MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

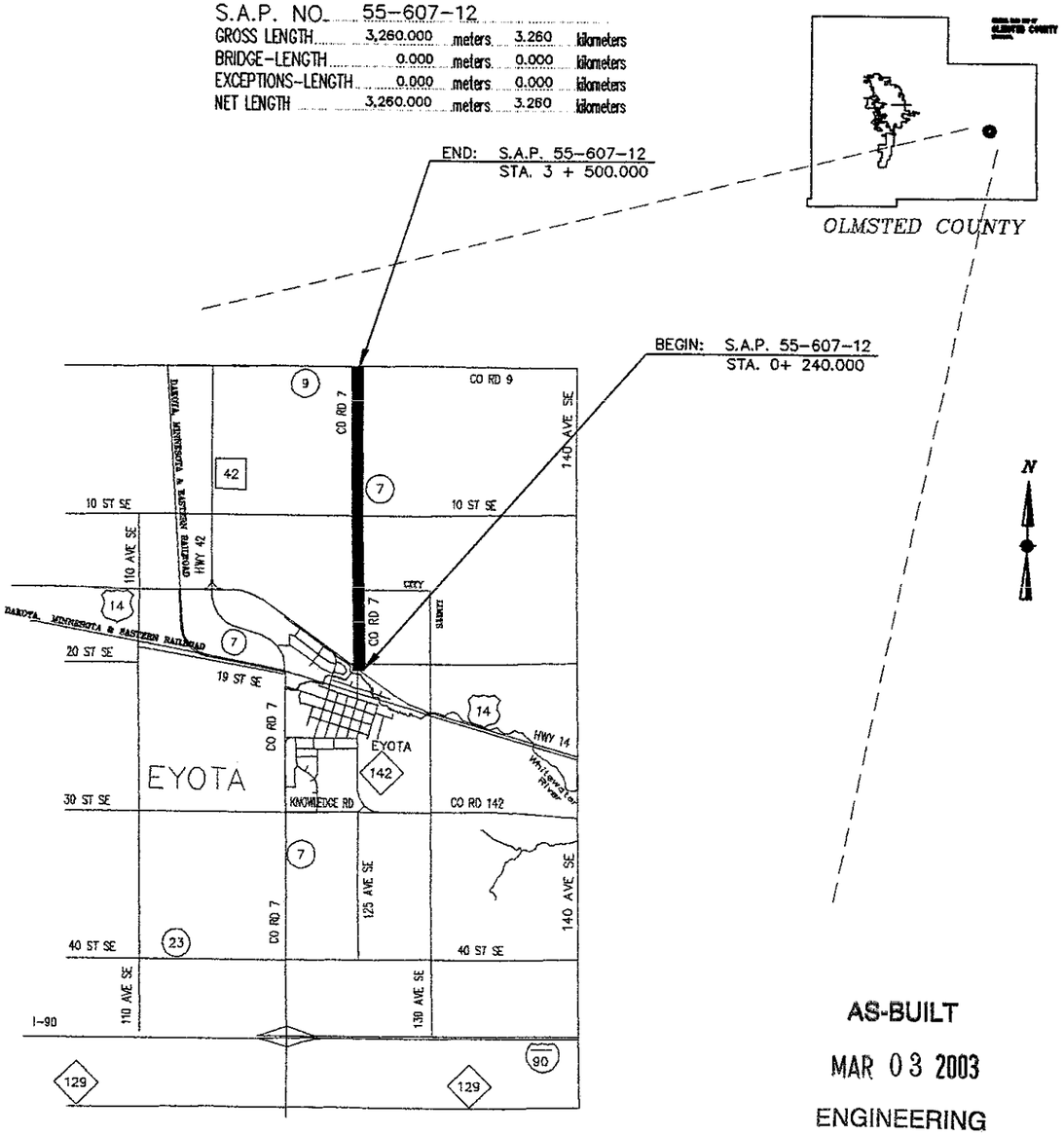
CONSTRUCTION PLAN FOR GRADING AND BASE

LOCATED ON CSAH 7 BETWEEN JCT. TH 14 & CSAH 7 AND JCT. CSAH 9 & CSAH 7 (GEOGRAPHIC DESCRIPTION)

FROM APPROX. 60 m SOUTH OF THE 1/4 COR. OF SEC. 11 & 14 T.106N.–R.12W. TO NORTH 1/4 COR. SEC. 2 T.106N.–R.12W. (LEGAL DESCRIPTION)

S.A.P. NO. 55–607–12

GROSS LENGTH	3,260.000	meters	3.260	kilometers
BRIDGE–LENGTH	0.000	meters	0.000	kilometers
EXCEPTIONS–LENGTH	0.000	meters	0.000	kilometers
NET LENGTH	3,260.000	meters	3.260	kilometers



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 10 METERS
PROFILE 0 10 METERS HORIZ. 0 2 METERS VERT.
INDEX MAP 0 1.0 KM
CROSS SECTIONS 0 2 METERS

AS-BUILT

MAR 03 2003

ENGINEERING

MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 1995 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	ESTIMATE OF QUANTITIES
SHEET NO. 3	TABULATIONS
SHEET NO. 4	TYPICAL SECTIONS
SHEET NO. 5–9	PLAN AND PROFILE
SHEET NO. 10	STORM SEWER SCHEDULE
SHEET NO. 11–15	EROSION CONTROL SHEETS
SHEET NO. 16	TRAFFIC CONTROL PLANS
SHEET NO. 17–48	CROSS SECTIONS

THIS PLAN CONTAINS 48 SHEETS.

minnesota metric

DESIGN DESIGNATION (CSAH 7)

ADT (Current Year) = 579(1999) Design Speed 90 km/h
ADT (Future Year) = 869(2019) Based on STOPPING Sight Distance
DHV (Design Hr. Vol.) = ... Height of eye 1070 mm Height of object 150 mm
D (Directional Distr.) = ... Design Speed not achieved at:
T (Heavy Commercial) = EST. 4% STA. 0+240 TO STA. 0+353.855 km/h 60*
SOIL FACTOR = 130 STA. 3+390 TO STA. 3+500 km/h 90*
METRIC TON DESIGN 8.2 *STOP CONDITIONS
NO. OF TRAFFIC LANES 2 NO. OF PARKING LANES NONE
SHOULDER WIDTH 1.8 meters
FUNCTIONAL CLASSIFICATION: MINOR COLLECTOR

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 6/2/99 REG. NO. 19917 ENGR Kaye M Prierndt

COUNTY OLMSTED

Approved 6/2 19 99 Michael Sheehan
OLMSTED COUNTY ENGINEER

Recommended for Approval ..... 19 .....
DISTRICT STATE AID ENGINEER

Recommended for Approval ..... 19 .....
~~DIRECTOR, OFFICE OF TRAFFIC ENGINEERING~~

