

BROOKFIELD SECTION I BOTETOURT COUNTY, VIRGINIA

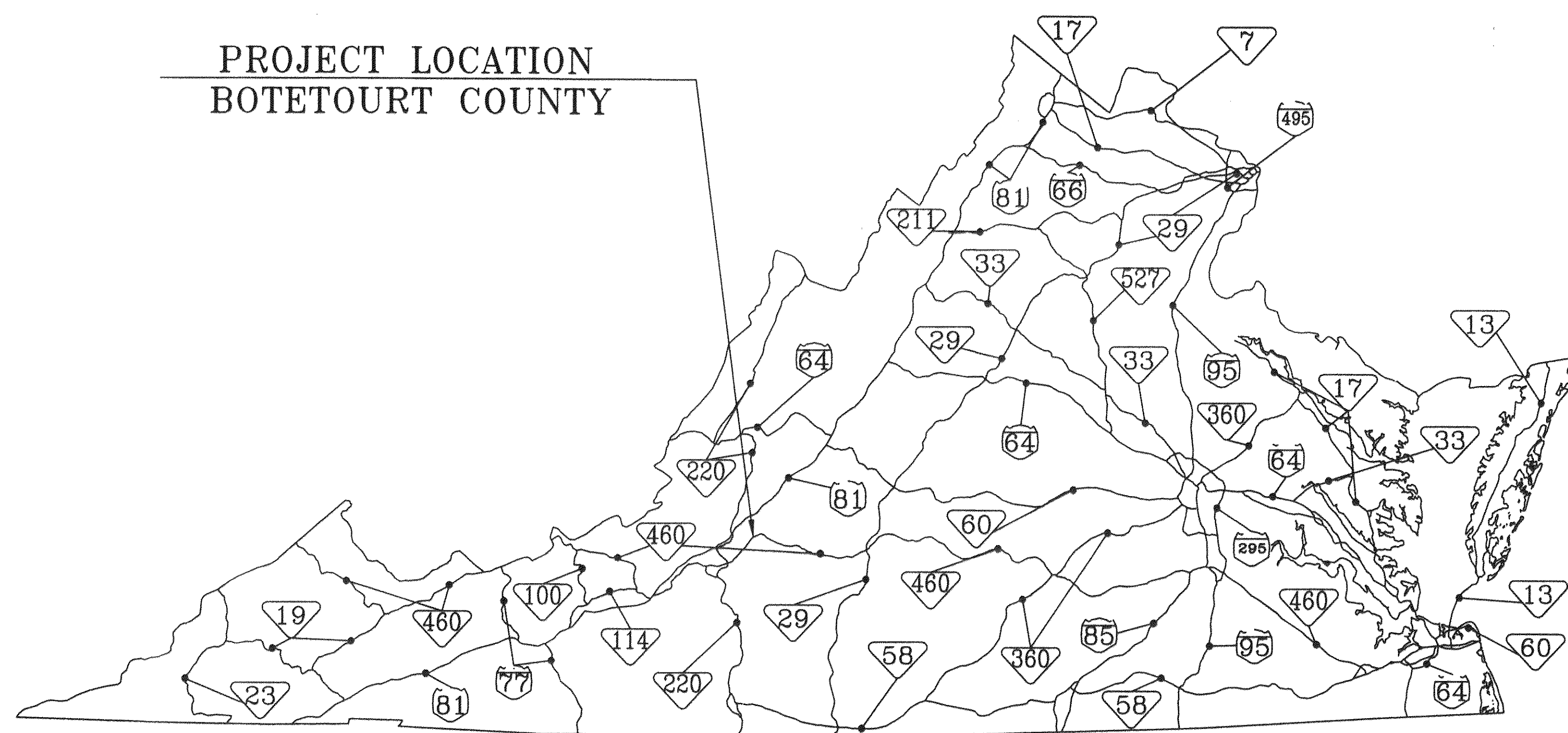
OWNER

BILDEL CORPORATION

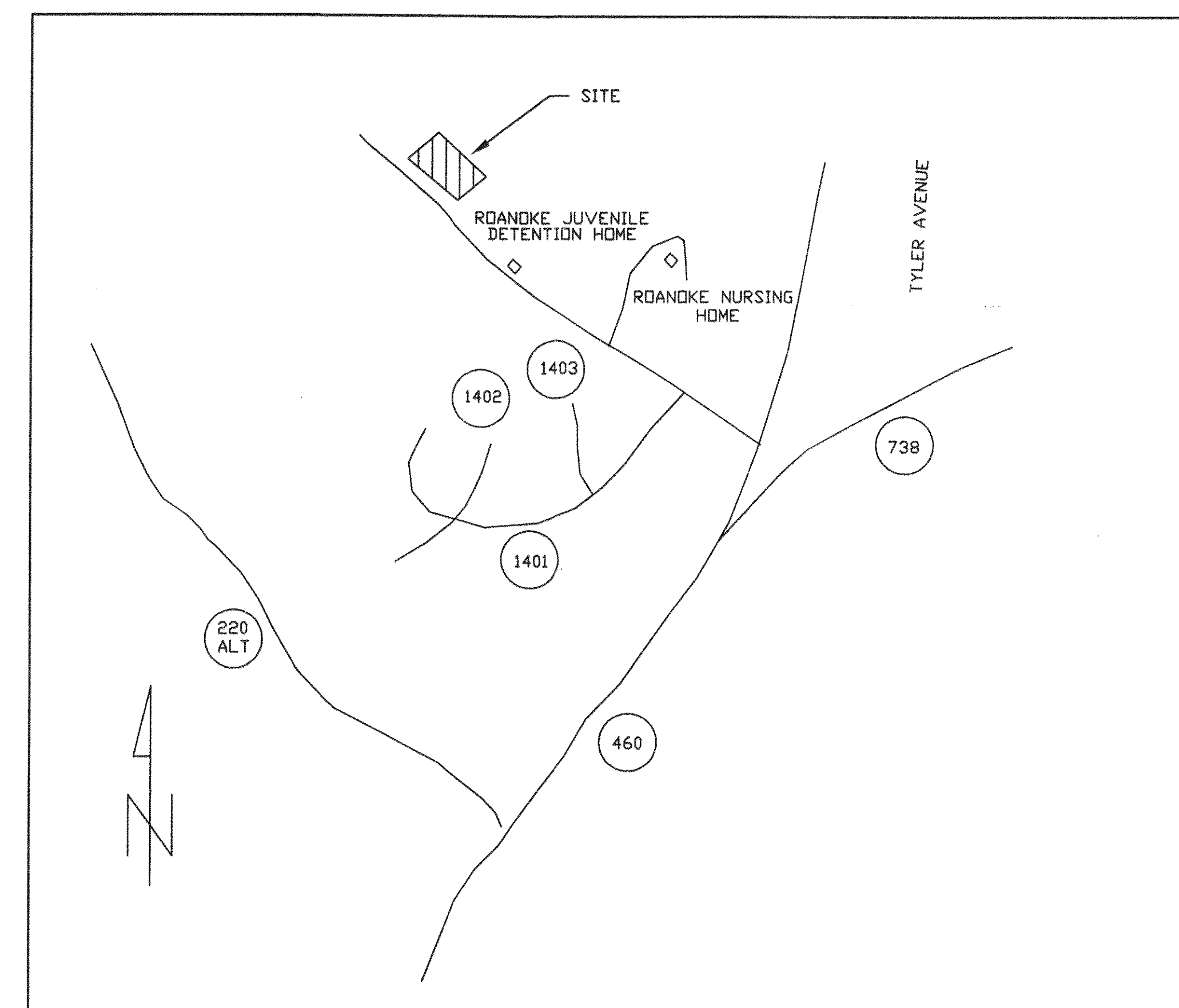
JOHN GRIFFIN

4053 LITTLE VALLEY DRIVE
TROUTVILLE, VIRGINIA 24175

PROJECT LOCATION
BOTETOURT COUNTY



