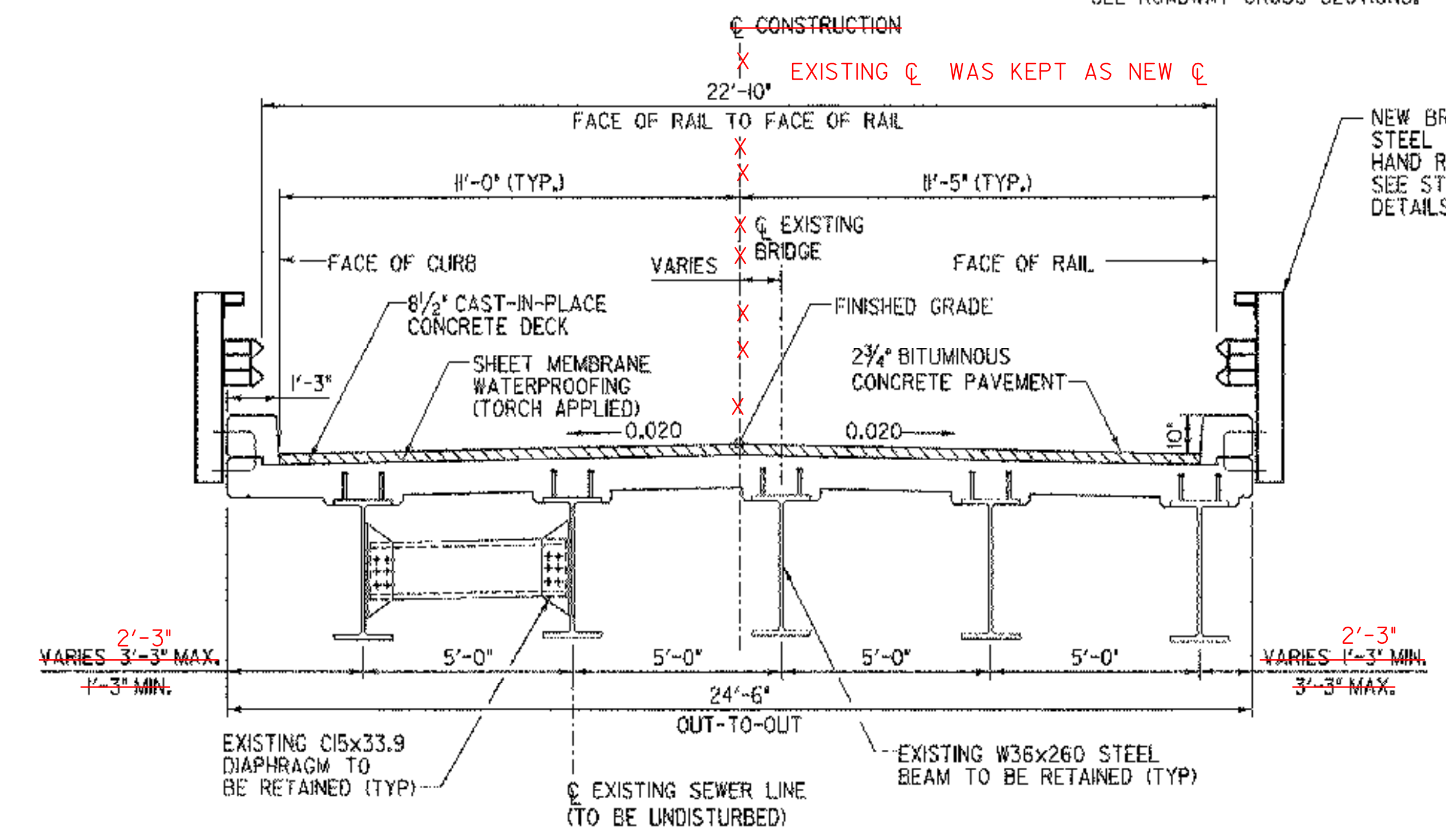


TRAFFIC DATA

2000 ADT =	1340
2000 DHV =	185
2000 ADTT =	55
2020 ADT =	1820
2020 DHV =	270
2020 ADTT =	75
D =	62%
T =	4%
DESIGN SPEED =	30 mph
ESALS (2000-2020)	638,000
(2000-2040)	2,036,000

