ROUTE	STATE	DISTRICT
59	MO	1

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

R/W PROJECT NO J1S0606 RW

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

HOLT COUNTY

DESIGN DESIGNATION

A.D.T. - 2003 = 2000
A.D.T. - 2023 = 3100
D.H.V.= 9%
T = 8%
V = 50 mph

FUNCTIONAL CLASSIFICATION = MAJOR COLLECTOR

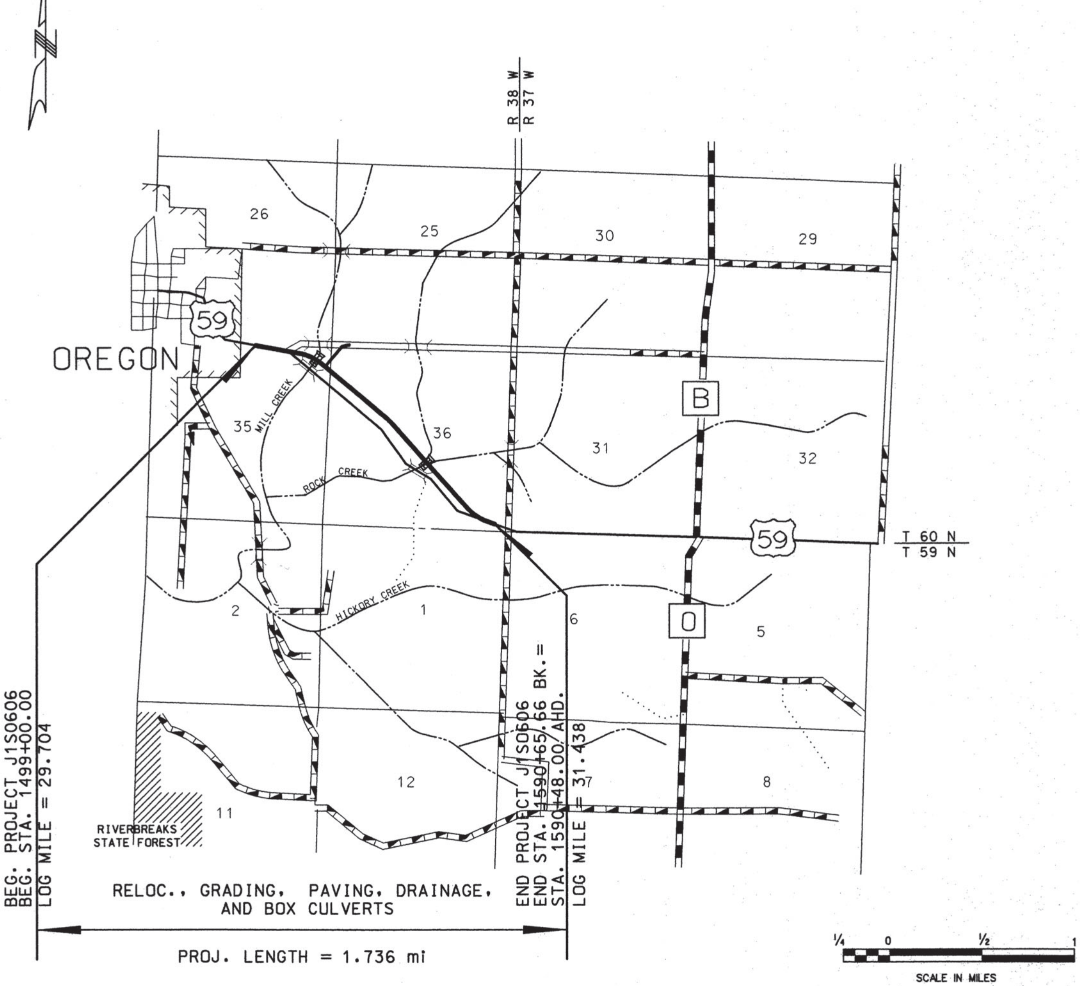
NORMAL RIGHT OF WAY

CONVENTIONAL SYMBOLS

(USED IN PLANS)

BUILDINGS AND STRUCTURES
GUARD RAIL
CONCRETE RIGHT-OF-WAY MARKER
STEEL RIGHT-OF-WAY MARKER
FENCE
CHAIN LINK
WOVEN WIRE
GATE
UTILITIES
TELEPHONE — T —
POWER — O —
GAS — G —
WATER — W —
EXIST. MANHOLE MH
EXIST. FIRE HYDRANT HYD
EXIST. WATER VALVE WV
EXIST. WATER METER WM
EXIST. DROP INLET DI
DITCH BLOCK
EXIST. GROUND MOUNTED SIGN
EXIST. LIGHT POLE
EXIST. H-FRAME POWER POLE

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES



INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (3 SHEETS)	2
SUMMARY (2 SHEET)	2-A
SUMMARY (8 SHEETS)	2-B
PLAN-PROFILE	3-7
REFERENCE POINTS	-
COORDINATE POINTS	8
SPECIAL SHEETS	9-25
TRAFFIC CONTROL SHEETS	26-27
EROSION CONTROL	28-32
LIGHTING	-
SIGNALS	-
SIGNING	-
CULVERT SECTIONS	33-35
BRIDGE DRAWINGS	B1-B12
STANDARD PLANS INDEX	36
CROSS SECTIONS	1-167
COMPUTER DATA	-

LENGTH OF PROJECT

END OF PROJECT	STA.	1590+65.66
BEGINNING OF PROJECT	STA.	1499+00.00
APPARENT LENGTH		9165.66 FEET
EQUATIONS AND EXCEPTIONS		
TOTAL CORRECTIONS		0.00 FEET
NET LENGTH OF PROJECT		9165.66 FEET
STATE LENGTH		1.736 MILES
FEDERAL LENGTH		1.736 MILES

STATE OF MISSOURI SHANNON D. KUSILEK NUMBER E-2000150032 REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001

t:\de-proj\Holt\j1s0606\plan_sheets\1000_m\001_000_ttl_j1s0606_f.dgn 10:19:28 AM 12/18/2001

Contract I.D. 020315-111

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2

JOB NO. J1S0606

PROJECT NO.

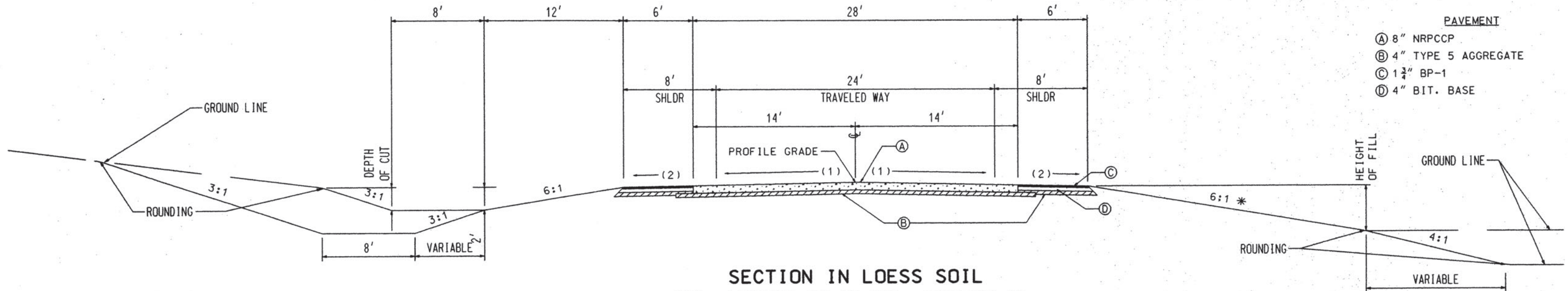
COUNTY HOLT

STATE OF MISSOURI SHANNON D. KUSILEK NUMBER E-2000150032 REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001

CROSS SLOPE
(1) 2.0%
(2) 2.0%

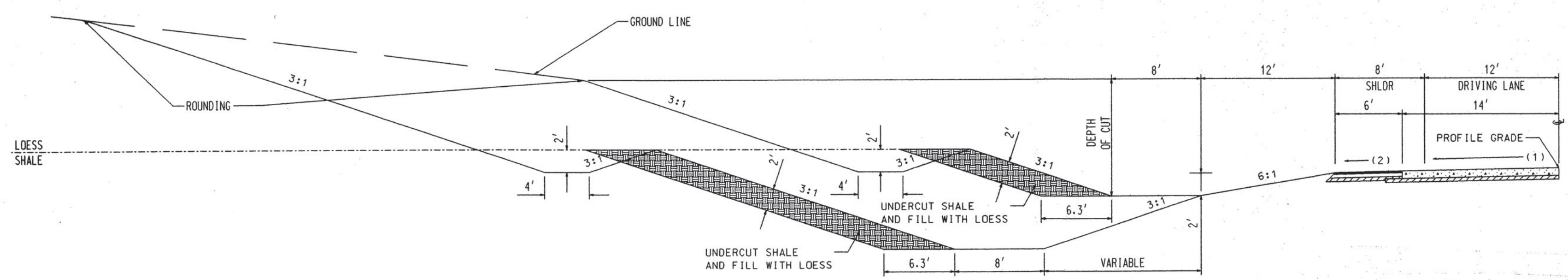
PAVEMENT
(A) 8" NRPCCP
(B) 4" TYPE 5 AGGREGATE
(C) $1\frac{3}{4}$" BP-1
(D) 4" BIT. BASE



SECTION IN LOESS SOIL
STA. 1499+00.00 TO STA. 1519+50.00
STA. 1527+50.00 TO STA. 1568+00.00
STA. 1574+50.00 TO STA. 1590+65.66

NOTE: THE DESIGN GUIDE FOR THE WIDTH OF RIGHT OF WAY FOR THIS PROJECT WILL BE 120 FEET. MORE OR LESS RIGHT OF WAY MAY BE SECURED TO SATISFY REQUIREMENTS OF THE DESIGN FEATURES OF THIS HIGHWAY.

* THE DISTANCE FROM TOE OF FILL TO THE SHOULDER POINT SHALL BE A MINIMUM OF 24 FEET. THE SLOPE MAY VARY TO MEET THIS REQUIREMENT. BUT SHALL NOT EXCEED THE MAXIMUM SLOPE DETERMINED BY THE SOIL SURVEY



	Aggregate	Binder
BP-1	1.860	0.104
Bit. Base	1.882	0.099

CUT SECTION IN LOESS - SHALE SOIL
STA. 1519+50.00 TO STA. 1527+50.00
STA. 1568+00.00 TO STA. 1574+50.00

TYPICAL SECTION SHEET
ROUTE 59

SHEET 1 OF 3

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\5_e\002_001typ_j1s0606_f.dgn 02:22:12 PM 12/06/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2

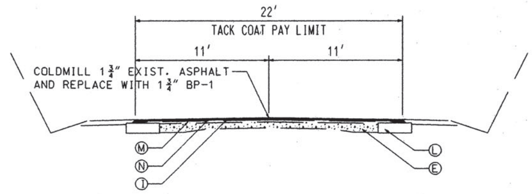
JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001



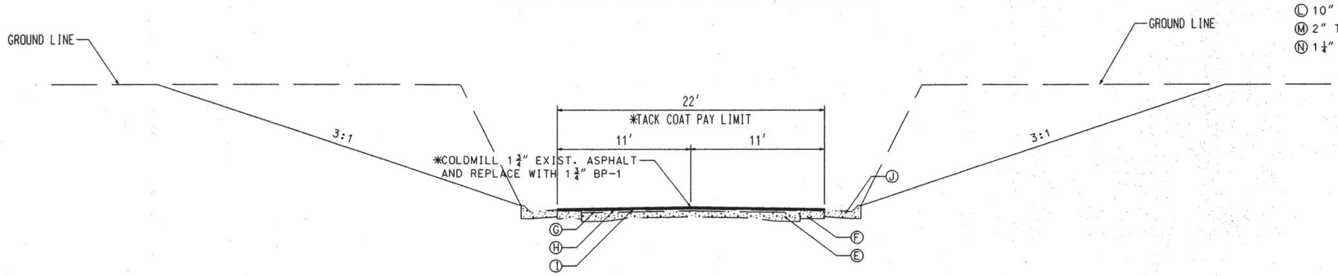
COLMILLING AND RESURFACING SECTION

EXISTING ROUTE 59

STA. 1590+48.00 TO STA. 1592+23.00

EXISTING PAVEMENT

- Ⓔ 6" TO 9" x 18' PCCP
- Ⓕ 8" x 2' CONC. WIDENING
- Ⓖ 2" x 18' TYPE B ASPH. CONC.
- Ⓗ 1¼" x 22' TYPE C ASPH. CONC.
- Ⓘ 1" x 22' LEVELING COURSE
- Ⓙ TYPE A CURB & GUTTER
- Ⓛ 10" x 2'-9" TYPE B ASPH. CONC. BASE WIDENING
- Ⓜ 2" TYPE B ASPH. CONC.
- Ⓝ 1¼" TYPE C ASPH. CONC.

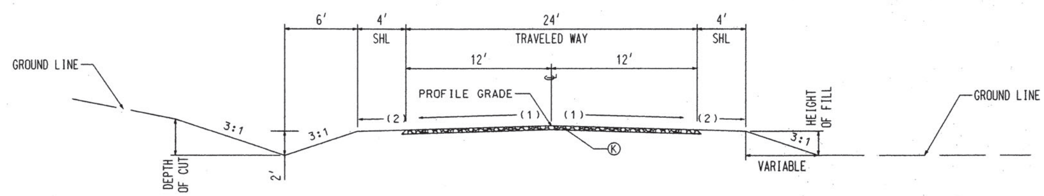


CUT SECTION IN EXISTING CURBED SECTION
*COLDMILLING AND RESURFACING IN EXISTING CURBED SECTION

EXISTING ROUTE 59

STA. 1495+60.00 TO STA. 1499+00.00

*STA. 1497+25.00 TO STA. 1499+00.00



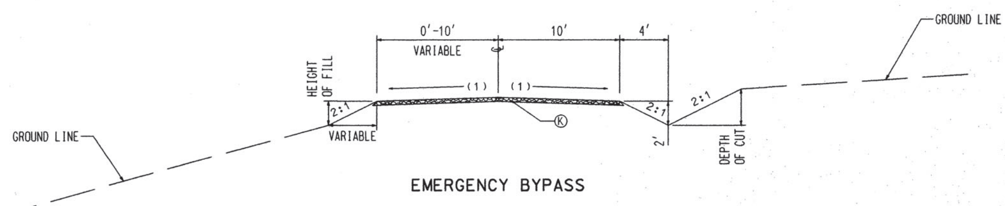
CO. RD. 369

STA. 3+97.91 TO STA. 9+80.13

CROSS SLOPE

(1) 3.12%

(2) 3.12%



EMERGENCY BYPASS

PAVEMENT

Ⓚ 4" GRAVEL A OR CRUSHED STONE B

TYPICAL SECTION SHEET

EXISTING ROUTE 59

CO. RD. 369

EMERGENCY BYPASS

SHEET 2 OF 3

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\5_e\002_002typ_j1s0606_f.dgn 01:44:22 PM 12/06/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2

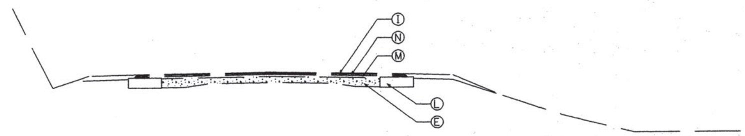
JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001



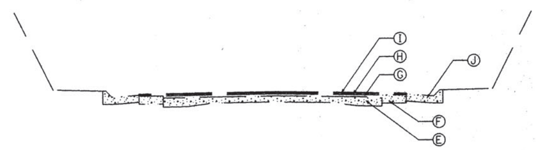
SECTION ON TANGENT

EXISTING ROUTE 59

STA. 1501+72.00 TO STA. EQ. 1517+31.82 BK.=
STA. 1517+34.14 AHD. TO STA. 1545+67.00
STA. 1557+01.00 TO STA. 1566+75.00
STA. 1579+66.00 TO STA. 1595+00.00

EXISTING PAVEMENT

E 6" TO 9" x 18' PCCP
L 10" x 2'-9" TYPE B ASPH. CONC. BASE WIDENING
M 2" TYPE B ASPH. CONC.
N 1¼" TYPE C ASPH. CONC.
I 1" x 22' LEVELING COURSE



SECTION ON TANGENT

EXISTING ROUTE 59

STA. 1494+00.00 TO STA. 1501+72.00
STA. 1545+67.00 TO STA. 1557+01.00
STA. 1566+75.00 TO STA. 1579+66.00

EXISTING PAVEMENT

E 6" TO 9" x 18' PCCP
F 8" x 2' CONC. WIDENING
G 2" x 18' TYPE B ASPH. CONC.
H 1¼" x 22' TYPE C ASPH. CONC.
I 1" x 22' LEVELING COURSE
J TYPE A CURB & GUTTER

TYPICAL SECTION SHEET

EXISTING ROUTE 59

SHEET 3 OF 3

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\5_e\002_003typ_j1s0606_f.dgn 01:44:19 PM 12/06/2001

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
SUMMARY OF QUANTITIES

REV. APRIL 99

SHEET 1 OF 2

STATE	JOB NO. J1S0606	SHEET NO.
MO		2A
DISTRICT	PROJECT NO.	ROUTE
01	COUNTY HOLT	59

ITEM	DESCRIPTION	UNIT	QUANTITY
*	ROADWAY - J1S0607		
105-10.00	CONSTRUCTION SURVEYING	LS	1
201-31.00	CLEARING AND GRUBBING	LS	23
202-10.10	REMOVAL OF BRIDGE	EA	1
202-20.10	REMOVAL OF IMPROVEMENTS	LS	1
202-40.24	REMOVAL OF THERMAL SYSTEM INSULATION ACM (FRIABLE)	LF	32
202-40.70	REMOVAL OF FLOOR SHEETING ACM ON WOOD (FRIABLE)	SQFT	196
202-99.50	DEMOLITION AND REMOVAL OF BUILDINGS - PARCEL NO.	LS	1
	PARCEL 4 (J1S0606)		
202-99.50	DEMOLITION AND REMOVAL OF BUILDINGS - PARCEL NO.	LS	1
	PARCEL 7 (J1S0606)		
202-99.50	DEMOLITION AND REMOVAL OF BUILDINGS - PARCEL NO.	LS	1
	PARCEL 9 (J1S0606)		
203-10.00	CLASS A EXCAVATION	CUYD	769538
203-60.00	COMPACTING EMBANKMENT	CUYD	471897
203-70.75	COMPACTING IN CUT	STA	62
205-10.00	OVERHAUL (STATION)	STYD	1632132
206-30.00	CLASS 3 EXCAVATION	CUYD	509
207-20.00	LINEAR GRADING CLASS 2	STA	17
208-10.00	INTERCEPTION DITCH	100F	26
301-20.00	MINERAL AGGREGATE (BITUMINOUS BASE)PG64-22	TONS	68
301-49.88	ASPHALT BINDER BITUMINOUS BASE MIXTURE (4 IN. THICK)	SQYD	605.3
	PG 64-22		
301-49.89	MINERAL AGGREGATE BITUMINOUS BASE MIXTURE (4 IN. THICK)	SQYD	11507.6
	PG 64-22		
301-60.17	ASPHALT BINDER (BITUMINOUS BASE) PG 64-22	TONS	3.5
304-05.04	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	SQYD	44553
310-50.02	GRAVEL (A) OR CRUSHED STONE (B)	TONS	1929
401-11.10	ASPHALT BINDER (BITUMINOUS PAVEMENT) PG 64-22 (BP-1 MIX)	TONS	9.3
401-12.15	ASPHALT BINDER BITUMINOUS PAVT. MIX PG64-22	SQYD	641.4
	(BP-1 MIX)(1.75 IN. THICK)		
401-12.16	MINERAL AGGREGATE BITUMINOUS PAVEMENT MIXTURE PG64-22	SQYD	11471.6
	(BP-1 MIX)(1.75 IN. THICK)		
401-20.10	MINERAL AGGREGATE (BITUMINOUS PAVEMENT) PG64-22(BP-1 MIX)	TONS	165
407-10.05	TACK COAT	GAL	40
502-13.08	CONCRETE PAVEMENT (8 IN. NON-REINFORCED, 15 FT. JOINTS)	SQYD	28395.4
609-10.41	CONCRETE GUTTER TYPE A	LF	80
609-10.51	CURB AND GUTTER TYPE A	LF	27
609-60.20	FURNISHING TYPE 2 ROCK DITCH LINER	CUYD	3136
609-60.30A	FURNISHING TYPE 3 ROCK DITCH LINER	CUYD	2848
609-60.40A	FURNISHING TYPE 4 ROCK DITCH LINER	CUYD	1091
609-60.42	PLACING TYPE 2 ROCK DITCH LINER	CUYD	3136
609-60.43	PLACING TYPE 3 ROCK DITCH LINER	CUYD	2484
609-60.44	PLACING TYPE 4 ROCK DITCH LINER	CUYD	1091
609-60.50	BEDDING MATERIAL FOR ROCK DITCH LINER	CUYD	1599
609-70.00	ROCK LINING	CUYD	59
611-30.20	FURNISHING TYPE 2 ROCK BLANKET	CUYD	1119
611-30.40	PLACING TYPE 2 ROCK BLANKET	CUYD	1119
616-10.05	CONSTRUCTION SIGNS	SQFT	716
616-10.30	TYPE III MOVEABLE BARRICADE	EA	6
616-11.00	CHANGEABLE MESSAGE SIGN, SOLAR POWERED,	EA	1
	CONTRACTOR FURNISHED, COMMISSION RETAINED		
616-11.30	INSTALLING GIVE EM A BRAKE, 48 IN. X 48 IN. SIGN	EA	2

ITEM	DESCRIPTION	UNIT	QUANTITY
616-11.32	INSTALLING 'SHOW ME PROGRESS' SIGN ASSEMBLY	EA	2
618-10.00	MOBILIZATION	LS	1
620-99.17	MISC.	100F	12.3
	4 IN. INTER. YELLOW EPOXY MARKING PAINT		
620-99.17	MISC.	100F	190.3
	4 IN. SOLID WHITE EPOXY MARKING PAINT		
620-99.17	MISC.	100F	141.1
	4 IN. SOLID YELLOW EPOXY MARKING PAINT		
622-10.01	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING	SQYD	856
	(3 IN. THICK OR LESS)		
622-10.03	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING	SQYD	22356
	(GREATER THAN 3 IN. THICK)		
626-10.00	BITUMINOUS RUMBLE STRIP	100F	176.7
703-40.41	CLASS B-1 CONCRETE (CULVERTS)	CUYD	259.8
706-10.30	REINFORCING STEEL (CULVERTS)	LB	44300
725-03.18	18 IN. PIPE CULVERT GROUP B	LF	170
725-03.21	21 IN. PIPE CULVERT GROUP B	LF	210
725-03.24	24 IN. PIPE CULVERT GROUP B	LF	204
725-03.30	30 IN. PIPE CULVERT GROUP B	LF	36
725-03.36	36 IN. PIPE CULVERT GROUP B	LF	116
725-03.42	42 IN. PIPE CULVERT GROUP B	LF	366
725-03.60	60 IN. PIPE CULVERT GROUP B	LF	146
726-13.54	54 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LF	180
726-14.36	36 IN. CLASS IV REINFORCED CONCRETE PIPE CULVERT	LF	68
732-06.36	36 IN. PRECAST CONCRETE FLARED END SECTION	EA	1
732-06.54	54 IN. PRECAST CONCRETE FLARED END SECTION	EA	2
802-30.00	TYPE 3 MULCH	ACRE	68.2
802-99.19	MISC.	ACRE	1.2
	RIPARIAN TYPE I MULCH		
803-10.00	SODDING	SQYD	4109
805-10.00	SEEDING	ACRE	7.4
805-20.00	NATIVE PLANT SEEDING	ACRE	60.7
805-99.19	MISC.	ACRE	1.2
	RIPARIAN SEEDING		
806-10.11	SLOPE DRAINS	LF	32
806-10.15	SEDIMENT BASIN	CUYD	4207
806-10.16	SEDIMENT REMOVAL	CUYD	690
806-10.17	TEMPORARY SEEDING AND MULCHING	ACRE	17
806-10.19	SILT FENCE	LF	6316
806-10.21	TYPE I DITCH CHECK	EA	547
808-99.02	MISC.	EA	129
	RIPARIAN TREES		
*	BRIDGE - A6360		
202-10.20	REMOVAL OF BRIDGES	LS	1
206-30.00	CLASS 3 EXCAVATION	CUYD	1180
206-47.00	GRANULAR BACKFILL (CULVERTS-BRIDGE)	CUYD	410
703-40.40	CLASS B-1 CONCRETE (CULVERTS-BRIDGE)	CUYD	1162.8
706-10.20	REINFORCING STEEL (CULVERTS-BRIDGE)	LB	164050
*	BRIDGE - A6359		
202-10.20	REMOVAL OF BRIDGES	LS	1
206-30.00	CLASS 3 EXCAVATION	CUYD	680
206-47.00	GRANULAR BACKFILL (CULVERTS-BRIDGE)	CUYD	187
703-40.40	CLASS B-1 CONCRETE (CULVERTS-BRIDGE)	CUYD	468.9

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

REV. APRIL 99

STATE	JOB NO. J1S0606	SHEET NO.
MO		2A
DISTRICT	PROJECT NO.	ROUTE
01	COUNTY HOLT	59

ITEM	DESCRIPTION	UNIT	QUANTITY
706-10.20	REINFORCING STEEL (CULVERTS-BRIDGE)	LB	63350

ITEM	DESCRIPTION	UNIT	QUANTITY

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2B

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI SHANNON D. KUSTER NUMBER E-2000150032 REGISTERED PROFESSIONAL ENGINEER

DATE 1-28-2002

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITES

EARTHWORK

PLAN SHEET NO.	STATION	STATION	LOC.	CLASS A EXC. CU.YD.	COMP. EMBANK. CU.YD.	EXCESS EXC. CU.YD.	OVERHAUL STA. YD.	REMARKS
STAGE 1								
3	1506+00.00	1536+03.53	ROUTE 59	262575	195111		327937	INCLUDES EARTHWORK FOR MILL CREEK IMPROVEMENT
5	1536+03.53	1542+28.92	ROUTE 59	28669	21305			
5	1542+28.92	1546+10.61	ROUTE 59	10572	7855			
6	1546+10.61	1557+03.13	ROUTE 59	50844	37781			
6	1557+03.13	1573+29.73	ROUTE 59	52513	39020			INCLUDES EARTHWORK FOR ROCK CREEK TRIBUTARY AND ROCK CREEK CHANNEL IMPROVEMENTS
7	1573+29.73	1581+00.00	ROUTE 59	116595	281	116217		
4	3+97.91	9+80.13	CO. RD. 369	14093	1035	12700		
STAGE 2								
3	1495+60.00	1507+54.17	ROUTE 59	15431	11467			
3	1507+54.17	1509+50.00	ROUTE 59	0	2679		211969	OBTAIN 3605 FROM BAL. STA. 1580+50 TO STA. 1587+97.43
7	1580+50.00	1587+97.43	ROUTE 59	10565	5170			USE 3605 IN BAL. STA. 1507+54.17 TO STA. 1509+50
7	1587+97.43	1590+65.66	ROUTE 59	4670	30	4630		
STAGE 3								
5	1497+00.00	1578+50.08	ROUTE 59	192798	143263		1092226	INCLUDES EARTHWORK FOR DITCH AT 1541+39.24 RT. (SEE X-SECT. SHTS. 110 TO 114)
7	1578+50.08	1593+00.00	ROUTE 59	9289	6900			
			TOTALS	768614	471897	133547	1632132	
			ROUNDING	924				
			PAY TOTALS	769538	471897	133547	1632132	

COMPACTING IN CUT

STATION	STATION	LOC.	COMP. IN CUT STA.
1499+00.00	1506+00.17	ROUTE 59	7.00
1509+28.38	1509+41.15	ROUTE 59	0.13
1519+24.95	1538+99.91	ROUTE 59	19.75
1539+08.39	1539+39.07	ROUTE 59	0.31
1544+28.75	1551+48.75	ROUTE 59	7.20
1552+40.29	1552+89.62	ROUTE 59	0.49
1556+16.81	1557+66.55	ROUTE 59	1.50
1566+38.65	1580+82.49	ROUTE 59	14.44
1583+70.27	1590+65.66	ROUTE 59	6.95
3+97.91	4+25.00	CO. RD. 369	0.27
4+81.86	4+86.05	CO. RD. 369	0.04
5+40.65	9+31.05	CO. RD. 369	3.90
		TOTALS	61.98
		PAY TOTALS	62.00

LINEAR GRADING

STATION	STATION	LOC.	LINEAR GRADING CLASS 2 STA.	CLASS A EXC. CU.YD.	COMP. EMBANK. CU.YD.	INTER. DITCH 100 FT.	REMARKS
1519+29.18	1519+50.00	ROUTE 59 LT				0.2	4′ F.B.D.
1519+50.00	1523+50.00	ROUTE 59 LT.				4.2	4′ F.B.D.
1519+28.39	1519+50.00	ROUTE 59 LT.				0.2	8′ F.B.D.
1519+50.00	1523+50.00	ROUTE 59 LT.				4.5	8′ F.B.D. WITH LEVEE
1523+50.00	1524+08.91	ROUTE 59 LT.				1.3	8′ F.B.D.
1524+10.53	1527+50.00	ROUTE 59 LT.				3.5	4′ F.B.D.
1569+09.55	1574+50.00	ROUTE 59 LT.				5.5	4′ F.B.D.
1497+00.00	1504+00.00	ROUTE 59 RT.	7.09	2301.0	60.5		EMERGENCY BYPASS
1568+07.52	1570+00.00	ROUTE 59 RT.				2.1	4′ F.B.D.
1570+70.00	1571+00.00	ROUTE 50 RT.				0.3	4′ F.B.D.
1571+00.00	1574+50.00	ROUTE 59 RT.				3.6	4′ F.B.D.
1583+50.00	1590+65.66	ROUTE 59 RT.	7.30	1908.4	63.7		EMERGENCY BYPASS
1590+48.00	1593+00.00	ROUTE 59 RT.	2.58	356.5	25.0		EMERGENCY BYPASS
2+87.53	2+90.00	DRWY. 1512+02 RT.				0.5	8′ F.B.D.
		TOTALS	16.97	4565.9	149.2	25.9	
		PAY TOTALS	17.00			26.0	

R/W MARKERS

CONSTRUCTED BY OTHERS

56 MARKERS

CLEARING AND GRUBBING

LUMP SUM 1

MOBILIZATION

LUMP SUM 1

CONSTRUCTION SURVEYING

LUMP SUM 1

SHEET 1 OF 8

REV.

T:\de-proj\Holt\j1s0606\plan_sheets\1_e\002_0012b_j1s0606_f.dgn 03:50:44 PM 01/25/2002

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITES

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2B

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI SHANNON D. KUSILER NUMBER E-2000150032 REGISTERED PROFESSIONAL ENGINEER

DATE 12-31-2001

REMOVAL OF IMPROVEMENTS

PLAN SHEET NO.	STATION	STATION	LOC.	DESCRIPTION	REMARKS
EXIST. ROUTE 59					
3	1499+00.00	1517+31.82	CL	22' X 1831.82' PCCP	
5	1517+34.14	1590+48.00	CL	22' X 7313.86' PCCP	STA. EQ. 1517+31.82 BK. = STA. 1517+34.14 AHD.
NEW ROUTE 59					
3	1499+00.00	1501+90.00	12' LT.	289' TYPE A CONCRETE CURB & GUTTER	
3	1499+00.00	1501+82.00	12' RT.	284' TYPE A CONCRETE CURB & GUTTER	
3		1504+22.00	42' RT.	18" X 30' C.M.P.	DRIVEWAY
3, 15		1511+12.00	164' RT.	65' CONCRETE GUTTER	
3, 15		1512+02.00	146' RT.	24" X 46' GROUP B PIPE	STAGE 3
3		1513+27.00	149' RT.	16' X 16' BILLBOARD SIGN	"COUNTRY CORNER ONE STOP"
3		1513+83.00	222' RT.	24" X 19' C.M.P.	DRIVEWAY
3	1515+03.00	1516+56.00	249' RT.	170' CONCRETE GUTTER WITH OUTLET	
3		1516+11.00	250' RT.	50' CONCRETE SURFACE DRAIN BASIN	
3, 12		1516+22.00	211' RT.	16' TYPE A GUARDRAIL WITH 2 END SECTIONS	
3, 12		1516+30.00	216' RT.	50' CONCRETE SURFACE DRAIN BASIN	
3		1519+00.00	233' RT.	24" X 68' GROUP B PIPE	STAGE 3
4, 12		1517+15.00	178' RT.	5' X 20' CONCRETE BLOCK END BENT	
4		1517+41.00	259' RT.	60' CONCRETE SURFACE DRAIN BASIN	
4		1517+46.00	237' RT.	60' CONCRETE SURFACE DRAIN BASIN	
4		1517+56.00	235' RT.	16' TYPE A GUARDRAIL WITH 2 END SECTIONS	
5		1534+20.00	120' RT.	3' X 42' SIDEWALK	
5		1534+29.00	133' RT.	2' X 22' SIDEWALK	
5		1538+65.00	231' RT.	18" X 37' C.M.P.	DRIVEWAY
5		1539+17.00	227' RT.	21" X 44' GROUP B PIPE	STAGE 3
5		1539+82.00	266' RT.	18" X 30' C.M.P.	DRIVEWAY
5, 14		1542+22.00	236' RT.	5' X 3' X 73' BROKEN BACK R.C.B.	
5, 17		1546+44.00	4' RT.	WELL	PARCEL 7
5, 17	1546+92.00	1547+74.00	194' RT.	387' TYPE A CONCRETE CURB & GUTTER	
5, 17	1546+97.00	1547+45.00	225' RT.	407' TYPE A CONCRETE CURB & GUTTER	
5, 17		1547+50.00	39' RT.	18" X 38' GROUP B PIPE	STAGE 3
5, 17		1547+65.00	50' RT.	WELL	PARCEL 7
6	1547+72.00	1558+15.00	305' RT.	1057' TYPE A CONCRETE CURB & GUTTER	
6	1547+99.00	1555+49.00	233' RT.	768' TYPE A CONCRETE CURB & GUTTER	
6		1551+83.00	32' RT.	PUMP PIT	PARCEL 7
6		1559+10.00	404' RT.	18" X 58' C.M.P.	DRIVEWAY
6		1559+68.00	238' RT.	2' X 75' SIDEWALK	
6		1560+13.00	334' RT.	18" X 25' C.M.P.	DRIVEWAY
6		1560+08.00	86' RT.	21" X 66' GROUP B PIPE	STAGE 3
6, 13		1562+24.00	227' RT.	WELL	PARCEL 9
6, 13		1562+26.00	279' RT.	60' CONCRETE SURFACE DRAIN BASIN WITH OUTLET	
6		1562+39.00	309' RT.	60' CONCRETE SURFACE DRAIN BASIN	
6, 13		1563+57.00	236' RT.	60' CONCRETE SURFACE DRAIN BASIN	
6, 13		1563+69.00	267' RT.	60' CONCRETE SURFACE DRAIN BASIN	
6, 22	1566+88.00	1568+15.00	112' RT.	120' CONCRETE GUTTER	
6, 22		1566+94.00	144' RT.	5' X 3' X 51' R.C.B.	
6	1567+53.00	1568+73.00	140' RT.	155' TYPE A CONCRETE CURB & GUTTER	
6		1568+35.00	104' RT.	18" X 30' C.M.P.	DRIVEWAY
6	1568+59.00	1580+49.00	120' RT.	1189' TYPE A CONCRETE CURB & GUTTER	
6	1569+32.00	1580+54.00	143' RT.	1134' TYPE A CONCRETE CURB & GUTTER	
7		1579+10.00	203' RT.	19' CONCRETE STEPS	WIDTH VARIES FROM 4' TO 6.5'
7, 24		1580+96.00	155' RT.	18" X 40' C.M.P.	DRIVEWAY
7, 24		1581+39.00	143' RT.	18" X 30' C.M.P.	DRIVEWAY
7		1582+50.00	76' RT.	3' X 2' X 65' BROKEN BACK R.C.B.	
				LUMP SUM 1	

DEMOLITION AND REMOVAL OF BUILDINGS - PARCEL 4

PLAN SHEET NO.	STATION	LOC.	DESCRIPTION	SIZE	REMARKS
5	1533+75	184' RT.	CISTERN	17' X 10'	
5	1533+82	213' RT.	SHED	18' X 14'	CONCRETE ON GRADE
5	1533+85	237' RT.	GREEN HOUSE REMNANT	26' X 14'	CONCRETE ON GRADE
5	1534+04	156' RT.	2 STORY HOUSE WITH BASEMENT	44' X 36'	
5	1534+14	60' RT.	2 CAR GARAGE REMNANT	24' X 20'	CONCRETE ON GRADE
5	1534+59	33' RT.	BARN REMNANT	58' X 50'	
			LUMP SUM 1		

DEMOLITION AND REMOVAL OF BUILDINGS - PARCEL 7

PLAN SHEET NO.	STATION	LOC.	DESCRIPTION	SIZE	REMARKS
5, 17	1546+41	42' LT.	SHED REMNANT	60' X 17'	
5, 17	1546+72	CL	BARN	40' X 32'	
5, 17	1546+72	110' LT.	BARN	62' X 40'	
5, 17	1547+01	CL	SHED	13' X 10'	
5	1548+78	112' RT.	SHED	20' X 14'	
5, 17	1546+70	LT. & RT.	VARIOUS CONCRETE SLABS ON GRADE	5090 SQ. FT.	
			LUMP SUM 1		

DEMOLITION AND REMOVAL OF BUILDINGS - PARCEL 9

PLAN SHEET NO.	STATION	LOC.	DESCRIPTION	SIZE	REMARKS
6	1559+50	229' RT.	SHED	10' X 8'	
6	1559+55	205' RT.	SHED	8' X 8'	
6	1559+65	264' RT.	1 STORY HOUSE WITH CELLAR	36' X 28'	
6	1560+23	214' RT.	GARAGE	20' X 17'	
			LUMP SUM 1		

REMOVAL OF ACM (FRIABLE)

PLAN SHEET NO.	STATION	LOC.	PARCEL NO.	THERMAL SYSTEM INSULATION LF	FLOOR SHEETING ON WOOD SQ.FT.	REMARKS
5	1534+04	156' RT.	4	12.0		BASEMENT, FLOOR JOISTS, FROM OLD DUCTS
5	1534+04	156' RT.	4	20.0		BASEMENT, OLD METAL DUCTS, AND ON FLOOR
5	1534+04	156' RT.	4		196.0	KITCHEN, UNDER FLOOR TILE
		TOTALS		32.0	196.0	
		PAY TOTALS		32.0	196.0	

REMOVAL OF BRIDGE

PLAN SHEET NO.	STATION	LOC.	DESCRIPTION	REMARKS
3, 12	1513+83	154' LT.	STEEL PONY TRUSS WITH WOOD DECK	CO. RD. 369 (BR. NO. 3690001) MILL CREEK
			1.0 EA	

REV.

