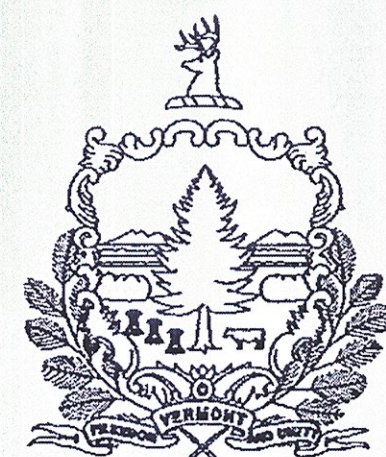
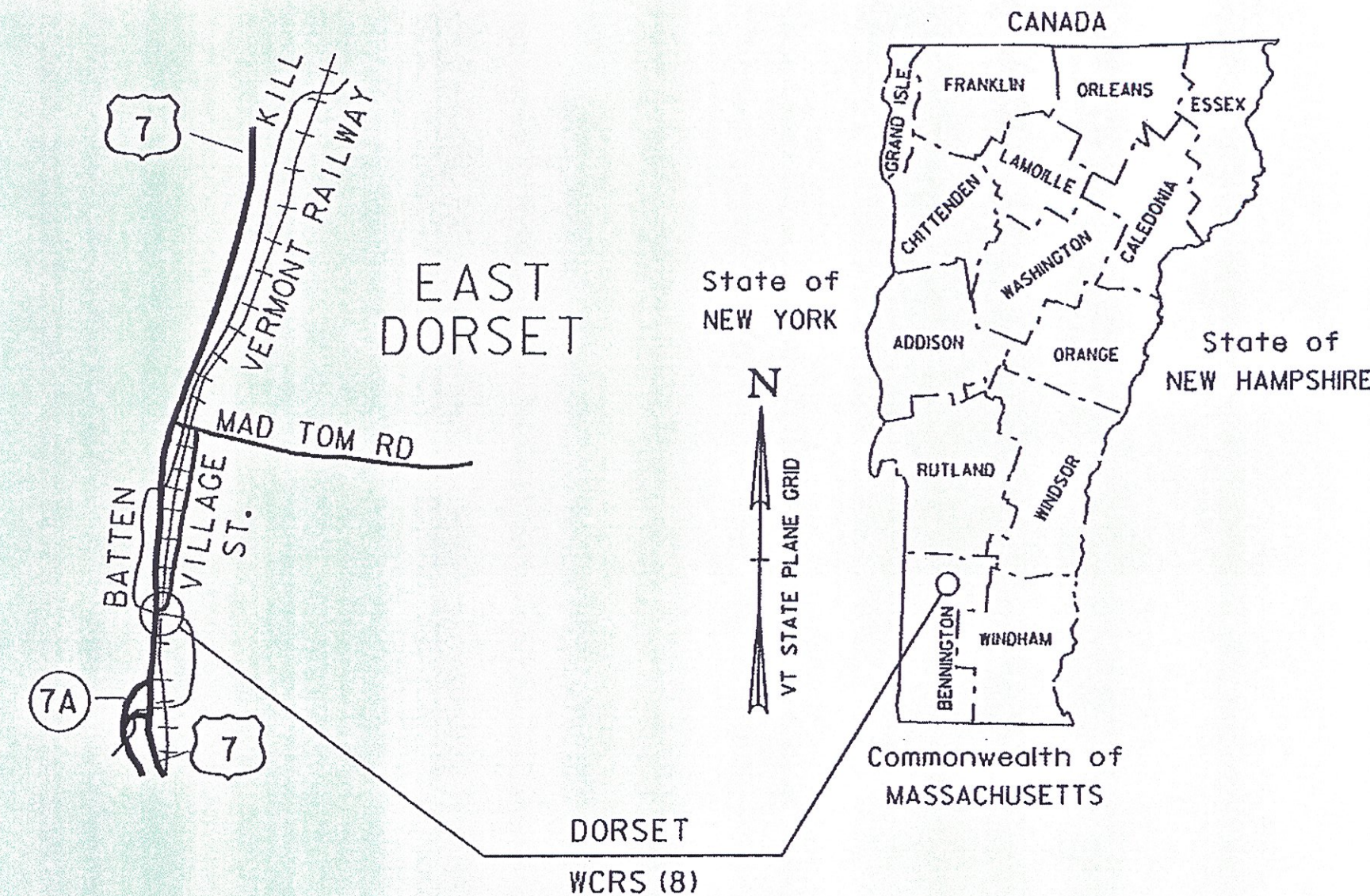


STATE OF VERMONT
AGENCY OF TRANSPORTATION



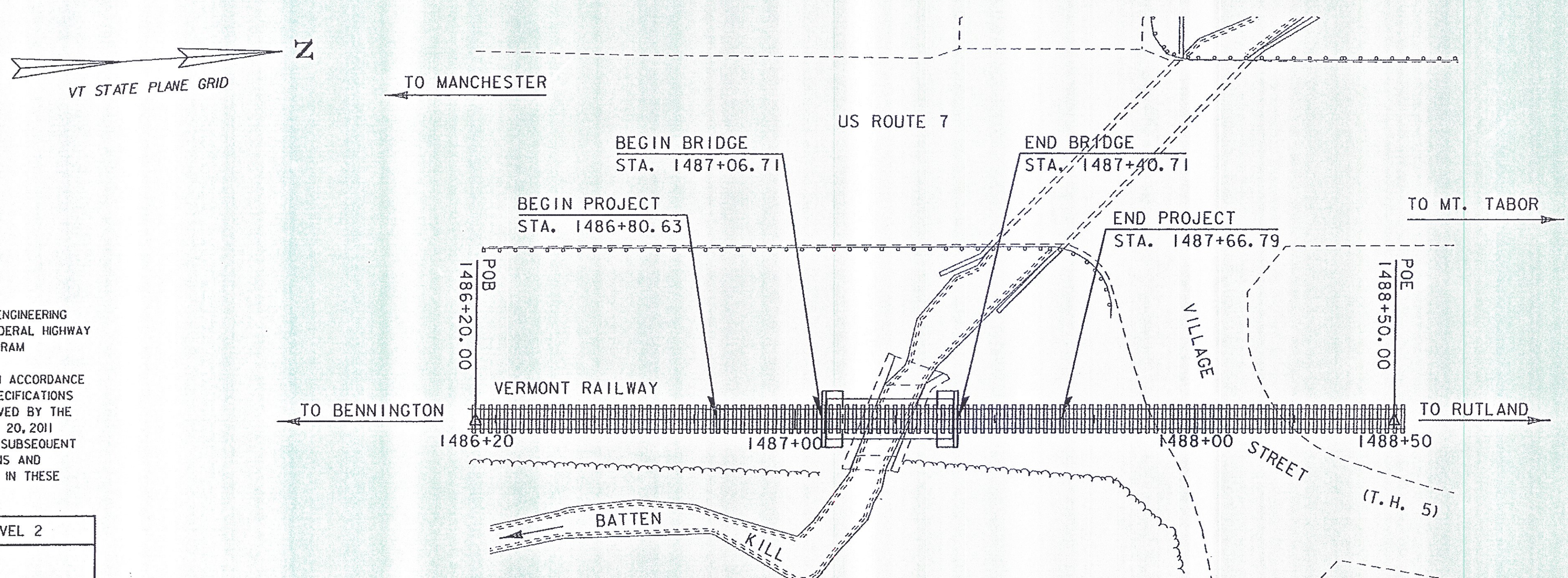
PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF DORSET
COUNTY OF BENNINGTON
VERMONT RAILWAY (VTR) BRIDGE NO. 79



RECORD PLANS	
CONTRACTOR:	CCS CONSTRUCTORS LLC - MORRISVILLE, VT
RESIDENT ENGINEER:	JUDY GILMORE
CONSTRUCTION BEGAN:	SEPTEMBER 22, 2014
CONSTRUCTION COMPLETE:	OCTOBER 1, 2014
RECORD PLANS BY:	JUDY GILMORE & C. PIERCE
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY	<i>Judy Gilmore</i> RESIDENT ENGINEER
DATE	7 May 2016
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.	

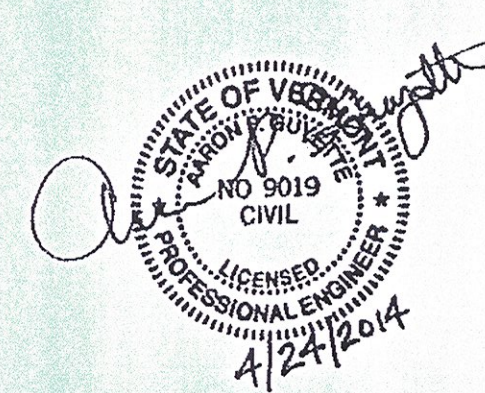
PROJECT LOCATION: VTR BRIDGE NO. 79 OVER THE BATTEN KILL AT MILE POST 28.17 IN DORSET.
 PROJECT DESCRIPTION: REMOVAL AND REPLACEMENT OF EXISTING CONCRETE STRUCTURE WITH STEEL OPEN DECK SUPERSTRUCTURE, PRECAST CONCRETE ABUTMENTS ON PILES, CONCRETE APPROACH SLABS, ASSOCIATED TRACK WORK AND CHANNEL ARMORING.
 LENGTH OF STRUCTURE: 34.00 FEET
 LENGTH OF RAILROAD: 52.16 FEET
 LENGTH OF PROJECT: 86.16 FEET



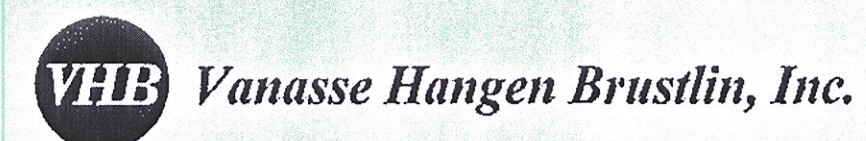
THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.
 CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL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

QUALITY ASSURANCE PROGRAM : LEVEL 2
SURVEYED BY : VHB
SURVEYED DATE : DECEMBER, 2008
DATUM
VERTICAL: NAVD 1988
HORIZONTAL: NAD 83

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



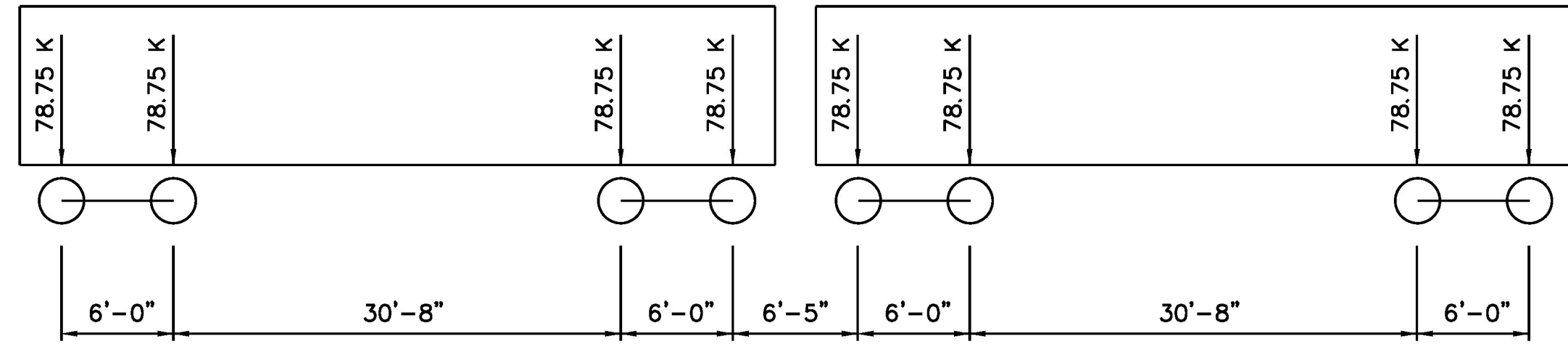
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	APPROVED <i>Joshua L. Schultz</i> DATE 5/5/14
DIRECTOR OF POLICY PLANNING AND INTERMODAL DEVELOPMENT	APPROVED <i>Joshua L. Schultz</i> DATE 4/24/14
PROJECT MANAGER : JOSHUA L. SCHULTZ, P.E.	
PROJECT NAME : DORSET	
PROJECT NUMBER : WCRS (8)	
SHEET 1 OF 33 SHEETS	



PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

INDEX OF SHEETS		STANDARDS LIST		FINAL HYDRAULIC REPORT		
PLAN SHEETS				HYDROLOGIC DATA Date: 6/4/2013		
1	TITLE SHEET	T-1	TRAFFIC CONTROL GENERAL NOTES	08-06-2012		
2	PRELIMINARY INFORMATION SHEET	T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012		
3	TYPICAL SECTIONS	T-30	CONSTRUCTION SIGN DETAILS	08-06-2012		
4	PROJECT NOTES					
5 - 6	QUANTITY SHEETS					
7	CONVENTIONAL SYMBOLS LEGEND					
8	TIE SHEET					
9	ALIGNMENT LAYOUT SHEET					
10	LAYOUT SHEET					
11	TRAFFIC CONTROL PLAN					
12	BORING INFORMATION SHEET					
13 - 15	BORING LOGS					
16	PLAN AND ELEVATION					
17	TRACK WORK PLAN					
18	DECK DETAILS					
19	FRAMING PLAN & STRINGER ELEVATION					
20	STEEL DETAILS					
21	BEARING DETAILS					
22	ABUTMENT DETAILS (MASONRY)					
23	ABUTMENT DETAILS (REINFORCING)					
24	APPROACH SLAB DETAILS					
25	RAIL CROSS SECTIONS					
26 - 27	CHANNEL CROSS SECTIONS					
28	EROSION CONTROL NARRATIVE					
29	EPSC EXISTING CONDITIONS SITE PLAN					
30	EPSC CONSTRUCTION CONDITIONS SITE PLAN					
31	EPSC FINAL CONDITIONS SITE PLAN					
32 - 33	EPSC DETAILS					
STRUCTURE DETAILS				PROPOSED STRUCTURE		
SD-501.00	CONCRETE DETAILS AND NOTES	02-09-2012		STRUCTURE TYPE: Deck Plate Girder CLEAR SPAN(NORMAL TO STREAM): 23.5 feet VERTICAL CLEARANCE ABOVE STREAMBED: 3.3 feet WATERWAY OF FULL OPENING: 58 square feet WATER SURFACE ELEVATIONS AT: Q2.33 = 776.3 VELOCITY= 6.8 Q10 = 777.5 " 7.6 Q25 = 777.7 " 10.1 Q50 = 778.5 " 12.1 Q100 = 779.2 " 14.1 IS THE ROADWAY OVERTOPPED BELOW Q100: Yes FREQUENCY: on average once every 79 years RELIEF ELEVATION: 779.5 feet DISCHARGE OVER ROAD @Q100: approximately 2 cfs AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 777.12 VERTICAL CLEARANCE: @ Q50 = - 1.45 feet SCOUR: Worst case at Q79 incipient bank overtopping flow. Contraction Scour is live bed at depth 9.7 ft. Note that foundation piles will be driven to depth > 15 feet. REQUIRED CHANNEL PROTECTION: Stone fill, Type III		
				EXISTING STRUCTURE INFORMATION		
				STRUCTURE TYPE: Concrete Slab YEAR BUILT: 1919 CLEAR SPAN(NORMAL TO STREAM): 10 ft VERTICAL CLEARANCE ABOVE STREAMBED: 3.5 feet WATERWAY OF FULL OPENING: 28 square feet DISPOSITION OF STRUCTURE: Remove and replace TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown WATER SURFACE ELEVATIONS AT: Q2.33 = 777.0 VELOCITY = 8 Q10 = 780.0 " 10 Q25 = 780.1 " 11 Q50 = 780.5 " 11 Q100 = 780.9 " 10 LONG TERM STREAMBED CHANGES: No significant changes IS THE ROADWAY OVERTOPPED BELOW Q100: Yes FREQUENCY: on average once every 7 years RELIEF ELEVATION: 779.5 feet NAVD 88 DISCHARGE OVER ROAD @Q100: approximately 275 cfs		
				PERMIT INFORMATION		
				AVERAGE DAILY FLOW: 4 CFS DEPTH OR ELEVATION: ORDINARY LOW WATER: 2 CFS 774.1 (0.3 feet deep) ORDINARY HIGH WATER: 56 CFS 775.4 (1.6 feet deep)		
				TEMPORARY BRIDGE REQUIREMENTS		
				STRUCTURE TYPE: n/a CLEAR SPAN (NORMAL TO STREAM): n/a VERTICAL CLEARANCE ABOVE STREAMBED: n/a WATERWAY AREA OF FULL OPENING: n/a		
				ADDITIONAL INFORMATION		
				No temporary bridge required. Service will be shut down during work. Flows will be diverted around the structure and paid for under Item 900.845, "Special Provision (Temporary Relocation of Stream)".		
				TRAFFIC MAINTENANCE NOTES		
				DESIGN VALUES		
				1. DESIGN LIVE LOAD --- 2. FUTURE PAVEMENT --- 3. DESIGN SPAN L: 30.00 FT 4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS) Δ: --- 5. PRESTRESSING STRAND f _y : --- 6. PRESTRESSED CONCRETE STRENGTH f' _c : --- 7. PRESTRESSED CONCRETE RELEASE STRENGTH f' _{cr} : --- 8. CONCRETE, HIGH PERFORMANCE CLASS AA f' _c : --- 9. CONCRETE, HIGH PERFORMANCE CLASS A f' _c : --- 10. CONCRETE, HIGH PERFORMANCE CLASS B f' _c : --- 11. CONCRETE, CLASS C f' _c : --- 12. REINFORCING STEEL f _y : 60 KSI 13. STRUCTURAL STEEL AASHTO M270 (GALVANIZED) f _y : 50 KSI 14. SOIL UNIT WEIGHT γ: 0.140 KCF 15. NOMINAL BEARING RESISTANCE OF SOIL q _n : --- 16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) φ: --- 17. NOMINAL BEARING RESISTANCE OF ROCK q _n : --- 18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) φ: --- 19. NOMINAL AXIAL PILE RESISTANCE q _p : --- 20. PILE YIELD STRENGTH ASTM A572 f _y : 50 KSI 21. PILE SIZE HP 14X 89 22. EST. AVG. PILE LENGTH L _p : 20 FT 23. PILE RESISTANCE FACTOR φ: --- 24. LATERAL PILE DEFLECTION Δ: --- 25. BASIC WIND SPEED V _{3s} : --- 26. MINIMUM GROUND SNOW LOAD p _g : --- 27. SEISMIC DATA PGA: --- S ₁ : ---		
				UPSTREAM STRUCTURE		
				TOWN: Dorset DISTANCE: 50 feet HIGHWAY #: US 7 STRUCTURE #: C46 CLEAR SPAN: 12 feet CLEAR HEIGHT: 6 feet YEAR BUILT: 1959 FULL WATERWAY: 59 sq ft STRUCTURE TYPE: Concrete Box Culvert		
				DOWNSTREAM STRUCTURE		
				TOWN: Dorset DISTANCE: 1600 feet HIGHWAY #: US 7 STRUCTURE #: C31 CLEAR SPAN: 18 feet CLEAR HEIGHT: 4 ft 9 in YEAR BUILT: 1990 FULL WATERWAY: 90 sq ft STRUCTURE TYPE: Reinforced Concrete Box		
				TRAFFIC DATA		
YEAR	ADT	DHV	% D	% T	ADTT	20 year ESAL for flexible pavement from XXXX to 0 : 0
0	0	0	0	0	0	40 year ESAL for flexible pavement from XXXX to XXXX : 0
1	0	0	0	0	0	Design Speed : 0 mph
				AS BUILT "REBAR" DETAIL		
				LEVEL I TYPE: GRADE: LEVEL II TYPE: GRADE: LEVEL III TYPE: GRADE:		
				TRAFFIC MAINTENANCE NOTES		
				PILE DRIVING AND TESTING REQUIREMENTS		
				1. NOMINAL PILE DRIVING CAPACITY --- 2. PILE TEST RESISTANCE FACTOR φ: * 3. MAXIMUM PILE TIP ELEVATION --- 4. 0		
				PROJECT INFORMATION		
				PROJECT NAME: DORSET PROJECT NUMBER: WCRS(8) FILE NAME: z08g224pi.dgn PLOT DATE: 4/22/2014 PROJECT LEADER: A.P. GUYETTE DRAWN BY: D.A. GINGRAS DESIGNED BY: B.J. MASSE CHECKED BY: S.E. BURBANK PRELIMINARY INFORMATION SHEET SHEET 2 OF 33		

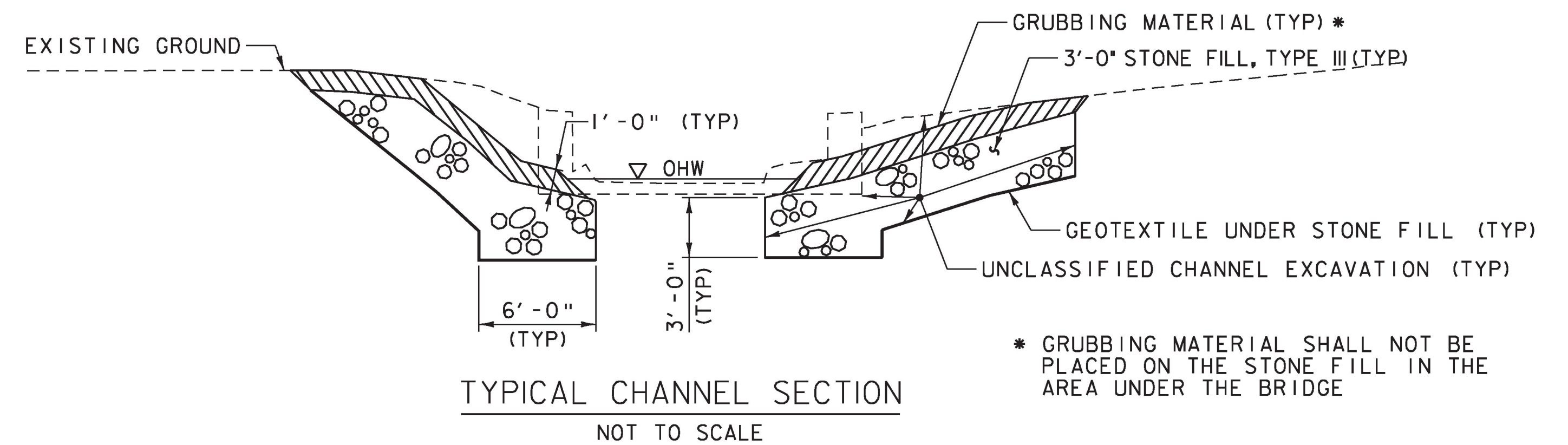
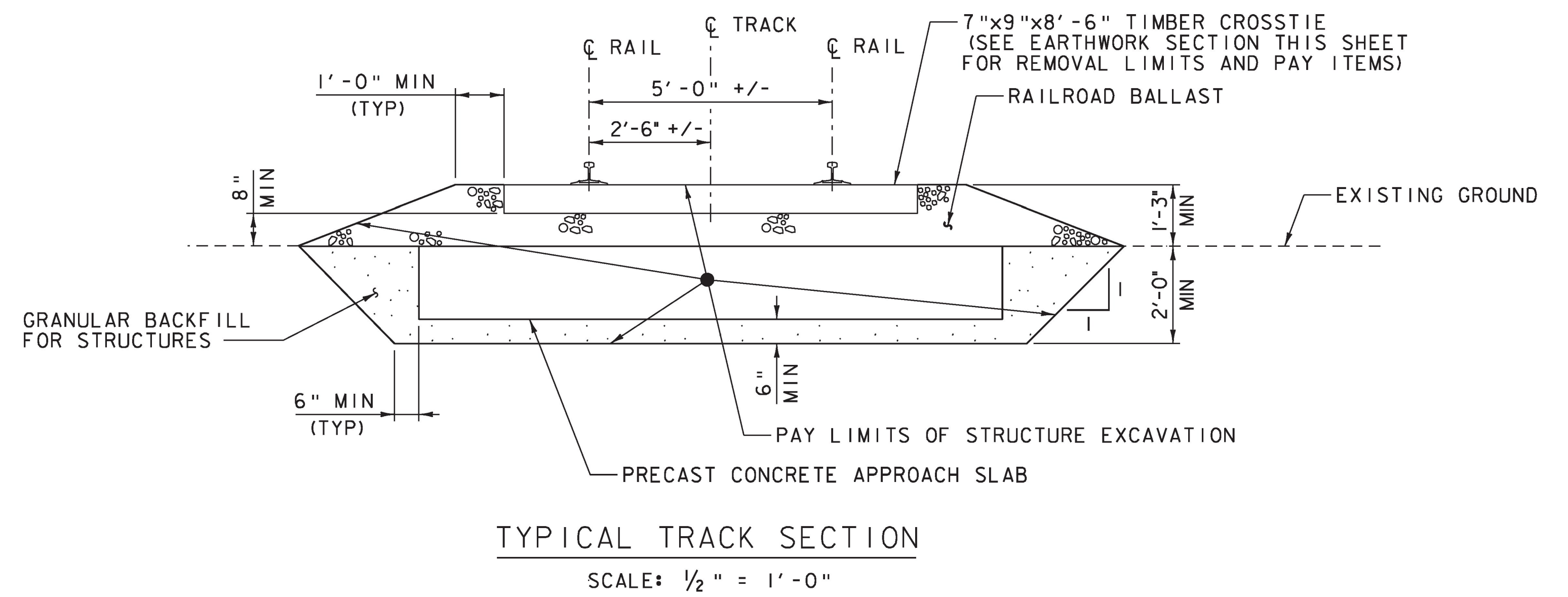
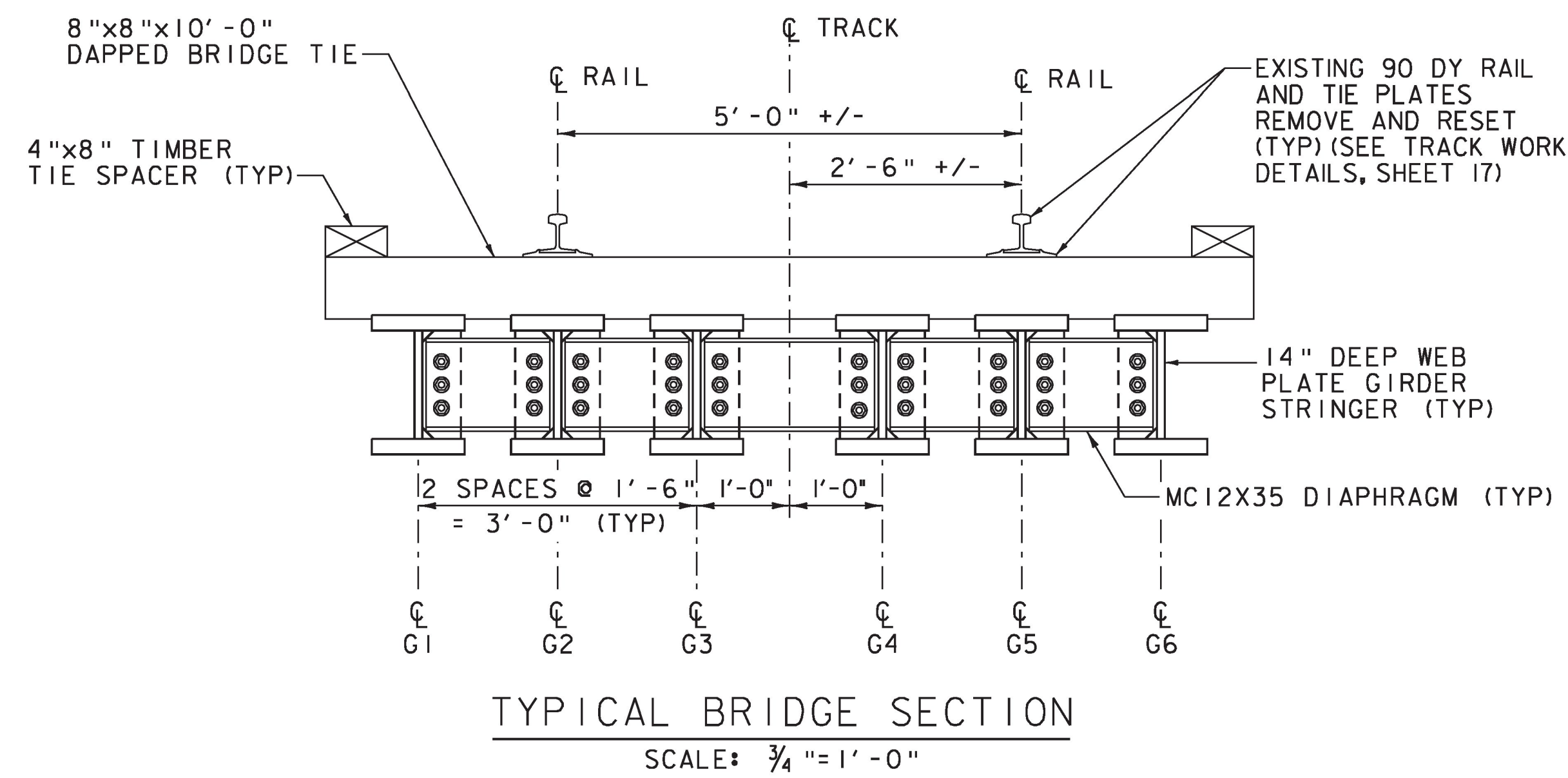


315 KIP BASE CAR AXLE LOADS AND SPACING
NOT TO SCALE

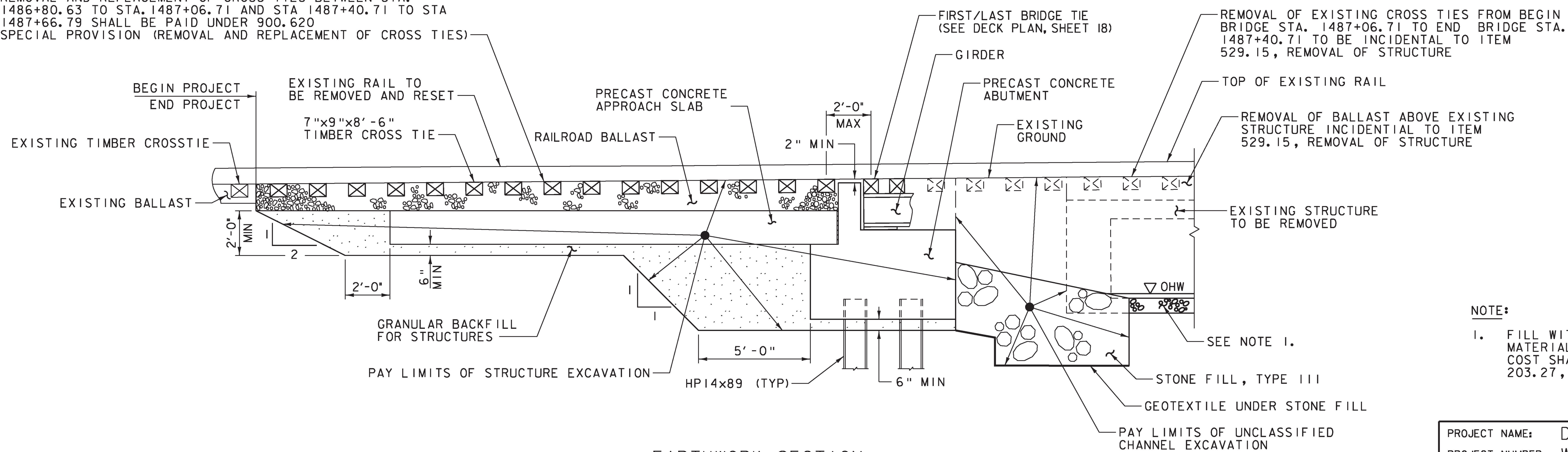


AS BUILT "REBAR" DETAIL		
LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

* SEE PROJECT NOTES



REMOVAL AND REPLACEMENT OF CROSS TIES BETWEEN STA. 1486+80.63 TO STA. 1487+06.71 AND STA. 1487+40.71 TO STA. 1487+66.79 SHALL BE PAID UNDER 900.620 SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES)



NOTE:

1. FILL WITH SUITABLE ON-SITE EXCAVATED MATERIAL AS APPROVED BY THE ENGINEER. COST SHALL BE INCLUDED UNDER ITEM 203.27, UNCLASSIFIED CHANNEL EXCAVATION.

PROJECT NAME: DORSET
PROJECT NUMBER: WCRS(8)

FILE NAME: z08g224+yp.dgn
PROJECT LEADER: A.P. GUYETTE
DESIGNED BY: J.W. GOLEK
TYPICAL SECTIONS

PLOT DATE: 5/2/2014
DRAWN BY: E.A. FIALA
CHECKED BY: S.E. BURBANK
SHEET 3 OF 33

GENERAL NOTES:

- ALL CONTRACTOR DESIGN, CONSTRUCTION AND FABRICATION SHALL CONFORM TO THE "AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION (AREMA) MANUAL FOR RAILWAY ENGINEERING, 2013" AND THE "STATE OF VERMONT AGENCY OF TRANSPORTATION (VTRANS) STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2011" AND ITS LATEST REVISIONS.
- THE DESIGN LIVE LOAD FOR THE BRIDGE IS BASED ON A 4 AXLE 315 KIP VEHICLE (SEE DETAIL ON PRELIMINARY INFORMATION SHEET).
- THE GENERAL SCOPE OF WORK INCLUDES BUT IS NOT LIMITED TO:
 - PREPARING AND IMPLEMENTING AN EROSION CONTROL AND ENVIRONMENTAL CONTAINMENT PLAN
 - REMOVING AND STORING TRACK FROM BRIDGE AND APPROACHES.
 - REMOVING EXISTING CONCRETE SLAB STRUCTURE.
 - DRIVING STEEL PILES
 - INSTALLING NEW PRECAST CONCRETE STRUCTURES (ABUTMENTS AND APPROACH SLABS).
 - INSTALLING NEW BEARING DEVICE ASSEMBLIES ON BOTH ABUTMENTS.
 - INSTALLING NEW STEEL SUPERSTRUCTURE WITH TIMBER DECK.
 - RE-INSTALL TRACK ON BRIDGE AND APPROACHES.
- THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT CONTINUOUS COORDINATION WITH THE RAILROAD OPERATOR, VERMONT RAILWAY (VTR), WILL BE REQUIRED THROUGHOUT CONSTRUCTION. VTR WILL PROVIDE THE CONTRACTOR WITH FLAGGERS FOR PROTECTION OF RAILROAD TRAFFIC WHILE WORK IS BEING PERFORMED ON THE RAILROAD RIGHT OF WAY (R.O.W.). THE CONTRACTOR SHALL NOT ENTER THE R.O.W. AT ANY TIME WITHOUT VTR AUTHORIZATION. ALL COSTS FOR RAILROAD FLAGGER PROTECTION AND RAILROAD COORDINATION SHALL BE INCLUDED UNDER ITEM 900.650, SPECIAL PROVISION (MAINTENANCE OF RAILROAD TRAFFIC)(N.A.B.I.). SEE THE RAILROAD SPECIAL PROVISION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- SEE PROJECT SPECIAL PROVISIONS FOR EXCLUSIVE AND NON-EXCLUSIVE TRACK TIMES DEFINED FOR THIS PROJECT.
- THE RAILROAD/HIGHWAY RIGHT-OF-WAY IS SHOWN ON THE LAYOUT SHEET. CONSTRUCTION AND ACCESS SHALL BE WITHIN THE R.O.W. UNLESS OTHERWISE APPROVED BY THE PROPERTY OWNER(S) AND VTRANS ENVIRONMENTAL PERMITTING. THE CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE PROPERTY OWNER(S) TO OBTAIN WRITTEN APPROVAL OF LAND USE OUTSIDE THE R.O.W. THE CONTRACTOR SHALL SUBMIT COPIES OF WRITTEN PROPERTY AGREEMENTS TO THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL PERMITTING REQUIRED FOR OUTSIDE THE R.O.W. LAND USE.
- EXISTING AERIAL FACILITIES WITHIN AND/OR NEAR THE PROJECT AREA WILL NOT BE AFFECTED BY THE PROJECT, THE CONTRACTOR SHALL PROTECT THESE FACILITIES FROM DAMAGE. ALL CONTRACTORS, SUBCONTRACTORS OR MATERIAL SUPPLIERS INVOLVED IN ANY PROJECT-RELATED ACTIVITY SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS RELATED TO WORKING AROUND LIVE ELECTRICAL LINES; INCLUDING, BUT NOT LIMITED TO MAINTAINING THE REQUIRED MINIMUM CLEAR DISTANCE FROM AN ELECTRICAL UTILITY FACILITY.
- AN UNDERGROUND CABLE IS ATTACHED TO THE EXISTING BRIDGE AND IS ASSUMED TO BE ABANDONED AND SHALL BE REMOVED; NO OTHER UNDERGROUND FACILITIES HAVE BEEN IDENTIFIED IN THE PROJECT AREA. HOWEVER, THE CONTRACTOR IS ADVISED THAT EXPLORATORY EXCAVATION TO LOCATE AND/OR TRACE THIS LINE AND ANY OTHER UNDERGROUND FACILITY NOT IDENTIFIED MAY BE NECESSARY AND ANY FACILITY FOUND TO BE ACTIVE WILL NEED TO BE PROTECTED FROM DAMAGE AS REFERENCED IN THE PROJECT UTILITY SPECIAL PROVISIONS. THE CONTRACTOR SHALL CONTACT DIG SAFE BEFORE STARTING EXCAVATION ACTIVITIES. THE CONTRACTOR MUST TELEPHONE DIG SAFE AT 811 AT LEAST 48 HOURS (EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS) BEFORE, BUT NOT MORE THEN 30 DAYS BEFORE, STARTING EXCAVATION ACTIVITIES AT ANY LOCATION. SEE UTILITY SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- ALL PRECAST CONCRETE PLACEMENT AND BACKFILLING SHALL BE DONE IN THE DRY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PREVENT CONSTRUCTION DEBRIS FROM ENTERING WATERWAYS, PUBLIC OR PRIVATE PROPERTY, OR TRAVELED WAYS DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE CLEANUP OF DEBRIS OR CONTAMINATION RESULTING FROM THE WORK.
- DIMENSIONS AND ELEVATIONS SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM LIMITED FIELD INVESTIGATION AND 2008 AND 2010 FIELD SURVEYS. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SURVEY AND FIELD MEASUREMENTS OF ALL EXISTING COMPONENTS IMPACTED BY THE NEW WORK TO ENSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS TO THE SITE. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT ITEMS.
- EXISTING COMPONENTS DAMAGED AS A RESULT OF THE WORK, BUT INTENDED TO REMAIN IN USE, SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS DIRECTED AND APPROVED BY THE ENGINEER, AT NO ADDITIONAL EXPENSE TO THE BRIDGE OWNER (VTRANS) OR THE RAILROAD OPERATOR (VTR).
- THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO ALL AREAS OF WORK ON THE BRIDGE FOR THE ENGINEER'S INSPECTIONS. COST SHALL BE INCIDENTAL TO THE CONTRACT ITEMS.

