

**TALKING ROCK RANCH
PHASE 27**

**SEWER SYSTEM
DESIGN REPORT**

Prepared for:

Talking Rock Land, L.L.C.
7600 East Doubletree Ranch Road, Suite 220
Scottsdale, Arizona 85258
Job # 03350

Prepared By:

Shephard-Wesnitzer, Inc.
115 East Goodwin Street, Suite G
Prescott, Arizona 86303
Phone: (928) 541-0443

November 2003



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- Appendix A – Site Map
- Appendix B – Phase 27 Sewer Collection System
- Appendix C – Sewer Collection System Analysis

Introduction

General Description

The Talking Rock Ranch Subdivision consists of residential and recreational facilities. This planned area development (PAD) was approved by the Yavapai County Board of Supervisors on October 6, 1999 and Amended on May 8, 2000.

The site encompasses about 3500 acres of undeveloped and newly developed land that slopes towards Inscription Canyon. The site is divided by Williamson Valley Road. The site consists of forested areas with, sometimes, extreme slopes.

Project Location

The project site is located in portions of Sections 15 and 22, Township 16 North, Range 3 West, Gila and Salt River - Meridian, Yavapai County, Arizona. The project is generally located in the Southern portion of Williamson Valley and straddles Williamson Valley Road. See Appendix "A" for site map.

Objective

This report will address the gravity sewer system design for Phase 27. All lots within this phase of the project will be constructed using 8" SDR 35 PVC pipe.

Phase 27 will be serviced entirely by gravity sewer system. This system will connect with the existing sewer in Talking Rock Ranch Road constructed for Phase 1. See attached Phase 27 Sewer Collection System drawings in Appendix "B" for the sewer layout for this phase.

System Analysis

The estimated sewage flow from each unit is an average of 250 GAL/Day, slightly less than the estimated water usage of 270 GAL/unit/Day. The average flow from Phase 27 is $39 \text{ units} \times 250 \text{ GAL/unit/Day} = 9750 \text{ Gal/Day}$. Using a conservative peaking factor of 4.0, peak flow will be 39,000 GAL/Day or 27.1 gpm.

The capacity of an 8" gravity sewer using $n = 0.013$ at the minimum slope in this phase of 0.50 % is 0.43 cfs or 193 gpm (See Appendix "C"). This is much greater than the peak load of 27.1 gpm.

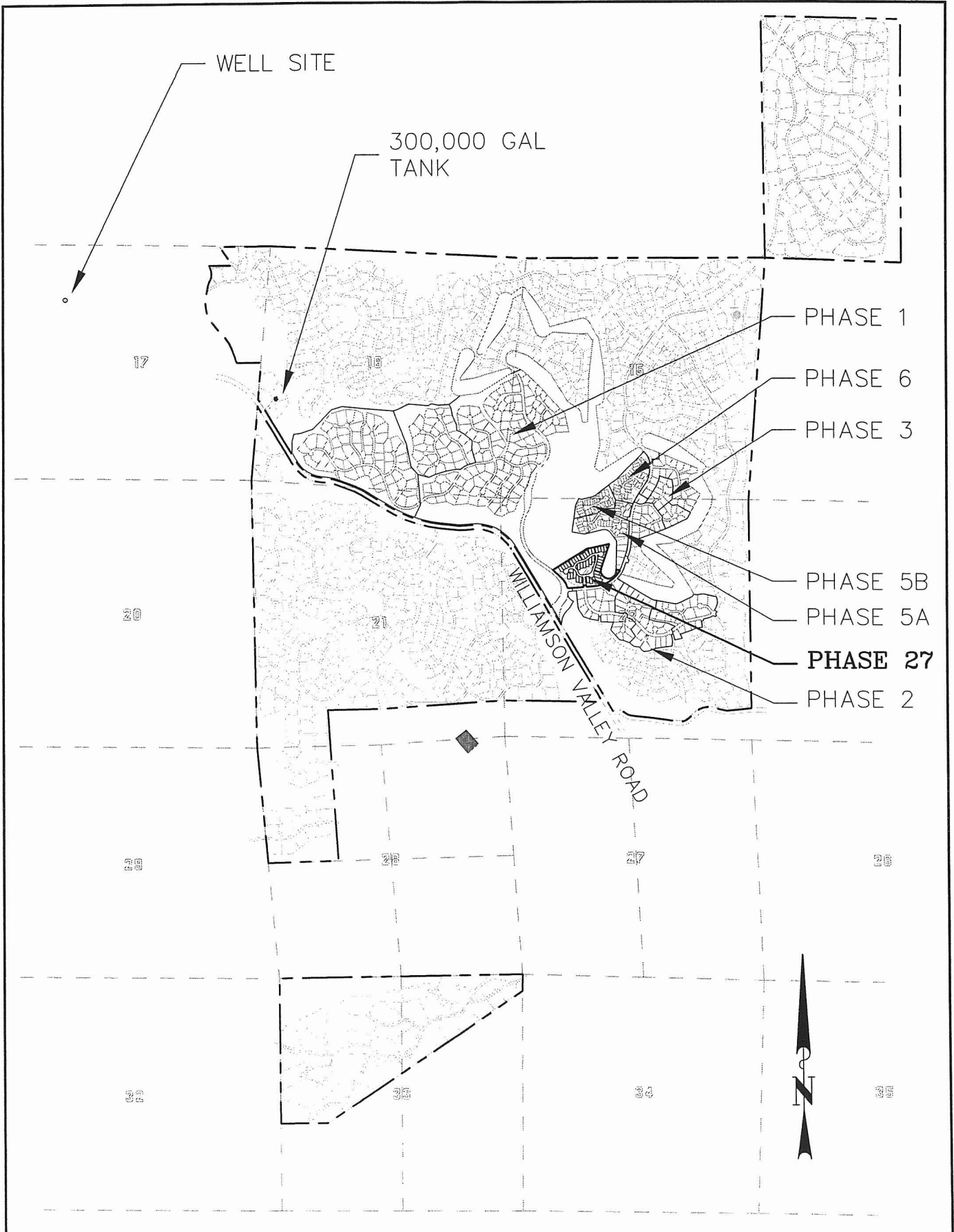
Conclusion

The gravity sewer system chosen for this phase of the project is the preferred system based on the slope characteristics of the site.

This system will adequately serve 39 single-family lots with gravity sewer to maintain a balance between initial costs and operation and maintenance costs.

APPENDIX A
SITE MAP

P:\2003\03350\utilities\water\03350 Water Site Map.dwg, 11/12/2003 09:00:38 AM



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 115 E. GOODWIN ST., SUITE G
 PRESCOTT, AZ 86303
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DRAWN:	BBH/MWB
DESIGN:	BBH
CHECKED:	SFH

