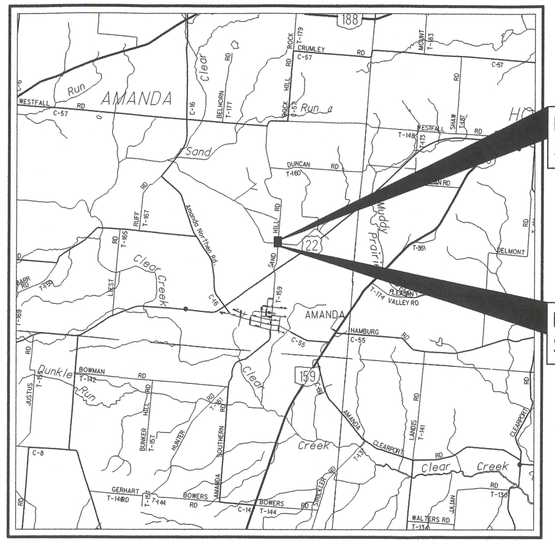
FAIRFIELD COUNTY ENGINEER

FAI-TR159-1.088

AMANDA TOWNSHIP

SAND HILL ROAD

ROAD AND CULVERT IMPROVEMENT PROJECT



LOCATION MAP

LATITUDE: 39° 39' 53" LONGITUDE: 82° 44' 24"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2025)	492
DESIGN YEAR ADT (2046)	663
DESIGN SPEED	55
LEGAL SPEED	55

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL LOCAL

DESIGN EXCEPTIONS

NONE

INDEX OF SHEETS:

PROJECT DESCRIPTION

UPGRADING 0.189 MILE OF SAND HILL ROAD (TR159), BY ROAD RE-ALIGMENT, RESURFACING. PROJECT INCLUDES SHOULDER WIDENING, DITCH IMPROVEMENTS, GUARDRAIL, AND INSTALLING A 9' x 8' CONCRETE BOX CULVERT.

FEDERAL PROJECT NUMBER

NONE

RAILROAD INVOLVEMENT

NONE

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVED THESE PLANS AND DECLARE THAT THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY.

FAIRFIELD COUNTY ENGINEER: _____

DATE: 02-20-2026

WE THE TRUSTEES OF AMANDA TOWNSHIP IN FORMAL SESSION, HEREBY APPROVE THESE PLANS:

TRUSTEE: _____

DATE: 2/16/26

TRUSTEE: _____

DATE: 2/16/26

TRUSTEE: _____

DATE: _____

Know what's below. Call before you dig.

PLAN PREPARED BY:
FAIRFIELD COUNTY ENGINEER'S OFFICE
3026 W. FAIR AVENUE
LANCASTER, OHIO 43130
JEREMIAH D. UPP, P.E., P.S.
FAIRFIELD COUNTY ENGINEER

ENGINEER'S SEAL:

STATE OF OHIO
WILLIAM G. MARAVY
71811
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: _____
DATE: 2-10-26

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1 01/19/24					832 07/18/2025	
BP-4.1 07/19/13						
MGS-2.1 01/16/26						
MGS-2.3 07/18/25						
MGS-4.1 07/18/25						
MGS-4.2 07/18/25						
MT-101.60 04/21/23						

