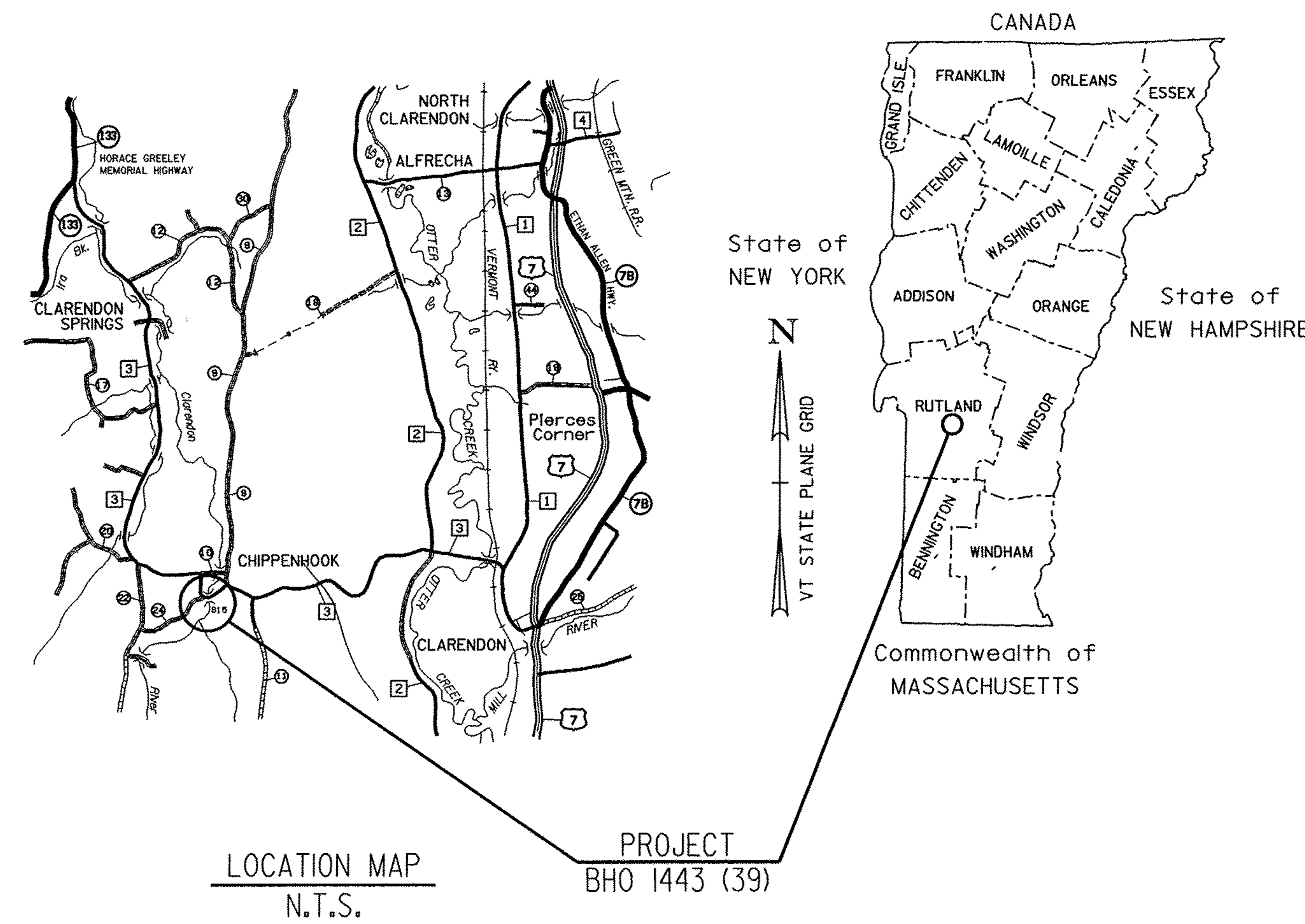
STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF CLARENDON
COUNTY OF RUTLAND
BRIDGE NO. 15 ON TOWN HIGHWAY NO. 3 (MINOR COLLECTOR)



LOCATION MAP
N.T.S.

PROJECT LOCATION: BEGINNING AT APPROXIMATELY 2.45 MILES WEST OF THE INTERSECTION OF TOWN HIGHWAY 1 AND TOWN HIGHWAY 3 AND EXTENDING WEST 0.027 MILES.

PROJECT DESCRIPTION: THIS PROJECT INVOLVES THE REMOVAL OF THE EXISTING BRIDGE SUPERSTRUCTURE, REHABILITATION OF EXISTING BRIDGE ABUTMENTS, CONSTRUCTION OF THE NEW BRIDGE SUPERSTRUCTURE AND MINOR APPROACH RECONSTRUCTION.
LENGTH OF STRUCTURE: 68.77 FEET (0.013 MILES)
LENGTH OF ROADWAY: 71.41 FEET (0.014 MILES)
LENGTH OF PROJECT: 140.18 FEET (0.027 MILES)

RECORD PLANS

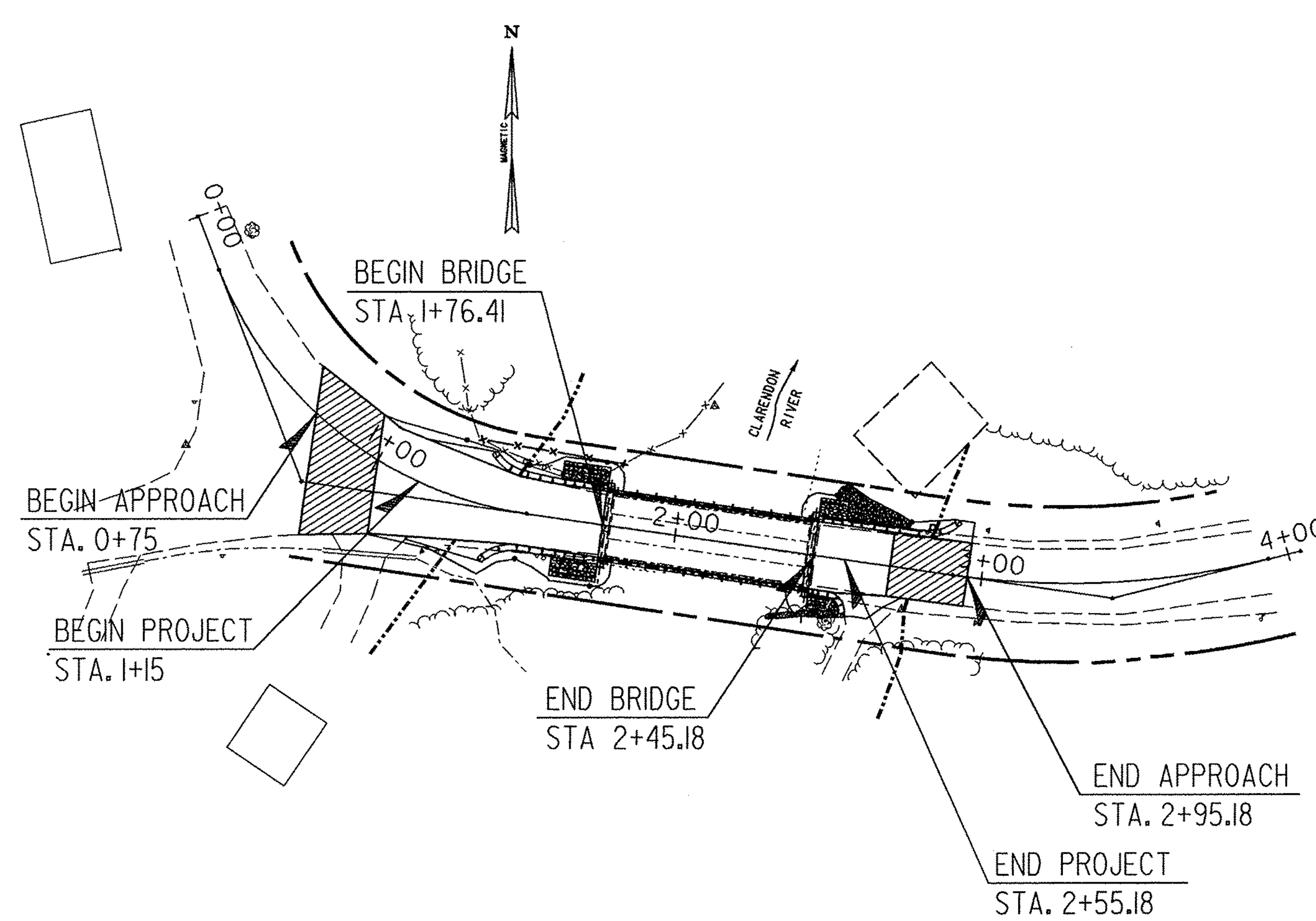
CONTRACTOR:	MILLER CONSTRUCTION, INC. - WINDSOR, VT
RESIDENT ENGINEER:	ERIC FOSTER
CONSTRUCTION BEGAN:	SEPTEMBER 22, 2009
CONSTRUCTION COMPLETE:	AUGUST 20, 2010
RECORD PLANS BY:	ERIC FOSTER & AMOS KEMPTON

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

BY Eric Foster RESIDENT ENGINEER

DATE 1.24.12

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



SCALE 1" = 40'-0
40 0 40

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

CONVENTIONAL SYMBOLS

Symbol	Line type
COUNTY LINE	COUNTY LINE
TOWN LINE	TOWN LINE
LIMITS OF ACCESS	
POINT OF ACCESS	X
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	SR SR SR
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : VERMONT SURVEY CONSULT., INC
SURVEYED DATE : MAY 16, 2000

DATUM
VERTICAL NGVD 1988
HORIZONTAL ASSUMED

STATE OF VERMONT MICHAEL J. ... NO. 2000 PROFESSIONAL ENGINEER

Stantec
Stantec Consulting Services Inc.
55 Green Mountain Drive
South Burlington VT U.S.A.
05403
Tel. 802.864.0223
Fax. 802.864.0165
www.stantec.com

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED Richard Tetreault	DATE 7-16-09
PROJECT MANAGER : MARTHA EVANS-MONGEON	
PROJECT NAME : **CLARENDON**	
PROJECT NUMBER : BHO 1443 (39)	
SHEET 1 OF 24 SHEETS	

INDEX OF SHEETS

LIST OF STANDARDS

C-10	02/11/08
E-100	01/02/04
E-101	05/30/03
E-102	06/30/03
E-102A	05/01/04
E-107	06/30/03
E-107A	06/08/09
E-108	06/08/09
E-121	08/08/95
E-160	05/20/99
G-1	01/03/00
G-1d	01/03/00
SB-R4A-82	09/19/89
SB-R6-82	01/06/95

EXISTING STRUCTURE

1. STRUCTURE TYPE STEEL BEAMS WITH CONCRETE DECK OVERALL LENGTH 68.77' INVENTORY RATING _____
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 66.77'
3. CLEAR SPAN LENGTH(S) NORMAL TO STREAM 64'
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) _____ VERTICAL CLEARANCE ABOVE STREAM BED _____
5. WATER SURFACE ELEVATION @ 0 2.33 _____ WATER SURFACE ELEVATION @ 0 100 _____
6. WATER SURFACE ELEVATION AT FLOOD OF RECORD _____ YEAR _____ ESTIMATED DISCHARGE _____
7. DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? ____ IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR? 010 _____
   ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF _____
8. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL _____
9. DISPOSITION OF STRUCTURE CONCRETE DECK AND STEEL BEAMS TO BE REPLACED

NOTE: A HYDRAULICS ANALYSIS WAS NOT PERFORMED FOR THIS PROJECT.

ALLOWABLE STRESSES:
1. DESIGN LIVE LOAD AASHTO HS25-44
2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL _____ ON LEDGE _____
3. ALLOWABLE LOAD FOR PILING N/A TYPE N/A ESTIMATED LENGTH N/A
4. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M 270 GRADE 50W TENSION 27.0 KSI
5. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 24.0 KSI COMPRESSION 20.0 KSI
6. ALLOWABLE STRESS FOR CONCRETE, HIGH PERFORMANCE CLASS A f'_c 4,000 PSI f_c 1,600 PSI
   HIGH PERFORMANCE CLASS B f'_c 3,500 PSI f_c 1,400 PSI

TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? ROAD CLOSED DURING CONSTRUCTION IF YES, ON EXISTING STRUCTURE _____ OR ON TEMPORARY BRIDGE _____
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY _____ TRAFFIC CONTROL SIGNALS REQUIRED _____
   MINIMUM CLEAR SPAN _____ MINIMUM CLEAR HEIGHT _____ MINIMUM WATERWAY AREA _____
   ARE SIDEWALKS REQUIRED? _____ IF SO, ON WHAT SIDE? _____

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY A=2.17 B=1.00	47	60					
POSTED A=1.55 B=1.40	65	83	104		75	77	93
OPERATING A=1.30 B=1.67		99	124	151	89	92	

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2000	810	-	-	-	-
2020	1100	-	-	-	-

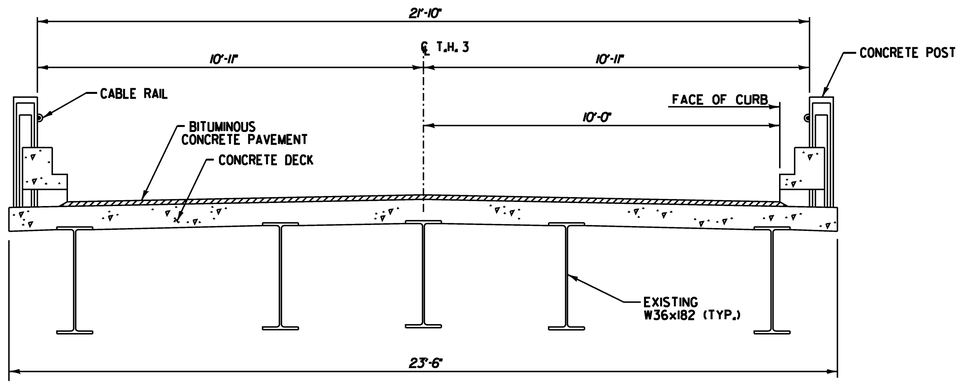
DESIGN SPEED: 15 MPH

STRENGTH RF: $\frac{\phi M_n - 1.3 M_{DL}}{A \times M_{LL+I}}$ SERVICEABILITY RF: $B\left[\frac{.95 F_y S_{LL+I} - M_{DL}\frac{S_{SS+I}}{S_{SS}} - M_{SDL}\frac{S_{LL+I}}{S_{SDL}}}{1.67 M_{LL+I}}\right]$

Stantec

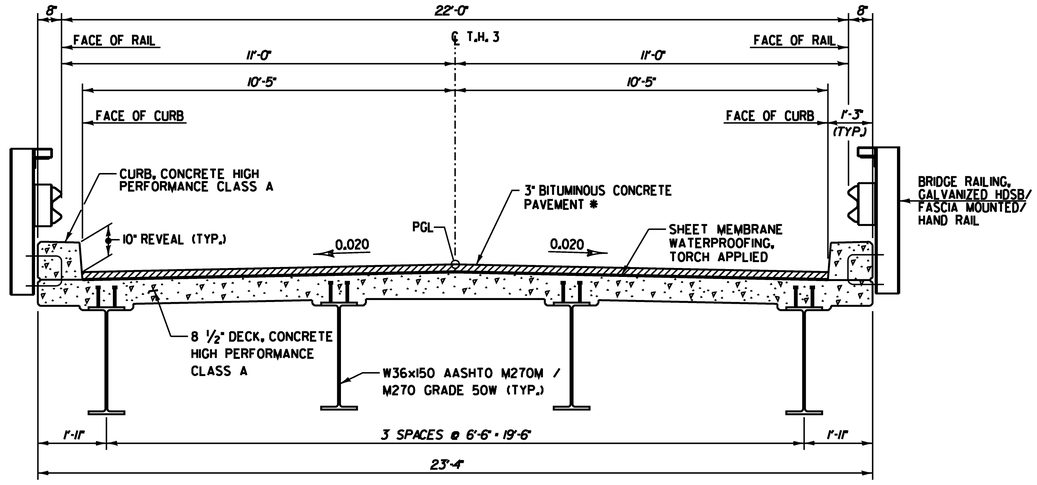
PROJECT NAME: CLARENDON
PROJECT NUMBER: BH0 1443 (39)

FILE NAME: ...\Drawing\02-clar-pi.dgn PLOT DATE: 7/23/2009
PROJECT LEADER: MJC DRAWN BY: SEB
DESIGNED BY: SEB CHECKED BY: MJC
PRELIMINARY INFORMATION SHEET SHEET 2 OF 24



EXISTING BRIDGE SECTION

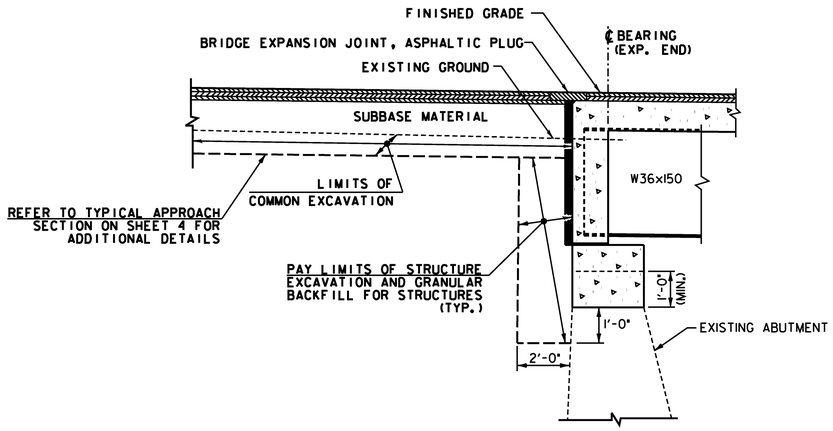
SCALE ½" = 1'-0



* 1½" TYPE IV OVER 1½" TYPE IV

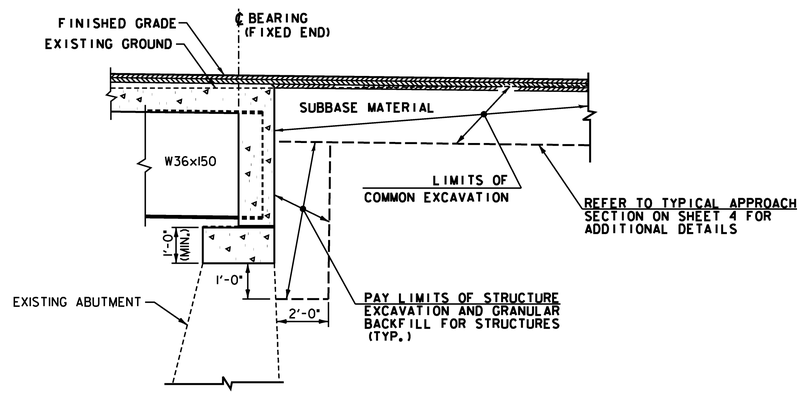
TYPICAL BRIDGE SECTION

SCALE ½" = 1'-0



ABUTMENT #1 EARTHWORK SECTION

SCALE ½" = 1'-0

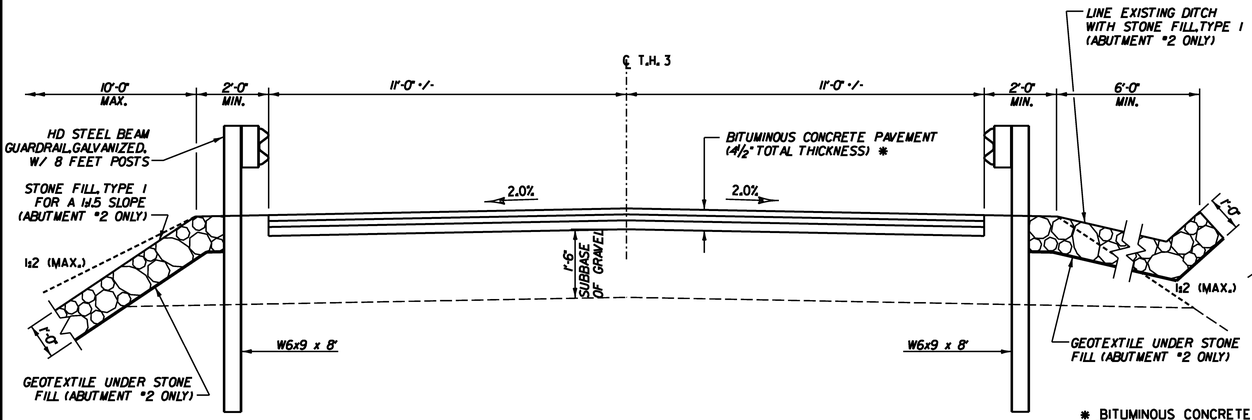


ABUTMENT #2 EARTHWORK SECTION

SCALE ½" = 1'-0

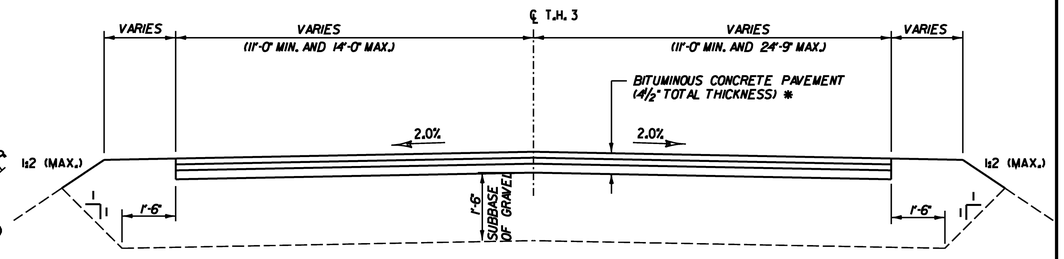
Stantec

PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BH0 1443 (39)
FILE NAME: ...\Drawing\03-clar-brsect.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: AET
DESIGNED BY: SEB	CHECKED BY: MJC
TYPICAL BRIDGE SECTIONS	SHEET 3 OF 24



TYPICAL ROADWAY SECTION WITH GUARD RAIL

NOT TO SCALE



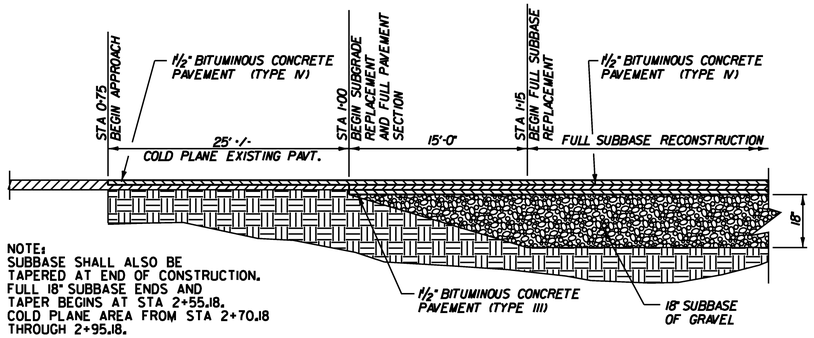
TYPICAL ROADWAY SECTION WITHOUT GUARD RAIL

NOT TO SCALE

* BITUMINOUS CONCRETE PAVEMENT:
1½" TYPE IV OVER
1½" TYPE IV OVER
1½" TYPE III

SUBBASE:
18" OF SUBBASE OF GRAVEL

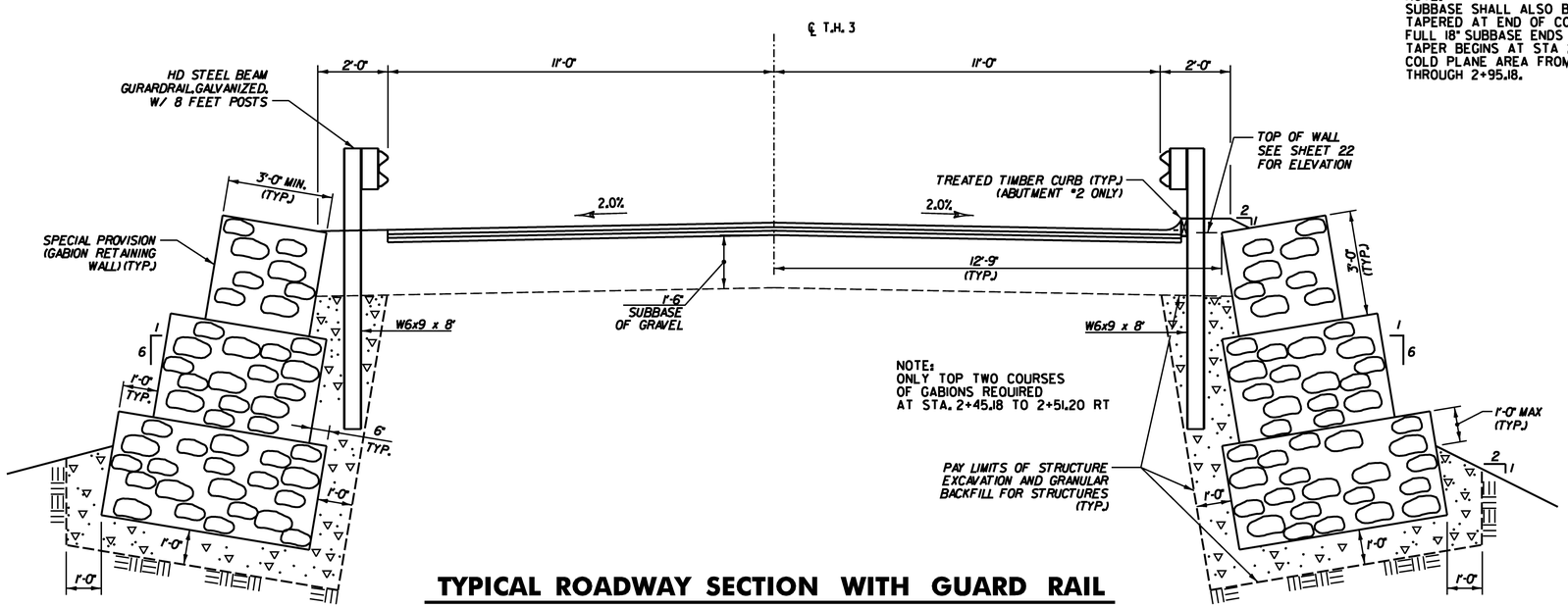
MATERIAL ITEM	TOLERANCE
PAVEMENT	+/- ¼" TOTAL THICKNESS
SUBBASE	+/- 1"



NOTE:
SUBBASE SHALL ALSO BE TAPERED AT END OF CONSTRUCTION. FULL 18" SUBBASE ENDS AND TAPER BEGINS AT STA 2+55.18. COLD PLANE AREA FROM STA 2+70.18 THROUGH 2+95.18.

TYPICAL APPROACH SECTION

NOT TO SCALE



NOTE:
ONLY TOP TWO COURSES OF GABIONS REQUIRED AT STA. 2+45.18 TO 2+51.20 RT

TYPICAL ROADWAY SECTION WITH GUARD RAIL AND GABION WALL

NOT TO SCALE

NOTE: FOR PG BINDER GRADE SEE SECTION 406 OF THE GENERAL SPECIAL PROVISIONS.

