MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

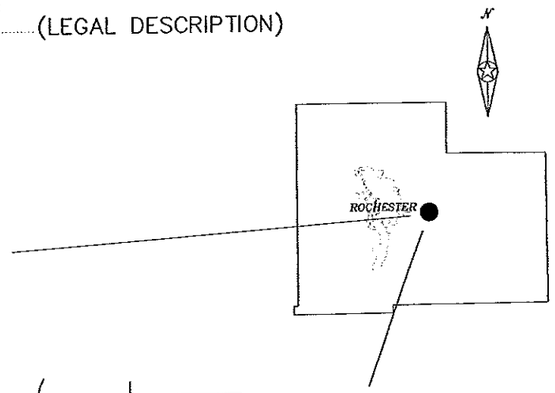
CONSTRUCTION PLAN FOR UNBONDED CONCRETE OVERLAY & BITUMINOUS SHOULDERS

LOCATED ON C.S.A.H. 9 BETWEEN C.R. 119 AND T.H. 42 (GEOGRAPHIC DESCRIPTION)

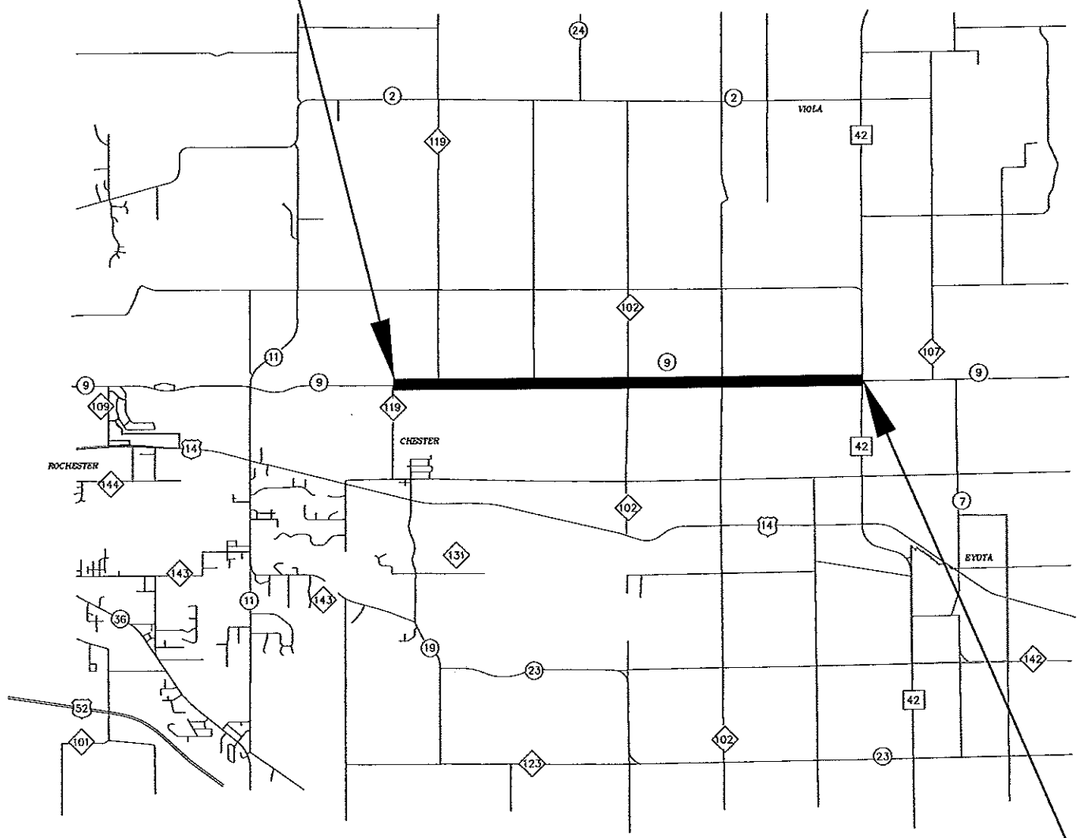
FROM NORTH CENTER SECT. 2 T106N–R13W & SOUTH CENTER SECT. 35 T107N–R13W TO NORTH CENTER SECT. 3 T106N–R12W & SOUTH CENTER SECT. 34 T107N–R12W (LEGAL DESCRIPTION)

S.A.P. NO. 55–609–17

GROSS LENGTH	26,287.000	FEET	4.979	MILES
BRIDGE–LENGTH	0.000	FEET	0.000	MILES
EXCEPTIONS–LENGTH	0.000	FEET	0.000	MILES
NET LENGTH	26,287.000	FEET	4.979	MILES



BEGIN: 55–609–17
STA. 211+55



END: 55–609–17
STA. 474+42

AS-BUILT
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ENGINEERING

PLAN SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT RIGHT-OF-WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER
SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN
FIRE HYDRANT
CATTLE GUARD
OVERPASS (HIGHWAY OVER)
UNDERPASS (HIGHWAY UNDER)
BRIDGE
BUILDING (ONE STORY FRAME)
F – FRAME C – CONCRETE
S – STONE T – TILE
B – BRICK ST – STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY
SLOPE EASEMENT

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLE
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRICAL CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRICAL MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRICAL CABLE
AERIAL TELEPHONE CABLE
SEWER (SANITARY OR SEWER)
SEWER MANHOLE

EROSION CONTROL SYMBOLS

TEMPORARY SILT FENCE
RIP RAP DITCH CHECKS

SCALES
PLAN 0 100'

INDEX MAP: NOT TO SCALE

MINN. PROJ. NO. .....

GOVERNING SPECIFICATIONS

THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO.	1	TITLE SHEET
SHEET NO.	2 – 3	ESTIMATE OF QUANTITIES & TABLES
SHEET NO.	4 – 6	TYPICAL SECTIONS & DETAIL
SHEET NO.	7	EDGE DRAIN DETAILS
SHEET NO.	8 – 13	CONC. PAVEMENT, JOINTS & DETAILS
SHEET NO.	14 – 22	PLAN SHEETS
SHEET NO.	23 – 24	TRAFFIC CONTROL PLANS

THIS PLAN CONTAINS 24 SHEETS.

DESIGN DESIGNATION: S.A.P. 55–609–17

R.....
ΣN18(20).....
ADT (Current Year) = 2,784(2004) Design Speed 55 MPH
ADT (Future Year) = 4,454(2024) Based on STOPPING Sight Distance
Height of eye 3.5 FT. Height of object 0.5 FT.
DHV (Design Hr. Vol.) = Design Speed not achieved at:
D (Directional Distr.) = STA. ..... TO STA. ..... MPH
T (Heavy Commercial) = STA. ..... TO STA. ..... MPH
SUBGRADE = K=150 STA. ..... TO STA. ..... MPH
SOIL FACTOR = 130%

FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR
LANE WIDTH 12 FT.
SHOULDER WIDTH 8 FT.
10 TON DESIGN

DESIGN ENGINEER: I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 6/8/04 REG. NUMBER 19917

PRINTED NAME: KAYE M. BIENIEK

SIGNED NAME: Kaye M Bieniek
COUNTY DESIGN ENGINEER

DATE 6/11/04 REG. NUMBER 10397

Michael Sheehan
APPROVED: OLMSTED COUNTY ENGINEER

STATE AID APPROVALS:

Judy Schmidt DATE: 6-16-04
ASST DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

Judy Schmidt DATE: 6-16-04
for APPROVED FOR STATE AID FUNDING:
STATE AID ENGINEER

STATEMENT OF ESTIMATED QUANTITIES

NOTE NO.	ITEM NO.	DESCRIPTION	UNIT	PARTICIPATING	NON PARTICIPATING	TOTAL ESTIMATED QUANTITIES
	2031.501	FIELD OFFICE TYPE D	EACH	1		1
①	2104.501	REMOVE BITUMINOUS CURB	LIN. FT.	773		773
①	2104.505	REMOVE CONCRETE PAVEMENT	SQ. YDS.	2,103		2,103
①②	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ. YDS.	8,881		8,881
①	2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN. FT.	206		206
①	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN. FT.	230		230
①	2105.515	UNCLASSIFIED EXCAVATION	CU. YD.	170		170 (P)
①	2105.523	COMMON BORROW (CV)	CU. YD.	639		639
①	2105.525	TOPSOIL BORROW (CV)	CU. YD.	416		416
③	2112.501	SUBGRADE PREPARATION	RD. STA.	6(P)		6(P)
④	2211.501	AGGREGATE BASE CLASS 5	TON	4,193		4,193
⑤	2221.501	AGGREGATE SHOULDERING CLASS 2	TON	24,576		24,576
①	2232.502	MILL CONCRETE PAVEMENT SURFACE	SQ. YD.	534		534 (P)
⑥	2301.502	CONCRETE PAVEMENT STANDARD WIDTH 8"	SQ. YD.	68,232		68,232 (P)
⑥⑦	2301.502	CONCRETE PAVEMENT STANDARD WIDTH 9"	SQ. YD.	1,867		1,867 (P)
⑥⑧	2301.503	CONCRETE PAVEMENT IRREGULAR WIDTH 6"	SQ. YD.	517		517 (P)
⑨	2301.511	STRUCTURAL CONCRETE	CU. YD.	15,736		15,736
	2301.538	DOWEL BAR	EACH	42,072		42,072
	2301.545	CONCRETE CORING	EACH	52		52
⑩	2301.602	DRILL AND GROUT DOWEL BAR (EPOXY COATED)	EACH	24		24
⑪	2301.603	PERMANENT TERMINAL HEADER	LIN. FT.	24		24
⑫	2331.518	TYPE 41 BIT MIXTURE FOR PATCHING	TON	30		30
	2350.609	BIT. MIX FOR PERM ASPH STAB ST RE COURSE	TON	6,723		6,723
	2350.609	ASPHALT CEMENT FOR MIXTURE	TON	269		269
⑬	2350.501	TYPE LV4 WEARING COURSE MIXTURE (LVWE45030B)	TON	8,496		8,496
⑭	2350.501	TYPE MV4 WEARING COURSE MIXTURE (MVWE45035C)	TON	630		630
⑭	2350.502	TYPE MV3 NON-WEARING COURSE MIXTURE (MVNW35035C)	TON	844		844
⑭	2350.502	TYPE MV3 NON-WEARING COURSE MIXTURE (MVNW35035B)	TON	1,057		1,057
⑮	2502.501	4" PRECAST CONCRETE HEADWALL	EACH	86		86
⑮	2502.521	4" TP PIPE DRAIN	LIN. FT.	1,490		1,490
⑮	2502.541	4" PERFORATED PE PIPE DRAIN	LIN. FT.	51,509		51,509
⑧	2531.501	CONCRETE CURB & GUTTER DESIGN B424	LIN. FT.	775		775
	2563.601	TRAFFIC CONTROL	LUMP SUM	1		1
	2564.603	4" SOLID LINE WHITE - EPOXY	LIN. FT.	54,546		54,546
	2564.603	4" SOLID LINE YELLOW - EPOXY	LIN. FT.	12,350		12,350
	2564.603	4" BROKEN LINE YELLOW - EPOXY	LIN. FT.	5,000		5,000
	2564.603	4" DOUBLE SOLID YELLOW - EPOXY	LIN. FT.	1,350		1,350

(P) PLAN QUANTITY

STATEMENT OF ESTIMATED QUANTITIES

NOTE NO.	ITEM NO.	DESCRIPTION	UNIT	PARTICIPATING	NON PARTICIPATING	TOTAL ESTIMATED QUANTITIES
⑯	2575.501	SEEDING	ACRE	1		1 (P)
	2575.502	SEED MIXTURE 50B	POUND	50		50
	2575.502	SEED MIXTURE 110B	POUND	100		100
⑯	2575.505	SODDING TYPE LAWN	SQ. YD.	733		733
	2575.511	MULCH MATERIAL TYPE-1	TON	2		2
	2575.519	DISK ANCHORING	ACRE	1		1 (P)
	2575.532	COMMERCIAL FERTILIZER 12-12-12	POUND	200		200

(P) PLAN QUANTITY

CONSTRUCTION NOTES

① SEE TABLE ON SHEET NO. 3

② SPEC. 1903 DOES NOT APPLY TO ITEM NO. 2104.505 REMOVE BITUMINOUS PAVEMENT

③ STA. 211+55 TO STA. 214+55 AND STA. 471+42 TO STA. 474+42, SEE SHEET NO. 10.

