

CITY OF MANDAN, NORTH DAKOTA

JOB # _____

STATE	PROJECT	SHEET NO.
ND	X	1

MORTON COUNTY

PLANS FOR FEDERAL AID
PROJECT NO. XX-X-XXX(XXX)XXX

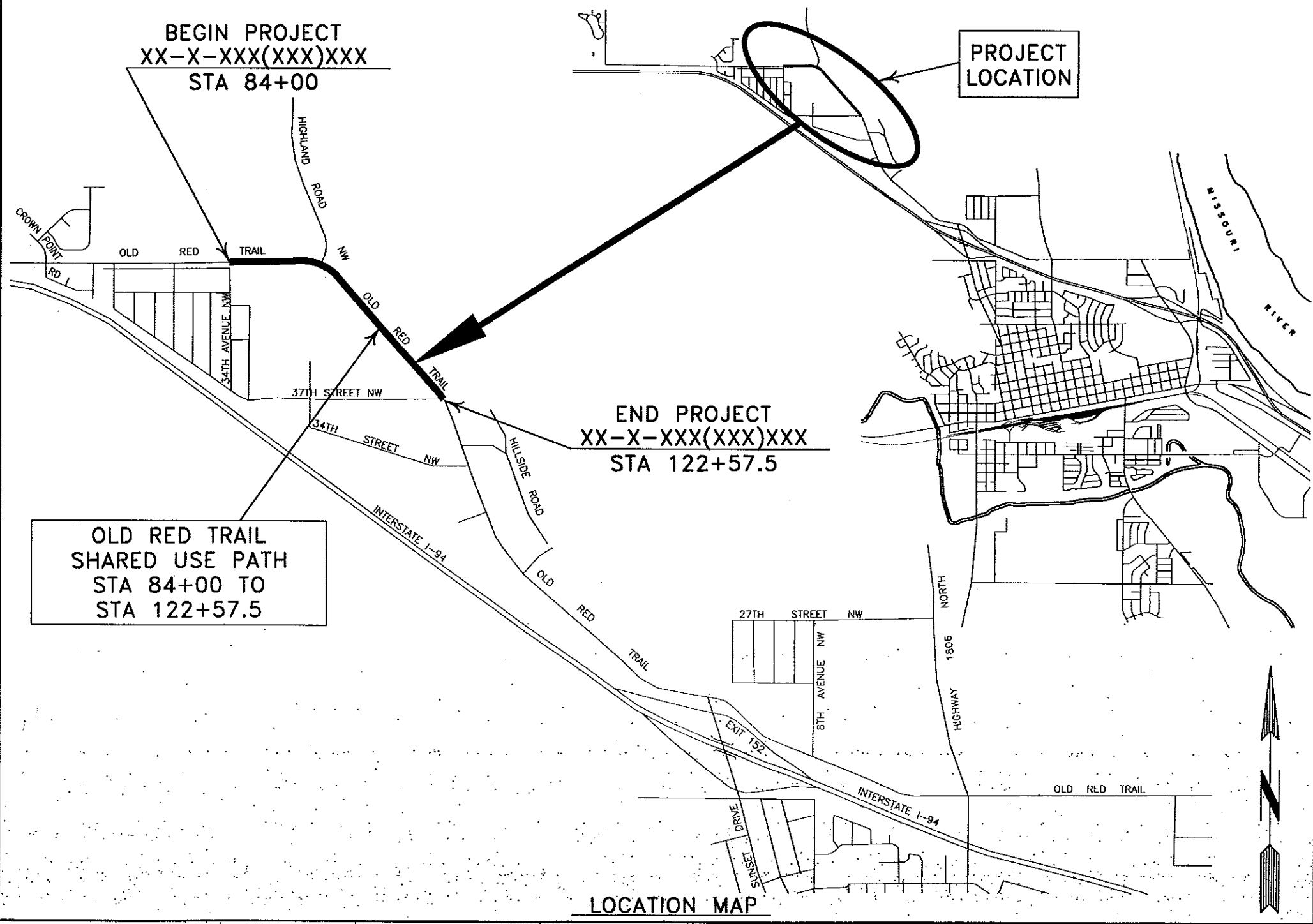
OLD RED TRAIL

SHARED USE PATH
34TH AVE. TO 37TH ST

GOVERNING SPECIFICATIONS:
STANDARD SPECIFICATIONS ADOPTED BY THE NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION OCTOBER 1997;
STANDARD DRAWINGS CURRENTLY IN EFFECT; AND OTHER
CONTRACT PROVISIONS SUBMITTED HEREIN.

LENGTH OF PROJECT

PROJECT	MILES-GROSS	MILES-NET
XX-X-XXX(XXX)XXX	0.75	0.75



BEGIN PROJECT
XX-X-XXX(XXX)XXX
STA 84+00

END PROJECT
XX-X-XXX(XXX)XXX
STA 122+57.5

OLD RED TRAIL
SHARED USE PATH
STA 84+00 TO
STA 122+57.5

LOCATION MAP

<p>APPROVAL OF CITY ENGINEER</p> <p>I, Thomas Little, P.E., City Engineer for the City of Mandan, North Dakota, hereby approve these plans for Old Red Trail, Project Number XX-X-XXX(XXX)XXX, Mandan, North Dakota as shown on the accompanying plans.</p> <p>Thomas R. Little City Engineer Mandan, North Dakota</p> <p>Date: _____</p>	
<p>I hereby certify that this plan, specification, or report 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 North Dakota.</p> <p>Kenneth Nysether P.E. #4157 Ulteig Engineers, Inc.</p> <p>Date: _____</p>	
<p>I hereby certify that this plan, specification, or report 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 North Dakota.</p> <p>Bron P. Molsom P.E. #2847 Ulteig Engineers, Inc.</p> <p>Date: _____</p>	

ULTEIG ENGINEERS, INC.
BISMARCK • FARGO • MINNEAPOLIS •
SIOUX FALLS

XX-X-XXX(XXX)XXX

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STATE	PROJECT	SHEET NO.
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OLD RED TRAIL SHARED USE PATH		

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STATE	PROJECT	SHEET NO.
ND	X	3
OLD RED TRAIL LEGEND		

LEGEND

SYMBOLS

	250 WATT H.P. SODIUM VAPOR LUMINARE		GROUND MOUNTED SIGN (NEW)
	BORINGS		HEDGES
	CABLE TV		HYDRANT
	CENTERLINE OF CONSTRUCTION		MAILBOX
	CONCRETE CURB AND GUTTER		MANHOLE (EXISTING)
	CONCRETE PULL BOX		OLD RIGHT-OF-WAY LINE
	CONDUCTOR		NEW RIGHT-OF-WAY LINE
	CONDUIT		POWER LINES
	CONIFEROUS TREE		PROPERTY CORNER
	CONSTRUCTION SIGN		SECTION LINE
	CURB INLET (EXISTING)		STREET LIGHTS
	CURBSTOP		TELEPHONE LINES
	DECIDUOUS TREE		TEMPORARY CONSTRUCTION EASEMENT LINE
	DEFLECTION ANGLE (DELTA)		TUBULAR MARKERS
	DELINEATOR DRUMS		TYPE III BARRICADE
	FEED POINT		VALVE (EXISTING)
	FENCE		
	GAS		
	GRADE LINE (EXISTING)		
	GRADE LINE (NEW)		

ABBREVIATIONS

AGG. = AGGREGATE	M.A. = MAST ARM
AHD. = AHEAD	MAX. = MAXIMUM
ALUM. = ALUMINUM	MGAL. = THOUSAND GALLONS
APT. = APARTMENT	MDU = MONTANA DAKOTA UTILITIES
BEG. = BEGIN	MED. = MEDIAN
BIT. = BITUMINOUS	MIN. = MINIMUM
BK. = BACK	MTL. = METAL
BLK. = BLOCK	NB = NORTH BOUND
BRK. = BRICK	N.T.S. = NOT TO SCALE
B.S.W. = BACK OF SIDEWALK	O.C. = O/C = ON CENTER
BVC = BEGIN VERTICAL CURVE	O.D. = OUTSIDE DIAMETER
B.M. = BENCH MARK	PARPT. = PARAPET
BTM. = BOTTOM	PCC = PORTLAND CEMENT CONCRETE
CIP = CAST IRON PIPE	PERIM. = PERIMETER
CL = CENTERLINE	PERMANENT MTCE. ESMT. =
CL = CLASS	PERMANENT MAINTENANCE EASEMENT
CONC. = CONCRETE	PI = POINT OF INTERSECTION
CR = CURB RETURN	PROP. COR. = PROPERTY CORNER
CRS. = COURSE	PSI = POUNDS PER SQUARE INCH
CS = CURB STOP	PT = POINT OF TANGENCY
C.Y. = CUBIC YARD	PVC = POLYVINYL CHLORIDE PIPE
DEF. BARS = DEFORMED BARS	PVMT = PAVEMENT
DGBC = DENSE GRADED BASE COURSE	RAD. = RADIUS
EA. = EACH	RCP = REINFORCED CONCRETE PIPE
EB = EAST BOUND	R/W = RIGHT OF WAY
EL. = ELEV. = ELEVATION	SAN. = SANITARY
EVC = END VERTICAL CURVE	SB = SOUTH BOUND
EX. = EXIST. = EXISTING	S.F. = SQUARE FEET
FIN. = FINISH	SIG./LT. COMB. = TRAFFIC SIGNAL/ STREET LIGHT COMBINATION
FL = FLOW LINE	SRT = SOURIS RIVER TELEPHONE
FLR. = FLOOR	STA. = STATION
FND. = FOUNDATION	STD. = STANDARD
FTG. = FOOTING	SURF. = SURFACE
GAL. = GALLON	SVC. = SERVICE
GALV. = GALVANIZED	S.Y. = SQUARE YARD
G.C. = GENERAL CONTRACTOR	TA = TOP OF ASPHALT
GV = GATE VALVE	TC = TOP OF CURB
GYP. BD. = GYPSUM BOARD	TEMP. = TEMPERED
HBP = HOT BITUMINOUS PAVEMENT	TEMP. CONST. ESMT. =
H.M. = HEAVY METAL	TEMPERARY CONSTRUCTION EASEMENT
HORIZ. = HORIZONTAL	TW = TOP OF WALL
IN. = INCH	VC = VERTICAL CURVE
INT. = INTERIOR	VCP = VITRIFIED CLAY PIPE
INSUL. = INSULATION	VERT. = VERTICAL
INV. = INVERT	VPC = VERTICAL POINT OF CURVATURE
JST. = JOIST	VPI = VERTICAL POINT OF INTERSECTION
JST. BRG. = JOIST BEARING	VPT = VERTICAL POINT OF TANGENCY
KI = KIPS PER INCH	W/ = WITH
LBS. = POUNDS	WB = WEST BOUND
L.F. = LINEAR FOOT	WD = WIDE
L.S. = LUMP SUM	

GENERAL NOTES

STATE	PROJECT	SHEET NO.
ND	X	4
OLD RED TRAIL GENERAL NOTES		

- 100 011 GENERAL: THE ENGINEER WILL ATTEND TO THE REMOVAL OF EXISTING FENCES TO THE HIGHWAY RIGHT OF WAY LINE AND TO THE RELOCATION OR ADJUSTMENT OF UTILITY FACILITIES AS SHOWN ON THE PLANS. EQUIPMENT SHALL WORK AROUND UTILITY POLES, WITHIN THE AREA, THAT ARE NOT TO BE DISTURBED.
- 100 P01 CONTRACTOR LOCATED AGGREGATE: THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF THE POTENTIAL FOR CULTURAL RESOURCES IN THE AREA OF THE AGGREGATE SOURCE EXISTS. IF AN ARCHAEOLOGIST PERMITTED BY SHPO, DETERMINES THAT A MODERATE OR HIGHER POTENTIAL DOES EXIST, THE CONTRACTOR MUST OBTAIN SHPO CLEARANCE BEFORE ANY PIT OPERATIONS CAN BE INITIATED.
- 100 P02 THE CONTRACTOR'S OPERATION IS LIMITED TO THE R/W OR EASEMENTS AS SHOWN ON THE PLANS. ANY WORK OR DISTURBANCE OF PROPERTY BEYOND THOSE LIMITS SHALL BE RESTORED TO EXISTING CONDITIONS AND ANY COMPENSATION DUE THE PROPERTY OWNER SHALL BE NEGOTIATED BETWEEN THE OWNER AND THE CONTRACTOR AND PAID BY THE CONTRACTOR. THE CONTRACTOR SHALL PROTECT TREES AND SHRUBS UNLESS INDICATED FOR CLEARING AND GRUBBING. ANY DAMAGE OR REMOVAL PERFORMED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL OF THE ENGINEER IN THE FIELD SHALL BE RESTORED OR COMPENSATION DUE SHALL BE NEGOTIATED WITH THE OWNER OF THE ADJACENT PROPERTY. THE CONTRACTOR SHALL OBTAIN A WRITTEN RELEASE FROM THE PROPERTY OWNER AND FURNISH THE ENGINEER WITH A COPY.
- 105 030 UNDERGROUND UTILITIES: THE CONTRACTOR SHALL NOTIFY THE LOCAL UTILITY COMPANIES PRIOR TO THE BEGINNING OF CONSTRUCTION, SO THEY MAY DETERMINE THE LOCATION OF ALL UTILITIES IN THE PROJECT AREA. SUBCUTTING OR SCARIFYING OVER UTILITY LINES MAY BE ELIMINATED IF, IN THE OPINION OF THE UTILITY, A HAZARDOUS SITUATION EXISTS. SEPARATE PLANS, IF ANY, SHOWING RELOCATION OR ADJUSTMENT WORK TO BE PERFORMED BY UTILITY COMPANIES TO ACCOMMODATE HIGHWAY CONSTRUCTION WILL BE MADE AVAILABLE TO THE CONTRACTOR, UPON REQUEST TO THE ENGINEER.
- 105 110 PAVEMENT SWEEPING: THE CONTRACTOR SHALL SWEEP NEW PAVEMENTS BEFORE OPENING TO TRAFFIC AND FOR FINAL ACCEPTANCE. FOR THIS SWEEPING, THE CONTRACTOR SHALL FURNISH AND UTILIZE A VACUUM TYPE SWEEPER TO CONTROL THE DUST. ALL COSTS CONNECTED WITH THIS WORK SHALL BE INCLUDED IN THE PRICE BID OF OTHER ITEMS.
- 107 P01 HISTORICAL PRESERVATION: IN THE EVENT OF AN ARCHAEOLOGICAL FIND DURING EXCAVATION, THE CONSTRUCTION SHALL BE HALTED. THE CONTRACTOR SHALL NOTIFY THE OWNER, WHO SHALL CONTACT THE STATE HISTORIC PRESERVATION OFFICER. ANY CLAIM MADE BY THE CONTRACTOR FOR DELAY OR ADDITIONAL WORK REQUIRED BY THE OWNER OR PRESERVATION OFFICER SHALL BE CLASSIFIED AS EXTRA WORK.
- 110 P01 SEDIMENT AND EROSION CONTROL: SILT FENCE OR STRAW BALE EROSION CHECKS WILL BE UTILIZED AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. NO DISTURBANCE OF THE SOIL MAY OCCUR WITHOUT ADEQUATE EROSION CONTROL IN PLACE. SEEDING OF DISTURBED AREAS SHALL BE COMPLETED WITHIN 14 WORKING DAYS FROM THE COMPLETION OF THE BIKEWAY.

- 200 010 SHRINKAGE: 25 PERCENT ADDITIONAL VOLUME IS INCLUDED FOR SHRINKAGE IN EARTH EMBANKMENT.
- 200 252 WASTE DISPOSAL: ALL EXCESS EXCAVATION AND OLD CONCRETE SIDEWALKS, DRIVEWAYS, CURB AND GUTTER, PAVEMENT, BITUMINOUS SURFACING, ETC., SHALL BE DISPOSED OF OFF THE HIGHWAY RIGHT-OF-WAY AT A SITE SELECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE FOLLOWING PROPERTY OWNERS ADJACENT TO THE PROJECT HAVE EXPRESSED A WILLINGNESS TO PROVIDE A DISPOSAL SITE FOR EXCESS EXCAVATION MATERIAL. ANY CONDITIONS ASSOCIATED WITH THAT DISPOSAL ARE A MATTER BETWEEN THE CONTRACTOR AND THE PROPERTY OWNER. DISPOSAL IN WETLAND AREAS WILL NOT BE APPROVED. THE COST OF DISPOSAL (AND OBTAINING OF THE DISPOSAL AREA) SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS.

