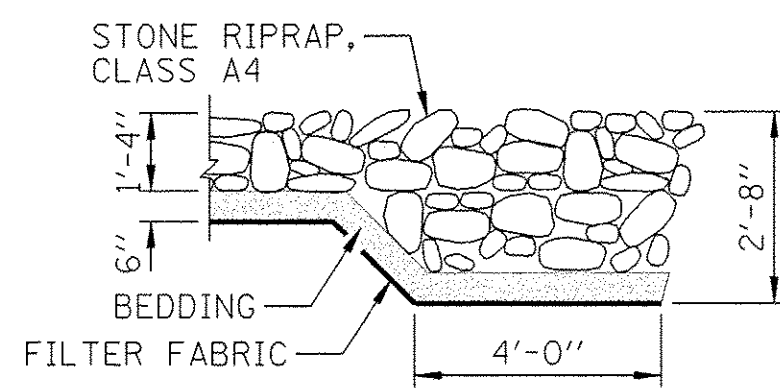
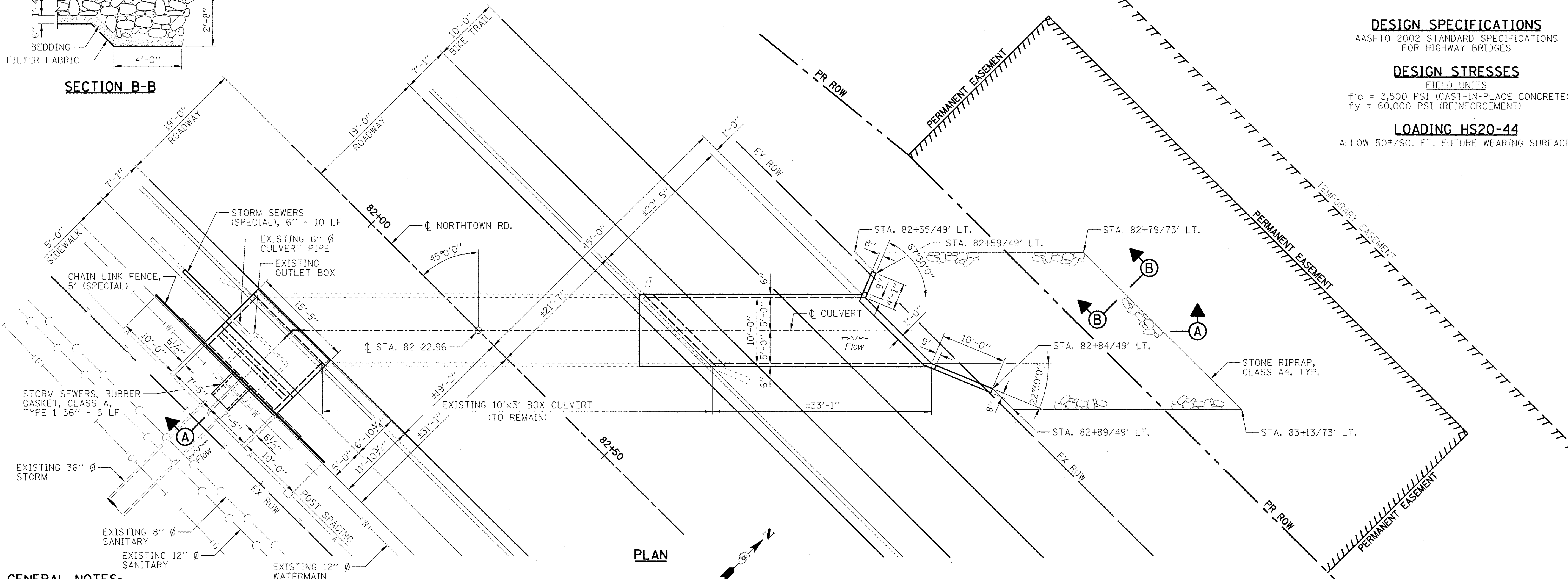


LONGITUDINAL SECTION (A-A)

NOTE: HORIZONTAL DIMENSIONS SHOWN AT RIGHT ANGLES TO ROADWAY.



SECTION B-B



PLAN

GENERAL NOTES:

- 1.) PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE AND PIPING HAVE BEEN TAKEN FROM LIMITED FIELD MEASUREMENTS AND FROM EXISTING PLANS AND ARE SUBJECT TO VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION OR FOR A CHANGE IN THE SCOPE OF THE WORK.
- 2.) IF DAMAGE IS DONE TO EXISTING OR NEW STRUCTURES DURING CONSTRUCTION, THEY SHALL BE REPLACED OR REPAIRED IN A SATISFACTORY MANNER BY THE CONTRACTOR AT HIS EXPENSE.
- 3.) STRUCTURAL SHEETS SHALL BE COORDINATED WITH ALL OTHER SHEETS FOR PIPE SIZES AND LOCATIONS.
- 4.) LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND PIPING, CONDUITS, STRUCTURES, ETC., WHEN CROSSED BY PROPOSED CONSTRUCTION SHALL BE FIELD VERIFIED BY EXCAVATION (AS NECESSARY) BEFORE STARTING CONSTRUCTION OF NEW FACILITIES.
- 5.) THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING FOR EXCAVATIONS AS REQUIRED BY OSHA AND ALL APPLICABLE BUILDING CODES. THE CONTRACTOR IS RESPONSIBLE FOR THE ADEQUACY OF TEMPORARY SHORING AND BRACING FOR BUILDING AND EARTH LOADS.
- 6.) CONTRACTOR TO FIELD LOCATE ALL UTILITIES BEFORE STARTING CONSTRUCTION.
- 7.) THE PAY ITEM, "POROUS GRANULAR EMBANKMENT", SHALL INCLUDE THE PLACEMENT OF A 1'-6" DEPTH OF #3 OVERSIZE ROCK, CA-1 1" TO 3" SIZE, TOPPED WITH A 6" DEPTH OF CA-7 IN THE EXCAVATION FROM "REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL". THE VOLUME FOR THESE ITEMS ARE ASSUMED TO BE UNDER THE JUNCTION STRUCTURE AND CULVERT EXTENSION FOR A DEPTH OF 2'-0" BELOW THE BOTTOM ELEVATION OF THE BOTTOM SLAB AND FOR A WIDTH 2'-0" OUTSIDE OF EACH OUTSIDE WALL. DEPENDING ON SOIL CONDITIONS ENCOUNTERED DURING EXCAVATION, THE AMOUNT OF BOTH "REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL" AND "POROUS GRANULAR EMBANKMENT" MAY CHANGE AS DETERMINED BY THE RESIDENT ENGINEER.

- 8.) IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DIVERT THE WATER FLOW DURING CONSTRUCTION IN ORDER TO KEEP THE CONSTRUCTION AREAS FREE OF WATER. THE METHOD OF WATER DIVERSION SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AND THE COST SHALL BE INCLUDED WITH THE COST OF "CONCRETE BOX CULVERTS".
- 9.) IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP ALL STRUCTURAL EXCAVATIONS DEWATERED DURING CONSTRUCTION TO AVOID BUOYANCY AND DETERIORATION OF THE EXCAVATION.
- 10.) THE CONCRETE STRENGTH, f'_c , SHALL = 4000 PSI AT 28 DAYS.
- 11.) REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60. THE CONCRETE COVER OVER REINFORCEMENT SHALL BE 2" CLEAR FOR CONCRETE CAST AGAINST FORMS, AND 3" CLEAR FOR CONCRETE CAST AGAINST EARTH, UNLESS OTHERWISE SHOWN. SPACING OF REINFORCEMENT IS MEASURED FROM CENTERLINE OF BARS. THE YIELD STRENGTH OF THE REINFORCEMENT SHALL BE 60,000 PSI.
- 12.) ALL REINFORCEMENT SHALL BE PLACED ON CHAIRS.
- 13.) CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2012 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
- 14.) CONTRACTOR TO FIELD LOCATE OUTLET FOR 6" FIELD TILE BEFORE STARTING CONSTRUCTION.

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THIS BOX 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 REQUIREMENTS OF THE CURRENT 'AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.'



Mark S. Wylie Date 1/18/13
 MARK S. WYLIE
 ILLINOIS STRUCTURAL ENGINEER
 No. 081-005002
 Exp. Date 11/30/14

EXISTING STRUCTURE: 36" CONCRETE PIPE CONNECTS TO OUTLET BOX OF APPROXIMATE DIMENSIONS: 8" WALLS, HEADWALL AND BOTTOM SLAB; INSIDE LENGTH OF 8'-0" AND WIDTH OF 6'-0". APPROXIMATELY 3'-7" RIPRAP BETWEEN OUTLET BOX AND DOWNSTREAM CULVERT. A 6" DIAMETER OUTLET TILE PROTRUDES INTO THE OUTLET BOX AT THE SOUTHWEST CORNER.

EXISTING 10'x3' BOX CULVERT HAS APPROXIMATE BARREL DIMENSIONS: 9 1/2" TOP SLAB; 10 1/2" BOTTOM SLAB; 6" SIDEWALLS. BOX CULVERT IS AT A 45° SKEW WITH C OF NORTHTOWN ROAD. WING WALLS ARE 8" THICK AT LENGTHS 3'-0" & 6'-6" AND SKEWED AT 67°30' AND 22°30' RESPECTIVELY.

INDEX OF SHEETS

- C1 GENERAL PLAN AND ELEVATION
- C2 REMOVAL PLAN, BILL OF MATERIAL AND DETAILS
- C3 CULVERT EXTENSION PLANS
- C4 CULVERT EXTENSION SECTIONS AND ELEVATIONS
- C5 JUNCTION STRUCTURE TOP & BOTTOM SLABS, AND ELEVATIONS
- C6 JUNCTION STRUCTURE PLAN AND SECTIONS
- C7 EXISTING PLANS

DESIGN SPECIFICATIONS

AASHTO 2002 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES

DESIGN STRESSES

FIELD UNITS
 f'_c = 3,500 PSI (CAST-IN-PLACE CONCRETE)
 f_y = 60,000 PSI (REINFORCEMENT)

LOADING HS20-44

ALLOW 50#/SQ. FT. FUTURE WEARING SURFACE.



DESIGNED - TCR	REVISION
CHECKED - MSW	REVISION
DRAWN - DJM	REVISION
CHECKED - MSW	REVISION

DATE - 01/18/13

TOWN OF NORMAL

GENERAL PLAN AND ELEVATION

SHEET NO. C1 OF 7 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6375	00-00206-00-RP	MCCLEAN	129	85
CONTRACT NO. 91479				

ILLINOIS FED. AID PROJECT