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2B

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

SHANNON KUSTER NUMBER E-2000150032 STATE OF MISSOURI REGISTERED PROFESSIONAL ENGINEER

DATE 1-28-2002

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITES

PAVEMENT QUANTITIES

STATION	STATION	LOC.	GRAVEL A OR CRUSHED STONE B 4 IN. THICK TONS	TACK COAT GAL.	ASPHALT BINDER BITUMINOUS PAVEMENT PG 64-22 BP-1 MIX 1 3/4 IN. THICK TONS	MINERAL AGGREGATE BITUMINOUS PAVEMENT PG 64-22 BP-1 MIX 1 3/4 IN. THICK TONS	TYPE 5 AGGREGATE FOR BASE 4 IN. THICK SQ.YD.	CONCRETE PAVEMENT 8 IN. NON-REINFORCED 15 FT. JOINTS SQ.YD.	REMARKS
1497+25.00	1499+00.00	ROUTE 59		21.0	2.18	38.9			
1499+00.00	1500+80.00	ROUTE 59					560.0	500.00	WIDTH TRANSITION
1500+80.00	1588+85.66	ROUTE 59					30330.6	27395.39	
1588+85.66	1590+65.66	ROUTE 59					560.0	500.00	WIDTH TRANSITION
1590+48.00	1592+23.00	ROUTE 59		21.0	2.18	38.9			STA. EQ. 1590+65.66 BK. = STA.1590+48.00 AHD.
1497+00.00	1504+00.00	ROUTE 59 RT.	219.7						EMERGENCY BYPASS
1583+50.00	1590+65.66	ROUTE 59 RT.	242.4						EMERGENCY BYPASS
1590+48.00	1593+00.00	ROUTE 59 RT.	68.0						EMERGENCY BYPASS
		TOTALS	530.1	42.0	4.36	77.8	31450.6	28395.39	
		PAY TOTALS	530.0	40.0	4.40	78.0	31451.0	28395.40	

SHOULDER QUANTITIES

STATION	STATION	LOC.	TYPE 5 AGGREGATE FOR BASE 4 IN. THICK SQ.YD.	ASPHALT BINDER BITUMINOUS BASE PG 64-22 4 IN. THICK SQ.YD.	MINERAL AGGREGATE BITUMINOUS BASE PG 64-22 4 IN. THICK SQ.YD.	ASPHALT BINDER BITUMINOUS PAVEMENT PG 64-22 BP-1 MIX 1 3/4 IN.THICK SQ.YD.	MINERAL AGGREGATE BITUMINOUS PAVEMENT PG 64-22 BP-1 MIX 1 3/4 IN. THICK SQ.YD.	REMARKS
1499+09.75	1499+13.92	ROUTE 59 LT. & RT.	1.8	0.09	1.69	0.09	1.68	
1499+13.92	1500+80.00	ROUTE 59 LT. & RT.	158.3	8.51	161.81	9.02	161.31	WIDTH TRANSITION
1500+80.00	1588+85.66	ROUTE 59 LT. & RT.	11746.8	586.75	11154.13	621.72	11119.16	
1588+85.66	1590+65.66	ROUTE 59 LT. & RT.	200.1	9.99	190.01	10.59	189.41	WIDTH TRANSITION
		TOTALS	12107.0	605.34	11507.64	641.42	11471.56	
		PAY TOTALS	12107.0	605.30	11507.60	641.40	11471.60	

DRIVEWAY AND COUNTY ROAD PAVEMENT QUANTITIES

STATION	LOC.	TYPE	WIDTH FT.	GRAVEL A OR CRUSHED STONE B 4 IN. THICK TONS	TYPE 5 AGGREGATE FOR BASE 4 IN. THICK SQ.YD.	ASPHALT BINDER BITUMINOUS BASE PG 64-22 4 IN. THICK TONS	MINERAL AGGREGATE BITUMINOUS BASE PG 64-22 4 IN. THICK TONS	ASPHALT BINDER BITUMINOUS PAVEMENT PG 64-22 BP-1 MIX 1 3/4 IN.THICK TONS	MINERAL AGGREGATE BITUMINOUS PAVEMENT PG 64-22 BP-1 MIX 1 3/4 IN. THICK TONS	REMARKS
1504+00	ROUTE 59 LT.	I	20	30.6	5.0	0.05	1.0	0.02	0.4	STAGE 2
1512+02	ROUTE 59 LT.	I	20	67.1	5.0	0.05	1.0	0.02	0.4	STAGE 1
1519+00	ROUTE 59 LT.	II	24	229.7	74.2	0.80	15.3	0.36	6.5	STAGE 1 - CO. RD. 369
1539+17	ROUTE 59 LT.	I	20	32.6	5.0	0.05	1.0	0.02	0.4	STAGE 1
1547+50	ROUTE 59 LT.	I	20	76.6	5.0	0.05	1.0	0.02	0.4	STAGE 1
1560+08	ROUTE 59 LT.	I	20	61.3	5.0	0.05	1.0	0.02	0.4	STAGE 1
1568+37	ROUTE 59 LT.	I	20	22.1	5.0	0.05	1.0	0.02	0.4	STAGE 1
1512+02	ROUTE 59 RT.	I	20	35.6						STAGE 3
1512+02	ROUTE 59 RT.	I	20	60.3	4.9	0.05	1.0	0.02	0.4	STAGE 1 - TEMP. DRWY.
1519+00	ROUTE 59 RT.	I	20	43.4						STAGE 3
1519+00	ROUTE 59 RT.	I	20	94.3	5.0	0.05	1.0	0.02	0.4	STAGE 1 - TEMP. DRWY.
1539+17	ROUTE 59 RT.	I	20	90.7	5.0	0.05	1.0	0.02	0.4	STAGE 3
1539+17	ROUTE 59 RT.	I	20	78.6						STAGE 1 - TEMP. DRWY.
1547+50	ROUTE 59 RT.	I	20	50.5						STAGE 1 - TEMP. DRWY.
1559+00	ROUTE 59 RT.	I	20	140.6	5.0	0.05	1.0	0.02	0.4	STAGE 3
1560+08	ROUTE 59 RT.	I	20	102.1						STAGE 1 - TEMP. DRWY.
1566+42	ROUTE 59 RT.	MOD. I	24	51.5	196.7	2.14	40.6	0.97	17.4	STAGE 3
1570+50	ROUTE 59 RT.	I	20	73.9	5.0	0.05	1.0	0.02	0.4	STAGE 3
1581+50	ROUTE 59 RT.	I	20		669.2	0.05	1.0	3.30	59.1	STAGE 3
5+00	CO. RD. 369 RT.	I	20	20.5						STAGE 1
7+50	CO. RD. 369 RT.	I	20	24.9						STAGE 1
6+70	DRWY. 1581+50 LT.	I	20	12.4						STAGE 3
		TOTALS		1399.3	995.0	3.54	67.9	4.85	87.4	
		PAY TOTALS		1399.0	995.0	3.50	68.0	4.90	87.0	

REV.

T:\de-proj\Holt\j1s0606\plan_sheets\1_e\002_0032b_j1s0606_f.dgn 03:51:26 PM 01/25/2002

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2B

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITES

PAVEMENT MARKING MATERIAL

STATION	STATION	LOC.	INTERMITTENT YELLOW EPOXY MARKING PAINT 4 IN. 100 FT.	SOLID YELLOW EPOXY MARKING PAINT 4 IN. 100 FT.	DOUBLE SOLID YELLOW EPOXY MARKING PAINT 4 IN. 100 FT.	SOLID WHITE EPOXY MARKING PAINT 4 IN. 100 FT.	REMARKS
1497+25.00	1499+00.00	ROUTE 59 CL			3.50		
1499+00.00	1501+00.00	ROUTE 59 CL			4.00		
1501+00.00	1510+50.00	ROUTE 59 CL	2.38	9.50			NO PASSING ZONE NORTH BOUND
1510+50.00	1522+60.00	ROUTE 59 CL			24.20		
1522+60.00	1531+30.00	ROUTE 59 CL	2.18	8.70			NO PASSING ZONE SOUTH BOUND
1531+30.00	1546+60.00	ROUTE 59 CL			30.60		
1546+60.00	1561+70.00	ROUTE 59 CL	3.78	15.10			NO PASSING ZONE NORTH BOUND
1561+70.00	1567+00.00	ROUTE 59 CL			10.60		
1567+00.00	1582+90.00	ROUTE 59 CL	3.98	15.90			NO PASSING ZONE SOUTH BOUND
1582+90.00	1590+65.66	ROUTE 59 CL			15.51		
1590+48.00	1592+23.00	ROUTE 59 CL			3.50		STA. EQ. 1590+65.66 BK. = STA. 1590+48 AHD.
1497+25.00	1499+00.00	ROUTE 59 LT.				1.75	
1499+00.00	1504+20.66	ROUTE 59 LT.				5.21	
1504+20.66	1525+37.33	ROUTE 59 LT.				21.26	
1525+37.33	1543+40.69	ROUTE 59 LT.				18.03	
1543+40.69	1559+00.69	ROUTE 59 LT.				15.61	
1559+00.69	1576+08.48	ROUTE 59 LT.				17.08	
1576+08.48	1577+83.48	ROUTE 59 LT.				1.75	
1577+83.48	1587+69.15	ROUTE 59 LT.				9.81	
1587+69.15	1589+44.15	ROUTE 59 LT.				1.75	
1589+44.15	1590+65.66	ROUTE 59 LT.				1.22	
1590+48.00	1592+23.00	ROUTE 59 LT.				1.75	STA. EQ. 1590+65.66 BK. = STA. 1590+48 AHD.
1497+25.00	1499+00.00	ROUTE 59 RT.				1.75	
1499+00.00	1504+20.66	ROUTE 59 RT.				5.21	
1504+20.66	1525+37.33	ROUTE 59 RT.				21.08	
1525+37.33	1543+40.69	ROUTE 59 RT.				18.03	
1543+40.69	1559+00.69	ROUTE 59 RT.				15.59	
1559+00.69	1576+08.48	ROUTE 59 RT.				17.08	
1576+08.48	1577+83.48	ROUTE 59 RT.				1.75	
1577+83.48	1587+69.15	ROUTE 59 RT.				9.91	
1587+69.15	1589+44.15	ROUTE 59 RT.				1.75	
1589+44.15	1590+65.66	ROUTE 59 RT.				1.22	
1590+48.00	1592+23.00	ROUTE 59 RT.				1.75	STA. EQ. 1590+65.66 BK. = STA. 1590+48 AHD.
		TOTALS	12.32	49.20	91.91	190.34	
		PAY TOTALS	12.30	49.20	91.90	190.30	

CURB AND GUTTER

STATION	STATION	LOC.	TYPE A CURB AND GUTTER LF	TYPE A CONCRETE GUTTER LF	REMARKS
1499+00.00	1499+13.92	ROUTE 59 LT. & RT.	27.1		SEE SHT. 11
1499+13.92	1499+50.00	ROUTE 59 LT. & RT.		79.6	SEE SHT. 11
		TOTALS	27.1	79.6	
		PAY TOTALS	27.0	80.0	

BITUMINOUS RUMBLE STRIP

STATION	STATION	LOC.	BITUMINOUS RUMBLE STRIP 100 FT.
1499+13.92	1503+82.00	ROUTE 59 LT.	4.68
1504+18.00	1511+84.05	ROUTE 59 LT.	7.66
1512+19.95	1518+69.27	ROUTE 59 LT.	6.49
1519+30.73	1538+99.00	ROUTE 59 LT.	19.68
1539+35.00	1547+32.01	ROUTE 59 LT.	7.97
1547+67.99	1559+90.00	ROUTE 59 LT.	12.22
1560+26.00	1568+19.00	ROUTE 59 LT.	7.93
1568+55.00	1590+65.66	ROUTE 59 LT.	22.11
1499+13.92	1511+83.94	ROUTE 59 RT.	12.70
1512+20.06	1518+81.94	ROUTE 59 RT.	6.62
1519+18.06	1538+99.00	ROUTE 59 RT.	19.81
1539+35.00	1558+81.99	ROUTE 59 RT.	19.47
1559+18.00	1565+77.02	ROUTE 59 RT.	6.59
1567+19.29	1570+32.00	ROUTE 59 RT.	3.13
1570+68.00	1581+32.07	ROUTE 59 RT.	10.64
1581+67.93	1590+65.66	ROUTE 59 RT.	8.98
		TOTALS	176.68
		PAY TOTALS	176.70

COLDMILLING QUANTITIES

STATION	STATION	LOC.	COLDMILLING BITUMIINOUS PAVEMENT FOR REMOVAL OF SURFACING 1¾ IN. THICK SQ.YD.	COLDMILLING BITUMIINOUS PAVEMENT FOR REMOVAL OF SURFACING 4¼ IN. THICK SQ.YD.	REMARKS
1497+25.00	1499+00.00	EXIST. ROUTE 59	427.8		
1499+00.00	1517+31.82	EXIST. ROUTE 59		4477.8	REMOVAL OF ENTIRE ASPHALT SURFACE
1517+34.14	1590+48.00	EXIST. ROUTE 59		17878.3	REMOVAL OF ENTIRE ASPHALT SURFACE*
1590+48.00	1592+23.00	EXIST. ROUTE 59	427.8		
		TOTALS	855.6	22356.1	* STA. EQ. 1517+31.82 BK.= STA. 1517+34.14 AHD.
		PAY TOTALS	856.0	22356.0	

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\1_e\002_0042b_j1s0606_f.dgn 08:08:45 AM 12/07/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2B

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITES

REINFORCED CONCRETE PIPE

STATION	LOC.	SKEW	36" CLASS IV RCP L.F.	54" CLASS III RCP L.F.	36" PRECAST CONCRETE F.E.S. EA	54" PRECAST CONCRETE F.E.S. EA	CLASS 3 EXC. CU.YD.	ROCK LINING CU.YD.	REMARKS
1514+99.62	LT.		68		1		66.4		SEE SHT. 33
1541+27.00	CL	7° RA		180		2	20.2	59.4	SEE SHT. 34
		TOTALS	68	180	1	2	86.6	59.4	
		PAY TOTALS	68	180	1	2	87.0	59.0	

REINFORCED CONCRETE BOX

STATION	LOC.	SKEW	SIZE	LENGTH	DESIGN FILL HEIGHT	CLASS B-1 CONCRETE (CULVERTS) CU.YD.	REINFORCING STEEL (CULVERTS) LBS.	CLASS 3 EXC. CU.YD.	FURNISHING TYPE 2 ROCK BLANKET CU.YD.	PLACING TYPE 2 ROCK BLANKET CU.YD.	REMARKS
1515+21.98	CL	45° RA	DBL. 12' X 12'						804.8	804.8	BRIDGE #A6360, SEE SHT. 12
1562+62.00	CL	15° RA	12' X 11'	131'	9'10"	259.80	44302	405.8	75.7	75.7	SEE SHT. 34
1563+66.54	CL	NO SKEW	DBL. 12' X 12'						238.7	238.7	BRIDGE #A6359, SEE SHT. 13
					TOTALS	259.80	44302	405.8	1119.2	1119.2	
					PAY TOTALS	259.80	44300	406.0	1119.0	1119.0	

DRIVEWAY CULVERTS

STATION	LOC.	18" GROUP B PIPE L.F.	21" GROUP B PIPE L.F.	24" GROUP B PIPE L.F.	30" GROUP B PIPE L.F.	36" GROUP B PIPE L.F.	42" GROUP B PIPE L.F.	60" GROUP B PIPE L.F.	CLASS 3 EXC. CU.YD.	REMARKS
1504+00	LT.			46						
1512+02	LT.				36				15.5	DRIVEWAY STA. 2+90, SEE SHT. 35
1512+02	LT.					116				
1512+02	RT.						62			
1512+02	RT.			46						TEMP. PIPE (STAGE 1 & 2)
1519+00	LT.						64			
1519+00	RT.			44						
1519+00	RT.			68						TEMP. PIPE (STAGE 1 & 2)
1539+17	RT.		44							TEMP. PIPE (STAGE 1 & 2)
1547+50	LT.		40							
1547+50	RT.	38								TEMP. PIPE (STAGE 1 & 2)
1559+00	RT.		60							
1560+08	LT.						80			
1560+08	RT.		66							TEMP. PIPE (STAGE 1 & 2)
1566+42	RT.							146		2 PIPES (70'& 76')
1568+37	LT.						50			
1570+50	RT.						54			
1581+50	RT.						56			
5+00	RT.	40								COUNTY ROAD 369
7+50	RT.	46								COUNTY ROAD 369
6+70	LT.	46								DRIVEWAY AT STA. 1581+50
TOTALS		170	210	204	36	116	366	146	15.5	
PAY TOTALS		170	210	204	36	116	366	146	16.0	

REV.

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2B

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITES

SEDIMENT BASINS

PLAN SHEET NO.	STATION	STATION	LOC.	LENGTH FT.	WIDTH FT.	DEPTH FT.	VOLUME CU.YD.	SEDIMENT REMOVAL CU.YD.
28	1517+00	1518+00	ROUTE 59 RT.	100.0	12	2	88.89	10
29	1560+50	1562+00	ROUTE 59 LT.	150.0	16	6	533.33	10
29	1565+00	1567+00	ROUTE 59 LT.	200.0	20	6	888.89	10
29	1561+00	1562+50	ROUTE 59 RT.	150.0	16	6	533.33	10
30	1580+50	1582+50	ROUTE 59 LT.	200.0	20	6	888.89	10
31	1520+00	1521+00	ROUTE 59 RT.	100.0	12	2	88.89	10
31	1541+65	1542+19	ROUTE 59 RT.	100.0	20	4	296.30	10
32	1564+00	1566+00	ROUTE 59 RT.	200.0	20	6	888.89	10
			TOTAL				4207.41	80
			PAY TOTALS				4207.00	80

SILT FENCE

STATION	STATION	LOC.	SILT FENCE FT.	SEDIMENT REMOVAL CU.YD.	REMARKS
STAGE 1					
1525+00	1533+50	ROUTE 59 RT.	1062.3	10.6	
1535+50	1538+50	ROUTE 59 RT.	419.5	4.2	
1540+00	1544+00	ROUTE 59 RT.	416.3	4.2	
1545+00	1547+00	ROUTE 59 RT.	250.1	2.5	
1548+00	1558+00	ROUTE 59 RT.	1120.0	11.2	
1574+50	1578+00	ROUTE 59 RT.	359.4	3.6	
STAGE 3					
1505+00	1510+00	ROUTE 59 RT.	475.3	4.8	
1527+00	1537+00	ROUTE 59 RT.	1026.7	10.3	
1542+50	1554+00	ROUTE 59 RT.	1186.0	11.9	
		TOTALS	6315.6	63.3	
		PAY TOTALS	6316.0	63.0	

TYPE I DITCH CHECKS

STATION	STATION	LOC.	DITCH CHECKS EA	SEDIMENT REMOVAL CU.YD.	REMARKS
STAGE 1					
1506+50	1509+50	ROUTE 59 LT.	4	4	
1509+50	1513+00	ROUTE 59 LT.	14	14	
1515+00		ROUTE 59 LT.	1	1	
1515+50	1527+50	ROUTE 59 LT.	19	19	
1528+07	1532+00	ROUTE 59 LT.	7	7	
1532+00	1539+00	ROUTE 59 LT.	7	7	
1539+00	1541+00	ROUTE 59 LT.	6	6	
1541+50	1544+50	ROUTE 59 LT.	7	7	
1545+07	1562+00	ROUTE 59 LT.	30	30	
1565+00	1580+00	ROUTE 59 LT.	35	35	
1519+50	1523+50	ROUTE 59 LT.	12	12	INTERCEPTOR DITCH
1519+50	1521+50	ROUTE 59 LT.	13	13	INTERCEPTOR DITCH
1521+50	1524+00	ROUTE 59 LT.	17	17	INTERCEPTOR DITCH
1524+00	1527+50	ROUTE 59 LT.	8	8	INTERCEPTOR DITCH
1569+00	1574+50	ROUTE 59 LT.	14	14	INTERCEPTOR DITCH
1506+50	1516+00	ROUTE 59 RT.	30	30	
1511+50	1514+00	ROUTE 59 RT.	6	6	INTERCEPTOR DITCH
1517+00	1520+00	ROUTE 59 RT.	4	4	
1520+00	1539+00	ROUTE 59 RT.	20	20	
1538+50	1539+50	ROUTE 59 RT.	3	3	INTERCEPTOR DITCH
1544+50	1551+50	ROUTE 59 RT.	6	6	
1551+50	1562+50	ROUTE 59 RT.	18	18	
1564+00	1580+50	ROUTE 59 RT.	17	17	
STAGE 2					
1500+50	1506+50	ROUTE 59 RT.	20	20	
1497+50	1503+50	ROUTE 59 RT.	22	22	INTERCEPTOR DITCH
1500+50	1509+50	ROUTE 59 LT.	29	29	
1580+50	1590+50	ROUTE 59 LT.	25	25	
1584+00	1590+50	ROUTE 59 RT.	15	15	
1584+00	1592+50	ROUTE 59 RT.	24	24	INTERCEPTOR DITCH
STAGE 3					
1520+00	1538+50	ROUTE 59 RT.	28	28	
1539+00	1542+00	ROUTE 59 RT.	8	8	
1541+32	1542+32	ROUTE 59 RT.	10	10	DITCH TO EXIST. CULVERT
1542+00	1545+50	ROUTE 59 RT.	11	11	
1546+83	1551+50	ROUTE 59 RT.	4	4	
1564+50	1583+50	ROUTE 59 RT.	40	40	
1568+00	1570+00	ROUTE 59 RT.	9	9	INTERCEPTOR DITCH
1570+69	1574+50	ROUTE 59 RT.	4	4	INTERCEPTOR DITCH
		TOTALS	547	547	
		PAY TOTALS	547	547	

SEEDING AND MULCH

STATION	STATION	LOC.	SEEDING ACRE	NATIVE PLANT SEEDING ACRE	TYPE 3 MULCH ACRE	REMARKS
1506+00.00	1581+00.00	ROUTE 59	2.98	12.76	15.74	STAGE 1
1495+60.00	1509+50.00	ROUTE 59	0.32	1.87	2.19	STAGE 2
1580+50.00	1590+65.66	ROUTE 59	0.37	1.09	1.46	STAGE 2
1497+00.00	1590+65.66	ROUTE 59	3.77	43.64	47.41	STAGE 3
1590+48.00	1593+00.00	ROUTE 59		0.20	0.20	STAGE 3
3+97.91	10+00.00	CO. RD. 369		1.15	1.15	STAGE 1
		TOTALS	7.44	60.71	68.15	
		PAY TOTALS	7.40	60.70	68.20	
TEMPORARY SEEDING AND MULCH				17.0 ACRE		

RIPARIAN CORRIDOR RESTORATION

	RIPARIAN TREES EA	RIPARIAN SEEDING ACRE	RIPARAIN TYPE I MULCH ACRE
TOTALS	129	1.18	1.18
PAY TOTALS	129	1.20	1.20

SODDING

STATION	STATION	LOC.	SODDING SQ.YD.	REMARKS
1502+80.00	1503+81.81	ROUTE 59 LT.	155.1	STAGE 2, 8' F.B.D.
1504+26.12	1506+00.00	ROUTE 59 LT.	324.1	STAGE 2, 8' F.B.D.
1506+80.00	1509+50.00	ROUTE 59 LT.	448.0	STAGE 2, 8' F.B.D.
1509+50.00	1510+30.00	ROUTE 59 LT.	132.7	STAGE 1, 8' F.B.D.
1558+80.00	1559+73.76	ROUTE 59 LT.	140.3	STAGE 1, 8' F.B.D.
1582+70.00	1584+70.00	ROUTE 59 LT.	331.9	STAGE 2, 8' F.B.D.
1504+80.00	1509+80.00	ROUTE 59 RT.	829.7	STAGE 3, 8' F.B.D.
1526+70.00	1530+20.00	ROUTE 59 RT.	580.8	STAGE 3, 8' F.B.D.
1559+37.55	1561+00.00	ROUTE 59 RT.	243.0	STAGE 3, 8' F.B.D.
1579+70.00	1581+18.60	ROUTE 59 RT.	305.0	STAGE 3, 8' F.B.D.
1581+73.50	1582+70.00	ROUTE 59 RT.	147.6	STAGE 3, 8' F.B.D.
4+25.00	6+50.00	CO. RD. 369 LT.	274.1	STAGE 1, 4' F.B.D.
6+75.00	7+33.93	CO. RD. 369 RT.	45.1	STAGE 1, V-DITCH
7+79.71	9+53.89	CO. RD. 369 RT.	151.3	STAGE 1, V-DITCH
		TOTALS	4108.7	
		PAY TOTALS	4109.0	

TEMPORARY PIPE SLOPE DRAINS

STATION	LOC.	SLOPE DRAINS FT.	REMARKS
1514+50	ROUTE 59 LT.	6.8	STAGE 1
1518+50	ROUTE 59 LT.	2.5	STAGE 1
1539+50	ROUTE 59 LT.	1.3	STAGE 1
1544+00	ROUTE 59 LT.	2.4	STAGE 1
1563+00	ROUTE 59 LT.	5.2	STAGE 1
1566+00	ROUTE 59 LT.	2.5	STAGE 1
1518+50	ROUTE 59 RT.	2.5	STAGE 1
1539+50	ROUTE 59 RT.	2.0	STAGE 1
1544+00	ROUTE 59 RT.	1.7	STAGE 1
1563+00	ROUTE 59 RT.	4.4	STAGE 1
1566+00	ROUTE 59 RT.	1.1	STAGE 1
	TOTALS	32.4	
	PAY TOTALS	32.0	

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\1_e\002_0062b_j1s0606_f.dgn 08:19:06 AM 12/07/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2B

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITES

ROCK DITCH LINER										
STATION	STATION	LOCATION	FURNISHING TYPE 2 ROCK DITCH LINER CU.YD.	PLACING TYPE 2 ROCK DITCH LINER CU.YD.	FURNISHING TYPE 3 ROCK DITCH LINER CU.YD.	PLACING TYPE 3 ROCK DITCH LINER CU.YD.	FURNISHING TYPE 4 ROCK DITCH LINER CU.YD.	PLACING TYPE 4 ROCK DITCH LINER CU.YD.	BEDDING MATERIAL FOR ROCK DITCH LINER CU.YD.	REMARKS
1499+50.00	1500+50.00	ROUTE 59 LT.			85.7	85.7			31.1	STAGE 2
1510+30.00	1511+66.04	ROUTE 59 LT.			112.0	112.0			40.7	STAGE 1
1512+67.73	1513+22.00	ROUTE 59 LT.			48.5	48.5			17.6	STAGE 1
1515+30.00	1517+70.00	ROUTE 59 LT.			338.8	338.8			123.2	STAGE 1
1517+70.00	1518+67.19	ROUTE 59 LT.	67.6	67.6						STAGE 1
1519+30.23	1519+60.00	ROUTE 59 LT.			26.8	26.8			9.7	STAGE 1
1519+60.00	1523+00.00	ROUTE 59 LT.	213.2	213.2						STAGE 1
1523+00.00	1524+50.00	ROUTE 59 LT.			149.3	149.3			54.3	STAGE 1
1524+50.00	1528+70.00	ROUTE 59 LT.	232.2	232.2						STAGE 1
1561+50.00	1562+00.00	ROUTE 59 LT.			39.5	39.5			14.3	STAGE 1
1564+58.81	1565+00.00	ROUTE 59 LT.			65.6	65.6			23.8	STAGE 1
1565+00.00	1568+10.45	ROUTE 59 LT.	182.1	182.1						STAGE 1
1568+60.44	1569+70.00	ROUTE 59 LT.			112.6	112.6			40.9	STAGE 1
1569+70.00	1580+50.00	ROUTE 59 LT.	613.9	613.9						STAGE 1
1580+50.00	1581+00.00	ROUTE 59 LT.	26.5	26.5						STAGE 2
1581+00.00	1582+70.00	ROUTE 59 LT.			166.0	166.0			60.3	STAGE 2
1519+29.18	1520+20.00	ROUTE 59 LT.			43.8	43.8			15.9	STAGE 1 - SHALE INTER. DT.
1520+20.00	1523+50.00	ROUTE 59 LT.	87.7	87.7						STAGE 1 - SHALE INTER. DT.
1524+12.46	1524+50.00	ROUTE 59 LT.			17.1	17.1			6.2	STAGE 1 - SHALE INTER. DT.
1524+50.00	1527+50.00	ROUTE 59 LT.	79.8	79.8						STAGE 1 - SHALE INTER. DT.
1569+04.78	1569+70.00	ROUTE 59 LT.			28.6	28.6			10.4	STAGE 1 - SHALE INTER. DT.
1569+70.00	1574+50.00	ROUTE 59 LT.	127.6	127.6						STAGE 1 - SHALE INTER. DT.
1519+28.39	1520+20.00	ROUTE 59 LT.			68.8	68.8			25.0	STAGE 1 - INTER. DT.
1523+30.00	1524+12.46	ROUTE 59 LT.			114.5	114.5			41.6	STAGE 1 - INTER. DT.
1499+50.00	1500+50.00	ROUTE 59 RT.			85.6	85.6			31.1	STAGE 3
1509+80.00	1511+77.07	ROUTE 59 RT.	100.7	100.7						STAGE 3
1512+39.81	1513+80.00	ROUTE 59 RT.	69.9	69.9						STAGE 3
1513+80.00	1515+88.00	ROUTE 59 RT.			189.2	189.2			68.8	STAGE 3
1516+68.00	1518+76.67	ROUTE 59 RT.			246.6	246.6			89.6	STAGE 3
1519+20.60	1526+70.00	ROUTE 59 RT.	414.4	414.4						STAGE 3
1562+00.00	1562+74.73	ROUTE 59 RT.			58.6	58.6			21.3	STAGE 3
1563+86.16	1564+70.00	ROUTE 59 RT.					138.6	138.6	55.4	STAGE 3
1564+70.00	1566+10.11	ROUTE 59 RT.	143.4	143.4						STAGE 3
1566+80.09	1567+50.00	ROUTE 59 RT.					177.7	177.7	71.0	STAGE 3
1567+50.00	1569+50.00	ROUTE 59 RT.	146.3	146.3						STAGE 3
1569+50.00	1570+19.85	ROUTE 59 RT.			83.0	83.0			30.1	STAGE 3
1570+73.81	1571+70.00	ROUTE 59 RT.			89.0	89.0			32.3	STAGE 3
1571+70.00	1579+70.00	ROUTE 59 RT.	455.8	455.8						STAGE 3
1568+03.26	1570+00.00	ROUTE 59 RT.	50.6	50.6						STAGE 3 - SHALE INTER. DT.
1570+70.00	1571+20.00	ROUTE 59 RT.			29.4	29.4			10.7	STAGE 3 - SHALE INTER. DT.
1571+20.00	1574+50.00	ROUTE 59 RT.	107.1	107.1						STAGE 3 - SHALE INTER. DT.
6+50.00	7+00.00	COUNTY ROAD 369 LT.	17.6	17.6						STAGE 1
7+00.00	9+55.99	COUNTY ROAD 369 LT.			197.3	197.3			71.7	STAGE 1
2+86.50	3+70.79	DRIVEWAY 1512+02 LT.			53.7	53.7			19.5	STAGE 1. SEE SHT. 15
2+87.53	2+90.00	DRIVEWAY 1512+02 RT.					49.3	49.3	19.7	STAGE 1. SEE SHT. 15
5+90.13	6+95.00	DRIVEWAY 1566+42 LT.					221.3	221.3	348.7	STAGE 3. SEE SHT. 22
5+46.75	6+20.00	DRIVEWAY 1570+50 LT.			34.2	34.2			12.4	STAGE 3. SEE SHT. 23
6+30.00	8+66.72	SIDE DT. STA. 1541+27 RT.					503.8	503.8	201.3	STAGE 3. SEE SHT. 14
		TOTALS	3136.4	3136.4	2484.2	2484.2	1090.7	1090.7	1598.6	
		PAY TOTALS	3136.0	3136.0	2484.0	2484.0	1091.0	1091.0	1599.0	

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\1_e\002_0072b_j1s0606_f.dgn 08:22:08 AM 12/07/2001

EFFECTIVE: 01-01-2002

D-2BS

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	2BS

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

SHANNON D. KUSILEK NUMBER E-2000150032 STATE OF MISSOURI REGISTERED PROFESSIONAL ENGINEER

DATE 1-15-2002

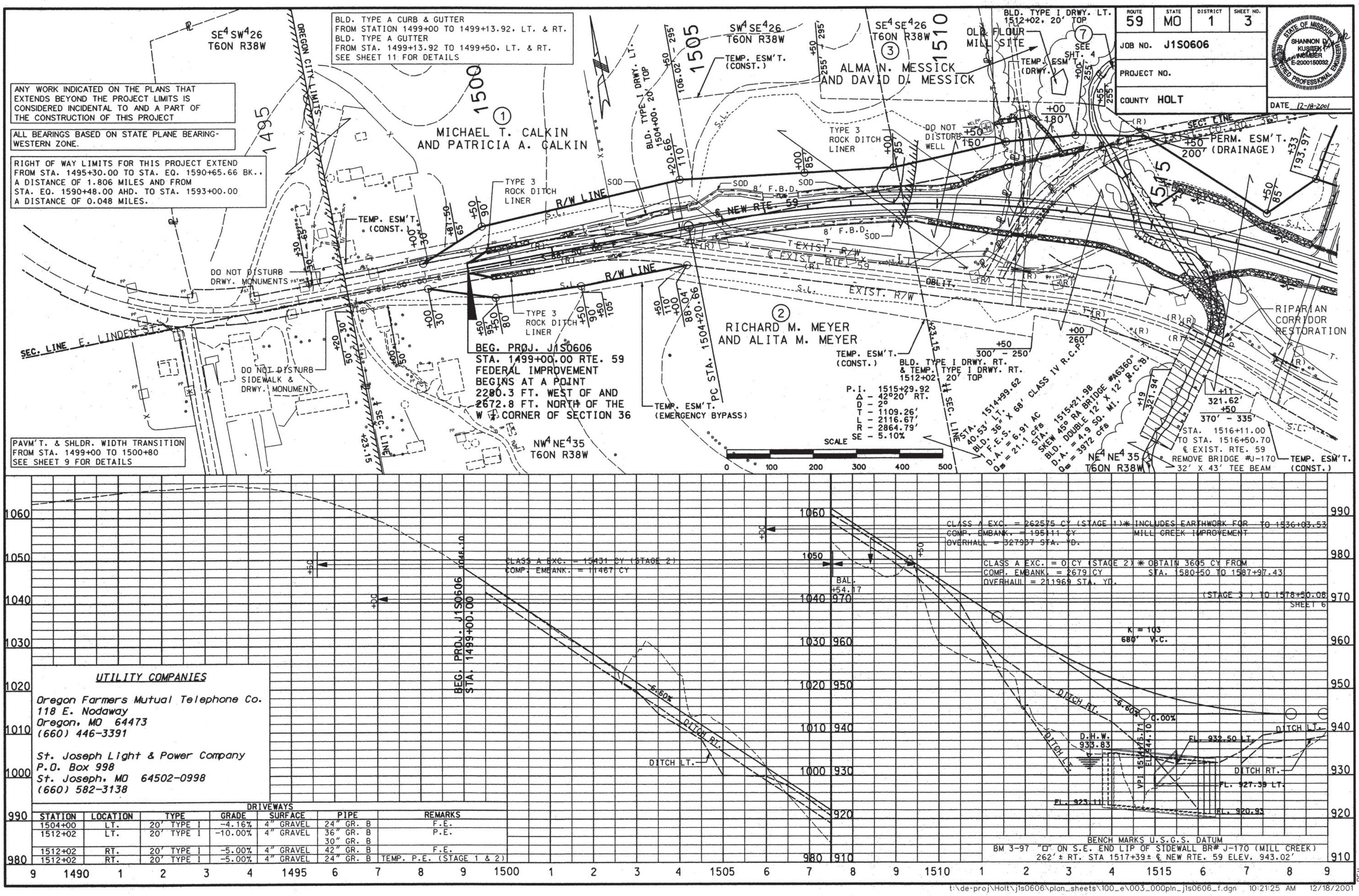
SUMMARY OF QUANTITIES

SIGN	SIZE (INCHES)	AREA (SQ FT)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
							WARNING SIGNS
WF20-4	36X36	9.00					ONE LANE ROAD AHEAD
WF20-5	36X36	9.00					RIGHT LANE/CENTER LANE/LEFT LANE CLOSED AHEAD
WF20-6a	36X36	9.00					RIGHT/CENTER/LEFT LANE CLOSED
WF21-4	36X36	9.00					ROAD WORK AHEAD
WF22-6e	21X15	2.19					WET PAINT (ARROW PIVOTS)
WO1-1L	48X48	16.0					TURN (SYMBOL LEFT ARROW)
WO1-1R	48X48	16.0					TURN (SYMBOL RIGHT ARROW)
WO1-2L	48X48	16.0					CURVE (SYMBOL LEFT ARROW)
WO1-2R	48X48	16.0					CURVE (SYMBOL RIGHT ARROW)
WO1-3L	48X48	16.0					REVERSE TURN (SYMBOL LEFT ARROW)
WO1-3R	48X48	16.0					REVERSE TURN (SYMBOL RIGHT ARROW)
WO1-4L	48X48	16.0					REVERSE CURVE (SYMBOL LEFT ARROW)
WO1-4R	48X48	16.0					REVERSE CURVE (SYMBOL RIGHT ARROW)
WO1-4bL	48X48	16.0					DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
WO1-4bR	48X48	16.0					DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
WO1-4cL	48X48	16.0					TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
WO1-4cR	48X48	16.0					TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
WO1-6	48X24	8.0					HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.0					HORIZONTAL ARROW (SYMBOL ON BARRICADE)
WO1-7	48X24	8.0					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.0					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL ON BARRICADE)
WO1-8	18X24	3.0					CHEVRON (SYMBOL)
WO1-8a	36X48	12.0					CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.0					STOP AHEAD
WO3-2	48X48	16.0					YIELD AHEAD
WO3-3	48X48	16.0					SIGNAL AHEAD (SYMBOL)
WO4-1L	48X48	16.0					MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.0					MERGE (SYMBOL FROM RIGHT)
WO5-1	48X48	16.0					ROAD NARROWS
WO5-3	48X48	16.0					ONE LANE BRIDGE
WO5-5	48X48	16.0					NARROW LANES
WO6-1	48X48	16.0					DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.0					DIVIDED HIGHWAY ENDS (SYMBOL)
WO6-3	48X48	16.0					TWO WAY TRAFFIC (SYMBOL)
WO7-3a	24X18	3.0					NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.0					BUMP
WO8-2	48X48	16.0					DIP
WO8-3	48X48	16.0					PAVEMENT ENDS
WO8-4	48X48	16.0					SOFT SHOULDER
WO8-5	48X48	16.0					SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.0					TRUCK CROSSING
WO8-6c	48X48	16.0					TRUCK ENTRANCE
WO8-7	36X36	9.0					LOOSE GRAVEL
WO8-9	48X48	16.0					LOW SHOULDER
WO8-9a	48X48	16.0					SHOULDER DROP-OFF
WO8-11	48X48	16.0					UNEVEN LANES
WO8-12	36X36	9.0					NO CENTER STRIPE
W10-1	42RND.	9.62					RAILROAD CROSSING
WO12-1	24X24	4.0					DOUBLE DOWN ARROW (SYMBOL)
WO12-2	48X48	16.0					LOW CLEARANCE (SYMBOL)
WO12-2x	24X18	3.0					LOW CLEARANCE (PLAQUE)
WO12-3a,b	144X24	24.0					OVERHEAD LOW CLEARANCE (FEET AND INCHES)
SPECIAL	120X60	50.0					LOW CLEARANCE XX' XX" XX MILES AHEAD
SPECIAL	120X60	50.0					WIDTH RESTRICTION XX' XX" XX MILES AHEAD
WO13-1	24X24	4.0					ADVISORY SPEED (PLAQUE)
WO20-2	48X48	16.0	11	176			DETOUR AHEAD (18)
WO20-3	48X48	16.0	2	32			ROAD CLOSED AHEAD (20)
WO20-4	48X48	16.0					ONE LANE ROAD AHEAD
WO20-5	48X48	16.0					RIGHT LANE/CENTER LANE/LEFT LANE CLOSED AHEAD
WO20-6a	48X48	16.0					RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.0					FLAGGER (SYMBOL)
WO20-7x	24X18	3.0					500 FT/1000 FT (PLAQUE)
WO20-7b	48X48	16.0					BE PREPARED TO STOP
WO20-9c	48X48	16.0					OPEN TRENCH
WO21-2	48X48	16.0					FRESH OIL
WO21-4	48X48	16.0	4	64			ROAD WORK AHEAD (2)
WO21-5b	48X48	16.0	2	32			SHOULDER WORK AHEAD (21)
WO21-7	36X36	9.0					SAND BLASTING
WO22-1	48X48	16.0					BLASTING ZONE 1000 FT