TALKING ROCK RANCH PH. 27
 YAVAPAI COUNTY ARIZONA
**APPENDIX A
 SITE MAP**

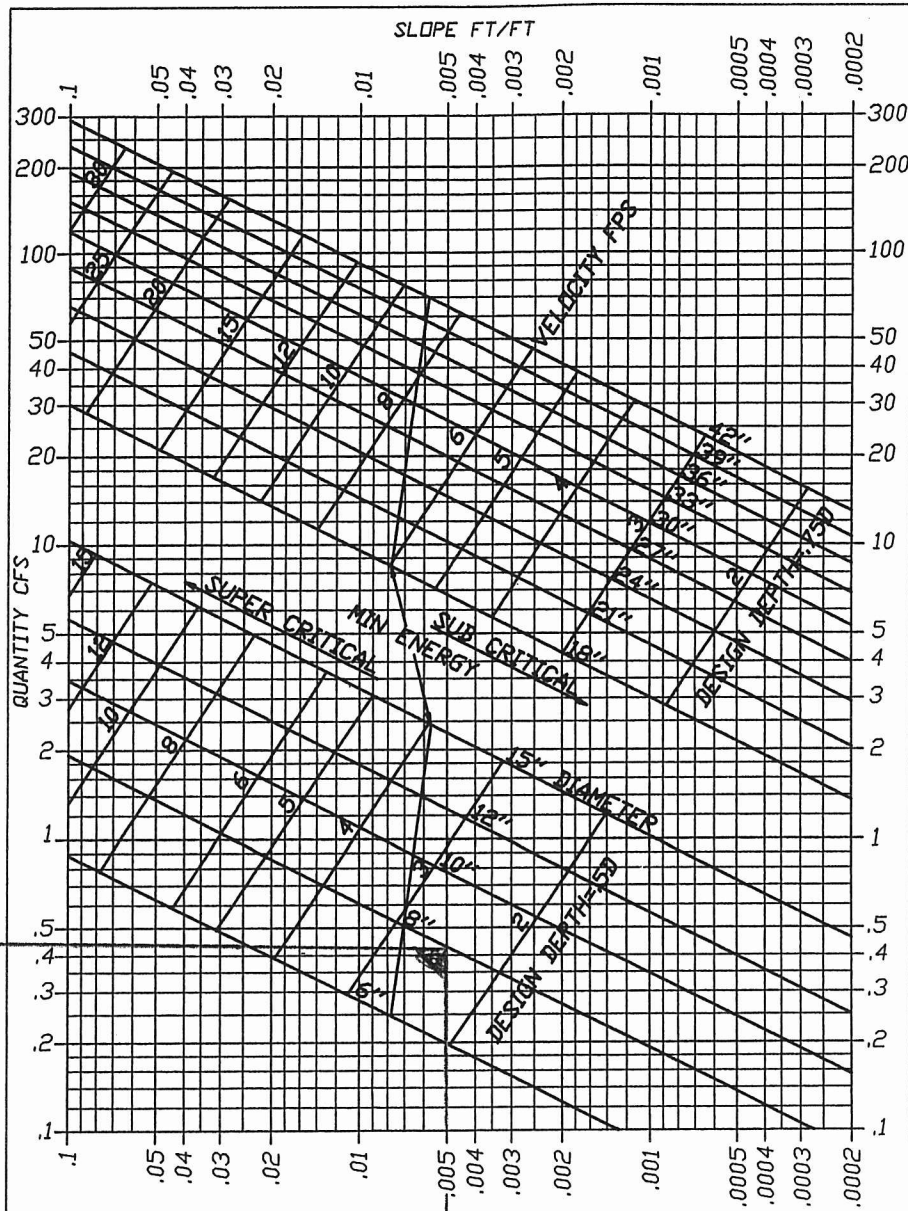
SHEET	1
OF	1

APPENDIX B

PHASE 27 SEWER COLLECTION SYSTEM

APPENDIX C

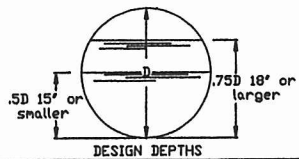
SEWER COLLECTION SYSTEM ANALYSIS



DESIGN CAPACITIES FOR CLAY PIPE SEWERS

BASED ON MANNING'S EQUATION

$$Q=AV \quad V=\frac{1.486}{n} R^{2/3} S^{1/2}$$

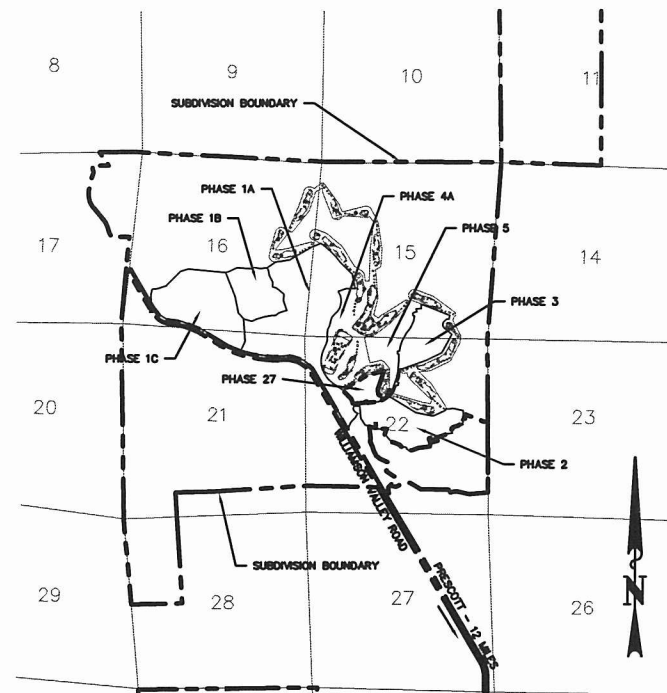


For "n" equal to:
 .014 multiply Q or V by .93
 .015 multiply Q or V by .87
 .016 multiply Q or V by .81

n=.013

TALKING ROCK PHASE 27 CONSTRUCTION PLANS GRADING, DRAINAGE, AND UTILITIES

A PORTION OF SECTION 22, TOWNSHIP 16 NORTH, RANGE 3 WEST,
GILA AND SALT RIVER, BASE AND MERIDIAN,
YAVAPAI COUNTY, ARIZONA



VICINITY MAP
SCALE: 1"=1/2 MILE

OWNER:

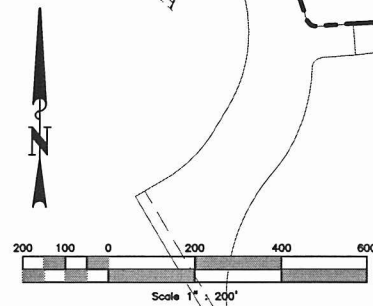
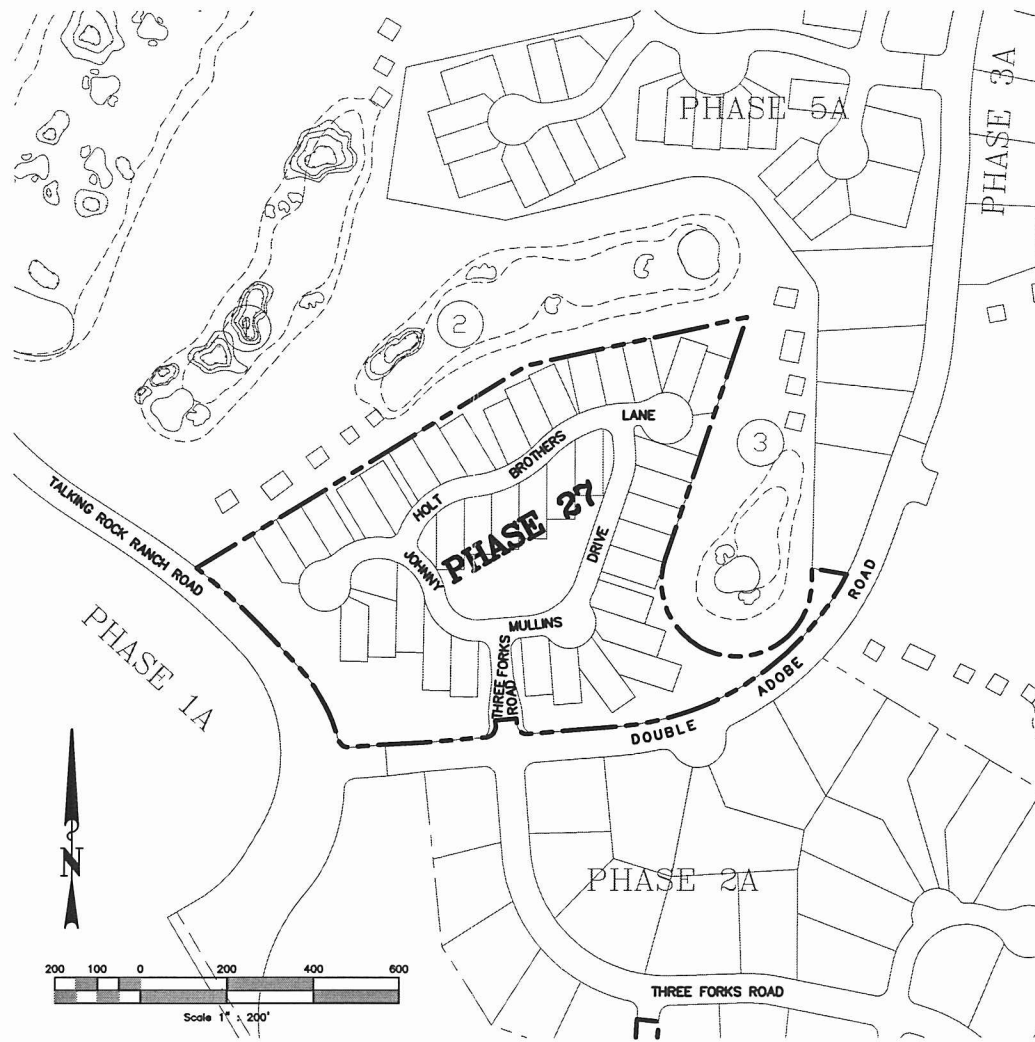
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SUBDIVIDER:

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ENGINEER:

SHEPARD-WESNITZER, INC.
221 N. MARINA ST., SUITE 102
PRESCOTT, ARIZONA 86301
PHONE: (928) 541-0443



SITE PLAN
SCALE: 1"=200'