LOCATION MAP
NO SCALE



VICINITY MAP
NO SCALE

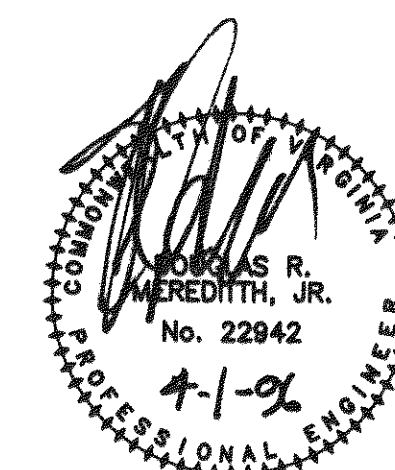
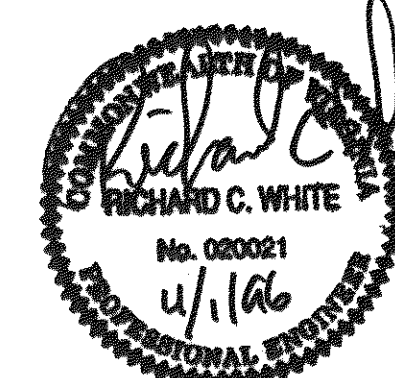
LMWP.C.
ENGINEERING - SURVEYING

1401 2nd STREET

ROANOKE, VA. 24016

PHONE: (540) 345-0675

FAX (540) 342-4456



COMM. NO. 942-A
SET NO.

