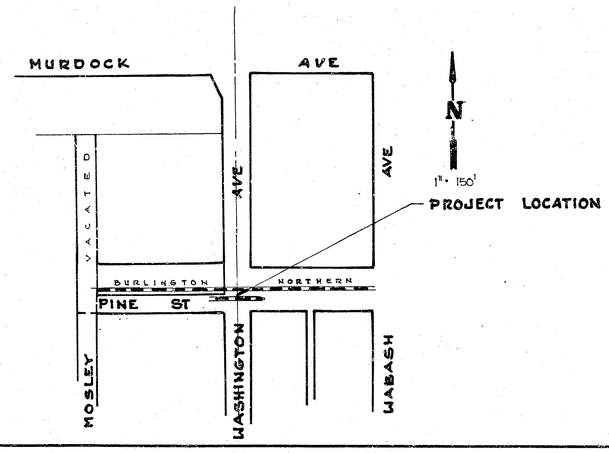
PAVING MODIFICATIONS IN CONNECTION WITH RUBBERIZATION OF RAILROAD CROSSING AT WASHINGTON STREET. SOUTH OF MURDOCK

PROJ. NO. 870-70-286-50223-430-000-000
CONSTRUCTION CONTRACT COSTS

PROJ. NO. 870-70-286-50223-110-000-000
CONSTRUCTION INSPECTION COSTS

CITY OF WICHITA, KANSAS

M. E. LINDEBAK - CITY ENGINEER



INDEX TO DRAWINGS

SHEET No.	DESCRIPTION
1.	TITLE SHEET
2,3.	PLAN & PAVING DETAILS
4.	RUBBERIZED RAILROAD CROSSING INSTALLATION
5.	STD. DRIVE ENTRANCE DETAIL.

1. PROJECT WILL BE CLOSED TO THROUGH TRAFFIC DURING THE TIMEFRAME THE RAILROAD COMPANY IS INSTALLING RUBBERIZED CROSSING MATERIAL. PROJECT WILL BE REOPENED TO THROUGH TRAFFIC IMMEDIATELY AFTER THE RAILROAD COMPANY HAS COMPLETED THEIR WORK INVOLVED WITH INSTALLATION OF THE RUBBER CROSSING MATERIAL UNLESS THE CITY ELECTS TO NOT REQUIRE SUCH THROUGH TRAFFIC TO BE MAINTAINED DURING THE NEXT PHASE OF CONSTRUCTION. DETOUR SIGNING AND CONSTRUCTION TRAFFIC CONTROL SIGNING DURING THE TIME THE RAILROAD COMPANY IS WORKING ON THE CROSSING WILL BE THE RESPONSIBILITY OF THE PAVING CONTRACTOR AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS. CONSTRUCTION OF TEMPORARY PAVEMENT REQUIRED TO FACILITATE MAINTENANCE OF SUCH THROUGH TRAFFIC WILL ALSO BE THE RESPONSIBILITY OF THE PAVING CONTRACTOR AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS.

2. UTILITY SERVICE LINES, POWER POLES, VALVE BOXES, METERS, ETCETERA, ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

3. A SAW CUT OF AT LEAST ONE-HALF THE DEPTH OF EXISTING SURFACE COURSES OR ONE-FOURTH THE DEPTH OF THE EXISTING TOTAL PAVEMENT THICKNESS SHALL BE PROVIDED AT LOCATIONS WHERE PROPOSED CONSTRUCTION ABUTS AN EXISTING SURFACE COURSE OR PAVEMENT FOR WHICH PARTIAL REMOVAL OF THAT SURFACE OR PAVEMENT IS REQUIRED. SAWED JOINT TO FACILITATE REMOVAL WITHIN THREE (3) FEET OF EXISTING JOINTS WILL NOT BE PERMITTED AND FOR SUCH INSTANCES THE LIMITS OF REMOVAL SHALL EXTEND TO THE EXISTING JOINT. SUCH SAW CUTS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE REMOVAL OF THE SURFACE OR PAVEMENT.

4. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED.

5. CONCRETE JOINTING PATTERNS AND DIMENSIONS ARE APPROXIMATE. ENGINEER SHALL FIELD ADJUST AS REQUIRED TO MATCH EXISTING AND ADJACENT CONDITIONS.

SPECIAL NOTES

RUBBERIZED CROSSING MATERIAL SUPPLIER SHALL FURNISH ALL MATERIALS AND FASTENERS NECESSARY TO PROPERLY INSTALL THE RUBBERIZED CROSSING, INCLUDING RUBBER OR WOOD TIE SHIM CAP BOARD, AND ANY OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION. ALL SUCH MATERIALS SUPPLIED BY THE RUBBERIZED CROSSING MANUFACTURER SHALL BE INSTALLED BY THE INVOLVED RAILROAD COMPANY IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MATERIAL SUPPLIER.