SHEET INDEX	
SHEET	DESCRIPTION
1	COVER SHEET
2	NOTES
3	ROADWAY AND DRAINAGE DETAILS
4	UTILITY DETAILS
5	SURVEY CONTROL
6	THREE FORKS ROAD PLAN AND PROFILE - STA 10+00 (BOP) TO 12+84.00 (EOP)
7	JOHNNY MULLINS DRIVE PLAN AND PROFILE - STA 10+00 (BOP) TO 19+00
8	JOHNNY MULLINS DRIVE PLAN AND PROFILE - STA 19+00 TO 21+98.57 (EOP)
9	HOLT BROTHERS LANE PLAN AND PROFILE - STA 10+00 (BOP) TO 17+39.86 (EOP)
10	GRAVITY SEWER OUTFALL PLAN AND PROFILE - STA 10+00 (BOP) TO STA 13+96.65 (EOP)
11	TRAFFIC SIGNING PLAN
12	CHANNELIZATION PLAN
13	STORM WATER POLLUTION PROTECTION PLAN
14	STORM WATER POLLUTION PROTECTION DETAILS

LEGEND

	EXISTING ELEVATION CONTOUR
	PROPOSED ELEVATION CONTOUR
	PROPOSED WATER LINE
	PROPOSED SEWER LINE
	CMP CULVERT
	SINGLE WATER SERVICE
	DOUBLE WATER SERVICE
	FIRE HYDRANT ASSEMBLY
	BLOWOFF VALVE
	GATE VALVE
	CONCRETE ENCASMENT

NOTE: CONCRETE ENCASMENTS FOR SEWER MAINS HAVE BEEN KEYNOTED ON PLAN AND PROFILE SHEETS WHERE NEEDED. ENCASMENTS FOR SEWER SERVICES ARE NOT DEPICTED AND SHOULD BE ENCASSED WHERE NEEDED IN ACCORDANCE WITH ADEQ AND MAG SPECIFICATIONS.

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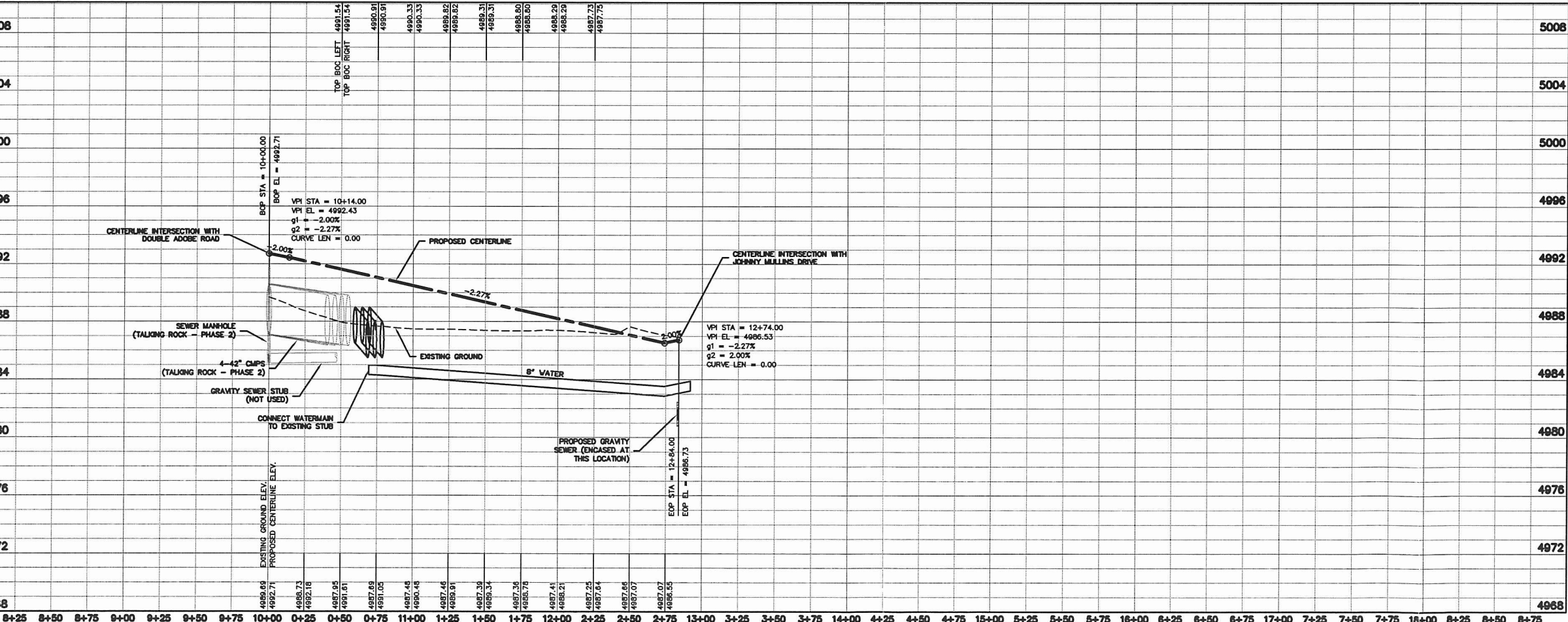
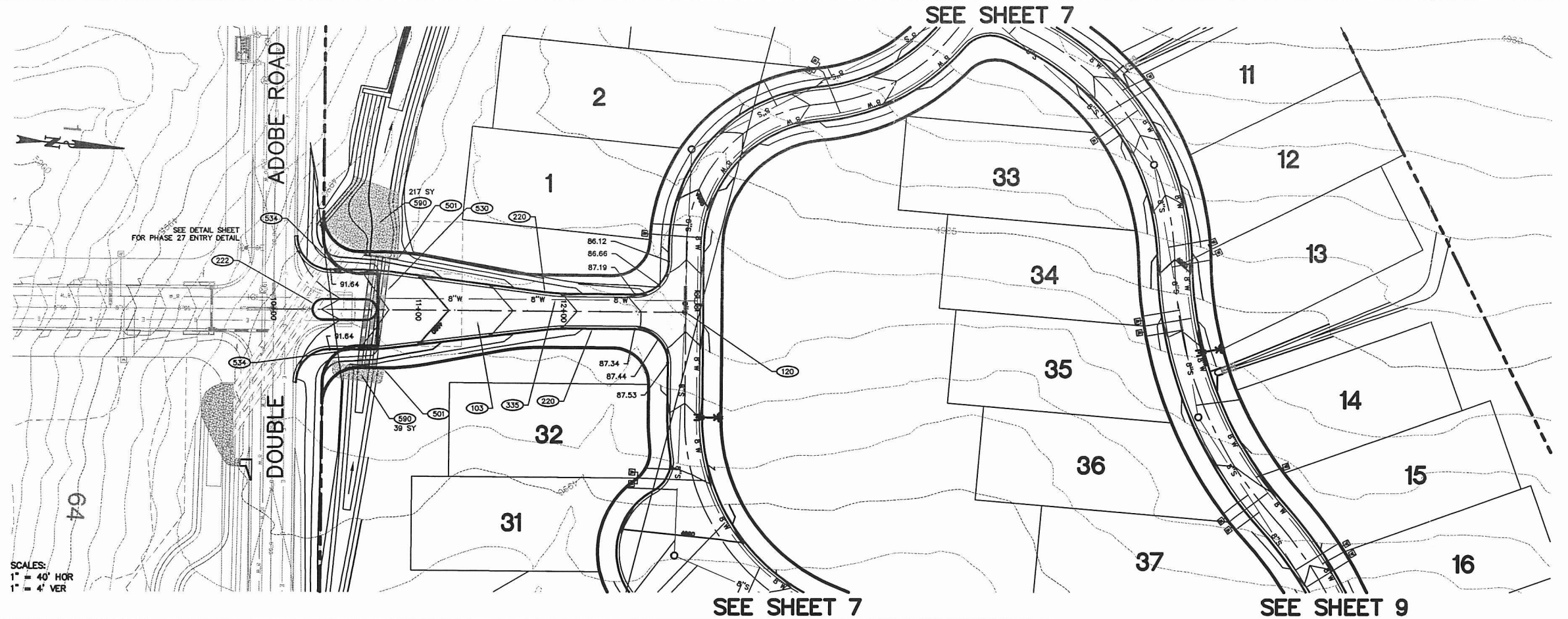
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TALKING ROCK PHASE 27	YAVAPAI COUNTY ARIZONA	SHEET 1 OF 14
COVER SHEET		

