

**DESIGN DESIGNATION**

A.D.T. - 1991 = 12,550  
 A.D.T. - 3001 = 15,200

D.M.V. = 10 %  
 T = 06 %  
 V = 30 N.P.H.

**MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION  
 PLANS FOR PROPOSED  
 STATE HIGHWAY**

FINAL PLANS

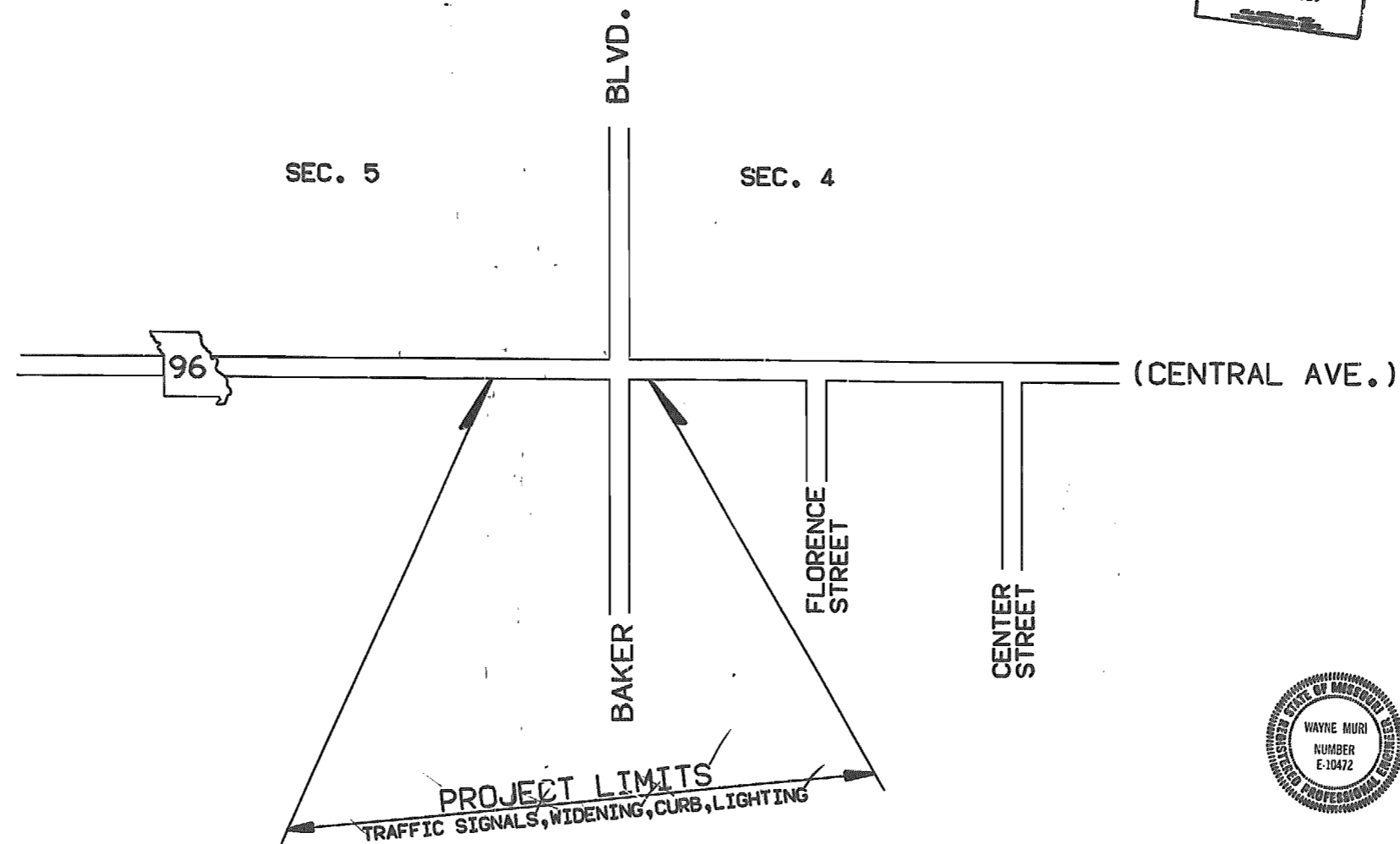
COUNTY **JASPER**  
 ROUTE **96**  
 PROJECT *M.G. - 1606 (701)*  
 JOB NO. *J7U0479*

FEDERAL AID PROJECT  
 JASPER COUNTY

**INDEX OF SHEETS**

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**CITY OF CARTHAGE**



AWAILED  
 OCT 04 1991

**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	
SANITARY SEWER	

NOTE: DASHED OR OPEN SYMBOLS INDICATES EXISTING FEATURES

**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	MILES
NOT APPLICABLE	
FEDERAL LENGTH	MILES

**MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION**

SUBMITTED

*Wayne Muri* 7-18-91  
 CHIEF ENGINEER DATE



U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR DATE

308  
 2/2



# SUMMARY OF QUANTITIES

0-206  
REV SEP 1, 1990

FINAL PLANS

STATE MO	JOB NO. J7U0479	SHEET NO. 2B DATE 96
DEST. NO. 7	PROJECT NO. MG-1606(701)	
	COUNTY JASPER	

SHEET 1 OF 2

SIGN	SIZE (INCHES)	AREA (SQ FT)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
<b>WARNING SIGNS</b>							
W01-1Lb	48X48	16.0					TURN (SYMBOL LEFT ARROW)
W01-1Rb	48X48	16.0					TURN (SYMBOL RIGHT ARROW)
W01-2Lb	48X48	16.0					CURVE (SYMBOL LEFT ARROW)
W01-2Rb	48X48	16.0					CURVE (SYMBOL RIGHT ARROW)
W01-3Lb	48X48	16.0					REVERSE TURN (SYMBOL LEFT ARROW)
W01-3Rb	48X48	16.0					REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4Lb	48X48	16.0					REVERSE CURVE (SYMBOL LEFT ARROW)
W01-4Lb2	48X48	16.0					DOUBLE ARROW REVERSE CURVE (SYM LT ARROWS)
W01-4Rb	48X48	16.0					REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4Rb2	48X48	16.0					DOUBLE ARROW REVERSE CURVE (SYM RT ARROWS)
W01-6	48X24	8.0					HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.0					HORIZONTAL ARROW (SYMBOL)
W01-7	48X24	8.0					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.0					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-8	18X24	3.0					CHEVRON (SYMBOL)
W03-1b	48X48	16.0					STOP AHEAD
W03-2b	48X48	16.0					YIELD AHEAD
W03-3b	48X48	16.0					SIGNAL AHEAD (SYMBOL)
W03-4b	48X48	16.0					BE PREPARED TO STOP
W04-1Lb	48X48	16.0					MERGE (SYMBOL FROM LEFT)
W04-1Rb	48X48	16.0					MERGE (SYMBOL FROM RIGHT)
W05-1a	48X48	16.0					ROAD NARROWS
W05-3a	48X48	16.0					ONE LANE BRIDGE
W06-1b	48X48	16.0					DIVIDED HIGHWAY
W06-2b	48X48	16.0					DIVIDED HIGHWAY ENDS
W06-3b	48X48	16.0					TWO WAY TRAFFIC (SYMBOL)
W06-3x	24X18	3.0					TWO WAY TRAFFIC (PLAQUE)
W08-1b	48X48	16.0					BUMP
W08-2b	48X48	16.0					DIP
W08-3	48X48	16.0					PAVEMENT ENDS
W08-4b	48X48	16.0					SOFT SHOULDER
W08-5b	48X48	16.0					SLIPPERY WHEN WET (SYMBOL)
W08-6b	48X48	16.0					TRUCK CROSSING
W08-6c	48X48	16.0					TRUCK ENT (INCLUDES W025-1a PLATE)
W08-7a	36X36	9.0					LOOSE GRAVEL
W08-9	48X48	16.0					LOW SHOULDER
W08-9L	48X48	16.0					UNEVEN PAVEMENT (SYM FOR LT DROPOFF)
W08-9Ra	48X48	16.0					UNEVEN PAVEMENT (SYM FOR RT DROPOFF)
W09-1R	48X48	16.0					RIGHT LANE ENDS (INCLUDES W025-3c PLATE)
W09-2Ra	48X48	16.0					LANE ENDS MERGE RIGHT (INCLUDES W025-3b PLATE)
W10-1a	42D1a	9.6					RAILROAD CROSSING
W012-1	24X24	4.0					DOUBLE DOWN ARROW (SYMBOL)
W012-2a	48X48	16.0					LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.0					LOW CLEARANCE (PLAQUE)
W012-3a,b	144X24	24.0					OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W013-1a	24X24	4.0					ADVISORY SPEED (PLAQUE)
W020-1	48X48	16.0	4	64.0			ROAD CONST AHEAD (INCLUDES W025-6 PLATE)
W020-2	48X48	16.0					DETOUR AHEAD (INCLUDES W025-1b PLATE)
W020-3	48X48	16.0					ROAD CLOSED AHEAD (INCLUDES W025-1c PLATE)
W020-4a	48X48	16.0					ONE LANE ROAD AHEAD (INCLUDES W025-1a PLATE)
W020-5	48X48	16.0	2	32.0			RIGHT LANE CLOSED AHEAD (INCL W025-3d PLATE)
W020-6a	48X48	16.0					RIGHT LANE CLOSED (INCLUDES W025-3c PLATE)
W020-7b	48X48	16.0	0	0.0			FLAGGER (SYMBOL)
W020-7x	24X18	3.0					500 FT/1000 FT (PLAQUE)
W020-9c	48X48	16.0	6	96.0			OPEN TRENCH
W021-2b	48X48	16.0					FRESH OIL
W021-5b	48X48	16.0					SHOULDER WORK AHEAD
W021-7	36X36	9.0					SAND BLASTING
W022-1	48X48	16.0					BLASTING ZONE 1000 FT
W022-2	42X36	10.5					TURN OFF 2-WAY RADIO
W022-3	42X36	10.5					END BLASTING ZONE
W022-5	30X30	6.3					NO PASSING ZONES UNMARKED
W025-1a	26X9						1000 FT/1500 FT Plate
W025-1b	38X9						500 FT/1000 FT Plate
W025-1c	34X9						500 FT/1000 FT Plate

SIGN	SIZE (INCHES)	AREA (SQ FT)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
<b>REGULATORY SIGNS</b>							
W025-3b	30X9						LEFT Plate
W025-3c	33X9						LEFT/CENTER Plate
W025-3d	22X9						LEFT/CENTER Plate
W025-5	30X12	2.5					1/2 MILE/1 MILE (PLAQUE)
W025-6	28X9						RAMP/BIDGE Plate
R1-1b	48X48	13.25					STOP
R1-2a	48X48X48	6.93					YIELD
R1-3	20X9	1.25					4-WAY (PLAQUE)
R1-5	20X9	1.25					3-WAY (PLAQUE)
R2-1b	36X48	12.00					SPEED LIMIT XX
R2-5b	36X48	12.00					REDUCED SPEED AHEAD
R3-1b	36X36	9.00					NO RIGHT TURN (SYMBOL)
R3-2b	36X36	9.00					NO LEFT TURN (SYMBOL)
R3-3a	36X36	9.00					NO TURNS
R3-4	24X24	4.00					NO U-TURN (SYMBOL)
R3-7L	30X30	6.25					LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25					RIGHT LANE MUST TURN RIGHT
R4-1b	36X48	12.00					DO NOT PASS
R4-2b	36X48	12.00					PASS WITH CARE
R4-7Lb	36X48	12.00	2	24.00			KEEP LEFT (HORIZONTAL ARROW)
R4-7Rb	36X48	12.00					KEEP RIGHT (HORIZONTAL ARROW)
R4-17La	36X36	9.00					KEEP LEFT
R4-17Ra	36X36	9.00					KEEP RIGHT
R5-1	30X30	6.25					DO NOT ENTER
R5-1a	36X24	6.00					WRONG WAY
R6-1La	48X18	6.00					ONE WAY ARROW (LEFT)
R6-1Ra	48X18	6.00					ONE WAY ARROW (RIGHT)
R6-2La	24X30	5.00					ONE WAY (LEFT)
R6-2Ra	24X30	5.00					ONE WAY (RIGHT)
R11-2	48X30	10.00					ROAD CLOSED
R11-3	60X30	12.50					ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50					ROAD CLOSED TO THRU TRAFFIC
R12-3b	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)
S4-4a	36X18	4.50					WHEN FLASHING
<b>GUIDE SIGNS</b>							
G020-1	60X36	15.00					ROAD CONSTRUCTION NEXT XX MILES
G020-2	60X24	10.00					END CONSTRUCTION
M04-8a	30X15	3.13					DETOUR (PLAQUE)
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)
M04-11	24X18	3.00					DETOUR ENDS
M5-1L	21X15	2.19					ADVANCE LEFT TURN ARROW
M5-1R	21X15	2.19					ADVANCE RIGHT TURN ARROW
<b>MISCELLANEOUS SIGNS</b>							
616-10.05							
CONSTRUCTION SIGNS TOTAL			216.0				
616-10.10							
RELOCATED SIGNS TOTAL							

ITEM NUMBER	SIZE (INS)	TOTAL QTY	DESCRIPTION
616-10.20	36X18	26	CHANNELIZER (DRUM)
616-10.35	8X24		TYPE I BARRICADE (ONE RAIL)
616-10.36	8X24		TYPE II BARRICADE (TWO RAILS)
616-10.40	48X96	1	FLASHING ARROW PANEL
616-10.45	18X18		TYPE I OBJECT MARKER
616-10.46	6X12		TYPE II OBJECT MARKER
616-10.47	8X24		TYPE III OBJECT MARKER
616-10.50	8		FLASHING ELECTRIC LIGHT
616-10.51	---		WARNING LIGHT TYPE A
616-10.52	---		WARNING LIGHT TYPE B
616-10.53	---		WARNING LIGHT TYPE C
616-10.54	---		STROBE LIGHT
616-10.60	---		RAISED PAVEMENT MARKER
616-10.70	28		FLEXIBLE DELINEATOR
616-10.80	LIN FT		EDGE DROPOFF TREATMENT
612-10.30	72X144		MOVEABLE BARRICADE (THREE RAILS)
612-90.20	48X48	6	INSTALLING GIVE EM A BRAKE

274 310

# MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

## SUMMARY OF QUANTITIES

REV MAY 1, 89

STATE <b>MO</b>	JOB NO. J7U0479	SHEET NO. <b>2B</b>
DIST. NO. <b>7</b>	PROJECT NO. MG-1606(7C1)	ROUTE <b>96</b>
COUNTY <b>JASPER</b>		SHEET 2 OF 2

### 8" INTEGRAL CURB (TYPE A)

SHEET	STATION TO STATION	LOC.	LN. FT.	REMARKS
5	465+60-466+14.4	LT.	54.4	
5	466+40.4-466+77.6	LT.	37.2	RTE. 96
5	467+03-467+82.8	LT.	89.0	RTE. 96 INCLUDES RADIUS
5	465+60-467+79.6	RT.	227.4	INCLUDES RADIUS
			TOTAL 408.0 L.F.	
			USE: 408 L.F.	

### REMOVAL OF IMPROVEMENTS

TOTAL LUMP SUM 1

### SUBGRADING AND SHOULDERING CL. 2

SHEET	STATION TO STATION	LOC.	LENGTH	REMARKS
5	465+60-467+82.8	RTE. 96	222.8'	BOTH SIDES INCLUDED
			TOTAL 2.2 STA.	

### SUBGRADE COMPACTION (6 INCH DEPTH)

SHEET	STATION TO STATION	LOC.	LENGTH	REMARKS
5	465+60-467+82.8	RTE. 96	222.8'	BOTH SIDES INCLUDED
			TOTAL 2.2 STA.	

### 4" TYPE 3 AGGR. BASE

SHEET	STATION TO STATION	LOC.	S.Y.
5	465+60-467+82.85	LT. =	172.1
5	465+60-467+80.57	RT. =	174.1
			TOTAL 346.2
			USE: 346 S.Y.

### 9" NON-REINFORCED CONC. PAV'T.

SHEET	STATION TO STATION	LOC.	S.Y.
5	465+60-467+82.85	LT. =	143.03
5	465+60-467+80.57	RT. =	136.34
			TOTAL 279.37
			USE: 279.4 SY.

### PAVED APPROACH 7" (CONC.)

SHEET	STATION	LOC.	WIDTH	S.Y.	REMARKS
5	466+27.4	LT.	20'	14.00	P.E. LT. (FROM E.P. TO SDWK.)
5	466+92.2	LT.	20'	9.89	P.E. LT. (FROM E.P. TO SDWK.)
5	466+49	RT.	20'		BY PERMIT
5	467+14	RT.	20'		BY PERMIT
				TOTAL 233.89	
				USE 239 S.Y.	

### VERTICAL SAW CUTS

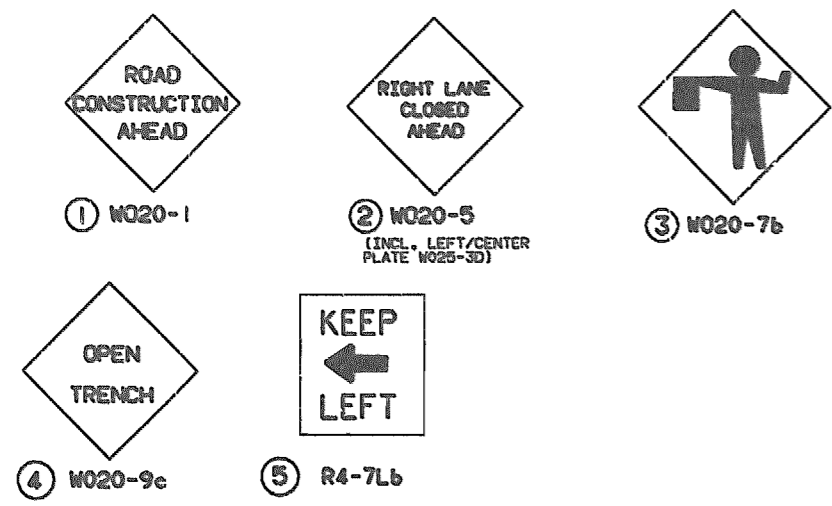
SHEET	STATION TO STATION	LOC.	LN. FT.	REMARKS
5	465+60	LT.	2.5'	
5	465+60	RT.	2.5'	
5	467+66.1 (RTE. 96) - 0+48.5 (BANKER LT.)	LT.	22.0'	1.5'± FROM BK. EXIST. CURB (ON RADIUS)
5	467+60.4 (RTE. 96) - 0+48.1 (BANKER RT.)	RT.	22.0'	" " " " " " " "
			TOTAL 49.0' LN. FT.	
			USE 49' LN. FT.	

### SODDING

SHEET	STATION TO STATION	LOC.	S.Y.	REMARKS
5	465+36.7-467+75.9	LT.	116.2	BETWEEN NEW CURB & SDWK. (PAVED APPR. DEDUCTED)
5	465+30.5-467+74.8	RT.	120.4	BETWEEN NEW CURB & SDWK.
			TOTAL 237.1 S.Y.	
			USE 237 S.Y.	

275 311

FINAL PLANS

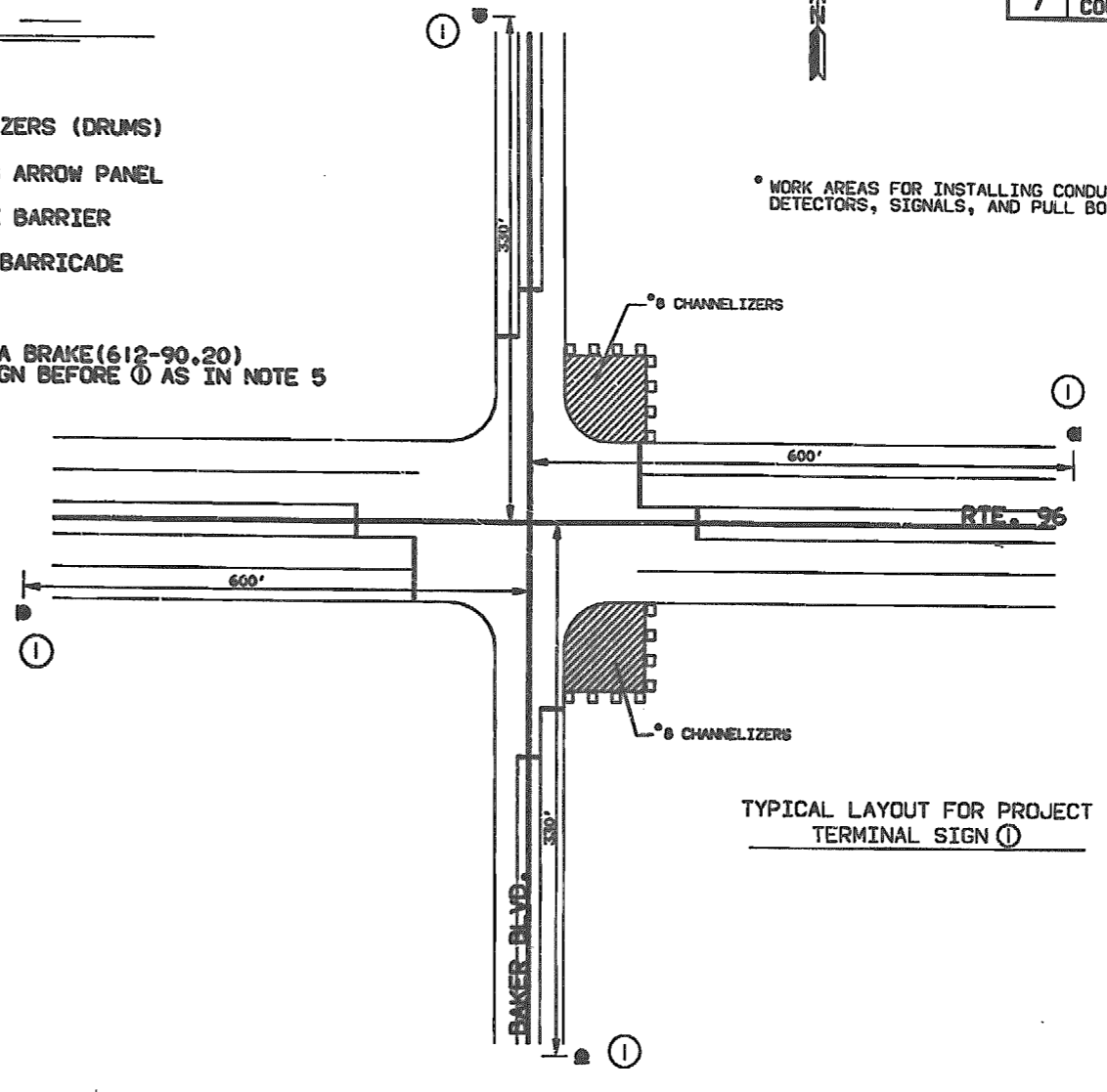


- LEGEND**
- ○ ○ ○ ○ - CONES
  - □ □ □ □ - CHANNELIZERS (DRUMS)
  - ▬▬▬▬▬ - FLASHING ARROW PANEL
  - ▬▬▬▬▬▬▬ - CONCRETE BARRIER
  - ▬▬▬▬ - MOVABLE BARRICADE
  - ⚑ - FLAGGER
  - - GIVE EM A BRAKE (612-90.20)  
PLACE SIGN BEFORE ① AS IN NOTE 5

SIGN ① IS LOCATED APPROX. 30' BACK OF LAST CHANNELIZER.

**INSIDE LANE & LEFT-TURN CLOSURE**  
 RTE. 96 EAST & WEST, 230' TAPER, 17 CHANNELIZERS  
 FRANCIS ST. NORTH & SOUTH, 125' TAPER, 11 CHANNELIZERS

**OUTSIDE LANE CLOSURE**  
 RTE. 96 EAST & WEST, 230' TAPER, 9 CHANNELIZERS  
 FRANCIS ST. NORTH & SOUTH, 125' TAPER, 5 CHANNELIZERS



TYPICAL LAYOUT FOR PROJECT TERMINAL SIGN ①

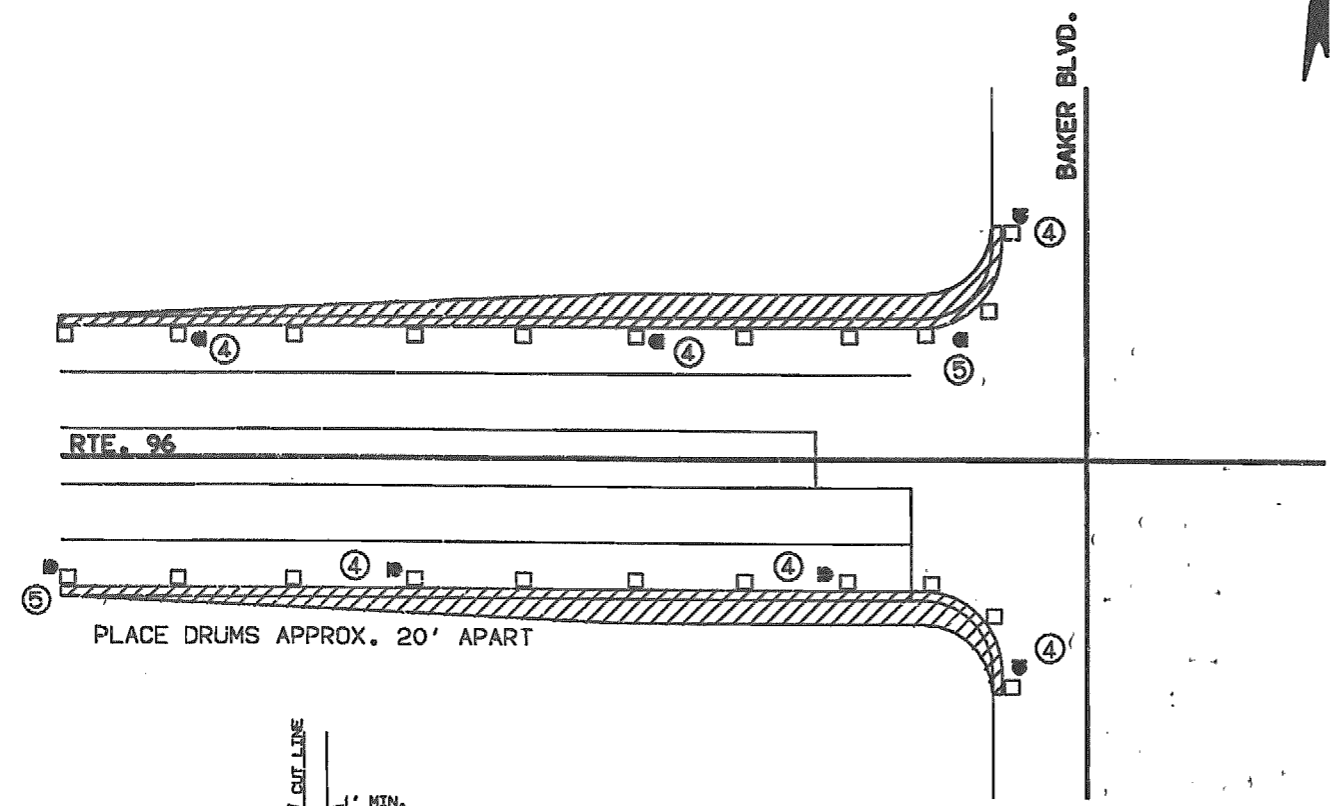
**NOTES:**

- 1) FLAGGER WILL BE USED WHEN DIRECTED BY THE ENGINEER.
- 2) SIGN ① WILL BE NON-PORTABLE MOUNTED.
- 3) SIGNS ② & ③ WILL BE PORTABLE MOUNTED.
- 4) ALL PAVEMENT MARKINGS "BY OTHERS."
- 5) SIGN ② MOUNTED NON-PORTABLE 300' AHEAD OF SIGN ① ON EACH SIDE OF STREET FACING TRAFFIC IN ALL FOUR DIRECTIONS.
- 6) AT LEAST ONE LANE IN EACH DIRECTION MUST BE OPEN AT ALL TIMES INCLUDING WHEN SAW CUTTING CONDUIT ACROSS RTE. 96.

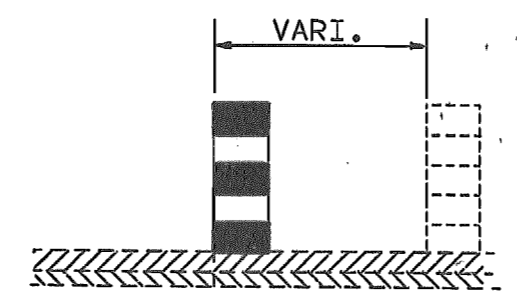
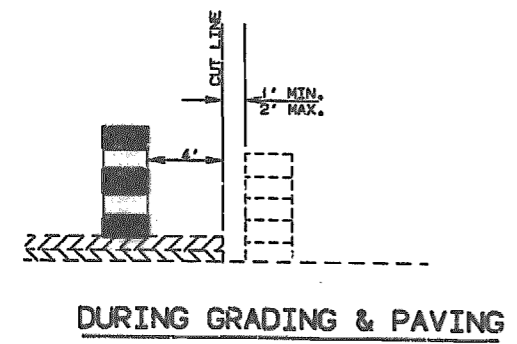
216 312

FINAL PLANS

STATE NO	JOB NO.	J7U0479	SHEET NO	4
DIST NO	PROJECT NO.	M.G.-1606(701)	ROUTE	96
7	COUNTY	JASPER		



PLACE DRUMS APPROX. 20' APART



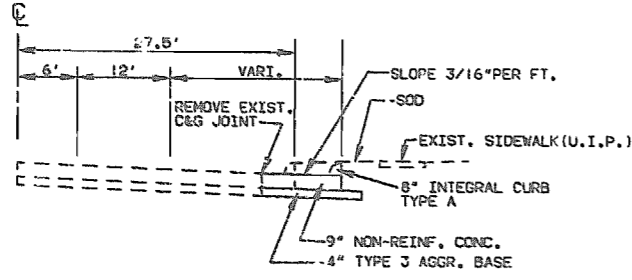
**WHILE CURING**

PLACE CHANNELIZER ON NEW PAVEMENT EDGE AFTER APPROX. 4 HRS. OF CURING. AFTER 96 HRS. OF CURING PLACE CHANNELIZER 6' INTO NEW PAVEMENT.

217 313

FINAL PLANS

STATE NO	JOB NO. J7U0479	SHEET NO	5
DIST NO	PROJECT NO. M.G.-1606(701)	ROUTE	96
7	COUNTY JASPER		



P.I. - STA. 467+96.0  
Δ-0' 07' RT.

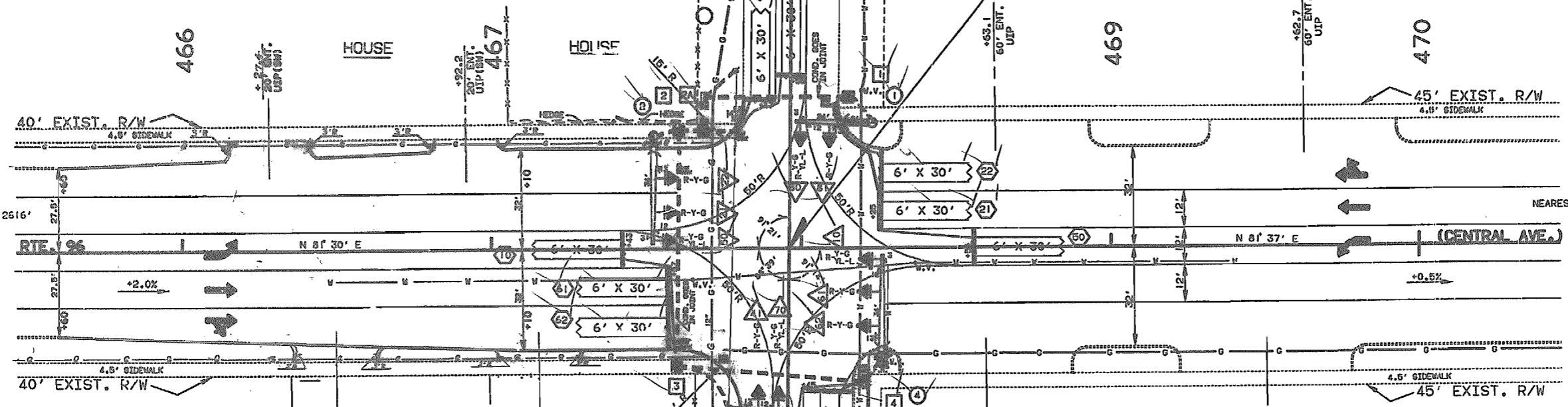
SW<sup>4</sup> NW<sup>4</sup>  
4-28-31

SE<sup>4</sup> NE<sup>4</sup>  
5-28-31

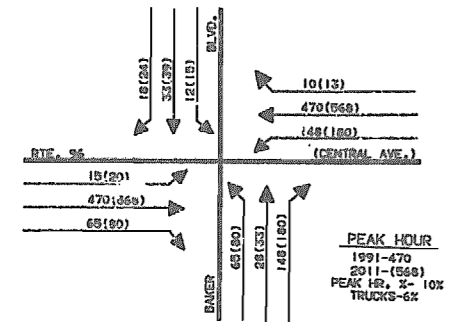
467+96 RTE. 96 (CENTRAL AVE.)

= 0+00 BAKER BLVD. (NORTH)  
= 0+00 BAKER BLVD. (SOUTH)

RAMEY'S SUPERMARKET



NOTE:  
REMOVE ALL TREES BETWEEN EXIST. CURB & SIDEWALK BOTH SIDES RTE. 96 FROM STA. 462+96 TO BAKER BLVD. (COST INCL. IN OTHER ITEMS)  
STUMPS WERE COMPLETELY REMOVED, REMOVED 6 INCHES BELOW GROUND LINE AND BACKFILLED.



PEAK HOUR  
1991-470  
2911-(568)  
PEAK 12, 2-10Z  
TRUCKS-6%

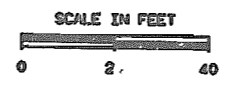
UTILITIES  
WATER & ELECTRIC-CARTHAGE WATER & ELECTRIC CO.  
149 E. 3RD. ST.  
CARTHAGE, MO.  
(417) 358-5904  
GAS-KPL GAS CO.  
301 E. 4TH. ST.  
CARTHAGE, MO. 64836  
(417) 358-4075

NOTE:  
CONTRACTOR SHALL MAKE SAMMARK ON CURB OVER CONDUIT RUNS.

NOTE:  
SEE SPECIAL PROVISION E TRENCHING FOR CONDUIT

SPEED LIMIT 30 MPH (ALL DIRECTIONS)  
NO RAILROAD TRACKS  
NO BUS STOPS  
NO ISLANDS  
NO PARKING

TRAFFIC SIGNALS  
AT  
INTERSECTION  
OF  
RTE. 96 (CENTRAL AVE.)  
AND  
BAKER BLVD.



218 314



**CONDUIT**

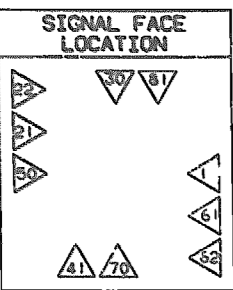
**CABLE**

FROM	TO	CTR TO CTR DISTANCE	TRENCH					MEDIAN		PUSHED				ON BRIDGE		REMARKS	FROM	TO	CTR TO CTR DISTANCE	POWER 1c #8	CONTROL					DETECTOR		REMARKS						
			1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	1-1/4	2	2-1/2	3	3-1/2	4						2c #12	3c #12	5c #12	7c #12	12c #12	1c #14	LEAD -IN CABLE							
5	1	13'	16'															13'	96'															
1	1	46'				47'												11'															171'	
1	2	4'	3'															11'															44'	
2A	2A	11'					12'											152'															351'	
2A	2	8'					6'											58'															362'	
2	2	10'	9'															104'																
2	2	9'		10'														74'																
2	3	75'																117'																
3	3	23'		24'														162'																
3	6	6'	5'															31'																LOOP
3	4	60'				58'												43'																338'
4	4	8'		9'														84'																362'
4	6	4'	3'															22'																444'
																		38'																320'
																		14'																352'
																		23'																304'
																		48'																322'
																		10'																372'
																		32'																296'
																																		340'
<b>TOTALS</b>			36'		56'	105'	73'		18'								(96')		(398)'															(928)'
<b>TOTALS</b>																		100'		400'														3450'
																																		930'

288 316

RTE. 96 & BAKER BLVD.  
 INTERSECTION

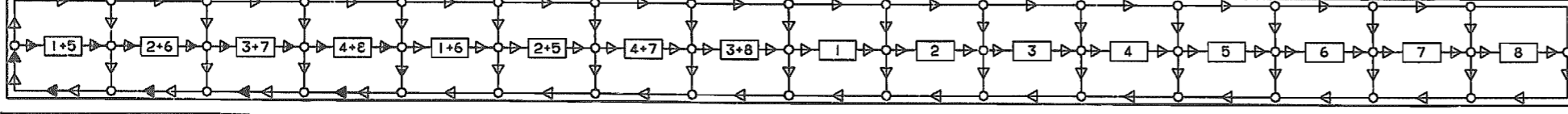
FINAL PLANS



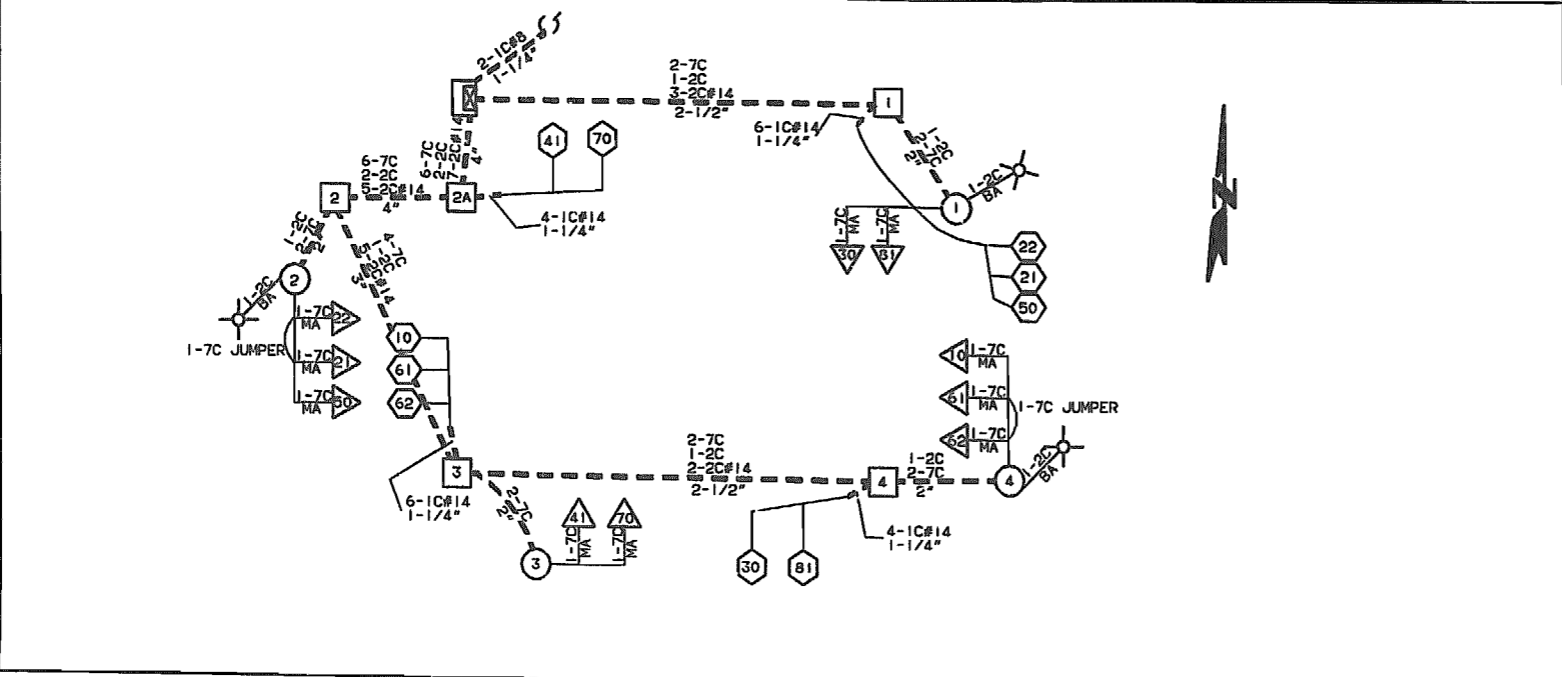
TRAFFIC PHASING AND COLOR SEQUENCE

CONT. NO.	PHASE 1	PHASE 5	PHASE 2	PHASE 6	PHASE 1 + 5	PHASE 1 + 6	PHASE 2 + 5	PHASE 2 + 6	PHASE 7	PHASE 3	PHASE 8	PHASE 4	PHASE 3 + 7	PHASE 4 + 7	PHASE 3 + 8	PHASE 4 + 8	FACE NO.
	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	
NORTHBOUND BAKER BLVD.	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	81&82	81&82	81&82	81&82	81&82	81&82	81&82	81&82	81&82	81&82	81&82	81&82	81&82	81&82	81&82	81&82	81&82
SOUTHBOUND BAKER BLVD.	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
	41&42	41&42	41&42	41&42	41&42	41&42	41&42	41&42	41&42	41&42	41&42	41&42	41&42	41&42	41&42	41&42	41&42
EASTBOUND RTE. 96	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	61&62	61&62	61&62	61&62	61&62	61&62	61&62	61&62	61&62	61&62	61&62	61&62	61&62	61&62	61&62	61&62	61&62
WESTBOUND RTE. 96	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	21&22	21&22	21&22	21&22	21&22	21&22	21&22	21&22	21&22	21&22	21&22	21&22	21&22	21&22	21&22	21&22	21&22

FLOW DIAGRAM



WIRING DIAGRAM



—> PHASE ON RECALL WITH EQUAL TIME SETTINGS.  
 - - -> SKIP PHASE.  
 —> COMBINED RECALL & SKIP PHASE.  
 IF CALLED, ALL NON-CONFLICTING PHASES SHALL COMBINE AND TIME CONCURRENTLY. TIMING TO BE DETERMINED BY THE ENGINEER AT SIGNAL TURN ON AND SET IN THE CONTROLLER BY THE CONTRACTOR.

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
- > VEHICLE STOPPED
- FDW—FLASHING DON'T WALK
- R/W—RIGHT OF WAY INTERVAL
- DW—DON'T WALK
- YRt—YELLOW RIGHT ARROW
- RT.—GREEN RIGHT ARROW
- W—WALK
- Y—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

TRAFFIC SIGNAL CONTROL OPERATION

RTE. 96 (CENTRAL AVE.)  
 INTERSECTION OF  
 BAKER BLVD.  
 WITH

FLASHING OPERATION  
 ALL APPROACHES FR

CONTROLLER TYPE 8Ø

221 317

**MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION**  
**REVISED STANDARD PLANS**

REV. AUG. 1, 1991

FINAL PLANS

STATE	MO	JOB NO.	J7U0479	SHEET NO.	9
DIST. NO.	7	PROJECT NO.	M.G.-1606(701)	ROUTE	96
COUNTY	JASPER				

✓ 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
203.40E	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (OTHER THAN 6:1 FORESLOPE)
203.41E	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (6:1 FORESLOPE)
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
604.05B	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
604.25C	DROP INLET - TYPE F
604.26D	DROP INLET - TYPE G
604.27C	DROP INLET - TYPE S (3 SHEETS)
604.28E	DROP INLET - TYPE T (ALSO INCLUDE 614.30)
604.29C	DROP INLET - TYPE X
604.30F	CONCRETE MANHOLES (ALSO INCLUDE 614.30)
604.40E	PIPE COLLARS
605.10A	CLASS A UNDERDRAINS
606.00W	GUARD RAIL (5 SHEETS) *
606.22J	BRIDGE ANCHOR SECTION (SAFETY BARRIER CURB ON BRIDGE) (ALSO INCLUDE 606.00) *
606.23B	BRIDGE ANCHOR SECTION (THREE BEAM RAIL ON BRIDGE) (ALSO INCLUDE 606.00) *
606.30E	TERMINAL SECTION (ALSO INCLUDE 606.00)
606.40A	GUARD CABLE
607.10R	CHAIN LINK FENCE
607.11B	CHAIN LINK FENCE FOR RETAINING WALLS
607.20F	WOVEN WIRE FENCE (ALSO INCLUDE 607.10)

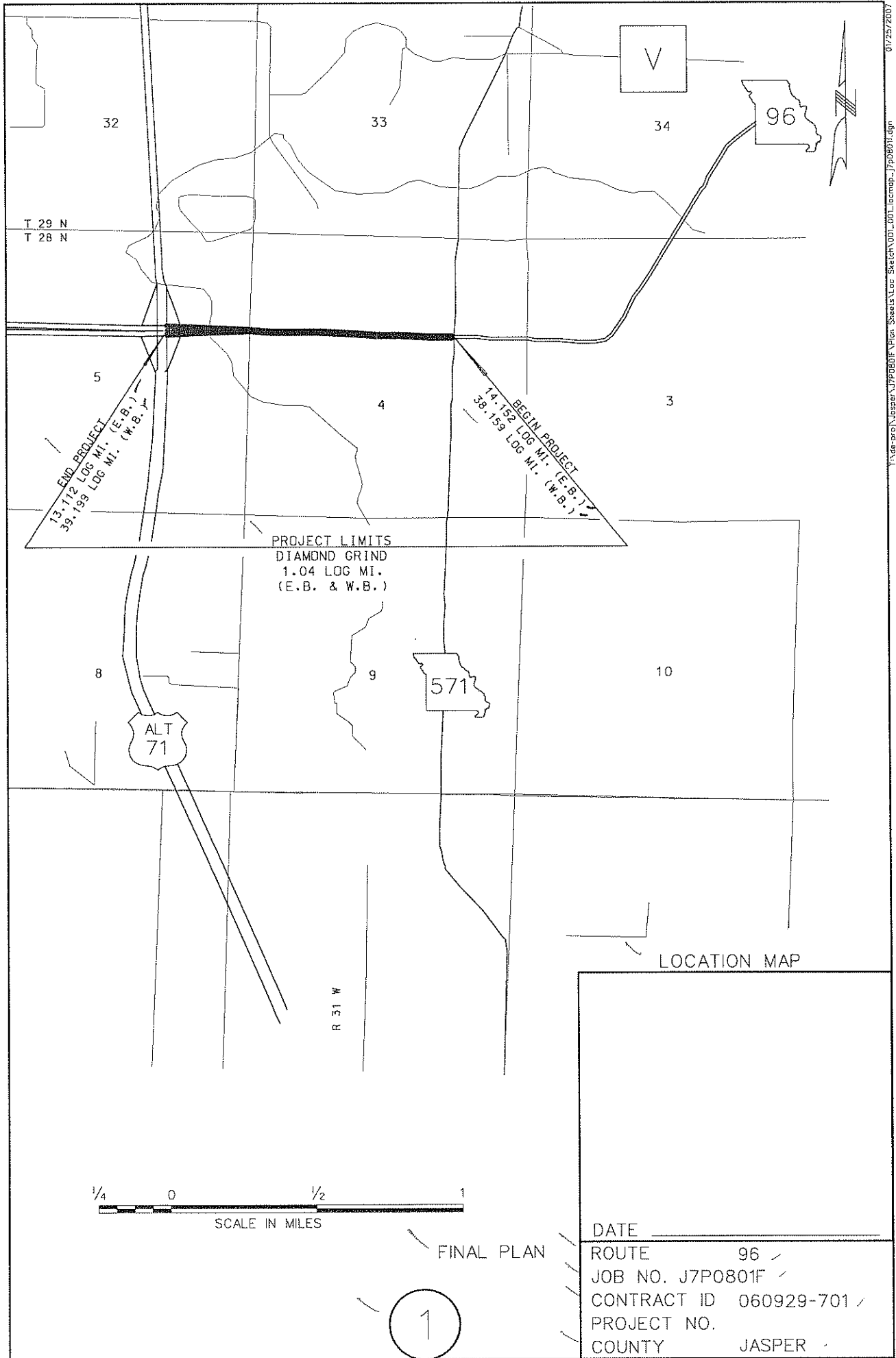
✓ NO.	DESCRIPTION
608.00C	PAVED APPROACHES
608.10G	CONCRETE SIDEWALK & WHEELCHAIR RAMPS
608.20C	CONCRETE STEPS
609.00G	CONCRETE CURB - CURB & GUTTER - GUTTER
609.15B	PAVED DITCHES
609.40D	DRAIN BASIN, SHOULDER PAVING & FILL SLOPE AT BRIDGE ENDS
609.60B	DITCH LINER
609.70C	ROCK LINING FOR CULVERT OUTLETS
610.20E	BRICK MANHOLES (ALSO INCLUDE 614.30)
611.60L	CONCRETE SLOPE PROTECTION
612.10K	BARRICADES AND FLASHER SIGNS
613.00B	PAVEMENT REPAIR
614.100	CURB INLETS, GRATES & BEARING PLATES *
614.30D	MANHOLE FRAMES & COVERS
615.00A	OFFICE FOR ENGINEER
616.10M	TRAFFIC CONTROL DEVICES (3 SHEETS) (ALSO INCLUDE 903.01) *
617.00W	CONCRETE TRAFFIC BARRIER (3 SHEETS) *
702.01F	16" CONCRETE PILES (APPROVED TYPES) (2 SHEETS)
702.02B	CAST-IN-PLACE CONCRETE PILES (APPROVED TYPES)
703.21E	CONCRETE BOX CULVERTS, H2O LOADING (3 SHEETS) (FLARED WINGS) (INCL 706.35) *
703.24E	CONCRETE BOX CULVERTS, SKEW DATA (703.30) (INCL 706.35)
703.25E	CONCRETE BOX CULVERTS, SKEW DATA (703.21) (3 SHTS) (FLRD WINGS) (INCL 706.35) *
703.30F	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)
703.50H	CONCRETE DOUBLE BOX STRUCTURE-SQUARE (INCL 706.35) *
703.51G	CONCRETE DOUBLE BOX STRUCTURE-SKEWED (INCL 706.35) *
703.52D	CONCRETE DOUBLE BOX STRUCTURE-CUT SECTIONS (INCL 706.35) *
703.54E	DOUBLE BOX STRUCTURE REINFORCEMENT-H2O OR HS20 LOADING (8 SHEETS) *
703.55E	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS) SQUARE (INCL 706.35) *
703.56E	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS) SKEWED (INCL 706.35) *
703.60C	CONCRETE BOX STRUCTURE-PIPE INLET
703.70D	CONCRETE TRIPLE BOX STRUCTURE-SQUARE (2 SHEETS) (INCL 706.35) *
703.71D	CONCRETE TRIPLE BOX STRUCTURE-SKEWED (2 SHEETS) (INCL 706.35) *
703.72D	CONCRETE TRIPLE BOX STRUCTURE-(FLARED WINGS) (SQUARE) (2 SHEETS) (INCL 706.35) *
703.73D	CONCRETE TRIPLE BOX STRUCTURE-(FLARED WINGS) (SKEWED) (2 SHEETS) (INCL 706.35) *
703.74D	CONCRETE TRIPLE BOX STRUCTURE-CUT SECTIONS (INCL 706.35) *
703.76E	CONCRETE TRIPLE BOX STRUCTURE REINFORCEMENT-H2O 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
731.00S	PRECAST MANHOLES (ALSO INCL 614.30)
731.10J	PRECAST DROP INLETS (4 SHTS) (ALSO INCL 614.30 & 614.10) *

✓ NO.	DESCRIPTION
732.00L	FLARED END SECTION (2 SHEETS)
806.02A	STAPLE PLACEMENT FOR PLASTIC NETTING
<b>HIGHWAY LIGHTING</b>	
901.00P	POLES & APPURTENANCES-30' (3 SHEETS)
901.01U	POLES & APPURTENANCES-45' (3 SHEETS)
901.05A	CONTROL PANEL CABINET DETAILS (2 SHEETS) (SEE NOTE)
901.12C	POLE MOUNT CONT STA-SECONDARY SERV-480 V MULTI CIR (NOT METERED)
901.15E	POLE MOUNT CONT STA-SEC SERV-120,240, & 480 V MULTI CIR
901.16D	POLE MOUNT CONT STA-SEC SERV-480 V MULTI CIR (METERED)
901.18D	POLE MOUNT CONT STA-SEC SERV-120/240 V MULTI CIR
901.19D	POLE MOUNT CONT STA-SEC SERV-240 V MULTI CIR (NOT METERED)
901.20D	POLE MOUNT CONT STA-SEC SERV-120/240 V MULTI CIR (SIG METERED)
901.22E	POLE MOUNT CONT STA-SEC SERV-120/240 & 480 V MULTI CIR (BOTH METERED)
901.23E	POLE MOUNT CONT STA-SEC SERV-240 V MULTI CIR (METERED)
901.24D	POLE MOUNT CONT STA-SEC SERV-240 V MULTI CIR (LIGHTS & SIGNALS-BOTH METERED)
901.25D	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	
<b>TRAFFIC SIGNALS</b>	
902.00F	SIGNAL HEADS, LENSES AND MOUNTING
902.10J	PULI. BOXES, CONTROLLERS, COND LOCATION
902.15D	POWER SUPPLY ASSEMBLY
902.21B	TELEPHONE INTERCONNECT
902.30G	CONCRETE BASES
902.40J	TUBULAR STEEL POST *
902.50F	DETECTORS *
902.60F	SPAN WIRE DETAILS-STEEL POST
902.70C	SPAN WIRE DETAILS-WOOD POLE
902.80A	TRAFFIC SIGNAL SYMBOLS
<b>HIGHWAY SIGNING</b>	
903.01C	ALPHABETS (2 SHEETS)
903.02X	HIGHWAY SIGNING (7 SHEETS)
903.03AN	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 JANUARY 1990

222 318



T 29 N  
T 28 N

END PROJECT  
13+712 LOG MI. (E.B.)  
39+199 LOG MI. (W.B.)

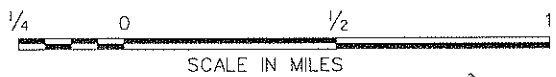
BEGIN PROJECT  
14+152 LOG MI. (E.B.)  
38+159 LOG MI. (W.B.)

PROJECT LIMITS  
DIAMOND GRIND  
1.04 LOG MI.  
(E.B. & W.B.)

ALT  
71

571

LOCATION MAP



1

DATE \_\_\_\_\_  
 ROUTE 96 /  
 JOB NO. J7P0801F /  
 CONTRACT ID 060929-701 /  
 PROJECT NO. \_\_\_\_\_  
 COUNTY JASPER /

\ ROUTE 96  
 LENGTH OF PROJECT  
 FROM US 71 TO MO 571

---

\ E.B.L.

\ BEGIN AT LOG MILE

\ LOG Mi 13.112

\ END AT LOG MILE

\ LOG Mi 14.152

APPARENT LENGTH

1.040 Mi

EXCEPTIONS:

NONE

0.000 Mi

NET LENGTH

\ 1.040 Mi

\ W.B.L.

\ BEGIN AT LOG MILE

\ LOG Mi 38.159

\ END AT LOG MILE

\ LOG Mi 39.199

APPARENT LENGTH

1.040 Mi

EXCEPTIONS:

NONE

0.000 Mi

NET LENGTH

\ 1.040 Mi

NOTE:

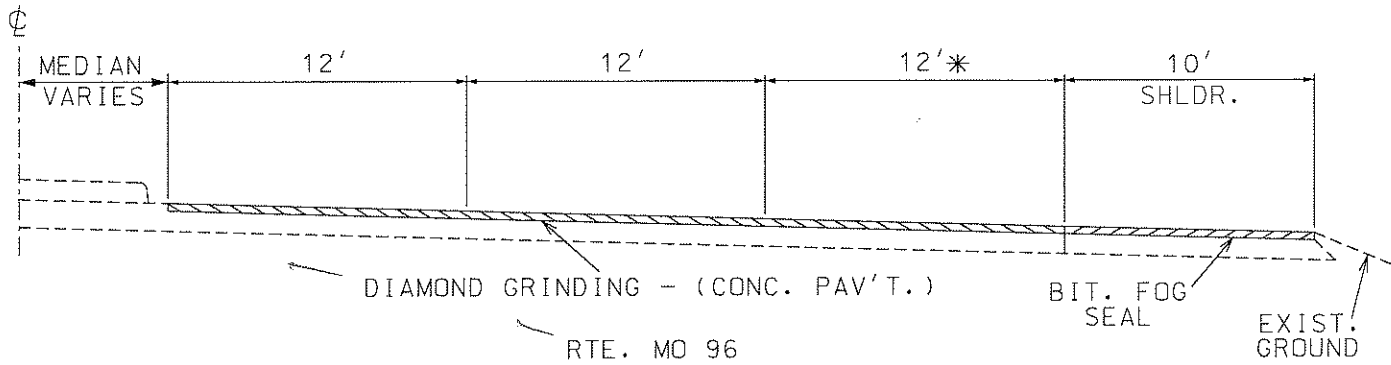
Any work indicated on the plans that extends beyond the project limits is considered incidental to and a part of the construction of this project.

DATE: \_\_\_\_\_

ROUTE 96 /  
 JOB NO. J7P0801F /  
 CONTRACT ID 060929-701 /  
 PROJECT NO.  
 COUNTY JASPER /

\ FINAL PLAN /  
 \ (2) /

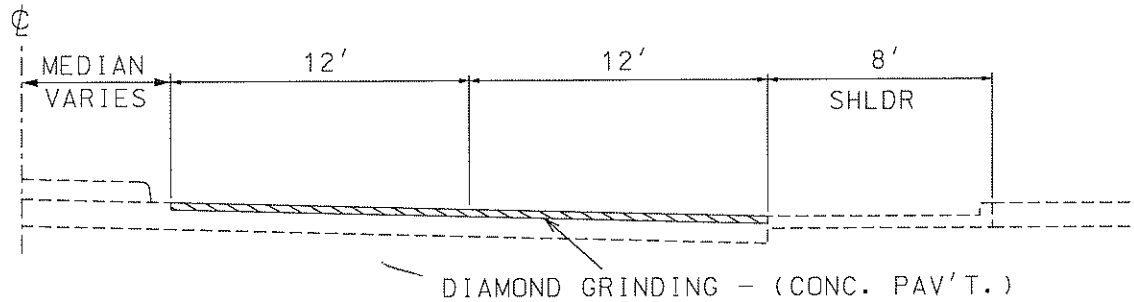
I:\aspe\proj\jasper\j7p0801f\pen sheets\documents\002\_001\_length\_of\_project.j7p0801f.dwg 08:37:33 PM 07/25/2007



LOG MI. 13.112 - LOG MI. 13.322 (E.B.L.)  
 LOG MI. 38.989 - LOG MI. 39.199 (W.B.L.)

NOTE:  
 SEE B-SHEETS FOR TRAVELWAY  
 WIDTH TRANSITIONS

3



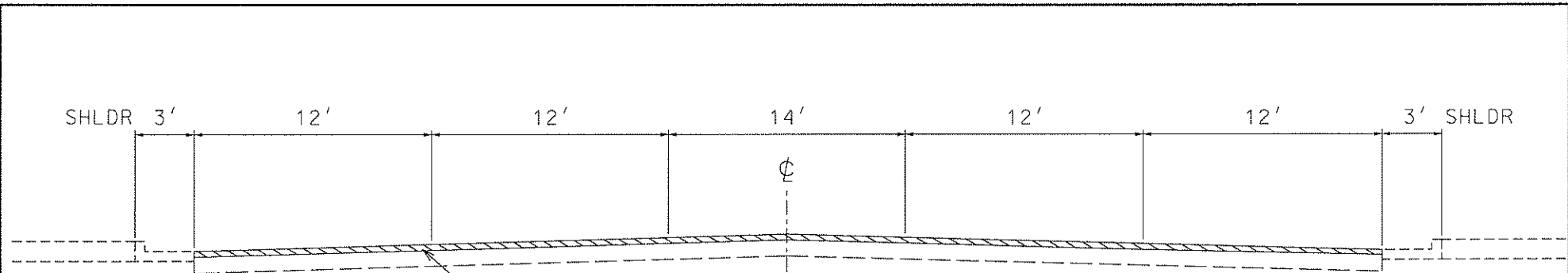
RTE. MO 96  
 LOG MI. 13.742 - LOG MI. 14.152 (E.B.L.)  
 LOG MI. 38.159 - LOG MI. 38.549 (W.B.L.)

FINAL PLAN

TYPICAL SECTION  
 SHEET 1 OF 2

DATE: \_\_\_\_\_

ROUTE 96 ✓  
 JOB NO. J7P0801F ✓  
 CONTRACT ID 060929-701 ✓  
 PROJECT NO.  
 COUNTY JASPER ✓

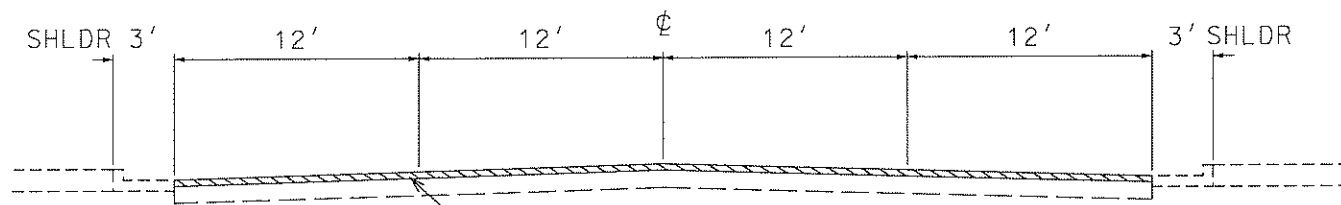
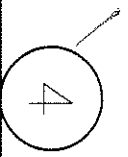


DIAMOND GRINDING - (CONC. PAV'T.)

RTE. MD 96

LOG MI. 13.358 - LOG MI. 13.742 (E.B.L.)  
 LOG MI. 38.549 - LOG MI. 38.919 (W.B.L.)

NOTE:  
 SEE B-SHEETS FOR TRAVELWAY  
 WIDTH TRANSITIONS



DIAMOND GRINDING - (CONC. PAV'T.)

RTE. MD 96

LOG MI. 13.322 - LOG MI. 13.358 (E.B.L.)  
 LOG MI. 38.919 - LOG MI. 38.989 (W.B.L.)

FINAL PLAN

TYPICAL SECTION  
 SHEET 2 OF 2

DATE: \_\_\_\_\_

ROUTE 96 ✓  
 JOB NO. J7P0801F ✓  
 CONTRACT ID 060929-701 ✓  
 PROJECT NO.  
 COUNTY JASPER ✓



DESIGN DESIGNATION

A.D.T. - 1991 = 14,000  
A.D.T. - 2011 = 17,050

D.N.V. = 10 %  
T = %  
V = 30 M.P.H.

# MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION PLANS FOR PROPOSED STATE HIGHWAY

FEDERAL AID PROJECT  
JASPER COUNTY

COUNTY JASPER  
ROUTE 96  
PROJECT MG-1607(701)  
JOB NO. 7-U-476

FINAL PLANS

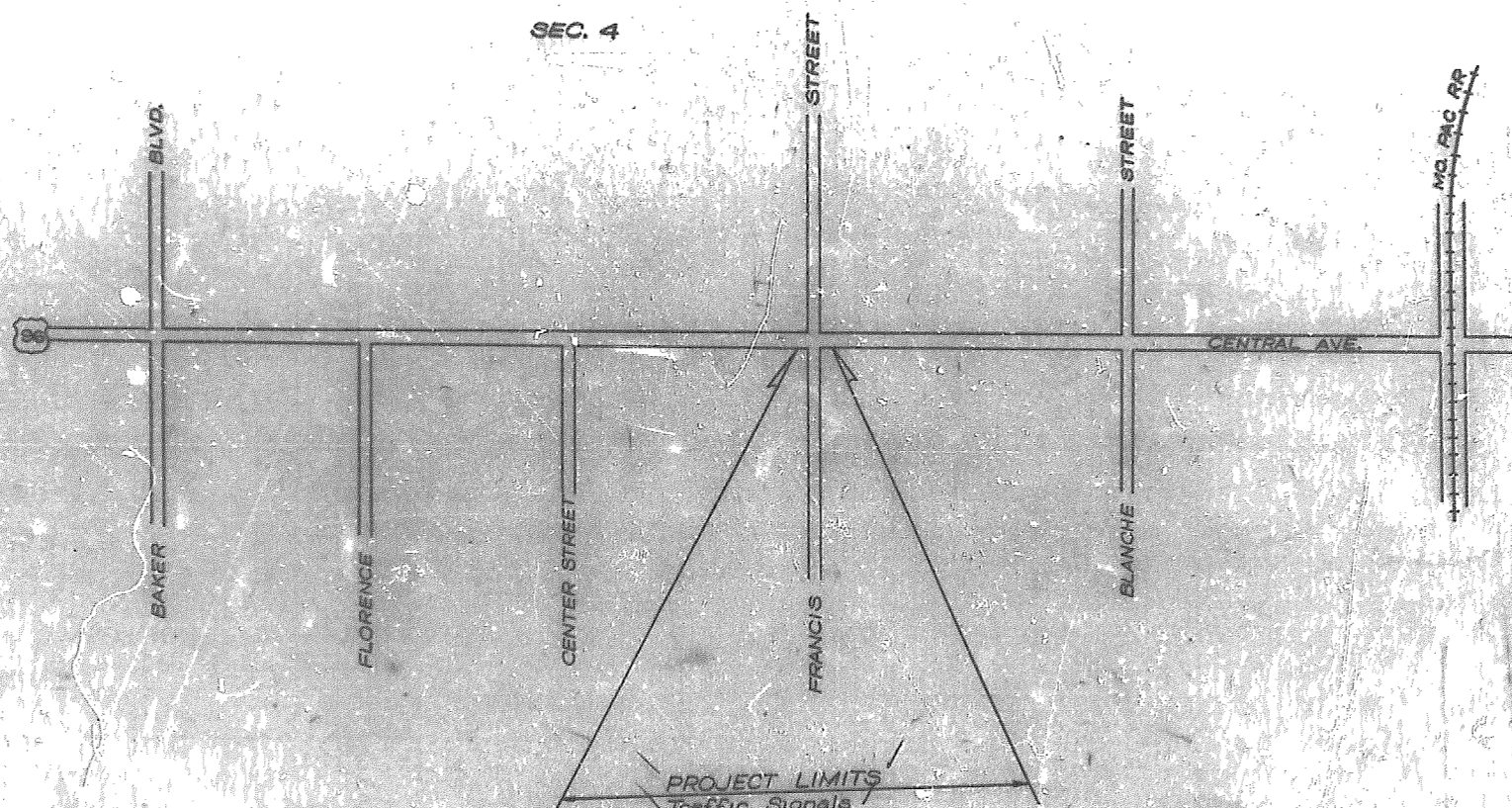
INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS ( SHEET )	2
SUMMARY ( / SHEET )	2-A
SUMMARY ( / SHEET )	2-B
PLAN-PROFILE	
REFERENCE POINTS	
SPECIAL SHEETS <i>TRAFFIC CONTROL PLAN</i>	3
LIGHTING	
SIGNALS	4-7
SIGNING	
CULVERT SECTIONS	
BRIDGE DRAWINGS	
STANDARD PLANS INDEX	8
CROSS SECTIONS	
COMPUTER DATA	



CITY OF CARTHAGE

SEC. 4

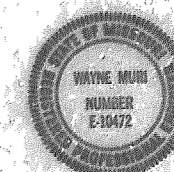


LENGTH OF PROJECT

END OF PROJECT	STA.	+	
BEGINNING OF PROJECT	STA.	+	
APPARENT LENGTH			FEET
EQUATIONS AND EXCEPTIONS			
TOTAL CORRECTIONS			FEET
NET LENGTH OF PROJECT			FEET
STATE LENGTH			MILES
			<i>Not Applicable</i>
FEDERAL LENGTH			MILES

CONVENTIONAL SIGNS  
(USED IN PLANS)

- BUILDINGS AND STRUCTURES
- GUARD RAIL
- CONCRETE RIGHT-OF-WAY MARKER
- STEEL RIGHT-OF-WAY MARKER
- FENCE
- CHAIN-LINK
- W.C. WIRE
- GATE
- UTILITIES
- TELEPHONE
- POWER
- GAS
- WATER



MISSOURI HIGHWAY AND  
TRANSPORTATION COMMISSION

SUBMITTED  
Wayne Munn 8-27-90  
CHIEF ENGINEER DATE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED  
\_\_\_\_\_  
DIVISION ADMINISTRATOR DATE

NOTE: DASHED OR OPEN SYMBOL INDICATES  
EXISTING FEATURE

361  
365360



# SUMMARY OF QUANTITIES

D-286  
REV JAN 19, 1996

STATE	MO	JOB NO.	7-U-476	PROJECT NO.	MG-1607(701)	COUNTY	JASPER
DIST NO.	7						

28  
96

## FINAL PLANS

SIGN	SIZE (INCHES)	AREA (SQ FT)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
<b>WARNING SIGNS</b>							
W01-1Lb	48X48	16.0					TURN (SYMBOL LEFT ARROW)
W01-1Rb	48X48	16.0					TURN (SYMBOL RIGHT ARROW)
W01-2Lb	48X48	16.0					CURVE (SYMBOL LEFT ARROW)
W01-2Rb	48X48	16.0					CURVE (SYMBOL RIGHT ARROW)
W01-3Lb	48X48	16.0					REVERSE TURN (SYMBOL LEFT ARROW)
W01-3Rb	48X48	16.0					REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4Lb	48X48	16.0					REVERSE CURVE (SYMBOL LEFT ARROW)
W01-4Lb2	48X48	16.0					DOUBLE ARROW REVERSE CURVE (SYM LT ARROWS)
W01-4Rb	48X48	16.0					REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4Rb2	48X48	16.0					DOUBLE ARROW REVERSE CURVE (SYM RT ARROWS)
W01-6	48X24	8.0					HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.0					HORIZONTAL ARROW (SYMBOL)
W01-7	48X24	8.0					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.0					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-8	18X24	3.0					CHEVRON (SYMBOL)
W03-1b	48X48	16.0					STOP AHEAD
W03-2b	48X48	16.0					YIELD AHEAD
W03-3b	48X48	16.0					SIGNAL AHEAD (SYMBOL)
W03-4b	48X48	16.0					BE PREPARED TO STOP
W04-1Lb	48X48	16.0					MERGE (SYMBOL FROM LEFT)
W04-1Rb	48X48	16.0					MERGE (SYMBOL FROM RIGHT)
W05-1a	48X48	16.0					ROAD NARROWS
W05-3a	48X48	16.0					ONE LANE BRIDGE
W06-1b	48X48	16.0					DIVIDED HIGHWAY
W06-2b	48X48	16.0					DIVIDED HIGHWAY ENDS
W06-3b	48X48	16.0					TWO WAY TRAFFIC (SYMBOL)
W06-3x	24X18	3.0					TWO WAY TRAFFIC (PLAQUE)
W08-1b	48X48	16.0					BUMP
W08-2b	48X48	16.0					DIP
W08-3	48X48	16.0					PAVEMENT ENDS
W08-4b	48X48	16.0					SOFT SHOULDER
W08-5b	48X48	16.0					SLIPPERY WHEN WET (SYMBOL)
W08-6b	48X48	16.0					TRUCK CROSSING
W08-6c	48X48	16.0					TRUCK ENT (INCLUDES W025-1b PLATE)
W08-7a	36X36	9.0					LOOSE GRAVEL
W08-9	48X48	16.0					LOW SHOULDER
W08-9La	48X48	16.0					UNEVEN PAVEMENT (SYM FOR LT DROPOFF)
W08-9Ra	48X48	16.0					UNEVEN PAVEMENT (SYM FOR RT DROPOFF)
W09-1R	48X48	16.0					RIGHT LANE ENDS (INCLUDES W025-3c PLATE)
W09-2Ra	48X48	16.0					LANE ENDS MERGE RIGHT (INCLUDES W025-3b PLATE)
W10-1A	42D1a	9.6					RAILROAD CROSSING
W012-1	24X24	4.0					DOUBLE DOWN ARROW (SYMBOL)
W012-2a	48X48	16.0					LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.0					LOW CLEARANCE (PLAQUE)
W012-3a,b	144X24	24.0					OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W013-1a	24X24	4.0					ADVISORY SPEED (PLAQUE)
W020-1	48X48	16.0		4'164.0'			ROAD CONST AHEAD (INCLUDES W025-6 PLATE)
W020-2	48X48	16.0					DETOUR AHEAD (INCLUDES W025-1b PLATE)
W020-3	48X48	16.0					ROAD CLOSED AHEAD (INCLUDES W025-1c PLATE)
W020-4a	48X48	16.0					ONE LANE ROAD AHEAD (INCLUDES W025-1a PLATE)
W020-5	48X48	16.0		2'732.0'			RIGHT LANE CLOSED AHEAD (INCL W025-3d PLATE)
W020-6a	48X48	16.0					RIGHT LANE CLOSED (INCLUDES W025-3c PLATE)
W020-7a	48X48	16.0					FLAGMAN AHEAD (INCLUDES W025-1b PLATE)
W020-8	36X18	4.5					WORKERS AHEAD
W020-9a	48X48	16.0					OPEN TRENCH
W021-2b	48X48	16.0					FRESH OIL
W021-5b	48X48	16.0					SHOULDER WORK AHEAD
W021-7	36X36	9.0					SAND BLASTING
W022-1	48X48	16.0					BLASTING ZONE 1000 FT
W022-2	42X36	10.5					TURN OFF 2-WAY RADIO
W022-3	42X36	10.5					END BLASTING ZONE
W022-5	30X30	6.3					NO PASSING ZONES UNMARKED
W025-1a	26X9						1000 FT/1500 FT Plate
W025-1b	38X9						500 FT/1000 FT Plate
W025-1c	34X9						500 FT/1000 FT Plate

SIGN	SIZE (INCHES)	AREA (SQ FT)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
<b>REGULATORY SIGNS</b>							
W025-3b	30X9						LEFT Plate
W025-3c	33X9						LEFT/CENTER Plate
W025-3d	22X9						LEFT/CENTER Plate
W025-5	30X12	2.6					1/2 MILE/1 MILE (PLAQUE)
W025-6	28X9						RAMP/BRIDGE Plate
R1-1b	48X48	13.25					STOP
R1-2a	48X48X48	6.93					YIELD
R1-3	20X9	1.25					4-WAY (PLAQUE)
R1-5	20X9	1.25					3-WAY (PLAQUE)
R2-1b	36X48	12.00					SPEED LIMIT XX
R2-5	36X48	12.00					REDUCED SPEED AHEAD
R3-1b	36X48	12.00					NO RIGHT TURN
R3-2b	36X48	12.00					NO LEFT TURN
R3-3a	36X36	9.00					NO TURNS
R3-4b	36X48	12.00					NO U-TURNS
R3-7L	30X30	6.25					LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25					RIGHT LANE MUST TURN RIGHT
R4-1b	36X48	12.00					DO NOT PASS
R4-2b	36X48	12.00					PASS WITH CARE
R4-7Lb	36X48	12.00					KEEP LEFT (HORIZONTAL ARROW)
R4-7Rb	36X48	12.00					KEEP RIGHT (HORIZONTAL ARROW)
R4-17L	36X36	9.00					KEEP LEFT
R4-17R	36X36	9.00					KEEP RIGHT
R5-1	30X30	6.25					DO NOT ENTER
R5-1A	36X24	6.00					WRONG WAY
R6-1La	48X18	6.00					ONE WAY ARROW (LEFT)
R6-1Ra	48X18	6.00					ONE WAY ARROW (RIGHT)
R6-2La	24X30	5.00					ONE WAY (LEFT)
R6-2Ra	24X30	5.00					ONE WAY (RIGHT)
R11-2	48X30	10.00					ROAD CLOSED
R11-3	60X30	12.50					ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50					ROAD CLOSED TO THRU TRAFFIC
R12-3B	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)
R20-1	36X18	4.50					WHEN FLASHING
<b>GUIDE SIGNS</b>							
G020-1	60X36	15.00					ROAD CONSTRUCTION NEXT XX MILES
G020-2	60X24	10.00					END CONSTRUCTION
M04-8a	30X15	3.13					DETOUR (PLAQUE)
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)
M04-11	24X18	3.00					DETOUR ENDS
M4-1L	21X15	2.19					ADVANCE LEFT TURN ARROW
M5-1R	21X15	2.19					ADVANCE RIGHT TURN ARROW
<b>MISCELLANEOUS SIGNS</b>							
<div style="display: flex; justify-content: space-between;"> <span>616-10.05</span> <span>CONSTRUCTION SIGNS TOTAL 196.0</span> </div> <div style="display: flex; justify-content: space-between;"> <span>616-10.10</span> <span>RELOCATED SIGNS TOTAL 96</span> </div>							

ITEM NUMBER	SIZE (INS)	TOTAL QTY	DESCRIPTION
616-10.20	36X18	35	CHANNELIZER (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		TYPE III OBJECT MARKER
616-10.50	8		FLASHING ELECTRIC LIGHT
616-10.51	---		WARNING LIGHT TYPE A
616-10.52	---		WARNING LIGHT TYPE B
616-10.53	---		WARNING LIGHT TYPE C
616-10.54	---		STROBE LIGHT
616-10.60	---		RAISED PAVEMENT MARKER
616-10.70	28		FLEXIBLE DELINEATOR
616-10.80	LIN FT		EDGE DROPOFF TREATMENT
612-10.30	72X144		MOVEABLE BARRICADE (THREE RAILS)
612-90.20	48X48	4	INSTALLING GIVE EM A BRAKE

367 362 363



① W020-1



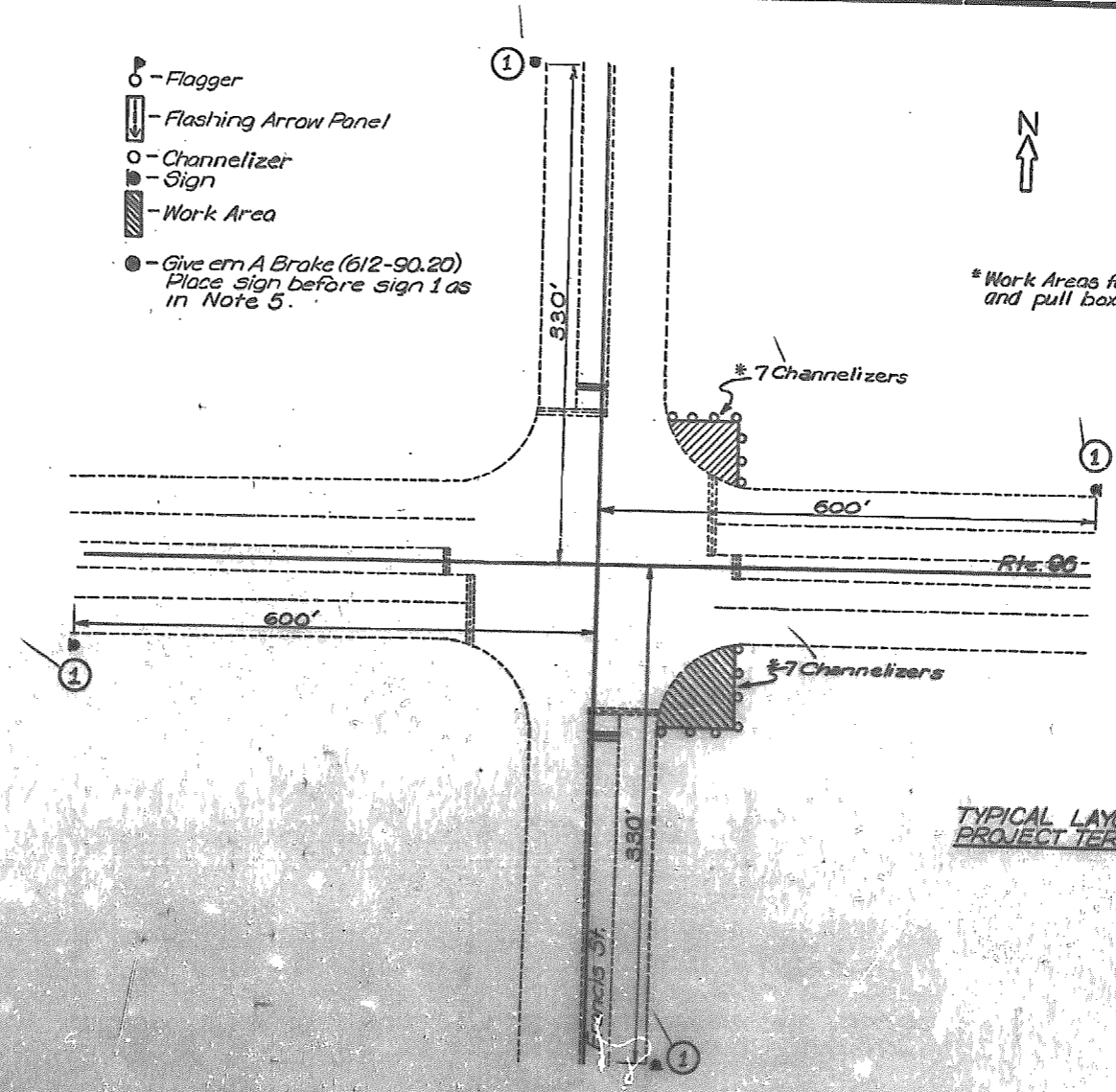
③ W020-5  
(Incl. Left/Center Plate W025-3d)

- - Flagger
- ▭ - Flashing Arrow Panel
- - Channelizer
- - Sign
- ▨ - Work Area
- - Give em A Brake (612-90.20)  
Place sign before sign 1 as in Note 5.

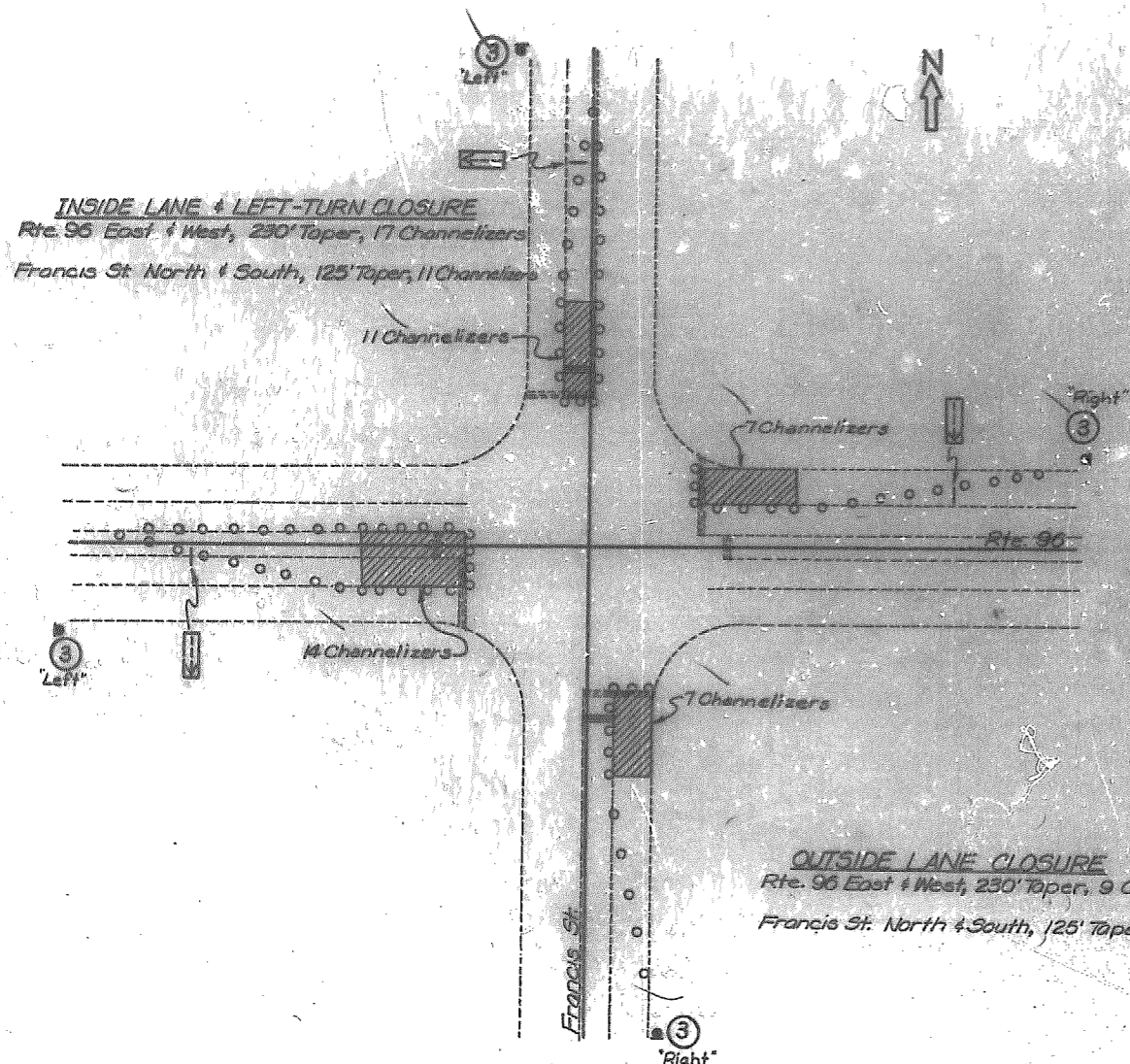
STATE MO.	JOB NO. 7-U-476	SHEET NO. 3
DIST. NO. 7	PROJECT NO. MG-1607(701)	ROUTE 96
	COUNTY JASPER	

FINAL PLANS

\* Work Areas for installing conduit for detectors, signals, and pull boxes



Sign ③ is located approx. 30' back of last channelizer:



- NOTES:
- 1) Flaggers will be used when directed by the Engineer.
  - 2) Sign ① will be non-portable mounted.
  - 3) Sign ③ will be portable mounted.
  - 4) All pavement markings "By Others"
  - 5) Sign ② mounted non-portable 300' ahead of sign ① on each side of street facing traffic in all four directions.
  - 6) At least one lane in each direction must be open at all times including when saw cutting conduit across Rte. 96.

DATE	
BY	
REVISIONS	
NO.	DESCRIPTION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

368

354

368

STATE	JOB NO. 7-U-476	SHEET NO.	4
MO.	PROJECT NO. MG-1607(701)	ROUTE	96
DIST. NO. 7	COUNTY JASPER		

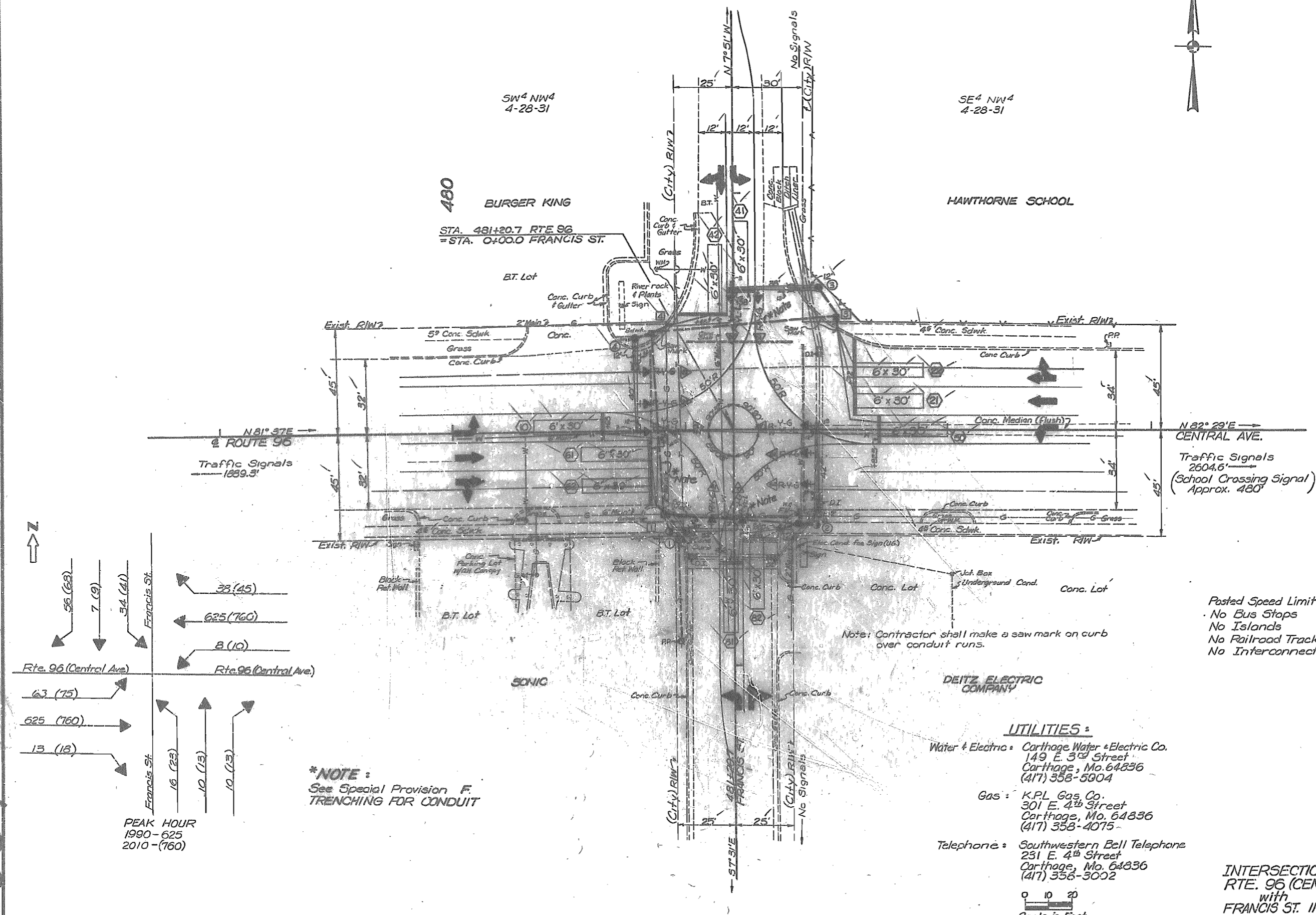
FINAL PLANS



DATE	BY
NO.	NO.
DATE	BY
NO.	NO.

DATE	BY
NO.	NO.
DATE	BY
NO.	NO.

369



Traffic Signals  
2604.6'  
(School Crossing Signal)  
Approx. 480'

Posted Speed Limit: 30 M.P.H. Rte. 96  
No Bus Stops  
No Islands  
No Railroad Tracks  
No Interconnection

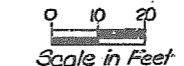
**\*NOTE:**  
See Special Provision F.  
TRENCHING FOR CONDUIT

**UTILITIES:**

Water & Electric: Carthage Water & Electric Co.  
149 E. 3<sup>rd</sup> Street  
Carthage, Mo. 64836  
(417) 358-5904

Gas: K.P.L. Gas Co.  
301 E. 4<sup>th</sup> Street  
Carthage, Mo. 64836  
(417) 358-4075

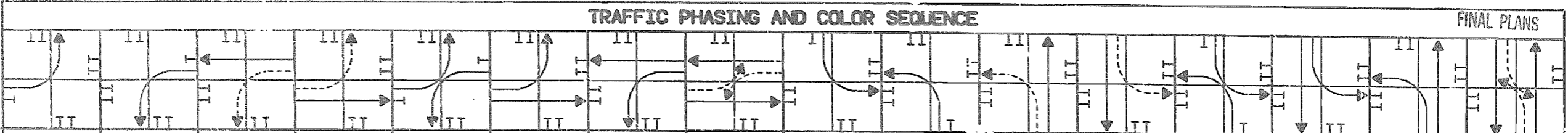
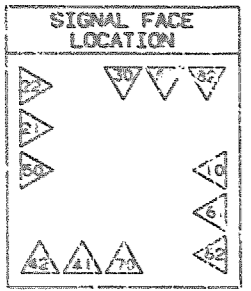
Telephone: Southwestern Bell Telephone  
231 E. 4<sup>th</sup> Street  
Carthage, Mo. 64836  
(417) 358-3022



INTERSECTION OF  
RTE. 96 (CENTRAL AVE.)  
with  
FRANCIS ST. IN CARTHAGE



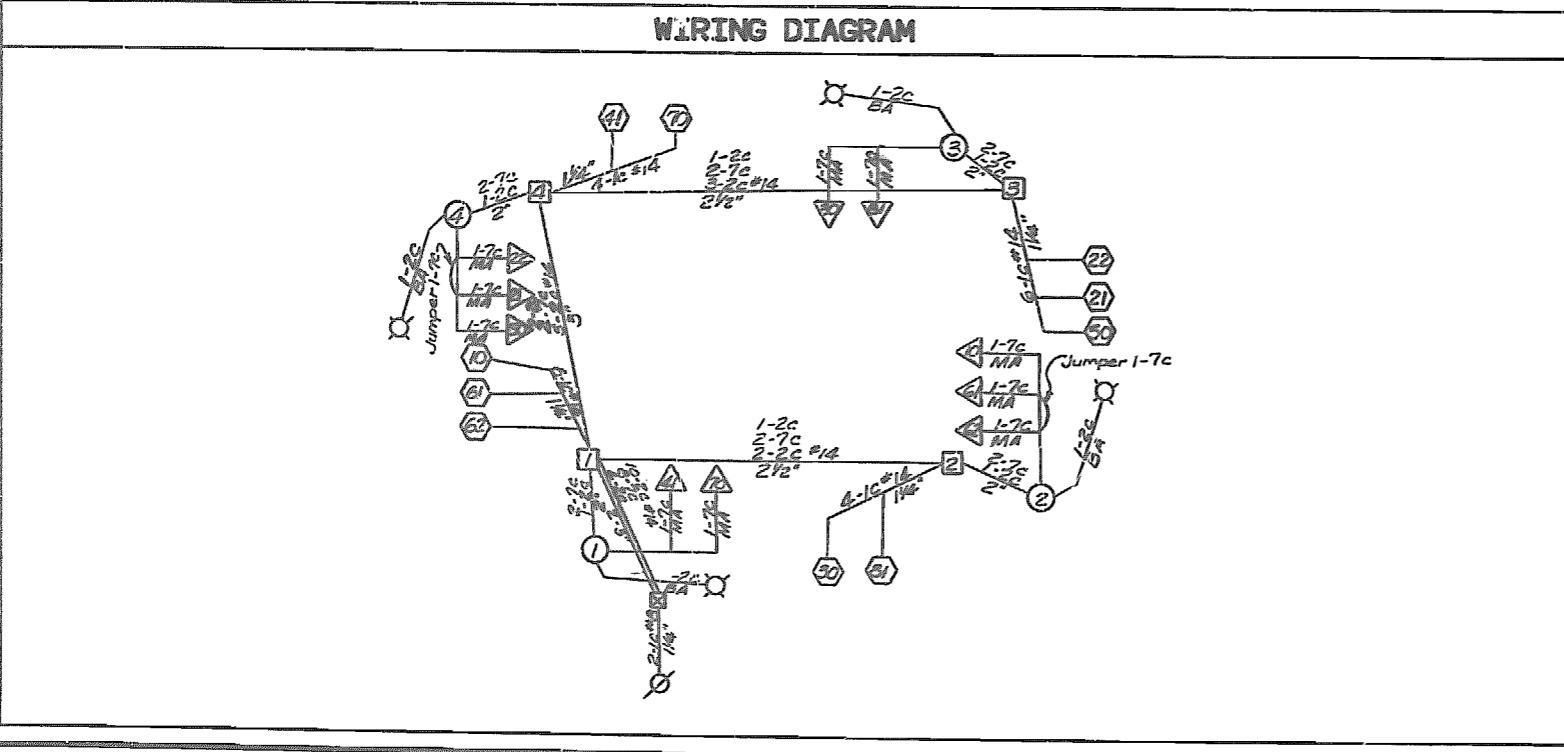
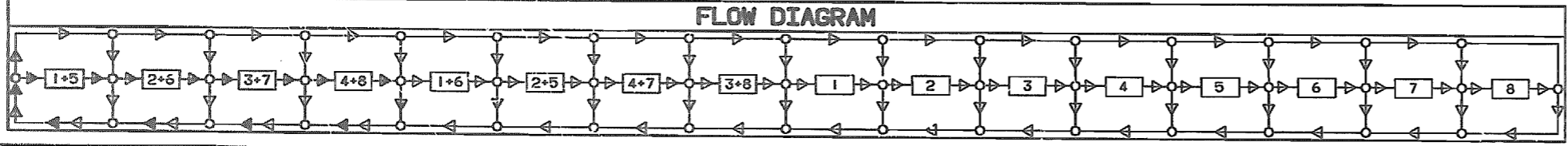




FINAL PLANS

CONT. NO.	PHASE 1	PHASE 5	PHASE 2	PHASE 6	PHASE 1 + 5	PHASE 1 + 6	PHASE 2 + 5	PHASE 2 + 6	PHASE 7	PHASE 3	PHASE 8	PHASE 4	PHASE 3 + 7	PHASE 4 + 7	PHASE 3 + 8	PHASE 4 + 8	FACE NO.
APPROACH	FACE NO.	CLEAR TO PHASE				CLEAR TO PHASE				CLEAR TO PHASE		CLEAR TO PHASE		CLEAR TO PHASE		FACE NO.	
EAST BOUND ROUTE 96	30	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	LYYYL	LYYYL	RRRRRRRR	LYYYL	LYYYL	RRRRRRRR	30
	81&82	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	81&82
WEST BOUND ROUTE 96	70	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	LYYYL	LYYYL	RRRRRRRR	LYYYL	LYYYL	RRRRRRRR	LYYYL	70
	41&42	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	41&42
SOUTH BOUND FRANCIS ST.	10	LYYYL	RRRRRRRR	RRRRRRRR	GYG	LYYYL	LYYYL	RRRRRRRR	GYG	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	10
	61&62	RRRRRRRR	RRRRRRRR	RRRRRRRR	GYG	RRRRRRRR	GYG	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	61&62
NORTH BOUND FRANCIS ST.	50	RRRRRRRR	LYYYL	GYG	RRRRRRRR	LYYYL	RRRRRRRR	LYYYL	GYG	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	50
	21&22	RRRRRRRR	RRRRRRRR	GYG	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	RRRRRRRR	21&22

372 367 368



PHASE ON RECALL WITH EQUAL TIME SETTINGS.  
 SKIP PHASE.  
 COMBINED RECALL & SKIP PHASE.  
 IF CALLED, ALL NON-CONFLICTING PHASES SHALL COMBINE AND TIME CONCURRENTLY. TIMING TO BE DETERMINED BY THE ENGINEER AT SIGNAL TURN ON.

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
- VEHICLE 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 - 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

FLASHING OPERATION  
 ALL APPROACHES FR  
 CONTROLLER TYPE 80

TRAFFIC SIGNAL CONTROL OPERATION  
 RTE. 96 (CENTRAL AVE.)  
 INTERSECTION OF  
 FRANCIS ST.  
 WITH

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION  
STANDARD PLANS

REV SEP 1, 1990

STATE MO	JOB NO. 7U 476-06	SHEET NO. 8
DIST NO. 7	PROJECT NO. MG-1607(701)	ROUTE 06
	COUNTY JASPER	

FINAL PLANS

373 368 369

✓ 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
203.40E	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (OTHER THAN 6:1 FORESLOPE)
203.41E	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (6:1 FORESLOPE)
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
604.05B	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
604.25C	DROP INLET - TYPE F
604.26D	DROP INLET - TYPE G
604.27C	DROP INLET - TYPE S (3 SHEETS)
604.28E	DROP INLET - TYPE T (ALSO INCLUDE 614.30)
604.29C	DROP INLET - TYPE X
604.30F	CONCRETE MANHOLES (ALSO INCLUDE 614.30)
604.40E	PIPE COLLARS
605.10A	CLASS A UNDERDRAINS
606.00U	GUARD RAIL (2 SHEETS) *
606.22H	BRIDGE ANCHOR SECTION (SAFETY BARRIER CURB ON BRIDGE) (ALSO INCLUDE 606.00) *
606.23A	BRIDGE ANCHOR SECTION (THREE BEAM RAIL ON BRIDGE) (ALSO INCLUDE 606.00) *
606.30E	TERMINAL SECTION (ALSO INCLUDE 606.00)
606.40A	GUARD CABLE
607.10R	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
609.15B	PAVED DITCHES
609.40D	DRAIN BASIN, SHOULDER PAVING & FILL SLOPE AT BRIDGE ENDS
609.60B	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
613.00B	PAVEMENT REPAIR
614.10Q	CURB INLETS, GRATES & BEARING PLATES *
614.30D	MANHOLE FRAMES & COVERS
615.00A	OFFICE FOR ENGINEER
✓ 616.10M	TRAFFIC CONTROL DEVICES (3 SHEETS)(ALSO INCLUDE 903.01) *
617.00W	CONCRETE TRAFFIC BARRIER (3 SHEETS) *
702.01F	16" CONCRETE PILES (APPROVED TYPES) (2 SHEETS)
702.02B	CAST-IN-PLACE CONCRETE PILES (APPROVED TYPES)
703.21D	CONCRETE BOX CULVERTS, H20 LOADING (3 SHEETS)(FLARED WINGS)(INCL 706.35)
703.24E	CONCRETE BOX CULVERTS, SKEW DATA (703.30)(INCL 706.35)
703.25E	CONCRETE BOX CULVERTS, SKEW DATA (703.21)(3 SHTS)(FLRD WINGS)(INCL 706.35)
703.30E	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)
703.50G	CONCRETE DOUBLE BOX STRUCTURE-SQUARE (INCL 706.35)
703.51F	CONCRETE DOUBLE BOX STRUCTURE-SKEWED (INCL 706.35)
703.52C	CONCRETE DOUBLE BOX STRUCTURE-CUT SECTIONS (INCL 706.35)
703.54D	DOUBLE BOX STRUCTURE REINFORCEMENT-H20 OR H20 LOADING (8 SHEETS)
703.55D	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS) SQUARE (INCL 706.35)
703.56D	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS) SKEWED (INCL 706.35)
703.60C	CONCRETE BOX STRUCTURE-PIPE INLET
703.70C	CONCRETE TRIPLE BOX STRUCTURE-SQUARE (2 SHEETS)(INCL 706.35)
703.71C	CONCRETE TRIPLE BOX STRUCTURE-SKEWED (2 SHEETS)(INCL 706.35)
703.72C	CONCRETE TRIPLE BOX STRUCTURE-(FLARED WINGS)(SQUARE)(2 SHEETS)(INCL 706.35)
703.73C	CONCRETE TRIPLE BOX STRUCTURE-(FLARED WINGS)(SKEWED)(2 SHEETS)(INCL 706.35)
703.74C	CONCRETE TRIPLE BOX STRUCTURE-CUT SECTIONS (INCL 706.35)
703.76B	CONCRETE TRIPLE BOX STRUCTURE REINFORCEMENT-H20 OR H20 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
731.00S	PRECAST MANHOLES (ALSO INCL 614.30)
731.10J	PRECAST DROP INLETS (4 SHTS)(ALSO INCL 614.30 & 614.10) *

✓ NO.	DESCRIPTION
732.00L	FLARED END SECTION (2 SHEETS)
806.02A	STAPLE PLACEMENT FOR PLASTIC NETTING
HIGHWAY LIGHTING	
901.00P	POLES & APPURTENANCES-30' (3 SHEETS)
901.01U	POLES & APPURTENANCES-45' (3 SHEETS)
901.05A	CONTROL PANEL CABINET DETAILS (2 SHEETS)(SEE NOTE)
901.12C	POLE MOUNT CONT STA-SECONDARY SERV-480 V MULTI CIR (NOT METERED)
901.15E	POLE MOUNT CONT STA-SEC SERV-120,240, & 480 V MULTI CIR
901.16D	POLE MOUNT CONT STA-SEC SERV-480 V MULTI CIR (METERED)
901.18D	POLE MOUNT CONT STA-SEC SERV-120/240 V MULTI CIR
901.19D	POLE MOUNT CONT STA-SEC SERV-240 V MULTI CIR (NOT METERED)
901.20D	POLE MOUNT CONT STA-SEC SERV-120/240 V MULTI CIR (SIG METERED)
901.22E	POLE MOUNT CONT STA-SEC SERV-120/240 & 480 V MULTI CIR (BOTH METERED)
901.23E	POLE MOUNT CONT STA-SEC SERV-240 V MULTI CIR (METERED)
901.24D	POLE MOUNT CONT STA-SEC SERV-240 V MULTI CIR (LIGHTS & SIGNALS-BOTH METERED)
901.25D	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	
✓ 902.00F	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
✓ 902.40J	TUBULAR STEEL POST
✓ 902.50F	DETECTORS
902.60F	SPAN WIRE DETAILS-STEEL POST
902.70C	SPAN WIRE DETAILS-WOOD POLE
✓ 902.80A	TRAFFIC SIGNAL SYMBOLS
HIGHWAY SIGNING	
✓ 903.01C	ALPHABETS (2 SHEETS)
903.02X	HIGHWAY SIGNING (7 SHEETS)
✓ 903.03AN	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 JANUARY 1990

# CENTRAL AVENUE & GARRISON AVENUE SIGNAL & INTERSECTION IMPROVEMENTS CARTHAGE, MISSOURI

VICINITY MAP & INDEX ..... 1  
 PLAN SHEET - ROAD WORK ... 2  
 PLAN SHEET - SIGNALS ..... 3  
 STRIPING PLANS ..... 4-5  
 TRAFFIC CONTROL PLANS .... 6  
 SIGNAL DETAILS ..... 7-10

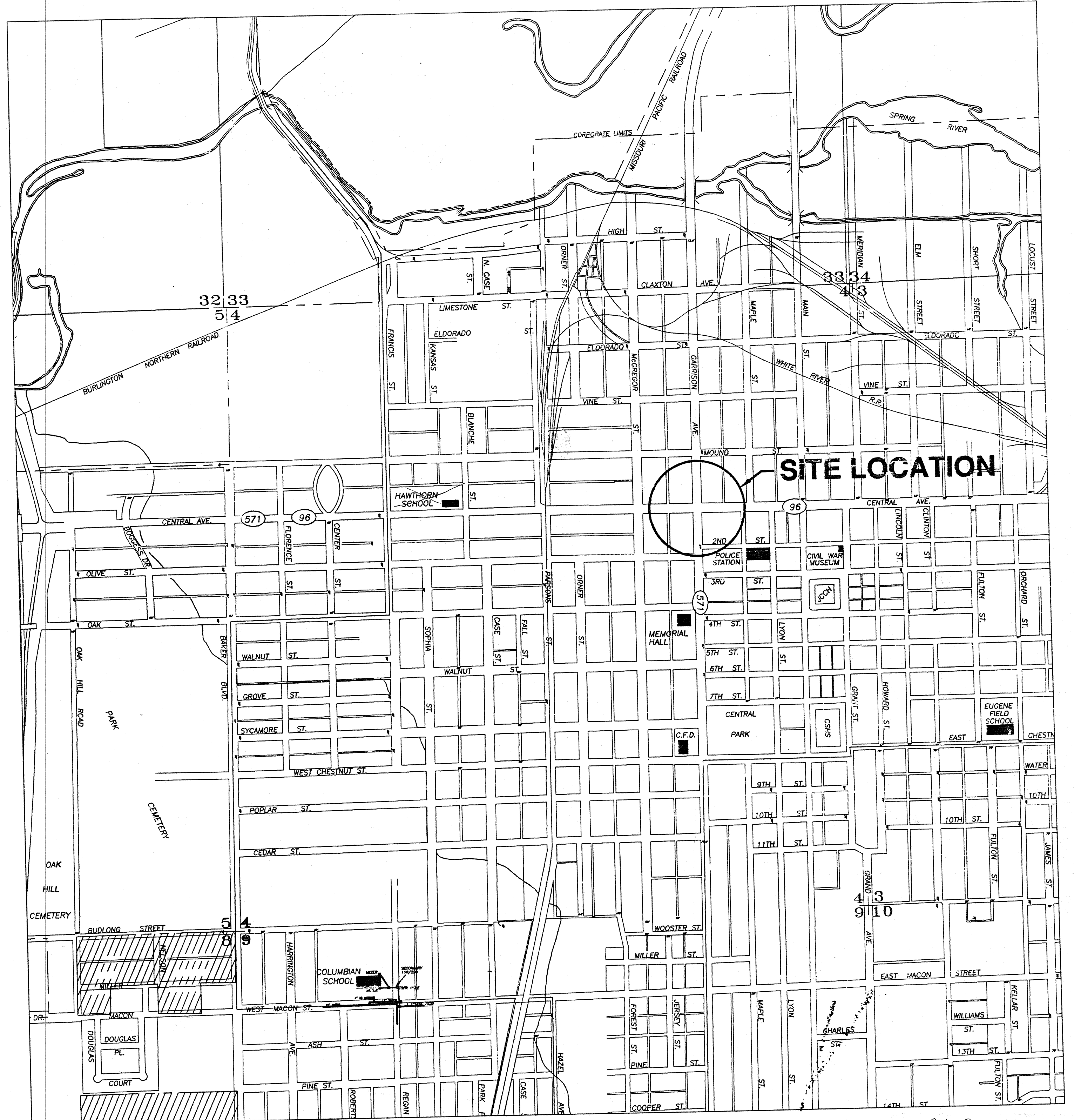
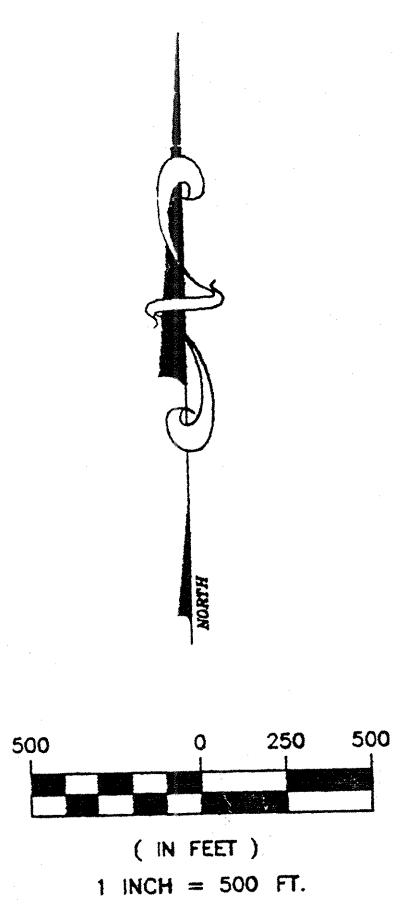
OCTOBER 1998

PLANS PREPARED FOR:  
**CITY OF CARTHAGE**  
 623 EAST 7th STREET  
 CARTHAGE, MISSOURI 64836  
 (417)-358-9336

PLANS PREPARED BY:  
**TRI-STATE ENGINEERING CO.**  
 P.O. BOX 1867  
 JOPLIN, MISSOURI 64802  
 (417)-781-0643

*Jeff*  
*Sprauls Const*  
 417-682-9577  
 397 W. Hwy DD  
 Carthage, Mo. 64759  
 682-2277  
*Pat*  
*Steve Miller - Telephone*  
 358-8874  
 878  
*James Ewing*  
*Leggett & Platt* 358-8131

*Call*  
 849-1928



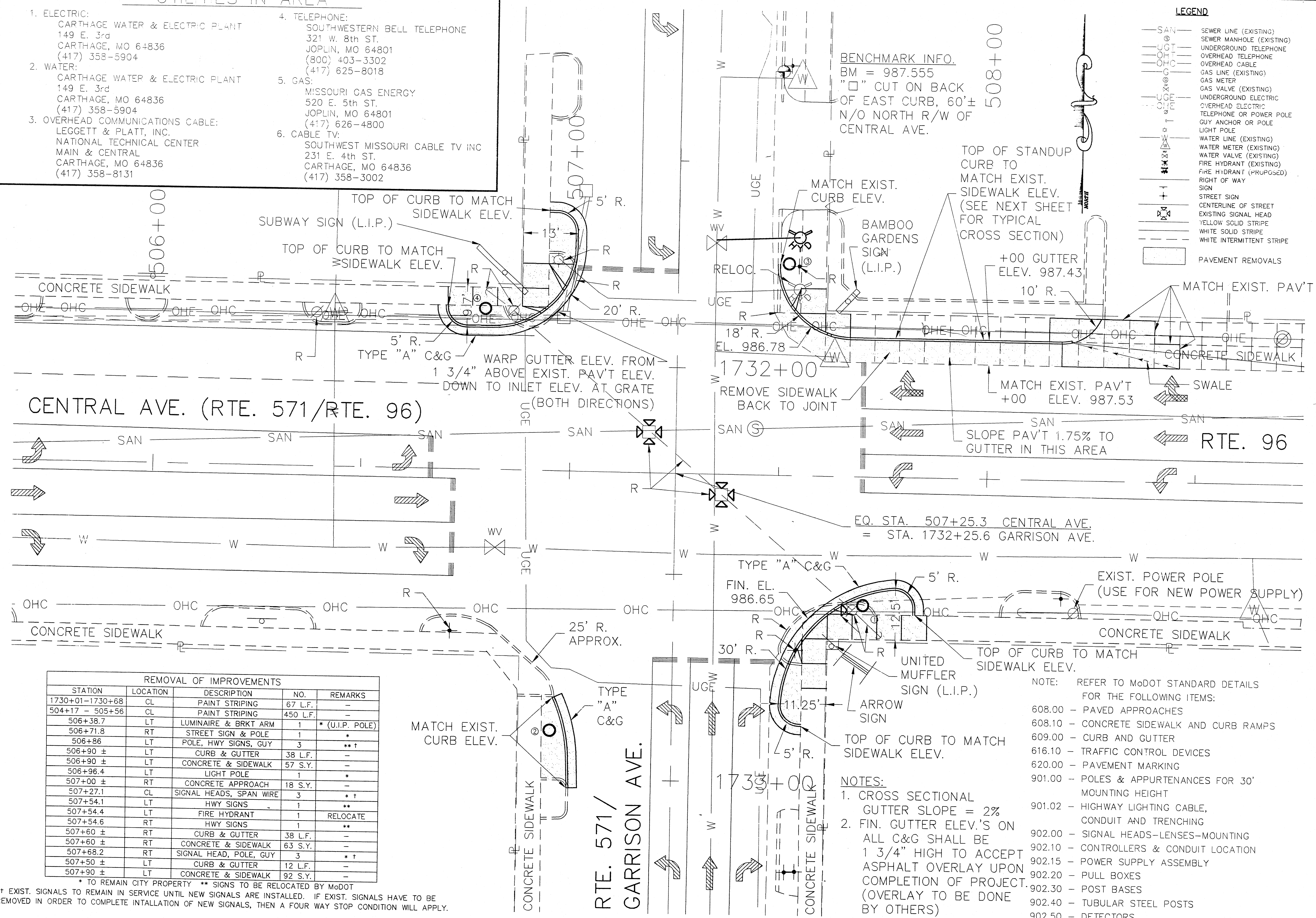
VICINITY MAP - CARTHAGE, MISSOURI M 96 @ M 571

# UTILITIES IN AREA

- ELECTRIC:**  
CARTHAGE WATER & ELECTRIC PLANT  
149 E. 3rd  
CARTHAGE, MO 64836  
(417) 358-5904
- WATER:**  
CARTHAGE WATER & ELECTRIC PLANT  
149 E. 3rd  
CARTHAGE, MO 64836  
(417) 358-5904
- OVERHEAD COMMUNICATIONS CABLE:**  
LEGGETT & PLATT, INC.  
NATIONAL TECHNICAL CENTER  
MAIN & CENTRAL  
CARTHAGE, MO 64836  
(417) 358-8131
- TELEPHONE:**  
SOUTHWESTERN BELL TELEPHONE  
321 W. 8th ST.  
JOPLIN, MO 64801  
(800) 403-3302  
(417) 625-8018
- GAS:**  
MISSOURI GAS ENERGY  
520 E. 5th ST.  
JOPLIN, MO 64801  
(417) 626-4800
- CABLE TV:**  
SOUTHWEST MISSOURI CABLE TV INC  
231 E. 4th ST.  
CARTHAGE, MO 64836  
(417) 358-3002

## LEGEND

- SAN — SEWER LINE (EXISTING)
- ⊙ SAN ⊙ SEWER MANHOLE (EXISTING)
- UGT — UNDERGROUND TELEPHONE
- OHT — OVERHEAD TELEPHONE
- OHC — OVERHEAD CABLE
- G — GAS LINE (EXISTING)
- ⊙ G ⊙ GAS METER
- G — GAS VALVE (EXISTING)
- UGE — UNDERGROUND ELECTRIC
- OUE — OVERHEAD ELECTRIC
- T — TELEPHONE OR POWER POLE
- A — GUY ANCHOR OR POLE
- L — LIGHT POLE
- W — WATER LINE (EXISTING)
- ⊙ W ⊙ WATER METER (EXISTING)
- V — WATER VALVE (EXISTING)
- F — FIRE HYDRANT (EXISTING)
- FH — FIRE HYDRANT (PROPOSED)
- R — RIGHT OF WAY
- S — SIGN
- ST — STREET SIGN
- C — CENTERLINE OF STREET
- ⊙ — EXISTING SIGNAL HEAD
- — YELLOW SOLID STRIPE
- — WHITE SOLID STRIPE
- — WHITE INTERMITTENT STRIPE
- — PAVEMENT REMOVALS



**BENCHMARK INFO.**  
BM = 987.555  
"□" CUT ON BACK  
OF EAST CURB, 60'±  
N/O NORTH R/W OF  
CENTRAL AVE.

TOP OF STANDUP  
CURB TO  
MATCH EXIST.  
SIDEWALK ELEV.  
(SEE NEXT SHEET  
FOR TYPICAL  
CROSS SECTION)

+00 GUTTER  
ELEV. 987.43  
10' R.

MATCH EXIST. PAV'T  
+00 ELEV. 987.53

SAN  
SLOPE PAV'T 1.75% TO  
GUTTER IN THIS AREA

EQ. STA. 507+25.3 CENTRAL AVE.  
= STA. 1732+25.6 GARRISON AVE.

EXIST. POWER POLE  
(USE FOR NEW POWER SUPPLY)

NOTE: REFER TO MoDOT STANDARD DETAILS  
FOR THE FOLLOWING ITEMS:

- 608.00 - PAVED APPROACHES
- 608.10 - CONCRETE SIDEWALK AND CURB RAMPS
- 609.00 - CURB AND GUTTER
- 616.10 - TRAFFIC CONTROL DEVICES
- 620.00 - PAVEMENT MARKING
- 901.00 - POLES & APPURTENANCES FOR 30' MOUNTING HEIGHT
- 901.02 - HIGHWAY LIGHTING CABLE, CONDUIT AND TRENCHING
- 902.00 - SIGNAL HEADS-LENSES-MOUNTING
- 902.10 - CONTROLLERS & CONDUIT LOCATION
- 902.15 - POWER SUPPLY ASSEMBLY
- 902.20 - PULL BOXES
- 902.30 - POST BASES
- 902.40 - TUBULAR STEEL POSTS
- 902.50 - DETECTORS
- 902.80 - TRAFFIC SIGNAL SYMBOLS

- NOTES:**
- CROSS SECTIONAL GUTTER SLOPE = 2%
  - FIN. GUTTER ELEV.'S ON ALL C&G SHALL BE 1 3/4" HIGH TO ACCEPT ASPHALT OVERLAY UPON COMPLETION OF PROJECT. (OVERLAY TO BE DONE BY OTHERS)

REMOVAL OF IMPROVEMENTS				
STATION	LOCATION	DESCRIPTION	NO.	REMARKS
1730+01-1730+68	CL	PAINT STRIPING	67 L.F.	-
504+17 - 505+56	CL	PAINT STRIPING	450 L.F.	-
506+38.7	LT	LUMINAIRE & BRKT ARM	1	* (U.I.P. POLE)
506+71.8	RT	STREET SIGN & POLE	1	*
506+86	LT	POLE, HWY SIGNS, GUY	3	**†
506+90 ±	LT	CURB & GUTTER	38 L.F.	-
506+90 ±	LT	CONCRETE & SIDEWALK	57 S.Y.	-
506+96.4	LT	LIGHT POLE	1	*
507+00 ±	RT	CONCRETE APPROACH	18 S.Y.	-
507+27.1	CL	SIGNAL HEADS, SPAN WIRE	3	*†
507+54.1	LT	HWY SIGNS	1	**
507+54.4	LT	FIRE HYDRANT	1	RELOCATE
507+54.6	RT	HWY SIGNS	1	**
507+60 ±	RT	CURB & GUTTER	38 L.F.	-
507+60 ±	RT	CONCRETE & SIDEWALK	63 S.Y.	-
507+68.2	RT	SIGNAL HEAD, POLE, GUY	3	*†
507+50 ±	LT	CURB & GUTTER	12 L.F.	-
507+90 ±	LT	CONCRETE & SIDEWALK	92 S.Y.	-

\* TO REMAIN CITY PROPERTY \*\* SIGNS TO BE RELOCATED BY MoDOT  
† EXIST. SIGNALS TO REMAIN IN SERVICE UNTIL NEW SIGNALS ARE INSTALLED. IF EXIST. SIGNALS HAVE TO BE REMOVED IN ORDER TO COMPLETE INTALLATION OF NEW SIGNALS, THEN A FOUR WAY STOP CONDITION WILL APPLY.

ROAD WORK PLAN SHEET  
CENTRAL AVENUE & GARRISON AVENUE

CITY OF CARTHAGE,  
MISSOURI

---

PROJECT: CENTRAL AVENUE & GARRISON AVENUE  
CUSTOMER: CITY OF CARTHAGE, MISSOURI

---

NO.	DATE	INIT.	REVISIONS

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**TRI-STATE ENGINEERING INC.**  
SURVEYING  
ENGINEERING

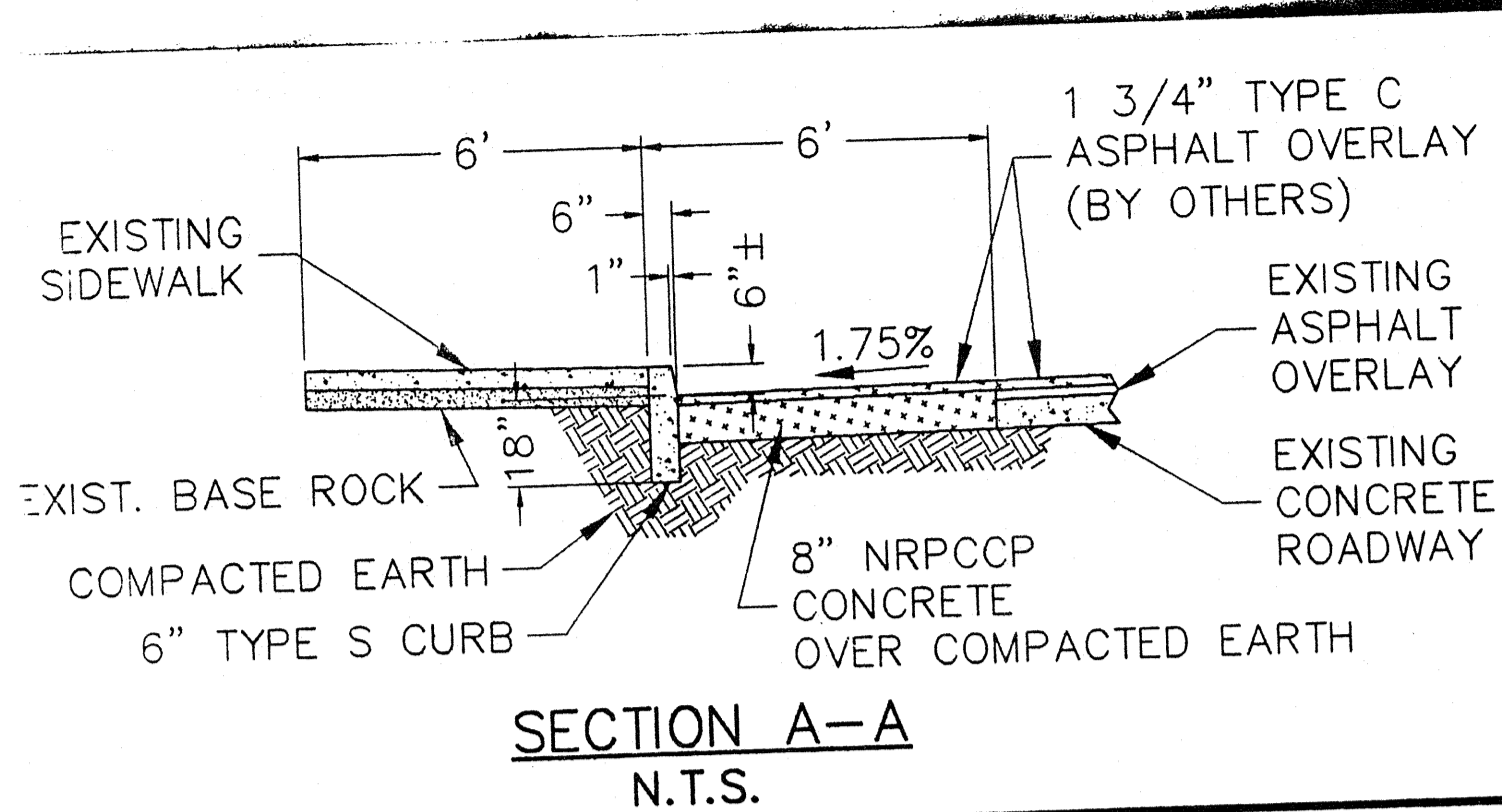
623 EAST 7TH ST. SUITE 1  
CARTHAGE, MO 64836  
(417) 359-5115  
(417) 359-8705  
FAX (417) 359-8705

P.O. BOX 1867  
1102 WEST 9TH ST.  
JOPLIN, MO 64803  
(417) 781-0643  
FAX (417) 781-4714

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JOPLIN, MO 64802

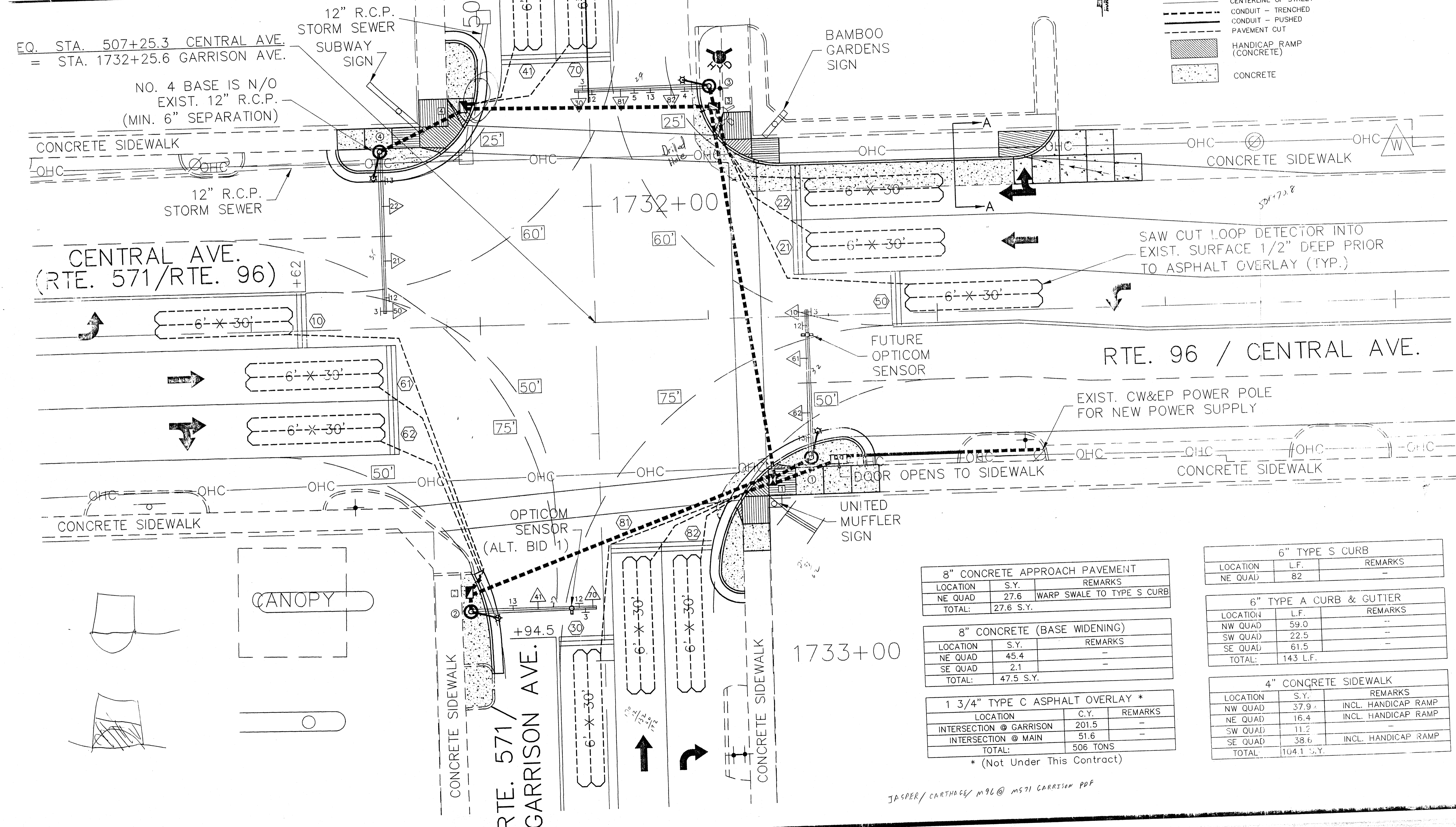
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FILE NO. 98208R01	JOB NO. 98208	DATE 10-02-98	DRAWN BY TED	APP. BY JHB	SCALE 1"=10'	XREF -	SHEET 2 OF 10
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**LEGEND**

- SAN — SEWER LINE (EXISTING)
- UGT — SEWER MANHOLE (EXISTING)
- OHT — UNDERGROUND TELEPHONE
- OHC — OVERHEAD CABLE
- G — GAS LINE (EXISTING)
- G — GAS METER
- G — GAS VALVE (EXISTING)
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- W — WATER VALVE (EXISTING)
- F — FIRE HYDRANT (EXISTING)
- F — FIRE HYDRANT (PROPOSED)
- R — RIGHT OF WAY SIGN
- S — STREET SIGN
- C — CENTERLINE OF STREET
- T — CONDUIT - TRENCHED
- P — CONDUIT - PUSHED
- P — PAVEMENT CUT
- H — HANDICAP RAMP (CONCRETE)
- C — CONCRETE



**8" CONCRETE APPROACH PAVEMENT**

LOCATION	S.Y.	REMARKS
NE QUAD	27.6	WARP SWALE TO TYPE S CURB
TOTAL:	27.6 S.Y.	

**8" CONCRETE (BASE WIDENING)**

LOCATION	S.Y.	REMARKS
NE QUAD	45.4	
SE QUAD	2.1	
TOTAL:	47.5 S.Y.	

**1 3/4" TYPE C ASPHALT OVERLAY \***

LOCATION	C.Y.	REMARKS
INTERSECTION @ GARRISON	201.5	
INTERSECTION @ MAIN	51.6	
TOTAL:	506 TONS	

\* (Not Under This Contract)

**6" TYPE S CURB**

LOCATION	L.F.	REMARKS
NE QUAD	82	

**6" TYPE A CURB & GUTTER**

LOCATION	L.F.	REMARKS
NW QUAD	59.0	
SW QUAD	22.5	
SE QUAD	61.5	
TOTAL:	143 L.F.	