ABBREVIATIONS

AB	ANCHOR BOLT	JT	JOINT
ABAN	ABANDON OR ABANDONED	JB	JUNCTION BOX
ABUT	ABUTMENT	L	LENGTH, LONG
ABV	ABOVE	LF	LINEAL FOOT
ACT	ACOUSTICAL	LG	LONG
ADD	ADDITIONAL	LP	LIGHT POLE
ADJ	ADJACENT	LR	LONG RADIUS
AFF	ABOVE FINISH FLOOR	LT	LEFT
AGGR	AGGREGATE	LTG	LIGHTING
AHR	ANCHOR	MACH	MACHINERY
ALUM	ALUMINUM	MAS	MASONRY
ALT	ALTERNATE	MATL	MATERIAL
ANC	ANCHOR	MAX	MAXIMUM
APPROX	APPROXIMATE	MB	MAIL BOX
AARCH	ARCHITECTURAL	MECH	MECHANICAL
AWWA	AMERICAN WATER WORKS ASSOCIATION	MFR	MANUFACTURER
B	BRICK	MH	MANHOLE, MOUNTING HEIGHT
BIT	BITUMINOUS	MIN	MINIMUM
BJ	BELL JOINT	MISC	MISCELLANEOUS
BL	BASE LINE	MJ	MECHANICAL JOINT
BEG	BEGIN OR BEGINNING	MON	MONUMENT
BLDG	BUILDING	MTD	MOUNTED
BLKG	BLOCKING	MTG	MOUNTING
BM	BENCH MARK, BEAM	MTL	METAL
BOTT	BOTTOM	N & C	NAIL AND CAP
BP	BYPASS	NIC	NOT IN CONTRACT
BRG	BEARING	NO	NUMBER
BSMT	BASEMENT	NPW	NON POTABLE WATER
BSP	BLACK STEEL PIPE	NTS	NOT TO SCALE
BUR	BUILT UP ROOF	OC	ON CENTERS
BV	BUTTERFLY VALVE	OD	OUTSIDE DIAMETER
C	CHANNEL, COLD	OPER	OPERATOR
C/C, C TO C	CENTER TO CENTER	OPNG	OPENING
CAB	CABINET	OPP	OPPOSITE
CAP	CAPACITY	PC	POINT OF CURVE
CF	CUBIC FEET	PCC	POINT OF COMPOUND CURVE
CG	CHANGE OF GRADE	PER	PERIMETER
C & G	CURB AND GUTTER	PERF	PERFORATED
CI	CAST IRON	PERP	PERPENDICULAR
CIRC	CIRCULAR	PI	POINT OF INTERSECTION
CKT	CIRCUIT	PIV	POST INDICATOR VALVE
CL	CENTER LINE	PL	PLATE, PROPERTY LINE
CLR	CLEAR	PLYWD	PLYWOOD
CONST	CONSTRUCTION	POL	POINT ON LINE
CMP	CORRUGATED METAL PIPE	PT	POINT OF TANGENCY
CMU	CONCRETE MASONRY UNITS	POT	POINT ON TANGENT
CND	CONDUIT	PRC	POINT OF REVERSE CURVE
CO	CLEANOUT	PSI	POUNDS PER SQUARE INCH
COMB	COMBINATION	PT	POINT OF TANGENT
CONC	CONCRETE (PORTLAND CEMENT)	PVC	POLYVINYL CHLORIDE
CONN	CONNECT, CONNECTION	PM	POINT OF VERTICAL INTERSECTION
CONT	CONTINUOUS, CONTROL	PVMT	PAVEMENT
CONTR	CONTRACTOR	PVT	PRIVATE
CONV	CONVEYOR	R	RADIUS, RISER
CR STONE	CRUSHED STONE	RR	RAILROAD
CTR	CENTER	RCP	REINFORCED CONCRETE PIPE
CULV	CULVERT	RO	ROOF DRAIN, ROAD
CY	CUBIC YARD	RODR	REDUCER
D	DEPTH OR DEGREE OF CURVE	RECP	RECTANGLE
DEPT	DEPARTMENT	RECT	RECTANGULAR
DF	DRINKING FOUNTAIN	REINF	REINFORCE, REINFORCEMENT
DI	DROP INLET, DUCTILE IRON	REF	REFERENCE
DIA	DIAMETER	REL	RELOCATED
DIM	DIMENSION	REQD	REQUIRED
DISC	DISCONNECT	REV	REVISION
DMH	DROP MANHOLE	RTE	ROUTE
DN	DOWN	RT	RIGHT
DR	DRIVE	R/W	RIGHT OF WAY
DS	DOWN SPOUT	S	SANITARY SEWER, SOUTH, STORY, SWITCH
DTL	DETAIL	SAN	SANITARY
DWL	DWELLING	SCH	SCHEDULE
DWG	DRAWING	SD	STORM DRAIN
E	EAST	SECT	SECTION
EA	EACH	SER	SERVICE
E.B.L.	EASTBOUND LANE	SH	SHEET
EF	EACH FACE	SHITG	SHEETING
EJ	EXPANSION JOINT	SIM	SIMILAR
EL, ELEV	ELEVATION	SPEC	SPECIFICATION
ELEC	ELECTRICAL	SPECS	SPECIFICATIONS
ENGR	ENGINEER	SQ	SQUARE
ENTR	ENTRANCE	SS	STAINLESS STEEL
EOL	END OF LINE	ST	STREET
EP	EDGE OF PAVEMENT	STA	STATION
EQ	EQUAL	STD	STANDARD
EQPT	EQUIPMENT	STL	STEEL
EW	EACH WAY, ENDWALL	STRUCT	STRUCTURAL
EXIST	EXISTING	STY	STORY
EXP	EXPANSION	SUR	SURVEY
EXT	EXTERIOR	SURF	SURFACE
FR	FRAME	SYMM	SYMMETRICAL
FD	FLOOR DRAIN	T	TREAD
FDN	FOUNDATION	T & B	TOP AND BOTTOM
FES	FLARED END SECTION	TDC	TURNED DOWN CURB
FF	FINISH FLOOR	TELE	TELEPHONE
FFE	FINISHED FLOOR ELEVATION	TEMP	TEMPORARY
FIG	FIGURE	THK	THICK
FIN	FINISH	TRTD	TREATED
FIXT	FIXTURE	TV	TELEVISION
FL	FLOOR	TW	TOP OF WALL
FLEX	FLEXIBLE	TYP	TYPICAL
FLG	FLANGE	UG	UNDERGROUND
FT	FOOT	UON	UNLESS OTHERWISE NOTED
FTG	FOOTING	U.S.C.&G.S.	UNITED STATES COAST AND GEODETIC SURVEY
FUT	FUTURE	V, VAL	VALVE, VENT
GAL	GALLON	VAP BAR	VAPOR BARRIER
GALV	GALVANIZED	VC	VERTICAL CURVE
GAR	GARAGE	VERT	VERTICAL
GND	GROUND	VOL	VOLUME
GR	GRAVEL	VDOT	VIRGINIA DEPARTMENT OF TRANSPORTATION
GOVT	GOVERNMENT	V.S.D.	VERTICAL SIGHT DISTANCE
GP	GALLONS PER MINUTE	W.B.L.	WESTBOUND LANE
GRTG	GRATING	W	WIDE FLANGE, WDE, WASTE, WATER
GV	GATE VALVE	W/I	WITH
H	HOT	WD	WOOD
HB	HOSE BIBB	WL	WATER LINE
HK	HOOK	W/O	WITHOUT
HM	HOLLOW METAL	WS	WATER SURFACE
HOR, HORIZ	HORIZONTAL	WT	WATERTIGHT, WEIGHT
HP	HORSE POWER	WVDH	WEST VIRGINIA DEPARTMENT OF HIGHWAYS
HPT	HIGH POINT	WWF	WELDED WIRE FABRIC
HYD	HYDRANT	COR	CORNER
ID	INSIDE DIAMETER	DW, D/W	DRIVEWAY
INCH	INCH	PP	POWER POLE
INSUL	INSULATION	TP	TELEPHONE POLE
INV	INVERT	S/W	SIDEWALK
IP	IRON PIN		

