

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00180-00-BR	COOK	14	1
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83822				

**INDEX OF SHEETS**

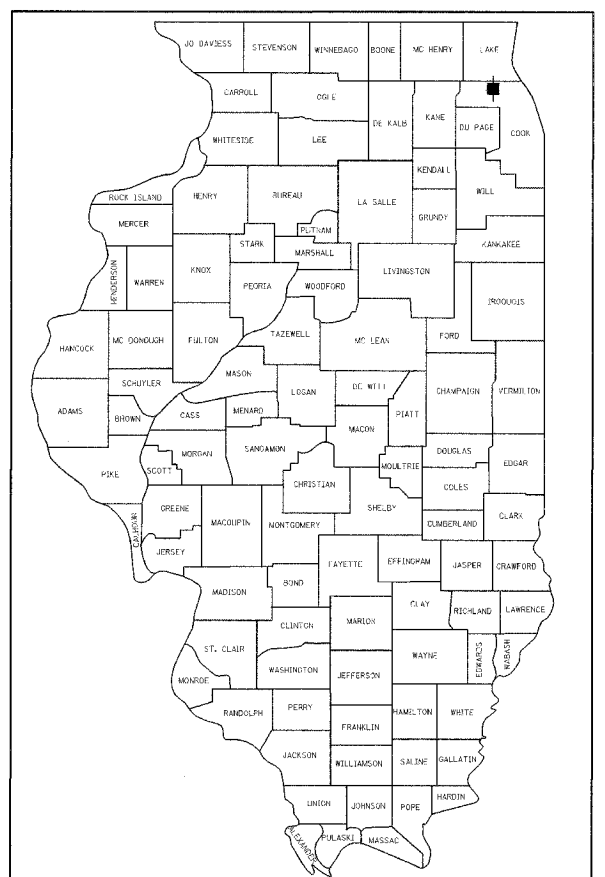
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**

**PROPOSED PLANS FOR A  
FEDERAL AID HIGHWAY**  
**PEDESTRIAN CULVERT UNDER THE UNION PACIFIC RAILROAD  
AT NORTHWEST HIGHWAY (U.S. ROUTE 14) AND KENSINGTON ROAD**  
**SECTION NO. 05-00180-00-BR**  
**PROJECT NO. CMM-8003 (546)**  
**CULVERT CONSTRUCTION**  
**COOK COUNTY**  
**JOB NO. C-91-072-06**

**DESCRIPTION OF IMPROVEMENT**

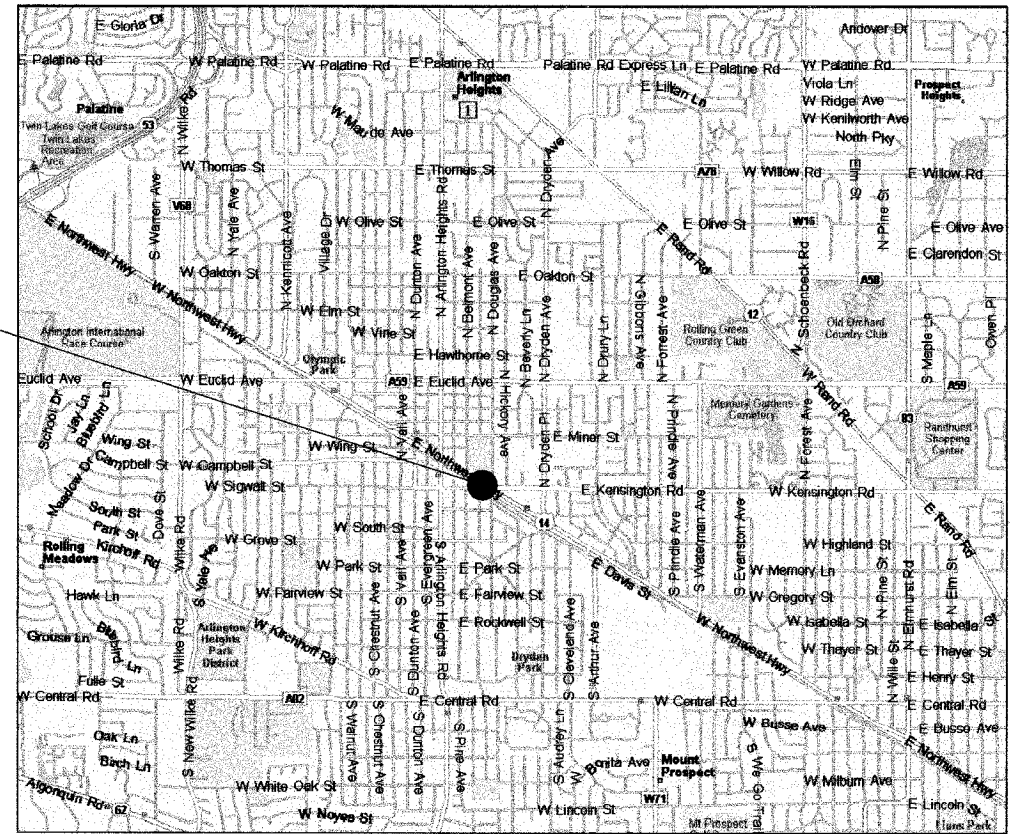
THIS IMPROVEMENT CONSISTS OF EARTH EXCAVATION, REINFORCED CONCRETE BOX CULVERT CONSTRUCTION, SIDEWALK REMOVAL AND REPLACEMENT, LIGHTING INFRASTRUCTURE, LANDSCAPING AND ALL INCIDENTAL AND COLLATERAL WORK AS NECESSARY TO COMPLETE THE IMPROVEMENT SHOWN HEREIN AND AS DESCRIBED IN THE SPECIFICATIONS.



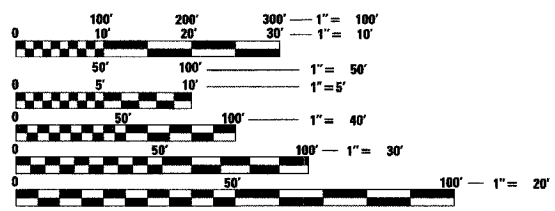
LOCATION OF SECTION INDICATED THUS: —■—

PROJECT IS LOCATED IN THE VILLAGE OF ARLINGTON HEIGHTS

**PROJECT LOCATION**  
PEDESTRIAN CULVERT  
STATION 50+00.00  
DOT NO. 176922D  
MP 22.05 - HARVARD SUBDIVISION



**LOCATION MAP**  
ARLINGTON HEIGHTS  
COOK COUNTY, ILLINOIS  
PROJECT LENGTH = 400 FEET (0.08 MILES)



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

**J.U.I.E.**  
**JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION**  
**1-800-892-0123**

**CONTRACT NO. 83822**

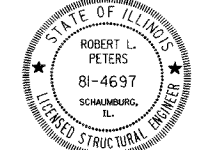
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**

APPROVED 1 Nov 05 2005  
*Robert L. Peters, P.E.*  
VILLAGE OF ARLINGTON HEIGHTS, DEPUTY DIRECTOR PUBLIC WORKS

APPROVED NOVEMBER 18 2005  
*Scott D. Czaplack*  
ENGINEER OF LOCAL ROADS AND STREETS

APPROVED Nov. 18 2005  
*Briane M. O'Keefe /col*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**



*Robert L. Peters 11/18/05*  
TRANSYSTEMS CORPORATION  
ROBERT L. PETERS, PE, SE  
NO. 081-04697  
EXP. DATE 11/30/06

*Scott D. Czaplack 11-1-05*  
TRANSYSTEMS CORPORATION  
SCOTT D. CZAPLACK, PE  
NO. 062-053236  
EXP. DATE 11/30/07

IDOT FEDERAL AID DESIGN ENGINEER  
JESSICA MILLER (847) 705-4487

CONSULTANT  
TRANSYSTEMS CORPORATION (847) 605-6800  
1051 PERIMETER DRIVE, SCHUMBERG, IL 60173  
11/1/2005 8:48:42 AM  
91\CH03\018B\Road\1118e.sht

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00180-00-BR	COOK	14	2
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 63822				

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2002, THE DETAILS IN THESE PLANS, AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL NOTIFY JOHN KLEIN WITH UNION PACIFIC RAILROAD AT LEAST 72 HOURS IN ADVANCE OF BEGINNING WORK AT (312) 496-4727. COORDINATION WITH THE UNION PACIFIC COMMUNICATIONS DEPARTMENT AT (800) 336-9193 SHALL BEGIN UPON CONTRACT AWARD AND TO OBTAIN A FIBER OPTIC LOCATE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN A UNION PACIFIC ENTRY PERMIT TO PERFORM CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL ACCOUNT FOR WORKING WITH THE UNION PACIFIC RAILROAD CONCURRENTLY DURING CONSTRUCTION.
- THE COST OF ALL PERMITS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICES OF THE CONTRACT.
- THE CONTRACTOR SHALL NOTIFY BOB BURNS WITH PUBLIC WORKS AT (847) 368-5800 AT LEAST 72 HOURS IN ADVANCE OF BEGINNING WORK AND SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH THE ENGINEER. SPECIAL ATTENTION IS CALLED TO ARTICLE 105.07 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS FOR TRAFFIC CONTROL AND PROTECTION.
- THE CONTRACTOR SHALL CALL "JULIE" 48 HOURS IN ADVANCE AT 1-800-892-0123 FOR FIELD LOCATIONS OF UTILITIES. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES BEFORE STARTING ANY EXCAVATION.
- THE LOCATION OF PUBLIC OR PRIVATE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND THE VILLAGE DOES NOT GUARANTEE THEIR ACCURACY. THE CONTRACTOR WILL BE REQUIRED TO ASCERTAIN THE EXACT LOCATIONS OF SUCH FACILITIES SO AS NOT TO DAMAGE THEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR DESTRUCTION OF PUBLIC OR PRIVATE PROPERTY, AND SHALL RESTORE SUCH PROPERTY AT HIS OWN EXPENSE IN ACCORDANCE WITH ARTICLE 107.20 OF THE STANDARD SPECIFICATIONS. COORDINATION OF ALL KNOWN UTILITY WORK INVOLVED IN THE CONSTRUCTION AREA WILL BE DISCUSSED AT A PRECONSTRUCTION CONFERENCE. THE CONTRACTOR SHALL USE ALL NECESSARY PRECAUTIONS AND PROTECTIVE MEASURES REQUIRED TO MAINTAIN EXISTING UTILITIES, SEWERS, AND APPURTENANCES THAT MUST BE KEPT IN OPERATION. IN PARTICULAR, THE CONTRACTOR SHALL TAKE ADEQUATE MEASURES TO PREVENT THE UNDERMINING OF UTILITIES AND SEWERS WHICH ARE STILL IN SERVICE.
- THE CONTRACTOR SHALL NOT REMOVE ANY UTILITY LINE, CONDUIT OR VAULT WITHIN THE LIMITS OF THE PROJECT UNTIL AFTER RECEIVING WRITTEN PERMISSION FROM THE UTILITY COMPANY OR AGENCY INVOLVED AND PERMISSION FROM THE ENGINEER.
- WHENEVER THE CONTRACTOR ENCOUNTERS FACILITIES AND APPURTENANCES WITHIN THE LIMITS OF THE IMPROVEMENTS DURING TRENCHING OPERATION, HE WILL BE REQUIRED TO HAND TRENCH IN THAT AREA IN ORDER NOT TO DAMAGE THE FACILITIES.
- ANY LOOSE MATERIAL THAT IS DEPOSITED DURING CONSTRUCTION INTO ANY DRAINAGE STRUCTURE THAT RESULTS IN THE OBSTRUCTION OF FLOW SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF OPERATIONS, ALL DRAINAGE STRUCTURES (EXISTING AND PROPOSED) WITHIN THE PROJECT LIMITS SHALL BE FREE OF DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE UNIT PRICES OF THE CONTRACT.
- THE COST OF CONNECTING EXISTING STORM SEWERS TO THE PROPOSED DRAINAGE SYSTEM AND CONNECTING PROPOSED STORM SEWER TO EXISTING STRUCTURES SHALL BE INCLUDED IN THE UNIT PRICES OF THE CONTRACT. HOWEVER, THE NECESSARY PIPE USED WILL BE PAID FOR AT THE CONTRACT UNIT PRICE "STORM SEWER" OF THE SIZE REQUIRED.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN EXISTING APPURTENANCES ALONG NORTHWEST HIGHWAY AND DAVIS STREET. BOTH ROADWAYS SHALL BE KEPT CLEAN AND FREE OF DEBRIS TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE UNIT PRICES OF THE CONTRACT.
- THE CONTRACTOR WILL BE REQUIRED TO DISPOSE ALL MATERIAL EXCAVATED OR REMOVED DUE TO CONSTRUCTION OPERATIONS, AT HIS EXPENSE. ALL EXCESS EXCAVATED MATERIAL SHALL BE REMOVED FROM SITE ON THE DAY IT IS EXCAVATED. NO PAYMENT WILL BE MADE FOR HAULING OR TRUCKING MATERIAL TO LOCATIONS, PROVIDED BY THE CONTRACTOR, OUTSIDE THE LIMITS OF THE IMPROVEMENT.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO WEIGHTED SAND BAGS ON EACH TYPE I OR TYPE II BARRICADE USED AT ALL LOCATIONS WITHIN THE PROJECT LIMITS. ONE SAND BAG SHALL BE PLACED ON EACH BOTTOM RAIL.
- QUANTITIES OF TREE TRUNK PROTECTION, TREE PRUNING AND TREE ROOT PRUNING HAVE BEEN INCLUDED IN THE SUMMARY OF QUANTITIES FOR CARE AND PROTECTION OF EXISTING PLANT MATERIAL.
- ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SODDED UPON COMPLETION OF ALL GRADING OPERATIONS. THIS WORK SHALL BE PAID FOR AS SODDING, SALT TOLERANT.
- FULL DEPTH SAW CUTS SHALL BE PROVIDED FOR ALL REMOVAL ITEMS. THE COST SHALL BE INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

