

SMITH ENGINEERING CONSULTANTS, INC.
 CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
 4500 POND PARKWAY, SUITE 301
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 PH: 815-385-1770 FAX: 815-385-1781
 www.smithengineering.com E-MAIL: sec@smithengineering.com
 McHENRY HUNTLEY YORKVILLE
 ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

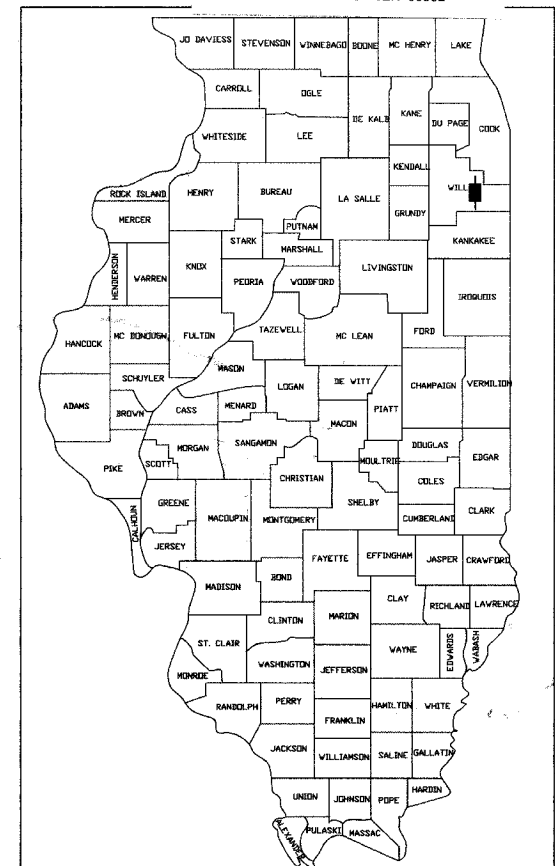
**PLANS FOR PROPOSED
 FEDERAL AID HIGHWAY**

CH. 70 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 SECTION NO. 01-00139-02-BR
 BRIDGE SUPERSTRUCTURE REPLACEMENT
 PROJECT NO. BROS D001 607
 STRUCTURE NUMBER 099-3091

WILL COUNTY
 C-91-148-01
 R 12 E, R 13 E

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	1
PROJECT NO. BROS D001 607				
FED. ROAD DIST. NO. 1 ILLINOIS HIGHWAY PROJECT 1				

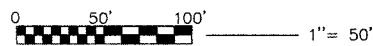
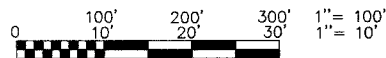
CONTRACT NUMBER 83802



LOCATION OF SECTION INDICATED THIS: -

FOR INDEX OF SHEETS, SEE SHEET NO. 2

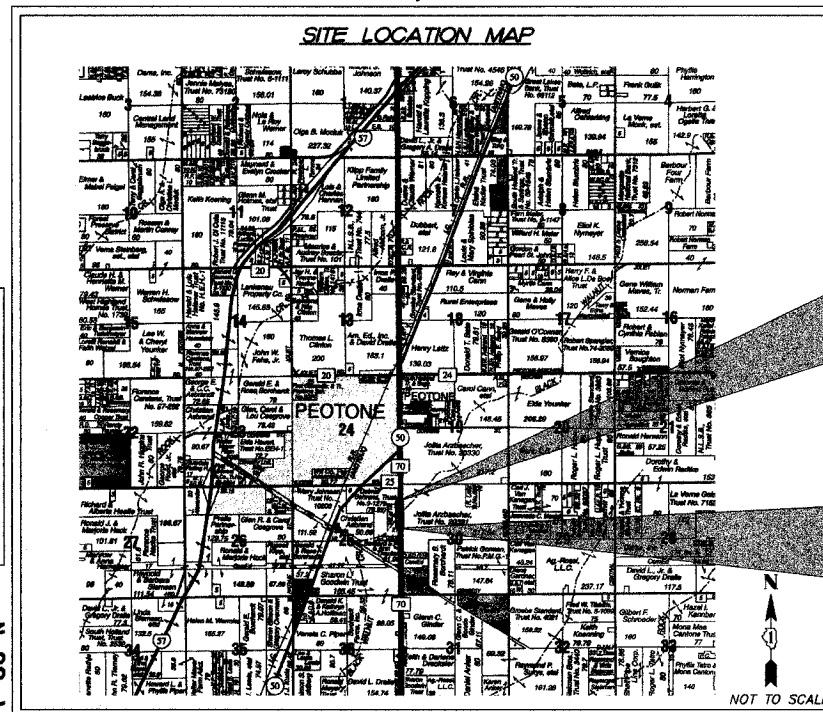
SCALES
 PLAN: 1" = 20'
 PROFILE HORIZ.: 1" = 20'
 PROFILE VERT.: 1" = 5'
 CROSS SECTIONS HORIZ.: 1" = 2'
 CROSS SECTIONS VERT.: 1" = 5'



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.

PROJECT LOCATED IN
 UNINCORPORATED WILL COUNTY

STRUCTURE INFORMATION
 EXISTING AND PROPOSED STRUCTURE IS SINGLE SPAN (48'-8 1/2") REMOVE EXISTING PPC DECK BEAM SUPERSTRUCTURE AND REPLACE WITH A 43'-2" WIDE SUPERSTRUCTURE CONSISTING OF A CONCRETE DECK ON STEEL WIDE FLANGE BEAMS. EXISTING SUBSTRUCTURE UNITS TO BE MODIFIED AND RE-USED. SN 099-3091



HARLEM AVENUE
 PROJECT ENDS
 STA. 113+46.50

HARLEM AVENUE
 PROJECT BEGINS
 STA. 100+00

WILL/PEOTONE TOWNSHIP (RANGE LINE)
 T 33 N
 GROSS LENGTH OF PROJECT = 1,347 FEET = 0.255 MILES
 NET LENGTH OF PROJECT = 1,347 FEET = 0.255 MILES

FUNCTIONAL CLASSIFICATION
 LOCAL ROAD, (NON-URBAN)

DESIGN SPEED
 HARLEM AVENUE: 55 MPH

SPEED LIMIT
 HARLEM AVENUE: 55 MPH

TRAFFIC DATA
 HARLEM AVENUE: 1,207 (2002)
 13,500 (2025)

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

APPROVED MAY 20 2005
Sheldon C. Lot
 LOCAL AGENCY OFFICIAL

APPROVED MAY 20 2005
[Signature]
 LOCAL ROAD ENGINEER

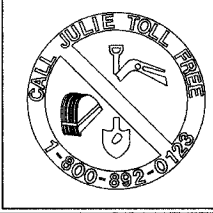
APPROVED June 1, 2005
Dina O'Keefe/AP
 DEPUTY DIRECTOR OF HIGHWAYS
 REGION ONE ENGINEER

PRINTED BY AUTHORITY OF THE
 STATE OF ILLINOIS

CALL JULIE 1-800-892-0123

WITH THE FOLLOWING:
 COUNTY WILL
 CITY-TOWNSHIP WILL / PEOTONE
 SEC. & 1/4 SEC. NO.# 25, NE 1/4

48 hours before you dig
 (Excluding Sat., Sun. & Holidays)



CONTRACT NO. 83802

PROFESSIONAL ENGINEER'S SIGN & SEAL

Jeff L. Pisha
 JEFF L. PISHA P.E.
 5-23-2005

DATE: 11-30-2005
 LICENSE EXPIRES: _____

SEAL

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

PLOT FILE GEN
 DATE: 05-19-05
 04:15:59 - 011.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	02
STA.	TO STA.			
FED. ROAD DIST. NO. 1			ILLINOIS HIGHWAY PROJECT	
CONTRACT # 83802				

INDEX OF SHEETS

1	COVER SHEET
2	INDEX OF SHEETS, LIST OF STATE STANDARDS, GENERAL NOTES
3	SUMMARY OF QUANTITIES
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8-10	ROADWAY PLAN AND PROFILE
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13-14	PAVEMENT MARKING AND RESTORATION PLAN
15-27	BRIDGE PLANS
28	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
29	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
30	BUTT JOINT AND BITUMINOUS TAPER DETAILS
31	BENCHING DETAIL FOR EMBANKMENT WIDENING
32-35	CROSS SECTIONS AND EARTHWORK TABLE

GENERAL NOTES

- 1 THE CONTRACTOR WILL PROVIDE AND INSTALL TWO (2) WEIGHTED SAND BAGS ON EACH BARRICADE USED. (TYPE I OR TYPE II (ONE (1) WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL.) ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR (4) SANDBAGS PER BARRICADE.
- 2 FORTY-EIGHT HOURS BEFORE STARTING EXCAVATION THE CONTRACTOR WILL CALL J.U.L.I.E. (1-800-892-0123) TO HAVE THE LOCATION OF EXISTING UTILITIES STAKED.
- 3 THE CONTRACTOR SHALL CONTACT THE WILL COUNTY DEPARTMENT OF HIGHWAYS AND I.D.O.T. BUREAU OF TRAFFIC AT LEAST 72 HOURS IN ADVANCE OF BEGINNING ANY WORK ON HARLEM AVENUE.
- 4 THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON COUNTY PROPERTY WITHOUT WRITTEN PERMISSION FROM THE WILL COUNTY DEPARTMENT OF HIGHWAYS.
- 5 PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT SAME TO THE ENGINEER BEFORE DOING ANY WORK, OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTIONS, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.
- 6 THE CONTRACTOR SHALL ENSURE THAT ALL STORM SEWER MANHOLES AND SANITARY SEWER MANHOLES REMAIN READILY ACCESSIBLE TO THE COUNTY FOR EMERGENCY OPERATIONS. THE LOCATIONS OF ALL STORM AND SANITARY FACILITIES SHALL BE MARKED AND READILY VISIBLE AT ALL TIMES.
- 7 A SOILS REPORT HAS BEEN COMPLETED FOR THIS PROJECT AND IS AVAILABLE FOR CONTRACTOR REVIEW AT THE WILL COUNTY DEPARTMENT OF HIGHWAYS.

- 8 THE LENGTH OF "GUARDRAIL REMOVAL" INCLUDES THE LENGTH OF THE TRAFFIC BARRIER TERMINALS
- 9 BUTT JOINTS WILL BE INSTALLED AT THE END OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND BITUMINOUS TAPER" DETAILS UNLESS OTHERWISE SPECIFIED.
- 10 EXISTING FIELD TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE MAINTAINED IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM "REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL."
- 11 IF EXISTING TREES OR STUMPS OVER 6" CALIPER ARE ENCOUNTERED THAT CONFLICT WITH CONSTRUCTION OPERATIONS, THEY SHALL BE REMOVED IN ACCORDANCE WITH SECTION 201 OF THE STANDARD SPECIFICATIONS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM "REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL."
- 12 PLACING EMBANKMENT SHALL BE IN ACCORDANCE WITH THE "BENCHING DETAIL FOR EMBANKMENT WIDENING" AND THE STANDARD SPECIFICATIONS. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM "FURNISHED EXCAVATION."

LIST OF STATE STANDARDS

STANDARD NO.	LIST OF DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
420401-05	BRIDGE APPROACH PAVEMENT
515001-02	NAME PLATE FOR BRIDGES
630001-05	STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-05	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
702001-05	TRAFFIC CONTROL DEVICES
780001-01	TYPICAL PAVEMENT MARKINGS
BLR 22-4	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO LANE TWO WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

SYMBOL LEGEND

	EXISTING	PROPOSED
SANITARY MANHOLE	⊗	⊗
STORM MANHOLE	⊙	⊙
STORM CATCH BASIN	□	□
INLET	○	○
FLARED END SECTION	▷	▷
VALVE VAULT	⊗	⊗
FIRE HYDRANT	▽	▽
LIGHT POLE	✱	✱
STREET SIGN	+	+
REGULATORY SIGN	+	+
UTILITY POLE	○	○
UTILITY BOX	⊠	⊠
MAILBOX	⊠	⊠
WELL	⊗	⊗
SANITARY SEWER	—	—
STORM SEWER	—	—
CULVERT	—	—
WATER MAIN	—	—
WATER MAIN ENCASEMENT	—	—
STORM UNDERDRAIN	—	—
ELECTRIC LINE	—	—
TELEPHONE LINE	—	—
GAS LINE	—	—
CABLE TV LINE	—	—
TREELINE	—	—
TREE	⊗	⊗
FENCE	—	—
EROSION CONTROL FENCE	—	—
DITCH CHECK	—	—
DRAINAGE ARROW	—	—
100 YEAR OVERFLOW	—	—

STANDARD ABBREVIATIONS

- B-B - BACK TO BACK OF CURB
- B.C. - BACK OF CURB
- B.O.C. - BACK OF CURB
- B.S.L. - BUILDING SETBACK LINE
- C.B. - STORM CATCH BASIN
- C.E. - COMMONWEALTH EDISON CO.
- D.E. - DRAINAGE EASEMENT
- E-E - EDGE TO EDGE OF PAVEMENT
- E.O.P. - EDGE OF PAVEMENT
- E.O.S. - EDGE OF SHOULDER
- E.P. - EDGE OF PAVEMENT
- E.S. - EDGE OF SHOULDER
- F.E.S. - FLARED END SECTION
- I.B.T. - ILLINOIS BELL TELEPHONE CO.
- L.E. - LANDSCAPE EASEMENT
- M.H. - MANHOLE (TYPE SPECIFIED ON PLANS)
- R.O.W. - RIGHT OF WAY
- T.B.F. - TRENCH BACKFILL
- T.C. - TOP OF CURB
- T.C.E. - TEMPORARY CONSTRUCTION EASEMENT
- T.O.B. - TOP OF BERM
- T.O.C. - TOP OF CURB
- U.E. - UTILITY EASEMENT

SITE BENCHMARKS

BM 1:
CUT SQUARE IN TOP OF CONCRETE WINGWALL AT THE SOUTH EAST CORNER OF THE HARLEM AVENUE BRIDGE OVER BLACK WALNUT CREEK. ELEV. 689.71

BM 2:
CUT SQUARE IN TOP OF CONCRETE HEADWALL ADJACENT TO THE WINGWALL AT THE NORTH EAST CORNER OF THE HARLEM AVENUE BRIDGE OVER BLACK WALNUT CREEK. ELEV. 685.35

REVISIONS	
NO.	DATE
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 INDEX OF SHEETS,
 LIST OF STATE STANDARDS,
 AND GENERAL NOTES

SCALE: "NTS" DRAWN BY WJH
 DATE 5-26-2005 CHECKED BY JLP

PLOT FILE STANDARD
 VBA CT-00 040159-611.dwg
 COMP FILE:

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE		
CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY	BRIDGE
				80% FEDERAL 20% LOCAL 1000	80% FEDERAL 20% LOCAL XO 71-2A
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	1,156	1,156	-
20400800	FURNISHED EXCAVATION	CU YD	362	362	-
20700420	POROUS GRANULAR EMBANKMENT, SUBGRADE	CU YD	164	164	-
20900110	POROUS GRANULAR BACKFILL	CU YD	78	-	78
* 21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	3,291	3,291	-
* 25000210	SEEDING, CLASS 2A	ACRE	0.68	0.68	-
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	61	61	-
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	61	61	-
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	61	61	-
* 25100105	MULCH, METHOD 1	ACRE	0.52	0.52	-
25100630	EROSION CONTROL BLANKET	SQ YD	628	628	-
28000300	TEMPORARY DITCH CHECKS	EACH	12	12	-
28000400	PERIMETER EROSION BARRIER	FOOT	2,539	2,539	-
28100107	STONE RIP RAP CL A4	SQ YD	90	90	-
28200200	FILTER FABRIC	SQ YD	90	90	-
35101400	AGGREGATE BASE COURSE, TYPE B	TON	110	110	-
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GAL	112	112	-
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	167	167	-
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	160	160	-
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	32	32	-
44000006	BITUMINOUS SURFACE REMOVAL 1 1/2"	SQ YD	957	957	-
44000100	PAVEMENT REMOVAL	SQ YD	158	158	-
48101200	AGGREGATE SHOULDERS, TYPE B	TONS	130	130	-
48202600	BITUMINOUS SHOULDERS SUPERPAVE 8"	SQ YD	492	492	-
50101600	REMOVAL OF EXISTING SUPERSTRUCTURES	L SUM	1	-	1
50102400	CONCRETE REMOVAL	CU YD	36.8	-	36.8
50105220	PIPE CULVERT REMOVAL	FOOT	23	23	-
50200100	STRUCTURE EXCAVATION	CU YD	275	-	275
50300100	FLOOR DRAINS	EACH	8	-	8
50300225	CONCRETE STRUCTURES	CU YD	115.8	-	115.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	66.3	-	66.3
50300260	BRIDGE DECK GROOVING	SQ YD	193	-	193
50300300	PROTECTIVE COAT	SQ YD	65	-	65
50301245	FORMED CONCRETE REPAIR (DEPTH <=5")	SQ FT	5	-	5
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	-	1
50500505	STUD SHEAR CONNECTORS	EACH	1,008	-	1,008
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	26,690	-	26,690
51201100	FURNISHING METAL PILE SHELLS, 14"	FOOT	408	-	408
51202600	DRIVING AND FILLING SHELLS	FOOT	408	-	408
51500100	NAME PLATES	EACH	1	-	1
54200220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	27	27	-
54214080	ALUMINUM END SECTIONS 15"	EACH	2	2	-
59000100	EPOXY CRACK SEALING	FOOT	65	-	65
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	67	-	67
60100915	PIPE DRAINS, 6"	FOOT	67	-	67
60255500	MANHOLES TO BE ADJUSTED	EACH	2	2	-
63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	128	128	-
63100085	TRAFFIC BARRIER TERMINAL TYPE 6	EACH	4	4	-
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4	4	-

*
*


SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE		
CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY	BRIDGE
				80% FEDERAL 20% LOCAL 1000	80% FEDERAL 20% LOCAL XO 71-2A
63200310	GUARDRAIL REMOVAL	FOOT	309	309	-
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	-
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1,458	1,458	-
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	7	7	-
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	-
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	7	7	-
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	200	200	-
X4021000	TEMPORARY ACCESS (PRIVATE ENTRANCE)	EACH	1	1	-
X4066426	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70	TONS	94	94	-
X4066770	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70	TONS	20	20	-
X7011005	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	L SUM	1	1	-
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5	0.5
67100100	MOBILIZATION	L SUM	1	1	-

* SPECIALTY ITEM

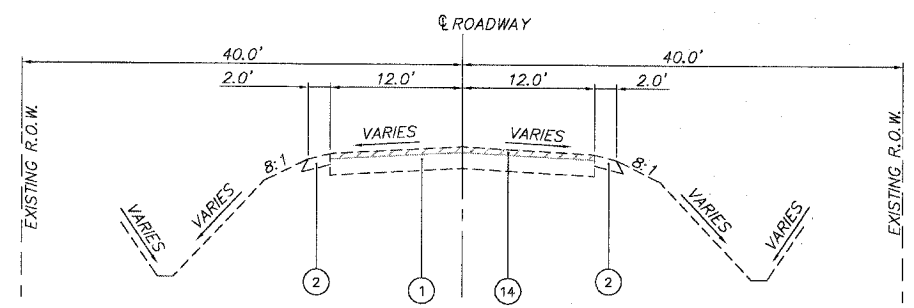
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3762	01-00139-02-BR	WILL	35	03
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS HIGHWAY PROJECT		CONTRACT # 83802	

PLOT FILE STANDARD
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 COMP. FILE: 040159-611.dwg

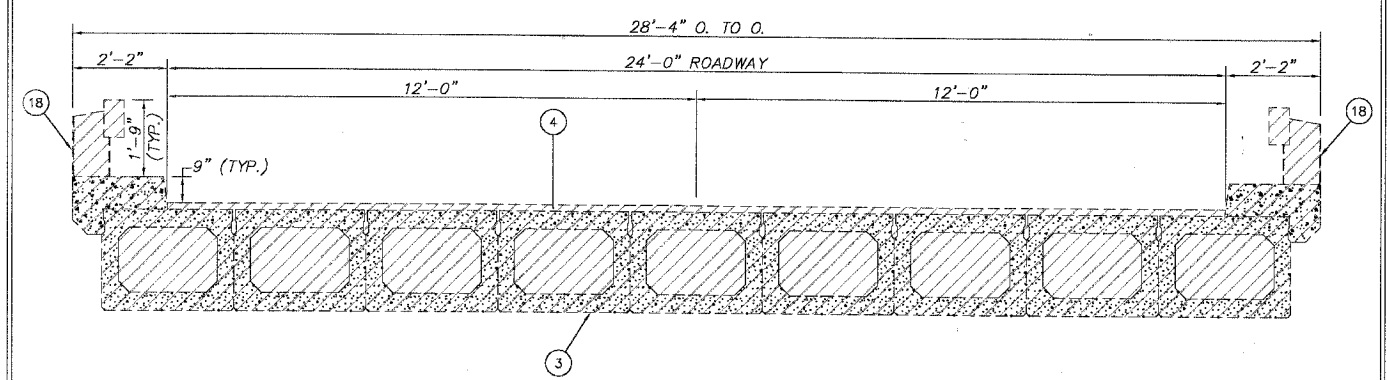
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 ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 SUMMARY OF QUANTITIES
 SCALE: "NTS"
 DATE 5-26-2005
 DRAWN BY: WJH
 CHECKED BY: JLP



**EXISTING ROADWAY
TYPICAL SECTION**
* APPLIES ONLY FROM STA. 104+32 TO STA. 106+46
AND FROM STA. 107+54 TO STA. 109+47



HARLEM AVENUE - EXISTING BRIDGE TYPICAL SECTION
STA. 106+76.00 TO STA. 107+24.70

- LEGEND**
- 1 EXISTING BITUMINOUS PAVEMENT 8" - 10"
 - 2 EXISTING AGGREGATE SHOULDER
 - 3 EXISTING PPC DECK BEAM SUPERSTRUCTURE
 - 4 EXISTING BITUMINOUS WEARING SURFACE
 - 5 PROPOSED TOPSOIL FURNISH AND PLACE, 6" & SEEDING CL 2A
 - 6 PROPOSED BITUMINOUS SHOULDERS, SUPERPAVE, 8"
 - 7 PROPOSED BRIDGE APPROACH PAVEMENT
 - 8 PROPOSED RETAINING WALL (CONCRETE STRUCTURES - SEE SHEET S-11)
 - 9 PROPOSED AGGREGATE SHOULDERS, TYPE B (8" THICK)
 - 10 PROPOSED CONCRETE BARRIER (CONCRETE SUPERSTRUCTURES - SEE SHEET S-05)
 - 11 PROPOSED STEEL PLATE BEAM GUARDRAIL, TYPE A
 - 12 PROPOSED CONCRETE SUPERSTRUCTURE (SEE BRIDGE PLANS)
 - 13 PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D" N70 (1 1/2" THICK)
 - 14 BITUMINOUS SURFACE REMOVAL 1 1/2"
 - 15 PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
 - 16 POROUS GRANULAR EMBANKMENT, SUBGRADE (12" THICK)
 - 17 LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70 (1 1/2" MIN. & VARIES)
 - 18 EXISTING CONCRETE BRIDGE RAIL



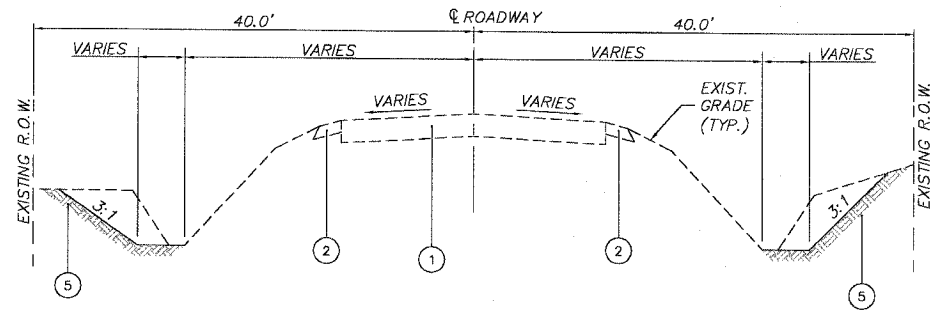
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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION
WILL COUNTY DEPARTMENT OF HIGHWAYS
HARLEM AVENUE/DRECKSLER ROAD
OVER BLACK WALNUT CREEK
EXISTING TYPICAL SECTIONS
SCALE: "NTS"
DATE 5-26-2005
DRAWN BY WJH
CHECKED BY JLP

PLOT FILE STANDARD
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COMP. FILE: CAD159-611.dwg

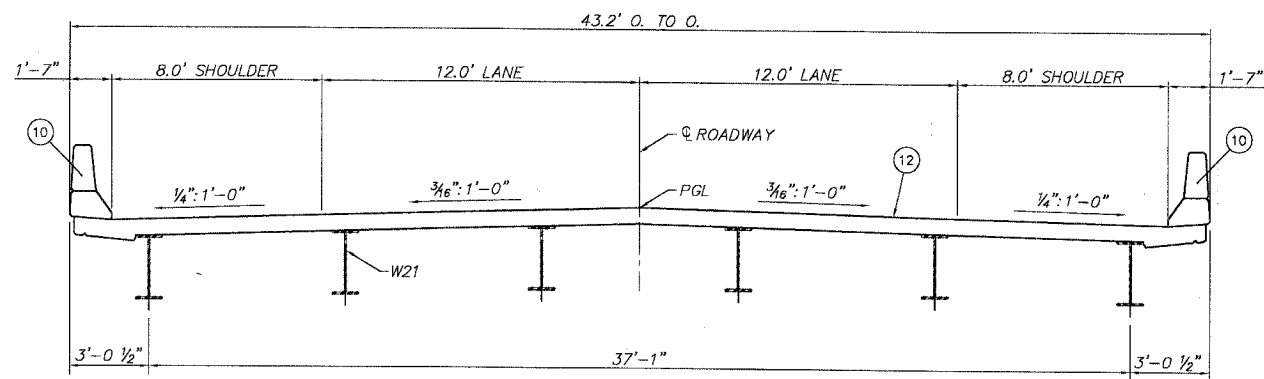
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	05
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS HIGHWAY PROJECT		
CONTRACT #: 83802				



HARLEM AVENUE - PROPOSED ROADWAY TYPICAL SECTION

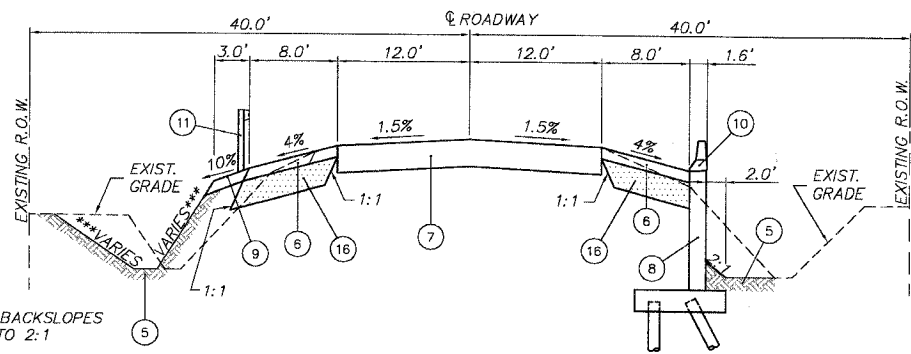
LEFT: STA. 101+00 TO STA. 104+32
 STA. 112+00 TO STA. 118+46.50
 RIGHT: STA. 100+00 TO STA. 104+32
 STA. 109+47 TO STA. 113+00

SEE CROSS SECTIONS FOR MORE DETAILED INFORMATION



HARLEM AVENUE - PROPOSED BRIDGE TYPICAL SECTION

STA. 106+76.00 TO STA. 107+24.70



HARLEM AVENUE - PROPOSED ROADWAY TYPICAL SECTION

STA. 106+49.49 TO STA. 106+76.49
 STA. 107+24.21 TO STA. 107+54.21

***FORESLOPES AND BACKSLOPES RANGE FROM 3:1 TO 2:1

REF: FILE STANDARD
 VIEW: C.D.S.
 COMP. FILE: C:\DTS9-611.dwg

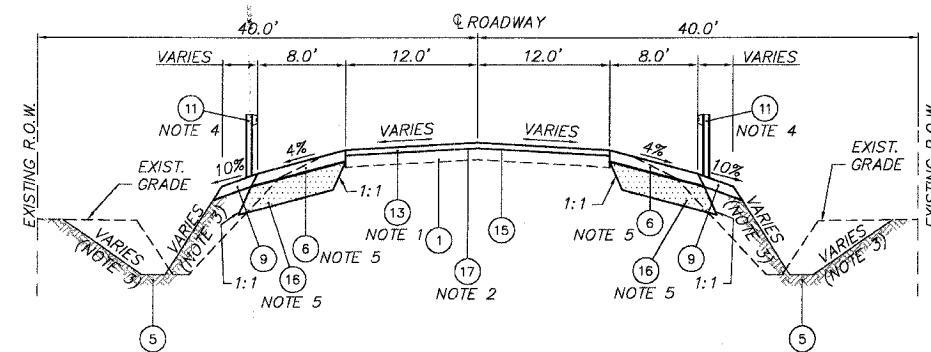
LEGEND

- 1 EXISTING BITUMINOUS PAVEMENT 8" - 10"
- 2 EXISTING AGGREGATE SHOULDER
- 3 EXISTING PPC DECK BEAM SUPERSTRUCTURE
- 4 EXISTING BITUMINOUS WEARING SURFACE
- 5 PROPOSED TOPSOIL FURNISH AND PLACE, 6" & SEEDING CL 2A
- 6 PROPOSED BITUMINOUS SHOULDERS, SUPERPAVE, 8"
- 7 PROPOSED BRIDGE APPROACH PAVEMENT
- 8 PROPOSED RETAINING WALL (CONCRETE STRUCTURES-SEE SHEET S-11)
- 9 PROPOSED AGGREGATE SHOULDERS, TYPE B (8" THICK)
- 10 PROPOSED CONCRETE BARRIER (CONCRETE SUPERSTRUCTURES-SEE SHEET S-05)
- 11 PROPOSED STEEL PLATE BEAM GUARDRAIL, TYPE A
- 12 PROPOSED CONCRETE SUPERSTRUCTURE (SEE BRIDGE PLANS)
- 13 PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D" N70 (1 1/2" THICK)
- 14 BITUMINOUS SURFACE REMOVAL 1 1/2"
- 15 PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
- 16 POROUS GRANULAR EMBANKMENT, SUBGRADE (12" THICK) (SEE NOTE BELOW)
- 17 LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70 (1 1/2" MIN. & VARIES)
- 18 EXISTING CONCRETE BRIDGE RAIL

"POROUS GRANULAR EMBANKMENT, SUBGRADE (PGES) HAS BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH PGES WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSTABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO COMPENSATION WILL BE DUE THE CONTRACTOR."

