MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

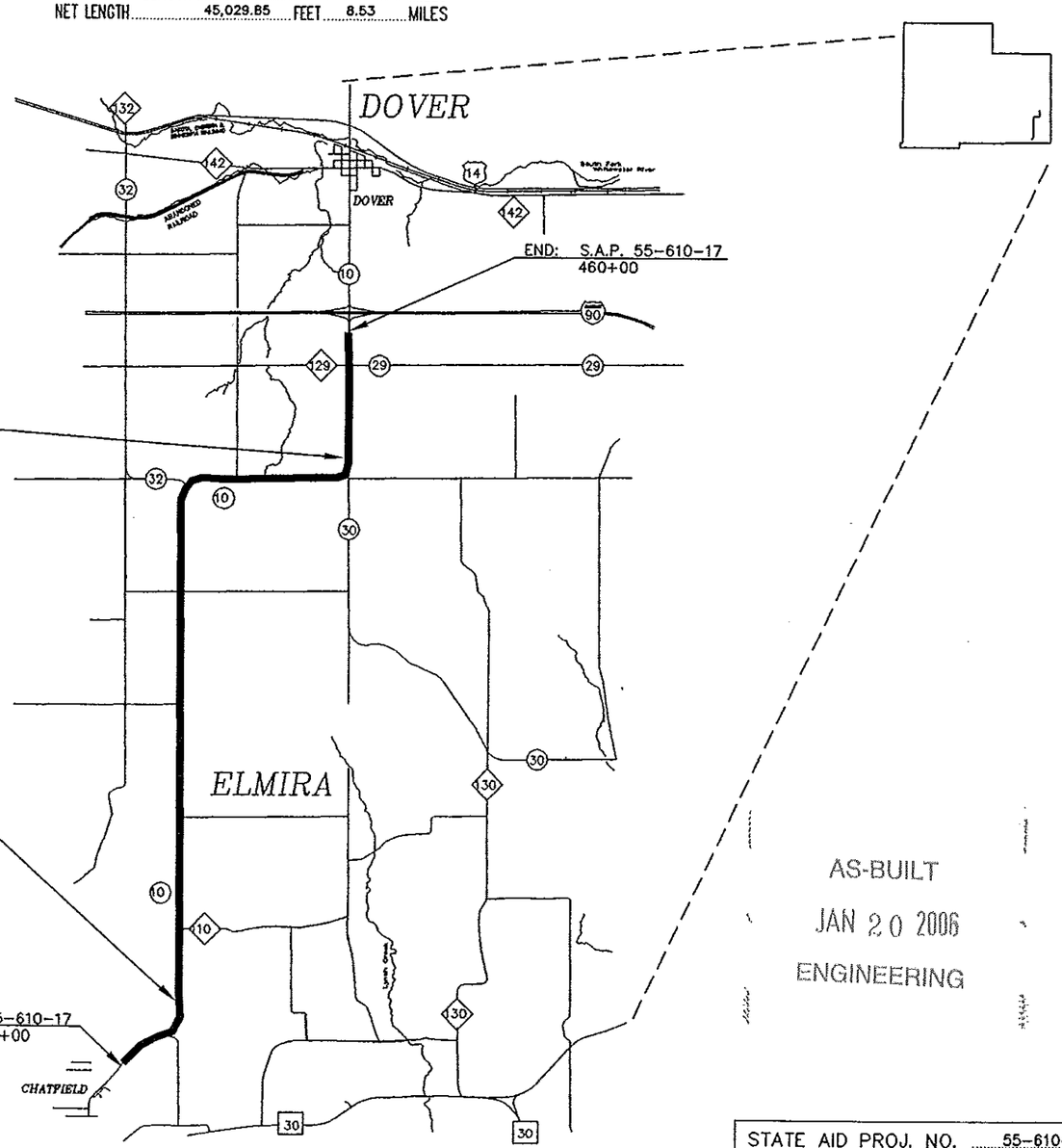
CONSTRUCTION PLAN FOR PAVEMENT EDGE DRAINS

LOCATED ON OLMSTED CSAH 10 BETWEEN CHATFIELD AND 700' S. OF JCT. CSAH 10 & I-90 (GEOGRAPHIC DESCRIPTION)

FROM 1570' W. & 135' S. OF E. 1/4 COR. SEC. 31 T.106N.-R.11W. TO 1755' N. OF SE. COR. SEC. 28 T.106N.-R.11W. (LEGAL DESCRIPTION)

S.A.P. NO. 55-610-17

GROSS LENGTH	45,029.85	FEET	8.53	MILES
BRIDGE-LENGTH	0.00	FEET	0.00	MILES
EXCEPTIONS-LENGTH	0.00	FEET	0.00	MILES
NET LENGTH	45,029.85	FEET	8.53	MILES



AS-BUILT
JAN 20 2006
ENGINEERING

MINN. PROJ. NO. .....

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE MAY 2, 1994, SUPPLEMENTAL SPECIFICATION SHALL GOVERN.

INDEX

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	ESTIMATE OF QUANTITIES & DETAIL SHEET
SHEET NO. 3	TABULATION SHEET
SHEET NO. 4-13	PLAN SHEETS (INFORMATION ONLY)

THIS PLAN CONTAINS 13 SHEETS.

STA 108+00 TO STA 184+17.67
CONCRETE OVERLAY 1982 UNDER SAP 55-610-12
SURFACED 1968 UNDER SAP 55-610-05
GRADED 1966 UNDER SAP 55-610-05

STA 184+17.67 TO STA 503+80
CONCRETE SURFACE 1982 UNDER SAP 55-610-12
GRADED 1977 UNDER SAP 55-610-08

STA 400+56.57 TO DOVER
CONCRETE OVERLAY 1982 UNDER SAP 55-610-13
SURFACED 1961 UNDER SAP 55-610-03
GRADED 1959 UNDER SAP 55-610-01

DESIGN DESIGNATION (OLMSTED CSAH 10)

ADT (Current Year)	= 968(2000)	Design Speed	50 MPH
ADT (Future Year)	= 1,549(2020)	STA. 112+00 TO STA. 400+56.57	
DHV (Design Hr. Vol.)	=	Design Speed	45 MPH
D (Directional Distr.)	=	STA. 400+56.57 TO STA. 460+00	
T (Heavy Commercial)	=	Based on STOPPING Sight Distance	
SOIL FACTOR	= 130	Height of eye 3.75 Height of object 0.5	
TON DESIGN	10	Design Speed not achieved at:	
LANE WIDTH	12'	STA. ..... TO STA.	MPH
SHOULDER WIDTH	6'	STA. ..... TO STA.	MPH

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

DATE 1/13/00 REG. NO. 19917 ENGR Kaye M Bierwerk

COUNTY OLMSTED

Approved 1/13 2000 Michael A Nelson
OLMSTED COUNTY ENGINEER

Recommended for Approval ..... 20 .....
DISTRICT STATE AID ENGINEER

Recommended for Approval ..... 20 .....
STATE AID PLANS AND SPECS ENGINEER

Approved January 18 2000 Andy Schmidt
FOR STATE AID DIVISION

STATE AID PROJ. NO. 55-610-17
~~STATE PROJ. NO.~~ .....
SHEET NO. 1 OF 13 SHEETS

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 RCO
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

AN 0 100'
0 100' HORIZ. 0 10' VERT.
0 5,280'

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	PARTICIPATING	TOTAL ESTIMATED QUANTITIES
2502.521	4" TP PIPE DRAIN	LIN FT	~~2688~~ 2289	~~2688~~
2502.541	4" PERF PE PIPE DRAIN	LIN FT	~~84042~~ 84099	~~84042~~
2502.601	4" PRECAST CONCRETE HEADWALL	EACH	168	168

2289
84099

QUANTITY NOTES

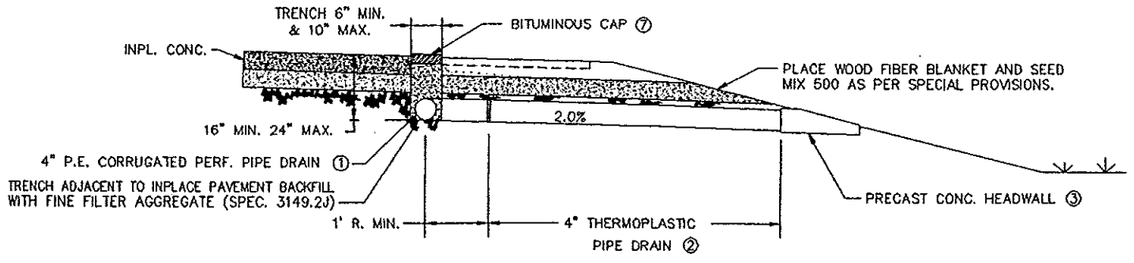
SEE TABULATION SHEET 3 FOR PERFORATED PIPE & HEADWALL LOCATIONS.