④ TWP ROAD & COUNTY ROAD ENTRANCES — 234 TON
RIGHT TURN LANES & BYPASS IS SHEET 5 — 3,317 TON
TRANSITION AREAS SEE SHEET NO. 10 — 642 TON

⑤ SHOULDERS — 23,147 TON
RES. AND FIELD ENTRANCES — 1,429 TON

⑥ ALL REINFORCEMENT BARS TO BE CONSIDERED INCIDENTAL TO ITEM NO. 2301.502 CONCRETE PAVEMENT STANDARD WIDTH 8", 2301.502 CONCRETE PAVEMENT STANDARD WIDTH 9" AND ITEM 2301.503 CONCRETE PAVEMENT IRREGULAR WIDTH 6".

⑦ SEE SHEET 10, 15' LONG TAPER 12" TO 9" IS INCLUDED IN ITEM NO. 2301.502.

⑧ STA. 298+50 TO STA. 301+25 AND STA. 325+00 TO STA.330+00, SEE SHEET NO. 4.

⑨ SPEC. 1903 DOES NOT APPLY TO ITEM NO. 2301.511 STRUCTURAL CONCRETE.

⑩ END OF PROJECT STA. 474+42

⑪ BEGINING OF PROJECT STA. 211+55

⑫ SPEC. 1903 DOES NOT APPLY TO ITEM NO. 2331.518 TYPE 41 BIT MIXTURE FOR PATCH.

⑬ SHOULDERS — 8,088 TON
ENTRANCES — 408 TON

⑭ RIGHT TURN LANES & BYPASS AREAS SEE SHEET NO. 5

⑮ SEE SHEET NO. 7

⑯ SEE SHEET NO. 3

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Note: Supplemental Steel added over all culvert locations. (See D.A.R. 3)

BASIS OF PLANNED QUANTITIES

AGGREGATE BASE CL. 5 –	140 LBS / CU. FT. COMPACTED
AGGREGATE SHOULDER CL. 2 –	140 LBS / CU. FT. COMPACTED
2350 BITUMINOUS MIXTURE	110 LBS / SQ. YD./ INCH OF DEPTH
SEED MIXTURE 50B –	50 LBS / ACRE
SEED MIXTURE 110B–	100 LBS / ACRE
MULCH MATERIAL –	2 TONS / ACRE
DISC ANCHOR –	ALL SEEDING AREA'S, EXCLUDING 2:1 SLOPES
COMMERCIAL FERTILIZER –	200 LBS / ACRE

STANDARD PLATES

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY TO THIS PROJECT.

ITEM NO.	DESCRIPTION
1141D	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
1150Q	CONSTRUCTION OF HEADER JOINTS
3131C	PRECAST CONCRETE HEADWALL FOR SUBSURFACE DRAINS
7100G	CONCRETE CURB AND GUTTER
8000I	STANDARD BARRICADES

ESTIMATED QUANTITIES

CERTIFIED BY Kurt M. Bauer REG. NO. 19917 7/20 2004
LICENSED PROFESSIONAL ENGINEER

SAP 55-609-17 C.S.A.H. 9

REMOVAL ITEMS / SAW PAVEMENT / MILL PAVEMENT

LOCATION	REMOVAL ITEMS 2104.501 REMOVE BIT. CURB (LIN. FT.)	REMOVAL ITEMS 2104.505 REMOVE BIT. PAVEMENT (SQ. YD.)	REMOVAL ITEMS 2104.505 REMOVE CONC. PAVEMENT (SQ. YD.)	SAW PAVEMENT 2104.511 CONCRETE (FULL DEPTH) (LIN. FT.)	SAW PAVEMENT 2104.513 BITUMINOUS (FULL DEPTH) (LIN. FT.)	MILL PAVEMENT 2232.502 CONCRETE (TAPER 0" TO 1") (SQ. YD.)
STA. 211+55					36	
STA. 211+55 – STA. 214+55			800			
RT. STA. 212+04		321				
LT. STA. 213+80		217				
STA. 214+55				24		
STA. 214+55 – STA. 215+55						267
RT. STA. 219+44		10				
RT. STA. 221+96		168			19	
RT. STA. 231+05		10				
RT. STA. 234+37 – STA. 237+94		330				
LT. STA. 238+34 & STA. 240+14		528				
RT. STA. 245+46		160				
RT. STA. 251+55		14				
RT. STA. 258+06		12				
LT. STA. 260+58 & STA. 261+81		417				
RT. STA. 261+65		11				
LT. STA. 265+08		11				
RT. STA. 265+22		238				
LT. STA. 277+85		10				
RT. STA. 286+42		8				
LT. STA. 290+14 & STA. 291+24		582				
RT. STA. 291+45		14				
LT. STA. 293+75		14				
LT. STA. 298+52 – STA. 301+25	273					
LT. STA. 299+17 & STA. 300+41		488				
RT. STA. 304+27		14				
LT. STA. 306+25		14				
RT. STA. 308+51		97			14	
LT. STA. 308+52		120			18	
LT. STA. 310+41 & STA. 311+33		383				
LT. STA. 312+93		14				
RT. STA. 316+33		14				
LT. STA. 325+00 – STA. 330+00	500					
LT. STA. 326+98		714				
RT. STA. 327+00		14				
RT. STA. 329+70		14				
LT. STA. 342+72		301				
RT. STA. 342+73		364				
RT. STA. 352+84		215				
LT. STA. 369+05		16				
RT. STA. 369+25		16				
RT. STA. 373+39		14				
RT. STA. 376+31		247				
LT. STA. 380+60		14				
LT. STA. 384+43		160			22	
RT. STA. 388+00		14				
RT. STA. 395+55		344				
LT. STA. 395+58		333				
LT. STA. 401+40		196			28	

REMOVAL ITEMS / SAW PAVEMENT / MILL PAVEMENT

LOCATION	REMOVAL ITEMS 2104.501 REMOVE BIT. CURB (LIN. FT.)	REMOVAL ITEMS 2104.505 REMOVE BIT. PAVEMENT (SQ. YD.)	REMOVAL ITEMS 2104.505 REMOVE CONC. PAVEMENT (SQ. YD.)	SAW PAVEMENT 2104.511 CONCRETE (FULL DEPTH) (LIN. FT.)	SAW PAVEMENT 2104.513 BITUMINOUS (FULL DEPTH) (LIN. FT.)	MILL PAVEMENT 2232.502 CONCRETE (TAPER 0" TO 1") (SQ. YD.)
RT. STA. 402+23		14				
LT. STA. 403+25		14				
LT. STA. 407+25		176				
RT. STA. 408+50		14				
LT. STA. 418+79		14				
RT. STA. 421+60		14				
LT. STA. 421+80		197				
LT. STA. 431+26		14			62	
LT. STA. 434+70		177			23	
RT. STA. 434+94		14				
LT. STA. 437+25		14				
RT. STA. 441+44		216				
RT. & LT. STA. 457+40 – 459+65		561				
RT. STA. 469+64		14				
RT. STA. 470+20 – STA. 471+42				122		
RT. STA. 470+20 – STA. 474+42 (TURN LANE)			503			
STA. 470+42 – STA. 471+42						267
STA. 471+42				24		
STA. 471+42 – STA. 474+42			800			
LT. STA. 472+32 – STA. 474+42		194				
RT. STA. 473+10		39				
LT. STA. 474+42				36	8	
TOTAL	773	8881	2103	206	230	534

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TURF ESTABLISHMENT

LOCATION	SODDING (SQ. YD.)	SEEDING (SQ. YD.)
RT. STA. 234+65 – STA. 240+75		1,011
LT. STA. 238+45 – STA. 243+25		383
LT. STA. 291+35 – STA. 296+15		437
LT. STA. 298+50 – STA. 301+25	200	
LT. STA. 325+00 – STA. 330+00	533	
RT. STA. 337+83 – STA. 342+63		683
LT. STA. 342+82 – STA. 347+62		481
LT. STA. 390+62 – STA. 395+42		601
LT. STA. 395+70 – STA. 400+50		547
RT. STA. 470+20 – STA. 472+00		100
TOTAL	733	4,243

EARTHWORK TABULATION

LOCATION	EMBANKMENT (CV) (CU. YD.)	UNCL. EXC. (CU. YD.)	COMMON BORROW (CV) (CU. YD.)	TOPSOIL BORROW (CV) (CU. YD.)
RT. STA. 234+65 – STA. 240+75	129	34	103	84
LT. STA. 238+45 – STA. 243+25	91	22	74	31
LT. STA. 291+35 – STA. 296+15	33	27	13	36
LT. STA. 298+50 – STA. 301+25	29	0	29	17
LT. STA. 325+00 – STA. 330+00	171	0	171	44
RT. STA. 337+83 – STA. 342+63	84	13	74	57
LT. STA. 342+82 – STA. 347+62	66	18	52	40
LT. STA. 390+62 – STA. 395+42	113	7	107	51
LT. STA. 395+70 – STA. 400+50	38	29	16	48
RT. STA. 470+20 – STA. 472+00	9	*20	–	8
TOTAL	763	170	639	416

* EXCESS MATERIAL TO BE WASTE ON BACKSLOPE AS DIRECTED BY THE ENGINEER

TABULATIONS

CERTIFIED BY Kaye M Bieniek REG. NO. 19917 6/8 2004
LICENSED PROFESSIONAL ENGINEER

SAP 55-609-17 C.S.A.H. 9.

