Don't have approved ADA ownership memo and map yet.

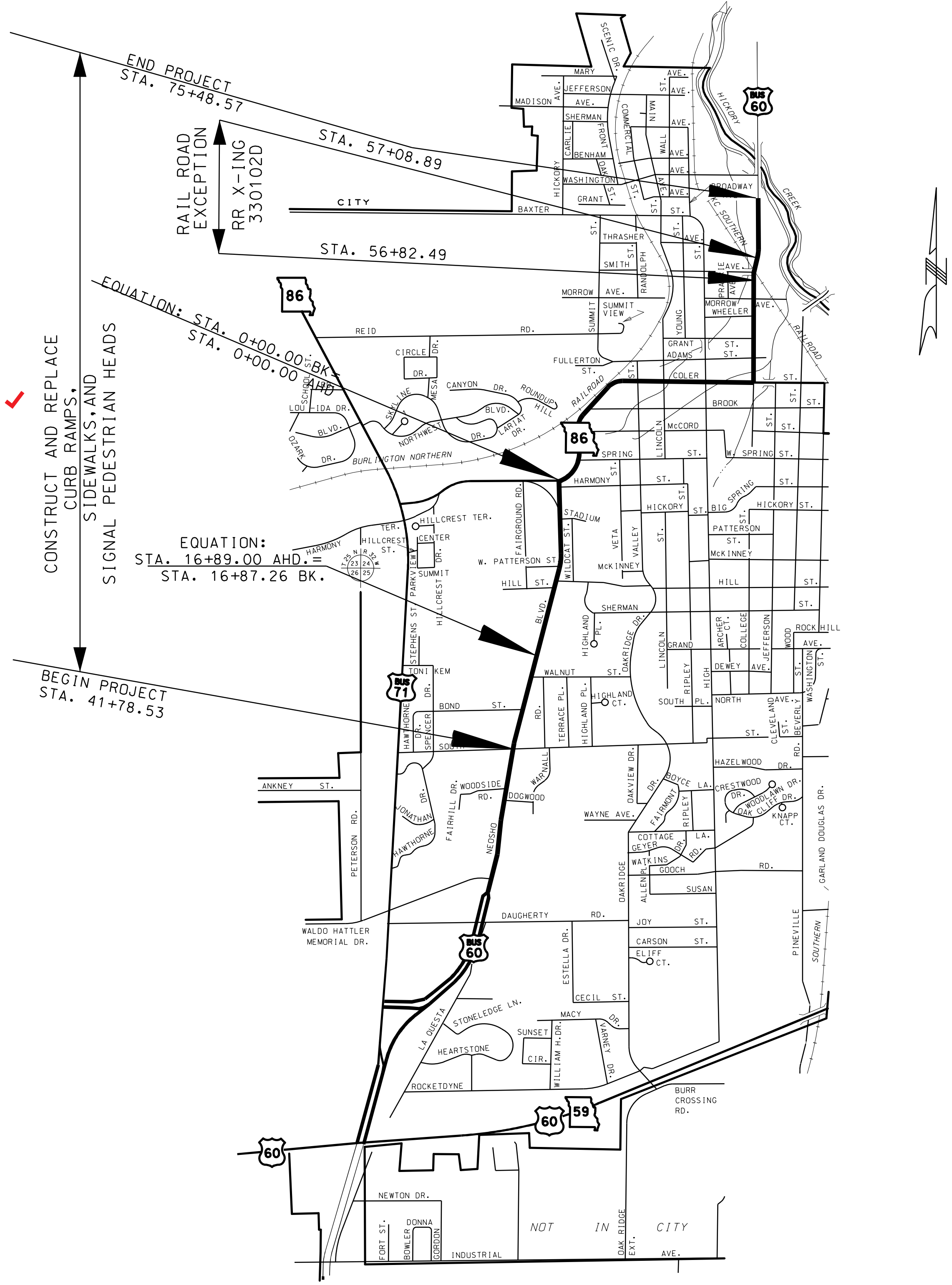
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
FINAL PLANS FOR
STATE HIGHWAY
NEWTON COUNTY

DESIGN DESIGNATION

A.A.D.T.= 9364
V = 35.45 MPH
T = 5%

FUNCTIONAL CLASSIFICATION- PRINCIPAL ARTERIAL

NO NEW RIGHT OF WAY REQUIRED



CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL	○○○○○	●●●●
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		○
UTILITIES		
FIBER OPTICS	—FO—	—FO—
OVERHEAD TELEPHONE	—○—	—●—
UNDERGROUND TELEPHONE	—T—	—T—
OVERHEAD POWER	—□—	—■—
UNDERGROUND POWER	—P—	—P—
GAS	—G—	—G—
WATER	—W—	—W—
MANHOLE	SAN ⊕	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM ⊕	
DROP INLET	DI ▣	
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED △	
FENCE		
CHAIN LINK	—V—	
WOVEN WIRE	—X—	
GATE POST	☒	
BENCHMARK	BM ⊗	

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (6 SHEETS)	2
QUANTITIES (QU) (5 SHEETS)	3
PLAN-PROFILE (PP)	4-14
SPECIAL SHEETS (SS)	16-17
SIGNALS (SG)	21-30
SIGNING (SN)	31-33

✓ THESE PLANS ACCURATELY DEPICT THE CONFIGURATION AND LOCATION OF THE ROADWAY AND ALL APPURTENANCE FEATURES, INCLUDING MODIFICATIONS DESIGNATED OR AUTHORIZED BY THE ENGINEER OF RECORD.

SIGNATURE ____________ DATE ____________

LENGTH OF PROJECT

BEGINNING OF PROJECT	41+78.53
STA. 0+00.00 BK=	0+00.00
STA. 0+00.00 AHD.	0+00.00
END OF PROJECT	75+48.57
APPARENT LENGTH	11727.10 FT.
EQUATIONS AND EXCEPTIONS:	
EXCEPTION (RR X-ING 330102D)	
STA. 56+82.49 - STA. 57+08.89	26.40 FT.
EQUATION: STA. 16+87.26 BK.= STA. 16+89.00 AHD.	1.74 FT.
TOTAL CORRECTIONS	- 28.14 FT.
	11698.96 FT.
LENGTH OF PROJECT	✓ 2.216 MILES

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED 11/30/2015
ROUTE BUS60
STATE MO
DISTRICT SW
SHEET NO. 1
COUNTY NEWTON
JOB NO. J7P2205B
CONTRACT ID. 150220-G01
PROJECT NO. FAF 60-1(43)
BRIDGE NO.

DESCRIPTION
DATE

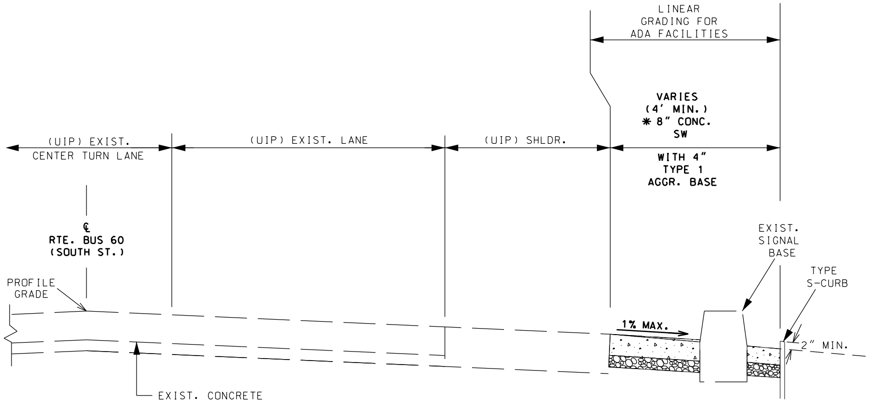
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

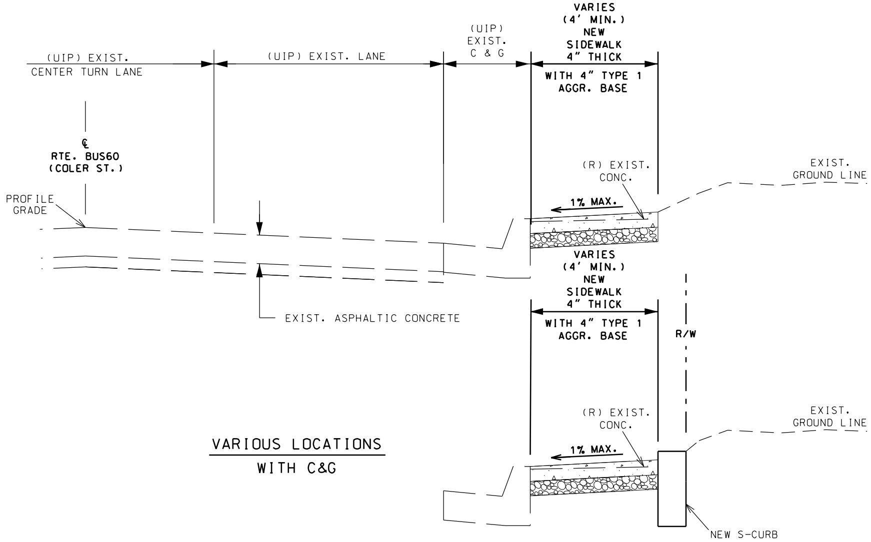
FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

J:\Castillo\150220-G01 J7P2205B\001_Title_J7P2205B_i1.dgn 3:00:44 PM 11/30/2015



* SOUTHWEST, SOUTHEAST, AND NORTHEAST QUADRANT (SOUTH ST.) (SEE QUANT. SHT.) FOR OTHER LOCATIONS



VARIOUS LOCATIONS
WITH C&G

NOT TO SCALE
NO DIRECT PAY FOR SAWCUTS

TYPICAL SECTION
ROUTE BUS60

TYPICAL SECTION
SHEET 1 OF 6

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED 11/6/2015
ROUTE BUS60
STATE MO
DISTRICT SW
SHEET NO. 2
COUNTY NEWTON
JOB NO. J7P2205B
CONTRACT ID. 150220-G01
PROJECT NO. FAF 60-1(43)
BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

T - TRANSITION TO EXISTING SW OR PAVED APPROACH (LANDING PREFERED IF CONDITIONS ALLOW)

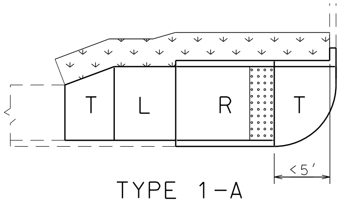
L - LANDING

R - RAMP

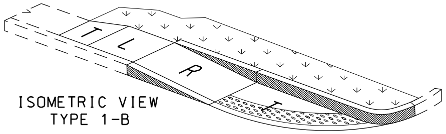
▨ - SOD SLOPE 6:1 MIN.

▨ - TRUNCATED DOME LOCATION IF DIST. IS <5' OR >5'

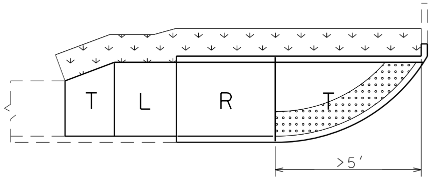
TRUNCATED DOMES ARE USED ONLY AT STREETS & ENTRANCES UTILIZING STOP SIGNS OR SIGNALS



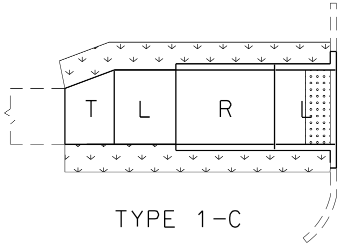
TYPE 1-A



ISOMETRIC VIEW
TYPE 1-B

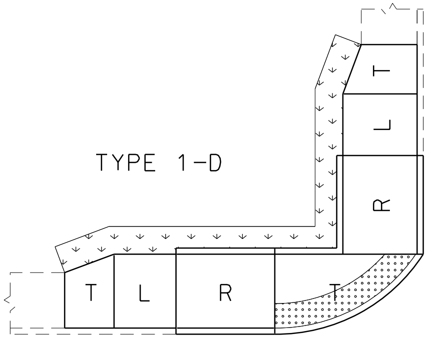


TYPE 1-B

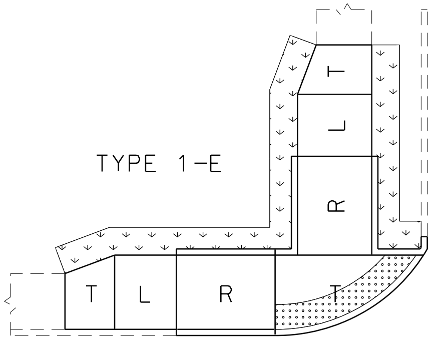


TYPE 1-C

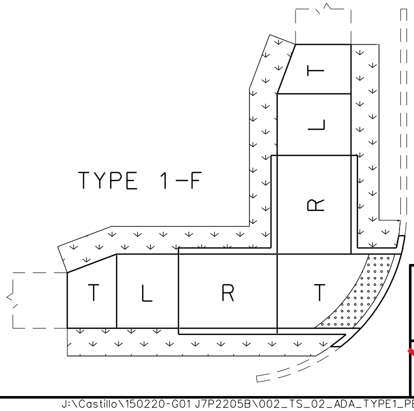
TYPE 1-D



TYPE 1-E



TYPE 1-F



"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE	
DATE PREPARED 11/6/2015	
ROUTE BUS60	STATE MO
DISTRICT SW	SHEET NO. 2
COUNTY NEWTON	
JOB NO. J7P2205B	
CONTRACT ID. 150220-G01	
PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

TYPE 1
PERPENDICULAR CURB RAMPS

TYPICAL SHEET
2 OF 6

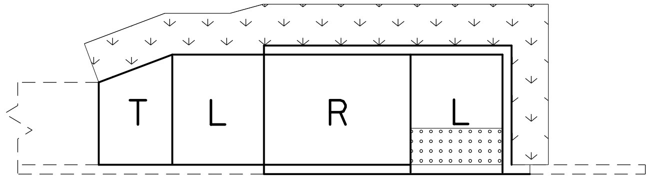
FINAL PLANS

REV.

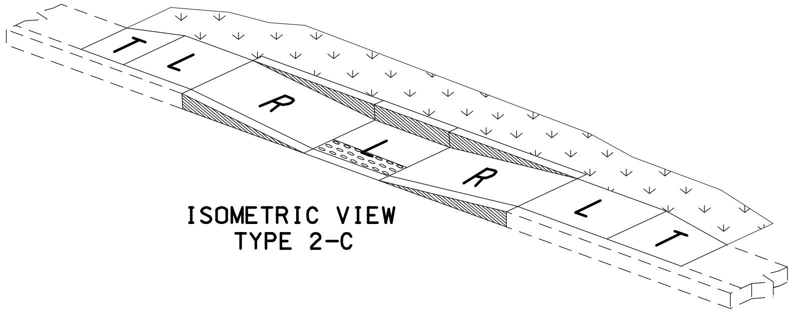
J:\Castillo\150220-G01 J7P2205B\002_TS_02_ADA_TYPE1_PERP_J7P2205B_i5.dgn 6:51:49 AM 11/6/2015

T - TRANSITION TO EXISTING SW
L - LANDING
R - RAMP
▨ - SOD SLOPE 6:1 MIN.
▨ - TRUNCATED DOME

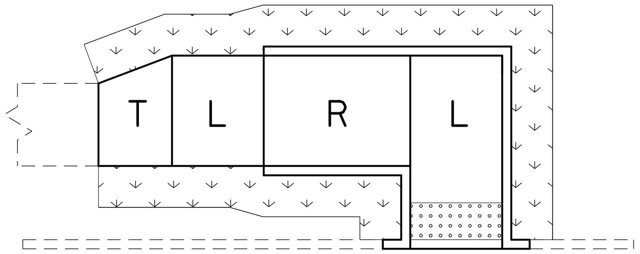
TRUNCATED DOMES ARE USED ONLY AT STREETS & ENTRANCES UTILIZING STOP SIGNS OR SIGNALS



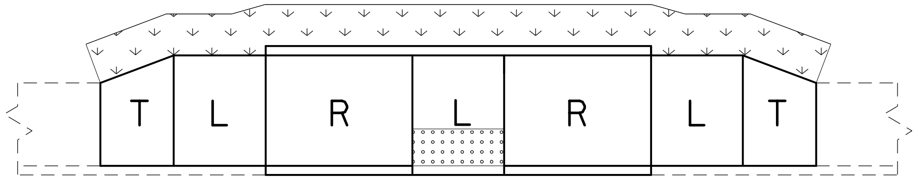
TYPE 2-A



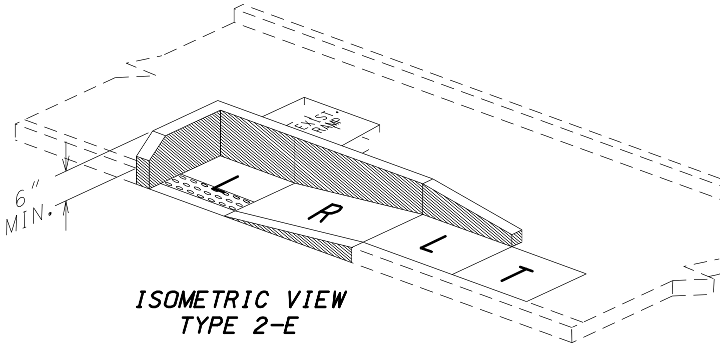
ISOMETRIC VIEW
TYPE 2-C



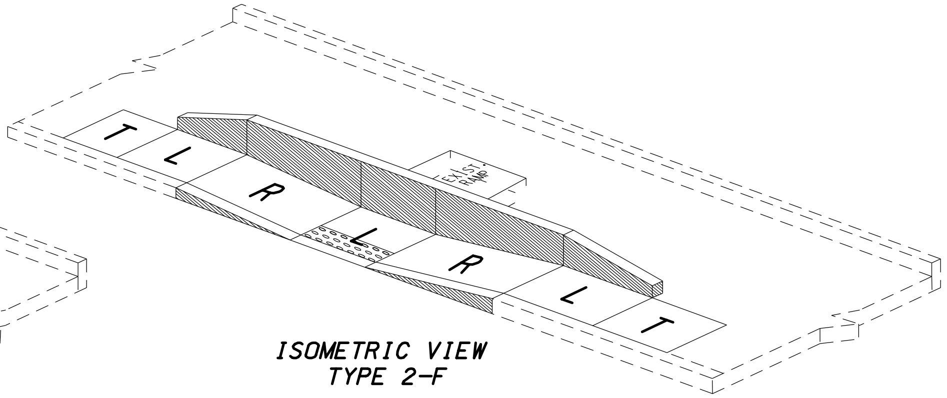
TYPE 2-B



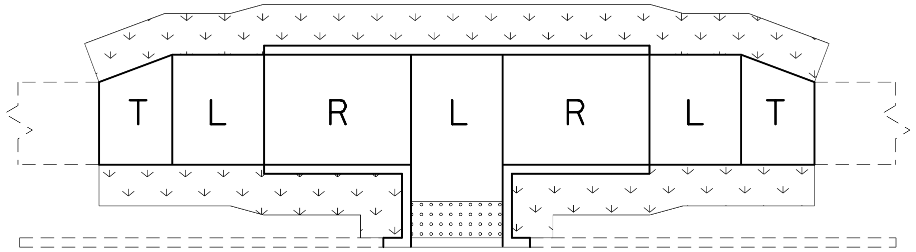
TYPE 2-C



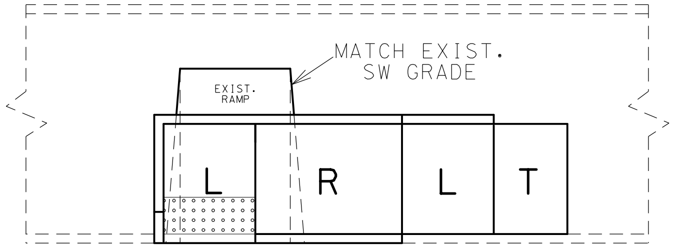
ISOMETRIC VIEW
TYPE 2-E



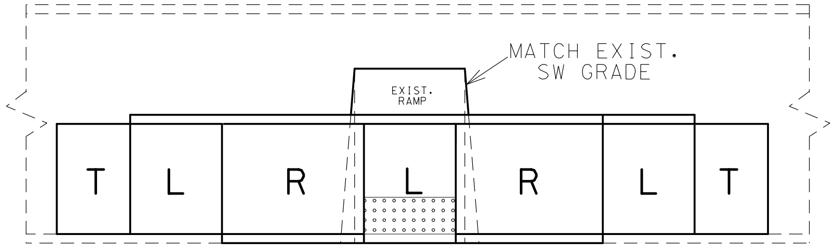
ISOMETRIC VIEW
TYPE 2-F



TYPE 2-D



TYPE 2-E



TYPE 2-F

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED 11/6/2015	
ROUTE BUS60	STATE MO
DISTRICT SW	SHEET NO. 2
COUNTY NEWTON	
JOB NO. J7P2205B	
CONTRACT ID. 150220-G01	
PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DATE

DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

TYPE 2

PARALLEL CURB RAMPS

TYPICAL SHEET
3 OF 6

FINAL PLANS

T - TRANSITION TO EXISTING SW OR PAVED APPROACH (LANDING PREFERED IF CONDITIONS ALLOW)

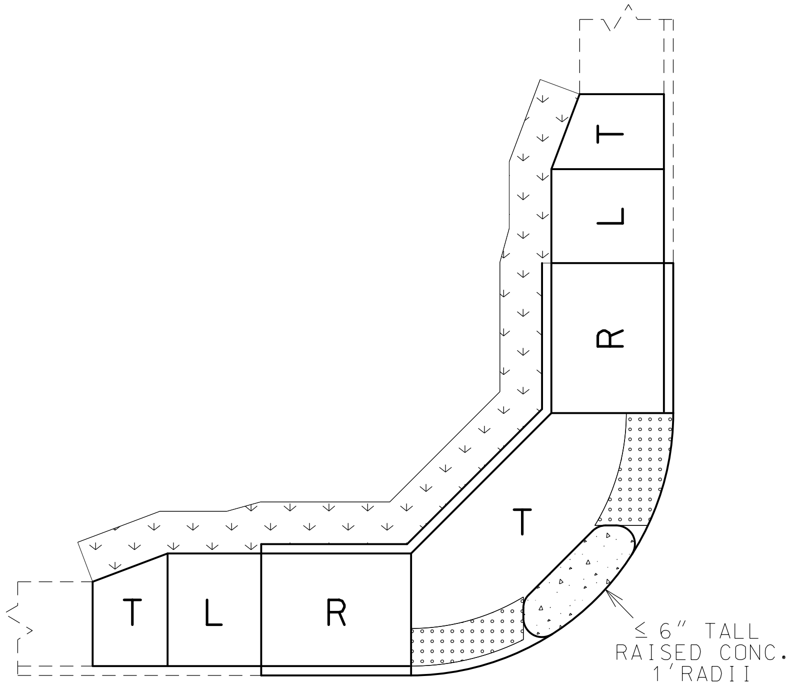
L - LANDING

R - RAMP

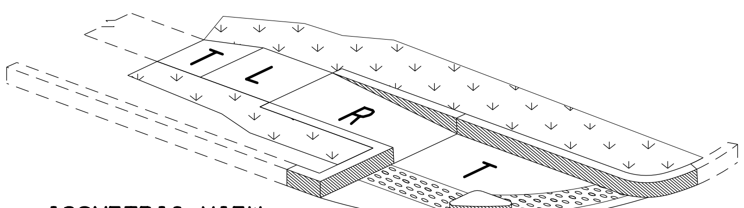
▨ - SOD SLOPE 6:1 MIN.

▨ - TRUNCATED DOME LOCATION, IF DIST. IS <5′ OR >5′

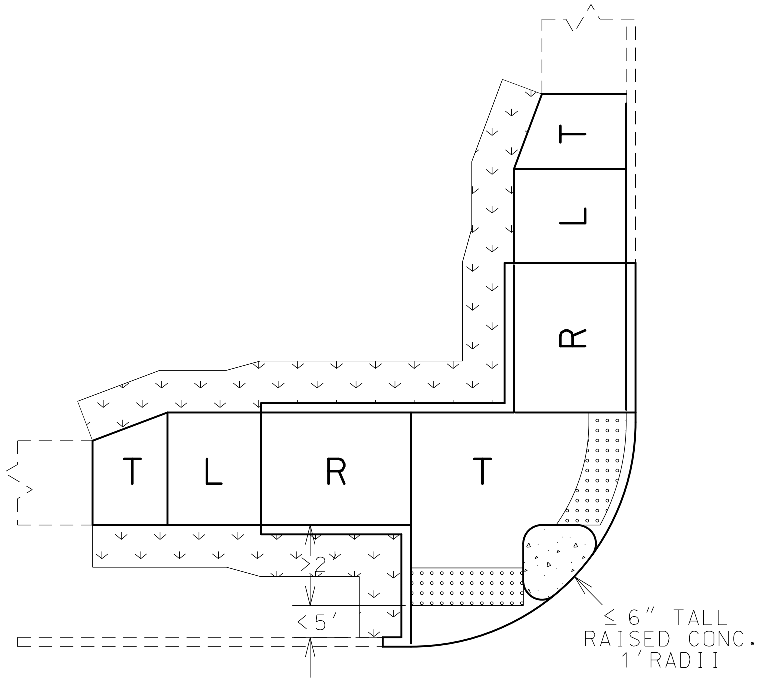
TRUNCATED DOMES ARE USED ONLY AT STREETS & ENTRANCES UTILIZING STOP SIGNS OR SIGNALS



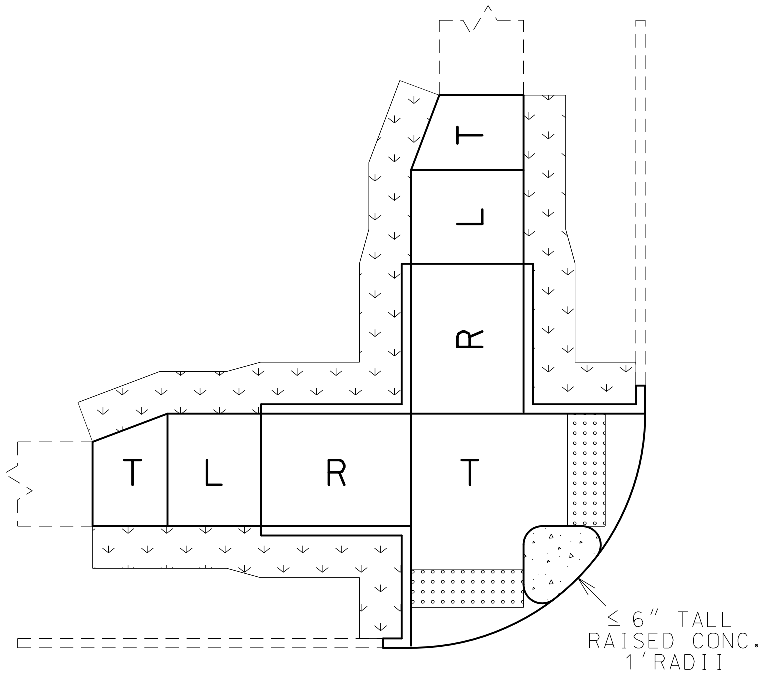
TYPE 3-A



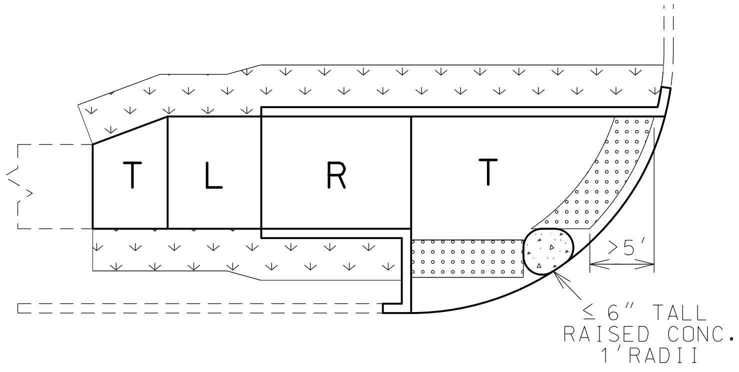
ISOMETRIC VIEW
TYPE 3-D



TYPE 3-B



TYPE 3-C



TYPE 3-D

✱ SPLITTER ISLAND'S WHERE NOT USED BUT CAN BE USED AS REFERENCE.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED	
11/6/2015	
ROUTE	STATE
BUS60 ✓	MO
DISTRICT	SHEET NO.
SW ✓	2
COUNTY	
NEWTON ✓	
JOB NO.	
J7P2205B ✓	
CONTRACT ID.	
150220-G01 ✓	
PROJECT NO.	
FAF 60-1(43) ✓	
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

TYPE 3

DIAGONAL CURB RAMPS

✓ TYPICAL SHEET
4 OF 6 ✓

FINAL PLANS

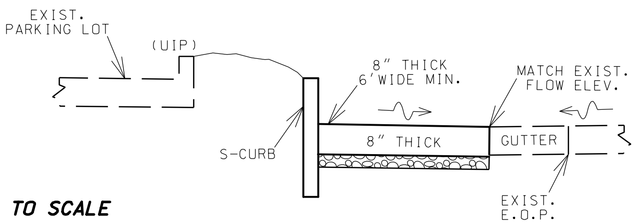
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

J:\Castillo\150220-G01 J7P2205B\002_TS_04_ADA_TYPE3_DIAG_J7P2205B_i5.dgn 7:19:01 AM 11/6/2015

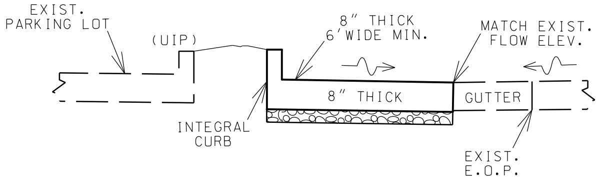
NOTES FOR MODIFIED SIDEWALK:

1. REMOVE EXIST. CURB & RAISED ISLAND WITHIN LIMITS SHOWN.
2. AREA INSIDE FINAL CURB TO BE REPAIRED OR REPLACED WITH EXISTING SURFACE MATERIAL. GRADE TO DRAIN.
3. CONSTRUCT 8" THICK CONC. SIDEWALK FLUSH WITH EXIST. CONC. PAVED APPROACH.
4. CONSTRUCT CURB ADJACENT TO MODIFIED SIDEWALK.
5. MODIFIED SIDEWALK PAID FOR AS 8" SIDEWALK.
6. 6' MINIMUM WIDTH.
7. NO DIRECT PAY FOR SAW CUTS AND TIE BARS (ON 12" CENTERS MAX.)
8. TRUNCATED DOMES ARE USED ONLY AT STREETS & ENTRANCES UTILIZING STOP SIGNS OR SIGNALS.
9. X-SLOPE 1% PREFERRED (2% MAX.)

SECTION A-A
WITH S-CURB OR MODIFIED S-CURB

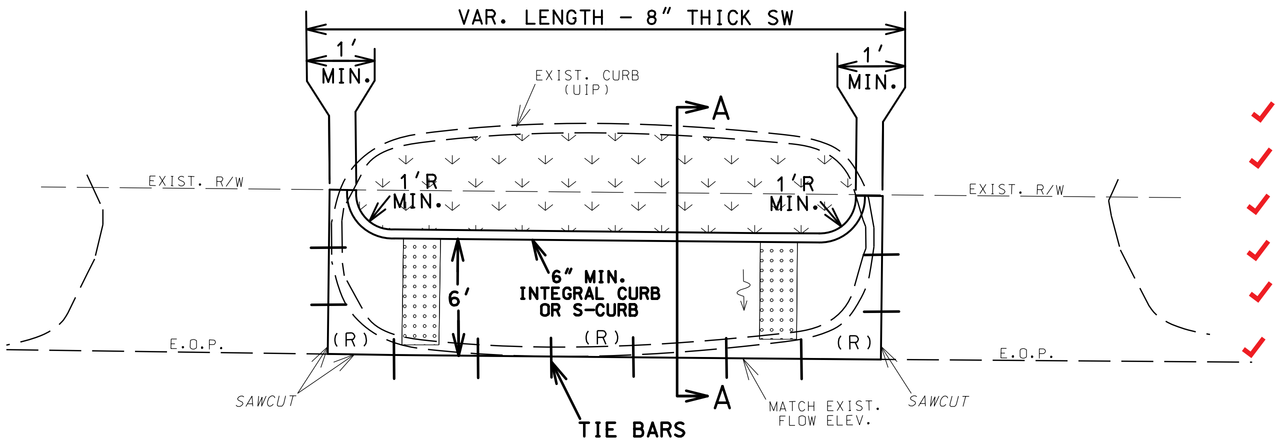


SECTION A-A
WITH INTEGRAL CURB



NOT TO SCALE

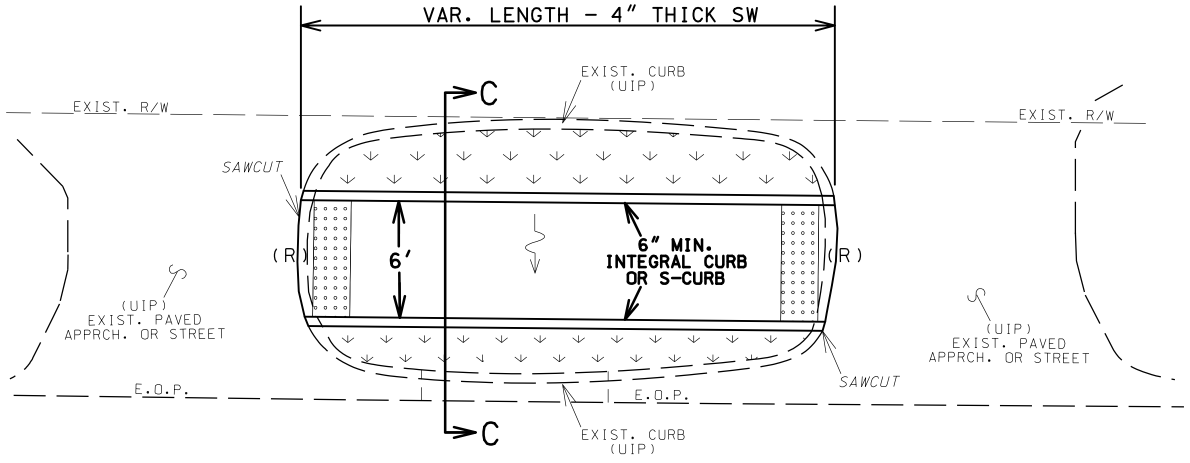
TYPICAL
MODIFIED SIDEWALK
8" THICK



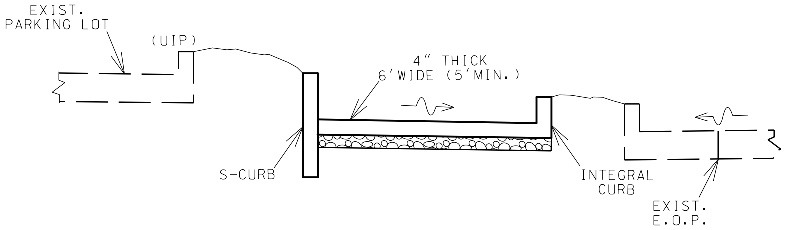
NOTES FOR CUT-THRU SIDEWALK:

1. REMOVE EXIST. CURB & RAISED ISLAND WITHIN LIMITS SHOWN.
2. AREA INSIDE FINAL CURB TO BE REPAIRED OR REPLACED WITH EXISTING SURFACE MATERIAL. GRADE TO DRAIN.
3. CONSTRUCT 4" THICK CONC. SIDEWALK FLUSH WITH EXIST. CONC. PAVED APPROACH.
4. CONSTRUCT CURB ON BOTH SIDES ADJACENT TO SIDEWALK.
5. CUT-THRU SIDEWALK PAID FOR AS 4" SIDEWALK.
6. 6' PREFERRED WIDTH (5' MIN.)
7. SAW CUTS (NO DIRECT PAY).
8. TRUNCATED DOMES ARE USED ONLY AT STREETS & ENTRANCES UTILIZING STOP SIGNS OR SIGNALS.
9. X-SLOPE 1% PREFERRED (2% MAX.)

TYPICAL
CUT-THRU SIDEWALK



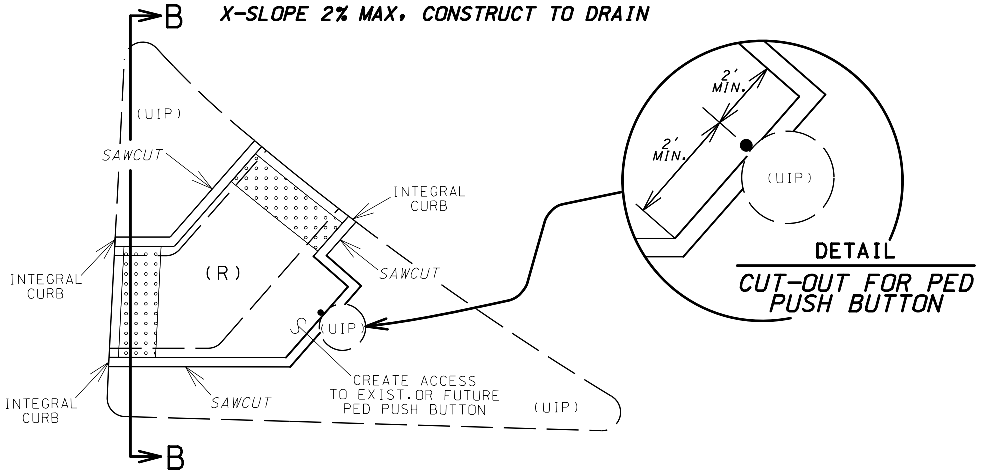
SECTION C-C
WITH S-CURB OR INTEGRAL



NOT TO SCALE

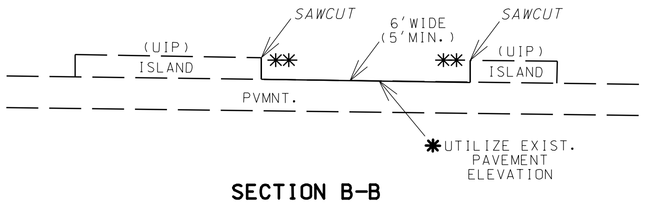
NOT TO SCALE

TYPICAL
ISLAND CUT-THRU SIDEWALK
X-SLOPE 2% MAX. CONSTRUCT TO DRAIN



DETAIL
CUT-OUT FOR PED PUSH BUTTON

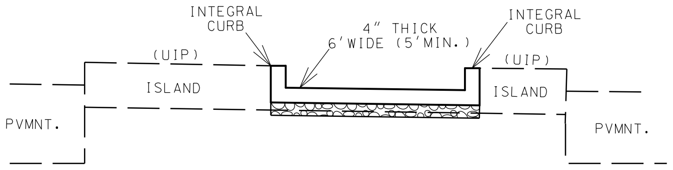
SECTION B-B
ISLAND CUT-THRU SIDEWALK
FOR EXISTING 'PINNED-ON' ISLAND



✱ INCLUDE PAY ITEM FOR SMALL QUANTITY OF PARTIAL DEPTH PAVEMENT REPAIR TO BE USED IF NEEDED

✱✱ NO INTEGRAL CURB REQUIRED IF THE ISLAND IS 'PINNED-ON'

SECTION B-B
ISLAND CUT-THRU SIDEWALK



STA. 40+56.39 LT.- STA. 40+70.89 LT.

STA. 40+56.39 LT.- STA. 40+70.89 LT.

MODIFIED SIDEWALK
AND
SIDEWALK CUT-THRU's

✓ TYPICAL SHEET
5 OF 6

"THIS MEDIA SHOULD
NOT BE CONSIDERED
A CERTIFIED
DOCUMENT."

DATE	
DATE PREPARED	11/6/2015
ROUTE	✓ BUS60
STATE	MO
DISTRICT	✓ SW
SHEET NO.	2
COUNTY	✓ NEWTON
JOB NO.	✓ J7P2205B
CONTRACT ID.	✓ 150220-G01
PROJECT NO.	✓ FAF 60-1(43)
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

✓ FINAL PLANS

REV.

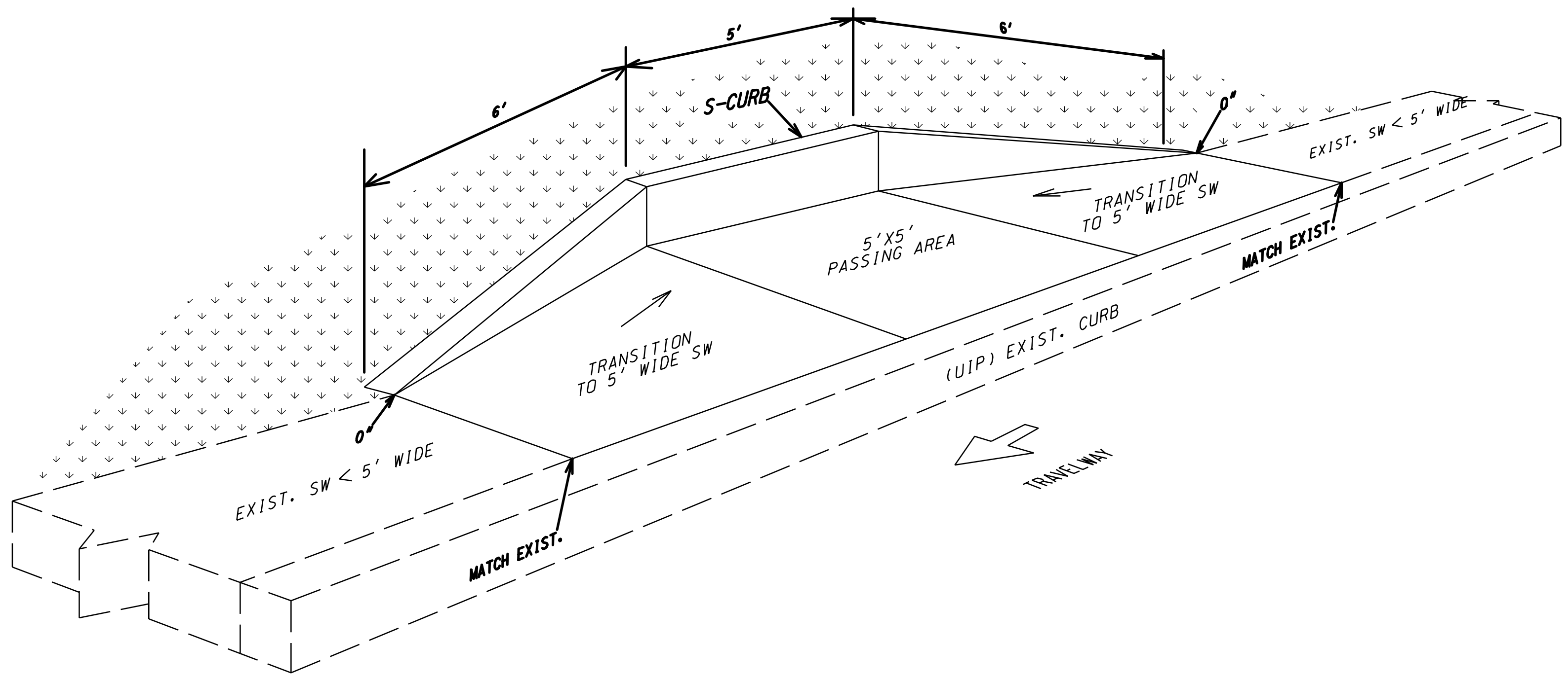
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

J:\Castillo\150220-G01 J7P2205B\002_TS_05_ADA_MOD_CUTTHRU_J7P2205B_i5.dgn 8:11:22 AM 11/6/2015

NOTES:

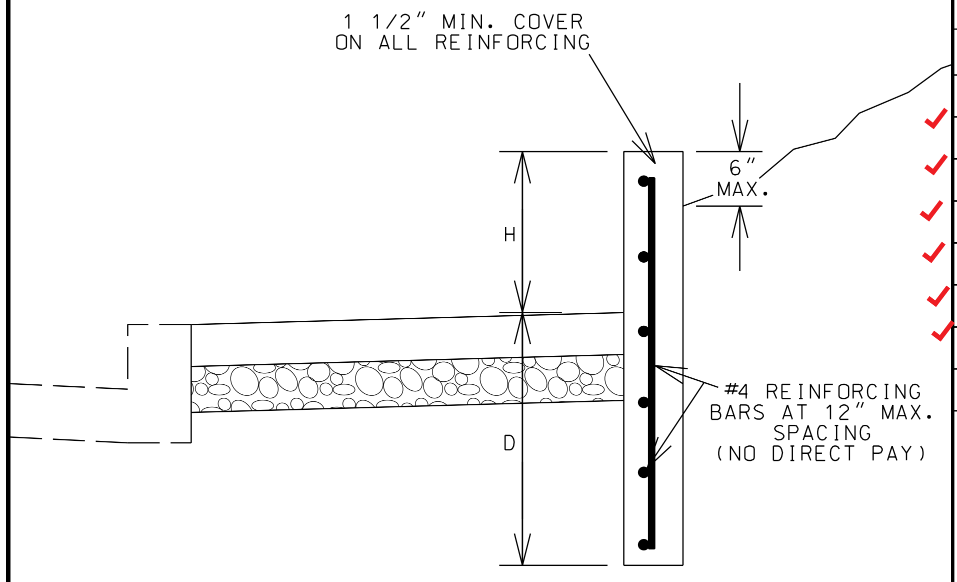
1. *REQUIRED EVERY 200' ON SIDEWALK THAT IS LESS THAN 5' WIDE.*
2. *S-CURB HEIGHT WILL VARY DEPENDING ON FIELD CONDITIONS.*
3. *S-CURB OVER 12" TALL IS PAID FOR AS 'MODIFIED S-CURB' AND REQUIRES REINFORCEMENT (NO DIRECT PAY). SEE DETAIL THIS SHEET.*

5'X5' PASSING AREA



NOT TO SCALE

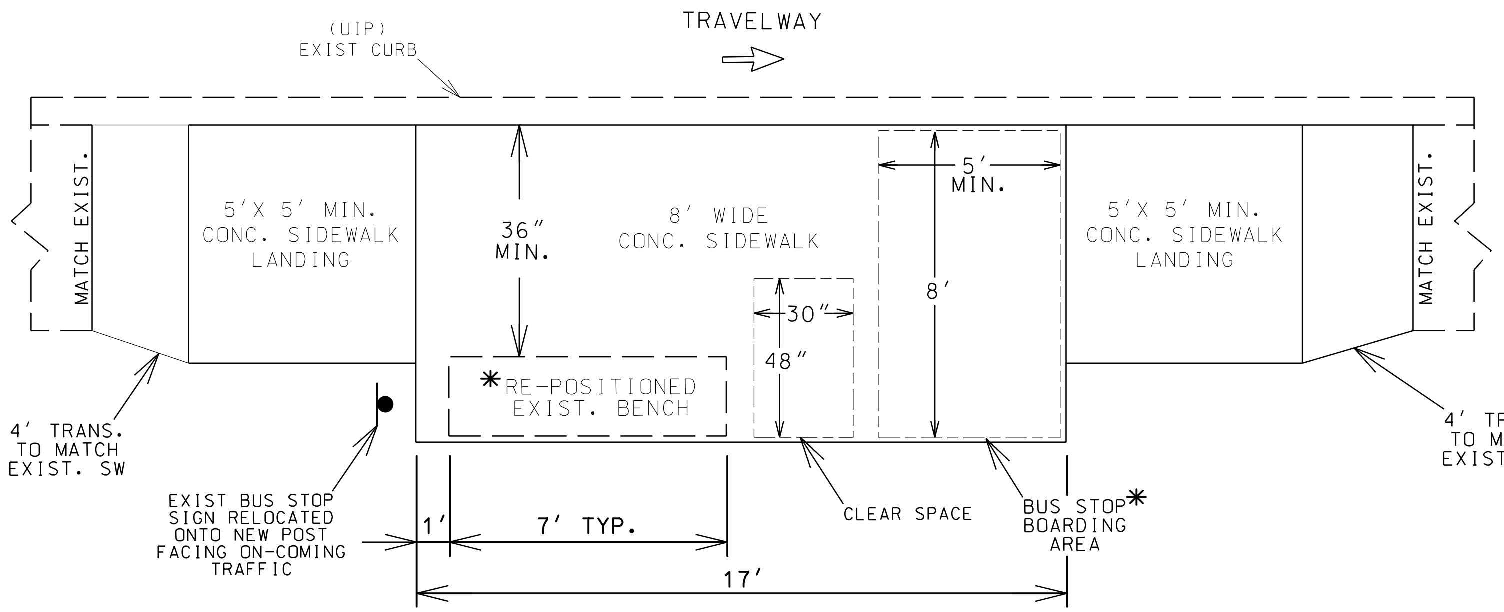
MODIFIED S-CURB
> 12" TALL (2'-6" MAX.)



"D" IS THE BURY DEPTH. THIS SHALL BE 18 INCHES OR "H" WHICHEVER IS GREATER. VERTICAL REINFORCING LENGTHS VARY AS NEEDED.
H = 2'-6" MAX.

NOT TO SCALE

BUS STOP WITH BENCH

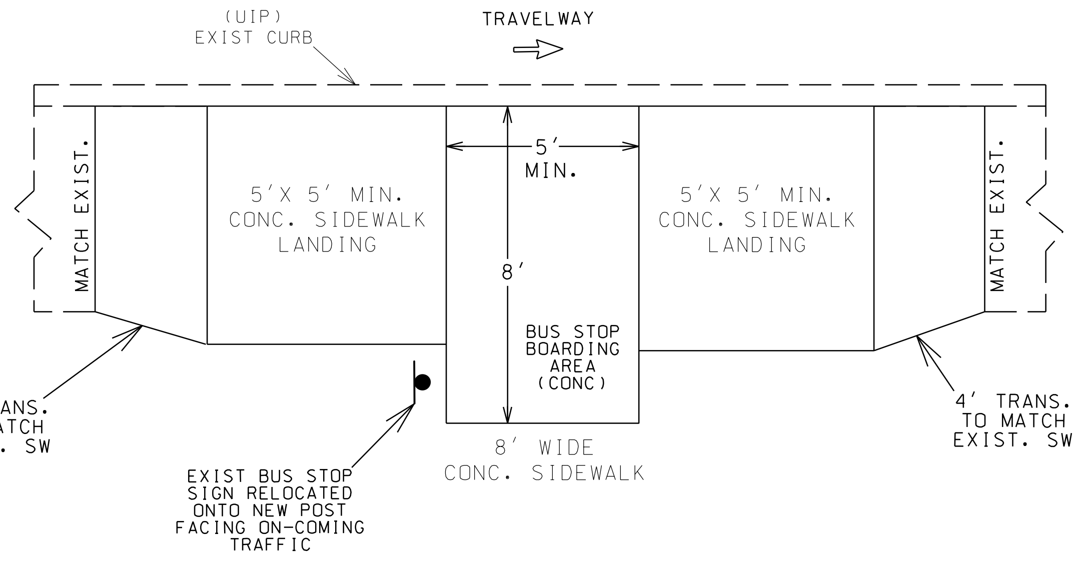


✱ THE BENCH SHALL NOT BE PLACED ON THE 5'X8' BUS STOP BOARDING AREA.

EXIST. BENCH MUST BE RE-POSITIONED ON 17'X8' CONC. PAD,
SO THAT THERE IS A 30"X48" CLEAR SPACE NEXT TO IT,
AND A 5'(MIN.)x 8' BOARDING AREA NEXT TO THE CLEAR SPACE.

NOT TO SCALE

BUS STOP WITHOUT BENCH



"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	
DATE PREPARED	11/6/2015
ROUTE	BUS60 ✓
STATE	MO
DISTRICT	SW ✓
SHEET NO.	2
COUNTY	NEWTON ✓
JOB NO.	J7P2205B ✓
CONTRACT ID.	150220-G01 ✓
PROJECT NO.	FAF 60-1(43) ✓
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

PASSING AREAS, BUS STOPS, AND MODIFIED S-CURB

✓ TYPICAL SHEET
6 OF 6

✓
FINAL PLANS

REV.

J:\Castillo\150220-G01 J7P2205B\002_TS_06_ADA_PASS_BSTOP_CURB_J7P2205B_i5.dgn 8:13:09 AM 11/6/2015

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

TRUNCATED DOMES, CURB RAMP, SIDEWALK, TYPE 1 AGGREGATE, ADA LINEAR GRADING, KENTUCKY BLUEGRASS SODDING, TYPE S-CURB

SHEET	STATION	STATION	LOCATION	LT/RT	TRUNC. DOMES	CURB RAMP				SIDEWALK					TYPE 1 AGGR.	ADA LIN. GR.	SODDING	TYPE S- CURB		REMARKS
										WIDTH	4" THICK	CUT-THRU	8" THICK	MODIFIED				LESS/EQUAL 6"	OVER 6"	
					SF	LENGTH	WIDTH	TYPE	SY	LF	SY	SY	SY	SY	SY	LF	SY	LF	LF	
4	39+87.13	40+11.71	SOUTH ST	LT	12.0								16.79		16.79	34.0				NE QUAD.
4	39+93.40	40+09.76	SOUTH ST	LT															28.2	NE QUAD.
4	40+57.00	40+74.27	SOUTH ST	LT	20.0							19.50			19.50	36.8				SE QUAD.
4	40+56.07	40+71.27	SOUTH ST	LT														31.3		SE QUAD.
4	40+57.92	40+77.27	SOUTH ST	LT														40.8		SE QUAD.
4	40+29.68	40+44.32	SOUTH ST	RT	12.0								12.9		12.9	22.0				NW QUAD.
4	40+29.68	40+42.03	SOUTH ST	RT															20.6	NW QUAD.
4	40+88.78	41+24.62	SOUTH ST	RT	12.0								28.9		28.9	36.5				SW QUAD.
4	40+91.20	41+24.62	SOUTH ST	RT															28.2	SW QUAD.
6	23+15.68	23+23.48	RTE 86	RT	10.0	8.0	5.6		5.0						5.0	7.8				
6	23+15.68	23+32.34	RTE 86	RT														17.0		
6	23+23.48	23+32.34	RTE 86	RT						5.6	5.51				5.5	8.9				
6	24+57.78	24+66.78	RTE 86	RT						5.9	5.90				5.9	8.9				
6	24+66.78	24+77.67	RTE 86	RT	10.0	11.0	5.9		7.2						7.2	11.0				
6	24+57.78	24+77.67	RTE 86	RT														19.9		
6	25+03.89	25+25.31	RTE 86	RT														24.9		WEST SIDE OF CUT THRU IN ISLAND
6	25+25.31	25+25.22	RTE 86	RT														5.4		WEST SIDE OF CUT THRU IN ISLAND
6	25+25.22	25+32.00	RTE 86	RT														6.0		NORTHSIDE OF CUT THRU IN ISLAND
6	25+07.85	0+00.01	RTE 86	RT														32.7		EASTSIDE OF CUT THRU IN ISLAND
6	25+07.85	0+00.01	RTE 86	RT	20.0					5		22.4			22.4	37.0				
6	0+57.04	9+22.38	HARMONY ST	RT	10.0		5.0		11.1						11.1					
6	0+57.04	0+60.19	HARMONY ST	RT														10.7		SOUTH SIDE OF LANDING
6	9+23.52	9+21.74	HARMONY ST	RT														6.0		EAST SIDE OF LANDING
6	9+21.74	9+26.61	HARMONY ST	RT														4.5		NORTH SIDE OF LANDING
6	9+26.61	8+06.89	HARMONY ST	RT														106.9		
6	9+22.38	8+28.80	HARMONY ST	RT						5	58.11				58.1					
6	8+28.80	8+06.89	HARMONY ST	RT	30.0	22.0	5.0		12.2						12.2					
			SUBTOTAL 1		136.0	--	--	--	35.5	--	69.5	41.9	58.6		205.5	202.9		306.1	77.0	
CONT'D. NEXT SHEET			SUBTOTAL 1		136	--	--	--		--	111.4		58.6		206	203		307	77	

SUMMARY
SHEET
1 OF 5

"THIS MEDIA SHOULD
NOT BE CONSIDERED
A CERTIFIED
DOCUMENT."

DATE

DATE PREPARED
12/3/2015

ROUTE	STATE
BUS60	MO

DISTRICT	SHEET NO.
SW	3

COUNTY
NEWTON

JOB NO.
J7P2205B

CONTRACT ID.
150220-G01

PROJECT NO.
FAF 60-1(43)

BRIDGE NO.

DESCRIPTION

DATE

REV.

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

FINAL PLANS

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

TRUNCATED DOMES, CURB RAMP, SIDEWALK, TYPE 1 AGGREGATE, ADA LINEAR GRADING, KENTUCKY BLUEGRASS SODDING, TYPE S-CURB

SHEET	STATION	STATION	LOCATION	LT/ RT	TRUNC. DOMES	CURB RAMP				SIDEWALK					4" TYPE 1 AGGR.	ADA LINEAR GRADING	SODDING	S-CURB			REMARKS
										WIDTH	4" THICK	CUT-THRU	8" THICK	MODIFIED SIDEWALK				LESS/EQUAL 6" (0"-6")	OVER 6" (6"-12")	MODIFIED (12"-30")	
					SF	LENGTH	WIDTH	TYPE	SY	LF	SY	SY	SY	SY	SY	LF	SY	LF	LF	LF	
7	21+14.94	21+22.82	BUS 60	RT	16.0	8.0	5.0		4.4						4.4	8.0					VALLEY ST.
7	21+14.94	21+22.82	BUS 60	RT														8.0			
7	21+49.53	21+66.49	BUS 60	RT						4.7	8.90				8.9	17.0					
7	21+66.49	21+79.41	BUS 60	RT		13.0	5.0		7.2						7.2	13.0					
7	24+88.50	25+14.54	BUS 60	RT	26.0					4.0		11.6			11.6	26.0					
7	24+95.73		BUS 60	RT		8.0	4.0		3.6	4.0	4.00				7.6	17.0					LINCOLN ST.
7	25+06.29	25+14.54	BUS 60	RT														8.0			
7	25+37.00	25+49.88	BUS 60	RT		13.0	6.0		8.7						8.7	13.0					
7,8	25+49.88	26+51.58	BUS 60	RT						6.0	68.00				68.0	102.0					
8	25+81.68	26+51.58	BUS 60	RT																70.0	REPLACE EXISTING WALL
8	26+51.58		BUS 60	RT																18.0	REPLACE EXISTING WALL
8	26+89.09	27+66.12	BUS 60	RT														77.0			
8	26+89.09	27+02.13	BUS 60	RT		13.0	6.0		8.7						8.7	13.0					
8	27+02.13	27+53.17	BUS 60	RT						6.0	34.00				34.0	51.0					
8	27+53.17	27+66.12	BUS 60	RT		13.0	6.0		8.7						8.7	13.0					
8	27+92.43	28+21.90	BUS 60	RT						5.8		18.7			18.7	29.0					
8	27+92.43	28+21.90	BUS 60	RT														29.0			
8	28+41.70	28+95.83	BUS 60	RT														54.0			
8	28+41.70	28+56.25	BUS 60	RT		15.0	5.8		9.7						9.7	15.0					
8	28+56.25	28+82.40	BUS 60	RT						5.8	16.80				16.8	26.0					
8	28+82.40	28+95.83	BUS 60	RT		13.0	5.8		8.4						8.4	13.0					
8	29+15.81	29+41.79	BUS 60	RT						6.4		18.5			18.5	26.0					
8	29+51.72	30+07.00	BUS 60	RT																55.0	
8	29+51.72	29+94.37	BUS 60	RT						5.7	27.30				27.3	43.0					
8	29+94.37	30+07.00	BUS 60	RT		13.0	5.7		8.2						8.2	13.0					
8	31+54.18		BUS 60	RT		8.0	5.0		4.4	5.0	4.80				9.2	17.0					
8,9	31+49.80	31+65.21	BUS 60	RT	20.0	15.0	6.5		10.8						10.8	15.0		17.0			HIGH ST.
9	31+65.21	31+82.27	BUS 60	RT						6.5	12.30				12.3	17.0					
9	31+82.27	31+94.44	BUS 60	RT		12.0	6.5		8.7	6.5					8.7	12.0					
9	32+22.62	32+67.63	BUS 60	RT						6.1	30.50				30.5	45.0					
9	32+22.62	32+67.63	BUS 60	RT														45.0			
9	33+02.98	34+17.93	BUS 60	RT	12.0					5.9	75.40				75.4	115.0					
9	33+02.98	34+17.93	BUS 60	RT														115.0			
9	34+53.42	35+26.12	BUS 60	RT	12.0					5.4	43.80				43.8	73.0					
9	34+53.42	35+26.12	BUS 60	RT														73.0			
9	35+58.47	36+40.92	BUS 60	RT						5.5	50.20				50.2	82.0					
9	35+58.47	36+40.92	BUS 60	RT														82.0			
9,10	36+97.75	37+21.00	BUS 60	RT						4.0		10.3			10.3	23.0					
9,10	36+97.75	37+21.00	BUS 60	RT														23.0			
10	37+62.50	37+87.64	BUS 60	RT						2.0		5.6			5.6	25.0		25.0			
10	38+59.69	38+74.70	BUS 60	RT	28.0	15.0	5.2		8.7	5.2					8.7	15.0					8" THICK
10	39+60.62	39+99.12	BUS 60	RT						4.7	20.40				20.4	39.0					
10	40+09.66	41+76.39	BUS 60	RT						5.0	92.80				92.8	167.0					
10	41+76.39	41+91.51	BUS 60	RT	18.0	15.0	5.2		8.7	5.2					8.7	15.0					
10	42+16.95	42+32.34	BUS 60	RT	18.0	15.0	5.1		8.5	5.1					8.5	15.0					
10	42+32.34	42+36.34	BUS 60	RT						5.1	2.30				2.3	4.0					
11	43+81.80	44+65.20	BUS 60	RT						6.1	56.30				56.3	83.0					
11	45+11.17	45+53.91	BUS 60	RT	16.0					5.6	26.80				26.8	43.0					
11	45+77.97	45+92.91	BUS 60	RT	24.0	15.0	6.4		10.7	6.4					10.7	15.0					
11	45+92.91	46+33.18	BUS 60	RT						6.4	28.50				28.5	40.0					
11	46+33.18	46+46.24	BUS 60	RT						6.4			9.3		9.3	13.0					
11	46+46.24	46+99.71	BUS 60	RT						6.4	37.70				37.7	53.0					
11	46+99.71	47+12.66	BUS 60	RT		13.0	6.4		9.2	6.4					9.2	13.0					
12	51+79.58	51+94.25	BUS 60	RT	20.0	15.0	6.5		10.8	6.5					10.8	15.0					
12	51+94.25	53+40.38	BUS 60	RT						6.5	105.50				105.5	146.0					
			SUBTOTAL		210.0				148.1		746.3	64.7	9.3		968.4	1538.0		556.0		143.0	
CONT'D. NEXT SHEET			SUBTOTAL 2		210	--	--	--	148.1	--	811.0		9.3		968	1538		556.0		143.0	
CONT'D. FROM PREV. SHT			SUBTOTAL 1		136	--	--	--	35.5	--	111.4		58.6		206	203		307	77	0	

SUMMARY
SHEET 2
OF 5

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED
12/3/2015

ROUTE BUS60
STATE MO
DISTRICT SW
SHEET NO. 3
COUNTY NEWTON
JOB NO. J7P2205B
CONTRACT ID. 150220-G01
PROJECT NO. FAF 60-1(43)
BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

FINAL PLANS

REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

TRUNCATED DOMES, CURB RAMP, SIDEWALK, TYPE 1 AGGREGATE, ADA LINEAR GRADING, KENTUCKY BLUEGRASS SODDING, TYPE S-CURB

SHEET	STATION	STATION	LOCATION	LT/ RT	TRUNC. DOMES	CURB RAMP				SIDEWALK					4" TYPE 1 AGGR.	ADA LINEAR GRADING	SODDING	S-CURB			REMARKS
										WIDTH	4" THICK	CUT-THRU	8" THICK	MODIFIED SIDEWALK				LESS/EQUAL 6" (0"-6")	OVER 6" (6"-12")	MODIFIED (12"-30")	
					SF	LENGTH	WIDTH	TYPE	SY	LF	SY	SY	SY	SY	SY	LF	SY	LF	LF	LF	
7	17+55.40	17+89.22	BUS 60	LT						5.0		18.9			18.9	34.0					CAR LOT
7	17+55.02	17+89.89	BUS 60	LT														35.0			CAR LOT
7	17+57.07	17+87.22	BUS 60	LT														30.0			CAR LOT
7	21+17.68	21+22.67	BUS 60	LT	16.0					5.1			2.9		2.9	5.0					VALLEY ST.
7	21+17.68	21+22.67	BUS 60	LT														5.0			
7	21+77.64	21+90.12	BUS 60	LT						4.7	6.30				6.3	12.0					
7	21+90.12	22+00.12	BUS 60	LT		10.0	5.0		5.6						5.6	10.0					
7	22+10.88	22+69.90	BUS 60	LT						6.2	40.70				40.7	59.0					
7	22+69.90	22+83.53	BUS 60	LT		14.0	6.2		9.6						9.6	14.0					
7	22+98.51	23+24.44	BUS 60	LT						5.8		16.8			16.8	26.0					
7	23+55.04	23+82.20	BUS 60	LT						5.7		17.1			17.1	27.0					LINCOLN ST.
7	24+35.13	24+59.01	BUS 60	LT	24.0					5.8		15.5			15.5			27.0			
7	24+35.13	24+59.01	BUS 60	LT														24.0			
7	24+88.41	25+28.03	BUS 60	LT	24.0					5.9		26.3			26.3	40.0					LINCOLN ST.
7	24+88.41	25+28.03	BUS 60	LT														40.0			
7	25+62.45	25+99.18	BUS 60	LT						6.4		26.4			26.4			46.0			
8	26+34.24	26+49.68	BUS 60	LT						5.8		9.7			9.7	15.0					
8	26+34.24	26+49.68	BUS 60	LT														15.0			
8	26+62.12	26+76.64	BUS 60	LT		15.0	5.3		8.8						8.8	15.0					
8	26+76.64	27+99.02	BUS 60	LT						5.3	71.90				71.9	122.0					
8	27+99.02	28+13.68	BUS 60	LT		15.0	5.3		8.8						8.8	15.0					
8	28+60.94	29+01.24	BUS 60	LT						5.8		25.8			25.8	40.0					
8	28+60.94	29+01.24	BUS 60	LT														40.0			
9	32+46.24	32+92.19	BUS 60	LT						6.2	31.70				31.7	46.0					
9	33+12.60	33+67.58	BUS 60	LT						5.1	31.20				31.2	55.0					
9	34+09.82	34+24.50	BUS 60	LT						5.1	8.50				8.5	15.0					
9	34+42.03	35+12.51	BUS 60	LT						4.8	37.40				37.4	70.0					
9	35+23.85	36+48.55	BUS 60	LT						4.9	68.10				68.1	125.0					
9	36+48.55	36+63.09	BUS 60	LT		15.0	4.9		8.2						8.2	15.0					
9,10	36+74.62	37+26.04	BUS 60	LT						4.9	27.80				27.8	51.0					
9,10	36+74.62	37+08.64	BUS 60	LT																34.0	
9,10	37+19.21	37+26.04	BUS 60	LT																7.0	
10	39+19.40	40+19.60	BUS 60	LT						6.0	66.70				66.7	100.0					
10	40+31.35	40+45.93	BUS 60	LT		15.0	5.8		9.7						9.7	15.0					
10	40+45.93	41+78.82	BUS 60	LT						5.8	85.80				85.8	133.0					
10	41+78.82	41+93.45	BUS 60	LT	20.0	15.0	5.8		9.7						9.7	15.0					
10,11	42+16.92	45+39.56	BUS 60	LT	20.0					5.3	190.30				190.3	323.0					
10,11	42+26.34	42+72.63	BUS 60	LT																46.0	
10,11	42+77.89	43+18.66	BUS 60	LT																41.0	
11	43+24.17	44+14.02	BUS 60	LT																90.0	
11	44+19.51	45+45.56	BUS 60	LT																126.0	
11	45+39.56	45+55.04	BUS 60	LT	20.0	15.0	5.3		8.8						8.8	15.0					
11	45+88.64		BUS 60	LT		8.0	4.3		3.8	4.3	4.30				8.1	17.0					GRANT ST.
11	45+79.06	45+94.44	BUS 60	LT	20.0	15.0	5.9		9.8						9.8	15.0					GRANT ST.
11	45+92.54	47+41.63	BUS 60	LT														149.0			
11	45+94.44	47+26.95	BUS 60	LT						5.9	87.20				87.2	133.0					
11	47+26.95	47+41.63	BUS 60	LT	14.0	15.0	5.9		9.8						9.8	15.0					ALLEY
11	47+53.64	47+66.77	BUS 60	LT	10.0	13.0	6.3		9.1						9.1	13.0					ALLEY
11,12	47+66.77	48+96.03	BUS 60	LT						6.3	90.30				90.3	129.0					
12	48+96.03	49+11.38	BUS 60	LT	14.0	15.0	6.3		10.5						10.5	15.0					
12	49+06.59		BUS 60	LT		8.0	5.0		4.4	5.0	5.00				9.4	17.0					WHEELER ST.
12	49+47.00	49+60.65	BUS 60	LT	12.0	14.0	6.5		10.1						10.1	14.0					
12	49+49.8		BUS 60	LT		11.0	5.0		6.1	5.0	5.00				11.1	20.0					WHEELER ST.
12	49+60.65	50+07.43	BUS 60	LT						6.5	34.00				34.0	47.0					
12	50+07.43	50+44.24	BUS 60	LT						5.5	22.70				22.7	37.0					
12	50+52.31	51+48.35	BUS 60	LT						6.2	66.20				66.2	96.0					
12	51+48.35	51+63.17	BUS 60	LT	24.0	15.0	6.2		10.3				3.4		13.7	15.0					RAD 8" THICK MORROW ST.
12	51+88.96	52+28.75	BUS 60	LT	36.0					7.3			40.2		40.2	40.0					RAD 8" THICK MORROW ST.
12	51+88.96	52+28.75	BUS 60	LT														40.0			
12	52+39.57	52+82.28	BUS 60	LT						5.4	25.80				25.8	43.0					
12	52+82.28	52+90.15	BUS 60	LT						5.4			4.8		4.8	8.0					8" THICK
12	52+90.15	53+31.04	BUS 60	LT						5.4	24.60				24.6	41.0					
12	53+31.04	53+40.96	BUS 60	LT						5.9			6.6		6.6	10.0					8" THICK
12	53+40.96	53+94.98	BUS 60	LT						6.4	38.40				38.4	54.0					
12,13	53+94.98	54+06.36	BUS 60	LT						6.3			7.7		7.7	11.0					8" THICK
13	54+06.36	54+97.98	BUS 60	LT						6.2	63.40				63.4	92.0					
14	70+52.70	70+67.57	BUS 60	LT	24.0	15.0	5.0		8.3						8.3	15.0					
14	70+67.57	75+34.64	BUS 60	LT						5.0	259.50				259.5	467.0					
14	75+34.64	75+48.57	BUS 60	LT		14.0	5.0		7.8						7.8	14.0					
14	41+78.53	75+48.57	BUS 60	LT/RT							43.9										QUANTITY FOR 8" WIDENING THROUGHOUT VARIOUS LOCATIONS IN NEOSHO
																	240				QUANTITY THROUGHOUT VARIOUS LOCATIONS IN NEOSHO
SUBTOTAL					278.0	--	--	--	159.2	--	1392.8	156.5	65.6		1774.1	2790.0	0	451.0	0	344.0	
SUBTOTAL 3					278	--	--	--	159.2	--	1549.3		65.6		1774	2790	0	451	0	344	
CONT'D. FROM PREV. SHT SUBTOTAL 2					210				148.1		811		9.3		968	1538	0	556	0	143	
CONT'D. FROM PREV. SHT SUBTOTAL 1					136				35.5		111.4		58.6		206	203	240	307	77	0	
TOTAL					624				342.8		2471.7		133.5		2948	4531	240	1314	77	487	
USE					✓ 624				✓ 342.8		2471.7		✓ 133.5		✓ 2948	✓ 4531	✓ 240	✓ 1314	✓ 77	✓ 487	

✓ SUMMARY SHEET
SHEET 3 OF 5

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED
12/3/2015

ROUTE	STATE
✓ BUS60	MO
DISTRICT	**SHEET NO.**
✓ SW	3

✓ COUNTY
NEWTON

JOB NO.
~~J8P2205B~~ ✓ J7P2205B

✓ CONTRACT ID.
150220-G01

✓ PROJECT NO.
FAF 60-1(43)

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
MoDOT
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

✓ FINAL PLANS

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

TYPE A CURB & GUTTER

SHEET	STATION	STATION	LT/RT	LOCATION	LENGTH LF	TYPE 1 AGGR. BASE SY
9	33+18.32	33+63.58	LT	BUS 60	45.26	15.1
9	34+46.64	35+12.51	LT	BUS 60	65.87	22.0
11	45+15.16	45+38.36	RT	BUS 60	23.20	7.7
11	51+88.96	52+46.96	LT	BUS 60	58.00	0.0
				TOTAL:	192.33	45
				USE:	192	45

CONTRACTOR FURNISHED STAKING

LUMP SUM =	1

MOBILIZATION

LUMP SUM =	1

CONC. BLOCKWALL & PRIVACY FENCE

LUMP SUM =	1

CHAIN LINK FENCE

SHEET	STATION	STATION	LT/RT	LOCATION	LENGTH LF	GATE EACH
7	25+81.68	26+51.58	RT	BUS 60	70.00	1
7	26+51.58	26+51.58	RT	BUS 60	30.00	0
				USE:	100.0	1.00
SEE CALC SHEET FOR DATA				TOTAL:	100.0	1.00

PEDESTRIAN STAIRS

SHEET	STATION	LT/RT	LOCATION	NUMBER EA	REMARKS
8	26+26.37	RT	BUS 60	1	YELLOW HOUSE
8	29+63.83	RT	BUS 60	1	BLUE HOUSE
			TOTAL:	2	
			USE:	2	

TEMPORARY EROSION CONTROL

SHEET	STATION	STATION	LOCATION	SILT FENCE L.F.	SEDIMENT REMOVAL (C.Y.)	REMARKS
4			BUS60	22.00		NE QUAD. (SOUTH ST.)
4			BUS60	39.00		NW QUAD. (SOUTH ST.)
4			BUS60	44.00		SW QUAD. (SOUTH ST.)
			TOTAL:	105.00		
			USE:	105.00	0 ~~1.00~~	

HANDRAIL-CONTINGENT LINE NO. 5002

SHEET	STATION	STATION	LT/RT	LOCATION	LENGTH LF	REMARKS
7	23+11.92		RT	BUS 60	15.00	IN FRONT OF HIGHSCHOOL
7	23+06.51		RT	BUS 60	20.00	IN FRONT OF HIGHSCHOOL
9	26+62.12	27+09.48	LT	BUS 60	47.36	IN FRONT OF EYE CARE BUSINESS
9	27+16.61	28+04.92	LT	BUS 60	88.31	IN FRONT OF EYE CARE BUSINESS
				TOTAL:	170.67	
				USE:	171	

TYPE 2 PREFORMED MARKING TAPE

SHEET	STATION	STATION	LOCATION	30" MID BLOCK EACH	REMARKS
5	23+09.22		BUS60	14.00	HIGH SCHOOL
6	0+00.00		BUS60	6.00	SW QUAD.
6	0+00.00		BUS60	13.00	SE QUAD.
	0+00.00		TOTAL:	33.00	
			USE:	33.00	

CONCRETE SLOPE PROTECTION

SHEET	STATION	STATION	LT/RT	LOCATION	SY	REMARKS
10	37+62.50	37+87.54	RT	BUS 60	8.90	CONOCO
				TOTAL:	8.9	
				USE:	9	

SUMMARY SHEET
SHEET 4 OF 5

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED 12/1/2015	
ROUTE BUS60	STATE MO
DISTRICT SW	SHEET NO. 3
COUNTY NEWTON	
JOB NO. J7P2205B	
CONTRACT ID. 150220-G01	
PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

FINAL PLANS

EFFECTIVE: 08-01-2012

WARNING SIGNS

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
W01-1L	48X48	16.00					TURN (SYMBOL LEFT ARROW)
W01-1R	48X48	16.00					TURN (SYMBOL RIGHT ARROW)
W01-2L	48X48	16.00					CURVE (SYMBOL LEFT ARROW)
W01-2R	48X48	16.00					CURVE (SYMBOL RIGHT ARROW)
W01-3L	48X48	16.00	1	16			REVERSE TURN (SYMBOL LEFT ARROW)
W01-3R	48X48	16.00	1	16			REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4L	48X48	16.00					REVERSE CURVE (SYMBOL LEFT ARROW)
W01-4R	48X48	16.00					REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4bL	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-4bR	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-4cL	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-4cR	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-6	60X30	12.50	2	25			HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.00					HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-7	60X30	12.50					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.00					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-8	18X24	3.00					CHEVRON (SYMBOL)
W01-8a	30X36	7.50					CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X48	16.00					STOP AHEAD (SYMBOL)
W03-2	48X48	16.00					YIELD AHEAD (SYMBOL)
W03-3	48X48	16.00					SIGNAL AHEAD (SYMBOL)
W03-4	48X48	16.00					BE PREPARED TO STOP
W03-5	48X48	16.00					SPEED LIMIT AHEAD
W04-1L	48X48	16.00					MERGE (SYMBOL FROM LEFT)
W04-1R	48X48	16.00	1	16			MERGE (SYMBOL FROM RIGHT)
W05-1	48X48	16.00					ROAD/BRIDGE/RAMP NARROWS
W05-3	48X48	16.00					ONE LANE BRIDGE
W05-5	48X48	16.00	2	32			NARROW LANES
W06-1	48X48	16.00					DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00					DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00					TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00					NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00					BUMP
W08-2	48X48	16.00					DIP
W08-3	48X48	16.00					PAVEMENT ENDS
W08-4	48X48	16.00					SOFT SHOULDER
W08-5	48X48	16.00					SLIPPERY WHEN WET (SYMBOL)
W08-6	48X48	16.00					TRUCK CROSSING WITH FLAGS
W08-6c	48X48	16.00					TRUCK ENTRANCE
W08-7	36X36	9.00					LOOSE GRAVEL
W08-9	48X48	16.00					LOW SHOULDER
W08-11	48X48	16.00					UNEVEN LANES
W08-12	48X48	16.00					NO CENTER LINE
W10-1	42 RND.	9.62					RAILROAD CROSSING
W012-1	24X24	4.00					DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00					LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00					LOW CLEARANCE (PLAQUE)
W012-2a	84X24	14.00					OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W08-15	48X48	16.00					GROOVED PAVEMENT
W08-15p	30X24	5.00					MOTORCYCLE (PLAQUE)
W08-17	48X48	16.00					SHOULDER DROP-OFF (SYMBOL)
W08-17p	30X24	5.00					SHOULDER DROP-OFF (PLAQUE)
SPECIAL	120X60	50.00					LOW CLEARANCE XX FT XX IN XX MILES AHEAD
SPECIAL	120X60	50.00					WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
W013-1	30X30	6.25					ADVISORY SPEED (PLAQUE)
W016-2	30X24	5.00					XXX FEET (PLAQUE)
W016-3	30X24	5.00					X MILE (PLAQUE)
W020-1	48X48	16.00	12	192			ROAD/BRIDGE/RAMP WORK AHEAD
W020-2	48X48	16.00					DETOUR AHEAD
W020-3	48X48	16.00					ROAD CLOSED AHEAD
W020-4	48X48	16.00					ONE LANE ROAD AHEAD
W020-5	48X48	16.00					RIGHT/CENTER/LEFT LANE CLOSED AHEAD
W020-5a	48X48	16.00					2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
W020-6a	48X48	16.00	2	32			RIGHT/CENTER/LEFT LANE CLOSED
W020-7a	48X48	16.00	3	48			FLAGGER (SYMBOL) WITH FLAGS
W021-2	36X36	9.00					FRESH OIL
W021-5b	48X48	16.00	2	32			SHOULDER WORK AHEAD
W022-1	48X48	16.00					BLASTING ZONE AHEAD
W022-2	42X36	10.50					TURN OFF 2-WAY RADIO AND PHONE
W022-3	42X36	10.50					END BLASTING ZONE
W022-6e	21X15	2.19					WET PAINT (ARROW PIVOTS)

GUIDE SIGNS

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
SPECIAL	36X36	9.00					FRESH OIL/LOOSE GRAVEL
E05-1	36X48	12.00					GORE EXIT
E05-2	48X36	12.00					EXIT OPEN
E05-2a	48X36	12.00					EXIT CLOSED
G020-1	60X24	10.00					ROAD WORK NEXT XX MILES
G020-2	48X24	8.00					END ROAD WORK
G020-4	36X18	4.50					PILOT CAR FOLLOW ME
SPECIAL	42X30	8.75					PLEASE WAIT FOR PILOT CAR
G020-5aP	36X24	6.00	2	12			WORK ZONE (PLAQUE)
M04-8a	24X18	3.00					END DETOUR
M04-9L	48X36	12.00					DETOUR (LEFT ARROW)
M04-9R	48X36	12.00					DETOUR (RIGHT ARROW)
M04-10L	48X18	6.00					DETOUR (ARROW LEFT)
M04-10R	48X18	6.00					DETOUR (ARROW RIGHT)

REGULATORY SIGNS

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
R1-1	48X48	13.25					STOP
R1-2	48 TRI.	6.93					YIELD
R1-2a	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)
R1-3	20X9	1.25					X-WAY (PLAQUE)
R2-1	36X48	12.00	4	48			SPEED LIMIT XX (2 @ 35 and 2 @ 45 mph)
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)
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					ROAD CLOSED
R11-3a	60X30	12.50					ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50					ROAD CLOSED TO THRU TRAFFIC
S4-4	36X15	3.75					WHEN FLASHING
CONST-3A	60X48	20.00					FINE SIGN
CONST-3X	56X12	4.67					SPEEDING/PASSING (PLATE)
R9-9	24X12	2.00	15	30			SIDEWALK CLOSED

MISCELLANEOUS SIGNS

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
SPECIAL	36X48	12.00					POINT OF PRESENCE
SPECIAL	96X48	32.00	2	64			POINT OF PRESENCE
CONST-7-48	48X24	8.00					RATE OUR WORK ZONE
CONST-7-72	72X36	18.00	2	36			RATE OUR WORK ZONE

616-10.05 CONSTRUCTION SIGNS TOTAL	✓	599	☒
616-10.10 RELOCATED SIGNS TOTAL			☒

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR (8 SAND BARRELS)
6122009		IMPACT ATTENUATOR (9 SAND BARRELS)
6122010		IMPACT ATTENUATOR (10 SAND BARRELS)
6122012		IMPACT ATTENUATOR (12 SAND BARRELS)
6122014		IMPACT ATTENUATOR (14 SAND BARRELS)
6122017		IMPACT ATTENUATOR (17 SAND BARRELS)
6122019		IMPACT ATTENUATOR (19 SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR ARRAY (RELOCATION)
6123000A		TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
6161007		SPEED LIMIT AND STROBE LIGHT ASSEMBLY
6161008	✓	ADVANCED WARNING RAIL SYSTEM
6161009	15	FLAG ASSEMBLY
6161020		CHANNELIZER (DRUM-LIKE)
6161022		CHANNELIZER (CONES)
6161024		CHANNELIZER (TRIM LINE) WITH LIGHT
6161025		CHANNELIZER (TRIM LINE)
6161026		CHANNELIZER (VERTICAL PANEL)
6161027	✓	CHANNELIZER (VERTICAL PANEL) WITH LIGHT
6161028	125	CHANNELIZER
6161030		TYPE III MOVEABLE BARRICADE
6161031		TYPE III MOVEABLE BARRICADE WITH LIGHT
6161033		DIRECTION INDICATOR BARRICADE
6161034		DIRECTION INDICATOR BARRICADE, WITH LIGHT
6161040		FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161051		WARNING LIGHT, TYPE A
6161052		WARNING LIGHT, TYPE B
6161053		WARNING LIGHT, TYPE C
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098	✓ 2	CHANGEABLE MESSAGE SIGN, CONTRACTOR FURNISHED/RETAINED
6161100		CHANGEABLE MESSAGE SIGN, CONTRACTOR FURNISHED/COMMISSION RETAINED
6173600D		CONTRACTOR FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER
6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED TEMPORARY TRAFFIC BARRIER
6174000A		TEMPORARY TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		COMMISSION FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER
6177000B		COMMISSION FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER HEIGHT TRANSITION
9019400		TEMPORARY LIGHTING
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
6169902	✓ 30	ADA COMPLIANT MOVEABLE BARRICADE

✓ SUMMARY SHEET
SHEET 5 OF 5

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED
11/16/2015

✓ ROUTE BUS60 | STATE MO
✓ DISTRICT SW | SHEET NO. 3
✓ COUNTY NEWTON
✓ JOB NO. J7P2205B
✓ CONTRACT ID. 150220-G01
✓ PROJECT NO. FAF 60-1(43)
BRIDGE NO.

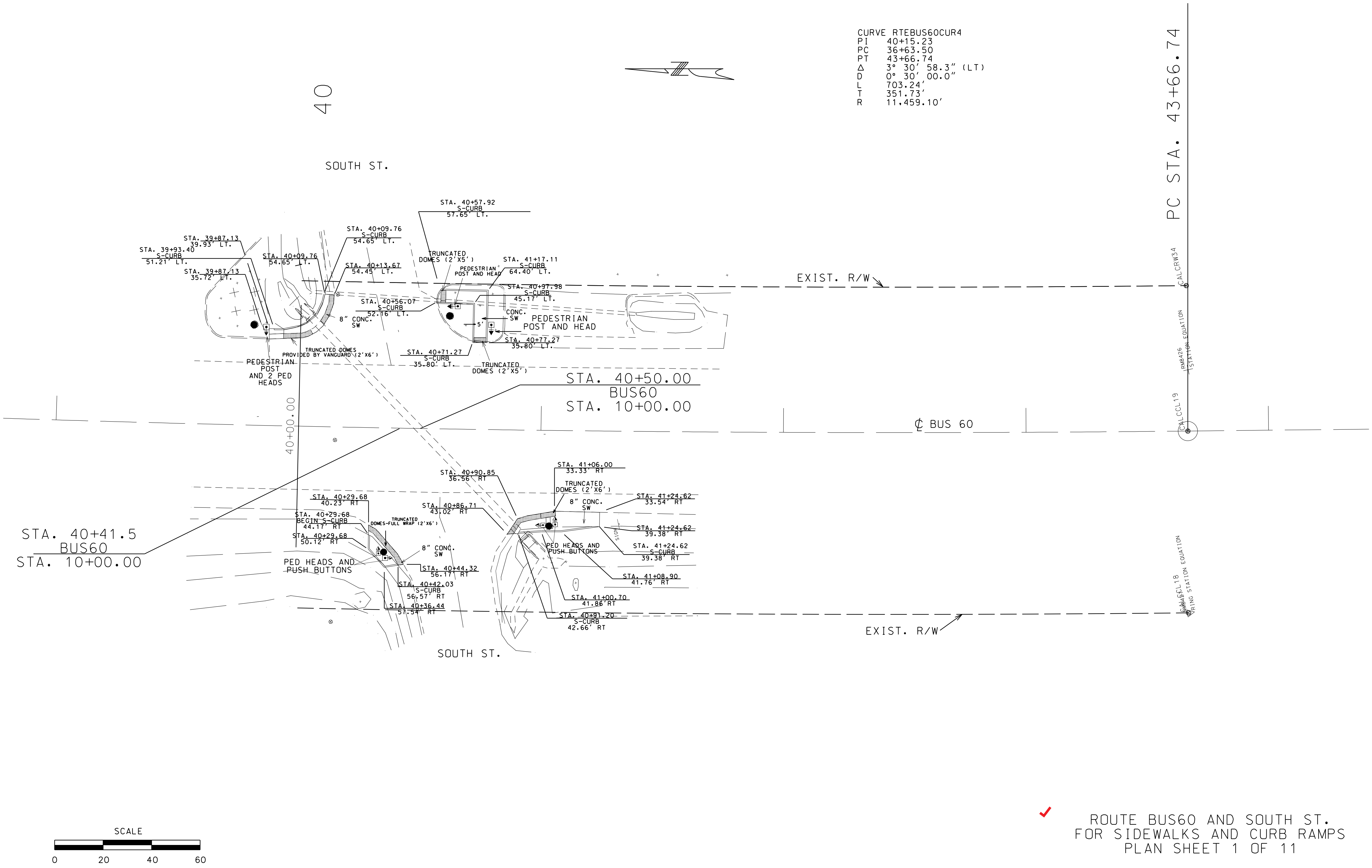
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

✓ FINAL PLANS

REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



CURVE RTEBUS60CUR4

PI	40+15.23
PC	36+63.50
PT	43+66.74
Δ	3° 30' 58.3" (LT)
D	0° 30' 00.0"
L	703.24'
T	351.73'
R	11,459.10'

ROUTE BUS60 AND SOUTH ST.
FOR SIDEWALKS AND CURB RAMPS
PLAN SHEET 1 OF 11

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED	12/1/2015
ROUTE	BUS60
STATE	MO
DISTRICT	SW
SHEET NO.	4
COUNTY	NEWTON
JOB NO.	J7P2205B
CONTRACT ID.	150220-G01
PROJECT NO.	FAF 60-1(43)
BRIDGE NO.	