GENERAL NOTES CONTINUED:

- THE CONTRACTOR SHALL FIELD VERIFY EXISTING TOP OF RAIL ELEVATIONS AT CENTERLINE OF BEARING AND SHALL VERIFY DESIRED FINAL TOP OF RAIL ELEVATIONS WITH VTR BEFORE STARTING THE WORK. TEMPORARY CHANGES TO TOP OF RAIL ELEVATIONS DURING THE WORK MUST BE APPROVED BY THE ENGINEER AND VTR BEFORE ADVANCING THE WORK.
- THE CONTRACTOR SHALL SUBMIT A PROPOSED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE VTRANS RAIL SECTION FOR REVIEW BEFORE STARTING WORK. COST SHALL BE INCIDENTAL TO THE CONTRACT ITEMS.

REMOVAL AND REPAIR NOTES:

- ITEM 529.15, REMOVAL OF STRUCTURE SHALL INCLUDE REMOVAL OF THE EXISTING CONCRETE SUPERSTRUCTURE, EXISTING CROSS TIES, AND EXISTING BALLAST ABOVE THE STRUCTURE.
- THE CONTRACTOR'S METHODS FOR REMOVAL OF THE EXISTING STRUCTURE SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY REMOVAL WORK. PAYMENT SHALL BE INCLUDED IN PAY ITEM 529.15.
- ALL COSTS FOR CROSS TIE REMOVAL OUTSIDE OF THE EXISTING STRUCTURE LIMITS SHALL BE INCLUDED IN PAY ITEM 900.620, "SPECIAL PROVISION, (REMOVAL AND REPLACEMENT OF CROSS TIES)".
- ALL COSTS FOR NEW BRIDGE TIES SHALL BE INCLUDED IN PAY ITEM 900.645, "SPECIAL PROVISION, (TIMBER DECK, RAILROAD BRIDGE)".
- ALL COSTS FOR NEW CROSS TIES SHALL BE INCLUDED IN PAY ITEM 900.620, "SPECIAL PROVISION, (REMOVAL AND REPLACEMENT OF CROSS TIES)".

ENVIRONMENTAL CONTAINMENT NOTES:

- ALL EXISTING MATERIALS REMOVED AND NOT REUSED OR RESET AS PART OF THIS PROJECT AND ALL WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF ONLY AT AN APPROVED FACILITY.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATUTES AND REGULATIONS RELATING TO THE PREVENTION AND ABATEMENT OF ALL POLLUTION.

REINFORCING STEEL NOTES:

- REINFORCING STEEL SHALL HAVE 3" COVER UNLESS OTHERWISE NOTED IN THE PLANS.
- REINFORCING STEEL IN PRECAST CONCRETE AND ALL DOWELS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE 540.10, "PRECAST CONCRETE STRUCTURE" ITEM.
- REINFORCING STEEL IN PRECAST CONCRETE AND ALL DOWELS SHALL MEET THE REQUIREMENTS OF SECTION 507 LEVEL I PLAIN REINFORCING STEEL.
- REINFORCING STEEL PLACEMENT TOLERANCE SHALL BE:
SPACING: +/- 1"
CLEARANCE: +/- 3/16"

PRECAST CONCRETE NOTES

- NEW BRIDGE ABUTMENTS AND APPROACH SLABS SHALL BE CONSTRUCTED OF PRECAST CONCRETE. ALL COSTS FOR PRECAST CONCRETE BRIDGE ABUTMENTS AND APPROACH SLABS SHALL BE INCLUDED IN THE APPROPRIATE 540.10, "PRECAST CONCRETE STRUCTURE" ITEM.
- PVC GROUT SLEEVES IN PRECAST STRUCTURES SHALL BE REMOVED PRIOR TO GROUTING AND SHALL BE INCIDENTAL TO THE APPROPRIATE 540.10, "PRECAST CONCRETE STRUCTURE" ITEM.
- ALL PRECAST CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI.
- ABUTMENTS SHALL BE PLUMB AND LEVEL PRIOR TO GROUTING PILE BLOCK-OUTS IN PRECAST ABUTMENTS. BLOCK-OUTS SHALL BE GROUTED WITH ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)".

LIFTING LOOPS SHALL BE DETAILED AND DESIGNED BY THE PRECAST CONCRETE FABRICATOR. LIFTING LOOPS SHALL BE REMOVED A MINIMUM OF 1" BELOW THE TOP OF THE CONCRETE SURFACE. ONCE THE PRECAST CONCRETE UNITS ARE IN PLACE, RECESSES SHALL BE FILLED WITH AN APPROVED MORTAR. FABRICATION DRAWINGS FOR THE PRECAST CONCRETE SHALL BE SUBMITTED FOR APPROVAL ACCORDING TO THE VTRANS STANDARD SPECIFICATIONS AND SHALL IDENTIFY ALL MATERIALS AND DETAILS INCLUDING THE PROPOSED LIFTING LOOPS, LIFTING LOOP REMOVAL, AND MORTAR PROPOSED TO FILL RECESSES. ALL COSTS SHALL BE PAID FOR UNDER THE APPROPRIATE 540.10, "PRECAST CONCRETE STRUCTURE" ITEM.
- THE CONTRACTOR SHALL ENSURE THAT ALL LIFTING DEVICES ARE PLACED SO AS NOT TO CONFLICT WITH APPROACH SLAB DOWEL LOCATIONS.
- EXTREME CARE SHALL BE TAKEN DURING THE TRANSPORTATION, ERECTION AND FINAL PLACEMENT OF ALL PRECAST CONCRETE TO PREVENT DAMAGE. DAMAGED COMPONENTS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.

PRECAST CONCRETE NOTES CONTINUED:

- ITEM 514.10, WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL SURFACES OF THE PRECAST CONCRETE STRUCTURES INCLUDING FRONT, BACK, TOP, AND ENDS. BOTTOM SURFACES DO NOT REQUIRE WATERPROOFING.
- PRECAST CONCRETE SHALL HAVE ALL EXPOSED TOP EDGES CHAMFERED 1" UNLESS OTHERWISE NOTED. BOTTOM EDGES OF ALL PRECAST CONCRETE SHALL NOT BE CHAMFERED.

STRUCTURAL STEEL NOTES:

- ALL STRUCTURAL STEEL SHALL BE PAID FOR UNDER ITEMS 506.55, "STRUCTURAL STEEL, PLATE GIRDER" AND 506.60, "STRUCTURAL STEEL".
- FIELD AND SHOP CONNECTIONS SHALL BE MADE WITH 1" DIAMETER A325 TYPE I GALVANIZED BOLTS IN 1 1/16" DIAMETER HOLES. NUTS AND WASHERS SHALL CONFORM TO ASTM A563DH AND ASTM F436-1. ALL BOLTS, NUTS, AND WASHERS SHALL CONFORM TO SUBSECTION 714.05.
- ALL BOLT HOLES SHALL BE SHOP REAMED AFTER GALVANIZING TO ENSURE 1 1/16" DIAMETER. NO FIELD REAMING SHALL BE ALLOWED.
- ALL BOLTED CONNECTIONS SHALL BE TIGHTENED BY THE TURN OF THE NUT METHOD. ALL SHOP BOLTING SHALL CONFORM TO SUBSECTION 506.19.
- GIRDERS TO BE ASSEMBLED WITH ANY MILL CAMBER UPWARD.
- THE ENDS OF THE GIRDERS SHALL BE VERTICAL UNDER DEAD LOAD.
- ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO VTRANS RAIL SECTION FOR APPROVAL.
- THE STEEL GIRDERS, DIAPHRAGMS, CONNECTION PLATES, BEARING STIFFENERS, ETC. SHALL BE GALVANIZED IN ACCORDANCE WITH SUB SECTION 726.08.

PILE NOTES:

- TO PREVENT DAMAGE PILE SHOES SHALL BE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04(f)
- ABUTMENT PILES
 - THE PILES SHALL BE HP 14 X 89
 - THE PILES SHALL BE DRIVEN TO REFUSAL IN BEDROCK. A NOMINAL PILE DRIVING RESISTANCE (RNDR) OF 183.1 KIPS IS REQUIRED BY DESIGN, PROVIDED A MINIMUM PENETRATION OF 15 FEET BELOW THE BOTTOM OF THE PILE CAP HAS BEEN ACHIEVED.
- A MINIMUM OF THREE DYNAMIC PILE LOADING TESTS ARE REQUIRED DURING PILE INSTALLATION. NO LESS THAN ONE DYNAMIC PILE TEST SHALL BE CONDUCTED AT EACH ABUTMENT. DYNAMIC LOADING TESTS SHALL BE PAID UNDER ITEM 505.45, "DYNAMIC PILE LOADING TESTING".
- THE TOPS OF THE PILES AFTER DRIVING SHALL NOT VARY FROM THE POSITION SHOWN ON THE PLANS BY MORE THAN 3 INCHES. THE PILE ORIENTATION SHALL NOT VARY BY MORE THAN 5 DEGREES. AS PART OF THE PILE CONSTRUCTION DRAWINGS SUBMITTAL, THE CONTRACTOR SHALL DEMONSTRATE HOW THE TOLERANCES WILL BE MET.
- FOR ESTIMATING PURPOSES THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.



PROJECT NAME:	DORSET	PLOT DATE:	5/2/2014
PROJECT NUMBER:	WCRS(8)	DRAWN BY:	J.W. GOLEK
FILE NAME:	z08g224notes.dgn	CHECKED BY:	M.A. COLGAN
PROJECT LEADER:	A.P. GUYETTE	SHEET	4 OF 33
DESIGNED BY:	B.O. CRONIN		
PROJECT NOTES			

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
							ROADWAY	EROSION CONTROL	RAILROAD	BRIDGE	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
									1		1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				
										210	210		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
									1		1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
										190	190		CY	STRUCTURE EXCAVATION	204.25				
										90	90		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
										225	225		LF	STEEL PILING, HP 14 X 89	505.18				
										3	3		EACH	DYNAMIC PILE LOADING TEST	505.45				
										41640	41640		LB	STRUCTURAL STEEL, PLATE GIRDER	506.55				
										3610	3610		LB	STRUCTURAL STEEL	506.60				
										6	6		GAL	WATER REPELLENT, SILANE	514.10				
										1	1		EACH	REMOVAL OF STRUCTURE (10.25' x 15.58' CONCRETE BOX CULVERT)	529.15				
										2	2		EACH	BEARING DEVICE ASSEMBLY, PLAIN ELASTOMERIC PAD	531.16				
										1	1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 1)	540.10				
										1	1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 2)	540.10				
										1	1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB NO. 1)	540.10				
										1	1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB NO. 2)	540.10				
										150	150		CY	STONE FILL, TYPE III	613.12				
							1				1		LS	MOBILIZATION/DEMobilIZATION	635.11				
							1				1		LS	TRAFFIC CONTROL	641.10				
										130	130		SY	GEOTEXTILE UNDER STONE FILL	649.31				
								45			45		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515				
								10			10		LB	SEED	651.15				
								30			30		LB	FERTILIZER	651.18				
								1			1		TON	AGRICULTURAL LIMESTONE	651.20				
								1			1		TON	HAY MULCH	651.25				
										100	100		SY	GRUBBING MATERIAL	651.40				
								1			1		LS	EPSC PLAN	652.10				
								48			48		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				
								20			20		CY	VEHICLE TRACKING PAD	653.35				
								1			1		EACH	FILTER BAG	653.45				
								180			180		LF	PROJECT DEMARCATION FENCE	653.55				
										3	3		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)	900.608				
									45		45		CY	SPECIAL PROVISION (RAILROAD BALLAST)	900.608				
									30		30		EACH	SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES)	900.620				
										41	41		LF	SPECIAL PROVISION (RAPID SETTING GROUT)	900.640				
									231		231		LF	SPECIAL PROVISION (REMOVE AND RESET RAILROAD TRACKS)	900.640				
								1			1		LS	SPECIAL PROVISION (TEMPORARY RELOCATION OF STREAM)	900.645				
										1	1		LS	SPECIAL PROVISION (TIMBER DECK, RAILROAD BRIDGE)	900.645				

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



PROJECT NAME: DORSET
PROJECT NUMBER: WCRS(8)

FILE NAME: z08g224qs.dgn
PROJECT LEADER: A.P. GUYETTE
DESIGNED BY: J.W. GOLEK
QUANTITY SHEET (1 OF 2)

PLOT DATE: 4/10/2014
DRAWN BY: J.W. GOLEK
CHECKED BY: B.O. CRONIN
SHEET 5 OF 33

GENERAL INFORMATION

SYMBOLGY LEGEND NOTE

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

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

POINT CODE	DESCRIPTION
CH	CHANNEL EASEMENT
CONST	CONSTRUCTION EASEMENT
CUL	CULVERT EASEMENT
D&C	DISCONNECT & CONNECT
DIT	DITCH EASEMENT
DR	DRAINAGE EASEMENT
DRIVE	DRIVEWAY EASEMENT
EC	EROSION CONTROL
I&M	INSTALL & MAINTAIN EASEMENT
LAND	LANDSCAPE EASEMENT
SR	SLOPE RIGHT
UE	UTILITY EASEMENT
(P)	PERMANENT EASEMENT
(T)	TEMPORARY EASEMENT
■	BNDNS BOUND SET
□	BNDNS BOUND TO BE SET
●	IPNS IRON PIN SET
⊙	IPNS IRON PIN TO BE SET
⊠	CALC CALCULATED ROW POINT [DISTANCE]
	DISTANCE CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

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

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

PROPOSED GEOMETRY CODES

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

UTILITY SYMBOLGY

UNDERGROUND UTILITIES

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

ABOVE GROUND UTILITIES (AERIAL)