Stantec

PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BH0 1443 (39)
FILE NAME: ...\Drawing\04-clar-rdwysect.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: AET
DESIGNED BY: SEB	CHECKED BY: MJC
TYPICAL ROADWAY SECTIONS	SHEET 4 OF 24

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				
						150				150		CY	COMMON EXCAVATION	203.15				
						1				1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
						81		15		96		CY	STRUCTURE EXCAVATION	204.25				
						41		15		56		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
						175				175		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10				
						140				140		CY	SUBBASE OF GRAVEL	301.15				
						2				2		CWT	EMULSIFIED ASPHALT	404.65				
						1				1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50				
								59		59		CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33				
								9		9		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
								44610		44610		LB	STRUCTURAL STEEL, ROLLED BEAM	506.50				
								976		976		LB	REINFORCING STEEL	507.15				
								112		112		LF	DRILLING AND GROUTING DOWELS	507.16				
								13520		13520		LB	EPOXY COATED REINFORCING STEEL	507.17				
								1		1		LS	SHEAR CONNECTORS (592 - 7/8" x 7")	508.15				
								8		8		GAL	WATER REPELLENT, SILANE	514.10				
								24		24		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
								172		172		SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20				
								150		150		LF	BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/HAND RAIL	525.43				
								153		153		SY	REMOVAL OF BRIDGE PAVEMENT	529.10				
								1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20				
								8		8		EACH	BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD	531.10				
								2		2		SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I	580.13				
						10				10		CY	STONE FILL, TYPE I	613.10				
						19				19		LF	TREATED TIMBER CURB	616.35				
						50				50		LF	REMOVING AND RESETTING FENCE	620.50				
						169				169		LF	HD STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.215				
						3				3		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60				
						85				85		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
						40				40		LF	TEMPORARY TRAFFIC BARRIER	621.90				
									1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
									1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
									1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
									1	1		LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25				
						1				1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
						1				1		LS	TRAFFIC CONTROL	641.10				
						441				441		LF	4 INCH WHITE LINE	646.20				
						441				441		LF	4 INCH YELLOW LINE	646.21				
						30				30		SY	GEOTEXTILE UNDER STONE FILL	649.31				

Stantec

PROJECT NAME: CLARENDON
PROJECT NUMBER: BHO 1443 (39)

FILE NAME: ...\05-07-quantity sheet.dgn
PROJECT LEADER: MJC
DESIGNED BY: SEB
QUANTITY SHEET 1

PLOT DATE: 7/2/2009
DRAWN BY: ENA
CHECKED BY: MJC
SHEET 5 OF 24

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							75			75		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515				
							10			10		LB	SEED	651.15				
							10			10		LB	SEED, WINTER RYE	651.17				
							100			100		LB	FERTILIZER	651.18				
							1			1		TON	AGRICULTURAL LIMESTONE	651.20				
							1			1		TON	HAY MULCH	651.25				
							10			10		CY	TOPSOIL	651.35				
							1			1		LS	EPSC PLAN	652.10				
							40			40		HR	MONITORING EPSC PLAN	652.20				
							1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
							10			10		SY	TEMPORARY EROSION MATTING	653.20				
							30			30		CY	VEHICLE TRACKING PAD	653.35				
							1			1		EACH	FILTER BAG	653.45				
							40			40		LF	BARRIER FENCE	653.50				
						28				28		SF	TRAFFIC SIGNS, TYPE A	675.20				
						48				48		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
						5				5		EACH	REMOVING SIGNS	675.50				
						64				64		CY	SPECIAL PROVISION (GABION RETAINING WALL)	900.608				
							50			50		EACH	SPECIAL PROVISION (GRAVEL BAGS)	900.620				
						1				1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	900.650				
						1				1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650				
						87		27		114		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

Stantec

PROJECT NAME: CLARENDON
PROJECT NUMBER: BHO 1443 (39)

FILE NAME: ...\05-07-quantity sheet.dgn
PROJECT LEADER: MJC
DESIGNED BY: SEB
QUANTITY SHEET 2

PLOT DATE: 7/2/2009
DRAWN BY: ENA
CHECKED BY: MJC
SHEET 6 OF 24

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES			TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
ABUTMENT No. 1	ABUTMENT No. 2	DECK	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
8	7		15	CY	STRUCTURE EXCAVATION	204.25			
8	7		15	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30			
		59	59	CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33			
5	4		9	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			
		44610	44610	LB	STRUCTURAL STEEL, ROLLED BEAM	506.50			
563	413		976	LB	REINFORCING STEEL	507.15			
56	56		112	LF	DRILLING AND GROUTING DOWELS	507.16			
		13520	13520	LB	EPOXY COATED REINFORCING STEEL	507.17			
		1	1	LS	SHEAR CONNECTORS (592 - 7/8" x 7")	508.15			
2	1	5	8	GAL	WATER REPELLENT, SILANE	514.10			
		24	24	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
		172	172	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20			
		150	150	LF	BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/HAND RAIL	525.43			
		153	153	SY	REMOVAL OF BRIDGE PAVEMENT	529.10			
		1	1	EACH	PARTIAL REMOVAL OF STRUCTURE	529.20			
4	4		8	EACH	BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD	531.10			
1	1		2	SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I	580.13			
		27	27	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680			

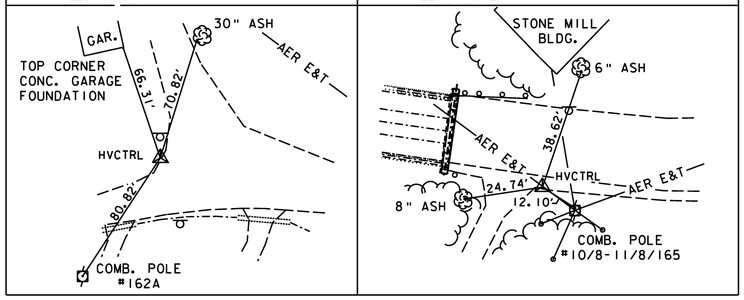
Stantec

PROJECT NAME: CLARENDON
PROJECT NUMBER: BHO 1443 (39)

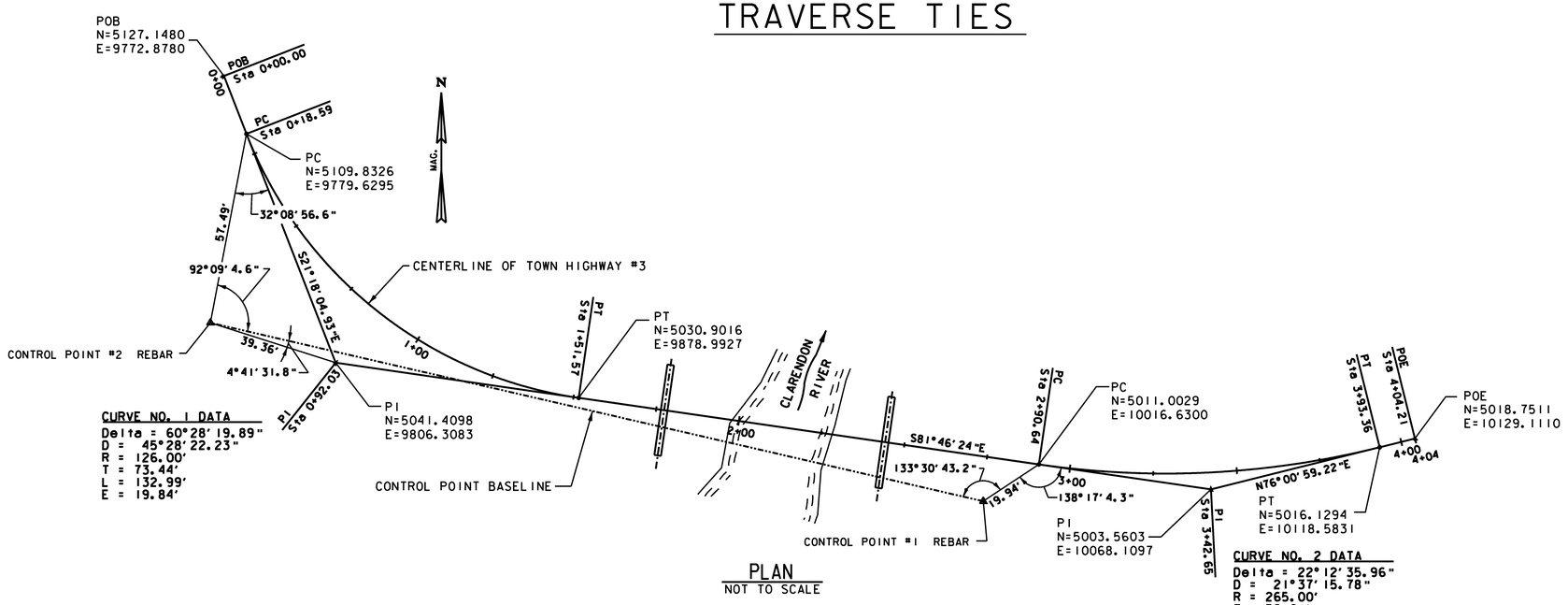
FILE NAME: ...\05-07-quantity sheet.dgn
PROJECT LEADER: MJC
DESIGNED BY: SEB
BRIDGE QUANTITY SHEET 1

PLOT DATE: 7/2/2009
DRAWN BY: ENA
CHECKED BY: MJC
SHEET 7 OF 24

CONTROL POINT #2 REBAR	CONTROL POINT #1 REBAR
N=5053.37	N=5000.00
E=9768.81	E=10000.00
EL.=859.98	EL.=849.72



TRAVERSE TIES



CURVE NO. 1 DATA
Delta = 60°28'19.89"
D = 45°28'22.23"
R = 126.00'
T = 73.44'
L = 132.99'
E = 19.84'

CURVE NO. 2 DATA
Delta = 22°12'35.96"
D = 21°37'15.78"
R = 265.00'
T = 52.01'
L = 102.72'
E = 5.06'

PLAN
NOT TO SCALE

ALIGNMENT COORDINATES

SURVEYED BY : VERMONT SURVEY CONSULT., INC
SURVEYED DATE : MAY 16, 2000

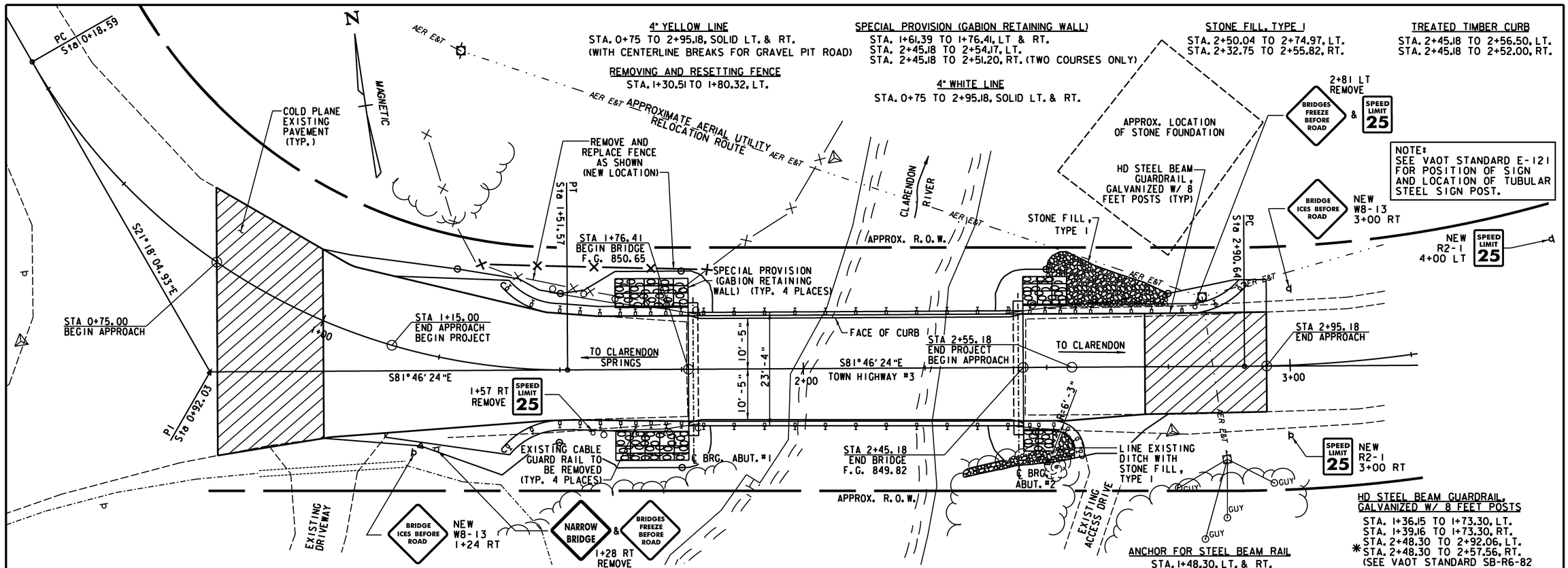
DATUM
VERTICAL NGVD 1988
HORIZONTAL ASSUMED

Stantec

PROJECT NAME: CLARENDON
PROJECT NUMBER: BHO 1443 (39)

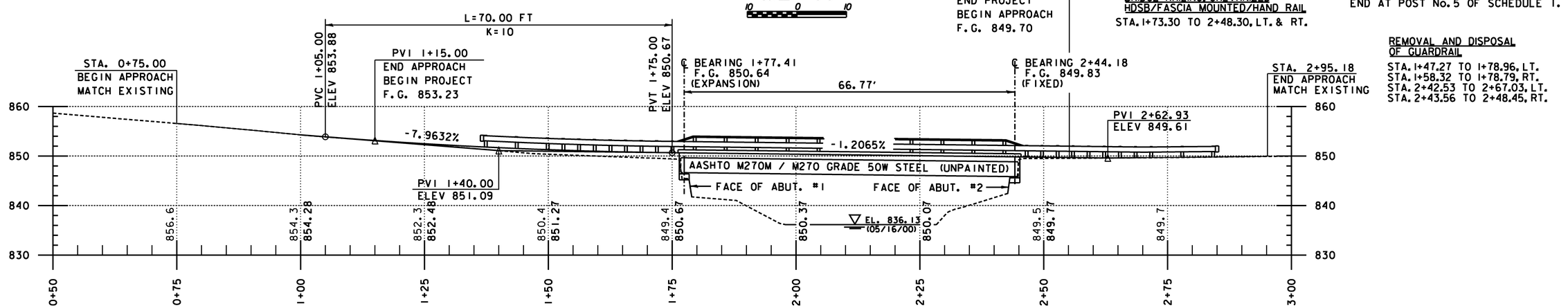
FILE NAME: ...\Drawing\08-clar-ties.dgn
PROJECT LEADER: MJC
DESIGNED BY: SEB
TIE SHEET

PLOT DATE: 7/2/2009
DRAWN BY: AET
CHECKED BY: MJC
SHEET 8 OF 24



SITE PLAN

SCALE 1" = 10'-0



PROFILE

SCALE 1" = 10'-0

Stantec

PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BHO 1443 (39)
FILE NAME: ...\Drawing\09-clar-bdr.dgn	PLOT DATE: 7/23/2009
PROJECT LEADER: MJC	DRAWN BY: AET
DESIGNED BY: SEB	CHECKED BY: MJC
SITE PLAN AND PROFILE	SHEET 9 OF 24

NARRATIVE

PROJECT DESCRIPTION

THIS PROJECT IS LOCATED APPROXIMATELY 2.45 MILES WEST OF THE INTERSECTION OF MIDDLE ROAD (T.H. 1) AND WALKER MOUNTAIN ROAD (T.H. 3) IN CLARENDON, VT AND PROCEEDS WESTERLY APPROXIMATELY 0.032 MILES ALONG WALKER MOUNTAIN ROAD (T.H. #3)

WORK TO BE PERFORMED FOR THIS PROJECT IS THE COMPLETE REMOVAL AND RECONSTRUCTION OF THE EXISTING SUPERSTRUCTURE, REHABILITATION OF EXISTING ABUTMENTS AND RE-CONSTRUCTION OF THE APPROACHES. THE NEW BRIDGE WILL BE CONSTRUCTED ALONG THE EXISTING ALIGNMENT. HOWEVER, THE VERTICAL ALIGNMENT HAS BEEN RAISED APPROXIMATELY 1'-3" ON THE WEST END AND APPROXIMATELY 4" ON THE EAST END TO ALLOW FOR DRAINAGE OFF THE EASTERN END OF THE BRIDGE. THE APPROXIMATE AREA OF EARTH DISTURBANCE FOR THIS PROJECT IS ESTIMATED TO BE 0.05 ACRES.

SITE INVENTORY AND ANALYSIS

WALKER MT. ROAD IS A PAVED ROADWAY. IT COMES FROM THE EAST AND TURNS SHARPLY TO THE NORTHWEST AFTER CROSSING THE RIVER. APPROXIMATELY 100 FEET WEST OF THE BRIDGE, GRAVEL PIT ROAD INTERSECTS WALKER MT. ROAD. GRAVEL PIT ROAD IS ALSO PAVED AND HEADS TO THE SOUTHWEST. BOTH ROADWAYS SLOPE UPWARD FROM THE BRIDGE WITH LAWNS ALONG THE WEST EDGE OF WALKER MT. ROAD AND ALONG BOTH EDGES OF GRAVEL PIT ROAD. THE AREA EAST OF THE BRIDGE IS WOODED ON THE NORTH SIDE OF WALKER MT. ROAD AND HAS LAWNS ON THE SOUTH SIDE. THE WOODS SLOPE AWAY FROM THE ROAD, WHILE THE LAWNS SLOPE UPWARD FROM THE ROAD.

THE CLARENDON RIVER RUNS DIRECTLY THROUGH THE SITE, TRAVELING FROM THE SOUTH TO THE NORTH. LOW LYING FIELDS ARE LOCATED ON BOTH SIDES OF THE RIVER NORTH OF THE BRIDGE. BEYOND THE FIELDS ARE STEEP WOODED BANKS THAT ASCEND TO WALKER MT. ROAD ON THE WEST AND MORE WOODS ON THE EAST. THERE IS A DITCH LINE ALONG THE EAST AND NORTH EDGE OF WALKER MT. ROAD WEST OF THE BRIDGE. WATER ON WALKER MT. ROAD EAST OF THE BRIDGE CASCADES OVER THE ROADWAY INTO THE FIELD AND WOODS TO ITS NORTH. THE BANKS SOUTH OF THE BRIDGE ARE STEEP AND WOODED. THEY START AT THE EDGE OF THE RIVER AND ASCEND TO THE LAWNS ON TOP OF THE BANKS. THERE IS A DITCH LINE ON THE SOUTH SIDE OF GRAVEL PIT ROAD WHICH CONTINUES ALONG THE SOUTH SIDE OF WALKER MT. ROAD. AT THE WOODS EDGE IT TURNS SOUTH AND GOES DOWN TO THE RIVER. EAST OF THE BRIDGE THERE IS A DITCH LINE NEXT TO THE SOUTHEAST CORNER OF THE ABUTMENT. ALL FOUR CORNERS OF THE ABUTMENTS ARE ERODED DUE TO WATER RUNNING AROUND THEIR ENDS.

AERIAL ELECTRICAL AND TELEPHONE LINES RUN ACROSS THE NORTH SIDE OF THE SITE FROM A POLE LOCATED APPROXIMATELY 40 FEET EAST OF THE EASTERN ABUTMENT ON THE SOUTH SIDE OF WALKER MT. ROAD. THERE IS AN OLD STONE FOUNDATION, WHICH IS CONSIDERED ARCHAEOLOGICALLY SENSITIVE, LOCATED EAST OF THE BRIDGE AND NORTH OF WALKER MT. ROAD ON LAND OWNED BY THE TOWN OF CLARENDON. THIS FOUNDATION SHALL REMAIN UNDISTURBED DURING CONSTRUCTION AND BARRIER FENCE SHALL BE PLACED ALONG THE SOUTH SIDE OF THE FOUNDATION PER THE EROSION AND SEDIMENT CONTROL PLAN.

THE ON-SITE SOILS CONSIST OF GRAVEL AND SAND PLACED DURING THE CONSTRUCTION OF THE EXISTING ABUTMENTS AND ROADWAY. THE SOIL ERODIBILITY COEFFICIENT RANGES FROM 0.23 AND LOWER, THEREFORE THE SOILS HAVE A LOW ERODIBILITY POTENTIAL.

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 BASED ON THE PROJECT IMPACT AREA. 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 THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

TEMPORARY EROSION AND SEDIMENT CONTROL

BARRIER FENCING:
FENCING WILL BE USED TO DEMARCATE LIMITS OF CONSTRUCTION AS DIRECTED BY THE ENGINEER. FENCING SHALL BE PAID FOR UNDER ITEM 653.50, BARRIER FENCE.

VEHICLE TRACKING PAD:
A VEHICLE TRACKING PAD SHALL BE USED, IF NECESSARY, TO PROVIDE A STABILIZED ENTRANCE TO ALL CONSTRUCTION AREAS AND TO ASSIST WITH THE REMOVAL OF SEDIMENT CAPTURED ON THE TIRES OF CONSTRUCTION VEHICLES ENTERING ONTO PUBLIC RIGHTS OF WAY OR STREETS. LOCATION OF VEHICLE TRACKING PAD(S) SHALL BE APPROVED BY THE ENGINEER AND THE ON-SITE COORDINATOR.

SILT FENCE:
SILT FENCE IS TO BE CONSTRUCTED AS SHOWN ON THE PLANS WITH PROPER EMBEDMENT AND ANCHORING, AS WELL AS ENDS THAT ARE "CURLED" UPHILL TO PROMOTE PONDING AND SETTLING OF SEDIMENT. SEE DETAILS ON SHEET 13.

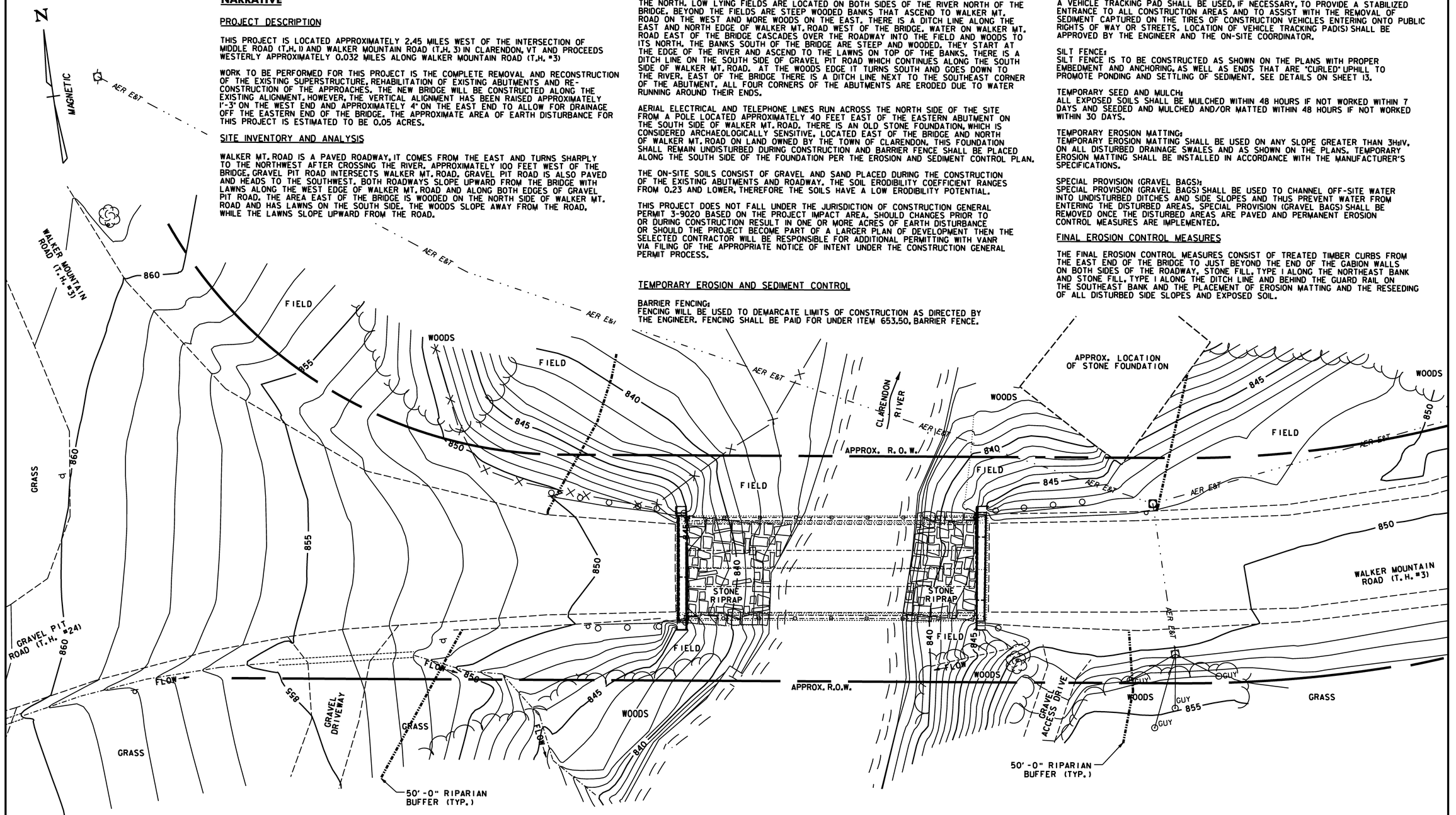
TEMPORARY SEED AND MULCH:
ALL EXPOSED SOILS SHALL BE MULCHED WITHIN 48 HOURS IF NOT WORKED WITHIN 7 DAYS AND SEEDED AND MULCHED AND/OR MATTED WITHIN 48 HOURS IF NOT WORKED WITHIN 30 DAYS.

TEMPORARY EROSION MATTING:
TEMPORARY EROSION MATTING SHALL BE USED ON ANY SLOPE GREATER THAN 3H:1V. ON ALL DISTURBED DRAINAGE SWALES AND AS SHOWN ON THE PLANS. TEMPORARY EROSION MATTING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

SPECIAL PROVISION (GRAVEL BAGS):
SPECIAL PROVISION (GRAVEL BAGS) SHALL BE USED TO CHANNEL OFF-SITE WATER INTO UNDISTURBED DITCHES AND SIDE SLOPES AND THUS PREVENT WATER FROM ENTERING THE DISTURBED AREAS. SPECIAL PROVISION (GRAVEL BAGS) SHALL BE REMOVED ONCE THE DISTURBED AREAS ARE PAVED AND PERMANENT EROSION CONTROL MEASURES ARE IMPLEMENTED.

FINAL EROSION CONTROL MEASURES

THE FINAL EROSION CONTROL MEASURES CONSIST OF TREATED TIMBER CURBS FROM THE EAST END OF THE BRIDGE TO JUST BEYOND THE END OF THE GABION WALLS ON BOTH SIDES OF THE ROADWAY, STONE FILL, TYPE I ALONG THE NORTHEAST BANK AND STONE FILL, TYPE I ALONG THE DITCH LINE AND BEHIND THE GUARD RAIL ON THE SOUTHEAST BANK AND THE PLACEMENT OF EROSION MATTING AND THE RESEEDING OF ALL DISTURBED SIDE SLOPES AND EXPOSED SOIL.