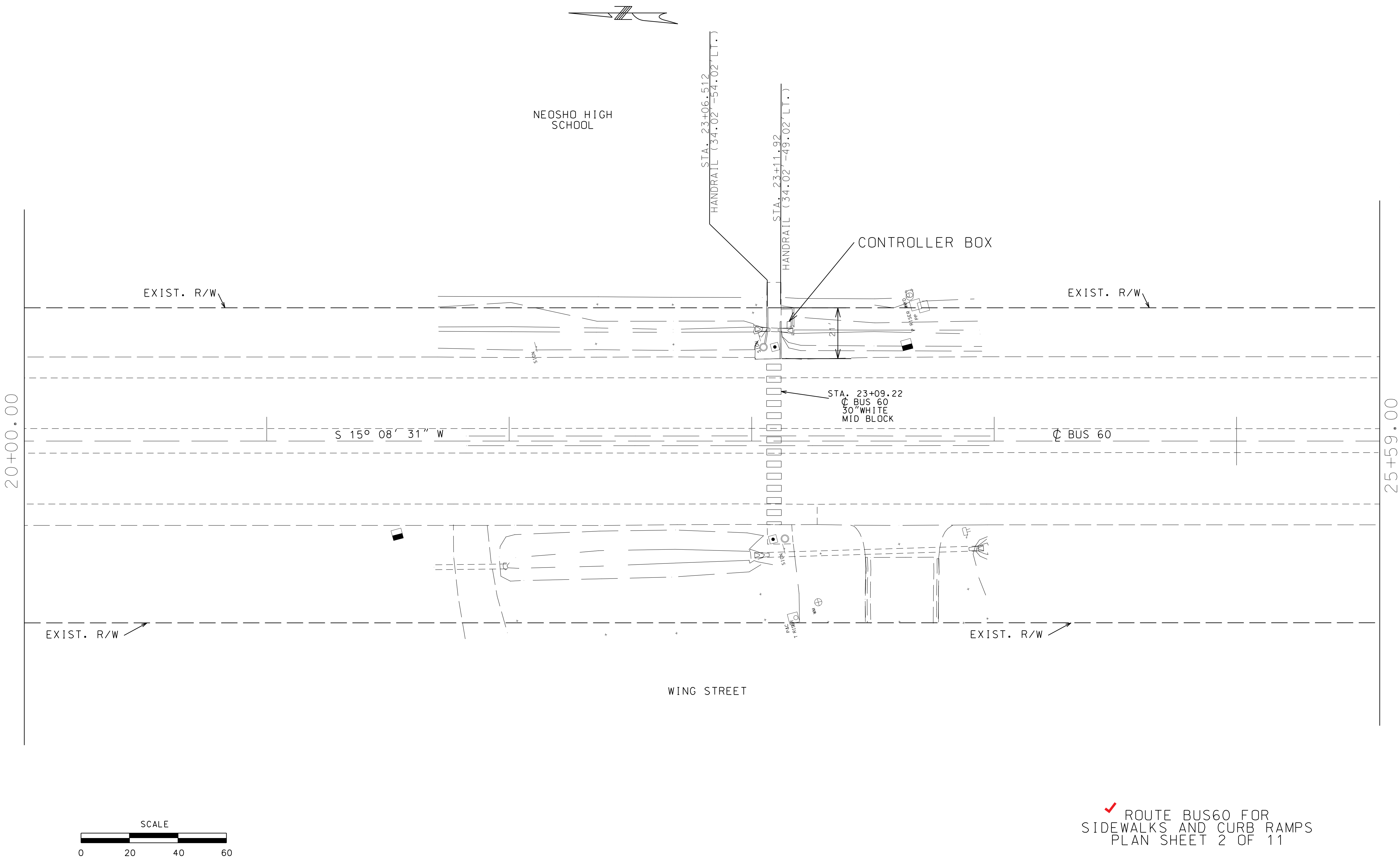
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



✓ ROUTE BUS60 FOR
SIDEWALKS AND CURB RAMPS
PLAN SHEET 2 OF 11

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

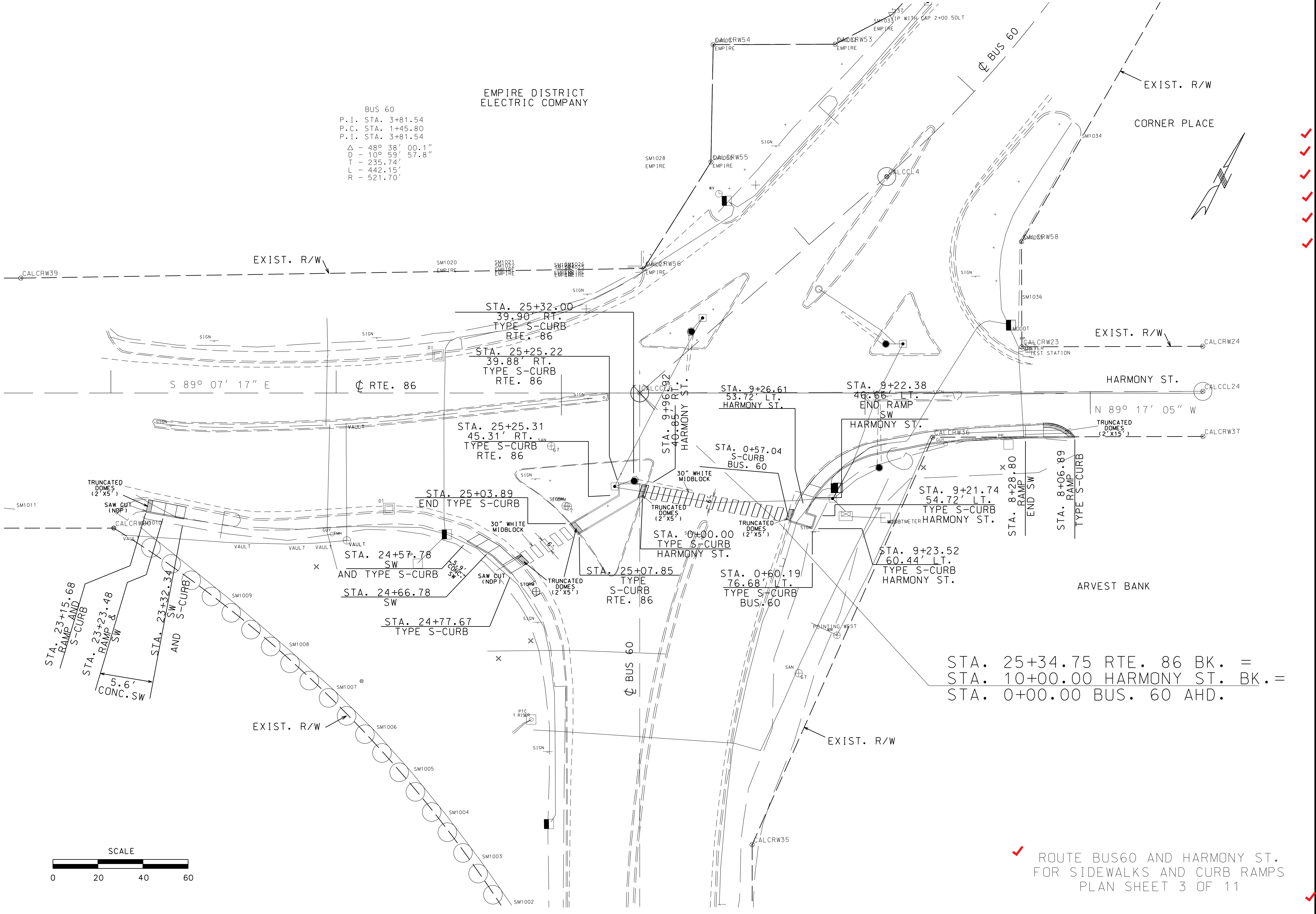
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	
DATE PREPARED 12/1/2015	
✓ ROUTE BUS60	STATE MO
✓ DISTRICT SW	SHEET NO. 5
✓ COUNTY NEWTON	
✓ JOB NO. J7P2205B	
✓ CONTRACT ID. 150220-G01	
✓ PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

✓ FINAL PLANS



ROUTE BUS60 AND HARMONY ST.
FOR SIDEWALKS AND CURB RAMPS
PLAN SHEET 3 OF 11

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE	
DATE PREPARED	12/1/2015
ROUTE	BUS60
STATE	MO
DISTRICT	SW
SHEET NO.	6
COUNTY	NEWTON
JOB NO.	J7P2205B
CONTRACT ID.	150220-G01
PROJECT NO.	FAF 60-1(43)
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

FINAL PLANS

J:\Castillo\150220-G01 J7P2205B\006_PP_03_J7P2205B_i20.dgn 8:38:42 AM 12/1/2015

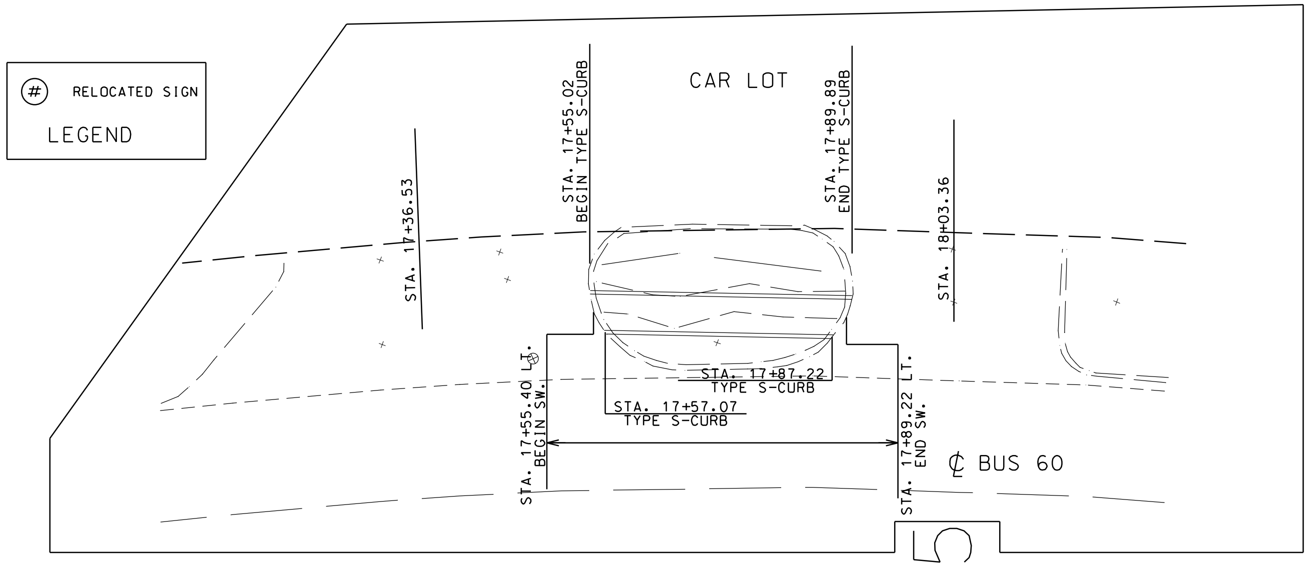
IF A STOP SIGN IS TO BE (R) & RELOCATED AND IT HAS CORSS-STREET SIGNS ON IT, THE STREET SIGNS MUST ALSO BE RELOCATED WITH THE STOP SIGN.

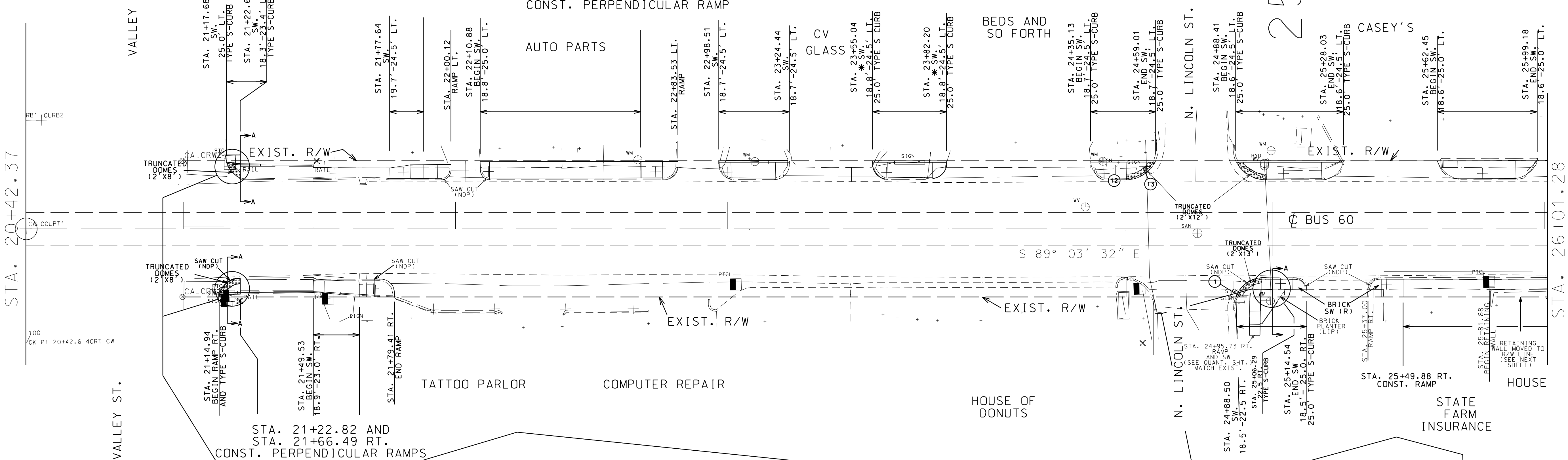
ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.

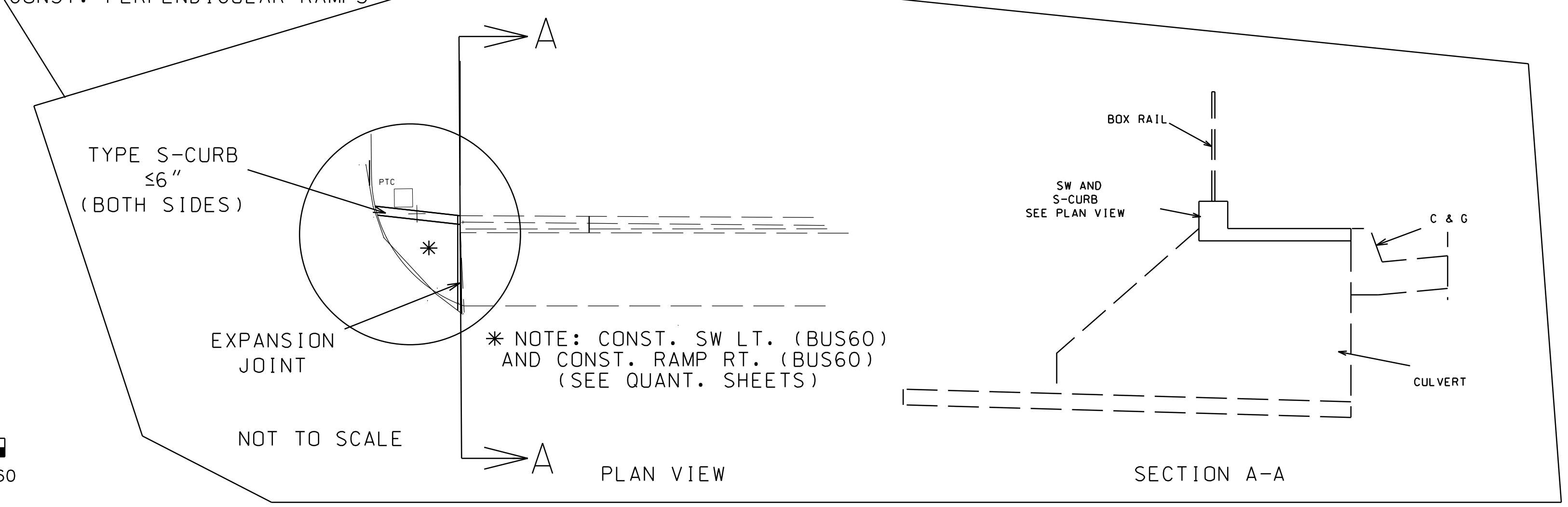
✱ AVERAGE WIDTH FOR SW IS 6′

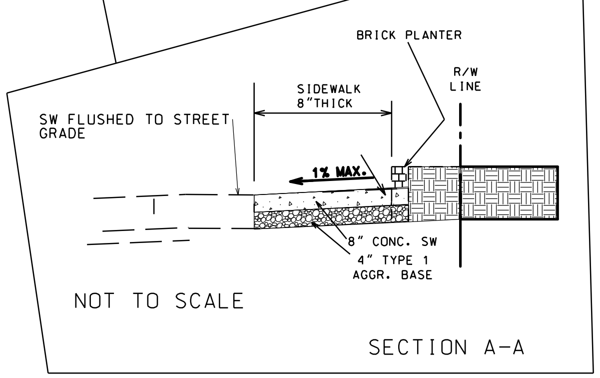
(#) RELOCATED SIGN

LEGEND









SCALE

0 20 40 60

ROUTE BUS60 FOR SIDEWALKS AND CURB RAMPS PLAN SHEET 4 OF 11

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 12/8/2015	
ROUTE BUS60	STATE MO
DISTRICT SW	SHEET NO. 7
COUNTY NEWTON	
JOB NO. J7P2205B	
CONTRACT ID. 150220-G01	
PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DESCRIPTION

DATE

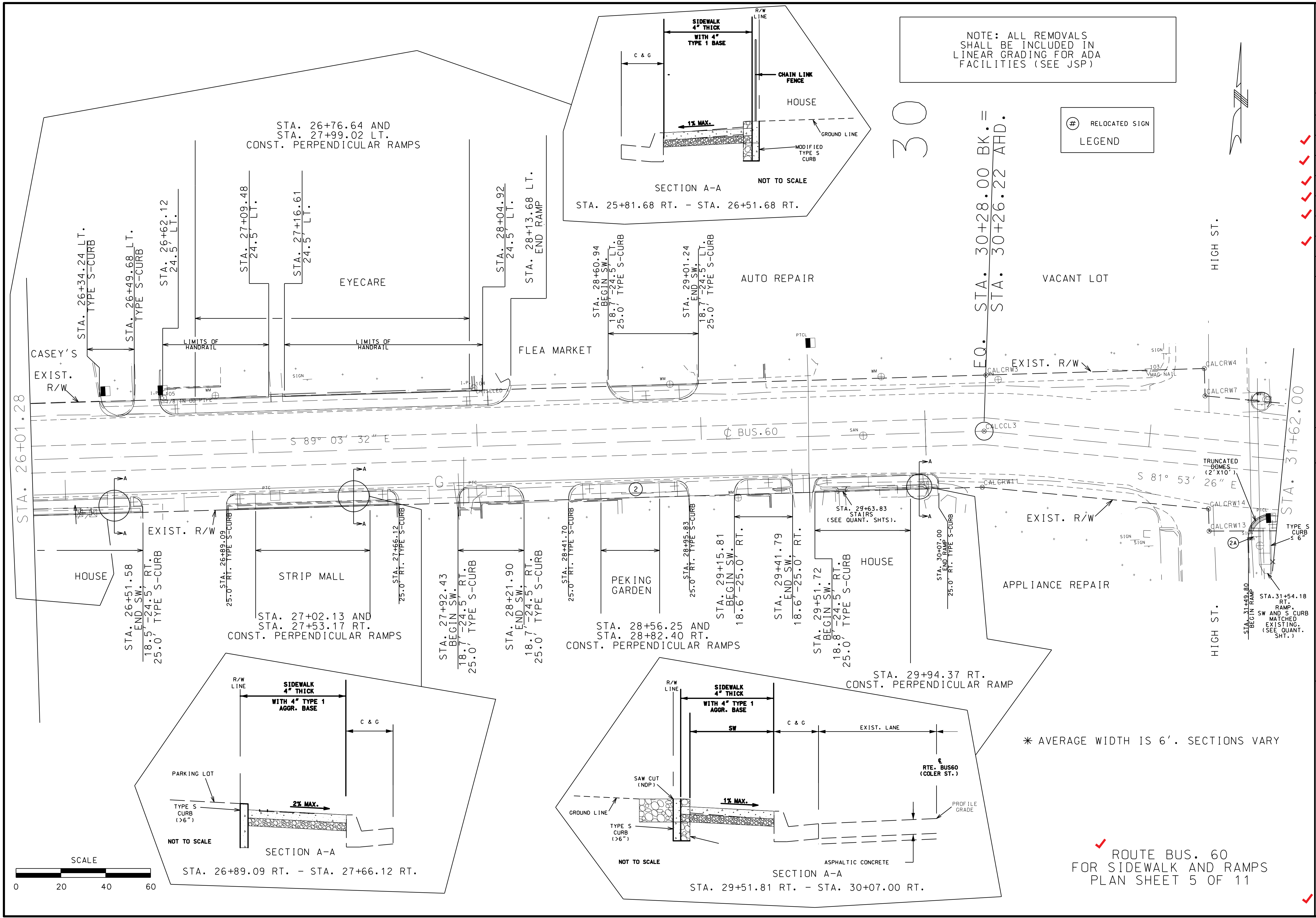
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

FINAL PLANS



NOTE: ALL REMOVALS SHALL BE INCLUDED IN LINEAR GRADING FOR ADA FACILITIES (SEE JSP)

#	RELOCATED SIGN

LEGEND

✳ AVERAGE WIDTH IS 6'. SECTIONS VARY

ROUTE BUS. 60
FOR SIDEWALK AND RAMPS
PLAN SHEET 5 OF 11

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE	
DATE PREPARED	12/2/2015
ROUTE	BUS60
STATE	MO
DISTRICT	SW
SHEET NO.	8
COUNTY	NEWTON
JOB NO.	J7P2205B
CONTRACT ID.	150220-G01
PROJECT NO.	FAF 60-1(43)
BRIDGE NO.	

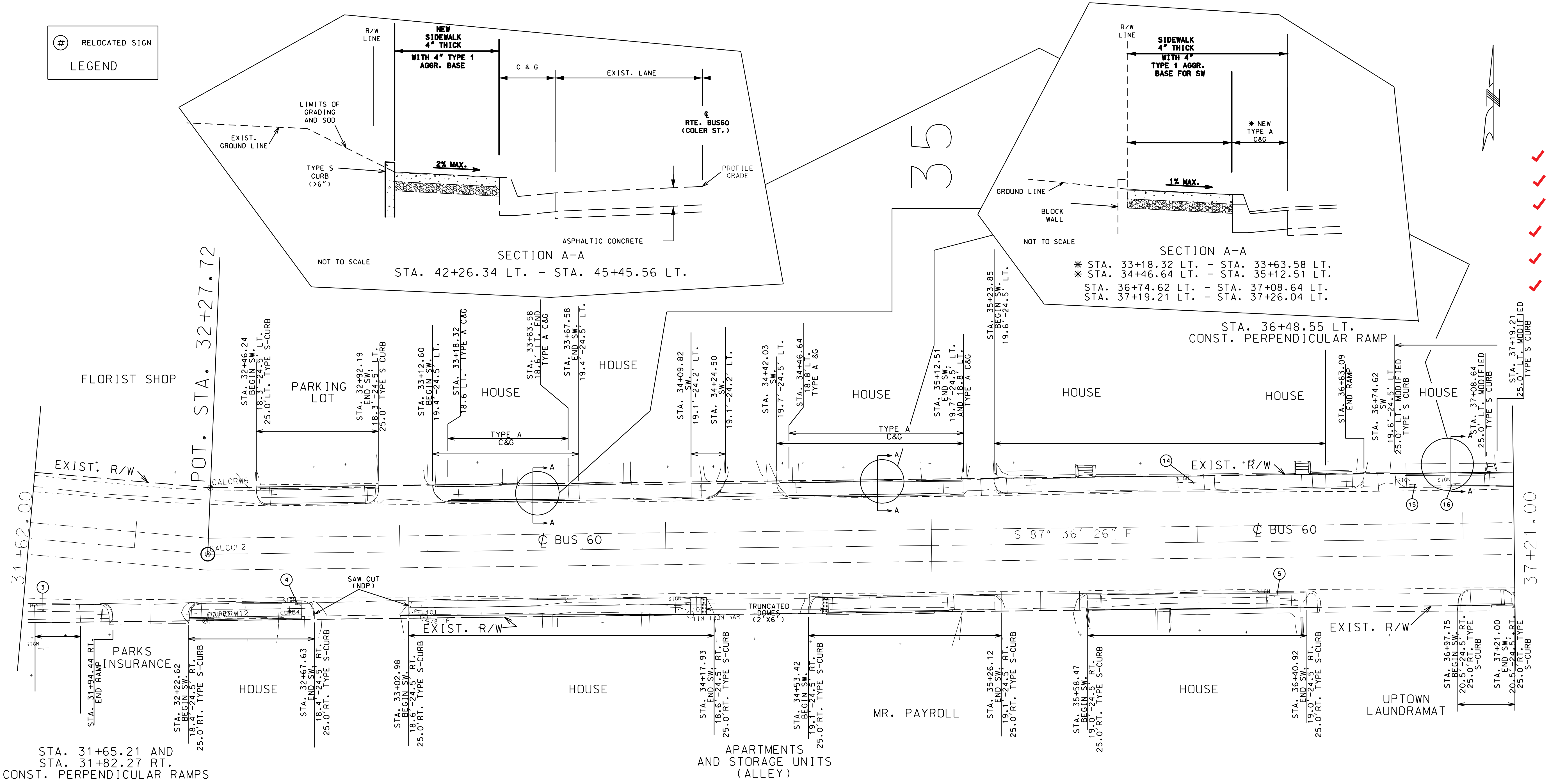
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

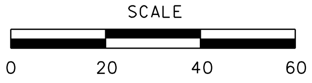
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



∗ 6' AVERAGE SW WIDTH THROUGHOUT SECTIONS VARY



✓ ROUTE BUS60 FOR
SIDEWALKS AND CURB RAMPS
PLAN SHEET 6 OF 11

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

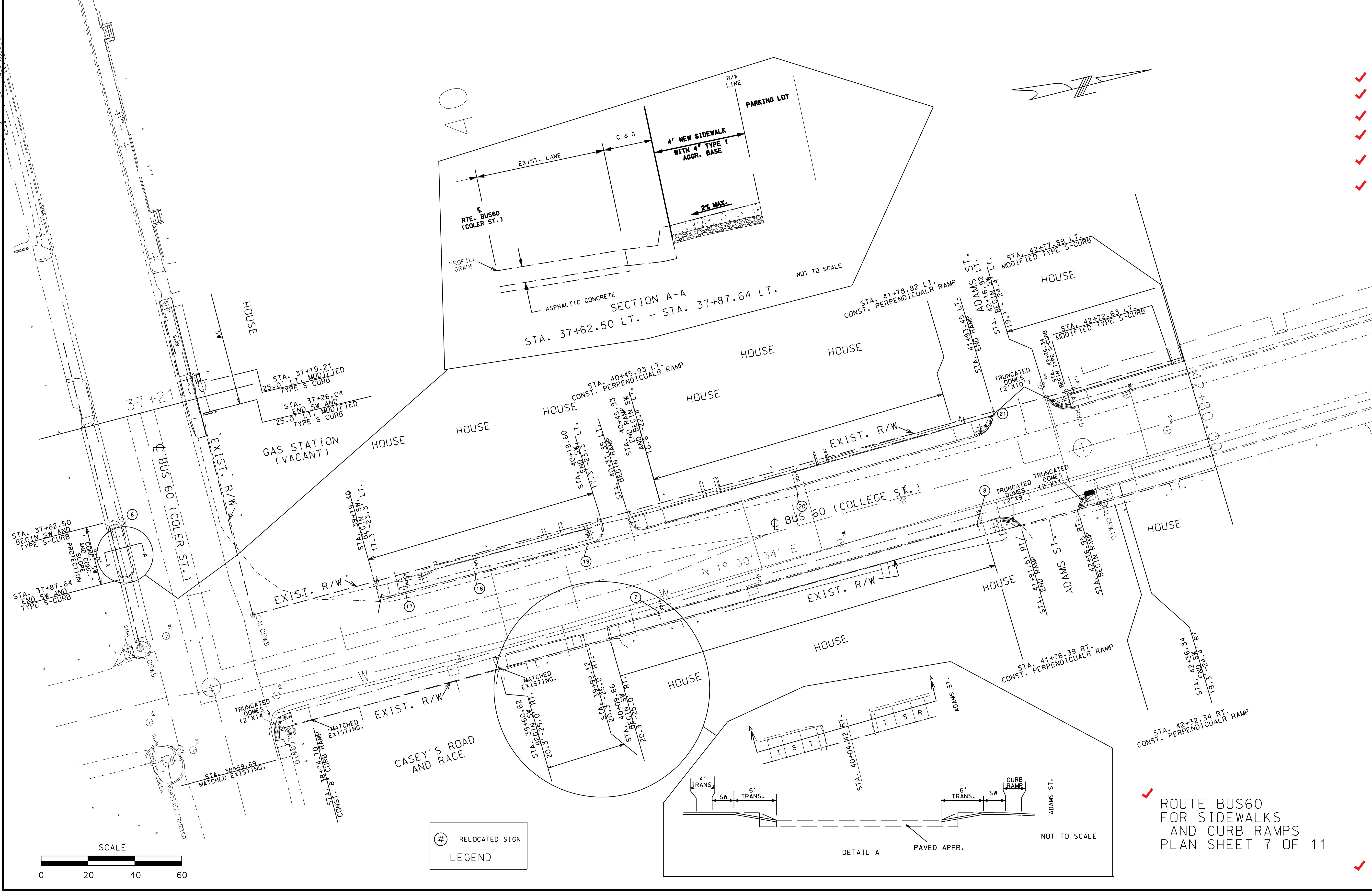
DATE PREPARED 12/1/2015 ✓
ROUTE BUS 60 STATE MO ✓
DISTRICT SW SHEET NO. 9 ✓
COUNTY NEWTON ✓
JOB NO. J7P2205B ✓
CONTRACT ID. 150220-G01 ✓
PROJECT NO. FAF 60-1(43) ✓
BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

✓ FINAL PLANS

✳ AVERAGE WIDTH OF SW IS 6'. SECTIONS VARY



✓ ROUTE BUS60
FOR SIDEWALKS
AND CURB RAMPS
PLAN SHEET 7 OF 11

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

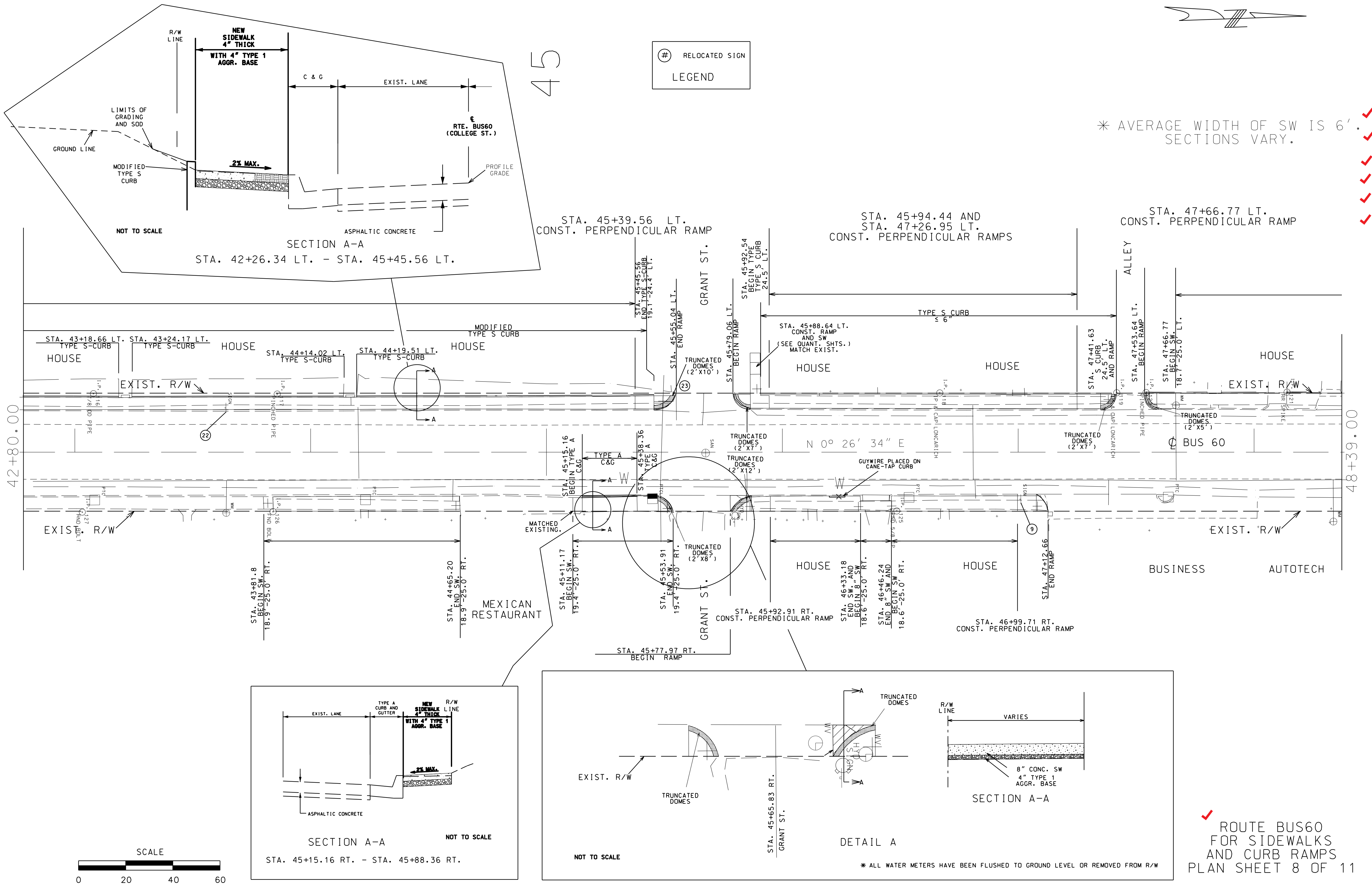
DATE PREPARED
12/8/2015
ROUTE BUS 60 ✓ STATE MO
DISTRICT SW ✓ SHEET NO. 10
COUNTY NEWTON ✓
JOB NO. J7P2205B ✓
CONTRACT ID. 150220-G01 ✓
PROJECT NO. FAF 60-1(43) ✓
BRIDGE NO.

DESCRIPTION
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

✓ FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 12/8/2015	
ROUTE BUS.60	STATE MO
DISTRICT SW	SHEET NO. 11
COUNTY NEWTON	
JOB NO. J7P2205B	
CONTRACT ID. 150220-G01	
PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DATE	DESCRIPTION

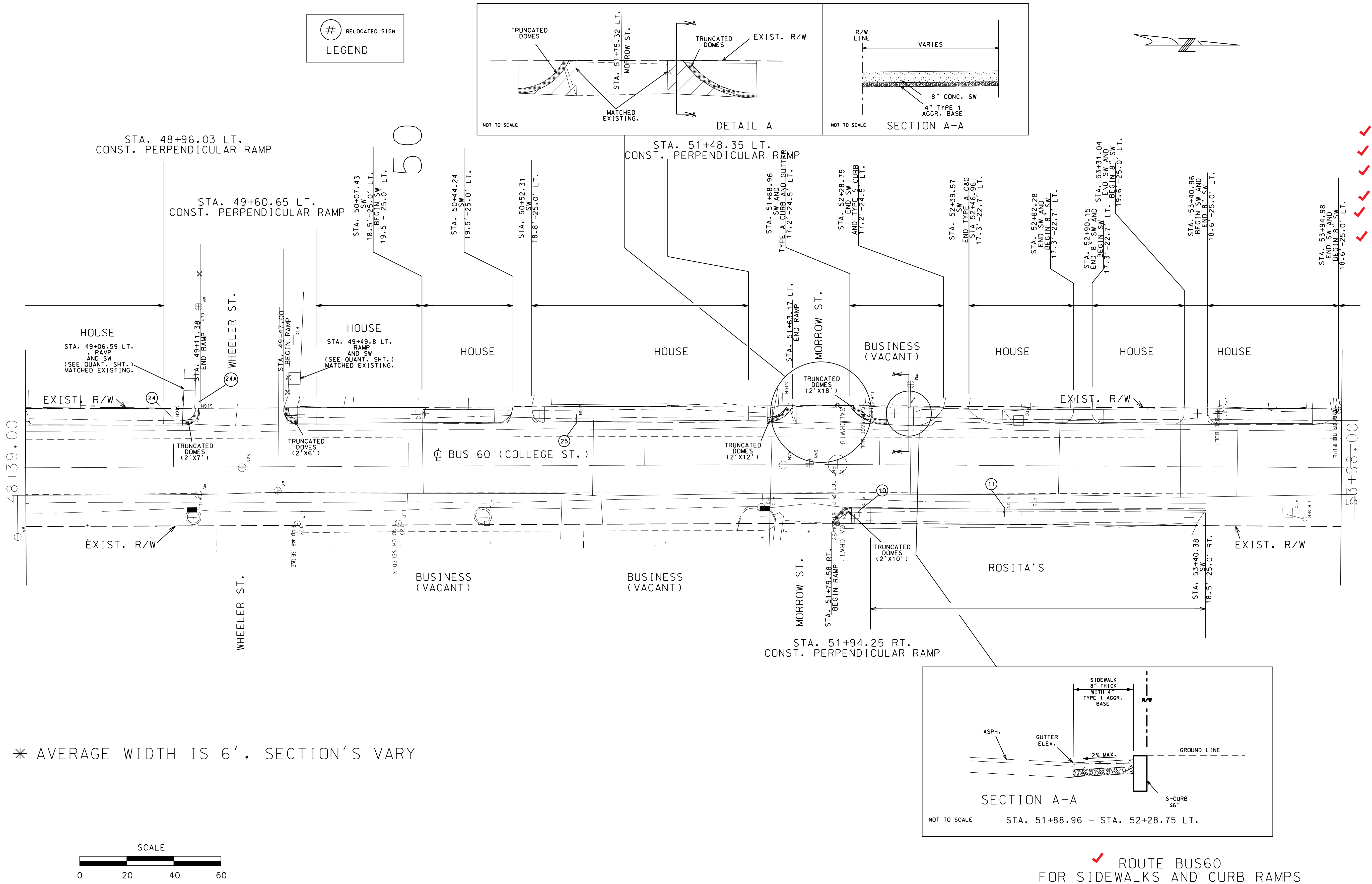
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

ROUTE BUS60
FOR SIDEWALKS
AND CURB RAMPS
PLAN SHEET 8 OF 11

FINAL PLANS



✳ AVERAGE WIDTH IS 6'. SECTION'S VARY

✓ ROUTE BUS60
FOR SIDEWALKS AND CURB RAMPS
PLAN SHEET 9 OF 11

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE	
DATE PREPARED	12/2/2015
ROUTE	BUS.60
STATE	MO
DISTRICT	SW
SHEET NO.	12
COUNTY	NEWTON
JOB NO.	J7P2205B
CONTRACT ID.	150220-G01
PROJECT NO.	FAF 60-1(43)
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

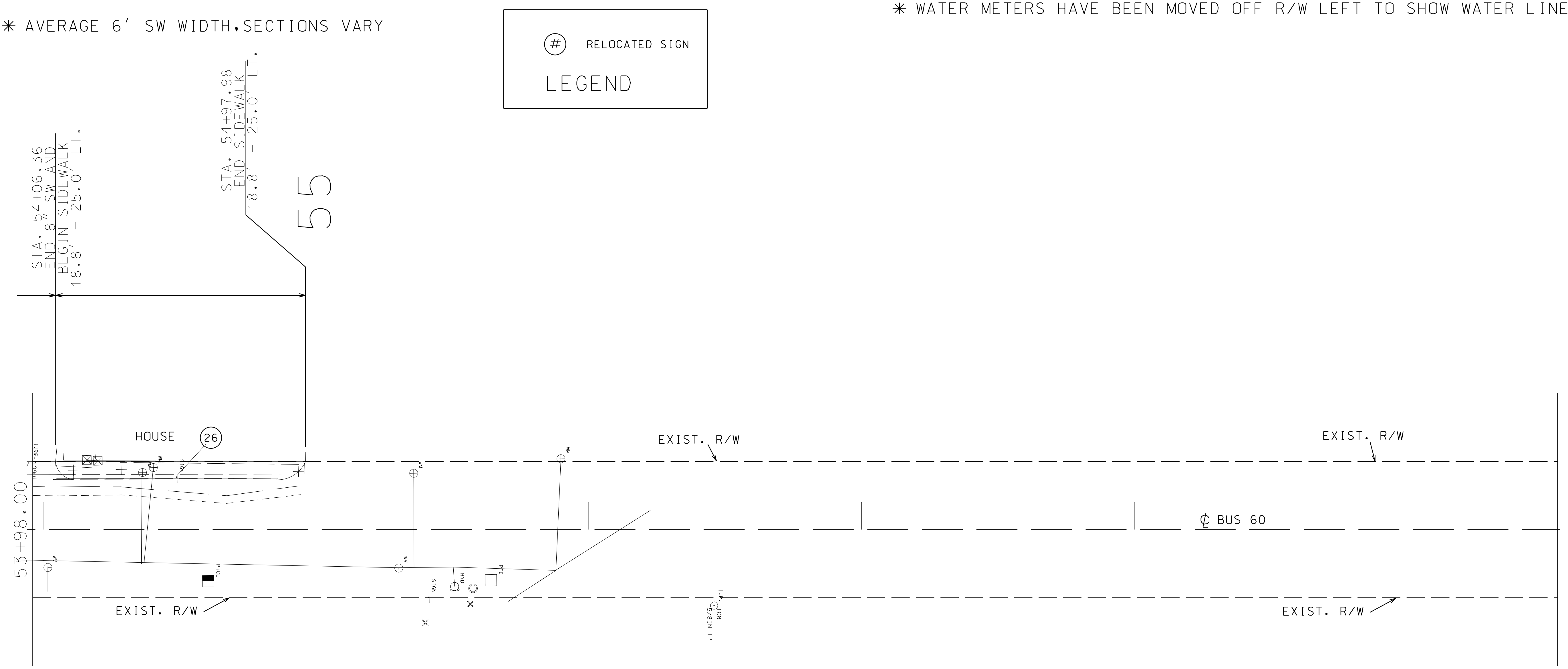
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

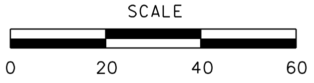
✓ FINAL PLANS

REV.

* AVERAGE 6' SW WIDTH, SECTIONS VARY

* WATER METERS HAVE BEEN MOVED OFF R/W LEFT TO SHOW WATER LINES





✓ ROUTEBUS 60 FOR
SIDEWALKS AND CURB RAMPS
PLAN SHEET 10 OF 11

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED 12/1/2015

✓ ROUTE BUS60	STATE MO
✓ DISTRICT SW	SHEET NO. 13
✓ COUNTY NEWTON	
✓ JOB NO. J7P2205B	
✓ CONTRACT ID. 150220-G01	
✓ PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

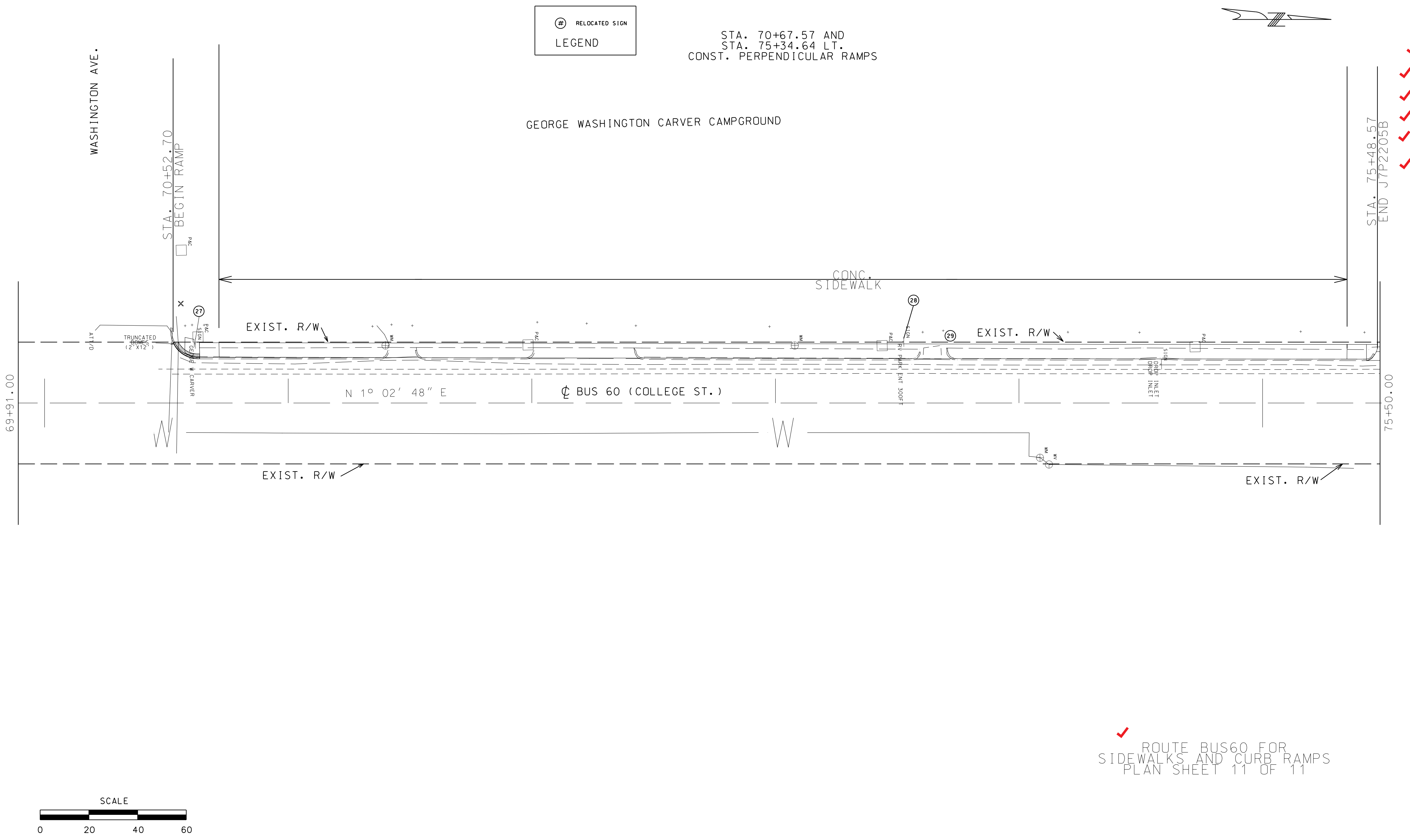
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

✓ FINAL PLANS

REV.

✳ AVERAGE 6′ SW WIDTHS

✳ ALL WATER METERS HAVE BEEN FLUSHED TO GROUND LEVEL OR REMOVED OFF OF R/W



ROUTE BUS60 FOR
SIDEWALKS AND CURB RAMPS
PLAN SHEET 11 OF 11

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE	
DATE PREPARED	12/1/2015
ROUTE BUS60	STATE MO
DISTRICT SW	SHEET NO. 14
COUNTY NEWTON	
JOB NO. J7P2205B	
CONTRACT ID. 150220-G01	
PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DESCRIPTION

DATE

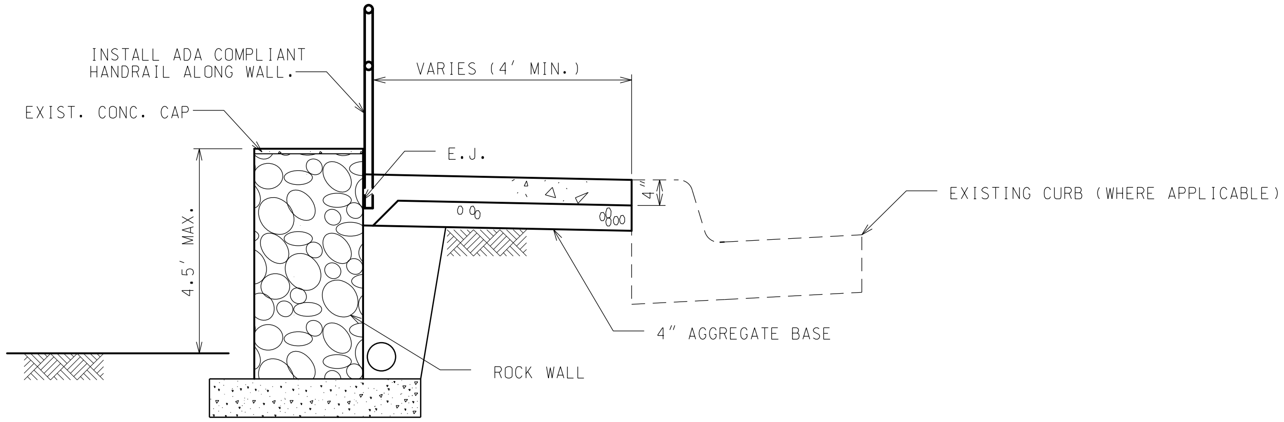
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

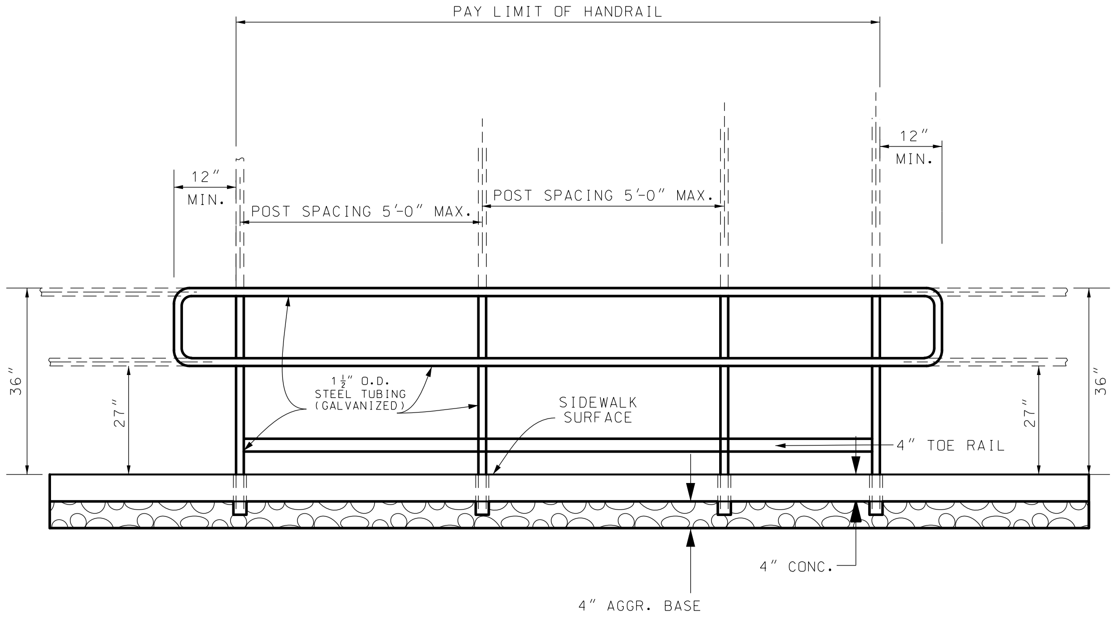
FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

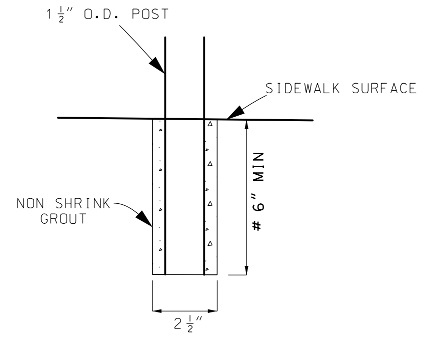


SECTION A-A



HANDRAIL DETAILS
(EYE CARE PLACE)

STA. 26+62.12 LT. - STA. 27+09.48 LT.
STA. 27+16.61 LT. - STA. 28+04.92 LT.
STA. 23+06.51 LT. (HIGH SCHOOL)
STA. 23+11.92 LT. (HIGH SCHOOL)



6" MIN OR PER MANUFACTURES RECOMMENDATION

DETAIL A

GENERAL NOTES:

STEEL RAILINGS AND POSTS SHALL BE GALVANIZED (SEE JOB SPECIAL PROVISIONS).

ALL JOINTS SHALL BE CONTINUOUS WELD.

✓ROUTE BUS60
SPECIAL SHEET 1 OF 2

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

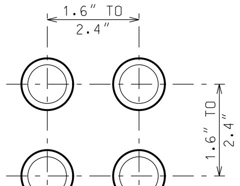
DATE PREPARED 12/8/2015
✓ ROUTE BUS60 | STATE MO
✓ DISTRICT SW | SHEET NO. 16
✓ COUNTY NEWTON
✓ JOB NO. J7P2205B
✓ CONTRACT ID. 150220-G01
✓ PROJECT NO. FAF 60-1(43)
BRIDGE NO.

DESCRIPTION
DATE

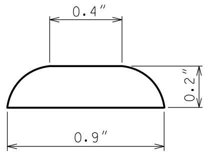
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

✓
FINAL PLANS

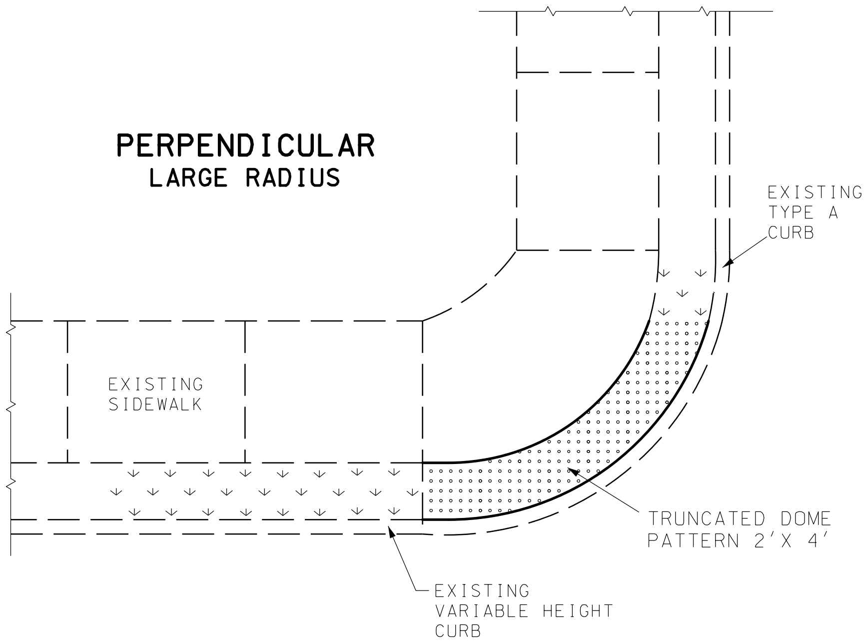


TRUNCATED DOMES SPACING

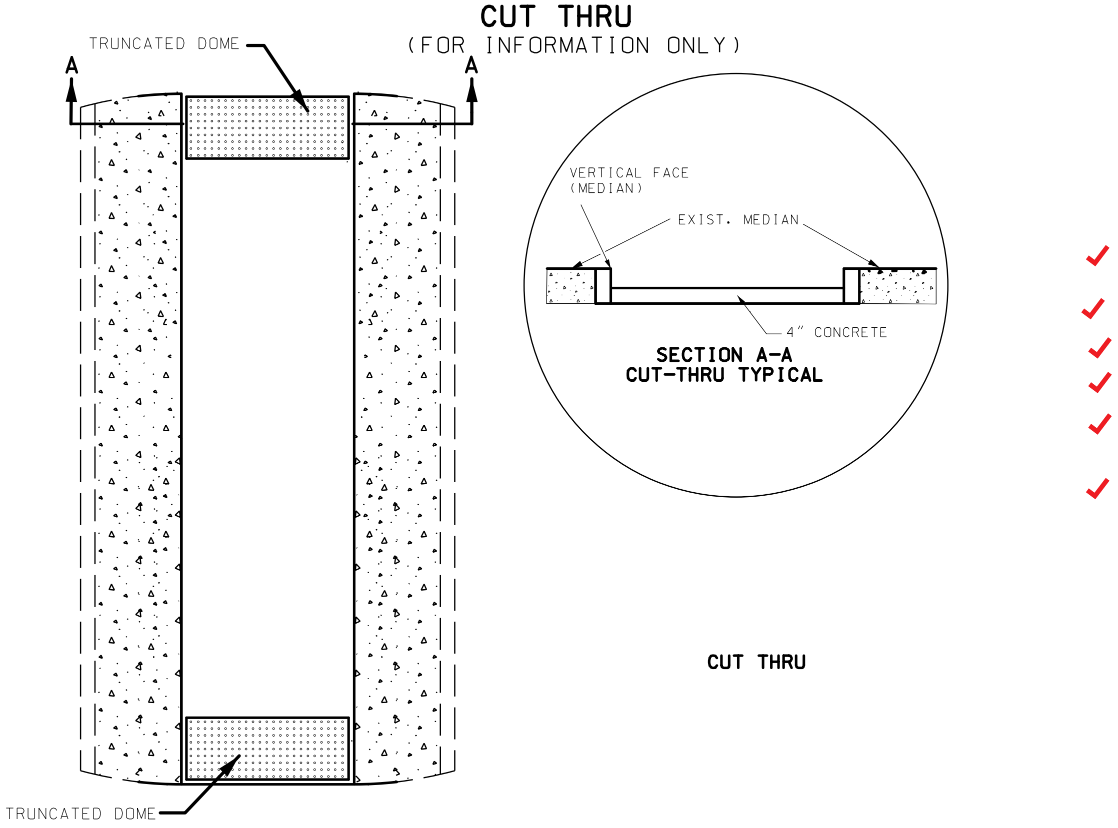


TRUNCATED DOMES CROSS SECTION

PERPENDICULAR
LARGE RADIUS

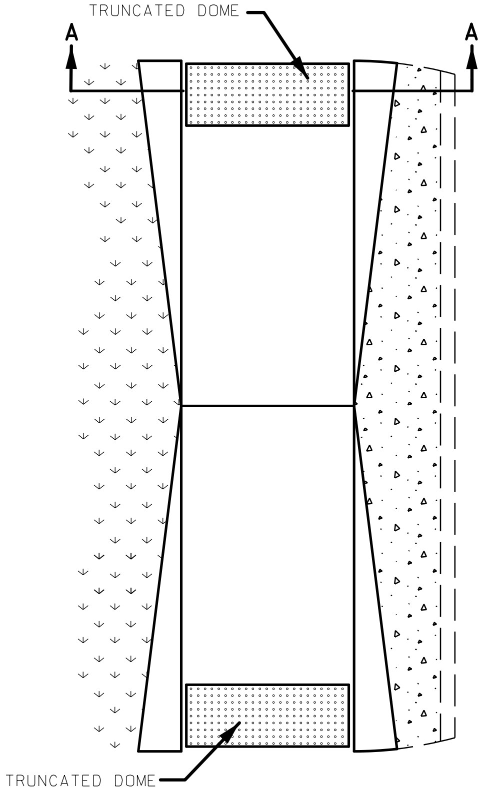


CUT THRU
(FOR INFORMATION ONLY)

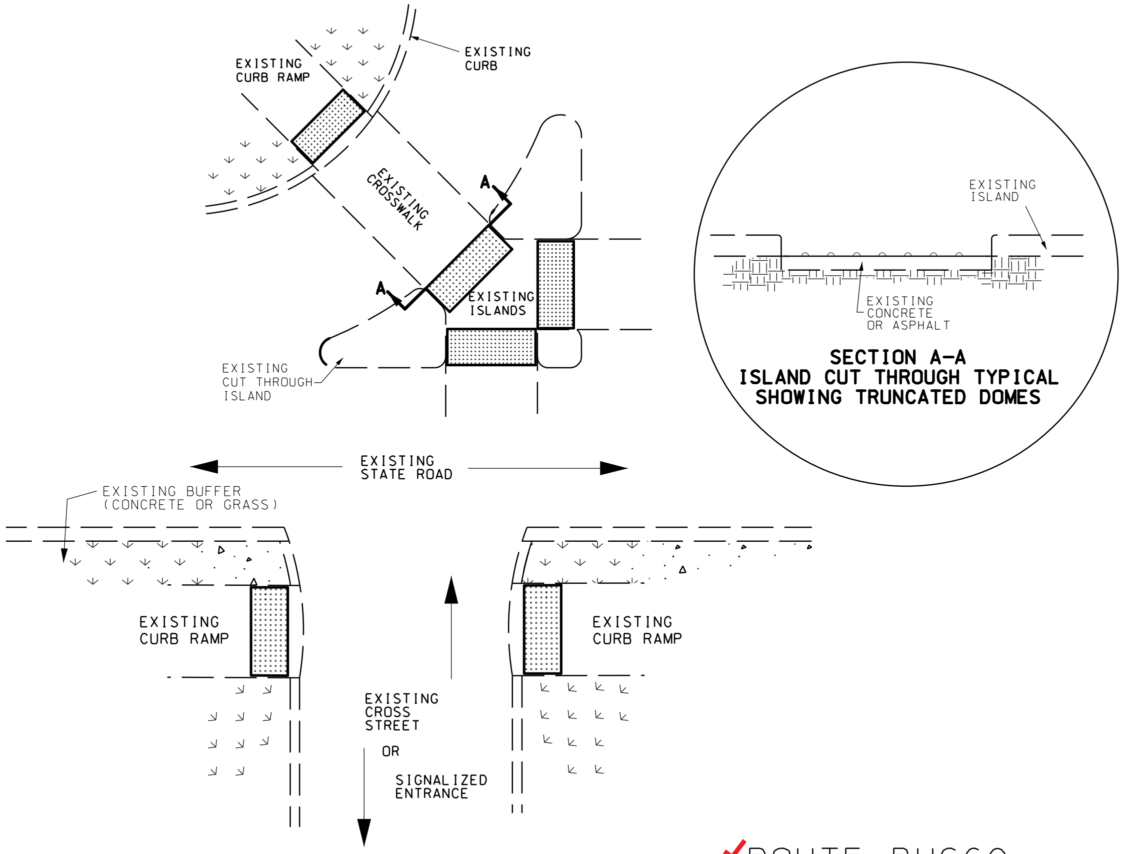


SECTION A-A
CUT-THRU TYPICAL

CUT THRU



TRUNCATED DOME PLACEMENT



SECTION A-A
ISLAND CUT THROUGH TYPICAL
SHOWING TRUNCATED DOMES

✓ROUTE BUS60
SPECIAL SHEET 2 OF 2

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 12/8/2015	
✓ ROUTE BUS60	STATE MO
✓ DISTRICT SW	SHEET NO. 17
✓ COUNTY NEWTON	
✓ JOB NO. J7P2205B	
✓ CONTRACT ID. 150220-G01	
✓ PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

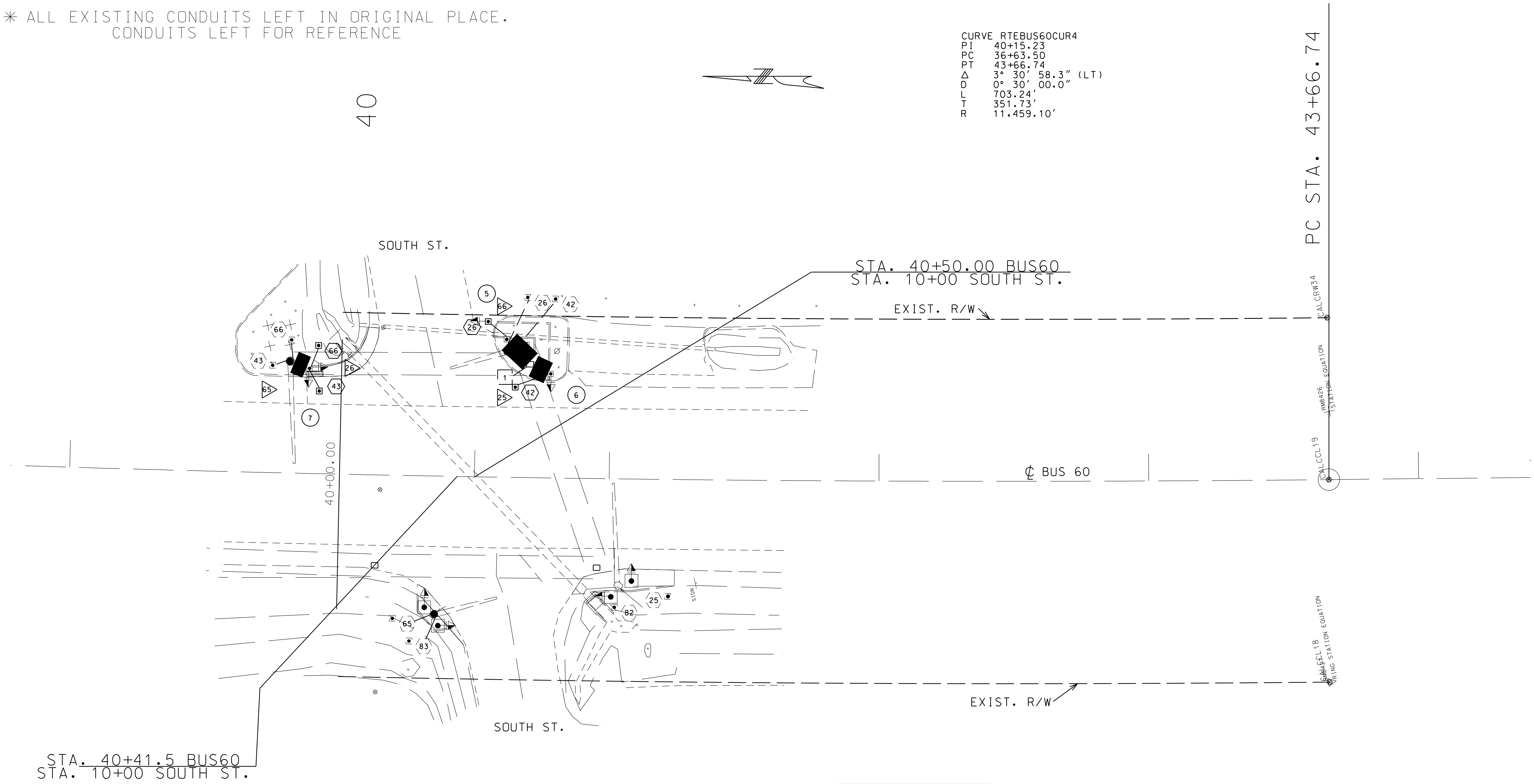
REV.

✓
FINAL PLANS

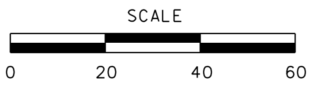
✳ ALL EXISTING CONDUITS LEFT IN ORIGINAL PLACE.
CONDUITS LEFT FOR REFERENCE

CURVE RTEBUS60CUR4

PI	40+15.23
PC	36+63.50
PT	43+66.74
Δ	3° 30′ 58.3″ (LT)
D	0° 30′ 00.0″
L	703.24′
T	351.73′
R	11,459.10′



SCALE



⬡ XX	EXIST.DECTOR
⬡ XX	DECTOR NUMBER
○	EXIST.POST NUMBER
☐	EXIST. PULL BOX
○	POST NUMBER
▷	FACE NUMBER
■	TRENCH CONDIUT
	EXIST. CONDIUT
◁	PED HEAD
●	DETECTOR PUSH BUTTON

LEGEND

✓ROUTE BUS60 AND SOUTH ST.
FOR PEDESTRIAN SIGNALS
SIGNAL SHEET 1 OF 10

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED
12/1/2015

ROUTE	STATE
BUS60	MO
DISTRICT	SHEET NO.
SW	21

COUNTY
NEWTON
JOB NO.
J7P2205B
CONTRACT ID.
150220-G01
PROJECT NO.
FAF 60-1(43)
BRIDGE NO.

DATE
DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

✓FINAL PLANS

REV.

EFFECTIVE: 07/01/2013

POST NUMBER	PULL BOX NUMBER	LOCATION: APPROACH	STATION	OFFSET	BASE A: 9	9.5	10	10.5	11	12	BASE F: 9	9.5	10	10.5	11	12	C	CONCRETE✱✱ (CU. YDS.)	PULL BOX PREFORMED: CLASS 1	CLASS 2	CLASS 3	CLASS 5	CONCRETE: STANDARD	DOUBLE, TYPE A	DOUBLE, TYPE B	DRAIN TYPE✱ I	II A	II B	II C	POST: TOP MOUNT POST 8 FT.	15 FT.
			CONTROLLER	(AS REQ'D)																											
⑤	[1]	EAST	40+61.27	51.10' LT.													1	0.44												1	
⑥	[1]	EAST	40+77.81	38.60' LT.													1	0.44												1	
⑦	[1]	EAST	39+88.09	38.90' LT.													1	0.44												1	
				SUBTOTAL														1.32												3	
				TOTAL														1.30												3	

POST — TYPE C & CL: ARM LENGTH A A A A; SIGNAL SPACING B C D D'; SIGN SPACING B C D D'. TYPE B & BL: ARM LENGTH E K E K E K; LEFT ARM E — SIGNAL SPACING F G H H'; SIGN SPACING F G H H'; RIGHT ARM K — SIGNAL SPACING L M N N'; SIGN SPACING L M N N'; INCLUDED ANGLE. LUMINAIRE BRACKET ARM✱: 4 FT. 6 FT. 8 FT. 10 FT. 12 FT. 15 FT.

SIGNAL HEADS

SPAN NUMBER	POST NUMBER	FACE NUMBER	LUMINAIRE 150W SODIUM	INDICATIONS ✱ 12" LENS CONVENTIONAL: R	Y	YL	YR†	FYL	FYR	G	S	L	R†	✋🚶	12" LENS OPTICAL LIMITING: R	Y	YL	YR†	YL	YR†	G	S	L	R†	VISORS ✱ 12" LENS	PED.	LOUVERS ✱ A	B	C	D	E	F	BACKPLATE✱ LENSES 1	2	3	4	5	BRACKET✱ TYPE I	II	III	ONE-FACE SECTION 1- T	S	C	B
	⑤	66												1												1																	1		
	⑥	25												1												1																	1		
	⑦	65												1												1																	1		
	⑦	26												1												1																	1		
														4												4																			

ONE-FACE SECTION 3- T S C B; 4- T S C B; 5- T S C B. TWO-FACE SECTIONS 11- T S B; 33- T S C B; 34- S B; 35- S B; 44- S B; 45- S B.

SUBTOTAL
TOTAL

SUBTOTAL OPTICALLY LIMITED	
SUBTOTAL CONVENTIONAL	
SUBTOTAL COMBINATION OL & CONV	
TOTAL OPTICALLY LIMITED	
TOTAL CONVENTIONAL	8
TOTAL COMBINATION OL & CONV	

SPAN WIRE POLES

POST NUMBER	WOOD CLASS IV	STEEL (A10 BASE REQUIRED)
SUBTOTAL		
TOTAL		

SPAN WIRE CABLE SPANS

SPAN NUMBER	FROM POST	TO POST	SINGLE MESSENGER ASSEMBLY (LIN. FT.)	MESSENGER ASSEMBLY WITH TETHER (LIN. FT.)
		SUBTOTAL		
		TOTAL		

SIGNS

QUANTITY	MUTCD SIGN NUMBER	SIZE (INCHES)	AREA (SQ. FT.)	TOTAL AREA EACH SIGN (SQ. FT.)
	R10-10L	24 X 30	5.0	
	R10-10R	24 X 30	5.0	
	R3-5L	30 X 36	7.5	
	R3-5R	30 X 36	7.5	
	R3-5S	30 X 36	7.5	
	R3-6L	30 X 36	7.5	
	R3-6R	30 X 36	7.5	
	R3-2	24 X 24	4.0	
	R3-1	24 X 24	4.0	
	R3-3	24 X 24	4.0	
	R10-5	24 X 30	5.0	
	R10-12	24 X 30	5.0	
	D3-16✱✱✱	VAR. X 16		
	D3-18✱✱✱	VAR. X 18		
	R10-10eL	9 X 15	0.94	
	R10-3B	9 X 12	0.75	
	R10-11A	24 X 30	5.0	
SUBTOTAL AREA ITEM NO. 903-50.68				0
TOTAL AREA ITEM NO. 903-50.68			✓	0

REMARKS

ALL LENGTHS AND SPACINGS ARE IN FEET UNLESS OTHERWISE INDICATED.

✱ ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.

✱✱ SEE STANDARD PLANS 902.10 AND 902.30 FOR CONCRETE REQUIREMENTS ON BASES.

✱✱✱ USE D3-16 FOR ONE LINE. USE D3-18 FOR TWO LINE.

SIGNAL STRUCTURES WHICH WILL EXCEED THE DIMENSION LIMITS SHOWN ON STANDARD PLAN SHEETS IN SECTION 902 AND ANY OTHER INSTALLATION WHERE THE DETAILS OF CONSTRUCTION ARE NOT FURNISHED IN THE CONTRACT PLANS, SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION, AND LATEST INTERIMS. THE STRUCTURE SHALL BE DESIGNED AS IMPORTANCE CATEGORY I FOR FATIGUE WITH A 50-YEAR DESIGN LIFE. THE CONTRACTOR SHALL SUBMIT A SET OF SHOP DETAIL DRAWINGS INCLUDING WELD PROCEDURE SPECIFICATIONS AND DESIGN COMPUTATIONS FOR MODOT RECORDS AND REFERENCE. THE SUBMITTED DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED IN ACCORDANCE WITH THE LAWS RELATING TO ARCHITECTS AND PROFESSIONAL ENGINEERS (CHAPTER 327, RSMO.), AND SHALL INCLUDE A TITLE BLOCK OR SUMMARY SHEET WHICH LISTS AND CERTIFIES THAT THE PRODUCT MEETS ALL OF THE SPECIFIED DESIGN CRITERIA.

LEGEND
T - TOP MOUNT
S - SIDE MOUNT
C - SPANWIRE MOUNT
B - MAST ARM MOUNT

✓ ROUTE BUS60 AND SOUTH ST.
INTERSECTION

SIGNAL SHEET 2 OF 10

D-37A

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED 12/1/2015

✓ ROUTE BUS60	STATE MO
✓ DISTRICT SW	SHEET NO. 22
✓ COUNTY NEWTON	
✓ JOB NO. J7P2205B	
✓ CONTRACT ID. 150220-G01	
✓ PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

✓ FINAL PLANS

REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

J:\Castillo\150220-G01 J7P2205B\022_SIG_02_J7P2205B_i60.dgn 12:08:59 PM 12/1/2015

EFFECTIVE: 07-01-2008

CONDUIT

FROM	TO	CENTER TO CENTER DISTANCE	LOOP DET.	TRENCH				PUSHED			MEDIAN			ON STRUCTURE			REMARKS
			1"	2"	3"	4"		2"	3"	4"	2"	3"	4"	2"	3"		
⑤	1	9'		13'													EXIST. CONTROLLER
⑥	1	8'		9'													EXIST. CONTROLLER
⑦	④	10'		10'													
SUBTOTALS				32'													
TOTALS				32'													

CABLE

FROM	TO	CENTER TO CENTER DISTANCE	POWER		CONTROL				CLOSED LOOP INTERCONNECT	LUMINAIRE		DETECTOR		FIBER		REMARKS
										CONTROL	POLE & BRACKET					
					2c #16	5c #16	7c #16	3c #16	3 PAIR #16	2c #12	1c #10	1c #14 IN DUCT	2c #14 LEAD-IN CABLE	SINGLE-MODE	MULTI-MODE	
⊠	66	18'				50'										
⊠	26	18'			50'											
⊠	25	13'				46'										
⊠	42	13'			46'											
⊠	65	92'				134'										
⊠	43	92'			134'											
⊠	26	92'				134'										
⊠	66	92'			134'											
					800'											800' USED FOR FOUR EXTRA PED HEADS USED ON SOUTH ST. NW AND SW INTERSECTION
SUBTOTALS					1164	364'										
TOTALS					1160	360'										

INTERSECTION ROUTE BUS60 AND SOUTH ST. (SIGNAL SHEET 3 OF 10)

D-37B

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED	12/8/2015
ROUTE	BUS60
STATE	MO
DISTRICT	SW
SHEET NO.	23
COUNTY	NEWTON
JOB NO.	J7P2205B
CONTRACT ID.	150220-G01
PROJECT NO.	FAF 60-1(43)
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

POWER SUPPLY

LOCATION			POWER SUPPLY ASSEMBLY		CIRCUIT BREAKER TRIP RATING✳				LIGHTING CONTROL ✳ (ON POWER SUPPLY)		SERVICE POLE	
					CONTROLLER		POWER SUPPLY DISCONNECT					
							MAIN BREAKER					
APPROACH	STATION	OFFSET	DRAWING 902.15	DRAWING	AUXILIARY BREAKER	CONT & SIGNAL LAMPS	SIGNALS	LIGHTING	120 VOLT CONTROL CABINET	MAIN BREAKER	CONTRACT FURNISH	UTILITY COMPANY
			Type		15 Amps	Amps	Amps	Amps		Amps	Cl. Ft.	
			Type		15 Amps	Amps	Amps	Amps		Amps	Cl. Ft.	

CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT

LOCATION			SYSTEM MASTER (CLOSED LOOP)		ACTUATED		ON-OFF✳ SWITCH		COORDINATION INTERFACE ✳						TIME ✳ CLOCK	NEMA CABINET TYPE ✳			170 CABINET TYPE ✳		170 SOFTWARE ✳	
							TYPE		12C/7C HARDWIRE (1)		TIME BASE	CLOSED LOOP		FIBER								
APPROACH	STATION	OFFSET	NEMA	170	NEMA	170	I	II	MASTER	LOCAL		NEMA	170			E	EV	DOUBLE	332	336S	BITRAN	WAPITI

DETECTOR SCHEDULE

DETECTOR NUMBER	APPROACH	TYPE					
		PUSH BUTTON	RELOCATED PUSH BUTTON	INDUCTION LOOP (2)			VIDEO
				STANDARD	DELAY/ EXTEND ✳	CALL UNIT ✳	
66	BUS60 NE QUAD.	1					
43	BUS60 NE QUAD.	1					
42	BUS60 SE QUAD.	1					
26	BUS60 SE QUAD.	1					
	TOTAL	4					

✳ ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.

(1) MoDOT "D" PLUG SHALL BE WIRED INTO ALL NEMA CONTROLLERS WITH 7C HARDWIRE INTERCONNECT.

(2) PAYMENT IS MADE FOR THE NUMBER OF 2-CHANNEL DETECTOR CARDS AS SHOWN BELOW THE ASSIGNMENT CHART.

NEMA DETECTOR ASSIGNMENT

		CARD POSITION							
		1	2	3	4	5	6	7	8
CHANNEL	1								
	2								

TOTAL NUMBER OF DETECTOR CARDS(2-CHANNEL) = (2)

NEMA LOAD SWITCH ASSIGNMENTS

1	2	3	4	5	6	7	8	9	10	11	12

170 INPUT FILE ASSIGNMENTS

	CHANNEL	1	2	3	4	5	6	7	8	9	10	11	12	13	14
"I"	U														
	L														
"J"	U														
	L														

TOTAL NUMBER OF DETECTOR CARDS(2-CHANNEL) = (2)

170 OUTPUT FILE ASSIGNMENTS

FR1							MONITOR
FR2							
FR3							
FR4							

170 AUXILIARY OUTPUT FILE

FR5							
FR6							

✓ ROUTE BUS60 AND SOUTH ST. (SIGNAL SHEET 4 OF 10)

INTERSECTION

D-37C

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE

DATE PREPARED
12/1/2015

✓ ROUTE BUS60	STATE MO
✓ DISTRICT SW	SHEET NO. 24

✓ COUNTY
NEWTON

✓ JOB NO.
J7P2205B

✓ CONTRACT ID.
150220-G01

✓ PROJECT NO.
FAF 60-1(43)

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

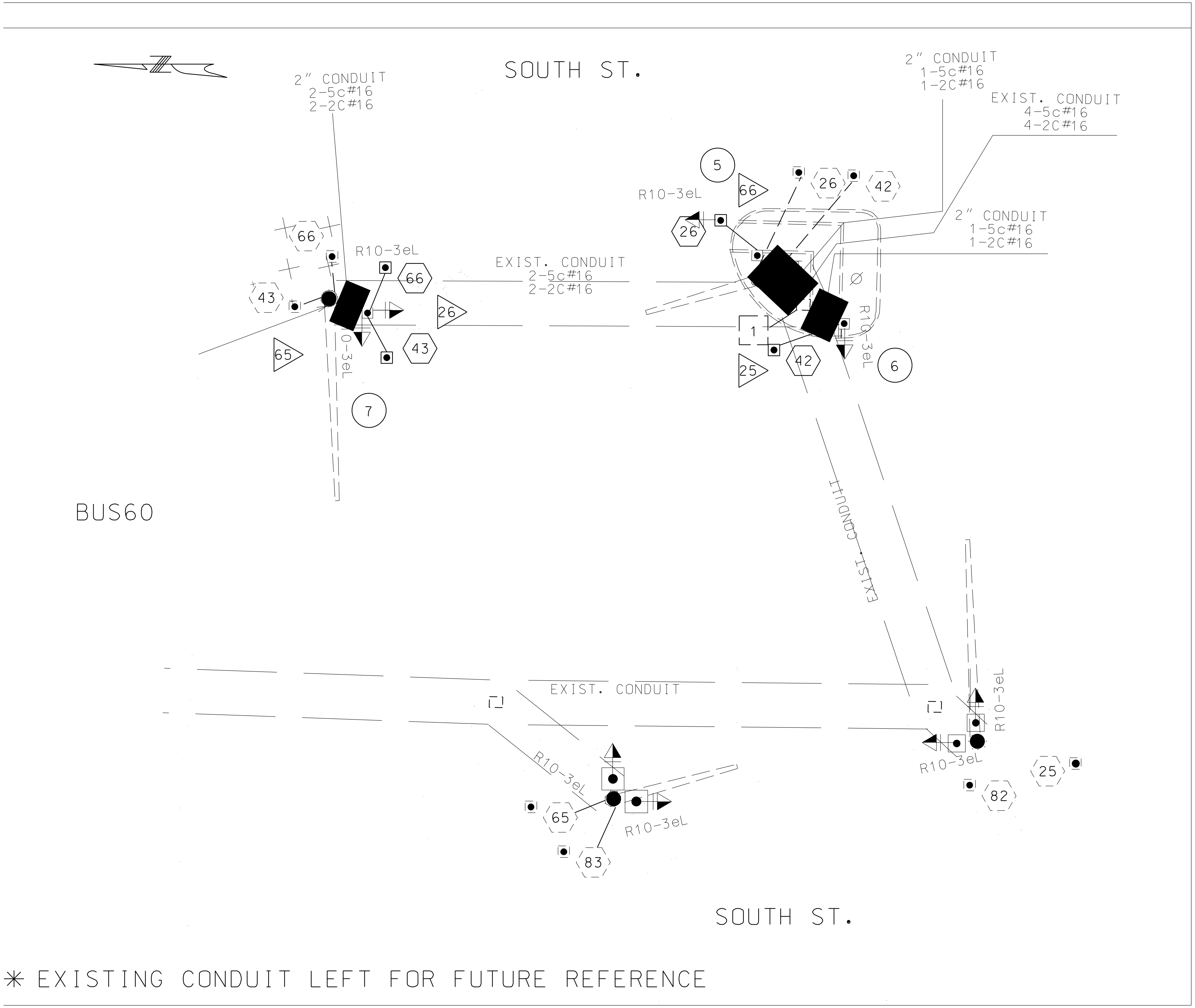
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

✓ FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

EFFECTIVE 04-01-99



✳ EXISTING CONDUIT LEFT FOR FUTURE REFERENCE

LEGEND

—2"—	CONDUIT CONTAINING CABLE WITH SIZE
——	CABLE
X-Xc	MULTI-CONDUCTOR CABLE #12 AWG (UNLESS OTHERWISE INDICATED)
LIC	#14 AWG DETECTOR LEAD-IN CABLE (2C TWISTED SHIELDED)
☒	PULL BOX WITH NUMBER
Ⓧ	POST WITH NUMBER
Ⓧ	POST WITH MAST ARM
Ⓧ	POST WITH MAST ARM AND LUMINAIRE
⬡	DETECTOR WITH NUMBER
▷	SIGNAL HEAD WITH NUMBER
☒	SIGNAL CONTROLLER
∅	POWER SUPPLY
⧓	LIGHTING CONTROLLER

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 12/8/2015	
ROUTE BUS60	STATE MO
DISTRICT SW	SHEET NO. 25
COUNTY NEWTON	
JOB NO. J7P2205B	
CONTRACT ID. 150220-G01	
PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

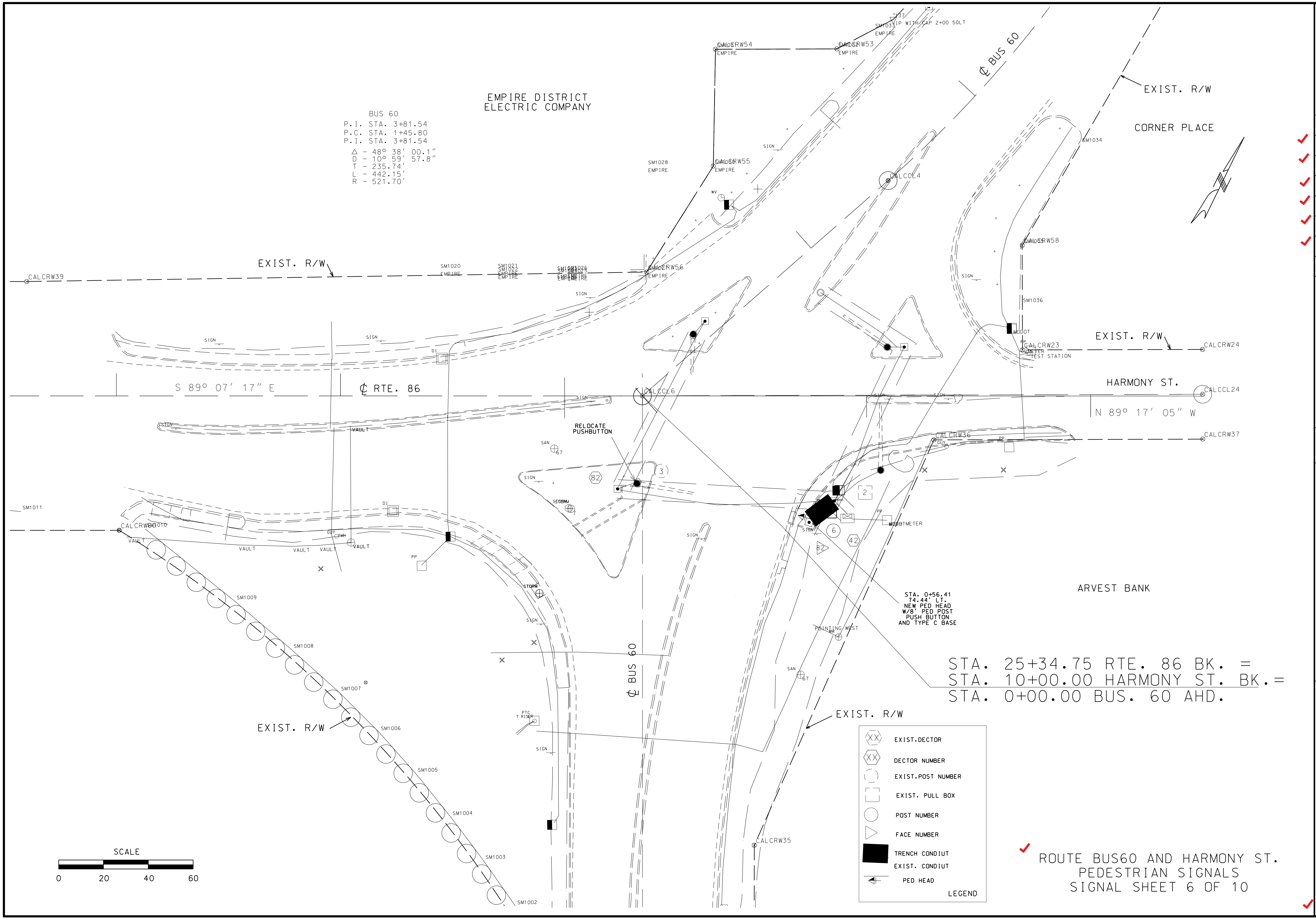
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ROUTE BUS60 AND SOUTH ST. (SIGNAL SHEET 5 OF 10)

D-37D

FINAL PLANS

REV.



STA. 0+56.41
74.44′ LT.
NEW PED HEAD
W/8′ PED POST
PUSH BUTTON
AND TYPE C BASE

STA. 25+34.75 RTE. 86 BK. =
STA. 10+00.00 HARMONY ST. BK. =
STA. 0+00.00 BUS. 60 AHD.

⬡ XX	EXIST. DECTOR
⬡ XX	DECTOR NUMBER
◌	EXIST. POST NUMBER
⬚	EXIST. PULL BOX
○	POST NUMBER
▷	FACE NUMBER
■	TRENCH CONDIUT
	EXIST. CONDIUT
◄	PED HEAD

LEGEND

✓ ROUTE BUS60 AND HARMONY ST.
PEDESTRIAN SIGNALS
SIGNAL SHEET 6 OF 10

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 12/8/2015	
✓ ROUTE BUS60	STATE MO
✓ DISTRICT SW	SHEET NO. 26
✓ COUNTY NEWTON	
✓ JOB NO. J7P2205B	
✓ CONTRACT ID. 150220-G01	
✓ PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

REV.

✓ FINAL PLANS

J:\Castillo\150220-G01 J7P2205B\026_SIG_06_J7P2205B_i20.dgn 7:40:20 AM 12/8/2015

EFFECTIVE: 07/01/2013

LOCATION / BASE

POST NUMBER	PULL BOX NUMBER	APPROACH	STATION	OFFSET	A 9	A 9.5	A 10	A 10.5	A 11	A 12	F 9	F 9.5	F 10	F 10.5	F 11	F 12	C	CONCRETE ✻✻ (CU. YDS.)
			CONTROLLER	(AS REQ'D)														
❻	2	SOUTH	0+33.49	91.76' RT.													1	0.44
																	SUBTOTAL	0.44
																	TOTAL	0.40

PULL BOX

PREFORMED CLASS 1	PREFORMED CLASS 2	PREFORMED CLASS 3	PREFORMED CLASS 5	CONCRETE STANDARD	CONCRETE DOUBLE, TYPE A	CONCRETE DOUBLE, TYPE B	DRAIN TYPE✻ I	DRAIN TYPE✻ II A	DRAIN TYPE✻ II B	DRAIN TYPE✻ II C

POST

TOP MOUNT POST 8 FT.	TOP MOUNT POST 15 FT.	TYPE C & CL ARM LENGTH A	A	A	A	SIGNAL SPACING B	C	D	D'	SIGN SPACING B	C	D	D'	TYPE B & BL ARM LENGTH E	K	E	K	E	K	LEFT ARM E SIGNAL SPACING F	G	H	H'	LEFT ARM E SIGN SPACING F	G	H	H'	RIGHT ARM K SIGNAL SPACING L	M	N	N'	RIGHT ARM K SIGN SPACING L	M	N	N'	INCLUDED ANGLE	LUMINAIRE BRACKET ARM✻ 4 FT.	6 FT.	8 FT.	10 FT.	12 FT.	15 FT.
1																																										
SUBTOTAL 1																																										
TOTAL 1																																										

SIGNAL HEADS

SPAN NUMBER	POST NUMBER	FACE NUMBER	LUMINAIRE 150W SODIUM	INDICATIONS ✻ 12" LENS CONVENTIONAL R	Y	YL	YR†	FYL	FYR	G	S	L	R†	✋🚶	12" LENS OPTICAL LIMITING R	Y	YL	YR†	YL	YR†	G	S	L	R†	VISORS ✻ 12" LENS	VISORS ✻ PED.	LOUVERS ✻ A	B	C	D	E	F	BACKPLATE✻ LENSES 1	2	3	4	5	BRACKET✻ TYPE I	II	III	ONE-FACE SECTION 1- T	S	C	B	3- T	S	C	B	4- T	S	C	B	5- T	S	C	B	TWO-FACE SECTIONS 11- T	S	B	33- T	S	C	B	34- S	B	35- S	B	44- S	B	45- S	B
	⑥	82												1												1																1																																

SUBTOTAL	
TOTAL	

SUBTOTAL OPTICALLY LIMITED	
SUBTOTAL CONVENTIONAL	
SUBTOTAL COMBINATION OL & CONV	
TOTAL OPTICALLY LIMITED	
TOTAL CONVENTIONAL	1
TOTAL COMBINATION OL & CONV	

SPAN WIRE POLES

POST NUMBER	WOOD CLASS IV	STEEL (A10 BASE REQUIRED)
SUBTOTAL		
TOTAL		

SPAN WIRE CABLE SPANS

SPAN NUMBER	FROM POST	TO POST	SINGLE MESSENGER ASSEMBLY (LIN. FT.)	MESSENGER ASSEMBLY WITH TETHER (LIN. FT.)
		SUBTOTAL		
		TOTAL		

SIGNS

QUANTITY	MUTCD SIGN NUMBER	SIZE (INCHES)	AREA (SQ. FT.)	TOTAL AREA EACH SIGN (SQ. FT.)
	R10-10L	24 X 30	5.0	
	R10-10R	24 X 30	5.0	
	R3-5L	30 X 36	7.5	
	R3-5R	30 X 36	7.5	
	R3-5S	30 X 36	7.5	
	R3-6L	30 X 36	7.5	
	R3-6R	30 X 36	7.5	
	R3-2	24 X 24	4.0	
	R3-1	24 X 24	4.0	
	R3-3	24 X 24	4.0	
	R10-5	24 X 30	5.0	
	R10-12	24 X 30	5.0	
	D3-16✻✻✻	VAR. X 16		
	D3-18✻✻✻	VAR. X 18		
	✻R10-10eL	9 X 15	0.94	0
	R10-3B	9 X 12	0.75	
	R10-11A	24 X 30	5.0	
SUBTOTAL AREA ITEM NO. 903-50.68				0
TOTAL AREA ITEM NO. 903-50.68				0

✻ CROSSWALK SIGNS PROVIDED BY MAINTENANCE

REMARKS

ALL LENGTHS AND SPACINGS ARE IN FEET UNLESS OTHERWISE INDICATED.

✻ ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.

✻✻ SEE STANDARD PLANS 902.10 AND 902.30 FOR CONCRETE REQUIREMENTS ON BASES.

✻✻✻ USE D3-16 FOR ONE LINE. USE D3-18 FOR TWO LINE.
SIGNAL STRUCTURES WHICH WILL EXCEED THE DIMENSION LIMITS SHOWN ON STANDARD PLAN SHEETS IN SECTION 902 AND ANY OTHER INSTALLATION WHERE THE DETAILS OF CONSTRUCTION ARE NOT FURNISHED IN THE CONTRACT PLANS, SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION, AND LATEST INTERIMS. THE STRUCTURE SHALL BE DESIGNED AS IMPORTANCE CATEGORY I FOR FATIGUE WITH A 50-YEAR DESIGN LIFE. THE CONTRACTOR SHALL SUBMIT A SET OF SHOP DETAIL DRAWINGS INCLUDING WELD PROCEDURE SPECIFICATIONS AND DESIGN COMPUTATIONS FOR MODOT RECORDS AND REFERENCE. THE SUBMITTED DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED IN ACCORDANCE WITH THE LAWS RELATING TO ARCHITECTS AND PROFESSIONAL ENGINEERS (CHAPTER 327, RSMO.), AND SHALL INCLUDE A TITLE BLOCK OR SUMMARY SHEET WHICH LISTS AND CERTIFIES THAT THE PRODUCT MEETS ALL OF THE SPECIFIED DESIGN CRITERIA.