ALL RECOMMENDED UNDERCUTS ARE FROM 6" OUTSIDE THE EDGES OF SHOULDER. DEPTHS WILL BE DETERMINED BY A LICENSED SOILS ENGINEER. LIMITS ARE FROM STA 105+68 TO 106+75 AND 107+23 TO 108+59 LEFT, 104+82 TO 106+75 AND 107+23 TO 109+13 RIGHT.

NOTE: THE UNIT WEIGHT USED TO CALCULATE ALL BITUMINOUS SURFACE MIXTURE QUANTITIES IS 112 LB/SY/IN.



HARLEM AVENUE - PROPOSED ROADWAY TYPICAL SECTION

LEFT: STA. 104+94 TO STA. 106+49.49
 STA. 107+54.21 TO STA. 108+93

RIGHT: STA. 104+20 TO STA. 106+49.49
 STA. 107+54.21 TO STA. 109+30

SEE CROSS SECTIONS FOR MORE DETAILED INFORMATION

- NOTE 1: APPLIES ONLY FROM STA. 104+32 TO STA. 106+46 AND FROM STA. 107+54 TO STA. 109+47
 NOTE 2: APPLIES TO STA. 107+54.21 TO STA. 109+47
 NOTE 3: FORESLOPES AND BACKSLOPES RANGE FROM 4:1 TO 2:1

- NOTE 4: APPLIES ONLY FROM STA. 105+82 TO STA. 106+62 AND FROM STA. 107+30 TO STA. 108+11 LEFT; AND STA. 105+30 TO STA. 106+56 AND STA. 107+51 TO STA. 108+65 RIGHT
 NOTE 5: APPLIES ONLY FROM STA. 105+68 TO STA. 106+75 AND FROM STA. 107+23 TO STA. 108+59 LEFT; AND STA. 104+82 TO STA. 106+75 AND STA. 107+23 TO STA. 109+13 RIGHT

BITUMINOUS MIXTURE REQUIREMENT

ITEM DESCRIPTION	AC TYPE	VOIDS	RAP %	THICKNESS
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N70	PG 64-22	4% @ 50 Gyr.	15%	1 1/2"
BITUMINOUS SHOULDER, SUPERPAVE, 8"	PG 58-22	2% @ 30 Gyr.	50%	8"
LEVELING BINDER (MACHINE METHOD), SUPERPAVE, N70 (MIX C)	PG 64-22	4% @ 50 Gyr.	15%	VARIES

REVISIONS	
NAME	DATE

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 * ROCKFORD * HUNTLEY * YORKVILLE
 ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

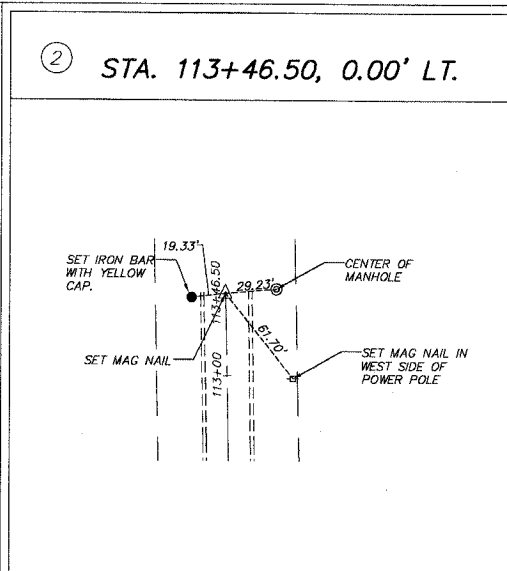
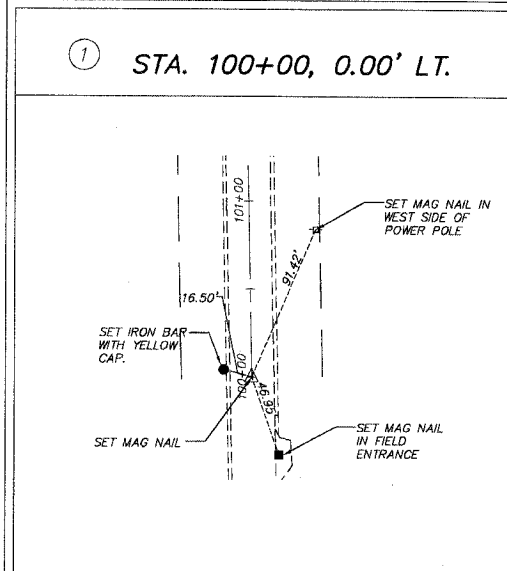
ILLINOIS DEPARTMENT OF TRANSPORTATION

WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 PROPOSED TYPICAL SECTIONS

SCALE: "N"TS
 DATE 5-26-2005

DRAWN BY: WJH
 CHECKED BY: JLP

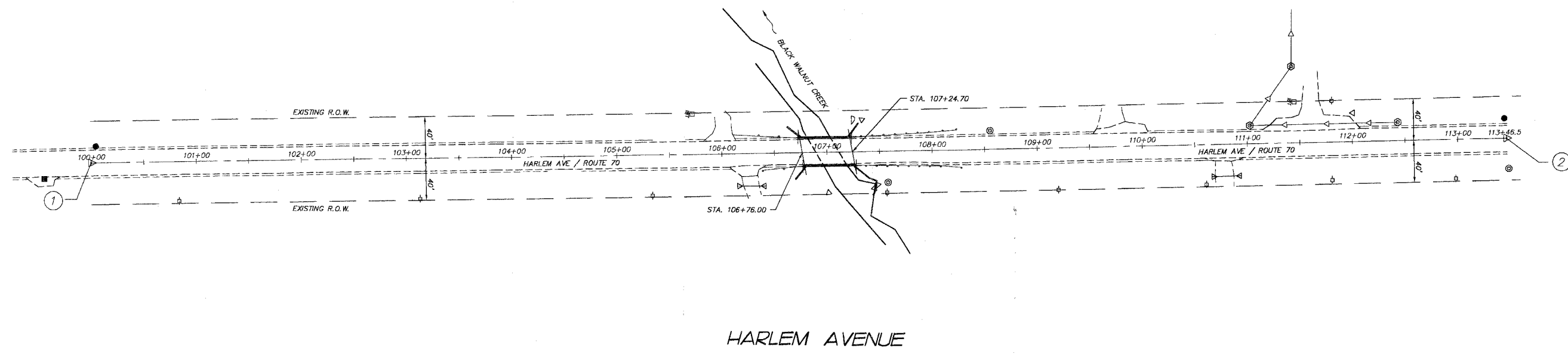
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	06
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS HIGHWAY PROJECT		
CONTRACT # 83802				



NO.	PROPOSED STATION	OFFSET	NORTHING	EASTING
1	100+00	0.00' LT	1695070.187	1134844.758
2	113+46.50	0.00' LT	1696408.903	1134812.903

● THESE STAKES REFERENCE SET MONUMENTATION. SET 1/2 INCH IRON BAR FLUSH WITH GROUND TO SET MAG NAIL.

■ THESE STAKES REFERENCE SET MONUMENTATION. SET MAG NAIL WITH WASHER SET TO TIE SET MAG NAIL.



HARLEM AVENUE

PLOT FILE STANDARD
 WVA, C, S, A
 COMP. FILE: 04015904.dwg

REVISIONS	
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 McHENRY HUNTLEY YORKVILLE
 ILLINOIS PROFESSIONAL DESIGN FIRM # 164-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 ALIGNMENT AND TIES

SCALE: "NTS" DRAWN BY WJH
 DATE 5-26-2005 CHECKED BY RGD

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	07
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		
CONTRACT # 83802				

ROAD CLOSURE GENERAL NOTES

1. THE CONTRACTOR WILL BE ALLOWED TO CLOSE HARLEM AVENUE/DRECKSLER ROAD FOR THE DURATION OF THE PROJECT AS DETAILED IN THE SPECIFICATIONS.
2. THE DETOUR ROUTE SHALL BE POSTED PRIOR TO CLOSING THE ROAD.
3. ALL TRAFFIC CONTROL WORK ASSOCIATED WITH THE ROAD CLOSURE, SIGNING, AND BARRICADING, SHALL BE INCLUDED IN THE PAY ITEM FOR "TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR."
4. THE CONTRACTOR SHALL GIVE THE ENGINEER, COUNTY, AND IDOT A 72 HOUR NOTICE PRIOR TO PLACING THE ADVANCE NOTICE SIGNS.
5. * ADVANCE NOTICE SIGNS "15" SHALL BE PLACED TWO WEEKS PRIOR TO CLOSING THE ROADWAY.

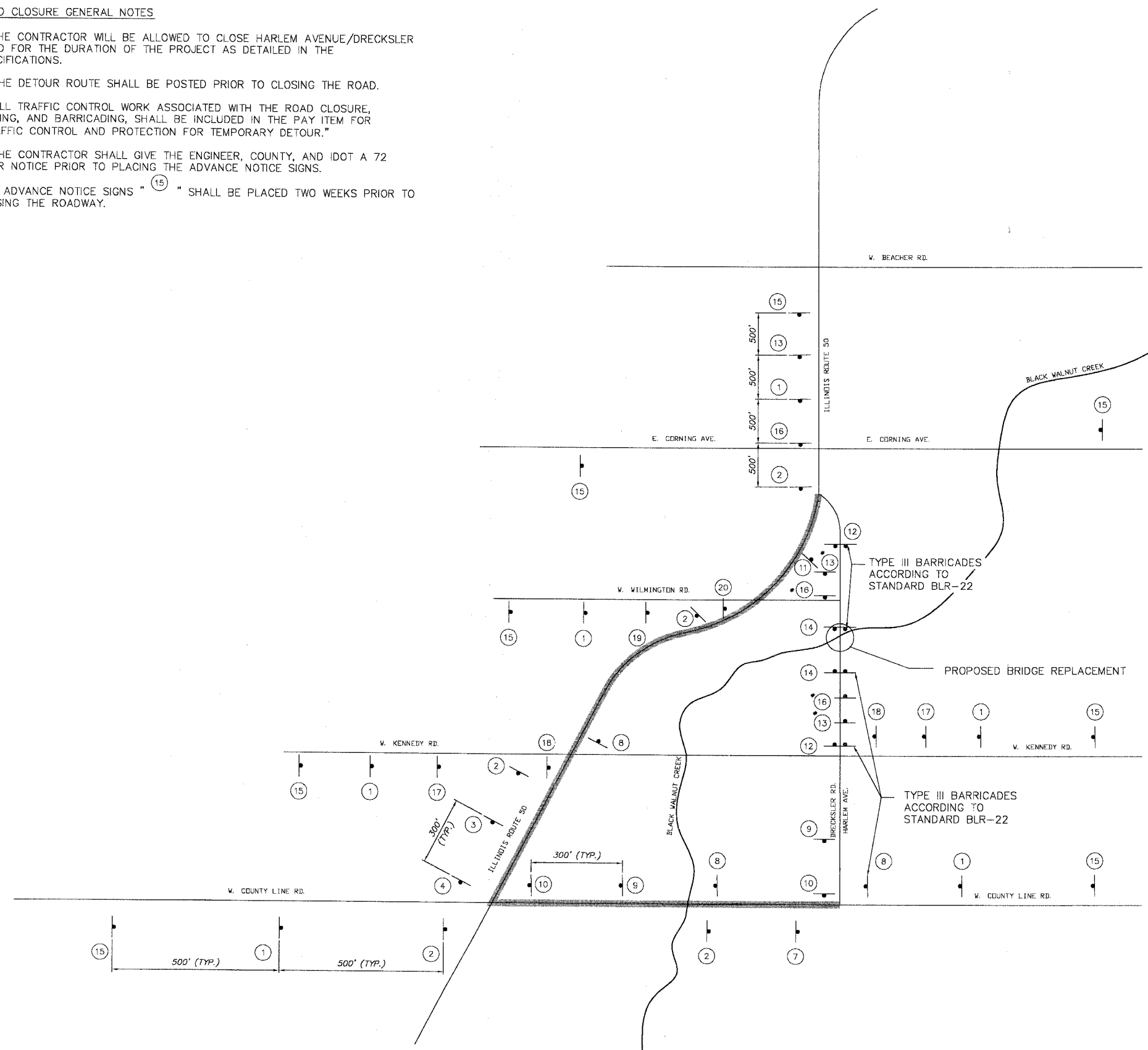


SIGN LEGEND

1		12	
2		13	
3		14	
4		15	
6		16	
7		17	
8		18	
9		19	
10		20	
11			

LEGEND

PROPOSED DETOUR ROUTE



- NOTES:**
1. SIGN SPACING SHALL BE 500' TYPICAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 2. * INDICATES SIGN WITHOUT NAMEPLATE

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 * ILLINOIS PROFESSIONAL DESIGN FIRM # 154-000108

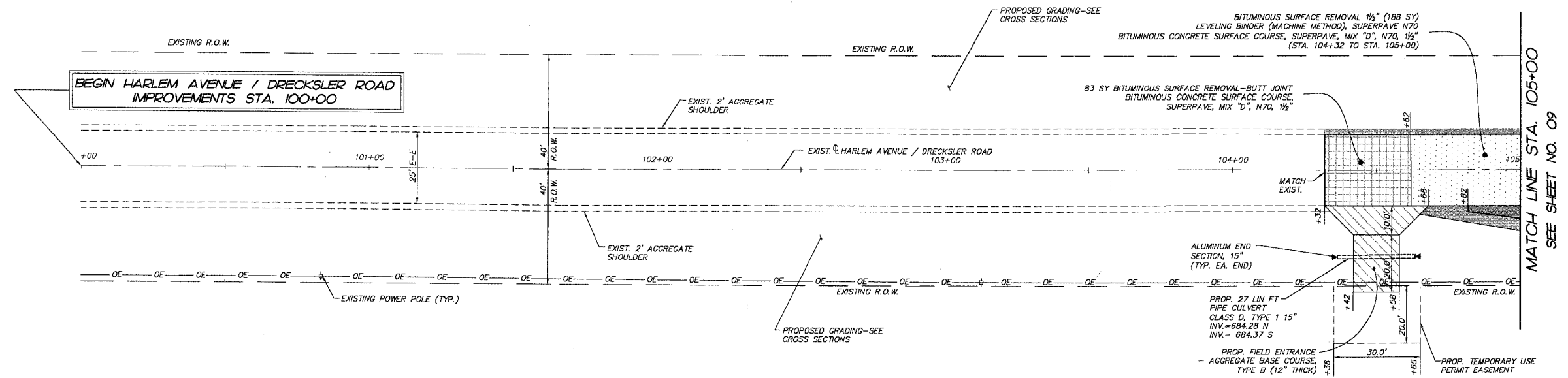
ILLINOIS DEPARTMENT OF TRANSPORTATION
 WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 DETOUR PLAN

SCALE: "NTS"
 DATE 5-26-2005

DRAWN BY WJH
 CHECKED BY JLP

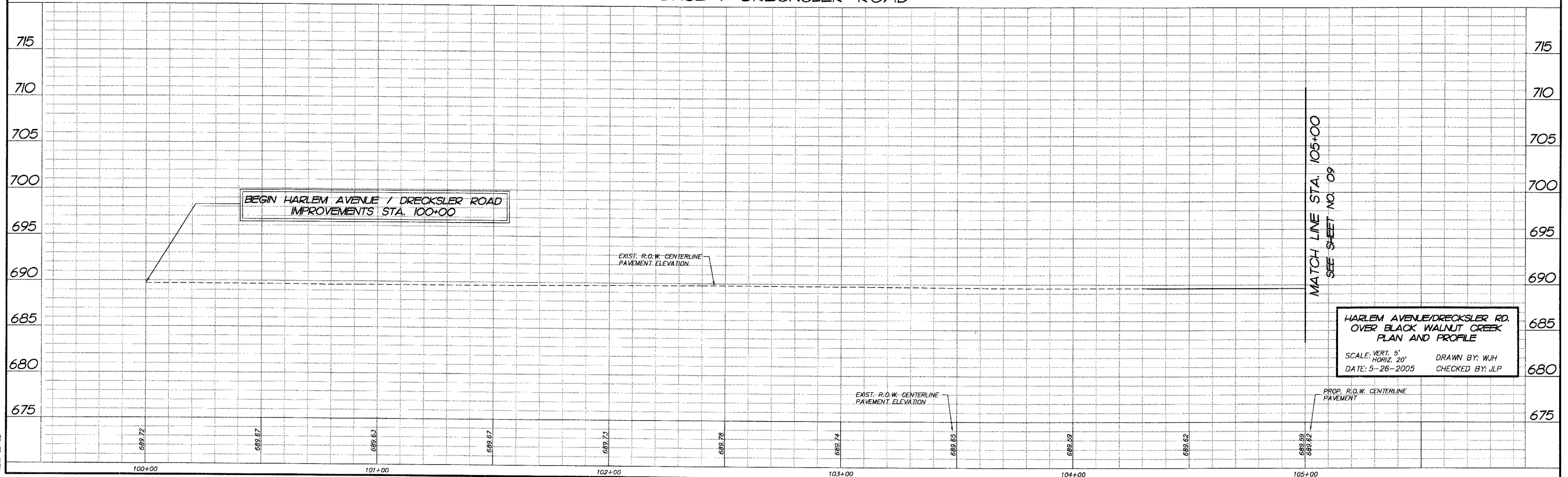
PLOT FILE STANDARD
 VECT COMP FILE: 0401597-624.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WLL	35	08
STA. 100+00		TO STA. 105+00		
FED. ROAD DIST. NO.		ILLINOIS	HIGHWAY PROJECT	
CONTRACT # 83802				



LEGEND	
	DENOTES BITUMINOUS SURFACE REMOVAL, 1/2"
	DENOTES BITUMINOUS SHOULDER, SUPERPAVE, 8"
	DENOTES AGGREGATE SHOULDER, TYPE B
	DENOTES FIELD ENTRANCE
	DENOTES BITUMINOUS SURFACE REMOVAL - BUTT JOINT

HARLEM AVENUE / DRECKSLER ROAD



HARLEM AVENUE/DRECKSLER RD. OVER BLACK WALNUT CREEK PLAN AND PROFILE
 SCALE: VERT. 5' HORZ. 20'
 DATE: 5-26-2005
 DRAWN BY: WJH
 CHECKED BY: JLP

NO.	DATE	BY

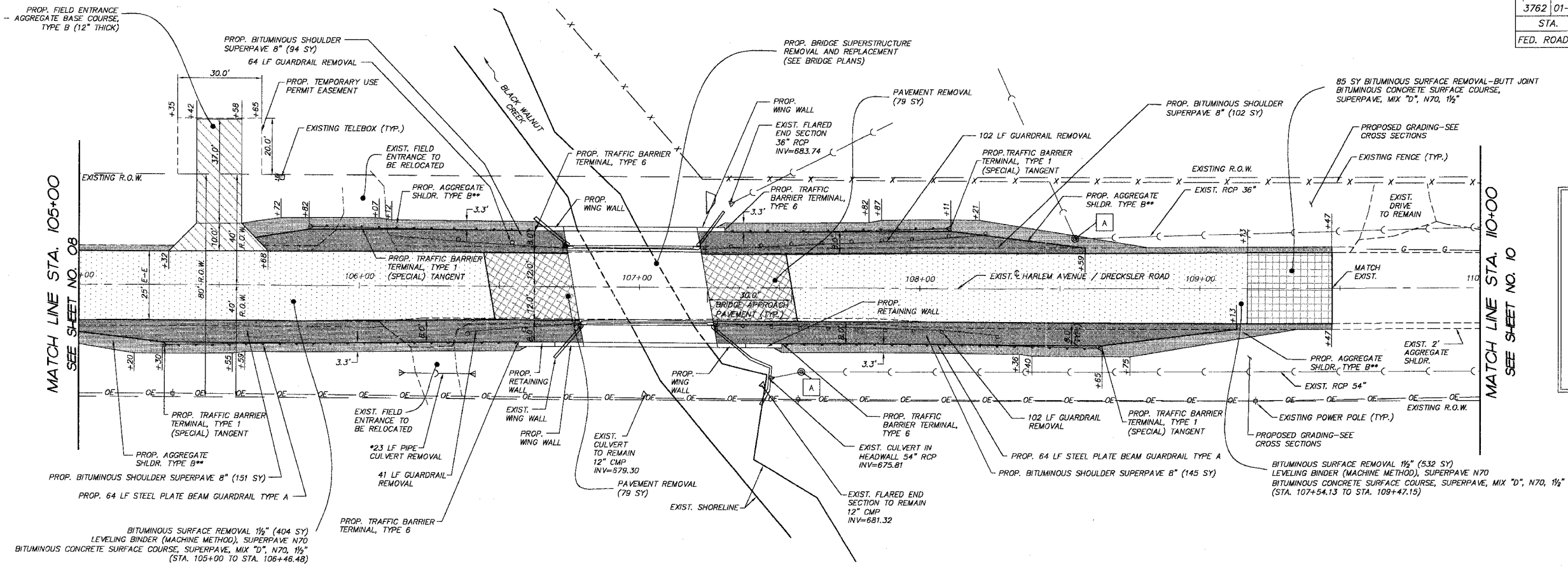
FINAL SURVEYED PLOTTED NOTE BOOK TEMPLATE AREAS CHECKED

COMP. FILE: 040139-022.dwg
 DATE: 5-26-2005
 USER: JLP

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	09
STA. 105+00		TO STA. 110+00		
FED. ROAD DIST. NO.	ILLINOIS	HIGHWAY PROJECT		CONTRACT # 83802



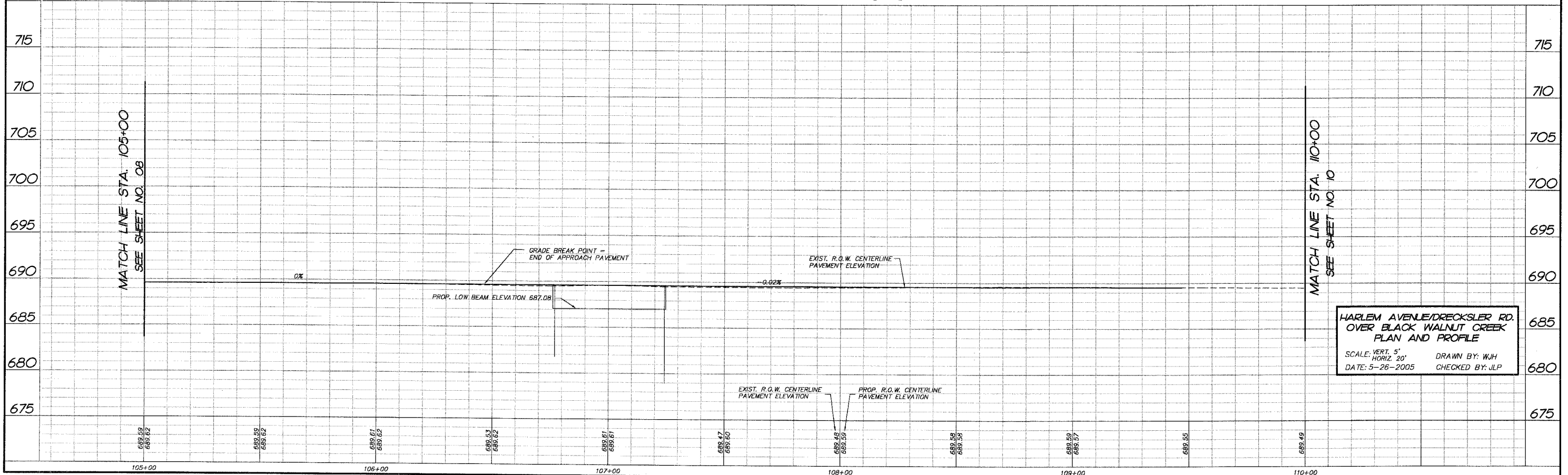
LEGEND	
[Pattern: Dotted]	DENOTES BITUMINOUS SURFACE REMOVAL, 1 1/2"
[Pattern: Horizontal Lines]	DENOTES BITUMINOUS SHOULDER, SUPERPAVE, 8"
[Pattern: Diagonal Lines]	DENOTES AGGREGATE SHOULDER, TYPE B
[Symbol: Circle with 'A']	DENOTES EXISTING MANHOLE TO BE ADJUSTED
[Pattern: Vertical Lines]	DENOTES FIELD ENTRANCE
[Pattern: Cross-hatch]	DENOTES PAVEMENT REMOVAL
[Pattern: Grid]	DENOTES BITUMINOUS SURFACE REMOVAL - BUTT JOINT



HARLEM AVENUE / DRECKSLER ROAD

* REMOVAL OF FLARED END SECTIONS SHALL BE INCIDENTAL TO PIPE CULVERT REMOVAL.

** LAYOUT OF PROP. AGGREGATE SHOULDER AT PROP. TRAFFIC BARRIER TERMINALS, TYPE 1 (SPECIAL) TANGENT SHALL CONFORM TO HIGHWAY STANDARD 630301



HARLEM AVENUE/DRECKSLER RD.
OVER BLACK WALNUT CREEK
PLAN AND PROFILE
SCALE: VERT. 5'
HORIZ. 20' DATE: 5-26-2005
DRAWN BY: WJH
CHECKED BY: JLP

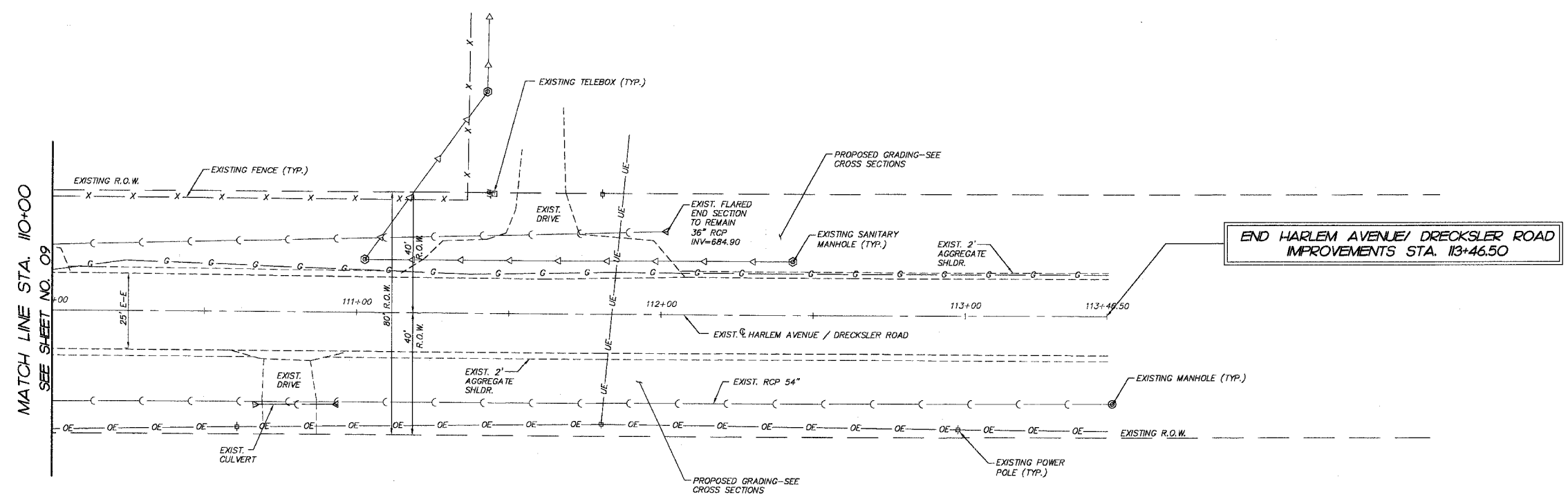
FINAL SURVEYED PLOTTED	DATE
NOTE BOOK TEMPLATE	BY
AREAS CHECKED	
	NO.

COMP. FILE: 040759-602.dwg
DATE: 5-26-2005
USER: JLP

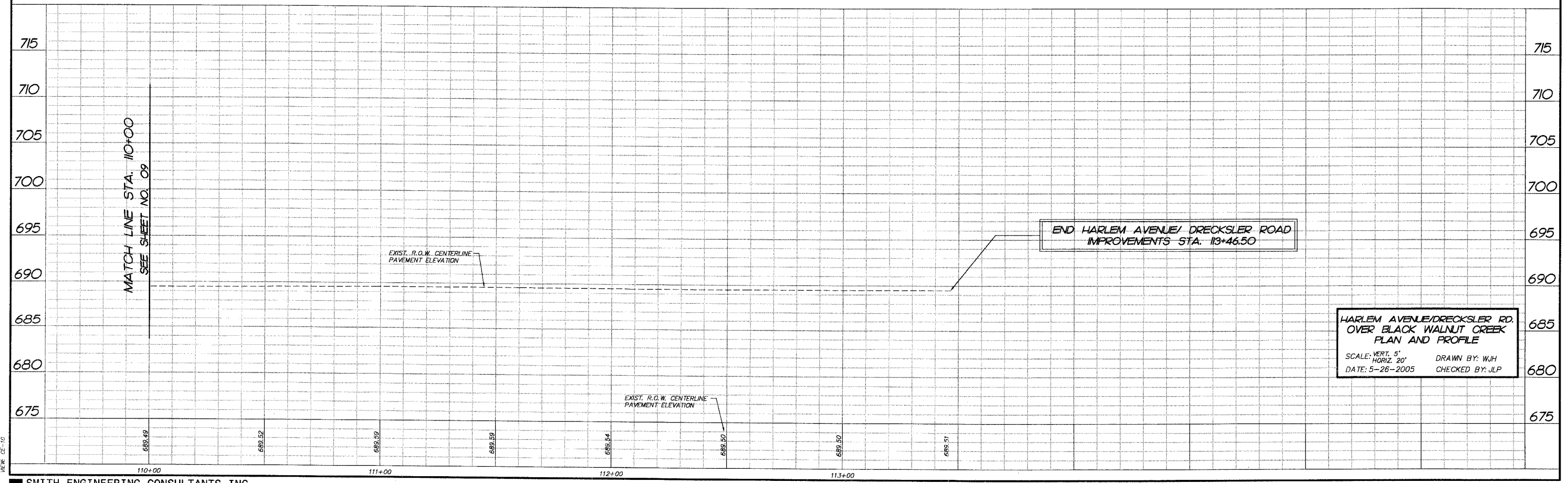
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	10
STA. 110+00 TO STA. 113+46.50				
FED. ROAD DIST. NO.	ILLINOIS	HIGHWAY PROJECT		
CONTRACT # 83802				



FINAL SURVEYED SURVEY PLOTTED NOTE BOOK TEMPLATE AREAS CHECKED NO.	BY	DATE



HARLEM AVENUE / DRECKSLER ROAD



COMP. FILE: 040159-602.dwg
 PLOT FILE: 10.dwg
 DATE: 5-26-2005

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	11
STA.	TO STA.	TO STA.		
100+00	110+00	110+00		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	
CONTRACT # B3802				



LEGEND:

	NOTES EROSION CONTROL BLANKET
	NOTES MULCH METHOD 1
	NOTES PERIMETER EROSION BARRIER
	NOTES TEMPORARY DITCH CHECK
	NOTES FLOW DIRECTION

EROSION CONTROL NOTES:

WORK SHALL BE DONE IN ACCORDANCE WITH HIGHWAY STANDARD 280001 AND DETAILS IN THE PLANS.

THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE ENGINEER.

PERIMETER EROSION BARRIER MUST REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.

ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED WEEKLY OR AFTER A ONE-HALF INCH OR GREATER RAINFALL EVENT AND ANY REQUIRED REPAIRS WILL BE MADE.

WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION SHALL BE FILTERED AND A MEANS PROVIDED TO REDUCE EROSION.

ANY DISTURBED GROUND SHALL BE PROTECTED WITHIN 7 DAYS WITH EITHER PERMANENT OR TEMPORARY EROSION CONTROL MEASURES.

CONTRACTOR SHALL NOT DISTURB GROUND OUTSIDE THE PERIMETER EROSION BARRIER. PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES IN AREA OTHER THAN INDICATED ON THESE PLANS.

WORK THIS SHEET WITH THE BRIDGE PLANS.

AT ALL TIMES, PERIMETER EROSION BARRIER SHALL BE INSTALLED BETWEEN ALL DISTURBED AREAS AND THE CREEK. PERIMETER BARRIERS SHALL BE INSPECTED AT THE END OF EACH WORK DAY AND PRIOR TO ANY RAIN EVENTS.

BUILDING MATERIAL STOCKPILES SHALL BE LOCATED IN AREAS THAT DO NOT HAVE HIGH POTENTIAL FOR CONTRIBUTING SEDIMENTS TO THE CREEK.

CONTRACTOR SHALL REMOVE ANY EXISTING DECK MATERIAL, OR OTHER CONSTRUCTION DEBRIS THAT FALLS INTO THE CREEK DURING DEMOLITION OR CONSTRUCTION.

WORK THIS SHEET AND SHEET 12 WITH THE PAVEMENT MARKING AND RESTORATION PLANS (SHEETS 13-14)

SEQUENCE OF CONSTRUCTION

1. INSTALL PERIMETER EROSION BARRIER AND TEMPORARY DITCH CHECKS.
2. PERFORM BRIDGE SUPERSTRUCTURE DEMOLITION AND RECONSTRUCTION CONCURRENTLY WITH ROADWAY AND SHOULDER RECONSTRUCTION.
3. COMPLETE BRIDGE AND ROADWAY RECONSTRUCTION AND ESTABLISH SEEDING CLASS 2A.

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 * MCHENRY * HUNTER * YORKVILLE
 ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

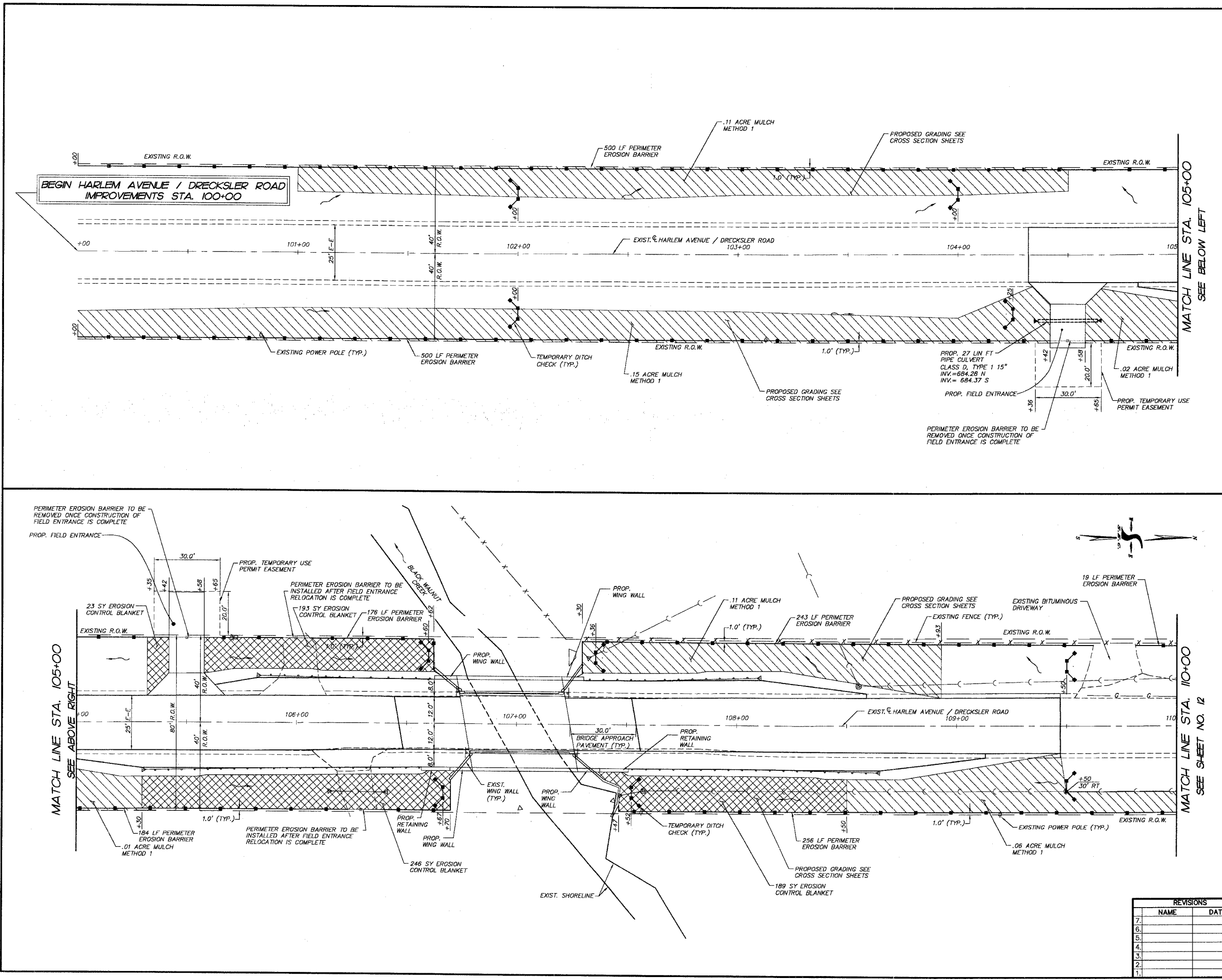
ILLINOIS DEPARTMENT OF TRANSPORTATION

WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 EROSION CONTROL PLAN

SCALE: 1"=20'
 DATE 5-26-2005
 DRAWN BY WJH
 CHECKED BY JLP

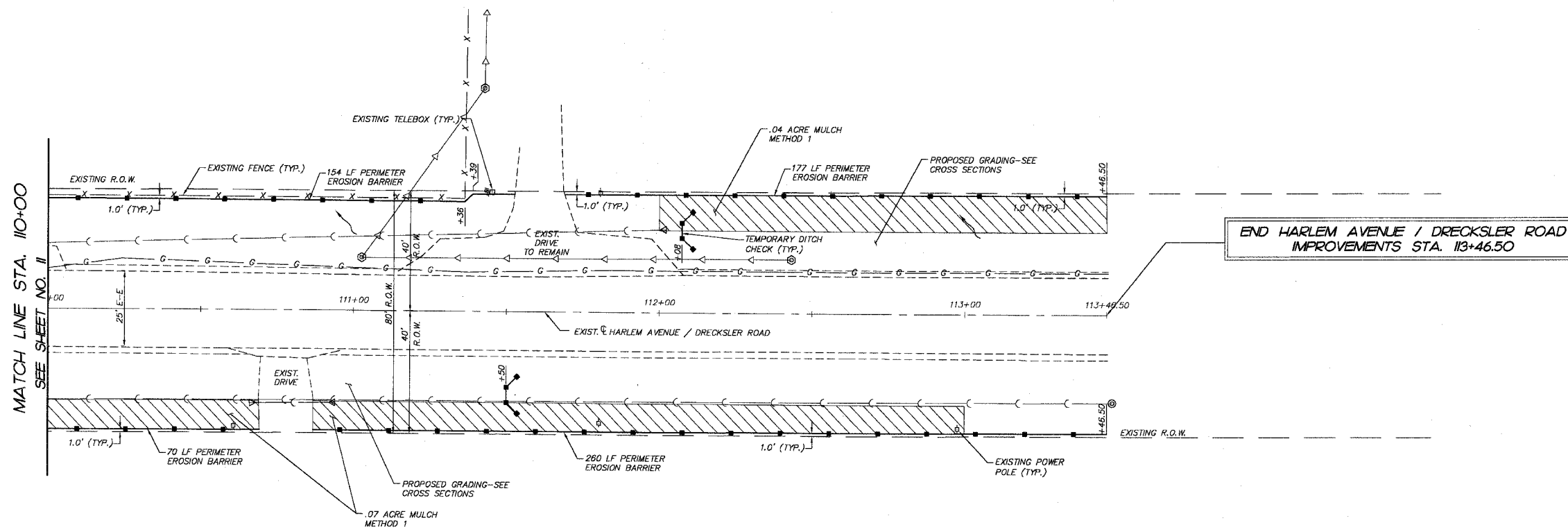
REVISIONS

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PLOT FILE: STANDARD
 VIEW: CE-11
 COMP. FILE: 140139-02-BR.dwg

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	12
STA.	110+00	TO STA.	113+46.50	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT	CONTRACT # 83802	



LEGEND:

	DENOTES EROSION CONTROL BLANKET
	DENOTES MULCH METHOD 1
	DENOTES PERIMETER EROSION BARRIER
	DENOTES TEMPORARY DITCH CHECK
	DENOTES FLOW DIRECTION

PLOT FILE STANDARD
 V.E.#. CE-12
 COMP. FILE 040759-026.dwg

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 ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 EROSION CONTROL PLAN
 SCALE: 1"=20'
 DATE 5-26-2005
 DRAWN BY WJH
 CHECKED BY JLP

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	13
STA.	100+00	TO STA.	110+00	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		
CONTRACT # 83802				

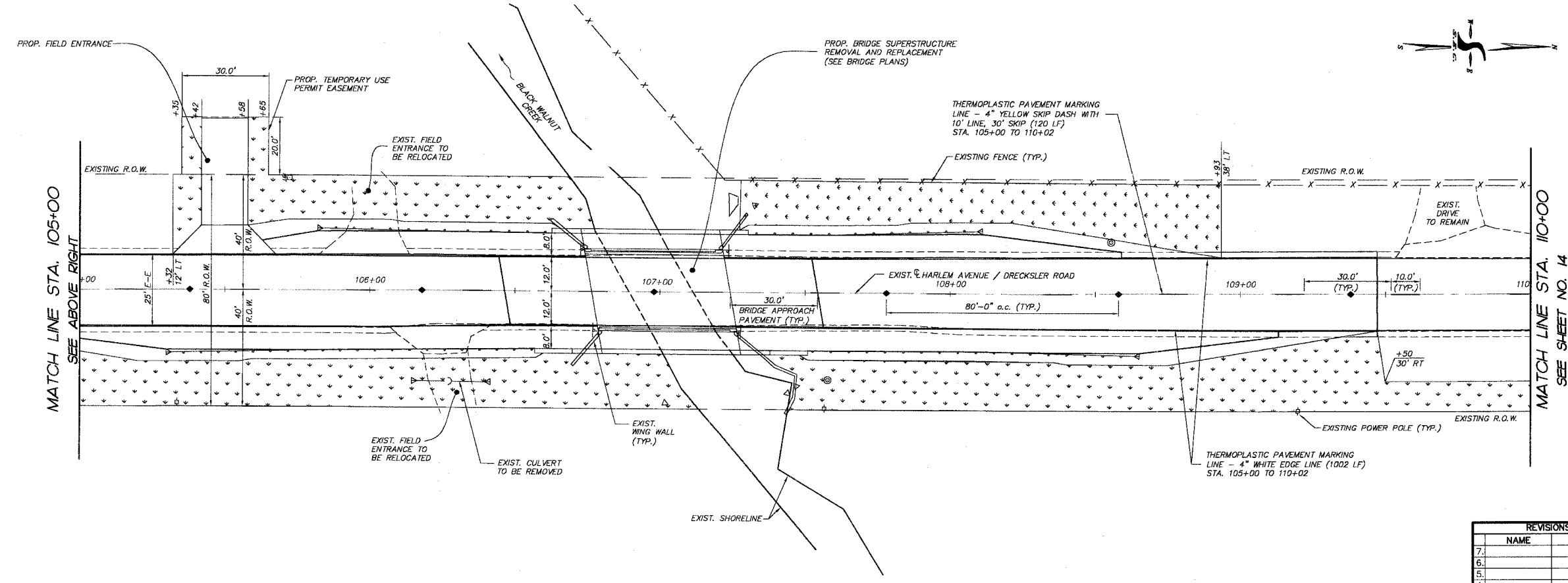
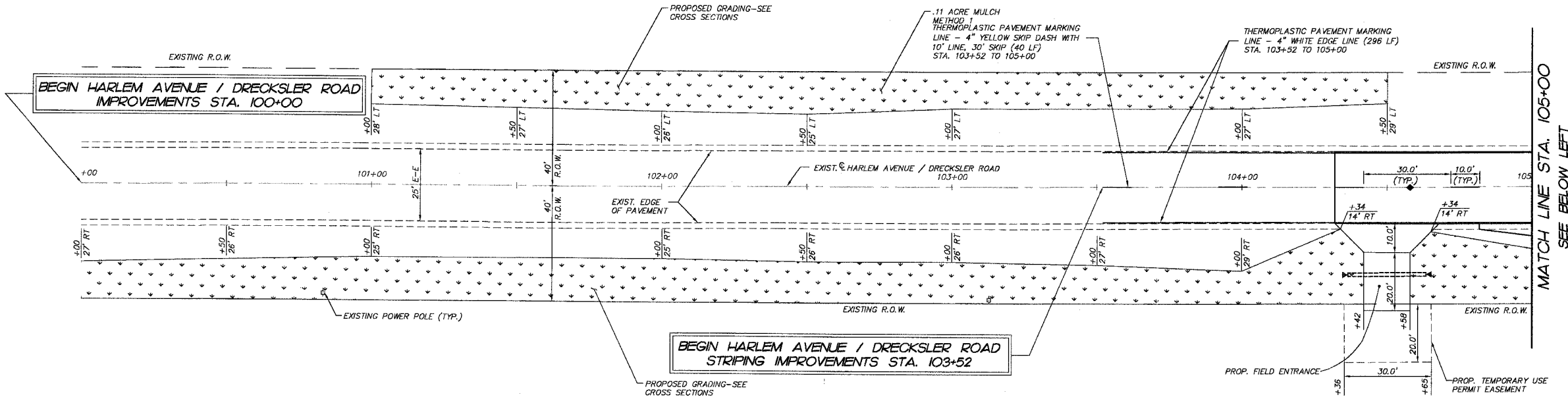


LEGEND

DENOTES TOPSOIL FURNISH AND PLACE, 6" AND SEEDING CLASS 2A

DENOTES RAISED REFLECTIVE PAVEMENT MARKER, TWO-WAY AMBER

AREAS DISTURBED OUTSIDE LIMITS SHOWN SHALL BE RESTORED BY THE CONTRACTOR WITH TOPSOIL FURNISH AND PLACE 6" SEEDING CLASS 2A, AND EROSION CONTROL BLANKET WITH NO ADDITIONAL COMPENSATION DUE TO THE CONTRACTOR FOR THIS WORK.



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 ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 PAVEMENT MARKING AND RESTORATION PLAN

SCALE: 1"=20'
 DATE 5-26-2005
 DRAWN BY W.J.H.
 CHECKED BY J.L.P.

PLOT FILE STANDARD
 NEW: CE-13
 COMP. FILE: 040139-605.dwg

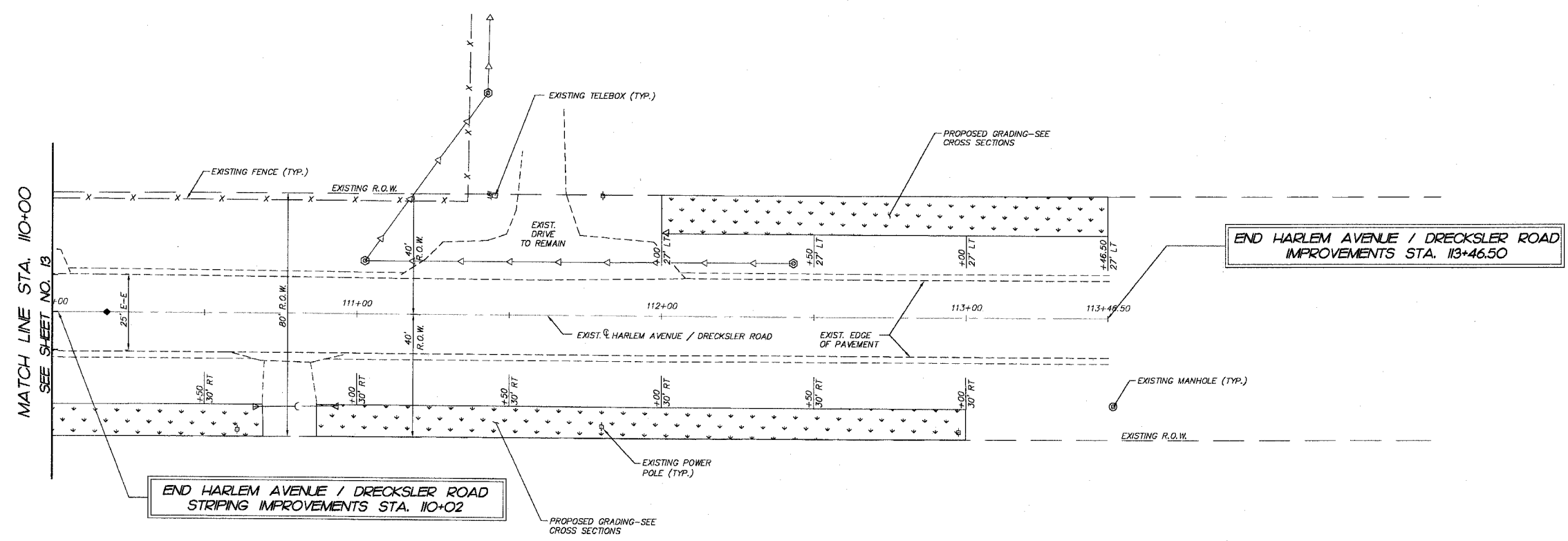
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	14
STA. 110+00		TO STA. 113+46.50		
FED. ROAD DIST. NO. 1		ILLINOIS HIGHWAY PROJECT		
CONTRACT # 83802				



LEGEND

DENOTES TOPSOIL FURNISH AND PLACE, 6" AND SEEDING CLASS 2A

AREAS DISTURBED OUTSIDE LIMITS SHOWN SHALL BE RESTORED BY THE CONTRACTOR WITH TOPSOIL FURNISH AND PLACE 6", SEEDING CLASS 2A, AND EROSION CONTROL BLANKET WITH NO ADDITIONAL COMPENSATION DUE TO THE CONTRACTOR FOR THIS WORK.



PLOT FILE STANDARD
 NEW: CE-14
 COMP: FILE: 040139-02-BR.dwg

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 ILLINOIS PROFESSIONAL DESIGN FIRM # 104-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 PAVEMENT MARKING AND RESTORATION PLAN

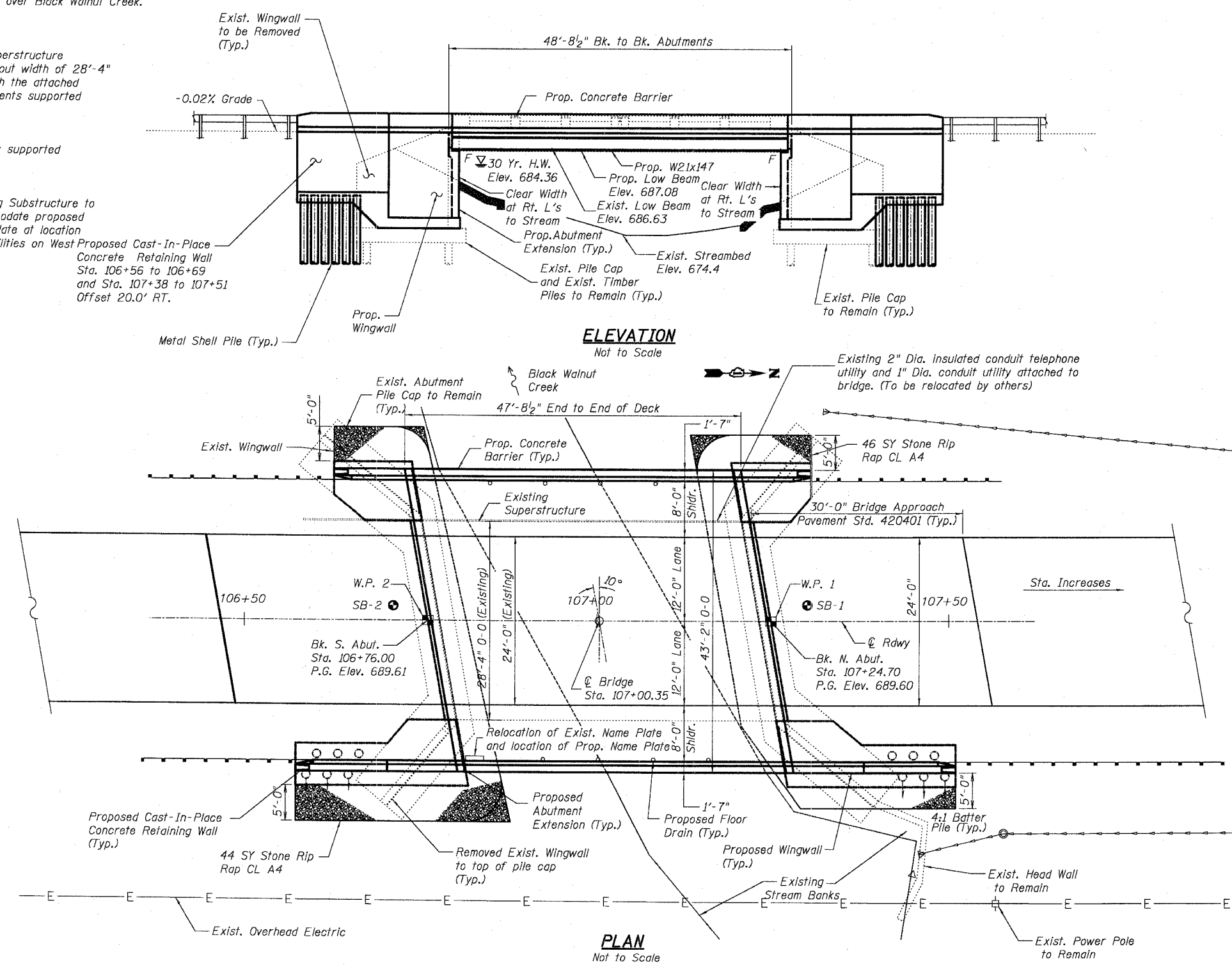
SCALE: 1"=20'
 DATE 5-26-2005
 DRAWN BY W.J.H.
 CHECKED BY J.L.P.

Benchmarks:
 BM 1: Cut square in top of concrete wingwall at the South East corner of the Harlem Avenue Bridge over Black Walnut Creek. Elev. 689.71
 BM 2: Cut square in top of concrete headwall adjacent to the wingwall at the North East corner of the Harlem Avenue Bridge over Black Walnut Creek. Elev. 685.35

Existing Structure:
 Bridge Constructed in 1962 (S.N.# 099-3091). The Superstructure consists of a precast concrete bridge with an out-to-out width of 28'-4" and a total length of 48'-8 1/2" to be removed along with the attached bridge rail. The Substructure consists of closed abutments supported on untreated timber piles to remain.

New Structure:
 One span composite concrete deck on Steel W sections supported on existing closed abutments.

Salvage:
 Existing Superstructure to be removed and the existing Substructure to be partially demolished, repaired and modified to accommodate proposed Superstructure. Salvage and re-install existing Name Plate at location indicated below. Also salvage and re-install existing utilities on West Proposed Cast-In-Place Concrete Retaining Wall Sta. 106+56 to 106+69 and Sta. 107+38 to 107+51 Offset 20.0' RT.



DESIGN SPECIFICATIONS
 2002 AASHTO with 2003 & 2004 Interims

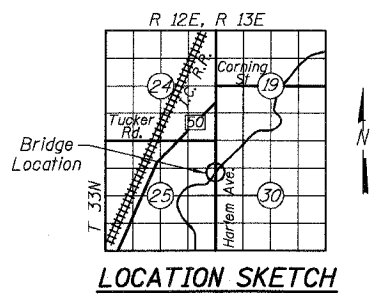
***LOADING HS20-44**
 50#/sq. ft. for future wearing surface.
 * Also designed for 120,000 Lb. Permit loading

DESIGN STRESSES

FIELD UNITS
 $f_y = 60,000$ psi (Reinforcement Bars)
 $f'_c = 4,000$ psi (Class SI)
 $f_c = 3,500$ psi (Class BD)
 $f_s = 27,500$ psi (Structural Steel)

SEISMIC DATA

Seismic Performance Category (SPC) = "A"
 Bedrock Acceleration Coefficient (A) = 0.04g
 Site Coefficient (S) = 1.0



DRECKSLER BRIDGE
 REBUILT 200- BY
 WILL COUNTY
 SEC. 01-00139-02-BR
 LOADING HS20-44
 S.N. 099-3091

NAME PLATE
 See Std. 515001

To the best of my knowledge, information and belief, this bridge 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".

Robert & David
 IL Licensed Structural Engineer
 Date 5/26/05



WATERWAY INFORMATION

Drainage Area = 15.7 mi ²		Low Grade Elev. 689.45 ft.		Sta. 107+76.2			
Freq. Yr.	Q C.F.S.	Opening Exist.	Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist. Prop.	Headwater El. Exist. Prop.	
Design	30	1455	323.0	323.0	684.36	0.09 0.09	684.45 684.45
Base	100	2091	397.0	384.6	686.09	0.00 0.16	686.04 686.19

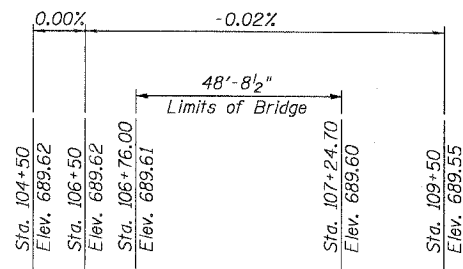
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CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 General Plan and Elevation
 Harlem Avenue/Dreckler Road
 Over Black Walnut Creek
 Will County
 Section 01-00139-02-BR
 SN. 099-3091
 DATE 5-26-2005

INDEX OF SHEETS

- S-1. General Plan and Elevation
- S-2. General Notes, Bill of Material, and Index of Sheets
- S-3. Top of Deck Slab Elevations
- S-4. Deck Plan and Cross Sections
- S-5. Parapet Elevations and Details
- S-6. Steel Framing Plan
- S-7. Beam Elevation and Details and Bearing Details
- S-8. Anchor Bolt Details
- S-9. Abutment Plan and Elevation
- S-10. Abutment Details
- S-11. Retaining Wall Plan and Elevation
- S-12. Pile Details
- S-13. Soil Borings



PROFILE GRADE
(along PGL)

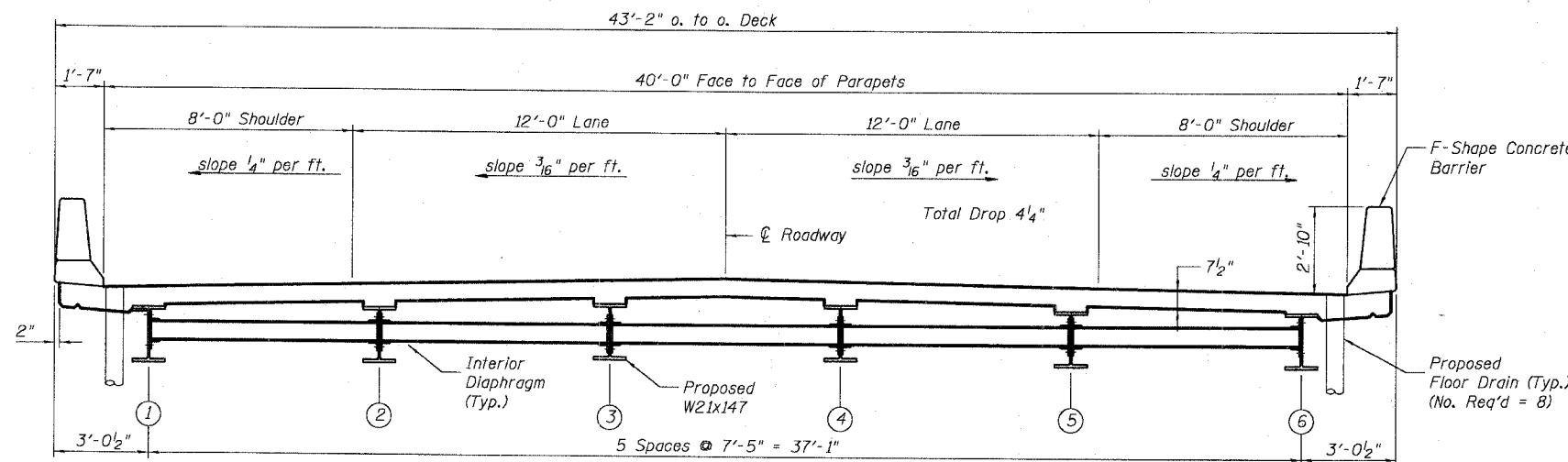
TOTAL BILL OF MATERIAL

CODE NO.	DESCRIPTION	UNIT	TOTAL
20900110	Porous Granular Backfill	Cu. Yds.	78
28100107	Stone Rip Rap CL A4	Sq. Yds.	90
28200200	Filter Fabric	Sq. Yds.	90
50101600	Removal of Existing Superstructures	L. Sum.	1
50102400	Concrete Removal	Cu. Yds.	36.8
50200100	Structure Excavation	Cu. Yds.	275
50300100	Floor Drains	Each	8
50300225	Concrete Structures	Cu. Yds.	115.8
50300255	Concrete Superstructures	Cu. Yds.	66.3
50300260	Bridge Deck Grooving	Sq. Yds.	193
50300300	Protective Coat	Sq. Yds.	65
50301245	Formed Concrete Repair (Depth <= 5")	SF	5
50500105	Furnishing and Erecting Structural Steel	L. Sum	1
50500505	Stud Shear Connectors	Each	1008
50800205	Reinforcement Bars (Epoxy Coated)	Pound	26,690
51201100	Furnishing Metal Pile Shells, 14"	Foot	408
51202600	Driving and Filling Shells	Foot	408
51500100	Name Plates	Each	1
59000100	Epoxy Crack Sealing	Foot	65
59100100	Geocomposite Wall Drain	Sq. Yds.	67
60100915	Pipe Drain, 6"	Foot	67

GENERAL NOTES

1. Fasteners shall be high strength bolts. Bolts 3/4" Dia., open holes 5/16" unless otherwise noted.
2. Calculated weight of Structural Steel (Grade 50) = 41,785 pounds.
3. Calculated weight of Structural Steel (Grade 36) = 1,588 pounds.
4. All Structural Steel shall be AASHTO M 270 Grade 50 except diaphragms, bearing plates, high strength bolts, and anchor bolts.
5. Field welding of construction accessories will not be permitted to beams or girders.
6. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams.
7. Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.
8. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
9. Backfill shall be placed behind the abutment after the superstructure has been poured and the false work removed. See Article 502.10 of the Standard Specifications.
10. The back face of the Abutment Extensions, their Wingwalls, and Retaining Walls shall be waterproofed according to Article 503.18 of the Standard Specifications.
11. The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of false work, in addition to allowance for dead load deflection.
12. Plan dimensions and details relative to existing structure have been taken from existing plans 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 material. Such variations shall not be cause for additional compensation for a change in the scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
13. The contractor shall drive one (1) steel test pile in a permanent location as directed by the Engineer before ordering the remainder of the piles.
14. Bridge Seat Sealer shall be applied to the seat area of the abutments.
15. Excavation of three (3) feet behind existing abutment walls and installation of temporary bracing shall be completed before removing the existing superstructure.
16. Cover from the face of concrete to reinforcement bars shall be 3" for surfaces formed against earth and 2" for all other surfaces unless otherwise shown.
17. Reinforcement bending details shall be in accordance with the "Manual of Standard Practice for Detailing Reinforced Concrete Structures." ACI 315, latest edition.
18. Reinforcement Bars designated "(E)" shall be epoxy coated.
19. Reinforcement bar splices shall be in accordance with the following table unless shown otherwise on the drawings.