**4" CONCRETE SIDEWALK**

LOCATION	S.Y.	REMARKS
NW QUAD	37.9	INCL. HANDICAP RAMP
NE QUAD	16.4	INCL. HANDICAP RAMP
SW QUAD	11.2	
SE QUAD	38.6	INCL. HANDICAP RAMP
TOTAL:	104.1 S.Y.	

SIGNALS PLAN SHEET  
CENTRAL AVENUE & GARRISON AVENUE  
CITY OF CARTHAGE  
CARTHAGE, MISSOURI

PROJECT: CENTRAL AVENUE & GARRISON AVENUE  
CUSTOMER: CITY OF CARTHAGE, MISSOURI

NO.	DATE	INIT.	REVISIONS

STATE OF MISSOURI  
Joplin  
REGISTERED PROFESSIONAL SURVEYOR

623 EAST 7TH ST. SUITE 101  
CARTHAGE, MO 64830  
(417) 358-5115  
FAX (417) 358-5115

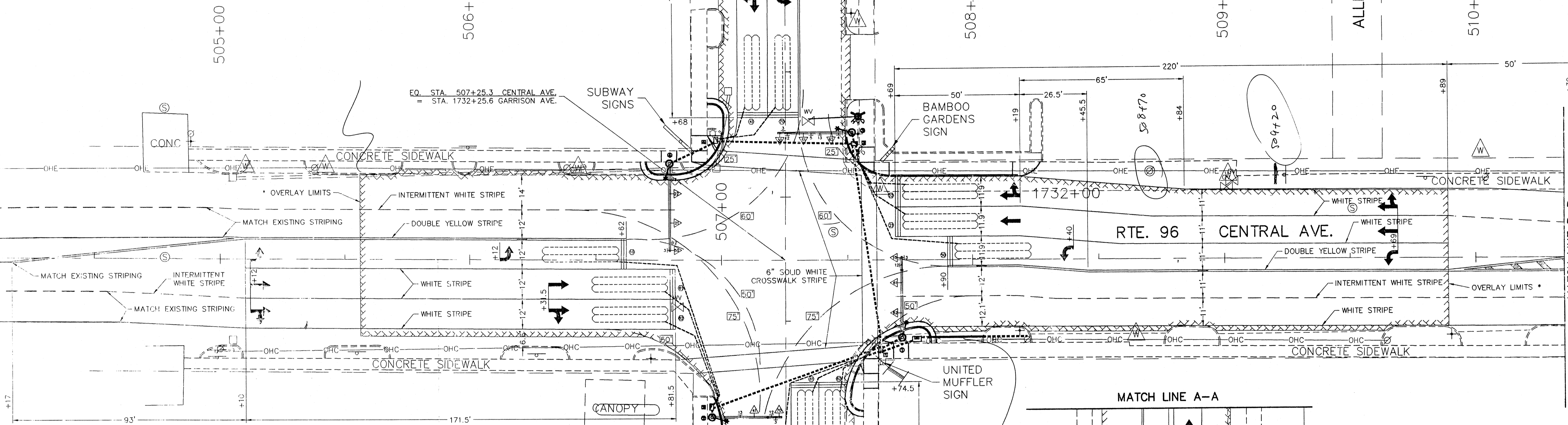
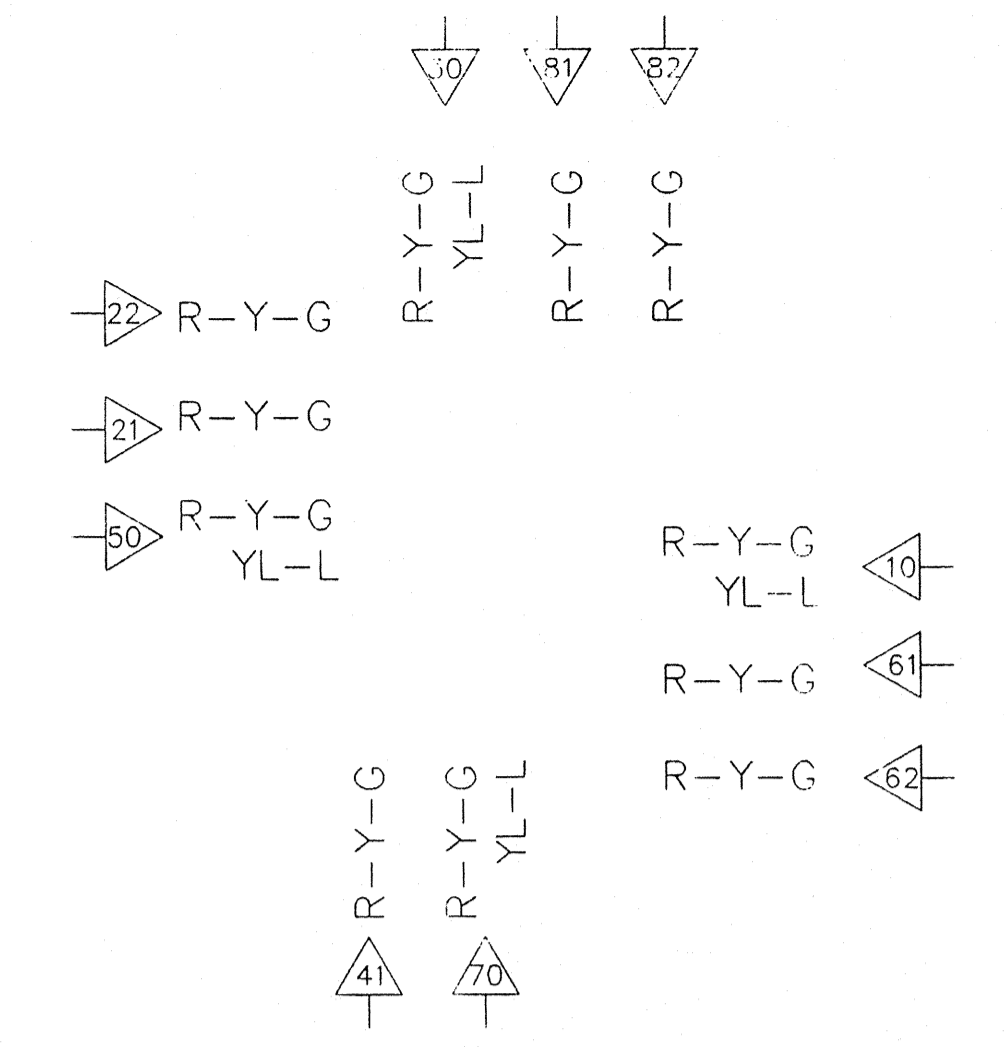
TRISTATE ENGINEERING INC.  
SURVEYING  
ENGINEERING

P.O. BOX 1567  
1102 WEST 9TH ST.  
CARTHAGE, MO 64830  
(417) 781-0643  
FAX (417) 781-0643

FILE: 98208R01  
JOB NO.: 98208  
DATE: 10-05-98  
DRAWN BY: TED  
APP. BY: JHB  
SCALE: 1"=10'  
XREF: JOP  
SHEET: 3 OF 10

JASPER / CARTHAGE / M96 @ M571 GARRISON PPF

**LENS CONFIGURATION - SIGNALS**



\* NOTE:  
THE 1 3/4" TYPE C ASPHALT OVERLAY IS NOT PART OF THIS CONTRACT. THIS WORK WILL BE COMPLETED BY OTHERS UNDER AN EXISTING CITY OF GARTHAGE CONTRACT. STRIPING WORK SHALL BE COMPLETED IMMEDIATELY AFTER OVERLAY OPERATIONS ARE FINISHED.

*Handwritten notes:*  
P E B  
ohi  
oc  
o E I  
o z e

*Handwritten notes:*  
309+69  
69  
579920

**STRIPING & PAINT SCHEDULE**

SHEET	STATION	LOCATION	RIGHT ARROW EACH	LEFT ARROW EACH	STRIPES/ARROW EACH	STRIPES/ARROW EACH	WORD ONLY	24" WHITE STOP LINE	4" SOLID YELLOW MARKER	4" SOLID YELLOW	4" INT. WHITE	6" SOLID WHITE	REMARKS
							LN. FT.	LN. FT.	LN. FT.	LN. FT.	LN. FT.		
1	504+17-506+62	CL											DOUBLE YELLOW
1	504+49-506+82	LT									172	187	
1	504+11-506+82	RT										55	
1	504+55-505+10	RT											
1	504+60-506+82	RT											
1	505+11-506+82	RT											
1	505+12	RT											
1	506+31.5	RT											
1	506+62	RT											
1	506+81.5	RT											
1	508+90-507+80	LT											117 TWO LINES
1	506+90-507+80	RT											138 TWO LINES
1	1731+89-1732+79	LT											136 TWO LINES
1	1728+9-1731+68	CL											342 DOUBLE YELLOW
1	1730+68-1731+68	RT											100
1	1730+68-1731+68	RT											100
1	1730+18	RT											
1	1731+88	RT											
1	1732+74.5	LT											24
1	1732+94.5	RT											12
1	1733+24.5	LT											
1	1733+44.5	RT											
1	1733+74.5	LT											
1	1734+24.5	CL											
1	1732+95-1735+42	CL											508 DOUBLE YELLOW
1	1732+75-1734+47	RT											172
1	1732+75-1734+47	RT											172
1	507+89	LT											24
1	507+90	LT											12
1	508+19	LT											
1	508+40	LT											
1	509+89	LT											
1	507+89-509+89	LT											210
1	507+89-509+89	LT											210
1-2	507+89-515+68	RT											800
1-2	507+89-515+68	LT											800
1	507+90-509+89	CL											400 DOUBLE YELLOW
1-2	507+89-514+68	RT											700
1-2	509+89-513+24	LT											335
1-2	509+89-511+18	CL											
1-2	509+89-511+18	CL											44 CROSS HATCH
2	511+18-513+24	CL											412 DOUBLE YELLOW
2	513+24-514+68	CL											340 QUAD YELLOW
2	513+24-514+68	CL											54 CROSS HATCH
2	514+68-515+68	CL											176 DOUBLE YELLOW
2	514+68-515+68	RT											100
2	514+68-515+68	RT											100
2	514+23	RT											
2	514+68	RT											
2	515+08	RT											2
2	515+31	RT											
2	515+68	RT											12
2	515+96	RT											23
2	515+88	RT											
TOTALS			5	9	8	5	4	167	98	3358	3330	1277/4	301
USE:			5	9	8	5	4	167	98	3358	3330	1277/4	301

**STRIPING PLANS**  
CENTRAL AVENUE & GARRISON AVENUE  
CITY OF GARTHAGE

PRODUCT: STRIPING PLANS  
CUSTOMER: CENTRAL AVENUE & GARRISON AVENUE  
CITY OF GARTHAGE

NO. DATE INIT. REVISIONS

**TRI-STATE ENGINEERING INC.**  
SURVEYING  
ENGINEERING

623 EAST 7TH ST. SUITE 1  
GARTHAGE, MO. 64455  
(417) 349-5115

P.O. BOX 1867  
1002 WEST 9TH ST.  
GARTHAGE, MO. 64455  
(417) 781-0643  
FAX: (417) 781-3714

FILE: 98208R01  
JOB NO.: 98208  
DATE: 11-24-98  
DRAWN BY: TED  
APP. BY: JHB  
SCALE: 1"=20'  
XREF



CONDUIT											CABLE											REMARKS															
FROM	TO	CTR TO CTR DISTANCE (FT.)	TRENCH				MEDIAN				PUSHED				ON BRIDGE	REMARKS	FROM	TO	CTR TO CTR DISTANCE (FT.)	POWER			CONTROL				CLOSED LOOP INTERCONNECT 3 PAIR #16	POLE & BRACKET 1c #10	DETECTOR								
			1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	1-1/4	2	2-1/2	3	3-1/2						4	1c #8		2c #12	4c #18 *	7c #12	12c #12			1c #14 IN DUCT	LEAD -IN CABLE							
15	44	15			26												15	261									78	* M138 DETECTOR CABLE									
10	10	10			14												25		**39	87*	173				**72	312	* M138 DETECTOR CABLE										
72	72	72															87		**112	155*	305				**72	345	** LUMINAIRE										
5	5	5			9												98		**123		335				**72	352	** LUMINAIRE										
83	83	83															103				500				**72		** LUMINAIRE										
5	5	5			9												153		**200							381	6' X 30' LOOP										
55	55	55															174									325	6' X 30' LOOP										
21	21	21			23												60									313	6' X 30' LOOP										
7	7	7	6														32									429	6' X 30' LOOP										
4	4	4	3														84									357	6' X 30' LOOP										
9	9	9	8														48									347	6' X 30' LOOP										
3	3	3	2														43									395	6' X 30' LOOP										
																	67									331	6' X 30' LOOP										
																	35									321	6' X 30' LOOP										
																	30									319	6' X 30' LOOP										
																	29									301	6' X 30' LOOP										
																	20																				
TOTALS											19	81	123	100		22												270	480	250	1320			290	3820	1090	

Handwritten calculations and notes:

$$\frac{70 \times 1.5 \times 3}{2} = 157.5$$

$$\frac{381 \times 6}{2} = 1143$$

$$\frac{321 \times 2}{2} = 321$$

JASPER/CARTHAGE M9C @ M571 GARRISON PDF

CENTRAL AVENUE & GARRISON AVENUE INTERSECTION

CONDUIT & CABLE  
CENTRAL AVENUE & GARRISON AVENUE  
CITY OF CARTHAGE  
CARTHAGE, MISSOURI

NO.	DATE	INIT.	REVISIONS



**TRI-STATE ENGINEERING INC.**  
ENGINEERING SURVEYING  
623 EAST 7TH ST. SUITE 1  
JOPLIN, MO 64602  
(417) 359-5115  
FAX (417) 359-5806

FILE 208037B  
JOB NO. 58208  
DATE 11-24-98  
DRAWN BY TED  
APP. BY JHB  
SCALE N/A  
SHEET 8 OF 10

POWER SUPPLY												
LOCATION			POWER SUPPLY ASSEMBLY		CIRCUIT BREAKER TRIP RATING*						SERVICE POLE	
APPROACH	STATION	OFFSET	DRAWING 902.15	DRAWING	CONTROLLER		SERVICE POLE		LIGHTING CONTROL * (ON SIDE OF CONTROLLER)		CONTRACT FURNISH	UTILITY COMPANY
					AUXILIARY BREAKER	CONT & SIGNAL LAMPS	MAIN BREAKER	SIGNALS	MAIN BREAKER			
CENTRAL AVENUE	508+21.3	32' RT.	Type 1**		15 Amps	30 Amps	40 Amps	15 Amps	CL 4 FT. 30		CARTHAGE WATER & ELECTRIC	
			Type		Amps	Amps	Amps	Amps	Cl. Ft.			

CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																								
LOCATION			SYSTEM MASTER (CLOSED LOOP)		ACTUATED (1)		SOLID STATE PRE-TIMED			ON-OFF SWITCH		COORDINATION INTERFACE *				TONE UNIT *		TIME * CLOCK		170 CABINET TYPE*		'170 SOFTWARE*		
APPROACH	STATION	OFFSET	NEMA 170		NEMA	170	TYPE			TYPE		12C/7C HARDWIRE OR TONE (1)		TIME BASE	CLOSED LOOP		TRANS-MITTER (MASTER)	RECEIVER (LOCAL)	TIME	CLOCK	332A	336S	BITRAN	WAPITI
			S-M	S-S			S-N	I	II	MASTER	LOCAL	NEMA	170											
CENTRAL AVENUE	507+77.8	31.5' RT.			1																			

DETECTOR SCHEDULE							
DETECTOR NUMBER	APPROACH	PUSH BUTTON	TYPE				
			INDUCTION LOOP (2)			MAGNETOMETER (2)	
			STANDARD	DELAY/EXTEND *	CALL UNIT *	STANDARD	DELAY/EXTEND *
10	CENTRAL AVE. (EAST)		1				
61	CENTRAL AVE. (EAST)		1				
62	CENTRAL AVE. (EAST)		1				
50	CENTRAL AVE. (WEST)		1				
21	CENTRAL AVE. (WEST)		1				
22	CENTRAL AVE. (WEST)		1				
70	GARRISON AVE. (SOUTH)		1				
41	GARRISON AVE. (SOUTH)		1				
30	GARRISON AVE. (NORTH)		1				
81	GARRISON AVE. (NORTH)		1				
82	GARRISON AVE. (NORTH)		1				
TOTAL			11				

- \* ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- \*\* EXISTING POWER POLE (U.I.P.)
- (1) A "D" PLUG SHALL BE WIRED INTO ALL NEMA CONTROLLERS WITH 7C HARDWIRE OR TONE INTERCONNECT. (REQ'D FOR PREEMPTION DEVICES)
- (2) IF 2-CHANNEL DETECTORS ARE USED, 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	10	61	62		30		81 82
	2	50	21	22		70		41

TOTAL NUMBER OF DETECTOR CARDS(2-CHANNEL) = 6

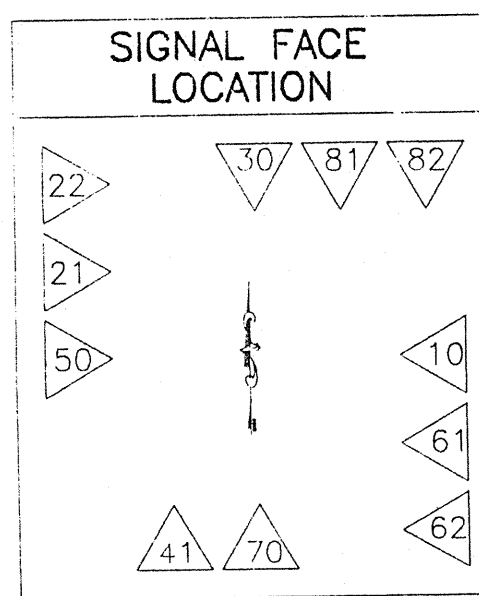
NEMA LOAD SWITCH ASSIGNMENTS												
1	2	3	4	5	6	7	8	9	10	11	12	
X	X	X	X	X	X	X	X					

PROJECT: POWER SUPPLY, CONTROLLER ASS'Y, & DETECTOR SCHED.  
 CENTRAL AVENUE & GARRISON AVENUE  
 CITY OF CARTHAGE  
 CARTHAGE, MISSOURI  
 CUSTOMER

NO.	DATE	INIT.	REVISIONS

**TRI-STATE ENGINEERING INC.**  
 ENGINEERING SURVEYING  
 623 EAST 7TH ST. SUITE 1  
 JOPLIN, MO 64802  
 (417) 359-5115  
 (417) 359-5705  
 FAX (417) 781-4714  
 JOPLIN, MO 64802  
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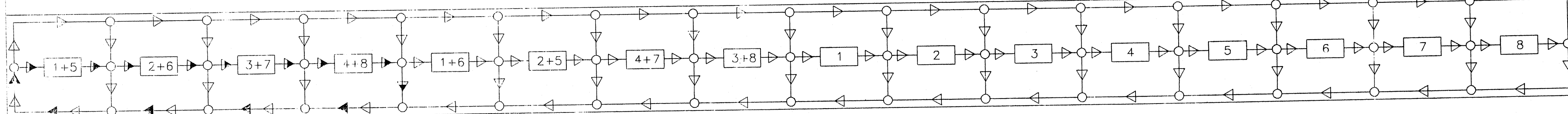
NO. 920370	DATE 11-24-98	DRAWN BY TED	SCALE N/A	SHEET 9 OF 10
		APP. BY JHB		



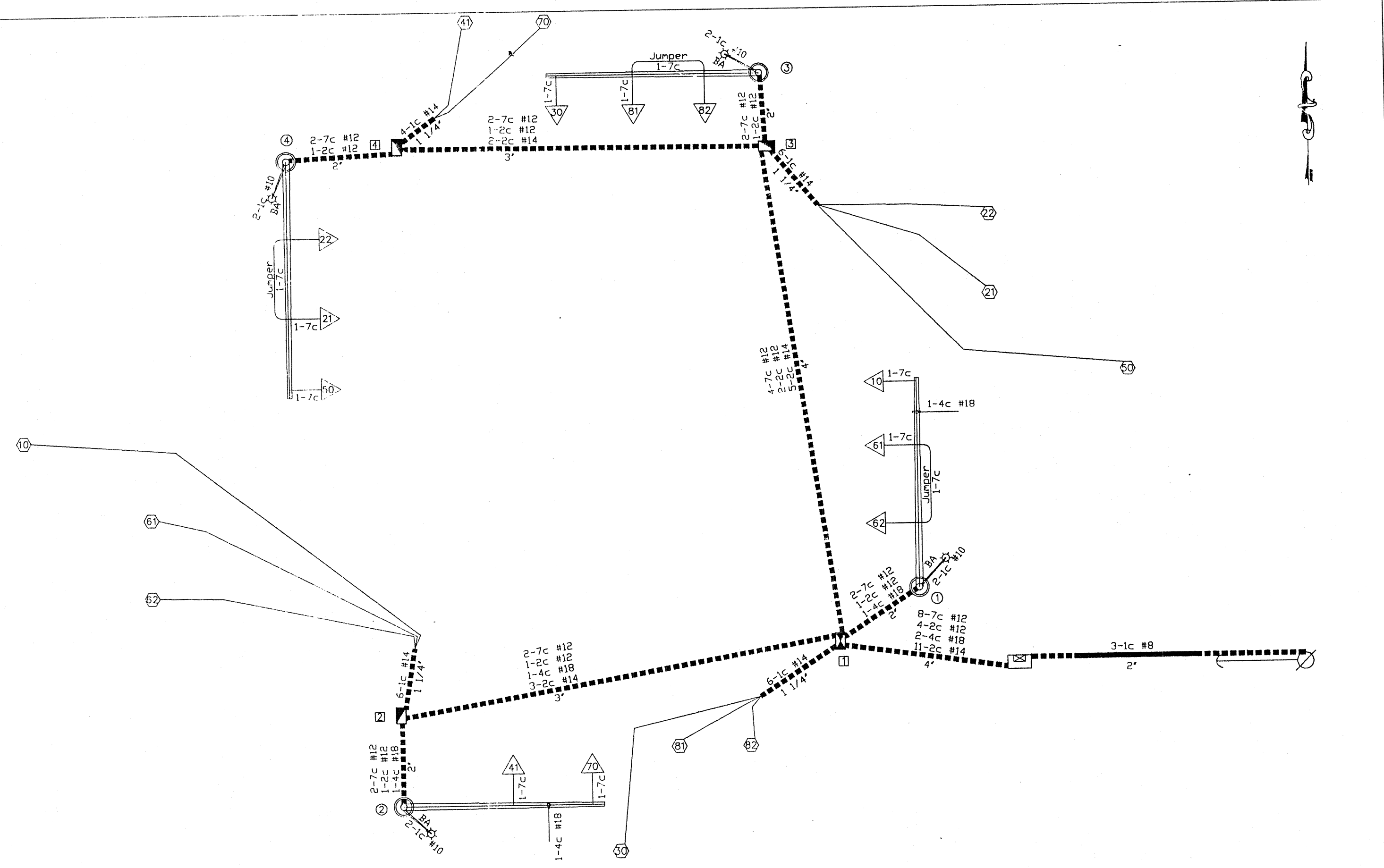
TRAFFIC PHASING AND COLOR SEQUENCE

CONT. NO.	PHASE 1	PHASE 5	PHASE 2	PHASE 6	PHASE 1 + 5	PHASE 1 + 6	PHASE 2 + 5	PHASE 2 + 6	PHASE 7	PHASE 3	PHASE 8	PHASE 4	PHASE 3 + 7	PHASE 4 + 7	PHASE 3 + 8	PHASE 4 + 8	FACE NO.
	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	CLEAR TO PHASE	
NORTHBOUND GARRISON	3 30	81&82															30
SOUTHBOUND GARRISON	7 70																70
EASTBOUND CENTRAL	1 10																10
WESTBOUND CENTRAL	5 50																50
	21&22																21&22

FLOW DIAGRAM



WIRING DIAGRAM



- ▶ PHASE ON RECALL WITH EQUAL TIME SETTINGS.
- ◀ SKIP PHASE.
- ◀▶ COMBINED RECALL & SKIP PHASE.

IF CALLED, ALL NON-CONFLICTING PHASES SHALL COMBINE AND TIME CONCURRENTLY. TIMING TO BE DETERMINED BY THE ENGINEER AT SIGNAL TURN ON AND SET IN THE CONTROLLER BY THE CONTRACTOR.

FLASHING OPERATION	FR
ALL APPROACHES	
CONTROLLER TYPE	80

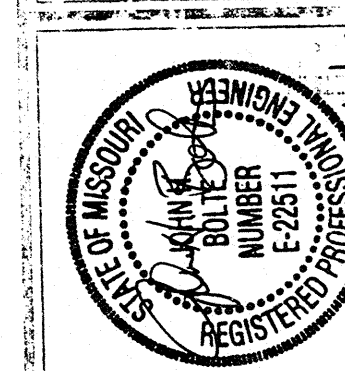
LEGEND

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

TRAFFIC SIGNAL CONTROL OPERATION  
 INTERSECTION OF  
 CENTRAL AVENUE  
 WITH  
 GARRISON AVENUE

PHASING SHEET & WIRING DIAGRAM  
 CENTRAL AVENUE & GARRISON AVENUE  
 CITY OF CARTHAGE  
 CARTHAGE, MISSOURI

NO.	DATE	INIT.	REVISIONS



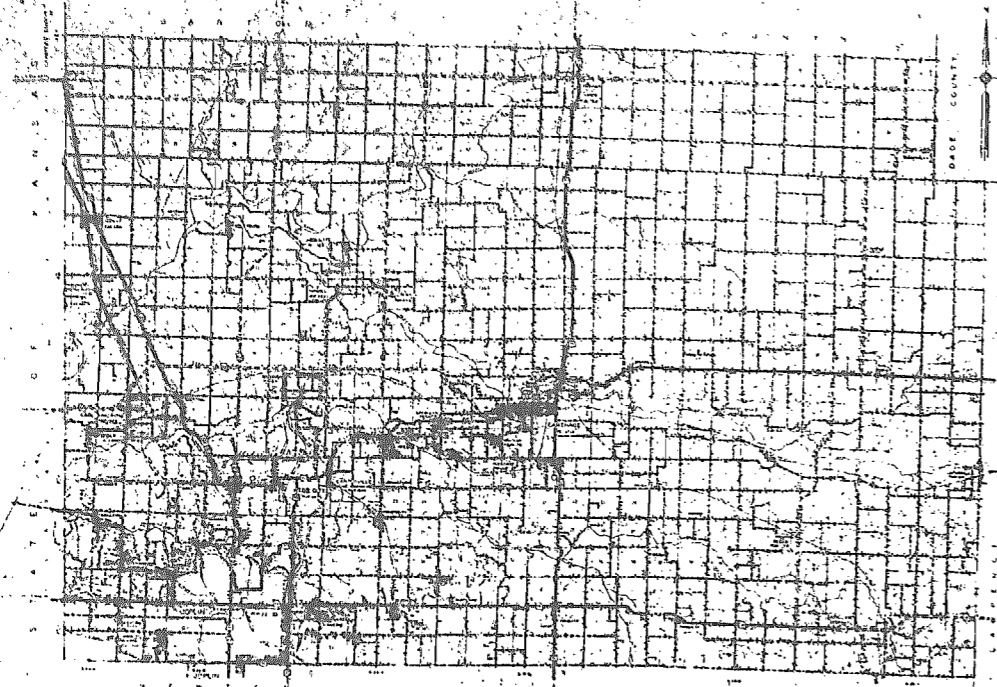
**ENGINEERING INC.**  
 SURVEYING  
 ENGINEERING

623 EAST 7TH ST.  
 SUITE 110  
 JOPLIN, MO 64606  
 (417) 359-5115  
 (417) 359-8705  
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P.O. BOX 1867  
 1102 WEST 9TH ST.  
 JOPLIN, MO 64602  
 (417) 783-7174  
 FAX (417) 783-7174

DATE: 11-24-98  
 DRAWN BY: JHB  
 APP. BY: JHB  
 SCALE: N/A  
 XREF: 10 OF 10

LOCATION MAP

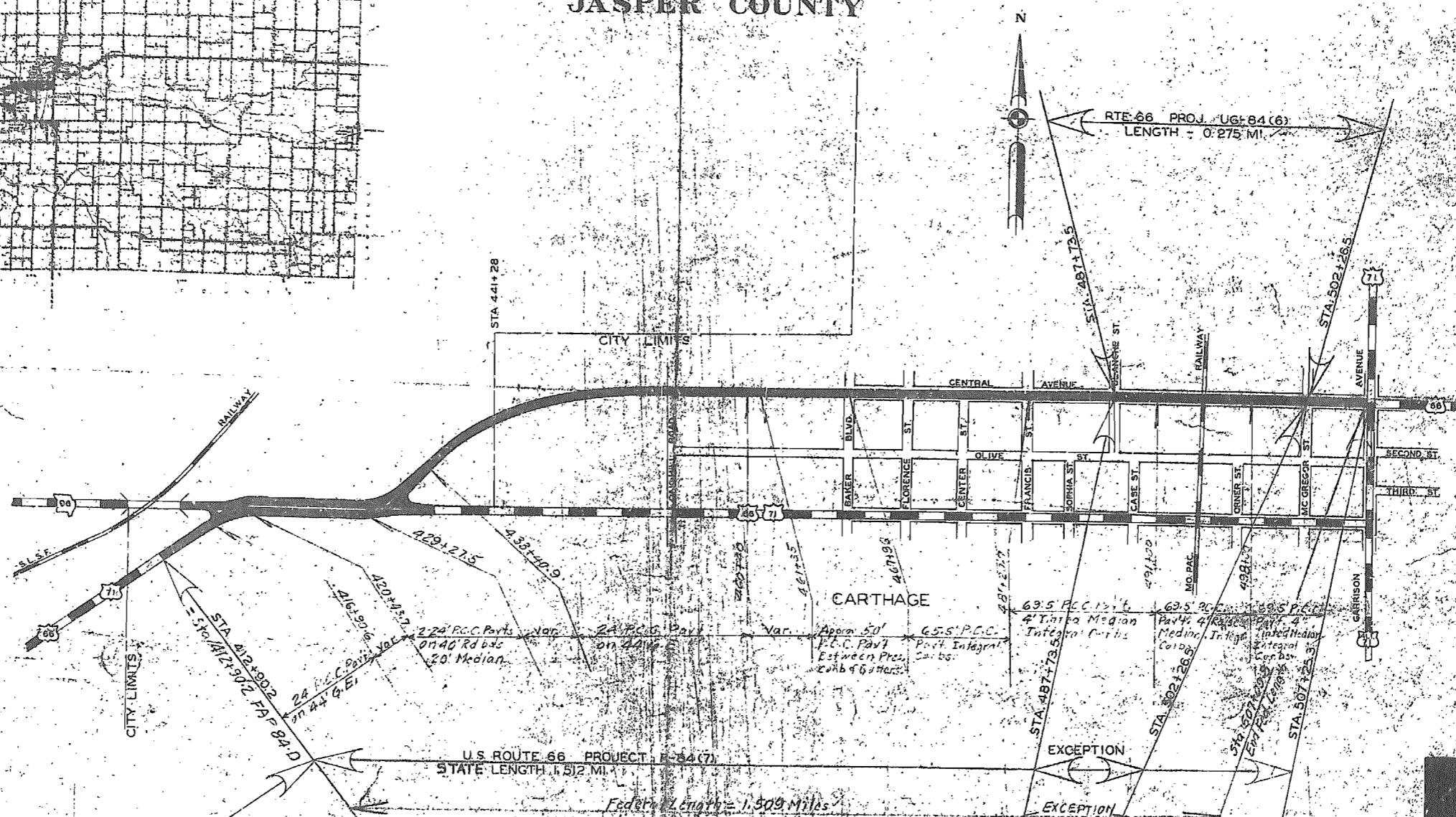


# MISSOURI STATE HIGHWAY COMMISSION PLAN AND PROFILE OF PROPOSED STATE ROAD

FEDERAL AID PROJECT  
JASPER COUNTY

**LIMITED ACCESS HIGHWAY**  
This shall be a limited access highway between station 441+28 and station 507+25.5. It shall be a divided highway with a median strip. It shall be a limited access highway in that it shall be closed to all through traffic and to all traffic from the adjacent property. It shall be a limited access highway in that it shall be closed to all through traffic and to all traffic from the adjacent property. It shall be a limited access highway in that it shall be closed to all through traffic and to all traffic from the adjacent property.

LEGEND  
O TERMINAL POINT  
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	MARSH
GUARD RAIL	HEDGE
IMPROVED PROPERTY	GROUND ELEVATION
TRUNKED WAY LINE	GRADE ELEVATION
RAILROAD	SURFACE LINE
RETAINING WALL	GRADE LINE
BASE OR SURVEY LINE	

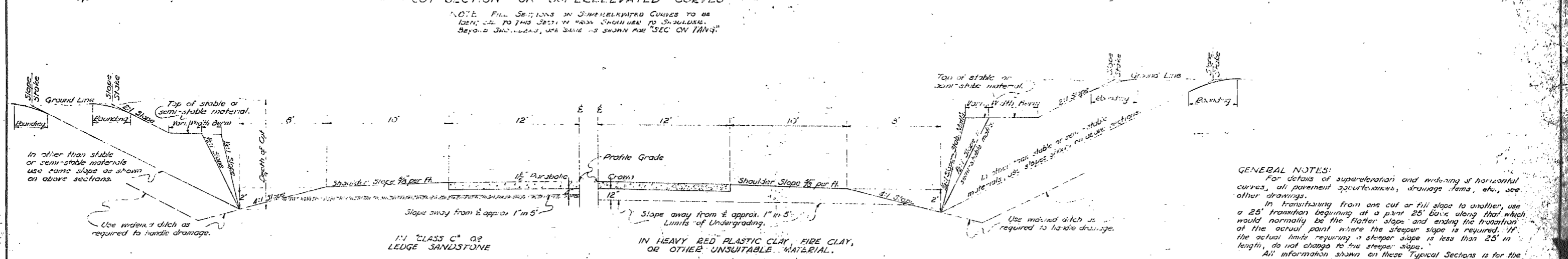
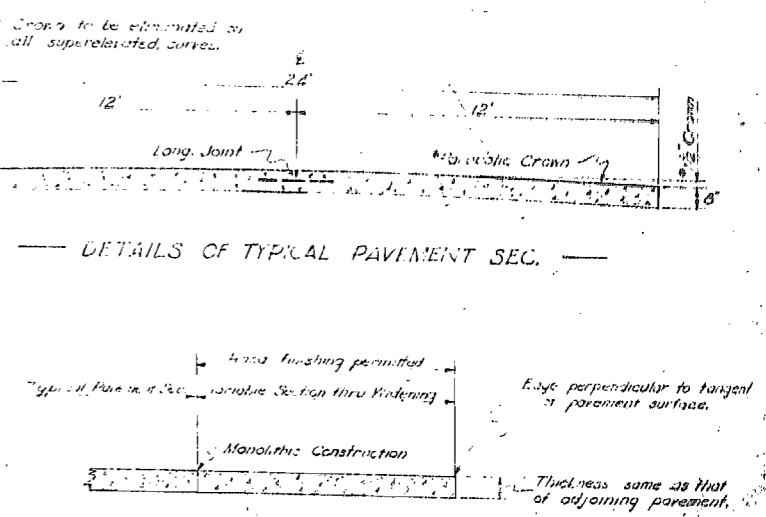
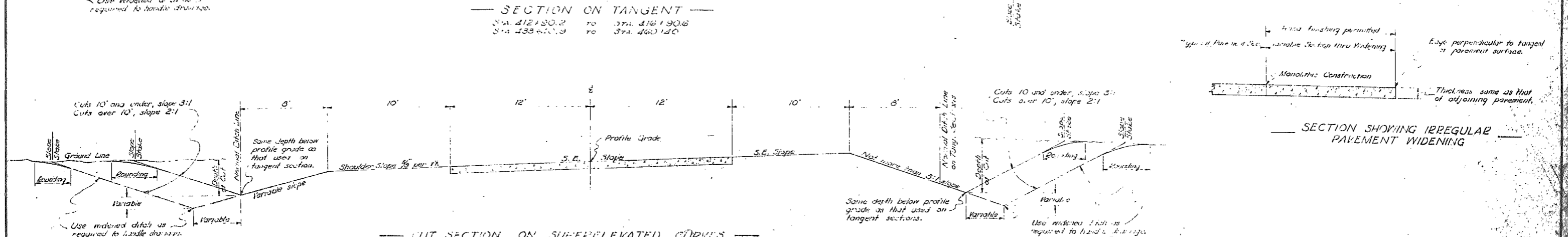
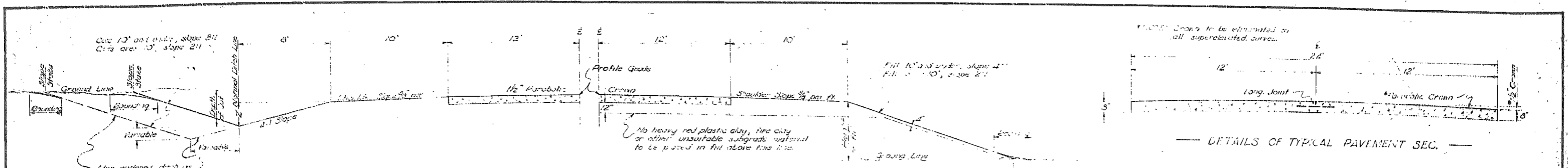
SUBMITTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

CHIEF ENGINEER  
MISSOURI STATE HIGHWAY COMMISSION

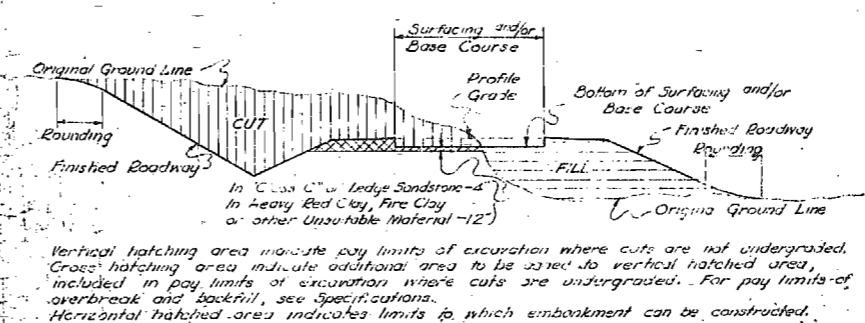
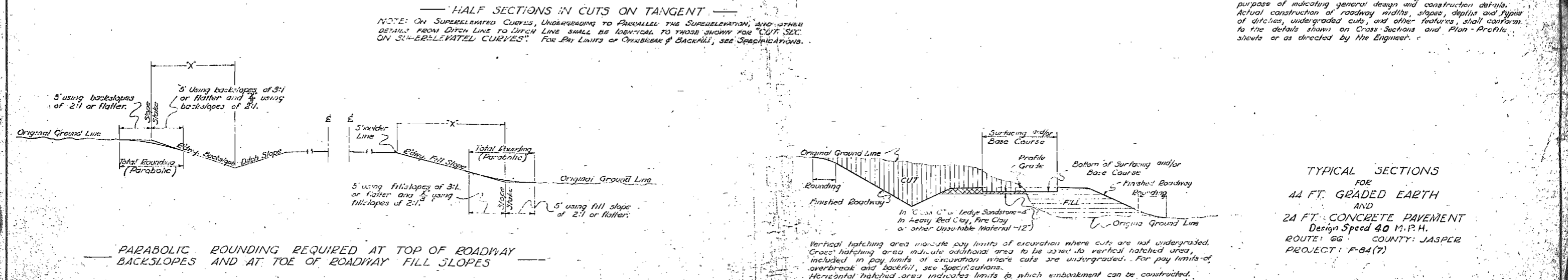
APPROVED: \_\_\_\_\_  
D.S. RICH ENGINEER

RECORDS SECTION  
MISSOURI STATE HIGHWAY COMMISSION





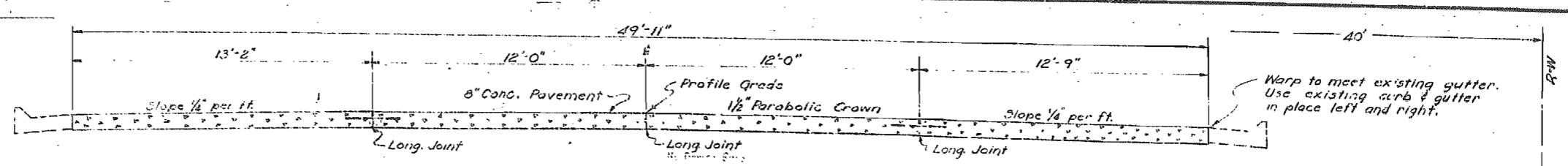
**GENERAL NOTES:**  
 For details of super-elevation and widening of horizontal curves, all pavement spacings, drainage items, etc., see other drawings.  
 In transitioning from one cut or fill slope to another, use a 25' transition beginning at a point 25' back along that which would normally be the 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 types 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.



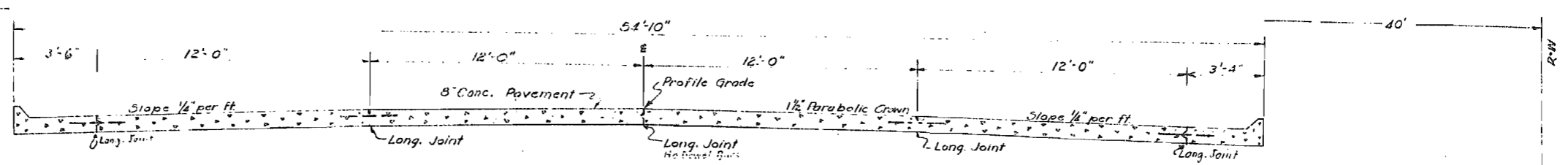
**TYPICAL SECTIONS FOR 44 FT. GRADED EARTH AND 24 FT. CONCRETE PAVEMENT Design Speed 40 M.P.H. ROUTE 66 COUNTY: JASPER PROJECT: F-64(7)**

FINAL SURVEY PLATTER NOTE BOOK AREAS COLLECTED

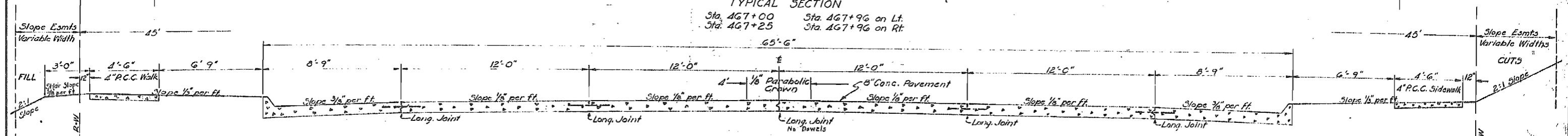
DATE: 11-23-31  
 BY: J. J. BARNETT  
 CHECKED: J. J. BARNETT  
 NO. 110



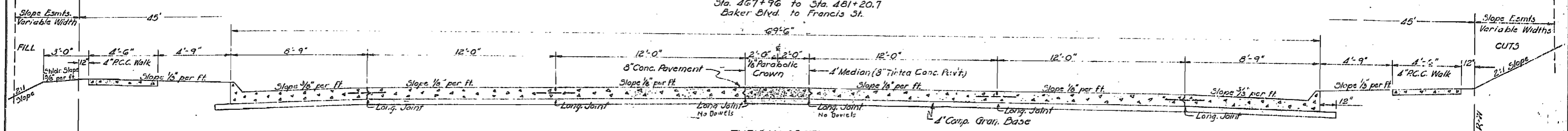
TYPICAL SECTION  
 Sta. 461+35.2 to Sta. 467+00 on Lt.  
 Sta. 461+30.3 to Sta. 467+25 on Rt.



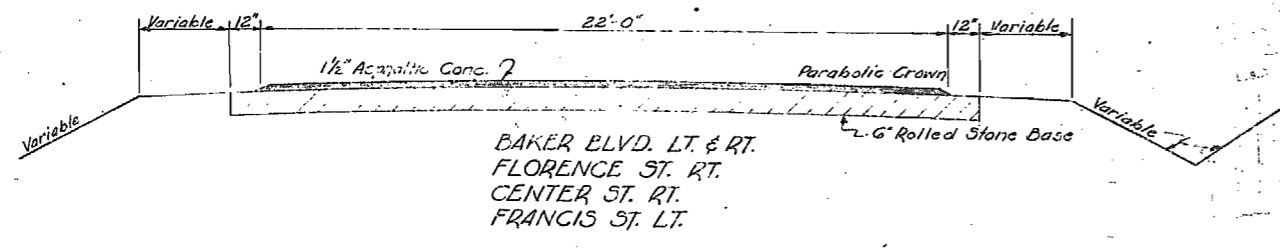
TYPICAL SECTION  
 Sta. 467+00 to Sta. 467+25 on Lt.  
 Sta. 467+96 to Sta. 467+96 on Rt.



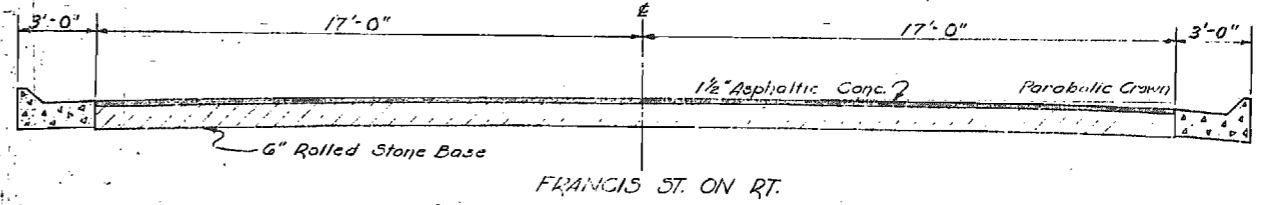
TYPICAL SECTION  
 Sta. 467+96 to Sta. 481+20.7  
 Baker Blvd. to Francis St.



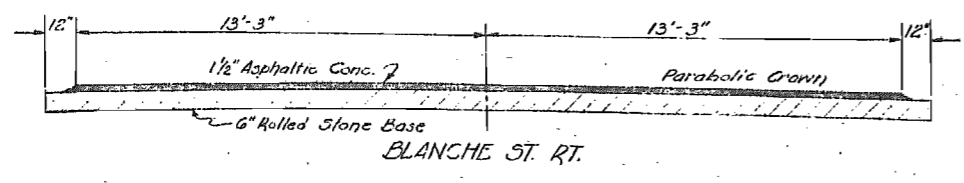
TYPICAL SECTION  
 Sta. 431+20.7 to Sta. 487+73.5  
 Francis St. to Blanche St.



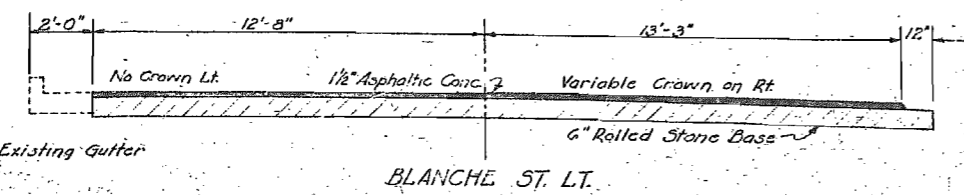
BAKER BLVD. LT. & RT.  
 FLORENCE ST. RT.  
 CENTER ST. RT.  
 FRANCIS ST. LT.



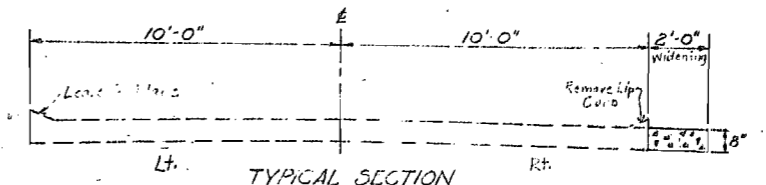
FRANCIS ST. ON RT.



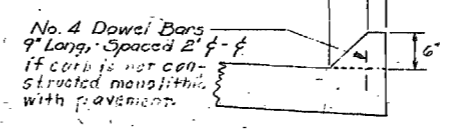
BLANCHE ST. RT.



BLANCHE ST. LT.

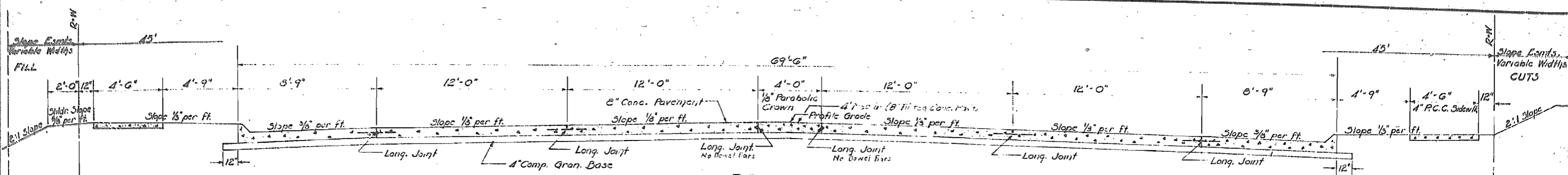


TYPICAL SECTION  
 Sta. 423+12.75 to Sta. 424+52.9 - Rte. 96  
 Remove Lip Curb from Existing 20' Pavement  
 and Widen 2'-0" Rt. with 8" R.C.C. Pavement.

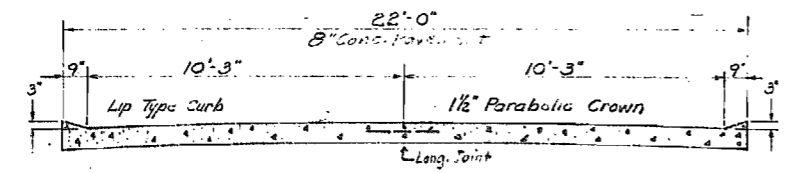


TYPICAL SECTION FOR INTEGRAL CUT-B.

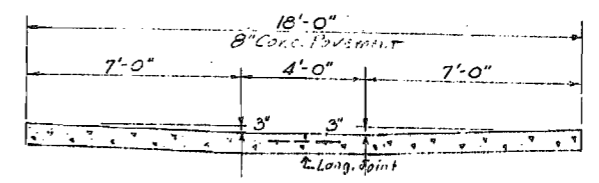
TYPICAL SECTIONS FOR  
 Route 66 County: JASPER  
 Project: F-2A(7)



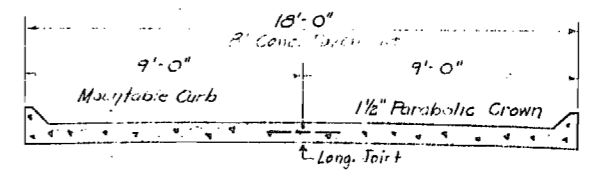
TYPICAL SECTION  
Sta. 487+73.5 to Sta. 491+40  
Sta. 497+52 to Sta. 502+26.5



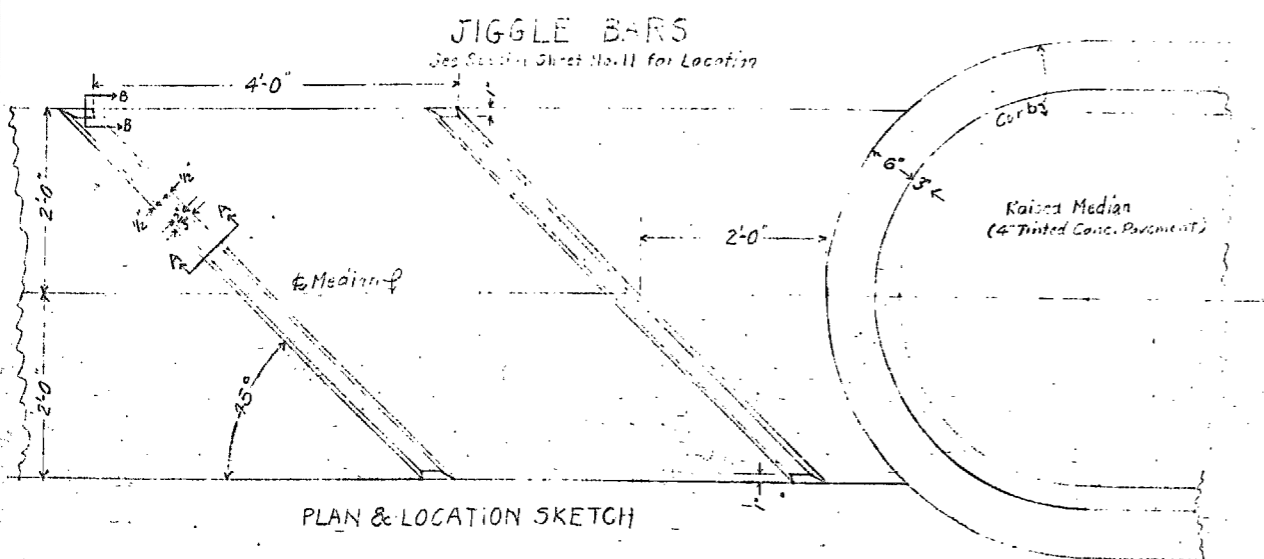
TYPICAL SECTION  
Service Road 235' Lt. Sta. 496+86 to Sta. 501+98



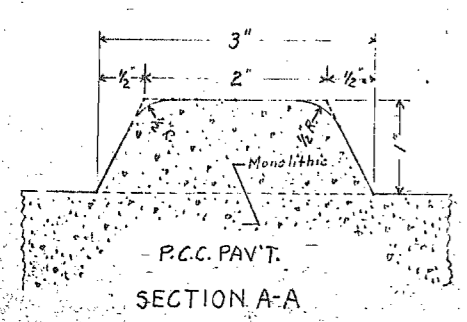
TYPICAL SECTION  
Alley Lt. Sta. 504+77.8



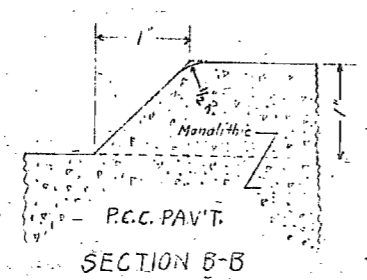
TYPICAL SECTION  
Alley Rt. Sta. 504+78.5



PLAN & LOCATION SKETCH



SECTION A-A



SECTION B-B

TYPICAL SECTIONS  
FOR  
Route 66 County: JASPER  
Project F-84 (7)  
Project UG-84 (6)

# MISSOURI STATE HIGHWAY COMMISSION

TYPE *Graded Earth, Culverts, Bridge & Variable Width Concrete Pavement*

## SUMMARY OF QUANTITIES

FINAL PLANS

FED. ROAD DIST. No.	STATE MO.	PROJECT F-84(7)	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5				2A	
DIST. No.	COUNTY	ROUTE	ROUTE		
7	JASPER	66			

### EXCAVATION

### CLEARING & GRUBBING

### REMOVAL CONCRETE SIDEWALK

Station	Class A	Class C	CL.B. Per	Sheet No.	Clearing	Grubbing
42190.2				3	18	10
42192.5				4	470	266
42194.0				5	202	107
42195.5				6	21	21
<b>TOTALS</b>					<b>711</b>	<b>404</b>

Total Units 711 / 404  
Acres 3.2 / 4.6

Sub-totals 4899.3 / 6592 / 14217 / 1141 ✓  
Barrow 14817 ✓  
Rxdg. 411 ✓

TOTALS 63521 / 6592 ✓

### PAVEMENT REMOVAL

Station	Location	Dimensions	Sq. Yds.	Remarks
42190.2	Rte. 96	722.8 x 20.0	1777.3	
42192.5	Rte. 96	261.8 x 20.0	523.6	
42194.0	Rte. 66	186.0 x 20.0	372.0	
42195.5	"	80.0 x 20.0	160.0	
42197.0	"	420.0 x 28.0	1176.0	
42198.5	"	318.0 x 18.0	572.4	
42199.0	"	350.0 x 18.0	630.0	
42200.5	"	19.7 x 60.0	1182.0	
42202.0	"	613.0 x 31.0	19003.0	
42203.5	"	11.0 x 6.5	71.5	Paved Appro.
42205.0	"	15.5 x 60.0	930.0	
42206.5	"	483.3 x 37.0	17882.1	
42208.0	"	30.5 x 21.5	656.8	Paved Appro.
42209.5	"	30.5 x 21.5	656.8	Paved Appro.
42211.0	"	6.0 x 12.0	72.0	Ally Appr.
42212.5	"	9.0 x 17.5	157.5	Paved Appro.
42214.0	"	18.0 x 30.0	540.0	
42215.5	"	17.5 x 10.0	175.0	
42217.0	"	18.0 x 31.0	558.0	
42218.5	"	21.0 x 26.0	546.0	Ally Appr.
42220.0	"	31.0 x 21.0	651.0	
42221.5	"	27.0 x 52.0	1404.0	Paved Appro.
42223.0	"	26.0 x 17.0	442.0	
42224.5	"	27.0 x 42.0	1134.0	
42226.0	"	27.0 x 48.0	1296.0	
42227.5	"	40.0 x 9.5	380.0	St. Appr.
42229.0	"	120.0 x 3.5	420.0	
42230.5	"	9.0	9.0	Paved Appro. off Garrison Ave.
<b>TOTAL</b>		<b>600x135</b>	<b>11363.6</b>	

### CROSS ROAD CULV PIPE & SEWER PIPE (12" & 18")

Station	Side	Depth	Width	Length	Volume	Remarks
477+83.5	RT	2.1	4'-6"	177	78	
478+47.5	RT	2.1	4'-6"	206	91	
479+12.5	RT	1.2	4'-6"	183	75	
480+73.5	RT	2.1	4'-6"	173	78	
481+30	RT	2.1	4'-6"	163	73	
482+12	RT	2.1	4'-6"	191	83	
483+64.5	RT	2.1	4'-6"	220	97	
484+31	RT	2.1	4'-6"	191	83	
485+22.5	RT	2.1	4'-6"	17	8	
486+11.5	RT	2.1	4'-6"	17	8	
487+49.5	RT	2.1	4'-6"	17	8	
488+14.3	RT	2.1	4'-6"	106	48	
489+12.2	RT	2.1	4'-6"	17	8	
490+53.2	LT	2.1	4'-6"	192	85	
<b>TOTALS</b>				<b>1724</b>	<b>853</b>	

### DROP INLETS

Station	Location	Side	Depth	Width	Length	Volume	Remarks
0164	Francis St. RT	RT	5'-0"	3'-0"	100	135	See Sta. #4
0165	"	LT	5'-0"	3'-0"	100	135	"
0166	"	RT	5'-0"	3'-0"	100	135	"
0167	"	LT	5'-0"	3'-0"	100	135	"
0168	"	RT	5'-0"	3'-0"	100	135	"
0169	"	LT	5'-0"	3'-0"	100	135	"
0170	"	RT	5'-0"	3'-0"	100	135	"
0171	"	LT	5'-0"	3'-0"	100	135	"
0172	"	RT	5'-0"	3'-0"	100	135	"
0173	"	LT	5'-0"	3'-0"	100	135	"
0174	"	RT	5'-0"	3'-0"	100	135	"
0175	"	LT	5'-0"	3'-0"	100	135	"
0176	"	RT	5'-0"	3'-0"	100	135	"
0177	"	LT	5'-0"	3'-0"	100	135	"
0178	"	RT	5'-0"	3'-0"	100	135	"
0179	"	LT	5'-0"	3'-0"	100	135	"
0180	"	RT	5'-0"	3'-0"	100	135	"
0181	"	LT	5'-0"	3'-0"	100	135	"
0182	"	RT	5'-0"	3'-0"	100	135	"
0183	"	LT	5'-0"	3'-0"	100	135	"
0184	"	RT	5'-0"	3'-0"	100	135	"
0185	"	LT	5'-0"	3'-0"	100	135	"
0186	"	RT	5'-0"	3'-0"	100	135	"
0187	"	LT	5'-0"	3'-0"	100	135	"
0188	"	RT	5'-0"	3'-0"	100	135	"
0189	"	LT	5'-0"	3'-0"	100	135	"
0190	"	RT	5'-0"	3'-0"	100	135	"
0191	"	LT	5'-0"	3'-0"	100	135	"
0192	"	RT	5'-0"	3'-0"	100	135	"
0193	"	LT	5'-0"	3'-0"	100	135	"
0194	"	RT	5'-0"	3'-0"	100	135	"
0195	"	LT	5'-0"	3'-0"	100	135	"
0196	"	RT	5'-0"	3'-0"	100	135	"
0197	"	LT	5'-0"	3'-0"	100	135	"
0198	"	RT	5'-0"	3'-0"	100	135	"
0199	"	LT	5'-0"	3'-0"	100	135	"
0200	"	RT	5'-0"	3'-0"	100	135	"

LOCATION Route 96 N.E. & E. Over Central Ave. to Sta. 71 in Carthage

MISSOURI STATE HIGHWAY COMMISSION

Sheet 2 of 3

TYPE Graded Earth, Culverts, Bridge & Variable Width Concrete Pavement

SUMMARY OF QUANTITIES

Table with columns: FED. ROAD DIST. No., STATE, PROJECT, FISCAL YEAR, SHEET No., TOTAL SHEETS, COUNTY, ROUTE, DIST. No.

CONCRETE SIDEWALK

Main table with columns: Station, Length, Side, Type, Width, 4" Plain Conc. S.V., 7" Plain Conc. S.V., Station, Location, Length, Side, Type, Width, 4" Plain Conc. S.V., 7" Plain Conc. S.V.

Table with columns: End of Project, Beginning of Project, Apparent Length, Equations and Exceptions, Total Corrections, Net Length of Project, State Length, Federal Length.