STANDARD PLATES

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

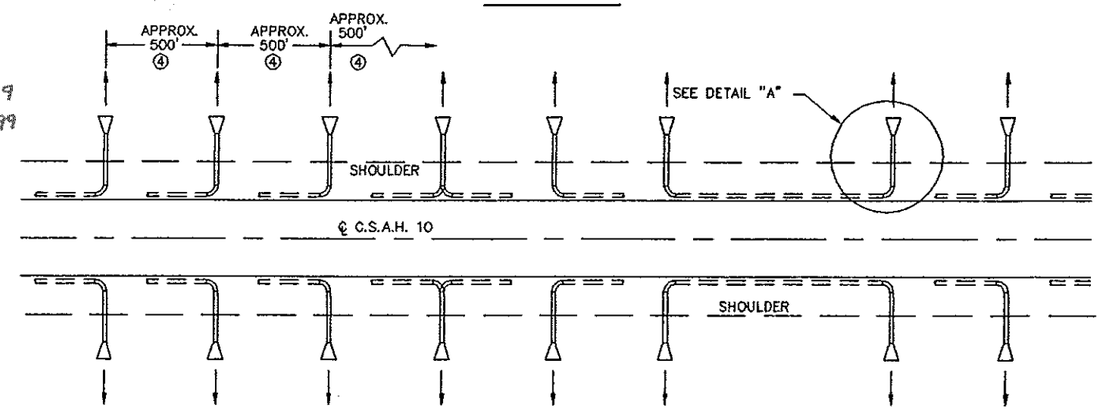
PLATE NO.	DESCRIPTION
	NUMERICAL INDEX OF STANDARD PLATES
3131 B	PRECAST CONCRETE HEADWALL FOR SUBSURFACE DRAINS
8000 I	STANDARD BARRICADES

X-SECTION VIEW



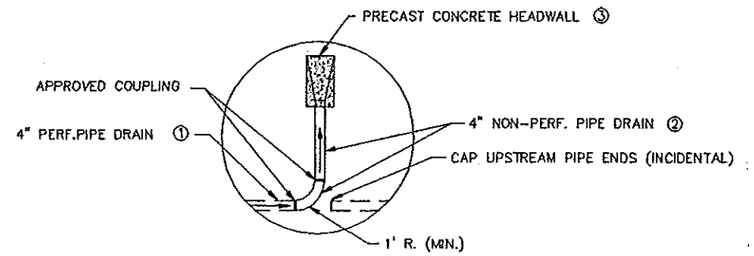
EDGE DRAIN DETAILS AND CONSTRUCTION NOTES

PLAN VIEW



LEGEND

- = = = 4" PERFORATED PIPE DRAIN
- ═══ 4" NON-PERFORATED PIPE DRAIN
- ▷ PRECAST CONCRETE HEADWALL



DETAIL "A"

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CONSTRUCTION NOTES

① PAYMENT FOR 4" PERFORATED PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, FABRIC WRAPPED P.E. PIPE, INSTALLATION, FILTER AGGREGATE BACKFILL AND COMPACTION, BITUMINOUS OR AGGREGATE CAP, AND ALL OTHER ASSOCIATED WORK.

② PAYMENT FOR 4" NON-PERFORATED PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, FURNISHING AND PLACING PIPE AND CONNECTIONS, BACKFILL AND COMPACTION, AND ALL OTHER ASSOCIATED WORK.

③ PAYMENT FOR PRECAST CONCRETE HEADWALLS SHALL BE FULL COMPENSATION FOR PLACING HEADWALL, WOOD FIBER BLANKET AND SEED, AND ALL OTHER ASSOCIATED WORK.

④ IF AN OUTLET HAPPENS TO FALL WITHIN A CROSS-OVER OR DITCH-BLOCK INCREASE THE LENGTH OF THE PERFORATED PIPE TO A POINT WHERE AN OUTLET CAN BE SATISFACTORLY CONSTRUCTED AS DIRECTED BY THE ENGINEER.

⑤ EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH MN/DOT SPEC. 2104.303.

⑥ NO EDGEDRAINS WILL BE PLACED ON ELEVATED SUPER SIDE AS DIRECTED BY ENGINEER.

⑦ WHERE THERE IS AN INPLACE BITUMINOUS SHOULDER THE TRENCHED HOLE SHALL BE FINISHED WITH A BITUMINOUS CAP HAVING THE SAME DEPTH AS THE BITUMINOUS SHOULDER AND COMPACTED TO 1 INCH ABOVE EXISTING PAVEMENT.

EDGE DRAIN TABULATIONS

English Stations	Location	Perf. Pipe (feet)	TP Pipe (feet)	Headwalls (each)	Headwall Stations	
~~112+00 - 117+02~~	RT&LT	~~1004~~	~~32~~ 26	2	112+00	
~~117+02 - 121+36~~	RT	~~434~~	~~16~~ 13	1	117+02	
~~117+02 - 122+04~~	LT	~~502~~	~~16~~ 15	1	117+02	
~~122+04 - 127+06~~	LT	~~502~~	~~16~~ 17	1	122+04	
~~127+06 - 132+08~~	LT	~~502~~	~~16~~ 17	1	127+06	
~~128+89 - 133+74~~	RT	~~485~~	~~16~~ 15	1	128+89	
~~132+08 - 137+13~~	LT	~~505~~	16	1	132+08	
~~133+74 - 138+59~~	RT	~~485~~	~~16~~ 13	1	133+74	
~~138+59 - 143+14~~	RT	~~455~~	~~16~~ 21	1	138+59	
~~143+14 - 148+23~~	RT	~~500~~	~~16~~ 17	1	143+14	
~~148+23 - 154+03~~	RT&LT	~~1160~~	~~64~~ 55	4	~~148+23-154+03~~	147+95 - 153+55
~~154+03 - 158+12~~	LT	~~400~~	~~16~~ 14	1	~~158+12~~	157+66
~~158+12 - 167+23~~	LT	~~911~~	~~16~~ 15	1	~~162+13~~ LOW PT	162+30
~~168+17 - 173+04~~	~~RT&LT~~	~~974~~	~~32~~ 12	~~2~~ 1	~~168+17~~	166+25
~~173+04 - 181+91~~	~~RT&LT~~	~~1774~~	~~64~~ 13	~~4~~ 1	~~173+04-181+91~~	169+36
~~181+91 - 189+21~~	RT&LT	~~1460~~	~~32~~ 24	2	~~184+36 LOW PT~~	172+27
~~189+21 - 194+06~~	RT&LT	~~970~~	~~32~~ 28	2	~~189+21~~	181+15
~~194+06 - 199+01~~	RT&LT	~~990~~	~~32~~ 27	2	~~194+06~~ Low Pt	183+70
~~199+01 - 203+96~~	RT&LT	~~990~~	~~32~~ 31	2	~~199+01~~	188+30
~~203+96 - 208+91~~	RT&LT	~~990~~	~~32~~ 26	2	~~203+96~~	193+25
~~208+91 - 213+86~~	RT&LT	~~990~~	~~32~~ 33	2	~~208+91~~	198+20
~~213+86 - 224+13~~	RT&LT	~~1027~~	~~64~~ 33	~~4~~ 2	~~213+86-224+13~~	203+10
~~224+13 - 234+36~~	RT&LT	~~2046~~	~~32~~ 27	2	~~229+52 LOW PT~~	208+10
~~234+36 - 239+20~~	RT&LT	~~968~~	~~32~~ 29	2	~~234+36~~	213+86
~~239+20 - 244+04~~	RT&LT	~~968~~	~~32~~ 28	2	~~239+20~~	224+13
~~244+04 - 248+88~~	RT&LT	~~968~~	~~32~~ 31	2	~~244+04~~ Low Pt	229+60
~~248+88 - 253+72~~	RT&LT	~~968~~	~~32~~ 30	2	~~248+88~~	234+36
~~253+72 - 263+56~~	RT&LT	~~984~~	~~64~~ 32	~~4~~ 2	~~253+72-263+56~~	239+20
~~263+56 - 268+11~~	RT&LT	~~910~~	~~32~~ 28	2	~~268+11~~	244+04
~~268+11 - 277+38~~	RT&LT	~~1854~~	~~32~~ 24	2	~~272+66 LOW PT~~	248+88
~~277+38 - 282+10~~	RT&LT	~~944~~	~~32~~ 25	2	~~277+38~~	253+72
~~282+10 - 286+82~~	RT&LT	~~944~~	~~32~~ 25	2	~~282+10~~	263+64
~~286+82 - 291+54~~	RT&LT	~~944~~	~~32~~ 30	2	~~286+82~~	268+11
~~291+54 - 296+26~~	RT&LT	~~944~~	~~32~~ 23	2	~~291+54~~ Low Pt	272+66
~~296+26 - 300+98~~	RT&LT	~~944~~	~~32~~ 27	2	~~296+26~~	277+38
~~300+98 - 310+80~~	RT&LT	~~1964~~	~~64~~ 28	~~4~~ 2	~~300+98-310+80~~	282+10
~~310+80 - 315+95~~	RT&LT	~~1030~~	~~32~~ 28	2	~~315+95~~	286+82
~~315+95 - 324+12~~	RT&LT	~~1634~~	~~32~~ 23	2	~~319+31 LOW PT~~	291+54
~~324+12 - 328+90~~	RT&LT	~~956~~	~~32~~ 25	2	~~324+12~~	296+26
~~328+90 - 333+72~~	RT&LT	~~964~~	~~32~~ 27	2	~~328+90~~	300+98
~~333+72 - 338+54~~	RT&LT	~~964~~	~~32~~ 27	2	~~333+72~~	310+80
~~338+54 - 348+78~~	RT&LT	~~2048~~	~~64~~ 27	~~4~~ 2	~~338+54-348+78~~	314+40
~~348+78 - 357+20~~	RT&LT	~~1684~~	~~32~~ 31	2	~~354+16~~ Low Pt	319+15
~~357+20 - 362+13~~	RT&LT	~~986~~	~~32~~ 25	2	~~357+20~~	324+12
~~362+13 - 367+06~~	RT&LT	~~986~~	~~32~~ 27	2	~~362+13~~	328+86
	RT&LT	~~45630~~	~~1456~~ 29	~~91~~ 2	333+35	
	RT & LT		30	~~2~~ 2	338+54	
	RT & LT		25	2	348+78	
	RT & LT		26	2	354+68	
	RT & LT		28	2	357+20	
	RT & LT		28	2	362+13	
	Subtotals		1246	91		