LEGEND

EXISTING	NEW	DESCRIPTION
		BUILDING WITH PORCH OR STOOP
		FOUNDATION ONLY
		CONTOUR, CONTOUR WITH ELEVATION
		SPOT ELEVATION
		CONCRETE CURB
		CONCRETE CURB & GUTTER
		CONCRETE WALK OR SLAB
		PAVEMENT
		UNPAVED OR GRAVEL ROAD
		CONSTRUCTION EASEMENT
		PERMANENT EASEMENT
		TREE OR SHRUB
		FENCE
		CENTERLINE CREEK, SWALE, DITCH
		PROPERTY LINE
		CENTERLINE OR BASELINE
		LIMIT OF WORK LINE
		FIELD SURVEY TRAVERSE POINT
		P.O. OR P.T.
		GEOLOGIC BORE HOLE
		STORM DRAIN AND ENDWALL
		SANITARY SEWER
		FORCE MAIN
		GAS MAIN OR SERVICE LINE
		WATER MAIN OR SERVICE LINE
		ELECTRICAL LINE
		UNDERGROUND TELEPHONE LINE
		UNDERGROUND ELECTRICAL LINE
		PIPE FITTINGS
		FIRE HYDRANT
		GATE VALVE
		CLEANOUT
		MANHOLE
		DROP INLET (CURB AND GRATING TYPES)
		G.M. - GAS METER, W.M. - WATER METER
		TELEPHONE LINE
		TELEPHONE POLE, GUY AND ANCHOR
		POWER POLE, GUY AND ANCHOR
		LIGHT POLE
		TELEPHONE PEDESTAL
		BURIED TELEPHONE VAULT
		ABANDON OR REMOVE
		PAVED DITCH
		DRIVEWAY CULVERT
		CULVERT WITH FLARED END SECTION
		WATER VALVE
		HUB AND TACK
		AIR RELEASE VALVE

EROSION AND SEDIMENT CONTROL SYMBOLS

EC1		EROSION CONTROL STONE
STB		STRAW BALE BARRIER
IP		STORM DRAIN INLET PROTECTION
DD		TEMPORARY DIVERSION DIKE
ST		TEMPORARY SEDIMENT TRAP
CE		TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
RR		RIPRAP
SF		SILT FENCE
PS		PERMANENT SEEDING
TS		TEMPORARY SEEDING
CD		ROCK CHECK DAMS
OP		OUTLET PROTECTION

MATERIALS SYMBOLS

	METAL
	BRICK
	CONCRETE MASONRY
	CONCRETE
	GROUT OR FINISHED CONCRETE
	INSULATION (RIGID)
	WOOD BLOCKING
	FINISHED WOOD OR PLYWOOD
	GRAVEL OR STONE
	EARTH

GENERAL NOTES

THE LOCATION OF EXISTING UTILITIES, INCLUDING UNDERGROUND UTILITIES IS INDICATED ON THE DRAWINGS IN SO FAR AS THEIR EXISTENCE AND LOCATION WERE KNOWN AT THE TIME OF PREPARATION OF THESE DRAWINGS. HOWEVER, NOTHING IN THESE CONTRACT DOCUMENTS SHALL BE CONSTRUED AS A GUARANTEE THAT SUCH UTILITIES ARE IN THE LOCATION INDICATED OR THAT THEY ACTUALLY EXIST OR THAT OTHER UTILITIES ARE NOT WITHIN THE AREA OF OPERATIONS. THE CONTRACTOR SHALL MAKE ALL NECESSARY INVESTIGATIONS TO DETERMINE THE EXISTENCE AND LOCATIONS OF SUCH UTILITIES. THE CONTRACTOR SHALL PAY FOR ANY DAMAGE TO AND FOR MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES.

