

TYPICAL ABUTMENT/WINGWALL SECTION

SCALE 1:50

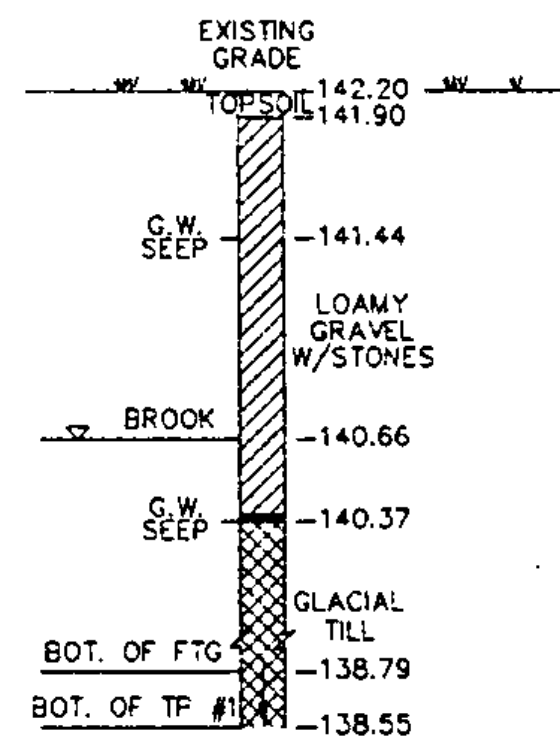
- LIMITS OF COFFERDAM TO BE DETERMINED BY THE CONTRACTOR.
- FOR PURPOSES OF ESTIMATING EARTHWORK QUANTITIES, THE LIMITS OF COFFERDAM HAVE BEEN ASSUMED TO BE .66 m OUTSIDE THE PERIMETER OF THE FOOTING.
- A 0.33 m UNDERCUT MAY BE ALLOWED AS DETERMINED NECESSARY BY THE ENGINEER.
- IF A COFFERDAM IS CONSTRUCTED WHICH IS MORE THAN THE INDICATED MINIMUM DISTANCE OUTSIDE THE FOOTING LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE MINIMUM COFFERDAM LIMITS SHOWN WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.
- SEE CHANNEL SECTIONS FOR PLACEMENT OF STONE FILL.

ABUTMENT/WINGWALL DESIGN NOTES

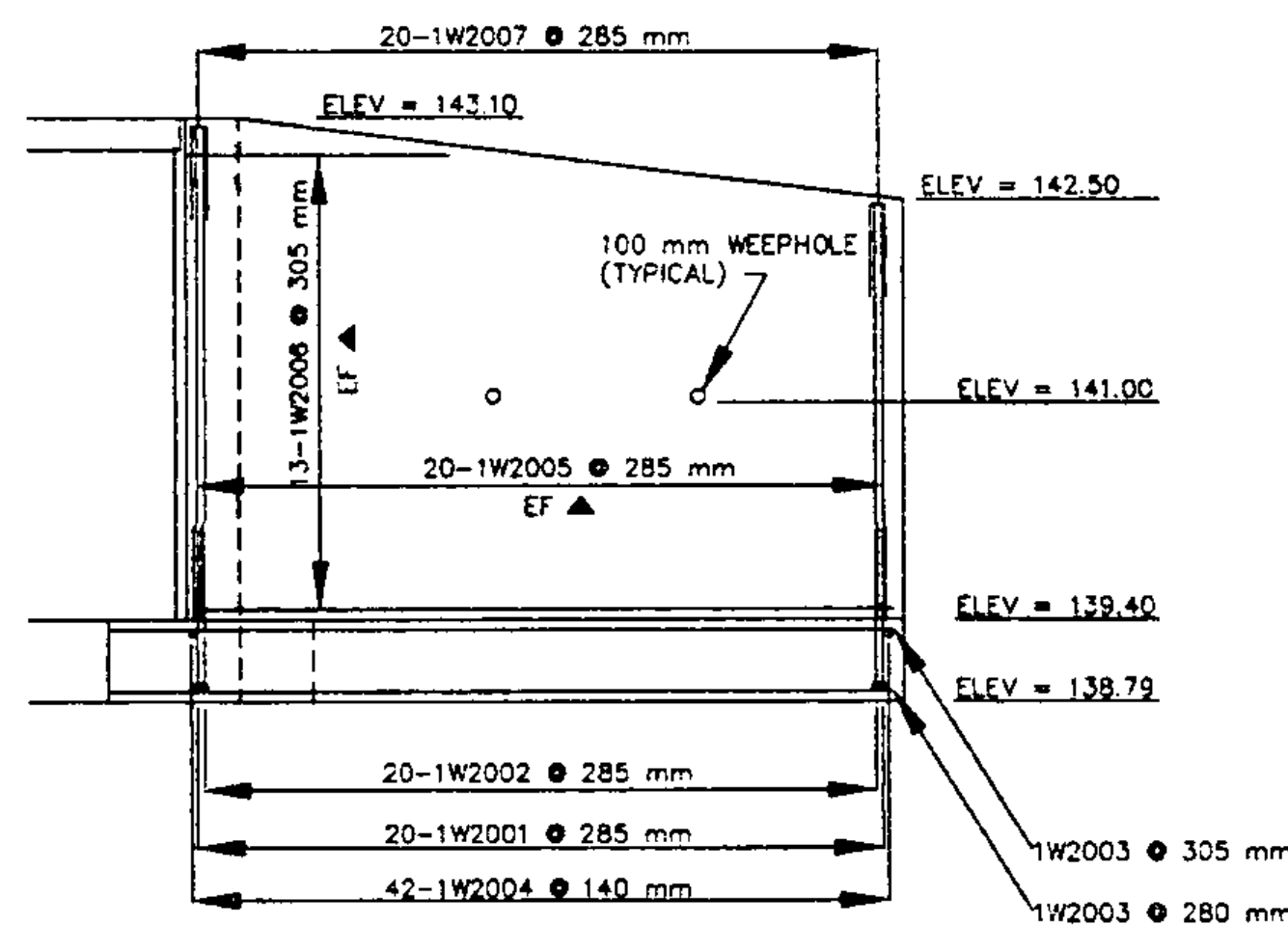
- ALL CONCRETE SHALL BE CLASS B AND COATED WITH AN APPROVED WATER REPELLANT.
- ALL REINFORCING STEEL SHALL BE GRADE 400.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE CONSTRUCTION OF THE ABUTMENT/WINGWALLS SHOWN ON THE DRAWINGS. PLACEMENT OF THE ANCHOR BOLTS AND BEARING PLATE ASSEMBLY SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS PROVIDED BY THE BRIDGE MANUFACTURER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECT PLACEMENT OF BOLTS AND KEY WIDTH AND DEPTH.

