

NOTES

- GENERAL:**
- THIS STRUCTURE SHALL BE OF THE BLACK ANODIZED ALUMINUM TRI-CHORD TYPE. DETAILS FOR THESE PLANS ARE FOR A TRI-CHORD SECTION. THE CONTRACTOR MAY CHOOSE TO USE A BOX SECTION. SEE SPECIAL PROVISIONS.
 - THE RESIDENT ENGINEER AND THE CONTRACTOR MUST CHECK THE DISTANCE BETWEEN BACKWALLS AND EXISTING BRIDGE SEAT ELEVATIONS BEFORE FABRICATION DRAWINGS OF THE TRI-CHORD ARE SUBMITTED FOR REVIEW BY THE VTRANS STRUCTURES ENGINEER.
- DESIGN:**
- THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN AND FABRICATION OF THIS STRUCTURE.
 - ALL CONNECTIONS NOT DETAILED IN THESE PLANS OR OTHERWISE, SHALL BE DETAILED AND SUBMITTED BY THE FABRICATOR TO THE ENGINEER FOR APPROVAL.
 - THE DESIGN OF THIS STRUCTURE SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" DATED 1994, ITS LATEST INTERIMS, AND ANY CORRECTIONS OR EDITIONS.
 - ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION 1990 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION AND ITS LATEST REVISIONS, AND THE ASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 1996, AND ITS LATEST REVISIONS.
 - THE FOLLOWING LOADS ARE MINIMUMS TO USE FOR DESIGNING:
DEAD LOAD = 86 LBS/LF PLUS TRI-CHORD WEIGHT PER FOOT
LIVE LOAD = 425 LBS. MOVING POINT LOAD (2 MEN)
ICE AND SNOW LOAD ON WATER LINE BOX = 75 POUNDS/LF
WIND LOAD = 50 LBS/SF
ICE LOAD = 10 LBS/SF
VELOCITY (V) = 90 MPH
HEIGHT COEFFICIENT (C_H) = 1.10
DRAG COEFFICIENT (C_D) = 1.20
 - ALL CONCRETE SHALL BE "CONCRETE CLASS B".
 - ALL REINFORCING STEEL SHALL BE FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".
 - DESIGN, FABRICATION, DELIVERY AND ERECTION OF A PREENGINEERED TRI-CHORD STRUCTURE, INCLUDING FURNISHING AND INSTALLING BEARINGS, ANCHOR BOLTS AND LEVELING PADS, SHALL BE PAID FOR UNDER ITEM 677.10 "OVERHEAD TRAFFIC SIGN SUPPORT, TRI-CHORD (MOD)".
 - THE PREENGINEERED TRI-CHORD STRUCTURE SHALL BE CAMBERED UPWARD TO OFFSET DESIGN DEAD LOADS SUCH THAT RESIDUAL CAMBER IS ZERO TO THREE INCHES.
 - BEARING AND ANCHOR BOLT LOCATIONS FOR THE TRI-CHORD STRUCTURE SHALL BE DETERMINED BY THE FABRICATOR.

CONSTRUCTION:

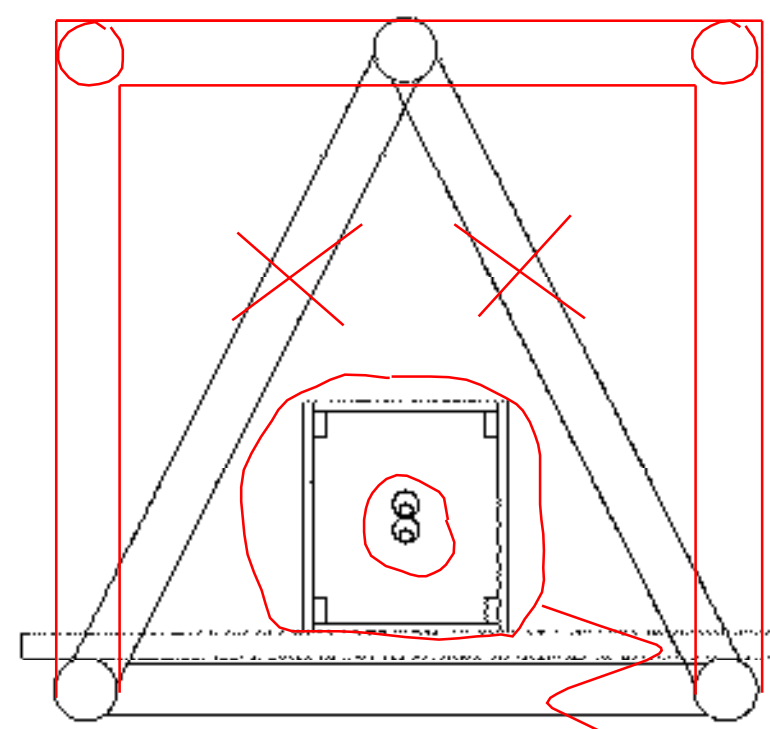
- MINIMUM COVER FOR REINFORCING STEEL SHALL BE 3" UNLESS OTHERWISE SHOWN.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" X 1".
- ALL BRIDGE SEATS SHALL BE SLOPED 1/2" PER FOOT EXCEPT UNDER BEARING PLATES WHERE THE SURFACES SHALL BE LEVEL. ABUTMENTS SHALL BE SLOPED FULL WIDTH. PIERS SHALL BE SLOPED EACH WAY FROM CENTER. THE ENTIRE BRIDGE SEAT SHALL BE SMOOTHED WITH EITHER A WOOD OR MAGNESIUM FLOAT FINISH.
- REINFORCING PLACEMENT TOLERANCES SHALL BE AS FOLLOWS:
SPACING TOLERANCE = +/- 1"
- "WATER REPELLENT" SHALL BE APPLIED TO ALL EXPOSED CONCRETE.
- ALL REINFORCING STEEL CUT-OFFS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
- REMOVAL OF THE EXISTING ACROW VEHICULAR BRIDGE AND ALL ASSOCIATED APPURTENANCES WILL BE PAID FOR UNDER THE ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE". SEE SPECIAL PROVISIONS.
- INSTALLATION AND CUTOVER OF THE TEMPORARY WATER LINE, TEMPORARY SUPPORT AND PROTECTION OF THE EXISTING WATER LINE, REMOVAL OF THE EXISTING WATER LINE AND REINSTALLATION OF THE WATER LINE ON THE NEW TRI-CHORD SHALL BE PAID FOR UNDER ITEM "629.00 RELOCATE WATER LINE" (MOD).
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS TO ASSURE PROPER SUPPORT OF THE PREENGINEERED BRIDGE SUPERSTRUCTURE. IF CHANGES ARE REQUIRED, THE CONTRACTOR SHALL SUBMIT REVISIONS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

OTHER:

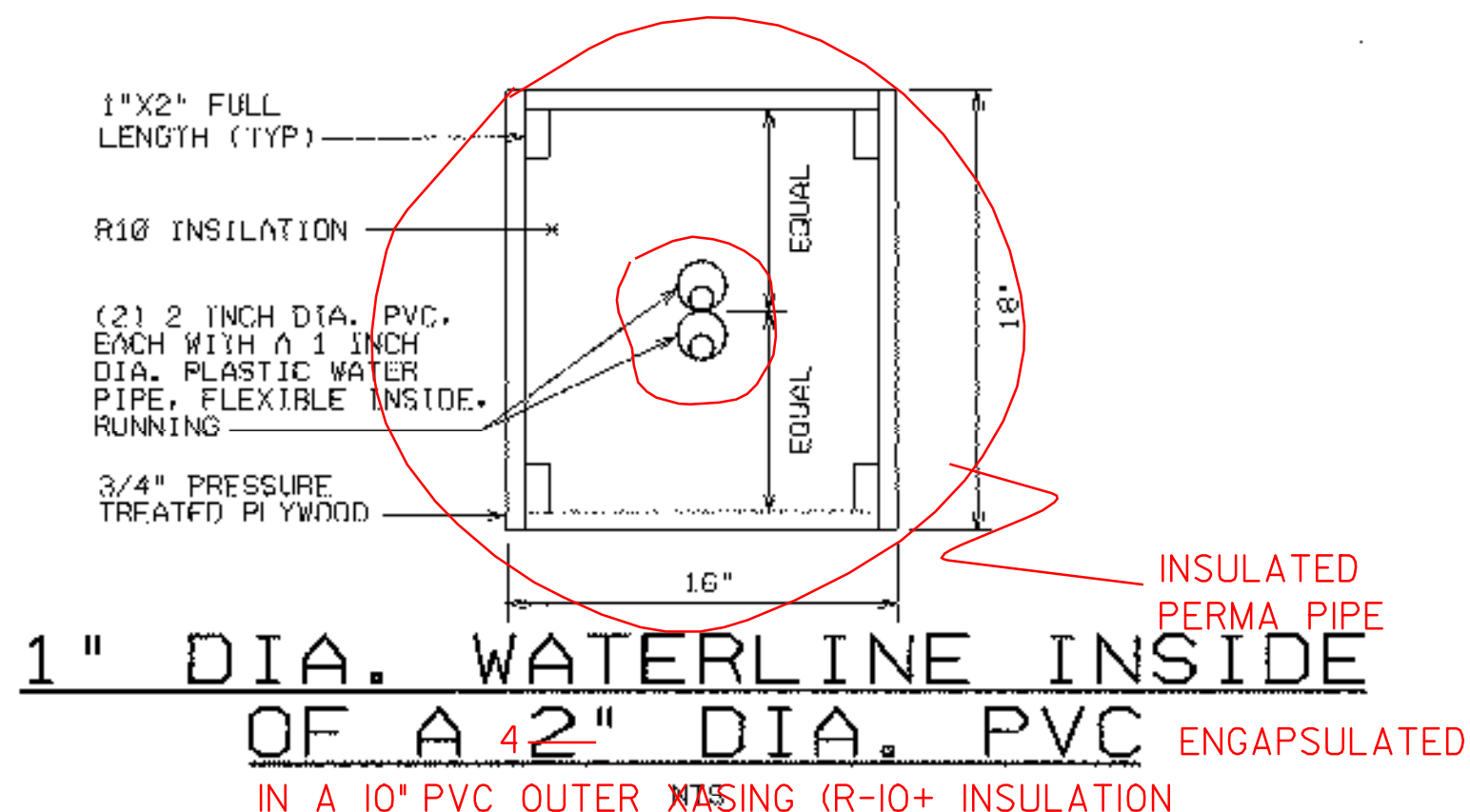
- ALL MATERIALS INCLUDING HANGERS, (2) 2 INCH DIAMETER PVC PIPE SLEEVES (ITEM 629.10), (2) 1 INCH DIAMETER PLASTIC WATER PIPES, FLEXIBLE (ITEM 629.32), FROM SERVICE CURB STOP AND BOX TO SERVICE CURB STOP AND BOX, PIPE INSULATION IN BOX, ALONG WITH WORK NECESSARY TO CONSTRUCT A TEMPORARY LOCATION AND HANG A ONE INCH PLASTIC WATERLINE, AND NECESSARY WORK TO CONSTRUCT THE WATERLINE SHALL BE SUBSIDIARY TO THE ITEM 629.00 "RELOCATE WATER LINE (MOD)". SEE SPECIAL PROVISIONS.
- THE ITEM "SHEET MEMBRANE WATERPROOFING (MOD)" WILL BE USED TO WRAP THE WATERLINE BOX. SEE SPECIAL PROVISIONS.
- THE WATERLINE BOX RUNS FROM BACKWALL TO BACKWALL. ITEM 629.44 "PIPE INSULATION" IS FOR PROJECTING SLEEVES THROUGH BACK WALLS AND TO SERVICE BOX AS DETAILED ON SHEET BR201.
- THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF THE SUPPORT MEMBER AND ATTACHMENTS THAT CARRY THE LOAD OF THE WATERLINE BOX TO THE TRI-CHORD. THE MAXIMUM SPACING OF THIS SUPPORT MEMBER IS FOUR FEET ON CENTER. THE MINIMUM BEARING WIDTH OF THIS SUPPORT MEMBER UNDER THE WATERLINE BOX IS 4 INCHES. ALL ALUMINUM MEMBERS IN CONTACT WITH CONCRETE SURFACES SHALL BE SEPARATED BY A GASKET MATERIAL. THE COST OF SUPPORT MEMBER, SAID ATTACHMENTS, AND GASKET MATERIALS SHALL BE PAID FOR UNDER ITEM 677.10, "OVERHEAD TRAFFIC SIGN SUPPORT, TRI-CHORD (MOD)".
- THE MINIMUM THICKNESS OF PIPE INSULATION AROUND THE PVC PIPES IS SIX INCHES.

SEQUENCE OF PROJECT

- CLOSE EXISTING BRIDGE (ACROW).
- STRING A TEMPORARY WATER LINE AND REROUTE WATER TO THIS LINE.
- REMOVE ENTIRE EXISTING BRIDGE INCLUDING BEARINGS, ANCHOR BOLTS & ALL APPURTENANCES.
- DRILL & GROUT DOWELS INTO PIER SEATS. REMOVE ANY DELAMINATED OR SPALLED CONCRETE FROM BRIDGE SEATS.
- TIE STEEL AND POUR BRIDGE SEATS TO FINISH GRADE ELEVATIONS PROVIDED BY THE FABRICATOR.
- PLACE ANCHOR BOLTS AND BEARINGS IN PREPARATION TO SET TRI-CHORD STRUCTURE.
- SET AND SECURE TRI-CHORD STRUCTURE BASED UPON FABRICATOR RECOMMENDATIONS.
- STRING AND SECURE WATER LINE.
- INSTALL CHAIN LINK FENCE AT BOTH ABUTMENTS.
- CLEAN UP AND FINISH WORK.



TRI-CHORD TYPICAL
N.T.S.
(STRUCTURE SHOWN FOR CONCEPTUAL PURPOSES ONLY).