Recommended for Approval ..... 19 .....
STATE AID PLANS AND SPECS ENGINEER

Approved June 7 19 99 Cindy Schmidt for
FOR STATE AID DIVISION

STATE AID PROJ. NO. 55–607–12
~~STATE PROJ. NO.~~

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	PARTICIPATING	PARTICIPATING MUNICIPAL	TOTAL ESTIMATED QUANTITIES
	2031.501	FIELD OFFICE TYPE D	EACH	.9	.1	1
(1)	2101.511	CLEARING & GRUBBING	LUMP SUM	1		1
	2104.501	REMOVE PIPE CULVERTS	m	244.3	28.7	273
(2)	2104.501	REMOVE CATTLE PASS	m	22.6		22.6
	2104.513	SAW BITUMINOUS PAVEMENT (FULL DEPTH)	m	27.6	20.4	48
(3)	2105.515	UNCLASSIFIED EXCAVATION	m^3	45 367	2 204	(P) 47 571
(3)	2105.521	GRANULAR BORROW (CV)	m^3	3 175	1 828	(P) 5 003
(3)	2105.523	COMMON BORROW (CV)	m^3	14 803	3 400	(P)18 203
(4)	2130.501	WATER	m^3	43	7	50
(5)	2211.501	AGGREGATE BASE CL. 5	t	13 238	1 962	15 200
(6)	2451.507	GRANULAR BEDDING (CV)	m^3	22		22
	2501.511	450 mm C.S. PIPE CULVERT	m	110.4	10.4	120.8
	2501.511	600 mm C.S. PIPE CULVERT	m	28		28
	2501.511	750 mm C.S. PIPE CULVERT	m	17	15.8	32.8
	2501.511	750 mm R.C. PIPE CULVERT	m	19.5		19.5
	2501.511	1050 mm R.C. PIPE CULVERT	m	51.8		51.8
	2501.515	450 mm G.S. PIPE APRON	EACH	18	2	20
	2501.515	600 mm G.S. PIPE APRON	EACH	4		4
	2501.515	750 mm G.S. PIPE APRON	EACH	3	3	6
	2501.515	450 mm R.C. PIPE APRON	EACH		1	1
	2501.515	600 mm R.C. PIPE APRON	EACH	1		1
	2501.515	750 mm R.C. PIPE APRON	EACH	2	1	3
	2501.515	900 mm R.C. PIPE APRON	EACH		1	1
	2501.515	1050 mm R.C. PIPE APRON	EACH	4		4
	2501.521	2590 mm SPAN RC PIPE-ARCH CULVERT CL IVA	m	30.5		30.5
	2501.521	725 mm SPAN RC PIPE-ARCH CULVERT CL IIA	m	15.8		15.8
	2501.525	725 mm RC PIPE-ARCH APRON	EACH	2		2
	2501.525	2590 mm SPAN RC PIPE-ARCH APRON	EACH	2		2
(7)	2502.521	200 mm C.S. PIPE DRAIN	m	73.2		73.2
(7)	2502.551	200 mm C.S. INSPECTION TEE	m	3.2		3.2
	2503.511	450 mm R.C. PIPE SEWER CLASS III	m		3.4	3.4
	2503.511	600 mm R.C. PIPE SEWER CLASS III	m	10.3	10.3	20.6
	2503.511	750 mm R.C. PIPE SEWER CLASS II	m		18.1	18.1
	2503.511	825 mm R.C. PIPE SEWER CLASS II	m		40.4	40.4
	2503.511	900 mm R.C. PIPE SEWER CLASS II	m		3.7	3.7
	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN N	EACH		1	1
	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 1350 mm 4020	EACH		1	1
	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 1500 mm 4020	EACH		1	1
(8)	2511.501	RANDOM RIPRAP CL. III	m^3	55		55
	2563.601	TRAFFIC CONTROL	LUMP SUM	.9	.1	1
	2573.501	BALE CHECK	EACH	890	150	1 040
	2573.502	SILT FENCE, TYPE HEAVY DUTY MAINTAINED	m	1 240		1 240
	2575.501	SEEDING	ha	5	1	(P) 6
	2575.502	SEED MIXTURE 50A	kg	250	50	300
	2575.502	SEED MIXTURE 110A	kg	500	100	600
	2575.505	SODDING TYPE EROSION	m^2	5 920		5 920
	2575.511	MULCH MATERIAL TYPE 1	t	22.5	4.5	27
	2575.519	DISC ANCHORING	ha	4	1	(P) 5
(9)	2575.523	EROSION CONTROL BLANKETS, TYPE 2	m^2	1 112		1 112
	2575.532	COMMERCIAL FERTILIZER ANALYSIS 12-12-12	kg	1 125	225	1 350

QUANTITY NOTES:

(1) TREES FOR REMOVAL WILL BE DESIGNATED BY THE ENGINEER. (APPROX. 72 TREES + 0.1 HECTARES)

(2) REMOVAL INCLUDES 1800 mm x 1800 mm TIMBER BOX CULVERT AND TIMBER WING WALLS STA. 2+368.

(3) UNCLASSIFIED EXCAVATION INCLUDES SUBGRADE TREATMENT AS SHOWN IN TYPICAL SECTIONS AND CROSS SECTIONS. 4084 m3 OF UNCLASSIFIED EXCAVATION TO BE USED AS SALVAGED TOPSOIL AND PLACED AS SHOWN ON TYPICAL. GRANULAR BORROW IS TO BE USED IN SUBGRADE TREATMENT AS SHOWN IN TYPICAL SECTIONS AND CROSS SECTIONS FROM STA. 0+250 TO STA. 1+400.

(4) WATER TO BE USED AS A DUST PREVENTATIVE AS DIRECTED BY THE ENGINEER

(5) INCLUDES 14 800 METRIC TONS FOR MAINLINE AND 400 METRIC TONS FOR DRIVES AND APPROACHES.

(6) THIS ITEM REFERS TO CLASS "B" BEDDING ON PLAN SHEETS.

(7) PIPE DRAIN SHALL BE PLACE 600 mm BELOW CENTERLINE CULV. ELEVATIONS. ALL TIME AND MATERIALS TO INSTALL PIPE DRAIN SHALL BE INCIDENTAL AND NO DIRECT COMPENSATION WILL BE MADE THEREFOR.

(8) PLACE RIPRAP ON 230 mm GRANULAR FILTER OR GEOTEXTILE MATERIAL WHICH SHALL BE CONSIDERED INCIDENTAL AND NO DIRECT COMPENSATION WILL BE MADE THEREFOR.

(9) INCLUDES MAINTENANCE

BASIS OF PLANNED QUANTITIES

AGGREGATE BASE CLASS 5 –	2160 kg / m3 COMPACTED
SEED MIXTURE 50A –	50 kg / ha
SEED MIXTURE 110A –	100 kg / ha
MULCH MATERIAL –	4.5 t / ha
DISC ANCHOR –	ALL SEEDING AREA'S EXCEPT 2:1 SLOPES
COMMERCIAL FERTILIZER –	225 kg / ha

STANDARD PLATES

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

PLATE NO.	DESCRIPTION
	NUMERICAL INDEX OF METRIC STANDARD PLATES
M3007 C	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
M3133 C	RIPRAP AT RCP OUTLETS
M3145 E	CONCRETE PIPE TIES
M3040 F	CORRUGATED METAL PIPE CULVERT
M3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
M3110 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH
M3123 J	METAL APRON FOR C.S. PIPE
M3131 B	PRECAST CONCRETE HEADWALL FOR SUBSURFACE DRAINS
M3133 C	RIPRAP AT RCP OUTLETS
M3221 C	CORRUGATED STEEL PIPE COUPLING BAND
M4003 B	750 mm PRECAST CATCH BASIN
M4006 L	MANHOLE OR CATCH BASIN
M4010 H	CONCRETE SHORT CONE AND ADJUSTING RING
M4110 F	COVER CASTING FOR MANHOLE
M4101 D	RING CASTING FOR MANHOLE OR CATCH BASIN
M4125 D	CATCH BASIN FRAME CASTING
M4134 A	CURB BOX CASTING FOR CATCH BASIN
M4154 B	CATCH BASIN GRATE CASTING
M4180 J	MANHOLE OR CATCH BASIN STEP
M8000 I	STANDARD BARRICADES
M9000 C	APROACHES AND ENTRANCES

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ENGINEERING

minnesota metric

CERTIFIED BY Kaye M Brenneck PROFESSIONAL ENGINEER REG. NO. 19917 5/27 1999

S.A.P. 55-607-12

UTILITY LOCATIONS
GOPHER STATE ONE CALL 1-800-252-1166
NOTE: CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION. ALL INPLACE UTILITIES MAY NOT BE SHOWN ON THIS PLAN