ADJACENT OWNERS:

KENNETH PORSBORG 663-3572

- 200 P01 COMPACTION AND DENSITY CONTROL: COMPACTION AND DENSITY CONTROLS SHALL BE IN ACCORDANCE WITH SECTION 203.02 H OF THE STANDARD SPECIFICATIONS. PONDING OF WATER ADJACENT TO ROADWAY CONSTRUCTION WILL NOT BE ALLOWED.
- 200 P02 WATER: THE QUANTITY OF WATER REQUIRED FOR COMPACTION OF EMBANKMENT AND BASE COURSE, AND FOR USE AS A DUST PALLIATIVE HAS BEEN INCLUDED IN THE QUANTITIES AND SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "WATER." WATER IS AVAILABLE FOR PURCHASE FROM THE CITY OF MANDAN. CONTRACTOR MUST ABIDE BY THE CITY'S WATER SALE POLICY.
- 200 P03 TOPSOIL EMBANKMENT: IN INSLOPE AREAS WHERE TOPSOIL EMBANKMENT MAY FALL OVER EXISTING TOPSOIL, THE EXISTING VEGETATION SHALL BE REMOVED BEFORE PLACING THE EMBANKMENT. ALL COSTS ASSOCIATED WITH REMOVING VEGETATION SHALL BE INCLUDED IN THE PRICE BID FOR "COMMON EXCAVATION TYPE B".
- 203 P01 APPROXIMATE EARTHWORK QUANTITIES FOR THIS PROJECT HAVE BEEN CALCULATED AS FOLLOWS:

	<u>EXCAVATION</u>	<u>EMBANKMENT</u>	<u>BORROW OR EXCESS</u>
TOPSOIL	*942 CY	365 CY	577 CY EXCESS
DIRT	*87 CY	514 CY	*427 CY BORROW

* COMMON EXCAVATION QUANTITY IS A TOTAL OF THESE QUANTITIES.

PAYMENT FOR EXCAVATION SHALL BE IN ACCORDANCE WITH SECTION 203.03B-CONTRACT PLAN QUANTITY UNLESS FIELD GRADE CHANGES ARE MADE. THE EXISTING TOPSOIL ON THIS PROJECT SHALL BE REMOVED TO ITS FULL DEPTH, BUT NOT TO EXCEED EIGHT INCHES, AND STOCKPILED. UPON COMPLETION OF THE GRADING OPERATIONS, THE TOPSOIL SHALL BE SPREAD EVENLY OVER THE AREAS TO BE SEED OR SODDED. THE REMOVAL, STOCKPILING, AND SPREADING OF THE EXISTING TOPSOIL SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE PAID FOR AS "COMMON EXCAVATION TYPE B." ALL EXCESS EXCAVATION AND TOPSOIL SHALL BE DISPOSED OF OFF THE RIGHT-OF-WAY AT A SITE SECURED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THERE WILL BE NO SEPARATE MEASUREMENT OR PAYMENT FOR COMPACTED EMBANKMENT, AND ALL COSTS INCIDENTAL TO PLACING IN LAYERS, COMPACTING, DISKING, WATERING, MIXING, SLOPING, AND OTHER NECESSARY OPERATIONS FOR CONSTRUCTION OF EMBANKMENTS WILL BE INCLUDED IN THE CONTRACT PRICE FOR "COMMON EXCAVATION TYPE B".

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GENERAL NOTES

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OLD RED TRAIL GENERAL NOTES		

- 203 P02 STORM WATER DISCHARGE AND EROSION CONTROL REQUIREMENTS: BEFORE WORK CAN BEGIN ON THIS CONTRACT, THE CONTRACTOR MUST COMPLY WITH THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS AND THE ND POLLUTANT DISCHARGE ELIMINATION SYSTEM (NDPDES), AS FOLLOWS:
- A. THE CONTRACTOR MUST FILE A "NOTICE OF INTENT TO OBTAIN COVERAGE UNDER NDPDES GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY" (NOI). THIS FORM MUST BE FILED WITH THE ND HEALTH AND CONSOLIDATED LABORATORIES AT LEAST FIVE DAYS BEFORE CONSTRUCTION BEGINS.
- 203 P03 SUBGRADE PREPARATION: PRIOR TO THE PLACEMENT OF THE AGGREGATE BASE COURSE, THE SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH SECTION 230 SUBGRADE PREPARATION, TYPE "A" OF THE STANDARD SPECIFICATIONS, ORDINARY COMPACTION.
- A SOIL STERILENT SHALL BE APPLIED TO THE SUBGRADE TO THE WIDTH OF THE ASPHALT PATH. SOIL STERILENT SHALL BE SPREAD UNIFORMLY AT THE MANUFACTURER'S RECOMMENDED APPLICATION RATE JUST PRIOR TO THE PLACEMENT OF THE AGGREGATE BASE COURSE. SOIL STERILENT IS NOT A SEPARATE PAY ITEM AND SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR AGGREGATE BASE COURSE. STERILENT SHALL BE PRAMATOL BRAND OR EQUAL.
- 203 P04 CONTRACTOR FURNISHED BORROW: ALL PROJECT EXCAVATION SHALL BE COMPLETED PRIOR TO FURNISHING BORROW. ALL COSTS TO FURNISH BORROW INCLUDING, BUT NOT LIMITED TO, ROYALTY PAYMENTS, REMOVAL AND REPLACEMENT OF TOPSOIL, RESHAPING, OBLITERATING CARTWAYS, CROP DAMAGE, SEEDING AND HAULING SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR "COMMON EXCAVATION - TYPE B."
- 400 050 AUTOMATIC BATCHING EQUIPMENT: THE AUTOMATIC BATCHING EQUIPMENT AS SPECIFIED IN AASHTO M-156 WILL NOT BE REQUIRED ON THIS PROJECT.
- 400 080 THE 4" HOT BITUMINOUS PAVEMENT SHALL BE LAID IN 2 EQUAL 2 INCH LIFTS. BEFORE THE NEXT LIFT CAN BE PLACED, THE PRECEDING LIFT SHALL HAVE BEEN COMPACTED AND COOLED TO 100° F.
- 550 130 CONCRETE PROTECTION: ADJACENT P.C.C. PAVEMENT SHALL BE PROTECTED DURING THE APPLICATION OF ALL BITUMINOUS AND ASPHALT MATERIALS TO PREVENT ANY DISCOLORATION OF THE PAVEMENT. FAILURE TO COMPLY WILL RESULT IN THE CONTRACTOR HAVING TO CLEAN THE PAVEMENT AT THE CONTRACTOR'S OWN EXPENSE. THE P.C.C. PAVEMENT SLAB SHALL NOT BE USED AS A TABLE FOR STOCKPILING, MIXING, OR DRYING OF ANY MATERIAL.

- 704 010 MAINTAINING ACCESS: THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ACCESS TO ALL RESIDENTIAL DWELLINGS AND BUSINESS ESTABLISHMENTS ADJACENT TO THIS PROJECT. FINAL DETAILS ON LOCATION OF ACCESS POINTS AND CONSTRUCTION PROCEDURES SHALL BE WORKED OUT WITH THE ENGINEER IN THE FIELD PRIOR TO START OF THE PROJECT.
- 704 P01 TRAFFIC CONTROL: ANY TRAFFIC CONTROL USED MUST BE DONE ACCORDING TO THE "MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES." ALL COSTS ASSOCIATED WITH TRAFFIC CONTROL SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "TRAFFIC CONTROL."
- 708 020 SEEDING: THE FOLLOWING SEED MIXTURE WILL BE USED ON THIS PROJECT: TYPE B, CLASS V. ALL SEEDED AREAS SHALL BE HYDRO MULCH SEEDED. HYDRO MULCHING SHALL MEET THE REQUIREMENTS OF SEC 708.02 B3 AND SEC 708.02 C3.

<u>GRASS SPECIES</u>	<u>VARIETY</u>	<u>POUNDS PURE LIVE SEED PER ACRE</u>
CRESTED WHEAT GRASS	FAIRWAY	100
KENTUCKY BLUEGRASS	PARK	50
PERENNIAL RYE GRASS	WIZARD	50
TOTAL		200

- 754 050 SIGN SUPPORTS: THE SIGN SUPPORTS "STEEL GALVANIZED POSTS - SQUARE TUBE PERFORATED" WERE DESIGNED USING A MINIMUM YIELD STRENGTH OF 55,000 PSI AND THE DESIGN REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS." THE WIND SPEED OF 75 MPH WAS USED. THE SQUARE TELESCOPING STEEL POSTS SHALL HAVE ALL HOLES PUNCHED COMPLETELY. ALL METAL SHALL BE REMOVED FROM THE PUNCHED HOLES.
- 900 P01 NOISE: PILE DRIVING, JACK HAMMERING, CONCRETE DEMOLITION OR OTHER CONSTRUCTION ACTIVITIES WHICH CAUSE DISRUPTIVE NOISE WILL NOT BE ALLOWED AFTER 10 P.M. OR BEFORE 7 A.M. THE SAWING OF CONCRETE IS EXCLUDED FROM THIS RESTRICTION.

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OLD RED TRAIL QUANTITIES SHARED USE PATH		

QUANTITIES

SPEC	CODE	DESCRIPTION	UNIT	UNITS
103	0100	CONTRACT BOND	LSUM	1.00
202	0130	REMOVAL OF CURB & GUTTER	LF	8.00
202	0153	SAW BITUMINOUS SURFACING - FULL DEPTH	LF	60.00
203	0102	COMMON EXCAVATION TYPE B	CY	1456.00
216	0100	WATER	MGAL	20.00
302	0120	AGGREGATE BASE COURSE CL 5	TON	991.00
401	0100	MC70 OR 250 LIQUID ASPHALT	GAL	1555.00
401	0150	SSIH OR CSSIH OR MSI EMULSIFIED ASPHALT	GAL	223.00
408	0176	HOT BITUMINOUS PAVEMENT CL 27	TON	976.00
408	0445	PG58-28 ASPHALT CEMENT	TON	59.00
702	0100	MOBILIZATION	LSUM	1.00
704	0100	FLAGGING	MHR	50.00
704	1000	TRAFFIC CONTROL	LSUM	1.00
708	1020	RIPRAP - LOOSE ROCK	CY	39.00
708	1310	EROSION CHECKS	LF	102.00
708	1350	SEDIMENT CONTROL FENCING	LF	70.00
708	2950	SEEDING-HYDRO MULCH	ACRE	0.50
709	0402	GEOTEXTILE FABRIC TYPE S2	SY	77.00
714	5035	PIPE CORR STEEL .064IN 24IN	LF	99.00
714	5820	END SECT CORR STEEL .064IN 24IN	EA	6.00
748	0140	CURB & GUTTER - TYPE 1	LF	3.00
754	0116	FLAT SHEET FOR SIGNS TYPE 2 REFLECTIVE SHEETING	SF	38.00
754	0117	FLAT SHEET FOR SIGNS TYPE 3A REFLECTIVE SHEETING	SF	17.00
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	127.32
754	0592	RESET SIGN PANEL	EA	2.00
754	0593	RESET SIGN SUPPORT	EA	1.00
762	1224	PLASTIC PVMT MK FILM 24IN LINE	LF	16.00

BASIS OF ESTIMATE

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OLD RED TRAIL BASIS OF ESTIMATE		

SURFACING

CLASS 5 AGGREGATE BASE COURSE @ 1.6 TON/CY + 25%	2.0 TON/CY
HOT BITUMINOUS PAVEMENT CLASS 27 @ 2 TON/CY	0.056 TON/SY/IN
P.G. 58-28 ASPHALT CEMENT @ 6% OF HOT BITUMINOUS PAVMENT	0.0036 TON/SY/IN
TACK COAT SS-1H OR CSS-1H OR MS1 EMULS ASPH @ 0.05 GAL/SY	0.05 GAL/SY
PRIME COAT MC70 OR 250 LIQUID ASPHALT @ 0.35 GAL/SY	0.35 GAL/SY

GRADING

- WATER: 10 GAL/CY OF ESTIMATED EMBANKMENT QUANTITIES AND 20 GAL/TON OF AGGREGATE BASE COURSE. AN ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE QUANTITIES FOR USE AS A DUST PALLIATIVE.
- TOPSOIL: TOPSOIL SHALL BE REMOVED AND REPLACED FOR A MINIMUM DEPTH OF 6 INCHES ON THE AREAS THAT WILL BE DISTURBED BY THE CONSTRUCTION. SALVAGING, STOCKPILING, AND SPREADING TOPSOIL FROM EXCAVATION AREAS SHALL BE MEASURED AND PAID FOR AS "COMMON EXCAVATION - TYPE B."
- SEEDING: THE ENTIRE AREA WITHIN THE RIGHT OF WAY THAT IS DISTURBED BY CONSTRUCTION ACTIVITIES, EXCLUDING SURFACED AREAS SHALL BE SEEDED. THE EXACT LIMITS SHALL BE DETERMINED IN THE FIELD.
- MULCHING: THE ENTIRE AREA TO BE SEEDED.

STATE	PROJECT	SHEET NO.
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OLD RED TRAIL		

LIST OF STANDARDS AND BENCH MARKS

LIST OF BENCH MARKS

NOTE:

VERTICAL CONTROL IS BASED ON NAVD OF 1929

NO	DESCRIPTION	LOCATION	ELEVATION
-	CHISEL "X"	S. END BOX CULVERT - W. OF 7TH DAY ADVENTIST	1940.75
-	PIPE IN CONC.	PROP. COR. - NE LOT COR. HOUSE #3901	1976.15
-	N. RIM W.V.	EXISTING W.V. E. OF HOUSE #4005	1966.45
-	TN - HYDRANT	1ST S. OF INT. 37TH ST NW & ORT	1990.71
-	TN - HYDRANT	W. SIDE ORT BETWEEN HILLSIDE & 34TH ST NW	1984.29

LIST OF STANDARDS

STANDARD NO.

D-704-8
D-704-9,10,11,12
D-704-13
D-704-14
D-708-2
D-748-1
D-750-1
D-750-2
D-754-1
D-754-3
D-754-4
D-754-23
D-754-24
D-754-28,29,34

BREAKAWAY SYSTEMS FOR CONSTRUCTION ZONE SIGNS
CONSTRUCTION SIGN DETAILS
BARRICADE DETAILS
CONSTRUCTION SIGN AND BARRICADE ASSEMBLY DETAILS
TEMPORARY EROSION AND SILTATION CONTROLS
VALLEY GUTTER AND CURB AND GUTTER
CONCRETE DRIVEWAY (URBAN)
SIDEWALKS AND CURB RAMPS
ASSEMBLY DETAILS
BREAK AWAY BASE
MULTI DIRECTIONAL BREAK AWAY BASE
ASSEMBLY DETAILS
MOUNTING DETAILS PERFORATED TUBE
SIGN PUNCHING, STRINGER, AND SUPPORT LOCATION
DETAILS FOR REGULATORY, WARNING, AND GUIDE SIGNS

NOTE: STANDARD DRAWINGS ARE INCLUDED IN THE BACK OF THE PLANS.