**GENERAL NOTES CONT**

- INLET & PIPE PROTECTION SHALL BE USED AT THE DISCRETION OF THE ENGINEER TO PREVENT SEDIMENT FROM ENTERING THE ENCLOSED SEWER SYSTEM.
- REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL SHALL BE REPLACED WITH AGGREGATE BASE COURSE, TYPE B WITHIN THE LIMITS OF THE CULVERT. POROUS GRANULAR EMBANKMENT SHALL BE USED ELSEWHERE. THE PROPOSED PROCEDURES AND EXTENT OF REMOVAL OF UNSUITABLE MATERIAL FOR THE CULVERT, OR IN ANY LOCATION THAT MAY AFFECT THE STABILITY OF THE EXISTING ABUTMENTS, SHALL BE SUBMITTED TO THE ENGINEER AND UPRR FOR REVIEW AND APPROVAL.
- QUANTITIES FOR TEMPORARY FENCE AND TEMPORARY CHAIN LINK FENCE HAVE BEEN INCLUDED TO RESTRICT ACCESS WITHIN THE PROJECT LIMITS. THE TEMPORARY CHAIN LINK FENCE SHALL BE USED AT THE DISCRETION OF THE ENGINEER TO CLOSE OFF THE ENDS OF THE CULVERT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RESTRICT ACCESS.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE PUMPS TO DRAIN THE PROJECT AREA.
- FLAGGING WILL BE REQUIRED FOR ANY WORK WITHIN 25 FT. OF ANY TRACK OR AS OTHERWISE REQUIRED BY THE UPRR SPECIAL PROVISIONS. THIS WORK SHALL BE PAID FOR AS RAILROAD FLAGMEN.

**SEQUENCE OF OPERATIONS**

- TRACK AND BRIDGE RAISE BY UPRR. CONSTRUCT WINGWALL EXTENSIONS.
- IMPLEMENT TRAFFIC CONTROL MEASURES AS REQUIRED
- INSTALL TEMPORARY ABUTMENT BRACING
- INITIATE EARTH EXCAVATION, REMOVALS AND RELOCATIONS
- INSTALL INLET, STORM SEWER AND CONDUIT
- CONSTRUCT REINFORCED CONCRETE BOX CULVERT
- CONSTRUCT SIDEWALK, CURB WALLS AND LIGHTING FOUNDATIONS
- INSTALL PEDESTRIAN RAILING AND CHAIN LINK FENCE
- COMPLETE LANDSCAPING
- LIGHT POLE, LUMINAIRE AND WIRING BY VILLAGE
- EXISTING BRIDGE GIRDER REMOVAL AND PLACEMENT OF BALLAST ON TOP OF CULVERT BY UPRR.

**TRAFFIC CONTROL NOTES**

- ALL TRAFFIC CONTROL MEASURES SHALL BE PAID PER TRAFFIC CONTROL STANDARDS 701501, 701606 AND 701801. THE COST OF SUPPLYING, ERECTING, AND MAINTAINING BARRICADES, DRUMS, WARNING LIGHTS, AND SIGNS SHALL BE INCLUDED IN TRAFFIC CONTROL STANDARDS. QUANTITIES FOR PAVEMENT MARKING TAPE, AND WORK ZONE PAVEMENT MARKING REMOVAL SHALL BE MEASURED SEPARATELY FOR PAYMENT.
- TRAFFIC CONTROL & PROTECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 700; APPLICABLE GUIDELINES IN THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS; AND APPLICABLE HIGHWAY STANDARDS FOR TRAFFIC CONTROL, UNLESS HEREIN REVISED.
- PERMANENT LANE CLOSURES ALONG NORTHWEST HIGHWAY WILL NOT BE ALLOWED. SHORT TIME CLOSURES FROM 9 A.M. TO 3 P.M. SHALL BE APPROVED BY THE ENGINEER. TEMPORARY LANE CLOSURES SHALL BE PERFORMED ACCORDING TO IDOT HIGHWAY STANDARD 701606.
- TWO-WAY TRAFFIC SHALL BE MAINTAINED ALONG DAVIS STREET AT ALL TIMES EXCEPT FOR SHORT PERIODS WHEN APPROVED BY THE ENGINEER. TEMPORARY LANES CLOSURES SHALL BE PERFORMED ACCORDING TO IDOT HIGHWAY STANDARD 701301.
- THE ENGINEER SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ANY CHANGE IN STAGING.
- ALL SIGNS SHALL BE MOUNTED ON METAL POSTS, 7 FEET ABOVE THE EXISTING GROUND AND DRIVEN A MINIMUM OF 3 FEET INTO THE GROUND. A J.U.L.I.E. LOCATE SHALL BE PERFORMED PRIOR TO THE INSTALLATION OF THE POSTS.
- EXISTING TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE REMOVED OR RELOCATED BY THE CONTRACTOR AFTER THE TRAFFIC CONTROL REQUIREMENTS ARE MET OR AS AUTHORIZED BY THE ENGINEER; ANY SIGNS OR DEVICES LEFT IN PLACE ARE TO BE PROTECTED FROM DAMAGE AND MAINTAINED.
- TYPE I OR TYPE II BARRICADES WITH TWO WAY FLASHING LIGHTS SHALL BE REQUIRED AT ALL OPEN TRENCHES, EXCAVATIONS, OPEN OR EXPOSED SEWER STRUCTURES, TRANSVERSE PAVEMENT JOINTS, MATERIAL STOCKPILES AND ON EQUIPMENT WITHIN THE RIGHT OF WAY (NUMBER AND SPACING DEPENDANT ON THE CONDITIONS); AND AT LOCATIONS DESIGNATED BY THE ENGINEER.

**LISTING OF HIGHWAY STANDARDS**

- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 001001 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 280001-02 TEMPORARY EROSION CONTROL SYSTEMS
- 424001-04 CURB RAMP FOR SIDEWALKS
- 601001 SUB-SURFACE DRAINS
- 602301 INLET, TYPE A
- 602401 MANHOLE, TYPE A
- 602406-01 MANHOLE, TYPE A, 1800 MM (72") DIAMETER
- 602701 CAST IRON STEPS
- 604001-02 FRAME AND LIDS, TYPE 1
- 606001-02 CONCRETE CURB AND COMBINATION CONCRETE CURB AND GUTTER
- 664001-01 CHAIN LINK FENCE
- 701301-02 LANE CLOSURE, 2L 2W, SHORT TIME OPERATIONS
- 701311-02 LANE CLOSURE, 2L 2W, MOVING DAY ONLY OPERATIONS
- 701501-03 URBAN LANE CLOSURE, 2L, 2W UNDIVIDED
- 701606-04 URBAN LANE CLOSURE, MULTILANE 2W WITH MOUNTABLE MEDIAN
- 701801-03 LANE CLOSURE, MULTILANE, 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 702001-05 TRAFFIC CONTROL DEVICES
- 720001 SIGN PANEL MOUNTING DETAILS
- 720006 SIGN PANEL ERECTION DETAILS

**ALIGNMENT COORDINATE TABLE**

NO.	NORTHING	EASTING	DESCRIPTION
1	1,972,121.5370	1,081,197.4852	POT STA 49+00.00
2	1,972,207.9586	1,081,247.7973	TRACKS STA 50+00
3	1,972,251.1694	1,081,272.9533	POT STA 50+50.00

**CONTROL POINTS**

NO.	NORTHING	EASTING	STATION OFFSET	ELEVATION	DESCRIPTION
BM #54	1,972,341.0079 1,081,119.0076		50+50.26 178.12' LT	680.12	1" DIA BRASS DISC IN SOUTHEAST SIDE OF LIGHT POLE CONCRETE BASE 30'± SOUTH WEST OF CENTERLINE OF NORTHWEST HIGHWAY & 39'± NORTH OF CENTERLINE OF KENSINGTON ROAD
BM #58	1,971,663.7864 1,081,990.2631		49+03.27 915.44' RT	676.71	1" DIA BRASS DISC ON SOUTH SIDE OF LIGHT POLE CONCRETE BASE AT NORTHWEST CORNER OF DAVIS STREET AND BEVERLY LANE

**BENCHMARKS**

NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
TBM #1	N/A	N/A	677.87	SET "X" IN SIDEWALK ON SOUTH SIDE OF DAVIS STREET AT UNION PACIFIC RAILROAD PEDESTRIAN UNDERPASS CULVERT
TBM #2	N/A	N/A	681.04	SET "X" IN SIDEWALK AT NORTHWEST CORNER OF NORTHWEST HIGHWAY AND KENSINGTON ROAD

ILLINOIS DEPARTMENT OF TRANSPORTATION  
PEDESTRIAN CULVERT UNDER UNION PACIFIC RAILROAD

**GENERAL NOTES, LISTING OF HIGHWAY STANDARDS AND SEQUENCE OF OPERATIONS**

0 5' 10' HORIZ  
NO SCALE  
DATE 01/20/06

DRAWN BY DMG  
CHECKED BY SDC

NOTE: BOXED ITEMS ARE INCLUDED IN THE COST OF THE CONTRACT.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00180-00-BR	COOK	14	3
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83822				

ITEM NO.	CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE
					CULVERT X628-2A
1	20101000	TEMPORARY FENCE	FOOT	200	
2	20101100	TREE TRUNK PROTECTION	EACH	1	
3	20101200	TREE ROOT PRUNING	EACH	1	
4	20101350	TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	1	
5	20101400	NITROGEN FERTILIZER NUTRIENT	POUND	3	
6	20101500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	3	
7	20101600	POTASSIUM FERTILIZER NUTRIENT	POUND	3	
8	20200100	EARTH EXCAVATION	CU YD	275	
9	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	200	
10	20700220	POROUS GRANULAR EMBANKMENT	CU YD	100	
11	20800150	TRENCH BACKFILL	CU YD	20	
12	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	190	
13	21301084	EXPLORATION TRENCH '84" DEPTH	FOOT	100	
14	25200110	SODDING, SALT TOLERANT	SQ YD	190	
15	25200200	SUPPLEMENTAL WATERING	UNIT	2	
16	28000400	PERIMETER EROSION BARRIER	FOOT	200	
17	28000510	INLET FILTERS	EACH	1	
18	35101500	AGGREGATE BASE COURSE, TYPE B	CU YD	250	
19	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1,400	
20	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	30	
21	44000600	SIDEWALK REMOVAL	SQ FT	950	
22	44100100	PAVEMENT REPLACEMENT	SQ YD	20	
23	50102400	CONCRETE REMOVAL	CU YD	18	18.0
24	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	30,900	30,900
25	55100500	STORM SEWER REMOVAL 12"	FOOT	28	28
26	60107700	PIPE UNDERDRAINS 6"	FOOT	80	80
27	60234200	INLETS, TYPE A, TYPE 1 FRAME, OPEN LID	EACH	1	1
28	60500060	REMOVING INLETS	EACH	1	1
29	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	30	30
30	63200310	GUARDRAIL REMOVAL	FOOT	27	27
31	66400305	CHAIN LINK FENCE, 6'	FOOT	305	305
32	66410300	CHAIN LINK FENCE REMOVAL	FOOT	335	335
33	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3
34	67100100	MOBILIZATION	L SUM	1	1
• 35	66900205	SPECIAL WASTE DISPOSAL	CU YD	200	150
36	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1
37	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	1
38	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1
39	70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	200	200
40	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	70	70
• 41	72000100	SIGN PANEL - TYPE I	SQ FT	5	5
• 42	72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	1	1