English Stations	Location	Perf. Pipe (feet)	TP Pipe (feet)	Headwalls (each)	Headwall Stations	
~~367+06 - 372+00~~	RT&LT	~~988~~	~~32~~ 30	2	367+06	
~~372+00 - 381+06~~	RT&LT	~~1812~~	~~64~~ 57	4	372+00-381+06	
~~381+06 - 385+20~~	RT&LT	~~828~~	~~32~~ 25	2	385+20	
~~385+20 - 392+90~~	RT&LT	~~1540~~	~~32~~ 29	2	~~389+33~~ LOW PT	389+00
~~392+90 - 396+73~~	RT&LT	~~766~~	~~32~~ 32	2	392+90	
~~396+73 - 404+63~~	RT&LT	~~1580~~	~~64~~ 56	4	396+73-404+63	
~~404+63 - 408+70~~	RT&LT	~~814~~	~~32~~ 27	2	408+70	
~~408+70 - 412+77~~	RT&LT	~~814~~	~~32~~ 30	2	412+77	
~~412+77 - 419+81~~	RT	~~704~~	~~16~~ 12	1	~~416+31~~ LOW PT	415+88
~~419+81 - 428+66~~	RT	~~885~~	~~32~~ 26	2	419+81-428+66	
~~425+76 - 428+66~~	LT	~~290~~	~~16~~ 17	1	428+66	
~~428+66 - 433+33~~	RT&LT	~~934~~	~~32~~ 27	2	433+~~33~~ 66	
~~433+33 - 438+00~~	RT&LT	~~934~~	~~32~~ 33	2	438+~~00~~ 33	
~~438+00 - 442+67~~	RT&LT	~~934~~	~~32~~ 27	2	442+67	
~~442+67 - 447+34~~	RT&LT	~~934~~	~~32~~ 31	2	447+34	
~~447+34 - 452+01~~	RT&LT	~~934~~	~~32~~ 27	2	452+01	
~~452+01 - 470+69~~	RT&LT	~~3736~~	~~32~~ 31	2	~~456+69~~ LOW PT	456+54
			~~32~~ 34	2	466+26 LOW PT	
~~470+69 - 475+12~~	RT&LT	~~886~~	~~32~~ 27	2	470+69	
~~475+12 - 479+55~~	RT&LT	~~886~~	~~32~~ 28	2	475+12	
~~479+55 - 483+98~~	RT&LT	~~886~~	~~32~~ 29	2	479+55	
~~483+98 - 488+41~~	RT&LT	~~443~~	~~32~~ 21	2	483+98	
~~488+41 - 492+25~~	LT	~~384~~	~~16~~ 14	1	488+41	
~~492+25 - 496+09~~	LT	384	~~16~~ 18	1	492+25	
~~496+09 - 503+80~~	LT	~~771~~	~~32~~ 24	2	496+09-503+80	
~~501+23 - 503+80~~	RT	~~257~~	~~16~~ 13	1	503+80	
~~400+56 - 405+21~~	RT&LT	~~930~~	~~32~~ 22	2	405+21	
~~405+21 - 409+86~~	RT&LT	~~930~~	~~32~~ 23	2	409+86	
~~409+86 - 414+51~~	RT&LT	~~930~~	~~32~~ 22	2	414+51	
~~414+51 - 419+16~~	RT&LT	~~930~~	~~32~~ 22	2	419+16	
~~419+16 - 423+85~~	RT&LT	~~938~~	~~32~~ 21	2	423+85	
~~423+85 - 428+46~~	RT&LT	~~922~~	~~32~~ 22	2	428+46	
~~428+46 - 436+16~~	RT&LT	~~1540~~	~~32~~ 24	2	~~433+11~~ LOW PT	432+78
~~436+16 - 443+35~~	RT&LT	~~1438~~	~~64~~ 44	4	436+16-443+~~35~~ 76	
~~443+35 - 447+52~~	RT&LT	834	~~32~~ 25	2	447+52	
~~447+52 - 451+69~~	RT&LT	834	~~32~~ 20	2	451+69	
~~451+69 - 455+86~~	RT&LT	~~834~~	~~32~~ 22	2	~~455+86~~	456+03
~~444+86 - 460+00~~	RT&LT	~~3028~~	~~32~~ 21	2	460+00	
	SUBTOTALS	~~38412~~	~~1232~~ 1043	77		
TOTALS		~~84099~~ ~~84042~~	~~2289~~ ~~2688~~	168		

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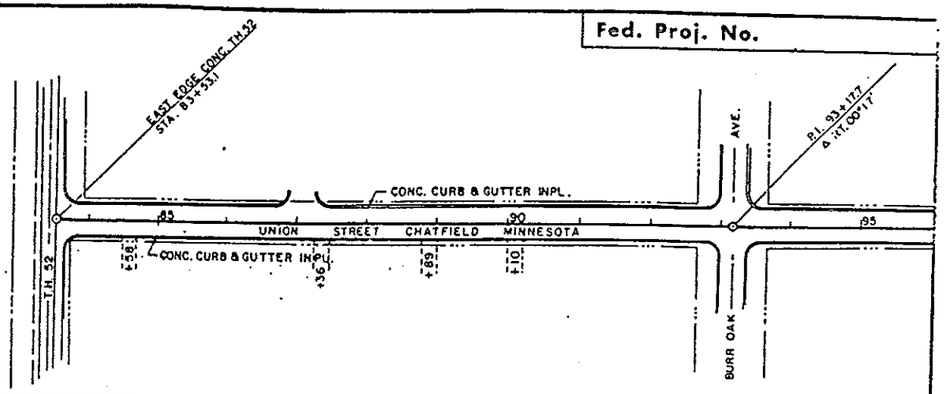
JAN 20 2006

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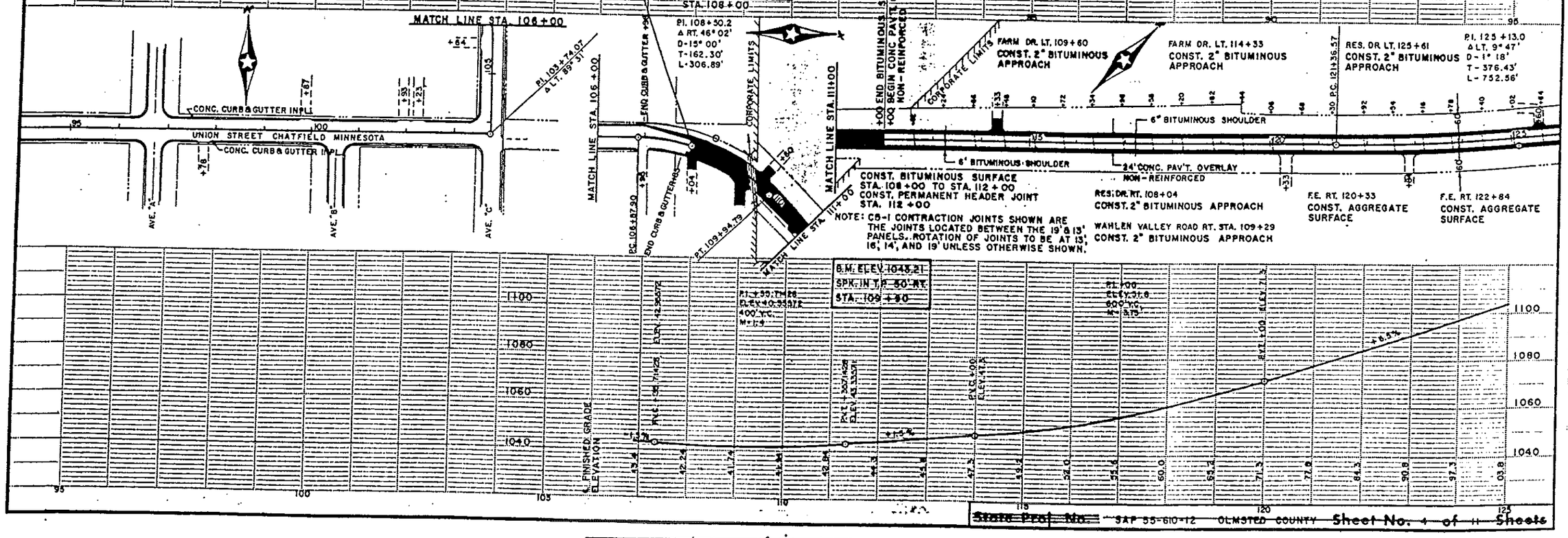
CERTIFIED BY Kurt M Bieniek PROFESSIONAL ENGINEER REG. NO. 19917 1/13 2000

State Aid Proj. No. 55-610-17 Sheet No. 3 of 13 Sheets

Fed. Proj. No.



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State Proj. No. SAP 55-610-12 OLMSTED COUNTY Sheet No. 4 of 11 Sheets

FOR INFORMATION ONLY

CERTIFIED BY Kaye M Brenneke PROFESSIONAL ENGINEER REG. NO. 19917 1/13 2000

State Aid Proj. No. 55-610-17 Sheet No. 4 of 13 Sheets

Fed. Proj. No.

P.I. 125+13.0
Δ LT. 9° 47'
D- 1° 18'
T- 376.43'
L- 752.56'

CORPORATE LIMITS

P.T. 128+89.13

F.E. LT. 125+61
CONST. AGGREGATE SURFACE

FARM DR. LT. 144+27
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE

F.E. LT. 148+41
CONST. AGGREGATE SURFACE

F.E. LT. 152+84
CONST. AGGREGATE SURFACE

P.C. 154+02.80

6' BITUMINOUS SHOULDER

6' BITUMINOUS SHOULDER

24' CONC. PAV'T. OVERLAY NON-REINFORCED

MATCH LINE STA. 147+00

NOTE: C5-1 JOINTS SHOWN ARE THE JOINTS LOCATED BETWEEN THE 19' & 13' PANELS. ROTATION OF JOINTS TO BE AT 13', 16', 14', AND 19' UNLESS OTHERWISE SHOWN.

