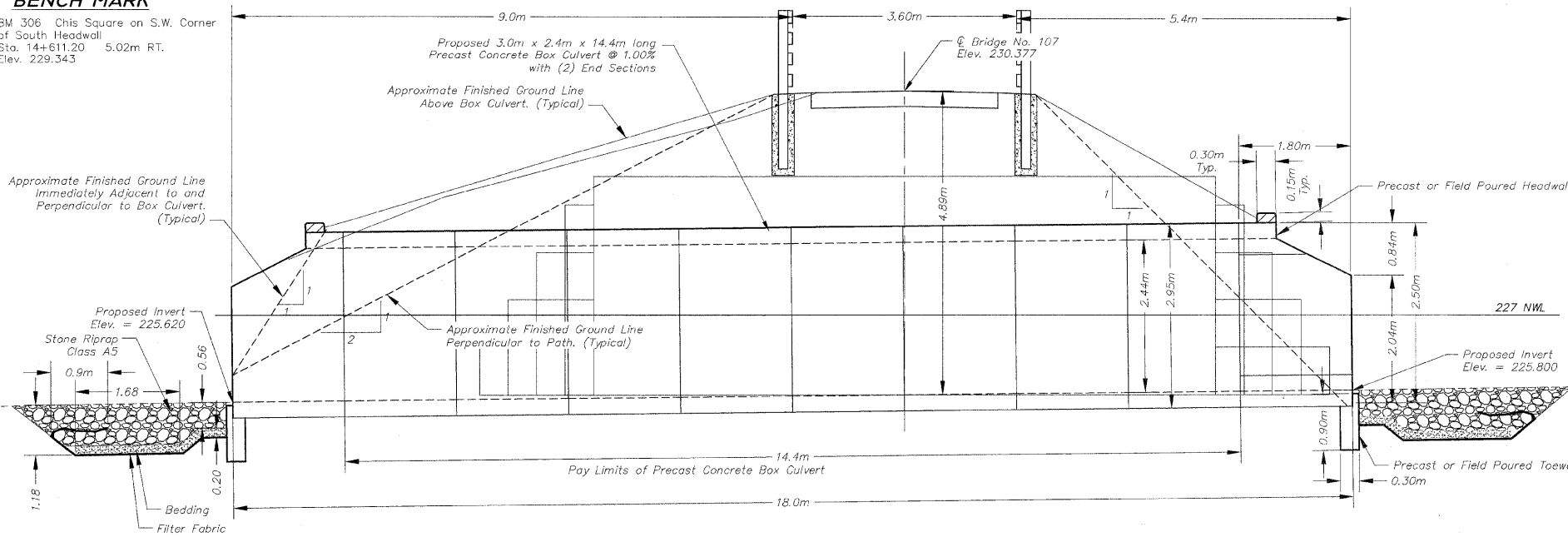


BENCH MARK

BM 306 Chis Square on S.W. Corner of South Headwall Sta. 14+611.20 Elev. 229.343
 5.02m RT.



LONGITUDINAL SECTION NOT TO SCALE
 (Looking West)

BILL OF MATERIAL - BRIDGE 107

ITEM	UNIT	QUANTITY
PRECAST CONC BOX CULVERT 3.0M X 2.4M	M	18
BOX CULVERT END SECTIONS	EA	2
FURNISHED EXCAVATION	CM	750
REMOVAL OF EXISTING STRUCTURE	EA	1
SEDIMENT CONTROL, SILT CURTAIN	EA	1
POROUS GRANULAR BACKFILL	CM	420
STONE RIPRAP, CLASS A5	SM	23
FILTER FABRIC	SM	200
QUARRY RUN GRANULAR EMBANKMENT	CM	86
STONE DUMPED RIPRAP, CLASS A5	SM	200
NAME PLATE, SPECIAL	EA	1
UNDERWATER STRUCTURE EXCAVATION PROTION L2	EA	1
MONODIRECTIONAL PRISMATIC BARRIER REFLECTORS	EA	12

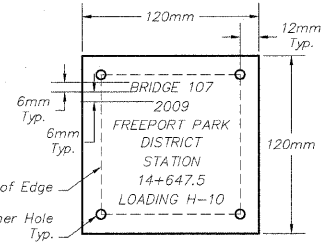


If the Material Encountered at the Plan Bottom Elevation is Found To Be Unsuitable, the Material Shall Be Removed Up To 1m Depth, and Replaced With Up To (86 CM) Quarry Run Granular Embankment, Compacted As Directed By the Engineer. Then (86 SM) Geotechnical Fabric Shall Be Placed Between Stone and Porous Granular Backfill in Accordance to Section 210. Additional Excavation Will not Be Paid for Separately But Shall Be Included in the Contract Unit Price for Quarry Run Granular Embankment.