• INDICATES SPECIALTY ITEM

ILLINOIS DEPARTMENT OF TRANSPORTATION  
PEDESTRIAN CULVERT UNDER UNION PACIFIC RAILROAD

SUMMARY OF QUANTITIES

NO SCALE  
DATE 01/20/06

DRAWN BY JMH  
CHECKED BY SDC

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00180-00-BR	COOK	14	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83822				

ITEM NO.	CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE
					CULVERT X628-2A
• 43	72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	1	1
• 44	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	28	28
• 45	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	50	50
• 46	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	84	84
47	78300100	PAVEMENT MARKING REMOVAL	SQ FT	17	17
• 48	80700140	GROUND ROD, 5/8" DIA. X 10 FT.	EACH	2	2
• 49	81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	147	147
• 50	81500200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	147	147
51	X0323426	SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING	EACH	1	1
52	X0632001	CLEAR PROTECTIVE COATING FOR CONCRETE	SQ FT	2,380	2,380
53	XX001978	RAILROAD FLAGMEN	L SUM	1	1
54	X6640200	TEMPORARY CHAIN LINK FENCE	FOOT	50	50
55	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1
56	54003000	CONCRETE BOX CULVERTS	CU YD	155	155
57	XX005817	FORMLINER LIMESTONE SURFACE	SQ FT	500	500
• 58	XX006495	LIGHT POLE FOUNDATION, 18" DIAMETER	FOOT	8	8
59	50900805	PEDESTRIAN RAILING	FOOT	104	104
61	XX006496	PORTLAND CEMENT CONCRETE SIDEWALK AND CURB WALL	CU YD	75	75
62	X0324160	CATCH BASIN WITH HALF TRAP, 4' DIAMETER (INCLUDING FRAME AND LTD)	EACH	1	1
63	X0322033	STORM SEWER (WATER MAIN REQUIREMENTS) 12"	FOOT	40	40
64	42400800	DETECTABLE WARNINGS	SQ FT	24	24
66	XX005195	COMBINED SEWER MANHOLE, 4'-DIAMETER TYPE 1 FRAME, CLOSED LTD	EACH	1	1

• INDICATES SPECIALTY ITEM

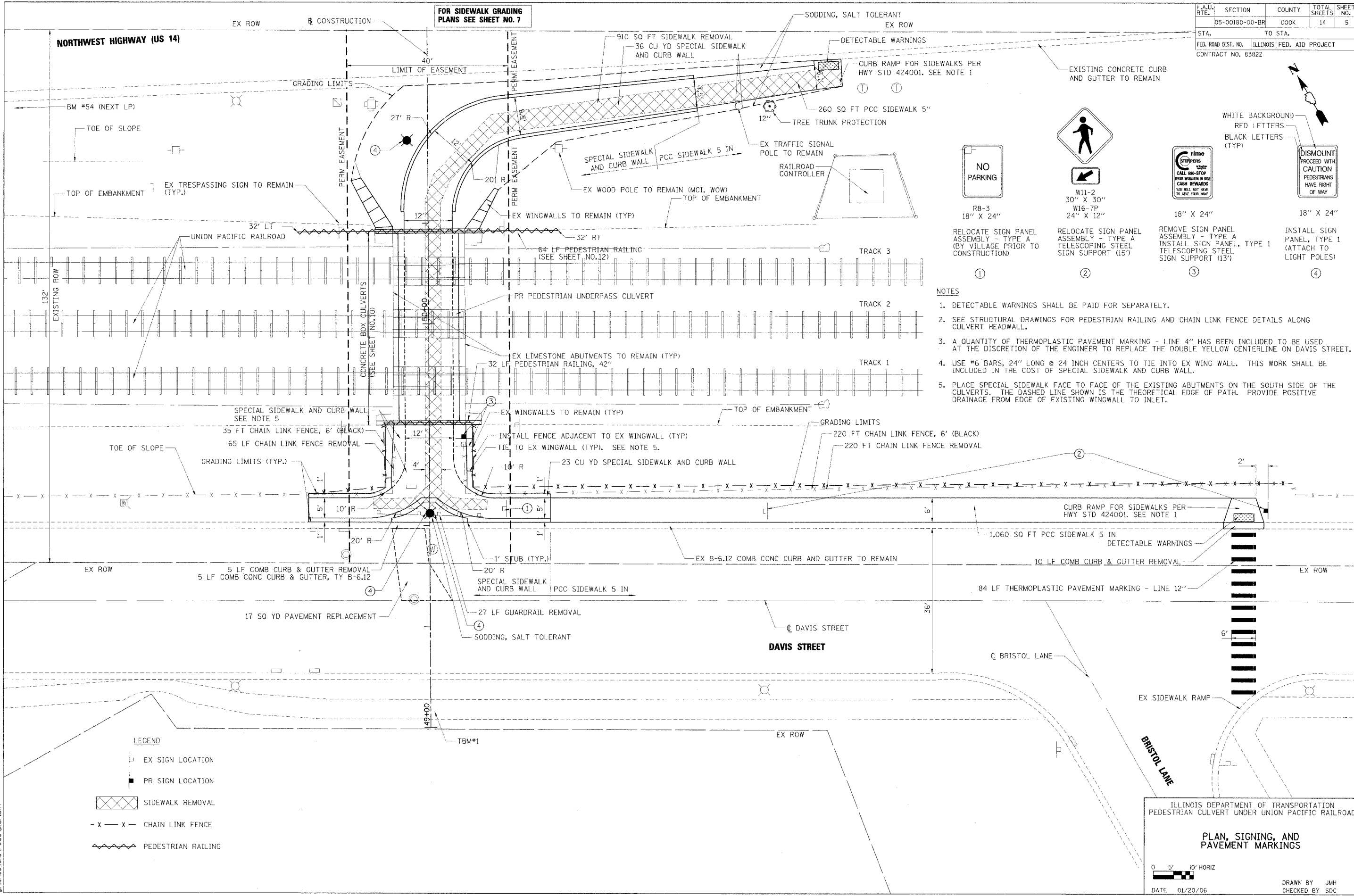
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 PEDESTRIAN CULVERT UNDER UNION PACIFIC RAILROAD

**SUMMARY OF QUANTITIES**

NO SCALE  
 DATE 01/20/06

DRAWN BY JMH  
 CHECKED BY SOC

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
05-00180-00-BR		COOK	14	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83822				



**NO PARKING**  
R8-3  
18" X 24"

**W11-2**  
30" X 30"

**W16-7P**  
24" X 12"

**18" X 24"**

**18" X 24"**

RELOCATE SIGN PANEL ASSEMBLY - TYPE A (BY VILLAGE PRIOR TO CONSTRUCTION)

RELOCATE SIGN PANEL ASSEMBLY - TYPE A TELESCOPING STEEL SIGN SUPPORT (15')

REMOVE SIGN PANEL ASSEMBLY - TYPE A INSTALL SIGN PANEL, TYPE 1 TELESCOPING STEEL SIGN SUPPORT (13')

INSTALL SIGN PANEL, TYPE 1 (ATTACH TO LIGHT POLES)

WHITE BACKGROUND  
RED LETTERS  
BLACK LETTERS (TYP)

DISMOUNT  
PROCEED WITH CAUTION  
PEDESTRIANS HAVE RIGHT OF WAY

ILLINOIS DEPARTMENT OF TRANSPORTATION  
PEDESTRIAN CULVERT UNDER UNION PACIFIC RAILROAD

**PLAN, SIGNING, AND PAVEMENT MARKINGS**

0 5' 10' HORIZ

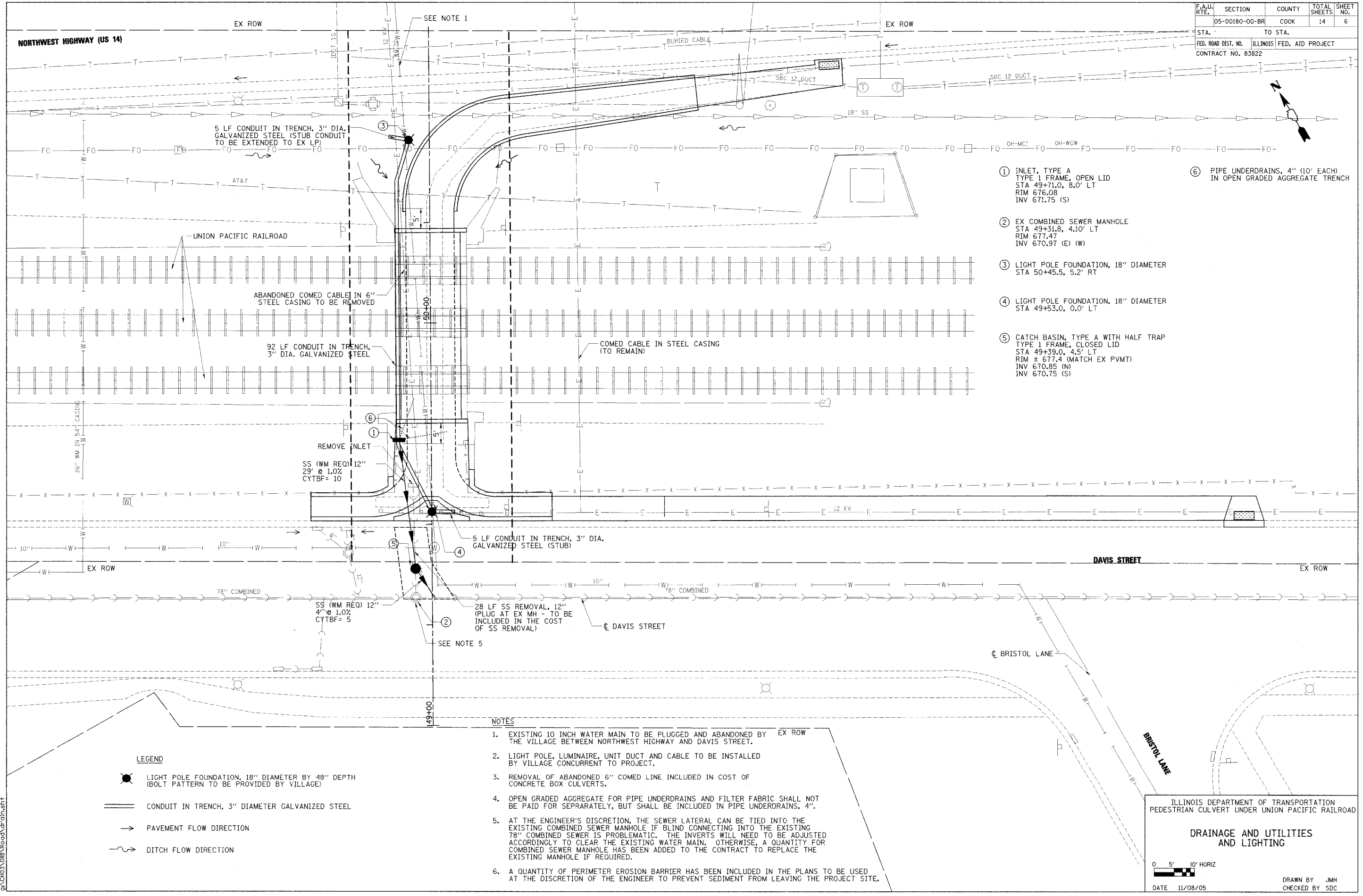
DATE 01/20/06

DRAWN BY JMH  
CHECKED BY SDG

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
05-00180-00-BR		COOK	14	6
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83822				



- ① INLET, TYPE A  
TYPE 1 FRAME, OPEN LID  
STA 49+71.0, 8.0' LT  
RIM 676.08  
INV 671.75 (S)
- ② EX COMBINED SEWER MANHOLE  
STA 49+31.8, 4.10' LT  
RIM 677.47  
INV 670.97 (E) (W)
- ③ LIGHT POLE FOUNDATION, 18" DIAMETER  
STA 50+45.5, 5.2' RT
- ④ LIGHT POLE FOUNDATION, 18" DIAMETER  
STA 49+53.0, 0.0' LT
- ⑤ CATCH BASIN, TYPE A WITH HALF TRAP  
TYPE 1 FRAME, CLOSED LID  
STA 49+39.0, 4.5' LT  
RIM = 677.4 (MATCH EX PVMT)  
INV 670.85 (N)  
INV 670.75 (S)
- ⑥ PIPE UNDERDRAINS, 4" (10' EACH)  
IN OPEN GRADED AGGREGATE TRENCH