SCALE 1" = 10'-0
10 0 10

SURVEYED BY: VERMONT SURVEY CONSULT., INC.
SURVEYED DATE: MAY 26, 2000

DATUM
VERTICAL NGVD 1988
HORIZONTAL ASSUMED

Stantec

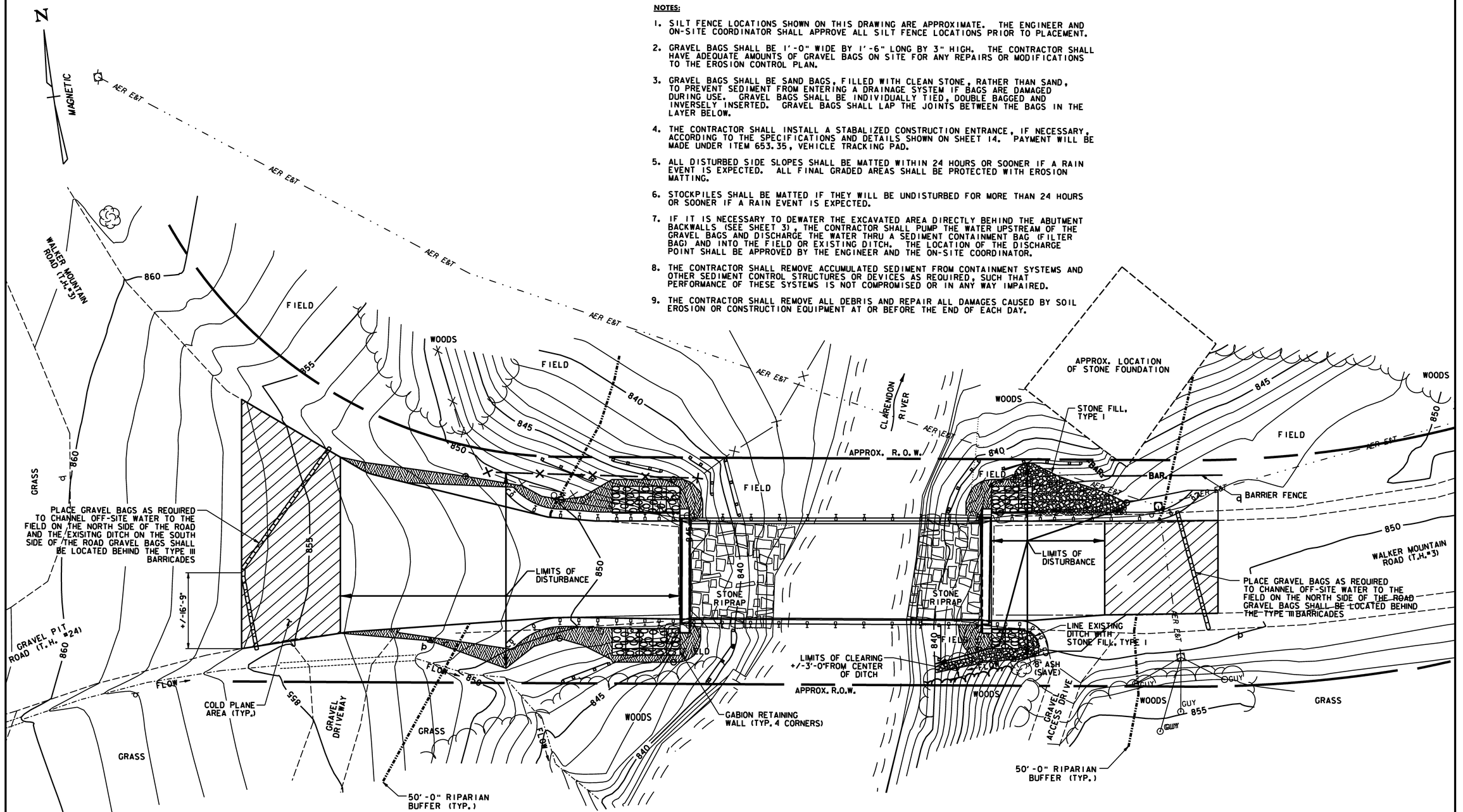
PROJECT NAME: CLARENDON
PROJECT NUMBER: BHO 1443 (39)

FILE NAME: ...\Drawing\10-clar-exist.dgn
PROJECT LEADER: MJC
DESIGNED BY: SEB
EXIST. COND. SITE PLAN & NARR.

PLOT DATE: 7/2/2009
DRAWN BY: SEB
CHECKED BY: MJC
SHEET 10 OF 24

NOTES:

1. SILT FENCE LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE. THE ENGINEER AND ON-SITE COORDINATOR SHALL APPROVE ALL SILT FENCE LOCATIONS PRIOR TO PLACEMENT.
2. GRAVEL BAGS SHALL BE 1'-0" WIDE BY 1'-6" LONG BY 3" HIGH. THE CONTRACTOR SHALL HAVE ADEQUATE AMOUNTS OF GRAVEL BAGS ON SITE FOR ANY REPAIRS OR MODIFICATIONS TO THE EROSION CONTROL PLAN.
3. GRAVEL BAGS SHALL BE SAND BAGS, FILLED WITH CLEAN STONE, RATHER THAN SAND, TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM IF BAGS ARE DAMAGED DURING USE. GRAVEL BAGS SHALL BE INDIVIDUALLY TIED, DOUBLE BAGGED AND INVERSELY INSERTED. GRAVEL BAGS SHALL LAP THE JOINTS BETWEEN THE BAGS IN THE LAYER BELOW.
4. THE CONTRACTOR SHALL INSTALL A STABALIZED CONSTRUCTION ENTRANCE, IF NECESSARY, ACCORDING TO THE SPECIFICATIONS AND DETAILS SHOWN ON SHEET 14. PAYMENT WILL BE MADE UNDER ITEM 653.35, VEHICLE TRACKING PAD.
5. ALL DISTURBED SIDE SLOPES SHALL BE MATTED WITHIN 24 HOURS OR SOONER IF A RAIN EVENT IS EXPECTED. ALL FINAL GRADED AREAS SHALL BE PROTECTED WITH EROSION MATTING.
6. STOCKPILES SHALL BE MATTED IF THEY WILL BE UNDISTURBED FOR MORE THAN 24 HOURS OR SOONER IF A RAIN EVENT IS EXPECTED.
7. IF IT IS NECESSARY TO DEWATER THE EXCAVATED AREA DIRECTLY BEHIND THE ABUTMENT BACKWALLS (SEE SHEET 31), THE CONTRACTOR SHALL PUMP THE WATER UPSTREAM OF THE GRAVEL BAGS AND DISCHARGE THE WATER THRU A SEDIMENT CONTAINMENT BAG (FILTER BAG) AND INTO THE FIELD OR EXISTING DITCH. THE LOCATION OF THE DISCHARGE POINT SHALL BE APPROVED BY THE ENGINEER AND THE ON-SITE COORDINATOR.
8. THE CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENT FROM CONTAINMENT SYSTEMS AND OTHER SEDIMENT CONTROL STRUCTURES OR DEVICES AS REQUIRED, SUCH THAT PERFORMANCE OF THESE SYSTEMS IS NOT COMPROMISED OR IN ANY WAY IMPAIRED.
9. THE CONTRACTOR SHALL REMOVE ALL DEBRIS AND REPAIR ALL DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH DAY.



SURVEYED BY:	VERMONT SURVEY CONSULT., INC.
SURVEYED DATE:	MAY 26, 2000
DATUM	
VERTICAL	NGVD 1988
HORIZONTAL	ASSUMED

LEGEND

- TEMPORARY EROSION MATTING (PAYMENT FOR TEMPORARY EROSION MATTING SHALL BE MADE UNDER ITEM 653.20)
- GRAVEL BAGS (PAYMENT FOR GRAVEL BAGS SHALL BE MADE UNDER ITEM 900.620 SPECIAL PROVISION (GRAVEL BAGS))
- GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAYMENT FOR SILT FENCE SHALL BE MADE UNDER ITEM 649.515)
- BAR - BARRIER FENCE (PAYMENT FOR BARRIER FENCE SHALL BE MADE UNDER ITEM 653.50)

SCALE 1" = 10'-0

Stantec

PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BHO 1443 (39)
FILE NAME:	...\Drawing\11-clar-ecplan.dgn
PLOT DATE:	7/2/2009
PROJECT LEADER:	MJC
DRAWN BY:	SEB
DESIGNED BY:	SEB
CHECKED BY:	MJC

EROSION & SEDIMENT CONTROL PLAN SHEET 11 OF 24

N

MAGNETIC

AER E&T

WALKER MOUNTAIN ROAD (T.H. #3)

860

FIELD

855

WOODS

840

845

850

GRASS

GRAVEL PIT ROAD (T.H. #24)

GRAVEL DRIVEWAY

50'-0" RIPARIAN BUFFER (TYP.)

CLARENDON RIVER

APPROX. R.O.W.

STONE RIPRAP

APPROX. LOCATION OF STONE FOUNDATION

GRAVEL ACCESS DRIVE

GUY

NOTE:

PLEASE REFER TO THE PROFILE (SHEET 9) AND ROADWAY CROSS SECTIONS (SHEET 24) FOR FINAL GRADING.

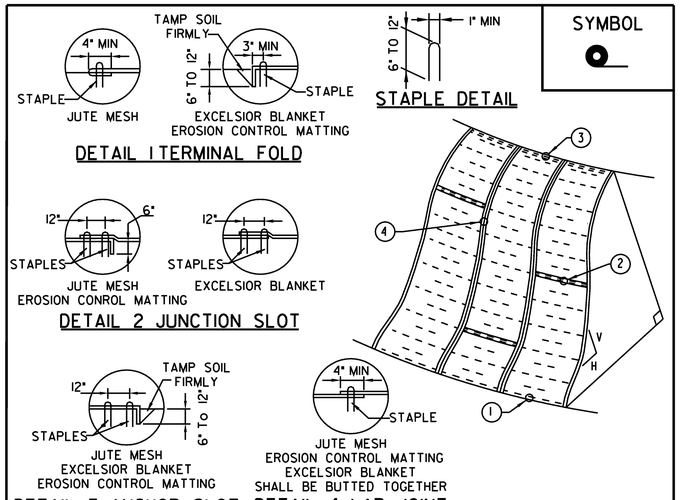
SCALE 1" = 10'-0"

10 0 10

SURVEYED BY:	VERMONT SURVEY CONSULT., INC.
SURVEYED DATE:	MAY 26, 2000
DATUM	
VERTICAL	NGVD 1988
HORIZONTAL	ASSUMED

Stantec

PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BHO 1443 (39)
FILE NAME: ...\Drawing\12-clar-final.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: SEB
DESIGNED BY: SEB	CHECKED BY: MJC
FINAL CONDITIONS SITE PLAN	SHEET 12 OF 24



CONSTRUCTION SPECIFICATIONS

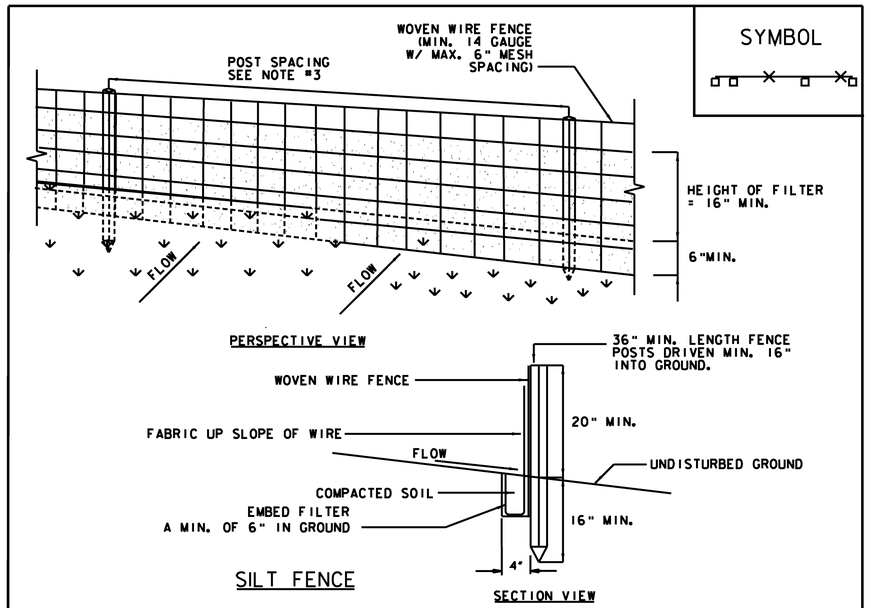
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED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

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.20 TEMPORARY EROSION MATTING



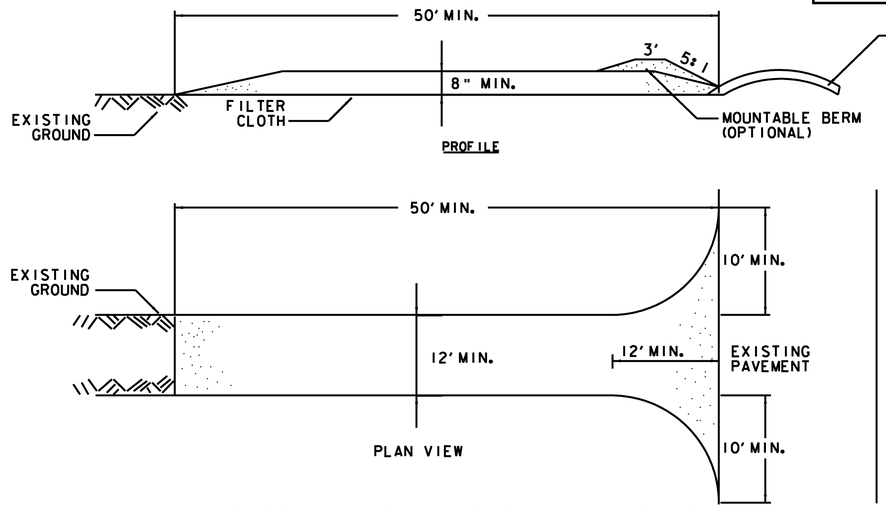
CONSTRUCTION SPECIFICATION

1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UP SLOPE OF RECEIVING WATERS.
2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, 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'. FOR FILTER-CLOTH FENCE, 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 SIX INCHES AND FOLDED.
6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.
8. ITEMS SHALL BE PAID FOR UNDER ITEM 649.515 GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED.

Stantec

PROJECT NAME: CLARENDON	
PROJECT NUMBER: BHO 1443 (39)	
FILE NAME: ...\Drawing\13-clar-ecdetl.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: SEB
DESIGNED BY: SEB	CHECKED BY: MJC
EROSION CONTROL DETAILS 1	SHEET 13 OF 24

SYMBOL



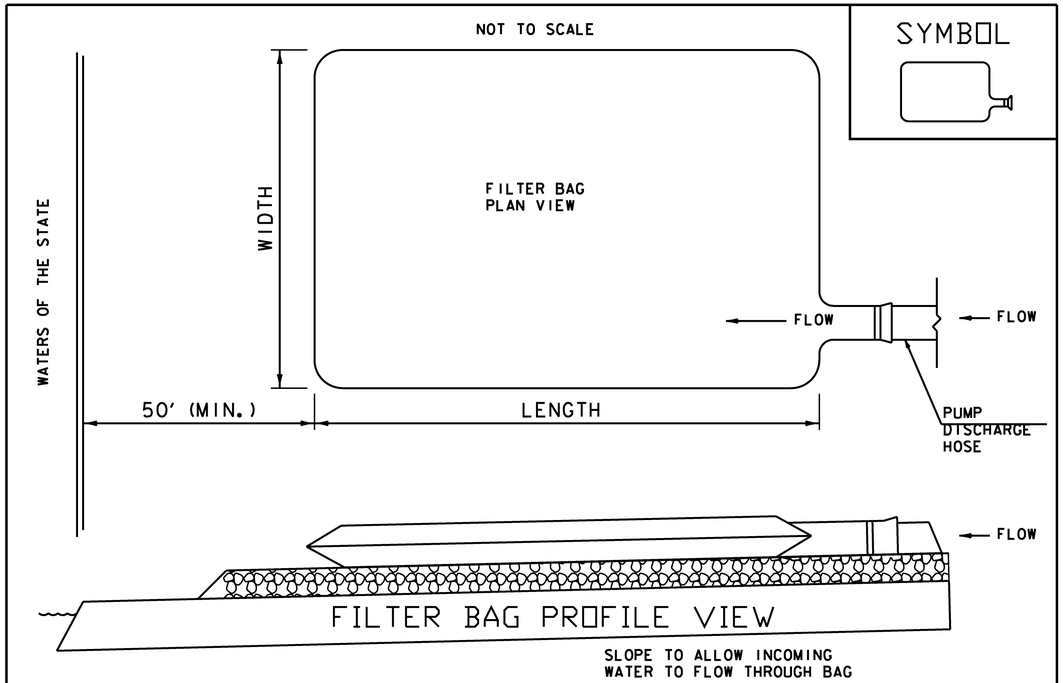
STABILIZED CONSTRUCTION ENTRANCE

CONSTRUCTION SPECIFICATION

1. STONE SIZE - USE 1-4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH APPLIES).
3. THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTURE ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.
10. THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.35 VEHICLE TRACKING PAD.

SYMBOL

NOT TO SCALE



APPLICATION NOTES:

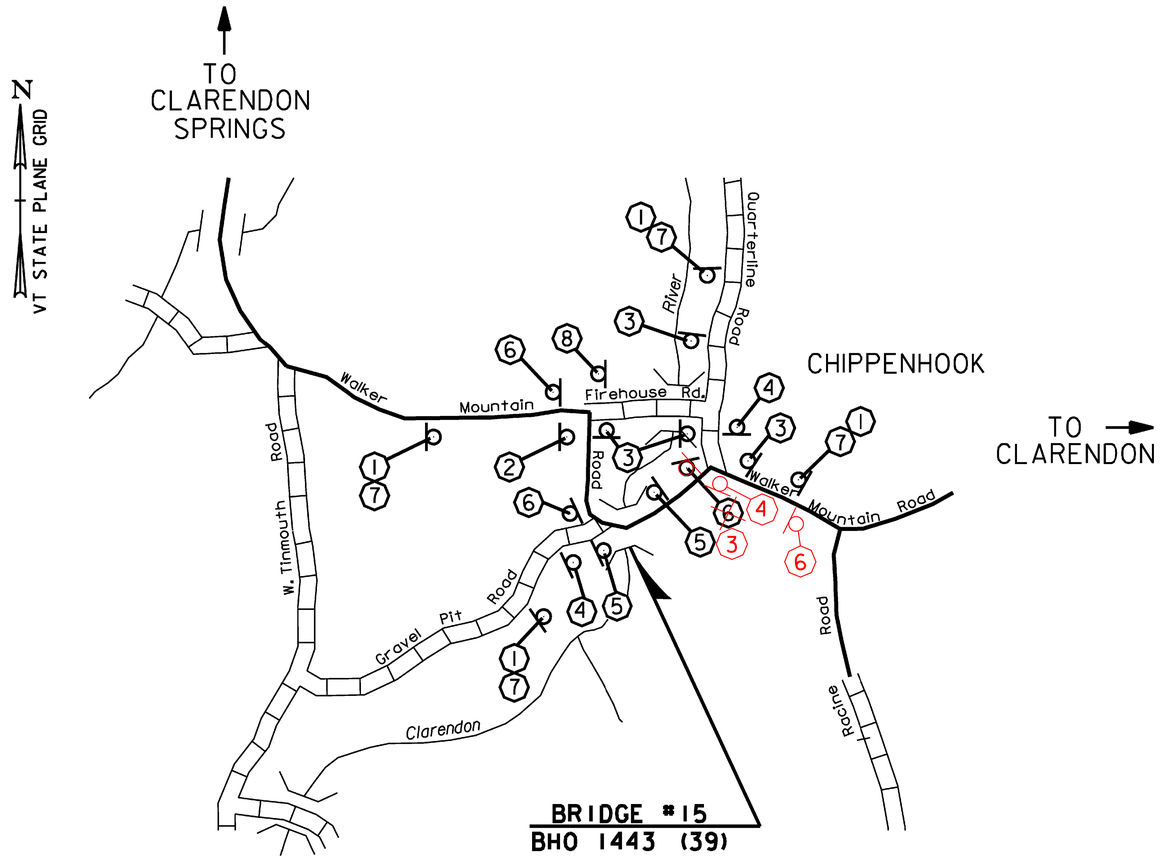
THE PRIMARY PURPOSE OF THE FILTER BAG IS TO RETAIN SILT, SAND, AND FINES DURING DEWATERING OPERATIONS WHILE ALLOWING WATER TO PASS THROUGH THE BAG.

GENERAL NOTES:

1. FILTER BAG SHALL BE INSTALLED ON A VEGETATED SLOPE TO ALLOW INCOMING WATER TO FLOW THROUGH THE BAG.
2. FILTER BAGS MAY ALSO BE PLACED ON COARSE AGGREGATE, STONE, OR HAYBALES TO INCREASE FILTRATION EFFICIENCY.
3. FILTER BAG SHALL BE LOCATED A MINIMUM OF 50 FEET FROM WATERS OF THE STATE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
4. THE NECK OF THE FILTER BAG SHALL BE STRAPPED TIGHTLY TO THE DISCHARGE HOSE.
5. A FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A REASONABLE RATE.
6. FILTER BAG SHALL BE DISPOSED OF AS APPROVED IN THE EPSC PLAN OR AS DIRECTED BY THE ENGINEER.
7. THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.45 FILTER BAG

Stantec

PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BHO 1443 (39)
FILE NAME: ...\Drawing\14-clar-ecdet2.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: SEB
DESIGNED BY: SEB	CHECKED BY: MJC
EROSION CONTROL DETAILS 2	SHEET 14 OF 24



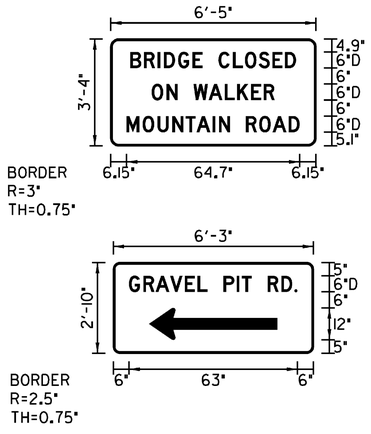
TRAFFIC CONTROL PLAN

APPROX. SCALE: 1"=500'

NOTES:

1. ALL TRAFFIC SIGNS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2003 EDITION.
2. "BRIDGE CLOSED" SIGNS SHALL BE MOUNTED AND MAINTAINED ON TYPE III MODIFIED BARRICADES.
3. TYPE III CONSTRUCTION BARRICADES AND TEMPORARY TRAFFIC BARRIERS SHALL BE PLACED SO AS TO PHYSICALLY EXCLUDE TRAFFIC FROM THE ENTIRE ROADWAY WIDTH OR AT THE DISCRETION OF THE ENGINEER. TEMPORARY TRAFFIC BARRIERS WILL BE PAID FOR UNDER ITEM 621.90.
4. ALL ORANGE SIGNS SHALL BE FABRICATED USING RETROREFLECTORIZED FLUORESCENT ORANGE COLORED SHEETING.
5. USE TYPE A SIGN WITH BACKGROUND PER NOTE 4 AND NON-RETROREFLECTIVE BLACK LETTERING.
6. "BRIDGE CLOSED" SIGN PLACEMENT MAY CHANGE WITH FIELD CONDITIONS OR AT THE DISCRETION OF THE ENGINEER.
7. ALL COSTS OF INSTALLING, MAINTAINING, AND REMOVING THE SIGNS AND BARRICADES IN THIS TRAFFIC CONTROL PLAN AS NECESSARY TO MEET PROJECT CONDITIONS WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10.
8. REFER TO VAOT STANDARD E-100 FOR CONSTRUCTION APPROACH SIGNING AT BRIDGE.
9. THE "BRIDGE CLOSED ON WALKER MOUNTAIN ROAD" SIGN SHALL BE ERECTED DIRECTLY BELOW THE "DETOUR AHEAD" SIGN.
10. DETOUR SIGNS SHALL BE INSTALLED SUCH THAT THEY DO NOT OBSTRUCT VISIBILITY OF EXISTING TRAFFIC CONTROL DEVICES OR CORNER SIGHT DISTANCE.

PLAN REF. SYMBOL	ID NUMBER	SIGN TEXT	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	NUMBER OF SIGNS REQ'D.	TOTAL AREA (SQ FT)	REMARKS
(1)	W20-2	DETOUR AHEAD	48"	48"	4	16.00	
(2)	M4-9V	DETOUR ▲	30"	24"	1	5.00	
(3)	M4-9R	DETOUR →	30"	24"	4	5.00	
(4)	M4-9L	DETOUR ←	30"	24"	2	5.00	
(5)	R11-2C	BRIDGE CLOSED	48"	30"	2	10.00	SEE NOTES 2 & 3
(6)	M4-8a	END DETOUR	24"	18"	3	3.00	
(7)	---	BRIDGE CLOSED ON WALKER MOUNTAIN ROAD	77"	40"	4	21.39	SEE NOTE 5 & 9
(8)	---	GRAVEL PIT RD. ←	75"	34"	1	17.71	SEE NOTE 5



NON-STANDARD CONSTRUCTION SIGNS

Stantec

PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BHO 1443 (39)
FILE NAME: ...\Drawing\15-clar-traffic.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: AET
DESIGNED BY: SEB	CHECKED BY: MJC
TRAFFIC CONTROL PLAN	SHEET 15 OF 24

PROJECT NOTES

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT, AGENCY OF TRANSPORTATION, 2006 STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 2002, AND ITS LATEST REVISIONS.
2. ALL WORK ON THIS PROJECT SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS. NO ADDITIONAL R.O.W. RIGHTS ARE ANTICIPATED FOR THIS PROJECT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY PROJECT SIGNING AND BARRICADES SHOWN ON THE PLANS. ALL COSTS ASSOCIATED WITH THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10, TRAFFIC CONTROL.
4. DURING CONSTRUCTION, TOWN HIGHWAY 3 WILL BE CLOSED TO THROUGH TRAFFIC. ACCESS TO ALL EXISTING SIDE ROADS, DRIVES AND PARKING AREAS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR WILL NOTIFY THE TOWN OF CLARENDON, ADMINISTRATIVE ASSISTANT, LINDA TROMBLEY AT (802)-747-4074, TWO WEEKS AHEAD OF TIME, OF THEIR INTENTION TO CLOSE THE ROAD.
5. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AT 68 DEGREES FAHRENHEIT.
6. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS, CONSTRUCTION DIMENSIONS AND ELEVATIONS. ANY DISCREPANCIES SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER.

