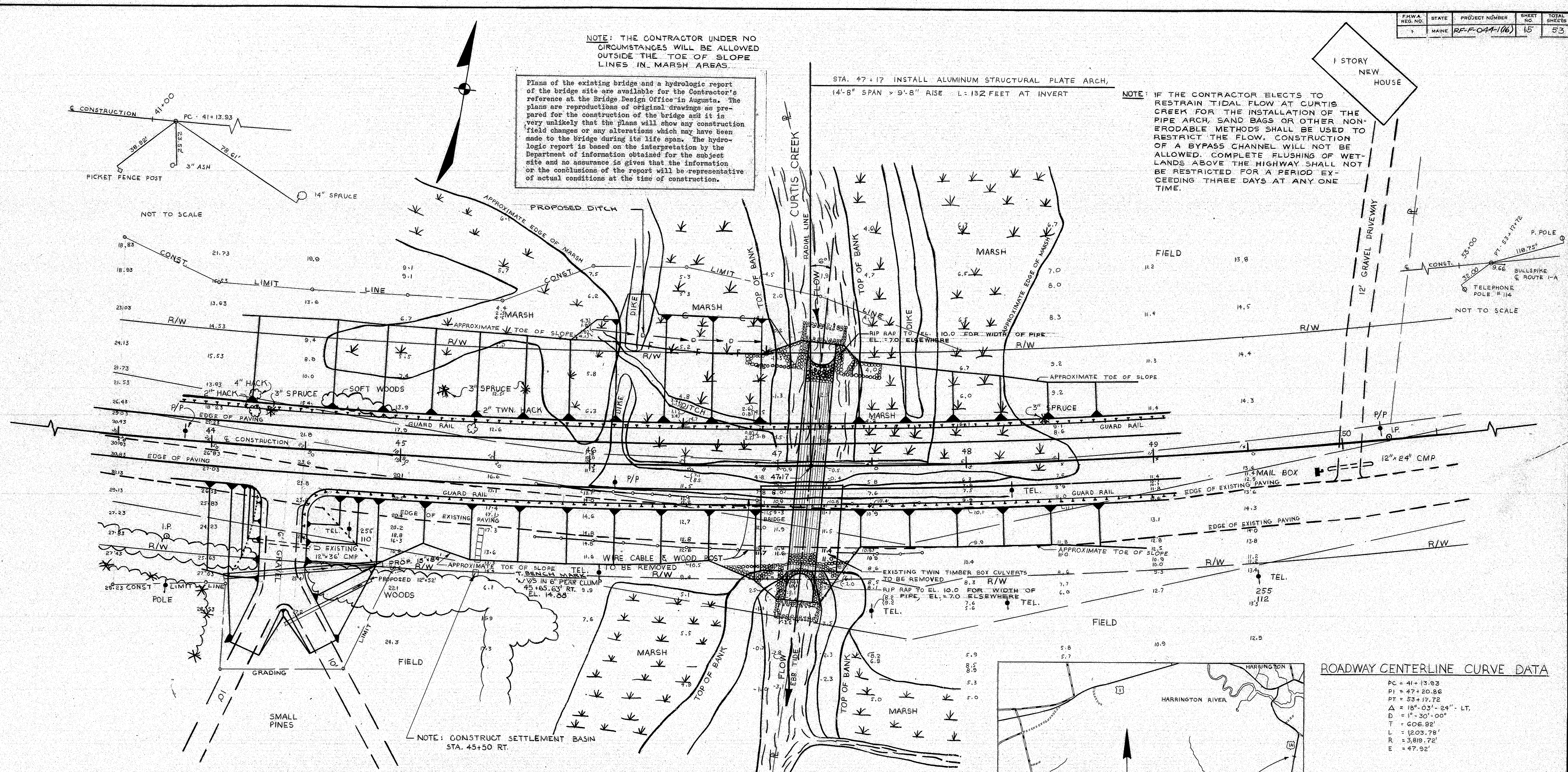


FHWA PROJECT NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	RF-F-044-1(16)	15	63



FIELD SURVEY NOTES

STREAM:
CURTIS CREEK IS AN INLET TO A SMALL TIDAL ESTUARY - FLOOD TIDE FLOW TO NORTH, EBB TIDE TO SOUTH.

STREAM BED:
MARINE CLAY.

EXISTING STRUCTURE:
TWIN TIMBER BOX CULVERTS - 6 FOOT SPAN BY 3'-10" HEIGHT - STRUCTURE SUPPORTED BY TIMBER PILING. ORIGINALLY EQUIPPED WITH TIDEGATE ON DOWNSTREAM END, REMOVED SOME YEARS AGO.

APPROACHES:
PAVED ROADWAY 20 FEET WIDE.

UTILITIES:
NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY.
BANGOR HYDROELECTRIC COMPANY

HYDROLOGIC DATA

DRAINAGE AREA = 2.54 SQ. MI.
DESIGN UPLAND DISCHARGE Q-50 = 300 CFS
CHECK UPLAND DISCHARGE Q-100 = 360 CFS
DESIGN MAX. COMBINED TIDAL AND UPLAND FLOW DISCHARGE = 800 CFS
UPLAND FLOW VELOCITY = 7.3 FPS
ESTIMATED MAX. VELOCITY = 10.0
EST. MAX. HEADWATER EL. = 10.0

SPECIFICATIONS

DESIGN: AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES, 1973 AND INTERIM SPECIFICATIONS 1974, 1975, 1976. MATERIAL: AASHTO DESIGNATION M219 - ALLOY 5082.

CONTRACT: STATE OF MAINE, STATE HIGHWAY COMMISSION, STANDARD SPECIFICATIONS, HIGHWAY AND BRIDGES, REVISION OF JUNE 1968.