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KEYNOTES

- (101) (1 L.S.) CLEAR AND GRUB WITHIN GRADING LIMITS
 - (102) EARTHWORK: EXCAVATION (CUT = 55 C.Y.)
EMBANKMENT (FILL = 894 C.Y.)
 - (103) (1,037 S.Y.) CONSTRUCT ASPHALT PAVEMENT AND SUBGRADE PER
TYPICAL ROADWAY SECTION SHOWN ON DETAIL SHEET
 - (120) (1 EA.) CENTERLINE STREET MONUMENTS PER M.A.G. STD. DTL. 120-1
TYPE B.
 - (220) (458 LF.) CONSTRUCT TYPE "C" CURB & GUTTER (ROLL CURB) PER
M.A.G. DTL. 220.
 - (222) (104 LF.) CONSTRUCT TYPE "A" SINGLE CURB PER M.A.G. DTL. 222.
 - (335) (218 LF.) INSTALL 8" WATER LINE (C-900/CL 200 PVC) COMPLETE
INCLUDING ALL APPURTENANCES PER M.A.G. STD. 610. TRENCHING
AND BACKFILL PER Y.A.G. STD. 601.
 - (501) (2 EA.) CONSTRUCT HEADWALL (STRAIGHT TYPE) IN ACCORDANCE WITH
M.A.G. STD. DTL. 501. AFFIX HANDRAIL ATOP WALL FULL LENGTH PER
OWNER IN ACCORDANCE WITH IBC AND ADA REQUIREMENTS.
STA 10+73.61 OFFSET 36.94' LT
TOP WALL EL.=4991.33'
STA 10+64.70 OFFSET 39.67' RT
TOP WALL EL.=4990.00'
 - (530) (3678'-228' LF.) INSTALL 3-36" DIA ALLUMINIZED CMP (14 GA.
HELICAL 2-2/3"x1/2"). PER M.A.G. STD. DTL. 510.
INLET INV. = 4985.50'
OUTLET INV. = 4984.50'
 - (534) (2 EA.) INSTALL CATCH BASIN TYPE 'E' PER M.A.G. STD. DETAIL
534.
- STA. 10+61.08, OFFSET 27.5' RT, TOP BOC ELEV. 4991.35
- STA. 10+44.00, OFFSET 27.5' LT, TOP BOC ELEV. 4991.74
 - (590) (256 S.Y.) CONSTRUCT RIP RAP SCOUR PROTECTION, D50 = 6",
12" THICK WITH FILTER FABRIC. SEE DETAIL SHEET.
- NOTE: SPOT ELEVATION LABELS ON THIS SHEET ARE TO THE TOP
BACK OF CURB



CALL TWO WORKING DAYS
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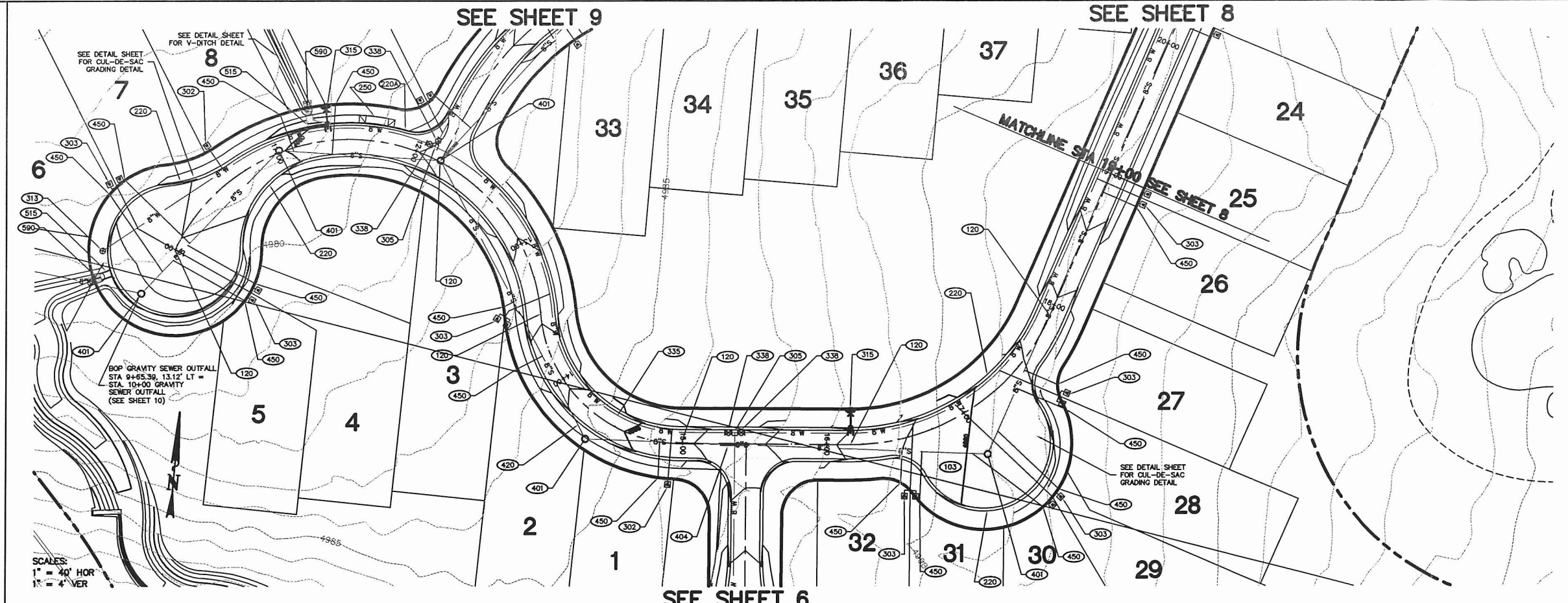
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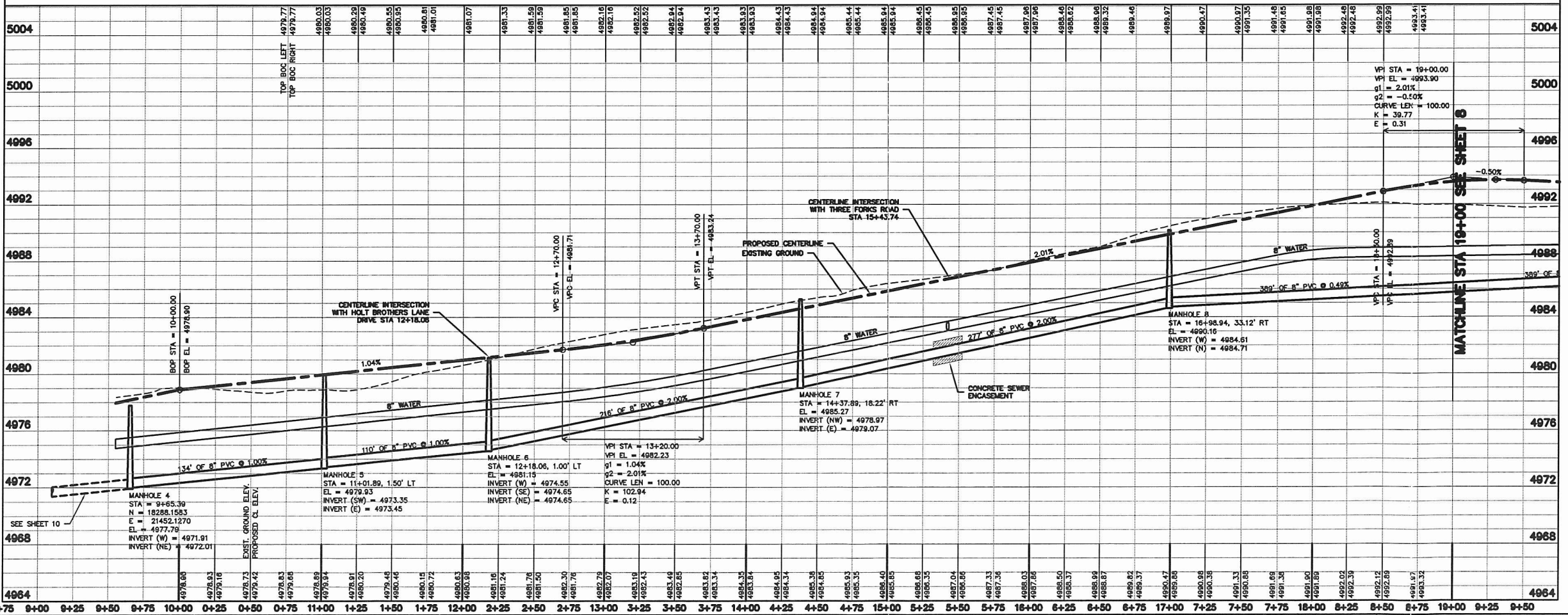
TALKING ROCK PHASE 27
 YAVAPAI COUNTY ARIZONA
**THREE FORKS ROAD
 PLAN AND PROFILE**
 STA. 10+00 (BOP) TO 12+84 (EOP)

