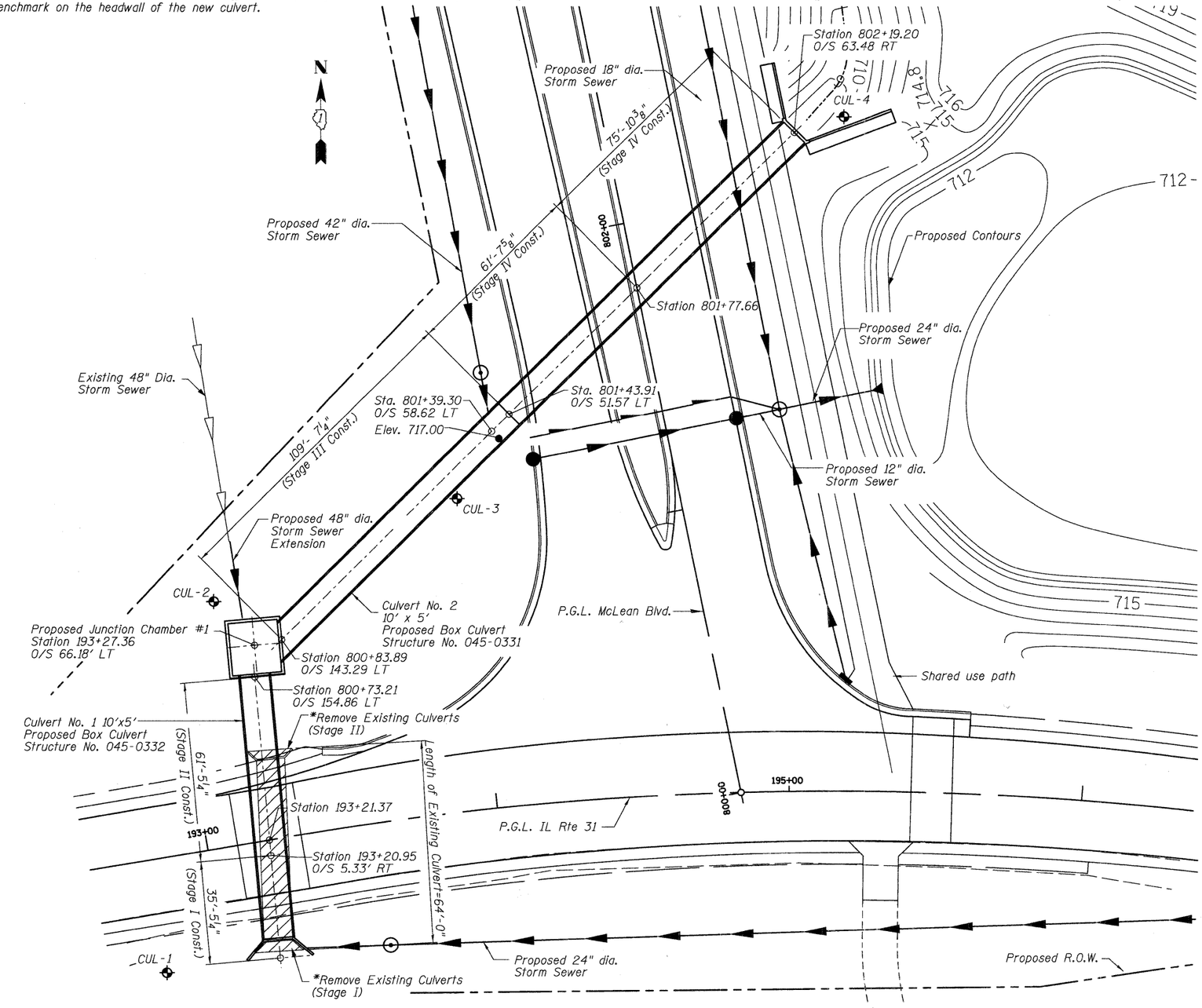
Benchmark RM-12:
A Standard US Geological Survey Disk set in the south headwall of a culvert located on State Route 31, about 130 feet west of McLean Boulevard. Elevation of 710.37 (NGVD of 1929) as shown on Firm Community Panel Number 170896 0040A, effective date March 1, 1982. (Also known as NGS-K19, RESET 1967). The Contractor shall use this benchmark to establish temporary control points as required and establish a new benchmark on the headwall of the new culvert.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



*Size of Existing Culvert: 3'Hx9'W

KEY PLAN

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-42 grade 60.