ROUTE BUS60 AND HARMONY ST.

INTERSECTION

SIGNAL SHEET 7 OF 10

LEGEND
T - TOP MOUNT
S - SIDE MOUNT
C - SPANWIRE MOUNT
B - MAST ARM MOUNT

D-37A

DATE PREPARED 12/8/2015
ROUTE BUS60
STATE MO
DISTRICT SW
SHEET NO. 27
COUNTY NEWTON
JOB NO. J7P2205B
CONTRACT ID. 150220-G01
PROJECT NO. FAF 60-1(43)
BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

REV.

FINAL PLANS

CONDUIT

FROM	TO	CENTER TO CENTER DISTANCE	LOOP DET.	TRENCH				PUSHED			MEDIAN			ON STRUCTURE			REMARKS
			1″	2″	3″	4″		2″	3″	4″	2″	3″	4″	2″	3″		
⑥	2	13′		13′													
✉	2	8′															
③																	
SUBTOTALS				13′													
TOTALS			✓	13′													

CABLE

FROM	TO	CENTER TO CENTER DISTANCE	POWER		CONTROL				CLOSED LOOP INTERCONNECT	LUMINAIRE CONTROL	LUMINAIRE POLE & BRACKET	DETECTOR		FIBER		REMARKS
					2c #16	5c #16	7c #16	3c #16	3 PAIR #16	2c #12	1c #10	1c #14 IN DUCT	2c #14 LEAD-IN CABLE	SINGLE-MODE	MULTI-MODE	
✉	82	13′				43′										
✉	42				43′											
					5′											
SUBTOTALS					48′	43′										
TOTALS					✓50′	✓40′										

INTERCEPTION ROUTE BUS60 AND HARMONY ST. (SIGNAL SHEET 8 OF 10)

D-37B

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 12/8/2015
ROUTE BUS60 ✓ STATE MO
DISTRICT SW ✓ SHEET NO. 28
COUNTY NEWTON ✓
JOB NO. J7P2205B ✓
CONTRACT ID. 150220-G01 ✓
PROJECT NO. FAF 60-1(43) ✓
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

✓ FINAL PLANS

EFFECTIVE 0401-2002

POWER SUPPLY

LOCATION			POWER SUPPLY ASSEMBLY		CIRCUIT BREAKER TRIP RATING✳				LIGHTING CONTROL ✳ (ON POWER SUPPLY)		SERVICE POLE	
					CONTROLLER		POWER SUPPLY DISCONNECT					
							MAIN BREAKER					
APPROACH	STATION	OFFSET	DRAWING 902.15	DRAWING	AUXILIARY BREAKER	CONT & SIGNAL LAMPS	SIGNALS	LIGHTING	120 VOLT CONTROL CABINET	MAIN BREAKER	CONTRACT FURNISH	UTILITY COMPANY
			Type		15 Amps	Amps	Amps	Amps		Amps	Cl. Ft.	
			Type		15 Amps	Amps	Amps	Amps		Amps	Cl. Ft.	

CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT

LOCATION			SYSTEM MASTER (CLOSED LOOP)		ACTUATED		ON-OFF✳ SWITCH		COORDINATION INTERFACE ✳						TIME ✳ CLOCK	NEMA CABINET TYPE ✳			170 CABINET TYPE ✳		170 SOFTWARE ✳	
							TYPE		12C/7C HARDWIRE (1)		TIME BASE	CLOSED LOOP		FIBER								
APPROACH	STATION	OFFSET	NEMA	170	NEMA	170	I	II	MASTER	LOCAL		NEMA	170			E	EV	DOUBLE	332	336S	BITRAN	WAPITI

DETECTOR SCHEDULE

DETECTOR NUMBER	APPROACH	TYPE					
		PUSH BUTTON	✳✳ RELOCATED PUSH BUTTON	INDUCTION LOOP (2)			VIDEO
				STANDARD	DELAY/ EXTEND ✳	CALL UNIT ✳	
42	BUS60 NBL	1					
82	BUS60 SBL		1				
	TOTAL	✓ 1	✓ 1				

✳ ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.

(1) MoDOT "D" PLUG SHALL BE WIRED INTO ALL NEMA CONTROLLERS WITH 7C HARDWIRE INTERCONNECT.

(2) PAYMENT IS MADE FOR THE NUMBER OF 2-CHANNEL DETECTOR CARDS AS SHOWN BELOW THE ASSIGNMENT CHART.

✳✳ SEE JSP (RELOCATION OF EXIST. SIGNAL EQUIPMENT)

NEMA DETECTOR ASSIGNMENT

		CARD POSITION							
		1	2	3	4	5	6	7	8
CHANNEL	1								
	2								

TOTAL NUMBER OF DETECTOR CARDS(2-CHANNEL) = (2)

NEMA LOAD SWITCH ASSIGNMENTS

1	2	3	4	5	6	7	8	9	10	11	12

170 INPUT FILE ASSIGNMENTS

	CHANNEL	1	2	3	4	5	6	7	8	9	10	11	12	13	14
"I"	U														
	L														
"J"	U														
	L														

TOTAL NUMBER OF DETECTOR CARDS(2-CHANNEL) = ✓ (2)

170 OUTPUT FILE ASSIGNMENTS

FR1							MONITOR
FR2							
FR3							
FR4							

170 AUXILIARY OUTPUT FILE

FR5							☒
FR6							

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED
12/8/2015

✓ ROUTE BUS60	STATE MO
✓ DISTRICT SW	SHEET NO. 29

✓ COUNTY
NEWTON

✓ JOB NO.
J7P2205B

✓ CONTRACT ID.
150220-G01

✓ PROJECT NO.
FAF 60-1(43)

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

ROUTE BUS60 AND HARMONY ST. (SIGNAL SHEET 9 OF 10)

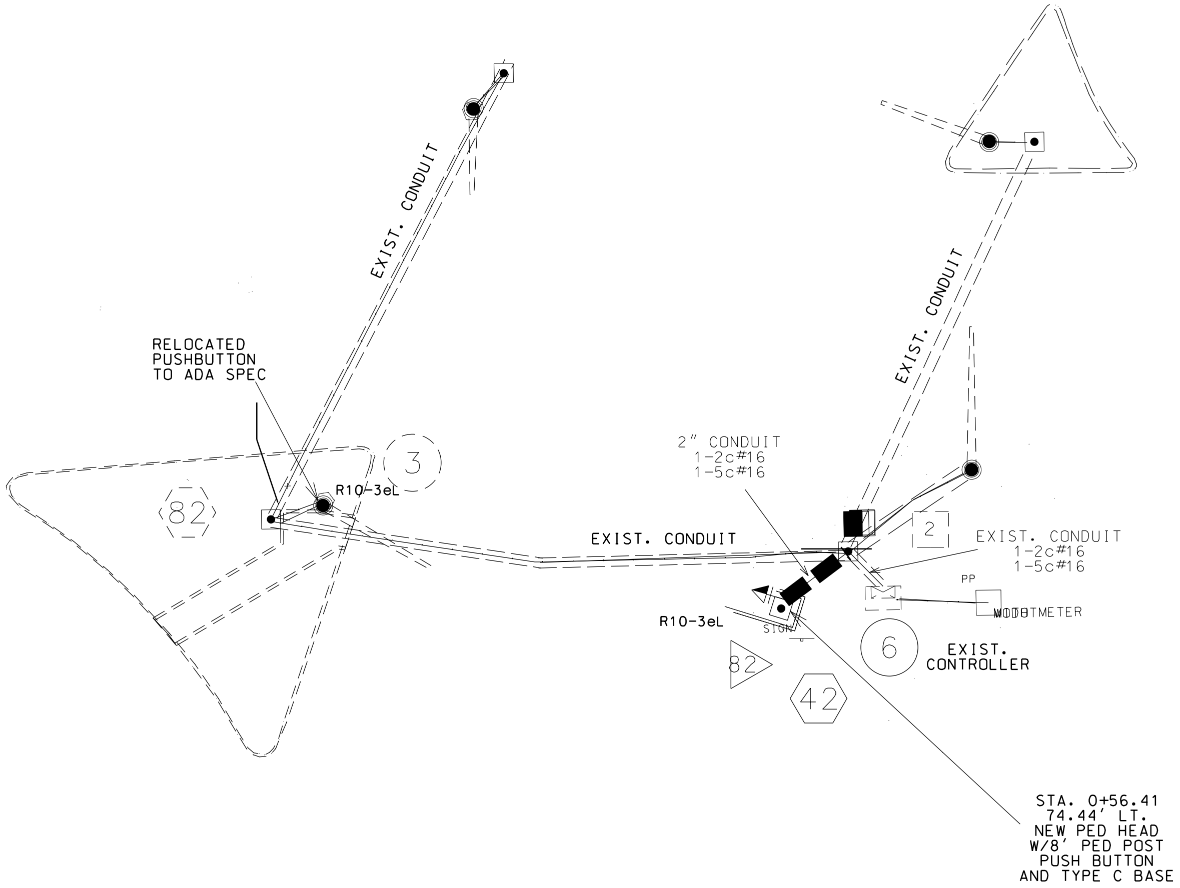
INTERSECTION

D-37C

✓ FINAL PLANS

EFFECTIVE 04-01-99

WIRING DIAGRAM



✳ EXISTING CONDUIT IN PLACE. LEFT FOR FUTURE REFERENCE

LEGEND

——3"——	CONDUIT CONTAINING CABLE WITH SIZE
———	CABLE
X-Xc	MULTI-CONDUCTOR CABLE #12 AWG (UNLESS OTHERWISE INDICATED)
LIC	#14 AWG DETECTOR LEAD-IN CABLE (2C TWISTED SHIELDED)
X	PULL BOX WITH NUMBER
X	POST WITH NUMBER
X	POST WITH MAST ARM
X	POST WITH MAST ARM AND LUMINAIRE
X	DETECTOR WITH NUMBER
X	SIGNAL HEAD WITH NUMBER
☒	SIGNAL CONTROLLER
∅	POWER SUPPLY
⧓	LIGHTING CONTROLLER
●	NEW INSTALLED PUSH BUTTONS
▶	NEW INSTALLED PEDESTRIAN HEAD

✓ROUTE BUS60 AND HARMONY ST. (SIGNAL SHEET 10 OF 10)

INTERSECTION

D-37D

"THIS MEDIA SHOULD
NOT BE CONSIDERED
A CERTIFIED
DOCUMENT."

DATE PREPARED 12/8/2015	
ROUTE BUS60	STATE MO
DISTRICT SW	SHEET NO. 30
COUNTY NEWTON	
JOB NO. J7P2205B	
CONTRACT ID. 150220-G01	
PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

✓ FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

J:\Castillo\150220-G01 J7P2205B\030_SIG_10_J7P2205B_i5.dgn 8:02:28 AM 12/8/2015

EFFECTIVE 01-01-2003

SIGNS					PIPE POST					STRUCTURAL STEEL POSTS						BACKING BARS			TOTAL ITEM NO. 903-12.10	U-CHANNEL POST	WOOD POSTS			2½ PERF. STEEL SQ.		BREAKAWAY ASSEMBLY	PSST CONC FTG'S EMBD	CONC FTG'S BOLT DOWN	HORZ CLEAR IF NOT STD	REMARKS
SIGN NO.	STATION	SIGN DTL. SHT. NO.	LOCATION	SIGN SIZE	PIPE SIZE	POST NO. 1	POST NO. 2	LBS PER FT	TOTAL ITEM NO. 903-12.20	POST DES NO.	POST NO. 1	POST NO. 2	POST NO. 3	LBS PER FT	TOTAL	2" X $\frac{3}{8}$" BARS @ 2.55 LBS PER LIN FT NO. EACH	TOTAL	TOTAL		ITEM NO. 903-12.50	4"X4" ITEM NO. 903-12.60	4"X6" ITEM NO. 903-12.61	6"X6" ITEM NO. 903-12.62	POSTS ITEM NO. 903-12.72	ANCHOR SLEEVE ITEM NO. 903-12.73	ITEM NO. 903-12.40	ITEM NO. 903-99.07	ITEM NO. 903-10.20		
					IN.	LIN FT	LIN FT		LBS		LIN FT	LIN FT	LIN FT		LBS		LIN FT	LBS	LBS	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	EACH	CU YDS	CU YDS		
1	25+06.94		RT																					16	3		0.09			STOP SIGN
2	28+79.94		RT																					16	3		0.09			CENTER TURN LANE
2A	31+51.63		RT																					16	3		0.09			STOP SIGN
3	31+79.94		RT																					16	3		0.09			BUS 60 / 86 SIGN
4	32+74.94		RT																					16	3		0.09			35 MPH
5	36+44.94		RT																					16	3		0.09			NEOSHO DOWNTOWN SIGN
6	37+74.94		RT													USE EXISTING														BUS 60 / 86 SIGN
7	40+20.57		RT																					16	3		0.09			NO PARKING
8	41+61.57		RT																					16	3		0.09			NO PARKING
9	46+89.57		RT																					16	3		0.09			DIP SIGN
10	51+83.57		RT																					16	3		0.09			BUS 60 SIGN
11	52+47.57		RT																					16	3		0.09			RR SIGN
12	24+49.69		LT																					16	3		0.09			BUS 60 / 86 SIGN
13	24+59.69		LT																					16	3		0.09			STOP SIGN
14	36+04.69		LT																					16	3		0.09			35 MPH / NO PARKING
15	36+89.69		LT																					16	3		0.09			NO PARKING
16	36+99.69		LT																					16	3		0.09			BUS 60 / 86 SIGN
17	39+19.57		LT													USE EXISTING								16	3		0.09			86 / BUS 60 SIGN
18	39+49.57		LT																					16	3		0.09			NEOSHO DOWNTOWN SIGN
19	40+00.57		LT																					16	3		0.09			NO PARKING
20	40+92.57		LT																					16	3		0.09			NO PARKING
21	41+75.57		LT																					16	3		0.09			H LEFT TURN SIGN
22	43+51.57		LT																					16	3		0.09			STOP LIGHT AHEAD
23	45+41.57		LT																					16	3		0.09			JCT 86 SIGN
24	48+92.57		LT																					16	3		0.09			NEOSHO DOWNTOWN SIGN
24A	49+09.94		LT																					16	3		0.09			STOP SIGN
25	50+65.57		LT																					16	3		0.09			35 MPH
26	54+44.57		LT																					16	3		0.09			DIP SIGN
27	70+64.57		LT																					16	3		0.09			TRAIL SIGN
28	73+55.57		LT																					16	3		0.09			RV PARKING SIGN
29	73+94.57		LT																					16	3		0.09			DARE SIGN
29	33+03.45		RT																					16	3		0.09			ARRAY SIGN(86) LEFT OUT
					TOTAL			▨		▨	▨	▨	▨	▨		▨	▨							496	93		2.79			
					USE			▨		▨	▨	▨	▨	▨		▨	▨							✓ 496	✓ 93		✓ 2.80			

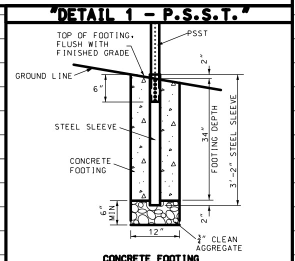
NOTES:

CROSS SECTIONS ARE DRAWN AS THE DRIVER VIEWS THE SIGN FACE, UNLESS OTHERWISE NOTED.

HEIGHT TO BOTTOM OF LOWEST SIGN SHALL BE 7'-0" ABOVE ELEVATION OF OUTSIDE E.O.P., UNLESS OTHERWISE NOTED.

HEIGHT TO BOTTOM OF LOWEST SIGN SHALL BE 7'-0" MIN. ABOVE SIDEWALK, UNLESS OTHERWISE NOTED.

"DETAIL 1 – P.S.S.T."



CONCRETE FOOTING FOR PERFORATED STEEL SQUARE POST ONLY

NOTE: CONCRETE FOOTING (APPROX .09 CU YD) AND AGGREGATE (APPROX. 0.10 SQ YD) INCLUDED IN PAY ITEM 903-10.10 CONCRETE FOOTINGS , EMBEDDED.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED
12/8/2015

ROUTE	STATE
✓ BUS60	MO
DISTRICT	SHEET NO.
✓ SW	31

✓ COUNTY
NEWTON

✓ JOB NO.
J7P2205B

✓ CONTRACT ID.
150220-G01

✓ PROJECT NO.
FAF 60-1(43)

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

SIGNING SHEETS

SHEET 1 OF 3

D-29

✓ FINAL PLANS

REV.

EFFECTIVE 07-01-2010

STANDARD SIGN ASSEMBLIES (RELOCATED SIGNS)

✳ SIGN NUMBER	STATION	LOCATION	SIGN DESCRIPTION		RELOCATED SIGNS
1	25+06.94	RT	STOP SIGN		
2	28+79.94	RT	CENTER TURN LANE		
2A	31+51.63	RT	STOP SIGN		
3	31+79.94	RT	BUS 60 / 86 SIGN		
4	32+74.94	RT	35 MPH		
5	36+44.94	RT	NEOSHO DOWNTOWN SIGN		
6	37+74.94	RT	BUS 60 / 86 SIGN		
7	40+20.57	RT	NO PARKING		
8	41+61.57	RT	NO PARKING		
9	46+89.57	RT	DIP SIGN		
10	51+83.57	RT	BUS 60 SIGN		
11	52+47.57	RT	RR SIGN		
12	24+49.69	LT	BUS 60 / 86 SIGN		
13	24+59.69	LT	STOP SIGN		
14	36+04.69	LT	35 MPH / NO PARKING		
15	36+89.69	LT	NO PARKING		
16	36+99.69	LT	BUS 60 / 86 SIGN		
17	39+19.57	LT	86 / BUS 60 SIGN		
18	39+49.57	LT	NEOSHO DOWNTOWN SIGN		
19	40+00.57	LT	NO PARKING		
20	40+92.57	LT	NO PARKING		
21	41+75.57	LT	H LEFT TURN SIGN		
22	43+51.57	LT	STOP LIGHT AHEAD		
23	45+41.57	LT	JCT 86 SIGN		
24	48+92.57	LT	NEOSHO DOWNTOWN SIGN		
24A	49+09.94	LT	STOP SIGN		
25	50+65.57	LT	35 MPH		
26	54+44.57	LT	DIP SIGN		
27	70+64.57	LT	TRAIL SIGN		
28	73+55.57	LT	RV PARKING SIGN		
29	73+94.57	LT	DARE SIGN		
30	34+53.42	RT	RT 86 SIGN		
				TOTAL	✓ 32

✳ ALL SIGNS SHALL HAVE
NEW POSTS EXCEPT
FOR SIGN NO.6
AND SHALL BE PAID
FOR AS RELOCATED SIGNS

✓ SIGNING SHEETS

SHEET 2 OF 3

D-30

DATE PREPARED 12/8/2015	
✓ ROUTE BUS60	STATE MO
✓ DISTRICT SW	SHEET NO. 32
✓ COUNTY NEWTON	
✓ JOB NO. J7P2205B	
✓ CONTRACT ID. 150220-G01	
✓ PROJECT NO. FAF 60-1(43)	
BRIDGE NO.	

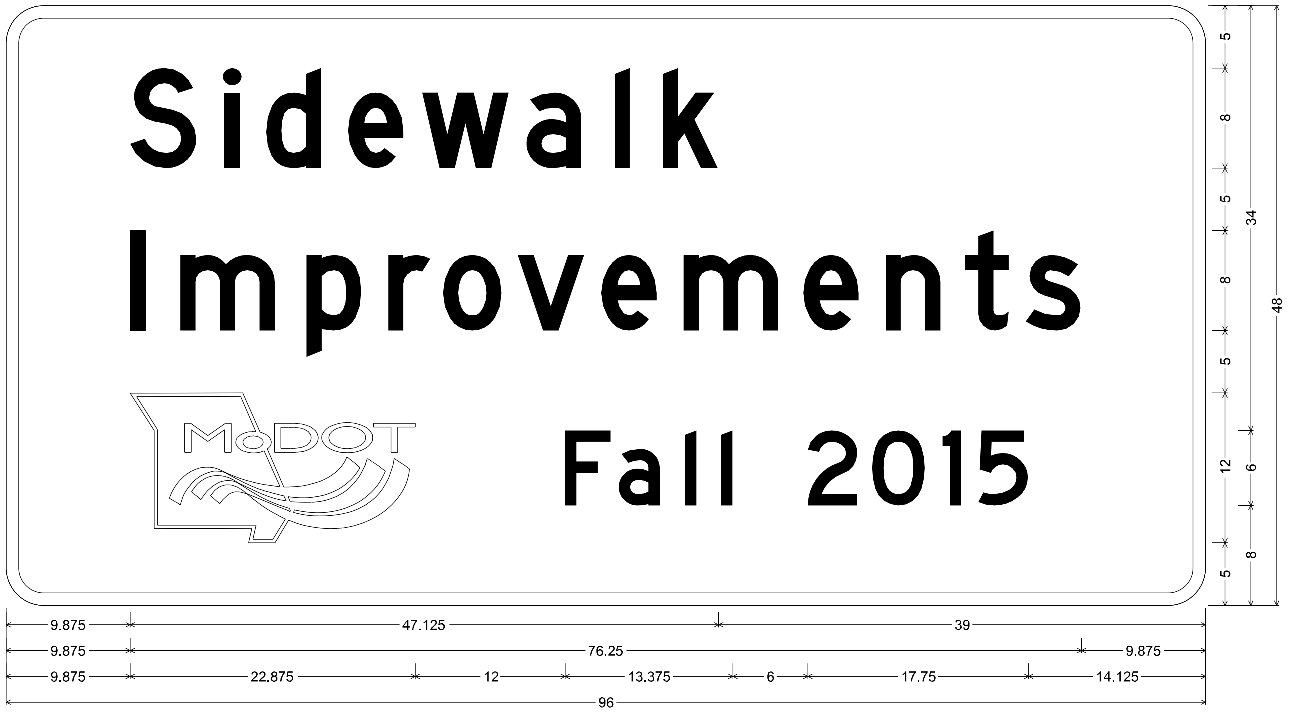
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

✓ FINAL PLANS

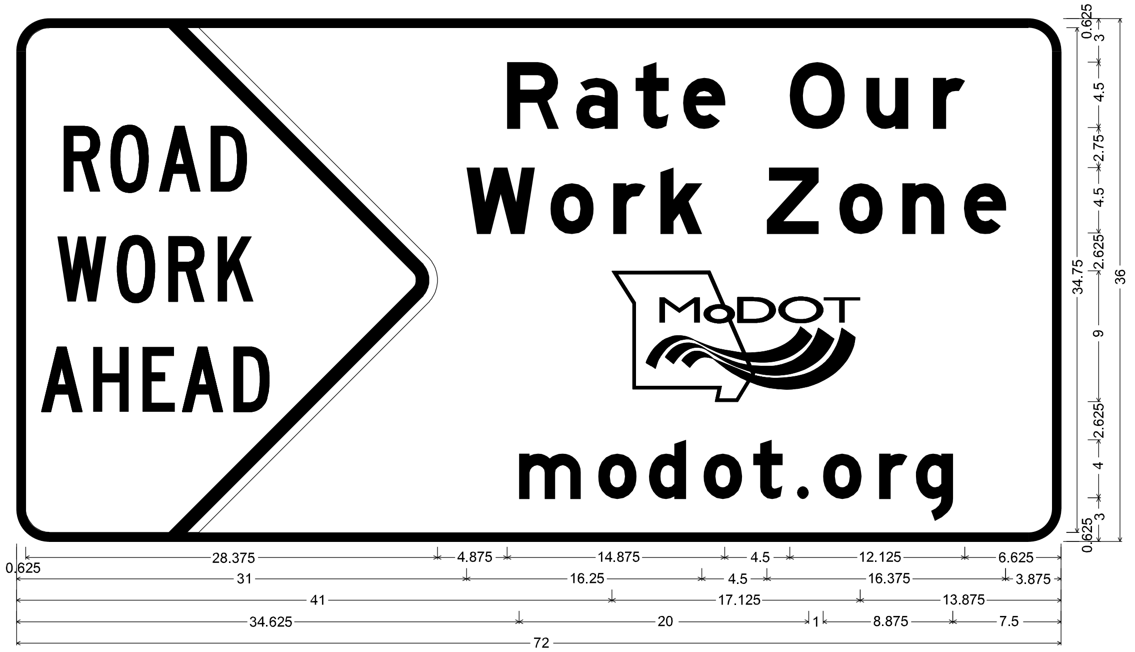


CONST-5-96 SHR2L1; 3.000" Radius, 1.000" Border, White on Blue;
[Sidewalk] D; [Improvements] D; [Fall 2015] D;
Table of letter and object lefts.

S	i	d	e	w	a	l	k
9.875	17.500	20.875	27.375	33.250	41.625	48.750	52.625

I	m	p	r	o	v	e	m	e	n	t	s
9.875	14.000	24.000	30.625	35.000	41.000	47.625	54.250	63.750	70.375	76.750	81.625

	F	a	l	l	2	0	1	5
9.875	44.750	49.000	54.375	57.250	64.125	69.375	75.000	77.750



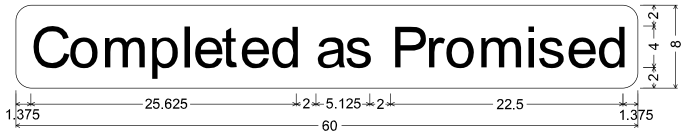
CONST-7-72 SHR2L1; 2.250" Radius, 0.625" Border, White on Blue;
"ROAD WORK AHEAD" 4.5 Inch C, Black on Orange; [Rate Our] E Mod; [Work Zone] E Mod;
MoDOT Logo; [modot. org] E Mod;
Table of letter and object lefts.

▷	R	a	t	e	O	u	r
0.625	33.875	38.625	42.625	46.000	53.250	58.625	63.125

W	o	r	k	Z	o	n	e
31.000	36.750	41.125	44.375	51.750	56.750	61.000	65.250

41.000

m	o	d	o	t	.	o	r	g
34.625	40.125	43.625	47.375	50.750	53.750	55.625	59.500	62.000



CONST-5P-60 SHR4L1; 1.500" Radius, No border, Yellow;
[Completed as Promised] Black Arial;
Table of letter and object lefts.

C	o	m	p	l	e	t	e	d	a	s
1.375	5.000	8.250	12.750	15.875	17.125	19.875	21.625	24.500	29.000	31.750

P	r	o	m	i	s	e	d
36.125	39.500	41.375	44.500	49.125	50.250	53.125	56.000

SIGNING SHEETS
SHEET 3 OF 3

D-31

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED	
12/8/2015	
ROUTE	STATE
BUS60	MO
DISTRICT	SHEET NO.
SW	33
COUNTY	
NEWTON	
JOB NO.	
J7P2205B	
CONTRACT ID.	
150220-G01	
PROJECT NO.	
FAF 60-1(43)	
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

FINAL PLANS

REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SP-1

DESIGN DESIGNATION

A.D.T. - 1974 = 11,500
A.D.T. - 1994= 17,200

D = %
T = %
V =40 M.P.H.

MISSOURI STATE HIGHWAY COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

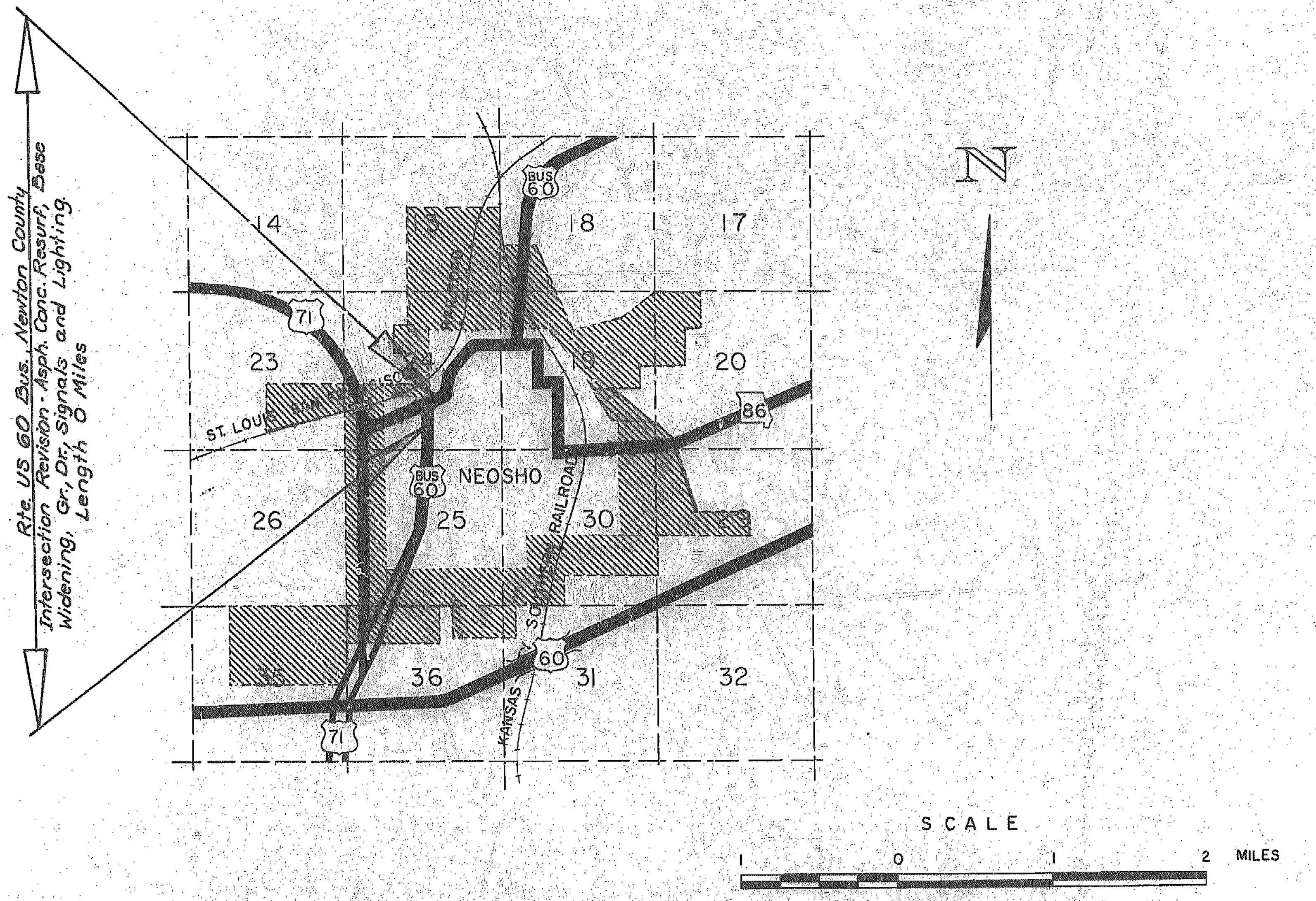
NEWTON COUNTY

COUNTY NEWTON
ROUTE US 60 BUS.
PROJECT 7-U-60BR-11

FINAL PLANS

INDEX OF SHEETS

DESCRIPTION	SHEET NO.
TITLE SHEET	1
TYPICAL SECTIONS (3 SHEETS)	2
SUMMARY (/ SHEET/)	2-A
SUMMARY (/ SHEET/)	2-B
PLAN-PROFILE	3-6
REFERENCE POINTS	7
SPECIAL SHEETS	
LIGHTING	9-12
SIGNALS	13-16
SIGNING	
CULVERT SECTIONS	
BRIDGE DRAWINGS	
STANDARD PLANS INDEX	
CROSS SECTIONS	
COMPUTER DATA	



CONVENTIONAL SIGNS
(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
- POWER
- GAS
- WATER

NOTE: DASHED OR OPEN SYMBOL INDICATES EXISTING FEATURE

LENGTH OF PROJECT

END OF PROJECT STA. +
BEGINNING OF PROJECT STA. +

APPARENT LENGTH 0 FEET

EQUATIONS AND EXCEPTIONS

TOTAL CORRECTIONS FEET
NET LENGTH OF PROJECT 0 FEET

STATE LENGTH MILES

FEDERAL LENGTH MILES

MISSOURI STATE HIGHWAY COMMISSION

SUBMITTED

CHIEF ENGINEER DATE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

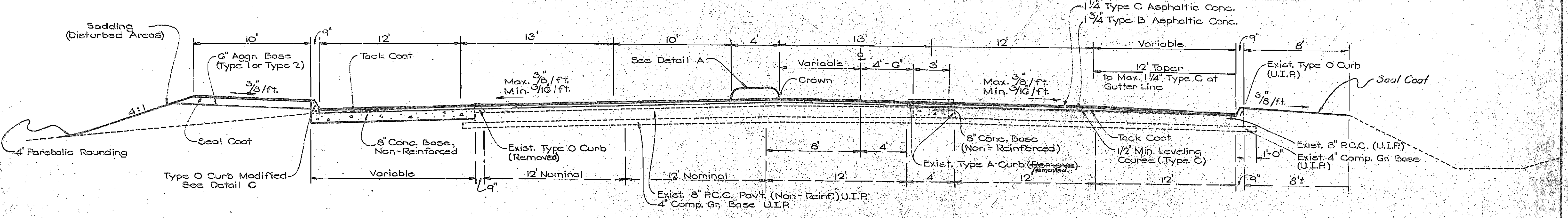
APPROVED

DIVISION ENGINEER DATE

FED. ROAD DIV. No.	STATE	FEDERAL PROJECT No. & SEC.	SHEET No.
5	MO.	7-U-60BR-11	2
DIST. No.		COUNTY	ROUTE
7		NEWTON	60BUS

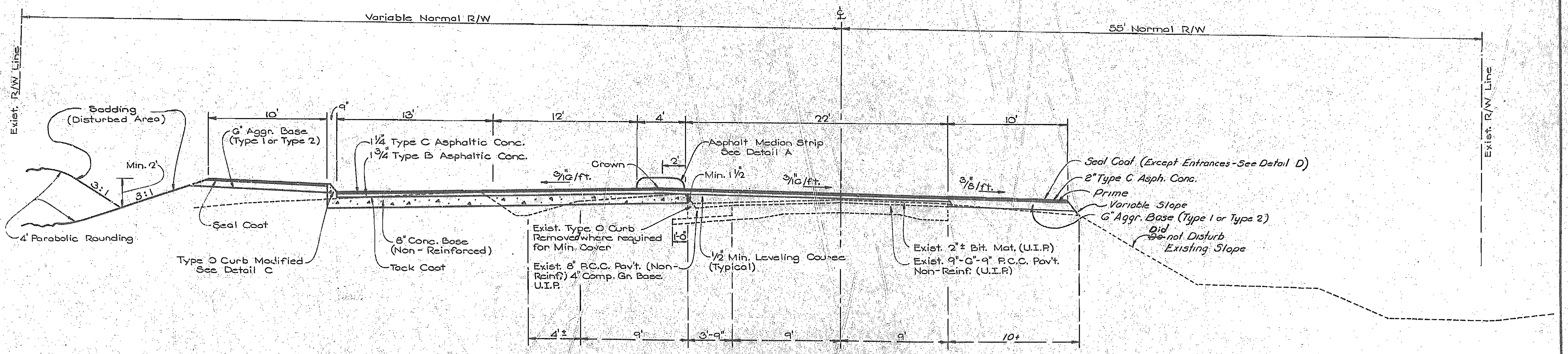
JOB NO. 7-U-60-11

FINAL PLANS



SECTION B-B

ROUTE U.S. 60 BUSINESS (NEOSHO BLVD.) (South)



SECTION A-A

ROUTE MO. 86 (West)

Note: ~~For Finished Pavement Elevations See Plan Sheets No. 3, 4, 4 5.~~

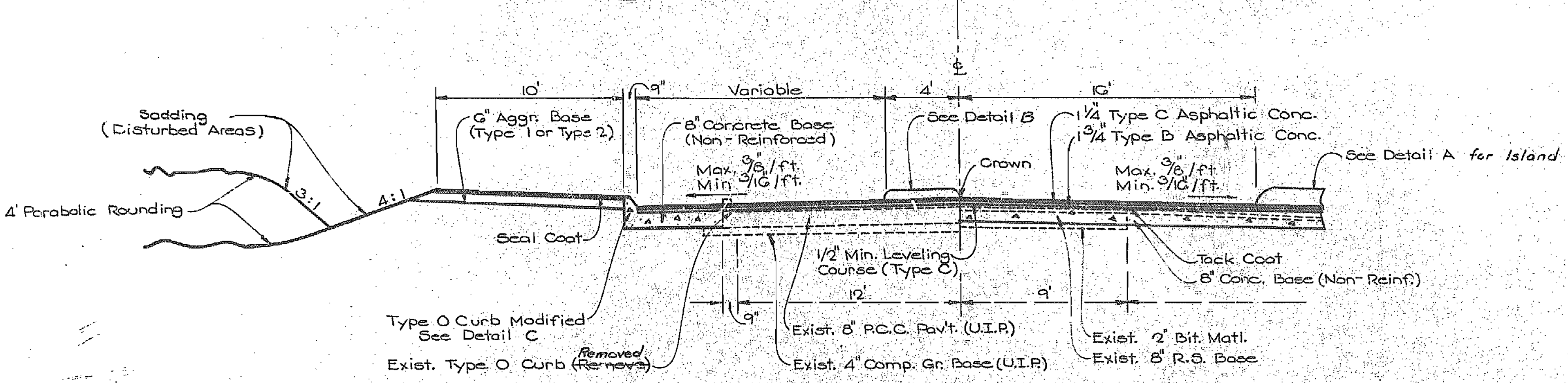
TYPICAL SECTION

SHEET 1 OF 3

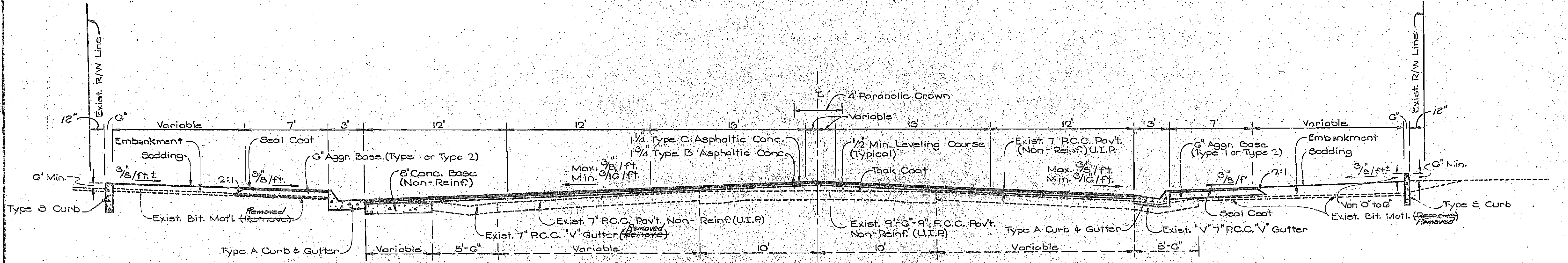
178

FED. ROAD DIV. No.	STATE	FEDERAL PROJECT No. & SEC.	SHEET No.
5	MO.	7-U-60 BR-11	2
DIST. No.	COUNTY	ROUTE	SEC.
7	NEWTON	60BUS	

JOB NO. 7-U-60-11
FINAL PLANS



SECTION D-D
HARMONY STREET *(East)*



~~Note: For Finished Pavement Elevations See Plan Sheets No. 3, 4, & 5.~~

SECTION C-C
RTE. U.S. 60 BUS. & RTE. MO. 86 (NEOSHO BLVD.) *(North)*

TYPICAL SECTION

SHEET 2 OF 3

FINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE
6-73

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

179

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO. & SEC.	SHEET NO.
5	MO.	7-U-60BR-11	2
DIST. NO.	COUNTY	ROUTE	SEC.
7	NEWTON	60BUS	

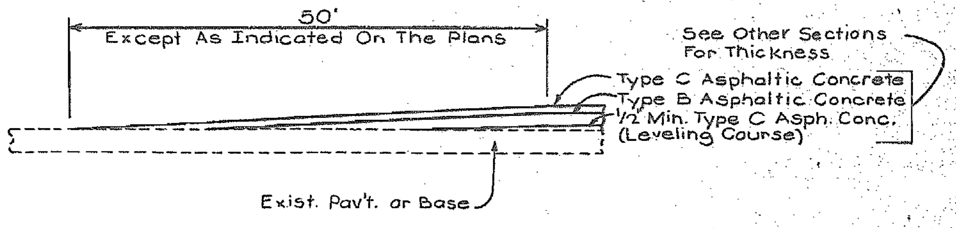
JOB NO. 7-U-60-11

FINAL PLANS

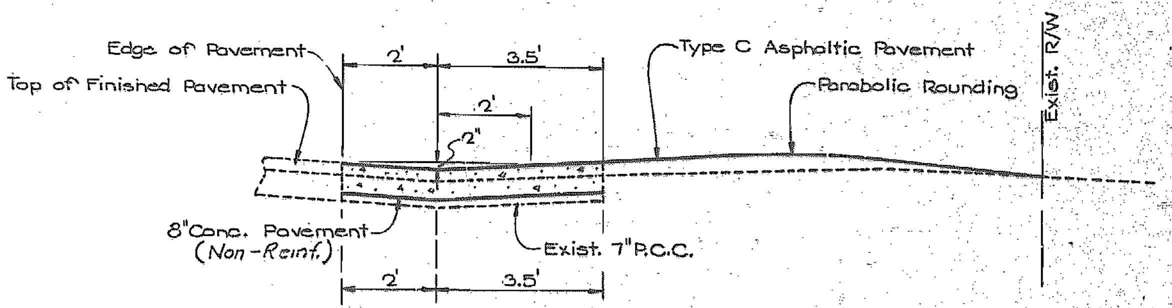
FINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY Jerry B. Coburn

ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY

180



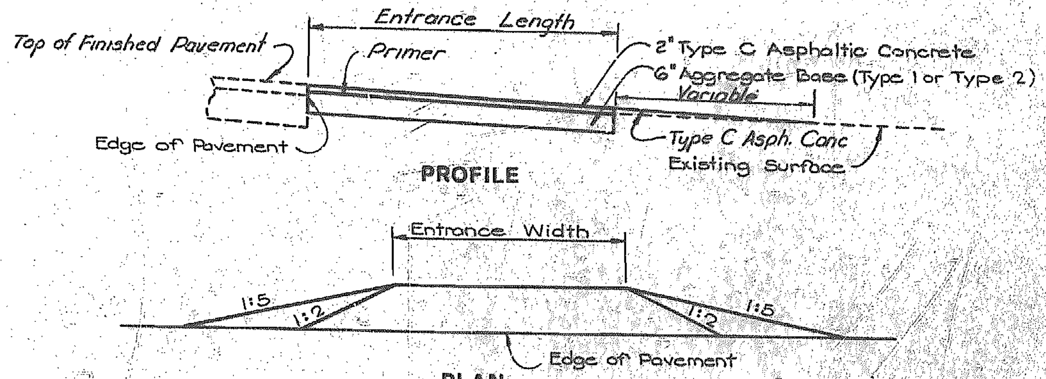
DEPTH TRANSITION



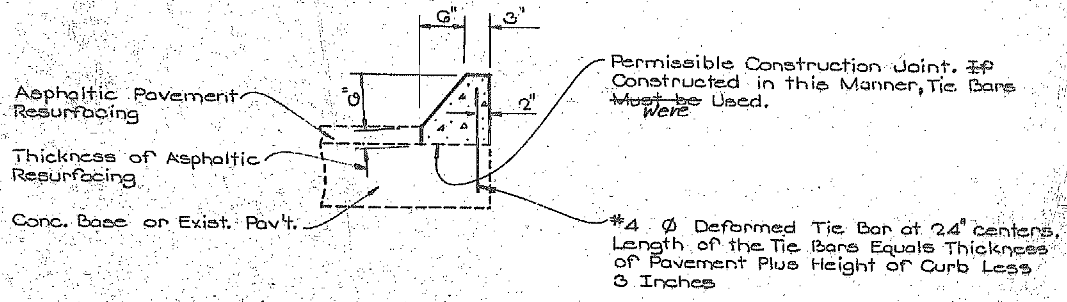
SECTION F-F

RTE. U.S. 60 BUS. & RTE. MO. 86 (NEOSHO BLVD.) (NORTH)

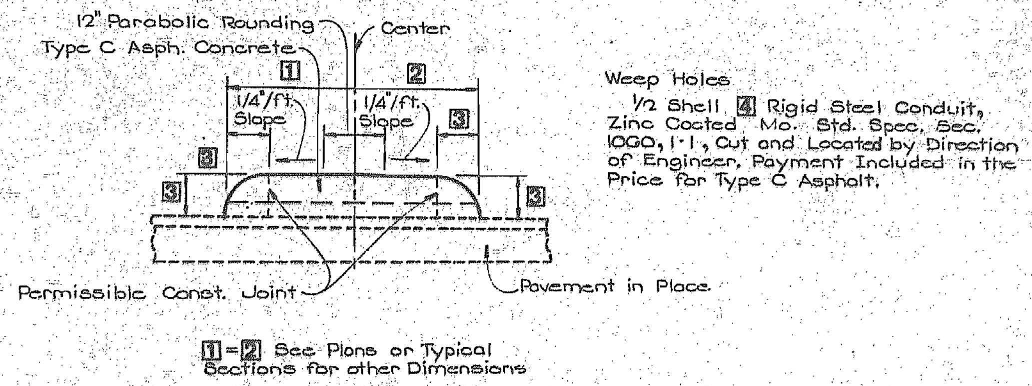
See Section C-C for Other Details



DETAIL D: ENTRANCE (SHOULDER)



DETAIL C: TYPE O CURB, MODIFIED

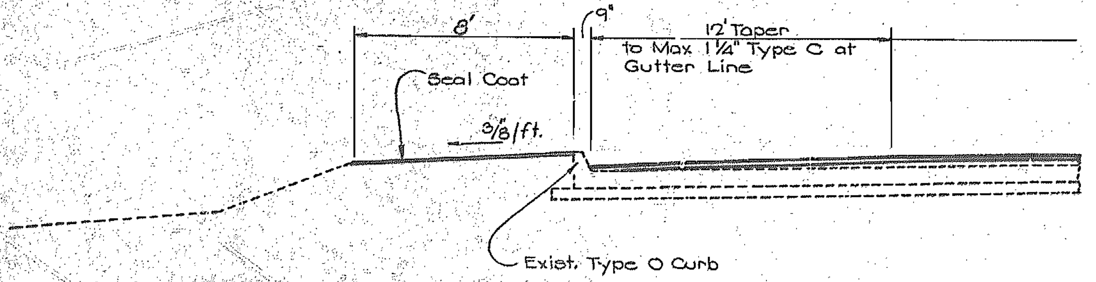


DETAIL A: ASPHALT MEDIAN STRIP & ISLANDS (HIGH)

3 = 8", 4 = 4"

DETAIL B: ASPHALT MEDIAN STRIP (LOW)

3 = 4", 4 = 2"



SECTION E-E

ROUTE U.S. 60 BUSINESS (NEOSHO BLVD.) (SOUTH)

TYPICAL SECTION

SHEET 3 OF 3

MISSOURI STATE HIGHWAY COMMISSION
SUMMARY OF QUANTITIES

FINAL PLANS

FED. ROAD DIVISION	STATE	PROJECT	SHEET NO.
5	MO.	7-U-60BR-11	2A
DIST. NO.		COUNTY	ROUTE
7		NEWTON	60BR

ITEM	DESCRIPTION	UNIT	QUANTITY
202-20.10	REMOVAL OF IMPROVEMENTS	LUMP SUM	1
203-10.00	CLASS A EXCAVATION	CU YD	822
203-60.00	COMPACTING EMBANKMENT	CU YD	470
206-30.00	CLASS 3 EXCAVATION	CU YD	38
304-00.02	TYPE 1 AGGREGATE FOR BASE	TON	601
304-10.62	PROCESSING TYPE 1 AGGREGATE (6 IN. THICK)	SQ YD	1813
309-11.00	CONCRETE BASE (8 IN. NON-REINFORCED)	SQ YD	2501.6
403-60.00	ASPHALT CEMENT (ASPHALTIC CONCRETE)	TON	145.0
403-70.00	MINERAL AGGREGATE (ASPHALTIC CONCRETE) (TYPE B MIX)	TON	602
403-80.00	MINERAL AGGREGATE (ASPHALTIC CONCRETE) (TYPE C MIX)	TON	1231
403-85.00	MINERAL AGGREGATE (ASPHALTIC CONCRETE) (TYPE C MIX) SPOT WEDGE	TON	766
407-10.10	TACK-LIQUID ASPHALT	GALLON	460
407-20.00	SANDING TACK	CU YD	13
408-10.10	PRIME-LIQUID ASPHALT MC 30	GALLON	640
409-10.30	BITUMINOUS MATERIAL (SEAL COAT) ASPHALT CEMENT (200-300 PENETRATION)	GALLON	603
409-20.02	COVER AGGREGATE GRADE 2	TON	33
[illegible]	CONCRETE PAVEMENT (8 IN. NON-REINF)	SQ YD	68.1
[illegible]	FIELD LABORATORY	LUMP SUM	1
604-20.10	ADJUSTING MANHOLE	EACH	1
606-10.10	GUARD RAIL TYPE A	LIN FT	25
606-50.00	TERMINAL SECTION	EACH	1
606-60.00	GUARD CABLE	LIN FT	265
608-10.00	PAVED APPROACH, 6 IN.	SQ YD	36.5
609-10.11	CONCRETE CURB (OVER 6 IN. HEIGHT) TYPE [illegible]	LIN FT	427
609-20.01	CURB AND GUTTER TYPE A	LIN FT	482
609-40.00	PAVED DITCH	SQ YD	20.3
[illegible]	INTEGRAL CURB-TYPE [illegible]	LIN. FT.	576
612-10.00	STANDARD CONSTRUCTION SIGNS	LUMP SUM	1
614-30.15	MANHOLE FRAME AND COVER, TYPE 1	EACH	2
703-20.01	CLASS B CONCRETE (CULVERTS)	CU YD	1.6
703-20.02	CLASS B CONCRETE (BASE)	CU YD	2.7
706-10.00	REINFORCING STEEL	POUND	330
706-10.30	REINFORCING STEEL (CULVERTS)	POUND	220
726-12.12	12 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	12
726-13.15	15 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	51
732-20.10	12 IN. FLARED END SECTION	EACH	1
732-20.15	15 IN. FLARED END SECTION	EACH	1
803-10.00	SODDING	SQ YD	1457

ITEM	DESCRIPTION	UNIT	QUANTITY
	HIGHWAY LIGHTING		
901-10.30	TYPE AT-30 LIGHTING POLE	EACH	8
901-11.10	10 FT BRACKET ARM	EACH	8
901-12.10	250 WATT MERCURY LUMINAIRE	EACH	7
901-12.20	400 WATT MERCURY LUMINAIRE	EACH	1
901-22.10	120-240 VOLT POLE MOUNTED CONTROL STATION, DWG 901-10	EACH	1
901-32.00	CONDUIT, 2 IN. RIGID STEEL, IN TRENCH	LIN FT	164
901-42.00	CONDUIT, 2 IN. RIGID STEEL, PUSHED	LIN FT	98
901-50.20	TRENCHING TYPE II	LIN FT	1176
901-71.10	CABLE, 10 AWG 1 CONDUCTOR, POLE AND BRACKET	LIN FT	672
901-75.07	1 IN. CABLE-CONDUIT 2 CONDUCTORS 8 AWG	LIN FT	2150
901-80.00	STEEL PILE FOUNDATION	EACH	8
	TRAFFIC SIGNALS		
902-01.13	SIGNAL HEAD TYPE 3T	EACH	1
902-02.13	SIGNAL HEAD, TYPE 3S	EACH	1
902-02.33	SIGNAL HEAD, TYPE 33A	EACH	1
902-05.13	SIGNAL HEAD, TYPE 3B	EACH	1
902-26.00	BEAM LIGHT	EACH	2
902-27.10	POST, 10 FT SIGNAL	EACH	1
902-32.18	POST, TYPE C-2, 18 A	EACH	1
902-32.24	POST, TYPE C-2, 24 A	EACH	1
902-32.26	POST, TYPE C-2, 26 A	EACH	1
902-32.30	POST, TYPE C-2, 30 A	EACH	1
902-41.41	CONTROLLER ASSEMBLY HOUSING, 4 PHASE, STANDARD TIMING	EACH	1
902-45.10	DETECTOR, MAGNETIC VEHICLE, NON-COMPENSATED	EACH	3
902-49.00	DETECTOR, INDUCTION LOOP VEHICLE	EACH	8
902-51.25	CONDUIT, 1 1/4 IN. RIGID STEEL, IN TRENCH	LIN FT	258
902-52.00	CONDUIT, 2 IN. RIGID STEEL, IN TRENCH	LIN FT	478
902-53.00	CONDUIT 3 IN. RIGID STEEL, IN TRENCH	LIN FT	88
902-72.00	CONDUIT 2 IN. RIGID STEEL, PUSHED	LIN FT	72
902-73.00	CONDUIT, 3 IN. RIGID STEEL, PUSHED	LIN FT	106
902-80.00	CONDUIT, 4 IN. ALUMINUM IN TRENCH	LIN FT	34
902-81.00	CONDUIT 4 IN. ALUMINUM PUSHED	LIN FT	40
902-82.08	CABLE, 8 AWG 1 CONDUCTOR, POWER	LIN FT	170
902-83.02	CABLE, 12 AWG 2 CONDUCTOR	LIN FT	2230
902-83.07	CABLE, 12 AWG 7 CONDUCTOR	LIN FT	1500
902-85.00	CABLE, INDUCTION LOOP VEHICLE DETECTOR	LIN FT	2380

ITEM	DESCRIPTION	UNIT	QUANTITY
902-86.00	POWER SUPPLY ASSEMBLY	EACH	1
902-87.30	30 FT SERVICE POLE	EACH	1
902-88.01	CONCRETE PULL BOX, TYPE 1	EACH	7
902-91.00	BASE, CONCRETE	CU YD	10.0
	CONTINGENT ITEMS		
50101	DENSITY SAMPLES	EACH	9
50201	CONDUIT 3 in RIGID STEEL IN TRENCH	LIN. FT.	148
50301	CREVICE CONCRETE	C.Y.	5.1

RECEIVED

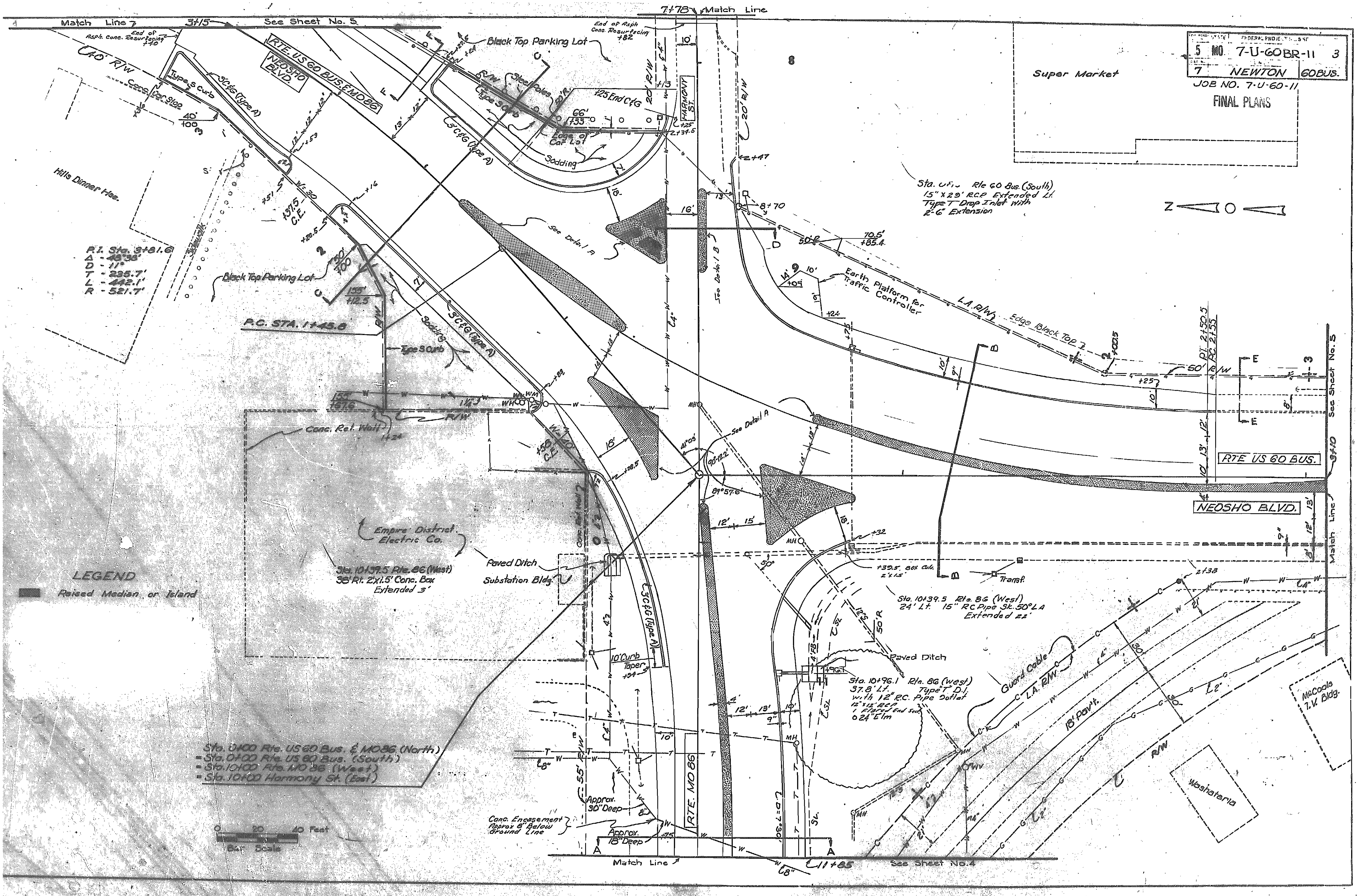
181

Date of Final Acceptance 12-2-74 Prepared by D. P. Miller Date 12-6-74 Checked in Dist. Office by E. L. Locke Date 12-17-74 Checked in Main Office by Kenneth Marshall Date 12-26-74

5	MO.	7-U-60BR-11	3
7		NEWTON	60BUS.

JOB NO. 7-U-60-11

FINAL PLANS

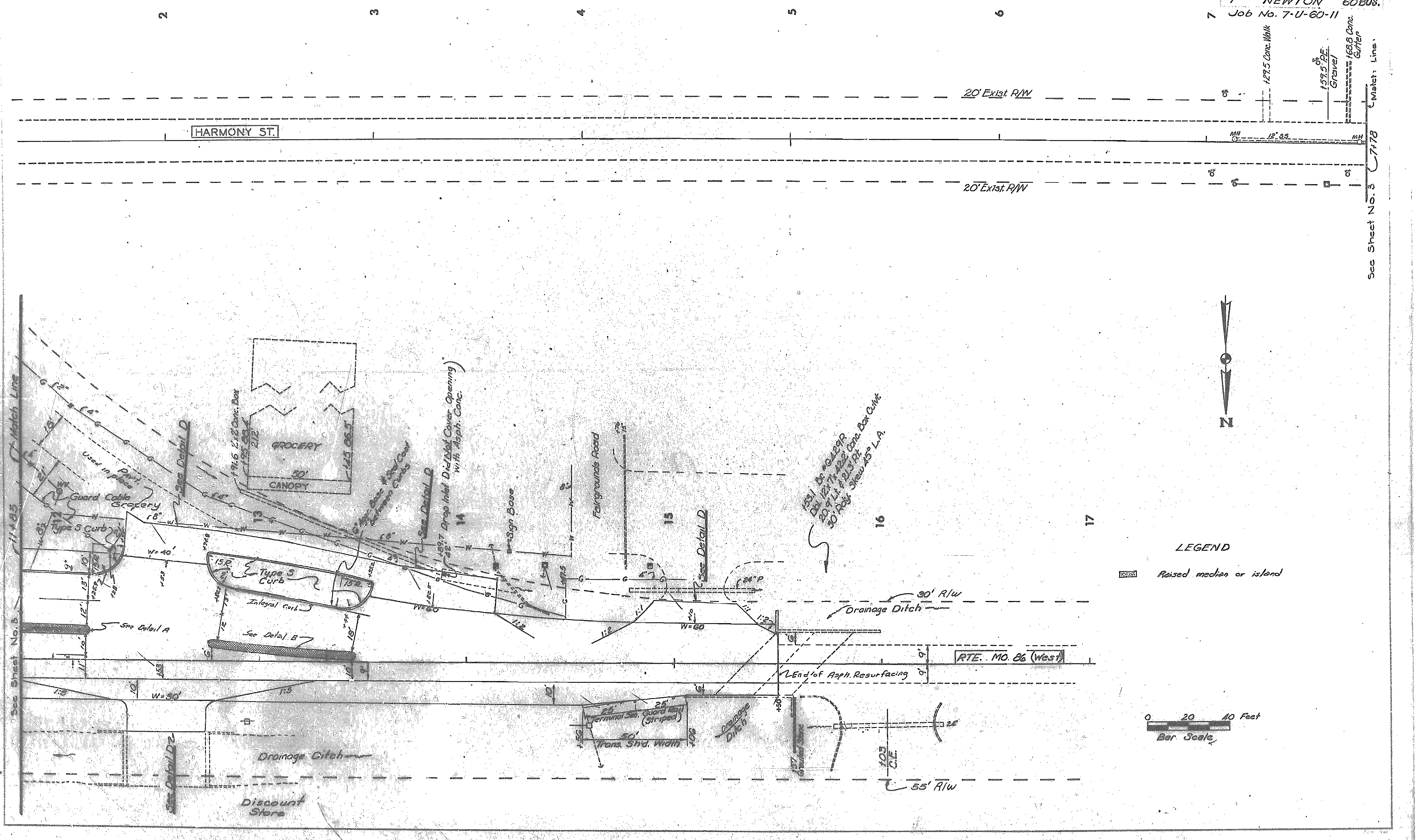


FINAL PLANS

7-U-60BR-11 4

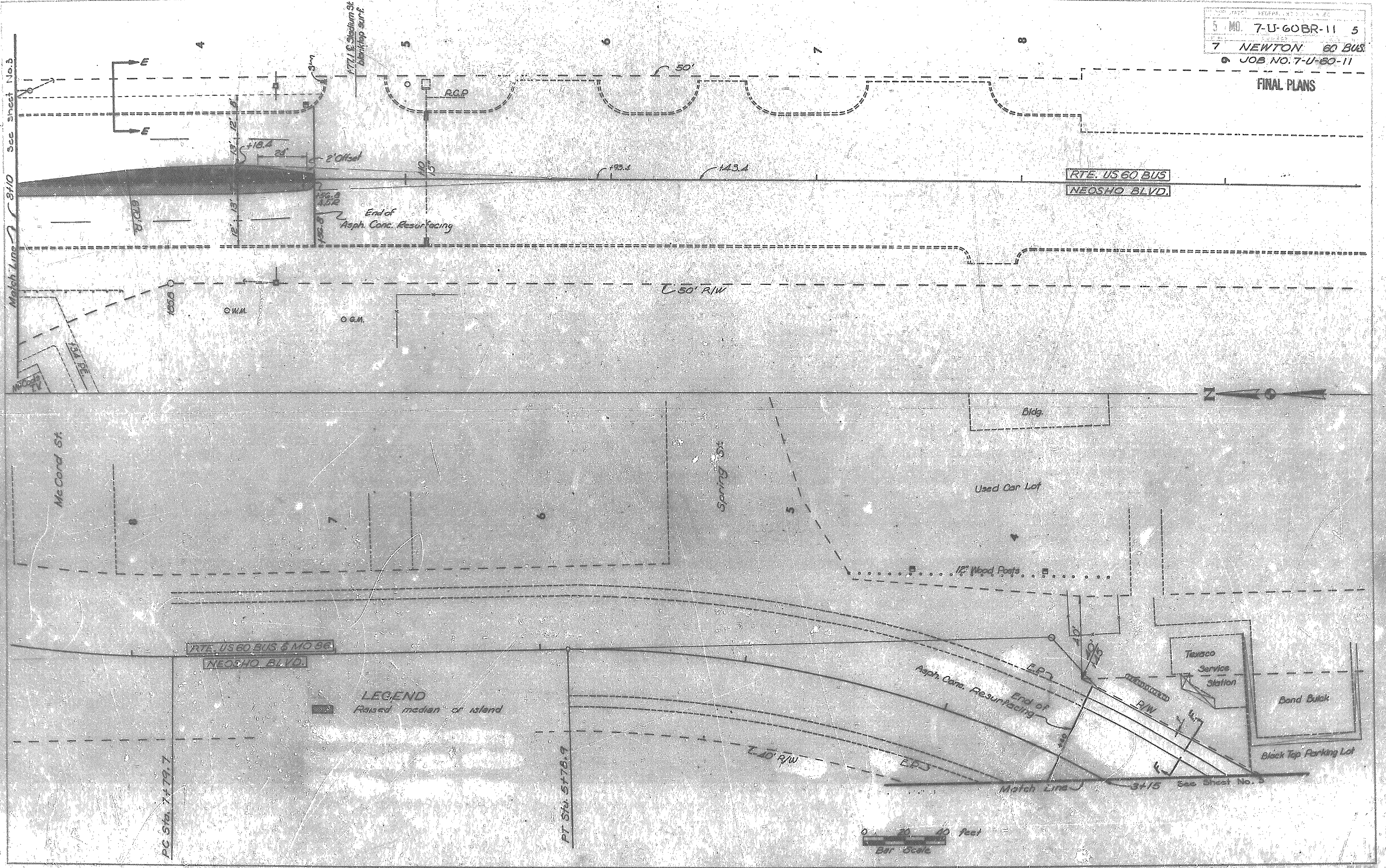
7 NEWTON 60BUS.

Job No. 7-U-60-11



5 MO. 7-U-60BR-11 5
7 NEWTON 60 BUS.
9 JOB NO. 7-U-60-11

FINAL PLANS



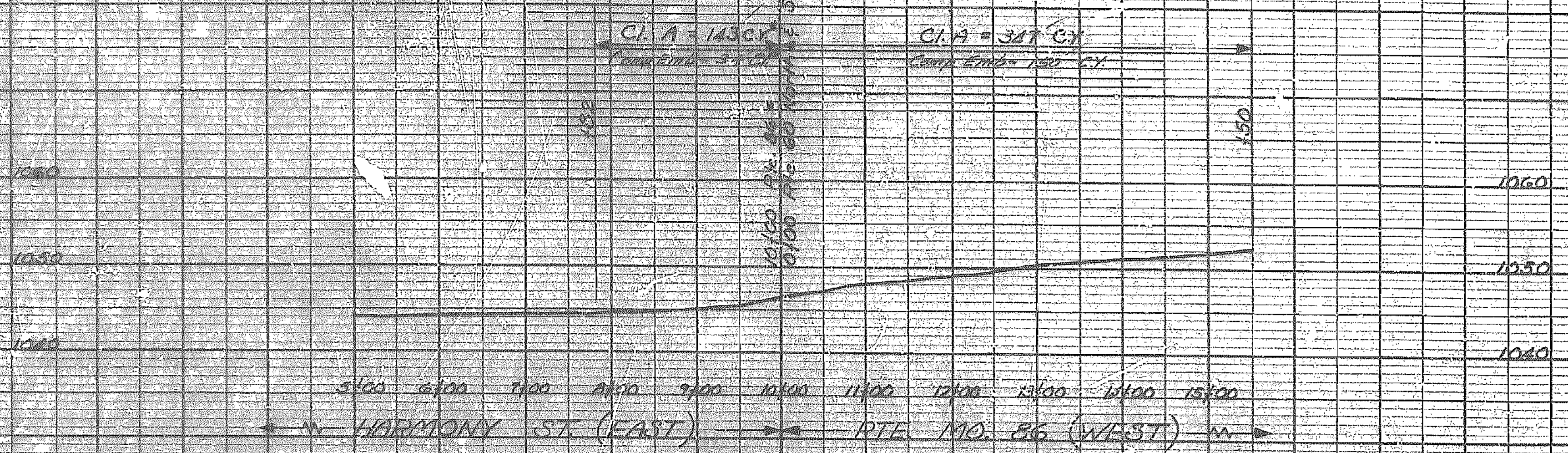
18

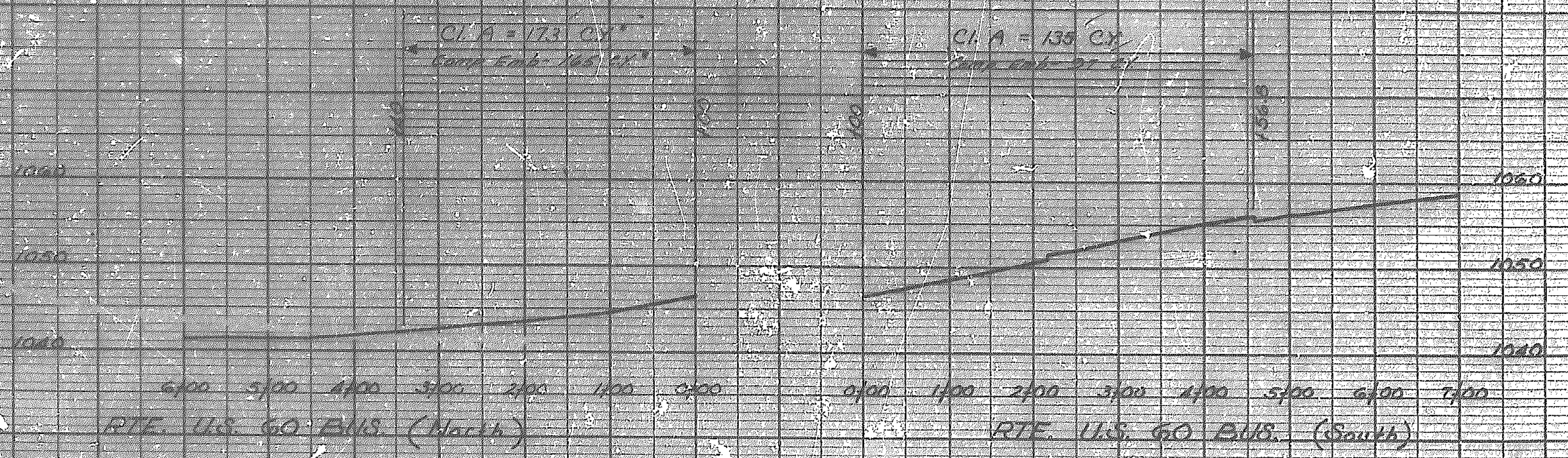
STATE	FEDERAL PROJECT NO.		SHEET NO.
MISSOURI	7-U-60BR-11		6
DIST. NO.	COUNTY	ROUTE	SEC.
7	NEWTON	60	BUS

JOB NO. 7-U-60-11

FINAL PLANS

	BY	DATE
	Campbell	2-73
	Franklin	2-73





*See Sheet Number 8 For Additional Quantities

BENCH MARKS

BM#1 X-on S.E. Cor. Conc. wall to Empire Sub-Sta. 56.8' Right Sta. 9+79 on Harmony Street
Elev. 1047.11

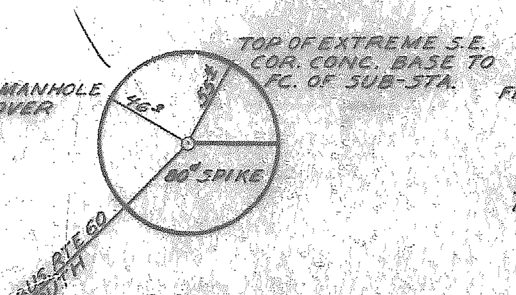
TBM#1 S.W. Cor. of west Hdwll. of triple Conc. Box Culv. Lt. Sta. 4+53.2 Rte. 60-86 North
Elev. 1042.89

TBM#2 X-on S.E. Cor. of N. Hdwll. of Culv. 15.5' Rt. Sta. 15+05 Rte. 86 West
Elev. 1052.56

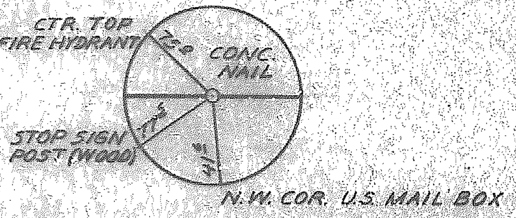
FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO. & SEC.	SHEET NO.
5	MO.	7-U-60BR-11	7
DIST. NO.	COUNTY	ROUTE	SEC.
7	NEWTON	60	BUS

JOB NO. 7-U-60-11

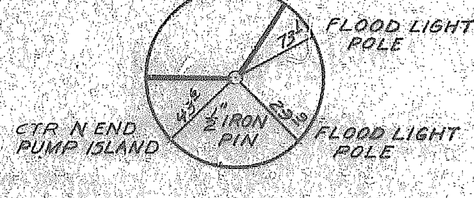
FINAL PLANS



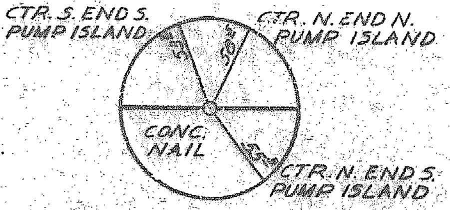
0+00



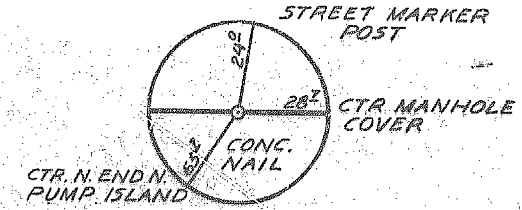
P.C. 1+45⁴



P.I. 3+81⁵
Δ-48°-38'-LT.

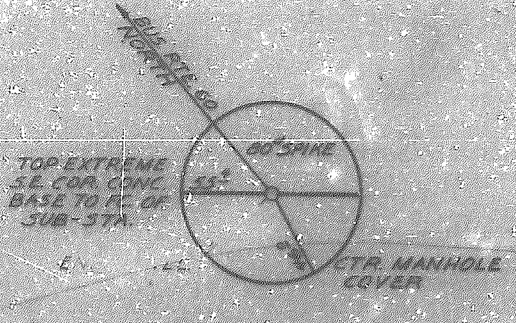


P.T. 5+87²

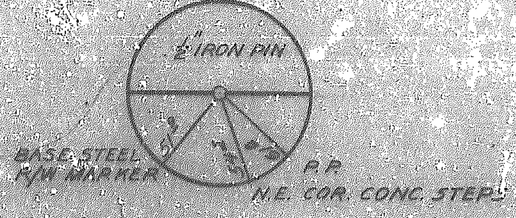


P.O.T. 8+00

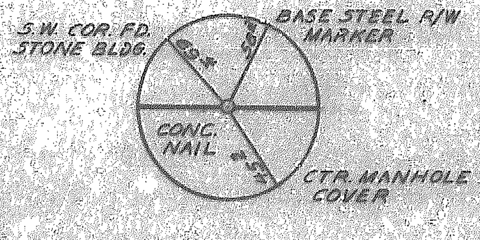
BUS. RTE. 60 NORTH



POT 0+00

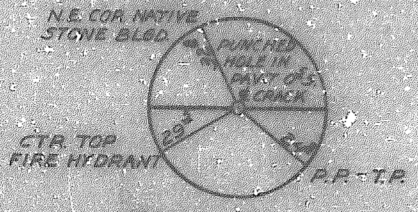


POT 4+00

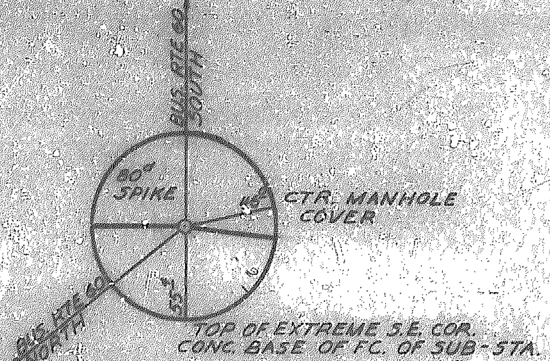


P.O.T. 8+00

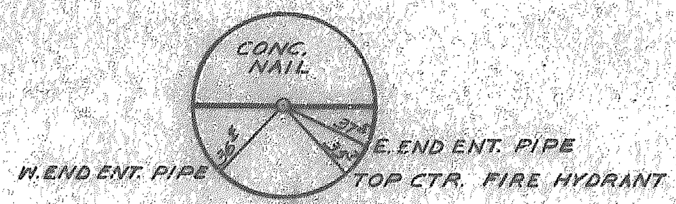
BUS. RTE. 60 SOUTH



P.O.T. 5+00



P.I. 10+00 Δ-0°-09⁸' RT.
= 0+00 BUS. RTE 60 NORTH & SOUTH



P.O.T. 20+00

HARMONY STREET

REFERENCED POINTS

SP-2B

B-8-1

MISSOURI STATE HIGHWAY COMMISSION

SUMMARY OF QUANTITIES

FED. ROAD DIVISION	STATE	PROJECT	SHEET NO.
5	MO.	7-U-60BR-11	9
DIST. NO.		COUNTY	ROUTE
7		NEWTON	60BUS

JOB NO. 7-U-60-11

FINAL PLANS

LIGHTING POLE, LUMINAIRE, POLE & BRACKET CABLE,

Sheet No.	Lighting Unit No.	Appr.	Sta.	Loc.	Circuit No. 1	2	3	Type AT-30 Lighting Pole Each	Bracket Arm Each 10'	250W Mercury Vapor Luminaire Each	400W Mercury Vapor Luminaire Each	Pole & Bracket Cable 10 AWG 1 Cond. Lin. Ft.	Steel Pile Foundation Each	Bracket Skew With Appr. ℄
10	1	North	0+86	38' Lt.	1			1	1	1		84	1	5° RA
10	2	North	2+15	45' Lt.	1			1	1	1		84	1	Rt. ∠
10	3	South	1+91	41' Rt.		1		1	1	1		84	1	Rt. ∠
10	4	West	0+77	47' Lt.		1		1	1	1		84	1	Rt. ∠
11	5	West	12+85	45' Lt.		1		1	1	1		84	1	4° LA
10	6	East	8+37	29' Rt.				1	1	1		84	1	Rt. ∠
10	7	East	9+12	42' Lt.			1	1	1		1	84	1	50° RA
12	8	South	5+06	43' Lt.			1	1	1	1		84	1	Rt. ∠
Total								8	8	7	1	672	8	

TRENCHING, TYPE II

Sheet No.	Circuit No.	Lin. Ft.
10	1	290
10-11	2	347
10-12	3	539
Total		1176

POLE MOUNTED CONTROL STATION

Sheet No.	Appr.	Sta.	Loc.	120-240 Volt Pole Mounted Control Station DWG. No. 901.18 Each	Remarks
10	South	0+56	110' Lt.	1	30' No. IV Pole included with signals
Total				1	

1" CABLE CONDUIT 2 CONDUCTOR 8 AWG

Sheet No.	Circuit No.	C to C Lin. Ft.	1"-2#8 Lin. Ft.
10	1	530	540
10-11	2	752	767
10-12	3	692	72
Snaking & etc.			96
Total			2150

Circuit Breaker Trip Rating: 20 Amps

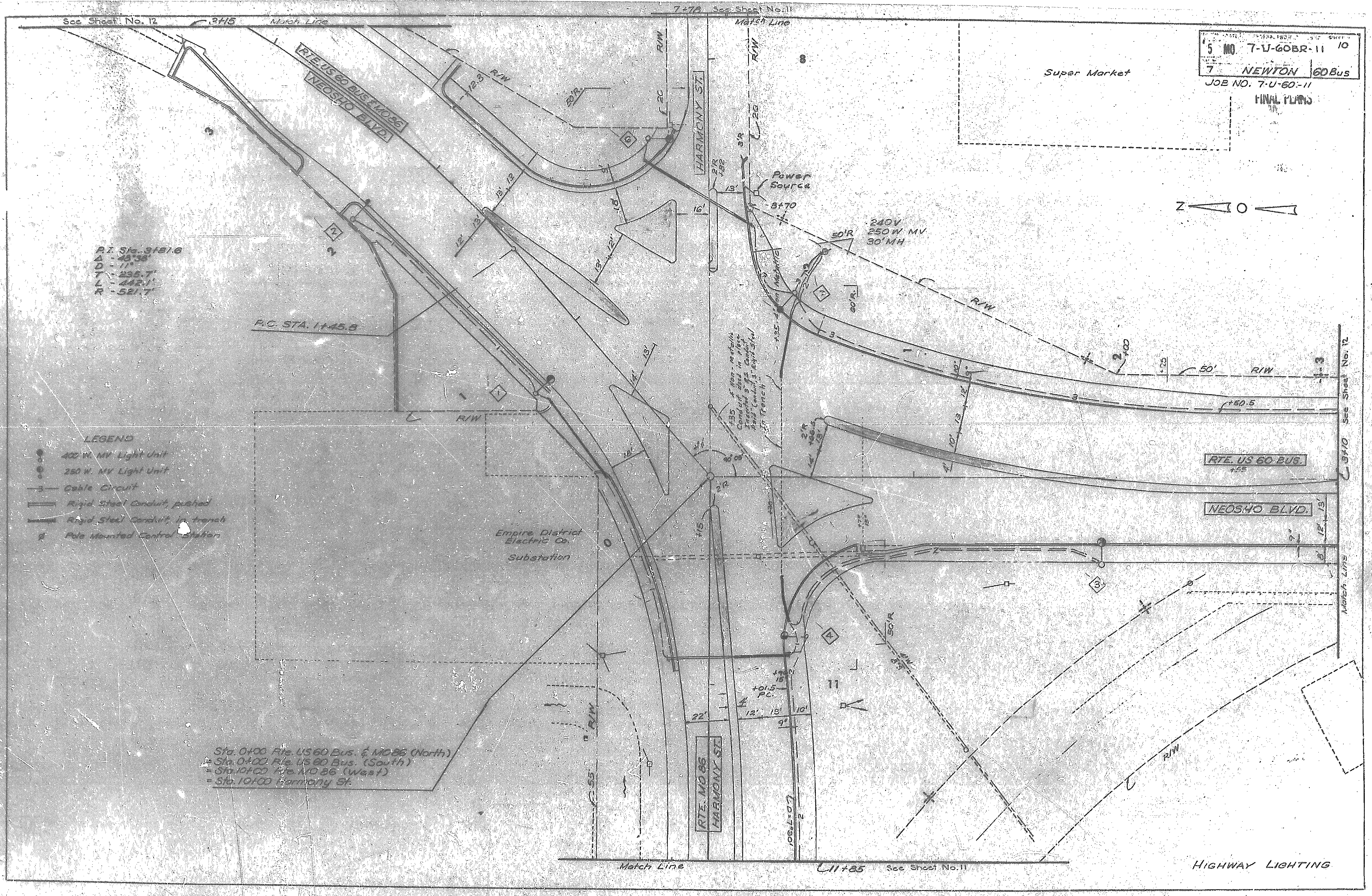
Circuiting: 240V Multiple

RIGID STEEL CONDUIT

Sheet No.	Appr.	Sta.	Loc.	In Trench 2" Lin. Ft.	Pushed 2" Lin. Ft.	In Trench 3" Lin. Ft.	Circuit No.	Skew with Appr. ℄	
10	South	0+35	℄			96	1-2	RT. ∠	*
10	South	0+35	48' Rt.			21	1-2	57°-10' LA	*
10	South	0+35	48' Lt.			31	1-2	57° 10' RA	*
10	West	0+87	℄	27	33		1	RT. ∠	
10	North	0+57	37' Lt.	48			1	86° RA	
10	East	8+67	℄	37	25		3	30° LA	
12	South	4+76	39' Lt.		40		3	90° LA	
11	West	12+54	43' Lt.	52			2	86° RA	
Total				164	98	148			

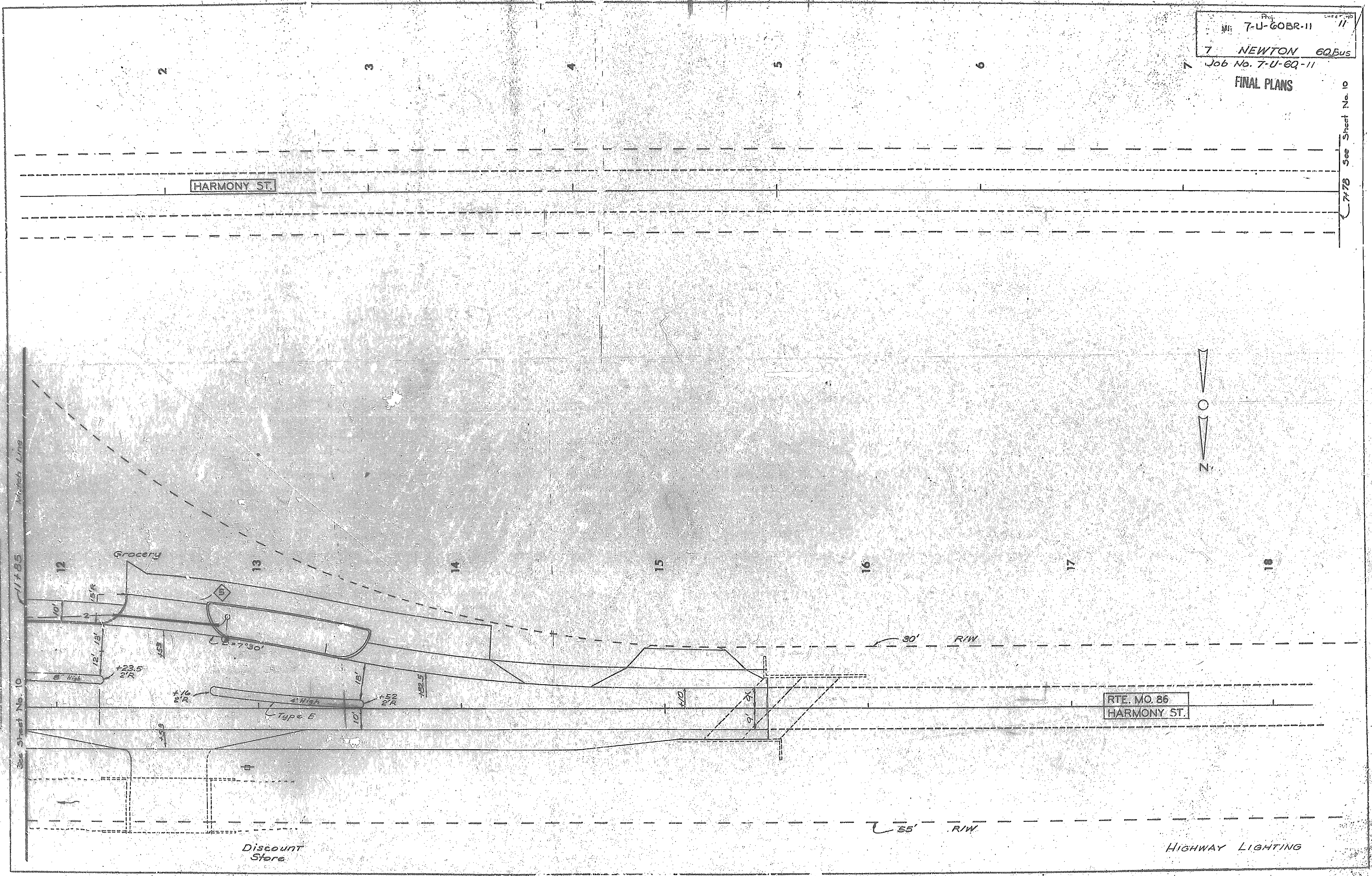
* C.O. #1

HIGHWAY LIGHTING


5 MO 7-U-60BR-11 10
7 NEWTON 60 Bus
JOB NO. 7-U-60-11
FINAL PLANS
See Sheet No. 12
3+15
Match Line
7+76
See Sheet No. 11
Match Line
R/W
RTE. US 60 BUS. & MO 86
NEOSHO BLVD.
HARMONY ST.
Super Market
Power Source
8+70
240 V
250 W MV
30' MH
50' R.
80' R.
P.I. Sta. 3+81.6
Δ - 48°35'
D - 11°
T - 235.7'
L - 442.1'
R - 521.7'
P.C. STA. 1+45.8
50'
+50.5
See Sheet No. 12
3+10
RTE. US 60 BUS.
NEOSHO BLVD.
Match Line
LEGEND
400 W. MV Light Unit
250 W. MV Light Unit
Cable Circuit
Rigid Steel Conduit, pushed
Rigid Steel Conduit, in trench
Pole Mounted Control Station
Empire District Electric Co.
Substation
Sta. 0+00 Rte. US 60 Bus. & MO 86 (North)
= Sta. 0+00 Rte. US 60 Bus. (South)
= Sta. 10+00 Rte. MO 86 (West)
= Sta. 10+00 Harmony St.
RTE. MO 86
HARMONY ST.
+01.5 P.C.
Match Line
11+85
See Sheet No. 11
HIGHWAY LIGHTING
1
2
3
4
5
7
11
55'
22'
12'
13'
10'
16'

Proj.
7-U-60BR-11 Sheet No. 11
7 NEWTON 60 Bus
Job No. 7-U-60-11

FINAL PLANS

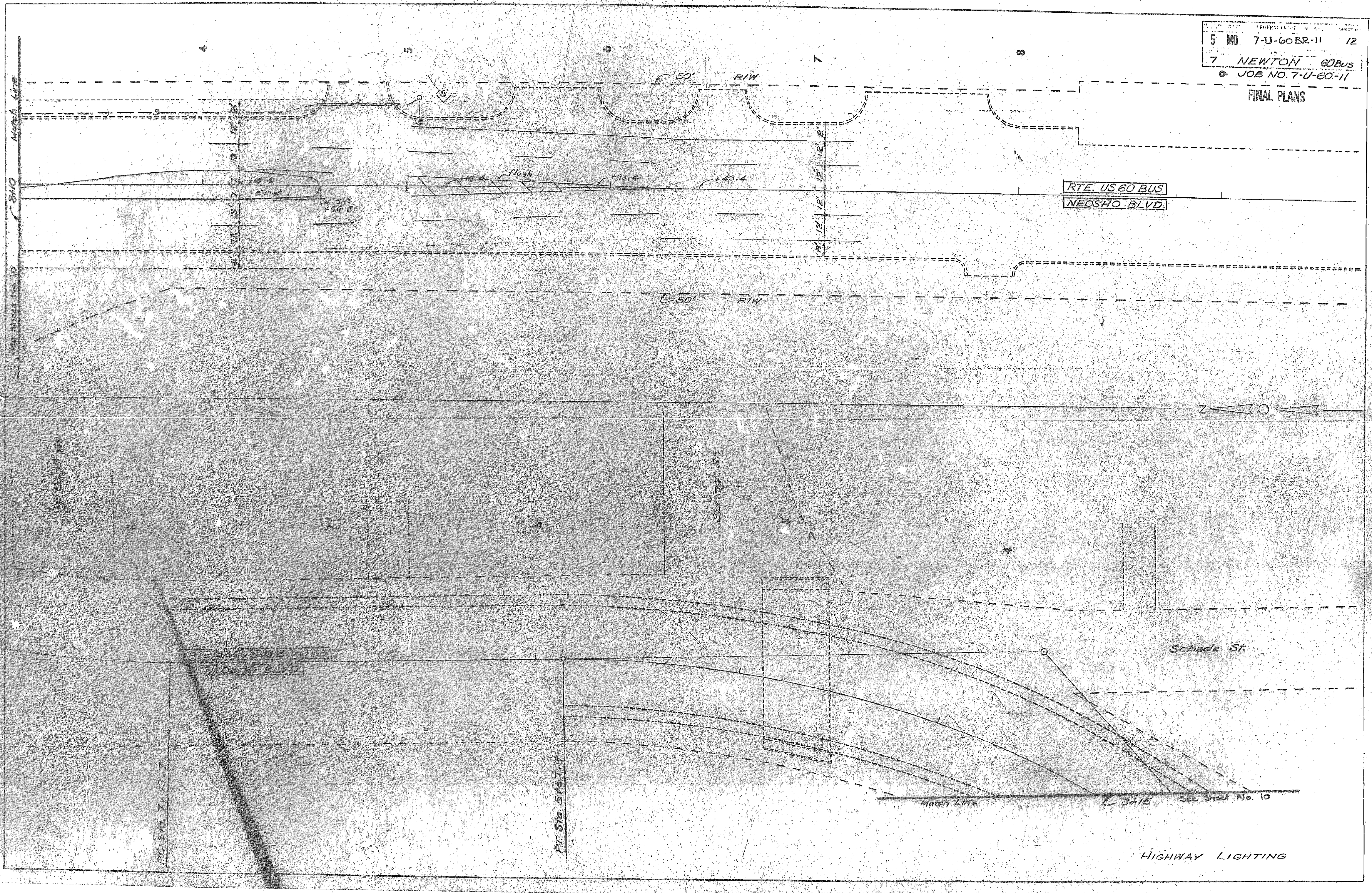


5 MO. 7-U-60BR-11 12

7 NEWTON 60Bus

9 JOB NO. 7-U-60-11

FINAL PLANS



HIGHWAY LIGHTING

FED. ROAD DIV. NO.	STATE	JOB NO. 7-U-60-11		SHEET NO.
5	MO.	PROJECT NO. 7-U-60BR-11		13
DIST. NO.	COUNTY		ROUTE	SEC.
7	NEWTON		60BUS	

FINAL PLANS

TRAFFIC SIGNAL SYMBOLS

—▷	OPTICALLY LIMITING SIGNAL HEAD
—▶	SIGNAL HEAD
—+▶	SIGNAL HEAD WITH BACKPLATE
—▷	SIGNAL HEAD-PEDESTRIAN
●┤—▶	POST MOUNTED SIGNAL HEAD WITH SIGN
≡	STOP LINE
↰ ↑	LANE USE
●	TYPE A BASE
◐	TYPE B BASE
○	TYPE C BASE
▣	JUNCTION BOX
⊠ ⊠	CONTROLLER
■	CONCRETE PULL BOX
▬	CONCRETE PULL BOX (DOUBLE)
◪	BITUMINOUS FIBER PULL BOX
┬	SPAN WIRE WITH SIGNAL HEAD
↑—●	MAST ARM WITH SIGNAL HEAD
↑↑—●	MAST ARM WITH SIGNAL HEADS
○—	MAST ARM WITH OVERHEAD SIGN
-S-●	MAST ARM WITH ULTRA-SONIC DETECTOR (NARROW)
-S-▬	MAST ARM WITH ULTRA-SONIC DETECTOR (EXTENDED)
-S-▨	SIDE FIRE ULTRA-SONIC DETECTOR
---●	NON-COMP. MAG. DETECTOR
—▭	PRES.-SENS. DET. NON-DIRECTIONAL
—▭	PRES.-SENS. DET. DIRECTIONAL
▭	INDUCTION LOOP DETECTOR

⊡	PUSH BUTTON DETECTOR
∅	SERVICE POLE AND POWER SUPPLY
▬ ▬ ▬	RIGID STEEL CONDUIT IN TRENCH
▭ ▭ ▭	RIGID STEEL CONDUIT PUSHED
= = =	ALUMINUM CONDUIT IN TRENCH
Z Z Z	ALUMINUM CONDUIT PUSHED
▬M▬M▬	RIGID STEEL CONDUIT IN MEDIAN
3"	SIZE OF CONDUIT
3-2C #12	NUMBER & SIZE OF CABLE
▽7	SIGNAL FACE NUMBER
⑦	POST NUMBER
⬡7	DETECTOR NUMBER
☐7	PULL BOX NUMBER
R	RED LENS
Y	YELLOW LENS
←Y	YELLOW LEFT ARROW LENS
Y→	YELLOW RIGHT ARROW LENS
G	GREEN LENS
S	GREEN STRAIGHT ARROW LENS
L	GREEN LEFT ARROW LENS
Rt	GREEN RIGHT ARROW LENS
DL	DOWN LIGHT
R	12 INCH LENS
G	TUNNEL VISOR
YE	TUNNEL VISOR WITH EXTERNAL LOUVERS
W	WALK INDICATION

DW	DON'T WALK INDICATION
FDW	FLASHING DON'T WALK

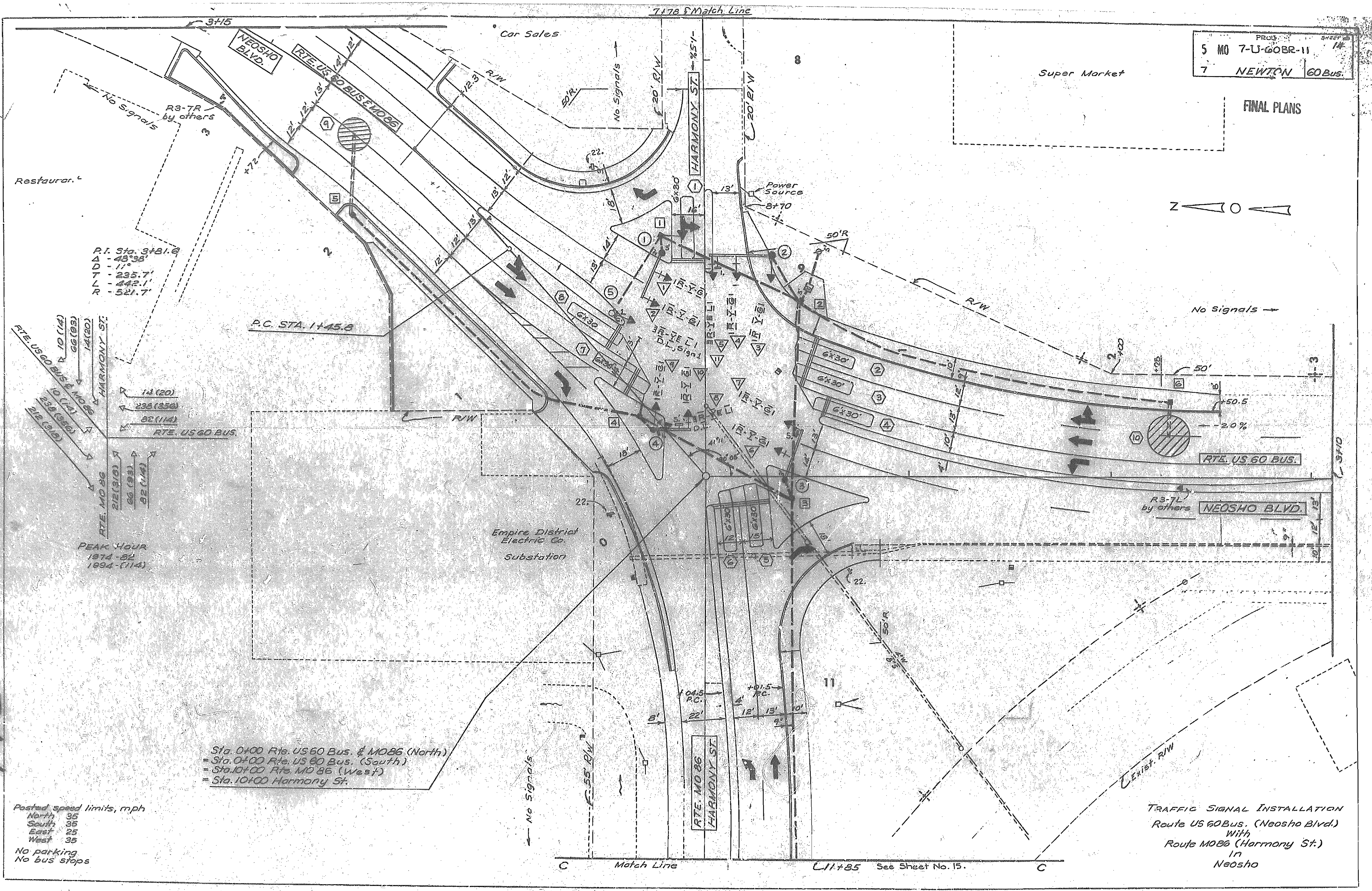
COMMISSION FURNISHED SIGNS

SIGN NUMBER	
1	R10-10L – LEFT TURN SIGNAL
2	R10-10R – RIGHT TURN SIGNAL
3	R3-5La – LEFT ARROW (SYMBOL)-ONLY
4	R3-5Ra – RIGHT ARROW (SYMBOL)-ONLY
5	R10-11 – LEFT TURN YIELD
6	R10-12 – LEFT TURN YIELD ON GREEN
7	R10-4 – PUSH BUTTON FOR WALK SIGNAL
8	R10-3a – ARROW (SYMBOL)(ABOVE PUSHBUTTON)
9	R3-7L – LEFT LANE MUST TURN LEFT
10	R3-7R – RIGHT LANE MUST TURN RIGHT
11	R3-5Sa – STRAIGHT ARROW (SYMBOL)-ONLY
12	R3-6La – LEFT ARROW-STRAIGHT ARROW (SYMBOL)
13	R3-6Ra – RIGHT ARROW-STRAIGHT ARROW (SYMBOL)
14	R3-2 – NO LEFT TURN (SYMBOL)
15	R3-2x – NO LEFT TURN (PLAQUE)
16	R3-1 – NO RIGHT TURN (SYMBOL)
17	R3-1x – NO RIGHT TURN (PLAQUE)
18	R3-3a – NO TURNS
19	R9-9 – FIRE STATION SIGNAL
20	R9-9a – FIRE STATION SIGNAL
21	R9-9b – FIRE STATION SIGNAL
22	R1-2a – YIELD (BY OTHERS)

6-1-73

5	MO	PROJ. 7-U-60BR-11	SHEET 14
7	NEWTON		60 Bus.

FINAL PLANS



Sta. 0+00 Rte. US 60 Bus. & MO86 (North)
= Sta. 0+00 Rte. US 60 Bus. (South)
= Sta. 10+00 Rte. MO 86 (West)
= Sta. 10+00 Harmony St.