INDIVIDUAL PIECES OF RUBBER OR WOOD CAP BOARDS SHALL NOT BE LESS THAN SIX (6) FEET LONG EXCEPT WHERE NECESSARY TO FURNISH SHORTER PIECES TO MATCH THE RUBBERIZED CROSSING LENGTH. SHORTER LENGTHS OF INDIVIDUAL RUBBER OR WOOD CAP BOARD PIECES SHALL NOT BE LESS THAN THREE (3) FEET. RUBBER OR WOOD CAPBOARDS SHALL BE INSTALLED SUCH THAT WHEN THE ABUTTING PAVEMENT IS CONSTRUCTED, THERE WILL BE SMOOTH VERTICAL SURFACES FORMED AT THE JUNCTURE BETWEEN THE PAVEMENT AND THE CAP BOARD FOR THE FULL DEPTH OF THE PAVEMENT WITHOUT ANY PAVEMENT COMING INTO DIRECT CONTACT WITH THE RAILROAD CROSS TIES. ONE THICKNESS OF TARPAPER SHALL BE INSTALLED BY THE PAVING CONTRACTOR ON ALL MATING SURFACES BETWEEN THE PAVEMENT AND THE RAILROAD CROSSING MATERIAL TO BREAK ANY BOND BETWEEN THE PAVEMENT AND THE RAILROAD CROSSING MATERIAL.

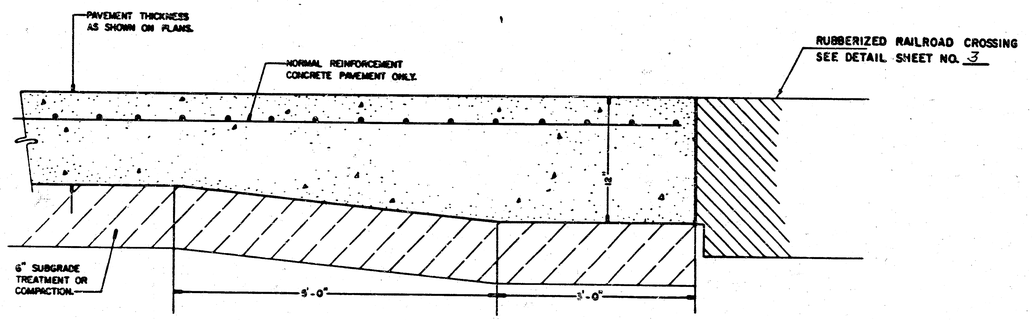
LOCATION OF RUBBER OR WOOD TIE SHIM CAP BOARD AS SHOWN ON DETAIL DRAWING WILL REQUIRE INSTALLATION OF REDWOOD SHIMS ON THE ENDS OF RAILROAD CROSS TIES WHICH ARE LESS THAN 4' -3" FOR 8' - 6" TIES AND 4' - 6" FOR 9' - 0" TIES FROM CENTERLINE OF THE TRACK. LOCATION OF RUBBER OR WOOD TIE SHIM CAP BOARD AS SHOWN ON DETAIL DRAWINGS WILL ALSO REQUIRE ENDS OF RAILROAD CROSS TIES BE CUT OFF WHERE ENDS OF SUCH TIES ARE MORE THAN 4' - 3" FOR 8' - 0" TIES AND 4' - 6" FOR 9' - 0" TIES FROM THE CENTERLINE OF THE TRACK.

EXISTING PAVEMENT SHALL BE REMOVED BY THE PAVING CONTRACTOR. PAVEMENT IMMEDIATELY ADJACENT TO AND WITHIN THREE (3) FEET OF THE CROSSING SHALL BE REMOVED PRIOR TO THE INSTALLATION OF NEW RAILROAD CROSSING MATERIALS. PAVING CONTRACTOR SHALL COORDINATE THE PAVEMENT REMOVAL AT EACH CROSSING LOCATION WITH THE INVOLVED RAILROAD COMPANY. ALL EXPANSION JOINTS BETWEEN NEW CONSTRUCTION AND EXISTING PAVEMENT, WALK OR DRIVES SHALL BE TO NEAT LINES FORMED EITHER BY SAW CUT OR EXISTING JOINT.

LENGTHS OF RUBBERIZED CROSSING MATERIAL SHOWN ON THE PLANS IN MOST CASES ARE TO EXTEND THREE (3) FEET BEYOND EACH SIDES OF THE PAVED ROAD TRAFFICWAY FOR EACH LOCATION. WOOD PLANKING SHALL BE INSTALLED BY THE INVOLVED RAILROAD COMPANY OUTSIDE THE LIMITS OF THE RUBBERIZED INSTALLATION FOR SIDEWALK, DRIVEWAY AND SMALLER CROSSINGS WHERE NECESSARY. THE INVOLVED RAILROAD COMPANIES SHALL ADJUST THEIR RAILS TO ELEVATIONS AS SHOWN ON THE PLANS FOR EACH CROSSING LOCATION. VARIATIONS FROM THE TOP OF RAIL ELEVATIONS SHOWN WILL BE PERMITTED ONLY WHEN APPROVED BY THE FIELD ENGINEER FOR ANTICIPATED TRACK SETTLEMENT.