- LEGEND**
- LIGHT POLE FOUNDATION, 18" DIAMETER BY 48" DEPTH (BOLT PATTERN TO BE PROVIDED BY VILLAGE)
  - ══ CONDUIT IN TRENCH, 3" DIAMETER GALVANIZED STEEL
  - PAVEMENT FLOW DIRECTION
  - ↪ DITCH FLOW DIRECTION

- NOTES**
1. EXISTING 10 INCH WATER MAIN TO BE PLUGGED AND ABANDONED BY THE VILLAGE BETWEEN NORTHWEST HIGHWAY AND DAVIS STREET.
  2. LIGHT POLE, LUMINAIRE, UNIT DUCT AND CABLE TO BE INSTALLED BY VILLAGE CONCURRENT TO PROJECT.
  3. REMOVAL OF ABANDONED 6" COMED LINE INCLUDED IN COST OF CONCRETE BOX CULVERTS.
  4. OPEN GRADED AGGREGATE FOR PIPE UNDERDRAINS AND FILTER FABRIC SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN PIPE UNDERDRAINS, 4".
  5. AT THE ENGINEER'S DISCRETION, THE SEWER LATERAL CAN BE TIED INTO THE EXISTING COMBINED SEWER MANHOLE IF BLIND CONNECTING INTO THE EXISTING 78" COMBINED SEWER IS PROBLEMATIC. THE INVERTS WILL NEED TO BE ADJUSTED ACCORDINGLY TO CLEAR THE EXISTING WATER MAIN. OTHERWISE, A QUANTITY FOR COMBINED SEWER MANHOLE HAS BEEN ADDED TO THE CONTRACT TO REPLACE THE EXISTING MANHOLE IF REQUIRED.
  6. A QUANTITY OF PERIMETER EROSION BARRIER HAS BEEN INCLUDED IN THE PLANS TO BE USED AT THE DISCRETION OF THE ENGINEER TO PREVENT SEDIMENT FROM LEAVING THE PROJECT SITE.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
PEDESTRIAN CULVERT UNDER UNION PACIFIC RAILROAD

**DRAINAGE AND UTILITIES AND LIGHTING**

0 5' 10' HORIZ

DATE 11/08/05

DRAWN BY JMH  
CHECKED BY SDC

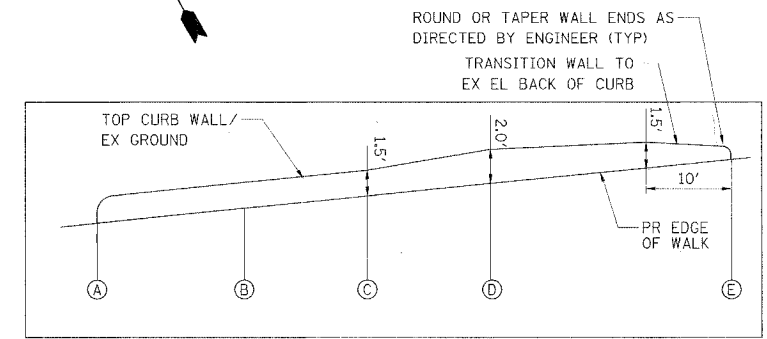
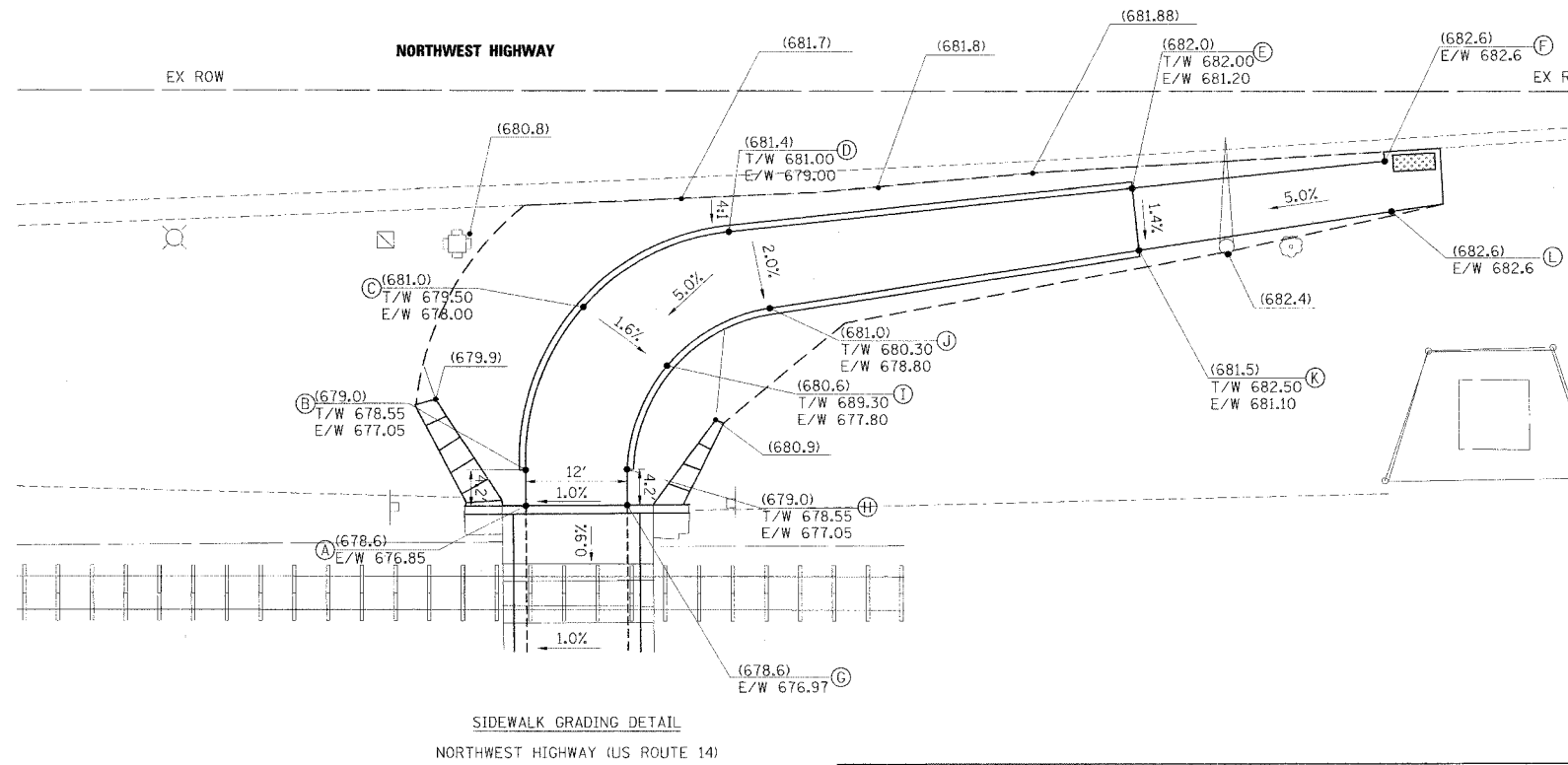
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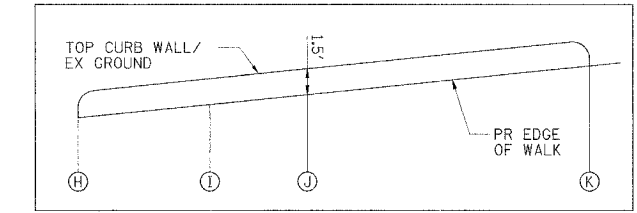
F.A.U. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00180-00-BR	COOK	14	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83822				

COORDINATE TABLE

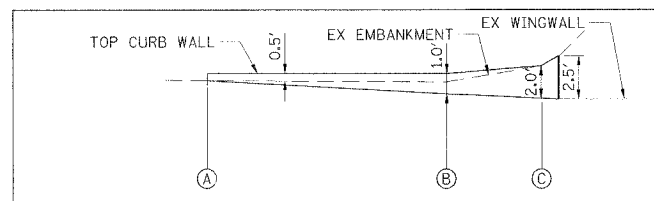
	NORTHING	EASTING
A	1,972,231.33	1,081,254.46
B	1,972,234.99	1,081,256.59
C	1,972,248.04	1,081,272.26
D	1,972,246.90	1,081,291.63
E	1,972,226.99	1,081,335.45
F	1,972,214.53	1,081,362.86
G	1,972,225.29	1,081,264.83
H	1,972,228.96	1,081,266.96
I	1,972,237.01	1,081,277.28
J	1,972,236.67	1,081,291.22
K	1,972,220.20	1,081,332.36
L	1,972,208.94	1,081,360.49



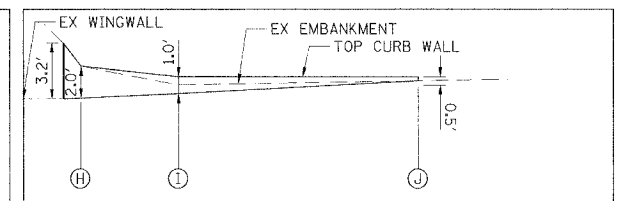
CURB WALL A-B-C-D-E PROFILE  
SCALE: 1"=10' HORZ 1"=5' VERT



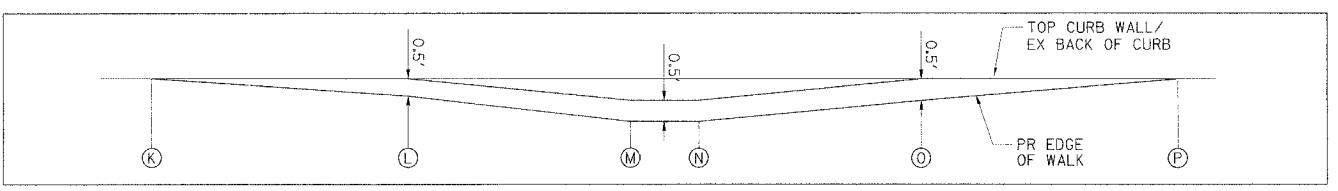
CURB WALL F-G-H-I-J-K PROFILE  
SCALE: 1"=10' HORZ 1"=5' VERT



CURB WALL A-B-C PROFILE  
SCALE: 1"=5' HORZ 1"=5' VERT



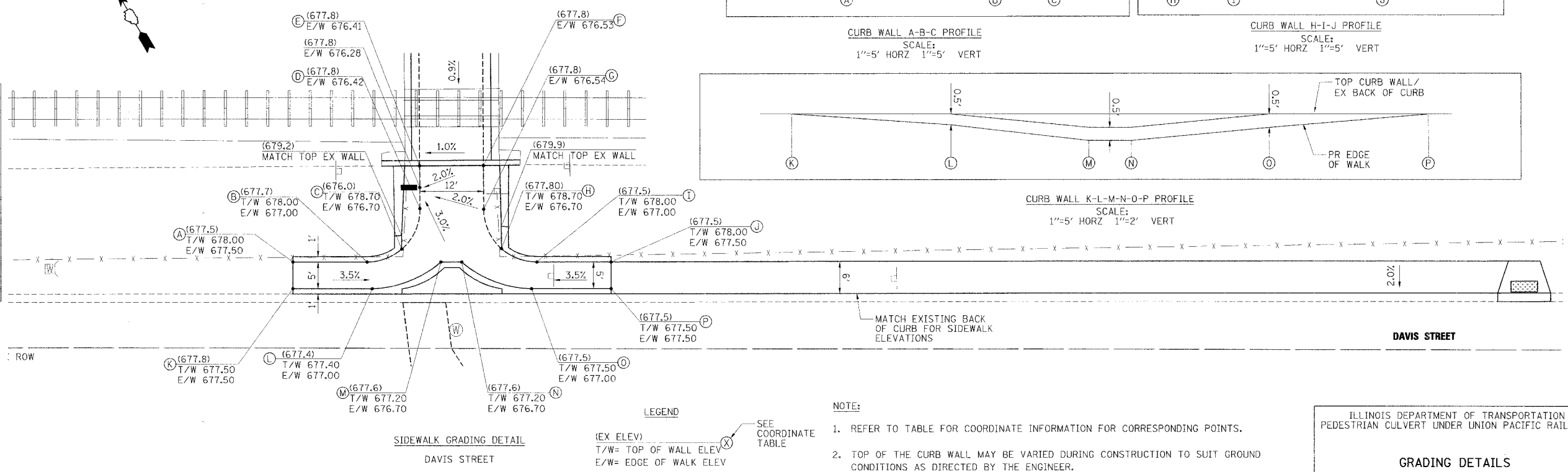
CURB WALL H-I-J PROFILE  
SCALE: 1"=5' HORZ 1"=5' VERT