MATERIALS TOLERANCE TABLE

MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT	± 1/4" (TOTAL)
SUBBASE	± 1"
SAND BORROW	± 1"



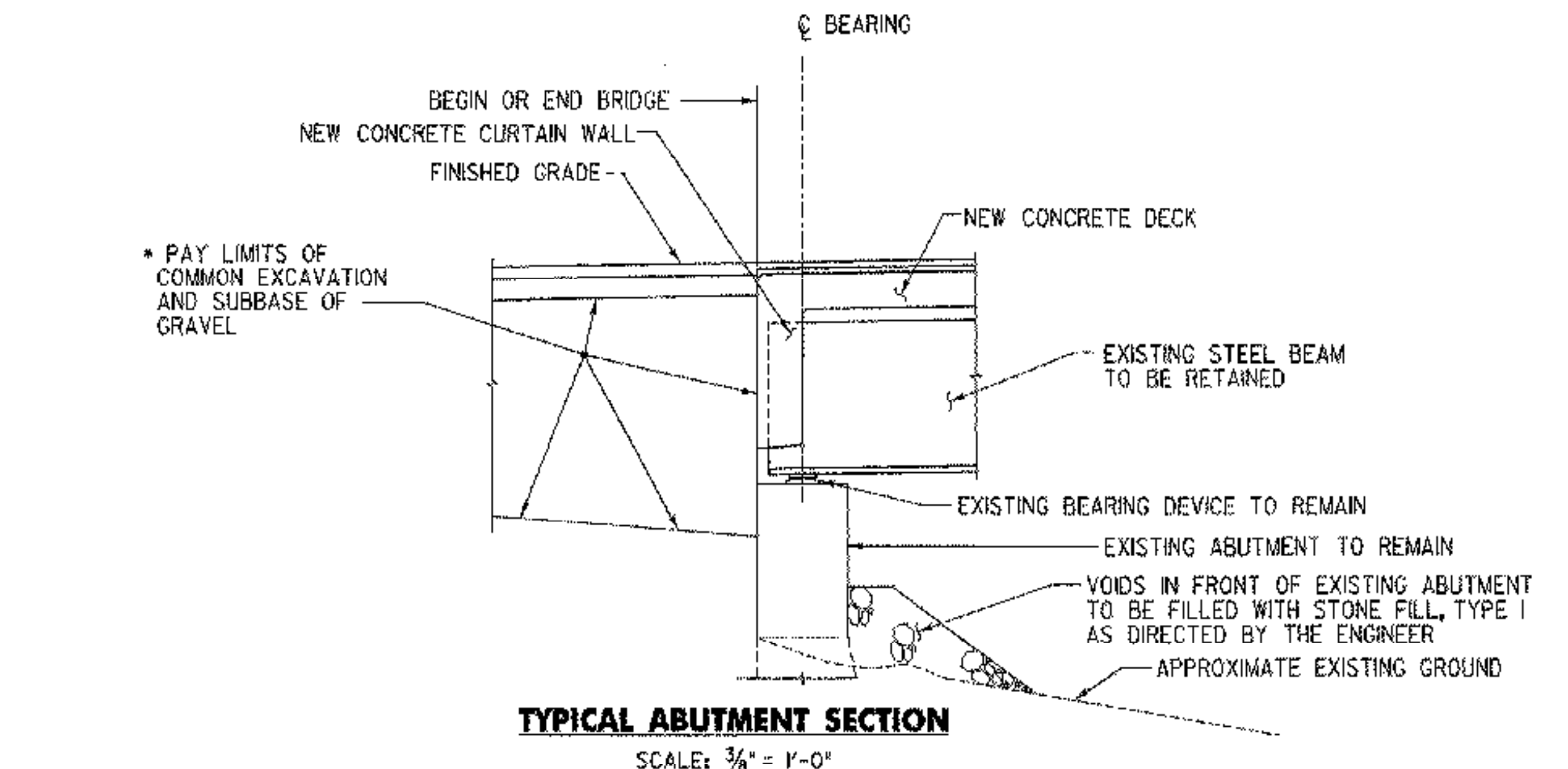
BRIDGE DECK PAVEMENT

TOP LIFT = 1-1/2" TYPE III
BOTTOM LIFT = 1-1/4" TYPE IV
EMULSIFIED ASPHALT BETWEEN LIFTS TO BE APPLIED AT A RATE OF 0.015 gal/sy PAID SUBSIDIARY TO ITEM NO. 406.27

SEEDING FORMULA URBAN AREAS

% MASS	lbs/s	NAME	PUR%	GERM%
42.5	34.0	CREeping RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.0	80.0			

SEED MIXTURE:
SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY MASS AND SHALL BE FREE OF ALL NOXIOUS WEED SEED.
SEED:
TO BE APPLIED PER SEEDING FORMULA DIRECTED BY THE RESIDENT ENGINEER.
FERTILIZER:
FORMULA 10-20-10 TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 lbs/acre (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).
AGRICULTURAL LIMESTONE:
TO BE APPLIED AT THE RATE OF 2 tons/acre OR AS DIRECTED BY THE RESIDENT ENGINEER.
HAY MULCH:
TO BE APPLIED ON EARTH SLOPES AT THE RATE OF 2 tons/acre OR AS DIRECTED BY THE RESIDENT ENGINEER.
TOPSOIL:
TO BE USED WITH SEED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.