PAVED APPROACHES

Table with columns: Station, Type, Side, Radius, Length, Width, 7" Conc. S.V., 8" Conc. S.V., REMARKS

2" GALV. STEEL PIPE CONDUIT

Table with columns: Station, Location, Length, Remarks

ADJUSTING MANHOLES TO GRADE

Table with columns: Station, Location, Number

CONCRETE BOX CULVERTS

Table with columns: Station, C-Std, Size, Length, Concrete, Paved, Sides, CL, 3' Fac, Remarks

RELAY PIPE CULV. & APPROACHES

Table with columns: Station, Type, Side, Length, Remarks

GENERAL SUMMARY

Table with columns: ITEM NO., DESCRIPTION, UNIT, TOTAL UNITS, NO. UNITS PER FOOT

LOCATION ROUTE 96 N.E. & E. OVER CENTRAL AVE. TO RTE. 71 IN CARTHAGE MISSOURI STATE HIGHWAY COMMISSION

Sheet 8 of 9

TYPE GRADED EARTH, CULVERTS, BRIDGE & VARIABLE WIDTH CONCRETE PAVEMENT

SUMMARY OF QUANTITIES

FINAL PLANS

FED. ROAD DIST. No.	STATE	PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	MO.	F-84(7)		2A	
DIST. No.	COUNTY	ROUTE	SPEC. No.		
7	JASPER	66			

**8" CONCRETE PAVEMENT**

Station	Station	Location	Width	Lin. Ft.	Sq. Yds.	Remarks
412+90.2	413+90.2	E	20' to 24'	50.0	122.2	Transition
413+40.2	414+90.6	E	24'	350.4	837.4	
416+90.6	420+43.7	E	Var.		2,194.6	Design Change W. Inter. (see #1) Inter. @ Rte. 96
420+43.7	422+14.02	Lt	24'	903.32	2,106.2	
422+14.7	429+27.45	Lt	24'	883.75	2,135.7	
429+27.45	433+40.2	E	Var.		2,817.3	Design Change & Inter. (see #1) Inter. @ Rte. 66
433+40.2	440+40.2	E	24'	2,693.1	7,197.4	
440+40.2	446+35.2	E	Var.		324.6	
446+35.2	457+100	E	49.92	5,648	13,328	
457+100	467+25	E	52.25	25.0	145.1	
467+25	467+96	E	54.83	71.0	437.4	
467+96	487+20.7	E	65.5	1,324.7	2,640.9	
487+20.7	487+73.5	E	69.5	652.8	504.1	(890.1) 3% Tinted Median Proj. U.G. 84(6)
487+73.5	502+26.5	E	Exception			(890.1) 3% Tinted Median Proj. U.G. 84(6)
502+26.5	507+09.8	E	69.5	483.3	373.2	(890.1) 3% Tinted Median Proj. U.G. 84(6)
Sub-total					40,854.0	
Drop Inlets					-19.9	
Total					40,834.1	

**4" CONCRETE PAVEMENT (TINTED MEDIAN)**

Station	Station	Location	Width	Lin. Ft.	Sq. Yds.	Remarks
0+21.5	1+15.5	Rt	2.5	94	25.5	On Old Rte. 66
Total					25.5	

**6" ROLLED STONE BASE & 2" ASPH. CONC. SURF**

Station	Location	Base	Top	Water	Base	Asph. Conc.	Remarks
467+96	Baker Blvd. Lt	65.440	7.5	28.0	93.0		
467+96	Baker Blvd. Rt	65.390	7.5	21.0	83.0		
472+34.9	Florence St. Rt	46.070	5.0	10.5	64.0		
476+37.4	Center St. Rt	44.805	5.0	10.5	59.0		
481+20.7	Francis St. Lt	151.715	10.0	35.0	167.0		
481+20.7	Francis St. Rt	151.915	25.0	35.0	197.0		
487+73.5	Blanche St. Lt	25.690	5.0	7.0	29.0		
487+73.5	Blanche St. Rt	50.520	5.0	10.5	54.0		
502+54	M. Greger St. Lt	28.120	7.5	10.5	49.0		
Totals		622.725	77.5	168.0	735.0		

**ENTRANCE & SIDE ROAD CULV. PIPE & APPROACHES (CMP)**

Station	Type	Side	12"	15"	18"	24"	30"	36"	42"	Remarks
421+97	PE	Lt			28	8.0				X-Over Sheet #32
421+97	PE	Rt			38	12.0				Double
423+77	PE	Lt		44						X-Over Sheet #32
423+77	PE	Rt			33	14.75				Crown
427+85	PE	Lt				14.0				X-Over Sheet #32
427+85	PE	Rt			28	8.80				Crown
433+00	PE	Lt				13.0				Crown
431+00	PE	Rt								Crown
Totals		158	44	66	61.0	22.5	28.0	83		* For in Surfacing Book

**6' CHAIN LINK FENCE & DRIVE GATES**

Station	Station	Side	Lin. Ft.	Remarks
481+45.7	486+96	Lt	450.3	
485+96	486+108	Lt	2	Dr. Gates 12' Opening
486+108	487+128.5	Lt	140.5	
Totals			590.8	
Use			591.0	

**STD. 36" CONC. CURB & GUTTER**

Station	Station	Side	Lin. Ft.	Remarks
461+30.3	461+45.3	Rt	33.0	
461+35.2	461+50.2	Lt	48.0	
0+59.75	1+61.1	Rt	101.4	
0+59.75	1+61.1	Lt	101.4	
Total			283.8	

**SPREADING, SHAPING & COMPACTING 4" COMP. GRAN. BASE FOR P.C.C.I.**

Station	Location	Remarks
481+20	(Francis St) Lt	10.75 x 12' + 42.00 = 30.73 sq yds.
481+20	(Francis St) Rt	21 x 24' + 42.00 = 60.67 sq yds.
487+73	(Blanche St) Lt	14 x 16.17' + 42.00 = 28.83 sq yds.
487+73	(Blanche St) Rt	24' x 16.17' + 42.00 = 40.94 sq yds.
502+26	(M. Greger St) Lt	31.5 x 24' + 42.00 = 88.67 sq yds.
502+26	(M. Greger St) Rt	32.25 x 14.1' + 42.00 = 51.13 sq yds.
507+09	(Garrison St) Lt	5.0 x 4.25' + 42.00 = 7.12 sq yds.
507+09	(Garrison St) Rt	5.49' x 10.2 x 22.25 = 27.16 sq yds.
507+09	(Garrison St) Lt	26 x 9.75' + 60' (15' x 10') = 25.75 x 9.75' = 250.64 sq yds.
Total		250.64

**4" CONCRETE PAVEMENT (TINTED MEDIAN)**

Station	Station	Location	Width	Lin. Ft.	Sq. Yds.	Remarks
481+20	487+73	E	65.2	8 x 71.5	5,186.13	
Total					5,186.13	

**8" ROLLED STONE BASE (BY-PASS)**

Station	Station	Location	Width	Lin. Ft.	Sq. Yds.	Remarks
426+55	414 (Cont.)	618.230	78.0	212	13,690.87	
Total					13,690.87	

**6" ROLLED STONE BASE SP. SH. & COMP.**

Station	Location	Remarks
467+96	(Baker St) Lt	24 x 33.0 = 792.0
467+96	(Baker St) Rt	38.5 x 24' (19) = 924.0
467+96	(Baker St) Lt	135.9 x 6.5 = 883.35
467+96	(Baker St) Rt	36.57 x 24' = 877.68
467+96	(Baker St) Lt	38.5 x 24' (19) = 924.0
467+96	(Baker St) Rt	36.57 x 24' = 877.68
472+34.9	(Florence St) Rt	132.7 x 9.3 = 1234.31
472+34.9	(Florence St) Rt	22.35 x 24' = 536.40
472+34.9	(Florence St) Rt	38.5 x 24' (19) = 924.0
472+34.9	(Florence St) Rt	1082.65 x 9 = 9743.85
476+37.4	(Center St) Rt	22.49 x 24' = 539.76
476+37.4	(Center St) Rt	33.5 x 24' (19) = 786.0
476+37.4	(Center St) Rt	1086.01 x 9 = 9774.09
481+20	(Francis St) Rt	101.35 x 24' = 2432.4
481+20	(Francis St) Lt	131.25 x 24' = 3150.0
481+20	(Francis St) Lt	38.5 x 24' (19) = 924.0
487+73	(Blanche St) Lt	31.5 x 24' = 756.0
487+73	(Blanche St) Lt	17.67 x 22.25 = 393.96
487+73	(Blanche St) Lt	16.25 x 25.25 = 410.31
502+54	(M. Greger St) Lt	183.26 x 4.5 = 824.68
502+54	(M. Greger St) Lt	4.37 x 3 = 13.11
502+54	(M. Greger St) Lt	811.13 x 9 = 7299.17
421+97		130' x 1378' = 177,140
423+77	Crossovers	20 x 24 = 480.00
427+85		25 x 24 = 600.00
427+85		718.52 x 9 = 6466.68
427+85		79.88 x 3 = 239.64
Total		1856.64

**LENGTH OF PROJECT**

End of Project	Station
Beginning of Project	Station
Apparent Length	Feet
Equations and Exceptions:	

**GENERAL SUMMARY**

ITEM NO.	DESCRIPTION	UNIT	TOTAL UNITS	NO. UNITS PER ACROSS
	State Length	Miles		
	Federal Length	Miles		

**4" COMP. GRAN. BASE GRAN. BASE MAT'L WATER**

Book	Yards	100gal/yard
1 Thru B	1959.485	140
Use	1959	140

**CUT COMPACTION**

Station	Station	C.Y.	Remarks
460+75	467+50	1658	See Sh. #2 for details
477+90	480+75	2770	See Sh. #2 for details
Total		4428 CY	

**HOUSE SERVICE SEWER CONN.**

4" VCP	6" VCP	Trench	Backfill	Lim. Ft.	6"-8"	8"-12"
1.55	17.49	210.1	4.5	58		
Total						

**SHIMILARY SEWER TR. & BK. FILL**

8" VCP	6"-8"	8"-10"	8"-12"
192.0	39.0	118.0	37.0
Total			

**STANDARD MANHOLE**

Station	Quan.
504+49	1
Total	1

**DROP MANHOLE**

Station	Quan.
504+77B	1
Total	1

**SOLID ROCK EXC. 8" VCSP**

Station	Station	Cu. Yds.	Remarks
502+92	504+77B	26	See Sh. #28



# SUMMARY SHEET FOR CONCRETE PAVING PROJECT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	F-94(7)		2-AA	
DIST. NO.	COUNTY	ROUTE	DATE	IN.	
7	JASPER	66			

SHEET #2 OF 3

CONTRACTOR  
PAVED BY  
RESIDENT ENGINEER  
SLAB INSPECTORS

TYPE OF CONSTRUCTION  
TOTAL LENGTH  
EXCEPTIONS

LOCATION OF PROJECT

PLANT INSPECTOR  
DAILY TEMPERATURE Minimum  
Maximum  
CONSTRUCTION DATE

EQUATIONS

DATE OF CONSTRUCTION

## GRAPHIC RECORD OF CONSTRUCTION FEATURES

### TYPICAL SECTION

Graded Earth \_\_\_\_\_  
Pavement \_\_\_\_\_

### MATERIALS

Coarse Aggregate \_\_\_\_\_  
Fine Aggregate \_\_\_\_\_  
Cement \_\_\_\_\_  
Admixture \_\_\_\_\_

### PROPORTIONS

### MIXING WATER

Average gal. per sack of cement \_\_\_\_\_

### AIR ENTRAINED CONCRETE

Average % air \_\_\_\_\_

### DISTRIBUTED REINFORCEMENT

Wire Fabric \_\_\_\_\_  
Bar Mat \_\_\_\_\_  
Other \_\_\_\_\_

### JOINTS

Expansion (Show Spacing) \_\_\_\_\_  
Contraction (Show Spacing) \_\_\_\_\_  
Longitudinal \_\_\_\_\_  
Construction \_\_\_\_\_

### CURING METHOD

### DRAINAGE STRUCTURES

Surface Drains \_\_\_\_\_  
Culverts \_\_\_\_\_  
Cross Drainage \_\_\_\_\_  
Longitudinal Drainage \_\_\_\_\_  
Special Drainage \_\_\_\_\_  
Underdrains (Length, Type, & Station) \_\_\_\_\_

### GUARD RAIL

### SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS

### SUBGRADE

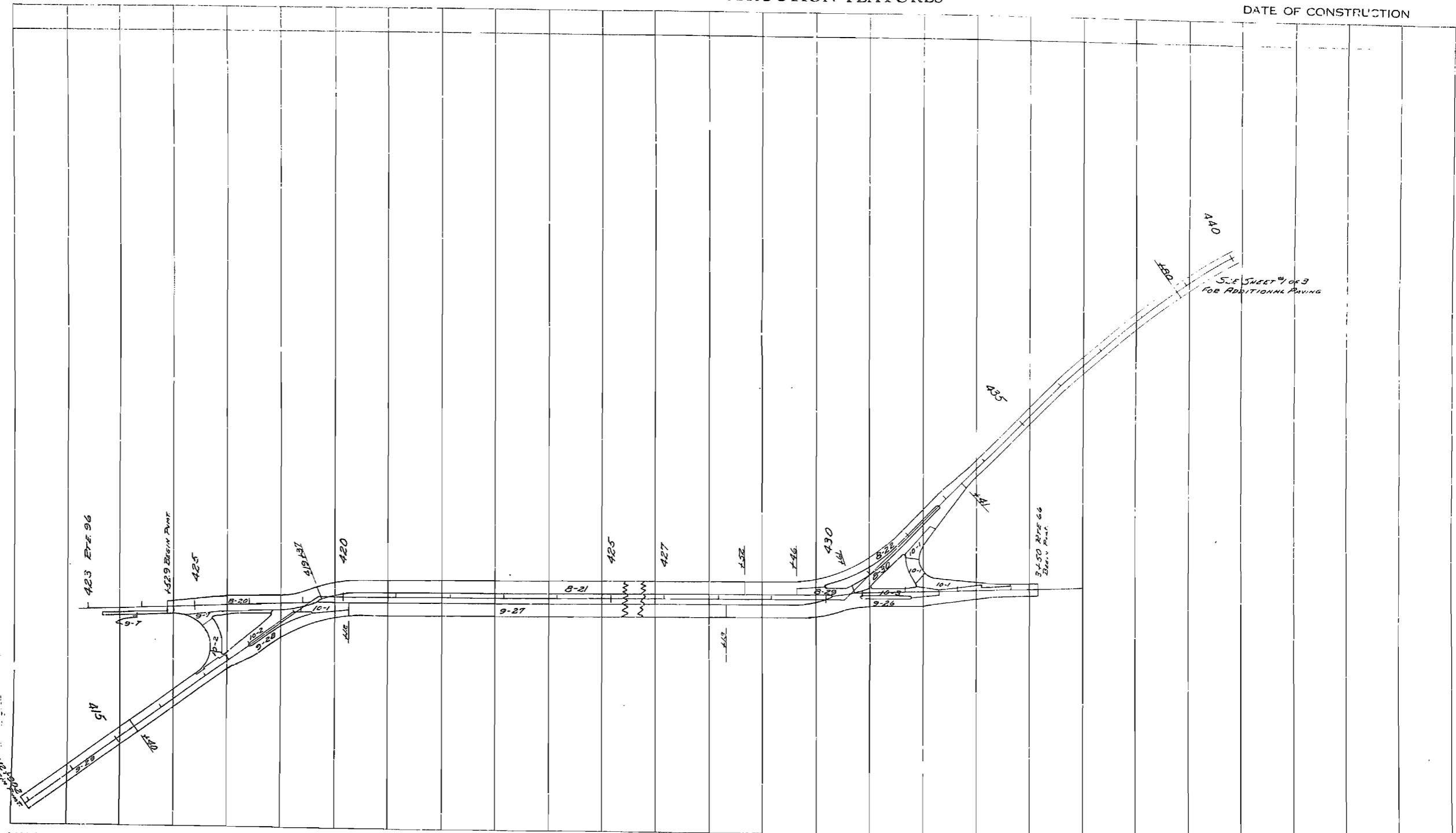
Method of Compacting Embankment \_\_\_\_\_  
Treatment \_\_\_\_\_  
Condition \_\_\_\_\_  
Type \_\_\_\_\_

### BASE COURSE

Type & Thickness \_\_\_\_\_  
Condition \_\_\_\_\_

### DATE OPENED TO TRAFFIC

DEFECTS OBSERVED In Completed Pavement \_\_\_\_\_



MATERIAL KEY

SPECIAL PROCEDURE KEY

PREPARED BY C.R. Hill  
APPROVED BY [Signature] RESIDENT ENGINEER  
APPROVED BY [Signature] DISTRICT MATERIALS ENGINEER  
CHECKED BY [Signature] CONSTRUCTION DIV. ROADWAYS & 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.	F-84(7)		2-AA	
DIST. NO.	COUNTY	ROUTE	SEC.		
7	JASPER	66			

SHEET 13 OF 3

CONTRACTOR  
PAVED BY  
RESIDENT ENGINEER  
SLAB INSPECTORS

TYPE OF CONSTRUCTION  
TOTAL LENGTH  
EXCEPTIONS

LOCATION OF PROJECT

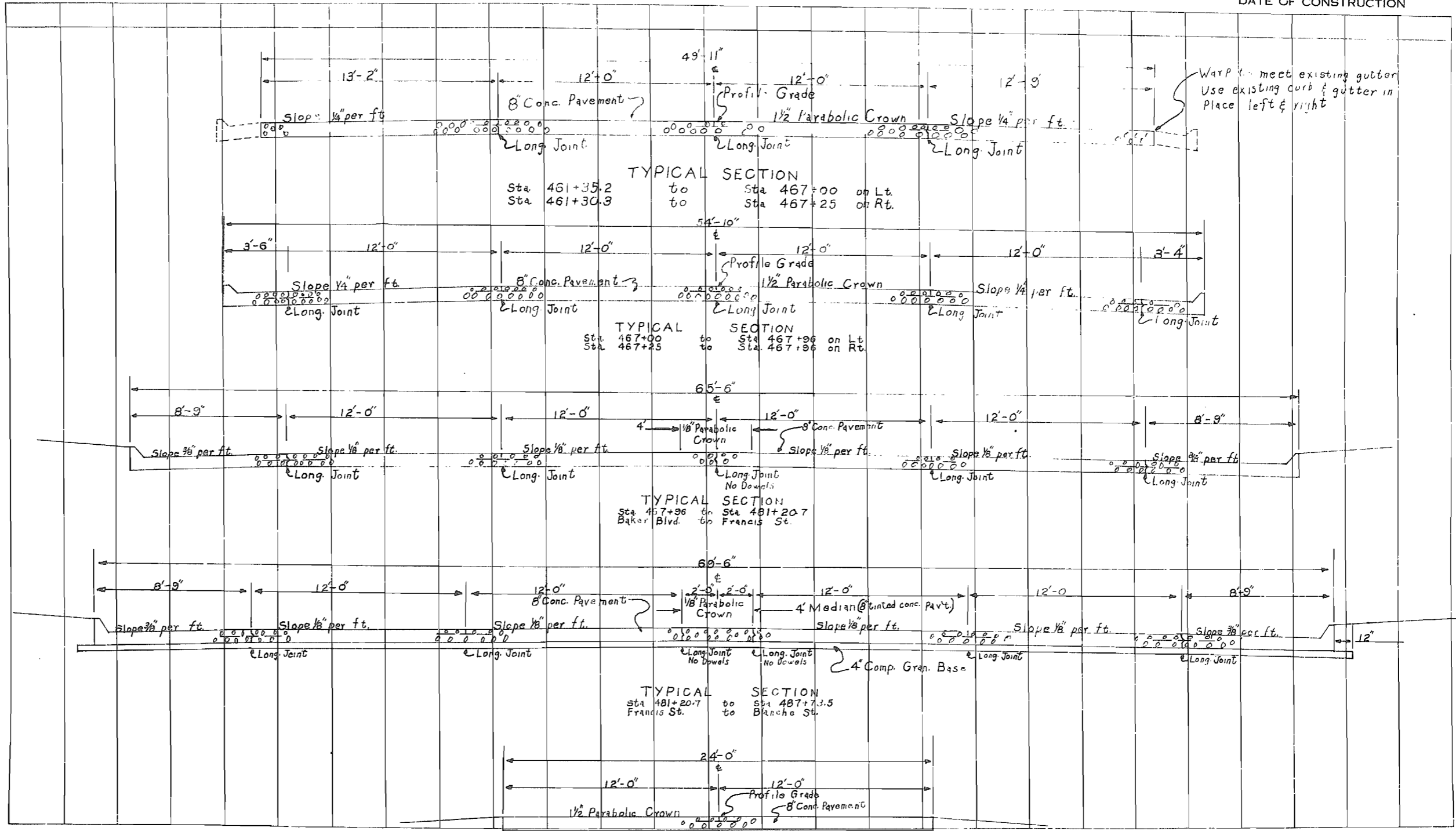
PLANT INSPECTOR  
DAILY TEMPERATURE Minimum Maximum  
CONSTRUCTION DATE

EQUATIONS

DATE OF CONSTRUCTION

## GRAPHIC RECORD OF CONSTRUCTION FEATURES

- TYPICAL SECTION
- Graded Earth \_\_\_\_\_  
Pavement \_\_\_\_\_
- MATERIALS
- Coarse Aggregate \_\_\_\_\_  
Fine Aggregate \_\_\_\_\_  
Cement \_\_\_\_\_  
Admixture \_\_\_\_\_
- PROPORTIONS \_\_\_\_\_
- MIXING WATER  
Average gal. per sack of cement \_\_\_\_\_
- AIR ENTRAINED CONCRETE  
Average % air \_\_\_\_\_
- DISTRIBUTED REINFORCEMENT
- Wire Fabric \_\_\_\_\_  
Bar Mat \_\_\_\_\_  
Other \_\_\_\_\_
- JOINTS
- Expansion (Show Spacing) \_\_\_\_\_  
Contraction (Show Spacing) \_\_\_\_\_  
Longitudinal \_\_\_\_\_  
Construction \_\_\_\_\_
- CURING METHOD \_\_\_\_\_
- DRAINAGE STRUCTURES
- Surface Drains \_\_\_\_\_  
Culverts \_\_\_\_\_  
Cross Drainage \_\_\_\_\_  
Longitudinal Drainage \_\_\_\_\_  
Special Drainage \_\_\_\_\_  
Underdrains (Length, Type, & Station) \_\_\_\_\_
- GUARD RAIL \_\_\_\_\_
- SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS \_\_\_\_\_
- SUBGRADE
- Method of Compacting Embankment \_\_\_\_\_  
Treatment \_\_\_\_\_  
Condition \_\_\_\_\_  
Type \_\_\_\_\_
- BASE COURSE
- Type & Thickness \_\_\_\_\_  
Condition \_\_\_\_\_
- DATE OPENED TO TRAFFIC \_\_\_\_\_
- DEFECTS OBSERVED in Completed Pavement \_\_\_\_\_



MATERIAL KEY

SPECIAL PROCEDURE KEY

TYPICAL SECTION  
24" P.C. Pavement

PREPARED BY	E.A. Stuart
APPROVED BY	[Signature]
APPROVED BY	[Signature]
CHECKED BY	[Signature]

RESIDENT ENGINEER  
DISTRICT MATERIALS ENGINEER  
CONSTRUCTION DIV. CURBETS & PLANS DIV. MATERIALS DIV.

SUMMARY SHEET FOR CONCRETE PAVING PROJECT

Table with columns: FED. ROAD DIST. NO., STATE, FEDERAL PROJECT NO., FISCAL YEAR, SHEET NO., TOTAL SHEETS. Values: 5 MO. F-84(7), 7 JASPER, 2-AA.

EQUIPMENT: KOENIG PRYER 34-E SER. No. 26106 1954, JAEGER SPREADER SER. No. 51X806 1951, BLOW-KNOX FINISHER SER. No. 50XE 9 1950, etc.

TYPE OF CONSTRUCTION: GRADED EARTH, CULVERTS, BRIDGES, & VAR. WIDTH CONC. PAVT.
TOTAL LENGTH 1.512 MILES
EXCEPTIONS STA. 487+73.5 TO 502+26.5 = -1453.0 FT.
EQUATIONS NONE

LOCATION OF PROJECT: Rte. 96 N.E. & E. OVER CENTRAL AVE. TO Rte. 71 IN CARTHAGE

GRAPHIC RECORD OF CONSTRUCTION FEATURES

TEMPERATURES, MIXING WATER, & ENTRAINED AIR LISTED UNDER THESE DATES

DAILY TEMPERATURE Minimum Maximum

CONSTRUCTION DATE

STATION

TYPICAL SECTION

Graded Earth
Pavement

MATERIALS

Coarse Aggregate
Fine Aggregate
Cement
Admixture

PROPORTIONS

MIXING WATER

Average gal. per sack of cement

AIR ENTRAINED CONCRETE

Average % air

DISTRIBUTED REINFORCEMENT

Wire Fabric
Bar Mat
Other

JOINTS

Expansion (Show Spacing)
Contraction (Show Spacing)
Longitudinal
Construction

CURING METHOD

DRAINAGE STRUCTURES

Surface Drains
Culverts
Cross Drainage
Longitudinal Drainage
Special Drainage
Underdrains (Length, Type, & Station)

GUARD RAIL

SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS

SUBGRADE

Method of Compacting Embankment
Treatment
Condition
Type

BASE COURSE

Type & Thickness
Condition

DATE OPENED TO TRAFFIC

DEFECTS OBSERVED In Completed Pavement

Main construction record table with columns for station (412-510) and rows for materials, proportions, mixing water, air entrainment, joints, curing, drainage, subgrade, base course, and defects.

MATERIAL KEY and SPECIAL PROCEDURE KEY: I - Keokuk Limestone, 1 - River Sand, A - Monarch Cement, etc.

PREPARED BY: C.R. Hill & C.R. Beckham
APPROVED BY: [Signature]
APPROVED BY: [Signature]
CHECKED BY: [Signature]

Handwritten number 384

# SUMMARY SHEET FOR CONCRETE PAVING PROJECT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	F8417		2-AA	
DIST. NO.	COUNTY	ROUTE	SEC.		
7	JASPER	66			

SHEET #2 of 3

CONTRACTOR  
PAVED BY  
  
RESIDENT ENGINEER  
SLAB INSPECTORS

TYPE OF CONSTRUCTION  
TOTAL LENGTH  
EXCEPTIONS

PLANT INSPECTOR  
  
DAILY TEMPERATURE Minimum  
Maximum  
  
CONSTRUCTION DATE

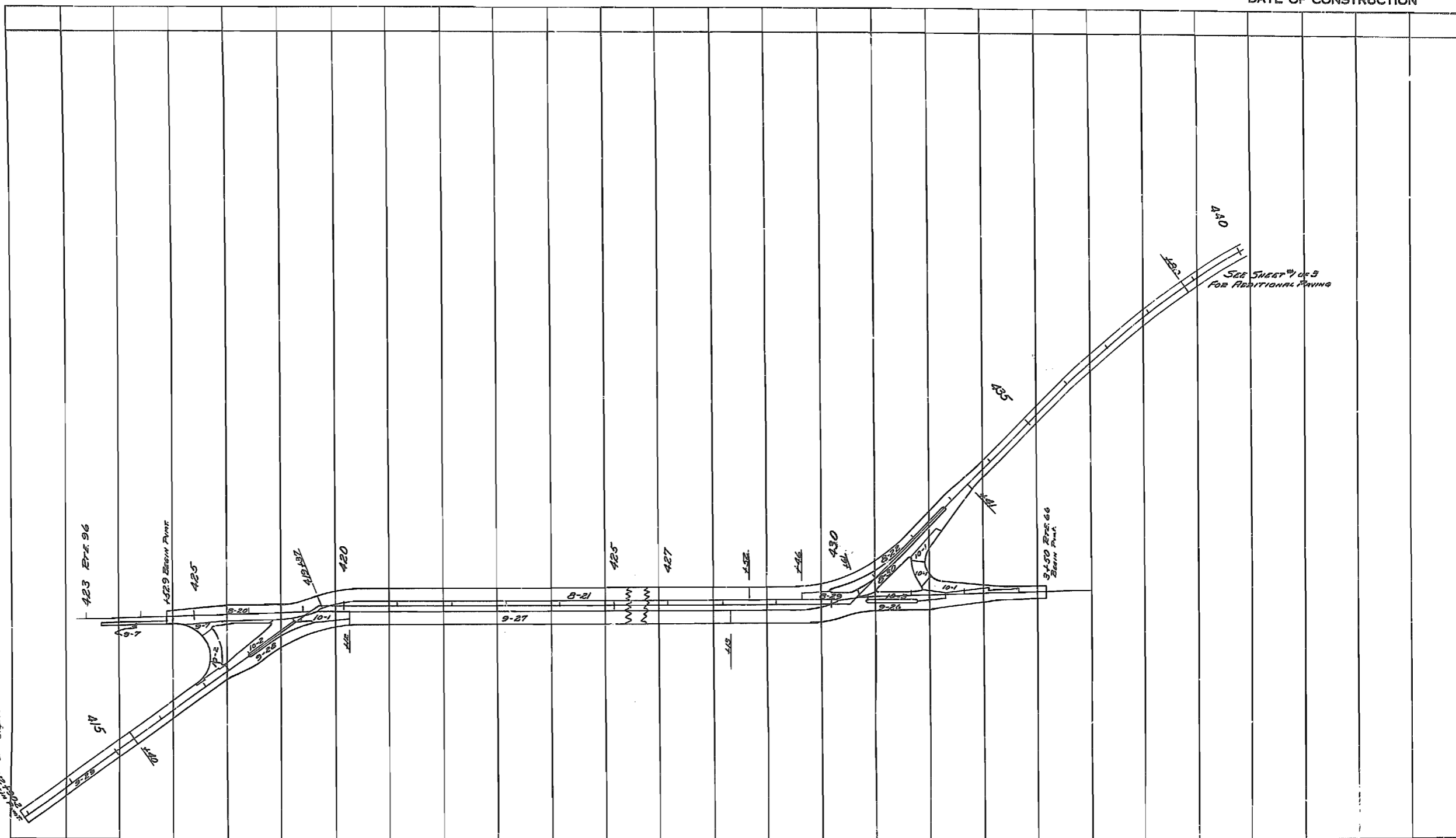
EQUATIONS

LOCATION OF PROJECT

## GRAPHIC RECORD OF CONSTRUCTION FEATURES

DATE OF CONSTRUCTION

- TYPICAL SECTION**  
Graded Earth \_\_\_\_\_  
Pavement \_\_\_\_\_
- MATERIALS**  
Coarse Aggregate \_\_\_\_\_  
Fine Aggregate \_\_\_\_\_  
Cement \_\_\_\_\_  
Admixture \_\_\_\_\_
- PROPORTIONS** \_\_\_\_\_
- MIXING WATER**  
Average gal. per sack of cement \_\_\_\_\_
- AIR ENTRAINED CONCRETE**  
Average % air \_\_\_\_\_
- DISTRIBUTED REINFORCEMENT**  
Wire Fabric \_\_\_\_\_  
Bar Mat \_\_\_\_\_  
Other \_\_\_\_\_
- JOINTS**  
Expansion (Show Spacing) \_\_\_\_\_  
Contraction (Show Spacing) \_\_\_\_\_  
Longitudinal \_\_\_\_\_  
Construction \_\_\_\_\_
- CURING METHOD** \_\_\_\_\_
- DRAINAGE STRUCTURES**  
Surface Drains \_\_\_\_\_  
Culverts \_\_\_\_\_  
Cross Drainage \_\_\_\_\_  
Longitudinal Drainage \_\_\_\_\_  
Special Drainage \_\_\_\_\_  
Underdrains (Length, Type, & Station) \_\_\_\_\_
- GUARD RAIL** \_\_\_\_\_
- SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS** \_\_\_\_\_
- SUBGRADE**  
Method of Compacting Embankment \_\_\_\_\_  
Treatment \_\_\_\_\_  
Condition \_\_\_\_\_  
Type \_\_\_\_\_
- BASE COURSE**  
Type & Thickness \_\_\_\_\_  
Condition \_\_\_\_\_
- DATE OPENED TO TRAFFIC** \_\_\_\_\_
- DEFECTS OBSERVED** In Completed Pavement \_\_\_\_\_



MATERIAL KEY

SPECIAL PROCEDURE KEY

PREPARED BY *S.R. Hill*  
APPROVED BY *[Signature]* RESIDENT ENGINEER  
APPROVED BY *[Signature]* DISTRICT MATERIALS ENGINEER  
CHECKED BY *[Signature]* CONSTRUCTION DIV.    SUPERVISOR & PLANS DIV.    MATERIALS DIV.

385

# SUMMARY SHEET FOR CONCRETE PAVING PROJECT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	F-84(7)		2-AA	
DIST. NO.	COUNTY	ROUTE	SEC.		
7	JASPER		66		

SHEET #3 OF 3

CONTRACTOR  
PAVED BY  
RESIDENT ENGINEER  
SLAB INSPECTORS

TYPE OF CONSTRUCTION  
TOTAL LENGTH  
EXCEPTIONS

LOCATION OF PROJECT

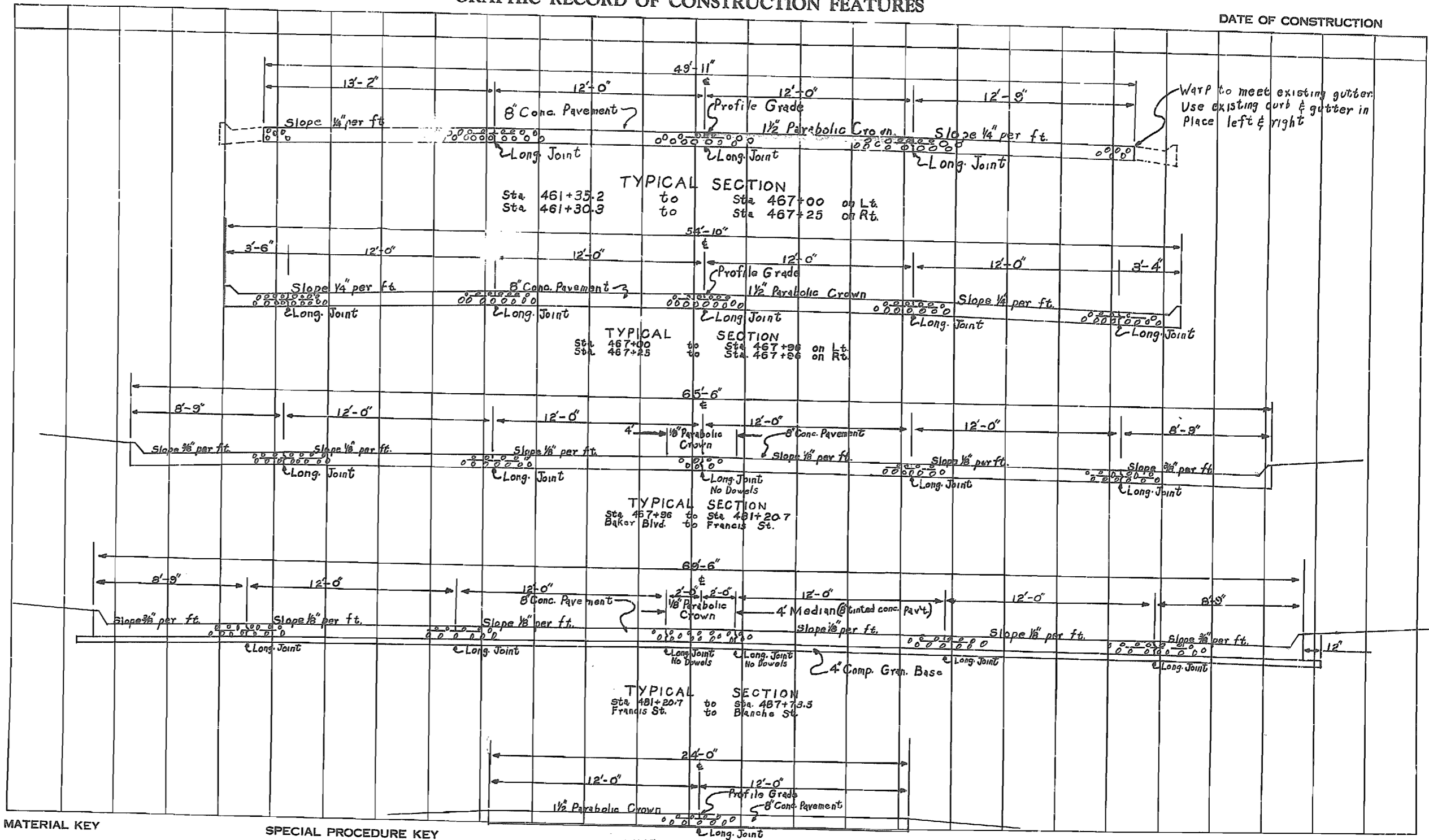
PLANT INSPECTOR  
DAILY TEMPERATURE Minimum Maximum  
CONSTRUCTION DATE

EQUATIONS

DATE OF CONSTRUCTION

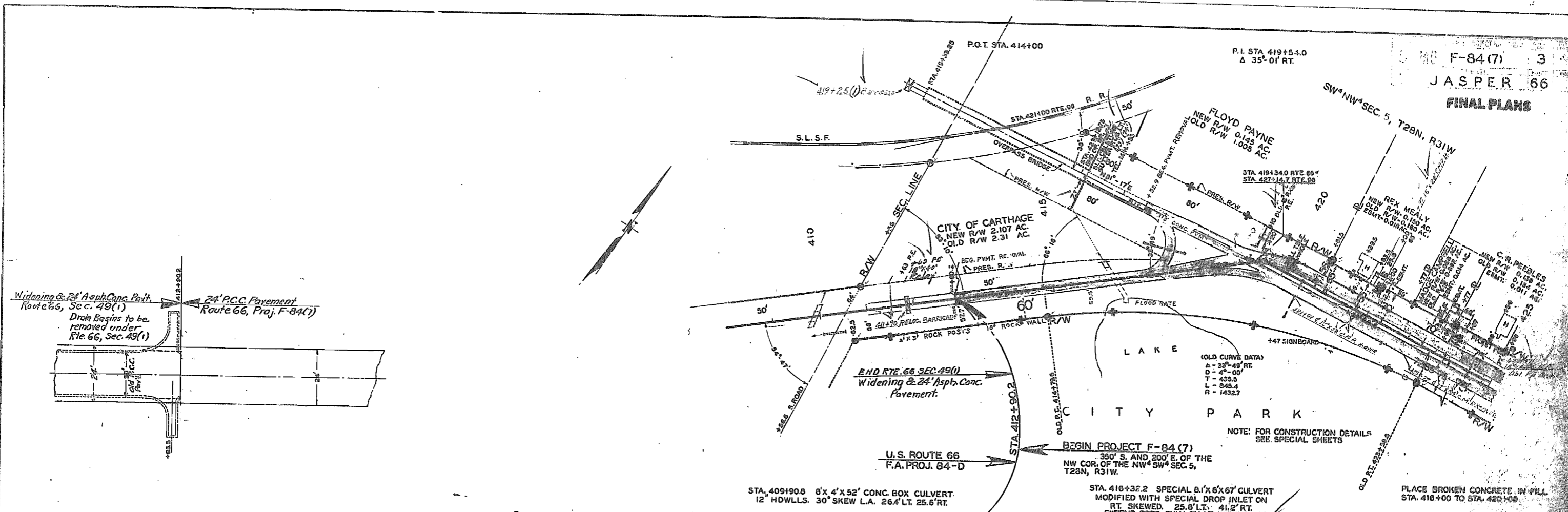
## GRAPHIC RECORD OF CONSTRUCTION FEATURES

- TYPICAL SECTION**  
Graded Earth \_\_\_\_\_  
Pavement \_\_\_\_\_
- MATERIALS**  
Coarse Aggregate \_\_\_\_\_  
Fine Aggregate \_\_\_\_\_  
Cement \_\_\_\_\_  
Admixture \_\_\_\_\_
- PROPORTIONS**  
MIXING WATER  
Average gal. per sack of cement \_\_\_\_\_
- AIR ENTRAINED CONCRETE**  
Average % air \_\_\_\_\_
- DISTRIBUTED REINFORCEMENT**  
Wire Fabric \_\_\_\_\_  
Bar Mat \_\_\_\_\_  
Other \_\_\_\_\_
- JOINTS**  
Expansion (Show Spacing) \_\_\_\_\_  
Contraction (Show Spacing) \_\_\_\_\_  
Longitudinal \_\_\_\_\_  
Construction \_\_\_\_\_
- CURING METHOD** \_\_\_\_\_
- DRAINAGE STRUCTURES**  
Surface Drains \_\_\_\_\_  
Inverts \_\_\_\_\_  
Cross Drainage \_\_\_\_\_  
Longitudinal Drainage \_\_\_\_\_  
Special Drainage \_\_\_\_\_  
Underdrains (Length, Type, & Station) \_\_\_\_\_
- GUARD RAIL** \_\_\_\_\_
- SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS**
- SUBGRADE**  
Method of Compacting Embankment \_\_\_\_\_  
Treatment \_\_\_\_\_  
Condition \_\_\_\_\_  
Type \_\_\_\_\_
- BASE COURSE**  
Type & Thickness \_\_\_\_\_  
Condition \_\_\_\_\_
- DATE OPENED TO TRAFFIC** \_\_\_\_\_
- DEFECTS OBSERVED** In Completed Pavement



*Handwritten signature/initials*

PREPARED BY: E.A. Stuart  
APPROVED BY: [Signature] RESIDENT ENGINEER  
APPROVED BY: [Signature] DISTRICT MATERIALS ENGINEER  
CHECKED BY: \_\_\_\_\_  
CONSTRUCTION DIV. SURVEY & PLANS DIV. MATERIALS DIV.



**PLAN**  
 SURVEILED BY: [ ]  
 PLOTTED BY: [ ]  
 CHECKED BY: [ ]  
 DATE: [ ]

**PROFILE**  
 SURVEILED BY: [ ]  
 PLOTTED BY: [ ]  
 CHECKED BY: [ ]  
 DATE: [ ]

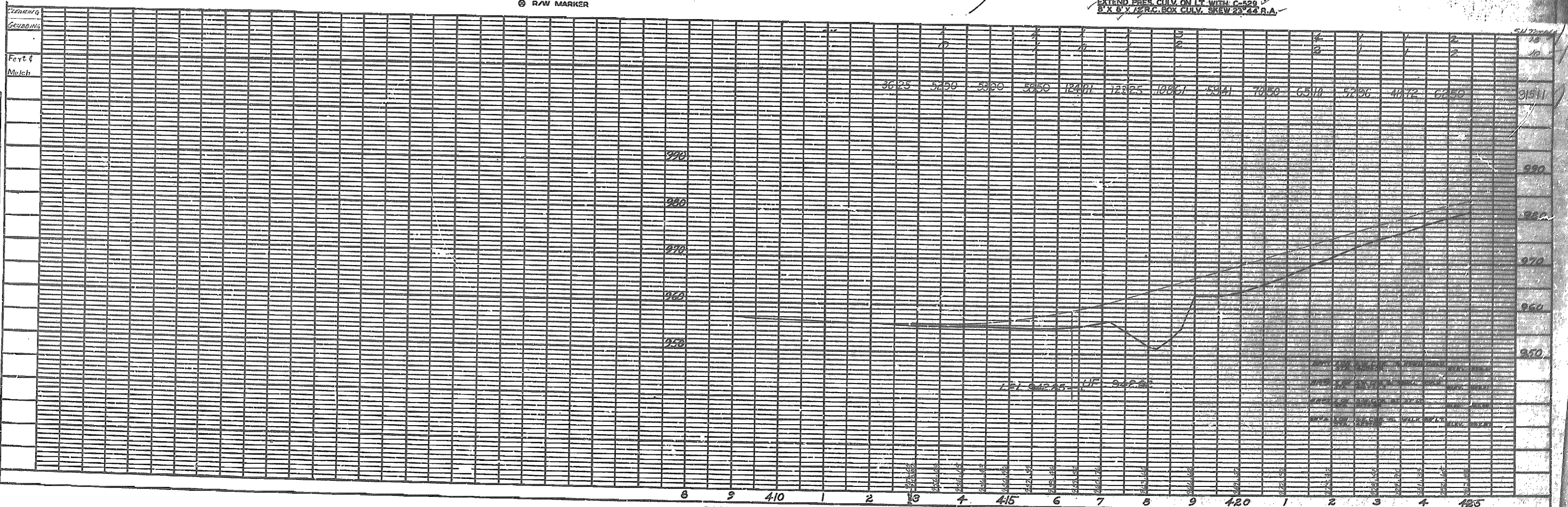
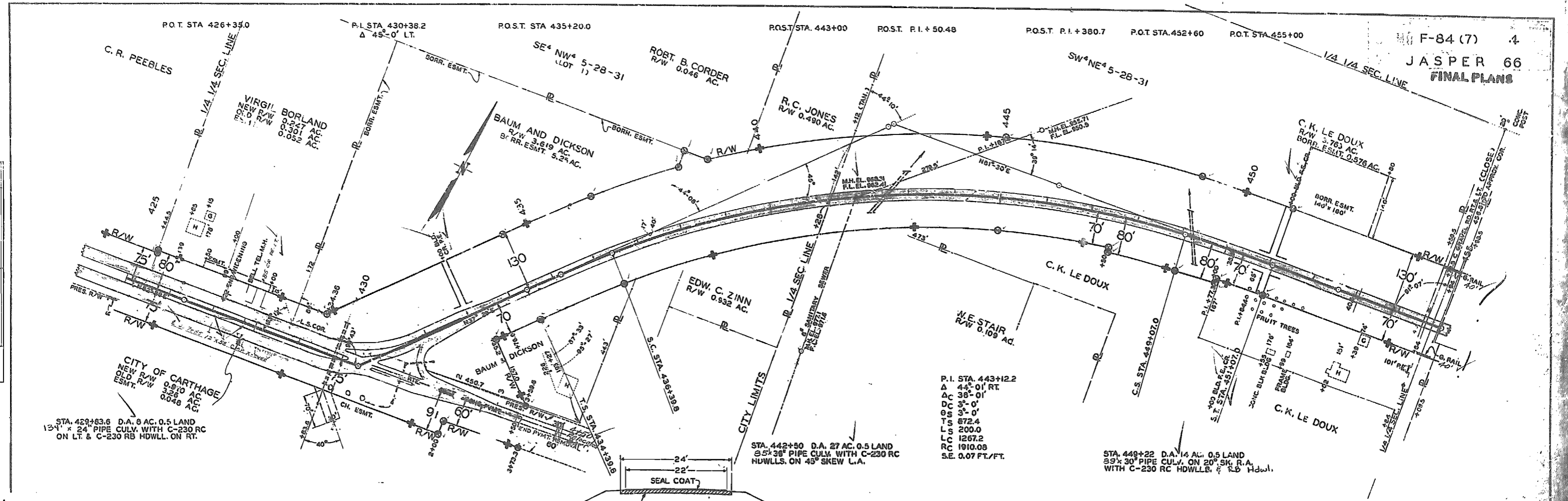


PLATE 1-PLAN-PROFILE O.P.R. & R.E. STANDARD  
 H. S. BLUM, Chicago



P.I. STA. 443+12.2  
 Δ 44° 01' RT  
 Δ C 36° 01'  
 Δ C 5° 0'  
 Δ C 5° 0'  
 T.S. 872.4  
 L.S. 200.0  
 L.C. 1267.2  
 R.C. 1910.08  
 S.E. 0.07 FT./FT.

STA. 449+22 D.A. 14 AC. 0.5 LAND  
 39" x 30" PIPE CULV. ON 20° SK. R.A.  
 WITH C-230 RC HDWLLS. & R.B. Hdwl.

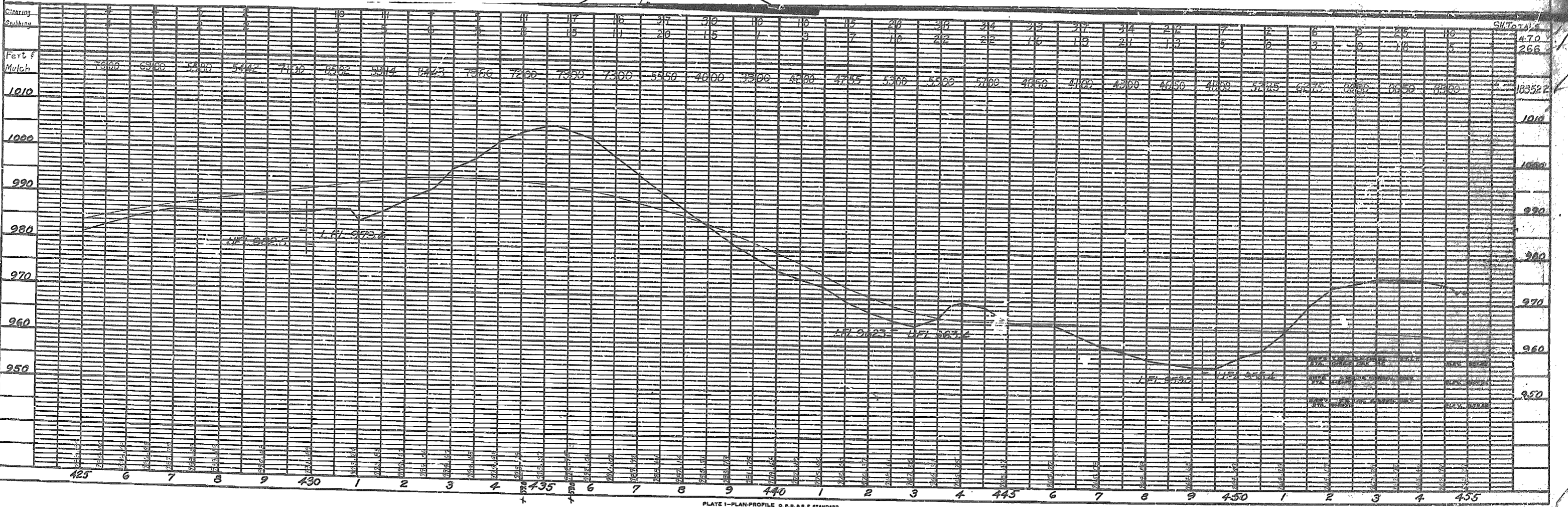
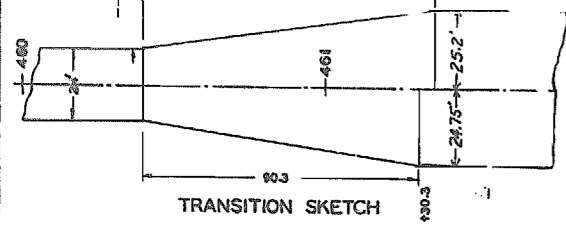
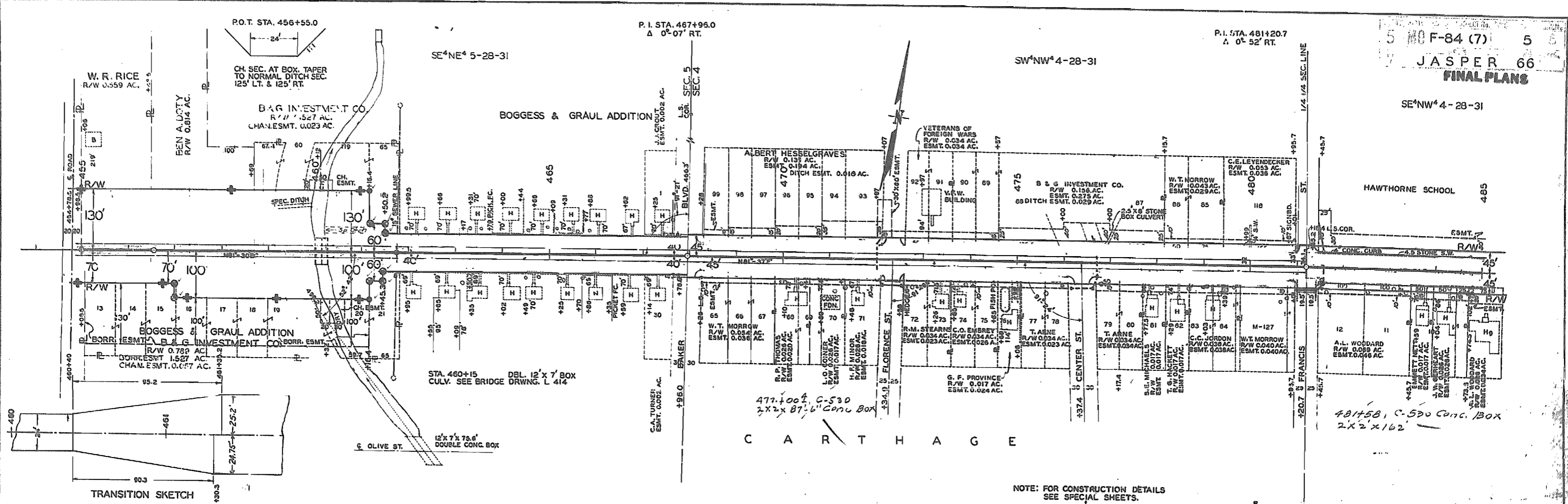


PLATE 1-PLAN-PROFILE O.P.R. & R.E. STANDARD  
 U.S. BLUE. Chicago

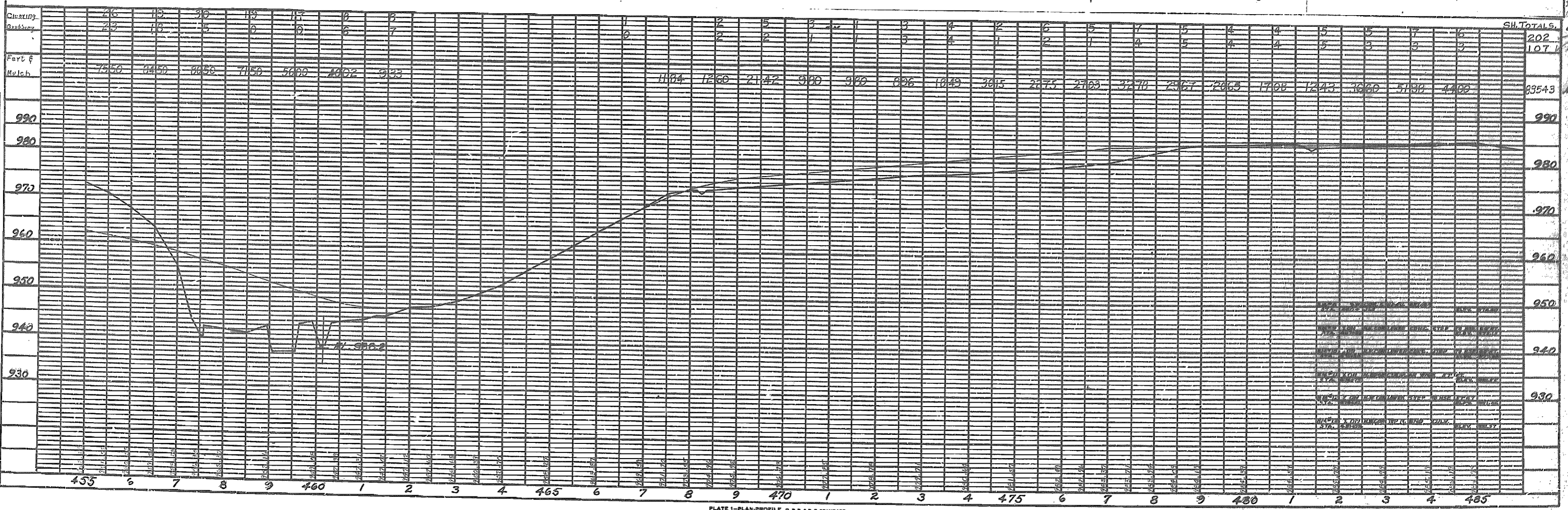
PLAN  
 SHEETED  
 PLOTTED  
 ALIGNED  
 DATE  
 BY  
 NO.

PROJ.  
 SHEETED  
 PLOTTED  
 GRADES CHECKED  
 DATE  
 BY  
 NO.

PLAN	SUPPLIER	DATE
NOTE BOOK	REVISIONS CHECKED	11-1-50
	BY	
	DATE	



NOTE: FOR CONSTRUCTION DETAILS SEE SPECIAL SHEETS.

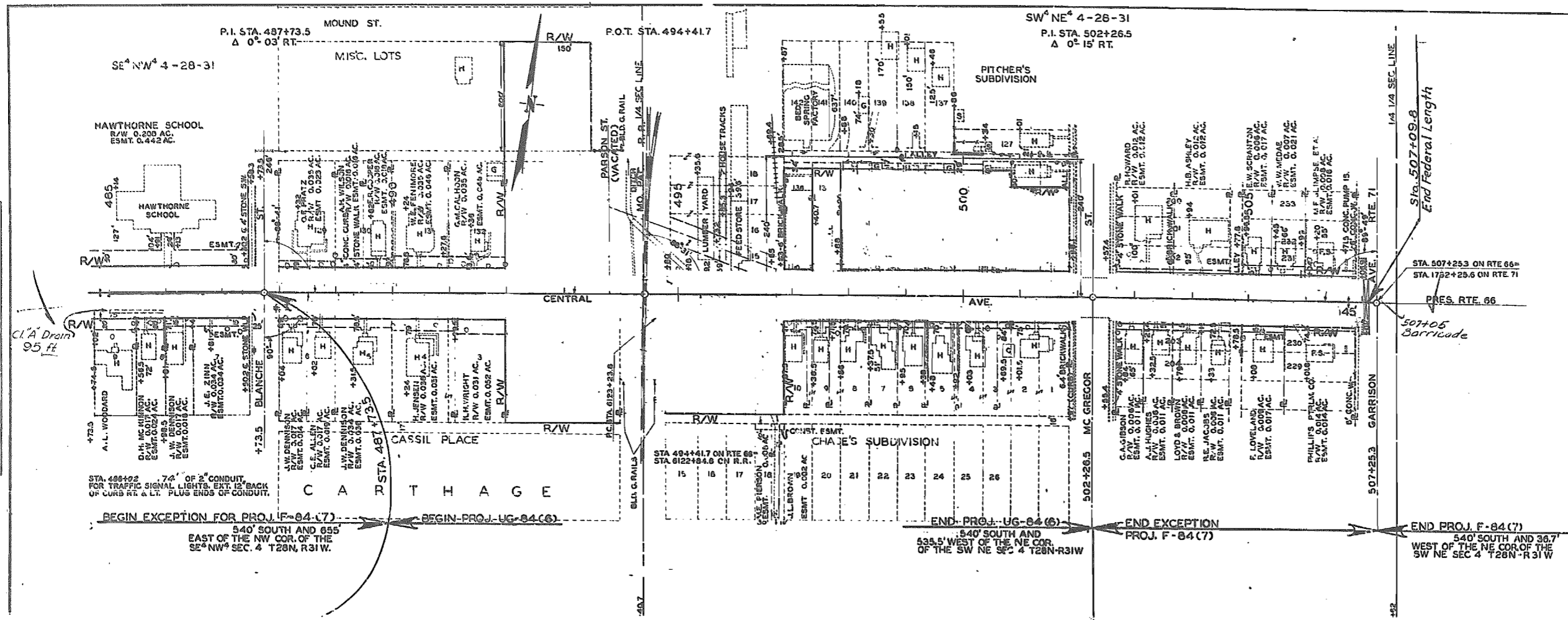


2

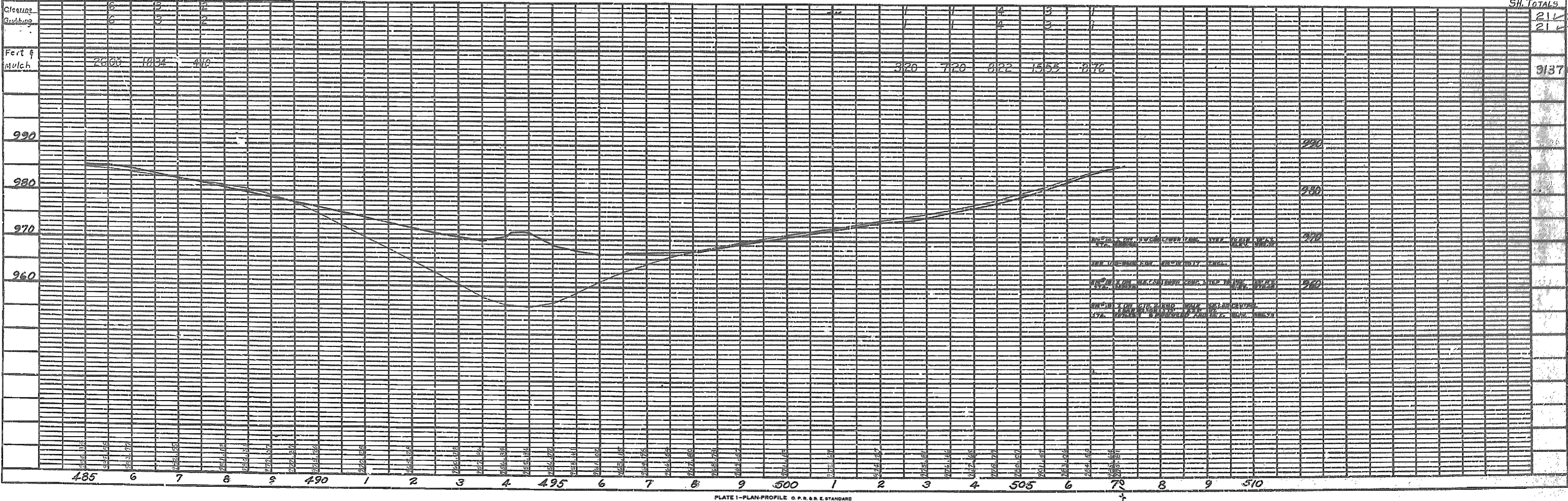
JASPER 66 FINAL PLANS

LOT	OWNER	R/W AC.	ESMT. AC.
136	PLATT & PORTER	0.317	0.017
135	H. B. CRAWFORD	0.218	0.017
134	AL. SBURY & MEYER	0.017	0.011
133	C. E. BLACKWELL	0.017	0.011
132	A. J. LAMPERS	0.017	0.011
131	O. L. WHEELER	0.017	0.017
128	R. E. CHATTEYTON	0.017	0.017
125	J. A. MC JEE	0.024	0.017
124-123	R. H. STANTON	0.248	0.037

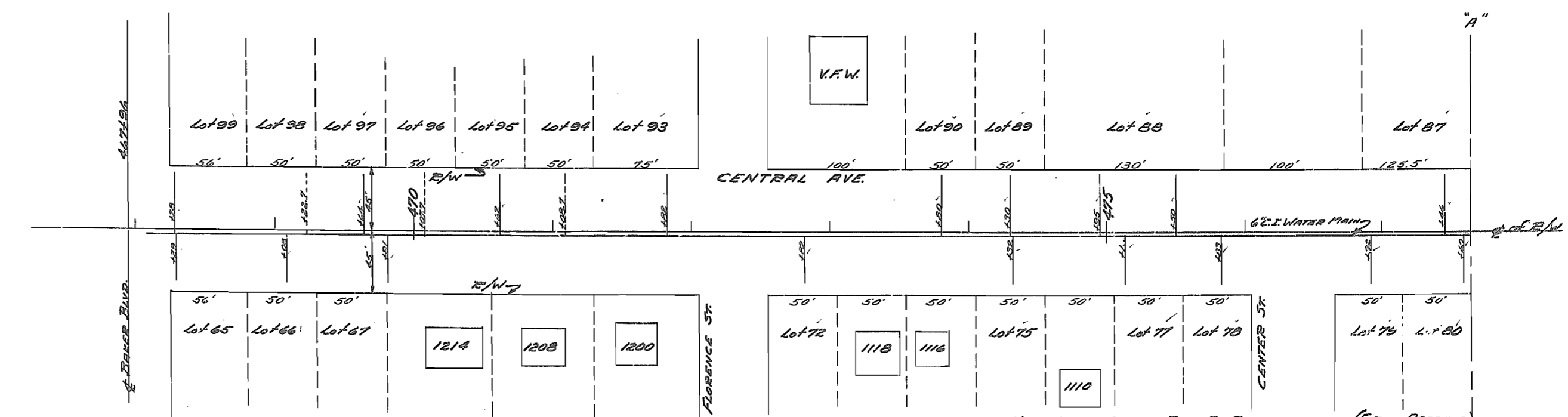
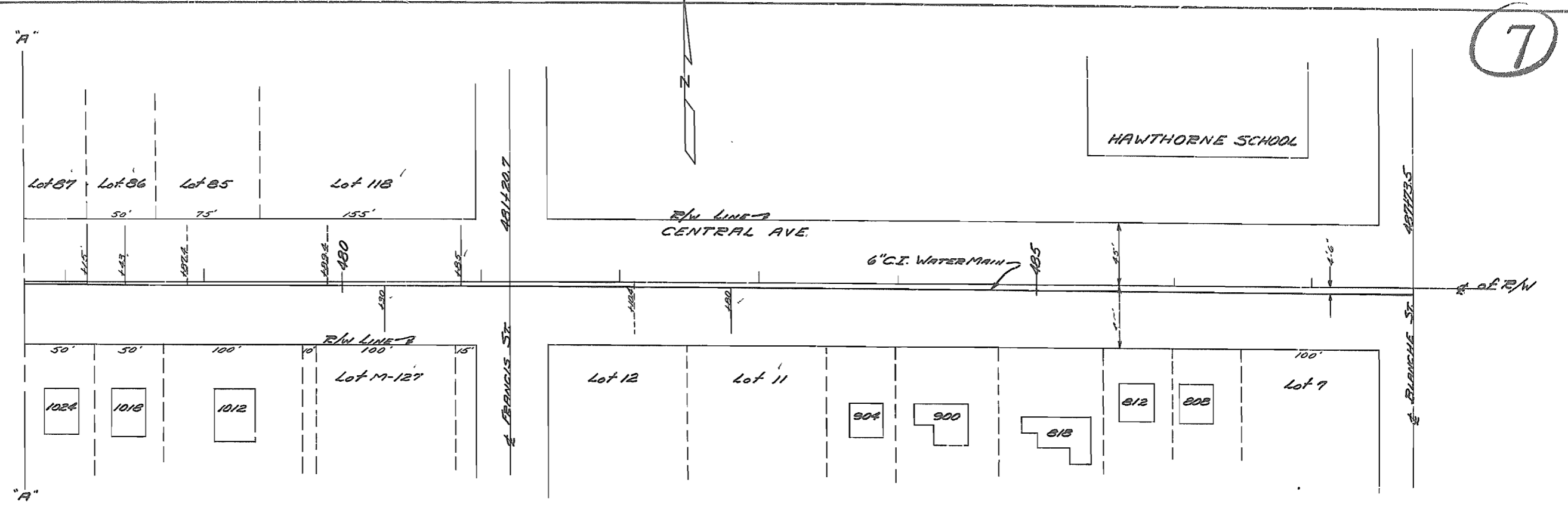
LOT	OWNER	R/W AC.	ESMT. AC.
14-13	G. THOMPSON	0.325	
13-12	J. R. CASH	0.217	
11	J. W. ALLEN	0.192	
10	J. A. ECKMAN	0.005	0.010
10-9	R. THOMPSON	0.005	0.018
9-8	F. B. BADGLEY	0.008	0.017
7	R. E. BRUNBACK	0.008	0.011
6	C. G. BRYAN	0.008	0.018
6-4	R. N. RALSTON	0.008	0.018
4-3	F. MOSER	0.007	0.016
3-2-1	W. H. ALBROOKS	0.014	0.028



PLAN	DATE	BY	CHECKED
1	1/22/80	J.B.	J.B.
2	2/19/80	J.B.	J.B.
3	3/25/80	J.B.	J.B.
4	4/22/80	J.B.	J.B.
5	5/20/80	J.B.	J.B.
6	6/17/80	J.B.	J.B.
7	7/15/80	J.B.	J.B.
8	8/12/80	J.B.	J.B.
9	9/9/80	J.B.	J.B.
10	10/7/80	J.B.	J.B.
11	11/4/80	J.B.	J.B.
12	12/2/80	J.B.	J.B.



PROFILE	DATE	BY	CHECKED
1	1/22/80	J.B.	J.B.
2	2/19/80	J.B.	J.B.
3	3/25/80	J.B.	J.B.
4	4/22/80	J.B.	J.B.
5	5/20/80	J.B.	J.B.
6	6/17/80	J.B.	J.B.
7	7/15/80	J.B.	J.B.
8	8/12/80	J.B.	J.B.
9	9/9/80	J.B.	J.B.
10	10/7/80	J.B.	J.B.
11	11/4/80	J.B.	J.B.
12	12/2/80	J.B.	J.B.