SIGN	SIZE (INCHES)	AREA (SQ FT)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
							WARNING SIGNS (CONT.)
WO22-2	42X36	10.5					TURN OFF 2-WAY RADIO AND PHONE
WO22-3	42X36	10.5					END BLASTING ZONE
WO25-5	30X12	2.5					½ MILE/1 MILE (PLAQUE)
							REGULATORY SIGNS
R1-1	48X48	13.25					STOP
R1-2	48TRI.	6.93					YIELD
R1-3	20X9	1.25					4-WAY (PLAQUE)
R1-5	20X9	1.25					3-WAY (PLAQUE)
R2-1	36X48	12.00	4	48			SPEED LIMIT **XX** 2 @ 40 (4) 2 @ 60 (25)
R2-5a	36X48	12.00	2	24			REDUCED SPEED AHEAD (3)
R3-1	48X48	16.00					NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00					NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00					NO TURNS
R3-4	48X48	16.00					NO U-TURN (SYMBOL)
R3-7L	30X30	6.25					LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25					RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00					DO NOT PASS
R4-2	36X48	12.00					PASS WITH CARE
R4-7aL	36X48	12.00					KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00					KEEP RIGHT (HORIZONTAL ARROW)
R4-17aL	36X36	9.00					KEEP LEFT
R4-17aR	36X36	9.00					KEEP RIGHT
R5-1	30X30	6.25					DO NOT ENTER
R5-1a	36X24	6.00					WRONG WAY
R6-1L	48X18	6.00					ONE WAY ARROW (LEFT)
R6-1R	48X18	6.00					ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00					ONE WAY (LEFT)
R6-2R	24X30	5.00					ONE WAY (RIGHT)
R10-6	24X36	6.00					STOP HERE ON RED (45° ARROW)
R11-2	48X30	10.00	4	40			ROAD CLOSED (29) 1 @ 1 (58a) 1 @ 5 (58)
R11-3a	60X30	12.50	2	25			ROAD CLOSED **XX** MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50					ROAD CLOSED TO THRU TRAFFIC
R12-3b	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)
S4-4	36X15	3.75					WHEN FLASHING
STOP/SLOW	18 OCT.						STOP/SLOW PADDLE (STOP/SLOW)
							SUPPLEMENTAL PLATES FOR WARNING SIGNS
WF25-6	20X6	---					BRIDGE/RAMP PLATE (USE WITH WF21-4)
WO25-1a	26X9	---					1000 FT/1500 FT PLATE
WO25-1b	38X9	---					500 FT/1000 FT PLATE
WO25-1c	34X9	---					500 FT/1000 FT PLATE
WO25-6	28X9	---					BRIDGE/RAMP PLATE (USE WITH WO21-4 OR WO5-1)
							GUIDE SIGNS
EO5-1	60X48	20.00					GORE EXIT
GO20-1	60X24	10.00	2	20			ROAD WORK NEXT **2** MILES (1)
GO20-2a	48X24	8.00	2	16			END ROAD WORK (26)
GO20-4	36X18	4.50					PILOT CAR FOLLOW ME
GO23-1	36X12	3.00	6	18			WORK ZONE (PLAQUE) (3) (4) (25)
MO4-1	24X12	2.00					ALTERNATE (PLAQUE)
MO4-8	24X12	2.00	18	36			DETOUR (PLAQUE) (50) THRU (51a)
MO4-8a	24X18	3.00	2	6			END DETOUR (52)
MO4-9L	48X36	12.00					DETOUR (LEFT ARROW)
MO4-9R	48X36	12.00					DETOUR (RIGHT ARROW)
MO4-10L	48X18	6.00					DETOUR (ARROW LEFT)
MO4-10R	48X18	6.00					DETOUR (ARROW RIGHT)
M5-1L	21X15	2.19	1	2.19			ADVANCE LEFT TURN ARROW (50)
M5-1R	21X15	2.19	1	2.19			ADVANCE RIGHT TURN ARROW (50d)
M6-1	21X15	2.19	11	24.09			TURN ARROW (50a) (50b) (50e) (50f)
M6-3	21X15	2.19	1	2.19			STRAIGHT ARROW (50c)
							MISCELLANEOUS SIGNS
CONST-3A	60X48	20.00	2	40			FINE SIGN (53)
CONST-3X	57X9	---					SPEEDING/PASSING (PLATE) (USE WITH CONST-3A)
M1-4	24X24	4.00	18	72			U.S. ROUTE MARKER **59** (50) THRU (51a)
M3-1	24X12	2.00	13	26			NORTH (PLAQUE) (50) THRU (50c) (51a)
M3-3	24X12	2.00	5	10			SOUTH (PLAQUE) (50d) THRU (51)
616-10.05 CONSTRUCTION SIGNS TOTAL				716			
616-10.10 RELOCATED SIGNS TOTAL							

ITEM NUMBER	TOTAL QTY	DESCRIPTION
612-10.10		TEMPORARY BARRICADE
612-10.20		RELOCATED TEMPORARY BARRICADES
612-10.40		PERMANENT BARRICADE
612-20.08		IMPACT ATTENUATOR (8 SAND BARRELS)
612-20.09		IMPACT ATTENUATOR (9 SAND BARRELS)
612-20.10		IMPACT ATTENUATOR (10 SAND BARRELS)
612-20.12		IMPACT ATTENUATOR (12 SAND BARRELS)
612-20.14		IMPACT ATTENUATOR (14 SAND BARRELS)
612-20.17		IMPACT ATTENUATOR (17 SAND BARRELS)
612-20.19		IMPACT ATTENUATOR (19 SAND BARRELS)
612-20.20		REPLACEMENT SAND BARREL
612-20.30		IMPACT ATTENUATOR (RELOCATION)
612-30.00		TRUCK MOUNTED ATTENUATOR (TMA)
616-10.20		CHANNELIZER (DRUM-LIKE)
616-10.25		CHANNELIZER (TRIM-LIKE)
616-10.30	6	TYPE III MOVEABLE BARRICADE
616-10.33		DIRECTIONAL INDICATOR BARRICADE
616-10.34		DIRECTIONAL INDICATOR BARRICADE,
		WITH LIGHT
616-10.40		FLASHING ARROW PANEL
616-10.45		TYPE I OBJECT MARKER
616-10.46		TYPE II OBJECT MARKER
616-10.47		TYPE III OBJECT MARKER
616-10.50		FLASHING ELECTRIC LIGHT
616-10.51		WARNING LIGHT, TYPE A
616-10.52		WARNING LIGHT, TYPE B
616-10.53		WARNING LIGHT, TYPE C
616-10.54		STROBE LIGHT
616-10.60		TYPE I CHANNELIZER/MARKER
616-10.70		TUBULAR MARKER
616-10.71		TRAFFIC BARRIER DELINEATOR, WHITE
616-10.72		TRAFFIC BARRIER DELINEATOR, AMBER
616-10.73		TRAFFIC BARRIER DELINEATOR,
		WHITE / AMBER
616-10.91		RADAR SPEED ADVISORY SYSTEM
		OPERATION
616-10.95		RADAR SPEED ADVISORY SYSTEM
616-10.96		CHANGEABLE MESSAGE SIGN,
		COMMISSION FURNISHED
616-10.98		CHANGEABLE MESSAGE SIGN,
		CONTRACTOR FURNISHED, CONTRACTOR
		RETAINED
616-11.00	1	CHANGEABLE MESSAGE SIGN,
		SOLAR POWERED, CONTRACTOR
		FURNISHED, COMMISSION RETAINED
616-11.30	2	INSTALLING GIVE EM A BRAKE, (63)
		48 IN. X 48 IN. SIGN
616-11.32	2	INSTALLING SHOW ME PROGRESS SIGN (64)
		ASSEMBLY
616-11.40		INSTALLING NO CENTER STRIPE SIGN
616-12.00		LAW ENFORCEMENT
619-10.00		PAVEMENT EDGE TREATMENT
620-80.65		TEMPORARY RAISED PAVEMENT MARKER
901-94.00		TEMPORARY LIGHTING
902-94.00		TEMPORARY TRAFFIC SIGNALS
902-94.01		TEMPORARY TRAFFIC SIGNALS
		AND LIGHTING
902-94.12		SOLAR POWERED PORTABLE TRAFFIC
		SIGNAL SYSTEM (COMMISSION RETAINED)
902-94.15		RELOCATION OF PORTABLE TRAFFIC
		SIGNAL SYSTEM

SHEET 8 OF 8



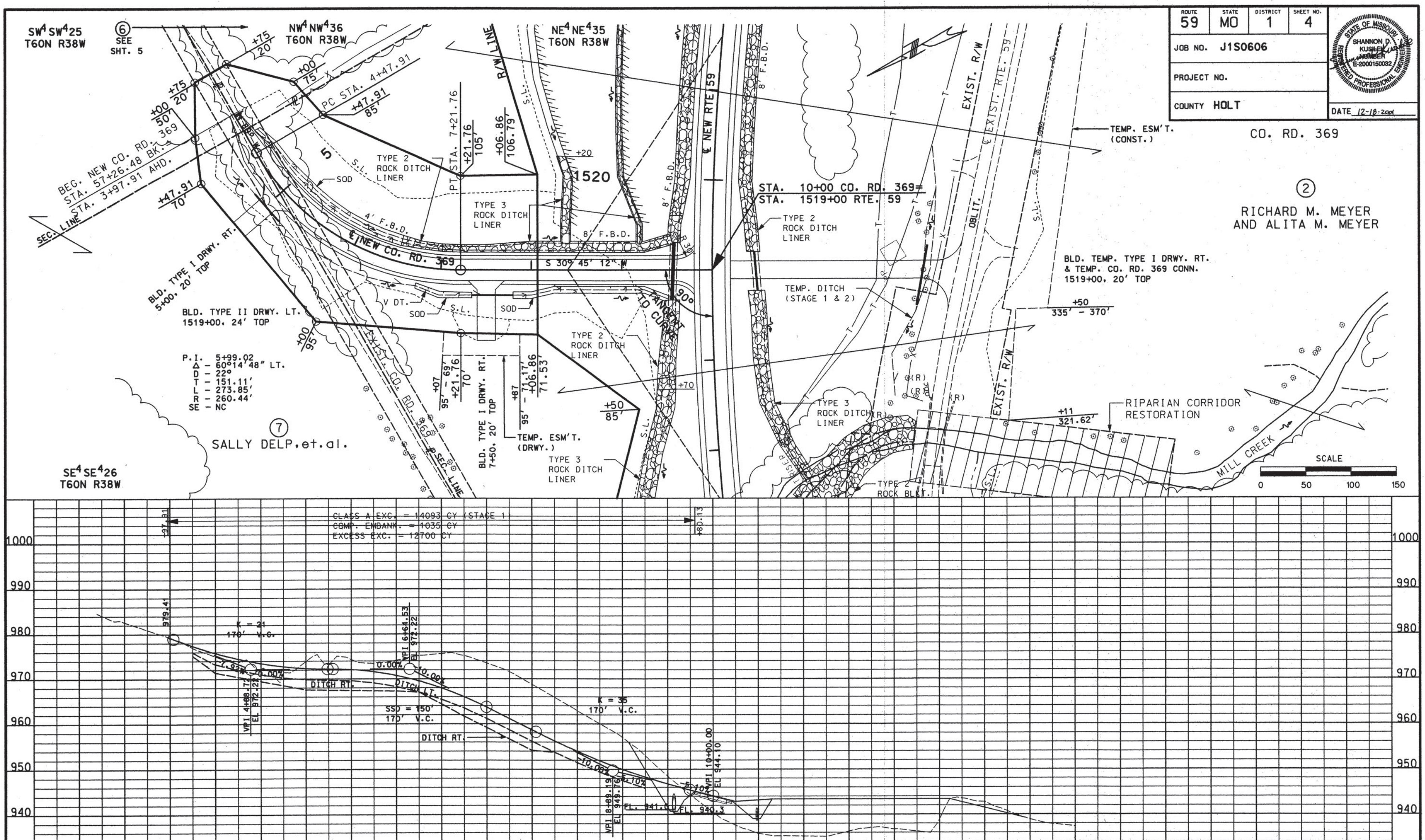
UTILITY COMPANIES

Oregon Farmers Mutual Telephone Co.
118 E. Nodaway
Oregon, MO 64473
(660) 446-3391

St. Joseph Light & Power Company
P.O. Box 998
St. Joseph, MO 64502-0998
(660) 582-3138

DRIVEWAYS

STATION	LOCATION	TYPE	GRADE	SURFACE	PIPE	REMARKS
1504+00	LT.	20' TYPE I	-4.16%	4" GRAVEL	24" GR. B	F.E.
1512+02	LT.	20' TYPE I	-10.00%	4" GRAVEL	36" GR. B 30" GR. B	P.E.
1512+02	RT.	20' TYPE I	-5.00%	4" GRAVEL	42" GR. B	F.E.
1512+02	RT.	20' TYPE I	-5.00%	4" GRAVEL	24" GR. B	TEMP. P.E. (STAGE 1 & 2)



DRIVEWAYS						
STATION	LOCATION	TYPE	GRADE	SURFACE	PIPE	REMARKS
5+00	RT.	20' TYPE I	-3.12%	4" GRAVEL	18" GR. B	F.E.
7+50	RT.	20' TYPE I	+5.00%	4" GRAVEL	18" GR. B	F.E.
1519+00	LT.	24' TYPE II	+10.00%	4" GRAVEL	42" GR. B	CO. RD. 369
1519+00	RT.	20' TYPE I	+1.23%	4" GRAVEL	24" GR. B	F.E.
1519+00	RT.	20' TYPE I	+1.23%	4" GRAVEL	24" GR. B	TEMP. CO. RD. 369 CONN. (STAGE 1 & 2)

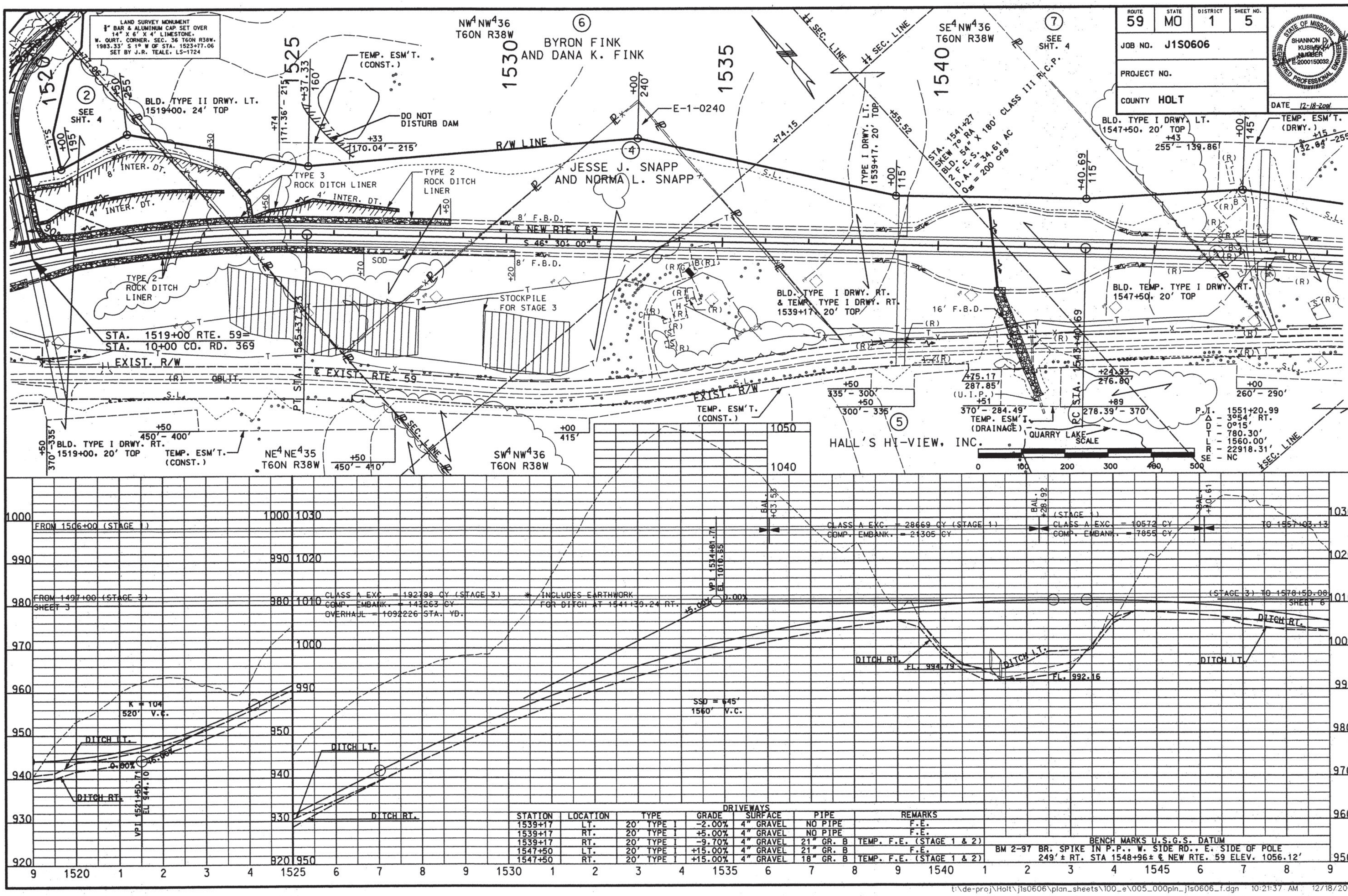
CO. RD. 369

BENCH MARKS U.S.G.S. DATUM

BM 3-97 "□" ON S.E. END LIP OF SIDEWALL BR# J-170 (MILL CREEK)
262'± RT. STA 1517+39± ℄ NEW RTE. 59 ELEV. 943.02'

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\50_e\004_000pln_j1s0606_f.dgn 01:50:00 PM 12/06/2001

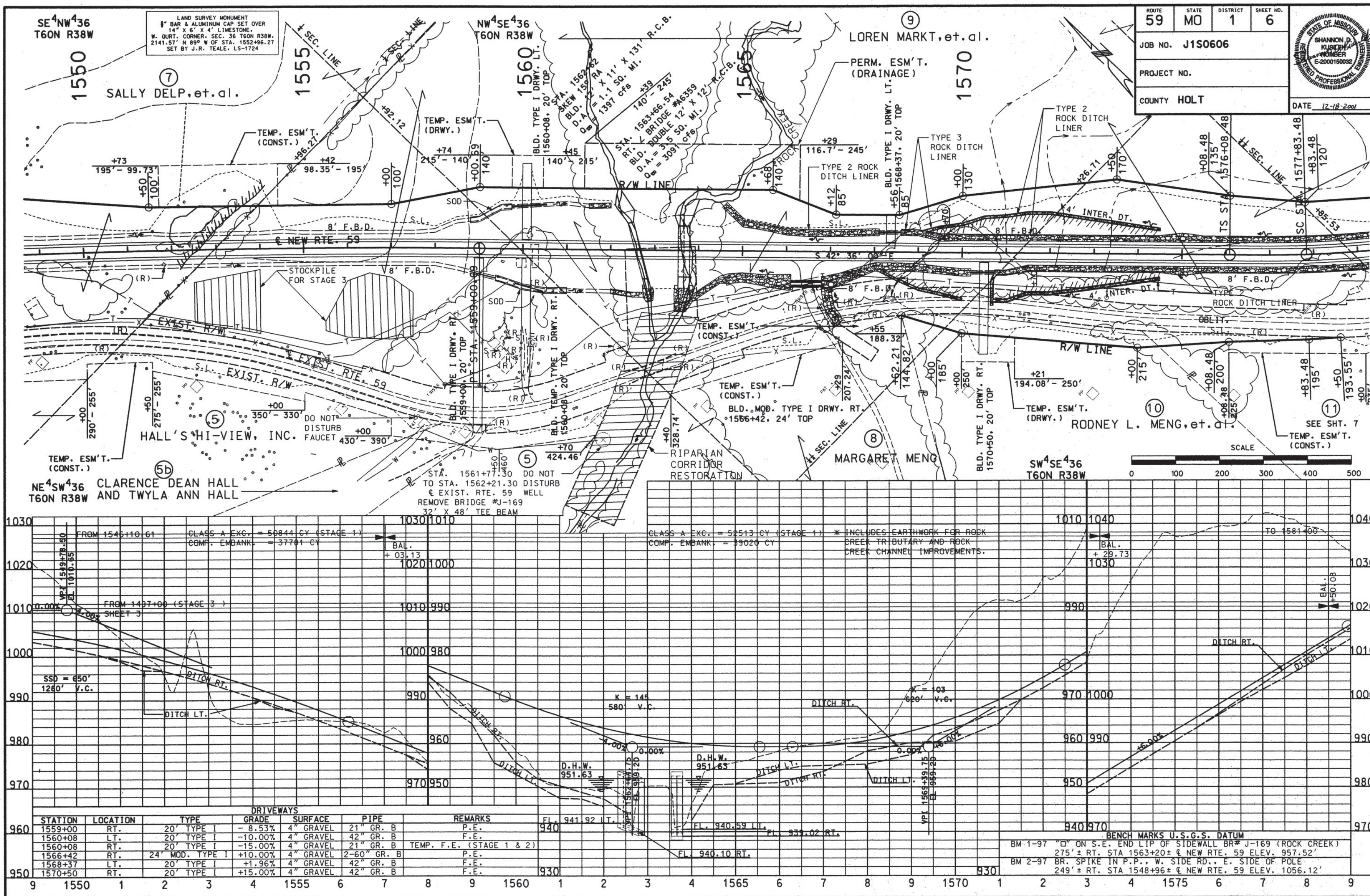


DRIVEWAYS

STATION	LOCATION	TYPE	GRADE	SURFACE	PIPE	REMARKS
1539+17	LT.	20' TYPE I	-2.00%	4" GRAVEL	NO PIPE	F.E.
1539+17	RT.	20' TYPE I	+5.00%	4" GRAVEL	NO PIPE	F.E.
1539+17	RT.	20' TYPE I	-9.70%	4" GRAVEL	21" GR. B	TEMP. F.E. (STAGE 1 & 2)
1547+50	LT.	20' TYPE I	+15.00%	4" GRAVEL	21" GR. B	F.E.
1547+50	RT.	20' TYPE I	+15.00%	4" GRAVEL	18" GR. B	TEMP. F.E. (STAGE 1 & 2)

BENCH MARKS U.S.G.S. DATUM
BM 2-97 BR. SPIKE IN P.P., W. SIDE RD., E. SIDE OF POLE 249' ± RT. STA 1548+96 ± ℄ NEW RTE. 59 ELEV. 1056.12'

t:\de-proj\Holt\j1s0606\plan_sheets\100_e\005_000pln_j1s0606_f.dgn 10:21:37 AM 12/18/2001



ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	6

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

DATE 12-18-2001

DRIVEWAYS

STATION	LOCATION	TYPE	GRADE	SURFACE	PIPE	REMARKS
1559+00	RT.	20' TYPE I	- 8.53%	4" GRAVEL	21" GR. B	P.E.
1560+08	LT.	20' TYPE I	-10.00%	4" GRAVEL	42" GR. B	F.E.
1560+08	RT.	20' TYPE I	-15.00%	4" GRAVEL	21" GR. B	TEMP. F.E. (STAGE 1 & 2)
1566+42	RT.	24' MOD. TYPE I	+10.00%	4" GRAVEL	2-60" GR. B	P.E.
1568+37	LT.	20' TYPE I	+1.96%	4" GRAVEL	42" GR. B	F.E.
1570+50	RT.	20' TYPE I	+15.00%	4" GRAVEL	42" GR. B	F.E.

BENCH MARKS U.S.G.S. DATUM

BM 1-97 "□" ON S.E. END LIP OF SIDEWALL BR# J-169 (ROCK CREEK) 275'± RT. STA 1563+20± ℄ NEW RTE. 59 ELEV. 957.52'

BM 2-97 BR. SPIKE IN P.P., W. SIDE RD., E. SIDE OF POLE 249'± RT. STA 1548+96± ℄ NEW RTE. 59 ELEV. 1056.12'

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\100_e\006_000pln_j1s0606_f.dgn 10:21:46 AM 12/18/2001

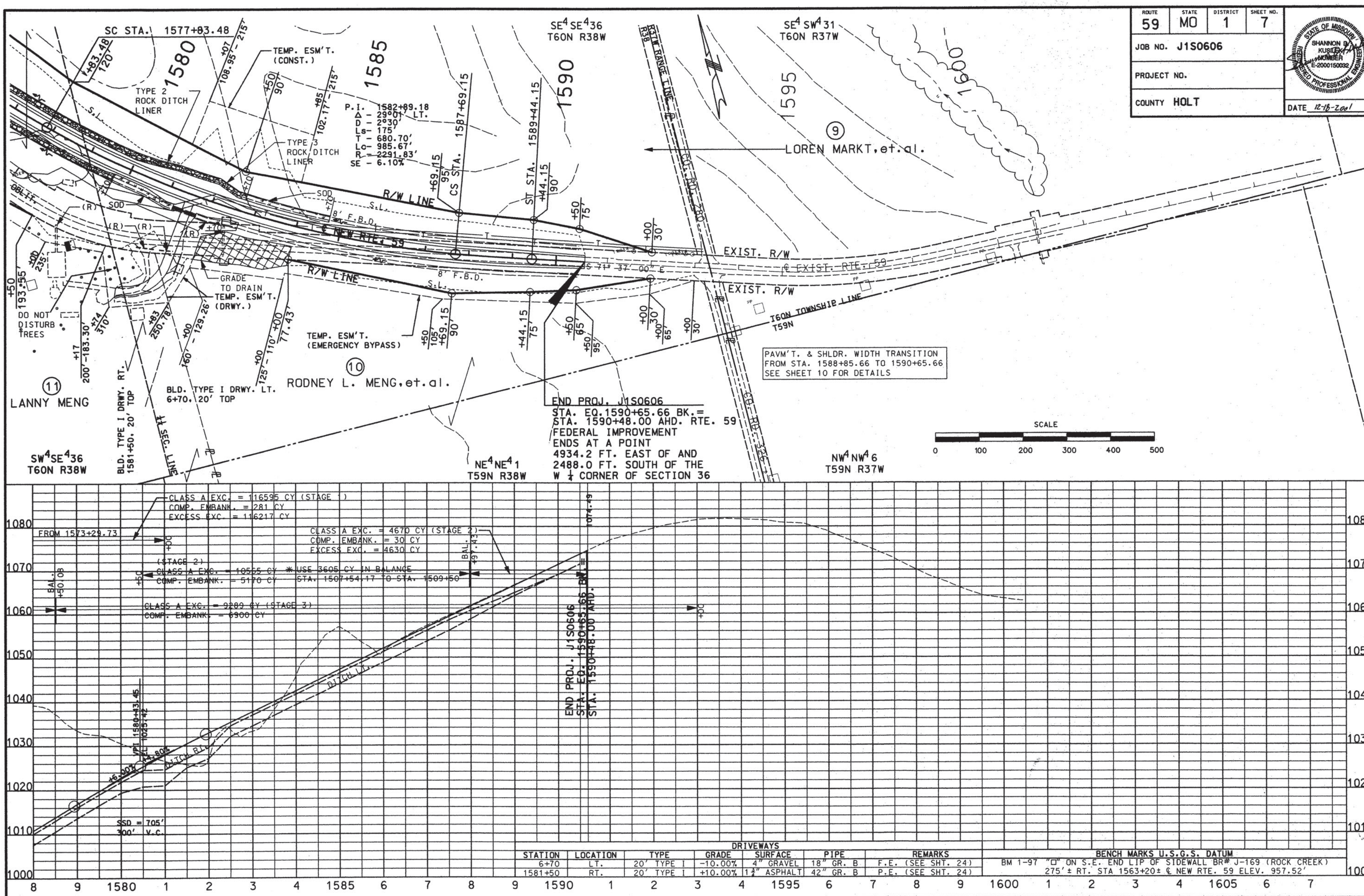
ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	7

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

DATE 12-18-2001



DRIVEWAYS

STATION	LOCATION	TYPE	GRADE	SURFACE	PIPE	REMARKS
6+70	LT.	20' TYPE I	-10.00%	4" GRAVEL	18" GR. B	F.E. (SEE SHT. 24)
1581+50	RT.	20' TYPE I	+10.00%	1¾" ASPHALT	42" GR. B	P.E. (SEE SHT. 24)

BENCH MARKS U.S.G.S. DATUM

BM 1-97 "□" ON S.E. END LIP OF SIDEWALL BR# J-169 (ROCK CREEK) 275'± RT. STA 1563+20± ℄ NEW RTE. 59 ELEV. 957.52'

t:\de-proj\Holt\j1s0606\plan_sheets\100_e\007_000pln_j1s0606_f.dgn 01:54:02 PM 12/06/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	8

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI SHANNON D. KUSTER NUMBER E-2000150032 REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001

Coordinate Point Listing
Missouri Coordinate System of 1983

Reciprocal Average Grid Factor : 1.0000754

SHEET NO.	STATION[1]	LOCATION	OFFSET[1] (FEET)	NORTHING (FEET)	EASTING (FEET)	DESCRIPTION	DESIGN PT. ID
3	1499+00.00	ROUTE 59	0	1,390,535.90	2,611,681.42	BEG. PROJ. J1S0606	200
3	1515+29.92	ROUTE 59	207.26 LT.	1,390,502.72	2,613,311.01	P.I. CURVE NEW5901	201
6	1551+20.99	ROUTE 59	13.28 LT.	1,387,960.68	2,615,989.76	P.I. CURVE NEW5902	202
7	1582+89.18	ROUTE 59	76.07 RT.	1,385,628.13	2,618,134.65	P.I. CURVE NEW5903	203
7	1590+65.66	ROUTE 59	0	1,385,375.13	2,618,895.92	END PROJ. J1S0606	204
4	3+97.91	CO. RD. 369	0	1,390,488.50	2,614,029.17	BEG. CO. RD. 369	--
4	5+99.02	CO. RD. 369	40.66 RT.	1,390,492.01	2,613,828.09	P.I. CURVE DRW19+00	307
4	10+00.00	CO. RD. 369	0	1,390,123.04	2,613,608.54	END CO. RD. 369	308

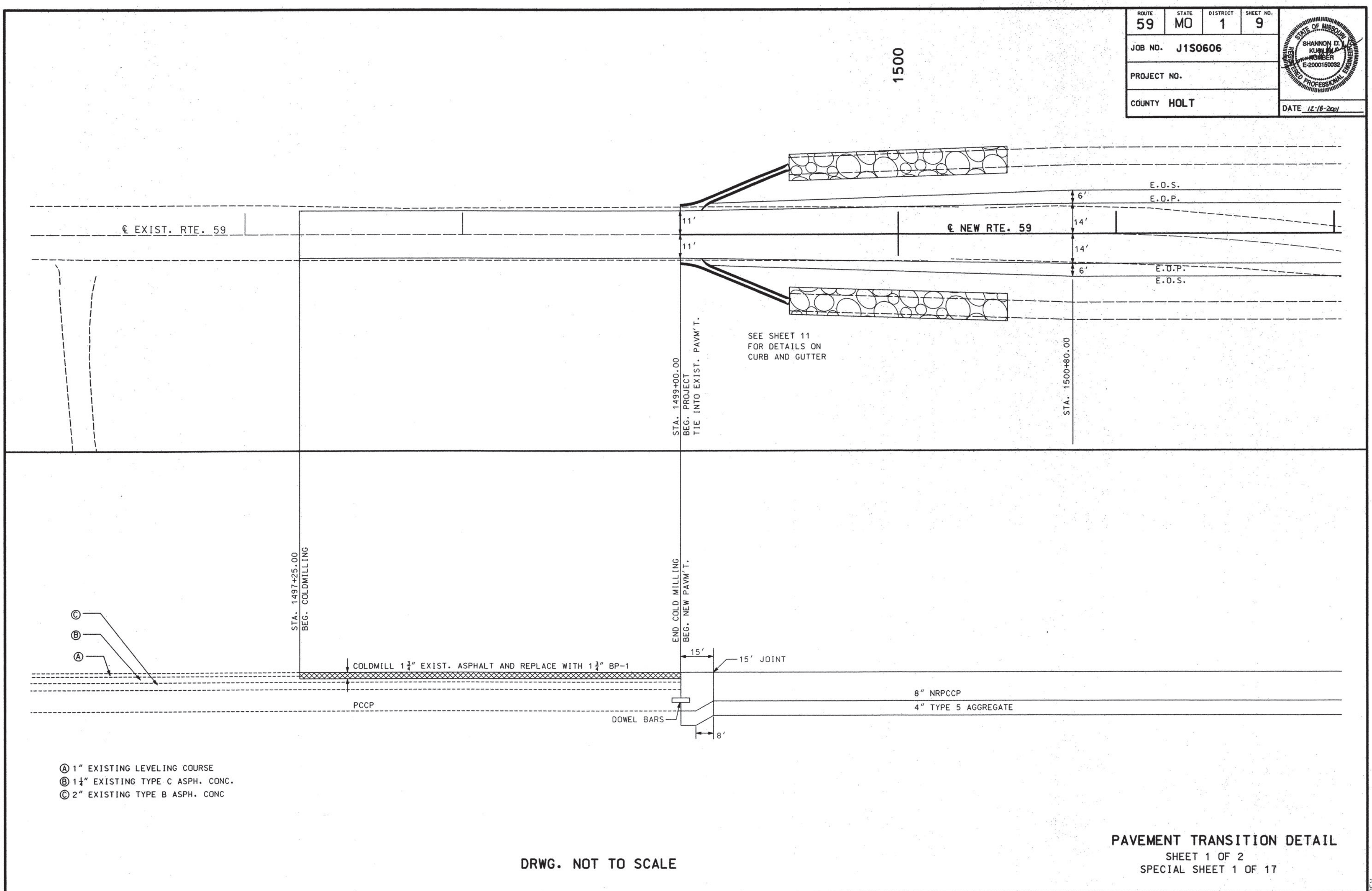
1 Ground Distance

NOTE : The reciprocal of the average grid factor is used as a multiplier from state plane distance to ground distance.

Coordinate Point Sheet
Sheet 1 of 1

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\1_e\008_000cor_j1s0606_f.dgn 08:29:05 AM 12/07/2001



t:\de-proj\Holt\j1s0606\plan_sheets\20_e\009_001spc_j1s0606_f.dgn 01:32:29 PM 12/06/2001

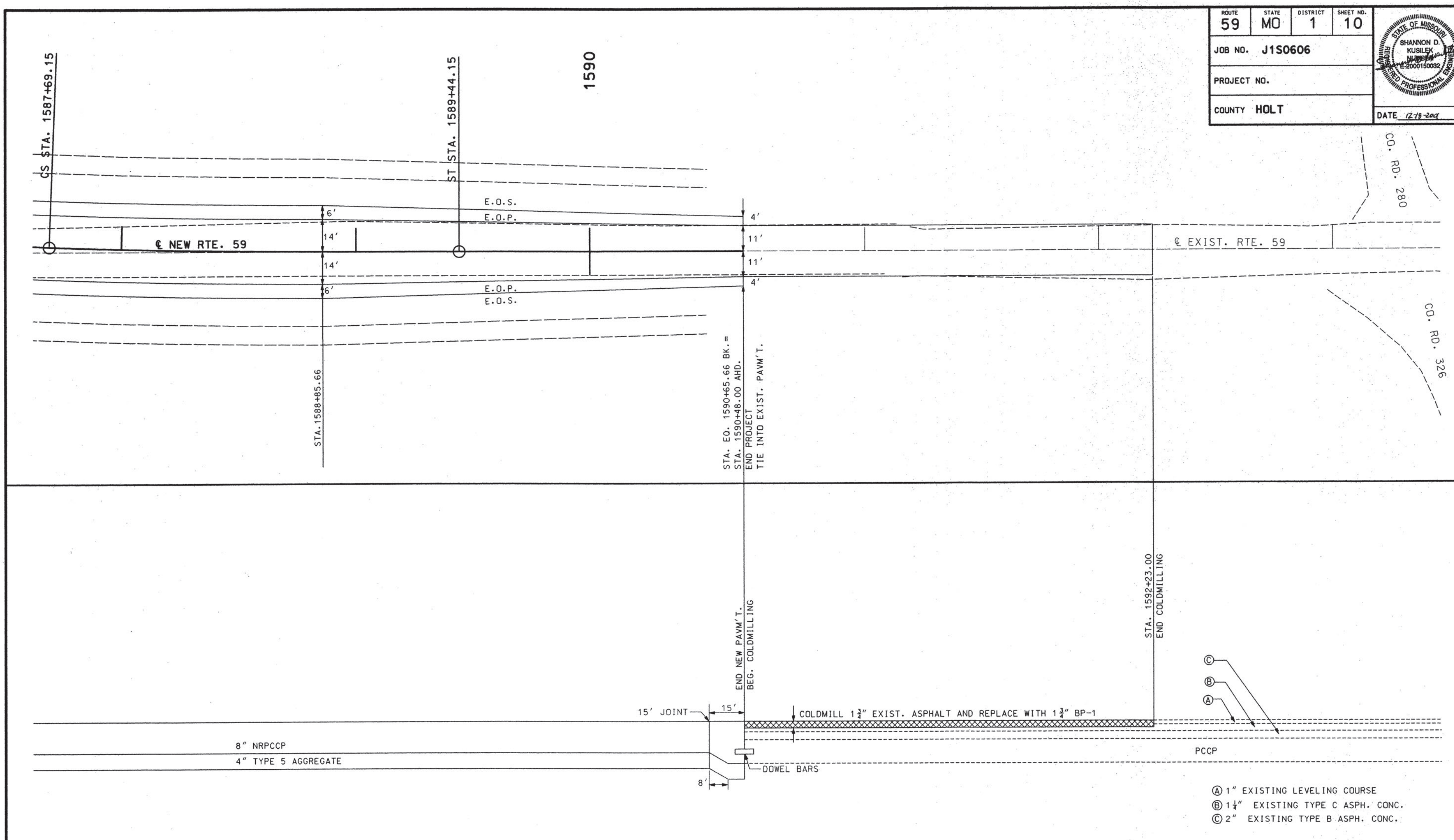
ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	10

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

DATE 12-18-2001



DRWG. NOT TO SCALE

PAVEMENT TRANSITION DETAIL

SHEET 2 OF 2
SPECIAL SHEET 2 OF 17

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\20_e\010_002spc_j1s0606_f.dgn 01:32:26 PM 12/06/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	11

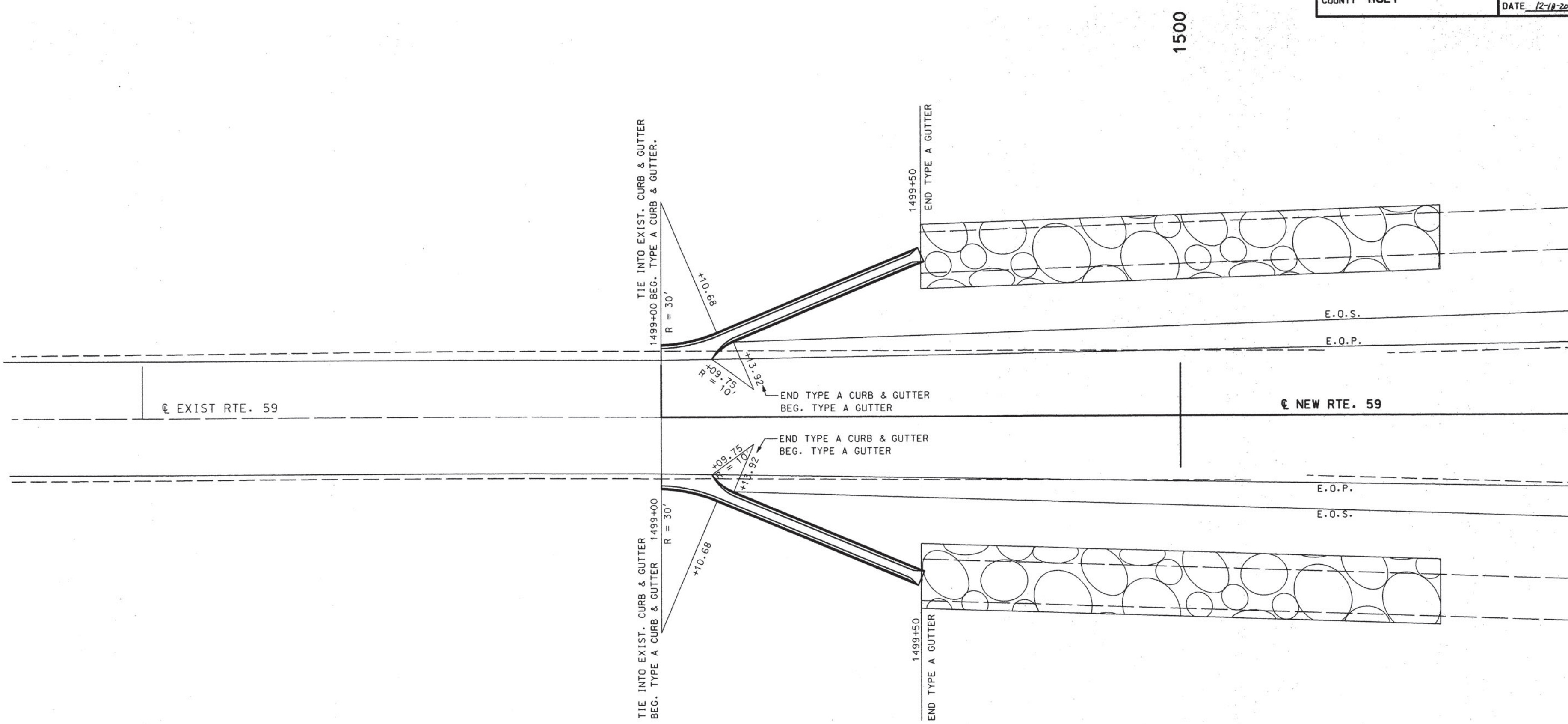
JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001