ABUTMENT DESIGN NOTES:	
Allow Soil Pressure	= 191 kPa
Actual Max Soil Pressure	= 93 kPa
Design Active Pressure	= 1 915 Pa
Overturning Stability Ratio	= 5.53
Sliding Stability Ratio	= 1.62
Axial LL on Stem	= 5 380 kg/m
Footing Concrete	= CLASS B
Footing Rebar	= GRADE 400

WINGWALL DESIGN NOTES:	
Allow Soil Pressure	= 191 kPa
Actual Max Soil Pressure	= 88 kPa
Design Active Pressure	= 1 915 Pa
Overturning Stability Ratio	= 5.60
Sliding Stability Ratio	= 1.63
Footing Concrete	= CLASS B
Footing Rebar	= GRADE 400

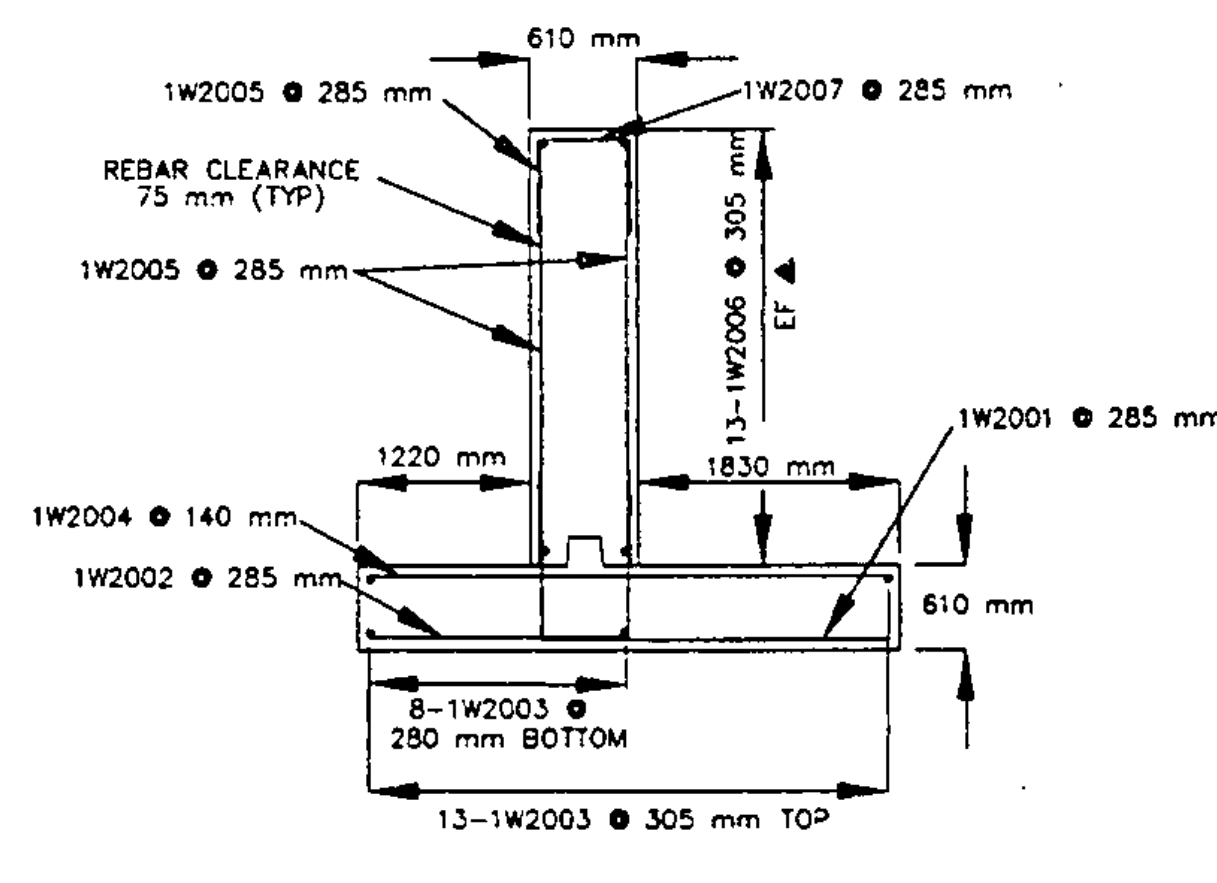


SOIL PROFILE
TEST PIT #1
STA. 0+215 ON CENTERLINE
NOTE: PENETROMETER TESTS TAKEN AT ELEV 139.3 IN GLACIAL TILL PRESENT READINGS GREATER THAN 215 kPa.



WINGWALL ELEVATION

SCALE 1:50



WINGWALL TYPICAL

SCALE 1:50

REINFORCING STEEL SCHEDULE

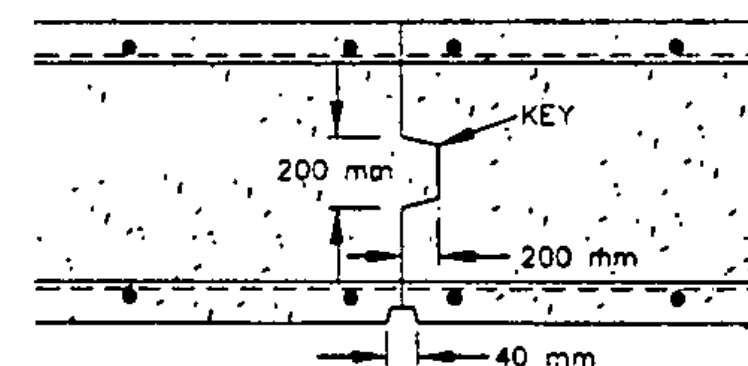
ITEM	NO. PIECES	SIZE	LENGTH METERS	MARK	TYPE	DIMENSIONS IN METERS												
						A	B	C	D	E	F	G	H	J	K	R	O	
ABUTMENT NO. 1 (ABUTMENT #2 SIMILAR EXCEPT FOR THE PREFIX)																		
15	20	20 mm	3.25	1A2001	17		1.26	1.99										
* 25	20	20 mm	5.10	1A2002	STR													
