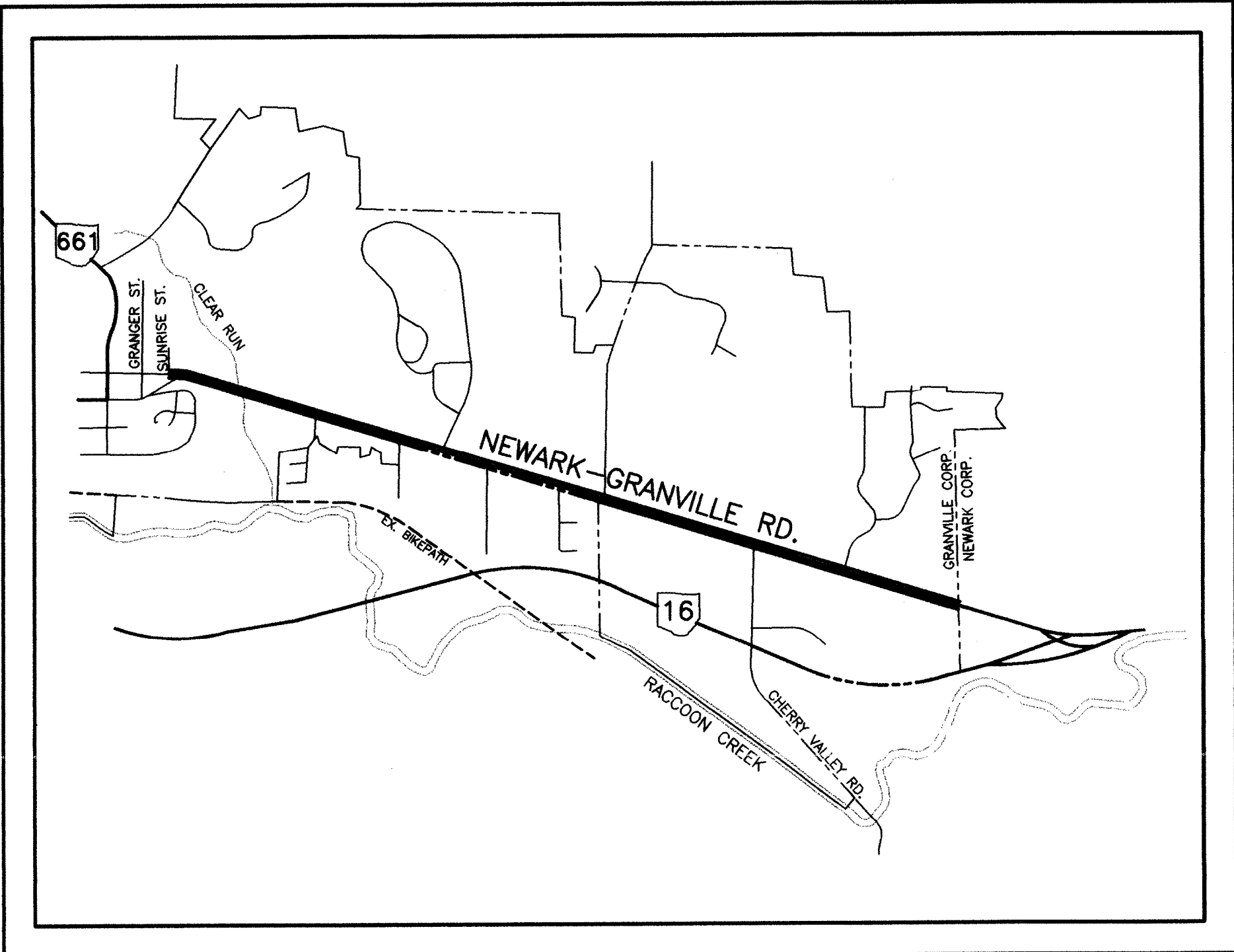
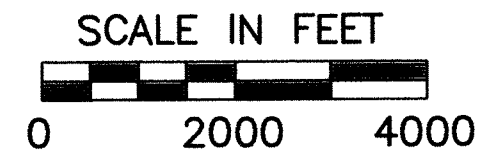


STATE OF OHIO,
DEPARTMENT OF TRANSPORTATION
LIC-CR539-5.24
(NEWARK-GRANVILLE ROAD)
VILLAGE OF GRANVILLE
LICKING COUNTY



LOCATION MAP



PORTION TO BE IMPROVED _____
STATE & FEDERAL ROUTES _____
OTHER ROADS _____

DESIGN FUNCTIONAL CLASSIFICATION -
COLLECTOR (RURAL/URBAN)

DESIGN DESIGNATION

CURRENT YEAR, ADT (1996) 5028
DESIGN YEAR, ADT (2016) 10700
D 55%
T 2%
V 35 MPH
LEGAL SPEED 35 MPH

DESIGN EXCEPTIONS

NONE



PLANS PREPARED BY:

C.F. BIRD & R.J. BULL, INC.
2875 W. Dublin-Granville Road
Columbus, Ohio 43235
(614)761-1661

INDEX OF SHEETS

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SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS					
ODOT					
BP-2.1	10-28-94	MH-4	2-21-92	TC-41.20	6-21-94
BP-2.2	10-28-94	MC-11	8-1-78	TC-41.40	6-18-79
BP-3.1	2-21-92	LIC-13-6.23		TC-42.20	3-26-79
BP-5.1	10-28-94	LA-1	6-1-79	TC-52.10	4-3-79
BP-7.1	10-30-92	LA-2	6-1-79	TC-52.20	4-3-79
GR-1.1	5-6-91	I-1	12-18-84	TC-65.10	4-5-82
GR-1.2	10-30-92	I-2	12-18-84	MT-97.10	4-29-88
GR-1.3	2-21-92				
GR-2.1	5-6-91			MT-97.11	10-4-89
GR-4.1	5-6-91			MT-105.10	7-1-92
CB-2-2-B	5-1-79			MT-105.11	7-1-92
CB-2-3	5-1-79				
CB-2-4	5-1-79				
CB-2-5	5-1-79				
MH-1	12-18-84				
MH-3	12-18-84				

PROJECT DESCRIPTION
IMPROVEMENTS TO NEWARK-GRANVILLE ROAD IN THE VILLAGE OF GRANVILLE, BY RESURFACING THE ROADWAY, BUILDING SHOULDERS AND CONSTRUCTING A BIKEPATH.

1995 SPECIFICATIONS
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION AND THE VILLAGE OF GRANVILLE SHALL GOVERN THESE IMPROVEMENTS ALONG WITH ALL SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL.

I HEREBY APPROVE THESE PLANS THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THESE PLANS AND ESTIMATES.

APPROVALS
VILLAGE MANAGER, VILLAGE OF GRANVILLE
DISTRICT DEPUTY DIRECTOR

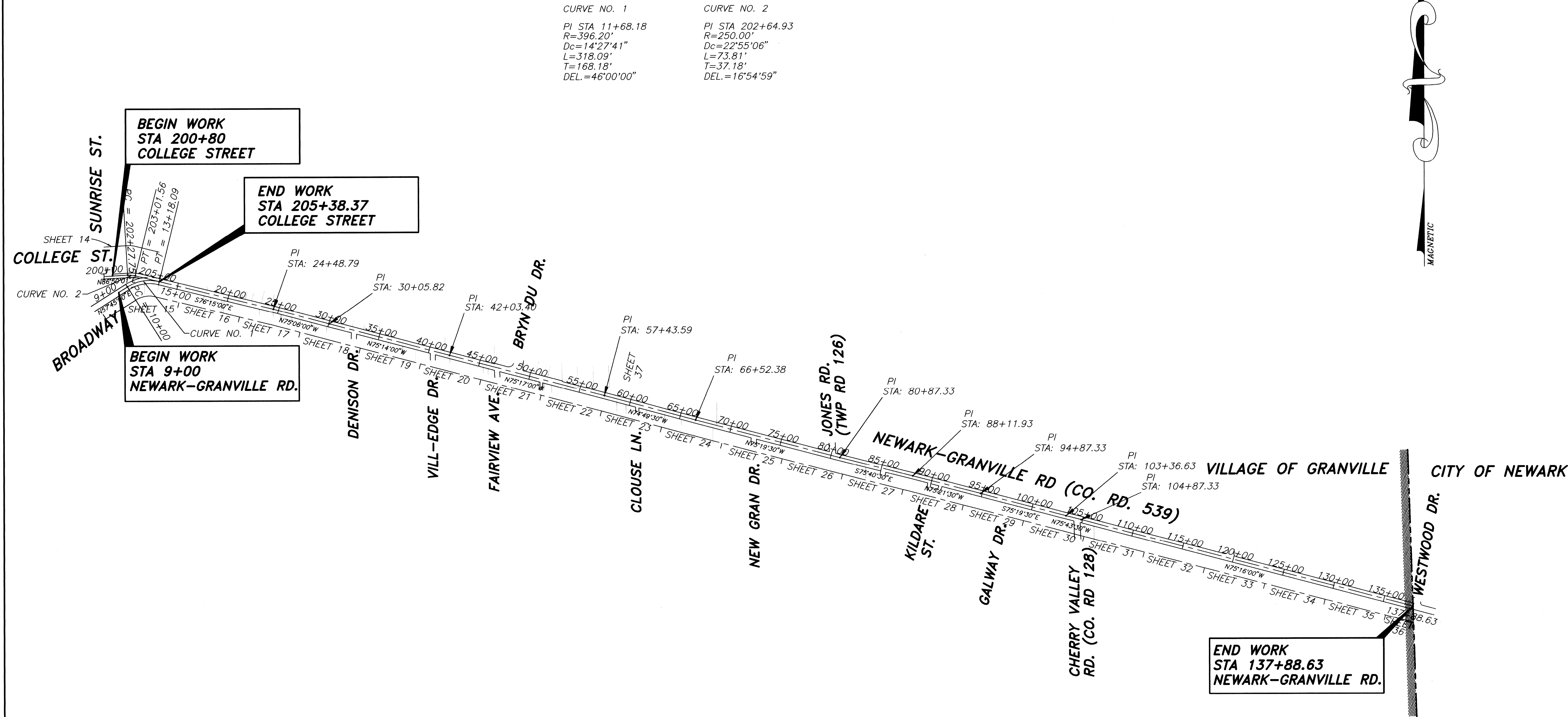
DIRECTOR, DEPARTMENT OF TRANSPORTATION

Notes: Topographic information shown on this plan is based on a survey provided by Curry Willis & Grove, Inc.
ALL offsets are from the centerline unless otherwise noted.

FEDERAL PROJECT NO. STP	PID NO. 15260	CONST. PROJECT NO.	RAILROAD INVOLVEMENT NONE	LIC-CR539-5.24
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H:\V005\JMC\96-154\NOTES\TILEDWG C.F. Bird & R.J. Bull, Inc.

SCHEMATIC PLAN



500
250
0
500

VERTICAL
SCALE IN FEET

CALC
BY: TDW

CHKD
BY: JLK

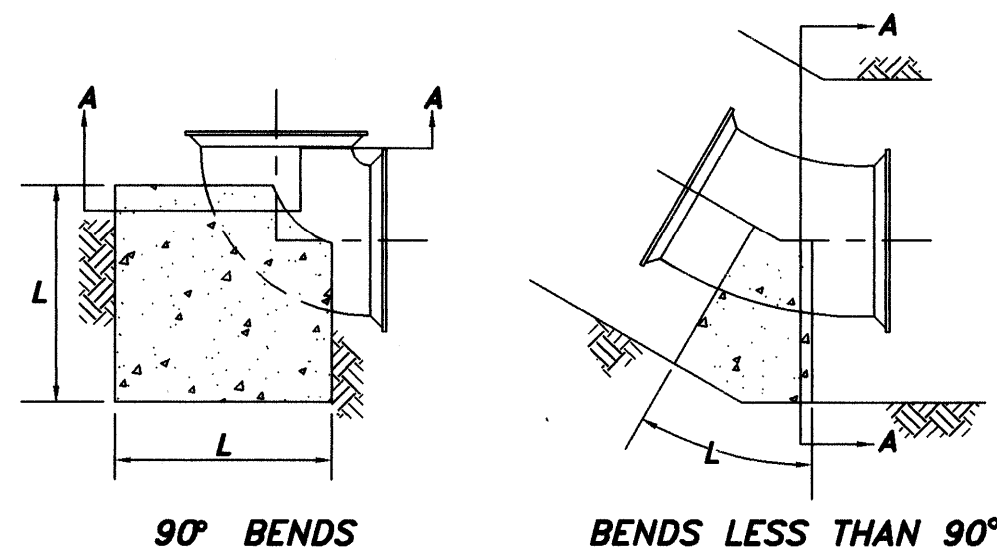
SCHEMATIC PLAN

LIC: 08539-5-24
NEWARK-GRANVILLE RD.
VILLAGE OF GRANVILLE

2
97

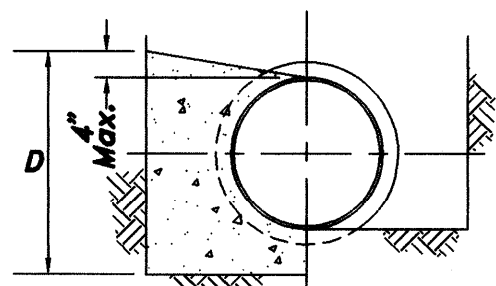
BACKING FOR BENDS HORIZONTAL AND VERTICAL SAG									
SIZE OF PIPE	11-1/2"	12"	14"	16"	18"	20"	22"	24"	26"
DEGREE OF BEND	1"	2"	3"	4"	5"	6"	7"	8"	9"
1"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
4"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
5"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
6"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
7"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
8"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
9"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

NOTE: 1. BACKER DESIGNED FOR 3000 PSF SOIL BEARING.
2. CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH.

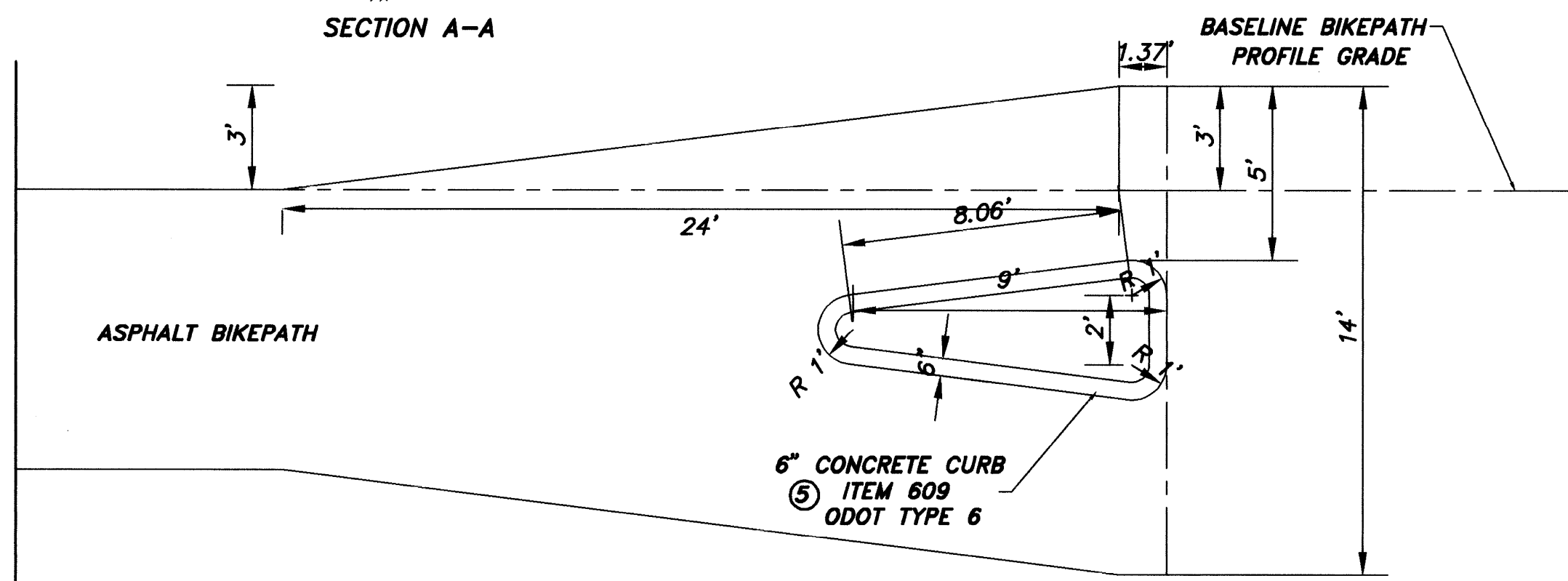


90° BENDS

BENDS LESS THAN 90°

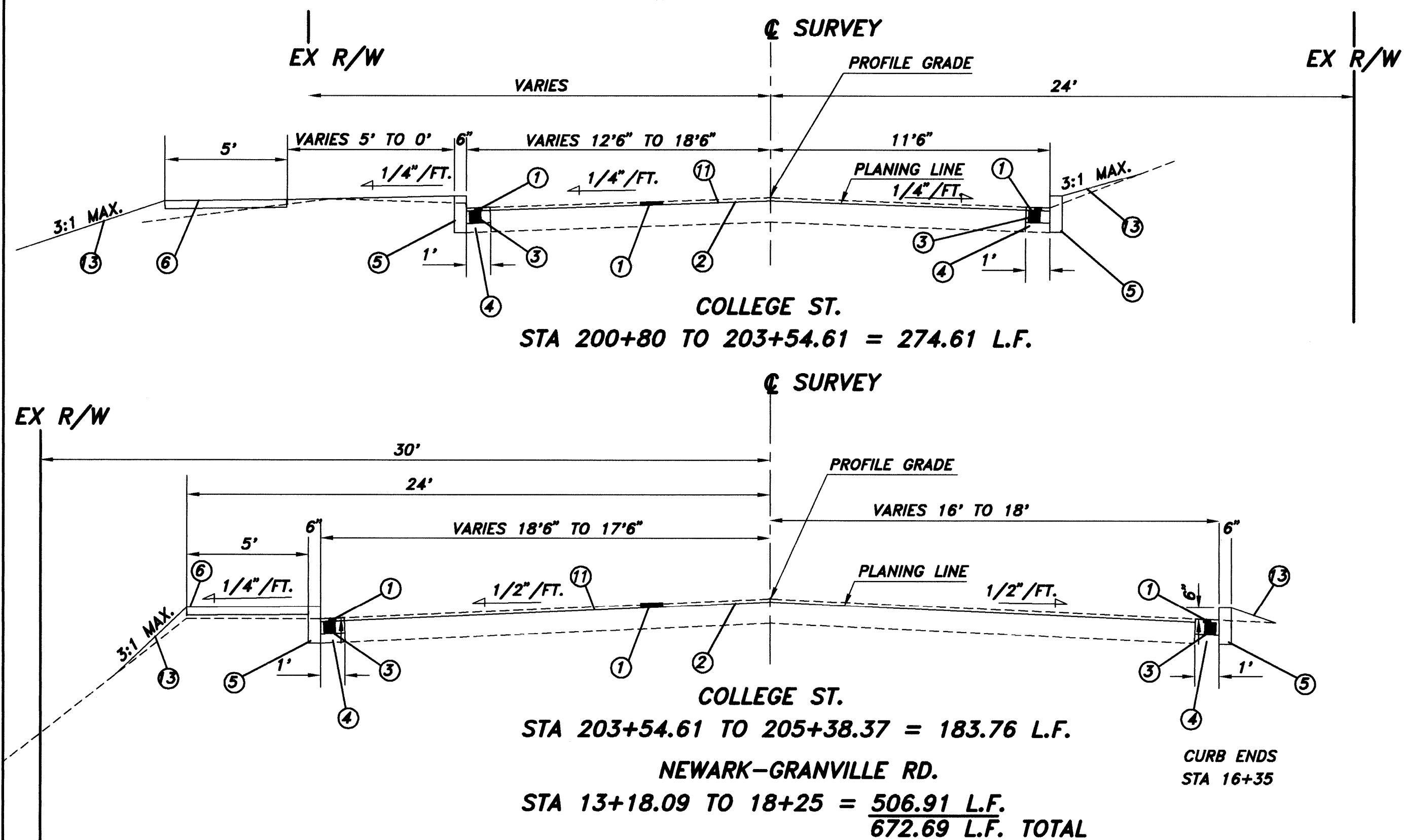


SECTION A-A



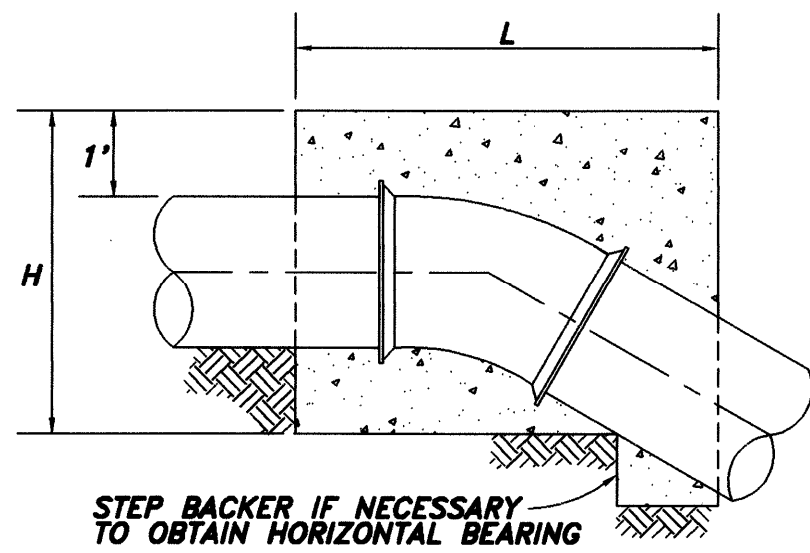
BIKEPATH INTERSECTION DETAIL (SEE SHEETS 26 & 33)

SCALE 1" = 1'

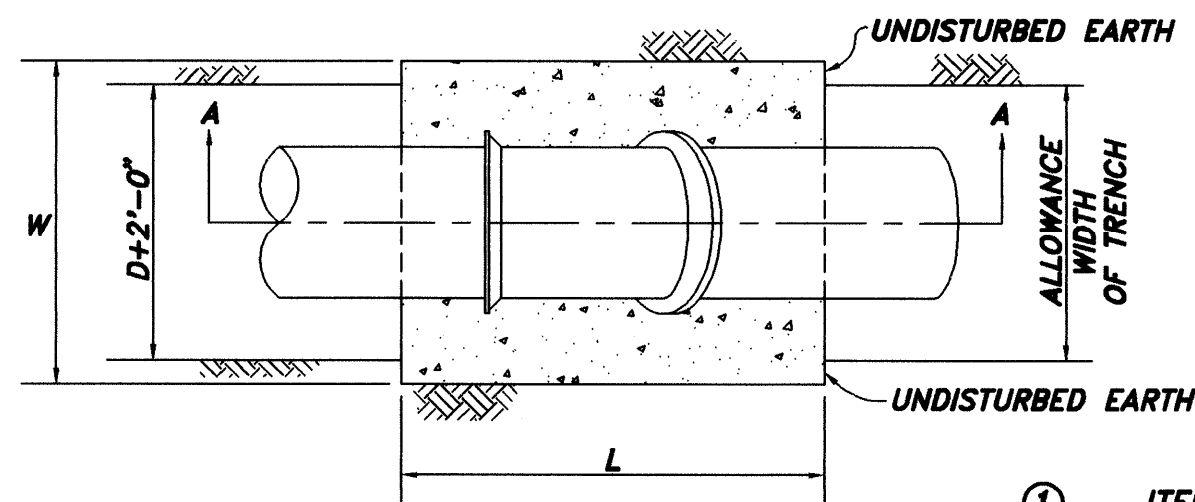


(OVER BENDS ONLY) BACKING FOR VERTICAL BENDS									
SIZE OF PIPE	11-1/2"	12"	14"	16"	18"	20"	22"	24"	26"
DEGREE OF BEND	1"	2"	3"	4"	5"	6"	7"	8"	9"
1"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
4"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
5"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
6"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
7"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
8"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
9"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

NOTE: 1. VOLUMES GIVEN IN CUBIC FEET.
2. BACKER TO BE CENTERED HORIZONTALLY ON BEND.
3. STEEL WILL BE USED AS REQUIRED BY THE ENGINEER.

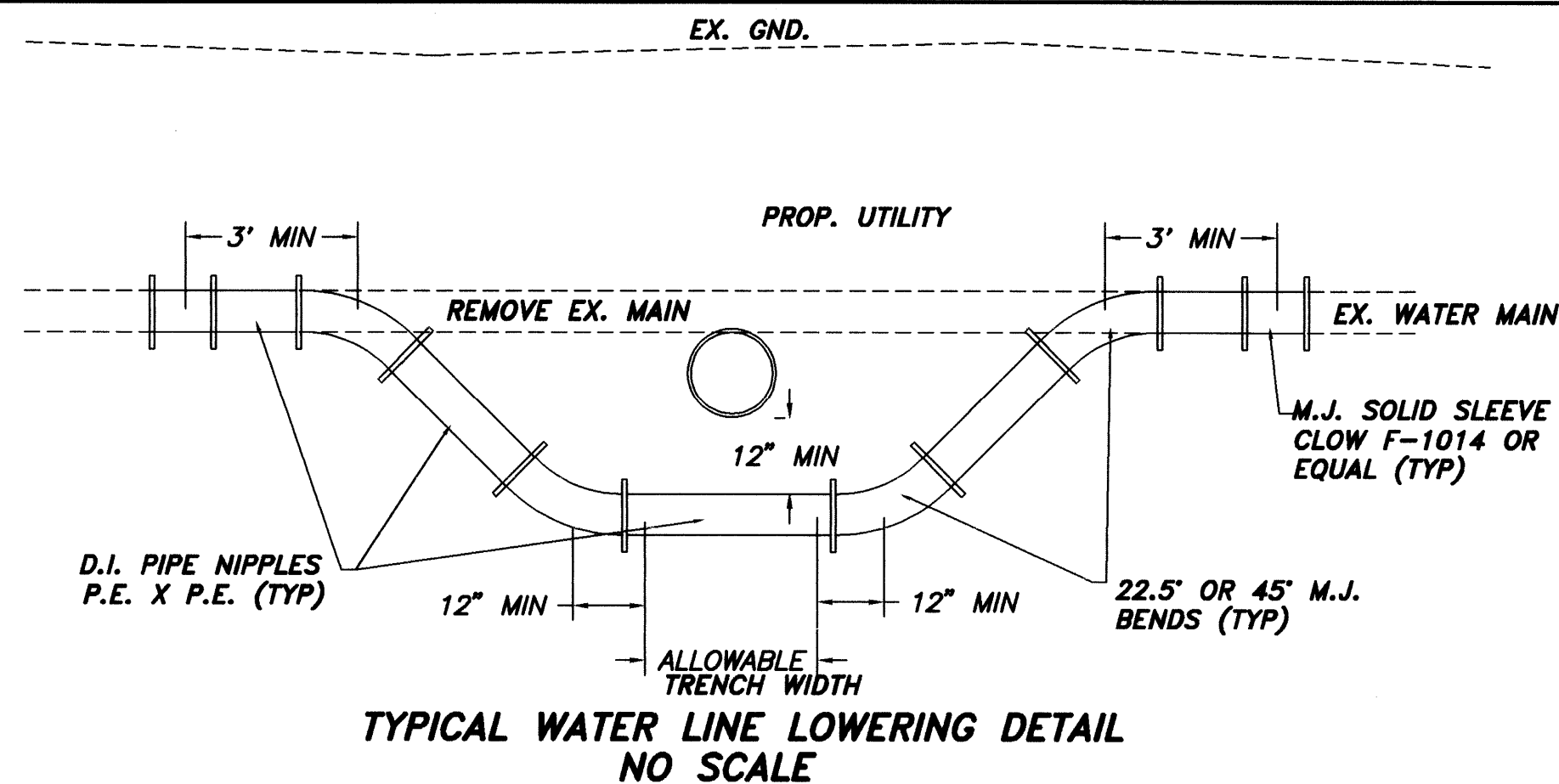


SECTION A-A



PLAN VIEW

- ① ITEM 448 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1
- ② ITEM 254 1-1/2" PAVEMENT PLANING, BITUMINOUS
- ③ ITEM 305 5" CONCRETE BASE
- ④ ITEM 304 5" AGGREGATE BASE
- ⑤ ITEM 609 CURB, TYPE 6
- ⑥ ITEM 608 4" CONCRETE WALK
- ⑦ ITEM 304 6" AGGREGATE BASE
- ⑧ ITEM 301 4" BITUMINOUS AGGREGATE BASE, AC-20
- ⑨ ITEM 404 1-1/4" ASPHALT CONCRETE, AC-20
- ⑩ ITEM 402 1-3/4" ASPHALT CONCRETE, AC-20
- ⑪ ITEM 407 TACK COAT, APP. @ 0.075 GAL/S.Y.
- ⑫ ITEM 305 7" PORTLAND CEMENT CONC. BASE
- ⑬ ITEM 659 SEEDING AND MULCHING



TYPICAL WATER LINE LOWERING DETAIL
NO SCALE

TYPICAL WATER LINE LOWERING NOTES

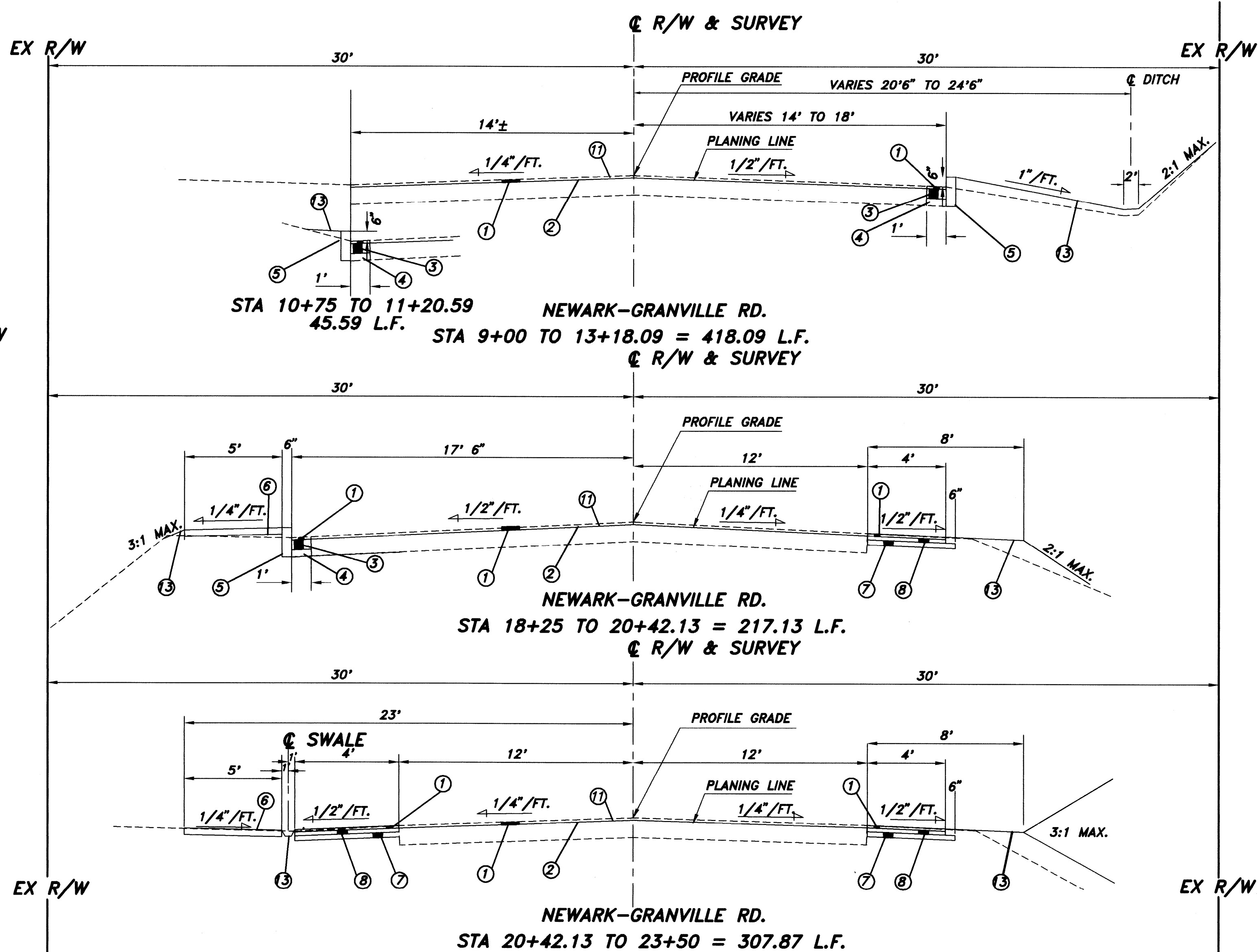
TIME AND DURATION OF SHUT DOWN SHALL BE DETERMINED BY THE VILLAGE OF GRANVILLE.