CURB WALL K-L-M-N-O-P PROFILE  
SCALE: 1"=5' HORZ 1"=2' VERT

COORDINATE TABLE

	NORTHING	EASTING
A	1,972,185.97	1,081,200.21
B	1,972,178.85	1,081,212.26
C	1,972,177.62	1,081,219.14
D	1,972,182.43	1,081,225.99
E	1,972,189.41	1,081,230.06
F	1,972,183.37	1,081,240.43
G	1,972,176.23	1,081,236.27
H	1,972,168.13	1,081,235.39
I	1,972,162.58	1,081,239.83
J	1,972,155.47	1,081,251.89
K	1,972,181.67	1,081,197.67
L	1,972,174.04	1,081,210.58
M	1,972,171.80	1,081,224.24
N	1,972,169.78	1,081,227.66
O	1,972,158.78	1,081,236.43
P	1,972,151.16	1,081,249.35



LEGEND  
(EX ELEV)  
T/W= TOP OF WALL ELEV  
E/W= EDGE OF WALK ELEV  
SEE COORDINATE TABLE

- NOTE:
- REFER TO TABLE FOR COORDINATE INFORMATION FOR CORRESPONDING POINTS.
  - TOP OF THE CURB WALL MAY BE VARIED DURING CONSTRUCTION TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
  - CONSTRUCTION/CONSTRUCTION JOINTS SHALL BE PROVIDED AT A 10' MAXIMUM SPACING IN SPECIAL SIDEWALK AND CURB WALL.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
PEDESTRIAN CULVERT UNDER UNION PACIFIC RAILROAD

**GRADING DETAILS**

0 5' 10' HORZ

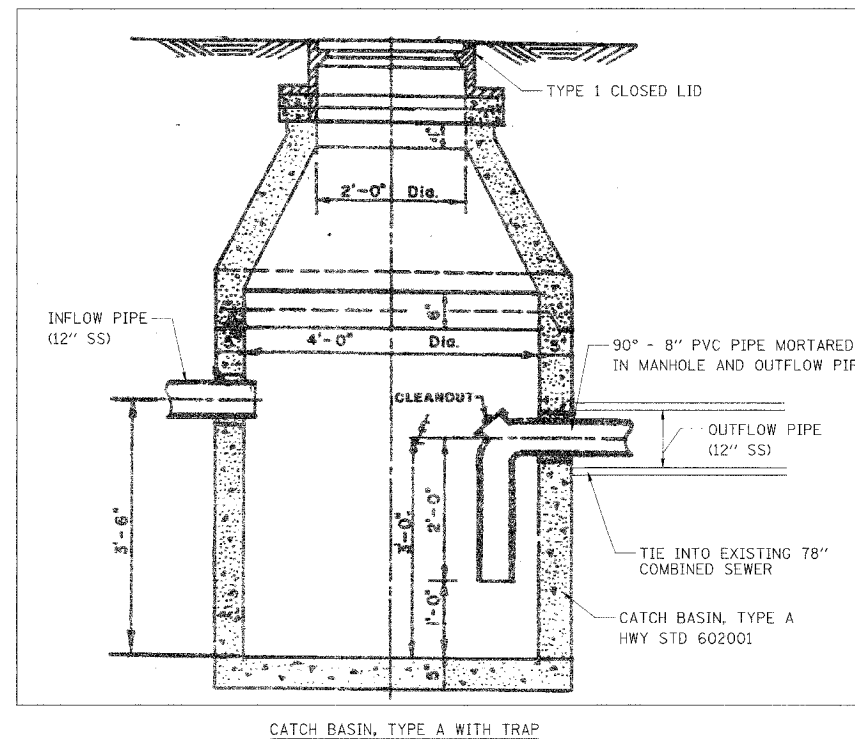
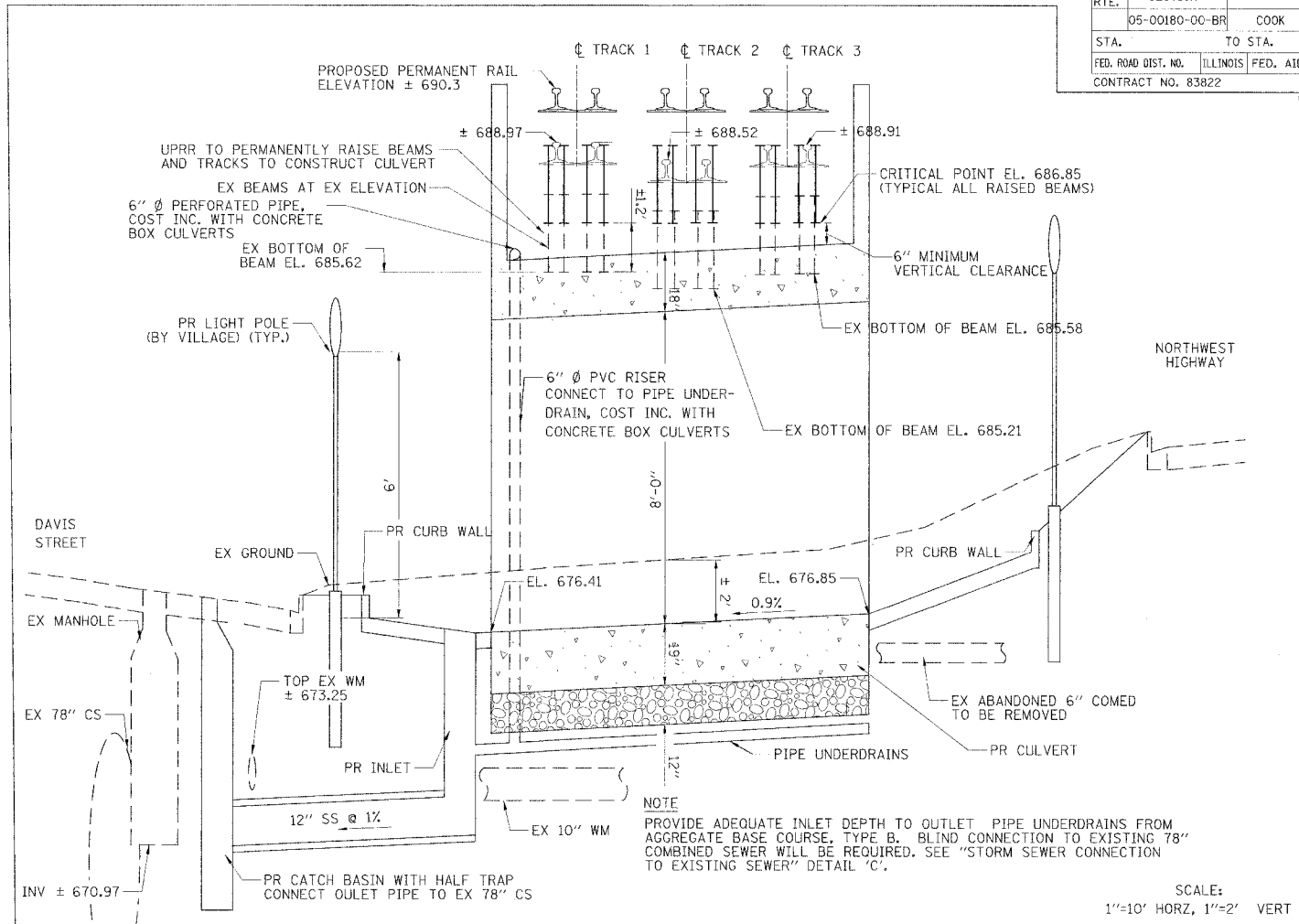
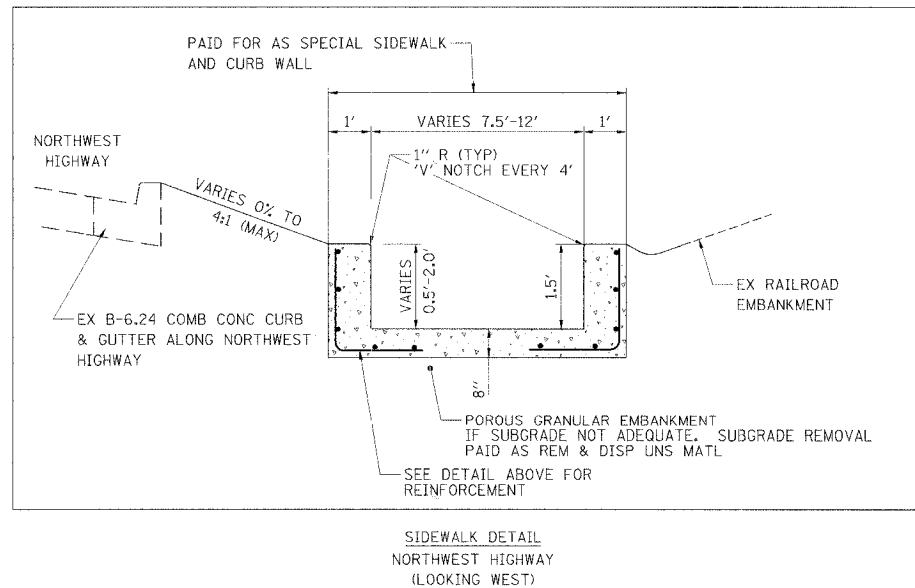
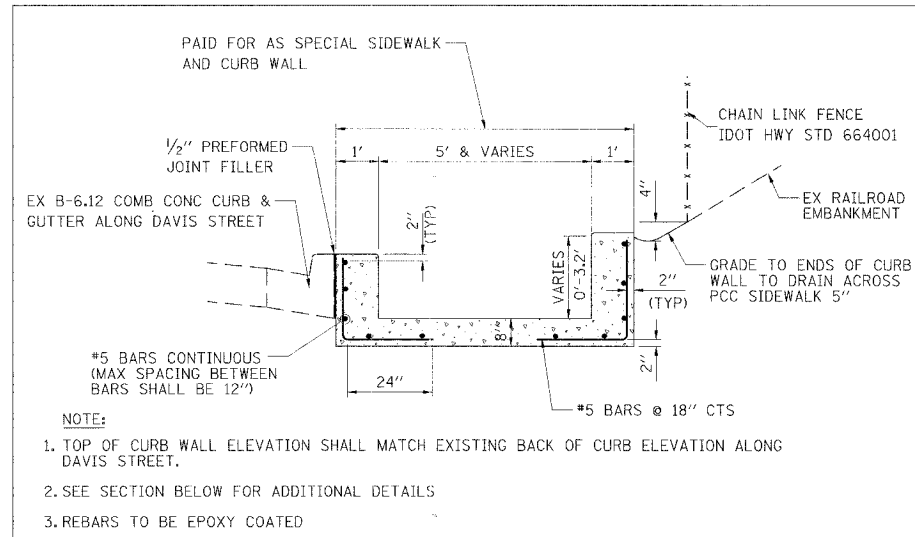
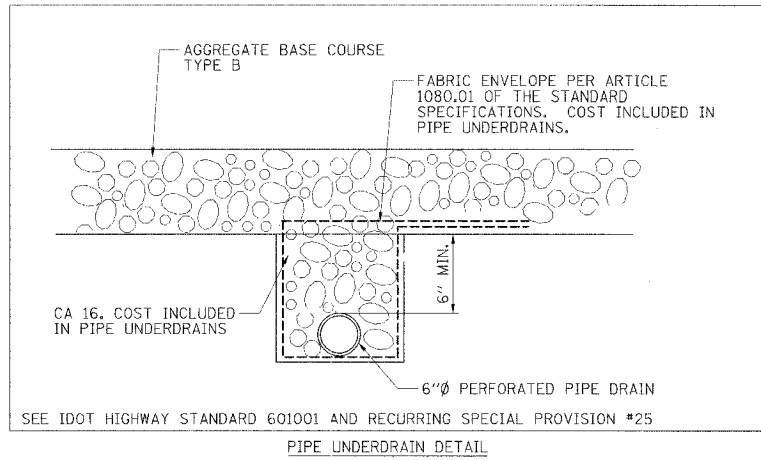
DATE 01/20/06

DRAWN BY JMH  
CHECKED BY SDC

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00180-00-BR	COOK	14	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83822				