TRAFFIC DATA

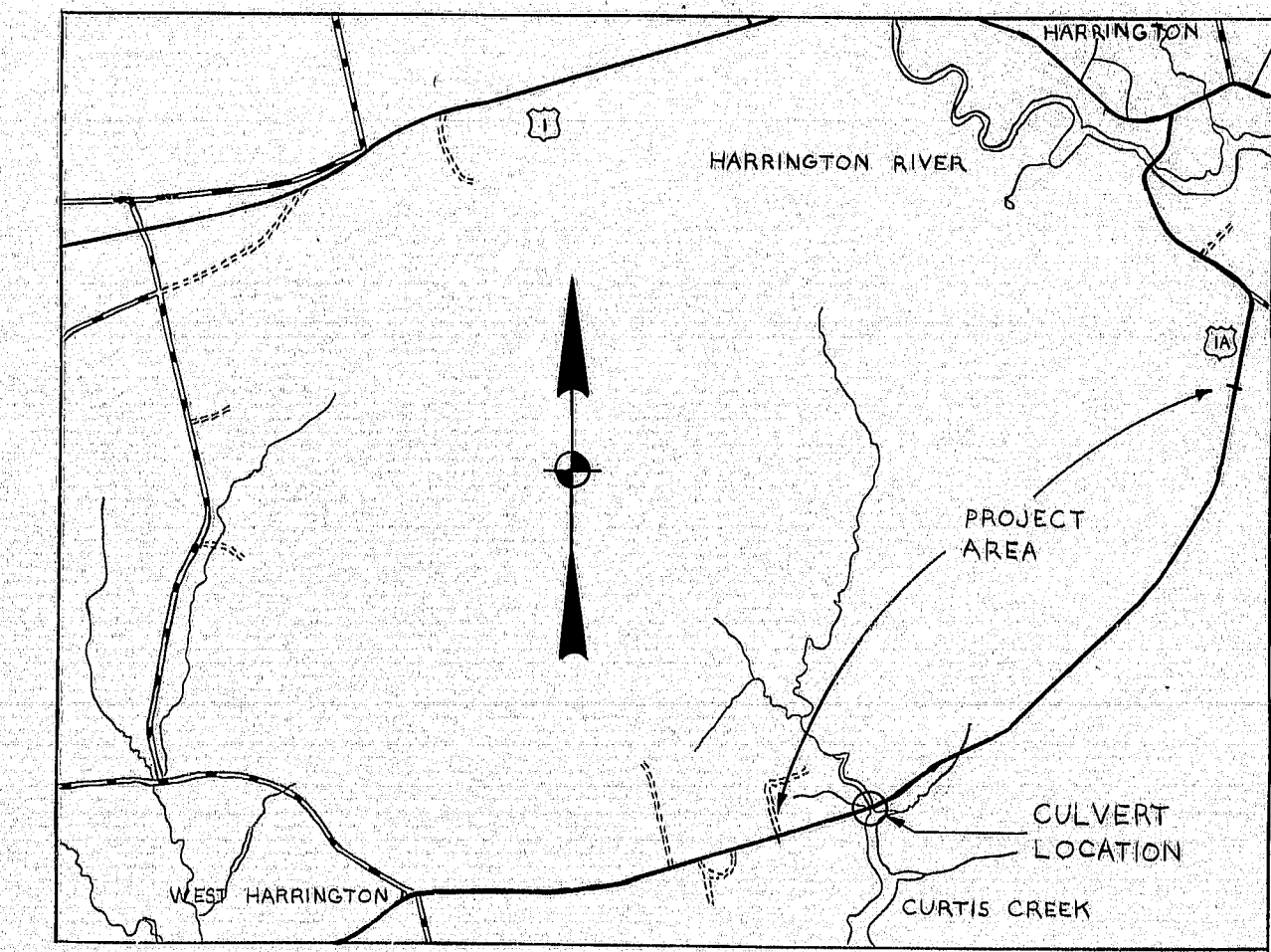
AADT 1979 = 2150
AADT 1999 = 3230
DNV 1999 = 484

DESIGN LOADING

LIVE LOAD HS-25

TIDAL DATA

MEAN LOW TIDE EL. -5.7
MEAN SEA LEVEL EL. 0.0
MEAN HIGH TIDE EL. +5.7
1978 PREDICTED EXTREME HIGH TIDE +10.5



ROADWAY CENTERLINE CURVE DATA

PC = 41+13.92
PI = 47+20.86
PT = 53+17.72
Δ = 18°-03'-24" - LT.
D = 1°-30'-00"
T = 606.92'
L = 1203.78'
R = 13,819.72'
E = 47.92'