THE CONTRACTOR SHALL NOTIFY ALL WATER CUSTOMERS EFFECTED BY THE PROPOSED WORK AT LEAST 24 HOURS IN ADVANCE OF SHUT DOWN.

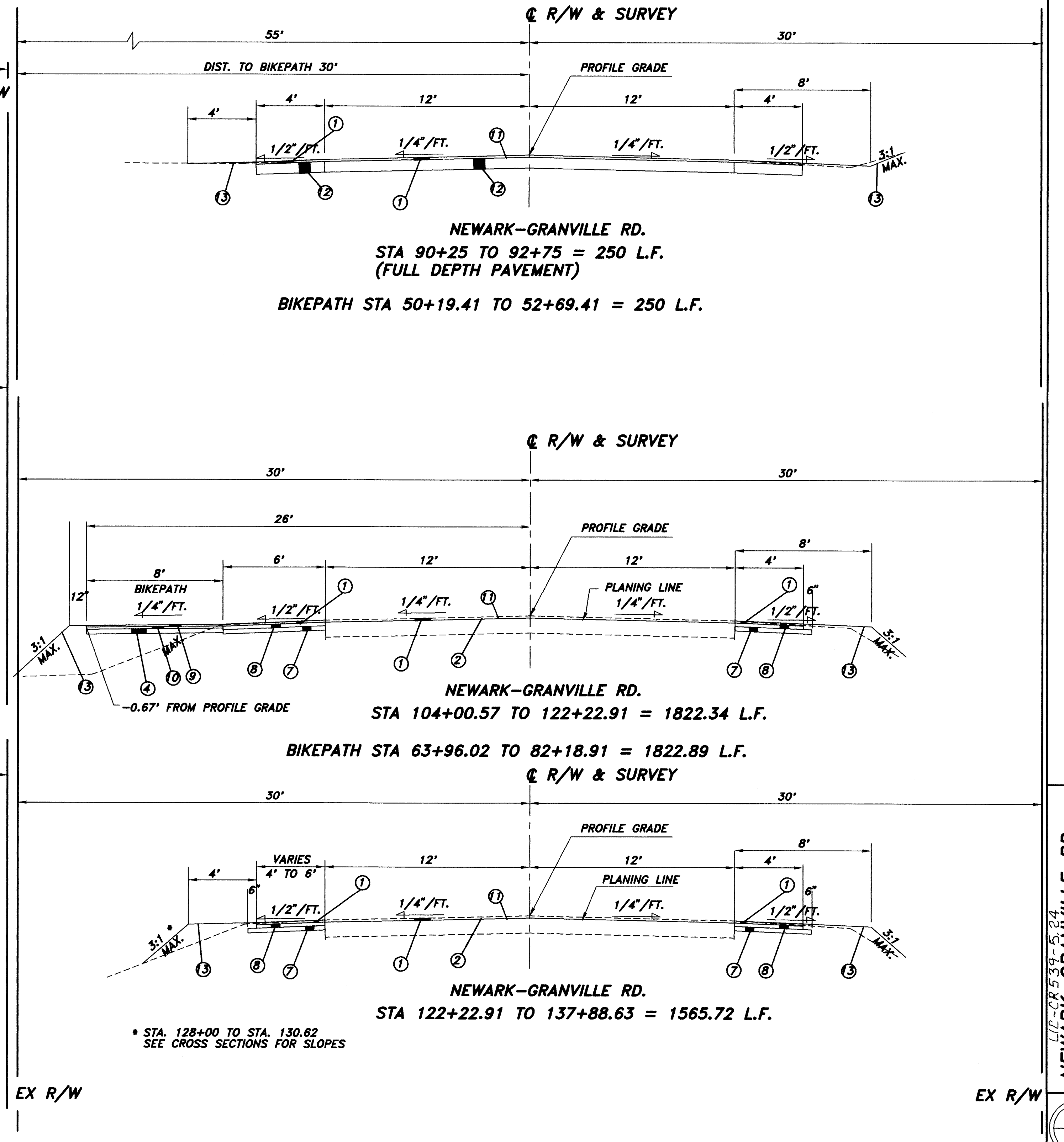
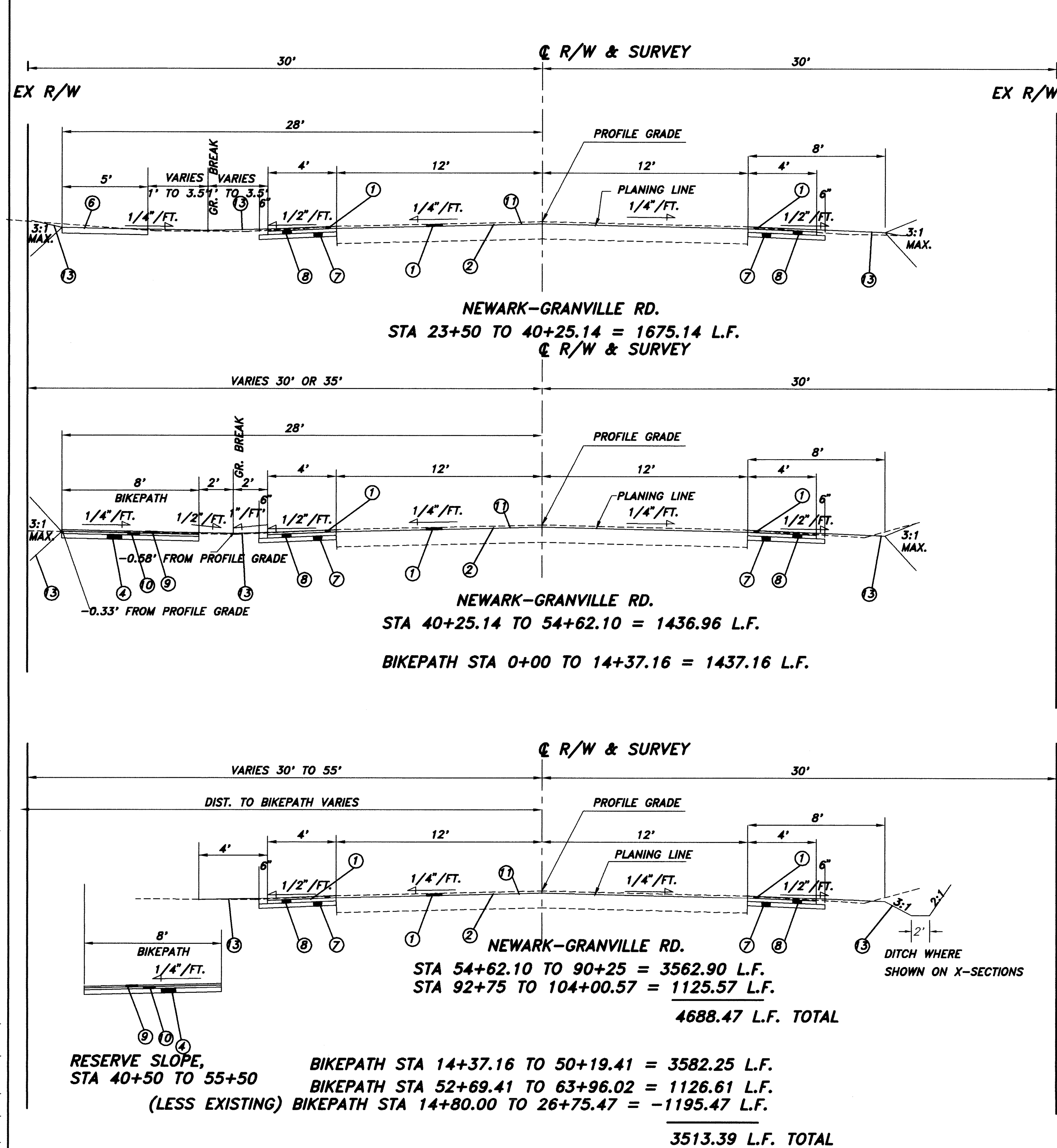
ALL BENDS SHALL BE SECURED BY RETAINING GLANDS, RODDING OR OTHER METHODS AS APPROVED BY THE ENGINEER TO RESTORE MAIN TO SERVICE AS SOON AS POSSIBLE. CONCRETE BACKING SHALL THEN BE PROVIDED IN ACCORDANCE WITH DETAILS SHOWN.

THE RELOCATED LINES SHALL BE LAID TO THE NEW LINE AND GRADE TESTED AND DISINFECTED PRIOR TO SHUT DOWN OF EXISTING MAIN AND CONNECTION OF RELOCATED LINES TO THE EXISTING MAIN.

ALL WATER LINES SHALL BE DISINFECTED BY SWABBING WITH A 5 PER CENT HYPOCHLORITE SOLUTION IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF AWWA C-601.



- ① ITEM 448 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE I
- ② ITEM 254 1-1/2" PAVEMENT PLANING, BITUMINOUS
- ③ ITEM 305 5" CONCRETE BASE
- ④ ITEM 304 5" AGGREGATE BASE
- ⑤ ITEM 609 CURB, TYPE 6
- ⑥ ITEM 608 4" CONCRETE WALK
- ⑦ ITEM 304 6" AGGREGATE BASE
- ⑧ ITEM 301 4" BITUMINOUS AGGREGATE BASE, AC-20
- ⑨ ITEM 404 1-1/4" ASPHALT CONCRETE, AC-20
- ⑩ ITEM 402 1-3/4" ASPHALT CONCRETE, AC-20
- ⑪ ITEM 407 TACK COAT, APP. @ 0.075 GAL/S.Y.
- ⑫ ITEM 305 7" PORTLAND CEMENT CONC. BASE
- ⑬ ITEM 659 SEEDING AND MULCHING



TYPICAL SECTIONS

NEWARK-GRANVILLE RD.
VILLAGE OF GRANVILLE

GENERAL NOTES

CONSTRUCTION AND MATERIAL SPECIFICATIONS

THE IMPROVEMENTS SHALL BE GOVERNED BY THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS DATED 1995 AND ALL SUPPLEMENTS THERETO. THESE SPECIFICATIONS SHALL GOVERN ALL WORK OF THIS PLAN UNLESS OTHERWISE NOTED.

CONTRACTOR AND SUB-CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS, EMPLOYEES AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF CONTRACTOR AND SUB-CONTRACTOR TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

TRAFFIC CONTROL DEVICES

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE "OHIO MANUAL OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION AND MAINTENANCE OPERATIONS", COPIES OF WHICH ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF TRAFFIC ENGINEERING, 25 SOUTH FRONT STREET, COLUMBUS, OHIO 43215.

EXISTING UTILITIES

THE IDENTITY AND LOCATION OF THE EXISTING UNDERGROUND UTILITY FACILITIES KNOWN TO BE LOCATED IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UNDERGROUND UTILITY. THE VILLAGE OF GRANVILLE AND/OR ENGINEER ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR DEPTHS OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS.

SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS.

THE CONTRACTOR SHALL CAUSE NOTICE TO BE GIVEN TO THE OHIO UTILITIES PROTECTION SERVICE, TELEPHONE 800-362-2764 TOLL FREE AND TO THE OWNERS OF UNDERGROUND UTILITY FACILITIES SHOWN ON THE PLANS WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE IN ACCORDANCE WITH SECTION 153.64 OF THE REVISED CODE. THE ABOVE MENTIONED NOTICE SHALL BE GIVEN AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION.

THE FOLLOWING UTILITIES ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT AND THE OWNERS DO NOT SUBSCRIBE TO A REGISTERED UNDERGROUND UTILITY PROTECTION SERVICE.

UTILITY	OWNER	TELEPHONE
SANITARY SEWER, WATERLINES & STORM SEWER	VILLAGE OF GRANVILLE 143 E. BROADWAY GRANVILLE, OH 43023	614-587-0707
TELEPHONE	ALL TEL OHIO, INC. 66 N. FOURTH STREET NEWARK, OH 43055	614-349-8551
ELECTRIC	OHIO POWER	1-800-672-2231
GAS	COLUMBIA GAS OF OHIO 135 W. CHURCH STREET NEWARK, OH 43055	614-345-3481
PIPELINE	TEXAS EASTERN PRODUCTS PIPELINE CO. ATTN: KEN NEFF P.O. BOX 813 LEBANON, OHIO 43036	513-932-1816
	ASHLAND PETROLEUM COMPANY ATTN: KENNETH HAMMONTREE 245 MILL ST. LEXINGTON, OHIO 44904	419-884-0800
	NATIONAL GAS & OIL CORPORATION ATTN: DAVE PETTY 1500 GRANVILLE RD. NEWARK, OHIO 43055	614-344-2102
CABLE	COX COMMUNICATIONS 111 N. 11TH STREET NEWARK, OH 43055	614-345-4000

RESTORATION AND CLEAN UP

IT IS THE INTENT OF THESE PLANS TO KEEP INCONVENIENCE TO THE PROPERTY OWNERS TO AN ABSOLUTE MINIMUM. ALL WORK PRESCRIBED AND DESCRIBED IN THESE SPECIFICATIONS IS SITUATED IN IMPROVEMENT AREAS. ALL WORK IS TO CONTINUE ON A UNIFORM BASIS AND ON SCHEDULE, PARTICULARLY THE RESTORATION AND CLEAN UP OF DISTURBED AREAS AFTER CONSTRUCTION.

CONTRACT SPECIFICATIONS

ALL CONTRACT SPECIFICATIONS ACCOMPANYING THESE PLANS ARE TO BE CONSIDERED A PART THEREOF.

STORAGE OF EQUIPMENT AND MATERIALS

NO MATERIALS, INCLUDING PIPE, SHALL BE STORED WITHIN THE RIGHT-OF-WAY OR WITHIN ONE HUNDRED (100) FEET OF ANY INTERSECTING STREET OR DRIVEWAY. DURING NON-WORKING HOURS, STORAGE OF EQUIPMENT SHALL COMPLY WITH THESE SAME REQUIREMENTS. COMPLIANCE WITH THESE REQUIREMENTS SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS LEGAL RESPONSIBILITIES OR LIABILITIES FOR THE SAFETY OF THE PUBLIC.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE OHIO DEPARTMENT OF TRANSPORTATION. (THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT ODOT'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATING INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.)

REMOVAL OF TREES OR STUMPS

ALL TREES, STUMPS AND SHRUBS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED AND SHALL BE PROTECTED PER STANDARD DRAWINGS LA-1 & LA-2.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZE	NO. OF TREES	NO. OF STUMPS	TOTAL
18"	3	0	1

THE ABOVE ESTIMATE IS APPROXIMATE AND THE ENGINEER RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

TREE SALVAGE AND PROTECTION

ALL SOUND TREES OUTSIDE THE ACTUAL WORK AREAS AND THOSE FALLING WITHIN THE DESIGNATED WORK LIMITS BUT NEAR ITS OUTER LIMITS SHALL BE SAVED. APPROPRIATE MATERIALS SHALL BE USED TO PROTECT SAID TREES INCLUDING SNOW, FENCE AND BOXING, AS DIRECTED BY THE ENGINEER. THE ENGINEER SHALL INSPECT THE TREES TO DETERMINE WHICH TREES ARE TO BE SAVED. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

MAIL BOXES

MAILBOXES WITHIN THE LIMITS OF THE WORK AREA SHALL BE RELOCATED PER ODOT STANDARD DRAWING LIC-13-6.23. PAYMENT SHALL BE INCLUDED IN THE COST BID FOR ITEM SPECIAL, MAILBOX SUPPORT SYSTEM, SINGLE.

SAWCUTTING EXISTING PAVEMENT

WHENEVER PORTIONS OF ASPHALT PARKING OR DRIVEWAY AREAS ARE TO BE REMOVED ALLOWING PORTIONS OF THE PAVEMENT TO REMAIN, THE CONTRACTOR SHALL SAW CUT THE ASPHALT PRIOR TO REMOVAL. ALL COSTS OF SAW CUTTING SHALL BE INCLUDED IN ITEM 255, FULL DEPTH PAVEMENT SAWING.

SEEDING AND MULCHING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE WORK LIMITS INCLUDING AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. THE COST OF FERTILIZING IS TO BE INCLUDED IN THE PRICE BID FOR ITEM 659, SEEDING AND MULCHING.

ITEM 616 DUST CONTROL

WILL BE PERFORMED BY THE CONTRACTOR AT THE DIRECTION AND ORDERS OF THE ENGINEER THE FOLLOWING ESTIMATES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE.

ITEM 616 WATER	25 M. GALS.
ITEM 616 CALCIUM CHLORIDE	10 TONS

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED OR INSTALLED BY THE CONTRACTOR UNTIL AUTHORIZED BY THE OHIO DEPARTMENT OF TRANSPORTATION.

CONDUIT AND TREATMENT

IMMEDIATELY AFTER PLACEMENT OF ANY CONDUITS, THE CONTRACTOR SHALL CONSTRUCT THE END TREATMENTS REQUIRED BY THE PLANS AT BOTH THE OUTLET AND INLET. THIS SHALL INCLUDE HEADWALLS, RIPRAP, SODDING, ETC.

MAINTAIN DRAINAGE

THE FLOW IN ALL SEWERS, DRAINS AND WATERCOURSES ENCOUNTERED SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE, AND WHENEVER SUCH WATERCOURSES AND DRAINS ARE DISTURBED OR DESTROYED DURING THE PROSECUTION OF THE WORK, THEY SHALL BE RESTORED BY THE CONTRACTOR AT HIS OWN COST AND EXPENSE TO A CONDITION SATISFACTORY TO THE ENGINEER.

DISINFECTING WATER MAINS

ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH ITEM 638.10 OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. SPECIAL ATTENTION IS DIRECTED TO APPLICABLE SECTIONS OF A.W.W.A. C-601, PARTICULARLY FOR FLUSHING (SECTION 5) AND FOR CHLORINATING VALVES AND FOR FIRE HYDRANTS (SECTION 7).

FENCE REBUILT. AS PER PLAN

RELOCATED WOOD FENCES SHALL DUPLICATE THE EXISTING FENCE IN AS NEAR A MANNER AS POSSIBLE. THIS SHALL INCLUDE PAINTING, REPLACING DAMAGED MEMBERS, AND PERFORMING ALL OTHER TASKS TO THE SATISFACTION OF THE ENGINEER. ALL EQUIPMENT, LABOR AND MATERIAL TO PERFORM THE ABOVE WORK SHALL BE PAID UNDER ITEM SPECIAL, FENCE REBUILT, AS PER PLAN.

EXISTING VALVES

EXISTING VALVES SHALL BE OPERATED BY THE VILLAGE OF GRANVILLE ONLY.

SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEMS

THE PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY EXISTING OR NEW DRAINAGE INTO THE HIGHWAY DRAINAGE SYSTEM WHEN SUCH DRAINS CARRY FLOW FROM ANY PLUMBING FIXTURES, INCLUDING FLOOR DRAINS AND SINK DRAINS FROM LIVESTOCK LOTS OR BARNs.

EXISTING PIPE CARRYING FLOW WHICH COMES WITHIN THE CATEGORY OUTLINED ABOVE, SHALL BE PLUGGED WITH CLASS C CONCRETE IN THE RIGHT-OF-WAY LINE. PAYMENT FOR SAID PLUGGING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION OR THE PERTINENT 202 ITEM.

DRIVEWAY CONSTRUCTION

ASPHALT DRIVE REPLACEMENT

THIS ITEM SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT IN THE DESIGNATED AREA AND REPLACEMENT WITH A 6" ITEM 304, AGGREGATE BASE, 1-3/4" ITEM 402, ASPHALT INTERMEDIATE COURSE AND 1-1/4" ITEM 404, ASPHALT CONCRETE SURFACE COURSE. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL, ASPHALT DRIVE REPLACEMENT.

CONCRETE DRIVE REPLACEMENT

THIS ITEM SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT IN THE DESIGNATED AREA AND REPLACEMENT WITH A 6" ITEM 452 PLAN PORTLAND CEMENT CONCRETE PAVEMENT. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL, CONCRETE DRIVE REPLACEMENT.

GRAVEL DRIVE REPLACEMENT

THIS ITEM SHALL CONSIST OF THE REMOVAL OF THE EXISTING GRAVEL DRIVE IN THE DESIGNATED AREA AND REPLACEMENT WITH 6" NO. 67 OR NO. 57 GRAVEL. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL, GRAVEL DRIVE REPLACEMENT.

FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE REMOVAL OF PAVEMENT IN THE DESIGNATED AREA AND THE REPLACEMENT WITH 8" ITEM 305 CONCRETE BASE. THE SURFACE SHALL BE PAVED DURING THE 448 ASPHALT SURFACE COURSE OPERATION. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL, FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT.

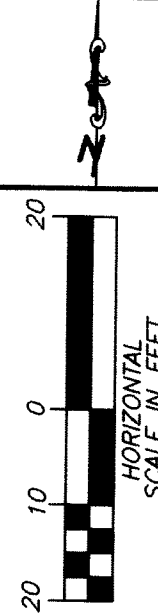
TEMPORARY SOIL EROSION AND SEDIMENT CONTROL, AS PER PLAN

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

207, STRAW OR HAY BALES	470 EACH
207, FILTER FABRIC FENCE	200 LIN. FT.
207, BEAVER DAM CURB INLET PROTECTION	5 EA.
659, COMMERCIAL FERTILIZER	2.39 TON
659, REPAIR SEEDING AND MULCHING	1,424 SQ. YD.
659, AGRICULTURAL LIMING	12.0 TON
659, SEEDING AND MULCHING	26,594 SQ. YD.
659, WATER	8 M GAL.

EROSION CONTROL

ITEMS 601, 660, 667 AND 670 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 660, 667 OR 668. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET THE REQUIREMENT OF 108.04.



CALC BY: TDW
CHKD BY: JLT

GENERAL NOTES

110-10530-5.24
NEWARK-GRANVILLE RD.
VILLAGE OF GRANVILLE

	NEWARK—GRANVILLE RD. L10-08539-524 VILLAGE OF GRANVILLE	GENERAL NOTES AND DETAILS	CALC. BY <u>TW</u>	CHKD. BY <u>JK</u>		
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TI F NO 3372-10-04

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FROM SHEET NUMBER																	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION
				5	9	10	11	12	13	38	85	87	88	89	90	91					
																	201	11000	LUMP	SUM	ROADWAY
								20,717									202	30000	20,717	SQ. FT.	CLEARING AND GRUBBING
								30									202	58300	30	EACH	WALK REMOVED
								7405									202	34900	7405	LIN. FT.	CATCH BASIN OR INLET REMOVED
								67									202	35200	67	LIN. FT.	PIPE REMOVED
								473									202	38000	473	LIN. FT.	PIPE REMOVED, OVER 24"
								2630									202	75200	2630	LIN. FT.	GUARDRAIL REMOVED
								1023									202	32000	1023	LIN. FT.	FENCE REMOVED FOR RE-USE
								2									202	98100	2	EACH	CURB REMOVED
								226									202	98100	226	LIN. FT.	REMOVAL MISC: HEADWALL REMOVED
									972								202	50000	972	SQ. YD.	ABANDON MISC: STORM SEWER ABANDONED IN PLACE
											8030						203	12000	8030	CU. YD.	SUBGRADE COMPACTION
											2993						203	20000	2993	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
								14									203	20000	2993	CU. YD.	EMBANKMENT
								263									604	34500	14	EACH	MANHOLE ADJUSTED TO GRADE
								443									606	19500	263	EACH	GUARDRAIL POST, WOOD
								6									606	13000	443	LIN. FT.	GUARDRAIL, TYPE 5
								2630									606	25000	6	EACH	ANCHOR ASSEMBLY, TYPE A
								15,307									607	23101	2630	LIN. FT.	FENCE REBUILT AS PER PLAN
								555									608	12000	15,307	SQ. FT.	5" CONCRETE WALK
								1									608	98000	555	SQ. FT.	WALKWAY, MISC.: REINFORCED CONCRETE WALK AS PER PLAN
								14									608	51000	1	EACH	CURB RAMP, TYPE 2
																	664	10000	14	EACH	PLANTING SALVAGED TREES, MISC.
																					PAVEMENT
								3222									202	23 000	3222	SQ. YD.	PAVEMENT REMOVED
									36,424								254	01 000	36,424	SQ. YD.	PAVEMENT PLANING BITUMINOUS
								530									255	10 001	530	SQ. YD.	FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT(RIGID),
																					CLASS "C", AS PER PLAN, ASPHALT, CONCRETE 225
								5154									255	20000	5154	LIN. FT.	FULL DEPTH PAVEMENT SAWING
									1179								301	10002	1179	CU. YD.	BITUMINOUS AGGREGATE BASE
									2847								304	20000	2847	CU. YD.	AGGREGATE BASE
									218								305	17500	218	SQ. YD.	CONCRETE BASE, MISC.: 5" CONCRETE BASE
									889								305	11000	889	SQ. YD.	7" CONCRETE BASE
									299								402	20000	299	CU. YD.	ASPHALT CONCRETE, AC-20
									214								404	20000	214	CU. YD.	ASPHALT CONCRETE, AC-20
									3594								407	10000	3594	GAL	TACK COAT
									1997								448	16000	1997	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20
								106	2139								609	26000	2245	LIN. FT.	CURB, TYPE 6
								34									609	12000	34	LIN. FT.	COMBINATION CURB AND GUTTER, TYPE 2
								980									SPECIAL	69098300	980	SQ. YD.	ASPHALT DRIVE REPLACEMENT
								136									SPECIAL	69098300	136	SQ. YD.	CONCRETE DRIVE REPLACEMENT
								82									SPECIAL	69098300	82	SQ. YD.	GRAVEL DRIVE REPLACEMENT
								197									SPECIAL	69098300	197	SQ. YD.	BRICK PAVEMENT
								246									SPECIAL	69098300	246	SQ. YD.	MISC: ASPHALT FEATHERING
								666									SPECIAL	69098300	666	SQ. YD.	MISC: GRAVEL FEATHERING
																					TRAFFIC CONTROL
															7	18	621	00100	25	EACH	RAISED PAVEMENT MARKER
					28												630	85100	28	EACH	REMOVAL OF GROUND MOUNTED SIGN AND RE-ERECTION
					2												630	85000	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE
													54	27	81	90	630	02100	252	LIN. FT.	GROUND MOUNTED SUPPORT, NO. 2 POST
													37.50	18.75	61.25	68.75	630	80100	186.25	SQ. FT.	SIGN, FLAT SHEET
												0.91	1.08	1.03	0.56	1.33	642	00100	4.91	MILE	EDGE LINE, TYPE 1
												0.56	0.52	0.48	0.22	0.53	642	00300	2.31	MILE	CENTER LINE, TYPE 1
															2	5	642	01600	7	EACH	BIKE LANE SYMBOL MARKING
															3	1	642	01380	4	EACH	WORD ON PAVEMENT, 48"
												133					644	00400	133	LIN. FT.	CHANNELIZING LINE
												45	158	74	276	60	644	00600	613	LIN. FT.	CROSSWALK LINE
													560	365	637	212	644	00700	1774	LIN. FT.	TRANSVERSE LINE
																					WATER WORK
					3												SPECIAL	63898000	3	EACH	WATERWORK, MISC.: WATER MAIN LOWERED
					19												202	75610	19	EACH	VALVE BOX REMOVED
					19												638	10300	19	EACH	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE
					20												638	10400	20	EACH	FIRE HYDRANT ADJUSTED TO GRADE
					50												638	10800	50	EACH	VALVE BOX ADJUSTED TO GRADE
					19												638	98000	19	EACH	WATER WORK MISC: INSTALL HEAVY DUTY VALVE BOX
					74												638	00604	74	LIN. FT.	"6" DUCTILE IRON PIPE AND FITTINGS, CL 53, PUSH-ON JOINTS
																					WATER MAIN ANSI