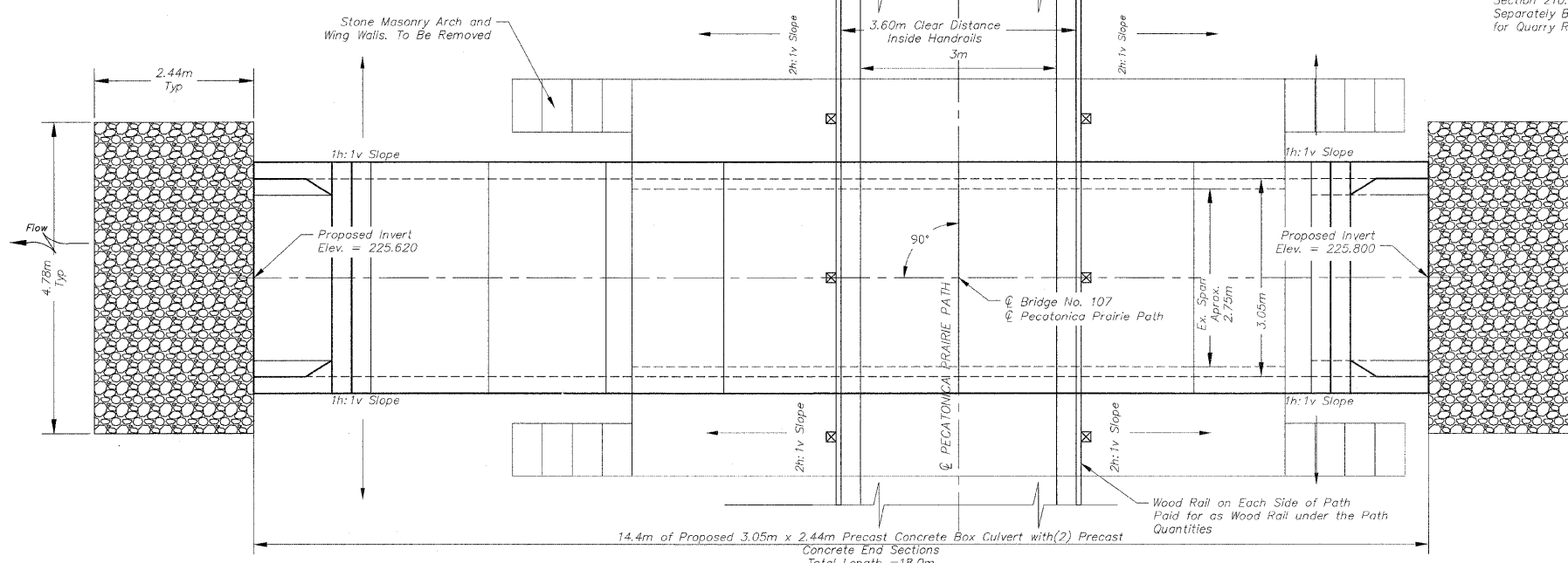
BRIDGE 107 NOTES

1. THE PRECAST CONCRETE BOX CULVERT BARREL SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C850 AND THE END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ARTICLES 1003.02 AND 1004.02 OF THE STANDARD SPECIFICATIONS, WITH THE EXCEPTION OF A GRADATION.
2. ALL TREE REMOVAL AND SELECTIVE BRUSH CLEARING SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER. TREE REMOVAL AND SELECTIVE CLEARING WILL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE FOR THE APPROPRIATE ITEM.
3. THE CONTRACTOR SHALL REMOVE THE PARTIALLY COLLAPSED EXISTING STONE ARCH TO A MINIMUM DEPTH OF 1.5m BELOW FINISHED GRADE. THE CONTRACTOR SHALL REMOVE EXISTING WING WALLS. THIS WORK WILL BE PAID AT THE CONTRACT UNIT PRICE FOR REMOVE EXISTING STRUCTURE.
4. PRECAST CONCRETE BOX CULVERT SECTIONS AND BOX CULVERT END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 540.06 OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE REQUIREMENTS OF AASHTO M273M.
5. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENT OF AASHTO M31M, M42M OR M53M GRADE #20.
6. LIFTING HOLES SHALL BE FILLED WITH CONCRETE PLUGS AND MASTIC AFTER BOX SECTIONS ARE IN PLACE.
7. BOX CULVERT SECTIONS AND END SECTIONS SHALL BE PRECAST, CAST-IN-PLACE CONCRETE ALTERNATIVE FOR BOX CULVERT SECTIONS AND END SECTIONS IS NOT ALLOWED. HEADWALL AND TOEWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE.
8. THE EXCAVATION AND BACKFILLING FOR PRECAST CONCRETE BOX CULVERT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 502 OF THE STANDARD SPECIFICATIONS EXCEPT A LAYER OF POROUS GRANULAR BACKFILL, AT LEAST 457mm(18") IN THICKNESS, SHALL BE PLACED BELOW THE ELEVATION OF THE BOTTOM OF THE BOX. THE POROUS GRANULAR BACKFILL SHALL BE