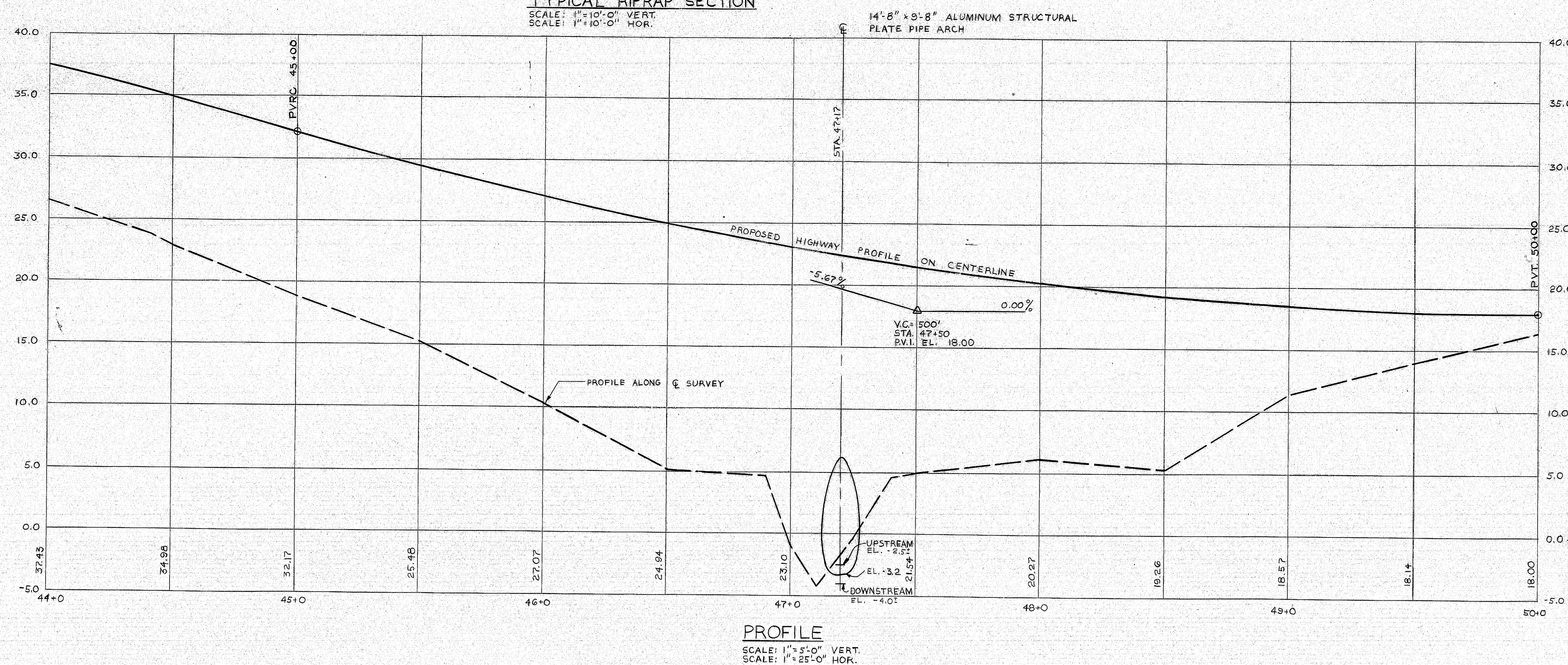
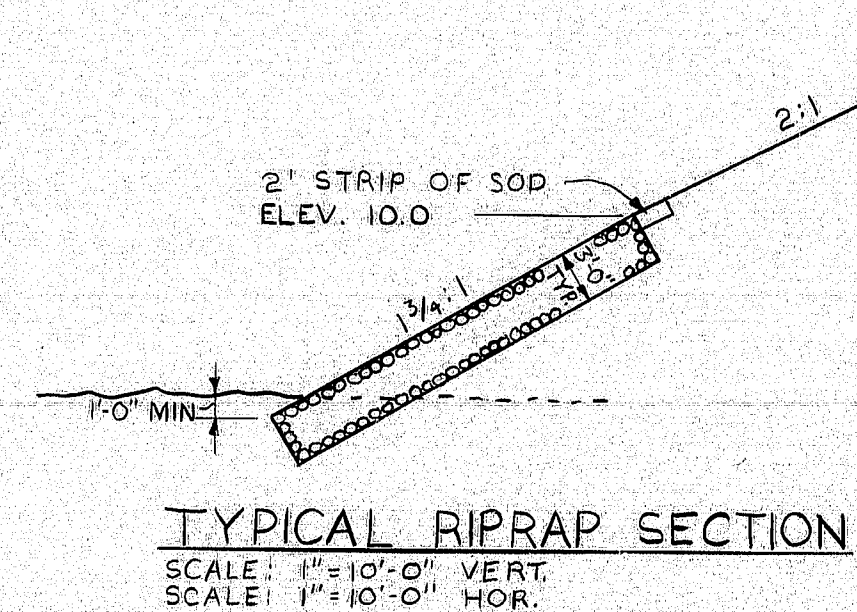
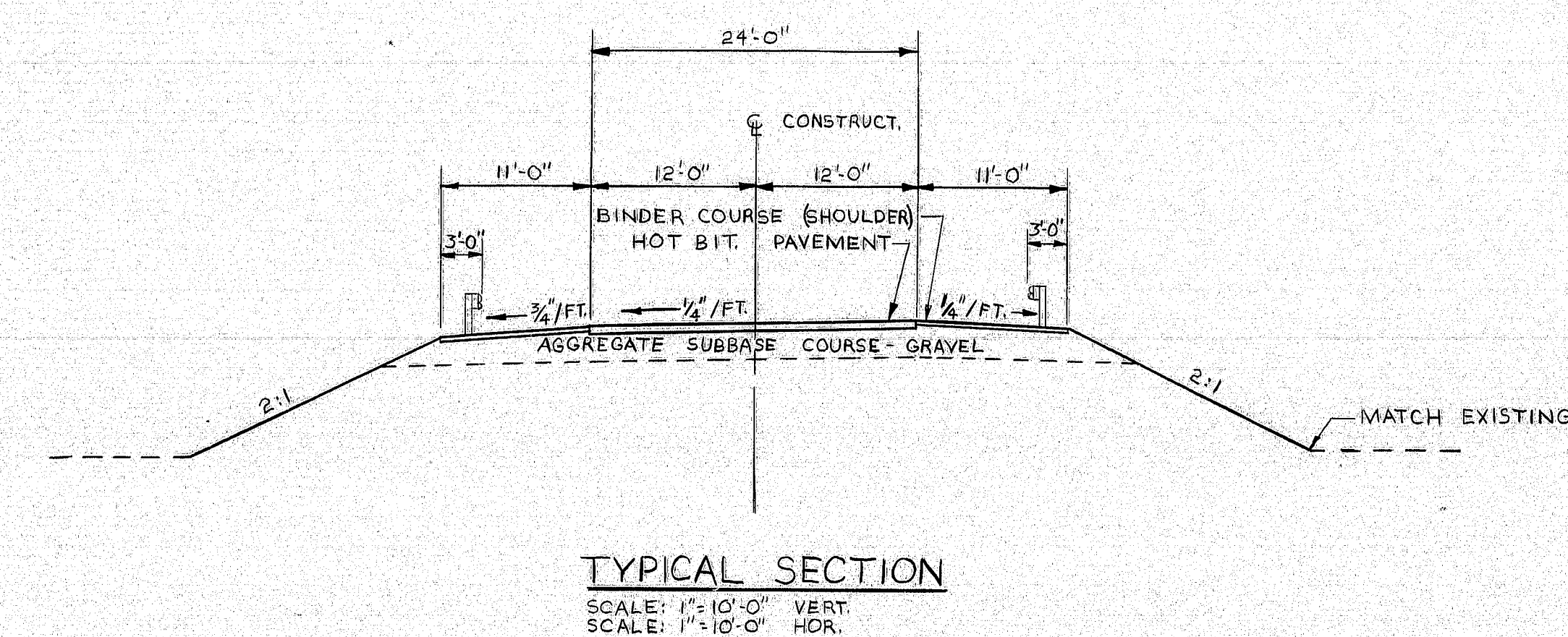