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WATER SUB-SUMMARY									
REFERENCE NO.	SHEET NO.	STATION LOCATION	SPECIAL	638	638	638	638	638	202
			WATER MAIN LOWERED AS PER PLAN	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE	FIRE HYDRANT ADJUSTED TO GRADE	INSTALL HEAVY DUTY VALVE BOX	ADJUST VALVE BOX TO GRADE	6" DUCTILE IRON WATER PIPE & FITTINGS, CL. 53	VALVE BOX REMOVED
			EACH	EACH	EACH	EACH	EACH	LIN. FT.	EACH
W1	14	203+70 24'LT.					1		
W2	14	203+63 22'LT.					1		
W3	14	203+63 7'LT.					1		
W4	14	203+63 24'LT.			1				
W5	16	15+65 20'RT.					1		
W6	16	17+21 22'RT.			1				
W7	16	19+30 22'RT.		1				2	
W8	16	19+16 16'RT.		1					1
W9	17	22+33 16'RT.			1				1
W10	17	22+33 20'RT.			1				
W10A	17	22+86 17'RT.				1			1
W11	17	25+68 16'RT.				1			1
W12	17	25+68 22'RT.		1				2	
W13	17	26+88 21'RT.					1		
W14	17	26+79 9'RT.	1						
W15	18	28+98 22'RT.		1				3	
W15A	18	28+98 17'RT.				1			1
W15B	18	27+52 19'RT.				1			1
W16	18	30+26 21'RT.					1		
W17	18	32+12 22'RT.		1				2	
W18	18	32+12 17'RT.				1			1
W19	18	32+33 8'RT.	1						
W20	18	32+45 8'RT.					1		
W21	18	32+42 10'RT.					1		
W22	18	32+46 23'LT.					1		
W23	19	35+06 8'RT.	1						
W23A	19	34+96 26'RT.					1		
W24	19	35+59 16'RT.				1			1
W25	19	35+59 22'RT.		1				4	
W26	19	37+72 16'RT.				1			1
W27	19	37+72 22'RT.		1				3	
W28	19	38+09 22'RT.					1		
W29	19	35+68 28'LT.				1			1
W30	19	36+82 23'LT.					1		
W31	19	37+92 23'LT.					1		
W32	20	40+00 16'RT.				1			1
W32A	20	39+03 20'RT.					1		
W33	20	40+00 22'RT.			1				
W34	20	40+30 10'RT.					1		
W35	20	40+34 7'RT.					1		
W36	20	41+87 22'RT.					1		
W37	20	43+23 27'LT.					1		
W38	20	43+87 16'RT.				1			1
W39	20	43+87 22'RT.		1				3	
W40	20	39+68 23'LT.					1		
W41	21	46+42 16'RT.				1			1
W42	21	46+42 22'RT.		1				2	
W43	21	49+30 13'RT.				1			1
W44	21	49+30 22'RT.		1				6	
W45	21	46+52 27'LT.					1		
W46	21	46+94 26'LT.					1		
W47	21	46+97 8'RT.					1		
W48	22	55+07 22'LT.		1				19	
W49	22	54+89 29'LT.					1		
W50	22	55+57 18'RT.				1			1
W51	22	56+46 20'RT.					1		
W52	23	60+82 25'LT.			1				
W53	24	66+78 22'LT.		1				1	

WATER SUB-SUMMARY									
REFERENCE NO.	SHEET NO.	STATION LOCATION	SPECIAL	638	638	638	638	638	202
			WATER MAIN LOWERED AS PER PLAN	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE	FIRE HYDRANT ADJUSTED TO GRADE	INSTALL HEAVY DUTY VALVE BOX	ADJUST VALVE BOX TO GRADE	6" DUCTILE IRON WATER PIPE & FITTINGS, CL. 53	VALVE BOX REMOVED
			EACH	EACH	EACH	EACH	EACH	LIN. FT.	EACH
W54	25	69+78 42'LT.							
W55	25	69+79 22'LT.		1				1	
W56	25	72+05 40'LT.						2	
W57	25	72+70 42'LT.						1	
W58	25	72+69 22'LT.		1				2	
W59	26	75+62 42'LT.						1	
W60	26	75+62 22'LT.		1				2	
W61	26	78+75 40'LT.						1	
W62	26	78+74 22'LT.		1				2	
W63	26	79+52 20'RT.						1	
W64	26	80+35 43'LT.						1	
W65	26	80+41 48'LT.						1	
W66	26	80+48 45'LT.						1	
W67	27	81+73 41'LT.						1	
W68	27	81+71 25'LT.			1				
W69	27	84+90 46'LT.						1	
W70	27	84+90 25'LT.			1				
W71	28	87+84 41'LT.						1	
W72	28	87+84 25'LT.			1				
W73	28	90+80 40'LT.						1	
W74	28	90+80 25'LT.			1				
W75	29	93+78 39'LT.						1	
W76	29	93+78 25'LT.			1				
W77	29	96+80 34'LT.						1	
W78	29	96+80 25'LT.		1				4	
W79	30	99+63 33'LT.						1	
W79A	30	99+73 37'LT.				1			1
W80	30	99+63 26'LT.			1				
W81	30	102+77 35'LT.						1	
W82	30	102+77 26'LT.			1				
W83	31	105+68 23'LT.						1	
W84	31	105+68 21'LT.		1					
W85	31	108+70 25'LT.						1	
W86	31	108+70 27'LT.			1				
W87	31	108+80 23'RT.						1	
W88	32	111+69 22'LT.						1	
W89	32	111+69 24'LT.			1			4	
W90	32	113+73 26'LT.						1	
W91	32	114+79 26'LT.						1	
W92	32	114+97 14'RT.				1			1
W93	32	115+15 25'LT.						1	
W94	32	115+15 23'LT.		1					5
W95	33	118+68 27'LT.			1				
W96	33	120+76 27'LT.				1			
W97	34	123+65 27'LT.			1				
W98	34	126+49 27'LT.			1				
W99	35	129+68 21'LT.			1				
W100	35	132+70 20'LT.			1				
W101	36	135+43 19'LT.			1				
W102	36	135+43 18'LT.				1			1
W103	36	136+74 20'LT.						1	
W104	36	136+78 15'LT.			1				1
W105	36	136+91 18'RT.						1	
TOTALS TO GENERAL SUMMARY			3	19	20	19	50	74	19

TRAFFIC SUB-SUMMARY				
REFERENCE NO.	SHEET NO.	STATION LOCATION	REMOVAL OF GROUND MOUNTED SIGN AND RE-ERECTION	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE
			EACH	EACH
T1	14	200+80, 16'LT	1	
T2	14	203+80, 26'LT	1	
T3	15	13+45, 26'LT	1	
T4	16	17+90, 26'LT	1	
T4A	16	17+77, 18'RT	1	
T5	16	18+94, 16'LT		1
T6	16	19+05, 16'LT		1
T7	17	24+18, 20'LT	1	
T8	18	30+60, 20'LT	1	
T9	19	34+75, 18'LT	1	
T9A	19	38+13, 18'RT	1	
T10	19	33+90, 18'RT	1	
T11	20	44+87, 18'LT	1	
T12	22	51+24, 18'LT	1	
T13	23	62+01, 18'LT	1	
T14	26	80+19, 18'RT	1	
T15	27	84+60, 18'LT	1	
T16	28	90+35, 18'RT	1	
T17	30	102+50, 18'LT	1	
T18	30	104+41, 29'LT	1	
T19	30	104+45, 29'LT	1	
T20	31	110+97, 29'LT	1	
T21	32	111+57, 29'LT	1	
T22	32	114+80, 18'RT	1	
T23	33	120+92, 27'LT	1	
T24	34	123+70, 18'RT	1	
T25	34	124+38, 18'LT	1	
T25A	34	127+90, 18'RT	1	
T26	35	132+69, 18'RT	1	
T27	36	135+05, 18'LT	1	
TOTALS TO GENERAL SUMMARY			28	2
MAILBOX RELOCATION SUB-SUMMARY				
MARK	RELOCATED STATION	RELOCATED @ OFFSET	ITEM, SPECIAL MAILBOX SUPPORT SYSTEM, SINGLE	
			EACH	
MB1	18+30	18' RT	1	
MB2	20+90	25' LT	1	
MB3	24+78	18' LT	1	
MB4	33+71	18' LT	1	
MB5	35+55	18' LT	1	
MB6	39+77	18' LT	1	
MB7	41+70	18' RT	1	
MB8	42+85	18' LT	1	
MB9	42+12	18' RT	1	
MB10	53+18	18' RT	1	
MB11	53+70	18' RT	1	
MB12	54+80	18' RT	1	
MB13	56+85	18' RT	1	
MB14	57+50	18' RT	1	
MB15	107+42	18' LT	1	
MB16	108+28	18' LT	1	
MB17	112+23	18' LT	1	
MB18	113+00	18' LT	1	
MB19	113+88	18' LT	1	
MB20	114+75	18' LT	1	
MB21	118+02	18' LT	1	
MB22	121+68	18' LT	1	
TOTALS TO GENERAL SUMMARY			22	

DRAINAGE SUB-SUMMARY

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ITEM 203. SUBGRADE COMPACTION

STA 90+25 TO 92+75 = 275.00'
AREA = (275' X 35')/9 = 972.0 S.Y.

ITEM 254. PAVEMENT PLANING BITUMINOUS

STA 200+80 TO 203+54.61 = 274.61'
AREA = (274.61' X 24')/9 = 732.3 S.Y.

STA 203+54.61 TO 205+38.37, LT = 183.76'
AREA = (183.76' X 18.50')/9 = 377.7 S.Y.

STA 203+54.61 TO 204+50, RT = 95.39'
AREA = (95.39' X 11.5')/9 = 121.9 S.Y.

STA 9+00 TO 13+18.09, LT = 418.09'
AREA = (418.09' X 14)/9 = 650.4 S.Y.

STA 9+00 TO 10+50, RT = 150.0'
AREA = (150' X 16')/9 = 266.7 S.Y.

STA 10+50 TO 15+00, RT = 450'
AREA = (450' X 18')/9 = 900.0 S.Y.

STA 13+18.09 TO 15+00, LT = 181.91'
AREA = (181.91' X 18.5')/9 = 373.9 S.Y.

STA 15+00 TO 18+25 = 325'
AREA = (325' X 40.8')/9 = 1473.6 S.Y.

STA 18+25 TO 20+50 = 225'
AREA = (225' X 26.5')/9 = 662.5 S.Y.

STA 20+50 TO 90+25 = 6975'
AREA = (6975' X 24')/9 = 18,600.0 S.Y.

STA 92+75 TO 137+88.63 = 4513.63'
AREA = (4513.63' X 24')/9 = 12,036.3 S.Y.

ADD FOR JONES ROAD = 229 S.Y.

ITEM 254, TOTAL = 36,424.3 S.Y.

ITEM 305. 5" CONCRETE BASE

STA 200+70 TO 205+38.37, LT = 468.37'
AREA = (468.37' X 1')/9 = 52.0 S.Y.

STA 200+80 TO 203+36.04 +(RETURN)34.36', RT = 290.40'
AREA = (290.40' X 1')/9 = 32.3 S.Y.

STA 9+00 TO 16+35 - 33', RT = 702'
AREA = (702' X 1')/9 = 78.0 S.Y.

STA 13+18.09 TO 18+25 - 47', LT = 459.91'
AREA = (459.91' X 1')/9 = 51.1 S.Y.

STA 10+75 TO 11+20.59, LT = 45.59'
AREA = (45.59' X 1')/9 = 5.1 S.Y.

ITEM 305, 5" CONCRETE BASE, TOTAL = 218.5 S.Y.

ITEM 304. AGGREGATE BASE

AREA UNDER ITEM 305, = 218.5 S.Y.

BP STA 0+00 TO 14+81.0 - 98.5' = 1382.5'
BP STA 26+75.47 TO 82+69.33 - 150' = 5443.86'
TOTAL LENGTH = 6826.36'

AREA = (6826.36' X 8')/9 = 6067.9 S.Y.
AREA FOR BIKEPATH AT STA. 20+50 = 83.6 S.Y.
VOL = (218.5 S.Y. + 6067.9 S.Y. + 83.6 S.Y.) = 6370.0 S.Y. X 5"/12/3 = 884.7 C.Y.

SHOULDER
STA 20+90.13 TO 23+50, LT = 259.87'
AREA = (259.87' X 4')/9 = 115.5 S.Y.

STA 23+50 TO 103+24.06 - (ROADS) 108', LT = 7866.06'
AREA = (7866.06' X 4.5')/9 = 3933.03 S.Y.

STA 103+24.06 TO 104+00.57, LT = 76.51'
AREA = (76.51' X 4.5')/9 = 42.5 S.Y.

STA 104+00.57 TO 122+20.00, LT = 1819.43'
AREA = (1819.43' X 6')/9 = 1213.0 S.Y.

ITEM 304. AGGREGATE BASE, CONT'D

STA 122+20.00 TO 123+00, LT = 80'
AREA = (80' X 5.5')/9 = 48.9 S.Y.

STA 123+00 TO 137+88.63, LT = 1488.63'
AREA = (1488.63' X 4.5')/9 = 744.3 S.Y.

STA 17+85 TO 137+88.63 - (ROADS) 646', RT = 11,357.63'
AREA = (11,357.63' X 4.5')/9 = 5678.8 S.Y.

TOTAL AREA, SHOULDER, = 11,776.0 S.Y.
VOL = 11,776.0 S.Y. X 6"/12/3 = 1962.7 C.Y.

ITEM 304, TOTAL = 2847.4 C.Y.

ITEM 301. BITUMINOUS AGGREGATE BASE

SHOULDER
STA 20+90.13 TO 23+50, LT = 259.87'
AREA = (259.87' X 4')/9 = 115.5 S.Y.

STA 23+50 TO 103+24.06 - (ROADS) 108', LT = 7866.06'
AREA = (7866.06' X 4')/9 = 3496.0 S.Y.

STA 103+24.06 TO 104+00.57, LT = 76.51'
AREA = (76.51' X 4')/9 = 34.0 S.Y.

STA 104+00.57 TO 122+20.00, LT = 1819.43'
AREA = (1819.43' X 6')/9 = 1213.0 S.Y.

STA 122+20.00 TO 123+00, LT = 80'
AREA = (80' X 5')/9 = 44.4 S.Y.

STA 123+00 TO 137+88.63, LT = 1488.63'
AREA = (1488.63' X 4')/9 = 661.6 S.Y.

STA 17+85 TO 137+88.63 - (ROADS) 646', RT = 11,357.63'
AREA = (11,357.63' X 4')/9 = 5047.8 S.Y.

TOTAL AREA, SHOULDER, = 10,612.3 S.Y.
VOL = 10,612.3 S.Y. X 4"/12/3 = 1179.1 C.Y.

ITEM 301, TOTAL = 1179.1 C.Y.

ITEM 305. 7" CONCRETE BASE

STA 90+25 TO 92+75 = 250'
AREA = (250' X 32')/9 = 888.9 S.Y.

ITEM 305, 7" CONCRETE BASE TOTAL = 888.9 S.Y.

ITEM 407. TACK COAT. APP. @ 0.075 GAL/S.Y

AREA = 36,424.3 S.Y + 10,612.3 S.Y. + 888.9 S.Y = 47,925.5 S.Y.
VOL = 47,925.5 S.Y. X 0.075 GAL/S.Y. = 3594.4 GAL

ITEM 407, TOTAL = 3594 GAL

ITEM 448. 1-1/2" ASPHALT CONCRETE SURFACE COURSE. TYPE I

AREA = 36,424.3 S.Y + 10,612.3 S.Y. + 888.9 S.Y = 47,925.5 S.Y.
VOL = 47,925.5 S.Y. X 1.5"/12/3 = 1,996.9 C.Y.

ITEM 448, TOTAL = 1,997 C.Y.

ITEM 402. 1-3/4" ASPHALT CONCRETE

AREA = 6151.5 S.Y.
VOL = 6151.5 S.Y. X 1.75"/12/3 = 299.0 C.Y.

ITEM 402, TOTAL = 299 C.Y.

ITEM 404. 1-1/4" ASPHALT CONCRETE

AREA = 6151.5 S.Y.
VOL = 6151.5 S.Y. X 1.25"/12/3 = 213.6 C.Y.

ITEM 404, TOTAL = 214 C.Y.

ITEM 609. CONCRETE CURB. TYPE 6

STA 200+80 TO 205+38.37, LT = 458.37'
STA 200+80 TO 203+36.04 + (RETURN) 34.36', RT = 290.40'
STA 9+00 TO 16+35 - (DRIVE) 33', RT = 702'
STA 13+18.09 TO 20+42.13 - (DRIVE & BRIDGE) 81.5', LT = 642.54'
STA 10+75 TO 11+20.59, LT = 45.59'

ITEM 609, TOTAL = 2139 L.F.

ITEM 659. SEEDING AND MULCHING

TOTAL AREA = 26,594 S.Y.

ITEM 659, SEEDING & MULCHING TOTAL = 26,594 S.Y.

ITEM 659. COMMERCIAL FERTILIZER

TOTAL AREA = 26,594 S.Y.
TONAGE = 26,594 X 9 X 20/1000/2000 = 2.39 TONS

ITEM 659, COMMERCIAL FERTILIZER TOTAL = 2.39 TONS

ITEM 659. AGRICULTURAL LIME

TOTAL AREA = 26,594 S.Y.
TONAGE = 26,594 X 100 X 9/1000/2000 = 11.97 TONS

ITEM 659, AGRICULTURAL LIME TOTAL = 11.97 TONS

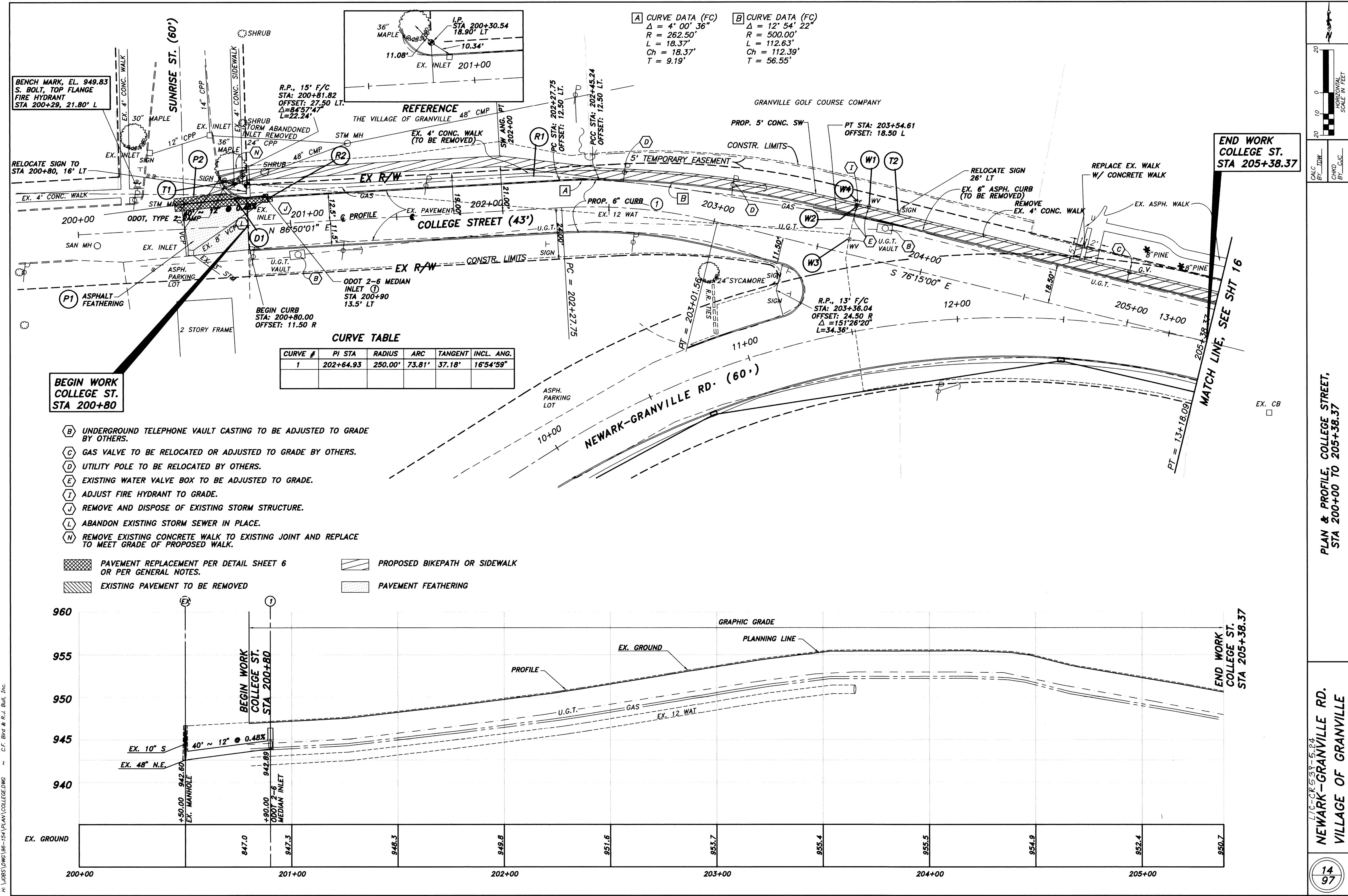
ITEM 659. WATER

TOTAL AREA = 26,594 S.Y.
TONAGE = 26,594 X 9 X 0.12/1000 = 29 MGAL

ITEM 659, WATER TOTAL = 29 MGAL

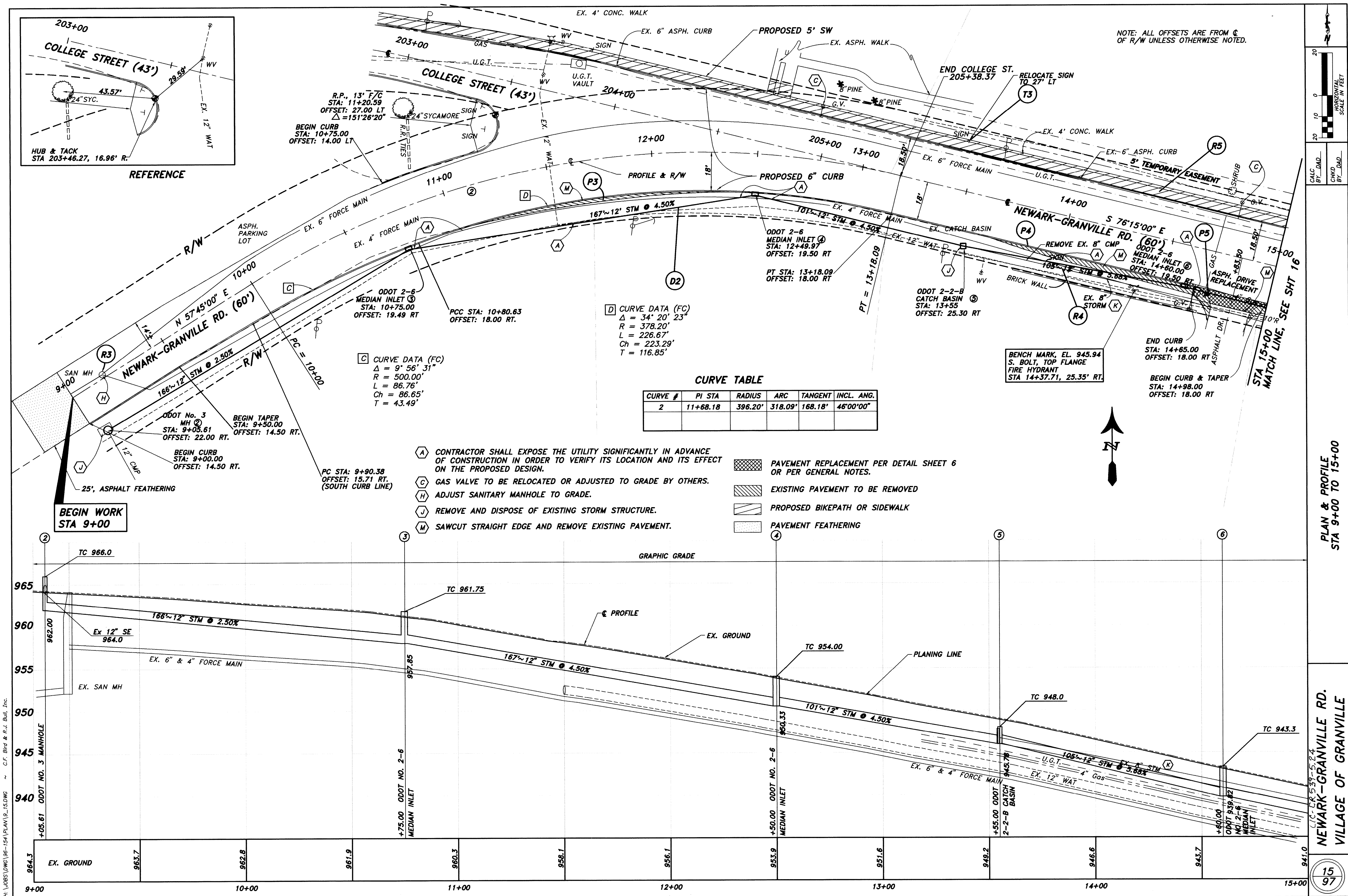
CALCULATIONS

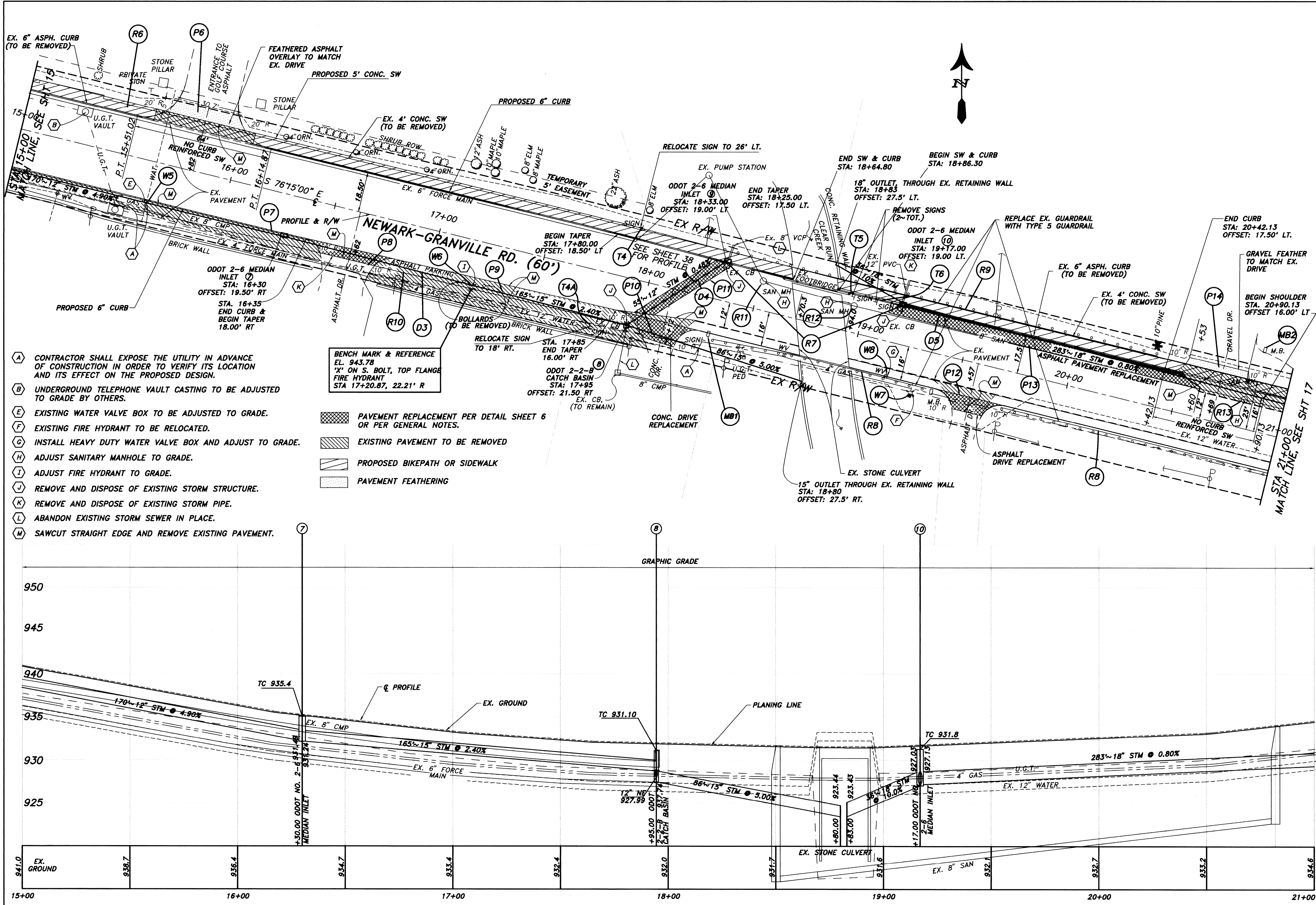
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NEWARK-GRANVILLE RD.
VILLAGE OF GRANVILLE