℄ CULV. 128+00
1-N.PL. 24"x56' R.C.P.
CONST. 19' REINFORCED PANEL STA. 127+93 TO STA. 128+12

℄ CULV. 138+50
1-N.PL. 4'x6'x60' TIMBER BOX CULV.
CONST. 18' REINFORCED PANEL STA. 138+44 TO STA. 138+62

P.C. 137+12.51

F.E. RT. 146+22
CONST. AGGREGATE SURFACE

P.I. 142+76.88
Δ RT. 43° 00'
D- 4° 00'
T- 364.37'
L- 1075.0'

F.E. RT. 153+75
CONST. AGGREGATE SURFACE

P.T. 147+87.51

B.M. ELEV. 1128.57
SPK. IN GATE POST 40' LT. STA. 126+70

B.M. ELEV. 1185.18
PAINTED BOLT TOP C.P. RT. STA. 138+60

B.M. ELEV. 1236.77
SPK. IN PP. 40' LT. STA. 146+50

P.I. 100 ELEV. 23.3 400' V.C. M=0.4

P.V.C. 100 ELEV. 10.4

P.V.T. 100 ELEV. 34.7

+5.7%

P.I. 100 ELEV. 68.9 400' V.C. M=0.65

P.V.C. 100 ELEV. 82.9

P.V.T. 100 ELEV. 82.9

+7.0%

P.I. 123.07692 ELEV. 91.5538 400' V.C. M=0.65

P.V.C. 123.07692 ELEV. 91.5538

P.V.T. 123.07692 ELEV. 91.5538

P.I. 148.0 ELEV. 128.0 1200 V.C. M=1.5.0

+5.7%

℄ FINISHED GRADE ELEV.

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P.I. 161+93.24
Δ LT. 79° 12' 30"
D- 6° 00'
T- 790.44'
L- 1320.14'

P.C. 154+02.8

TWP. RD. RT. 159+00
CONST. 2" BITUMINOUS APPROACH

MATCH LINE STA. 161+00

MATCH LINE STA. 151+00

6' BITUMINOUS SHOULDER

6' BITUMINOUS SHOULDER

℄ CULV. 162+25
1-N.PL. 46"x148' R.C.P.
CONST. 19', 13', 16', & 14' REINFORCED PANELS STA. 162+56 TO STA. 163+18

P.T. 167+22.24

EQUATION

P.O.T. 168+16.32

F.E. LT. 166+50
CONST. AGGREGATE SURFACE

F.E. LT. 184+08
CONST. AGGREGATE SURFACE

END BITUMINOUS SHOULDER & BEGIN 6' AGGREGATE SHOULDER STA. 170+00

STA. 184+18 END CONCRETE PAV'T. OVERLAY BEGIN 7" THICK CONC. PAVEMENT

6' AGGREGATE SHOULDER

24' CONC. PAVEMENT OVERLAY NON-REINFORCED

6' AGGREGATE SHOULDER

RES. DR. RT. 166+48
CONST. 2" BITUMINOUS APPROACH

F.E. RT. 169+75
CONST. AGGREGATE SURFACE

F.E. RT. 179+37
CONST. AGGREGATE SURFACE

F.E. RT. 184+09
CONST. AGGREGATE SURFACE

P.I. 184+17.67
LT. 0° 26'

CONST. 13' REINFORCED PANEL STA. 184+11 TO STA. 184+24.

B.M. ELEV. 1243.07
SPK. IN PP. 50' RT. STA. 166+15

B.M. ELEV. 1260.82
SPK. IN PP. 60' LT. STA. 183+50

P.I. 100 ELEV. 51.9 700' V.C. M=6.5625

P.V.C. 100 ELEV. 48.0 ELEV. 48.35

P.V.T. 100 ELEV. 48.0 ELEV. 47.30

-6.3%

P.I. 100 ELEV. 42.5 400' V.C. M=10.0

P.V.T. 100 ELEV. 42.5 ELEV. 44.1

+3.2%

P.I. 100 ELEV. 47.3 200' V.C. M=10.225

P.V.T. 95.72 ELEV. 49.55056

+2.3%

P.V.C. 122.85714 ELEV. 61.72571

P.V.T. 122.85714 ELEV. 61.72571

P.I. 122.85714 ELEV. 66.62571 800' V.C. M=2.625

-1.2%

P.V.C. 136.25 ELEV. 62.465

P.V.T. 136.25 ELEV. 62.465

P.I. 136.25 ELEV. 60.065 400' V.C. M=1.2

℄ FINISHED GRADE ELEV.

~~State Proj. No.~~ ~~SAP 55-610-12~~ ~~OLMSTED COUNTY~~ Sheet No. 5 of 11 ~~Sheets~~

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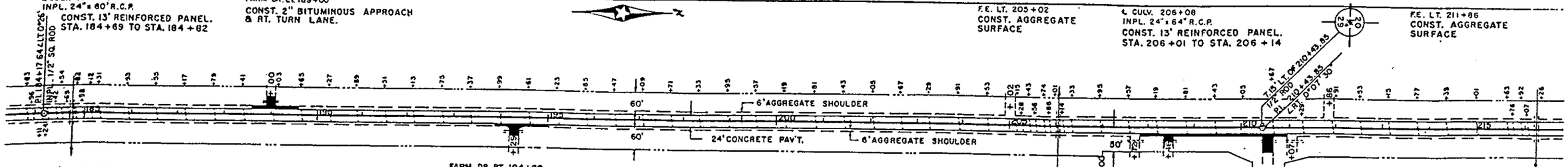
℄ CULV. 184+75
INPL. 24"x 60' R.C.P.
CONST. 13' REINFORCED PANEL.
STA. 184+69 TO STA. 184+82

FARM DR. LT. 189+00
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

F.E. LT. 205+02
CONST. AGGREGATE SURFACE

℄ CULV. 206+08
INPL. 24"x 64" R.C.P.
CONST. 13' REINFORCED PANEL.
STA. 206+01 TO STA. 206+14

F.E. LT. 211+86
CONST. AGGREGATE SURFACE



CONST. 13' REINFORCED PANEL STA. 184+11 TO STA. 184+24

NOTE: C5-1 CONTRACTION JOINTS SHOWN ARE THE JOINTS LOCATED BETWEEN THE 19' & 13' PANELS. ROTATION OF JOINTS TO BE AT 13', 16', 14', AND 19' UNLESS OTHERWISE SHOWN.

FARM DR. RT. 194+29
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

F.E. RT. 207+72
CONST. AGGREGATE SURFACE

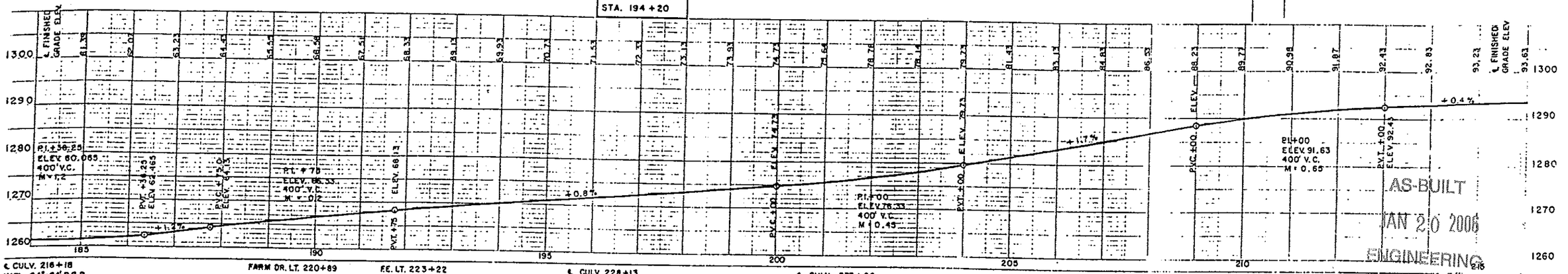
FARM DR. 208+46
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

C.R. 110

C.R. 110 RT. 210+55
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

F.E. RT. 211+07
CONST. AGGREGATE SURFACE

B.M. ELEV. 1267.61
SPK. IN P.P. LT.
STA. 194+20



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℄ CULV. 216+18
INPL. 24"x64" R.C.P.
CONST. 19' REINFORCE PANEL
STA. 216+07 TO STA. 216+26

FARM DR. LT. 220+89
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

F.E. LT. 223+22
CONST. AGGREGATE SURFACE

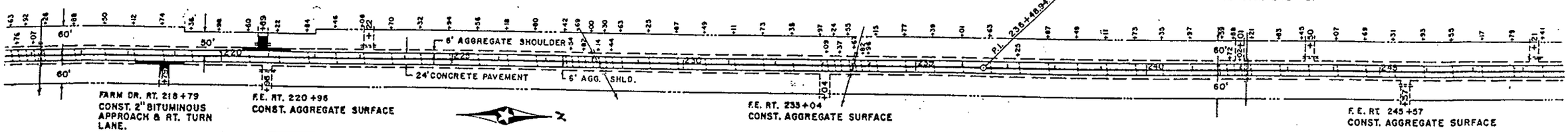
℄ CULV. 228+13
INPL. 36"x 76' R.C.P.
SKEWED 30°
CONST. 14' & 16' REINFORCED PANELS
STA. 228+00 TO STA. 228+30