ALINGMENT TABULATION

POINT NO.	POINT	STATION	CURVE DATA				COORINATES	
			DELTA	RADIUS	TANGENT	LENGTH	NORTHING	EASTING
	PI	0+100					20120.12	142131.50
	PC	0+199.27					20219.37	142129.29
	PI	0+208.77	15°28'00"	70.000	9.506	18.896	20228.87	142129.08
	PT	0+218.16					20238.09	142131.41
	PC	0+262.22					20280.80	142142.21
	PI	0+309.11	30°00'08"	175.000	46.895	91.636	20326.26	142153.71
	PT	0+353.85					20371.38	142140.93
	PC	0+371.57					20388.43	142136.10
	PI	0+414.59	14°25'20"	340.000	43.019	85.584	20429.82	142124.38
	PT	0+457.16					20472.83	142123.34
	PI	1+911.02	0°14'07"				21926.27	142088.14
	PI	3+528.01					23542.92	142055.62

TURF ESTABLISHMENT / EROSION CONTROL

STATIONING	LOCATION LT.-RT.	SEEDING (ha)	SEED MIXTURE 50A (kg)	SEED MIXTURE 110A (kg)	MULCH MATERIAL TYPE 1 (t)	BALE CHECK (EACH)	SILT FENCE HEAVY DUTY (m)	SODDING TYPE EROSION (m2)	DISK ANCHOR (ha)	WOOD FIBER BLANKET (m2)	COMM. FERT. ANALYSIS 12-12-12 (kg)
1+290-1+350	RT						60				
1+440-1+560	RT						120				
2+260-2+480	RT & LT						220				
2+820-3+100	RT						280				
2+900-3+120	LT						220				
3+280-3+340	LT						60				
3+300-3+500	RT						200				
3+400-3+480	LT						80				
1+580-1+740	LT							1600			
1+580-1+740	RT							1600			
3+145-3+240	LT							950			
3+145-3+240	RT							950			
3+310-3+370	LT							420			
3+460-3+510	RT							400			
0+260-1+660	LT					240					
0+320-1+280	RT					160					
1+320-1+420	RT					40					
1+600-1+680	RT					30					
1+680-1+740	LT					20					
1+700-1+740	RT					10					
1+940-2+220	RT & LT					200					
2+500-2+710	RT & LT					140					
2+710-2+820	RT & LT					80					
3+120-3+280	RT & LT					120					
1+620-1+720	RT & LT									1112	
0+240-3+520	RT & LT	6	300	600	27				5		1350
TOTALS		6	300	600	27	1040	1240	5920	5	1112	1350

SURFACE DRAINAGE REMOVAL

STATIONING	LOCATION	INPLACE	REMOVE PIPE CULVERTS R.C.P. (m)	REMOVE PIPE CULVERTS C.M.P. (m)	REMOVE CATTLE PASS TIMBER BOX (m)
0+254	C/L	600 mm x 23.5 m R.C. PIPE CULV. W/APRONS	27.2		
0+272	ENTRANCE RT	750 mm x 8.5 m R.C. PIPE CULV. W/APRONS	11.1		
0+300	TWP. ROAD RT	750 mm x 11.0 m R.C. PIPE CULV. W/APRONS	13.6		
0+410	ENTRANCE RT	450 mm x 9.1 m CMP CULVERT W/APRONS		9.1	
0+662	FIELD ENT. LT	450 mm x 7.9 m CMP CULVERT W/APRONS		9.5	
0+820	FIELD ENT. RT	450 mm x 9.4 m CMP CULVERT		9.4	
1+138	ENTRANCE RT	450 mm x 9.8 m CMP CULVERT W/APRONS		11.4	
1+326	C/L	750 mm x 10.4 m R.C. PIPE CULV. W/APRONS	14.0		
1+405	FIELD ENT. RT	450 mm x 8.5 m CMP CULVERT W/APRONS		8.5	
1+595	ENTRANCE RT	450 mm x 9.8 m CMP CULVERT W/APRONS		9.8	
1+638	ENTRANCE RT.	450 mm x 12.2 m CMP CULVERT W/APRONS		13.8	
1+909	TWP. ROAD RT	600 mm x 9.8 m CMP CULVERT W/APRONS		11.9	
1+909	TWP. ROAD LT	600 mm x 9.8 m CMP CULVERT W/APRONS		11.9	
2+368	C/L	1800 mm x 1800 mm x 22.6 m TIMBER BOX CULV.			22.6
2+492	FIELD ENT. RT	450 mm x 7.9 m CMP CULVERT W/APRONS		9.5	
2+710	FIELD ENT. LT	450 mm x 9.6 m CMP CULVERT		11.2	
3+005	C/L	1050 mm x 9.4 m R.C. PIPE CULV. W/APRONS	14.4		
3+145	FIELD ENT. RT	450 mm x 9.6 m CMP CULVERT		9.6	
3+166	ENTRANCE RT	450 mm x 9.1 m CMP CULVERT W/APRONS		10.7	
3+265	FIELD ENT. LT	450 mm x 7.9 m CMP CULVERT W/APRONS		9.5	
3+342	C/L	750 mm x 11.6 m R.C. PIPE CULV. W/APRONS	15.3		
3+440	FIELD ENT. LT	450 mm x 9.8 m CMP CULVERT W/APRONS		11.4	
3+462	C/L	1050 mm x 15.2 m R.C. PIPE CULV. W/APRONS	20.2		
TOTALS			115.8	157.2	22.6

SURFACE DRAINAGE

STATIONING	LOCATION	REINFORCED CONCRETE R.C.P. 750 mm (m)	R.C.P. 1050 mm (m)	SPAN R.C.P.-ARCH 725 mm (m)	SPAN R.C.P.-ARCH 2590 mm (m)	C.S.P 450 mm (m)	C.S.P 600 mm (m)	C.S.P 750 mm (m)	CLASS	APRONS
0+254	C/L	SEE STORM SEWER SCHEDULE SHEET 10								
NEW ENT. 20 ST SE	RT					10.4				450 mm G.S.
0+300	TWP. ROAD RT	SEE STORM SEWER SCHEDULE SHEET 10								
0+410	ENTRANCE RT					11.6				450 mm G.S.
0+662	FIELD ENT. LT					11.6				450 mm G.S.
0+820	FIELD ENT. RT							11.0		750 mm G.S.
1+106	FIELD ENT. RT							9.6		750 mm G.S.
1+106	FIELD ENT. LT					9.6				450 mm G.S.
1+326	C/L			15.8					IIA	725 mm SPAN R.C.P.
1+405	FIELD ENT. RT					10.4				450 mm G.S.
1+595	ENTRANCE RT					11.6				450 mm G.S.
1+638	ENTRANCE RT.					14				450 mm G.S.
1+909	TWP. ROAD RT						14			600 mm G.S.
1+909	TWP. ROAD LT						14			600 mm G.S.
2+332	FIELD ENT. LT							12.2		750 mm G.S.
2+368	C/L				30.5				IVA	2590 mm SPAN R.C.P.
2+492	FIELD ENT. RT					10.4				450 mm G.S.
2+710	FIELD ENT. LT	NO CULVERT REQUIRED								
3+005	C/L		29.9							1050 mm R.C.
3+145	FIELD ENT. RT					10.4				450 mm G.S.
3+166	ENTRANCE RT	NO CULVERT REQUIRED								
3+265	FIELD ENT. LT					10.4				450 mm G.S.
3+342	C/L	19.5								750 mm R.C.
3+440	FIELD ENT. LT					10.4				450 mm G.S.
3+462	C/L		21.9							1050 mm R.C.
TOTALS		19.5	51.8	15.8	30.5	120.8	28	32.8		