35	20	20 mm	3.68	1A2003	STR													
16	20	20 mm	3.19	1A2004	17		1.34	1.85										
27	20	20 mm	4.18	1A2005	STR													
15	20	20 mm	3.34	1A2006	STR													
16	20	20 mm	3.63	1A2007	STR													
16	20	20 mm	2.32	1A2008	23		0.71	0.23	0.29	0.38	0.71			0	0.38			
50	20	20 mm	2.13	1A2009	19		0.71	1.42	0.00					0.50	0.50	0.87		
WINGWALL NO. 1 (WINGWALLS 2,3 AND 4 SIMILAR EXCEPT FOR THE PREFIX)																		
20	20	20 mm	3.57	1W2001	17		1.26	2.31										
20	20	20 mm	2.96	1W2002	17		1.26	1.70										
* 23	20	20 mm	5.81	1W2003	STR													
42	20	20 mm	3.53	1W2004	STR													
40	20	20 mm	3.63	1W2005	STR													
26	20	20 mm	5.15	1W2006	STR													
40	20	20 mm	1.87	1W2007	S10		0.71	0.45	0.71									

NOTES:

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A615M). ALL BARS SHALL BE GRADE 400, 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 DEGREE AND 135 DEGREE HOOKS.
- "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSIONS ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
- * DENOTES ONE EXTRA BAR TO BE ADDED FOR TESTING PURPOSES.