EARTHWORK AND RELATED ITEMS

7. THE FOLLOWING SHALL BE PAID FOR UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE": REMOVAL AND DISPOSAL OF THE EXISTING BRIDGE DECK, CURBS, BRIDGE RAIL, STEEL BEAMS AND BACK WALLS. REMOVAL AND DISPOSAL OF THE BRIDGE PAVEMENT SHALL BE PAID FOR UNDER ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT." PARTIAL REMOVAL OF STRUCTURE WILL ALSO INCLUDE REMOVING ANY PART OF THE EXISTING ABUTMENTS WHICH IS ABOVE ELEVATION 844.33. THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE STRUCTURAL STEEL.
8. BACKFILLING BEHIND ABUTMENTS SHALL NOT BEGIN UNTIL THE ABUTMENT AND DECK CONSTRUCTION IS COMPLETE AND THE CURING PERIOD IS UP. THE DIFFERENCE IN ELEVATION OF FILL BEHIND THE ABUTMENTS AT ANY TIME DURING BACKFILLING OPERATIONS SHALL NOT EXCEED TWO (2) FEET.

CONCRETE AND REINFORCING STEEL

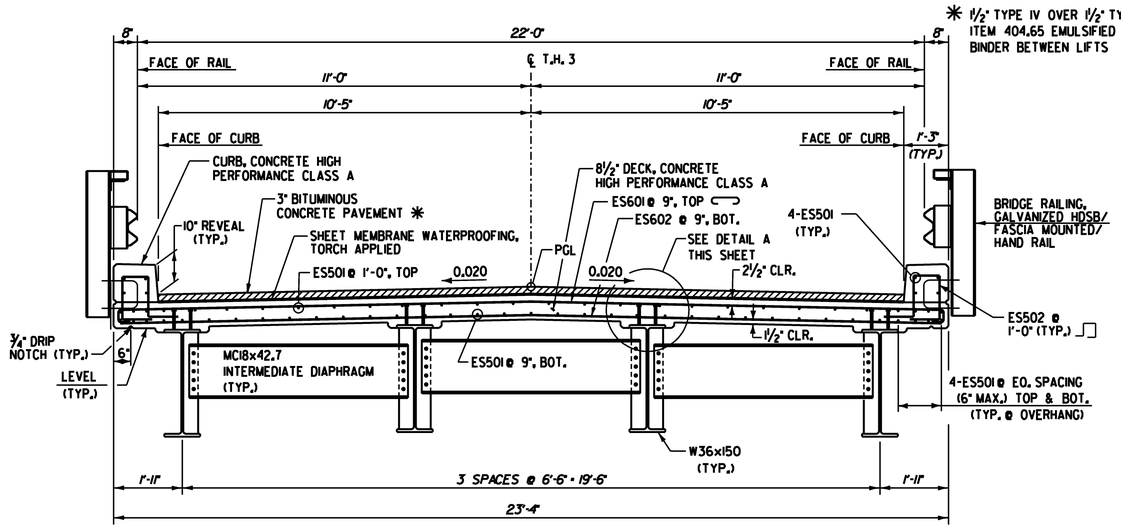
9. CONCRETE FOR THE DECK, CURBS AND CURTAIN WALL SHALL BE HIGH PERFORMANCE CLASS A AND WILL BE PAID FOR UNDER ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A". ALL OTHER CONCRETE SHALL BE HIGH PERFORMANCE CLASS B AND WILL BE PAID FOR UNDER ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B" UNLESS OTHERWISE NOTED.
10. THE DECK IS TO BE PLACED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT (8) HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTORS CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A CONSTRUCTION JOINT SHALL BE USED AS SHOWN ON SHEET 20 OF THE PLANS. A NINETY-SIX (96) HOUR DELAY BETWEEN THE COMPLETION OF ONE DAY'S POUR AND THE BEGINNING OF ANY OTHER POUR SHALL BE OBSERVED.
11. NO TRAFFIC SHALL BE ALLOWED ON THE DECK UNTIL THE CURE PERIOD IS UP AND THE 28-DAY DESIGN STRENGTH IS ATTAINED, AS EVIDENCED BY TEST CYLINDERS CURED UNDER FIELD CONDITIONS.
12. WHEN CONSTRUCTING THE DECK, THE CONCRETE SHALL BE PLACED PARALLEL TO THE CENTERLINE OF BEARING SO AS TO LOAD THE BEAMS EQUALLY.
13. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF DECK BETWEEN DRIP BEADS.
14. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED ONE (1) INCH.
15. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN ON SHEET 20 OF THE PLANS OR AS DIRECTED BY THE ENGINEER.
16. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. UPWARD KEYS SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
17. ALL SUPERSTRUCTURE AND CURTAIN WALL REINFORCING STEEL SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 507.17, "EPOXY COATED REINFORCING STEEL". WHEN EPOXY COATED REINFORCING STEEL IS TO BE CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL WILL NOT BE PERMITTED.
18. ALL SUBSTRUCTURE REINFORCING STEEL SHALL BE PAID FOR UNDER ITEM 507.15, "REINFORCING STEEL".
19. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE."
20. MINIMUM COVER FOR REINFORCING STEEL IN THE SUBSTRUCTURE SHALL BE TWO (2) INCHES ALONG WALL FACES AGAINST EARTH, AND THREE (3) INCHES ELSEWHERE UNLESS DETAILED OTHERWISE.
21. REINFORCING PLACEMENT TOLERANCES SHALL BE:
    SPACING +/- 1"
    CLEARANCE +/-1/4"
22. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/2" PER FOOT. ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD MID-SPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE GIVEN A MAGNESIUM FLOAT FINISH.

STRUCTURAL STEEL

23. ALL STRUCTURAL STEEL SHALL BE PAID FOR UNDER ITEM 506.50, "STRUCTURAL STEEL, ROLLED BEAM" AND SHALL CONFORM TO SECTION 506 OF THE STANDARD SPECIFICATIONS.
24. AFTER SUPERSTRUCTURE STEEL HAS BEEN SET ON THE BEARINGS, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF EACH BEAM UNDER THE DIRECTION OF THE ENGINEER. THESE ELEVATIONS SHALL BE USED IN DETERMINING FINAL GRADES.
25. FASCIA OVERHANG BRACKETS OR SIMILAR FALSE WORK SHALL BE SPACED AT A MAXIMUM OF FOUR (4) FEET. THE DESIGN OF THE FALSE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
26. ANY HOLES IN THE FASCIA BEAMS NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS CONFORMING TO AASHTO M164 TYPE 3. THE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19.
27. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER BOLTS CONFORMING TO AASHTO M164 TYPE 3. HOLES SHALL BE 15/16" DIAMETER, UNLESS OTHERWISE NOTED. CONNECTIONS NOT DESIGNED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL.
28. THE CHARPY V-NOTCH TEST IS REQUIRED ONLY FOR THOSE MEMBERS DESIGNATED AS SUCH IN THE PLANS AS SPECIFIED IN SUBSECTION 714.01.

Stantec

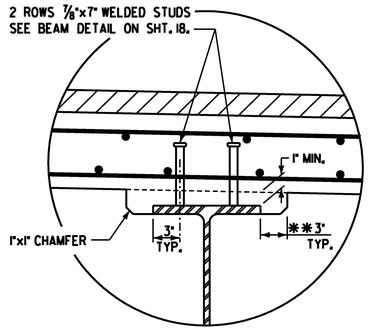
PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BHO 1443 (39)
FILE NAME: ...\Drawing\16-clar-notes.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: AET
DESIGNED BY: SEB	CHECKED BY: MJC
PROJECT NOTES	SHEET 16 OF 24



✱ 1½" TYPE IV OVER 1½" TYPE IV. ITEM 404.65 EMULSIFIED ASPHALT BINDER BETWEEN LIFTS

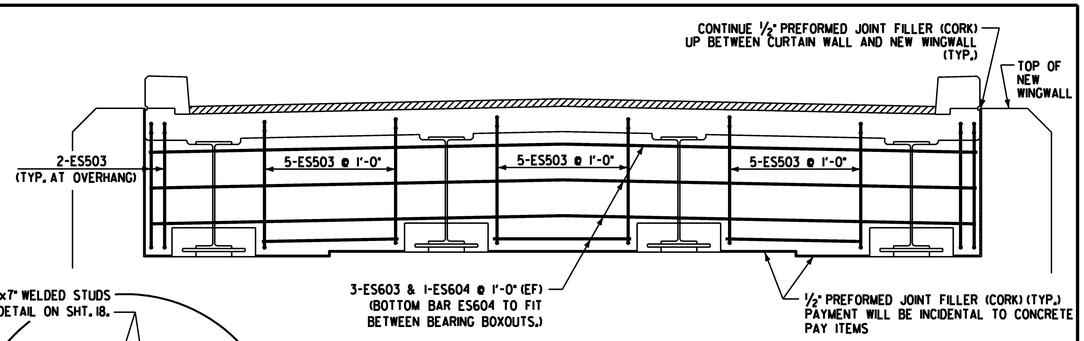
BRIDGE TYPICAL SECTION

SCALE ½" = 1'-0
1 0 1 2



DETAIL A

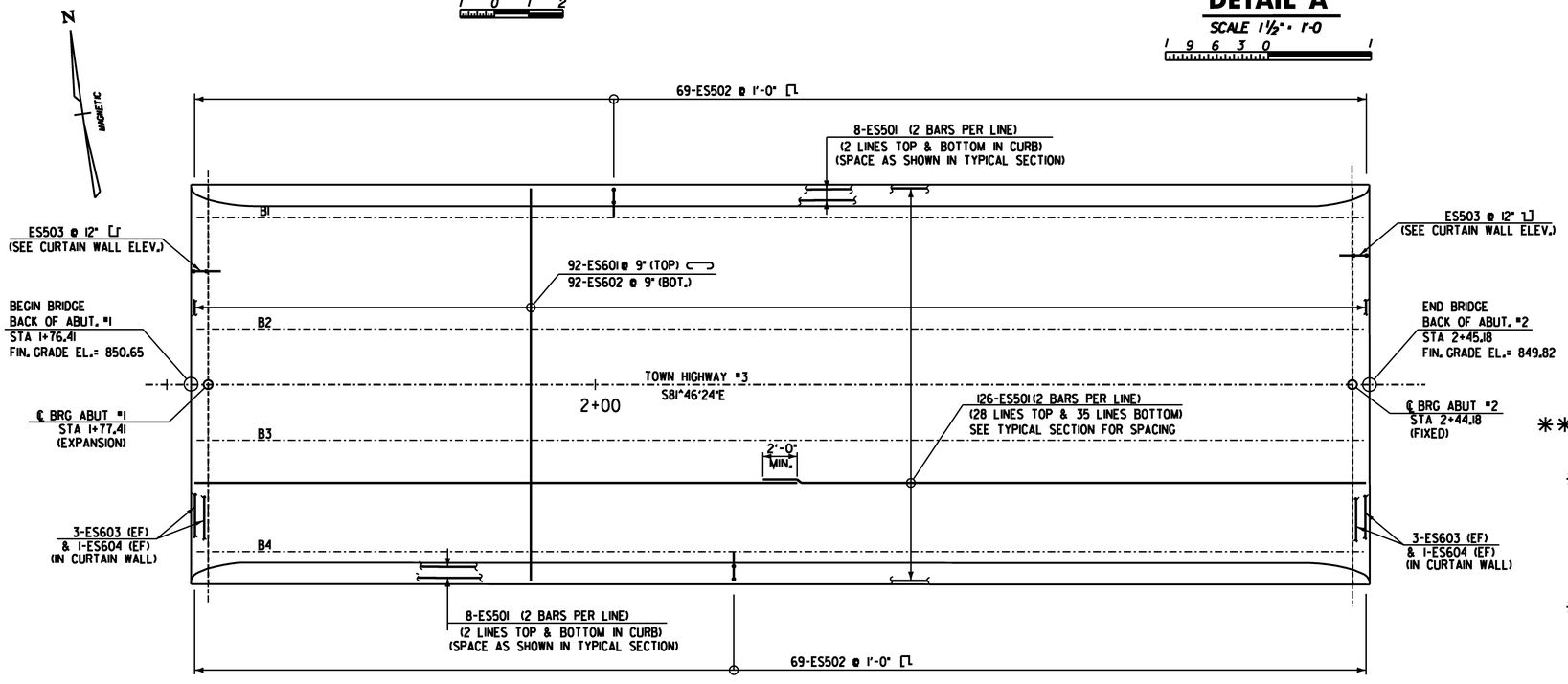
SCALE 1½" = 1'-0
1 9 6 3 0 1



CURTAIN WALL ELEVATION

SCALE ½" = 1'-0
1 0 1 2

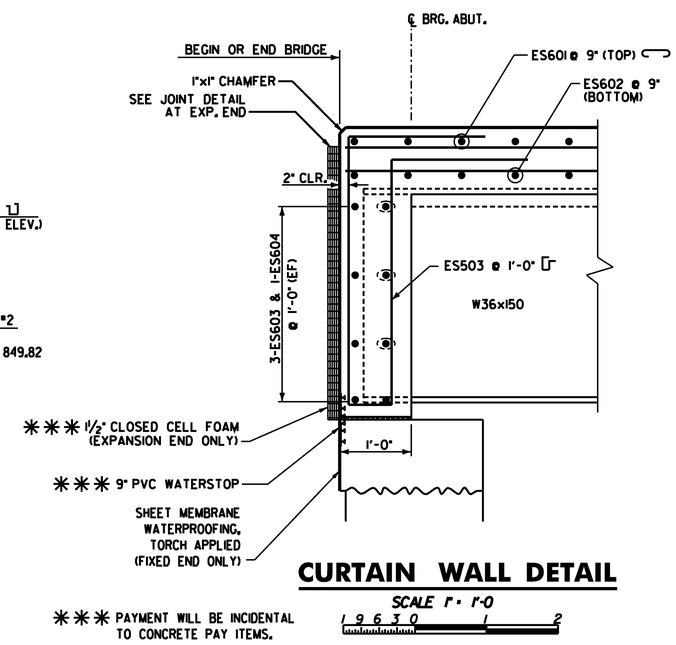
✱✱ — THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES IF APPROVED BY THE STRUCTURES ENGINEER. ANY HOLES RESULTING FROM THIS FORMING SYSTEM SHALL BE FILLED WITH MORTAR, TYPE IV. COST OF MORTAR TO BE INCIDENTAL TO ITEM 501.33.



DECK REINFORCING PLAN

SCALE ¼" = 1'-0
1 0 2 4 6

NOTE:
1. ALL REINFORCING STEEL IN DECK, CURB AND CURTAIN WALL SHALL BE EPOXY COATED, ITEM 507.17.



CURTAIN WALL DETAIL

SCALE 1" = 1'-0
1 9 6 3 0 1 2

✱✱✱ PAYMENT WILL BE INCIDENTAL TO CONCRETE PAY ITEMS.

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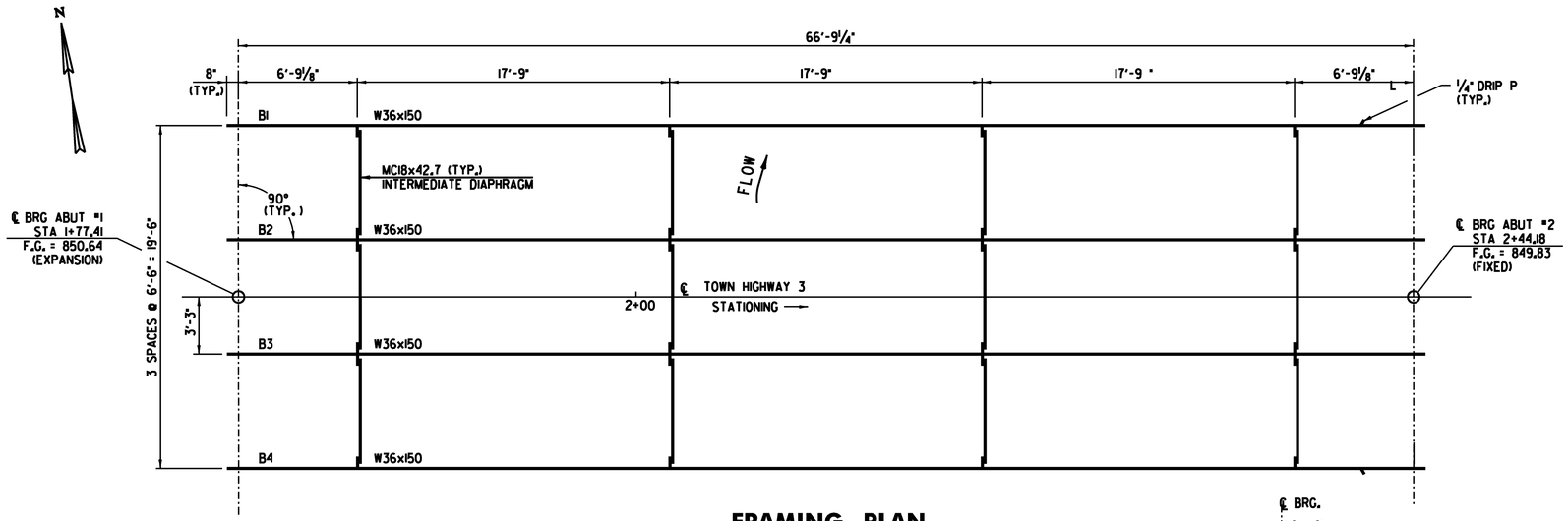
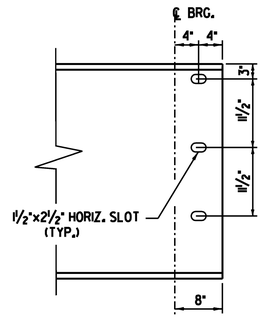
PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BHO 1443 (39)
FILE NAME: ...\Drawing\17-clar-deck.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: AET
DESIGNED BY: SEB	CHECKED BY: SEB
DECK REINFORCING PLAN	SHEET 17 OF 24



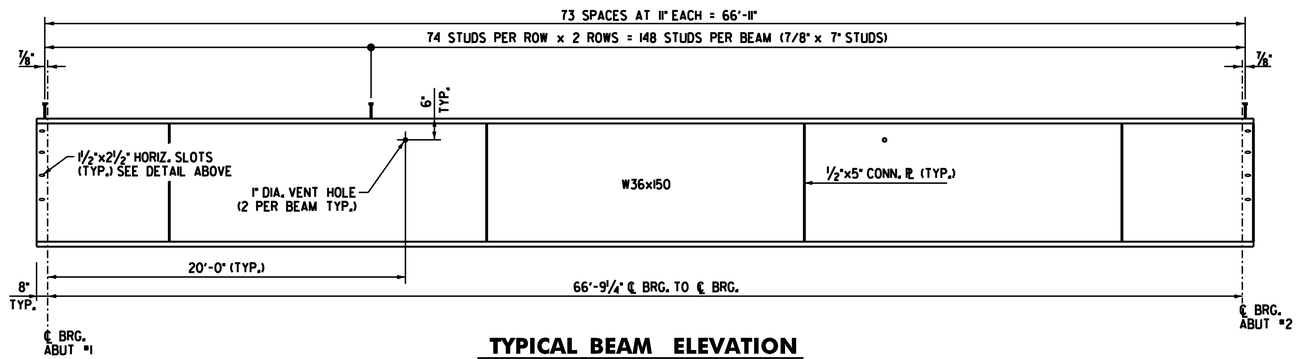
FRAMING PLAN

SCALE 1/4" = 1'-0



BEAM END DETAIL

SCALE 1" = 1'-0

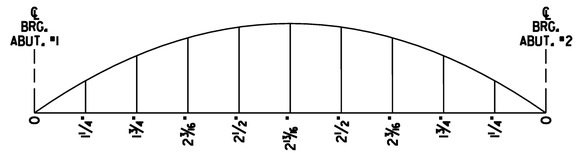


TYPICAL BEAM ELEVATION

SCALE HORIZONTAL: 1/4" = 1'-0"
SCALE VERTICAL: NOT TO SCALE

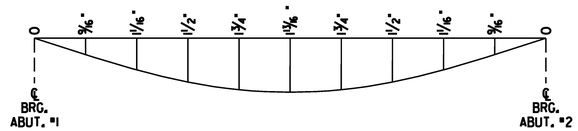
NOTES:

1. ALL STRUCTURAL STEEL SHALL BE AASHTO M270M / M270 GRADE 50W STEEL, UNPAINTED.
2. FOR DIAPHRAGM DETAILS, SEE SHEET 19.
3. THE ENDS OF THE BEAMS SHALL BE VERTICAL IN THE FINAL POSITION.
4. THE CONNECTION PLATES SHALL BE PERPENDICULAR TO THE FLANGES AND THE WEBS.
5. FOR DRIP PLATE DETAILS, SEE SHEET 19.
6. CHARPY V-NOTCH TESTING IS REQUIRED OF ALL W36x150 BEAMS IN ACCORDANCE WITH SUBSECTION 714.01.



CAMBER DIAGRAM

NTS



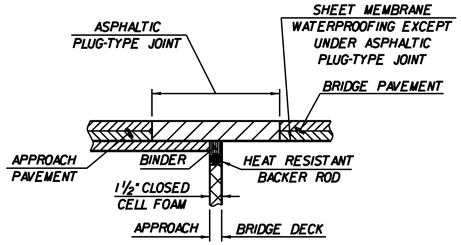
NOTES:
DEAD LOAD DEFLECTIONS SHOWN ARE FOR ALL DEAD LOADS AND SUPERIMPOSED DEAD LOADS INCLUDING BEAM AND CROSS FRAME WEIGHTS.

DEAD LOAD DEFLECTION DIAGRAM

NTS

Stantec

PROJECT NAME: CLARENDON	
PROJECT NUMBER: BH0 1443 (39)	
FILE NAME: ...\Drawing\18-clar-frame.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: TEK
DESIGNED BY: SEB	CHECKED BY: MJC
FRAMING PLAN	SHEET 18 OF 24



ASPHALTIC PLUG-TYPE JOINT DETAIL

MTS

ASPHALTIC PLUG JOINT NOTES

1. INSTALLATION

A. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.

B. EXCAVATE THE JOINT AS SHOWN ON THE PLANS WITH SAWS AND PNEUMATIC HAMMER OR A HAMMER AND CHISEL.

C. BLAST CLEAN THE JOINT AREA OF DEBRIS AND ASPHALT. THOROUGHLY DRY THE JOINT AREA WITH HOT COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.

D. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.

E. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.

F. HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.

G. INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

H. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

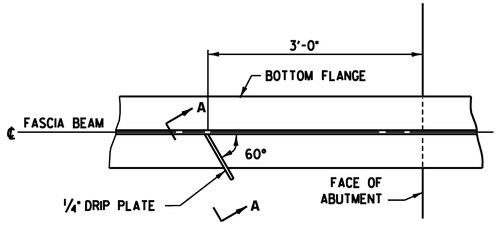
I. PROTECTED JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 51 DEG C (125 DEG F) +/-.

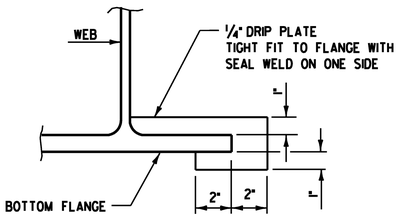
2. WEATHER LIMITATIONS. (APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL):

A. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.

B. THE ROAD SURFACE IS SUFFICIENTLY DRY.

C. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.





NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA BEAMS AS INDICATED ON THE FRAMING PLAN.

PLAN DRIP PLATE

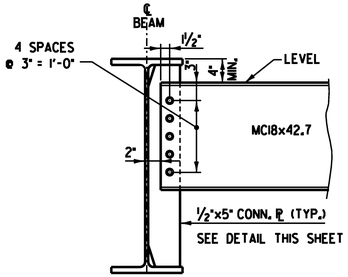
SCALE 1" = 1'-0

1 9 6 3 0 1 2

SECTION A-A

SCALE 3" = 1'-0

1 9 6 3 0 1

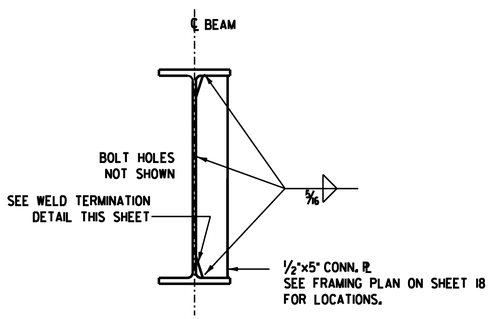


INTERMEDIATE DIAPHRAGMS

SCALE 1" = 1'-0

1 9 6 3 0 1 2

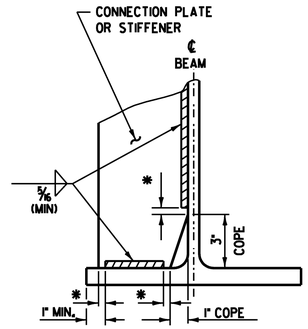
NOTE: ALL BOLTED FIELD CONNECTIONS SHALL BE MADE WITH ⅞" DIAMETER HIGH STRENGTH (AASHTO M164, TYPE 3) BOLTS PLACED IN ⅝" DIAMETER HOLES.



CONNECTION PLATE

SCALE 1" = 1'-0

1 9 6 3 0 1 2



* NO WELD FOR ¼" MIN., ½" MAX (EXCEPT MUST MAINTAIN 1" MIN. FROM EDGE OF FLANGE)

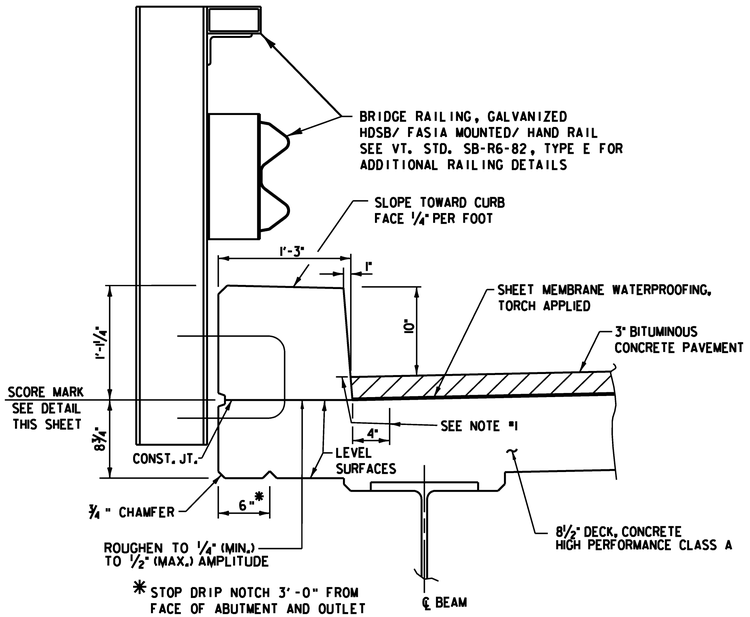
WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

SCALE 3" = 1'-0

1 9 6 3 0 1

Stantec

PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BH0 1443 (39)
FILE NAME: ...\Drawing\19-clar-miscdetsl.dgr	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: TEK
DESIGNED BY: SEB	CHECKED BY: MJC
MISCELLANEOUS DETAILS 1	SHEET 19 OF 24



NOTES:

1. INDICATES AREA ALONG DECK AND UP FACE OF CURB FOR PLACEMENT OF TWO COATS OF POLYURETHANE MEMBRANE.

2. POLYURETHANE MEMBRANE AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SHEET MEMBRANE WATERPROOFING, TORCH APPLIED

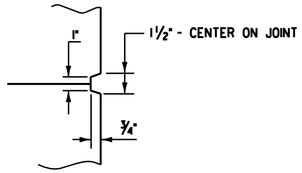
3. SHEET MEMBRANE WATERPROOFING, TORCH APPLIED SHALL EXTEND TO FACE OF CURB AS SHOWN ABOVE.

