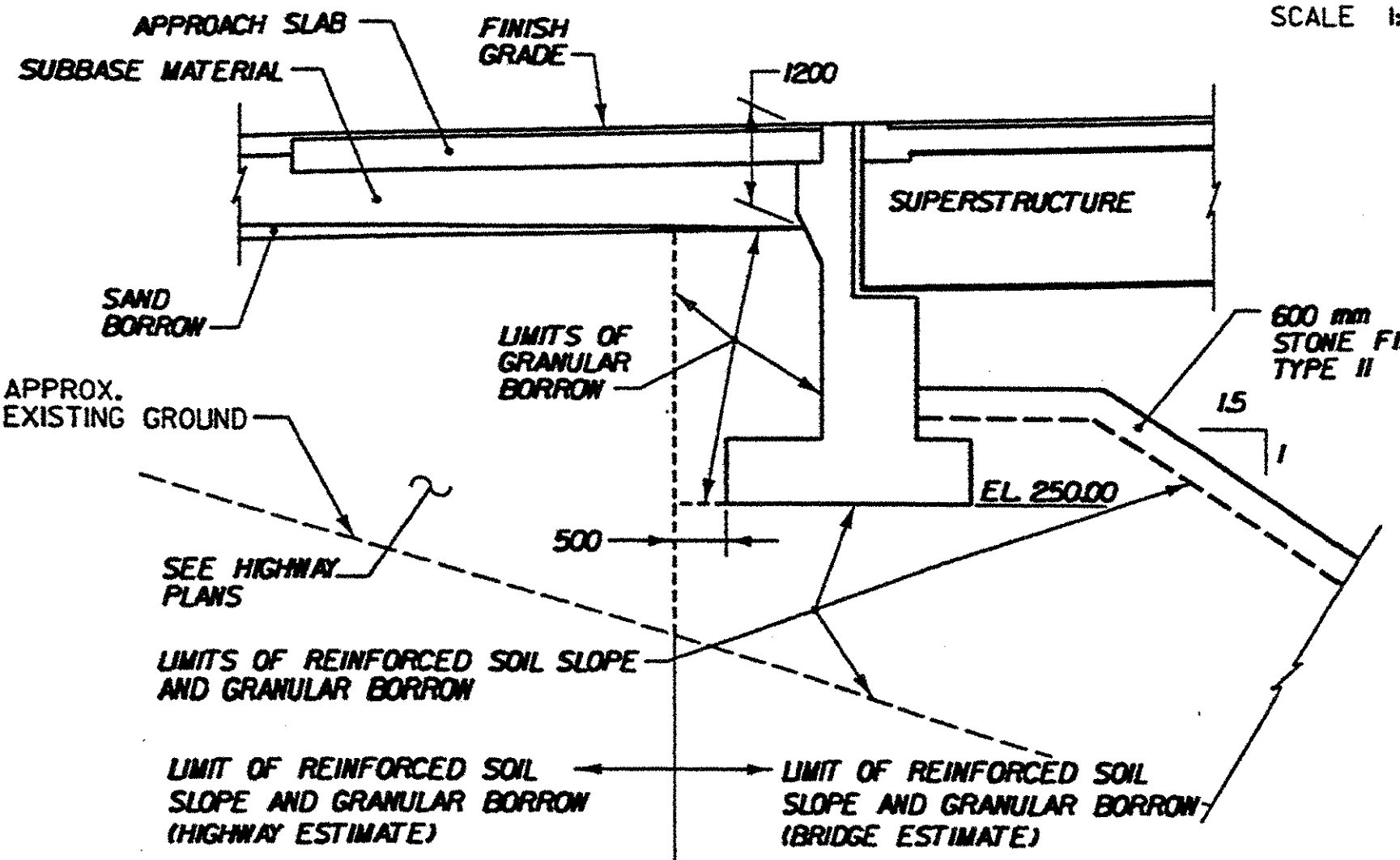