SURFACE OF NEW PAVEMENT AND RUBBERIZED CROSSING MATERIAL SHALL BE SET TO IDENTICAL ELEVATIONS AT THEIR POINT OF JUNCTURE ONLY WHEN THE RAILROAD COMPANY USES APPROVED MECHANICAL EQUIPMENT TO COMPACT RAILROAD FILL AND BALLAST SUCH TO PRECLUDE TRACK SETTLEMENT. RAILROAD TRACK AND RUBBERIZED CROSSING MATERIAL ELEVATIONS OR PAVEMENT ELEVATIONS SHALL BE ADJUSTED IN A RANGE OF ONE-FOURTH (1/4) INCH TO ONE (1) INCH TO ALLOW FOR TRACK SETTLEMENT WHEN THE RAILROAD COMPANY USES HAND METHODS FOR COMPACTION OF RAILROAD FILL AND BALLAST OR USE OF OTHER COMPACTION METHODS WHICH MAY NOT PRECLUDE TRACK SETTLEMENT. THE EXACT ELEVATION DIFFERENTIAL BETWEEN CROSSING MATERIAL AND PAVEMENT SHALL BE DETERMINED BY THE RAILROAD BASED ON THEIR EXPERIENCE FOR TRACK SETTLEMENT WITH CONCURRENCE BY THE ENGINEER.

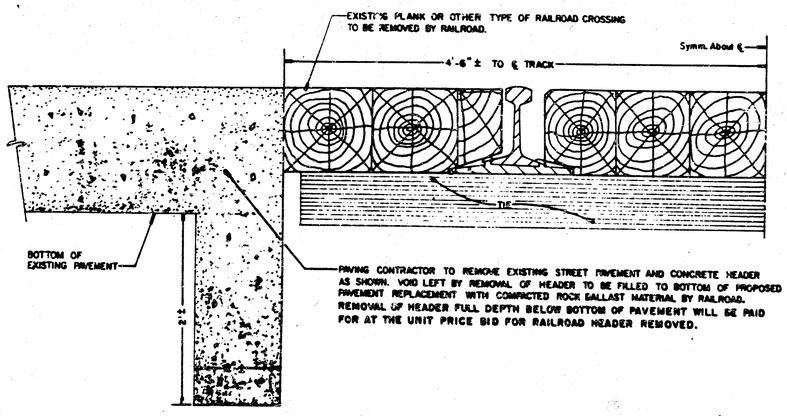
INDIVIDUAL SECTIONS OF THE RUBBERIZED CROSSING MATERIAL SHALL BE OFFSET AT LEAST ONE TIE SPACE FROM EACH OTHER SUCH THAT THE ENDS OF THE RUBBERIZED CROSSING WILL MORE CLOSELY CONFORM TO SIDEWALK OR PAVEMENT CURB ALIGNMENTS WHERE RAILROAD CROSSINGS ARE SKEWED THIRTY (30) DEGREES OR MORE TO THE STREET.



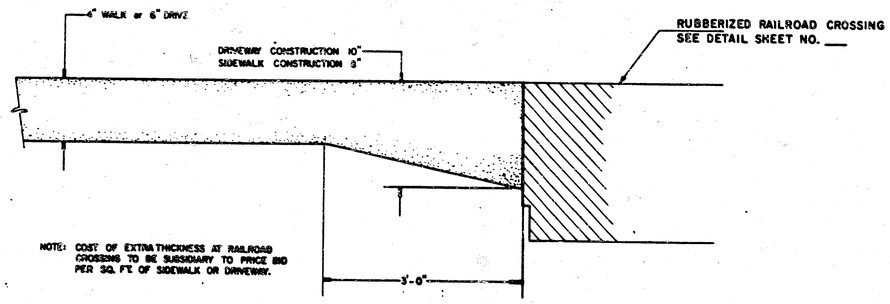
NOTE: COST OF EXTRA THICKNESS AT RAILROAD CROSSING TO BE SUBSIDIARY TO PRICE BID PER SQ. YD. OF PAVEMENT.

NOTE: ONE THICKNESS OF TAR PAPER SHALL BE INSTALLED BY PAVING CONTRACTOR ON ALL MATING SURFACES BETWEEN PAVEMENT AND RAILROAD CROSSING MATERIAL TO BREAK ANY BOND BETWEEN PAVEMENT AND RAILROAD CROSSING MATERIAL.

CROSS-SECTION DETAIL
NEW PAVEMENT CONSTRUCTION
ABUTTING RUBBERIZED RAILROAD CROSSING
NO SCALE



CROSS-SECTION DETAIL
PAVEMENT REMOVAL ABUTTING TRACKS
TO FACILITATE INSTALLATION OF
RUBBERIZED CROSSING
NO SCALE



NOTE: COST OF EXTRA THICKNESS AT RAILROAD CROSSING TO BE SUBSIDIARY TO PRICE BID PER SQ. FT. OF SIDEWALK OR DRIVEWAY.