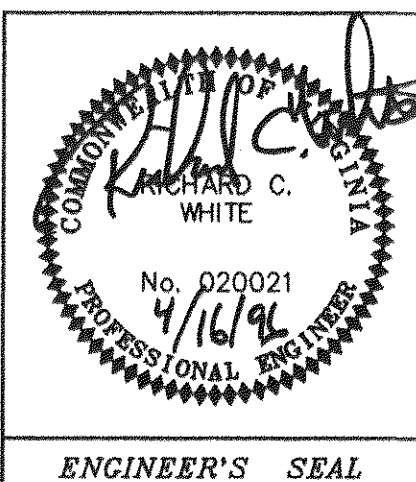
EXISTING WATER LINE LOCATIONS BOTH HORIZONTAL AND VERTICAL ARE APPROXIMATE. THE LOCATION IS NOT THE RESULT OF A FIELD SURVEY.

THE CONTRACTOR IS DIRECTED TO DIG AND LOCATE ALL UTILITIES IN ADVANCE OF PIPELAYING TO ALLOW FOR ADJUSTMENTS DUE TO CONFLICTS WITH EXISTING UTILITIES. SHOULD A CONFLICT ARISE THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY.

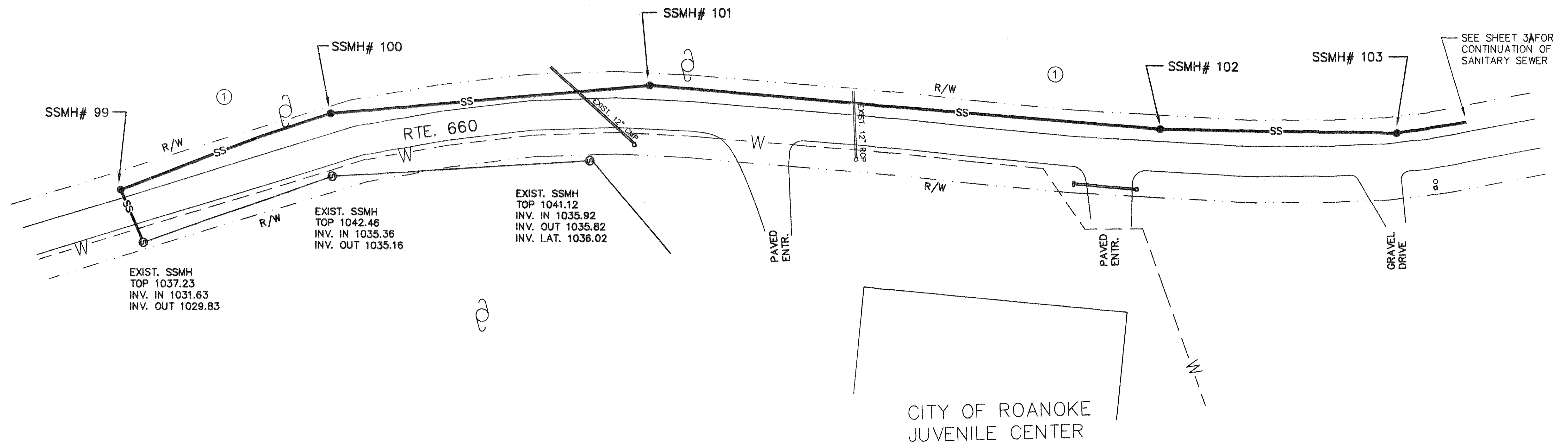
THE CONTRACTOR IS REQUIRED TO NOTIFY "MISS UTILITY" AT 1-800-552-7001 AT LEAST TWO, BUT NOT MORE THAN TEN WORKING DAYS IN ADVANCE OF CONSTRUCTION.