LIST OF CONTROL POINTS

DESCRIPTION	COORDINATES	STATION AND OFFSET OR DESCRIPTION
CPT#108	434,467.84 N, 1,862,581.18 E	GPS #97907-4 - "T" POST - 1/4 COR
CPT#109	434,832.07 N, 1,862,646.74 E	SHOT ON COVER GPS MONUMENT 97907-5
CPT#110	435,048.56 N, 1,862,341.36 E	"T" POST -- PROP COR - SW COR INT 37TH ST. NW & ORT
CPT#112	436,679.51 N, 1,860,942.26 E	REBAR - GPS #97907-7 - SW OF MAILBOX #4209 - CHURCH OF NAZARENE
CPT#114	437,148.38 N, 1,860,229.47 E	CURB STOP - IN FRONT OF 7TH DAY ADVENTIST CHURCH GPS #97907-8
CPT#116	437,018.13 N, 1,859,234.84 E	REBAR - SE COR ORT & 34TH AVE NW
CPT#117	437,028.02 N, 1,859,977.08 E	REBAR - ±100' W OF PC OF CURVE TO THE RIGHT /±22' N OF N END OF N-S TREE ROW
CPT#122	434,488.22 N, 1,862,980.91 E	REBAR - SE COR RADIO TOWER LOT - HILLSIDE ROAD
CPT#123	434,173.89 N, 1,863,317.52 E	REBAR - BY MAILBOX #3405 - HILLSIDE ROAD
CPT#124	434,676.01 N, 1,863,240.25 E	REBAR - EAST SHOULDER HILLSIDE ROAD N. OF 35TH ST.
CPT#127	437,236.43 N, 1,860,674.83 E	REBAR - WEST SIDE OF HIGHLAND RD E. OF HOUSE #4401
CPT#130	433,233.63 N, 1,863,699.33 E	S. END - HILLSIDE RD - E. SHOULDER E. OF #3201
CPT#132	437,155.12 N, 1,859,680.39 E	REBAR IN FIELD - N. SIDE ORT - NE OF BOX CULVERT
CPT#134	438,882.49 N, 1,860,470.67 E	40d SPIKE/CHSR - BACK YARD HOUSE #4900
CPT#136	429,380.80 N, 1,866,706.13 E	REBAR - W. SIDE SUNSET DRIVE ACROSS FROM AMOCO

STATE	PROJECT	SHEET NO.
ND	X	10
OLD RED TRAIL STA. 1001+00 TO STA. 1005+00 SHARED USE PATH LAYOUT		

PIPE CORR STEEL .064IN 24IN	
1003+77	33 LF
1003+83	33 LF
1003+89	33 LF

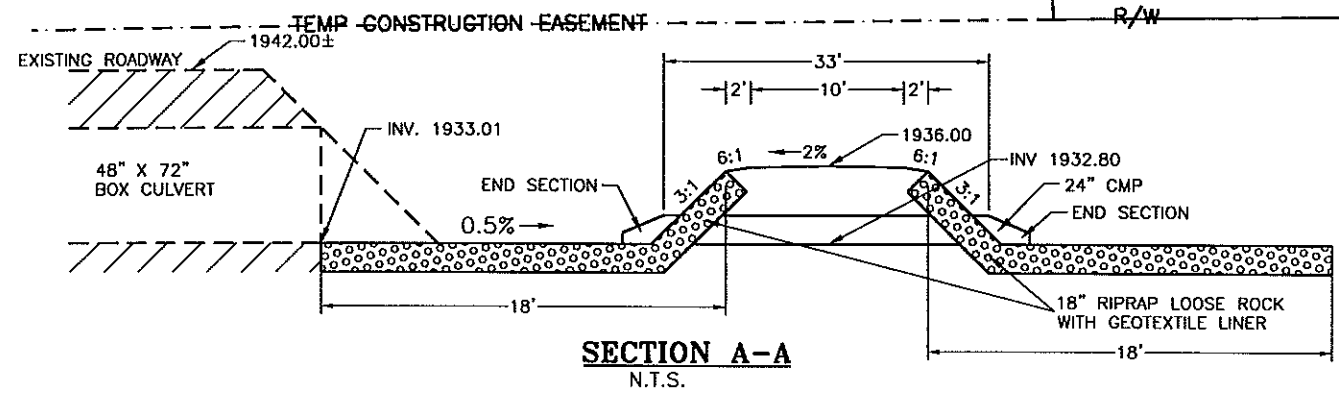
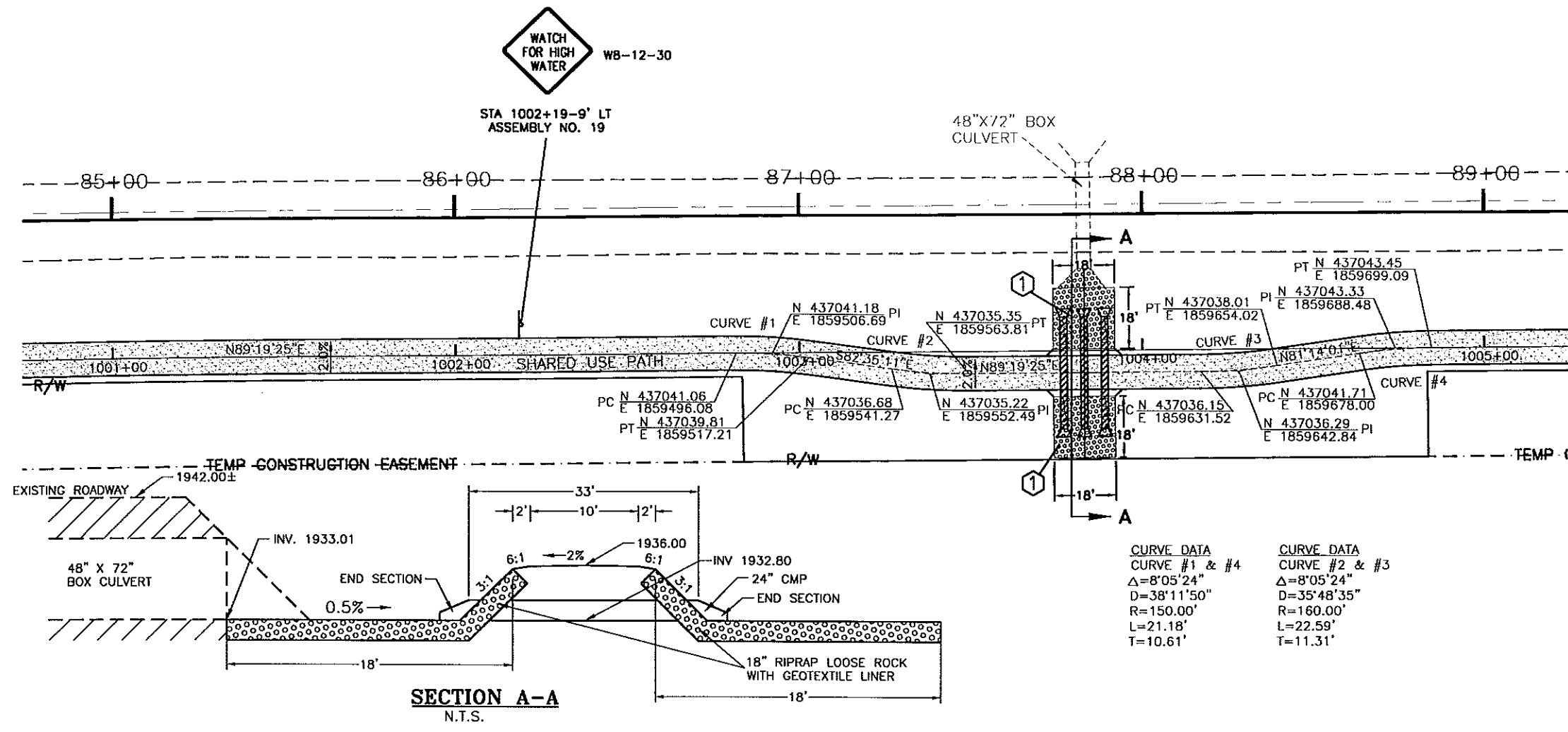
RIP-RAP LOOSE ROCK	
1003+83	39 CY

GEOTEXTILE SEPARATION FABRIC TYPE S2	
1003+83	77 SY

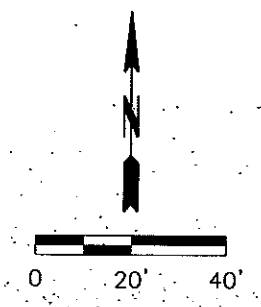
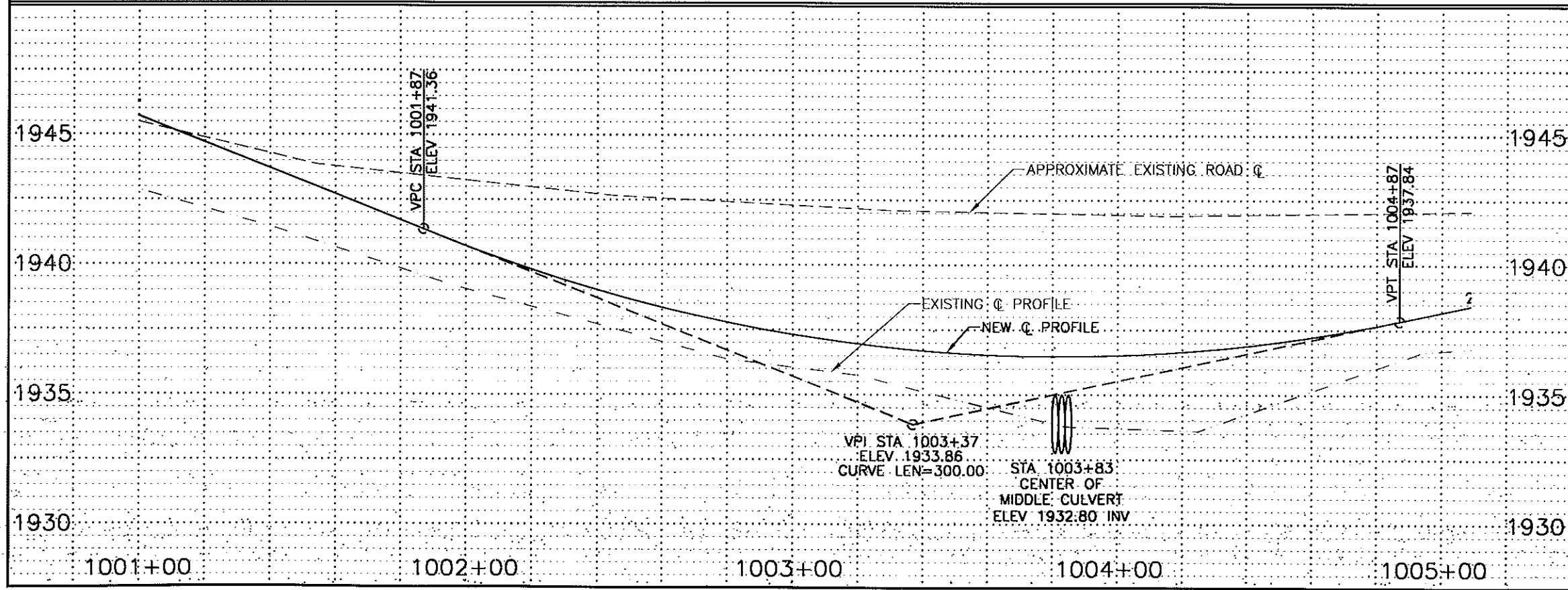
END SECTION CORR STEEL .064IN 24IN	
1003+77	2 EA
1003+83	2 EA
1003+89	2 EA

CONSTRUCTION NOTES:

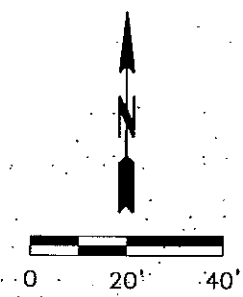
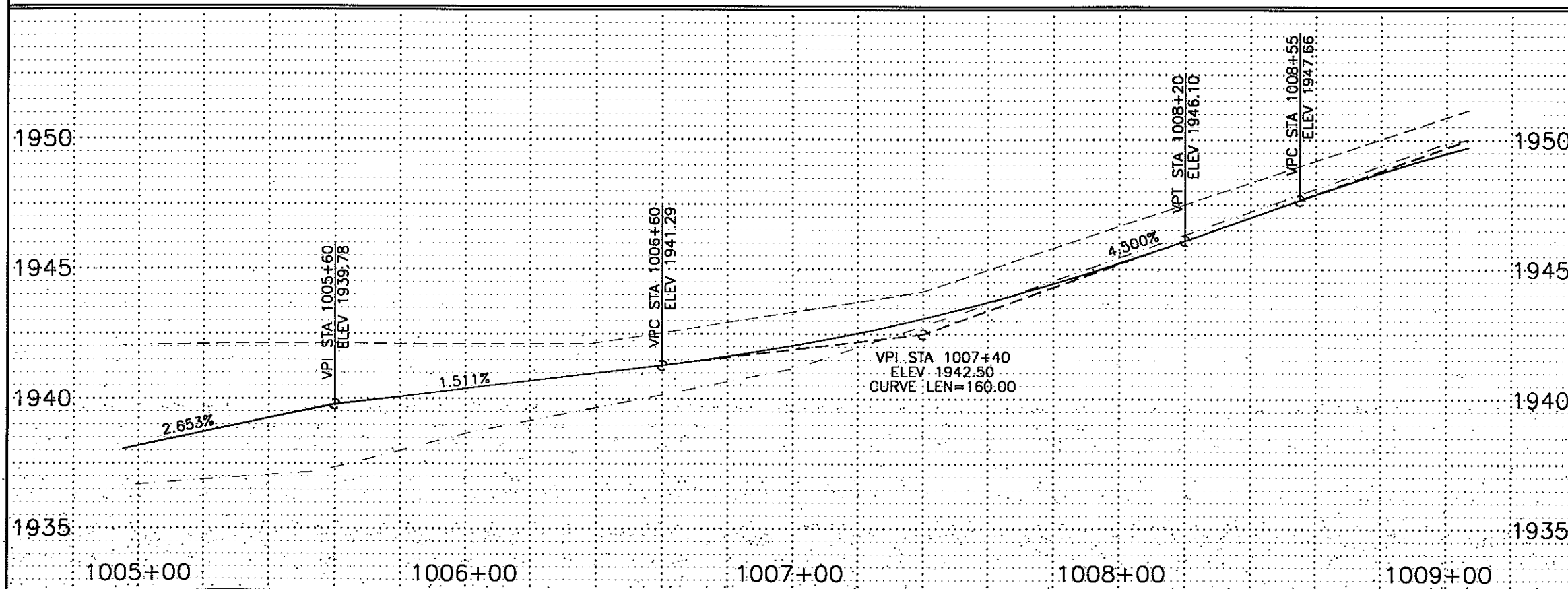
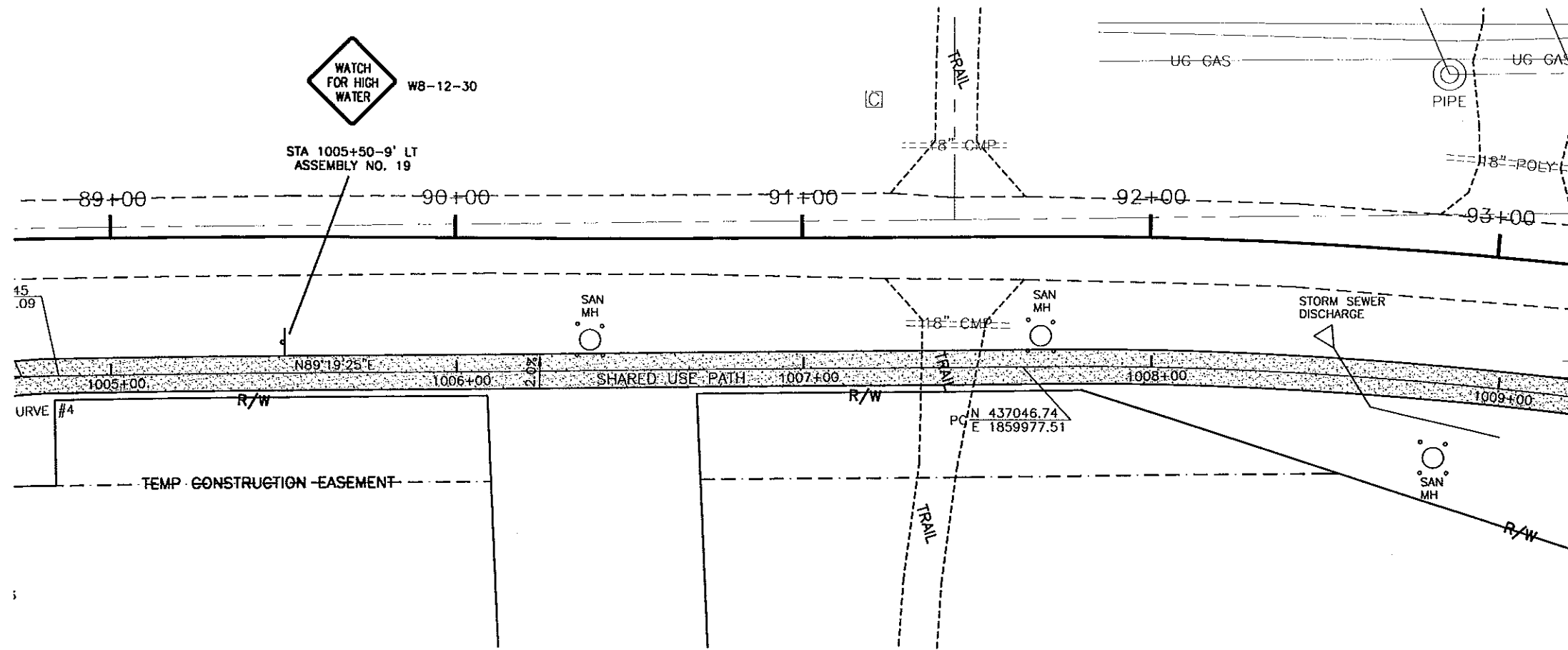
① INSTALL GEOTEXTILE SEPARATION FABRIC TYPE S2 UNDER 18" OF RIP-RAP LOOSE ROCK. ANY EXCAVATION REQUIRED FOR RIP-RAP SHALL BE INCLUDED IN THE PRICE BID FOR "RIP-RAP LOOSE ROCK."