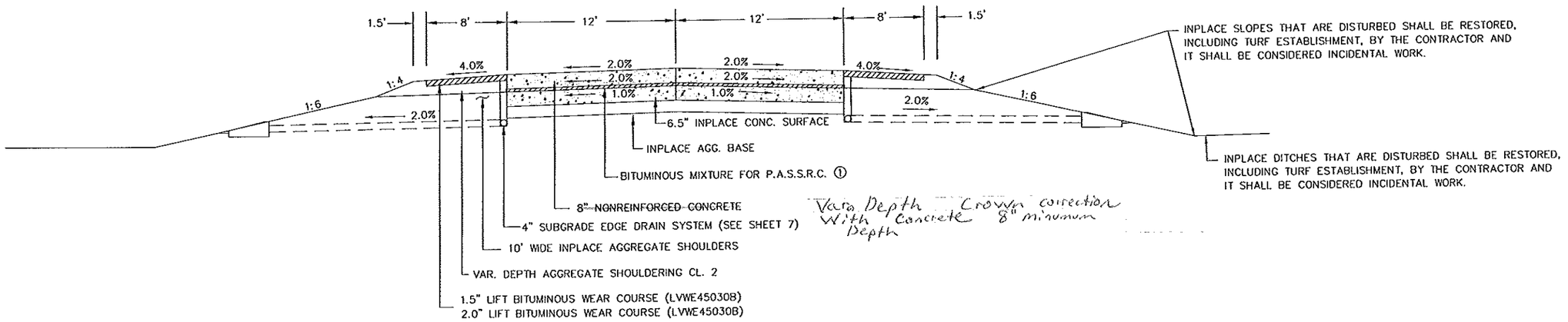
TYPICAL SECTION

STA. 211+55 TO STA. 298+50

STA. 301+25 TO STA. 325+00

STA. 330+00 TO STA. 474+42

SEE SHEET 5 FOR RIGHT TURN LANE & BYPASS LOCATIONS



Vary Depth Crown correction With Concrete Depth 8" minimum

NOTE: ① PASSRC LAYER TO BE PLACED 12.17 FT WIDE ON EACH ~~SIDE OF CENTERLINE, 0.2' DEPTH AT CENTERLINE, 0.08' AT OUTER EDGE.~~

1" PASSRC across entire Section Crown Correction with Concrete

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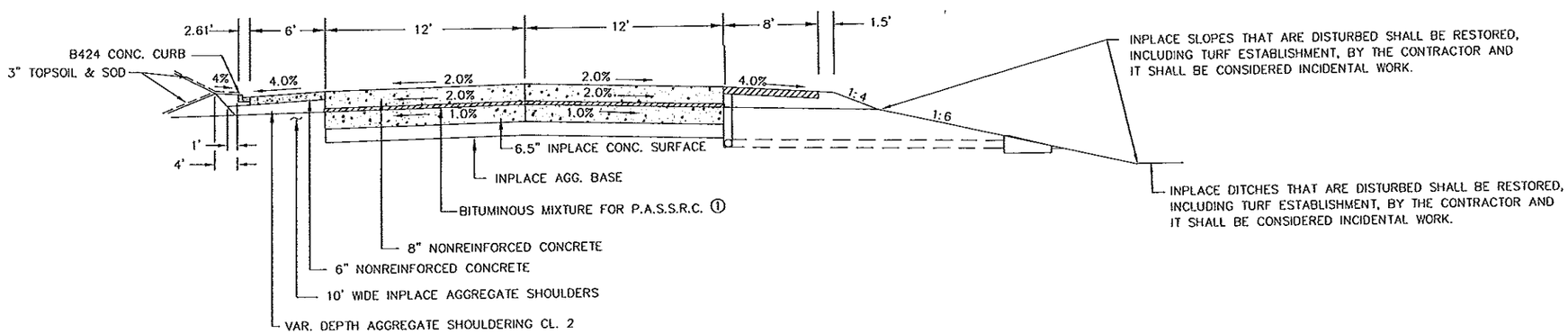
MAR 03 2011

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CURB TYPICAL SECTION

STA. 298+50 TO STA. 301+25

STA. 325+00 TO STA. 330+00

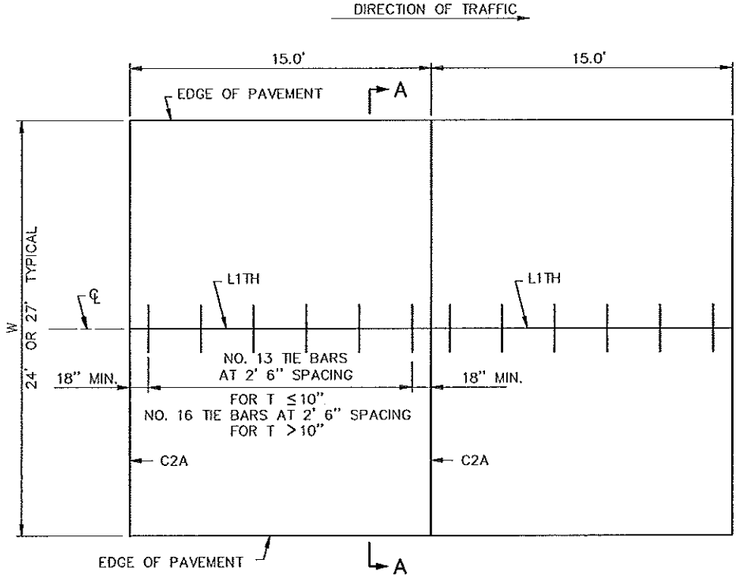


TYPICAL SECTIONS

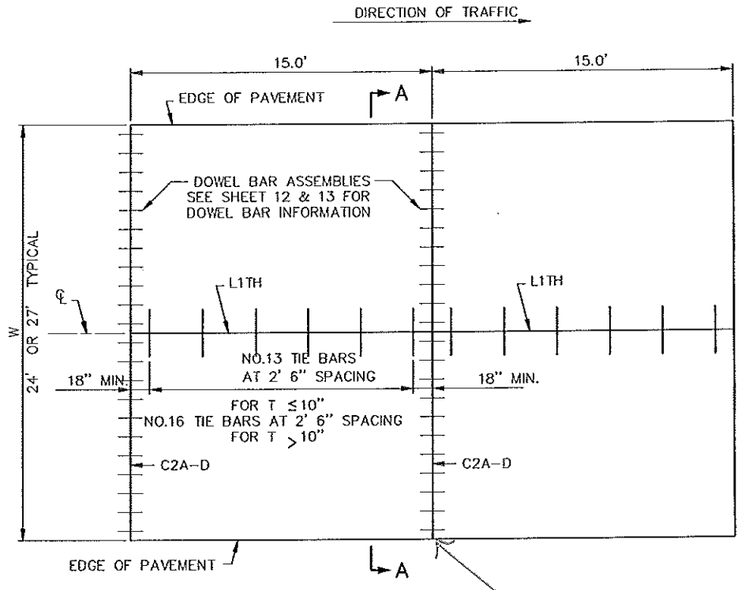
CERTIFIED BY Kurt M Bauer REG. NO. 19217 7/20 2004
LICENSED PROFESSIONAL ENGINEER

SAP 55-609-17 C.S.A.H. 9

SHEET NO. 4 OF 24 SHEETS

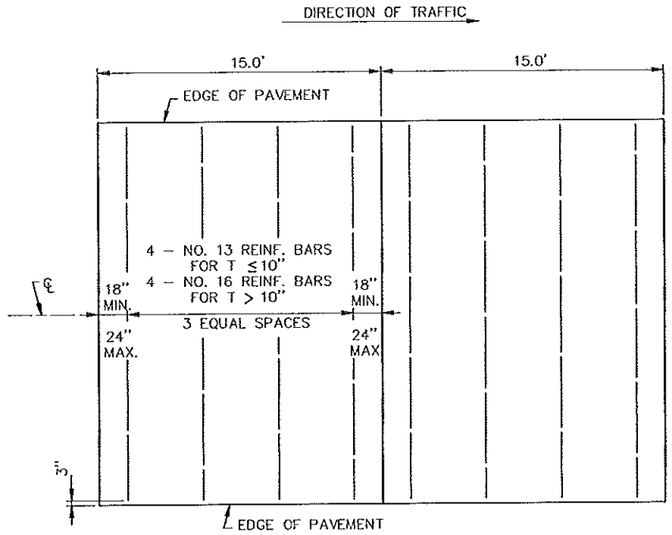


MAINLINE PAVEMENT
UNDOWELED

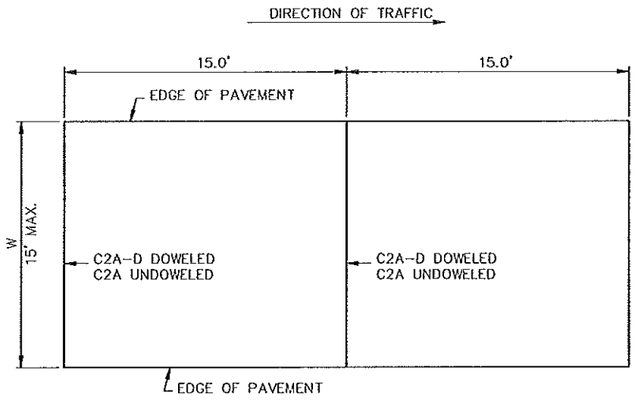


MAINLINE PAVEMENT
DOWELED

Unsealed joint
Section 200' +/- East
of C.R. 102



SUPPLEMENTAL PANEL REINFORCEMENT

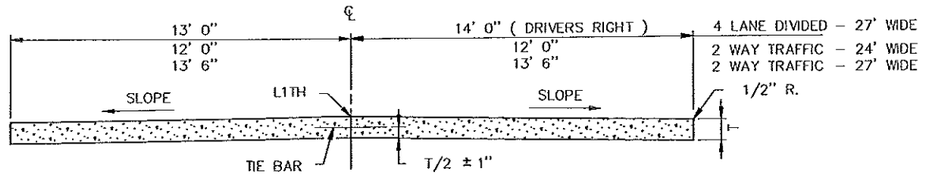


PAVEMENT 2 FT. THRU 15 FT. WIDTH

AS-BUILT

MAR 0 3 2011

ENGINEERING



SECTION A–A

GENERAL NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

SEE TYPICAL SECTIONS AND PLAN SHEETS FOR CROSS SLOPES AND PAVEMENT THICKNESS, T.

WHEN RIGID PAVEMENT ADJOINS FLEXIBLE PAVEMENT, BRIDGE APPROACHES, R. R. CROSSINGS OR OTHER TYPES OF FREE ENDS, THE FOLLOWING MODIFICATIONS SHALL BE MADE: THE FIRST OR LAST 10 JOINTS SHALL BE DOWELED CONTRACTION JOINTS, C2A–D.

DOWEL BAR ASSEMBLIES, WHEN REQUIRED, SHALL BE SIMILAR TO THOSE SHOWN ON STANDARD PLATE 1103.

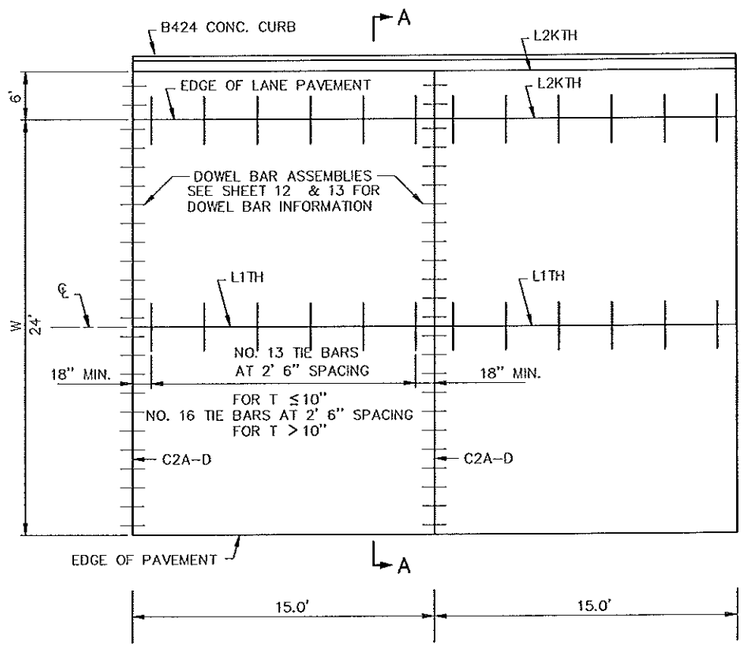
ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301 AND SHALL MEET THE REQUIREMENTS OF GRADE 60 FOR AASHTO M–31 OR M–53. FOR ADDITIONAL REINFORCEMENT OVER CULVERTS, SEE STANDARD PLATE 1070.

TIE BARS:
USE NO. 13 BARS 2' 6" LONG, AT 2' 6" SPACING. FOR T ≤10" USE NO. 16 BARS 3' 0" LONG AT 2' 6" SPACING FOR T >10".