* FOR SUBBASE TRANSITION, SEE MATERIAL DEPTH TRANSITION DETAIL SHEET 6

STRENGTH RF = $\frac{\phi M_n - 1.3M_{DL}}{A \times M_{LL+H}}$

* SERVICEABILITY RF = B $\left[\frac{.95F_y S_{LL+H} - M_{DL} \frac{S_{LL+H}}{SOL} - M_{SD} \frac{S_{LL+H}}{SOL}}{1.67 M_{LL+H}} \right]$

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK						
	H	HS	3S2	6 AXLE	3A STR	4A STR	5A SEMI
INVENTORY A=2.17 B=1.00	*30	*44					
POSTED A=1.55 B=1.40	*42	*52	*41		*57	*58	*65
OPERATING A=1.30 B=1.67		*73	*49	*95	*68	*69	

PLOTTED 02/03/2004

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA

DRAINAGE AREA: _____
CHARACTER OF TERRAIN: _____
CHARACTER & TYPE OF STREAM: _____
NATURE OF STREAMBED: _____
Q2.33= _____ Q50= _____
Q10= _____ Q100= _____
Q25= _____ Q500= _____
DATE OF FLOOD OF RECORD: _____
WATER SURFACE ELEV. ESTIMATED DISCHARGE: _____
NATURAL STREAM VELOCITY @ Q _____
ICE CONDITIONS: _____ DEBRIS: _____
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY _____
IS ORDINARY RISE RAPID? _____
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? _____
IF YES, DESCRIBE: _____
WATERSHED STORAGE _____ HEADWATERS _____ UNIFORM THROUGHOUT WATERSHED _____ IMMEDIATELY ABOVE SITE _____