SHEET INDEX

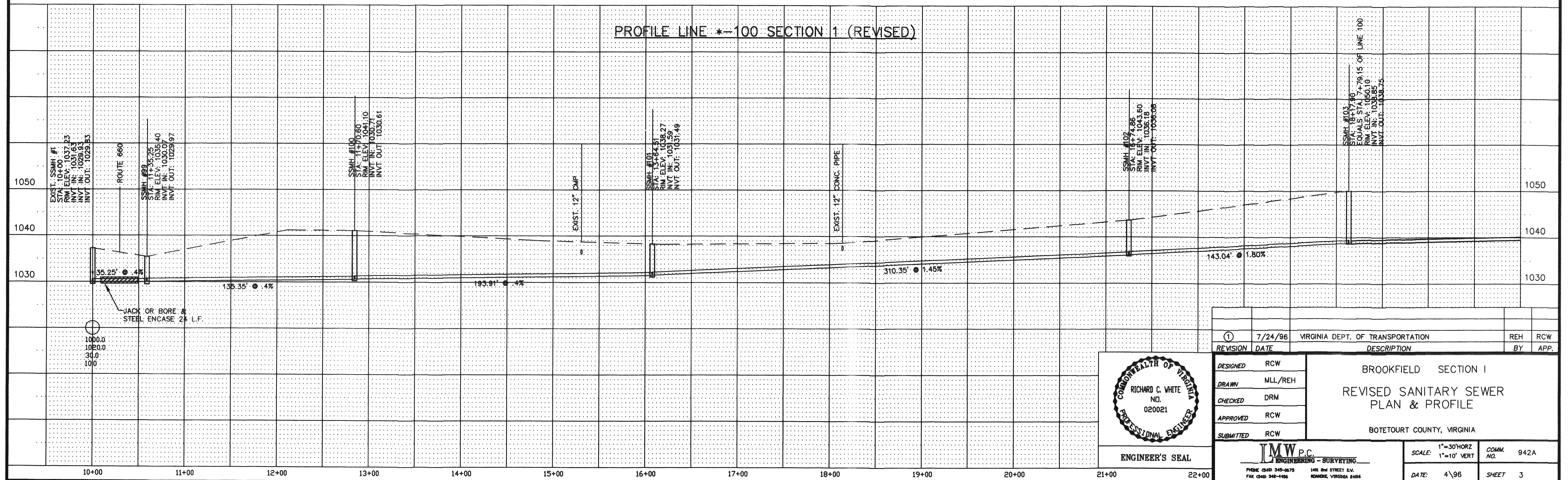
- #1 COVER SHEET
- #2 ABBREVIATION, LEGENDS & GENERAL NOTES
- #3 PLAN & PROFILE
- #3A PLAN & PROFILE
- #4 PLAN & PROFILE
- #5 PLAN & PROFILE
- #6 PLAN & PROFILE
- #7 PROFILE
- #8 WATER & SANITARY SEWER DETAILS
- #8-A WATER & SANITARY SEWER DETAILS
- #9 WATER PUMPING FACILITY
- #10 WATER STORAGE TANK
- #11 UTILITIES SPECIFICATIONS



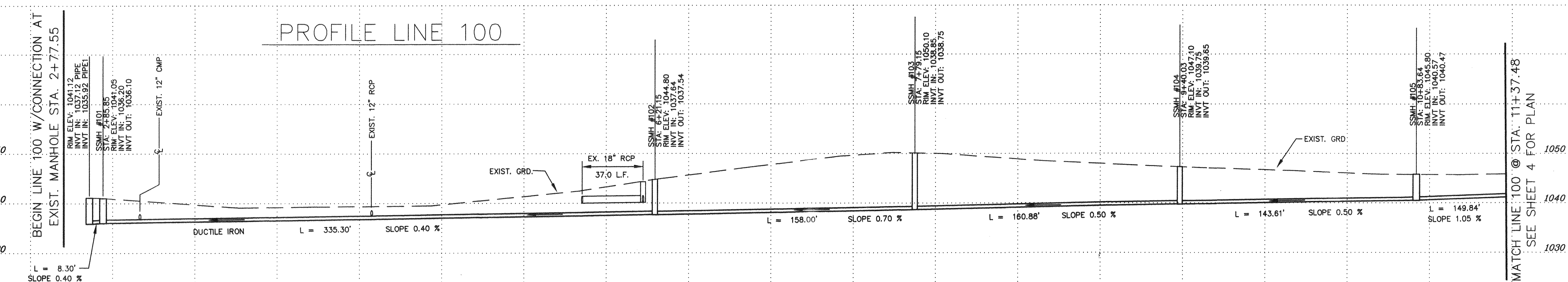
REVISION	DATE	DESCRIPTION	BY	APP.
DESIGNED	RCW			
DRAWN	MLL/REH			
CHECKED	DRM			
APPROVED	RCW			
SUBMITTED	RCW			
BROOKFIELD SECTION I				
ABBREVIATIONS, LEGEND, GENERAL NOTES, & INDEX				
BOTETOURT COUNTY, VIRGINIA				
SCALE: NONE		COMM. NO. 942A		
DATE: 4/96		SHEET 2		