Size	Basic Lap	Top Bars Lap
#4	1'-8"	2'-5"
#5	2'-2"	3'-0"
#6	2'-7"	3'-7"
#7	3'-5"	4'-10"
#8	4'-6"	6'-4"
#9	5'-9"	8'-1"



TYPICAL CROSS SECTION

Not to Scale

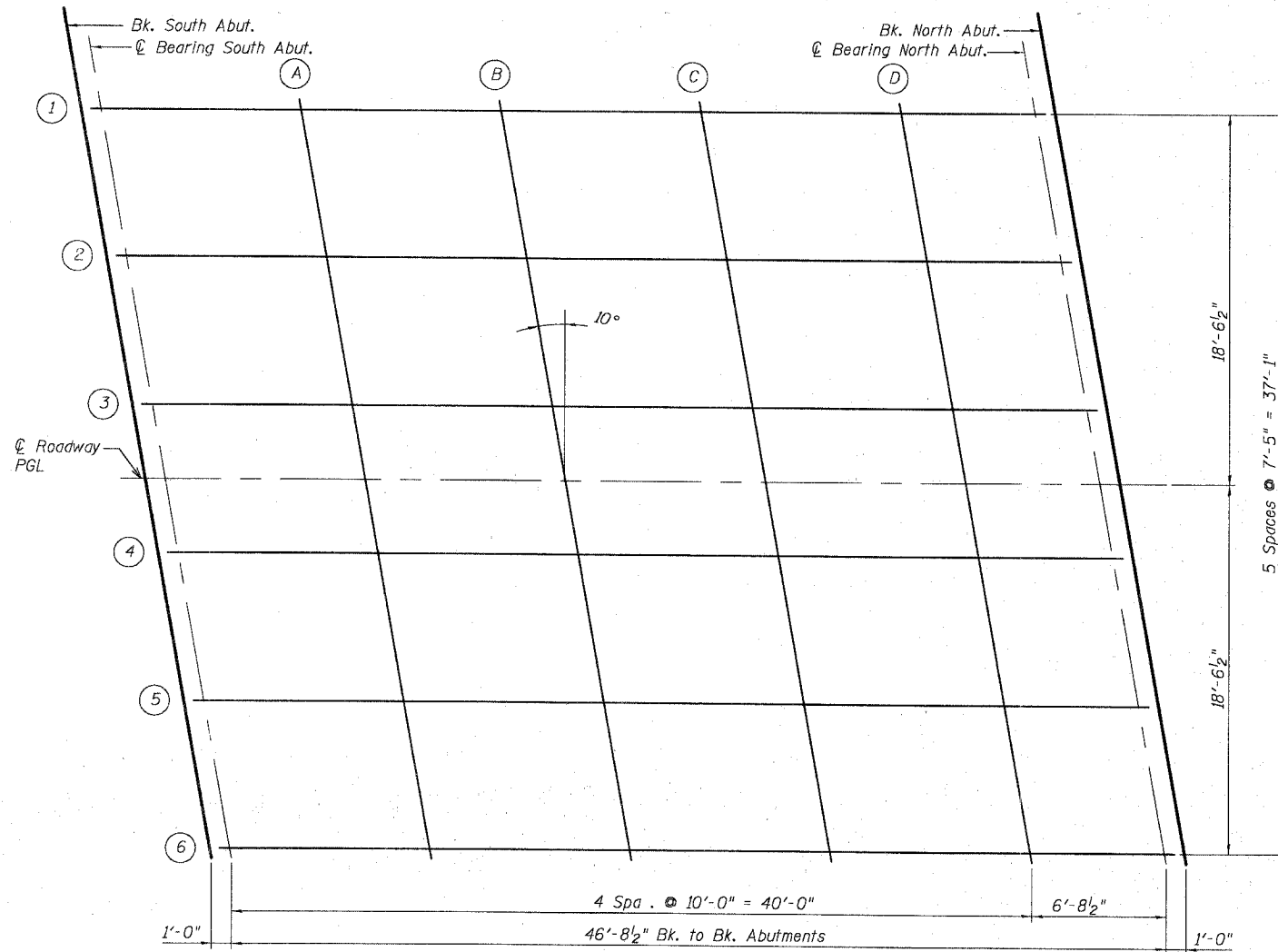
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CHECKED	RGD
DRAWN	WJH
CHECKED	NRF



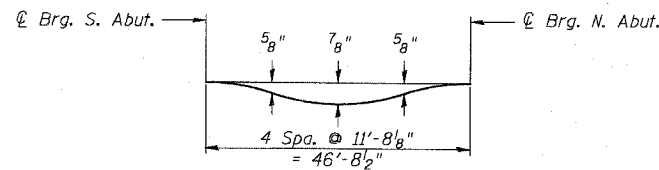
ILLINOIS DEPARTMENT OF TRANSPORTATION
General Notes, Bill of Material,
and Index of Sheets
Harlem Avenue Over Black Walnut Creek
Will County
Section 139B-MFT
SN. 099-3091

REVISIONS	
NAME	DATE

DATE 5-26-2005



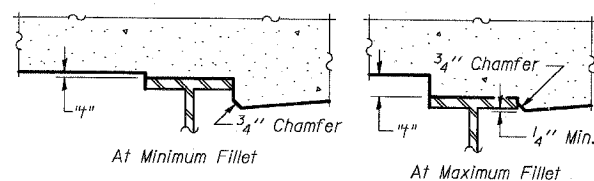
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete deck and all superimposed dead loads except for future wearing surface.)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown above and on S-03.



FILLET HEIGHTS

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown above, minus slab thickness, equals the fillet heights "t" above top flange of beams.

DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

ROADWAY & PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abutment	106+76.00	0.00	689.61	689.61
Centerline of Brg. S. Abut.	106+77.00	0.00	689.61	689.61
A	106+87.00	0.00	689.61	689.65
B	106+97.00	0.00	689.61	689.68
C	107+07.00	0.00	689.60	689.67
D	107+17.00	0.00	689.60	689.63
Centerline of Brg. N. Abut.	107+23.70	0.00	689.60	689.60
Back of North Abutment	107+24.70	0.00	689.60	689.60

GIRDER #1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abutment	106+72.73	-18.54	689.29	689.29
Centerline of Brg. S. Abut.	106+73.73	-18.54	689.29	689.29
A	106+83.73	-18.54	689.29	689.33
B	106+93.73	-18.54	689.29	689.36
C	107+03.73	-18.54	689.28	689.35
D	107+13.73	-18.54	689.28	689.31
Centerline of Brg. N. Abut.	107+20.43	-18.54	689.28	689.28
Back of North Abutment	107+21.43	-18.54	689.28	689.28

GIRDER #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abutment	106+74.04	-11.13	689.44	689.44
Centerline of Brg. S. Abut.	106+75.04	-11.13	689.44	689.44
A	106+85.04	-11.13	689.44	689.48
B	106+95.04	-11.13	689.44	689.51
C	107+05.04	-11.13	689.43	689.50
D	107+15.04	-11.13	689.43	689.46
Centerline of Brg. N. Abut.	107+21.74	-11.13	689.43	689.43
Back of North Abutment	107+22.74	-11.13	689.43	689.43

GIRDER #3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abutment	106+75.35	-3.71	689.55	689.55
Centerline of Brg. S. Abut.	106+76.35	-3.71	689.55	689.55
A	106+86.35	-3.71	689.55	689.59
B	106+96.35	-3.71	689.55	689.62
C	107+06.35	-3.71	689.54	689.61
D	107+16.35	-3.71	689.54	689.57
Centerline of Brg. N. Abut.	107+23.05	-3.71	689.54	689.54
Back of North Abutment	107+24.05	-3.71	689.54	689.54

GIRDER #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abutment	106+76.65	3.71	689.55	689.55
Centerline of Brg. S. Abut.	106+77.65	3.71	689.55	689.55
A	106+87.65	3.71	689.55	689.59
B	106+97.65	3.71	689.55	689.62
C	107+07.65	3.71	689.54	689.61
D	107+17.65	3.71	689.54	689.57
Centerline of Brg. N. Abut.	107+24.35	3.71	689.54	689.54
Back of North Abutment	107+25.35	3.71	689.54	689.54

GIRDER #5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abutment	106+77.96	11.13	689.44	689.44
Centerline of Brg. S. Abut.	106+78.96	11.13	689.44	689.44
A	106+88.96	11.13	689.44	689.48
B	106+98.96	11.13	689.44	689.51
C	107+08.96	11.13	689.43	689.50
D	107+18.96	11.13	689.43	689.46
Centerline of Brg. N. Abut.	107+25.66	11.13	689.43	689.43
Back of North Abutment	107+26.66	11.13	689.43	689.43

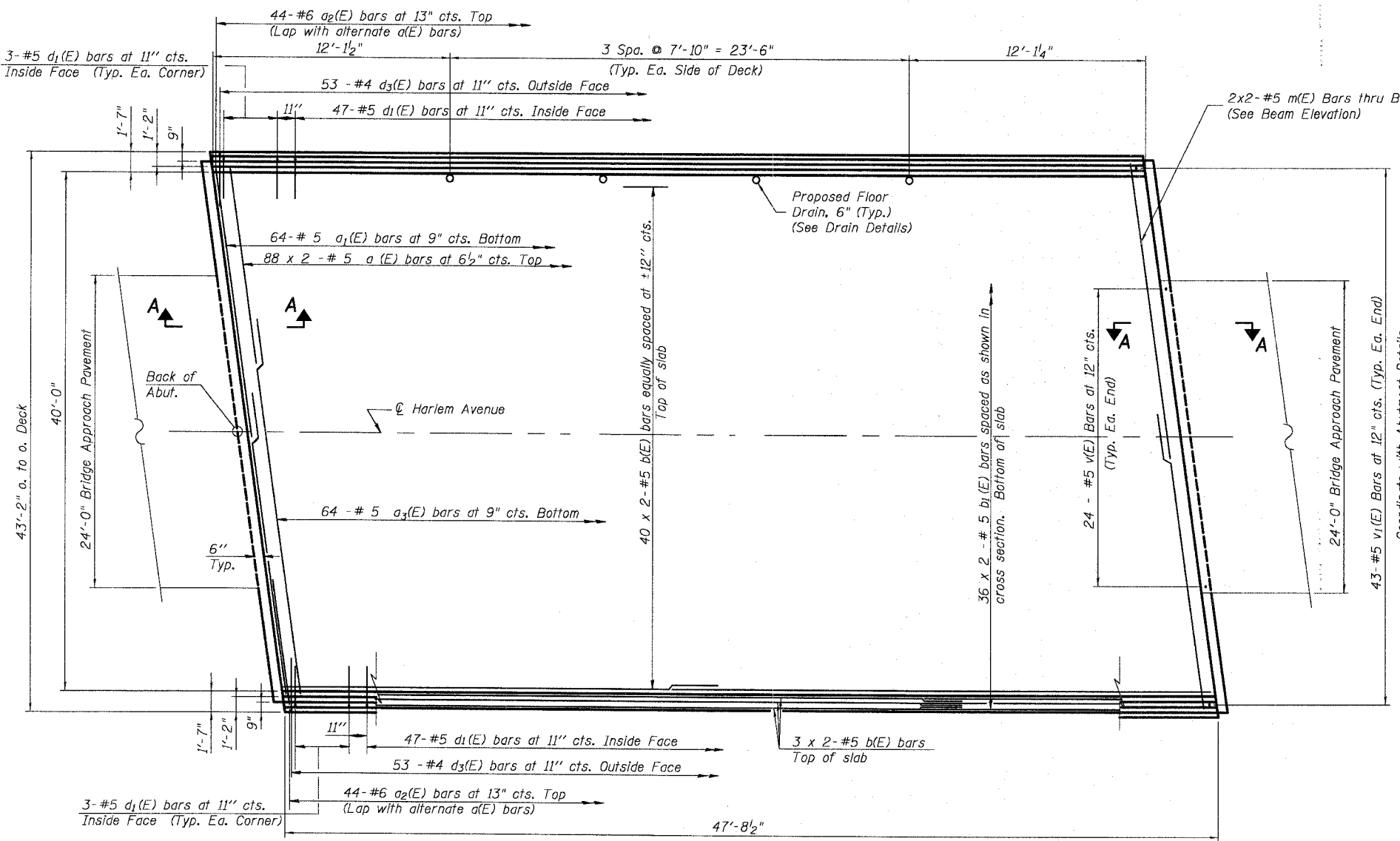
GIRDER #6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of South Abutment	106+81.23	18.54	689.29	689.29
Centerline of Brg. S. Abut.	106+82.23	18.54	689.29	689.29
A	106+92.23	18.54	689.29	689.33
B	107+02.23	18.54	689.29	689.36
C	107+12.23	18.54	689.28	689.35
D	107+22.23	18.54	689.28	689.31
Centerline of Brg. N. Abut.	107+28.93	18.54	689.28	689.28
Back of North Abutment	107+29.93	18.54	689.28	689.28

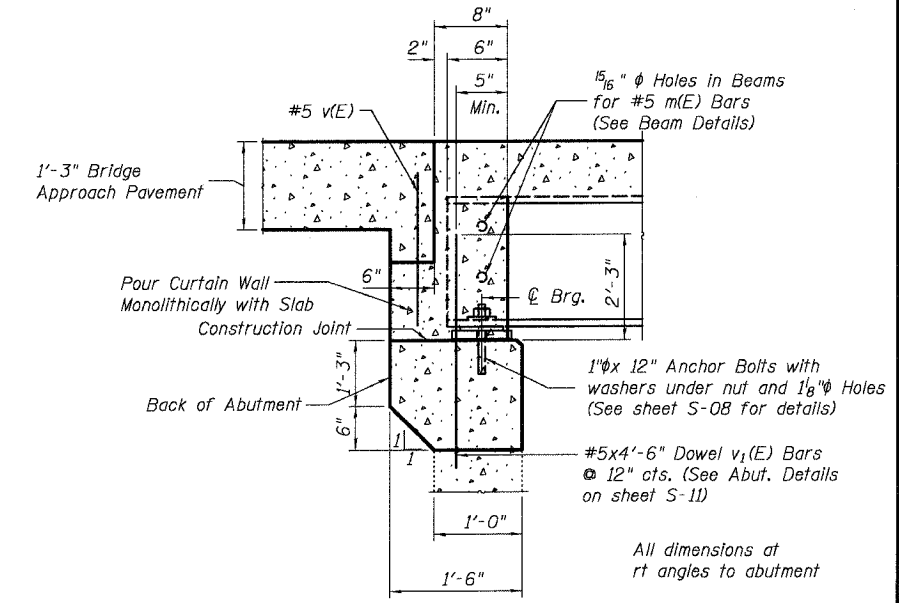
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CIVIL, STRUCTURAL ENGINEERS AND SURVEYORS
www.smitheng.com
2540 West 12th Street, Suite 200
Tulsa, Oklahoma 74107

REVISIONS	
NAME	DATE

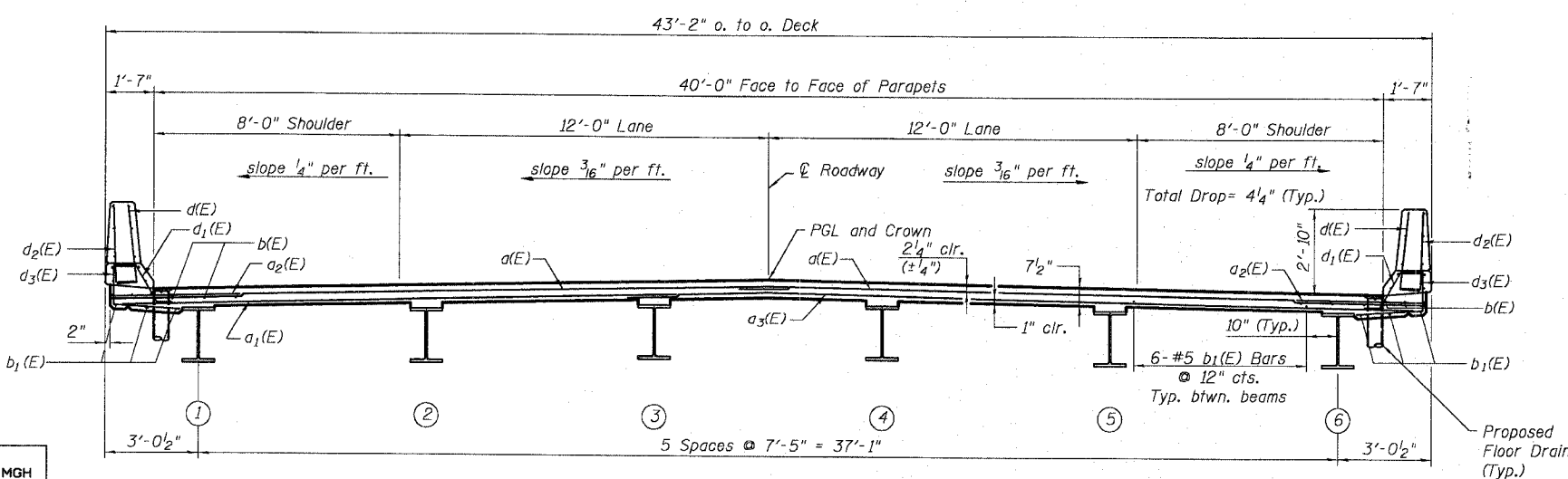
ILLINOIS DEPARTMENT OF TRANSPORTATION
Top of Deck Slab Elevations - Deck Tables
Harlem Avenue/Drecksler Road
Over Black Walnut Creek
Will County
Section 01-00139-02-BR
SN. 099-3091
DATE 5-26-2005



PLAN



SECTION A-A
Not to Scale



CROSS SECTION
Not to Scale

- Notes:
- See Sheet S-05 of S-12 for superstructure details and Bill of Material for deck and parapets.
 - Reinforcement bars designated (E) shall be epoxy coated.
 - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 - See Sheet S-05 of S-13 for parapet reinforcement.
 - Reinforcement bar splices shall be in accordance with the following table unless shown otherwise on the drawing

Size	Basic Lap	Top Bars Lap
#5	2'-2"	3'-0"
#6	2'-7"	3'-7"
#8	4'-6"	6'-4"

DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

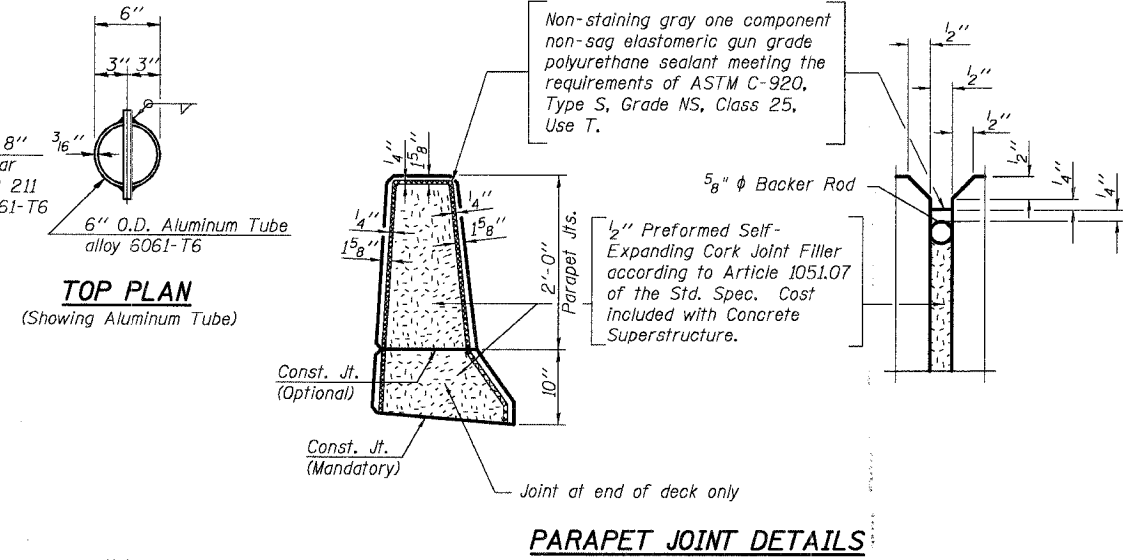
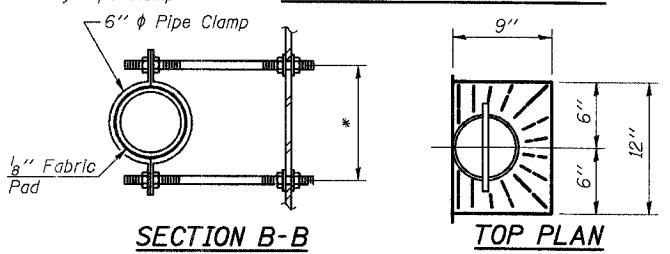
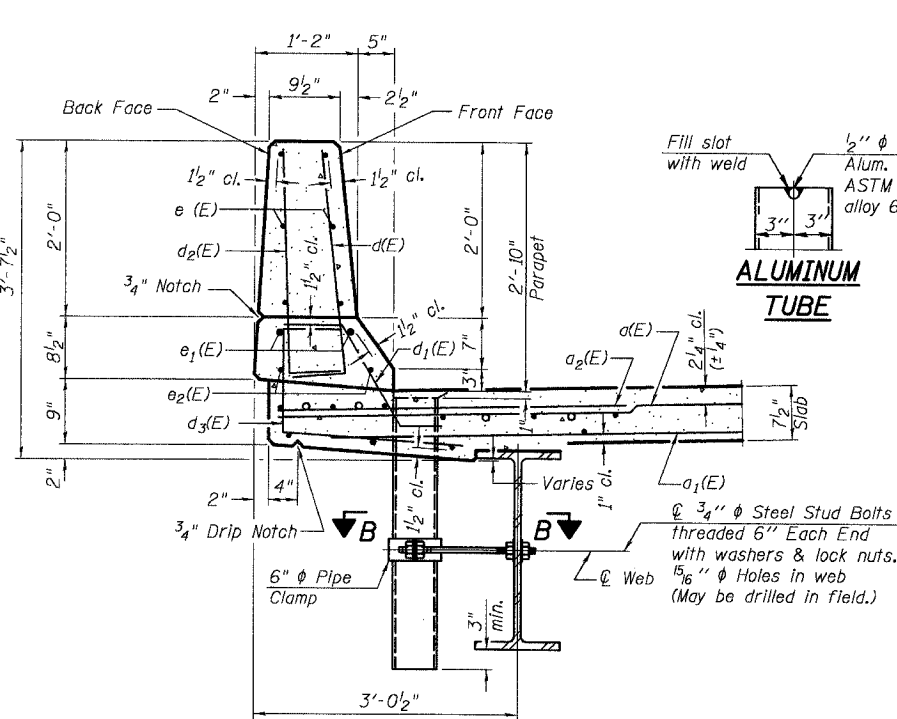


REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

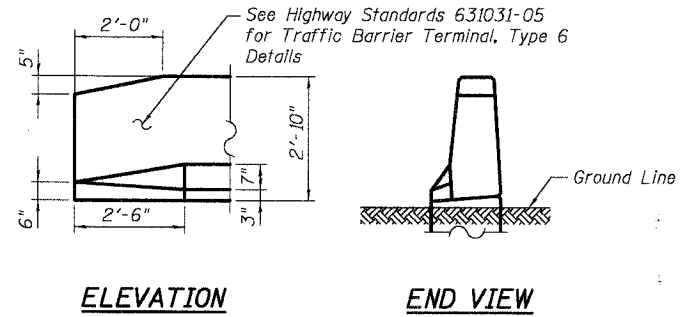
Deck Plan, Cross Section, and Details
Harlem Avenue/Drecksler Road
Over Black Walnut Creek
Will County
Section 01-00139-02-BR
SN. 099-3091

DATE 5-26-2005

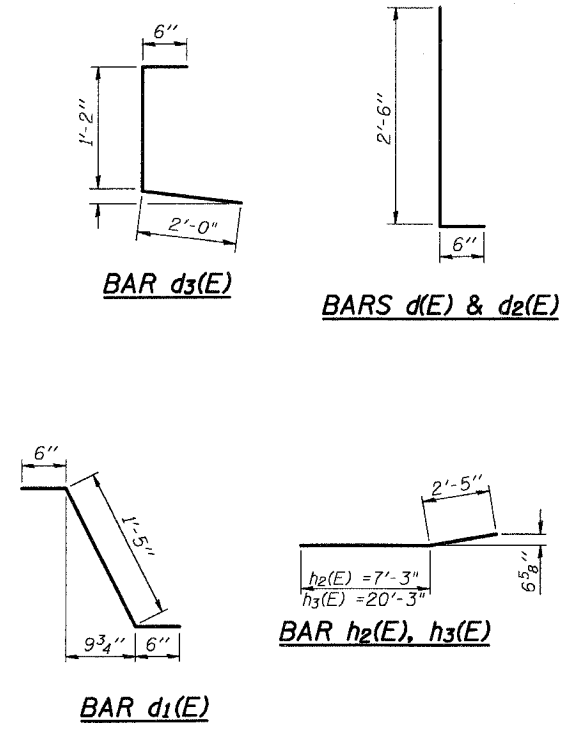
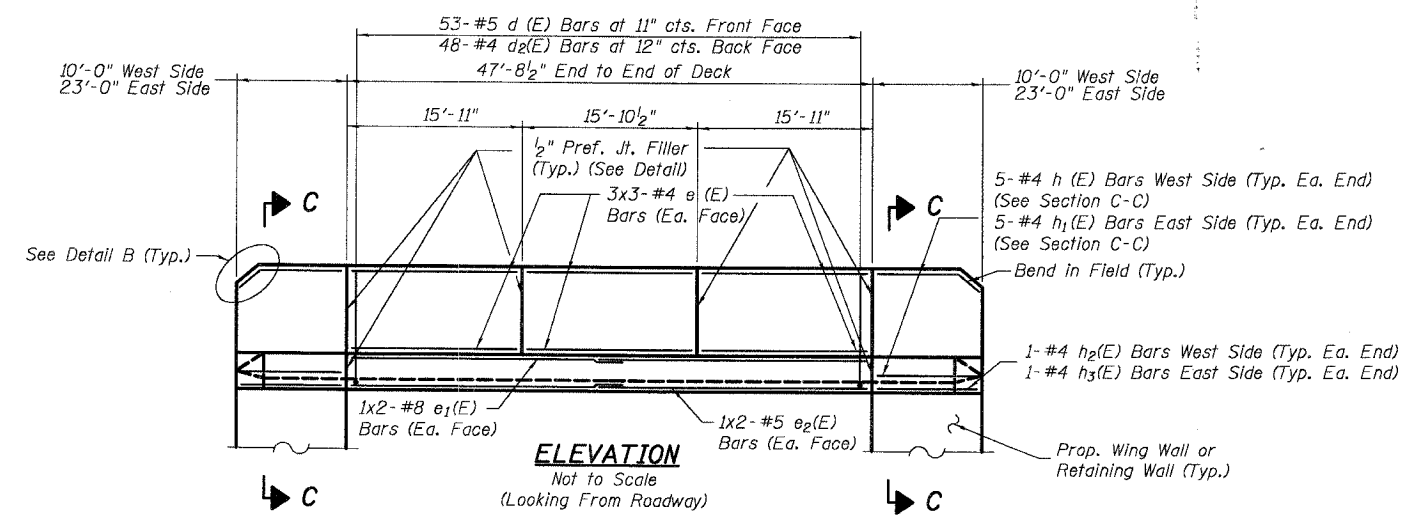
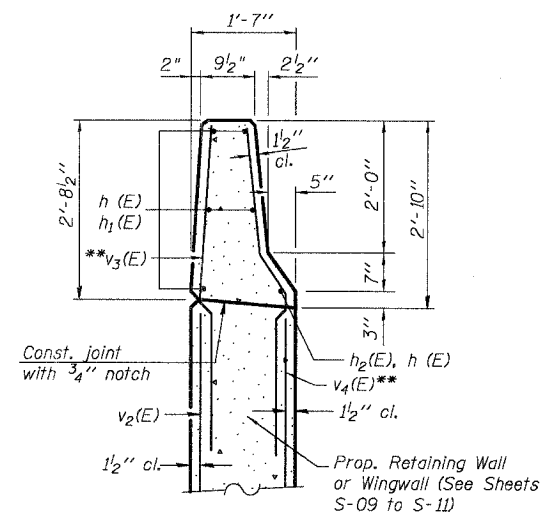


Notes:

- The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the General Notes on S-02. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.
- The pipe clamp, fabric pad, bolts, washers, nuts, Aluminum bar, and Aluminum tube shall be included in the Pay Item "Floor Drains".