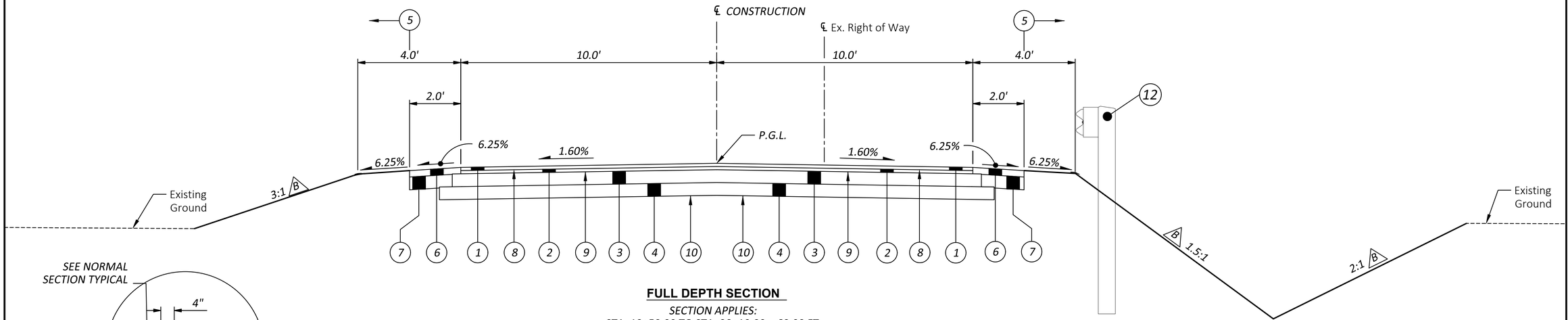
DESIGN AGENCY
FAIRFIELD COUNTY ENGINEER

DESIGNER: JAA
REVIEWER: WGM 11/25
PROJECT ID: TR159-1.088
SHEET: 1
TOTAL: 25

TITLE SHEET

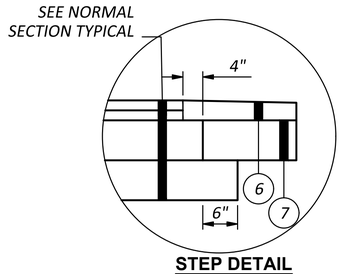
J:\Township\Amanda\TR159-Sond Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_CONS.dwg 10-Feb-26 9:37 AM

FAI-TR159-1.088

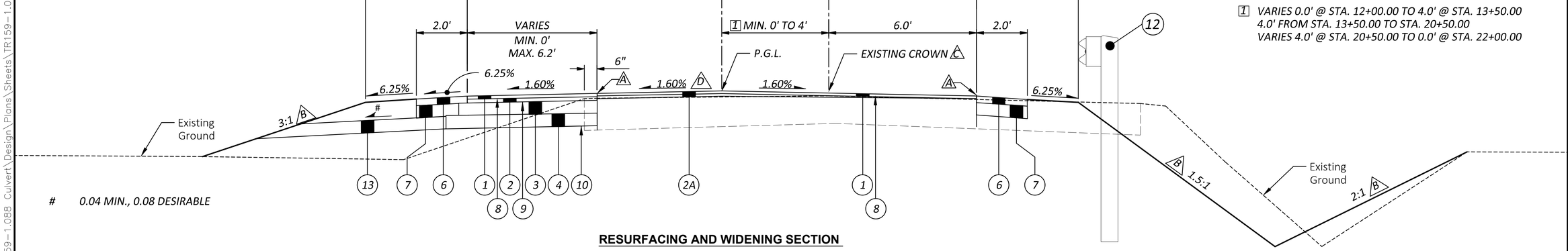


FULL DEPTH SECTION

SECTION APPLIES:
STA. 19+50.00 TO STA. 20+10.00 = 60.00 FT.



STEP DETAIL



1 *VARIES 0.0' @ STA. 12+00.00 TO 4.0' @ STA. 13+50.00*
4.0' FROM STA. 13+50.00 TO STA. 20+50.00
VARIES 4.0' @ STA. 20+50.00 TO 0.0' @ STA. 22+00.00

 # 0.04 MIN., 0.08 DESIRABLE

RESURFACING AND WIDENING SECTION

SECTION APPLIES:
STA. 12+00.00 TO STA. 19+50.00 = 750 FT
STA. 20+10.00 TO STA. 22+00.00 = 190 FT

LEGEND

1. *ITEM 441 - 1 1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, PG 64-22 (449)*
2. *ITEM 441 - 1 1/2" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2 (449)*
2A. *ITEM 441 - VARIABLE ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2 (449)* D
3. *ITEM 301 - 6" ASPHALT CONCRETE BASE*
4. *ITEM 304 - 6" AGGREGATE BASE*
5. *ITEM 659 - SEEDING AND MULCHING*
6. *ITEM 411 - 3" STABILIZED CRUSHED AGGREGATE, AS PER PLAN*
7. *ITEM 304 - 6" AGGREGATE BASE (BERM)*
8. *ITEM 407 - NON-TRACKING TACK COAT FOR INTERMEDIATE COURSE (0.05 GAL/SY)*
9. *ITEM 407 - NON-TRACKING TACK COAT FOR BASE COURSE (0.075 GAL/SY)*
10. *ITEM 204 - SUBGRADE COMPACTION*
12. *ITEM 606 - GUARDRAIL, TYPE MGS LONG POST*
13. *ITEM 605 - AGGREGATE DRAINS*

