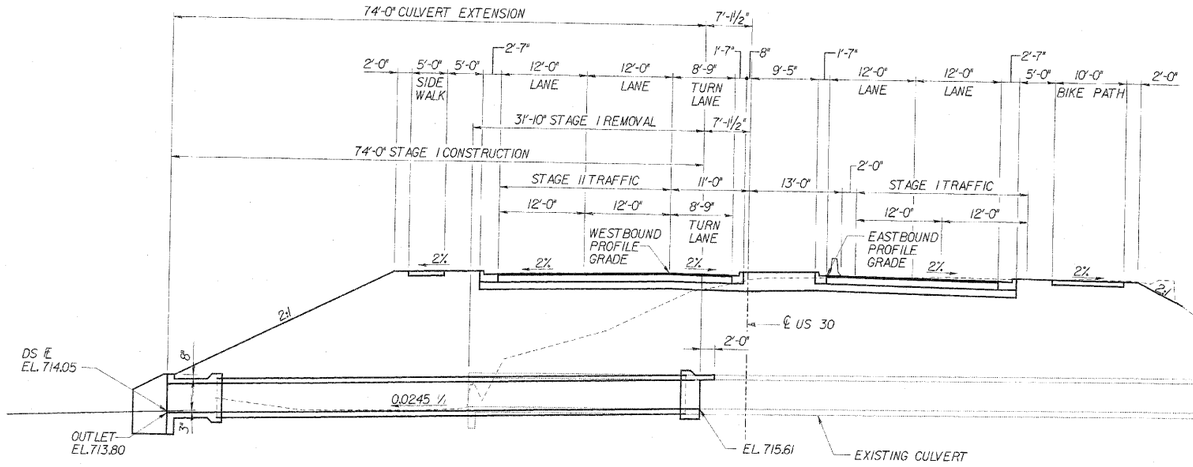
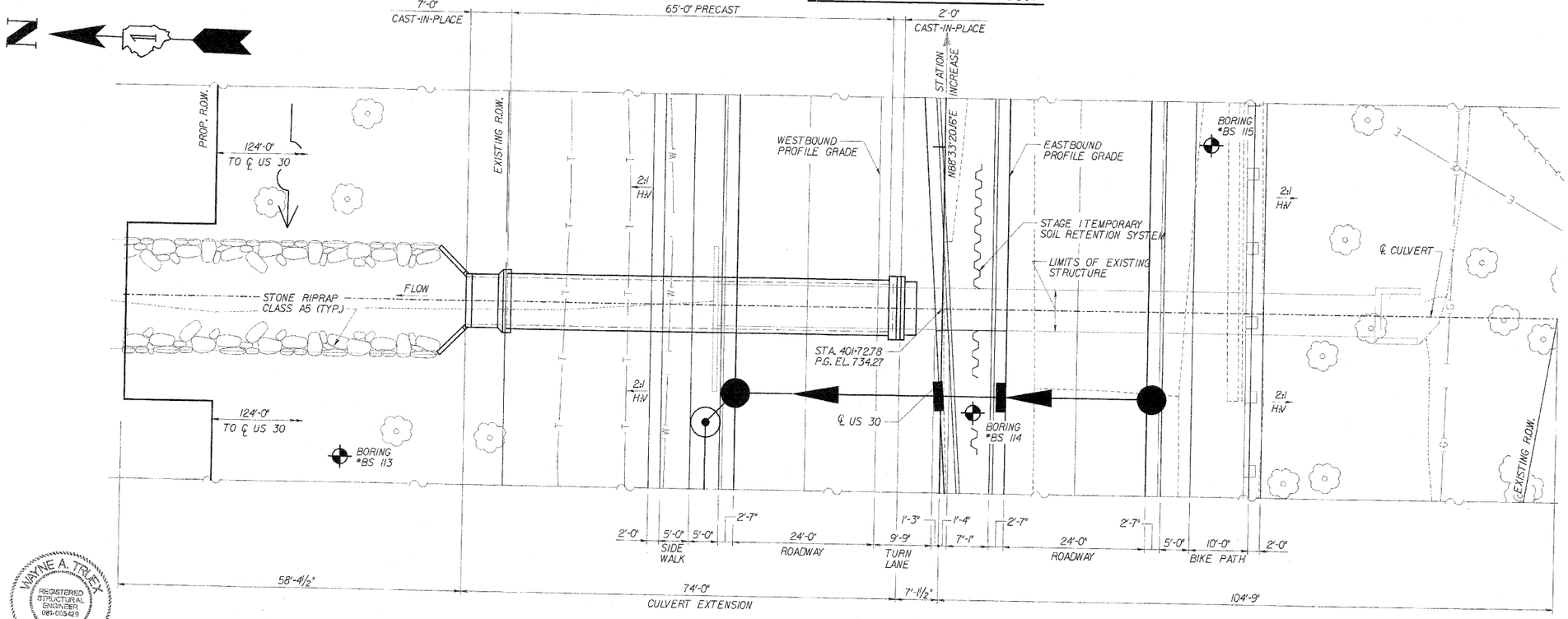
BENCH MARK: BM 243
STA. 395+19.378, 51.13' RT., ELEV. 732.295
SET 5/8" DIAMETER IRON ROD ONE FOOT +/- SOUTH OF SOUTHERLY STONE SHOULDER OF ROUTE 30, +/- HALFWAY BETWEEN ELM STREET AND LOCUST STREET.

EXISTING STRUCTURE:
SINGLE 8'-0" X 4'-0" X 112'-0" CONCRETE BOX CULVERT
PROPOSED IMPROVEMENTS:
APPROXIMATELY 31'-10" OF THE NORTH END OF EXISTING STRUCTURE TO BE REMOVED AND EXTENDED 74'-0" WITH A SINGLE 8'-0" X 4'-0" PRECAST CONCRETE BOX CULVERT, WITH CAST-IN-PLACE END SECTIONS, MAINTAINING TWO LANES OF TRAFFIC.