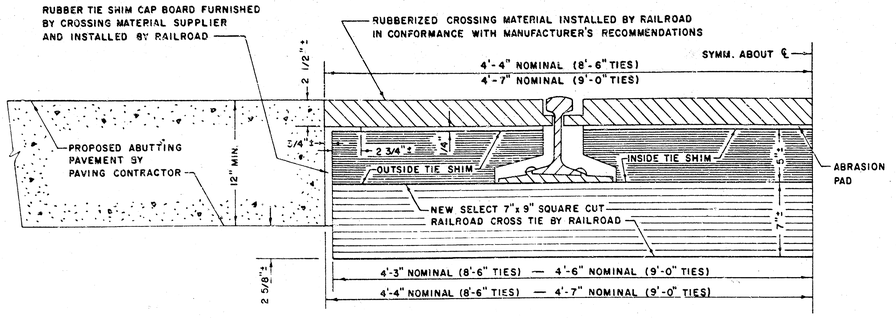
NOTE: ONE THICKNESS OF TAR PAPER SHALL BE INSTALLED BY PAVING CONTRACTOR ON ALL MATING SURFACES BETWEEN SIDEWALK OR DRIVEWAY CONSTRUCTION AND RAILROAD CROSSING MATERIAL TO BREAK ANY BOND BETWEEN THE SIDEWALK OR DRIVEWAY PAVEMENT AND RAILROAD CROSSING MATERIAL.

CROSS-SECTION DETAIL
NEW SIDEWALK AND DRIVEWAY CONSTRUCTION
ABUTTING RUBBERIZED RAILROAD CROSSING
NO SCALE

CITY OF WICHITA, KANSAS

STANDARDS FOR PAVING MODIFICATION IN CONNECTION WITH RUBBERIZED RAILROAD CROSSING INSTALLATION AT LOCATIONS WHERE ALL EXISTING ABUTTING PAVEMENT IS REMOVED AND RECONSTRUCTED

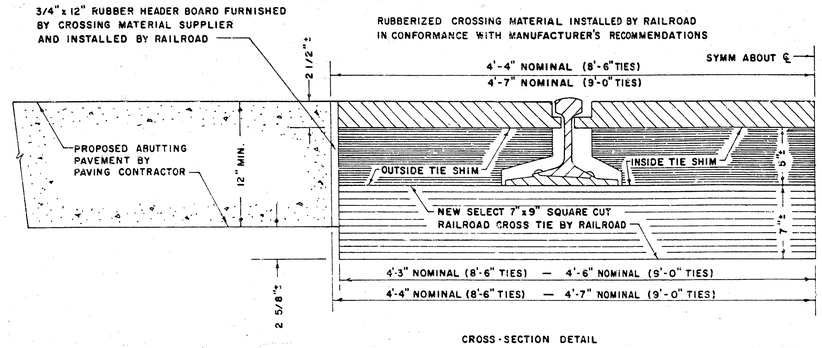
8" REINFORCED CONCRETE PAVEMENT



CROSS-SECTION DETAIL

RUBBER PADS WITH WOOD TIE SHIMS

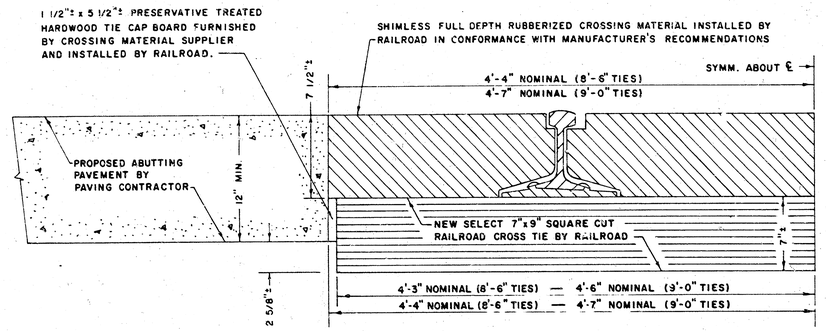
NO SCALE



CROSS-SECTION DETAIL

RUBBER PADS WITH WOOD TIE SHIMS (ALTERNATE)

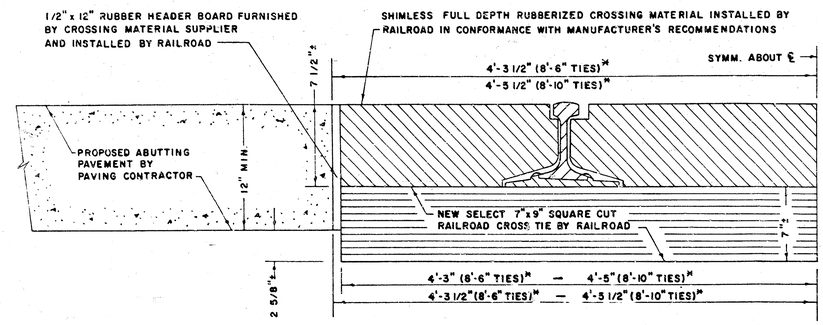
NO SCALE



CROSS-SECTION DETAIL

FULL DEPTH RUBBER PADS (ALTERNATE)

NO SCALE



* - TIES TO BE CUT AND FRAMED IN FACTORY OR IN FIELD.

CROSS-SECTION DETAIL

FULL DEPTH RUBBER PADS

NO SCALE

NOTE: SEE SPECIAL NOTES ON PAVING MODIFICATION OR PAVING APPROACH DETAIL SHEET FOR ADDITIONAL APPLICABLE REQUIREMENTS PERTAINING TO WORK SHOWN ON THIS SHEET.