DRWG. NOT TO SCALE

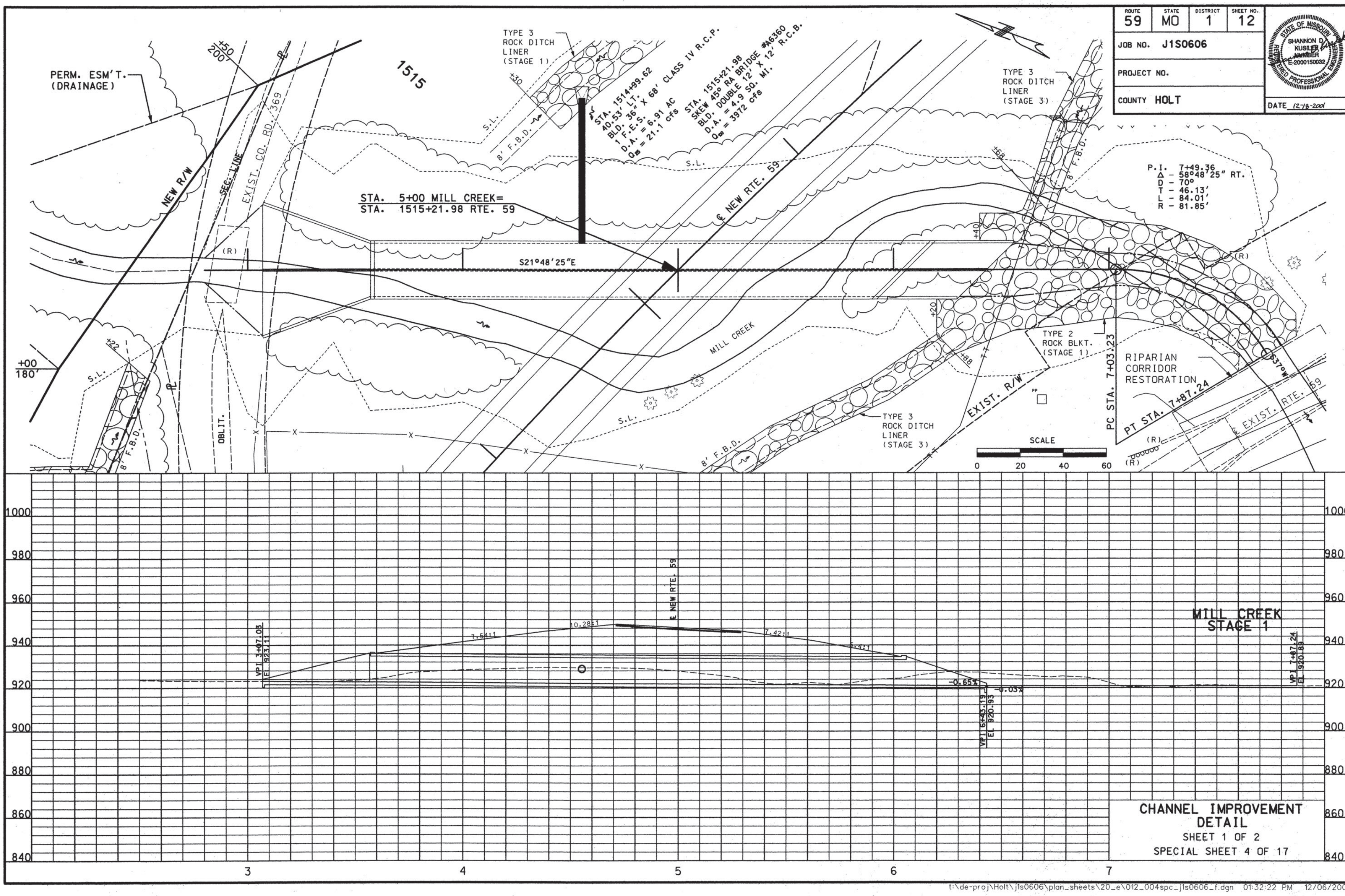
CURB & GUTTER DETAIL

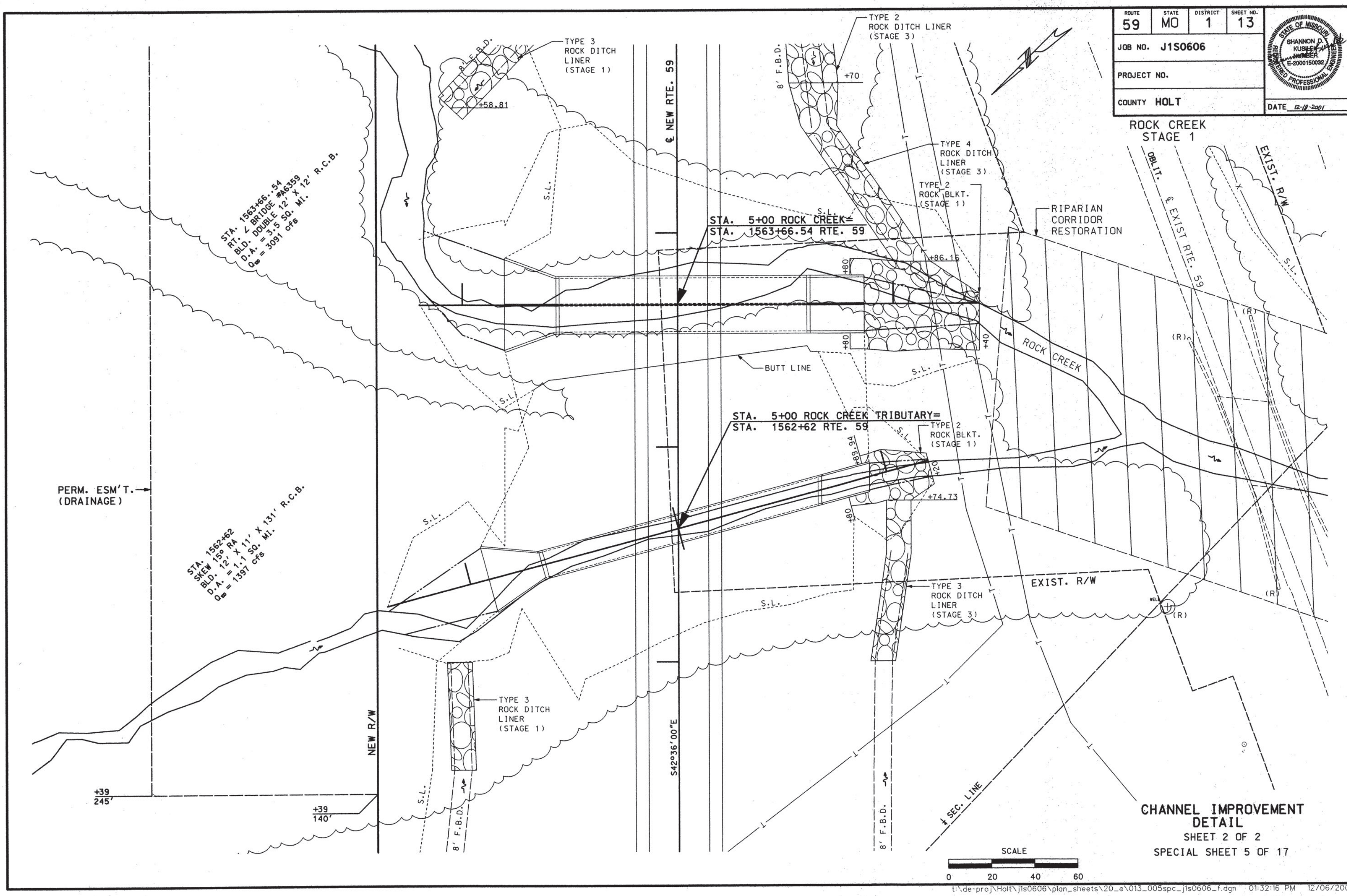
SHEET 1 OF 1

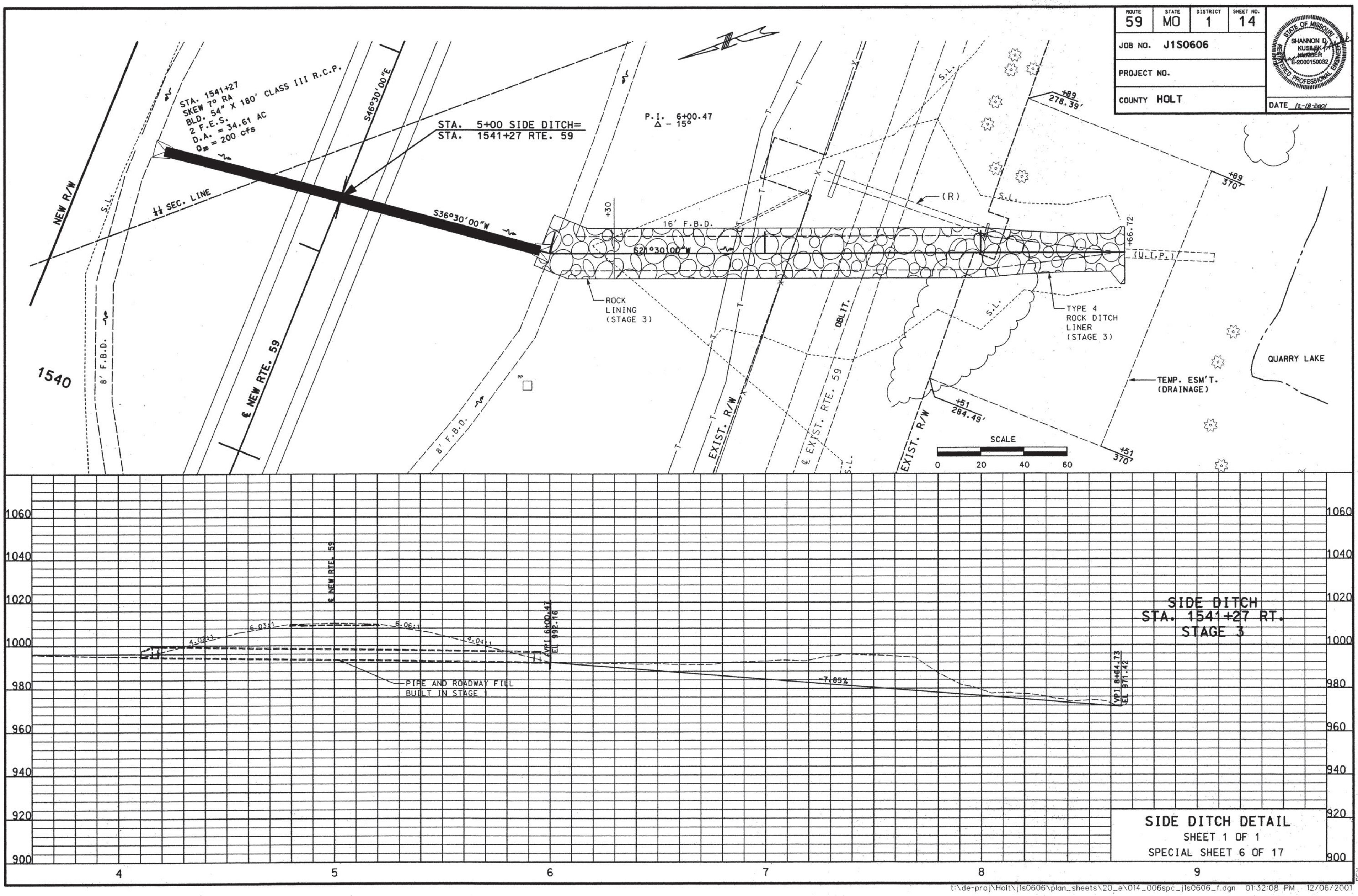
SPECIAL SHEET 3 OF 17

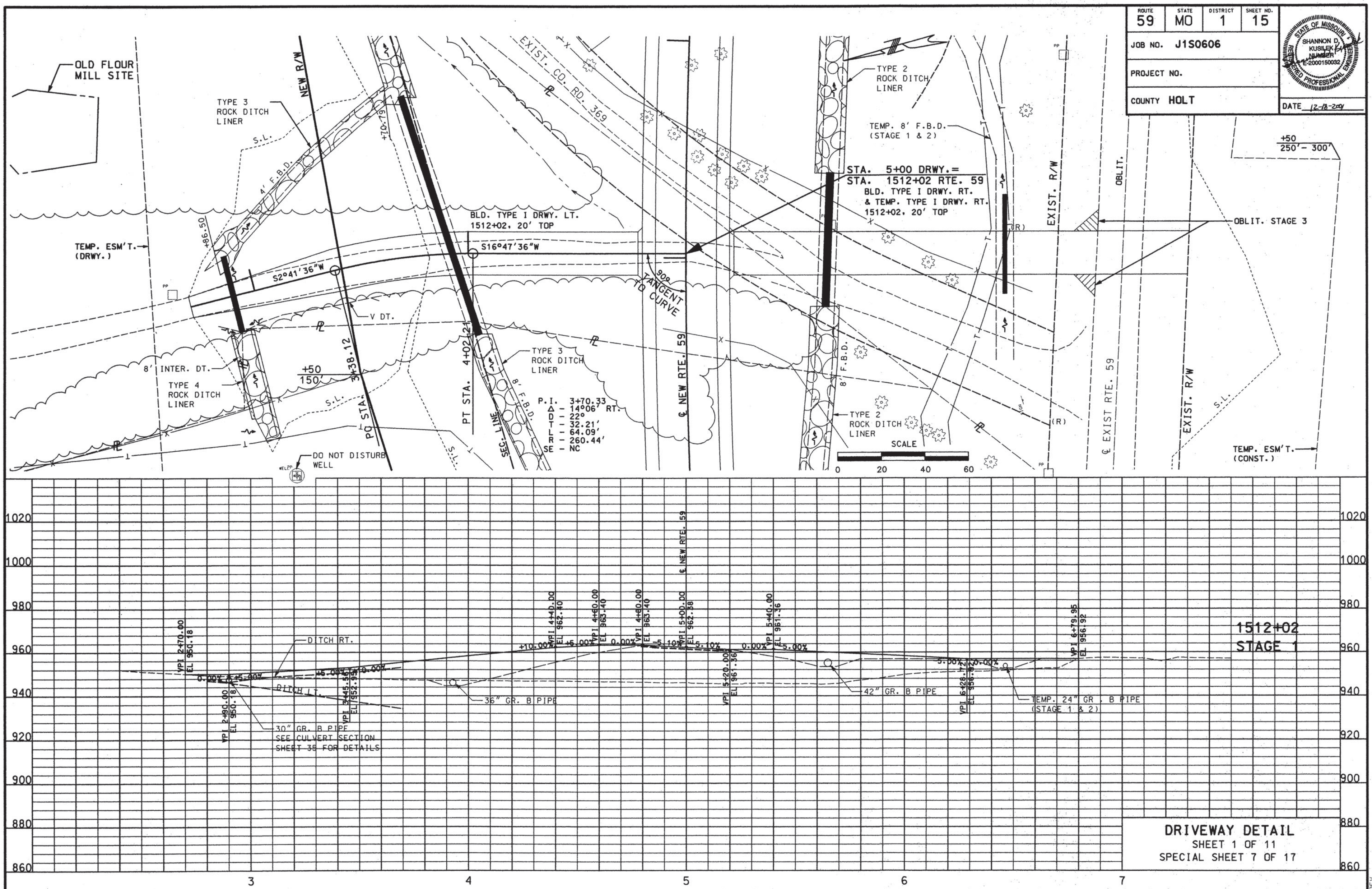
REV.

t:\de-proj\Holt\j1s0606\plan_sheets\10_e\011_003spc_j1s0606_f.dgn 01:36:42 PM 12/06/2001

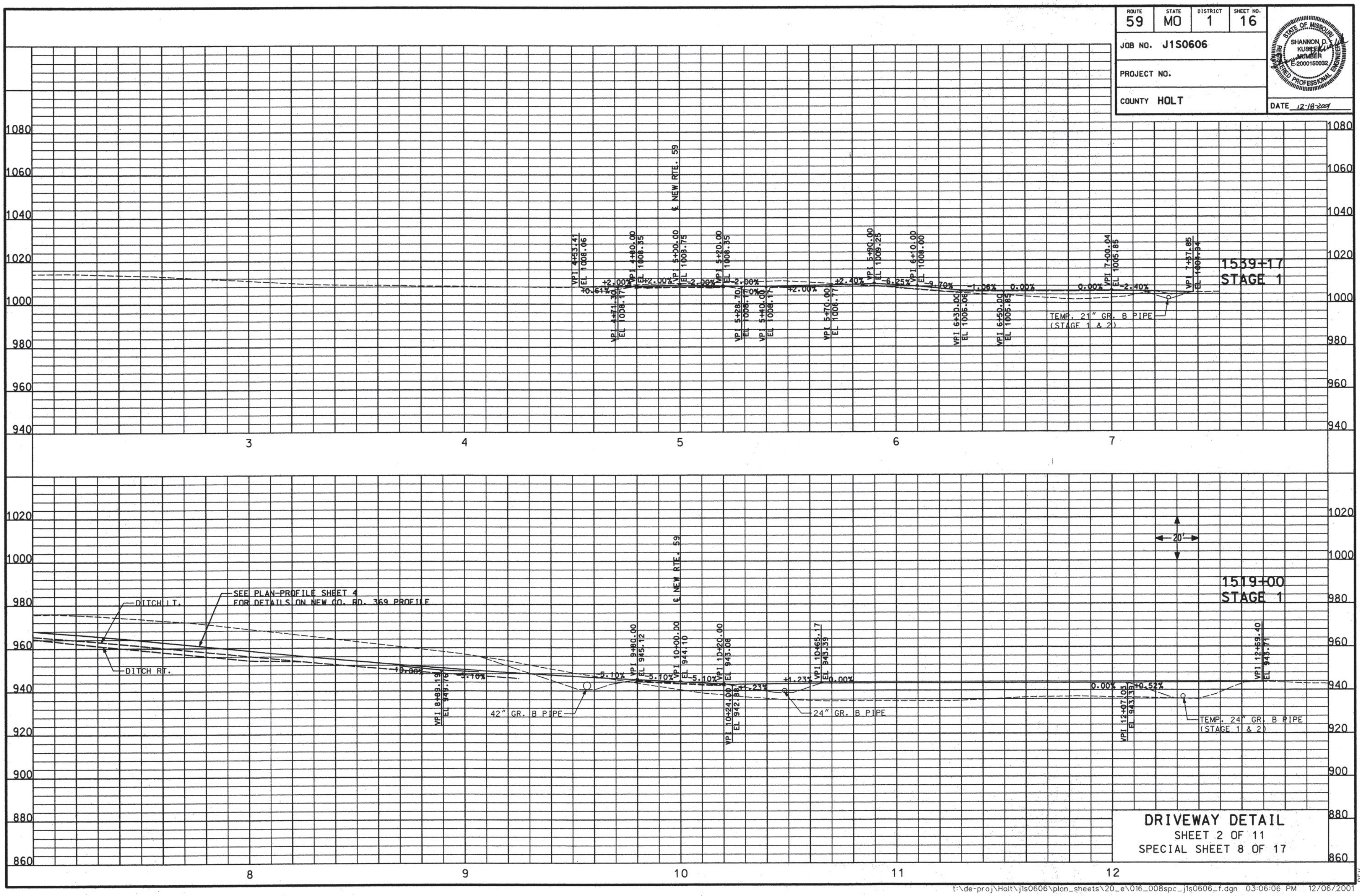

ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 12
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
DATE 12-18-2001
STATE OF MISSOURI
SHANNON D. KUSILEK
E-2000150032
PROFESSIONAL ENGINEER
PERM. ESM'T. (DRAINAGE)
NEW R/W
SEC. LINE
EXIST. CO. RD. 369
1515
TYPE 3 ROCK DITCH LINER (STAGE 1)
STA. 1514+99.62 40.53' LT. BLD. 36" X 68' CLASS IV R.C.P. 1 F.E.S. D.A. = 6.91 AC Q50 = 21.1 cfs
STA. 1515+21.98 SKEW 45° RA BRIDGE #A6360 BLD. DOUBLE 12' X 12' R.C.B. D.A. = 4.9 SQ. MI. Q50 = 3972 cfs
STA. 5+00 MILL CREEK=
STA. 1515+21.98 RTE. 59
℄ NEW RTE. 59
S21°48'25"E
TYPE 3 ROCK DITCH LINER (STAGE 3)
P.I. 7+49.36
Δ - 58°48'25" RT.
D - 70°
T - 46.13'
L - 84.01'
R - 81.85'
MILL CREEK
TYPE 2 ROCK BLKT. (STAGE 1)
RIPARIAN CORRIDOR RESTORATION
PC STA. 7+03.23
PT STA. 7+87.24
EXIST. R/W
℄ EXIST. RTE. 59
TYPE 3 ROCK DITCH LINER (STAGE 3)
8' F.B.D.
S.L.
OBLIT.
SCALE
0 20 40 60
℄ NEW RTE. 59
VPI 3+07.03 EL 923.11
VPI 6+43.19 EL 920.93
VPI 7+87.24 EL 920.89
-0.65%
-0.03%
MILL CREEK STAGE 1
1000 980 960 940 920 900 880 860 840
3 4 5 6 7
CHANNEL IMPROVEMENT DETAIL
SHEET 1 OF 2
SPECIAL SHEET 4 OF 17
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\20_e\012_004spc_j1s0606_f.dgn 01:32:22 PM 12/06/2001

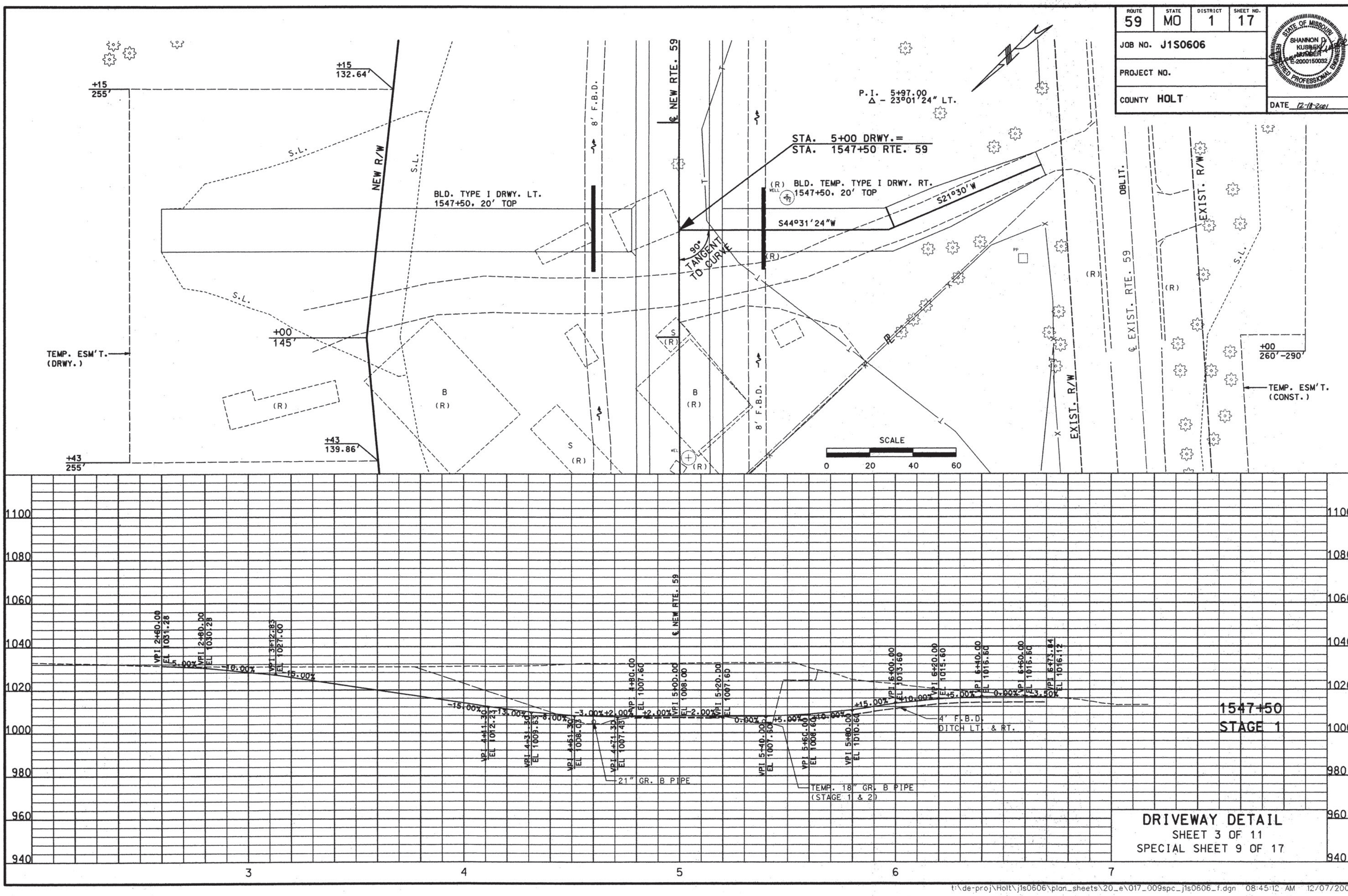

ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 13
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
DATE 12-18-2001
STATE OF MISSOURI
SHANNON D. KUSLER
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
ROCK CREEK
STAGE 1
TYPE 3 ROCK DITCH LINER (STAGE 1)
TYPE 2 ROCK DITCH LINER (STAGE 3)
TYPE 4 ROCK DITCH LINER (STAGE 3)
TYPE 2 ROCK BLKT. (STAGE 1)
RIPARIAN CORRIDOR RESTORATION
OBLIT. ℄ EXIST RTE. 59
EXIST. R/W
℄ NEW RTE. 59
8' F.B.D.
+58.81
+70
+86.15
+80
+40
STA. 1563+66.54 RT. ∠ BRIDGE #A6359 BLD. DOUBLE 12' X 12' R.C.B. D.A. = 3.5 SQ. MI. Q50 = 3091 cfs
STA. 5+00 ROCK CREEK= STA. 1563+66.54 RTE. 59
S.L.
ROCK CREEK
BUTT LINE
(R)
STA. 5+00 ROCK CREEK TRIBUTARY= STA. 1562+62 RTE. 59
TYPE 2 ROCK BLKT. (STAGE 1)
+89.94
+20
+74.73
+80
PERM. ESM'T. (DRAINAGE)
STA. 1562+62 SKEW 15° RA BLD. 12' X 11' X 131' R.C.B. D.A. = 1.1 SQ. MI. Q50 = 1397 cfs
TYPE 3 ROCK DITCH LINER (STAGE 3)
EXIST. R/W
WELL
TYPE 3 ROCK DITCH LINER (STAGE 1)
NEW R/W
S42°36'00"E
+39 245'
+39 140'
1/4 SEC. LINE
CHANNEL IMPROVEMENT DETAIL
SHEET 2 OF 2
SPECIAL SHEET 5 OF 17
SCALE
0 20 40 60
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\20_e\013_005spc_j1s0606_f.dgn 01:32:16 PM 12/06/2001


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 14
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
DATE 12-18-2001
STA. 1541+27
SKEW 7° RA
BLD. 54" X 180' CLASS III R.C.P.
2 F.E.S.
D.A. = 34.61 AC
Q = 200 cfs
S46°30'00"E
STA. 5+00 SIDE DITCH=
STA. 1541+27 RTE. 59
P.I. 6+00.47
Δ - 15°
NEW R/W
1/4 SEC. LINE
S36°30'00"W
16' F.B.D.
S21°30'00"W
+66.72
(U.L.P.)
(R)
+89 278.39'
+89 370'
+51 284.49'
+51 370'
ROCK LINING (STAGE 3)
TYPE 4 ROCK DITCH LINER (STAGE 3)
TEMP. ESM'T. (DRAINAGE)
QUARRY LAKE
OBLIT.
EXIST. R/W
℄ EXIST. RTE. 59
℄ NEW RTE. 59
8' F.B.D.
1540
S.L.
SCALE
0 20 40 60
SIDE DITCH
STA. 1541+27 RT.
STAGE 3
VPI 6+00.47
EL 992.16
VPI 8+64.73
EL 971.42
-7.85%
4.02:1
6.03:1
6.06:1
4.04:1
PIPE AND ROADWAY FILL BUILT IN STAGE 1
1060
1040
1020
1000
980
960
940
920
900
4
5
6
7
8
9
SIDE DITCH DETAIL
SHEET 1 OF 1
SPECIAL SHEET 6 OF 17
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\20_e\014_006spc_j1s0606_f.dgn 01:32:08 PM 12/06/2001



t:\de-proj\Holt\j1s0606\plan_sheets\20_e\015_007spc_j1s0606_f.dgn 03:03:51 PM 12/06/2001


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 16
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
STATE OF MISSOURI
SHANNON D. KUSLER
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
DATE 12-18-2001
℄ NEW RTE. 59
1539+17
STAGE 1
TEMP. 21" GR. B PIPE (STAGE 1 & 2)
1519+00
STAGE 1
DITCH LT.
DITCH RT.
SEE PLAN-PROFILE SHEET 4 FOR DETAILS ON NEW CO. RD. 369 PROFILE
42" GR. B PIPE
24" GR. B PIPE
TEMP. 24" GR. B PIPE (STAGE 1 & 2)
20'
DRIVEWAY DETAIL
SHEET 2 OF 11
SPECIAL SHEET 8 OF 17
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\20_e\016_008spc_j1s0606_f.dgn 03:06:06 PM 12/06/2001


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 17
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
DATE 12-18-2001
P.I. 5+97.00
Δ - 23°01'24" LT.
STA. 5+00 DRWY.=
STA. 1547+50 RTE. 59
BLD. TYPE I DRWY. LT.
1547+50, 20' TOP
BLD. TEMP. TYPE I DRWY. RT.
1547+50, 20' TOP
S21°30'W
S44°31'24"W
90° TANGENT TO CURVE
NEW R/W
℄ NEW RTE. 59
8' F.B.D.
S.L.
OBLIT.
℄ EXIST. RTE. 59
EXIST. R/W
+15
255'
+15
132.64'
+00
145'
+43
139.86'
+43
255'
+00
260'-290'
TEMP. ESM'T. (DRWY.)
TEMP. ESM'T. (CONST.)
SCALE
0 20 40 60
VPI 2+60.00
EL 1031.28
VPI 2+80.00
EL 1030.28
VPI 3+12.83
EL 1027.00
-5.00%
-10.00%
-15.00%
-13.00%
-8.00%
-3.00%
+2.00%
-2.00%
0.00%
+5.00%
+10.00%
+15.00%
+3.50%
VPI 4+41.30
EL 1012.23
VPI 4+31.30
EL 1009.63
VPI 4+51.30
EL 1008.03
VPI 4+71.30
EL 1007.43
VPI 4+80.00
EL 1007.60
VPI 5+00.00
EL 1008.00
VPI 5+20.00
EL 1007.60
VPI 5+40.00
EL 1007.60
VPI 5+60.00
EL 1008.60
VPI 5+80.00
EL 1010.60
VPI 6+00.00
EL 1013.60
VPI 6+20.00
EL 1015.60
VPI 6+40.00
EL 1016.60
VPI 6+50.00
EL 1016.60
VPI 6+73.84
EL 1016.12
21" GR. B PIPE
TEMP. 18" GR. B PIPE
(STAGE 1 & 2)
4' F.B.D.
DITCH LT. & RT.
1547+50
STAGE 1
1100
1080
1060
1040
1020
1000
980
960
940
3
4
5
6
7
DRIVEWAY DETAIL
SHEET 3 OF 11
SPECIAL SHEET 9 OF 17
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\20_e\017_009spc_j1s0606_f.dgn 08:45:12 AM 12/07/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	18

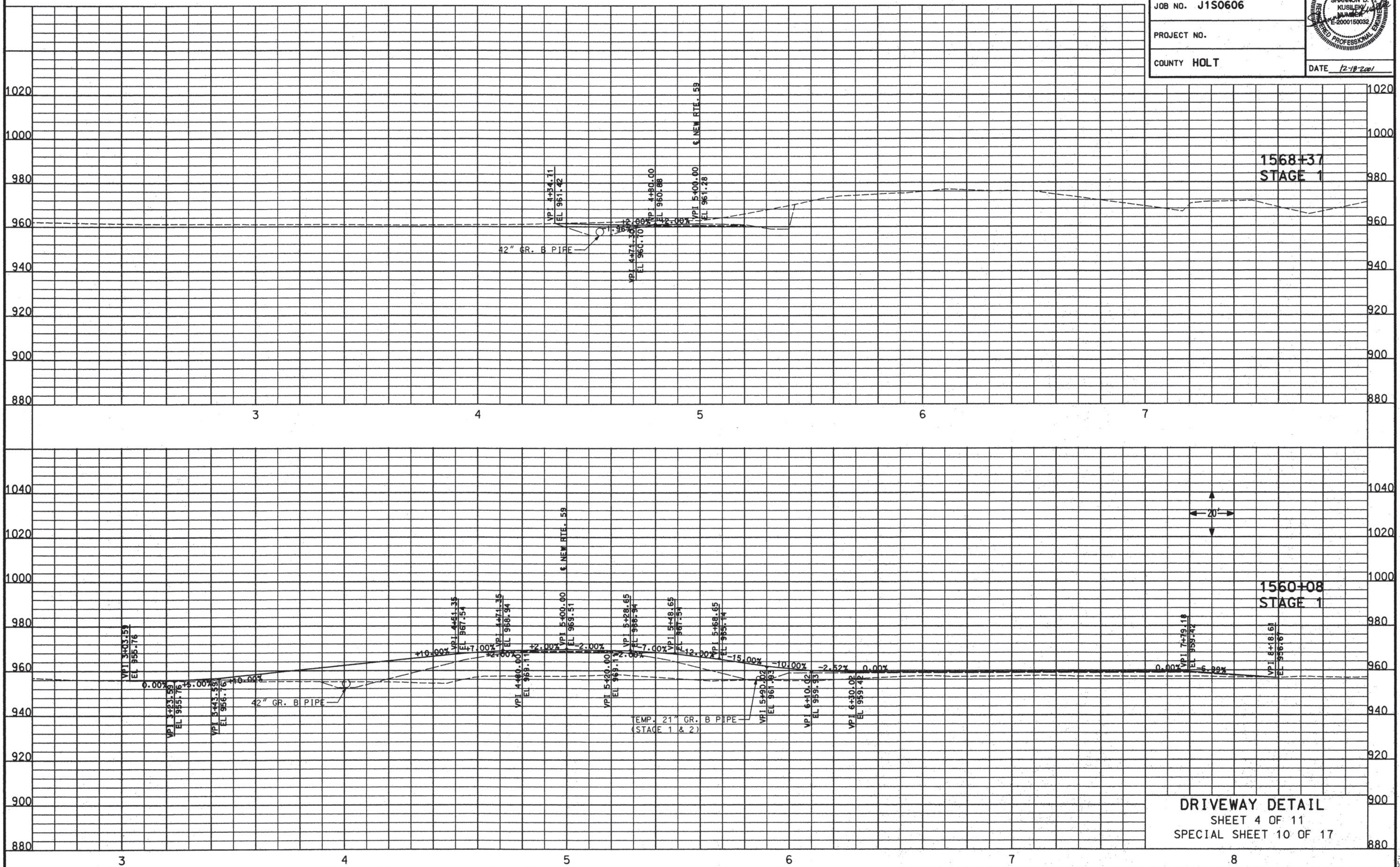
JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI SHANNON D. KUSILEK NUMBER E-2000150032 REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001



DRIVEWAY DETAIL
SHEET 4 OF 11
SPECIAL SHEET 10 OF 17

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\20_e\018_010spc_j1s0606_f.dgn 03:08:42 PM 12/06/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	19

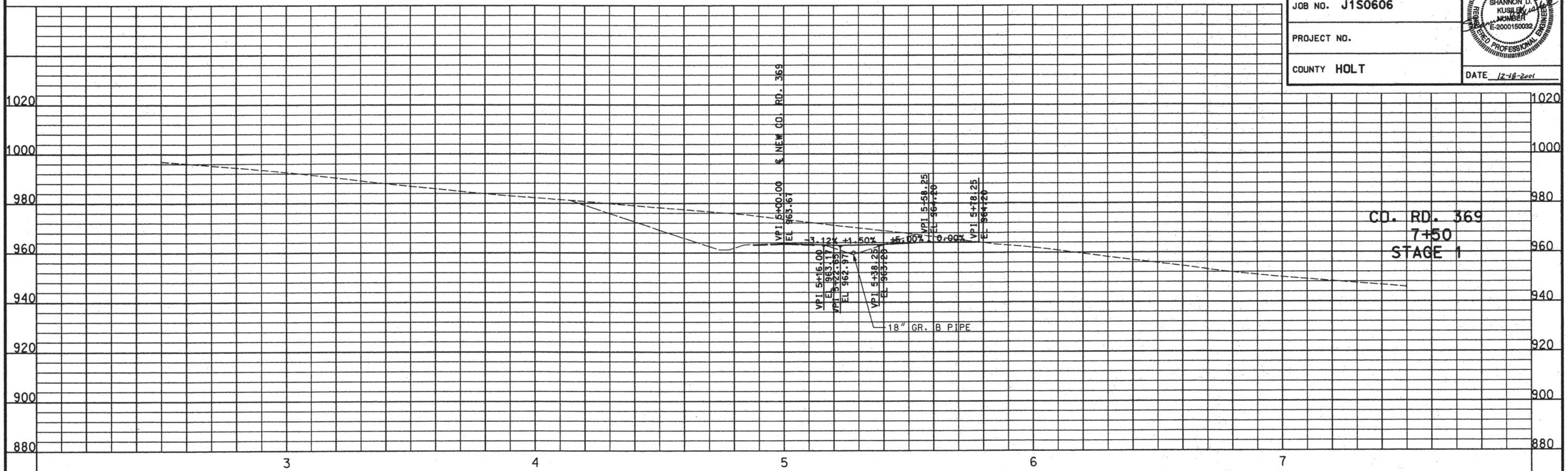
JOB NO. J1S0606

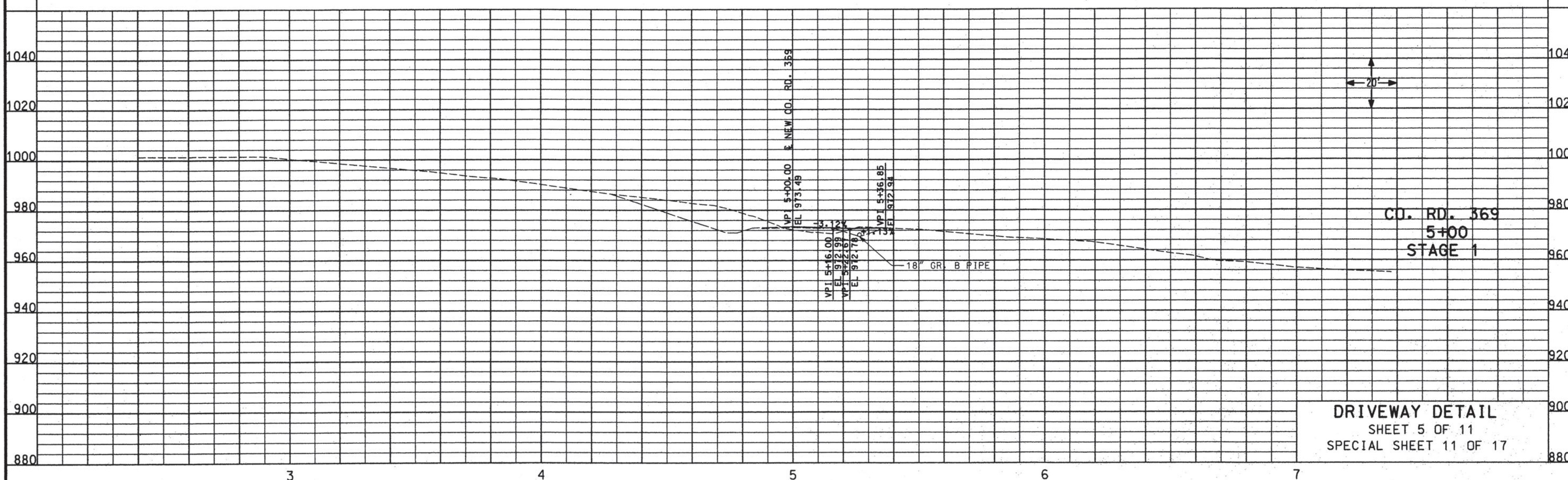
PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001





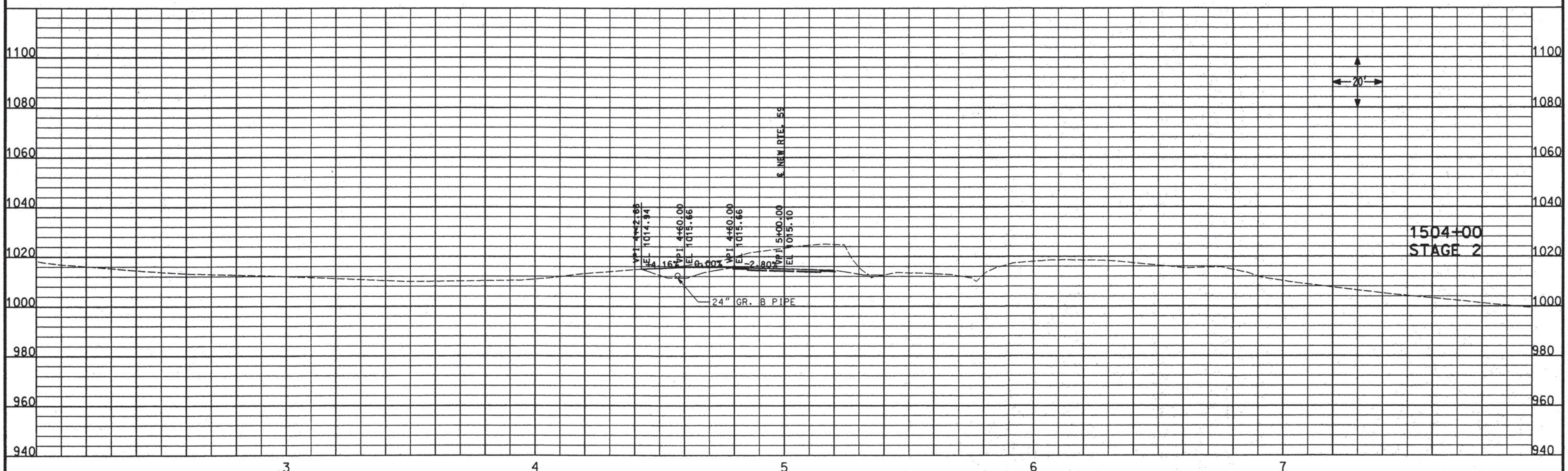
DRIVEWAY DETAIL
SHEET 5 OF 11
SPECIAL SHEET 11 OF 17

REV.