2. Backfill shall not be placed behind the walls of concrete culvert until the top slab is placed and cured. Backfill behind sidewalls shall be carried up simultaneously behind opposite side walls, and at no time shall the fill behind one sidewall be more than 2ft higher than behind the opposite wall.

3. Waterflow shall be maintained during the removal of the existing culvert and construction of the proposed culverts and junction chamber. The cost shall be included in the pay item "Remove Existing Culverts". Contractor will receive no additional compensation.

4. The Contractor shall be responsible for diverting the water flow from the construction area using a method meeting the approval of the Engineer.

5. The temporary Soil Retention System shown on the plans is for information only. It is the Contractor's responsibility to design and install a system that can safely support all lateral and vertical loads during the various construction phases to the satisfaction of the Engineer. The Contractor shall submit calculations and drawings prepared by a licensed Structural Engineer of Illinois for the proposed system to the Engineer for approval. The cost for the temporary Soil Retention System shall be included in the pay item "Remove Existing Culverts".

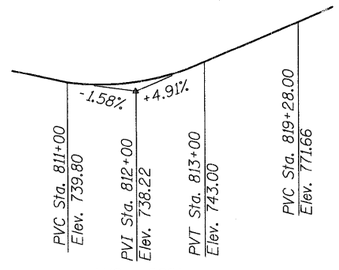
6. The cost for the temporary bulkhead shall be included in the unit bid price of "Concrete Box Culverts".

7. Pre-Fabricated Culverts are not permitted.

8. Rock Excavation shall conform to the requirements of the Standard Specifications Section 502.5. Large voids may be filled with Porous Granular Backfill, but only if approved by the Engineer. Otherwise any excess voids or over excavation into bedrock shall be filled with concrete.

9. Reinforcement bars designated (E) shall be Epoxy coated.

10. Broken stone deposits and filter fabric screens at the outside of drain holes shall be inculded in pay item "Concrete Box Culverts".



LVC = 200'

PROFILE GRADE
McLEAN BOULEVARD

DESIGN SPECIFICATIONS

2002 AASHTO LFD Specifications

DESIGN STRESSES

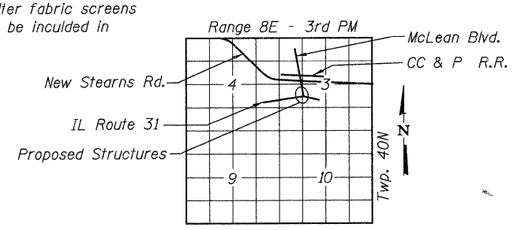
FIELD UNITS

f_y = 60,000 psi (Reinforcement)

f'_c = 3,500 psi

SEISMIC DATA

Seismic Performance Category A
Bedrock Acceleration Coefficient (A) = 0.037g
Site Coefficient (S) = 1.0



LOCATION SKETCH

LICENSED STRUCTURAL ENGINEER
GERALD E. KOYLASS
081-005264
STATE OF ILLINOIS

Gp 11/30/2010

LEGEND

Soil Boring Location

KEY PLAN
BOX CULVERTS AND JUNCTION CHAMBER
MCLEAN BOULEVARD AND IL ROUTE 31
SECTION 06-00214-02 BR
KANE COUNTY

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

McDonough Associates Inc.
Engineers / Architects
130 East Randolph Street
Chicago, Illinois 60601
(312) 946-8600

SHEET NO. 9C01	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BC09 SHEETS	361	06-00214-02-BR	KANE	219	119
			CONTRACT NO. 63073		
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		