AS-BUILT

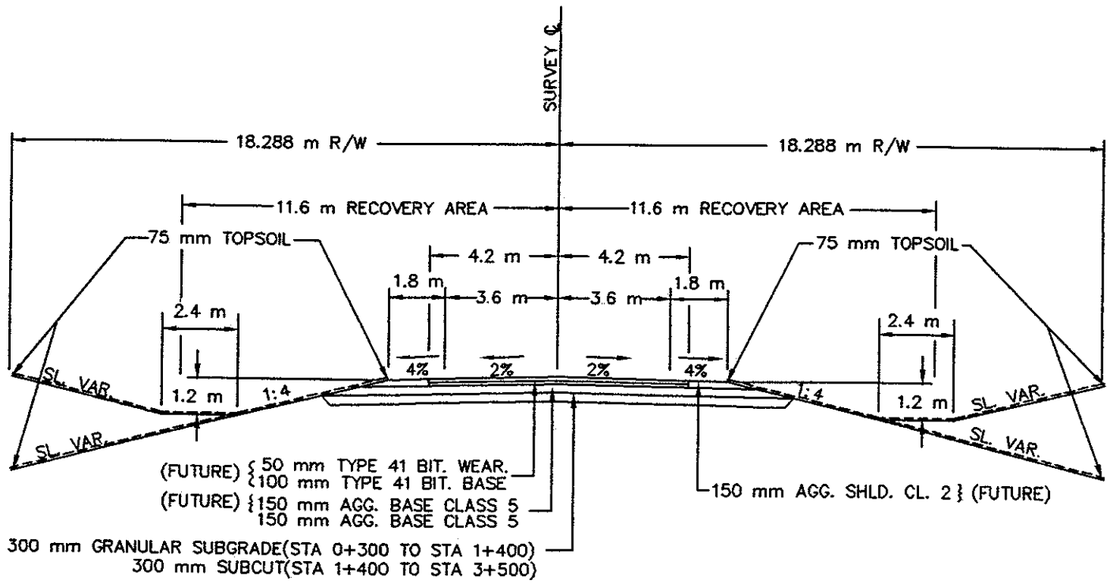
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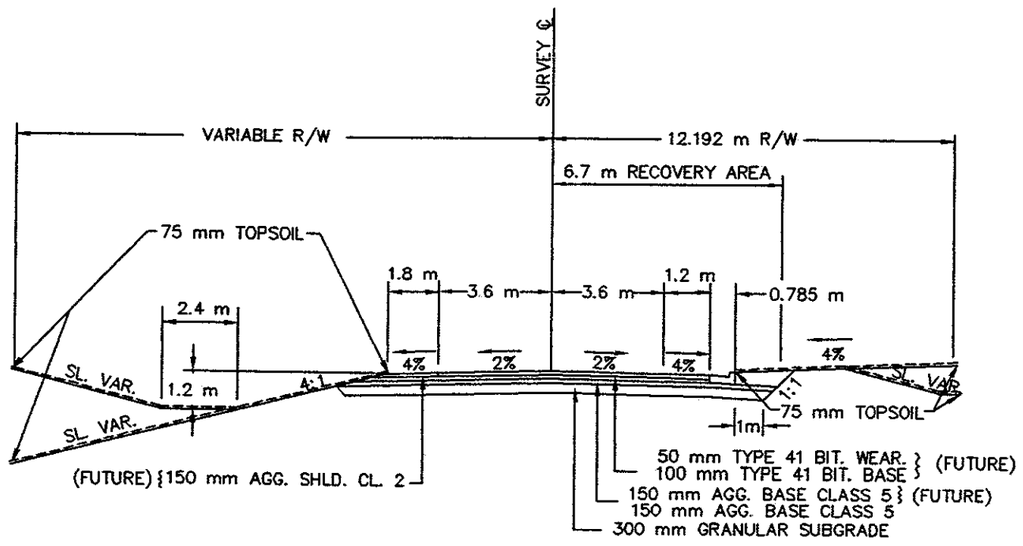
minnesota metric

CERTIFIED BY Kayce M Bierneck PROFESSIONAL ENGINEER REG. NO. 19917 5/27 1999

S.A.P. 55-607-12



STA. 0+300 TO STA. 3+500



STA. 0+240 TO STA. 0+300

AS-BUILT

MAR 03 2003

ENGINEERING

minnesota metric

TYPICAL SECTIONS

CERTIFIED BY Gary M Pieniek PROFESSIONAL ENGINEER REG NO. 19917 5/27/99 22

SAP 55 – 607 – 12

SHEET NO. 4 OF 48 SHEETS

NORTHERN NATURAL GAS CO.

RICHARD R & TRACY VEHRENKAMP

℄ CULV. STA. 0+254
INPL. 600 mm x 23.5 m RCP
W/APRONS 13.6
REMOVE ~~27.2~~ m R.C.P. CULV.

SEE SHEET 10 FOR STORM SEWER DETAIL SHEET

ENT LT. STA. 0+410
INPL. 450 mm x 9.1 m CMP
NO APRONS
REMOVE 9.1 m C.M.P. CULV.

CONST. 450 mm x 11.6 m C.S. PIPE CULV.
2-450 mm G.S. PIPE APRONS

F.E. LT. STA. 0+682
INPL. 450 mm x 7.9 m CMP
W/APRONS
REMOVE 9.5 m C.M.P. CULV.

CONST. 450 mm x 11.6 m C.S. PIPE CULV.
2-450 mm G.S. PIPE APRONS

BEGIN: SAP 55-607-12
STA. 0+240
PI STA 0+208.774
Δ = 15°28'00"
T = 9.506
R = 70.000
L = 18.896

PI STA 0+414.594
Δ = 14°25'20"
T = 43.019
R = 340.000
L = 85.584

CANOPY

U.S. Highway 14

PC STA 0+262.117

PT STA 0+350.855

70° SKEW

C.S.A.H. 7

2" GASLINE

18.288 m NEW R/W

10.058 m OLD R/W

7.62 m T.E.

0+200 0+300 0+400 0+500 0+600 0+700 0+800

0+650 0+670 0+810 0+830

PC STA 0+198.396

PC STA 0+218.292

SAW 40.8 m BIT. PAVEMENT

12.192 m NEW R/W

PI STA 0+309.113
Δ = 30°00'08"
T = 46.895
R = 175.000
L = 91.636

PC STA 0+371.575

PT STA 0+457.158

20 ST SE

ENT RT. STA. 0+272
INPL. 750 mm x 8.5 m CMP
W/APRONS
REMOVE 11.1 m C.M.P. CULV.
REMOVE ENTRANCE

MOVE ENTRANCE TO 20 ST SE
CONST. 450 mm x 10.4 m C.S. PIPE CULV.
2-450 mm G.S. PIPE APRONS

INTERSTATE POWER CO.

TWP. RD. RT. STA. 0+300
INPL. 750 mm x 11.0 m CMP
W/APRONS
REMOVE 13.6 m C.M.P. CULV.