EXISTING STRUCTURE

1. STRUCTURE TYPE	TEMPORARY (ACROW) BRIDGE	OVERALL LENGTH	240'	INVENTORY RATING	
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS	120' - 120'				
3. CLEAR SPAN LENGTH(S) NORMAL TO STREAM	60' - 60'				
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM)	6400 SQ FT	VERTICAL CLEARANCE ABOVE STREAMBED	62'		
5. WATER SURFACE ELEVATION @ Q 2.33	453.1 FT	WATER SURFACE ELEVATION @ Q	500.8 FT		
6. WATER SURFACE ELEVATION AT FLOOD OF RECORD	UNKNOWN	YEAR	1927	ESTIMATED DISCHARGE	UNKNOWN
7. DOES ALL WATER PASS THROUGH EXISTING STRUCTURE	YES	IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR	N/A		
8. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL	LEDGE				
9. DISPOSITION OF STRUCTURE	TO BE REMOVED				

NEW STRUCTURE

STRUCTURE GEOMETRY:

1. STRUCTURE TYPE	ANODIZED ALUMINUM TRI-CHORD UTILITY TRUSS	OVERALL LENGTH	240'
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS	120' - 120'		
3. VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER	62'		
4. CLEAR SPAN LENGTH(S) NORMAL TO STREAM	60' - 60'		
5. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM)	6400 SQ FT		
6. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES	YES		

N/A - NOT APPLICABLE

QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL	FINAL
204.20	TRENCH EXCAVATION OF EARTH	CY	20	
204.30	GRANULAR BACKFILL OF STRUCTURES	CY	10	
501.25	CONCRETE, CLASS B	CY	3	
507.15	REINFORCING STEEL	LB	280	
507.16	DRILLING AND GROUTING OF DOWELS	LF	75	
519.20	SHEET MEMBRANE WATERPROOFING (MOD.)	SY	161	
529.20	PARTIAL REMOVAL OF STRUCTURE	EACH	1	
620.13	CHAIN LINK FENCE, 8' HIGH (MOD.)	LF	90	
620.17	GATE FOR CHAIN LINK FENCE, 8' HIGH (MOD.)	LF	24	
620.22	BRACING ASSEMBLY FOR CHAIN LINK FENCE, 8' HIGH (MOD.)	EACH	16	
629.25	EXTENSION SERVICE BOX AND CURB STOP.	EACH	4	
629.44	PIPE INSULATION	LF	20	
629.00	RELOCATE WATER LINE (MOD.)	EACH	1	
677.10	OVERHEAD TRAFFIC SIGN SUPPORT, TRI-CHORD (MOD.)	EACH	2	

INDEX OF SHEETS:

BR200	GENERAL INFORMATION SHEET
BR201	PLAN & ELEVATION
BR202	BRIDGE DETAILS
BR203	MISCELLANEOUS DETAILS
BR204-BR209	REFERENCE SHEETS: MORETOWN MIDDLESEX BRS 0167-(11)S

STANDARD SHEETS

F2	CHAIN LINK FENCE, TYPE I	06-01-94
----	--------------------------	----------

REINFORCING SCHEDULE

ITEM	NUMBER OF PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J
10				3P501	NOT USED									
11	18	5	2'-8"	1P502	STR.									
12	4	5	3'-9"	1P503	STR.									
13	9	5	10'-2"	1P504	STR.									
14	5	5	6'-8"	1P505	2	3'-0"	3'-8"							
15	4	5	6'-0"	1P506	2	1'-3"	3'-6"				1'-3"			
16	9	5	5'-10"	1P508	2	1'-2"	3'-6"				1'-2"			
17	2	5	2'-4"	1P509	STR.									

NOTES:

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEVELOPED BUILT-UP STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASIM A 615-31). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
 - FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS AND OTHER STANDARD PRACTICE SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
 - BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
 - ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180° AND 135° HOOKS.
 - "J" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE STANDARD HOOKS ARE TO BE USED.
 - "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
 - WHERE SLOPE DIFFERS FROM 45° DIMENSIONS "H" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
△ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWNS OF	MORETOWN - MIDDLESEX	BRIDGE NO.	8
ROUTE NUMBER	VT 100B	LOG STA.	
		SURV. STA.	
WATER LINE OVER WINOOSKI RIVER			
GENERAL INFORMATION SHEET			
DESIGNED BY	J.P. SPILAK	DRAWN BY	STR1
CHECKED BY		DATE	
		BRIDGE DESIGN SUPERVISOR	
S. FARNSWORTH	6/98	S. FARNSWORTH	DATE 6/98
PROJECT		PROJECT NO.	
MORETOWN - MIDDLESEX		BRS 0167-(11)	
		DATE 6/23/98	
BRIDGE SHEET NO.	BR200	SHEET	225 OF 243