NOTES:

A *SAWCUT AND REMOVE EXISTING PAVEMENT TO FULL DEPTH TO EXPOSE A SOUND PAVEMENT EDGE. EXACT LOCATION SHALL BE DETERMINED IN THE FIELD. FOR ESTIMATING PURPOSES, THE PLANS INCLUDE AN AVERAGE WIDTH OF 6-INCHES BEING REMOVED. IN MOST CASES THE SAWCUT LINE SHALL BE PLACED NO CLOSER THAN 6-INCH FROM THE EXISTING PAVEMENT EDGE.*

B *OR AS SHOWN IN CROSS SECTIONS*

C *TRANSITION CROWN IN 150.00 FT.*

D *SHALL BE A VARIABLE DEPTH OF 3-INCHES FROM THE PROPOSED ℄ OF CONSTRUCTION TO THE EXISTING CROWN WITH A UNIFORM CROSS SLOPE OF 0.016 ESTABLISHED. MAXIMUM DEPTH AT THE OUTSIDE EDGES OF EXISTING PAVEMENT FOR ESTIMATED PURPOSE HAS BEEN CALCULATED TO BE 3-INCHES.*

TYPICAL SECTION

DESIGN AGENCY
FAIRFIELD COUNTY ENGINEER

DESIGNER JAA
REVIEWER WGM 11/25
PROJECT ID TR159-1.088
SHEET 2 TOTAL 25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_CONS.dwg 20-Feb-26 7:36 AM

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICALS SECTIONS APPLIES TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT OUPS (800-362-2764) FOR EACH LOCATION WHERE DIGGING IS REQUIRED OR IN LOCATIONS WHERE POSTS ARE TO BE DRIVE4N. NON-MEMBER UTILITY COMPANIES MUS BE CALLED DIRECTLY BY THE CONTRACTOR.

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

SOUTH CENTRAL POWER
ATTN: CASEY VALENTINE
720 MILL PARK DR
LANCASTER, OH 43130
C: 740-823-1334
valentine@southcentralpower.com

COLUMBIA GAS OF OHIO
ATTN: BRICE GRAVES
843 PLATT AVE.
CHILLICOTHE, OH 45601
C: 740-630-6882
bgraves@nisource.com

SOUTH CENTRAL POWER
ATTN: AARON GASSNER
FIELD ENGINEER II
P: 740-583-1068
gassner@southcentralpower.com

FRONTIER COMMUNICATIONS
ATTN: TRAVIS BRANNON
OSP CONTRACT ENGINNER
P: 740-381-8676
C: 740-835-6825
travis.l.brannon@ftr.com

CHARTER COMMUNICATIONS
ATTN: BRANDON LOTT
32 ENTERPRISE DR.
CHILLICOTHE, OH 4560
C: 740-993-9240
brandon.lott@charter.com

CHARTER COMMUNICATIONS
ATTN: ANTHONY FISHER
32 ENTERPRISE DR.
CHILLICOTHE, OH 45601
C: 740-253-1440
anthony.fisher@charter.com

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

WORK LIMITS

THE WORK LIMITS SHOWN ON THE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC DEVICES AS REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ENGINEER DEFINED

DULY AUTHORIZED AGENT OF THE FAIRFIELD COUNTY ENGINEER ACTING WITHIN THE SCOPE OF HIS/HER AUTHORITY FOR PURPOSES OF ENGINEERING ADMINISTRATION OF THE CONTRACT.

ITEM 832 - TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE PLACED BY THE CONTRACTOR WITH THE ENGINEERS CONCURRENCE FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

ITEM 832 - PERIMETER, DITCH CHECK OR INLET PROTECTION FILTER FABRIC FENCE	2,100 FT.

