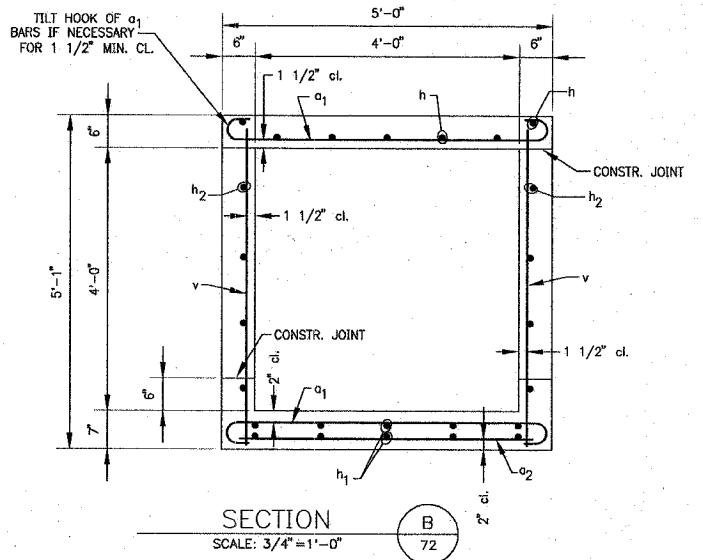
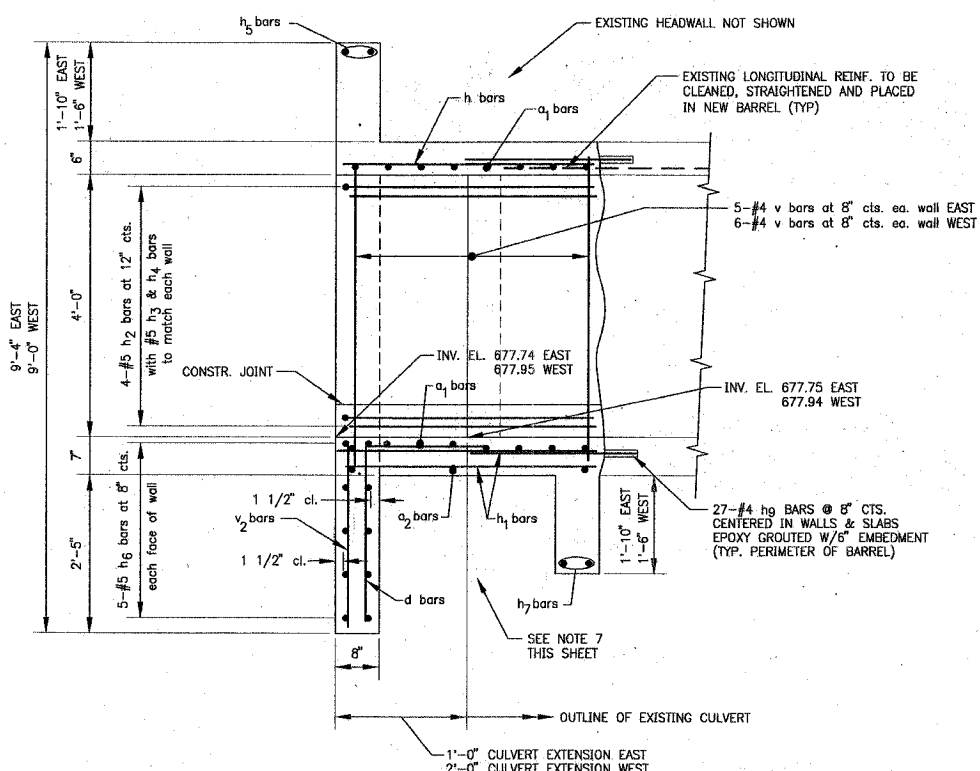