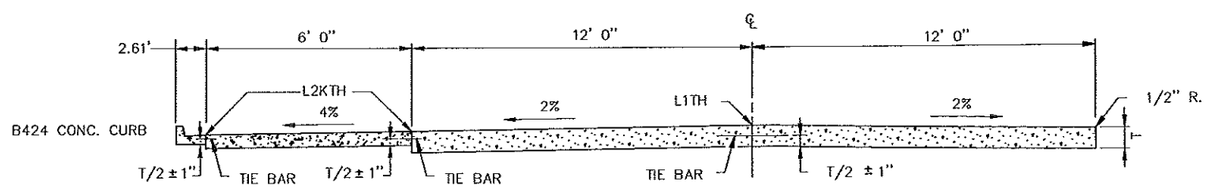
SUPPLEMENTAL PANEL REINFORCEMENT:
PLACE IN PANELS WHERE PAVEMENT WIDTH EXTEEDS 15.0' WITHOUT A LONGITUDINAL JOINT, AND IN THE MIDDLE LANE(S) WHERE TIED PAVEMENT WIDTH EXCEEDS 4 LANES. USE NO. 13 BARS FOR PAVEMENT THICKNESS 10" OR LESS. USE NO. 16 BARS FOR PAVEMENT THICKNESS GREATER THAN 10". PLACEMENT DEPTH SHALL BE PLANNED T/2 ± 1".

NO MORE THAN TWO LANES SHALL BE PAVED AT THE SAME TIME.

STANDARD SHEET NO. 5–297.217	TITLE: CONCRETE MAINLINE PAVEMENT (MODIFIED) 15.0 FT. PANEL LENGTH
STANDARD APPROVED: OCTOBER 1, 1998	
REVISION DATE 1–21–2000	S.A.P.55–609–17 C.S.A.H. 9 SHEET NO. 8 OF 24 SHEETS



MAINLINE PAVEMENT WITH CONC. SHOULDER & CONC. CURB
DOWELED



SECTION A–A

AS-BUILT

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ENGINEERING

GENERAL NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

SEE TYPICAL SECTIONS AND PLAN SHEETS FOR CROSS SLOPES AND PAVEMENT THICKNESS, T.

WHEN RIGID PAVEMENT ADJOINS FLEXIBLE PAVEMENT, BRIDGE APPROACHES, R. R. CROSSINGS OR OTHER TYPES OF FREE ENDS, THE FOLLOWING MODIFICATIONS SHALL BE MADE: THE FIRST OR LAST 10 JOINTS SHALL BE DOWELED CONTRACTION JOINTS, C2A–D.

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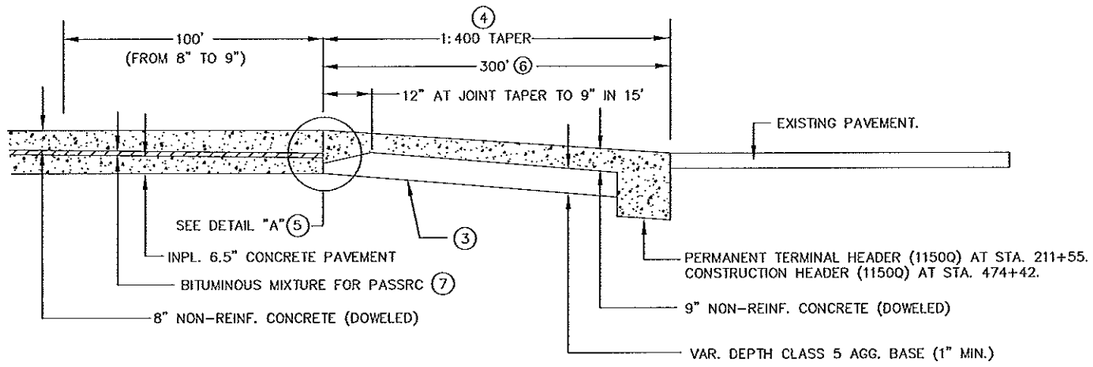
CERTIFIED BY Kaye M Bierwirth REG. NO. 19917 6/8 2004
LICENSED PROFESSIONAL ENGINEER

TITLE: CONCRETE CURB & SHOULDER PAVEMENT
STA. 298+50 TO STA. 301+25
STA. 325+00 TO STA. 330+00

S.A.P.55–609–17 C.S.A.H. 9 SHEET NO. 9 OF 24 SHEETS

PAVING TRANSITION DETAIL

USE AT BEGINNING & END OF PROJECT.



NOTES:

① MILL 1" AT THE END OF THE INPLACE CONCRETE PAVEMENT AND TAPER TO 0" AT A POINT 100' FROM THE END OF INPLACE CONCRETE PAVEMENT PRIOR TO PLACING PASSRC.

② SAWCUT INPLACE CONCRETE PAVEMENT NEAR MID-PANEL PERPENDICULAR TO ROADWAY CENTERLINE, AND SAW C2A JOINTS DIRECTLY OVER SAWCUT.

③ ANY SUBGRADE PREPARATION REQUIRED SHALL BE INCIDENTAL WORK FOR WHICH NO ADDITIONAL COMPENSATION WILL BE MADE.

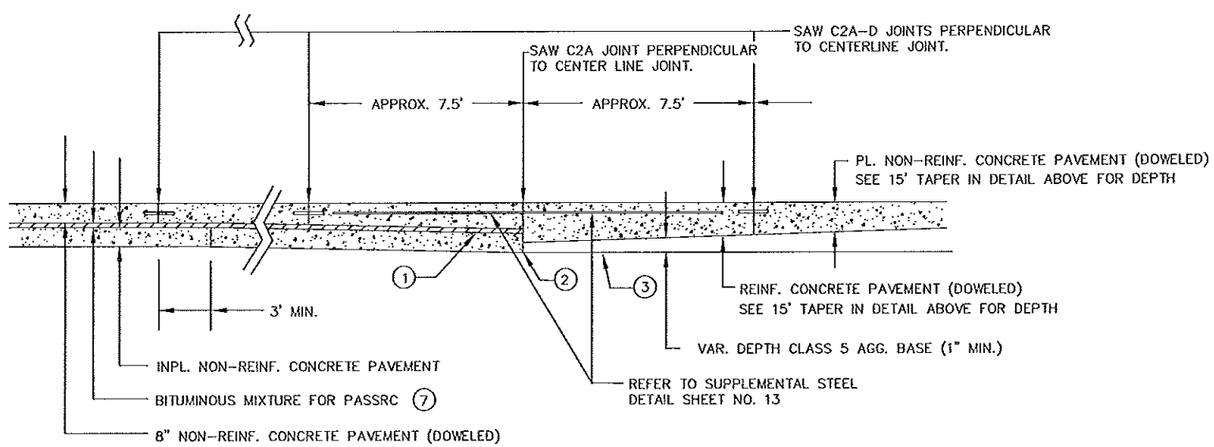
④ TRANSITION CROSS-SLOPE FROM 2.0% TO EXISTING CROSS-SLOPE IN TAPER AREA. THE 300' LENGTH MAY BE ADJUSTED TO MISS INPLACE SKEWED JOINTS.

⑤ REFER TO DETAIL "A" FOR SUPPLEMENTAL REINFORCEMENT LOCATION. SUPPLEMENTAL STEEL SHALL BE INCIDENTAL AND NO ADDITIONAL COMPENSATION WILL BE MADE.

⑥ ITEM NO. 2112.501 SUBGRADE PREPARATION TO BE USED FOR ANY EXCAVATION DONE IN THE TRANSITION AREA AND ANY EXCESS MATERIAL TO BE REMOVED, AS DIRECTED BY THE ENGINEER, SHALL BE REMOVED FROM THE PROJECT AND CONSIDERED INCIDENTAL TO ITEM 2112.501.

⑦ 0.2 FT DEPTH AT CENTERLINE, 0.08 FT DEPTH AT OUTER EDGE.

DETAIL "A"



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PAVING TRANSITION SECTIONS

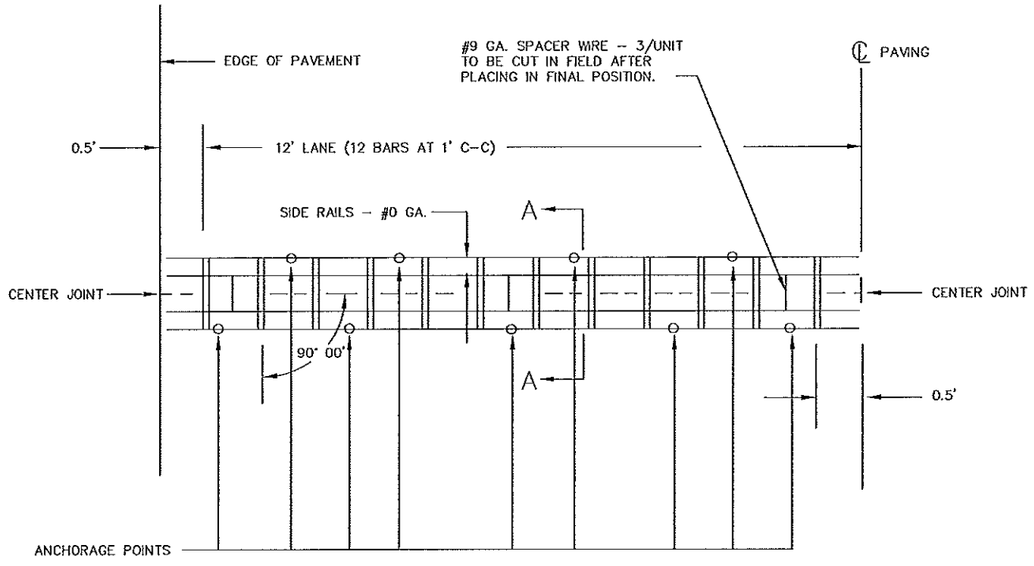
CERTIFIED BY Kyle M Biesiek REG. NO. 19917 6/8 2004
LICENSED PROFESSIONAL ENGINEER

SAP 55-609-17 C.S.A.H. 9

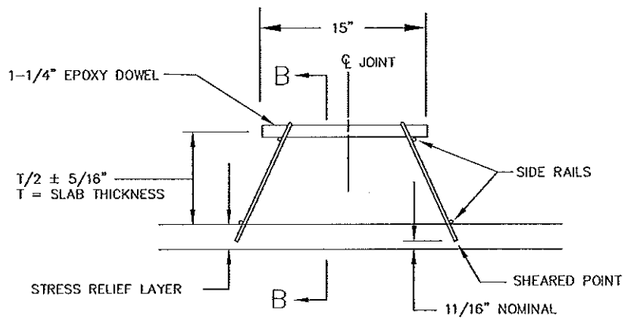
SHEET NO. 10 OF 24 SHEETS

PLAN OF NON-SKEWED CONTRACTION JOINT DOWEL ASSEMBLY

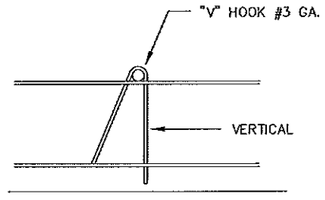
DOWEL ASSEMBLY TOP VIEW



DOWEL ASSEMBLY SIDE VIEW



SECTION A–A



SECTION B–B

NOTES:

ALL DOWELS SHALL BE 1–1/4" X 15" EPOXY DOWELS SHEARED AT BOTH ENDS.
STEEL FOR DOWELS SHALL CONFORM TO MNDOT SPEC. 3302
EPOXY FOR DOWELS SHALL CONFORM TO MNDOT SPEC 3302
A MINIMUM OF NINE ANCHORAGE POINTS ARE REQUIRED, FIVE ON THE SIDE OF THE BASKET FACING THE PAVER.

