

Benchmark:  
 BM 1: Railroad spike on the north face of powerpole at southwest corner of Charles J. Miller Road and Green Street (Barreville Road). Elevation = 805.79 (NAVD 88)  
 BM 2: Railroad spike on the west face of powerpole at southwest corner of Route 31 (Front Street) and Miller Road (Bull Valley Road). Elevation = 831.23 (NAVD 88)

Existing Structure:  
 Consists of a 83'-0" long, single 6' W x 3' H cell, cast in place concrete culvert.

Proposed Structure:  
 The Proposed Culvert will be constructed during Staged Construction, according to the Roadway Maintenance of Traffic plan.

**INDEX OF SHEETS**

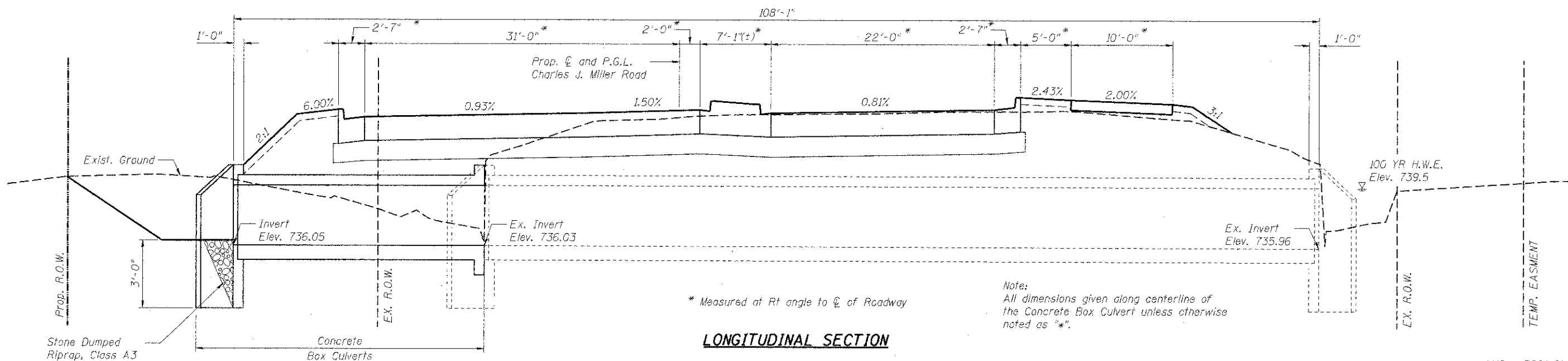
- SC-01 General Plan and Elevation
- SC-02 General Notes, Details and Bill of Materials
- SC-03 Culvert Extension Details

**LOADING HL-93**  
 Allow 50#/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**  
 2010 AASHTO LRFD Bridge Design Specifications

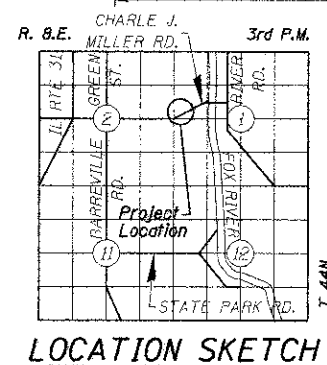
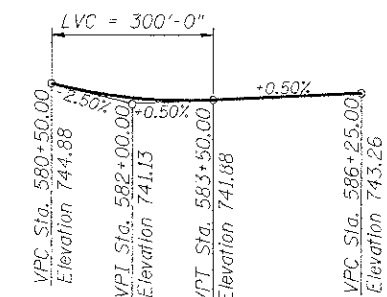
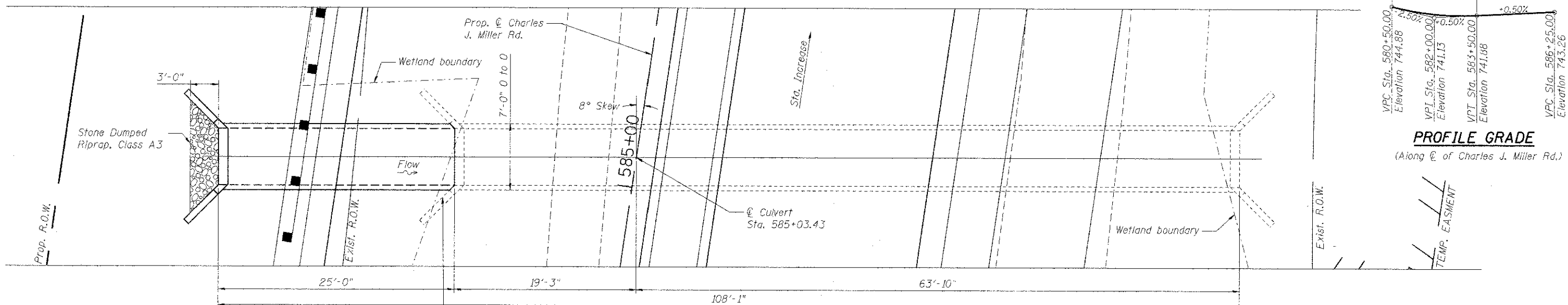
**DESIGN STRESSES**

**FIELD UNITS**  
 $f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 50,000$  psi (M270 Grade 50)



\* Measured at Rt angle to  $\phi$  of Roadway

Note:  
 All dimensions given along centerline of the Concrete Box Culvert unless otherwise noted as "\*".



Existing Name Plate to be removed and delivered to MCDOT Construction Manager

To the best of my knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current "AASHTO Standard Specifications for Highway Bridges".



Structural Engineer  
 HRGreen  
 Expires: 11/30/2012

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	D.S. Invert	U.S. Invert
	732.96	733.05

**GENERAL PLAN AND ELEVATION**  
**CHARLES J. MILLER ROAD BOX CULVERT**  
 FAU. RTE. 3860, SEC. 09-00372-00-PW  
 McHENRY COUNTY  
 STATION 585+03.43

DATE: 7/23/12

DESIGNED	JPG
CHECKED	RGD
DRAWN	WJH
CHECKED	RGD

SHEET NO. SC-1	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	TOTAL SHEET NO.
	3860	09-00372-00-PW	McHENRY	252	171
SC-3 SHEETS	CONTRACT NO.			63633	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

FILE NAME: 090717-09-05.dgn  
 PLOT DRIVER: pdfplot  
 PEN TABLE: standard.ctb