4. ALL CONCRETE IN CURBS SHALL BE CONCRETE, HIGH PERFORMANCE CLASS A.

CURB & RAIL DETAIL

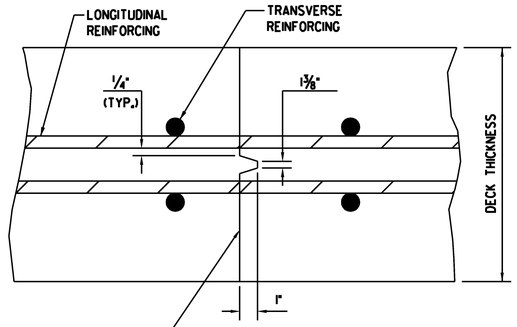
SCALE 1 1/2" = 1'-0

1 9 6 3 0 1



SCORE MARK DETAIL

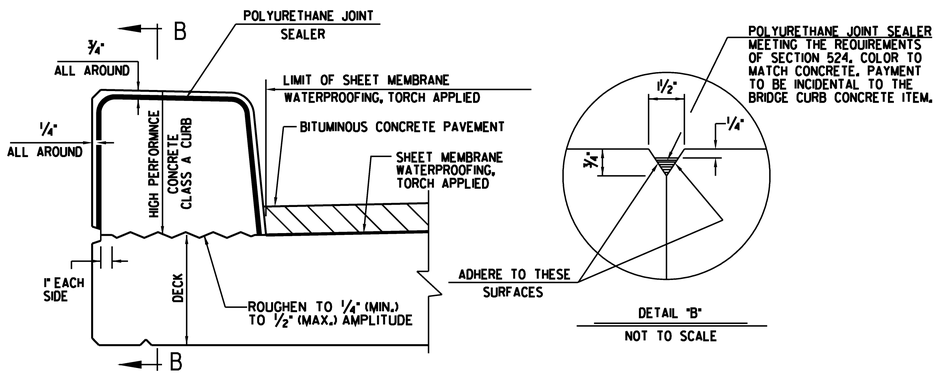
NOT TO SCALE



APPLY EPOXY BONDING COMPOUND
BEFORE PLACING NEW CONCRETE.
INCLUDE WITH COST BID FOR CONCRETE,
HIGH PERFORMANCE CLASS A.

TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS

NOT TO SCALE

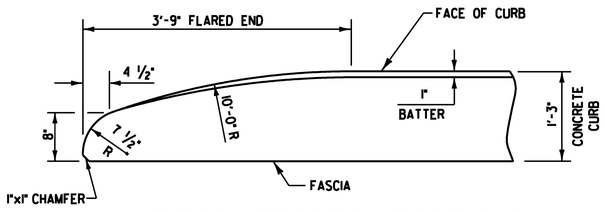


DETAIL "B"

NOT TO SCALE

TYPICAL SECTION THROUGH CONCRETE CURB CONSTRUCTION JOINT

NOT TO SCALE

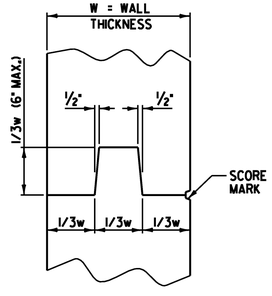


CURB REINFORCING STIRRUP BARS SHALL BE TURNED OR CUT AS REQUIRED TO FIT FLARED ENDS.

FLARED END DETAIL FOR CURB

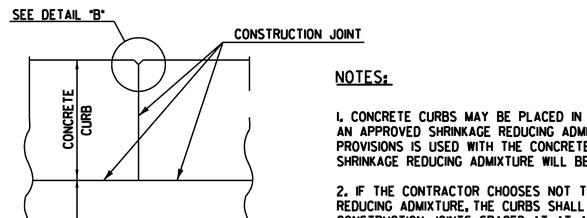
SCALE 1" = 1'-0

1 9 6 3 0 1 2



TYPICAL CONCRETE CONSTRUCTION JOINT

NOT TO SCALE



SECTION B-B

NOT TO SCALE

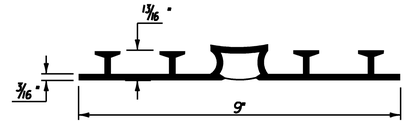
NOTES:

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 ITEM 501.33.

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

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

4. 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.

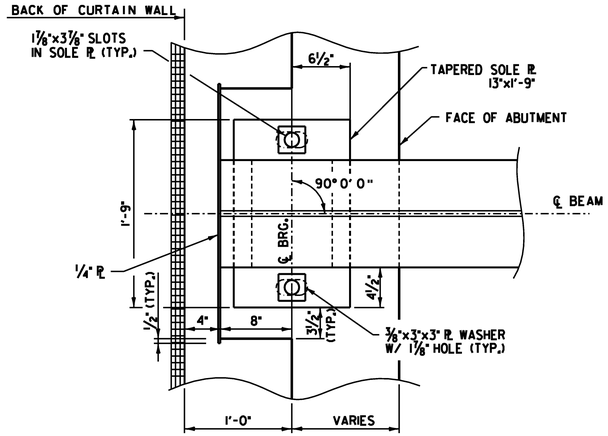


P.V.C. WATERSTOP FOR EXPANSION JOINTS

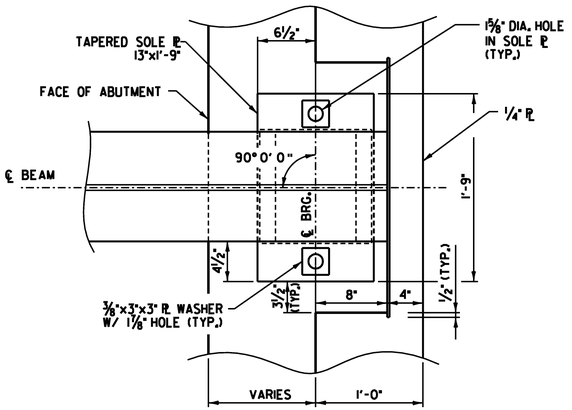
THE COSTS FOR P.V.C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE, HIGH PERFORMANCE CLASS B. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.

Stantec

PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BHO 1443 (39)
FILE NAME: ...\Drawing\20-clar-miscdets2.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: AET
DESIGNED BY: SEB	CHECKED BY: MJC
MISCELLANEOUS DETAILS II	SHEET 20 OF 24



ABUTMENT NO. 1

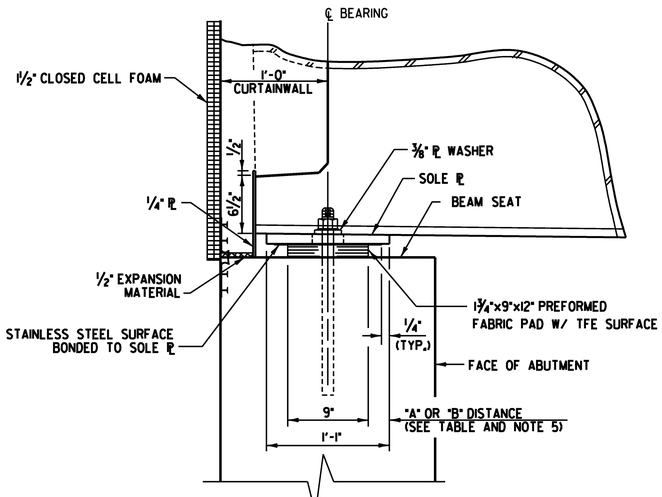


ABUTMENT NO. 2

PLAN

SCALE 1½" = 1'-0

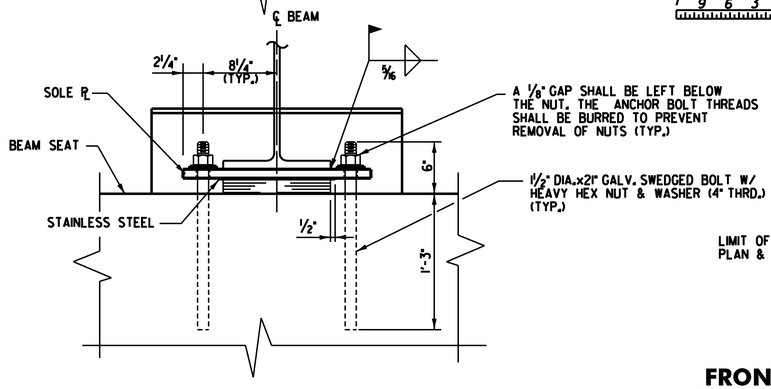
1 9 6 3 0 1



SIDE ELEVATION

SCALE 1½" = 1'-0

1 9 6 3 0 1

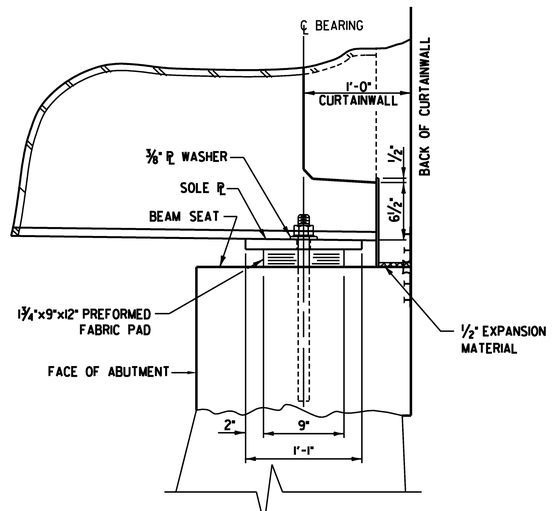


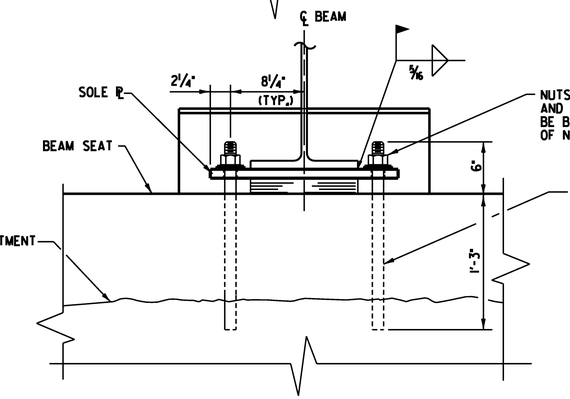
FRONT VIEW

SCALE 1½" = 1'-0

1 9 6 3 0 1

EXPANSION BEARING DETAILS @ ABUTMENT NO. 1



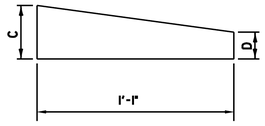


FIXED BEARING DETAILS @ ABUTMENT NO. 2

BEARING NOTES:

1. BEARINGS SHALL CONFORM TO APPLICABLE SUBSECTIONS OF THE STANDARD SPECIFICATION SECTIONS 531 AND 731.
2. BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10 "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD".
3. FABRICATION DRAWINGS CONFORMING TO STANDARD SPECIFICATIONS SUBSECTION 531.03 SHALL BE SUBMITTED TO INCLUDE WELDING AND BONDING PROCEDURES.
4. THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.
5. THE "A" DISTANCE IS LISTED FOR SETTING THE BEARING AFTER THE STRUCTURAL STEEL IS ERECTED AND BEFORE THE CONCRETE DECK IS POURED. THE "B" DISTANCE IS THE FINAL SETTING FOR THE BEARING PAD AFTER THE CONCRETE SLAB, CURB, PAVEMENT, AND BRIDGE RAIL ARE PLACED. THE DIFFERENCE IS THE THEORETICAL ELONGATION OF THE BOTTOM FLANGE DUE TO DEAD LOAD DEFLECTION. THE FINAL "B" DISTANCE, AS SHOWN IN THE TABLE, MUST BE ATTAINED WITHIN ⅛".
6. DESIGN CRITERIA:
   A. BASE PLATE TO CONCRETE DESIGN PRESSURE = 1000 P.S.I. MAXIMUM.
   B. MAXIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS.
   C. HORIZONTAL CAPACITY SHALL BE A MINIMUM OF 10% OF THE VERTICAL LOAD.
   D. DESIGN LOAD PER BEARING = 105.3 KIPS.
7. ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS STEEL) SHALL BE AASHTO M270M / M270, GRADE 36.
8. ANCHOR BOLTS SHALL HAVE A MINIMUM OF 1'-3" EMBEDMENT INTO THE CONCRETE AND SHALL CONFORM TO SUBSECTION 714.08.
9. ALL THE ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. ALL WASHERS SHALL BE ⅜" PLATE (MINIMUM). PAYMENT FOR ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 531.10.
10. BEARING DEVICES SHALL BE GALVANIZED OR METALIZED AS PER SUBSECTIONS 531.04(b) AND 506.15(a) AND (b). AREAS OF DAMAGED GALVANIZING SHALL BE COATED IN ACCORDANCE WITH ASTM A 760/A 760M AND A780. AREAS OF DAMAGED METALIZING SHALL BE COATED WITH THE SAME SEALANT USED BY THE BEARING SUPPLIER.
11. EXISTING STEEL ANCHOR BOLTS OR REINFORCING TO BE TERMINATED SHALL BE REMOVED 1" BELOW THE SURFACE OF ANY EXPOSED FACE.

STATIONING



TAPERED SOLE PLATE

N.T.S.

SOLE PL TABLE		
LOCATION	C	D
ABUTMENT #1	1⅛"	1"
ABUTMENT #2	1⅜"	1"

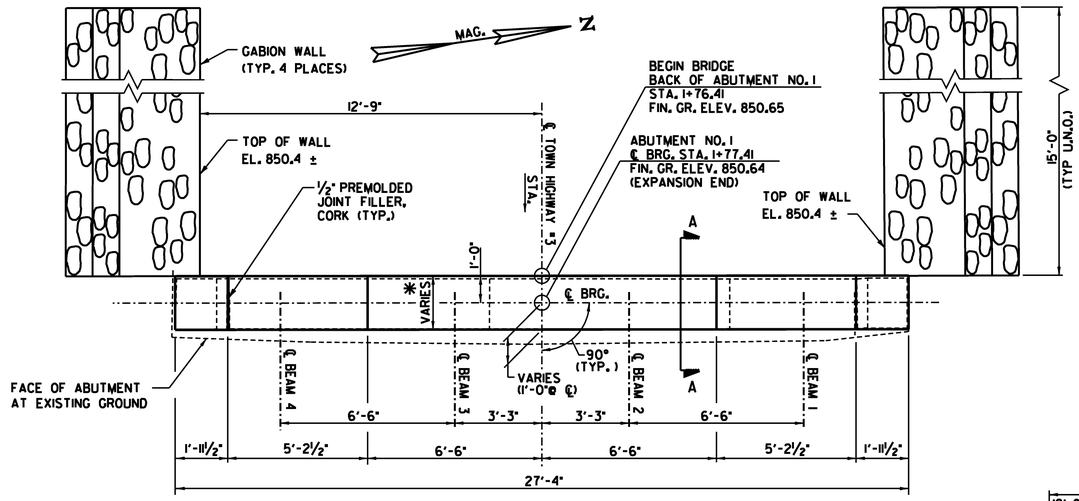
TEMPERATURE ADJUSTMENT TABLE

ABUTMENT NO. 1		
TEMP.	DIM. "A"	DIM. "B"
0°F	2⅝"	2⅜"
15°F	2⅝"	2⅜"
30°F	2½"	2¼"
45°F	2⅜"	2⅛"
60°F	2⅜"	2⅛"
75°F	2¼"	2"
90°F	2⅜"	1⅞"
105°F	2⅛"	1⅞"

Stantec

PROJECT NAME: CLARENDON
PROJECT NUMBER: BHO 1443 (39)

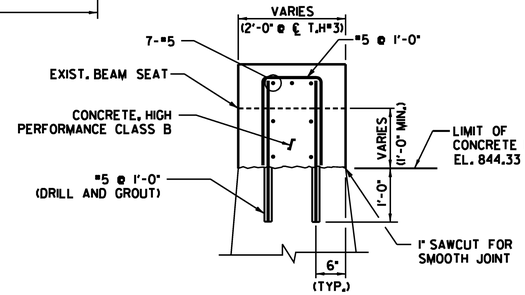
FILE NAME: ...\Drawing\21-clar-bearings.dgn PLOT DATE: 7/2/2009
PROJECT LEADER: MJC DRAWN BY: TEK
DESIGNED BY: TEK CHECKED BY: GAB
BEARING DETAILS SHEET 21 OF 24



PLAN – ABUTMENT #1

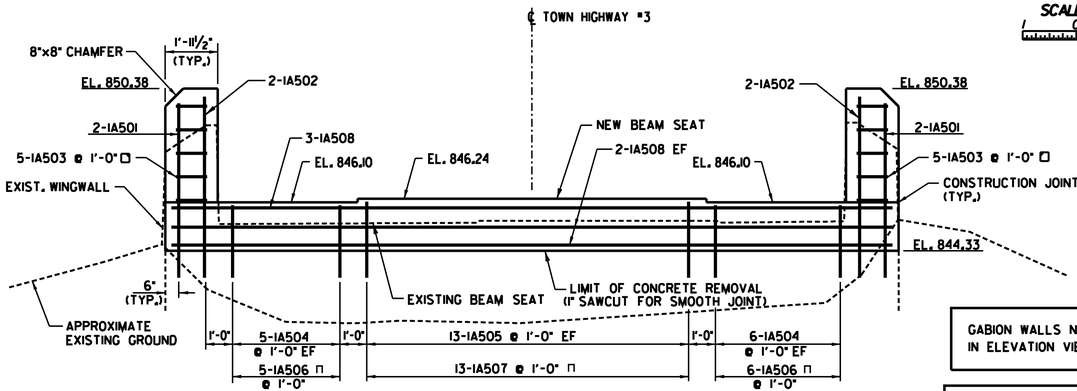
SCALE ⅜" = 1'-0

* - FRONT FACE OF EXISTING ABUTMENTS ARE NOT PARALLEL. RECONSTRUCTED BEAM SEAT TO FOLLOW FRONT FACE OF EXISTING ABUTMENT. BACK FACE OF BEAM SEAT TO BE 1'-0" FROM ℄ OF BEARING. FIELD VERIFY ALL DIMENSIONS.



SECTION A–A

SCALE ¼" = 1'-0



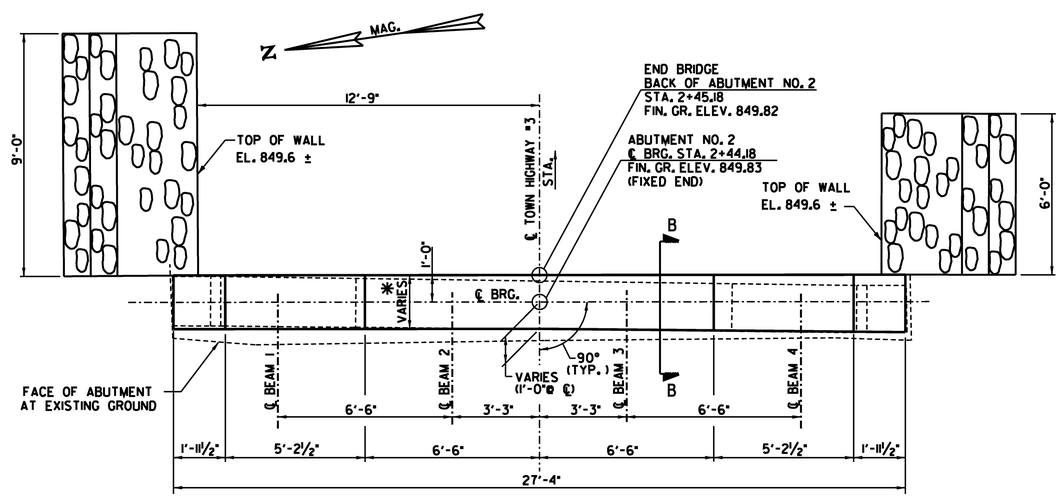
ELEVATION – ABUTMENT #1

SCALE ⅜" = 1'-0

GABION WALLS NOT SHOWN IN ELEVATION VIEWS.

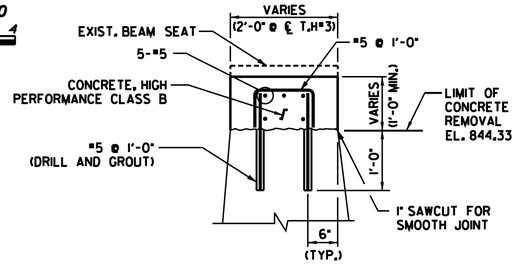
NOTES:

1. CONCRETE ABOVE BRIDGE SEAT ELEVATIONS SHOULD NOT BE PLACED UNTIL AFTER THE BEAMS HAVE BEEN PROFILED.
2. EXISTING VERTICAL REINFORCING IN WINGWALLS TO BE RETAINED IF POSSIBLE. ANY RETAINED REINFORCING SHALL BE BLAST CLEANED PER SECTION 580.
3. AREAS OF CONCRETE SURFACE REPAIR ON EXISTING ABUTMENTS TO BE DETERMINED IN THE FIELD BY THE ENGINEER AND PAID FOR UNDER ITEM 580.13.



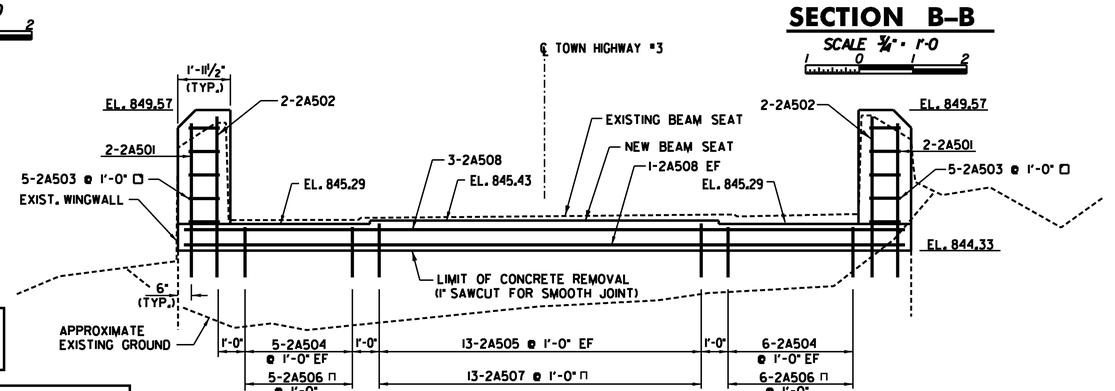
PLAN – ABUTMENT #2

SCALE ⅜" = 1'-0



SECTION B–B

SCALE ¼" = 1'-0



ELEVATION – ABUTMENT #2

SCALE ⅜" = 1'-0

NOTE:

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

Stantec

PROJECT NAME: CLARENDON	
PROJECT NUMBER: BHO 1443 (39)	
FILE NAME: ...\Drawing\22-clar-abuts.dgn	PLOT DATE: 7/2/2009
PROJECT LEADER: MJC	DRAWN BY: AET
DESIGNED BY: SEB	CHECKED BY: SEB
ABUTMENT PLANS & ELEVATIONS	SHEET 22 OF 24

ITEM		NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
1																		
2		DECK																
3																		
4	△	144	5	35'-2"	ES501	STR												
5																		
6		138	5	5'-2"	ES502	S5	0'-10"	1'-5"	0'-8"	1'-5"			0'-10"					
7		38	5	11'-4"	ES503	S5	1'-11"	3'-8"	0'-7"	3'-3"			1'-11"					
8																		
9	△	94	6	22'-10"	ES602	STR												
10		12	6	23'-0"	ES603	STR												
11		12	6	3'-8"	ES604	STR												
12																		
13		92	6	24'-2"	ES601	1	0'-8"	22'-10"					0'-8"		0'-6"			
14																		
15																		
16																		
17		ABUTMENT NO. 1																
18																		
19	△	6	5	6'-6"	1A501	STR												
20		4	5	6'-9"	1A502	STR												
21		22	5	2'-7"	1A504	STR												
22		26	5	2'-9"	1A505	STR												
23		7	5	26'-10"	1A508	STR												
24																		
25		10	5	5'-8"	1A503	T1	0'-6"	1'-2"	1'-2"	1'-2"	1'-2"		0'-6"					
26		11	5	4'-4"	1A506	S10		1'-7"	1'-2"	1'-7"								
27		13	5	4'-6"	1A507	S10		1'-8"	1'-2"	1'-8"								
28																		
29																		
30																		
31		ABUTMENT NO. 2																
32																		
33	△	6	5	5'-9"	2A501	STR												
34		4	5	6'-0"	2A502	STR												
35		22	5	1'-9"	2A504	STR												
36		26	5	1'-11"	2A505	STR												
37		5	5	26'-10"	2A508	STR												
38																		
39		10	5	5'-8"	2A503	T1	0'-6"	1'-2"	1'-2"	1'-2"	1'-2"		0'-6"					
40		11	5	2'-8"	2A506	S10		0'-9"	1'-2"	0'-9"								
41		13	5	2'-10"	2A507	S10		0'-10"	1'-2"	0'-10"								
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ITEM		NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
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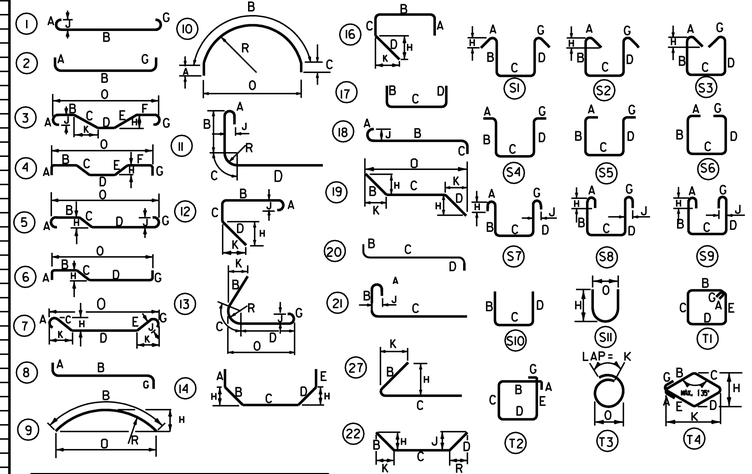
~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-91). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.