Posted speed limits, mph

North	35
South	35
East	25
West	35

No parking
No bus stops

TRAFFIC SIGNAL INSTALLATION
Route US 60 Bus. (Neosho Blvd.)
With
Route MO86 (Harmony St.)
In
Neosho

3#192

FED. ROAD DIV. NO.	STATE	JOB NO 7-U-60-11	SHEET NO
5	MO.	PROJECT NO 7-U-60BR-11	14 B
DIST NO	COUNTY	ROUTE	SEC
7	NEWTON	60 BUS	

1 of 3

TRAFFIC SIGNALS

FINAL PLANS

CONTROLLER AND AUXILIARY EQUIPMENT

Location: Approach	Location: Station	Location: Offset	Actuated: Controller Assembly Housing	Actuated: Minimum No. of Module Openings	Phase Module: S	Phase Module: D	Phase Module: P	Phase Module: SP	Phase Module: DP		Pre-Timed Type: M-N	Pre-Timed Type: M-I	Pre-Timed Type: M-M		On-Off Switch Type: I	On-Off Switch Type: II	Coordination Unit: Master	Coordination Unit: Local	Tone Unit: Transmitter	Tone Unit: Receiver	Pre-Emption Unit	Remarks
South	0+51	92' Lt.	1	* 4	*4										*	*	*	*	*	*	*	

* ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE

POWER SUPPLY

Location: Approach	Location: Station	Location: Offset	Power Supply Assembly: Drawing 902.10A	Power Supply Assembly: Drawing	Circuit Breaker Trip Rating: Controller: Down Light	Circuit Breaker Trip Rating: Controller: Cont & Signal Lamps	Circuit Breaker Trip Rating: Service Pole: Both Breakers	Service Pole: Contract Furnish	Service Pole: Utility Company
South	0+56	110' Lt.	1		15 Amps	30 Amps	40 Amps	CL. IV Ft 30	

LOCATION / BASES / PULL BOXES / DETECTOR

Post Number	Pull Box No.	Detector No.	Approach	Station	Offset	Bases A 3	Bases A 5	Bases A 8	Bases A 10	Bases B 5	Bases B 8	Bases B 10	Bases C	Class B Concrete C.Y.	Pull Boxes Concrete I	Pull Boxes Concrete II	Pull Boxes Concrete III	Pull Boxes Concrete IV	Pull Boxes Fiber I	Pull Boxes Fiber II	* Phase Assoc.	Push Button	Magnetic	Induction Loop	* Call Unit	* Time Delay Unit
				CONTROLLER		AS REQ'D								1.10*												
1			East	8+92	21' Rt.		1							1.70												
2			East	8+93	33' Lt.			1 (Mod)						2.53**												
3			South	0+38.5	2' Rt.			1 (Mod.)						2.53**												
4			North	0+34	5' Lt.		1							1.70												
5			North	0+89.5	17.5' Rt.								1	0.44												
	1		East	8+84	21' Rt.										1											
	2		South	0+47	85' Lt.										1											
	3		South	0+42	11' Rt.										1											
	4		North	0+43	6' Lt.										1											
	5		North	2+16	42' Lt.										1											
	6		South	2+29	37' Lt.										1											
	7		West	11+94	45' Lt.										1											
		1	East	8+95	8' Rt.																D			1		
		2	South	0+44	65.5 Lt.																B			1		
		3	South	0+45	53' Lt.																B			1		
		4	South	0+54	36.5 Lt.																A			1		
		5	West	10+04	22' Lt.																C			1		
		6	West	10+07	9' Lt.																C			1		
		7	North	0+51	6' Rt.																B			1		
		8	North	0+77	12' Rt.																B			1		
		9	North	2+40	13' Lt.																B		1		1	
		10	South	2+28	21' Lt.																B		1		1	
		11	West	11+94	30' Lt.																C		1		1	
					TOTAL									10.00	7								3	8	3	

POST

Post Number	Top Mount Post Length 7	Top Mount Post Length 10	Type C-1 Length Z	Type C-1 Length P	Type C-1 Length Z	Type C-1 Length P	Type C-1 Length Z	Type C-1 Length P	Type C-2 Arm Length A	Type C-2 Arm Length A	Type C-2 Arm Length A	Type C-2 Arm Length A	Type C-2 Arm Length A	Type C-2 Arm Length A	Type C-2 Signal Spacing B	Type C-2 Signal Spacing C	Type C-2 Signal Spacing D	Type C-2 Sign Spacing B	Type C-2 Sign Spacing C	Type C-2 Sign Spacing D	Type B Arm Length E	Type B Arm Length K	Type B Arm Length E	Type B Arm Length K	Type B Arm Length E	Type B Arm Length K	Type B Arm Length E	Type B Arm Length K	Left Arm-E Signal F	Left Arm-E Signal G	Left Arm-E Signal H	Left Arm-E Sign F	Left Arm-E Sign G	Left Arm-E Sign H	Right Arm-K Signal L	Right Arm-K Signal M	Right Arm-K Signal N	Right Arm-K Sign L	Right Arm-K Sign M	Right Arm-K Sign N	Included Angle	Post Mount Signal	Post Mount Down Light	Post Mount Sig. & D. L.	Span Wire Wood	Span Wire Steel
1										24'					9'-6"	14'-0"	—																								Lt.					
2												30'			17'-6"	12'-0"	—	26'-6"	—	—																					Lt.	1				
3											26'				11'-6"	14'-0"	—	22'-6"	—	—																					Lt.					
4									18'						17'-6"	—	—																								Lt.	1		1		
5		1																																									1			
TOTAL		1							1	1	1	1																																		

COMMISSION FURNISHED SIGNS

Post Number	Code Sign Number from Sign Legend Sheet: 1	5
1		
2	1	
3		1
4	1	1
5	1	
TOTAL	3	2

* See quantity for Type D Base on Standard Drawing 902.30A

** See quantity computations on Sheet No 8

193

6-1-73

SP-38A

FED. ROAD DIV. NO.	STATE	JOB NO. 7-U-60-11	SHEET NO.
5	MO.	PROJECT NO. 7-U-60BR-11	14B
DIST. NO.	COUNTY	ROUTE	SEC.
7	NEWTON	60 BUS	

2 of 3

TRAFFIC SIGNALS

CONDUIT

FROM	TO	CTR TO CTR DISTANCE	TRENCH							MEDIAN			PUSHED					PVC			4" ALUMINUM		REMARKS
			1¼	1½	2	2½	3	3½	4	1¼			2	2½	3	3½	4				TRENCH	PUSHED	
Ø	⊠	19	29																				
⊠	[2]	7					18																
[2]	②	27			30																		
[2]	[1]	76			49								25										
[1]	①	8			11																		
[1]	⑤	45			43								3										
[1]	⟨1⟩	6	7																				
[2]	⟨2⟩	11	12																				
	⟨3⟩⟨4⟩																						
[2]	[6]	191	189																				
[6]	⟨10⟩	17																			2	16	
[2]	[3]	95					49								44								
[3]	③	9			12																		
[3]	[7]	188			166								22										
[7]	⟨11⟩	16																			17		
[3]	⟨5⟩⟨6⟩	13	14																				
[3]	[4]	85					21								62								
[4]	④	9			12																		
[4]	⟨7⟩⟨8⟩	6	7																				
[4]	[5]	177			155								22										
[5]	⟨9⟩	39																			15	24	
TOTALS			258		478		88						72		106						34	40	

NOTE:
All conduit electrically bonded. See Drawing 802.10A.

CABLE

FINAL PLANS

FROM	TO	CTR TO CTR DISTANCE	POWER		CONTROL						DETECTOR		REMARKS
			1c #8		2c #12	3c #12	5c #12	7c #12	[illegible] #12		1c #14		
Ø	⊠	19	162										
⊠	①	91						153					
"	②	34						237					
"	③	111						154					
"	④	196			232			722					
"	⑤	128			158			158					
"	[1]	83			100								
"	[2]	7			54								
"	[3]	102			238								
"	[4]	187			420								
"	[5]	364			393								
"	[6]	198			215								
"	[7]	290			313								
[1]	⟨1⟩	10									248		
[2]	⟨2⟩	17									262		
[2]	⟨3⟩	30									288		
[2]	⟨4⟩	55									338		
[3]	⟨5⟩	19									266		
[3]	⟨6⟩	33									294		
[4]	⟨7⟩	11									250		
[4]	⟨8⟩	44									316		
[5]	⟨9⟩	39											Factory leads
[6]	⟨10⟩	17											Factory leads
[7]	⟨11⟩	16											Factory leads
SUB-TOTALS			162		2123			1424			2262		
EXTRA FOR CUTTING, ETC			8		107			76			118		
TOTALS			170		2230			1500			2380		

194

6-1-73

SP-38B

FED ROAD DIV NO	STATE	JOB NO. 7-U-60-11	SHEET NO
5	MO.	PROJECT NO. 7-U-60BR-11	14 B
DIST NO	COUNTY	ROUTE	SEC
7	NEWTON	60	

BUS

3 of 3

TRAFFIC SIGNALS

SIGNAL HEADS

FINAL PLANS

POST NUMBER	FACE NUMBER	DOWN LIGHT	*INDICATIONS									
			12" LENS CONVENTIONAL									
			R	Y	G	S	L	RI	¥	¥	W	DW
1	1		1	1	1							
1	2		1	1	1							
2	3		1	1	1							
2	4		1	1	1							
2	5		1	1			1					
3	6		1	1	1							
3	7		1	1	1							
4	8	1	1	1			1					
4	9		1	1	1							
4	10		1	1	1							
5	11	1	1	1			1					
TOTALS		2	11	11	8		3					

POST NUMBER	FACE NUMBER	*INDICATIONS														
		12" LENS OPT. LIMITING										8" LENS				
		R	Y	G	S	L	RI	¥	¥	W	DW	R	Y	G	DW	W
1	1															
1	2															
2	3															
2	4															
2	5															
3	6															
3	7															
4	8															
4	9															
4	10															
5	11															
TOTALS																

POST NUMBER	FACE NUMBER	*VISORS						*LOUVERS					
		12"		8" LENS									
		STD	TUN.	STD	TUNNEL								
		9.5	12	8	8	12	16	A	B	C	D	E	F
1	1		3										
1	2		3										
2	3		3										
2	4		3										
2	5		3					2					
3	6		3										
3	7		3										
4	8		3					2					
4	9		3										
4	10		3										
5	11		3					2					
TOTALS			33					6					

POST NUMBER	FACE NUMBER	*BACKPLATES											*BRKT		
		LENS COMBINATION											TYPE		
		12"	0	1	1	1	2	2	3	4	4	5			
		8"	3	0	2	3	1	2	0	0	1	0	I	II	III
1	1								1				1		
1	2								1				1		
2	3												1		
2	4								1				1		
2	5								1				1		
3	6								1				1		
3	7								1				1		
4	8													1	
4	9													—	
4	10								1				1		
5	11												1		
TOTALS									7				9	1	

POST NUMBER	FACE NUMBER	ONE-FACE																					
		SECTIONS																					
		1-					2-		3-					4-					5-				
		T	S	M	C	B	T	S	T	S	M	C	B	T	S	M	C	B	T	S	M	C	B
1	1												1										
1	2												1										
2	3									1													
2	4												1										
2	5												1										
3	6												1										
3	7												1										
4	8																						
4	9																						
4	10												1										
5	11								1														
TOTALS									1	1			7										

POST NUMBER	FACE NUMBER	TWO-FACES																									
		SECTIONS																									
		11-				22-		33-				34-				35-				44-				45-			
		T	S	M	C	T	S	T	S	M	C	T	S	M	C	T	S	M	C	T	S	M	C	T	S	M	C
1	1																										
1	2																										
2	3																										
2	4																										
2	5																										
3	6																										
3	7																										
4	8								1																		
4	9								—																		
4	10																										
5	11																										
TOTALS									1																		

POST NUMBER	FACE NUMBER	THREE-FACES																	FOUR-FACES			
		SECTIONS																	SEC			
		111-			222-		333-			334-			344-			444-			-		-	
		T	S	C	T	S	T	S	C	T	S	C	T	S	C	T	S	C	T	C	T	C
1	1																					
1	2																					
2	3																					
2	4																					
2	5																					
3	6																					
3	7																					
4	8																					
4	9																					
4	10																					
5	11																					
TOTALS																						

198

* ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.

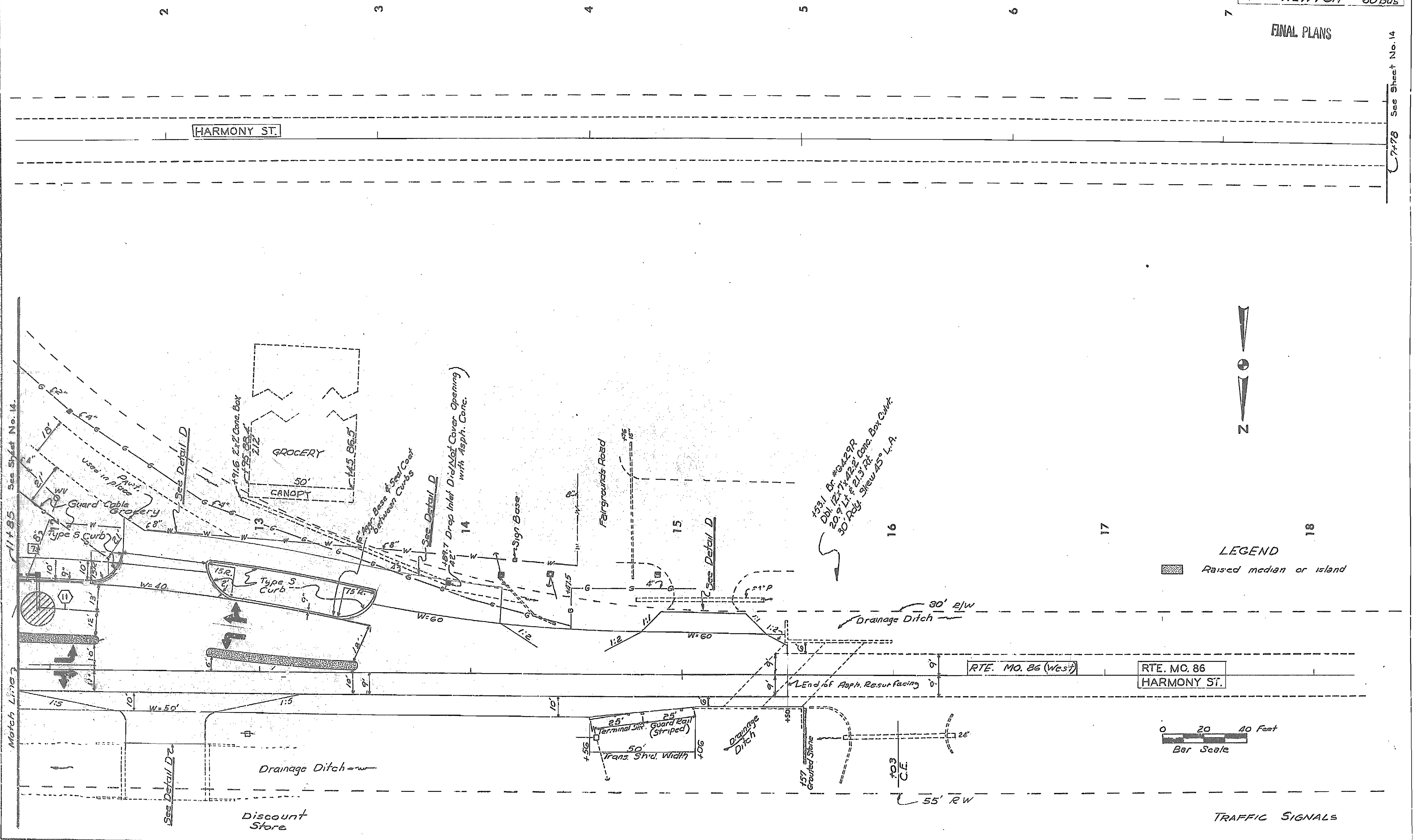
6-1-73

SP-38C

7-U-60BR-11 Sheet No. 15

7 NEWTON 60 Bus

FINAL PLANS



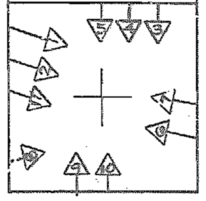
FED. ROAD DIV. NO.	STATE	JOB NO. 7-U-60-11 PROJECT NO. 7-U-60BR-11	SHEET NO
5	MO.		16
DIST. NO.	COUNTY	ROUTE	SEC.
7	NEWTON	60	

FINAL PLANBUS

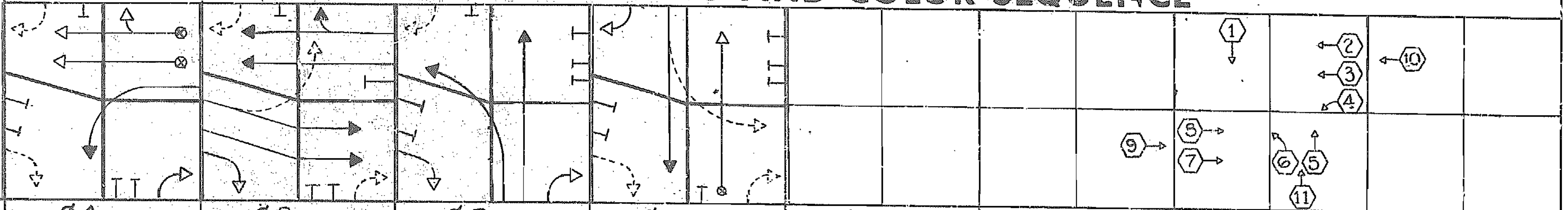
LEGEND

- ⟶ -ACTUATED VEHICULAR MOVEMENT
- ▷ -NON-ACTUATED VEHICULAR MOVEMENT
- ⋯▷ -PARTIALLY RESTRICTED VEHICULAR MOVEMENT
- ⟶ -ACTUATED PEDESTRIAN MOVEMENT
- ⋯▷ -NON-ACTUATED PEDESTRIAN MOVEMENT
- ⊗ -DETECTOR DISCONNECTED
- ① -DETECTOR SWITCHED (FUNCTION NO. 1)
- R/W-RIGHT OF WAY INTERVAL
- Ø-TRAFFIC PHASE
- R-RED
- Y-YELLOW
- G-CIRCULAR GREEN
- S-GREEN STRAIGHT AHEAD ARROW
- ⬅-YELLOW LEFT ARROW
- L-GREEN LEFT ARROW
- ➡-YELLOW RIGHT ARROW
- RT.-GREEN RIGHT ARROW
- W-WALK
- DW-DON'T WALK
- FDW-FLASHING DON'T WALK

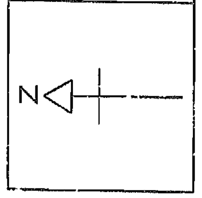
SIGNAL FACE LOCATION



TRAFFIC PHASING AND COLOR SEQUENCE



NORTH



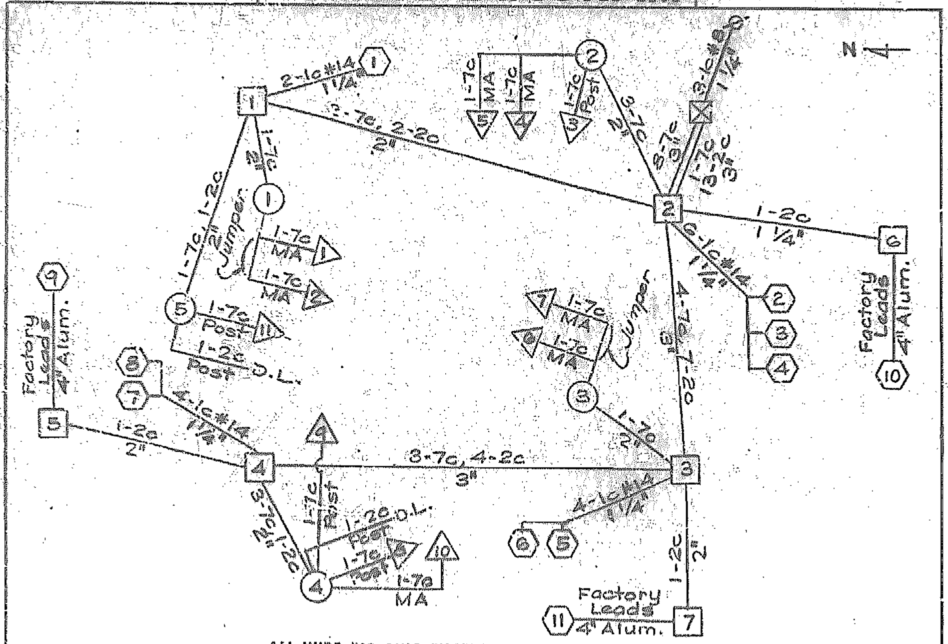
CONT. NO.		ØA					ØB					ØC					ØD				
APPROACH	FACE NO.	R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø			
			ØB	ØC	ØD			ØC	ØD	ØA			ØD	ØA	ØB			ØA	ØB	ØC	
NORTH BOUND Rte. US 60 Bus	1	G	G	Y	Y		G	Y	Y	G		R	R	R	R		R	R	R	R	
	2	G	G	Y	Y		G	Y	Y	G		R	R	R	R		R	R	R	R	
	8	L	Y	Y	Y		R	R	R	R		R	R	R	R		R	R	R	R	
	11	L	Y	Y	Y		R	R	R	R		R	R	R	R		R	R	R	R	
SOUTH BOUND Rte. US 60 Bus. & MO. 86	6	R	R	R	R		G	Y	Y	Y		R	R	R	R		R	R	R	R	
	7	R	R	R	R		G	Y	Y	Y		R	R	R	R		R	R	R	R	
EAST BOUND Rte. MO 86	3	R	R	R	R		R	R	R	R		G	G	Y	Y		G	Y	Y	G	
	4	R	R	R	R		R	R	R	R		G	G	Y	Y		G	Y	Y	G	
	5	R	R	R	R		R	R	R	R		L	Y	Y	Y		R	Y	Y	L	
WEST BOUND Harmony St.	9	R	R	R	R		R	R	R	R		R	G	R	R		G	Y	Y	Y	
	10	R	R	R	R		R	R	R	R		R	R	R	R		G	Y	Y	Y	
BOUND																					

CONT. NO.
APPROACH
BOUND
BOUND
BOUND
BOUND
BOUND

SUGGESTED TIMING

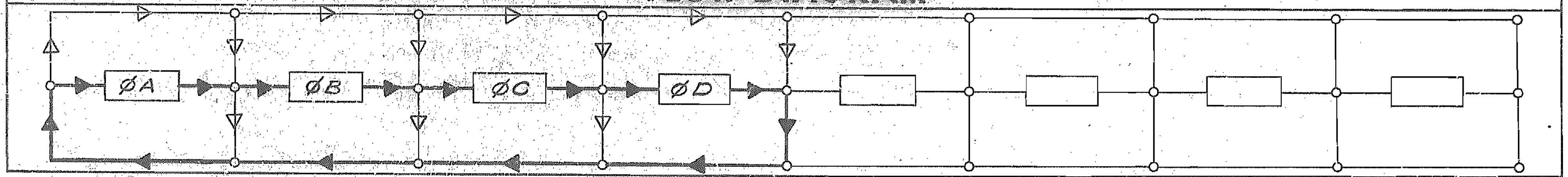
Ø	Min. Initial	Unit Extension	Max Green	Yellow Clearance	
A	3	2	20	3	
B	3	2	30	3	
C	3	2	30	3	
D	3	2	20	3	

WIRING DIAGRAM



ALL WIRE #12 AWG EXCEPT WHERE SHOWN

FLOW DIAGRAM



⟶ Phase sequence when there is demand for all phases.

◁ Skip phase sequence.

DETECTOR OPERATION

DET.	During Ø A	During Ø B	During Ø C	During Ø D
1	Calls Ø D	Calls Ø D	Calls Ø D	Extends Ø D
2-3	Disconnects	Extends Ø B	Calls Ø B	Calls Ø B
4	Extends Ø A	Calls Ø A	Calls Ø A	Calls Ø A
5	Calls Ø C	Calls Ø C	Extends Ø C until Det. 1 is actuated, then disconnects.	Disconnects
6	Calls Ø C	Calls Ø C	Extends Ø C	Calls Ø C
7-8	Calls Ø B	Extends Ø B	Calls Ø B	Calls Ø B
9	Calls Ø B	Disconnects on Green	Calls Ø B	Calls Ø B
10	Disconnects on Green	Disconnects on Green	Calls Ø B	Calls Ø B
11	Calls Ø C	Calls Ø C	Disconnects on Green	Disconnects on Green

CONTROLLER TYPE 4 Ø

FLASHING OPERATIONS

	FY
ALL	FR
	F

TRAFFIC SIGNAL
CONTROL OPERATION
Route US 60 Bus (Neosho Blvd.)
INTERSECTION OF
Route MO 86 (Harmony St.)
WITH

SP-37

6-1-73

Newton
7-U-60BR-11

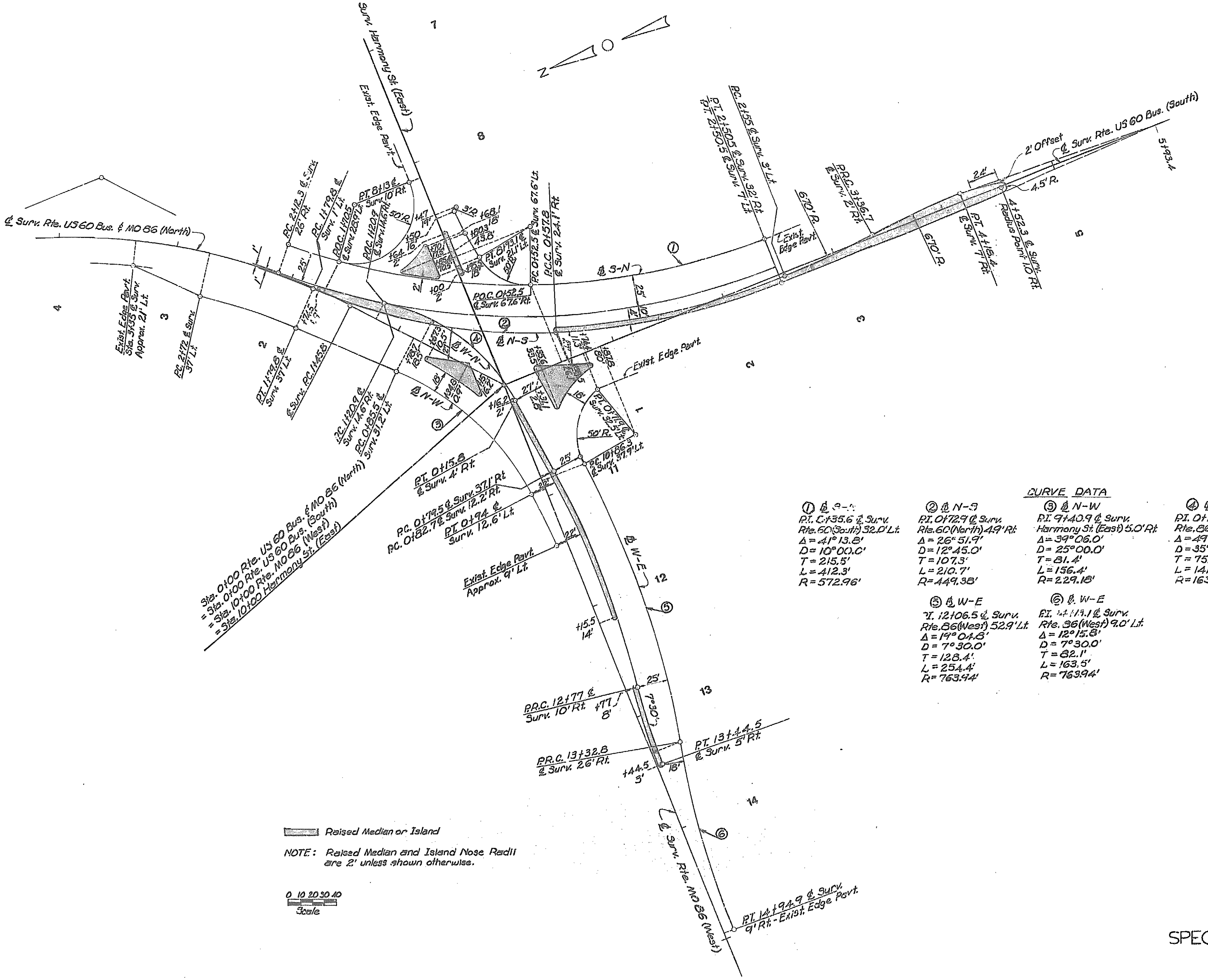
192

X

FED. ROAD DIV. No.	STATE	FEDERAL PROJECT No. & SEC.		SHEET No.
5	MO	7-U-60BR-11		17
DIST. No.	COUNTY		ROUTE	SEC.
7	NEWTON		60	BUS.

JOB NO. 7-U-60-11

FINAL PLANS



CURVE DATA

① ℄ S-N
P.I. 0+35.6 ℄ Surv. Rte. 60 (South) 32.0' Lt.
Δ = 41° 13.8'
D = 10° 00.0'
T = 215.5'
L = 412.3'
R = 572.96'

② ℄ N-S
P.I. 0+72.9 ℄ Surv. Rte. 60 (North) 49' Rt.
Δ = 26° 51.9'
D = 12° 45.0'
T = 107.3'
L = 210.7'
R = 449.38'

③ ℄ N-W
P.I. 9+40.9 ℄ Surv. Harmony St. (East) 5.0' Rt.
Δ = 39° 06.0'
D = 25° 00.0'
T = 81.4'
L = 156.4'
R = 229.18'

④ ℄ W-N
P.I. 0+12.9 ℄ Surv. Rte. 86 (West) 21.9' Rt.
Δ = 49° 37.8'
D = 35° 00.0'
T = 75.7'
L = 141.8'
R = 163.70'

⑤ ℄ W-E
P.I. 12+06.5 ℄ Surv. Rte. 86 (West) 52.9' Lt.
Δ = 19° 04.8'
D = 7° 30.0'
T = 128.4'
L = 254.4'
R = 763.94'

⑥ ℄ W-E
P.I. 14+19.1 ℄ Surv. Rte. 86 (West) 9.0' Lt.
Δ = 12° 15.8'
D = 7° 30.0'
T = 82.1'
L = 163.5'
R = 763.94'

▨ Raised Median or Island

NOTE: Raised Median and Island Nose Radii are 2' unless shown otherwise.

SPECIAL SHEET NO. 1

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

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

198

SP-2
~~APRIL~~ 1974
January

MISSOURI STATE HIGHWAY COMMISSION
STANDARD PLANS

FED. ROAD DIVISION		PROJECT	SHEET NO.
5	MO.	7-U-60BR-11	18
DIST. NO.		COUNTY	ROUTE
7		NEWTON	60BR

✓	NO.	DESCRIPTION
✓	203.00B	EXCAVATION & EMBANKMENT
	203.02A	UNDERGRADING
	203.10	TABULATED EARTHWORK & SECTION DATA
	203.20	SUPERELEVATION SPIRALS & WIDENING (UNDIVIDED)
	203.21	SUPERELEVATION SPIRALS & WIDENING (DIVIDED)
	203.30	ENTRANCES & APPROACHES (LESS THAN 400 ADT)
	203.31A	ENTRANCES & APPROACHES (GREATER THAN 400 ADT - NO SAFETY ZONE)
	203.32C	ENTRANCES & APPROACHES (GREATER THAN 400 ADT - SAFETY ZONE)
	203.40C	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (NO SAFETY ZONE)
	203.41C	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (SAFETY ZONE)
	203.50E	TYPICAL CROSS-OVERS (DIVIDED HIGHWAYS)
	204.00A	EMBANKMENT CONTROL MEASURING DEVICES
	502.00D	CONCRETE PAVEMENT APPURTENANCES
	502.10B	DOWEL SUPPORTING UNITS
	502.20	CONCRETE APPROACH SLABS TO RAILROAD CROSSINGS
	503.00D	CONCRETE APPROACH SLABS TO BRIDGES
	602.00	RIGHT-OF-WAY & DRAIN MARKERS
	604.05	PIPE CULVERT HEADWALLS - TYPE S
	604.10	HEADWALL-WITH ENERGY DISSIPATOR - 18"
	604.11	HEADWALL-WITH ENERGY DISSIPATOR - 24"
	604.12	HEADWALL-WITH ENERGY DISSIPATOR - 30"
	604.13	HEADWALL-WITH ENERGY DISSIPATOR - 36"
	604.14	HEADWALL-WITH ENERGY DISSIPATOR - 42"
	604.15	HEADWALL-WITH ENERGY DISSIPATOR - 48"
	604.20A	DROP INLET - TYPE B
	604.21	DROP INLET - TYPE C
	604.22	DROP INLET - TYPE D
	604.23	DROP INLET - TYPE E
	604.24	DROP INLET - TYPE EE
	604.25	DROP INLET - TYPE F
	604.26A	DROP INLET - TYPE G
	604.27	DROP INLET - TYPE S (3 SHEETS)
✓	604.28B	DROP INLET - TYPE T (ALSO INCLUDE 614.30)
	604.29A	DROP INLET - TYPE X
	604.30A	CONCRETE MANHOLES (ALSO INCLUDE 614.30)
	604.40C	PIPE COLLARS
	605.10A	CLASS A UNDERDRAINS
✓	606.00D	GUARD RAIL (2 SHEETS)
	606.20B	BRIDGE ANCHOR SECTION (ALSO INCLUDE 606.00)
	606.21A	BRIDGE ANCHOR SECTION - CURB TYPE (ALSO INCLUDE 606.00)
✓	606.30A	TERMINAL SECTION (ALSO INCLUDE 606.00)
✓	606.40	GUARD CABLE
	606.50	GUARD FENCE
	607.10J	CHAIN LINK FENCE
	607.11A	CHAIN LINK FENCE FOR RETAINING WALLS
	607.20C	WOVEN WIRE FENCE (ALSO INCLUDE 607.10)

✓		DESCRIPTION
✓	608.00	PAVED APPROACHES
	608.10A	CONCRETE SIDEWALK
	608.20	CONCRETE STEPS
✓	609.00C	CONCRETE CURB - CURB & GUTTER - GUTTER
✓	609.15	PAVED DITCHES
	609.40C	DRAIN BASIN, SHLDR. PAVING & FILL SLOPE AT BR. ENDS
	609.60	DITCH LINER
	610.20A	BRICK MANHOLES (ALSO INCLUDE 614.30)
	611.60A	CONCRETE SLOPE PROTECTION
	612.10B	BARRICADES AND FLASHER SIGNS
✓	612.20H	STANDARD CONSTRUCTION SIGNS (5 SHEETS) (ALSO INCLUDE 903.00)
	614.10E	CURB INLETS, GRATES & BEARING PLATES
✓	614.30	MANHOLE FRAMES & COVERS
	615.00	OFFICE FOR ENGINEER
	617.00J	CONCRETE MEDIAN BARRIER - TYPE A (3 SHEETS)
	702.01A	16" CONCRETE PILES (APPROVED TYPES) (2 SHEETS)
	702.02	CAST-IN-PLACE CONCRETE PILES (APPROVED TYPES)
	703.15B	CONCRETE BOX CULVERTS, H15 LOADING (3 SHEETS)
	703.20B	CONCRETE BOX CULVERTS, HS20 LOADING (3 SHEETS)
	703.24A	CONCRETE BOX CULVERTS, SKEW DATA (703.15, 703.20, 703.30)
✓	703.30A	CONCRETE BOX CULVERTS, 4 SPANS & LESS - ALL LOADING
✓	703.35	CONCRETE BOX CULVERTS, EXTENSION DETAILS
	703.50B	CONCRETE DOUBLE BOX STRUCTURE - SQUARE
	703.51D	CONCRETE DOUBLE BOX STRUCTURE - SKEWED
	703.52A	CONCRETE DOUBLE BOX STRUCTURE - CUT SECTIONS
	703.53A	DOUBLE BOX STRUCTURE TOP SLAB REINF. H15 LOADING (5 SHEETS)
	703.54A	DOUBLE BOX STRUCTURE TOP SLAB REINF. H20 OR HS20 LOADING (5 SHEETS)
	703.60A	CONCRETE BOX STRUCTURE - PIPE INLET
✓	706.30A	REINFORCING BAR SUPPORTS
	712.40	STEEL DAMS FOR BRIDGES (6" CHANNEL)
	712.41	STEEL DAMS FOR BRIDGES (4" CHANNEL)
	712.42	FILLET WELDED TEE JOINT TEST
	717.11	TIMBER BRIDGES - 11' ROADWAY
	717.15	TIMBER BRIDGES - 15' ROADWAY
	717.19	TIMBER BRIDGES - 18' ROADWAY
	725.31	METAL CURTAIN WALL AND METAL INLETS
✓	726.33	CULVERT INSTALLATION METHODS
	731.00D	PRECAST MANHOLES (ALSO INCLUDE 614.30)
✓	732.00D	FLARED END SECTION (2 SHEETS)
	733.00F	PRECAST DROP INLETS (4 SHEETS) (ALSO INCLUDE 614.30)
	806.00A	EROSION CONTROL NETTING (INSTALLATION)
	806.02	STAPLE PLACEMENT FOR TYPE III NETTING
	807.00	GLASS FIBER MAT (INSTALLATION)

✓	NO.	DESCRIPTION FINAL PLANS
		HIGHWAY LIGHTING
✓	901.00C	POLES & APPURTENANCES - 30' (2 SHEETS)
✓	901.01G	POLES & APPURTENANCES - 45' (2 SHEETS)
	901.02	POLE MOUNTED SUBSTATION-2400 V - 480 V MULTIPLE CIRCUIT
	901.03	POLE MOUNTED SUBSTATION-7200 V - 480 V MULTIPLE CIRCUIT
	901.10	POLE MOUNTED SUBSTATION-480 V MULTIPLE CIRCUIT
	901.11	POLE MOUNTED SUBSTATION - FOR DELTA & UNG/Y PRIM. SERV.-480 V MULT. CIR.
	901.12	POLE MOUNT. CONT. STA.-SECONDARY SERV.-480 V MULTI. CIR. (NOT METERED)
	901.13	PAD MOUNT. SUBSTATION-10 TO 50 KVA-4800 V MAX. PRI. INPUT
	901.14	PAD MOUNT. SUBSTATION-5000 TO 15,000 V PRIMARY - 10 TO 50 KVA
	901.15	POLE MOUNT. CONT. STA.-SEC. SERV.-120, 240, & 480 V MULTI. CIR.
	901.15	POLE MOUNT. CONT. STA.-SEC. SERV.-480 V MULTI. CIR. (METERED)
	901.17	POLE MOUNT. CONT. STA.-SEC. SERV.-UTIL CO. POLE-120/240 V MULTI. CIR.
✓	901.18A	POLE MOUNT. CONT. STA.-SEC. SERV.-120/240 V MULTI. CIR.
	901.19	POLE MOUNT. CONT. STA.-SEC. SERV.-240 V MULTI. CIR. (NOT METERED)
	901.20	POLE MOUNT. CONT. STA.-SEC. SERV.-120/240 V MULTI. CIR. (SIG. METERED)
	901.21	POLE MOUNT. CONT. STA.-SEC. SERV.-480 V MULTI. CIR. (NOT METERED)
	901.22	POLE MOUNT. CONT. STA.-SEC. SERV.-120/240 & 480 V MULTI. CIR. (BOTH METERED)
	901.23	POLE MOUNT. CONT. STA.-SEC. SERV.-240 V MULTI. CIR. (METERED)
	901.24	POLE MOUNT. CONT. STA.-SEC. SERV.-240 V MULTI. CIR. (LTS & SIGS BOTH METERED)
		TRAFFIC SIGNALS
✓	902.00A	SIGNAL HEADS, LENSES AND MOUNTING
✓	902.10A	PULL BOXES, CONTROLLERS, COND. INSTAL., POWER SUPPLY
	902.20A	TUBULAR STEEL POSTS - CANTILEVER TRUSS TYPE C-1
✓	902.30A	CONCRETE BASES
✓	902.40A	TUBULAR STEEL POST
✓	902.50A	DETECTORS
	902.60A	SPAN WIRE DETAILS
		HIGHWAY SIGNING
✓	903.00A	STANDARD ALPHABETS (SILK SCREEN - 5 SHEETS)
	903.01	ALPHABETS (CUT OUT - 5 SHEETS)
	903.02E	HIGHWAY SIGNING (7 SHEETS)
	903.03N	SIGN MOUNTING DETAILS (7 SHEETS)
	903.04	WEIGH STATION SIGNING
	903.05A	TUBULAR SPAN SUPPORT - ONE TUBE, TYPE S
	903.06A	TUBULAR SPAN SUPPORT - TWO TUBE, TYPE S
	903.07A	TUBULAR CANTILEVER SUPPORTS, TYPE C
	903.08B	TUBULAR BUTTERFLY SUPPORTS, TYPE
	903.09C	LIGHTING SUPPORT BRACKET
	903.10F	SIGN TRUSSES - OVERHEAD ALUMINUM (8 SHEETS)
	903.12C	SIGN TRUSSES - BUTTERFLY & CANTILEVER - STEEL (7 SHEETS)
	903.30E	SIGN TRUSSES - OVERHEAD STEEL (7 SHEETS)

NOTES: Plans for this project were developed using Drawings from this index. Plans issued for this project contain the Drawings checked. If any Drawing(s) is missing, it will be furnished upon notification and its omission will not be cause for claim on this project.

SP-1

DESIGN DESIGNATION

A.D.T. - 1986 = 14370
A.D.T. - 2006 = 20120
D = 60%
D.H.V. = 10%
T = 2% OF ADT
V = 45 M.P.H.

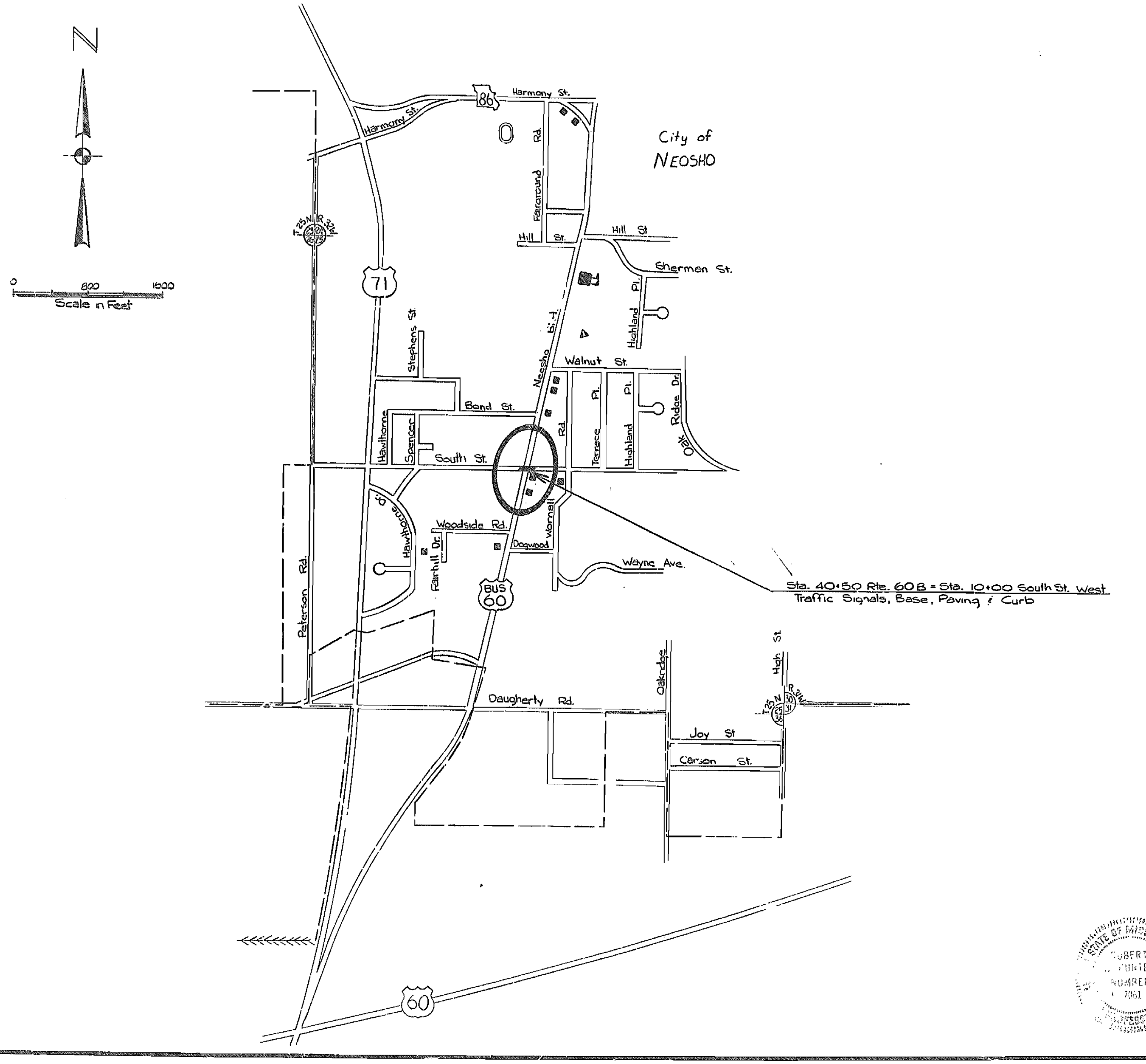
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

NEWTON COUNTY

COUNTY NEWTON
ROUTE 60 BUSINESS
PROJECT 7-U-60 BUS. -370
JOB NO. 7-U-60 BUS.-370

FINAL PLANS

JUL 3



Sta. 40+50 Rte. 60B = Sta. 10+00 South St. West
Traffic Signals, Base, Paving & Curb

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (1 SHEET)	2
SUMMARY (1 SHEET)	2-A
SUMMARY (2 SHEETS)	2-B
PLAN-PROFILE	3-
REFERENCE POINTS	
SPECIAL SHEETS (TRAFFIC CONTROL PLAN)	4
LIGHTING	
SIGNALS	5-6
SIGNING	
CULVERT SECTIONS	
BRIDGE DRAWINGS	
STANDARD PLANS INDEX	7
CROSS SECTIONS	
COMPUTER DATA	

CONVENTIONAL SIGNS
(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
- POWER
- GAS
- WATER

NOTE: DASHED OR OPEN SYMBOL INDICATES EXISTING FEATURE

LENGTH OF PROJECT

END OF PROJECT STA. +
BEGINNING OF PROJECT STA. +

APPARENT LENGTH FEET

EQUATIONS AND EXCEPTIONS

TOTAL CORRECTIONS FEET
NET LENGTH OF PROJECT FEET

STATE LENGTH 0 MILES

Not Applicable

FEDERAL LENGTH 0 MILES

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

SUBMITTED

CHIEF ENGINEER DATE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR DATE

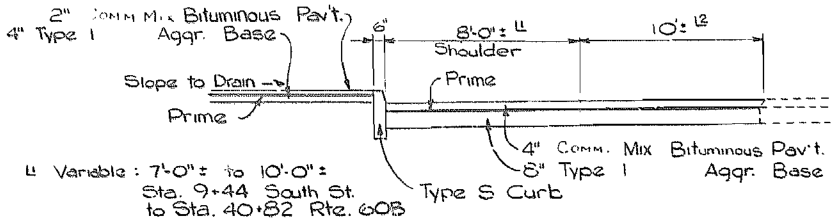
ROBERT HUNTER NUMBER 7061

60-161

REV SEP 83
50562

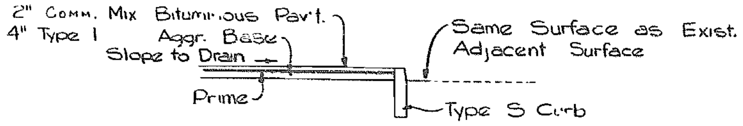
STATE	JOB NO.	7-U-60 BUS.-370	SHEET NO.
MO.	PROJECT NO.	7-U-60BUS-370	2
DIST NO.			ROUTE
7	COUNTY	NEWTON	60B

FINAL PLANS

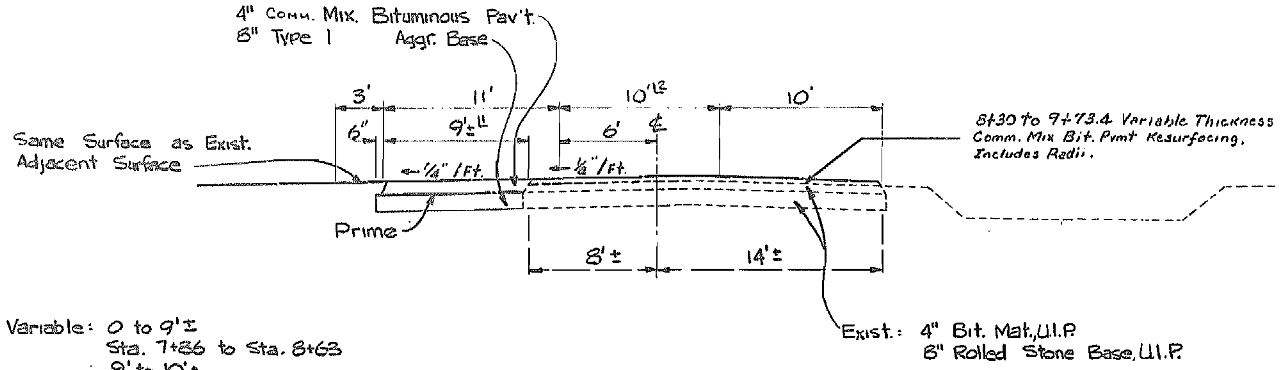


L1 Variable: 7'-0"± to 10'-0"±
Sta. 9+44 South St.
to Sta. 40+82 Rte. 60B
L2 Variable: 10'-0"± to 0'
Sta. 9+44 South St to
Sta. 40+[illegible]4 Rte. 60B

SECTION A-A

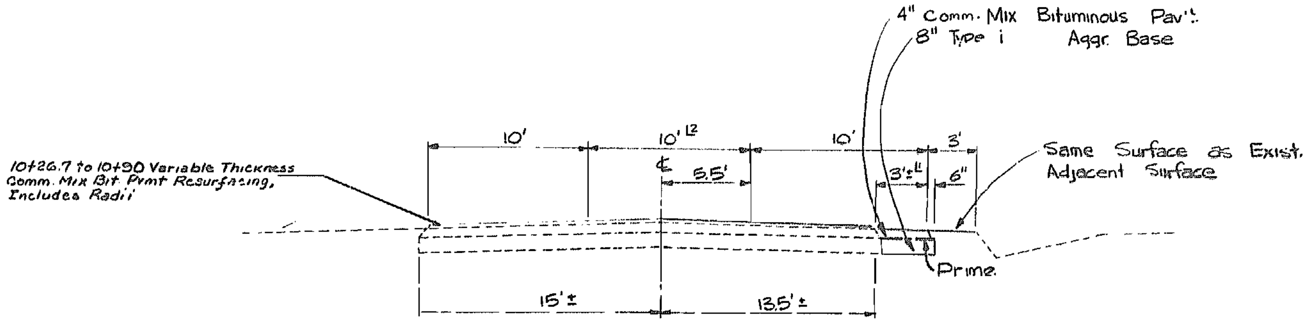


SECTION B-B



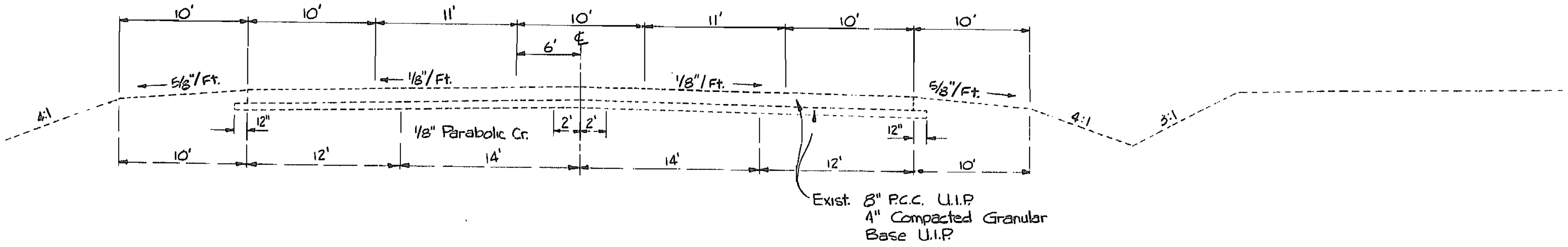
L1 Variable: 0 to 9'±
Sta. 7+86 to Sta. 8+63
9' to 10'±
Sta. 8+63 to Sta. 9+44
L2 Variable: 0 to 10'
Sta. 8+05 to Sta. 8+63
to 0'

TYPICAL SECTION
South Street East
Sta. 7+86 to Sta. 9+44



L1 Variable: 0 to 3'
Sta. 10+79 to Sta. 11+88
L2 Variable: 0 to 10'
Sta. 10+79 to Sta. 11+88

TYPICAL SECTION
South Street West
Sta. 10+79 to Sta. 11+88



TYPICAL SECTION
Rte. 60 Business
Sta. 35+66.3 to Sta. 45+26.7

162

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION
SUMMARY OF QUANTITIES

FINAL PLANS

SHEET 1 OF 1

STATE	JOB NO.	SHEET NO
MO.	7-U-60Bus-370	2A
DIST. NO.	PROJECT NO 7-U-60Bus-370	ROUTE
7	COUNTY NEWTON	60B

ITEM	DESCRIPTION	UNIT	QUANTITY

ITEM	DESCRIPTION	UNIT	QUANTITY
	--		
	ACCEPTED 3/24/87		
	PREPARED BY: S. WALTON		
	RESIDENT ENGINEER	DATE	3/25/87
	DIST. OFFICE BY Donald R. Lowery	DATE	4/2/87
	MAIN OFFICE BY	DATE	
	Mark J. Hoster 5-19-87		

ITEM	DESCRIPTION	UNIT	QUANTITY
304-00.43	TYPE 1 AGGREGATE FOR BASE (4 IN. THICK)	SQ YD	8
304-00.83	TYPE 1 AGGREGATE FOR BASE (8 IN. THICK)	SQ YD	253
401-10.11	ASPHALT CEMENT (BITUMINOUS PAVEMENT) COMMERCIAL MIX	TON	84
401-20.10	MINERAL AGGREGATE (BITUMINOUS PAVEMENT) COMMERCIAL MIX	TON	[illegible]
601-10.00	FIELD LABORATORIES	LUMP SUM	1
609-10.10	CONCRETE CURB (6 IN. HEIGHT AND UNDER) TYPE S	LIN FT	16
616-10.05	CONSTRUCTION SIGNS	SQ FT	112
616-10.20	DRUMS	EACH	13
616-10.40	FLASHING ARROW PANEL	EACH	2
616-10.47	TYPE III OBJECT MARKER	EACH	12
	TRAFFIC SIGNALS		
902-02.13	SIGNAL HEAD, TYPE 3S	EACH	2
902-05.13	SIGNAL HEAD, TYPE 3B	EACH	10
902-26.50	150 WATT 120 VOLT HIGH PRESSURE SODIUM LUMINAIRE	EACH	4
902-31.22	POST, TYPE CL, 22A	EACH	1
902-31.24	POST, TYPE CL, 24A	EACH	1
902-31.38	POST, TYPE CL, 38A	EACH	2
902-42.40	CONTROLLER ASSEMBLY HOUSING, MODULAR BY FUNCTION, KEYBOARD ENTRY, 4 PHASE, TYPE DP	EACH	1
902-49.20	DETECTOR, PUSHBUTTON	EACH	8
902-49.40	DETECTOR, INDUCTION LOOP VEHICLE	EACH	14
902-51.25	CONDUIT, 1 1/4 IN., TRENCH	LIN FT	514
902-52.00	CONDUIT, 2 IN., TRENCH	LIN FT	143
902-53.50	CONDUIT, 3 1/2 IN., TRENCH	LIN FT	121
902-73.50	CONDUIT, 3 1/2 IN., PUSHED	LIN FT	56
902-82.08	CABLE, 8 AWG 1 CONDUCTOR, POWER	LIN FT	90
902-83.02	CABLE, 12 AWG 2 CONDUCTOR	LIN FT	3,240
902-83.07	CABLE, 12 AWG 7 CONDUCTOR	LIN FT	1,220
902-85.00	CABLE, LOOP DETECTOR, IN DUCT	LIN FT	4,030
902-86.00	POWER SUPPLY ASSEMBLY	EACH	1
902-87.30	30 FT SERVICE POLE	EACH	1
902-88.01	PULL BOX, TYPE I	EACH	5
902-91.00	BASE, CONCRETE	CU YD	11.3
	CONTINGENT ITEMS		
501.01	15 IN. PIPE CULV. GR. II	LIN. FT.	15
501.02	REMOVE CURB STA. 41+	Lump Sum	1

7-U-60BUS-370 60 BUS NEWTON

62

163

SP-2B

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

FINAL PLANS

STATE	JOB NO 7-U-60Bus.-370	SHEET NO
MO.	PROJECT NO 7-U-60Bus-370	2B
DIST NO 7	COUNTY NEWTON	ROUTE 60B

Sheet 1 of 2

Type 1 Aggr. Base

Sheet	Route	Sta.	Route	Sta.	Location	Remarks	8" SQ. YD.	4" SQ. YD.	
3	South St.	7+86	Rte. 60B	40+76	Lt.		178.3		
3	South St.	10+79	South St.	11+88	Rt.		34.4		
3	South St.	9+44	Rte. 60B	40+82	Lt	Shoulder	40.5		
3	South St.	9+44	Rte. 60B	40+82	Lt.	25'± Lt. - Island		74.3	
3	60B Lt.	41+03	C.E. Widening		Lt.			43.2	Field measured
					TOTALS		253.2	117.5	
						USE ~	253	118	

Type S Curb

Sheet	Route	Sta.	Route	Sta.	Location	Remarks	Lin. Ft.	
3	South St.	9+44	Rte. 60B	40+82	Lt.	25'± - ISLAND	89.83	
3	60 Bus	C.E. Lt. 41+03					7.83	Field measured
						TOTAL	97.66	
						USE ~	98	

GROUP II PIPE ~ ENTRANCES

Sta.	Loc.	15"	Remarks
41+03	C.E. Lt	15'	Extended existing pipe ~ 50' Top
			No Cl. 3 Exc.
	TOTAL	15'	L.F.

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

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

SP-2BS Rev Oct 1, 1984

STATE	JOB NO. 7-U 60BUS-370	SHEET NO.
MO.	PROJECT NO. 7-U-60BUS-370	2B
DIST. NO.	COUNTY NEWTON	ROUTE
7		[illegible]

Sheet 2 of 2

FINAL PLANS

SUMMARY OF QUANTITIES

SIGN	SIZE (INS)	AREA (SQ FT)	QUANTITY	TOTAL AREA (SQ FT)	QUANTITY RELOCATED	TOTAL RELOCATED AREA (SQ FT)	DESCRIPTION
WARNING SIGNS							
WO1-1Lb	48x48	16.0					TURN (SYMBOL LEFT ARROW)
WO1-1Rb	48x48	16.0					TURN (SYMBOL RIGHT ARROW)
WO1-2Lb	48x48	16.0					CURVE (SYMBOL LEFT ARROW)
WO1-2Rb	48x48	16.0					CURVE (SYMBOL RIGHT ARROW)
WO1-3Lb	48x48	16.0					REVERSE TURN (SYMBOL LEFT ARROW)
WO1-3Rb	48x48	16.0					REVERSE TURN (SYMBOL RIGHT ARROW)
WO1-4Lb	48x48	16.0					REVERSE CURVE (SYMBOL LEFT ARROW)
WO1-4Rb	48x48	16.0					REVERSE CURVE (SYMBOL RIGHT ARROW)
WO1-6	48x24	8.0					HORIZONTAL ARROW (SYMBOL)
WO1-6a	72x36	18.0					HORIZONTAL ARROW (SYMBOL)
WO1-7	48x24	8.0					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72x36	18.0					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-8	18x24	3.0					CHEVRON (SYMBOL)
WO3-1b	48x48	16.0					STOP AHEAD
WO3-2b	48x48	16.0					YIELD AHEAD
WO3-3b	48x48	16.0					SIGNAL AHEAD (SYMBOL)
WO3-3x	24x18	3.0					SIGNAL AHEAD (PLAQUE)
WO3-4b	48x48	16.0					BE PREPARED TO STOP
WO4-1Lb	48x48	16.0					MERGE (SYMBOL FROM LEFT)
WO4-1Rb	48x48	16.0					MERGE (SYMBOL FROM RIGHT)
WO4-1x	24x18	3.0					MERGE (PLAQUE)
WO5-1a	48x48	16.0					ROAD NARROWS
WO5-3a	48x48	16.0					ONE LANE BRIDGE
WO6-1b	48x48	16.0					DIVIDED HIGHWAY
WO6-2b	48x48	16.0					DIVIDED HIGHWAY ENDS
WO6-3c	48x48	16.0					TWO WAY TRAFFIC
WO8-1b	48x48	16.0					BUMP
WO8-2b	48x48	16.0					DIP
WO8-3	48x48	16.0					PAVEMENT ENDS
WO8-4b	48x48	16.0					SOFT SHOULDER
WO8-5b	48x48	16.0					SLIPPERY WHEN WET (SYMBOL)
WO8-5x	24x18	3.0					SLIPPERY WHEN WET (PLAQUE)
WO8-6b	48x48	16.0					TRUCK CROSSING
WO8-6c	48x48	16.0					TRUCK ENTRANCE (Includes 1000FT./1500FT. plate WO25-1a)
WO8-7b	48x48	16.0					LOOSE GRAVEL
WO8-9a	48x48	16.0					LOW SHOULDER
WO9-1R	48x48	16.0					RIGHT LANE ENDS (Includes LEFT/CENTER plate WO25-3c)
WO9-2Ra	48x48	16.0					LANE ENDS MERGE RIGHT (Includes LEFT plate WO25-3b)
W10-1a	42 Dia	9.6					RAILROAD CROSSING
WO12-1	24x24	4.0					DOUBLE DOWN ARROW (SYMBOL)
WO12-2a	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)
WO13-1a	24x24	4.0					ADVISORY SPEED (PLAQUE)
WO20-1	48x48	16.0	4	64.0			ROAD CONSTRUCTION AHEAD (Incl. RAMP/BRIDGE plate WO25-6)
WO20-2	48x48	16.0					DETOUR AHEAD (Includes 500 FT./1000 FT. plate WO25-1b)
WO20-3	48x48	16.0					ROAD CLOSED AHEAD (Incl. 500 FT./1000 FT. plate WO25-1c)
WO20-4a	48x48	16.0					ONE LANE ROAD AHEAD (Incl. 1000 FT./1500 FT. plate WO25-1a)
WO20-5	48x48	16.0	3	48.0			RIGHT LANE CLOSED AHEAD (Incl. LEFT/CENTER plate WO25-3d)
WO20-6a	48x48	16.0					RIGHT LANE CLOSED (Incl. LEFT/CENTER plate WO25-3c)
WO20-7a	48x48	16.0					FLAGMAN AHEAD (Includes 500 FT./1000 FT. plate WO25-1b)
WO20-9c	48x48	16.0					OPEN TRENCH
WO21-2a	48x48	16.0					FRESH OIL
WO21-5b	48x48	16.0					SHOULDER WORK AHEAD
WO21-7	36x36	9.0					SAND BLASTING
WO25-5	30x12	2.5					1/2 MILE/1 MILE (PLAQUE)
REGULATORY SIGNS							
R1-1b	48x48	13.25					STOP
R1-2a	48x48 x48	6.93					YIELD
R1-2x	36x36	9.0					TO ONCOMING TRAFFIC (PLAQUE)
R1-3	20x9	1.25					4-WAY (PLAQUE)
R1-5	20x9	1.25					3-WAY (PLAQUE)
R2-1b	36x48	12.0	3	36.0			SPEED LIMIT ______
R2-5	36x48	12.0	2	24.0			REDUCED SPEED AHEAD
R3-1b	36x48	12.0					NO RIGHT TURN
R3-2b	36x48	12.0					NO LEFT TURN

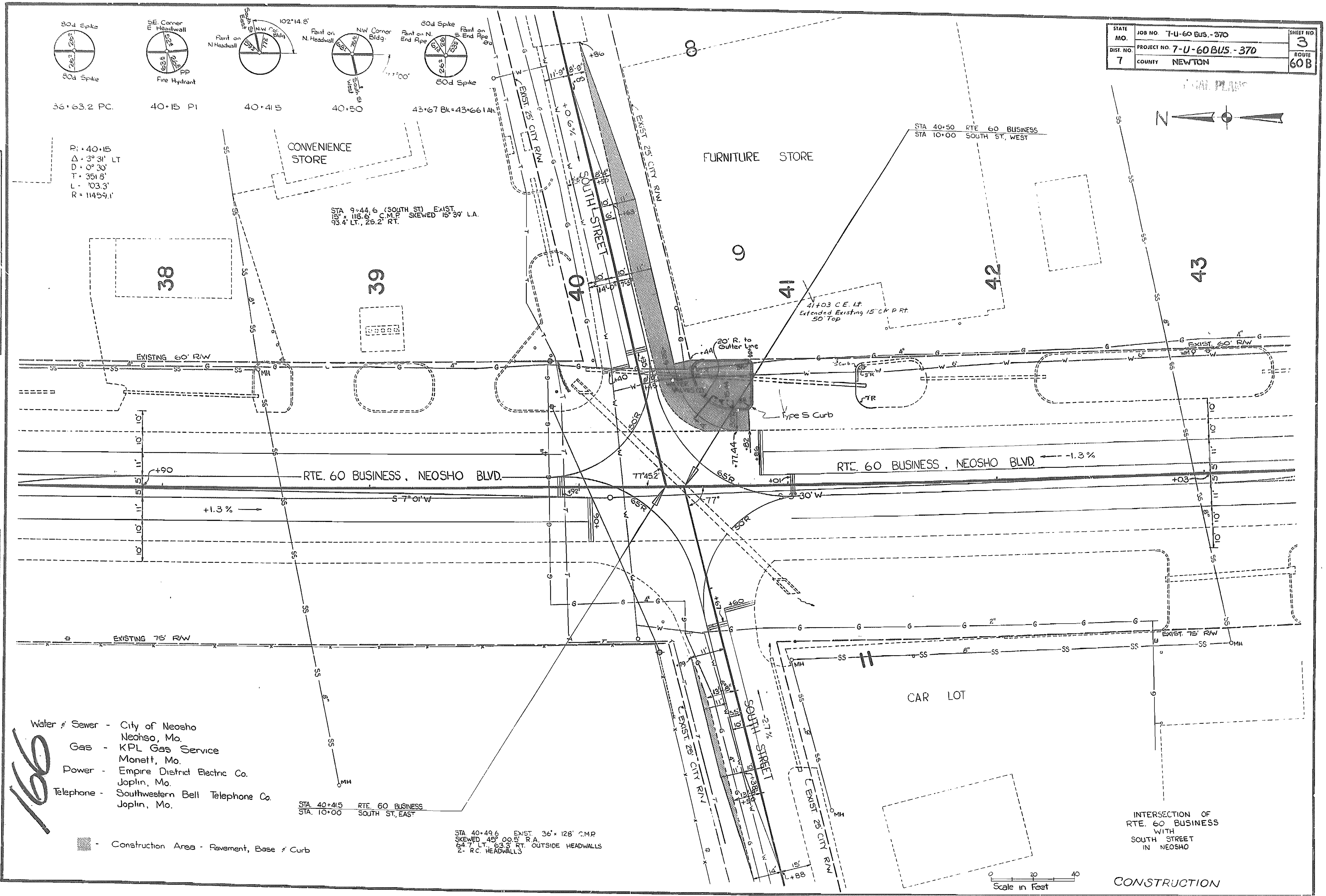
SIGN	SIZE (INS)	AREA (SQ FT)	QUANTITY	TOTAL AREA (SQ FT)	QUANTITY RELOCATED	TOTAL RELOCATED AREA (SQ FT)	DESCRIPTION
R3-3a	36x36	9.0					NO TURNS
R3-4b	36x48	12.0					NO U-TURN
R3-7L	30x30	6.25					LEFT LANE MUST TURN LEFT
R3-7R	30x30	6.25					RIGHT LANE MUST TURN RIGHT
R4-1b	36x48	12.0					DO NOT PASS
R4-2b	36x48	12.0					PASS WITH CARE
R4-7Lb	36x48	12.0					KEEP LEFT (HORIZONTAL ARROW)
R4-7Rb	36x48	12.0					KEEP RIGHT (HORIZONTAL ARROW)
R4-17La	36x36	9.0					KEEP LEFT
R4-17Ra	36x36	9.0					KEEP RIGHT
R5-1	30x30	6.25					DO NOT ENTER
R5-1a	36x24	5.0					WRONG WAY
R6-1La	48x18	6.0					ONE WAY ARROW (LEFT)
R6-1Ra	48x18	6.0					ONE WAY ARROW (RIGHT)
R6-2La	24x30	5.0					ONE WAY (LEFT)
R6-2Ra	24x30	5.0					ONE WAY (RIGHT)
R11-2	48x30	10.0					ROAD CLOSED
R11-3	60x30	12.5					ROAD CLOSED ____ MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60x30	12.5					ROAD CLOSED TO THRU TRAFFIC
GUIDE SIGNS							
GO20-1	60x36	15.0					ROAD CONSTRUCTION NEXT ____ MILES
GO20-2	60x24	10.0					END CONSTRUCTION
MO4-8a	30x15	3.13					DETOUR (PLAQUE)
MO4-9L	48x36	12.0					DETOUR (LEFT ARROW)
MO4-9R	48x36	12.0					DETOUR (RIGHT ARROW)
MO4-10L	48x18	6.0					DETOUR (ARROW LEFT)
MO4-10R	48x18	6.0					DETOUR (ARROW RIGHT)
MO4-11	24x18	3.0					DETOUR ENDS
M5-1L	21x15	2.19					ADVANCE LEFT TURN ARROW
M5-1R	21x15	2.19					ADVANCE RIGHT TURN ARROW
616-10.05 CONSTRUCTION SIGNS TOTAL				172.0	☒	☒	
616-10.10 RELOCATED SIGNS TOTAL				☒	☒		

ITEM NUMBER	SIZE	TOTAL QUANTITY	DESCRIPTION
616-10.20	36x18	13	DRUM
616-10.35	8x24		TYPE I BARRICADE (One Rail)
616-10.36	8x24		TYPE II BARRICADE (Two Rails)
616-10.40	36x72	2	FLASHING ARROW PANEL
616-10.45	18x18		TYPE I OBJECT MARKER
616-10.46	6x12		TYPE II OBJECT MARKER
616-10.47	8x24	13	TYPE III OBJECT MARKER
616-10.50	8x8		FLASHING ELECTRIC LIGHT
616-10.51	----		WARNING LIGHT TYPE A
616-10.52	----		WARNING LIGHT TYPE B
616-10.53	----		WARNING LIGHT TYPE C
616-10.60	----		RAISED PAVEMENT MARKER
612-10.30	72x144		MOVABLE BARRICADE (Three Rails)

6#165

STATE MO.	JOB NO. 7-U-60 BUS.-370	SHEET NO. 3
DIST. NO. 7	PROJECT NO. 7-U-60 BUS.-370	ROUTE 60 B
	COUNTY NEWTON	

FINAL PLANS



Water & Sewer - City of Neosho
Neohso, Mo.
Gas - KPL Gas Service
Monett, Mo.
Power - Empire District Electric Co.
Joplin, Mo.
Telephone - Southwestern Bell Telephone Co.
Joplin, Mo.

▨ - Construction Area - Pavement, Base & Curb

STA. 40+49.6 EXIST. 36" x 128' C.M.P.
SKEWED 45° 00.5' R.A.
64.7' LT., 63.3' RT. OUTSIDE HEADWALLS
2- R.C. HEADWALLS

INTERSECTION OF
RTE. 60 BUSINESS
WITH
SOUTH STREET
IN NEOSHO

CONSTRUCTION

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

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

~~65~~
166

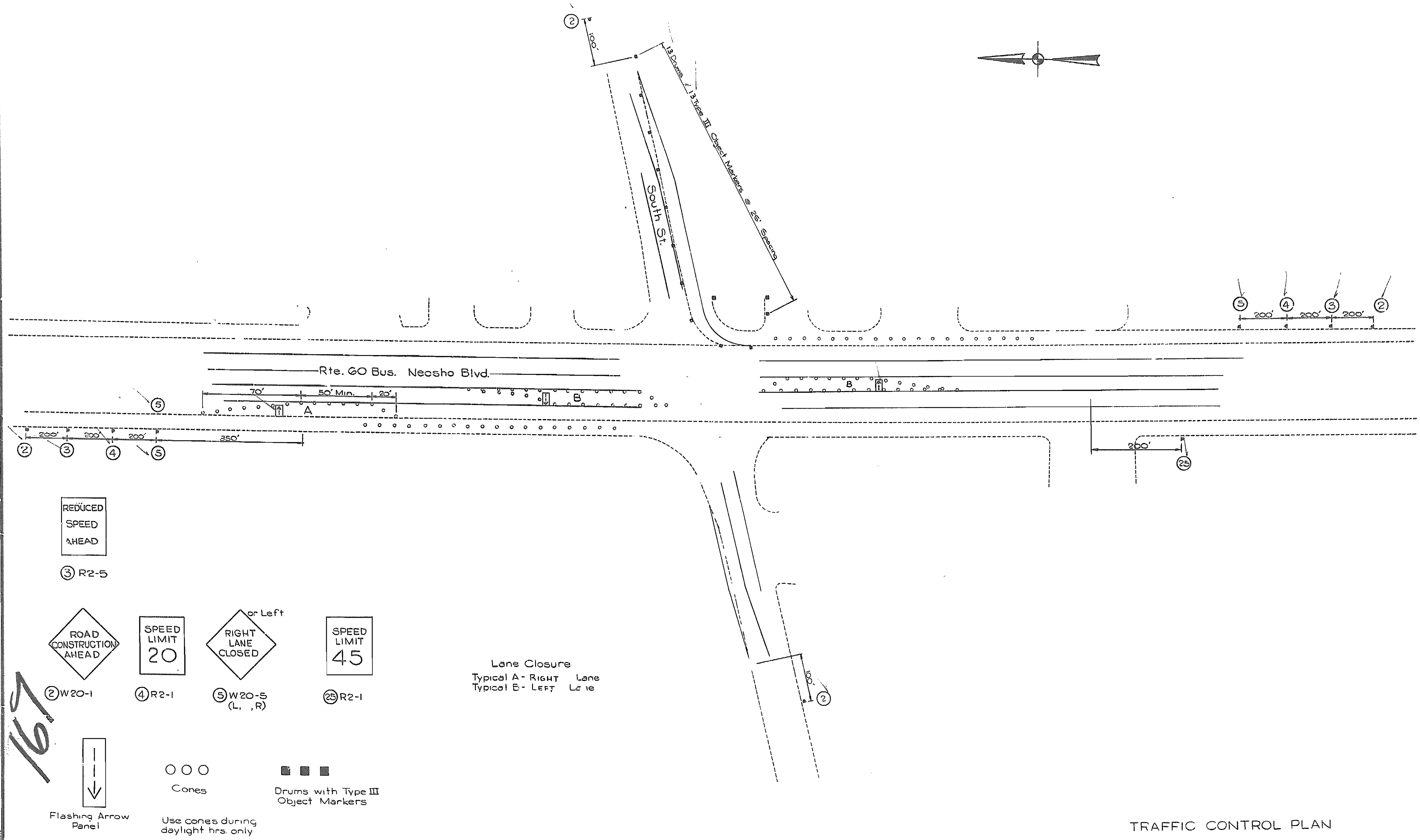
STATE MO.	JOB NO. 7-U-60BUS-370	SHEET NO. 4
DIST. NO. 7	PROJECT NO. 7-U-60 BUS-370	ROUTE 60B
	COUNTY NEWTON	

FINAL PLANS

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

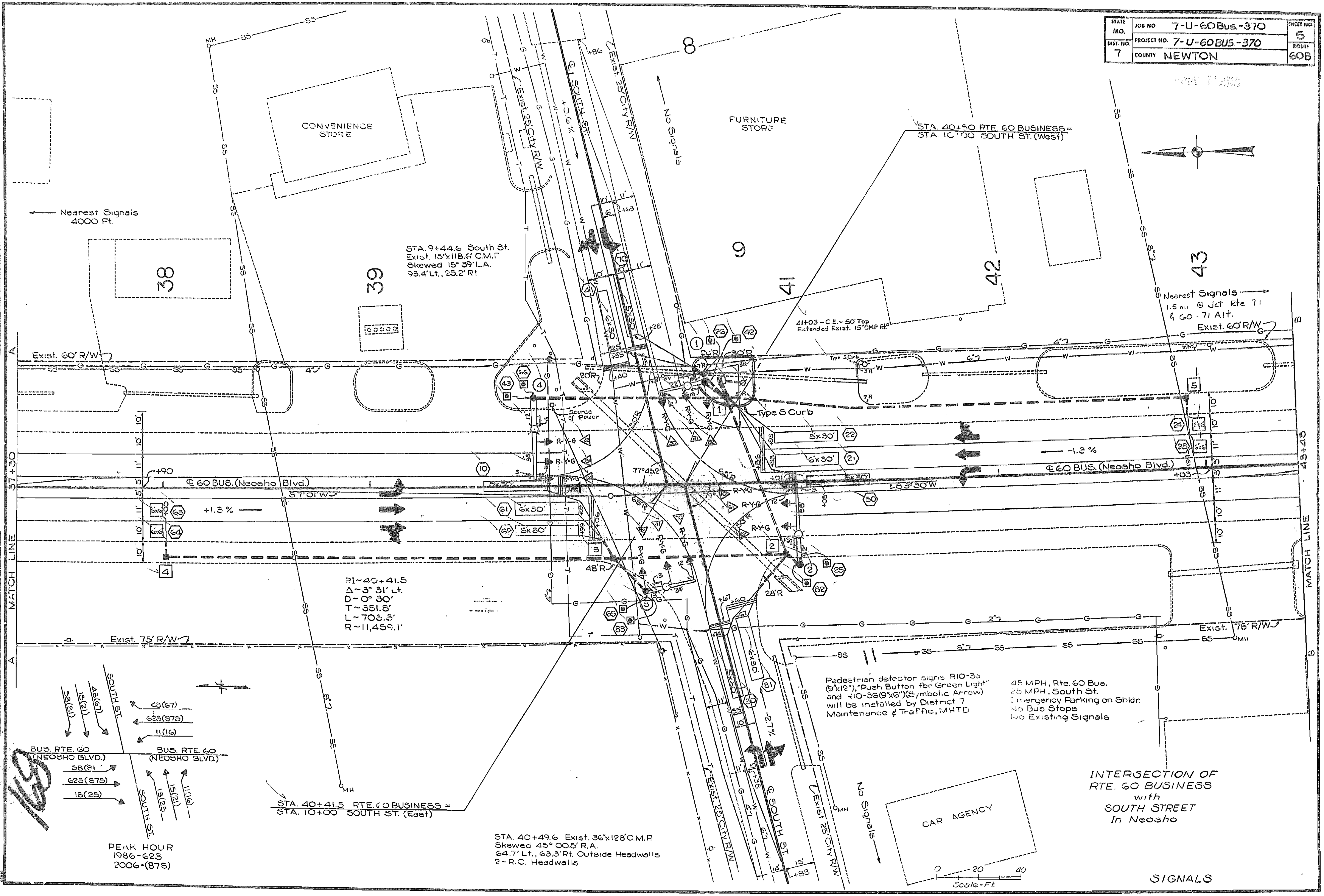
ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

69
167



TRAFFIC CONTROL PLAN

STATE	JOB NO. 7-U-60 Bus.-370	SHEET NO.
MO.	PROJECT NO. 7-U-60 BUS-370	5
DIST. NO. 7	COUNTY NEWTON	ROUTE 60B



Pedestrian detector signs R10-3a (9"x12"), "Push Button for Green Light" and R10-36 (9"x6") (Symbolic Arrow) will be installed by District 7 Maintenance & Traffic, MHTD

45 MPH, Rte. 60 Bus.
25 MPH, South St.
Emergency Parking on Shldr.
No Bus Stops
No Existing Signals

INTERSECTION OF RTE. 60 BUSINESS with SOUTH STREET In Neosho

SIGNALS

67

69

JOB NO	7-U-60 BUS-370	SHEET NO	
PROJECT NO	7-U-60 BUS-370		5B
DIST. NO	COUNTY	ROUTE	SEC
7	NEWTON	608	

Sheet 1 of 2

TRAFFIC SIGNALS

File - PLANS

CONTROLLER AND AUXILIARY EQUIPMENT

LOCATION			ACTUATED							PRE-TIMED					ON-OFF* SWITCH		COORDINATION UNIT*			TONE UNIT*		REMARKS
			CONTROLLER ASSEMBLY HOUSING	PHASE MODULE*					Modular by Function	TYPE			SEMI		TYPE		MASTER	LOCAL	TIME BASE	TRANS-MITTER	RECEIVER	
APPROACH	STATION	OFFSET		S	D	P	SP	DP	DP	M-N	M-I	M-M	TYPE 1	TYPE 2	I	II						
[illegible]	[illegible]	[illegible]	1						1**													** The Controller shall be a
																						4 Phase Modular by Function unit

POWER SUPPLY

LOCATION			POWER SUPPLY ASSEMBLY		CIRCUIT BREAKER TRIP RATING			SERVICE POLE	
APPROACH	STATION	OFFSET	DRAWING 902.15	DRAWING	MAIN BREAKER	CONT-ROLLER BREAKER	LIGHTING BREAKER	CONTRACT FURNISH	UTILITY COMPANY
60 BUS	40+79.0	47.0' Lt.	Type 1		40 Amps	30 Amps	15 Amps	Cl. 4 Ft 30	
			Type		Amps	Amps	Amps	Cl. Ft	

POST

POST NUMBER	PULL BOX NUMBER	DETECTOR NUMBER	APPROACH	STATION	OFFSET	BASES A 5	A 8	A 9 MOD.	A 10	B 5	B 8	B 10	C	CUBIC YARDS OF CONCRETE	PULL BOX TYPE I	PULL BOX TYPE II	PUSH BUTTON	MAGNETIC	INDUCTION LOOP	CALL UNIT*	TIME DELAY UNIT*	TOP MOUNT POST LENGTH 7	10	TYPE C & CL ARM LENGTH A 22	A 24	A 35	SIGNAL SPACING B	C	D	SIGN SPACING B	C	D	INCLUDED ANGLE	LUMINAIRE BRACKET ARM (FEET) 4	6	8	10	12	15	SPAN WIRE WOOD	STEEL	COMMISSION FURNISHED SIGNS (CODE SIGN NUMBER FROM LEGEND SHEET SP-36) 3	12	13
			CONTROLLER (AS REQ'D)											2.00																															
		43	60 BUS	40+61.0	48.0 LT	1								1.70			2							1			10.00	——	11.50	5.5	13.5	——			1								1	1
		81 82	60 BUS	41+03.5	39.5 RT				1					2.94			2									1	18.25	10.50	8.75	9.25	25.75	1.5						1				1	1	1
		65 34	60 BUS	40+34.0	52.0 RT	1								1.70			2								1		12.50	11.00	——	6.30	14.70	——				1							1	1
		66 23	60 BUS	39+78.5	41.5 LT				1					2.94			2									1	20.50	9.00	8.00	10.00	25.00	1.5						1				1	1	1
			60 BUS	40+71.0	41.0 LT.										1																														
			60 BUS	40+97.0	34.0 RT										1																														
			60 BUS	40+15.0	34.5 RT										1																														
			60 BUS	38+01.0	33.0 RT										1																														
			60 BUS	42+92.0	33.0 LT										1																														
		20	60 BUS	41+23.0	℄														1		1																								
		21	60 BUS	41+08.0	10.5 LT														1																										
		22	60 BUS	41+08.0	21.0 LT														1																										
		23	60 BUS	42+97.0	10.5 LT														1	1																									
		24	60 BUS	42+97.0	21.0 LT														1	1																									
		15	60 BUS	39+70.0	℄														1		1																								
		61	60 BUS	39+84.0	10.5 RT.														1																										
		62	60 BUS	39+84.0	21.0 RT.														1																										
		63	60 BUS	37+97.0	10.5 RT														1	1																									
		64	60 BUS	37+97.0	21.0 RT														1	1																									
		41	SOUTH ST	9+18.0	8.0 RT														1																										
		70	SOUTH ST	9+13.0	1.0 LT														1		1																								
		51	SOUTH ST	10+82.0	10.5 LT														1																										
		50	SOUTH ST	10+82.0	10.5 RT.									(11.28)					1		1																								
			TOTAL											11.3	5		8		14	4*	4*			1	1	2									1	1		2					2	4	4

SIGNAL HEADS

POST NUMBER	FACE NUMBER	DOWN LIGHT	LUMINAIRE 150W SODIUM	*INDICATIONS 12" LENS CONVENTIONAL R	Y	G	VISORS* 12" LENS TUN. 12	BACKPLATES* LENSES 12"	3	BRACKET* TYPE I	II	ONE-FACE SECTIONS 3- S	3- B	REMARKS
1	30		1	1	1	1	1	1	1		1		1	
1	81			1	1	1	1	1	1		1		1	
1	82			1	1	1	1	1	1	1		1		
2	10		1	1	1	1	1	1	1		1		1	
2	61			1	1	1	1	1	1		1		1	
2	62			1	1	1	1	1	1		1		1	
3	70		1	1	1	1	1	1	1		1		1	
3	41			1	1	1	1	1	1		1		1	
3	42			1	1	1	1	1	1		1		1	
4	50		1	1	1	1	1	1	1	1		1		
4	21			1	1	1	1	1	1		1		1	
4	22			1	1	1	1	1	1		1		1	
TOTAL			4											

*ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE

TOTAL	3- S	3- B
OPTICALLY LIMITED		
CONVENTIONAL	2	10
COMBINATION O.L.&CONV.		