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

PROJECT CONSTRUCTION SYMBOLGY

— CZ —	CLEAR ZONE
—	PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

△	TOP OF CUT SLOPE
○	TOE OF FILL SLOPE
⊗	STONE FILL
—	BOTTOM OF DITCH
—	CULVERT PROPOSED
—	STRUCTURE SUBSURFACE
PDF	PROJECT DEMARCATION FENCE
BF	BARRIER FENCE
XXXXXX	TREE PROTECTION ZONE (TPZ)
////	STRIPING LINE REMOVAL
~~~~	SHEET PILES

**CONVENTIONAL BOUNDARY SYMBOLGY**

**BOUNDARY LINES**

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

**EPSC LAYOUT PLAN SYMBOLGY**

**EPSC MEASURES**

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

**ENVIRONMENTAL RESOURCES**

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

**ARCHEOLOGICAL & HISTORIC**

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

**CONVENTIONAL TOPOGRAPHIC SYMBOLGY**

**EXISTING FEATURES**

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

PROJECT NAME: DORSET  
PROJECT NUMBER: WCRS(8)

FILE NAME: z08g224LegendSheet.dgn PLOT DATE: 4/10/2014  
PROJECT LEADER: A.P. GUYETTE DRAWN BY: D.A. GINGRAS  
DESIGNED BY: VTRANS CHECKED BY: S.E. BURBANK  
CONVENTIONAL SYMBOLGY LEGEND SHEET 7 OF 33

GPS CONTROL POINTS

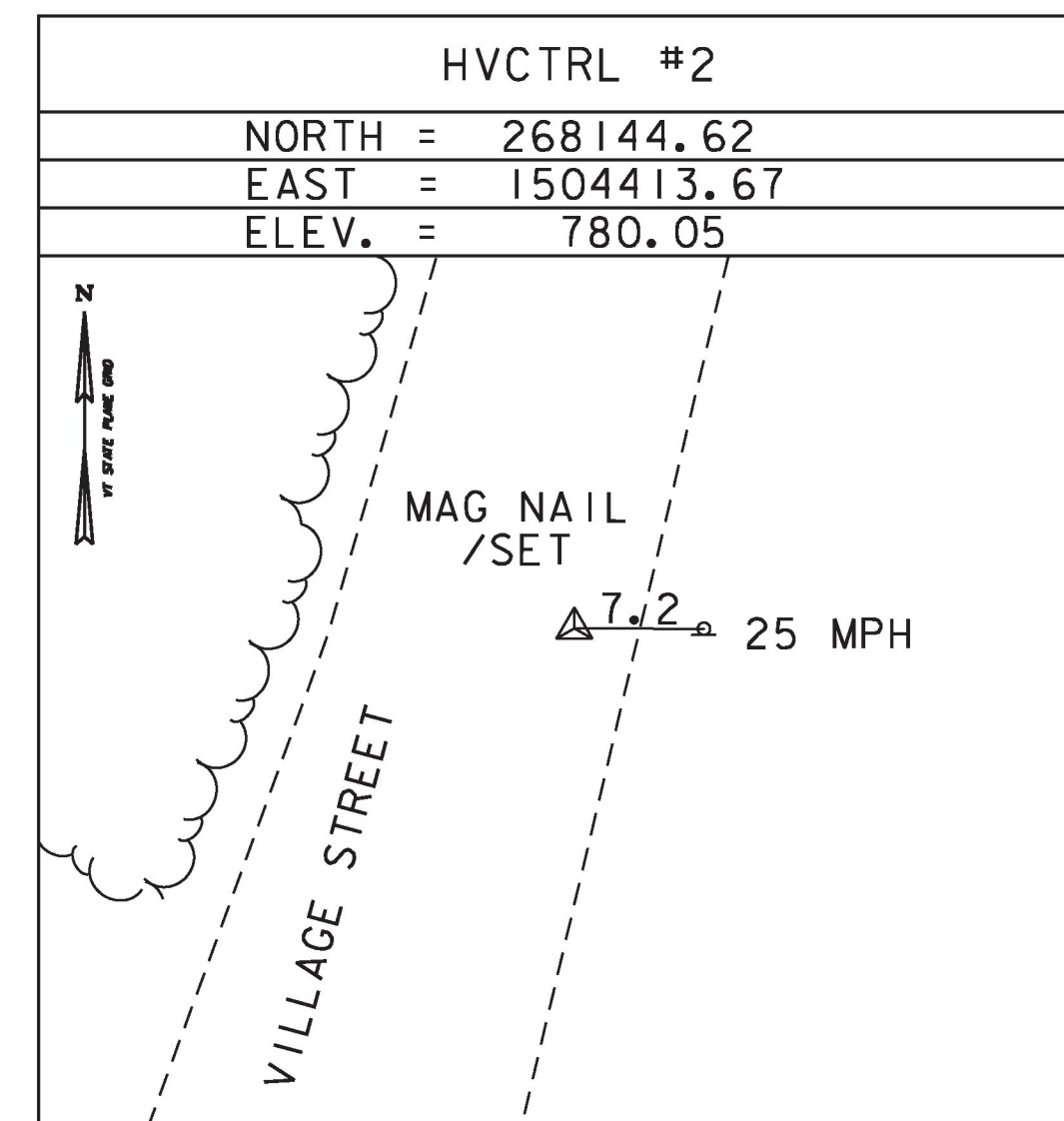
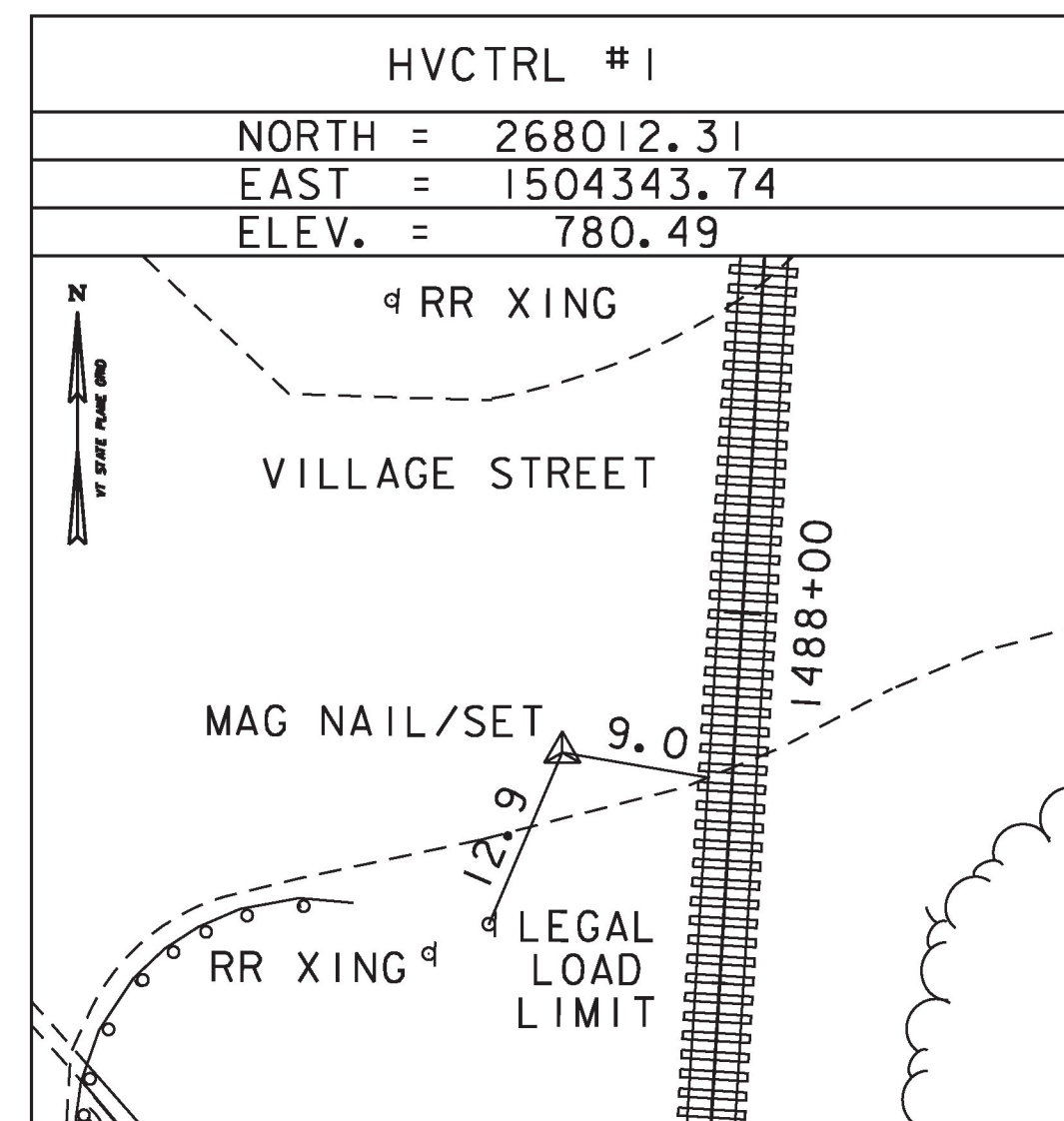
HVCTRL: #100

B99032

NORTH = 267971.25  
 EAST = 1504311.33  
 ELEV. = 780.90

GENERAL LOCATION: DORSET VT, IN EAST DORSET. TO REACH FROM THE INTERSECTION OF US ROUTE 7 AND HISTORIC VT ROUTE 7A IN EAST DORSET, GO NORTH ALONG US ROUTE 7 FOR 0.15 MI (0.24 KM) TO THE SOUTH END OF THE US ROUTE 7 BRIDGE OVER THE BATTEN KILL AND THE SITE OF THE MARK IS ON THE RIGHT, SET IN THE TOP OF THE ABUTMENT AT THE SOUTHEAST CORNER OF THE BRIDGE. IT IS JUST SOUTH OF THE INTERSECTION OF VILLAGE STREET AND THE STATE OF VERMONT EAST DORSET MAINTENANCE GARAGE. IT IS 1.6 FT (0.5 M) EAST OF AND ABOUT 0.3 FT (0.1 M) LOWER THAN THE EAST EDGE OF PAVEMENT OF US ROUTE 7, 0.3 FT (0.1 M) SOUTHWEST OF THE NORTHEAST FACE OF THE ABUTMENT, 50.9 FT (15.5 M) SOUTH OF THE CENTERLINE OF VILLAGE STREET, AND 38.7 FT (11.8 M) WEST OF THE RAIL OF THE RAILROAD TRACKS.

TRAVERSE TIES

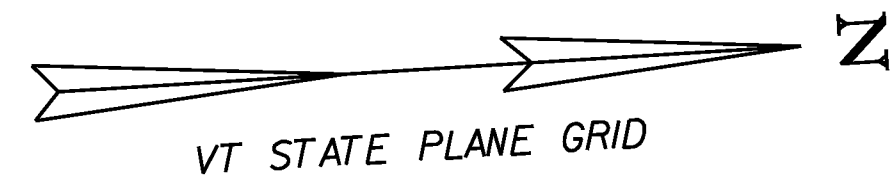


* Main Traverse Completed 12/30/08 by T. Gaudet

<b>DATUM</b>	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83



PROJECT NAME: DORSET	PLOT DATE: 5/2/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08g224t1.dgn	CHECKED BY: B.M. KLINEFELTER
PROJECT LEADER: A.P. GUYETTE	SHEET 8 OF 33
DESIGNED BY: T. J. GAUDET	
TIE SHEET	

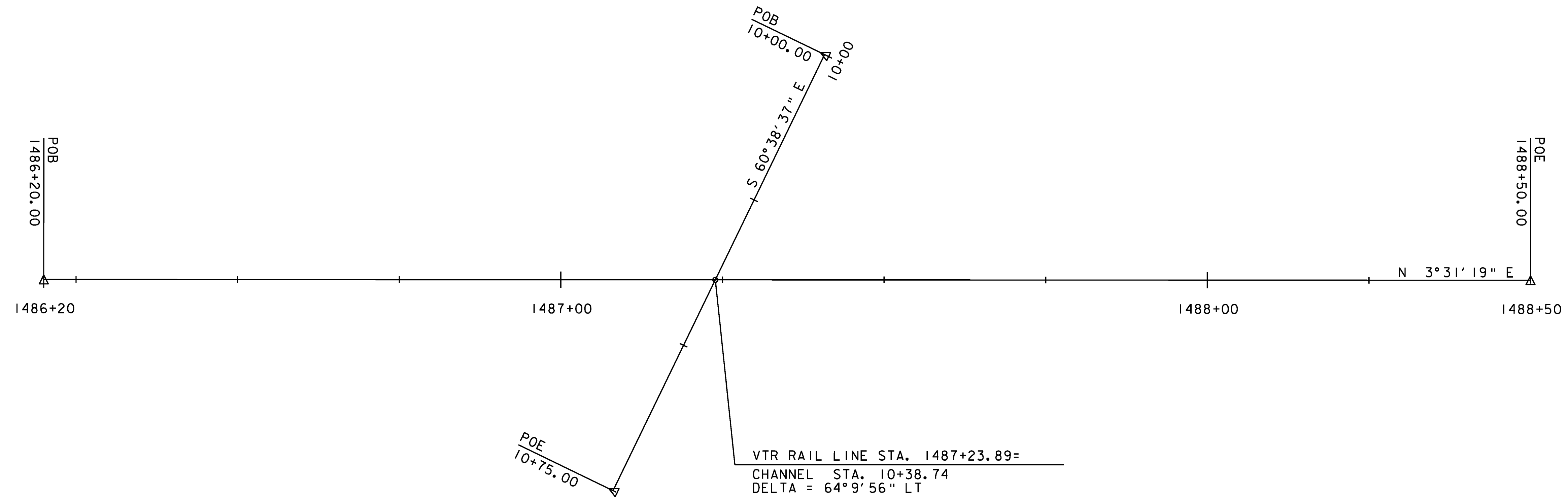


MAINLINE ALIGNMENT

Horizontal Alignment Name: VTR 79			
Element: Linear	STATION	NORTHING	EASTING
	POB (1)	1486+20.00	267842.0467 1504344.8213
	POE (2)	1488+50.00	268071.6123 1504358.9498
	Tangent Direction:	N 3°31'18.52" E	
	Tangent Length:	230.00	

CHANNEL ALIGNMENT

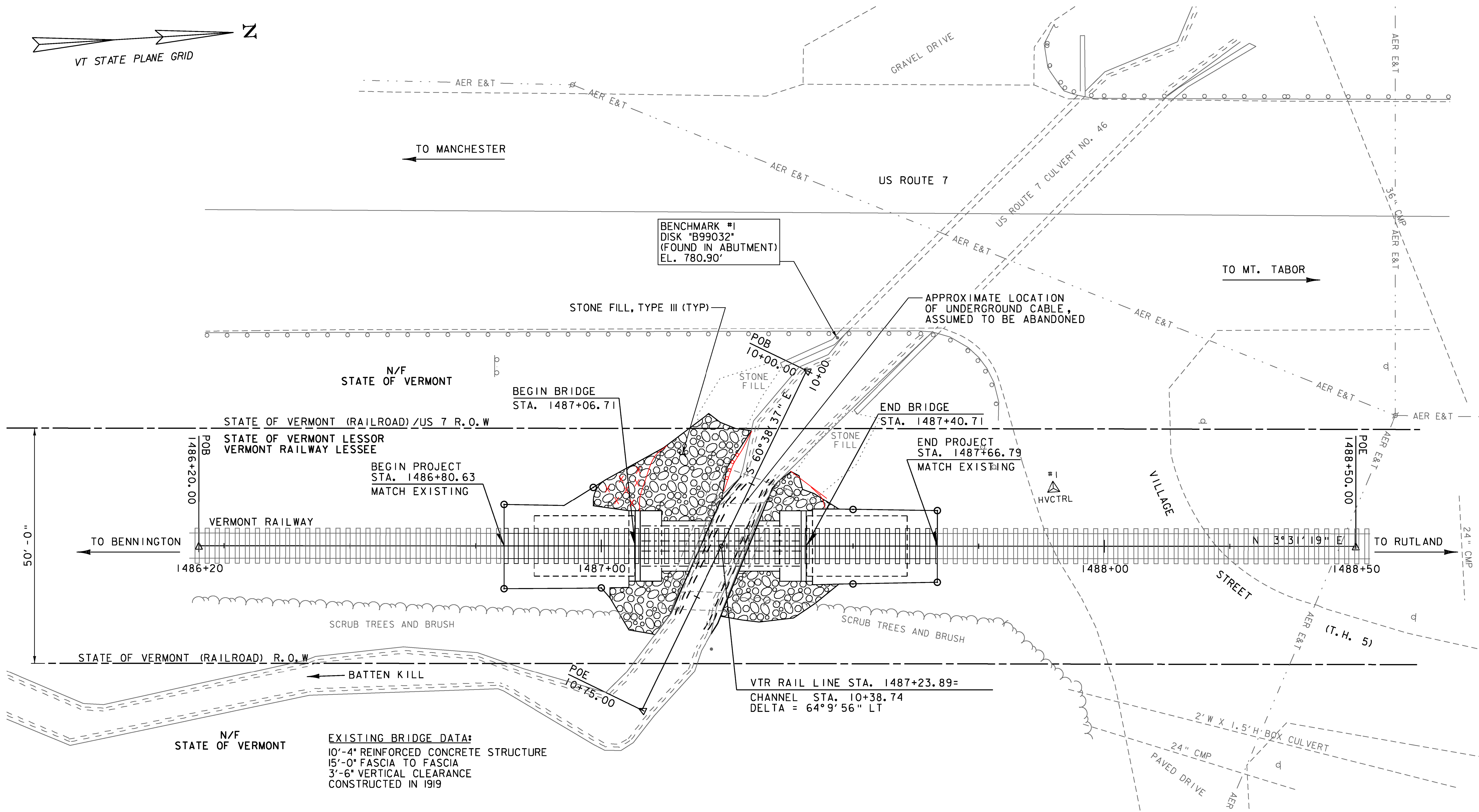
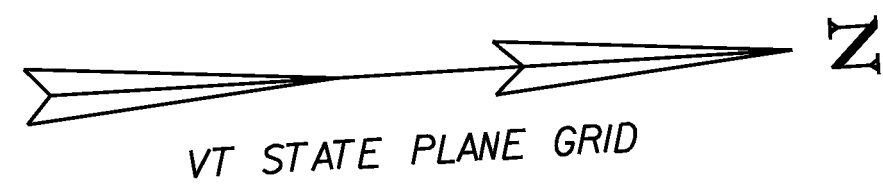
Horizontal Alignment Name: CHANNEL			
Element: Linear	STATION	NORTHING	EASTING
	POB ( 3)	10+00.00	267964.7331 1504317.4382
	POE ( 4)	10+75.00	267927.9651 1504382.8072
	Tangent Direction:	S 60°38'37.00" E	
	Tangent Length:	75.00	



DATUM  
 VERTICAL: NAVD 88  
 HORIZONTAL: NAD 83



PROJECT NAME: DORSET	PLOT DATE: 4/10/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08q224algn.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET 9 OF 33
DESIGNED BY: J.W. GOLEK	
ALIGNMENT LAYOUT SHEET	



**EXISTING BRIDGE DATA:**  
 10'-4" REINFORCED CONCRETE STRUCTURE  
 15'-0" FASCIA TO FASCIA  
 3'-6" VERTICAL CLEARANCE  
 CONSTRUCTED IN 1919

- NOTE:**
1. RIGHT OF WAY LIMITS TAKEN FROM RUTLAND RAILROAD COMPANY VALUATION PLAN DATED JUNE 30, 1917 AND RE-DATED JANUARY 1, 1964.

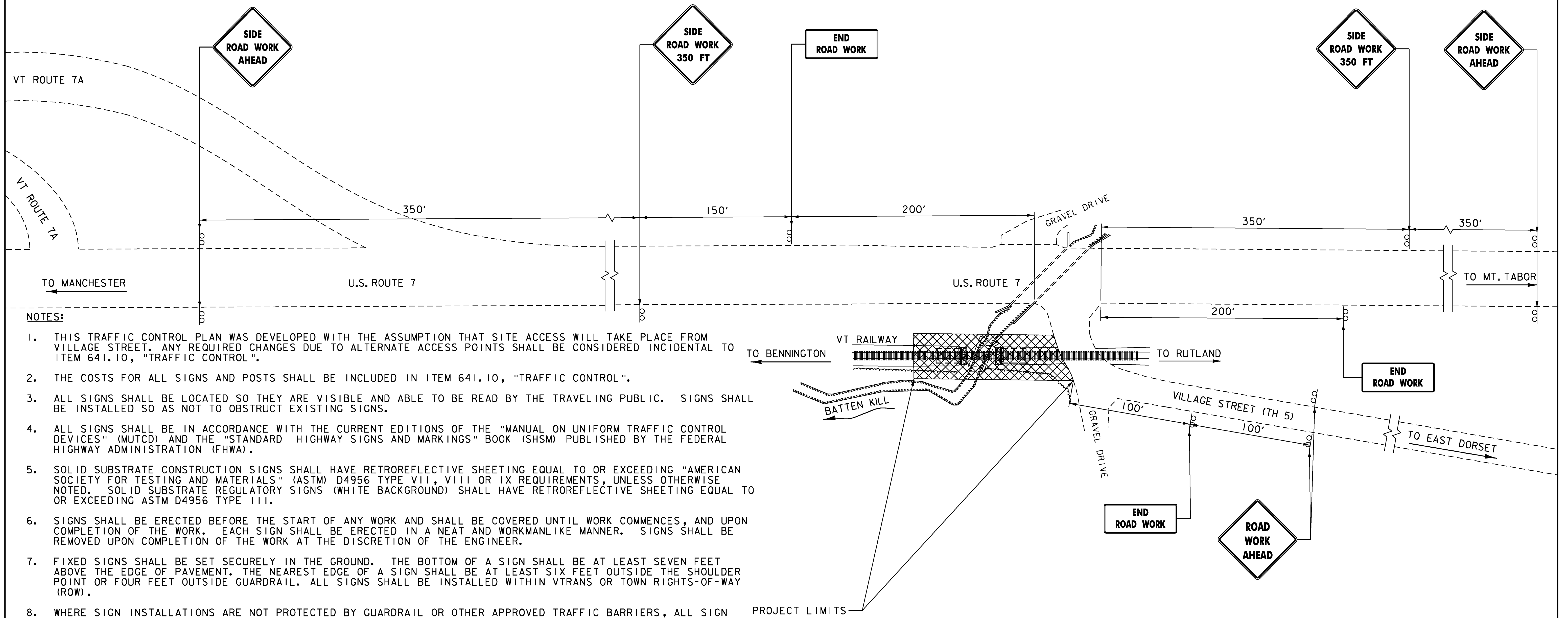
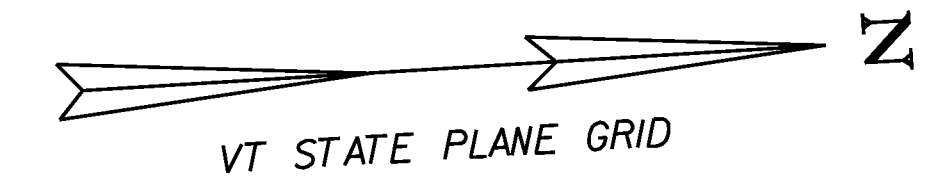
**LAYOUT PLAN**

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



PROJECT NAME: DORSET	PLOT DATE: 4/10/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08g224bdr_nul.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET 10 OF 33
DESIGNED BY: J.W. GOLEK	
LAYOUT SHEET	

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQ'D	AREA (SQ FT)	TOTAL AREA (SQ FT)
	WIDTH (IN)	HEIGHT (IN)				
G20-2A	48	24	END ROAD WORK	3	8	24
VC-839A	48	48	SIDE ROAD WORK AHEAD	4	16	64
VC-839C	48	48	SIDE ROAD WORK 350 FT	2	16	32
W20-1	48	48	ROAD WORK AHEAD	2	16	32



- NOTES:**
1. THIS TRAFFIC CONTROL PLAN WAS DEVELOPED WITH THE ASSUMPTION THAT SITE ACCESS WILL TAKE PLACE FROM VILLAGE STREET. ANY REQUIRED CHANGES DUE TO ALTERNATE ACCESS POINTS SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
  2. THE COSTS FOR ALL SIGNS AND POSTS SHALL BE INCLUDED IN ITEM 641.10, "TRAFFIC CONTROL".
  3. ALL SIGNS SHALL BE LOCATED SO THEY ARE VISIBLE AND ABLE TO BE READ BY THE TRAVELING PUBLIC. SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS.
  4. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
  5. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D4956 TYPE VII, VIII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED. SOLID SUBSTRATE REGULATORY SIGNS (WHITE BACKGROUND) SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM D4956 TYPE III.
  6. SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, AND UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
  7. FIXED SIGNS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE EDGE OF PAVEMENT. THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET OUTSIDE GUARDRAIL. ALL SIGNS SHALL BE INSTALLED WITHIN VTRANS OR TOWN RIGHTS-OF-WAY (ROW).
  8. WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 COMPLIANT. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
  9. ACCESS TO VILLAGE STREET AND TO THE GRAVEL DRIVE SHALL BE MAINTAINED AT ALL TIMES.

PROJECT LOCATION TRAFFIC CONTROL PLAN  
NOT TO SCALE



PROJECT NAME: DORSET	PLOT DATE: 5/5/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.D. KEENER
FILE NAME: z08g224TCP.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET II OF 33
DESIGNED BY: J.D. KEENER	
TRAFFIC CONTROL PLAN	

**SOIL CLASSIFICATION**

**AASHTO**

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

**ROCK QUALITY DESIGNATION**

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

**SHEAR STRENGTH**

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

**CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY**

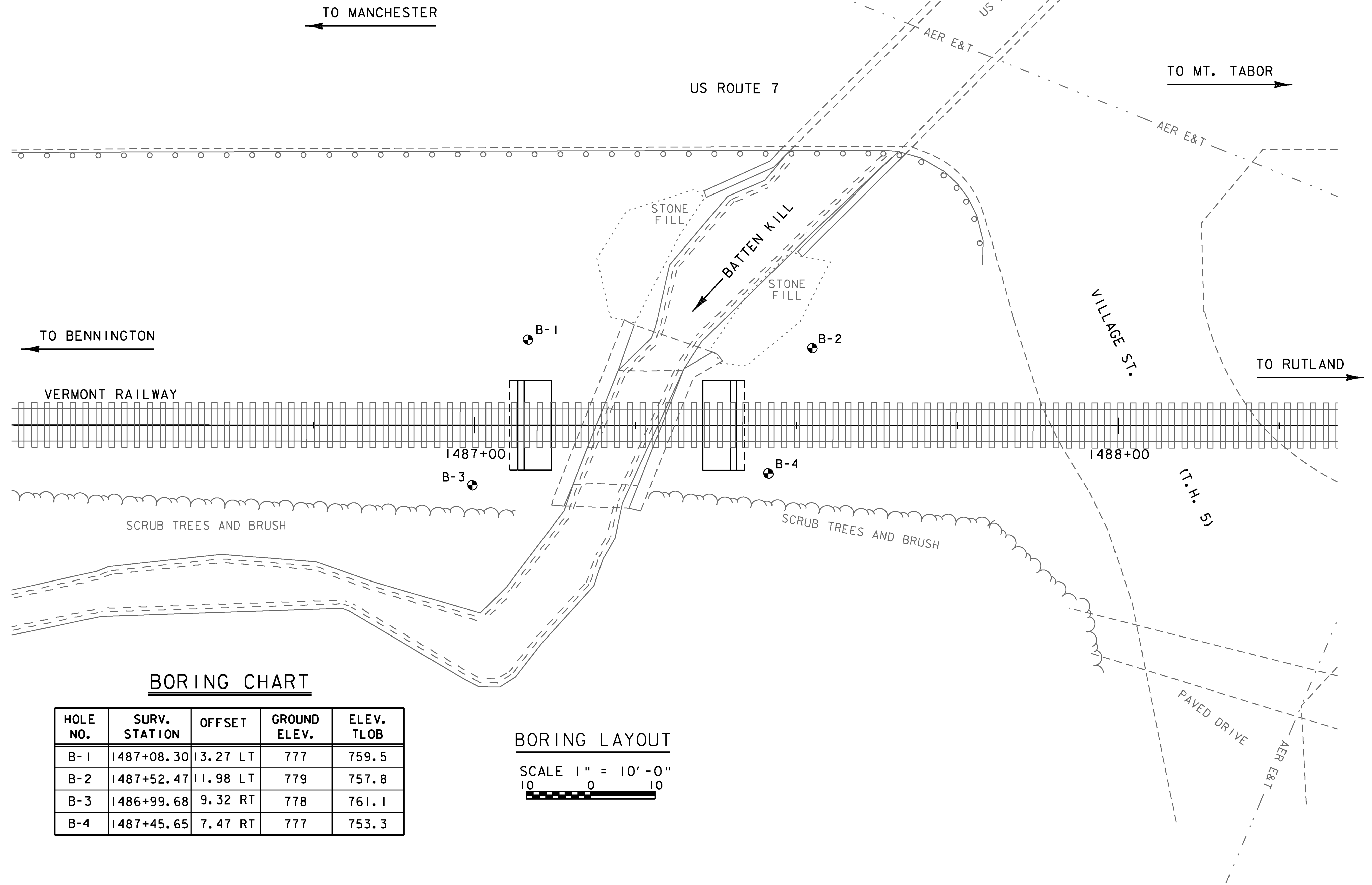
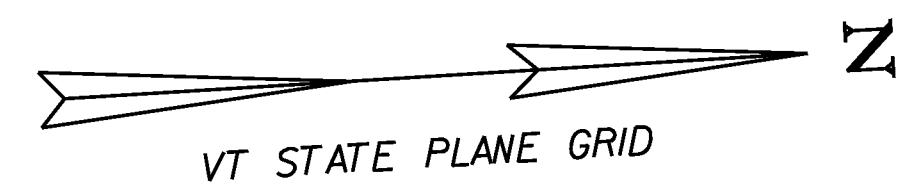
DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

**COMMONLY USED SYMBOLS**

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

**COLOR**

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



**DEFINITIONS (AASHTO)**


- BEDROCK (LEDGE)** - Rock in its native location of indefinite thickness.
- BOULDER** - A rock fragment with an average dimension > 12 inches.
- COBBLE** - Rock fragments with an average dimension between 3 and 12 inches.
- GRAVEL** - Rounded particles of rock < 3" and > 0.075" (#10 sieve).
- SAND** - Particles of rock < 0.075" (#10 sieve) and > 0.0025" (#200 sieve).
- SILT** - Soil < 0.0025" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.
- CLAY** - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.
- VARVED** - Alternate layers of silt and clay.
- HARDPAN** - Extremely dense soil, cemented layer, not softened when wet.
- MUCK** - Soft organic soil (containing > 10% organic material).
- MOISTURE CONTENT** - Weight of water divided by dry weight of soil.
- FLOWING SAND** - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
- STRIKE** - Angle from magnetic north to line of intersection of bed with a horizontal plane.
- DIP** - Inclination of bed with a horizontal plane.

**GENERAL NOTES**

- The subsurface explorations shown herein were made between Jan. 12, 2009 and Jan. 14, 2009 by Geodesign, Inc.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Geodesign, Inc. and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
- Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.
- Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in survey feet.




PROJECT NAME:	DORSET	PLOT DATE:	4/10/2014
PROJECT NUMBER:	WCRS(8)	DRAWN BY:	J.W. GOLEK
FILE NAME:	z08g224BorIng.dgn	CHECKED BY:	S.E. BURBANK
DESIGNED BY:	D.J. STEIN	SHEET	12 OF 33
BORING INFORMATION SHEET			

 <b>GEODESIGN INCORPORATED</b> <i>Geotechnical Engineers and Environmental Consultants</i> P.O. Box 699 1233 Shelburne Rd., Suite 360 Windsor, VT 05089 So. Burlington, VT 05403 Phone: 802-674-2033/Fax: 802-674-5943 Phone: 802-652-5140															<b>BORING LOG</b> Project Name <b>VTR Bridge #79</b> East Dorset, Vermont				Boring No.: <b>B-1</b> Page No.: <b>1 of 1</b> File No.: <b>837-27</b> Checked By: <b>JAG</b>																																																																																																																																																																						