DETAIL B
Not to Scale



SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	176	# 5	22'-4"	—
a1(E)	64	# 5	18'-8"	—
a2(E)	88	# 6	4'-6"	—
a3(E)	64	# 5	26'-1"	—
b(E)	92	# 5	24'-9"	—
b1(E)	84	# 5	24'-9"	—
d(E)	53	# 5	3'-0"	—
d1(E)	106	# 5	2'-5"	┌
d2(E)	48	# 4	3'-0"	└
d3(E)	106	# 4	3'-8"	┌
e(E)	18	# 4	15'-7"	—
e1(E)	4	# 8	25'-11"	—
e2(E)	4	# 5	24'-9"	—
h(E)	10	# 4	9'-8"	—
h1(E)	10	# 4	22'-8"	—
h2(E)	2	# 4	9'-8"	—
h3(E)	2	# 4	22'-8"	—
m(E)	8	# 5	22'-4"	—
v(E)	24	# 5	2'-4"	—
v1(E)	43	# 5	4'-6"	—
Reinforcement Bars, Epoxy Coated			Pound	13,360
Concrete Superstructure			Cu. Yd.	66.3
Protective Coat			Sq. Yd.	65
Floor Drains			Each	8

NOTES:

- Reinforcement bars designated (E) shall be epoxy coated.
- Bars indicated thus 1 x 2 - #5 etc. indicates 1 line of bars with 2 lengths per line.
- Work this sheet with sheet S-04 and S-09 to S-11.

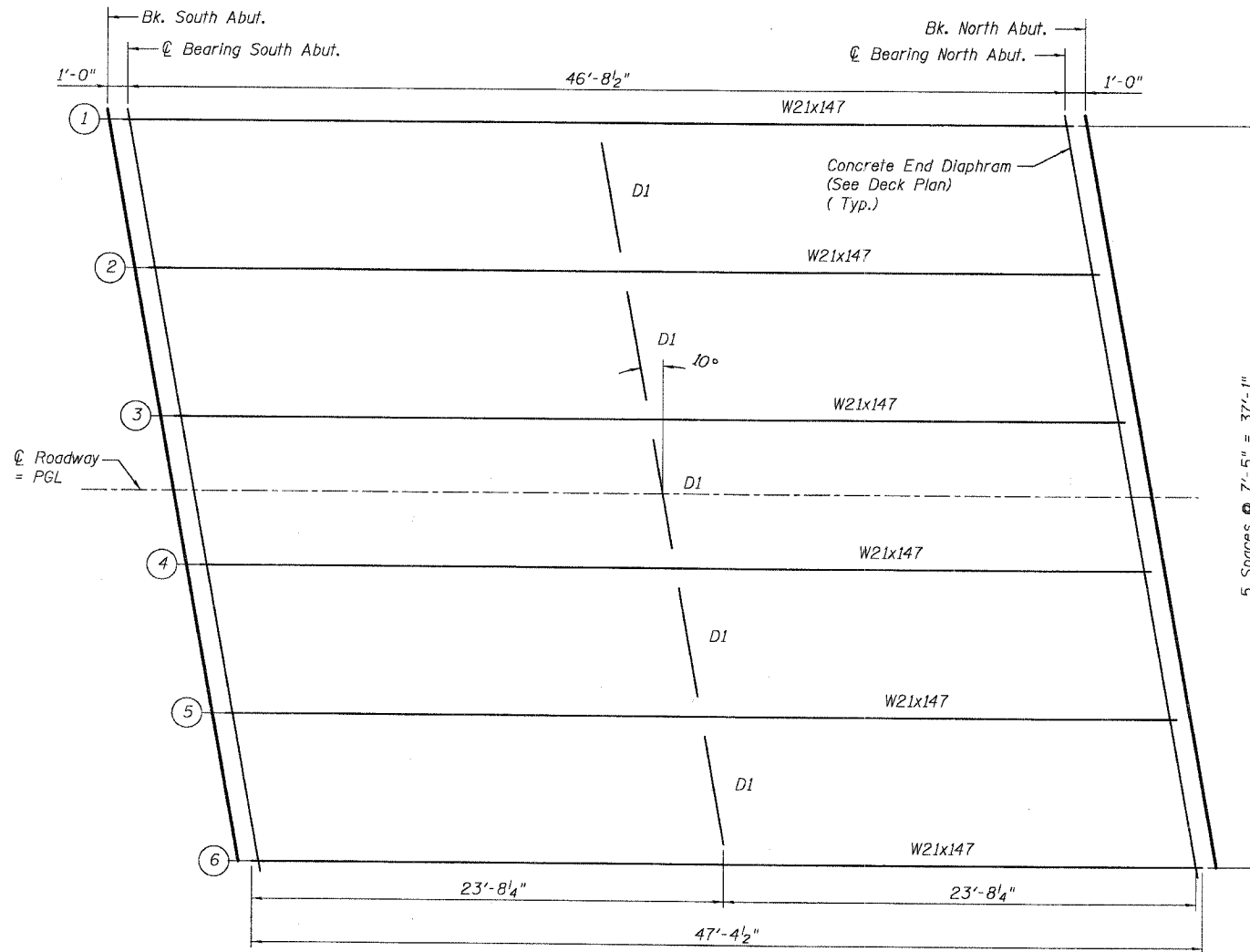
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DRAWN	WJH
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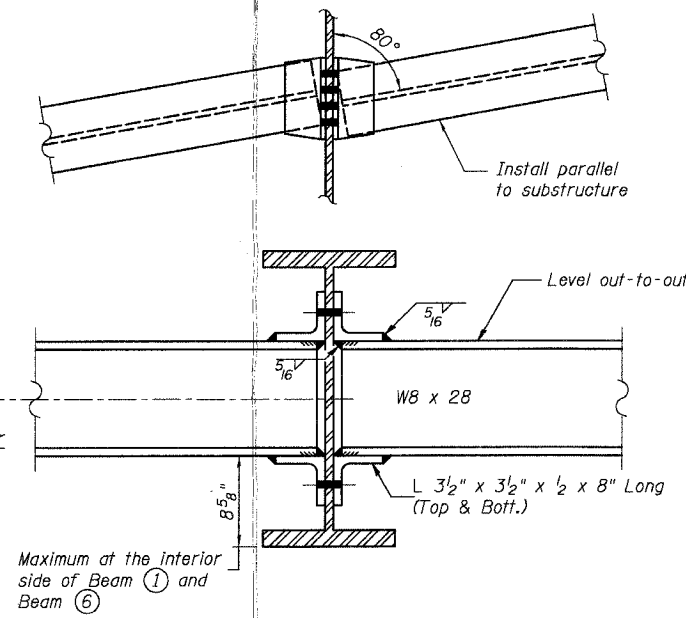
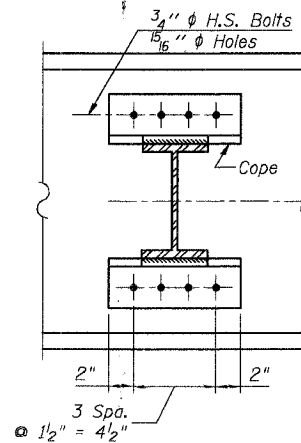
ILLINOIS DEPARTMENT OF TRANSPORTATION

Parapet Elevations, Details and Drain Details
Over Black Walnut Creek
Will County
Section 01-00139-02-BR
SN. 099-3091

DATE 5-26-2005



FRAMING PLAN
Not to Scale



INTERIOR DIAPHRAGM D1
Not to Scale

MOMENT AND REACTION TABLES

INTERIOR GIRDER MOMENT TABLE		0.5 Span
Is	(in ⁴)	3630
Ic (n)	(in ⁴)	10,635.1
Ic (3n)	(in ⁴)	7,732.86
Ss	(in ³)	329
Sc (n)	(in ³)	478.38
Sc (3n)	(in ³)	423.98
DL	(k/ft.)	0.87
M _{DL}	(k)	258.3
fs _{DL(non-comp)}	(k.s.i.)	9.42
S _{DL}	(k/ft.)	0.50
M _{SDL}	(k)	147.4
fs _{SDL(comp)}	(k.s.i.)	4.17
M _{LL}	(k)	416.1
M _{I (Impact)}	(k)	119.8
fs [M _{LL} + M _{Impact}]	(k.s.i.)	13.44
fs (Total)	(k.s.i.)	27.04
VR	(k)	59.19

INTERIOR GIRDER REACTION TABLE		Abut.
R _{DL}	(k)	33.3
R _{LL}	(k)	46.0
Imp.	(k)	13.3
R (Total)	(k)	92.6

TOP OF BEAM ELEV. TABLES

GIRDER #	N. ABUT.	S. ABUT.
1	688.59	688.60
2	688.74	688.75
3	688.85	688.86
4	688.85	688.86
5	688.74	688.75
6	688.59	688.60

For Fabrication use only

NOTES:

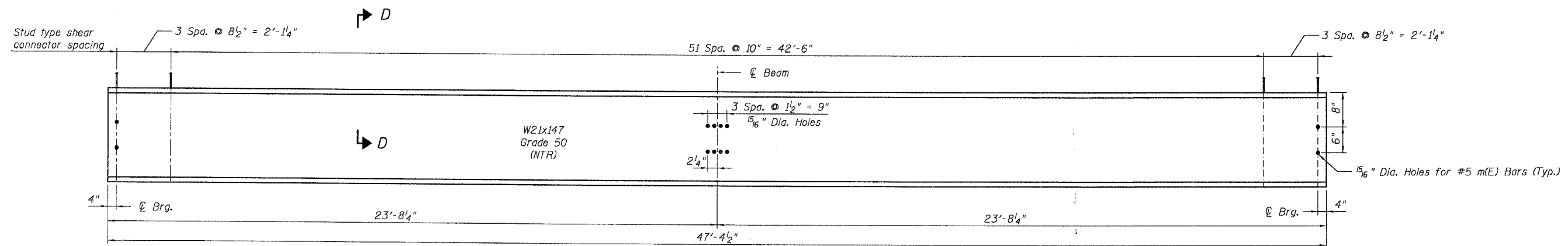
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DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

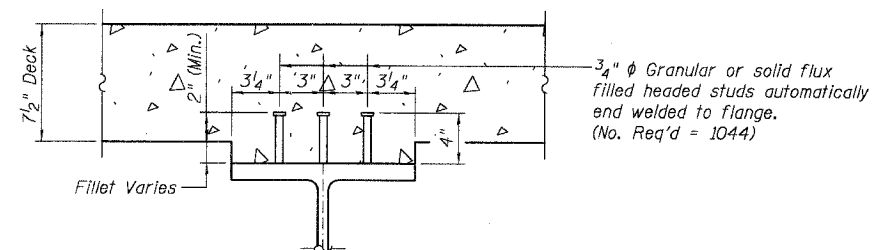
Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total).
Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)
VR is the maximum Live Load + Impact shear range in span.
Live Load and Impact designed for 120,000 lb. permit loading (one lane) as well as HS20-44.

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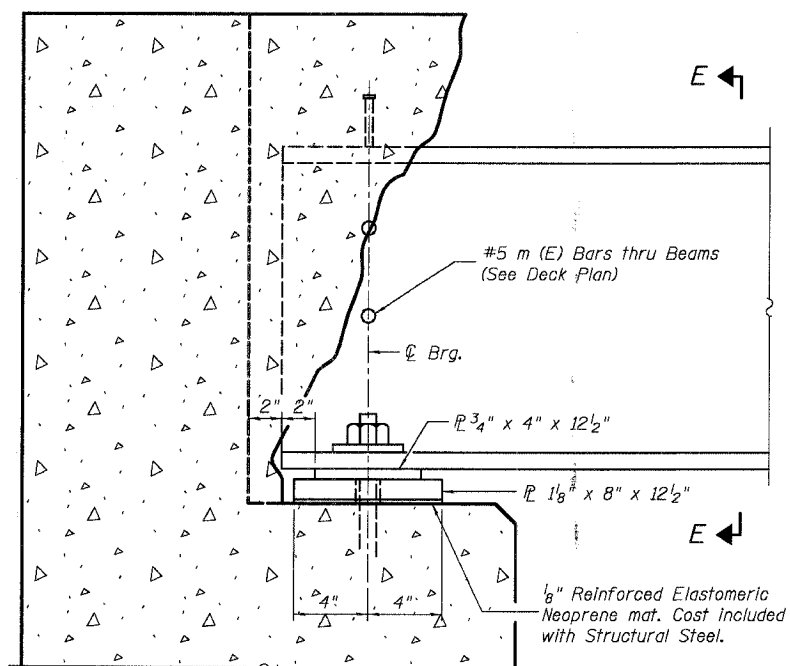
ILLINOIS DEPARTMENT OF TRANSPORTATION	
Steel Framing Plan Harlem Avenue/Drecksler Road Over Black Walnut Creek Will County Section 01-00139-02-BR SN. 099-3091	
DATE 5-26-2005	



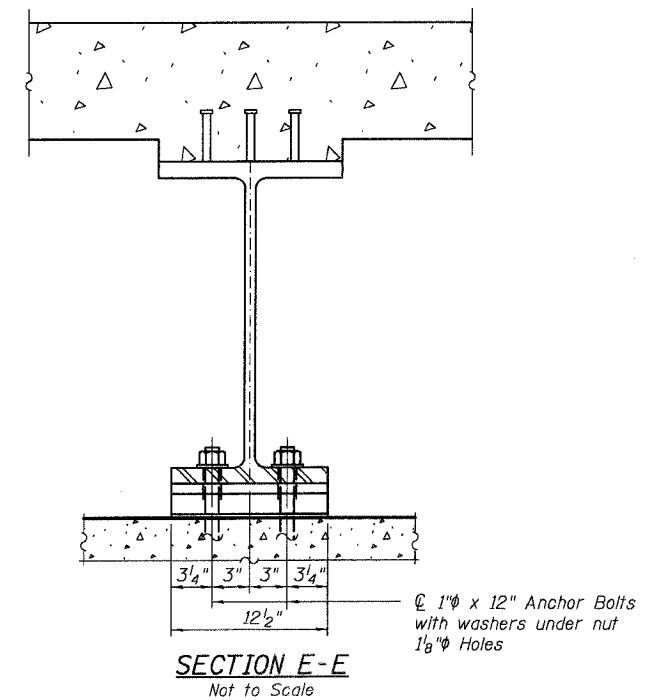
BEAM ELEVATION
Not to Scale



SECTION D-D
Not to Scale



BEARING DETAIL
Not to Scale



SECTION E-E
Not to Scale

DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

Notes

- "NTR" denotes plates to which Notch Toughness Requirements are applicable.
- Work this sheet with S-06 and S-08

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REVISIONS	
NAME	DATE

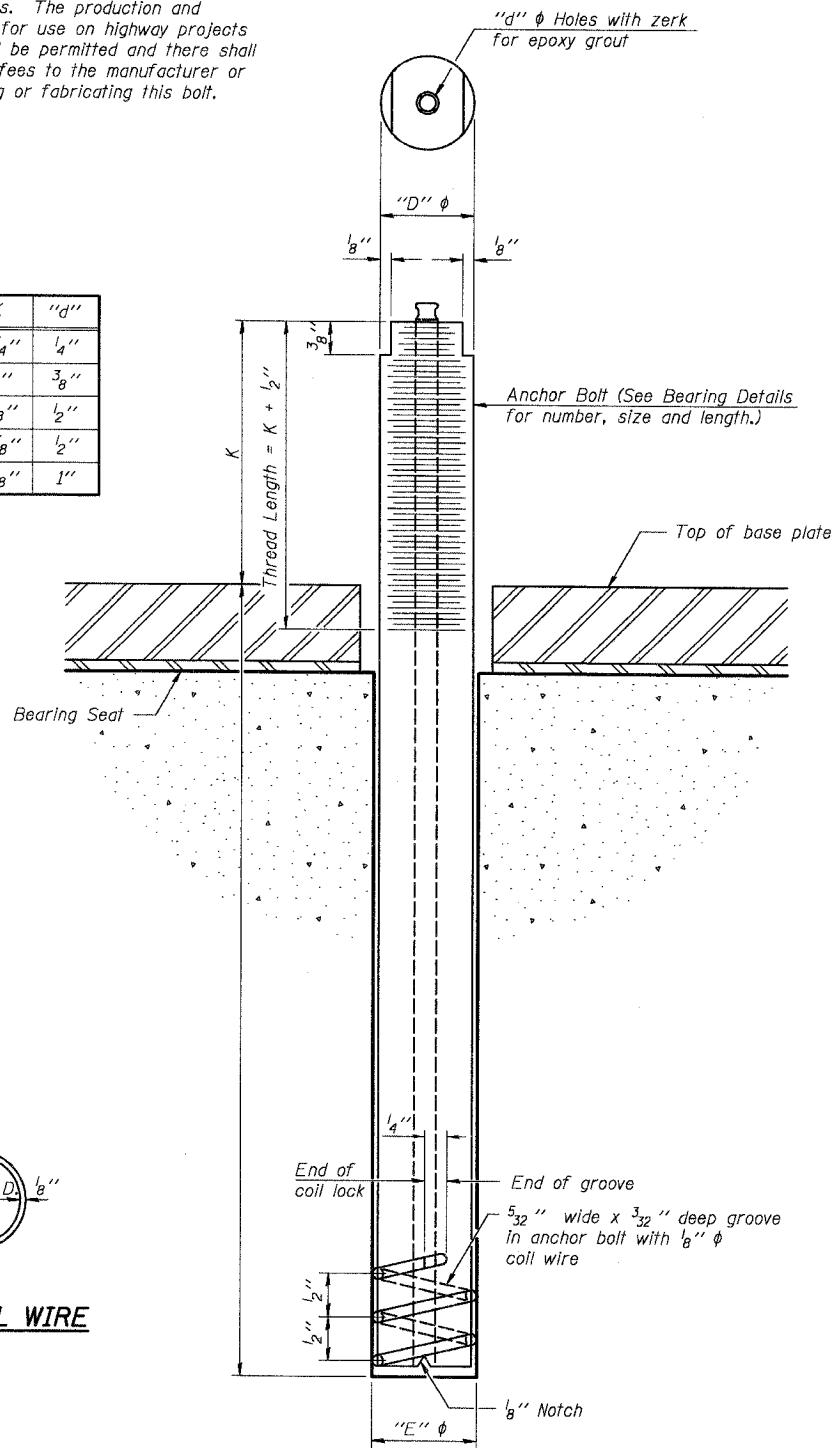
ILLINOIS DEPARTMENT OF TRANSPORTATION

Beam Elevation and Bearing Details
Harlem Avenue/Dreckster Road
Over Black Walnut Creek
Will County
Section 01-00139-02-BR
SN. 099-3091

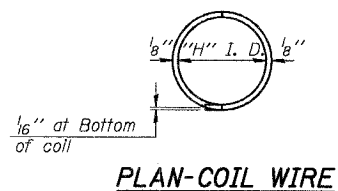
DATE 5-26-2005

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
N. Abut.	A307
S. Abut.	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

1. Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
2. Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
3. The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.
4. Work this sheet with S-07.

DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

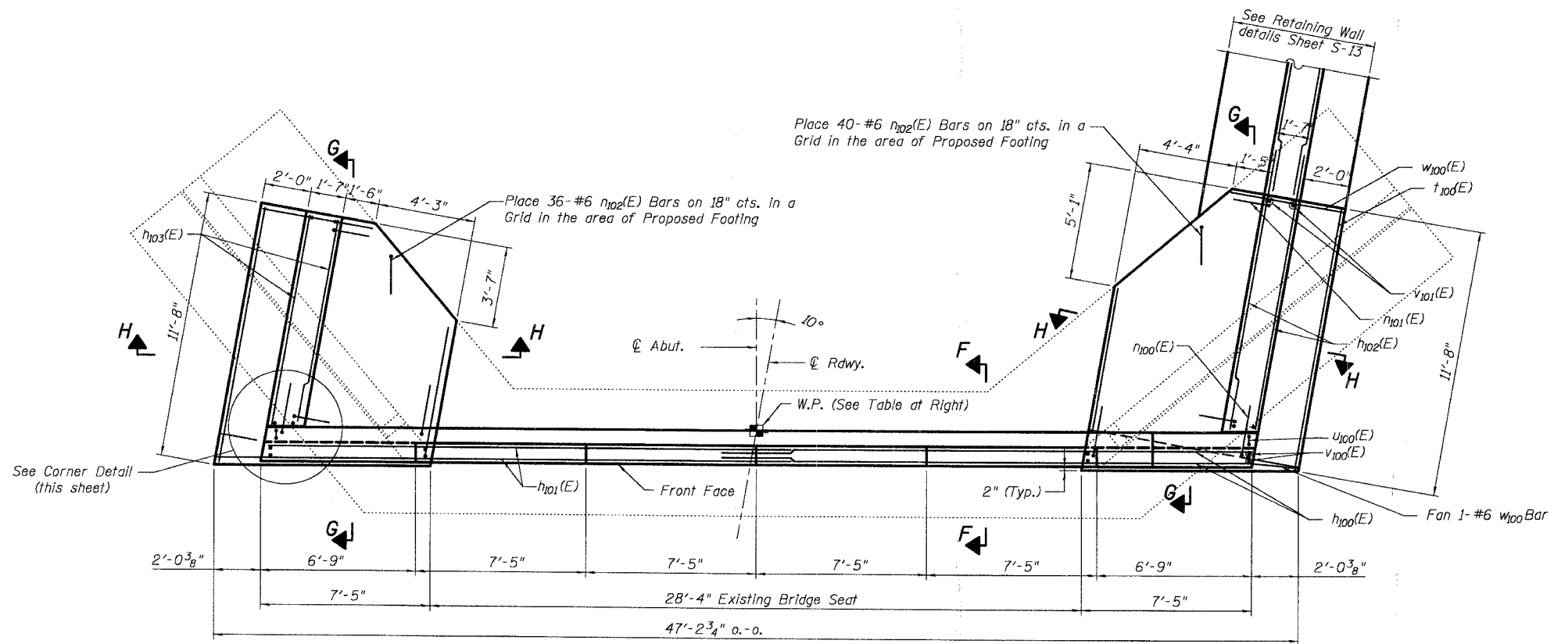


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NAME	DATE

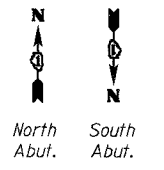
ILLINOIS DEPARTMENT OF TRANSPORTATION

Anchor Bolt Details
Harlem Avenue/Drecksler Road
Over Black Walnut Creek
Will County
Section 01-00139-02-BR
SN. 099-3091

DATE 5-26-2005



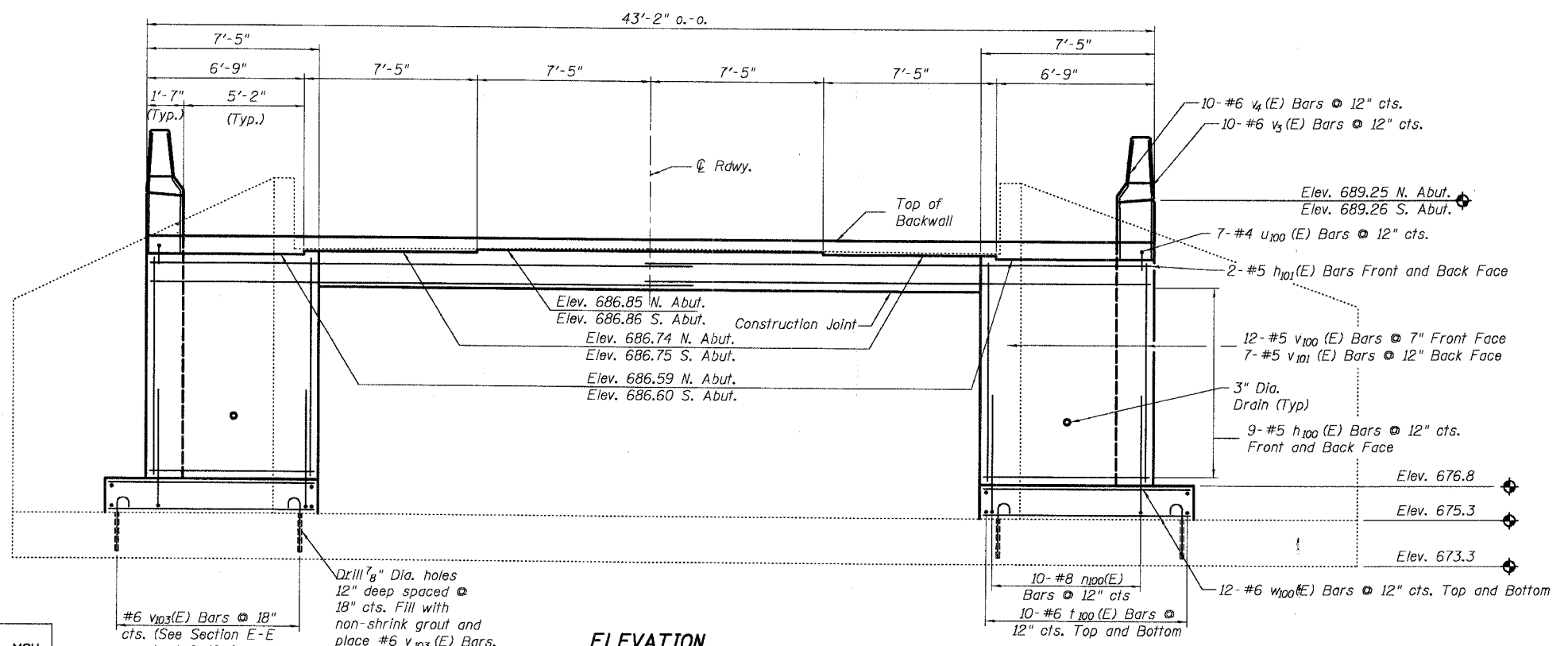
PLAN
Not to Scale



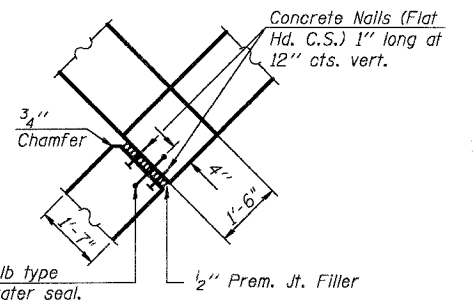
- NOTES:**
1. Removal of Existing Concrete shall conform to Article 501.03 of the Standard Specifications.
 2. Preserve and incorporate 3" length of a minimum of 50% of existing vertical reinforcement in removal area.
 3. Preserve and incorporate existing u Bar's located in the Back Wall.
 4. Install Epoxy Crack Sealing into narrow cracks located on the inside face of existing abutment walls as directed by the Resident Engineer..
 5. Install Formed Concrete Repair (Depth less than 5") on the inside face of the existing abutment walls as directed by the Resident Engineer.
 6. Work this sheet with S-12.

WORK POINT TABLE

Work Point	Harlem Ave Station	Offset
1	106+76.00	0' R
2	107+24.70	0' R



ELEVATION
Not to Scale



CORNER DETAIL

DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

#6 v103(E) Bars @ 18" cts. (See Section E-E on sheet S-12 for more information)

Drill 7/8" Dia. holes 12" deep spaced @ 18" cts. Fill with non-shrink grout and place #6 v103(E) Bars.