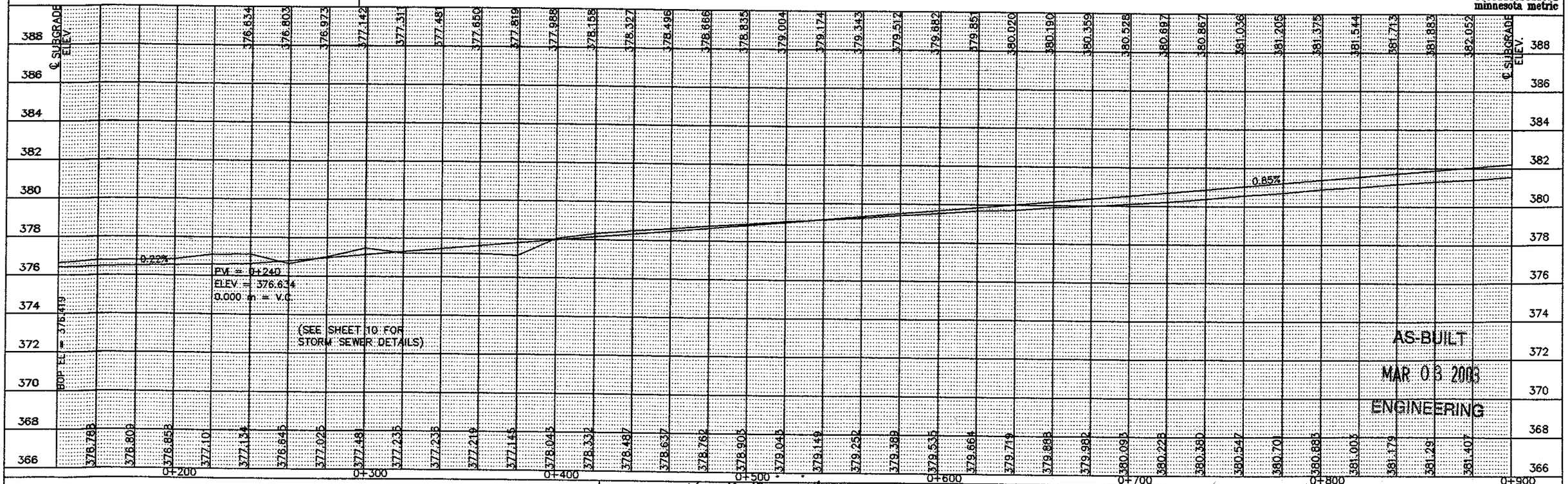
SEE SHEET 10 FOR STORM SEWER DETAIL SHEET

ROBERT G. BRUBAKER

F.E. RT. STA. 0+820
INPL. 450 mm x 9.4 m CMP
NO APRONS
REMOVE 9.4 m C.M.P. CULV.

CONST. 750 mm x 11.0 m C.S. PIPE CULV.
2-750 mm G.S. PIPE APRONS

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SHEET 5 OF 48 SHEETS

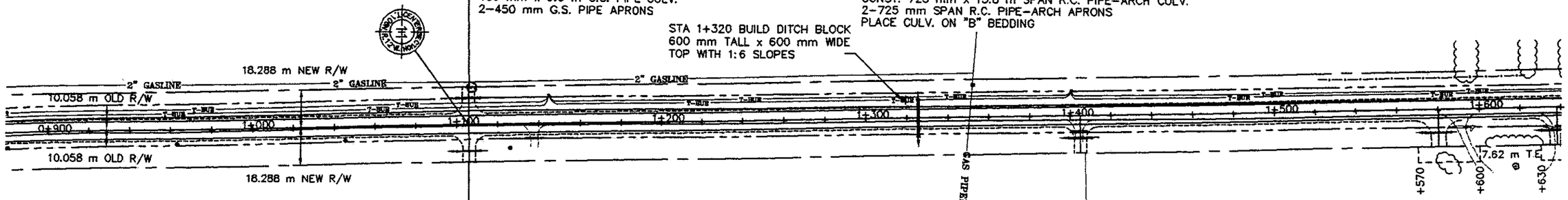
WAYNE & IRENE VEHRENKAMP

CONST. F.E. STA. 1+106
450 mm x 9.6 m C.S. PIPE CULV.
2-450 mm G.S. PIPE APRONS

℄ CULV. STA. 1+326
INPL. 750 mm x 10.4 m SCP
W/APRONS
REMOVE 14.0 m R.C.P. CULV.

CONST. 725 mm x 15.8 m SPAN R.C. PIPE-ARCH CULV.
2-725 mm SPAN R.C. PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING

STA 1+320 BUILD DITCH BLOCK
600 mm TALL x 600 mm WIDE
TOP WITH 1:6 SLOPES



F.E. RT. STA. 1+138
INPL. 450 mm x 9.8 m CMP
W/APRONS
REMOVE 11.4 m C.M.P. CULV.

MOVE F.E. TO STA. 1+106
CONST. 750 mm x 9.6 m C.S. PIPE CULV.
2-750 mm G.S. PIPE APRONS

CONST. 200 ~~mm~~ 30.3 TILE CROSSING STA. 1+330
200 mm x ~~30.5~~ 30.3 m C.S. PIPE DRAIN
200 mm x 1.6 m C.S. OUTLET INSPECTION TEE

ARTHUR W. & AGNES C. WENDT

F.E. RT. STA. 1+405
INPL. 450 mm x 8.5 m CMP
NO APRONS
REMOVE 8.5 m C.M.P. CULV.

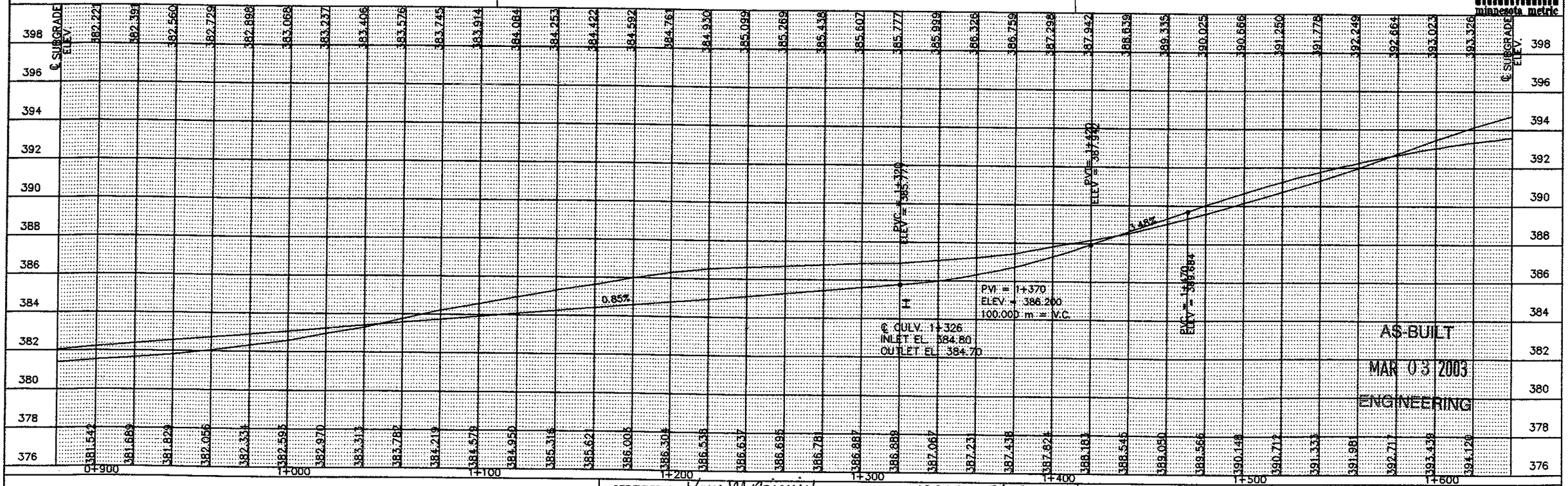
CONST. 450 mm x 10.4 m C.S. PIPE CULV.
2-450 mm G.S. PIPE APRONS

ENT. RT. STA. 1+595
INPL. 450 mm x 9.8 m CMP
NO APRONS
REMOVE 9.8 m C.M.P. CULV.