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	20
JOB NO. J1S0606			
PROJECT NO.			
COUNTY HOLT			

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001



DRIVEWAY DETAIL

SHEET 6 OF 11

SPECIAL SHEET 12 OF 17

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\20_e\020_012spc_j1s0606_f.dgn 03:19:00 PM 12/06/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	21

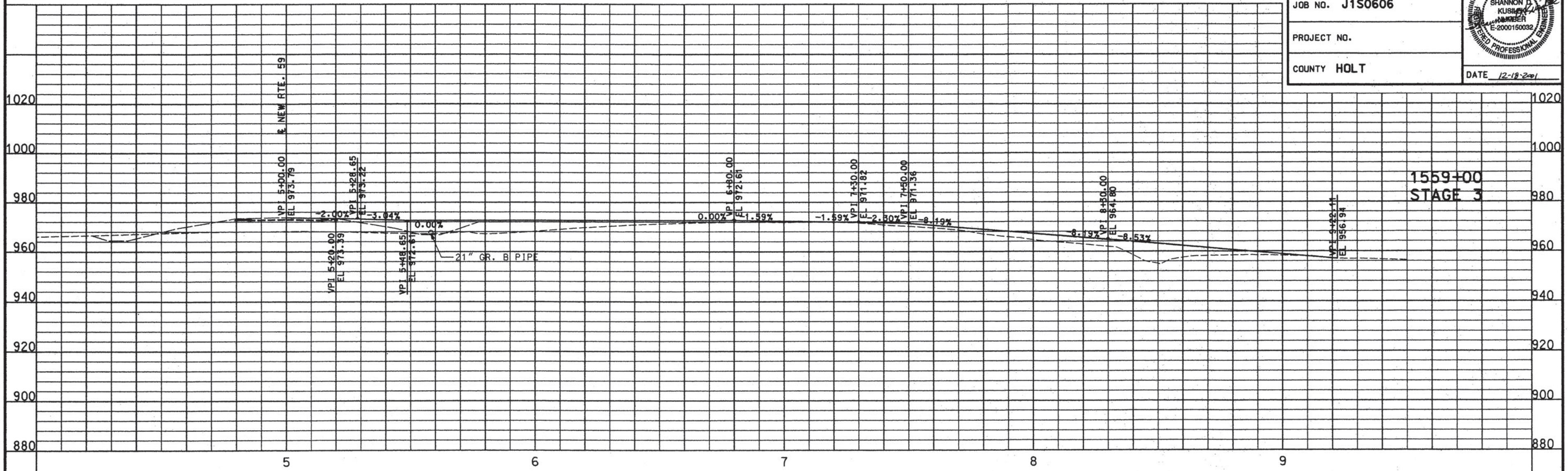
JOB NO. J1S0606

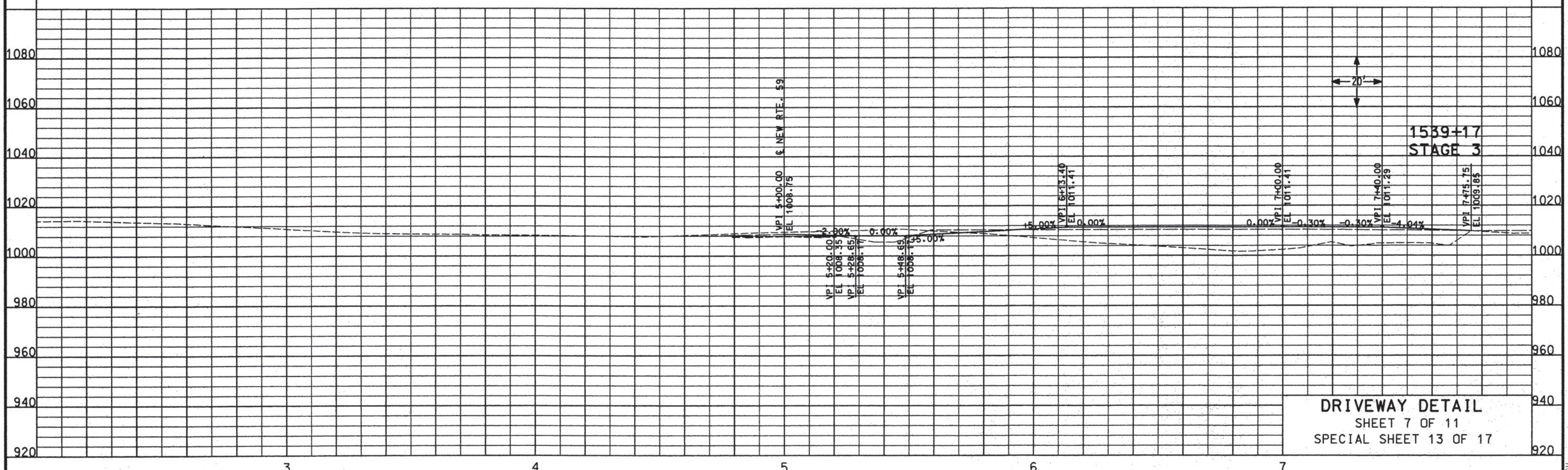
PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-19-2001

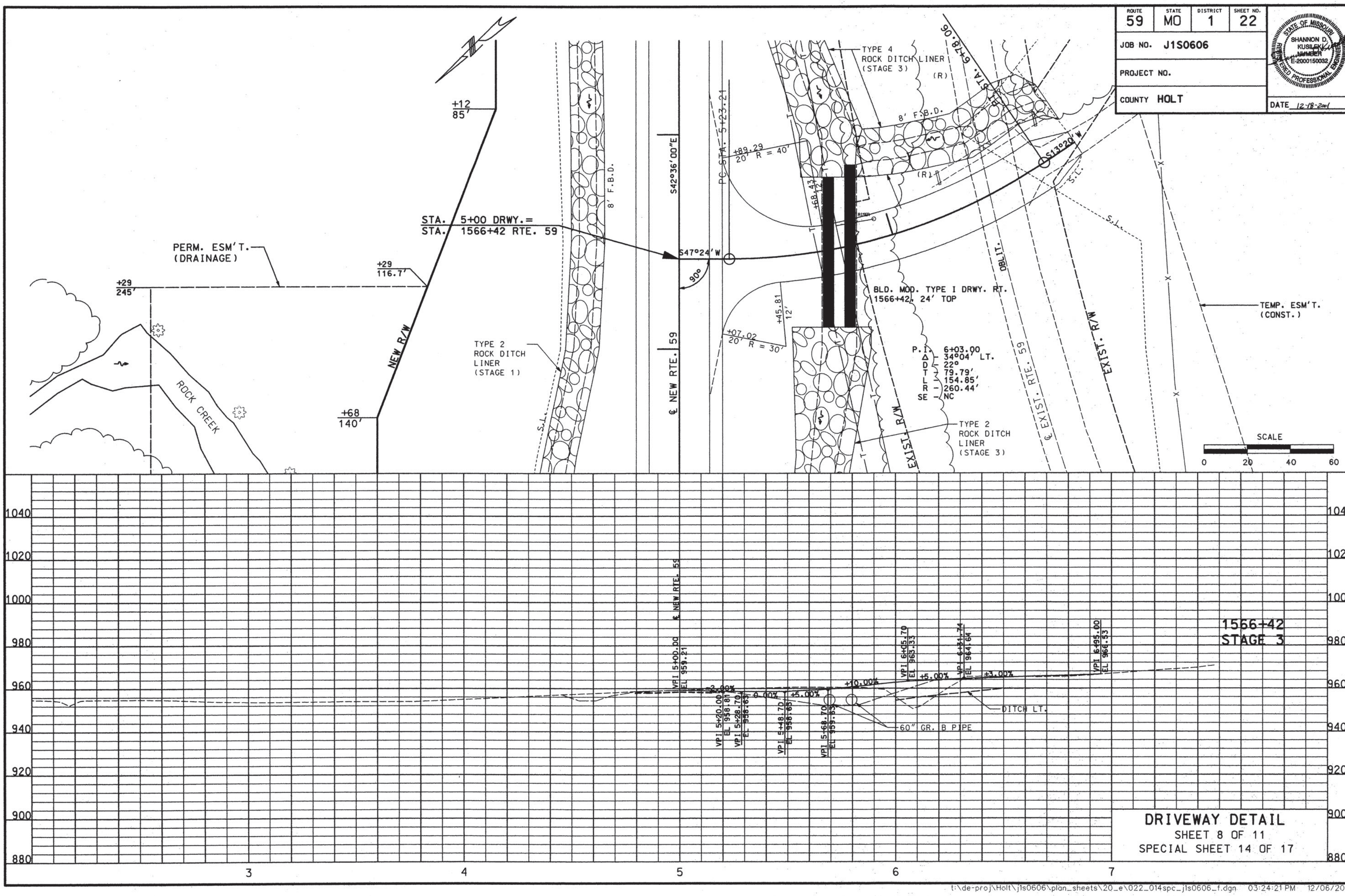




DRIVEWAY DETAIL
SHEET 7 OF 11
SPECIAL SHEET 13 OF 17

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\20_e\021_013spc_j1s0606_f.dgn 03:21:42 PM 12/06/2001


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 22
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
SHANNON D. KUSILEK
NUMBER E-2000150032
STATE OF MISSOURI
REGISTERED PROFESSIONAL ENGINEER
DATE 12-18-2001
TYPE 4 ROCK DITCH LINER (STAGE 3)
8' F.B.D.
PC STA. 5+23.21
+89.29 20' R = 40'
S42°36'00"E
STA. 5+00 DRWY.=
STA. 1566+42 RTE. 59
PERM. ESM'T. (DRAINAGE)
+12 85'
+29 116.7'
+29 245'
+68 140'
NEW R/W
ROCK CREEK
TYPE 2 ROCK DITCH LINER (STAGE 1)
S47°24'W
90°
+68.43 12'
+45.81 12'
+07.02 20' R = 30'
S13°20'W
BLD. MOD. TYPE I DRWY. RT. 1566+42, 24' TOP
P.I. 6+03.00
Δ 34°04' LT.
D 22°
T 79.79'
L 154.85'
R 260.44'
SE NC
TYPE 2 ROCK DITCH LINER (STAGE 3)
EXIST. R/W
℄ EXIST. RTE. 59
OBL IT.
S.L.
TEMP. ESM'T. (CONST.)
SCALE 0 20 40 60
℄ NEW RTE. 59
VPI 5+00.00 EL 959.21
VPI 5+20.00 EL 958.81
VPI 5+28.70 EL 958.67
VPI 5+48.70 EL 958.65
VPI 5+68.70 EL 959.53
VPI 6+05.70 EL 963.33
VPI 6+31.74 EL 964.64
VPI 6+95.00 EL 966.53
-2.00%
0.00%
-5.00%
+10.00%
+5.00%
+3.00%
DITCH LT.
60" GR. B PIPE
1566+42 STAGE 3
1040 1020 1000 980 960 940 920 900 880
3 4 5 6 7
DRIVEWAY DETAIL
SHEET 8 OF 11
SPECIAL SHEET 14 OF 17
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\20_e\022_014spc_j1s0606_f.dgn 03:24:21 PM 12/06/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	23

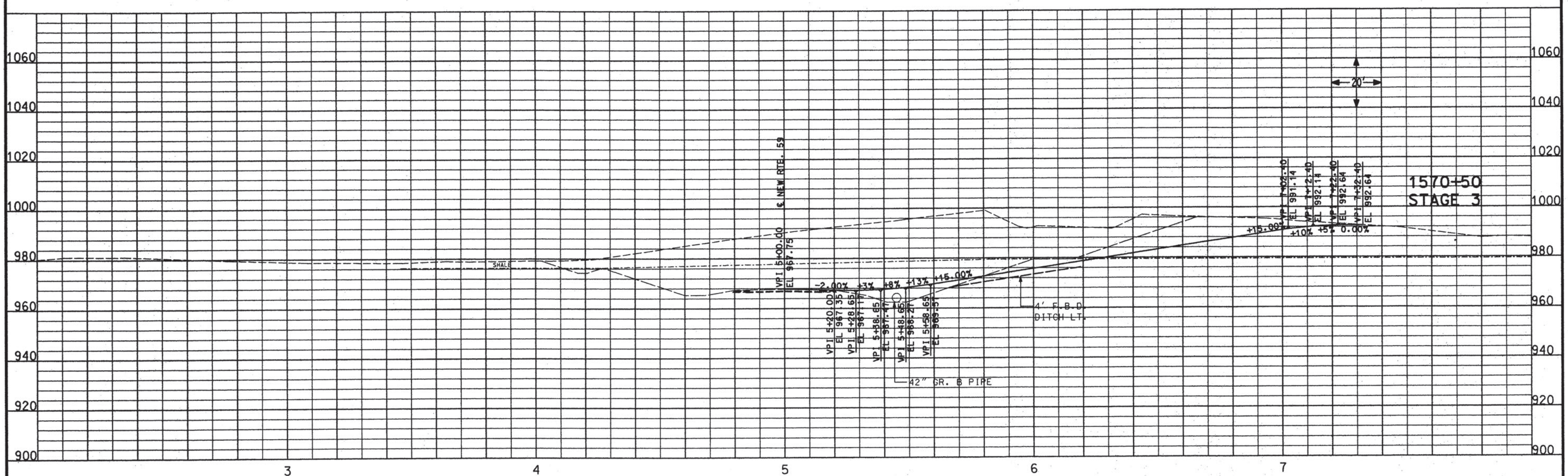
JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001



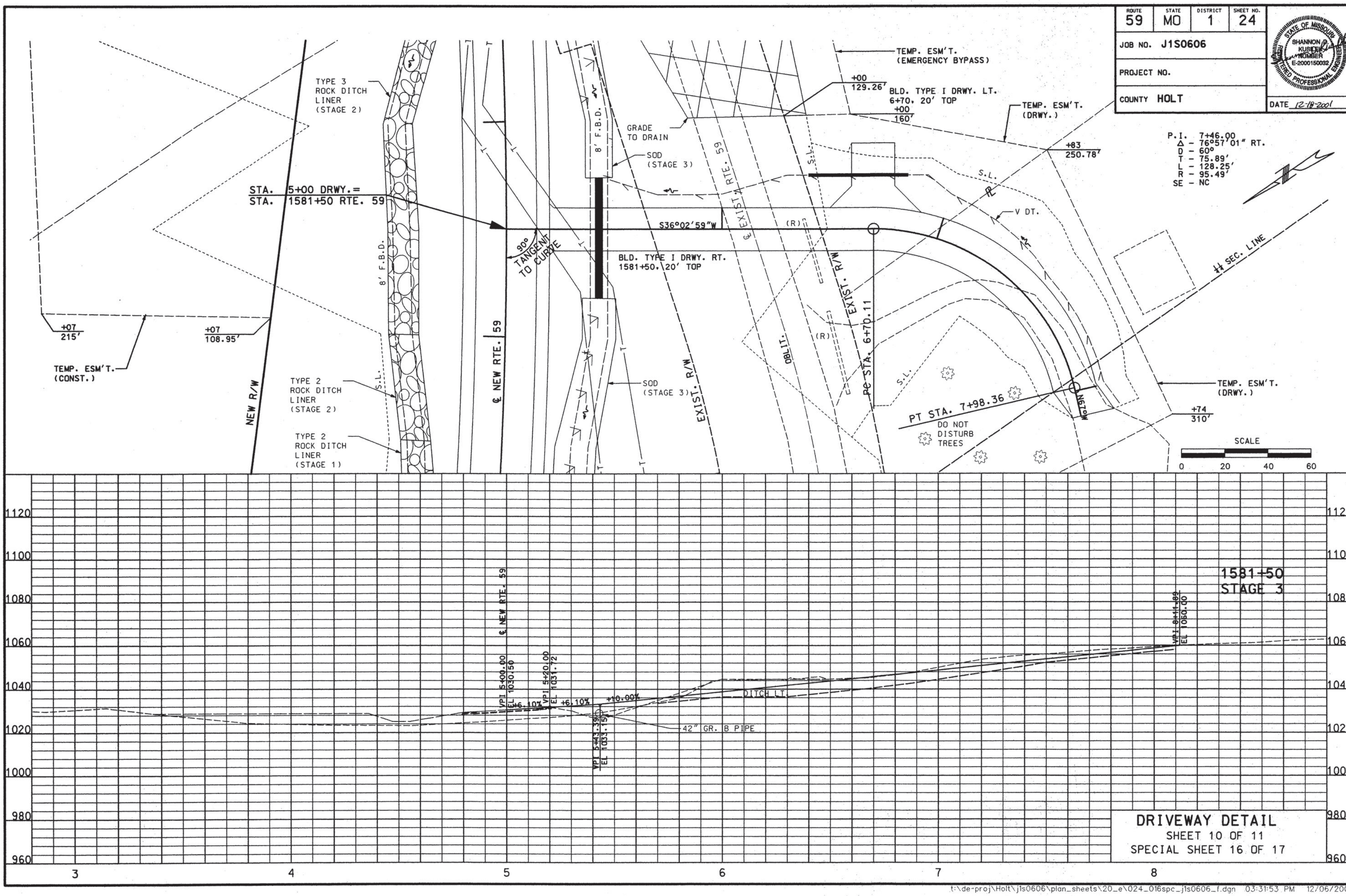
DRIVEWAY DETAIL

SHEET 9 OF 11

SPECIAL SHEET 15 OF 17

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\20_e\023_015spc_j1s0606_f.dgn 03:28:39 PM 12/06/2001


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 24
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
DATE 12-18-2001
SHANNON KUSLER NUMBER E-2000150032 STATE OF MISSOURI PROFESSIONAL ENGINEER
TEMP. ESM'T. (EMERGENCY BYPASS)
+00 129.26'
BLD. TYPE I DRWY. LT. 6+70, 20' TOP
+00 160'
TEMP. ESM'T. (DRWY.)
+83 250.78'
P.I. 7+46.00
Δ - 76°57'01" RT.
D - 60°
T - 75.89'
L - 128.25'
R - 95.49'
SE - NC
TYPE 3 ROCK DITCH LINER (STAGE 2)
GRADE TO DRAIN
SOD (STAGE 3)
8' F.B.D.
STA. 5+00 DRWY.=
STA. 1581+50 RTE. 59
S36°02'59"W
90° TANGENT TO CURVE
BLD. TYPE I DRWY. RT. 1581+50, 20' TOP
℄ EXIST. RTE. 59
EXIST. R/W
S.L.
V DT.
SEC. LINE
+07 215'
+07 108.95'
TEMP. ESM'T. (CONST.)
NEW R/W
TYPE 2 ROCK DITCH LINER (STAGE 2)
TYPE 2 ROCK DITCH LINER (STAGE 1)
℄ NEW RTE. 59
SOD (STAGE 3)
OBL IT.
(R)
PC STA. 6+70.11
PT STA. 7+98.36
N67°W
DO NOT DISTURB TREES
TEMP. ESM'T. (DRWY.)
+74 310'
SCALE
0 20 40 60
1120 1100 1080 1060 1040 1020 1000 980 960
℄ NEW RTE. 59
VPI 5+00.00 EL 1030.50
VPI 5+20.00 EL 1031.72
+6.10%
+6.10%
+10.00%
VPI 5+43.39 EL 1031.5
42" GR. B PIPE
DITCH LT.
VPI 8+11.89 EL 1060.00
1581+50 STAGE 3
DRIVEWAY DETAIL
SHEET 10 OF 11
SPECIAL SHEET 16 OF 17
3 4 5 6 7 8
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\20_e\024_016spc_j1s0606_f.dgn 03:31:53 PM 12/06/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	25

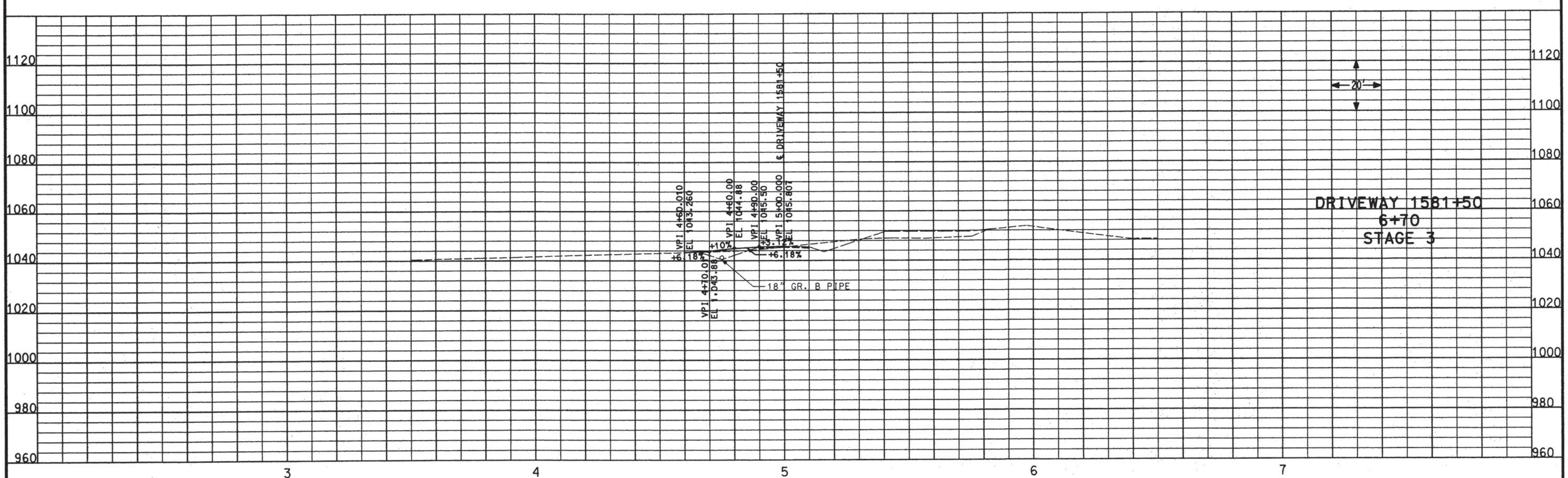
JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

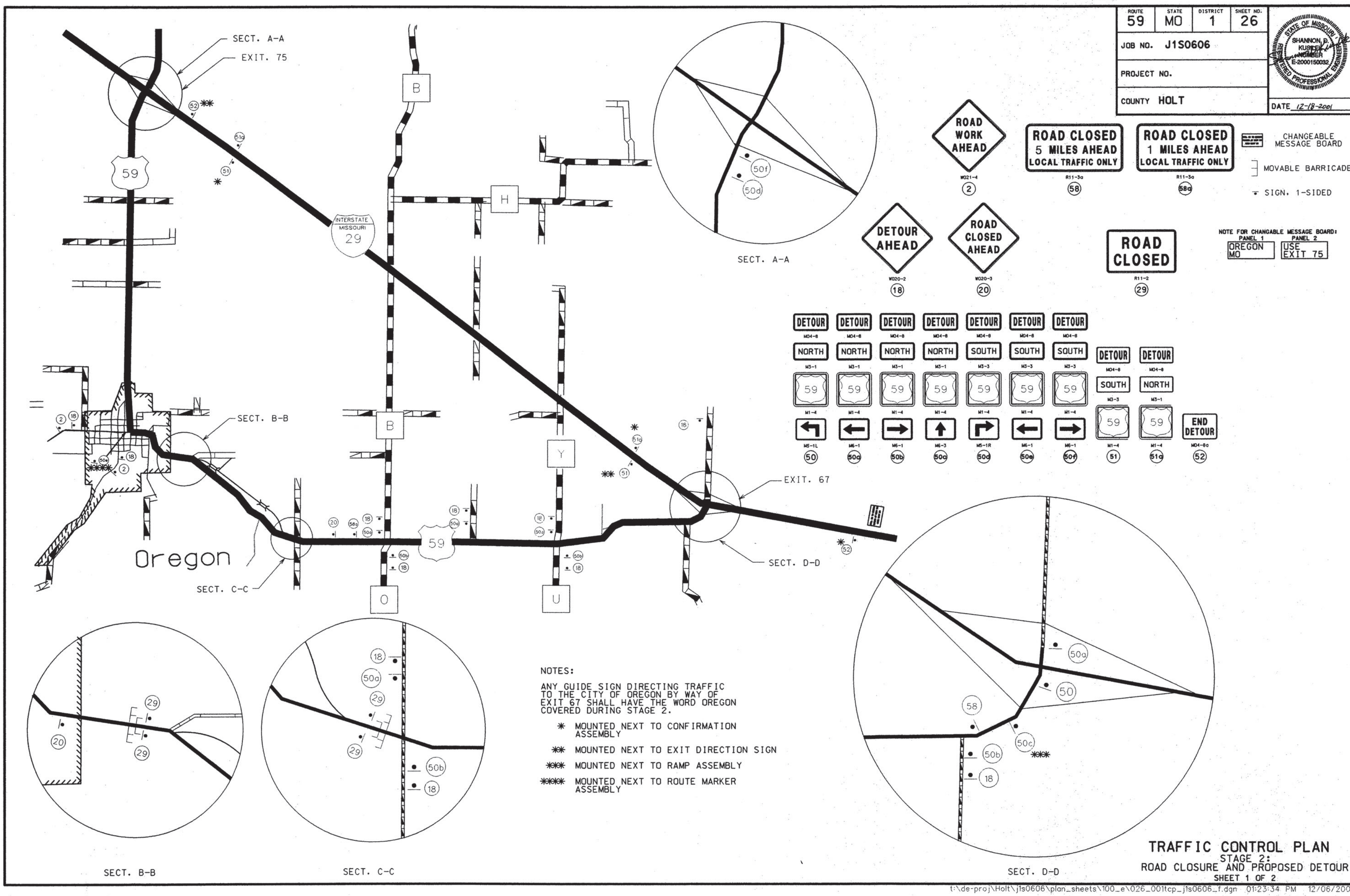
DATE 12-18-2001



DRIVEWAY DETAIL
SHEET 11 OF 11
SPECIAL SHEET 17 OF 17

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\20_e\025_017spc_j1s0606_f.dgn 03:34:05 PM 12/06/2001


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 26
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
DATE 12-18-2001
STATE OF MISSOURI
SHANNON D. KUSLER
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
SECT. A-A
EXIT. 75
SECT. B-B
SECT. C-C
SECT. D-D
EXIT. 67
Oregon
INTERSTATE MISSOURI 29
59
B
H
Y
O
U
ROAD WORK AHEAD
W021-4
2
ROAD CLOSED 5 MILES AHEAD LOCAL TRAFFIC ONLY
R11-3a
58
ROAD CLOSED 1 MILES AHEAD LOCAL TRAFFIC ONLY
R11-3a
58a
CHANGEABLE MESSAGE BOARD
MOVABLE BARRICADE
SIGN, 1-SIDED
DETOUR AHEAD
W020-2
18
ROAD CLOSED AHEAD
W020-3
20
ROAD CLOSED
R11-2
29
NOTE FOR CHANGABLE MESSAGE BOARD:
PANEL 1
OREGON MO
PANEL 2
USE EXIT 75
DETOUR
M04-8
NORTH
SOUTH
M3-1
M3-3
M1-4
M5-1L
M6-1
M6-3
M5-1R
50
50a
50b
50c
50d
50e
50f
51
51a
END DETOUR
M04-8a
52
NOTES:
ANY GUIDE SIGN DIRECTING TRAFFIC TO THE CITY OF OREGON BY WAY OF EXIT 67 SHALL HAVE THE WORD OREGON COVERED DURING STAGE 2.
* MOUNTED NEXT TO CONFIRMATION ASSEMBLY
** MOUNTED NEXT TO EXIT DIRECTION SIGN
*** MOUNTED NEXT TO RAMP ASSEMBLY
**** MOUNTED NEXT TO ROUTE MARKER ASSEMBLY
TRAFFIC CONTROL PLAN
STAGE 2:
ROAD CLOSURE AND PROPOSED DETOUR
SHEET 1 OF 2
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\100_e\026_001tcp_j1s0606_f.dgn 01:23:34 PM 12/06/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	27

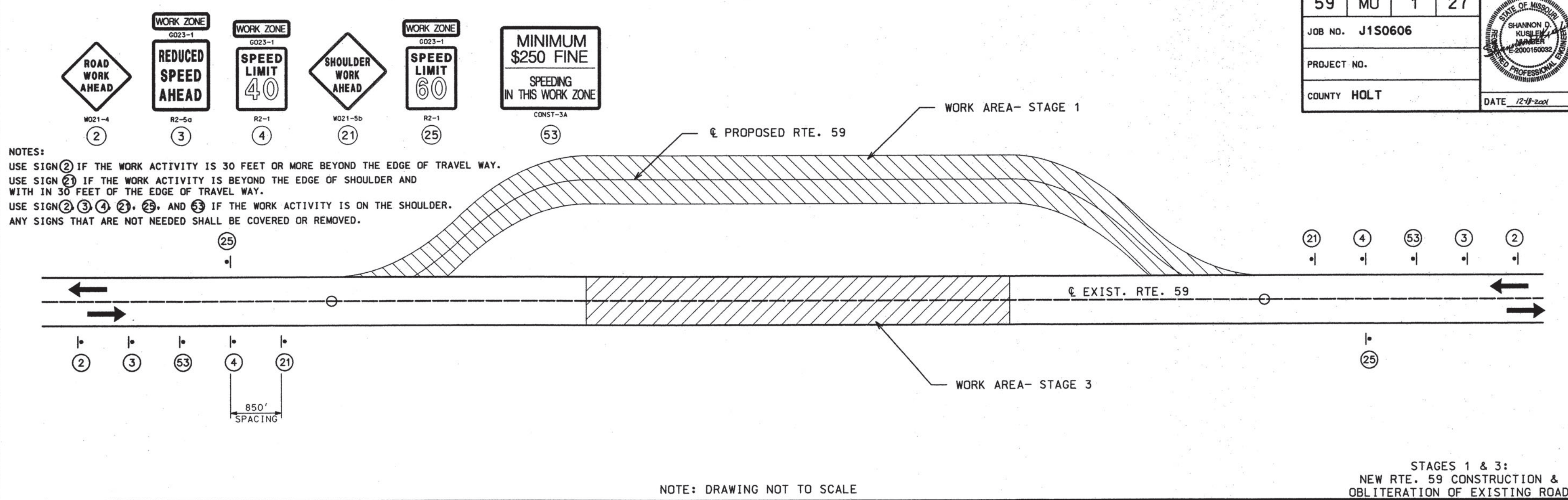
JOB NO. J1S0606

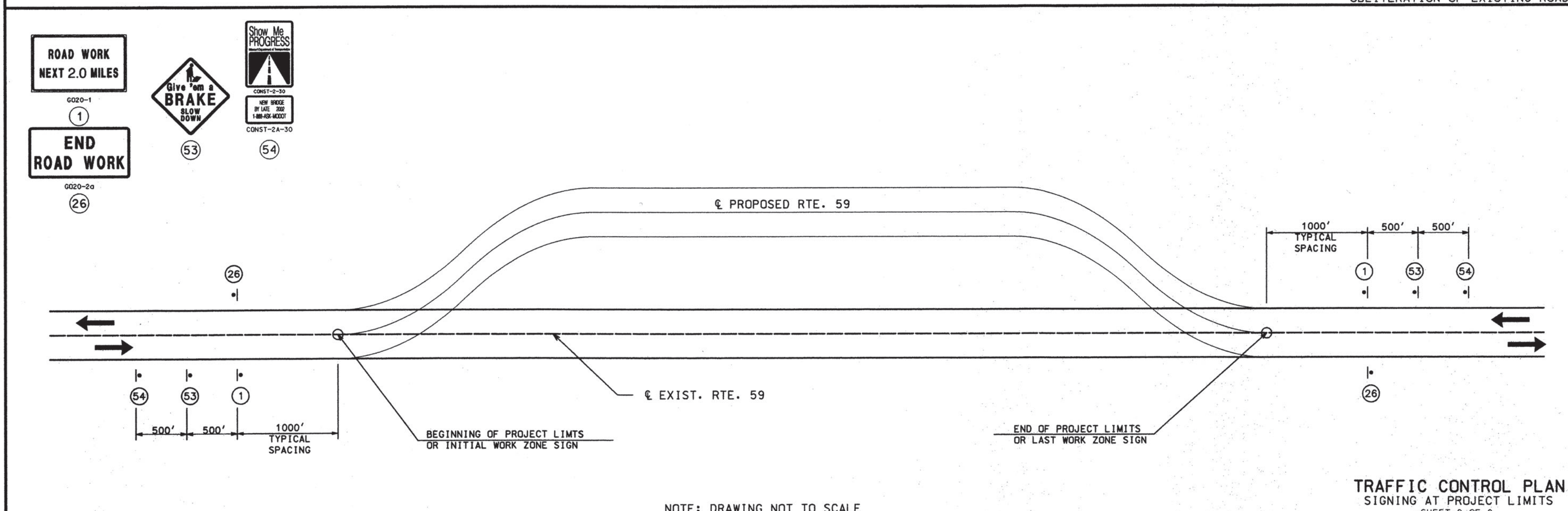
PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 12-18-2001

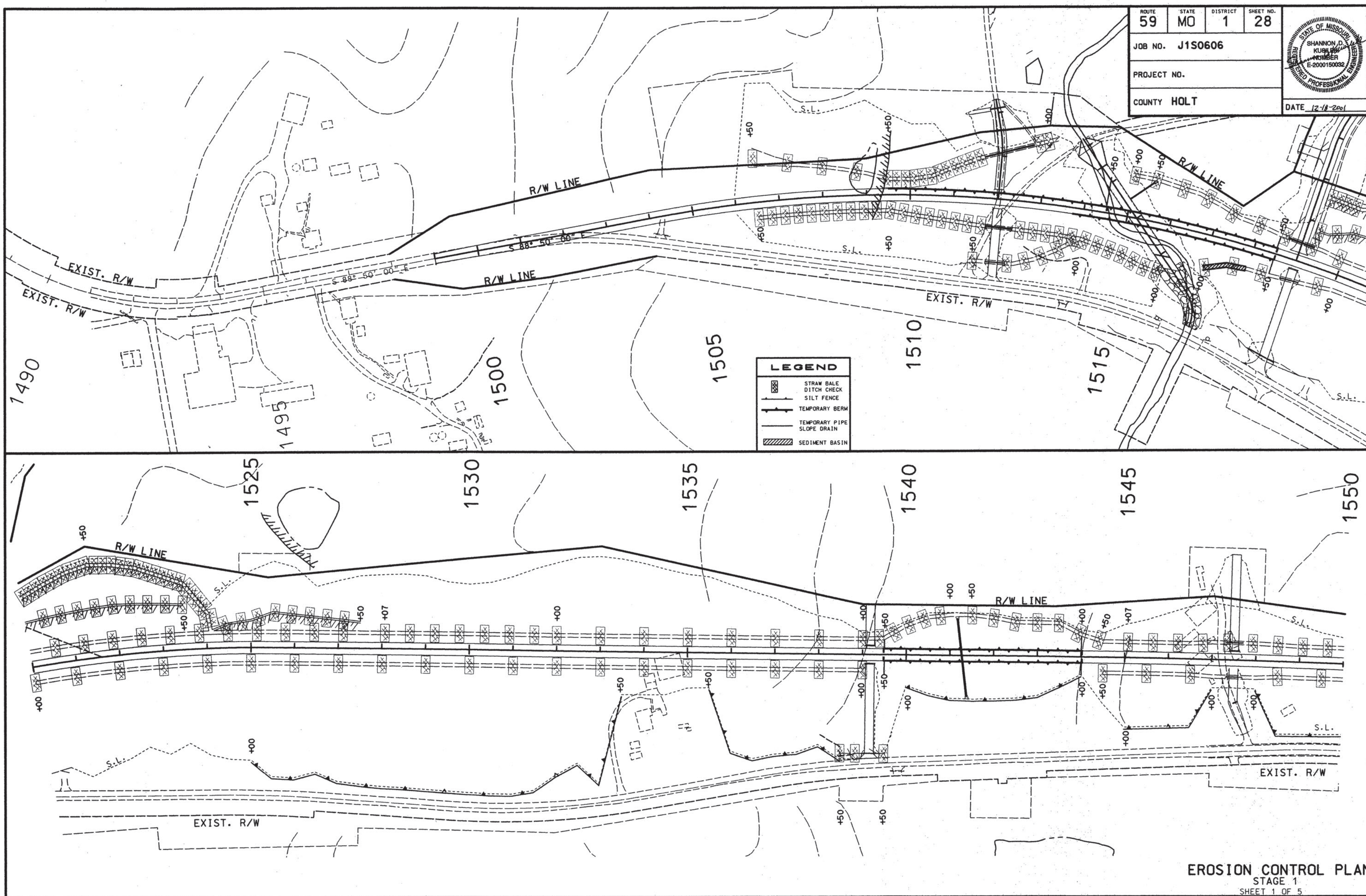




TRAFFIC CONTROL PLAN
SIGNING AT PROJECT LIMITS
SHEET 2 OF 2

REV.

t:\de-proj\Holt\j1s0606\plan_sheets\100_e\027_002tcp_j1s0606_f.dgn 01:23:30 PM 12/06/2001


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 28
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
DATE 12-18-2001
STATE OF MISSOURI
SHANNON D. KUBLI
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
R/W LINE
EXIST. R/W
S 88° 50' 00" E
S.L.
LEGEND
STRAW BALE DITCH CHECK
SILT FENCE
TEMPORARY BERM
TEMPORARY PIPE SLOPE DRAIN
SEDIMENT BASIN
1490
1495
1500
1505
1510
1515
1525
1530
1535
1540
1545
1550
EROSION CONTROL PLAN
STAGE 1
SHEET 1 OF 5
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\100_e\028_001tec_j1s0606_f.dgn 01:23:24 PM 12/06/2001

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	29

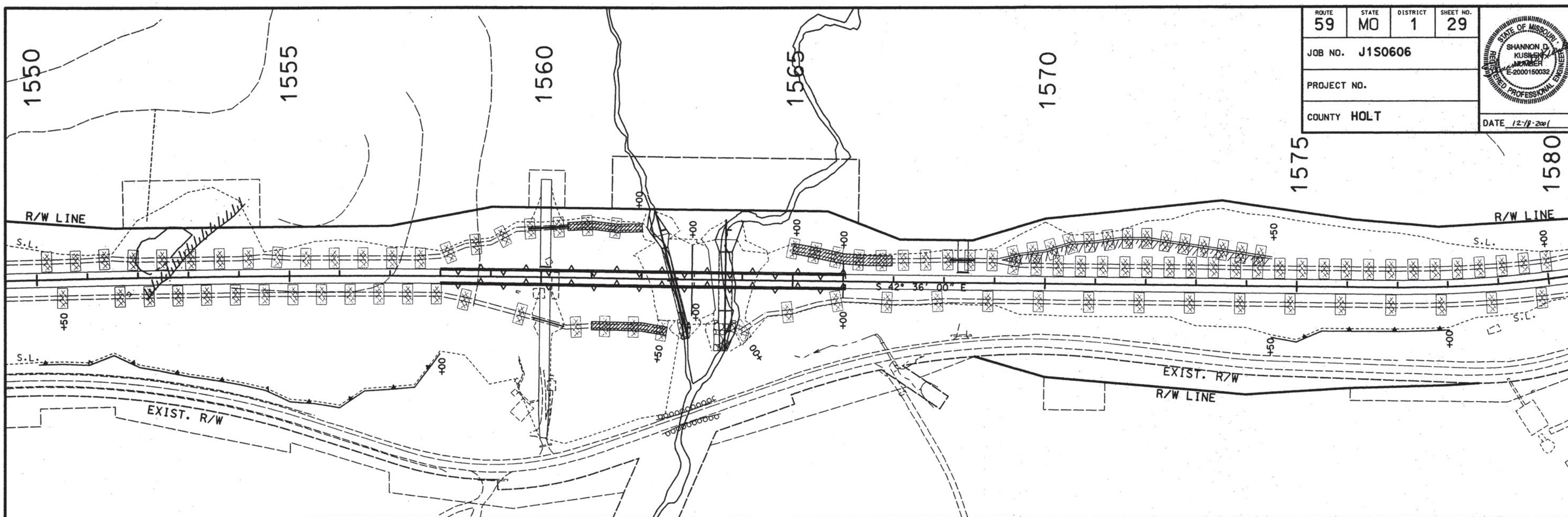
JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