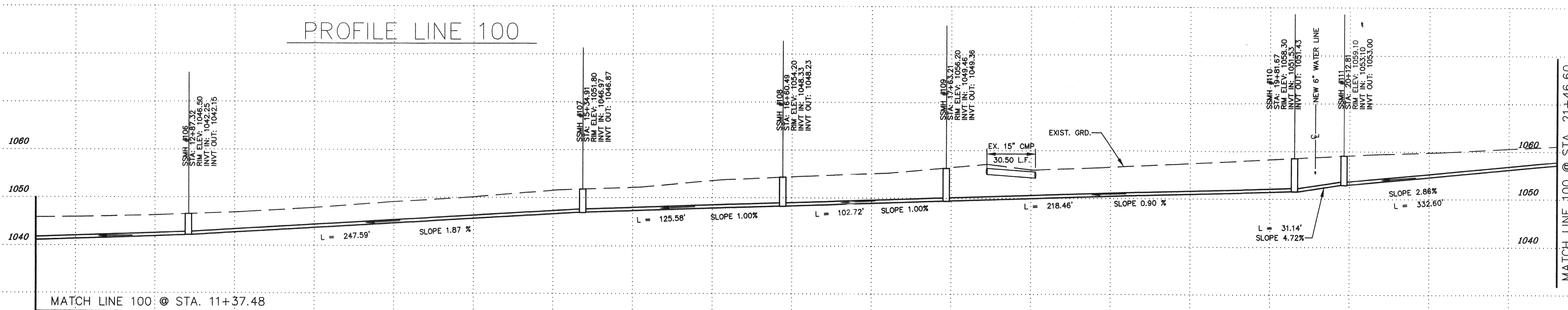
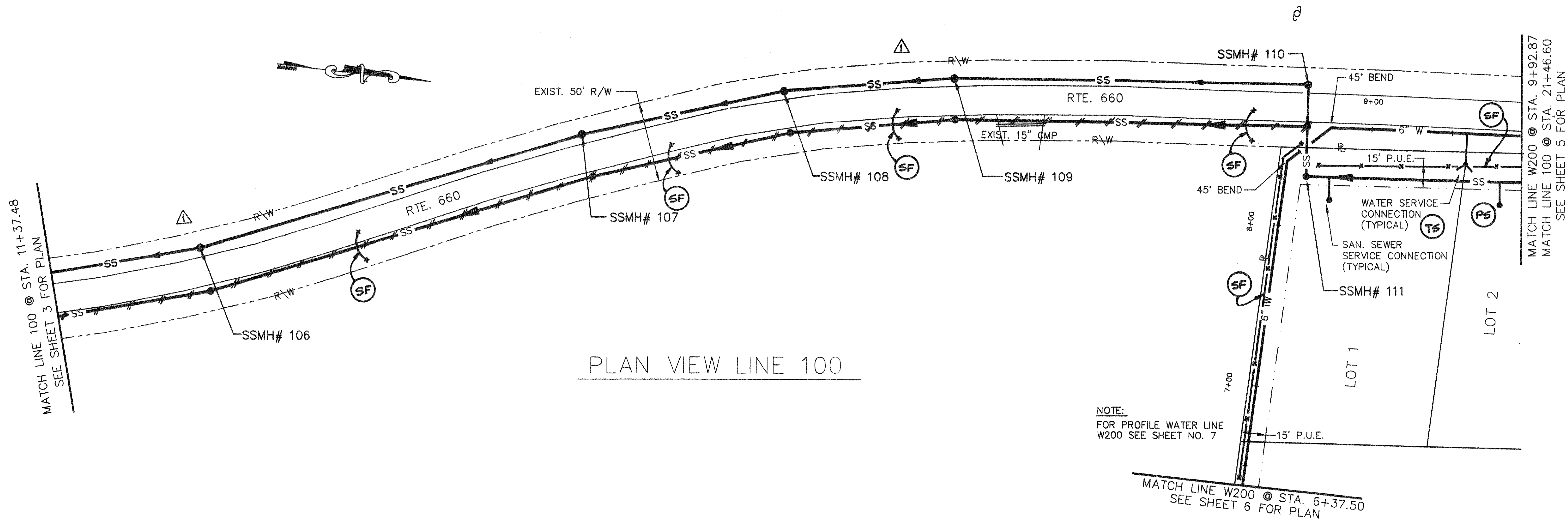
PROFILE LINE +100 SECTION 1 (REVISED)



REVISION	DATE	DESCRIPTION	BY	APP.
①	7/24/96	VIRGINIA DEPT. OF TRANSPORTATION	REH	RCW
BROOKFIELD SECTION I				
REVISED SANITARY SEWER				
PLAN & PROFILE				
BOTETOURT COUNTY, VIRGINIA				
DESIGNED	RCW			
DRAWN	MLL/REH			
CHECKED	DRM			
APPROVED	RCW			
SUBMITTED	RCW			
		SCALE: 1"=30'HORIZ 1"=10' VERT	COMM. NO.	942A
PHONE (540) 345-6675 FAX (540) 345-1406		1401 2nd STREET S.W. ROANOKE, VIRGINIA 24016	DATE:	4/96
			SHEET	3



	7-24-96	VDOT	MM	RCW
REVISION	DATE	DESCRIPTION	BY	APP
DRAWN	RCW	BROOKFIELD SECTION I SANITARY SEWER PLAN & PROFILE BOTETOURT COUNTY, VIRGINIA		
CHECKED	MLL/REH			
APPROVED	DRM			
SUBMITTED	RCW			
		ENGINEERING - SURVEYING		
PHONE (540) 345-0573 FAX (540) 342-4456		1401 2nd STREET S.W. ROANOKE, VIRGINIA 24016		
		SCALE: 1" = 30' HORIZ 1" = 10' VERT	COMM. NO.	942A
		DATE: 4/96	SHEET	3A