LEGEND
B-MAST ARM MOUNT
C-SPANWIRE MOUNT
T-TOP MOUNT
S-SIDE MOUNT

REV JUN 1, 83

SP-37A

JOB NO	7-U-60BUS-370		SHEET NO
PROJECT NO	7-U-60BUS-370		5B
DIST NO	COUNTY	ROUTE	SEC
7	NEWTON	60B	

Sheet 2 of 2

TRAFFIC SIGNALS

NAL PLANS

CONDUIT

FROM	TO	CTR TO CTR DISTANCE	TRENCH 1¼	TRENCH 1½	TRENCH 2	TRENCH 2½	TRENCH 3	TRENCH 3½	TRENCH 4	MEDIAN 1¼	MEDIAN	MEDIAN	PUSHED 2	PUSHED 2½	PUSHED 3	PUSHED 3½	PUSHED 4	ON BRIDGE	ON BRIDGE	REMARKS
	☒	0'	13																	
	1	8						18												
	①	13			14															
	[illegible]	[illegible]			*93															
	[illegible]	35	*																	
	5	220'	218'																	
	[illegible]	80'						22'								56				
	[illegible]	5'			9'															
	81	22	21																	
	3	83'						81												
	③	26'			*27'															
	62	10'	9'																	
	4	215	213																	
	4	7'	6'																	
	24	8'	7'																	
	2	7	6'																	
																				* Field measured
TOTALS			514		143			21								56				

CABLE

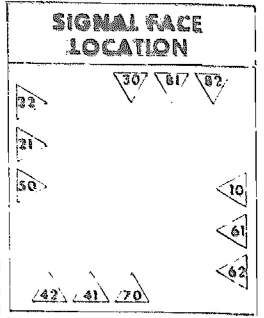
FROM	TO	CTR TO CTR DISTANCE	POWER 1c #8	POWER	CONTROL 2c #12	CONTROL 3c #12	CONTROL 5c #12	CONTROL 7c #12	CONTROL 12c #12	DETECTOR 1c #14	DETECTOR	REMARKS
∅	☒	10'	90									
☒	①	21'			63			138				
☒	②	96'			150'			335				
☒	③	197'			*253'			*519'				
☒	④	100'			*148'			*332'				
☒	1	8'			95'							
☒	2	88'			210							
☒	3	171'			582'							
☒	4	385'			830'							
☒	5	228'			490'							LOOP
1	41	59'								394'		6 x 30'
1	70	52'								376'		5 x 30'
1	22	29'								330		5 x 30'
1	21	36'								348'		6 x 30'
1	50	58'								388		5 x 30'
2	81	35'								346'		6 x 30
2	30	48								368		5 x 30
3	62	22								316'		5 x 30
3	61	27'								330		6 x 30'
3	10	48'								368		5 x 30'
4	64	11								406		6 x 6
4	63	20'								124'		6 x 6
5	24	12'								108'		6 x 6
5	23	22'								128		6 x 6'
☒	26	21'			41							
☒	42	21'			41							
☒	25	96'			122'							
☒	82	96'			122'							
☒	65	197'			*229'							
☒	83	197'			*229'							
☒	43	100'			*120'							
☒	66	100'			*120'							
												* Field measured
					(3845)			(1324)				
TOTALS			90		3840			1320		4030		

JOB NO	7-U-60 BUS-370
PROJECT NO.	7-U-60BUS-370
SHEET NO	6
DIST NO	7
COUNTY	NEWTON
ROUTE	60B
SEC	

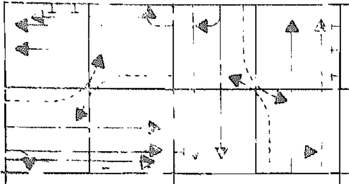
FINAL PLANS

SIGNAL FACE LOCATION

N ⇦



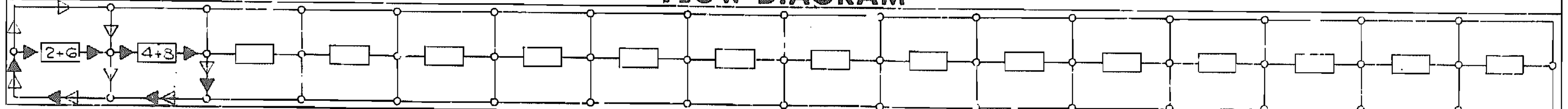
TRAFFIC PHASING AND COLOR SEQUENCE



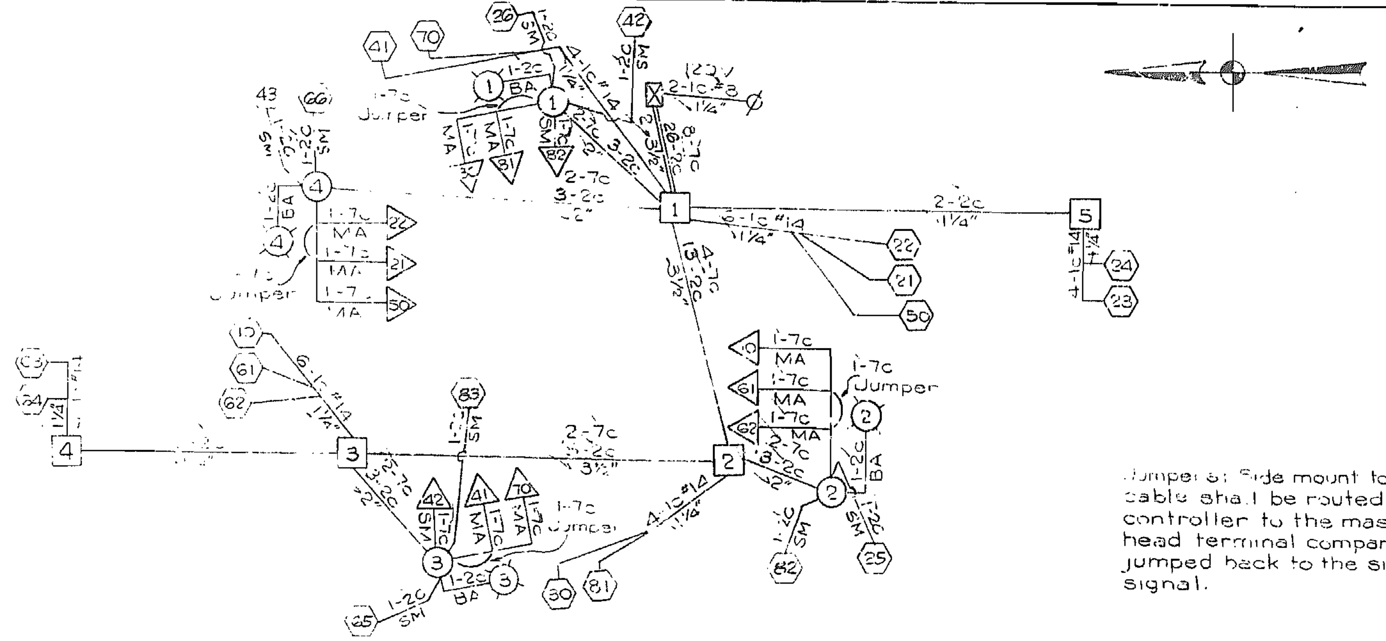
CONT. NO.			PHASE 2+6		PHASE 4+8		PHASE	PHASE	PHASE	PHASE	PHASE	PHASE	PHASE	PHASE	PHASE	PHASE	PHASE	PHASE	PHASE	PHASE	
APPROACH	PHASE	FACE NUMBER	R/W	CLEAR TO PHASE 4+8	R/W	CLEAR TO PHASE 2+6															FACE NUMBER
NORTH BOUND		22	G	Y	R	R															
RTE. 60 BUS.		21	G	Y	R	R															
(Neosho Blvd)		50	G	Y	R	R															
SOUTH BOUND		10	G	Y	R	R															
RTE. 60 BUS.		61	G	Y	R	R															
(Neosho Blvd)		62	G	Y	R	R															
EAST BOUND		30	R	R	G	Y															
SOUTH ST.		81	R	R	G	Y															
		82	R	R	G	Y															
WEST BOUND		42	R	R	G	Y															
SOUTH ST.		41	R	R	G	Y															
		70	R	R	G	Y															

—▶—	Priority Sequence
—▷—	Selective Sequence

FLOW DIAGRAM



WIRING DIAGRAM



Jumpers: Side mount to mast arm cable shall be routed from the controller to the mast arm signal head terminal compartment, then jumped back to the side mounted signal.

ALL WIRE NO. 12 AWG EXCEPT WHERE SHOWN.

LEGEND

—▶	ACTUATED VEHICULAR MOVEMENT
- - -▶	PARTIALLY RESTRICTED ACTUATED MOVEMENT
—▷	NON-ACTUATED VEHICULAR MOVEMENT
- - -▷	PARTIALLY RESTRICTED NON-ACTUATED VEHICULAR MOVEMENT
—▶	ACTUATED PEDESTRIAN MOVEMENT
- - -▷	NON-ACTUATED PEDESTRIAN MOVEMENT
—|	VEHICAL STOPPED
FDW	FLASHING DON'T WALK
R/W	RIGHT OF WAY INTERVAL
DW	DON'T WALK
YR	YELLOW RIGHT ARROW
RT.	GREEN RIGHT ARROW
W	WALK
LY - YL	YELLOW LEFT ARROW
L	GREEN LEFT ARROW
S	GREEN STRAIGHT AHEAD ARROW
G	CIRCULAR GREEN
Y	CIRCULAR YELLOW
R	CIRCULAR RED
Ø	TRAFFIC PHASE
AO	ALL OTHERS
FR	FLASHING RED
FY	FLASHING YELLOW

* Controller shall be 4ϕ Modular by Function Unit.

FLASHING OPERATION

APPROACHES SOUTH ST.	FR
APPROACHES 60 BUS	FY

STANDARD-PEDESTRIAN TIMING

CONTROLLER TYPE FULL-ACTUATED	2ϕ*

TRAFFIC SIGNAL CONTROL OPERATION

ROUTE 60 BUSINESS
INTERSECTION OF
SOUTH STREET
WITH
IN NEOSHO

SP-38

REV. SEP 1, 1984

70
171

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STANDARD PLANS

STATE	JOB NO.	SHEET NO.
MO.	7-U-60 Bus. -370	7
DIST. NO.	PROJECT NO. 7-U-60 Bus. -370	ROUTE
7	COUNTY Newton	60Bus.

SP-2
APR 1, 1986

✓	NO.	DESCRIPTION
✓	203.00E	EXCAVATION & EMBANKMENT
✓	203.02C	UNDERGRADING
	203.10A	TABULATED EARTHWORK & SECTION DATA
	203.20A	SUPERELEVATION SPIRALS & WIDENING (UNDIVIDED)
	203.21A	SUPERELEVATION SPIRALS & WIDENING (DIVIDED)
	203.30A	ENTRANCES & APPROACHES (LESS THAN 400 ADT)
	203.31B	ENTRANCES & APPROACHES (GREATER THAN 400 ADT - NO SAFETY ZONE)
	203.32D	ENTRANCES & APPROACHES (GREATER THAN 400 ADT - SAFETY ZONE)
	203.35A	MAILBOX TURNOUTS
	203.40D	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (NO SAFETY ZONE)
	203.41D	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (SAFETY ZONE)
	203.50J	TYPICAL CROSS-OVERS (DIVIDED HIGHWAYS)
	204.00D	EMBANKMENT CONTROL MEASURING DEVICES
	502.00L	CONCRETE PAVEMENT & BASE APPURTENANCES
	502.10D	DOWEL SUPPORTING UNITS
	503.00J	CONCRETE APPROACH SLABS TO BRIDGES (ALSO INCLUDE 502.00)
	602.00A	RIGHT-OF-WAY & DRAIN MARKERS
	604.05A	PIPE CULVERT HEADWALLS - TYPE S
	604.10B	HEADWALL-WITH ENERGY DISSIPATOR - 18"
	604.11B	HEADWALL-WITH ENERGY DISSIPATOR - 24"
	604.12B	HEADWALL-WITH ENERGY DISSIPATOR - 30"
	604.13B	HEADWALL-WITH ENERGY DISSIPATOR - 36"
	604.14B	HEADWALL-WITH ENERGY DISSIPATOR - 42"
	604.15B	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
	604.25B	DROP INLET - TYPE F
	604.26C	DROP INLET - TYPE G
	604.27C	DROP INLET - TYPE S (3 SHEETS)
	604.28D	DROP INLET - TYPE T (ALSO INCLUDE 614.30)
	604.29C	DROP INLET - TYPE X
	604.30F	CONCRETE MANHOLES (ALSO INCLUDE 614.30)
	604.40E	PIPE COLLARS
	605.10A	CLASS A UNDERDRAINS
	606.00S	GUARD RAIL (2 SHEETS)
	606.20G	BRIDGE ANCHOR SECTION (BRUSH CURB) (ALSO INCLUDE 606.00)
	606.21E	BRIDGE ANCHOR SECTION - CURB TYPE (ALSO INCLUDE 606.00)
	606.22D	BRIDGE ANCHOR SECTION (SAFETY BARRIER CURB) (ALSO INCLUDE 606.00)
	606.30E	TERMINAL SECTION (ALSO INCLUDE 606.00)
	606.40A	GUARD CABLE
	607.10Q	CHAIN LINK FENCE
	607.11B	CHAIN LINK FENCE FOR RETAINING WALLS
	607.20F	WOVEN WIRE FENCE (ALSO INCLUDE 607.10)

#172

✓	NO.	DESCRIPTION	
	608.00C	PAVED APPROACHES	
	608.10G	CONCRETE SIDEWALK & WHEELCHAIR RAMPS	
	608.20B	CONCRETE STEPS	
✓	609.00G	CONCRETE CURB - CURB & GUTTER - GUTTER	
	609.15A	PAVED DITCHES	
	609.40D	DRAIN BASIN, SHOULDER PAVING & FILL SLOPE AT BRIDGE ENDS	
	609.60A	DITCH LINER	
	609.70C	ROCK LINING FOR CULVERT OUTLETS	
	610.20E	BRICK MANHOLES (ALSO INCLUDE 614.30)	
	611.60L	CONCRETE SLOPE PROTECTION	
	612.10K	BARRICADES AND FLASHER SIGNS	
	614.10L	CURB INLETS, GRATES & BEARING PLATES	
	614.30D	MANHOLE FRAMES & COVERS	
	615.00A	OFFICE FOR ENGINEER	
✓	616.10E	TRAFFIC CONTROL DEVICES (2 SHEETS) (ALSO INCLUDE 903.01)	*
	617.00T	CONCRETE MEDIAN BARRIER (3 SHEETS)	
	702.01E	16" CONCRETE PILES (APPROVED TYPES) (2 SHEETS)	
	702.02B	CAST-IN-PLACE CONCRETE PILES (APPROVED TYPES)	
	703.15D	CONCRETE BOX CULVERTS, H15 LOADING (3 SHEETS) (INCL. 706.35)	
	703.16D	CONCRETE BOX CULVERTS, H15 LOADING (3 SHEETS) (FLARED WINGS) (INCL. 706.35)	
	703.20D	CONCRETE BOX CULVERTS, H20 LOADING (3 SHEETS) (INCL. 706.35)	
	703.21D	CONCRETE BOX CULVERTS, H20 LOADING (3 SHEETS) (FLARED WINGS) (INCL. 706.35)	
	703.24D	CONCRETE BOX CULVERTS, SKEW DATA (703.15, 703.20, 703.30) (INCL. 706.35)	
	703.25C	CONCRETE BOX CULVERTS, SKEW DATA (703.16 & 703.21) (3 SHEETS) (FLARED WINGS) (INCL. 706.35)	
	703.30D	CONCRETE BOX CULVERTS, 4' SPANS & LESS - ALL LOADING (INCL. 706.35)	
	703.35B	CONCRETE BOX CULVERTS, CUTTING DETAILS (STRAIGHT WINGS) (INCL. 706.35)	
	703.36A	CONCRETE BOX CULVERTS, CUTTING DETAILS (FLARED WINGS) (INCL. 706.35)	
	703.50F	CONCRETE DOUBLE BOX STRUCTURE - SQUARE (INCL. 706.35)	
	703.51E	CONCRETE DOUBLE BOX STRUCTURE - SKEWED (INCL. 706.35)	
	703.52B	CONCRETE DOUBLE BOX STRUCTURE - CUT SECTIONS (INCL. 706.35)	
	703.53D	DOUBLE BOX STRUCTURE REINFORCEMENT - H15 LOADING (8 SHEETS)	
	703.54D	DOUBLE BOX STRUCTURE REINFORCEMENT - H20 OR HS20 LOADING (8 SHEETS)	
	703.55C	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS) SQUARE (INCL. 706.35)	
	703.56C	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS) SKEWED (INCL. 706.35)	
	703.60C	CONCRETE BOX STRUCTURE - PIPE INLET	
	703.70A	CONCRETE TRIPLE BOX STRUCTURE - SQUARE (2 SHEETS) (INCL. 706.35)	
	703.71A	CONCRETE TRIPLE BOX STRUCTURE - SKEWED (2 SHEETS) (INCL. 706.35)	
	703.72A	CONCRETE TRIPLE BOX STRUCTURE - (FLARED WINGS) (SQUARE) (2 SHEETS) (INCL. 706.35)	
	703.73A	CONCRETE TRIPLE BOX STRUCTURE - (FLARED WINGS) (SKEWED) (2 SHEETS) (INCL. 706.35)	
	703.74A	CONCRETE TRIPLE BOX STRUCTURE - CUT SECTIONS (INCL. 706.35)	
	703.75	CONCRETE TRIPLE BOX STRUCTURE REINFORCEMENT - H15 LOADING (5 SHEETS)	
	703.76A	CONCRETE TRIPLE BOX STRUCTURE REINFORCEMENT - H20 OR HS20 LOADING (5 SHEETS)	
	706.30E	REINFORCING BAR SUPPORTS	
	706.35E	BAR SUPPORTS FOR CONCRETE REINFORCEMENT	
	712.40C	STEEL DAMS FOR BRIDGES (6" CHANNEL)	
	712.41C	STEEL DAMS FOR BRIDGES (4" CHANNEL)	
	725.31C	METAL CURTAIN WALL AND METAL INLETS	
	726.30C	CULVERT INSTALLATION METHODS	
	731.00P	PRECAST MANHOLES (ALSO INCL. 614.30)	
	731.10G	PRECAST DROP INLETS (4 SHEETS) (ALSO INCLUDE 614.30 & 614.10)	
	732.00K	FLARED END SECTION (2 SHEETS)	
	806.00C	EROSION CONTROL NETTING (INSTALLATION) TYPE I	
	806.02	STAPLE PLACEMENT FOR TYPE III NETTING	

FINAL PLANS

✓	NO.	DESCRIPTION	
		HIGHWAY LIGHTING	
	901.00M	POLES & APPURTENANCES - 30' (3 SHEETS)	*
	901.01R	POLES & APPURTENANCES - 45' (3 SHEETS)	*
	901.05A	CONTROL PANEL CABINET DETAILS (2 SHEETS) (NOTE BELOW)	
	901.12A	POLE MOUNT. CONT. STA. - SECONDARY SERV. - 480 V MULTI. CIR. (NOT METERED)	
	901.15C	POLE MOUNT. CONT. STA. - SEC. SERV. - 120, 240, & 480 V MULTI. CIR.	
	901.16B	POLE MOUNT. CONT. STA. - SEC. SERV. - 480 V MULTI. CIR. (METERED)	
	901.18B	POLE MOUNT. CONT. STA. - SEC. SERV. 120/240 V MULTI. CIR.	
	901.19B	POLE MOUNT. CONT. STA. - SEC. SERV. - 240 V MULTI CIR. (NOT METERED)	
	901.20B	POLE MOUNT. CONT. STA. - SEC. SERV. - 120/240 V MULTI. CIR. (SIG. METERED)	
	901.22C	POLE MOUNT. CONT. STA. - SEC. SERV. - 120/240 & 480 V MULTI. CIR. (BOTH METERED)	
	901.23C	POLE MOUNT. CONT. STA. — SEC. SERV. - 240 V MULTI. CIR. (METERED)	
	901.24B	POLE MOUNT. CONT. STA. - SEC. SERV. - 240 V MULTI. CIR. (LT'S & SIGS-BOTH METERED)	
	901.25B	BASE MOUNT. CONT. STA. - SEC. SERV. - 120/240 V MULTI. CIR.	
		NOTE: ALSO INCLUDE 901.05 WITH 901.12 THROUGH 901.25 EXCEPT 901.18	
		TRAFFIC SIGNALS	
✓	902.00E	SIGNAL HEADS, LENSES AND MOUNTING	
✓	902.10G	PULL BOXES, CONTROLLERS, COND. LOCATION	*
✓	902.15C	POWER SUPPLY ASSEMBLY	*
	902.21B	TELEPHONE INTERCONNECT	
✓	902.30G	CONCRETE BASES	*
✓	902.40F	TUBULAR STEEL POST	
✓	902.50E	DETECTORS	
	902.60E	SPAN WIRE DETAILS - STEEL POST	
	902.70A	SPAN WIRE DETAILS - WOOD POLE	
✓	902.80	TRAFFIC SIGNAL SYMBOLS	
		HIGHWAY SIGNING	
✓	903.01C	ALPHABETS (2 SHEETS)	
	903.02U	HIGHWAY SIGNING (7 SHEETS)	
	903.03AG	SIGN MOUNTING DETAILS (6 SHEETS)	
	903.04D	WEIGH STATION SIGNING	
	903.05C	TUBULAR SPAN SUPPORT - ONE TUBE, TYPE S	
	903.06C	TUBULAR SPAN SUPPORT - TWO TUBE, TYPE S	
	903.07C	TUBULAR CANTILEVER SUPPORTS, TYPE C	
	903.08C	TUBULAR BUTTERFLY SUPPORTS, TYPE B	
	903.09C	LIGHTING SUPPORT BRACKET	
	903.10T	SIGN TRUSSES - OVERHEAD ALUMINUM (3 SHEETS) (INCL. 903.03)	
	903.12M	SIGN TRUSSES - BUTTERFLY & CANTILEVER - STEEL (7 SHEETS) (INCL. 903.03)	
	903.60R	SIGN TRUSSES - OVERHEAD STEEL (7 SHEETS) (INCL. 903.03)	

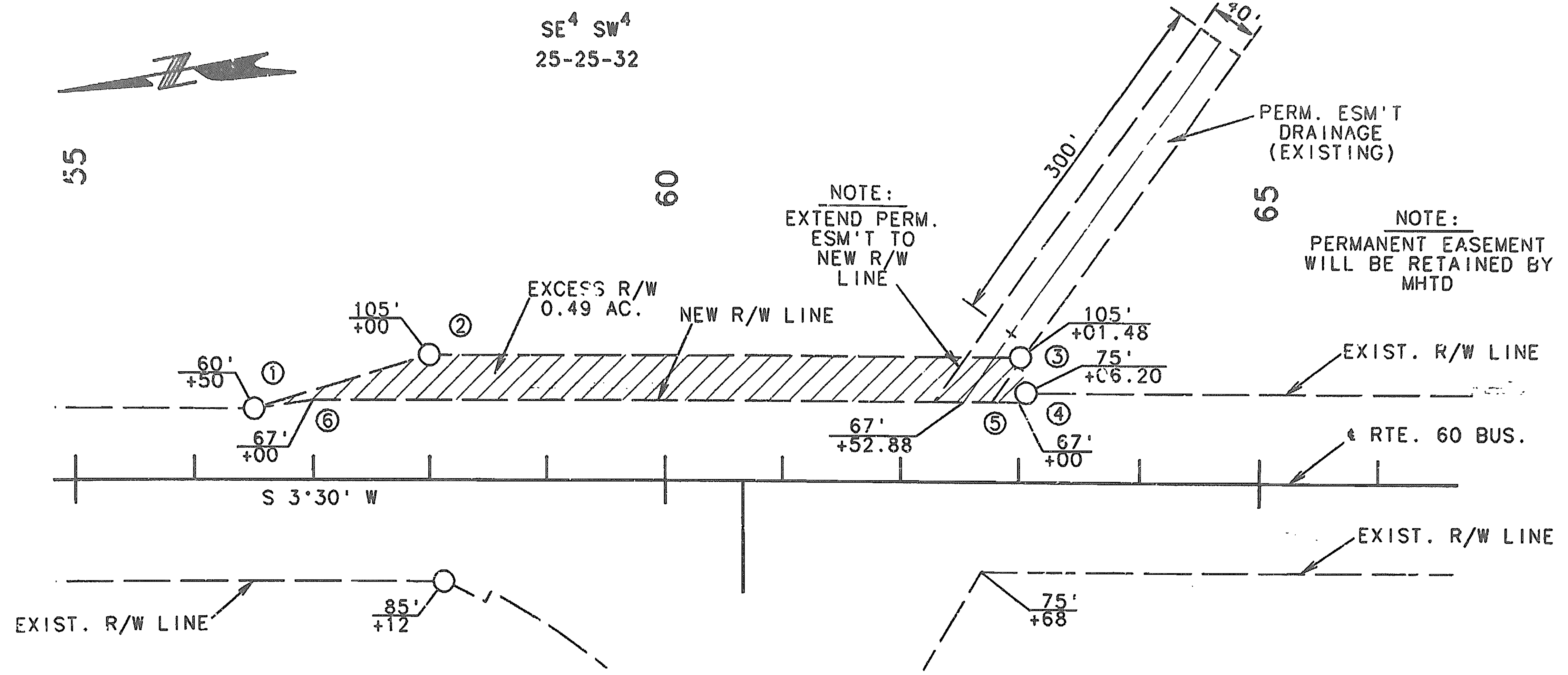
NOTES: Plans for this project were developed using Drawings from this index.

*REVISED SINCE SEPTEMBER 1985

See sheet 8 of 13

STATE MO	JOB NO.	SHEET NO. TT3
	PROJECT NO. F-182(6)	
D'ST NO. 7	COUNTY NEWTON	ROUTE 71 ALT.

PP Sheet No. 3&4 Exp. 249 & 250 (FINAL)
PP Sheet No. 3&4 Exp. 114 & 115 (CONTR)



56

① TO ②	S 13°11'57.12" E	156.61'
② TO ③	S 3°30' W	501.48'
③ TO ④	S 84°33'31.32" W	30.37'
④ TO ⑤	N 48°43'27.84" W	10.12'
⑤ TO ⑥	N 3°30' E	600.00'
⑥ TO ①	N 4°28'10.60" W	50.49'

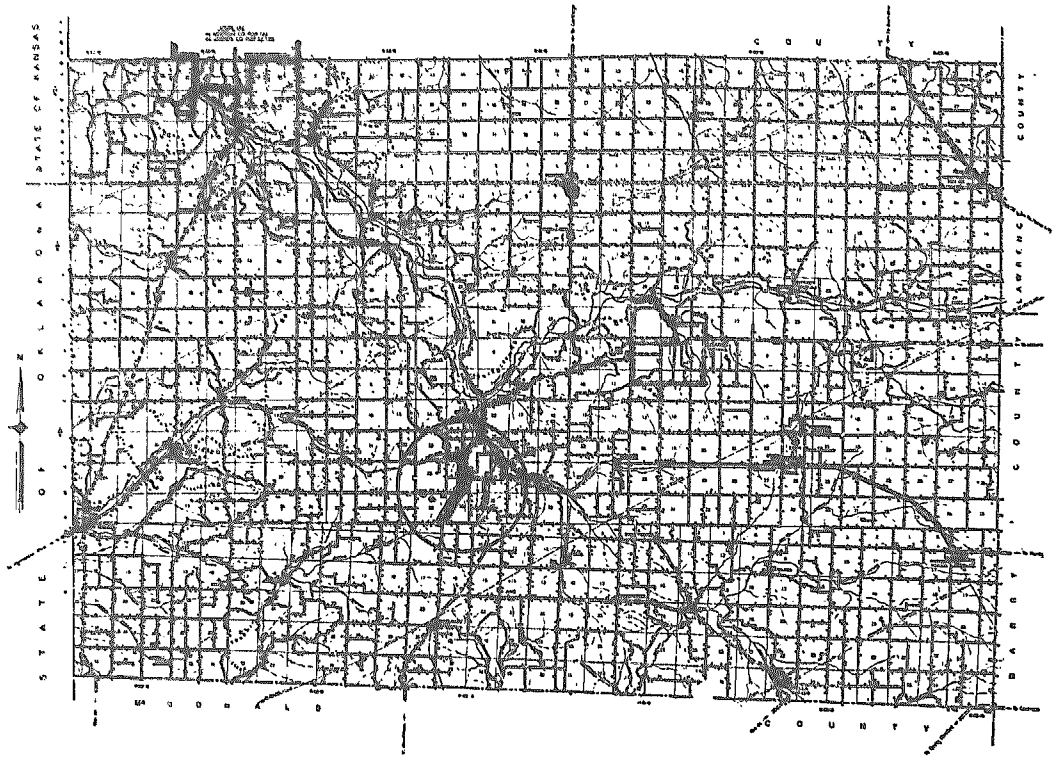
RECORDED DATE: NOVEMBER 8, 1994
BOOK NO.: 343 PAGE NO.: 9600

0 100 200
SCALE IN FEET

R/W REVISION

COUNTY: NEWTON
ROUTE: 71 ALT.
PROJECT: F-182 (6)
SHT. NO.: 3 & 4

LOCATION MAP

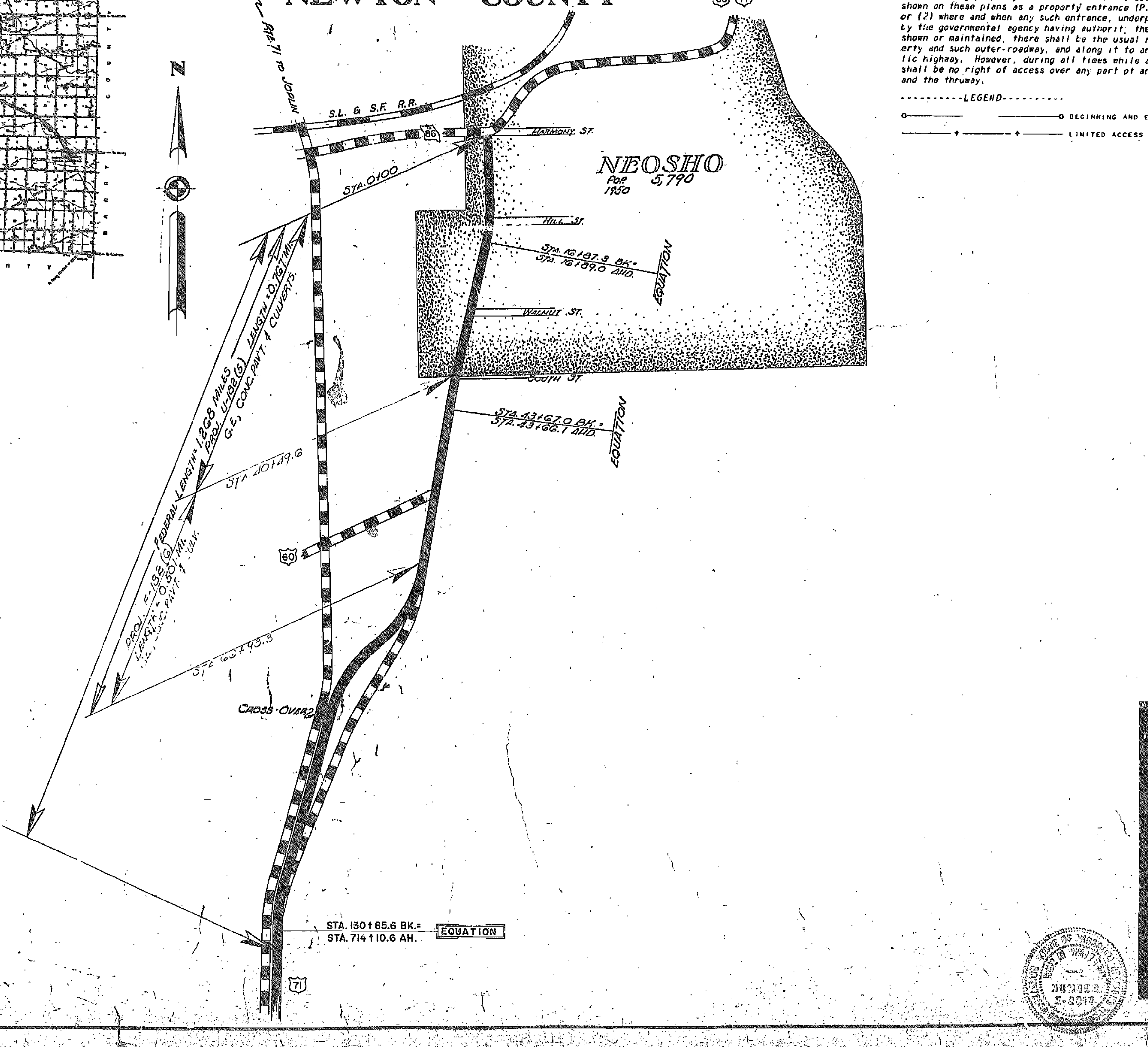


MISSOURI
STATE HIGHWAY COMMISSION
PLAN AND PROFILE
OF PROPOSED
STATE ROAD

COUNTY
NEWTON
STATE ROUTE NO.
RTE. 71 ALT.
PROJECT NO.
[redacted] F 132(6)

FEDERAL AID PROJECT

NEWTON COUNTY



LIMITED ACCESS HIGHWAY

This shall be a limited-access highway between Station 0+00 and Station 4+70. Except at locations and as otherwise specifically shown on these plans, no abutter's rights in, or of direct access to, from, or across the highway or its right of way shall attach or belong to any property abutting on said section of highway, or to any person merely because of ownership of such abutting property. There shall be the usual right of access over any location either (1) shown on these plans as a property entrance (P.E.), field entrance (F.E.), or private underpass, or (2) where and when any such entrance, underpass, or an open public highway is being maintained by the governmental agency having authority therefor. Wherever an adjacent outer-roadway is so shown or maintained, there shall be the usual right of direct access between the abutting property and such outer-roadway, and along it to and from the nearest lane of the thruway or a public highway. However, during all times while an outer-roadway is being so maintained, there shall be no right of access over any part of an entrance which lies between said outer-roadway and the thruway.

----------LEGEND----------

o———— ————o BEGINNING AND ENDING OF LIMITED ACCESS

———+———+——— LIMITED ACCESS

SUBMITTED BY/ DATE [redacted]

[redacted]

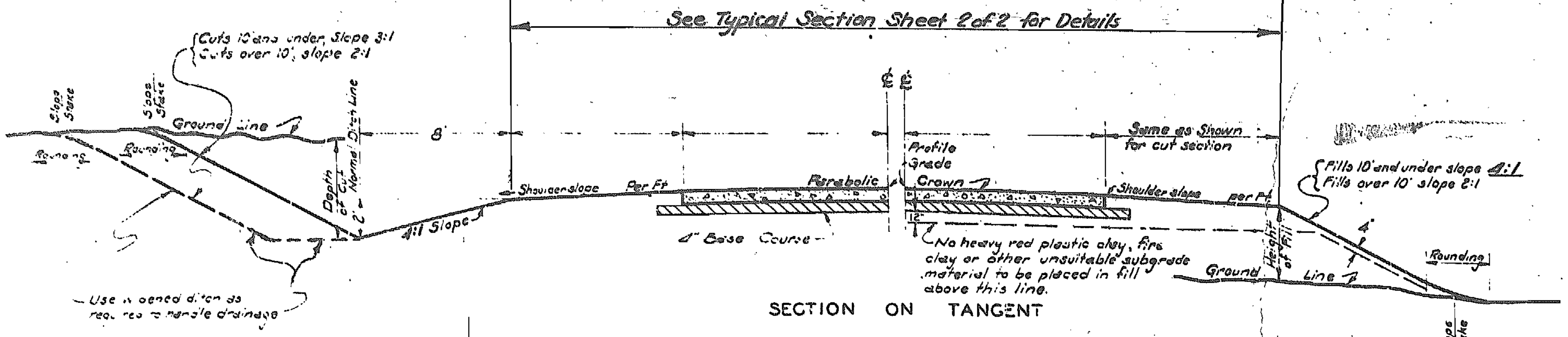
CHIEF ENGINEER
MISSOURI STATE HIGHWAY COMMISSION

[redacted]

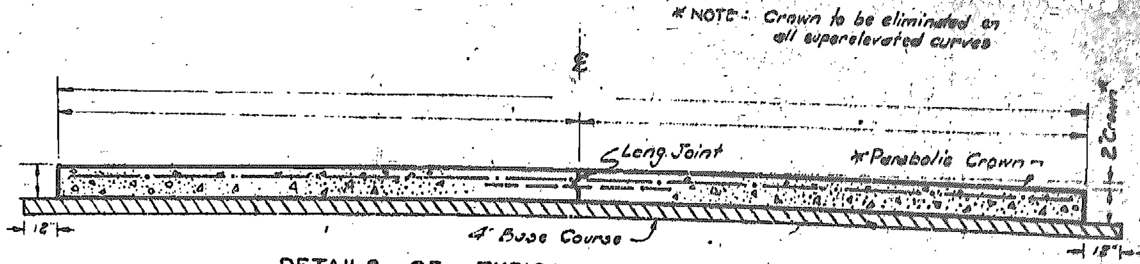
NUMBER E-2017

CONVENTIONAL SIGNS

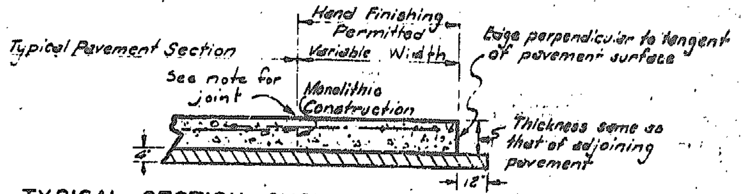
- STATE AND NATIONAL LINE
- COUNTY LINE
- CITY, VILLAGE OR BOROUGH
- TOWNSHIP LINE
- SECTION LINE
- GRANT LINE
- FENCE LINE
- GUARD RAIL
- UNFENCED PROPERTY
- RIGHT OF WAY LINE
- TRAVELED WAY
- RAILROADS
- RETAINING WALL
- BASE OR SURVEY LINE
- LEVEE
- CULVERTS
- DROP INLET
- TROLLEY POLE
- POWER POLE
- TELEPHONE OR TELEGRAPH POLE
- MARSH
- HEDGE
- GROUND ELEVATION
- GRADE ELEVATION
- SURFACE LINE
- GRADE LINE



SECTION ON TANGENT

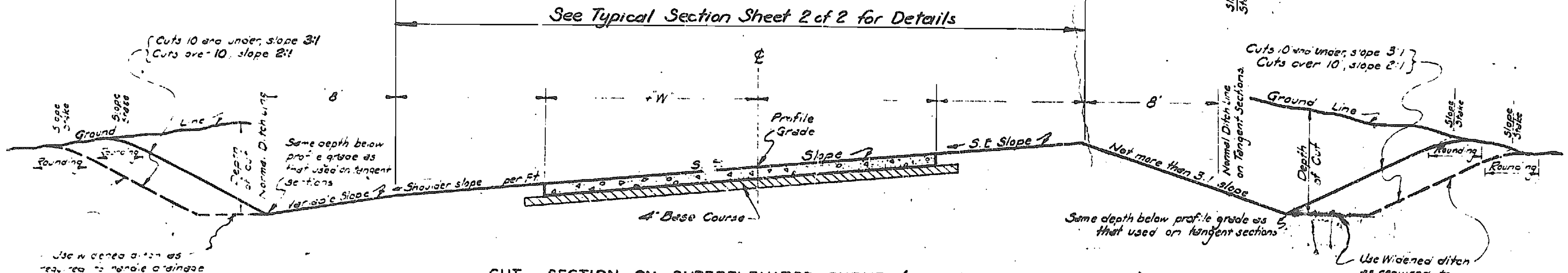


DETAILS OF TYPICAL PAVEMENT SECTION



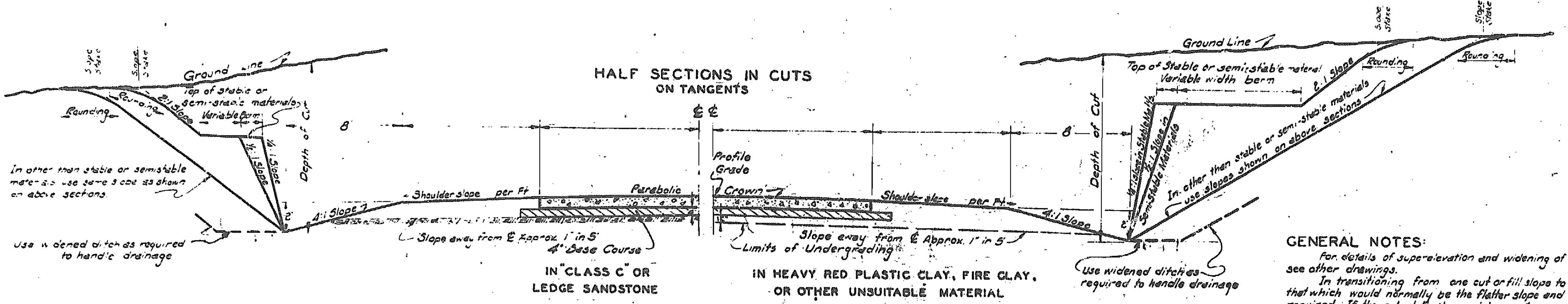
TYPICAL SECTION SHOWING WIDENING

Note: When width exceeds 2' construct a Tongue and Groove Joint between Pavement and widening See plan sheet.



CUT SECTION ON SUPERELEVATED CURVE (ALL CURVES OVER ONE DEGREE)

NOTE: Fill sections on superelevated curve to be identical to this section from shoulder to shoulder. Beyond shoulders use same as shown for "Section on Tangent."



HALF SECTIONS IN CUTS
ON TANGENTS

IN "CLASS C" OR LEDGE SANDSTONE

IN HEAVY RED PLASTIC CLAY, FIRE CLAY, OR OTHER UNSUITABLE MATERIAL

NOTE: On superelevated curves, undergrading to parallel the superelevation, and other details from ditch line to ditch line shall be identical to those shown for "Cut Section on Superelevated Curves."

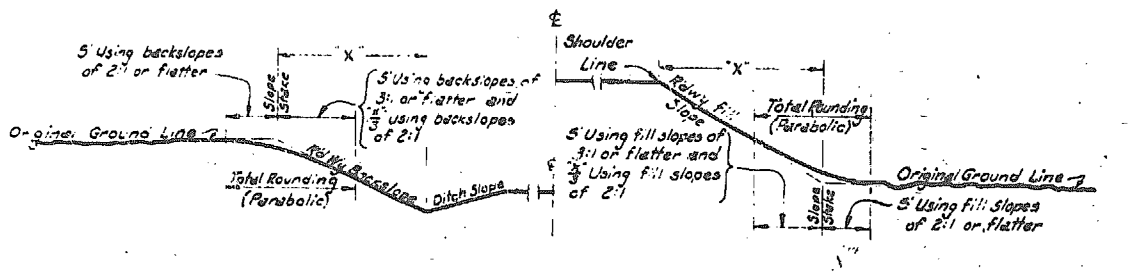
For paylimits of overbreak and backfill see specifications.

GENERAL NOTES:

For details of super-elevation and widening of horizontal curves, all pavement appurtenances, drainage items, etc., see other drawings.

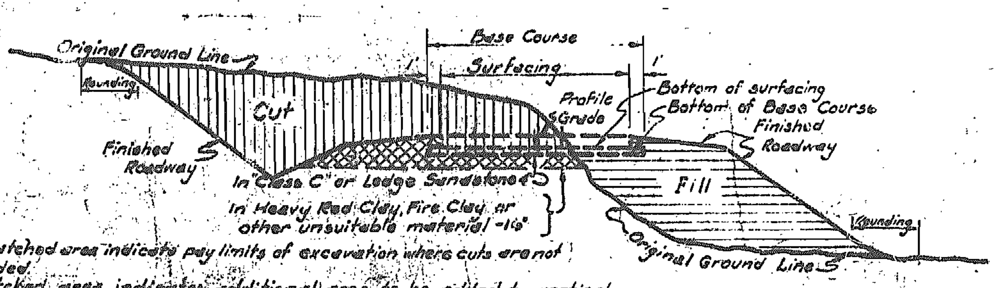
In transitioning from one cut or fill slope to another, use a 25' transition beginning at a point 25' back along that which would normally be the flatter slope and ending the transition at the actual point where the steeper slope is required. If the actual limits requiring a steeper slope is less than 25' in length, do not change to the steeper slope.

All information shown on these Typical Sections is for the purpose of indicating general design and construction details. Actual construction of roadway widths, slopes, depths and type of ditches, undergraded cuts, and other features, shall conform to the details shown on Cross-Sections and Plan-Profile sheets or as directed by the Engineer.



PARABOLIC ROUNDING REQUIRED AT TOP OF ROADWAY BACKSLOPES AND AT TOE OF ROADWAY FILL SLOPES.

Use on Rt. Side Only Sta. 16+32.1 to Sta. 67+50



Vertical hatched area indicates pay limits of excavation where cuts are not undergraded.
Cross-hatched area indicates additional area, to be added to vertical hatched area included in pay limits of excavation where cuts are undergraded. For pay limits of overbreak and backfill see Specifications.
Horizontal hatched area indicates limits to which embankment can be constructed.

SKETCH SECTION SHOWING EXCAVATION PAY LIMITS

MISSOURI STATE HIGHWAY COMMISSION

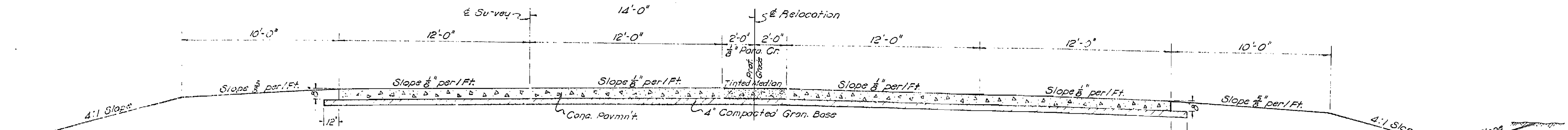
TYPICAL SECTIONS
FOR
FT. GRADED EARTH
AND
FT. CONCRETE PAVEMENT
(DESIGN SPEED 50 M.P.H.)

ROUTE: 71 Alt. COUNTY: NEWTON
PROJ. OR SEC. U-182(5) & F-182(6)
SHEET 1 of 2

REVISED 11-29-56 9-57

APPROVED G.P. [illegible] ENGR. SURVEYS AND PLANS APPROVED [illegible] CHIEF ENGINEER

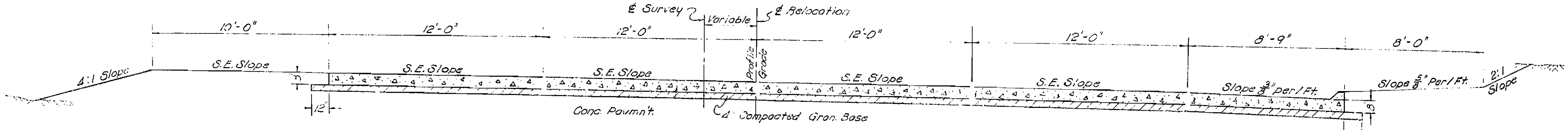
IART-2



TYPICAL SECTION

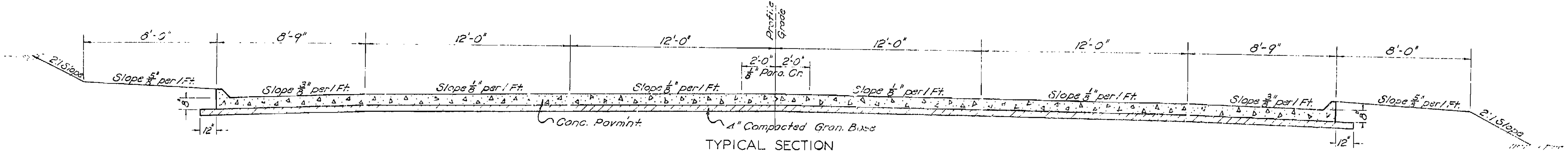
STA. 16+32.1 TO STA. 66+93.3

STA. 14+32.1 TO STA. 16+32.1 SEE PLAN SH. NO. 7



TYPICAL SECTION

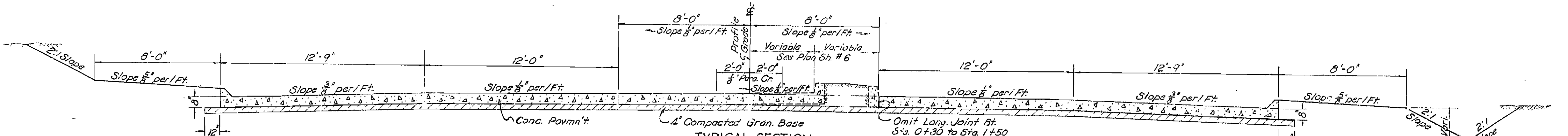
STA. 8+30 TO STA. 14+32.1



TYPICAL SECTION

STA. 5+97 TO STA. 8+30

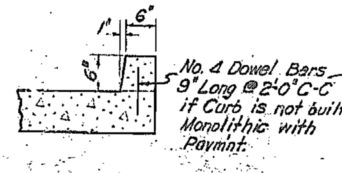
STA. 3+97 TO STA. 5+97 SEE PLAN SH. NO. 6



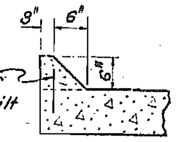
TYPICAL SECTION

STA. 0+75 TO STA. 3+97

STA. 0+00 TO STA. 0+75 SEE SP. SH. NO. 2



TYPICAL SEC. OF INTEGRAL MEDIAN CURB



TYPICAL SECTION OF INTEGRAL CURB

— NOTE —

For Slope Rounding, General Notes & Exc. Pay Limits See Typical Section Sheet Drwg. No. 1-ART-2

TYPICAL ROADBED SECTIONS
RTE. 71 ALT. NEWTON COUNTY
PROJ. U-182(5) & F-182(6)
SHEET 2 OF 2

LOCATION *City Limits of Neosho South to Rte. 60 Junction*

TYPE *Graded Earth, Culverts, a Bridge & Concrete Pvmt. 52' Wide.*

MISSOURI STATE HIGHWAY COMMISSION

SUMMARY OF QUANTITIES

FINAL PLANS

FED. ROAD DIST. No.	STATE	PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	MO.	F-182(6)		2-A	

DIST. No.	COUNTY	ROUTE	SEC No
7	NEWTON	71 Alt.	

EXCAVATION

Station	Class A	Borrow	Comp. Cut	Comp. Fill
40+49.6				
54+70	4720	4771	2770	6537
66+93.3	10035	1817	2646	8049
Sub-Totals	14755	6588		
Borrow	6588			
TOTALS	21343		5416	14586

CONCRETE BOX CULVERTS

Station	Std.	Size	Length	Fill	Skew	W.W. Slopes	Conc.	Reinf.	Cl. 3 Exc.	~ Remarks ~
57+31	C-529	7 × 5	112	1	45° L.A.	2:1	96.8	10,160	388.0	Lt Hdwl. Sq.
62+05	C-528	8 × 4	42	1	—	2:1	37.8	3,980	28.5	On PE Lt. Rt. Hdwl. Sk. 45° Dogleg 45°
TOTALS							134.6	14140	416.5	

REINFORCED CONC. CULVERT PIPE

Station	Location	36" Pipe	C-230 Hdwl.	Conc.	Reinf.	Cl. 3 Exc.	~ Remarks ~
60+66.2	Rte. 60 Rt.	44	2-RB	3.42	294	8.5	
TOTALS		44		3.42	294	8.5	

LENGTH OF PROJECT

End of Project	Station	66+93.3
Beginning of Project	Station	40+49.6
Apparent Length	2643.7	Feet
Equations and Exceptions:		
Sta 43+67.02 Bk = 43+66.1 Ah	+0.9	
Total Corrections	+0.9	Feet
Net Length of Project	2644.6	Feet
State Length	0.501	Miles
Federal Length	0.501	Miles

GROUTED LIGHT STONE REVETMENT

Station	Location	Sq. Yd.	~ Remarks ~
57+70	Lt.	111	Culv. End
62+30	Lt.	24	Culv. End
TOTAL		135	

ENTRANCES & S.R. CULV. PIPE & APPROACHES

Station	Type & Loc.	15" C.M.P.	18" C.M.P.	Rdwy. Width	Cl. 3 Exc.	~ Remarks ~
40+50	S.R. Rt.			60'		Sk. 13° Ahd. Crown
40+93	C.E. Lt.	60'		52'		
41+93	C.E. Lt.	60'		52'		
45+73	C.E. Lt.			60'		Crown
46+40	F.E. Lt.			24'		Crown
47+01	P.E. Rt.			30'		Crown
47+75	C.E. Lt.	60'		52'		
49+00	C.E. Lt.	60'		52'		
49+99	P.E. Lt.	48'		40'		
51+02	C.E. Lt.	38'		30'		
51+69	C.E. Lt.	60'		52'		
52+65	C.E. Lt.	48'		40'		
53+50	C.E. Lt.	60'		52'		
55+30	C.E. Lt.	60'		52'		
57+37	C.E. Lt.			60'		Crown
57+67 To 61+85	Out Rdy. Lt.			24'		
58+09	Out Rdy. Lt.	50'			25	Skew 45° L.A.
58+85	P.E. Lt.	28'		20'		On Outer Rdwy. Lt.
59+74	P.E. Lt.	38'		30'		On Outer Rdwy. Lt.
60+96	P.E. Lt.	28'		20'		On Outer Rdwy. Lt.
62+05	P.E. Lt.			40'		See Box Culvs.
65+93	P.E. Rt.		30'	20'		
67+40.1	S.R. Lt.			24'		Sk. 10° 58' Bk. Crown
67+40.1	S.R. Rt.		34'	24'		Sk. 10° 58' Ahd.
TOTALS		698	64		25	

MISC. ITEMS - TABULATED ON P&P SHEETS

Sheet No.	Cl. A U.D.	R/W Mark.	Dr. Mark.	Fert. & Mulch.
3		7		64,789
4	100	7	2	40,831
TOTALS	100	14	2	105,620

PAY: 2.4 Ac.

REMOVAL OF EXISTING STRUCTURES

Removal of (15) Fifteen Existing Structures (Culvs.) as per original plans.

LUMP SUM 1

REMOVAL OF MISCELLANEOUS ITEMS

Removal of (19) Nineteen Miscellaneous Items as per original plans.

LUMP SUM 1

PROCESSING

Bit. Mat. Surf.

Station	Location	Sq. Yds.
60+66.2	Rte. 60 Conn.	1243
66+93.3	Temp. Conn.	1243
TOTAL		*2486

* Plan quan. - plan quan. checked.

8" REINFORCED P.C.C. PAVEMENT

Sta. 40+49.6 To Sta. 66+93.3

Measured surface Length = 2644.9 Ft

2644.9' × 48/9 = 14,106.1 S.Y.

8" NON-REINFORCED P.C.C. PAVEMENT

2644.9' × 4/9 = 1,175.5 S.Y.

BARRICADES

Station	Location	No.
60+66.2	Sta. on Rte. 60	1
71+00	℄ Rdwy.	1
TOTAL		2

SPREAD, SHAPE, & COMP. 4" GRAN. BASE FOR PAVT.

Sta 40+49.6 to Sta 66+93.3

Measured surface Length = 2644.9 Ft.

2644.9' × 54/9 = 15869.4 S.Y.

PAY - 15869.

SPREAD, SHAPE, & COMP. 8" ROLLED STONE BASE

Station	Location	Sq. Yd.
60+66.2	Rte. 60 Conn. Rt.	1337
66+93.3	Temp. Conn.	1307
TOTAL		*2644

* Plan quan. - plan quan. checked

GENERAL SUMMARY

ITEM NO.	DESCRIPTION	UNIT	TOTAL UNITS	NO UNITS FED. AID ONLY
1-D	Class A Excavation	C.Y.	21343	
1-I	Class 3 Excavation for Structures	C.Y.	450	
1-K	Compacting Embankments	C.Y.	14586	
1-L	Compacting in Cuts	C.Y.	5416	
1-Z	Removing (19) Miscellaneous Items	L. Sum	1	
13-A	Chat Surface	C.Y.	258	
15-A	Concrete Pavement (8" Reinforced)	S.Y.	14106.1	
15-A	Concrete Pavement (8" Non-Reinforced)	S.Y.	1175.5	
16-B	Class B Concrete (Box Culverts)	C.Y.	134.6	
16-B	Class B Concrete (Other than Box Culvts.)	C.Y.	3.4	
18-B	15" Corr. Metal Culv. Pipe	L.F.	698	
18-B	18" Corr. Metal Culv. Pipe	L.F.	64	
18-C	36" Reinf. Concrete Culvert Pipe	L.F.	44	
19-A	Reinforcing Steel	Lbs.	14430	
23-B	Grouted Light Stone Revetment	S.Y.	135	
24-A	Class A Underdrains (Type 1)	L.F.	100	
28-A	Barricades	Each	2	
29-C	Right of Way Markers	Each	14	
29-D	Drain Markers	Each	2	
33-A	Removal of (15) Existing Structures (Culvs.)	L. Sum	1	
37-A	Fertilizing & Mulching	Acre	2.4	
	8" Rolled Stone Base			
1-BA	Water	100 Gal.	150	
2-A	Aggregate	Ton	1217	
2-B	Spreading, Shaping & Compacting	S.Y.	2644	
	4" Compacted Granular Base For 8" Conc. Pavement			
1-BA	Water	100 Gal.	75	
3C-A	Granular Base Material	Ton	3395	
3C-B	Spreading, Shaping & Compacting	S.Y.	15869	
	Bituminous Mat Surface			
9-A	Hauling & Windrowing Aggregate	C.Y.	106	
9-B	Processing	S.Y.	2486	
9-C	Primer (MC-0)	Gal.	630	
9-D	Binder (MC-3)	Gal.	1820	
	Bridge Station 47+29.77 Dwg. No. A-228			
1-I	Class 3 Excavation for Structures	C.Y.	458.5	
16-B	Class B Concrete	C.Y.	133.7	
19-A	Reinforcing Steel	Lbs.	17900	

Prepared By C.R. Baugher Date 12-30-1958 Checked in Dist. Office By Date 12-31-1958 Checked in Central Office By Date 3-1 1959 Revised By Date 19

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	F-182(6)		2-AA	
DIST. NO.		COUNTY		ROUTE	SEC.
7		NEWTON		71 Alt.	

FINAL PLANS

SUMMARY SHEET FOR CONCRETE PAVING PROJECT

CONTRACTOR Atkinson-Windle Company, Chillicothe, mo.
PAVED BY Atkinson-Windle Company, Chillicothe, mo.

RESIDENT ENGINEER C.R. Baugher
SLAB INSPECTORS D.E. Branham
W. G. Ward, Jr. O. L. McDaniel

PLANT INSPECTOR H. A. Harris, Jr. J.C. Long

EQUIPMENT
Koehring 34E Dual Drum Mixer Ser. No. 18950
Koehring 16E Dual Drum Mixer Ser. No. 24182 (1950)
Jaeger Spreader Mod. CS20 Ser. No. 41X705 (1941)
Jaeger-Lakewood Finishing Machine Ser. No. 55X146 (1955)
Koehring Longitudinal Finishing Mach. Size LF2A Ser. No. 1275 (1953)
Flex-Plane Spray Machine Mod. K-117
Johnson Dutch Mill Cement Bin (110 Bbl.) Johnson Scales Type MAN, Mod. 1000, Ser. No. 41072
Johnson 75 Ton Rock Bin, Johnson Scales Ser. Nos. 33903 & 28062
Johnson 75 Ton Sand Bin, Johnson Scales Ser. Nos. 33023 & 33022R

TYPE OF CONSTRUCTION Graded Earth, Culverts, a bridge and Concrete Pavement 52' Wide
TOTAL LENGTH 0.501 Miles
EXCEPTIONS None

EQUATIONS Sta. 43+67.0 Bk = Sta. 43+66.1 Ah = +0.9 Ft.

LOCATION OF PROJECT
City Limits of Neosho South to Rte. 60 Junction

September 12, 1958 to October 6, 1958
DATE OF CONSTRUCTION

GRAPHIC RECORD OF CONSTRUCTION FEATURES

STATION		40+00	41+00	42+00	43+00	44+00	45+00	46+00	47+00	48+00	49+00	50+00	51+00	52+00	53+00	54+00	55+00	56+00	57+00	58+00	59+00	60+00	61+00	62+00	63+00	64+00	65+00	66+00	67+00
DAILY TEMPERATURE	Minimum		64			64	48		51						73		38		64				76		63				
	Maximum		66			88	80		76						90		70		81				84		80				
CONSTRUCTION DATE	Rt. Lane					9/26/58									9/25/58								9/24/58						
	Tinted Median						10/9/58										10/3/58												
	Lt. Lane		9/19/58						9/18/58										9/15/58						9/12/58				
			41+56								49+55 49+63	50+50							57+09		59+78								
MIXING WATER Average gal. per sack of cement	Rt. Lane					4.7									4.7-A.M. 4.4-P.M.								4.8-A.M. 4.6-P.M.						
	Lt. Lane		4.9						4.4-A.M. 4.9-P.M.										4.8-A.M. 4.9-P.M.						5.1				
	Tinted median						4.8										4.8												
AIR ENTRAINED CONCRETE Average % air	Rt. Lane					4.55-A.M. 4.45-P.M.									4.53-A.M. 4.6-P.M.								4.45-A.M. 4.4-P.M.						
	Lt. Lane		4.35						4.4-A.M. 4.38-P.M.										4.0-A.M. 4.43-P.M.						3.0-A.M. 3.1-P.M.				
	Tinted median						4.45										4.7												
DATE OPENED TO TRAFFIC	Rt. Lane					10/1/58									9/30/58								9/29/58						
	Lt. Lane		9/24/58						9/23/58										9/22/58						9/26/58				
DEFECTS OBSERVED In Completed Pavement	Tinted Median						10/10/58										10/8/58												
																None													

Begin Project Station 40+49.6
Equation - Sta. 43+67.0 Bk. - Sta. 43+66.1 Ah.
End Project Station 66+93.3

TYPICAL SECTION
Graded Earth — See S&P Sheet 1ART-2 in Plans
Pavement — See Typical Section Sheet in Plans - Rt. & Lt. Lanes: 8" Reinforced, 4' Tinted Median: 8" Non-Reinforced

MATERIALS
Coarse Aggregate — I (50% 1" - 50% 2" Lt. Lane) (55% 1" - 45% 2" Rt. Lane) (60% 1" - 40% 2" 4' Tinted Median)
Fine Aggregate — A (All Concrete this sheet)
Cement — 1 - Rt. & Lt. Lanes - 2 - 4' Tinted Median
Admixture Air Entraining Agent — (a) - Rt. & Lt. Lanes - (b) - 4' Tinted median

PROPORTIONS 1:1.48:3.44 - Lt. Lane 1:1.52:3.45 Rt. Lane & 4' Tinted Median

DISTRIBUTED REINFORCEMENT
Wire Fabric — S&P 15CR-2 11'6" x 16' Sheets
Bar Mat None
Other None

JOINTS
Expansion (Show Spacing) None
Contraction (Show Spacing) — 4' Median - S&P 15CN-1, 30.75 Spacing, Sawed, S&P 15DE-9 Type B Dowel Support Units, Hot Poured Rubber Asphalt Type Joint Filler
24' Lanes - S&P 15CR-2, 61.5' Spacing, Sawed, S&P 15DE-9 Type B Dowel Support Units, Hot Poured Rubber Asphalt Type Joint Filler
Longitudinal — S&P 15CR-2, Sawed, #5 Bars, Hot Poured Rubber Asphalt Type Joint Filler - Along median strip S&P 15E-19 Type E Without Bars
Construction — S&P 15CR-2, #5 Bars

CURING METHOD — Presstite Membrane @ 200 Sq. Ft. per Gallon

DRAINAGE STRUCTURES
Surface Drains None
Culverts
Cross Drainage — 1 Box Culvert and 1 Bridge (Dbl 9' x 4' Box Culvert)
Longitudinal Drainage — 1 Box Culvert and 1 R.C. Pipe Culvert and 16 Continental C.M. Pipe
Special Drainage None
Underdrains (Length, Type, & Station)

GUARD RAIL None — Sta. 66+93 - S&P 24A-5, Cl. A, Type 1, "V" Lot, 100 Ft.

SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS — 4' Median Strip Hand Finished

SUBGRADE
Method of Compacting Embankment — Sheepfoot Rollers - 6" Lifts
Treatment — Sprinkling
Condition — Good
Type — Huntington Silt Loam — Baxter Gravelly Loam

BASE COURSE
Type & Thickness — 4" Compacted Chat (Mine Chat from Granby Area)
Condition — Good

MATERIAL KEY

I - Burlington Limestone, J. J. Griesemer, Wally, mo.

A - Arkansas River Sand, Mohawk Sand Co., Shirk, Okla.

1 - Portland Cement, Monarch Cement Co., Humboldt, Kan. (Bulk)
2 - Portland Cement, Missouri Portland Cement Co., Sugar Creek, Mo. (Bulk).

(a) - Presstite, Presstite-Keystone Co., St. Louis, mo.
(b) - Ad-Aire, Carter-Waters Corp., Kansas City, Mo. (c) Tinting Mtl., National Pulverized Metal Co., Chicago, Ill.

SPECIAL PROCEDURE KEY

PREPARED BY H. A. Harris Jr.
APPROVED BY C.R. Baugher RESIDENT ENGINEER
APPROVED BY D.W. Gurney DISTRICT MATERIALS ENGINEER
CHECKED BY CONSTRUCTION DIV. SURVEYS & PLANS DIV. MATERIALS DIV.

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	F-182(6)		2-AA	
DIST. NO.	COUNTY			ROUTE	SEC.
7	NEWTON			71 Alt.	

FINAL PLANS

SUMMARY SHEET FOR CONCRETE PAVING PROJECT

CONTRACTOR Atkinson-Windle Company, Chillicothe, mo.
PAVED BY Atkinson-Windle Company, Chillicothe, mo.

RESIDENT ENGINEER C. L. Baugher
SLAB INSPECTORS D. E. Branham
W. G. Ward, Jr. O. L. McDaniel

PLANT INSPECTOR H. A. Harris, Jr. J. C. Long

EQUIPMENT
Koehring 34 E Dual Drum Mixer Ser. No. 18450
Koehring 16 E Dual Drum Mixer Ser. No. 24182 (1950)
Jaeger Spreader Mod. CS20 Ser. No. 41X705 (1941)
Jaeger - Lakewood Finishing Machine Ser. No. 55X146 (1955)
Koehring Longitudinal Finishing Mach. Size LFLA Ser. No. 1275 (1953)
Flex-Plane Spray Machine Mod. E-117
Johnson Dutch Mill Cement Bin (110 Bbl.) Johnson Scales Type MAN, Mod. 1000, Ser. No. 41072
Johnson 75 Ton Rock Bin, Johnson Scales Ser. Nos. 33903 & 28062
Johnson 75 Ton Sand Bin, Johnson Scales Ser. Nos. 33023 & 33022 R

TYPE OF CONSTRUCTION Graded Earth, Culverts, a bridge and Concrete Pavement 52' Wide
TOTAL LENGTH 0.501 Miles
EXCEPTIONS None

EQUATIONS Sta. 43+67.0 Bk = Sta. 43+66.1 Ah = +0.9 Ft.

LOCATION OF PROJECT
City Limits of Neosho South to Rte. 60 Junction

September 12, 1958 to October 6, 1958
DATE OF CONSTRUCTION

GRAPHIC RECORD OF CONSTRUCTION FEATURES

DAILY TEMPERATURE	Minimum	64	64	48	51	73	38	64	76	63
	Maximum	66	88	80	76	90	70	81	84	80
CONSTRUCTION DATE	Rt. Lane		9/26/58			9/25/58			9/22/58	
	Tinted Median			10/6/58			10/3/58			
	Lt. Lane	9/19/58			9/18/58			9/15/58		9/12/58

41+56 49+55 49+63 50+50 57+09 59+78

STATION 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00

Begin Project Station 40+49.10
Equation - Sta. 43+67.0 Bk = Sta. 43+66.1 Ah
End Project Station 66+93.3

TYPICAL SECTION
Graded Earth
Pavement
See S&P Sheet 1ART-2 in Plans
See Typical Section Sheet in Plans - Rt. & Lt. Lanes: 8" Reinforced, 4' Tinted Median: 8" Non-Reinforced

MATERIALS
Coarse Aggregate
Fine Aggregate
Cement
Admixture Air-Entraining Agent
I (50% 1" - 50% 2" Lt. Lane) (55% 1" - 45% 2" Rt. Lane) (60% 1" - 40% 2" 4' Tinted Median)
A (All Concrete this sheet)
1 - Rt. & Lt. Lanes - 2 - 4' Tinted Median
(a) - Rt. & Lt. Lanes - (b) - 4' Tinted Median

PROPORTIONS
1 : 1.48 : 3.44 - Lt. Lane 1 : 1.52 : 3.45 Rt. Lane & 4' Tinted Median

MIXING WATER Average gal. per sack of cement	Rt. Lane		4.7			4.7-A.M. 4.4-P.M.			4.8-A.M. 4.6-P.M.	
	Lt. Lane	4.9			4.4-A.M. 4.9-P.M.			4.8-A.M. 4.9-P.M.		5.1
	Tinted median			4.8			4.8			
AIR ENTRAINED CONCRETE Average % air	Rt. Lane		4.55-A.M. 4.45-P.M.			4.53-A.M. 4.6-P.M.			4.45-A.M. 4.4-P.M.	
	Lt. Lane	4.35			4.4-A.M. 4.38-P.M.			4.0-A.M. 4.43-P.M.		3.0-A.M. 3.1-P.M.
	Tinted median			4.45			4.7			

DISTRIBUTED REINFORCEMENT
Wire Fabric
Bar Mat None
Other None
S&P 15CR-2 11'6" x 16' Sheets

JOINTS
Expansion (Show Spacing) None
Contraction (Show Spacing)
Longitudinal
Construction
4' Median - S&P 15CN-1, 30.75' Spacing, Sawed, S&P 15DE-9 Type B Dowel Support Units, Hot Poured Rubber Asphalt Type Joint Filler
24' Lanes - S&P 15CR-2, 61.5' Spacing, Sawed, S&P 15DE-9 Type B Dowel Support Units, Hot Poured Rubber Asphalt Type Joint Filler
S&P 15CR-2, Sawed, #5 Bars, Hot Poured Rubber Asphalt Type Joint Filler - Along Median Strip S&P 15E-19 Type E Without Bars
S&P 15CR-2, #5 Bars

CURING METHOD
~~[illegible]~~ & Presstite Membrane @ 200 Sq. Ft. per Gallon

DRAINAGE STRUCTURES
Surface Drains None
Culverts
Cross Drainage
Longitudinal Drainage
Special Drainage None
Underdrains (Length, Type, & Station)
1 Box Culvert and 1 Bridge (Dbl 9' x 4' Box Culvert)
1 Box Culvert and 1 R.C. Pipe Culvert and 16 Continental C.M. Pipe

GUARD RAIL None
Sta. 66+93 - S&P 22A-5, Cl. A, Type 1, "V" Lot, 100 Ft.

SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS
4' Median Strip Hand Finished

SUBGRADE
Method of Compacting Embankment
Treatment
Condition
Type
Sheepfoot Rollers - 6" Lifts
Sprinkling
Good
Huntington Silt Loam Baxter Gravelly Loam

BASE COURSE
Type & Thickness
Condition
4" Compacted Chat (Mine Chat from Granby Area)
Good

DATE OPENED TO TRAFFIC	Rt. Lane		10/1/58			9/30/58			9/29/58	
	Lt. Lane	9/24/58			9/23/58			9/22/58		9/20/58
	Tinted Median			10/10/58			10/8/58			

41+56 49+55 49+63 50+50 57+09 59+78

DEFECTS OBSERVED In Completed Pavement None

MATERIAL KEY
I - Burlington Limestone, J. J. Griesemer, Wally, mo.
A - Arkansas River Sand, Mohawk Sand Co., Shirk, Okla.
1 - Portland Cement, Monarch Cement Co., Humboldt, Kan. (Bulk)
2 - Portland Cement, Missouri Portland Cement Co., Sugar Creek, Mo. (Bulk)
(a) - Presstite, Presstite-Keystone(St. Louis, mo.
(b) - Ad-Aire, Carter-Waters Corp., Kansas City, Mo.
(c) Tinting Mtl., National Pulverized Metal Co., Chicago, Ill.

SPECIAL PROCEDURE KEY

PREPARED BY H. A. Harris Jr.
APPROVED BY C. R. Baugher RESIDENT ENGINEER
APPROVED BY D. W. Sperry DISTRICT MATERIALS ENGINEER
CHECKED BY
CONSTRUCTION DIV. SURVEYS & PLANS DIV. MATERIALS DIV.

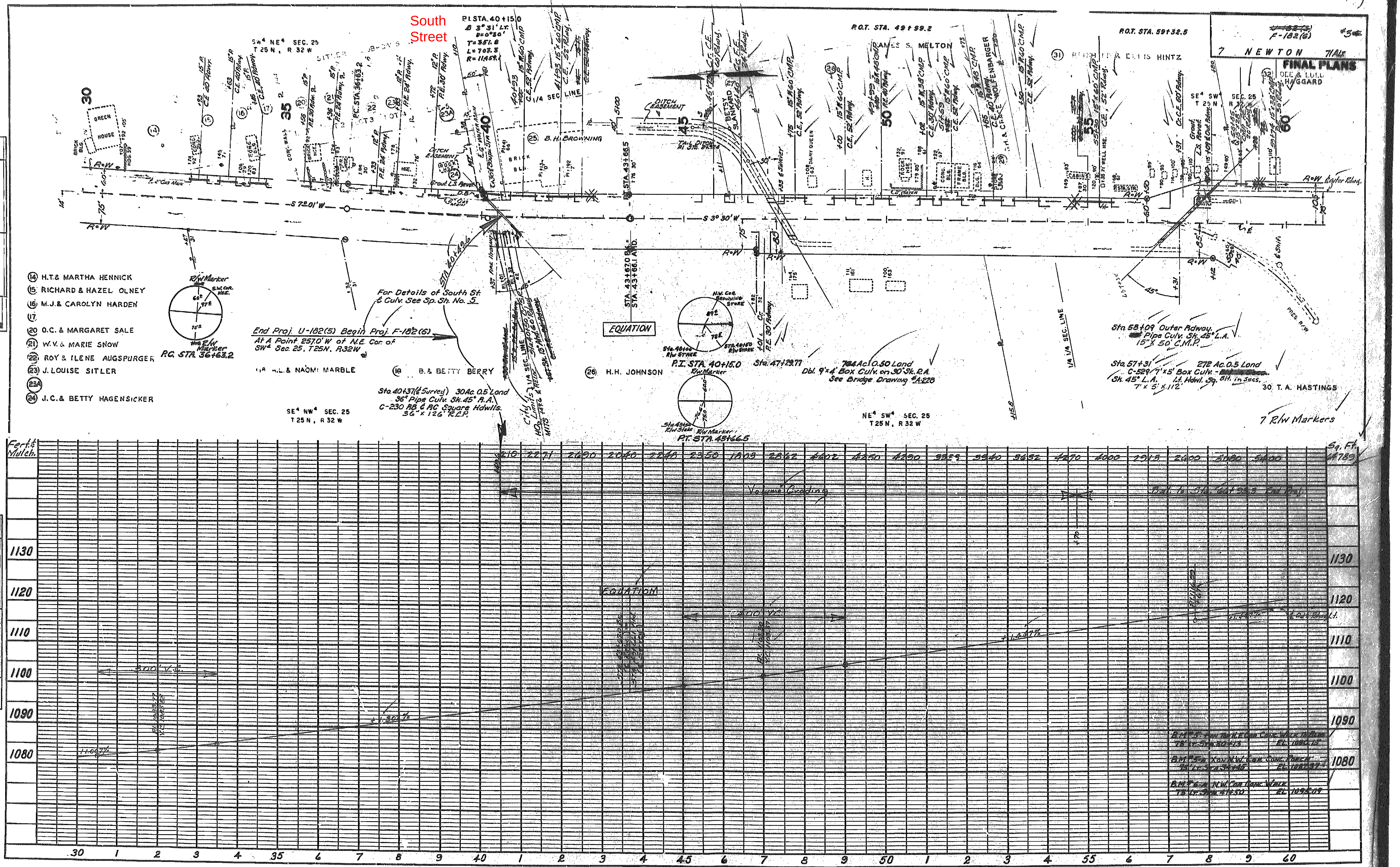
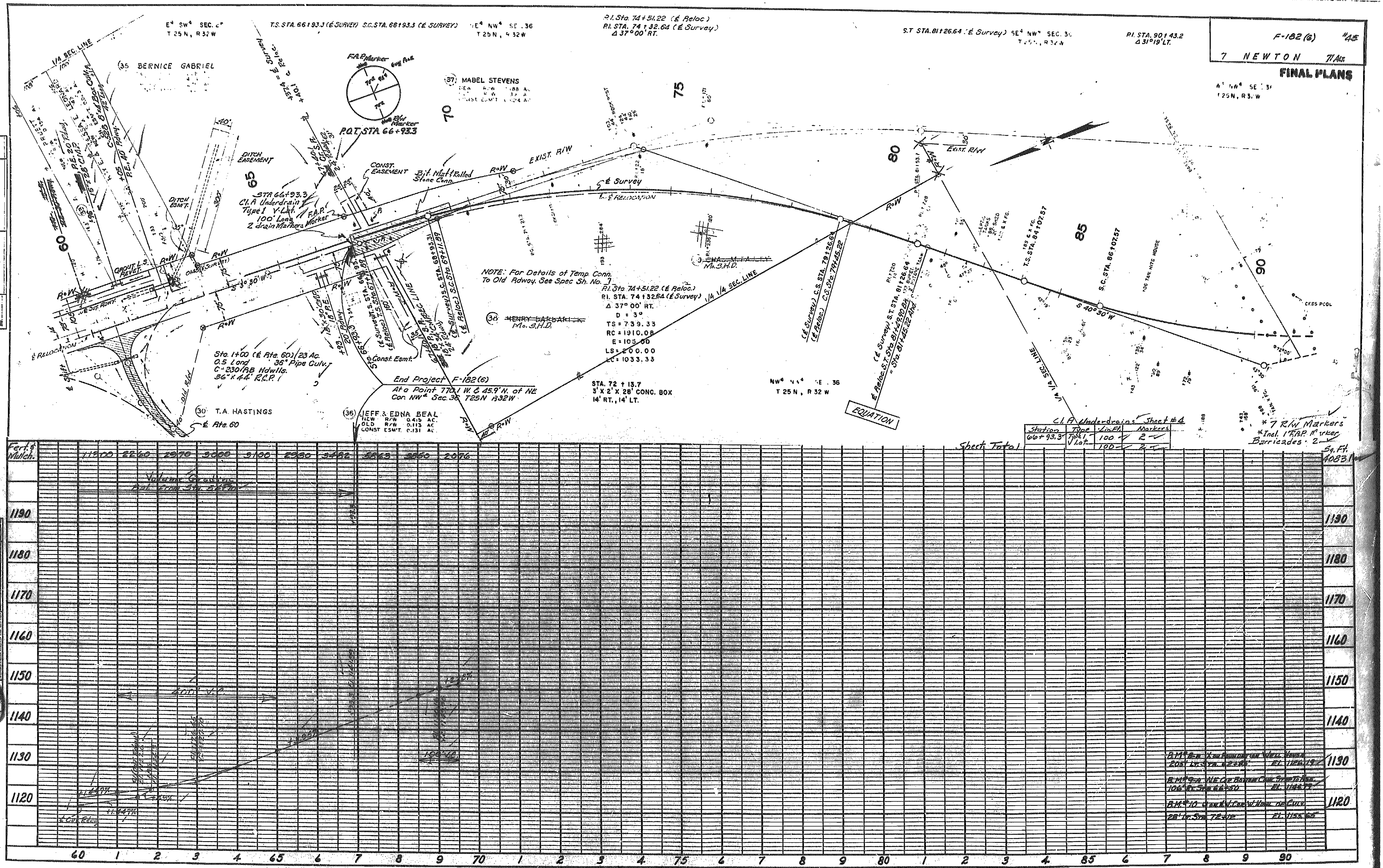


PLATE 1—PLAN-PROFILE

F-182 (6) #43
7 NEWTON 71 Am

FINAL PLANS



Station	Type	Lin. Ft.	Markers
66+93.3	Type 1 V Lat.	100	2
		100	2

PLATE 1—PLAN-PROFILE C.P.R.&R.C. STANDARD
U.S. BLUE PRINT PAPER CO.—CHICAGO

FINAL PLANS

MO. U-182(5)F-182(6) NEWTON 5 7

6

8

MODIFICATIONS OF STANDARD CULVERT DETAILS

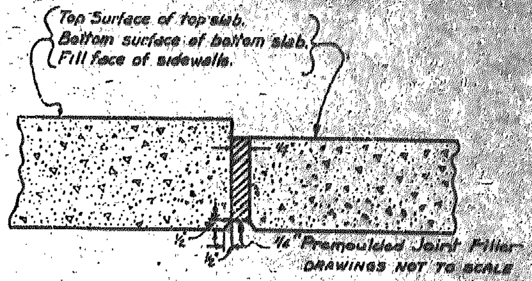
STATION	STANDARD NUMBER	SIZE AND TOTAL LENGTH OF FINAL STRUCTURES	SECTION OR IDENTICAL SECTIONS	LENGTH OF SECTION	HEIGHT OF FILL FOR DESIGN DATA	SECTION LOCATED UNDER	MODIFICATIONS BOTTOM SLAB THICKNESS OF SLAB	MODIFICATIONS BOTTOM SLAB SIZE OF A-BARS	MODIFICATIONS SPACING OF A-BARS	MODIFICATIONS LENGTH OF B-BARS IN SIDEWALLS	REMARKS
			PROJECT U-182(5)								
14+00 ℄ Survey	C-530	4'×2.5'×98' Sk. 20°R.A.	A	49' 0"	2'	Rt. Shldr. & Roadway					Normal W.W. Slope 2:1
			B	49' 0"	3'	Roadway & Lt. Shldr.					Normal W.W. Slope 2:1
29+33 ℄ Survey	C-530	4'×2'×148' Sk. 25°R.A.	A	50' 0"	2'	Rt. Shldr. & Roadway					Hdwll. Square 2:1 W.W. Slope
			B	50' 0"	2'	Roadway					
			C	48' 0"	2'	Lt. Shldr. Slope & Outer Rdwy.					Normal W.W Slope 2:1

MODIFICATIONS OF STANDARD CULVERT DETAILS

STATION	STANDARD NUMBER	SIZE AND TOTAL LENGTH OF FINAL STRUCTURES	SECTION OR IDENTICAL SECTIONS	LENGTH OF SECTION	HEIGHT OF FILL FOR DESIGN DATA	SECTION LOCATED UNDER	MODIFICATIONS BOTTOM SLAB THICKNESS OF SLAB	MODIFICATIONS BOTTOM SLAB SIZE OF A-BARS	MODIFICATIONS SPACING OF A-BARS	MODIFICATIONS LENGTH OF B-BARS IN SIDEWALLS	REMARKS
			PROJECT F-182(6)								
57+31 ℄ Reloc.	C-529	7'×5'×112' Sk. 45°L.A.	A	56' 0"	1'	Lt. Shldr. & Roadway	11½"	#6	5½"	6'6"	Hdwll. Square 9" Hdwll.
			B	56' 0"	1'	Roadway & Rt. Shldr.	11½"	#6	5½"	6'6"	9" Hdwll.

NOTE- *Section "A" is always that section nearest the upstream flow line of the final structure.*

DETAILS OF TRANSVERSE EXPANSION JOINT



Joint material to be used at transverse joints in top and bottom slabs and sidewalls.
Tranverse joint to be constructed perpendicular to flow line and at right angles to ℄ of box

GENERAL NOTES

All longitudinal reinforcement shall be placed with ends approximately 1½" from center of expansion joints.

Cost of tranverse expansion joints, complete in place, to be included in unit price bid for Class "B" concrete.

The Premoulded Joint Filler shall meet the requirements of Standard Specification 38-19A(1)h.

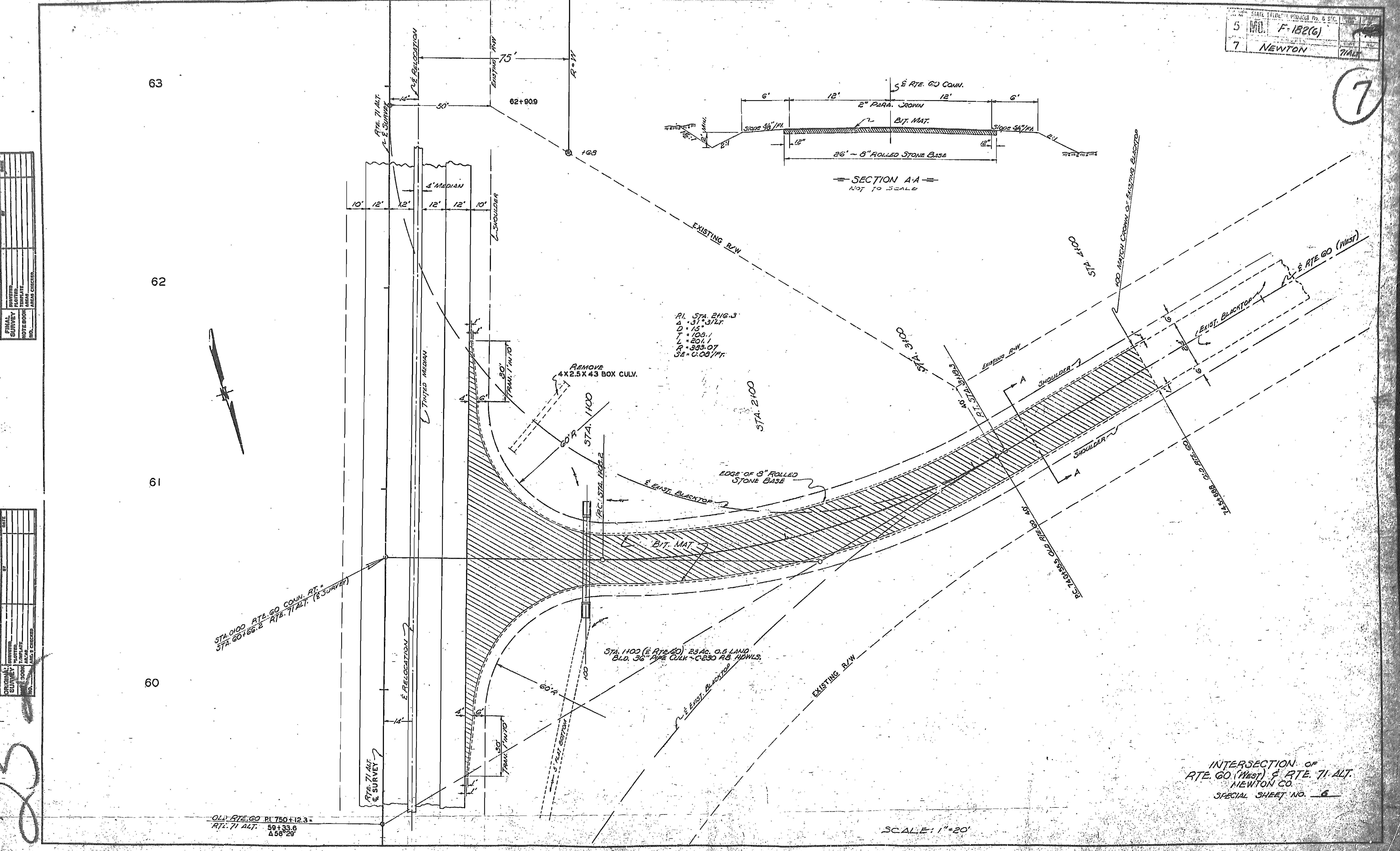
MISSOURI STATE HIGHWAY COMMISSION

MODIFICATIONS AND TRANSVERSE EXPANSION JOINTS
FOR
BOX CULVERTS WHICH ARE TO BE BUILT IN SECTIONS

ROUTE 71 ALT. PROJS U-182(5) & F-182(6)
COUNTY NEWTON

REVISIONS				
1	2	3	4	5
8-55	1-55			

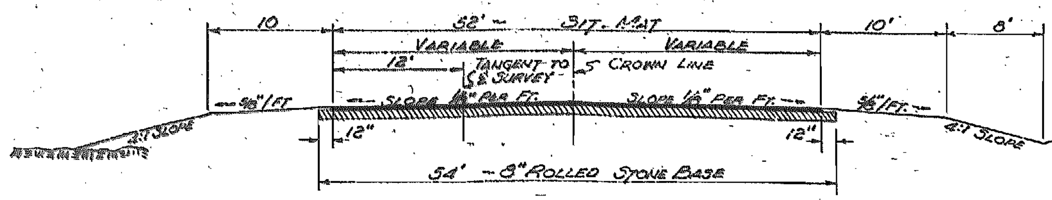
SPECIAL SHEET NO.1



INTERSECTION OF
RTE. 60 (WEST) & RTE. 71 ALT.
NEWTON CO.
SPECIAL SHEET NO. 6

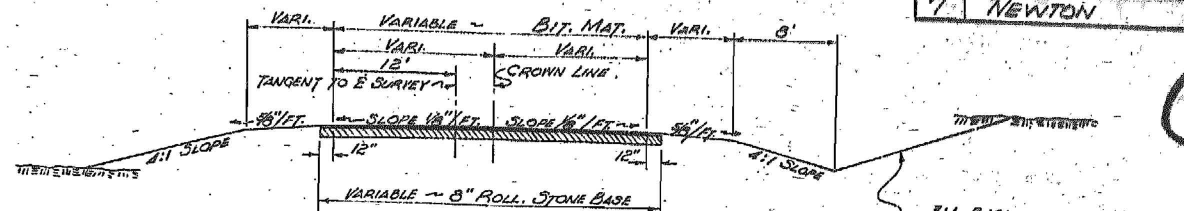
FED. ROAD DIV. No.	STATE	FEDERAL PROJECT No. & SEC.		
5	MO.	F-182(6)		
DIST. No.		COUNTY	ROUTE	
7		NEWTON	71ALT.	