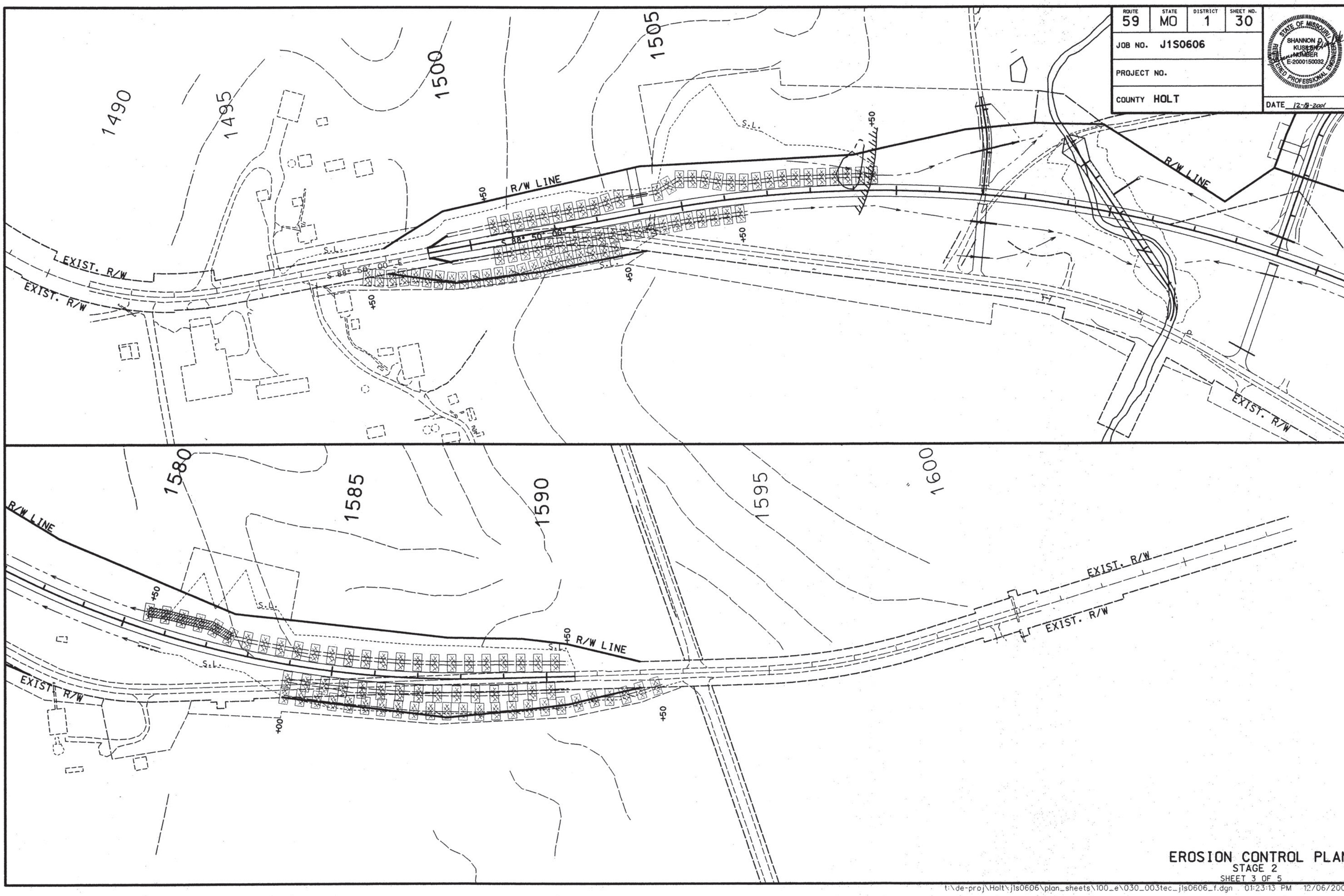
DATE 12-18-2001

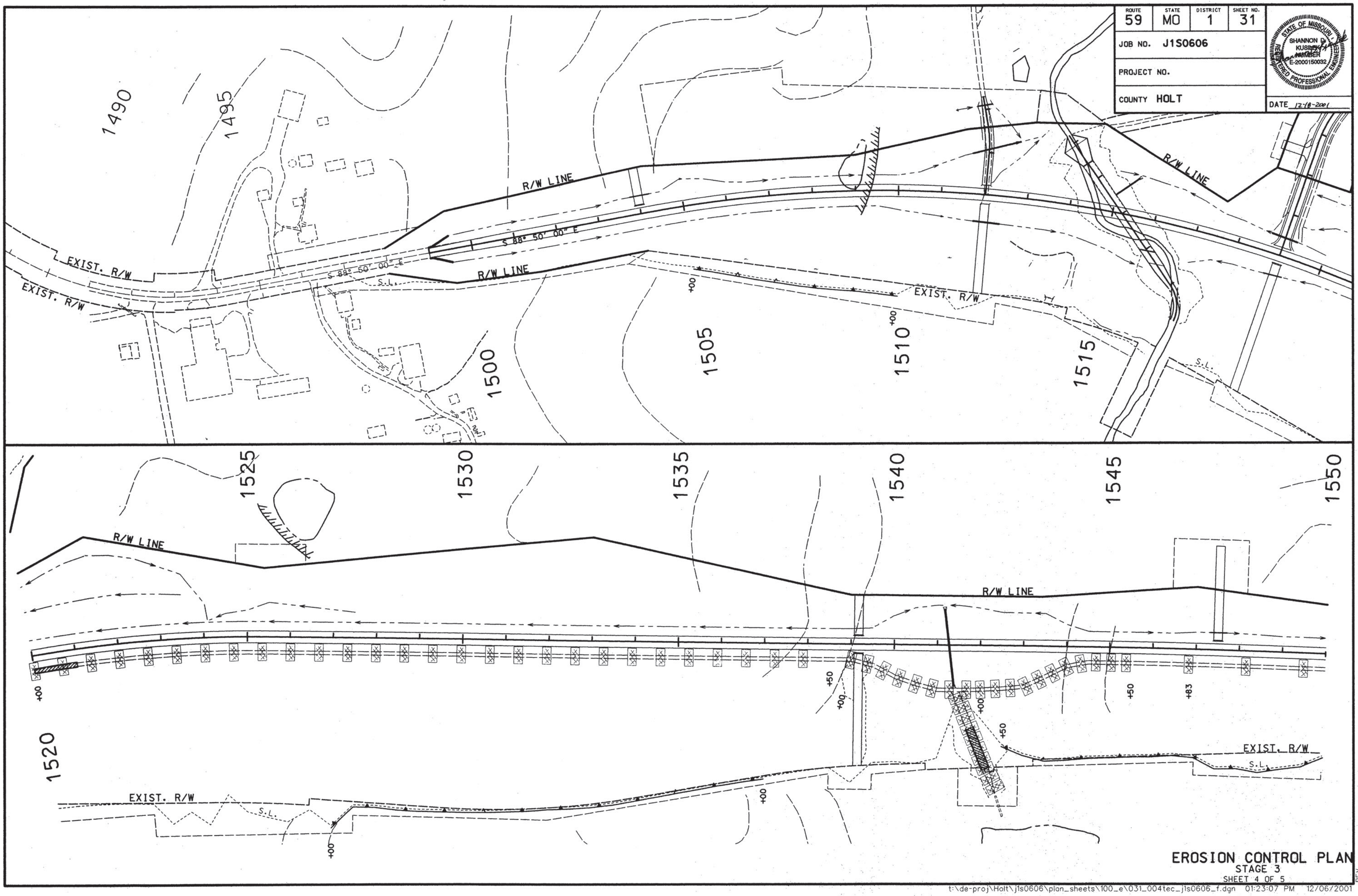


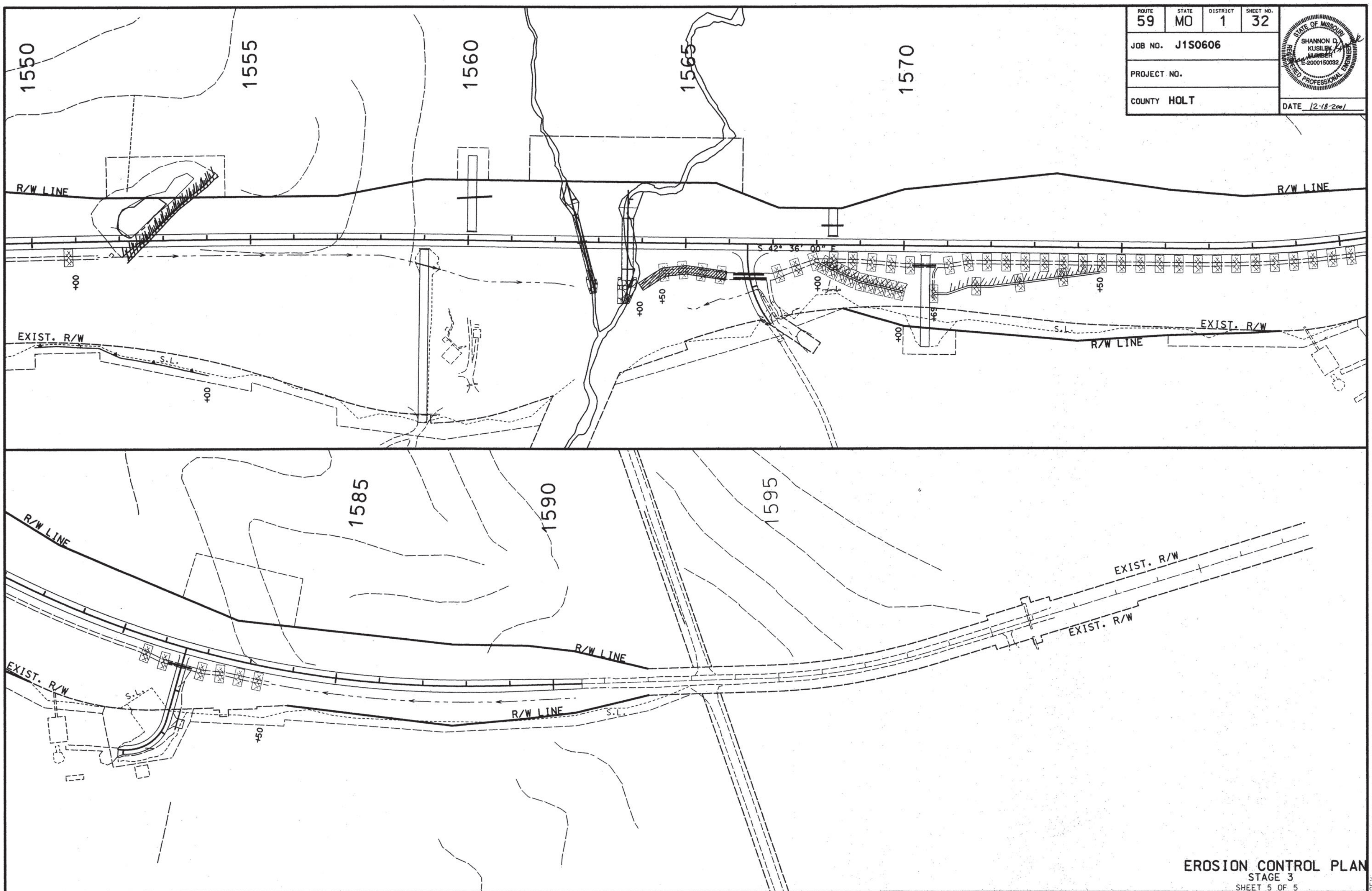
EROSION CONTROL PLAN
STAGE 1
SHEET 2 OF 5

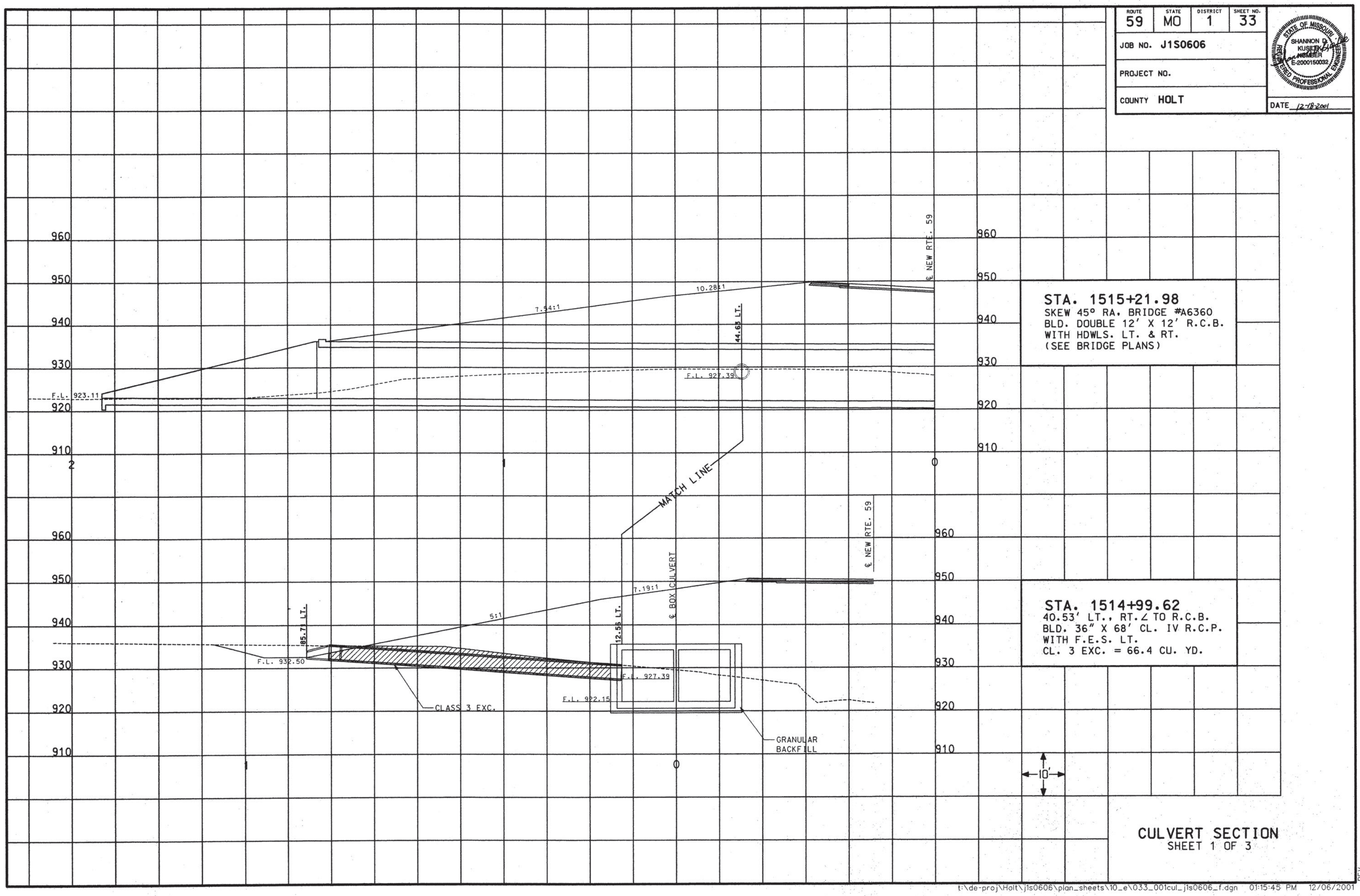
REV.

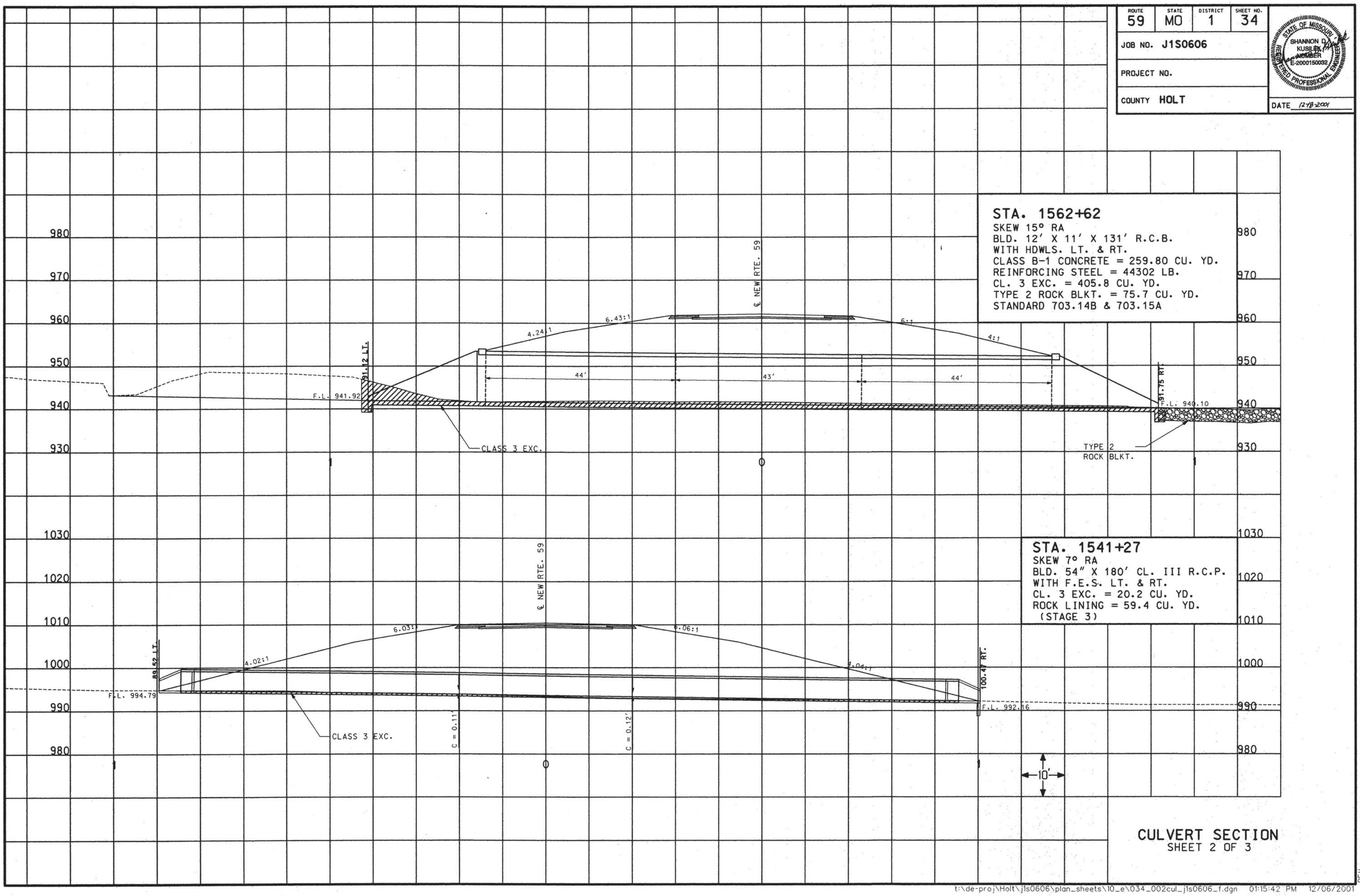
t:\de-proj\Holt\j1s0606\plan_sheets\100_e\029_002tec_j1s0606_f.dgn 01:23:18 PM 12/06/2001


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 30
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
DATE
STATE OF MISSOURI
REGISTERED PROFESSIONAL ENGINEER
1490
1495
1500
1505
R/W LINE
EXIST. R/W
S.L.
+50
1580
1585
1590
1595
1600
+00
EROSION CONTROL PLAN
STAGE 2
SHEET 3 OF 5
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\100_e\030_003tec_j1s0606_f.dgn 01:23:13 PM 12/06/2001

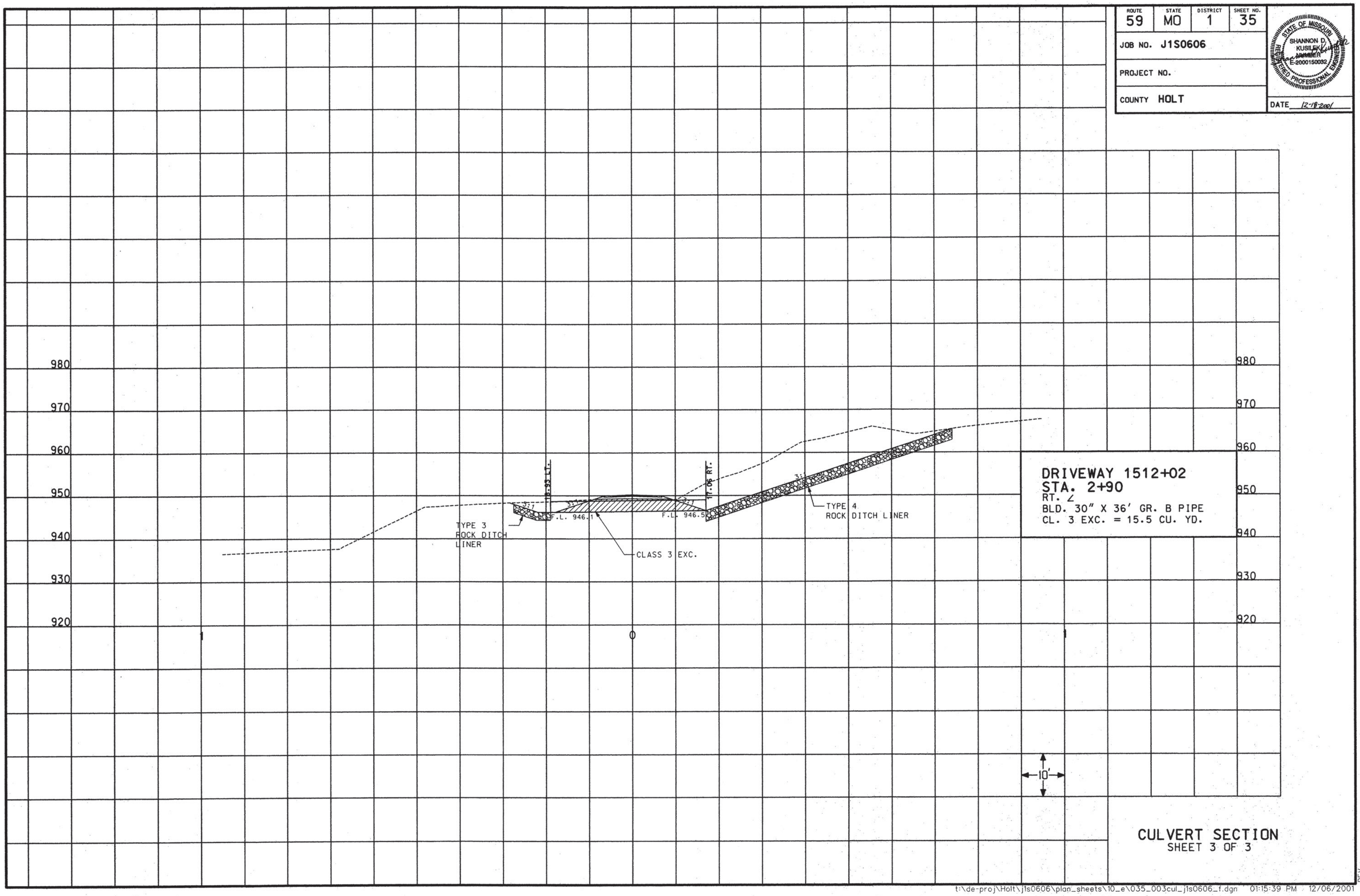

ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 31
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
DATE 12-18-2001
STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
R/W LINE
EXIST. R/W
S 88° 50' 00" E
S.L.
1490
1495
1500
1505
1510
1515
1520
1525
1530
1535
1540
1545
1550
+00
+50
+83
EROSION CONTROL PLAN
STAGE 3
SHEET 4 OF 5
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\100_e\031_004tec_j1s0606_f.dgn 01:23:07 PM 12/06/2001


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 32
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
DATE 12-18-2001
1550
1555
1560
1565
1570
R/W LINE
R/W LINE
S 42° 36' 00" E
EXIST. R/W
EXIST. R/W
R/W LINE
S.L.
S.L.
1585
1590
1595
R/W LINE
R/W LINE
R/W LINE
EXIST. R/W
EXIST. R/W
EXIST. R/W
S.L.
S.L.
EROSION CONTROL PLAN
STAGE 3
SHEET 5 OF 5
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\100_e\032_005tec_j1s0606_f.dgn 01:22:56 PM 12/06/2001


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 33
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
DATE 12-18-2001
STA. 1515+21.98
SKEW 45° RA. BRIDGE #A6360
BLD. DOUBLE 12' X 12' R.C.B.
WITH HDWLS. LT. & RT.
(SEE BRIDGE PLANS)
℄ NEW RTE. 59
10.28:1
7.54:1
44.63 LT.
F.L. 927.39
F.L. 923.11
960
950
940
930
920
910
2
1
0
MATCH LINE
STA. 1514+99.62
40.53' LT., RT.∠ TO R.C.B.
BLD. 36" X 68' CL. IV R.C.P.
WITH F.E.S. LT.
CL. 3 EXC. = 66.4 CU. YD.
℄ BOX CULVERT
7.19:1
5:1
85.7 LT.
12.55 LT.
F.L. 932.50
F.L. 927.39
F.L. 922.15
CLASS 3 EXC.
GRANULAR BACKFILL
10'
CULVERT SECTION
SHEET 1 OF 3
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\10_e\033_001cul_j1s0606_f.dgn 01:15:45 PM 12/06/2001

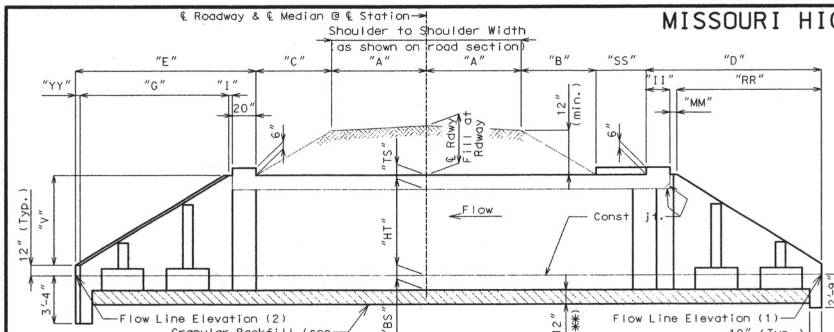


ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 34
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
DATE 12-13-2001
STA. 1562+62
SKEW 15° RA
BLD. 12′ X 11′ X 131′ R.C.B.
WITH HDWLS. LT. & RT.
CLASS B-1 CONCRETE = 259.80 CU. YD.
REINFORCING STEEL = 44302 LB.
CL. 3 EXC. = 405.8 CU. YD.
TYPE 2 ROCK BLKT. = 75.7 CU. YD.
STANDARD 703.14B & 703.15A
℄ NEW RTE. 59
6.43:1
4.24:1
6:1
4:1
91.12 LT.
91.75 RT.
44′
43′
44′
F.L. 941.92
F.L. 940.10
CLASS 3 EXC.
TYPE 2
ROCK BLKT.
980
970
960
950
940
930
STA. 1541+27
SKEW 7° RA
BLD. 54″ X 180′ CL. III R.C.P.
WITH F.E.S. LT. & RT.
CL. 3 EXC. = 20.2 CU. YD.
ROCK LINING = 59.4 CU. YD.
(STAGE 3)
℄ NEW RTE. 59
6.03:1
6.06:1
4.02:1
4.04:1
89.52 LT.
100.47 RT.
F.L. 994.79
F.L. 992.16
CLASS 3 EXC.
C = 0.11′
C = 0.12′
1030
1020
1010
1000
990
980
10′
CULVERT SECTION
SHEET 2 OF 3
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\10_e\034_002cul_j1s0606_f.dgn 01:15:42 PM 12/06/2001

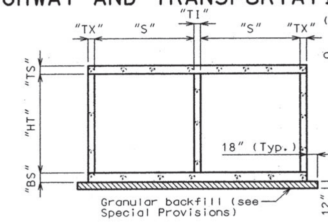

ROUTE 59
STATE MO
DISTRICT 1
SHEET NO. 35
JOB NO. J1S0606
PROJECT NO.
COUNTY HOLT
STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER
DATE 12-18-2001
980
970
960
950
940
930
920
DRIVEWAY 1512+02
STA. 2+90
RT. ∠
BLD. 30" X 36' GR. B PIPE
CL. 3 EXC. = 15.5 CU. YD.
17.06 RT.
3:1
F.L. 946.1
F.L. 946.5
TYPE 3 ROCK DITCH LINER
CLASS 3 EXC.
TYPE 4 ROCK DITCH LINER
0
10'
CULVERT SECTION
SHEET 3 OF 3
REV.
t:\de-proj\Holt\j1s0606\plan_sheets\10_e\035_003cul_j1s0606_f.dgn 01:15:39 PM 12/06/2001

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

State	Proj. No.	Sheet No.
MO		B1
SEC/SUR 35	TWP 60N	RGE 38W

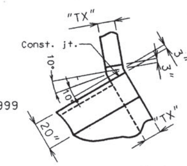


ELEVATION A-A
(Normal to ℄ Roadway & ℄ Station)

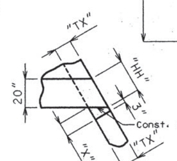


(✱✱) Depth of granular backfill may vary. 12" used for estimating quantities.

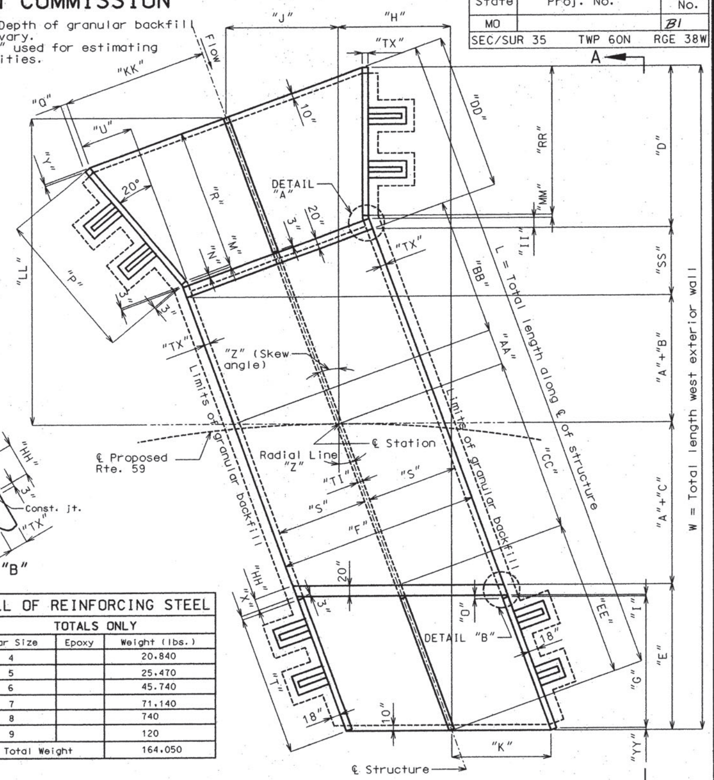
SECTION THRU BOX
(Normal to ℄ Structure)



DETAIL "A"



DETAIL "B"



PLAN SHOWING LAYOUT DIMENSIONS

GENERAL DATA TABLE

VARIABLE	EQUATION	DIM.	VARIABLE	EQUATION	DIM.
"S"	- - -	12'	"Q"	TX(cos 20°)	11¼"
"HT"	- - -	12'	"R"	P(cos 20°)	54'-5⅝"
"TS"	- - -	15''	"T"	G(sec Z)	34'-7¾"
"BS"	- - -	17''	"U"	(R + M)(tan 20°)	19'-11⅝"
"TX"	- - -	12''	"V"	HT + TS - 12"	12'-3''
"TI"	- - -	10''	"W"	2A + B + C + D + E + SS	244'-11½"
"A"	- - -	20'-0"	"X"	3" + TX(tan Z)	1'-3''
"B"	- - -	53'-1¼"	"Y"	TX(sin 20°)	4⅛"
"C"	- - -	51'-8⅜"	"Z"	Skew Angle	45°
"D"	II + MM + RR	54'-1½"	"AA"	(F/2)(tan Z)	13'-5"
"E"	G + O + 20"	27'-0⅝"	"BB"	(A + B)(sec Z)	103'-4⅞"
"F"	2S + 2TX + TI	26'-10"	"CC"	(A + C)(sec Z)	101'-4⅞"
"G"	2V	24'-6''	"DD"	R + M + N + 20"	56'-11⅝"
"H"	(A + C + E)(tan Z)	98'-9"	"EE"	E(sec Z)	38'-3⅛"
"I"	3"(cos Z)	2⅛"	"HH"	20"(sec Z)	2'-4¼"
"J"	(AA + BB + DD)(sin Z)	122'-10½"	"II"	20"(cos Z)	1'-2⅛"
"K"	(S + TI/2)(sec Z)	17'-6¾"	"KK"	S + TI/2 + U	32'-4⅝"
"L"	AA + BB + CC + DD + EE	313'-5½"	"LL"	(AA + BB + DD)(cos Z)	122'-10⅝"
"M"	N(cos 20°)	4⅞"	"MM"	3"[cos Z + cos(Z - 20°)]	4⅞"
"N"	3" + TX(tan 10°)	5⅛"	"RR"	P [cos (Z - 20°)]	52'-6½''
"O"	I + YY	10⅝"	"SS"	F(sin Z)	18'-11¾"
"P"	2V[sec(Z + 20°)]	57'-11⅝"	"YY"	TX(sin Z)	8½"

GENERAL NOTES:

Design Specifications:
AASHTO - 1996 and Interims thru 1999
Load Factor Design

Design Unit Stresses:
Class B1 concrete f'c = 4,000 psi
Reinforcing steel (Grade 60),
fy = 60,000 psi

Design Loading:
HS20-44
Earth 120 #/ft.^{3}
Equivalent fluid pressure
30 #/ft.^{3} (Min.) - 60 #/ft.^{3} (Max.)

Dimensions:
All elevations shown are in feet unless otherwise noted.

Traffic Control:
Use existing bridge J-170 during construction.

Channel Cleanout:
Provide grading of the channel bottom within the limits of the R/W as needed for culvert flowline elevations and transition of the channel bed to the culvert opening. Taper channel banks to match end of culvert opening as required. (Roadway Item).

Miscellaneous:

For design fill heights between values tabulated in the Missouri Standard Plans for Highway Construction, the design fill height is taken to the next incremement requiring the higher design.

When alternate precast box sections are used, the minimum barrel length measured along the shortest wall from the first joint to the outside of the headwall, shall be 3'-2". Reinforcement and dimensions for the wings and headwalls shall be in accordance with Missouri Standard Plans Drawing.

Provide Pipe Inlet For 36" RCP
(See Roadway Plans)

BILL OF REINFORCING STEEL

TOTALS ONLY

Bar Size	Epoxy	Weight (lbs.)
4		20,840
5		25,470
6		45,740
7		71,140
8		740
9		120
Total Weight		164,050

REINFORCEMENT TABLE

Span (S) = 12'-0"
HT (ft) = 12'-0"

HS20-44	Design Fill (✱) (ft)	Member Thickness TS Thick	BS Thick	TX Thick	TI Thick	Top Slab Bars A1 Bars size	A1 c to c	J3 Bars size	J3 c to c	H1 Bars size	H1 c to c	H2 Bars size	H2 c to c	Bottom Slab Bars A2 Bars size	A2 c to c	J4 Bars size	J4 c to c	H3 Bars size	H3 c to c	Wall Bars B1 Bars size	B1 c to c	B2 Bars G1	B2 size	B2 c to c	F Bars size	F c to c	Coefficients (see note) J4 C4	J4 K3	H3 C7	H3 Q10	J3 C1	J3 K2	H1 C5	H1 Q8	H2 C6	H2 Q9	"C" Multiplier S = 12'-0" in.	"O" Multiplier S = 12'-0" in.	"K" Multiplier HT = 12'-0" in.
	15.25	15"	17"	12"	10"	6	7.0	7	7.5	7	14	7	14	7	7.5	6	6.5	7	7.5	5	11	0	5	9.5	4	13.75	.46	.93	.51	–	.49	.29	.42	–	.29	–	155	–	171

All dimensions are in inches unless otherwise noted.

Dimensions marked with C# or K# are the product of the coefficient and its associated multiplier.

Use Std. Plans 703.42, 703.44 and 703.45 for details not shown.

Use Reinforcement Table shown as substitute for tables shown on Std. Plans 703.45.

HYDROLOGIC DATA

Drainage Area	=	4.9 sq. miles
Design Discharge	=	3,972 cu. ft./sec. (100 years)
Design H.W. Elev.	=	933.83 feet (100 years)
Estimated Backwater	=	0.77 feet
Rdwy. Overtopping	=	> 500 years

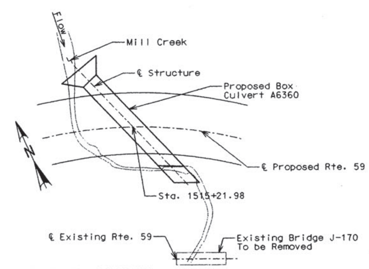
ESTIMATED QUANTITIES

			FINAL QUANTITIES
Removal of Bridges (J-170)	lump sum	1	
Class 3 Excavation	cu. yard	1180	
Granular Backfill (Culverts-Bridge)	cu. yard	410	
Class B1 Concrete (Culverts-Bridge)	cu. yard	1162.8	
Reinforcing Steel (Culverts-Bridge)	pounds	164,050	

℄ Sta.= 1515+21.98
Pr. Gr. Elev. at ℄ Sta.= 948.29
Earth Fill at ℄ Rdwy. @ ℄ Station =14'-3''

Design Fill (✱)	15'-3''
Elev. (1) 923.11	feet
Elev. (2) 920.93	feet

(✱) Design fill height is the distance from top of earth fill or roadway to the bottom of the top slab.



LOCATION SKETCH

Curve Data ℄ Proposed Rte. 59
P.I. 1515+29.92
Δ - 42° 20' RT.
D- 2 °
T- 1109.26'
L- 2116.67'
R- 2864.79
SE-5.10%

STATE OF MISSOURI
GREGORY E. SANDERS
NUMBER E-2000162167
REGISTERED PROFESSIONAL ENGINEER
DATE 12-19-01

B.M. 3-97 Elev.943.02' "□" ON S.E. END LIP OF SIDEWALL BR# J-170 (MILL CREEK) 262' ± RT. STA. 1517+39± ℄ NEW RTE. 59.