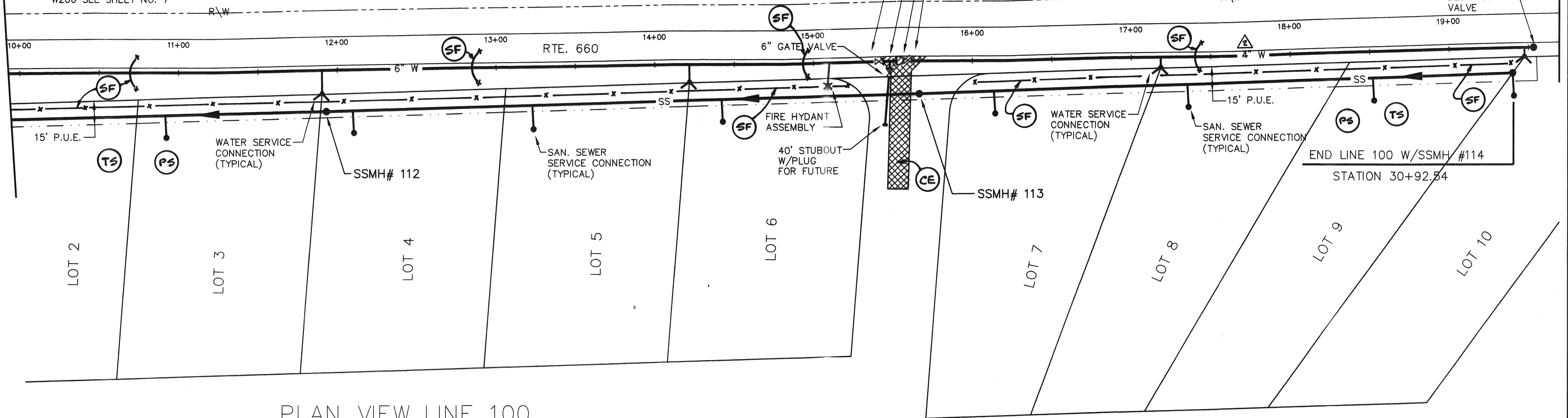
7-24-96		VOOT	MM	RCW
REVISION	DATE	DESCRIPTION	BY	APP.
DESIGNED	RCW	BROOKFIELD SECTION I SANITARY SEWER PLAN & PROFILE BOTETOURT COUNTY, VIRGINIA		
DRAWN	MLL/REH			
CHECKED	DRM			
APPROVED	RCW			
SUBMITTED	RCW			
		 PHONE (540) 340-0675 FAX (540) 340-4006	SCALE: 1"=30' HORZ 1"=10' VERT DATE: 4/96	COMM. NO. 942A SHEET 4

MATCH LINE 100 @ STA. 21+46.60
MATCH LINE W200 @ STA. 9+92.87

SEE SHEET 4 FOR PLAN

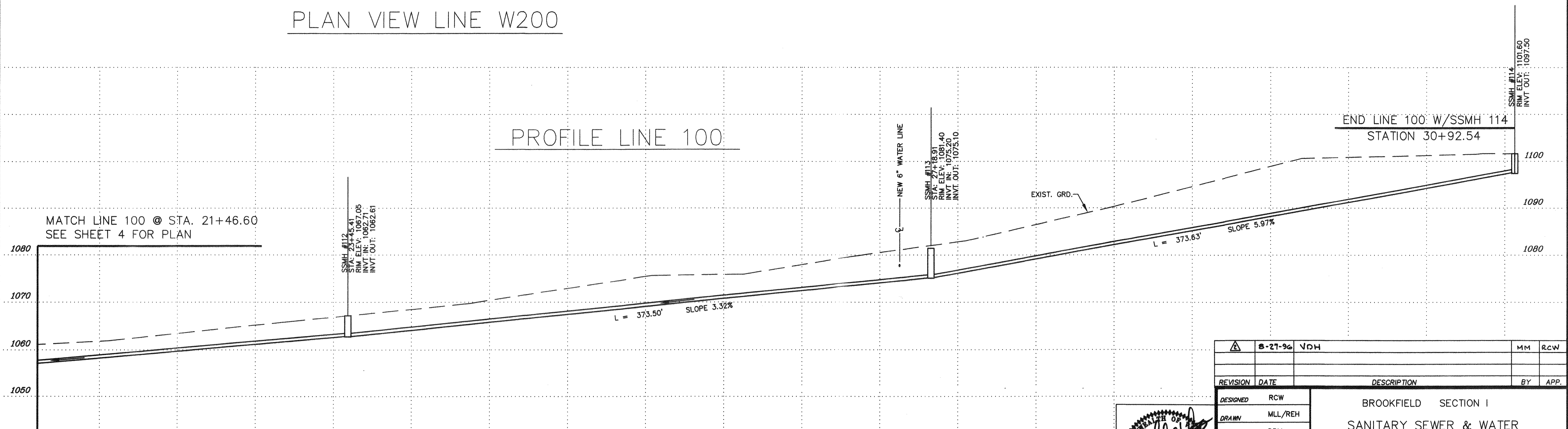
NOTE:

FOR PROFILE WATER LINE
W200 SEE SHEET NO. 7



PLAN VIEW LINE 100
PLAN VIEW LINE W200

PROFILE LINE 100



DESIGNED	RCW	REVISION	DATE	DESCRIPTION	BY	APP.
DRAWN	MLL/REH					
CHECKED	DRM					
APPROVED	RCW					
SUBMITTED	RCW					

BROOKFIELD SECTION I	
SANITARY SEWER & WATER	
PLAN & PROFILE	
BOTETOURT COUNTY, VIRGINIA	

ENGINEER SEAL	IMW P.C. ENGINEERING - SURVEYING	SCALE: 1"=30' HORZ 1"=10' VERT	DATE: 4/96	COMM. NO. 942A	SHEET 5
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