CURVE DATA	CURVE DATA
CURVE #1 & #4	CURVE #2 & #3
$\Delta=8^{\circ}05'24''$	$\Delta=8^{\circ}05'24''$
$D=38^{\circ}11'50''$	$D=35^{\circ}48'35''$
$R=150.00'$	$R=160.00'$
$L=21.18'$	$L=22.59'$
$T=10.61'$	$T=11.31'$

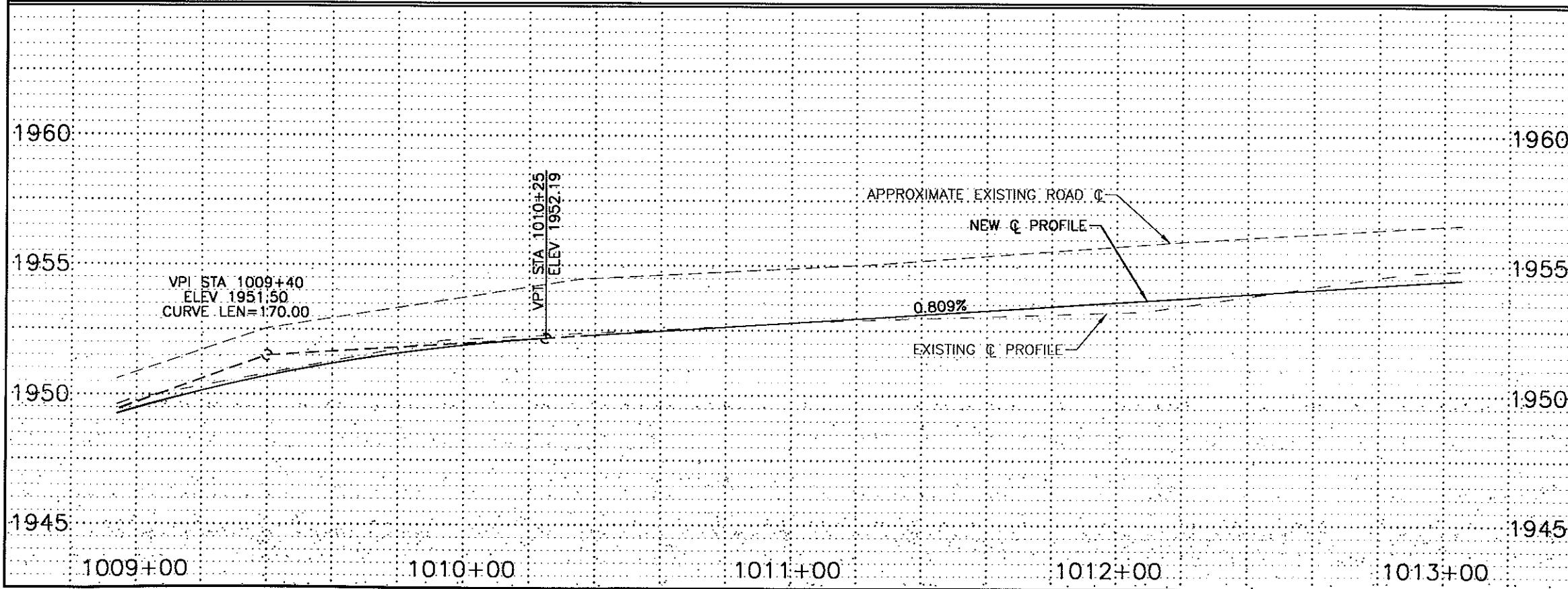
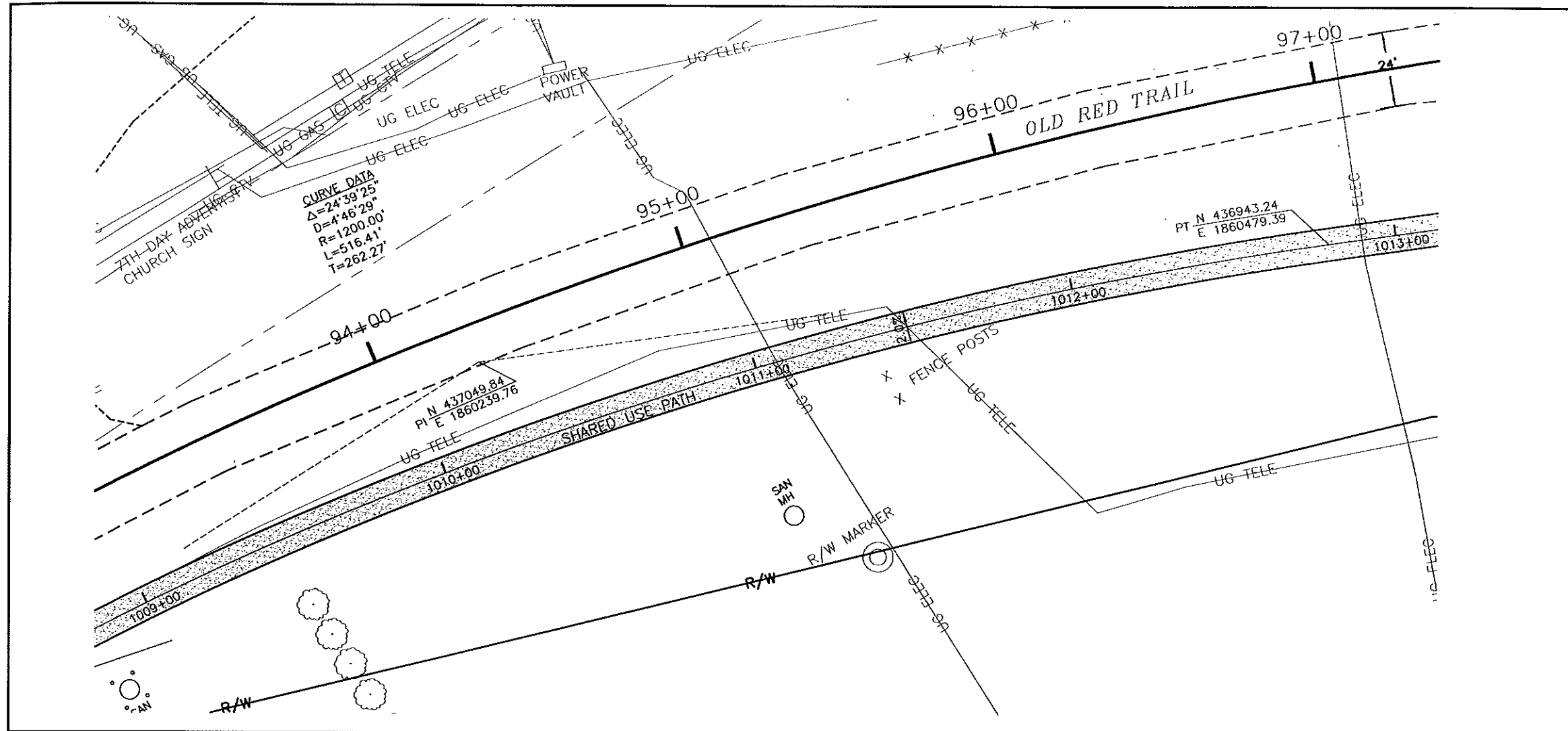


STATE	PROJECT	SHEET NO.
ND	X	11
OLD RED TRAIL STA. 1005+00 TO STA. 1009+00 SHARED USE PATH LAYOUT		



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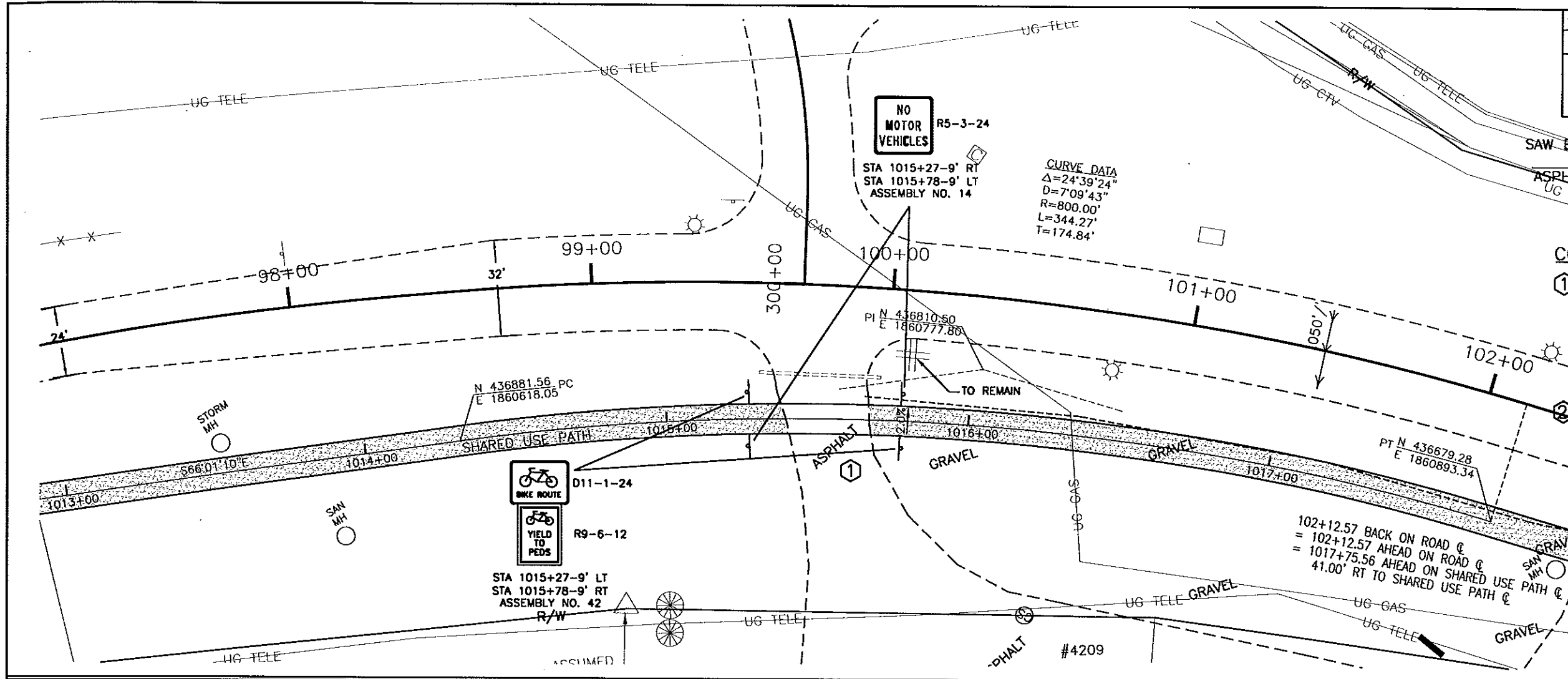
STATE	PROJECT	SHEET NO.
ND	X	12
OLD RED TRAIL STA. 1009+00 TO STA. 1013+00 SHARED USE PATH LAYOUT		



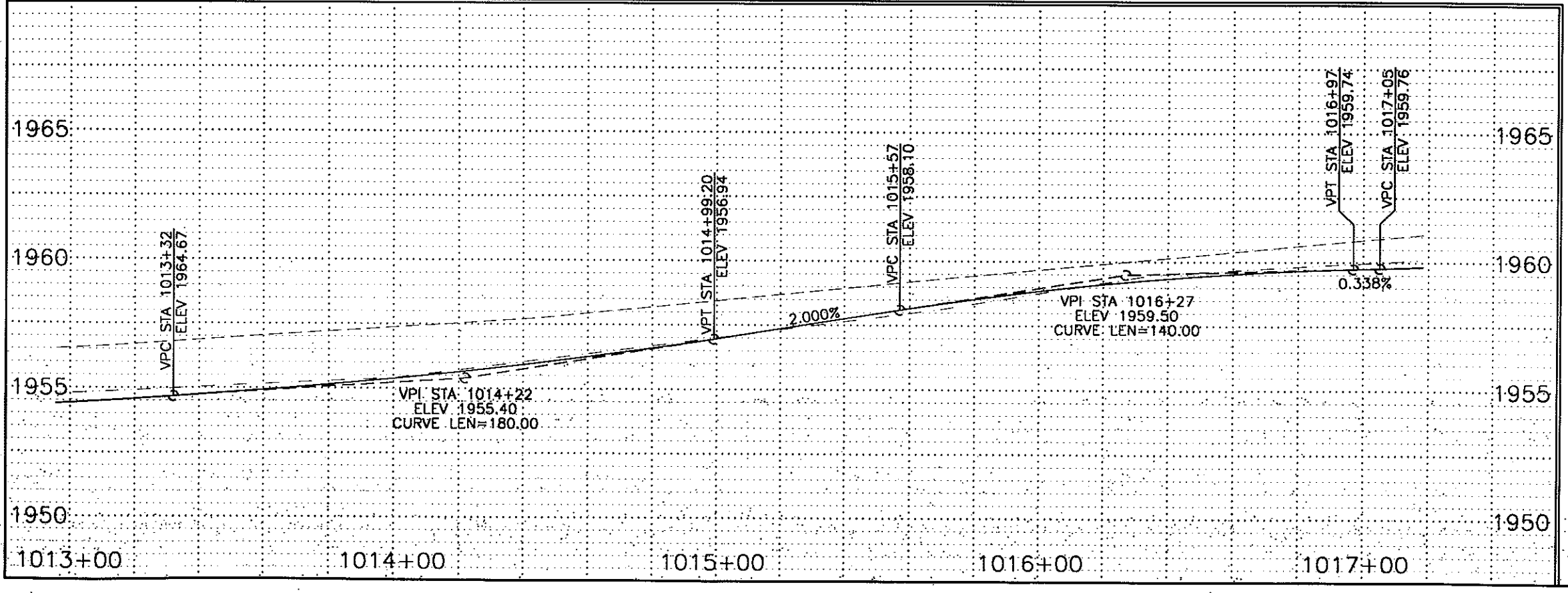
G:\CIVIL\1998\98-8929\BIKEPATH\north\PAV-SHT-PLOT.dwg Thu Mar 02 11:39:11 2000