SHEET
6
 OF 14

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- ### KEYNOTES
- (101) (1 L.S.) CLEAR AND GRUB WITHIN GRADING LIMITS
 - (102) EARTHWORK: EXCAVATION (CUT = 1,308 C.Y.)
EMBANKMENT (FILL = 136 C.Y.)
 - (103) (3,234 S.Y.) CONSTRUCT ASPHALT PAVEMENT AND SUBGRADE PER TYPICAL ROADWAY SECTION SHOWN ON DETAIL SHEET
 - (120) (6 EA.) CENTERLINE STREET MONUMENTS PER M.A.G. STD. DTL. 120-1 TYPE B.
 - (220) (1,981 L.F.) CONSTRUCT TYPE "C" CURB & GUTTER (ROLL CURB) PER M.A.G. STD. DTL. 220.
 - (220A) (57 L.F.) CONSTRUCT VERTICAL CURB & GUTTER PER M.A.G. DTL. 220, TYPE "A" FROM SPILLWAY TO END OF CURB RETURN.
 - (250) (1 EA.) CONSTRUCT DRIVEWAY ENTRANCE WITH WIDTH = 16' PER MAG STD. DETAIL 250, STA. 11+69.36 LT.
 - (302) (2 EA.) INSTALL 1" DIA. SINGLE WATER SERVICE CONNECTION PER YAG STD. DETAIL 3-16.
 - (303) (7 EA.) INSTALL 1" DIA. TANDEN WATER SERVICE CONNECTION PER YAG STD. DETAIL 3-16.
 - (305) (2 EA.) INSTALL 8"x8" TEE WITH THRUST BLOCK PER M.A.G. STD. DTL. 380.
 - (313) (1 EA.) INSTALL END OF LINE BLOW-OFF VALVE PER YAG STD. DETAIL 3-18 (N 18315.6637 E 21422.6484)
 - (315) (2 EA.) INSTALL FIRE HYDRANT ASSEMBLY IN ACCORDANCE WITH M.A.G. STD. DTL. 360. (COMPLETE INCLUDING FLANGED TEE, VALVE, PIPING AND ALL APPURTENANCES) SET NEW VALVE, VALVE BOX & COVER TO FINISH GRADE PER M.A.G. DTL. 391-1 & 391-2, STA 11+38.00 LT, STA 16+16.00 LT. SEE DETAIL SHEET FOR OFFSET LOCATION.
 - (335) (933 L.F.) INSTALL 8" WATER LINE (C-900/CL 200 PVC) COMPLETE INCLUDING ALL APPURTENANCES PER M.A.G. STD. 610. TRENCHING AND BACKFILL PER Y.A.G. STD. 601.
 - (338) (4 EA.) INSTALL 8" GATE VALVE (INCLUDING VALVE BOX AND COVER) PER M.A.G. STD. DTL. 340 AND M.A.G. STD. 610 ADJUST BOX TO FINISH GRADE PER M.A.G. STD. DTL. 391-1 & 2. THRUST BLOCK PER M.A.G. STD. DTL. 301.
 - (401) (5 EA.) INSTALL 48" DIA. SEWER PRE-CAST MANHOLE PER M.A.G. STD. DTL. 420 AND FRAME & COVER PER M.A.G. STD. DTL. 424
 - (404) (1 EA.) ENCASE SEWERLINE PER MAG STD. DTL. 404
 - (420) (947 L.F.) INSTALL 8" GRAVITY SEWER LINE (SDR-35 PVC) COMPLETE INCLUDING ALL APPURTENANCES PER M.A.G. STD. 615. TRENCHING & BACKFILL PER M.A.G. STD. 601.
 - (450) (16 EA.) INSTALL 4" DIA. SEWER LATERAL CONNECTION PER M.A.G. STD. DTL. 440.
 - (515) (2 EA.) CONSTRUCT OVERFLOW SPILLWAY PER M.A.G. STD. DTL. 550. STA=11+26.65 LT. SEE DETAIL SHEET FOR CUL-DE-SAC SPILLWAY LOCATION.
 - (590) (12 S.Y.) CONSTRUCT RIP RAP SCOUR PROTECTION, D50 = 6", 12" THICK WITH FILTER FABRIC. SEE DETAIL SHEET.



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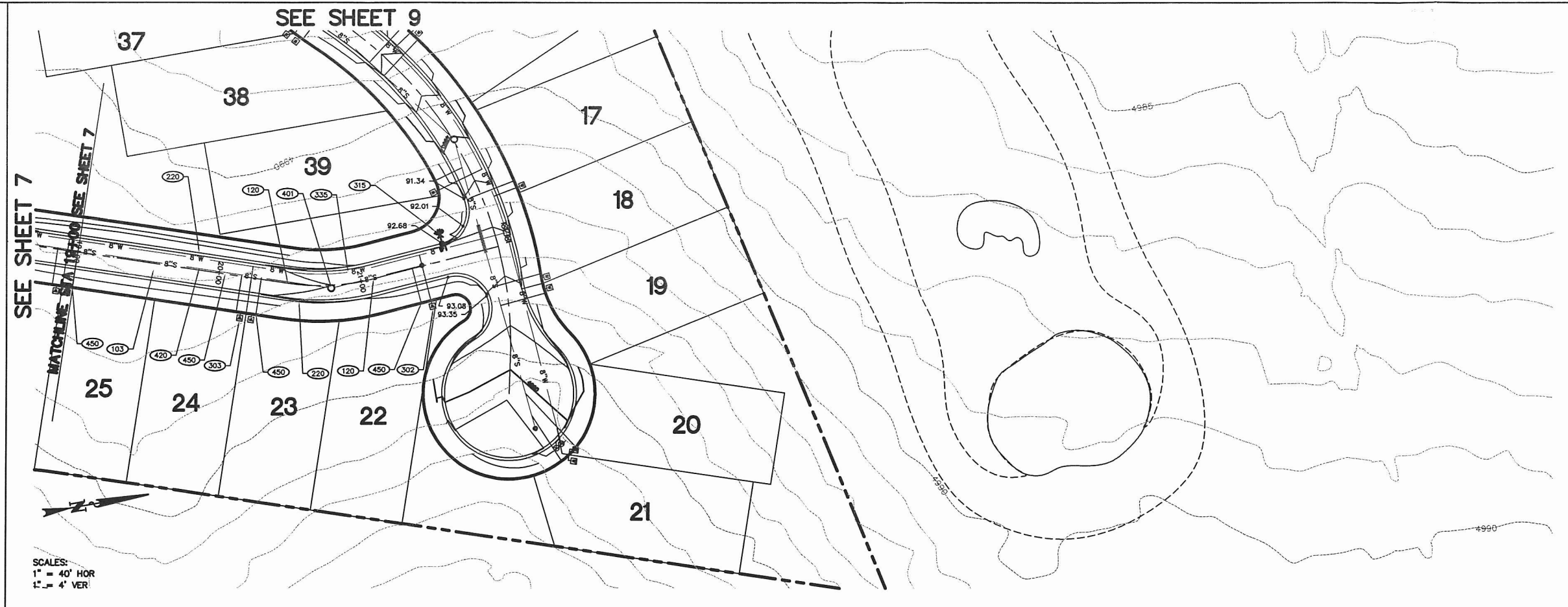
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TALKING ROCK PHASE 27
JOHNNY MULLINS DRIVE
PLAN AND PROFILE
STA. 10+00 (BOP) TO 19+00
YAVAPAI COUNTY
ARIZONA