BRIDGE OVER MILL CREEK
STATE ROAD FROM RTE. B TO I-29
ABOUT 2.5 MILES WEST OF RTE. B
PROJECT NO.
JOB NO. J1S0606
STA. 1515+21.98
RTE. 59
HOLT COUNTY

12/26/01

STD. 706.35
STD. 703.42
STD. 703.44
STD. 703.60
STD. 703.37
STD. 703.45
A6360

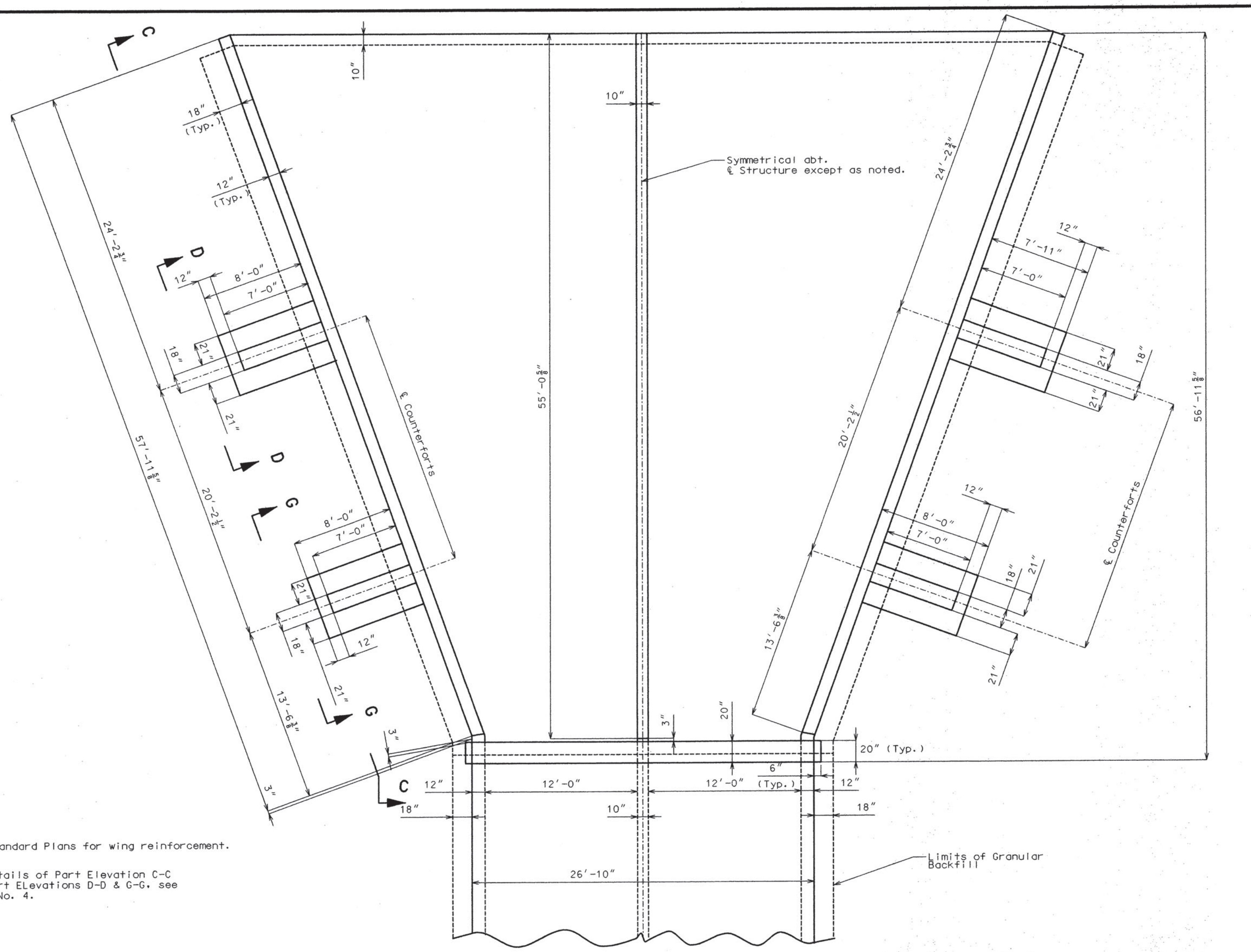
REV.

Designed MAY 2001
Detailed JUNE 2001
Checked JULY 2001

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 5

T:\br-proj\robincl\J1S0606\A6360\J1S0606_A6360.dgn 03:42:17 PM 12/19/2001



See Standard Plans for wing reinforcement.

For Details of Part Elevation C-C and Part ELevations D-D & G-G, see sheet No. 4.

PART PLAN OF CULVERT (UPSTREAM)

Detailed NOV. 2001
Checked JULY 2001

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 5

HOLT COUNTY A6360

REV.

T:\br-proj\robinc1\J1S0606\A6360\J1S0606_PARTPLAN.dgn 42:20 PM 12/19/2001

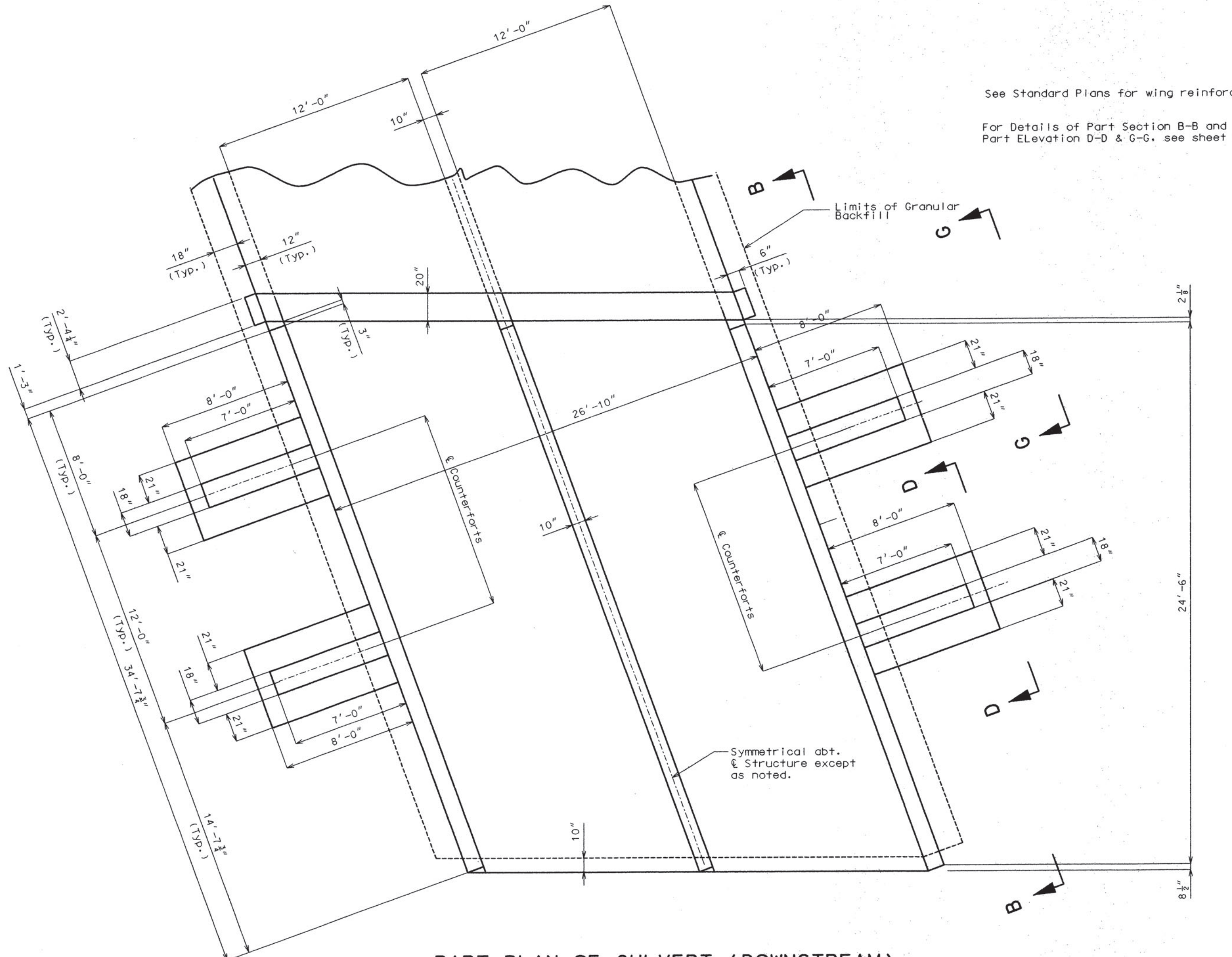
STATE OF MISSOURI GREGORY E. SANDERS NUMBER E-2000162187

DATE 12-19-01

State	Proj. No.	Sheet No.
MO		B3

See Standard Plans for wing reinforcement.

For Details of Part Section B-B and Part ELevation D-D & G-G, see sheet No. 5.



PART PLAN OF CULVERT (DOWNSTREAM)

STATE OF MISSOURI GREGORY E. SANDERS NUMBER E-2000152167 REGISTERED PROFESSIONAL ENGINEER

DATE 12-19-01

Detailed NOV. 2001
Checked JULY 2001

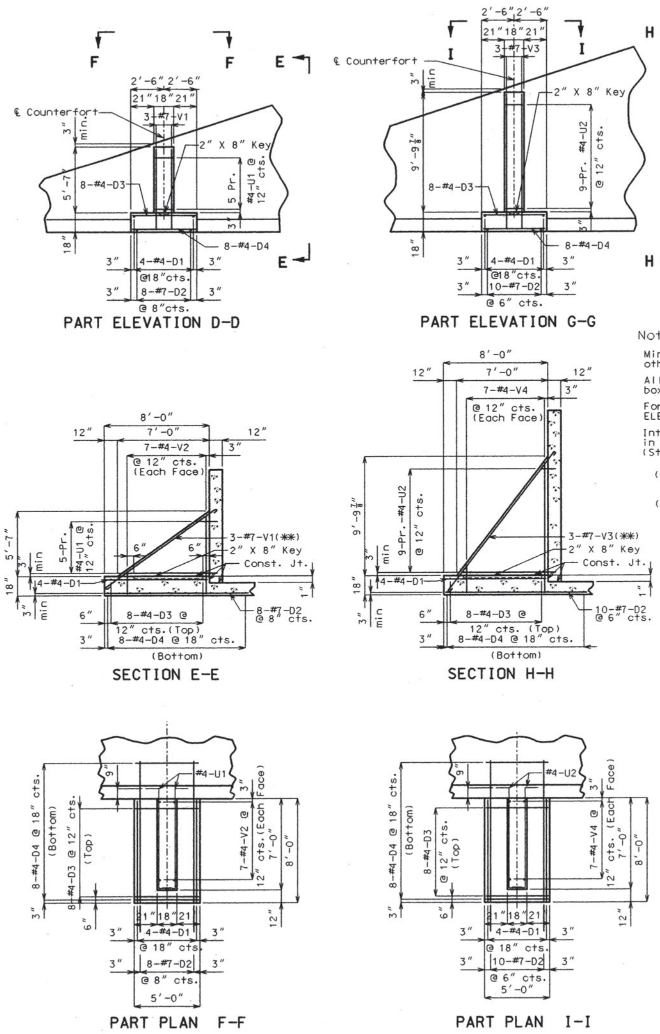
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 5

HOLT COUNTY | A6360 | REV.

T:\br-proj\robinc1\JIS0606\A6360\A6360_PLANDOWNSTREAM.dgn 03:42:15 PM 12/19/2001

State	Proj. No.	Sheet No.
MO		B4



Note:

Min. clearance to reinforcing steel shall be 1 1/2" unless otherwise shown.

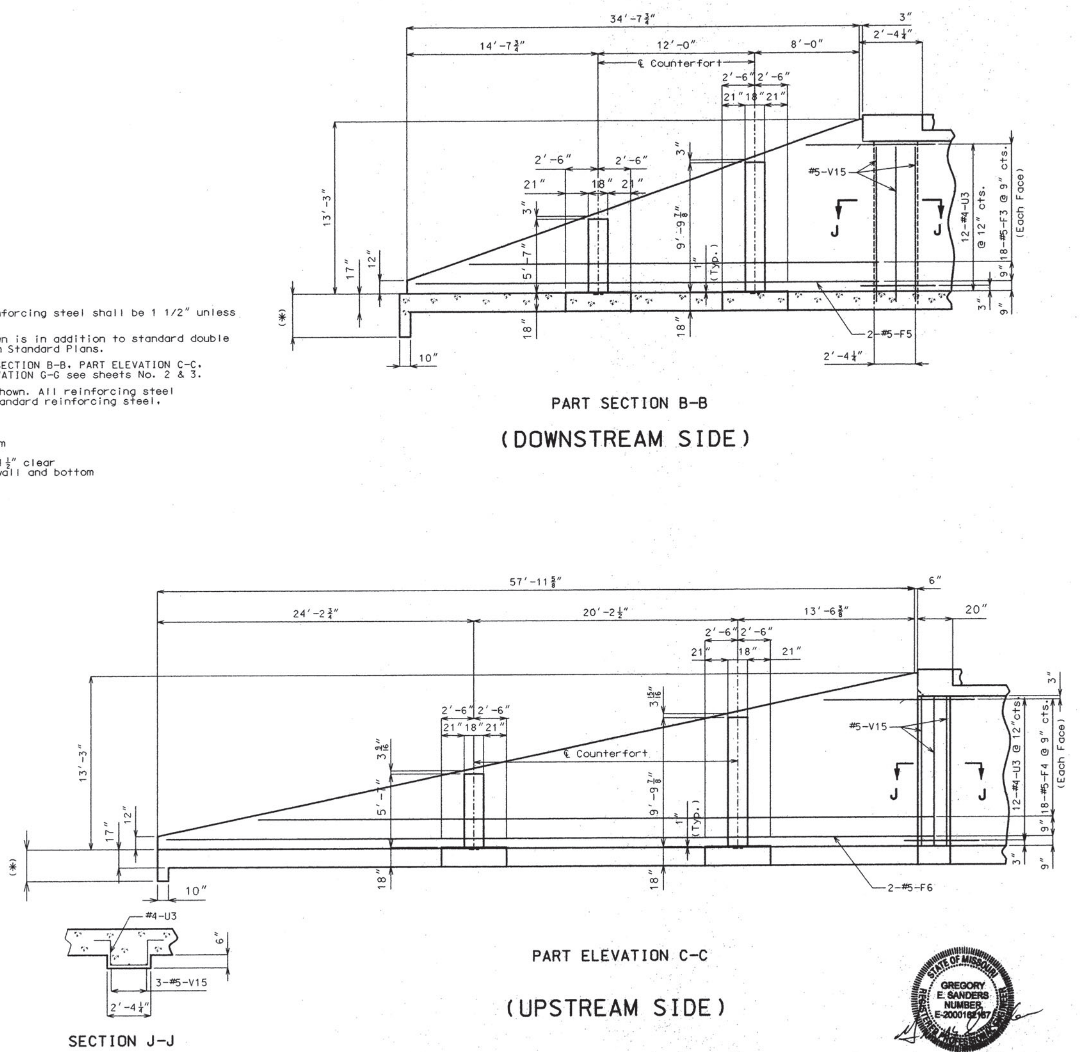
All reinforcement shown is in addition to standard double box reinforcement from Standard Plans.

For location of PART SECTION B-B, PART ELEVATION C-C, ELEVATION D-D and ELEVATION G-G see sheets No. 2 & 3.

Interior wing is not shown. All reinforcing steel in interior wing is standard reinforcing steel. (Standard Plans).

(✱) 2'-9" Upstream
3'-4" Downstream

(✱✱) Embed hooks to 1½" clear inside face of wall and bottom of footing



Detailed JUNE 2001
Checked JULY 2001

Note: This drawing is not to scale. Follow dimensions.

HOLT COUNTY | A6360 | REV.

barbill_i Oct. 1991

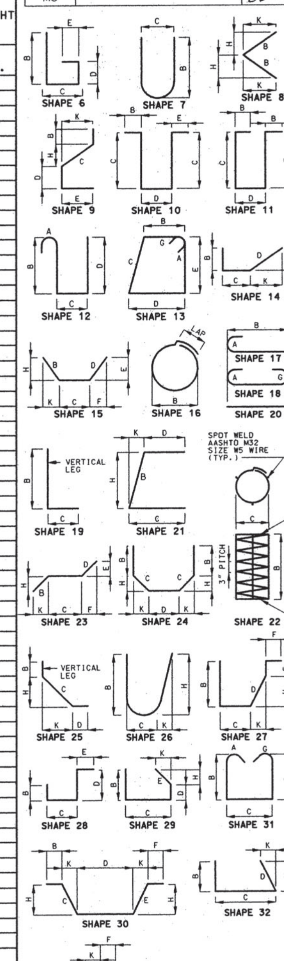
State	Proj. No.	Sheet No.
MO		B5

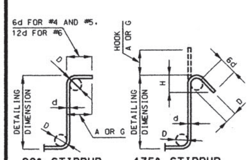
BILL OF REINFORCING STEEL

NO. REQ'D.	SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			COUNTERFORTS																										
32	4	D1	COUNTERFORTS		20					7	8.000													7	8	7	8	164
72	7	D2	COUNTERFORTS		20					10	10.000													10	10	10	10	1594
64	4	D3	COUNTERFORTS		20					4	9.000													4	9	4	9	203
64	4	D4	COUNTERFORTS		20					4	9.000													4	9	4	9	203
72	5	F3	WING		20			V	4	7	4.000													7	4	7	4	
			INCREMENT =							34	5.000													34	5	34	5	1568
			19.125 INCH																										
4	5	F5	WING		20					38	2.000													38	2	38	2	159
40	4	U1	COUNTERFORT		28	S		V	8				15.000	2	2.000		12.000							4	5	4	3	
			INCREMENT =										15.000	7	4.000		12.000							9	7	9	5	183
			15.500 INCH																										
72	4	U2	COUNTERFORT		28	S		V	8				15.000		17.000		17.000							4	1	3	11	
			INCREMENT =										15.000	7	4.000		12.000							9	7	9	5	321
			8.250 INCH																										
48	4	U3	VERT. BEAM		10	S					12.000		15.000	2	1.000		12.000							6	7	6	3	200
12	7	V1	COUNTERFORT		18					10	0.000													11	8	11	8	286
56	4	V2	COUNTERFORT		20			V	8	2	1.000													2	1	2	1	
			INCREMENT =							6	1.000													6	1	6	1	153
			8.000 INCH																										
12	7	V3	COUNTERFORT		18					13	9.000													15	5	15	5	378
56	4	V4	COUNTERFORT		20			V	8	2	2.000													2	2	2	2	
			INCREMENT =							10	3.000													10	3	10	3	232
			16.125 INCH																										
12	5	V15	VERT. BEAM		20					13	1.000													13	1	13	1	164
72	5	F4	WING		20			V	4	13	6.000													13	6	13	6	
			INCREMENT =							60	0.000													60	0	60	0	2760
			32.875 INCH																										
4	5	F6	WING		20					60	0.000													60	0	60	0	250
			TOTALS																										
	4																											1659
	5																											4901
	7																											2258
			TOTAL																									8818
			TOTAL	E																								0

BILL OF REINFORCING STEEL

NO. REQ'D.	SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.



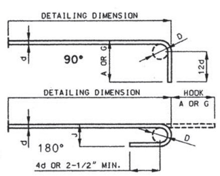


STIRRUP HOOK DIMENSIONS

GRADES 40 - 50 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK: HOOK A OR G	135° HOOK: HOOK A OR G	135° HOOK: APPROX. H
#4	2"	4-1/2"	4-1/2"	3"
#5	2-1/2"	6"	5-1/2"	3-3/4"
#6	4-1/2"	12"	8"	4-1/2"

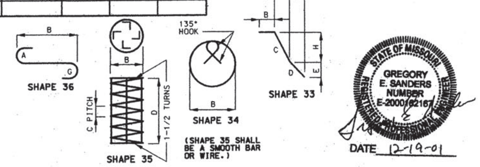
NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS

BAR SIZE	D (IN.)	ALL GRADES 180° HOOKS: A OR G	ALL GRADES 180° HOOKS: J	ALL GRADES 90° HOOKS: A OR G
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	12"
#7	5-1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9-1/2"	15"	11-3/4"	19"
#10	10-3/4"	17"	13-1/4"	22"
#11	12"	19"	14-3/4"	2'-0"
#14	18-1/4"	2'-3"	21-3/4"	2'-7"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEG. TO BE BENT WITH THE SAME PROCEDURE AS FOR 90 DEG. STD. HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATOR'S USE (NEAREST INCH).
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
FOUR ANGLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS.
REINFORCING STEEL (GRADE 60) = FY 60,000 PSI.



BENDING DIAGRAMS

DETAILED NOV. 2001
CHECKED NOV. 2001

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

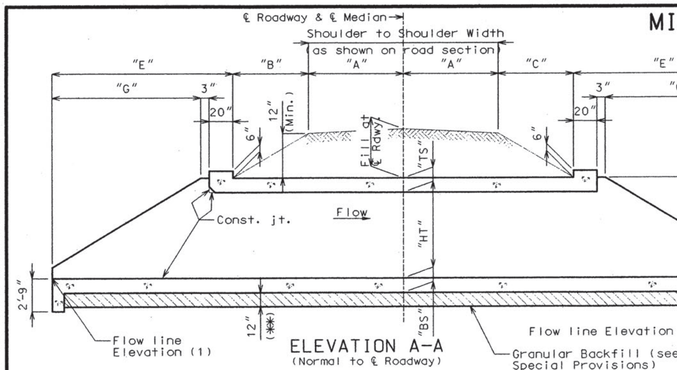
SHEET NO. 5 OF 5

HOLT COUNTY

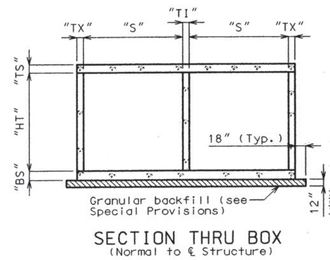
A6360

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

State	Proj. No.	Sheet No.
MO		B6
SEC/SUR 36	TWP 60N	RGE 38W

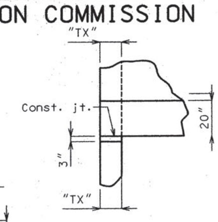


ELEVATION A-A
(Normal to ℄ Roadway)

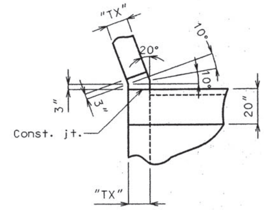


SECTION THRU BOX
(Normal to ℄ Structure)

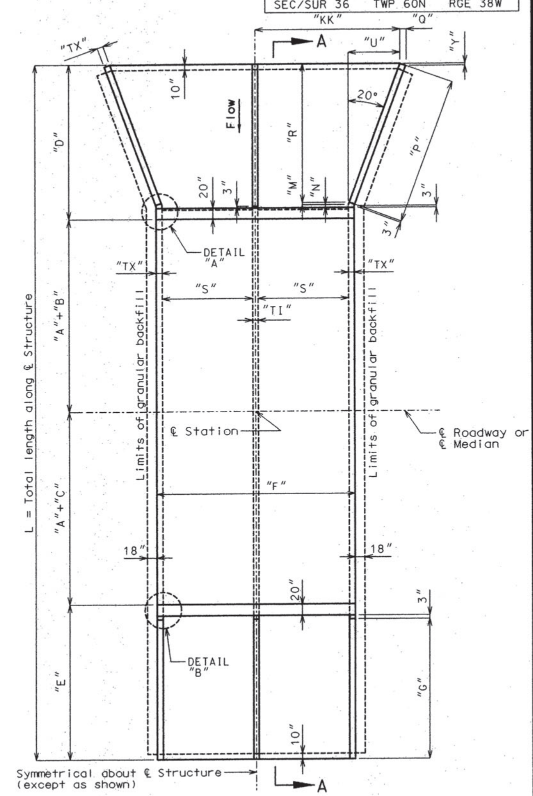
(✱✱)Depth of granular backfill may vary. 12" used for estimating quantities.



DETAIL "B"



DETAIL "A"



PLAN SHOWING LAYOUT DIMENSIONS

GENERAL DATA TABLE

VARIABLE	EQUATION	DIM.
"S"	- - -	12'-0"
"HT"	- - -	12'-0"
"TS"	- - -	11"
"BS"	- - -	14"
"TX"	- - -	10"
"TI"	- - -	10"
"A"	- - -	20'-0"
"B"	- - -	34'-5"
"C"	- - -	38'-9"
"D"	R + M + N + 20"	26'-2"
"E"	G + 23"	25'-9"
"F"	2S + 2TX + TI	26'-6"
"G"	2V	23'-10"
"L"	2A + B + C + D + E	164'-8"
"M"	N(cos 20°)	4½"
"N"	3" + TX(tan 10°)	4¾"
"P"	2V(sec 20°)	25'-4⅜"
"Q"	TX(cos 20°)	9⅜"

VARIABLE	EQUATION	DIM.
"R"	P(cos 20°)	23'-10"
"U"	(R + M)(tan 20°)	8'-9⅝"
"V"	HT + TS - 12"	11'-11"
"Y"	TX(sin 20°)	3⅜"
"KK"	S + U + TI/2	21'-2⅝"

Design Fill (✱)	8.62	
Elev. (1)	940.59	feet
Elev. (2)	939.02	feet

(✱)Design fill height is the distance from top of earth fill or roadway to the bottom of the top slab.

℄ Sta.=	1563+66.54
Pr. Gr. Elev. at ℄ Sta.=	960.42
Earth Fill at ℄ Rdwy. @ ℄ Station = 7.70'	

HYDROLOGIC DATA

Drainage Area	=	3.5 sq. miles
Design Discharge	=	3,091 cu. ft./sec. (100 years)
Design H.W. Elev.	=	951.63 feet (100 years)
Estimated Backwater	=	.90 feet
Rdwy. Overtopping	=	> 500 years

BILL OF REINFORCING STEEL

TOTALS ONLY

Bar Size	Epoxy	Weight (lbs.)
4		9820
5		24,890
6		18,070
7		10,220
8		350
Total Weight		63,350

GENERAL NOTES:

Design Specifications:
AASHTO - 1996 and Interims thru 1999
Load Factor Design

Design Unit Stresses:
Class B1 concrete f'c = 4,000 psi
Reinforcing steel (Grade 60),
fy = 60,000 psi

Design Loading:
HS20 -44
Earth 120 #/ft.³
Equivalent fluid pressure
30 #/ft.³ (Min.) - 60 #/ft.³ (Max.)

Dimensions:
All elevations shown are in feet unless otherwise noted.

Miscellaneous:
When alternate precast box sections are used, the minimum barrel length measured along the shortest wall from the first joint to the outside of the headwall, shall be 3'-2". Reinforcement and dimensions for the wings and headwalls shall be in accordance with Missouri Standard Plans Drawing.

For design fill heights between values tabulated in the Missouri Standard Plans for Highway Construction, the design fill height is taken to the next increment requiring the higher design.

Traffic Control:
Use existing Bridge J-169 during construction.

Channel Cleanout:
Provide grading of the channel bottom within the limits of the R/W as needed for culvert flowline elevations and transition of the channel bed to the culvert opening. Taper channel banks to match end of culvert opening as required. (Roadway Item).

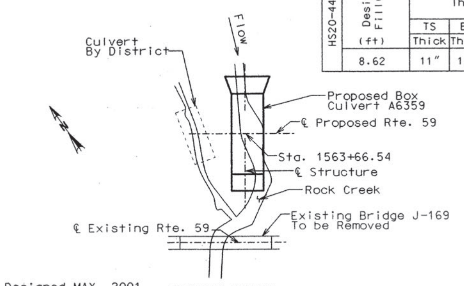
REINFORCEMENT TABLE

Span (S) = 12'-0"; HT (ft.) = 12'-0"

HS20-44 Design Fill(✱) (ft)	Member Thickness TS Thick	BS Thick	TX Thick	TI Thick	Top Slab Bars A1 Bars size	A1 c to c	J3 Bars size	J3 c to c	H1 Bars size	H1 c to c	H2 Bars size	H2 c to c	Bottom Slab Bars A2 Bars size	A2 c to c	J4 Bars size	J4 c to c	H3 Bars size	H3 c to c	Wall Bars B1 Bars size	B1 c to c	B2 Bars G1	B2 size	B2 c to c	F Bars size	F c to c
8.62	11"	14"	10"	10"	5	6.75	6	6.75	7	14	7	14	5	6.75	6	7	7	6.75	5	11	0	5	9.75	4	13.75

Coefficients (see note) J4 C4	J4 K3	H3 C7	H3 Q10	J3 C1	J3 K2	H1 C5	H1 Q8	H2 C6	H2 Q9	"C" Multiplier S = 12'-0" in.	"Q" Multiplier S = 12'-0" in.	"K" Multiplier HT = 12'-0" in.
.35	.95	.35	-	.36	.23	.42	-	.26	-	154	-	164

Use Reinforcement Table shown as substitute for tables shown on Std. Plans 703.45.
Use Std. Plans 703.41, 703.42 and 703.45 for details not shown.
All dimensions are in inches unless otherwise noted.
Dimensions marked with C# or K# are the product of the coefficient and its associated multiplier.



LOCATION SKETCH

STATE OF MISSOURI GREGORY E. SANDERS NUMBER E-2000162167 REGISTERED PROFESSIONAL ENGINEER

B.M. 1-97 ELEV.957.52"□" ON S.E. END LIP OF SIDEWALL BR# J-169 (ROCK CREEK) 275± RT. STA. 1563+20+± ℄ NEW RTE. 59.

ESTIMATED QUANTITIES

		DATE 12-19-01	FINAL QUANTITIES
Removal of Bridges (J-169)	lump sum	1	
Class 3 Excavation	cu. yard	680	
Granular Backfill (Culverts-Bridge)	cu. yard	187	
Class B1 Concrete (Culverts-Bridge)	cu. yard	468.9	
Reinforcing Steel (Culverts-Bridge)	pounds	63,350	

BRIDGE OVER ROCK CREEK
STATE ROAD FROM RTE B TO I-29
ABOUT 1.5 MILES WEST OF RTE. B

PROJECT NO. STA. 1563+66.54
JOB NO. J1S0606 RTE. 59

HOLT COUNTY

STD. 706.35
STD. 703.37
STD. 703.41
STD. 703.42
STD. 703.45

A6359 REV.

Designed MAY 2001
Detailed JUNE 2001
Checked MAY 2001

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 1

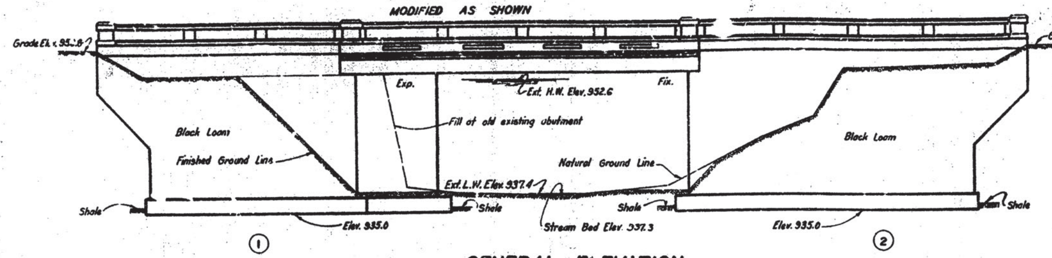
T:\br-proj\robinc1\J1S0606\A6359\A6359_SQBOXCULVERT.dgn 4:42:40 PM 12/19/2001

MISSOURI STATE HIGHWAY DEPARTMENT

B7

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RI-519A	19		

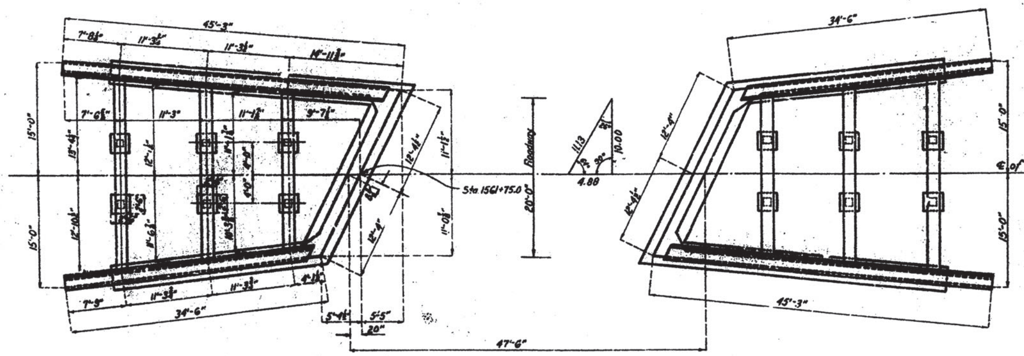
1-STANDARD SUPERSTRUCTURE C-6345 MODIFIED AS SHOWN



GENERAL ELEVATION

Note: Carry footings at least 2'-0" into firm undisturbed shale.

Note: Channel to be cleared above and below site approximately as shown on Road Plans.

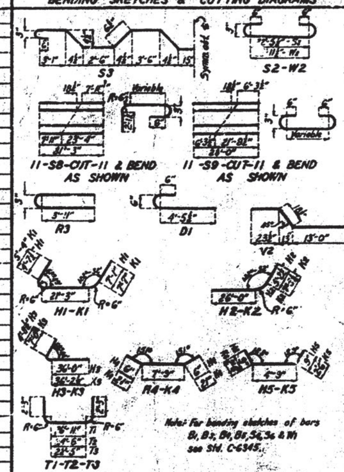


PLAN

COMPLETE BILL OF REINFORCING STEEL

No.	Size	Length	Mark	Location
Superstructure				
16	[illegible]	24'-6"	R1	Rail
40	[illegible]	9"	R2	Curb
16	[illegible]	8'-3"	R3	Subpost
16	[illegible]	4'-0"	R4	Post
416	[illegible]	18"	R5	Balusters
25	[illegible]	22'-9"	S1	Slab
26	[illegible]	25'-3"	S2	"
24	[illegible]	25'-3"	S3	"
6	[illegible]	26'-6"	S4	"
6	[illegible]	7'-0"	S5	"
12	[illegible]	6'-0"	S6	"
12	[illegible]	24'-0"	S7	"
11	[illegible]	31'-3"	S8	"
11	[illegible]	28'-0"	S9	"
12	[illegible]	25'-0"	C1	Curb
32	[illegible]	15"	C2	"
196	[illegible]	8'-3"	B1	Girder
16	[illegible]	24'-0"	B2	"
20	[illegible]	49'-3"	B3	"
8	[illegible]	50'-3"	B4	"
12	[illegible]	50'-3"	B5	"
2	[illegible]	22'-6"	W1	Web Wall
4	[illegible]	24'-9"	W2	" "
Substructure				
18	[illegible]	34'-6"	H1	Abut. Wall
18	[illegible]	32'-0"	H2	Wing Wall
18	[illegible]	41'-6"	H3	" "

BENDING SKETCHES & CUTTING DIAGRAMS

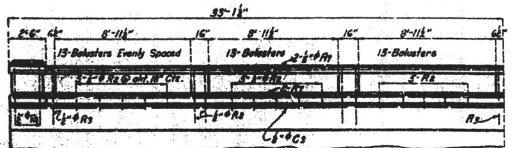


No.	Size	Length	Mark	Location
18	[illegible]	8'-9"	H4	Hounches
18	[illegible]	6'-3"	H5	"
16	[illegible]	10'-6"	H6	Wing Wall
12	[illegible]	8'-9"	H7	" "
12	[illegible]	35'-9"	K1	Wall Beam
12	[illegible]	34'-3"	K2	Wing Wall
12	[illegible]	44'-0"	K3	" "
12	[illegible]	11'-3"	K4	Hounches
12	[illegible]	9'-9"	K5	"
12	[illegible]	34'-8"	K6	Wing
12	[illegible]	23'-5"	K7	"
30	[illegible]	16'-0"	V1	Abut. Wall
26	[illegible]	16'-6"	V2	" "
162	[illegible]	16'-0"	V3	Wing Walls
8	[illegible]	6'-6"	V4	" "
144	[illegible]	8'-6"	V5	" "
218	[illegible]	5'-5"	D1	Footing
16	[illegible]	33'-0"	T1	Tie Beam
16	[illegible]	30'-9"	T2	" "
16	[illegible]	28'-6"	T3	" "
48	[illegible]	8'-3"	P1	Column
70	[illegible]	12"	R2	Curb
28	[illegible]	8'-3"	R3	Subpost
16	[illegible]	4'-8"	R4	Post
728	[illegible]	18"	R5	Baluster
8	[illegible]	32'-9"	R7	Rail
16	[illegible]	25'-0"	R8	"
4	[illegible]	82'-6"	C3	Curb
8	[illegible]	23'-0"	C4	"

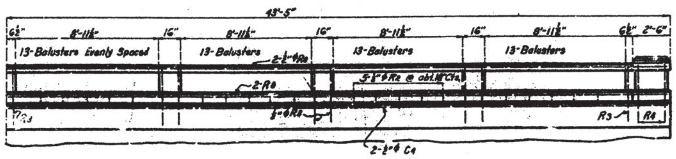
Note: Dimensions given are along ℄ of bars and are for computed lengths.

GENERAL NOTES:

Concrete in handrail to be 1:2:3 mix.
Concrete in slab, curbs and girders in superstructure to be 1:2:3½ mix.
All other concrete to be 1:2:4 mix.
Exposed edges shall be beveled ¾" where no other bevel is noted.
Where bituminous felt is used in expansion or partition joints in concrete stitch felt in vertical joints securely to one face of concrete with copper wire.
Two name plates type "A" as shown on Std. S-818 to be furnished and placed by contractor.
Cost of name plates to be included in price bid for other items.
Top of concrete in both wings and front wall of abutments to be kept at same level throughout pouring.
Shop drawings for the fabricating of bearing plates and bolts will be furnished by the Missouri State Highway Department.
No permanent camber desired in finished girders.
Any construction camber remaining in girders to be taken out in floor slab by thickening floor over supports.



SHORT WING

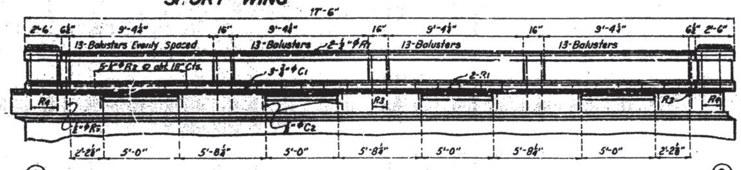


LONG WING

ESTIMATED QUANTITIES

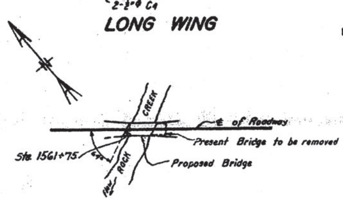
Item		Superstr.	Substr.	Total
Excavation	Cu. Yds.		500	500
Concrete 1:2:3 mix.	Cu. Yds.	4.8	7.5	12.3
Concrete 1:2:3½ mix.	Cu. Yds.	66.7		66.7
Concrete 1:2:4 mix.	Cu. Yds.		245.6	245.6
Reinforcing Steel	Lbs.	16310	18170	34480

Note: Weight of bearing plates and bolts is included in weight of reinforcing steel.



DETAILS OF HANDRAIL

Note: Dimensions are given along ℄ of rail.



LOCATION SKETCH

BEARING PLATES AND BOLTS REQUIRED

16-Plates - 8" × ⅝" × 20" - Plane to ½" thickness.
16- ⅞"φ Bolts 12" long - Sq. Nuts - Csk. hds.
16 - ¾"φ Bolts 12" long - No threads or Nuts.
4 - Copper Plates 8" × 20" - 16 Gauge.
16 - ⅜"φ Bolts 1½" long - Soft Iron.

Note: Above list of bearing plates and bolts is complete. Plates and bolts listed on Std. C-6345 not to be ordered.

B.M. Elev. 953.56 "X" on S. End of W. Abutment of Bridge 10' Rt. of Sta. 1561+76.