ILLINOIS DEPARTMENT OF TRANSPORTATION  
PEDESTRIAN CULVERT UNDER UNION PACIFIC RAILROAD

CONSTRUCTION DETAILS

NO SCALE  
DATE 01/20/06

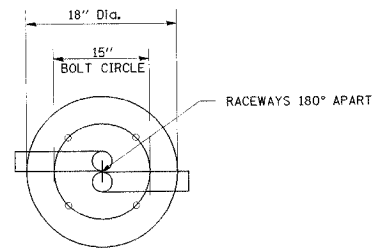
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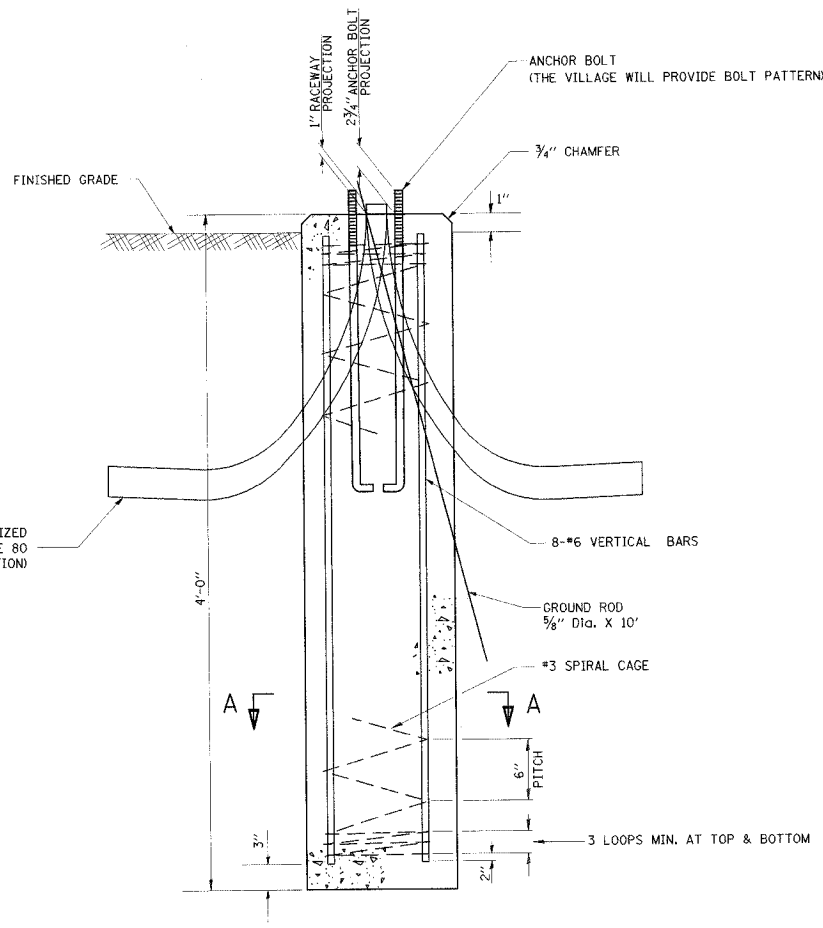
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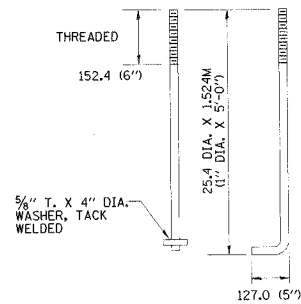
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00180-00-BR	COOK	14	9
STA. TO STA.				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 83822				



TOP PLAN



FOUNDATION DETAIL

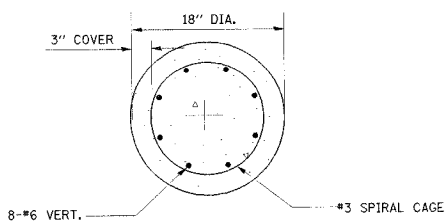


ANCHOR BOLT DETAIL

2" DIA. X 36" RADIUS RACEWAY GALVANIZED WITH BELL END - SCHEDULE 80 (2 EACH FOUNDATION)

FOUNDATION NOTES

1. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. SOIL CONDITIONS MAY REQUIRE THE USE OF A LINER TO FORM THE HOLE.
2. THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN..
3. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
4. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 3 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
5. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
6. ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 6 MILS OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
7. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES WITH A MINIMUM OF 3 INCHES OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
8. ANCHOR RODS SHALL PROJECT 2 3/4" ABOVE THE TOP OF THE FOUNDATION.
9. THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" PITCH OR MAY SUBSTITUTE #3 TIES AT 12" O.C. WITH THE APPROVAL OF THE ENGINEER.
10. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
11. THE RACEWAYS SHALL PROJECT 1" ABOVE THE TOP OF THE FOUNDATION.



SECTION A-A

ILLINOIS DEPARTMENT OF TRANSPORTATION  
PEDESTRIAN CULVERT UNDER UNION PACIFIC RAILROAD

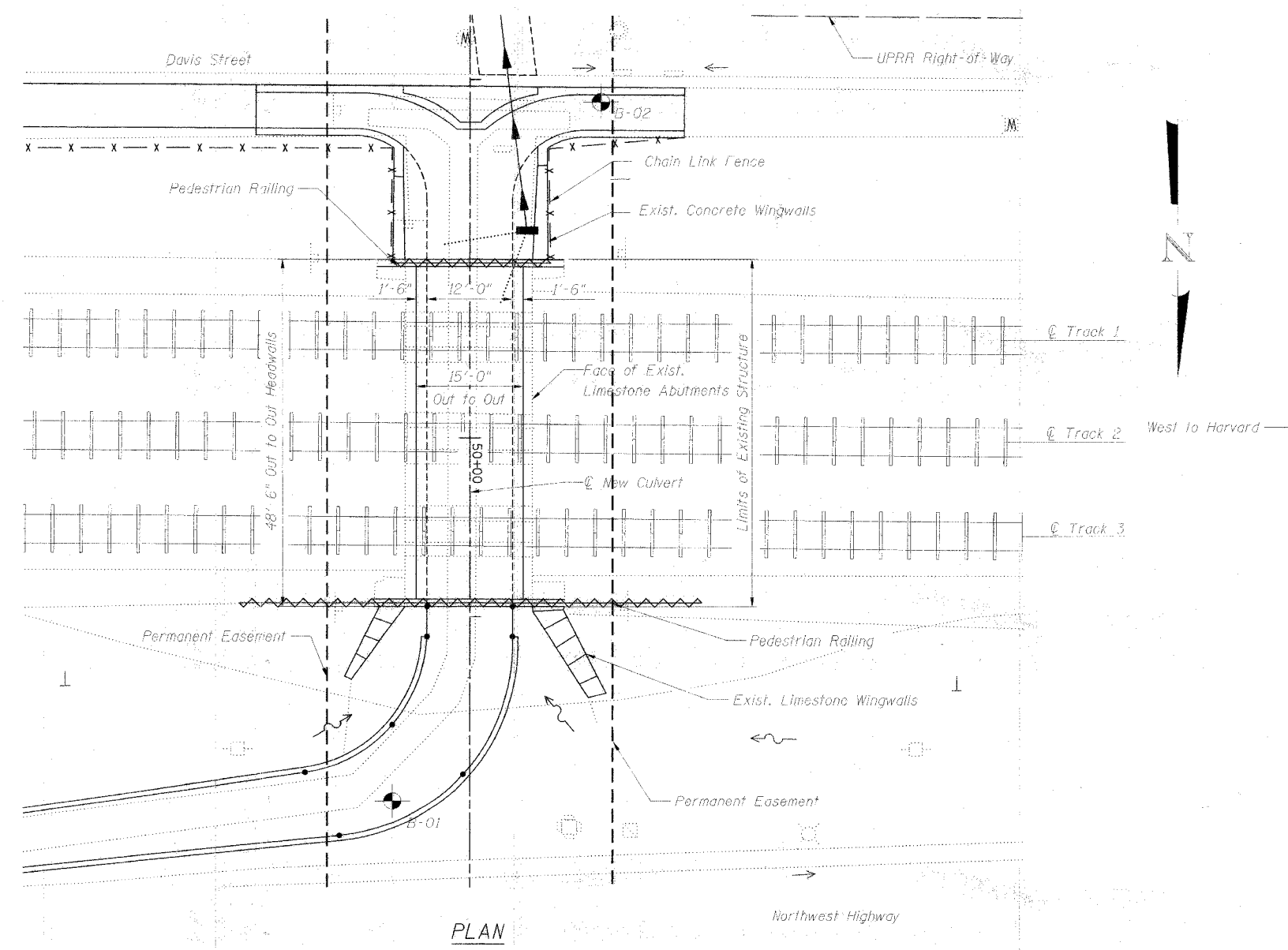
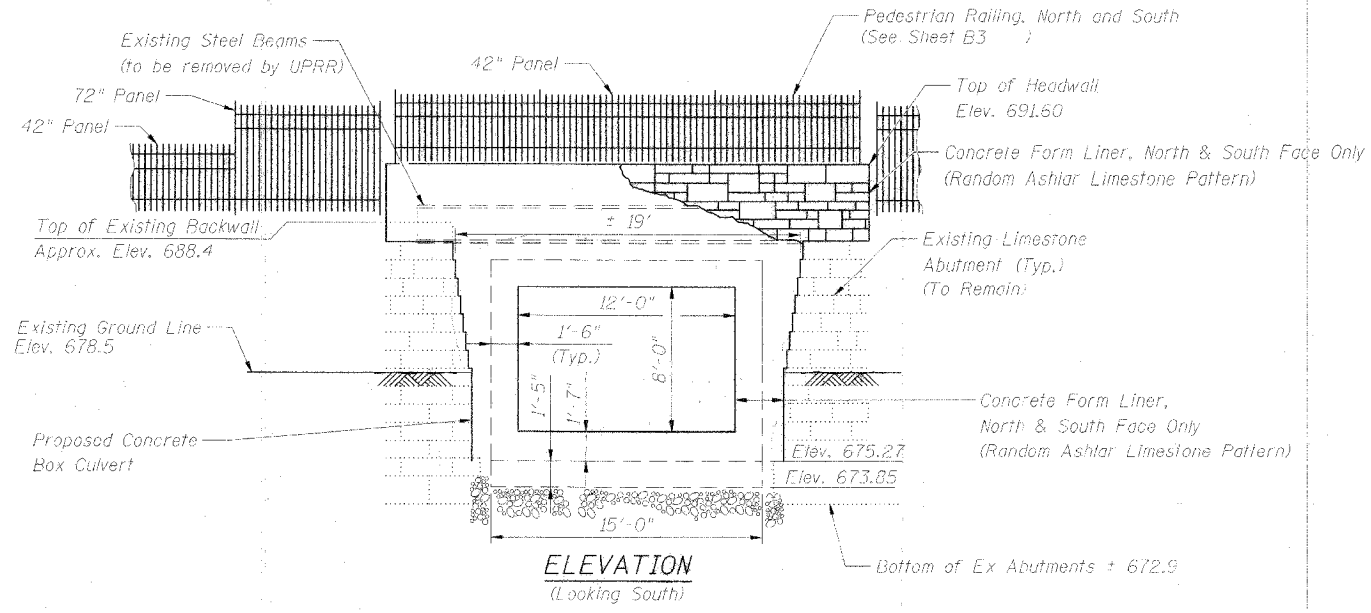
LIGHT POLE FOUNDATION

NO SCALE  
DATE 11/08/05

DRAWN BY DMG  
CHECKED BY SDC

Benchmark: Bm #54 1" Dia Brass disc in southeast side of light pole concrete base ±30' southwest of centerline of Northwest Highway and ±39' north of centerline of Kensington Road. El. 680.12.

Existing Structure: A single span 17'-9" face-to-face of abutments and a width of approximately 48'. Four 24<sup>3</sup>/<sub>8</sub>" deep steel beams, under each railroad track, on limestone abutments.