STATE	PROJECT	SHEET NO.
ND	X	13

OLD RED TRAIL
 STA. 1013+00 TO STA. 1017+00
 SHARED USE PATH LAYOUT

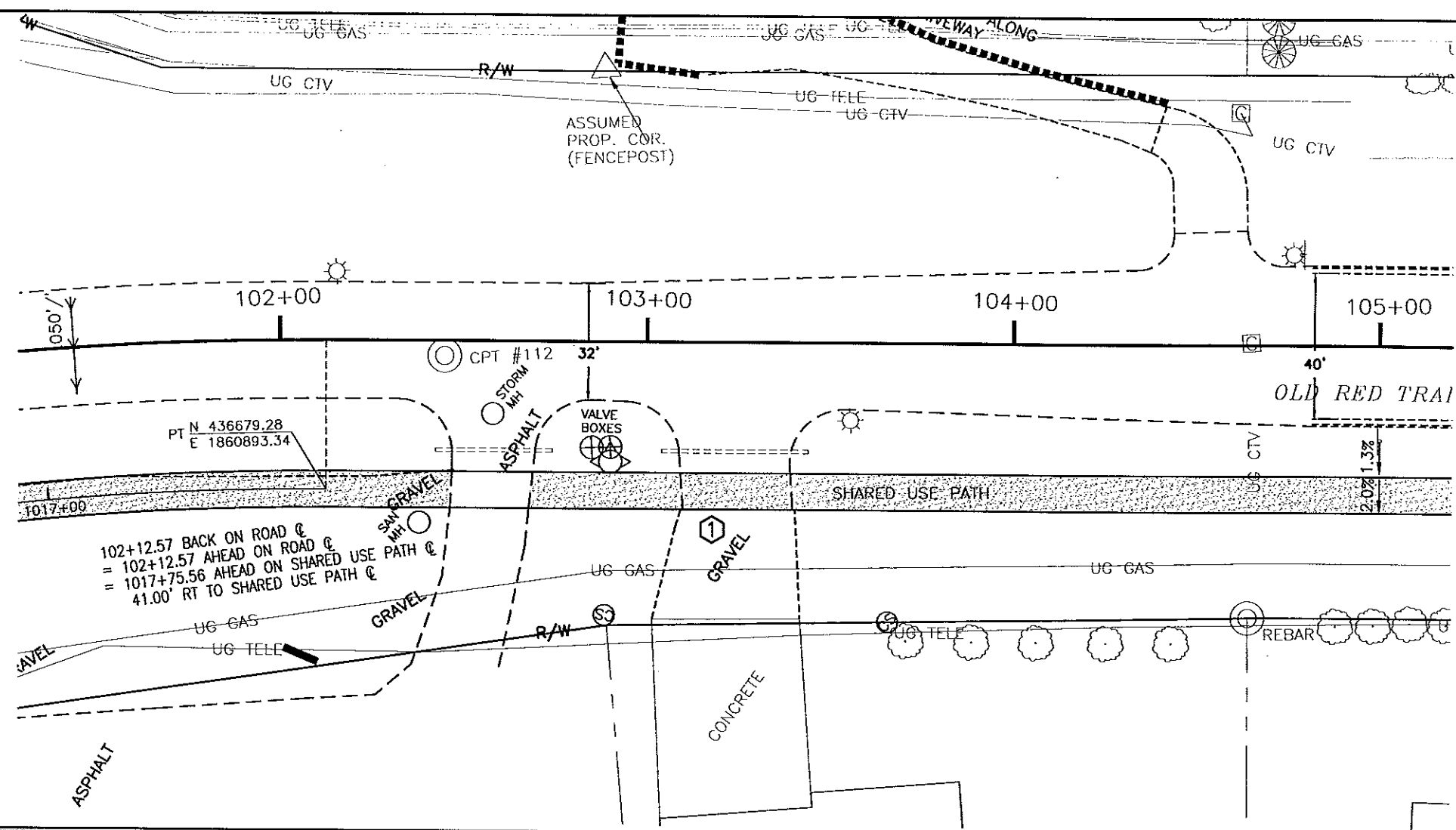


- CONSTRUCTION NOTES:**
- CONTRACTOR SHALL FULL DEPTH SAW OR SCORE EXISTING ASPHALT DRIVEWAY EDGES TO ALLOW CONSTRUCTION OF SHARED USE PATH UP TO EACH SIDE OF THE DRIVEWAY.
 - SHARED USE PATH PARALLELS ROAD CENTERLINE FROM 102+12 TO 37TH STR. CURVE DATA AND CROSS SECTIONS CAN BE SEEN IN OLD RED TRAIL ROAD PLANS.



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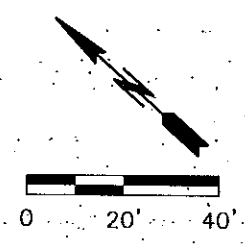
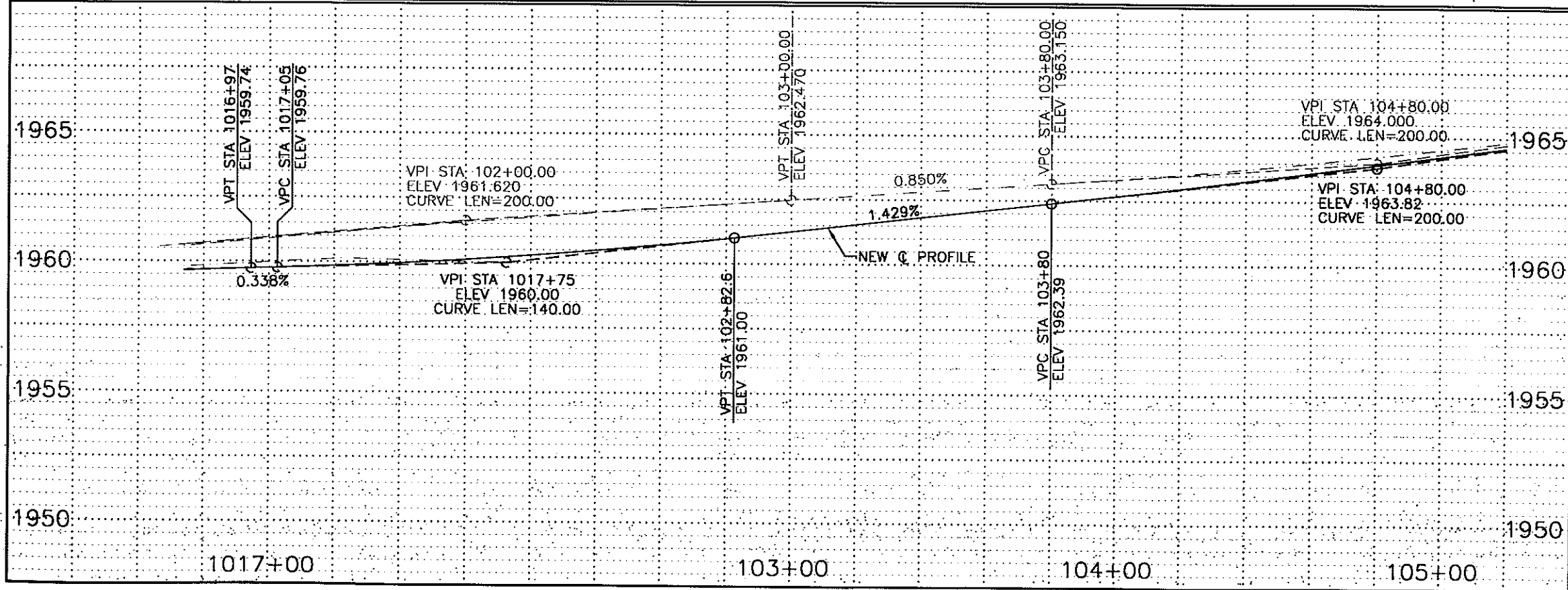
STATE	PROJECT	SHEET NO.
ND	X	14
OLD RED TRAIL STA. 1017+00 TO STA. 105+00 SHARED USE PATH LAYOUT		



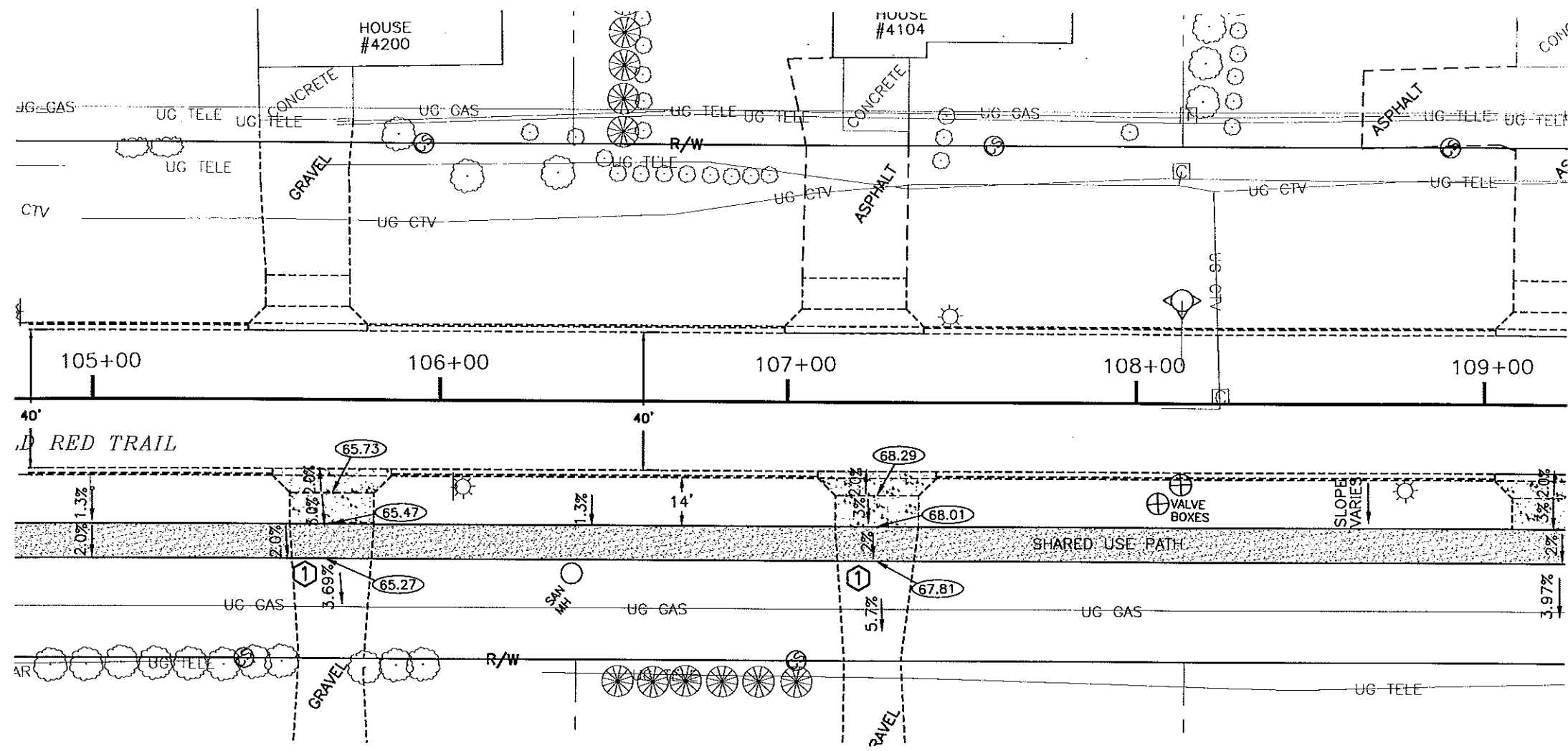
SAW BITUMINOUS SURFACING - FULL DEPTH
 ASPHALT DRIVEWAY 20 LF

CONSTRUCTION NOTES:

- ① CONTRACTOR SHALL BLEND GRAVEL DRIVE INTO EDGE OF SHARED USE PATH UPON COMPLETION OF THE CONSTRUCTION THROUGH THE DRIVEWAY. ALL COSTS INCIDENTAL TO OTHER ITEMS.
- ② CONTRACTOR SHALL FULL DEPTH SAW OR SCORE EXISTING ASPHALT DRIVEWAY EDGES TO ALLOW CONSTRUCTION OF SHARED USE PATH UP TO EACH SIDE OF THE DRIVEWAY.

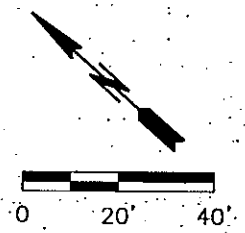
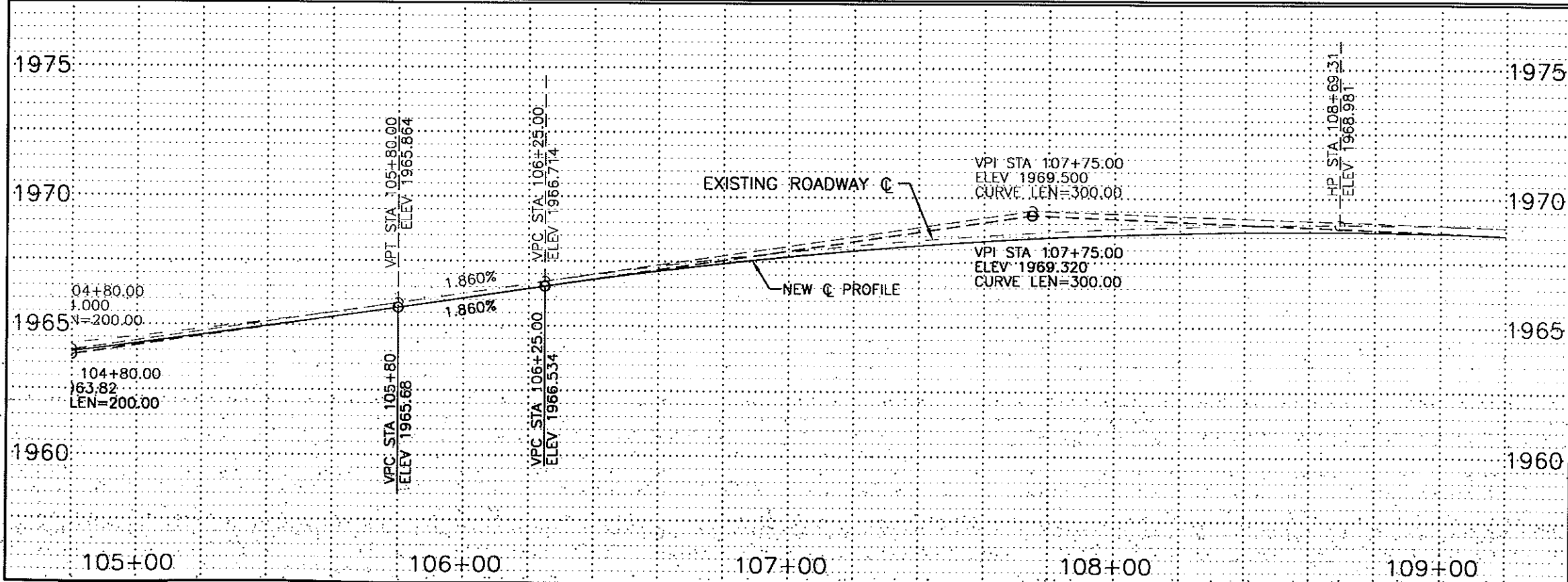