Boring Company: <b>TransTech Drilling Services</b> Foreman: <b>John Leonhardt</b> GeoDesign Rep.: <b>Jacob Wmnett</b> Date Started: <b>January 12, 2009</b> Date Finished: <b>January 12, 2009</b> N. Coordinate: <b>267931</b> E. Coordinate: <b>1504337</b> Ground Surface Elevation (feet): <b>777</b> Station: <b>Offset: ft</b>			Casing: <b>Sampler:</b> Type: <b>H.S.A. SS</b> I.D.: <b>3.25 in. 1.38 in.</b> Hammer Wt.: <b>NA 140 lbs</b> Hammer Fall: <b>NA 30 in.</b> Rig Type: <b>CME 75</b> Hammer Type: <b>Automatic</b>			Groundwater Observations Date Depth Elev. 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Remarks: 1) Ground surface elevation estimated by GeoDesign personnel in the field from a site plan with survey points provided by VHB. 2) Light auger grinding on inferred Gravel/Cobbles from 7' to 13'. 3) Sample poured out of tip while opening S6 spoon. Unknown total recovery. (Estimated to be approximately 12"). 4) Hollow stem auger advance halted at 17.5', very slow advance and grinding. Hollow stem auger refusal at 18'. 5) Noted complete wash water loss at 19.1' to 23.1'. (Unable to approximate volume of water loss as reverse circulation was not used and water was pumped directly from the river.) Notes: 1) Stratification Lines Represent Approximate Boundary Between Material Types, Transitions May Be Gradual. 2) Water Level Readings Have Been Made At Times And Under Conditions Stated, Fluctuations Of Groundwater May Occur Due To Other Factors Than Those Present At The Time Measurements Were Made. A.C. = After casing, N.R. = Not Recorded. 3) Sample Type Coding: A=Auger, C=Core, D=Driven, G=Grab, PS=Piston Sampler, SS=Split Barrel (Split Spoon), ST=Shelby Tube, Geo = GeoProbe, V=Vane, WOR=H=Weight of Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%. 4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%.																																																																																																																																																																																									

ABUTMENT NO. 1  
BOTTOM OF FOOTING  
EL. = 772.68 FT

ESTIMATED PILE TIP  
EL. = 758 FT +/-

VT BORING LOG MC-HPD-11/7/08 837-27-GPJ GEODESIGN STANDARD GDT 6/8/09

 <b>GEODESIGN INCORPORATED</b> <i>Geotechnical Engineers and Environmental Consultants</i> P.O. Box 699 1233 Shelburne Rd., Suite 360 Windsor, VT 05089 So. Burlington, VT 05403 Phone: 802-674-2033/Fax: 802-674-5943 Phone: 802-652-5140															<b>BORING LOG</b> Project Name <b>VTR Bridge #79</b> East Dorset, Vermont				Boring No.: <b>B-2</b> Page No.: <b>1 of 2</b> File No.: <b>837-27</b> Checked By: <b>JAG</b>																																																																																																																																																							
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20		S8	SS	14	2	20	3	3	25.2"				20 Bedrock 757.8	S8) Refusal, similar to S7 with fractured rock in tip.																																																																																																																																																												
25		C1	C	60	50	21.5				63				C1) White, moderately hard to hard, fresh to slightly weathered along fractures, moderately jointed, good quality siliceous DOLOMITE (RQD=83%). Very weak reaction to diluted HCl.																																																																																																																																																												
Remarks: 1) Ground surface elevation estimated by GeoDesign personnel in the field from a site plan with elevation points provided by VHB. 2) Casing pushed from 0' to 7' with rig hydraulics. 3) Wash-drive drilling methods used. 4) Noted black water return at 4'. Note grinding and temporary loss of water return at 5' deep. 5) Tan return at nearly 6'. 6) Only sampled 18" at S4 and S6 due to hammer stroke. Notes: 1) Stratification Lines Represent Approximate Boundary Between Material Types, Transitions May Be Gradual. 2) Water Level Readings Have Been Made At Times And Under Conditions Stated, Fluctuations Of Groundwater May Occur Due To Other Factors Than Those Present At The Time Measurements Were Made. A.C. = After casing, N.R. = Not Recorded. 3) Sample Type Coding: A=Auger, C=Core, D=Driven, G=Grab, PS=Piston Sampler, SS=Split Barrel (Split Spoon), ST=Shelby Tube, Geo = GeoProbe, V=Vane, WOR=H=Weight of Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%. 4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%.																																																																																																																																																																										

ABUTMENT NO. 2  
BOTTOM OF FOOTING  
EL. = 772.89 FT

VT BORING LOG MC-HPD-11/7/08 837-27-GPJ GEODESIGN STANDARD GDT 6/8/09

BORING B-2 CONTINUED ON NEXT SHEET

PROJECT NAME: <b>DORSET</b>	FILE NAME: <b>z08q224bor logl.dgn</b>	PLOT DATE: <b>4/10/2014</b>
PROJECT NUMBER: <b>WCRS(8)</b>	PROJECT LEADER: <b>A.P. GUYETTE</b>	DRAWN BY: <b>GEODESIGN</b>
	DESIGNED BY: <b>M.A. COLGAN</b>	CHECKED BY: <b>S.E. BURBANK</b>
	BORING LOGS (1 OF 3)	SHEET <b>13</b> OF <b>33</b>





BORING LOG										Boring No.: <b>B-4</b>		
Project Name										Page No.: <b>1 of 2</b>		
VTR Bridge #79										File No.: <b>837-27</b>		
East Dorset, Vermont										Checked By: <b>JAG</b>		
<b>GEODESIGN</b> INCORPORATED <i>Geotechnical Engineers and Environmental Consultants</i> P.O. Box 699 Windsor, VT 05089 Phone: 802-674-2033/Fax: 802-674-5943				1233 Shelburne Rd., Suite 360 So. Burlington, VT 05403 Phone: 802-652-5140		Boring Company: <b>TransTech Drilling Services</b> Foreman: <b>John Leonhardt</b> GeoDesign Rep.: <b>Jacob Wimet</b> Date Started: <b>January 14, 2009</b> Date Finished: <b>January 14, 2009</b> N. Coordinate: <b>267967</b> E. Coordinate: <b>1504360</b> Ground Surface Elevation (feet): <b>777</b> Station: <b>Offset: ft</b>		Casing: <b>Flush</b> Sampler: <b>SS</b> I.D.: <b>3.0 in.</b> <b>1.38 in.</b> Hammer Wt.: <b>300 lbs</b> <b>140 lbs</b> <b>1/12/09</b> Hammer Fall: <b>24 in.</b> <b>30 in.</b> Rig Type: <b>CME 75</b> Hammer Type: <b>Automatic</b>		Groundwater Observations Date: <b></b> Depth Elev. (ft): <b></b> Notes: <b></b> <b>None Observed</b>		
Depth (ft)	Sample Information								Strata Description	Symbol	Sample Description	
	Casing Blowoff Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval						Moisture Content (%)
	S1	SS	24	2	0	13	3	3	4		Fill	S1) Loose, black fine to coarse SAND and SILT, little Coal ash, frozen/moist.
	S2	SS	24	12	2	5	7	8	8			S2) Medium dense, orange brown fine to coarse SAND and fine to coarse GRAVEL, trace Root fibers, moist.
5	S3	SS	6	1	4	12	25.0*				4.5 Boulder 772.5 (inferred)	S3) Refusal, fractured Boulder pieces.
	S4	SS	24	0	6.5	5	3	2	2		6 Silty Sand & 771.0 Gravel (with Wood Pieces)	S4) Loose, no recovery.
10	S5	SS	24	14	9	3	2	3	4		10 Silty Sand & 767.0 Gravel	S5) Loose, brown fine to coarse SAND and fine to coarse GRAVEL, little Wood, (Bottom 2" of sample entirely non-decomposed wood), trace Silt, wet.
	S6	SS	24	5	11	5	7	8	4			S6) Medium dense, whitish brown fine to coarse SAND and fine GRAVEL, trace Wood fibers, trace Silt, wet.
15	S7	SS	24	0	14	3	2	5	8			S7) Loose, no recovery.
20	S8	SS	24	7	19	3	1	2	10			S8) Very loose, brown fine to medium SAND, little fine Gravel, little Silt, wet.
25	S9	SS	9	5	24	7	100.0*				23.7 Weathered 753.3 Rock	S9) Very dense/Refusal, orange brown SILT and fine to coarse SAND and white pulverized
Remarks: 1) Ground surface elevation estimated by GeoDesign personnel in the field from a site plan with elevation points provided by VHB. 2) Wash rotary drilling methods used. 3) Split spoon refusal at S3 at 4.5' deep on an inferred boulder. 4) Changed from wash-drive to wash rotary methods to advance the borehole through a boulder from 4.5' to 6' deep. Continued with wash-rotary drilling methods for the remainder of the borehole. 5) Increased drilling resistance noted while advancing the borehole at 23.7' deep. Notes: 1) Stratification Lines Represent Approximate Boundary Between Material Types, Transitions May Be Gradual. 2) Water Level Readings Have Been Made At Times And Under Conditions Stated. Fluctuations Of Groundwater May Occur Due To Other Factors Than Those Present At The Time Measurements Were Made. A.C. = After coring, N.R. = Not Recorded. 3) Sample Type Coding: A=Auger, C=Core, D=Driven, G=Grab, PS=Push Sampler, SS=Split Barrel (Split Spoon), ST=Shelby Tube, Geo = GeoProbe, V=Vane, WOR/H=Weight of Solids/Water 4) Proportions Used: Trace = 1-10%, Little = 10-20%, Some = 20-35%, And = 35-50%												