℄ CULV. 233+66
INPL. 36"x64' R.C.P.
SKEWED 15°
CONST. 12' & 15' REINFORCED PANELS
STA. 233+55 TO STA. 233+82

F.E. LT. 242+01
CONST. AGGREGATE SURFACE

℄ CULV. 242+10
INPL. 24"x 60' R.C.P.
CONST. 19' REINFORCED PANEL. STA. 242+02 TO STA. 242+21

F.E. LT. 243+50
CONST. AGGREGATE SURFACE



FARM DR. RT. 218+79
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

F.E. RT. 220+96
CONST. AGGREGATE SURFACE

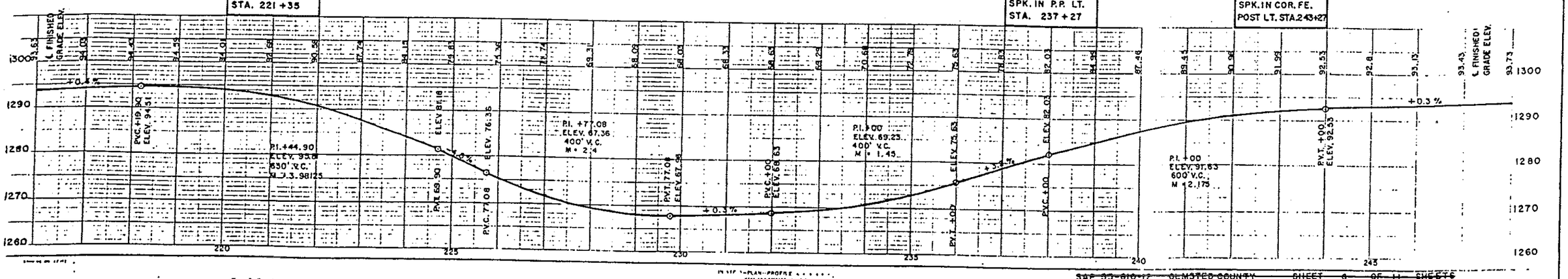
F.E. RT. 233+04
CONST. AGGREGATE SURFACE

F.E. RT. 245+57
CONST. AGGREGATE SURFACE

B.M. ELEV. 1293.77
SPK. IN P.P. LT.
STA. 221+35

B.M. ELEV. 1280.73
SPK. IN P.P. LT.
STA. 237+27

B.M. ELEV. 1291.45
SPK. IN COR. FE.
POST LT. STA. 243+27



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FARM DR. LT. 248+21
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

F.E. LT. 250+77
CONST. AGGREGATE SURFACE

℄ CULV. 250+98
INPL. 30"x64' R.C.P.
CONST. 13' REINFORCED PANEL.
STA. 250+91 TO STA. 251+04.

F.E. LT. 264+50
CONST. AGGREGATE SURFACE

℄ CULV. 272+45
INPL. 24"x270' CMP SKEWED 13° 01'
CONST. 13', 16', 14', 19', 13' & 15' REINFORCED PANELS. STA. 271+99 TO STA. 272+89

FARM DR. LT. 278+42
CONST. 2" BITUMINOUS APPROACH

CONST. 8624 CONC. CURB & GUTTER LEFT STA. 278+54 TO STA. 280+00 & 2" BITUMINOUS SHOULDER LEFT STA. 278+00 TO STA. 280+00.
BACKFILL CURB 62 CU.YDS. TOPSOIL BORROW (LV) 196 SQ.YDS. SOD.

F.E. DOUBLE RT. 249+69
CONST. AGGREGATE SURFACE

NOTE: C5-1 CONTRACTION JOINTS SHOWN ARE THE JOINTS LOCATED BETWEEN THE 19' & 13' PANELS. ROTATION OF JOINTS TO BE AT 13', 16', 14', AND 19' UNLESS OTHERWISE SHOWN.

TWP. RD. RT. 292+15
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

6' AGGREGATE SHOULDER

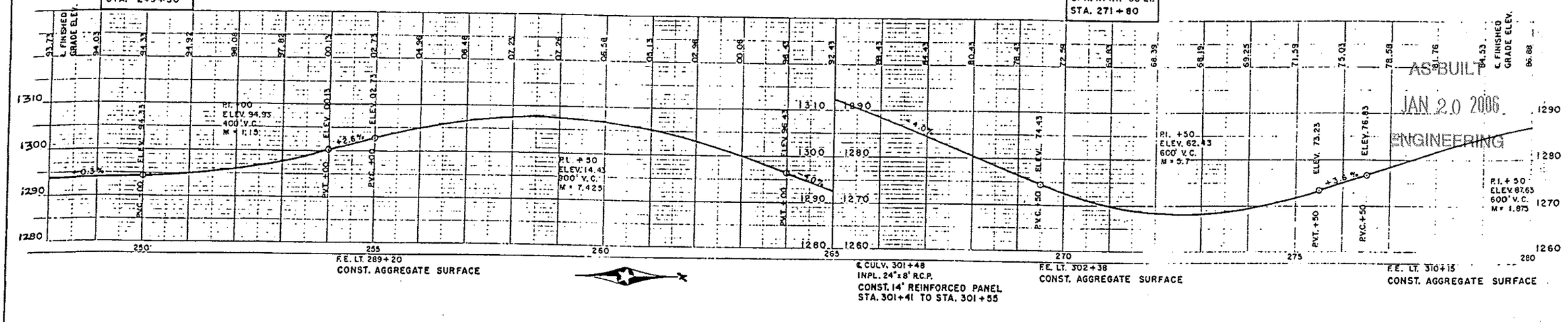
24' CONCRETE PAVEMENT NON-REINFORCED

6' AGG. SHLD.

FARM DR. RT. 278+14
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

B.M. ELEV. 1295.82
SPK. IN P.P. 60' LT.
STA. 249+30

B.M. ELEV. 1264.48
SPK. IN P.P. 65' LT.
STA. 271+80

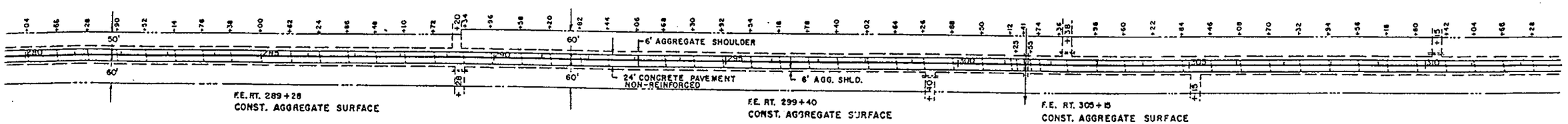


F.E. LT. 289+20
CONST. AGGREGATE SURFACE

℄ CULV. 301+48
INPL. 24"x8' R.C.P.
CONST. 14' REINFORCED PANEL
STA. 301+41 TO STA. 301+55

F.E. LT. 302+38
CONST. AGGREGATE SURFACE

F.E. LT. 310+15
CONST. AGGREGATE SURFACE



F.E. RT. 289+28
CONST. AGGREGATE SURFACE

F.E. RT. 299+40
CONST. AGGREGATE SURFACE

F.E. RT. 305+15
CONST. AGGREGATE SURFACE

B.M. ELEV. 1304.60
SPK. IN P.P. LT.
STA. 294+55

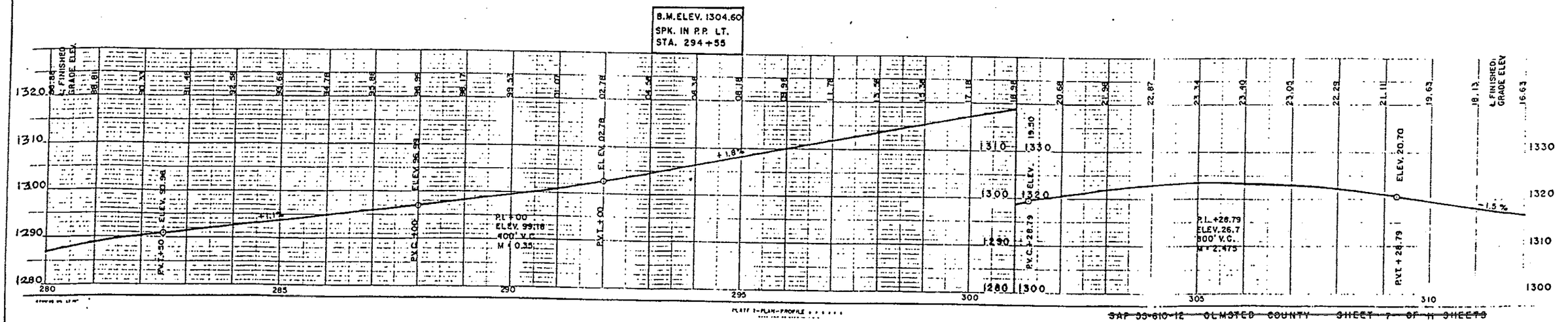


PLATE 1-PLAN-PROFILE

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TWP RD. LT. 315+70
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

℄ CULV. 318+63
INPL. 42"x78" R.C.P.
CONST. 13' & 16' REINFORCED PANELS STA. 318+46 TO STA. 318+77.

℄ CULV. 323+12
INPL. 36"x90" R.C.P. SKEWED 30°
CONST. 16' & 14' REINFORCED PANELS STA. 322+95 TO STA. 323+25.

F.E. LT. 329+03
CONST. AGGREGATE SURFACE

℄ CULV. 330+65
INPL. 30"x62" R.C.P.
CONST. 14' & 19' REINFORCED PANELS STA. 330+55 TO STA. 330+80.

℄ CULV. 335+61
INPL. 30"x76" R.C.P.
CONST. 15' REINFORCED PANEL STA. 335+53 TO STA. 335+68.

F.E. LT. 339+37
CONST. AGGREGATE SURFACE

F.E. LT. 343+40
CONST. AGGREGATE SURFACE

+70 TWP. RD.
PI 315+69.46
Δ 0°41'06" RT.
1100' LT. 3154.68
INPL. 1/2 ROD

60'
6' AGGREGATE SHOULDER
24' CONCRETE PAVEMENT NON-REINFORCED
6' AGG. SHLD.

