

NOTE:
 DIMENSIONS ARE AT RIGHT ANGLES
 TO ϕ ROADWAY UNLESS NOTED
 OTHERWISE.

BENCH MARK

EXISTING STRUCTURE
 NONE

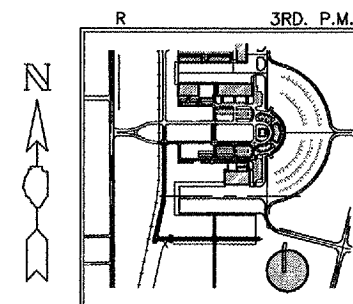
PROPOSED STRUCTURE

DOUBLE 10' x 4' PRECAST BOX
 CULVERT WITH CAST-IN-PLACE
 END SECTIONS.

DUPAGE TERMINAL OVERFLOW
 DITCH CROSSING
 BUILT 2006 BY
 DUPAGE AIRPORT AUTHORITY
 STATION 739+50.00
 STR. NO. 101 LOADING HS 20

NAME PLATE

IDOT STANDARD
 515001-02



LOCATION MAP

DESIGN SPECIFICATIONS
 2002 AASHTO "STANDARD SPECIFICATIONS
 FOR HIGHWAY BRIDGES" AND INTERIMS
 THROUGH 2006.

PRECAST UNITS

$f'_c = 5,000$ psi
 $f_y = 65,000$ psi
 (WELDED WIRE FABRIC)