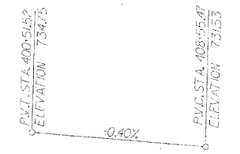
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LONGITUDINAL SECTION



PLAN



PROFILE GRADE
@ P.G. WBD. & EBD.

WATERWAY INFORMATION

DRAINAGE AREA (SQ.MI) = 0.18 | LOW GRADE ELEV.(FEET) EXIST = 733.09 @ STA. 402+15; PROPOSED = 733.21 @ STA. 401+72 | MAX. RECORDED H.W.E =

FLOOD	FREQ. YR.	DISCHARGE C.F.S.	WATERWAY OPENING EXISTING (square feet)	WATERWAY OPENING PROPOSED (square feet)	NATURAL H.W.E.	CREATED HEAD EXISTING (feet)	CREATED HEAD PROPOSED (feet)	HEADWATER ELEVATION EXISTING	HEADWATER ELEVATION PROPOSED
	10	65	13.93	13.93	718.13	0.47	0.47	718.60	718.60
DESIGN	50	98	16.52	16.52	718.50	0.89	0.89	719.39	719.39
BASE	100	112	17.50	17.50	718.64	1.07	1.07	719.71	719.71
MAX. CALC.	500	144	19.53	19.53	718.93	1.46	1.45	720.39	720.38
OVERTOPPING									

DESIGNED	ASP
CHECKED	CDS
DRAWN	LNB
CHECKED	ASP

WAYNE A. TRUEX
REGISTERED STRUCTURAL ENGINEER
081-015429
STATE OF ILLINOIS
7-6-10
expires 11-30-10

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
STONE RIPRAP, CLASS A5	TON	120
FILTER FABRIC	SQ.YD.	125
REMOVAL OF EXISTING STRUCTURES NO.10	EACH	1
REINFORCEMENT BARS	POUND	2,300
NAME PLATES	EACH	1
EXPANSION BOLTS 3/4 INCH	EACH	16
CONCRETE BOX CULVERTS	CU.YD.	12.8
PRECAST CONCRETE BOX CULVERT 8' x 4'	FOOT	65
TEMPORARY SOIL RETENTION SYSTEM	SQ.FT.	610

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	12.35	672
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
11 SHEETS

* SECT. (12 & 13) WRS-3
* CONTRACT NO. 62479

DESIGN SPECIFICATIONS

AASHTO 2002 SPECIFICATIONS.

LOADING HS20-44

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

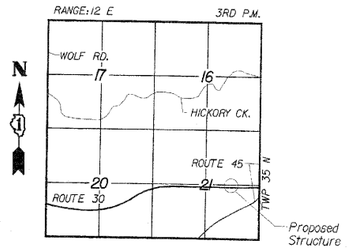
DESIGN STRESSES

FIELD UNITS
f'c = 3,500 PSI
fy = 60,000 PSI (REINFORCEMENT)

PRECAST UNITS
f'c = 5,000 PSI
fy = 60,000 PSI (REINFORCEMENT)

GENERAL NOTES

1. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR60. SEE SPECIAL PROVISIONS.
2. CAST-IN-PLACE BARREL SHALL BE POURED MONOLITHICALLY WITH THE WINGWALLS.
3. EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER.
4. IN ACCORDANCE WITH ARTICLE 540.04 OF THE STANDARD SPECIFICATIONS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DIVERT STREAM 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 "REMOVAL OF EXISTING STRUCTURES NO.10". CLEAN FILL (GRANULAR) MATERIAL WILL ONLY BE ALLOWED.
5. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M259 (DESIGN FILL HEIGHT= 15'-0")
6. A CANTILEVERED SHEET PILING DESIGN DOES NOT APPEAR FEASIBLE AND ADDITIONAL MEMBERS OR OTHER RETENTION SYSTEMS MAY BE NECESSARY. THE CONTRACTOR SHALL SUBMIT A TEMPORARY SOIL RETENTION SYSTEM DESIGN INCLUDING PLAN DETAILS AND CALCULATIONS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER.
7. THE CONTRACTOR SHALL PREPARE IN-STREAM WORK PLANS (ALL COFFERDAMS, WORK PADS, AND EROSION AND SEDIMENT CONTROL, ETC.) AND SUBMIT TO THE ENGINEER AND THE U.S. ARMY CORP OF ENGINEERS FOR REVIEW AND APPROVAL. THE CONTRACTOR SHOULD EXPECT TO HAVE TO ATTEND MEETINGS AT THE USACOE OFFICE TO DISCUSS THEIR WORK PLAN IN ORDER TO SECURE THEIR PERMIT. THE COST OF ALL IN-STREAM WORK ITEMS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.



LOCATION SKETCH

STATION 401+72.64
BUILT BY
STATE OF ILLINOIS
FAP 353 SECT. (12 & 13) WRS-3
LOADING HS20
STR. NO. 099-C018

NAME PLATE

NOTE: SEE STANDARD DRAWING 515001 FOR NAME PLATE DETAILS.

REVISIONS	
NAME	DATE

DLZ
DLZ Illinois, Inc.
85 W. Algonquin Rd. Ste. 220
Arlington Heights Il 60005

CULVERT 'H' GENERAL PLAN

U.S. ROUTE 30 (LINCOLN HIGHWAY)
F.A.P. 353 (U.S. 30)
SECTION (12 & 13) WRS-3
STATION 401+72.78
WILL COUNTY
STRUCTURE NUMBER 099-C018