CONTRACTOR DEFINED

THE INDIVIDUAL, FIRM OR CORPORATION CONTRACTING WITH THE FAIRFIELD COUNTY ENGINEER FOR PERFORMANCE OF PRESCRIBED WORK, ACTING DIRECTLY OR THROUGH A DULY AUTHORIZED REPRESENTATIVE AND QUALIFIED UNDER THE PROVISIONS OF 5525.02 TO 5525.09, OF THE ORC, AND ANY AMENDMENTS THERETO.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIAL OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

SURVEYING PARAMETER

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON FCEO PROJECT. SEE SHEETS 6 & 9 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL:

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD88
GEOID:	GEOID12A

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD83(2011)
ELLIPSOID:	GRS80
COORDINATE SYSTEM:	OHIO STATE PLANE SOUTH

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

ITEM 614 - MAINTAINING TRAFFIC

NOTICE OF CLOSURE SIGNS, SHALL BE ERECTED BY THE ENGINEER IN ADVANCE OF THE SCHEDULE ROAD CLOSURE. THE CONTRACTOR SHALL GIVE AT LEAST A TWO WEEK NOTICE TO THE ENGINEER IN ORDER TO ERECT THESE SIGNS.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48" x 30" "ROAD CLOSED" SIGNS, SIGN SUPPORTS, BARRICADES, GATES, AND LIGHTS, AS DETAILED IN STANDARD CONSTRUCTION DRAWING MT-101.60 DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

ACCESS TO LOCAL PROPERTY OWNERS SHALL BE MAINTAINED AT ALL TIMES.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 201 - CLEARING AND GRUBBING

ALL TREES AND STUMPS WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING , EXCEPT THOSE OTHERWISE DESIGNATED BY THE ENGINEER.
LANDOWNERS SHALL BE ALLOWED TO SALVAGE THE WOOD FROM TREES BEING REMOVED FROM THEIR PROPERTY. TREES DESIGNATED AS BEING SALVAGED FOR WOOD, SHALL BE CUT ABOVE THE BASE AND PLACED OUTSIDE OF THE RIGHT-OF-WAY.

ITEM 204 - PROOF ROLLING, AS PER PLAN

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR MAY UTILIZED A FULLY LOADED DUMP TRUCK, APPROVED BY THE ENGINEER, IN LIEU OF THE PROOF ROLLER REQUIREMENTS LISTED IN THE SPECIFICATION 204.06 A-G. ALL OTHER REQUIREMENTS PER 204.06 SHALL APPLY.

ITEM 204 - PROOF ROLLING	1 HR.

ITEM 407 - NON-TRACKING TACK COAT (BASE AND INTERMEDIATE COURSE)

THE RATE OF APPLICATION OF THE 407 NON-TRACKING TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY THE PLAN QUANTITIES INDICATE AND AVERAGE APPLICATION RATE OF:

407 - NON-TRACKING TACK COAT FOR INTERMEDIATE COURSE	0.050 GAL/SY
407 - NON-TRACKING TACK COAT FOR BASE COURSE	0.075 GAL/SY

ITEM 411 - STABILIZED CRUSHED AGGREGATE, AS PER PLAN

THE CRUSHED MATERIAL PROVIDED FOR THIS ITEM SHALL BE CRUSHED LIMESTONE.

ITEM 441 - ASPHALT CONCRETE

THE HOT MIX ASPHALT MIXTURE SHALL BE COMPOSED OF AGGREGATE, ASPHALT BINDER, AND MODIFIER (WHERE SPECIFIED) MEETING OHIO DEPARTMENT OF TRANSPORTATION (ODOT) REQUIREMENTS. PRIOR TO PRODUCING HOT MIX ASPHALT FOR THIS CONTRACT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL, A JOB MIX FORMULA (JMF) OR BITUMINOUS CONCRETE DATA SHEET.

THE JMF SHALL INCLUDE THE MIX TYPE PROPOSED FOR USE, AGGREGATE TYPE AND GRADATION, DESCRIPTION AND SOURCE OF MODIFIER (IF APPLICABLE), AND UNIT WEIGHT OF THE MIXTURE. THE JMF, OR DATA SHEET, SHALL HAVE PREVIOUSLY BEEN APPROVED FOR USE ON ODOT WORK.

FARM DRAINS

ALL FARM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION WILL EITHER BE REPAIRED OR PROVIDED WITH UNOBSTRUCTED OUTLETS.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY ITEM 611 CONDUIT, TYPE F. THE OPTIMUM OUTLET, INVERT ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS INTO THE LIMITS OF CONSTRUCTION SHALL BE INTERCEPTED BY ITEM 611 CONDUIT, TYPE F AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OR REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENT.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET AND OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1 EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS, TEES OR OTHER FITTINGS SHALL B INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 611 - 4" CONDUIT, TYPE F	50 FT.
ITEM 611 - 6" CONDUIT, TYPE F	50 FT.