STATE	PROJECT	SHEET NO.
ND	X	15
OLD RED TRAIL STA. 105+00 TO STA. 109+00 SHARED USE PATH LAYOUT		



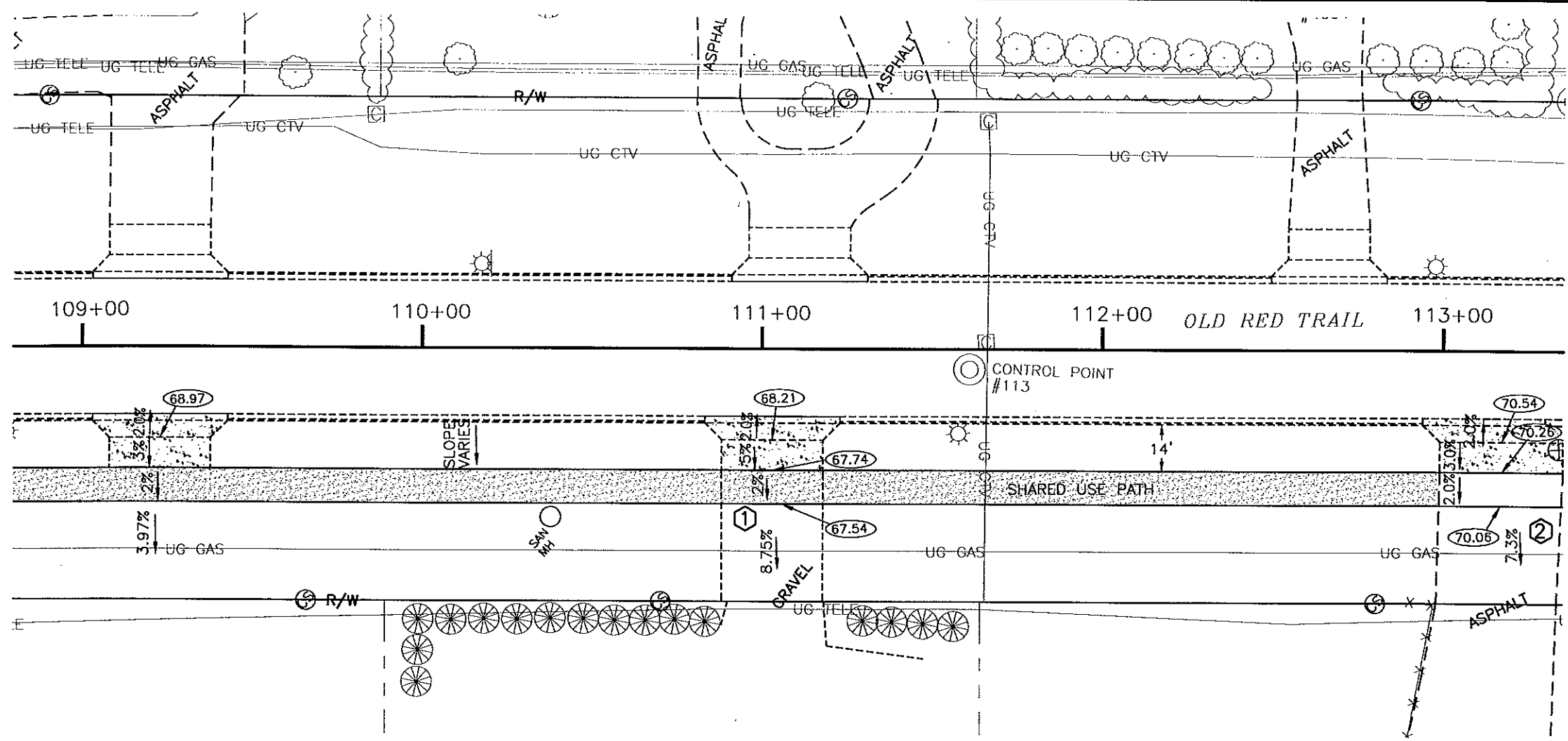
CONSTRUCTION NOTES:

① CONTRACTOR SHALL BLEND GRAVEL DRIVE INTO EDGE OF SHARED USE PATH UPON COMPLETION OF THE CONSTRUCTION THROUGH THE DRIVEWAY. ALL COSTS INCIDENTAL TO OTHER ITEMS.

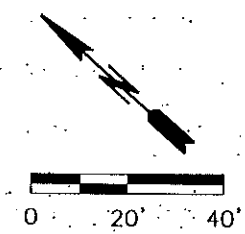
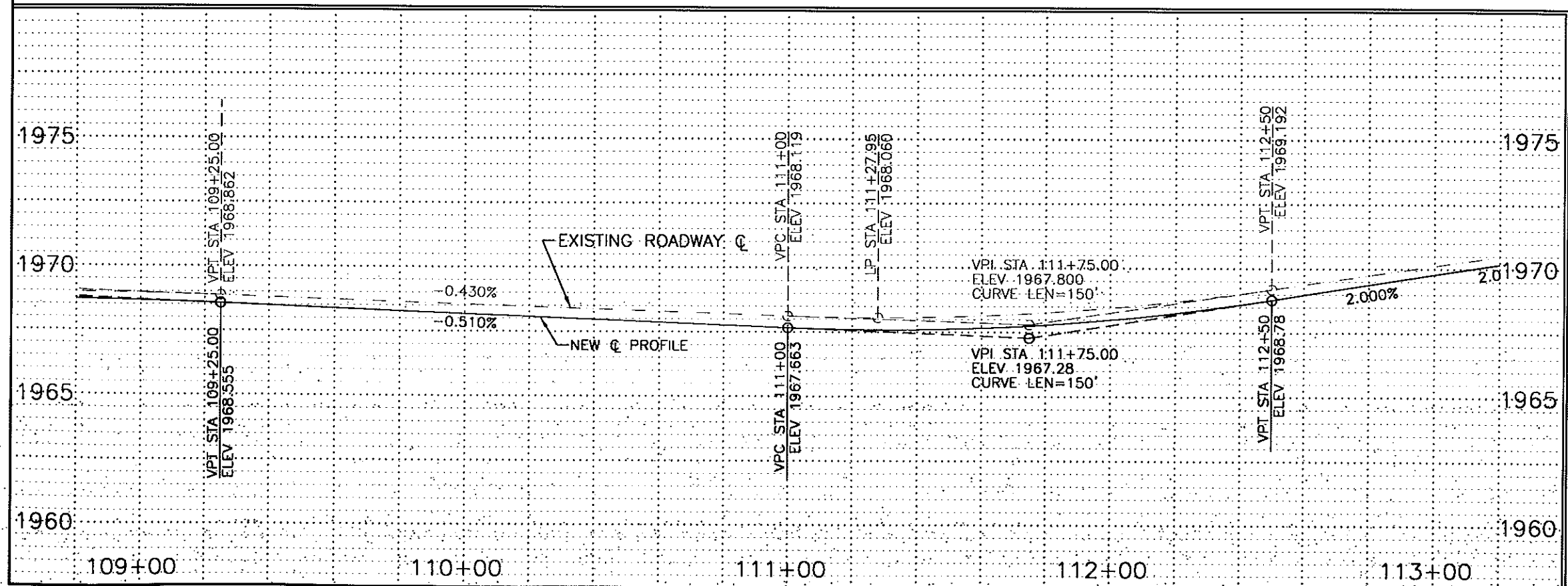


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STATE	PROJECT	SHEET NO.
ND	X	16
OLD RED TRAIL STA. 109+00 TO STA. 113+00 SHARED USE PATH LAYOUT		



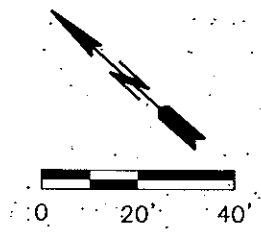
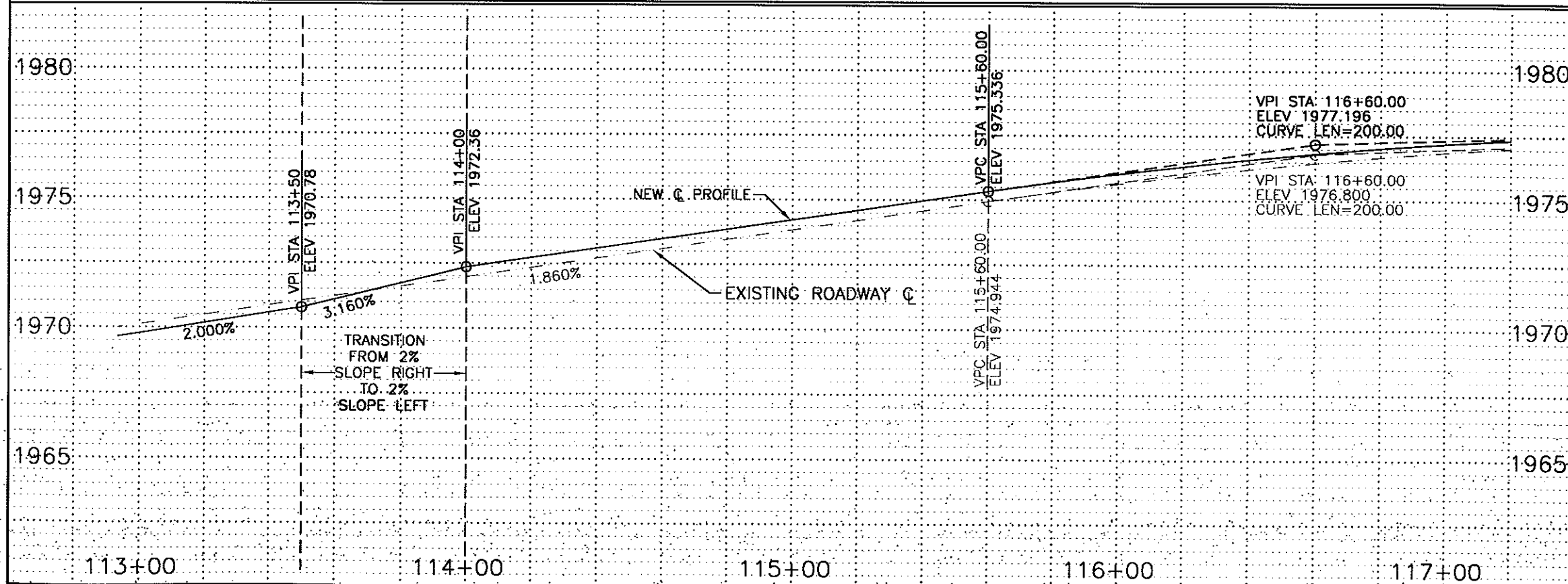
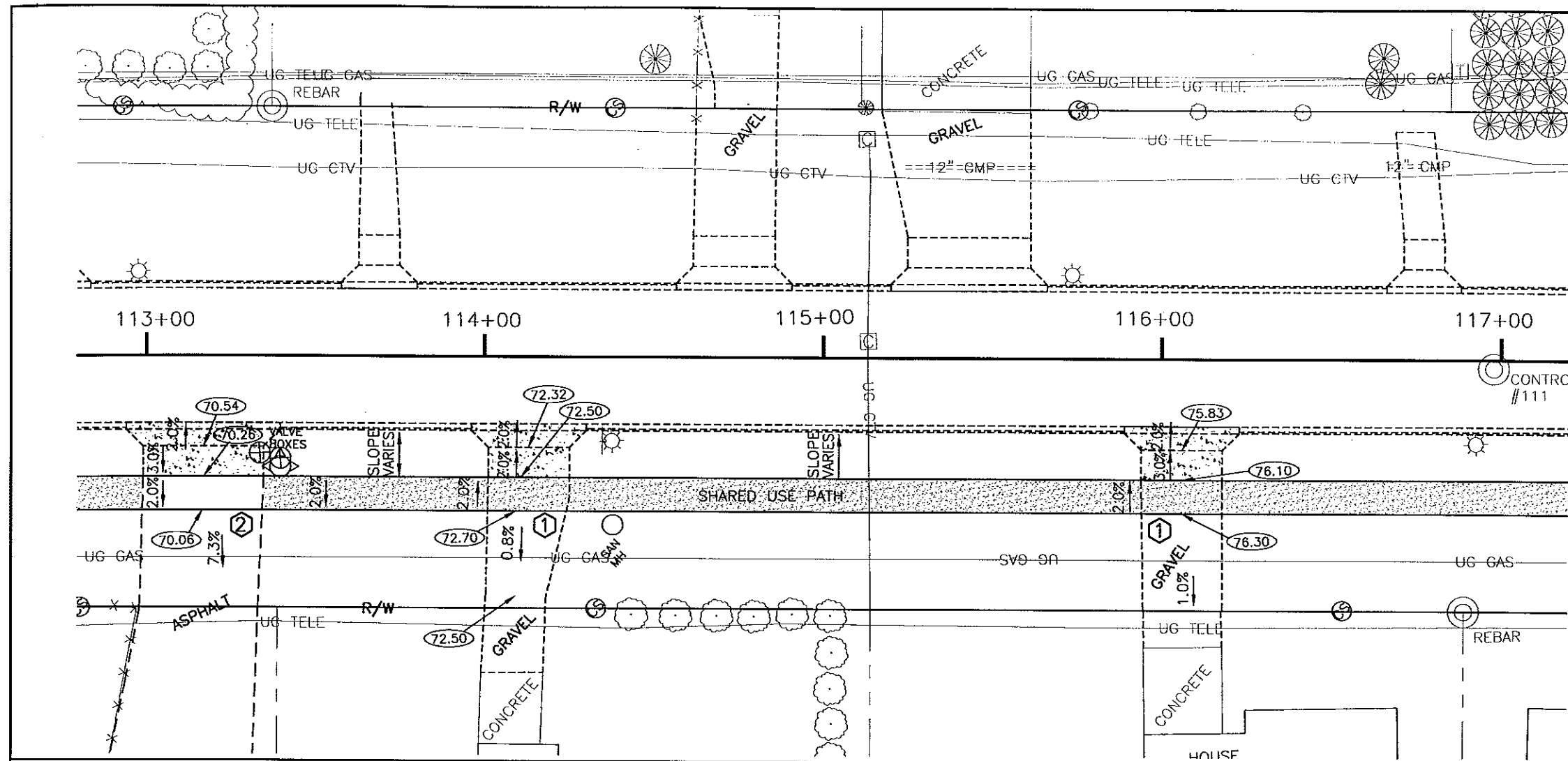
- CONSTRUCTION NOTES:**
- ① CONTRACTOR SHALL BLEND GRAVEL DRIVE INTO EDGE OF SHARED USE PATH UPON COMPLETION OF THE CONSTRUCTION THROUGH THE DRIVEWAY. ALL COSTS INCIDENTAL TO OTHER ITEMS.
 - ② CONTRACTOR SHALL FULL DEPTH SAW OR SCORE EXISTING ASPHALT DRIVEWAY EDGES TO ALLOW CONSTRUCTION OF SHARED USE PATH UP TO EACH SIDE OF THE DRIVEWAY.



STATE	PROJECT	SHEET NO.
ND	X	17
OLD RED TRAIL STA. 113+00 TO STA. 117+00 SHARED USE PATH LAYOUT		

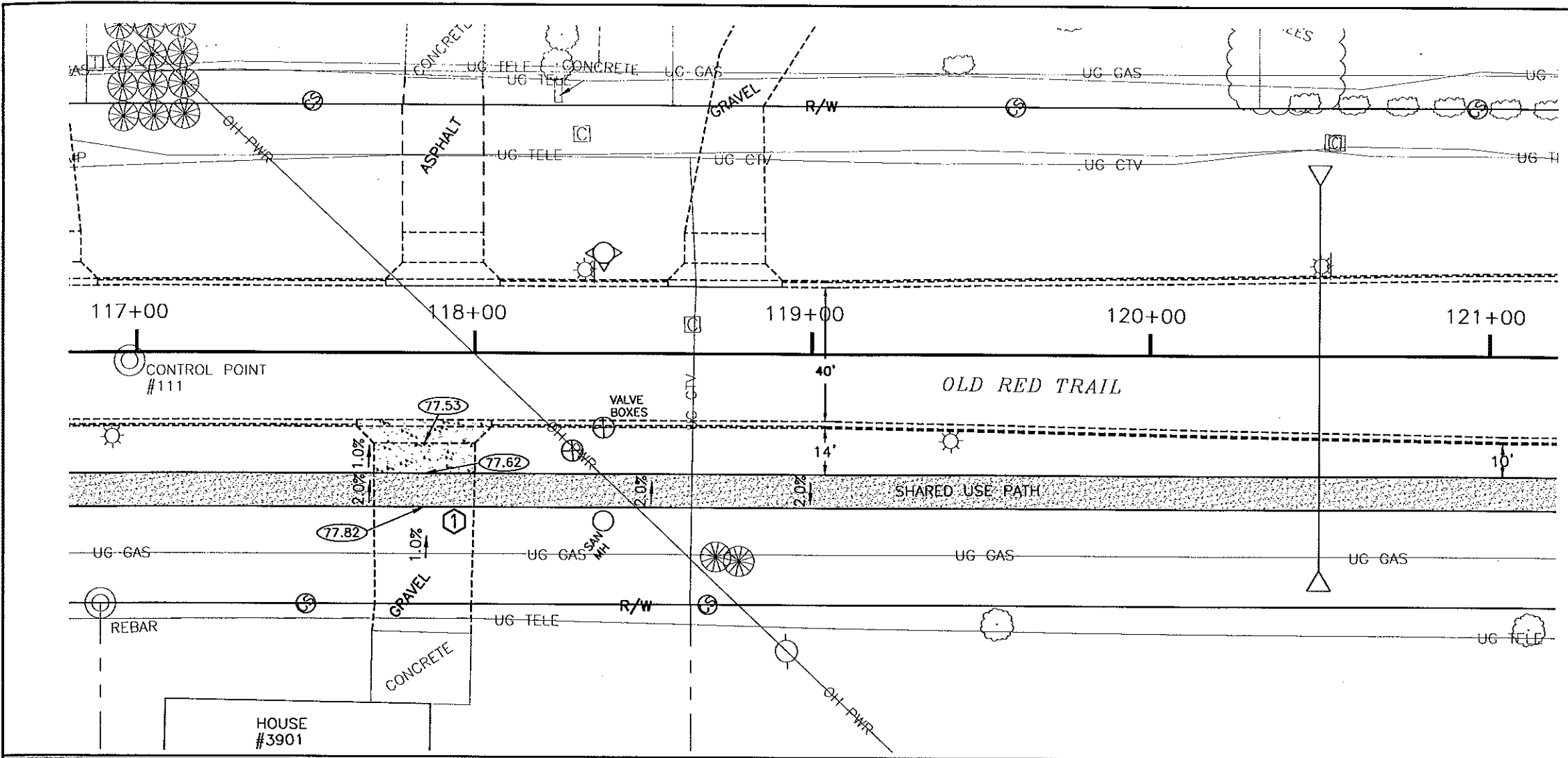
SAW BITUMINOUS SURFACING - FULL DEPTH
 ASPHALT DRIVEWAY 20 LF

- CONSTRUCTION NOTES:**
- ① CONTRACTOR SHALL BLEND GRAVEL DRIVE INTO EDGE OF SHARED USE PATH UPON COMPLETION OF THE CONSTRUCTION THROUGH THE DRIVEWAY. ALL COSTS INCIDENTAL TO OTHER ITEMS.
 - ② CONTRACTOR SHALL FULL DEPTH SAW OR SCORE EXISTING ASPHALT DRIVEWAY EDGES TO ALLOW CONSTRUCTION OF SHARED USE PATH UP TO EACH SIDE OF THE DRIVEWAY.