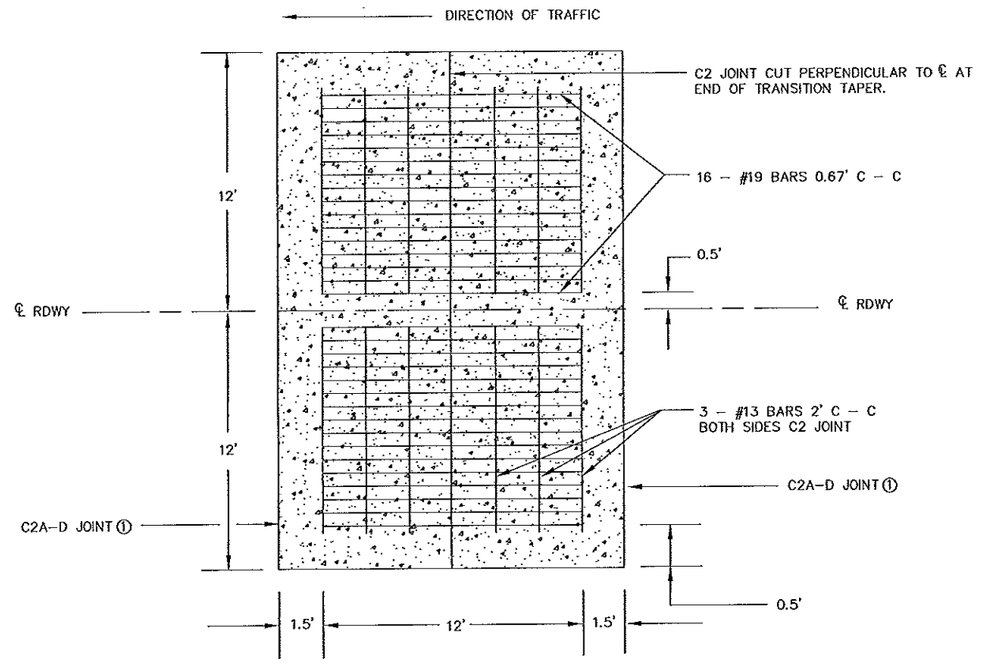
THE DOWEL BASKET ASSEMBLIES SHALL BE ANCHORED TO THE UNDERLYING PAVEMENT TO PREVENT ASSEMBLY MOVEMENT.
THE ANCHORAGE SYSTEM SHALL USE PINS OR FASTENERS OF SUFFICIENT
LENGTH AND SHANK DIAMETER (1/2" MINIMUM) TO PENETRATE INTO THE INPLACE CONCRETE PAVEMENT.

ALL JOINT SPACING WILL BE 15' UNIFORM.

SUPPLEMENTAL STEEL DETAIL ②

TRANSITION FROM UNBONDED OVERLAY TO PAVING ON GRADE

TOP VIEW

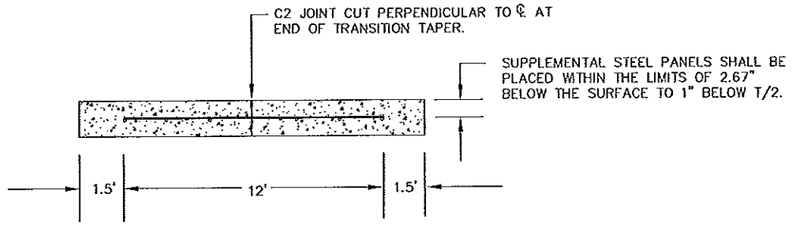


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SIDE VIEW



GENERAL NOTES:

① C2A–D JOINTS WILL BE USED. SAW C2 JOINTS PERPENDICULAR TO CENTERLINE JOINT.

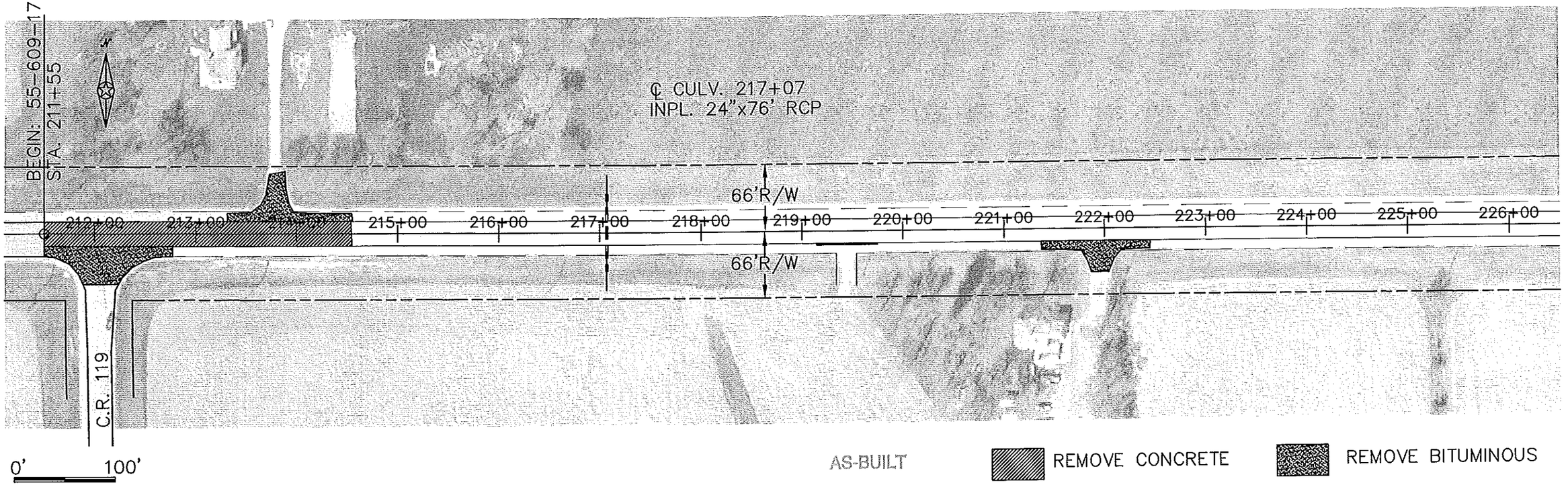
② PROVIDE THE SUPPLEMENTAL STEEL WHERE PAVING MATERIALS DIFFER UNDER OVERLAY.

PAVING DETAILS

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S.A.P. 55–609–17 C.S.A.H. 9

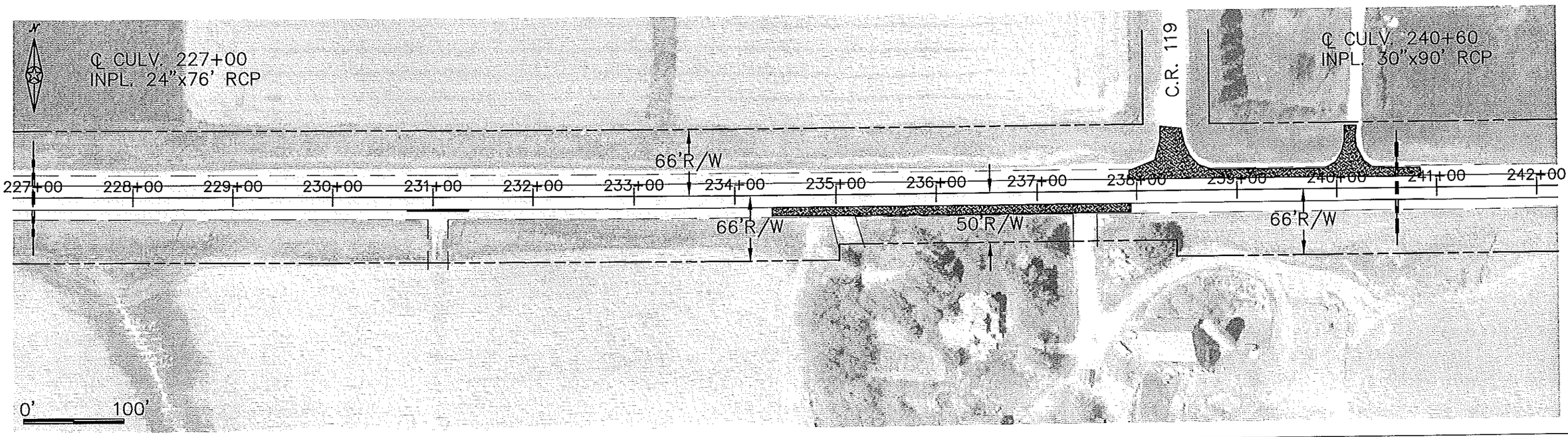
SHEET 13 OF 24 SHEETS



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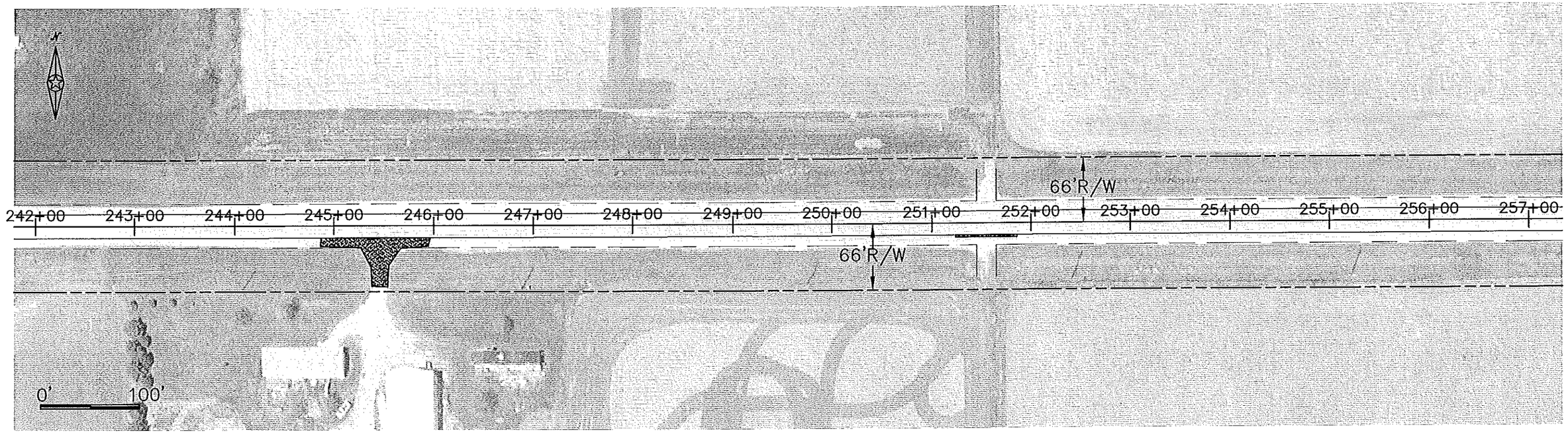
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S.A.P. 55-609-17 C.S.A.H. 9