MOVE ENT. TO STA. 1+580
CONST. 450 mm x 11.6 m C.S. PIPE CULV.
2-450 mm G.S. PIPE APRONS

JOHN FUCHS

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SHEET 6 OF 48 SHEETS

ENT. LT. STA. 1+675
NO CULV. INPLACE

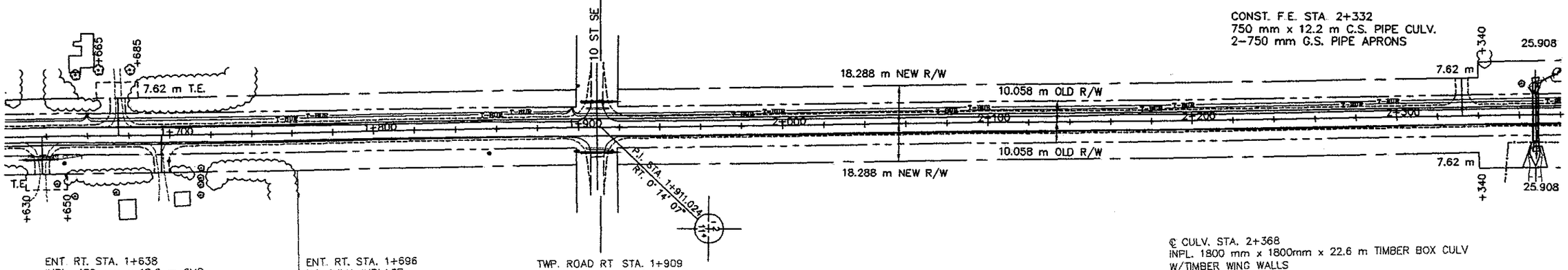
NO CULV. REQUIRED

TWP ROAD LT. STA. 1+909
INPL. 600 mm x 9.8 m CMP
W/APRONS
REMOVE 11.9 m C.M.P. CULV.

CONST. 600 mm x 14.0 m C.S. PIPE CULV.
2-600 mm G.S. PIPE APRONS
PLACE CULV. ON "B" BEDDING

CLAYTON E. & BEATRICE M. MCDOUGALL

CONST. F.E. STA. 2+332
750 mm x 12.2 m C.S. PIPE CULV.
2-750 mm G.S. PIPE APRONS



ENT. RT. STA. 1+638
INPL. 450 mm x 12.2 m CMP
W/APRONS
REMOVE 13.8 m C.M.P. CULV.

CONST. 450 mm x ~~14~~ 13 m C.S. PIPE CULV.
2-450 mm G.S. PIPE APRONS

ENT. RT. STA. 1+696
NO CULV. INPLACE

NO CULV. REQUIRED

ALFRED O. SCHUMANN

WAYNE A. SCHUMANN

TWP. ROAD RT STA. 1+909
INPL. 600 mm x 9.8 m CMP
W/APRONS
REMOVE 11.9 m C.M.P. CULV.

CONST. 600 mm x 14.0 m C.S. PIPE CULV.
2-600 mm G.S. PIPE APRONS
PLACE CULV. ON "B" BEDDING

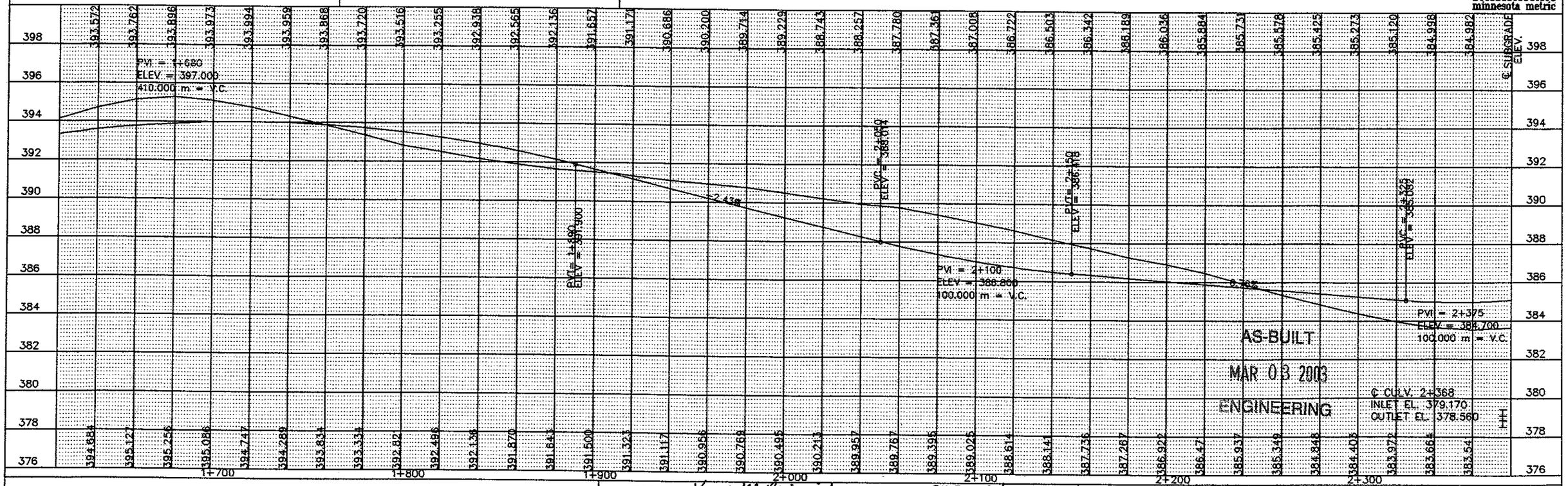
ALFRED O. SCHUMANN

WAYNE A. SCHUMANN

℄ CULV. STA. 2+368
INPL. 1800 mm x 1800mm x 22.6 m TIMBER BOX CULV
W/TIMBER WING WALLS
REMOVE 22.6 m TIMBER BOX CULV.

35.4
CONST. 2590 mm x ~~30.5~~ m SPAN R.C. PIPE-ARCH CULV.
2-2590 mm SPAN R.C. PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
PLACE 15 m3 OF CLASS III RIPRAP AT INLET
PLACE 40 m3 OF CLASS III RIPRAP AT OUTLET

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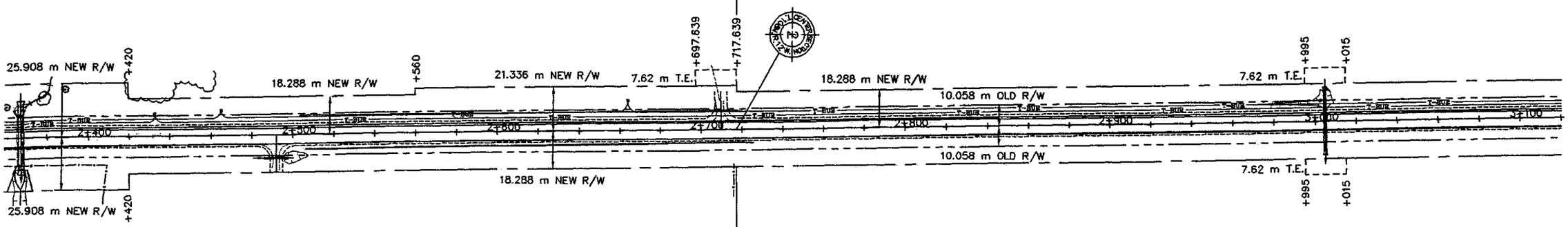
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SHEET 7 OF 48 SHEETS

F.E. LT. STA. 2+710
INPL. 450 mm x 9.6 m CMP
NO APRONS
REMOVE 11.2 m C.M.P. CULV.

NO CULVERT REQUIRED

CONST. 200 mm TILE CROSSING STA. 3+000
200 mm x 36.6 m C.S. PIPE DRAIN
200 mm x 1.6 m C.S. OUTLET INSPECTION TEE



F.E. RT. STA. 2+492
INPL. 450 mm x 7.9 m CMP
W/APRONS
REMOVE 9.5 m C.M.P. CULV.