										Boring No.: <b>B-4</b>		

ABUTMENT NO. 2  
BOTTOM OF FOOTING  
EL. = 772.89 FT

ESTIMATED PILE TIP  
EL. = 753 FT +/-

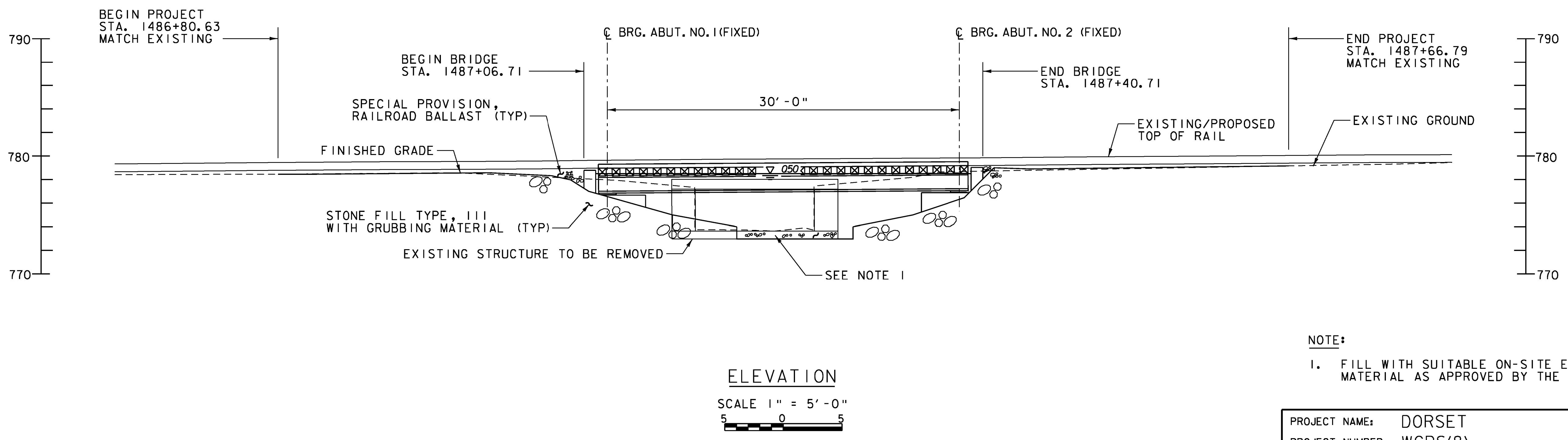
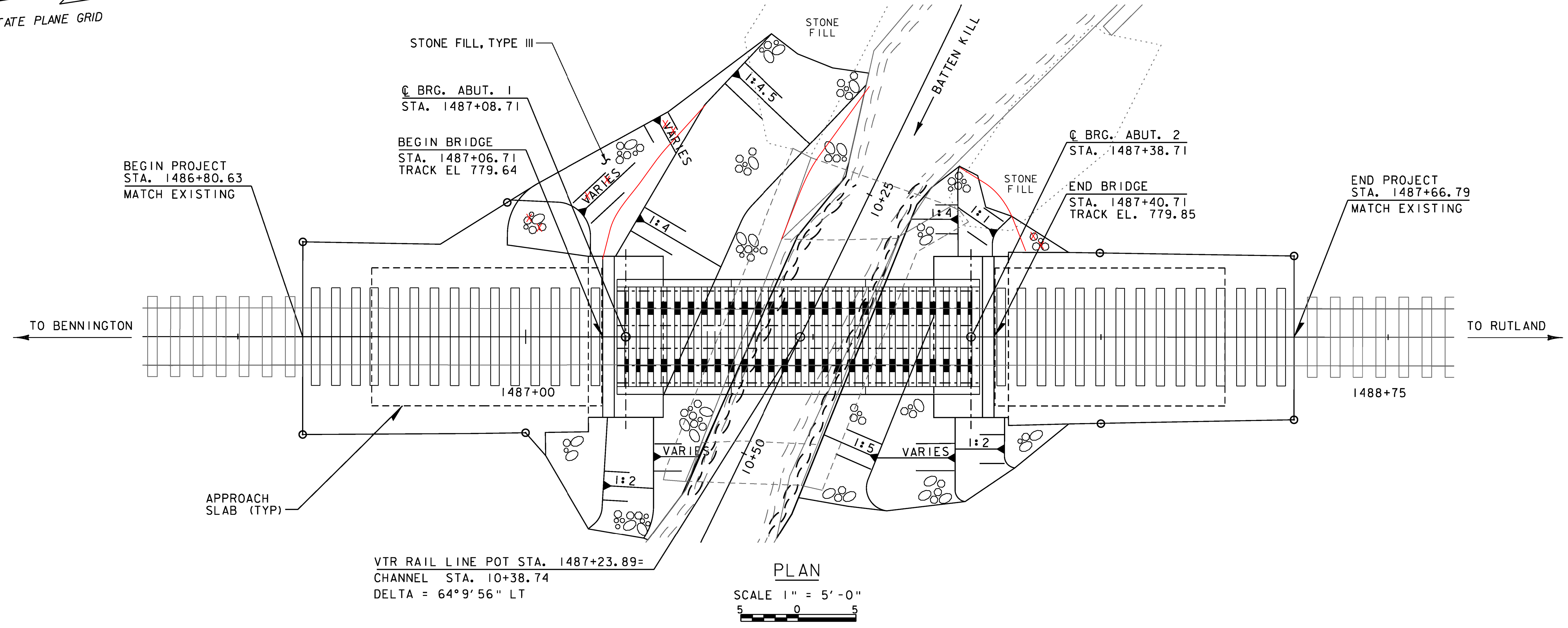
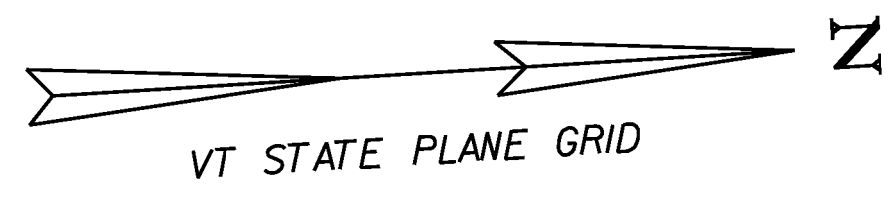
BORING LOG										Boring No.: <b>B-4</b>			
Project Name										Page No.: <b>2 of 2</b>			
VTR Bridge #79										File No.: <b>837-27</b>			
East Dorset, Vermont										Checked By: <b>JAG</b>			
<b>GEODESIGN</b> INCORPORATED <i>Geotechnical Engineers and Environmental Consultants</i> P.O. Box 699 Windsor, VT 05089 Phone: 802-674-2033/Fax: 802-674-5943				1233 Shelburne Rd., Suite 360 So. Burlington, VT 05403 Phone: 802-652-5140		Boring Company: <b>TransTech Drilling Services</b> Foreman: <b>John Leonhardt</b> GeoDesign Rep.: <b>Jacob Wimet</b> Date Started: <b>January 14, 2009</b> Date Finished: <b>January 14, 2009</b> N. Coordinate: <b>267967</b> E. Coordinate: <b>1504360</b> Ground Surface Elevation (feet): <b>777</b> Station: <b>Offset: ft</b>		Casing: <b>Flush</b> Sampler: <b>SS</b> I.D.: <b>3.0 in.</b> <b>1.38 in.</b> Hammer Wt.: <b>300 lbs</b> <b>140 lbs</b> <b>1/12/09</b> Hammer Fall: <b>24 in.</b> <b>30 in.</b> Rig Type: <b>CME 75</b> Hammer Type: <b>Automatic</b>		Groundwater Observations Date: <b></b> Depth Elev. (ft): <b></b> Notes: <b></b> <b>None Observed</b>			
Depth (ft)	Sample Information								Strata Description	Symbol	Sample Description		
	Casing Blowoff Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval						Moisture Content (%)	
	C1	C	60	60	25						47	Bedrock 752.0	and fractured Weathered Rock. C1) White, hard, slightly to moderately weathered fractures, closely to moderately jointed, poor quality siliceous DOLOMITE (RQD=47%). No reaction to diluted HCl.
30	C2	C	42	42	30						38		C2) White to light gray, moderately hard to hard, fresh to moderately weathered, fractured to closely jointed, poor quality siliceous DOLOMITE (RQD=38%). Very weak reaction to diluted HCl.
35												33.5 Bottom of Exploration at 33.5 ft	
40													
45													
50													
Remarks: 6) Slough caved into borehole after removing C1 limiting C2 run to only 42". (Core run from 28.5' to 33.5' but top 18" consisted of angular fine gravel inferred to be rollerbit cuttings that fell into the borehole between core runs.) 7) No water return during coring from 25' to 33'. Water return noted from 33' to end of borehole. (Unable to approximate volume of water loss as reverse circulation was not used and water was pumped directly from the river.) Notes: 1) Stratification Lines Represent Approximate Boundary Between Material Types, Transitions May Be Gradual. 2) Water Level Readings Have Been Made At Times And Under Conditions Stated. Fluctuations Of Groundwater May Occur Due To Other Factors Than Those Present At The Time Measurements Were Made. A.C. = After coring, N.R. = Not Recorded. 3) Sample Type Coding: A=Auger, C=Core, D=Driven, G=Grab, PS=Push Sampler, SS=Split Barrel (Split Spoon), ST=Shelby Tube, Geo = GeoProbe, V=Vane, WOR/H=Weight of Solids/Water 4) Proportions Used: Trace = 1-10%, Little = 10-20%, Some = 20-35%, And = 35-50%													
										Boring No.: <b>B-4</b>			

PROJECT NAME: **DORSET**  
PROJECT NUMBER: **WCRS(8)**

FILE NAME: **z08q224bor_log3.dgn**  
PROJECT LEADER: **A.P. GUYETTE**  
DESIGNED BY: **M.A. COLGAN**  
BORING LOGS (3 OF 3)

PLOT DATE: **4/10/2014**  
DRAWN BY: **GEODESIGN**  
CHECKED BY: **S.E. BURBANK**  
SHEET **15** OF **33**

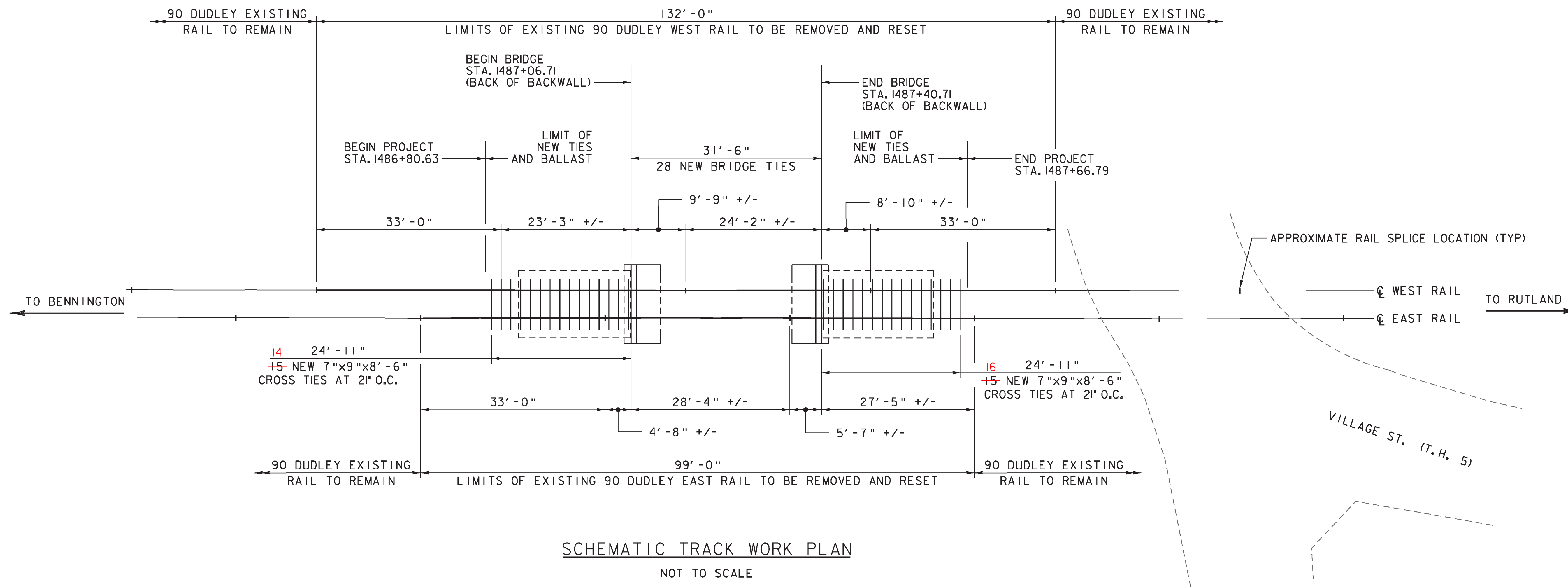




**NOTE:**  
 1. FILL WITH SUITABLE ON-SITE EXCAVATED MATERIAL AS APPROVED BY THE ENGINEER.

PROJECT NAME: DORSET	PLOT DATE: 4/10/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08g224pe.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET 16 OF 33
DESIGNED BY: J.W. GOLEK	
PLAN AND ELEVATION	



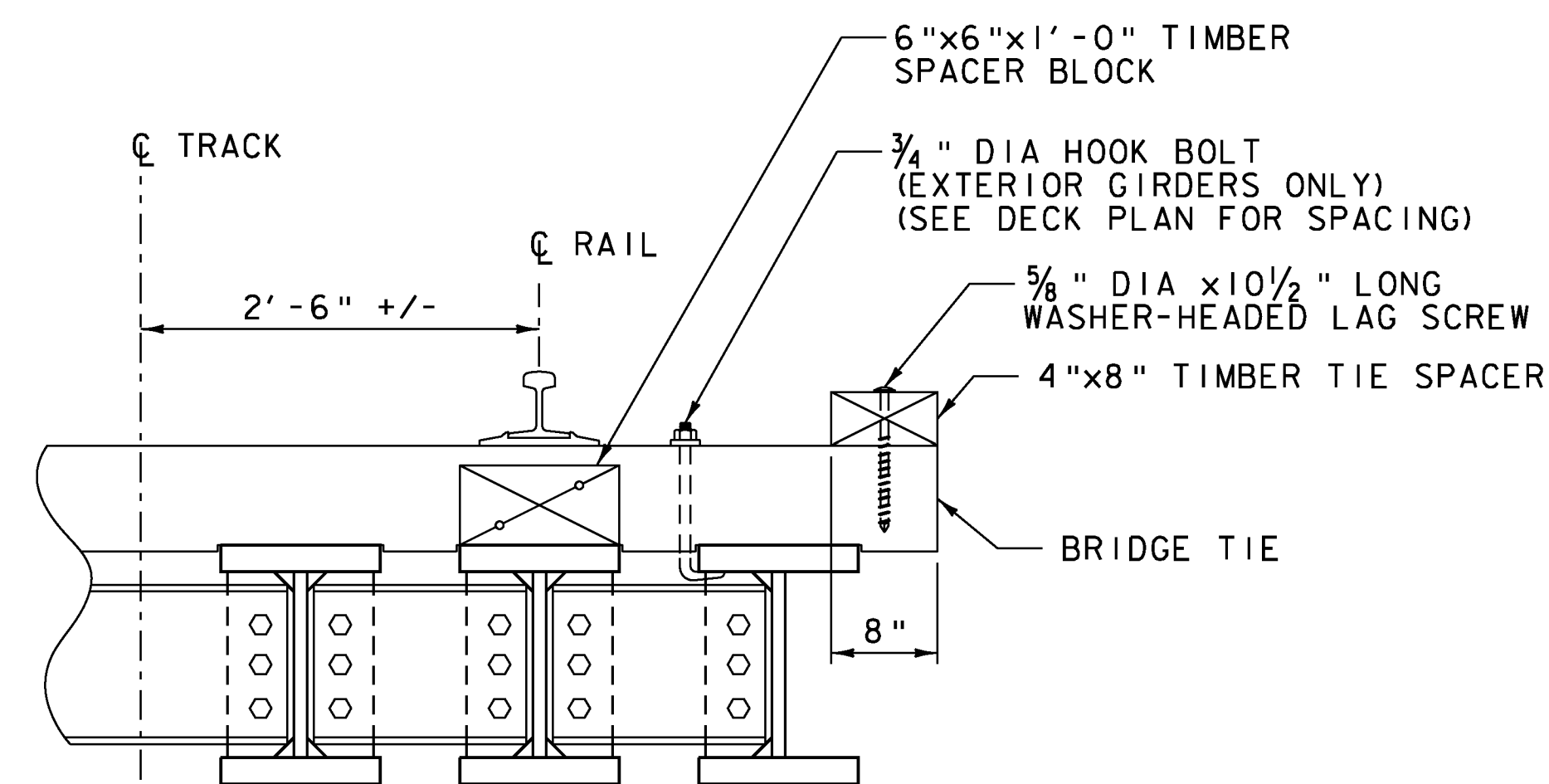
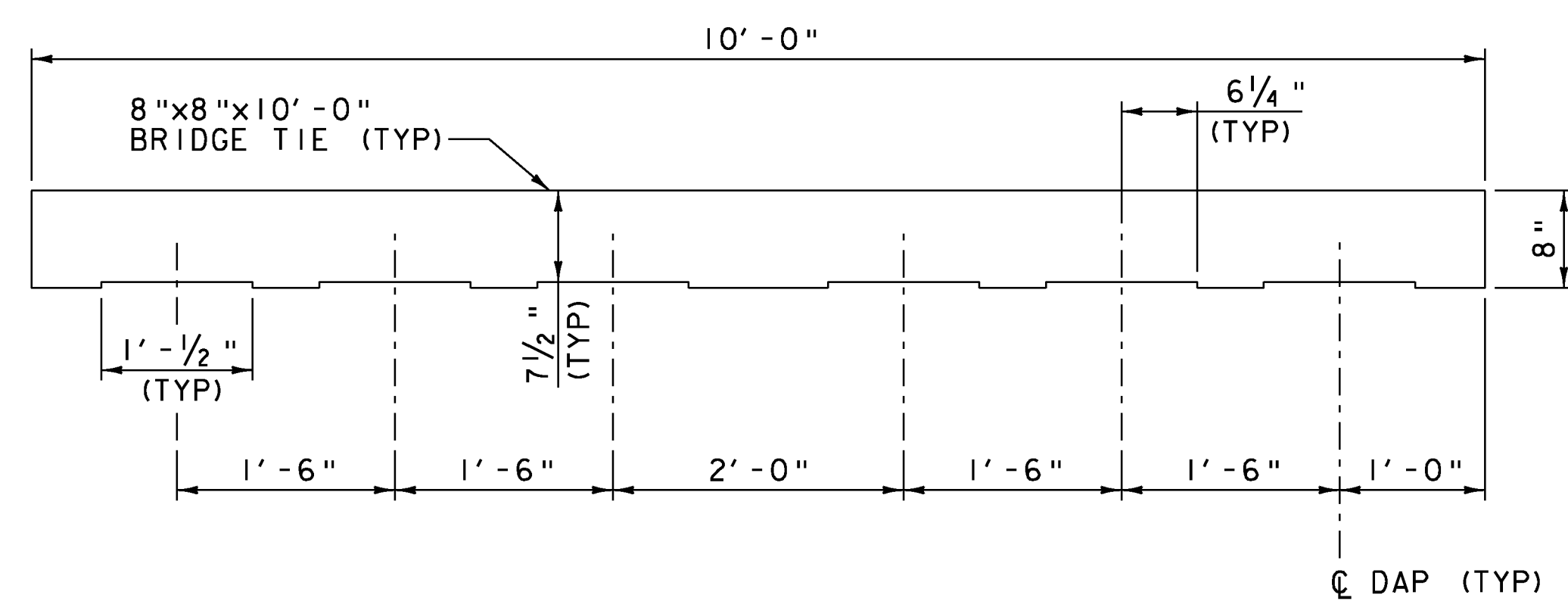
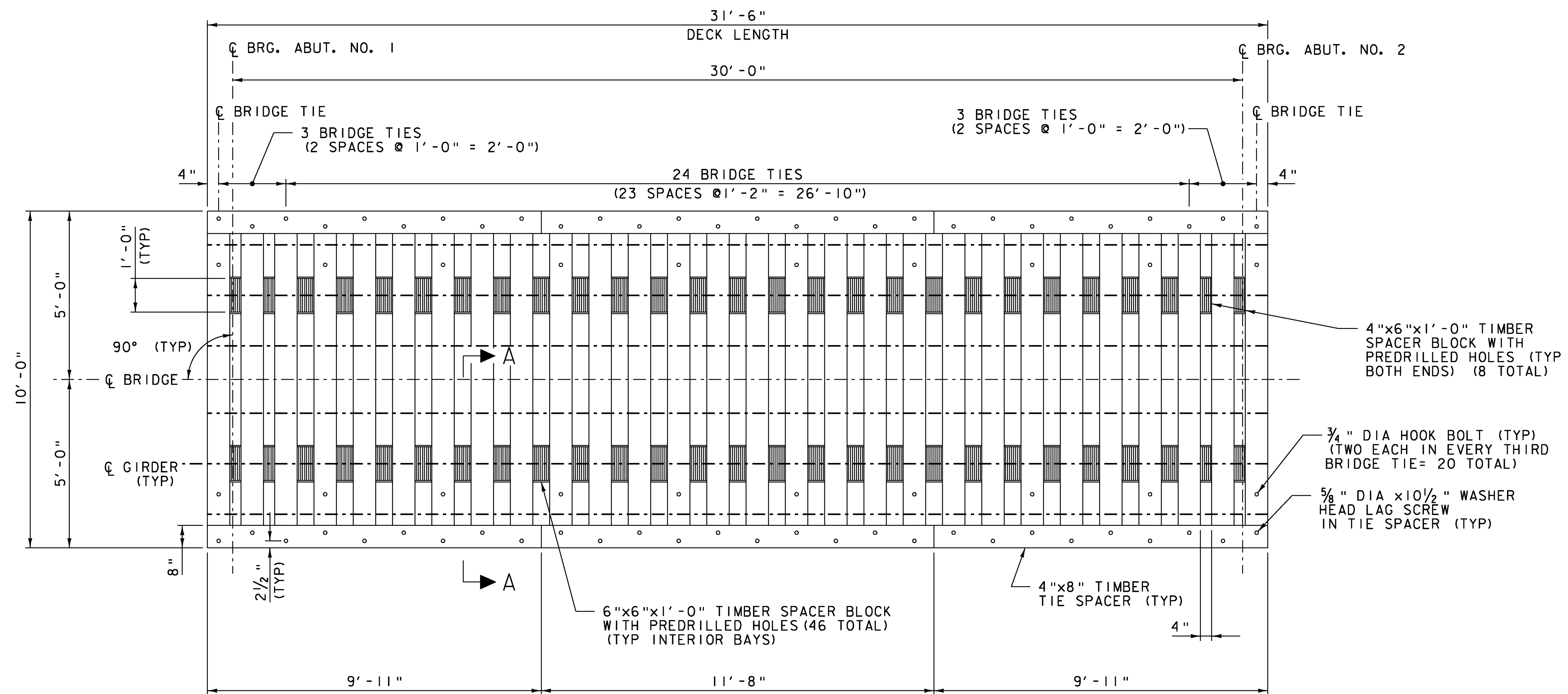


**NOTES:**

1. EXISTING RAIL SHALL BE REMOVED, RESET AND REALIGNED ON THE BRIDGE AND BOTH APPROACHES AS INDICATED ON THE PLAN. THE EXISTING JOINT LOCATIONS SHOWN ARE APPROXIMATE. EXISTING RAILS AND JOINTS BARS SHALL BE REUSED. THE CONTRACTOR SHALL PROVIDE ALL NEW RAIL ANCHORS, TIE PLATES, TRACK BOLTS, WASHERS, AND NUTS FOR JOINT BARS AND ALL NEW TRACK SPIKES. PAYMENT WILL BE MADE UNDER CONTRACT ITEM 900.640, SPECIAL PROVISION (REMOVE AND RESET RAILROAD TRACKS).
2. NEW TRACK BOLTS FOR THE EXISTING 6-HOLE RAIL JOINT BARS SHALL BE 7/8" DIAMETER x 5" LONG. NEW TRACK SPIKES FOR THE NEW 4-HOLE TIE PLATES SHALL BE 6" TRACK CUT SPIKES. SEE THE SPECIAL PROVISIONS FOR ADDITIONAL MATERIAL REQUIREMENTS.
3. THE NEW BRIDGE TIES DO NOT REQUIRE RAIL ANCHORS. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NEW RAIL ANCHORS TO "FULLY BLOCK" (INSTALL 4 RAIL ANCHORS) AT ALL OF THE NEW CROSS TIES ON THE TRACK APPROACHES. PAYMENT WILL BE MADE UNDER ITEM 900.620, SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES).
4. TIE PLATE PADS WILL NOT BE USED UNDER TIE PLATES ON ANY OF THE NEW CROSS TIES OR BRIDGE TIES.
5. NEW RAILROAD BALLAST AND TIMBER CROSS TIES SHALL BE PLACED BETWEEN THE ENDS OF THE BRIDGE AND THE LIMITS SHOWN. SEE THE SPECIAL PROVISIONS FOR MATERIAL REQUIREMENTS.
6. EXISTING RAIL SHALL BE RESET ON THE APPROACHES AND THE SUPERSTRUCTURE ON A TANGENT HORIZONTAL ALIGNMENT FROM BEGIN PROJECT TO END PROJECT. PROPOSED RAIL ELEVATIONS SHALL MATCH RAIL ELEVATIONS AS SHOWN ON SHEET 16 AND MATCH EXISTING RAIL ELEVATIONS AT BEGIN AND END PROJECT STATIONS. PRIOR TO REMOVING THE EXISTING RAIL, THE CONTRACTOR SHALL SURVEY THE EXISTING RAIL AND ESTABLISH SUFFICIENT SURVEY CONTROL TO ACCURATELY RESET THE RAIL. PAYMENT FOR THIS WORK WILL BE INCIDENTAL TO CONTRACT ITEM 900.640, SPECIAL PROVISION (REMOVE AND RESET RAILROAD TRACKS).
7. ANY EXISTING RAILROAD SIGNAL SYSTEM COMPONENTS THAT MUST BE REMOVED TO COMPLETE THE WORK OF THIS PROJECT SHALL BE RESET AS DIRECTED BY THE ENGINEER. ALL COSTS FOR THIS WORK SHALL BE INCIDENTAL TO ITEM 900.640, SPECIAL PROVISION (REMOVE AND RESET RAILROAD TRACKS).
8. SEE SHEET 18 FOR BRIDGE TIE SPACING.
9. SEE THE EARTHWORK SECTION ON SHEET 3 FOR THE SPACING BETWEEN THE BRIDGE TIE AND THE TIMBER CROSS TIE AT THE BEGINNING/END OF BRIDGE.

PROJECT NAME: DORSET	PLOT DATE: 5/2/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08g224trk.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET 17 OF 33
DESIGNED BY: J.W. GOLEK	
TRACK WORK PLAN	



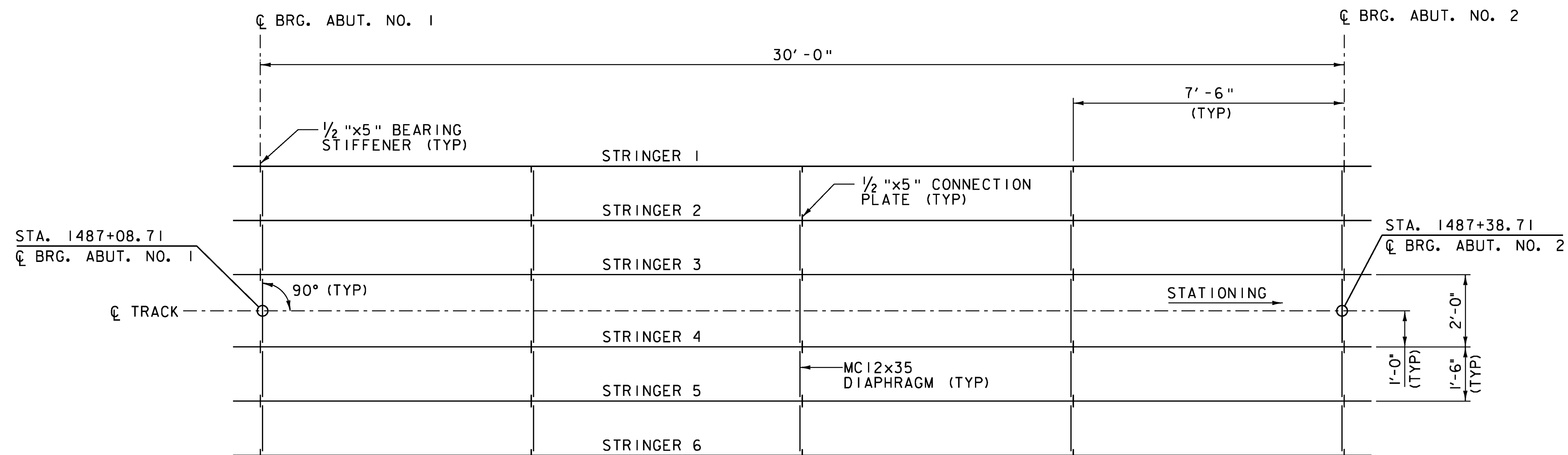
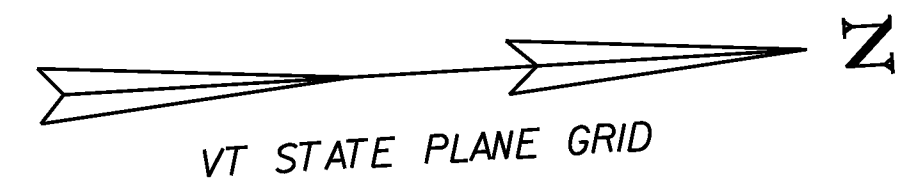


NOTES:

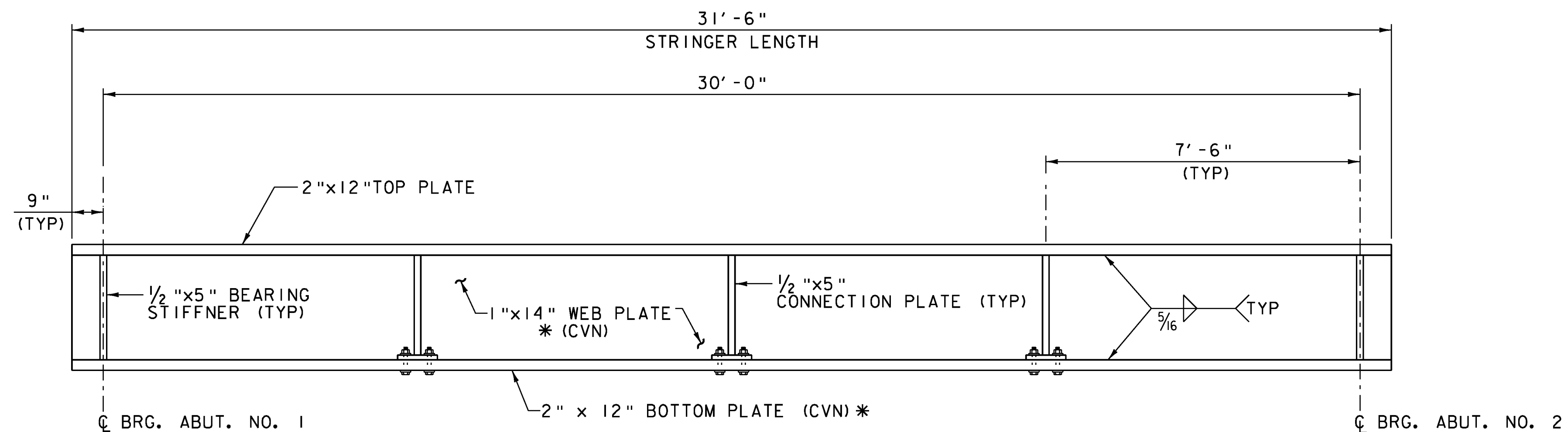
- PREBORE HOLES FOR ALL LAG SCREWS AND HOOK BOLTS. HOLES FOR LAG SCREWS SHALL BE BORED WITH A BIT NOT LARGER THAN THE BODY OF THE SCREW AT THE BASE OF THE THREAD. SEE SPECIAL PROVISIONS FOR TYPE OF LAG SCREWS AND HOOK BOLTS REQUIRED.
- THE JOINT BETWEEN ABUTTING TIMBER TIE SPACERS SHALL NOT BE PLACED ON A BRIDGE TIE.
- NAIL EACH TIMBER SPACER BLOCK TO AT LEAST ONE BRIDGE TIE WITH 8" RING SHANK NAILS. SPACER BLOCKS SHALL BE CUT TO FIT WHERE INDICATED IN DECK PLAN.
- ALL COSTS FOR THE COMPLETE TIMBER DECK SHALL BE INCLUDED IN ITEM 900.645, SPECIAL PROVISION (TIMBER DECK, RAILROAD BRIDGE), INCLUDING BRIDGE TIES, TIE SPACERS, TIE SPACER BLOCKS, HOOK BOLTS, LAG SCREWS, NAILS, AND ANY OTHER REQUIRED MATERIALS.

PROJECT NAME: DORSET	PLOT DATE: 4/10/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08q224detaildeck.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: A.P. GUYETTE	SHEET 18 OF 33
DESIGNED BY: J.W. GOLEK	
DECK DETAILS	





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



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

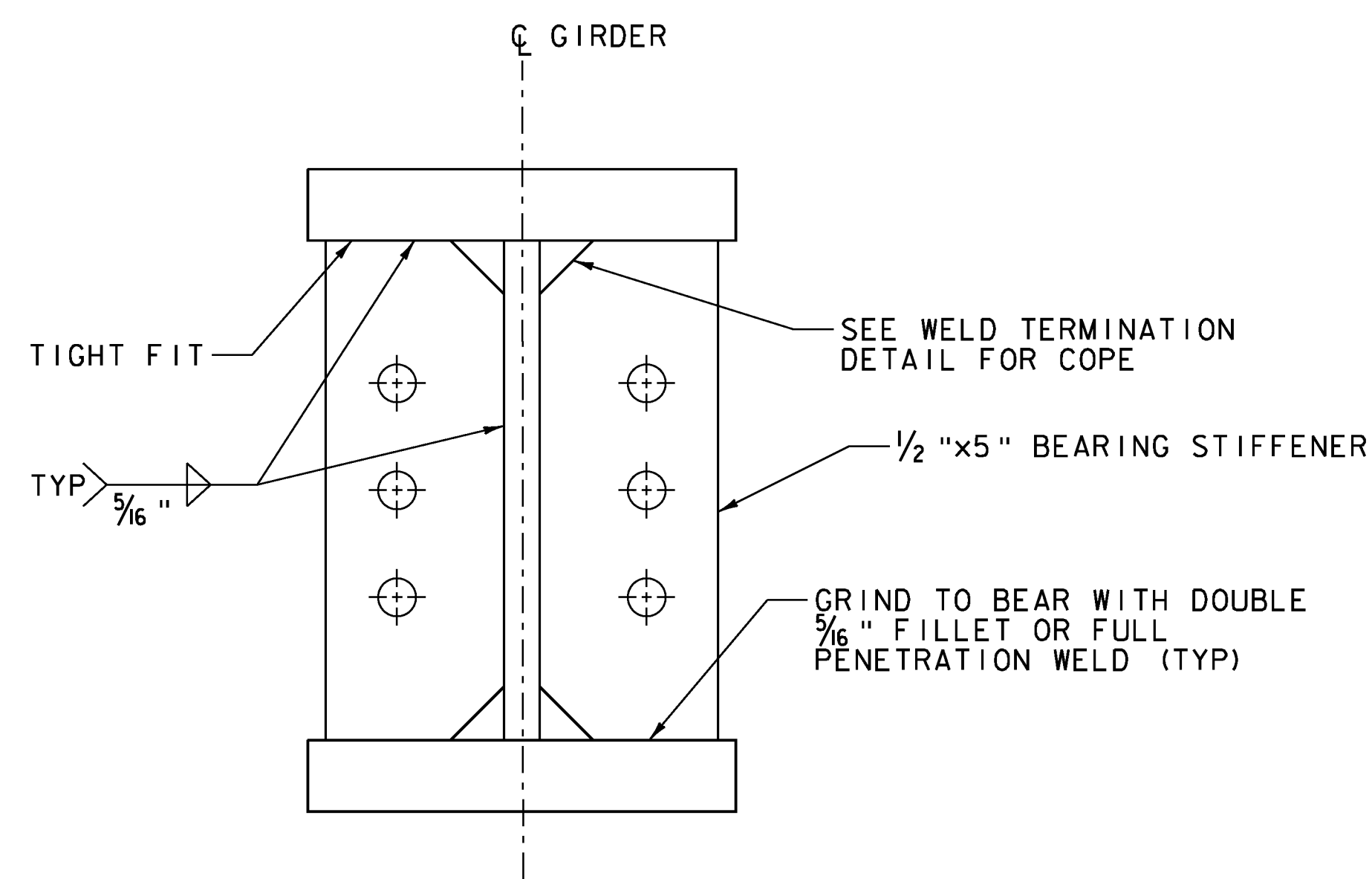
* DENOTES THAT CHARPY V-NOTCH (CVN) TESTING IS REQUIRED

PROJECT NAME: DORSET  
PROJECT NUMBER: WCRS(8)

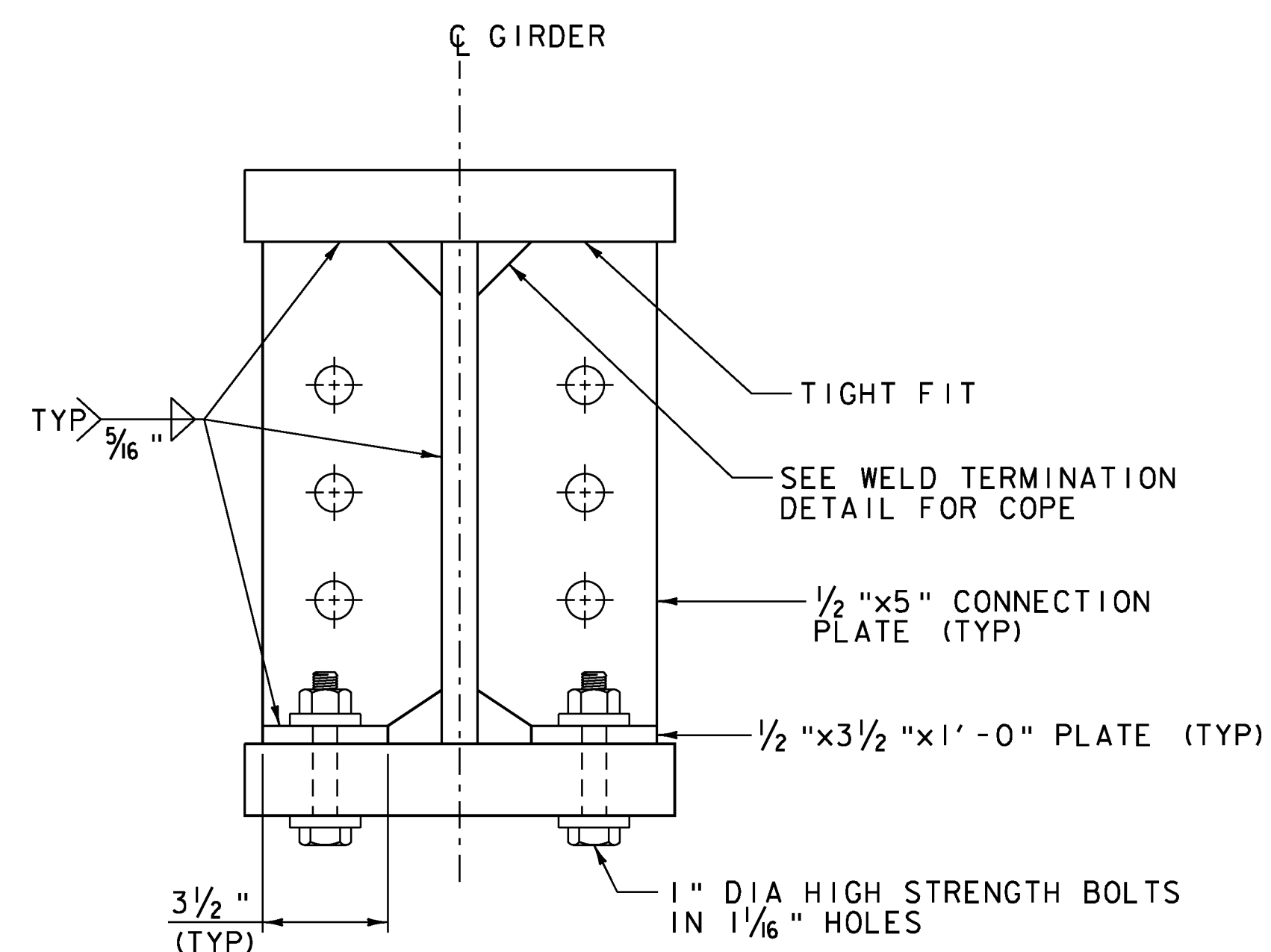
FILE NAME: z08q224detailelevfram.dgn  
PROJECT LEADER: A.P. GUYETTE  
DESIGNED BY: J.W. GOLEK  
FRAMING PLAN & STRINGER ELEVATION

PLOT DATE: 4/10/2014  
DRAWN BY: J.W. GOLEK  
CHECKED BY: S.E. BURBANK  
SHEET 19 OF 33

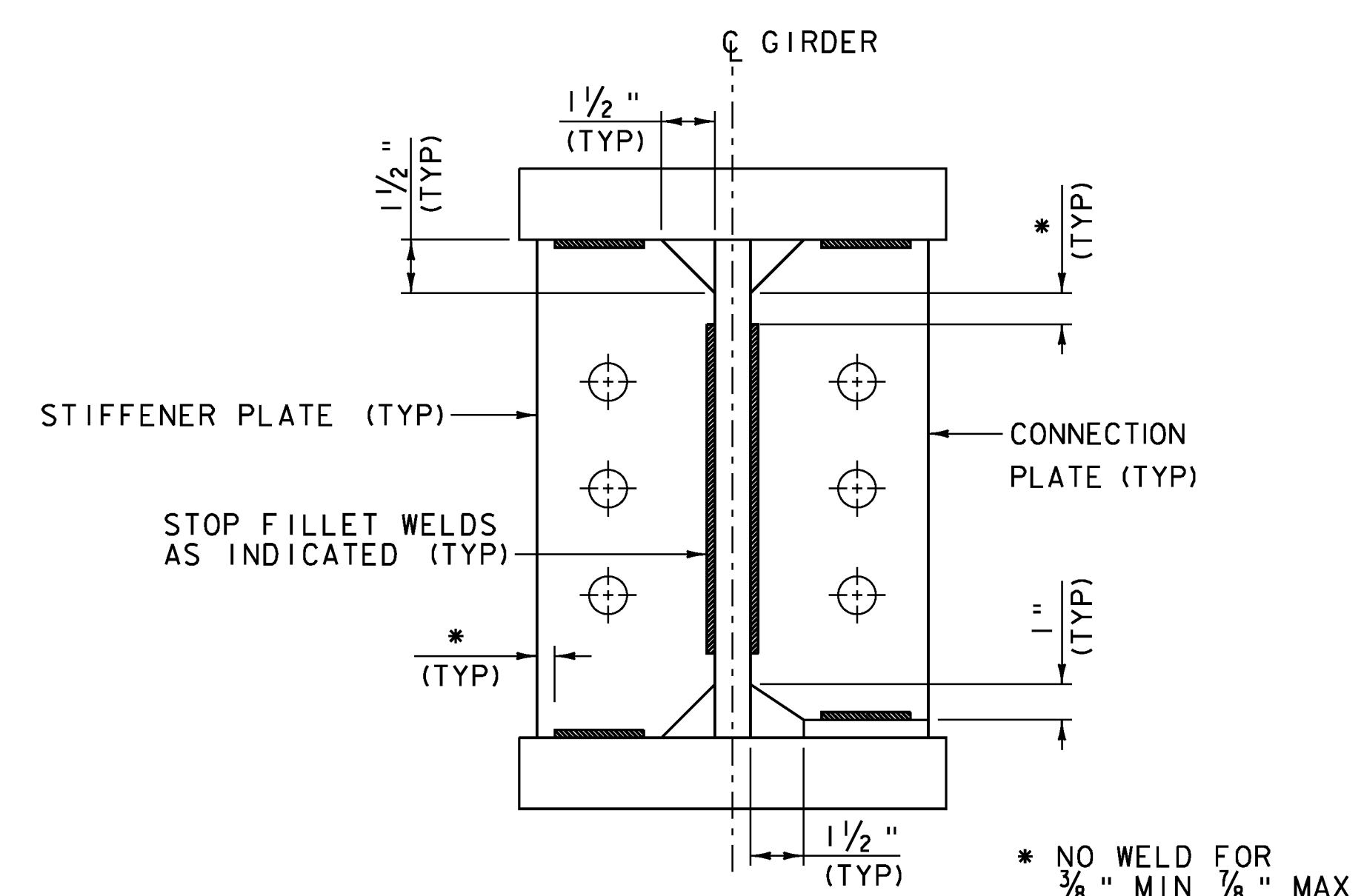




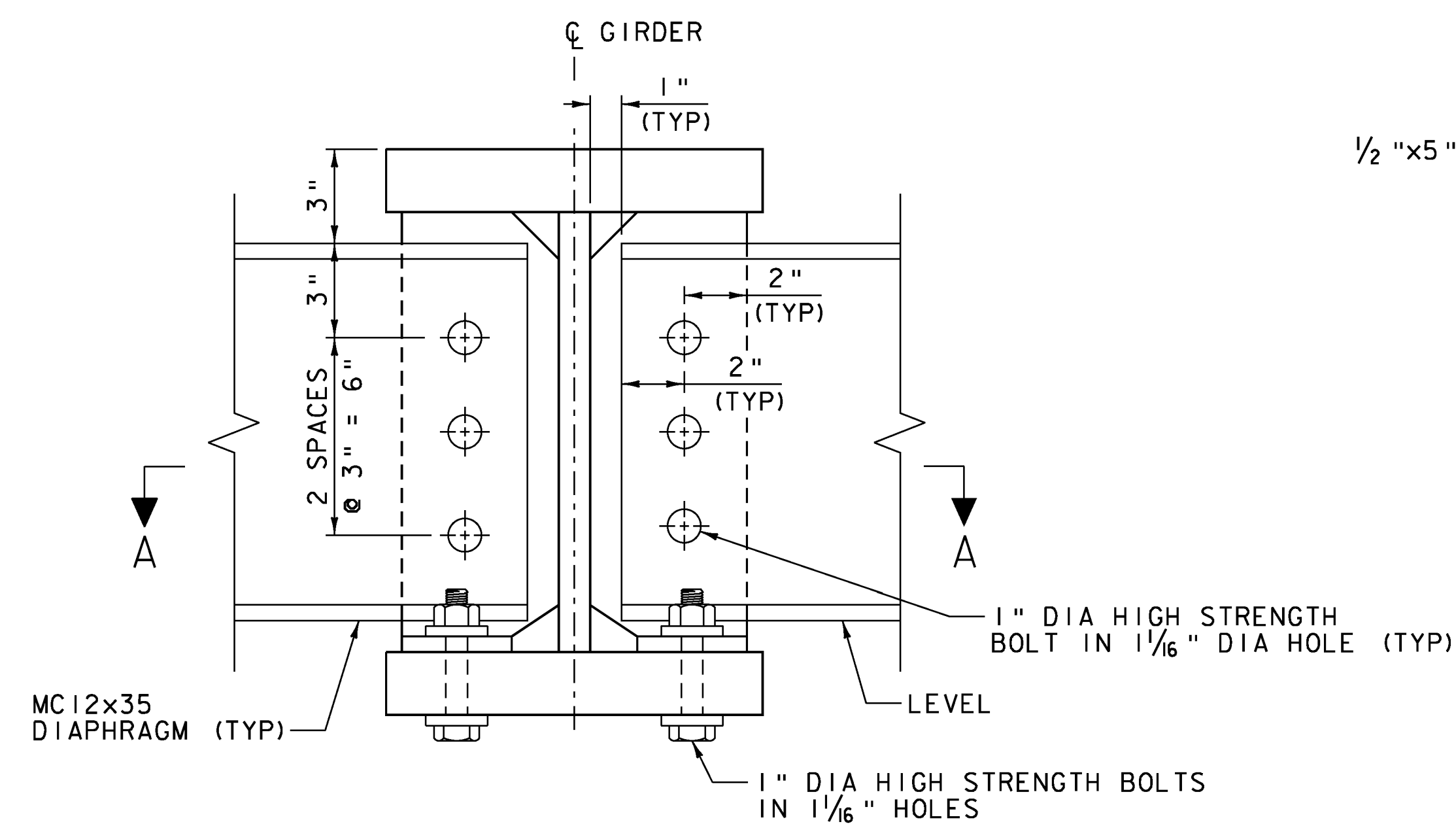
**BEARING STIFFENER DETAIL**  
SCALE: 3" = 1'-0"



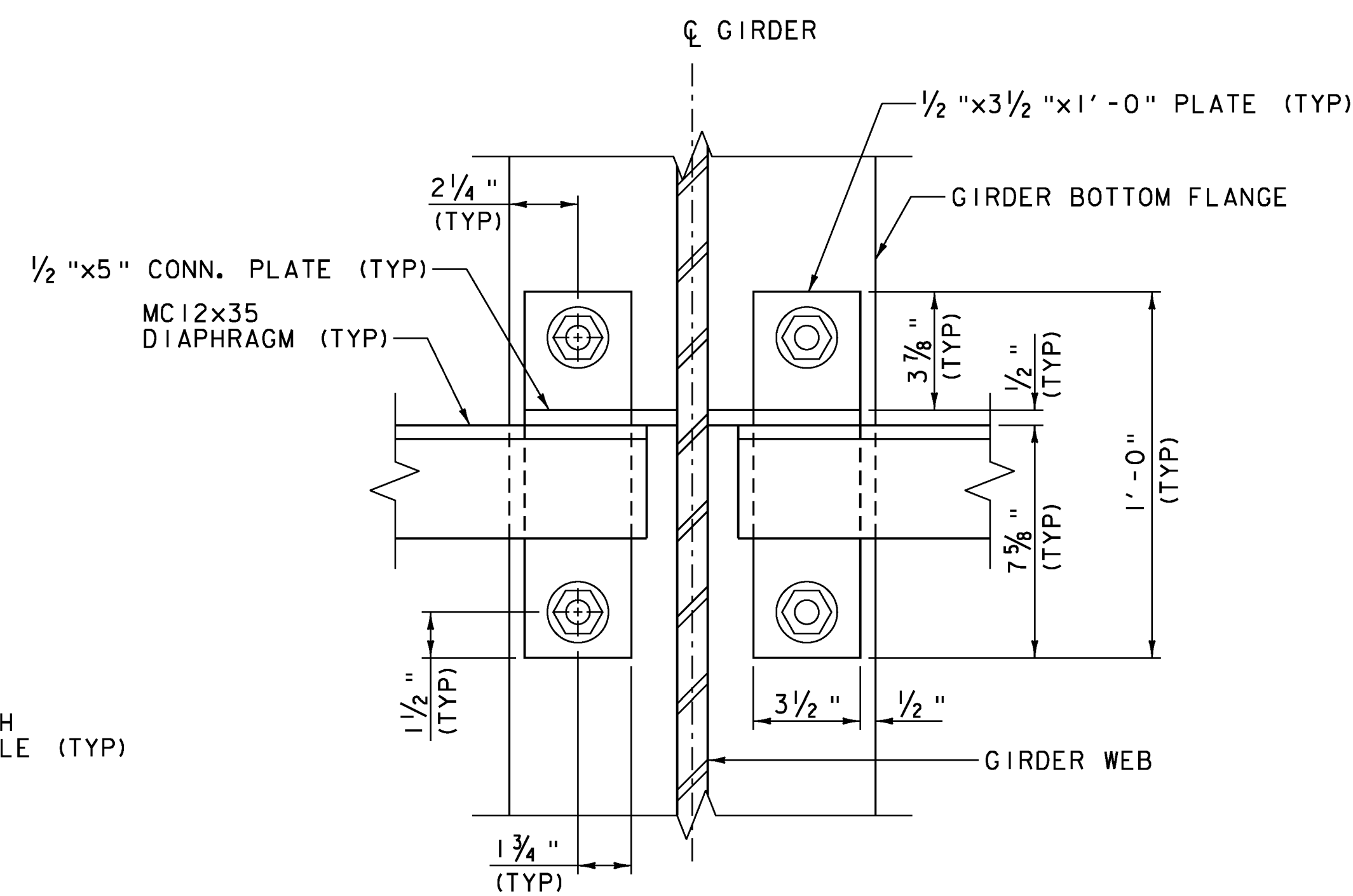
**CONNECTION PLATE DETAIL**  
SCALE: 3" = 1'-0"



**WELD TERMINATION AND COPING DETAIL**  
SCALE: 3" = 1'-0"

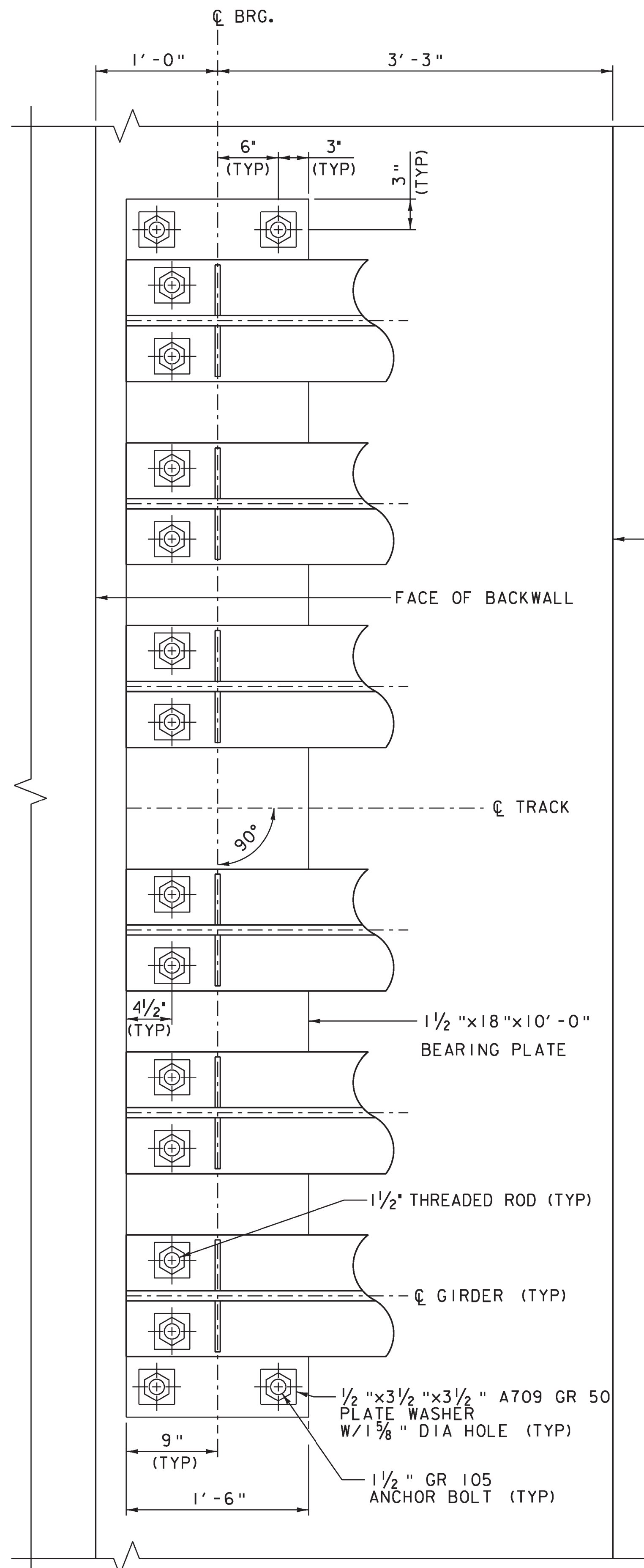


**DIAPHRAGM**  
SCALE: 3" = 1'-0"

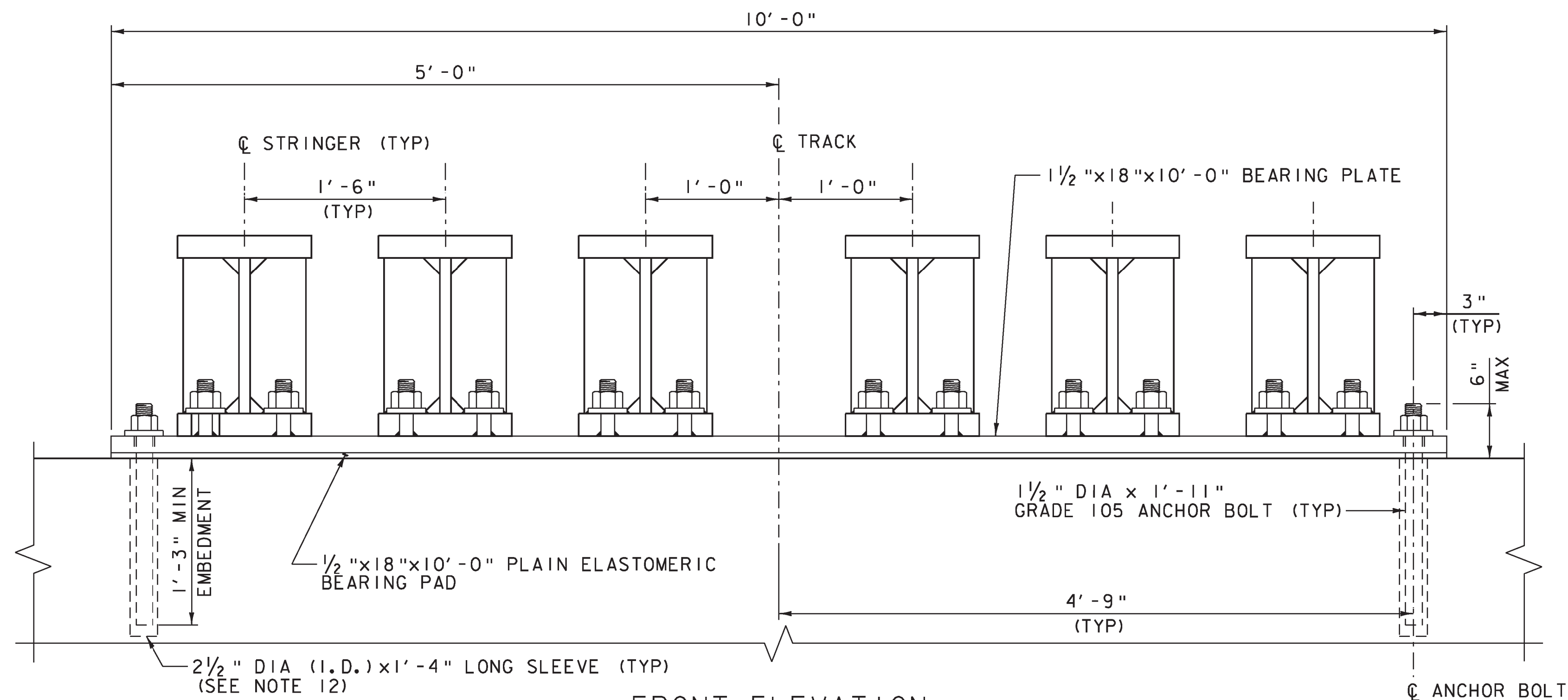