EXISTING STRUCTURE

STRUCTURE TYPE: SINGLE SPAN STEEL BEAM WITH CONCRETE DECK YEAR BUILT: 1939
CLEAR SPAN (NORMAL TO STREAM): 92 ft
VERTICAL CLEARANCE ABOVE STREAMBED: 19 ft
WATERWAY OF FULL OPENING: 1450 sq ft
DISPOSITION OF STRUCTURE: REMOVE EXISTING BRIDGE DECK AND RETAIN EXISTING STEEL BEAMS
TYPE OF MATERIAL UNDER SUBSTRUCTURE: _____
WATER SURFACE ELEV. @ Q2.33= _____ VELOCITY= _____
Q10= _____
Q25= _____
Q50= _____
Q100= _____
LONG TERM STREAM BED CHANGES: _____
IS THE ROADWAY OVERTOPPED BELOW THE Q100? _____ FREQUENCY: _____
RELIEF ELEVATION: _____ DISCHARGE OVER ROAD @ Q100: _____
UPSTREAM STRUCTURE: TOWN: _____ DISTANCE: _____
HIGHWAY NO.: _____ STRUCTURE NO.: _____
NOTE: _____
DOWNSTREAM STRUCTURE: TOWN: _____ DISTANCE: _____
HIGHWAY NO.: _____ STRUCTURE NO.: _____
NOTE: _____

DESIGN CRITERIA:

- DESIGN LIVE LOAD AASHTO: HS20-40
- DESIGN SPAN: 96.93 FEET
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL: N/A ON LEDGE N/A
- ALLOWABLE LOAD FOR PILING: N/A TYPE N/A ESTIMATED LENGTH N/A
- STRUCTURAL STEEL (EXISTING) F_y: 33 KSI (ASSUMED)
- REINFORCING STEEL: GRADE 60
- CONCRETE HIGH PERFORMANCE CLASS: A F_c: 4000 psi HIGH PERFORMANCE CLASS: B F_c: 3500 psi

TRAFFIC MAINTENANCE:

- IS TRAFFIC TO BE MAINTAINED? NO IF YES, ON EXISTING STRUCTURE N/A OR ON TEMPORARY BRIDGE N/A EXISTING BRIDGE TO BE CLOSED, TRAFFIC TO BE DETOURED AROUND CONSTRUCTION SITE
- TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY N/A TRAFFIC CONTROL SIGNALS REQUIRED N/A
MINIMUM CLEAR SPAN (NORMAL TO STREAM): _____ VERTICAL CLEARANCE ABOVE STREAMBED: _____
WATERWAY OF FULL OPENING: _____
ARE SIDEWALKS REQUIRED? _____ IF SO, ON WHAT SIDE? _____
STRUCTURE TYPE: _____

PROPOSED STRUCTURE

STRUCTURE TYPE: SINGLE SPAN STEEL BEAM WITH COMPOSITE CONCRETE DECK
CLEAR SPAN (NORMAL TO STREAM): _____
VERTICAL CLEARANCE ABOVE STREAMBED: _____
WATERWAY OF FULL OPENING: _____
WATER SURFACE ELEV. @ Q2.33= _____ VELOCITY= _____
Q10= _____
Q25= _____
Q50= _____
Q100= _____
IS THE ROADWAY OVERTOPPED BELOW THE Q100? _____ FREQUENCY: _____
RELIEF ELEVATION: _____ DISCHARGE OVER ROAD @ Q100: _____
AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: _____
VERTICAL CLEARANCE @ Q25: _____
SCOUR: _____
REQUIRED CHANNEL PROTECTION: _____

PERMIT INFORMATION

AVERAGE DAILY FLOW: _____
ORDINARY LOW WATER: _____ DEPTH: _____
ORDINARY HIGH WATER: _____ DEPTH: _____

ADDITIONAL COMMENTS

HYDRAULIC CONDITIONS FOR PROPOSED STRUCTURE SAME AS EXISTING STRUCTURE

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of BRATTLEBORO Bridge No. 34
Highway No. 378 Log Sta. _____
Surv. Sta. _____

TH 378 (WILLIAMS STREET) OVER WHETSTONE BROOK

PRELIMINARY INFORMATION SHEET

Designed By J. W. KAMB Drawn By E. B. SMALL
Checked By Date Bridge Design Supervisor
J. W. TUCKER 04/01 J. W. TUCKER Date 04/01

PROJECT BRATTLEBORO PROJECT NO. BHF 2000(22)
I.G.C. Info. ...zj228dtdgn
D & K DWG NO. 11367 Sheet 2 of 20

