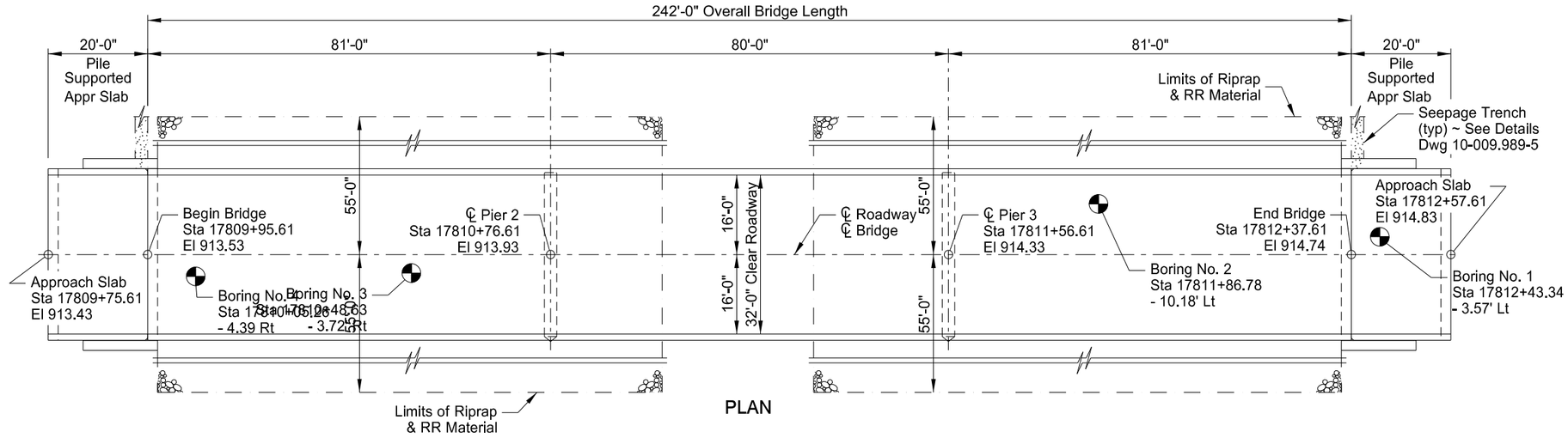
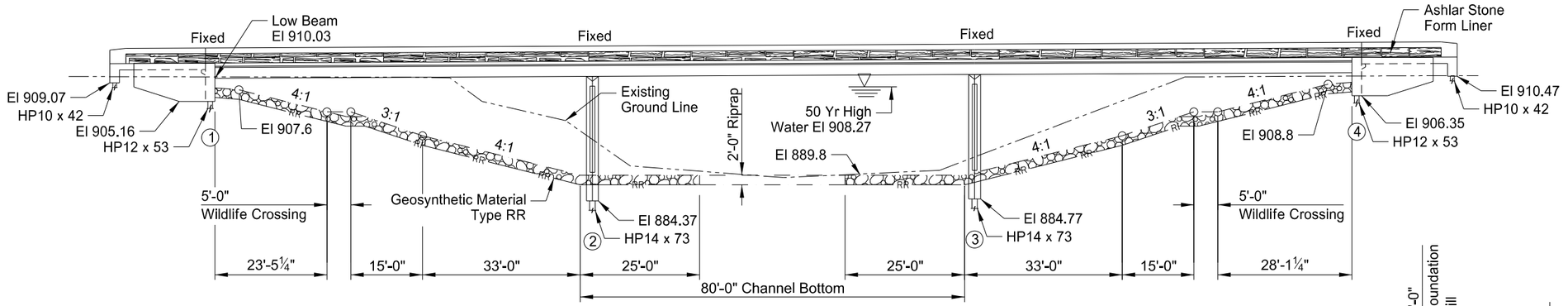
23 U.S.C. 409
NDDOT Reserves All Objections

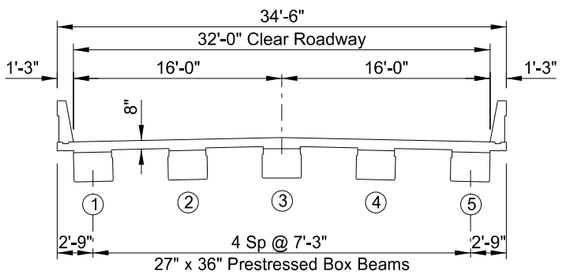
BRIDGE CODE		STATE	PROJECT NUMBER	SECTION NO.	SHEET NO.
X081		ND	BRO-8-010(036)009	170	37



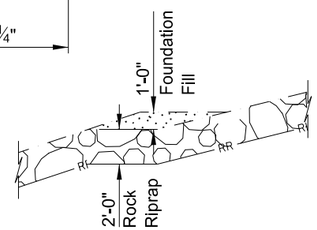
PLAN



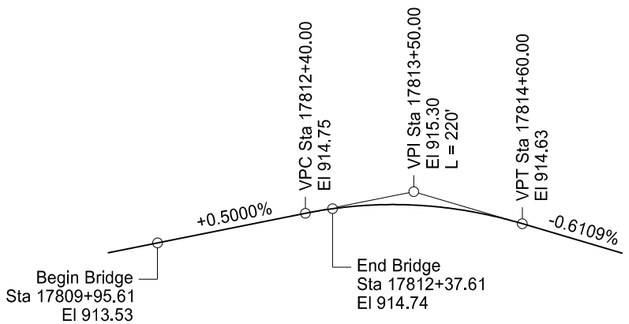
ELEVATION



TYPICAL SECTION



WILDLIFE WALKWAY



VERTICAL CURVE DATA

HYDRAULIC DATA:

Drainage Area	1,467.8	sq mi
Design Frequency	50	yr
Design Discharge	11,443	cfs
Design Stage (upstream)	908.27	ft
Stream Gradient	0.00068	ft/ft
Waterway Provided Below Design Stage	2,740.30	sq ft
Waterway Provided Below Clearance Elevation	3,286.9	sq ft
Average Velocity of Flow in Natural Channel	4.28	fps
Depth of Flow	18.47	ft
Velocity of Flow Under Bridge	4.17	fps
100-Year Frequency Discharge	13,269	cfs
100-Year Frequency Stage	909.20	ft
Overtopping Stage	910.88	ft
Overtopping Discharge	35,903.0	cfs

DESIGN STRENGTHS:

f'c = 3,000 psi ~ Class AE-3 Concrete
f'c = 4,000 psi ~ Class AAE-3 Concrete
f'c = 7,500 psi ~ Prestressed Beam Concrete
fy = 60,000 psi ~ Reinforcing Steel

Load & Resistance Factor Design

SURVEY CONTROL POINTS			
POINT	NORTHING	EASTING	ELEVATION
RTK 1018	460,119.90	2,823,629.48	913.03
RTK 1019	460,052.43	2,822,608.92	913.35

SPECIAL PROVISIONS	
SPP 2	MIGRATORY BIRD TREATY ACT
SP 294(20)	ARCHITECTURAL SURFACE
SP 355(20)	WINTER SUSPENSION

STANDARD DRAWINGS
D-622-1, D-714-18, D-900-1

F.W.S. 15 PSF

HL-93 DESIGN LOADING

MAPLE RIVER

STATION: 17811+16.61

BRIDGE LAYOUT

ND DEPARTMENT OF TRANSPORTATION
BRIDGE DIVISION

This drawing is preliminary and not for construction or implementation purposes.

PRELIMINARY