CITY OF WITCHITA, KANSAS
STANDARDS FOR:
RUBBERIZED RAILROAD CROSSING INSTALLATION DETAILS

TBM 85-345-Z. "□" Cut on N.E. Cor. of RR Signal Light N. Side of RR Crossing, W. of Washington & S. Murdock. El.=114.84

LEGEND

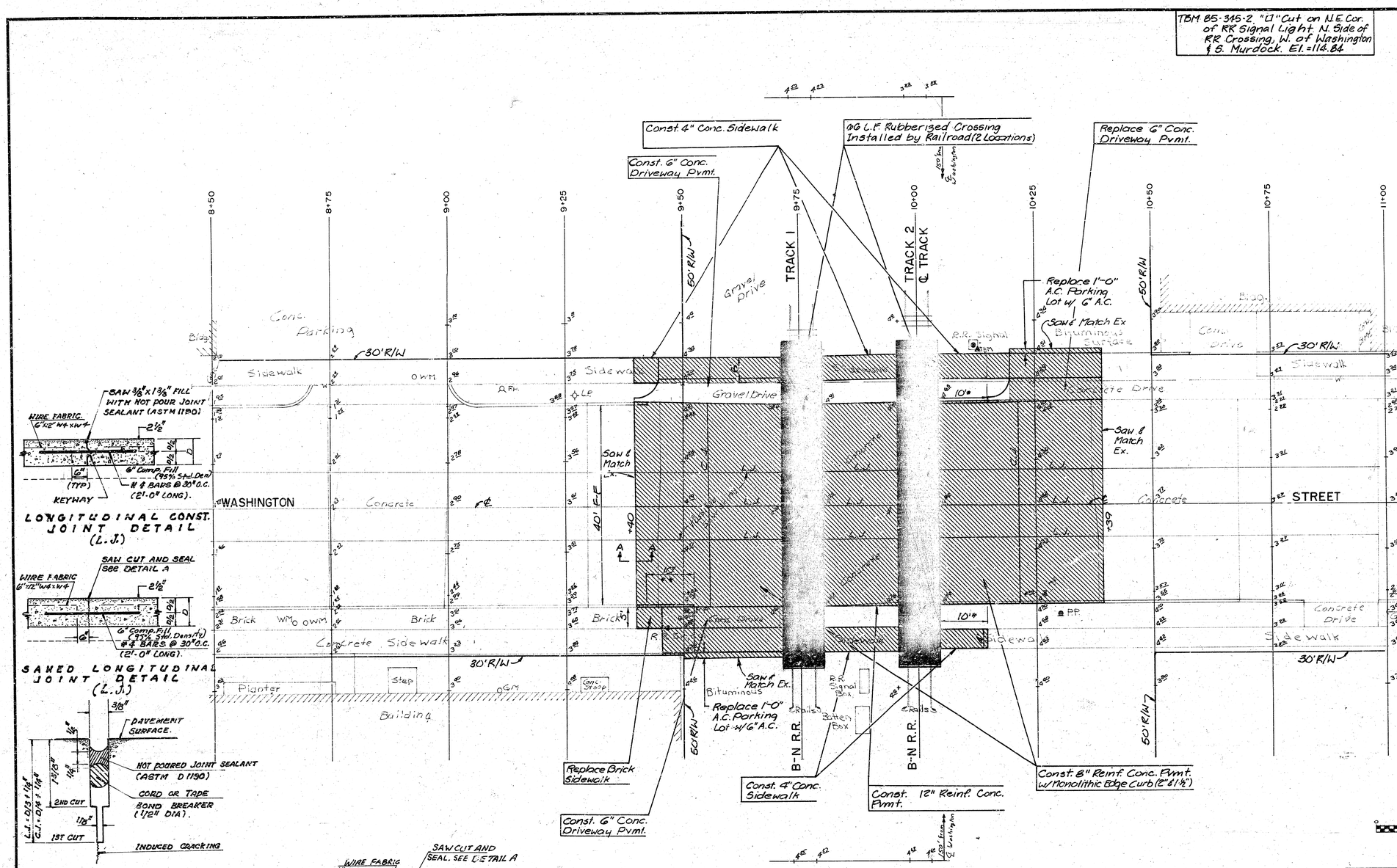
SYMBOL	DESCRIPTION
	REMOVE EXISTING CONCRETE PVMT. CURB AND GUTTER, SIDEWALK AND BITUMINOUS PVMT. AND REPLACE AS SHOWN. (BY PAVING CONTRACTOR)
	RUBBERIZED CROSSING MATERIAL (INSTALLED BY RAILROAD)

NOTES:

Sidewalks are to be removed to the nearest existing joint.