PLAN SHOWING NEW WATER SERVICES  
 WORK DONE BY CITY UTILITIES (FORCE ACCOUNT)

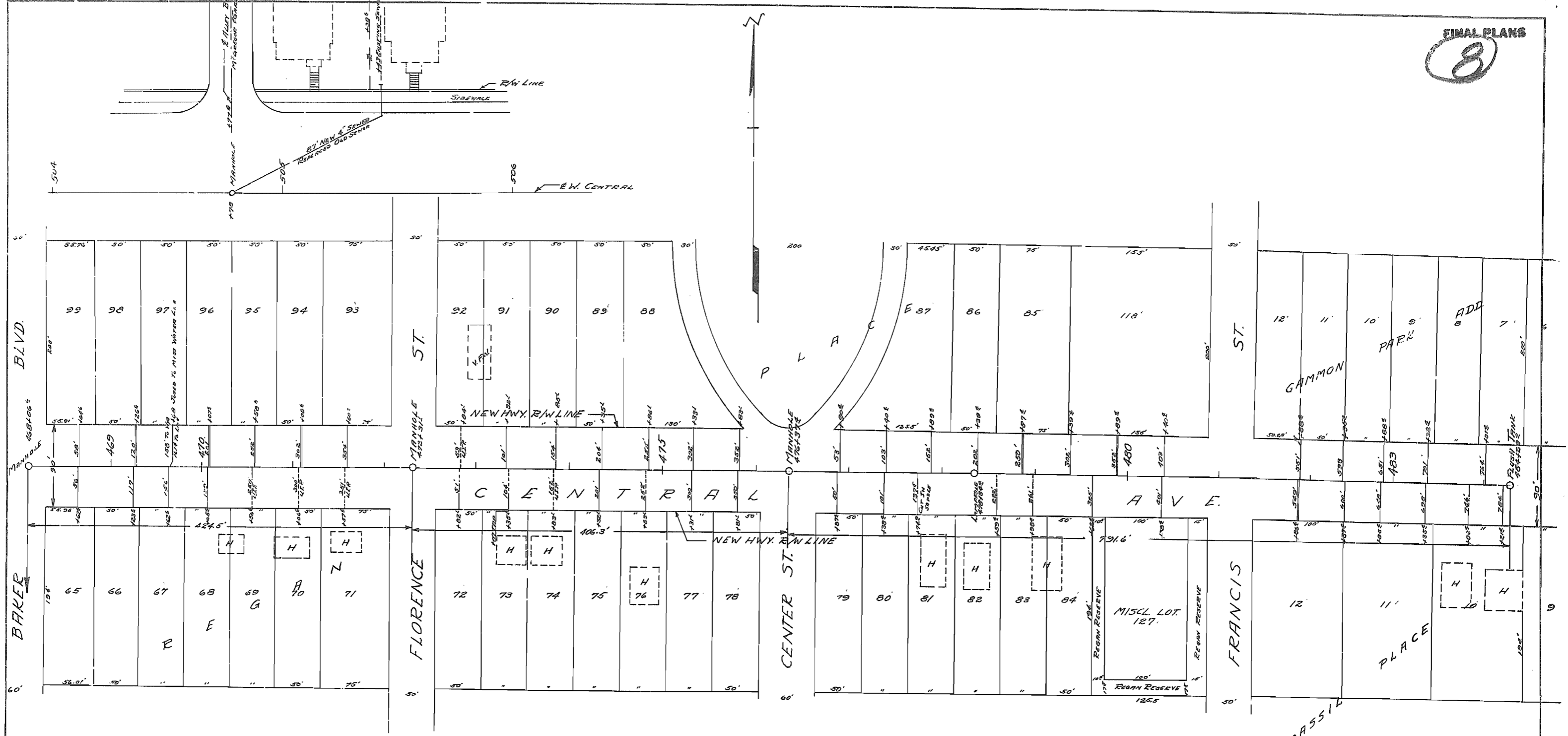
NEW WATER SERVICES BUILT BY STATE (FORCE ACCOUNT)  
 NEW WATER SERVICES BUILT BY OWNERS  
 MISSOURI STATE HIGHWAY DEPT.  
 RTE. 66 - CENTRAL AVE. IN CARTHAGE  
 PROJ. F-84(7) - JASPER COUNTY

FINAL SURVEY SUBMITTED BY CAR. H. 1-27-21  
 NOTEBOOK NO. 1111  
 NO. 1111

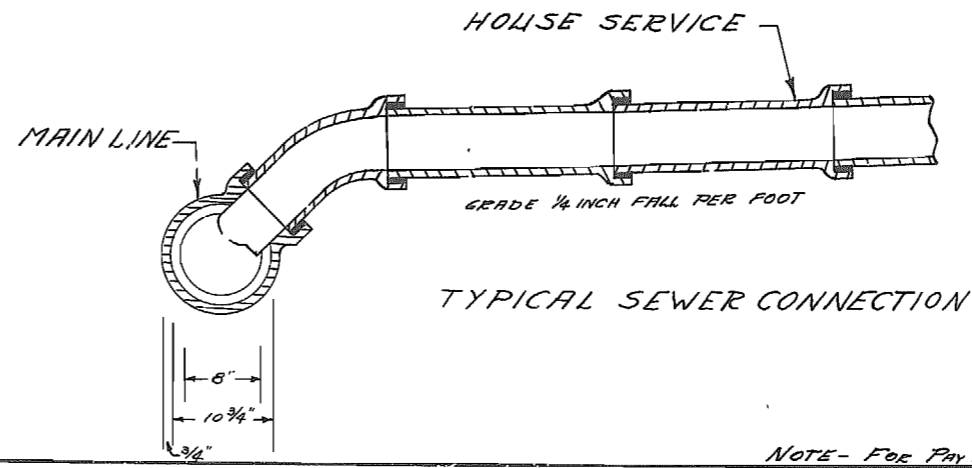
ORIGINAL SURVEY SUBMITTED BY CAR. H. 1-27-21  
 NOTEBOOK NO. 1111  
 NO. 1111

FINAL SURVEY  
NOTED FOR  
CITY OF CARB

ORIGINAL SURVEY  
NOTED FOR  
CITY OF CARB



HOUSE SERVICES CONNECTED TO EACH WYE AND EXTENDED TO R/W LINE  
 6" VITRIFIED CLAY TILE, MASTIC JOINTS, AND REMOVABLE STOPPER:: USED  
 LAID ON GRADE OF 1/4" PER FOOT  
 ALL MANHOLES AND FLUSH TANKS BROUGHT TO FINISH GRADE OF NEW PAVEMENT



TYPICAL SEWER CONNECTION

MISSOURI STATE  
 HIGHWAY DEPT.  
 PROJECT - F-84(1)  
 RTE. 66 - JASPER COUNTY  
 CITY OF CARTHAGE

— NEW SERVICE CONNECTIONS  
 - - - EXISTING SERVICE CONNECTIONS  
 EXTENDED  
 = = = NEW SERVICE CONNECTIONS  
 BUILT & PAID FOR BY PROPERTY  
 OWNERS

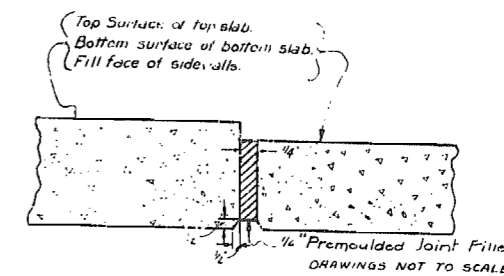
NOTE - FOR PAY ITEMS SEE SHEET #28  
 SPECIAL SHEET #18 - REVISED

MODIFICATIONS OF STANDARD CULVERT DETAILS											
STATION	STANDARD NUMBER	SIZE AND TOTAL LENGTH OF FINAL STRUCTURES	HEIGHT OF FILL FOR DESIGN DATA	SECTION OR IDENTICAL SECTIONS	SECTION LOCATED UNDER	LENGTH OF SECTION	MODIFICATIONS				REMARKS
							BOTTOM SLAB			LENGTH OF B-BARS IN SIDEWALLS	
							THICKNESS OF SLAB	SIZE OF A-BARS	SPACING OF A-BARS		
472+00.4	C-530	2x2x87.5'	2'	A	Road bed	37'-6"					1-Drop Inlet
			2'	B	Road bed Lt. Slope	50'					Dog Leg 25° Skew 1-Drop Inlet
481+58	C-530	2x2x162'	2'	A&D	Nat. Gd. Road bed	50'					2-Dog Legs 2-Drop Inlets
			2'	B&C	Road bed	31'					1-Dog Leg 1-Drop Inlet

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

MODIFICATIONS OF STANDARD CULVERT DETAILS											
STATION	STANDARD NUMBER	SIZE AND TOTAL LENGTH OF FINAL STRUCTURES	HEIGHT OF FILL FOR DESIGN DATA	SECTION OR IDENTICAL SECTIONS	SECTION LOCATED UNDER	LENGTH OF SECTION	MODIFICATIONS				REMARKS
							BOTTOM SLAB			LENGTH OF B-BARS IN SIDEWALLS	
							THICKNESS OF SLAB	SIZE OF A-BARS	SPACING OF A-BARS		
496+72.5		12x4'x59'-3"	2'	A	Alley Rt. 1'-6" Conn.	50'	12"	#6	5"	5'-6"	Connection to 8'x4' Box Culv.
	C-531		2'	B	Alley Rt. & Nat. Gd.	50'	12"	#6	5"	5'-6"	
			3'	C	Nat. Gd.	50'	12 1/2"		5"	5'-6"	
			5'	D	Nat. Gd.	50'	13 1/2"	#7	6"	5'-9"	
			5'	E	Nat. Gd. & Bk. Slope	37'-9"	13 1/2"	#7	6"	5'-9"	
	C-529		2'	F&G	Roadway	50'	15"	#8	7"	6'-0"	Dog Leg Sec. G.
	C-531		7'	H	Nat. Gd. Lt.	50'	14 1/2"	#7	5 1/2"	6'-0"	
			8'	I, J & K	Nat. Gd.	50'	15"	#7	5"	6'-0"	
	C-529		13'	L	Railroad	50'	19 1/2"	#10	6"	6'-9"	Special Modification: #10 A-Bars 6' Ctrs. Top and Bottom Slabs, Dog Leg
	C-531		4'	M	Nat. Gd.	32'	13"	#7	6 1/2"	5'-9"	
			4'	N	Nat. Gd.	25'	13"	#7	6 1/2"	5'-9"	2:1 W. W. Slopes Dog Leg

DETAILS OF TRANSVERSE EXPANSION JOINT



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

GENERAL NOTES

All longitudinal reinforcement shall be placed with ends approximately 1/2" from center of expansion joints.  
 Cost of transverse 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.

9

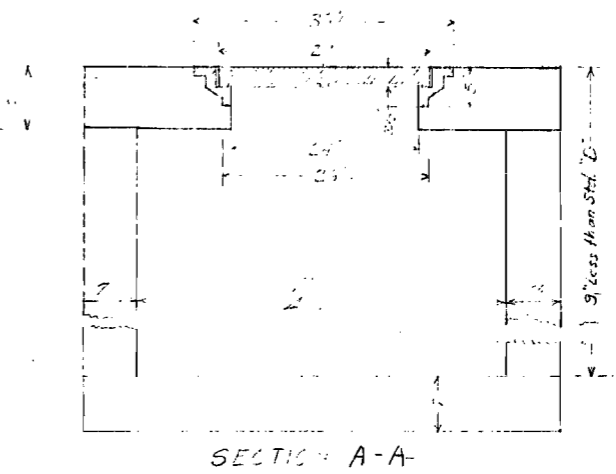
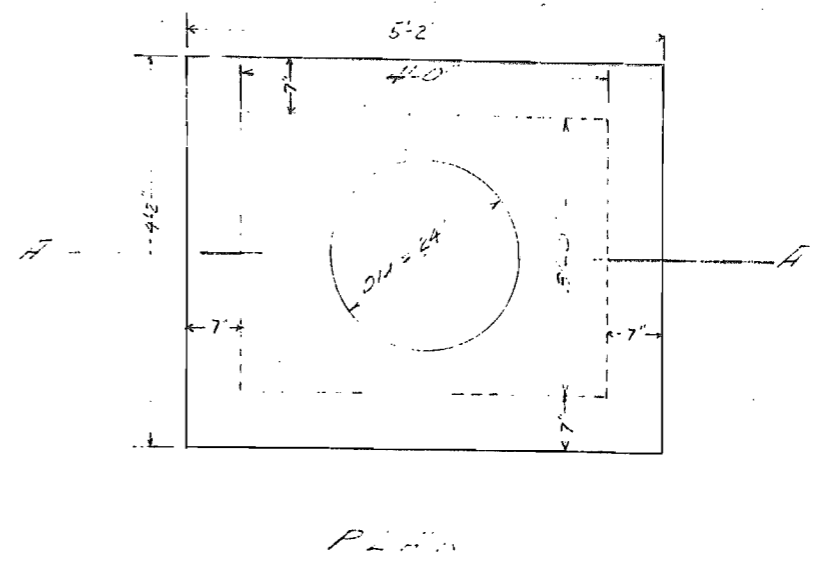
MISSOURI STATE HIGHWAY COMMISSION  
 MODIFICATIONS AND TRANSVERSE EXPANSION JOINTS  
 FOR  
 BOX CULVERTS WHICH ARE TO BE BUILT IN SECTIONS

ROUTE 66 COUNTY JASPER PROJ. UG-84(6) & F-84(7)

REVISIONS				
1	2	3	4	5

SPECIAL SHEET NO. 1

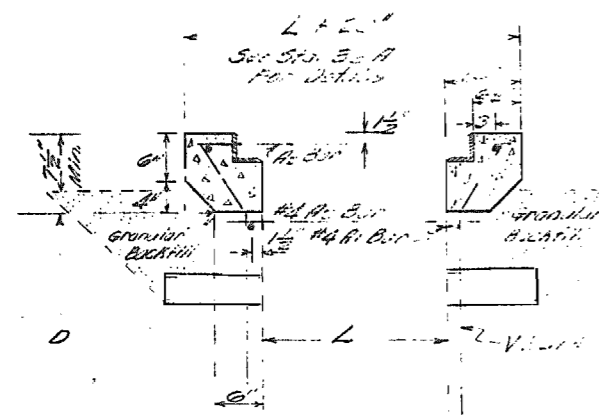
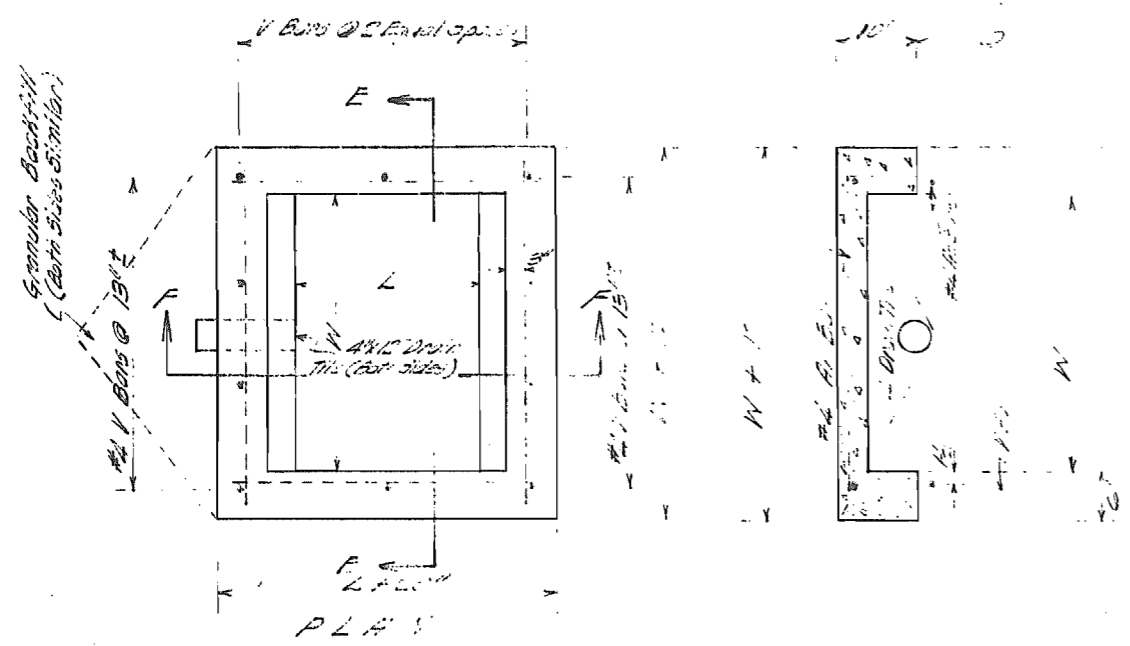
10



PLAN OF FRAME

SECTION A-A

Note: Frame and Cover to be Neusal Family Co. #6066 or equivalent, weight 455 lbs. For reinforcement and other details not shown See Std. Dwg. No. 16A. No deduction in Class B Cons. will be made for Frame.



SEC. F-F

MODIFICATION OF PLAN B -

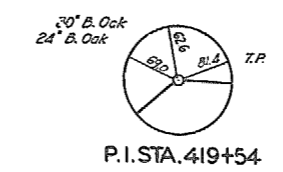
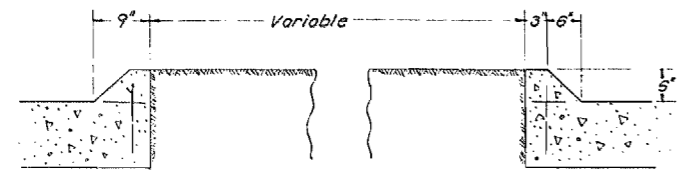
Drop Inlet	12"
Drop Inlet	12"
Drop Inlet	12"
Drop Inlet	15"

Part	Qty	Size	Weight	Notes
Drop Inlet	1	12"	321	See Std. Dwg. No. 16A
Drop Inlet	1	12"	325	See Std. Dwg. No. 16A
Drop Inlet	1	12"	70	See Std. Dwg. No. 16A
Drop Inlet	1	15"	83	See Std. Dwg. No. 16A

Note: Where drop inlet is placed adjacent to stone curb contractor will be required to remove & replace stone curb at own expense, back in place and for other items.

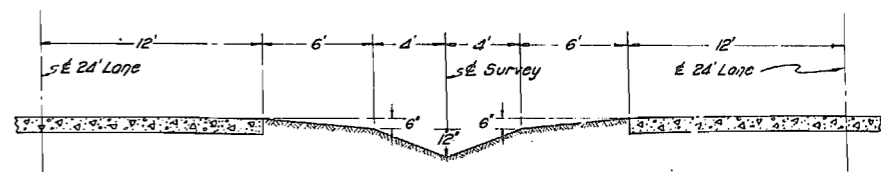
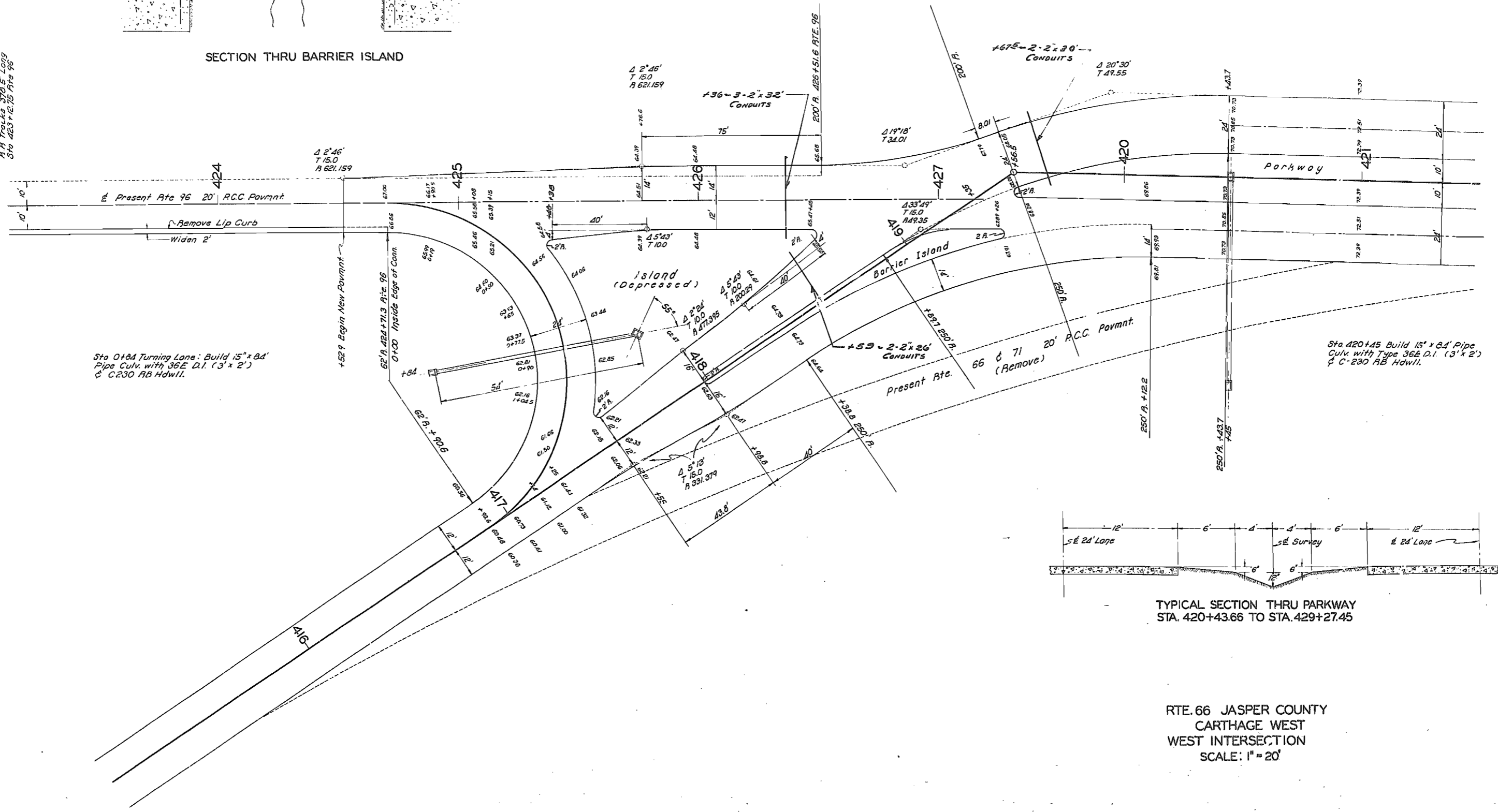
MODIFICATION OF PLAN B - SEE STD. DWG. NO. 16A FOR LOCATION OF OTHER THAN CONSP. PARTS

MODIFICATION OF PLAN B - SEE STD. DWG. NO. 16A FOR LOCATION OF OTHER THAN CONSP. PARTS

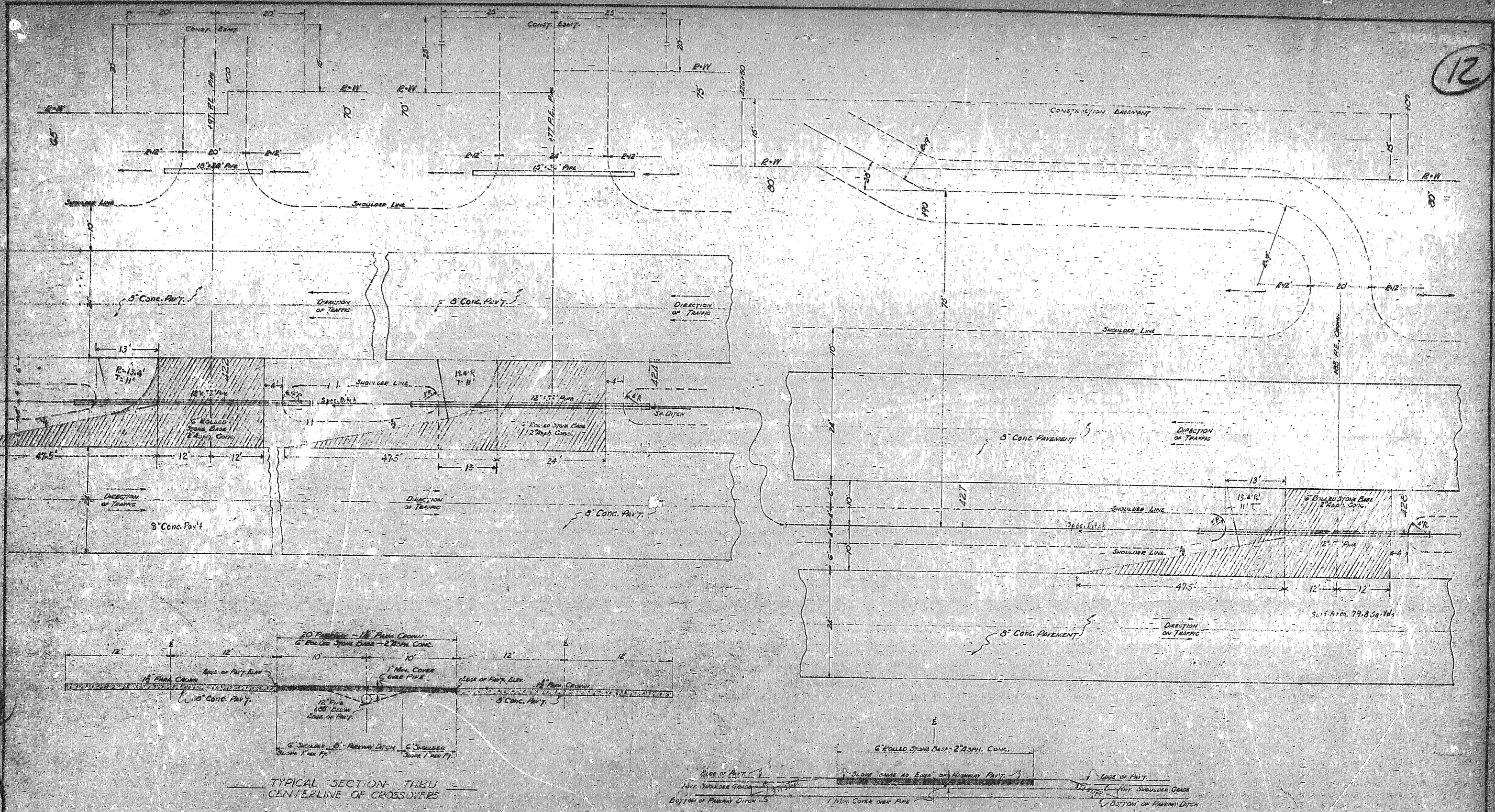


Sta. 419+34 Rte. 66  
Sta. 427+14.7 on Rte. 96

Overhead Crossing Over Frisco  
A.P. Trunks 374 & Loop  
Sta. 423+12.75 Rte. 96



RTE. 66 JASPER COUNTY  
CARTHAGE WEST  
WEST INTERSECTION  
SCALE: 1" = 20'

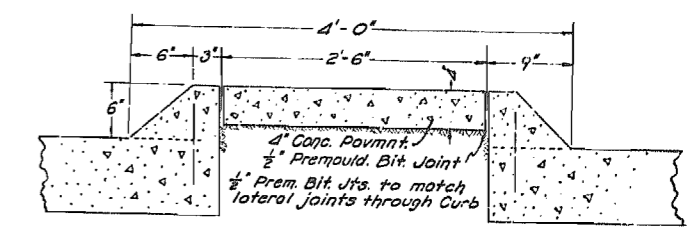
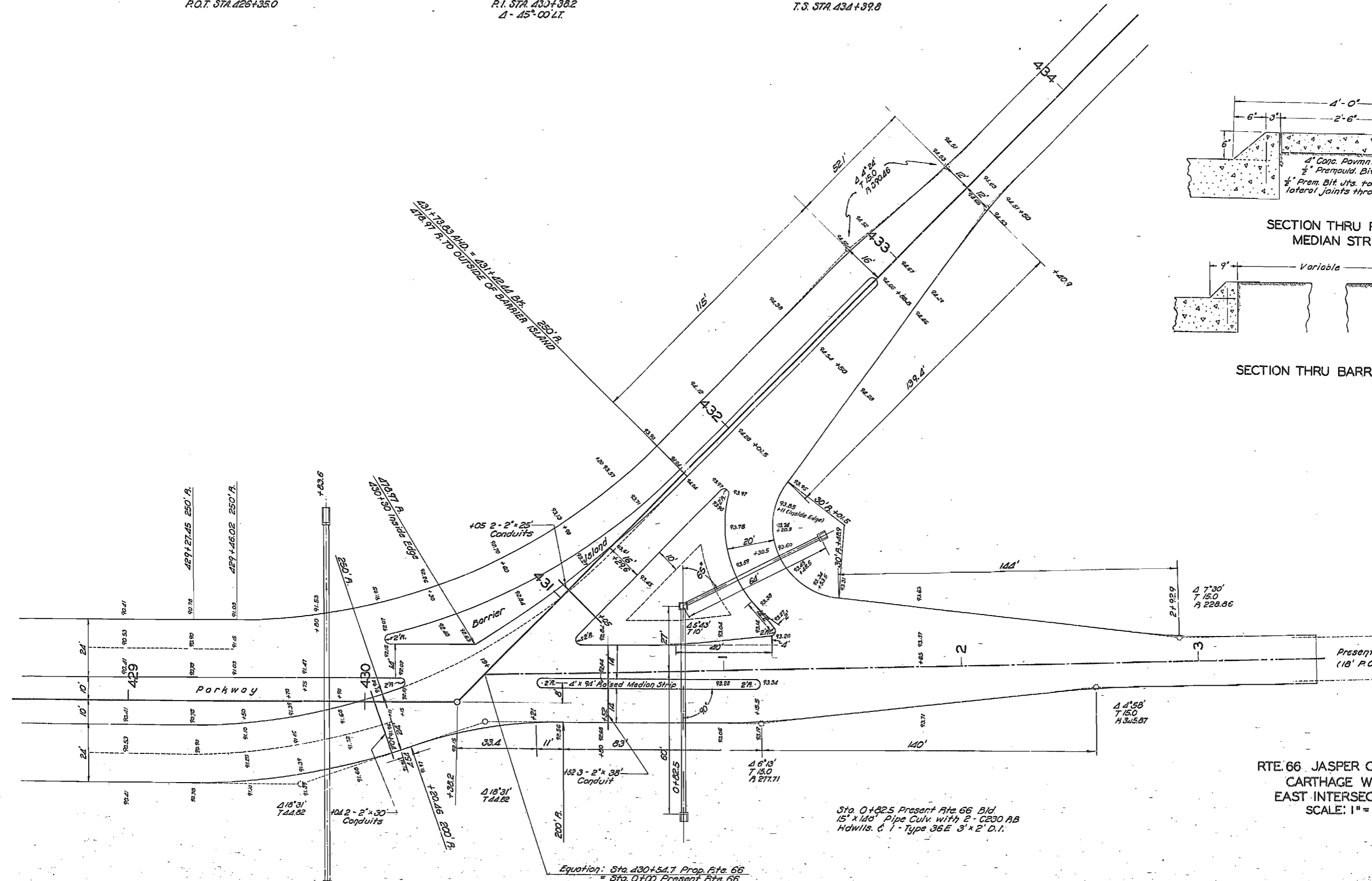
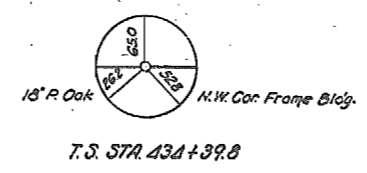
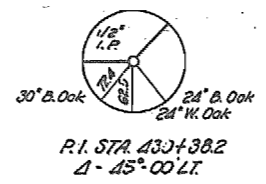
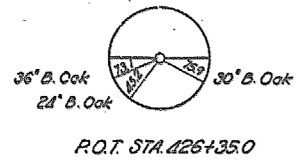


TYPICAL SECTION THRU CENTERLINE OF CROSSOVERS

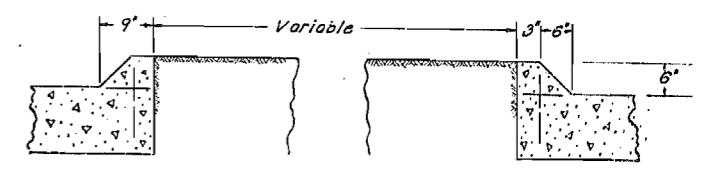
TYPICAL SECTION THRU CROSSOVER AT E. OF PARKWAY DITCH

ENTRANCES AND CROSSOVERS  
 FOR DIVIDED PAVEMENTS  
 ROUTE 66 COUNTY: JASPER  
 PROJECT: F-34(7)

Drawing Not to Scale - Follow Dimensions



Note: Place #4 Dowels 9" Lg. on 2' C-C if curbs are not Constructed monolithic with Pavement.



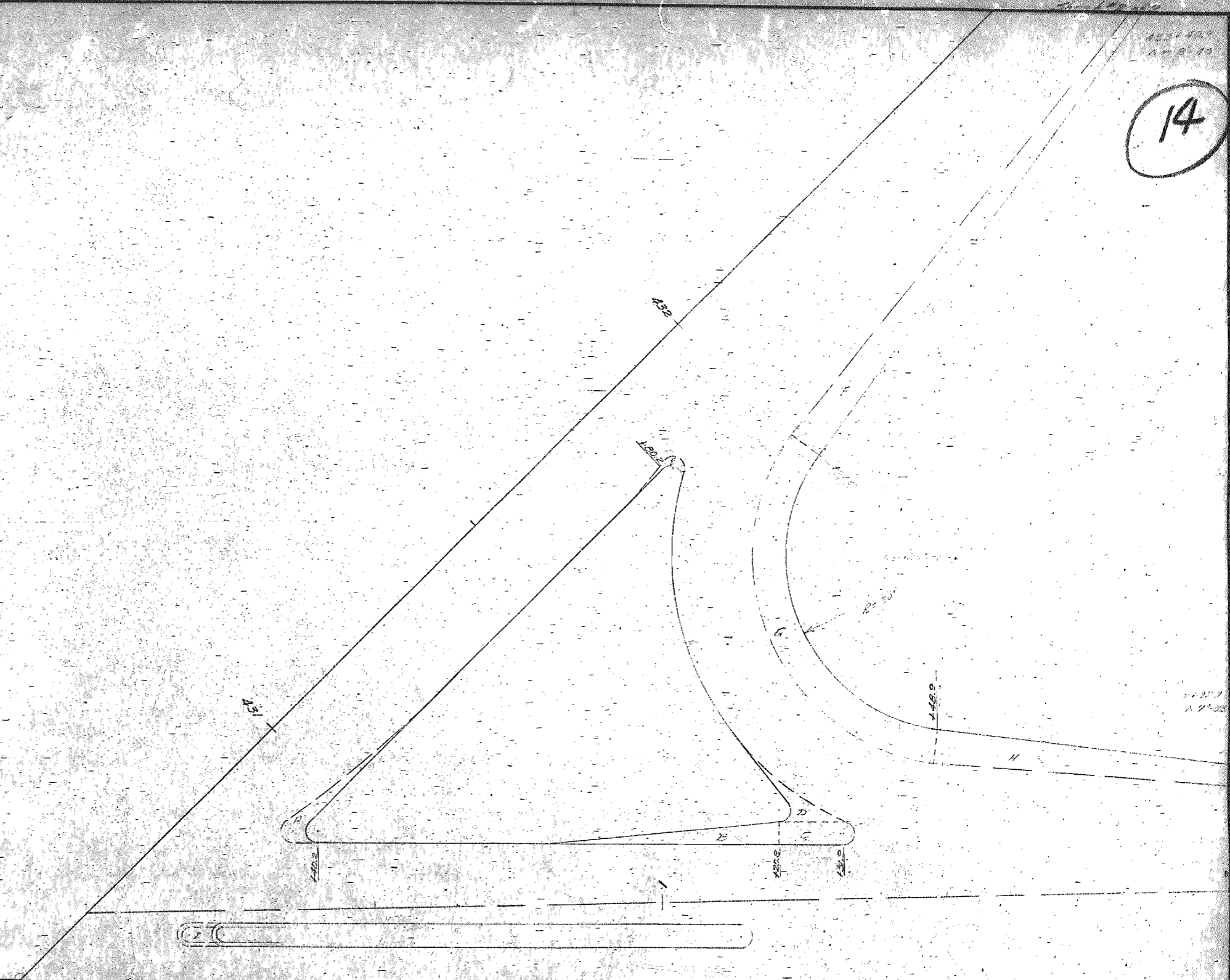
SECTION THRU BARRIER ISLAND

RTE. 66 JASPER COUNTY  
CARTHAGE WEST  
EAST INTERSECTION  
SCALE: 1" = 20'

14

PLCP CHANGES DUE TO CHANGE IN DESIGN  
EAST INTERSECTION

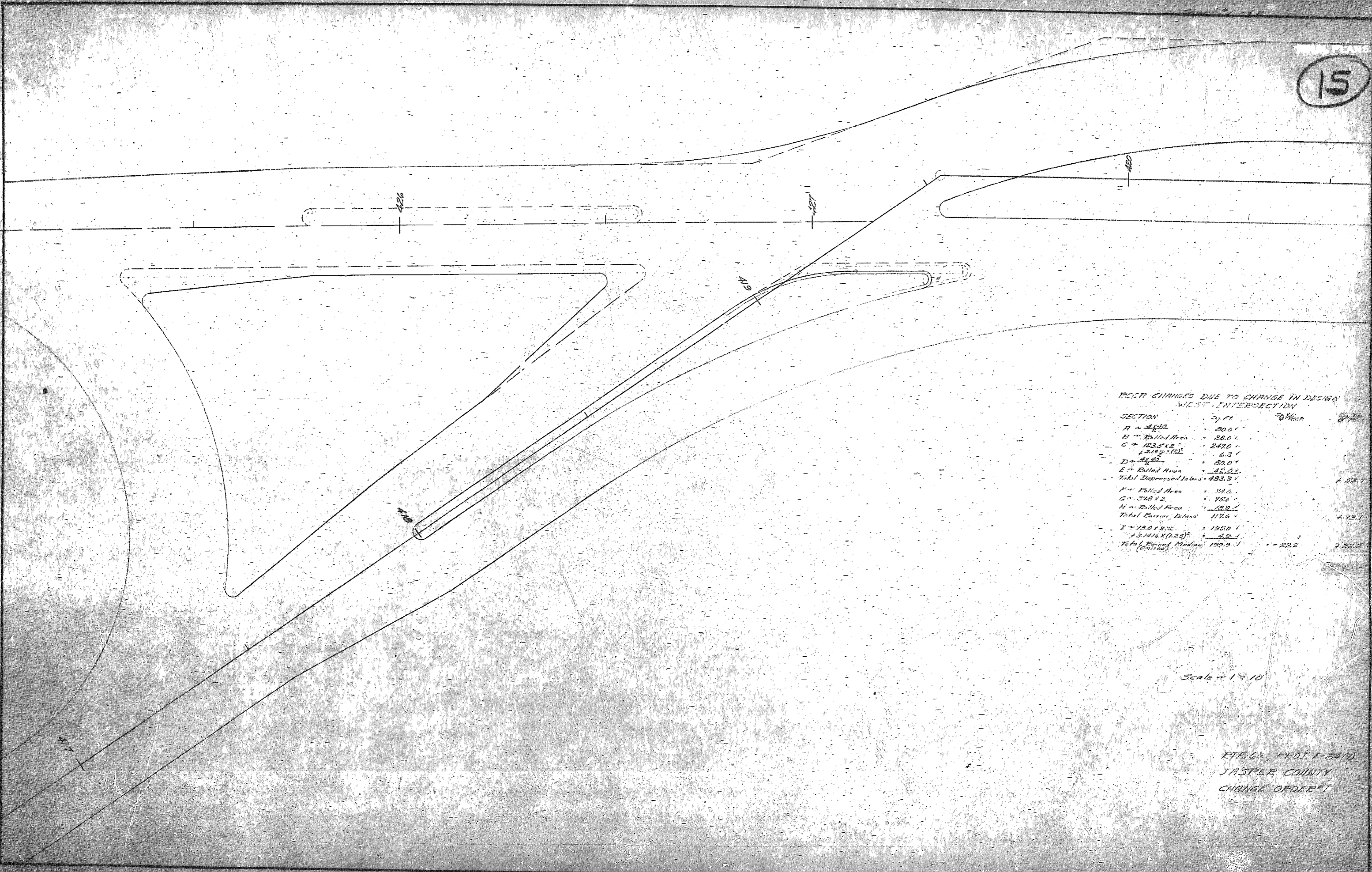
SECTION	Sq. Ft.	Sq. Ft.	Area	Sq. Ft.
A - Filled Area			46.0	
B - Filled Area			80.0	
C - Filled Area			11.4	
D - Filled Area			6.3	
E - Filled Area			36.0	
F - Filled Area			12.2	
Total Depressed Island	222.7			+222.7
G - Filled Area			423.0	
H - Filled Area			1357.51	
I - Filled Area			242.72	
J - Filled Area			114.8	
K - Filled Area			435.9	
Total Inside Radius	1273.7			+1141.5
L - Filled Area			15.0	
Total Median Strip (Shoulder)	15.0			+1.17



PT. 66, PROJ. 84(7)  
JASPER COUNTY  
CHANGE ORDER #1

Scale 1" = 10'





PCRP CHANGES DUE TO CHANGE IN DESIGN  
 WEST INTERSECTION

SECTION	Sq. Ft.	Sq. Yards	Sq. Feet
A - 4' x 22'	88.0		
B - 2' x 140'	280.0		
C - 123.5' x 2'	247.0		
D - 4' x 20'	80.0		
E - 4' x 22'	88.0		
Total Depressed Island	483.0		4.59
F - 2' x 140'	280.0		
G - 3' x 2'	6.0		
H - 2' x 140'	280.0		
Total Barrier Island	566.0		4.93
I - 15.0' x 4.5'	67.5		
4.5' x 14.0' (1.25')	63.0		
Total Raised Median	130.5		1.22

Scale: 1" = 10'

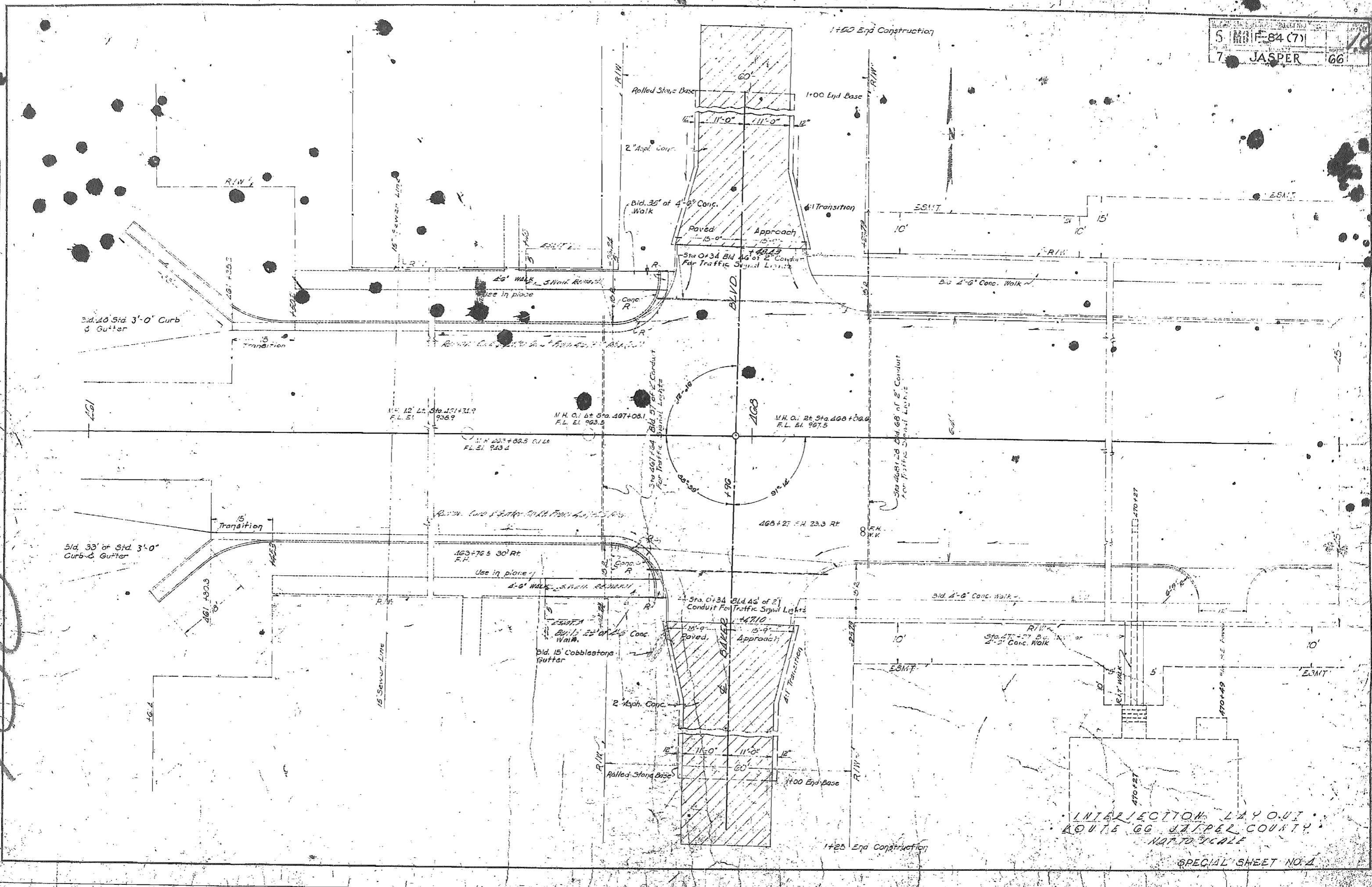
EYE 66, PLOT F-84(1)  
 JASPER COUNTY  
 CHANGE ORDER

DATE	
BY	
CHECKED	
APPROVED	
SCALE	
PROJECT	
NO.	

DATE	
BY	
CHECKED	
APPROVED	
SCALE	
PROJECT	
NO.	

FINAL SURVEY  
 PLATT  
 NOTE BOOK  
 AREA CHECKED

ORIGINAL SURVEY  
 PLATT  
 NOTE BOOK  
 AREA CHECKED



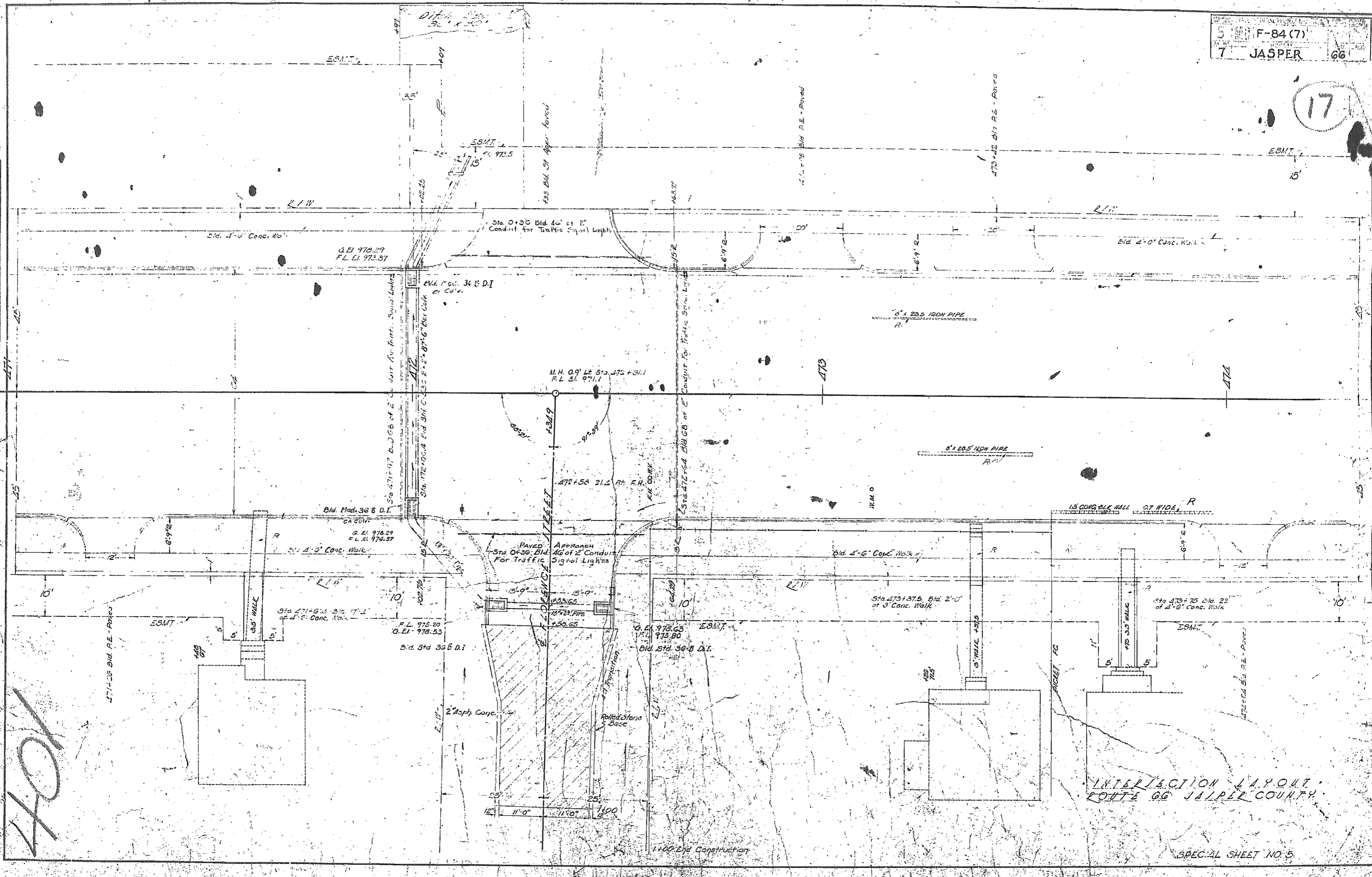
INTERSECTION LAYOUT  
 ROUTE 66 JASPER COUNTY  
 NAT. TO SCALE

SPECIAL SHEET NO. 4

17

ORIGINAL SURVEY  
NOTES  
DATE  
BY

ORIGINAL SURVEY  
NOTES  
DATE  
BY



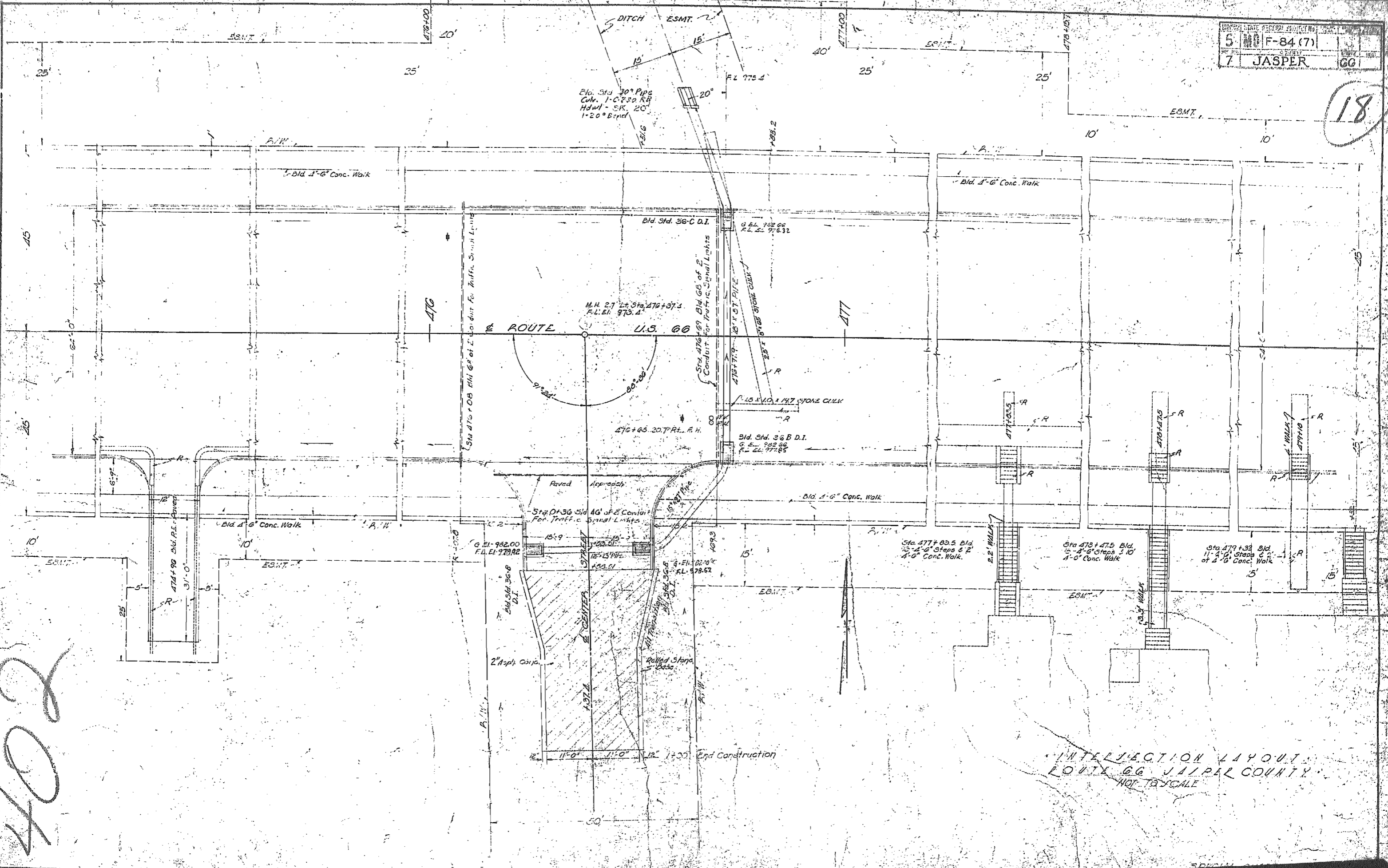
101

INTERSECTION LAYOUT  
ROUTE 66 JASPER COUNTY

SPECIAL SHEET NO. 5

1:00 End Construction

18



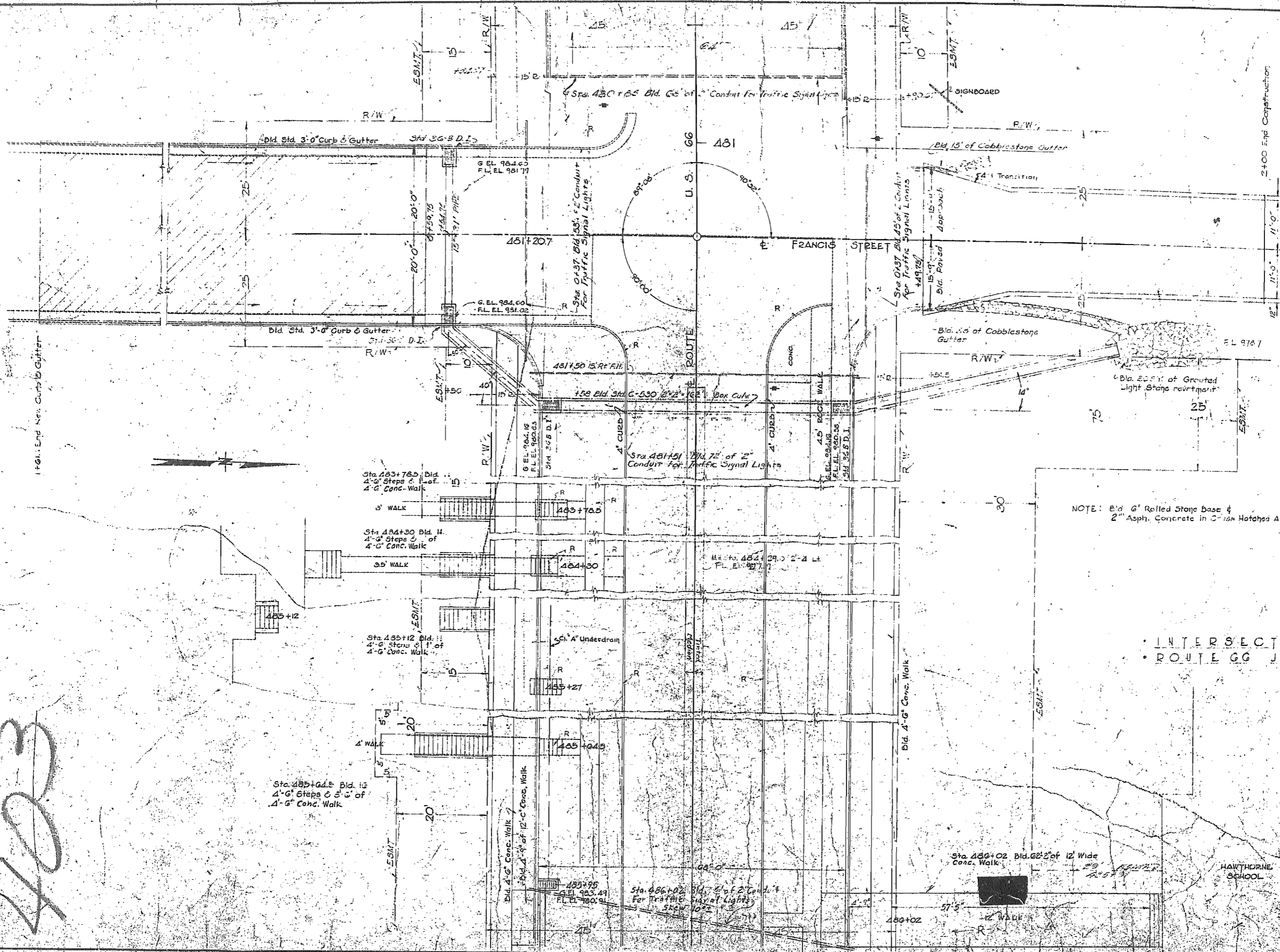
INTERSECTION LAYOUT  
 ROUTE 66 JASPER COUNTY  
 NOT TO SCALE

402

DATE	BY	REVISION

NO.	DATE	REVISION

19



NOTE: Bid 6" Rolled Stone Base & 2" Asph. Concrete in Hatched Area

INTERSECTION LAYOUT  
ROUTE GG JASPER COUNTY

HAWTHORNE SCHOOL

SPECIAL SHEET NO. 7

ORIGINAL SURVEY  
DATE: \_\_\_\_\_  
BY: \_\_\_\_\_  
CHECKED: \_\_\_\_\_  
REVISIONS: \_\_\_\_\_

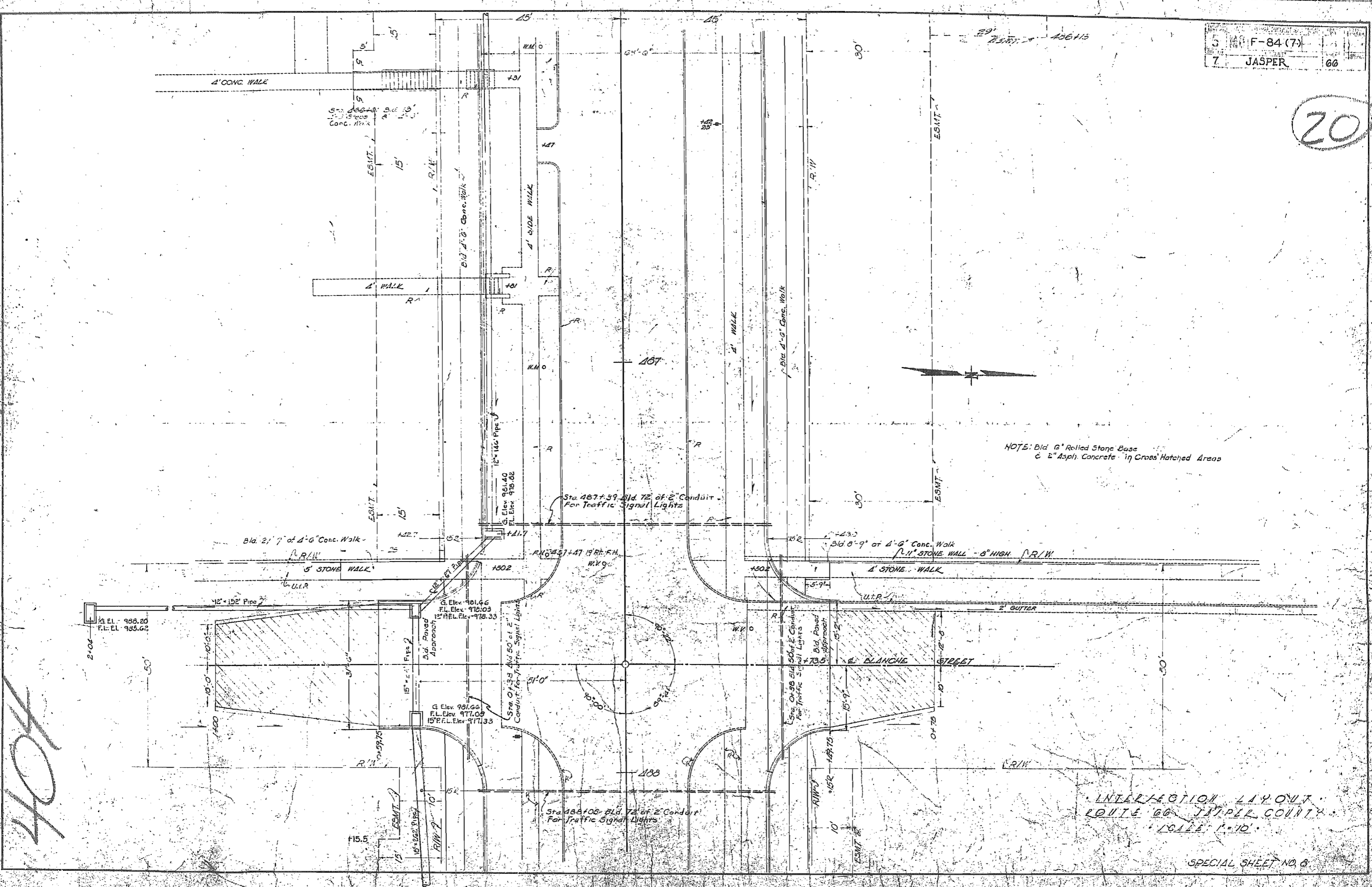
ORIGINAL SURVEY  
DATE: \_\_\_\_\_  
BY: \_\_\_\_\_  
CHECKED: \_\_\_\_\_  
REVISIONS: \_\_\_\_\_

403

20

DATE	
BY	
REVISION	
NO.	
DESCRIPTION	
DATE	
BY	
REVISION	
NO.	
DESCRIPTION	
DATE	
BY	
REVISION	
NO.	
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DATE	
BY	
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DESCRIPTION	
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DESCRIPTION	
DATE	
BY	
REVISION	
NO.	
DESCRIPTION	



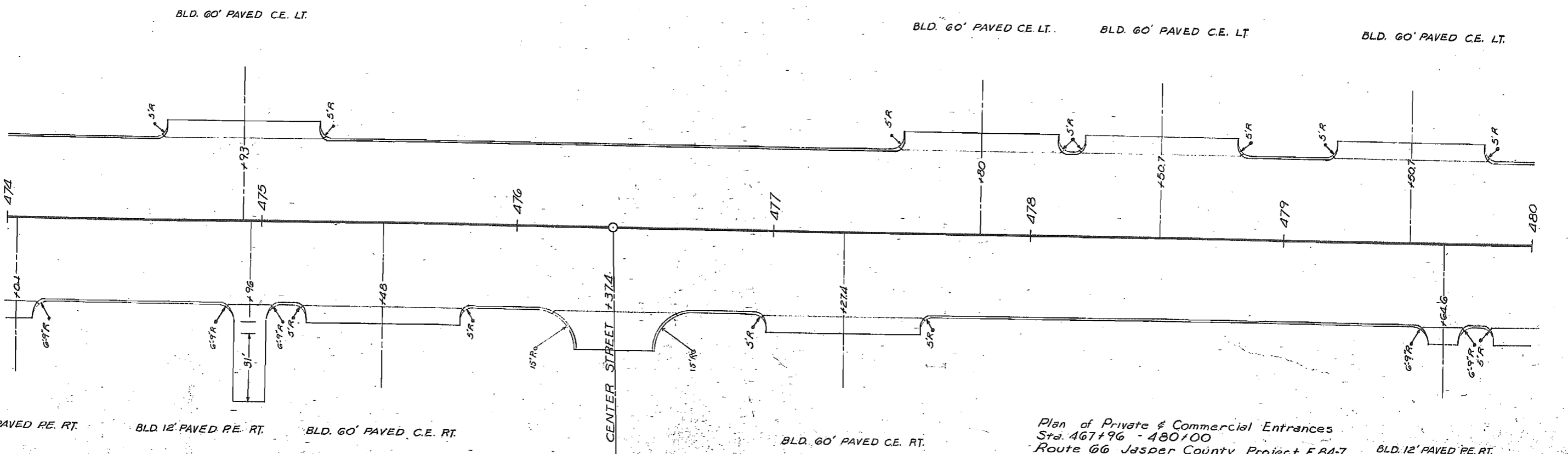
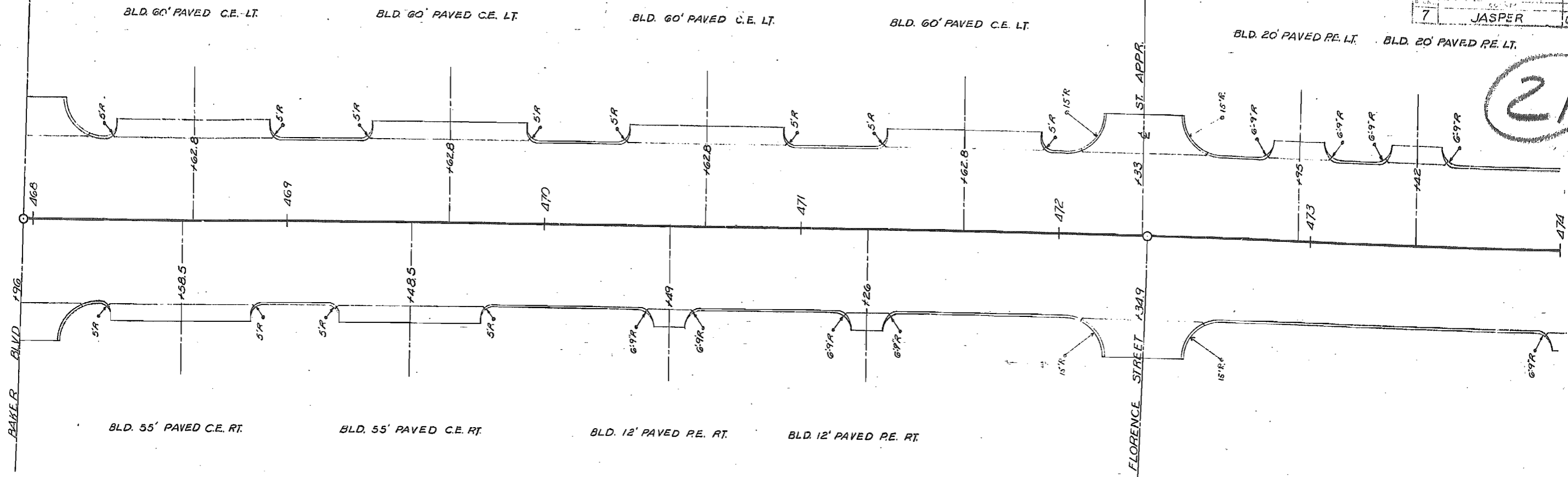
NOTE: Bid 6" Rolled Stone Base  
& 2" Asph. Concrete in Cross Hatched Areas

INTERSECTION LAYOUT  
ROUTE 60 JASPER COUNTY  
SCALE 1"=10'

SPECIAL SHEET NO. 8

404

21



FINAL SURVEY	DATE
PRINTED	
NOTED	
NO. 0000	
AREA	
CHECKER	

ORIGINAL SURVEY	DATE
PRINTED	
NOTED	
NO. 0000	
AREA	
CHECKER	

400

Plan of Private & Commercial Entrances  
Sta. 467+96 - 480+00  
Route 66 Jasper County Project F84-7

BLD. 12' PAVED P.E. RT.  
Special Sheet No. 9

Scale: 1" = 20'



STAT. FEDERAL PROJECT No.	UG-64 (6)
5	F-64 (7)
COUNTY	JASPER
66	

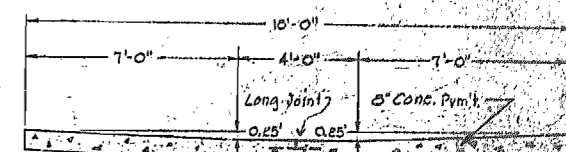
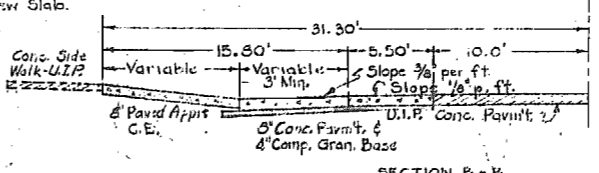
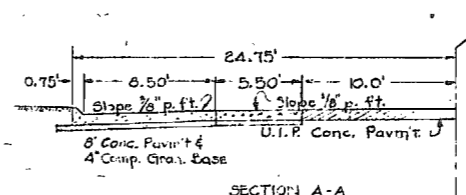
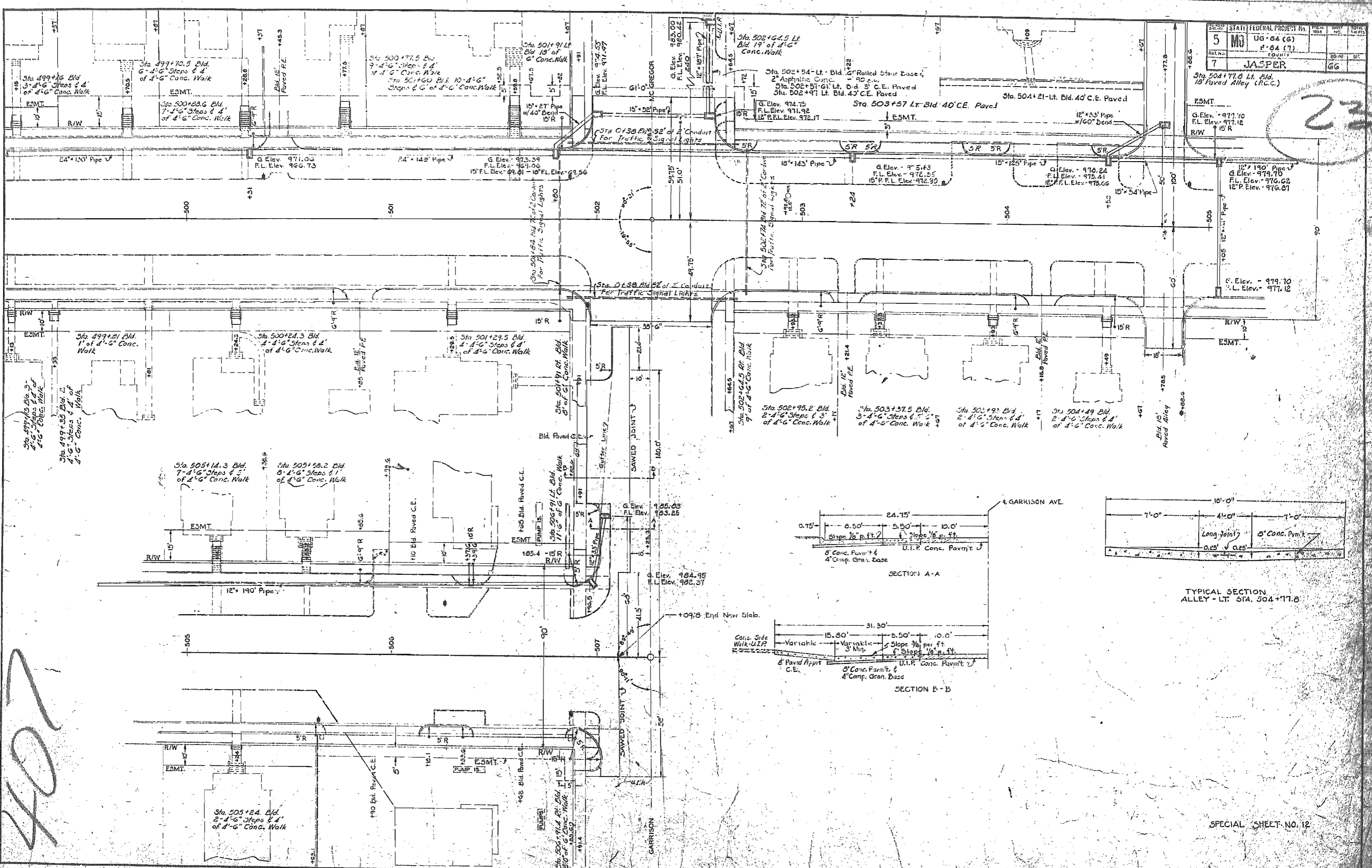
Sta. 504+77.8 Lt. Bld. 18' Paved Alley (P.C.C.)

