICE

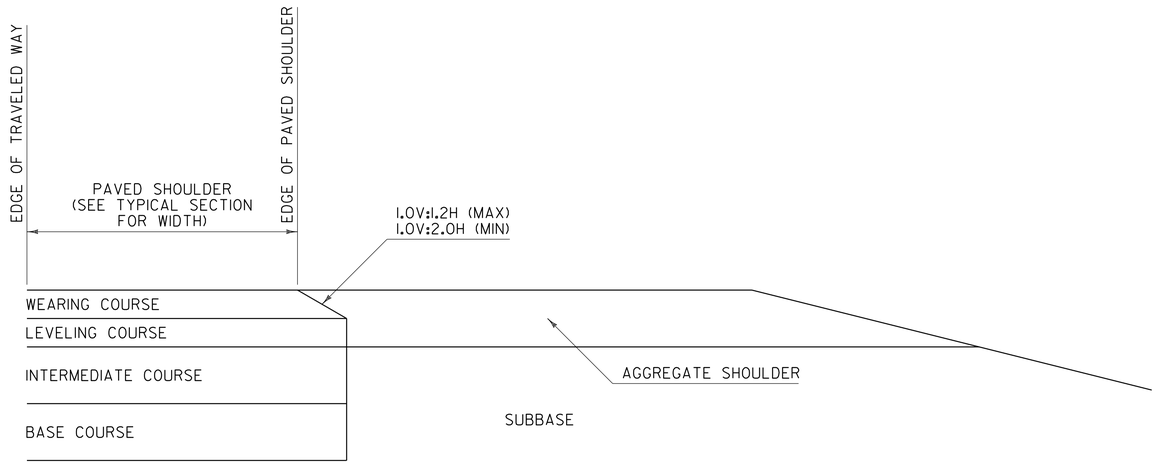
DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

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

STRUCTURAL STEEL DETAILS & NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

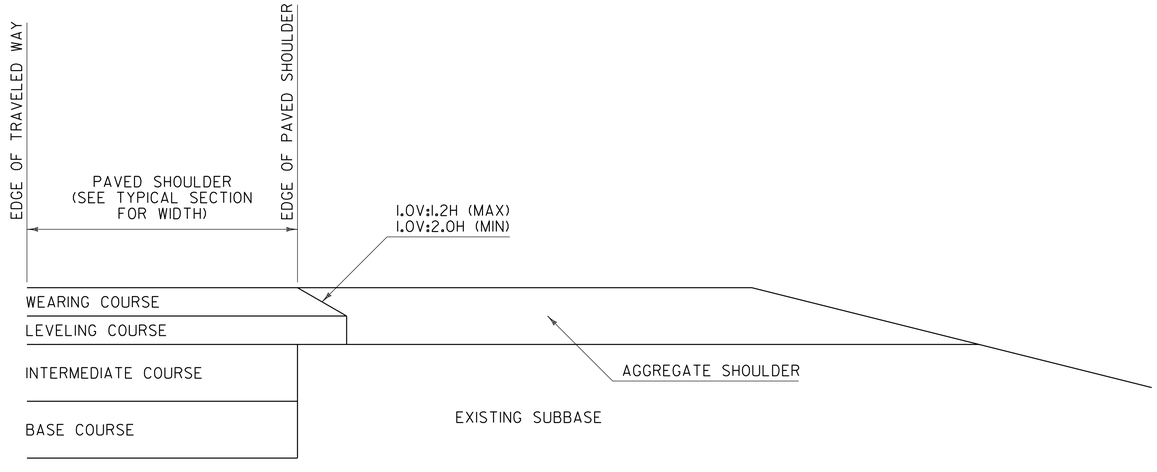
STRUCTURES DETAIL
SD-601.00



SAFETY EDGE DETAIL
FOR PAVING BELOW WEARING COURSE

NOTES:

1. THIS DETAIL IS INTENDED FOR WHEN PAVING EXTENDS BELOW THE WEARING COURSE.
2. PRIOR TO PLACEMENT OF THE LEVELING AND/OR WEARING COURSE, THE SUBBASE LOCATED BENEATH THE AGGREGATE SHOULDER SHALL BE PREPARED FLUSH WITH THE BOTTOM OF THE LEVELING COURSE.
3. BASE COURSE LIMITS MAY VARY, SEE TYPICAL SECTIONS FOR WIDTH.



SAFETY EDGE DETAIL
FOR PAVING WEARING COURSE ONLY

NOTES:

1. THIS DETAIL IS INTENDED FOR WHEN ONLY THE LEVELING AND/OR WEARING COURSE IS TO BE PLACED.
2. PAVEMENT COURSES MAY VARY, SEE TYPICAL SECTIONS FOR ACTUAL PAVEMENT COURSES REQUIRED.

REV.	DATE	DESCRIPTION
0	MAR. 29, 2016	ORIGINAL APPROVAL

OTHER DETAILS REQUIRED: NONE

DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

SAFETY EDGE WIDTH BASED ON WEARING COURSE THICKNESS AND A 1V:1.6H SLOPE	
WEARING COURSE THICKNESS (INCHES)	NOMINAL SAFETY EDGE WIDTH (INCHES)
1.25	2.000
1.50	2.375
1.75	2.750
2.00	3.125
2.25	3.500
2.50	4.000

GENERAL NOTES:

1. PLACEMENT OF THE WEARING COURSE SHALL INCLUDE THE SAFETY EDGE, UNLESS THE FOLLOWING APPLIES:
   - A. THE ADJACENT SLOPE IS STEEPER THAN THE SAFETY EDGE.
   - B. THE EDGE OF PAVEMENT BEING PLACED ABUTS BOUND MATERIAL.
   - C. VEHICLES ARE RESTRICTED FROM LEAVING THE PAVED SURFACE (EXAMPLE: GUARDRAIL).
2. THE SAFETY EDGE SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE SLOPE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.
3. THE SAFETY EDGE SHALL NOT BE CONSIDERED PART OF THE PAVED SHOULDER.
4. THIS WORK SHALL BE INCIDENTAL TO THE RESPECTIVE BITUMINOUS CONCRETE PAVEMENT ITEM.

SAFETY EDGE DETAILS

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VERMONT AGENCY OF TRANSPORTATION

HIGHWAY SAFETY & DESIGN DETAIL

HSD-400.01