* Transition curb from full height to no curb in 10'

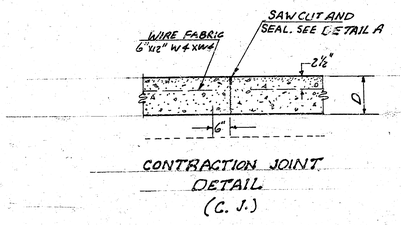
** Transition curb from existing to 2" in 10'

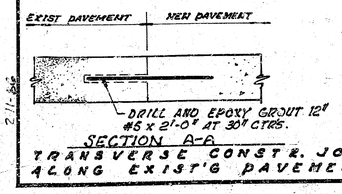


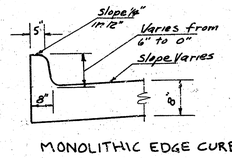
PROPOSED ELEVATIONS

(R) - Edge of Rubber (CL) - Centerline
(M) - Match Existing (FL) - Flowline
(H.E.) - High Edge

STATION	WEST EDGE PAVEMENT (FL)	CL	EAST EDGE PAVEMENT (FL)
9+40	113.93±(M)	113.96±(M)	113.72±(M)
9+45	114.10	114.11	113.91
9+50	114.29	114.30	114.18
9+55	114.47	114.49	114.45
9+60	114.60	114.64	114.65
9+65	114.68	114.72	114.76
9+71	114.70(R)	114.75(R)	114.80(R)
10+04	114.70(R)	114.75(R)	114.80(R)
10+10	114.67	114.73	114.77
10+15	114.58	114.67	114.69
10+20	114.44	114.59	114.56
10+25	114.23	114.46	114.37
10+30	113.99	114.31	114.15
10+35	113.77	114.16	113.95
10+39	113.58±(M)	114.03±(M)	113.80±(M)







WASHINGTON, SOUTH OF MURDOCK

NEW TOP OF RAIL ELEVATIONS		
	Track 1	Track 2
W. Curb Line ℄ E. Curb Line	114.70 / 114.75 / 114.80	114.70 / 114.75 / 114.80

PROJ. NO. 870-70-286-50223-430-000-000 CONSTR. CONTRACT COST.
PROJ NO. 870-70-286-50223-110-000-000 CONSTR. INSPECTION COST

REVISION	DATE	BY

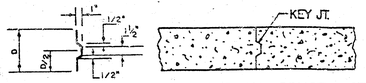
WICHITA, KANSAS
RUBBERIZED RAILROAD CROSSING
WASHINGTON, SOUTH OF MURDOCK
PAVING PLAN

DESIGN | DRAWN: JMR/MEK

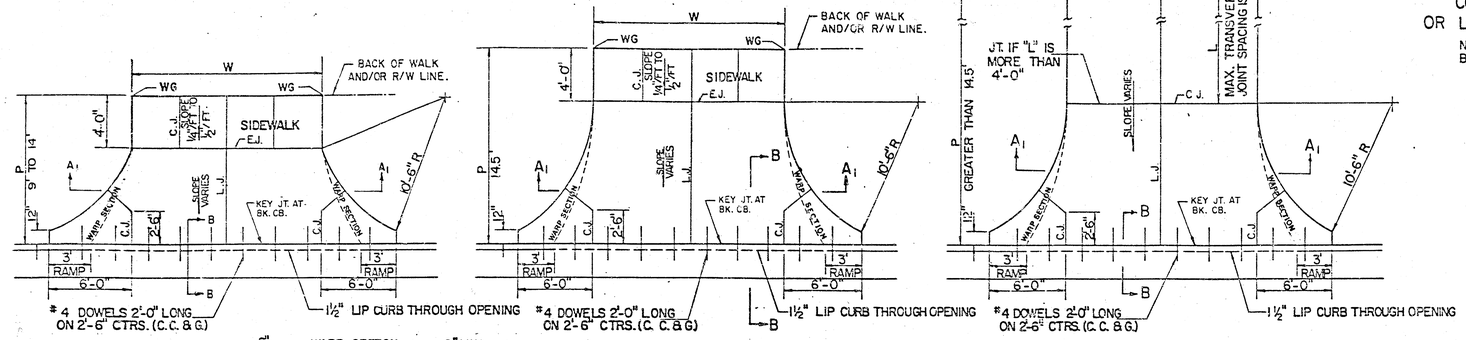
WILSON & COMPANY ENGINEERS & ARCHITECTS
WICHITA - KANSAS

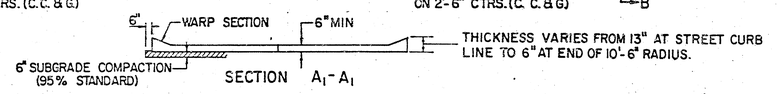
DATE: FEB. 1986
FILE NO. 85-345
SHEET NO. 4 OF 5

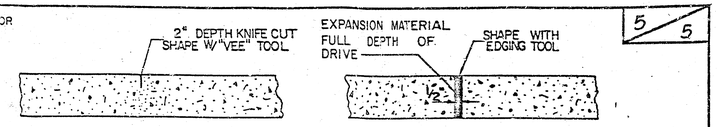
Wichita Ks R.R. X-INGS 1-17-86 85-345



ALT. LONGITUDINAL CONSTRUCTION JOINT



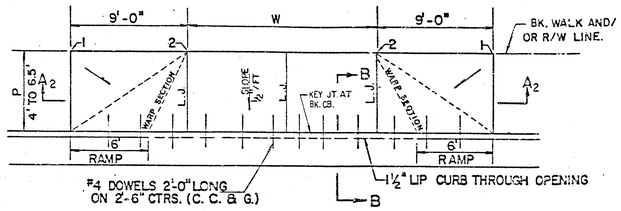


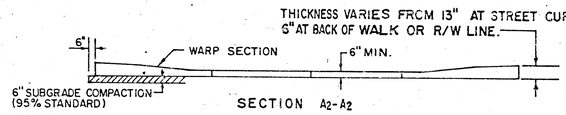


CONTRACTION JOINT (C.J.) OR LONGITUDINAL JOINT (L.J.)