LOADING HS 20

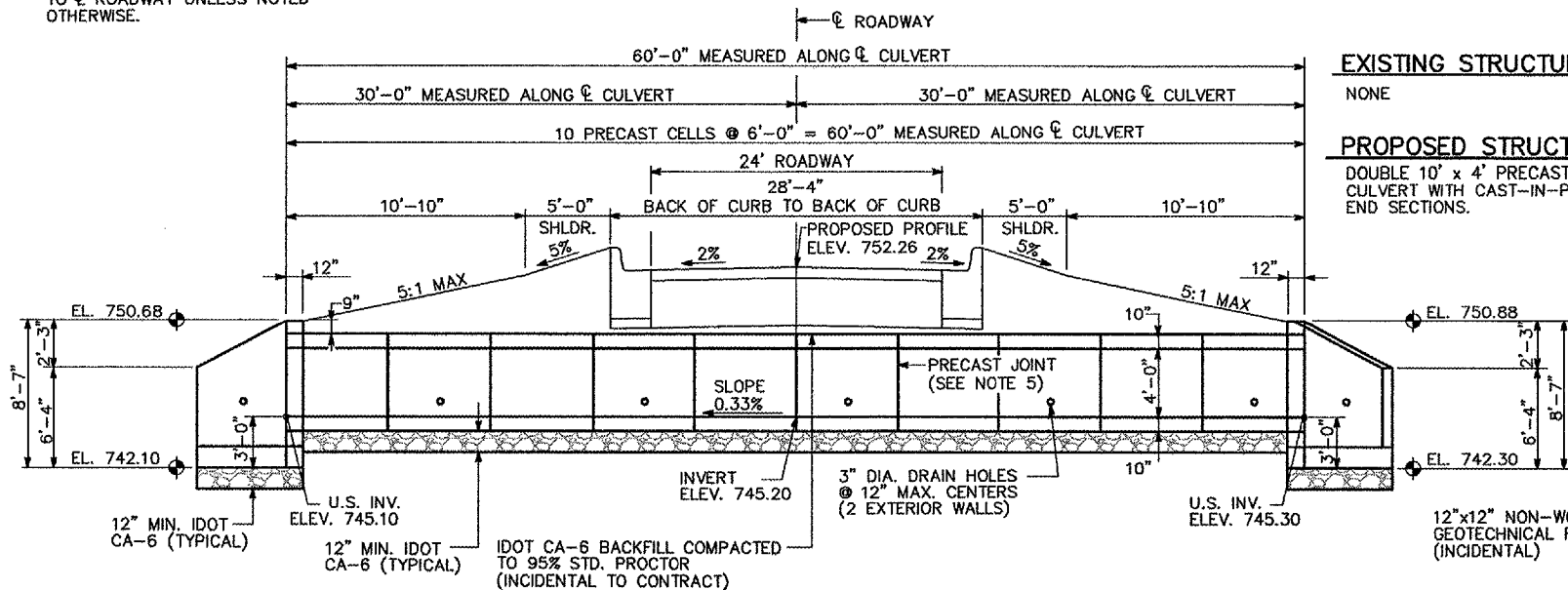
ALLOW 50 psf FUTURE
 WEARING SURFACE

DESIGN STRESSES

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (REINFORCEMENT)
 ALLOWABLE SOIL PRESSURE = 1500 PSF

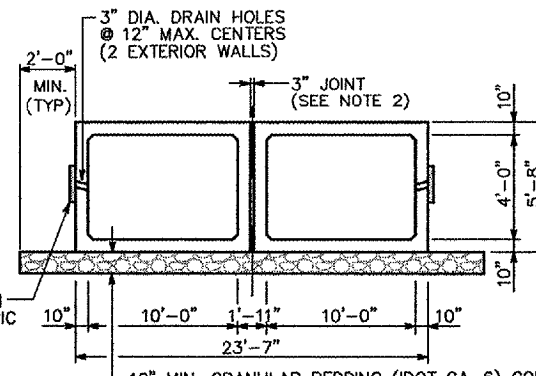
SEISMIC DATA

SEISMIC PERFORMANCE CATEGORY (SPC) = A
 BEDROCK ACCELERATION COEFFICIENT (A) = 0.04
 SITE COEFFICIENT (S) = 1.5



HALF LONG. SECTION

HALF ELEVATION



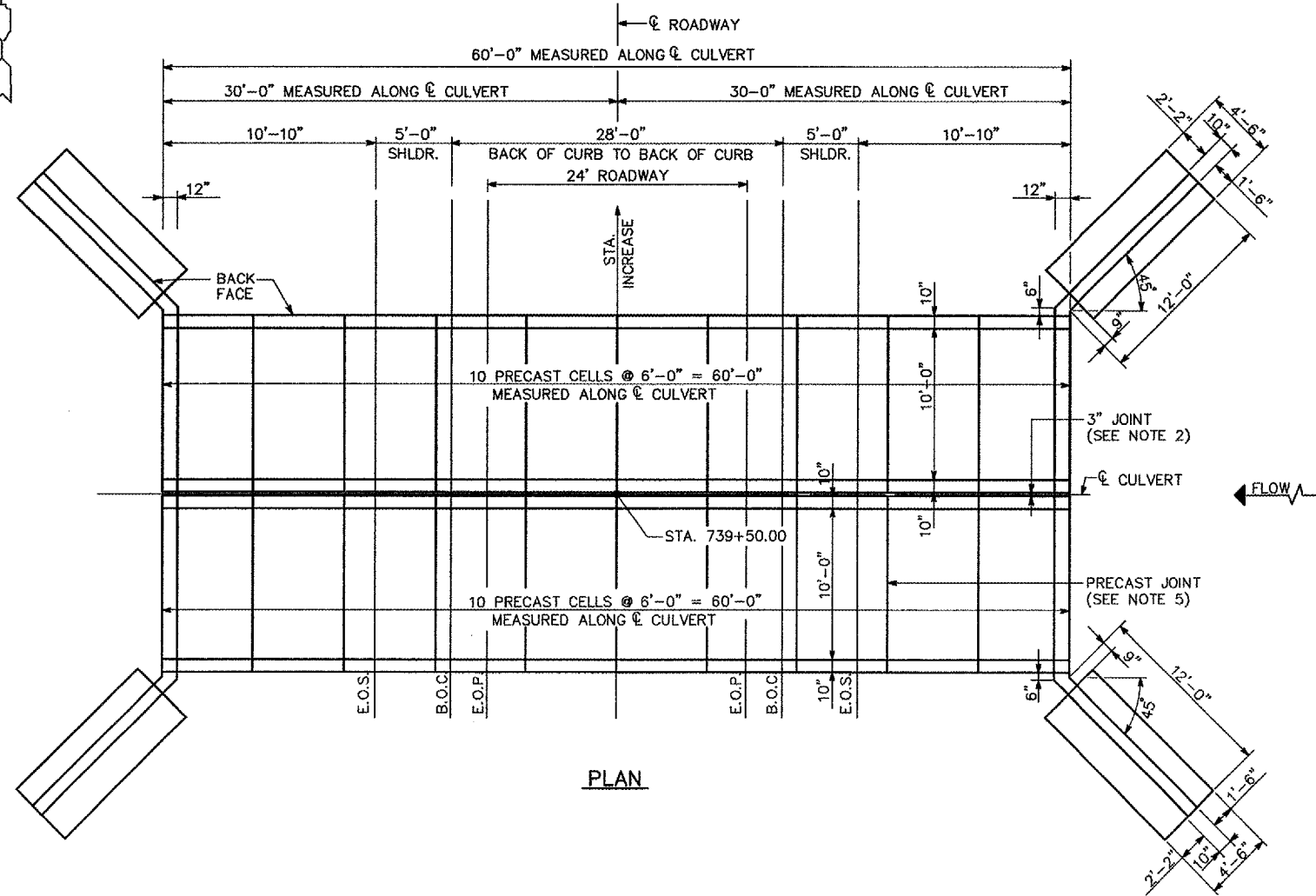
SECTION THRU PRECAST BARREL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
PRECAST CONCRETE BOX CULVERT 10' x 4'	FOOT	120
BOX CULVERT END SECTIONS	EACH	2