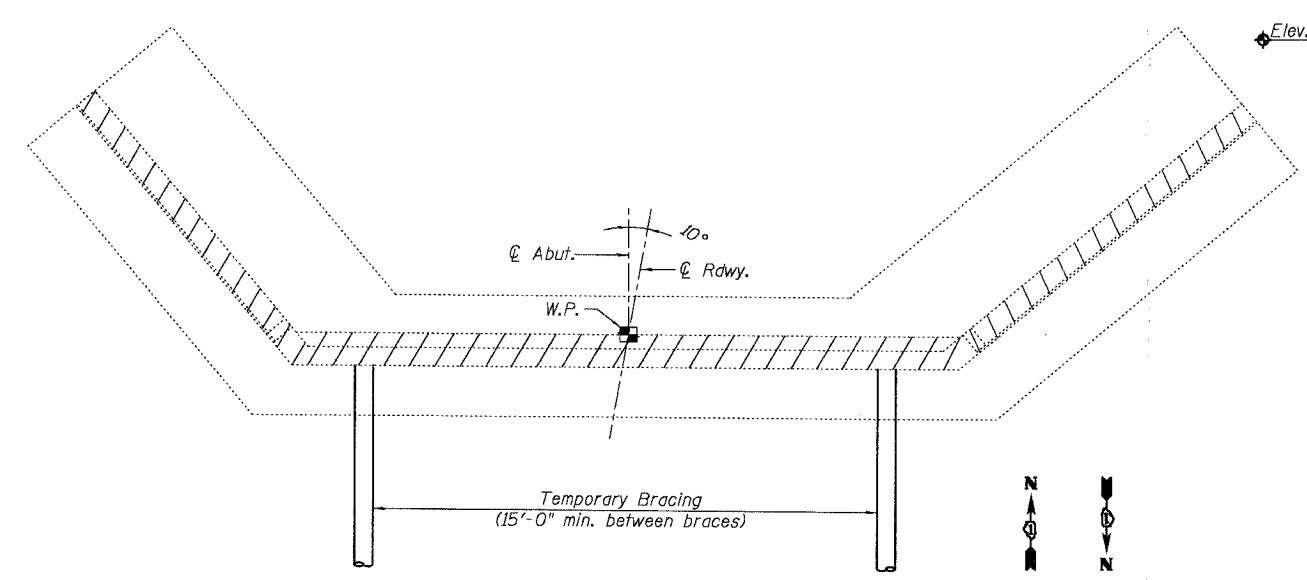
SMITH ENGINEERING CONSULTANTS, INC.
CIVIL, STRUCTURAL, ELECTRICAL AND SUPERVISOR

REVISIONS	
NAME	DATE

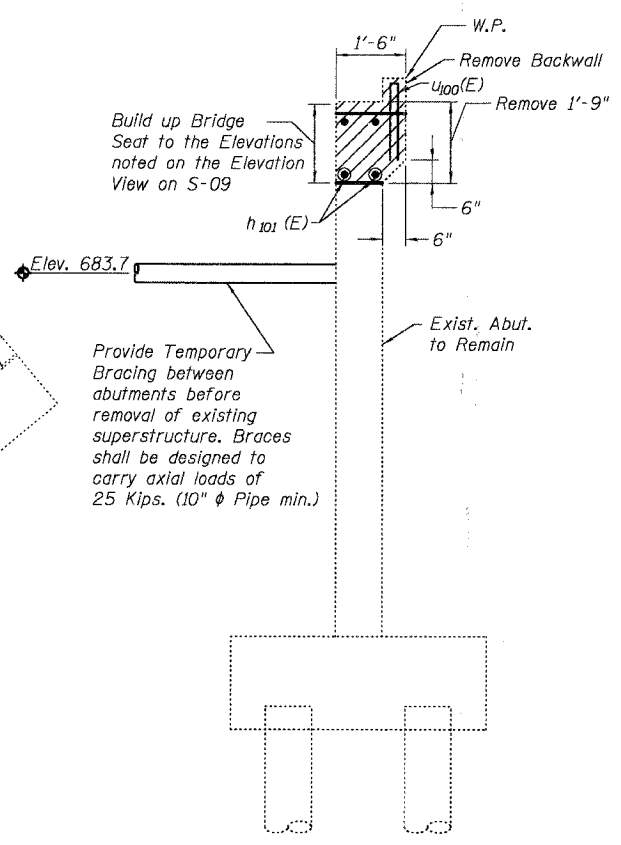
ILLINOIS DEPARTMENT OF TRANSPORTATION

Abutment Plan and Elevation
Harlem Avenue/Drecksler Road
Over Black Walnut Creek
Will County
Section 01-00139-02-BR
SN. 099-3091

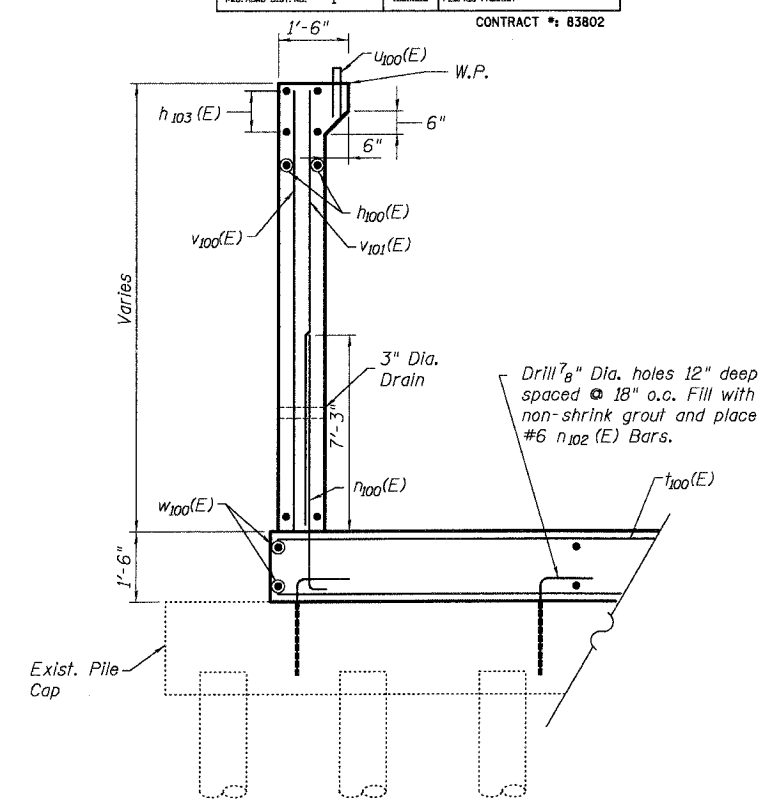
DATE 5-26-2005



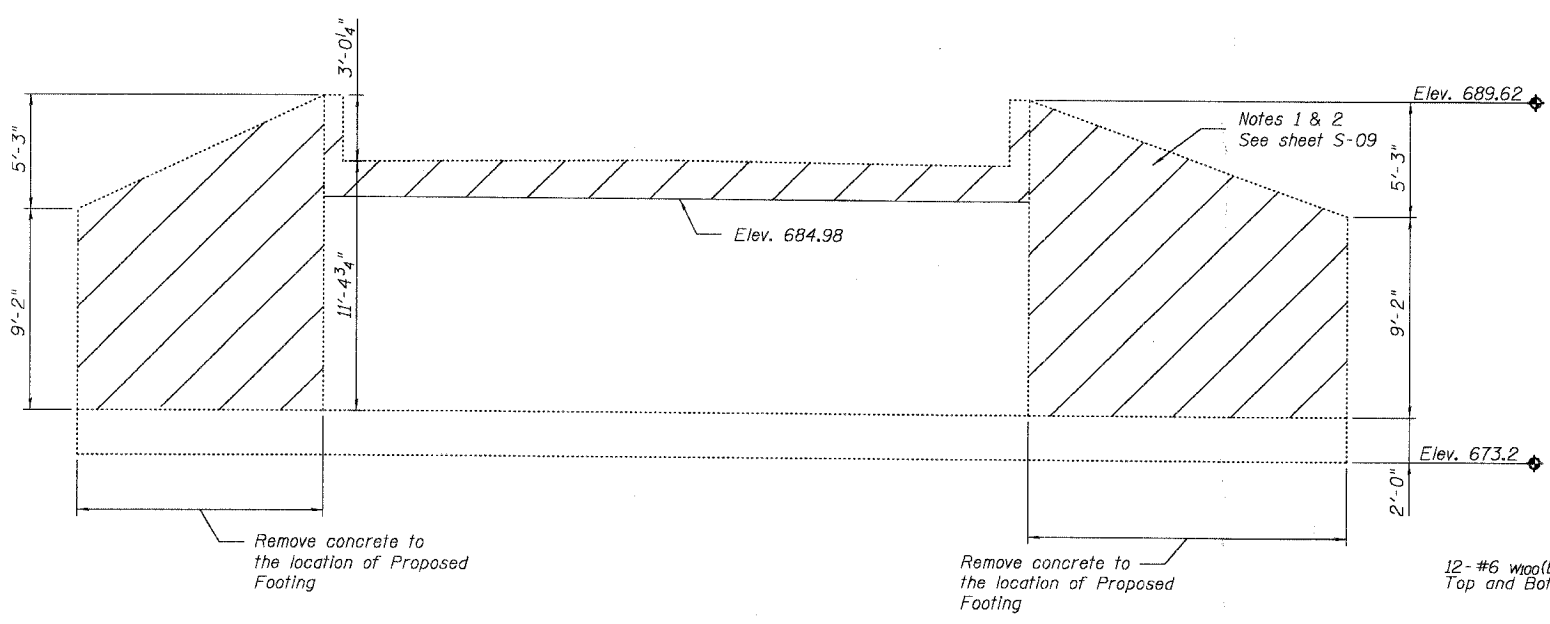
PLAN OF EXISTING ABUTMENT
Not to Scale



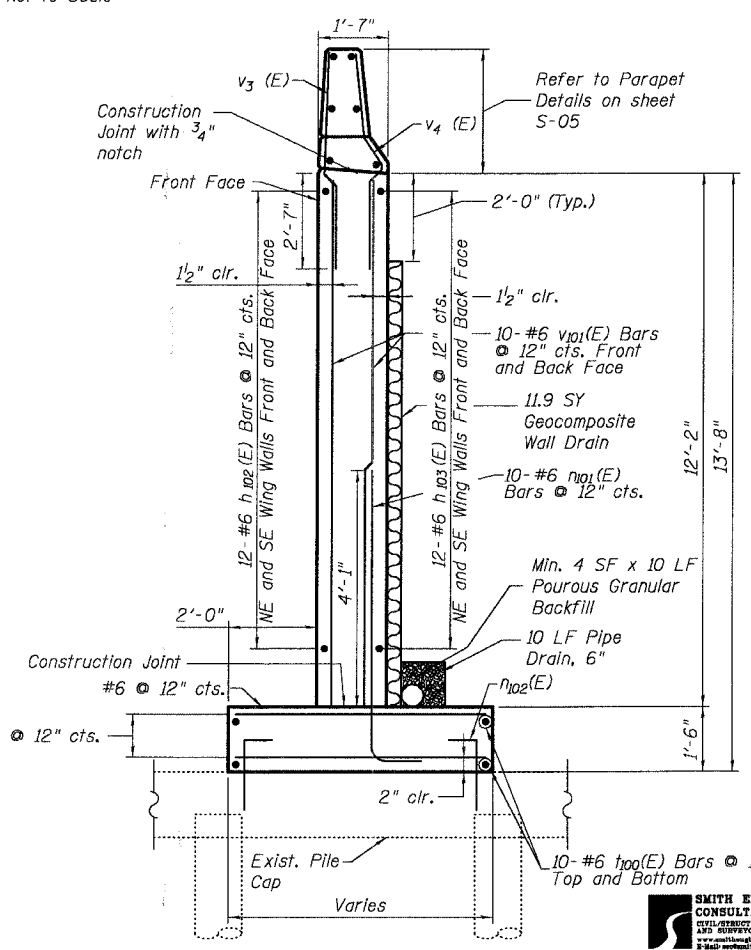
SECTION F-F
Not to Scale



SECTION G-G
Not to Scale



ELEVATION OF EXISTING ABUTMENT
Not to Scale



SECTION H-H
Not to Scale

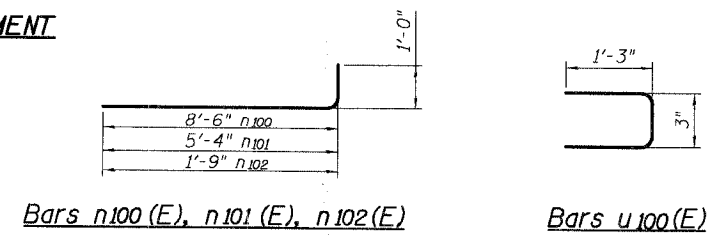
BILL OF MATERIAL

Bar	No.	Size	Length (FT)	Shape
h103(E)	72	# 5	7'-1"	
h103(E)	8	# 7	23'-6"	
h103(E)	96	# 6	12'-3"	
h103(E)	96	# 6	9'-8"	
h103(E)	40	# 8	6'-4"	
h103(E)	28	# 6	2'-9"	
h103(E)	80	# 6	11'-3"	
h103(E)	88	# 4	2'-9"	
h103(E)	48	# 5	9'-9"	
h103(E)	80	# 5	12'-4"	
h103(E)	40	# 6	9'-6"	
h103(E)	40	# 6	4'-5"	
h103(E)	40	# 6	5'-3"	
h103(E)	96	# 6	9'-1"	
Reinforcement Bars, Epoxy Coated		Pound	10,360	
Concrete Structures		Cu. Yds.	88.9	
Concrete Removal		Cu. Yds.	36.8	
Bridge Seat Sealer		Sq. Ft.	64.7	
Structure Excavation		Cu. Yd.	102	
Epoxy Crack Sealing		Foot	65	
Formed Concrete Repair (< 5 in)		Sq. Ft.	5	
Porous Granular Backfill		Cu. Yd.	31.3	
Geocomposite Wall Drain		Sq. Yd.	47.5	
Pipe Drain		Foot	40	

Reinforcement Bars designated (E) shall be Epoxy Coated

DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

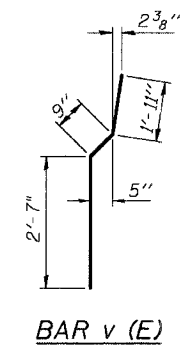
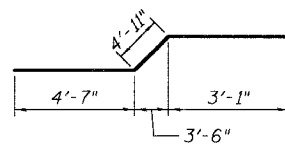
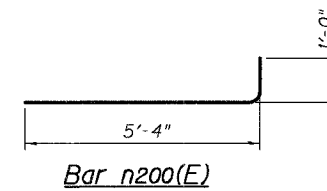
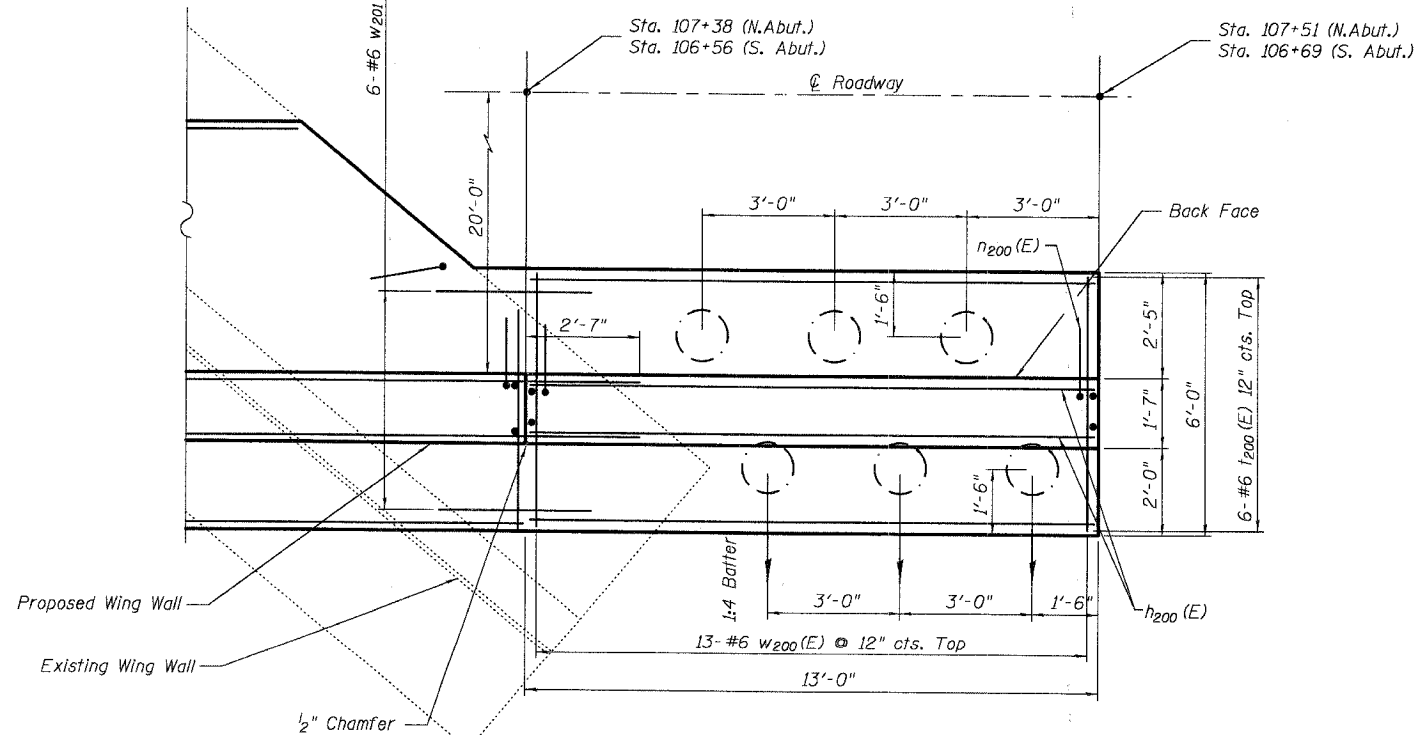
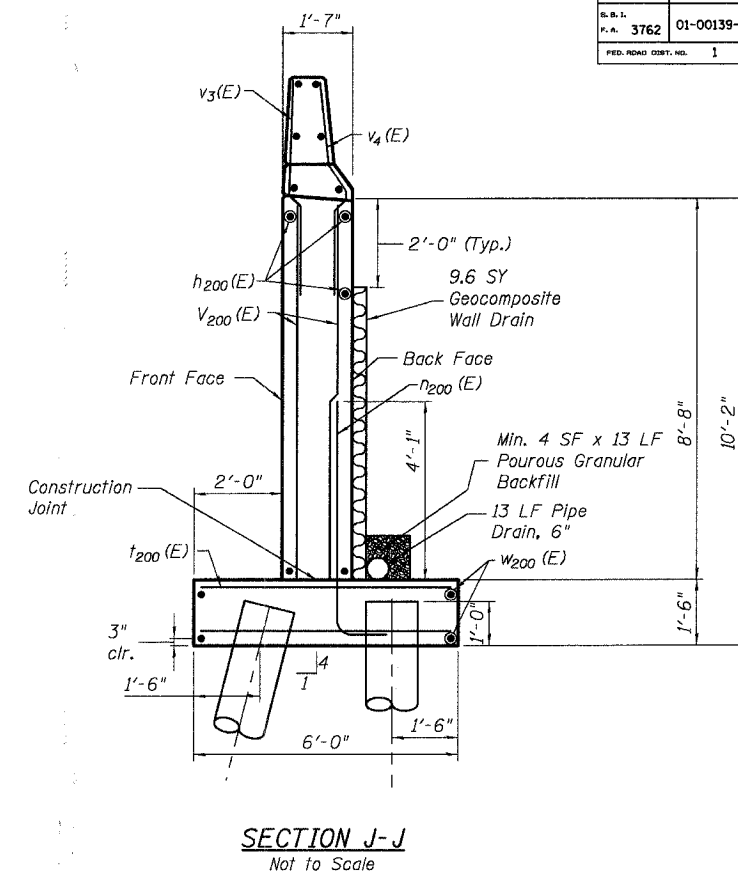
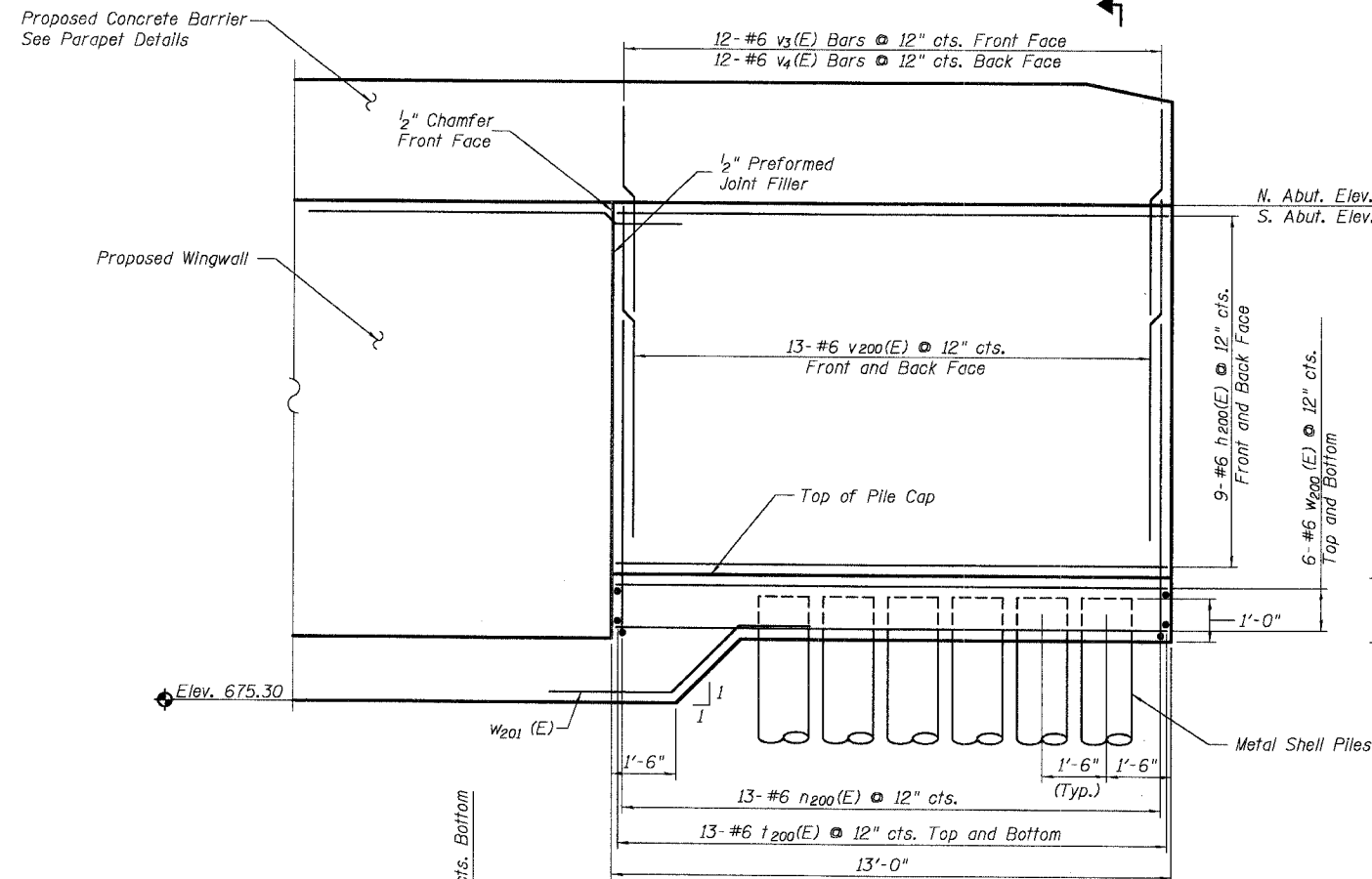
LEGEND:
 Indicates Concrete Removal Area



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 2140 W. 111th Street, Suite 200
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 Fax: (708) 485-1112
 Website: www.smitheng.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 Abutment Details
 Harlem Avenue/Drecksler Road
 Over Black Walnut Creek
 Will County
 Section 01-00139-02-BR
 SN. 099-3091
 DATE 5-26-2005



PILE DATA

Type: 14" φ Metal Shells
Capacity: 15 Ton
Length: 34 Ft
No.: 12*
* included one (1) Test Pile at Northeast Retaining Wall

BILL OF MATERIAL

Bar	No.	Size	Length (FT)	Shape
h ₂₀₀ (E)	36	# 6	11'-8"	
n ₂₀₀ (E)	26	# 6	6'-4"	
t ₂₀₀ (E)	52	# 6	5'-8"	
v ₂₀₀ (E)	52	# 6	8'-6"	
v ₃ (E)	23	# 6	4'-5"	
v ₄ (E)	23	# 6	5'-3"	
w ₂₀₀ (E)	24	# 6	11'-8"	
w ₂₀₁ (E)	12	# 6	12'-7"	
Reinforcement Bars, Epoxy Coated		Pound	2,970	
Concrete Structures		Cu. Yd.	26.9	
Structure Excavation		Cu. Yd.	83.6	
Porous Granular Backfill		Cu. Yd.	46.7	
Geocomposite Wall Drain		Sq. Yd.	19.3	
Pipe Drain		Foot	26	

Reinforcement Bars designated (E) shall be Epoxy Coated

DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

Not to Scale
Northeast Wall shown
(Southeast Wall ~ opposite hand)



REVISIONS	
NAME	DATE

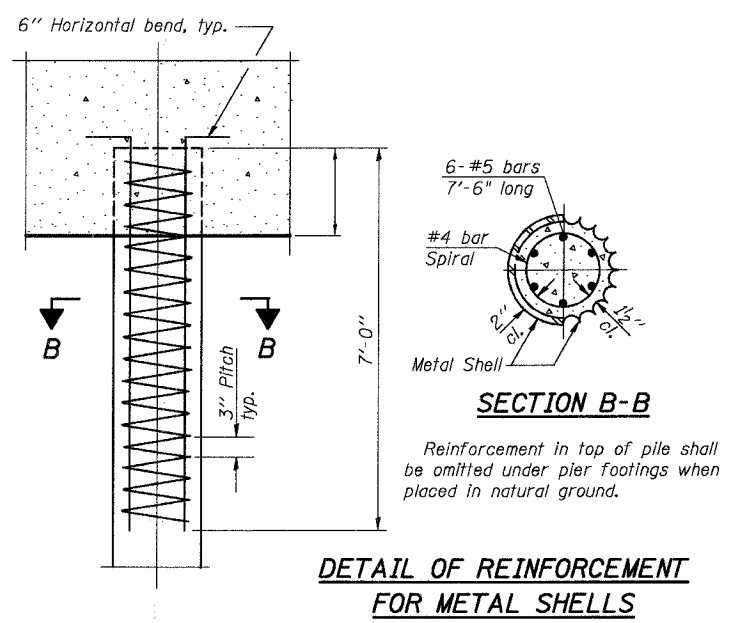
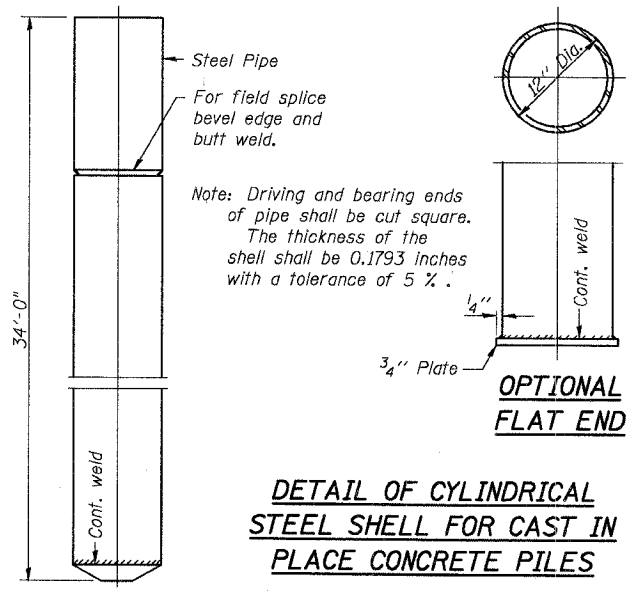
ILLINOIS DEPARTMENT OF TRANSPORTATION

Retaining Wall Plan and Elevation
Harlem Avenue/Drecksler Road
Over Black Walnut Creek
Will County
Section 01-00139-02-BR
SN. 099-3091

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
P.A. 3762	01-00139-02-BR	Will	35	26
FED. ROAD DIST. NO. 1	SLINGER	FED. AID PROJECT		

SHEET NO. S-12
S-13 SHEETS

CONTRACT #: 83802



DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Pile Details
Harlem Avenue/Drecksler Road
Over Black Walnut Creek
Will County
Section 01-00139-02-BR
SN. 099-3091

DATE 5-26-2005

SCHLEEDE-HAMPTON ASSOCIATES, INC. • CONSULTING ENGINEERS
BRIDGE FOUNDATION BORING LOG

PROJECT HARLEM ROAD OVER BLACK WALNUT CREEK DATE 5/15/02
 ROUTE HARLEM ROAD/DRECKSLER ROAD BORER BY SPE
 SECTION STATION 106+76 TO 107+24 CHECKED BY WJW

Depth N/6"	Qu tsf	W %	Rotary Mud Drilling	Depth N/6"	Qu tsf	W %
GROUND SURFACE EL. 689.5						
GROUND WATER SURFACE IN CREEK 677.2						
1	11	-	Dark Grey Sandy LOAM, A-2-4	7	4.3	22
1	10	7	Grey Silty CLAY, A-6	9	1.75	18
1	5	-		11	BS	
1	2	0.5		2	1.75	18
1	2	P		7	BS	
2	1	0.70		2	2.09	17
2	2	B		3	BS	
2	3	B		7	BS	
3	1	0.89		3	2.83	16
3	2	B		4	BS	
3	2	B		9	BS	
4	3	-		3	1.32	25
4	3	-		6	B	
4	6	-		2	1.86	22
4	9	-		9	2.75	17
4	7	-		11	B	
4	8	-		10	B	
5	5	-		10	B	
5	6	-		11	B	
5	8	-		12	B	
6	7	-		12	B	
6	8	-		12	B	

N-Standard Penetration Test- Blows per foot to drive 2 inch
 O.D. Split Spoon Sampler 12 inches with 140 lbs. hammer falling 30 inches
 Qu- Unconfined Compressive Strength (tsf)
 W- Water Content-percentage of oven dry weight (%)
 Type failure: B- Bulge Failure
 S- Shear Failure
 E- Estimated Value
 P- Penetrometer

SCHLEEDE-HAMPTON ASSOCIATES, INC. • CONSULTING ENGINEERS
BRIDGE FOUNDATION BORING LOG

BORING SB-1
 PROJECT HARLEM AVENUE OVER BLACK WALNUT CREEK DATE 5/21/02
 ROUTE HARLEM ROAD/DRECKSLER ROAD BORER BY SPE
 SECTION STATION 106+76 TO 107+24 CHECKED BY WJW

Depth N/6"	Qu tsf	W %	Rotary Mud Drilling	Depth N/6"	Qu tsf	W %
CONTINUED						
Recovery = 97% RQD = 51%						
13			Dark Grey Sandy LOAM, A-2-4	20		
13			Grey Silty CLAY, A-6	21		
14				21		
14				22		
15				22		
15				23		
16				24		
17				25		
18				26		
19				27		

SCHLEEDE-HAMPTON ASSOCIATES, INC. • CONSULTING ENGINEERS
BRIDGE FOUNDATION BORING LOG

BORING SB-2
 PROJECT HARLEM AVENUE OVER BLACK WALNUT CREEK DATE 5/21/02
 ROUTE HARLEM ROAD/DRECKSLER ROAD BORER BY SPE
 SECTION STATION 106+76 TO 107+24 CHECKED BY WJW

Depth N/6"	Qu tsf	W %	Rotary Mud Drilling	Depth N/6"	Qu tsf	W %
CONTINUED						
Recovery = 99% RQD = 53%						
13			Dark Grey Sandy LOAM, A-2-4	20		
13			Grey Silty CLAY, A-6	21		
14				21		
14				22		
15				22		
15				23		
16				24		
17				25		
18				26		
19				27		

N-Standard Penetration Test- Blows per foot to drive 2 inch
 O.D. Split Spoon Sampler 12 inches with 140 lbs. hammer falling 30 inches
 Qu- Unconfined Compressive Strength (tsf)
 W- Water Content-percentage of oven dry weight (%)
 Type failure: B- Bulge Failure
 S- Shear Failure
 E- Estimated Value
 P- Penetrometer

SCHLEEDE-HAMPTON ASSOCIATES, INC. • CONSULTING ENGINEERS
BRIDGE FOUNDATION BORING LOG

BORING SB-2
 PROJECT HARLEM AVENUE OVER BLACK WALNUT CREEK DATE 5/21/02
 ROUTE HARLEM ROAD/DRECKSLER ROAD BORER BY SPE
 SECTION STATION 106+76 TO 107+24 CHECKED BY WJW