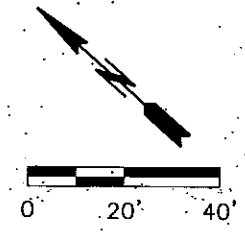
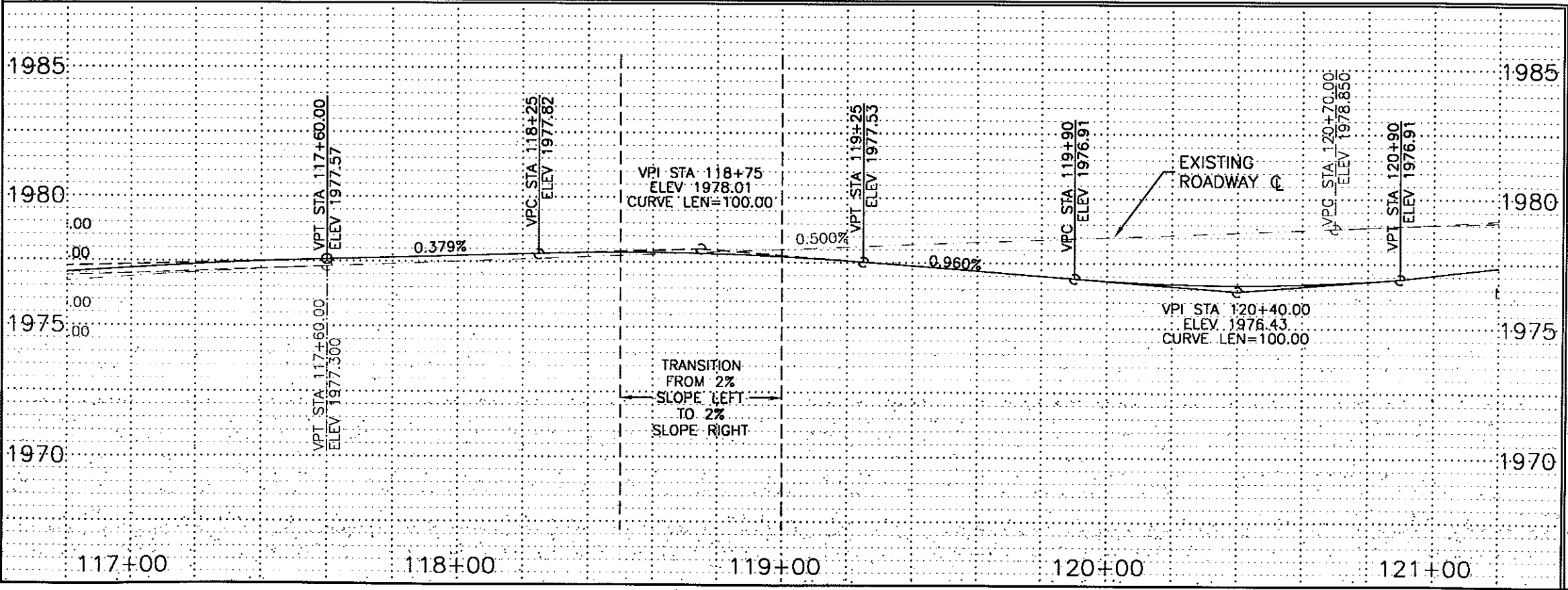
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STATE	PROJECT	SHEET NO.
ND	X	18
OLD RED TRAIL STA. 117+00 TO STA. 121+00 SHARED USE PATH LAYOUT		



CONSTRUCTION NOTES:

① CONTRACTOR SHALL BLEND GRAVEL DRIVE INTO EDGE OF SHARED USE PATH UPON COMPLETION OF THE CONSTRUCTION THROUGH THE DRIVEWAY. ALL COSTS INCIDENTAL TO OTHER ITEMS.



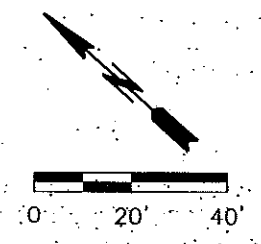
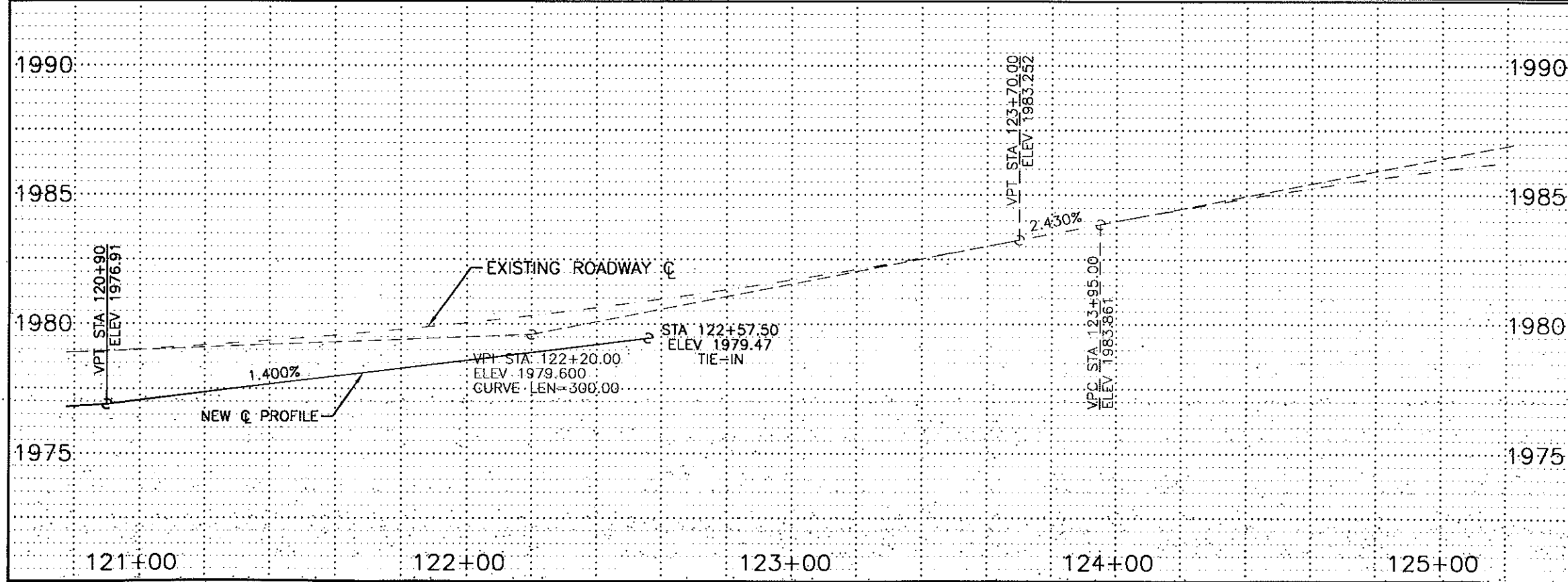
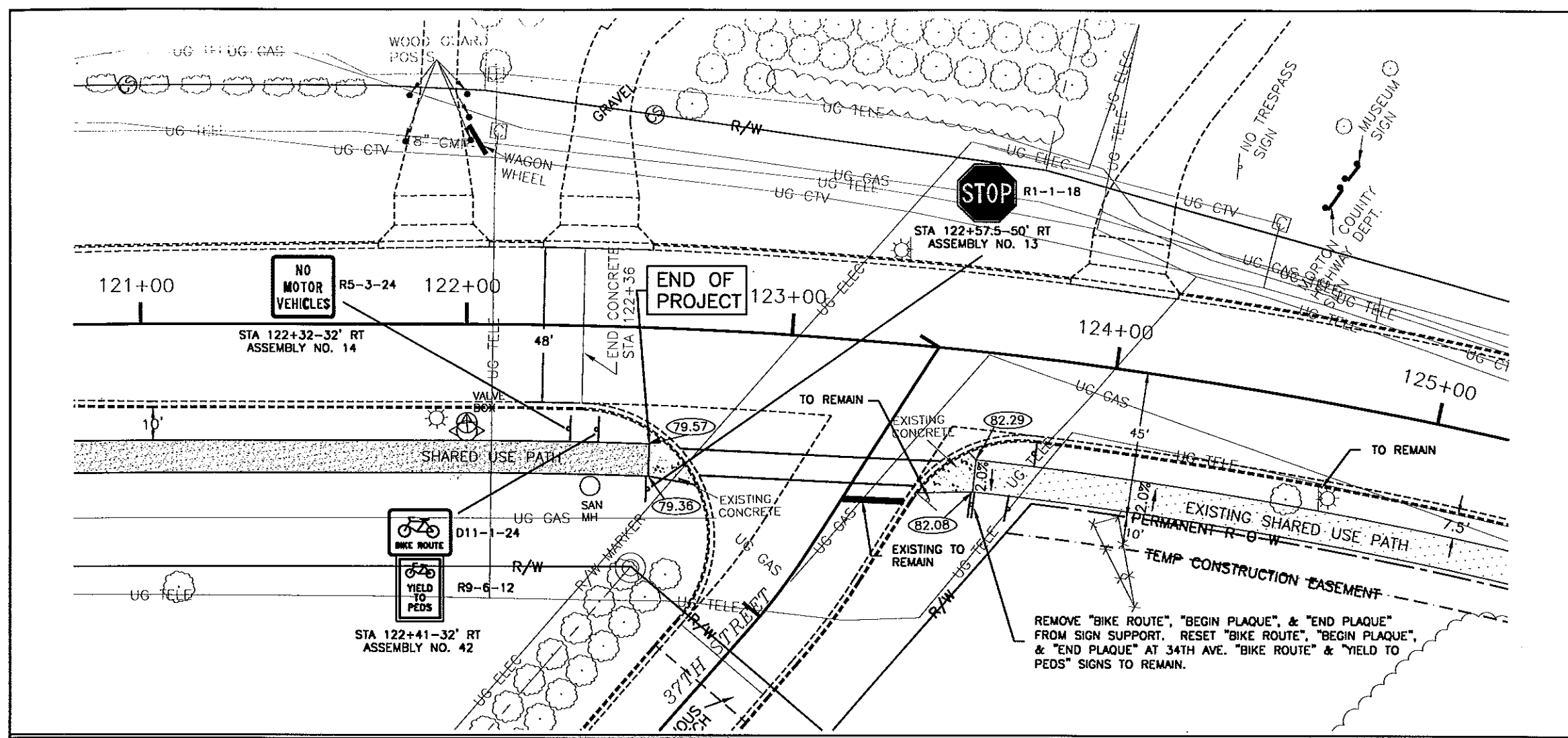
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STATE	PROJECT	SHEET NO.
ND	X	19

OLD RED TRAIL
 STA. 121+00 TO STA. 125+00
 SHARED USE PATH LAYOUT

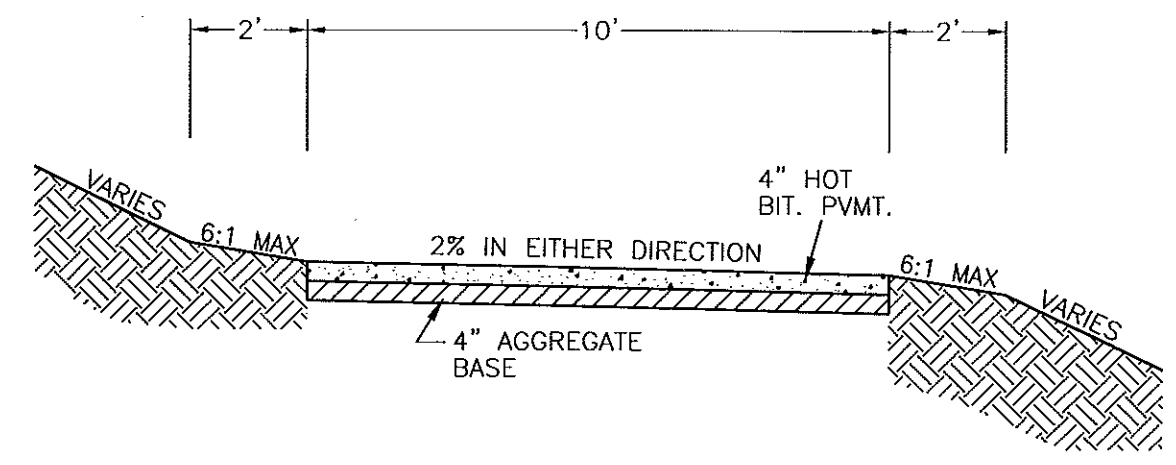
PREFORMED PATTERNED PVMT MK
 6IN LINE GROOVED
 X-WALK 146 LF

CONSTRUCTION NOTES:
 ① SHARED USE PATH PARALLELS ROAD CENTERLINE FROM STA 102+12 TO 37TH STR. CURVE DATA AND CROSS SECTIONS CAN BE SEEN IN OLD RED TRAIL ROAD PLANS.