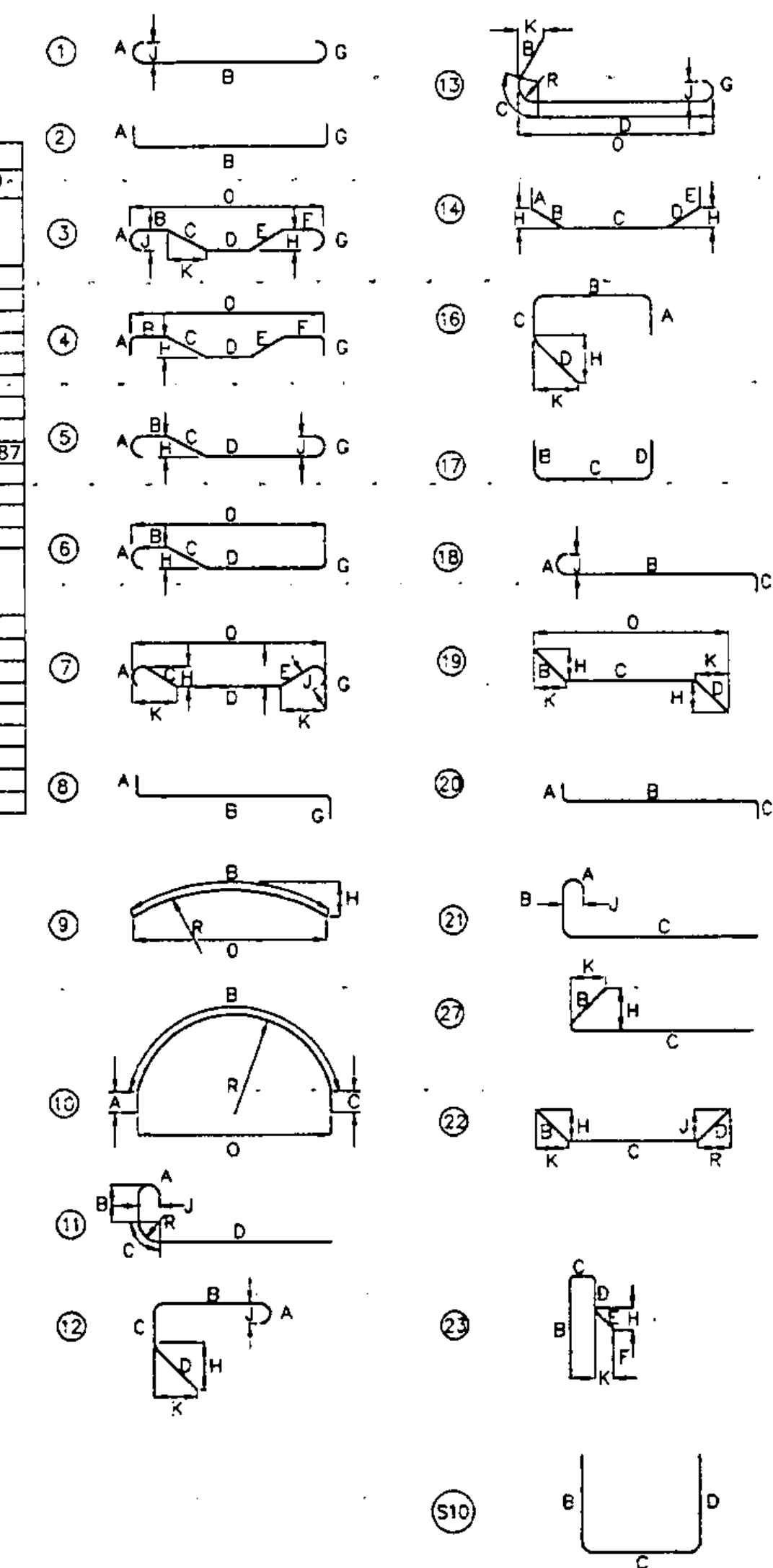
ASTM A615M STANDARD REINFORCING BARS

METRIC BAR SIZE DESIGNATION	NOMINAL DIMENSIONS		
	MASS kg/m	DIA mm	CROSS SECTIONAL AREA mm ²
10	0.785	11.3	100
15	1.570	16.0	200
20	2.355	19.5	300
25	3.925	25.2	500



CONSTRUCTION JOINT

NTS



LEGEND

- NF NEAR FACE
- FF FAR FACE
- EF EACH FACE

Metric

REVISED PER STATE REVIEW	DLH
9-20-95	REVISED PER STATE REVIEW
8-1-95	REVISED PER STATE REVIEW
DLH	DLH
date	description
	by
REVISIONS	
STATE OF VERMONT AGENCY OF TRANSPORTATION	
TRANSPORTATION PATH WILLISTON STP BIKE (9) IN WILLISTON VERMONT	
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