CONST. 450 mm x 10.4 m C.S. PIPE CULV.
2–450 mm G.S. PIPE APRONS

Installed 4" Drain Tile In Ditch Bottoms & Shoulder Line Lt & Rt. Sta. 2+503 To Sta. 2+727

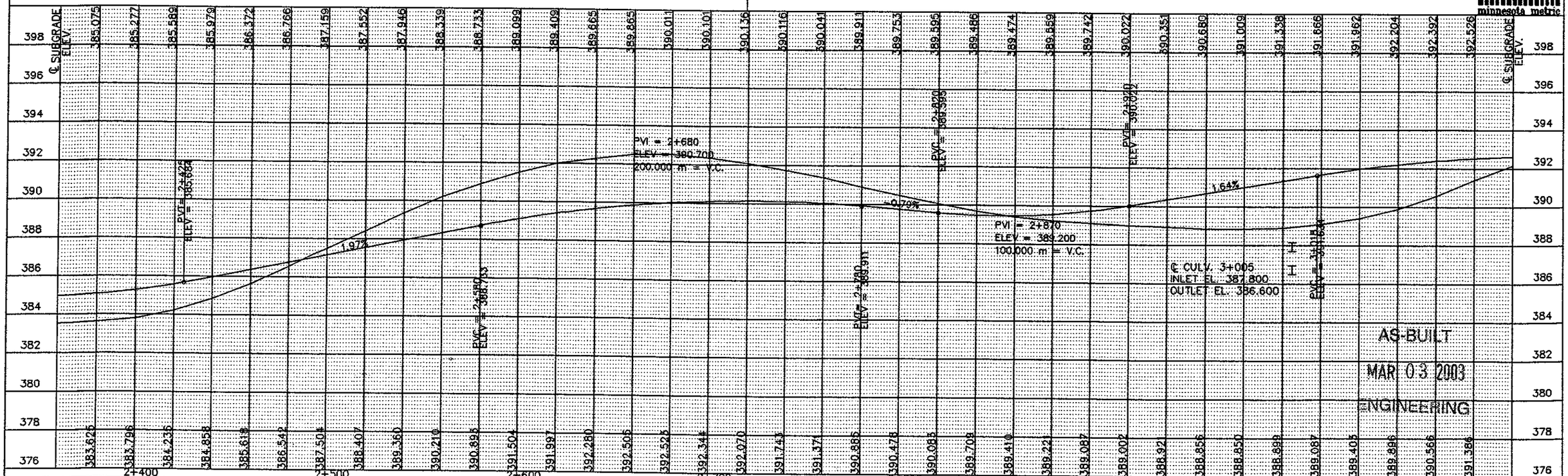
Note: 24" Breaker Run under roadbed Sta. 2+500 To Sta. 2+700.

℄ CULV. STA. 3+005
INPL. 1050 mm x 9.4 m SCP
W/APRONS
REMOVE 14.4 m R.C.P. CULV.

CONST. 1050 mm x 29.9 m R.C. PIPE CULV.
2–1050 mm R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING

THEODORE W. & GAIL R. KLASSEN

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SHEET 8 OF 48 SHEETS

R. EDWIN & JULIE L. KAEHLER

New F.E. Lt. Sta. 3+389
Const. 450mm x 8.4m C.M.P. Culv.
2-450mm G.S. Pipe Aprons

ENT. LT. STA. 3+180
NO CULV INPLACE

NO CULVERT REQUIRED

F.E. LT. STA. 3+265
INPL. 450 mm x 7.9 m CMP
W/APRONS
REMOVE 9.5 m C.M.P. CULV.

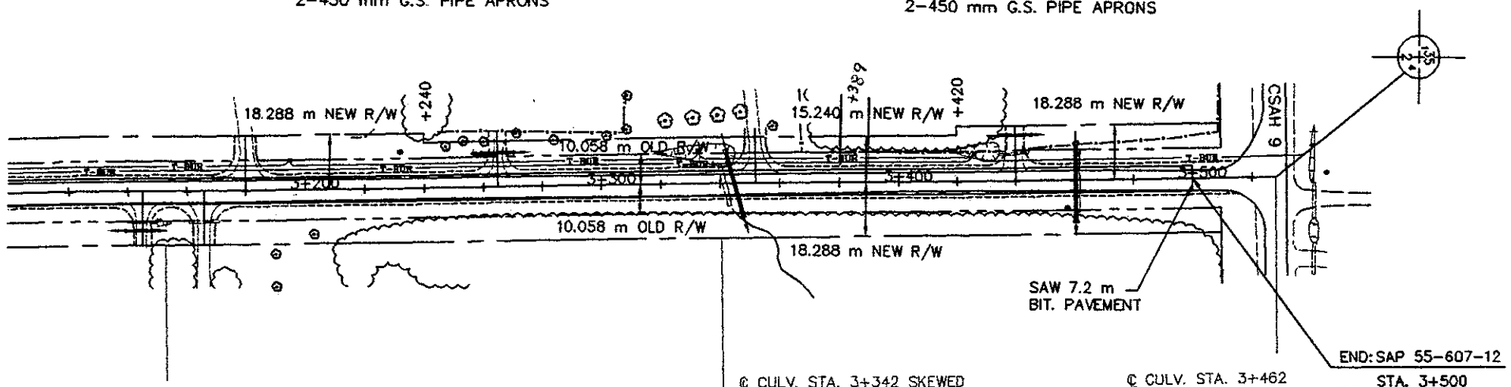
CONST. 450 mm x 10.4 m C.S. PIPE CULV.
2-450 mm G.S. PIPE APRONS

ENT. LT. STA. 3+352
NO CULV INPLACE

NO CULVERT REQUIRED

F.E. LT. STA. 3+440
INPL. 450 mm x 9.8 m CMP
W/APRONS
REMOVE 11.4 m C.M.P. CULV.

CONST. 450 mm x 10.4 m C.S. PIPE CULV.
2-450 mm G.S. PIPE APRONS



F.E. RT. STA. 3+145
INPL. 450 mm x 9.6 m CMP
NO APRONS
REMOVE 9.6 m C.M.P. CULV.

CONST. 450 mm x 10.4 m C.S. PIPE CULV.
2-450 mm G.S. PIPE APRONS

ENT. RT. STA. 3+166
INPL. 450 mm x 9.1 m CMP
W/APRONS
REMOVE 10.7 m C.M.P. CULV.