NOTES

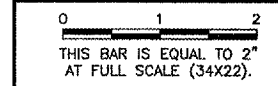
- ALL PRECAST BOX CULVERTS SHALL BE DESIGNED IN ACCORDANCE WITH AASHTO M273, HS-20 LOADING.
- PRIOR TO BACKFILLING, FILL SOLID THE 3" JOINT BETWEEN BARRELS WITH CONCRETE (610).
- GROUT ALL LIFTING HOLES BEFORE BACKFILLING, ALLOW GROUT TO ACHIEVE MINIMUM STRENGTH BEFORE BACKFILLING.
- DURING BACKFILL PLACEMENT, DO NOT PERMIT A DIFFERENCE IN FILL ELEVATION ON THE WALLS OF THE CULVERT IN EXCESS OF 2 FEET. DURING COMPACTION, DO NOT ALLOW WHEELS OF ROLLERS TO COME CLOSER THAN ONE FOOT TO THE FACE OF THE STRUCTURE.
- JOINT MATERIAL BETWEEN PRECAST SECTIONS SHALL CONFORM TO SECTION 1056 OR SECTION 1055 OF IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2002.
- ANY ACCUMULATED DEBRIS WITHIN THE PROJECT AS A RESULT OF THE IMPROVEMENT SHALL BE REMOVED AND DISPOSED OF SATISFACTORILY BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF DRAINAGE AT ALL TIMES DURING THE CONSTRUCTION OF THE CULVERT. THE METHODS USED BY THE CONTRACTOR SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST FOR THIS REQUIREMENT WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- THE JOINTS SHALL BE EXTERNALLY SEALED ON ALL FOUR SIDES USING EITHER 13 INCH WIDE EXTERNAL SEALING BANDS CONFORMING TO SECTION 1057.01 OR 24" WIDE NONWOVEN GEOTECHNICAL FABRIC MEETING THE REQUIREMENTS OF SECTION 1080.01, IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, EXCEPT THE MINIMUM WEIGHT SHALL BE 4 OZ/SY. THE SEAL OR FABRIC SHALL, BE CENTERED OVER THE JOINT AND SECURED TO REMAIN IN PLACE DURING THE BACKFILLING OPERATION.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF THE AASHTO M31, M42 OR M53 GRADE 60.
- PRECAST END SECTIONS WILL NOT BE ALLOWED.
- BEDDING FOR THE BOX CULVERT AND END SECTIONS SHALL BE A MINIMUM OF 12" THICK AND SHALL CONFORM TO IDOT GRADATION CA-6.
- THE CONTRACT UNIT PER LINEAR FOOT FOR THE PRECAST CONCRETE BOX CULVERT SHALL BE FULL PAYMENT FOR FURNISHING AND INSTALLING ALL MATERIALS INCLUDING BUT NOT LIMITED TO CONCRETE FILLER, GROUT, JOINT MATERIAL, GEOTECHNICAL FABRIC AND FOR ALL EXCAVATION EARTH BACKFILL, GRANULAR CRADLE, SELECT GRANULAR BACKFILL PLACEMENT, COMPACTION AND SURFACE GRADING AND FOR ALL LABOR, EQUIPMENT AND TOOLS NECESSARY TO COMPLETE THIS ITEM OF THE SIZE AND TYPE TO THE PLANS AND THE SATISFACTION OF THE ENGINEER.



PLAN

REVISIONS

NUMBER	BY	DATE



**DUPAGE AIRPORT
 WEST CHICAGO, ILLINOIS
 ROADWAY IMPROVEMENTS FOR SOUTH FLIGHT CENTER
 DEVELOPMENT - PHASE 1**

BOX CULVERT PLAN AND ELEVATION

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