NO SAWN JOINTS WILL BE ALLOWED.

EXPANSION JOINT (E.J.)



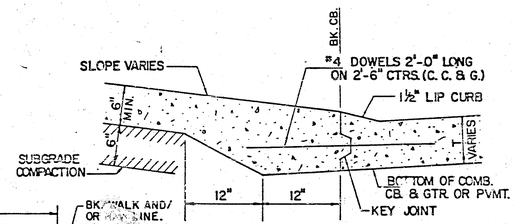


PARKING WIDTH "P"		4'	4.5'	5'	5.5'	6'	6.5'
DIST OF PT. "I" ABOVE TOP OF FULL CB.		0.08'	0.09'	0.10'	0.12'	0.13'	0.14'
DIST. OF PT "2" BELOW TOP OF FULL CB.		+.26'	+.24'	+.22'	+.20'	+.18'	+.16'

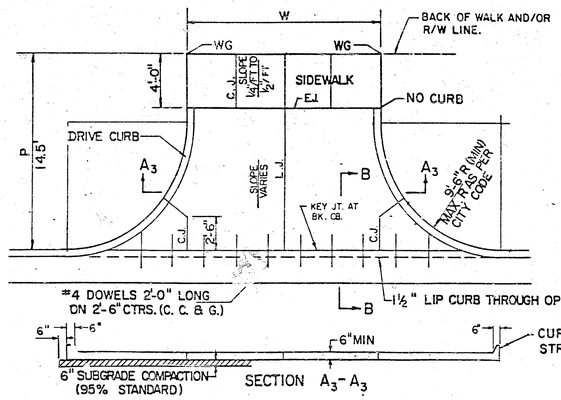
FULL RAMP DRIVE (P=4.0' TO 6.5')

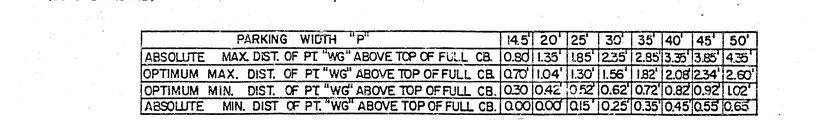
PARKING WIDTH "P"		9'	10'	11'	12'	13'	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE	MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.35'	0.35'	0.40'	0.45'	0.60'	0.80'	1.35'	1.85'	2.35'	2.85'	3.35'	3.85'	4.35'
OPTIMUM	MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.35'	0.35'	0.40'	0.45'	0.60'	0.70'	1.04'	1.30'	1.56'	1.82'	2.08'	2.34'	2.60'
OPTIMUM	MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.19'	0.21'	0.23'	0.25'	0.27'	0.30'	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE	MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	-.19'	-.16'	-.13'	-.10'	-.06'	0.00	0.00	0.15'	0.25'	0.35'	0.45'	0.55'	0.65'

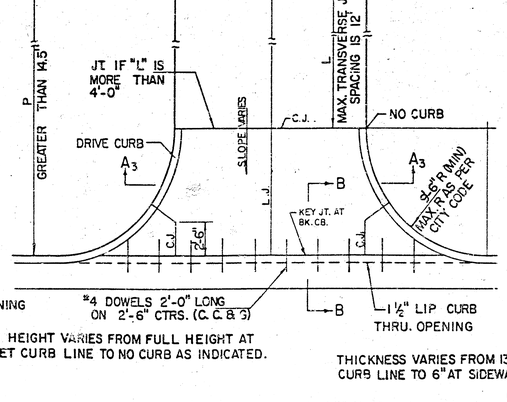
RADIUS RAMP DRIVES (P = 9.0' & GREATER)

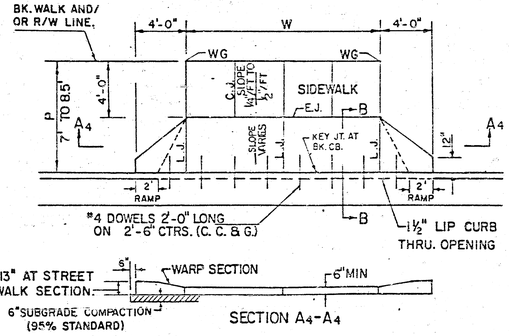


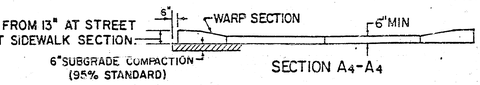
BACK OF CURB DETAIL
SECTION B - B (no scale)











PARKING WIDTH "P"		14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE	MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.80'	1.35'	1.85'	2.35'	2.85'	3.35'	3.85'	4.35'
OPTIMUM	MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.70'	1.04'	1.30'	1.56'	1.82'	2.08'	2.34'	2.60'
OPTIMUM	MIN. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.30	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE	MIN. DIST OF PT. "WG" ABOVE TOP OF FULL CB.	0.00	0.00'	0.15'	0.25'	0.35'	0.45'	0.55'	0.65'