ESMT.  
G. Elev. - 917.70  
F.L. Elev. - 917.12  
R/W

23

DESIGNED BY	PLANNED
CHECKED BY	FIELD
DATE	NO.
REVISIONS	NO.
DATE	DESCRIPTION

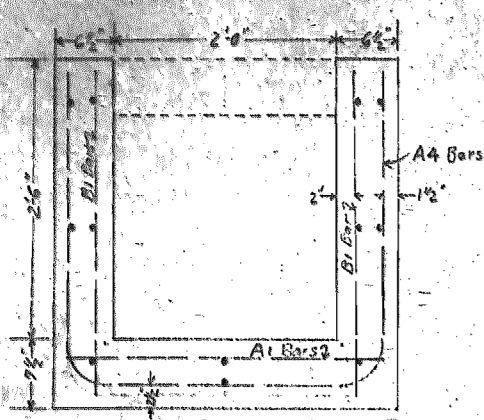
DESIGNED BY	PLANNED
CHECKED BY	FIELD
DATE	NO.
REVISIONS	NO.
DATE	DESCRIPTION



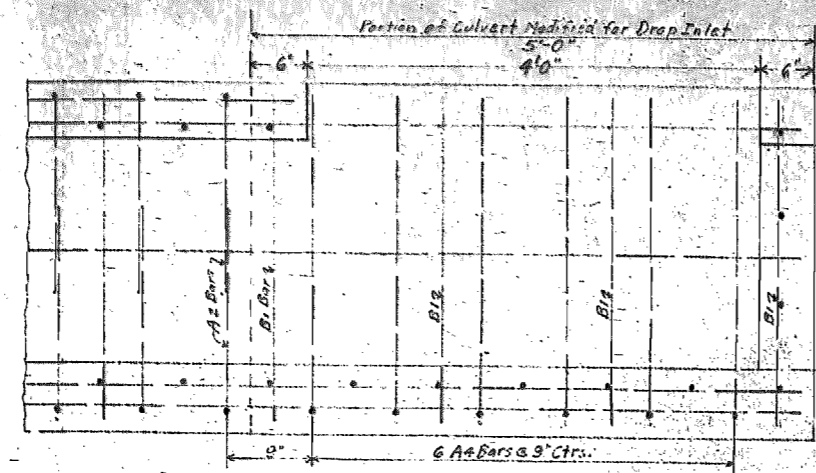
SPECIAL SHEET NO. 12

MODIFICATION C-530-2x2' BOX CULV. FOR DROP INLETS

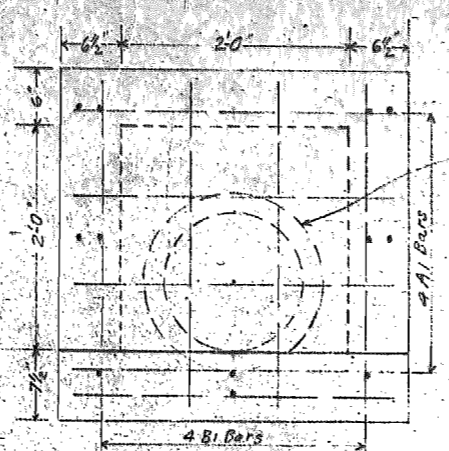
24



SECTION THRU OPENING FOR DROP INLET



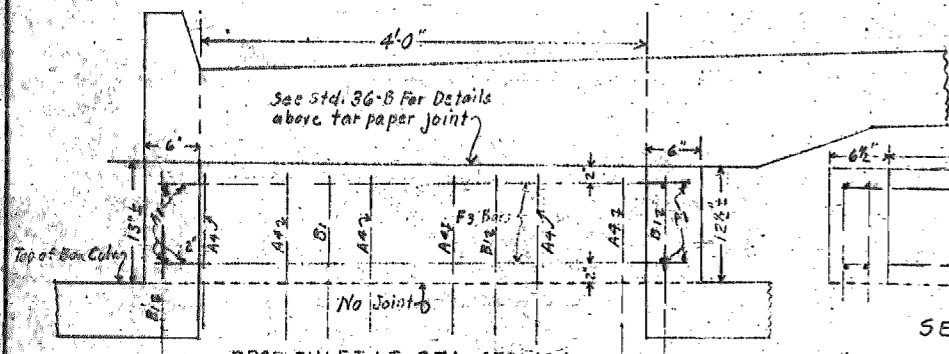
LONGITUDINAL SECTION



SECTION THRU CLOSED END

QUANTITIES

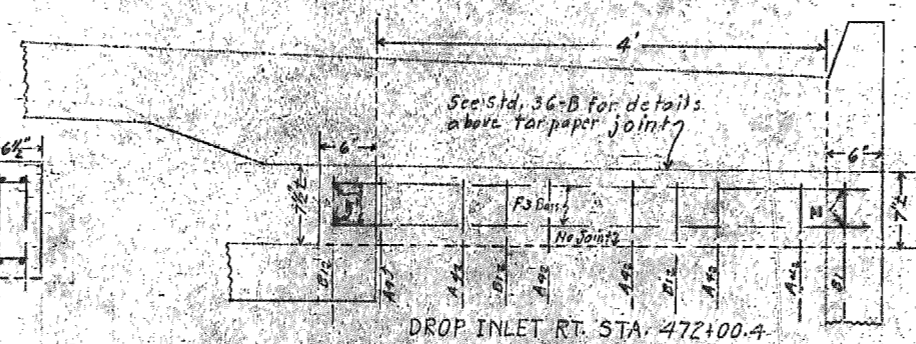
Class B Concrete	0.97 Cu.Yds.	Both Ends Open
Reinforcing Steel	103 Pounds	
Class B Concrete	0.97 Cu.Yds.	One End Open
Reinforcing Steel	110 Pounds	



DROP INLET LT. STA. 472+00.4

QUANTITIES (Additional above Top of Box Culv.)

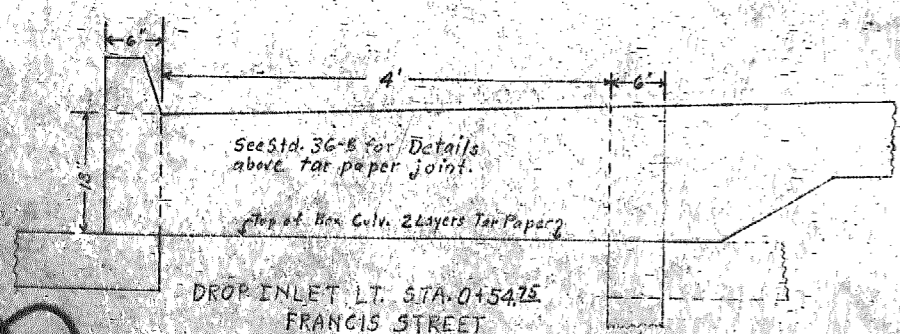
Class B Concrete	0.29 Cu.Yds.
Reinforcing Steel	53 Pounds



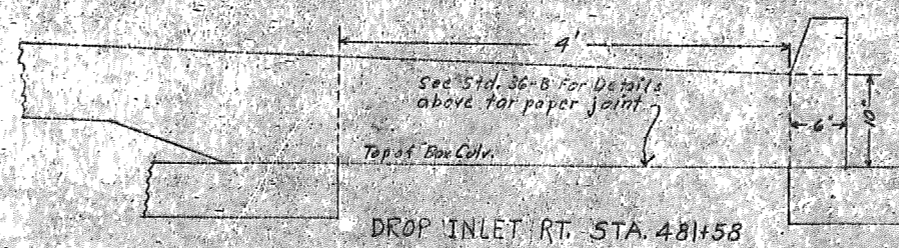
DROP INLET RT. STA. 472+00.4

QUANTITIES (Additional above Top of Box Culv.)

Class B Concrete	0.17 Cu.Yds.
Reinforcing Steel	50 Pounds



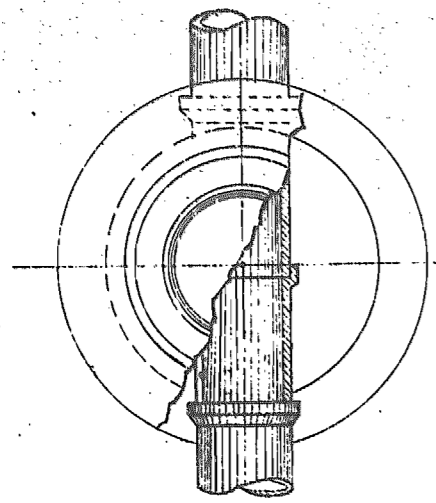
DROP INLET LT. STA. 0+54.75  
FRANCIS STREET  
AND STA. 481+58 LT. RTE. 66



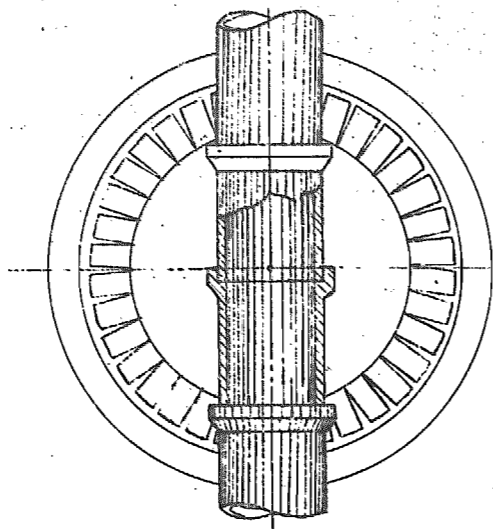
DROP INLET RT. STA. 481+58

SPECIAL DROP INLETS  
Route 66, Project F-84(7)  
Jasper County

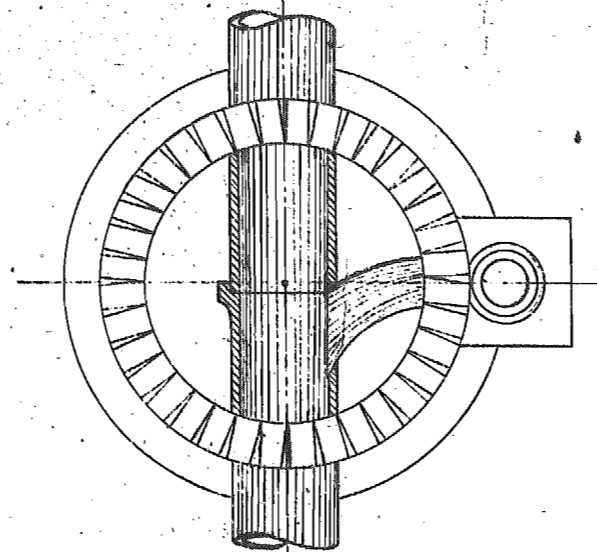




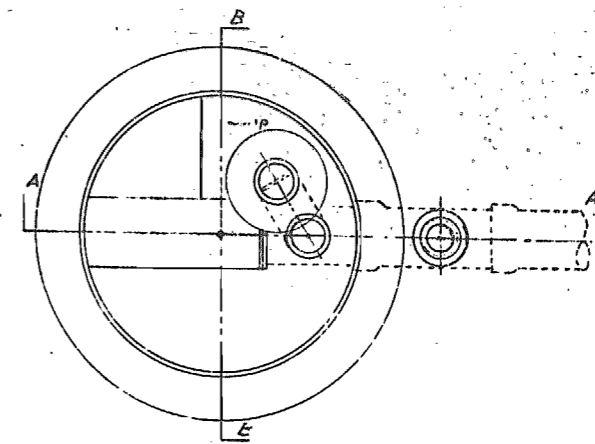
PLAN OF STANDARD CONCRETE MANHOLE



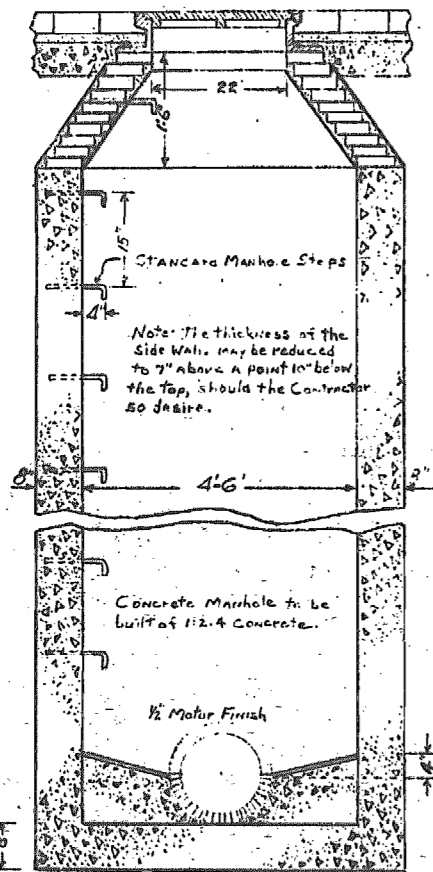
PLAN OF STANDARD BRICK MANHOLE STRAIGHT INVERT



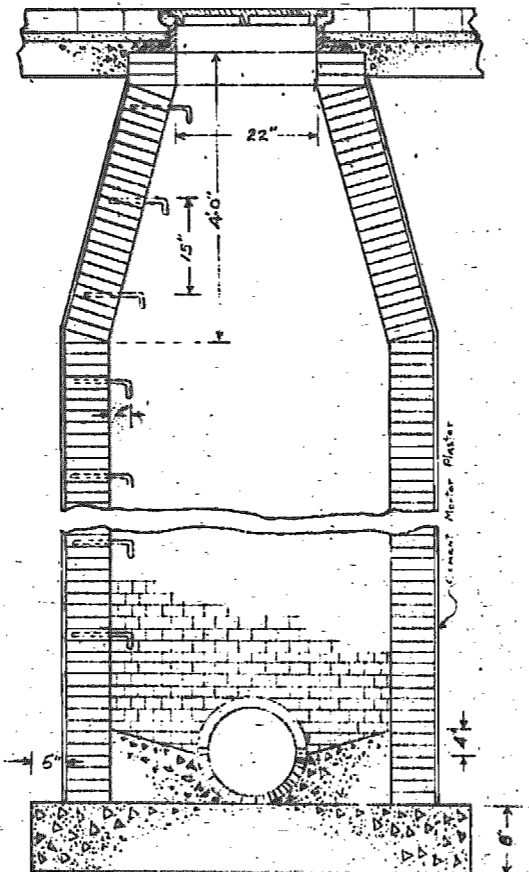
PLAN OF DROP MANHOLE



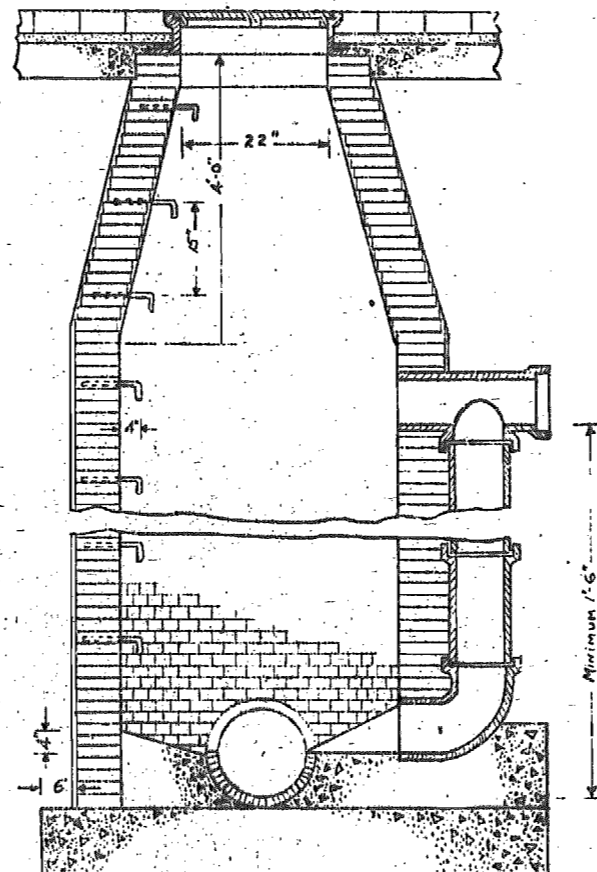
PLAN OF STANDARD FLUSH TANK



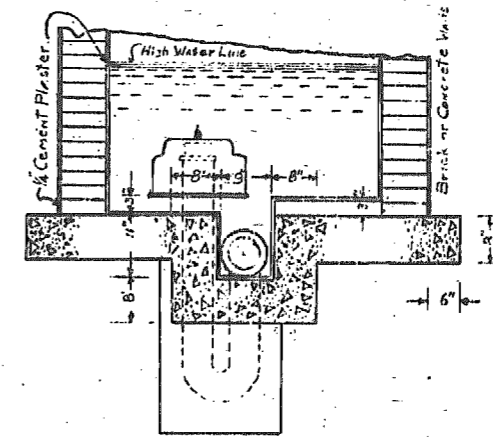
SECTION



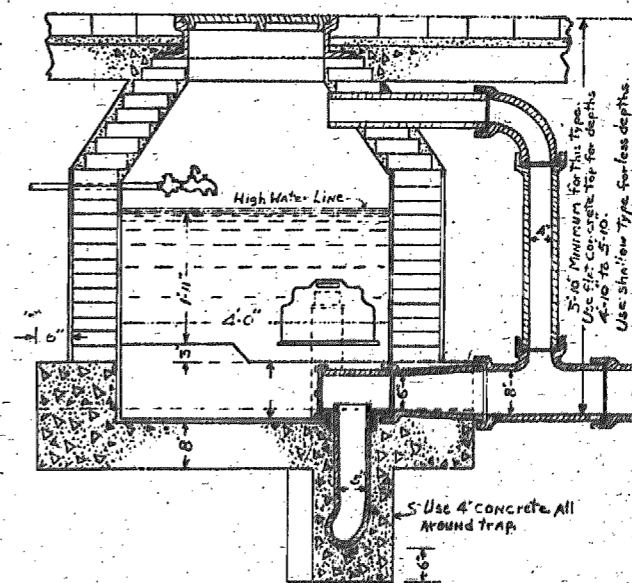
SECTION



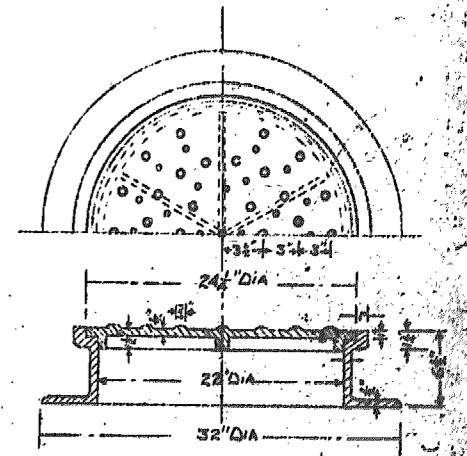
SECTION



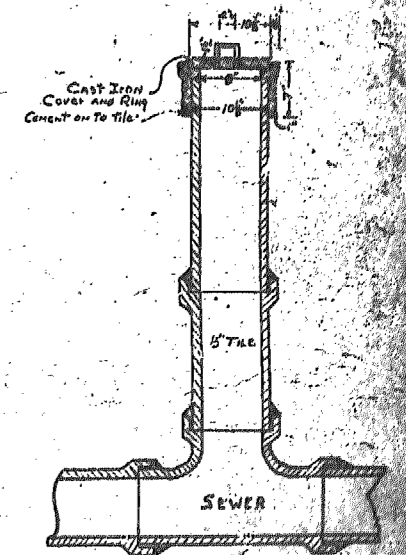
SECTION BB- STANDARD FLUSH TANK



SECTION AA- STANDARD FLUSH TANK



22" MANHOLE RING & COVER



SECTION OF LAMP HOLE

DETAILS OF MANHOLES AND FLUSH TANKS  
SANITARY SEWERS IN CARTHAGE

ROUTE 66 PROJ'S F-84(7)  
UG-24(6)  
JASPER COUNTY, MISSOURI  
CITY OF CARTHAGE

440



**DESIGN DESIGNATION**

A.D.T. - 1974 = 7430  
A.D.T. - 1994 = 11180

D = 60%  
T = 4% of D.M.V.  
V = 40M.P.H.

# MISSOURI STATE HIGHWAY COMMISSION PLANS FOR PROPOSED STATE HIGHWAY

COUNTY JASPER

ROUTE 66

PROJECT U-7-1(4)

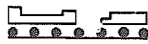
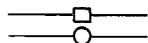
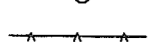
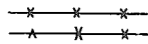
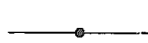
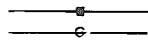
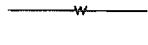




JOB 7-U-66-9  
FINAL PLANS

**FULLY LIMITED ACCESS HIGHWAY**

THIS SHALL BE A FULLY LIMITED ACCESS HIGHWAY BETWEEN STA. 55+66 AND STA. 73+36.8. ADJUTING OWNER SHALL HAVE THE RIGHT OF DIRECT ACCESS TO SAID HIGHWAY OR ITS RIGHT-OF-WAY EXCEPT THAT ACCESS WILL BE PERMITTED TO ANY ADJACENT OUTER ROADWAY OR SERVICE ROAD TO WHICH ACCESS IS NOT SPECIFICALLY PROHIBITED BY THE SPECIAL SYMBOL DENOTING "NO RIGHT OF ACCESS" AS SHOWN ON THE PLANS. NO ACCESS WILL BE PERMITTED FROM OUTER ROADWAYS AND SERVICE ROADS TO THROUGHWAYS EXCEPT ALONG ROUTES CONSTRUCTED FOR THAT PURPOSE. OUTER ROADWAYS AND SERVICE ROADS, AS THE CASE MAY BE, ARE SO DESIGNATED ON THE PLANS.

- — ● BEGINNING AND ENDING OF LIMITED ACCESS.
- + — LIMITED ACCESS
- III — NO RIGHT OF ACCESS OR CROSSING OF LINES BEARING THIS SYMBOL WILL BE PERMITTED UNDER ANY CIRCUMSTANCES.

**CONVENTIONAL SIGNS  
(USED IN PLANS)**

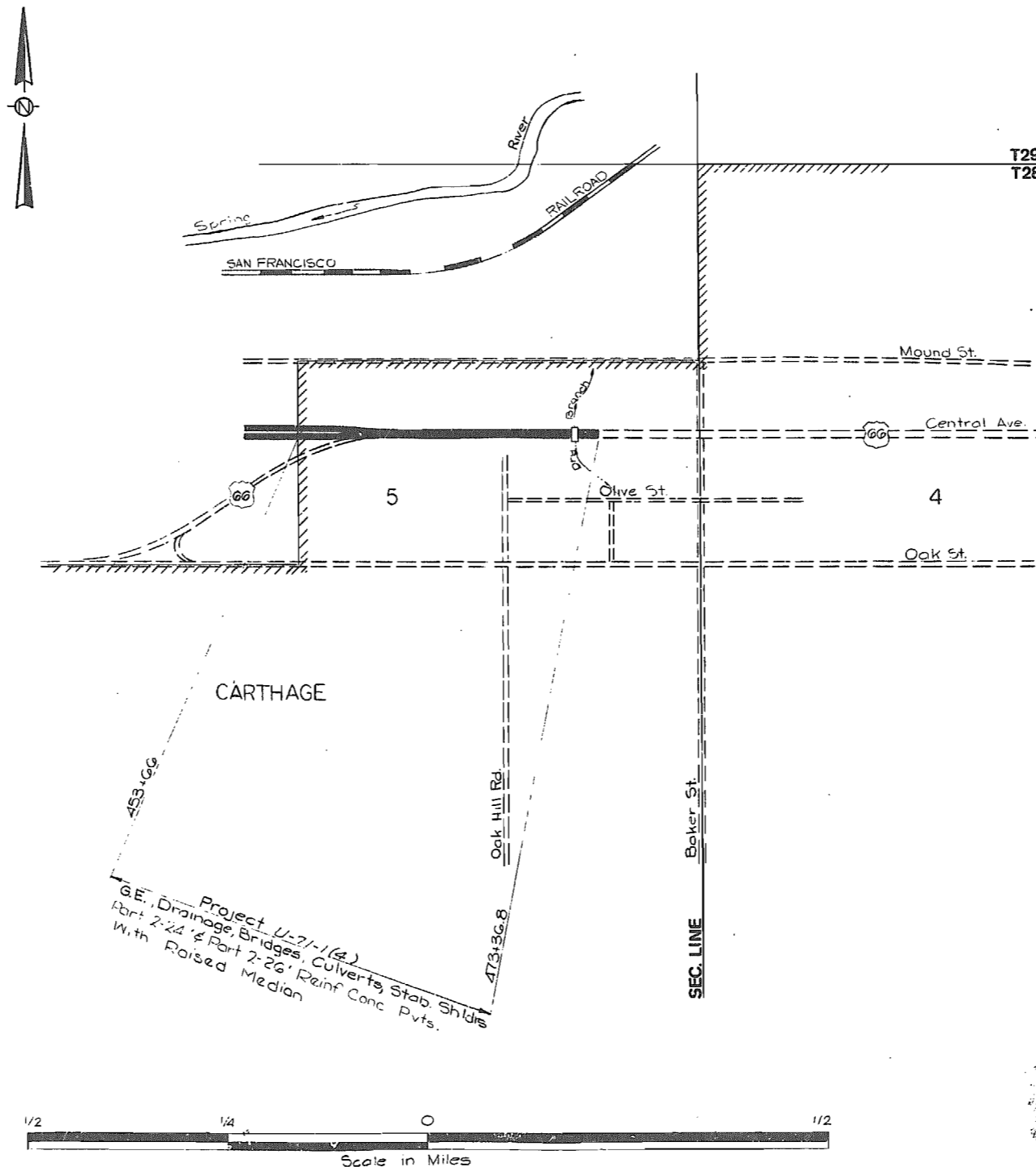
- BUILDINGS AND STRUCTURES 
- GUARD RAIL 
- CONCRETE RIGHT-OF-WAY MARKER 
- STEEL RIGHT-OF-WAY MARKER 
- FENCE
  - CHAIN LINK 
  - WOVEN WIRE 
  - GATE 
- UTILITIES
  - TELEPHONE 
  - POWER 
  - GAS 
  - WATER 

NOTE - DASHED OR OPEN SYMBOL INDICATES EXISTING FEATURE.

**TITLE SHEET LEGEND**

PROJECT INFORMATION SIGNS (REQ'D)

**FEDERAL AID PROJECT  
JASPER COUNTY**



**INDEX OF SHEETS**

DESCRIPTION	SHEET NO.
TITLE SHEET	1
TYPICAL SECTIONS ( 2 SHEETS )	2
SUMMARY ( 1 SHEET )	2-A
SUMMARY ( 1 SHEET )	2-B
PLAN-PROFILE	3
REFERENCE POINTS	4
SPECIAL SHEETS	5-7
LIGHTING	
SIGNALS	
SIGNING	8-12
CULVERT SECTIONS	13
BRIDGE DRAWINGS	14-17
STANDARD PLANS	18
CROSS SECTIONS	19-21
COMPUTER DATA	

**LENGTH OF PROJECT**

END OF PROJECT	STA. 473 + 36.8
BEGINNING OF PROJECT	STA. 453 + 66.0
APPARENT LENGTH	1970.8 FEET
EQUATIONS AND EXCEPTIONS	None
TOTAL CORRECTIONS	None FEET
NET LENGTH OF PROJECT	1970.8 FEET
STATE LENGTH	.373 MILES
FEDERAL LENGTH	.373 MILES

**MISSOURI STATE HIGHWAY COMMISSION**

SUBMITTED

CHIEF ENGINEER

DATE

**U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
BUREAU OF PUBLIC ROADS**

APPROVED

DIVISION ENGINEER

DATE

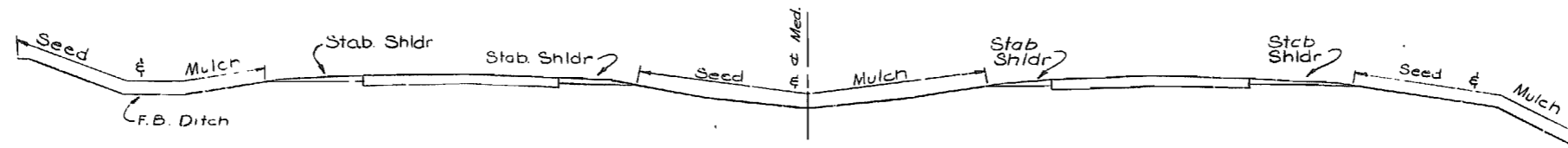
458



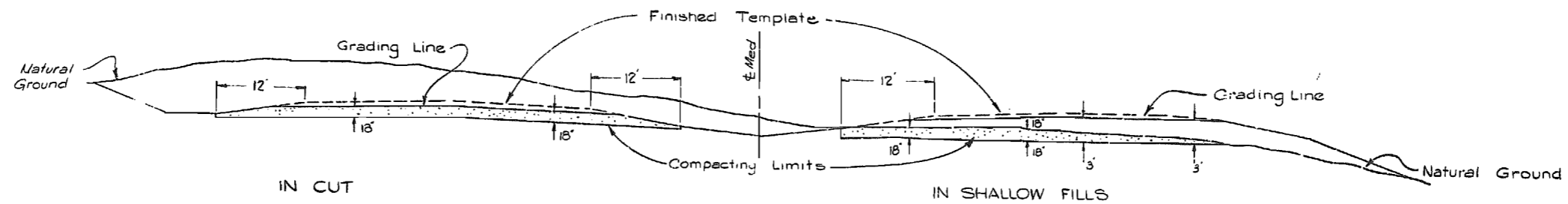
FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO. & SEC.	SHEET NO.
5	MO.	U-71-1(4)	2
DIST. NO.	COUNTY	ROUTE	SIC.
7	JASPER	66	

Job 7-U-66-9

FINAL PLANS

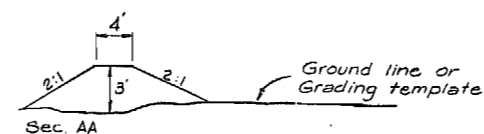
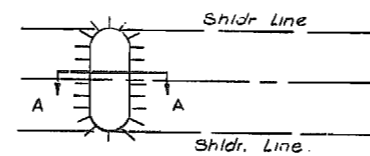


LIMITS OF SEEDING & MULCHING



COMPACTING IN CUT LIMITS

Fills 0' to 18' Cut Compact 18'  
 Fills Over 18' Cut Compact 18'  
 to a plane 3' Below the top  
 of the Grading Section



DETAILS OF EARTH BARRIER

State maintenance forces to place hazard markers on earth barrier.

DATE	BY
7/72	C.M.
DESIGNED	PLOTTED
SURVEY	TEMPLATE
NOTE BOOK	AREAS CHECKED
NO.	

DATE	BY
DESIGNED	PLOTTED
SURVEY	TEMPLATE
NOTE BOOK	AREAS CHECKED
NO.	

460

# MISSOURI STATE HIGHWAY COMMISSION

## SUMMARY OF QUANTITIES

FED. ROAD DIVISION	STATE	PROJECT	SHEET NO.
5	MO.	U-71-1(4)	2A
DIST. NO.		COUNTY	ROUTE
7		JASPER	66

JASPER  
66  
U-71-1(4)

ITEM	DESCRIPTION	UNIT	QUANTITY		ITEM	DESCRIPTION	UNIT	QUANTITY		ITEM	DESCRIPTION	UNIT	QUANTITY
201-10.00	CLEARING	ACRE	5.0 ✓		726-13.48	48 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	124 ✓					
201-20.00	GRUBBING	ACRE	3.5 ✓		731-00.48	PRECAST CONCRETE MANHOLE - 48 IN.	FT	6 ✓					
202-20.10	REMOVAL OF IMPROVEMENTS	LUMP SUM	1 ✓		732-00.15	15 IN. FLARED END SECTION	EACH	1 ✓					
203-10.00	CLASS A EXCAVATION	CU YD	124,813 ✓		732-00.48	48 IN. FLARED END SECTION	EACH	2 ✓					
203-20.00	CLASS C EXCAVATION	CU YD	2,958 ✓		802-20.00	TYPE 2 MULCH	ACRE	12.5 ✓					
203-60.00	COMPACTING EMBANKMENT	CU YD	52,444 ✓		802-21.00	ASPHALT EMULSION	GALLON	3,100 ✓					
203-70.00	COMPACTING IN CUT	CU YD	5,482 ✓		803-10.00	SODDING	SQ YD	227 ✓					
206-30.00	CLASS 3 EXCAVATION	CU YD	265 ✓		805-10.00	SEEDING	ACRE	14.9 ✓					
304-00.02	TYPE 1 AGGREGATE FOR BASE	TON	3277 ✓		902-53.00	CONDUIT, 3 IN. RIGID STEEL, IN TRENCH	LIN FT	352 ✓					
304-03.02	TYPE 3 AGGREGATE FOR BASE	TON	3963 ✓			HIGHWAY SIGNING							
304-04.02	TYPE 4 AGGREGATE FOR BASE	TON	1620 ✓		903-10.10	CONCRETE FOOTINGS, EMBEDDED	CU YD	.9 ✓					
304-10.42	PROCESSING TYPE 1 OR TYPE 2 AGGREGATE (4 IN. THICK)	SQ YD	3,982 ✓		903-10.30	CONCRETE FOOTINGS, METAL SLEEVE	EACH	1 ✓					
304-10.81	PROCESSING TYPE 1 OR TYPE 2 AGGREGATE (8 IN. THICK)	MILE	.43 ✓		903-12.10	STRUCTURAL STEEL POSTS	POUND	460 ✓					
304-13.43	PROCESSING TYPE 3 AGGREGATE (4 IN. THICK)	MILE	.43 ✓		903-12.32	WOOD POSTS 4 IN. X 6 IN.	LIN FT	14 ✓					
304-14.53	PROCESSING TYPE 4 AGGREGATE (5 IN. THICK)	MILE	.43 ✓		903-12.40	BREAKAWAY ASSEMBLY	EACH	2 ✓					
403-60.00	ASPHALT CEMENT (ASPHALTIC CONCRETE)	TON	42.6 ✓		903-50.06	TYPE SHRS SIGN	SQ FT	32 ✓					
403-70.00	MINERAL AGGREGATE (ASPHALTIC CONCRETE) (TYPE B MIX)	TON	170.0 ✓		903-50.07	TYPE SHBC SIGN	SQ FT	2 ✓					
403-80.00	MINERAL AGGREGATE (ASPHALTIC CONCRETE) (TYPE C MIX)	TON	891.0 ✓			BRIDGE DWG. NO. L-414R AT STA. 472+15.50							
407-10.10	TACK-LIQUID ASPHALT	GALLON	80 ✓		206-30.00	CLASS 3 EXCAVATION	CU YD	196 ✓					
408-10.10	PRIME-LIQUID ASPHALT RC-70 OR MC 30	GALLON	2910 ✓		703-20.00	CLASS B CONCRETE (CULVERTS-BRIDGE)	CU YD	113.5 ✓					
409-10.30	BITUMINOUS MATERIAL (SEAL COAT) ASPHALT CEMENT (200-300 PENETRATION)	GALLON	1020 ✓		706-10.20	REINFORCING STEEL (BRIDGE-CULVERT)	POUND	12,820 ✓					
409-20.22	COVER AGGREGATE GRADE 2	TON	42 ✓			CONTINGENT ITEM							
409-30.10	BITUMINOUS MATERIAL (COLOR COAT) LIQUID ASPHALT RC 70 OR MC 30	GALLON	960 ✓		CONT.	ASPHALT SAMPLES	EACH	3 ✓					
502-12.09	CONCRETE PAVEMENT (9 IN. REINFORCED)	SQ YD	12,868.0 ✓										
602-20.00	STEEL RIGHT-OF-WAY MARKER	EACH	9 ✓										
602-30.00	CONCRETE RIGHT-OF-WAY MARKER	EACH	3 ✓										
604-20.10	ADJUSTING MANHOLE	EACH	3 ✓										
609-10.11	CONCRETE CURB (OVER 6 IN. HEIGHT) TYPE S	LIN FT	50 ✓										
609-20.21	INTEGRAL CURB (OVER 6 IN. HEIGHT) TYPE A	LIN FT	2,900 ✓										
609-60.00	DITCH LINER	SQ YD	138 ✓										
612-10.30	MOVABLE BARRICADES	EACH	3 ✓										
612-10.50	FLASHER SIGN	EACH	3 ✓										
612-20.10	STANDARD CONSTRUCTION SIGNS	LUMP SUM	1 ✓										
614-10.10	GRATES AND BEARING PLATES	POUND	300 ✓										
614-30.14	MANHOLE FRAME AND COVER TYPE 4	EACH	1 ✓										
703-20.02	CLASS B CONCRETE (MISC)	CU YD	1.8 ✓										
706-10.00	REINFORCING STEEL	POUND	80 ✓										
726-13.15	15 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	50 ✓										

401

Prepared by - James W. Jordan 11-15-76

Checked in Dist. Office by Ronald R. Lowrey 11-29-76

Mark J. Sooter 12-16-76

X

# MISSOURI STATE HIGHWAY COMMISSION

## SUMMARY OF QUANTITIES

FED. ROAD DIVISION	STATE	PROJECT	SHEET NO.
5	MO.	U-71-(4)	215
DIST. NO.	COUNTY		ROUTE
7	JASPER		66

Job No. 7-U-66-2

Clearing & Grubbing	
Clear Units	Grub Units
3 439	3 309
Subtotal	5.0 Ac.
Total	3.5 Ac.

Right-of-Way Markers	
Steel R/W	Conc. R/W
3 9	3 3
TOTAL	3

Movable Barricades & Flasher Signs			
Sheet	Station	Loc.	Remarks
3	467+50	±	
			Barricade Flasher
			Each Each
			3 3
TOTAL			3 3

Removal of Improvements					
Sheet	Sta.	Location	No. of Items	Description	Remarks
3	454+78	135' RT	1	85' x 36" Pipe	Remove Hdwall's
3	461+22	±	1	89' x 30" Pipe	Remove Hdwall's
3	453+66	RT & E	1	EXIST 24" PCC	to 473+36.8
3	461+08	180' Lt	1	Bldg Removal	
3	462+00	123' RT	1	Bldg Removal	
3	463+72	172' RT	1	Bldg Removal	
3	464+28	80' RT	1	Bldg Removal	
3	465+20	180' RT	1	Bldg Removal	
3	465+46	75' RT	1	Bldg Removal	
3	466+83	75' RT	1	Guard Rail	@ Dead End
3	457+41.3	94.5' RT	1	Manhole	
TOTAL				Lump Sum	✓

Conduit, 3 inch Rigid Steel in Trench			
Sheet	Station	Loc.	Lin. Ft.
3	459+60	±	88
3	461+00	±	88
3	463+50	±	88
3	465+05	±	88
TOTAL			352

Class III Reinforced Concrete Pipe Culverts												
Sheet	Station	Loc.	Skew	15"	48"	15' Finiso	18" Flared	Gr & Brq	Cl. B	Rein	Cl. III	
3	455+00	lt lane	Sq	50'								
3	459+00	±	Sq		124'			300	1.8	80	24	
TOTAL					50'	124'	1'	2'	300	1.8	80	244

8" Conc. Curb (Type S)					
Sheet	Station	Station	Loc.	Lin. Feet	Remarks
3	455+90	456+06	Lt	25	16' Radius
3	455+90	456+06	RT	25	16' Radius
TOTAL				50	

PRECAST CONCRETE MANHOLE - 48"							
Sheet	Sta.	Loc.	"D" Opening	Pipe Lin. Ft.	Type 4 Fr. Cover	Cl. 3 C.Y.	Remarks
3	457+87	132' Lt	5' 9"	2'-8"	6	21	
TOTAL				6	1	21	

Sodding							
Sheet	Station	Station	Loc.	Sq Yd	Slopes	Depth	Width
3	454+70	459+10	RT	927	6:1-3:1	2.25	8
TOTAL				927			

8" Integral Curb (Type A)					
Sheet	Station	Station	Loc.	Lin. Feet	Remarks (See Sp. Sh. 1 of 3 & 2 of 3)
3	456+06	459+63.5	Lt	358	
3	459+63.5	459+79.5	Lt	25	16' Radius
3	456+06	459+63.5	RT	358	
3	459+63.5	459+79.5	RT	25	16' Radius
3	460+81.7	460+87.7	Lt	10	6' Radius
3	460+87.7	463+65.5	Lt	278	
3	463+65.5	463+71.5	Lt	10	6' Radius
3	460+81.7	460+87.7	RT	10	6' Radius
3	460+87.7	463+65.5	RT	278	
3	463+65.5	463+71.5	RT	10	6' Radius
3	464+83.5	464+99.5	Lt	25	16' Radius
3	464+99.5	470+00	Lt	501	
3	470+00	472+80	Lt	280	
3	472+80	472+82	Lt	3	2' Radius
3	464+83.5	464+99.5	RT	25	16' Radius
3	464+99.5	470+00	RT	501	
3	470+00	472+80	RT	280	
3	472+80	472+82	RT	3	2' Radius
TOTAL				2980	

Ditch Liner							
Sheet	Station	Station	Loc.	Sq Yd	Slopes	Depth	Width
3	469+00	470+00	RT	138	3:1-3:1	0.75	8'
TOTAL				138			

Adjusting Manholes			
Sheet	Station	Loc.	Remarks
7	2+31	8.7' Lt	See Sp. Sh. 3 of 3 Reuse Cover and FRAME (on Baker St. Detour)
7	6+37	11' Lt	See Sp. Sh. 3 of 3 Reuse Cover and FRAME
3	454109.1	177.5' RT	Reuse Cover & Frame
TOTAL			3

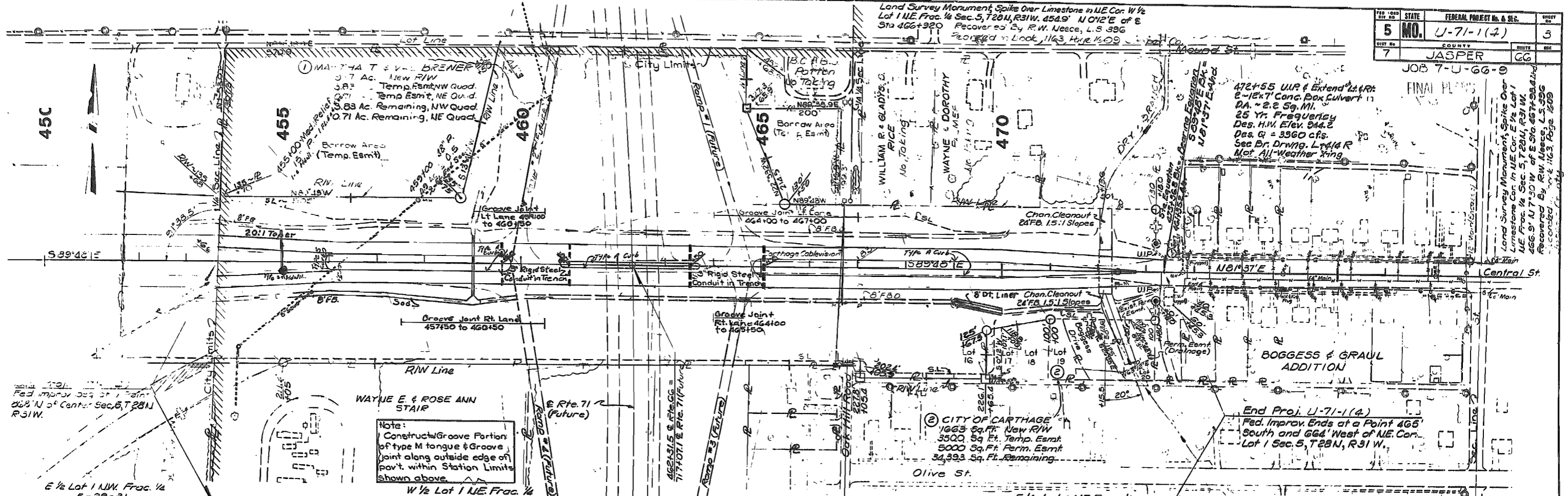
462

Land Survey Monument Spike Over Limestone in NE Cor. W 1/2 Lot 1 NE. Frac. 1/4 Sec. 5, T28N, R31W. 454.9' N 01°2'E of E Sta 466+320 Recovered by R.W. Neece, L.S. 396 Reopened in Book 1163 Page 1609

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO. & SECT.	SHEET NO.
7	MO.	U-71-1(4)	3
COUNTY	CITY	DATE	
JASPER			

JOB 7-U-66-9

DATE	BY
11/1/66	M.L.H.
11/1/66	M.L.H.
11/1/66	M.L.H.



Note:  
Construct Groove Portion of type M tongue & Groove joint along outside edge of part within Station Limits shown above.

UTILITY OWNERSHIPS

Telephone:  
Southwestern Bell Joplin, Mo.

WATER:  
City of Carthage Carthage, Mo.

GAS:  
Gas Service Co. Carthage, Mo.

SEWER:  
City of Carthage Carthage, Mo.

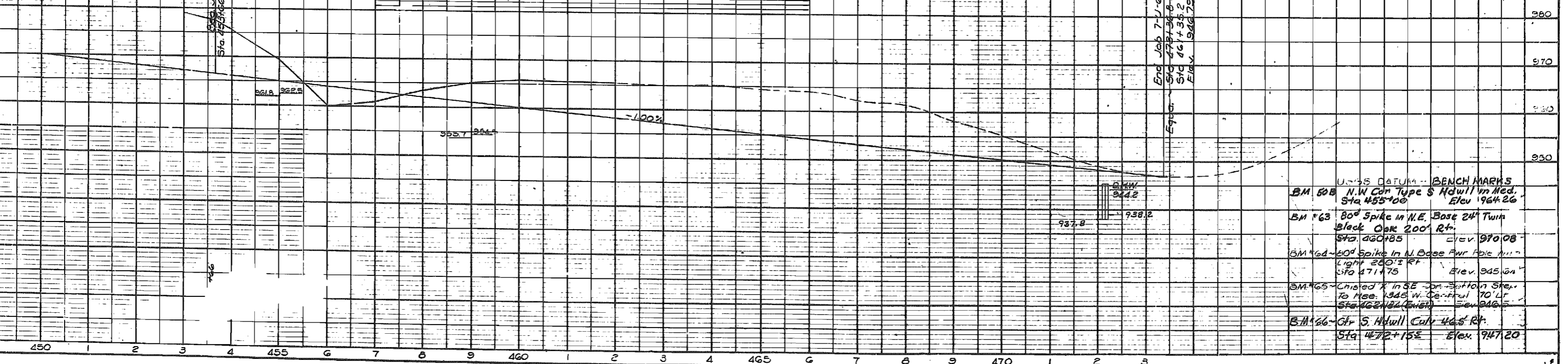
POWER:  
City of Carthage Carthage, Mo.

TV:  
Carthage Cablevision Carthage, Mo.

Sta. 460+00	CU Yds.	4.5
Sta. 461+00	CU Yds.	4.5
Sta. 462+00	CU Yds.	4.5
Sta. 463+00	CU Yds.	4.5
Sta. 464+00	CU Yds.	4.5
Sta. 465+00	CU Yds.	4.5

End Job 7-U-66-9  
Exp. Sta. 475+00  
Sta. 46+35.2 AN  
Elev. 946.75

463



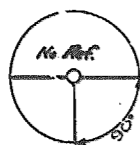
USGS DATUM - BENCH MARKS

BM 60B	N.W. Cor. Type S Hdwall in Med. Black Oak 200' Rt.	Sta. 455+00	Elev. 964.26
BM 63	80° Spike in N.E. Base 24" Twin Black Oak 200' Rt.	Sta. 460+85	Elev. 970.08
BM 64	80° Spike in N. Base Pwr Pole in Light 280' RT	Sta. 471+75	Elev. 945.64
BM 65	Crushed X in SE cor. Bottom Step to Hse. 1345 W. Ge. Fruit 70' LT	Sta. 462+82	Elev. 946.5
BM 66	Chr. S. Hdwall Curv 46.5' Rt.	Sta. 4672+15E	Elev. 947.20

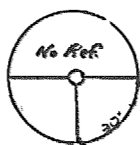
FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT No. & S.C.	SECTION
5	MO.	U-71-1(4)	4
DIST. NO.	COUNTY		ROUTE, SEC.
7	JASPER		66

JOB 7-U-66-9

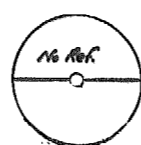
FINAL PLANS



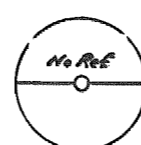
POT. 453+68.0



POT. 454+60.6



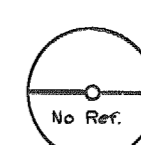
POT. 459+22.5



POT. 467+00.0

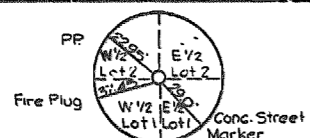


POT. 472+41.6

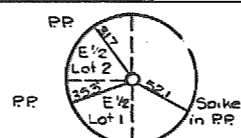


EQUATION  
473+36.8 BK.  
461+55.2 Ah.

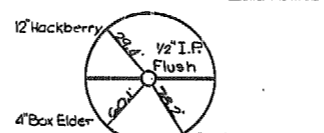
Land Ties



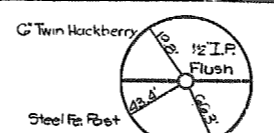
Spike Over Limestone in  
NE Cor. W 1/2 Lot 1, NE frac. 1/4  
Sec. 5, T28N, R31W



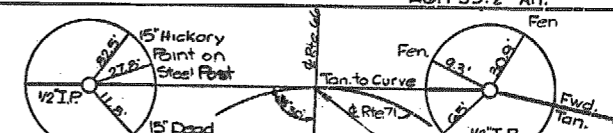
Spike Over Limestone Cor.  
in NE Cor. E 1/2 Lot 1 NE frac. 1/4  
Sec. 5, T28N, R31W



POT. 710+15.2



POST. 713+12.8



POST. 715+04.4

717+07 & Fut. Roadway  
462+31.4 & Rte 66 Sur.  
PI. 717+79.0  
Δ 6° 13.9' Rt.

D- 0°30'  
T- 623.8'  
L- 1246.4'  
R- 11460.0'  
PC- 711+55.2  
PT- 724+01.6  
SE- 0

Future Roadway

REFERENCED POINTS

2-75

J.M.P.

ORIGINAL SURVEY NOTE BOOK NO.

DATE	
BY	
REVISION	
REVISION	
REVISION	
REVISION	
REVISION	
REVISION	
REVISION	
REVISION	

464

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO & SEC.	SHEET NO.
5	MO.	U-71-1(4)	5
DIST. NO.	COUNTY	NO. IN SEC.	SEC.
7	JASPER	66	

Job 7-U-66-9

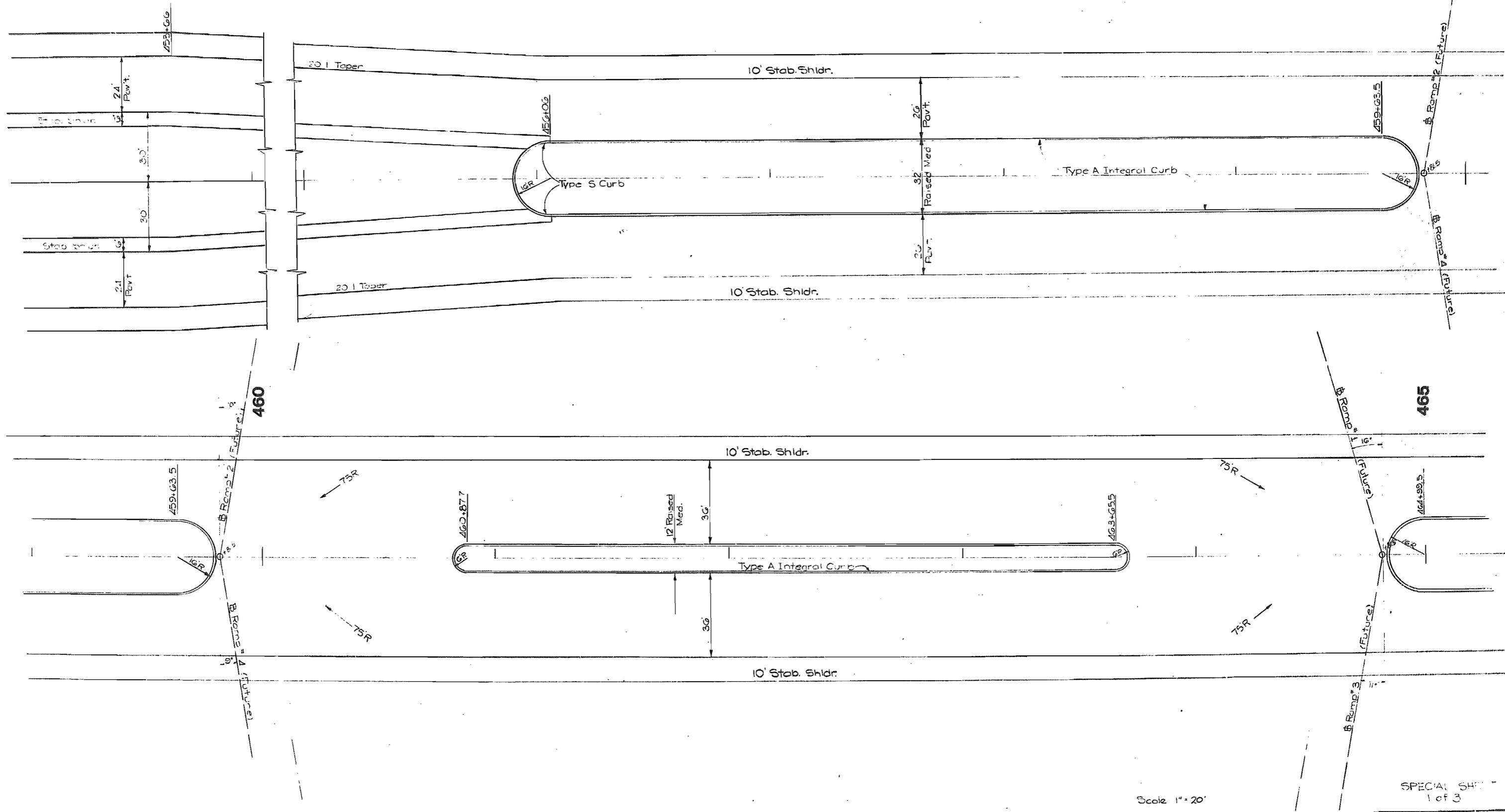
FINAL PLANS

460

ORIGINAL SURVEY PLANNING  
 SURVEY PLANNING  
 DATE: 5-73  
 JHP

ORIGINAL SURVEY PLANNING  
 SURVEY PLANNING  
 DATE: 5-73  
 JHP

465



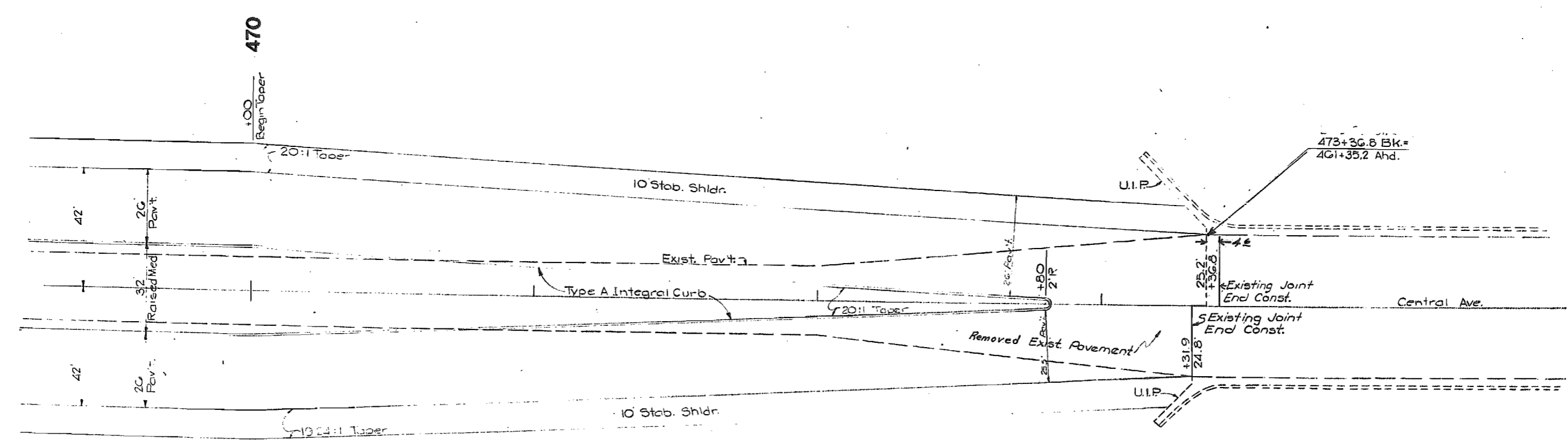
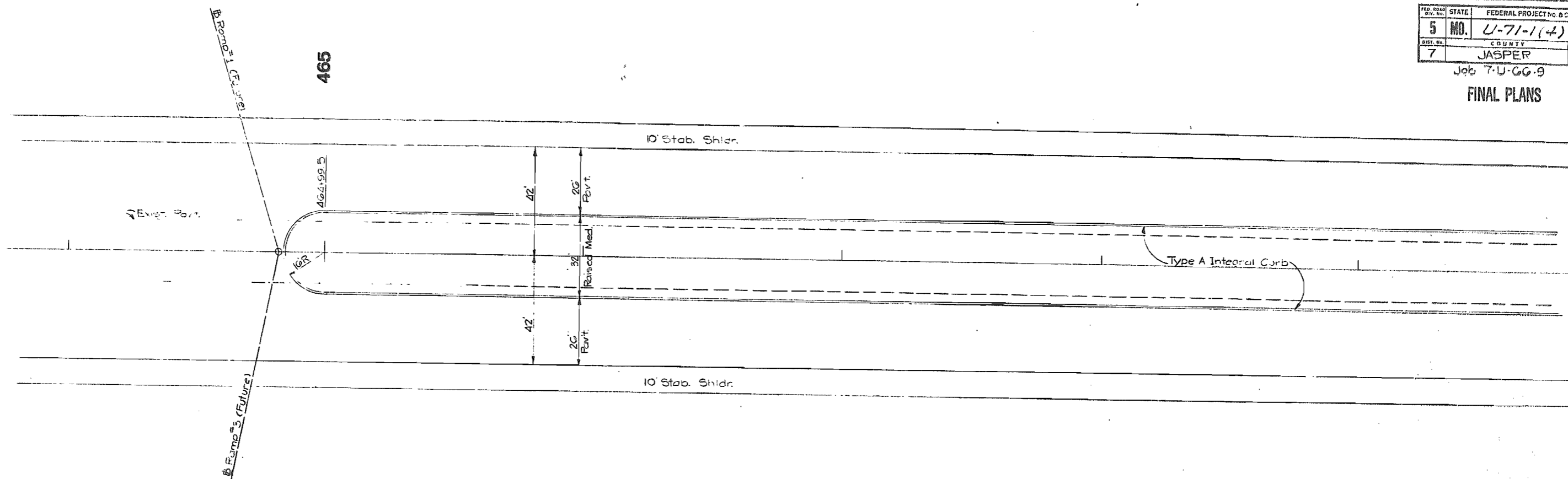
Scale 1" = 20'

SPECIAL SHEET  
 1 of 3

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO. & SEC.	SHEET NO.
5	MD.	U-71-1(4)	6
DIST. NO.	COUNTY	ROUTE	SEC.
7	JASPER	66	

Job 7-U-66-9

FINAL PLANS



FINAL SURVEY

ORIGINAL SURVEY

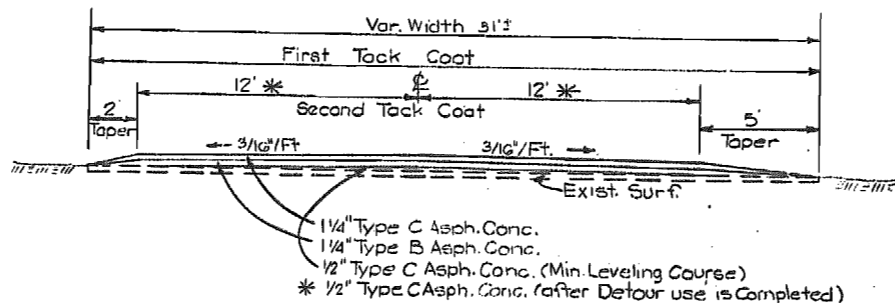
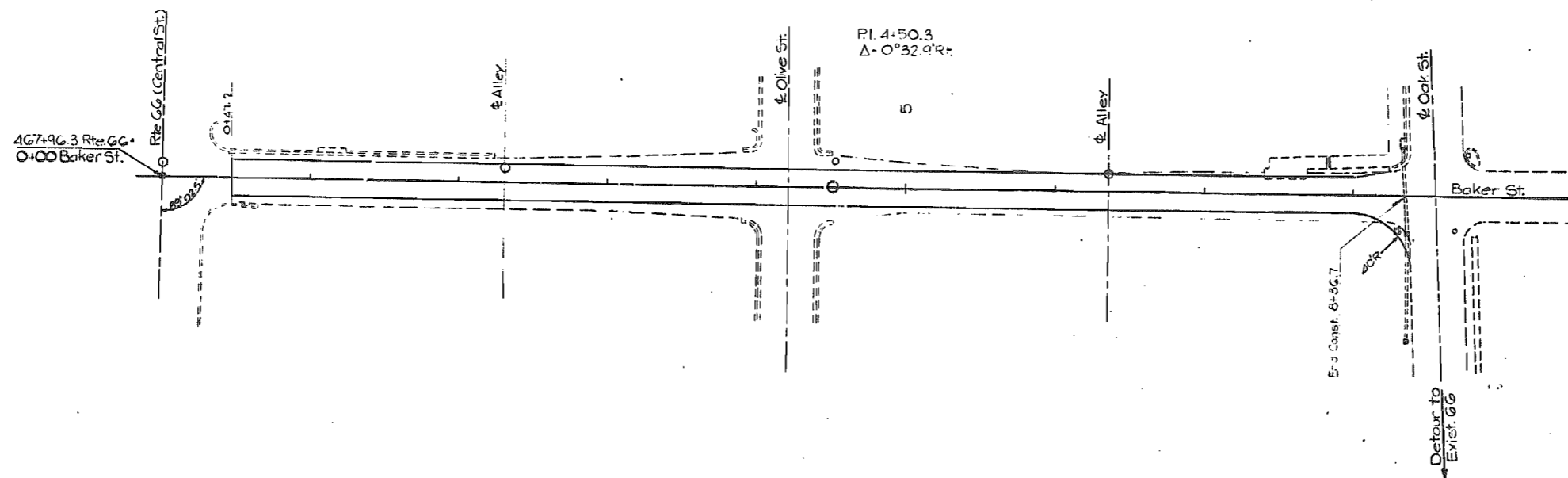
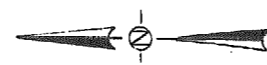
466

Scale 1"=20'

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO. & SEC.	SHEET NO.
5	MO.	U-71-1(4)	7
DIST. NO.	COUNTY	DATE	SEC.
7	JASPER	6/6	

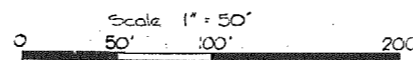
Job U-66-4

FINAL PLANS



NOTE:  
 Radius in N.W. Quadrant of the Baker St. - Oak St. Intersection did have a 4" Type 1 or 2 Base Under the new Construction. Surface for the new Const. was 1 1/4" Type C Asph. Conc. Surface Course, 1 3/4" Type B Asph. Conc.