Depth N/6"	Qu tsf	W %	Rotary Mud Drilling	Depth N/6"	Qu tsf	W %
CONTINUED						
Recovery = 99% RQD = 53%						
13			Dark Grey Sandy LOAM, A-2-4	20		
13			Grey Silty CLAY, A-6	21		
14				21		
14				22		
15				22		
15				23		
16				24		
17				25		
18				26		
19				27		

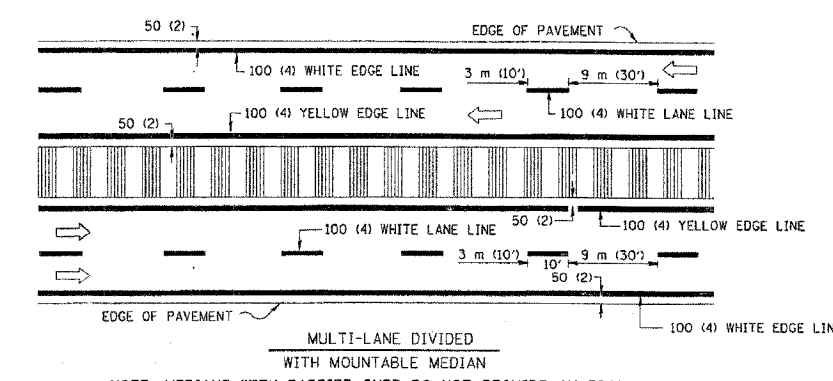
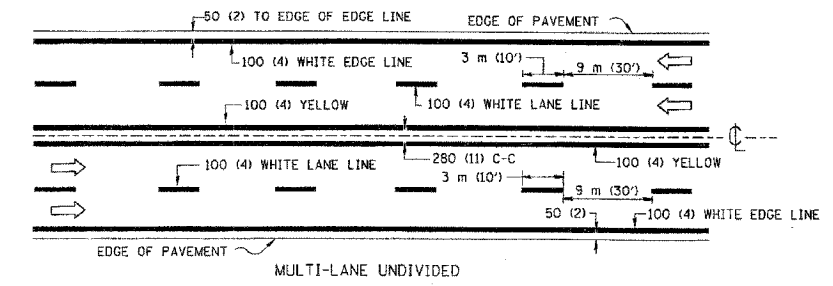
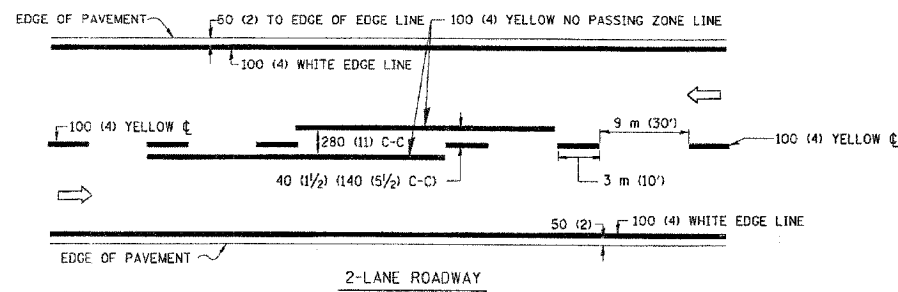
DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.	
1001 W. BROADWAY, SUITE 200, CHICAGO, IL 60606	
TEL: 312.467.1000 FAX: 312.467.1001	
WWW.SMITHENGINEERING.COM	
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

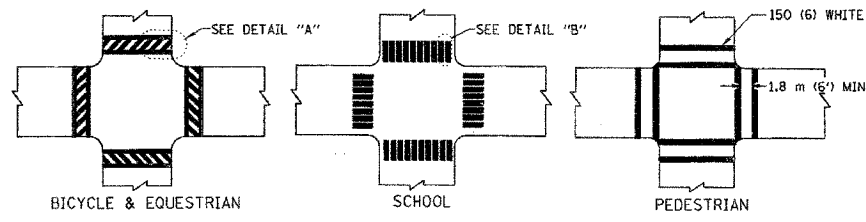
Soil Boring Logs
 Harlem Avenue/Drecksler Road
 Over Black Walnut Creek
 Will County
 Section 01-00139-02-BR
 SN. 099-3091

DATE 5-26-2005

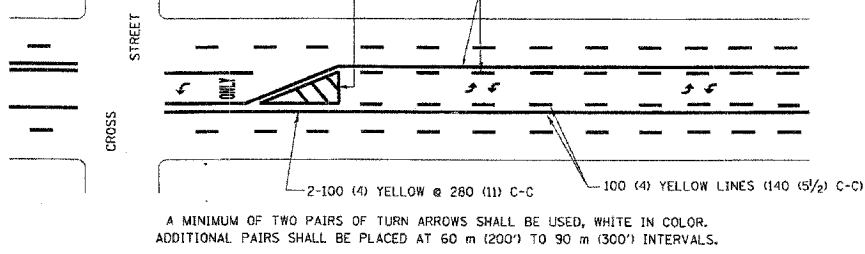
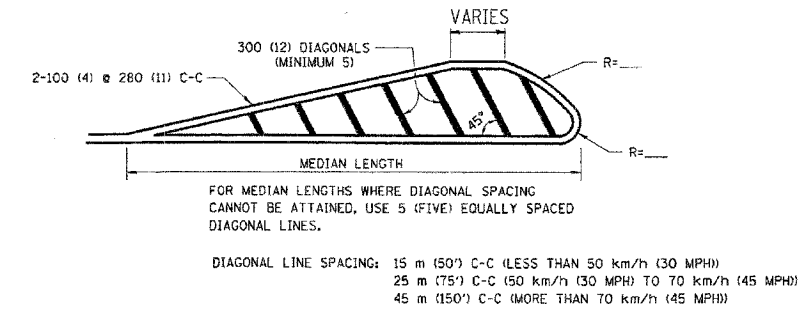
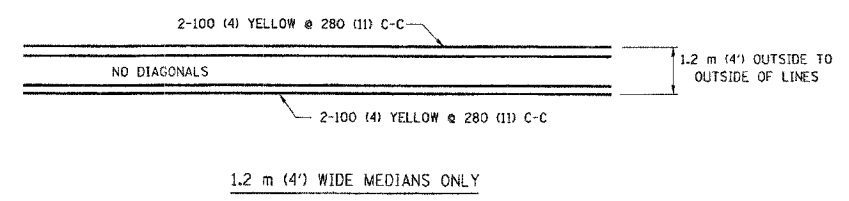


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

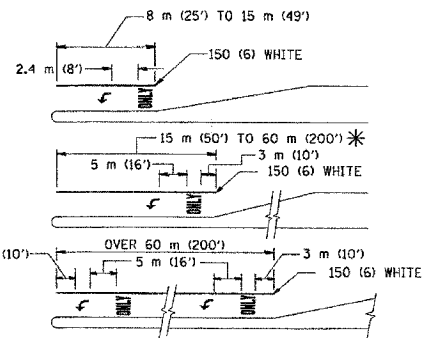
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



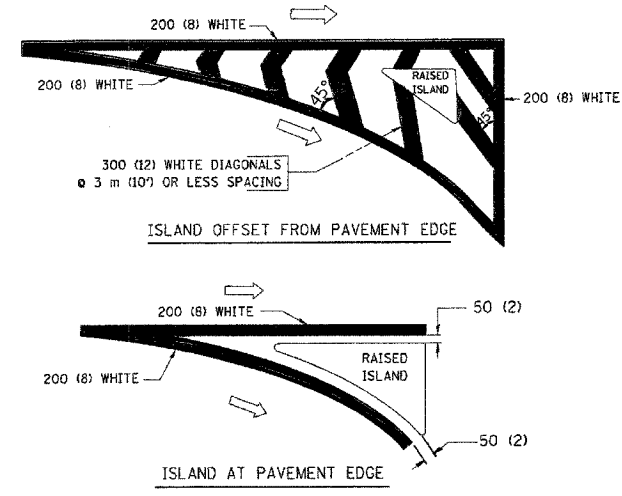
TYPICAL PAINTED MEDIAN MARKING



TYPICAL LEFT (OR RIGHT) TURN LANE

TURN LANES IN EXCESS OF 120 m (400') IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	100 (4) 2 @ 100 (4)	SOLID SOLID	YELLOW YELLOW	140 (5 1/2) C-C FROM SKIP-DASH CENTERLINE 280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	100 (4) 125 (5) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	3 m (10') LINE WITH 9 m (30') SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINES	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 100 (4) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH; 140 (5 1/2) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	2.4 m (8') LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 150 (6) 300 (12) @ 45° 300 (12) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 1.8 m (6') APART 600 (2') APART 600 (2') APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 100 (4) WITH 300 (12) DIAGONALS @ 45° NO DIAGONALS USED FOR 1.2 m (4') WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 9 m (30') C-C (OVER 70 km/h (45 MPH))
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" 15 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=0.33m ² (3.6 SQ. FT.) EACH "X"=5.0 m ² (54.0 SQ. FT.)
SHOULDER DIAGONALS	300 (12) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	15 m (50') C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 45 m (150') C-C (OVER 70 km/h (45 MPH))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in millimeters (inches) unless otherwise shown.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

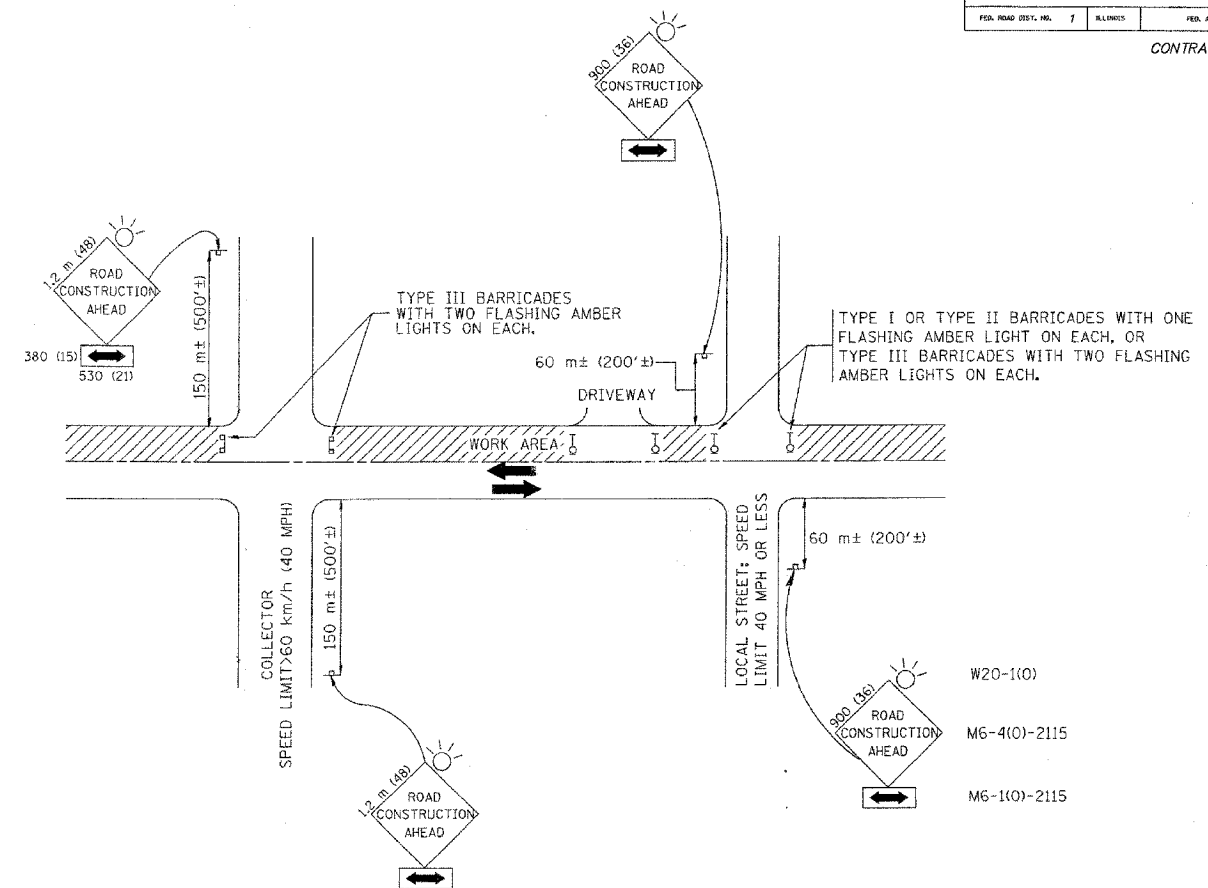
SCALE: NONE
DATE: 11/20/01

DRAWN BY: CADD
CHECKED BY:

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

F. & L. SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3782 01-00139-02-BR	WILL	35	29	
STA. TO STA.		FED. AID PROJECT		
FED. ROAD DIST. NO. 1		ILLINOIS		

CONTRACT # B3802



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE **ROAD CONSTRUCTION AHEAD** SIGN 900x900 (36x36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE **ROAD CONSTRUCTION AHEAD** SIGN 1.2 m x 1.2 m (48x48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (Inches) unless otherwise shown.

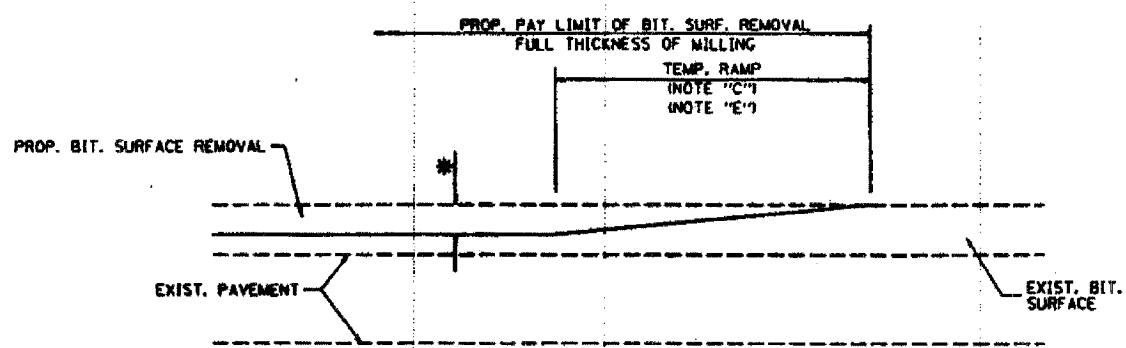
ILLINOIS DEPARTMENT OF TRANSPORTATION
 TRAFFIC CONTROL AND PROTECTION
 FOR
 SIDE ROADS, INTERSECTIONS, AND
 DRIVEWAYS

REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

SCALE: NONE
 DATE: 11/20/01
 DRAWN BY
 CHECKED BY

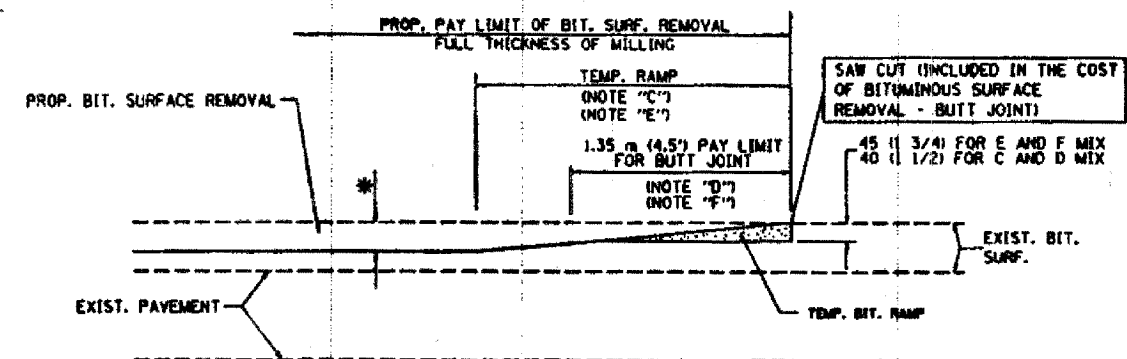
SECTION	COUNTY	SHEET	TOTAL
3762 01-00139-02-BR	WILL	35	30
SHEET NO. 1		TOTAL SHEETS	

CONTRACT # 83802



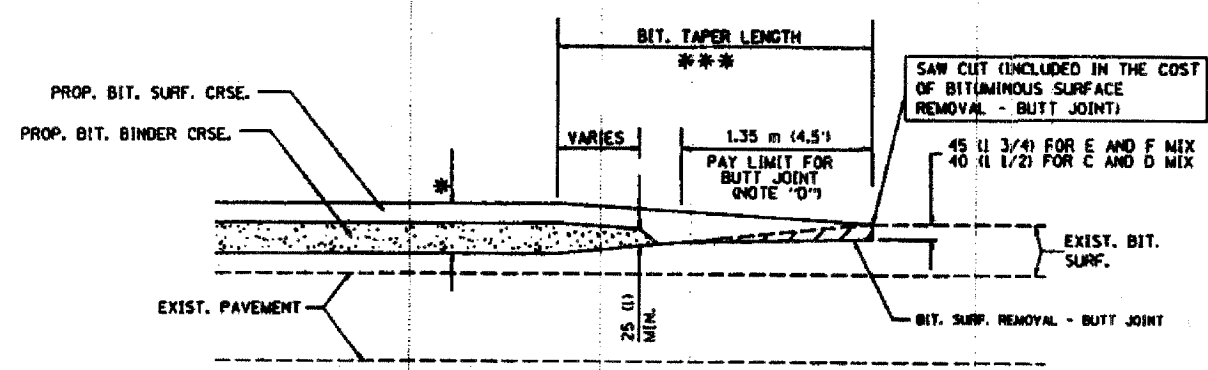
MILLED TEMPORARY RAMP
(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

OPTION 1

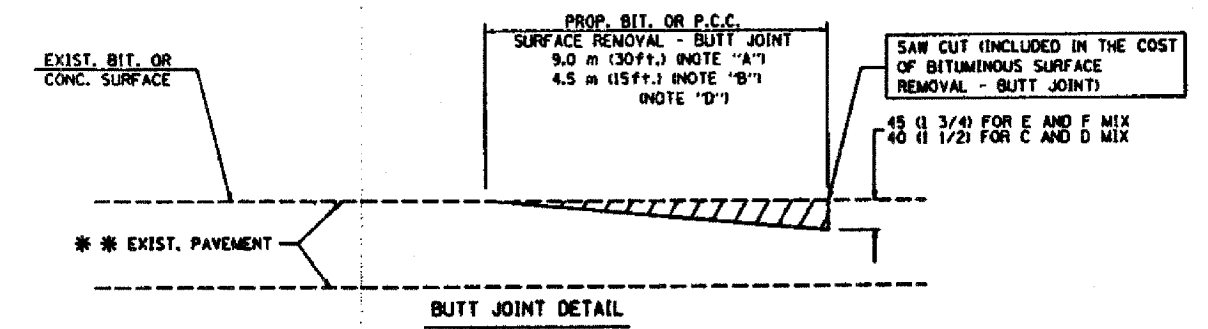


BITUMINOUS CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

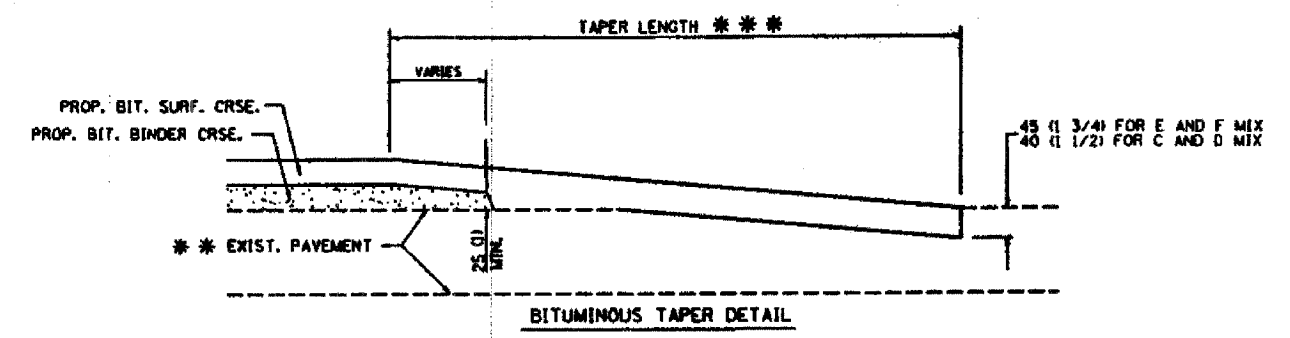
OPTION 2
TYPICAL TEMPORARY RAMP



BUTT JOINT AND BITUMINOUS TAPER
TYPICAL BUTT JOINT AND BITUMINOUS TAPER
FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



BITUMINOUS TAPER DETAIL

TYPICAL BUTT JOINT AND BITUMINOUS TAPER
FOR RESURFACING ONLY

** PC CONCRETE, BITUMINOUS OR BITUMINOUS RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING BITUMINOUS SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED BITUMINOUS COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 900 (3 ft.) PER INCH OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 1.35 m (4.5') TEMP. BIT. RAMP WILL BE PAID AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT".
- G: SEE ARTICLE 406.18 AND 406.24 OF THE STANDARD SPECIFICATIONS FOR "BITUMINOUS AND PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 6.1 m (20') PER 25 (1) RESURFACING (NOTE "A")
3.0 m (10') PER 25 (1) RESURFACING (NOTE "B")

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

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR PER SQUARE METER (SQUARE YARD.) AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT" OR AS "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

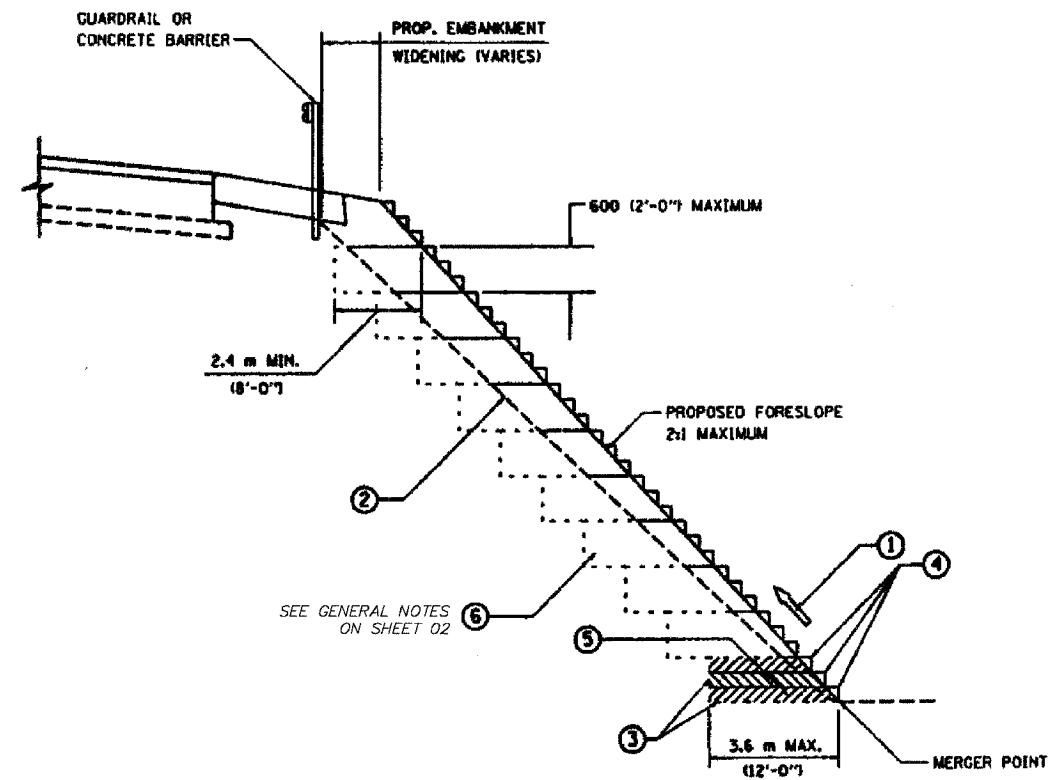
REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SMITH	09/02/94
R. SMITH	10/25/94
A. ARBAS	03/21/97
M. GOMEZ	04/06/01

ILLINOIS DEPARTMENT OF TRANSPORTATION
BUTT JOINT AND BITUMINOUS TAPER
DETAILS

SCALE: NONE
DATE PLOTTED: 10/16/2002
DRAWN BY
CHECKED BY

S. & C. NO.	SECTION	QUANTITY	TOTAL QUANTITY	PAGE NO.
3762	01-00139-02-BR	WILL	35	31
STA.		TO STA.		
NO. FOR QTY. NO. 1		QUANTITY	NO. FOR QUANTITY	

CONTRACT # 83802



**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.04 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 200 (8-INCH) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.06 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION (SPECIAL)". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

**BENCHING DETAIL
FOR EMBANKMENT
WIDENING**

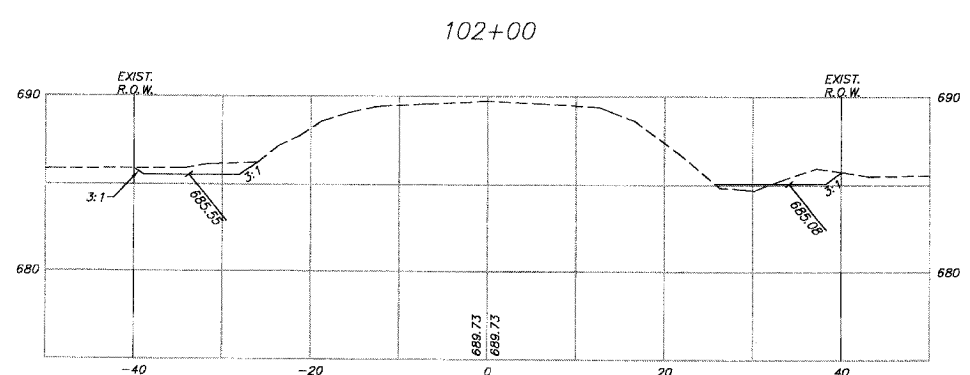
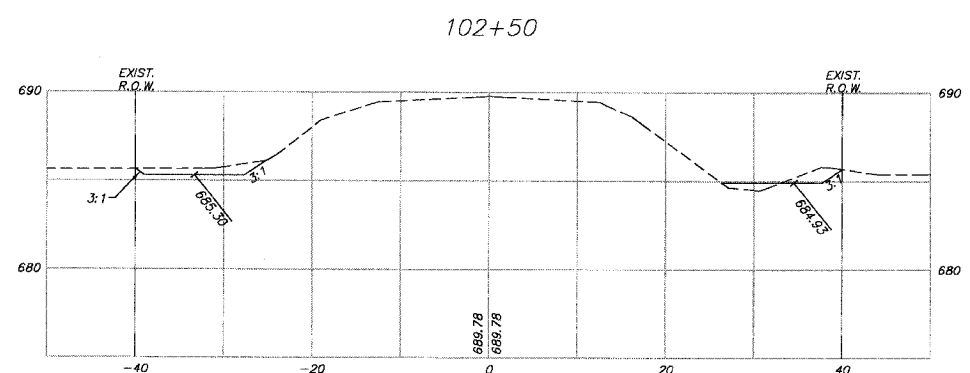
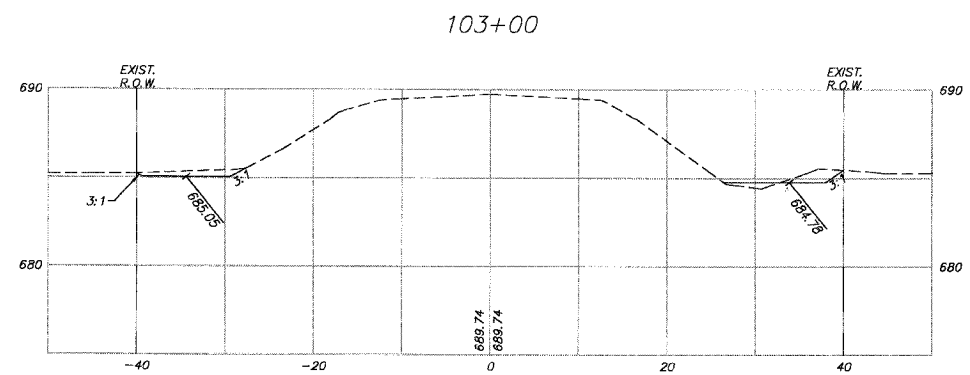
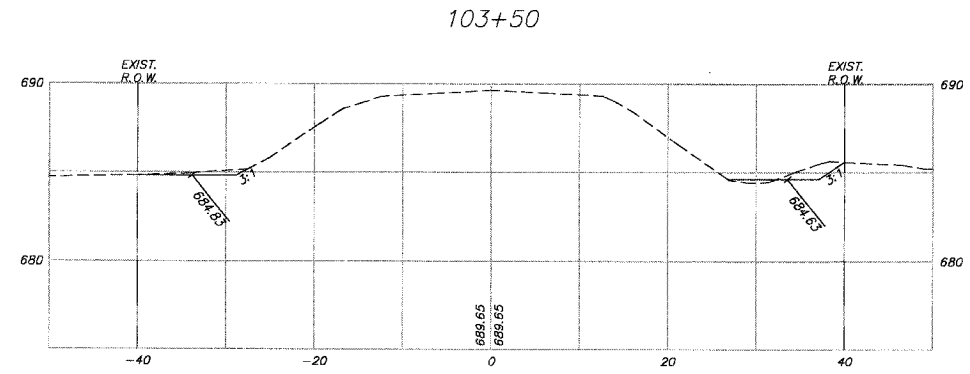
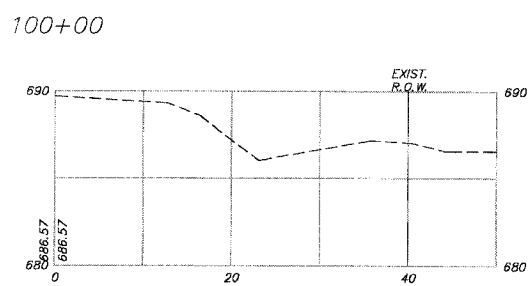
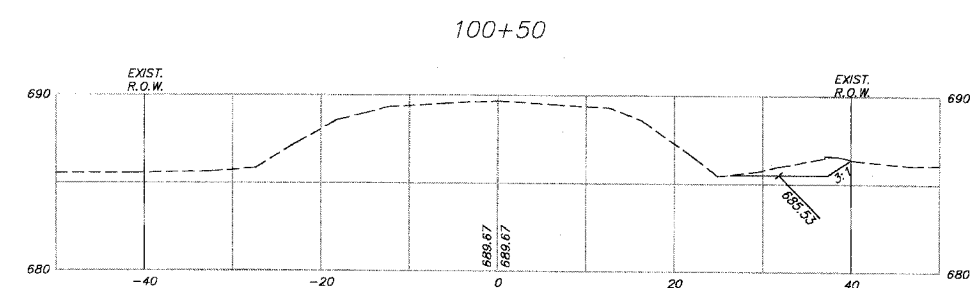
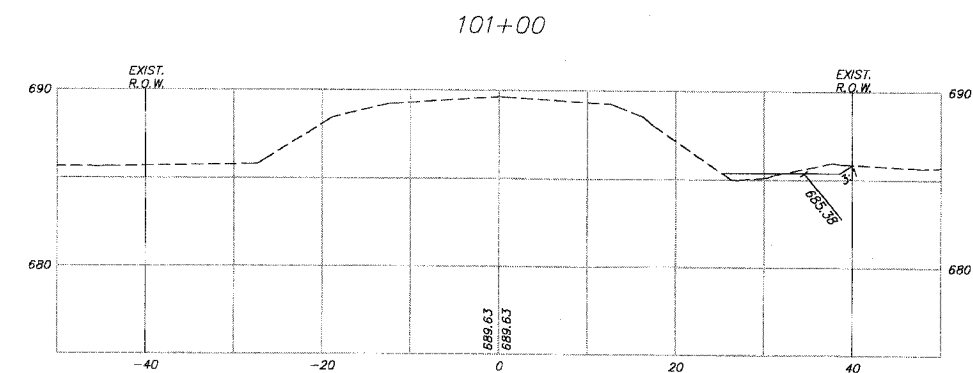
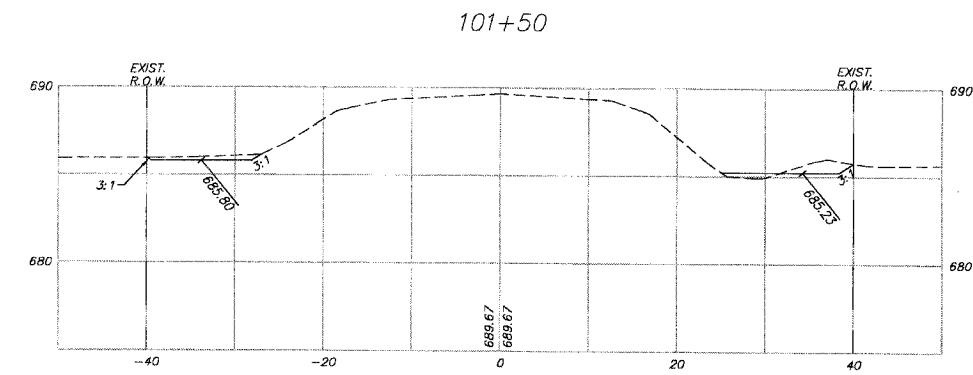
REVISIONS	
NAME	DATE