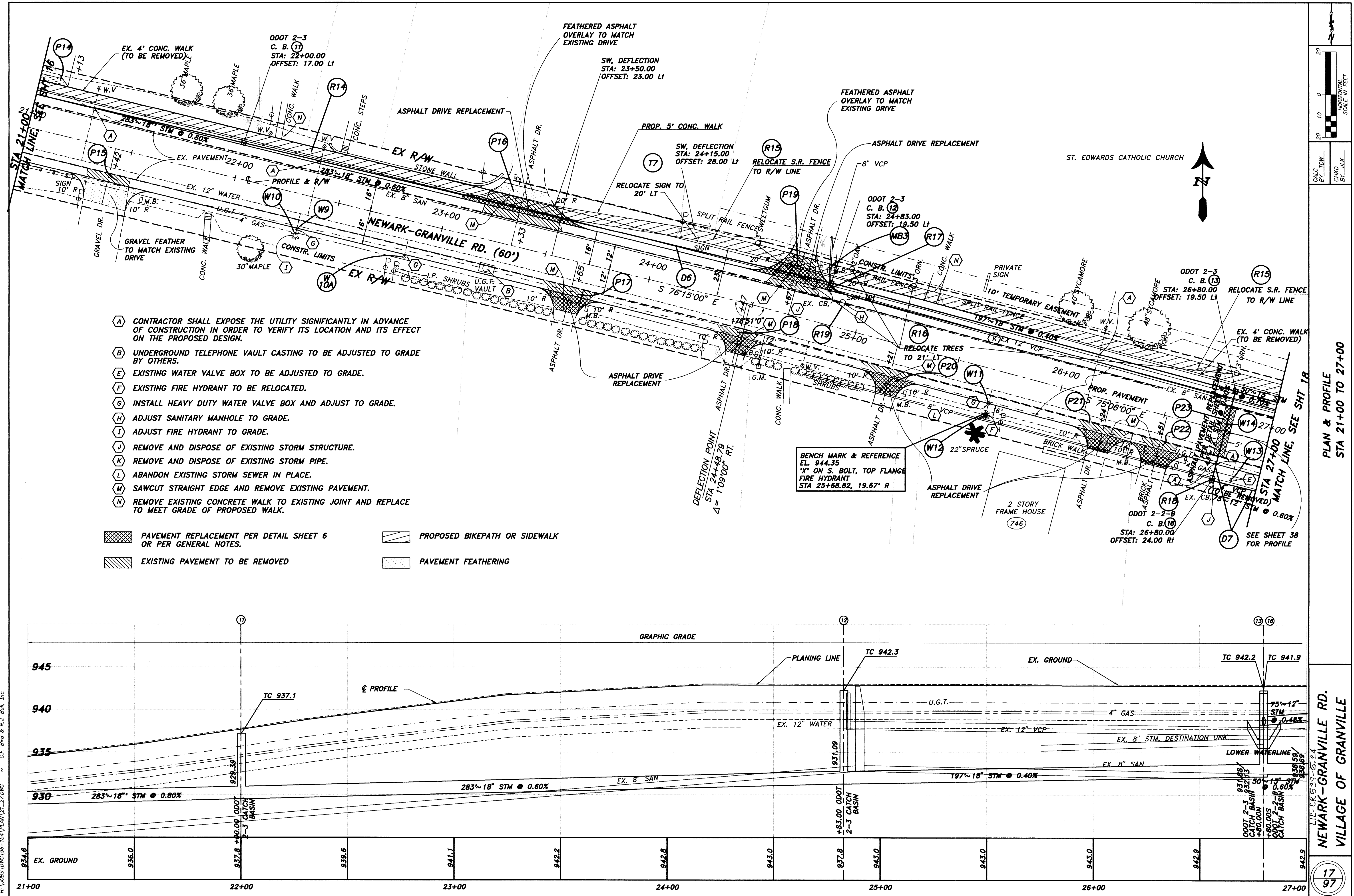


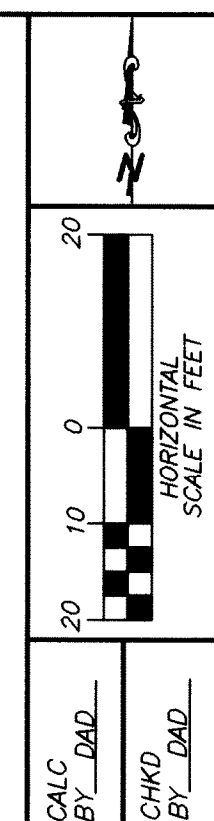
FILE NO. 3378-10-94

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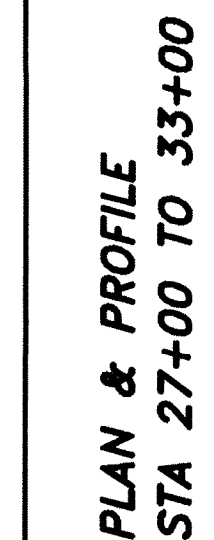


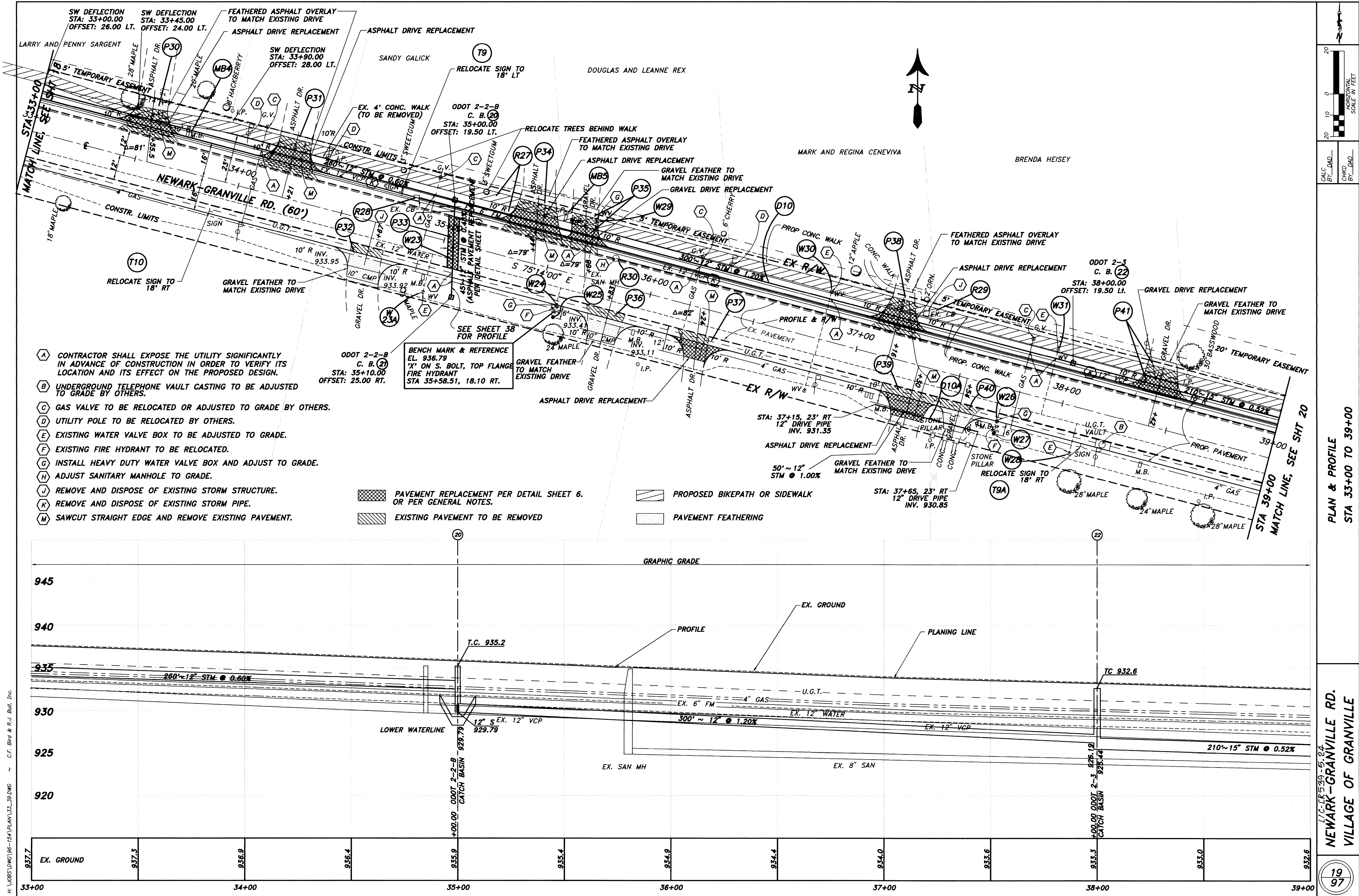




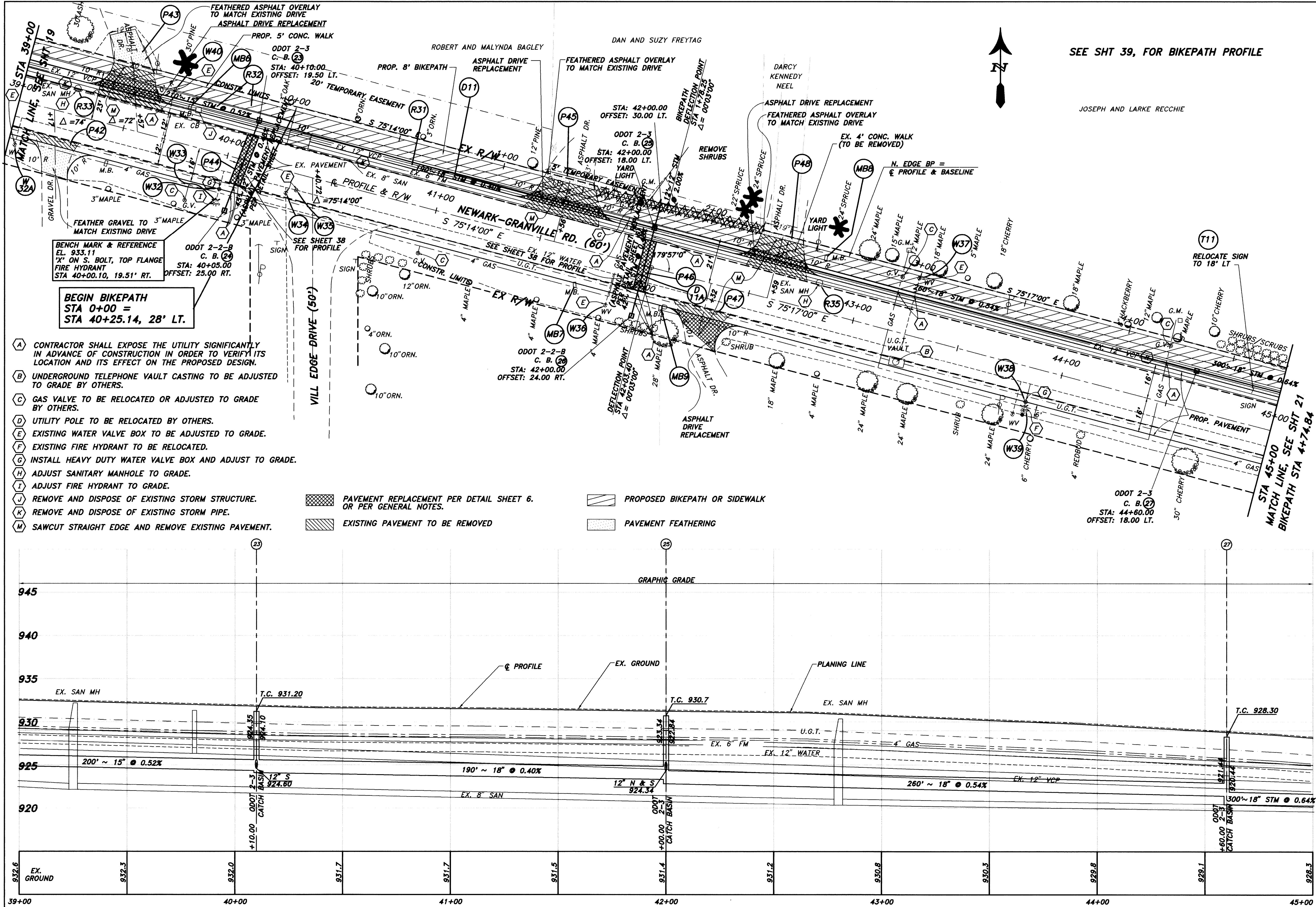
-  PAVEMENT REPLACEMENT PER DETAIL SHEET 6
OR PER GENERAL NOTES.
-  EXISTING PAVEMENT TO BE REMOVED

- SEE PROFILE SHEET 38**





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- (A) CONTRACTOR SHALL EXPOSE THE UTILITY SIGNIFICANTLY IN ADVANCE OF CONSTRUCTION IN ORDER TO VERIFY ITS LOCATION AND ITS EFFECT ON THE PROPOSED DESIGN.
- (B) UNDERGROUND TELEPHONE VAULT CASTING TO BE ADJUSTED TO GRADE BY OTHERS.
- (C) GAS VALVE TO BE RELOCATED OR ADJUSTED TO GRADE BY OTHERS.
- (D) UTILITY POLE TO BE RELOCATED BY OTHERS.
- (E) EXISTING WATER VALVE BOX TO BE ADJUSTED TO GRADE.
- (F) EXISTING FIRE HYDRANT TO BE RELOCATED.
- (G) INSTALL HEAVY DUTY WATER VALVE BOX AND ADJUST TO GRADE.
- (H) ADJUST SANITARY MANHOLE TO GRADE.
- (I) ADJUST FIRE HYDRANT TO GRADE.
- (J) REMOVE AND DISPOSE OF EXISTING STORM STRUCTURE.
- (K) REMOVE AND DISPOSE OF EXISTING STORM PIPE.
- (M) SAWCUT STRAIGHT EDGE AND REMOVE EXISTING PAVEMENT.

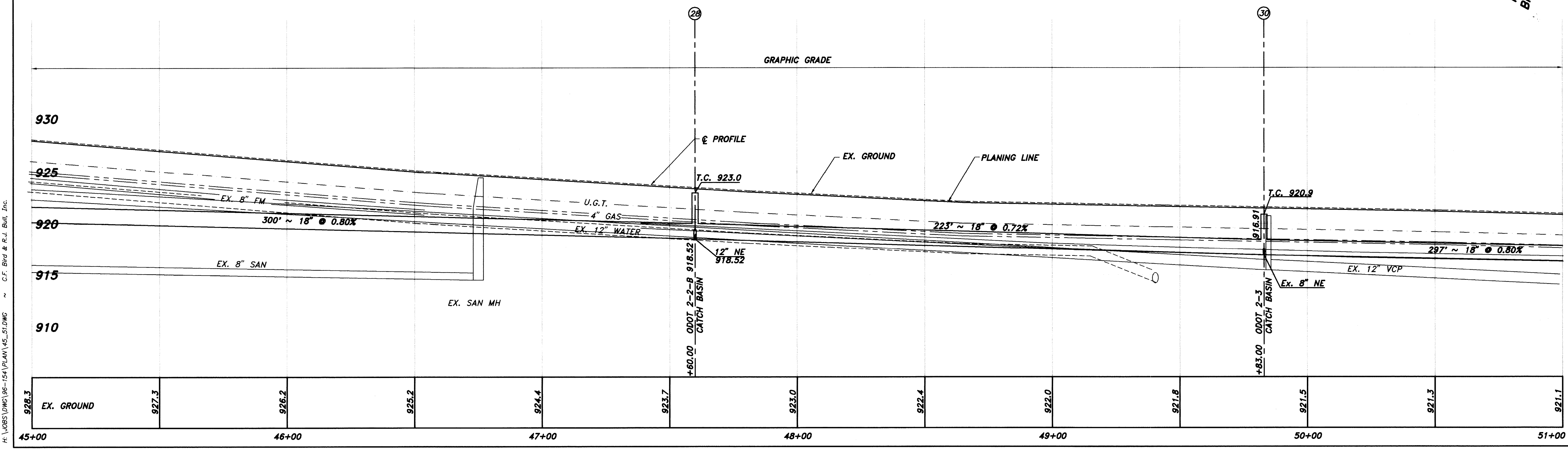
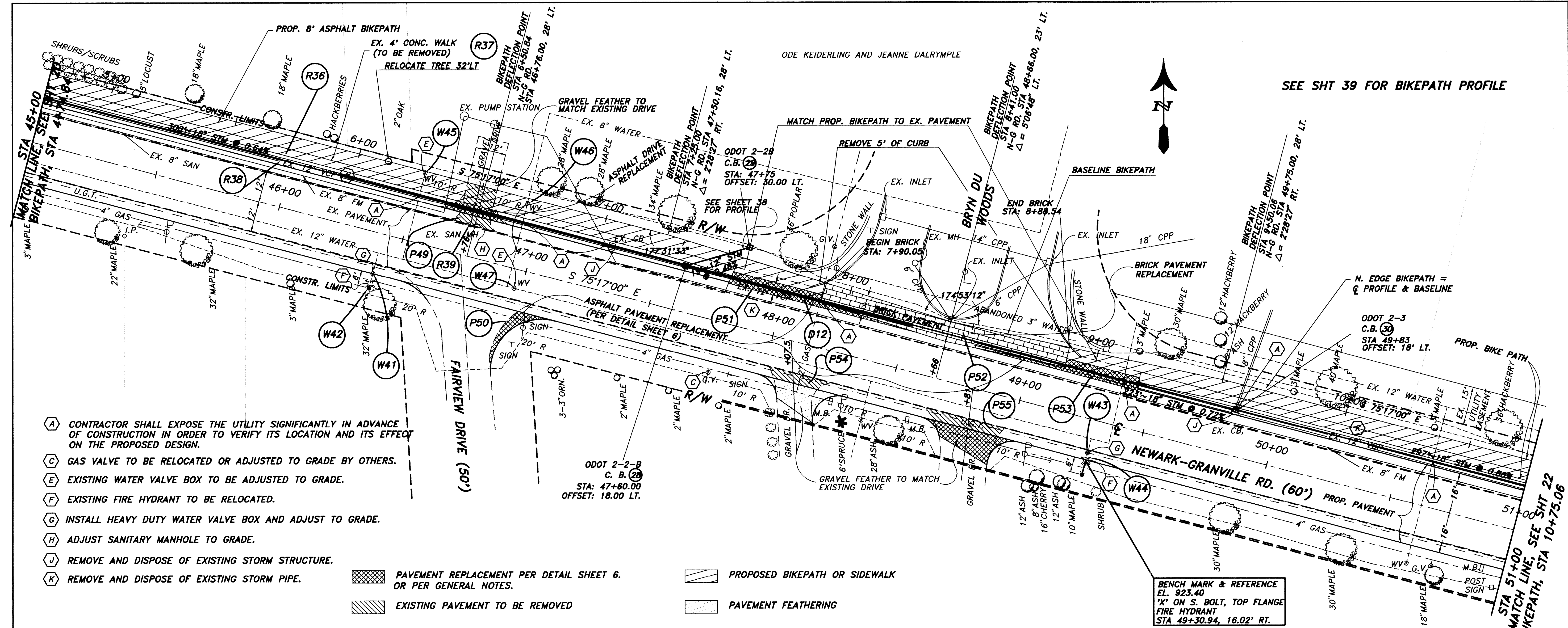
- PAVEMENT REPLACEMENT PER DETAIL SHEET 6. OR PER GENERAL NOTES.
- EXISTING PAVEMENT TO BE REMOVED
- PROPOSED BIKEPATH OR SIDEWALK
- PAVEMENT FEATHERING

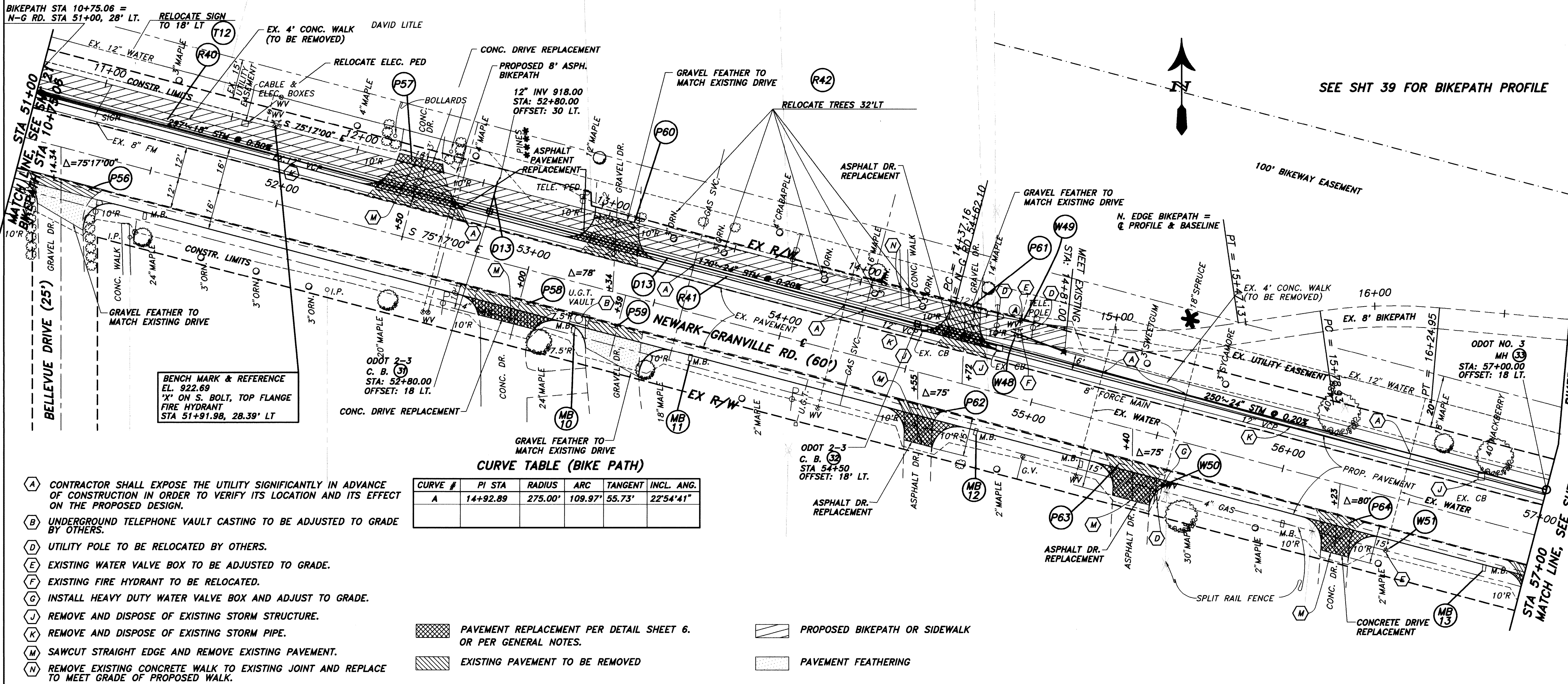
SEE SHT 39, FOR BIKEPATH PROFILE

PLAN & PROFILE
STA 39+00 TO 45+00

NEWARK-GRANVILLE RD.
VILLAGE OF GRANVILLE

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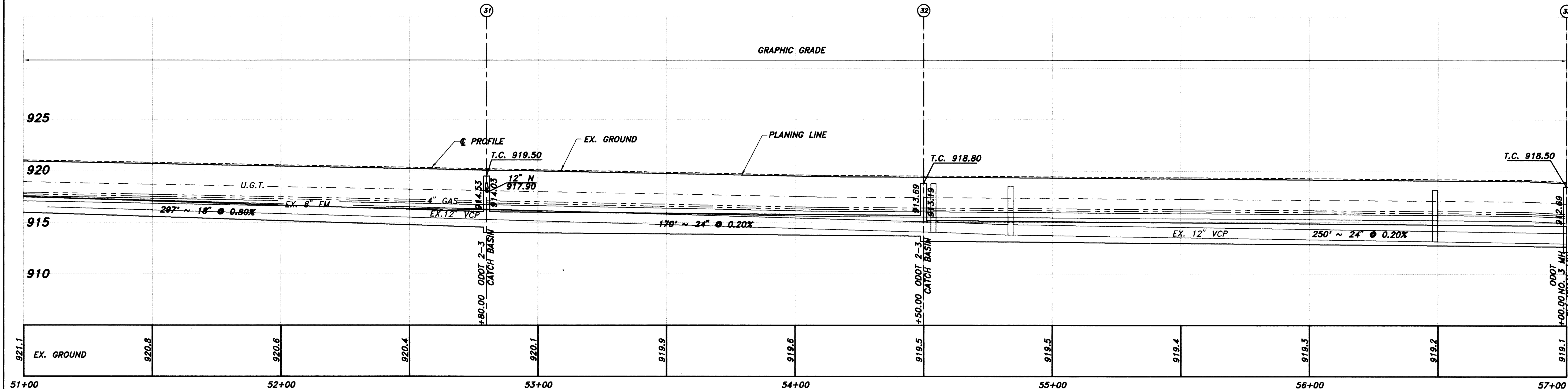


- (A) CONTRACTOR SHALL EXPOSE THE UTILITY SIGNIFICANTLY IN ADVANCE OF CONSTRUCTION IN ORDER TO VERIFY ITS LOCATION AND ITS EFFECT ON THE PROPOSED DESIGN.
- (B) UNDERGROUND TELEPHONE VAULT CASTING TO BE ADJUSTED TO GRADE BY OTHERS.
- (D) UTILITY POLE TO BE RELOCATED BY OTHERS.
- (E) EXISTING WATER VALVE BOX TO BE ADJUSTED TO GRADE.
- (F) EXISTING FIRE HYDRANT TO BE RELOCATED.
- (G) INSTALL HEAVY DUTY WATER VALVE BOX AND ADJUST TO GRADE.
- (J) REMOVE AND DISPOSE OF EXISTING STORM STRUCTURE.
- (K) REMOVE AND DISPOSE OF EXISTING STORM PIPE.
- (M) SAWCUT STRAIGHT EDGE AND REMOVE EXISTING PAVEMENT.
- (N) REMOVE EXISTING CONCRETE WALK TO EXISTING JOINT AND REPLACE TO MEET GRADE OF PROPOSED WALK.

CURVE TABLE (BIKE PATH)

CURVE #	PI STA	RADIUS	ARC	TANGENT	INCL. ANG.
A	14+92.89	275.00'	109.97'	55.73'	22°54'41"

- PAVEMENT REPLACEMENT PER DETAIL SHEET 6. OR PER GENERAL NOTES.
- EXISTING PAVEMENT TO BE REMOVED
- PROPOSED BIKEPATH OR SIDEWALK
- PAVEMENT FEATHERING



SEE SHT 39 FOR BIKEPATH PROFILE

100' BIKEWAY EASEMENT

BIKEPATH STA 16+75

STA 57+00 MATCH LINE, SEE SHT 23

PLAN & PROFILE

STA 51+00 TO 57+00

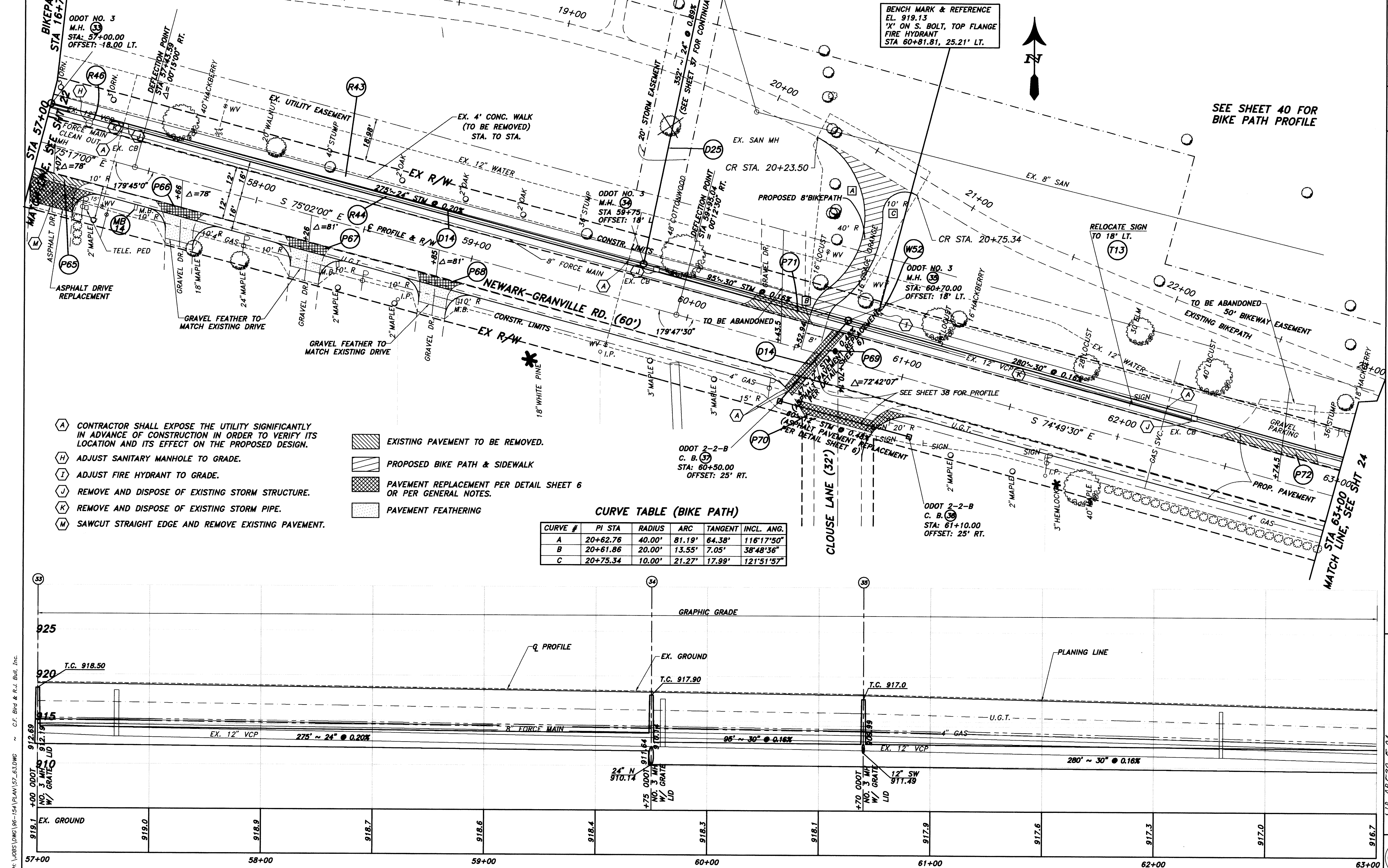
NEWARK-GRANVILLE RD.