DESIGNED	JMH
CHECKED	RLP
DRAWN	DMG
CHECKED	RLP

PROJECT NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. OF SHEETS
83822		COOK	14	10
FED. ROAD DIST. NO. 7		ILL. HIGHWAY PROJECT		
Contract No. 83822				

**GENERAL NOTES**

1. Reinforcement bars shall conform to the requirements of AASHTO M31 (ASTM A615), Grade 60.
2. Exposed concrete edges shall be beveled <sup>3</sup>/<sub>4</sub>".
3. The back face of wingwalls and sidewalls and top of the top slab of the culvert shall be waterproofed according to article 503.18 of the Standard Specifications. Cast included in Concrete Box Culverts.
4. Plan dimensions and details relative to the existing structure have been taken from their measurements and are subject to nominal construction 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 a cause for additional compensation for a change in the scope of work.
5. All reinforcement bars designated (E) shall be epoxy coated.
6. The voids between the culvert sidewalls and existing abutments shall be filled with Porous Granular Embankment. The cost of this work shall be included in the Concrete Box Culverts. The contractor, at his option, may bank pour the culvert sidewalls against the existing abutments. The pay limits will be based on the concrete lines shown on the plans. No additional payment will be made for use of concrete in lieu of Porous Granular Embankment.
7. Care shall be taken to avoid undermining the existing abutment footings by excavating for proposed culvert.
8. Culvert wingwalls shall be poured to meet the face of the existing abutments. Reinforcing shall be adjusted to fit actual conditions as necessary. Cost included in Concrete Box Culverts.
9. Precast structure is not allowed.
10. Temporary abutment bracing shall be installed prior to excavation for Concrete Box Culverts. See sheet 12 for details.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Reinforcement Bars, Epoxy Coated	pound	30,900
Pedestrian Railing, 42"	foot	88
Pedestrian Railing, 72"	foot	16
Clear Protective Coating for Concrete	sq ft	2,380
Concrete Box Culverts	cu yd	155
Concrete Formliner	sq ft	500
Temporary Abutment Bracing	1 sum	1

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, 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 "AREMA MANUAL FOR RAILWAY ENGINEERING."



Robert L. Peters  
 ROBERT L. PETERS, P.E., S.E.  
 NO. 081-04697  
 EXP. DATE 11/30/06

**DESIGN STRESSES**

f'c = 4,000 psi  
 fy = 60,000 psi (REINFORCEMENT)

**DESIGN LOADING**

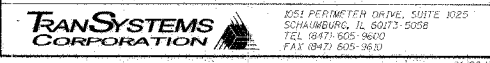
COOPER E-80

**DESIGN SPECIFICATIONS**

AREMA 2004 "MANUAL FOR RAILWAY ENGINEERING"

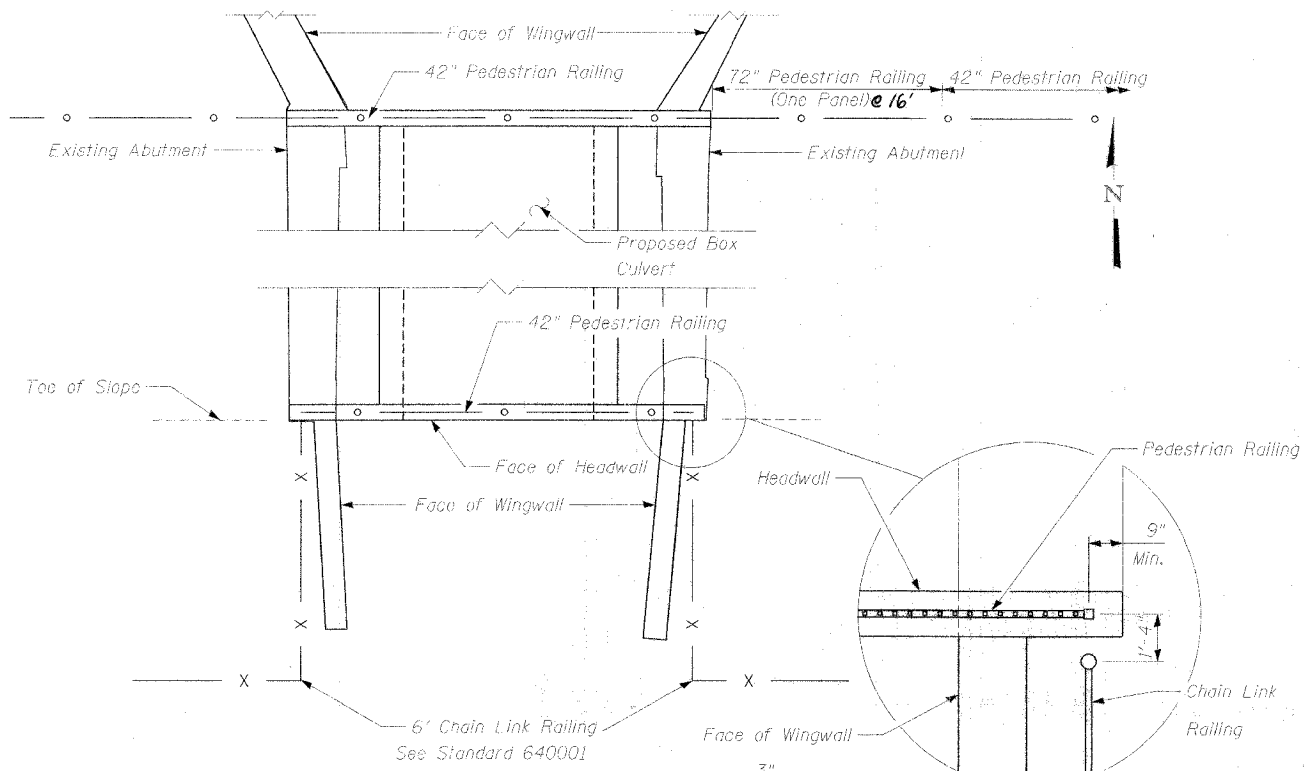
**CULVERT GENERAL PLAN AND ELEVATION**

PEDESTRIAN UNDERPASS CULVERT  
 UNDER THE UNION PACIFIC RAILROAD  
 COOK COUNTY  
 M.P. 22.05 - HARVARD SUBDIVISION  
 DOT NO. 176922D

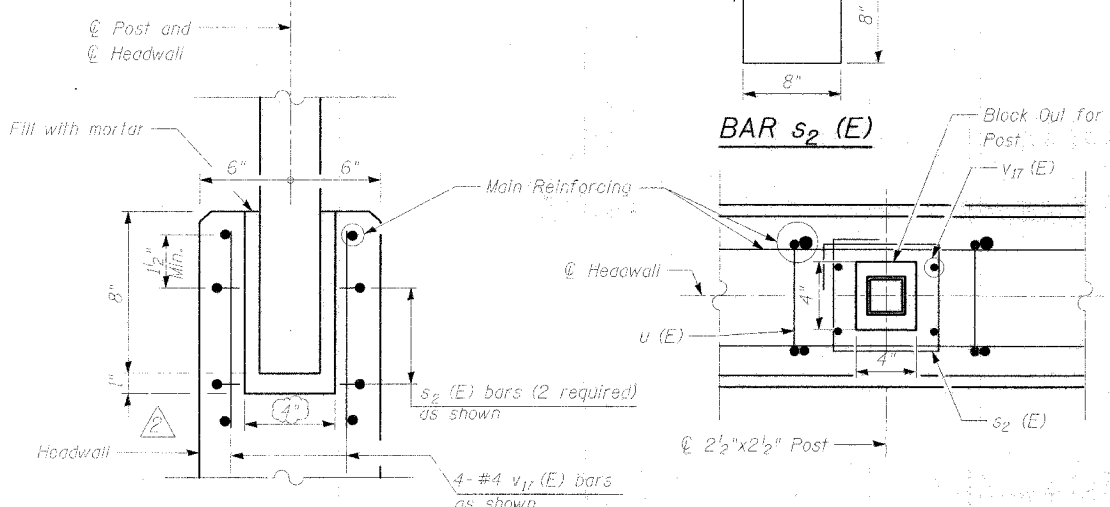


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**PLAN VIEW**

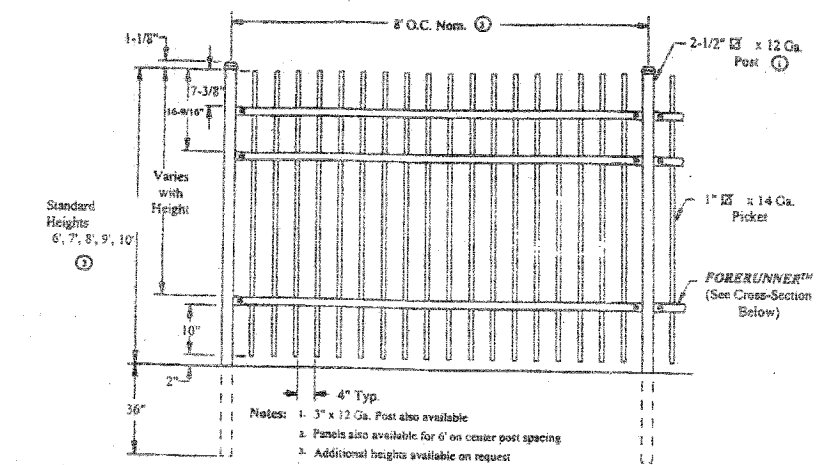


**POST ANCHORAGE DETAIL**

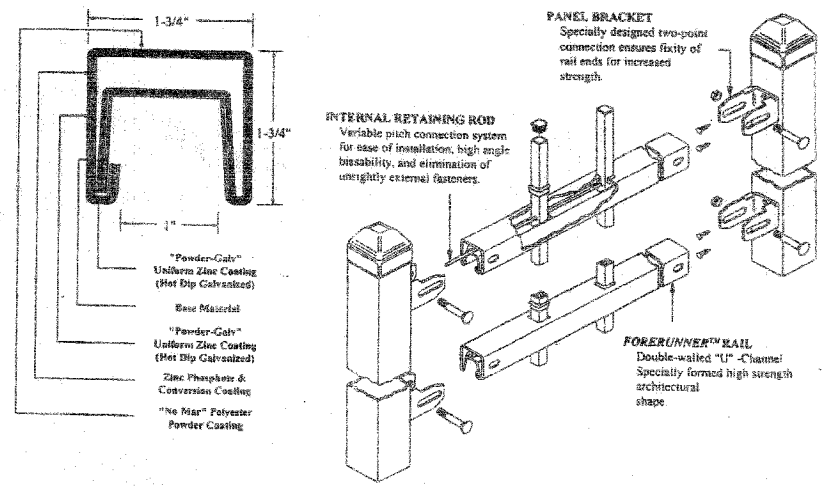
Bar	No.	Size	Length	Shape
s <sub>2</sub> (E)	8	#4	3'-2"	□
v <sub>17</sub> (E)	16	#4	1'-0"	—
Reinforcement Bars, Epoxy Coated				Pounds 30

- NOTES:**
- See Plan for chain link fence and pedestrian railing locations.
  - Railing assembly except chain link fabric to be galvanized after fabrication.
  - Posts shall be vertical.
  - Fence posts to be placed so that main reinforcing is not disturbed.
  - Railing on top of headwalls to be 6' tall. Panels adjacent to headwalls to be 10' tall and 8' tall, transitioning to 6' tall railing along embankment.

DESIGNED	JMH/JRS
CHECKED	RLP
DRAWN	DMG/JRS
CHECKED	RLP



**PEDESTRIAN RAILING DETAILS**

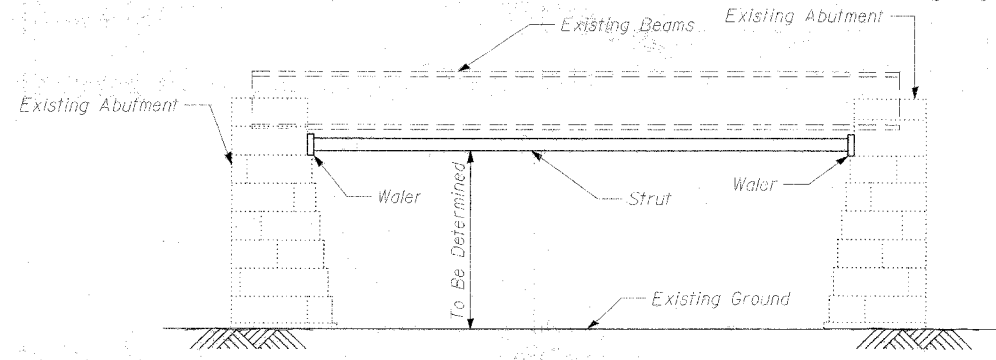


**Bracing Notes:**

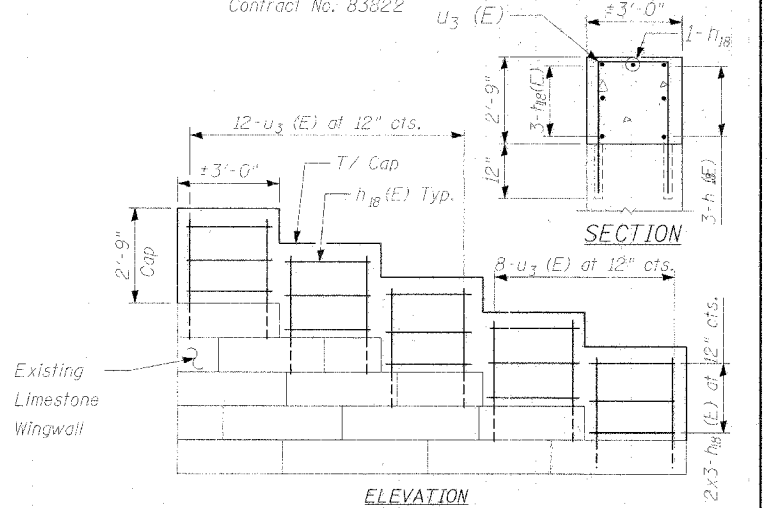
- Contractor shall submit calculations and details for Temporary Abutment Bracing to the Union Pacific Railroad for review and approval.
- Temporary Abutment Bracing is to be designed for a horizontal distributed load of 12 kips per linear foot of abutment.