PLACED TO EXTEND AT LEAST 60mm(2") EACH SIDE OF THE BOX. THE PRECAST CONCRETE BOX CULVERT SHALL BE LAID IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ARTICLE 542.04 (d) OF THE IDOT STANDARD SPECIFICATIONS. STRUCTURE EXCAVATION WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED WITH THE COST OF REMOVING THE EXISTING STRUCTURE.
9. SHOP DRAWINGS FOR THE PRECAST CONCRETE BOX CULVERT SECTIONS AND THE END SECTION SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 1042.03 (b) OF THE IDOT STANDARD SPECIFICATIONS.
10. THE PRECAST CONCRETE BOX CULVERT EXCLUDING END SECTIONS WILL BE MEASURED AND PAID PER METER FOR PRECAST CONCRETE BOX CULVERT, OF THE SIZE SPECIFIED, AND INCLUDES POROUS GRANULAR BACKFILL EXCEPT EXCAVATION OF ROCK AND/OR UNSTABLE OR UNSUITABLE MATERIAL BELOW BEDDING GRADE.
11. THE PRECAST CONCRETE BOX CULVERT END SECTION WILL BE MEASURED ON AN EACH BASIS. THE END SECTIONS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR BOX CULVERT END SECTIONS, OF THE CULVERT NUMBER SPECIFIED, AND INCLUDE EXCAVATION, TOEWALL AND HEADWALL.
12. CONTRACTOR SHALL FURNISH AND INSTALL A BRASS NAME PLATE IN ACCORDANCE WITH SECTION 515 OF THE IDOT STANDARD SPECIFICATIONS EXCEPT THAT IT SHALL BE INSTALLED WITH FOUR (4) TAMPER RESISTANT SCREWS TO THE TOP TIMBER RAIL ON THE RIGHT-HAND SIDE ABOVE THE CULVERT WHILE LOOKING IN THE DIRECTION OF INCREASING STATIONING. THE PLATE SHALL BE MADE OF SOLID BRASS 3MM THICK WITH IMPRINTED STAMP LETTERING 6MM HIGH. THIS ITEM WILL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE FOR NAME PLATES.
13. LAYOUT OF THE RIPRAP AND SLOPE PROTECTION SYSTEM MAY BE VARIED TO SUIT GROUND CONDITIONS IN THE FIELD OR AS DIRECTED BY THE ENGINEER. REFER TO PLAN AND PROFILE SHEET FOR APPROXIMATE PLACEMENT LOCATIONS.