VILLAGE OF GRANVILLE

22

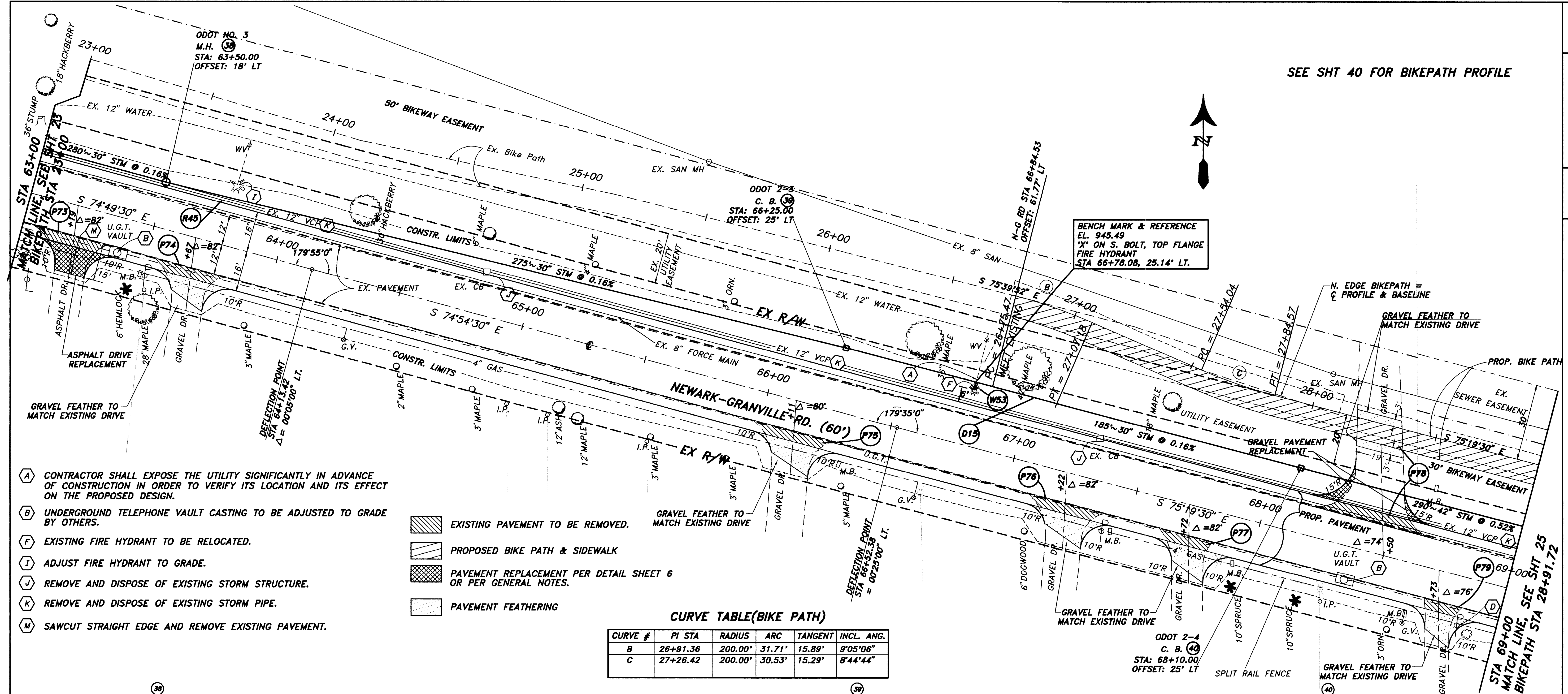
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- (A) CONTRACTOR SHALL EXPOSE THE UTILITY SIGNIFICANTLY IN ADVANCE OF CONSTRUCTION IN ORDER TO VERIFY ITS LOCATION AND ITS EFFECT ON THE PROPOSED DESIGN.
- (H) ADJUST SANITARY MANHOLE TO GRADE.
- (I) ADJUST FIRE HYDRANT TO GRADE.
- (J) REMOVE AND DISPOSE OF EXISTING STORM STRUCTURE.
- (K) REMOVE AND DISPOSE OF EXISTING STORM PIPE.
- (M) SAWCUT STRAIGHT EDGE AND REMOVE EXISTING PAVEMENT.

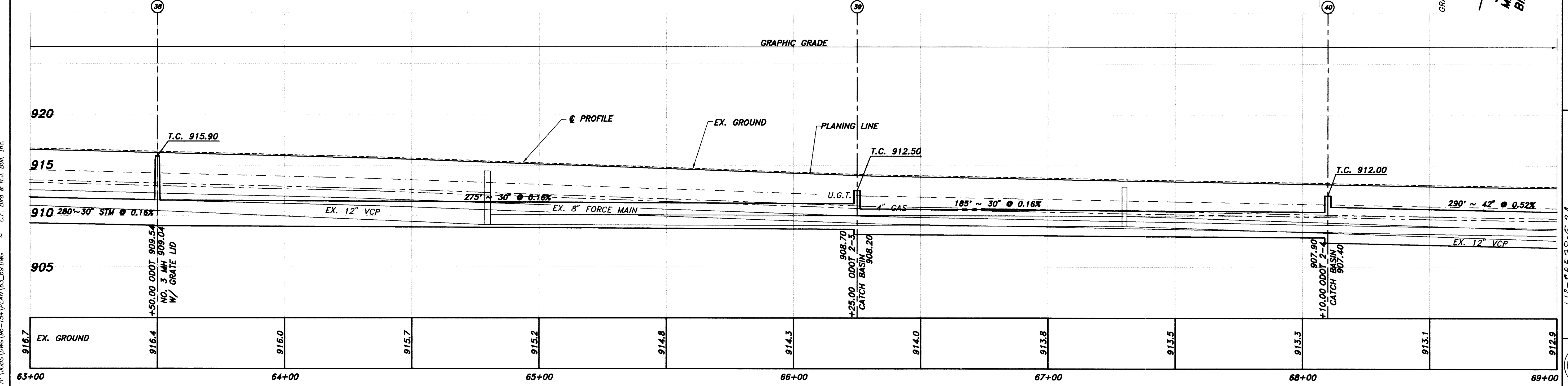
- EXISTING PAVEMENT TO BE REMOVED.
- PROPOSED BIKE PATH & SIDEWALK
- PAVEMENT REPLACEMENT PER DETAIL SHEET 6 OR PER GENERAL NOTES.
- PAVEMENT FEATHERING



- (A) CONTRACTOR SHALL EXPOSE THE UTILITY SIGNIFICANTLY IN ADVANCE OF CONSTRUCTION IN ORDER TO VERIFY ITS LOCATION AND ITS EFFECT ON THE PROPOSED DESIGN.
- (B) UNDERGROUND TELEPHONE VAULT CASTING TO BE ADJUSTED TO GRADE BY OTHERS.
- (F) EXISTING FIRE HYDRANT TO BE RELOCATED.
- (I) ADJUST FIRE HYDRANT TO GRADE.
- (J) REMOVE AND DISPOSE OF EXISTING STORM STRUCTURE.
- (K) REMOVE AND DISPOSE OF EXISTING STORM PIPE.
- (M) SAWCUT STRAIGHT EDGE AND REMOVE EXISTING PAVEMENT.

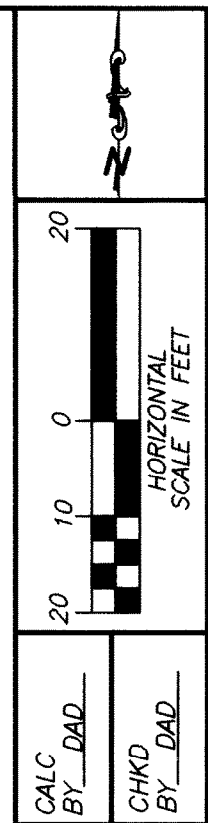
- EXISTING PAVEMENT TO BE REMOVED.
- PROPOSED BIKE PATH & SIDEWALK
- PAVEMENT REPLACEMENT PER DETAIL SHEET 6 OR PER GENERAL NOTES.
- PAVEMENT FEATHERING

CURVE TABLE(BIKE PATH)						
CURVE #	PI STA	RADIUS	ARC	TANGENT	INCL. ANG.	
B	26+91.36	200.00'	31.71'	15.89'	9°05'06"	
C	27+26.42	200.00'	30.53'	15.29'	8°44'44"	



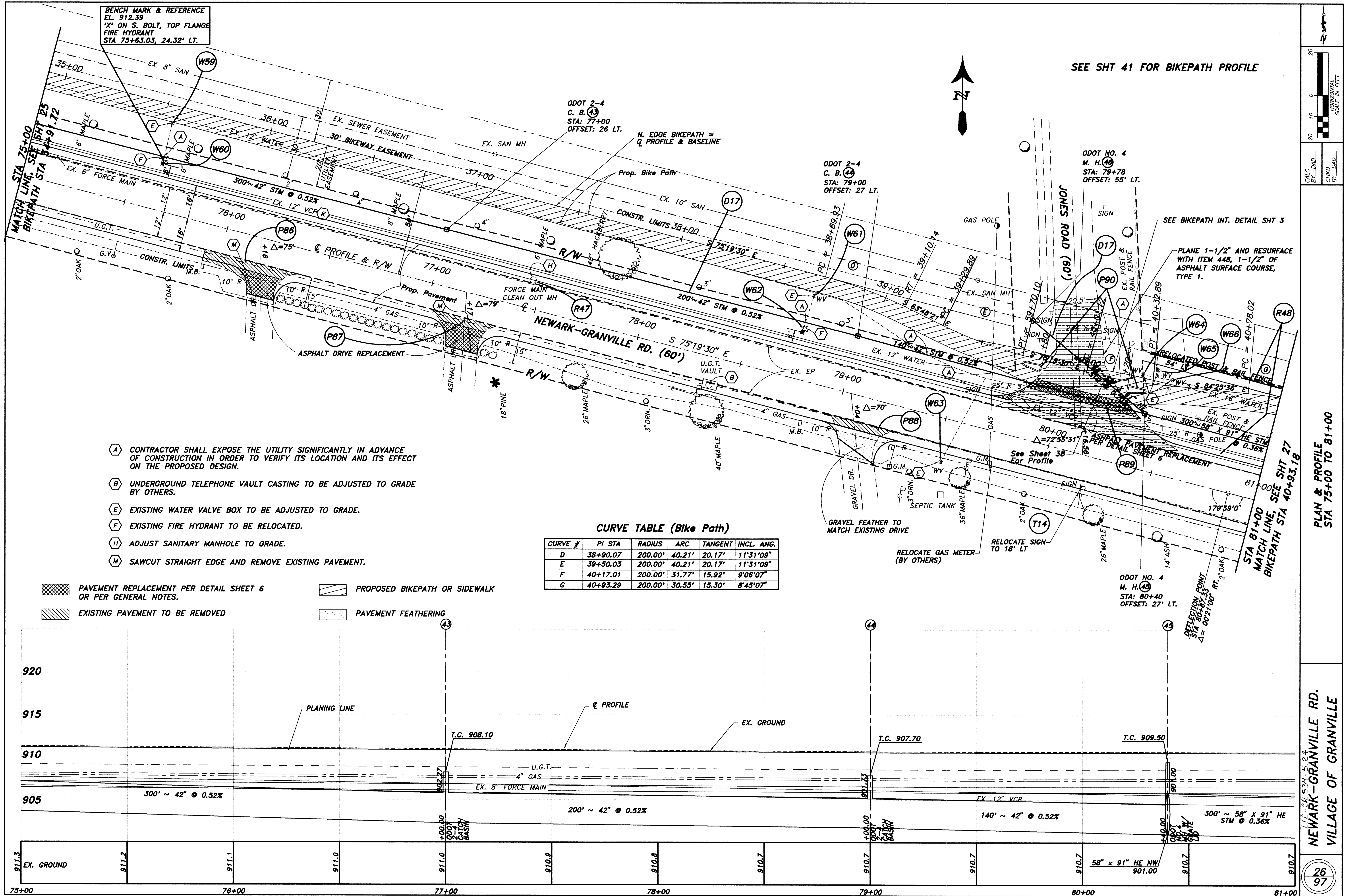
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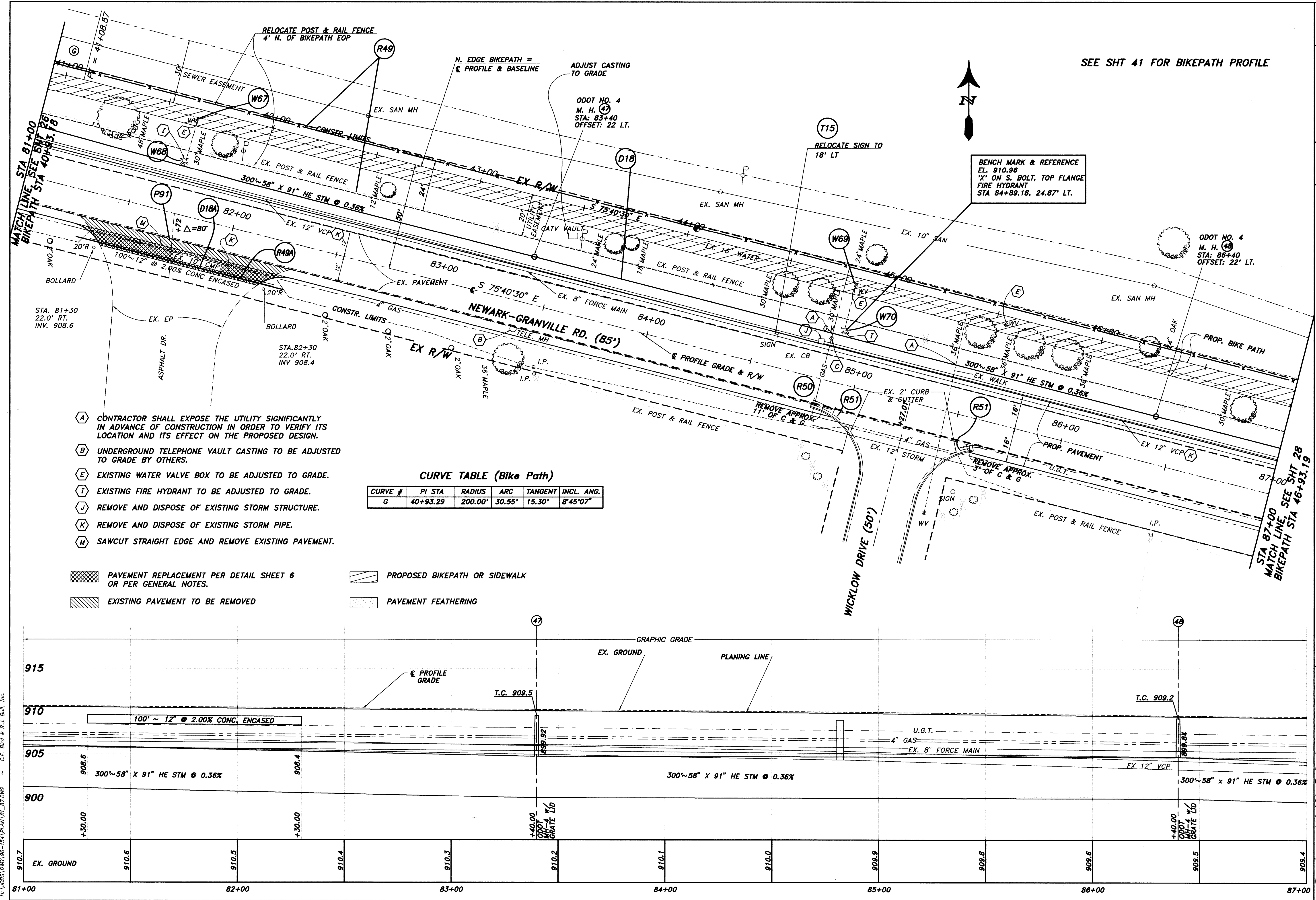
SEE SHT 40 FOR BIKEPATH PROFILE



PLAN & PROFILE
STA 63+00 TO 69+00

NEWARK-GRANVILLE RD.
VILLAGE OF GRANVILLE





- (A) CONTRACTOR SHALL EXPOSE THE UTILITY SIGNIFICANTLY IN ADVANCE OF CONSTRUCTION IN ORDER TO VERIFY ITS LOCATION AND ITS EFFECT ON THE PROPOSED DESIGN.
- (B) UNDERGROUND TELEPHONE VAULT CASTING TO BE ADJUSTED TO GRADE BY OTHERS.
- (E) EXISTING WATER VALVE BOX TO BE ADJUSTED TO GRADE.
- (I) EXISTING FIRE HYDRANT TO BE ADJUSTED TO GRADE.
- (J) REMOVE AND DISPOSE OF EXISTING STORM STRUCTURE.
- (K) REMOVE AND DISPOSE OF EXISTING STORM PIPE.
- (M) SAWCUT STRAIGHT EDGE AND REMOVE EXISTING PAVEMENT.

CURVE TABLE (Bike Path)					
CURVE #	PI STA	RADIUS	ARC	TANGENT	INCL. ANG.
G	40+93.29	200.00'	30.55'	15.30'	8°45'07"

- PAVEMENT REPLACEMENT PER DETAIL SHEET 6 OR PER GENERAL NOTES.
- PROPOSED BIKEPATH OR SIDEWALK
- EXISTING PAVEMENT TO BE REMOVED
- PAVEMENT FEATHERING

SEE SHT 41 FOR BIKEPATH PROFILE

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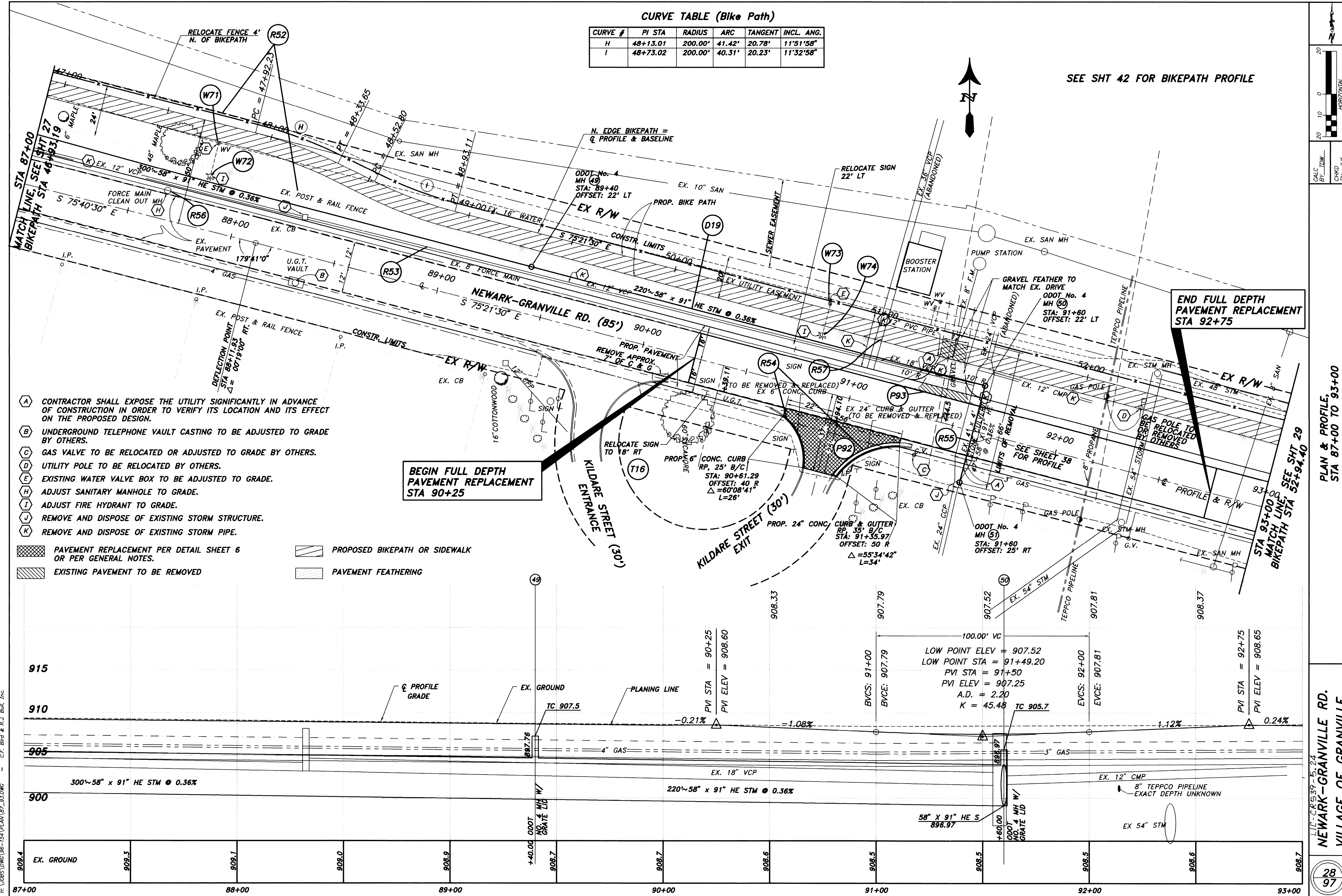
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HORIZONTAL SCALE IN FEET

PLAN & PROFILE, STA 81+00 TO 87+00

NEWARK-GRANVILLE RD. VILLAGE OF GRANVILLE

2797



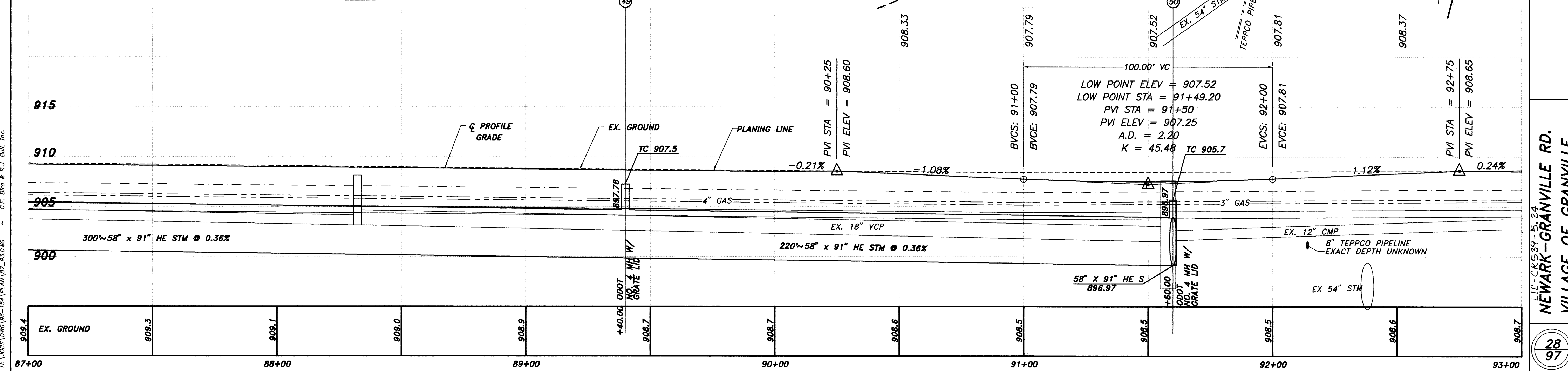
CURVE TABLE (Bike Path)

CURVE #	PI STA	RADIUS	ARC	TANGENT	INCL. ANG.
H	48+13.01	200.00'	41.42'	20.78'	11°51'58"
I	48+73.02	200.00'	40.31'	20.23'	11°32'58"

SEE SHT 42 FOR BIKEPATH PROFILE

- A CONTRACTOR SHALL EXPOSE THE UTILITY SIGNIFICANTLY IN ADVANCE OF CONSTRUCTION IN ORDER TO VERIFY ITS LOCATION AND ITS EFFECT ON THE PROPOSED DESIGN.
- B UNDERGROUND TELEPHONE VAULT CASTING TO BE ADJUSTED TO GRADE BY OTHERS.
- C GAS VALVE TO BE RELOCATED OR ADJUSTED TO GRADE BY OTHERS.
- D UTILITY POLE TO BE RELOCATED BY OTHERS.
- E EXISTING WATER VALVE BOX TO BE ADJUSTED TO GRADE.
- H ADJUST SANITARY MANHOLE TO GRADE.
- I ADJUST FIRE HYDRANT TO GRADE.
- L REMOVE AND DISPOSE OF EXISTING STORM STRUCTURE.
- K REMOVE AND DISPOSE OF EXISTING STORM PIPE.

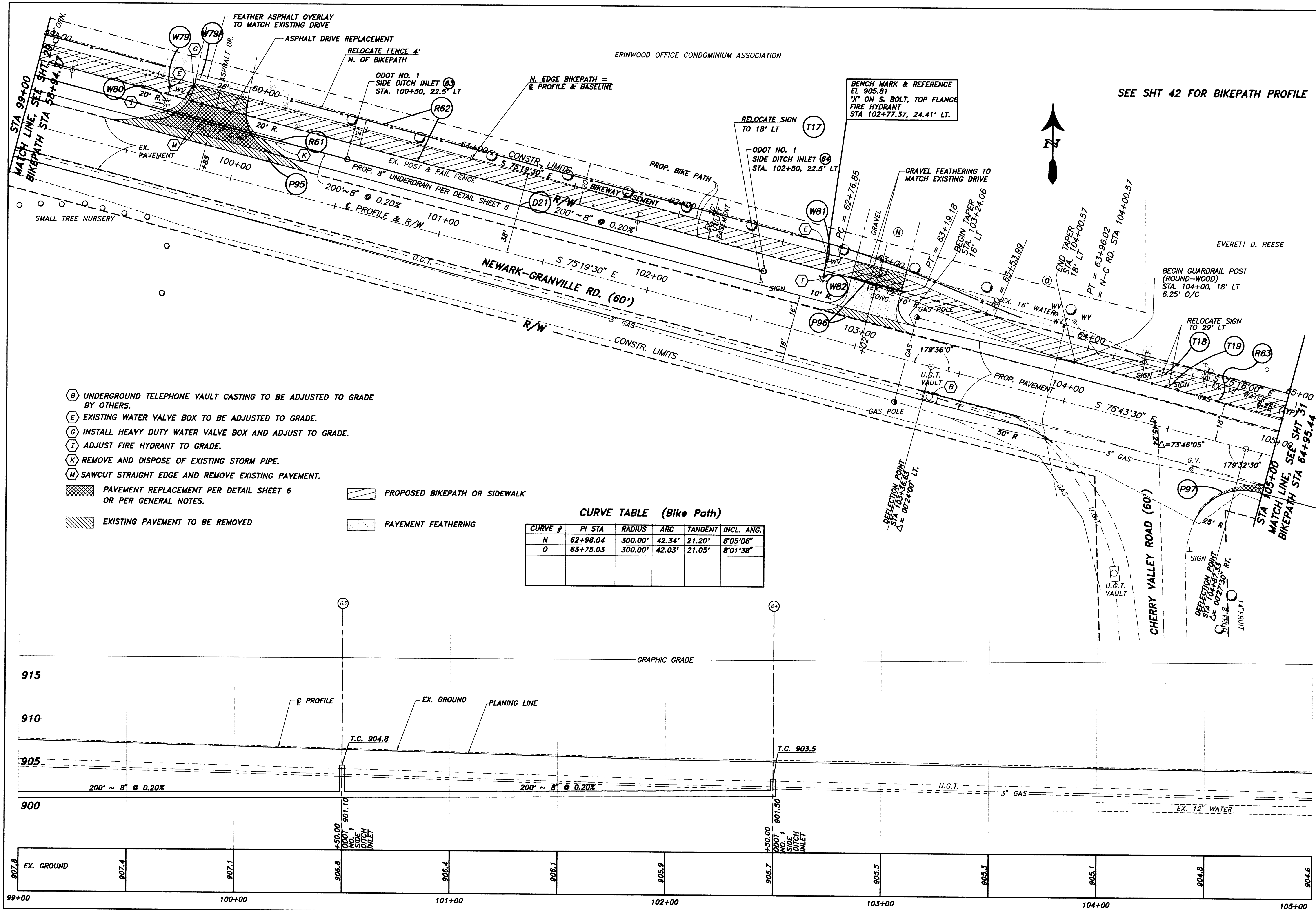
- PAVEMENT REPLACEMENT PER DETAIL SHEET 6 OR PER GENERAL NOTES.
- EXISTING PAVEMENT TO BE REMOVED
- PROPOSED BIKEPATH OR SIDEWALK
- PAVEMENT FEATHERING



PLAN & PROFILE
STA 87+00 TO 93+00

NEWARK-GRANVILLE RD.
VILLAGE OF GRANVILLE

28
97



CURVE TABLE (Bike Path)

CURVE #	PI STA	RADIUS	ARC	TANGENT	INCL. ANG.
N	62+98.04	300.00'	42.34'	21.20'	8°05'08"
O	63+75.03	300.00'	42.03'	21.05'	8°01'38"

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SCALE IN FEET

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20 10 0

CALC. BY: JOW

CHKD. BY: JUK

PLAN & PROFILE,

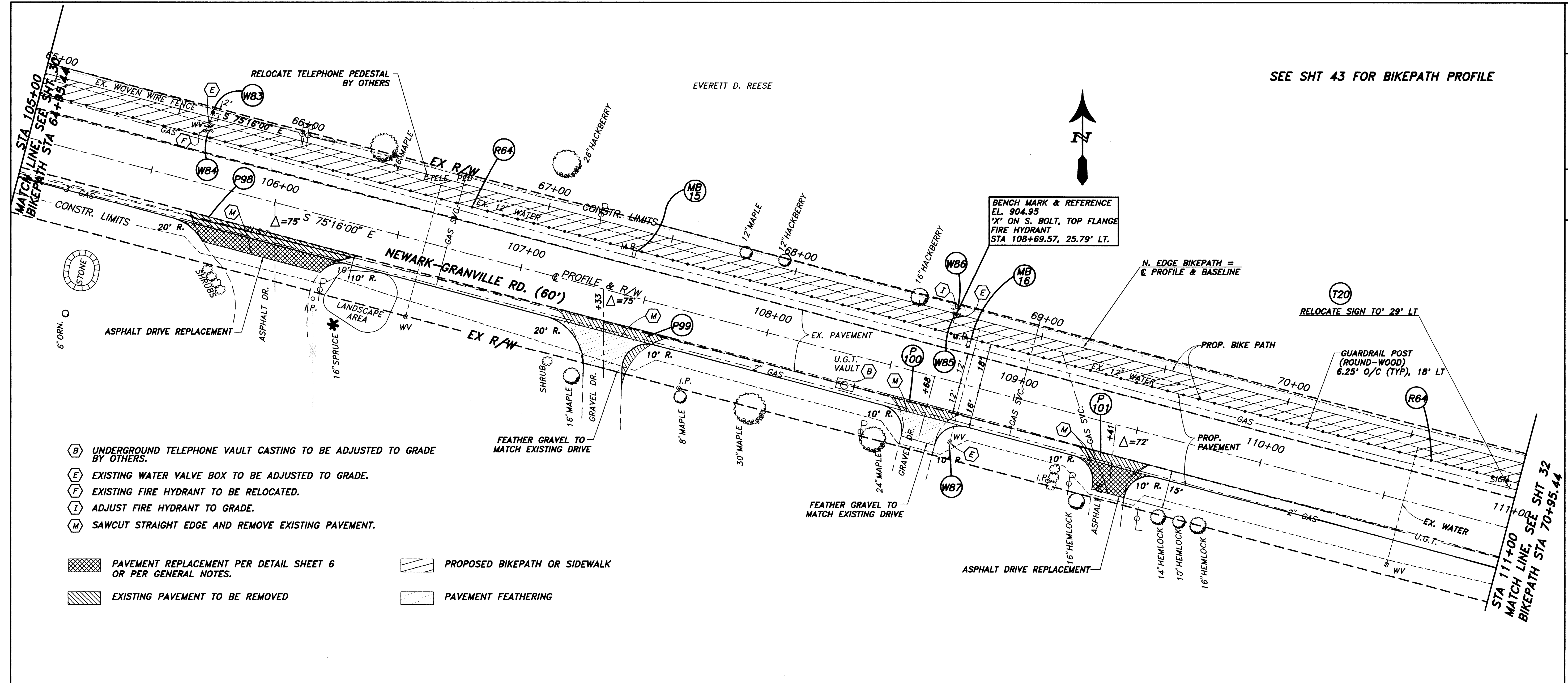
STA 99+00 TO 105+00

NEWARK-GRANVILLE RD.