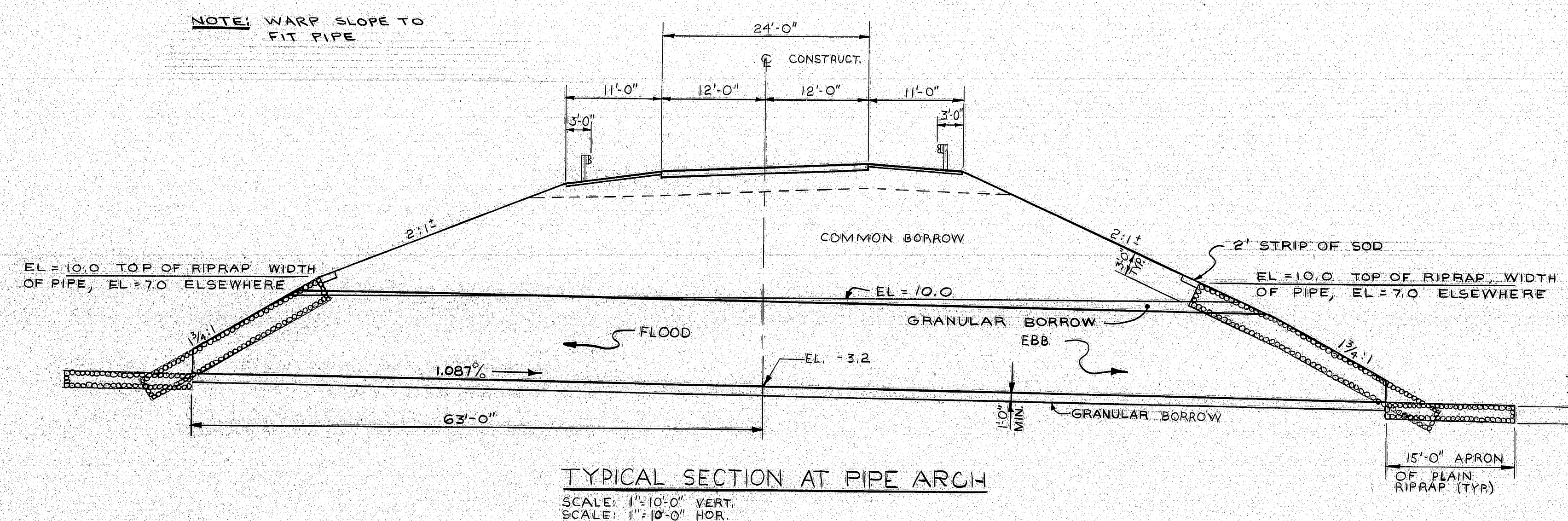
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