**Bracing Notes, Cont'd:**

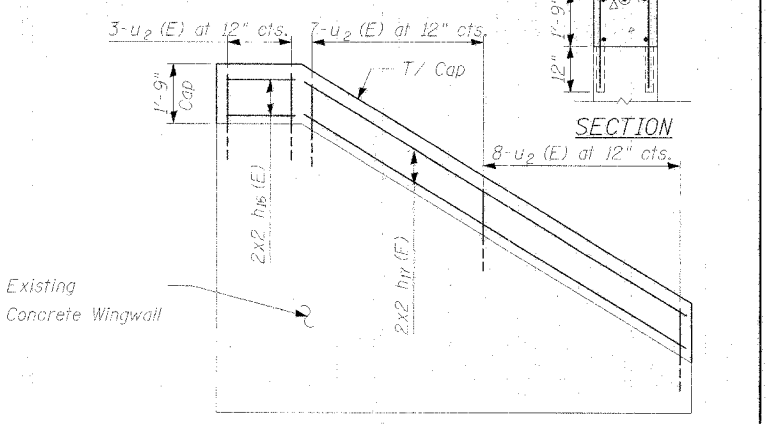
- Calculations and drawings are to be sealed by an Illinois Licensed Structural Engineer.
- Bracing is to be installed prior to excavation for Concrete Box Culverts and shall remain in place until the bottom slab has been cast and is fully cured.
- Cost for bracing will not be paid for separately, but shall be included in the cost of CONCRETE BOX CULVERTS.



**TEMPORARY ABUTMENT BRACING**  
(Looking South)



**NORTH WINGWALLS**



**SOUTH WINGWALLS**

**WINGWALL EXTENSION DETAILS**

**Wingwall Extension Notes:**

- Wingwalls to be raised with cast in-place concrete caps. Cost to be included with Concrete Box Culverts.
- u<sub>2,3</sub> (E) bars shall be epoxy grouted in 3/4" min. diameter drill holes into the existing wingwall in accordance with Section 584 of the Standard Specifications. Cost shall be included with Concrete Box Culverts.
- Reinforcing may be adjusted to fit field conditions.

Bar	No.	Size	Length	Shape
h <sub>16</sub> (E)	10	# 5	2' - 6"	—
h <sub>17</sub> (E)	10	# 5	16' - 0"	—
h <sub>18</sub> (E)	70	# 5	3' - 0"	—
u <sub>2</sub> (E)	36	# 5	6' - 6"	□
u <sub>3</sub> (E)	40	# 5	9' - 6"	□
Reinforcement Bars, Epoxy-Coated				Pounds 1,060

**RAILING DETAILS**

PEDESTRIAN UNDERPASS CULVERT  
UNDER THE UNION PACIFIC RAILROAD  
COOK COUNTY  
M.P. 22.05 - HARVARD SUBDIVISION  
DOT NO. 176922D

**W** Wang Engineering, INC.  
 Consulting Geotechnical and Environmental Engineers  
 wangeng3@wangeng.com  
 1145 Main Street  
 Lombard, IL 60148  
 Telephone: 630-953-9928  
 Fax: 630-953-9938

**BORING LOG B-01** Page 1 of 1  
 WEI Job No.: 790-08-01  
 Datum: NGVD  
 Elevation: 5.25 ft - **681.25 ft**  
 North: 9993.50 ft  
 East: 9992.00 ft  
 Station: 1+08  
 Offset: 10.5 LT

Client: **TranSystems**  
 Project: **Arlington Heights Pedestrian Underpass**  
 Location: **Arlington Heights, Illinois**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blows/6 in)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blows/6 in)	Cu (tsf)	Moisture Content (%)
3.8	Very stiff, black CLAY LOAM --TOPSOIL--								Boring terminated at 25.00 ft						
2.3	Loose, brown coarse SAND --FILL--	1		1	4.00	2.00	16								
0.3	Very stiff, black and gray, gravelly CLAY --FILL--	5		2	6.00	2.00	18								
5.3	Medium stiff to stiff, gray SANDY CLAY LOAM --FILL--	10		3	3.00	1.25	28								
	--LL=25%, PL=20%--			4	0.00	0.90	17								
5.3	Very stiff to hard, gray CLAY	15		5	11.00	5.33	16								
		20		6	10.00	3.69	18								
		25		7	16.00	2.00	18								
-12.8	Stiff to very stiff, gray CLAY	30		8	4.00	1.39	14								
		35		9	6.00	2.33	20								
-18.8		40		10	0.00	1.23	22								

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-01-2004	Complete Drilling	03-01-2004	While Drilling	<input checked="" type="checkbox"/>	DRY	
Drilling Contractor	Patrick	Drill Rig	CME-75 TMR	At Completion of Drilling	<input checked="" type="checkbox"/>	DRY	
Driller	K&J	Logger	Y. Shiu	Time After Drilling	NA		
Drilling Method	3.25" ID HSA; Boring backfilled upon completion			Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

**W** Wang Engineering, INC.  
 Consulting Geotechnical and Environmental Engineers  
 wangeng3@wangeng.com  
 1145 Main Street  
 Lombard, IL 60148  
 Telephone: 630-953-9928  
 Fax: 630-953-9938

**BORING LOG B-02** Page 1 of 1  
 WEI Job No.: 790-08-01  
 Datum: NGVD  
 Elevation: 2.69 ft - **677.43 ft**  
 North: 10017.50 ft  
 East: 9894.33 ft  
 Station: 2+05.67  
 Offset: 17.5 RT

Client: **TranSystems**  
 Project: **Arlington Heights Pedestrian Underpass**  
 Location: **Arlington Heights, Illinois**


Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blows/6 in)	Cu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	N Values (blows/6 in)	Cu (tsf)	Moisture Content (%)
1.0	Loose, gray GRAVELLY SAND --FILL--								Boring terminated at 25.00 ft						
	Medium stiff, gray gravelly CLAY --FILL--	1		1	0.00	0.50	10								
		5		2	1.00	0.75	22								
-3.5	Very stiff to hard, gray CLAY --LL=28%, PL=17%--	10		3	6.00	2.71	16								
		15		4	0.00	4.82	19								
-9.5	Medium dense, gray SILT	20		5	0.00	NP	16								
-11.0	Medium dense, gray GRAVELLY SAND	25		6	15.00	NP	10								
-13.5	Medium stiff to very stiff, gray CLAY	30		7	4.00	2.33	15								
		35		8	6.00	0.90	23								
		40		9	4.00	2.33	20								
-21.0	Medium dense, gray SILT	45		10	6.00	NP	17								
-23.9		50													

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-01-2004	Complete Drilling	03-01-2004	While Drilling	<input checked="" type="checkbox"/>	14.25 ft	
Drilling Contractor	Patrick	Drill Rig	CME-75 TMR	At Completion of Drilling	<input checked="" type="checkbox"/>	DRY	
Driller	K&J	Logger	Y. Shiu	Time After Drilling	NA		
Drilling Method	3.25" ID HSA; Boring backfilled upon completion			Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

DESIGNED	
CHECKED	RLP
DRAWN	DMG
CHECKED	RLP

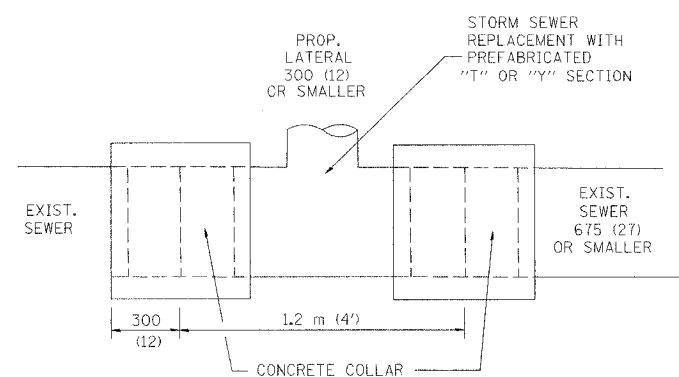
**BORING LOGS**

PEDESTRIAN UNDERPASS CULVERT  
 UNDER THE UNION PACIFIC RAILROAD  
 COOK COUNTY  
 M.P. 22.05 - HARVARD SUBDIVISION  
 DOT NO. 176922D

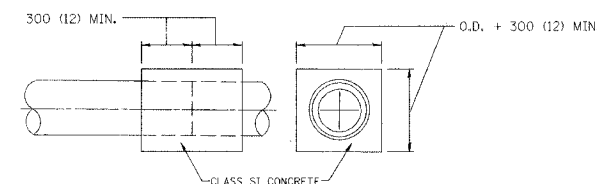
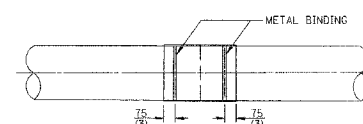
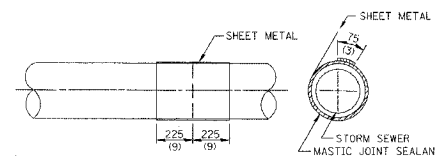
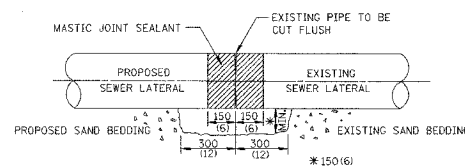

 1051 PERIMETER DRIVE, SUITE 2025  
 SCHWARTZBURG, IL 60173-3088  
 TEL: (815) 615-9200  
 FAX: (815) 615-9630

1/20/2006 8:33:39 AM G:\ch03\0181\structural\bor\log.sht

P. A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			14	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ALIGNMENT	FED. AID PROJECT		



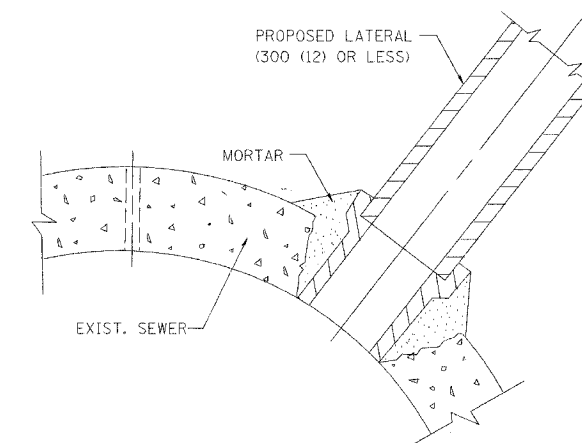
DETAIL "A"  
LATERAL CONNECTION TO EXISTING SEWER  
OF 675 (27) OR SMALLER



DETAIL "B"  
CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

- CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
- APPLY THE MASTIC JOINT SEALANT TO THE FIRST 150 (6) OF EACH PIPE.
- BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 300 x 150 (12 x 6) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
- CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 450 (18) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 75 (3) LONG.
- WRAP THE SHEET METAL AROUND THE PIPES, 225 (9) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
- LAP THE SHEET METAL AT LEAST 75 (3) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
- PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
- WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
- PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"  
PROPOSED LATERAL  
CONNECTION TO EXISTING SEWER  
OF 750 (30) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
  - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 675 (27) OR SMALLER SEE DETAIL "A" AND "B".
  - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 750 (30) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAIL OF STORM SEWER  
CONNECTION TO EXISTING SEWER

REVISIONS	
NAME	DATE
M. DE YONG	07/25/90
M. DE YONG	02/05/92
M. DE YONG	05/08/92
R. SHAH	09/09/94
R. SHAH	10/25/94
R. SHAH	06/12/96

SCALE: NONE  
DATE: 10/18/2002

DRAWN BY CADD  
CHECKED BY  
BD500-01 (BD-7)  
REVISION DATE: 06/12/96