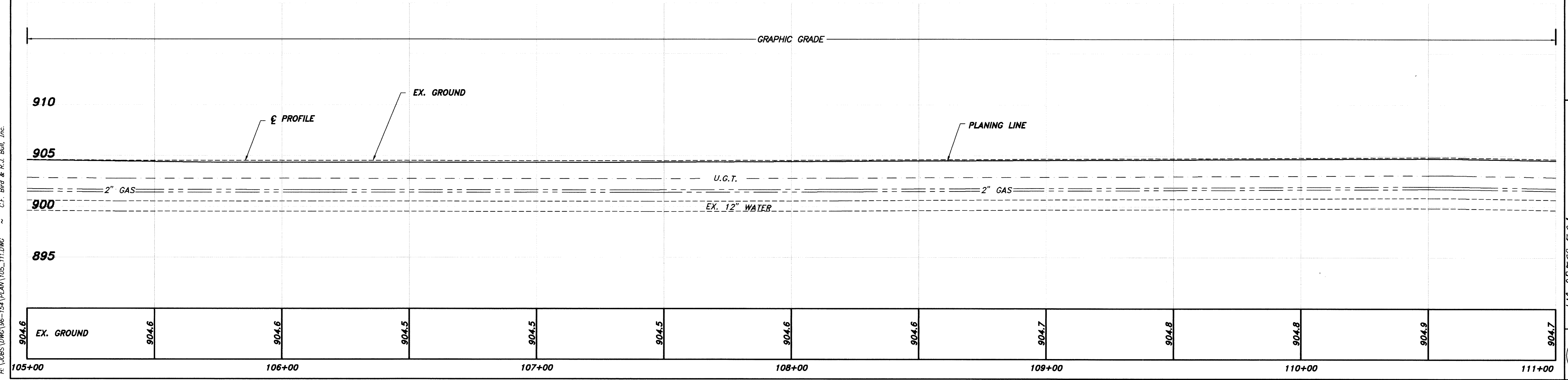
VILLAGE OF GRANVILLE

30

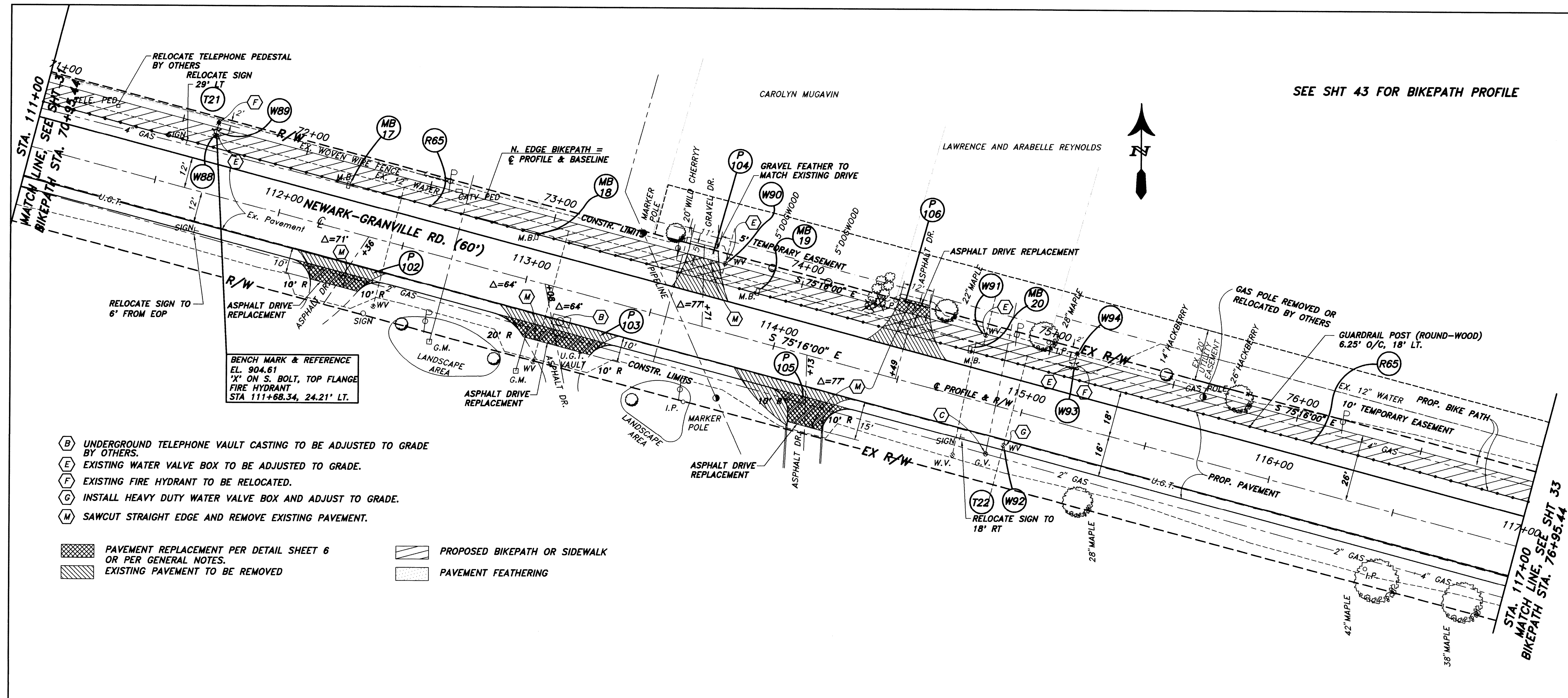
97



- (B) UNDERGROUND TELEPHONE VAULT CASTING TO BE ADJUSTED TO GRADE BY OTHERS.
 - (E) EXISTING WATER VALVE BOX TO BE ADJUSTED TO GRADE.
 - (F) EXISTING FIRE HYDRANT TO BE RELOCATED.
 - (I) ADJUST FIRE HYDRANT TO GRADE.
 - (M) SAWCUT STRAIGHT EDGE AND REMOVE EXISTING PAVEMENT.
- PAVEMENT REPLACEMENT PER DETAIL SHEET 6 OR PER GENERAL NOTES.
 - PROPOSED BIKEPATH OR SIDEWALK
 - EXISTING PAVEMENT TO BE REMOVED
 - PAVEMENT FEATHERING



SEE SHT 43 FOR BIKEPATH PROFILE

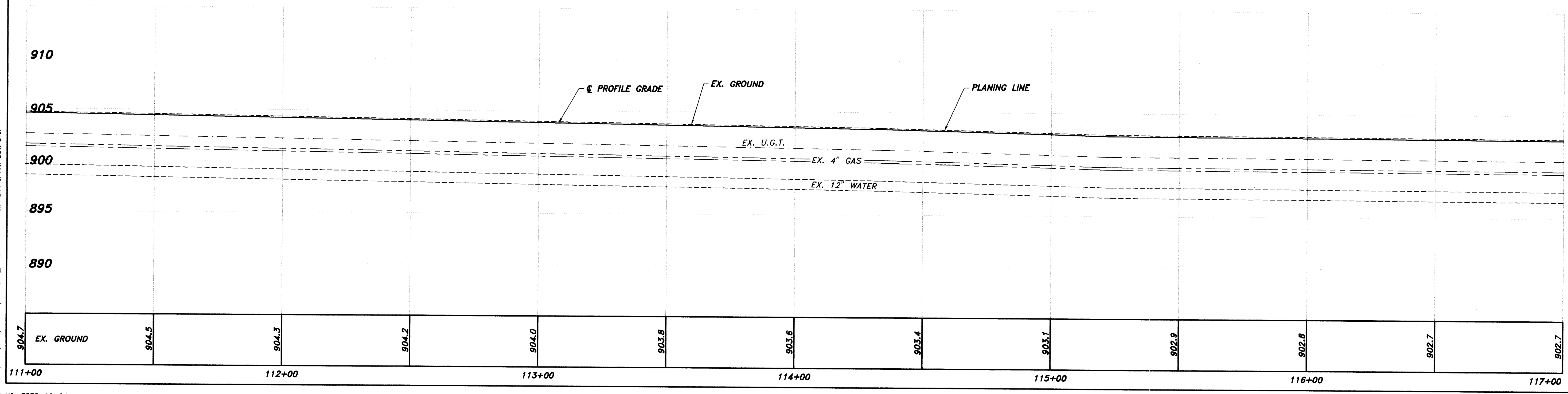
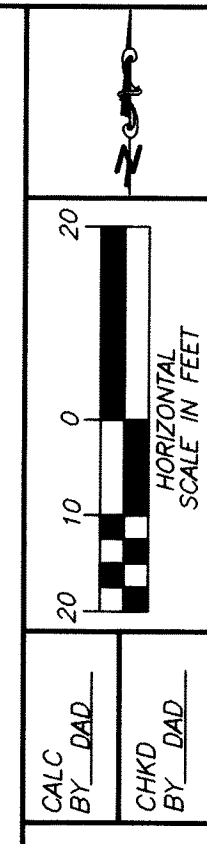


- (B) UNDERGROUND TELEPHONE VAULT CASTING TO BE ADJUSTED TO GRADE BY OTHERS.
- (E) EXISTING WATER VALVE BOX TO BE ADJUSTED TO GRADE.
- (F) EXISTING FIRE HYDRANT TO BE RELOCATED.
- (G) INSTALL HEAVY DUTY WATER VALVE BOX AND ADJUST TO GRADE.
- (M) SAWCUT STRAIGHT EDGE AND REMOVE EXISTING PAVEMENT.

- PAVEMENT REPLACEMENT PER DETAIL SHEET 6 OR PER GENERAL NOTES.
- EXISTING PAVEMENT TO BE REMOVED
- PROPOSED BIKEPATH OR SIDEWALK
- PAVEMENT FEATHERING

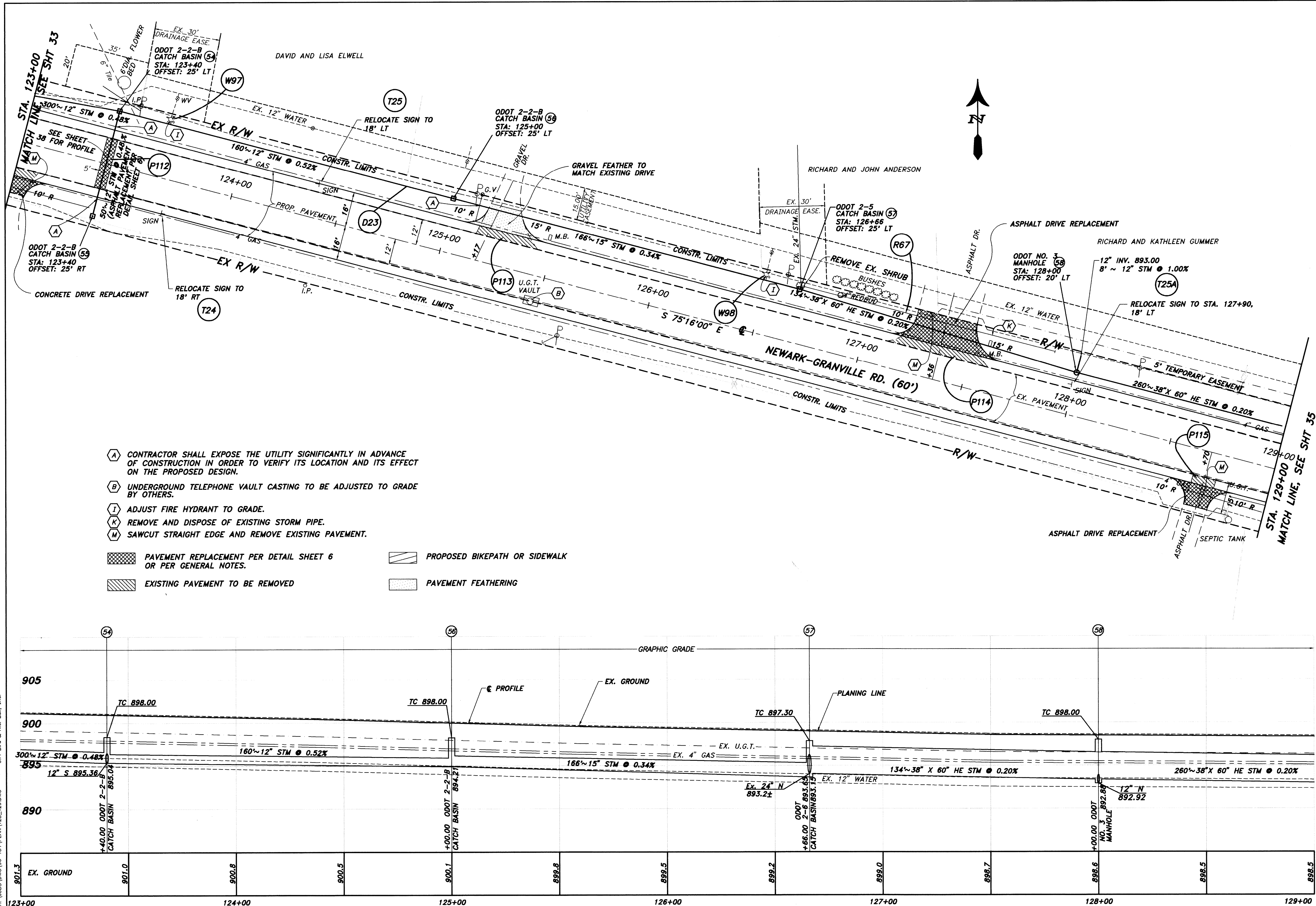
BENCH MARK & REFERENCE
 EL. 904.61
 'X' ON S. BOLT, TOP FLANGE
 FIRE HYDRANT
 STA 111+68.34, 24.21' LT.

SEE SHT 43 FOR BIKEPATH PROFILE

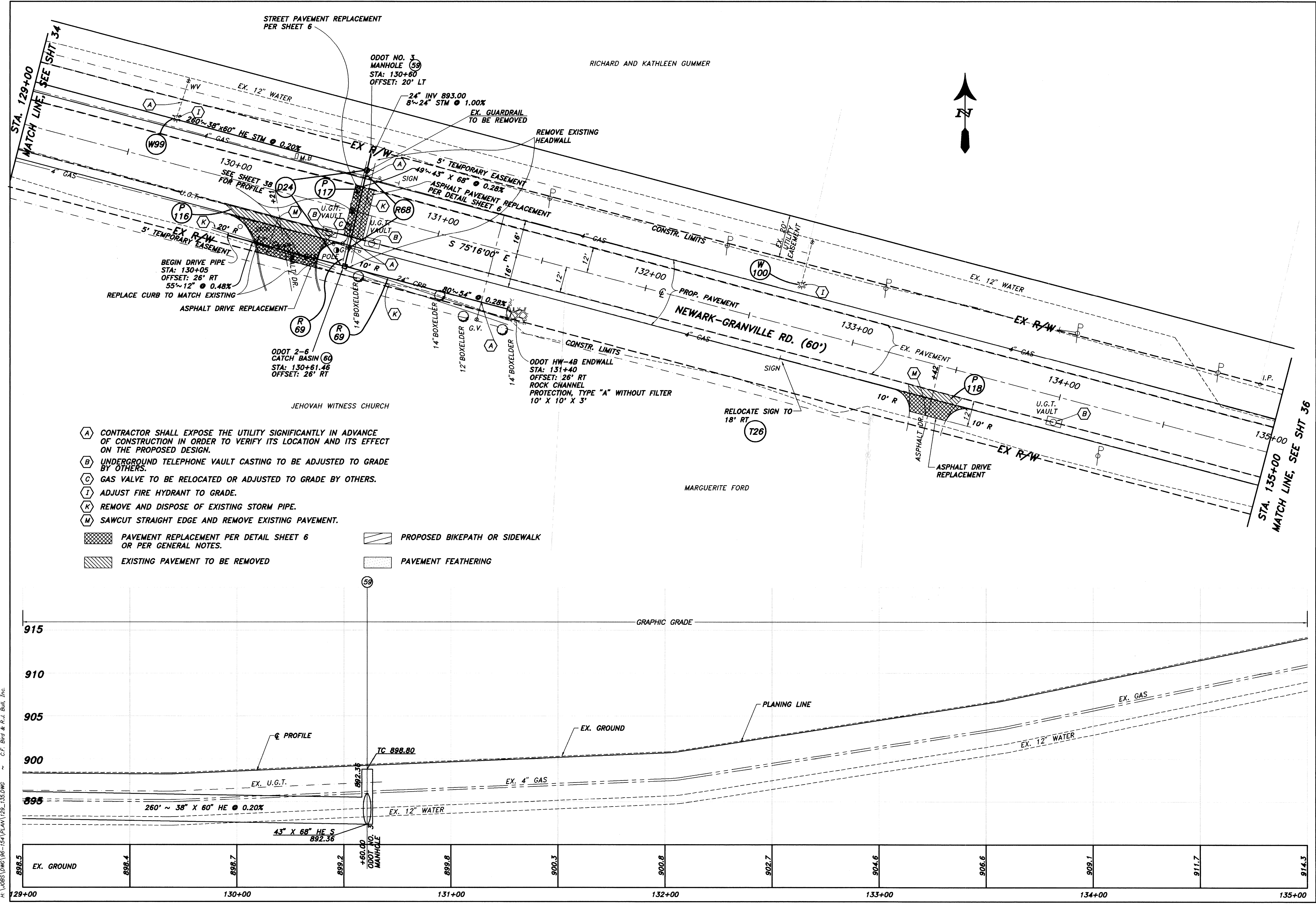


PLAN & PROFILE,
 STA 111+00 TO 117+00

NEWARK-GRANVILLE RD.
 VILLAGE OF GRANVILLE



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CALC BY: DAD

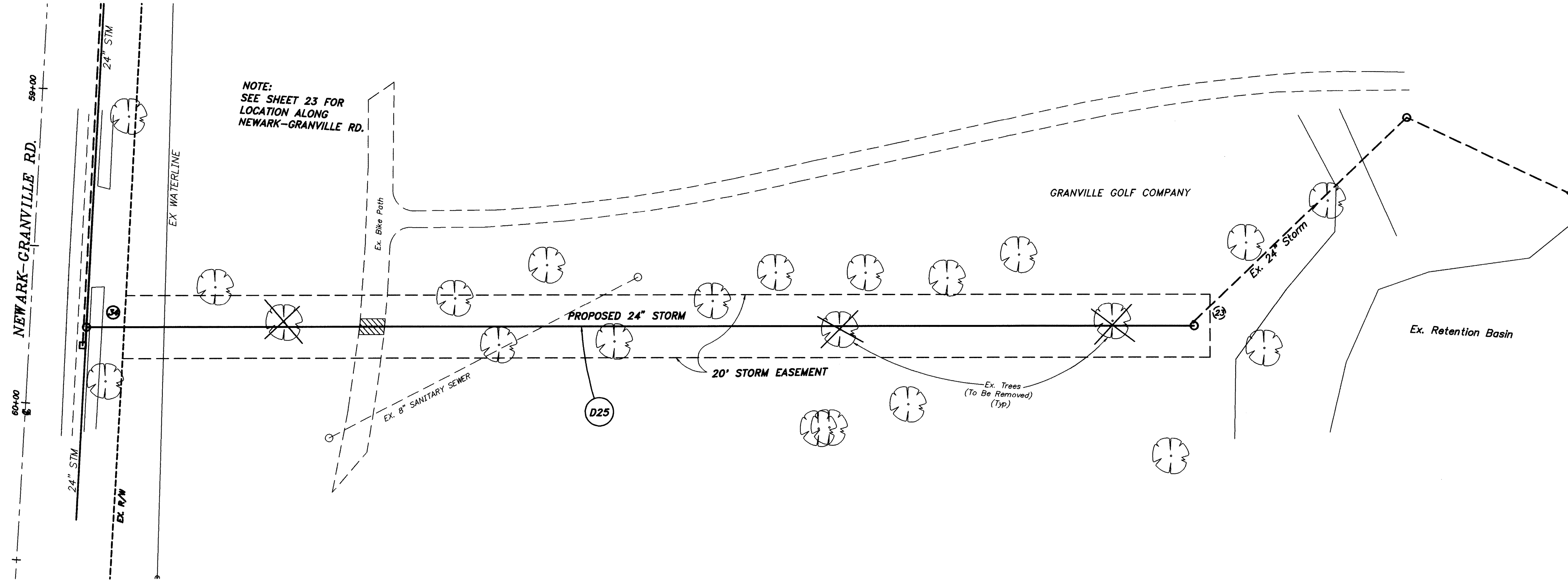
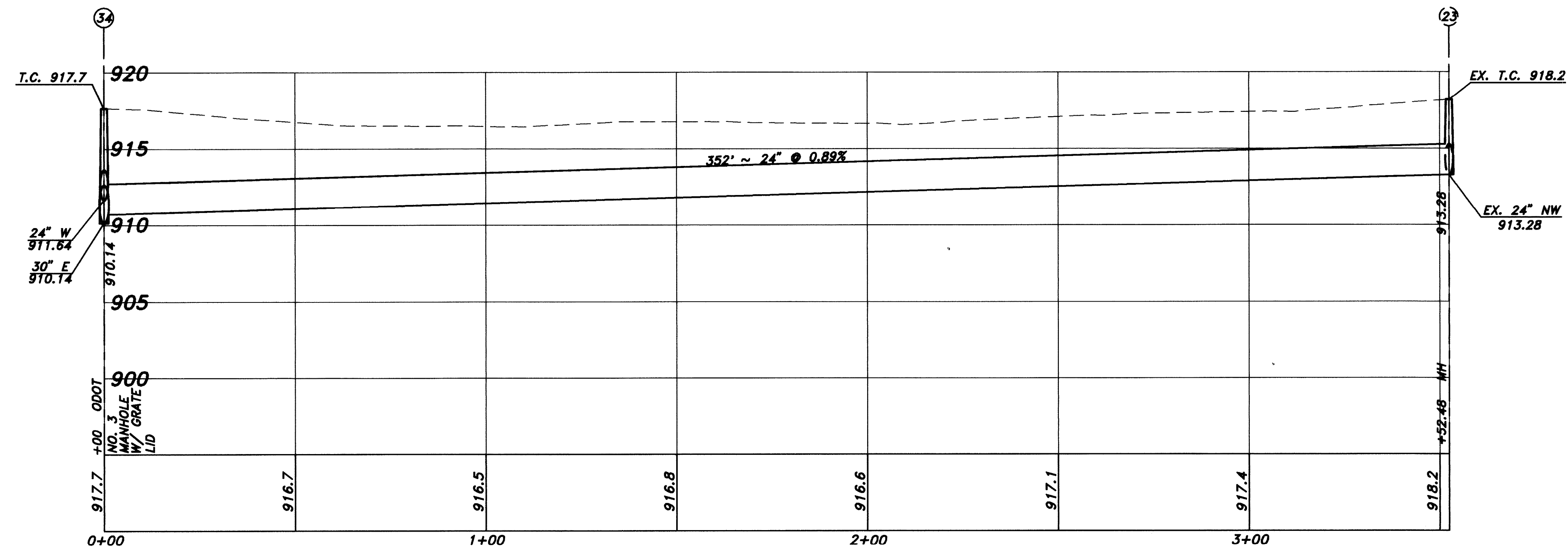
CHKD BY: DAD