JOHNSON BRIDGE
REPLACEMENT
CURTIS CREEK
U.S. ROUTE 1-A
HARRINGTON, MAINE
PLAN SURVEY

RF-F-044-1 (16)
SHEET OF AUGUSTA, MAINE 6/15/78

170-95

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TO SHEET
1	MAINE	RF-F-044-1(16)	16	5



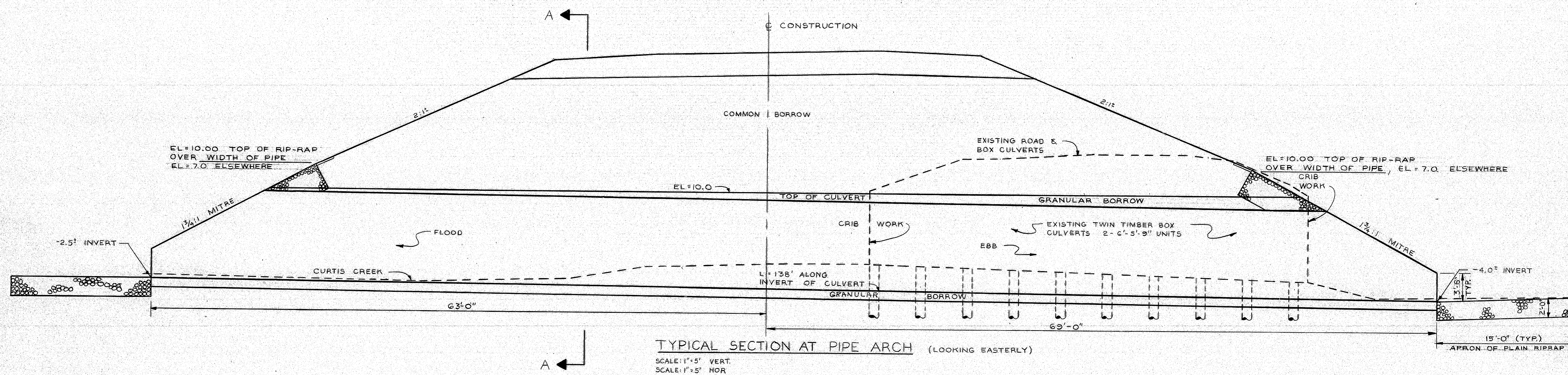
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