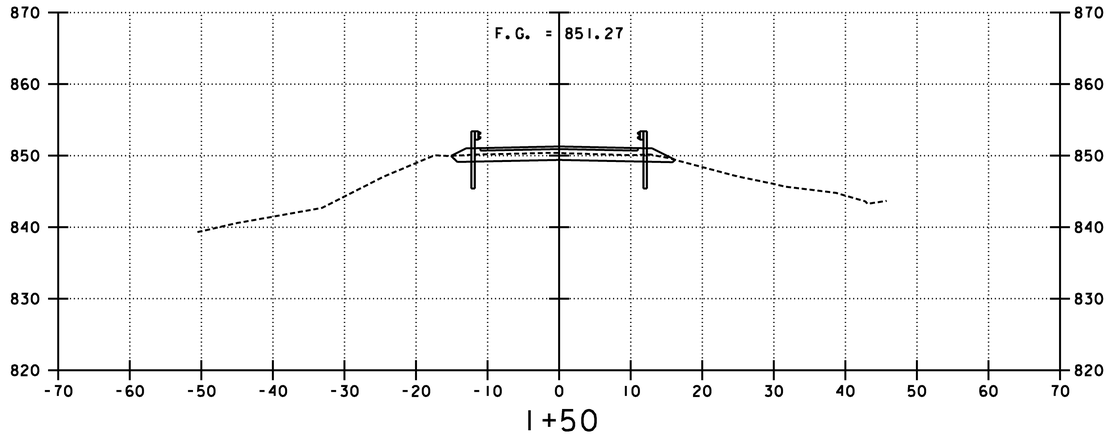


ASTM STANDARD REINFORCING BARS

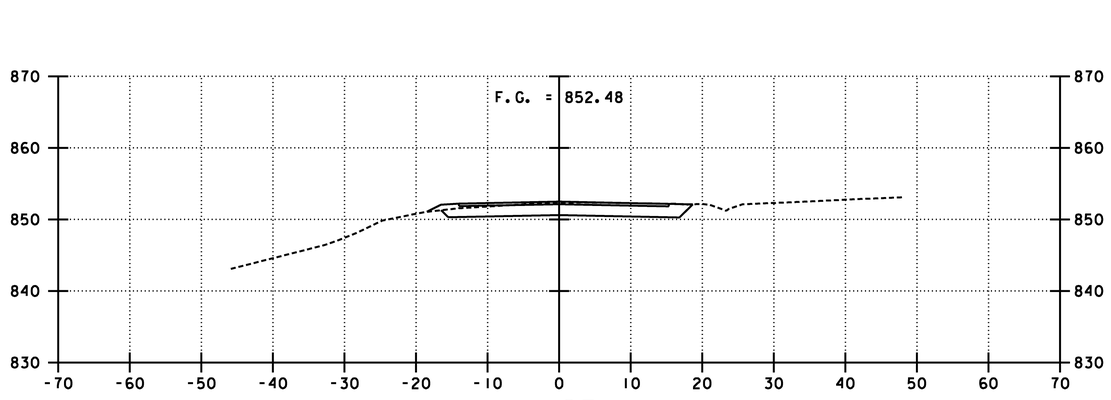
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	CROSS SECTIONAL AREA SQ. INCHES	PERIMETER INCHES
#3	.376	.375	.11	1.178
#4	.668	.500	.20	1.571
#5	1.043	.625	.31	1.963
#6	1.502	.750	.44	2.356
#7	2.044	.875	.60	2.749
#8	2.670	1.000	.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of CLARENDON	Bridge No. 15
Highway No. T.H. 3	Log Sta. / Surv. Sta.
TOWN HIGHWAY NO. 3 OVER CLARENDON RIVER	
REINFORCING SCHEDULE	
Designed By SEB	Drawn By AET
Checked By MJC — Date 06/08/01	Bridge Design Supervisor MJC — Date 06/01
PROJECT CLARENDON	PROJECT NO. BHO 1443 (39)
DH CAD Drawing Name: ...\Drawing\23-clar-rs.dgn	Plot Date: 7/2/2009
Bridge Sheet No.	Sheet 23 of 24

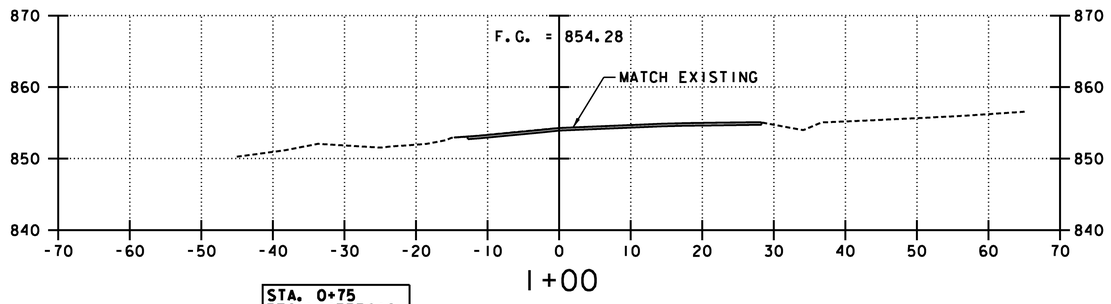


1+50



1+25

STA. 1+15
END APPROACH
BEGIN PROJECT

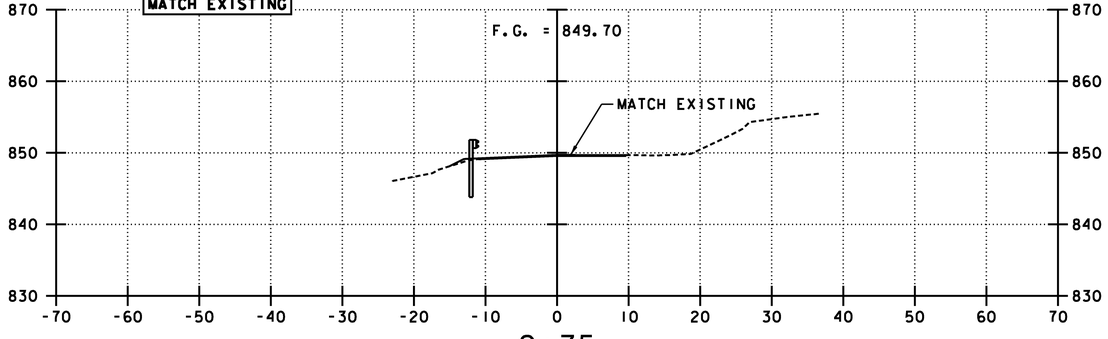


1+00

STA. 0+75
BEGIN APPROACH
MATCH EXISTING

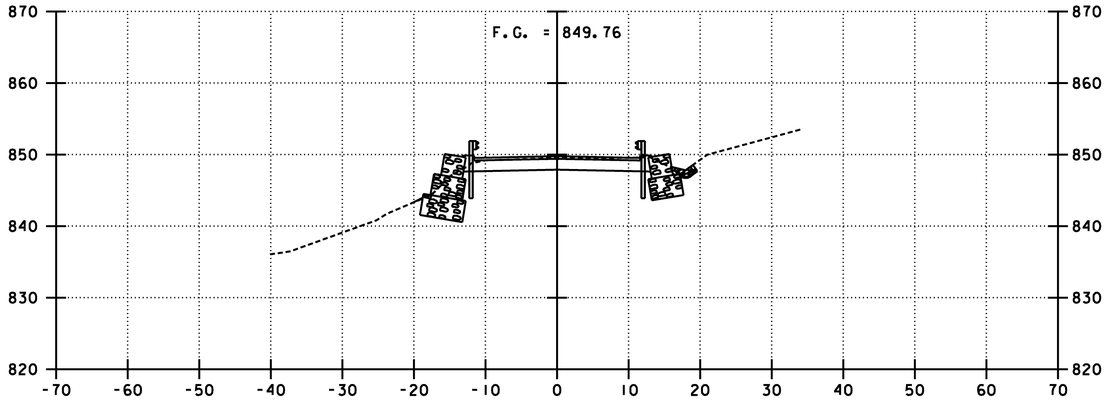
SCALE 1" = 10'-0"
10 0 10

STA. 2+95.18
END APPROACH
MATCH EXISTING



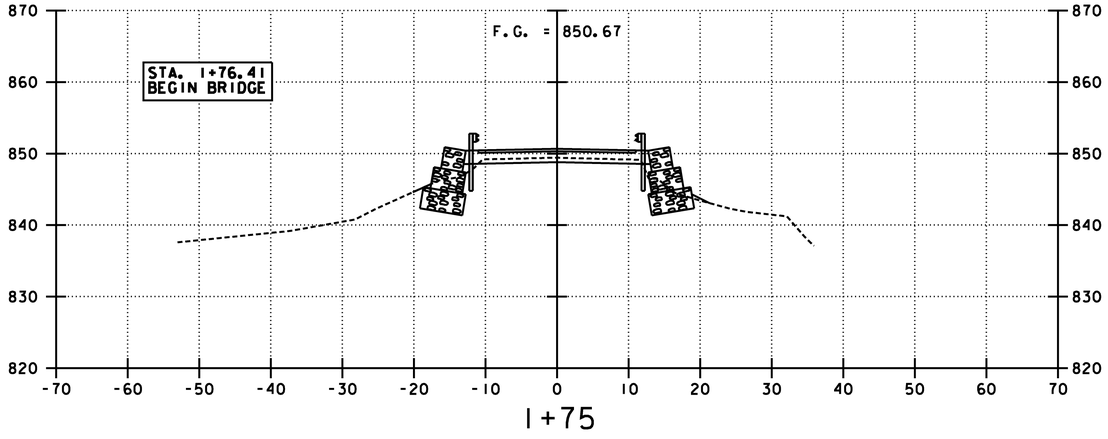
2+75

STA. 2+55.18
END PROJECT
BEGIN APPROACH



STA. 2+45.18
END BRIDGE

2+50



STA. 1+76.41
BEGIN BRIDGE

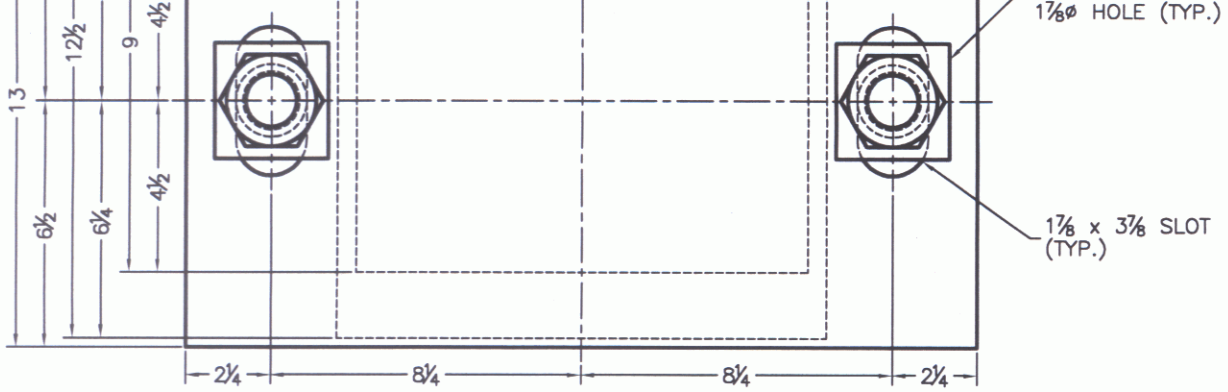
1+75

Stantec

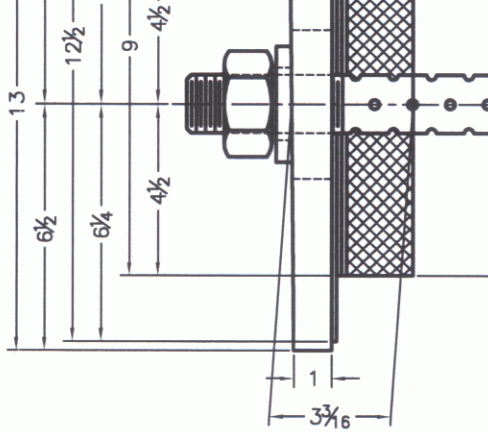
PROJECT NAME: CLARENDON
PROJECT NUMBER: BH0 1443 (39)

FILE NAME: ...\Drawing\24-clar-xs.dgn
PROJECT LEADER: MJC
DESIGNED BY: SEB
PLOT DATE: 7/2/2009
DRAWN BY: AET
CHECKED BY: MJC
SHEET 24 OF 24

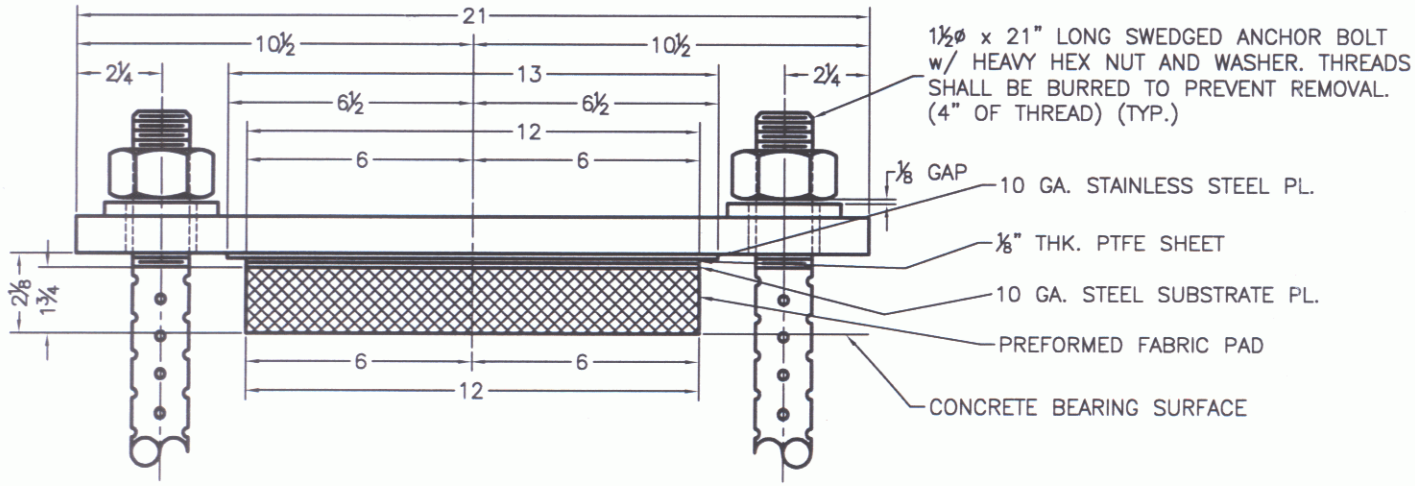
ROADWAY CROSS SECTIONS



PLAN VIEW



SIDE VIEW

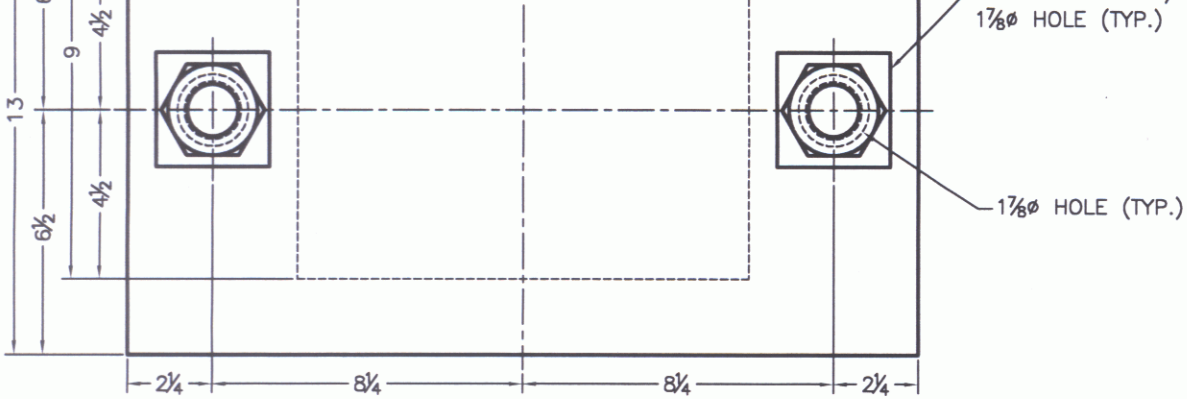


ELEVATION VIEW

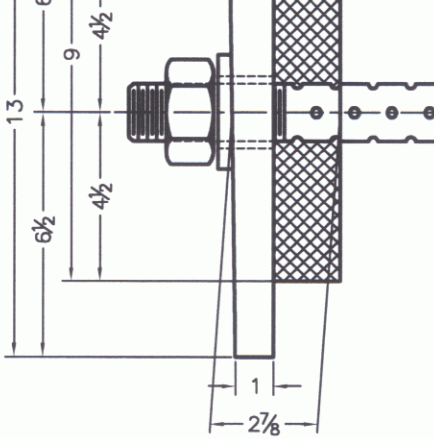
ABUTMENT NO. 1

QTY REQ'D = 4 ASSY.

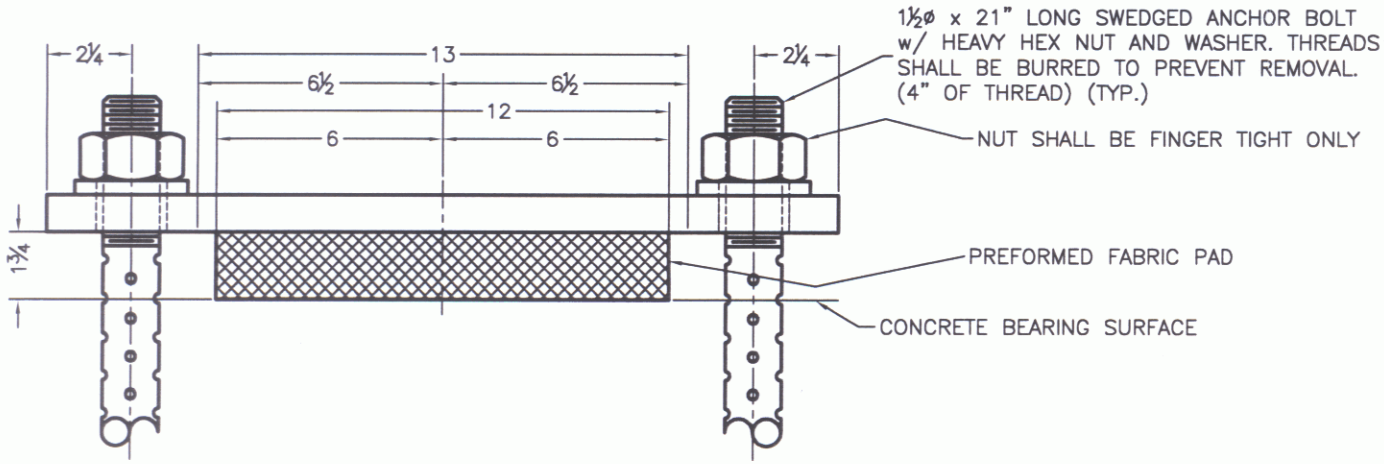
ITEM NO. 531.10



PLAN VIEW



SIDE VIEW



ELEVATION VIEW

ABUTMENT NO. 2

QTY REQ'D = 4 ASSY.

ITEM NO. 531.10

Filler metal classification E81T1-Ni1-H4 ESAB

Flux N/A

Shielding gas 75% AR - 25% CO2 Flow rate 35 CFH +8 -4

Single or multiple pass Single / Multiple Elec Ex 5/8 ± 1/4

Single or multiple arc Single

Welding current DC

Polarity DCEP

Welding progression See deTail

Root treatment wire brush - area To be Free of loose Scale, Slag, rusT & MoisTure

Preheat and interpass temperature To 20mm (3/4) 10(50), 20+ (3/4+) To 40 (1 1/2) 20(70), 40+ (1 1/2) To 60 (2 1/2) 65 C(150), over 60 (2 1/2) 110 (225)

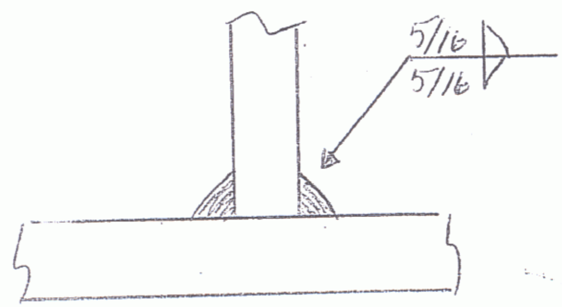
Postheat temperature N/A

Heat Input Min 27.7 KJ/in Max 43.6 KJ/in PQR FCM #8 39.6 KJ/in

Vermont A.O.T.
Br #15 - Proj #1143(39)
Clarendon - CBSS424

WELDING PROCEDURE

AWS 5-13

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed	AWS D1-5 Joint detail FilleT
		287	29	13	
	1/16	258 TO 315	26.8 TO 31	11.4 TO 14	

VTRANS RECEIVED
CK'D BY ______ CK'D BY JWC
SEP 29 2009
RESUBMIT ______ APPROVED ✓
BY DATE 10/13/09

AWS QC1
PAUL E. GOODALE
03100201
CWI

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 101

Revision no. ______

Form III-2

Contractor Casco Bay STeel

Authorized By Paul E. Goodale

Date 12-6-06

Filler metal classification E8A2-ENi1K-Ni1 Lincoln

Flux Lincoln 960 with LA75 Elec.

Shielding gas ~A Flow rate ~A

Single or multiple pass single

Single or multiple arc single

Welding current DC

Polarity DCEN

Welding progression See Joint Detail

Root treatment Blast Clean - wire brush - Free of loose scale & Moisture

Preheat and interpass temperature 3/4-50°F, 3/4" To 1 1/2-70°F, 1 1/2" To 2 1/2-150°F over 2 1/2-225

Postheat temperature ~A

Heat Input Min 30.3 KJ/in Max 42.6 KJ/in PQR-FCM #9-43.3 KJ/in

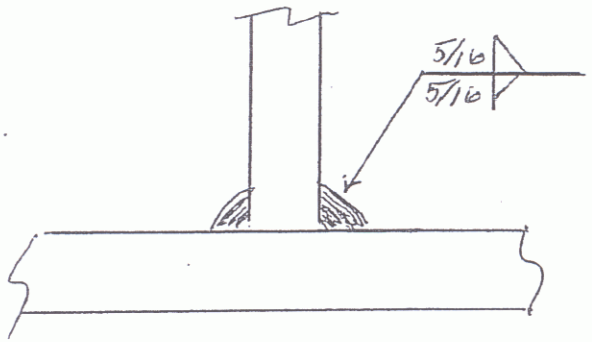
Vermont A.C.T.
BF-15-Proj #1443(39)
CIARFDOM - (855424)

WELDING PROCEDURE

AWS 5-13

AWS D1-5 Joint detail Fillet

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed
		293	32	13 IPM
		270 To 322	30 To 34	11 To 14
	3/32			



VTRANS
RECEIVED
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SEP 23 2009
RESUBMIT ____ APPROVED ✓
BY ____ DATE 10/13/09

AWS QC 1
PAUL E. GOODALE
88100201
CWI

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 250

Revision no. ____

Form III-2

Contractor Casco Bay Steel

Authorized By Paul E. Goodale

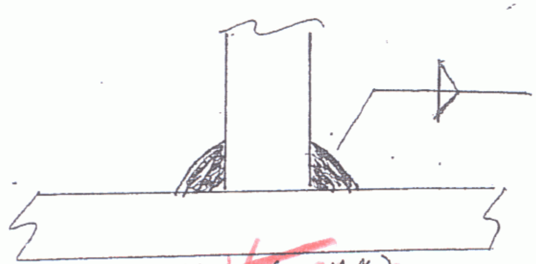
Date 12-6-06

Filler metal specification AWS A5-23
Filler metal classification F8A2-ENi1K-Ni1 Lincoln
Flux Lincoln 960 FLUX with LA75 Elec.
Shielding gas NA Flow rate
Single or multiple pass Single
Single or multiple arc Single
Welding current DC
Polarity DCEP
Welding progression See Joint Detail
Root treatment WiRE Brush - area To be Free of Loose Scale - Slag - RUST & Moistur
Preheat and interpass temperature To 3/4(19) 50°F(10°) - 3/4(19+) To 1 1/2(38) 70°(20°) 1 1/2+(38+) To 2 1/2(63) 150°
over 2 1/2(63) 225°F(110°C)
Postheat temperature NA
Heat Input Min 41.1 (1.6) Max 64.5 (2.5) P.Q.R. 3A - 58.7 KJ/IN (2.3 KJ/mm) △

Vermont A.O.T.
Br #15 - Prj # 1443(39)
Claredon - CBS5424

WELDING PROCEDURE

(metric)

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed	AWS D1.5 Joint detail Fillet
1	5/32	597 567 To 627	29.5 27 To 31	18 IPM 16 To 21	
1	3.9	597 567 To 627	29.5 27 To 31	457 mm/min 406 To 533	RECEIVED CK'D BY ____ OK'D BY JWC SEP 29 2009 RESUBMIT ____ APPROVED ✓ BY DATE 10/13/09 MAX 420°F (216°C)

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 201 Br. ST of VT
Revision no. △ New P.Q.R
Contractor Casco Bay Steel
Authorized By Phil E Goodale
Date 1-24-05

Form III-2

Manual or machine Manual
Position of welding Flat (1F), Horizontal (2F)
Filler metal specification ANSI/AWS A5.1 - A5.5
Filler metal classification E7018 - 8018 C1/C3 - 7028
Flux NA
Shielding gas NA Flow rate NA
Single or multiple pass Single and multiple
Single or multiple arc single
Welding current AC/DC
Polarity Straight / Reverse
Welding progression
Root treatment meet AWS specification
Preheat and interpass temperature To 3/4 (19) 50°F (10°C) 3/4 (19) To 1 1/2 (38) 70°F (20°C) 1 1/2 (38) To 2 1/2 (63.5) 150°F (65°C) over 2 1/2 (63.5) 225°F (110°C)
Postheat temperature NA
Heat Input Min NA Max NA

VTRANS
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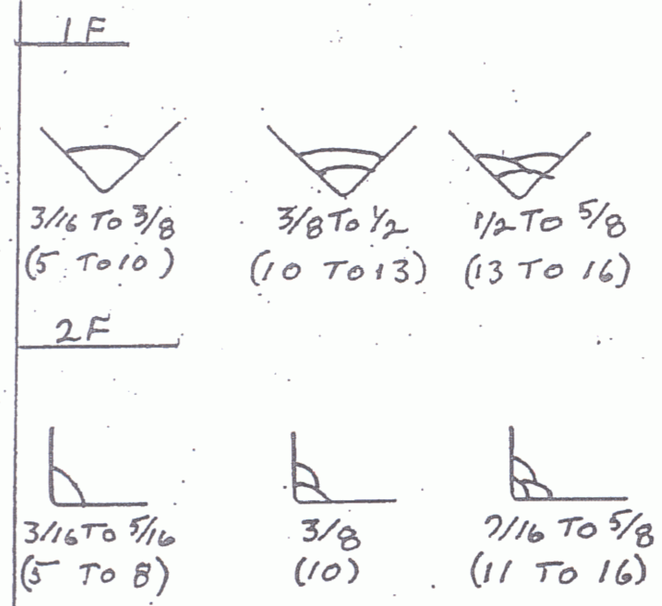
CK'D BY ____ OK'D BY JCC
SEP 28 2009
RESUBMIT ____ APPROVED ✓
BY ____ DATE 10/13/09

Vermont A.O.T.
BF #15-Proj #1443(37)
CLARENDON - CBSS424

(metric)

WELDING PROCEDURE

Pass no.	Electrode size	Welding current		Travel speed	AWS D1.5 Joint detail Fillet
		Amperes	Volts		
AS. REQ.	7018 1/8 (3.2)	70-170	22-26	AS REQ	
	5/32 (3.9)	120-225	22-26		
	3/16 (4.8)	170-300	24-27		
	8018 1/8 (3.2)	90-160	22-26		
	5/32 (3.9)	120-225	22-26		
	3/16 (4.8)	180-290	24-27		
	7028 5/32 (3.9)	170-270	22-26		
	3/16 (4.8)	210-330	24-27		

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable AWS codes or contract specifications

Procedure no. 401
Revision no.
Form III-2

AWS QC 1 PAUL E. GOODALE 89100201 CWI

Contractor Casco Bay Steel
Authorized By Paul E. Goodale
Date 3/2/00

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

1). ALL MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006 WITH LATEST REVISIONS AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 2002 AND ITS LATEST REVISIONS.