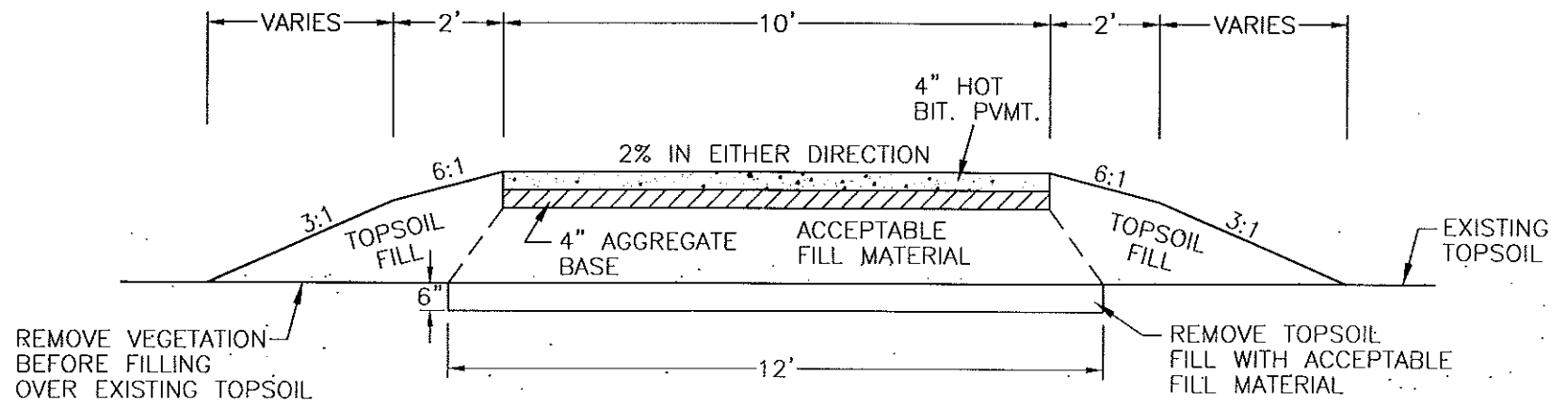


STATE	PROJECT	SHEET NO.
ND	X	20
OLD RED TRAIL TYPICAL SECTIONS		

TYPICAL SHARED USE PATH CROSS SECTION

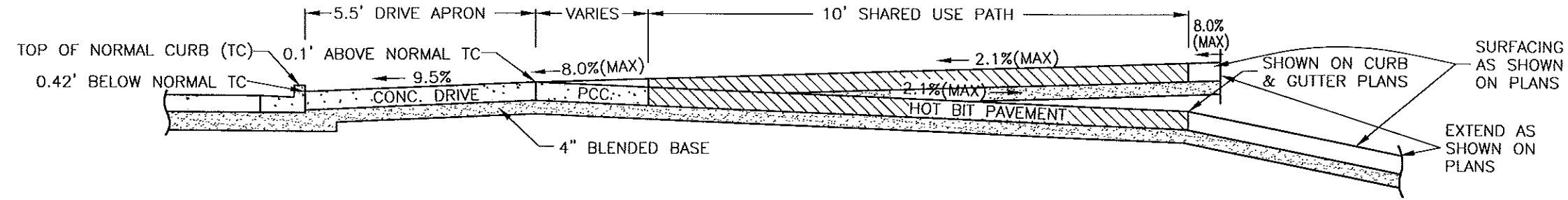


TYPICAL FILL SECTION

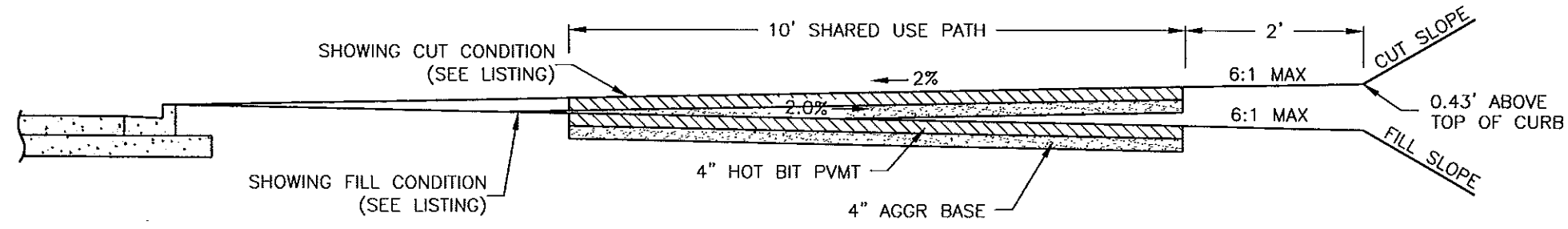


STATE	PROJECT	SHEET NO.
ND	X	21
OLD RED TRAIL TYPICAL SECTIONS		

TYPICAL GRADING FOR DRIVEWAYS & SHARED USE PATH SLOPE DETAILS

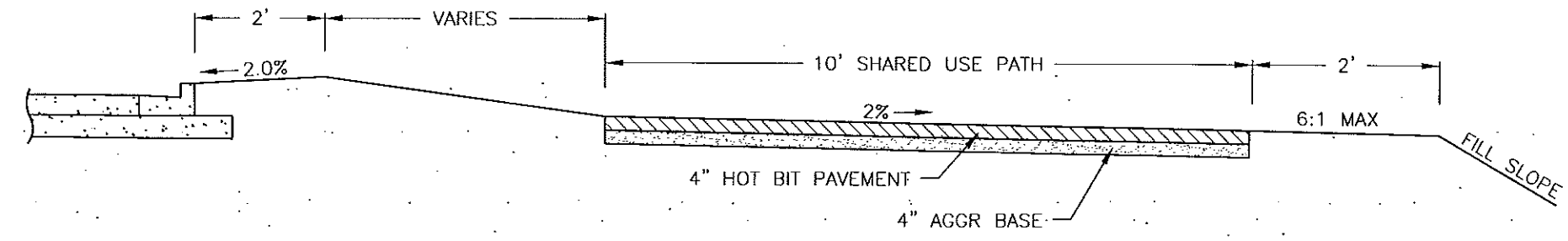


DRIVEWAY DETAIL



USE 50' TRANSITION BETWEEN SECTIONS

TYPICAL SHARED USE PATH SLOPE DETAIL (SHOWING CUT OR FILL CONDITIONS)



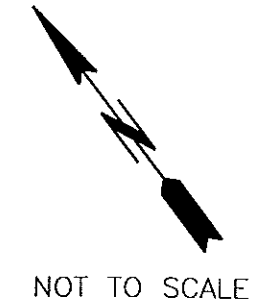
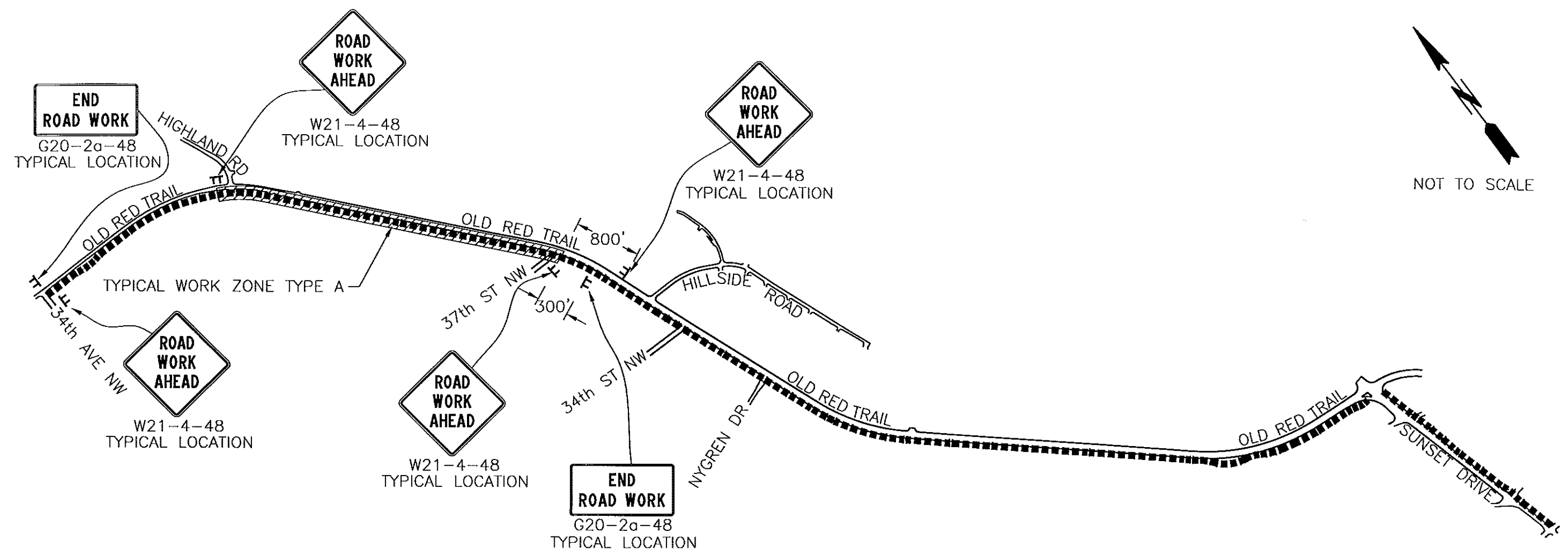
SHARED USE PATH SLOPE DETAIL

STATE	PROJECT	SHEET NO.
ND	SU-1-988(008)019	22
OLD RED TRAIL PERMANENT SIGNING		

OLD RED TRAIL

OLD STATION	NEW STATION	ASSEMBLY NUMBER	SIGN DISCRIPTION	NEW SIGN NUMBER	FLAT SHEET SIGN AREA		SUPPORT POST LENGTH			SUPPORT SLEEVE LENGTH			ANCHOR UNIT		TOTAL SUPPORT LENGTH(LF)	RESET SIGN PANEL	RESET SIGN SUPPORT		
					TYPE 2(SF)	TYPE 3A(SF)	1ST(FT)	2ND(FT)	SIZE(IN)	1ST(FT)	2ND(FT)	SIZE(IN)	LNG(FT)	SIZE(IN) NO.					
NEW	1000+19-9' LT	NO. 13	STOP	R2-1-18	-	2.25	6.25	-	2.00	-	-	-	4.00	2.25	1	9.75	-	-	
1000+21 C	1000+21-10' RT	RESET	STOP	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	
37TH STR.	1000+30-9' RT	NO. 42	COMBO	2(D11-1),R9-6	8.5	-	8.25	-	2.00	-	-	-	4.00	2.25	1	11.75	1	-	
NEW	1000+50-9'RT	NO. 14	NO MOTOR VEH	R5-3-24	4	-	6.25	-	2.00	-	-	-	4.00	2.25	1	9.75	-	-	
NEW	1002+19-9' LT	NO. 19	HIGH WATER	W8-12-30	-	6.25	8.16	-	2.25	-	-	-	4.00	2.50	1	11.66	-	-	
NEW	1005+50-9' LT	NO. 19	HIGH WATER	W8-12-30	-	6.25	8.16	-	2.25	-	-	-	4.00	2.50	1	11.66	-	-	
NEW	1015+27-9' LT	NO. 42	COMBO	D11-1,R9-6	4.5	-	7.75	-	2.00	-	-	-	4.00	2.25	1	11.25	-	-	
NEW	1015+27-9'RT	NO. 14	NO MOTOR VEH	R5-3-24	4	-	6.25	-	2.00	-	-	-	4.00	2.25	1	9.75	-	-	
NEW	1015+78-9' RT	NO. 42	COMBO	D11-1,R9-6	4.5	-	7.75	-	2.00	-	-	-	4.00	2.25	1	11.25	-	-	
NEW	1015+78-9'LT	NO. 14	NO MOTOR VEH	R5-3-24	4	-	6.25	-	2.00	-	-	-	4.00	2.25	1	9.75	-	-	
NEW	122+32-32'RT	NO. 14	NO MOTOR VEH	R5-3-24	4	-	6.25	-	2.00	-	-	-	4.00	2.25	1	9.75	-	-	
NEW	122+41-32' RT	NO. 42	COMBO	D11-1,R9-6	4.5	-	7.75	-	2.00	-	-	-	4.00	2.25	1	11.25	-	-	
NEW	122+57.5-50' RT	NO. 13	STOP	R1-1-18	-	2.25	6.25	-	2.00	-	-	-	4.00	2.25	1	9.75	-	-	
					38	17											127.32	2	1

L.P. = INSTALL ON LIGHT POLE



ESTIMATED CONSTRUCTION SIGN QUANTITIES

SIGN MESSAGE	SIGN NUMBER	SIZE	QUANTITY
ROAD WORK AHEAD (MOVABLE)	W21-4-48	48" x 48"	5
END ROAD WORK (MOVABLE)	G20-2a-48	48" x 24"	2
FLAGGER AHEAD (PORTABLE)	W20-7a-48	48" x 48"	2*
BE PREPARED TO STOP (PORTABLE)	W20-7b-48	48" x 48"	2*

* WORK ZONE SIGNS
WORK ZONE SIGNS SHALL BE TAKEN DOWN
WHENEVER WORK IS NOT IN PROGRESS.

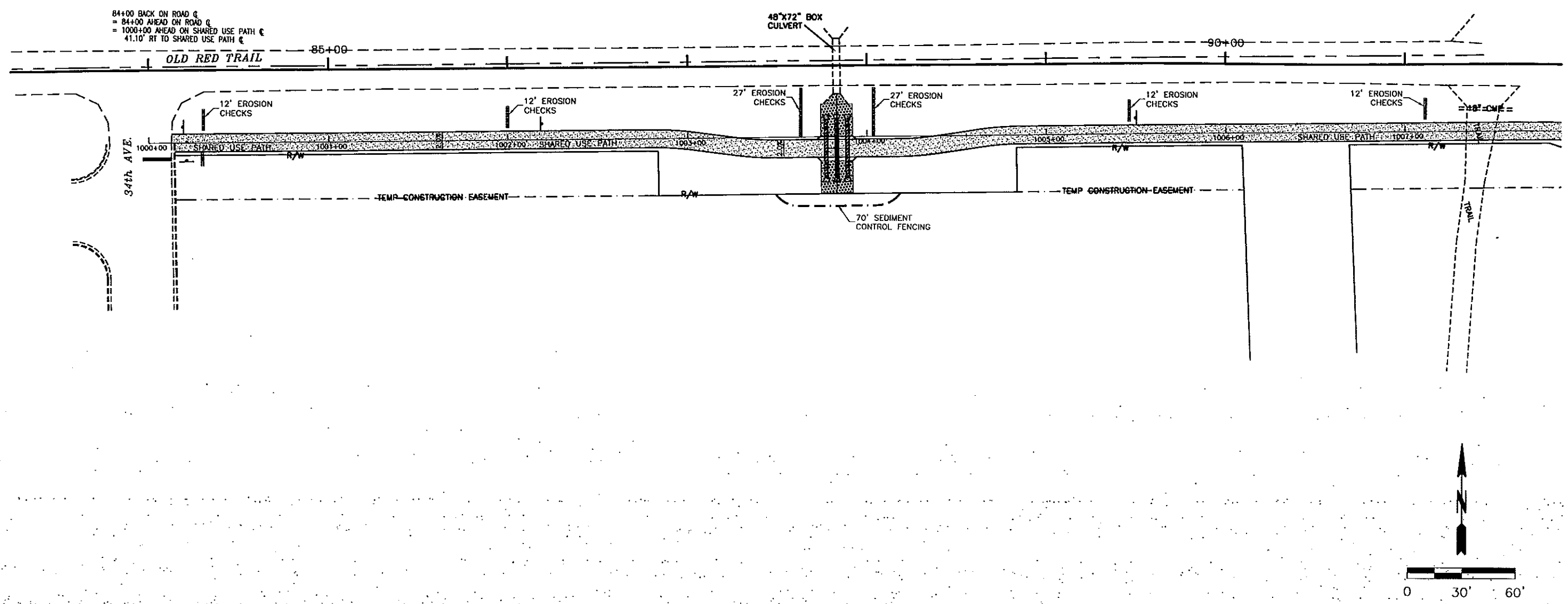
NOTES:

1. SEE NDDOT STANDARD DRAWINGS FOR SIGN AND LETTERING SIZES.
2. CONSTRUCTION SIGNS ARE NOT A SEPARATE BID ITEM AND SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "TRAFFIC CONTROL".
3. ANY TRAFFIC CONTROL ITEMS NEEDED SHALL ALSO BE INCLUDED IN THE LUMP SUM PRICE FOR TRAFFIC CONTROL.
4. ALL SIGNS SHALL BE MOVED AS THE PROJECT PROGRESSES SO THAT THEY ARE WITHIN 800' OF THE WORK OR AS DIRECTED BY THE ENGINEER.
5. ALL TRAFFIC CONTROL MUST COMPLY WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." CONTRACTOR MUST PROVIDE COMPLETE TRAFFIC CONTROL PLAN PRIOR TO COMMENCEMENT OF WORK.

STATE	PROJECT	SHEET NO.
ND	X	24

OLD RED TRAIL
EROSION CONTROL
SHARED USE PATH LAYOUT

<u>EROSION CHECKS</u>	
TOTAL	102 LF
<u>SEDIMENT CONTROL FENCING</u>	
TOTAL	70 LF



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