**SECTION A-A**  
SCALE: 3" = 1'-0"

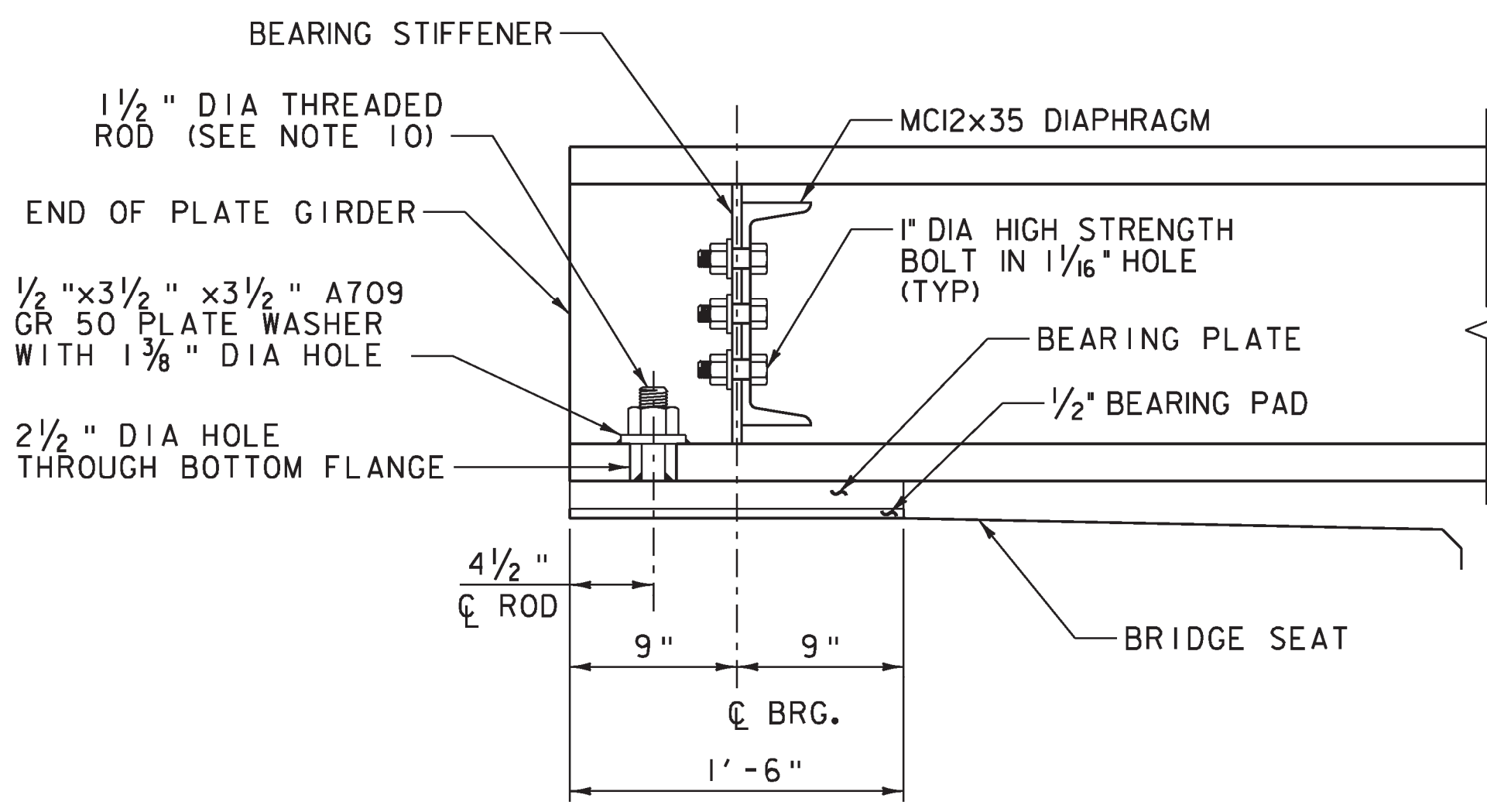
PROJECT NAME: DORSET	PLOT DATE: 4/10/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08q224detailconnections.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: A.P. GUYETTE	SHEET 20 OF 33
DESIGNED BY: J.W. GOLEK	
STEEL DETAILS	



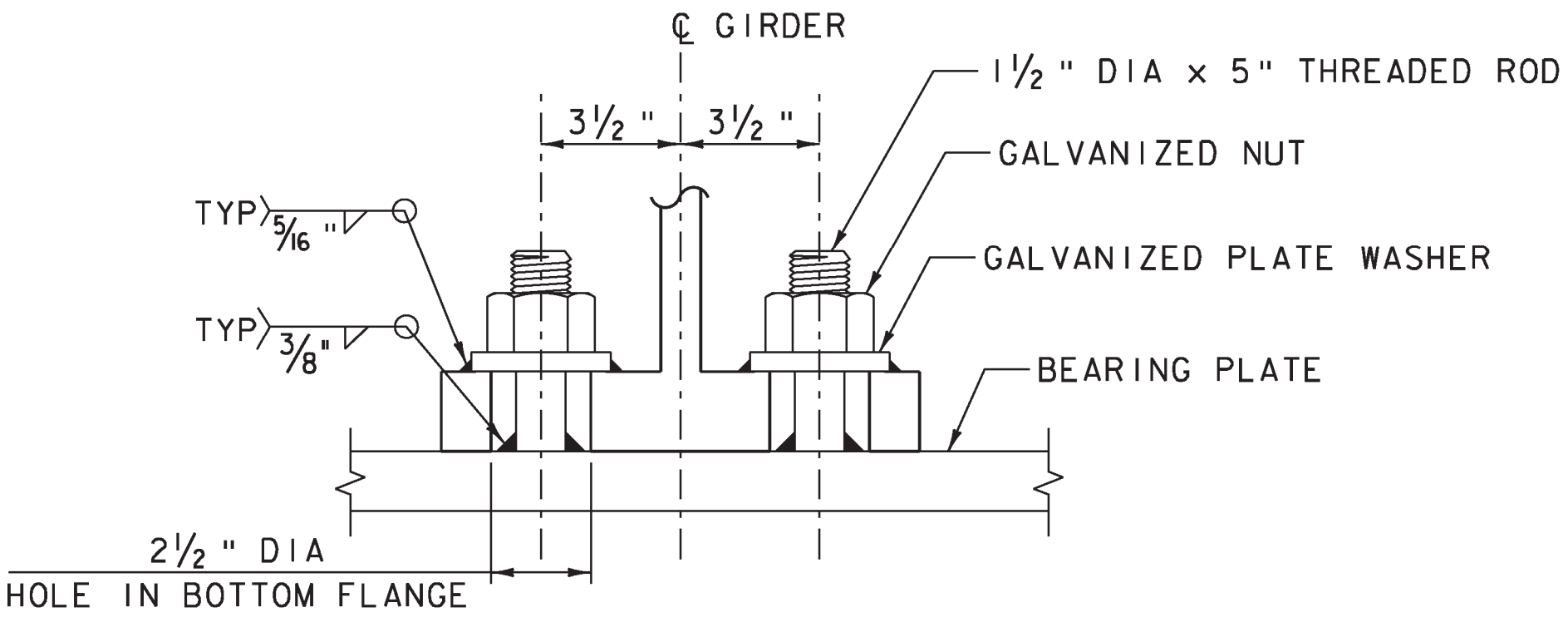
**PLAN**  
SCALE: 1/2" = 1'-0"  
(TYPICAL BOTH ABUTMENTS)



**FRONT ELEVATION**  
SCALE: 1/2" = 1'-0"



**SIDE ELEVATION**  
SCALE: 1/2" = 1'-0"  
(ANCHOR BOLTS NOT SHOWN FOR CLARITY)



**GALVANIZED THREADED ROD DETAIL**  
SCALE: 3" = 1'-0"

**BEARING NOTES**

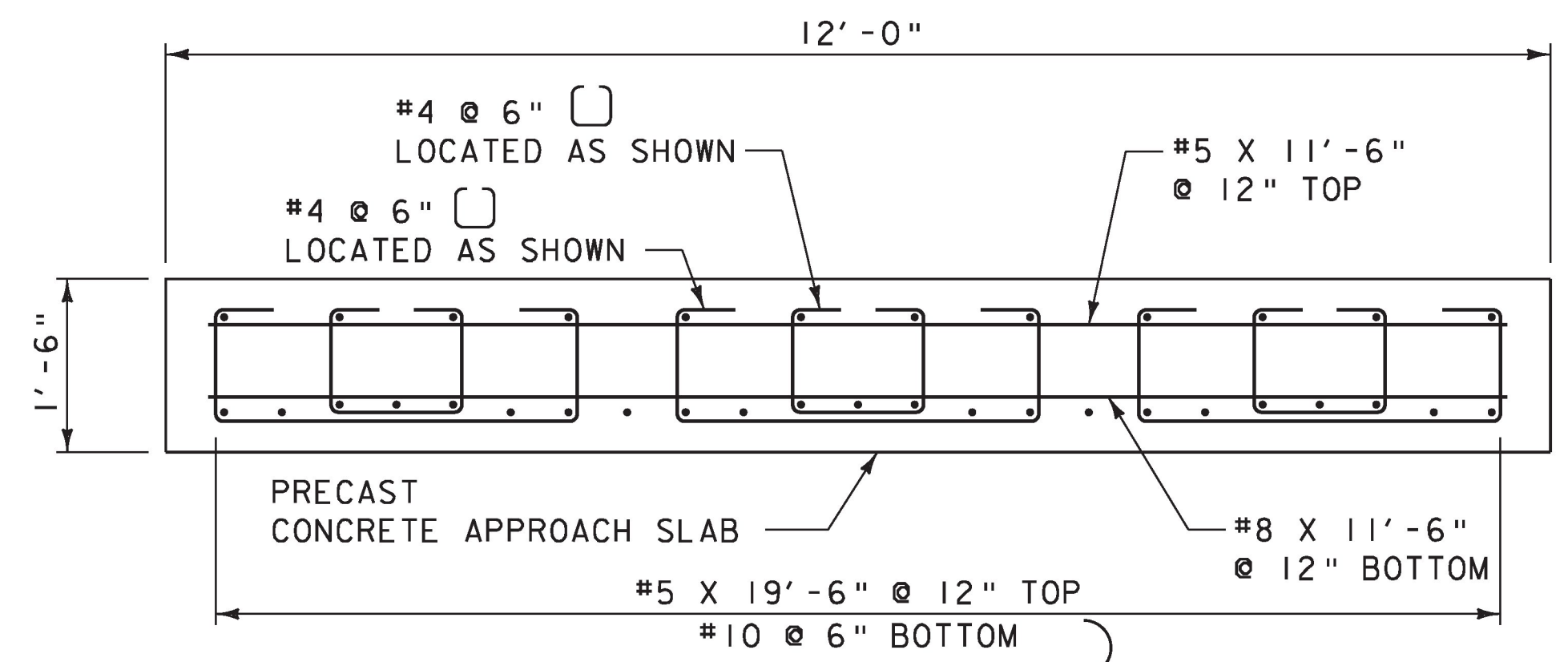
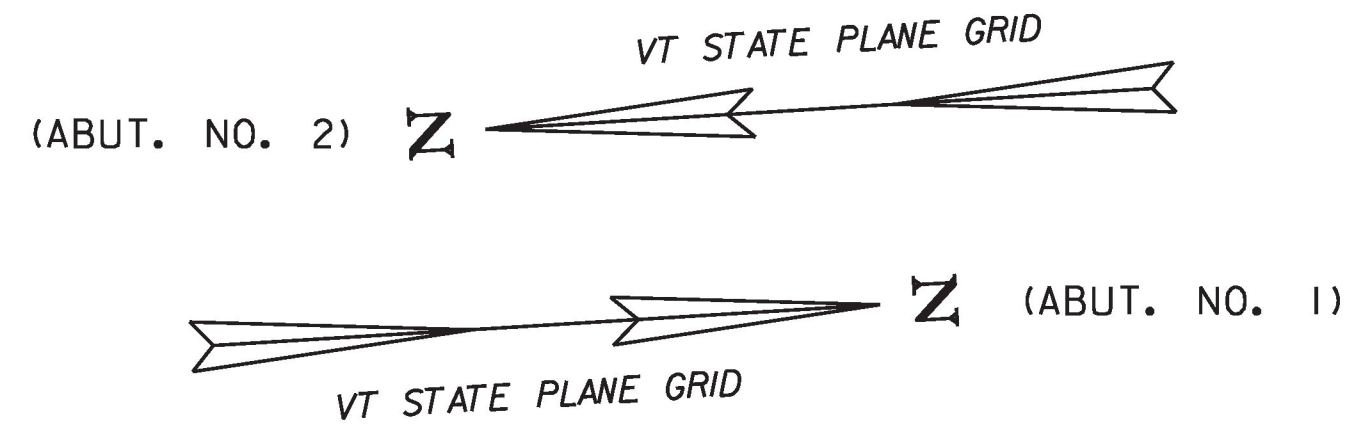
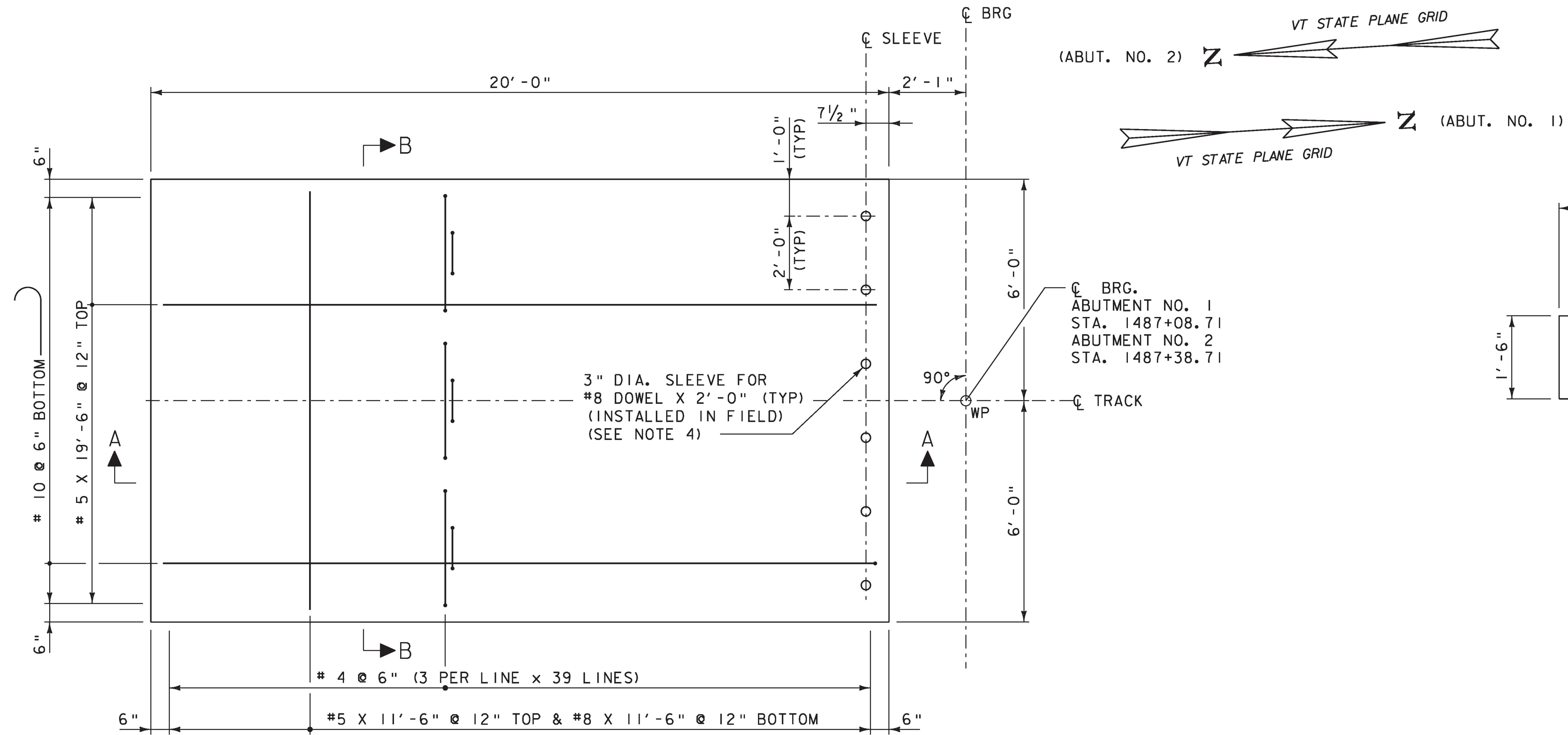
- ALL BEARING WORK SHALL BE IN ACCORDANCE WITH AREMA PART 11 OF CHAPTER 15.
- ALL STEEL IN BEARING DEVICES SHALL BE ASTM A709, GRADE 36, GALVANIZED OR METALIZED PER SUBSECTION 726.08 OR 726.09, RESPECTIVELY.
- ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED, PER SUBSECTION 726.08.
- CHARPY V-NOTCH TOUGHNESS TESTS ARE NOT REQUIRED FOR STEEL USED IN BEARING COMPONENTS.
- ALL WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF ANS1/AASHTO/AWS D1.5 BRIDGE WELDING CODE INCLUDING INTERIMS.
- ALL BEARING PLATES SHALL BE FLAT AND TRUE AFTER WELDING, UNLESS OTHERWISE INDICATED.
- ~~ALL BEARING COMPONENTS, INCLUDING BUT NOT LIMITED TO, THE BEARING PAD, BEARING PLATE, BOLTS, NUTS, AND WASHERS SHALL BE PAID FOR UNDER ITEM 531.16, "BEARING DEVICE ASSEMBLY, PLAIN ELASTOMERIC PAD". SEE SPECIALS~~
- FABRICATION DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED PRIOR TO BEARING FABRICATION AND SHALL INCLUDE WELDING PROCEDURES.
- PLAIN ELASTOMERIC BEARING PAD DESIGN CRITERIA:  
MAX BEARING PRESSURE ON PAD = 800 PSI  
DESIGN LOAD PER BEARING IS 407 KIPS  
BASE PLATE TO CONCRETE DESIGN PRESSURE= 1000 PSI
- THREADED ROD ASSEMBLY SHALL INCLUDE 1/2" x 5" A572 GR 50 GALVANIZED ROD WITH 2 1/2" OF THREAD. DO NOT THREAD FULL LENGTH. ALL COSTS FOR THREADED ROD ASSEMBLY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 531.16, "BEARING DEVICE ASSEMBLY, PLAIN ELASTOMERIC PAD".
- ANCHOR BOLTS SHALL BE GROUTED WITH ITEM 900.640 SPECIAL PROVISION (RAPID SETTING GROUT).
- PVC SLEEVES FOR ANCHOR BOLTS SHALL BE REMOVED PRIOR TO GROUTING ANCHOR BOLTS.
- THE NUTS FOR ALL BEARING ANCHOR BOLTS SHALL BE DRAWN UP FINGER TIGHT AND THEN BACKED OFF 1/8 TURN.
- THREADS SHALL BE BURRED ABOVE THE NUT TO PREVENT NUT REMOVAL.
- ANCHOR BOLTS SHALL BE SWEDGED ASTM F1554 GRADE 105 WITH 4" THREAD. NUTS SHALL BE A563 GRADE DH OR ASTM A194 GRADE 2H HEAVY HEX. WASHERS SHALL BE ASTM F-436. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. GALVANIZED BOLTS, NUTS AND WASHERS SHALL CONFORM TO VTRANS STANDARD SPECIFICATION FOR CONSTRUCTION, SUBSECTION 714.08.

PROJECT NAME: DORSET	PLOT DATE: 5/2/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08g224detailbearings.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET 21 OF 33
DESIGNED BY: J.W. GOLEK	
BEARING DETAILS	





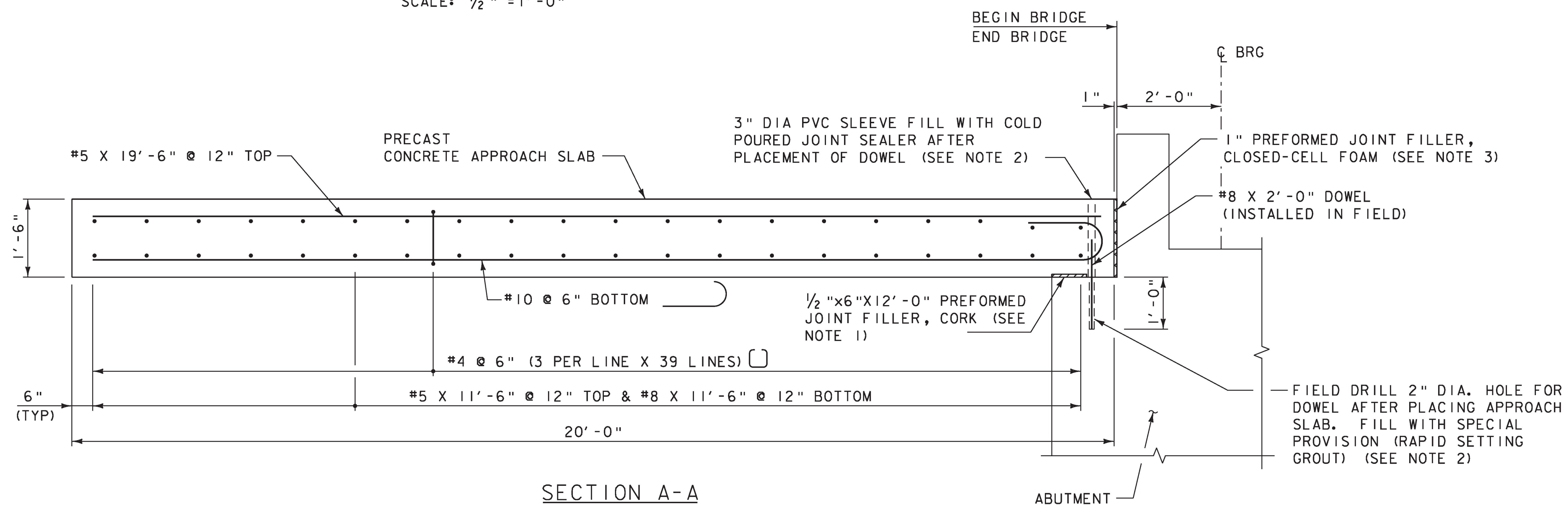




SECTION B-B  
SCALE: 3/4" = 1'-0"

APPROACH SLAB NO. 1

APPROACH SLAB NO. 1 SHOWN, APPROACH SLAB NO. 2 SIMILAR BUT OPPOSITE HAND  
SCALE: 1/2" = 1'-0"



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

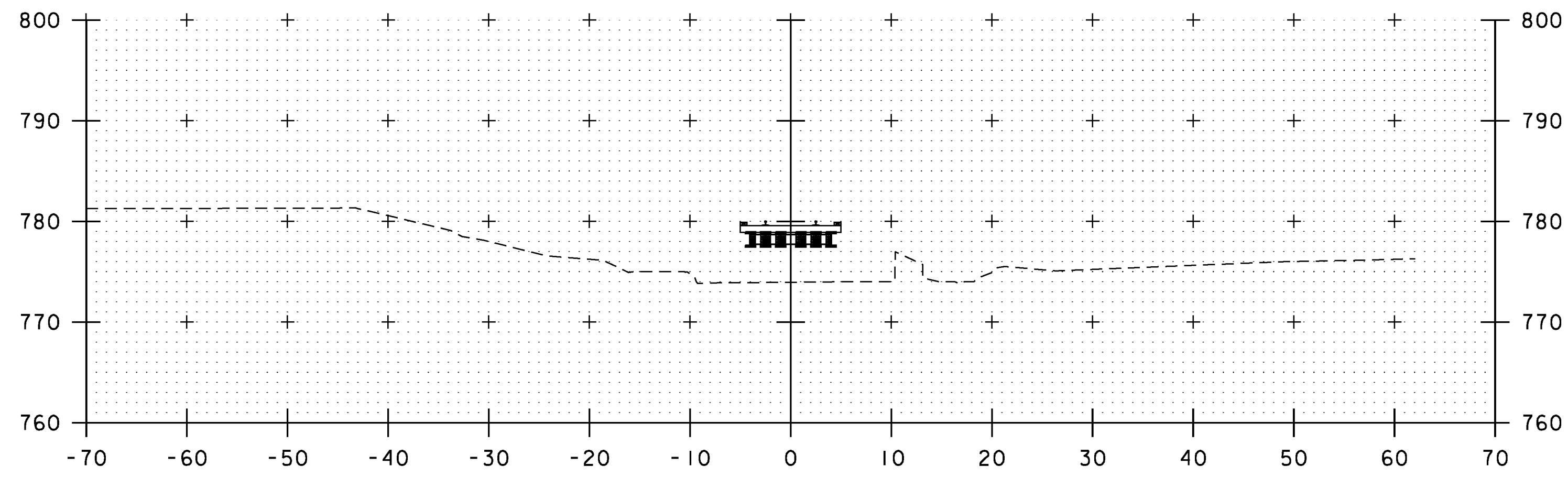
NOTES:

1. EXPANSION JOINT MATERIAL ALONG BOTTOM FACE OF APPROACH SLAB SHALL BE CAST INTO THE APPROACH SLAB AND SHALL BE PER SUBSECTION 707.08. ALL COSTS ARE INCIDENTAL TO THE CONTRACT ITEMS.
2. ALL COSTS FOR INSTALLATION OF PRECAST APPROACH SLAB DOWELS, SLEEVES, AND COLD POURED JOINT SEALER SHALL BE INCIDENTAL TO THE APPROPRIATE PRECAST APPROACH SLAB 540.10 ITEM. GROUTING OF DOWELS SHALL BE PAID FOR UNDER ITEM 900.640, "SPECIAL PROVISION (RAPID SETTING GROUT)".
3. PREFORMED JOINT FILLER, CLOSED-CELL FOAM SHALL BE PER SUBSECTION 707.09 AND PAID INCIDENTAL TO THE CONTRACT ITEMS.
4. CONTRACTOR SHALL ENSURE THAT DOWELS AND DRILLING DO NOT CONFLICT WITH ANY REINFORCING.

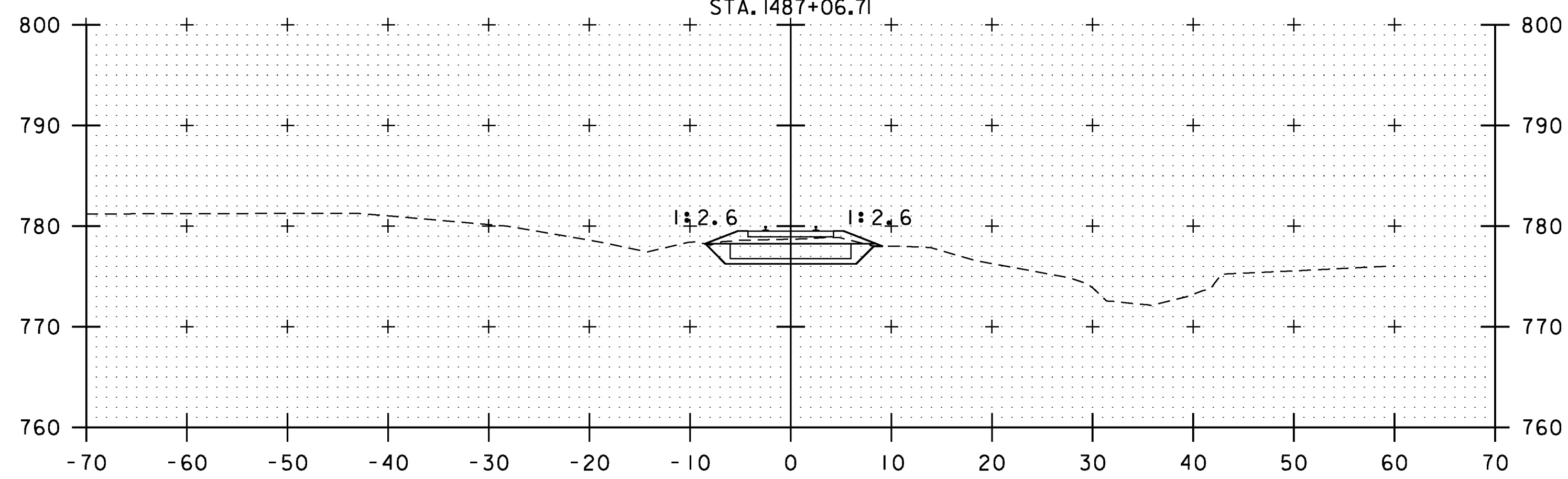
PROJECT NAME: DORSET  
PROJECT NUMBER: WCRS(8)

FILE NAME: z08g224subas.dgn  
PROJECT LEADER: A.P. GUYETTE  
DESIGNED BY: G.S. GOODRICH  
APPROACH SLAB DETAILS

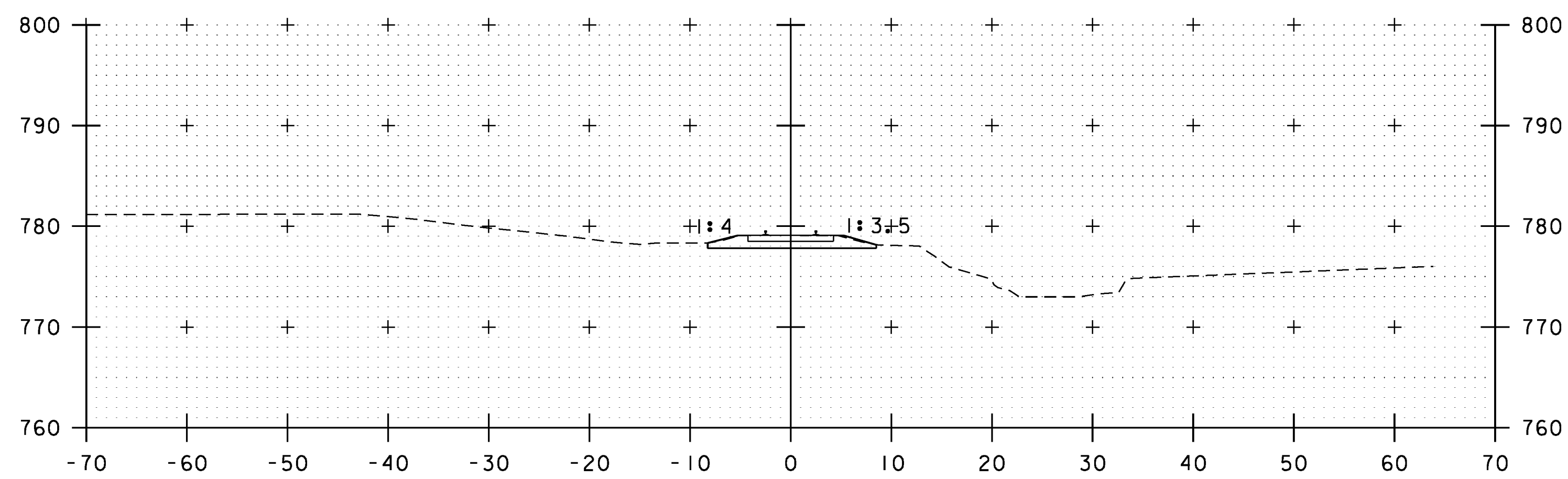
PLOT DATE: 5/2/2014  
DRAWN BY: B.J. MASSE  
CHECKED BY: L.S. GARDNER  
SHEET 24 OF 33



1487+25  
 BEGIN BRIDGE  
 STA. 1487+06.71



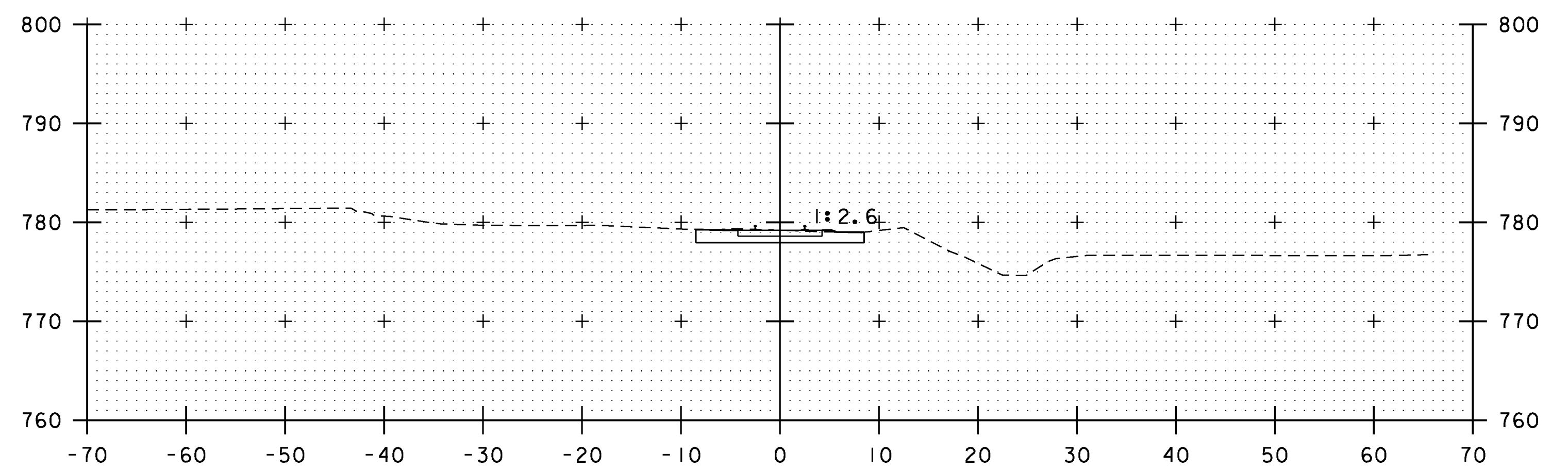
1487+00



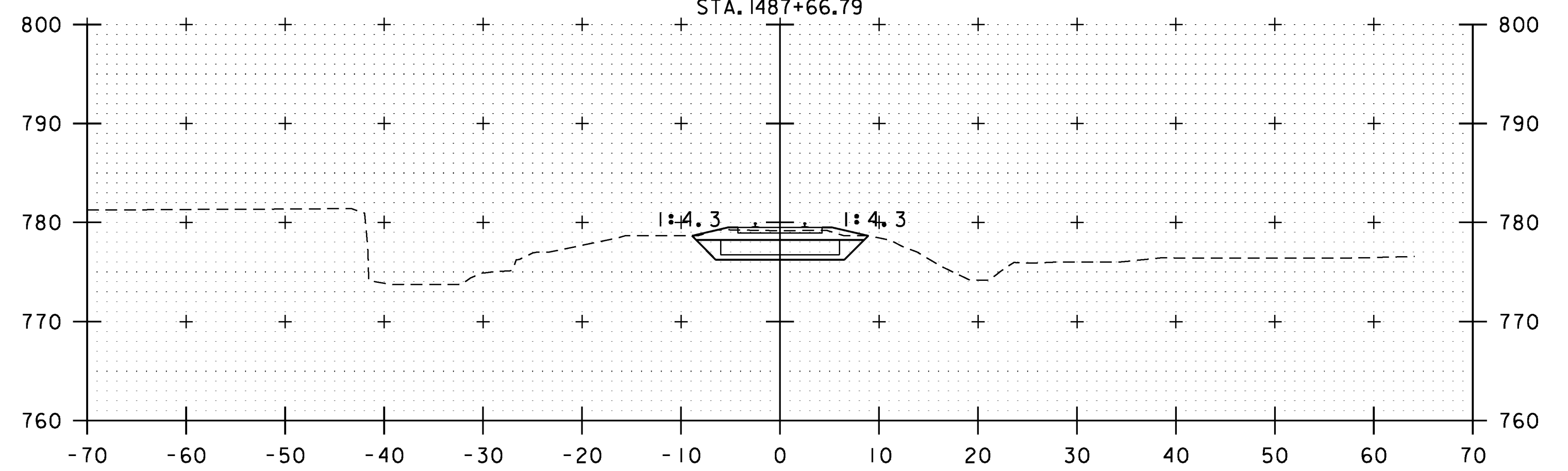
1486+81  
 BEGIN PROJECT  
 STA. 1486+80.63

RAILROAD CROSS SECTIONS  
 STA 1486+81 - 1487+67

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



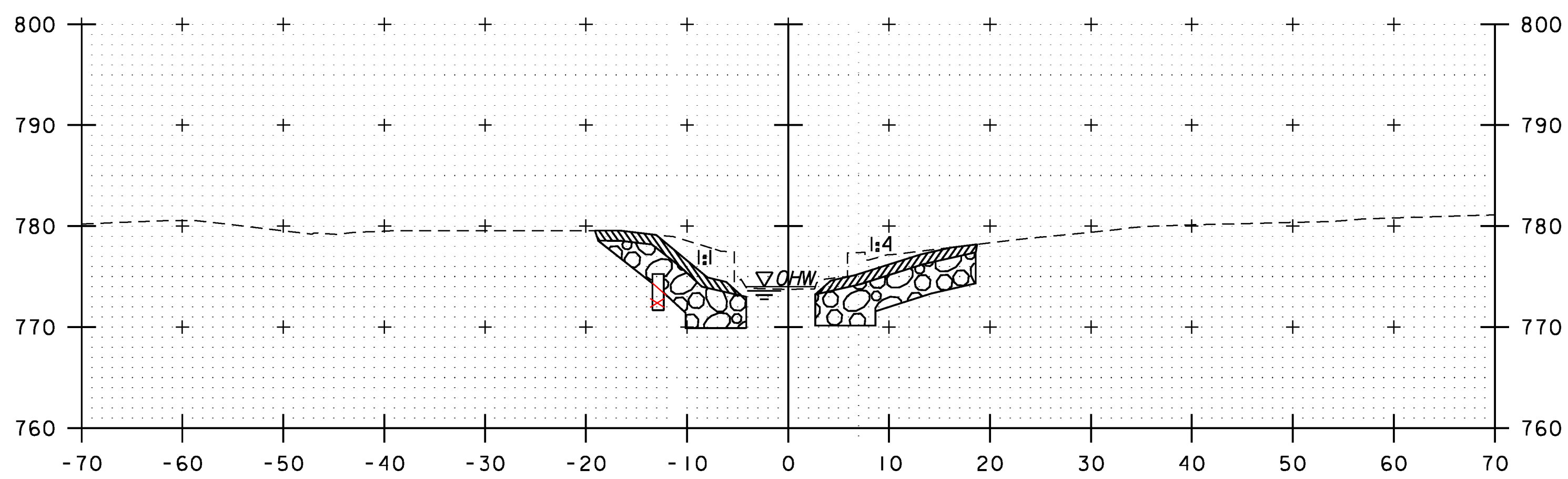
1487+67  
 END PROJECT  
 STA. 1487+66.79



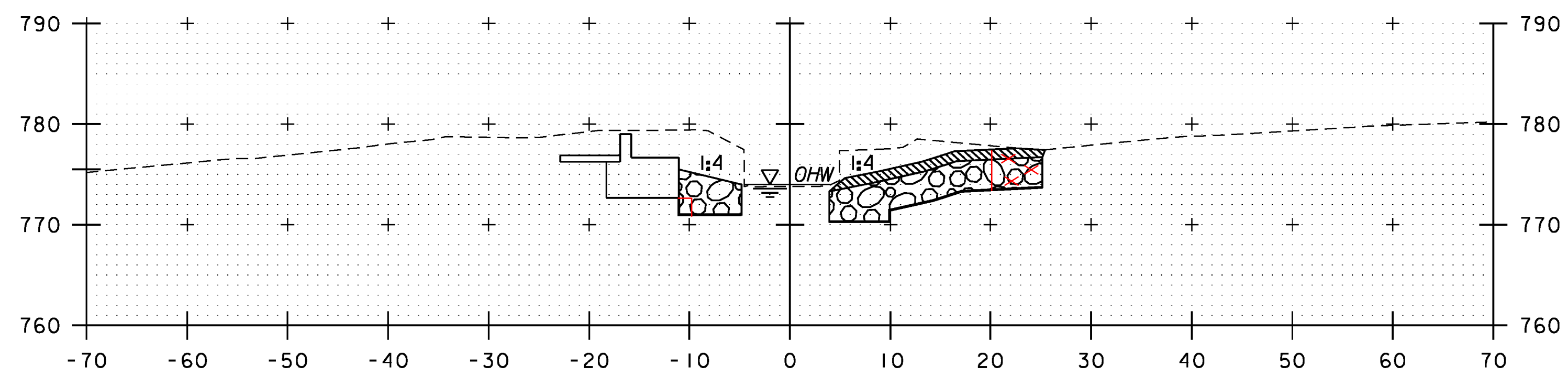
1487+50  
 END BRIDGE STA. 1487+40.71



PROJECT NAME: DORSET	PLOT DATE: 4/22/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.L. LEMIEUX
FILE NAME: z08g224xs3.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET 25 OF 33
DESIGNED BY: B.O. CRONIN	
RAIL CROSS SECTIONS	

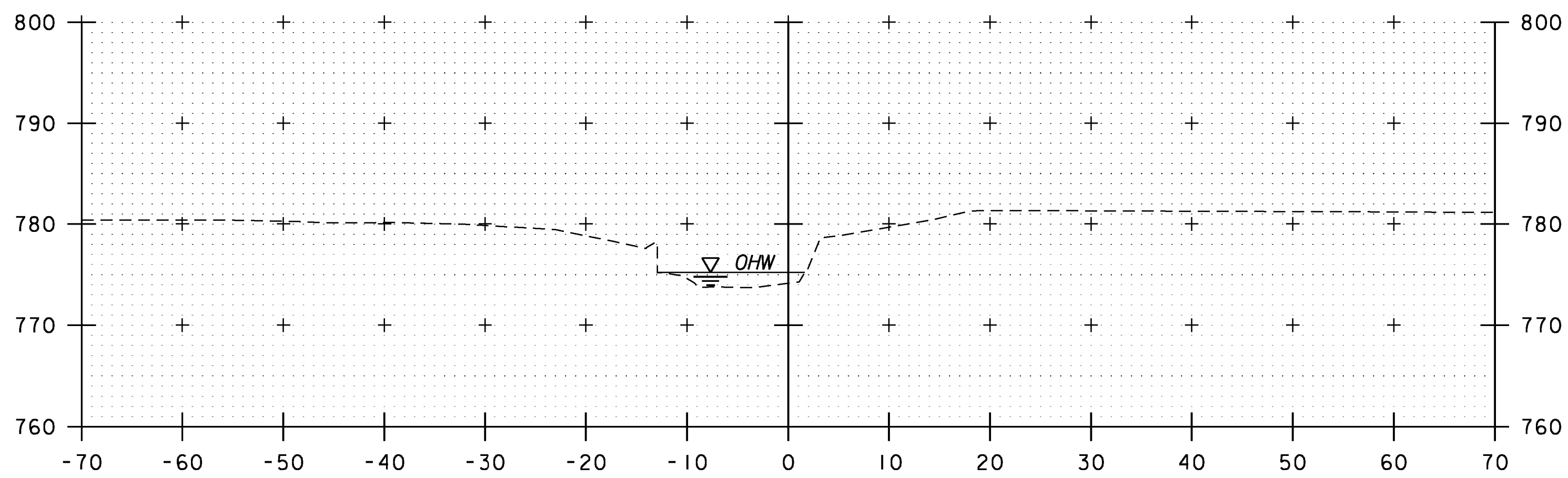


10+25

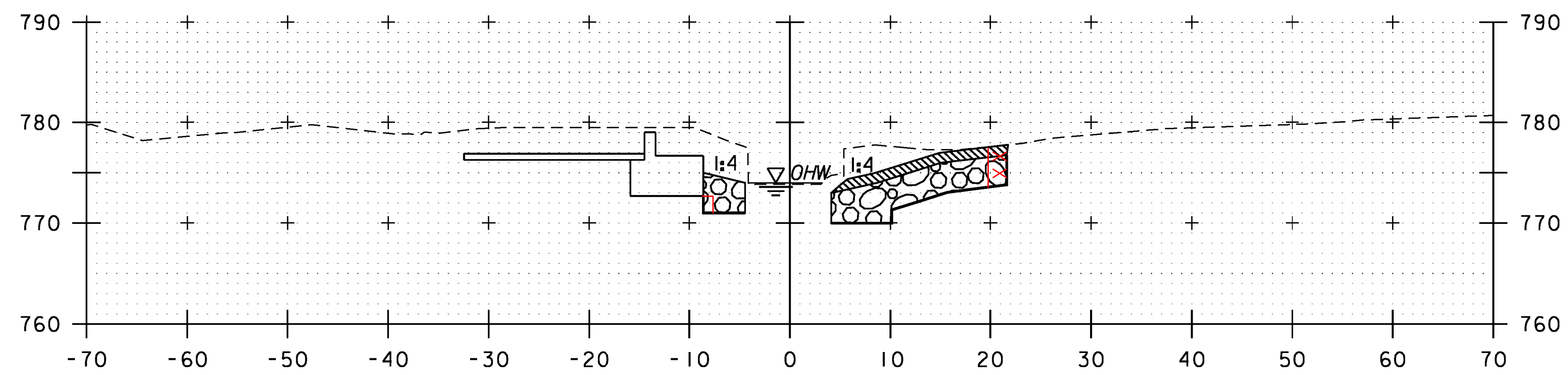


10+35

STA. 10+16.12 RT  
 STA. 10+19.36 LT  
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION  
 BEGIN STONE FILL  
 BEGIN GEOTEXTILE UNDER STONE FILL  
 BEGIN GRUBBING MATERIAL



10+00



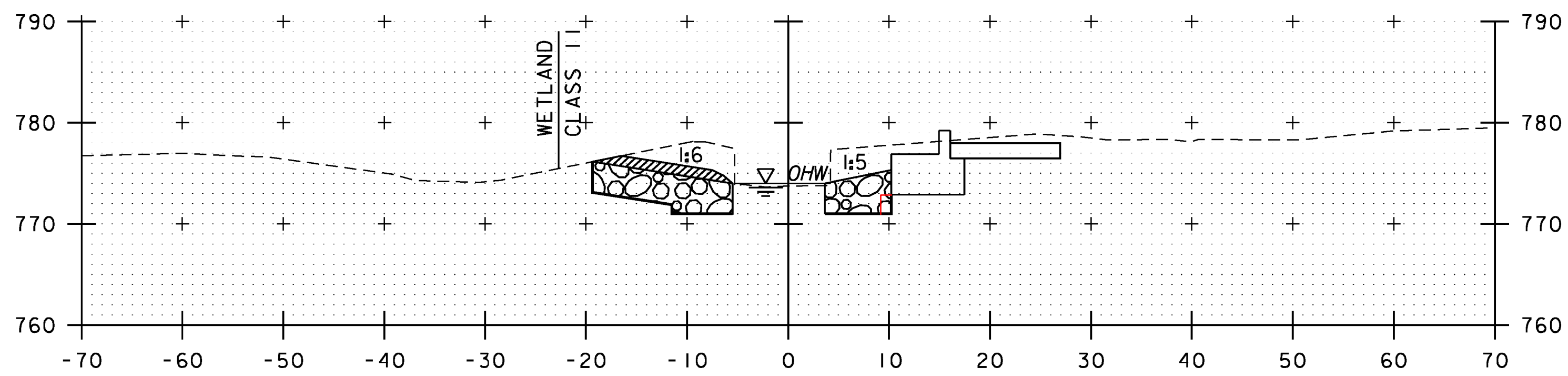
10+30

CHANNEL CROSS SECTIONS  
 STA. 10+00 - 10+35

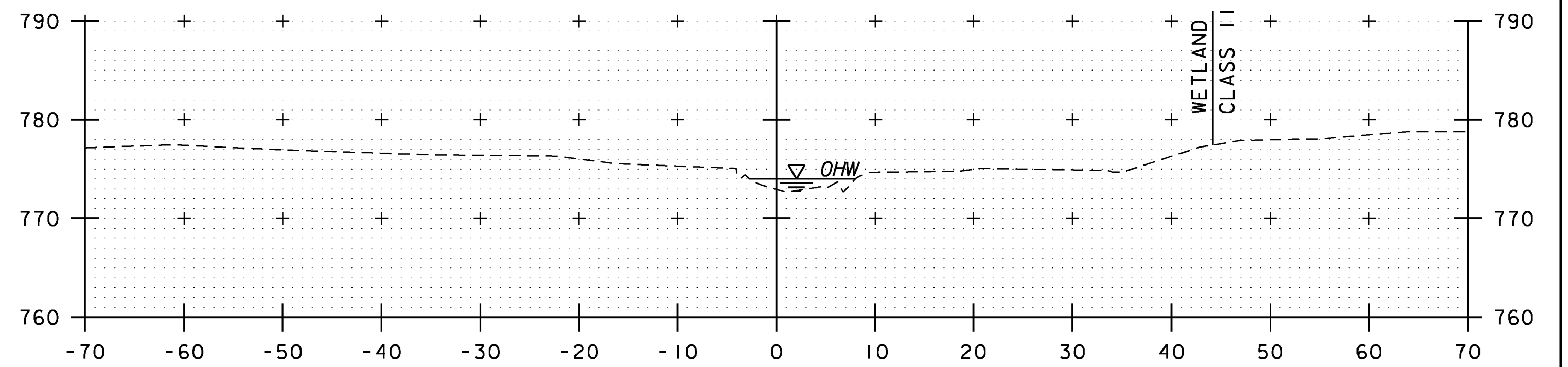
SCALE 1" = 10'-0"  
 10 0 10



PROJECT NAME: DORSET	PLOT DATE: 4/10/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08g224xsl.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET 26 OF 33
DESIGNED BY: J.W. GOLEK	
CHANNEL CROSS SECTIONS (1 OF 2)	

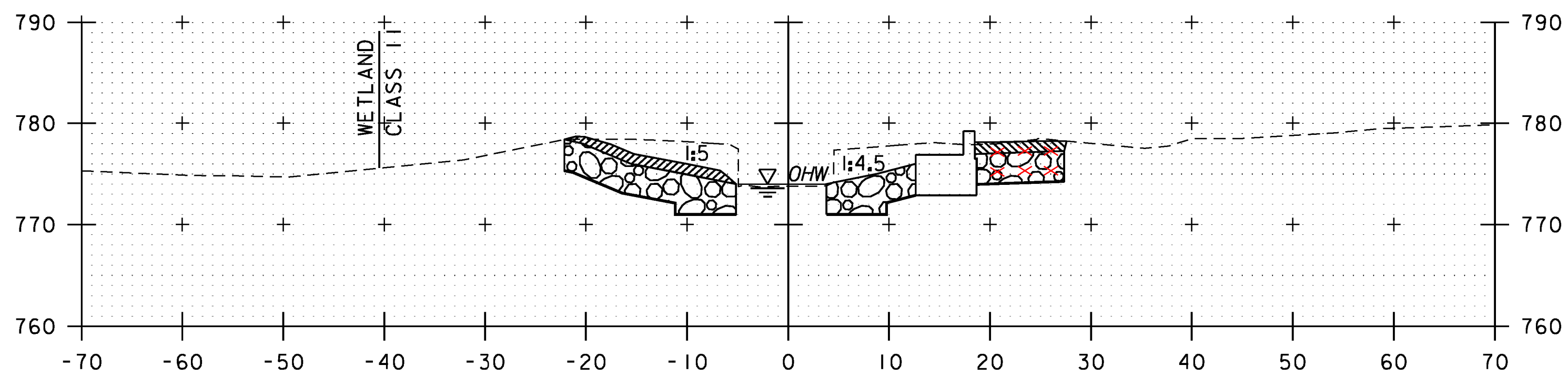


10+45

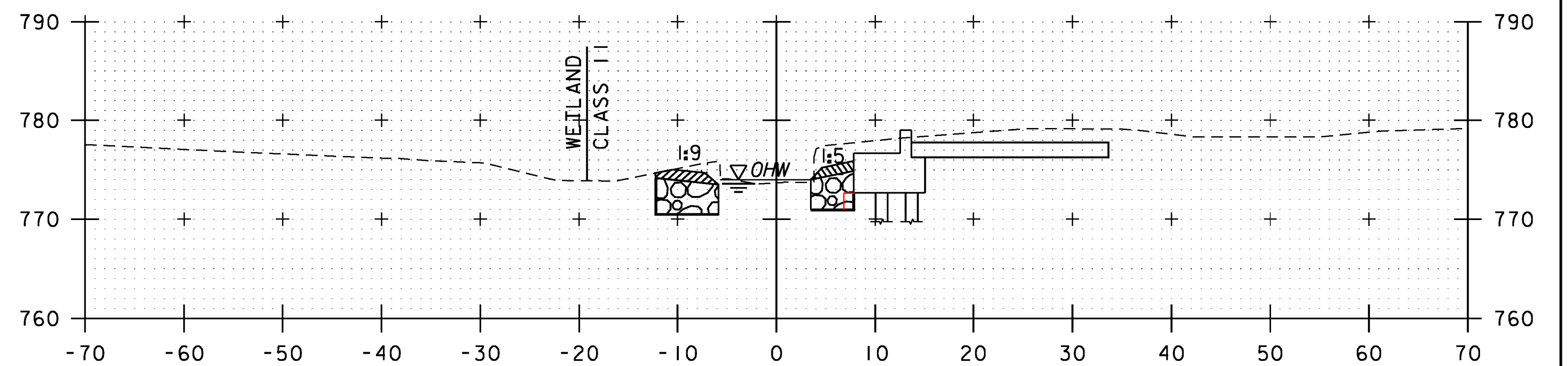


10+75

STA. 10+61.83 RT  
 STA. 10+55.37 LT  
 END UNCLASSIFIED CHANNEL EXCAVATION  
 END STONE FILL  
 END GEOTEXTILE UNDER STONE FILL  
 END GRUBBING MATERIAL



10+40



10+50

CHANNEL CROSS SECTIONS  
 STA. 10+40 - 10+75

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



PROJECT NAME: DORSET	PLOT DATE: 4/10/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08g224xs2.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET 27 OF 33
DESIGNED BY: J.W. GOLEK	
CHANNEL CROSS SECTIONS (2 OF 2)	

## EPSC PLAN NARRATIVE

### 1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REMOVAL AND REPLACEMENT OF THE EXISTING CONCRETE SLAB SUPERSTRUCTURE, CONCRETE ABUTMENTS AND WINGWALLS, AND RELATED APPROACH WORK. RAIL TRAFFIC WILL BE SHUT DOWN FOR PERIODS AS NEEDED DURING CONSTRUCTION. THIS PROJECT IS LOCATED AT THE SITE OF THE VERMONT RAILWAY (VTR) BRIDGE NO. 79 OVER THE BATTEN KILL RIVER IN THE TOWN OF DORSET. THE EXISTING BRIDGE IS APPROXIMATELY 10 FEET LONG AND HAS A 19 FOOT WIDE CONCRETE DECK CARRYING A SINGLE TRACK.

THE BRIDGE REPLACEMENT INCLUDES THE REMOVAL OF THE EXISTING STRUCTURE IN ITS ENTIRETY AND THE CONSTRUCTION OF A NEW 30 FOOT SINGLE SPAN OPEN TIMBER DECK ON NESTED STEEL PLATE GIRDERS WITH PRECAST ABUTMENTS ON PILES. THE TRACK ALIGNMENT AND PROFILE FOR VTR WILL NOT CHANGE. A STREAM ALTERATION PERMIT FROM VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) AND SECTION 404 PERMIT FROM THE U.S. ARMY CORPS OF ENGINEERS (ACOE) ARE REQUIRED FOR THE REMOVAL OF THE EXISTING SUBSTRUCTURE AND ARE INCLUDED IN THE CONTRACT DOCUMENTS.

APPROACH WORK INCLUDES THE INSTALLATION OF PRECAST BRIDGE APPROACH SLABS ON BOTH APPROACHES AND INSTALLING NEW SUBSTRUCTURES.

THIS PROJECT SITE IS LOCATED AT LATITUDE N 43 DEGREES 14 MINUTES, LONGITUDE W 73 DEGREES 0 MINUTES.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.10 ACRES.

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

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

### 1.2 SITE INVENTORY

#### 1.2.1 TOPOGRAPHY

THE TRACK IN THE PROJECT AREA IS GENERALLY FLAT AND FOLLOWS THE GENERAL LAY OF THE SURROUNDING TOPOGRAPHY. RAILROAD SURFACE DRAINAGE IS GENERALLY TOWARD THE EASTERN AND WESTERN SHOULDERS OF THE BALLASTED RAIL BED. IN THE PROJECT AREA THE RAIL BED SLOPES GENTLY TOWARD THE BATTEN KILL RIVER.

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

THE BATTEN KILL RIVER IS LOCATED BENEATH VTR BRIDGE NO. 79 AND DRAINS TO THE HUDSON RIVER. THERE ARE TWO CLASS II WETLANDS THAT ARE LOCATED DOWN STREAM OF THE PROJECT, ONE EACH SIDE OF THE BATENKILL. SOIL DISTURBANCE IS ADJACENT TO AND WITHIN RECEIVING WATERS. THE STREAM BANKS ARE LOW, WELL-DEFINED, AND WELL-VEGETATED WITH ARMORING NEAR VTR BRIDGE #79. THE STREAM BED CONSISTS OF GRAVEL AND SMALL COBBLE WITH A CONCRETE CULVERT FLOOR IN THE STREAM BED DIRECTLY UNDERNEATH THE EXISTING STRUCTURE. THIS FLOOR WILL BE REMOVED DURING CONSTRUCTION OF THE NEW BRIDGE. THERE ARE A FEW DRAINAGE CULVERTS IN THE AREA THAT DRAIN INTO THE BATTEN KILL UPSTREAM OF THE PROJECT SITE.