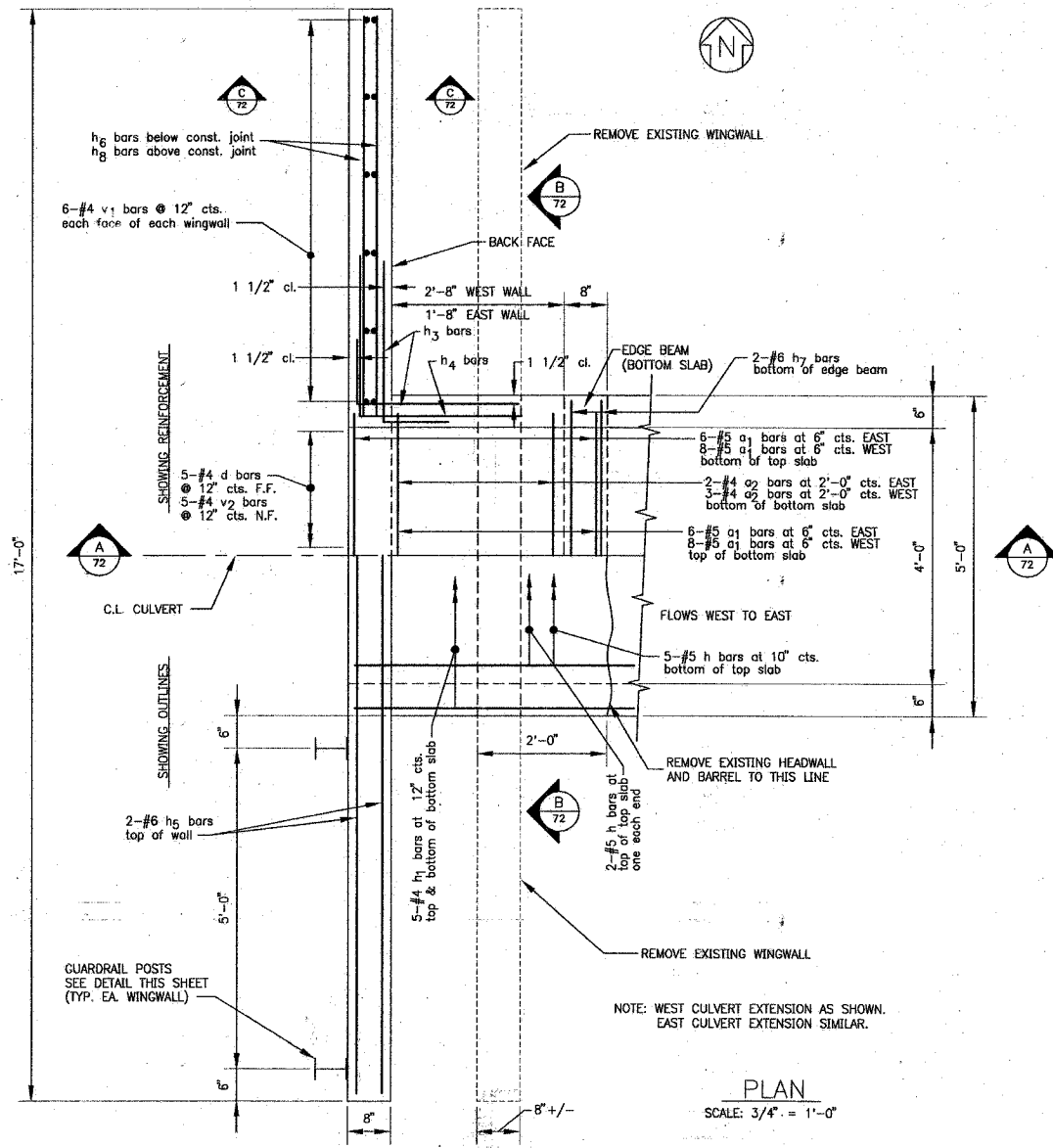