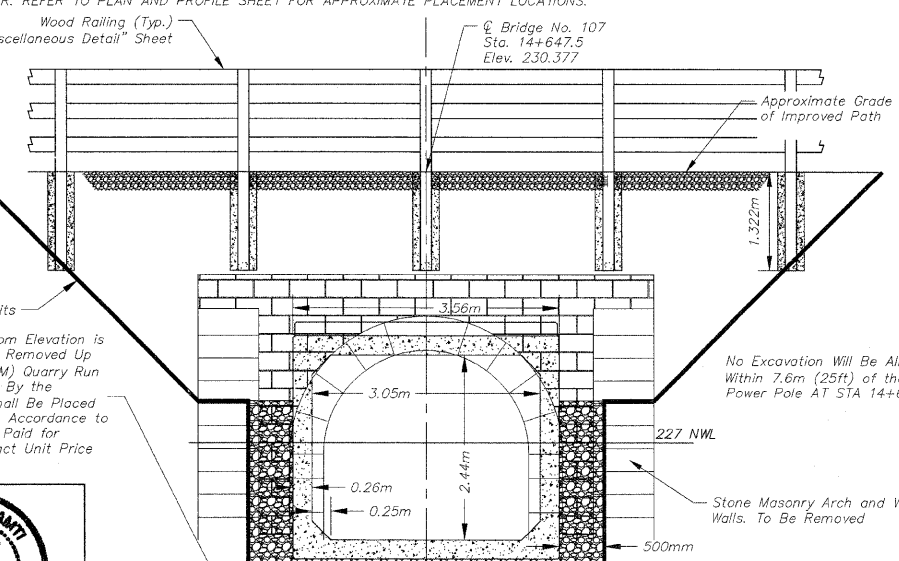
Final Grading Note:
 Provide Furnished Excavation Adjacent to the Path and the Box Culvert. Transition 2:1 Slope Along Path to Uniformly Blend with 1:1 Slope at Culvert End Sections (Typical). This Work shall be Paid for at the Contract Unit Price for Furnished Excavation - Aprox. 20 cubic meters per Quadrant. Porous Granular Backfill Material Shall not be Exposed. Disturbed Areas Adjacent to the End Sections Shall be Protected with Erosion Control Blanket as Directed by the Engineer.



NAME PLATE

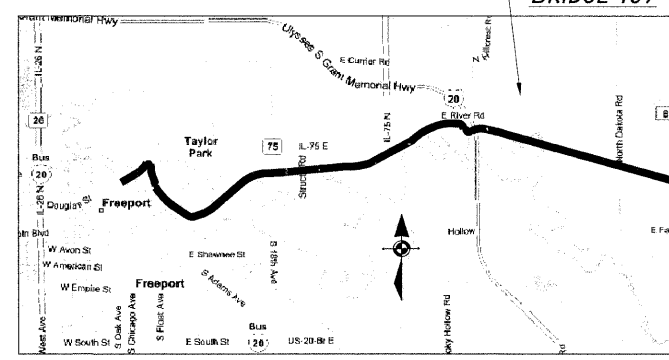
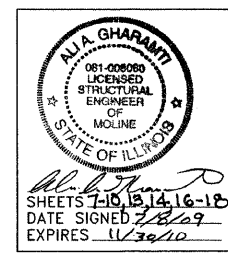


PLAN PLAN NOT TO SCALE



DESIGN LOADING
 MS9 (H-10)
 Design Fill Height > 610mm

DESIGN STRESSES
 $f_c = 35 \text{ MPa}$ (PRECAST)
 $f_c = 24 \text{ MPa}$ (FIELD POURED)
 Reinforcing $f_y = 450 \text{ MPa}$ (WELDED WIRE FABRIC)
 Reinforcing $f_y = 420 \text{ MPa}$ (FIELD POURED)
 Fasteners $f_y = 248 \text{ MPa}$



LOCATION SKETCH

DESIGN SPECIFICATIONS
 2002 AASHTO Standard Specifications - 17th Edition

SEISMIC DATA
 Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (4) = 3.25%
 Site Coefficient(s) = 1.0

GENERAL PLAN & ELEVATION OVER A TRIBUTARY DITCH TO THE PECATONICA RIVER SECTION 09-P4000-00-BT STEPHENSON COUNTY STATION 14+647.5

REVISIONS	
ITEM	DATE

PLOTTING SCALE:	1 : 1
DRAWN BY:	REK
CHECKED BY:	
DATE:	JUNE, 2009

McClure
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BRIDGE NO. 107 STA. 14+647.5
 PECATONICA PRAIRIE PATH
 STEPHENSON COUNTY SECTION 09-P4000-00-BT
 FILE NAME: G:\98-057 PECPATH\Stephenson\DESIGN\DRAWINGS\BRIDGE 107.dwg JOB NUMBER: 04-28-98-037

SHEET NO.
16 OF 26