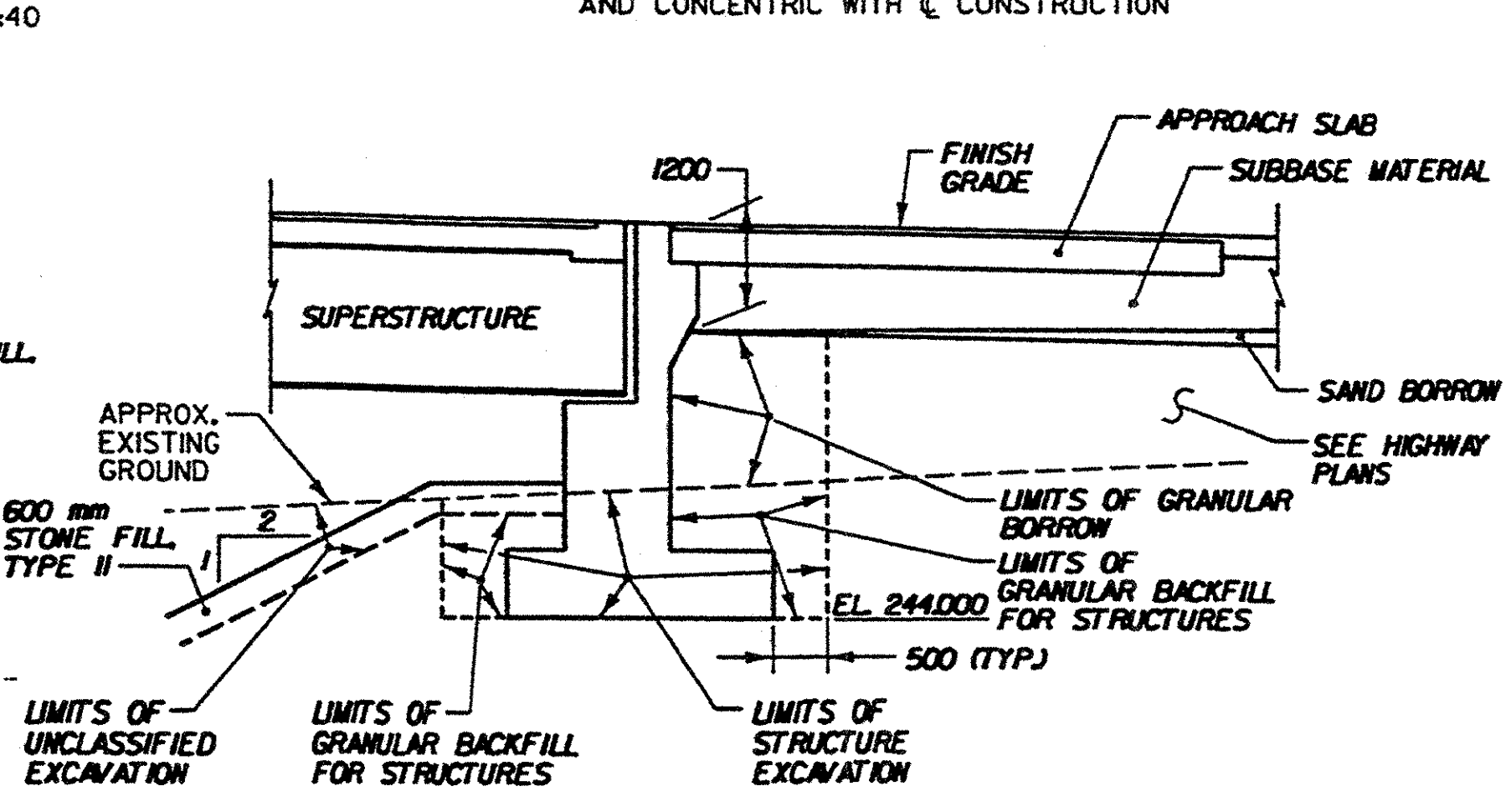