SCALE: NONE
DATE: 10/18/2002

DRAWN BY: CADD
CHECKED BY: S.E.B.
BO-51

REVISION DATE:

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	32
STA.	100+00	TO STA.	103+50	
FED. ROAD DIST. NO. 1		ILLINOIS HIGHWAY PROJECT		
CONTRACT # 83802				



LOCATION STA TO STA	REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL (CU YD)	EARTH EXCAVATION (CUT) (CU YD)	EXCAVATION TO BE USED IN EMBANKMENT (ADJ FOR SHRINKAGE) (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)
100+00 100+50	13	0	0	0	0
100+50 101+00	22	0	0	0	0
101+00 101+50	27	0	0	0	0
101+50 102+00	41	0	0	0	0
102+00 102+50	43	0	0	0	0
102+50 103+00	38	0	0	0	0
103+00 103+50	39	0	0	0	0
103+50 104+00	35	0	0	0	0
104+00 104+37	23	0	0	0	0
104+37 104+50	8	0	0	18	-18
104+50 104+65	11	0	0	21	-21
104+65 105+00	26	0	0	8	-5
105+00 105+37	36	0	0	16	-18
105+37 105+50	24	0	0	28	-28
105+50 105+83	25	0	0	26	-26
105+83 106+00	80	0	0	38	-38
106+00 106+50	153	0	0	62	-62
106+50 106+57	17	0	0	5	-5
106+57 106+80	38	0	0	1	-1
106+80 107+00	1	0	0	0	0
107+00 107+24	0	0	0	0	0
107+24 107+50	72	0	0	12	-12
107+50 108+00	70	0	0	47	-47
108+00 108+50	61	0	0	44	-44
108+50 109+00	48	0	0	36	-30
109+00 109+50	28	0	0	10	-10
109+50 110+00	19	0	0	0	0
110+00 110+50	19	0	0	0	0
110+50 111+00	21	0	0	0	0
111+00 111+50	25	0	0	0	0
111+50 112+00	27	0	0	0	0
112+00 112+50	35	0	0	0	0
112+50 113+00	28	0	0	0	0
113+00 113+48.50	7	0	0	0	0
TOTALS	1,156	0	0	362	-362

PAY ITEM	TOTAL (CY)
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FURNISHED EXCAVATION	1,156
	-362

REVISIONS	
NAME	DATE
7.	
6.	
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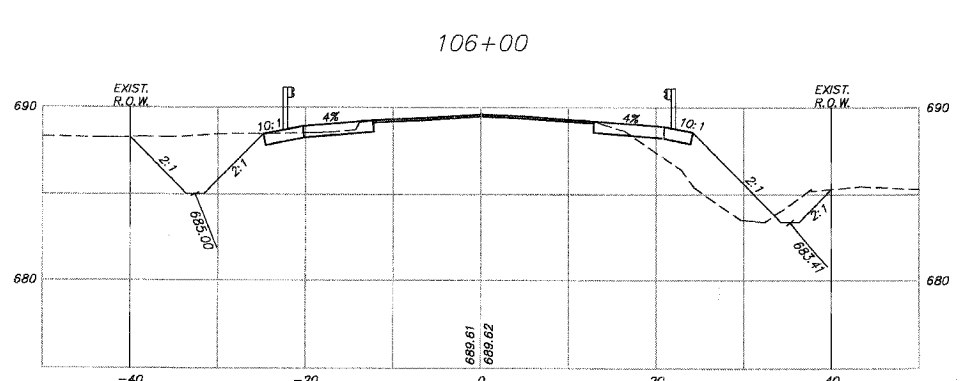
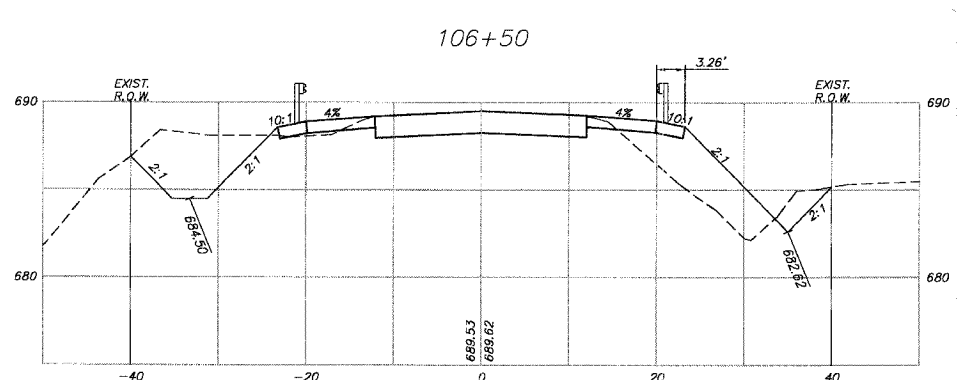
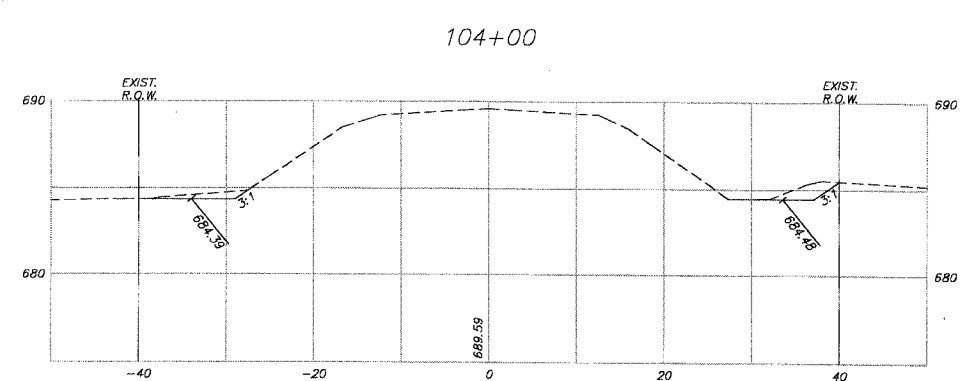
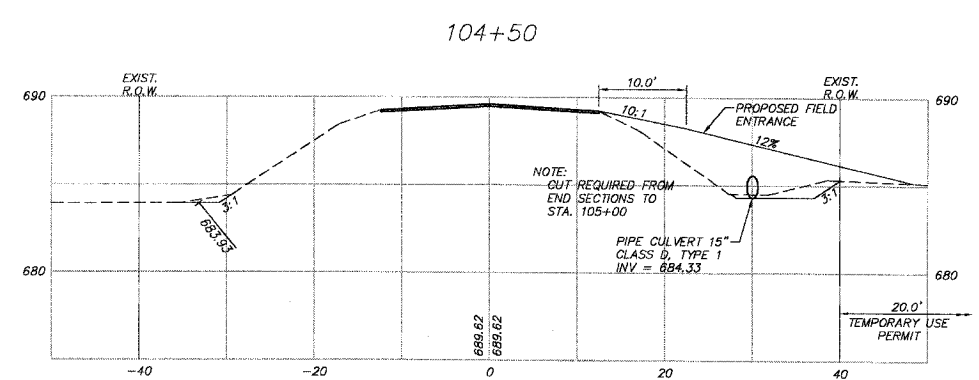
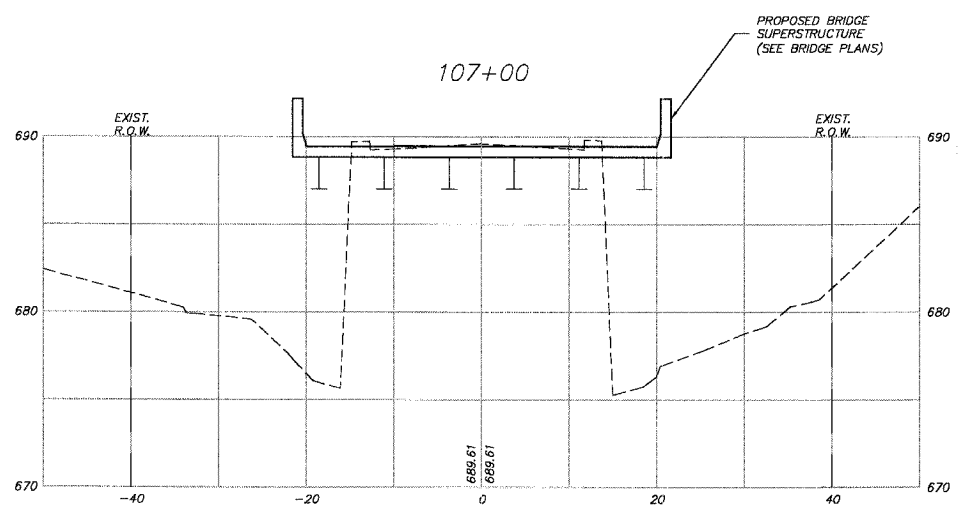
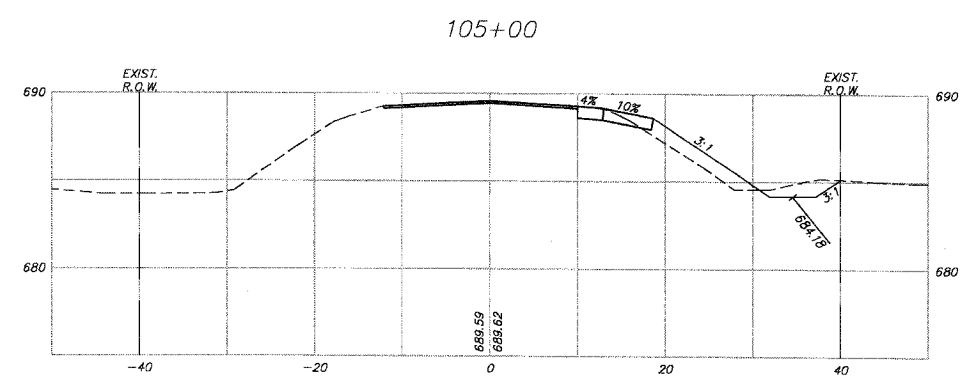
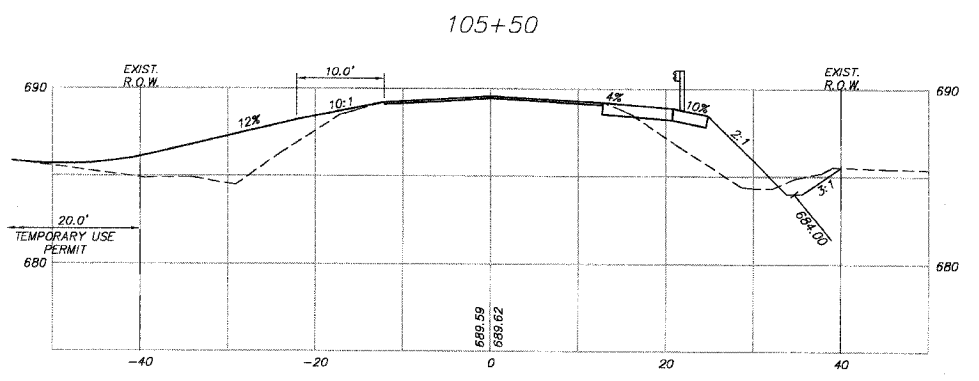
SMITH ENGINEERING CONSULTANTS, INC.
 CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
 4900 PRIME PARKWAY, SUITE 201
 MARIETTA, ILLINOIS 61459
 PH: 815-385-1778 FAX: 815-385-1781
 www.smithengineering.com E-MAIL: seo@smithengineering.com
 *McHENRY *STURBEY *TROYVILLE
 ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 CROSS SECTIONS

SCALE: 1"=10' H, 1"=5' V
 DATE 5-26-2005
 DRAWN BY WJH
 CHECKED BY JLP

PLOT FILE: STANDARD
 VIEW: CE-3D
 COMP. FILE: D:\0139-02\100.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	33
STA.	104+00	TO STA.	107+00	
FED. ROAD DIST. NO. 1	ILLINOIS HIGHWAY PROJECT		CONTRACT # 83802	



PLOT FILE: STANDARD
 VIEW: CE-25
 COMP. FILE: D:\0139-02\33.dwg

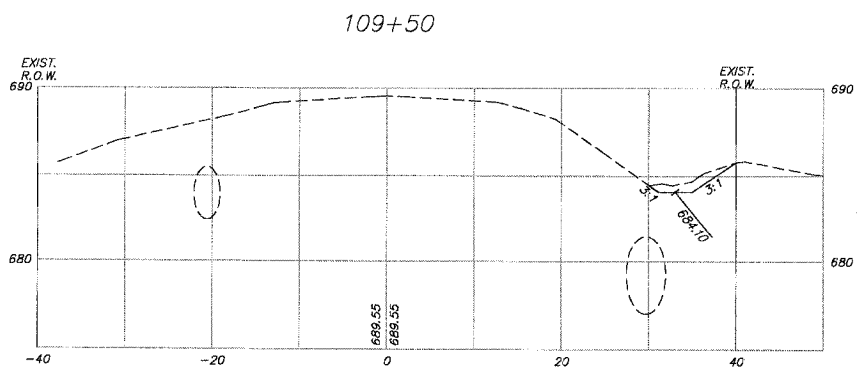
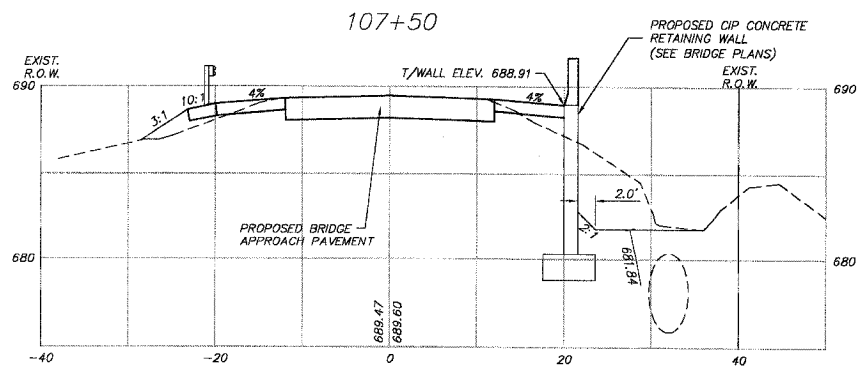
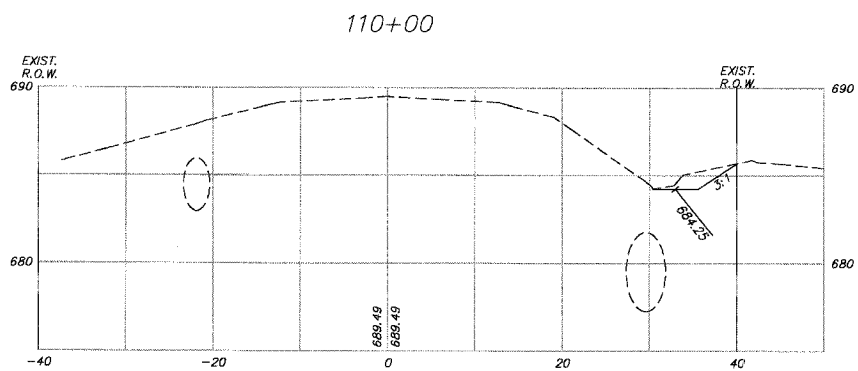
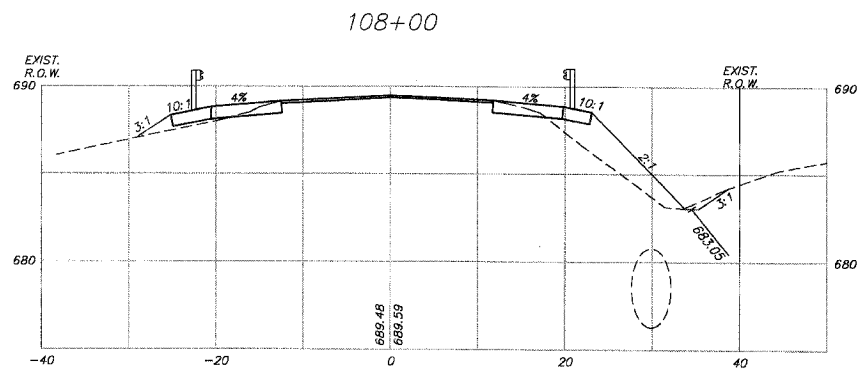
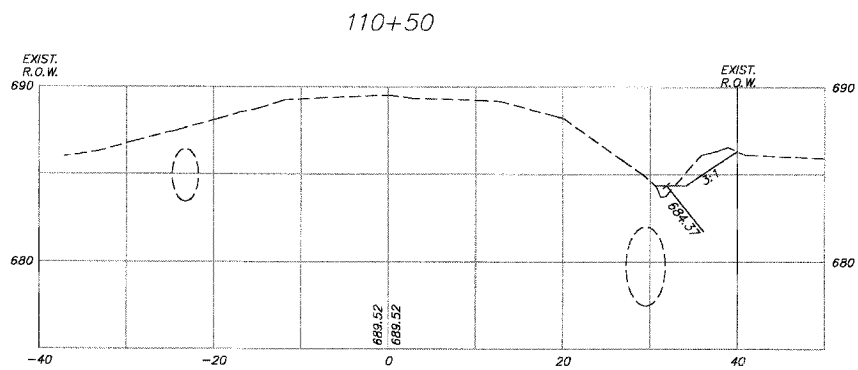
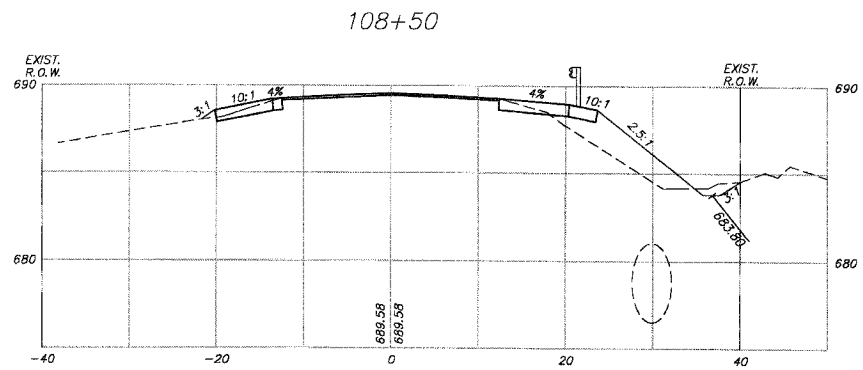
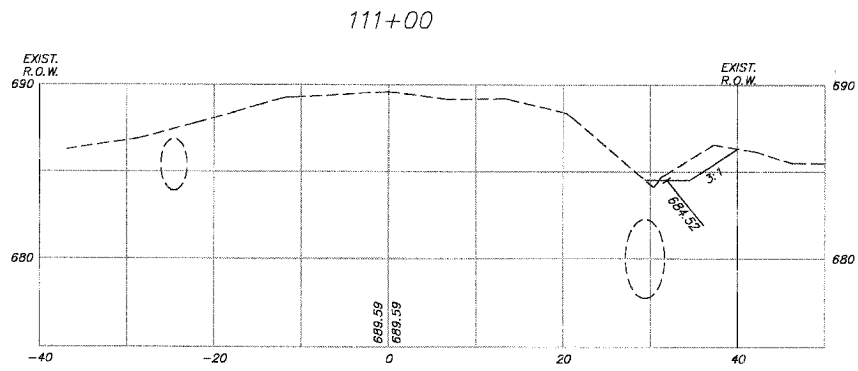
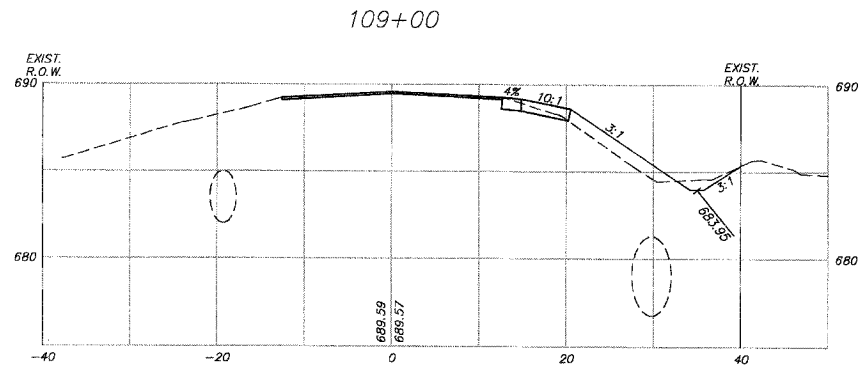
REVISIONS	
NO.	DATE
7.	
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SMITH ENGINEERING CONSULTANTS, INC.
 CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
 4000 PRIME PARKWAY, SUITE 501
 MCHENRY, ILLINOIS 60050
 TEL: 815-385-1778 FAX: 815-385-1781
 www.smithengineering.com E-MAIL: se@smithengineering.com
 MCHENRY HUNTLEY YORKVILLE
 ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 CROSS SECTIONS

SCALE: 1"=10' H, 1"=5' V
 DATE 5-26-2005
 DRAWN BY WJH
 CHECKED BY JLP

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WLL	35	34
STA.	107+50	TO STA.	111+00	
FED. ROAD DIST. NO. 1	ILLINOIS HIGHWAY PROJECT		CONTRACT # 83802	



REVISIONS	
NO.	DATE
7.	
6.	
5.	
4.	
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1.	

SMITH ENGINEERING CONSULTANTS, INC.
 CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
 4000 PRIME PARKWAY, SUITE 201
 McHENRY, ILLINOIS 60050
 PH: 815-385-1778 FAX: 815-385-1781
 www.smithengineering.com E-MAIL: see@smithengineering.com
 McHENRY HUNTLEY YORKVILLE
 ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

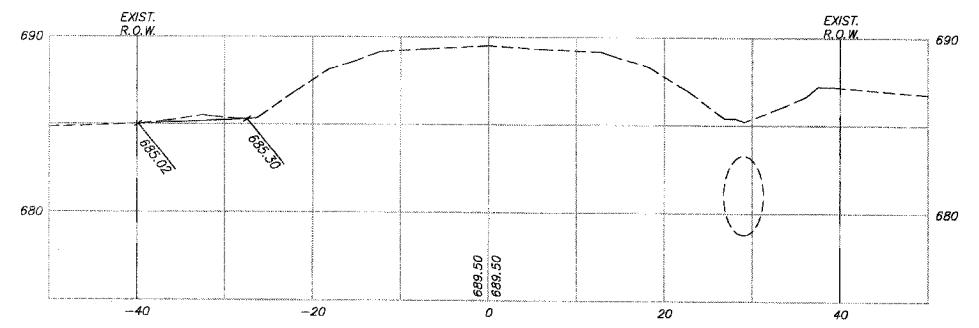
ILLINOIS DEPARTMENT OF TRANSPORTATION
 WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 CROSS SECTIONS

SCALE: 1"=10' H, 1"=5' V
 DATE 5-26-2005
 DRAWN BY WJH
 CHECKED BY JLP

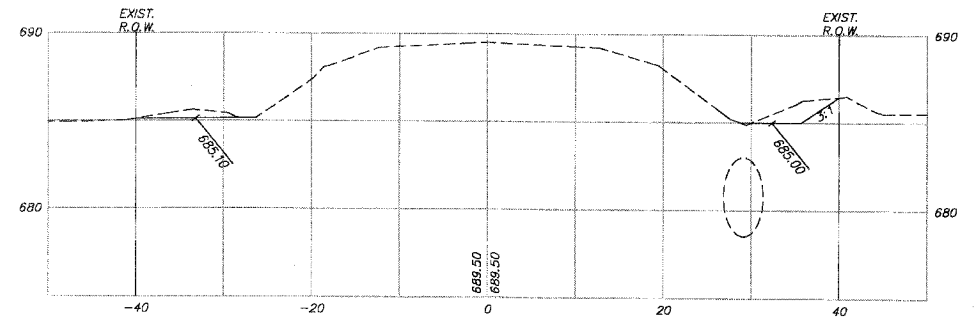
PLT FILE: STANDARD
 VIEW: C1-34
 COMP: FILE: D40159-603.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3762	01-00139-02-BR	WILL	35	35
STA.	111+50	TO STA.	113+46.50	
FED. ROAD DIST. NO. 1		ILLINOIS HIGHWAY PROJECT		
CONTRACT # 83802				

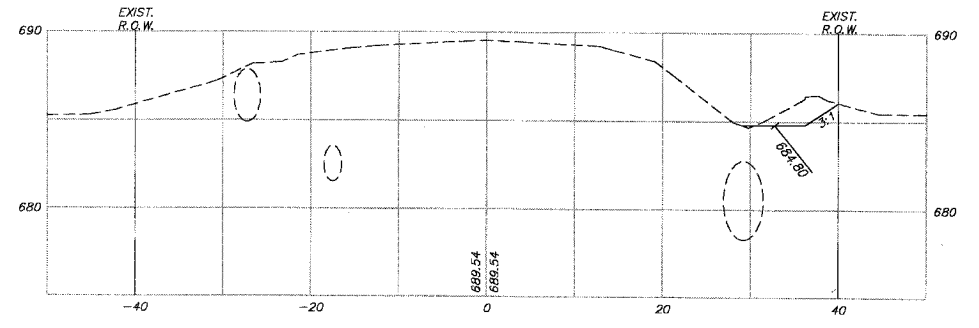
113+00



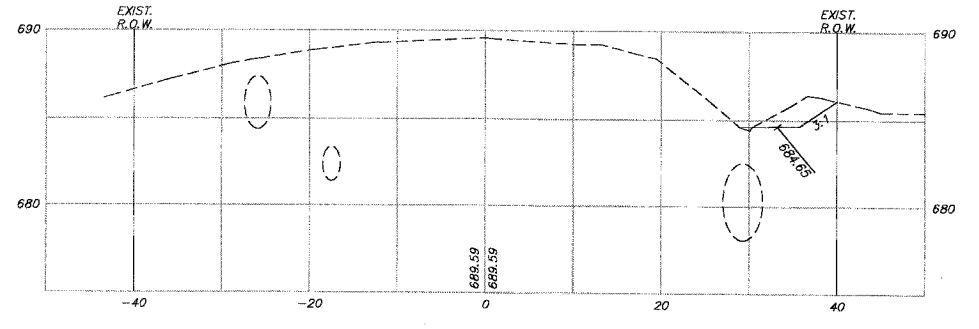
112+50



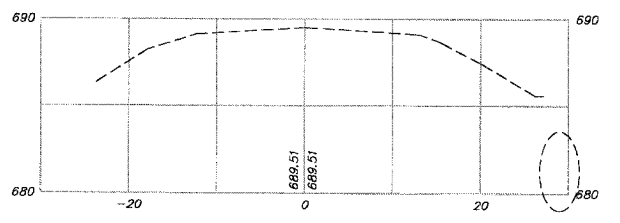
112+00



111+50



113+46.50



PLOT FILE STANDARD
COMP. FILE: 060109-803.dwg

REVISIONS	
NAME	DATE
7.	
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5.	
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3.	
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1.	

SMITH ENGINEERING CONSULTANTS, INC.
 CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
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 PH: 618-305-1776 FAX: 618-305-1781
 www.smithengineering.com E-MAIL: seo@smithengineering.com
 *MORNING *MIDNIGHT *EVENING *WEEKEND
 ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WILL COUNTY DEPARTMENT OF HIGHWAYS
 HARLEM AVENUE/DRECKSLER ROAD
 OVER BLACK WALNUT CREEK
 CROSS SECTIONS

SCALE: 1"=10' H, 1"=5' V
 DATE 5-26-2005
 DRAWN BY WJH
 CHECKED BY JLP