NO CULVERT REQUIRED

℄ CULV. STA. 3+342 SKEWED
INPL. 750 mm x 11.6 m SCP
W/APRONS
REMOVE 15.3 m R.C.P. CULV

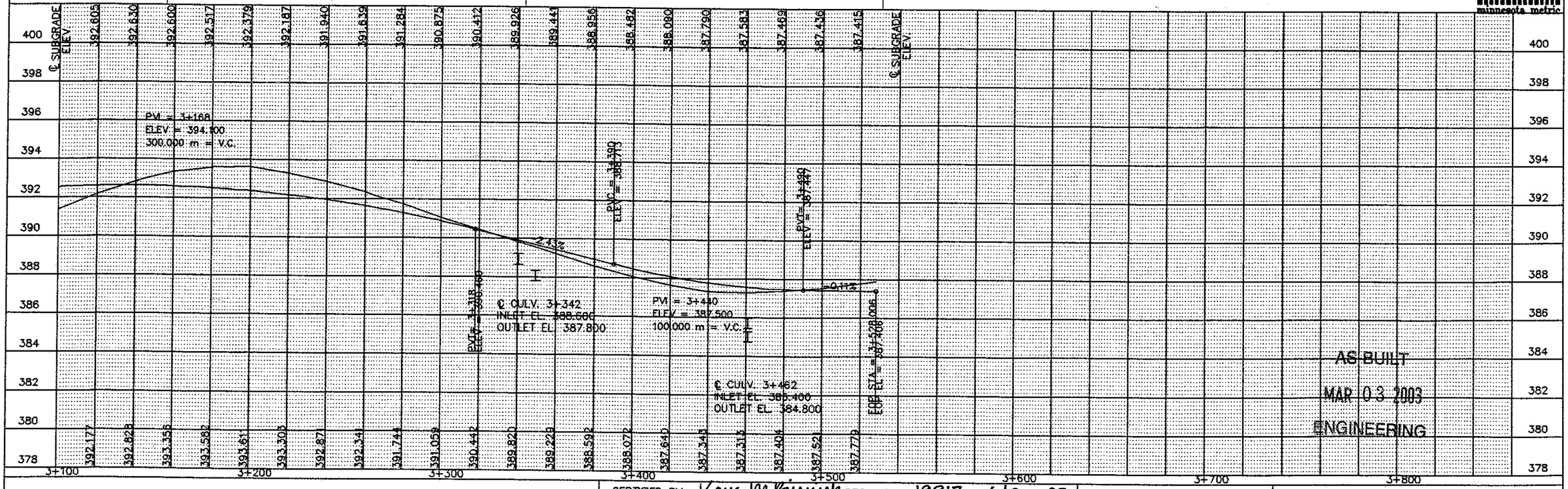
CONST. 750 mm x 19.5 m R.C. PIPE CULV.
2-750 mm R.C. PIPE APRONS
SKEWED 15°
PLACE CULV. ON "B" BEDDING

℄ CULV. STA. 3+462
INPL. 1050 mm x 15.2 m SCP
W/APRONS
REMOVE 20.2 m R.C.P. CULV.

CONST. 1050 mm x 21.9 m R.C. PIPE CULV.
2-1050 mm R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING

GENE C. & MARY P. STURGIS

GARY A. & MARGARET ELZEN



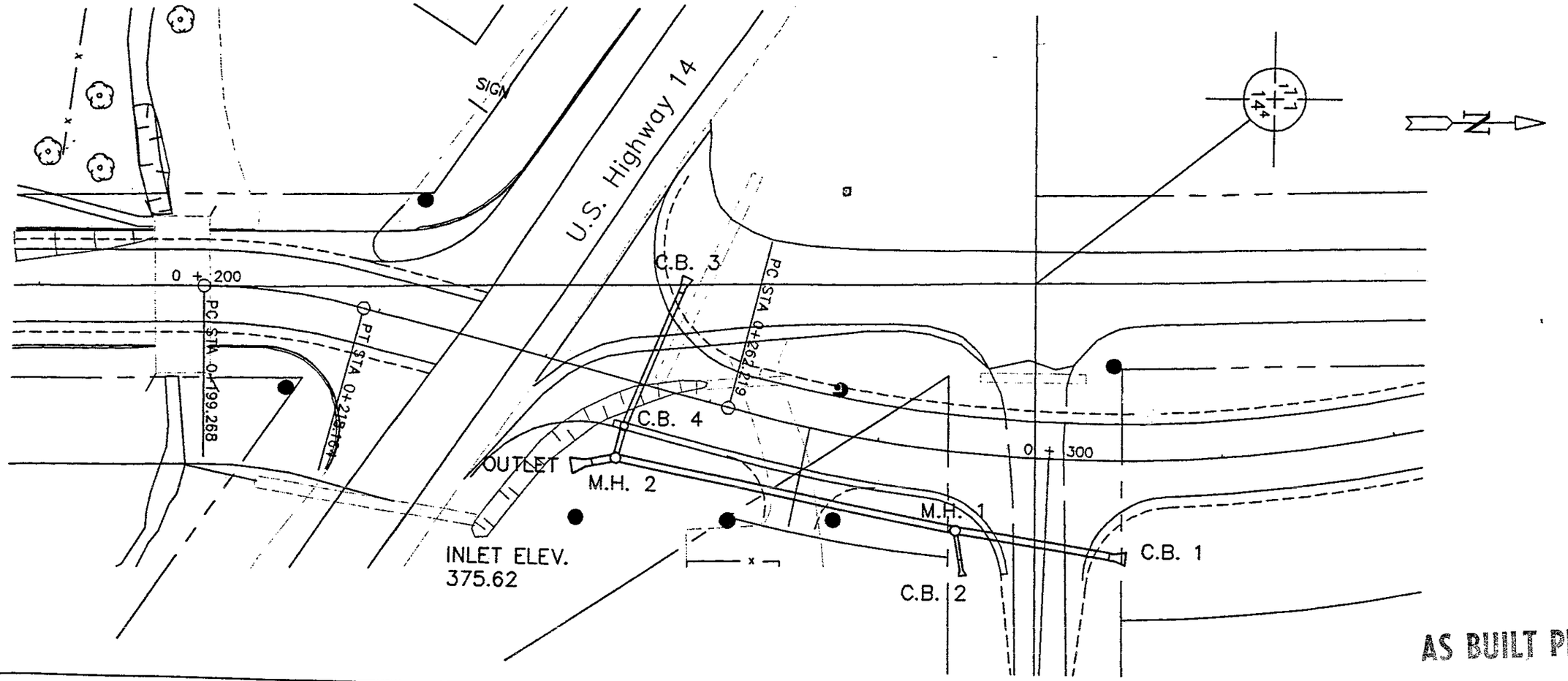
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SHEET 9 OF 48 SHEETS



AS BUILT PLANS

STORM SEWER

NOTES	STRUCTURE NO.	STATION	LOCATION	CONSTRUCTION DESIGN M.H.	CONSTRUCTION DESIGN C.B.	QUANTITY E.S.T.	QUANTITY FINAL	TOP CASTING ELEV.	INLET ELEV.	INLET ELEV.	INLET ELEV.	OUTLET ELEV.	FRAME CASTING NO.	GRATE NO.	CURB BOX NO.	RING CASTING NO.	COVER CASTING NO.	450 mm R.C. PIPE m	600 mm R.C. PIPE m	750 mm R.C. PIPE m	825 mm R.C. PIPE m	900 mm R.C. PIPE m	APRON INLET	APRON OUTLET	FLOWS TO	% GRADE	CLASS
	C.B. 1	0+308.80	11.306 RT.						~~376.700 N~~ 376.480 N																		
	C.B. 2	0+291.30	14.083 RT.						~~376.689 E~~ 376.58 E																		
	M.H. 1	0+290.00	9.000 RT.	1350-M4020		1		377.670	376.280 N	~~376.580 E~~ 376.480 E		376.200 S						3.37		18.14			1		M.H. 1	2.30	II
	M.H. 2	0+251.00	9.000 RT.	1500-M4020		1		377.120	375.800 N	375.960 W		375.720 S				700-7	716				40.37				M.H. 1	3.00	III
	C.B. 3	0+253.68	13.266 LT.			1			~~376.080 W~~ 376.930 W							700-7	716					3.69		1	M.H. 2	1.00	II
①	C.B. 4	0+251.00	5.200 RT.		N			376.850	376.000 W			375.980 E							16.79				1		OUTLET	0.50	II
	OUTLET	0+246.23	11.290 RT.									~~375.700 S~~ 375.700 S							3.80						C.B. 4	0.50	III
																									M.H. 2	0.50	III

① TOP OF CASTING ELEVATION IS THE ELEVATION FOR THE TOP OF STRUCTURE. A STEEL PLATE SHALL BE FURNISHED BY THE CONTRACTOR TO COVER THE STUCTURE WHICH SHALL BE INCIDENTAL AND NO COMPENSATION SHALL BE MADE THEREFORE.

AS-BUILT

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