ITEM 204 - UNSUITABLE FOUNDATION SOILS

IF UNSUITABLE FOUNDATION SOILS ARE ENCOUNTERED IN THE AREAS OF PROPOSED STRUCTURES BEDDING, THEY SHALL BE REMOVED TO A DEPTH OF 1.5' AND REPLACED WITH SUITABLE MATERIAL. THE LOCATIONS AND DIMENSIONS WILL BE DETERMINED BY THE ENGINEER.

THE FOLLOWING CONSTRINGENCY QUANTIFIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE AS DIRECTED BY THE ENGINEER.

204 - EXCAVATION OF SUBGRADE	46 CY
204 - GRANULAR MATERIAL, TYPE F, APP	46 CY
204 - GEOTEXTILE FABRIC	100 SY

ITEM 605 - AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT SPACING ON PAVEMENT WIDENING SIDE ONLY. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING AGGREGATE DRAINS.

ITEM 605 - AGGREGATE DRAINS	136 FT

GENERAL NOTES

DESIGN AGENCY
FAIRFIELD COUNTY ENGINEER

DESIGNER
JAA

REVIEWER
WGM 11/25

PROJECT ID
TR159-1.088

SHEET 3 TOTAL 25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_CONS.dwg 20-Feb-26 7:37 AM

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	3	5						23											
																		ROADWAY	
	LS													201	11000	LS		CLEARING AND GRUBBING	
		163												202	23500	163	SY	WEARING COURSE REMOVED	
		623												202	23000	623	SY	PAVEMENT REMOVED, ASPHALT	
		837.5												202	38000	837.5	FT	GUARDRAIL REMOVED	
		55												202	35100	55	FT	PIPE REMOVED, 24" DIAMETER AND UNDER	
	46													204	13001	46	CY	EXCAVATION OF SUBGRADE, AS PER PLAN	3
	46													203	35151	46	CY	GRANULAR MATERIAL, TYPE F, AS PER PLAN	3
	100													204	50000	100	SY	GEOTEXTILE FABRIC	3
		763												203	10000	763	CY	EXCAVATION	
		639												203	20000	639	CY	EMBANKMENT	
		976												204	10000	976	SY	SUBGRADE COMPACTION	
	1													204	45001	1	HOUR	PROOF ROLLING, AS PER PLAN	3
		875												606	15100	875	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
		1												606	25000	1	EACH	ANCHOR ASSEMBLY, TYPE A	
		1												606	26500	1	EACH	ANCHOR ASSEMBLY, TYPE T	
		25												606	17360	25	FT	GUARDRAIL, TYPE MGS, LONG-SPAN	
		17												626	00110	17	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTONAL)	
																		EROSION CONTROL	
		1																	
		3,680												659	10000	3,680	SY	SEEDING AND MULCHING	
		0.33												654	11000	0.33	TON	COMMERCIAL FERTILIZER	
		0.76												659	31000	0.76	ACRE	LIME	
		20												659	35001	20	MGAL	WATER, AS PER PLAN	
	2,100													832		2,100	FT	PERIMETER, DITCH CHECK OR INLET PROTECTION FILTER FABRIC-FENCE	
																		DRAINAGE	
		48												611	07900	48	FT	18" CONDUIT, TYPE D, 706.02	
	50													611	00406	50	FT	4" CONDUIT, TYPE F	
	50													611	01500	50	FT	6" CONDUIT, TYPE F	
		136												605	31100	136	FT	AGGREGATE DRAINS	3
																		PAVEMENT	
		1,880												252	01500	1,880	FT	FULL DEPTH PAVEMENT SAWING	
		111												301	56000	111	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
		217												304	20000	217	CY	AGGREGATE BASE	
		64												407	20000	64	GAL	NON-TRACKING TACK COAT FOR INTERMEDIATE COURSE	3
		201												407	20000	201	GAL	NON-TRACKING TACK COAT FOR BASE COURSE	3
		37												411	10000	37	CY	STABILIZED CRUSHED AGGREGATE, AS PER PLAN	3
		93												441	70000	93	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	
		72												441	70300	72	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)	
		3.5												441	70500	3.5	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)	
		3.5												441	70700	3.5	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), (DRIVEWAYS)	
																		STRUCTURE 20 FOOT SPAN AND UNDER (FAI TR159-1.088)	
								40						202	35200	40	FT	PIPE REMOVED, OVER 24" DIAMETER	
								50						601	32104	50	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	
								170						512	33000	170	SY	TYPE 2 WATERPROOFING, CONCRETE BOX	
								46						611	59100	46	FT	9' SPAN x 8' RISE CONDUIT, TYPE A, 706.05	
								38						518	21050	38	SY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
								80						518	39800	80	FT	4" PERFORATED CORRUGATED PLASTIC PIPE	
								12						SPECIAL	53050000	12	EACH	STONE STRONG WALL 24-44 BLOCK,24 S.F. UNIT BLOCK MACK INDUSTRIES OR EQUIVALENT = 96"	
								4						SPECIAL	53050000	4	EACH	STONE STRONG WALL 6EU-44, 6 S.F. END UNIT BLOCK MACK INDUSTRIES OR EQUIVALENT = 48"	
								14						SPECIAL	53050000	14	EACH	STONE STRONG WALL 45D, UNIT BLOCK MACK INDUSTRIES OR EQUIVALENT = 8.25"	
																		INCIDENTALS	
														614	11000	LS		MAINTAINING TRAFFIC	3
														623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
														624	10000	LS		MOBILIZATION	