#### 1.2.3 VEGETATION

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

#### 1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF BENNINGTON, VERMONT. SOILS ON THE PROJECT SITE ARE ADRIAN AND SACO, SILTY LOAM, 0% TO 2% SLOPES, "K FACTOR" = 0.49. THE SOIL IS CONSIDERED HIGHLY ERODIBLE.

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

#### 1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO  
HISTORICAL OR ARCHEOLOGICAL AREAS: THE PROJECT IS LOCATED IN AN ELIGIBLE LINEAR HISTORIC DISTRICT. NO IMPACTS ARE ANTICIPATED.  
PRIME AGRICULTURAL LAND: NO  
THREATENED AND ENDANGERED SPECIES: NO  
WATER RESOURCE: BATTEN KILL RIVER  
WETLANDS: THERE ARE TWO CLASS II WETLANDS ON EACH SIDE OF THE BATTEN KILL RIVER, ADJACENT TO THE PROJECT SITE. THE WETLANDS CONTAIN WOODY VEGETATION INCLUDING VARIOUS SEDGES, JEWELWEED, SPECKLED ALDER, AND HONEYSUCKLE. NO PROJECT WORK WILL TAKE PLACE WITHIN THE WETLANDS AND THERE ARE NO ANTICIPATED IMPACTS TO THESE FEATURES. SEE PLAN SHEETS FOR WETLAND LOCATION INFORMATION.

### 1.3 RISK EVALUATION

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

### 1.4 EROSION PREVENTION AND SEDIMENT CONTROL

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

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

#### 1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED. PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES

#### 1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE.

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

#### 1.4.3 SITE ENTRANCE/EXIT STABILIZATION

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

IT IS ANTICIPATED THAT THE SITE WILL BE ACCESSED FROM TWO DIFFERENT NEARBY AT-GRADE RAILROAD CROSSINGS. HOWEVER, STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

#### 1.4.4 INSTALL SEDIMENT BARRIERS

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

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

#### 1.4.5 DIVERT UPLAND RUNOFF

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

THE PROJECT AREA IS RELATIVELY FLAT AND NEARBY SLOPES ARE WELL-VEGETATED. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

#### 1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

STONE CHECK DAMS ARE NOT ANTICIPATED FOR THIS PROJECT.

#### 1.4.7 CONSTRUCT PERMANENT CONTROLS

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

PERMANENT EROSION CONTROL STRUCTURES ARE NOT ANTICIPATED FOR THIS PROJECT.

#### 1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

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

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

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

#### 1.4.9 WINTER STABILIZATION

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

#### 1.4.10 STABILIZE SOIL AT FINAL GRADE

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

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

#### 1.4.11 DE-WATERING ACTIVITIES

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

TREATMENT OF DEWATERING MAY BE REQUIRED FOR THE CONSTRUCTION AND PLACEMENT OF PRE-CAST ABUTMENTS. A LOCATION FOR TREATMENT HAS BEEN PROPOSED AND IS SHOWN ON THE PLANS. FILTER BAGS SHALL BE USED FOR THE TREATMENT OF DISCHARGE AND SHALL BE PROVIDED BY THE CONTRACTOR.

#### 1.4.12 INSPECT YOUR SITE

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

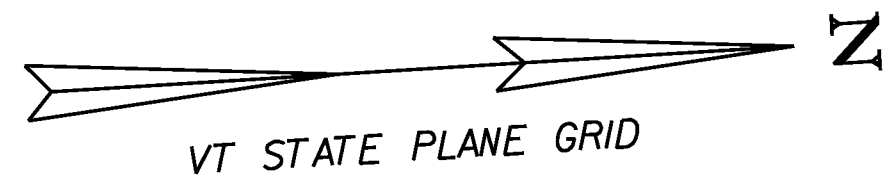
### 1.5 SEQUENCE AND STAGING

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

#### 1.5.1 CONSTRUCTION SEQUENCE

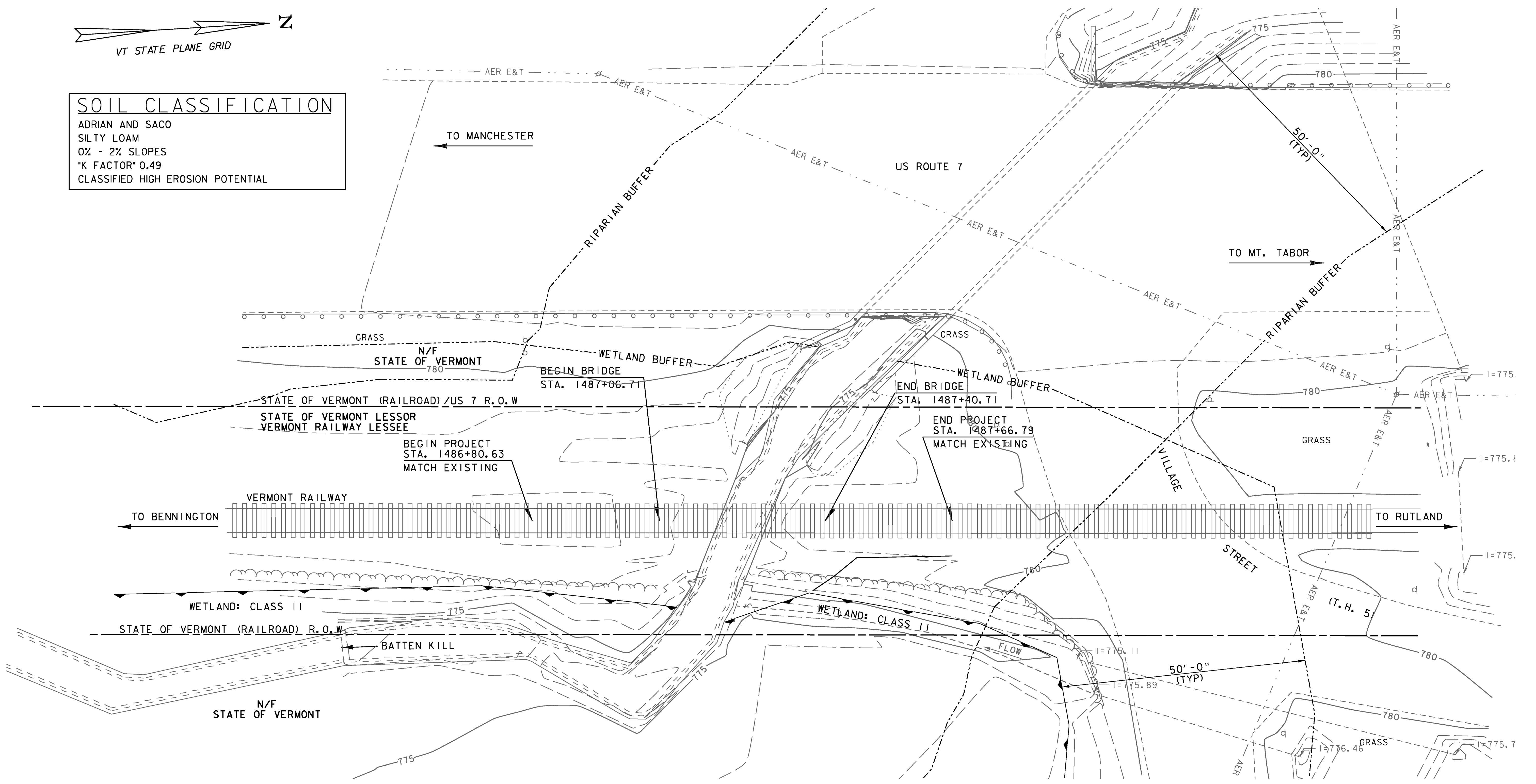
#### 1.5.2 OFF-SITE ACTIVITIES

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



**SOIL CLASSIFICATION**

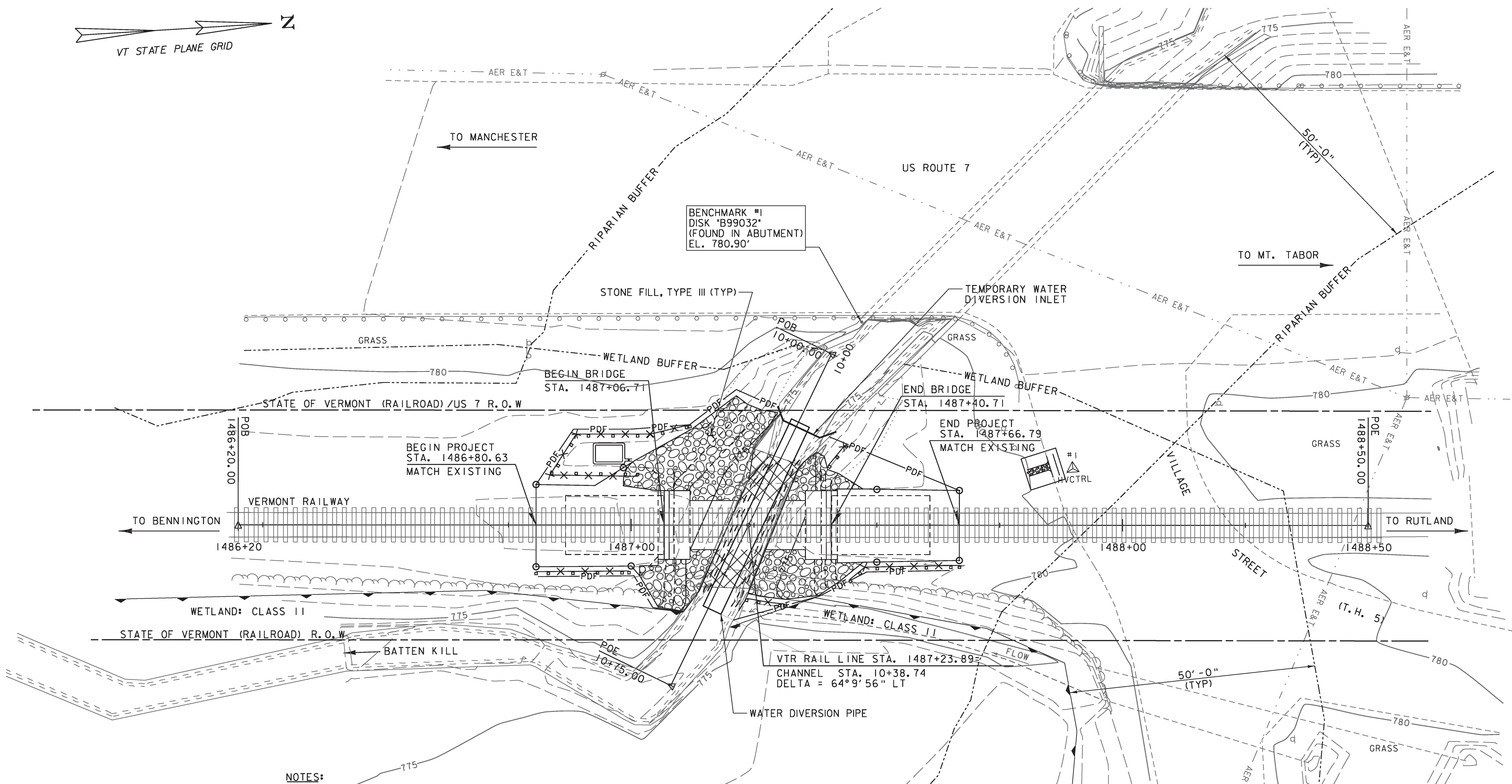
ADRIAN AND SACO  
 SILTY LOAM  
 0% - 2% SLOPES  
 *K FACTOR* 0.49  
 CLASSIFIED HIGH EROSION POTENTIAL



SCALE 1" = 10'-0"

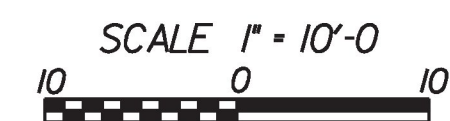


PROJECT NAME: DORSET	PLOT DATE: 4/10/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: E.A. FIALA
FILE NAME: z08q224bdr nul.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET 29 OF 33
DESIGNED BY: E.A. FIALA	
EPSC EXISTING CONDITIONS SITE PLAN	

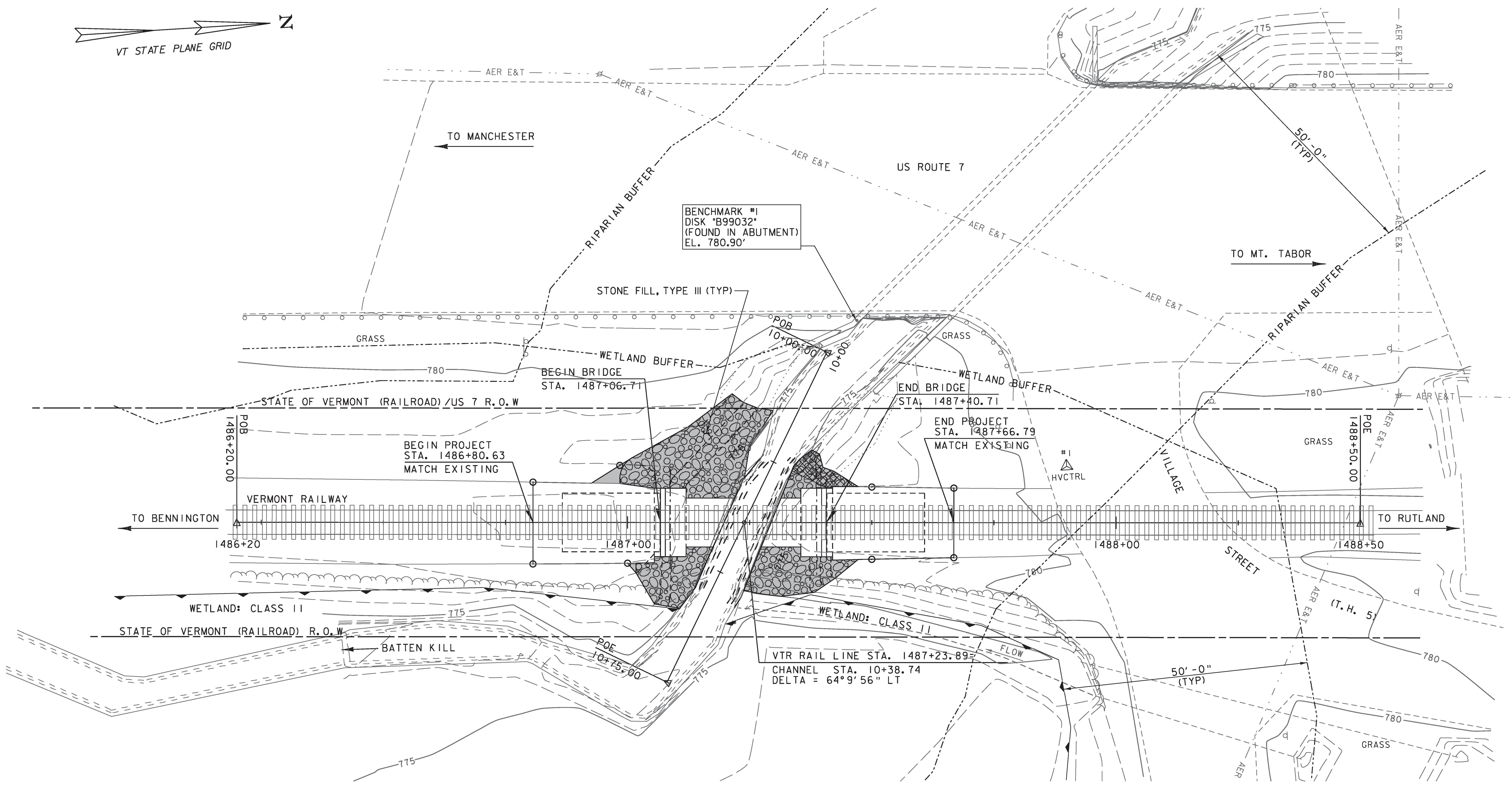
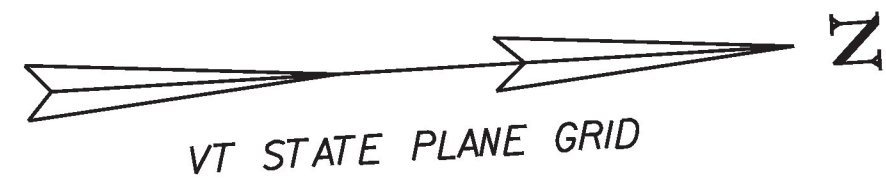


**NOTES:**

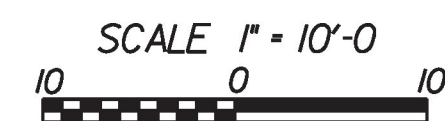
1. WHERE LEDGE IS EXPOSED, GRAVEL BAGS MAY BE USED. PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO ITEM 900.645 "SPECIAL PROVISION (TEMPORARY RELOCATION OF STREAM)".
2. WATER DIVERSION PIPE TO BE SIZED TO MAINTAIN RIVER FLOW.
3. THE WATER DIVERSION PIPE CONCEPTS SHOWN ARE FOR PERMITTING PURPOSES ONLY. THE CONTRACTOR MAY PROPOSE OTHER WATER DIVERSION SYSTEMS PROVIDED THEY REMAIN WITHIN THE LIMITS OF THE PERMITTED IMPACT AREAS.
4. TEMPORARY WATER DIVERSION WORK, INCLUDING PIPE AND INLET, SHALL BE PERFORMED IN ACCORDANCE WITH AND PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (TEMPORARY RELOCATION OF STREAM).
5. SEE SHEET 7 FOR SYMBOLOLOGY.



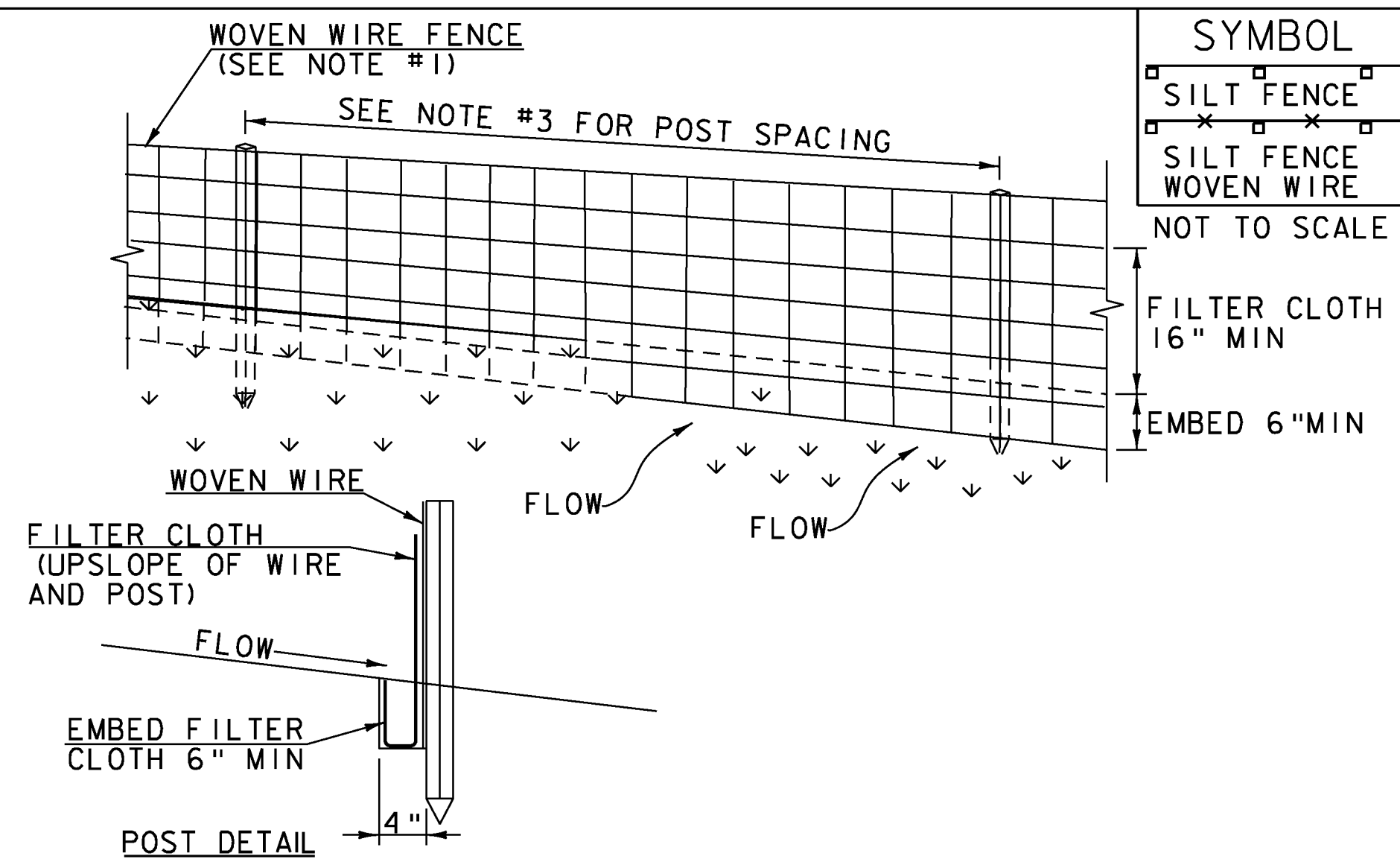
PROJECT NAME:	DORSET	FILE NAME:	z08g224bdr nul.dgn	PLOT DATE:	5/2/2014
PROJECT NUMBER:	WCRS(8)	PROJECT LEADER:	A.P. GUYETTE	DRAWN BY:	E.A. FIALA
		DESIGNED BY:	E.A. FIALA	CHECKED BY:	B.O. CRONIN
		EPSC CONSTRUCTION CONDITIONS SITE PLAN		SHEET 30 OF 33	



NOTE: SEE SHEET 7 FOR SYMBOLOGY



PROJECT NAME: DORSET	FILE NAME: z08g224bdr nul.dgn	PLOT DATE: 5/2/2014
PROJECT NUMBER: WCRS(8)	PROJECT LEADER: A.P. GUYETTE	DRAWN BY: E.A. FIALA
	DESIGNED BY: E.A. FIALA	CHECKED BY: B.O. CRONIN
	EPSC FINAL CONDITIONS SITE PLAN	SHEET 31 OF 33



CONSTRUCTION SPECIFICATIONS

- WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
- FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF1100X, STABILINKA T140N OR APPROVED EQUIVALENT.
- POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
- 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.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

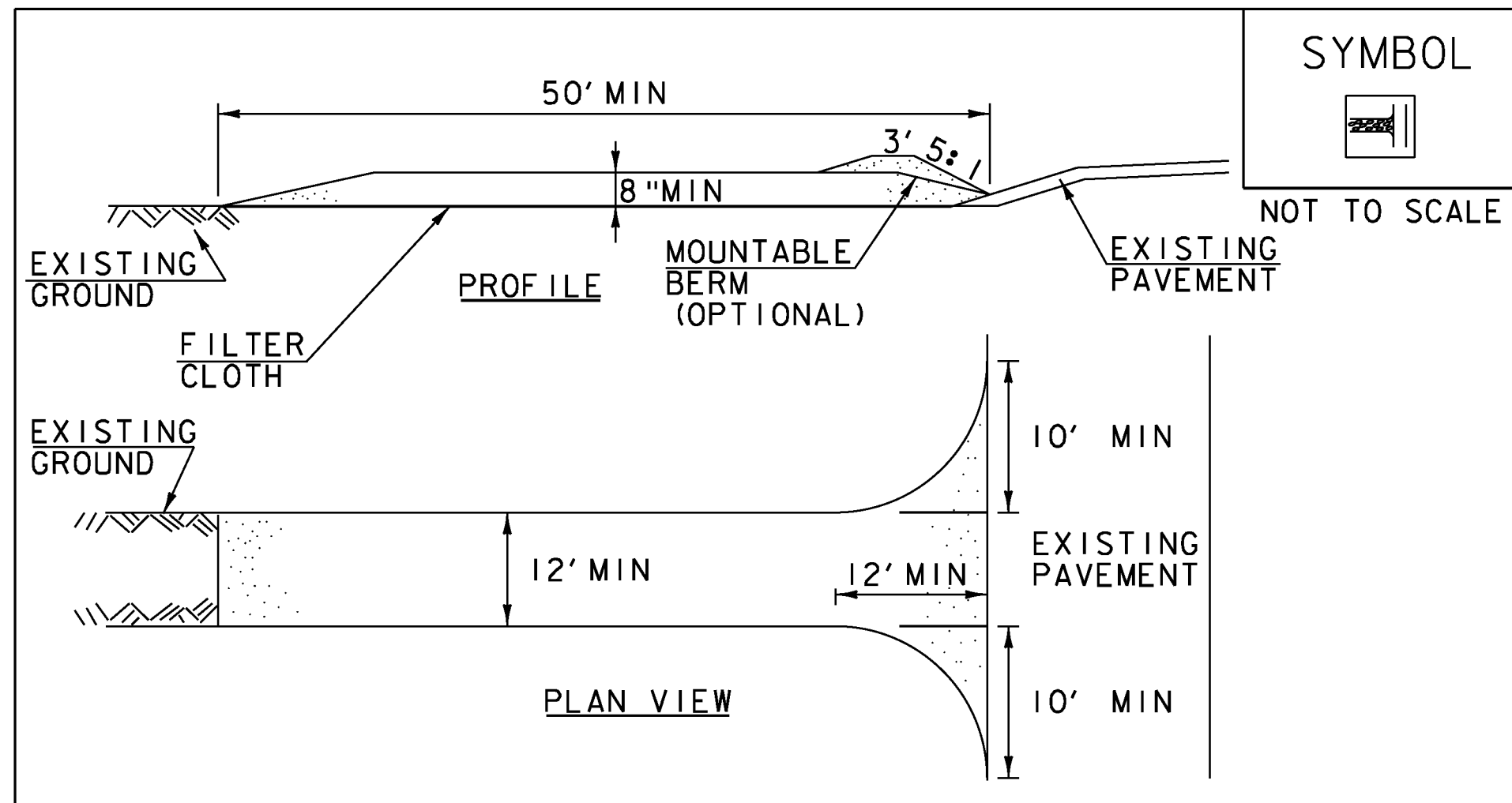
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2011- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

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

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



CONSTRUCTION SPECIFICATIONS

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

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

STABILIZED CONSTRUCTION ENTRANCE

NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2011- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

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

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

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

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

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

CONSTRUCTION GUIDANCE

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

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

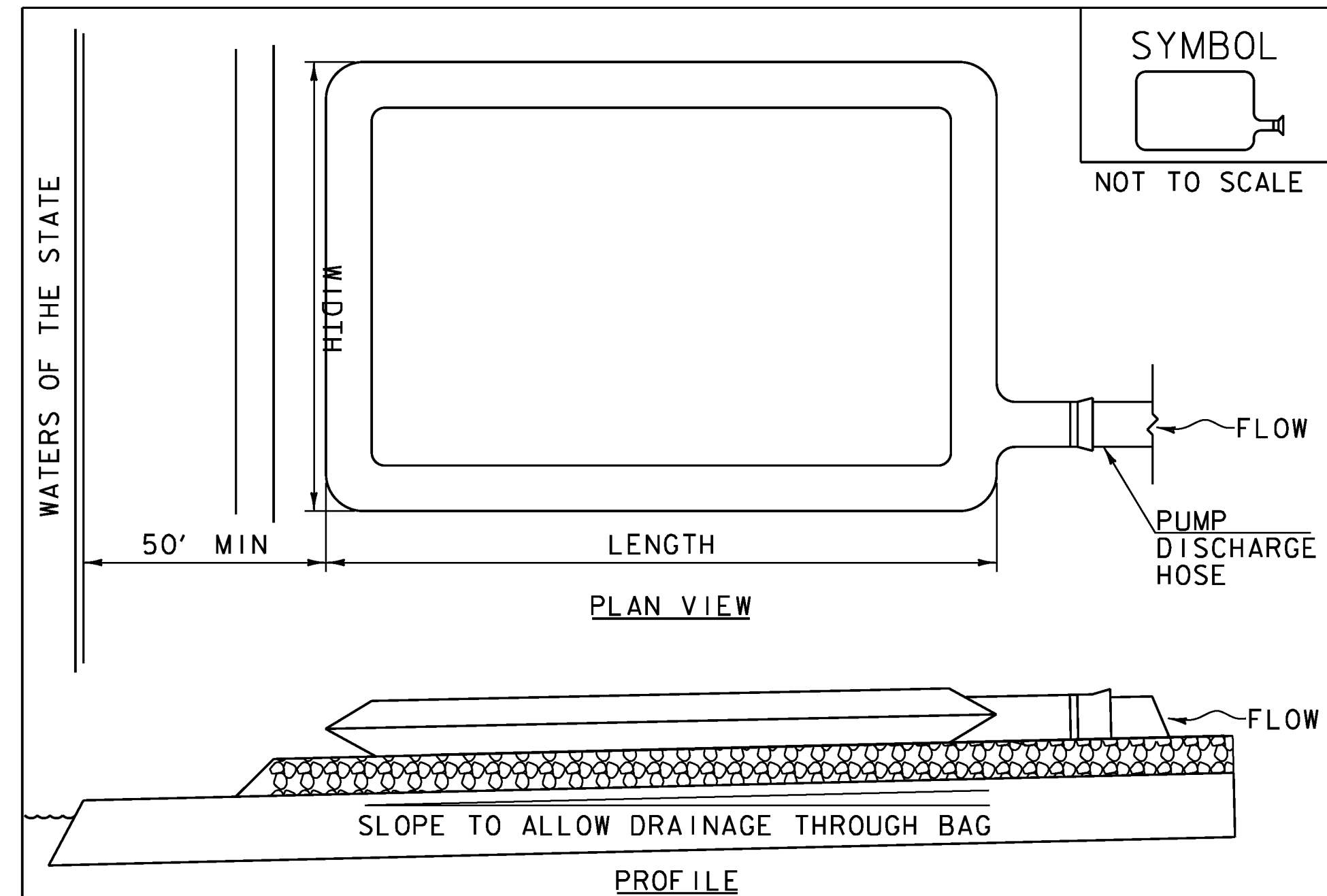
TURF ESTABLISHMENT

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

PROJECT NAME: DORSET  
PROJECT NUMBER: WCRS(8)

FILE NAME: z08q224ero details.dgn  
PROJECT LEADER: A.P. GUYETTE  
DESIGNED BY: VTRANS  
EPSC DETAILS

PLOT DATE: 4/10/2014  
DRAWN BY: J.W. GOLEK  
CHECKED BY: B.O. CRONIN  
SHEET 32 OF 33



SYMBOL  
NOT TO SCALE

**CONSTRUCTION SPECIFICATIONS**

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

FILTER BAG

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

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

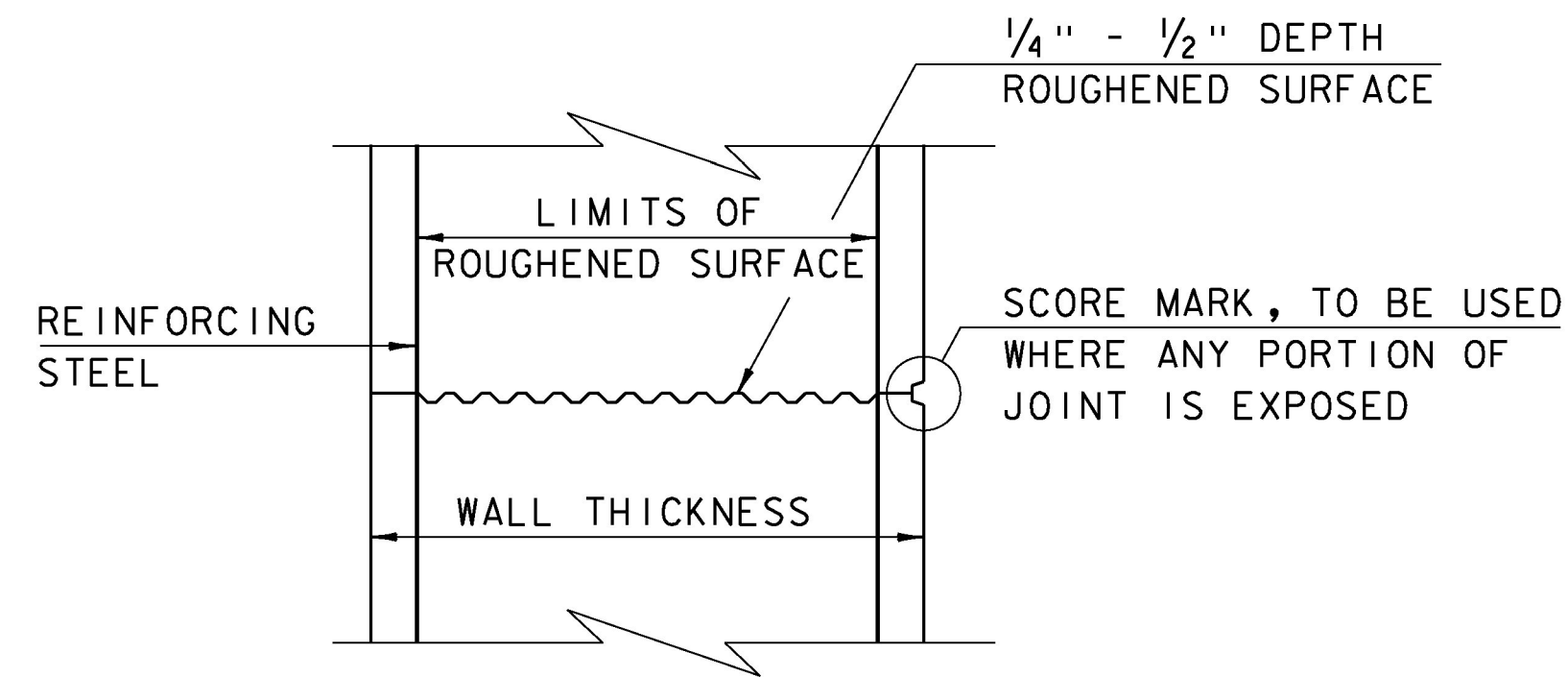
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR FILTER BAG (PAY ITEM 653.45) AND AS SPECIFIED IN THE CONTRACT.

PROJECT NAME: DORSET	PLOT DATE: 4/10/2014
PROJECT NUMBER: WCRS(8)	DRAWN BY: J.W. GOLEK
FILE NAME: z08q224ero details.dgn	CHECKED BY: B.O. CRONIN
PROJECT LEADER: A.P. GUYETTE	SHEET 33 OF 33
DESIGNED BY: VTRANS	
EPSC DETAILS	



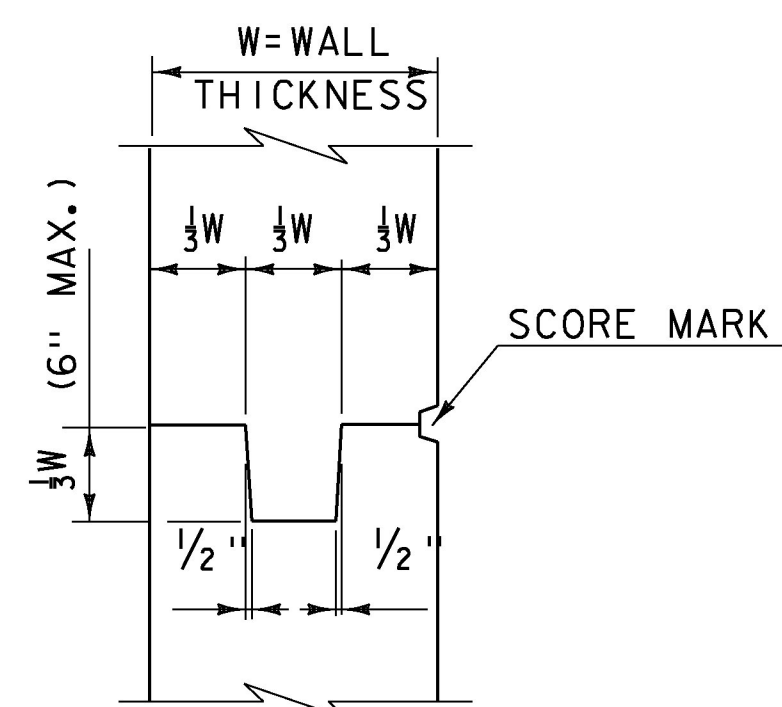
**CONCRETE GENERAL NOTES**

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

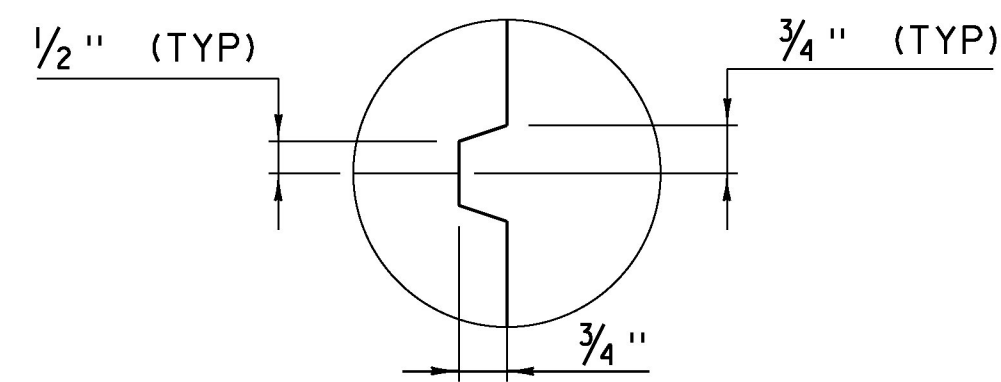


**TYPICAL HORIZONTAL CONSTRUCTION JOINT**  
(NOT TO SCALE)

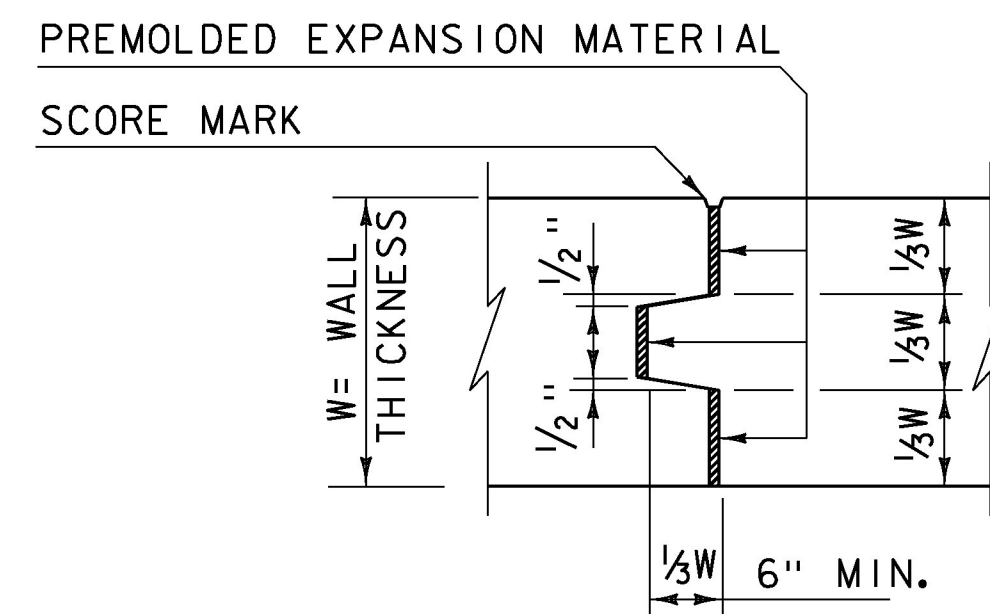
1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



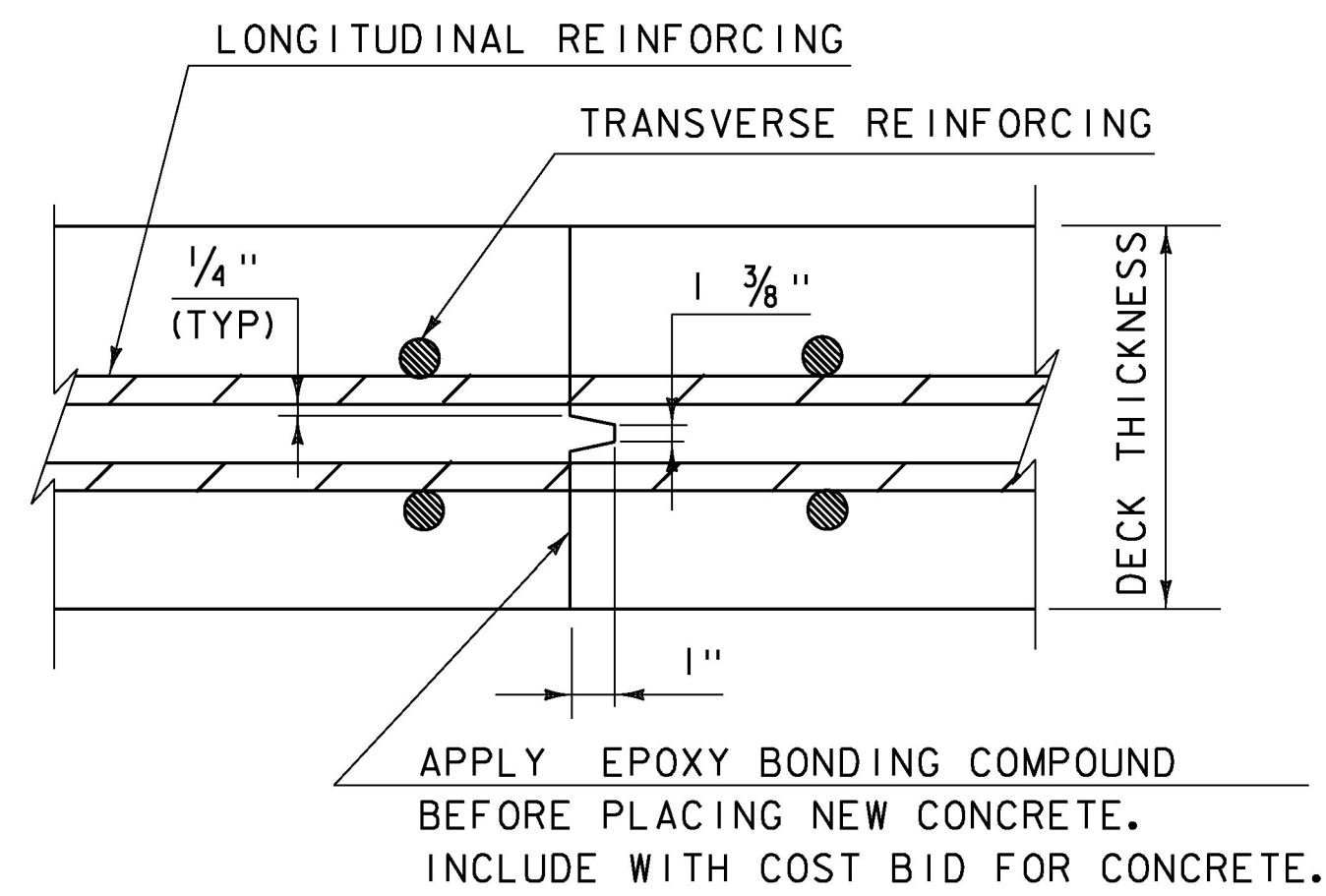
**TYPICAL CONCRETE CONSTRUCTION JOINT**  
(NOT TO SCALE)



**SCORE MARK DETAIL**  
(NOT TO SCALE)



**TYPICAL CONCRETE EXPANSION JOINT**  
(NOT TO SCALE)



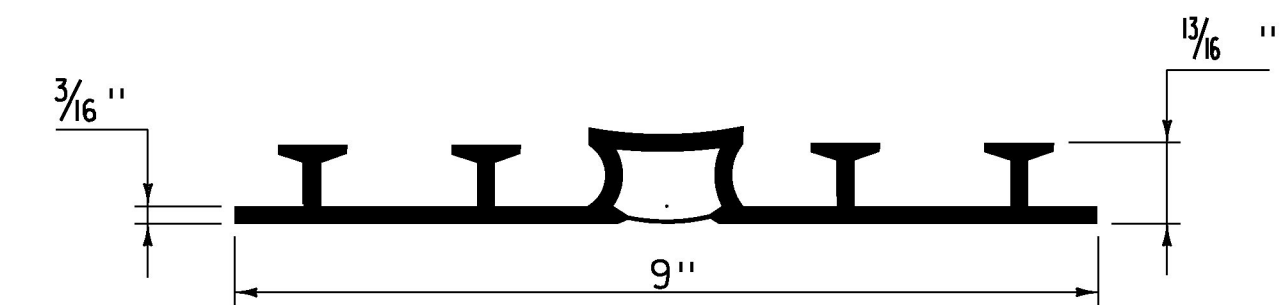
**TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS**  
(NOT TO SCALE)



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

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

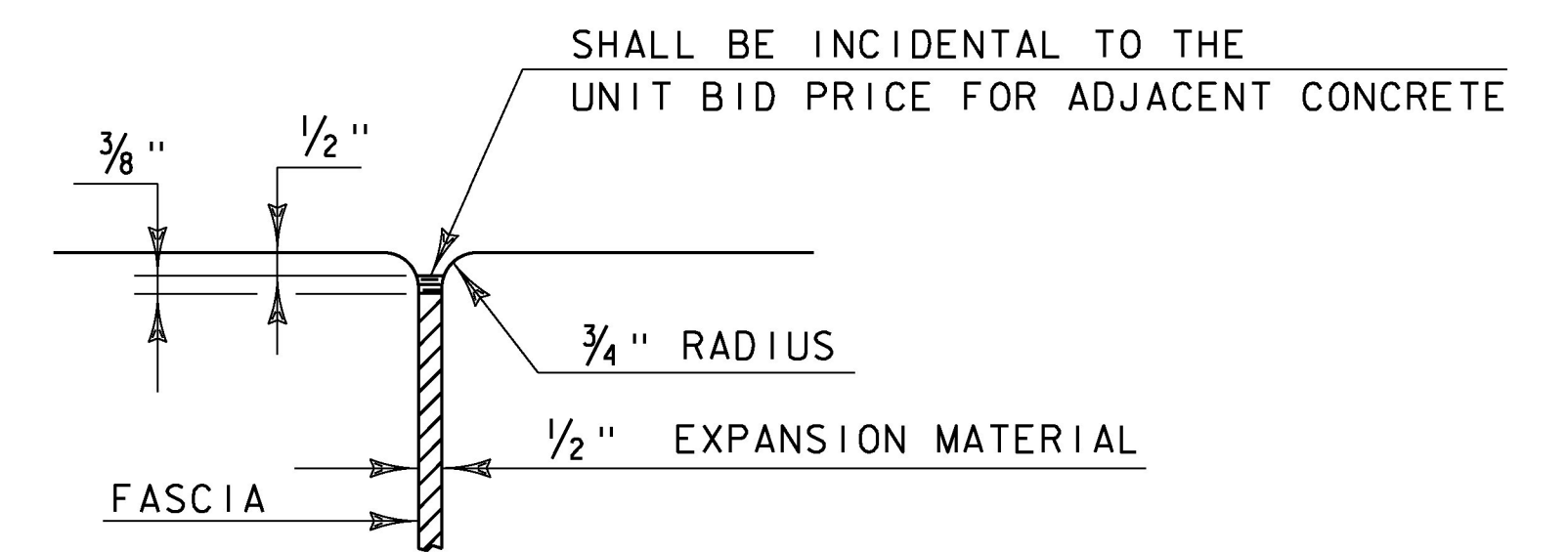
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



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

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

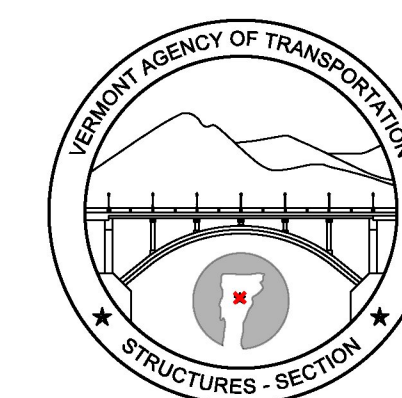
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



**JOINT BETWEEN FASCIA AND WINGWALL**  
(NOT TO SCALE)

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

**CONCRETE  
DETAILS AND NOTES**



**STRUCTURES  
DETAIL  
SD-501.00**

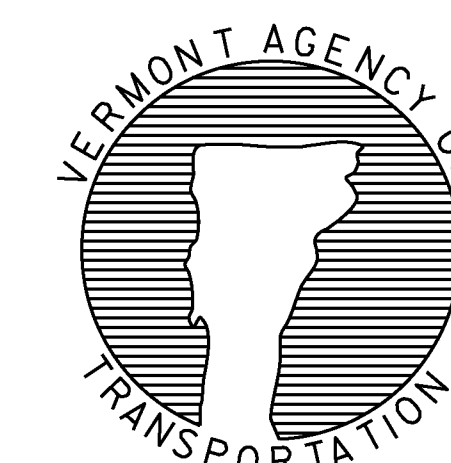
- I. TRAFFIC CONTROL DEVICES NOT DETAILED IN THE VERMONT AGENCY OF TRANSPORTATION (VAOT) "STANDARD DRAWINGS" OR THE PROJECT PLANS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
2. CONSTRUCTION SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER.
3. CONSTRUCTION SIGN COVERS SHALL CONSIST OF A PANEL, PAINTED FLAT BLACK, THE SAME SIZE AS THE SIGN IT COVERS. THE PANEL SHALL BE OF WOOD, PLYWOOD, HARDBOARD OR ANY MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL BE APPROVED THAT WILL DETERIORATE BY EXPOSURE TO THE WEATHER DURING THE PROJECT. MOUNTING OF THE PANEL SHALL BE DONE IN SUCH A WAY AS NOT TO DAMAGE THE SIGN FACE MATERIAL.
4. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACTED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.
5. NO CROSS-BRACING OR BACK-BRACING TO KEEP POSTS PLUMB WILL BE ALLOWED. CONCRETE FOUNDATIONS, COLLARS OR SOIL BEARING PLATES ARE NOT PERMITTED. CONSTRUCTION SIGNS SHALL BE PLACED ON TWO POSTS.
6. CONSTRUCTION SIGNS INSTALLED ON POSTS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST FIVE FEET ABOVE THE EDGE OF PAVEMENT AND THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT, FOUR FEET OUTSIDE GUARDRAIL, OR TWO FEET OUTSIDE CURBING OR SIDEWALK. THE INSTALLATION OF SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER. IN URBAN AREAS, THE BOTTOM OF THE SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE SIDEWALK OR EDGE OF PAVEMENT, WHICHEVER IS HIGHER.
7. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A MINIMUM OF ONE FOOT ABOVE THE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
8. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
9. ROLL UP CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956J TYPE VI AND TYPE VII UNLESS OTHERWISE NOTED.
10. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956J TYPE VIII OR IX REQUIREMENTS UNLESS OTHERWISE NOTED.
- II. WHERE CONSTRUCTION SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POSTS. WHEN ANCHORS ARE INSTALLED, STUBS SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
12. ROADWAY AND SHOULDER WIDTHS DEPICTED ON THE STANDARD DRAWINGS MAY VARY.
13. THESE STANDARD DRAWINGS ARE INTENDED TO SERVE AS VTRANS STANDARD OPERATING PROCEDURE. IT IS NOTED THAT COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL WORK ZONE MAY BE MODIFIED DUE TO FIELD CONDITIONS, AT THE DISCRETION OF THE ENGINEER.

OTHER STDS. REQUIRED: **NONE**

REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

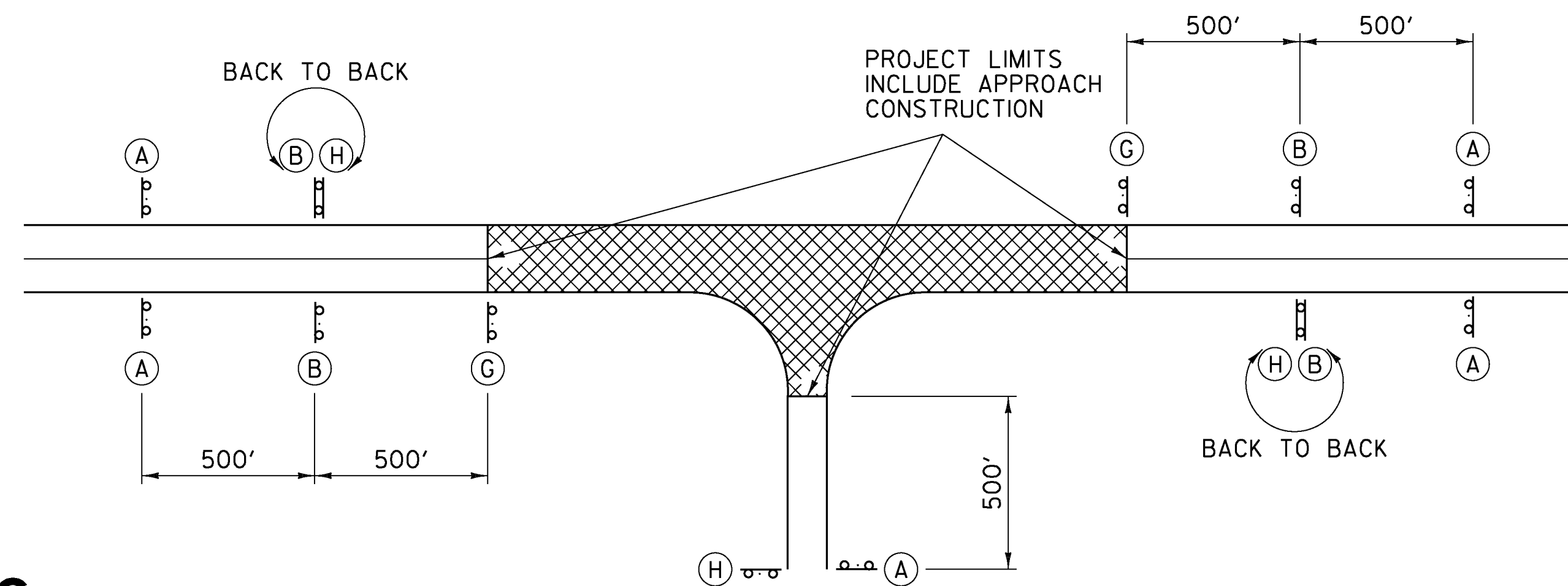
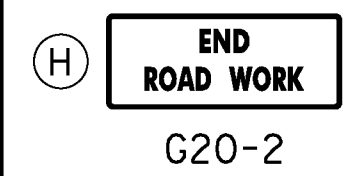
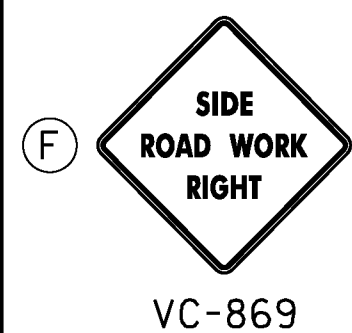
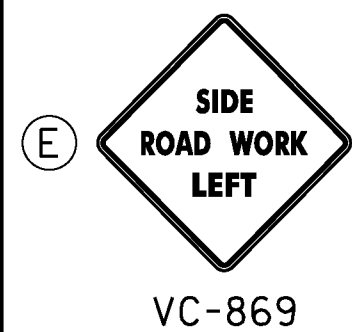
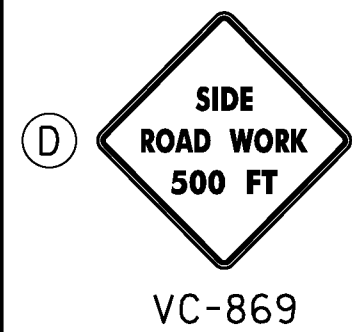
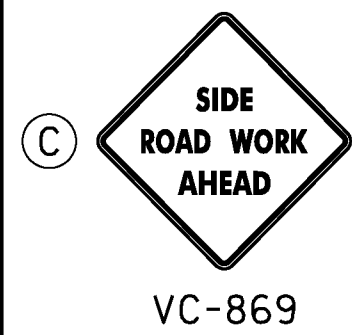
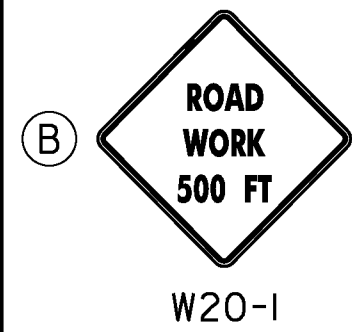
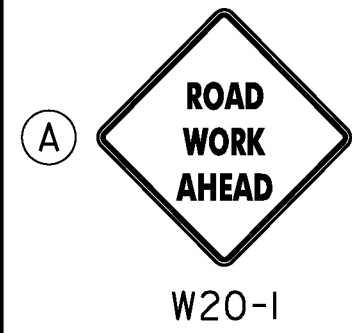
APPROVED  
*[Signature]*  
HIGHWAY SAFETY & DESIGN ENGINEER  
*[Signature]*  
DIRECTOR OF PROGRAM DEVELOPMENT  
*[Signature]*  
FEDERAL HIGHWAY ADMINISTRATION

# TRAFFIC CONTROL GENERAL NOTES



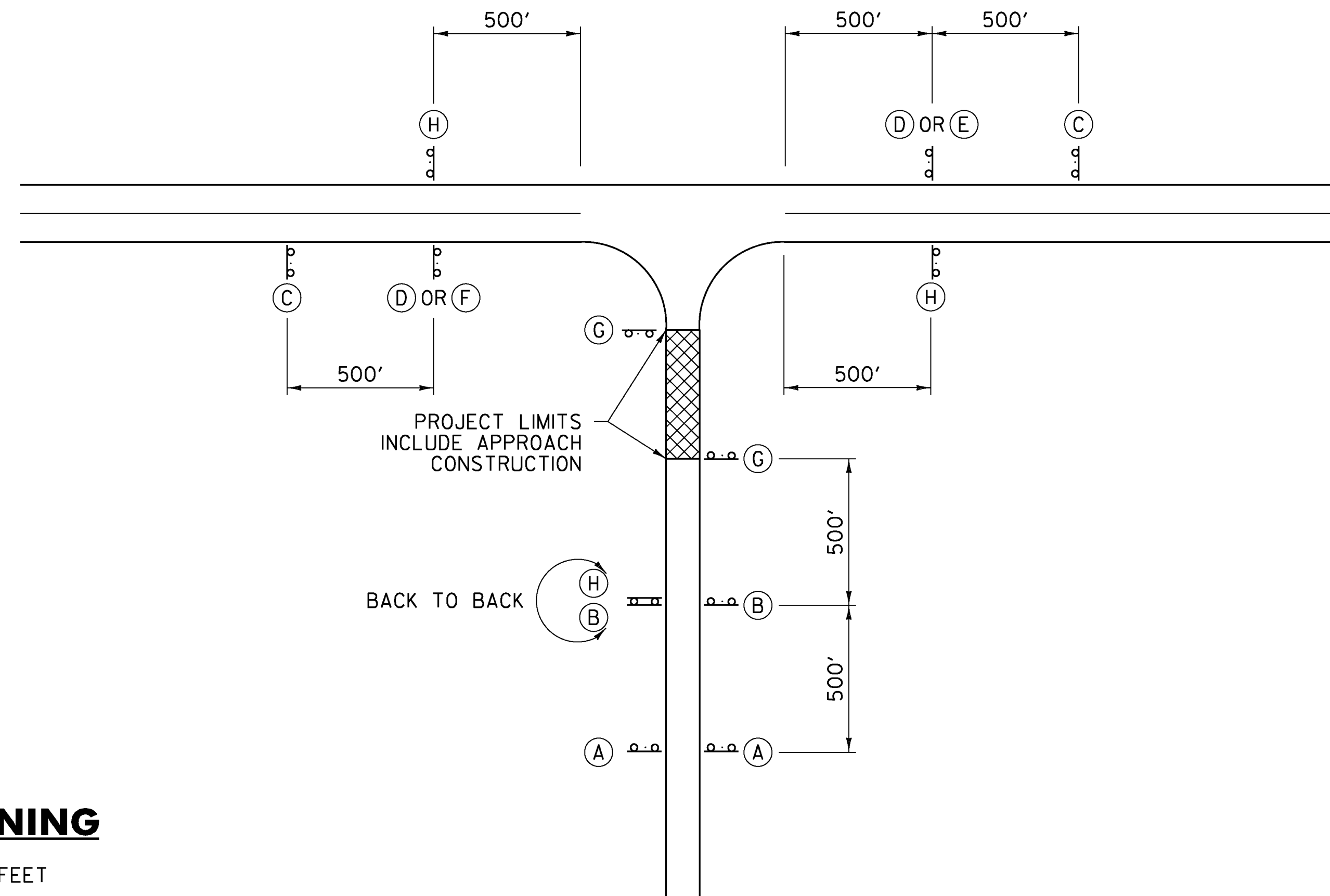
STANDARD  
T-1

**LEGEND**



**TYPICAL APPROACH SIGNING**

FIELD CONDITIONS MAY DICTATE THE ACTUAL PLACEMENT.



**SIDE ROAD APPROACH SIGNING**

TO BE USED WHEN CONSTRUCTION IS UP TO 1000 FEET FROM THE INTERSECTION. FIELD CONDITIONS MAY DICTATE THE ACTUAL PLACEMENT.

**GENERAL NOTES:**

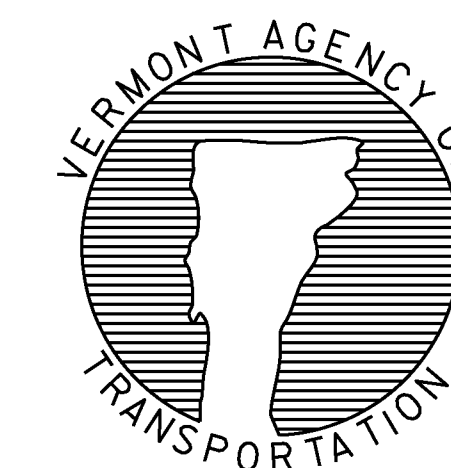
1. SIGNS SHOWN ON THIS SHEET ARE INTENDED FOR USE IN PROVIDING ADVANCE WARNING AND INFORMATION ON CONSTRUCTION PROJECTS OVER WHICH TRAFFIC WILL BE MAINTAINED. WHEN ADDITIONAL APPROACH SIGNS OR OTHER TYPES OF ADVANCE SIGNING OR CONTROL ARE NECESSARY, THE PLANS AND/OR THE SPECIFICATIONS FOR THAT PROJECT WILL GIVE THE DETAILS OF THE SIGNS AND DEVICES REQUIRED. FOR ON-PROJECT CONSTRUCTION SIGNS, REFER TO APPROPRIATE STANDARD SHEETS.
2. THE "ROAD WORK NEXT XX MILES" SIGN (G20-1) SHALL BE INSTALLED IN ADVANCE OF TEMPORARY TRAFFIC CONTROL ZONES THAT ARE MORE THAN TWO MILES IN LENGTH OR AS DIRECTED BY THE ENGINEER. DISTANCES SHALL BE STATED TO THE NEAREST WHOLE MILE.
3. SIGNS SHALL BE LOCATED AS DETAILED ON THIS SHEET OR AS OTHERWISE SHOWN ON THE PLANS. THEY SHALL APPEAR AT EACH END OF THE HIGHWAY UNDER CONSTRUCTION AND ON ALL INTERSECTING PUBLIC HIGHWAYS. THE ENGINEER SHALL DETERMINE THE EXACT LOCATIONS.

**OTHER STDS. REQUIRED: T-1, T-28**

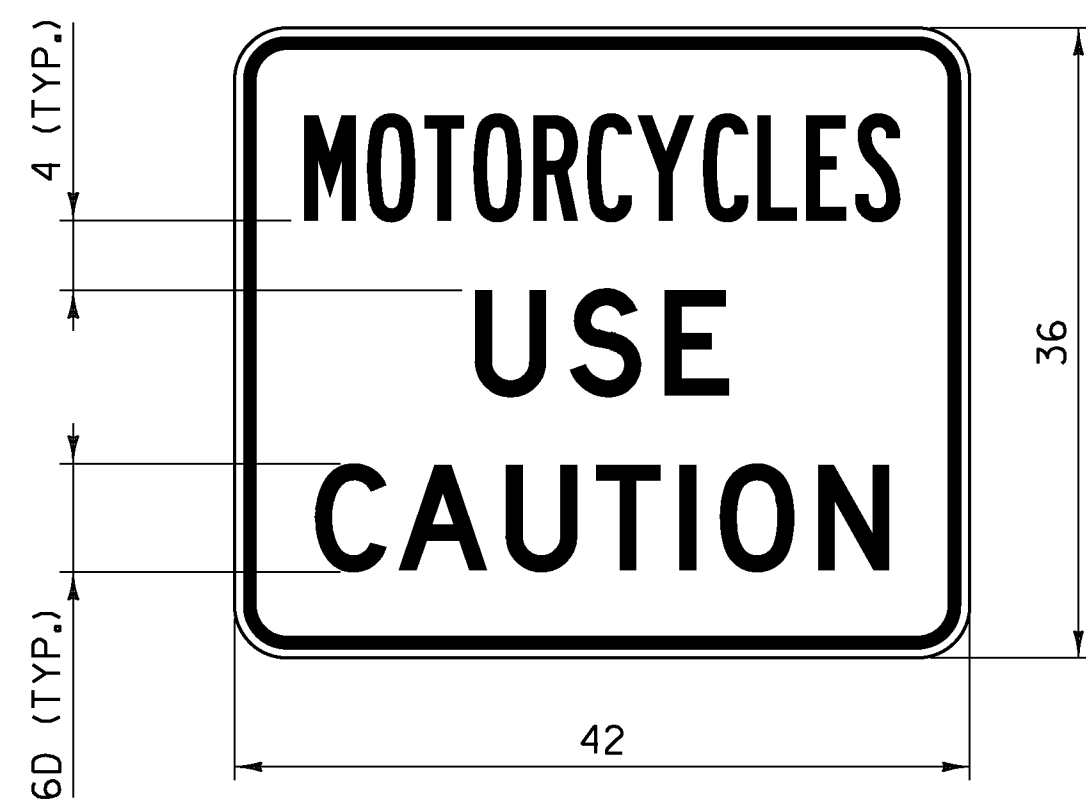
REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED  
*[Signature]*  
HIGHWAY SAFETY & DESIGN ENGINEER  
*[Signature]*  
DIRECTOR OF PROGRAM DEVELOPMENT  
*[Signature]*  
MARK D. RICHTER  
FEDERAL HIGHWAY ADMINISTRATION

**CONVENTIONAL ROADS  
CONSTRUCTION APPROACH  
SIGNING**



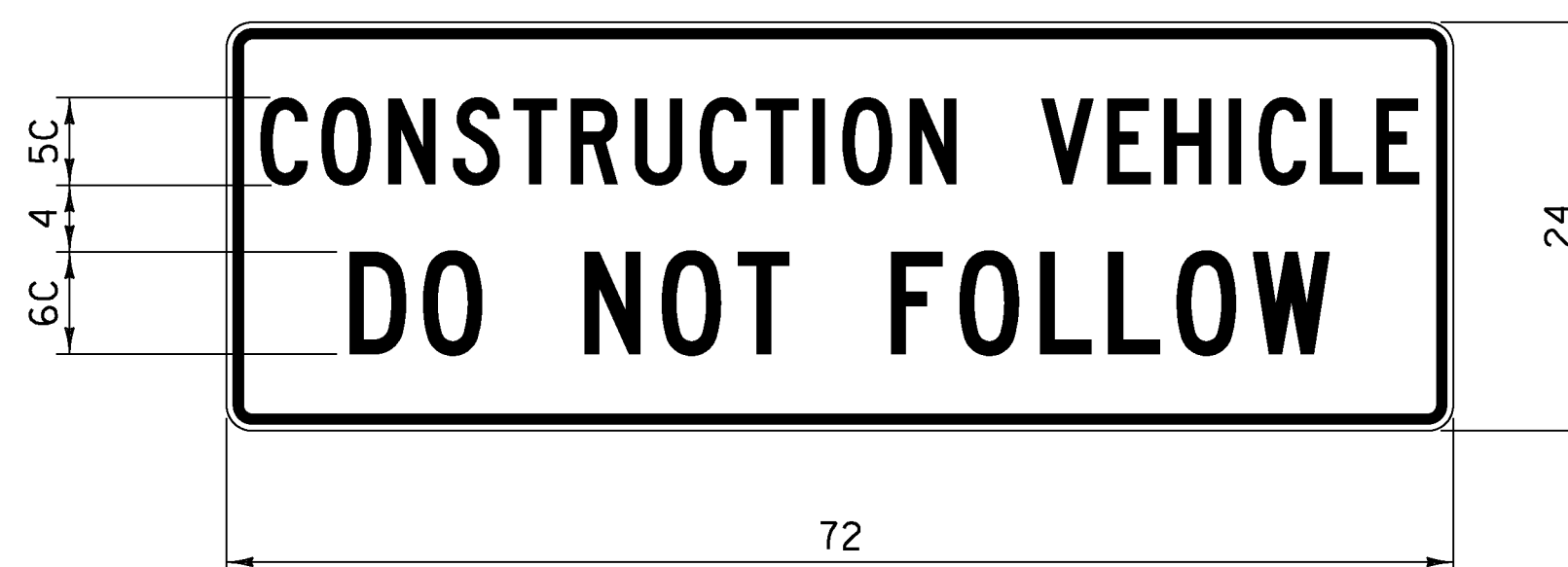
**STANDARD  
T-10**



**VC-004P**

**NOTES:**

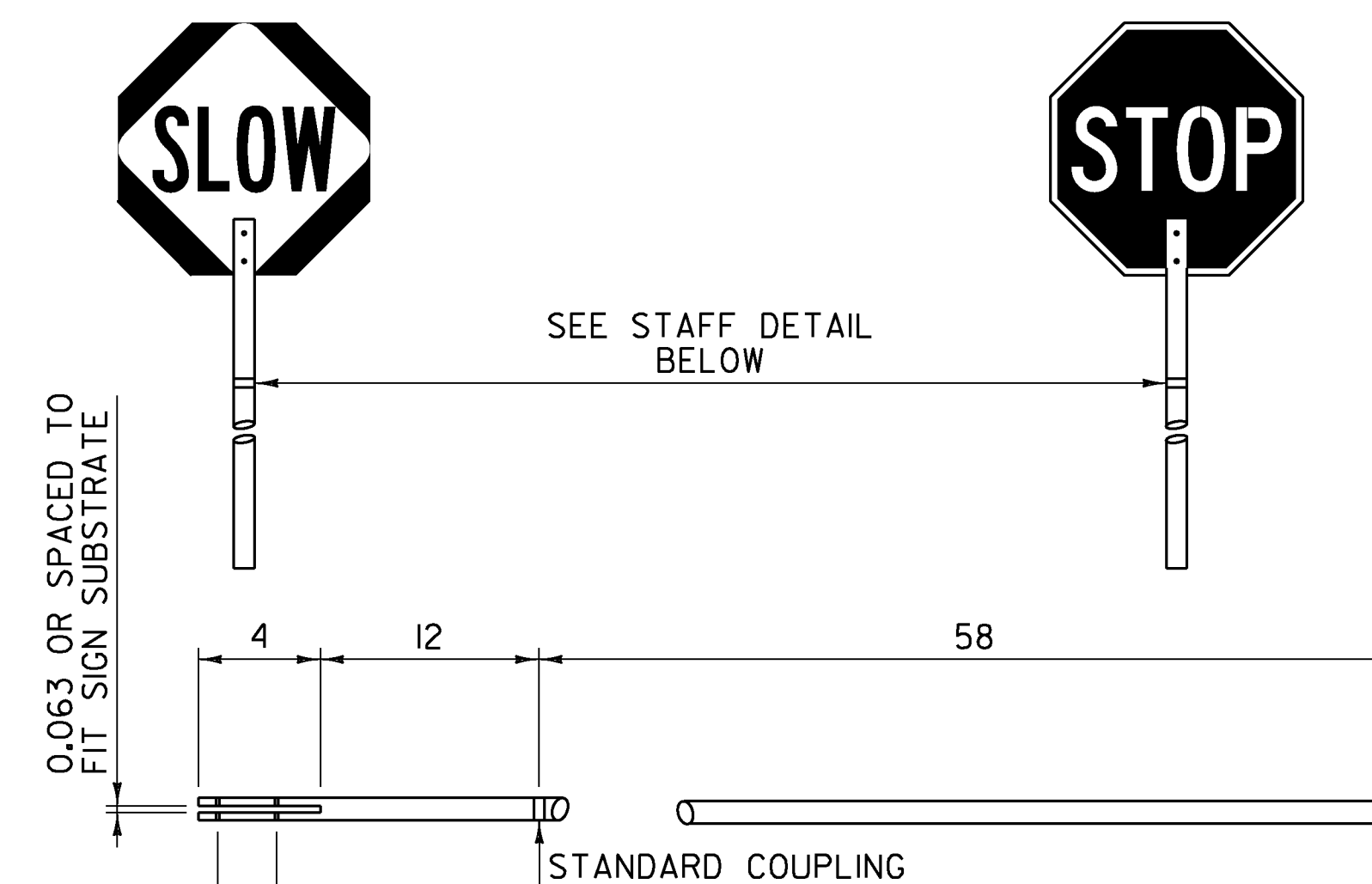
1. CORNERS SHALL BE ROUNDED TO A THREE INCH RADIUS.
2. THE BORDER SHALL BE  $\frac{3}{4}$  INCH WIDE WITH A  $\frac{1}{2}$  INCH INDENT FROM THE EDGE OF THE SIGN.
3. "MOTORCYCLES" SHALL HAVE A SPECIFIED WIDTH OF 34 INCHES.
4. "USE" SHALL HAVE A SPECIFIED WIDTH OF  $14 \frac{1}{2}$  INCHES.
5. "CAUTION" SHALL HAVE A SPECIFIED WIDTH OF  $32 \frac{3}{4}$  INCHES.
6. SIGN SHALL ONLY BE INSTALLED AS A SUPPLEMENTAL TO A PARENT WARNING SIGN AND SHALL NOT BE INSTALLED BY ITSELF.



**VC-007**

**NOTES:**

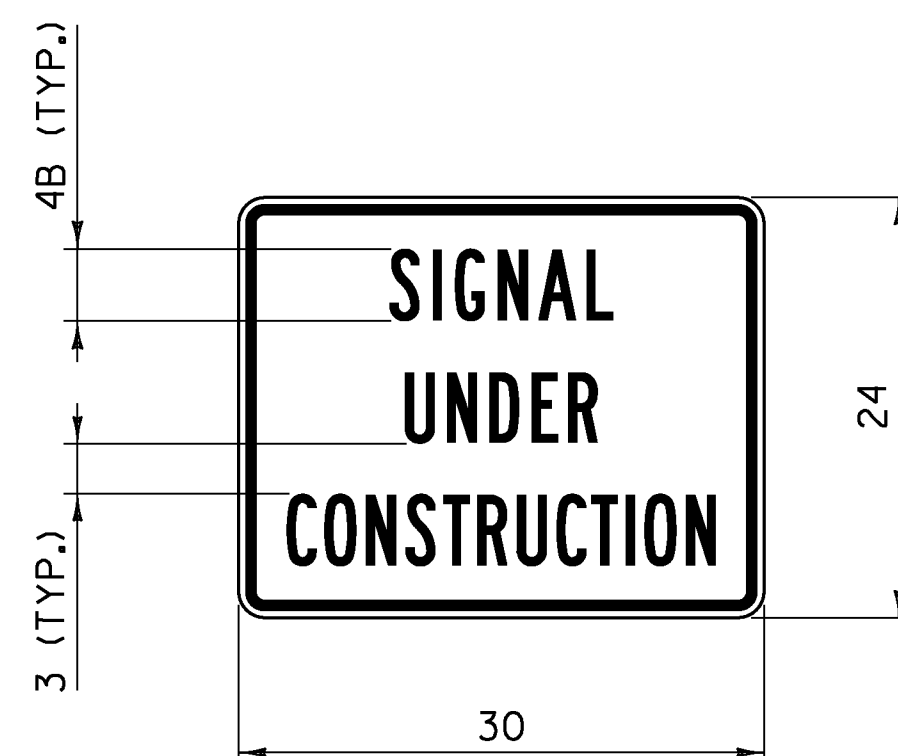
1. CORNERS SHALL BE ROUNDED TO A  $1\frac{1}{2}$  INCH RADIUS.
2. THE BORDER SHALL BE  $\frac{5}{8}$  INCH WIDE WITH A  $\frac{3}{8}$  INCH INDENT FROM THE EDGE OF THE SIGN.
3. "CONSTRUCTION VEHICLE" SHALL HAVE A SPECIFIED WIDTH OF 68 INCHES.
4. "DO NOT FOLLOW" SHALL HAVE A SPECIFIED WIDTH OF  $57 \frac{1}{2}$  INCHES.
5. SIGN SHALL BE MOUNTED IN A CONSPICUOUS LOCATION ON THE REAR OF THE CONSTRUCTION VEHICLE.
6. THE SIGN SHALL BE MOUNTED AS NOT TO INTERFERE WITH THE VISIBILITY OF DIRECTIONAL SIGNALS OR TAIL LIGHTS AS REQUIRED BY LAW.
7. SIGN SHALL BE COVERED OR REMOVED WHEN NOT IN USE.



**STOP-SLOW PADDLE & STAFF DETAIL**

**NOTES:**

1. REFER TO THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) "TEMPORARY TRAFFIC CONTROL - WARNING SIGNS" FOR THE STOP-SLOW PADDLE DESIGN.
2. COLORS FOR THE SLOW SIDE OF THE PADDLE SHALL BE BLACK LEGEND AND BORDER ON A FLUORESCENT ORANGE DIAMOND WITH RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE VII, VIII OR IX REQUIREMENTS.
3. COLORS FOR THE STOP SIDE OF THE PADDLE SHALL BE WHITE RETROREFLECTIVE LEGEND AND BORDER ON A RED RETROREFLECTIVE OCTAGON. BOTH COLORS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE III.
4. SIGN SUBSTRATE MATERIALS SHALL BE ALUMINUM, ACRYLONITRILE BUTADIENE STYRENE (ABS) PLASTIC OR EQUIVALENT.
5. THE STAFF MAY BE RIGID ABS PLASTIC OR WOOD WITH A ONE TO  $1\frac{1}{2}$  INCH DIAMETER.
6. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE COMPLETELY VISIBLE TO APPROACHING TRAFFIC AT ALL TIMES. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.



**VC-820**

**NOTES:**

1. CORNERS SHALL BE ROUNDED TO A  $1\frac{1}{2}$  INCH RADIUS.
2. THE BORDER SHALL BE  $\frac{5}{8}$  INCH WIDE WITH A  $\frac{3}{8}$  INCH INDENT FROM THE EDGE OF THE SIGN.
3. "SIGNAL" SHALL HAVE A SPECIFIED WIDTH OF  $12 \frac{3}{4}$  INCHES.
4. "UNDER" SHALL HAVE A SPECIFIED WIDTH OF 11 INCHES.
5. "CONSTRUCTION" SHALL HAVE A SPECIFIED WIDTH OF  $24 \frac{1}{2}$  INCHES.
6. SIGN SHALL ONLY BE INSTALLED AS A SUPPLEMENTAL TO A PARENT WARNING SIGN AND SHALL NOT BE INSTALLED BY ITSELF.

**GENERAL NOTES:**

1. ALL LEGEND SHALL BE CENTERED VERTICALLY AND HORIZONTALLY UNLESS OTHERWISE NOTED.
2. COLORS FOR SIGNS SHALL BE BLACK LEGEND AND BORDER ON FLUORESCENT ORANGE BACKGROUND UNLESS OTHERWISE NOTED.
3. ALL DIMENSIONS IN INCHES.

**OTHER STDS. REQUIRED: T-1**

REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED  
*[Signature]*  
HIGHWAY SAFETY & DESIGN ENGINEER  
*[Signature]*  
DIRECTOR OF PROGRAM DEVELOPMENT  
*[Signature]*  
MARK D. RICHTER  
FEDERAL HIGHWAY ADMINISTRATION

**CONSTRUCTION SIGN  
DETAILS**



**STANDARD  
T-30**