8



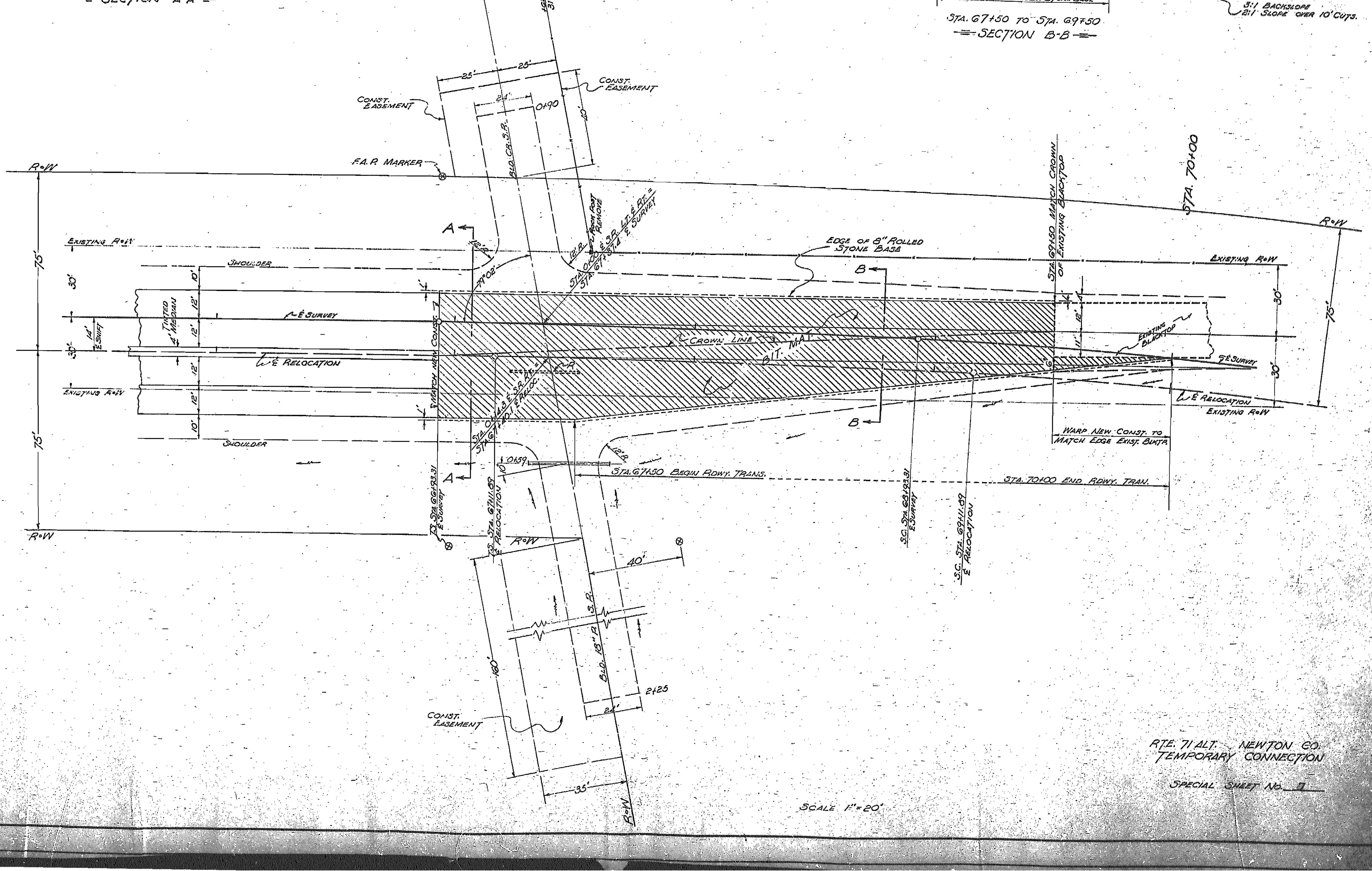
STA. 66+93.3 TO STA. 67+50

SECTION A-A



STA. 67+50 TO STA. 69+50

SECTION B-B



RTE. 71 ALT. NEWTON CO.
TEMPORARY CONNECTION

SPECIAL SHEET No. 1

SCALE 1" = 20'

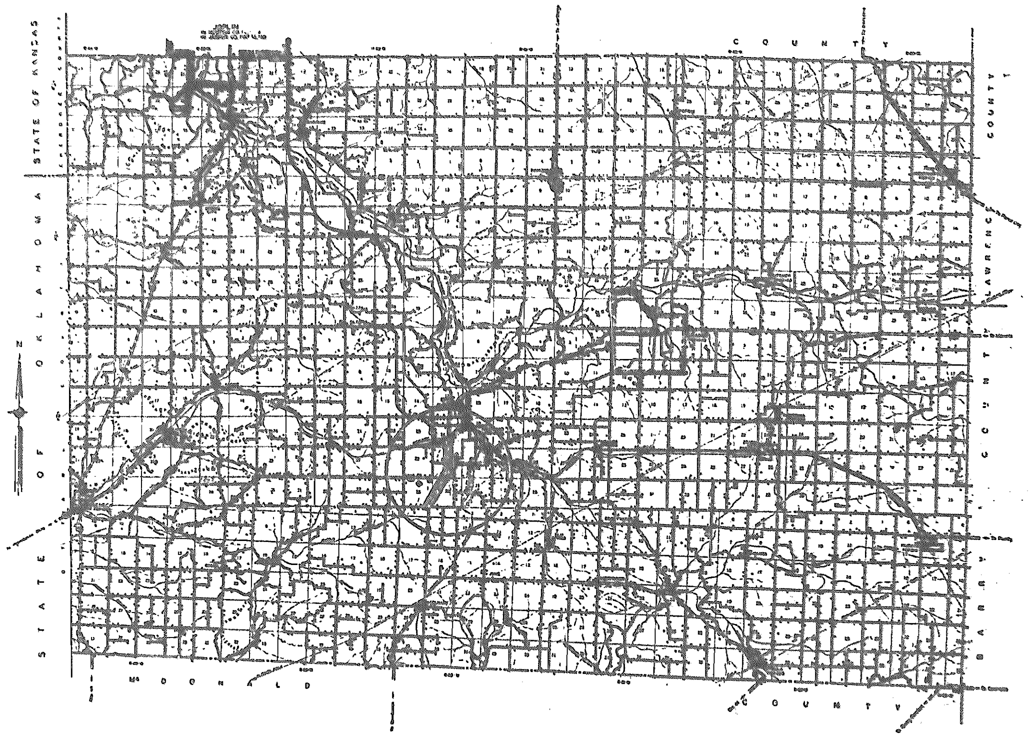
LIST OF STANDARD PLANS

PROJ.	SHEET
F-182(6)	9
CO.	**RTE.**
NEWTON	71 ALT. & 60

1BA-4		(6-9-54)
1TR-2		(8-20-52)
15CN-1		(3-57)
15CR-2		NEN-(5-56)
15DE-9		
15E-19		(5-55)
24A-5		(4-22-55)
28A-2		
C-230R2		(3-56)
C-528	1of2	(1-30-53)
C-528	2of2	(8-18-52)
C-529	1of2	(1-30-53)
C-529	2of2	(8-18-52)
C-27		
C110R5		

264

LOCATION MAP

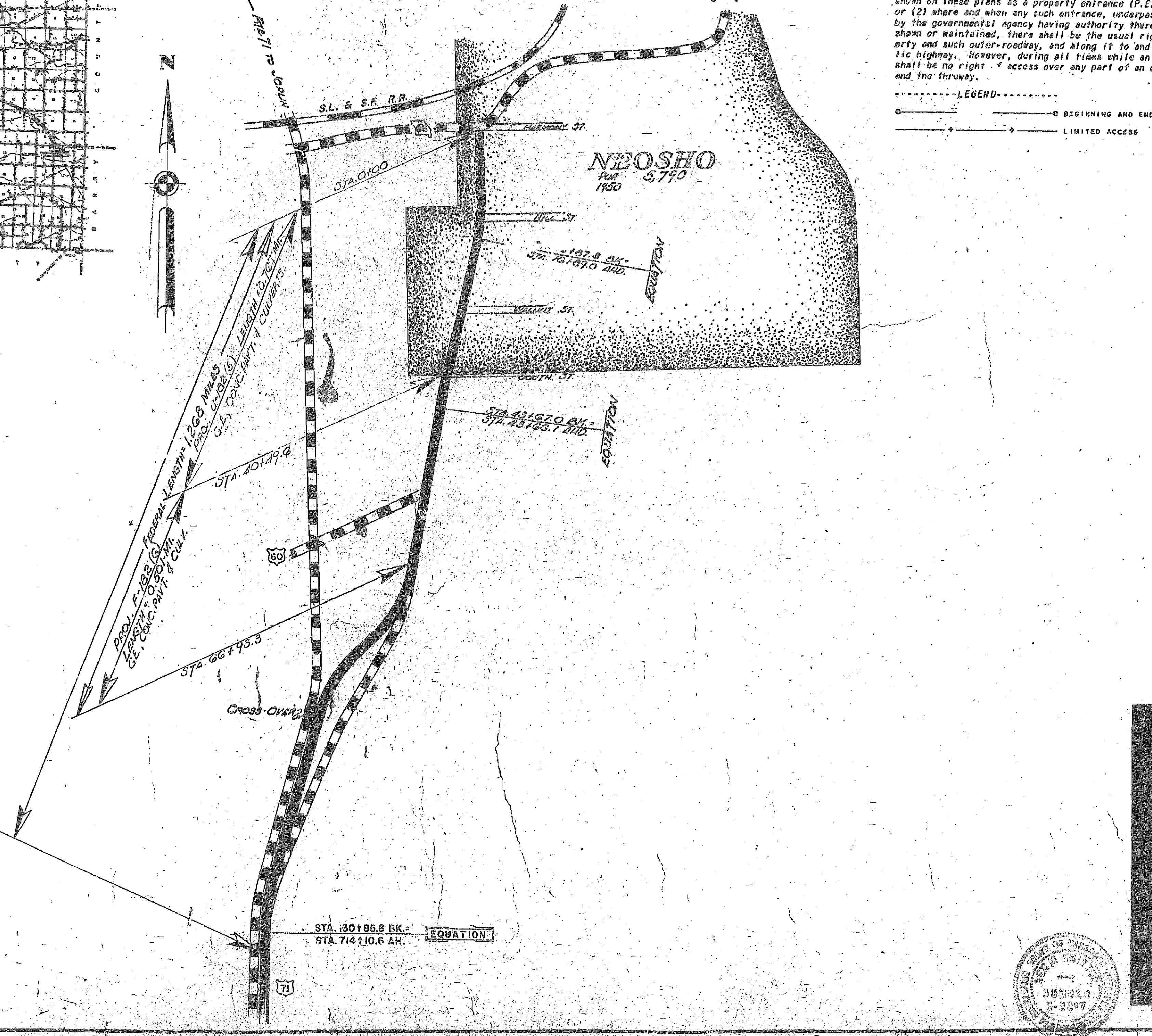


MISSOURI
STATE HIGHWAY COMMISSION
PLAN AND PROFILE
OF PROPOSED
STATE ROAD

FEDERAL AID PROJECT

NEWTON COUNTY

COUNTY
NEWTON
STATE ROUTE NO.
RTE. 71 ALT. F
PROJECT NO.
U-182 (5) [redacted]



LIMITED ACCESS HIGHWAY

This shall be a limited-access highway between Station 0+00 and Station 4+70. Except at locations and as otherwise specifically shown on these plans, no abutter's rights in, or of direct access to, from, or across the highway or its right of way shall attach or belong to any property abutting on said section of highway or to any person merely because of ownership of such abutting property. There shall be the usual right of access over any location either (1) shown on these plans as a property entrance (P.E.), field entrance (F.E.), or private underpass, or (2) where and when any such entrance, underpass, or an open public highway is being maintained by the governmental agency having authority therefor. Wherever an adjacent outer-roadway is so shown or maintained, there shall be the usual right of direct access between the abutting property and such outer-roadway, and along it to and from the nearest lane of the thruway or a public highway. However, during all times while an outer-roadway is being so maintained, there shall be no right of access over any part of an entrance which lies between said outer-roadway and the thruway.

LEGEND

o———————o	BEGINNING AND ENDING OF LIMITED ACCESS
——+——+——	LIMITED ACCESS

CONVENTIONAL SIGNS

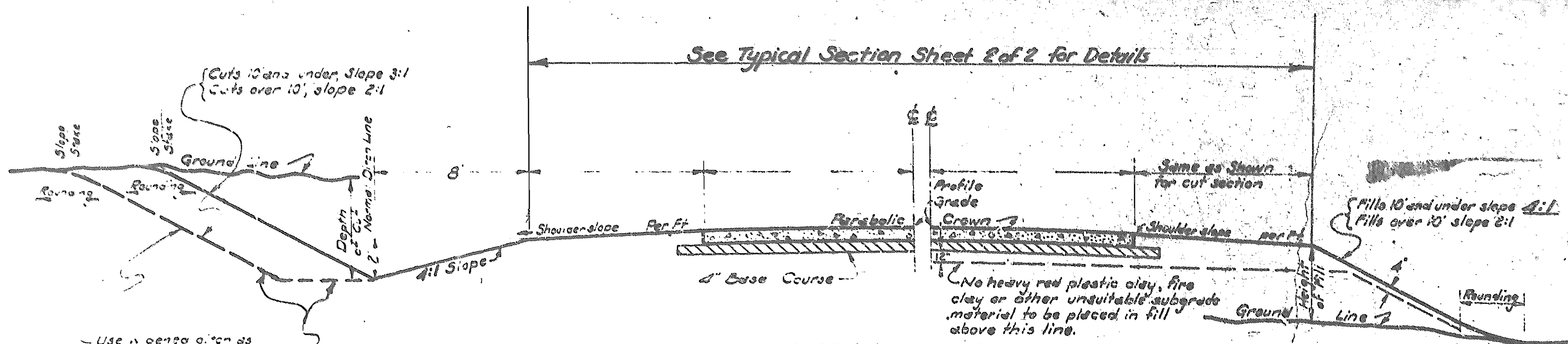
STATE AND NATIONAL LINE	— - —	LEVEE	
COUNTY LINE	— - —	CULVERTS	
CITY, VILLAGE OR BOROUGH	— - —	DROP INLET	
TOWNSHIP LINE	— —	TROLLEY POLE	
SECTION LINE	— —	POWER POLE	
GRANT LINE	— — —	TELEPHONE OR TELEGRAPH POLE	
FENCE LINE	—x—x—	MARSH	
GUARD RAIL	●—●—●	HEDGE	
UNFENCED PROPERTY			
RIGHT OF WAY LINE	———	GROUND ELEVATION	GROUND LINE
TRAVELED WAY			
RAILROADS		GRADE ELEVATION	GRADE LINE
RETAINING WALL		SURFACE LINE	
BASE OR SURVEY LINE		GRADE LINE	

SUBMITTED BY [redacted] DATE [redacted]

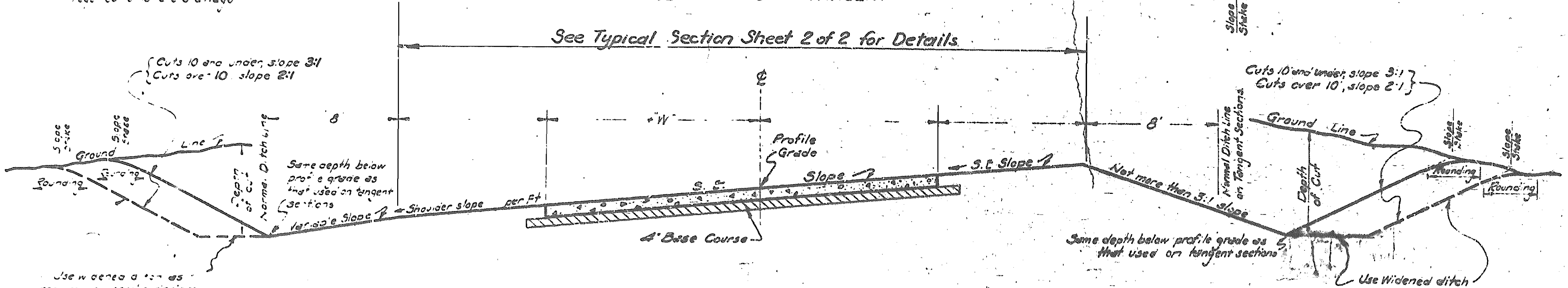
CHIEF ENGINEER
MISSOURI STATE HIGHWAY COMMISSION

[redacted]

FINAL PLANS

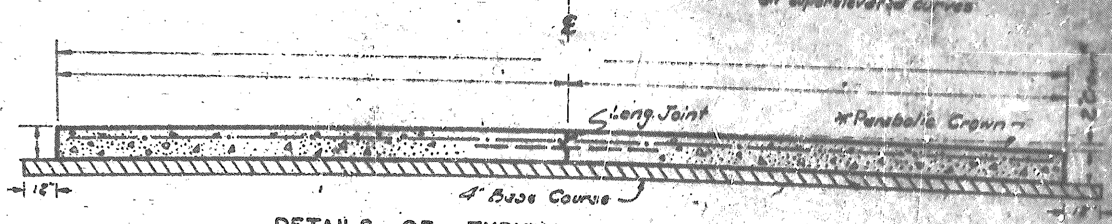


SECTION ON TANGENT



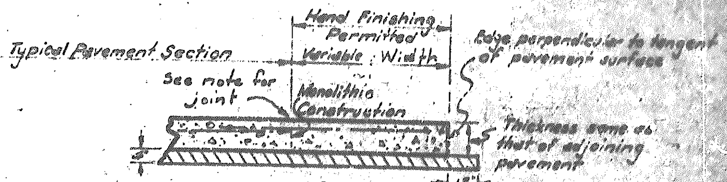
CUT SECTION ON SUPERELEVATED CURVE (ALL CURVES OVER ONE DEGREE)

NOTE: Fill sections on superelevated curve to be identical to this section from shoulder to shoulder. Beyond shoulders use same as shown for "Section on Tangent."



* NOTE: Crown to be eliminated on all superelevated curves.

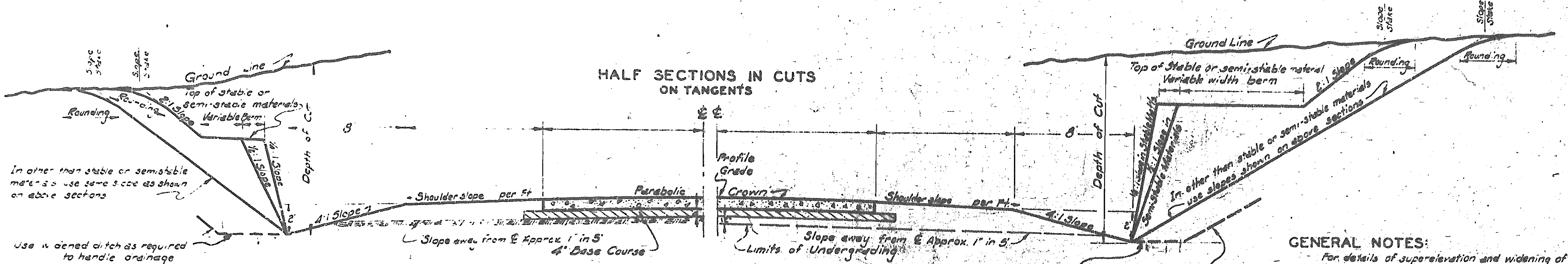
DETAILS OF TYPICAL PAVEMENT SECTION



TYPICAL SECTION SHOWING WIDENING

Note: When width exceeds 2' construct a Tongue and Groove Joint between Pavement and widening See plan sheet.

HALF SECTIONS IN CUTS
ON TANGENTS



IN "CLASS C" OR LEDGE SANDSTONE

IN HEAVY RED PLASTIC CLAY, FIRE CLAY, OR OTHER UNSUITABLE MATERIAL

NOTE: On superelevated curves, undergrading to parallel the superelevation, and other details from ditch line to ditch line shall be identical to those shown for "Cut Section on Superelevated Curves."

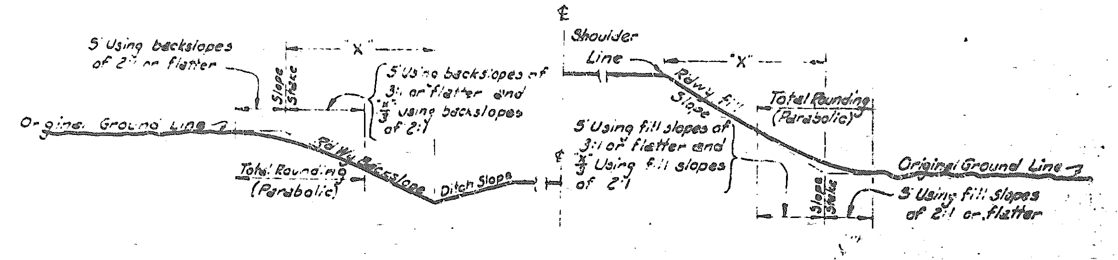
For paylimits of overbreak and backfill see specifications.

GENERAL NOTES:

For details of superelevation and widening of horizontal curves, all pavement appurtenances, drainage items, etc., see other drawings.

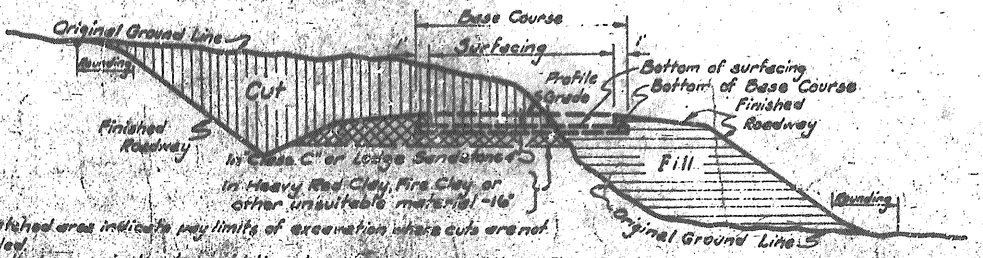
In transitioning from one cut or fill slope to another, use a 25' transition beginning at a point 25' back along that which would normally be the flatter slope and ending the transition at the actual point where the steeper slope is required. If the actual limits requiring a steeper slope is less than 25' in length, do not change to the steeper slope.

All information shown on these Typical Sections is for the purpose of indicating general design and construction details. Actual construction of roadway widths, slopes, depths and type of ditches, undergraded cuts, and other features, shall conform to the details shown on Cross-Sections and Plan-Profile sheets or as directed by the Engineer.



PARABOLIC ROUNDING REQUIRED AT TOP OF ROADWAY BACKSLOPES
AND AT TOE OF ROADWAY FILL SLOPES.

Use on Rt. Side Only Sta. 16+32.1 to Sta. 67+50



Vertical hatched area indicate pay limits of excavation where cuts are not undergraded.
Cross-hatched area indicates additional area, to be added to vertical hatched area included in pay limits of excavation where cuts are undergraded. For pay limits of overbreak and backfill see Specifications.
Horizontal hatched area indicates limits to which embankment can be constructed.

SKETCH SECTION SHOWING EXCAVATION PAY LIMITS

MISSOURI STATE HIGHWAY COMMISSION

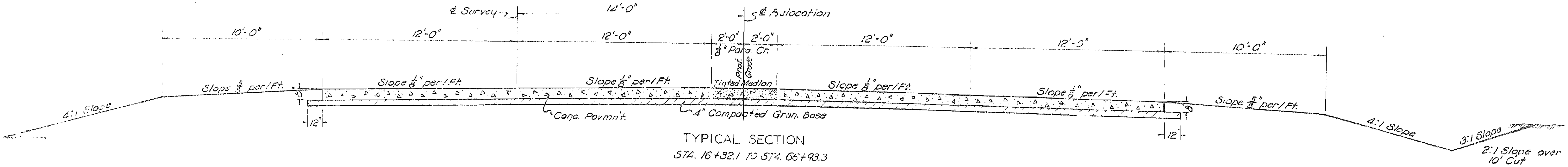
TYPICAL SECTIONS
FOR
FT. GRADED EARTH
AND
FT. CONCRETE PAVEMENT

(DESIGN SPEED 50 M.P.H.)

ROUTE: 71 Alt. COUNTY: NEWTON
PROJ. OR SEC. U-182(5) & F-182(6)
SHEET 1 of 2

APPROVED ENGR. SURVEYS AND PLANS APPROVED CHIEF ENGINEER

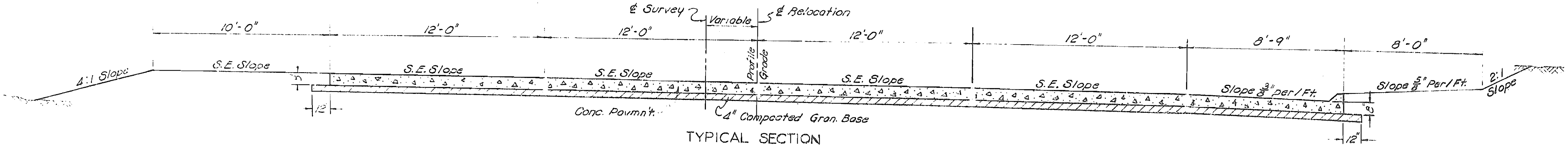
1 ART-2



TYPICAL SECTION

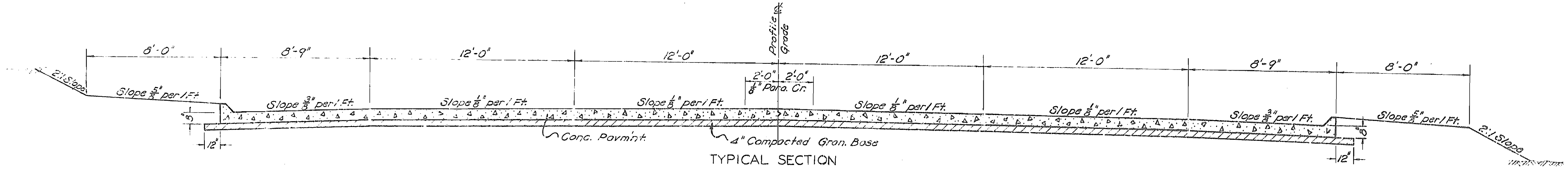
STA. 16+32.1 TO STA. 66+93.3

STA. 14+32.1 TO STA. 16+32.1 SEE PLAN SH. NO. 7



TYPICAL SECTION

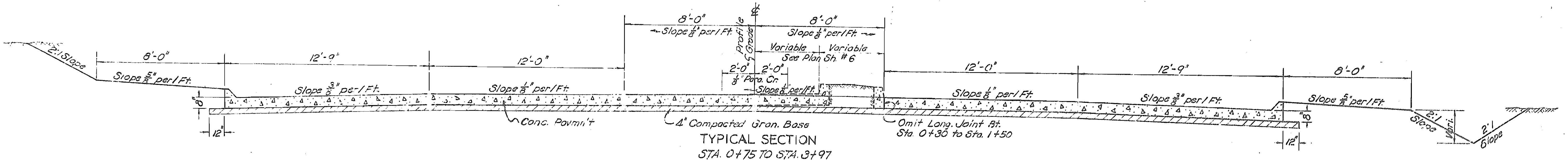
STA. 8+30 TO STA. 14+32.1



TYPICAL SECTION

STA. 5+97 TO STA. 8+30

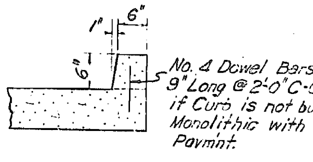
STA. 3+97 TO STA. 5+97 SEE PLAN SH. NO. 6



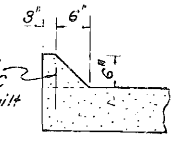
TYPICAL SECTION

STA. 0+75 TO STA. 3+97

STA. 0+00 TO STA. 0+75 SEE 6P. SH. NO. 2



TYPICAL SEC. OF INTEGRAL MEDIAN CURB



TYPICAL SECTION OF INTEGRAL CURB

—NOTE—

For Slope Rounding, General Notes & Exc. Pay Limits See Typical Section Sheet Drwg. No. 1-ART-2

TYPICAL ROADBED SECTIONS
RTE. 71 ALT. NEWTON COUNTY
PROJ. U-182(5) & F-182(6)
SHEET 2 OF 2

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

ORIGINAL SURVEY
SURVEYED
NOTE BOOK
TEMPLATE
AREAS CHECKED
P.O.
BY
DATE

LOCATION *Harmony Street in Neosho, South to South City Limits in Neosho*

TYPE *Graded Earth, Culverts and a Concrete Pavement 52' to 65.5' Wide*

MISSOURI STATE HIGHWAY COMMISSION

SUMMARY OF QUANTITIES

FINAL PLANS

FED. ROAD DIST. No.	STATE	PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	MO.	U-182(5)		2-A	
DIST. No.	COUNTY			ROUTE	SEC. No.
7	NEWTON			71 Alt.	

EXCAVATION

Station	Class A	Borrow	Comp. Cut	Comp. Fill
0+00				
18+00	6769	1420	4519	5519
40+49.6	4959	6570	4646	7817
Sub Totals	11728	7990	9165	13336
Borrow	7990			
TOTALS	19718		9165	13336

CONCRETE BOX CULVERTS

Station	Std.	Size	Length	Fill	Skew	W.W. Slope	Cl. B Conc.	Reinf.	Cl. 3 Exc.	~ Remarks ~
5+10	C-530	3'x3'	6'	1'		1.5:1	2.7	390	18.0	1-15" & 1-24" Pipe Open 9" Hdwl. Quan. incl Bkwall
4+02.7	C-530	4'x2.5'	98'	2'&3'	20° R.A.	2:1	33.7	3950	127.5	
4+26	C-530	4'x2.5'	30'	1'		1.5:1	12.1	1430	12.0	40' Lt. off Hill St 9" Hdwls. See Sp. Sh. #2
29+39.5	C-530	4'x2'	148'	2'	25° R.A.	2:1	45.8	5460	153.0	
TOTALS							94.3	11230	310.5	

LENGTH OF PROJECT

End of Project	Station	40+49.6	
Beginning of Project	Station	0+00.0	
Apparent Length		4049.6	Feet
Equations and Exceptions:			
Sta. 16+87.3 BL = 16+89.0 Ah.		-1.7	
Total Corrections		-1.7	Feet
Net Length of Project		4047.9	Feet
State Length		0.767	Miles
Federal Length		0.767	Miles

GENERAL SUMMARY

ITEM NO.	DESCRIPTION	UNIT	TOTAL UNITS	NO UNITS FED. AID ONLY
1-D	Class A Excavation	C.Y.	19718	
1-I	Class 3 Excavation for structures	C.Y.	1099.5	
1-K	Compacting Embankments	C.Y.	13336	
1-L	Compacting in Cuts	C.Y.	9165	
1-Q	Removing Pavement	S.Y.	1119	
1-X	Adjusting Manholes to Grade	Each	7	
1-Z	Removing (14) Miscellaneous Items	L. Sum	1	
13-A	Chat Surface	C.Y.	105	
15-A	Concrete Pavement (8" Reinf.)	S.Y.	24232.9	
15-A	Concrete Pavement (8" Non Reinf.)	S.Y.	1142.4	
16-B	Class B Concrete (Box Culverts)	C.Y.	94.3	
16-B	Class B Conc. (Other than Box Culv.)	C.Y.	17.2	
18-B	12" Corr. Metal Culv. Pipe	L.F.	96	
18-B	15" Corr. Metal Culv. Pipe	L.F.	322	
18-B	18" Corr. Metal Culv. Pipe	L.F.	28	
18-B	42" Corr. Metal Culv. Pipe	L.F.	40	
18-C	15" Reinf. Conc. Culv. Pipe	L.F.	242	
18-C	18" Reinf. Conc. Culv. Pipe	L.F.	296	
18-C	24" Reinf. Conc. Culv. Pipe	L.F.	468	
18-C	36" Reinf. Conc. Culv. Pipe	L.F.	127	
19-A	Reinforcing Steel	Lb.	13710	
23-B	Grouted Light Stone Revetment	S.Y.	24	
25-BB	Paved Approach (7")	S.Y.	254.6	
25-BB	Paved Approach (8")	S.Y.	358.7	
27-A	Guard Rail (Type A)	L.F.	125	
27-F	Chain Link Fence (4' Type A)	L.F.	900	
28-A	Barricades	Each	1	
28-B	Relocating Barricades	Each	1	
29-C	Right of Way Markers	Each	16	
33-A	Removal of 22 Existing Structs. (Culvs.)	L. Sum	1	
36-A	Grates & Bearing Plates	Lb.	3200	
36-C	Manhole Frame & Cover (36-T Drop Inlet)	Each	1	
37-A	Fertilizing and Mulching	Acre	2.7	
40-N	4" Non Metallic Conduit	L.F.	100	
	ROLLED STONE BASE FOR BIT. MAT			
1-BA	Water	100 Gal	75	
2-A	Aggregate	Ton	632	
2-B	Spreading, Shaping & Comp. (4" Thick)	S.Y.	529	
2-B	Spreading, Shaping & Comp. (8" Thick)	S.Y.	1203	
	4" COMPACTED GRANULAR BASE FOR 8" P.C.C. PAVT.			
1-BA	Water	100 Gal	90	
3C-A	Granular Base Material	Ton	5237	
3C-B	Spreading, Shaping & Compacting	S.Y.	26471	
	BITUMINOUS MAT SURFACE			
9-A	Hauling & Windrowing Aggregate	C.Y.	83	
9-B	Processing	S.Y.	2222	
9-C	Primer (MC-0)	Gal	480	
9-D	Binder (MC-3)	Gal	1420	
	CONTINGENT			
	24" Corr. Metal Culvert Pipe	L.F.	30	
	Integral Curb	L.F.	620	

GROUTED LIGHT STONE REVETMENT

Station	Location	Sq. Yd.	~ Remarks ~
40+00	Lt	24	At Culv. End See Sh. #10
TOTAL		24	

CROSS ROAD R.C.P. CULVERTS

Station	36" Pipe	C-230 Hdwl.	Cl. B Conc.	Reinf.	Cl. 3 Exc.	~ Remarks ~
40+49	127	1-RB, 1-RC	3.97	336	148.5	Sk. 45° R.A. Sq. Hdwls.
TOTALS	127		3.97	336	148.5	

P.C.C. PAVEMENT REMOVAL

Station	~ Location ~	S.Y.	~ Remarks ~
0+00	130.9' Lt. to 216.7' Lt.	149	Harmony St
0+00	100' Rt. to 453' Lt.	160	Harmony St
0+29.9	Rt.	650	Serv. Sta. driveway
7+82	Rt.	87	Paved PE
36+36	Lt	34	Paved PE
37+84	Lt	39	Paved PE
TOTAL		*1119	

* Plan quan. - plan quantity checked.

ENTRANCES (C.M.P.)

Station	Type & Side	12" CMP	15" CMP	18" C.M.P.	24"	42"	~ Remarks ~
14+25	Str. Lt						Ent. Lt. off Hill Str. See Box Culvs.
14+25	Str. Lt		66'				Hill St Lt.
15+47	PE Rt					40'	Sk. Ah 10°
21+84	FE Rt				30'		
26+63	FE Rt			28'			
29+38	PE Rt						Sk. Ah. 4° Crown
29+41	PE Lt		28'				Ent. Rt. off Walnut Dr.
33+18	CE Lt		60'				
34+46	CE Lt		60'				
35+55	PE Lt		36'				
36+31	PE Lt		30'				
37+33	PE Lt	30'					
37+53	PE Lt	30'					
38+72	PE Lt	36'					
40+30	Str. Lt		42'				South Str. Lt
TOTALS		96'	322'	28'	30'	40'	

P.C.C. PAVED APPROACHES

Station	Type & Side	Radius	Length	Width	7" Pave.	8" Pave.	~ Remarks ~
0+00	C.E. Lt	15'	72.5' Avg.	50'		46.50	C.E. off Harmony St. Lt
0+00	Str. Lt	15'	15'	3'-9"		19.43	Appr. off Harmony St Rt.
0+75						9.89	Drop Inlet Rt
4+77	Str. Lt	15'	15'	30'		60.73	
5+79	C.E. Lt	15'	15'	50'	94.06		
6+53	C.E. Lt	15'	15'	24'		60.73	
7+55	C.E. Lt	15'	15'	60'		110.73	
7+86	PE Rt	6'	47.5'	24'	127.72		
10+01	PE Rt	6'	6'	24'	17.72		
10+89	PE Rt	6'	6'	20'	15.05		
11+80	Str. Rt	15'	15'	30'		60.73	
TOTALS					*254.55	*358.74	Sq. Yds.

* Plan quan. - plan quantity checked.

8" REINFORCED P.C.C. PAVEMENT

Sta. 0+00 to 40+49.6

Measured Surface Length = 4047.9 Ft.

Station-Station	Sq. Yd.	~ Remarks ~
0+12 - 40+49.6	24874.8	See Sh. #11
Add for Harmony Str. Sta. 0+00	475.2	" " "
Add for 60' Radius Rt. & Lt. Sta. 0+72.75	192.1	" " "
Deduct for raised Median	- 195.9	" " "
Deduct for tinted Median	- 1107.0	" " "
Deduct for (10) drop Inlets	- 6.3	" " "
TOTAL	24232.9	

ADJUSTING MANHOLES TO GRD.

Station	Location	Adjust.
0+00	33' Lt	1
0+24	39' Rt	1
0+51	31' Rt	1
1+27	135' Rt	1
5+21	39' Rt	1
8+25	39' Rt	1
12+12	36' Rt	1
TOTAL		7

DROP INLETS

Station	Side	STD Type	Size	"D"	Cl. B Conc.	Reinf.	Cl. 3 Exc.	Grates & Bearing Type	Grates & Bearing Width	Plates Weight	M.H. Frm. & Cover	Pipe Openings	~ Remarks ~
0+10	96' Rt	G	1.5'x2'	2.00	0.50	102	3.5	I	2.0'	156		15"	Harmony Str. West
0+75	Rt	F	2'x3'	3.00	0.93	67	6.0	II	3.0'	280		1-15", 1-18"	2% Grade - 10'
0+75	Lt	T Mod.		3.75	1.67	199	5.5				1	1-15"	Exten. "L" = 2.5'
5+10	Rt	B	1.5'x4'	2.25	0.92	172	5.5	I	4.0'	307		1-15"	
5+10	Lt	B	1.5'x4'	2.75	1.00	184	6.0	I	4.0'	307		2-15"	
7+05	Rt	B	1.5'x4'	3.25	1.02	200	6.0	I	4.0'	307		1-24"	
8+59.4	Rt	B	1.5'x4'	3.25	1.02	200	6.0	I	4.0'	307		2-24"	
9+70.6	Rt	B	1.5'x4'	3.25	1.06	200	6.0	I	4.0'	307		1-18", 1-24"	
10+45.0	Rt	B	1.5'x4'	2.50	0.92	185	5.0	I	4.0'	307		2-18"	
11+57	Rt	B	1.5'x4'	2.50	0.92	185	5.0	I	4.0'	307		2-18"	
12+21	Rt	B	1.5'x4'	2.50	0.93	185	5.0	I	4.0'	307		1-15", 1-18"	
13+01.2	Rt	B	1.5'x4'	2.25	0.92	176	4.5	I	4.0'	307		1-15"	
TOTALS					11.81	2055	64.0			3199	1		

8" NON-REINFORCED P.C.C. PAVEMENT

Station-Station		Sq. Yds.	~ Remarks ~
15+30	40+49.6	*1107.0	Tinted Median
1+00	1+85	*35.4	Part widening - Harmony St West
TOTAL		1142.4	* See Sh. #11

BIT. MAT & ROLLED STONE BASE

Station	Location	4" Base S.Y.	8" Base S.Y.	Process S.Y.
0+00	Intersec.		138	764
4+77	Str. Lt		89	83
14+25	Str. Lt		410	379
29+41	Str. Lt		426	388
29+41	Out Rdwy.	529		481
40+30	Str. Lt		140	127
TOTALS		*529	*1203	*2222

* Plan quan. - Plan quan. checked

RELOCATING BARRICADES

Station	Location	Number
0+12	℄	1

STORM SEWERS (REINF. CONC. SEWER PIPE)

Station-Station		Location	C-230 Hdwl.	15"	18"	24"	Cl. B Conc.	Reinf.	Cl. 3 Exc.	~ Remarks ~
0+10		96' Rt	1-RB	12'			0.52	43	7.5	DI #11 to ditch - Harmony St. West
0+24		Rt	1-RB	24'			0.52	43	14.0	Open ditch to Manhole in place
0+24	0+75	Rt			49'		0.37		27.5	DI #10 to MH in place - Collar Conn.
0+75		℄		66'					37.0	DI #9 to DI #10
5+10		℄		57'					24.5	DI #7 to DI #8
5+10		Lt		4'						DI #8 to 3'x3' Box Cl. 3 Incl. with DI #8
5+10	7+05	℄				205'			144.0	3'x3' Box Culv. to DI #6
7+05	8+59.4	Rt				153'			104.5	DI #6 to DI #5
8+59.4	9+70.6	Rt				110'			74.5	DI #5 to DI #4
9+70.6	10+45	Rt			73'				35.5	DI #4 to DI #3
10+45	11+57	Rt			111'				52.5	DI #3 to DI #2A
11+57	12+21	Rt			63'				29.0	DI #2A to DI #2
12+21	13+01.2	Rt		79'					31.0	DI #2 to DI #1
TOTALS				242	296	468	1.41	86	576.5	

SPREAD, SHAPE & COMP. 4" GRAN. BASE FOR PAVT.

~ Location ~	Sq. Yd.
Main Rdwy. Sta. 0+12 - Sta. 40+49.6	25760.1
Add for Harmony Str. Sta. 0+00	504.6
Add for 60' Radius Rt. & Lt. Sta. 0+72.75	212.9
Deduct for (10) drop Inlets	- 6.3
TOTAL	* 26471.3 * See Sh. #11
PAY	26471

BARRICADES

Station	Location	Number
5+50	℄	1

4" NON-METALIC CONDUIT

Station	Location	Lin. Ft.	~ Remarks ~
0+35	℄	100	For Fut. Traffic Signal

MISC. ITEMS FROM P & P SHEETS

Sheet No.	R/W Mark.	Fert. & Mulch.
3	13	97003
4	2	22592
TOTAL	15	119,595
PAY		2.7 Ac.

GUARD RAIL (TYPE A)

Station-Station		Location	Lin. Ft.
2+35	3+60	55' Rt.	125
TOTAL			125

INTEGRAL CURB

Station-Station		Location	Lin. Ft.	~ Remarks ~
0+00	15+00	Rt. & Lt.	2937	Meas. Quantity
			2317	Plan Quantity
		INCREASE	+ 620	
		PAY	620	Lin. Ft. Increase

4' CHAIN LINK FENCE (TYPE A)

Station-Station		Location	Lin. Ft.
14+68.3	23+70	60' Lt	900
TOTAL			900

Project Accepted 11-14-58

Prepared By C.R. Baugher Date 12-30 1958 Checked in Dist. Office By M.W. Tapel Date 12-31 1958 Checked in Central Office By Date 19 Revised By Date 19

Sand Eddleman

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U-182(5)		2-AA	
DIST. NO.		COUNTY			
7		NEWTON			

Sheet 1 of 2 **FINAL PLANS**

SUMMARY SHEET FOR CONCRETE PAVING PROJECT

CONTRACTOR Atkinson-Windle Company, Chillicothe, Mo.
PAVED BY Atkinson-Windle Company, Chillicothe, Mo.

RESIDENT ENGINEER C. R. Baugher
SLAB INSPECTORS D. E. Branham
W. G. Ward, Jr. O. L. McDaniel

PLANT INSPECTOR H. A. Harris Jr. J. C. Long

EQUIPMENT
Koehring 34E Dual Drum Paver Ser. No. 18450
Koehring 16E Dual Drum Paver Ser. No. 24182 (1950)
Jaeger Spreader Mod. CS20 Ser. No. 41X705 (1941)
Jaeger - Lakewood Finishing Machine Ser. No. 55X146 (1955)
Koehring Longitudinal Finisher Size LF2A Ser. No. 1275 (1953)
Flex-Plane Spray Machine Mod. K-117
Johnson Dutch Mill Cement Bin (110 Bbl.) Johnson Scales Type MAN Mod. 10-0 Ser. No. 41072
Johnson 75 Ton Rock Bin, Johnson Scales Ser. No. 33903 & 28062
Johnson 75 Ton Sand Bin, Johnson Scales Ser. No. 33023 & 33022 R

TYPE OF CONSTRUCTION Graded Earth, Culverts and a Concrete Pavement 52' to 65.5' Wide
TOTAL LENGTH 0.767 Miles
EXCEPTIONS See Sheet 2 of 2
EQUATIONS Sta. 16+87.3 Bk = 16+89.0 Ah. = -1.7 Ft.

LOCATION OF PROJECT
Harmony Street in Neosho, South to South City Limits

September 19, 1958 to October 15, 1958
DATE OF CONSTRUCTION

GRAPHIC RECORD OF CONSTRUCTION FEATURES

DAILY TEMPERATURE Minimum / Maximum: 30/60; 68/84; 28/58; 63/84; 48/54; 64/78; 46/66; 63/76; 64/88

CONSTRUCTION DATE
Rt. Lane: 10/2/58; 10/1/58; 9/30/58; 9/29/58; 9/26
Lt. Lane: 9/23/58; 9/22/58; 9/20/58; 9/19/58
(0+12; 7+20; 11+09; 17+90; 22+17; 28+65; 31+85; 39+45)

STATION: 0+00 2+00 4+00 6+00 8+00 10+00 12+00 14+00 16+00 18+00 20+00 22+00 24+00 26+00 28+00 30+00 32+00 34+00 36+00 38+00 40+00

Beginning of Project Station 0+00
0+12 Begin Normal Pavement (For Sta. 0+00 to 0+12 See Sheet 2 of 2)

Sta. 16+87.3 Bk = Sta. 16+89.0 Ah. Equation

End of Project Station 40+49.3

TYPICAL SECTION
Graded Earth: See Sheet S&P 1 ART-2 in Plans
Pavement: See Typical Section Sheet in Plans - Rt. & Lt. Lanes: 8" Reinforced, 4' Tinted Median: 8" Non-Reinforced

MATERIALS
Coarse Aggregate: I (50% 1" - 50% 2" Lt. Lane Sta. 40+49.3 to 4+50) (55% 1" - 45% 2" Rt. Lane and 0+12 to 4+50 Lt. Lane) (60% 1" - 40% 2" 4' Tinted Median and Parkway Lt. — See Sheet 2 of 2)
Fine Aggregate: A
Cement: 2 - Rt. Lane; 1 - Lt. Lane & Rt. Lane Sta. 35+00 to 40+49.3
Admixture: Air Entraining Agent; (b) - Rt. Lane; (a) - Lt. Lane; (b & c) - 4' Tinted Median; (a) Rt. Lane Sta. 32+00 to 40+49.3

PROPORTIONS: Lt. Lane 1:1.52:3.45; 4+50; 1:1.48:3.44 - Lt. Lane; 1:1.52:3.45 - Rt. Lane

MIXING WATER
Average gal. per sack of cement
Rt. Lane: 4.7; 4.7-A.M. 4.8-P.M.; 4.7-A.M. 4.9-P.M.; 4.8; 4.7-A.M. 4.8-P.M.; 4.7-A.M. 4.6-P.M.; 4.7
Lt. Lane: 4.6-A.M. 4.65-P.M.; 4.6-A.M. 4.8-P.M.

AIR ENTRAINED CONCRETE
Average % air
Rt. Lane: 4.7-A.M. 4.75-P.M.; 4.45-A.M. 5.05-P.M.; 4.57-A.M. 4.86-P.M.; 4.68-A.M. 3.85-P.M.; 4.66-A.M. 4.25-P.M.; 4.98-A.M. 4.17-P.M.; 4.6
Lt. Lane: 4.6-A.M. 4.77-P.M.; 4.3-A.M. 4.2 P.M.

DISTRIBUTED REINFORCEMENT
Wire Fabric: S&P 15CB-2: 11'6" x 16' Sheets - 24' Lanes, 7'6" x 16' Sheets for Parkway, Variable for Median, Radii and etc.
Bar Mat: None
Others: None

JOINTS
Expansion (Show Spacing): S&P 15CP-2, 61.5' Spacing at beginning of Project, Compacted Chat Sills, Hot Poured Rubber Asphalt Type Joint Filler
Contraction (Show Spacing): S&P 15CP-2, 61.5' Spacing, Sawed, S&P 15DE-2 Dow. (Type 6) Support Units, Hot Poured Rubber Asphalt Type Joint Filler
Longitudinal: S&P 15CP-2, Sawed, #5 Bars, Along Parkway S&P 15E-19 Type E with #5 Bars, Along Median and when 24' Lanes are adjacent S&P 15E-19 Type E Without Bars; Hot Poured Rubber Asphalt Type Joint Filler
Construction: S&P 15CP-2, #5 Bars

CURING METHOD: ~~[illegible]~~ & Presstite Membrane @ 200 Sq. Ft. per Gallon

DRAINAGE STRUCTURES
Surface Drains: [redacted] E; G; & T Modified Drop Inlets
Culverts: 8 Box Culverts R.C. Pipe Culverts
Cross Drainage: 13 Continental C.M. Pipe
Longitudinal Drainage: Reinforced Conc. Storm Sewer (As Shown); 7+05 24" 9+70 18" 12+16 15" 13+00
Special Drainage
Underdrains (Length, Type, & Station): None

GUARD RAIL: S&P 27A-17 Type A 55' Rt. Sta. 2+35 to 3+60

SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS: 4' Median, Irregular Shaped Areas and Parkway Lanes Hand-Finished

SUBGRADE
Method of Compacting Embankment: Sheepfoot Rollers - 6" Lifts
Treatment: Sprinkling
Condition: Good
Type: Huntington Silt Loam

BASE COURSE
Type & Thickness: 4" Compacted Chat (Mine Chat from Granby Area)
Condition: Good

DATE OPENED TO TRAFFIC
Rt. Lane: 10/8/58; 10/7/58; 10/6/58; 10/5/58; 10/8
Lt. Lane: 9/29/58; 9/28/58; 9/27/58; 9/25/58
(7+20; 11+09; 17+90; 22+17; 28+65; 31+85; 39+45)

DEFECTS OBSERVED In Completed Pavement: None

MATERIAL KEY
I - Burlington Limestone - J. J. Griesemer, Wally, Mo.
A - Arkansas River Sand - Mohawk Sand Co., Shirk, Okla.
1 - Portland Cement - Monarch Cement Co., Humboldt, Kan. (Bulk)
2 - Portland Cement - Missouri Portland Cement Co., Sugar Creek, Mo. (Bulk)
(a) - Presstite - Presstite-Keystone Co., St. Louis, Mo.
(b) - Ad-Aire - Carter-Waters Corp., Kansas City, Mo. (c) Tinting Mtl., Pulverized National Metal Co., Chicago, Ill.

SPECIAL PROCEDURE KEY

PREPARED BY H. A. Harris, Jr.
APPROVED BY C. R. Baugher RESIDENT ENGINEER
APPROVED BY D. W. Spinney DISTRICT MATERIALS ENGINEER
CHECKED BY
CONSTRUCTION DIV. SURVEYS & PLANS DIV. MATERIALS DIV.

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U-182(5)		2-M	
DIST. NO.	COUNTY				
7	NEWTON			71 Alt.	

Sheet 2 of 2 **FINAL PLANS**

SUMMARY SHEET FOR CONCRETE PAVING PROJECT

EQUIPMENT See sheet 1 of 2

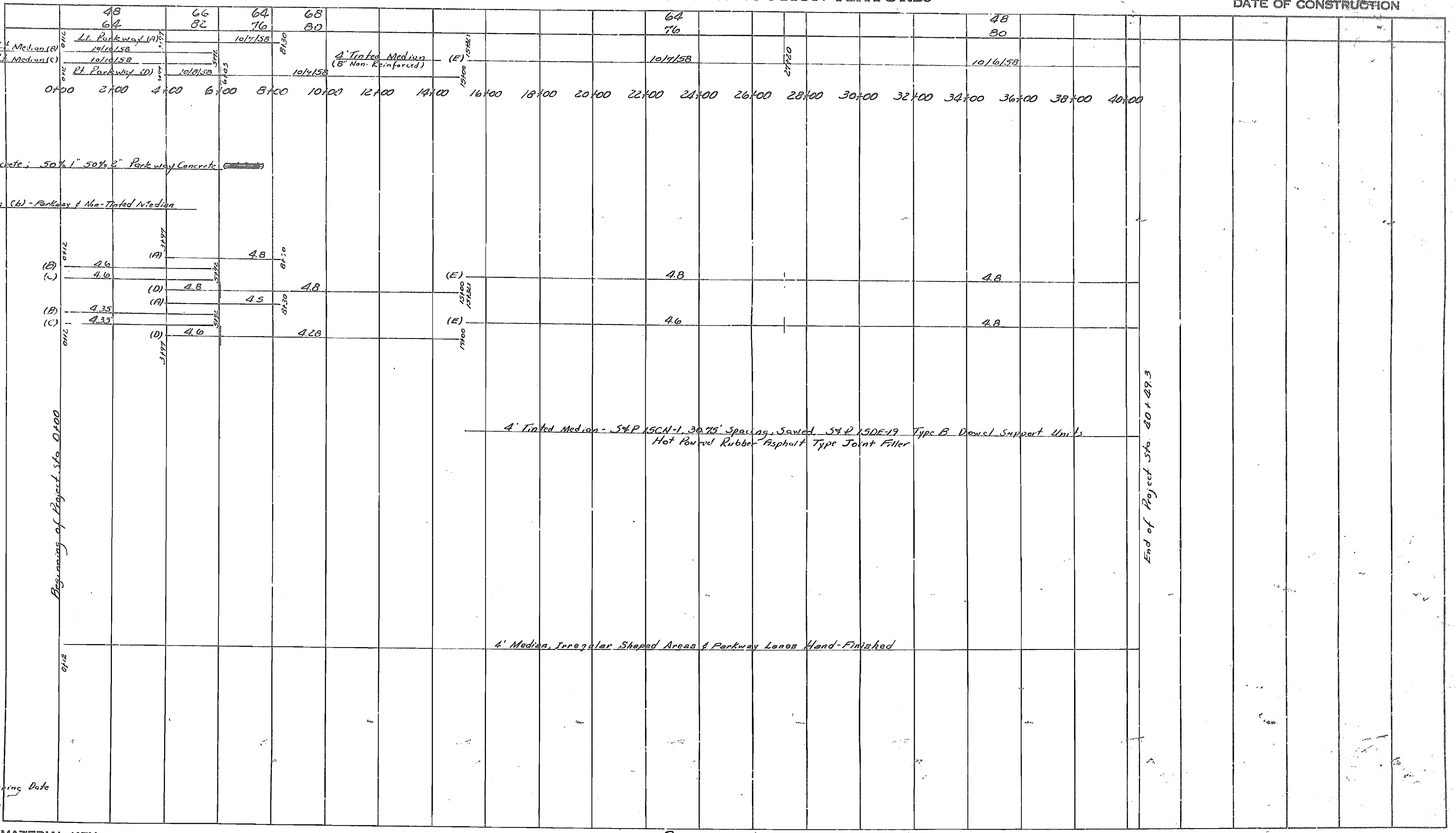
CONTRACTOR See sheet 1 of 2
PAVED BY ..
RESIDENT ENGINEER ..
SLAB INSPECTORS ..
PLANT INSPECTOR ..

TYPE OF CONSTRUCTION See sheet 1 of 2
TOTAL LENGTH ..
EXCEPTIONS ..
EQUATIONS

LOCATION OF PROJECT See sheet 1 of 2.
DATE OF CONSTRUCTION

GRAPHIC RECORD OF CONSTRUCTION FEATURES

DAILY TEMPERATURE Minimum / Maximum
CONSTRUCTION DATE
STATION



TYPICAL SECTION
Graded Earth See Sheet 1 of 2
Pavement ..

MATERIALS - See sheet 1 of 2 for key
Coarse Aggregate I - 60% 1" - 40" 2" - Median Concrete; 50% 1" 50% 2" Parkway Concrete
Fine Aggregate A
Cement 2
Admixture Air Entraining Agent (b) & (c) - Tinted Median; (b) - Parkway & Non-Tinted Median

PROPORTIONS 1 : 1.52 : 3.45

MIXING WATER
Average gal. per sack of cement

AIR ENTRAINED CONCRETE
Average % air

DISTRIBUTED REINFORCEMENT
Wire Fabric See Sheet 1 of 2
Bar Mat None
Other None

JOINTS
Expansion (Show Spacing) See sheet 1 of 2
Contraction (Show Spacing) ..
Longitudinal ..
Construction ..

CURING METHOD See sheet 1 of 2

DRAINAGE STRUCTURES
Surface Drains See sheet 1 of 2
Culverts
Cross Drainage ..
Longitudinal Drainage ..
Special Drainage ..
Underdrains (Length, Type, & Station) None

GUARD RAIL See Sheet 1 of 2

SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS

SUBGRADE
Method of Compacting Embankment See sheet 1 of 2
Treatment ..
Condition ..
Type ..

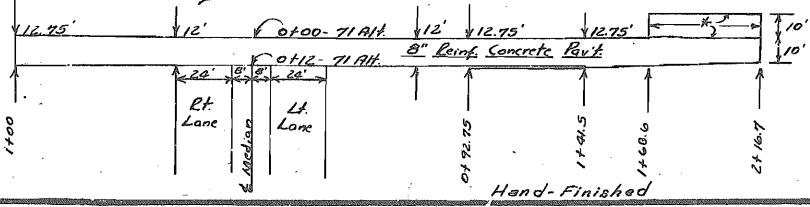
BASE COURSE
Type & Thickness See sheet 1 of 2
Condition ..

DATE OPENED TO TRAFFIC 4 Days after Pouring Date
DEFECTS OBSERVED In Completed Pavement - None

MATERIAL KEY
See sheet 1 of 2

SPECIAL PROCEDURE KEY

Paving Exception Detail - Sta. 0+00 to 0+12



Scale = 1" = 40'

Pouring Information

Date:	10/8/58	10/9/58
Temp:	66-82	68-80
% Air:	4.6	4.28
Gals p/sk:	4.8	4.8

Materials: I, A, 2, (b) - See key Sheet No. 1
Joints: See Special sheet No. 2 in plans

PREPARED BY H. A. Harris
APPROVED BY C. R. Ba[illegible] RESIDENT ENGINEER
APPROVED BY [illegible] DISTRICT MATERIALS ENGINEER
CHECKED BY CONSTRUCTION DIV. SURVEYS & PLANS DIV. MATERIALS DIV.

SUMMARY SHEET FOR CONCRETE PAVING PROJECT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U-182(5)		2-AA	
DIST. NO.	**COUNTY**			**ROUTE**	**SEC.**
7	NEWTON			71 Bus.	

Sheet 1 of 2 **FINAL PLANS**

CONTRACTOR Atkinson-Windle Company, Chillicothe, Mo
PAVED BY Atkinson-Windle Company, Chillicothe, Mo.

RESIDENT ENGINEER C. R. Baugher
SLAB INSPECTORS D. E. Branham
W. G. Ward, Jr. O. L. McDaniel

PLANT INSPECTOR H. A. Harris, Jr. J. C. Long

EQUIPMENT
Koehring 34E Dual Drum Paver Ser. No. 18450
Koehring 16E Dual Drum Paver Ser. No. 24182 (1950)
Jaeger Spreader Mod. C520 Ser. No. 41X705 (1941)
Jaeger-Lakewood Finishing Machine Ser. No. 55X146 (1955)
Koehring Longitudinal Finisher Size LF2A Ser. No. 1275 (1953)
Flex-Plane Spray Machine Mod. K-117
Johnsen Dutch Mill Cement Bin (110 Bbl.) Johnson Scales Type MAN Mod. 1000 Ser. No. 41072
Johnson 75 Ton Rock Bin, Johnson Scales Ser. No. 33903 & 28062
Johnson 75 Ton Sand Bin, Johnson Scales Ser. No 33023 & 33022 R

TYPE OF CONSTRUCTION Graded Earth, Culverts and a Concrete Pavement 53' to 65.5' Wide
TOTAL LENGTH 0.767 Miles
EXCEPTIONS See Sheet 2 of 2

EQUATIONS Sta. 16+87.3 Bk = 16+89.0 Ah. = -1.7 Ft.

LOCATION OF PROJECT
Harmony Street in Neosho, South to South City Limits

September 19, 1958 to October 15, 1958
DATE OF CONSTRUCTION

GRAPHIC RECORD OF CONSTRUCTION FEATURES

DAILY TEMPERATURE Minimum / Maximum: 30/60; 68/84; 28/58; 63/84; 48/54; 64/78; 46/66; 63/76; 64/88

CONSTRUCTION DATE
Rt. Lane: 0+12; 10/2/58; 7+46; 10/1/58; 17+30; 9/30/58; 22+17; 28+65; 9/29/58; 39+75; 10/1
Lt. Lane: 9/23/58; 11+09; 9/22/58; 9/20/58; 31+85; 9/19/58; 10/1

STATION 0+00 2+00 4+00 6+00 8+00 10+00 12+00 14+00 16+00 18+00 20+00 22+00 24+00 26+00 28+00 30+00 32+00 34+00 36+00 38+00 40+00

Beginning of Project Station 0+00
Sta. 0+12 Begin Normal Pavement (For Sta. 0+00 to 0+12 See Sheet 2 of 2)

Equation: Sta. 16+87.3 Bk. = Sta. 16+89.0 Ah.

End of Project Station 40+49.3

TYPICAL SECTION
Graded Earth: See Sheet S&P 1.9RT-2 in Plans
Pavement: See Typical Section Sheet in Plans - Rt. & Lt. Lanes: 8" Reinforced, 4' Tinted Median: 8" Non-Reinforced

MATERIALS
Coarse Aggregate: (60% 1" - 40% 2" 4' Tinted Median and Parkway L – See Sheet 2 of 2)
I (50% 1" - 50% 2" Lt. Lane Sta. 40+49.3 to 4+50) (55% 1" - 45% 2" Rt. Lane and 0+12 to 4+50 Lt. Lane)
Fine Aggregate: A
Cement: 2 - Rt. Lane; 35+00 1 - Lt. Lane & Rt. Lane Sta. 35+00 to 40+49.3
Admixture Air-Entraining Agent: (b) - Rt. Lane - (b & c) - 4' Tinted Median; (a) - Lt. Lane; (a) & Rt. Lane Sta. 32+00 to 40+49.3

PROPORTIONS
Lt. Lane 1:1.52:3.45; 4+50
1:1.48:3.44 - Lt. Lane
1:1.52:3.45 - Rt. Lane

MIXING WATER
Average gal. per sack of cement
Rt. Lane: 4.7; 4.7-A.M. 4.8-P.M.; 4.8; 4.7-A.M. 4.6-P.M.; 4.7
Lt. Lane: 4.6-A.M. 4.65-P.M.; 4.7-A.M. 4.7-P.M.; 4.7-A.M. 4.8-P.M.; 4.6-A.M. 4.8-P.M.

AIR ENTRAINED CONCRETE
Average % air
Rt. Lane: 4.7-A.M. 4.75-P.M.; 4.45-A.M. 5.05-P.M.; 4.68-A.M. 3.85-P.M.; 4.90-A.M. 4.17-P.M.; 4.6
Lt. Lane: 4.6-A.M. 4.77-P.M.; 4.57-A.M. 4.86-P.M.; 4.66-A.M. 4.25-P.M.; 4.3-A.M. 4.2 P.M.

DISTRIBUTED REINFORCEMENT
Wire Fabric: S&P 15CR-2 11'6" x 16' Sheets - 24' Lanes, 7'6" x 16' sheets for Parkway, Variable for Median, Radii and etc.
Bar Mat None
Other None

JOINTS
Expansion (Show Spacing): S&P 15CR-2, 61.5' Spacing at beginning of Project, Compacted Chat Sills, Hot Poured Rubber Asphalt Type Joint Filler
Contraction (Show Spacing): S&P 15CR-2, 61.5' Spacing, Sawed, [illegible], S&P 15DE-9 Dowel Support Units, Hot Poured Rubber Asphalt Type Joint Filler
Longitudinal: S&P 15CR-2, Sawed, #5 Bars, Along Parkway S&P 15E-19 Type E with #5 Bars, Along Median (Type E) and when 24' Lanes are adjacent S&P 15E-19 Type E without Bars
Hot Poured Rubber Asphalt Type Joint Filler
Construction: S&P 15CR-2, #5 Bars

CURING METHOD ~~[illegible]~~ & Presstite Membrane @ 200 Sq. Ft. per Gallon

DRAINAGE STRUCTURES
Surface Drains: S&P 36 B; F; G; & T Modified Drop Inlets
Culverts
Cross Drainage: 2 Box Culverts and 4 R.C. Pipe Culverts
Longitudinal Drainage: 13 Continental C.M. Pipe
Special Drainage: 7+05 24" 9+70 18" 12+14 15" 13+00 Reinforced Conc. Storm Sewer (As Shown)
Underdrains (Length, Type, & Station) None

GUARD RAIL S&P 27B-17 Type A 55' Rt. Sta. 2+35 to 3+60

SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS 4' Median, Irregular Shaped Areas and Parkway Lanes Hand-Finished

SUBGRADE
Method of Compacting Embankment: Sheepfoot Rollers - 6" Lifts
Treatment: Sprinkling
Condition: Good
Type: Huntington Silt Loam

BASE COURSE
Type & Thickness: 4" Compacted Chat (Mine Chat from Granby Area)
Condition: Good

DATE OPENED TO TRAFFIC
Rt. Lane: 10/8/58; 7+46; 10/7/58; 17+30; 10/6/58; 28+65; 10/5/58; 39+75; 10/4
Lt. Lane: 9/29/58; 11+09; 9/28/58; 22+17; 9/27/58; 31+85; 9/25/58

DEFECTS OBSERVED In Completed Pavement: None

MATERIAL KEY
I - Burlington Limestone - J. J. Griesemer, Wally, Mo.
A - Arkansas River Sand - Mohawk Sand Co., Shirk, Okla.
1 - Portland Cement - Monarch Cement Co., Humboldt, Kan. (Bulk)
2 - Portland Cement - Missouri Portland Cement Co., Sugar Creek, Mo. (Bulk)
(a) - Presstite - Presstite-Keystone Co., St. Louis, Mo.
(b) - Ad-Aire - Carter-Waters Corp., Kansas City, Mo.
(c) Tinting Mtl., National Pulverized Metal Co., Chicago, Ill.

SPECIAL PROCEDURE KEY

PREPARED BY H. A. Harris, Jr.
APPROVED BY C. R. Baugher RESIDENT ENGINEER
APPROVED BY D. W. Sperry DISTRICT MATERIALS ENGINEER
CHECKED BY
CONSTRUCTION DIV. SURVEYS & PLANS DIV. MATERIALS DIV.

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	U-182(5)		2-AA	

DIST. NO.	COUNTY	ROUTE	SEC.
7	NEWTON	71 Alt.	

Sheet 2 of 2 **FINAL PLANS**

SUMMARY SHEET FOR CONCRETE PAVING PROJECT

CONTRACTOR See sheet 1 of 2
PAVED BY "
RESIDENT ENGINEER "
SLAB INSPECTORS "
PLANT INSPECTOR "

EQUIPMENT See sheet 1 of 2

TYPE OF CONSTRUCTION See sheet 1 of 2
TOTAL LENGTH
EXCEPTIONS "
EQUATIONS "

LOCATION OF PROJECT
See sheet 1 of 2

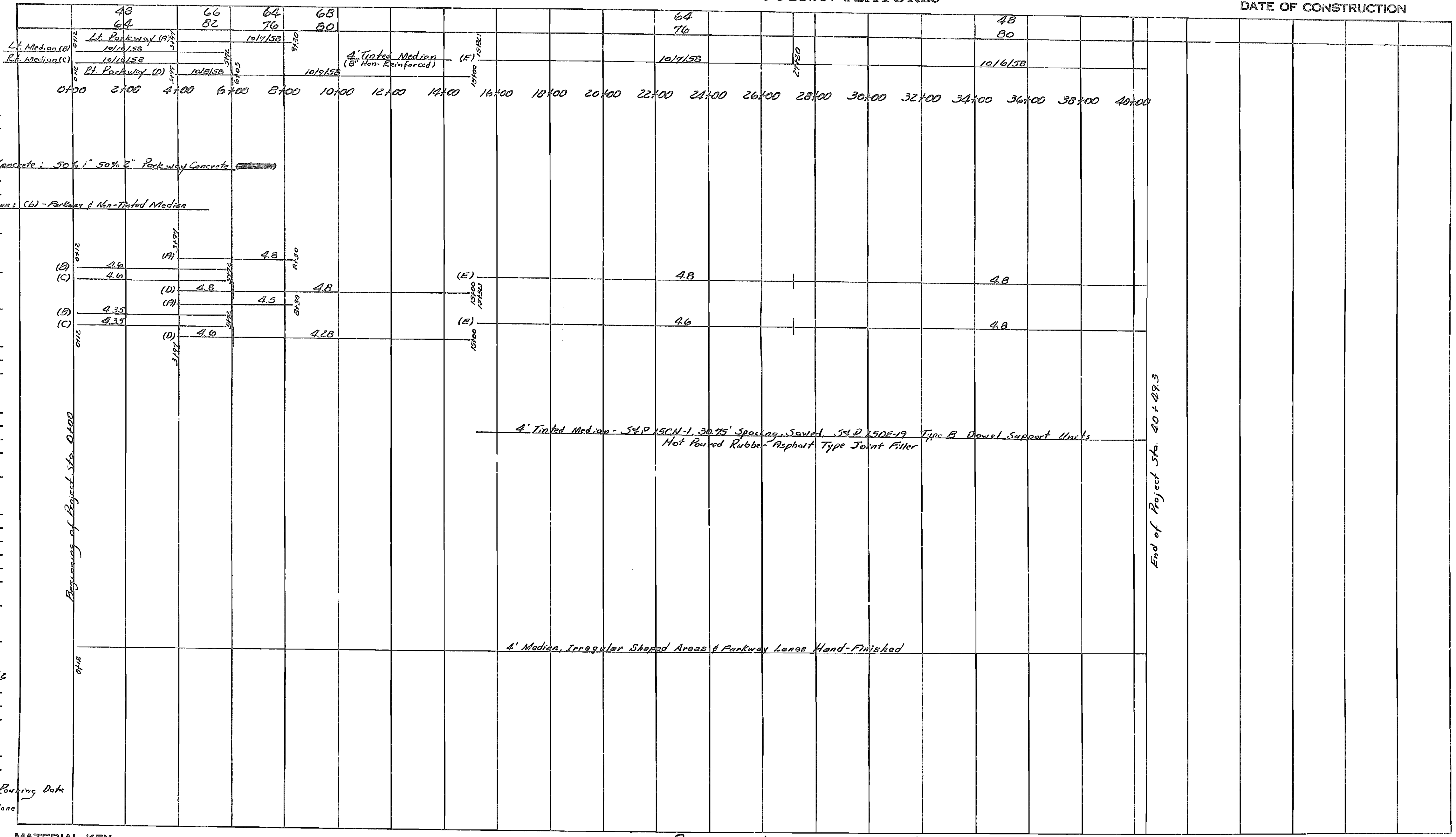
DATE OF CONSTRUCTION

GRAPHIC RECORD OF CONSTRUCTION FEATURES

DAILY TEMPERATURE Minimum Maximum

CONSTRUCTION DATE

STATION



TYPICAL SECTION
Graded Earth See Sheet 1 of 2
Pavement "

MATERIALS - See sheet 1 of 2 for key
Coarse Aggregate I - 60% 1" - 40% 2" - Median Concrete ; 50% 1" 50% 2" Parkway Concrete
Fine Aggregate A
Cement 2
Admixture Air Entraining Agent (b) & (☐) - Tinted Median ; (b) - Parkway & Non-Tinted Median

PROPORTIONS 1 : 1.52 : 3.45

MIXING WATER
Average gal. per sack of cement

AIR ENTRAINED CONCRETE
Average % air

DISTRIBUTED REINFORCEMENT
Wire Fabric See Sheet 1 of 2
Bar Mat None
Other None

JOINTS
Expansion (Show Spacing) See sheet 1 of 2
Contraction (Show Spacing) "
Longitudinal "
Construction "

CURING METHOD See sheet 1 of 2

DRAINAGE STRUCTURES
Surface Drains See sheet 1 of 2
Culverts
Cross Drainage "
Longitudinal Drainage "
Special Drainage "
Underdrains (Length, Type, & Station) None

GUARD RAIL See Sheet 1 of 2

SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS

SUBGRADE
Method of Compacting Embankment See sheet 1 of 2
Treatment "
Condition "
Type "

BASE COURSE
Type & Thickness See sheet 1 of 2
Condition "

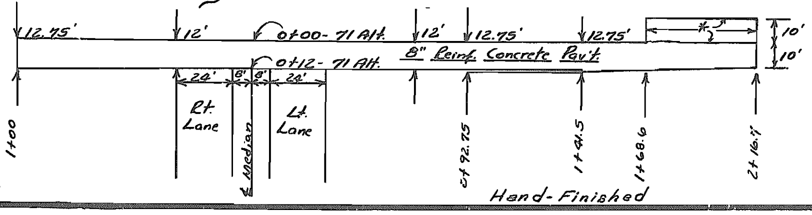
DATE OPENED TO TRAFFIC 4 Days after Pouring Date
DEFECTS OBSERVED In Completed Pavement - None

MATERIAL KEY
See sheet 1 of 2

SPECIAL PROCEDURE KEY

Scale = 1" = 40'

Paving Exception Detail - Sta. 0+00 to 0+12



Pouring Information

Date:	10/8/58	10/9/58
Temp:	66-82	68-80
% Air:	4.6	4.28
Gals p/sk:	4.8	4.8

Materials: I, A, 2, (b) - See key Sheet No. 1
Joints: See Special sheet No. 2 in plans

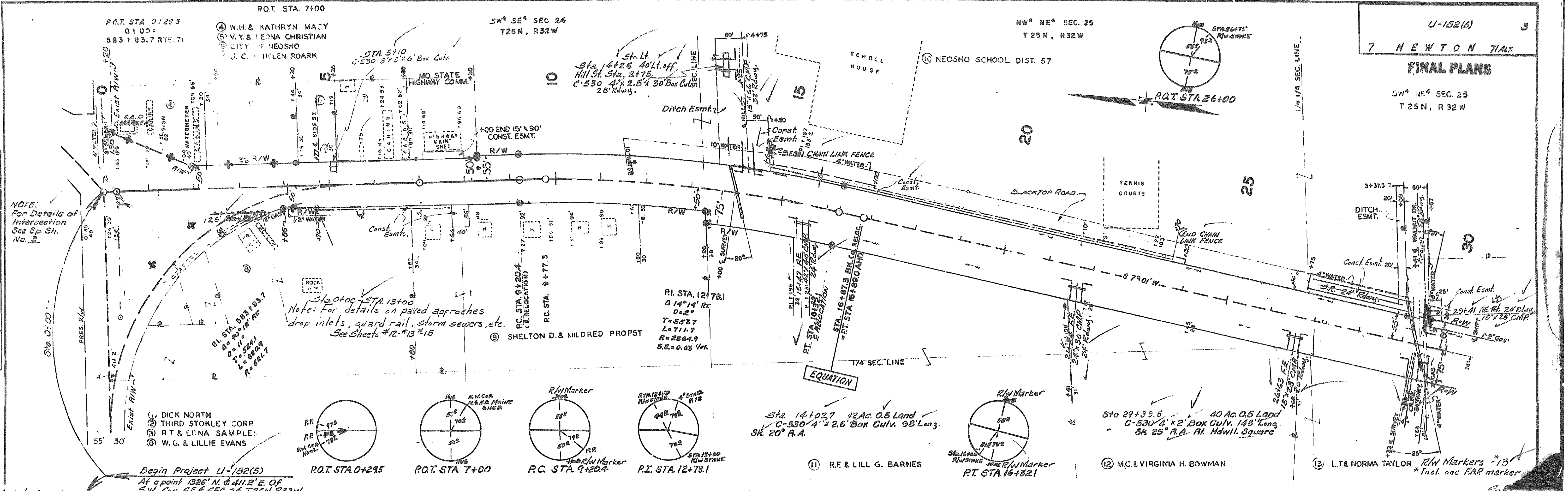
PREPARED BY H. A. Hanig
APPROVED BY C. R. Baugher RESIDENT ENGINEER
APPROVED BY A. W. Sperry DISTRICT MATERIALS ENGINEER
CHECKED BY
CONSTRUCTION DIV. SURVEYS & PLANS DIV. MATERIALS DIV.

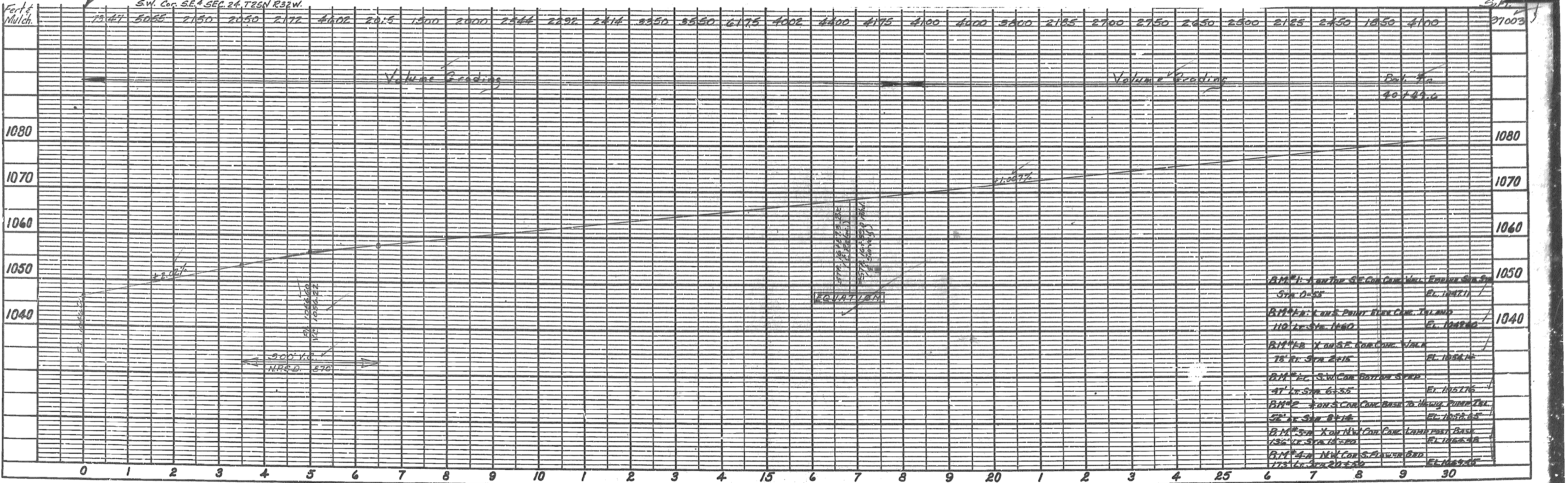
U-182(5) 3

7 NEWTON 71ALT.

FINAL PLANS

SW4 NE4 SEC. 25
T25N, R32W





B.M.#1: on Top S.E. Cor. Conc. Wall Sta. 0-55 El. 1047.11

B.M.#1a: on S. Point Conc. Island 110' Lt. Sta. 1+60 El. 1048.60

B.M.#1b: X on S.E. Cor. Conc. Walk 78' Rt. Sta. 2+15 El. 1052.14

B.M.#1c: S.W. Cor. Bottom Step 47' Lt. Sta. 6+35 El. 1057.16

B.M.#2: on S. Cor. Conc. Base to Hwy. Pump Tel. 52' Lt. Sta. 8+14 El. 1058.65

B.M.#3a: X on N.W. Cor. Conc. Lamp Post Base 136' Lt. Sta. 15+20 El. 1065.38

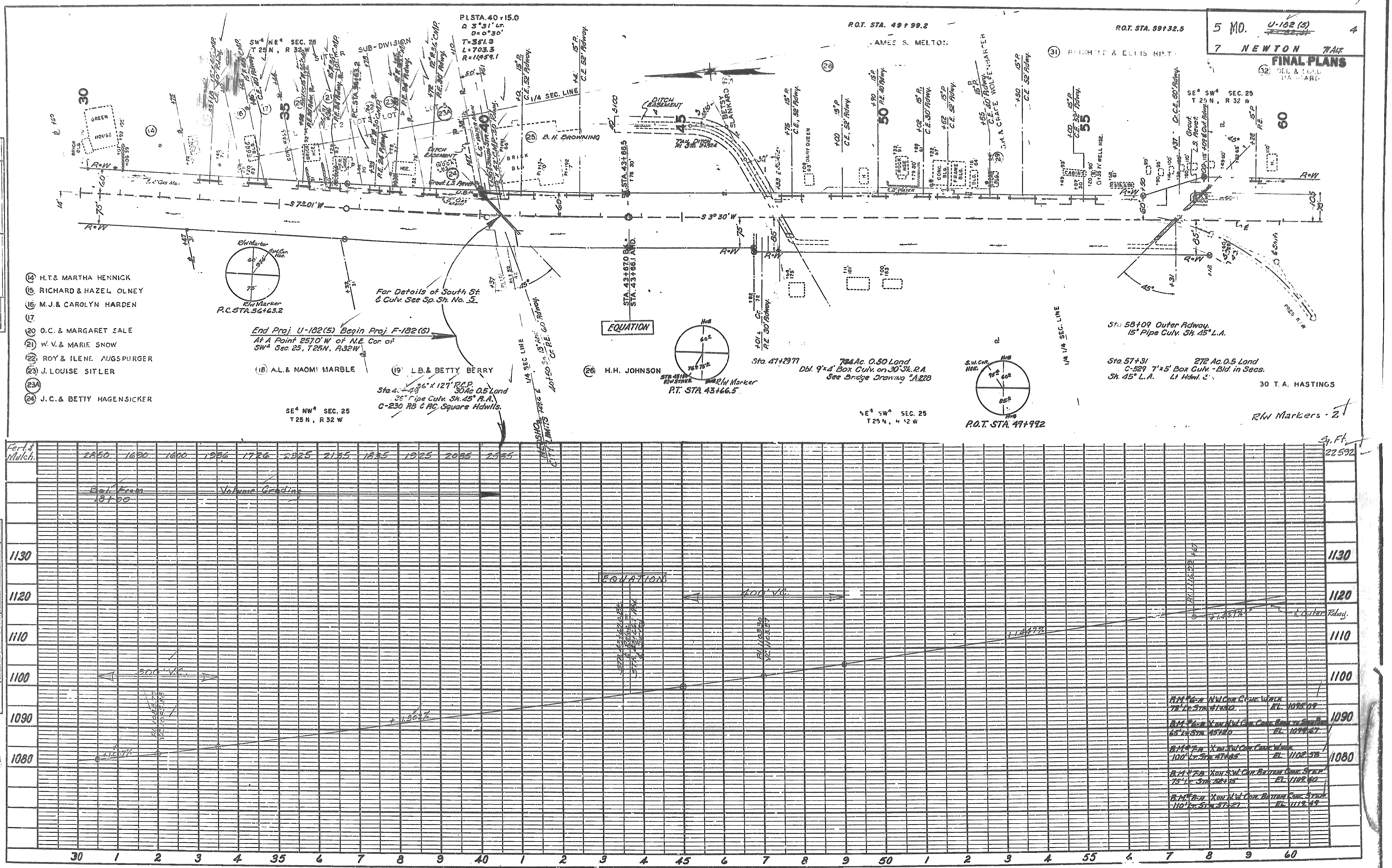
B.M.#4a: N.W. Cor. S. Flower Bed 173' Lt. Sta. 20+50 El. 1069.35

PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD

U. S. BLUE PRINT PAPER CO.—CHICAGO

5 MO. U-182(5) ~~F-182(6)~~ 4
7 NEWTON 71 Alt.

FINAL PLANS



(14) H.T. & MARTHA HENNICK
(15) RICHARD & HAZEL OLNEY
(16) M.J. & CAROLYN HARDEN
(17)
(20) O.C. & MARGARET SALE
(21) W.V. & MARIE SNOW
(22) ROY & ILENE AUGSPURGER
(23) J. LOUISE SITLER
(23A)
(24) J.C. & BETTY HAGENSICKER

B.M. #6-A N.W. Cor. Conc. Walk
75' Lt. Sta. 41+20 El. 1095.09

B.M. #6-B X on N.W. Cor. Conc. Base ...
65' Lt. Sta. 45+20 El. 1098.67

B.M. #7-A X on S.W. Cor. Conc. Walk
100' Lt. Sta. 47+85 El. 1102.58

B.M. #7-B X on S.W. Cor. Bottom Conc. Step
75' Lt. Sta. 52+75 El. 1109.40

B.M. #8-A X on N.W. Cor. Bottom Conc. Step
110' Lt. Sta. 57+27 El. 1113.49

PLATE 1 — PLAN-PROFILE O. P. R. & R. E. STANDARD
U. S. BLUE PRINT PAPER CO.—CHICAGO

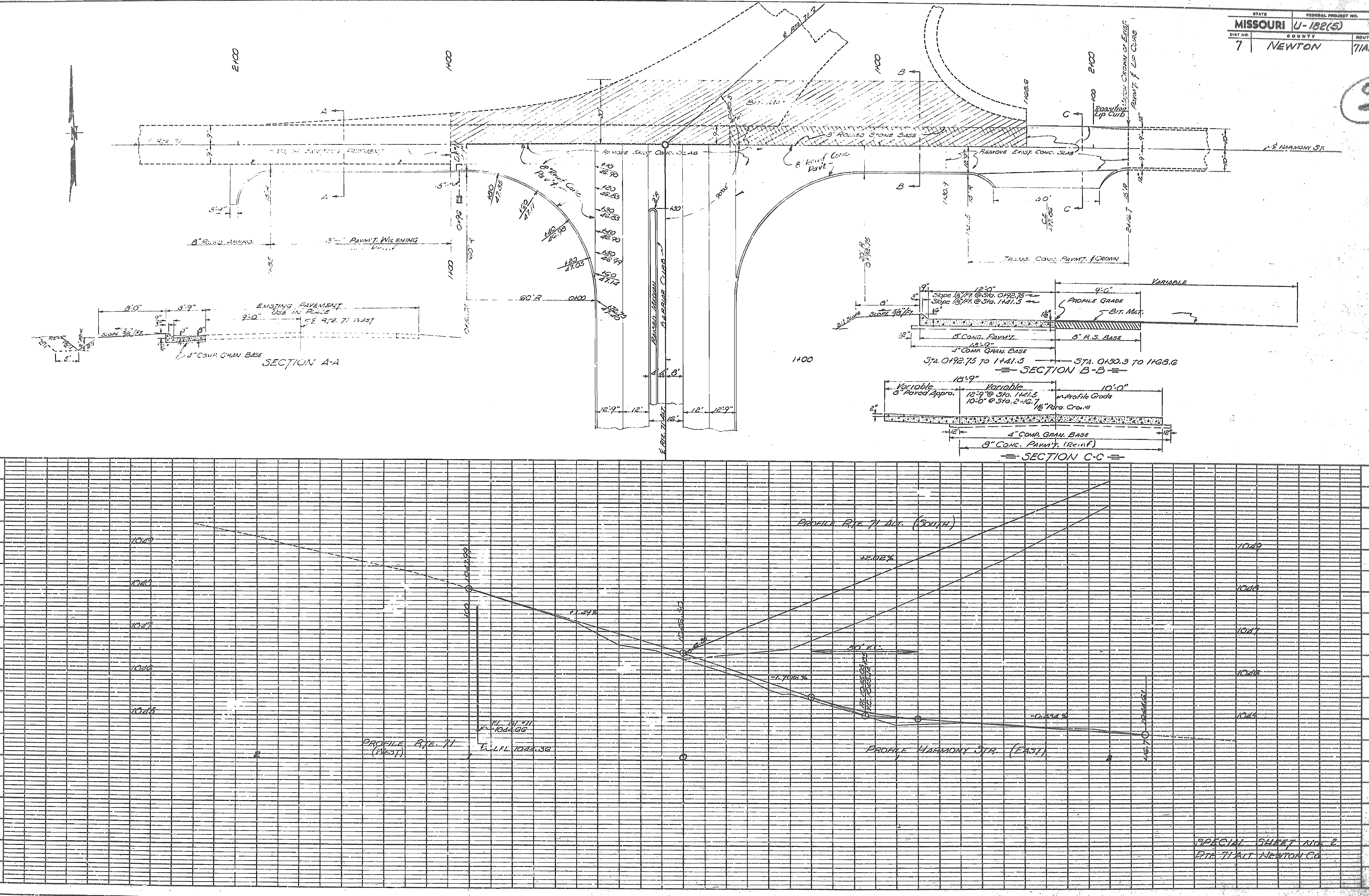
STATE	FEDERAL PROJECT NO.	SHEET
MISSOURI	U-182(5)	[illegible]

DIST. NO.	COUNTY	ROUTE	SEC.
7	NEWTON	71Alt	

⑤

PLAN
NOTE BOOK
No.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
NOTE BOOK
No.
SURVEYED
PLOTTED
GRADES CHECKED
B. M.'s NOTED
STRUCTURE NOTATIONS CHECKED
BY
DATE

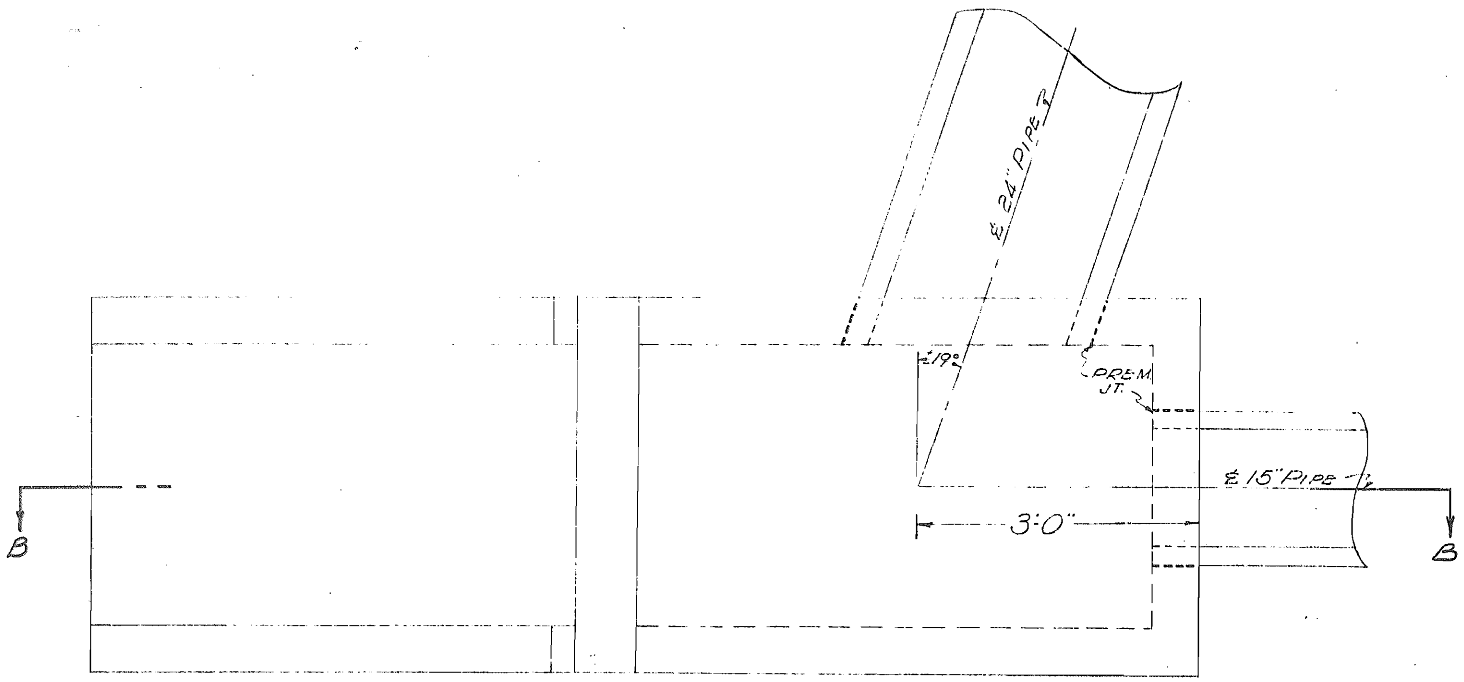


SPECIAL SHEET NO. 2
RTE. 71 ALT NEWTON CO.