PLAN & PROFILE, STA. 129+00 TO 135+00

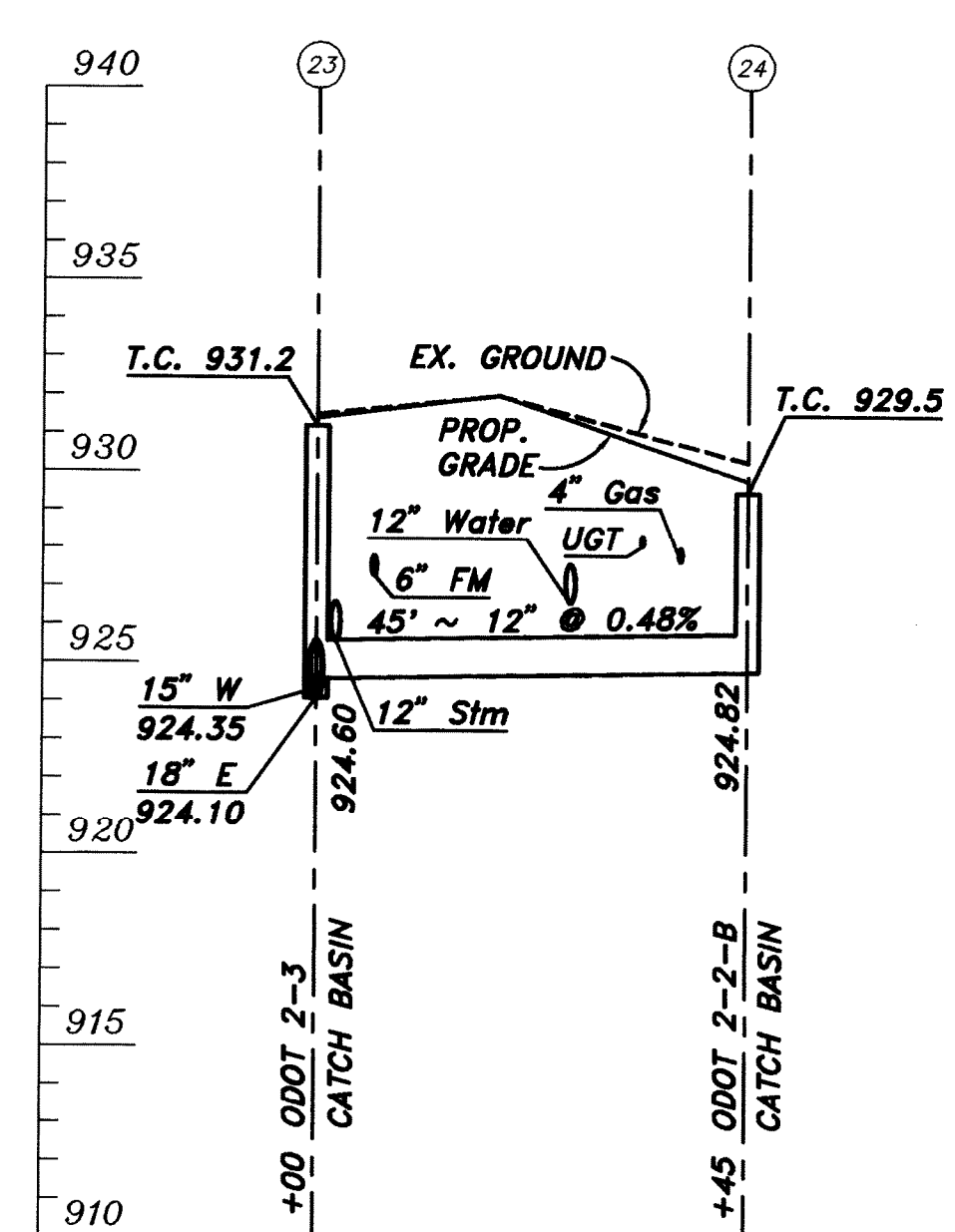
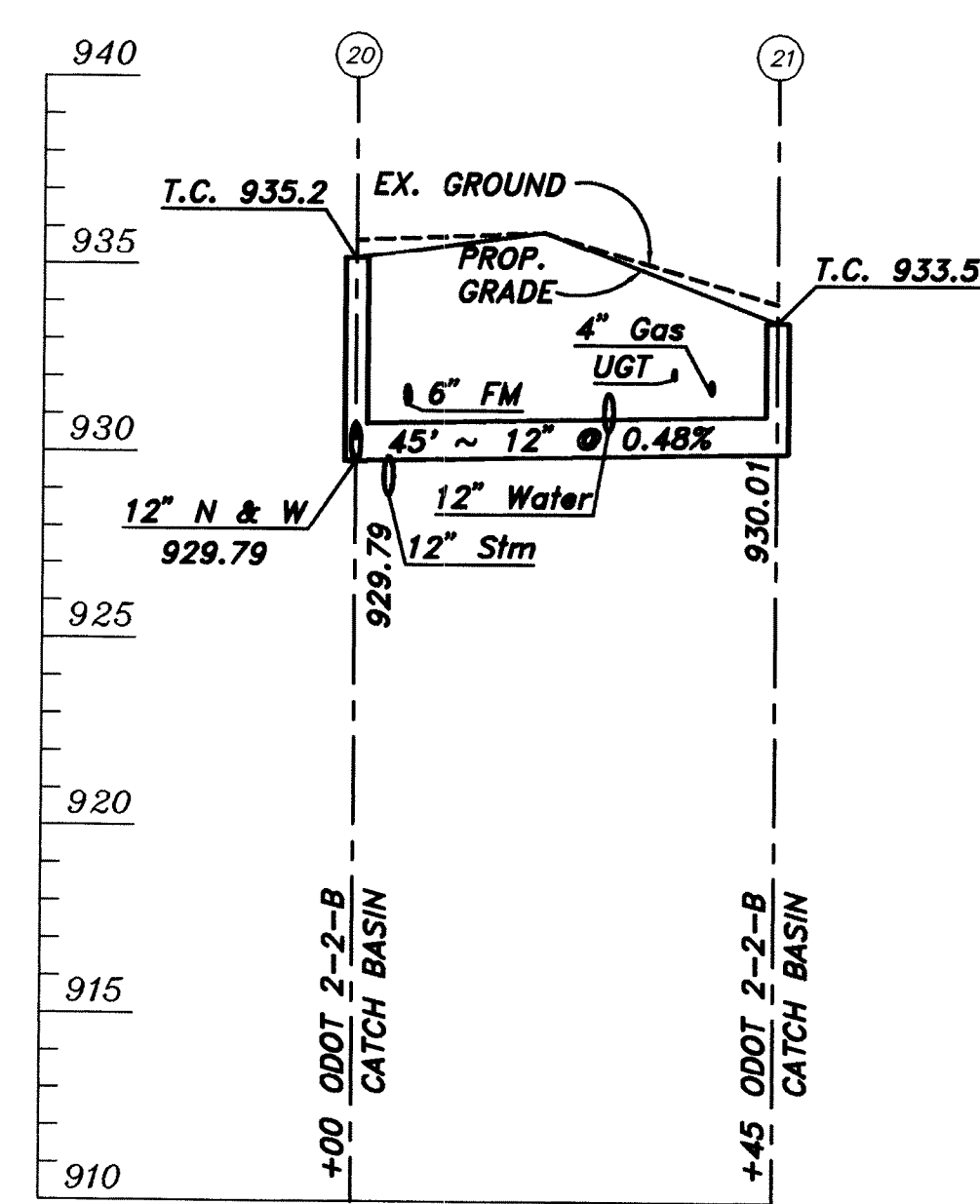
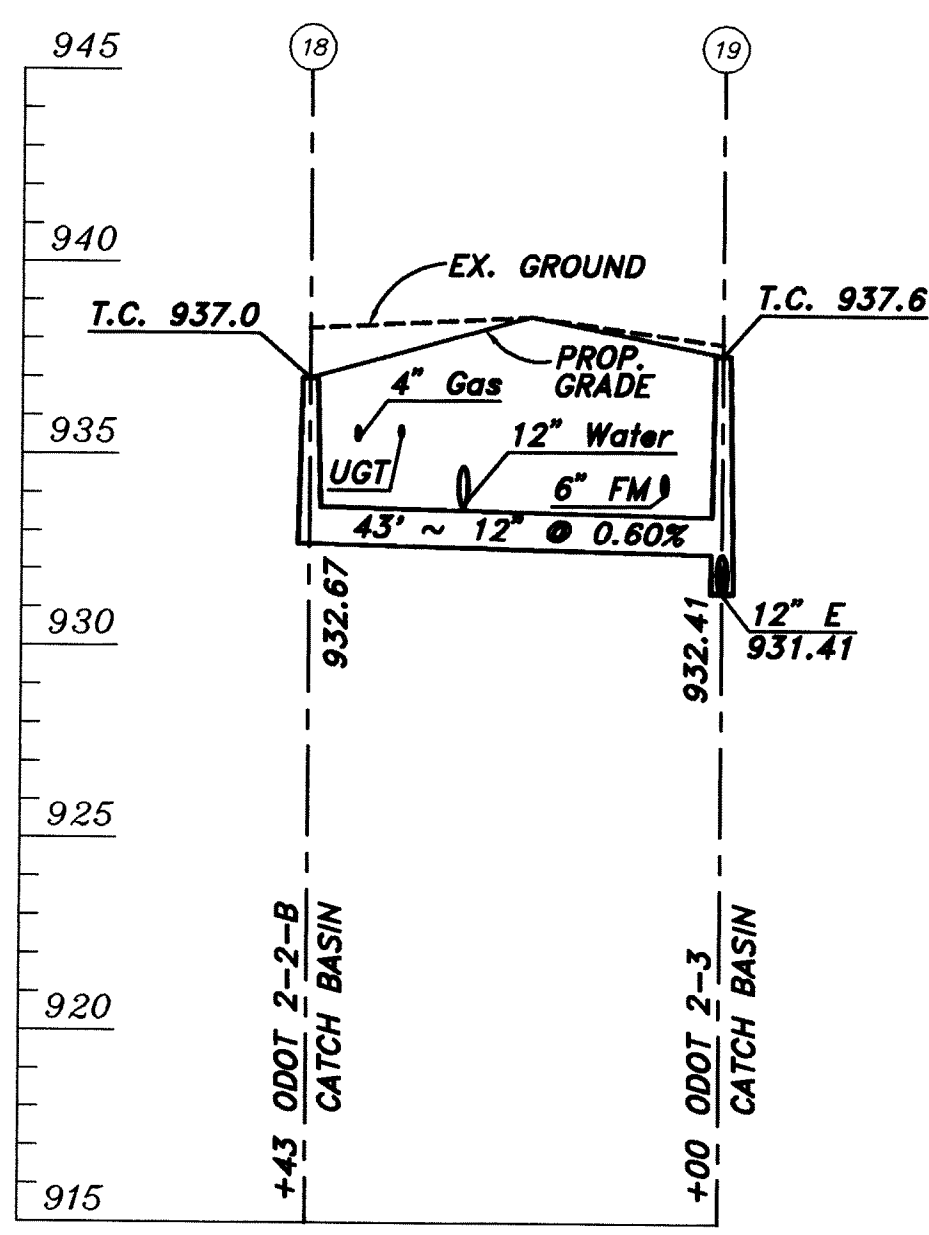
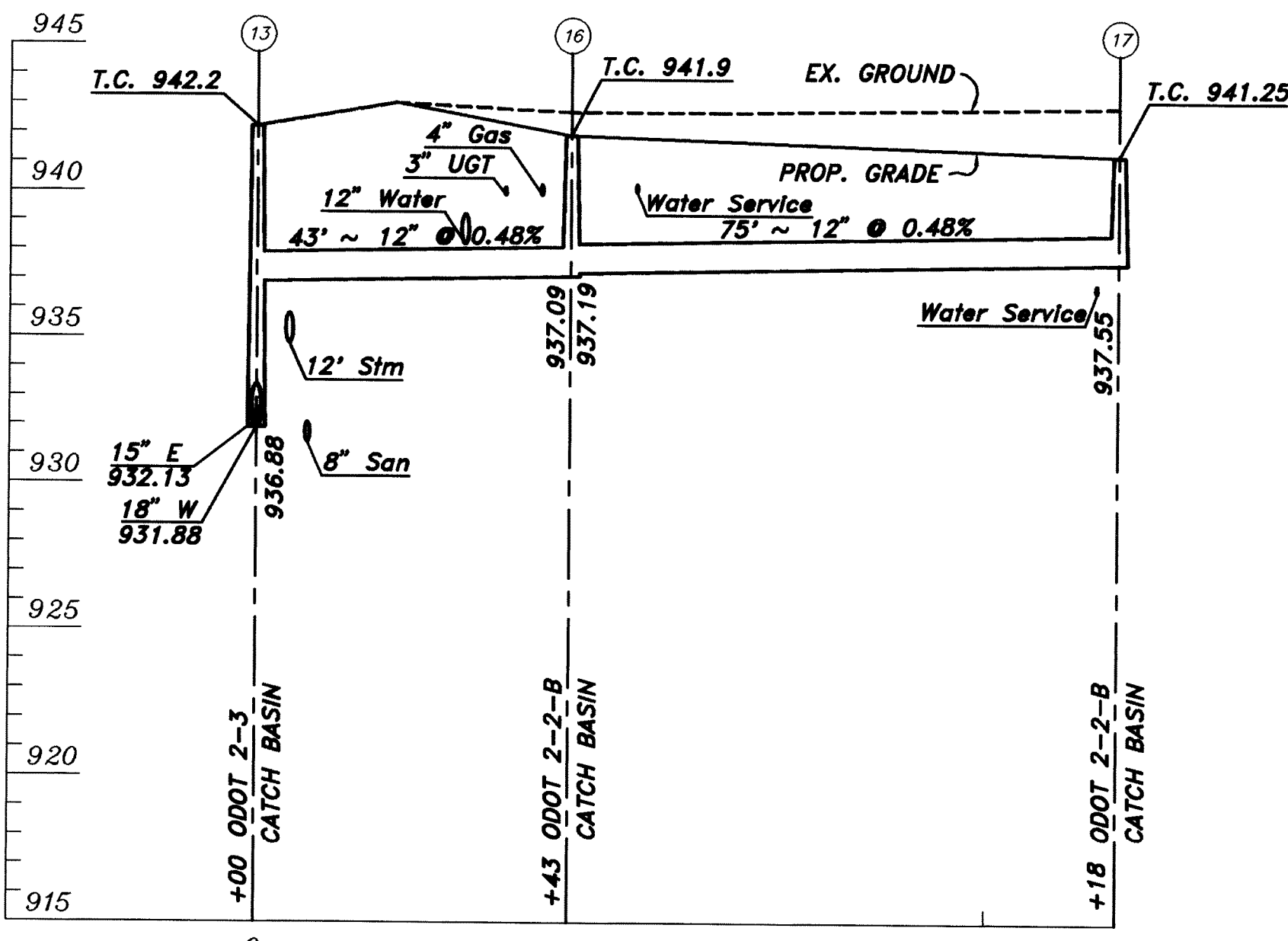
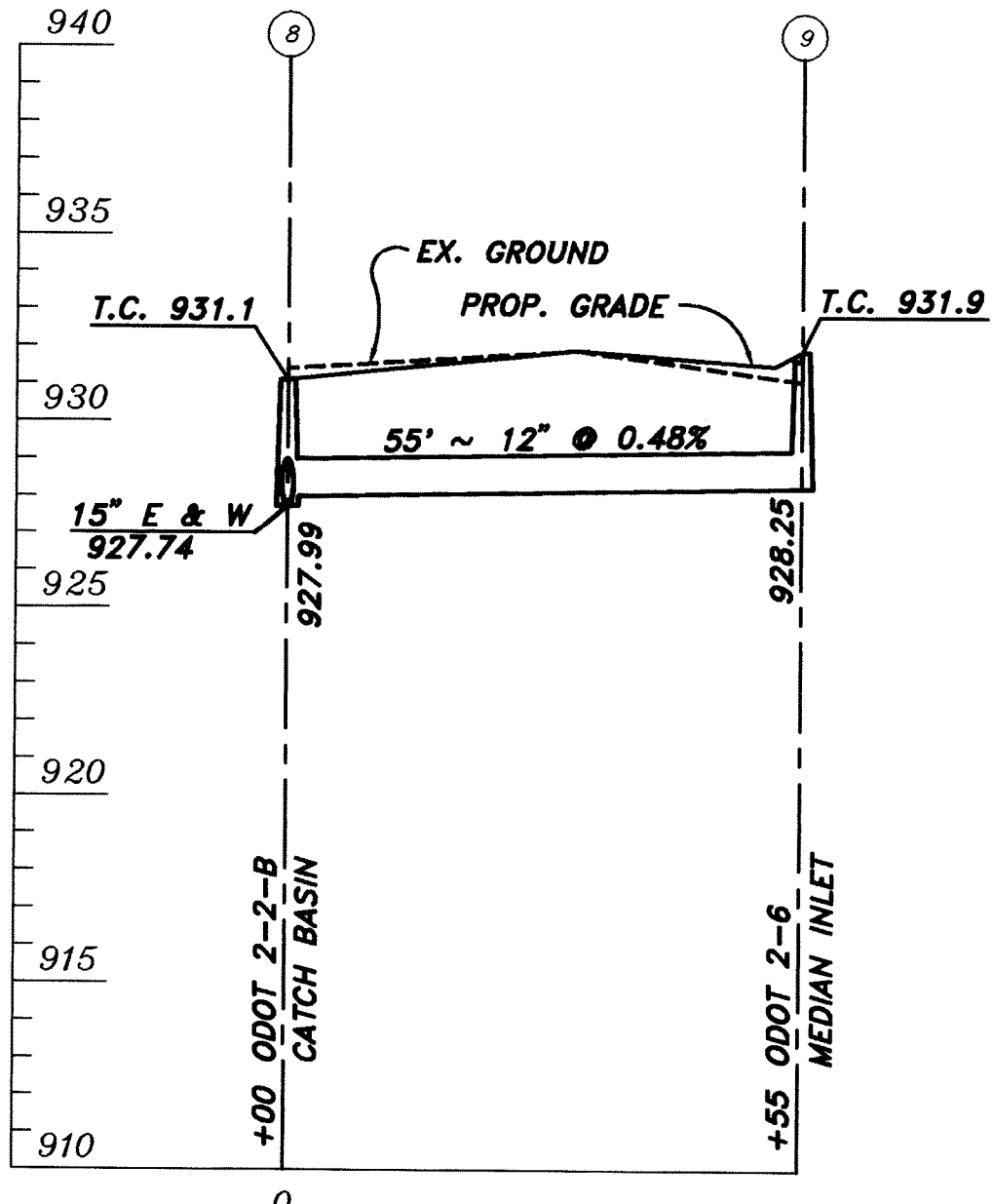
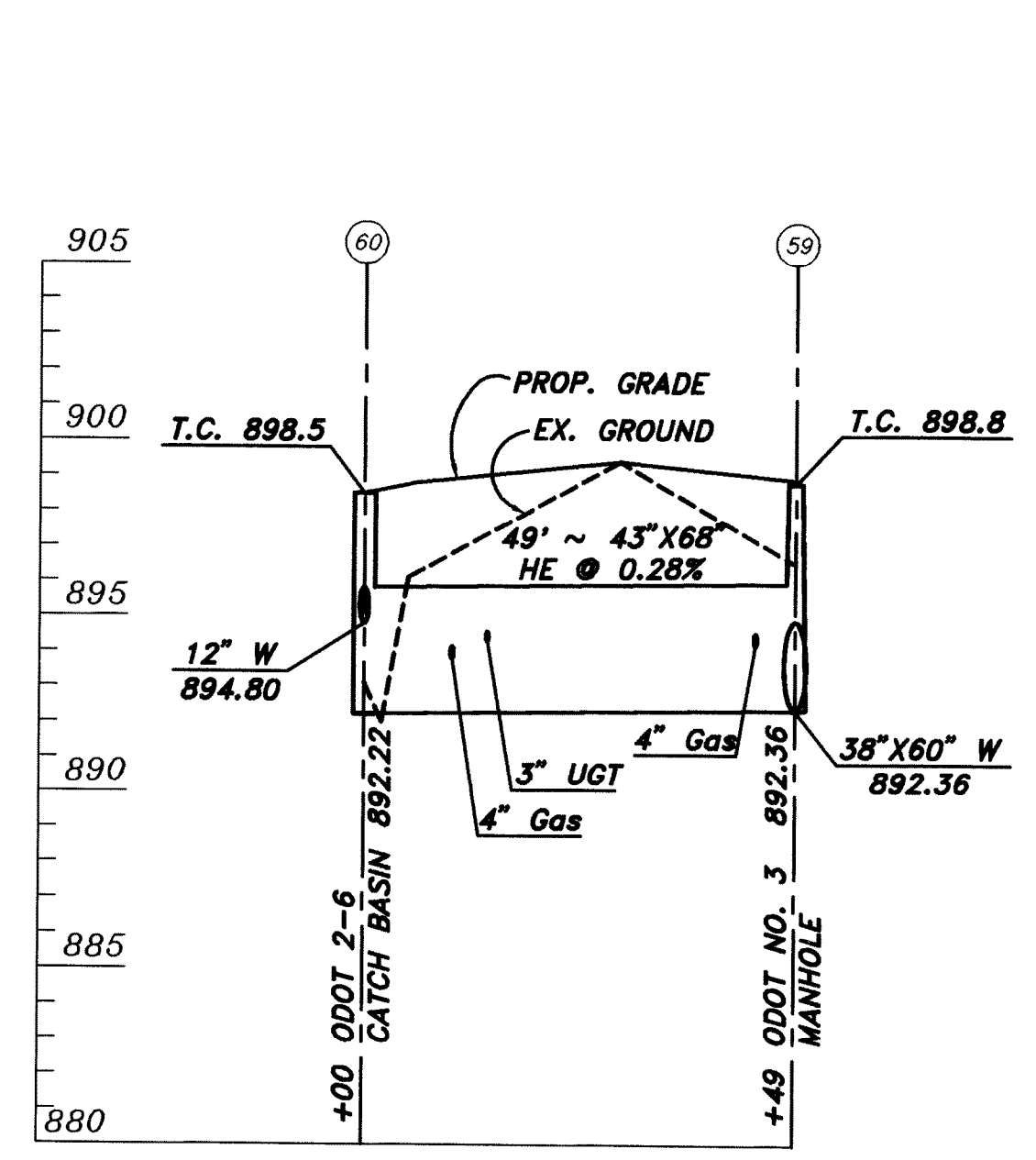
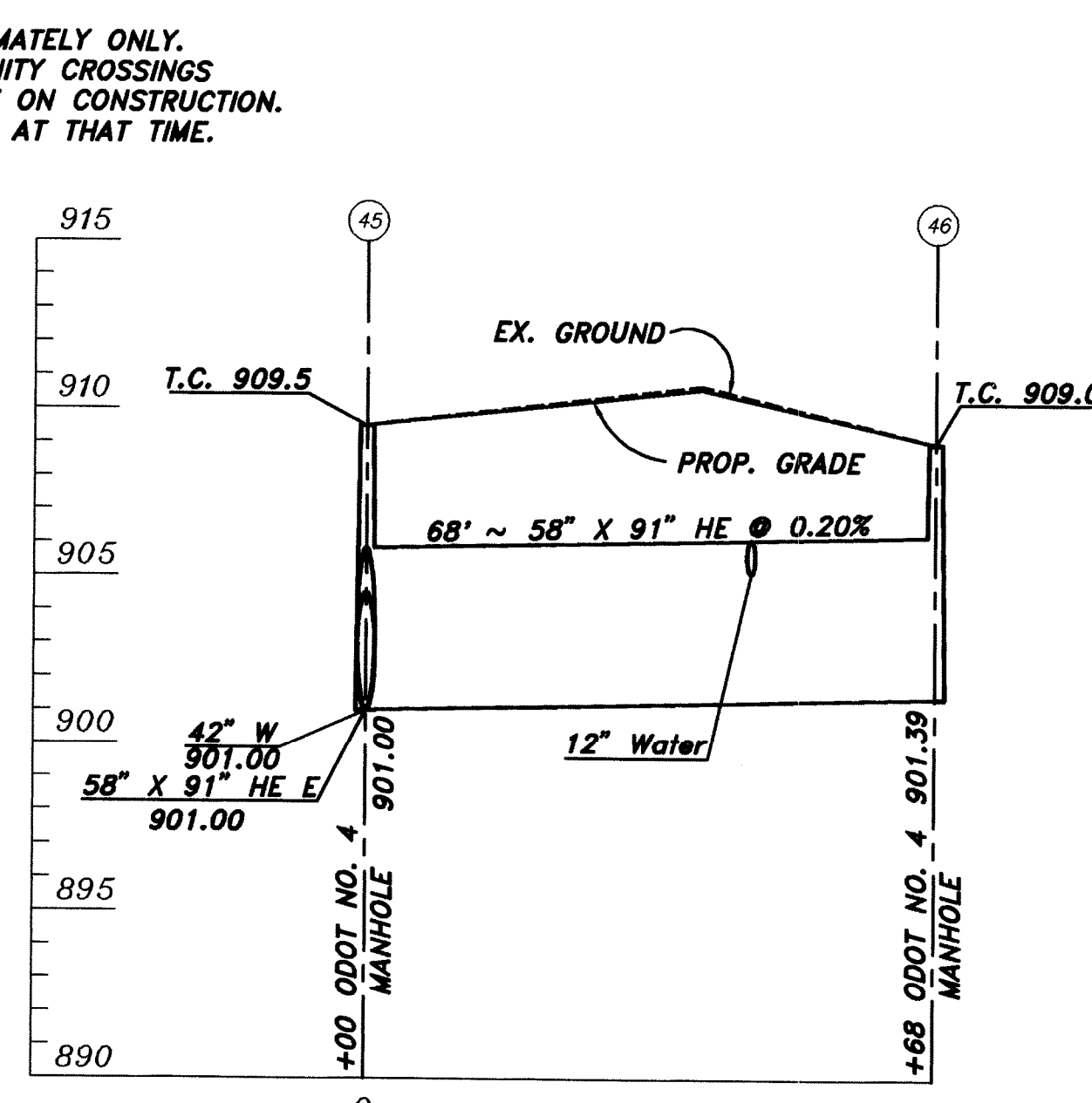
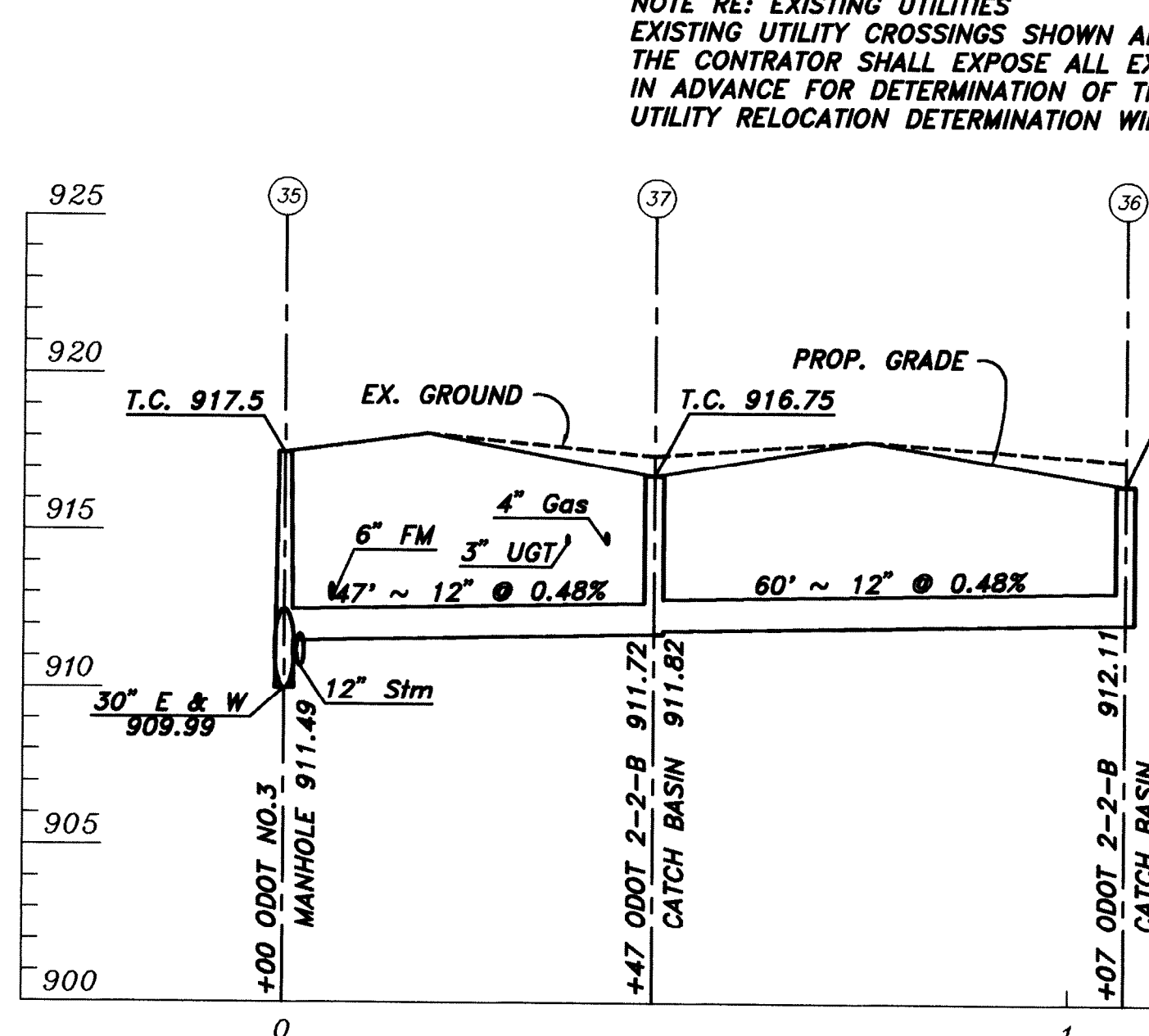
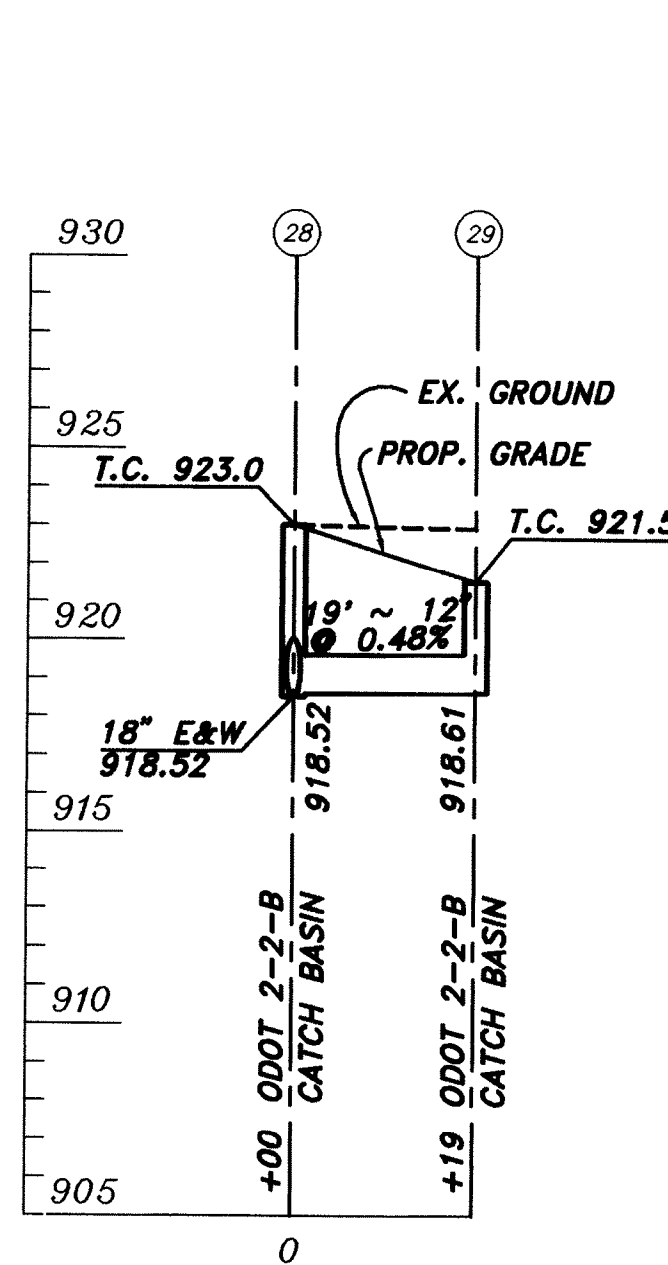
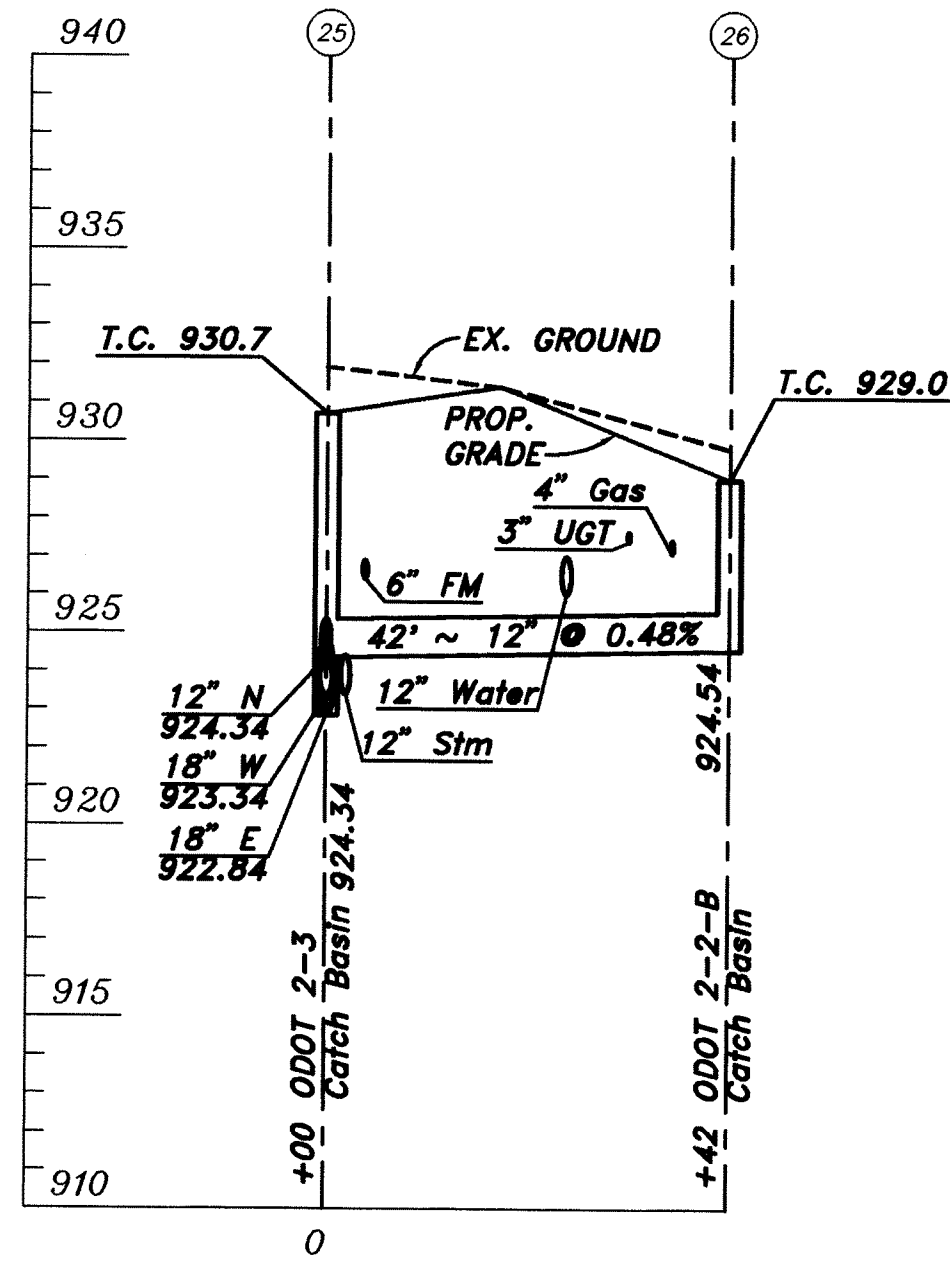
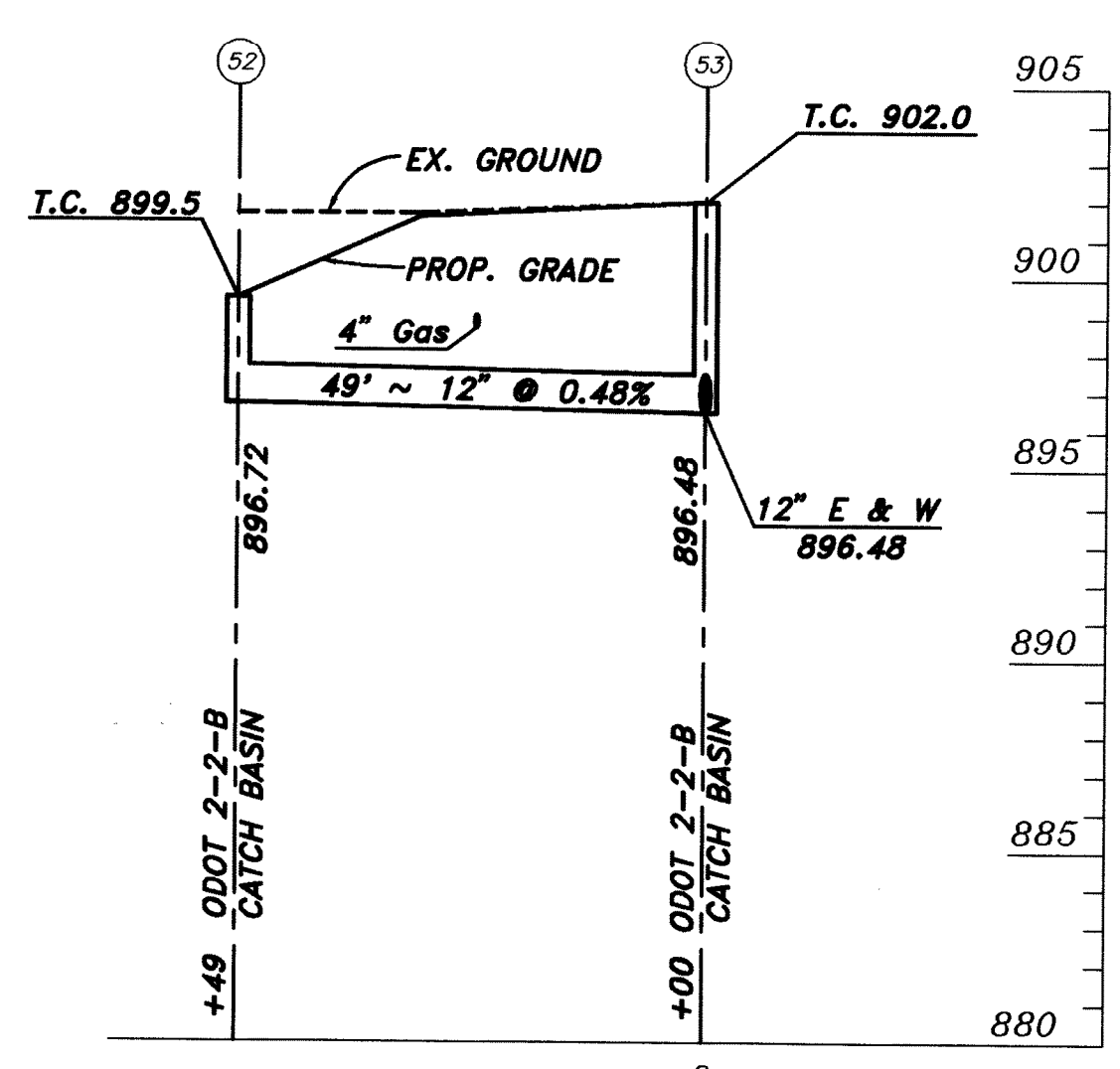
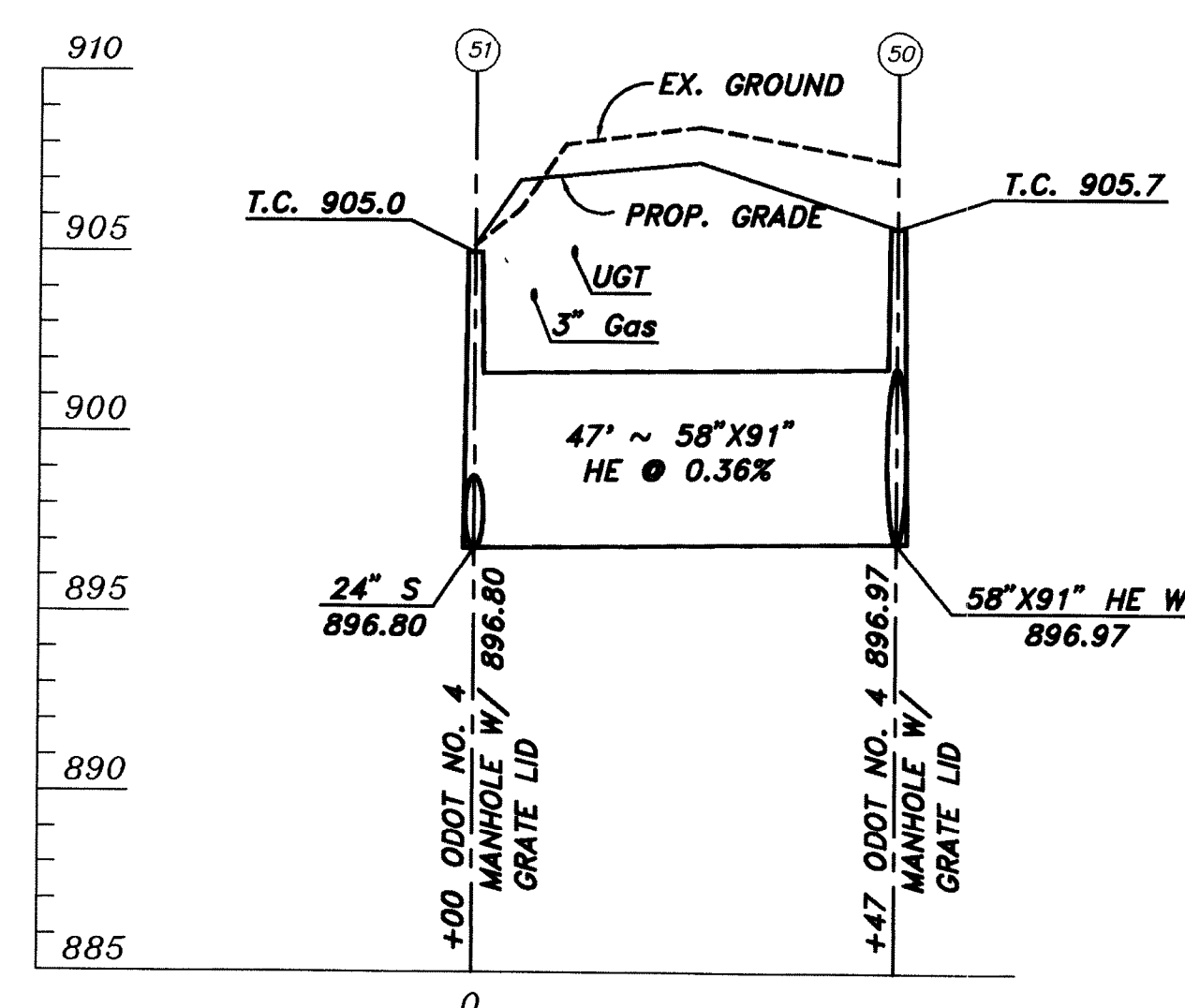
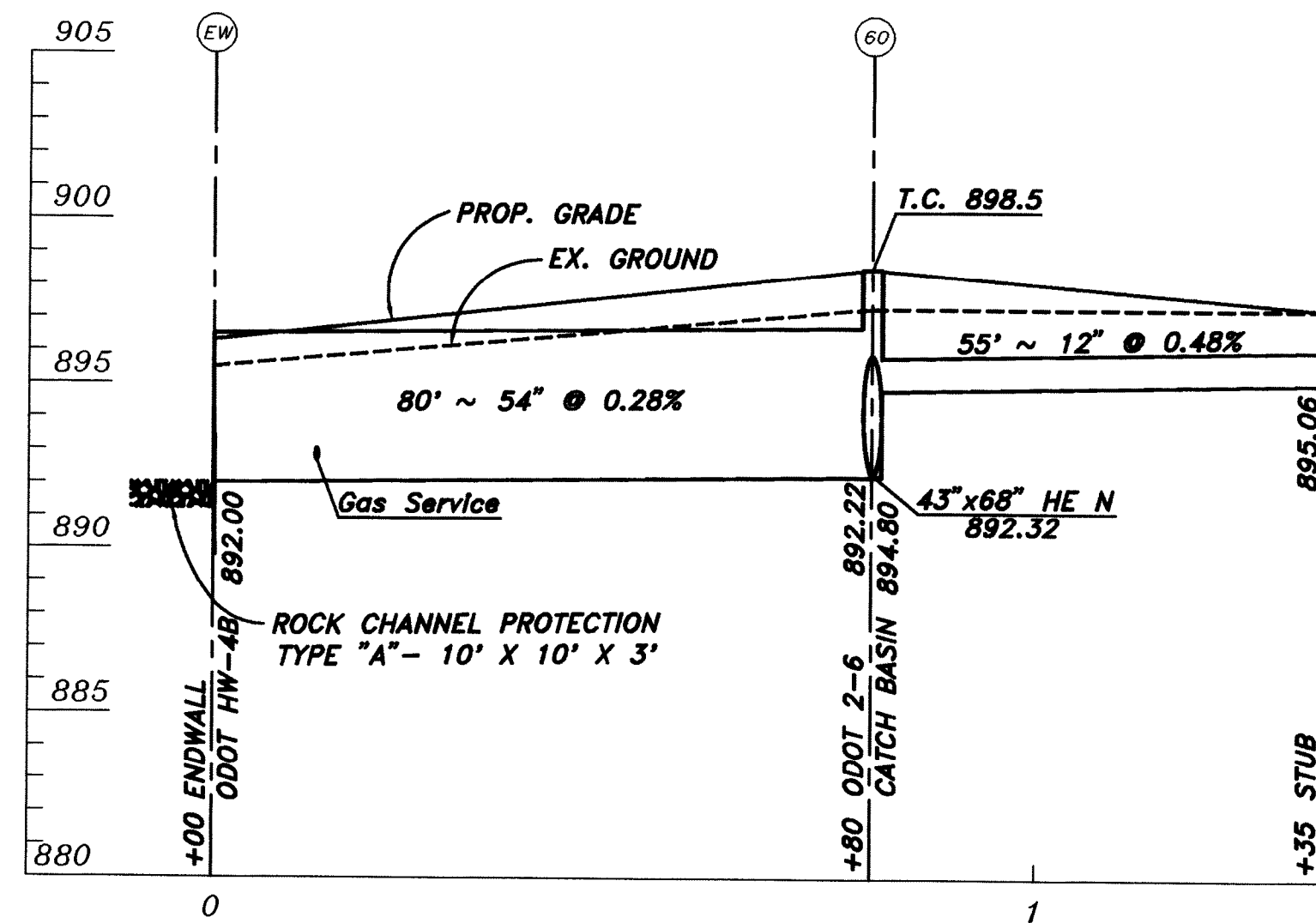
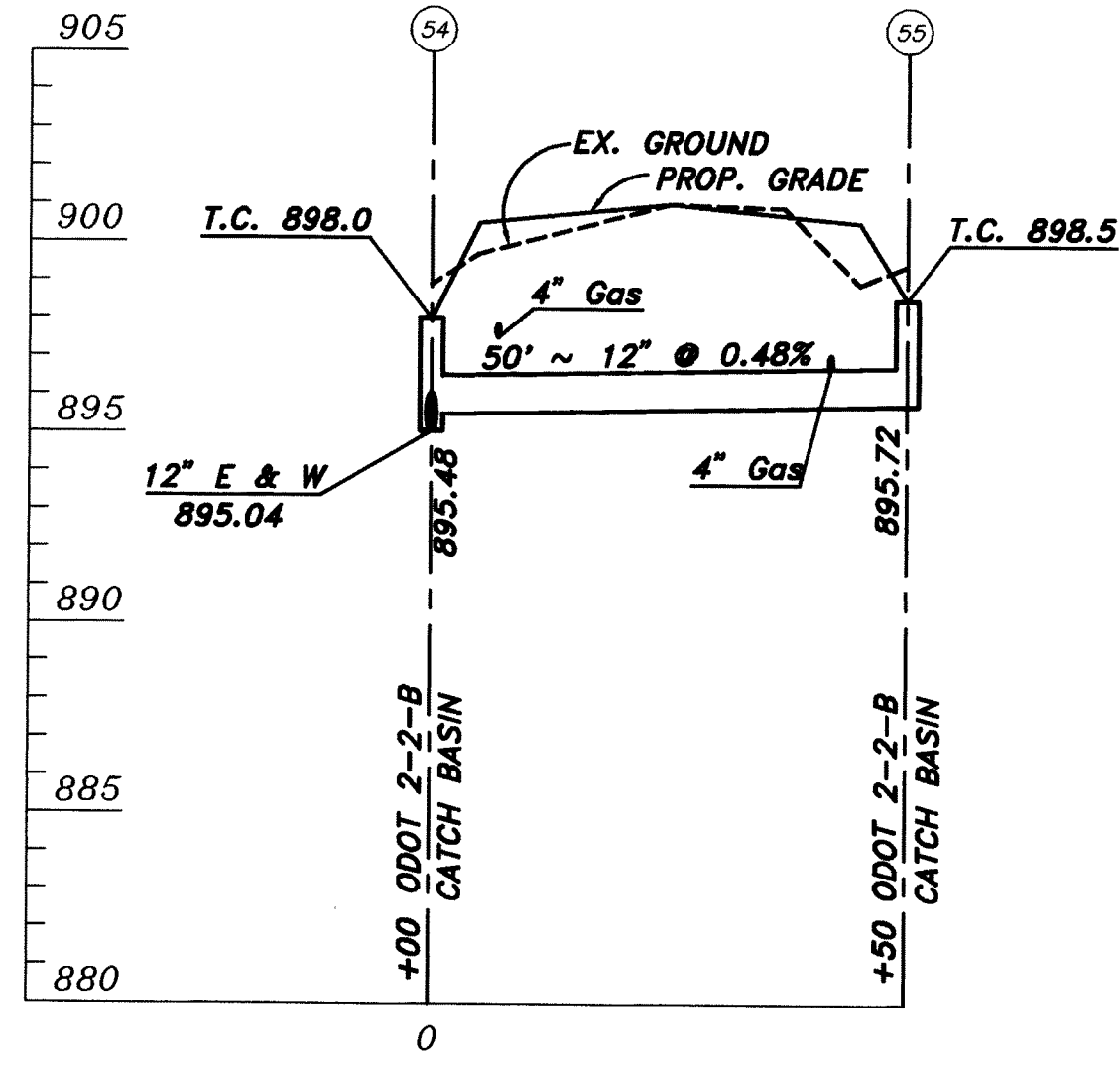
NEWARK-GRANVILLE RD. VILLAGE OF GRANVILLE