JOHNSON BRIDGE
REPLACEMENT
CURTIS CREEK
U.S. ROUTE 1-A
HARRINGTON, MAINE
SURVEY PROFILE

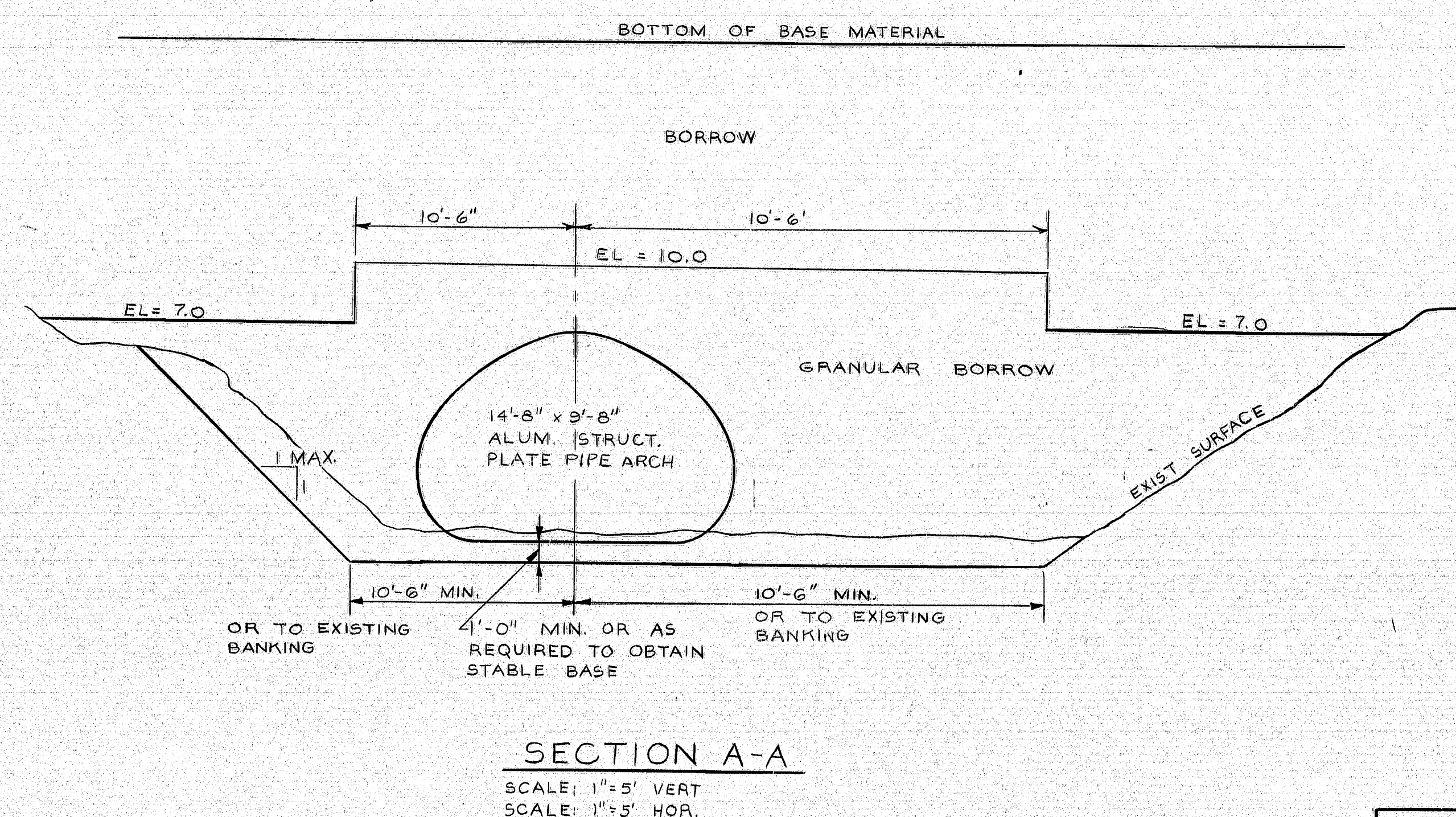
SHEET RF-F-044 - 1 (16)
OF AUGUSTA, MAINE 6/15/78

170-96

FHW.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	RF-F-044-1(16)	17	53



- NOTES**
- One 176 inch span, 116 inch rise aluminum structural plate pipe arch with 0.20" plate thickness required.
 - Ends shall be cut to the slope as shown in Typical Section.
 - Ends shall be cut square (no skew).
 - Rip Rap shall be carefully placed around the ends of the pipe in such a way that no damage to the pipe will result and so that the finished slope will match the ends of the pipe. No separate payments will be made for any extra work required to place Rip Rap adjacent to the ends of the pipe. Payment for all labor, material, and equipment necessary to place Rip Rap in the required manner will be made under Item 610.08, Plain Rip Rap.
 - Place a 2 foot wide strip of sod along the top of the Rip Rap.
 - All embankment fill below EL. 7.0, or current high tide, whichever is higher, shall be granular borrow meeting the requirements of Subsection 703.19, Material for underwater backfill.
 - Temporary side slopes shall be adequately protected from erosion by the tides. The temporary protection shall not be paid for directly but shall be considered incidental to the various contract items.
 - Embankment over top of arch to be 4'-0" min. before using as a temporary bypass for traffic.
 - All granular borrow to be placed in the embankment within 10 feet of the side slopes shall consist of a material containing not more than 70 percent passing a 1/4 inch mesh sieve.
 - Existing timber box culvert and log crib wings shall be removed entirely. Payment shall be made under Item 206.081, Structural Earth Excavation - Structural Plate Units.
 - If the contractor elects to restrain tidal flow at Curtis Creek for the installation of the pipe arch, sand bags or other non-erodable methods shall be used to restrict the flow. Construction of a bypass channel will not be allowed. Complete flushing of wetlands above the highway shall not be restricted for a period exceeding three days at any one time.
 - The construction period for the installation of the pipe arches and backfilling at Curtis Creek shall be scheduled to avoid anadromous fish runs and when the least tidal flow is expected.
 - The method of tidal flow restriction, if utilized, and the construction period shall be approved by the Engineer prior to any work at Curtis Creek. Any restriction of tidal flow by the contractor shall not be paid for directly but shall be considered incidental to the various contract items.
 - Existing pilings under box culverts to be removed to 2 ft. below inv. of pipe arch or Contractor may remove pilings completely at his option. Any excavated material removed during this process to be replaced with granular borrow as directed by the Engineer. Removal of piles to 2 feet below inv. of pipe will be paid for under Item 206.081, Structural Earth Excavation - Structural Plate Units.