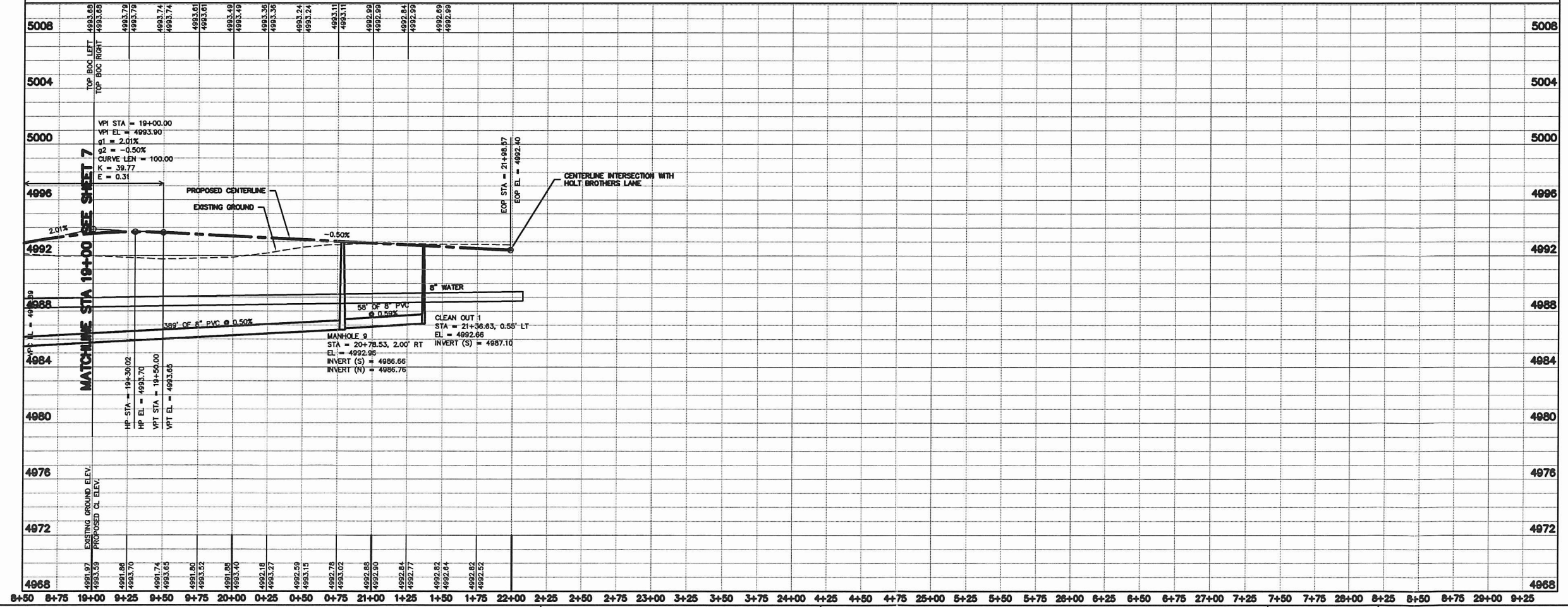
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KEYNOTES

- (101) (1 L.S.) CLEAR AND GRUB WITHIN GRADING LIMITS
 - (102) EARTHWORK: EXCAVATION (OUT = 117 C.Y.)
EMBANKMENT (FILL = 198 C.Y.)
 - (103) (676 S.Y.) CONSTRUCT ASPHALT PAVEMENT AND SUBGRADE PER TYPICAL ROADWAY SECTION SHOWN ON DETAIL SHEET
 - (120) (2 EA.) CENTERLINE STREET MONUMENTS PER M.A.G. STD. DTL. 120-1 TYPE B.
 - (220) (556 L.F.) CONSTRUCT TYPE "C" CURB & GUTTER (ROLL CURB) PER M.A.G. DTL. 220.
 - (302) (1 EA.) INSTALL 1" DIA. SINGLE WATER SERVICE CONNECTION PER YAG STD. DETAIL 3-16.
 - (303) (1 EA.) INSTALL 1" DIA. TANDEM WATER SERVICE CONNECTION PER YAG STD. DETAIL 3-16.
 - (315) (1 EA.) INSTALL FIRE HYDRANT ASSEMBLY IN ACCORDANCE WITH M.A.G. STD. DTL. 360. (COMPLETE INCLUDING FLANGED TEE, VALVE, PIPING AND ALL APPURTENANCES) SET NEW VALVE, VALVE BOX & COVER TO FINISH GRADE PER M.A.G. DTL. 391-1 & 391-2. STA 21+61 LT. SEE DETAIL SHEET FOR OFFSET LOCATION.
 - (335) (304 L.F.) INSTALL 8" WATER LINE (C-900/CL. 200 PVC) COMPLETE INCLUDING ALL APPURTENANCES PER M.A.G. STD. 610. TRENCHING AND BACKFILL PER Y.A.G. STD. 601.
 - (401) (1 EA.) INSTALL 48" DIA. SEWER PRE-CAST MANHOLE PER M.A.G. STD. DTL. 420 AND FRAME & COVER PER M.A.G. STD. DTL. 424
 - (420) (235 L.F.) INSTALL 8" GRAVITY SEWER LINE (SDR-35 PVC) COMPLETE INCLUDING ALL APPURTENANCES PER M.A.G. STD. 615. TRENCHING & BACKFILL PER M.A.G. STD. 601.
 - (450) (4 EA.) INSTALL 4" DIA. SEWER LATERAL CONNECTION PER M.A.G. STD. DTL. 440.
- NOTE: SPOT ELEVATION LABELS ON THIS SHEET ARE TO THE TOP BACK OF CURB

SCALES:
1" = 40' HOR
1" = 4' VER



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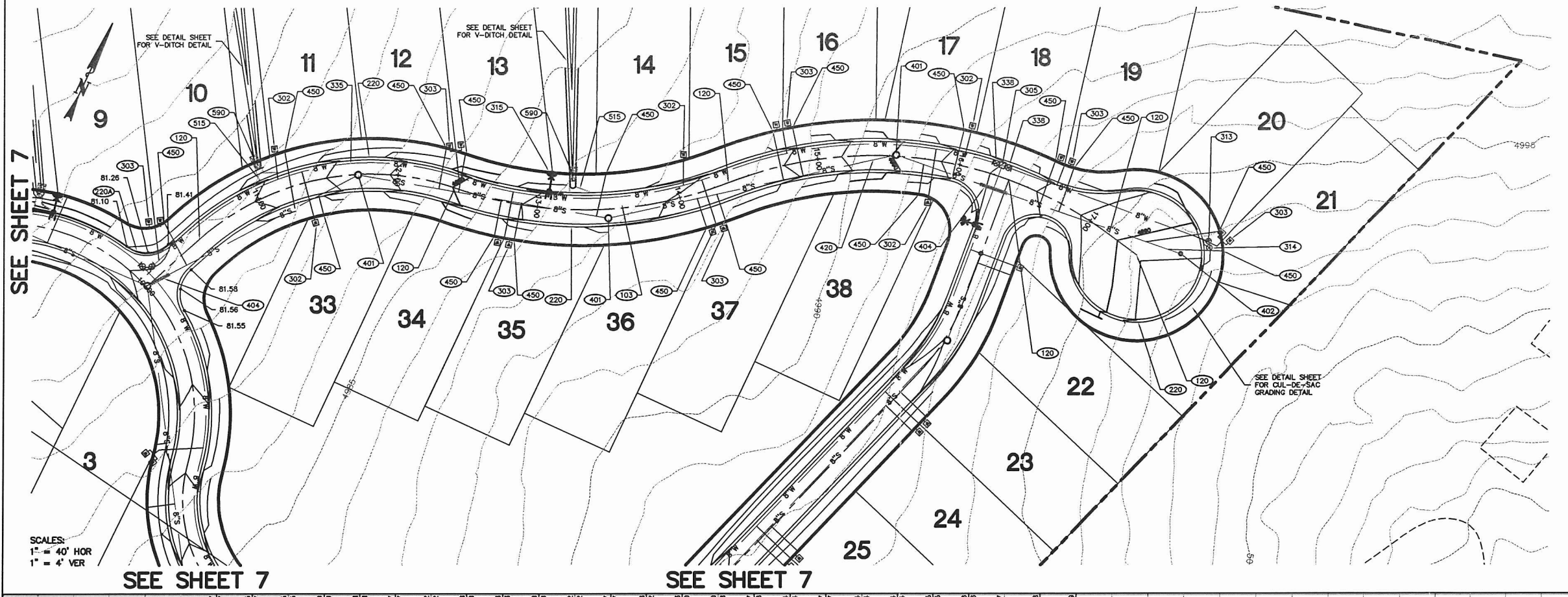
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TALKING ROCK PHASE 27
JOHNNY MULLINS DRIVE
PLAN AND PROFILE
STA. 19+00 TO 21+98.57 (EOP)