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_CONS.dwg 20-Feb-26 9:36 AM

FAI-TR159-1.088

GENERAL SUMMARY

DESIGN AGENCY

FAIRFIELD COUNTY ENGINEER

DESIGNER	
JAA	
REVIEWER	
WGM	11/25
PROJECT ID	
TR159-1.088	
SHEET	TOTAL
4	25

REF. NO.	SHEET NO.	STATION TO STATION	SIDE	202 GUARDRAIL REMOVED (FT)	202 PAVEMENT REMOVED, ASPHALT (SY)	202 PIPE REMOVED, 24" AND UNDER (FT)	202			611 18" CONDUIT, TYPE D, 706.02 (FT)	606 GUARDRAI, TPE MGS, LONG-SPAN (FT)	606 GUARDRAI, TPE MGS, W/ LONG POST (FT)	ANCHOR ASSEMBLY, MGS TYPE T	606 ANCHOR ASSEMBLY, MGS TYPE A (EA)	626 BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL) (EA)	
R1	6,7,8,9	STA. 11+70.00 TO STA. 20+50.00	RT	837.5												
R2	6, 7, 8	STA. 12+00.00 TO STA. 22+00.00	LT/RT		623											
R3	8, 9	STA. 19+15.67	LT			55										
D1	8	STA. 19+20.13 TO STA. 19+68.07	LT							48						
G1	6,7,8,9	STA. 11+66.00 TO STA. 20+62.50	RT								25	875.00	1	1	17	
TOTALS CARRIED TO GENERAL SUMMARY				837.5	623	55	0	0	0	48	25	875.00	1	1	17	0

SUBSUMMARY/PAVEMENT CALCULATIONS

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (449), PG64-22
CAD AREA

SURFACE OVERLAY (14,346.66 SF x 1.5") / 27 = 67 CY
FULL DEPTH (5,615.74 SF x 1.5") / 27 = 26 CY
TOTAL = 93 CY

ITEM 441 - VARIABLE ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (449)
CAD AREA

VARIABLE (9,776.76 SF x 1.5") / 27 = 46 CY
TOTAL = 46 CY

ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (449)
CAD AREA

FULL DEPTH (5,615.74 SF x 1.5") / 27 = 26 CY
TOTAL = 26 CY

ITEM 301 - ASPHALT CONCRETE BASE
CAD AREA

FULL DEPTH (5,956.51 SF x 6") / 27 = 111 CY
TOTAL = 111 CY

ITEM 304 - AGGREGATE BASE
CAD AREA

FULL DEPTH (6,145.58 SF x 6") / 27 = 114 CY
TOTAL = 114 CY

ITEM 304 - AGGREGATE BASE (BERM & DRIVES)
CAD AREA

1,504 SF x 6" / 27 = 28 CY (LEFT SIDE)
1,725 SF x 6" / 27 = 32 CY (RIGHT SIDE)
TOTAL = 60 CY

ITEM 407 NON-TRACKING TACK COAT (BASE COURSE)
CAD AREA

(14,346.66 SF + 9,776.76 SF) /9 x 0.075 = 201 GAL.

ITEM 407 NON-TRACKING TACK COAT (INTERMEDIATE COURSE)
CAD AREA

(5,956.51 SF + 5,615.74 SF) /9 x 0.050 = 64 GAL.