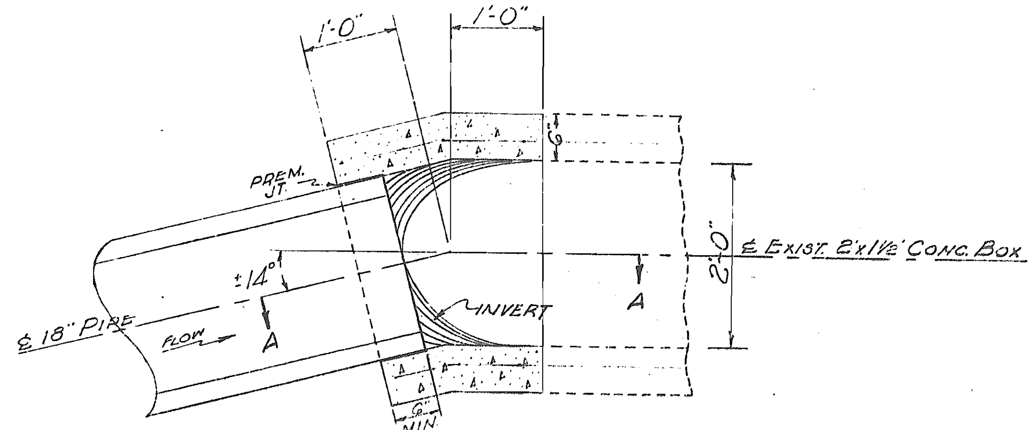
PLATE 1 - PLAN-PROFILE O. P. R. & R. E. STANDARD
THE FREDERICK POST CO., CHICAGO

5	MO.	U-182(5)	
7	NEWTON		71 ALT.

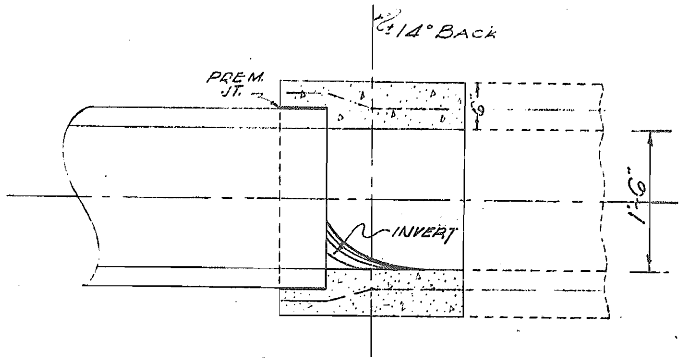
⑥



PLAN



PLAN



SEC. A-A

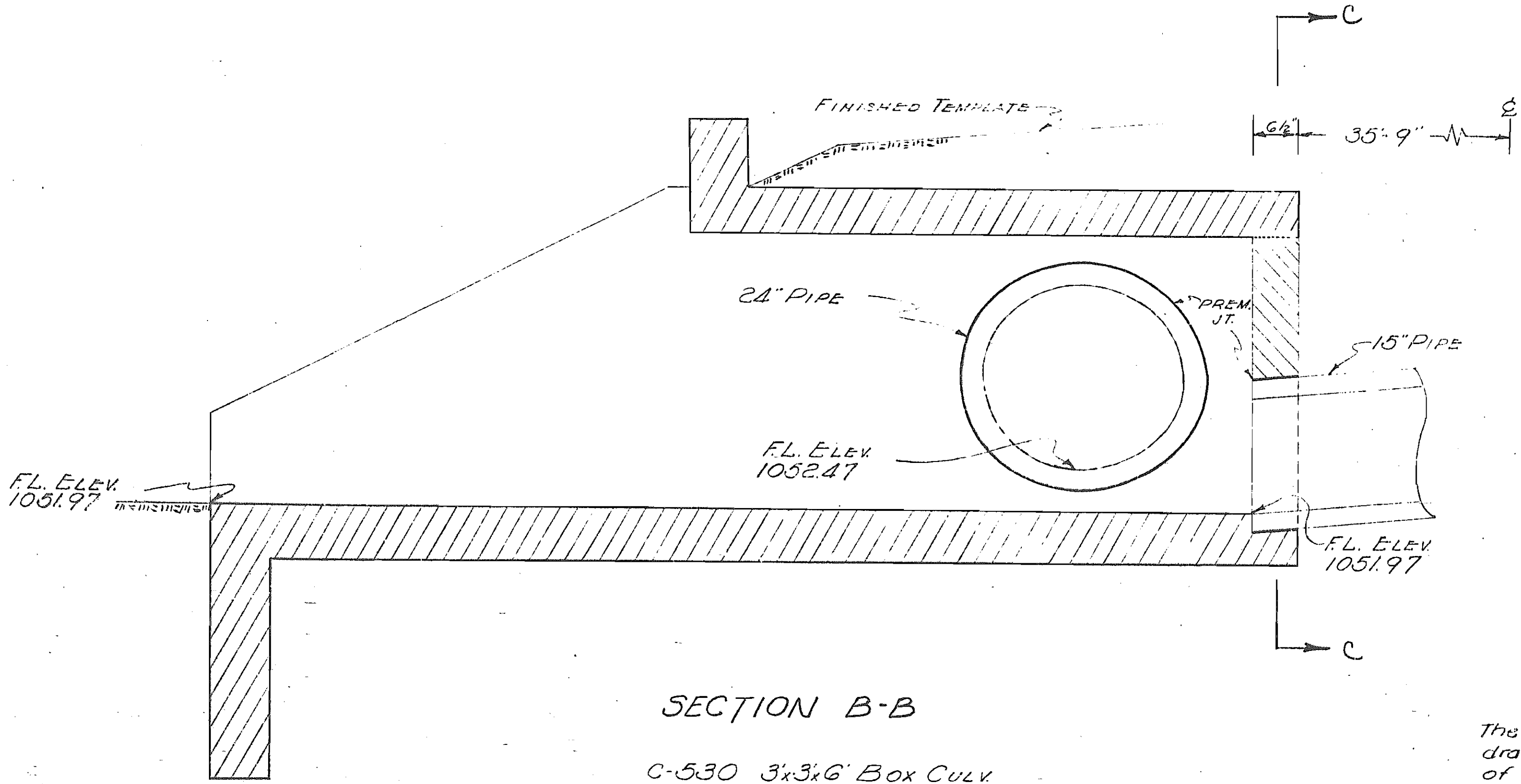
CONCRETE COLLAR CONNECTION
RT. STA. 0+62

GENERAL NOTES

THE INSIDE SURFACE OF COLLAR SHALL BE SHAPED WITH INVERT TO PROVIDE A SMOOTH TRANSITION FROM THE CIRCULAR PIPE TO THE RECTANGULAR BOX.

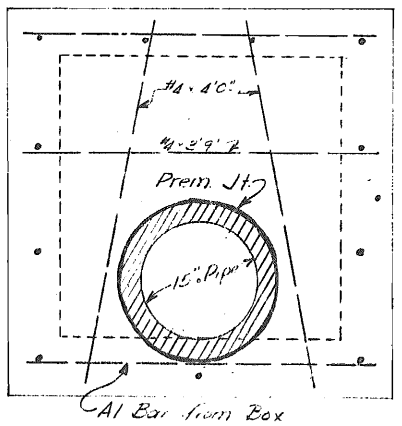
THE LONGITUDINAL STEEL IN THE EXISTING CULVERT IS TO BE PLACED IN THE CONCRETE COLLAR CONNECTION AS SHOWN IN THE ABOVE DRAWING. ALL WORK INVOLVED, SUCH AS STRIPPING, BENDING, SPLICING, CUTTING, ECT. AND FOR ANY ADDITIONAL STEEL REQUIRED, SHALL BE CONSIDERED AS COMPLETELY PAID FOR IN PRICE BID FOR CL. B CONCRETE IN CONC. COLLAR.

CL. "B" CONCRETE 0.37 C.Y. (INCLUDES 0.04 C.Y. FOR INVERT)
CL. 3 EXC. INCL. IN SEWER PIPE EXCAVATION



SECTION B-B

C-530 3'x3'x6' BOX CULV.
LT. STA. 5+10



SECTION C-C

The #4 Bars indicated in the above drawn are in addition to those of the Main Box.

RTE. 71 ALT. NEWTON COUNTY
C-530 BOX CULV. & CONCRETE COLLAR CONN.

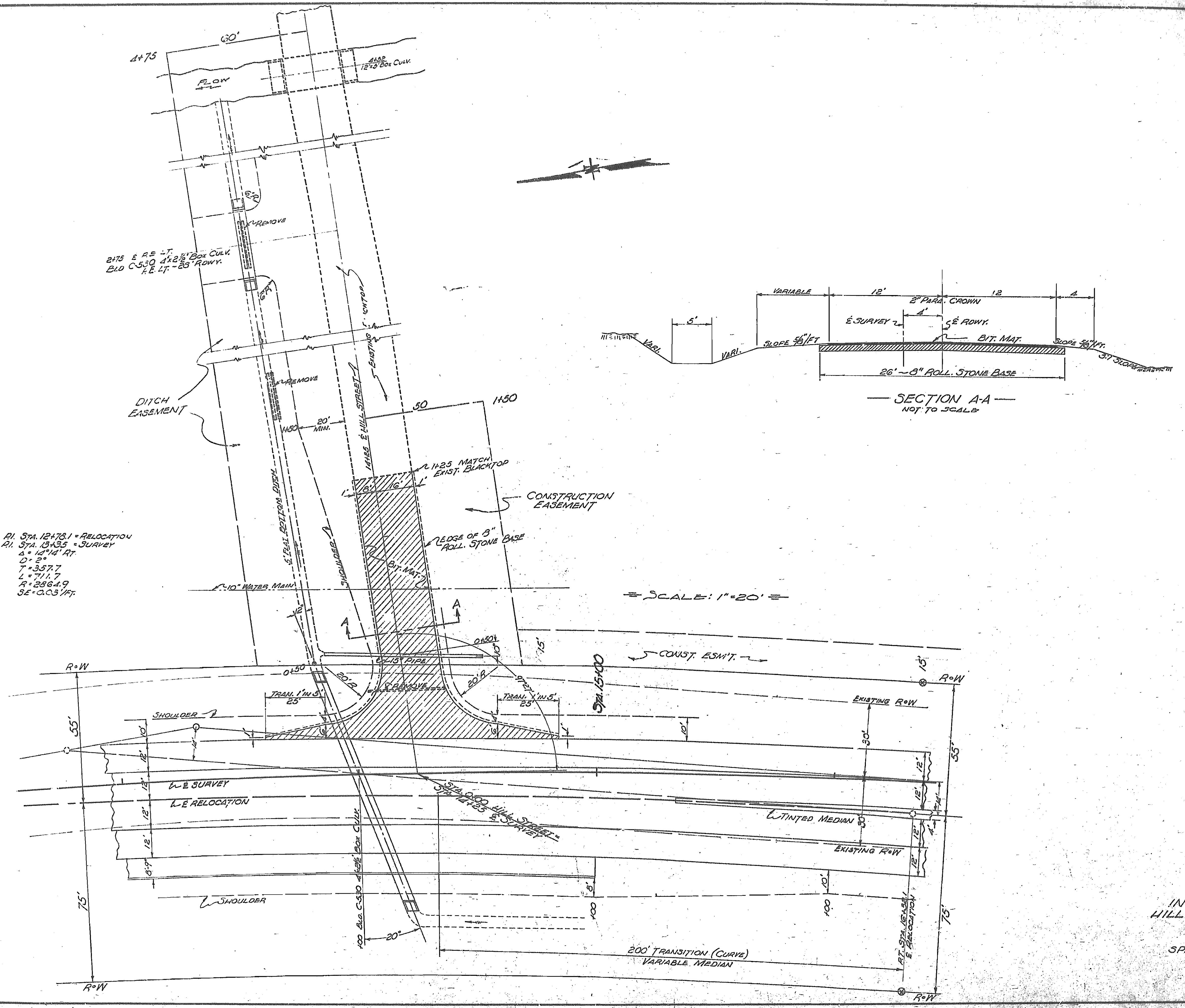
SPECIAL SHEET NO. 3

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

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

FED. ROAD DIV. No.	STATE	FEDERAL PROJECT No. & SEC.		
5	MO.	U-182(5)		
DIST. No.	COUNTY			
7	NEWTON		71AH.	

⑦



INTERSECTION OF
HILL STREET & RTE. 71 ALT.
NEWTON CO.

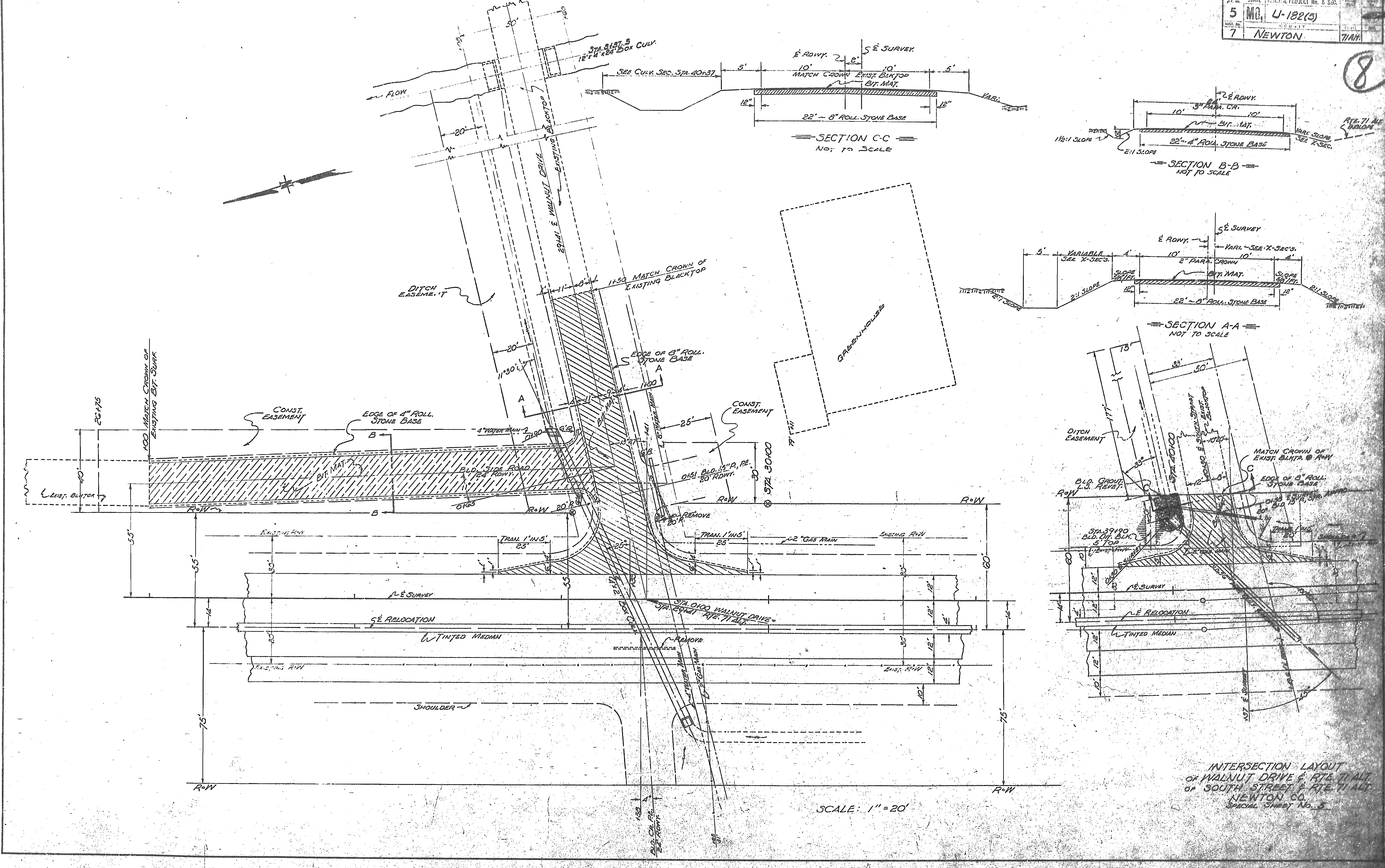
SPECIAL SHEET NO. 4

FED. ROAD DIV. No.	STATE	FEDERAL PROJECT No. & SEC.	ROUTE
5	MO.	U-182(5)	
DIST. No.	COUNTY		
7	NEWTON		71AH.

(8)

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

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

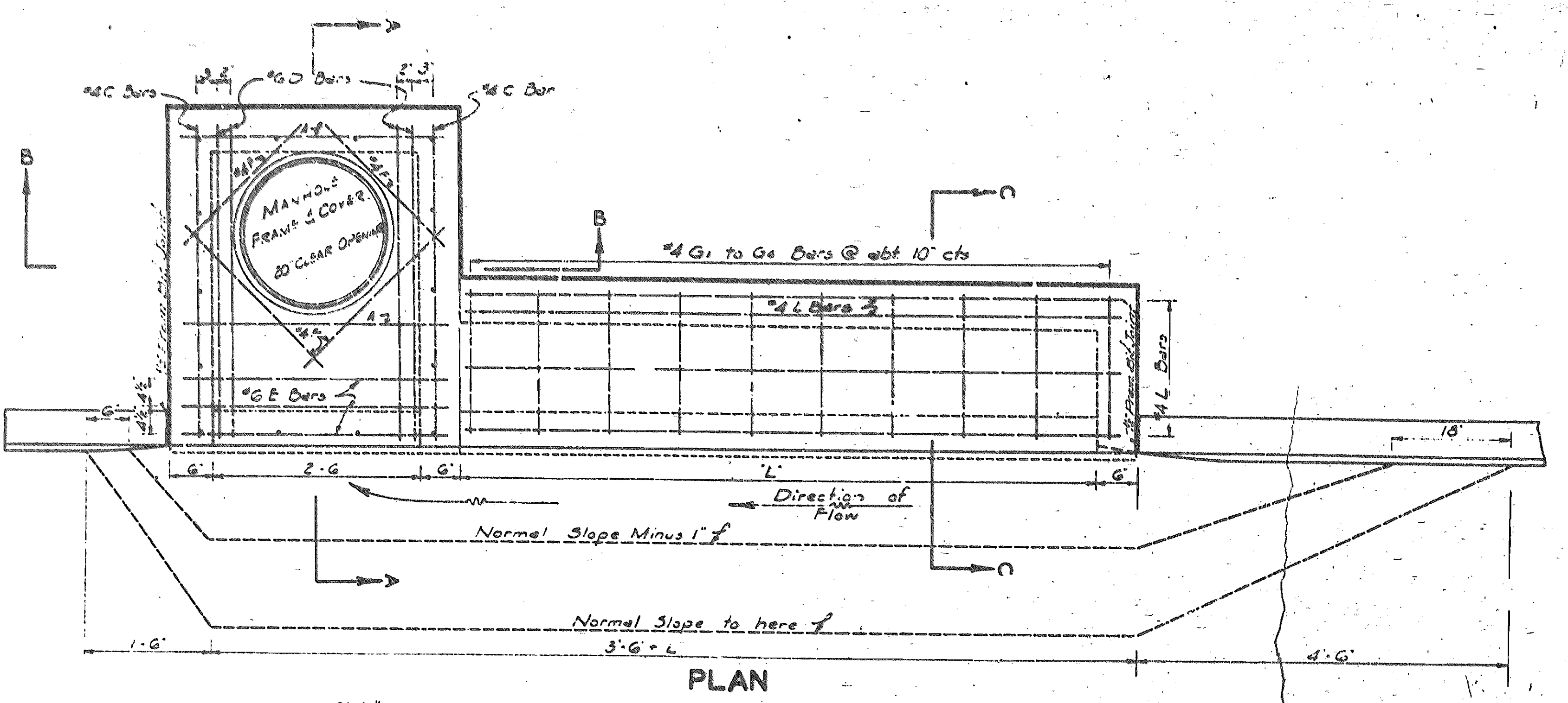


INTERSECTION LAYOUT
OF WALNUT DRIVE & RTE. 71 ALT.
OF SOUTH STREET & RTE. 71 ALT.
NEWTON CO.
SPECIAL SHEET No. 3

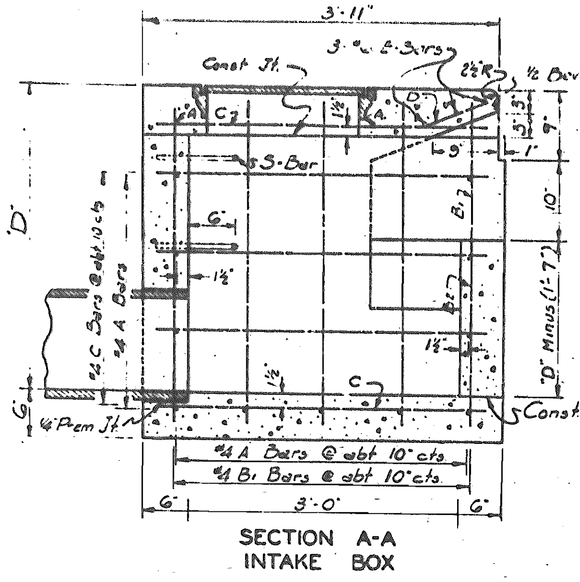
2

5	MO.	U-482(5)
7		NEWTON

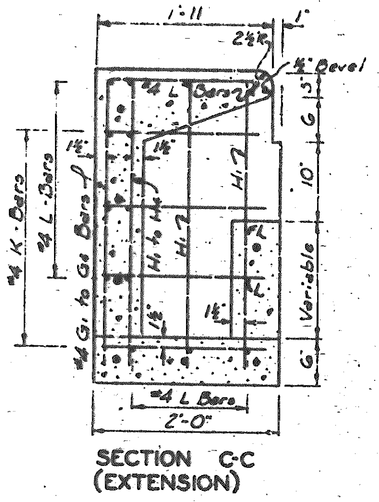
9



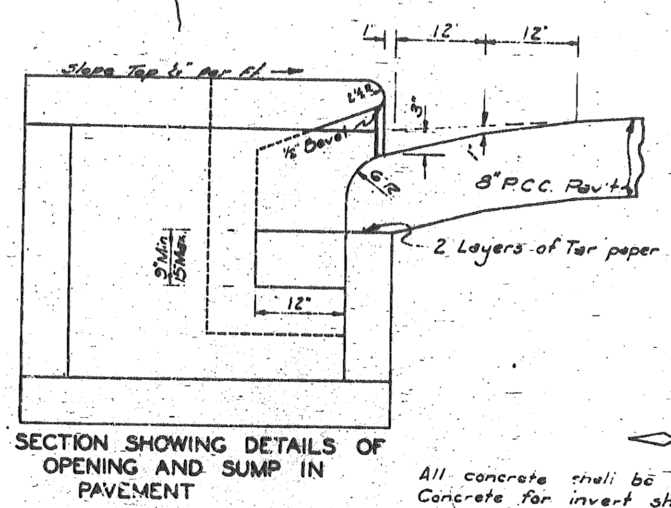
PLAN



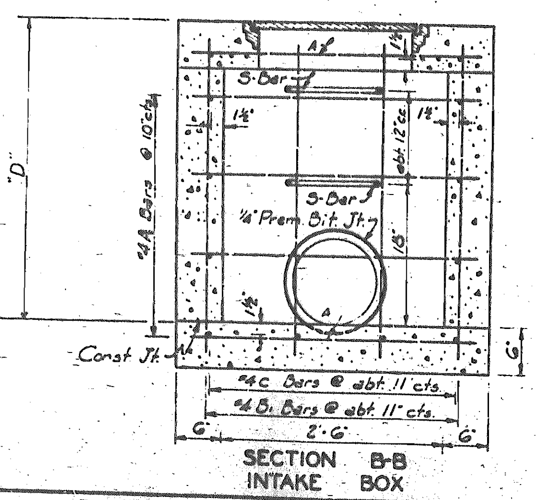
SECTION A-A
INTAKE BOX



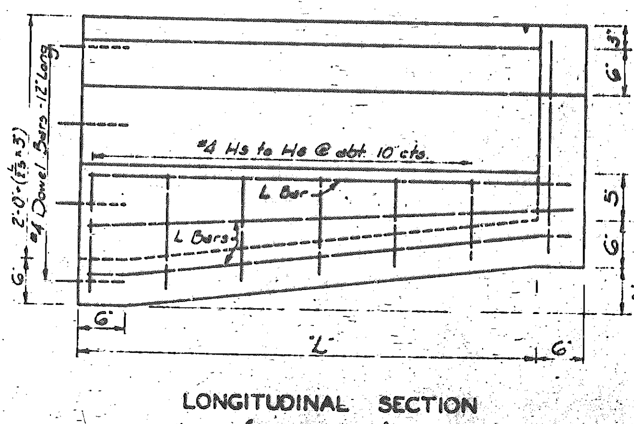
SECTION C-C
(EXTENSION)



SECTION SHOWING DETAILS OF
OPENING AND SUMP IN
PAVEMENT



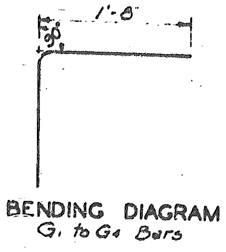
SECTION B-B
INTAKE BOX



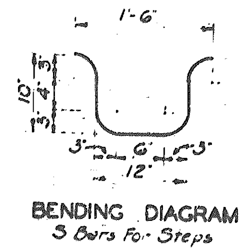
LONGITUDINAL SECTION
(EXTENSION)

BAR BILL - INTAKE BOX

'D'	Steel Pounds	#4 A-Bars in floor Front & Back walls		#4 B1-Bars in Back and Side walls		#4 B2-Bars in Front wall		#4 C-Bars in Floor & Side walls		#6 D-Bars in Top Slab		#6 E-Bars in Top Slab		#4 F-Bars in Top Slab		#5 S-Bars Steps	
		No	Lgth.	No.	Lgth	No.	Lgth	No	Lgth.	No.	Lgth.	No.	Lgth.	No.	Lgth.	No	Lgth.
2'-6"	114	10	3'-3"	12	2'-9"	2	1'-3"	10	3'-9"	4	3'-9"	3	3'-3"	4	2'-3"		
2'-9"	118	11	3'-3"	12	3'-0"	2	1'-6"	10	3'-9"	4	3'-9"	3	3'-3"	4	2'-3"		
3'-0"	120	11	3'-3"	12	3'-3"	2	1'-9"	10	3'-9"	4	3'-9"	3	3'-3"	4	2'-3"		
3'-3"	130	12	3'-3"	12	3'-6"	2	2'-0"	12	3'-9"	4	3'-9"	3	3'-3"	4	2'-3"		
3'-6"	132	12	3'-3"	12	3'-9"	2	2'-3"	12	3'-9"	4	3'-9"	3	3'-3"	4	2'-3"		
3'-9"	137	13	3'-3"	12	4'-0"	2	2'-6"	12	3'-9"	4	3'-9"	3	3'-3"	4	2'-3"		
4'-0"	152	14	3'-3"	12	4'-3"	2	2'-9"	14	3'-9"	4	3'-9"	3	3'-3"	4	2'-3"		
4'-3"	157	14	3'-3"	12	4'-6"	2	3'-0"	14	3'-9"	4	3'-9"	3	3'-3"	4	2'-3"	2	2'-9"
4'-6"	160	14	3'-3"	12	4'-9"	2	3'-3"	14	3'-9"	4	3'-9"	3	3'-3"	4	2'-3"	3	2'-9"



BENDING DIAGRAM
G1 to G4 Bars



BENDING DIAGRAM
S Bars For Steps

BAR BILL EXTENSION

Length of Extension 'L'		2'-6"		5'-0"		7'-6"	
Mark	Size	No	Lgth.	No.	Lgth.	No.	Lgth.
G1	#4	2	4'-3"	2	4'-3"	2	4'-3"
G2	#4	2	4'-6"	3	4'-6"	3	4'-6"
G3	#4			2	4'-9"	3	4'-9"
G4	#4					2	5'-0"
H1	#4	4	2'-3"	4	2'-3"	4	2'-3"
H2	#4	2	2'-6"	3	2'-6"	3	2'-6"
H3	#4			2	2'-9"	3	2'-9"
H4	#4					2	3'-0"
H5	#4	1	0'-9"	1	0'-9"	1	0'-9"
H6	#4	2	1'-0"	3	1'-0"	3	1'-0"
H7	#4			2	1'-3"	3	1'-3"
H8	#4					2	1'-6"
K	#4	7	1'-9"	10	1'-9"	13	1'-9"
L	#4	14	2'-9"	14	5'-3"	14	7'-9"
Dowel Bars	#4	8	1'-0"	9	1'-0"	10	1'-0"
Total Steel		62 Pounds		107 Pounds		153 Pounds	

CLASS B CONCRETE

	'D'	*Cu Yds
INTAKE BOX	2'-6"	1.05
	2'-9"	1.11
	3'-0"	1.16
	3'-3"	1.22
	3'-6"	1.28
	3'-9"	1.34
	4'-0"	1.39
	4'-3"	1.45
	4'-6"	1.51
	'L'	Cu. Yds
	2'-6"	0.38
	5'-0"	0.68
	7'-6"	1.05

Cubic Yds. Deductions to be made for pipe openings

12"	15"	18"	24"
0.03	0.04	0.05	0.09

Deductions based on R.C. pipe

Cubic Yds. Deductions to be made for Extension Openings

9"x12"	12"x12"	15"x12"	
0.01	0.02	0.03	

*Includes 0.15 cu Yd. Conc for invert but not deduction for pipe and Extension Openings

GENERAL NOTES

All concrete shall be Class B.
Concrete for invert shall be placed after the intake box is in place.

All pipe shall fit flush with the inside face of the inlet wall. The cost of cutting pipe shall be considered as completely covered by the Unit price bid for pipe.

Reinforcing bars shall be cut and/or bent at pipe and extension openings and the cost of same shall be included in the unit price bid for Reinforcing Steel.

Step bars shall clear all pipes and shall be built in either wall as directed by the Engineer.

Manhole Frame and Cover shall be Neenah Foundry Company, Catalogue No. R-1737, or equal. Weight of frame and cover approximately 115 pounds.

That portion of the pipe surrounded by concrete in the drop inlet wall shall be wrapped with two (2) layers of 65# smooth roll roofing meeting ASTM specs. D224-55.

DRAWN	REVISED
2-55	

MISSOURI STATE HIGHWAY COMMISSION

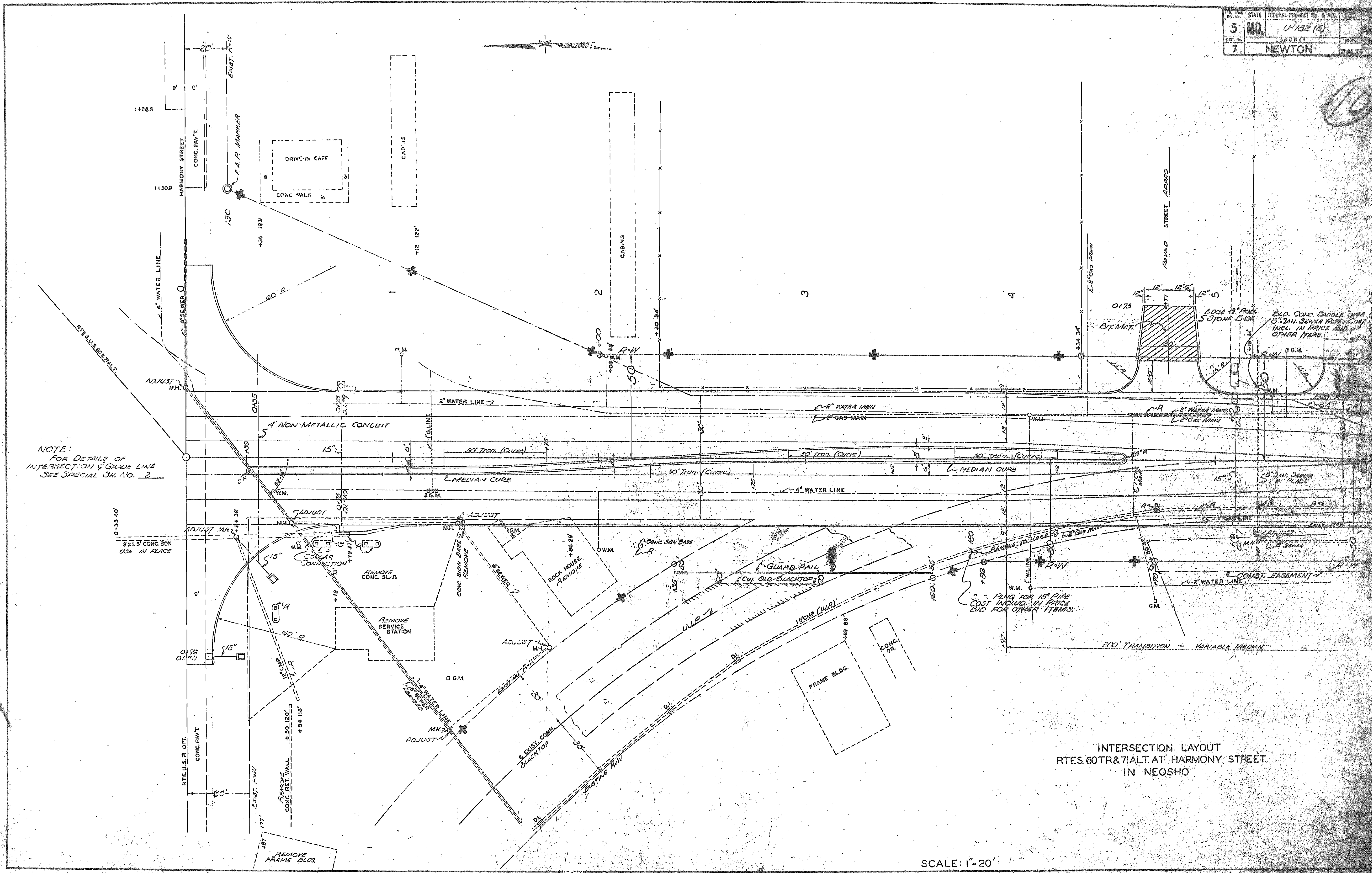
DETAILS OF CURB OPENING TYPE DROP INLETS FOR 6" MEDIAN STRIP

SUBMITTED BY C.P. Owens
ENGR. SURVEY & PLANS
APPROVED BY
CHIEF ENGR.

36T-MOD

FED. ROAD DIV. No.	STATE	FEDERAL PROJECT No. & SEC.
5	MO.	U-182(3)
DIST. No.	COUNTY	
7	NEWTON	71ALT.

10



INTERSECTION LAYOUT
RTES. 60TR & 71ALT. AT HARMONY STREET
IN NEOSHO

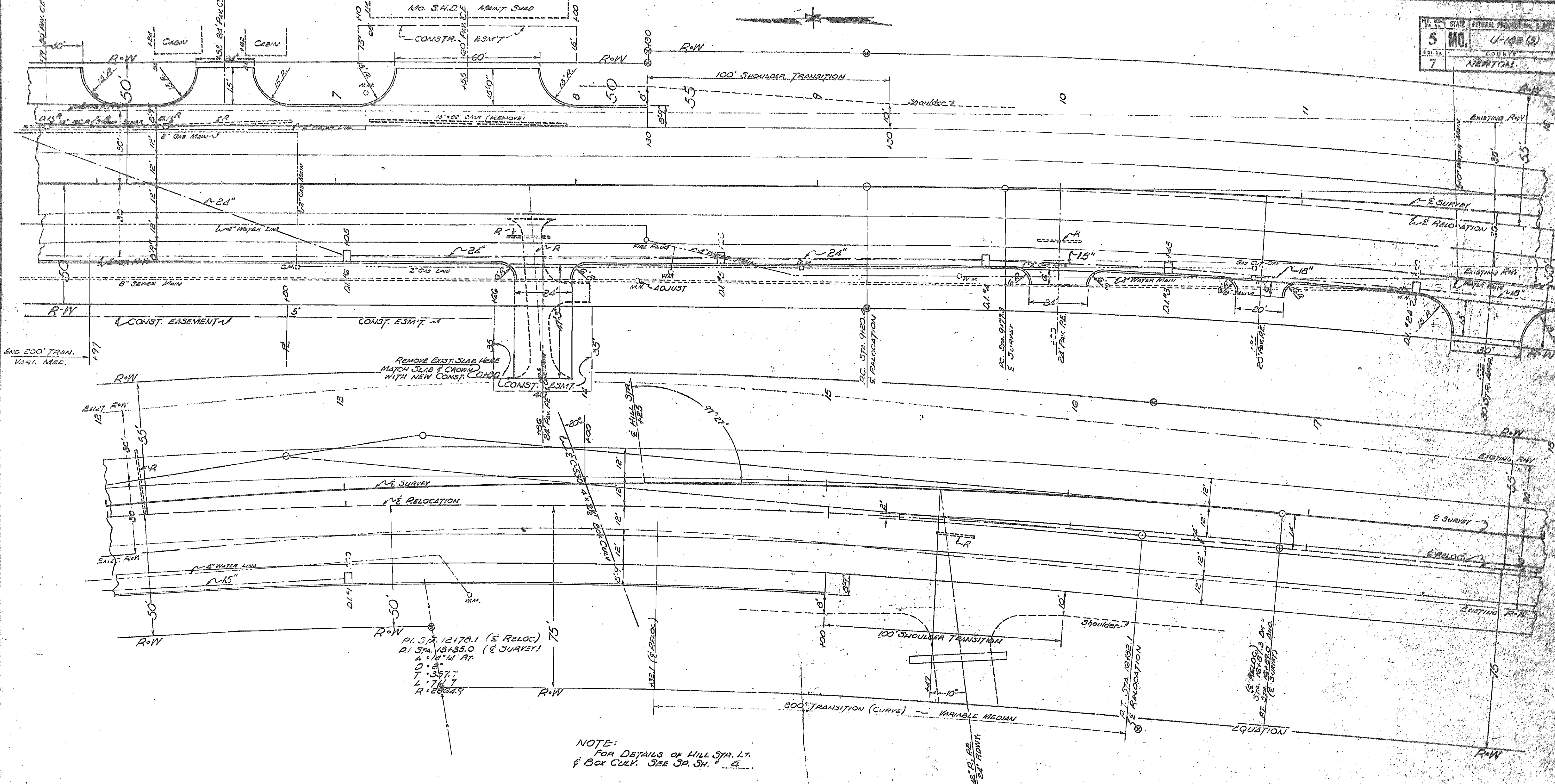
SCALE: 1" = 20'

FINAL SURVEY

ORIGINAL SURVEY

FED. ROAD DIV. No.	STATE	FEDERAL PROJECT No. & SEC.	
5	MO.	U-182 (3)	
DIST. No.	COUNTY		ROUTE
7	NEWTON		71 Alt.

11



NOTE:
For Details of Hill Str. Lt. & Box Culv. See Sp. Sh. 4

FINAL PLANS

MODIFICATIONS OF STANDARD CULVERT DETAILS

STATION	STANDARD NUMBER	SIZE AND TOTAL LENGTH OF FINAL STRUCTURES	SECTION OR IDENTICAL SECTIONS	LENGTH OF SECTION	HEIGHT OF FILL FOR DESIGN DATA	SECTION LOCATED UNDER	MODIFICATIONS – BOTTOM SLAB – THICKNESS OF SLAB	MODIFICATIONS – BOTTOM SLAB – SIZE OF A-BARS	MODIFICATIONS – BOTTOM SLAB – SPACING OF A-BARS	MODIFICATIONS – LENGTH OF B-BARS IN SIDEWALLS	REMARKS
			PROJECT U-182(5)								
14+00 ℄ Survey	C-530	4'×25'×98' Sk. 20°R.A.	A	49' 0"	2'	Rt. Shldr. Roadway					Normal W.W Slope 2:1
			B	49' 0"	3'	Roadway & Lt. Shldr.					Normal W.W. Slope 2:1
29+33 ℄ Survey	C-530	4'×8'×148' Sk. 25°R.A.	A	50' 0"	2'	Rt. Shldr. & Roadway					Hdwll. Square 2:1 W.W. Slope
			B	50' 0"	2'	Roadway					
			C	48' 0"	2'	Lt. Sh.ldr. Slope & Outer Rdwy.					Normal W.W Slope 2:1

MODIFICATIONS OF STANDARD CULVERT DETAILS

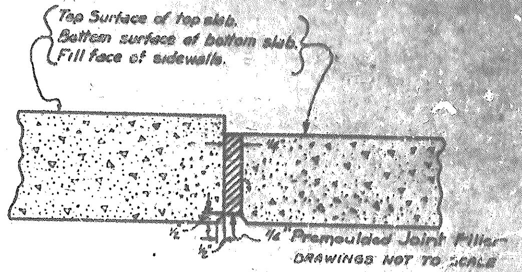
STATION	STANDARD NUMBER	SIZE AND TOTAL LENGTH OF FINAL STRUCTURES	SECTION OR IDENTICAL SECTIONS	LENGTH OF SECTION	HEIGHT OF FILL FOR DESIGN DATA	SECTION LOCATED UNDER	MODIFICATIONS – BOTTOM SLAB – THICKNESS OF SLAB	MODIFICATIONS – BOTTOM SLAB – SIZE OF A-BARS	MODIFICATIONS – BOTTOM SLAB – SPACING OF A-BARS	MODIFICATIONS – LENGTH OF B-BARS IN SIDEWALLS	REMARKS
			PROJECT F-182(6)								
57+31 ℄ Reloc.	C-529	7'×5'×112' Sk. 45°L.A.	A	56' 0"	1'	Lt. Shldr. & Roadway	11½"	#6	5½"	6'6"	Hdwll. Square 9" Hdwll.
			B	56' 0"	1'	Roadway & Rt. Shldr.	11½"	#6	5½"	6'6"	9" Hdwll.

NOTE- Section "A" is always that section nearest the upstream flow line of the final structure.

28

DETAILS OF TRANSVERSE EXPANSION JOINT

12



Joint material to be used at transverse joints in top and bottom slabs and sidewalls.
Tranverse joint to be constructed perpendicular to flow line and at right angles to ℄ of box.

GENERAL NOTES

All longitudinal reinforcement shall be placed with ends approximately 1½" from center of expansion joints.

Cost of tranverse expansion joints, complete in place, to be included in unit price bid for Class "B" concrete.

The Premoulded Joint Filler shall meet the requirements of Standard Specification 38-19A(1)h.

MISSOURI STATE HIGHWAY COMMISSION

MODIFICATIONS AND TRANSVERSE EXPANSION JOINTS FOR BOX CULVERTS WHICH ARE TO BE BUILT IN SECTIONS

ROUTE 71 ALT. PROJS. U-182(5) & F-182(6)
COUNTY NEWTON

REVISIONS				
1	2	3	4	5
8-53	1-55			

SPECIAL SHEET NO. 1

LIST OF STANDARD PLANS

PROJ. U-182(5)	SHEET 13
CO. NEWTON	RTE. 71 ALT & 60

1BA-4	(6-9-54)
1TR-2	(8-20-52)
15CN-1	(3-57)
15CR-2	NEW-(5-56)
15DE-9	
15E-19	(5-55)
16B-1	(11-11-52)
25BB-7	(5-56)
27A-17	NEW-(2-56)
28A-2	
36A-20	(10-57)
36B-3	(3-29-54)
36F-3	
36B-4	(3-29-54)
C-230R2	(3-56)
C-530	(1-30-53)
C-27	
C110R5	

SP-1

5443

DESIGN DESIGNATION

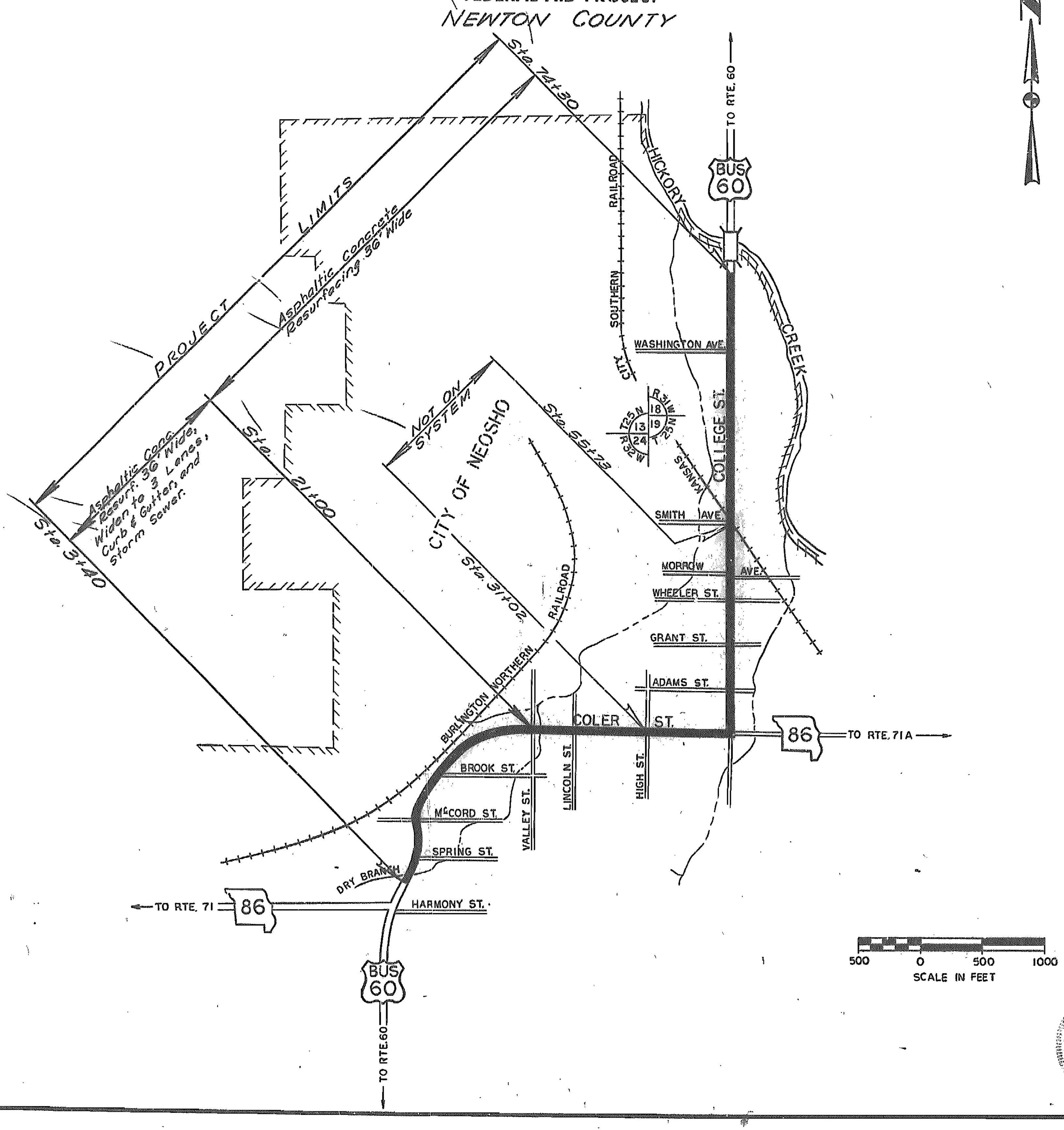
	COLER ST.	COLLEGE ST.
A.D.T. - 1986 =	9580	4160
A.D.T. - 2006 =	12750	6240
D.H.V. = %		
T = 3 %		T = 5 %
V = 40 M.P.H.		

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

FEDERAL AID PROJECT
NEWTON COUNTY

COUNTY NEWTON
ROUTE 60 BUS.
PROJECT M-HES-4711(701)
JOB NO. 7-X-60B-398

[illegible]



INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (2 SHEETS)	2
SUMMARY (SHEET)	2-A
SUMMARY (4 SHEETS)	2-B
PLAN-PROFILE	3-7
REFERENCE POINTS	8
SPECIAL SHEETS & T.C.P.	9-13
LIGHTING	
SIGNALS	
SIGNING	
CULVERT SECTIONS	14-17
BRIDGE DRAWINGS	
STANDARD PLANS INDEX	18
CROSS SECTIONS	
COMPUTER DATA	

LENGTH OF PROJECT

END OF PROJECT	STA.	74+30	
BEGINNING OF PROJECT	STA.	3+40	
APPARENT LENGTH		7090	FEET
EQUATIONS AND EXCEPTIONS			
TOTAL CORRECTIONS			FEET
NET LENGTH OF PROJECT		7090	FEET
STATE LENGTH		1.343	MILES
Federal Exception @ R.R. 56+29.1 to 56+43.6		14.5	Feet
NET FEDERAL LENGTH		7075.5	Feet
FEDERAL LENGTH		1.340	MILES

CONVENTIONAL SIGNS
(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
  - POWER
  - GAS
  - WATER
- Underground Tele.

NOTE: DASHED OR OPEN SYMBOL INDICATES EXISTING FEATURE

REV SEP 83

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

SUBMITTED

Wayne Muri 4-24-87
CHIEF ENGINEER DATE

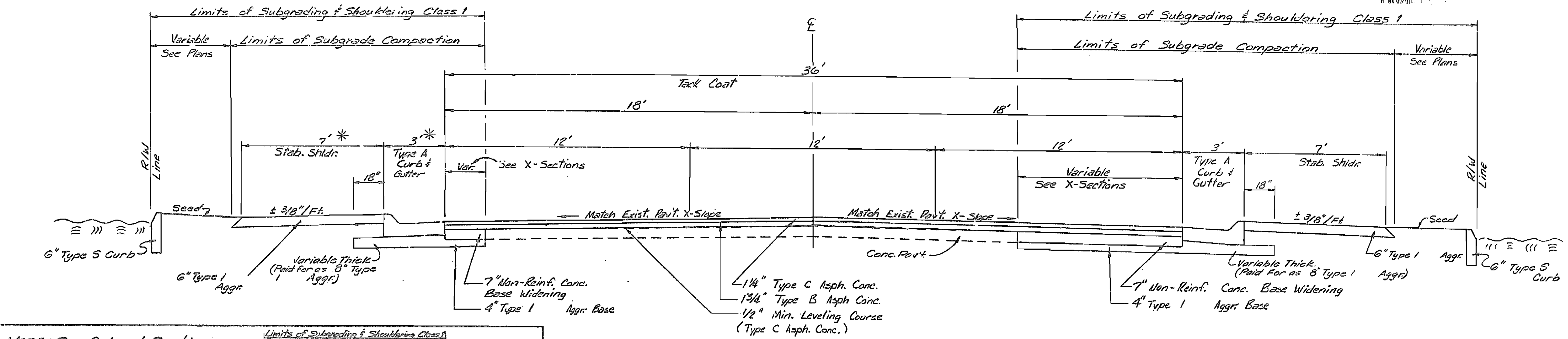
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

APPROVED

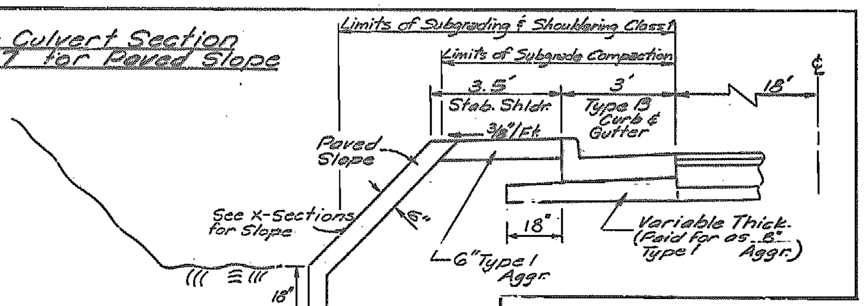
DIVISION ADMINISTRATOR DATE

STATE	JOB NO. 7-X-60B-398	SHEET NO.
MO.	PRO'''CT NO. M-HES-4711(701)	2
DIST. NO. 7	COUNTY NEWTON	ROUTE 60 BUS

FINAL PL...



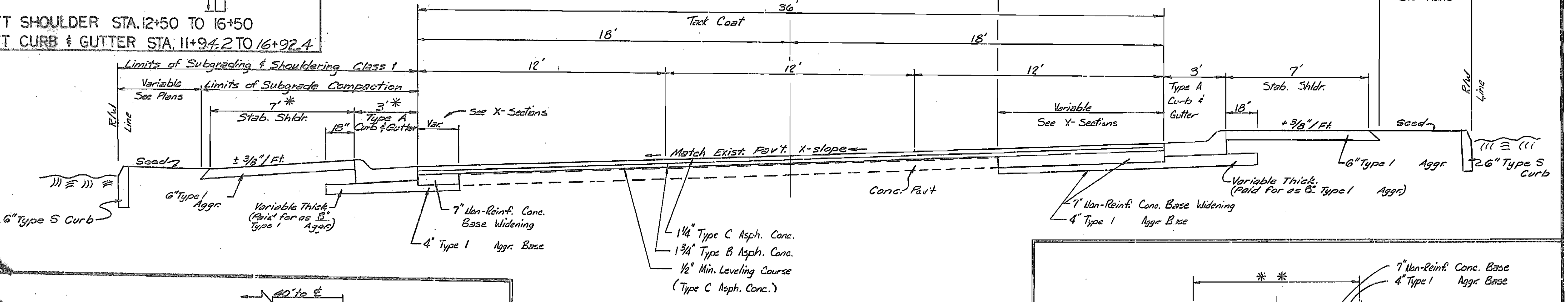
NOTE: See Culvert Section Sheet No. 17 for Paved Slope Details.



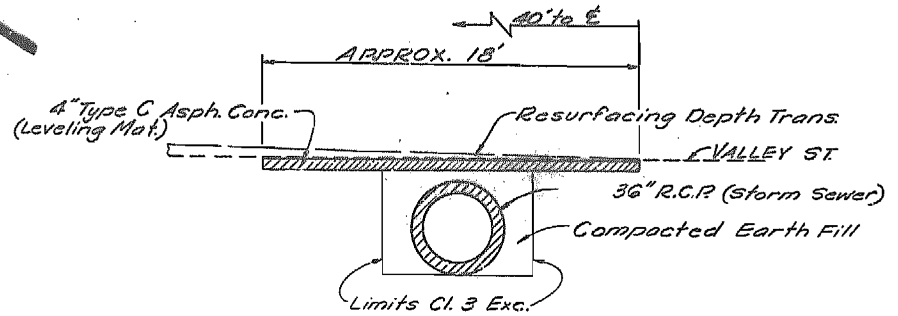
SECTION ON TANGENT
RTE. 60 BUS.

Note: Omitted Left Shldr. and Type S Curb from Sta. 6+77.5 to Sta. 8+10.5

*LEFT SHOULDER STA. 12+50 TO 16+50
LEFT CURB & GUTTER STA. 11+94.2 TO 16+92.4

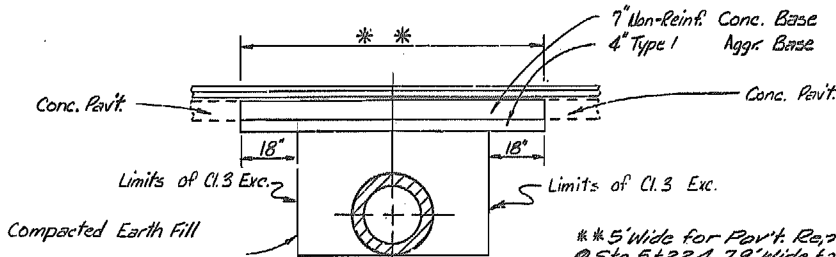


SECTION ON SUPERELEVATED CURVE
RTE. 60 BUS.



TYPICAL SECTION - ASPHALT PAVEMENT REPAIR @ VALLEY ST. RT. STA. 21+00

STA. 3+40 TO STA. 21+00



** 5' Wide for Pav't. Repair @ Sta. 5+22.4, 7.9' Wide for Storm Sewer Pipe @ Sta. 8+49

Typical Section - Concrete Pavement Repair Sta. 5+22.4 Lt and Sta. 8+49

SHEET 1 OF 2

TYPICAL SECTION
RTE. 60 BUS.

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

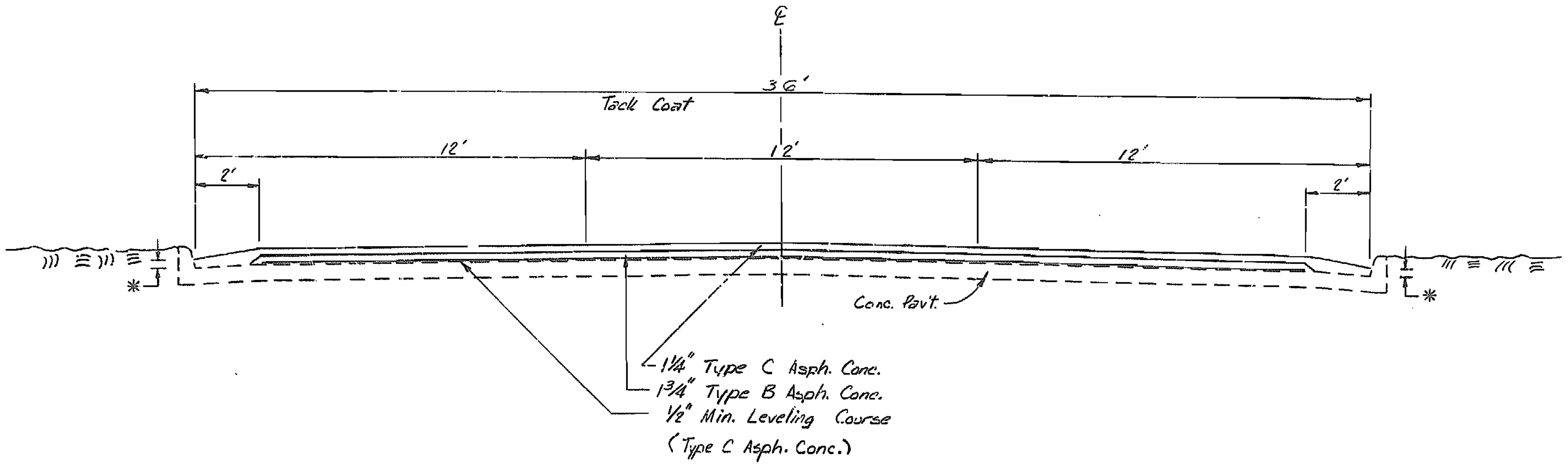
ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK		
NO		

543

STATE MO.	JOB NO. 7-X-60B-398	SHEET NO. 2
DIST. NO. 7	PROJECT NO. M-HES-4711 (701) COUNTY NEWTON	ROUTE 60 BUS.

FINAL

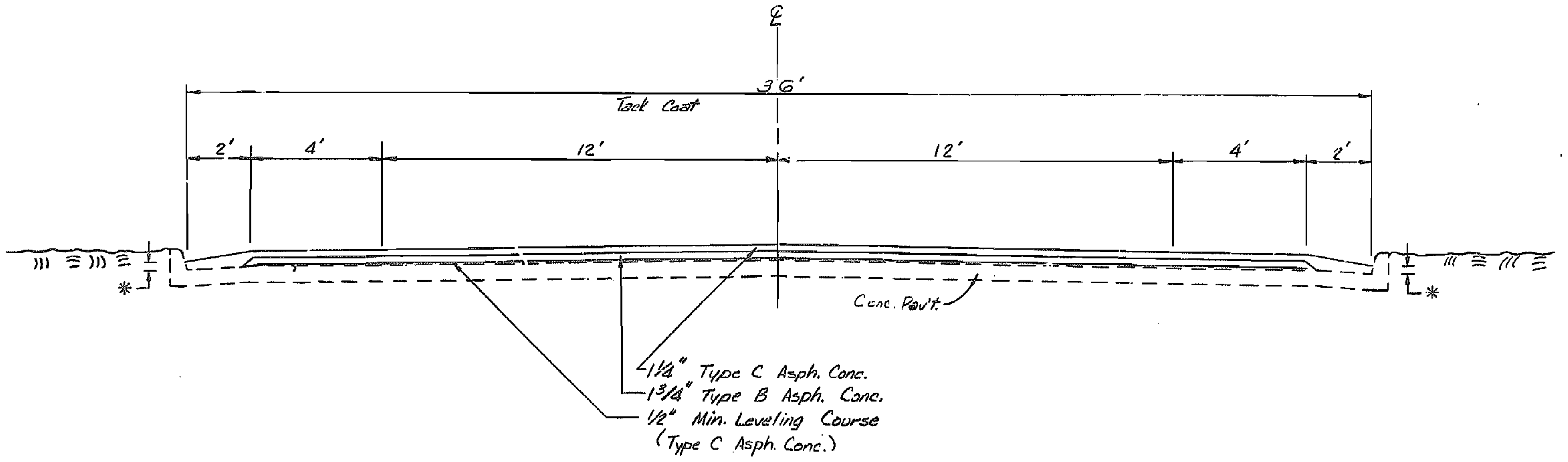
FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO	AREAS CHECKED		



*Taper Resurf. to ½"

TYPICAL SECTION RTE. 60 BUS. (RESURFACING)

STA. 21+00 TO STA. 42+08



*Taper Resurf. to ½"

TYPICAL SECTION RTE. 60 BUS. (RESURFACING)

STA. 42+08 TO STA. 74+30

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO	AREAS CHECKED		

546

45

TYPICAL SECTION
RTE. 60 BUS.
RESURFACING

SHEET 2 OF 2

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION
SUMMARY OF QUANTITIES

SHEET OF

STATE	JOB NO	SHEET NO.
MO.	7-X-60B-398	2A
DIST. NO.	PROJECT NO. M-HES-4711(701)	ROUTE
7	COUNTY NEWTON	60 Bus.

ITEM	DESCRIPTION	UNIT	QUANTITY
202-20.10	REMOVAL OF IMPROVEMENTS	LUMP SUM	1
206-30.00	CLASS 3 EXCAVATION	CU YD	1613
210-10.06	SUBGRADE COMPACTION (6-INCH DEPTH)	STATION	14.6
212-10.00	SUBGRADING AND SHOULDERING CLASS 1	STATION	18.8
304-00.43	TYPE 1 AGGREGATE FOR BASE (4 IN. THICK)	SQ YD	2514
304-00.63	TYPE 1 AGGREGATE FOR BASE (6 IN. THICK)	SQ YD	1.322
304-00.83	TYPE 1 AGGREGATE FOR BASE (8 IN. THICK)	SQ YD	786
309-13.07	CONCRETE BASE WIDENING (7 IN. NON-REINFORCED)	SQ YD	2447.7
403-10.11	ASPHALT CEMENT (ASPHALTIC CONCRETE) 60-70	TON	243.6
403-70.00	MINERAL AGGREGATE (ASPHALTIC CONCRETE) (TYPE B MIX)	TON	2237
403-80.00	MINERAL AGGREGATE (ASPHALTIC CONCRETE) (TYPE C MIX)	TON	3348
407-10.05	TACK COAT	GALLON	1940
604-20.10	ADJUSTING MANHOLE	EACH	20
608-50.08	PAVED APPROACH, 8 IN.	SQ YD	3589.7
608-60.04	CONCRETE SIDEWALK, 4 IN.	SQ YD	23.0
609-10.10	CONCRETE CURB (6 IN. HEIGHT AND UNDER) TYPE S	LIN FT	1391
609-10.51	CURB AND GUTTER TYPE A	LIN FT	1056
609-10.52	CURB AND GUTTER TYPE B	LIN FT	567
609-10.60	PAVED DITCH	SQ YD	580.5
612-10.30	MOVABLE BARRICADES	EACH	3
614-10.10	GRATES AND BEARING PLATES	POUND	3.790
614-30.12	MANHOLE FRAME AND COVER, TYPE 2	EACH	7
614-30.20	CURB INLET	EACH	2
616-10.05	CONSTRUCTION SIGNS	SQ FT	582
616-10.10	RELOCATED SIGNS	SQ FT	50
616-10.20	DRUMS	EACH	90
616-10.40	FLASHING ARROW PANEL	EACH	2
616-10.47	TYPE III OBJECT MARKER	EACH	90
618-10.00	MOBILIZATION	LUMP SUM	1
703-20.02	CLASS B CONCRETE (MISC)	CU YD	2.6
706-10.00	REINFORCING STEEL	POUND	380
726-13.12	12 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	243
726-13.15	15 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	26
726-13.18	18 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	63
726-13.24	24 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	352
726-13.30	30 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	523
726-13.36	36 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	320
731-00.48	PRECAST CONCRETE MANHOLE - 48 IN.	FT	15
731-00.60	PRECAST CONCRETE MANHOLE - 60 IN.	FT	23
731-10.22	PRECAST CONCRETE DROP INLET 2 FT X 2 FT	FT	32
731-10.32	PRECAST CONCRETE DROP INLET 3 FT X 2 FT	FT	6
802-30.00	TYPE 3 MULCH	ACRE	0.5
805-10.00	SEEDING	ACRE	0.5
500	CONTINGENT ITEMS		
50101	REPAIR CAVITY Sta. 4+98	Lump Sum	1
50102	EXTRA DOWEL BASKETS	Ft.	281
50103	INSTALL PIPE & GRATE	Lump Sum	1
50104	SUBGRADE COMPACTION (12-INCH DEPTH)	STATION	2.4
50105	SUBGRADE COMPACTION (18-INCH DEPTH)	STATION	1.8
50106	ASPHALT DENSITY SAMPLES	EACH	12

ITEM	DESCRIPTION	UNIT	QUANTITY

ACCEPTED: 5/16/88

Prepared by: JOHN L. ECKHART

Resident Engineer: Date: 7/19/88

Distr. Office: Donald R. Lowery Date: 7-28-88

Main Office: Mark J. Sooter 8-30-88

S-4711(701) 60 BUS. NEWTON

5746

SP-2B

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

Sheet 1 of 4

FINAL PLANS

STATE MO.	JOB NO. 7-X-60B-398	SHEET NO. 2B
DIST. NO. 7	PROJECT NO. M-HES-4711 (701)	ROUTE 60 B
	COUNTY NEWTON	

RIGHT-OF-WAY MARKERS (BY OTHERS)

SHEET	STATION	LOC.	NO	REMARKS
3	3+00	40' Lt.	1	Copperweld
3	3+51.4	40' Rt.	1	" "
3	3+65.1	73.1 Rt.	1	" "
3	4+51.7	49.4' Rt.	1	" "
3	5+87.9	40' Rt.	1	" "
3	5+87.9	40' Lt.	1	" "
3	7+79.7	40' Rt.	1	" "
3	7+79.7	40' Lt.	1	" "
3	11+65.2	40' Rt.	1	" "
3	11+65.2	40' Lt.	1	" "
4	14+48.8	40' Rt.	1	" "
4	16+67.4	76.6' Lt.	1	Steel
4	16+67.4	40' Lt.	1	Steel
4	20+42.6	40' Rt.	1	Copperweld
4	20+42.6	40' Lt.	1	Copperweld
		Total	15	

REMOVAL OF IMPROVEMENTS

1 ~ Lump Sum

PAVED APPROACHES 4 INCH AND AGGR. SURF.

SHEET	STATION	LOC.	TYPE	LENGTH	WIDTH	SQ. YD.	[illegible] S.Y.	REMARKS	
9	2+36.9	Rt.	CE	VAR.	40'	93.39			Field Measured
9	2+79.0	Rt.	CE	VAR.	30'	56.39			"
9	3+30.5	Rt.	CE	VAR.	25'	48.79			"
9	3+83.9	Rt.	CE	VAR.	30'	62.53	44	Apply Aggr. Surf. 2" Thick x 88 S.Y.	"
9	3+99.2	Lt.	CE	22'	44'	130.77		44' Wide @ R/W Line	"
9	4+34.1	Rt.	CE	VAR.	30'	59.03	22	Apply Aggr. Surf. 2" Thick x 44 S.Y.	"
9	5+15.0	Rt.	SR	32.7'	24.8'	111.25		SPRING STREET - Sta.@ ℄ - Sk. 8°05' R.A.	"
9	5+32.9	Lt.	CE	22'	30'	110.84		SK. 45° L.A.	"
9	5+75.7	Rt.	CE	22'	38'	103.97			"
9	6+37.5	Lt.	CE	22'	45'	126.44			"
9	6+42.5	Rt.	CE	22'	45'	119.07			"
9	7+00.5	Rt.	CE	22'	45'	120.10			"
10	8+27.6	Rt.	SR	22'	46'	152.85		McCORD STREET - Sta.@ ℄ - Sk. 5°27.5' R.A.	"
10	8+27.6	Lt.	SR	22'	31'	116.66		McCORD STREET - " " " - " " " "	"
10	9+24.6	Lt.	CE	22'	60'	164.27			"
10	10+19.9	Lt.	CE	22'	60'	163.11			"
10	10+65.0	Rt.	CE	22'	60'	160.02			"
10	11+66.2	Lt.	CE	22'	32'	93.50			"
10	12+20.0	Rt.	CE	22'	15'	46.40			"
10	12+46.0	Rt.	SR	22'	35.1'	117.05		BROOK STREET - Sta.@ ℄ - Sk. 42°12' R.A.	"
10	13+62.0	Rt.	CE	22'	30'	88.60			"
11	14+48.8	Rt.	CE	22'	30'	88.60			"
11	15+64.0	Rt.	CE	22'	60'	161.90			"
11	16+67.6	Rt.	CE	22'	55'	144.60			"
11	17+35.3	Lt.	CE	22'	40'	135.80		40' Wide @ R/W Line ~ Sk. 45° L.A.	"
11	17+39.1	Rt.	CE	22'	60'	158.27			"
11	18+07.4	Lt.	CE	22'	20'	60.16			"
11	18+66.5	Lt.	CE	22'	15'	46.78			"
11	18+80.0	Rt.	CE	22'	60	161.90			"
11	19+55.5	Lt.	CE	22'	35'	95.66			"
11	19+67.4	Rt.	CE	22'	25'	71.00			"
11	20+10.5	Lt.	CE	22'	30'	88.60			"
11	20+27.5	Rt.	CE	22'	55'	139.40			"
				Total		3589.70	66		
				Use ~		3589.7			

PRECAST MANHOLE

SHEET	STATION	LOC	SIZE	"D" DEPTH	PIPE OPENING		Ft. 48"	60"	MANHOLE [illegible] AND [illegible]	Cl. 3 Exc. C.Y.
10	8+58.0	26.5' Rt.	48	4.75'	1-12", 1-18"	1-24"	5'	—	1	9
10	10+18.0	26.5' Rt.	48"	4.5'	2-24"		5'	—	1	9
10	11+15.9	26.5' Rt.	48"	4.75'	2-24"		5'	—	1	9
10	12+37.5	32' Rt.	60"	5.5'	1-24"	1-30"	—	6'	1	13
11	14+81.2	32' Rt.	60"	4.5'	2-30"		—	5'	1	12
11	17+84.4	32' Rt.	60"	6.0'	1-30", 1-36"		—	6'	1	14
11	19+89.7	32' Rt.	60'	5.5'	2-36"		—	6'	1	14
					TOTALS -		15'	23'	7	80

CONCRETE DROP INLET

SHEET	STATION	LOC.	TYPE	SIZE	"D" DEPTH	PIPE OPENING	GRATES AND BEARING PLATES [illegible]	CURB INLET EACH	Cl. B CONC. C.Y.	REINF. STEEL Lbs.	Cl. 3 EXC. C.Y.	REMARKS
11	21+66	Lt.	"X"	2'x2'	3'-0"	1-18"	190	1	1.28	190	8	U/F Existing 18" Outlet Pipe
11	21+66	Rt.	"X"	2'x2'	3'-0"	1-18"	190	1	1.28	190	8	" " " " "
					TOTALS		380	2	2.6	380	16	

CONCRETE SIDEWALK, 4 Inch

SHEET	STATION	to	STATION	LOC.	LENGTH	WIDTH	SQ. YD.	Remarks		
11	21+48.0		21+76.0	Lt.	26'	VAR.	10.16	Field	Meas.	
	20+85.3			Lt.	16'	4'	7.11	"	"	
	14+84.0		15+10.0	Rt.	20.5'	2.5'	5.69	"	"	C.O.#3
					Total		22.96			
					Use		23.0			

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

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

BY

DATE

578

5/17

SP-2B

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

Sheet 2 of 4

FINAL PLANS

STATE	JOB NO.	SHEET NO.
MO.	7-X-60B-398	2B
DIST. NO.	PROJECT NO.	ROUTE
7	COUNTY NEWTON	60B

CONCRETE CURB (6 IN. HEIGHT AND UNDER) TYPE 'S'

SHEET	STATION	to	STATION	LOCATION	LIN. FT.	REMARKS
9	2+57.3		2+63.2	Rt.	6.0'	Field Meas.
9	2+94.8		3+17.0	Rt.	23.9'	" "
9	3+35.5		3+68.3	Lt.	30.3'	" "
9	3+44.5		3+70.4	Rt.	82.0'	Along R/W Line & Part. Ents.
9	3+97.4		4+20.6	Rt.	64.0'	" " " " " " " "
9	4+47.6		4+61.8	Rt.	26.0'	Field Meas.
9	4+98.0		5+11.5	Lt.	12.5'	" "
9	5+31.2		5+52.1	Rt.	22.5'	" "
9	5+56.2		6+08.5	Lt.	49.9'	" "
9	6+03.2		6+10.7	Rt.	7.5'	" "
9	6+62.0		6+72.5	Lt.	10.5'	" "
9	6+67.0		6+76.0	Rt.	9.0'	" "
9, 10	7+29.0		7+89.5	Rt.	60.5'	" "
10	8+42.9		8+90.7	Lt.	51.5'	" "
10	8+47.0		10+30.5	Rt.	170.5'	" "
10	9+58.5		9+86.0	Lt.	28.5'	" "
10	10+49.6		11+49.4	Lt.	107.5'	" "
10	11+84.2		11+92.2	Lt.	9.0'	" "
10	12+29.5		12+52.5	Rt.	23.0'	" "
10	13+00.0		13+43.0	Rt.	43.0'	" "
10, 11	13+77.0		14+31.8	Rt.	54.8'	" "
11	14+66.8		15+30.1	Rt.	59.8'	2' Gap for Sign Base @ Sta. 15+16.3
11	15+97.9		16+34.4	Rt.	36.5'	Field Meas.
11	16+98.8		17+05.2	Rt.	6.0'	" "
11	16+94.8		17+10.9	Lt.	17.0'	" "
11	17+60.4		17+91.8	Lt.	33.3'	" "
11	17+73.0		18+46.1	Rt.	69.0'	" "
11	18+18.8		18+57.5	Lt.	41.0'	" "
11	18+75.5		19+37.0	Lt.	65.0'	" "
11	19+13.9		19+52.0	Rt.	36.0'	" "
11	19+74.0		19+94.4	Lt.	21.5'	" "
11	20+26.6		20+83.3	Lt.	57.6'	" "
11	21+13.0		21+21.0	Rt.	26.5'	Radius @ Valley St.
11	21+48.0		21+77.0	Rt.	29.0'	Field Meas.
			TOTAL		1390.6'	
			Use ~		1391'	

CLASS III REINFORCED CONCRETE PIPE CULVERT

SHEET	STATION	to	STATION	LOCATION	PIPE SIZES 12"	15"	18"	24"	30"	36"	CL.3 EXC. CU. YD.	REMARKS
10	7+87.8		8+11.5	Lt.	30'	—	—	—	—	—	21	Includes 1-50° & 1-55° Bends
10	7+69.0		8+58.0	Rt.	83'	—	—	—	—	—	37	Includes 1-10° Bend
10	8+11.5		8+39.0	Lt.	—	26'	—	—	—	—	14	
10	8+39.0		8+58.0	℄	—	—	63'	—	—	—	45	
10	8+58.0		10+18.0	Rt.	—	—	—	148'	—	—	133	
10	10+18.0		—	Rt.	4'	—	—	—	—	—	—	Cl. 3 Included with Adjacent M.H. & D.I.
10	10+18.0		11+15.9	Rt.	—	—	—	89'	—	—	74	
10	11+15.9		—	Rt.	4'	—	—	—	—	—	—	Cl. 3 Included with Adjacent M.H. & D.I.
10	11+15.9		12+37.5	Rt.	—	—	—	115'	—	—	102	Includes 1-Tee Joint
10	11+96.5		—	Rt.	10'	—	—	—	—	—	3	
10	12+37.5		—	Rt.	9'	—	—	—	—	—	2	
10, 11	12+37.5		14+81.2	Rt.	—	—	—	—	238'	—	240	Includes 3-Tee Joint
10	13+07.5		—	Rt.	11'	—	—	—	—	—	3	
10	13+29.0		—	Rt.	11'	—	—	—	—	—	3	
10	13+91.0		—	Rt.	11'	—	—	—	—	—	3	
11	14+81.2		—	Rt.	9'	—	—	—	—	—	2	
11	14+81.2		17+84.4	Rt.	—	—	—	—	285'	—	309	Includes 1-Tee Joint
11	16+20.7		—	Rt.	11'	—	—	—	—	—	4	
11	17+84.4		—	Rt.	9'	—	—	—	—	—	2	
11	17+84.4		19+89.7	Rt.	—	—	—	—	—	192	258	Includes 1-Tee Joint
11	19+28.7		—	Rt.	11'	—	—	—	—	—	3	
11	19+89.7		—	Rt.	9'	—	—	—	—	—	2	
11	19+89.7		21+22.5	Rt.	—	—	—	—	—	128	176	Includes 1-Tee Joint, Bevel Outlet 45°
11	20+64.3		—	Rt.	13'	—	—	—	—	—	5	
11	14+81.2		14+85.0	Rt.	8'	—	—	—	—	—	—	C.O.#3 ~ Cl. 3 Included with Adjacent D.I.
			TOTAL		243'	26'	63'	352'	523'	320'	1441	

PAVED DITCH

SHEET	STATION	to	STATION	LOCATION	LENGTH	WIDTH	INSLOPE	SQ. YD.	
3, 4	11+93		16+94	Lt.	Var.	Var.	Var.	525.99	Field Meas.
11	21+48		21+52	Lt.	15.0'	5.0'	1.5:1	8.33	Field Meas.
11	21+18.5		21+47	Rt.	30.5'	10.0'	1:1	32.38	(Includes 1.5 S.Y. Deduct for 36" RCP in slope)
9	5+32		5+56	Rt.	31.0'	4.0'	1:1	13.78	Field Meas.
						TOTAL		580.48 Sq. Yd.	
						use ~ 580.5 Sq. Yd.			

PRECAST DROP INLET

SHEET	STATION	LOCATION	TYPE	SIZE	"D" DEPTH	PIPE OPENINGS	TYPE A 3'x2' FT.	TYPE D 2'x2' FT.	GRATE & BEARING PLATES lb.	CL.3 EXC. CU. YD.	REMARKS
10	7+87.8	19.5' Lt.	D	2'x2'	1'9"	1-12"	—	2'	190	4	2-1D
10	8+11.5	34.0' Lt.	A	3'x2'	3'0"	1-12" & 1-15"	3'	—	280	7	2-2A
10	8+39.0	34.0' Lt.	A	3'x2'	3'0"	1-15" & 1-18"	3'	—	280	7	2-3A
10	7+69.0	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	4	1-1D
10	10+18.0	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	4	3-1D
10	11+15.9	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	4	4-1D
10	11+96.5	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	4	5-1D
10	12+37.5	19.5' Rt.	D	2'x2'	2'0"	1-12"	—	2'	190	4	6-1D
10	13+07.5	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	4	7-1D
10	13+29.0	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	4	8-1D
10	13+91.0	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	3	9-1D
11	14+81.2	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	3	10-1D
11	16+20.7	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	5	11-1D
11	17+84.4	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	3	12-1D
11	19+28.7	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	4	13-1D
11	19+89.7	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	3	14-1D
11	20+64.3	19.5' Rt.	D	2'x2'	1'9"	1-12"	—	2'	190	4	15-1D
11	14+90.0	38.5' Rt.	D	2'x2'	2'0"	1-12"	—	2'	—	5	C.O.#3 ~ Used salvaged grate
							6'	32'	3410	76	

CURB & GUTTER, TYPE A

SHEET	STATION	to	STATION	LOCATION	LIN. FT.	REMARKS
9	3+02.2		3+09.6	Rt.	7.8'	Field Meas.
9	3+24.9		3+62.8	Lt.	36.0'	" "
9	3+51.4		3+58.8	Rt.	7.8'	" "
9	4+53.0		4+60.0	Rt.	24.5'	Includes Gutter Turnout
9	5+59.5		6+03.0	Lt.	42.4'	Field Meas.
9	6+03.2		6+10.7	Rt.	7.5'	" "
9, 10	6+72.0		7+91.2	Lt.	119.6'	" "
9, 10	7+35.0		7+73.0	Rt.	38.0'	" "
10	8+67.0		8+85.1	Lt.	18.8'	" "
10	8+64.0		10+22.2	Rt.	152.1'	" "
10	9+64.1		9+80.4	Lt.	16.9'	" "
10	10+59.4		11+39.8	Lt.	83.5'	" "
10	11+09.8		12+00.5	Rt.	88.5'	" "
10	12+32.5		12+41.5	Rt.	9.0'	" "
10	12+03.5		13+33.0	Rt.	29.5'	" "
10, 11	13+87.0		14+21.8	Rt.	34.8'	" "
11	14+77.1		15+20.0	Rt.	41.7'	" "
11	16+08.0		16+26.2	Rt.	17.7'	" "
11	17+65.9		17+86.4	Lt.	21.1'	" "
11	17+79.8		18+36.0	Rt.	54.6'	" "
11	18+21.9		18+47.9	Lt.	26.7'	" "
11	18+78.6		19+27.3	Lt.	50.1'	" "
11	19+24.0		19+41.7	Rt.	17.2'	" "
11	19+77.2		19+84.7	Lt.	7.7'	" "
11	19+85.6		19+93.8	Rt.	8.0'	" "
11	20+36.3		20+90.3	Lt.	57.5'	Includes Radius on Valley Street
11	20+60.3		20+87.0	Rt.	37.4'	Includes Radius on Valley Street
			TOTAL ~		1056.4 Lin. Ft.	
			Use		1056 Lin. Ft.	

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

		BY	DATE
SURVEYED			
PLOTTED			
TEMPLATE			
AREAS			
AREAS CHECKED			
NO.			

54 48

P-2B

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

Sheet 3 of 4

FINAL PLANS

STATE MO.	JOB NO. 7-X-60B-398		SHEET NO. 2B
DIST. NO. 7	PROJECT NO. M-HES-4711 (701)		ROUTE 60B
	COUNTY NEWTON		

CURB & GUTTER, TYPE B

SHEET	STATION	to	STATION	LOCATION	LIN. FT.	Remarks
10, 11	11+94.2		16+92.4	Lt.	505.2	Field Meas.
11	21+48.0		21+76.0	Lt.	28.0'	" "
11	21+48.0		21+80.0	Rt.	33.6'	" "
			Total		566.8'	
				Use	567 Lin. Ft.	

ADJUSTING MANHOLE

SHEET	STATION	LOCATION	NO.
4	21+05.4	2.2' Rt.	1
4	24+72.8	1.8' Rt.	1
5	29+73	0.5' Rt.	1
5	31+28.5	12.5' Lt.	1
5	31+54.5	17.2' Rt.	1
5	32+60	ON ℄	1
5	33+40.8	ON ℄	1
5	41+47	ON ℄	1
5	42+66.6	ON ℄	1
5	45+69	ON ℄	1
5	49+32.7	ON ℄	1
5	51+61.5	0.5' Lt.	1
5	51+73	0.5' Lt.	1
6	56+08	2' Lt.	1
6	59+83.6	0.4' Lt.	1
6	63+30.2	0.6' Lt.	1
6	66+90	1.0' Rt.	1
6	70+41	1.0' Rt.	1
6	72+93	1.0' Rt.	1
3	8+28.5	℄	1
	TOTAL		20

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

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

5249

Sheet 4 of 4

STATE	JOB NO. 7-X-60B-398	SHEET NO.
MO.	PROJECT NO. M-HES-4711 (701)	2B
DIST. NO. 7	COUNTY NEWTON	ROUTE 60B

SUMMARY OF QUANTITIES

FINAL PLANS

SIGN	SIZE (INS)	AREA (SQ FT)	QTY	TOTAL AREA (SQ FT)	QTY. RELOC.	TOTAL RELOC. AREA (SQ FT)	DESCRIPTION
				WARNING SIGNS			
WO1-1Lb	48x48	16.0					TURN (SYMBOL LEFT ARROW)
WO1-1Rb	48x48	16.0					TURN (SYMBOL RIGHT ARROW)
WO1-2Lb	48x48	16.0					CURVE (SYMBOL LEFT ARROW)
WO1-2Rb	48x48	16.0					CURVE (SYMBOL RIGHT ARROW)
WO1-3Lb	48x48	16.0	1	16'			REVERSE TURN (SYMBOL LEFT ARROW)
WO1-3Rb	48x48	16.0	1	16'			REVERSE TURN (SYMBOL RIGHT ARROW)
WO1-4Lb	48x48	16.0					REVERSE CURVE (SYMBOL LEFT ARROW)
WO1-4Rb	48x48	16.0					REVERSE CURVE (SYMBOL RIGHT ARROW)
WO1-6	48x24	8.0					HORIZONTAL ARROW (SYMBOL)
WO1-6a	72x36	18.0					HORIZONTAL ARROW (SYMBOL)
WO1-7	48x24	8.0					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72x36	18.0					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-8	18x24	3.0					CHEVRON (SYMBOL)
WO3-1b	48x48	16.0					STOP AHEAD
WO3-2b	48x48	16.0					YIELD AHEAD
WO3-3b	48x48	16.0					SIGNAL AHEAD (SYMBOL)
WO3-4b	48x48	16.0					BE PREPARED TO STOP
WO4-1Lb	48x48	16.0					MERGE (SYMBOL FROM LEFT)
WO4-1Rb	48x48	16.0					MERGE (SYMBOL FROM RIGHT)
WO5-1a	48x48	16.0	1	16'			ROAD NARROWS
WO5-3a	48x48	16.0					ONE LANE BRIDGE
WO6-1b	48x48	16.0					DIVIDED HIGHWAY
WO6-2b	48x48	16.0					DIVIDED HIGHWAY ENDS
WO6-3b	48x48	16.0					TWO WAY TRAFFIC (SYMBOL)
WO6-3x	24x18	3.0					TWO WAY TRAFFIC (PLAQUE)
WO8-1b	48x48	16.0					BUMP
WO8-2b	48x48	16.0					DIP
WO8-3	48x48	16.0					PAVEMENT ENDS
WO8-4b	48x48	16.0					SOFT SHOULDER
WO8-5b	48x48	16.0					SLIPPERY WHEN WET (SYMBOL)
WO8-6b	48x48	16.0					TRUCK CROSSING
WO8-6c	48x48	16.0					TRUCK ENT. (Includes 1000 FT./1500 FT. plate W025-1a)
WO8-7a	36x36	9.0					LOOSE GRAVEL
WO8-9a	48x48	16.0					LOW SHOULDER
WO9-1R	48x48	16.0					RIGHT LANE ENDS (Includes LEFT/CENTER plate WO25-3c)
WO9-2Ra	48x48	16.0					LANE ENDS MERGE RIGHT (Includes LEFT plate WO25-3b)
W10-1a	42 Dia.	9.6					RAILROAD CROSSING
WO12-1	24x24	4.0					DOUBLE DOWN ARROW (SYMBOL)
WO12-2a	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)
WO13-1a	24x24	4.0	2	8'			ADVISORY SPEED (PLAQUE)
WO20-1	48x48	16.0	4	64'	1	16'	ROAD CONST. AHEAD (Incl. RAMP/BRIDGE plate WO25-6)
WO20-2	48x48	16.0	2	32'			DETOUR AHEAD (Includes 500 FT./1000 FT. plate WO25-1b)
WO20-3	48x48	16.0					RD. CLOSED AHEAD (Incl. 500 FT./1000 FT. plate WO25-1c)
WO20-4a	48x48	16.0	2	32'			ONE LN. RD. AHD (Incl. 1000 FT./1500 FT. plate WO25-1a)
WO20-5	48x48	16.0					RT. LN. CLOSED AHEAD (Incl. LEFT/CENTER plate WO25-3d)
WO20-6a	48x48	16.0					RIGHT LANE CLOSED (Incl. LEFT/CENTER plate WO25-3c)
WO20-7a	48x48	16.0	2	32'			FLAGMAN AHEAD (Incl. 500 FT./1000 FT. plate WO25-1b)
WO20-9c	48x48	16.0	8	128'			OPEN TRENCH
WO21-2a	48x48	16.0	2	32'			FRESH OIL
WO21-5b	48x48	16.0	3	48'			SHOULDER WORK AHEAD
WO21-7	36x36	9.0					SAND BLASTING
WO22-1	48x48	16.0					BLASTING ZONE 1000 FT.
WO22-2	42x36	10.5					TURN OFF 2-WAY RADIO
WO22-3	42x36	10.5					END BLASTING ZONE
WO25-1a	26x9						1000 FT./1500 FT. Plate
WO25-1b	38x9						500 FT./1000 FT. Plate
WO25-1c	34x9						500 FT./1000 FT. Plate
WO25-3b	30x9						LEFT Plate
WO25-3c	33x9						LEFT/CENTER Plate
WO25-3d	22x9						LEFT/CENTER Plate
WO25-5	30x12	2.5					1/2 MILE/1 MILE (PLAQUE)
W025-6	28x9						RAMP/BRIDGE Plate

SIGN	SIZE (INS)	AREA (SQ FT)	QTY	TOTAL AREA (SQ FT)	QTY. RELOC.	TOTAL RELOC. AREA (SQ FT)	DESCRIPTION
				REGULATORY SIGNS			
R1-1b	48x48	13.25					STOP
R1-2a	48x48x48	6.93					YIELD
R1-2x	36x36	9.0					TO ONCOMING TRAFFIC (PLAQUE)
R1-3	20x9	1.25					4-WAY (PLAQUE)
RT-5	20x9	1.25					3-WAY (PLAQUE)
R2-1b	36x48	12.0	4	48'	1	12	SPEED LIMIT XX
R2-5	36x48	12.0	4	48'	1	12	REDUCED SPEED AHEAD
R3-1b	36x48	12.0					NO RIGHT TURN
R3-2b	36x48	12.0					NO LEFT TURN
R3-3a	36x36	9.0					NO TURNS
R3-4b	36x48	12.0					NO U-TURN
R3-7L	30x30	6.25					LEFT LANE MUST TURN LEFT
R3-7R	30x30	6.25					RIGHT LANE MUST TURN RIGHT
R4-1b	36x48	12.0					DO NOT PASS
R4-2b	36x48	12.0					PASS WITH CARE
R4-7Lb	36x48	12.0					KEEP LEFT (HORIZONTAL ARROW)
R4-7Rb	36x48	12.0					KEEP RIGHT (HORIZONTAL ARROW)
R4-17L	36x36	9.0					KEEP LEFT
R4-17R	36x36	9.0	1	9'			KEEP RIGHT
R5-1	30x30	6.25					DO NOT ENTER
R5-1a	36x24	5.0					WRONG WAY
R6-1La	48x18	6.0					ONE WAY ARROW (LEFT)
R6-1Ra	48x18	6.0					ONE WAY ARROW (RIGHT)
R6-2La	24x30	5.0					ONE WAY (LEFT)
R6-2Ra	24x30	5.0					ONE WAY (RIGHT)
R11-2	48x30	10.0	2	20'			ROAD CLOSED
R11-3	60x30	12.5					ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60x30	12.5	1	12.5'			ROAD CLOSED TO THRU TRAFFIC
				GUIDE SIGNS			
GO20-1	60x36	15.0					ROAD CONSTRUCTION NEXT XX MILES
GO20-2	60x24	10.0	2	20'	1	10	END CONSTRUCTION
MO4-8a	30x15	3.13					DETOUR (PLAQUE)
MO4-9L	48x36	12.0					DETOUR (LEFT ARROW)
MO4-9R	48x36	12.0					DETOUR (RIGHT ARROW)
MO4-10L	48x18	6.0					DETOUR (ARROW LEFT)
MO4-10R	48x18	6.0					DETOUR (ARROW RIGHT)
MO4-11	24x18	3.0					DETOUR ENDS
M5-1L	21x15	2.19					ADVANCE LEFT TURN ARROW
M5-1R	21x15	2.19					ADVANCE RIGHT TURN ARROW
				MISCELLANEOUS SIGNS			
616-10.05 CONSTRUCTION SIGNS TOTAL				581.5' Use ~ 582 sq.ft.			
616-10.10 RELOCATED SIGNS TOTAL						50 sq.ft.	