BAKER ST. DETOUR  
 Central Ave. to Oak St.  
 Sta. 0+47.2 to Sta. 8+36.7



BAKER ST. DETOUR  
 Central St. to Oak St.

Special Sheet 3 of 3

DATE	BY	REVISION

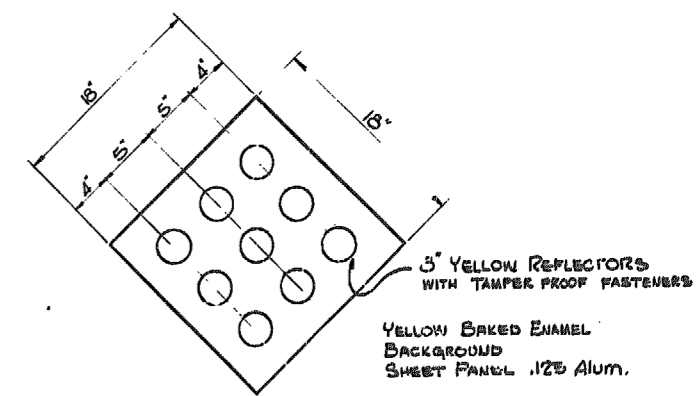
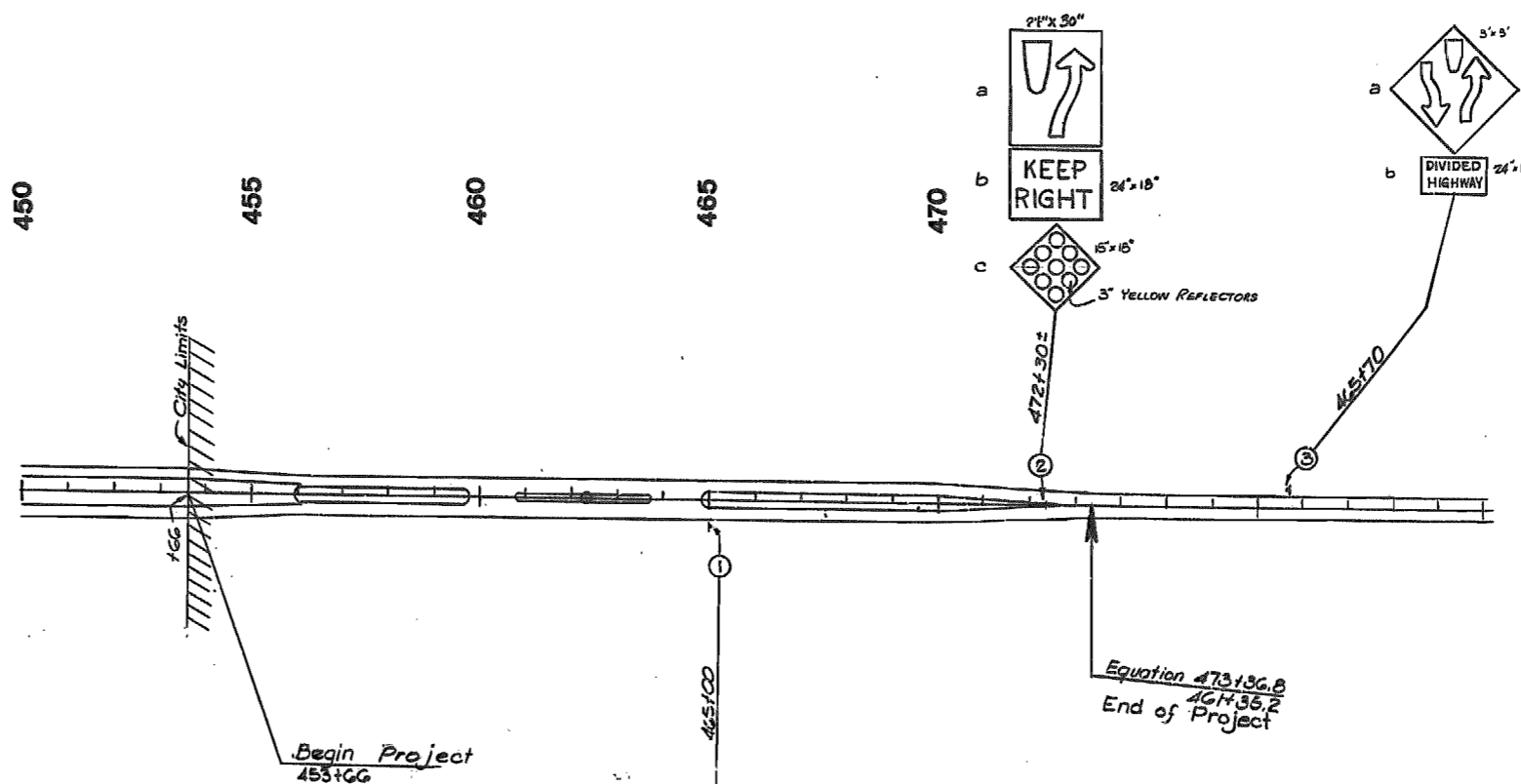
DATE	BY	REVISION

467

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO. & SEC.	SHEET NO.
5	MO.	U-71-1(4)	
DIST. NO.	COUNTY	ROUTE	ETC.
7	JASPER	66	

Job. No. 7-U-66-9

FINAL PLANS



SIGN NO. 2c  
STATION 472+30 ±

REFLECTOR SIGN NO. 2c DETAILS

Highway Signing

DATE	BY	REVISION

DATE	BY	REVISION

468

108





SP-2  
MAY 1974

MISSOURI STATE HIGHWAY COMMISSION  
STANDARD PLANS

FINAL PLANS

FED. ROAD DIVISION		PROJECT	SHEET NO.
5	MO.	U-71-1 (4)	18
DIST. NO.		COUNTY	ROUTE
7		JASPER	66

✓ NO.	DESCRIPTION
203.00C	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
502.00B	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
606.00E	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
609.00D	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, HTS 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
703.51B	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 A	TIMBER BRIDGES - 11' ROADWAY
717.15 A	TIMBER BRIDGES - 15' ROADWAY
717.19 A	TIMBER BRIDGES - 19' ROADWAY
725.31	METAL CURTAIN WALL AND METAL INLETS
726.30	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
<b>HIGHWAY LIGHTING</b>	
901.00C	POLES & APPURTENANCES - 30' (2 SHEETS)
901.01H	POLES & APPURTENANCES - 45' (2 SHEETS)
901.02	POLE MOUNTED SUBSTATION 2400 V - 480 V MULTIPLE CIRCUIT
901.03	POLE MOUNTED SUBSTATION 2400 V - 480 V MULTIPLE CIRCUIT
901.05	CONTROL PANEL CABINETS (2 SHEETS)
901.06	POLE MOUNTED SUBSTATION 480 V MULTIPLE CIRCUIT
901.12	POLE MOUNT. CONT. STA. SECONDARY SERV. 480 V MULTI. CIR. (NOT METERED)
901.15	POLE MOUNT. SUBSTATION 10 TO 30 KVA 480 V MAX. PR. INPUT
901.16	POLE MOUNT. CONT. STA. SEC. SERV. 120, 240, & 480 V MULTI. CIR.
901.17	POLE MOUNT. CONT. STA. SEC. SERV. 480 V MULTI. CIR. (METERED)
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. (LT'S & SIGS BOTH METERED)
<b>TRAFFIC SIGNALS</b>	
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
<b>HIGHWAY SIGNING</b>	
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 B
903.09C	LIGHTING SUPPORT BRACKET
903.10F	SIGN TRUSSES - OVERHEAD ALUMINUM (8 SHEETS)
903.12C	SIGN TRUSSES - BUTTERFLY & CANTILEVER - STEEL (7 SHEETS)
903.60E	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.

471

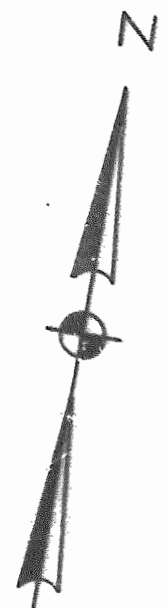
STATE	FEDERAL PROJECT No. & SEC.	SHEET No.
MO.	UG-84(6)	
SHEET No.		
7 JASPER		

PP-3 FIN  
PP-6 CON

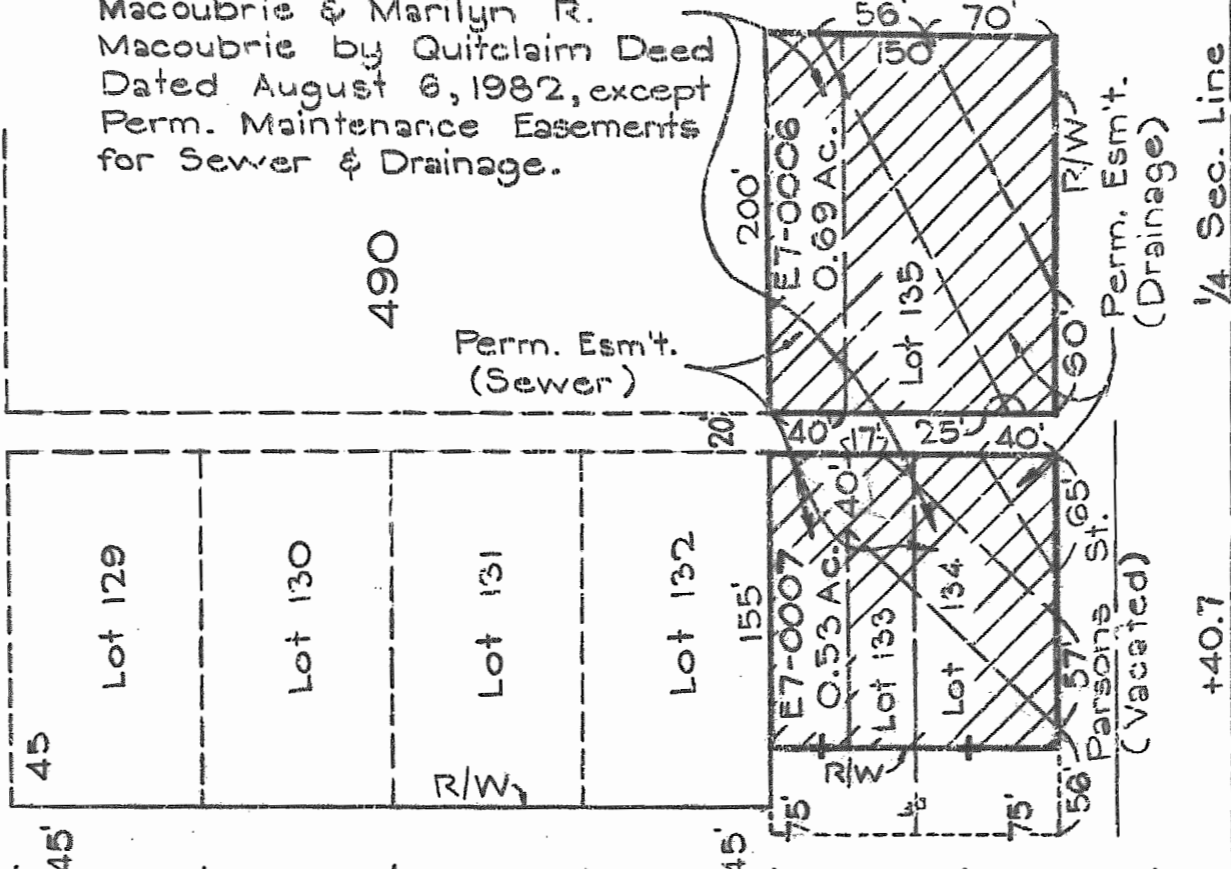
SE<sup>4</sup>NW<sup>4</sup> 4  
T28N R31W

SW<sup>4</sup>NE<sup>4</sup> 4  
T28N R31W

Transferred to Jewel E. Macoubrie & Marilyn R. Macoubrie by Quitclaim Deed Dated August 6, 1982, except Perm. Maintenance Easements for Sewer & Drainage.



+73.5 Blanche St.



490

495

Perm. Esm't. (Sewer)

Perm. Esm't. (Drainage)

1/4 Sec. Line

Parsons St. (Vacated)

Route 71 (66)

CITY OF CARTHAGE

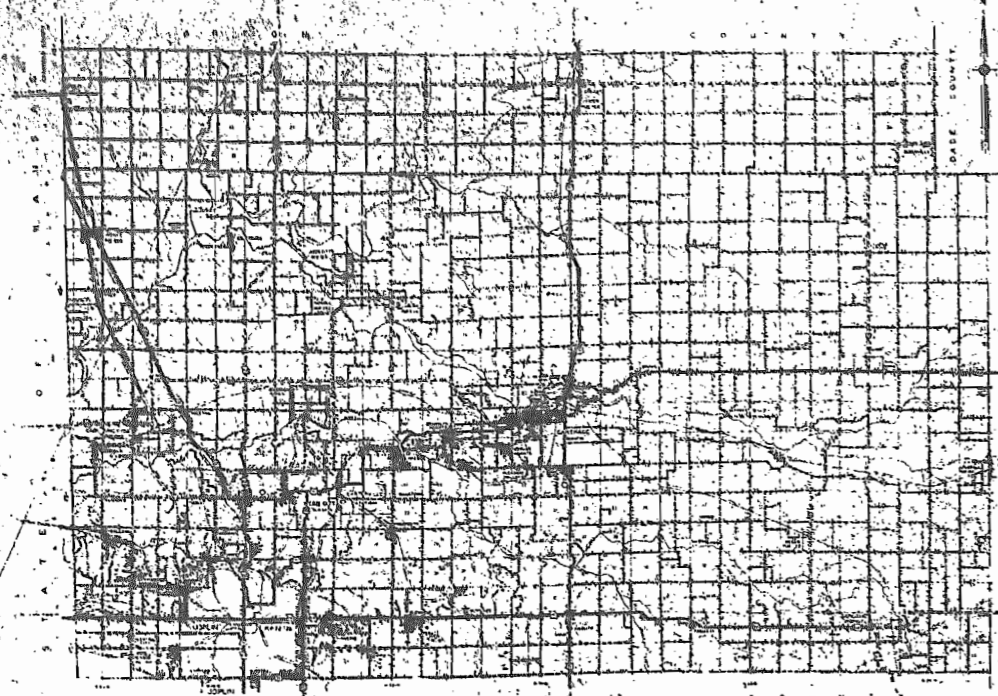
Jasper County  
Route 71 (66)  
Project UG-84(6)  
Sheet No. 3

DATE	
BY	
REVISION	
APPROVED	
PLANNED	
NOTED	
NO. 1	

DATE	
BY	
REVISION	
APPROVED	
PLANNED	
NOTED	
NO. 1	

138

LOCATION MAP



# MISSOURI STATE HIGHWAY COMMISSION PLAN AND PROFILE OF PROPOSED STATE ROAD

FEDERAL AID PROJECT  
JASPER COUNTY

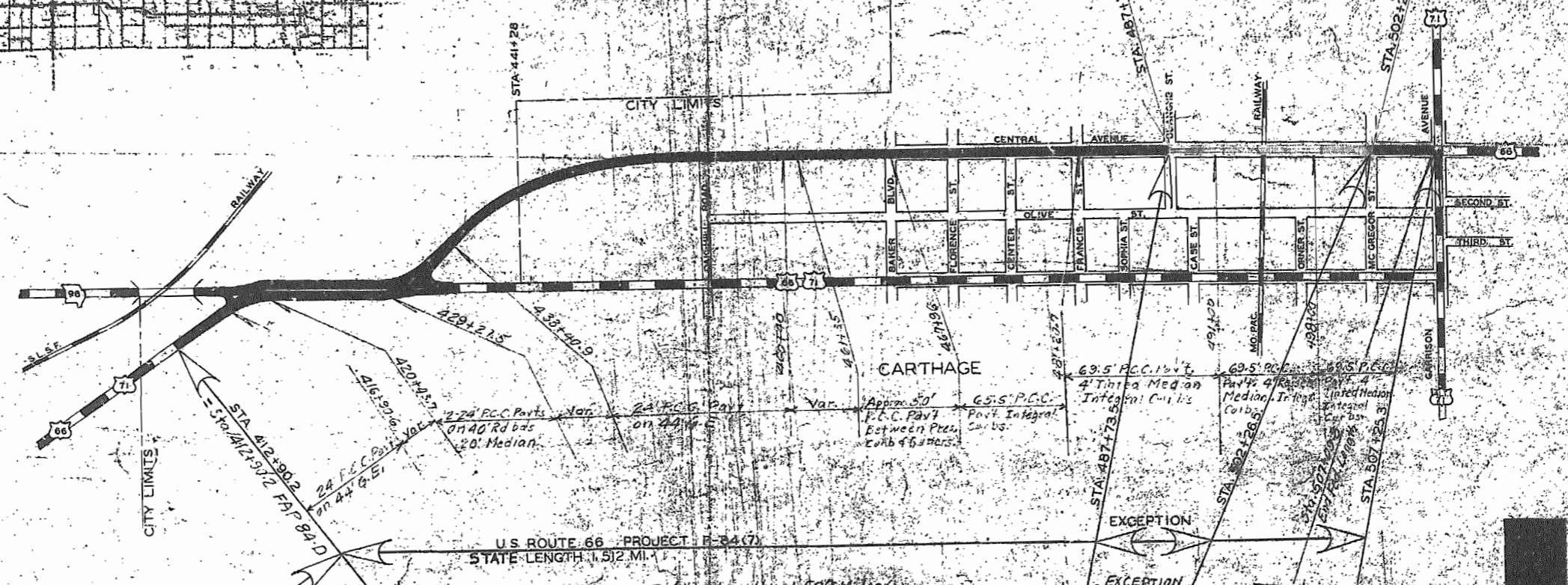
**LIMITED ACCESS HIGHWAY**  
This shall be a limited access highway having a minimum of two lanes in each direction and an adequately spaced median or barrier. It shall be subject to the provisions of the Missouri State Highway Code, Chapter 64, R.S.Mo., and shall be subject to the provisions of the Missouri State Highway Code, Chapter 64, R.S.Mo., and shall be subject to the provisions of the Missouri State Highway Code, Chapter 64, R.S.Mo.

MISSOURI STATE HIGHWAY COMMISSION  
JASPER COUNTY  
F-84(7)  
UG-84(6)

**LEGEND**  
---o--- TERMINAL POINT  
- - - - - LIMITED ACCESS



RTE-66 PROJ. UG-84(6)  
LENGTH - 0.275 MI.



U.S. ROUTE 66 PROJECT: F-84(7)  
STATE LENGTH: 1.512 MI.  
Federal Length = 1.508 Miles



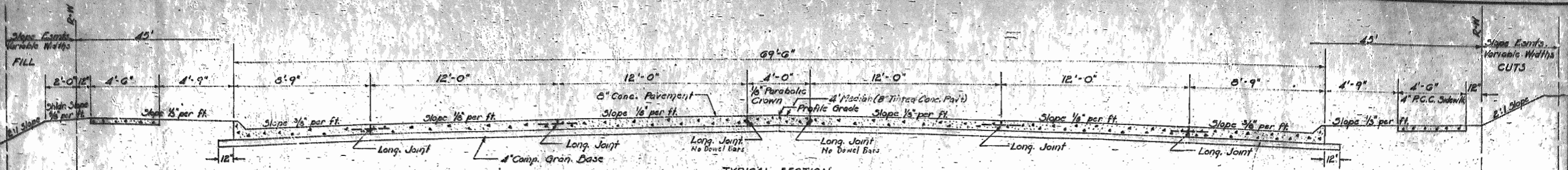
SUBMITTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

CHIEF ENGINEER  
MISSOURI STATE HIGHWAY COMMISSION

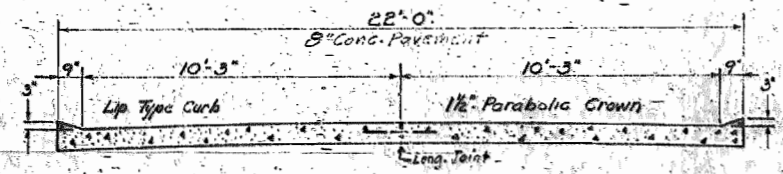
APPROVED:	DATE:
DIVISION ENGINEER:	DATE:
DISTRICT ENGINEER:	DATE:
CHIEF ENGINEER:	DATE:

**CONVENTIONAL SIGNS**

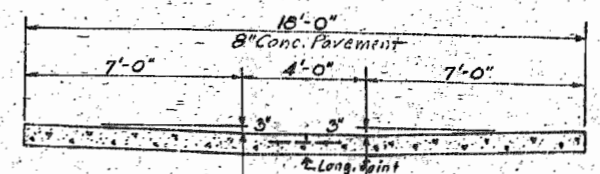
STATE AND NATIONAL LINE	LEVEE
COUNTY LINE	CULVERTS
CITY, VILLAGE OR BOROUGH	DROP INLET
TOWNSHIP LINE	TROLLEY POLE
SECTION LINE	POWER POLE
GRANT LINE	TELEPHONE OR TELEGRAPH POLE
TRUSS LINE	MANHOLE
GUARD RAIL	HEDGE
UNIMPROVED PROPERTY	GROUND ELEVATION
RIGHT OF WAY LINE	GRADE ELEVATION
RAILROADS	SURFACE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



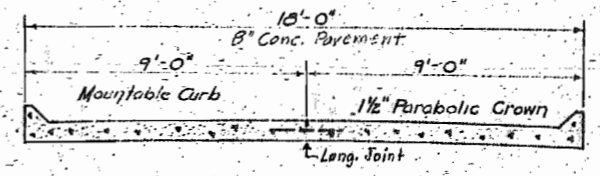
TYPICAL SECTION  
Sta. 487+73.5 to Sta. 491+40  
Sta. 497+52 to Sta. 502+26.5



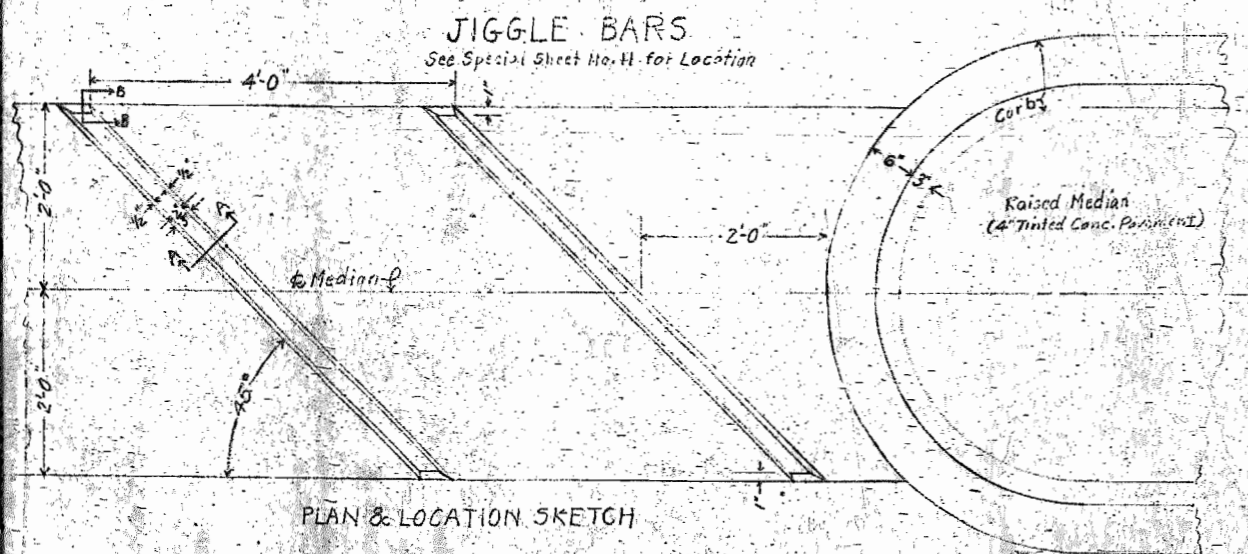
TYPICAL SECTION  
Service Road 235' Lt. Sta. 496+86 to Sta. 501+93



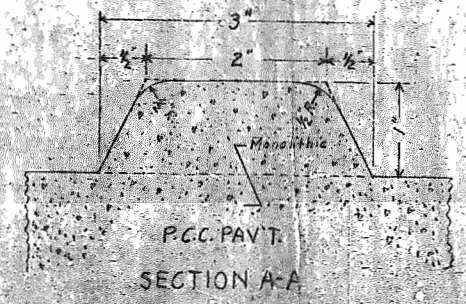
TYPICAL SECTION  
Alley Lt. Sta. 504+77.8



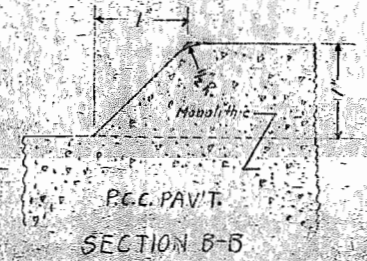
TYPICAL SECTION  
Alley Rt. Sta. 504+78.5



PLAN & LOCATION SKETCH

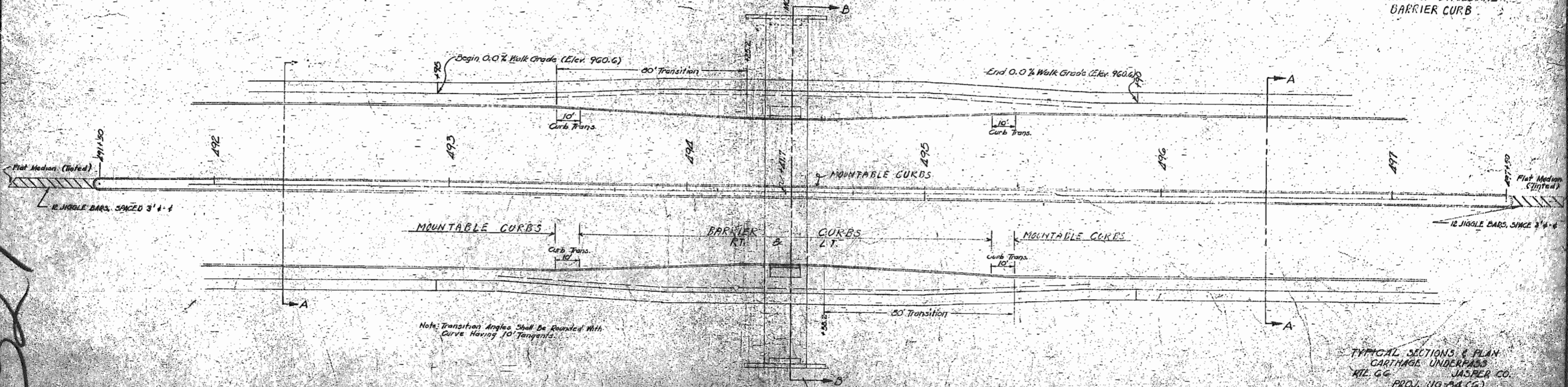
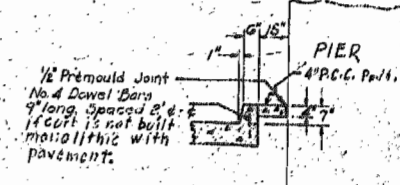
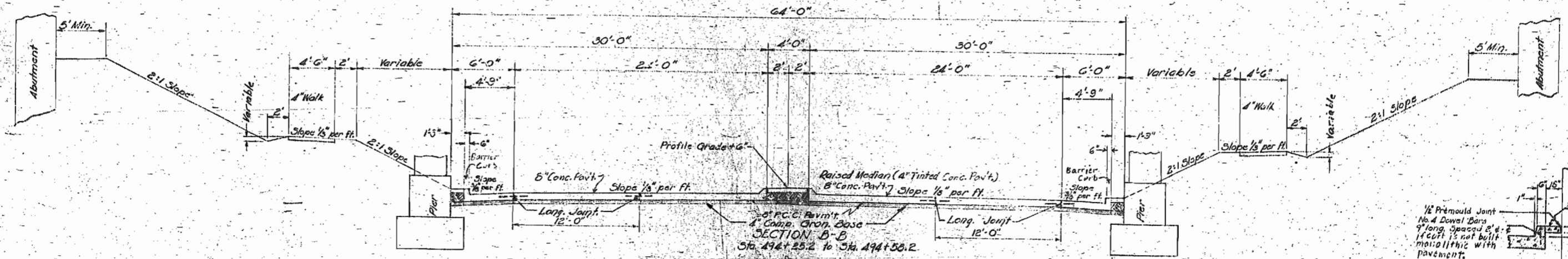
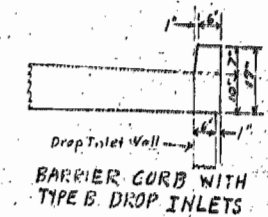
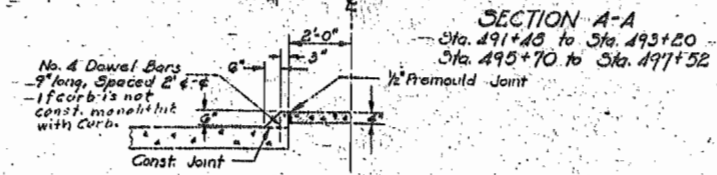
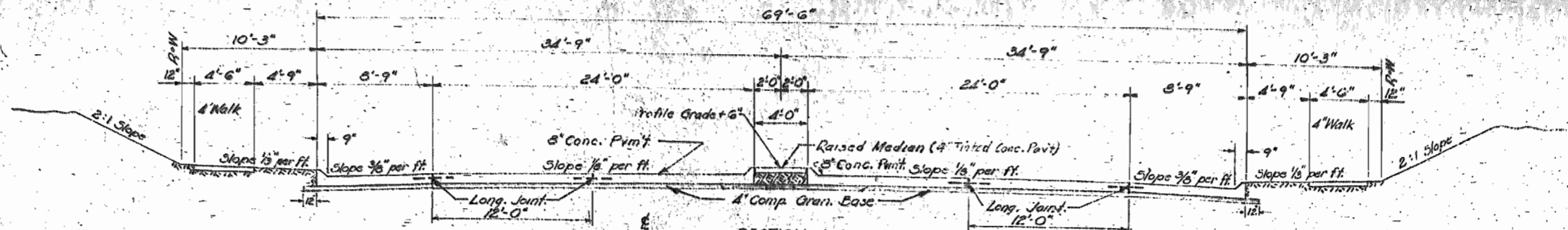


SECTION A-A



SECTION B-B

TYPICAL SECTIONS  
FOR  
Route 66 County JASPER  
Project F-84 (7)  
Project UG-84 (5)



TYPICAL SECTIONS & PLAN  
 CARTHAGE UNDERPASS  
 RILEY CO. JASPER CO.  
 PROJ. UG-84(G)  
 DESIGN SPEED: 40 MPH  
 CHDEN. TRANSECTIONS  
 Sheet 4 of 4

MISSOURI STATE HIGHWAY COMMISSION

LOCATION CENTRAL AVE. IN CARTHAGE

TYPE GRADED EARTH, CULVS, BRIDGE & 60.5' CONC. PAVMT.

SUMMARY OF QUANTITIES

Table with columns: FED. ROAD DIST. No., STATE, PROJECT, FISCAL YEAR, SHEET No., TOTAL SHEETS. Values include MO, 46-34(6), 2A, 66.

Main summary table with columns: EXCAVATION, CLEARING & GRUBBING, CONCRETE MANHOLES (MODIFIED), DEEP INLETS, CROSS ROAD CULVERT PIPE & SEWER PIPE, PAVED APPROACHES, CLASS A UNDERDRAINS, LENGTH OF PROJECT, GENERAL SUMMARY. Includes detailed item descriptions, units, and quantities.

MISSOURI STATE HIGHWAY COMMISSION

SUMMARY OF QUANTITIES

LOCATION Central Ave in Carthage

TYPE Graded Earth, Bridge & 62.5' Conc. Paved

FINAL PLANS

FED. ROAD DIST. No.	STATE	PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	MO.	46-84(6)		2A	54
DIST. No.	COUNTY			ROUTE	SHEET No.
7	JASPER			66	

REMOVAL CONCRETE SIDEWALK

Station	Location	Description	Sq. Yds.	Remarks
487+90	494+77	Lt. 36'x27'	344.9	
487+91	489+15	Lt. 4'x12'	5.1	
488+23		Lt. 15'x39'	19.6	
488+57		Lt. 2'x35'	17.5	
488+73		Lt. 3'x41'	15.9	
489+51		Lt. 4'x35'	15.6	
489+76		Lt. 3'x11'	3.7	
490+25		Lt.		Not Rem. by Contr.
490+10	494+45.3	Lt. 4'x43.5'	19.3	
490+43.8		Lt. 5'x56'	31.8	
490+46.3		Lt. 5'x39.5'	20.5	
490+47		Lt.		Not Rem. by Contr.
490+96		Lt.		Not Rem. by Contr.
491+41		Lt. 4'x36.5'	15.3	
492+20.5		Lt.		Not Rem. by Contr.
492+27.3		Lt. 4'x11'	4.9	
492+73.5		Lt. 4'x7'	3.1	
493+06		Lt. 2'x38'	8.4	
493+09.1		Lt. 2'x20'	4.4	
493+41		Lt. 4'x8'	3.6	
494+45.3	494+79.3	Lt. 4'x39'	15.1	
494+79.3	497+67.5	Lt. 2082'x8.2	262.6	
494+85		Lt. 3'x14'	5.4	
495+42.5		Lt. 3'x52'	20.2	
495+81.5		Lt.		Not Rem. by Contr.
495+92		Lt. 4'x31'	13.8	
496+63.5		Lt.		Not Rem. by Contr.
496+83	501+98	Lt. 6'x515'	393.3	
496+97.2		Lt. 5'x15'	9.2	
497+04.5		Lt. 3'x38'	12.7	
497+44.7		Lt. 3'x17'	5.7	
497+51		Lt. 4'x22'	12.0	
497+75.2	501+96	Lt. 4240'x84'	392.7	
498+13		Lt. 4'x22'	11.0	
498+19.8		Lt. 4'x41'	18.2	
498+69		Lt. 3'x32.5'	12.6	
498+70		Lt. 3'x30.5'	10.2	
499+13		Lt. 4'x22'	9.8	
499+16		Lt. 3'x22'	7.3	
499+35		Lt. 2'x16'	4.4	
499+70.5		Lt. 4'x33'	14.7	
499+81		Lt. 4'x14'	6.2	
500+24		Lt. 2'x22'	4.9	
500+28.5		Lt. 3'x29'	9.7	
500+77.5		Lt. 3'x38'	12.7	
501+29.5		Lt. 3'x22'	8.0	
501+60		Lt. 5'x36'	30.0	
501+91		Lt. 6'x22'	16.0	
501+91		Lt. 6'x32'	21.3	
501+91		Lt. 6'x32'	21.3	Service Road
Total			2061.7	

SPR, SHAP & COMP 4" GRAN. BASE (PCCP)

Station	Station	Length	Width	Square Feet
487+73.5	493+45.2	571.7	71.6	40876.55
493+45.2	494+25.2	80.0	71.6	5728.00
494+25.2	494+32.2	33.0	63.5	2095.50
494+32.2	495+32.2	80.0	71.6	5728.00
495+32.2	502+26.5	688.3	71.6	49283.45
Sub Total				102985.50 S.F.
				11442.83 Sq. Yds.

Approaches

487+73.5	Blanche St. Rt.	24x16.75+42.6	=	49.34
487+73.5	Blanche St. Lt.	14x16.75+42.6	=	30.73
502+26.5	McGregor St. Rt.	32x14+42.6	=	51.73
502+26.5	McGregor St. Lt.	31x14+42.6	=	48.67
Sub Total				220.47
				11442.83
Total				11663.30
P.C.'s				-22.50
				11640.80
				41.52 11641 sq. yds.

CONCRETE BOX CULVERTS

Station	Location	C-Std.	Size	Length	Covg.	Flow	Stk'd	Exc.	Remarks
496+72.5		52'	12'x4'	571'-8"	791.4	87900	3920.0'		W.W. Slips - 1/2" shell
	North Fabron St.								See Sheet #15
2+55	27 Lt.	531	12'x4'	24'	33.9	3430	29.0		W.W. Slips - 1/2" shell
4+70	139 Lt.	531	12'x4'	27'	36.1	3740	29.5		W.W. Slips - 1/2" shell
Sub Totals					861.4	99670	13978.5'		See Sheet #15

CULVERT PIPE FOR RAILROAD

Station	Location	C-Std.	Size	Length	Covg.	Flow	Stk'd	Exc.	Remarks
494+41.7	375 Lt. R.	15	30"	48'	20.5	205	46'		48" C.M.P. C13 Exc. 20.5' V skew 46° RA (See Sheet #2)
494+41.7	111.5 Lt. E.	42			26.0				
1+80	McGregor St.			2-46'	83.0				Temp. Under Shoe Fly
494+41.7	100 Lt. R.	40			5.5				
Sub Totals					82	31	92	135.0	

REMOVAL OF (6) EXISTING STRS.

(Culverts, Etc.) Lump Sum 1

REMOVING (47) MISC. ITEMS

Lump Sum 1

GUARD RAIL

Station	Side	Lim. Ft.
493+80	Lt.	40
494+10	Rt.	30
494+66.5	Rt.	30
Total		100

FERT. & MULCH

Sheet #	Total S.F.
3	57366
Total	57366
Acres	1.32
Use	1.3 Acres

4" VITRIFIED CLAY SEWER PIPE

Total 32 Lin. Ft. (See Sheet #15 For Details)

8" VITRIFIED CLAY SEWER PIPE

Total 1135 Lin. Ft. (See Sheet #15 For Details)

15" VITRIFIED CLAY SEWER PIPE

Total 1029 Lin. Ft. (See Sheet #15 For Details)

8" x 15" SANITARY SEWER TRENCH & BACKFILL

0-6'	6-8'	8-10'	10-12'	12-14'	14-16'	16-18'	Solid Back
369	322	676	149	162	288	128	224
							32
							4.01

LENGTH OF PROJECT

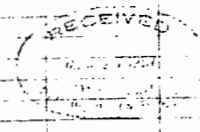
ITEM NO.	DESCRIPTION	UNIT	TOTAL UNITS	NO. UNITS
	End of Project	Station		
	Beginning of Project	Station		
	Apparent Length	Feet		
	Equations and Exceptions:			
	Total Corrections	Feet		
	Net Length of Project	Feet		
	State Length	Miles		
	Federal Length	Miles		

4" CONCRETE PAVEMENT

Station	Station	Location	Width	Lim. Ft.	Sq. Yds.	Remarks
491+48	497+52		4'	604	268.1	Tinted Median
494+34	494+49	Lt.	1'-3"	13	1.8	Between Curb & Flar
494+34	494+47	Rt.	1'-3"	13	1.8	
Total					271.7	

SANITARY SEWER WORK

Manhole #	TYPE	STANDARD	DROP	Field Measurements	
				Depth - Bottom	
1				1	
2				1.25	
3				5.50	
4				11.25	
5					
6					
7					
8					
9				1.75	
Totals		4	2	19.75	3





# SUMMARY SHEET FOR CONCRETE PAVING PROJECT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	UG-84(8)		2-AA	
DIV. NO.	COUNTY	ROUTE	MILE		
7	JASPER	66			

Sheet #2 of 2

CONTRACTOR  
PAVED BY  
  
PROJECT ENGINEER  
SLAB INSPECTORS  
  
PLANT INSPECTOR

EQUIPMENT

TYPE OF CONSTRUCTION  
TOTAL LENGTH  
EXCEPTIONS

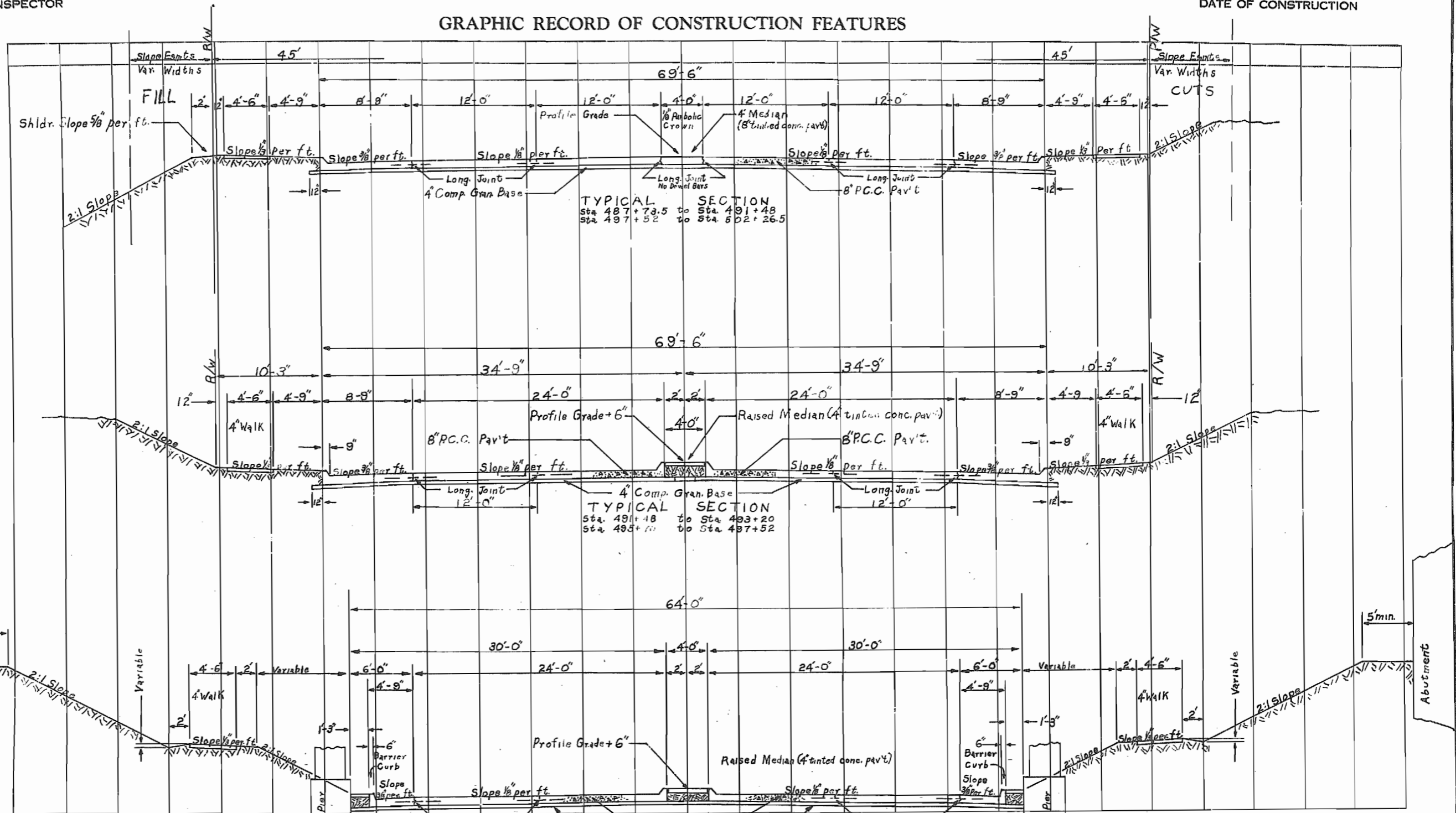
EQUATIONS

LOCATION OF PROJECT

DATE OF CONSTRUCTION

## GRAPHIC RECORD OF CONSTRUCTION FEATURES

- DAILY TEMPERATURE Minimum Maximum
- CONSTRUCTION DATE
- STATION
- TYPICAL SECTION
  - Graded Earth
  - Pavement
- MATERIALS
  - Coarse Aggregate
  - Fine Aggregate
  - Cement
  - Admixture
- PROPORTIONS
- MIXING WATER
  - Average gal. per sack of cement
- DISTRIBUTED REINFORCEMENT
  - Wire Fabric
  - Bar Mat
  - Other
- JOINTS
  - Expansion (Show Spacing)
  - Contraction (Show Spacing)
  - Longitudinal
  - Construction
- CURING METHOD
- DRAINAGE STRUCTURES
  - Surface Drains
  - Culverts
    - Cross Drainage
    - Longitudinal Drainage
    - Special Drainage
  - Underdrains (Length, Type, & Station)
- GUARD RAIL
- SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS
- SUBGRADE
  - Method of Compacting Embankment
  - Treatment
  - Condition
  - Type
- BASE COURSE
  - Type & Thickness
  - Condition
- DATE OPENED TO TRAFFIC
- DEFECTS OBSERVED IN COMPLETED PAVEMENT



MATERIAL KEY

SPECIAL PROCEDURE KEY

TYPICAL SECTION  
Sta. 494+25.2 to Sta. 494+58.2

PREPARED BY R.A. STUART  
APPROVED BY [Signature] PROJECT ENGINEER  
APPROVED BY [Signature] DIVISION MATERIALS ENGINEER  
CHECKED BY [Signature] CONSTRUCTION BUREAU SURVEY & PLANS BUREAU MATERIALS BUREAU

# SUMMARY SHEET FOR CONCRETE PAVING PROJECT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	16-54(6)		2-2A	66
RIV. NO.	COUNTY	PROJECT		ROUTE	MILE
7	JASPER	CENTRAL AVENUE IN CARTHAGE		66	

SHEET #1 OF 2

**CONTRACTOR** PETER KIEWIT SON'S Co., OMAHA, NEBR.  
**PAVED BY** PETER KIEWIT SON'S Co., OMAHA, NEBR.  
**PROJECT ENGINEER** D. F. POWERS  
**SLAB INSPECTORS** H. L. JOHNSON  
 R. A. STUART  
 E. O. EVANS  
**PLANT INSPECTOR** C. R. BECKHAM

**EQUIPMENT**  
 KOENIG PAYER 34E - SER. No. 26106 1954  
 JAEGER SPREADER - SER. No. 51X806 1951  
 DEAN KNOX FINISHING MACH. - SER. No. 50XES 1950  
 KOENIG LONGITUDINAL FINISHER - SER. No. LC 1173 1950  
 FLEX PLANE SPRAY MICH. - SER. No. 710B 1954  
 DEAN-KNOX AGG. BIN - SER. No. 50658 1954  
 JOHNSON CEMENT BIN - SER. No. 40494-1 1950

**TYPE OF CONSTRUCTION** GRADED EARTH, CULVERTS, BRIDGE, #VAR. WIDTH CONC. PAVT.  
**TOTAL LENGTH** .275 MILES  
**EXCEPTIONS** None  
**EQUATIONS** None

**LOCATION OF PROJECT**  
 CENTRAL AVENUE IN CARTHAGE  
**DATE OF CONSTRUCTION**  
 JULY 20 TO SEPT 19, 1956

## GRAPHIC RECORD OF CONSTRUCTION FEATURES

**DAILY TEMPERATURE** Minimum \_\_\_\_\_ Maximum \_\_\_\_\_

**CONSTRUCTION DATE** \_\_\_\_\_

**STATION** \_\_\_\_\_

**TYPICAL SECTION**  
 Graded Earth \_\_\_\_\_  
 Pavement \_\_\_\_\_

**MATERIALS**  
 Coarse Aggregate \_\_\_\_\_  
 Fine Aggregate \_\_\_\_\_  
 Cement \_\_\_\_\_  
 Admixture \_\_\_\_\_

**PROPORTIONS** \_\_\_\_\_

**MIXING WATER**  
 Average gal. per sack of cement \_\_\_\_\_

**AIR ENTRAINMENT CONCRETE - Avg. % Air** \_\_\_\_\_  
**DISTRIBUTED REINFORCEMENT**  
 Wire Fabric \_\_\_\_\_  
 Bar Mat \_\_\_\_\_  
 Other \_\_\_\_\_

**JOINTS**  
 Expansion (Show Spacing) \_\_\_\_\_  
 Contraction (Show Spacing) \_\_\_\_\_  
 Longitudinal \_\_\_\_\_  
 Construction \_\_\_\_\_

**CURING METHOD** \_\_\_\_\_

**DRAINAGE STRUCTURES**  
 Surface Drains \_\_\_\_\_  
 Culverts \_\_\_\_\_  
 Cross Drainage \_\_\_\_\_  
 Longitudinal Drainage \_\_\_\_\_  
 Special Drainage NONE  
 Underdrains (Length, Type, & Station) CLASS A-TYPE I

**GUARD RAIL** \_\_\_\_\_

**SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS** \_\_\_\_\_

**SUBGRADE**  
 Method of Compacting Embankment \_\_\_\_\_  
 Treatment \_\_\_\_\_  
 Condition \_\_\_\_\_  
 Type \_\_\_\_\_

**BASE COURSE**  
 Type & Thickness \_\_\_\_\_  
 Condition \_\_\_\_\_

**DATE OPENED TO TRAFFIC** \_\_\_\_\_

**DEFECTS OBSERVED IN COMPLETED PAVEMENT** \_\_\_\_\_

STATION	L. R. L. L.P. R.P.					L. R. L. L.P. R.P.					L. R. L. L.P. R.P.				
	75	76	76	71	76	62	71	69	73		56	68	67		
	107	105	98	92	96	88	100	92	98		82	90	89		
	7-20					9-13					9-11				
	8-6	8-2				9-13					9-13				
487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502
	200 SHEET #2 OF 2														
	200 SHEET #2 OF 2														
	I														
	A														
	B														
	1. 1.56:3.5														
	5.1	5.1	5.1			5.1	5.1	5.1			5.1				
			5.1					5.1				5.1	5.1		
	3.0	3.0	3.0			3.0	3.0	3.0			3.0				
			3.7				3.8	3.0				3.0	3.9		
	5' B-15C-2														
	5' B-15C-2														
	5' B-15C-2														
	5' B-15C-2														
	HUNTS PROCESS - 200 SO. G. PER GALLON														
	3 NEW STORM SEWER CULVERTS														
	4 CROSS ROAD CULVERT PIPES WITH DEAD TALLETS														
	CONCRETE CULVERT PIPES WITH DEAD TALLETS														
	CONCRETE CULVERT PIPES WITH DEAD TALLETS CONNECTING SPECIAL DITCHES WITH STORM CULVERT														
	60' INTERVALS AT 494+40 TO 494+43 AND 50' LONGITUDINAL AT 493+00 TO 494+40 (C.R.P.) & 494+43 TO 494+49 (L.P.R.) AT CURB LINE														
	WATERED & SHERBROT ROLLED														
	WATERED & BLANK														
	GOOD														
	BETTER GRAVELLY SOIL														
	4" COMPACTED GRANULAR BASE (DUR)														
	GOOD														
	10-29-56														
	NONE														

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**MATERIAL KEY**  
 I - KEOKUK LIMESTONE - CARTHAGE MARBLE CORP - CARTHAGE, MO.  
 1 - RIVER SAND - MONARK SAND & GRAVEL CO. - TULSA, OKLA.  
 A - MONARCH CEMENT CO. - HUMBOLDT, KANS.  
 A1 - ASH GROVE LIME & CEMENT CO. - CHARLOTTE, KANS.  
 B - AD-AIR - CARTER-WATERS - K.C., MO.

**SPECIAL PROCEDURE KEY**  
 PREPARED BY C. R. HILL & C. R. BECKHAM  
 APPROVED BY [Signature] PROJECT ENGINEER  
 APPROVED BY [Signature] DIVISION MATERIALS ENGINEER  
 CHECKED BY [Signature] CONSTRUCTION BUREAU  
 RECEIVED SEP 14 1957  
 DIVISION OF CONSTRUCTION

# SUMMARY SHEET FOR CONCRETE PAVING PROJECT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	UG-84(8)		2-AA	
DIV. NO.	COUNTY	ROUTE	MILE		
7	JASPER			66	

Sheet #2 of 2

CONTRACTOR  
PAVED BY

PROJECT ENGINEER  
SLAB INSPECTORS

PLANT INSPECTOR

EQUIPMENT

TYPE OF CONSTRUCTION  
TOTAL LENGTH  
EXCEPTIONS

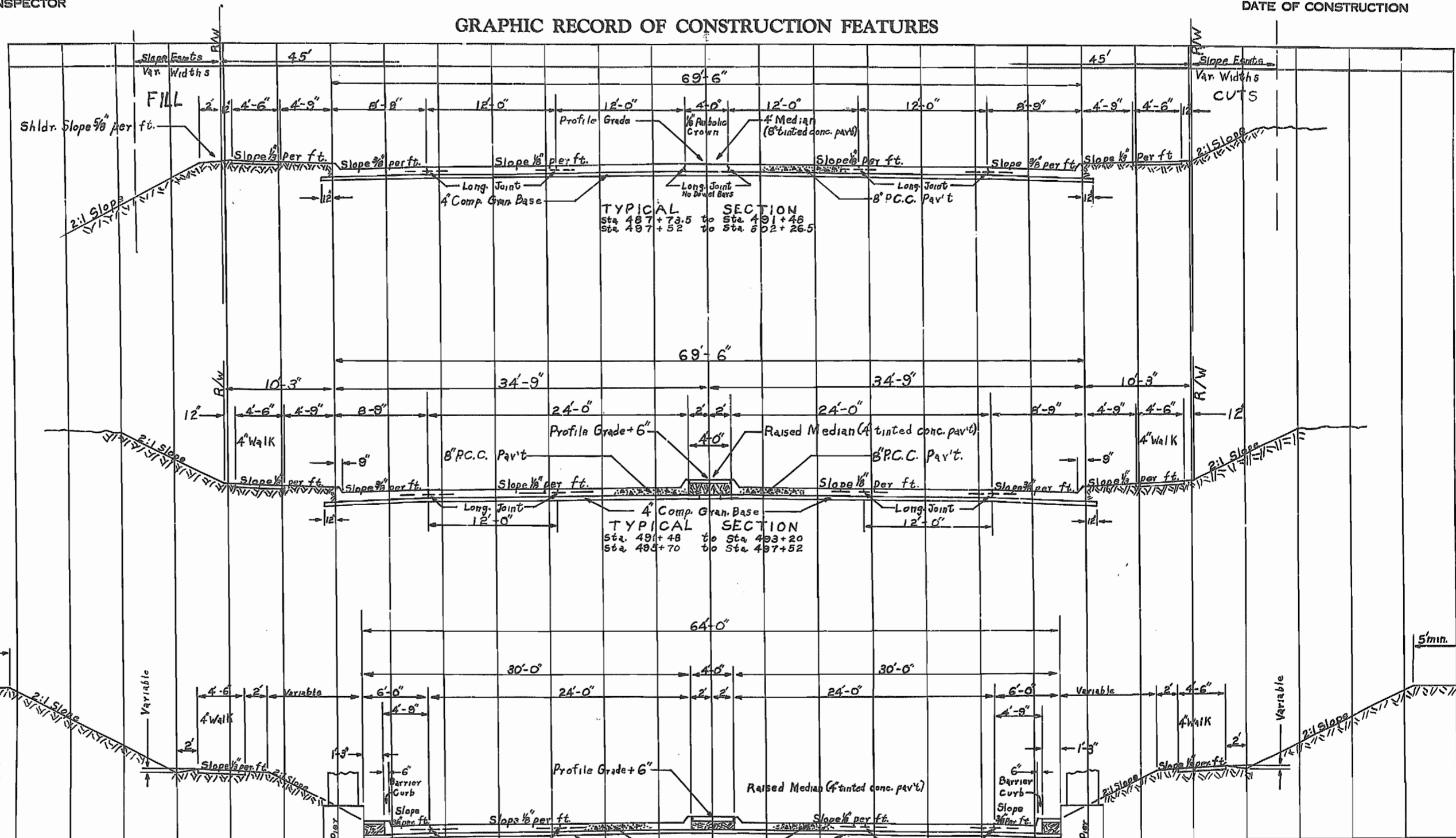
EQUATIONS

LOCATION OF PROJECT

DATE OF CONSTRUCTION

## GRAPHIC RECORD OF CONSTRUCTION FEATURES

- DAILY TEMPERATURE Minimum Maximum
- CONSTRUCTION DATE
- STATION
- TYPICAL SECTION
- Graded Earth \_\_\_\_\_
- Pavement \_\_\_\_\_
- MATERIALS
- Coarse Aggregate \_\_\_\_\_
- Fine Aggregate \_\_\_\_\_
- Cement \_\_\_\_\_
- Admixture \_\_\_\_\_
- PROPORTIONS \_\_\_\_\_
- MIXING WATER
- Average gal. per sack of cement \_\_\_\_\_
- DISTRIBUTED REINFORCEMENT
- Wire Fabric \_\_\_\_\_
- Bar Mat \_\_\_\_\_
- Other \_\_\_\_\_
- JOINTS
- Expansion (Show Spacing) \_\_\_\_\_
- Contraction (Show Spacing) \_\_\_\_\_
- Longitudinal \_\_\_\_\_
- Construction \_\_\_\_\_
- CURING METHOD \_\_\_\_\_
- DRAINAGE STRUCTURES
- Surface Drains \_\_\_\_\_
- Culverts \_\_\_\_\_
- Cross Drainage \_\_\_\_\_
- Longitudinal Drainage \_\_\_\_\_
- Special Drainage \_\_\_\_\_
- Underdrains (Length, Type, & Station) \_\_\_\_\_
- GUARD RAIL \_\_\_\_\_
- SPECIAL MATERIALS OR PROCEDURE OR UNUSUAL CONDITIONS
- SUBGRADE
- Method of Compacting Embankment \_\_\_\_\_
- Treatment \_\_\_\_\_
- Condition \_\_\_\_\_
- Type \_\_\_\_\_
- BASE COURSE
- Type & Thickness \_\_\_\_\_
- Condition \_\_\_\_\_
- DATE OPENED TO TRAFFIC \_\_\_\_\_
- DEFECTS OBSERVED IN COMPLETED PAVEMENT \_\_\_\_\_



MATERIAL KEY

SPECIAL PROCEDURE KEY

TYPICAL SECTION  
Sta 494+25.2 to Sta 494+58.2

PREPARED BY R.A. STUART

APPROVED BY *[Signature]* PROJECT ENGINEER

APPROVED BY *[Signature]* DIVISION MATERIALS ENGINEER

CHECKED BY \_\_\_\_\_

CONSTRUCTION BUREAU SURVEY & PLANS BUREAU MATERIALS BUREAU

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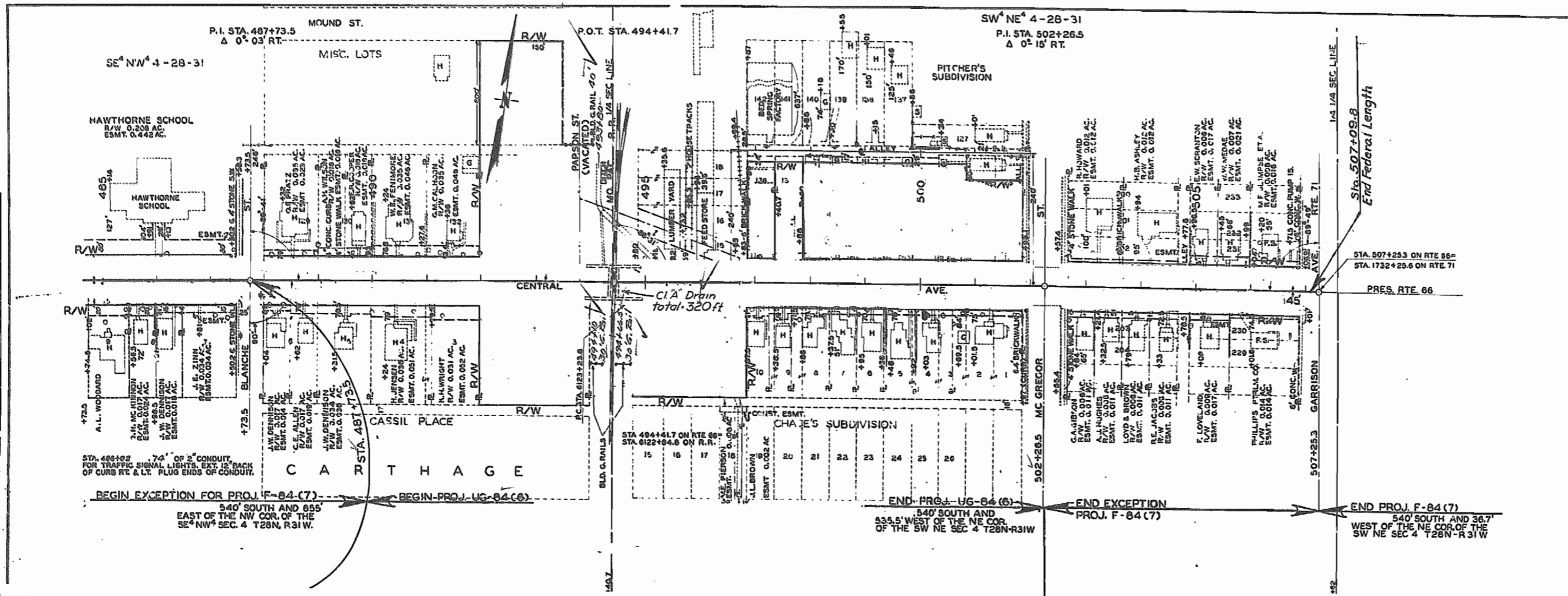
F-24(7)  
UG-84(6)  
**JASPER 66**  
**FINAL PLANS**

PITCHER'S SUBDIVISION

LOT	OWNER	R/W AC.	ESMT. AC.
136	PLATT & PORTER	0.017	0.017
135	N.B. CRAWFORD	0.218	0.017
134	ALBURY & MEYER	0.017	0.011
133	C.E. BLACKWELL	0.017	0.011
132	A.J. LAMPERS	0.017	0.011
131	O.L. WHEELER	0.017	0.017
128	R.E. CHATTERTON	0.017	0.017
125	J.A. MC 122	0.024	0.017
124-123	R.H. STANTON	0.348	0.037

CHASE'S SUBDIVISION

LOT	OWNER	R/W AC.	ESMT. AC.
14-13	G. THOMPSON	0.385	0.016
13-12	J.R. CASH	0.217	0.013
11	J.W. ALLEN	0.192	0.017
10	J.A. ROCKMAN	0.005	0.017
10-9	R. THOMPSON	0.005	0.011
9-8	P.B. BADILL	0.005	0.011
7	R.E. BRUMBACK	0.005	0.011
6-4	C.G. BRYAN	0.005	0.013
4-3	R.N. RALSTON	0.007	0.016
3-2-1	F. MODER	0.014	0.029