FARM DR. RT. 315+70
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

NOTE: C5-1 JOINTS SHOWN ARE THE JOINTS LOCATED BETWEEN THE 19' & 13' PANELS. ROTATION OF JOINTS TO BE AT 13', 16', 14', AND 19' UNLESS OTHERWISE SHOWN.

FARM DR. RT. 326+08
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

F.E. RT. 328+19
CONST. AGGREGATE SURFACE

F.E. RT. 333+57
CONST. AGGREGATE SURFACE

F.E. RT. 339+33
CONST. AGGREGATE SURFACE

B.M. ELEV. 1311.72
SPK. IN FE. POST 70' RT. STA. 315+33

℄ FINISHED GRADE ELEV.

-5%
PI 46.86
ELEV. 05.43
500' V.C.
M = 2.0
PVC 43.86
PVT 46.86
+1.7%
PVC +00
PVT +00
ELEV. 18.23
400' V.C.
M = 0.6
+0.5%
PVC +00
ELEV. 25.73

1320
1310
1300
315
320
325
330
335
340

℄ CULV. 345+08
INPL. 24"x86" R.C.P.
CONST. 19' REINFORCED PANEL STA. 344+98 TO STA. 345+17.

RES. DR. LT. 354+35
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

℄ CULV. 355+39
INPL. 48"x 114" R.C.P. SKEWED 30°
CONST. 14', 17', & 14' REINFORCED PANELS. STA. 355+15 TO STA. 355+60.

℄ CULV. 361+11
INPL. 24"x60" R.C.P.
CONST. 14' REINFORCED PANEL STA. 361+04 TO STA. 361+18

TWP RD. LT. 366+28
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

FARM DR. LT. 370+55
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

℄ CULV. 371+97
24"x 70' R.C.P.
CONST. 13' REINFORCED PANEL STA. 371+91 TO STA. 372+04.

+28 TWP. RD.
PI 368+28.39
Δ 0°31'37"
1/2 ROD INPL.

60'
6' AGG. SHLD.
24' CONCRETE PAVEMENT NON-REINFORCED
6' AGG. SHLD.

F.E. RT. 347+35
CONST. AGGREGATE SURFACE

CONST. B624 CONC. CURB & GUTTER RT. STA. 357+50 TO STA. 360+90 & 2" BITUMINOUS SHOULDER FROM STA. 357+50 TO STA. 360+90
BACKFILL CURB 134 CU. YDS. TOPSOIL BORROW (LV) 430 SQ. YDS. SOD.
CONST. BITUMINOUS SPILLWAY RT. STA. 357+50
BITUMINOUS QUANTITY INCLUDED IN SHOULDER MIXTURE

RES. DR. RT. 358+56
CONST. 2" BITUMINOUS APPROACH

F.E. RT. 360+99
CONST. AGGREGATE SURFACE

TWP. RD. RT. 368+28
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

B.M. ELEV. 1314.00
SPK. IN P.P. 55' LT.
STA. 352+50

B.M. ELEV. 1343.33
SPK. IN P.P. 55' LT.
STA. 369+14

℄ FINISHED GRADE ELEV.

-2.4%
PI +00
ELEV 27.73
800' V.C.
M = 2.9
PVC +00
PVT +00
PVC +20.41
ELEV 12.84
PI +20.41
ELEV. 08.04
400' V.C.
M = 2:45
PVT +20.41
ELEV 13.04
+4.5%
PVC 31.82
ELEV. 35.83
PI +31.82
ELEV. 40.83
400' V.C.
M = 1.1
+2.5%
PVT 31.82
ELEV. 41.43
+0.3%
PVC +00
ELEV. 43.43

1330
1320
1310
1300
1350
1340
345
350
355
360
365
370
375

PLATE 2-PLAN-PROFILE

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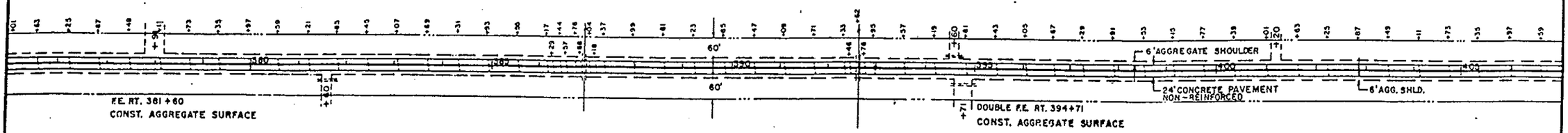
DOUBLE F.E. LT. 377+91
CONST. AGGREGATE SURFACE

℄ CULV. 386+96
INPL. 30"x 62' R.C.P.
CONST. 16' REINFORCED PANELS
STA. 386+88 TO STA. 387+04.

℄ CULV. 392+62
INPL. 30"x 62' R.C.P.
CONST. 16' & 14' REINFORCED
PANELS STA. 392+46
TO STA. 392+76

F.E. LT. 394+60
CONST. AGGREGATE SURFACE

F.E. LT. 401+20
CONST. AGGREGATE
SURFACE

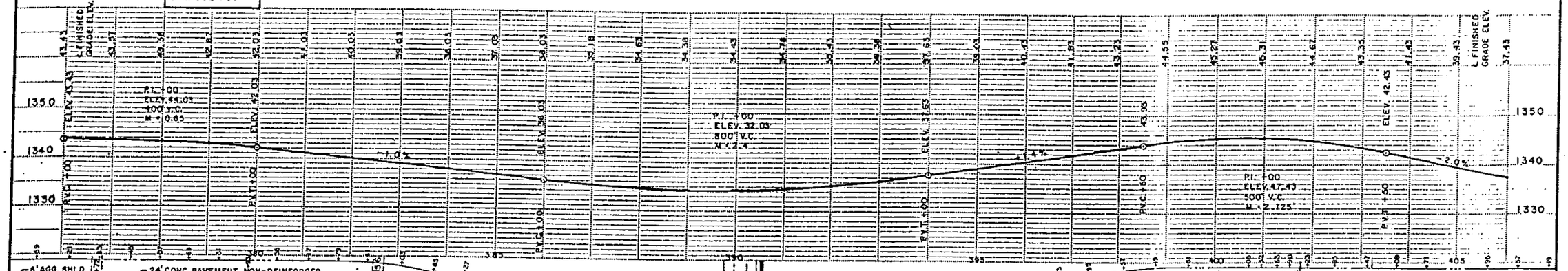


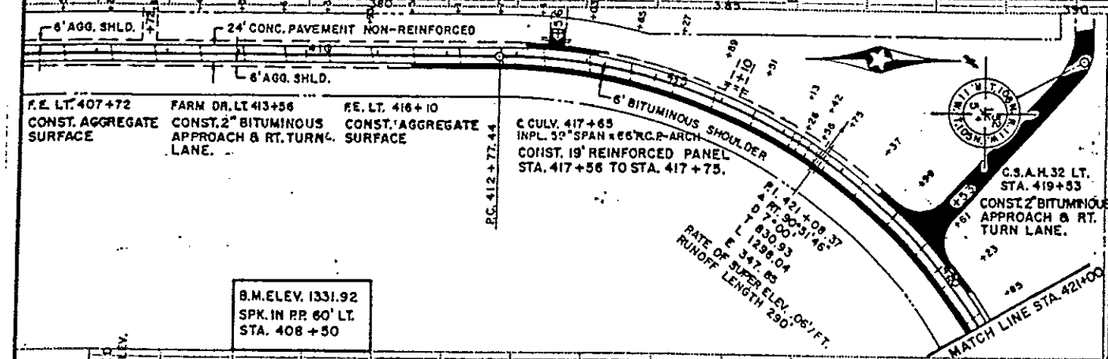
F.E. RT. 381+60
CONST. AGGREGATE SURFACE

DOUBLE F.E. RT. 394+71
CONST. AGGREGATE SURFACE

NOTE: C5-1 CONTRACTION JOINTS SHOWN ARE THE JOINTS LOCATED BETWEEN THE 19' & 13' PANELS. ROTATION OF JOINTS TO BE AT 13', 16', 14', AND 19' UNLESS OTHERWISE SHOWN.

B.M. ELEV. 1038.85
SPK. IN P.P. 63' LT.
STA. 382+37





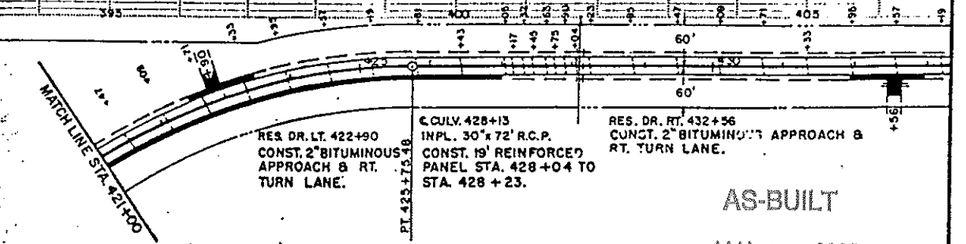
F.E. LT. 407+72
CONST. AGGREGATE
SURFACE

FARM DR. LT. 413+56
CONST. 2" BITUMINOUS
APPROACH & RT. TURN
LANE.

F.E. LT. 416+10
CONST. AGGREGATE
SURFACE

℄ CULV. 417+65
INPL. 59"SPAN x 66"R.C.P-ARCH
CONST. 19' REINFORCED PANEL
STA. 417+56 TO STA. 417+75.