SECTION A-A
SCALE: 1"=5' VERT
SCALE: 1"=5' HOR.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

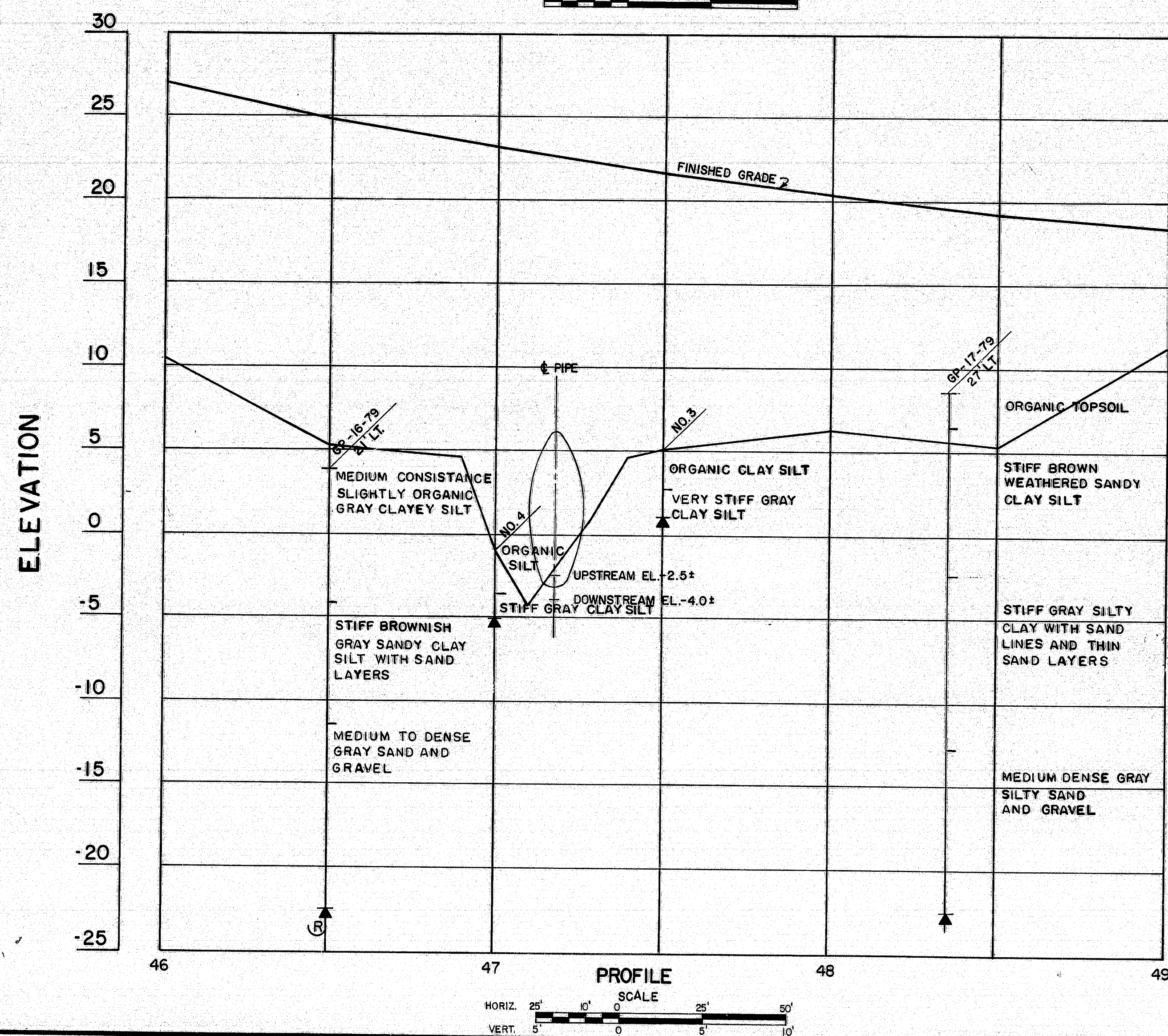
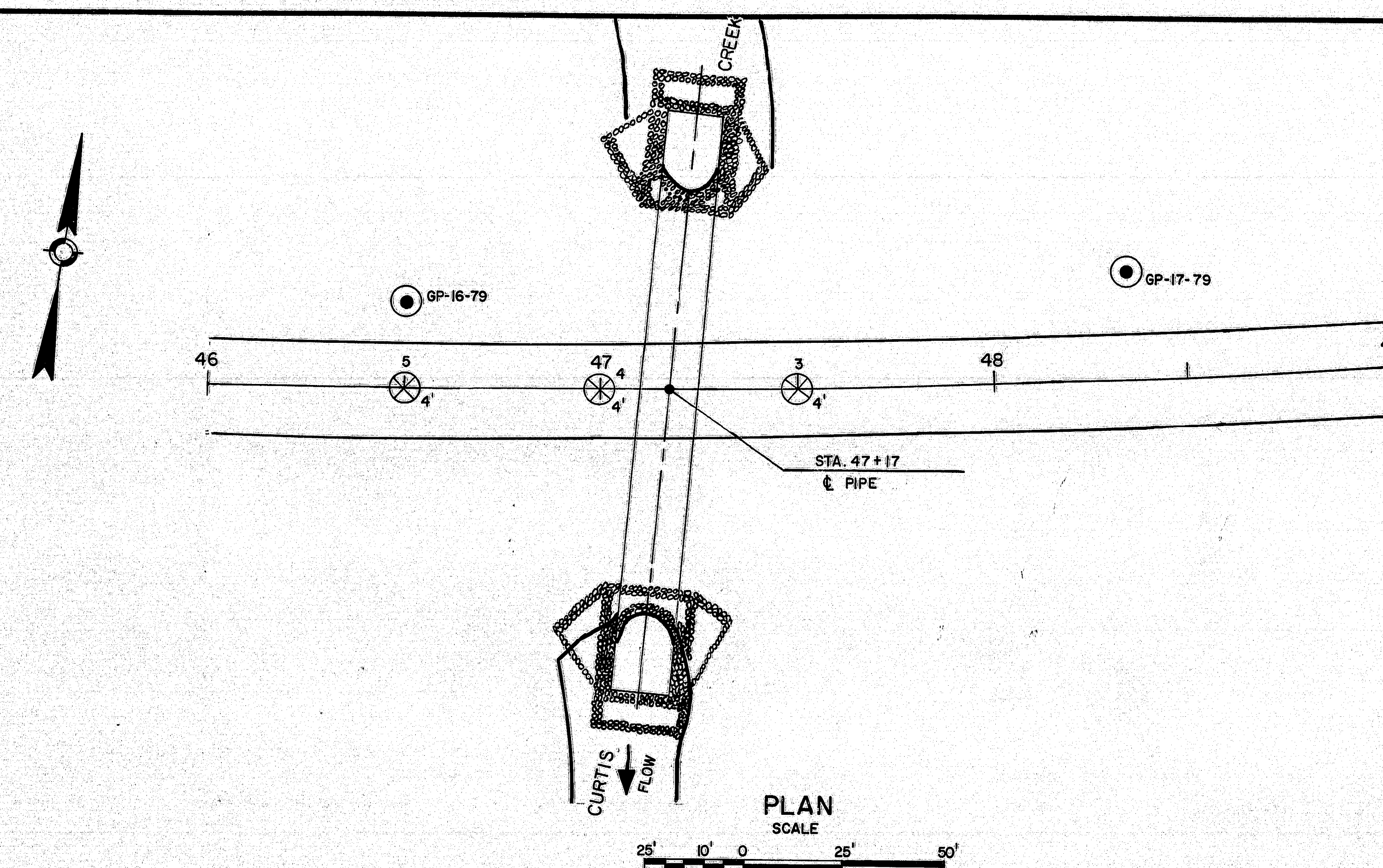
JOHNSON BRIDGE
REPLACEMENT
CURTIS CREEK
U.S. ROUTE 1-A
HARRINGTON, MAINE