MATERIAL SPECIFICATIONS

1). UNLESS OTHERWISE NOTED, ALL STEEL TO BE AASHTO M270M (ASTM A709M) GRADE 50W.

2). MATERIAL NOTED "CVN" OR "H2-3" ON DETAIL DRAWINGS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF VERMONT STANDARD SPECIFICATIONS SECTION 714.01.

3). HIGH STRENGTH BOLTS: $\frac{7}{8}$"ø ASTM A325 TYPE 3 IN $\frac{15}{16}$"ø HOLES.
NUTS SHALL BE A563 GRADE C3.
BOLTS & NUTS SHALL BE ROTATIONAL CAPACITY TESTED.
DO NOT MIX NUTS & BOLTS FROM DIFFERENT CONTAINERS UNLESS ALL BOLTS & NUTS HAVE THE SAME LOT NUMBER.

FABRICATION

1). ALL HOLES SHALL BE PUNCHED OR DRILLED FULL SIZE (UN).

WELDING

1). THE CONFIGURATION OF THE WELD JOINTS AND ALL WELDING PROCEEDURES SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5-02 BRIDGE WELDING CODE AND IN ADDITION TO SPECIFICATIONS SHOWN ABOVE. ALL WELDING WILL BE DETAILED TO PRE-QUALIFIED JOINTS, UNLESS PROHIBITED BY THE DESIGNER.

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

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

4). SEE DETAIL "WS1" ON THIS DRAWING FOR WELD TERMINATION DETAIL.

CLEANING

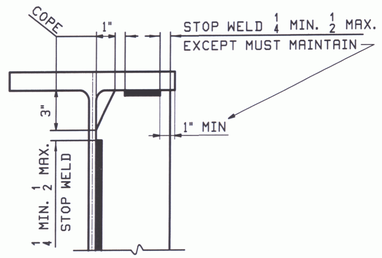
1. ALL STEEL SHALL BE BLAST CLEANED IN ACCORDANCE WITH SSPC SP-6.
2. STRUCTURAL STEEL SHALL NOT BE PAINTED.

FIELD CONNECTIONS

1). ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH A-325 TYPE 3 BOLTS (UN), INSTALLED PER SECTION 506.19(c). SEE DWG E1 FOR FIELD BOLT SIZES.

2). BOLTS SHALL HAVE HEAVY HEX NUT, HEAVY HEX HEAD, AND AT LEAST ONE FLAT WASHER EACH. WASHER TO BE PLACED UNDER TURNED ELEMENT.

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



DETAIL "WS1"

RECEIVED
OK'D BY _____ OK'D BY mjm
SEP 25 2009
RECEIVED APPROVED As Noted
BY DATE 10/13/09

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0					SEP 1 2009	

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

DESCRIPTION: GENERAL NOTES

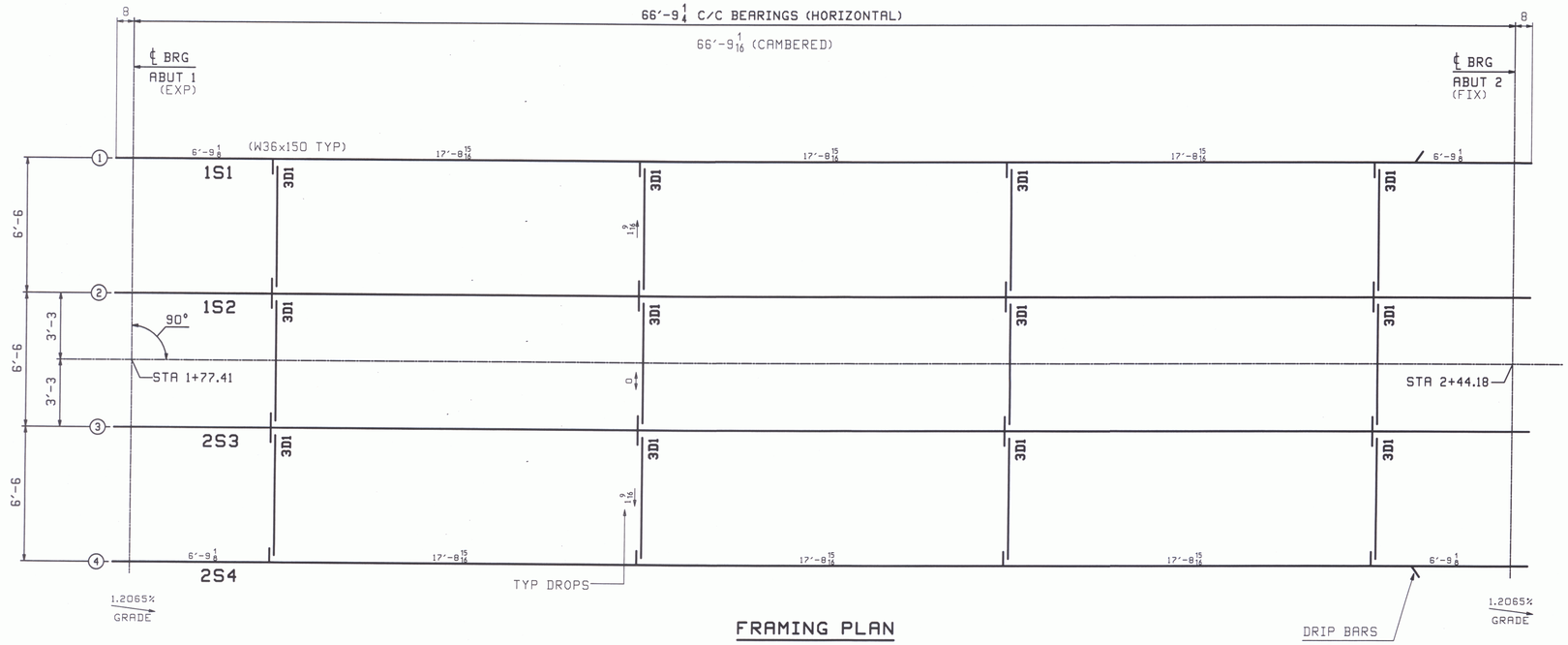
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179
TENSOR 2912

STRUCTURE:	DRAWN:	DATE:
BRIDGE NO. 15 ON TOWN HIGHWAY NO. 3 (MINOR COLLECTOR) COUNTY OF RUTLAND	JTB	09/16
	CHKD: JCF	DATE: 09/16

LOCATION:	TOWN OF CLARENDON, VERMONT	JOB NO.	DWG NO.
PROJ NO.	BHO 1443 (39)	424	GN1
CUSTOMER:	VERMONT A.O.T.		REV. △

NOTE TO ENGINEER:
THESE NOTES ARE NOT INTENDED TO BE ALL INCLUSIVE AND COMPLIANCE WITH RELEVANT SPECIFICATIONS REMAIN UNCHANGED.

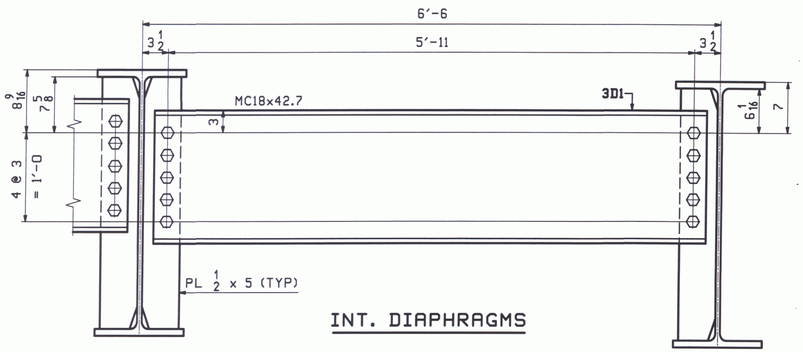
JTB Fri Sep 18 12:48:16 EDT 2009 /users/jobs/2912/GN1.1 Rev0



FRAMING PLAN

FIELD BOLT LIST						A325 Type 3 BOLTS							
LINE	NO REQ'D.	BOLT DIAM.	BOLT LEN.	BOLTS/ CONN.	# OF CONN.	GRIP	THICKNESS OF PCS. CONNECTED					WASH CODE	PIECES CONNECTED AND REMARKS
1													**DIAPHRAGMS**
2	120	7/8	2 1/4	5	24	15/16	7/16	1/2				1	DIAPHRAGM WEB TO CONNECTION PLATE
3													
WASHER CODES													
1: 1 Hard Flat Washer													

FIELD BOLT SUMMARY	EXACT COUNT - NONE EXTRA					
LINE	NO. OF BOLTS	BOLT DIAM.	TYPE	BOLT LEN	ACTUAL COUNT	REMARKS
1	120	7/8	A325 Type 3	2 1/4	120	
2						
3	120	Hard Flat Washers for 7/8 ø BOLT				F436-3
4						



INT. DIAPHRAGMS

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OK'D BY _____ OK'D BY mjem
SEP 22 2009
RECEIVED ... APPROVED ✓
BY _____ DATE 10/13/09

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0					SEP 21 2009	

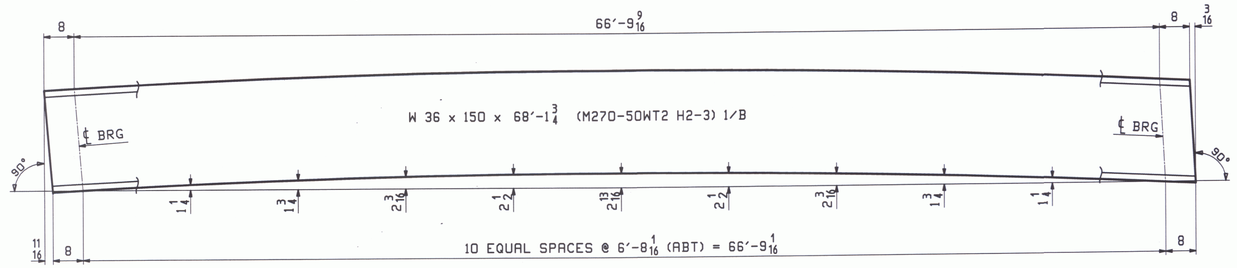
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-50W (UN)	SEE DWG GN1	15/16 ø	NONE

DESCRIPTION: FRAMING PLAN, FIELD BOLTS & LAYOUT

CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179
TENSOR 2912

STRUCTURE: BRIDGE NO. 15 ON TOWN HIGHWAY NO. 3 (MINOR COLLECTOR) COUNTY OF RUTLAND	DRAWN: JTB	DATE: 09/06
	CHKD: JCF	DATE: 09/16
LOCATION: TOWN OF CLARENDON, VERMONT	JOB NO.	DWG NO.
PROJ NO. BHO 1443 (39)	424	E1
CUSTOMER: VERMONT A.O.T.		REV. △

JTB Fri Sep 18 12:48:15 EDT 2009 J:\Jobs\2832\E1.dwg



CAMBER DIAGRAM FOR 1S1, 1S2, 2S3, 2S4

4 (REQ'D)

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CK'D BY _____ OK'D BY MPM
SEP 22 2009
APPROVED
BY DATE 10/13/09

RECEIVED
CK'D BY _____ OK'D BY _____
SEP 21 2009
BY DATE

NOTES:

1. FOR GENERAL NOTES SEE DRAWING GN1.
2. H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TEST AT H FREQ. FOR ZONE 2

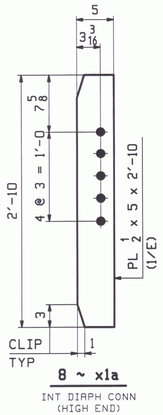
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0					SEP 21 2009	

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W (UN)	SEE DWG GN1		

DESCRIPTION: CAMBER DIAGRAM

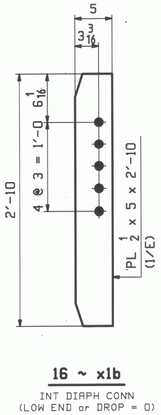
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179
TENSOR 2012

STRUCTURE: BRIDGE NO. 15 ON TOWN HIGHWAY NO. 3 (MINOR COLLECTOR) COUNTY OF RUTLAND		DRAWN: JTB	DATE: 09/08
		CHK'D: JCF	DATE: 09/16
LOCATION: TOWN OF CLARENDON, VERMONT		JOB NO. 424	DWG NO. C1
PROJ NO. BHO 1443 (39)			REV. △
CUSTOMER: VERMONT A.O.T.			



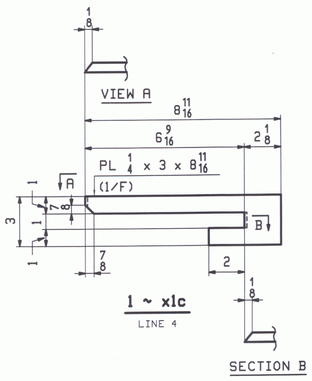
8 ~ x1a

INT DIAPH CONN
(HIGH END)



16 ~ x1b

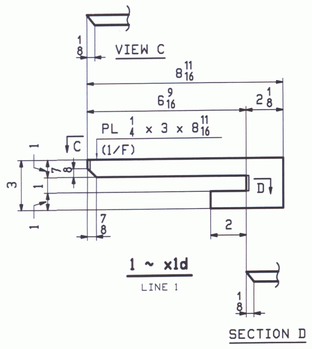
INT DIAPH CONN
(LOW END or DROP = 0)



1 ~ x1c

LINE 4

SECTION B



1 ~ x1d

LINE 1

SECTION D

NOTES:
ALL MATERIAL SHALL BE M270M-50W.
ALL BOLT HOLES SHALL BE $\frac{15}{16}$"Ø FOR $\frac{7}{8}$"Ø HSB.
FOR GENERAL NOTES SEE DRAWING GN1.

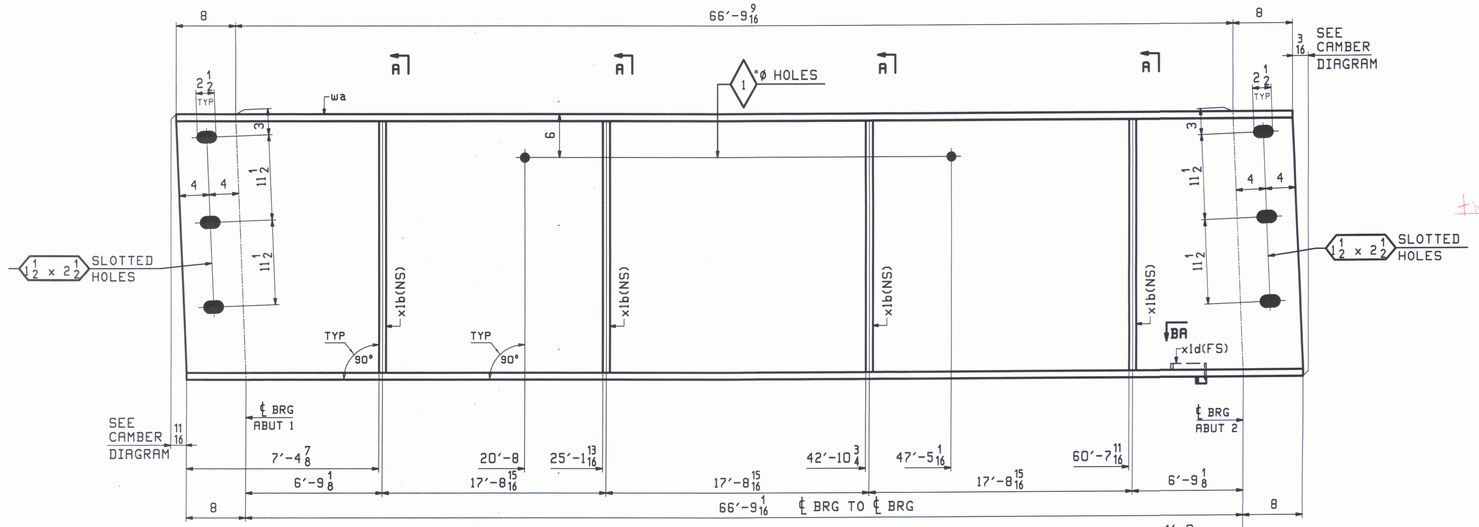
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0					SEP 21 2009	

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-50W	SEE DWG GN1	$\frac{15}{16}$"Ø	NONE

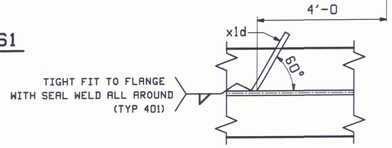
DESCRIPTION: STRINGER STANDARDS

CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179
TENSOR 2912

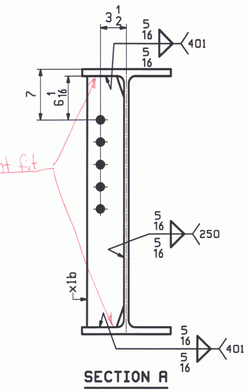
STRUCTURE: BRIDGE NO. 15 ON TOWN HIGHWAY NO. 3 (MINOR COLLECTOR) COUNTY OF RUTLAND	DRAWN: JTB	DATE: 09/08	
	CHKD: JCF	DATE: 09/16	
LOCATION: TOWN OF CLARENDON, VERMONT	JOB NO.	DWG NO.	
PROJ NO. BHO 1443 (39)	424	X1	
CUSTOMER: VERMONT A.O.T.		REV. △	



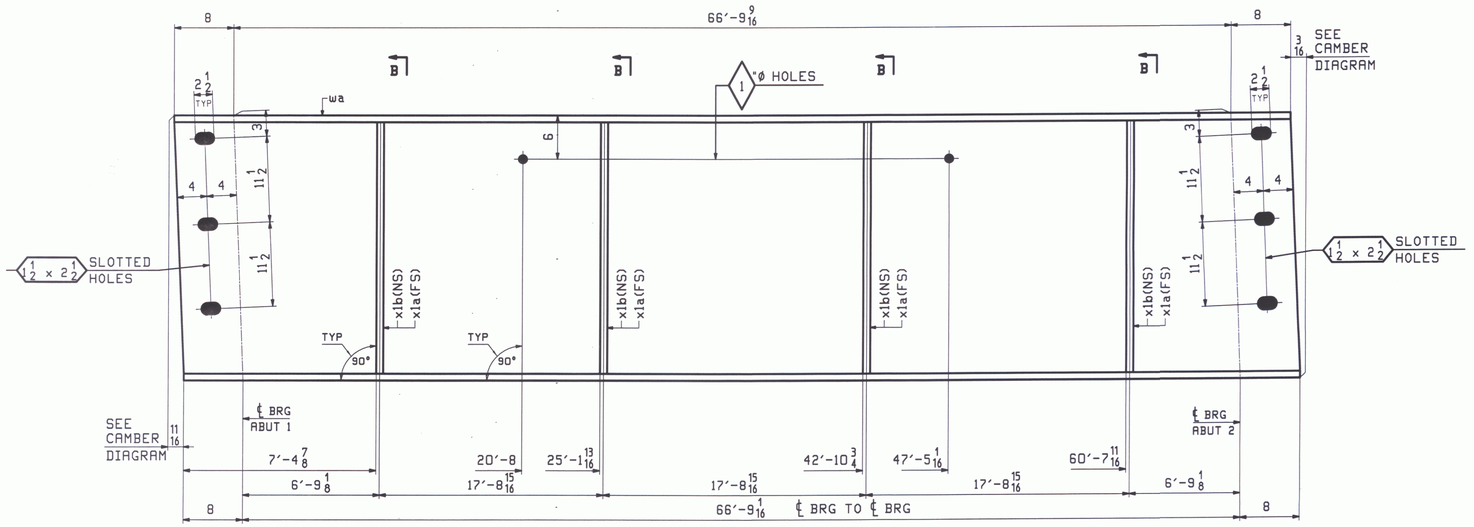
ONE - STRINGER - 1S1



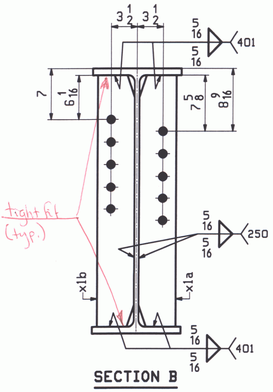
SECTION BA



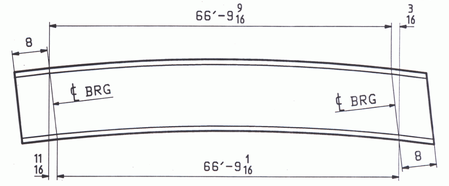
SECTION A



ONE - STRINGER - 1S2



SECTION B



ORIENTATION DIAGRAM - 1S1 & 1S2
FOR CAMBER SEE DWG C1

NOTES:
FOR STRINGER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAMS SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								424	1	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		1S1	1		STRINGER				10320	
1	B		1	wa	W 36x150	68	1 3/4	M270-50WT2 (H2-3)		
1	E		4	x1b	PL 1/2x5	2	10			
1	F		1	x1d	PL 1/2x3	0	8 11/16			
		1S2	1		STRINGER				10415	
1	B		1	wa	W 36x150	68	1 3/4	M270-50WT2 (H2-3)		
1	E		4	x1a	PL 1/2x5	2	10			
1	E		4	x1b	PL 1/2x5	2	10			

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SEP 22 2009
REVIEWED _____ APPROVED As Noted
BY _____ DATE 10/13/09

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0	SEP 21 2009					

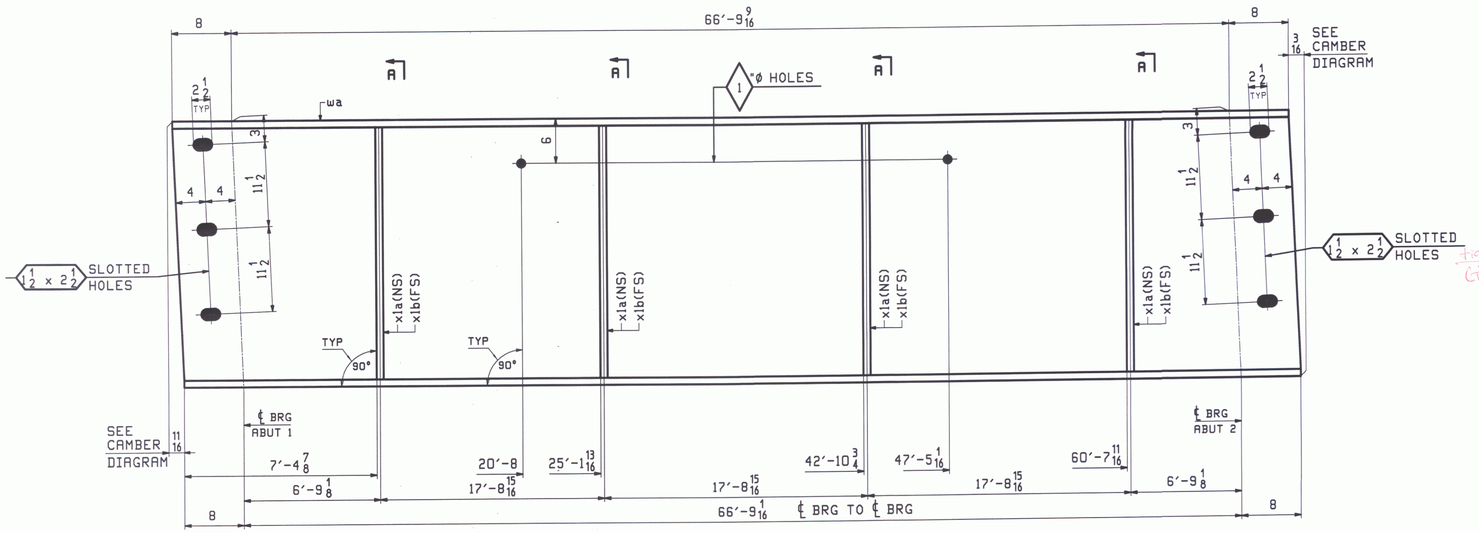
MATERIAL:	SURFACE PREP. & PRINT:	HOLES:	SHOP BOLTS:
M270M-50W (UN)	SEE DWG GN1	15/16"⌀	NONE

DESCRIPTION: STRINGERS - 1S1 & 1S2

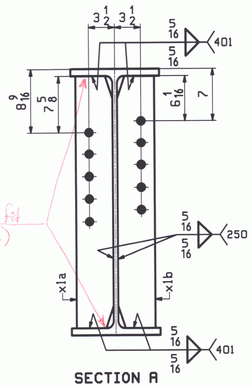
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179
TENSOR 2912

STRUCTURE:	DRAWN:	DATE:
BRIDGE NO. 15 ON TOWN HIGHWAY NO. 3 (MINOR COLLECTOR) COUNTY OF RUTLAND	JTB	09/08
	CHK'D: JCF	DATE: 09/16

LOCATION:	TOWN OF CLARENDON, VERMONT	JOB NO.	DWG NO.
PROJ NO.	BHO 1443 (39)	424	1
CUSTOMER:	VERMONT A.O.T.		REV. △

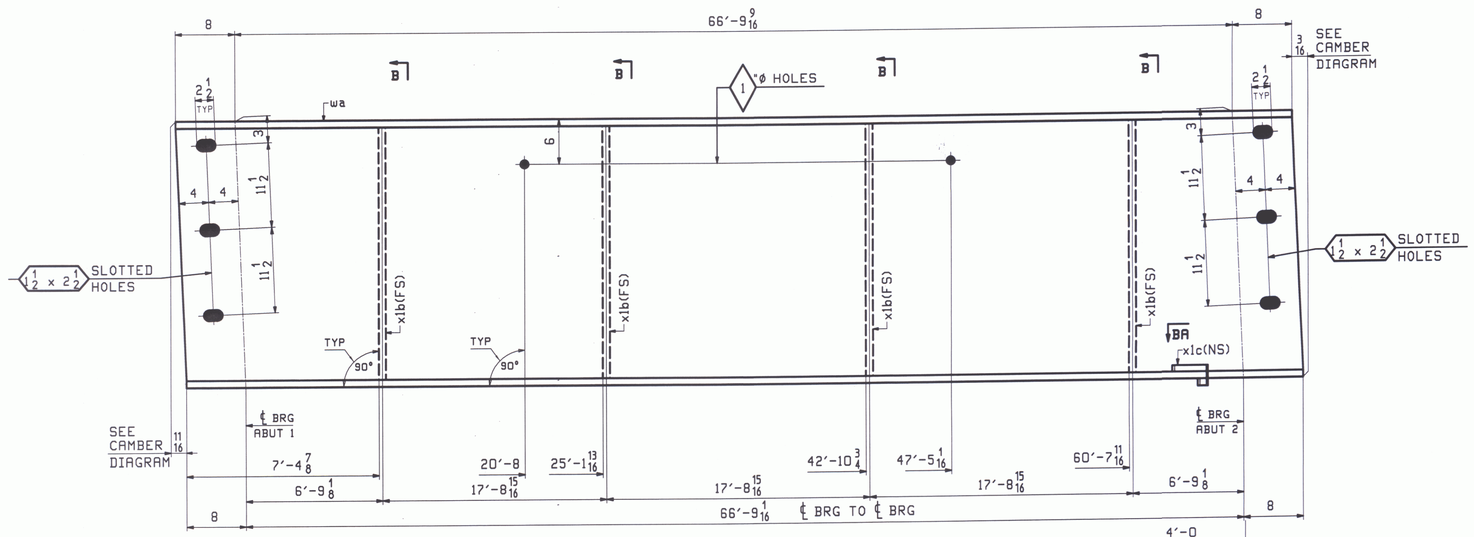


ONE - STRINGER - 2S3

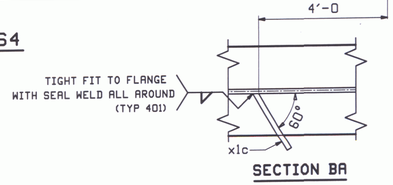


SECTION A

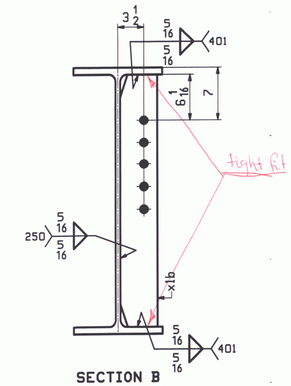
ABM INFO		SHIP	QTY	BILL OF MATERIAL		LENGTH		REMARKS	WT	PROCUREMENT NOTES
PAGE	LINE	MARK		MARK	MATERIAL	FT	INCHES			
		2S3	1		STRINGER				10415	
1	B		1	wa	W 36x150	68	1 3/4	M270-50WT2 (H2-3)		
1	E		4	x1a	PL 1/2x5	2	10			
1	E		4	x1b	PL 1/2x5	2	10			
		2S4	1		STRINGER				10320	
1	B		1	wa	W 36x150	68	1 3/4	M270-50WT2 (H2-3)		
1	E		4	x1b	PL 1/2x5	2	10			
1	F		1	x1c	PL 1/4x3	0	8 11/16			



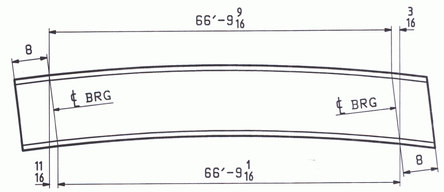
ONE - STRINGER - 2S4



SECTION BA



SECTION B



ORIENTATION DIAGRAM - 2S3 & 2S4
FOR CAMBER SEE DWG C1

NOTES:
FOR STRINGER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAMS SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.