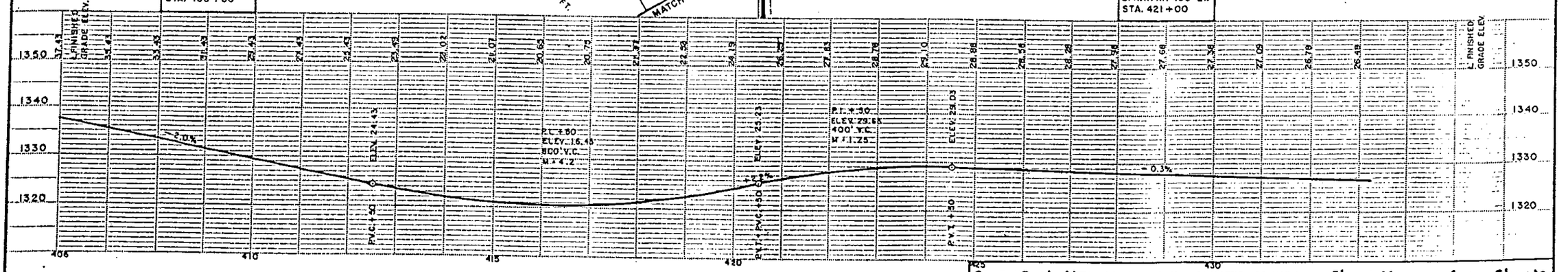
CONST. 2" BITUMINOUS SHOULDER RT.
FROM STA. 411+50 TO STA. 427+00.



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B.M. ELEV. 1331.92
SPK. IN P.P. 60' LT.
STA. 408+50

B.M. ELEV. 1324.89
SPK. IN P.P. 150' LT.
STA. 421+00



State Proj. No. ~~042-00-010-IC OLMSTED COUNTY~~ Sheet No. ~~9 of 11 Sheets~~

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T.W.P. RD. LT. 443+81
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

℄ CULV. 446+75
INPL. 24"x62'R.C.P.
CONST. 19' REINFORCED PANEL STA. 445+64 TO STA. 445+83.

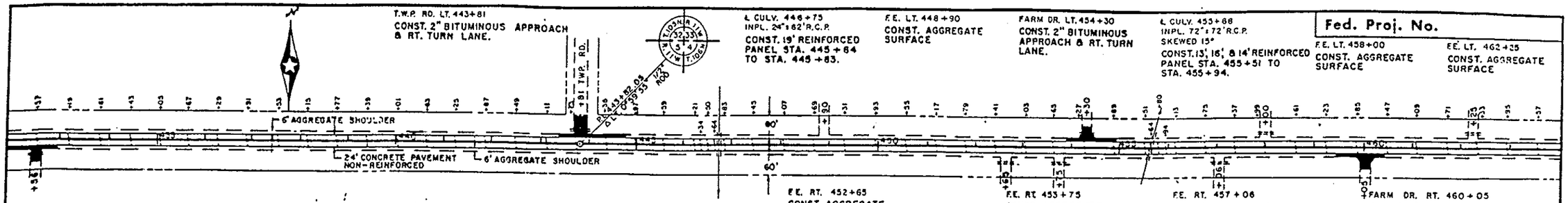
F.E. LT. 448+90
CONST. AGGREGATE SURFACE

FARM DR. LT. 454+30
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE.

℄ CULV. 455+68
INPL. 72"x72'R.C.P.
SKEWED 15°
CONST. 13', 16', & 14' REINFORCED PANEL STA. 455+51 TO STA. 455+94.

F.E. LT. 458+00
CONST. AGGREGATE SURFACE

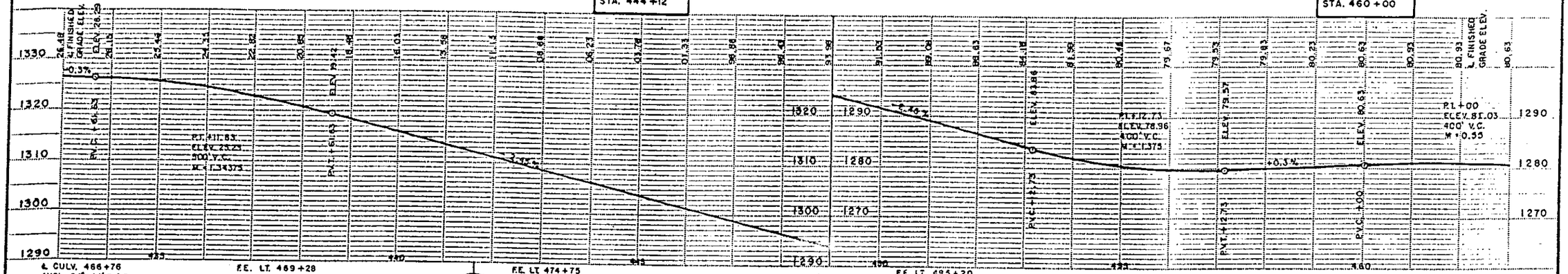
F.E. LT. 462+35
CONST. AGGREGATE SURFACE



NOTE: CS-1 CONTRACTION JOINTS SHOWN ARE THE JOINTS LOCATED BETWEEN THE 19' & 13' PANELS. ROTATION OF JOINTS TO BE AT 13', 16', 14', AND 19' UNLESS OTHERWISE SHOWN.

B.M. ELEV. 1303.03
SPK. IN PP 50' LT.
STA. 444+12

B.M. ELEV. 1282.44
SPK. IN PP 58' LT.
STA. 460+00



℄ CULV. 466+76
INPL. 54"x64' R.C.P.
CONST. 12' & 15' REINFORCED PANELS. STA. 466+61 TO STA. 466+88.

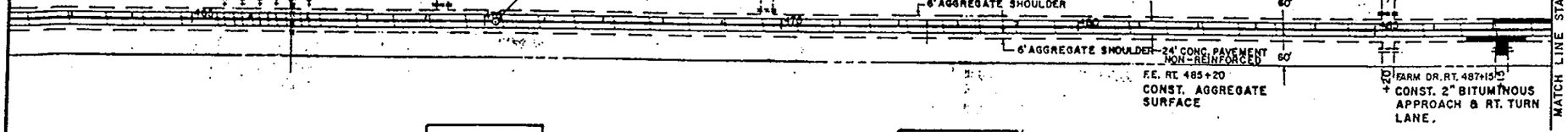
F.E. LT. 469+28
CONST. AGGREGATE SURFACE

F.E. LT. 474+75
CONST. AGGREGATE SURFACE

F.E. LT. 485+20
CONST. AGGREGATE SURFACE

CONST. 2" BITUMINOUS SHOULDER STA. 487+00 TO STA. 502+60.

