

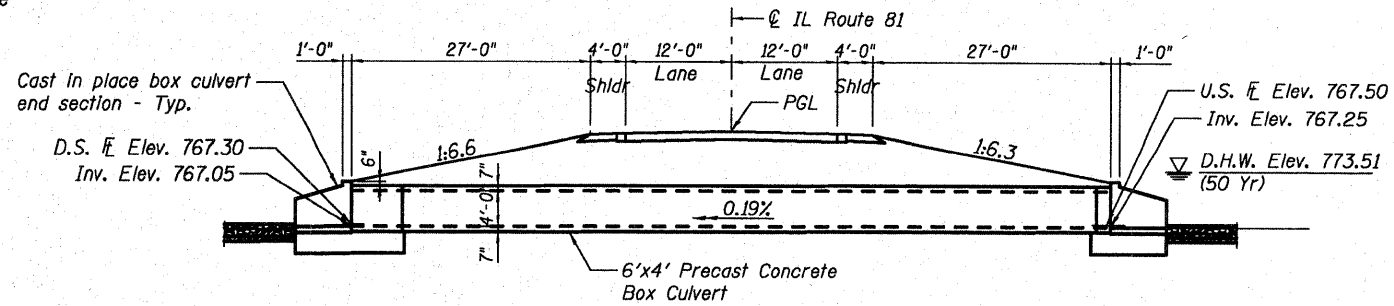
**BENCHMARKS**

Railroad spike in power pole at Sta. 778+46.68 Offset 33.39' Rt., Elev. 775.04

**EXISTING STRUCTURE**

S.N.-037-1059 is an existing 4' x 4' precast box culvert.  
Traffic will be staged during construction.  
No Salvage

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

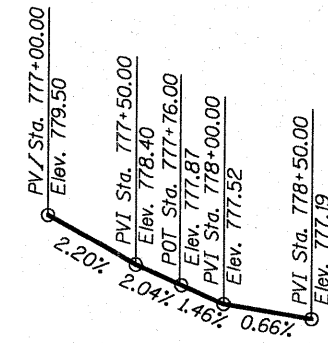


Note:  
Precast culvert sections at the ends of each barrel are to have exposed reinforcing bars to be tied into the cast in place portion.

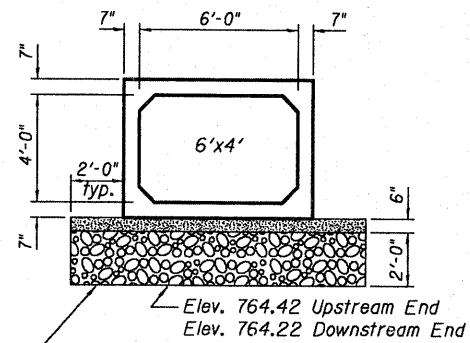
Lap Length = 2'-2"

**LONGITUDINAL SECTION**  
(Looking East)

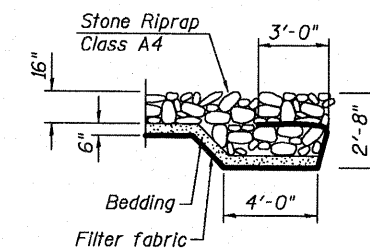
Note: Horizontal dimensions are at Rt. L's to C.Rdwy.



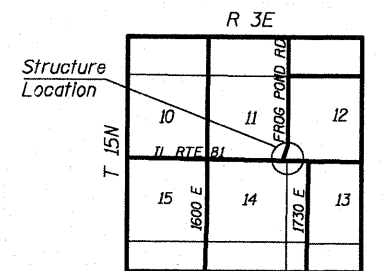
**PROFILE GRADE**  
(along C IL RTE 81)