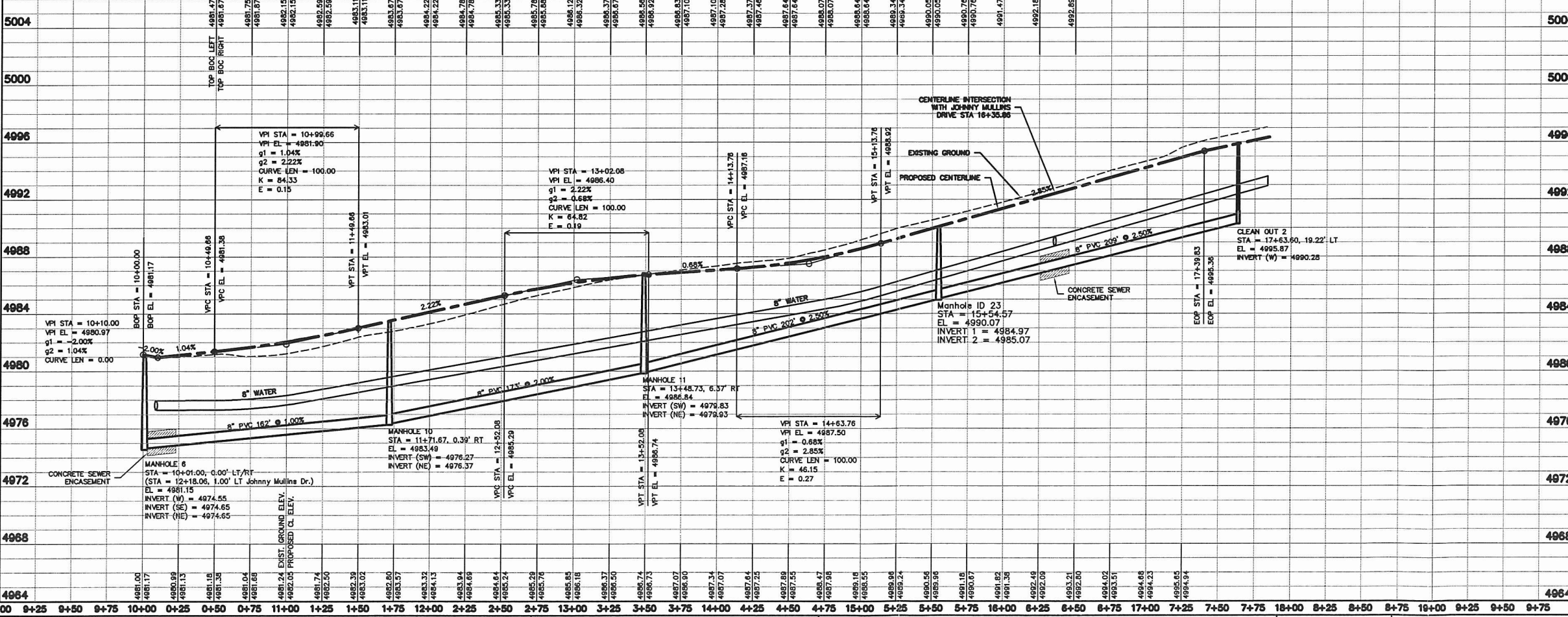
YAVAPAI COUNTY
ARIZONA



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- ### KEYNOTES
- 101 (1 L.S.) CLEAR AND GRUB WITHIN GRADING LIMITS
 - 102 EARTHWORK: EXCAVATION (CUT = 767 C.Y.) EMBANKMENT (FILL = 79 C.Y.)
 - 103 (2,287 S.Y.) CONSTRUCT ASPHALT PAVEMENT AND SUBGRADE PER TYPICAL ROADWAY SECTION SHOWN ON DETAIL SHEET
 - 120 (6 EA.) CENTERLINE STREET MONUMENTS PER M.A.G. STD. DTL 120-1 TYPE B.
 - 220 (1,559 L.F.) CONSTRUCT TYPE "C" CURB & GUTTER (ROLL CURB) PER M.A.G. DTL 220.
 - 220A (24 L.F.) CONSTRUCT VERTICAL CURB & GUTTER PER M.A.G. DTL 220, TYPE "A" FROM STA 10+31.34 LT TO END OF CURB RETURN WITH JOHNNY MULLINS DRIVE.
 - 302 (5 EA.) INSTALL 1" DIA. SINGLE WATER SERVICE CONNECTION PER YAG. STD. DETAIL 3-16.
 - 303 (7 EA.) INSTALL 1" DIA. TANDUM WATER SERVICE CONNECTION PER YAG. STD. DETAIL 3-16.
 - 305 (1 EA.) INSTALL 8"x8" TEE WITH THRUST BLOCK PER M.A.G. STD. DTL 360.
 - 313 (1 EA.) INSTALL END OF LINE BLOW-OFF VALVE PER YAG. STD. DTL 3-16, (N = 18739.6949 E = 22309.8675)
 - 314 (1 EA.) INSTALL AIR RELEASE VALVE PER DETAIL SHEET (N = 18735.8003 E = 22312.3287).
 - 315 (1 EA.) INSTALL FIRE HYDRANT ASSEMBLY IN ACCORDANCE WITH M.A.G. STD. DTL 360. (COMPLETE INCLUDING FLANGED TEE, VALVE, PIPING AND ALL APPURTENANCES) SET NEW VALVE, VALVE BOX & COVER TO FINISH GRADE PER M.A.G. STD. DTL 391-1 & 391-2. STA. 13+07.00 LT. SEE DETAIL SHEET FOR OFFSET LOCATION.
 - 335 (752 L.F.) INSTALL 8" WATER LINE (C-900/CL 200 PVC) COMPLETE INCLUDING ALL APPURTENANCES PER M.A.G. STD. 610. TRENCHING AND BACKFILL PER Y.A.G. STD. 601.
 - 336 (2 EA.) INSTALL 8" GATE VALVE (INCLUDING VALVE BOX AND COVER) PER M.A.G. STD. DTL 340 AND M.A.G. STD. 610 ADJUST BOX TO FINISH GRADE PER M.A.G. STD. DTL 391-1 & 2. THRUST BLOCK PER M.A.G. STD. DTL 301.
 - 401 (3 EA.) INSTALL 48" DIA. SEWER PRE-CAST MANHOLE PER M.A.G. STD. DTL 420 AND FRAME & COVER PER M.A.G. STD. DTL 424
 - 402 (1 EA.) INSTALL SEWER CLEANOUT PER Y.A.G. STD. DTL 4-13
 - 404 (2 EA.) ENCASE SEWERLINE PER M.A.G. STD. DTL 404
 - 420 (746 L.F.) INSTALL 8" GRADITY SEWER LINE (SDR-35 PVC) COMPLETE INCLUDING ALL APPURTENANCES PER M.A.G. STD. 615. TRENCHING & BACKFILL PER M.A.G. STD. 601.
 - 450 (18 EA.) INSTALL 4" DIA. SEWER LATERAL CONNECTION PER M.A.G. STD. DTL 440.
 - 515 (2 EA.) CONSTRUCT OVERFLOW SPILLWAY PER M.A.G. STD. DTL 550. STA=11+07.57 LT, STA. 13+23.81 LT
 - 590 (12 S.Y.) CONSTRUCT RIP RAP SCOUR PROTECTION, D50 = 6", 12" THICK WITH FILTER FABRIC. SEE DETAIL SHEET.
- NOTE: SPOT ELEVATION LABELS ON THIS SHEET ARE TO THE TOP BACK OF CURB