BRIDGE TYPICAL SECTION
SCALE 1:40

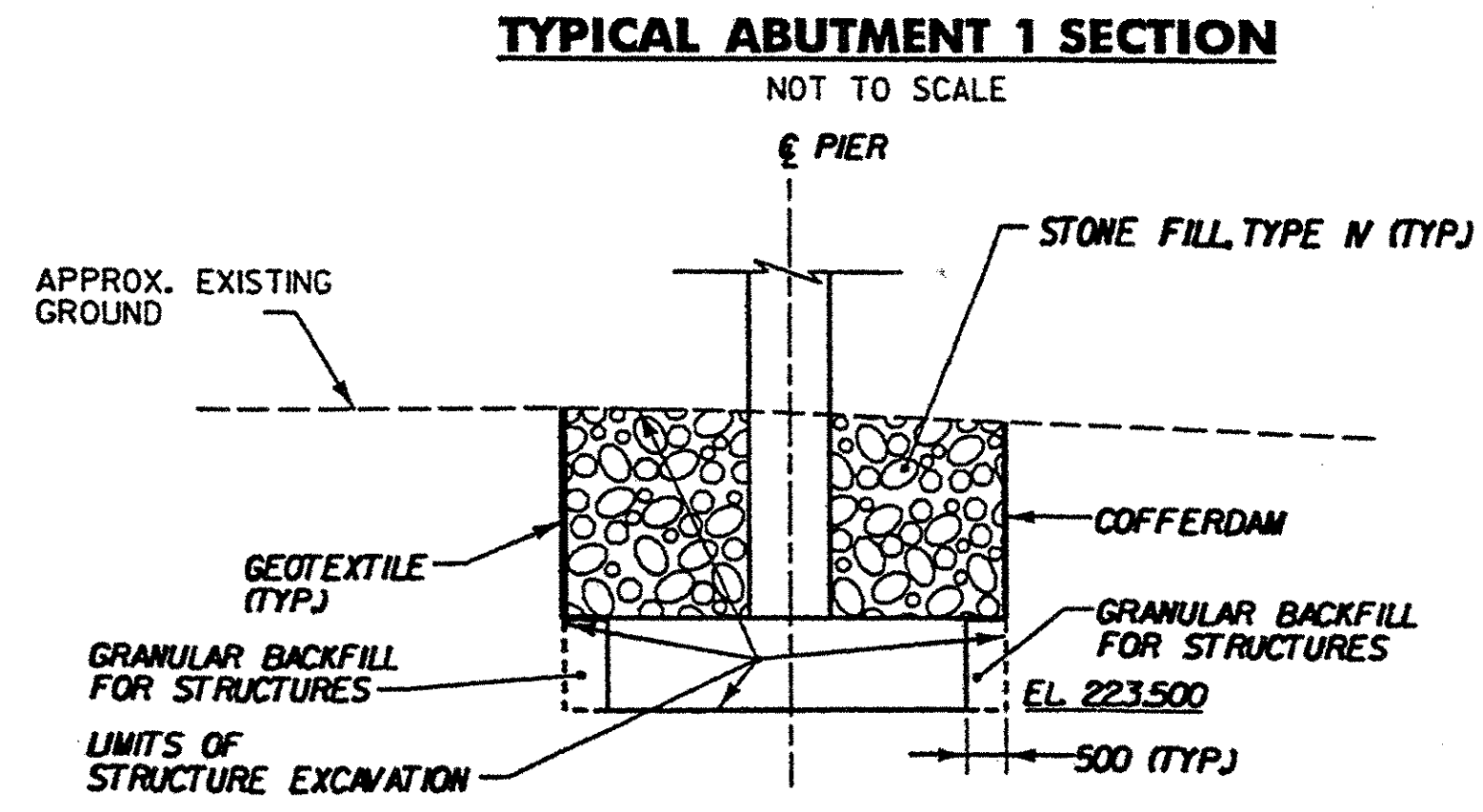
NOTE: ALL DIMENSIONS ARE RADIAL AND CONCENTRIC WITH ϵ CONSTRUCTION



TYPICAL ABUTMENT 1 SECTION
NOT TO SCALE



TYPICAL ABUTMENT 2 SECTION
NOT TO SCALE



TYPICAL PIER SECTION
NOT TO SCALE

INDEX OF SHEETS

- BR500 PRELIMINARY INFORMATION SHEET
- BR501 GENERAL PLAN AND ELEVATION
- BR502-504 CONSTRUCTION IMPACTS PLANS, NOTES & DETAILS
- BR505-506 BORING INFORMATION SHEETS
- BR507-510 BORING LOGS
- BR511 CHANNEL AND PIER DETAILS
- BR512-519 CHANNEL CROSS SECTIONS

NOTE:
ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

HYDROLOGIC DATA

DRAINAGE AREA: 29.1 sq. km
 CHARACTER OF TERRAIN: Mountainous
 CHARACTER & TYPE OF STREAM: Sinuous, perennial in alluvium
 NATURE OF STREAMBED: Cobble layer interlaced with sand & gravel

02.33= 27 cms 050= 63 cms
 010= 46 cms 0100= 71 cms
 025= 56 cms 0500= 121 cms

DATE OF FLOOD OF RECORD: Unknown
 WATER SURFACE ELEV.: Unknown ESTIMATED DISCHARGE: Unknown
 NATURAL STREAM VELOCITY @ 050 = 2.49 mps
 ICE CONDITIONS: Moderate DEBRIS: Slight
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? Yes
 IS ORDINARY RISE RAPID? Yes
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
 IF YES, DESCRIBE: _____

WATERSHED STORAGE: _____ HEADWATERS: UNIFORM THROUGHOUT WATERSHED
 IMMEDIATELY ABOVE SITE _____

EXISTING STRUCTURE

STRUCTURE TYPE: N/A YEAR BUILT: N/A
 CLEAR SPAN (NORMAL TO STREAM): N/A
 VERTICAL CLEARANCE ABOVE STREAMBED: N/A
 WATERWAY OF FULL OPENING: N/A
 DISPOSITION OF STRUCTURE: N/A

TYPE OF MATERIAL UNDER SUBSTRUCTURE: N/A

WATER SURFACE ELEV. @ 02.33= 230.4 VELOCITY= 1.94 mps
 010= 230.8 " 2.31 mps
 025= 231.0 " 2.44 mps
 050= 231.1 " 2.49 mps
 0100= 231.2 " 2.60 mps