RECEIVED
OK'D BY _____ OK'D BY mjm
SEP 22 2009
BUREAU OF HIGHWAYS APPROVED as Noted
BY _____ DATE 10/13/09

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0					SEP 21 2009	

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-50W (UN)	SEE DWG GN1	15/16"ø	NONE

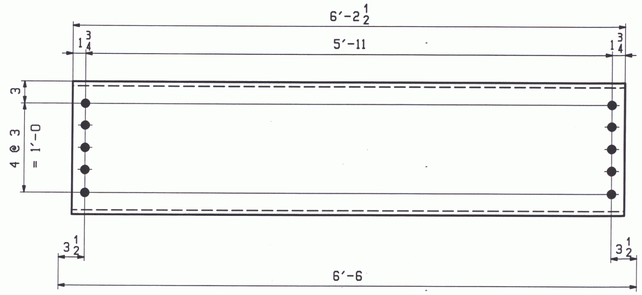
DESCRIPTION: STRINGERS - 2S3 & 2S4

CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179
TENSOR 2312

STRUCTURE:		DRAWN:	DATE:
	BRIDGE NO. 15 ON TOWN HIGHWAY NO. 3 (MINOR COLLECTOR) COUNTY OF RUTLAND	JTB	09/09
		CHKD: JCF	DATE: 09/16

LOCATION:	TOWN OF CLARENDON, VERMONT	JOB NO.	DWG NO.
PROJ NO.	BHO 1443 (39)	424	2
CUSTOMER:	VERMONT A.O.T.		REV. △

JTB Fri Sep 18 12:48:3 EDT 2009 /users/jobs/2512/2 : RevO



12 ~ DIAPHRAGMS - 3D1

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								424	3	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
					DIAPHRAGMS					
1	J	3D1	12		MC 18x42.7	6	2 1/2		265	
								X	12	
									3180	

RECEIVED
OK'D BY _____ OK'D BY MJM
SEP 23 2009
BY _____ DATE 10/13/09

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0					SEP 21 2009	

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE DWG GN1	15/16 Ø	NONE

DESCRIPTION: DIAPHRAGMS

CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179
TENSOR 2312

STRUCTURE:	DRAWN:	DATE:
BRIDGE NO. 15 ON TOWN HIGHWAY NO. 3 (MINOR COLLECTOR) COUNTY OF RUTLAND	JTB	09/08
	CHKD: JCF	DATE: 09/16
LOCATION: TOWN OF CLARENDON, VERMONT	JOB NO.	DWG NO.
PROJ NO. BHO 1443 (39)	424	3
CUSTOMER: VERMONT A.O.T.		REV. △

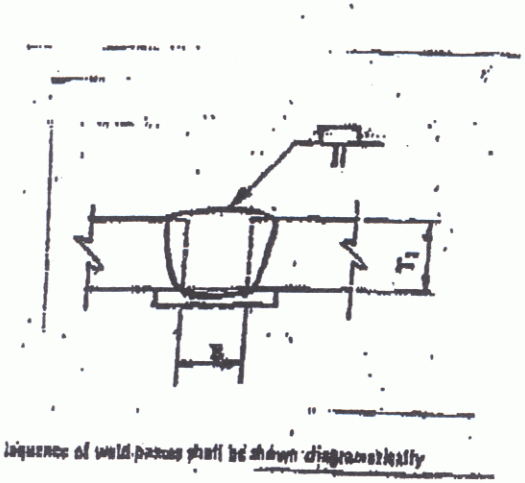
JTB Fri Sep 18 12:48:14 EDT 2009 /users/jobs/2512/3 1 Rev0

Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50CFH
Single or Multiple Pass	SINGLE
Single or Multiple Arc	SINGLE
Welding Current	DC
Polarity	(REVERSE) ELECTRODE POSITIVE
Welding Progression	STRINGER
Root Treatment	CLEAN AS PER SECTION 603 OF THE NYSSCM
Preheat and Interpass Temperature	PREHEAT AS PER TABLEL 708 OF THE NYSSCM
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

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

NYSDOT METALS ENGINEERING REVIEW
X APPROVED
__ APPROVED AS NOTED
__ DISAPPROVED
1/21/09
R. Pinkinelee



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

Procedure No. 1028
Revision No. _____

Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 12/4/2008

VTRANS
RECEIVED
OCT 05 2009

CK'D BY _____ OK'D BY Jac
RESUBMIT _____ APPROVED ✓

Form III-2

Form III-2-Sample Welding Procedure Specification

Filler Metal Classification	E71T-1H8 E71T-9H8 LINCOLN ULTRACORE
Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50CFH
Single or Multiple Pass	SINGLE
Single or Multiple Arc	SINGLE
Welding Current	DC
Polarity	(REVERSE) ELECTRODE POSITIVE
Welding Progression	STRINGER
Root Treatment	CLEAN AS PER SECTION 603 OF THE NYSSCM
Preheat and Interpass Temperature	PREHEAT AS PER TABLEL 708 OF THE NYSSCM
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

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

NYSDOT METALS ENGINEERING REVIEW
X APPROVED
APPROVED AS NOTED
DISAPPROVED
R. Rinkenella
1/12/09

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

Procedure No. 1025
Revision No. _____

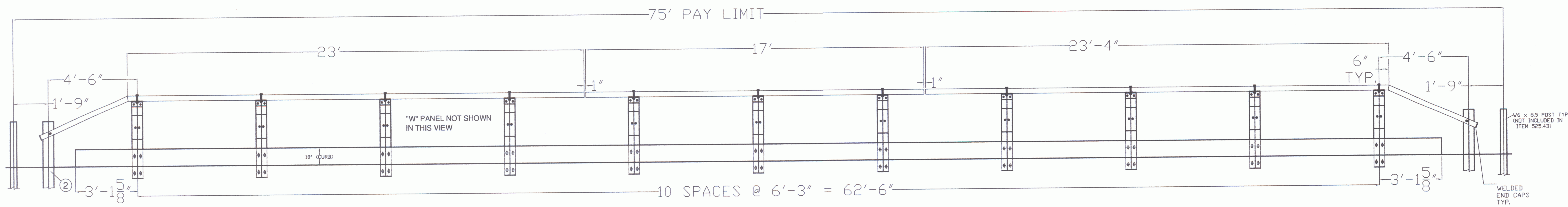
Contractor Elderlee, Inc.
Authorized By RANDY SCOTT VTRANS
Date 12/4/2008

RECEIVED
CK'D BY _____ OK'D BY JWC
OCT 05 2009
RESUBMIT _____ APPROVED ✓
BY _____ DATE 10/6/09

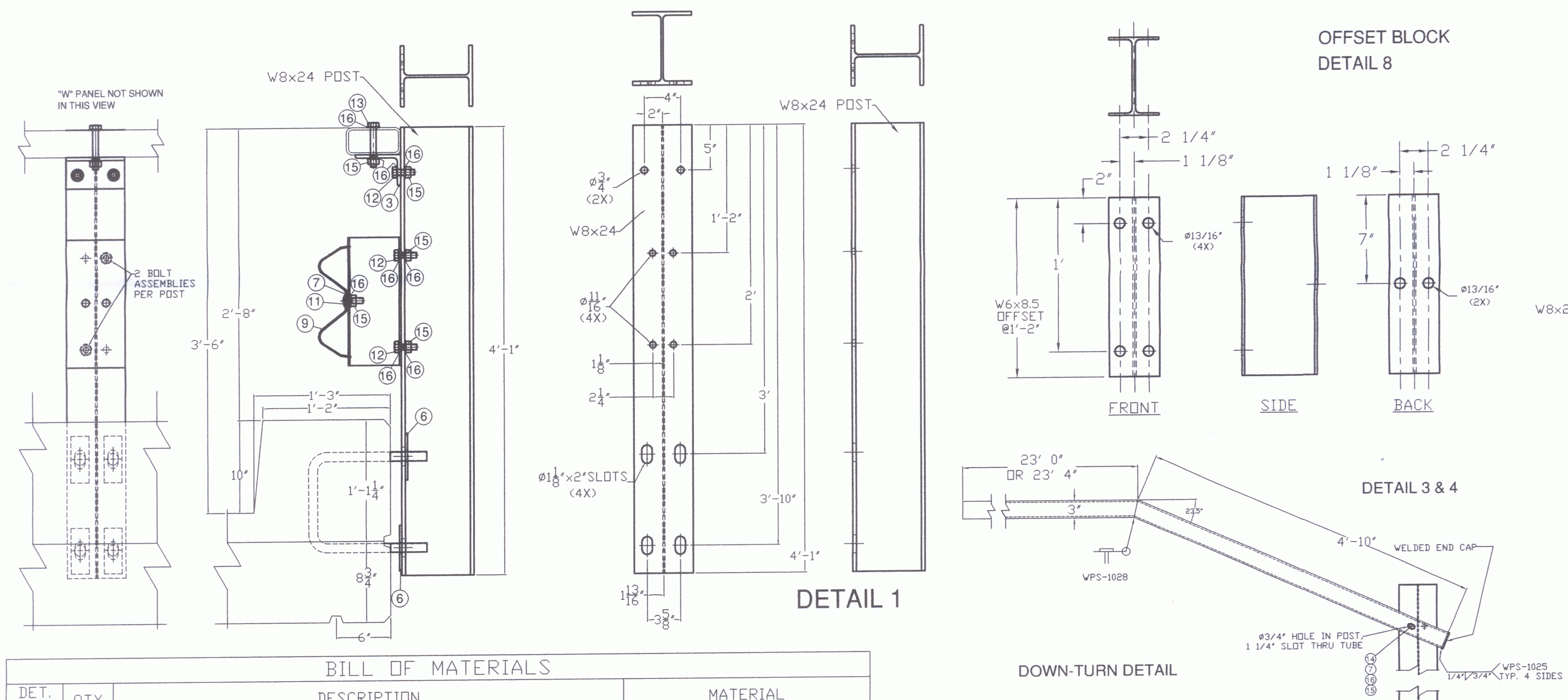
Form III-2

Form III-2-Sample Welding Procedure Specification

FIELD DRILL Ø3/4" HOLE / SLOT IN TOP RAIL TUBING (6x3x1/4")

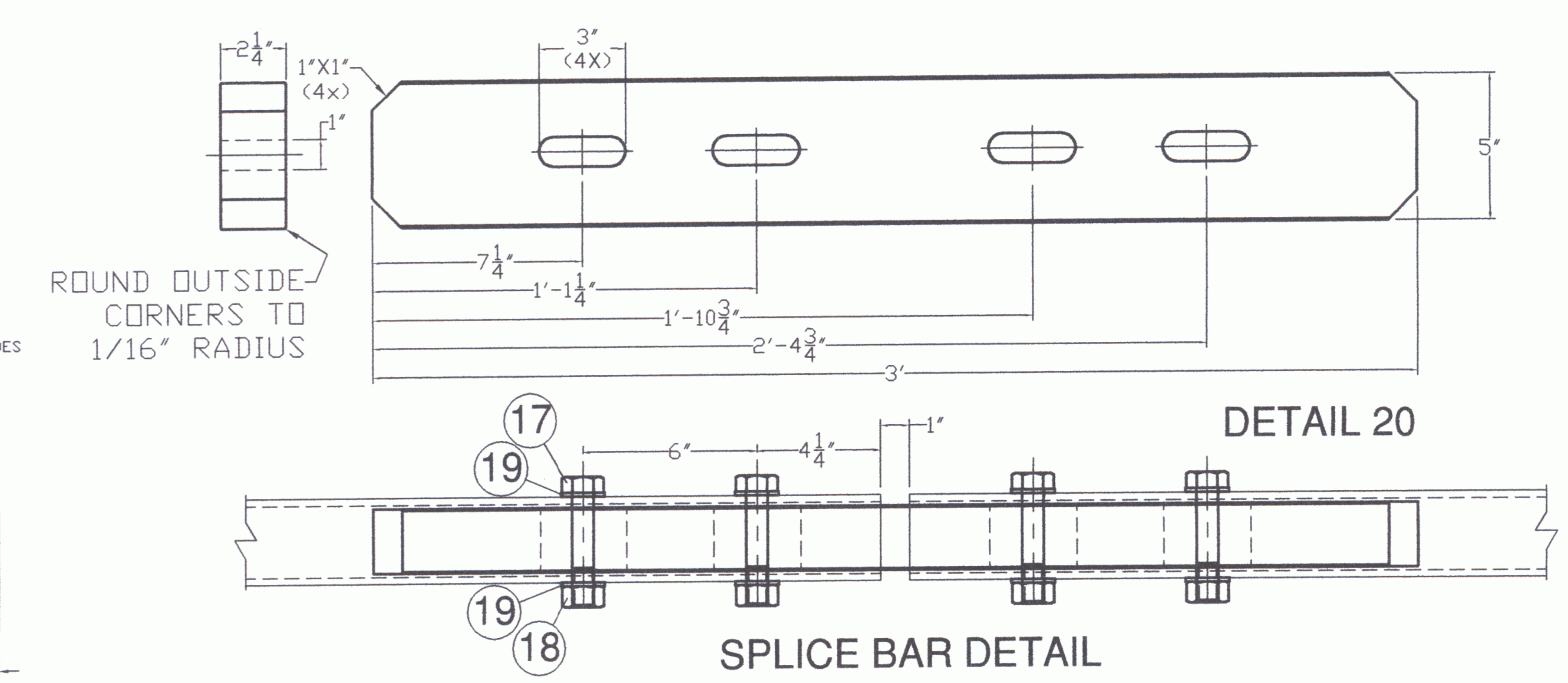


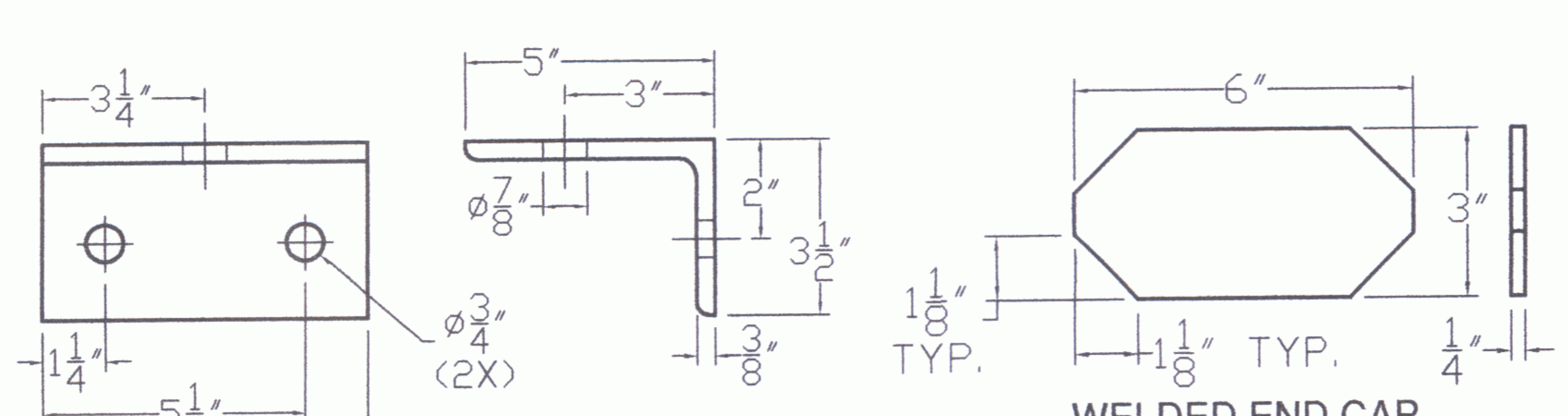
NORTH RAILING FACING NORTH SHOWN (SOUTH RAILING SIMILAR)

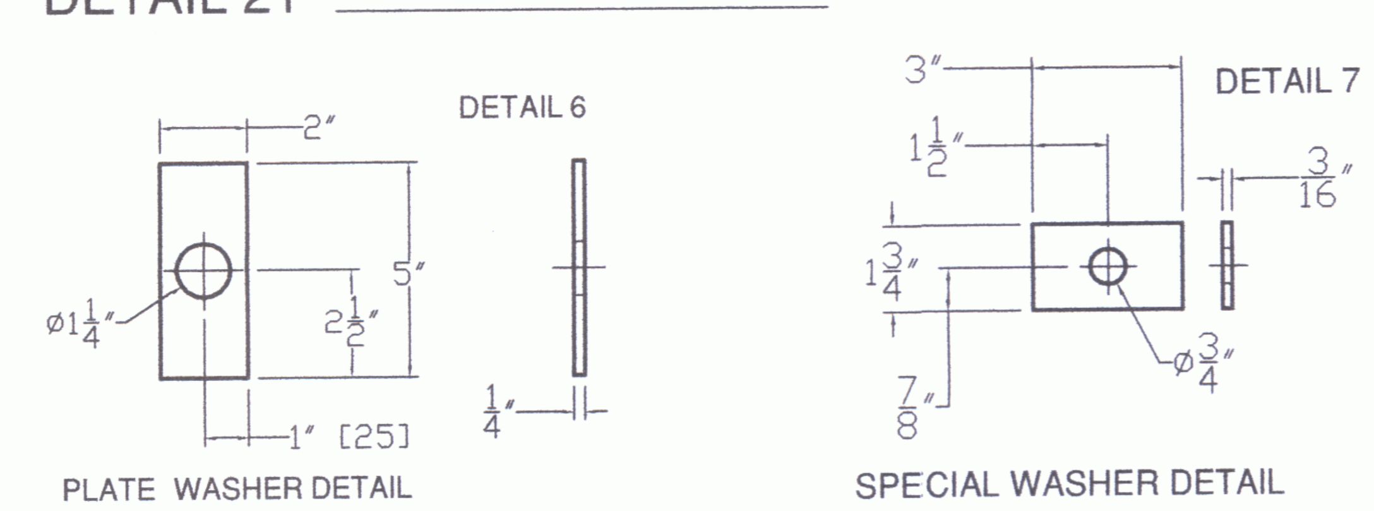


NOTES:

1. RAILING IS DESIGNED IN ACCORDANCE WITH THE 1989 AASHTO SPECIFICATIONS.
2. ALL PLATES, BARS, AND ANGLES SHALL BE ASTM A 36 STEEL. UNLESS OTHERWISE SPECIFIED, ALL BOLTS SHALL BE ASTM A 307. STRUCTURAL STEEL TUBING SHALL BE ASTM A 500 COLD-FORMED GRADE B AS MODIFIED IN SECTION 732.03 (a).
3. ALL BOX BEAM BRIDGE RAILING, COMPONENTS, ANCHOR BOLTS AND ATTACHMENT HARDWARE SHALL BE GALVANIZED TO ASTM A123 AFTER FABRICATION.
4. THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS, INCLUDING WELDING PROCEDURES, TO THE STRUCTURES DIVISION FOR APPROVAL IN ACCORDANCE WITH THE PROVISIONS OF SECTION 506.04 - SHOP DRAWINGS. ALL WELDING SHALL CONFORM WITH SECTION 506.10.
5. THE RAIL SYSTEM SHALL BE CONTINOUS WITH EACH TUBE SECTION ATTACHED TO A MINIMUM OF TWO POST. ALL JOINTS SHALL BE SPLICED AS DETAILED, WITH ALL SPLICE CONNECTIONS IN THE SAME PANEL, LOCATED ONE DIRECTLY ABOVE THE OTHER.
6. RAILING JOINT SPLICES SHALL BE PROVIDED FOR ALL SUPERSTRUCTURE JOINTS. THE RAIL JOINT OPENING SHALL BE 1 INCH OR CAPABLE OF PROVIDING THE MOVEMENT SPECIFIED. SPLICE PLATE DETAILS SHALL BE MODIFIED AS REQUIRED FOR JOINTS REQUIRING MORE THAN 2 INCHES OF TOTAL MOVEMENT.
7. ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AND CONFORM TO SECTION 714.07.
8. BOLTS SHALL BE ASTM A307. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION TO AASHTO M111 OR M232 (HARDWARE)
9. ALL POST SHALL BE SET NORMAL TO GRADE.
10. BRIDGE APPROACH RAIL HEIGHT SHALL BE TRANSITIONED TO NORMAL ROADWAY HEIGHT IN 25 FEET.
11. SPLICES SHALL LAP IN THE DIRECTION OF TRAFFIC FLOW.
12. THE DROP-WEIGHT TEAR TEST IN SECTION 732 SHALL NOT APPLY TO THE STRUCTURAL TUBING ON THIS STANDARD.
13. PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ETC., SHALL BE GROUND TO A 1/16" RADIUS.







BILL OF MATERIALS

DET. #	QTY	DESCRIPTION	MATERIAL
1	22	W8x24 FASCIA POST @ 4′-1″	ASTM A36
2	4	W8x24 POST @ 6′-0″	ASTM A36
3	2	6″x3″x1/4″ END SECTION @ 23′ 0″ W/ WELDED END CAP	ASTM A500 Gr B
4	2	6″x3″x1/4″ END SECTION @ 23′ 4″ W/ WELDED END CAP	ASTM A500 Gr B
5	2	6″x3″x1/4″ RAIL @ 17′ 0″	ASTM A500 Gr B
6	88	1/4″x2″ PLATE WASHER @ 5″	ASTM A36
7	26	1/4″x1-3/4″ SPECIAL WASHER @ 3″	ASTM A36
8	22	W6x8.5 OFFSET BLOCK @ 14″	ASTM A36
9	12	10 GAUGE "W" BEAM @ 12′ 6″	ASTM A36
10	96	5/8″x1-1/4″ SPLICE BOLT / RECESSED NUT (PANEL ASS'Y)	ASTM A307
11	22	5/8″x2″ SPLICE BOLT / RECESSED NUT (PANEL POST BOLT)	ASTM A307
12	66	5/8″x2″ HEX BOLT	ASTM A307
13	22	5/8″x4-1/2″ HEX BOLT	ASTM A307
14	4	5/8″x10″ HEX BOLT	ASTM A307
15	114	5/8″ HEX NUT	ASTM A307
16	202	5/8″ FLAT WASHER	ASTM A307
17	16	3/4″x4″ HEX BOLT	ASTM A325
18	16	3/4″ HEAVY HEX NUT	ASTM A563
19	32	3/4″ FLAT WASHER	ASTM F436
20	4	2 1/4″x5″X36″ EXP. SPLICE BAR	ASTM A36 OR ASTM A572
21	22	3/8″x3-1/2″x5″ SHELF BRACKET @ 6-1/2″	ASTM A36
22	44	U BOLTS, NUTS, F.W. - SUPPLIED BY OTHERS	ASTM A449 OR AASHTO M164
23	6	DELINEATOR'S	ALUMINUM

ITEM #: 525.43-BRIDGE RAIL, GALV. HDSB-150 LF GEN CONTR: F R LaFayette

SHEET 1 OF 1

APPROVED BY:

RECEIVED NOV 2 4 2009 OK'D BY MEM APPROVED MEM DATE 12/10/09

BRIDGE RAIL DETAILS SHEET

CLARENDON, PROJECT # BHO 1443 (39), BRIDGE #15, HWY #3
TOWN OF CLAREDON, RUTLAND COUNTY, STATE OF VERMONT

REV NO.	DATE	DESCRIPTION	BY
1	11/13/09	CHANGES PER MARTHA EVANS- MONGEON	E.P.

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

AISC ACTIVE MEMBER

DRAWN	E.P.	9/28/09
CHECKED	D.L.	9/28/09
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	EM09-171	