SHEET 14 OF 24 SHEETS

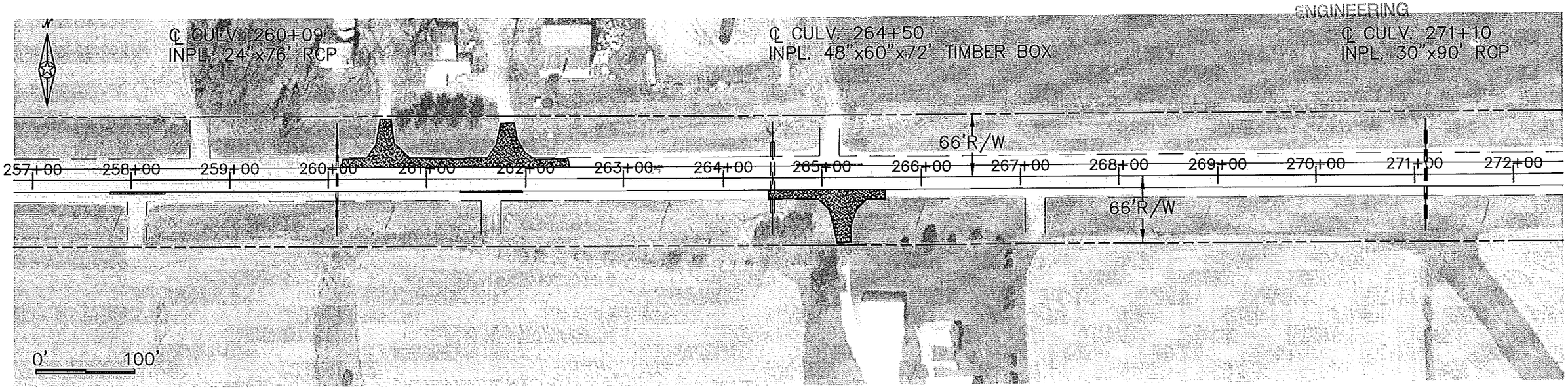


REMOVE BITUMINOUS

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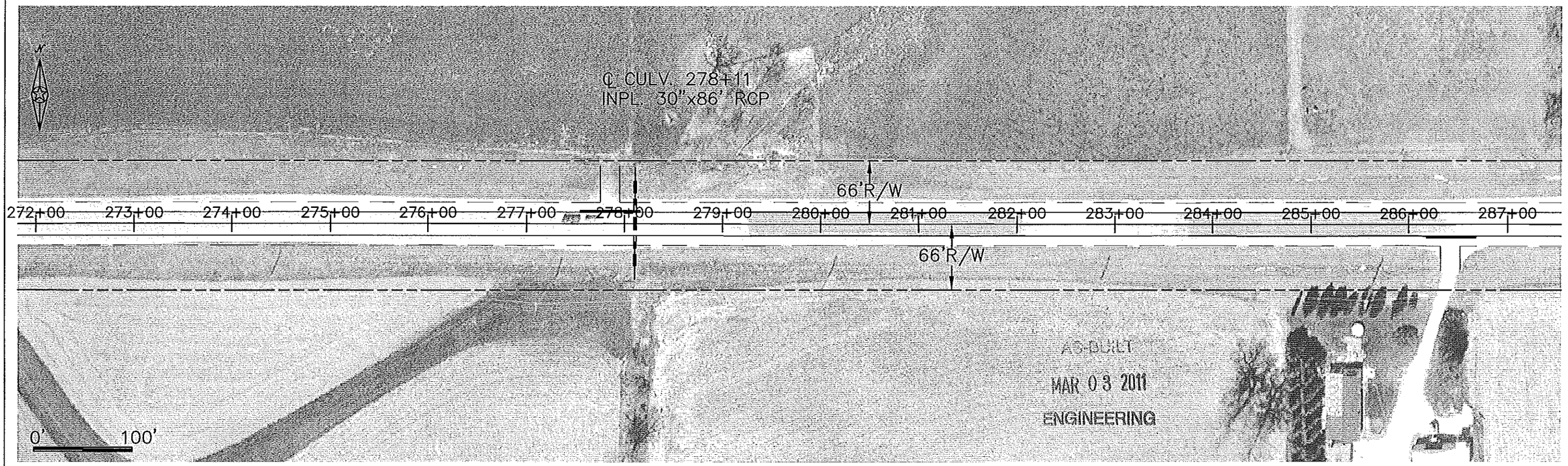
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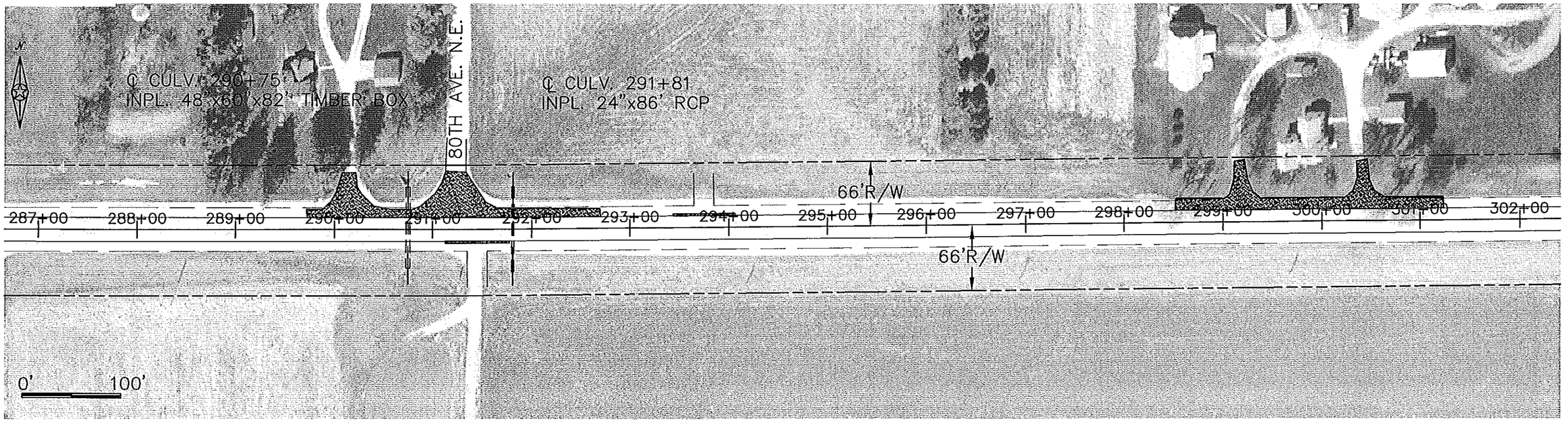
CERTIFIED BY Kurt W. Bauer LICENSED PROFESSIONAL ENGINEER REG. NO. 19917 6/8 2004

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SHEET 15 OF 24 SHEETS



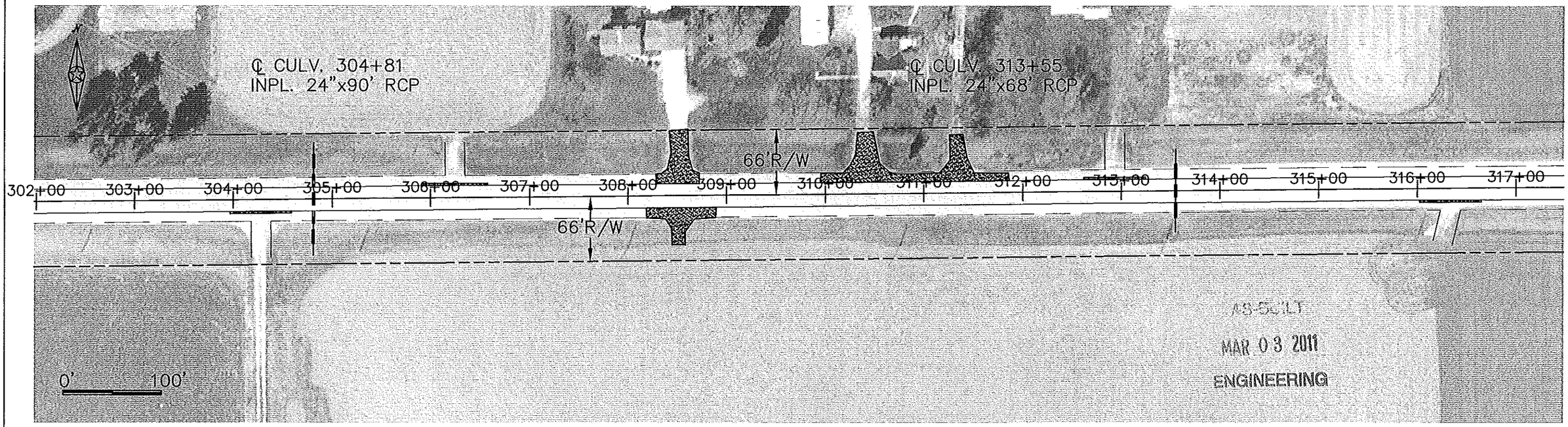
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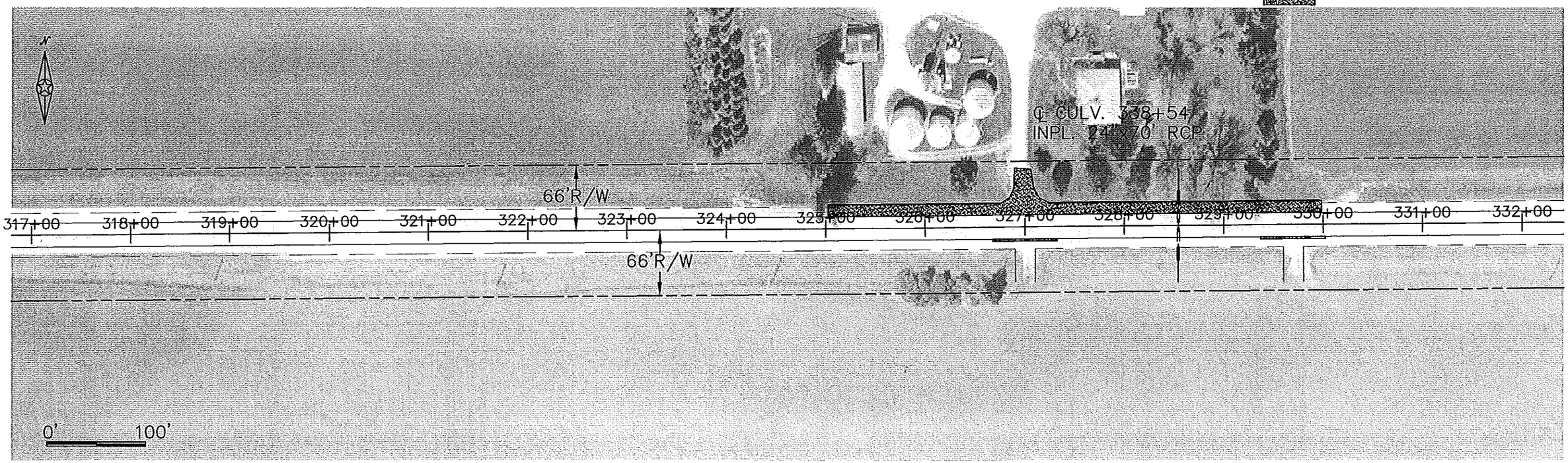
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S.A.P. 55-609-17 C.S.A.H. 9