RF-F-044 - 1(16)
SHEET OF AUGUSTA, MAINE 12-19-78

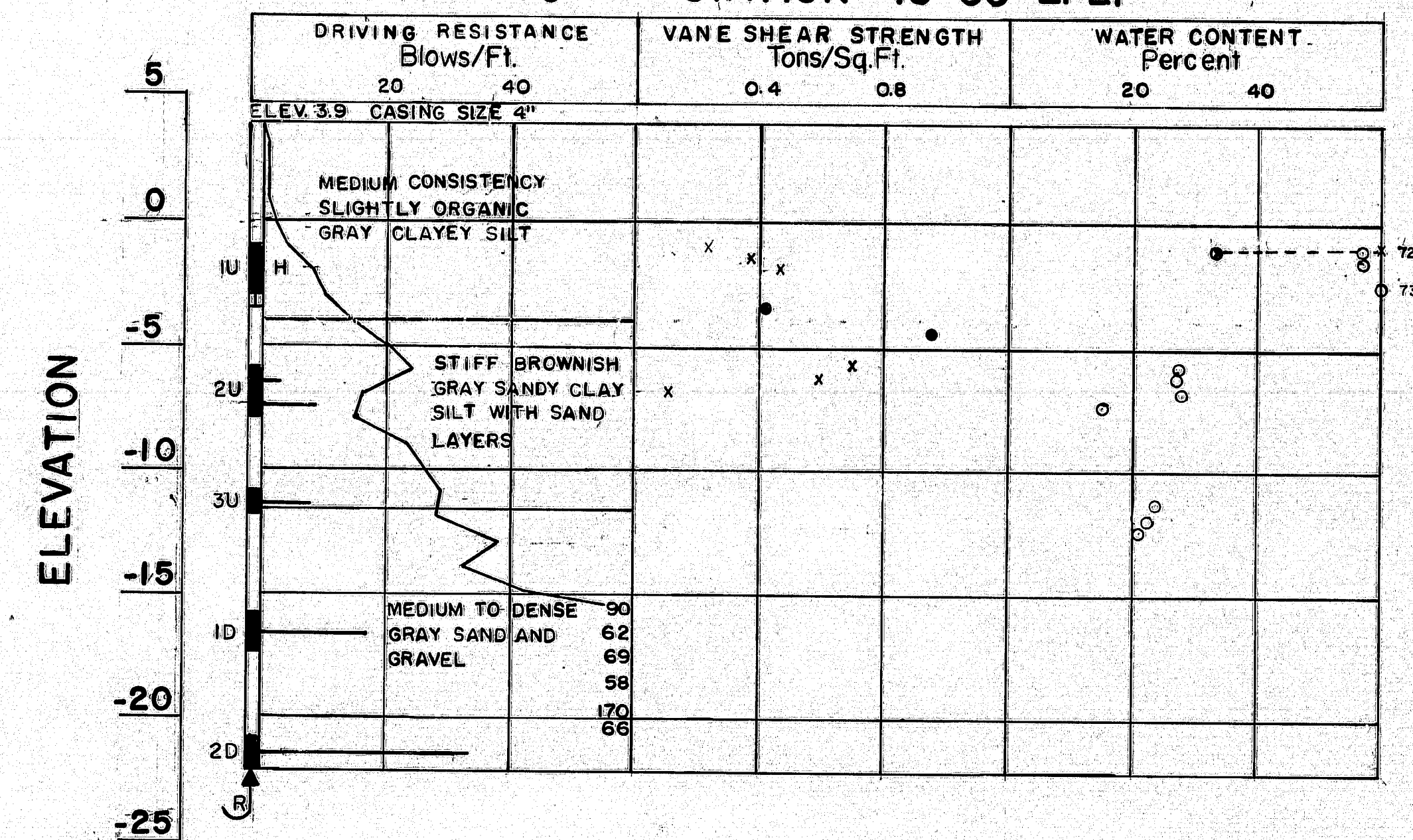
HUNTER - BALLEW ASSOCIATES
PORTLAND, MAINE
ENGINEERING, PLANNING, SURVEYING

170-97

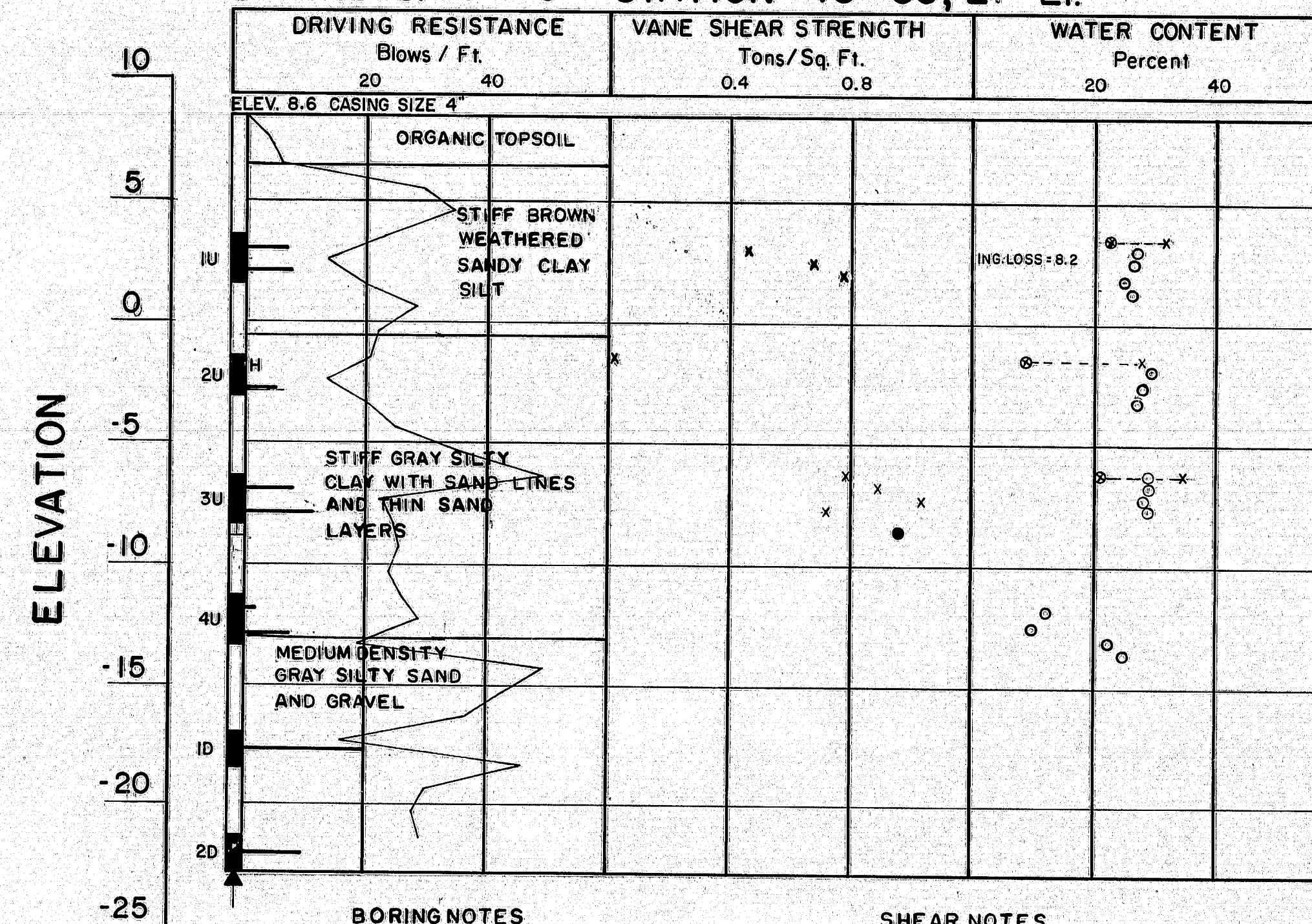
PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		



BORING GP-16-79 STATION 46+50 21' LT



BORING GP-17-79 STATION 48+35 27' LT



BORING NOTES

- All samples and vane are made ahead of casing
- Number of blows required to drive extra heavy casing one foot with 400ft. lbs. of energy per blow
- Location of sample or sample at tempt
- Number and type of dry sample
- S & H Sampler #1290's
- Number of blows required to drive spoon or tubing one foot with 350ft. lbs. of energy per blow
- Sampling spoon or seamless tubing driven by static weight of drill rods and hammer
- Field vane test
- Bottom of boring (may not be bottom of soil strata)
- Refusal of drill rods or casing (may not be ledge)

SHEAR NOTES

- Field vane shear strengths
- Laboratory vane shear strengths

WATER CONTENT NOTES

- Natural water contents, given as percent of dry weight
- Plastic and liquid limits
- Ignition losses are given as percent of dry weight

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	RF-F-044-1(6)	18	53

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
JOHNSON BRIDGE
OVER
CURTIS CREEK
IN THE TOWN OF
HARRINGTON
WASHINGTON COUNTY
FOUNDATION SURVEY

SHEET OF AUGUSTA, MAINE

170-98