FULL RADIUS DRIVES (P=14.5' & GREATER)

PARKING WIDTH "P"		7'	7.5'	8'	8.5'
ABSOLUTE	MAX. DIST OF PT. "WG" ABOVE TOP OF FULL CB.	0.00'	0.10'	0.20'	0.30'
OPTIMUM	MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.00'	0.10'	0.20'	0.30'
OPTIMUM	MIN. DIST. OF PT. "WG" BELOW TOP OF FULL CB.	-.15'	-.16'	-.17'	-.17'
ABSOLUTE	MAX. DIST OF PT. "WG" BELOW TOP OF FULL CB.	-.25'	-.20'	-.20'	-.20'

FULL RAMP DRIVE (P=7.0' TO 8.5')

GENERAL NOTES

1. DRIVEWAY CONSTRUCTION DETAILED ON THIS SHEET IS FOR USE WITH FULL HEIGHT STREET CURBS AND IN AREAS WITHOUT FULL WALK CONSTRUCTION IN THE PARKING. SEE OTHER DETAIL SHEETS FOR DRIVEWAY CONSTRUCTION WITH ROLL CURB AND/OR FULL WALK.
2. ONE LONGITUDINAL JOINT SHALL BE CONSTRUCTED ALONG THE CENTERLINE OF DRIVES HAVING A "W" DIMENSION OF 24' OR LESS. TWO LONGITUDINAL JOINTS SHALL BE CONSTRUCTED WITH EQUAL SPACINGS NOT TO EXCEED 10' FOR DRIVES WITH A "W" DIMENSION GREATER THAN 24'.
3. DRIVEWAY WIDTH DENOTED AS "P" ON THE DETAIL DRAWINGS SHALL BE A MINIMUM OF 10' AND A MAXIMUM OF 30'. THE MAXIMUM OPENING FOR RADIUS TYPE DRIVES WITH CURBS THROUGH THE RADIUS SHALL NOT EXCEED 52' AT THE STREET CURB LINE.
4. CONTRACTION JOINT SPACING IN THE DRIVEWAY WALK SECTION SHALL BE A MINIMUM OF 3' AND A MAXIMUM OF 5' AND ARE TO BE EQUALLY SPACED WITHIN THIS RANGE. WALK SECTION SHALL BE CONSTRUCTED TO THE SAME THICKNESS AS THE DRIVEWAY.
5. DOWEL BARS SHALL BE OMITTED FROM THE KEYED CONSTRUCTION JOINT ALONG THE BACK OF THE STREET CURB LINE WHEN DRIVEWAYS ARE CONSTRUCTED IN CONJUNCTION WITH NEW CONCRETE PAVEMENT CONSTRUCTION.
6. ADDITIONAL THICKNESS OF DRIVE AS INDICATED IN THE DRAWINGS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE DRIVEWAY CONSTRUCTION.
7. ONE HALF INCH EXPANSION JOINTS SHALL BE INSTALLED WHEREVER DRIVE CONSTRUCTION ABUTS SIDEWALK. ONE HALF INCH EXPANSION JOINTS SHALL ALSO BE INSTALLED ALONG THE PROPERTY LINE AND/OR BACK OF WALK LINE WHEN DRIVE CONSTRUCTION ALONG THIS LINE ABUTS CONCRETE PARKING LOTS OR CONCRETE DRIVE EXTENSION.
8. ALL DRIVEWAYS SHALL BE A MINIMUM OF 6" IN THICKNESS AND SHALL BE WITHOUT REINFORCEMENT. DRIVEWAYS MAY BE CONSTRUCTED THICKER THAN 6" AND THEY MAY BE REINFORCED WITH 6"x12" W4-W4 WELDED WIRE FABRIC WHEN PROPERLY AUTHORIZED BY THE PROPERTY OWNER WITH THE ENGINEER'S CONCURRENCE.
9. OPTIMUM DRIVEWAY ELEVATIONS SHOWN IN THE TABLES ARE TO BE USED WHEREVER POSSIBLE. ABSOLUTE MAXIMUM AND MINIMUM ELEVATIONS ARE TO BE USED ONLY WHEN THESE VALUES WILL PERMIT NEW CONSTRUCTION TO MATCH EXISTING DRIVES OR PARKING LOTS. VALUES SHOWN IN THE TABLE ARE BASED ON A FULL CURB HEIGHT ELEVATION OF 0.55' ABOVE THE GUTTER FLOW LINE AND MUST BE ADJUSTED ACCORDINGLY FOR OTHER CURB HEIGHTS. VALUES SHOWN IN THE TABLES WITH MINUS SIGNS INDICATE ELEVATIONS BELOW TOP OF FULL HEIGHT CURB.

REVISED OCTOBER 1985

SCALE: 1"=5'

STANDARD DRIVE ENTRANCES
FULL HEIGHT CURB
CITY OF WICHITA, KANSAS

PROJECT NUMBER 870-70-286-50223-430-000-000

PROJ. NO. 870-70-286-50223-110-000-000 CONSTRUCTION INSPECTION COSTS