SHEET 16 OF 24 SHEETS



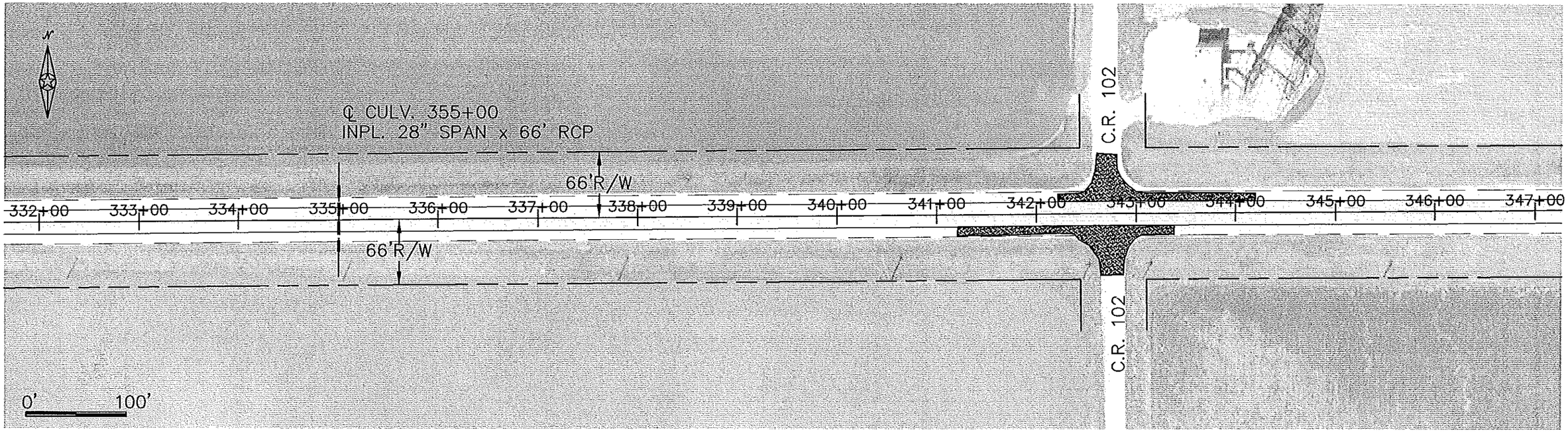
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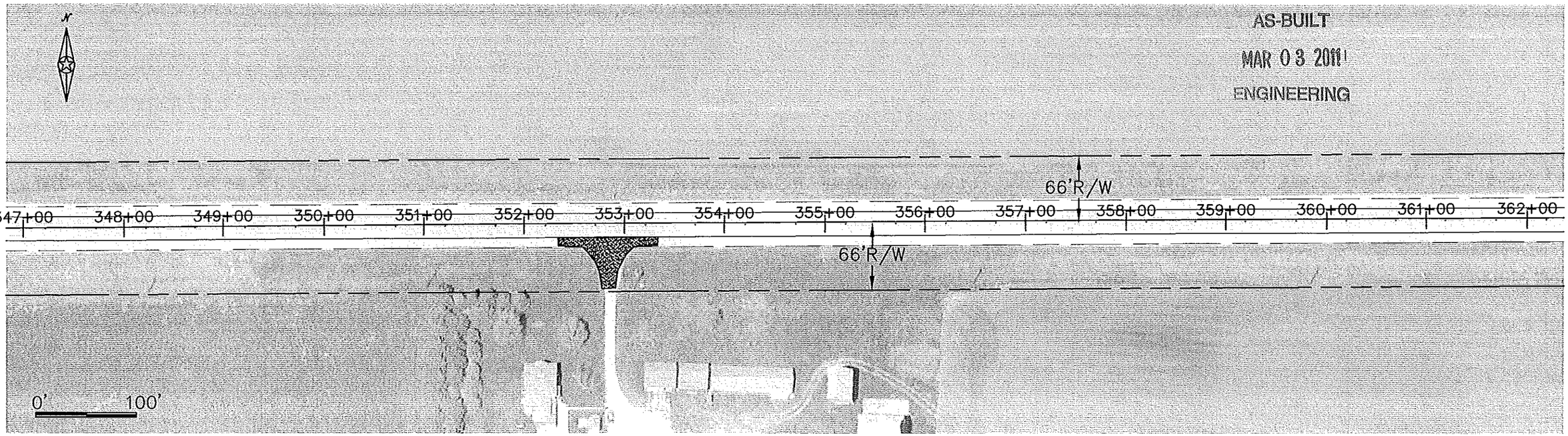
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S.A.P. 55-609-17 C.S.A.H. 9

SHEET 17 OF 24 SHEETS



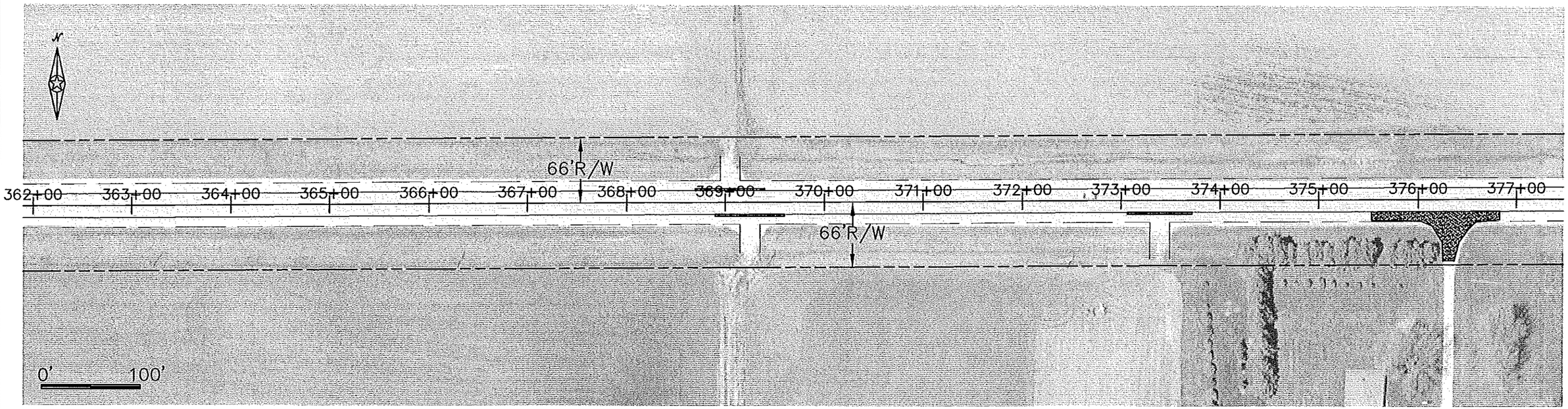
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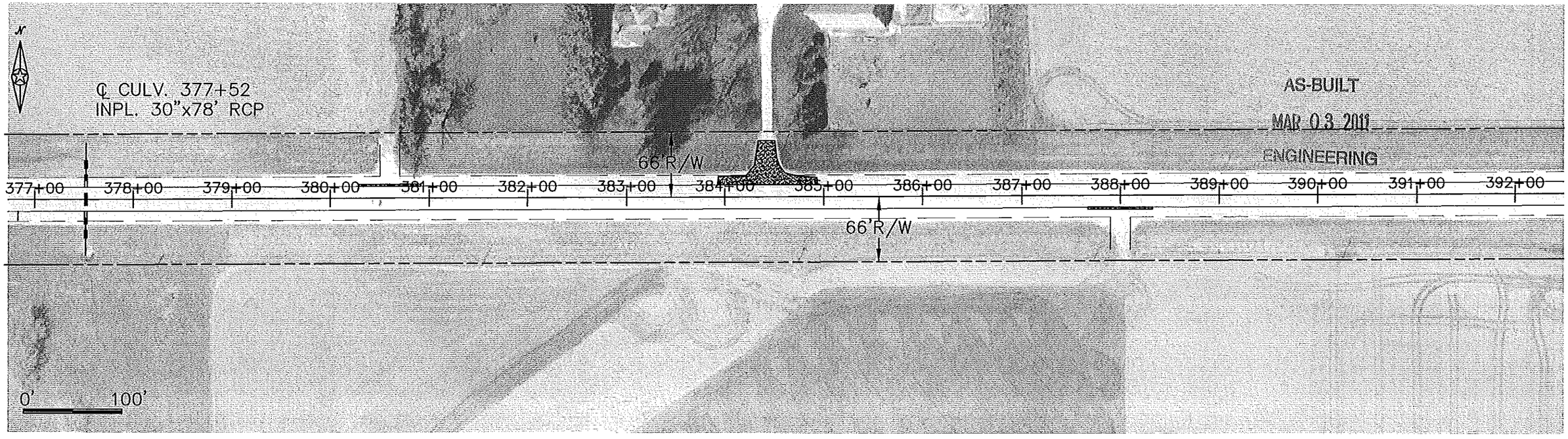
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SHEET 18 OF 24 SHEETS



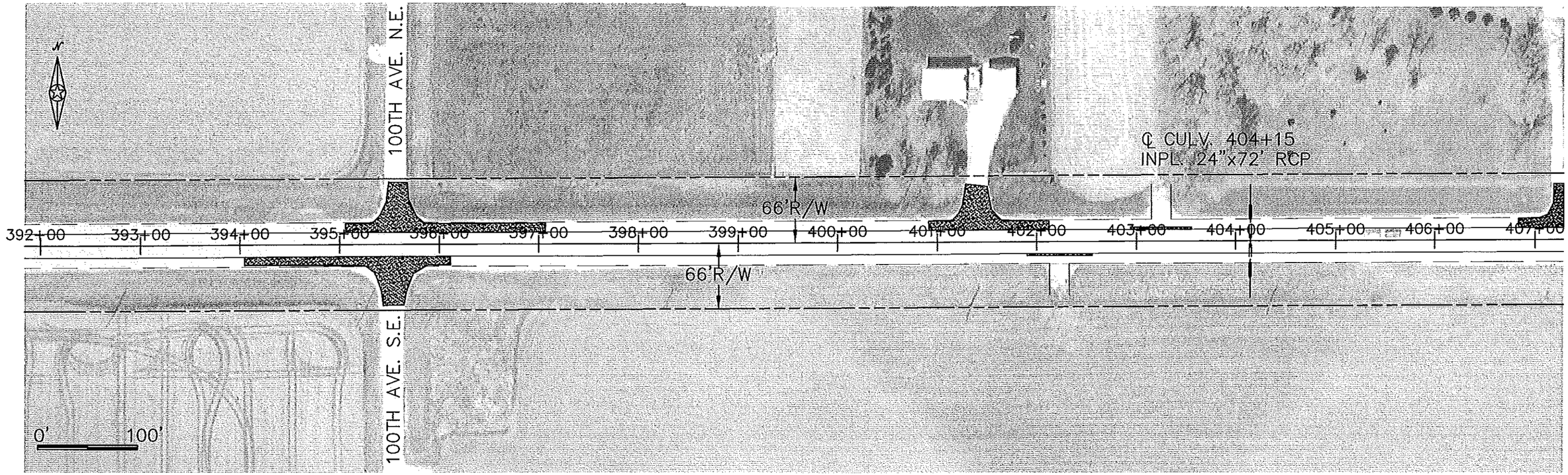
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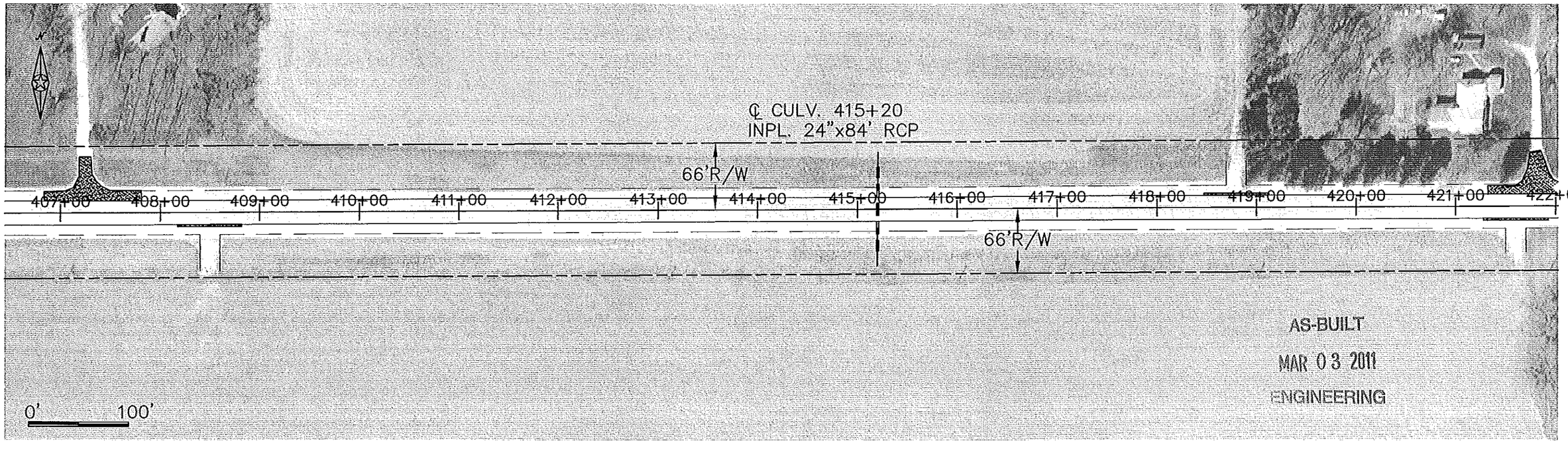
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SHEET 19 OF 24 SHEETS