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YAVAPAI COUNTY
 ARIZONA

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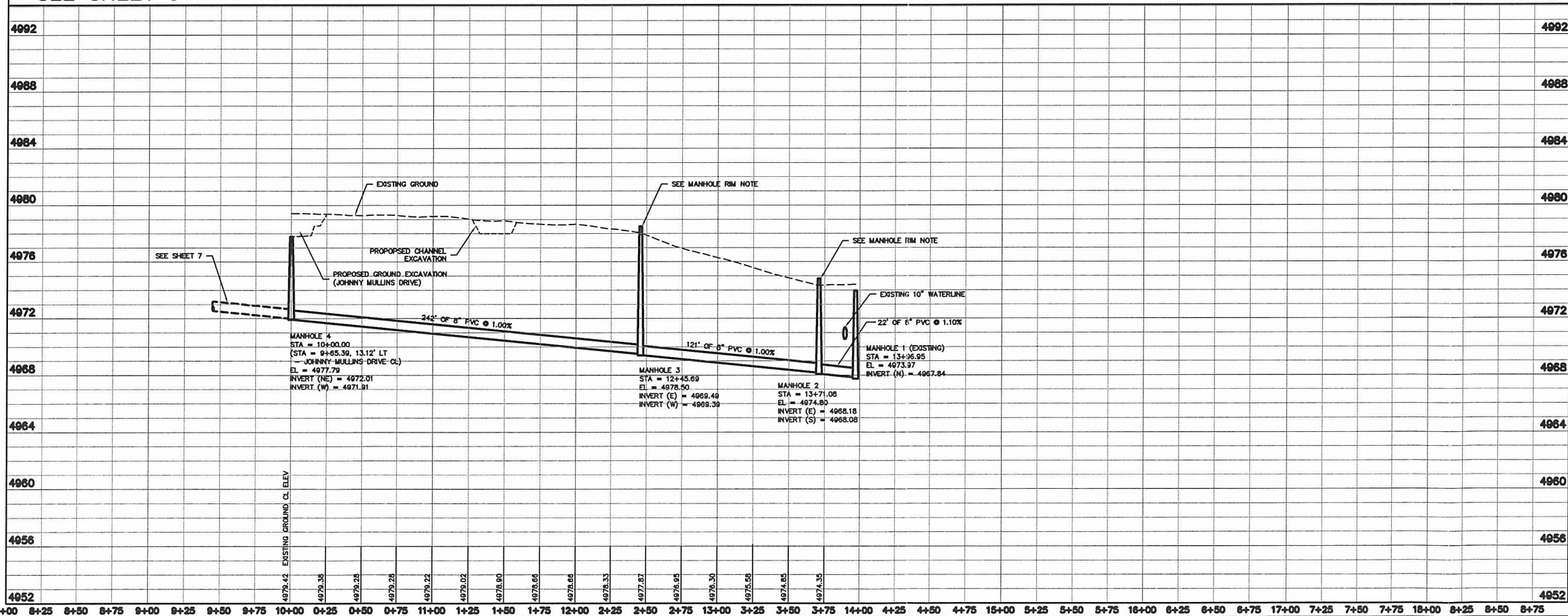
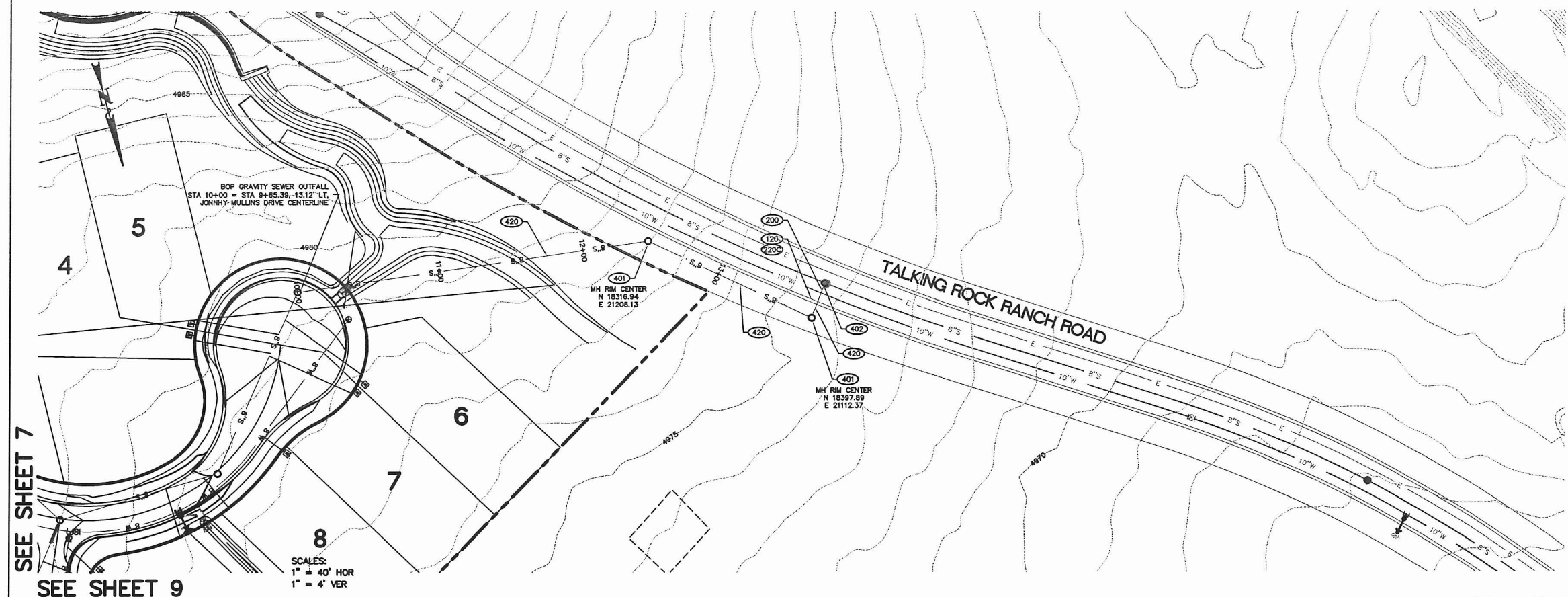
KEYNOTES

- (120) (20 L.F.) REMOVE CONCRETE CURB AND GUTTER.
- (200) (12 L.F.) SAWCUT, BACKFILL, PAVEMENT AND SURFACE REPLACEMENT PER DETAIL SHEET.
- (220) (20 L.F.) INSTALL CURB AND GUTTER, TYPE C, PER MAG STD. DTL. 220.
- (401) (2 EA.) INSTALL 48" DIA. SEWER PRE-CAST MANHOLE PER M.A.G. STD. DTL. 420 AND FRAME & COVER PER M.A.G. STD. DTL. 424
- (402) (1 E.A. NON-PAY ITEM) RECONSTRUCT NEW INVERTS IN MANHOLE BASE TO ACCOMMODATE NEW LINE.
- (420) (385 L.F.) INSTALL 8" GRAVITY SEWER LINE (SDR-35 PVC) COMPLETE INCLUDING ALL APPURTENANCES PER M.A.G. STD. 615. TRENCHING & BACKFILL PER M.A.G. STD. 601.

MANHOLE RIM NOTE:
 WHERE NOTED ON PROFILE, THE DESIGN RIM ELEVATIONS WERE BASED ON EXISTING TOPOGRAPHY. CONTRACTOR TO SET FINISHED RIM ELEVATION TO 0.5' ABOVE EXISTING GRADE, REGARDLESS OF DESIGN ELEVATION.

GENERAL REMOVAL NOTES

1. ALL REMOVALS OF EXISTING HARD SURFACES (PAVEMENT, CONCRETE, ETC.) SHALL INCLUDE A NEAT SAW-CUT EDGE OR REMOVAL TO THE NEAREST JOINT AS DIRECTED BY THE ENGINEER.
2. THE EXISTING SHOULDER SHALL BE REPLACED FULL WIDTH AND COMPACTED TO 95% STANDARD PROCTOR DENSITY FOLLOWING THE TRENCH CONSTRUCTION.
3. ALL EXISTING IMPROVEMENTS TO BE REMOVED SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
4. EXISTING UTILITIES, NOT REQUIRING REMOVAL OR RELOCATION FOR NEW CONSTRUCTION, SHALL REMAIN UNDISTURBED AND ACTIVE.
5. THE CONTRACTOR SHALL AVOID DAMAGING EXISTING FENCES, LANDSCAPING, OR OTHER IMPROVEMENTS ADJUTING THE REMOVAL LIMITS. ANY EXISTING IMPROVEMENTS DAMAGED BY THE CONTRACTOR, AND INTENDED TO REMAIN, SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
6. THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ABANDONMENT OR RELOCATION OF ANY UTILITIES WITH TALKING ROCK TO MINIMIZE SERVICE INTERRUPTIONS. THIS IS CRITICAL TO THE OPERATION OF THE SUBDIVISION AND ASSOCIATED OPERATIONS.
7. REMOVAL NECESSITATED BY THE WORK AS IT PROGRESSES AND NOT SPECIFICALLY CALLED OUT ON THE PLANS WILL BE CONSIDERED INCIDENTAL WORK.
8. ALL REMOVAL ITEMS NOT SPECIFICALLY DESIGNATED FOR STOCKPILING OR OTHER USES SHALL BE DEEMED TO BE SURPLUS MATERIAL AND DISPOSED OF IN ACCORDANCE WITH MAG SPECIFICATIONS.



CALL TWO WORKING DAYS BEFORE YOU DIG
 1-800-STAKE-IT

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SHEPHARD - WESNITZER, INC.
 CIVIL ENGINEERING AND SURVEYING
 221 N. MARINA ST., SUITE 102, PRESCOTT, AZ 86301
 (928) 541-0443

JOB NO: 03350
 DATE: DEC 2003
 SCALE: AS SHOWN
 DRAWN: MWS/BBH
 DESIGN: MWS/BBH
 CHECKED: RA/DMB

TALKING ROCK PHASE 27
**GRAVITY SEWER OUTFALL
 PLAN AND PROFILE**
 STA. 10+00 (BOP) TO 13+96.95 (EOP)

YAVAPAI COUNTY
 ARIZONA
 SHEET
10
 OF 14