**SECTION THRU PRECAST BARREL**



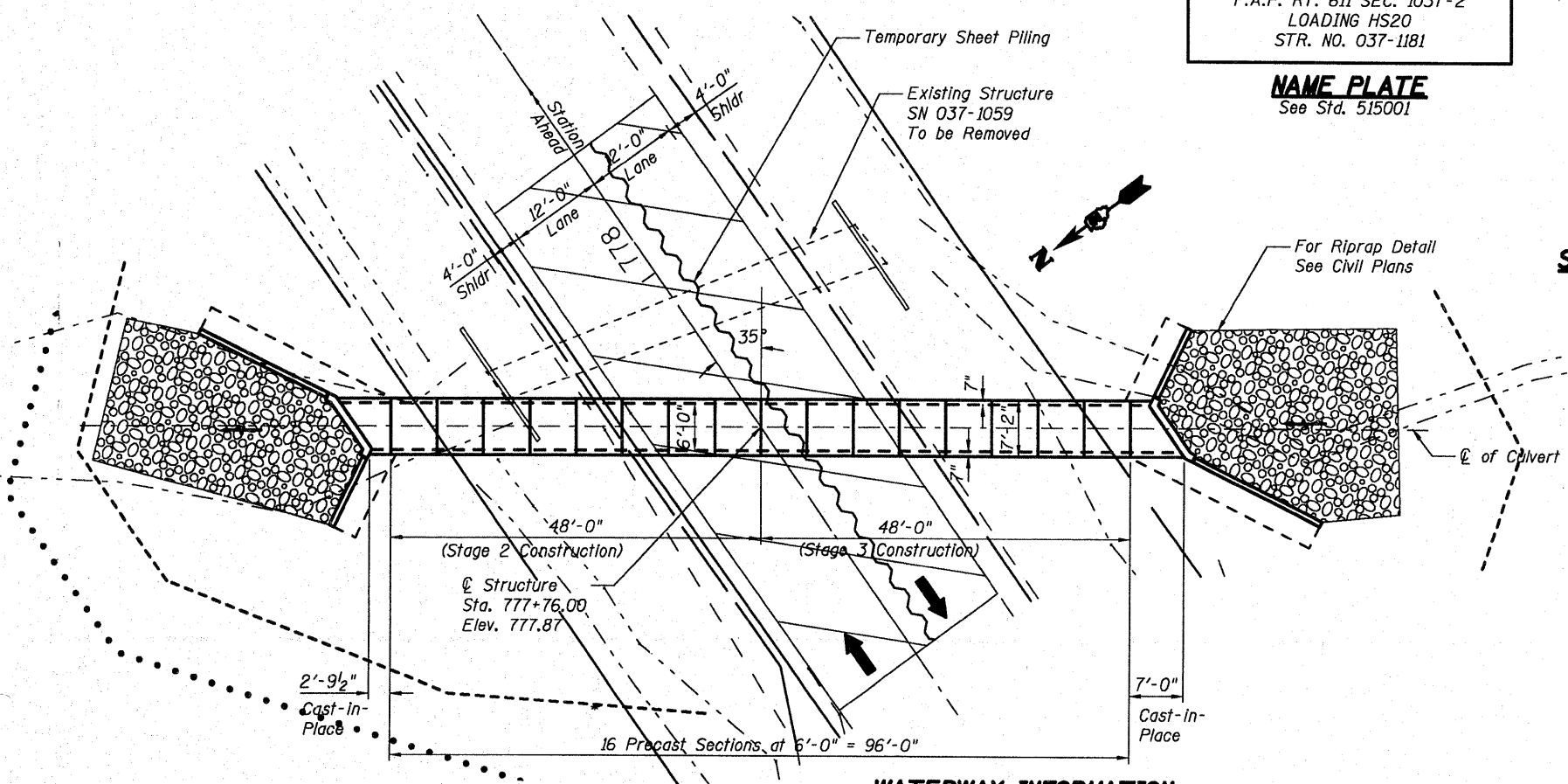
**STONE RIPRAP ANCHOR DETAIL**



**LOCATION SKETCH**

STATION 777+76.00  
BUILT 2009 BY  
STATE OF ILLINOIS  
F.A.P. RT. 611 SEC. 103T-2  
LOADING HS20  
STR. NO. 037-1181

**NAME PLATE**  
See Std. 515001



**WATERWAY INFORMATION**

Drainage Area = 108.0 acres  
Existing Low Grade Elevation: 777.12 ft. @ 778+69  
Proposed Low Grade Elevation: 777.12 ft. @ 778+69

Flood	Frequency Year	Discharge cfs	Headwater Elev. (ft)	
			Existing	Proposed
Ten-Year Design	10	159	775.19	772.19
Base	50	223	777.37	773.51
	100	253	777.49	774.43
OVT (E)	26	193	777.12	
OVT (P)	420	342		777.12

**INDEX OF SHEETS**

- S-1 General Plan
- S-2 End Section Details

**LOADING HS20-44**

Allow 50 #/sq.ft. for future wearing surface

**DESIGN SPECIFICATIONS**

2002 AASHTO "Standard Specifications for Highway Bridges" and AASHTO M259 - Precast Reinforced Concrete Box Sections

**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3,500 psi  
fy = 60,000 psi (reinf.)

**PRECAST UNITS**

f'c = 5,000 psi (minimum)  
fy = 65,000 psi (welded wire fabric)  
fy = 60,000 psi (reinforcement bars)

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Removal of Existing Structures	Each	1
Name Plates	Each	1
Box Culvert End Section No. 1	Each	2
Precast Concrete Box Culvert 6' x 4'	Foot	96

**GENERAL NOTES**

1. Reinforcement shall conform to the requirements of Illinois Modified ASTM A706.
2. All exposed edges shall have 3/4" chamfer.
3. This box culvert has a fill height > 2.0 feet. The precast concrete box culvert shall conform to the requirements of AASHTO M259.
4. Precast end sections are not allowed.
5. Remove existing structure including wings/headwalls.

*David L. Smoot*

David L. Smoot  
Date: 11/24/2008  
License Expires: 11/30/2010



**GENERAL PLAN**  
**IL RTE 81 OVER UN-NAMED**  
**TRIBUTARY TO GREEN RIVER**  
**F.A.P. ROUTE 611 - SECTION 103T-2**  
**HENRY COUNTY, STATION 777+76.00**  
**SN 037-1181**

DESIGNED - DLS	200
CHECKED - AWH	ENGINEER OF BRIDGE DESIGN
DRAWN - AWH	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED - DLS	

**RHA&A**  
Robert H. Anderson & Associates, Inc.  
Consulting Engineers  
License No. 184-005281

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
611	103T-2	HENRY	35	18
SN 037-1181			CONTRACT NO. 64C66	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				