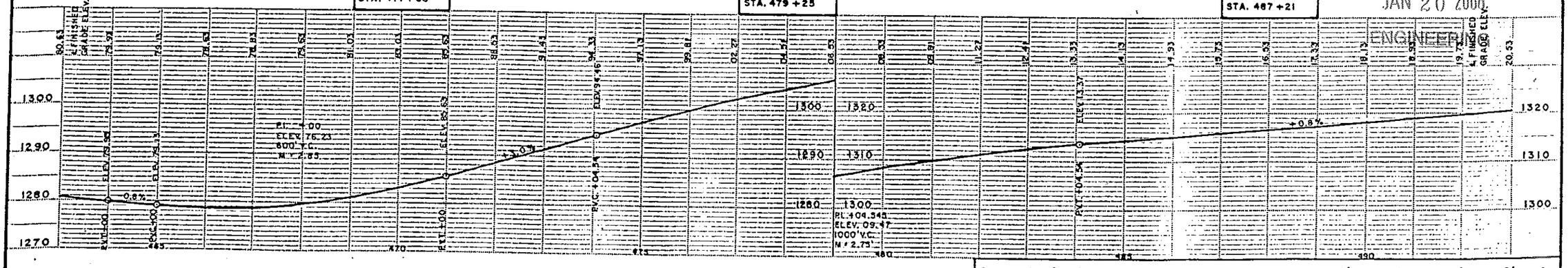
MATCH LINE STA. 488+00



B.M. ELEV. 1283.99
SPK. IN PP 60' LT.
STA. 471+00

B.M. ELEV. 1302.56
SPK. IN PP 60' LT.
STA. 479+25

B.M. ELEV. 1312.85
SPK. IN PP 40' LT.
STA. 487+21



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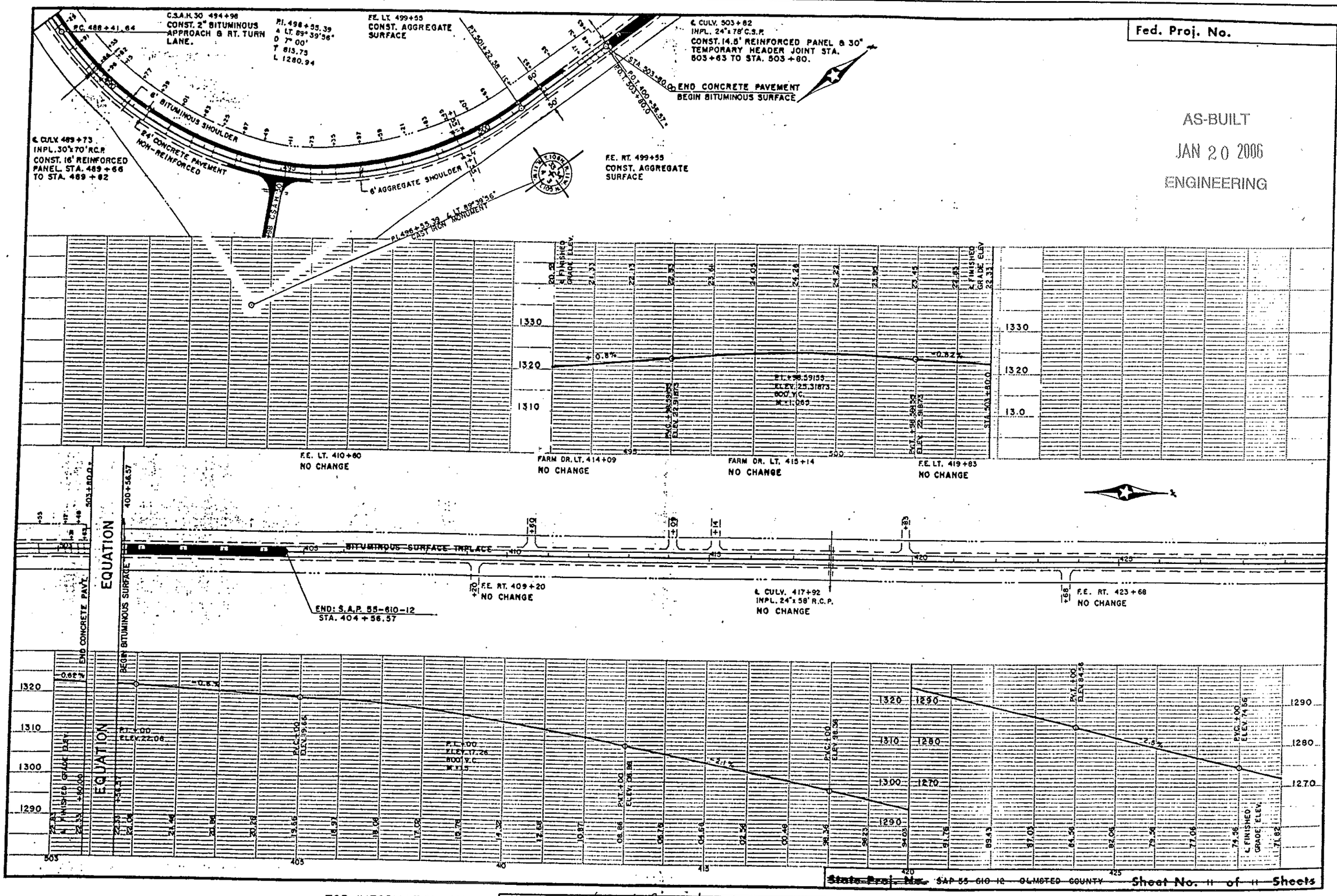
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℄ CULV. 503+82
INPL. 24"x 78' C.S.P
CONST. 17' REINFORCED PANEL STA. 503+77.5 TO STA. 400+71

F.E. LT. 410+60
CONST. AGGREGATE SURFACE

FARM DR. LT. 414+09
CONST 2" BITUMINOUS APPROACH & RT. TURN LANE.

FARM DR. LT. 415+14
CONST. 2" BITUMINOUS APPROACH & RT. TURN LANE

F.E. LT. 419+83
CONST. AGGREGATE SURFACE

EQUATION 503+80.0 = 400+56.37

4" AGGREGATE SHOULDER

4" AGGREGATE SHOULDER

24' CONC. PAV'T. OVERLAY NON-REINFORCED

BEGIN SAP 55-610-13
STA. 400+56.57

F.E. RT. 409+20
CONST. AGGREGATE SURFACE

℄ CULV. 417+92
INPL. 24"x 58' RCP
CONST. 19' REINFORCED PANEL STA. 417+81 TO STA: 418+00

F.E. RT. 423+68
CONST AGGREGATE SURFACE

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JAN 20 2006
ENGINEERING

B.M. ELEV 1319.94
SPK. IN P.P. 50' LT.
STA. 404+65

B.M. ELEV. 1296.72
SPK. IN P.P. 50' LT.
STA. 416+45

EQUATION

-0.82%

-0.6%

-2.1%

-2.5%

P.I. +00
ELEV. 22.06

P.V.C. +00
ELEV. 19.56

P.I. +00
ELEV. 17.26
800' V.C.
M = 1.5

P.V.T. +00
ELEV. 08.86

P.V.C. +00
ELEV. 98.36

P.V.T. +00
ELEV. 84.56

P.V.C. +00
ELEV. 74.36

℄ FINISHED GRADE ELEV.

FINISHED GRADE ELEV.

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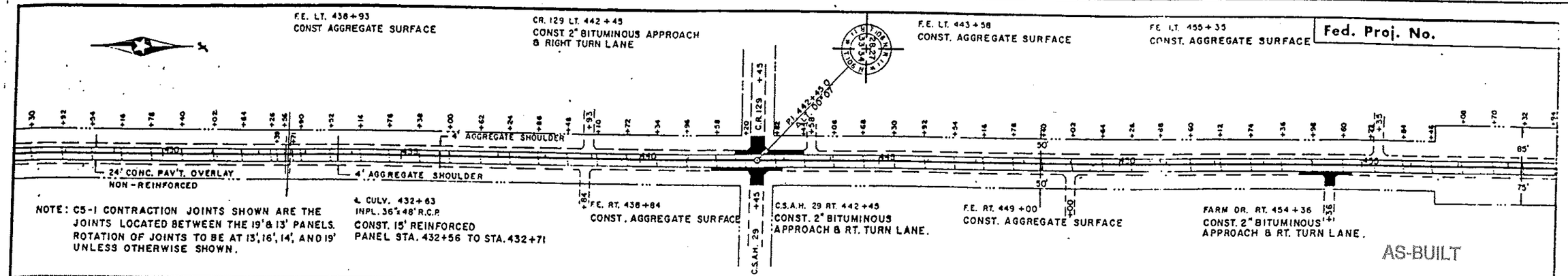
Fed. Proj. No.

F.E. LT. 436+93
CONST AGGREGATE SURFACE

CR. 129 LT. 442+45
CONST 2" BITUMINOUS APPROACH
& RIGHT TURN LANE

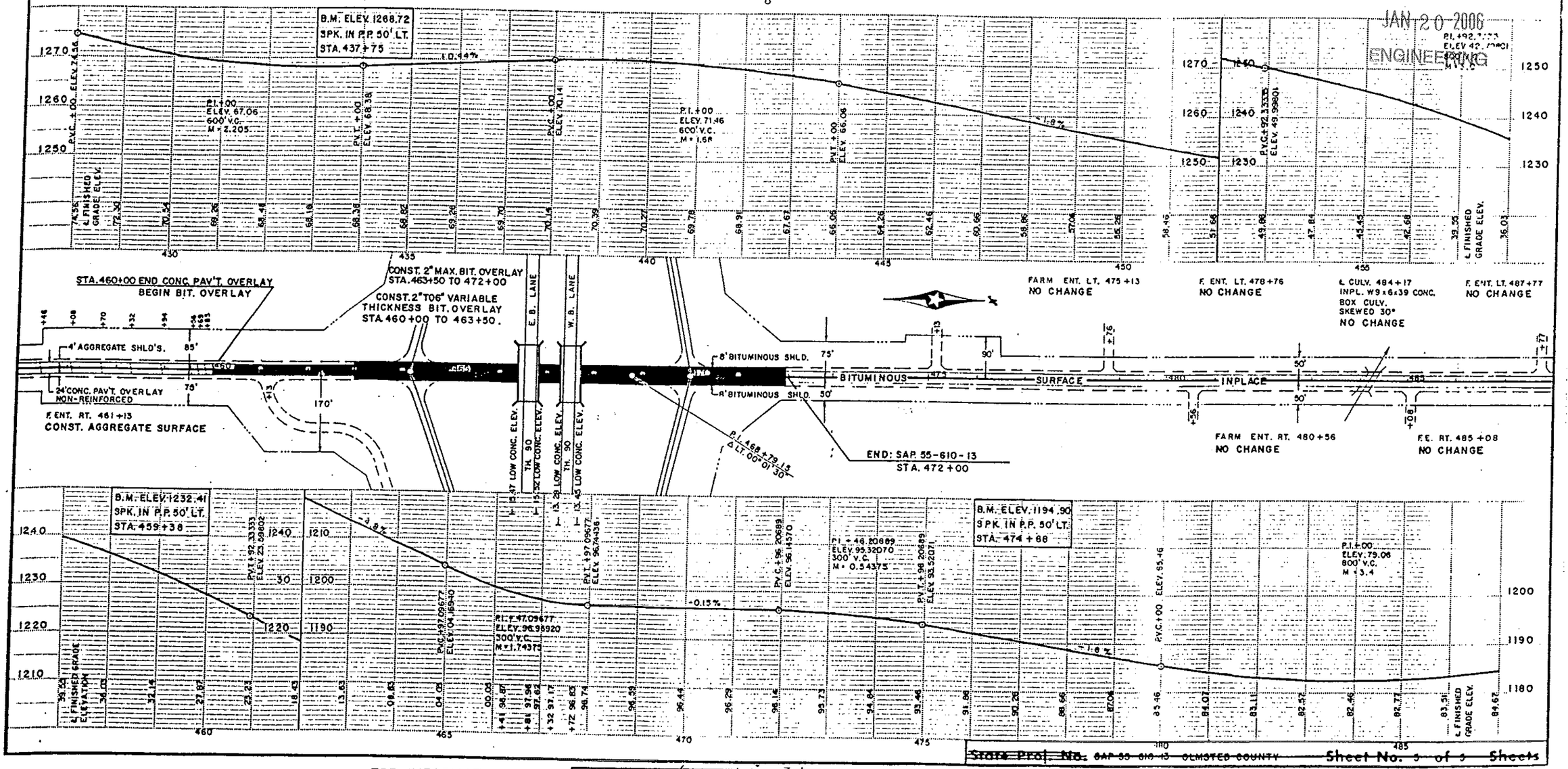
F.E. LT. 443+38
CONST. AGGREGATE SURFACE

F.E. LT. 455+35
CONST. AGGREGATE SURFACE



NOTE: C5-1 CONTRACTION JOINTS SHOWN ARE THE JOINTS LOCATED BETWEEN THE 19'& 13' PANELS. ROTATION OF JOINTS TO BE AT 13', 16', 14', AND 19' UNLESS OTHERWISE SHOWN.

AS-BUILT
JAN 20 2006
ENGINEERING



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