LONG TERM STREAM BED CHANGES: N/A

IS THE ROADWAY OVERTOPPED BELOW THE 0100? N/A FREQUENCY: N/A
 RELIEF ELEVATION: N/A DISCHARGE OVER ROAD @ 0100: N/A

UPSTREAM STRUCTURE: TOWN: N/A DISTANCE: N/A
 HIGHWAY NO.: N/A STRUCTURE NO.: N/A
 STRUCTURE TYPE: N/A TYPE: N/A ESTIMATED LENGTH: N/A
 CLEAR SPAN: N/A CLEAR HEIGHT: N/A
 YEAR BUILT: N/A FULL WATERWAY: N/A

DOWNSTREAM STRUCTURE: TOWN: BENNINGTON DISTANCE: 0.9 km
 HIGHWAY NO.: N. BRANCH ST. STRUCTURE NO.: N/A
 STRUCTURE TYPE: N/A TYPE: N/A ESTIMATED LENGTH: N/A
 CLEAR SPAN: N/A CLEAR HEIGHT: N/A
 YEAR BUILT: N/A FULL WATERWAY: N/A

(COMPLETE INFORMATION WILL BE PROVIDED ON FINAL PLANS)

DESIGN CRITERIA:

- DESIGN LIVE LOAD AASHTO: MS-22.5
- DESIGN SPAN: 71.5 m - 71.5 m
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL: 290 kPa (Abut.), 480 kPa (Pier) & 380 kPa (Abut.) ON LEDGE: N/A
- ALLOWABLE LOAD FOR PILING: N/A TYPE: N/A ESTIMATED LENGTH: N/A
- STRUCTURAL STEEL AASHTO GRADE: M270M GR345W HYBRID WITH ASTM A709M GR HP5485W WEATHERING STEEL
- REINFORCING STEEL GRADE: 420
- CONCRETE CLASS A: $f_c = 30$ MPa OC/OA
 CONCRETE CLASS B: $f_c = 25$ MPa

TRAFFIC MAINTENANCE:

- IS TRAFFIC TO BE MAINTAINED? NO IF YES, ON EXISTING STRUCTURE: N/A OR ON TEMPORARY BRIDGE: N/A
- TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY: N/A TRAFFIC CONTROL SIGNALS REQUIRED: N/A

MINIMUM CLEAR SPAN (NORMAL TO STREAM): N/A VERTICAL CLEARANCE ABOVE STREAMBED: N/A
 WATERWAY AT FULL OPENING: N/A
 ARE SIDEWALKS REQUIRED? N/A IF SO, ON WHAT SIDE? N/A

LOADING LEVELS (LOAD FACTOR)	LOAD RATING (TONS)						
	H	HS	SS2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY A = 2.17							
POSTED A = 1.55							
OPERATING A = 1.30							

RF = $\frac{M}{L} = 1.3 \frac{M}{L}$
 A x M L L 1

SEMI-FINAL PLAN SUBMISSION
 DATE 12-08-04

TVGA CONSULTANTS

PROPOSED STRUCTURE

STRUCTURE TYPE: Two open curved plate girder bridge

CLEAR SPAN (NORMAL TO STREAM): 143 m
 VERTICAL CLEARANCE ABOVE STREAMBED: 20 m
 WATERWAY OF FULL OPENING: 2100 sq. m

WATER SURFACE ELEV. @ 02.33= 230.5 VELOCITY= 1.81 mps
 010= 230.9 " 2.18 mps
 025= 231.0 " 2.35 mps
 050= 231.1 " 2.48 mps
 0100= 231.2 " 2.61 mps

IS THE ROADWAY OVERTOPPED BELOW THE 0100? No FREQUENCY: N.A.
 RELIEF ELEVATION: N.A. DISCHARGE OVER ROAD @ 0100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 251.8
 VERTICAL CLEARANCE @ 0 100 = 19 m

SCOUR: Channel = 0.8 m, Pier = 4.5 m
 REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW: 4.3 cms
 ORDINARY LOW WATER: 2.3 cms ELEV.: 229.3
 ORDINARY HIGH WATER: 12.7 cms ELEV.: 230.0

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: N/A
 CLEAR SPAN (NORMAL TO STREAM): N/A
 VERTICAL CLEARANCE ABOVE STREAMBED: N/A
 WATERWAY OF FULL OPENING: N/A

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of: BENNINGTON Bridge No. _____
 Highway No. _____ Log Sta. _____
 Surv. Sta. _____

VT ROUTE 279 OVER FURNACE BROOK

PRELIMINARY INFORMATION SHEET

Designed By: M. HANN Drawn By: R.A. BOTZENHART
 Checked By: _____ Date: _____ Bridge Design Supervisor: K.M. WOJTKOWSKI Date: _____

PROJECT: BENNINGTON PROJECT NO.: NH F019-1K5
 TVGA CAD Drawing No. _____ pl. sheet Date: _____
 Bridge Sheet No. BR500 Sheet 26 of 112