BRIDGE OVER ROCK CREEK

STATE ROAD FROM OREGON TO SAVANNAH
ABOUT 5 MILES EAST OF FOREST CITY
PROJECT NO. RI-519 A STA. 1561 + 75
HOLT COUNTY

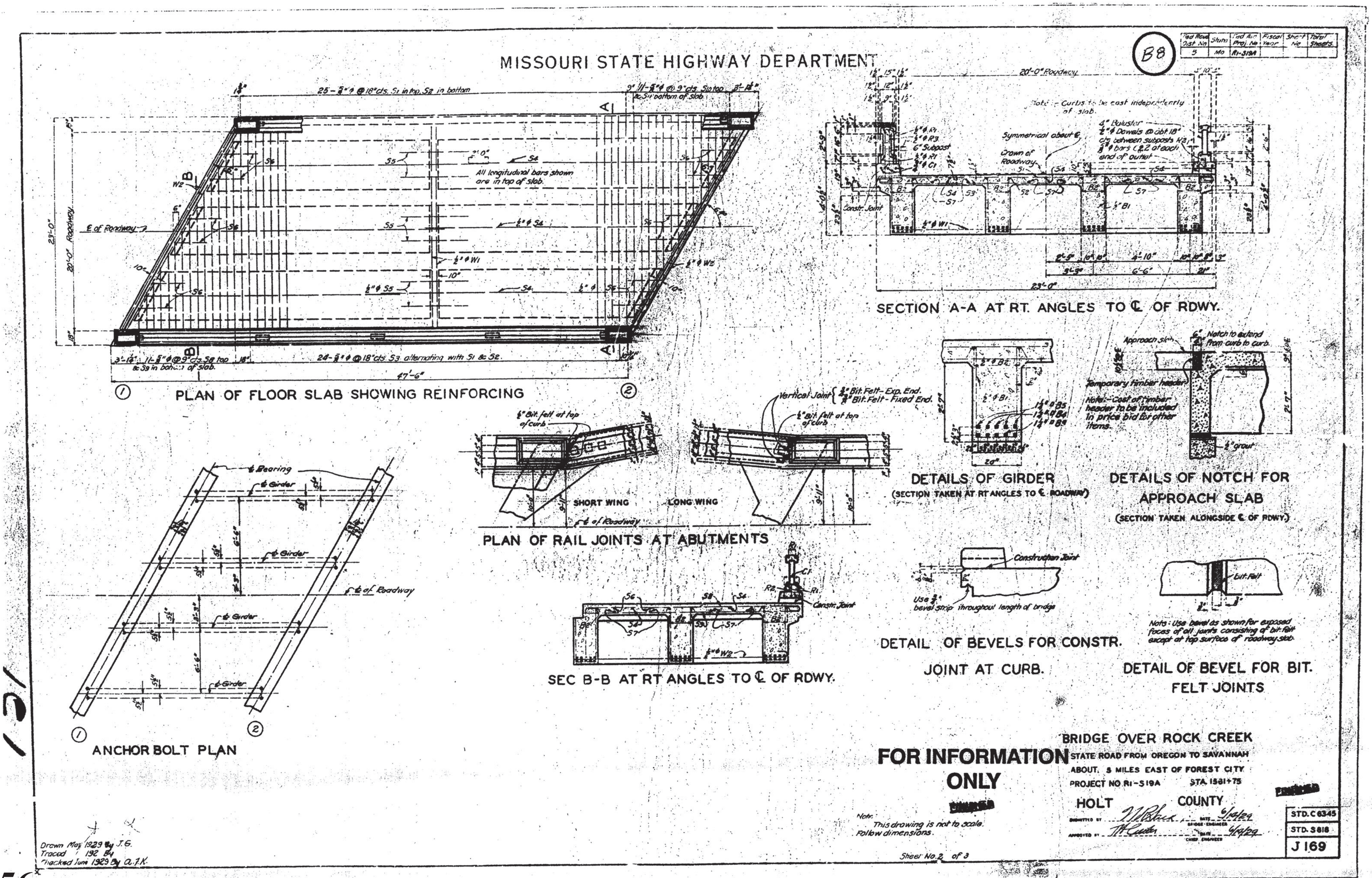
SUBMITTED BY [signature] DATE 6/13/29 BRIDGE ENGINEER
APPROVED BY [signature] DATE 6/14/29 CHIEF ENGINEER

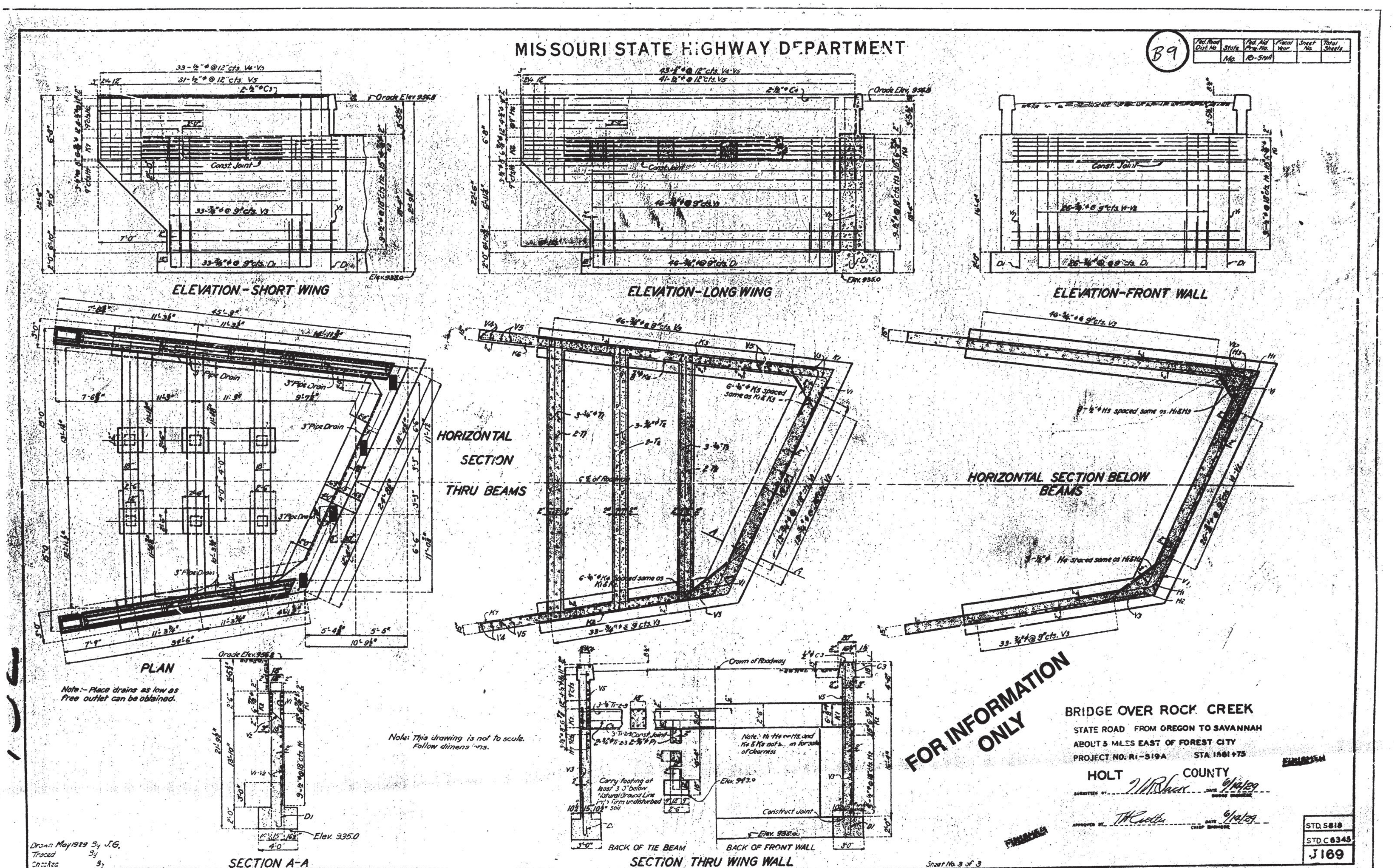
STD. C-6345
STD. S-818
J-169

FOR INFORMATION ONLY

Sheet No. 1 of 3

Drawn May 1929 by J.G.
Traced May 1929 by L.W.V.
Checked June 1929 by C.T.M.


MISSOURI STATE HIGHWAY DEPARTMENT
B8
PLAN OF FLOOR SLAB SHOWING REINFORCING
All longitudinal bars shown are in top of slab.
SECTION A-A AT RT. ANGLES TO ℄ OF RDWY.
20'-0" Roadway
Symmetrical about ℄
Crown of Roadway
Constr. Joint
ANCHOR BOLT PLAN
PLAN OF RAIL JOINTS AT ABUTMENTS
SHORT WING
LONG WING
DETAILS OF GIRDER
(SECTION TAKEN AT RT ANGLES TO ℄ ROADWAY)
DETAILS OF NOTCH FOR APPROACH SLAB
(SECTION TAKEN ALONGSIDE ℄ OF RDWY.)
SEC B-B AT RT ANGLES TO ℄ OF RDWY.
DETAIL OF BEVELS FOR CONSTR. JOINT AT CURB.
DETAIL OF BEVEL FOR BIT. FELT JOINTS
FOR INFORMATION ONLY
BRIDGE OVER ROCK CREEK
STATE ROAD FROM OREGON TO SAVANNAH
ABOUT 5 MILES EAST OF FOREST CITY
PROJECT NO RI-519A STA 1581+75
HOLT COUNTY
Note: This drawing is not to scale. Follow dimensions.
STD. C6345
STD. S816
J 169
Drawn May 1929 By J.G.
Traced 192 By
Checked June 1929 By A.J.K.
Sheet No. 2 of 3

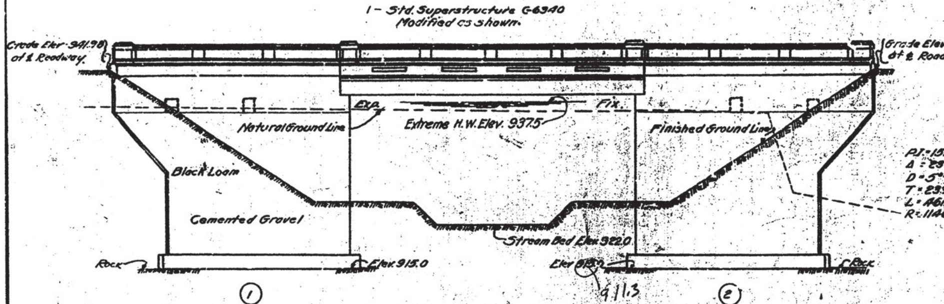


MISSOURI STATE HIGHWAY DEPARTMENT
B9
Mo.
RI-519A
ELEVATION - SHORT WING
ELEVATION - LONG WING
ELEVATION - FRONT WALL
Const. Joint
Grade Elev. 956.8
Elev. 935.0
PLAN
Note:- Place drains as low as free outlet can be obtained.
3" Pipe Drain
HORIZONTAL SECTION THRU BEAMS
HORIZONTAL SECTION BELOW BEAMS
SECTION A-A
SECTION THRU WING WALL
BACK OF TIE BEAM
BACK OF FRONT WALL
Crown of Roadway
Construct Joint
Carry footing at least 3'-0" below Natural Ground Line into firm undisturbed soil
Note: This drawing is not to scale. Follow dimensions.
FOR INFORMATION ONLY
BRIDGE OVER ROCK CREEK
STATE ROAD FROM OREGON TO SAVANNAH
ABOUT 5 MILES EAST OF FOREST CITY
PROJECT NO. RI-519A STA. 1561+75
HOLT COUNTY
6/14/29
STD. 5818
STD. C 6345
J169
Drawn May 1929 By J.G.
Traced By
Checked By
Sheet No. 3 of 3

B10

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	MO.	R1-S19A	19		

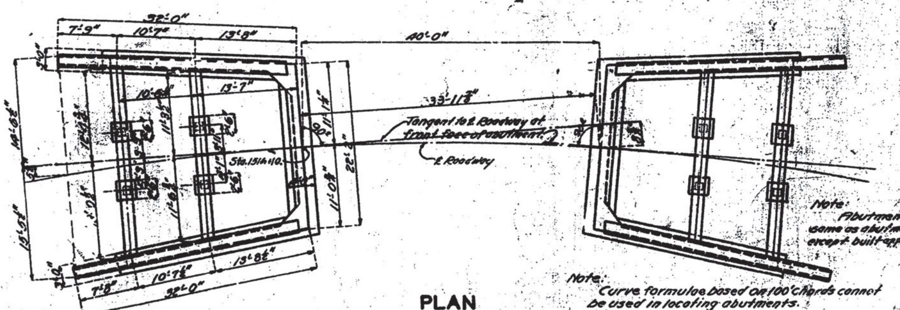
MISSOURI STATE HIGHWAY DEPARTMENT



GENERAL ELEVATION

Note: Footings to extend at least 6" into solid rock or 2'-0" into shale.

Note: Channel to be opened above and below site as shown on Road Plans.



Note: Abutment No. 2 same as abutment No. 1 except built opposite hand.

Note: Curve formulae based on 100' Chords cannot be used in locating abutments.

PLAN

LIST OF BEARING PLATES AND BOLTS REQ'D.

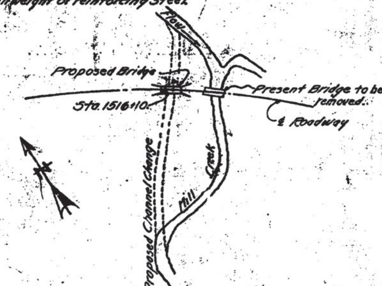
16 plates 15"x⅞"x17" planed to ¾" thickness.
4 Plates 15"x17" - No. 16 gauge copper.
16 Bolts ⅞"x12" long Sq. Hds. no threads or nuts.
16 Bolts ⅞"x12" long Csk. Hds. Sq. nuts.
16 Bolts ⅝"x1½" long soft iron.

Above list of bearing plates and bolts is complete.
Plates and bolts listed on standard C 6340 not to be ordered.

ESTIMATED QUANTITIES

ITEM		SUBSTR.	SUP'STR.	TOTAL
Excavation	Cu. Yds.	595		595
Concrete 1:2:3 mix	Cu. Yds.		10.6	10.6
Concrete 1:2:3½ mix	Cu. Yds.		53.5	53.5
Concrete 1:2:4 mix	Cu. Yds.	245.8		245.8
Reinforcing Steel	Lbs.	22030	12570	34600

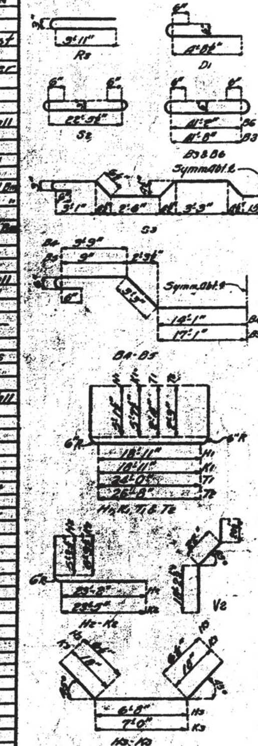
Weight of bearing plates and bolts for deck girder span is included in weight of reinforcing steel.



LOCATION SKETCH

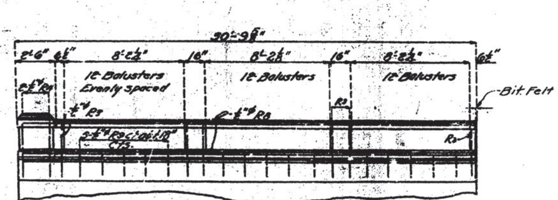
BILL OF REINFORCING STEEL

NO.	SIZE	LENGTH	MARK	LOCATION
SUBSTRUCTURE				
8	[illegible]	30'-6"	C2	Curb
24	[illegible]	8'-3"	R3	Sub post
16	[illegible]	4'-0"	R4	Post
576	[illegible]	18"	R5	Baluster
16	[illegible]	30'-6"	[illegible]	Rail
60	[illegible]	12"	R9	"
242	[illegible]	6'-0"	D1	Footing
26	[illegible]	30'-9"	H1	Front Wall
52	[illegible]	29'-9"	H2	Wing Wall
52	[illegible]	7'-8"	H3	Haunch
24	[illegible]	10'-6"	H4	Wing Wall
12	[illegible]	8'-6"	H5	" "
14	[illegible]	31'-9"	K1	Front Wall Bm
28	[illegible]	31'-0"	K2	Wing " "
28	[illegible]	10'-0"	K3	Haunch
28	[illegible]	21'-9"	K4	Wing Wall Bm
16	[illegible]	30'-8"	T1	Tie Beam
16	[illegible]	30'-9"	T2	" "
34	[illegible]	21'-9"	V1	Front Wall
172	[illegible]	21'-9"	V3	Wing Wall
58	[illegible]	8'-8"	V4	" "
[illegible]	[illegible]	6'-3"	V5	" "
58	[illegible]	9'-5"	V6	" "
4	[illegible]	7'-0"	V9	" "
8	[illegible]	5'-0"	P3	Columns
16	[illegible]	3'-0"	P1	[illegible]
8	[illegible]	16'-8"	P2	"
32	[illegible]	21'-9"	V12	Front Wall
SUPERSTRUCTURE				
4	[illegible]	22'-3"	C1	Curb
6	[illegible]	22'-0"	C2	"
16	[illegible]	15"	C3	"
8	[illegible]	22'-3"	R1	Rail
20	[illegible]	2'-0"	R2	"
16	[illegible]	8'-3"	R3	Sub Post
16	[illegible]	4'-0"	R4	Post
384	[illegible]	18"	R5	Baluster
8	[illegible]	22'-0"	R6	Rail
20	[illegible]	9"	R7	"
28	[illegible]	22'-9"	S1	Slab
28	[illegible]	24'-5"	S2	"
27	[illegible]	25'-5"	S3	"
6	[illegible]	24'-0"	S4	"
6	[illegible]	7'-0"	S5	"
12	[illegible]	6'-0"	S6	"
12	[illegible]	21'-6"	S7	"
172	[illegible]	7'-9"	B1	Girder
16	[illegible]	21'-6"	B2	"
8	[illegible]	44'-3"	B3	"
8	[illegible]	44'-9"	B4	"
8	[illegible]	44'-9"	B5	"
8	[illegible]	43'-9"	B6	"
6	[illegible]	22'-3"	W1	Web Wall



Above bill of reinforcing steel is complete.
Dimensions of bars are given along centerline and are for computed lengths.
See Std. C-6340 for bending sketches of S2, S3, B1 and W1.

B.M. Elev. 936.57 "X" in S.W. wing wall of Bridge 11' Rt. Sta. 1515+66.



Note: Dimensions given are along ℄ of handrail.

ELEVATION OF ABUTMENT HANDRAIL

GENERAL NOTES:-

Concrete in hand rail to be 1:2:3 mix.
Concrete in slab, girders and curbs on girder span to be 1:2:3½ mix.
All other concrete to be 1:2:4 mix.
Exposed edges to be beveled ¾" where no other bevel is noted.
Shop drawings for the fabricating of bearing plates and bolts will be furnished by the Missouri State Highway Department.
No permanent camber desired in finished girders.
Any construction camber remaining in girders to be taken out in floor slab by thickening floor over supports.
Top of concrete in both wings and front wall of abutments to be kept at same level throughout pouring.
Where bituminous felt is used in expansion or partition joints in concrete, stitch felt in vertical joint securely to one face of concrete with copper wire.
Two name plates type "A" as shown on Std. S-818 to be furnished and placed by contractor. Cost of name plates to be included in price bid for other items.
Omit drains as shown on Std C-6340.

FOR INFORMATION ONLY

BRIDGE OVER MILL CREEK

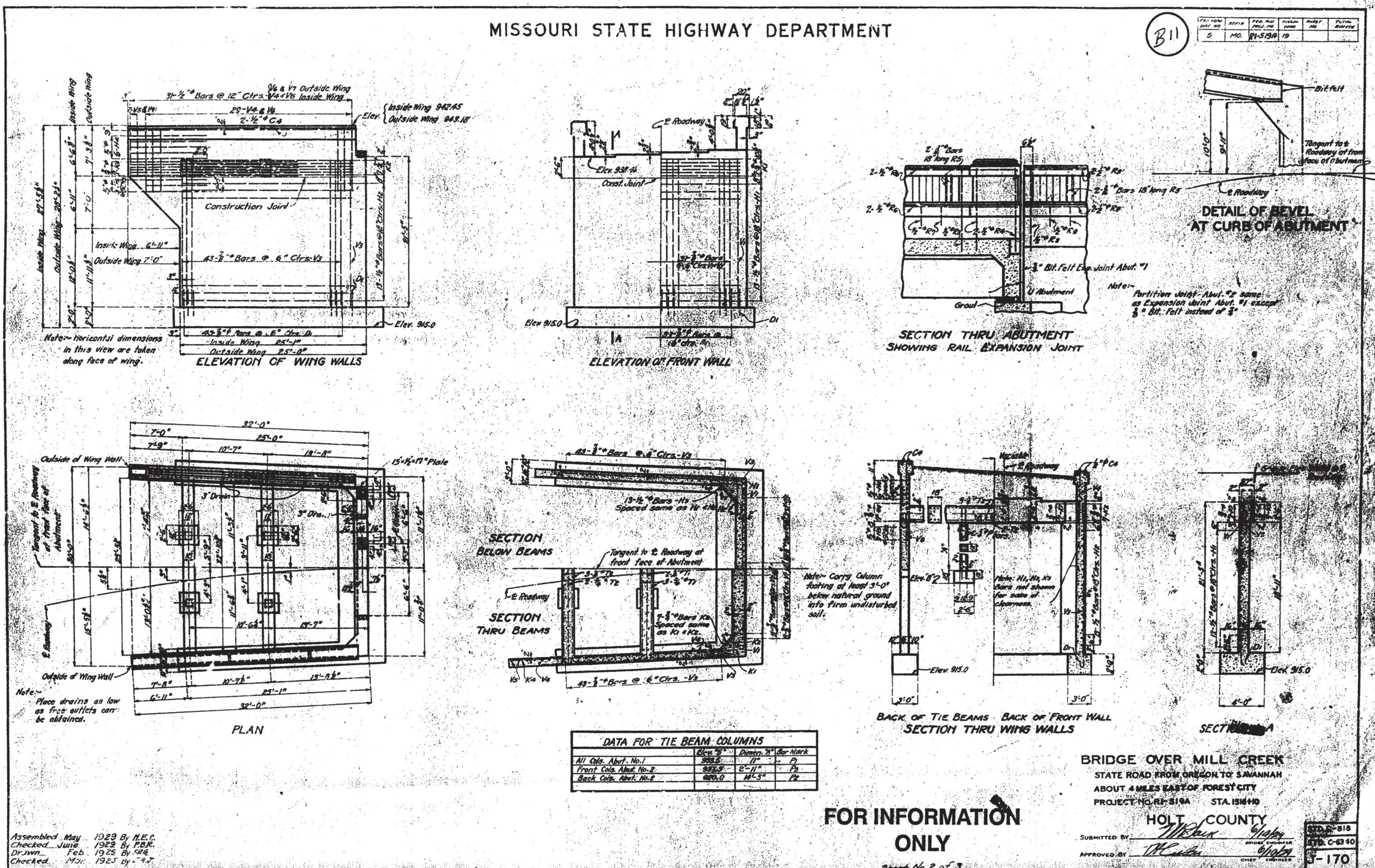
STATE ROAD FROM OREGON TO SAVANNAH
ABOUT 4 MILES EAST OF FOREST CITY
PROJECT NO. R1-S19A STA 1516+10
HOLT COUNTY

SUBMITTED BY [signature] DATE 6/14/29. BRIDGE ENGINEER
APPROVED BY [signature] DATE 6/14/29. CHIEF ENGINEER

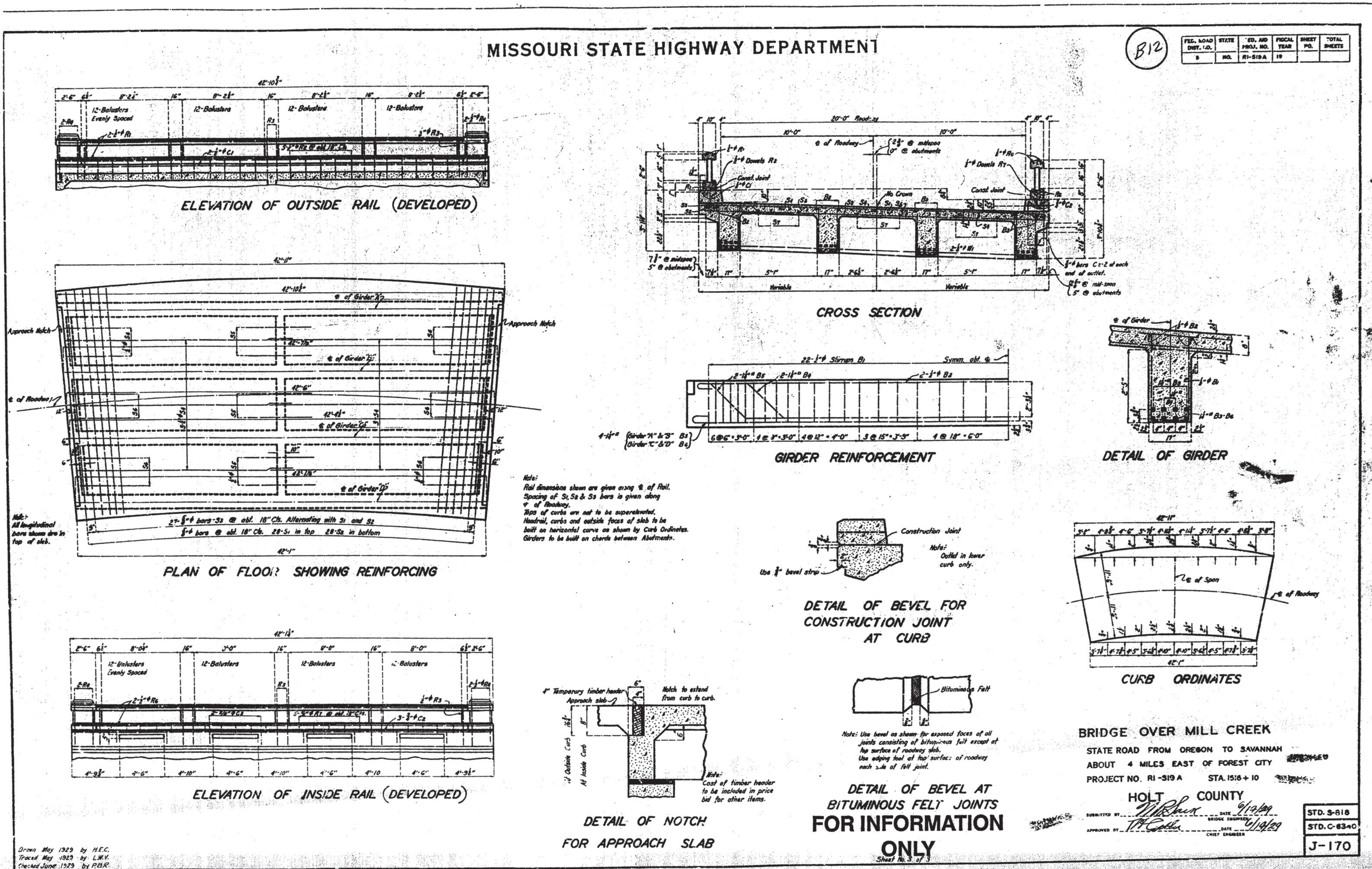
STD-S818
STD-C6340
J-170

Drawn May 1929 by H.E.C.
Traced May 1929 by J.T.
Checked June 1929 by P.B.R.

Sheet No. 1 of 3 Sheets.



DATA FOR TIE BEAM COLUMNS	Elev. "B"	Dimen. "A"	Bar Mark
All Cols. Abut. No. 1	953.5	11"	P1
Front Cols. Abut. No. 2	933.5	2'-11"	P3
Back Cols. Abut. No. 2	920.0	14'-5"	P2


MISSOURI STATE HIGHWAY DEPARTMENT
B12
ELEVATION OF OUTSIDE RAIL (DEVELOPED)
CROSS SECTION
PLAN OF FLOOR SHOWING REINFORCING
GIRDER REINFORCEMENT
DETAIL OF GIRDER
DETAIL OF BEVEL FOR CONSTRUCTION JOINT AT CURB
CURB ORDINATES
ELEVATION OF INSIDE RAIL (DEVELOPED)
DETAIL OF NOTCH FOR APPROACH SLAB
DETAIL OF BEVEL AT BITUMINOUS FELT JOINTS
FOR INFORMATION ONLY
BRIDGE OVER MILL CREEK
STATE ROAD FROM OREGON TO SAVANNAH
ABOUT 4 MILES EAST OF FOREST CITY
PROJECT NO. RI-319 A STA. 1518 + 10
HOLT COUNTY
STD. S-818
STD. C-6340
J-170
Sheet No. 3 of 3
Drawn May 1929 by H.E.C.
Traced May 1929 by L.W.V.
Checked June 1929 by P.B.R.

ROUTE	STATE	DISTRICT	SHEET NO.
59	MO	1	36

JOB NO. J1S0606

PROJECT NO.

COUNTY HOLT

STATE OF MISSOURI
SHANNON D. KUSILEK
NUMBER E-2000150032
REGISTERED PROFESSIONAL ENGINEER

DATE 1-15-2002

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STANDARD PLANS

EFFECTIVE: 01-01-2002

✓	NO.	DESCRIPTION
✓	203.00E	EXCAVATION & EMBANKMENT
	203.02E	UNDERGRADING (2 SHEETS)
	203.10B	TABULATED EARTHWORK AND SECTION DATA
✓	203.20E	SUPERELEVATION SPIRALS AND WIDENING (UNDIVIDED HIGHWAY)
	203.21H	SUPERELEVATION SPIRALS AND WIDENING (DIVIDED HIGHWAY) *
	203.35A	MAILBOX TURNOUTS
	203.40F	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (OTHER THAN 6:1 FORESLOPE)
	203.41F	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (6:1 FORESLOPE)
	203.50L	TYPICAL MEDIAN OPENINGS (DIVIDED HIGHWAYS)
✓	203.61A	DRIVEWAY TYPE I *
✓	203.62B	DRIVEWAY TYPE II *
	203.63A	DRIVEWAY TYPE III
	203.64B	DRIVEWAY TYPE IV *
	203.65A	DRIVEWAY TYPE V
	204.00D	EMBANKMENT CONTROL MEASURING DEVICES
	204.30	PORE PRESSURE MEASURING DEVICES
	502.00R	CONCRETE PAVEMENT AND BASE APPURTENANCES (2 SHEETS)
✓	502.05D	CONCRETE PAVEMENT & BASE APPURTENANCES FOR 15 FT. JOINT SPACING
		(2 SHEETS)
✓	502.10F	DOWEL SUPPORTING UNITS
	504.00E	CONCRETE APPROACH PAVEMENT (2 SHEETS)
✓	602.00B	RIGHT-OF-WAY AND DRAIN MARKERS *
	602.40	GEOGRAPHIC REFERENCE SYSTEM MONUMENT
	604.05C	PIPE CULVERT HEADWALLS - TYPE S
	604.10E	PIPE CULVERT HEADWALL-WITH ENERGY DISSIPATOR - 18"
	604.11E	PIPE CULVERT HEADWALL-WITH ENERGY DISSIPATOR - 24"
	604.12E	PIPE CULVERT HEADWALL-WITH ENERGY DISSIPATOR - 30"
	604.13E	PIPE CULVERT HEADWALL-WITH ENERGY DISSIPATOR - 36"
	604.14E	PIPE CULVERT HEADWALL-WITH ENERGY DISSIPATOR - 42"
	604.15E	PIPE CULVERT HEADWALL-WITH ENERGY DISSIPATOR - 48"
	604.20B	DROP INLET - TYPE B
	604.21B	DROP INLET - TYPE C
	604.22B	DROP INLET - TYPE D
	604.23B	DROP INLET - TYPE E
	604.24B	DROP INLET - TYPE EE
	604.25C	DROP INLET - TYPE F
	604.26D	DROP INLET - TYPE G
	604.27E	DROP INLET - TYPE S (3 SHEETS)
	604.28E	DROP INLET - TYPE T (ALSO INCLUDE 614.30)
	604.29C	DROP INLET - TYPE X
	604.30F	CONCRETE MANHOLES (ALSO INCLUDE 614.30)
	604.40F	PIPE COLLARS
	604.70	SLOTTED DRAIN (2 SHEETS)
	605.10D	PAVEMENT UNDERDRAINAGE (2 SHEETS) *
	606.00AK	GUARDRAIL (10 SHEETS)
	606.01B	BULLNOSE GUARDRAIL SYSTEM (13 SHEETS) *
	606.22P	BRIDGE ANCHOR SECTION (SAFETY BARRIER CURB ON BRIDGE)
		(ALSO INCLUDE 606.00) (2 SHEETS)
	606.23F	BRIDGE ANCHOR SECTION (THRIE BEAM RAIL ON BRIDGE) *
		(ALSO INCLUDE 606.00) (2 SHEETS)
	606.30E	TERMINAL SECTION (ALSO INCLUDE 606.00)
	606.40B	GUARD CABLE - ONE STRAND
	606.41E	GUARD CABLE - THREE STRAND (4 SHEETS) *
	607.10T	CHAIN LINK FENCE
	607.11E	CHAIN LINK FENCE FOR RETAINING WALLS
	607.20F	WOVEN WIRE FENCE (ALSO INCLUDE 607.10)

✓	NO.	DESCRIPTION
	608.00F	PAVED APPROACHES (2 SHEETS) *
	608.10J	CONCRETE SIDEWALK AND CURB RAMPS (2 SHEETS)
	608.20D	CONCRETE STEPS
✓	609.00K	CONCRETE CURB - CURB AND GUTTER - GUTTER *
	609.15C	PAVED DITCHES
	609.40K	DRAIN BASIN, SHOULDER PAVING AND FILL SLOPES AT BRIDGE ENDS (2 SHEETS) *
✓	609.60C	ROCK DITCH LINER
✓	609.70C	ROCK LINING FOR CULVERT OUTLETS
	610.20E	BRICK MANHOLES (2 SHEETS) (ALSO INCLUDE 614.30)
	611.60N	CONCRETE SLOPE PROTECTION
	612.10N	BARRICADES *
	612.20A	SAND FILLED IMPACT ATTENUATORS
	613.00H	PAVEMENT REPAIR (2 SHEETS) *
	614.10S	CURB INLETS, GRATES AND BEARING PLATES
	614.11A	CURVED VANE GRATE AND FRAME
	614.30E	MANHOLE FRAMES AND COVERS
	615.00A	OFFICE FOR ENGINEER
✓	616.10Z	TRAFFIC CONTROL DEVICES (5 SHEETS) (ALSO INCLUDE 903.01) *
	617.00AD	CONCRETE TRAFFIC BARRIER - TYPE A & B (2 SHEETS) *
	617.10A	CONCRETE TRAFFIC BARRIER - TYPE C
	617.20	CONCRETE TRAFFIC BARRIER - TYPE D
	619.10B	PAVEMENT EDGE TREATMENT
✓	620.00A	PAVEMENT MARKING
	625.00	HOLE PATTERN FOR PAVEMENT SLAB STABILIZATION
✓	626.00A	RUMBLE STRIPS
	702.02E	CAST-IN-PLACE CONCRETE PILES (APPROVED TYPES) *
	703.10C	CONCRETE SINGLE BOX STRUCTURE (STRAIGHT WINGS-SQUARE)(3 SHEETS)
		(ALSO INCLUDE 706.35) *
	703.11C	CONCRETE SINGLE BOX STRUCTURE (FLARED WINGS-SQUARE)(3 SHEETS)
		(ALSO INCLUDE 706.35) *
	703.12C	CONCRETE SINGLE BOX STRUCTURE (CUT SECTIONS) *
	703.13C	CONCRETE SINGLE BOX STRUCTURE (STRAIGHT WINGS-SKEWED)(3 SHEETS)
		(ALSO INCLUDE 706.35) *
✓	703.14C	CONCRETE SINGLE BOX STRUCTURE (FLARED WINGS-SKEWED)(3 SHEETS)
		(ALSO INCLUDE 706.35) *
✓	703.15B	CONCRETE SINGLE BOX STRUCTURE (MEMBER SIZES AND REINFORCEMENTS)
		(13 SHEETS) (ALSO INCLUDE 706.35) *
✓	703.37B	CONCRETE BOX CULVERTS (EXTERIOR WING REINFORCEMENTS)(2 SHEETS)
		(ALSO INCLUDE 706.35)
	703.38A	CONCRETE BOX CULVERTS (CUTTING DETAILS)(2 SHEETS)(ALSO INCLUDE 706.35)
	703.40C	CONCRETE DOUBLE BOX STRUCTURE (STRAIGHT WINGS-SQUARE)(2 SHEETS)
		(ALSO INCLUDE 706.35) *
✓	703.41C	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS-SQUARE)(2 SHEETS)
		(ALSO INCLUDE 706.35) *
✓	703.42C	CONCRETE DOUBLE BOX STRUCTURE (CUT SECTIONS)(2 SHEETS)
		(ALSO INCLUDE 706.35) *
	703.43C	CONCRETE DOUBLE BOX STRUCTURE (STRAIGHT WINGS-SKEWED)(2 SHEETS)
		(ALSO INCLUDE 706.35) *
✓	703.44C	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS-SKEWED)(2 SHEETS)
		(ALSO INCLUDE 706.35) *
✓	703.45A	CONCRETE DOUBLE BOX STRUCTURE (MEMBER SIZES AND REINFORCEMENT)
		(13 SHEETS) (ALSO INCLUDE 706.35) *
✓	703.60E	CONCRETE BOX STRUCTURE - PIPE INLET
	703.80C	CONCRETE TRIPLE BOX STRUCTURE (STRAIGHT WINGS-SQUARE)(2 SHEETS)
		(ALSO INCLUDE 706.35) *
	703.81C	CONCRETE TRIPLE BOX STRUCTURE (FLARED WINGS-SQUARED)(2 SHEETS)
		(ALSO INCLUDE 706.35) *
	703.82C	CONCRETE TRIPLE BOX STRUCTURE (CUT SECTIONS)(2 SHEETS)
		(ALSO INCLUDE 706.35) *
	703.83C	CONCRETE TRIPLE BOX STRUCTURE (STRAIGHT WINGS-SKEWED)(2 SHEETS)
		(ALSO INCLUDE 706.35) *
	703.84C	CONCRETE TRIPLE BOX STRUCTURE (FLARED WINGS-SKEWED)(2 SHEETS)
		(ALSO INCLUDE 706.35) *

✓	NO.	DESCRIPTION
	703.85A	CONCRETE TRIPLE BOX STRUCTURE (MEMBER SIZES AND REINFORCEMENT)
		(13 SHEETS) (ALSO INCLUDE 706.35) *
✓	706.35G	BAR SUPPORTS FOR CONCRETE REINFORCEMENT
	712.40H	STEEL DAMS AT EXPANSION DEVICES *
	725.00	CORRUGATED METAL PIPE INSTALLATION METHODS
	725.31C	METAL CURTAIN WALL AND METAL INLETS
✓	726.30E	CULVERT INSTALLATION METHODS (2 SHEETS) *
	730.00A	CORRUGATED POLYETHYLENE PIPE INSTALLATION METHODS *
	731.00T	PRECAST MANHOLES (ALSO INCLUDE 614.30)
	731.10P	PRECAST DROP INLETS (4 SHEETS)(ALSO INCLUDE 614.30 AND 614.10) *
✓	732.00M	FLARED END SECTION (2 SHEETS) *
	732.05C	BEVELED PIPE END TREATMENT (2 SHEETS)
	732.10D	SAFETY SLOPE END SECTIONS (2 SHEETS)
	806.02A	STAPLE PLACEMENT FOR PLASTIC NETTING
✓	806.10D	TEMPORARY EROSION CONTROL MEASURES (7 SHEETS) *
	901.00T	POLES, FOUNDATIONS & APPURTENANCES FOR 30' MOUNTING HEIGHT (2 SHEETS)
	901.01Z	POLES, FOUNDATIONS & APPURTENANCES FOR 45' MOUNTING HEIGHT (3 SHEETS) *
	901.02A	CABLE, CONDUIT AND TRENCHING
	901.30D	BASE MOUNTED CONTROL STATION (2 SHEETS)
	901.80C	POWER SUPPLY ASSEMBLY - SECONDARY SERVICE
	902.00J	SIGNAL HEADS - LENSES - MOUNTING
	902.10M	CONTROLLERS, CONDUIT LOCATION
	902.15H	POWER SUPPLY ASSEMBLY (2 SHEETS)
	902.20A	PULL BOXES
	902.21C	TELEPHONE INTERCONNECT
	902.30N	POST BASES (2 SHEETS)
	902.40L	TUBULAR STEEL POSTS (2 SHEETS)
	902.50I	DETECTORS
	902.70J	SPAN WIRE DETAILS (2 SHEETS)
	902.80D	TRAFFIC SIGNAL SYMBOLS
✓	903.01G	SPECIAL SIGNING CHARACTERS
	903.02AD	HIGHWAY SIGNING (10 SHEETS)
	903.03AU	SIGN MOUNTING DETAILS (6 SHEETS) *
	903.04E	WEIGH STATION SIGNING
	903.05F	TUBULAR SUPPORT STEEL - TYPE S, ONE TUBE (SPAN)
	903.06F	TUBULAR SUPPORT STEEL - TYPE S, TWO TUBE (SPAN)
	903.07F	TUBULAR SUPPORT STEEL - TYPE C (CANTILEVER)
	903.08E	TUBULAR SUPPORT STEEL - TYPE B (BUTTERFLY)
	903.09D	SIGN LIGHTING - LIGHTING SUPPORT BRACKET
	903.10X	OVERHEAD SIGN TRUSSES - ALUMINUM (6 SHEETS) (ALSO INCLUDE 903.03) *
	903.12S	OVERHEAD SIGN TRUSSES-BUTTERFLY & CANTILEVER-STRUCTURAL STEEL
		(5 SHEETS) (ALSO INCLUDE 903.03) *
	903.60X	OVERHEAD SIGN TRUSSES-STRUCTURAL STEEL (5 SHEETS) *
		(ALSO INCLUDE 903.03)

NOTES:

PLANS FOR THIS PROJECT WERE DEVELOPED USING DRAWINGS FROM THIS INDEX

* - REVISED -- SEE DRAWING FOR EFFECTIVE DATE

D-2