ITEM NO.	SIZE	TOTAL QTY.	DESCRIPTION
616-10.20	36x18	90	DRUM
616-10.35	8x24		TYPE I BARRICADE (One Rails)
616-10.36	8x24		TYPE II BARRICADE (Two Rails)
616-10.40	36x72	2	FLASHING ARROW PANEL
616-10.45	18X18		TYPE I OBJECT MARKER
616-10.46	6x12		TYPE II OBJECT MARKER
616-10.47	8x24	90	TYPE III OBJECT MARKER
616-10.50	8x8		FLASHING ELECTRIC LIGHT
616-10.51	—		WARNING LIGHT TYPE A
616-10.52	—		WARNING LIGHT TYPE B
616-10.53	—		WARNING LIGHT TYPE C
616-10.60	—		RAISED PAVEMENT MARKER
612-10.30	72x144	3	MOVABLE BARRICADE (Three Rails)

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

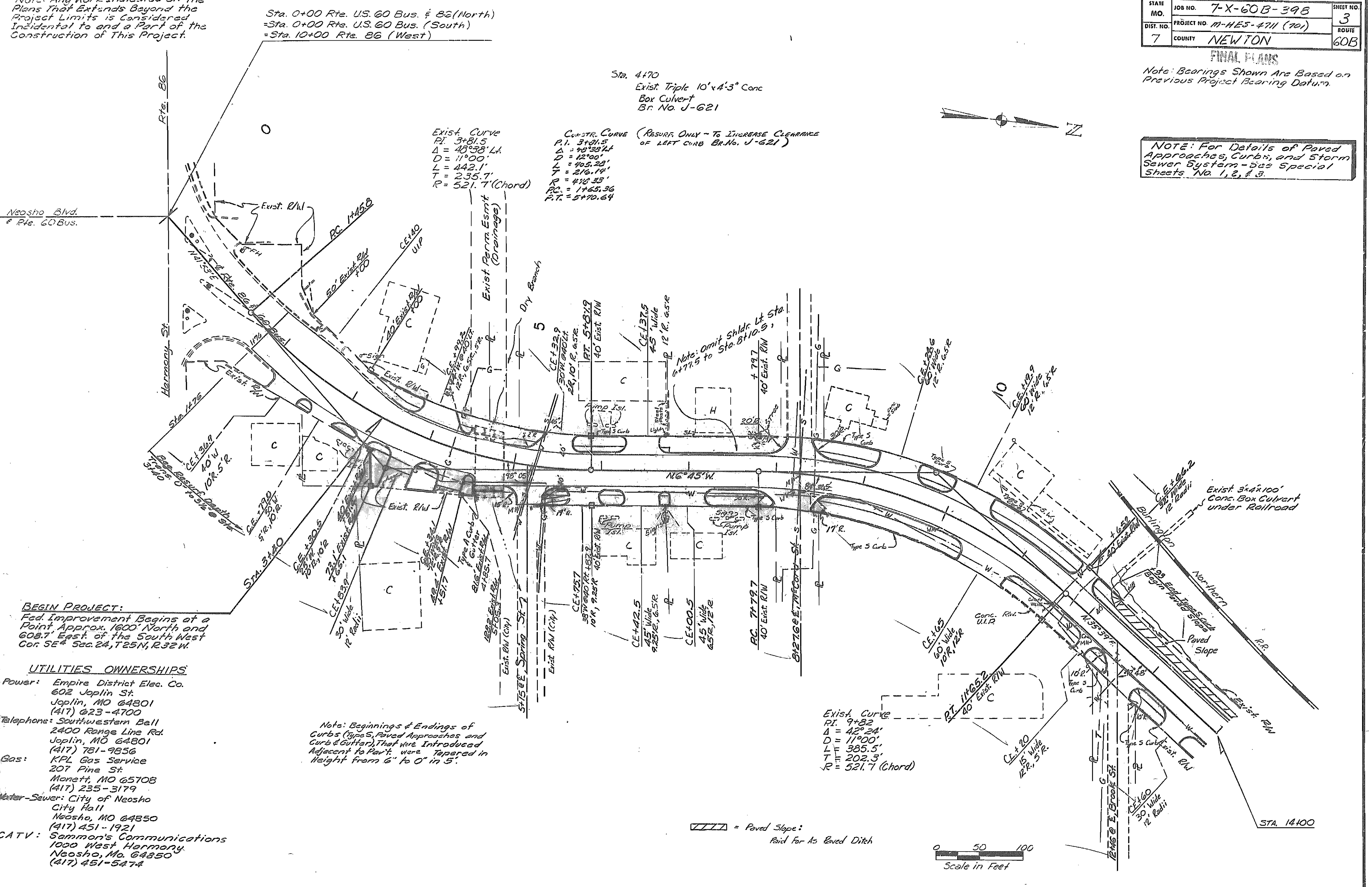
STATE	JOB NO.	SHEET NO.
MO.	7-X-60B-398	3
DIST. NO.	PROJECT NO. M-HES-4711 (701)	ROUTE
7	COUNTY NEWTON	60B

FINAL PLANS

Note: Bearings Shown Are Based on Previous Project Bearing Datum.

NOTE: For Details of Paved Approaches, Curbs, and Storm Sewer System - See Special Sheets No. 1, 2, & 3.

Note: Any Work Indicated on the Plans That Extends Beyond the Project Limits is Considered Incidental to and a Part of the Construction of This Project.



BEGIN PROJECT:
Fed. Improvement Begins at a Point Approx. 1600' North and 608.7' East of the South West Cor. SE¼ Sec. 24, T25N, R32W.

UTILITIES OWNERSHIPS

Power: Empire District Elec. Co.
602 Joplin St.
Joplin, MO 64801
(417) 623-4700

Telephone: Southwestern Bell
2400 Range Line Rd.
Joplin, MO 64801
(417) 781-9856

Gas: KPL Gas Service
207 Pine St.
Monett, MO 65708
(417) 235-3179

Water-Sewer: City of Neosho
City Hall
Neosho, MO 64850
(417) 451-1921

CATV: Sammon's Communications
1000 West Harmony
Neosho, Mo. 64850
(417) 451-5474

Note: Beginnings & Endings of Curbs (Type S, Paved Approaches and Curb & Gutter), That were Introduced Adjacent to Pav't. were Tapered in Height from 6" to 0" in 5'.

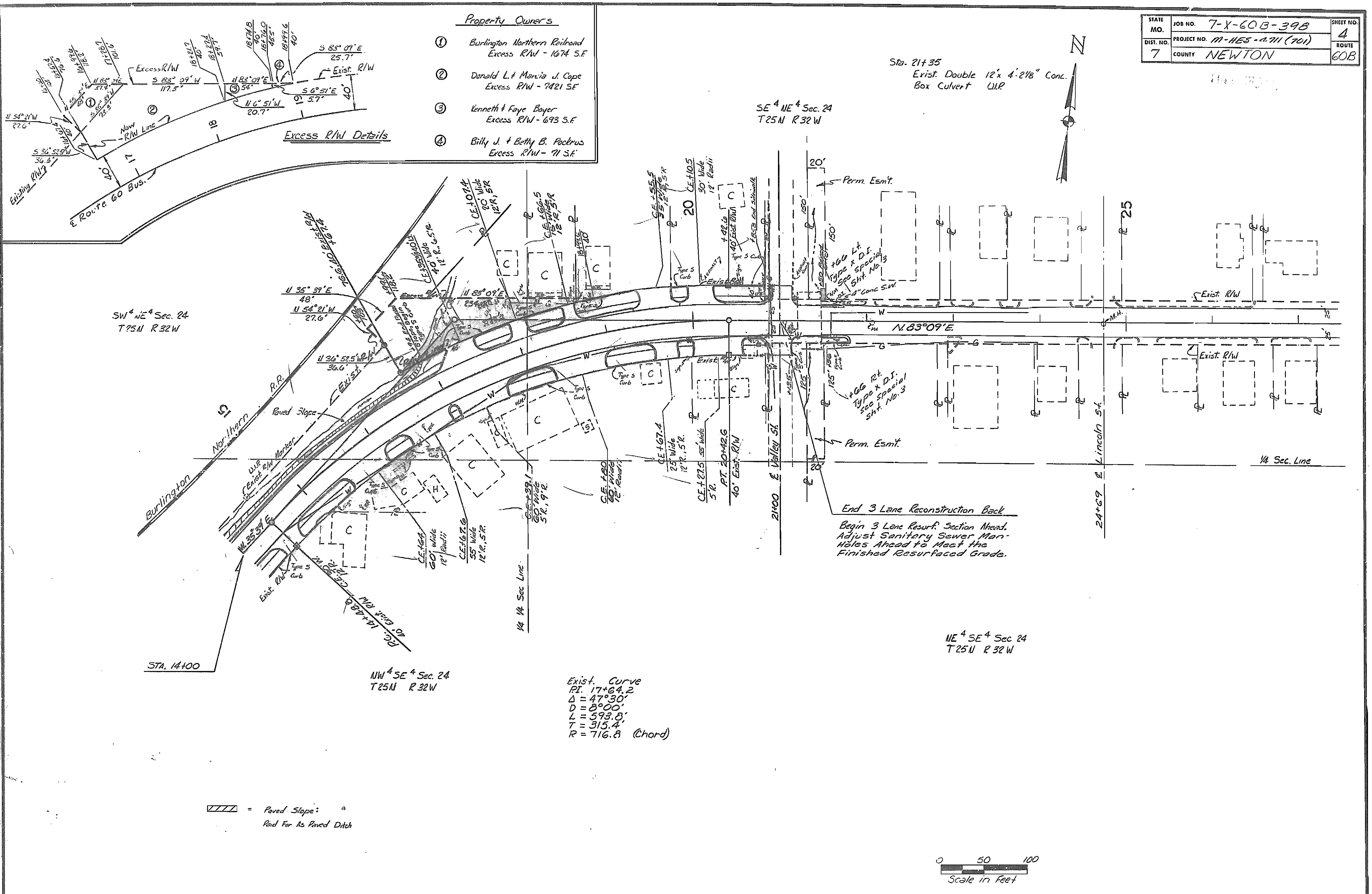
▨ = Paved Slope: Paid For As Paved Ditch

0 50 100
Scale in Feet

STATE	JOB NO.	SHEET NO.
MO.	7-X-60B-398	4
DIST. NO.	PROJECT NO. M-HES-2711 (701)	ROUTE
7	COUNTY NEWTON	60B

Property Owners

①	Burlington Northern Railroad Excess R/W - 1674 S.F.
②	Donald L. & Marcia J. Cope Excess R/W - 7421 S.F.
③	Kenneth & Faye Boyer Excess R/W - 693 S.F.
④	Billy J. & Betty B. Pockrus Excess R/W - 71 S.F.



End 3 Lane Reconstruction Back

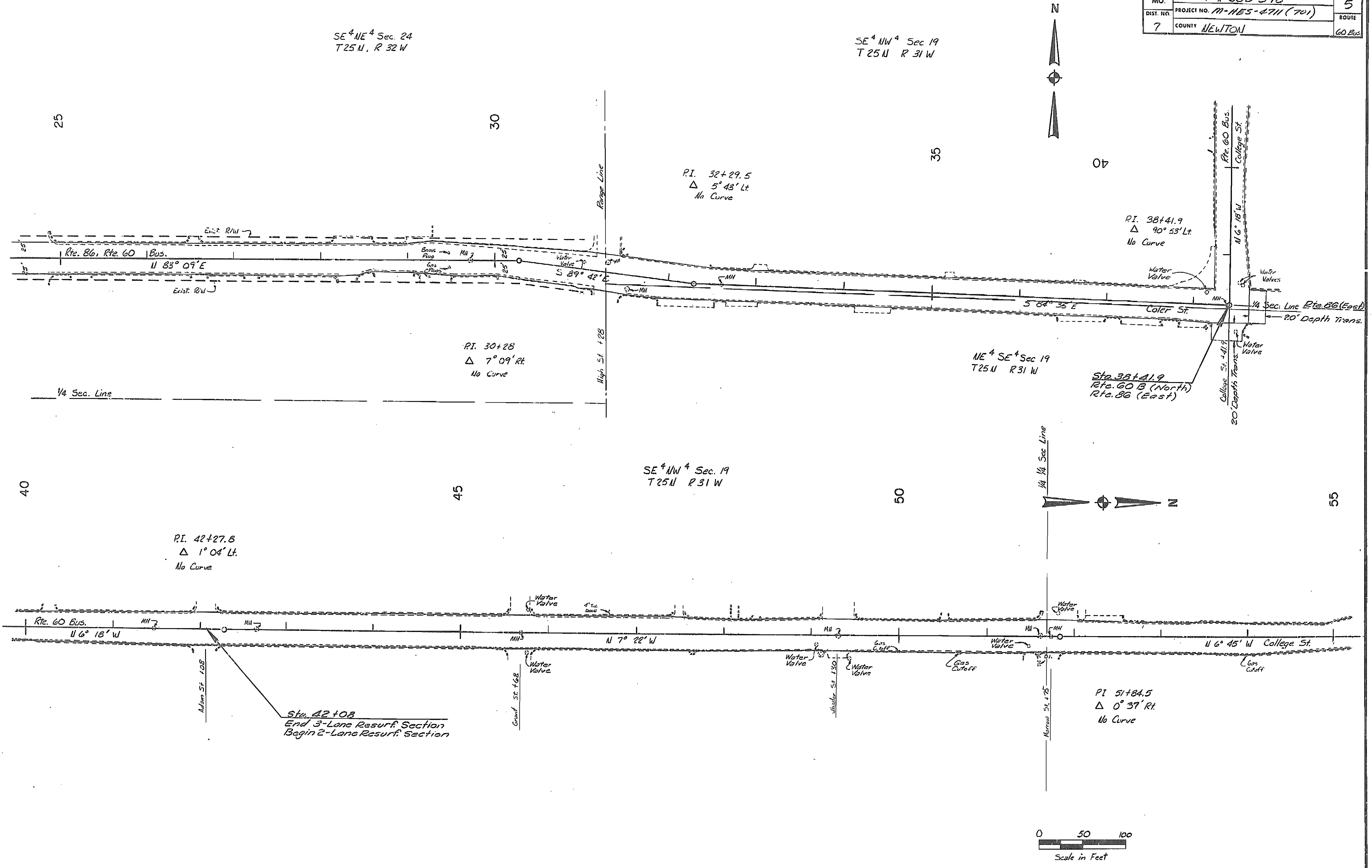
Begin 3 Lane Resurf. Section Ahead. Adjust Sanitary Sewer Manholes Ahead to Meet the Finished Resurfaced Grade.

Exist. Curve
P.I. 17+64.2
Δ = 47°30'
D = 8°00'
L = 593.8'
T = 315.4'
R = 716.8 (Chord)

▨ = Paved Slope:
Paid For As Paved Ditch

FINAL SURVEY
NOTE BOOK
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

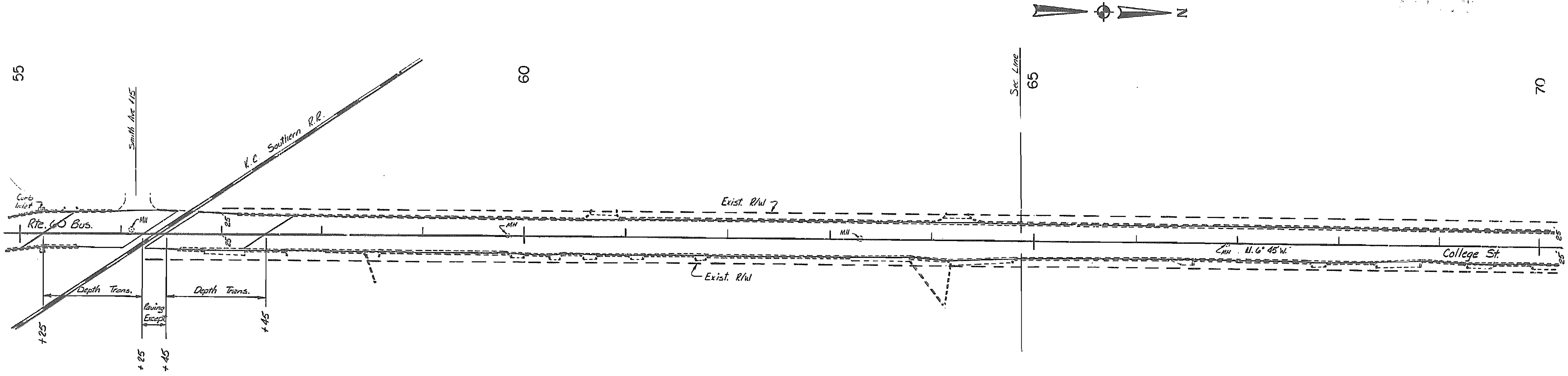
STATE	JOB NO.	SHEET NO.
MO.	7-X-60B-398	5
DIST. NO.	PROJECT NO. M-HES-4711 (701)	ROUTE
7	COUNTY NEWTON	60 Bus.

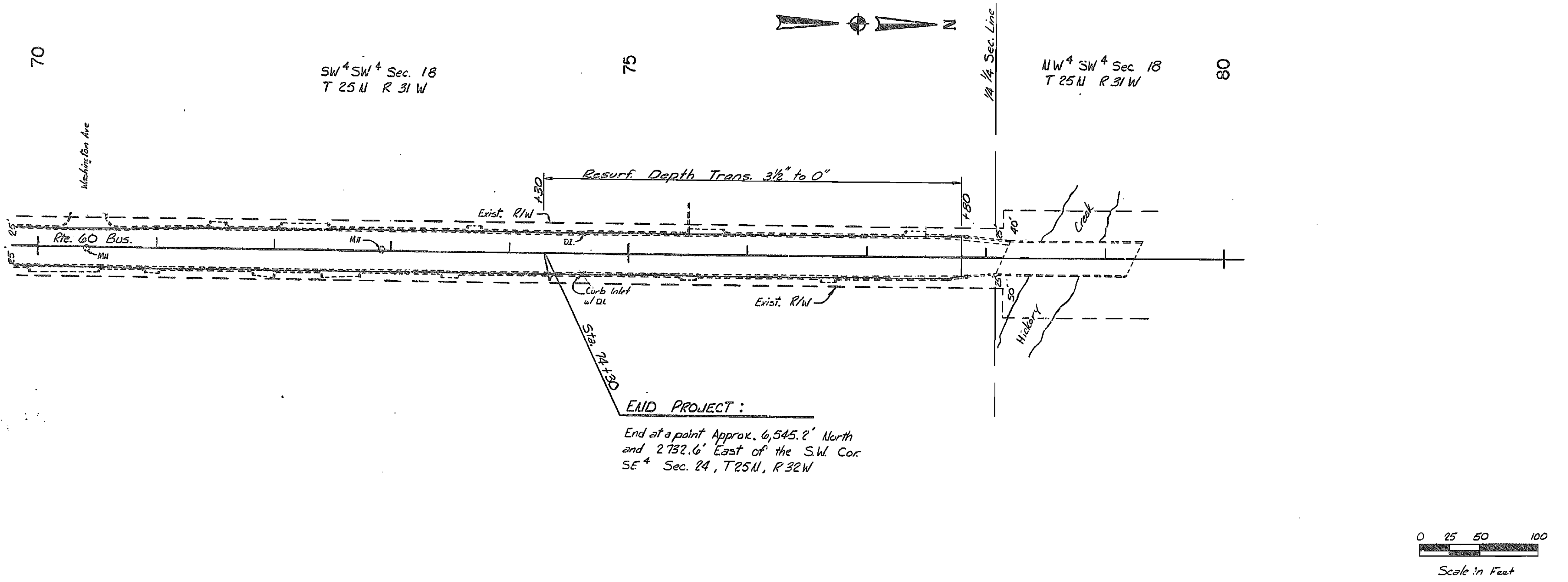


FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

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

STATE MO.	JOB NO. 7-X-60B-398	SHEET NO. 6
DIST. NO. 7	PROJECT NO. M-HES-4711 (701)	ROUTE 60 Bus.
	COUNTY NEWTON	



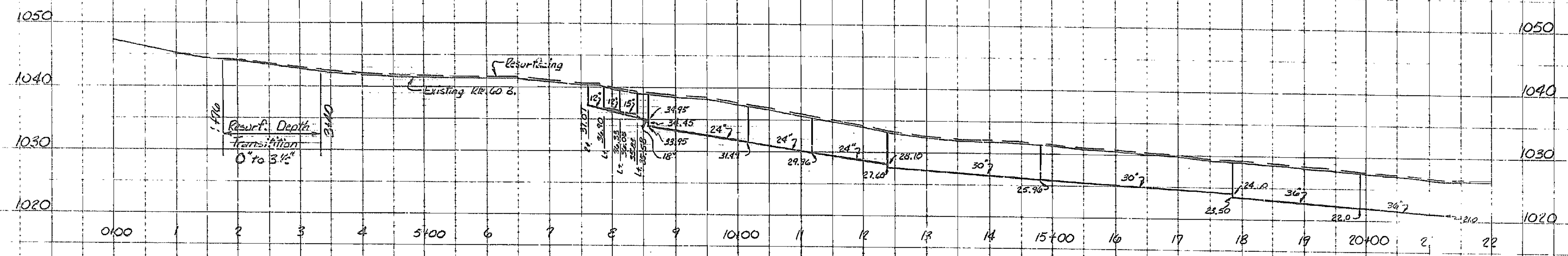


END PROJECT:

End at a point Approx. 6,545.2' North and 2732.6' East of the S.W. Cor. SE 1/4 Sec. 24, T25N, R32W

MISSOURI 7-X-60B-398 7
7 NEWTON 60B

FINAL PLANS

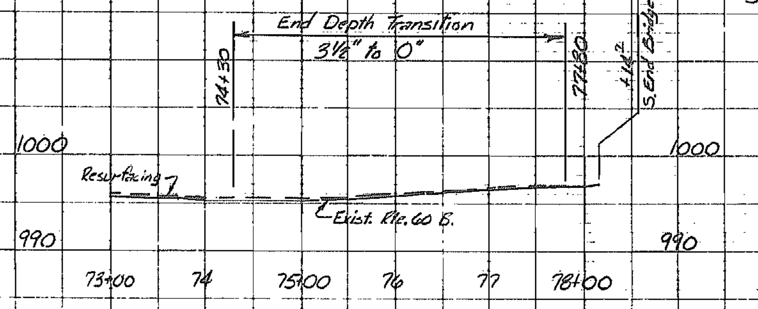


Profile Rte. 60 Bus.

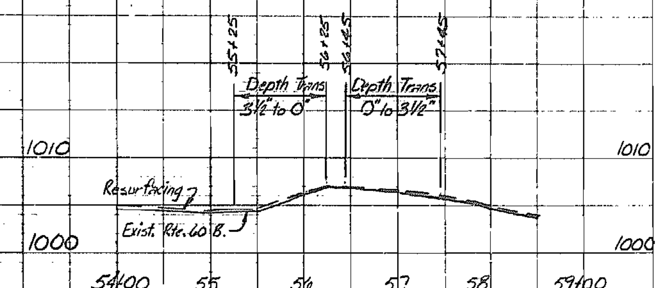
BENCHMARKS - USGS DATUM

BM#1	X-on S.E. Cor. Conc. Wall to Empire Sub-Station. 40' Lt. of Sta. 0+37 Elev. 1047.11	BM#10	X-ctr. of Circular Sidewalk SW Cor. Rte. 86 and College St. Rt. Sta. 38+20 Elev. 1013.83
BM#2	☐ on SW Cor. of West Hdwll. of Triple Conc. Box Culv. 25' Lt. of Sta. 4+53² Elev. 1042.89	BM#11	X-on Top of Post to Conc. Fence 27' Rt. Sta. 40+60 Elev. 1020.46
BM#3A	X-on NW Cor. Conc. Pillar 41' Rt. Sta. 12+12 Elev. 1036.36	BM#12	☐ on East End of Conc. Curb Radius Grant St. 25 ¹' Rt. Sta. 45+54 Elev. 1010.68
		BM#13	X-on N. End of old Pump Island 50' North of Neals Restorant 44⁵ Rt. Sta. 50+44⁵ Elev. 1006.91
BM#5	X-on SE Cor. of Sidewalk to old Restaurant Bldg. 50⁶' Lt. Sta. 18+54 Elev. 1029.03	BM#14	X-on NE Cor. of South Wing Wall of R-R Bridge 115' Lt. Sta. 58+26 Elev. 1008.72
BM#6	☐ on SW Cor. of S. Hdwll. Double Box Conc. Culv. 24¹' Rt. Sta. 21+21 Elev. 1027.38	BM#15	X-ctr. of South End of old Pump Island of abandoned service station 46' Rt. Sta. 65+86 Elev. 1000.53
BM#7	X-on SE Cor. of Conc. Porch to Frame Office Bldg. 26' Rt. Sta. 30+00 Elev. 1031.88	BM#16	X-on ctr. of W. End of Hdwll. of Conc. Box Culv. 27⁴' Lt. Sta. 66+25⁶ Elev. 996.59
BM#8	X-on NE Cor. of Conc. Retaining Wall to Dairy Queen. 27' Rt. Sta. 32+55 Elev. 1028.41	BM#17	X on E. End S. Hdwll. of Double Box Culv. under Washington Street 29⁴' Lt. Sta. 70+28 Elev. 998.20
BM#9	X on North End of Conc. Ret. Wall to Parking Lot of Fastrip Shopping Center 29' Rt. Sta. 36+41 Elev. 1019.15	BM#18	X-ctr. Top of Handrail Post South End of Bridge over Hickory Creek 16⁵ Rt. Sta. 77+80 Elev. 1000.57

53855



Depth Trans. - End of Project

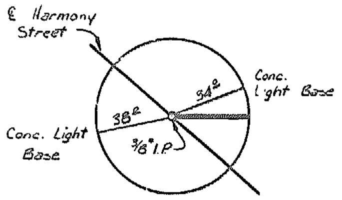


Depth Trans. - Railroad
Sta. 56+36.85

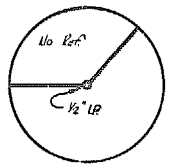
Profile Rte. 60 Bus.

STATE MO.	JOB NO. 7-X-60B-398	SHEET NO. 8
DIST. NO. 7	PROJECT NO. M-HES-4711 (701) COUNTY NEWTON	ROUTE 60 BUS

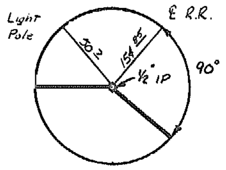
FINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED BY DATE



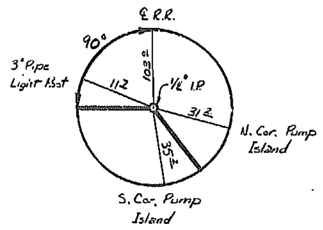
0+00 Rte. 60 Bus. =
10+00 Harmony St.



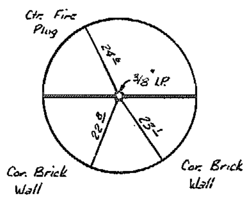
P.I. - Sta. 3+81.5
Δ = 48°-38' Lt.



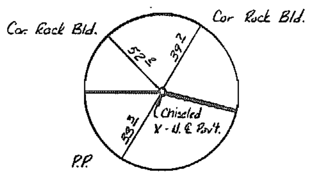
P.I. - Sta. 9+82
Δ = 42°-24' Rt.



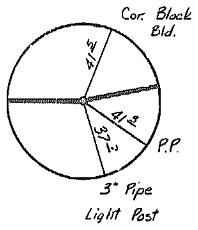
P.I. - Sta. 17+64.2
Δ = 47°-30' Rt.



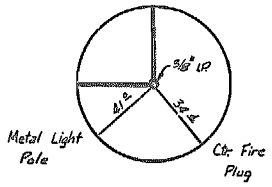
P.O.T. - Sta. 25+00



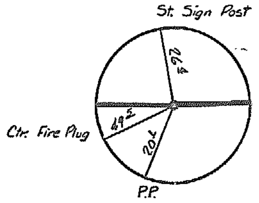
P.I. - Sta. 30+28
Δ = 7°-09' Rt.



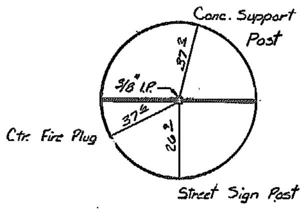
P.I. - Sta. 32+29.5
Δ = 5°-43' Lt.



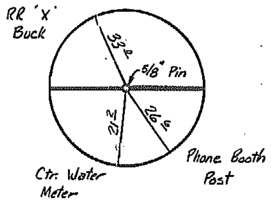
P.I. - Sta. 38+41.9
Δ = 90°-53' Lt.



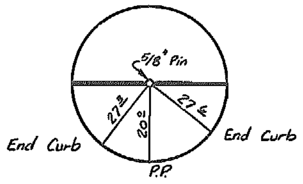
P.I. - Sta. 42+27.8
Δ = 1°-04' Lt.



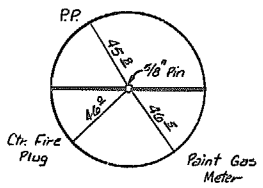
P.I. - Sta. 51+84.5
Δ = 0°-37' Rt.



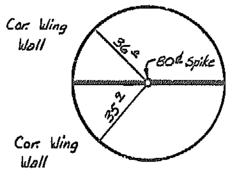
P.O.T. - Sta. 57+29.5



P.O.T. - Sta. 64+00



P.O.T. - Sta. 71+00



P.O.T. - Sta. 78+14.7

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

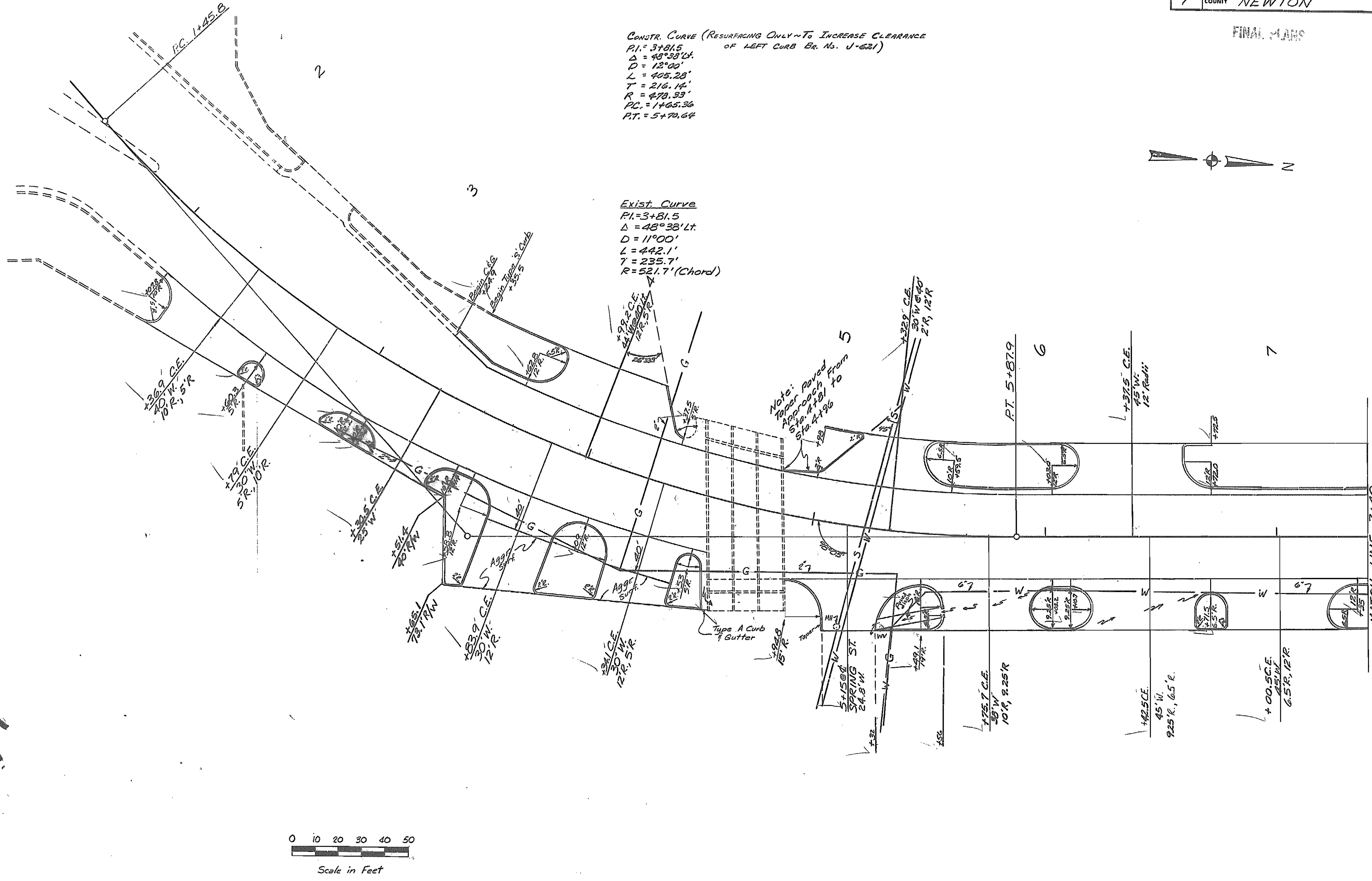
REFERENCE POINTS

STATE MO.	JOB NO. 7-X-60B-398	SHEET NO. 9
DIST. NO. 7	PROJECT NO. M-HES-4711 (701)	
	COUNTY NEWTON	ROUTE 60B

FINAL PLANS

CONSTR. CURVE (RESURFACING ONLY ~ TO INCREASE CLEARANCE OF LEFT CURB BR. NO. J-621)
P.I. = 3+81.5
Δ = 48°38' Lt.
D = 12°00'
L = 405.28'
T = 216.14'
R = 478.33'
P.C. = 1+65.36
P.T. = 5+70.64

Exist. Curve
P.I. = 3+81.5
Δ = 48°38' Lt.
D = 11°00'
L = 442.1'
T = 235.7'
R = 521.7' (Chord)



0 10 20 30 40 50
Scale in Feet

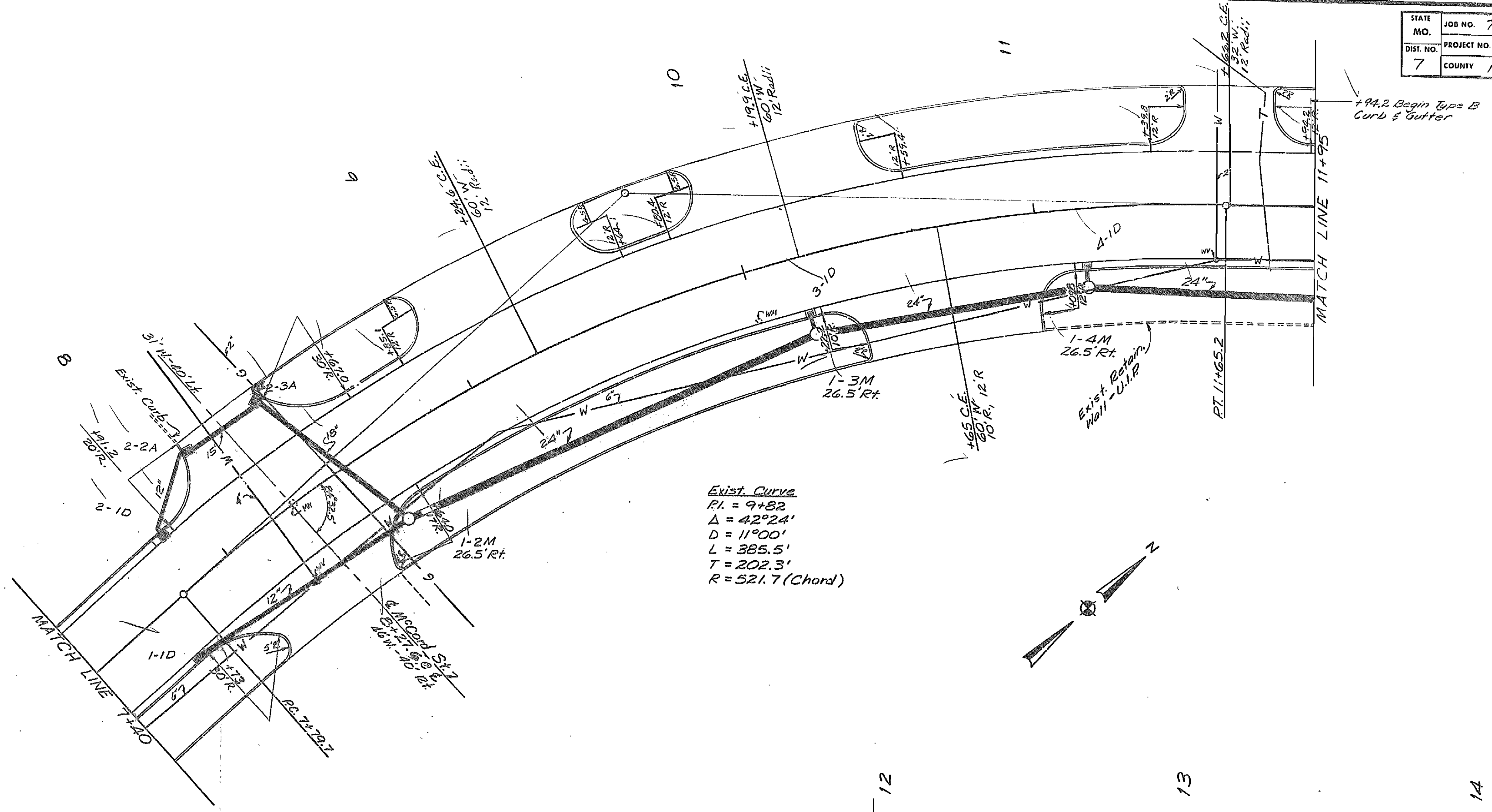
STORM SEWER & ENTRANCE DETAILS

Special Sheet No. 1

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

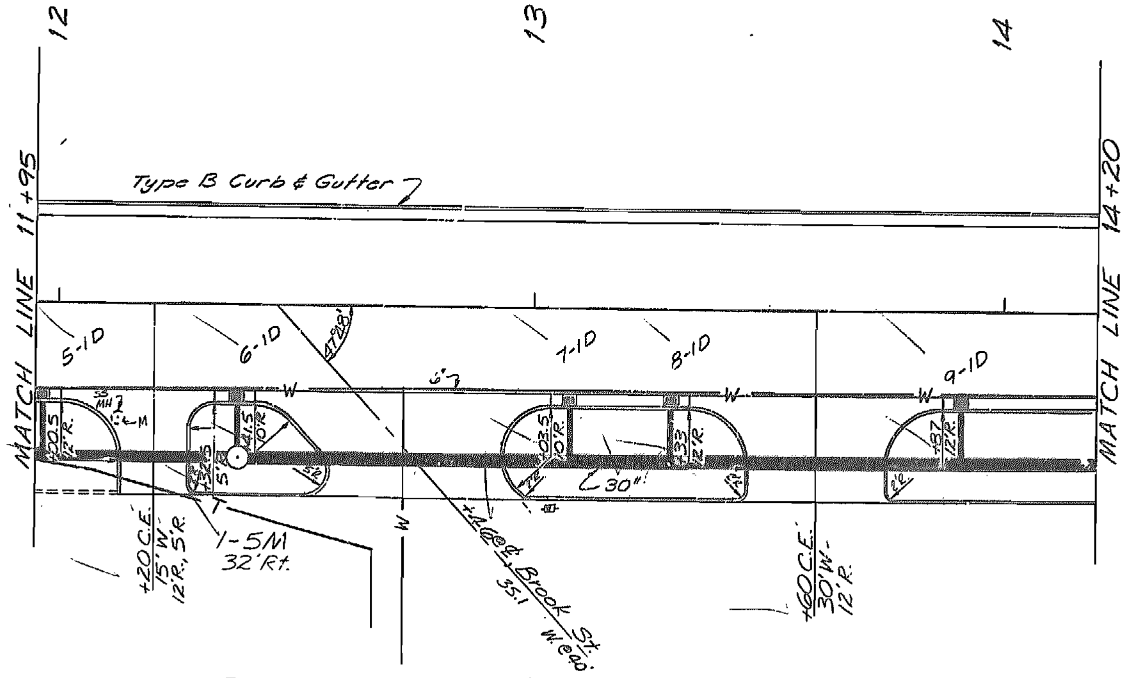
ORIGINAL SURVEY
SURVEYED
PLOTTED
NOTE BOOK
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

STATE	JOB NO.	SHEET NO.
MO.	7-X-60B-398	10
DIST. NO.	PROJECT NO. M-HES-4711 (701)	ROUTE
7	COUNTY NEWTON	60B



Exist. Curve
P.I. = 9+82
Δ = 42°24'
D = 11°00'
L = 385.5'
T = 202.3'
R = 521.7 (Chord)

0 10 20 30 40 50
Scale in Feet



STORM SEWER & ENTRANCE DETAILS

Special Sheet No. 2

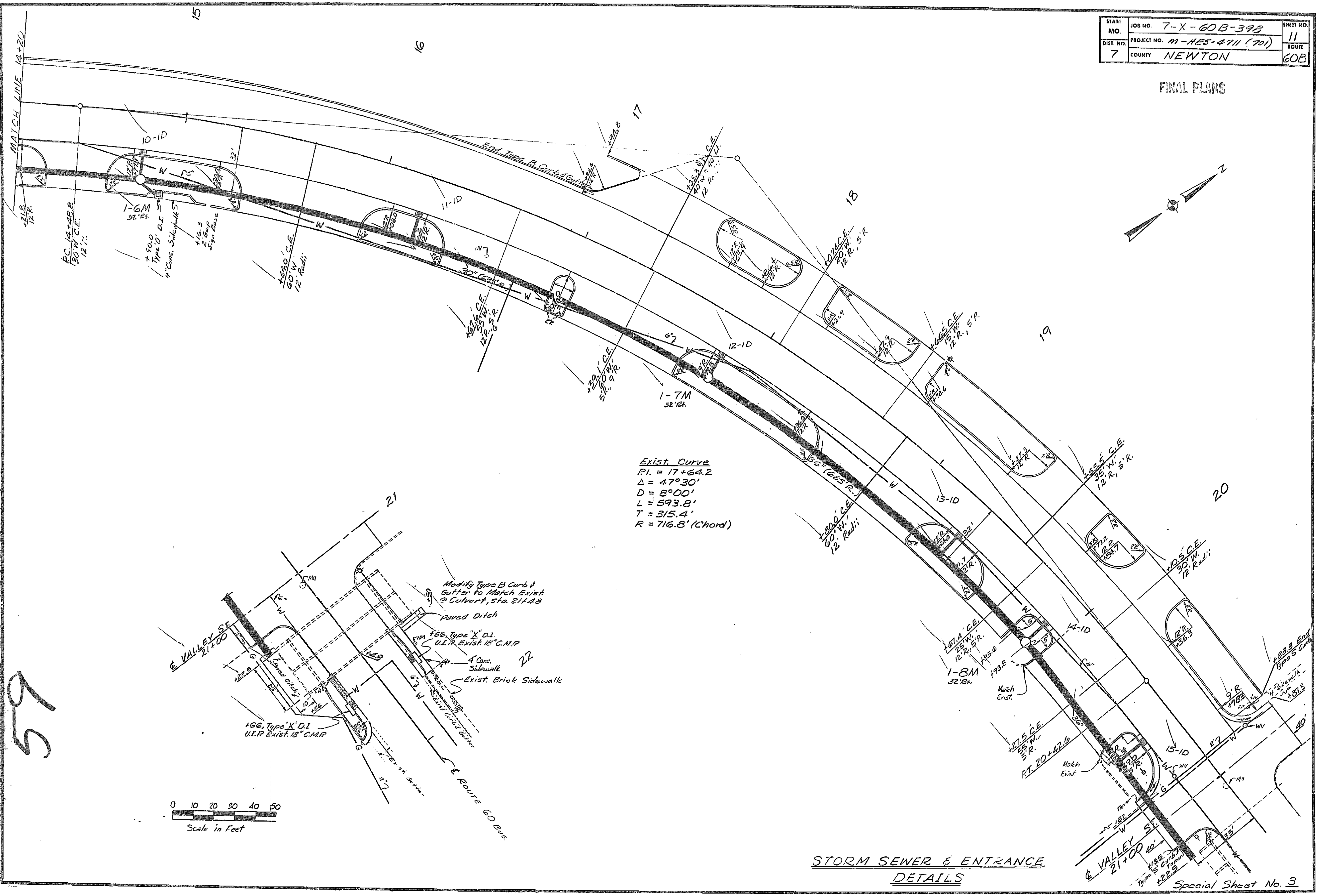
FINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO	AREAS CHECKED		

539
58

STATE	JOB NO.	SHEET NO.
MO.	7-X-60B-398	11
DIST. NO.	PROJECT NO. M-HES-4711 (701)	ROUTE
7	COUNTY NEWTON	60B

FINAL PLANS



Exist. Curve
P.I. = 17+64.2
Δ = 47°30'
D = 8°00'
L = 593.8'
T = 315.4'
R = 716.8' (Chord)

FINAL SURVEY
NOTE BOOK
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

53
59

STORM SEWER & ENTRANCE DETAILS

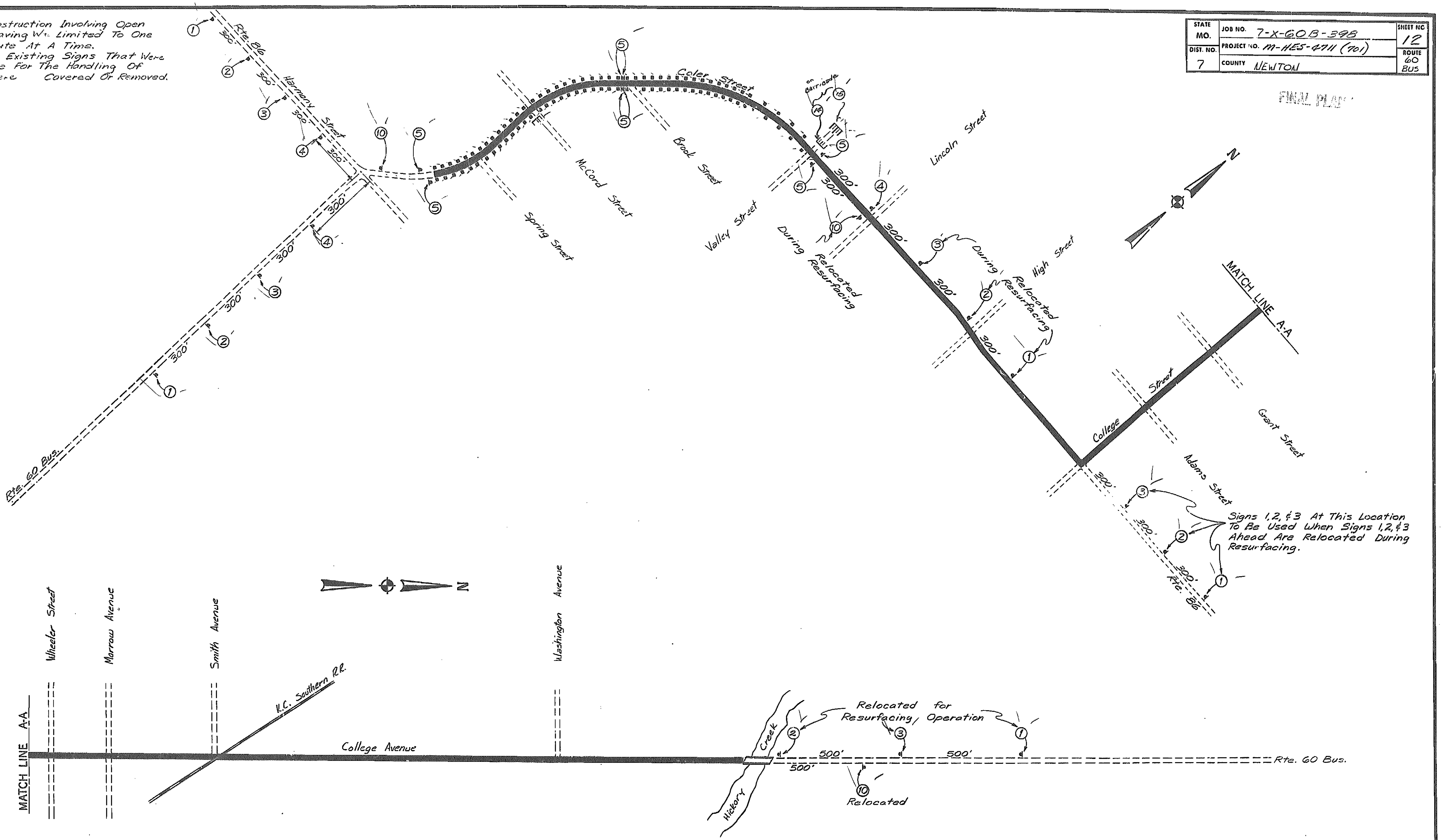
Special Sheet No. 3

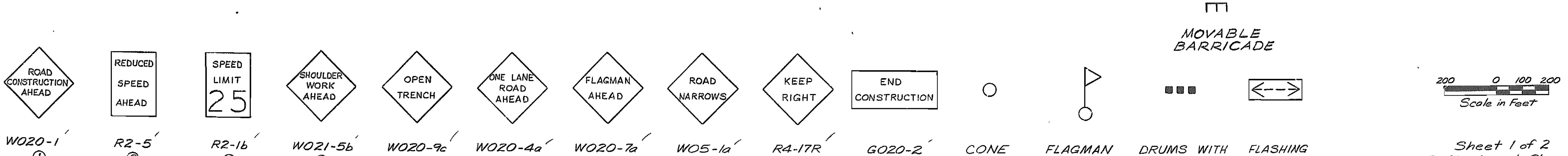
STATE MO.	JOB NO. 7-X-60B-398	SHEET NO 12
DIST. NO. 7	PROJECT NO. M-HES-4711 (701)	ROUTE 60 BUS
	COUNTY NEWTON	

FINAL PLAN

NOTES: Construction Involving Open Trench or Paving Was Limited To One Side Of Route At A Time.

All Existing Signs That Were Not Suitable For The Handling Of Traffic Were Covered Or Removed.



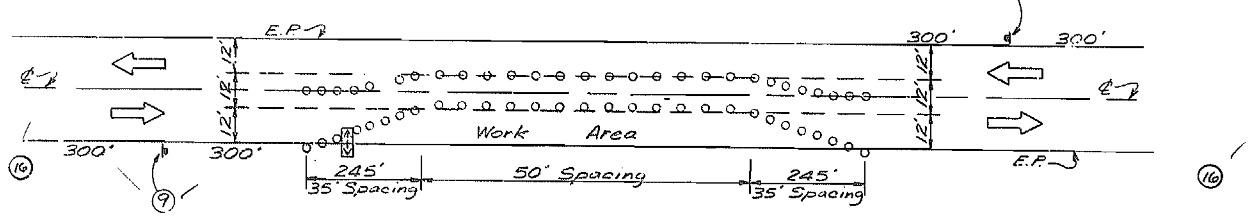


W020-1 ①
R2-5 ②
R2-1b ③
W021-5b ④
W020-9c ⑤
W020-4a ⑥
W020-7a ⑦
W05-1a ⑧
R4-17R ⑨
G020-2 ⑩
CONE
FLAGMAN
DRUMS WITH TYPE III OBJECT MARKERS (35' SPACING)
FLASHING ARROW PANEL

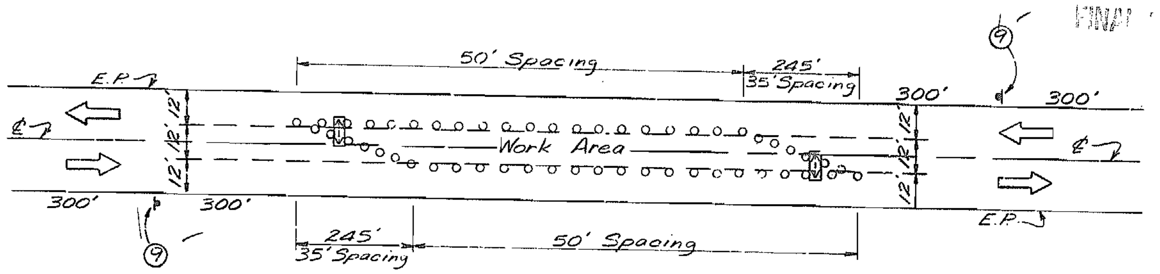
Note: Signs No. 5, 6, 7, 8, & 9 Will be Portable Mounted

Sheet 1 of 2
Traffic Control Plan
Special Sheet No. 4

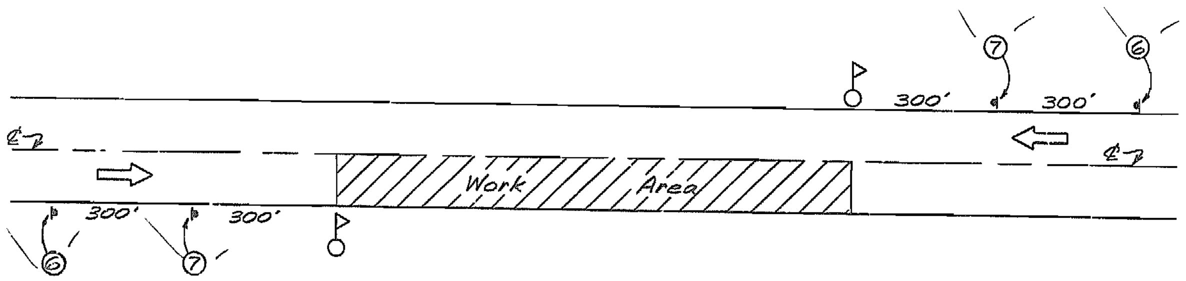
STATE	JOB NO. 7-X-60B-398	SHEET NO.
MO.	PROJECT NO. M-HES-4711 (701)	13
DIST. NO. 7	COUNTY NEWTON	ROUTE 60 Bus.



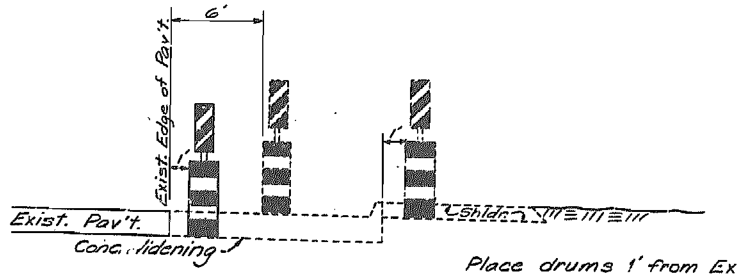
TYPICAL LANE CLOSURE (LT. OR RT.)
For Resurfacing



TYPICAL CENTER LANE CLOSURE
For Resurfacing

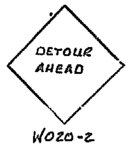


TYPICAL FLAGMAN SEQUENCE
Use as Required

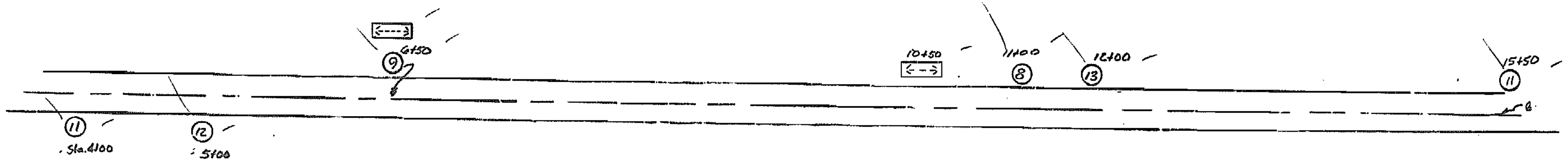


DRUM PLACEMENT

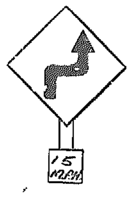
Place drums 1' from Exist. E.P. in trench.
Place drums on New Pav't. edge after approx. 4 hours of curing.
After Conc. Widening cures, place drums 6' into New Pav't.
Relocate to shldr. during shldr. trenching.



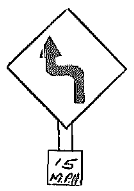
W020-2
⑪



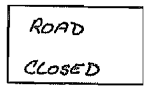
Lane Closure for Pavement Repair
Sta. 4+98



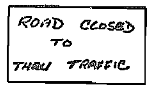
W01-3R6
with
W013-1a
⑫



W01-3L6
with
W013-1a
⑬



R11-2
⑭



R11-4
⑮

W021-2a
⑯

Note: See Sheet 1 of 2
for Signs & Symbols

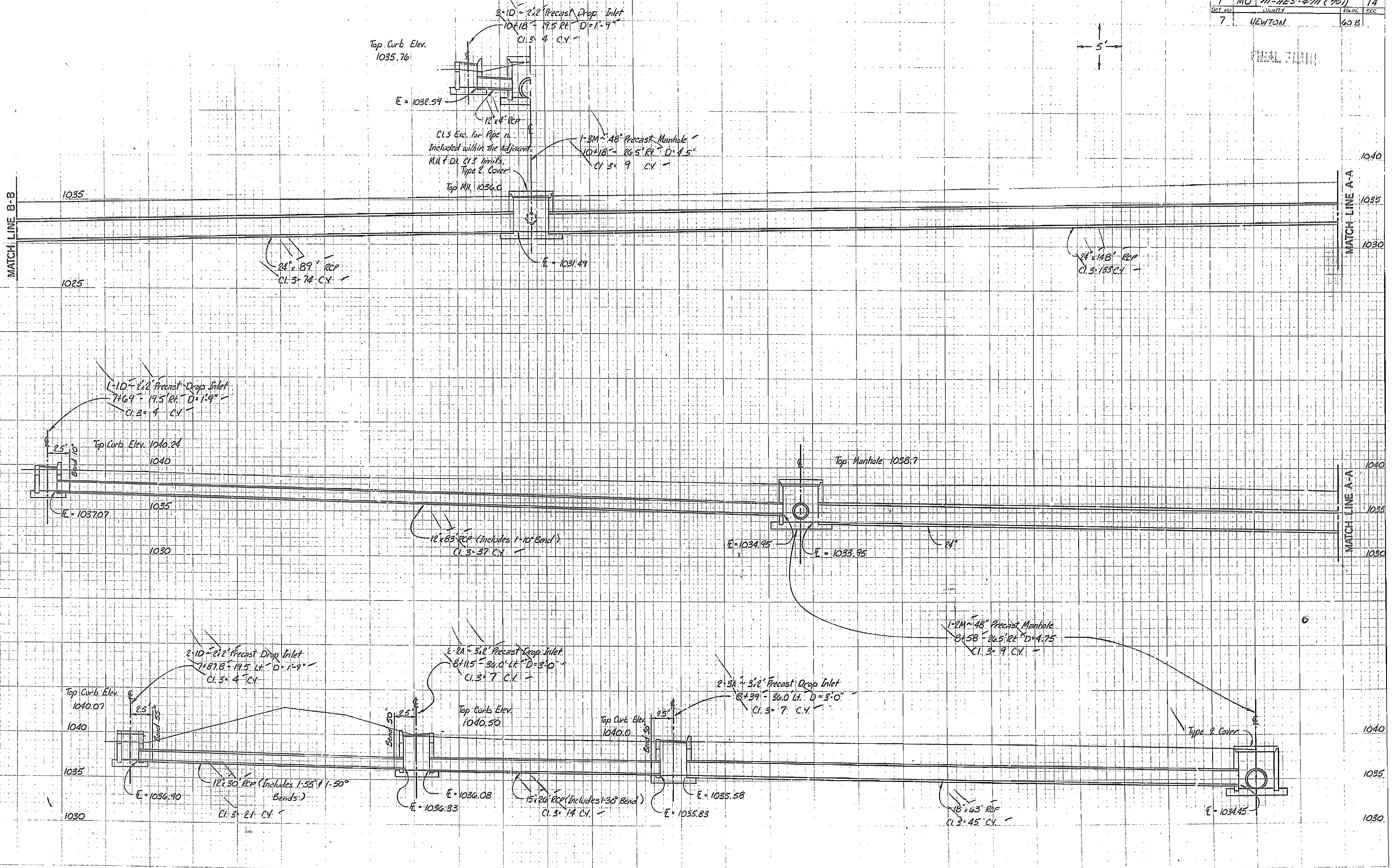
Sheet 2 of 2
Traffic Control Plan
Special Sheet No. 5

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

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

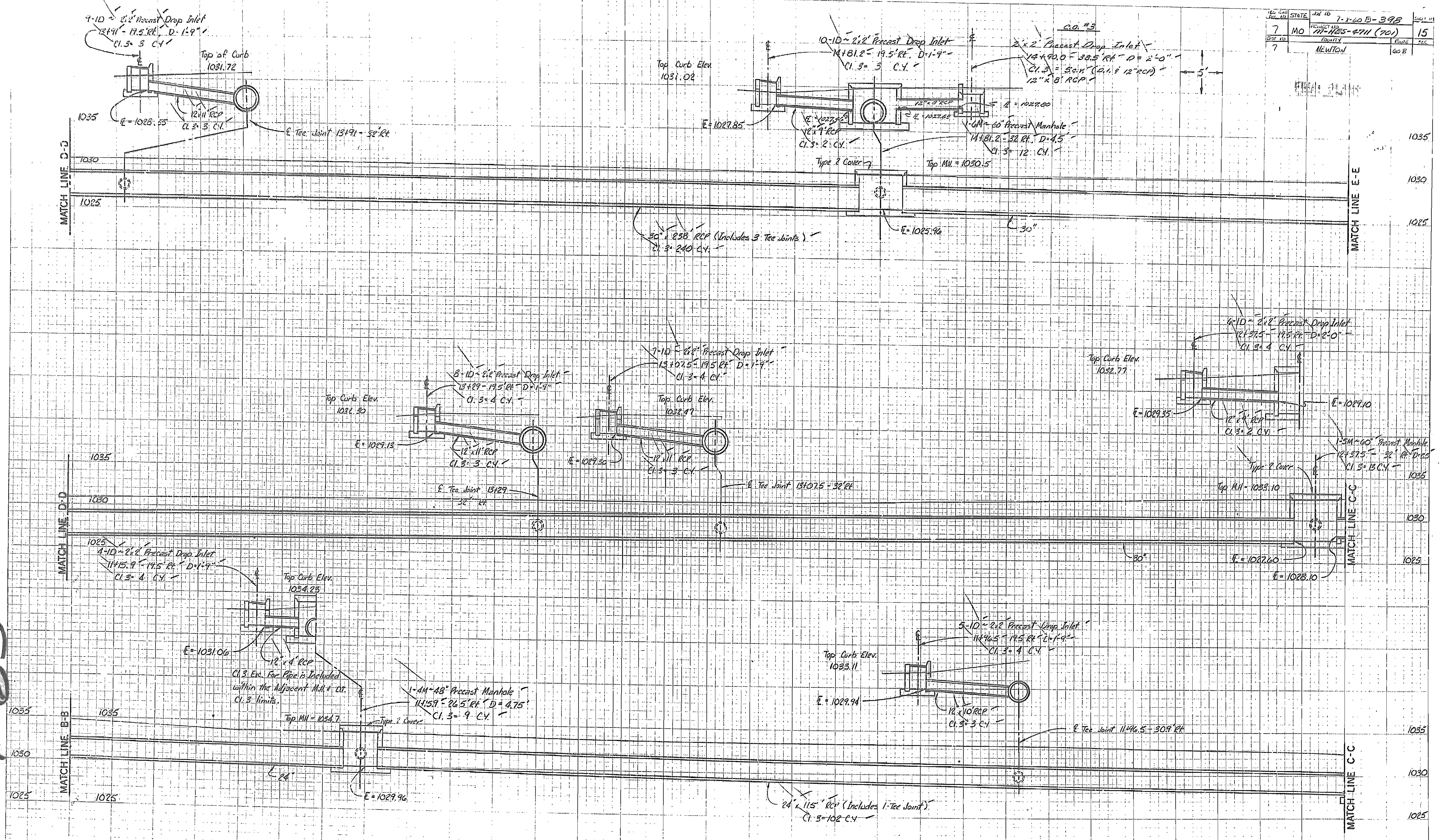
FED ROAD DIV NO	STATE	JOB NO 7-X-60B-398	SHEET
7	MO	PROJECT NO M-HES-4711 (701)	14
DIST NO	COUNTY	ROUTE	SEC
7	NEWTON	60 B	

FINAL PLAN



Storm Sewer System
Sheet 1 of 4

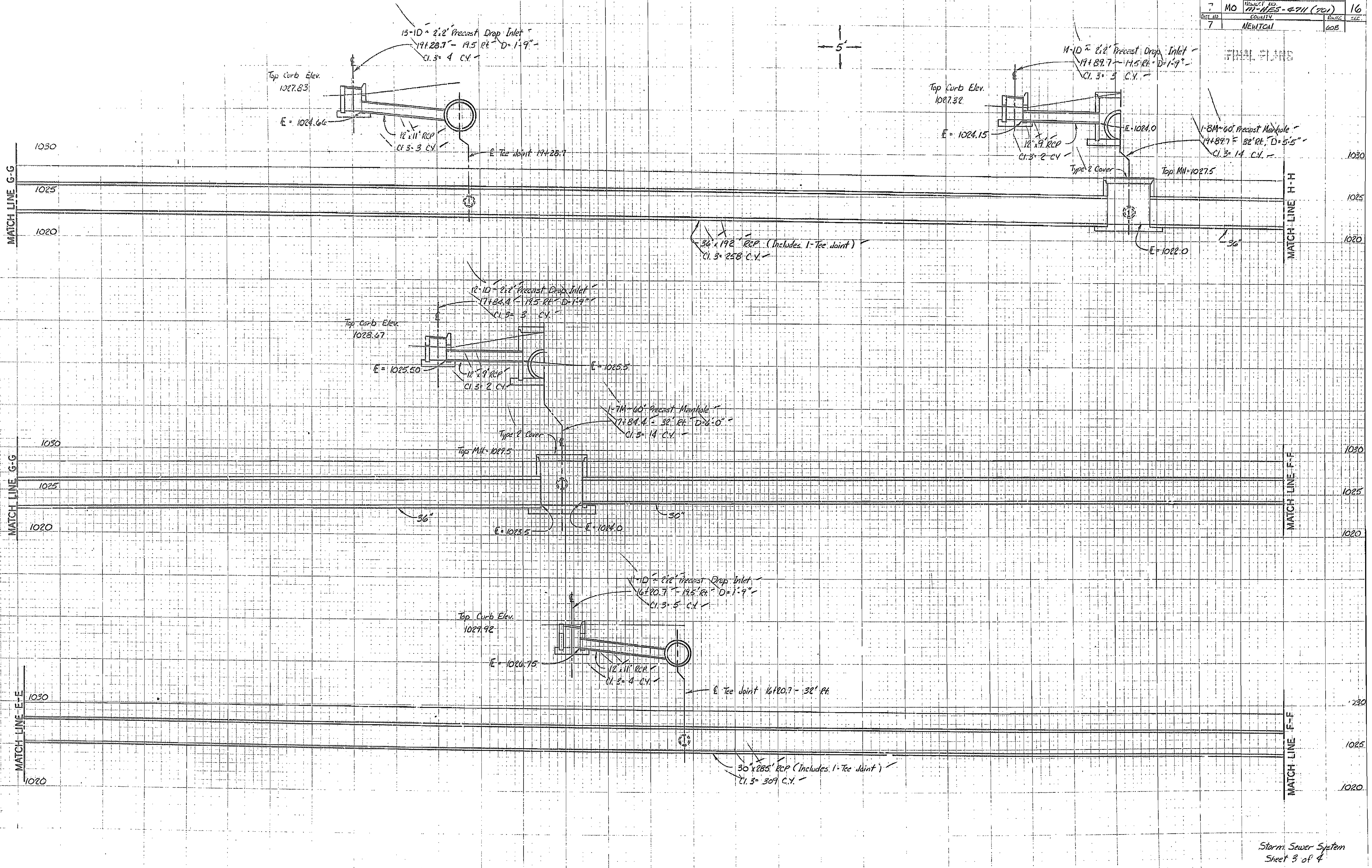
FED. ROAD DIV. NO.	STATE	JOB NO.	SHEET NO.
7	MO	7-X-60B-398 PROJECT NO. M-HES-4711 (701)	15
DIST. NO.	COUNTY	ROUTE	SEC
7	NEWTON	60B	



Storm Sewer System
Sheet 2 of 4

FED. ROAD DIV. NO.	STATE	JOB NO. 7-X-60B-398		SHEET NO.
7	MO	PROJECT NO. M-MES-4711 (701)		16
DIST. NO.	COUNTY		ROUTE	SEC.
7	NEWTON		60B	

FINAL PLANS



Storm Sewer System
Sheet 3 of 4

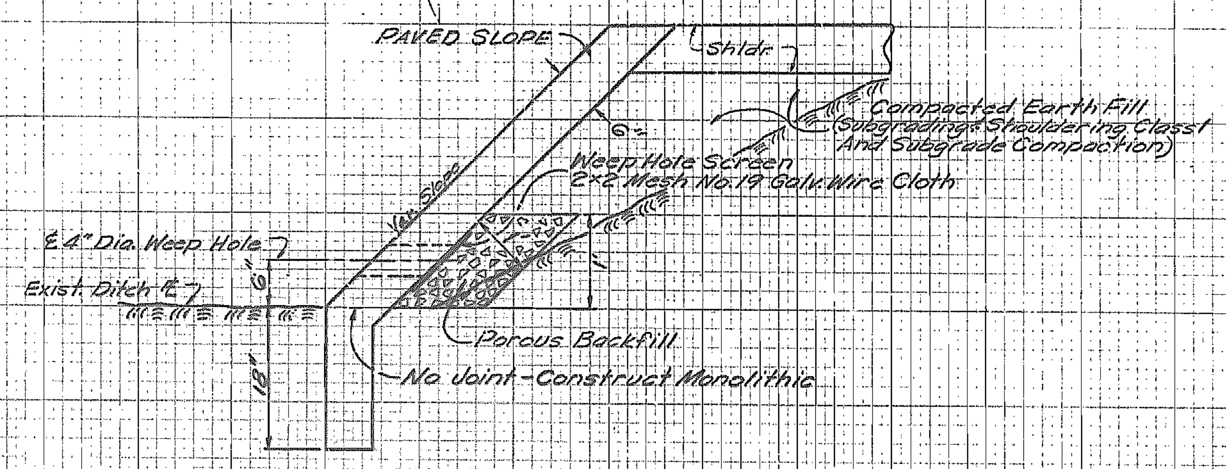
ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

53564

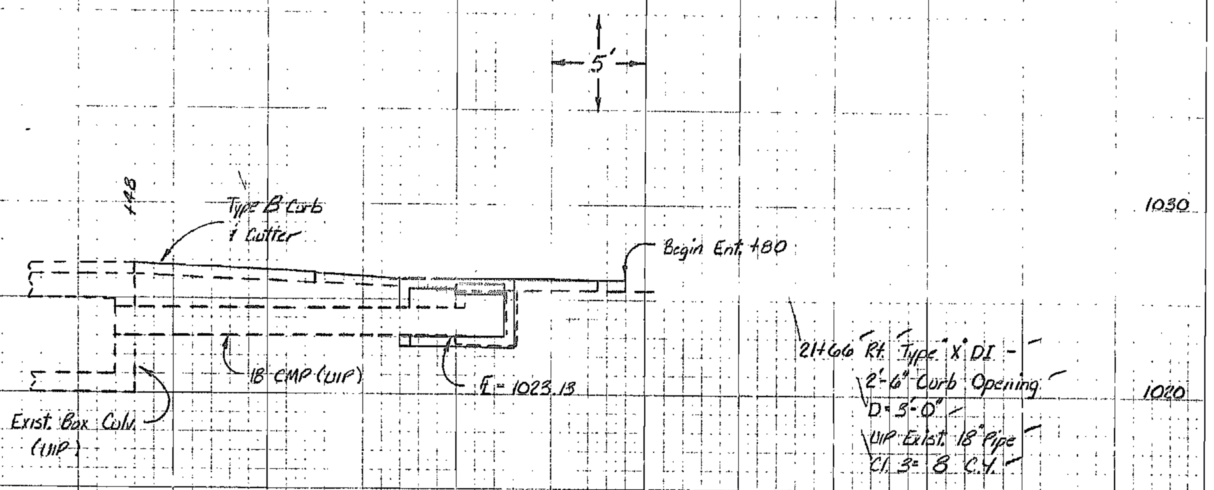
FED. ROAD DIST. NO.	STATE	JOB NO. 7-X-60 B-398		SHEET NO.
7	MO	PROJECT NO. M-HES-4711 (701)		17
DIST. NO.	COUNTY		ROUTE	SEC.
7	NEWTON		60B	

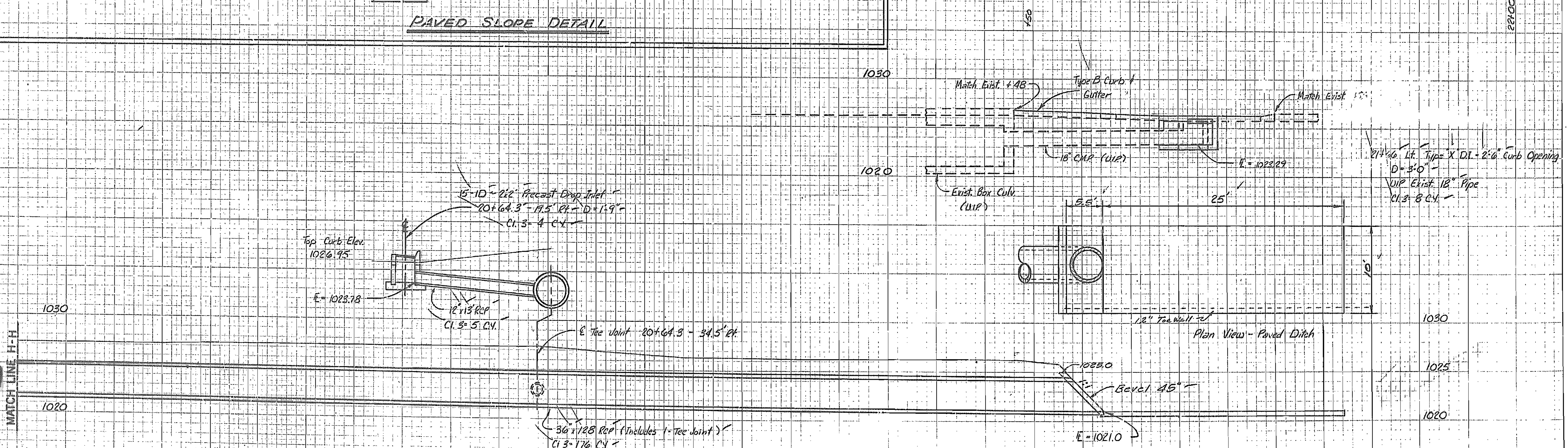
FINAL PLAN

Notes - Paved Slope:
1) Paved Slope Will Be Paid For As Paved Ditch. All Joints, Joint Spacings, Materials, and Cons't. Requirements Will Conform to Standard Drawing 609.15, Unless Otherwise Indicated.
2) Weep Holes Will Be Formed 4" in Dia., Centered Between Joints And 6" Above The Exist. Ditch Flowline.
3) Weep Hole Screens Will Be 2×2 Mesh No. 19 Galv. Wire Cloth, and Will Be Placed Prior to Pouring The Paved Slope.



PAVED SLOPE DETAIL





365

SURVEY NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS CHECKED

Storm Sewer System
Sheet 4 of 4

JUN 1, 1987

STATE MO.	JOB NO. 7-X-60B-398	SHEET NO. 18
DIST. NO. 7	PROJECT NO. M-HES-4711(701)	ROUTE 60B
	COUNTY NEWTON	

FINAL PLANS

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

ORIGINAL SURVEY
NOTE BOOK
NO
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STANDARD PLANS

✓	NO.	DESCRIPTION	
	203.00E	EXCAVATION & EMBANKMENT	
	203.02C	UNDERGRADING	
	203.10A	TABULATED EARTHWORK & SECTION DATA	
	203.20B	SUPERELEVATION SPIRALS & WIDENING (UNDIVIDED)	*
	203.21B	SUPERELEVATION SPIRALS & WIDENING (DIVIDED)	*
	203.30A	ENTRANCES & APPROACHES (LESS THAN 400 ADT)	
	203.31B	ENTRANCES & APPROACHES (GREATER THAN 400 ADT - NO SAFETY ZONE)	
	203.32D	ENTRANCES & APPROACHES (GREATER THAN 400 ADT - SAFETY ZONE)	
	203.35A	MAILBOX TURNOUTS	
	203.40D	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (NO SAFETY ZONE)	
	203.41D	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (SAFETY ZONE)	
	203.50J	TYPICAL CROSS-OVERS (DIVIDED HIGHWAYS)	
	204.00D	EMBANKMENT CONTROL MEASURING DEVICES	
✓	502.00M	CONCRETE PAVEMENT & BASE APPURTENANCES	*
✓	502.10E	DOWEL SUPPORTING UNITS	*
	503.00J	CONCRETE APPROACH SLABS TO BRIDGES (ALSO INCLUDE 502.00)	
✓	602.00A	RIGHT-OF-WAY & DRAIN MARKERS	
	604.05A	PIPE CULVERT HEADWALLS - TYPE S	
	604.10B	HEADWALL-WITH ENERGY DISSIPATOR - 18"	
	604.11B	HEADWALL-WITH ENERGY DISSIPATOR - 24"	
	604.12B	HEADWALL-WITH ENERGY DISSIPATOR - 30"	
	604.13B	HEADWALL-WITH ENERGY DISSIPATOR - 36"	
	604.14B	HEADWALL-WITH ENERGY DISSIPATOR - 42"	
	604.15B	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	
	604.25B	DROP INLET - TYPE F	
	604.26C	DROP INLET - TYPE G	
	604.27C	DROP INLET - TYPE S (3 SHEETS)	
	604.28D	DROP INLET - TYPE T (ALSO INCLUDE 614.30)	
✓	604.29C	DROP INLET - TYPE X	
	604.30F	CONCRETE MANHOLES (ALSO INCLUDE 614.30)	
	604.40E	PIPE COLLARS	
	605.10A	CLASS A UNDERDRAINS	
	606.00T	GUARD RAIL (2 SHEETS)	*
	606.20G	BRIDGE ANCHOR SECTION (BRUSH CURB) (ALSO INCLUDE 606.00)	
	606.21F	BRIDGE ANCHOR SECTION - CURB TYPE (ALSO INCLUDE 606.00)	*
	606.22D	BRIDGE ANCHOR SECTION (SAFETY BARRIER CURB) (ALSO INCLUDE 606.00)	
	606.30E	TERMINAL SECTION (ALSO INCLUDE 606.00)	
	606.40A	GUARD CABLE	
	607.10Q	CHAIN LINK FENCE	
	607.11B	CHAIN LINK FENCE FOR RETAINING WALLS	
	607.20F	WOVEN WIRE FENCE (ALSO INCLUDE 607.10)	

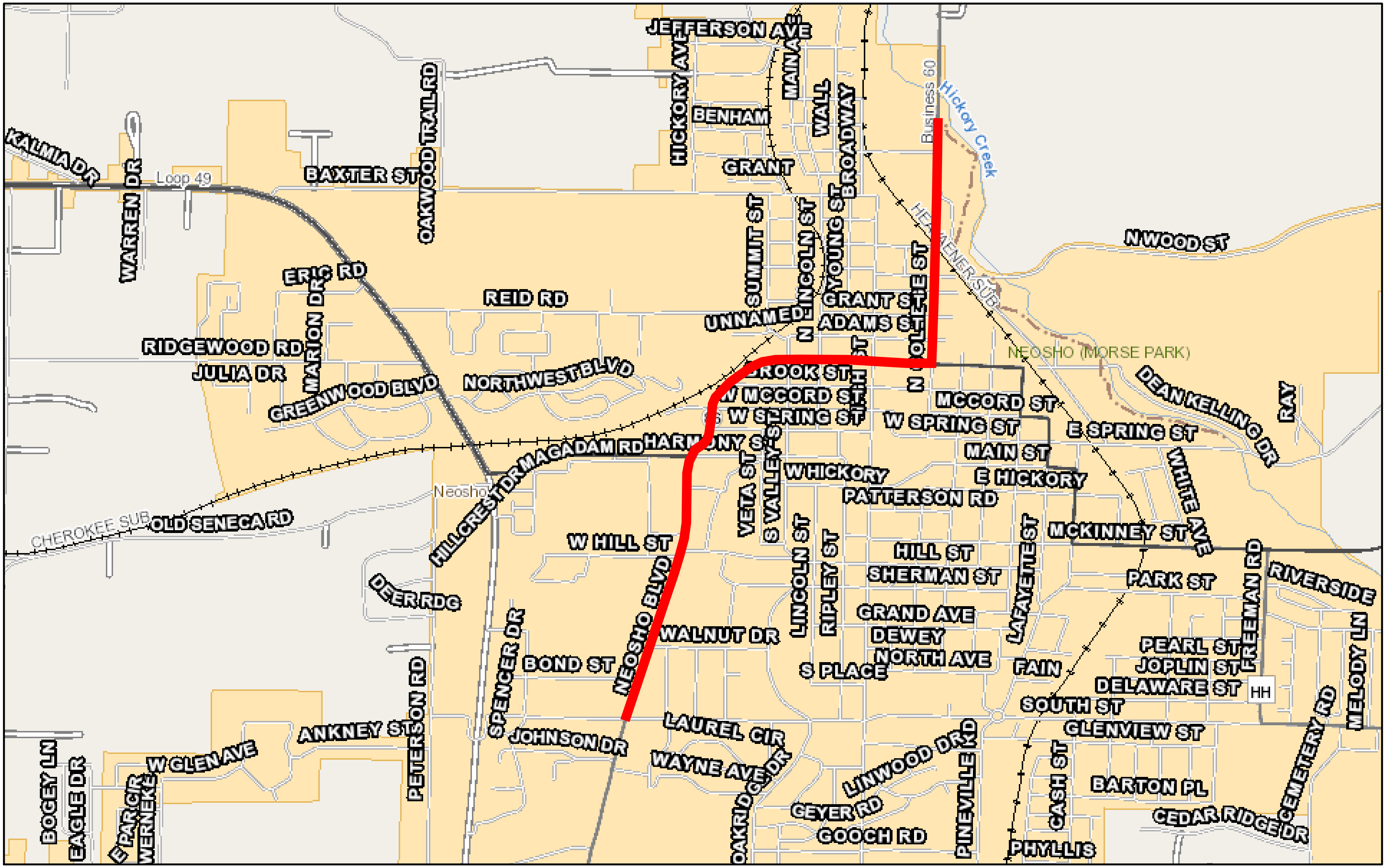
✓	NO.	DESCRIPTION	
✓	608.00C	PAVED APPROACHES	
✓	608.10G	CONCRETE SIDEWALK & WHEELCHAIR RAMPS	
	608.20C	CONCRETE STEPS	*
✓	609.00G	CONCRETE CURB - CURB & GUTTER - GUTTER	
✓	609.15A	PAVED DITCHES	
	609.40D	DRAIN BASIN, SHOULDER PAVING & FILL SLOPE AT BRIDGE ENDS	
	609.60A	DITCH LINER	
	609.70C	ROCK LINING FOR CULVERT OUTLETS	
	610.20E	BRICK MANHOLES (ALSO INCLUDE 614.30)	
	611.60L	CONCRETE SLOPE PROTECTION	
✓	612.10K	BARRICADES AND FLASHER SIGNS	
	613.00	PAVEMENT REPAIR	*
✓	614.10N	CURB INLETS, GRATES & BEARING PLATES	*
✓	614.30D	MANHOLE FRAMES & COVERS	
	615.00A	OFFICE FOR ENGINEER	
✓	616.10G	TRAFFIC CONTROL DEVICES (2 SHEETS) (ALSO INCLUDE 903.01)	*
	617.00U	CONCRETE TRAFFIC BARRIER (3 SHEETS)	*
	702.01E	16" CONCRETE PILES (APPROVED TYPES) (2 SHEETS)	
	702.02B	CAST-IN-PLACE CONCRETE PILES (APPROVED TYPES)	
	703.15D	CONCRETE BOX CULVERTS, H15 LOADING (3 SHEETS) (INCL. 706.35)	
	703.16D	CONCRETE BOX CULVERTS, H15 LOADING (3 SHEETS) (FLARED WINGS) (INCL. 706.35)	
	703.20D	CONCRETE BOX CULVERTS, H20 LOADING (3 SHEETS) (INCL. 706.35)	
	703.21D	CONCRETE BOX CULVERTS, H20 LOADING (3 SHEETS) (FLARED WINGS) (INCL. 706.35)	
	703.24D	CONCRETE BOX CULVERTS, SKEW DATA (703.15, 703.20, 703.30) (INCL. 706.35)	
	703.25C	CONCRETE BOX CULVERTS, SKEW DATA (703.16 & 703.21) (3 SHEETS) (FLARED WINGS) (INCL. 706.35)	
	703.30D	CONCRETE BOX CULVERTS, 4' SPANS & LESS - ALL LOADING (INCL. 706.35)	
	703.35B	CONCRETE BOX CULVERTS, CUTTING DETAILS (STRAIGHT WINGS) (INCL. 706.35)	
	703.36A	CONCRETE BOX CULVERTS, CUTTING DETAILS (FLARED WINGS) (INCL. 706.35)	
	703.50F	CONCRETE DOUBLE BOX STRUCTURE - SQUARE (INCL. 706.35)	
	703.51E	CONCRETE DOUBLE BOX STRUCTURE - SKEWED (INCL. 706.35)	
	703.52B	CONCRETE DOUBLE BOX STRUCTURE - CUT SECTIONS (INCL. 706.35)	
	703.53D	DOUBLE BOX STRUCTURE REINFORCEMENT - H15 LOADING (8 SHEETS)	
	703.54D	DOUBLE BOX STRUCTURE REINFORCEMENT - H20 OR HS20 LOADING (8 SHEETS)	
	703.55C	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS) SQUARE (INCL. 706.35)	
	703.56C	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS) SKEWED (INCL. 706.35)	
	703.60C	CONCRETE BOX STRUCTURE - PIPE INLET	
	703.70B	CONCRETE TRIPLE BOX STRUCTURE - SQUARE (2 SHEETS) (INCL. 706.35)	*
	703.71B	CONCRETE TRIPLE BOX STRUCTURE - SKEWED (2 SHEETS) (INCL. 706.35)	*
	703.72B	CONCRETE TRIPLE BOX STRUCTURE - (FLARED WINGS) (SQUARE) (2 SHEETS) (INCL. 706.35)	*
	703.73B	CONCRETE TRIPLE BOX STRUCTURE - (FLARED WINGS) (SKEWED) (2 SHEETS) (INCL. 706.35)	*
	703.74B	CONCRETE TRIPLE BOX STRUCTURE - CUT SECTIONS (INCL. 706.35)	*
	703.75	CONCRETE TRIPLE BOX STRUCTURE REINFORCEMENT - H15 LOADING (5 SHEETS)	
	703.76B	CONCRETE TRIPLE BOX STRUCTURE REINFORCEMENT - H20 OR HS20 LOADING (5 SHEETS)	*
	706.30E	REINFORCING BAR SUPPORTS	
	706.35E	BAR SUPPORTS FOR CONCRETE REINFORCEMENT	
	712.40E	STEEL DAMS FOR BRIDGES (6" CHANNEL)	*
	725.31C	METAL CURTAIN WALL AND METAL INLETS	
✓	726.30C	CULVERT INSTALLATION METHODS	
✓	731.00P	PRECAST MANHOLES (ALSO INCL. 614.30)	
✓	731.10G	PRECAST DROP INLETS (4 SHEETS) (ALSO INCLUDE 614.30 & 614.10)	
	732.00L	FLARED END SECTION (2 SHEETS)	*
	806.02A	STAPLE PLACEMENT FOR PLASTIC NETTING	*

✓	NO.	DESCRIPTION	
		HIGHWAY LIGHTING	
	901.00N	POLES & APPURTENANCES - 30' (3 SHEETS)	*
	901.01S	POLES & APPURTENANCES - 45' (3 SHEETS)	*
	901.05A	CONTROL PANEL CABINET DETAILS (2 SHEETS) (NOTE BELOW)	
	901.12B	POLE MOUNT. CONT. STA. - SECONDARY SERV. - 480 V MULTI. CIR. (NOT METERED)	*
	901.15D	POLE MOUNT. CONT. STA. - SEC. SERV. - 120, 240, & 480 V MULTI. CIR.	*
	901.16C	POLE MOUNT. CONT. STA. - SEC. SERV. - 480 V MULTI. CIR. (METERED)	*
	901.18C	POLE MOUNT. CONT. STA. - SEC. SERV. 120/240 V MULTI. CIR.	*
	901.19C	POLE MOUNT. CONT. STA. - SEC. SERV. - 240 V MULTI CIR. (NOT METERED)	*
	901.20C	POLE MOUNT. CONT. STA. - SEC. SERV. - 120/240 V MULTI. CIR. (SIG. METERED)	*
	901.22D	POLE MOUNT. CONT. STA. - SEC. SERV. - 120/240 & 480 V MULTI. CIR. (BOTH METERED)	*
	901.23D	POLE MOUNT. CONT. STA. — SEC. SERV. - 240 V MULTI. CIR. (METERED)	*
	901.24C	POLE MOUNT. CONT. STA. - SEC. SERV. - 240 V MULTI. CIR. (LT'S & SIGS-BOTH METERED)	*
	901.25C	BASE MOUNT. CONT. STA. - SEC. SERV. - 120/240 V MULTI. CIR.	*
		NOTE: ALSO INCLUDE 901.05 WITH 901.12 THROUGH 901.25 EXCEPT 901.18	
		TRAFFIC SIGNALS	
	902.00E	SIGNAL HEADS, LENSES AND MOUNTING	
	902.10J	PULL BOXES, CONTROLLERS, COND. LOCATION	*
	902.15D	POWER SUPPLY ASSEMBLY	*
	902.21B	TELEPHONE INTERCONNECT	
	902.30G	CONCRETE BASES	*
	902.40G	TUBULAR STEEL POST	*
	902.50E	DETECTORS	
	902.60E	SPAN WIRE DETAILS - STEEL POST	
	902.70B	SPAN WIRE DETAILS - WOOD POLE	*
	902.80	TRAFFIC SIGNAL SYMBOLS	
		HIGHWAY SIGNING	
✓	903.01C	ALPHABETS (2 SHEETS)	
	903.02V	HIGHWAY SIGNING (7 SHEETS)	*
	903.03AH	SIGN MOUNTING DETAILS (5 SHEETS)	*
	903.04D	WEIGH STATION SIGNING	
	903.05C	TUBULAR SPAN SUPPORT - ONE TUBE, TYPE S	
	903.06C	TUBULAR SPAN SUPPORT - TWO TUBE, TYPE S	
	903.07C	TUBULAR CANTILEVER SUPPORTS, TYPE C	
	903.08C	TUBULAR BUTTERFLY SUPPORTS, TYPE B	
	903.09C	LIGHTING SUPPORT BRACKET	
	903.10T	SIGN TRUSSES - OVERHEAD ALUMINUM (8 SHEETS) (INCL. 903.03)	
	903.12N	SIGN TRUSSES - BUTTERFLY & CANTILEVER - STEEL (7 SHEETS) (INCL. 903.03)	*
	903.60S	SIGN TRUSSES - OVERHEAD STEEL (7 SHEETS) (INCL. 903.03)	*

NOTES: Plans for this project were developed using Drawings from this index.

*REVISED SINCE SEPTEMBER 1985

J7S3506 - City of Neosho



February 5, 2023

1:25,000

0	0.17	0.34	0.68 mi
0	0.28	0.55	1.1 km

Missouri Department of Transportation

= PROJECT LIMITS (Business 60)