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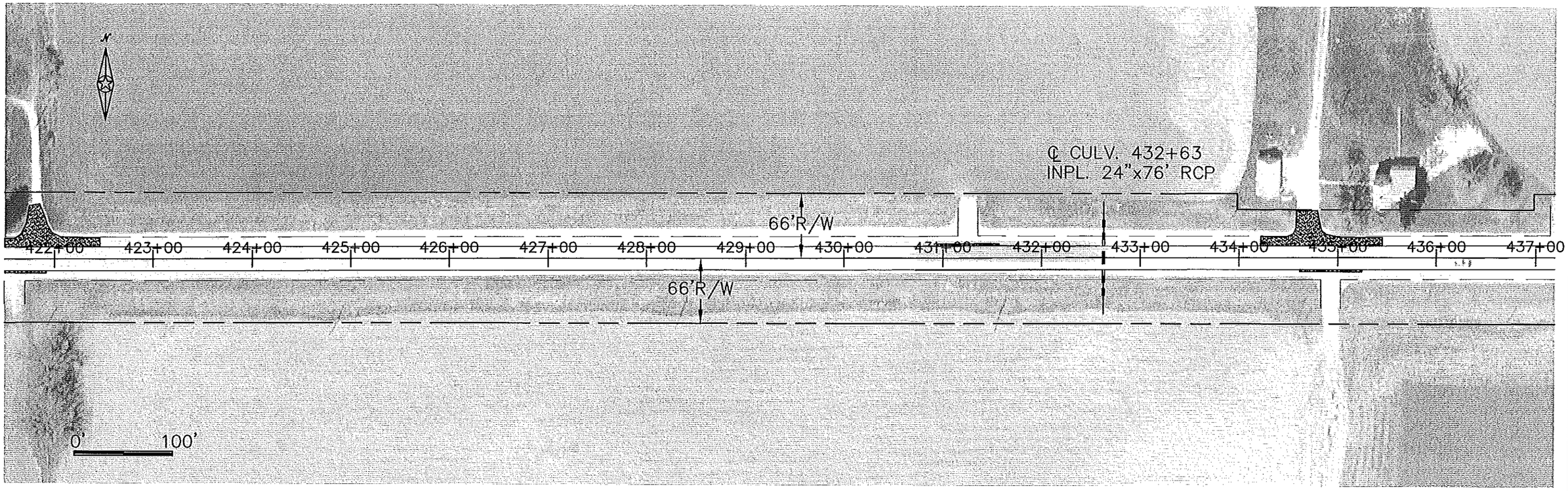
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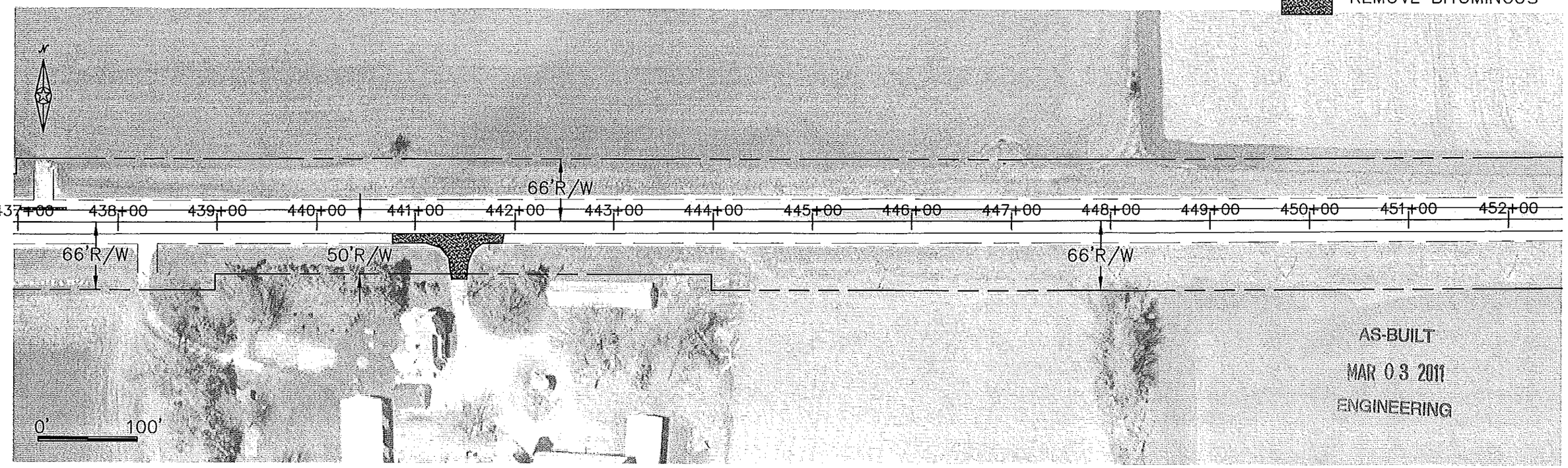
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SHEET 20 OF 24 SHEETS



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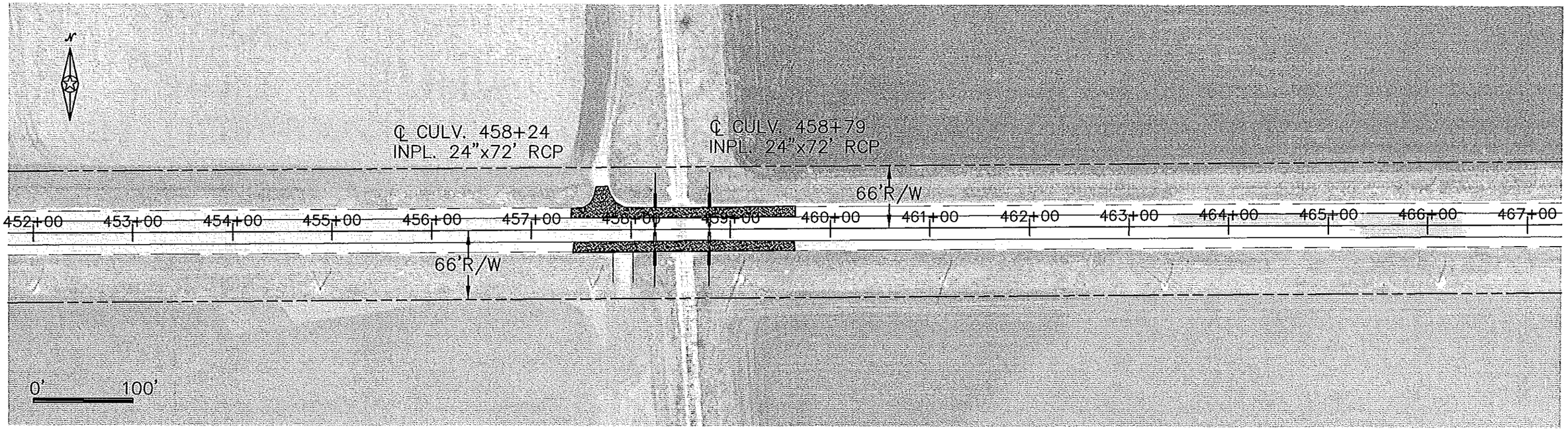


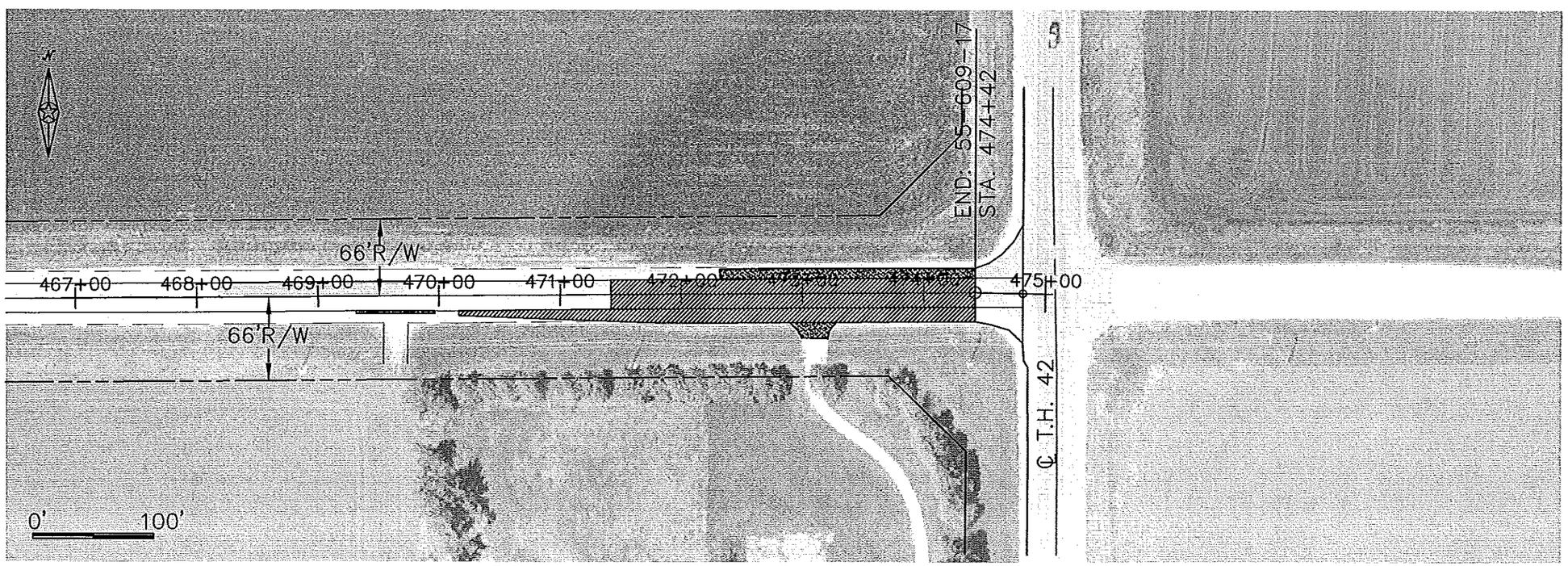
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SHEET 21 OF 24 SHEETS





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