PLAN

NO.	DATE
1	4-20-50
2	4-20-50
3	4-20-50
4	4-20-50
5	4-20-50
6	4-20-50
7	4-20-50
8	4-20-50
9	4-20-50
10	4-20-50
11	4-20-50
12	4-20-50
13	4-20-50
14	4-20-50
15	4-20-50
16	4-20-50
17	4-20-50
18	4-20-50
19	4-20-50
20	4-20-50
21	4-20-50
22	4-20-50
23	4-20-50
24	4-20-50
25	4-20-50
26	4-20-50
27	4-20-50
28	4-20-50
29	4-20-50
30	4-20-50
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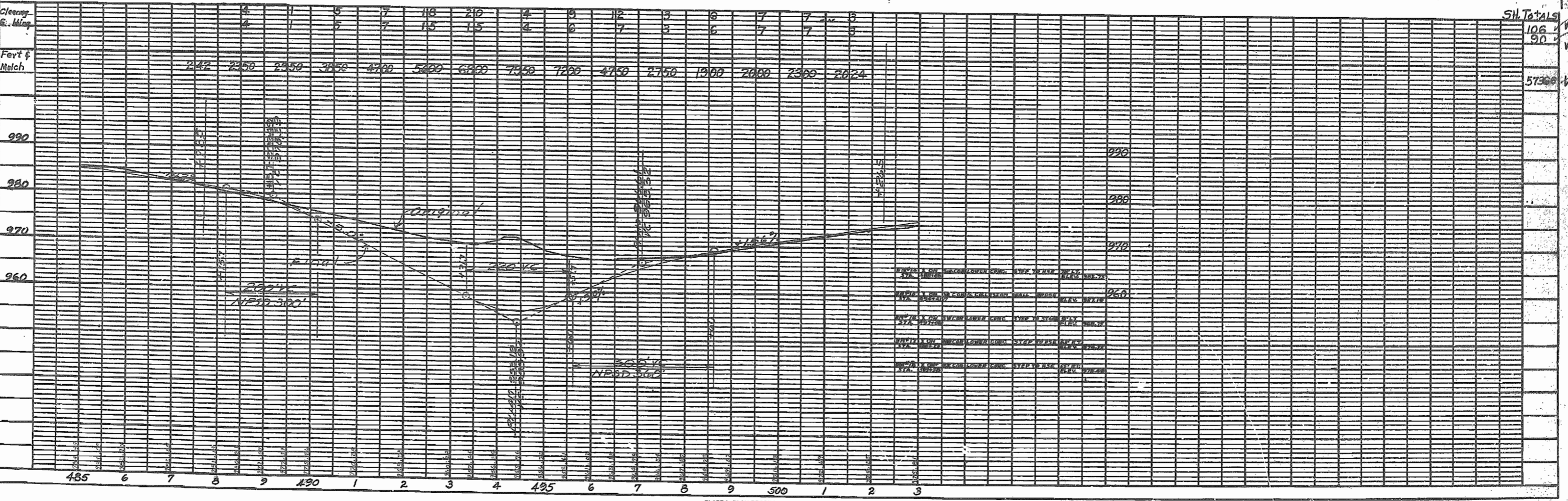
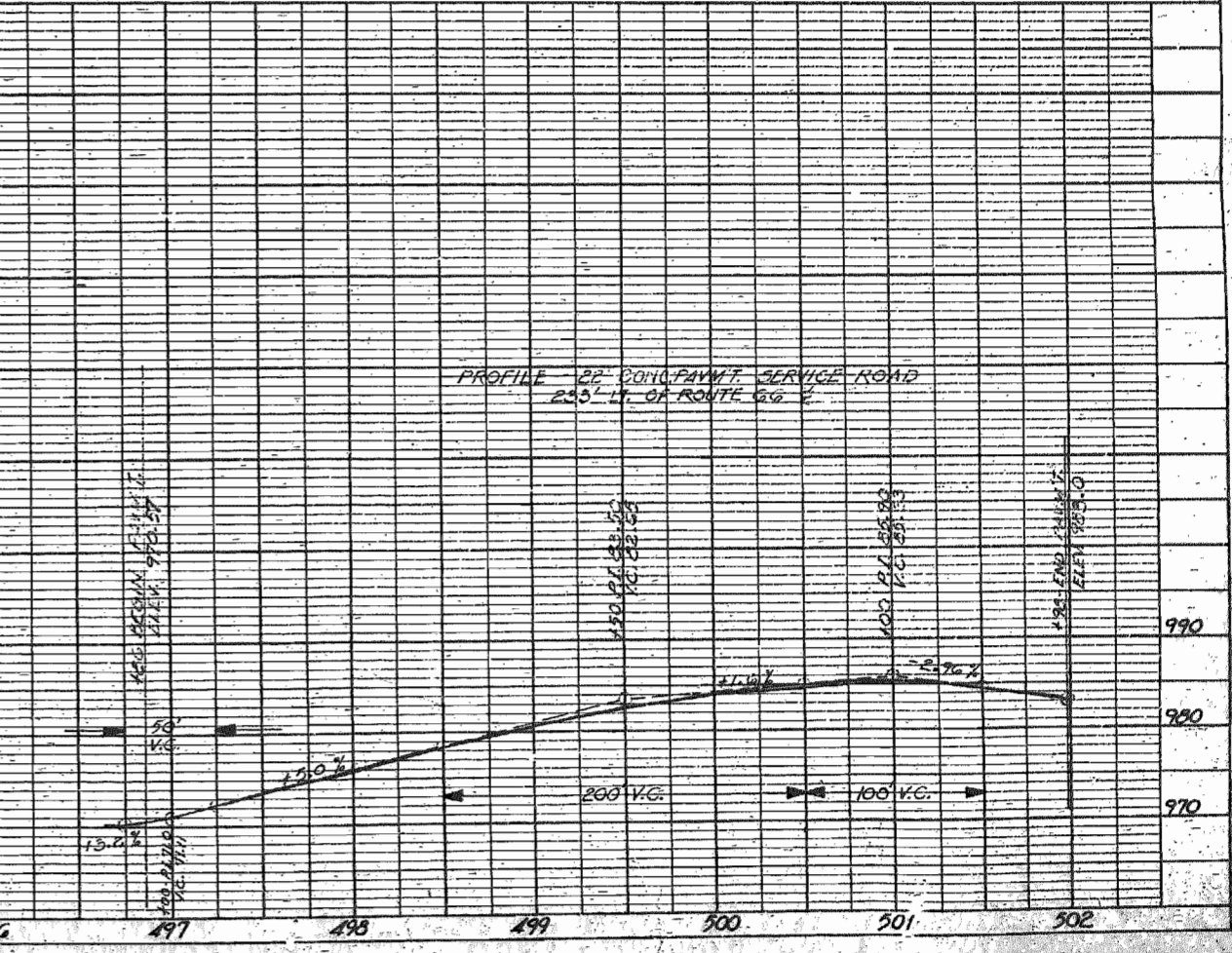
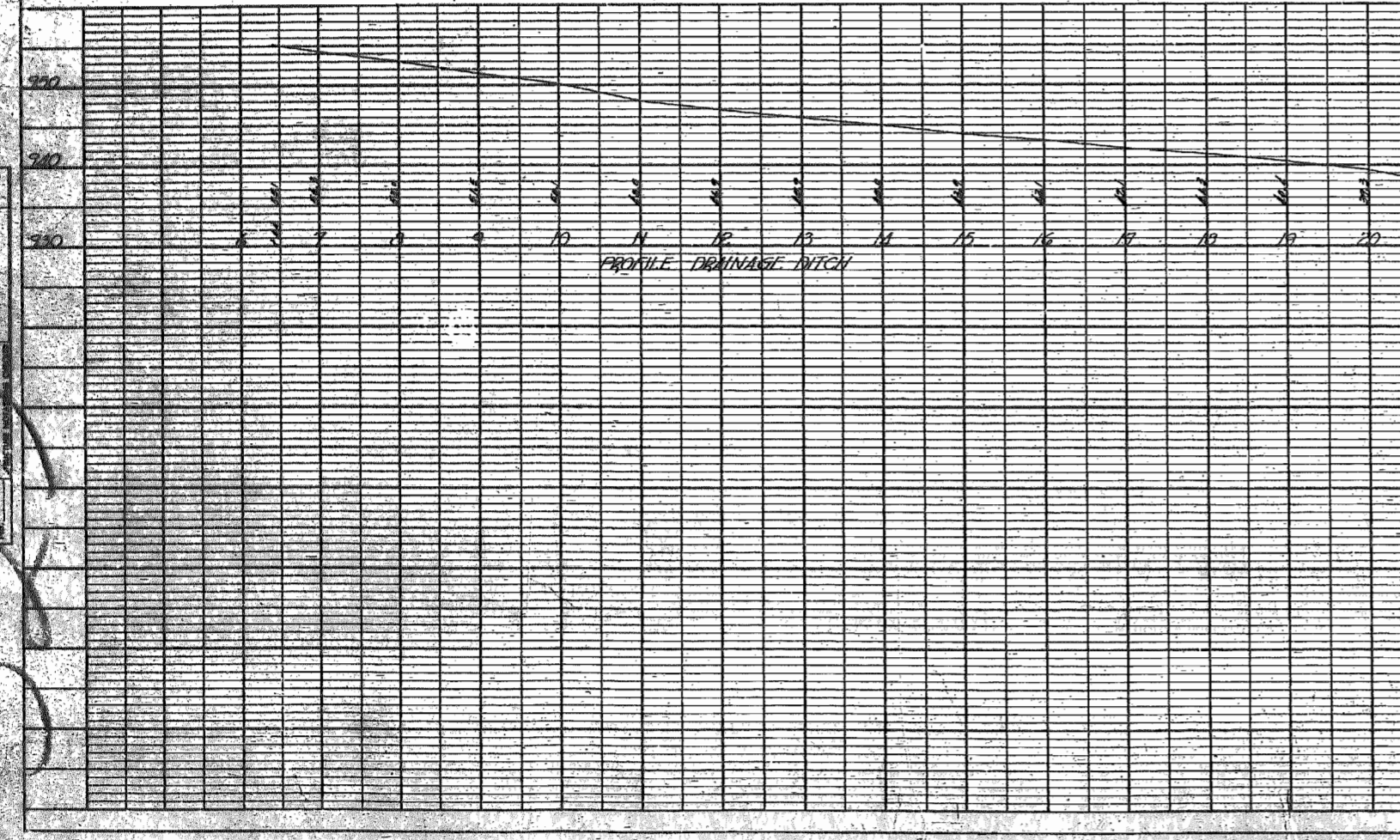
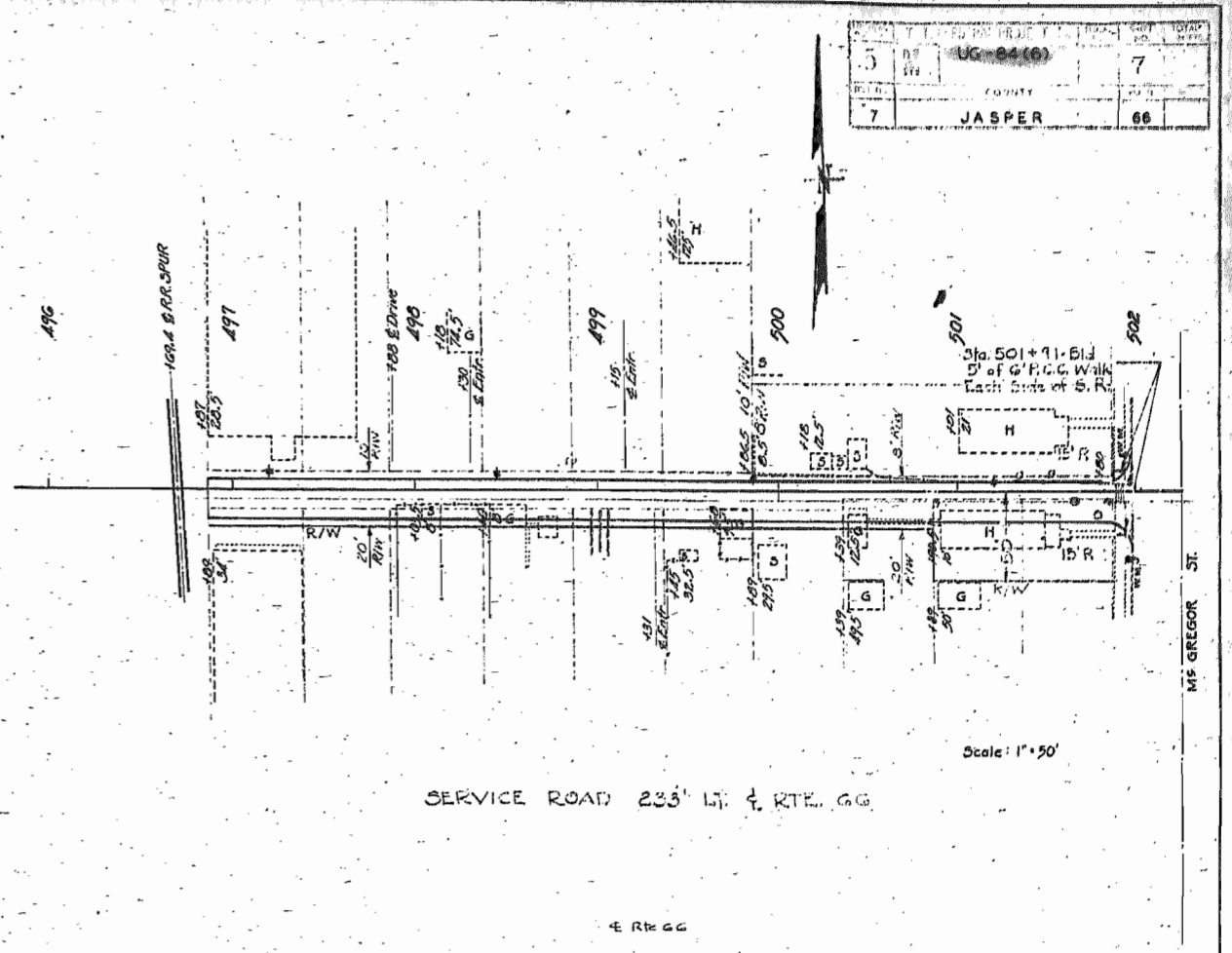
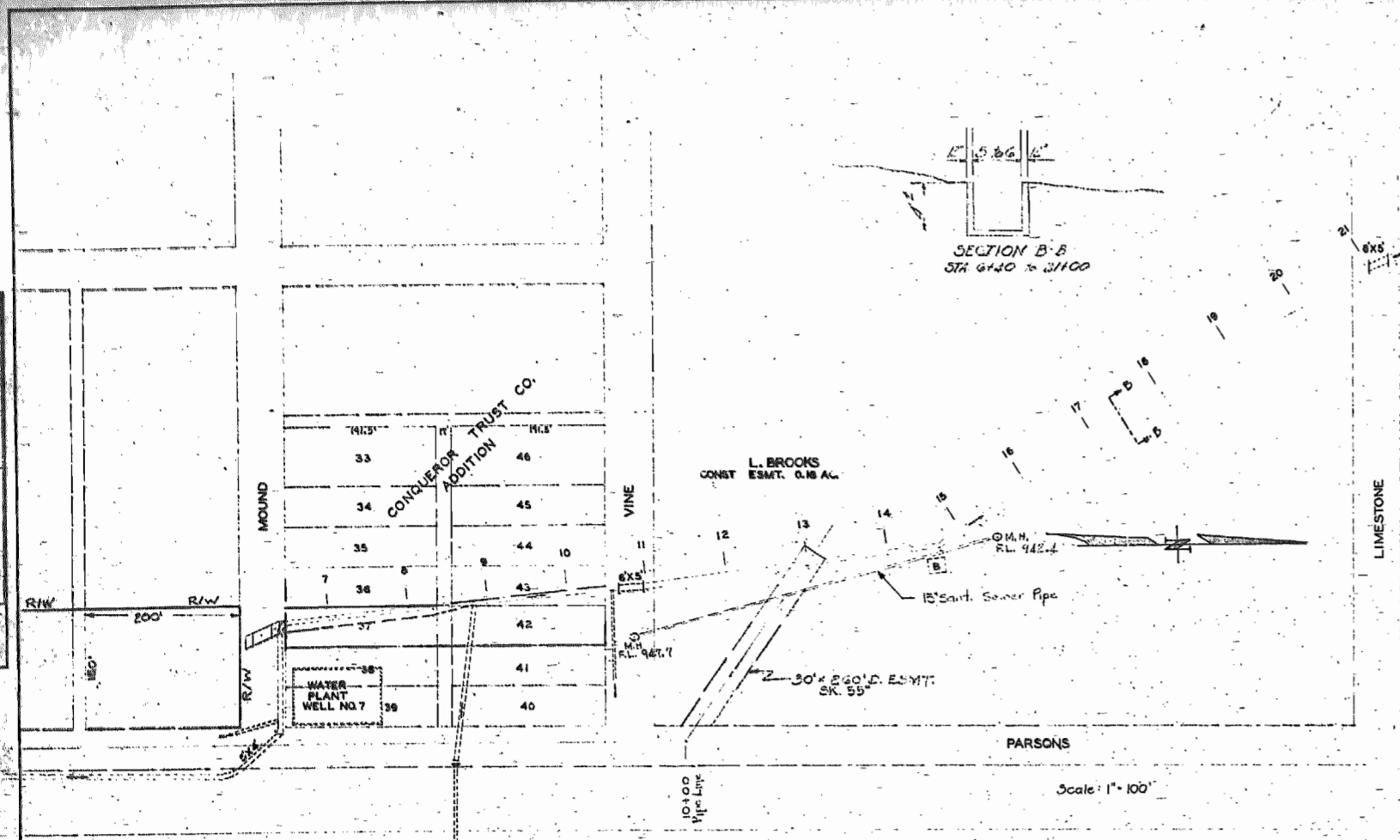


PLATE 1-PLAN-PROFILE C.P.R.R.C. STANDARD  
U. S. BLUE CHINA

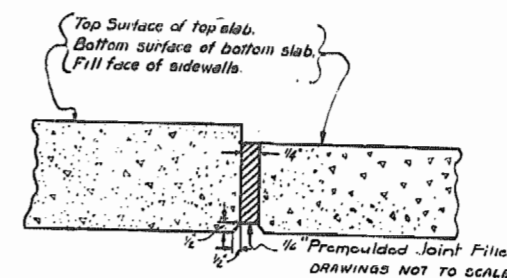
5	UG-24(6)	7
7	JASPER	66



MODIFICATIONS OF STANDARD CULVERT DETAILS											
STATION	STANDARD NUMBER	SIZE AND TOTAL LENGTH OF FINAL STRUCTURES	HEIGHT OF FILL FOR DESIGN DATA	SECTION OR IDENTICAL SECTIONS	SECTION LOCATED UNDER	LENGTH OF SECTION	MODIFICATIONS				REMARKS
							BOTTOM SLAB		LENGTH OF B-BARS IN SIDEWALLS		
							THICKNESS OF SLAB	SIZE OF A-BARS			
472+00.4	C-530	2x2x87.5'	2'	A	Road bed	37'-6"					1-Drop Inlet
			2'	B	Road bed Lt. Slope	50'					Dog Leg 25° Skew 1-Drop Inlet
481+58	C-530	2x2x162'	2'	A&D	Nat. Gd. Road bed	50'					2-Dog Legs 2-Drop Inlets
			2'	B&C	Road bed	31'					1-Dog Leg 1-Drop Inlet

MODIFICATIONS OF STANDARD CULVERT DETAILS											
STATION	STANDARD NUMBER	SIZE AND TOTAL LENGTH OF FINAL STRUCTURES	HEIGHT OF FILL FOR DESIGN DATA	SECTION OR IDENTICAL SECTIONS	SECTION LOCATED UNDER	LENGTH OF SECTION	MODIFICATIONS				REMARKS
							BOTTOM SLAB		LENGTH OF B-BARS IN SIDEWALLS		
							THICKNESS OF SLAB	SIZE OF A-BARS			
496+72.5		12x4'x 36x4'x 3"	2'	A	Alley Rt. i/c Conn.	50'	12"	#6	5"	5'-6"	Connection to 8'x4' Box Culv.
	C-531		2'	B	Alley Rt. & Nat. Gd.	50'	12"	#6	5"	5'-6"	
			3'	C	Nat. Gd.	50'	12 1/2"	#6	5"	5'-6"	
			5'	D	Nat. Gd.	50'	13 1/2"	#7	6"	5'-9"	
			5'	E	Nat. Gd. & Bk. Slope	37'-9"	13 1/2"	#7	6"	5'-9"	
	C-529		2'	F&G	Roadway	50'	15"	#8	7"	6'-0"	Dog Leg Sec. G.
	C-531		7'	H	Nat. Gd. Lt.	50'	14 1/2"	#7	5 1/2"	6'-0"	
			8'	I, J & K	Nat. Gd.	50'	15"	#7	5"	6'-0"	
	C-529		13'	L	Railroad	50'	19 1/2"	#10	6"	6'-9"	Special Modification #10 A-Bars 6' Ctrs. Top and Bottom Slabs, Dog Leg
			4'	M	Nat. Gd.	32'	13"	#7	6 1/2"	5'-9"	
	C-531		4'	N	Nat. Gd.	25'	13"	#7	6 1/2"	5'-9"	2:1 W. W. Slopes Dog Leg

DETAILS OF TRANSVERSE EXPANSION JOINT



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

GENERAL NOTES

All longitudinal reinforcement shall be placed with ends approximately 1/2' from center of expansion joints.  
Cost of transverse 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.

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

REVISIONS				
1	2	3	4	5
8-33				

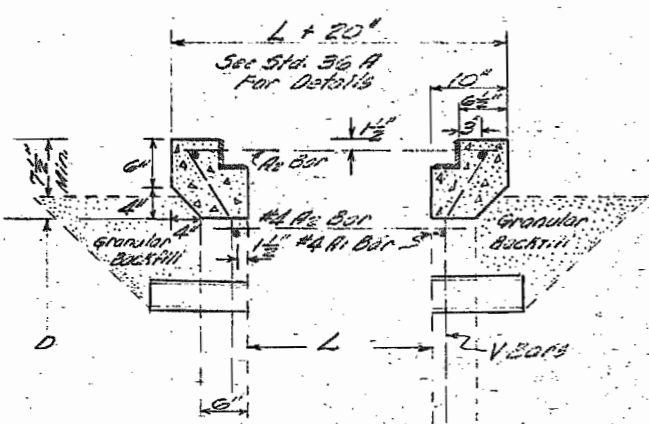
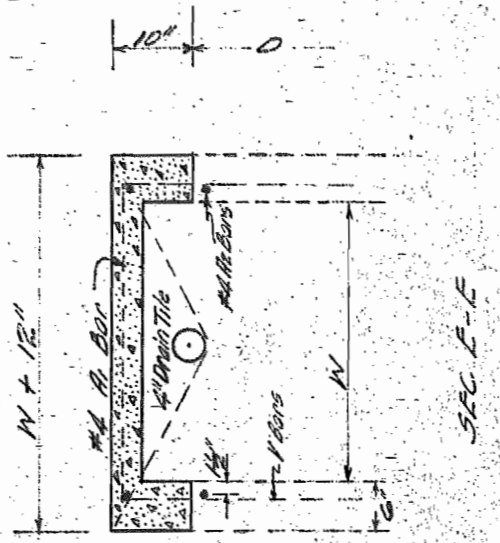
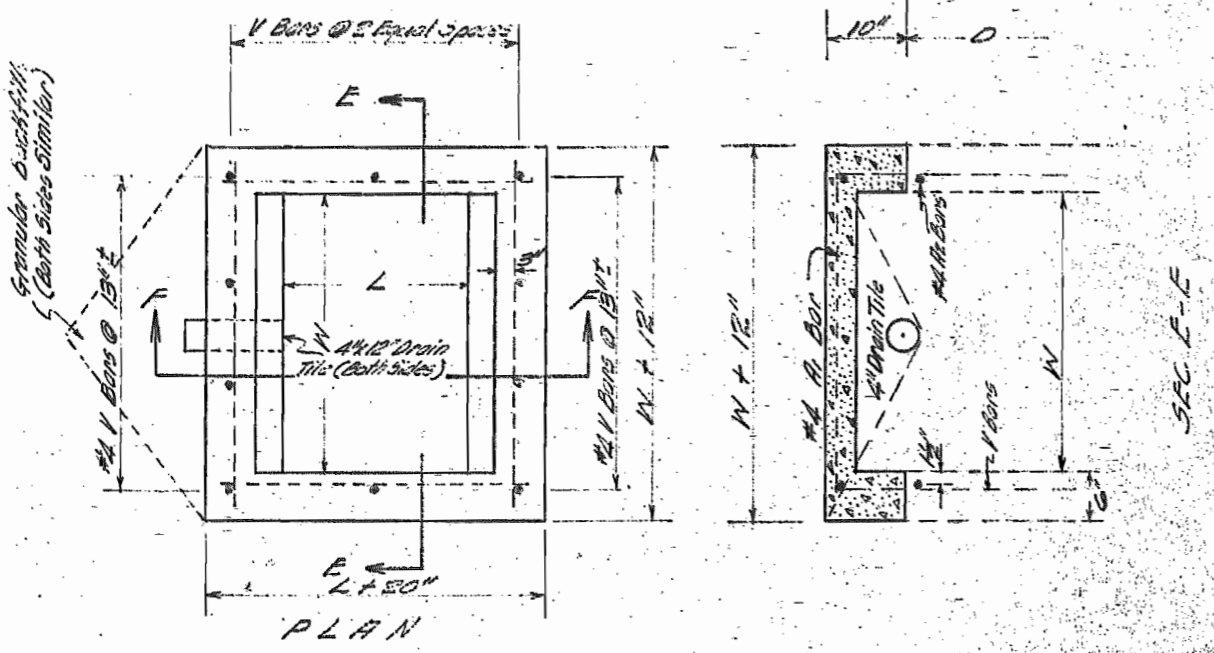
MISSOURI STATE HIGHWAY COMMISSION  
MODIFICATIONS AND TRANSVERSE EXPANSION JOINTS  
FOR  
BOX CULVERTS WHICH ARE TO BE BUILT IN SECTIONS

ROUTE 66  
COUNTY JASPER

PROJ. UG-84(6) & F-84(7)

SPECIAL SHEET NO. 1

STATE	FEDERAL PROJECT No.	FISCAL YEAR	DATE	TOTAL
5 MO	UG-84 (6)			
COMMITTEE				
7 JASPER				66

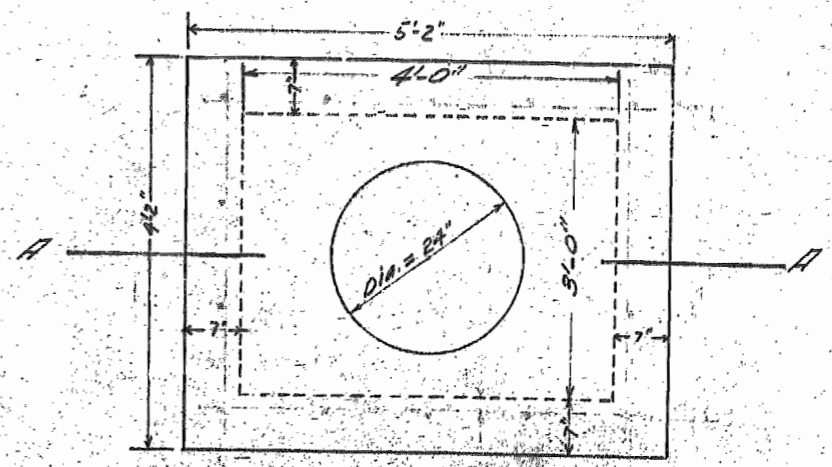


**MODIFICATION OF BAR BILL**  
 Omit all E, F, G, Bars  
 Lengthen all V Bars 12"  
 Add 2 - N.Y. Bars Length W + 12"  
 Add 2 - N.Y. Bars Length L + 15"

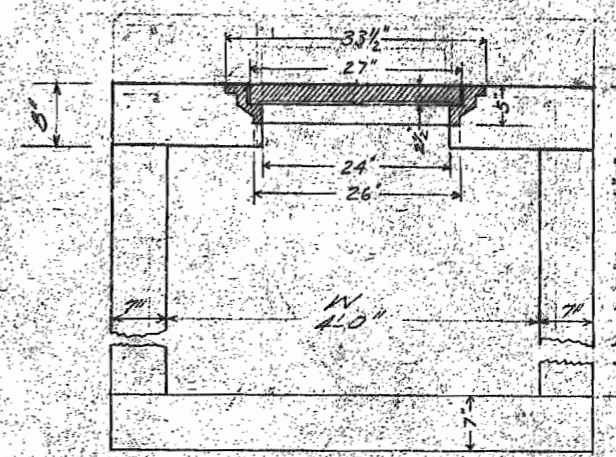
Size of Inlet	B113	B114	B215	B214	
Add	0.20	3.24	0.21	0.25	Cu Yds. of Concrete
Deduct	0.8	81	70	83	Lbs. of Steel

**Note:**  
 Where drop inlet is placed adjacent to stone curb contractor will be required to remove & replace stone curb at own expense, tech in price bid for other items.

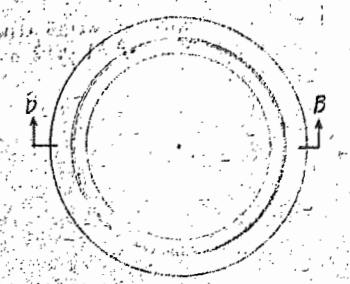
MODIFICATION OF DROP INLET TYPE B STD. 36B FOR LOCATIONS OTHER THAN CONC. PAV. AREAS



PLAN



SECTION A-A



PLAN OF FRAME

**Note:** Frame and Cover to be Heenan Foundry Co. #6066 or equivalent, weight 455 Lbs. For reinforcement and other details not shown see Std. Dwg. No. 16A. No deduction in Class B Conc. will be made for Frame.

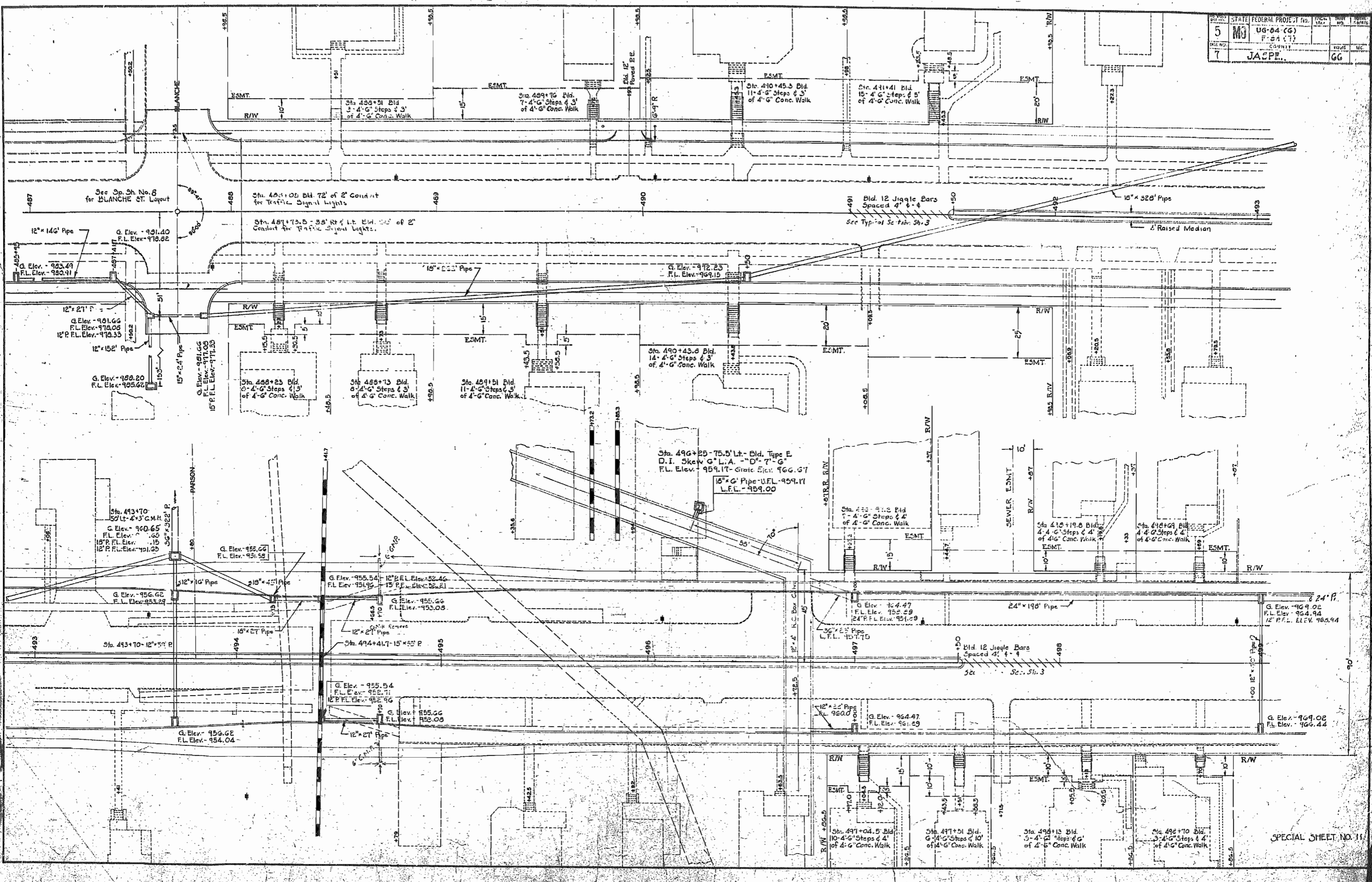
MODIFICATION OF CONCRETE MANHOLES STD. 16A FOR LOCATIONS OTHER THAN CONC. PAV. AREAS



STATE	FEDERAL PROJECT NO.	DATE	NO.	SCALE
MO	UG-84 (6)			
COUNTY				
JASPER				
ROUTE	NO.	SECTION		
	66			

FINAL SURVEY PLOTTED, REVISIONS, NOTES, AND AREAS CHECKED.

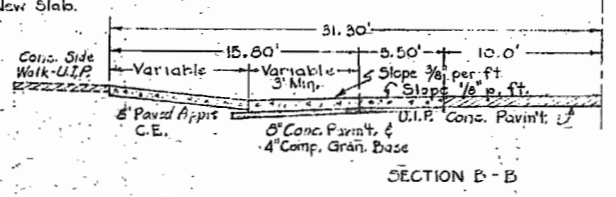
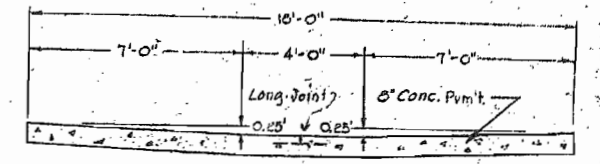
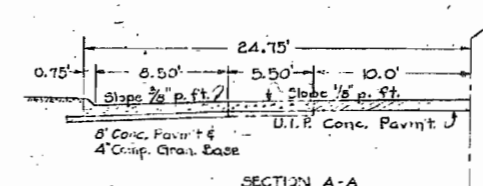
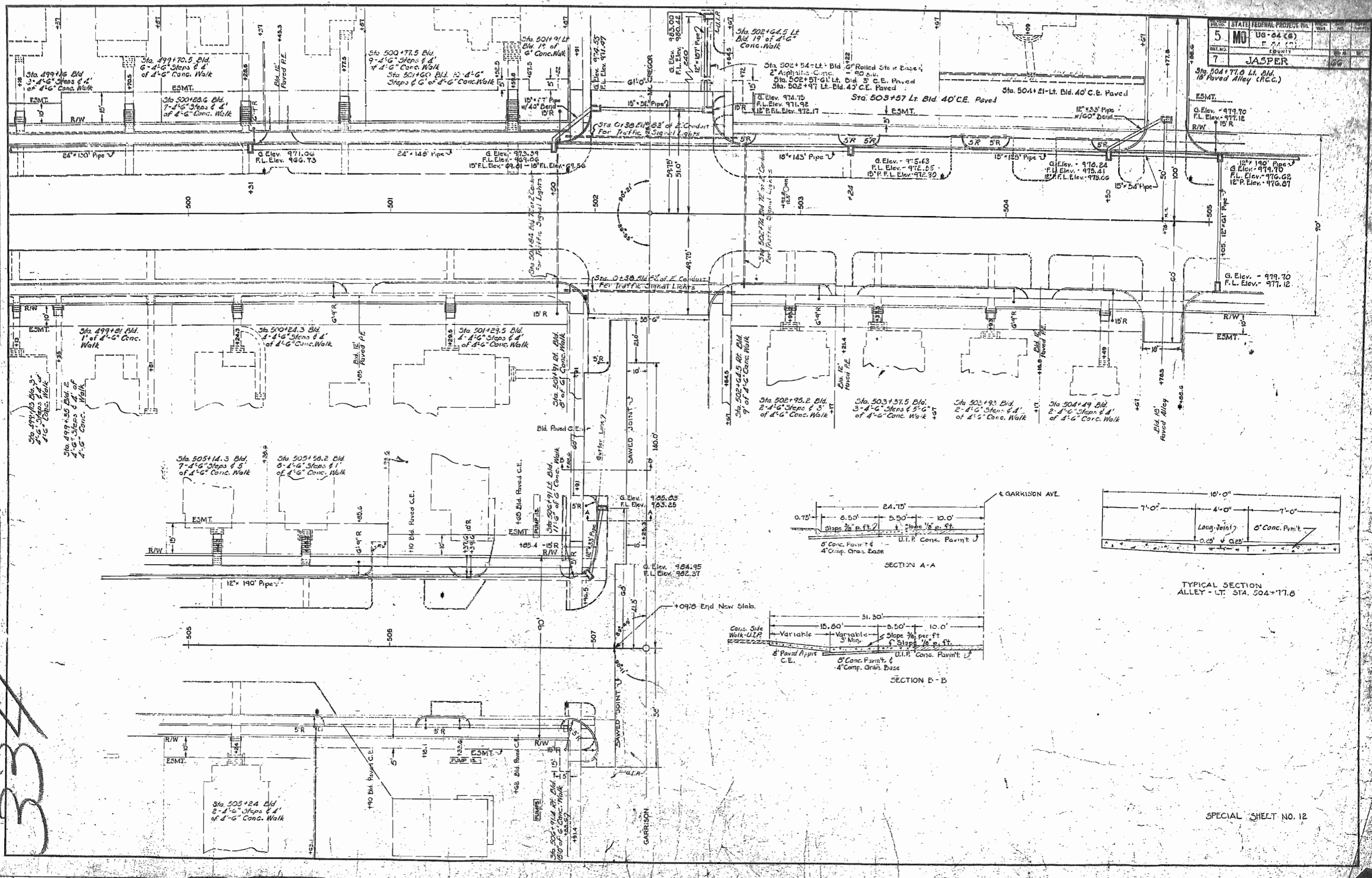
ORIGINAL TO LAWRENCE, MISSOURI, BY THE MISSOURI DEPARTMENT OF HIGHWAYS, DIVISION OF HIGHWAY CONSTRUCTION, MOBILE UNIT, JASPER COUNTY, MISSOURI.



SPECIAL SHEET NO. 11

FINAL SURVEY  
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 CHECKED BY: [ ]  
 DATE: [ ]

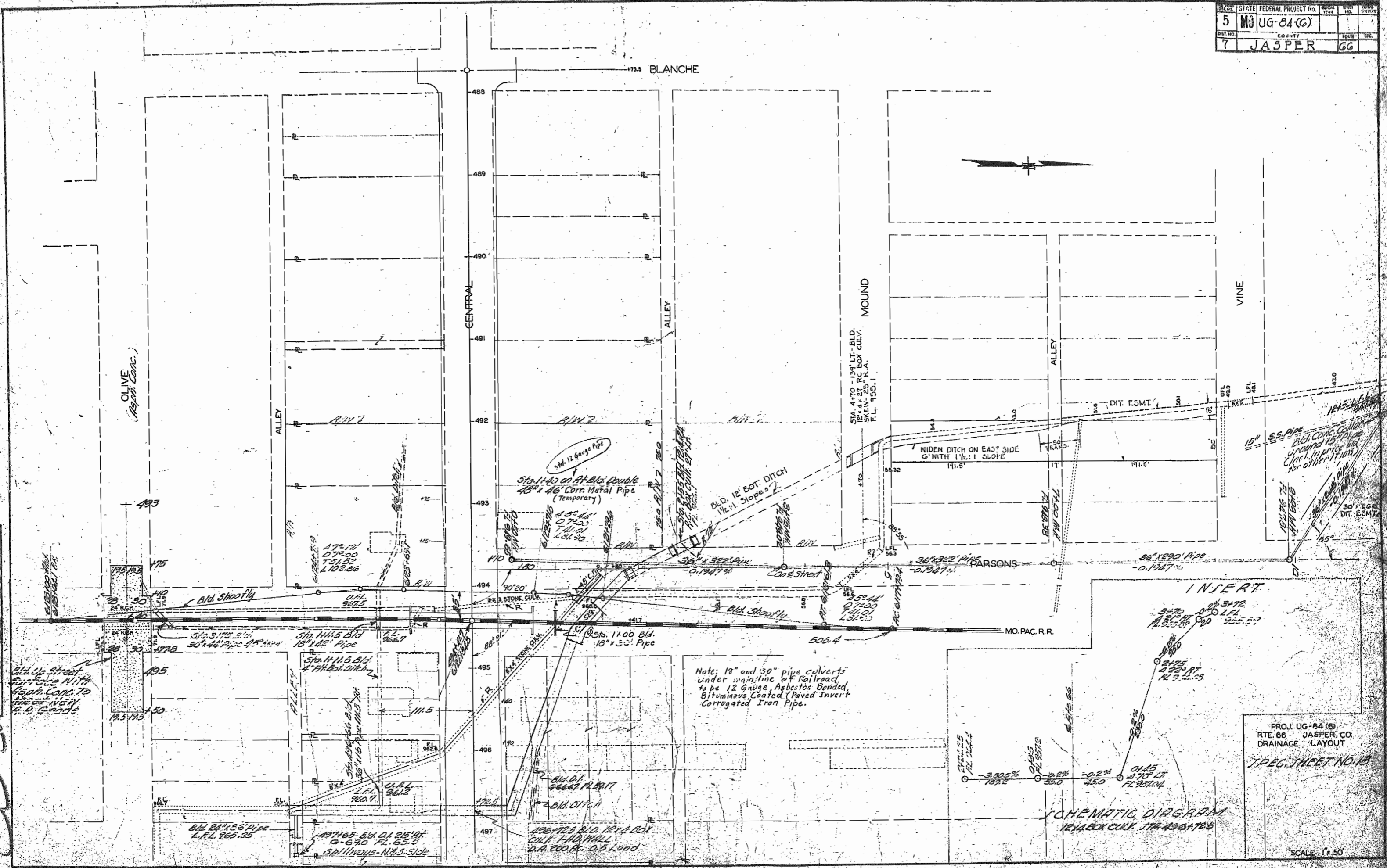
ORIGINAL SURVEY  
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 CHECKED BY: [ ]  
 DATE: [ ]



STATE	FEDERAL PROJECT No.	LOCAL	UNIT	SURVEY
5	MJ UG-84(6)			
7	JASPER	GG		

FINAL SURVEY	DATE
NOTED	
AREA	

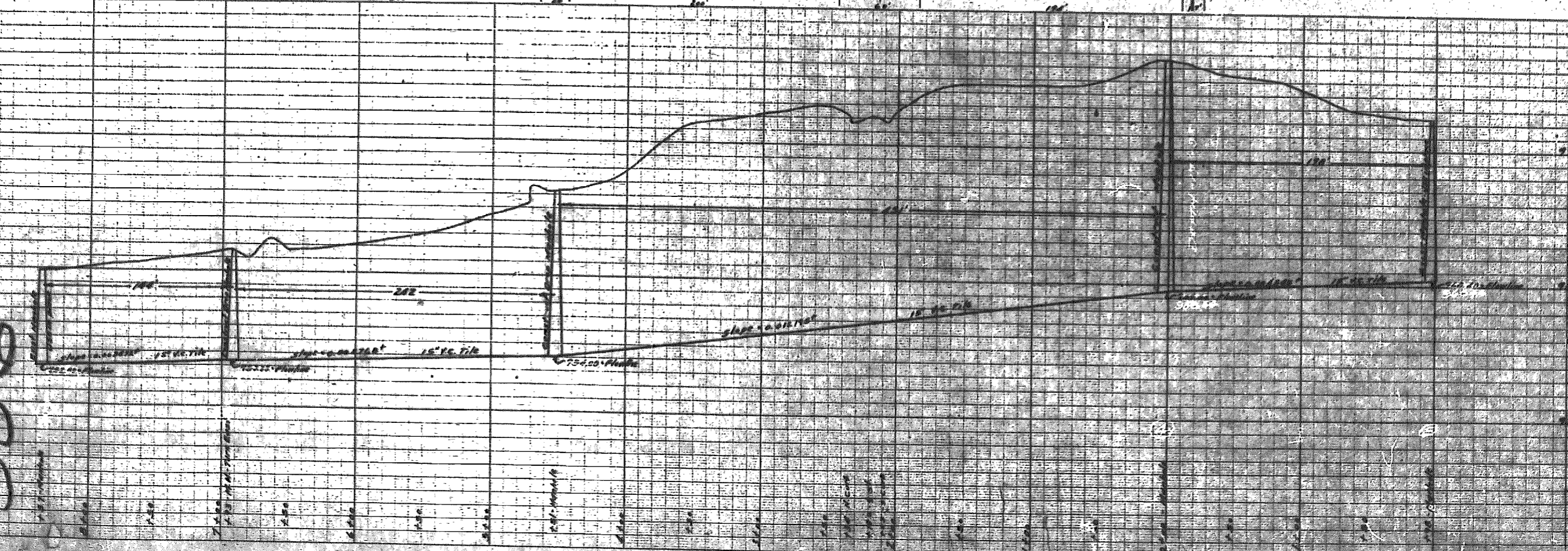
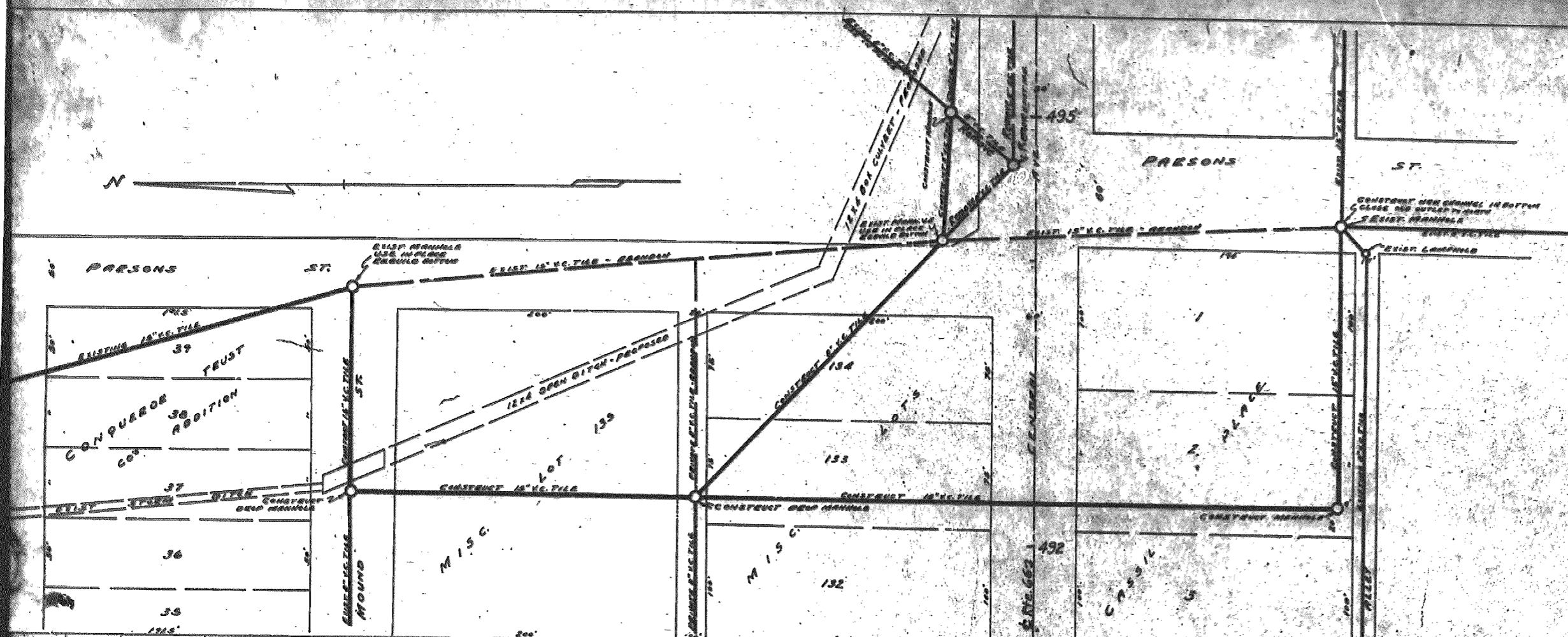
ORIGINAL SURVEY	DATE
NOTED	
AREA	



Note: 18" and 30" pipe culverts under mainline of Railroad to be 12 Gauge, Asbestos Bonded, Bituminous Coated (Paved Invert) Corrugated Iron Pipe.

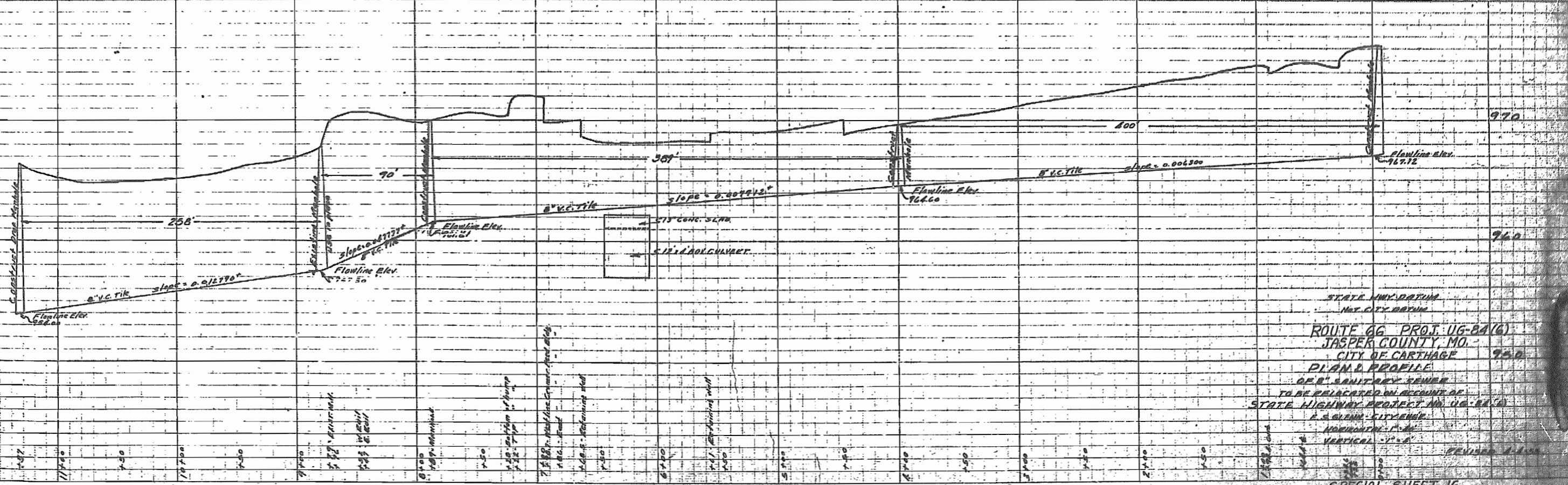
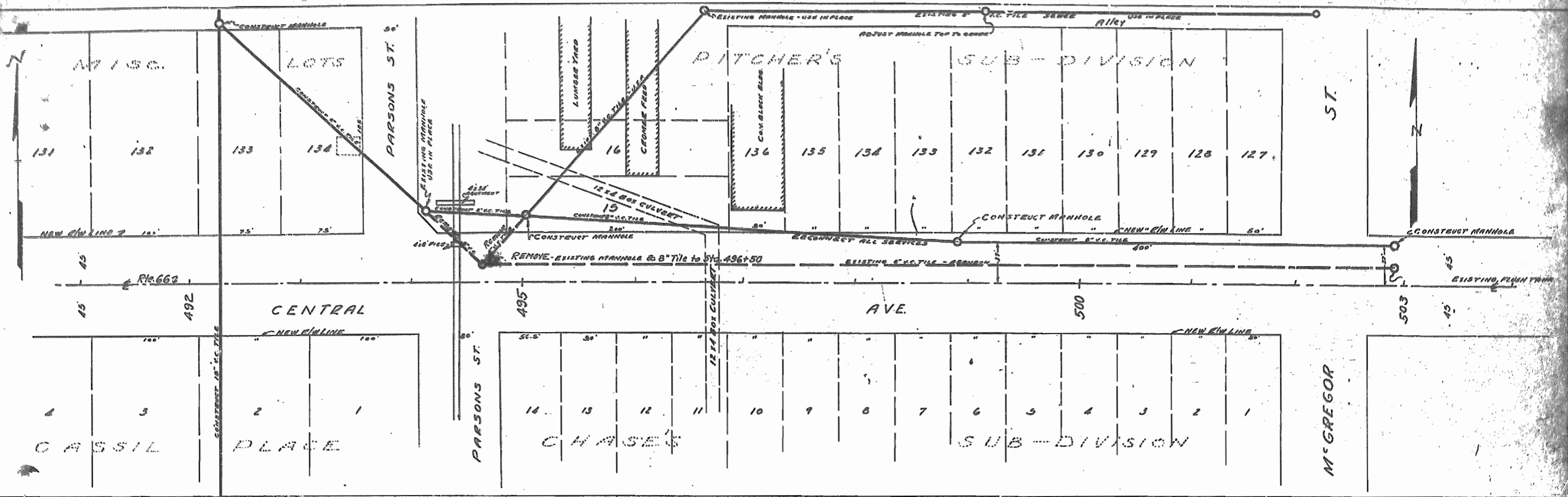
PROJ. UG-84 (6)  
 RTE. 66 JASPER CO.  
 DRAINAGE LAYOUT  
 TPEC. SHEET NO. 13

SCALE 1" = 50'

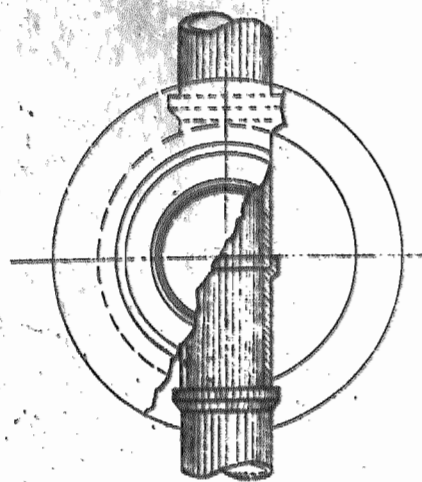


STATE HIGHWAY DEPT.  
 AND CITY DEPT.  
 ROUTE 66 PROJ UG-84(6)  
 JASPER COUNTY MO.  
 CITY OF CARTHAGE  
 R.I. AND PROFILE  
 OF SANITARY SEWER  
 FOR THE CITY OF CARTHAGE MO.  
 STATE HWY. PROJECT NO. UG-84(6)  
 P. A. OLIPHANT, CIVIL ENGINEER  
 CARTHAGE, MO.

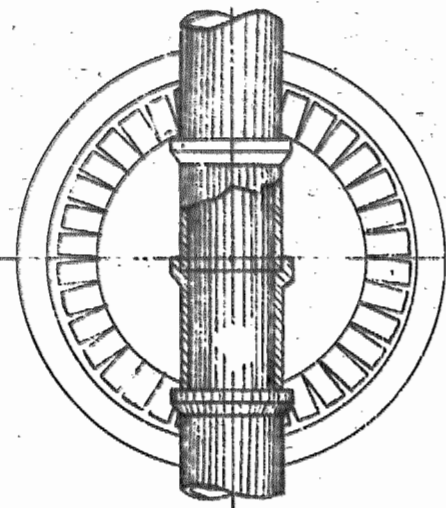
REVISION 1-1-85  
 SPECIAL SHEET 15



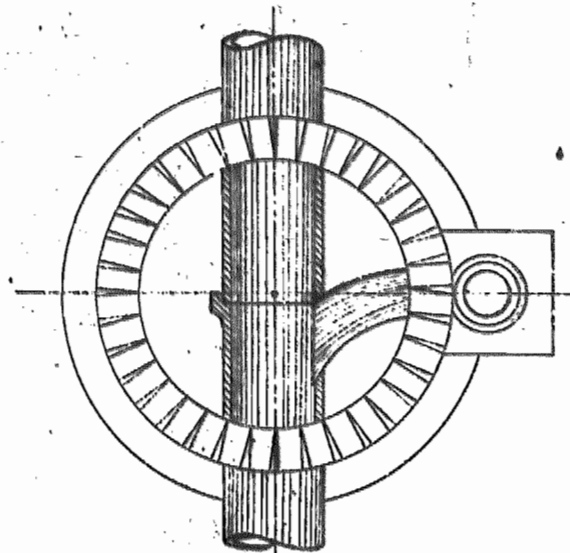
STATE UNIVERSITY  
 NOT CITY BOYD  
 ROUTE 66 PROJ. UG-84(6)  
 JASPER COUNTY, MO.  
 CITY OF CARTHAGE 95.0  
 PLAN & PROFILE  
 8\"/>



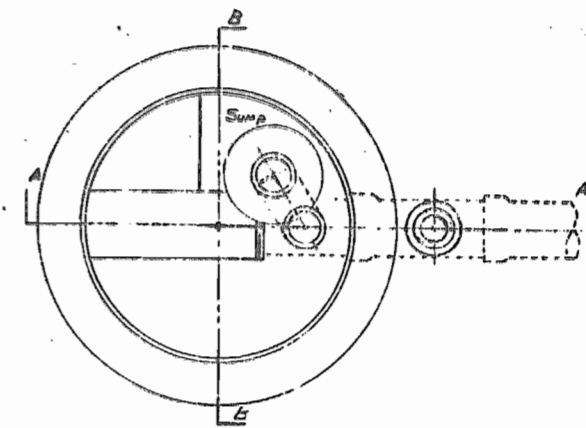
PLAN OF STANDARD CONCRETE MANHOLE



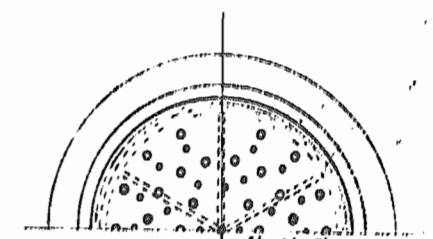
PLAN OF STANDARD BRICK MANHOLE STRAIGHT INVERT



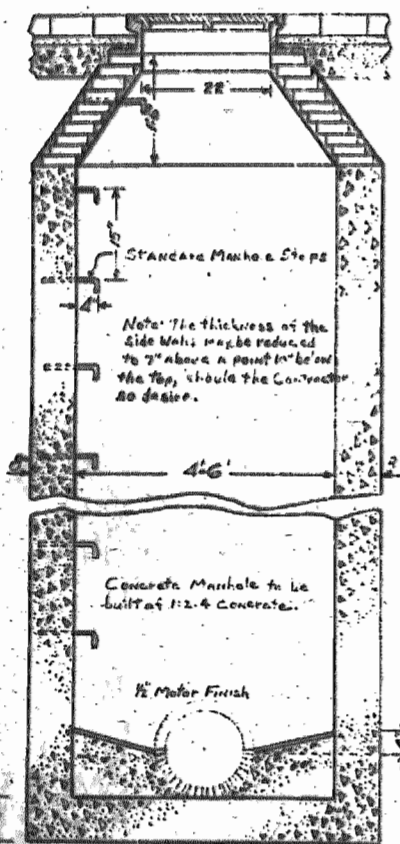
PLAN OF DROP MANHOLE



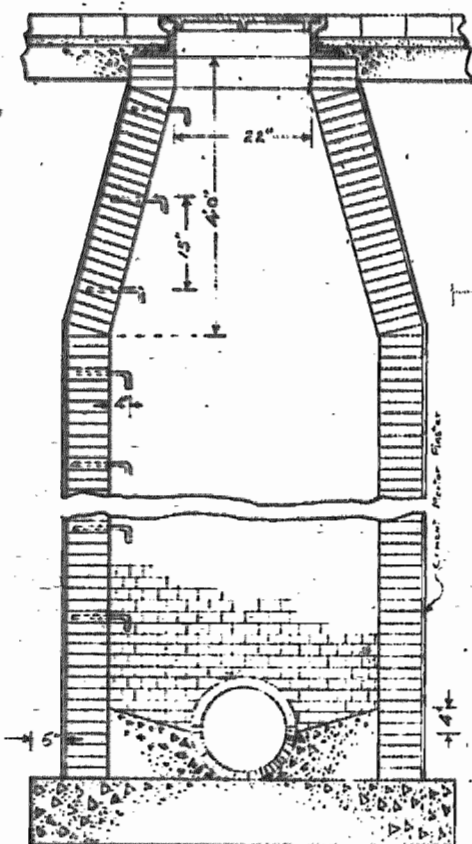
PLAN OF STANDARD FLUSH TANK



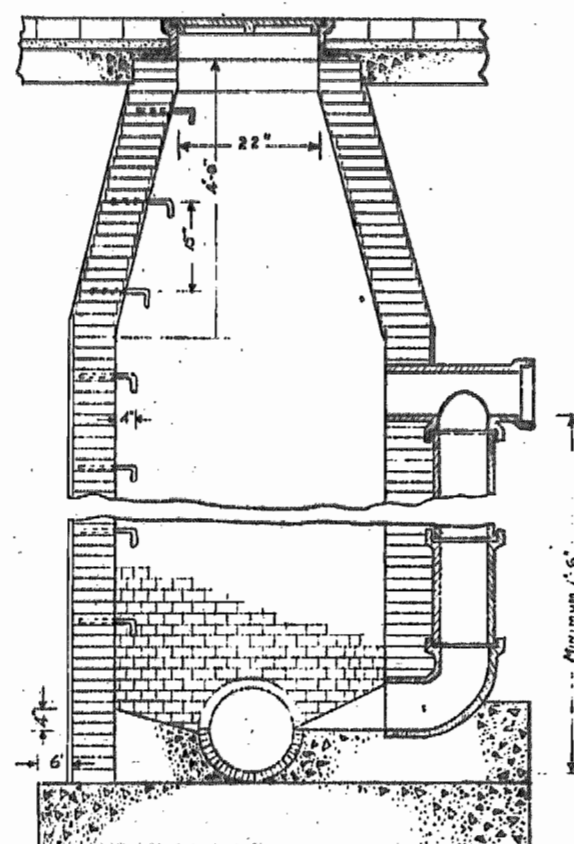
22" MANHOLE RING & COVER



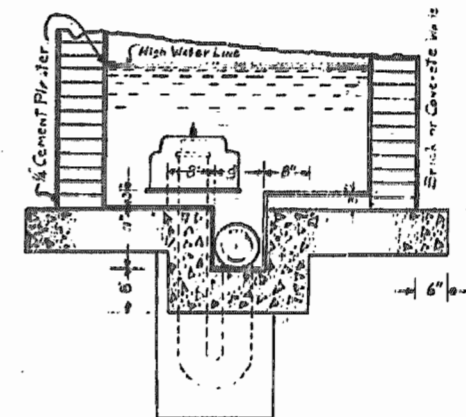
SECTION



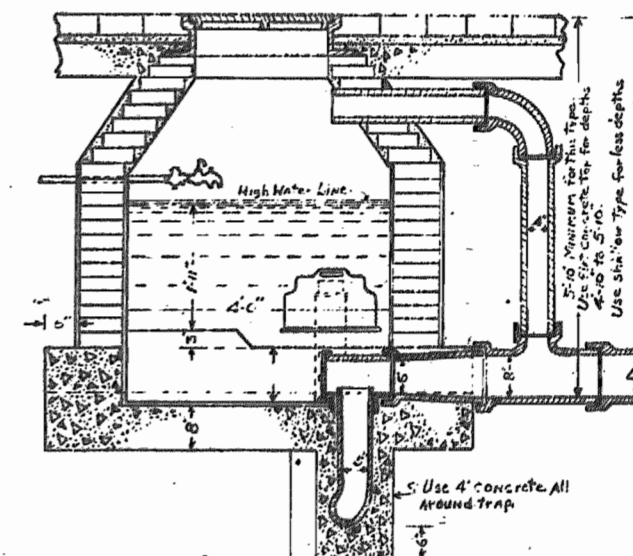
SECTION



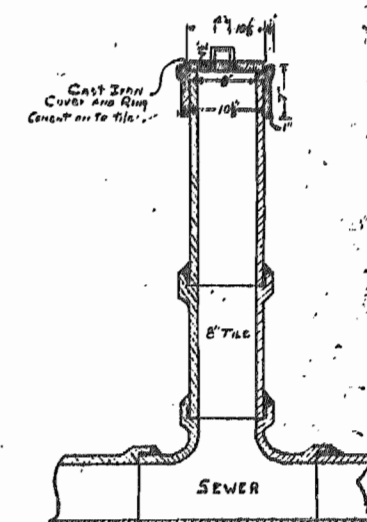
SECTION



SECTION BB - STANDARD FLUSH TANK



SECTION AA - STANDARD FLUSH TANK



SECTION OF LAMP HOLE

Note: The thickness of the side walls may be reduced to 7" above a point 10" below the top, should the Contractor so desire.

Concrete Manhole to be built of 1:2:4 concrete.

1/2 Motor Finish

Minimum 1' 6"

3" - 6" Minimum for this Tank. Use 4" concrete for depths 4'-0" to 5'-0". Use six-bar type for less depths.

Use 4" concrete all around trap.

ROUTE 66 PROJ'S. F-84(7) UG-84(6) JASPER COUNTY, MISSOURI CITY OF CARTHAGE

DETAILS OF MANHOLES AND FLUSH TANKS SANITARY SEWERS IN CARTHAGE

338