CONTRACT NO. 83727



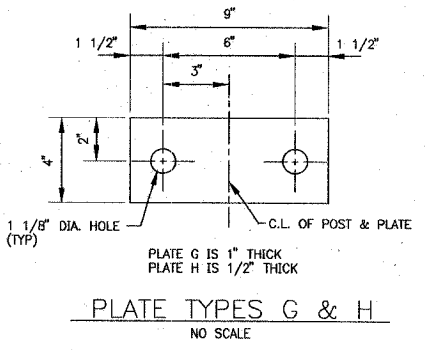
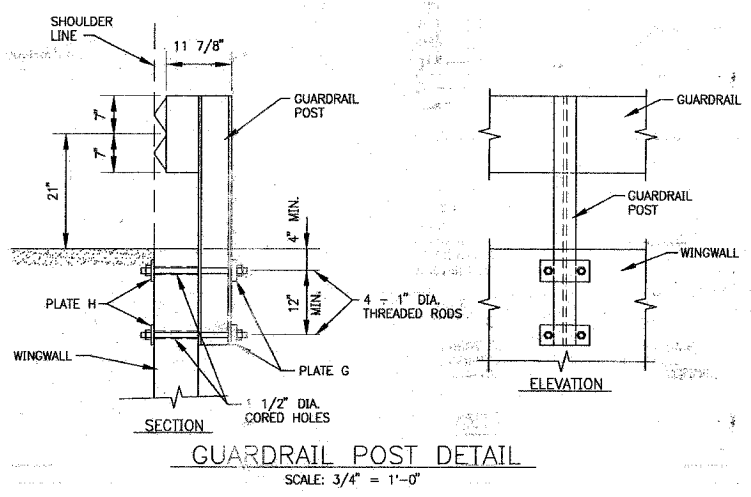
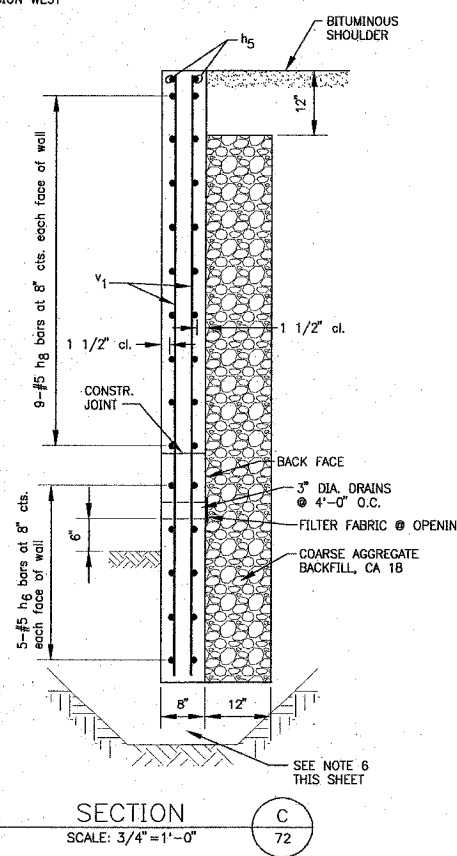
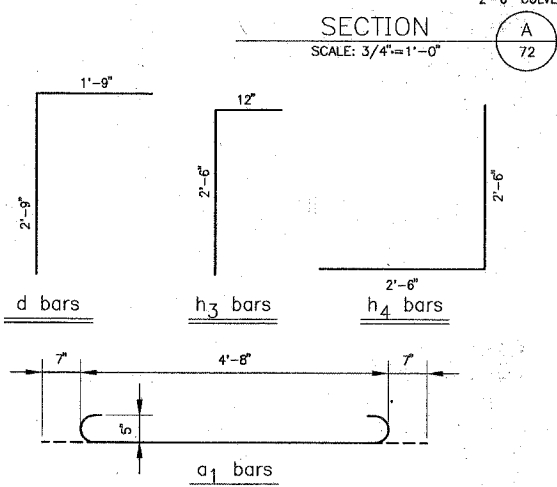
DESIGN STRESSES  
 $F_y = 60,000$  psi  
 $f'_c = 3,500$  psi  
 LOADING = HS20-44 & ALT.

**BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
a <sub>1</sub>	28	#5	5'-10"	U
a <sub>2</sub>	5	#4	4'-8"	U
d	10	#4	4'-6"	U
h <sub>E</sub>	7	#5	2'-9"	U
h <sub>W</sub>	7	#5	3'-9"	U
h <sub>1,E</sub>	10	#4	2'-9"	U
h <sub>1,W</sub>	10	#4	3'-9"	U
h <sub>2,E</sub>	8	#5	2'-9"	U
h <sub>2,W</sub>	8	#5	3'-9"	U
h <sub>3</sub>	32	#5	3'-6"	U
h <sub>4</sub>	16	#5	5'-0"	U
h <sub>5</sub>	4	#6	16'-9"	U
h <sub>6</sub>	20	#5	16'-9"	U
h <sub>7</sub>	4	#6	4'-9"	U
h <sub>8</sub>	72	#5	5'-9"	U
h <sub>9</sub>	54	#4	2'-6"	U
v	22	#4	4'-9"	U
v <sub>1,E</sub>	24	#4	9'-0"	U
v <sub>1,W</sub>	24	#4	8'-8"	U
v <sub>2</sub>	10	#4	2'-9"	U
CONCRETE BOX CULVERTS				9.4 CY
REINFORCEMENT BARS				2,030 lbs.

**NOTES:**

- PERFORM WORK IN ACCORDANCE WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2002, SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2002 AND INTERIM SPECIAL PROVISIONS UPDATED MAY 9, 2002.
- ALLOWABLE NET SOIL BEARING PRESSURE = 2,000 P.S.F. MINIMUM.
- BARREL SHALL BE PLACED MONOLITHICALLY WITH THE WINGWALLS.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53, GRADE 60.
- ALL CONSTRUCTION JOINTS SHALL BE BONDED.
- LETTERS E & W IN REINFORCEMENT BAR SCHEDULE DESIGNATE EAST & WEST SIDE EXTENSIONS RESPECTIVELY.
- UNDERCUT AREA BELOW BASE OF WALL 1'-0" EXTENDING OVEREXCAVATION 6" BEYOND PERIMETER OF THE WALL. BACKFILL EXCAVATED AREA WITH COMPACTED COARSE AGGREGATE BACKFILL, CA 18 TO THE REQUIRED SUBGRADE ELEVATION.
- UNDERCUT AREA BELOW CULVERT BARREL AS REQUIRED TO REMOVE BURIED TOPSOIL LAYER. BACKFILL EXCAVATED AREA WITH COMPACTED COARSE AGGREGATE BACKFILL, CA 18 TO THE REQUIRED SUBGRADE ELEVATION.



CHARLES A. BRUNER  
 081-005609  
 LICENSED  
 STRUCTURAL  
 ENGINEER  
 OF  
 ILLINOIS  
 License Expires 11-30-2006

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CONSULTANTS	REV. NO.	DATE	DESCRIPTION
	1	4-28-06	PER IDOT AND COOK COUNTY COMMENTS
* - REFER TO EQUIPMENT MANUFACTURER'S SHOP DRAWINGS			

CULV-1-DWG DEK-27/APR/06 09:43

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 Crystal Lake, Illinois 815.459.1551  
 Plainfield, Illinois 815.609.7425

**CITY OF OAK FOREST, ILLINOIS**  
**OAK PARK AVENUE PROJECT**

**CULVERT EXTENSION**  
**HEADWALL DETAIL**

DESIGNED BY	SCALE	AS NOTED
DRAWN BY	PROJECT NO.	020146
CHECKED BY	SHEET NO.	
CAD DATE		
1-20-05		

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