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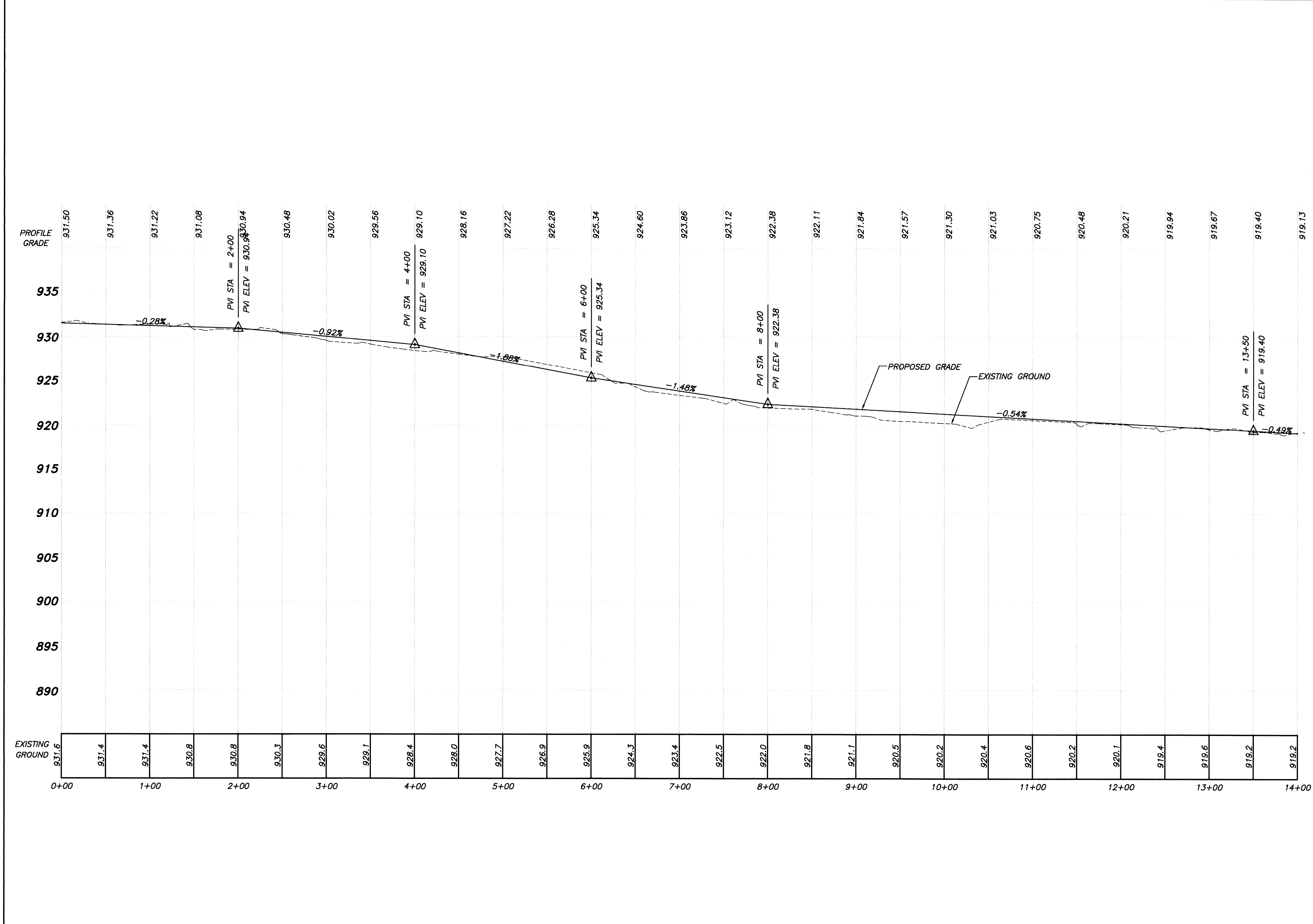
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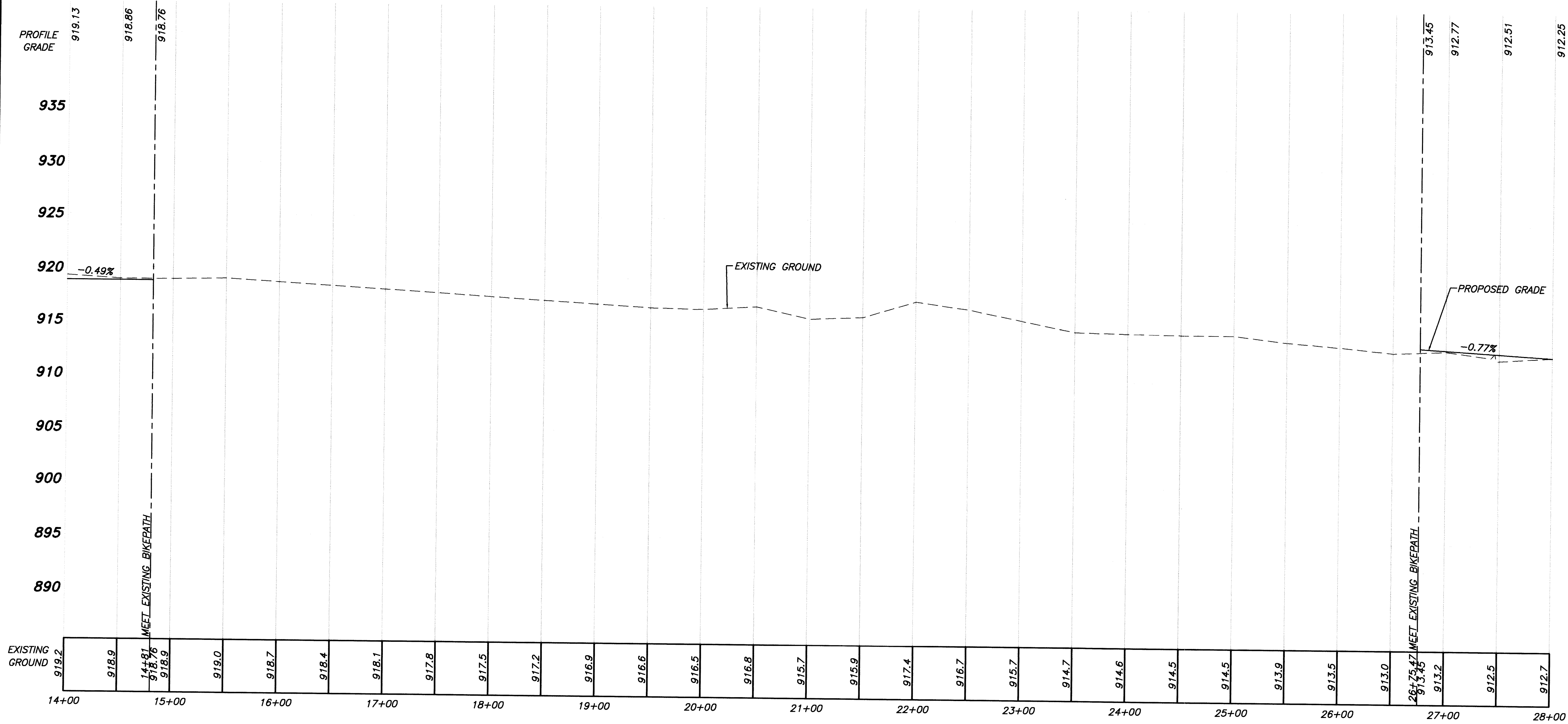
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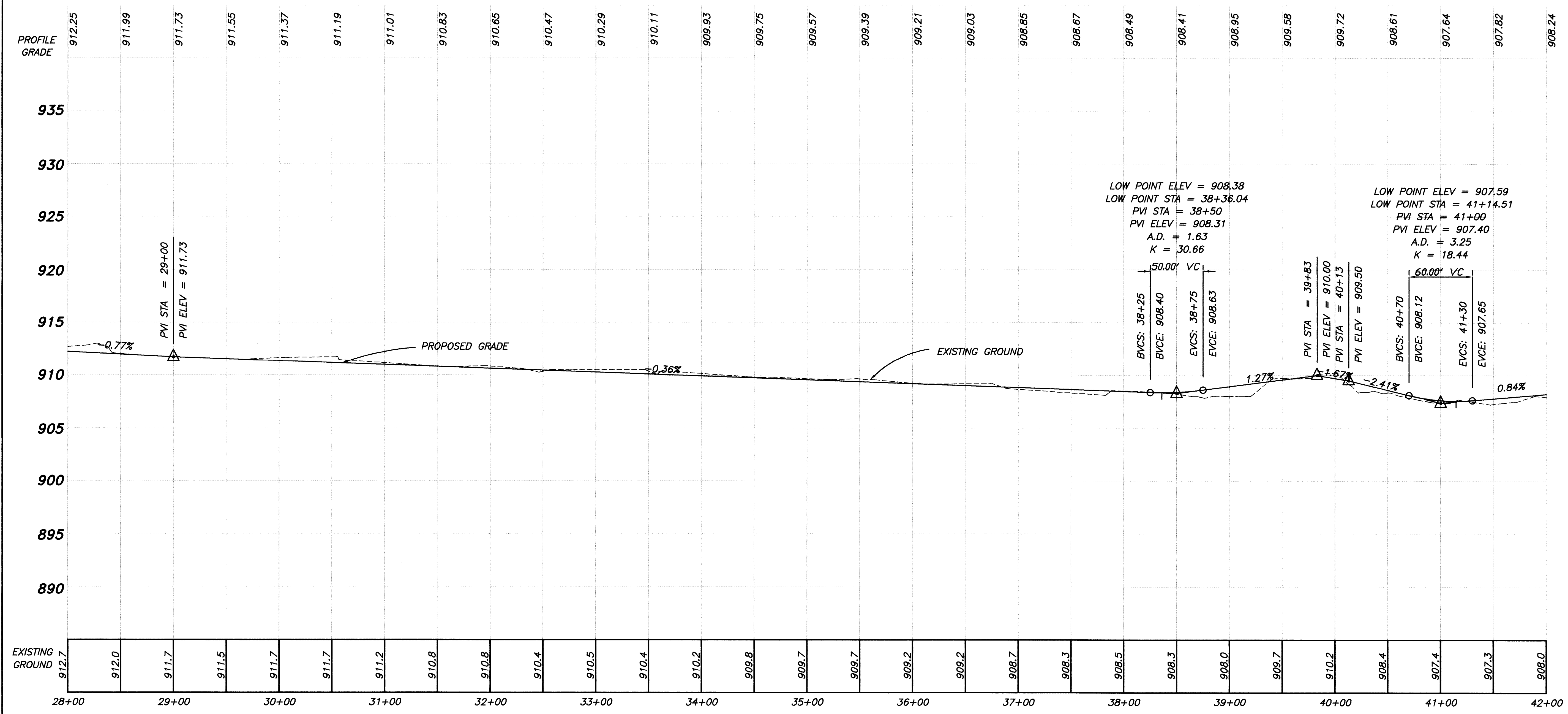
NOTE RE: EXISTING UTILITIES
EXISTING UTILITY CROSSINGS SHOWN ARE APPROXIMATELY ONLY.
THE CONTRACTOR SHALL EXPOSE ALL EXISTING UTILITY CROSSINGS
IN ADVANCE FOR DETERMINATION OF THEIR EFFECT ON CONSTRUCTION.
UTILITY RELOCATION DETERMINATION WILL BE MADE AT THAT TIME.



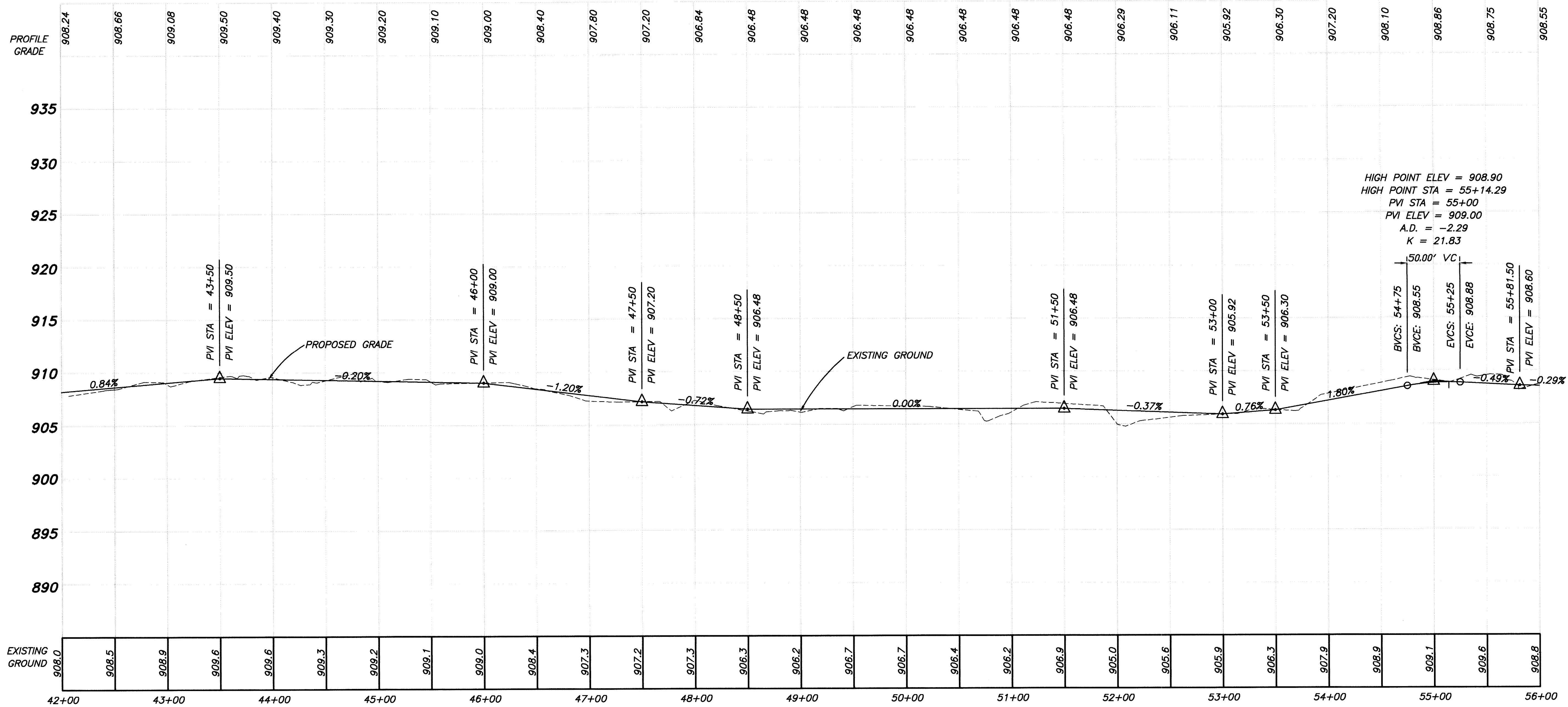
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