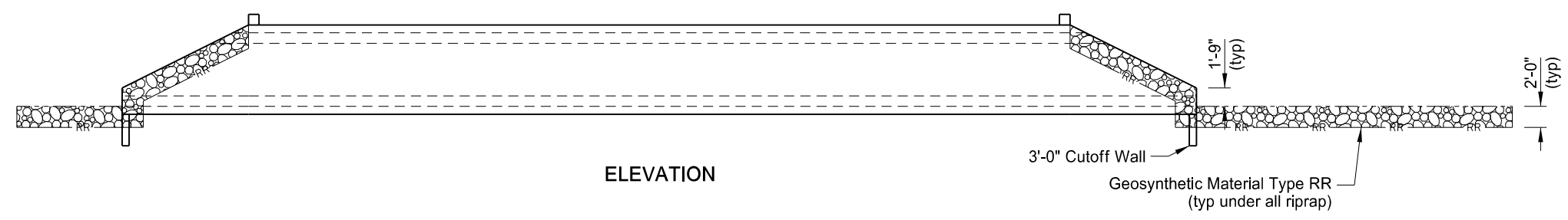
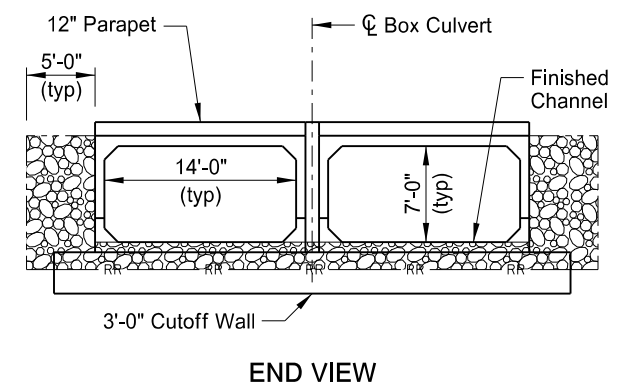
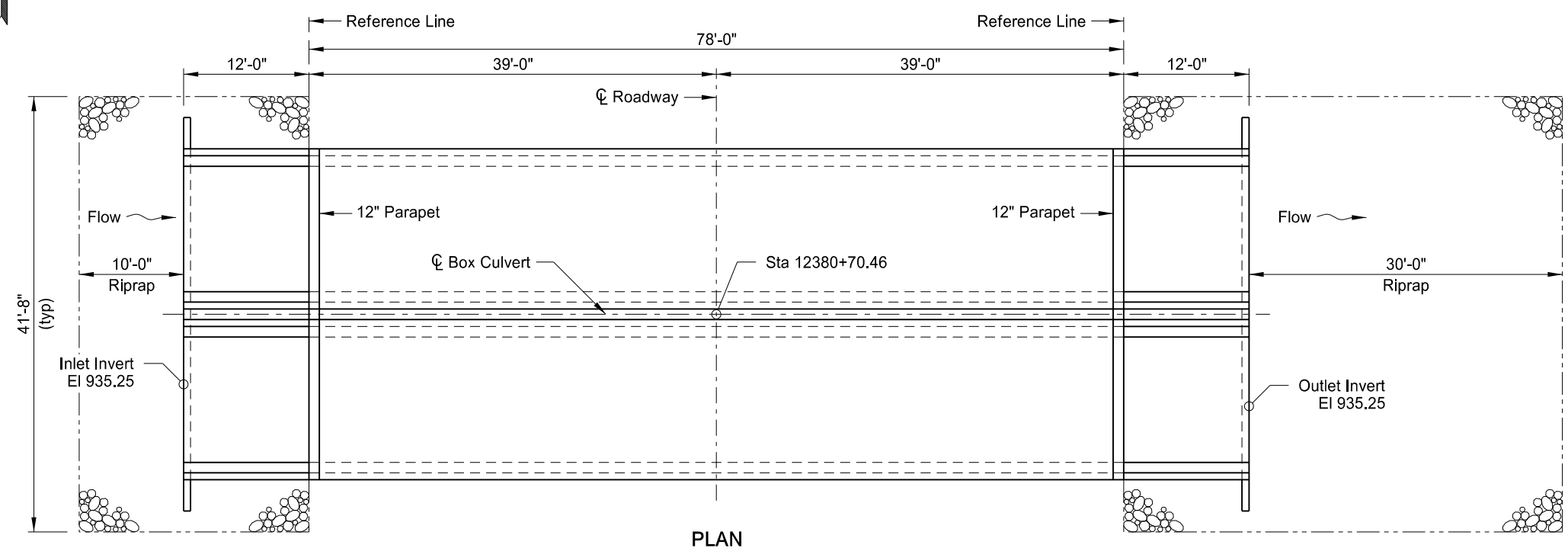
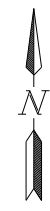


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-6-032(075)230	170	1



**DESIGN STRENGTHS:**

f'c = 5,000 psi ~ Precast Box Culvert Concrete  
 fy = 65,000 psi ~ Welded Wire Reinforcement

Load & Resistance Factor Design

BRIDGE BID ITEMS			
SPEC	CODE	ITEM DESCRIPTION	UNIT QUANTITY
202	0109	REMOVAL OF STRUCTURE-SITE 2	L SUM 1
210	0052	BOX CULVERT EXCAVATION-SITE 2	EA 1
210	0210	FOUNDATION FILL	CY 1,880
210	0250	BOX CULVERT FOUNDATION AGGREGATE	CY 210
210	0405	FOUNDATION PREPARATION-BOX CULVERT	EA 1
256	0200	RIPRAP GRADE II	CY 145
606	1407	14FT X 7FT PRECAST RCB CULVERT	LF 156
606	5407	14FT X 7FT PRECAST RCB END SECTION	EA 4
709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY 420
709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY 215
900	1000	TEMPORARY STREAM DIVERSION	EA 1

**HYDRAULIC DATA:**

Drainage Area	9.54	sq mi
Stream Gradient	0.009	ft/ft
Design Frequency	50	yr
Design Discharge	1,805.1	cfs
Design Headwater Stage	944.49	ft/ft
Design Tailwater Stage	942.18	ft/ft
Velocity Through Culvert	9.3	fps
100-Year Frequency Discharge	2,219.6	cfs
100-Year Frequency Headwater	946.53	ft/ft
Overtopping Stage	948.7	ft/ft
Overtopping Discharge	2,609.15	cfs

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

SPECIAL PROVISIONS	
SSP 2	MIGRATORY BIRD TREATY ACT
SP X	TEMPORARY STREAM DIVERSION
CREEK 2 SOUTH OF CANADA BORDER  CLEAR SPAN 2 X 14' CLEAR HEIGHT 7' MAXIMUM FILL 7' STATION: 12380+70.46  <b>PRECAST CONCRETE            DOUBLE BOX CULVERT LAYOUT</b>	
ND DEPARTMENT OF TRANSPORTATION BRIDGE DIVISION	
DRAWING NO.	32-234.484-1