ITEM 411 STABILIZED CRUSHED AGGREGATE, AS PER PLAN

1,804 SF x 3" / 27 = 17 CY (LEFT SIDE)
2,070 SF x 3" / 27 = 20 CY (RIGHT SIDE)
TOTAL = 37 CY

ITEM 203 EXCAVATION
PER CROSS SECTION SHEET 21 = 763 CY

ITEM 203 EMBANKMENT
PER CROSS SECTION SHEETS 21 = 639 CY

ITEM 204 SUBGRADE COMPACTION
CAD AREA

7,205.86 SF / 9 = 801 SY

ITEM 659 SEEDING AND MULCHING
PER CROSS SECTION SHEET 21 = 3,680 SY

ITEM 659 COMMERCIAL FERTILIZER
33,120 SF x (20 / 1000 SF) X (1 TON / 2000) = 0.33 TON

ITEM 659 LIME
33,120 SF x (1 SF/43560 AC) = 0.76 AC.

ITEM 659 WATER
33,120 SF x (300 GAL / 1000 SF) x (1 MGAL/1000 GAL) x 2 = 20 MGAL

ITEM 252 - FULL DEPTH PAVEMENT SAWING
PER PLAN AND PROFILE SHEETS = 1,880 FT.

ITEM 202 - WEARING COURSE REMOVED
{(19.6' * 37.5)*2} / 9 = 163 SY

ITEM 605 - AGGREGATE DRAINS

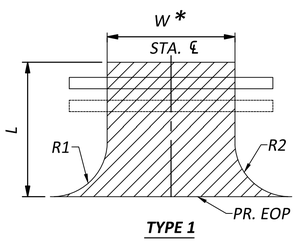
STA.	FT
12+50.00	8
13+00.00	8
13+50.00	8
14+00.00	8
14+50.00	8
15+00.00	8
15+50.00	8
16+00.00	8
16+50.00	8
17+00.00	8
17+50.00	8
18+00.00	8
18+50.00	8
19+00.00	8

STA.	FT
20+50.00	8
21+00.00	8
21+50.00	8
TOTALS	**136**

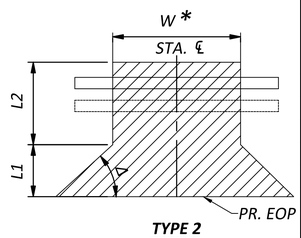
DR1 PAVEMENT BUILD-UP — W = SEE TABLE — 1 2 3 4 — DRIVE SECTION

DR2 PAVEMENT BUILD-UP — W = SEE TABLE — 3 4 — DRIVE SECTION

DR3 PAVEMENT BUILD-UP — W = SEE TABLE — 3 4 — DRIVE SECTION



TYPE 1



TYPE 2

(1) ITEM 441 - 1 1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, PG 64-22 (449)(DRIVEWAYS)
(2) ITEM 441 - 1 1/2" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2 (449) (DRIVEWAYS)
(3) ITEM 304 - 8" AGGREGATE BASE
(4) ITEM 204 - SUBGRADE COMPACTION

* TAPER LAST 10' OF DRIVE TO MATCH EXISTING

DRIVE QUANTITIES

STA. ℄	SIDE	TYPE	(L)	(W)	(R1)	(R2)	(L1)	(L2)	Δ	ITEM 204 SQ.YD.	ITEM 304 CU.YD.	ITEM 441 SURFACE COURSE, FOR DRIVES CU.YD.	ITEM 441 INTERMEDIATE COURSE, FOR DRIVES CU.YD.
STA. 19+40.00	LT.	1	34.0'	13.0'	25.0'	20.0'				82	18	3.5	3.5
STA. 20+06.00	LT.	1	33.0'	13.3'	15.0'	25.0'				54	12		
STA. 11+50.00	RT.	2		25.0'			4.0'	16.0'	45	39	13		
TOTAL FOR GENERAL SUMMARY										175	43	3.5	3.5

DESIGN AGENCY: FAIRFIELD COUNTY ENGINEER
DESIGNER: JAA
REVIEWER: WGM 11/25
PROJECT ID: TR159-1.088
SHEET: 5 TOTAL: 25

SUB SUMMARY AND PAVEMENT CALCULATIONS

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_CONS.dwg 20-Feb-26 7:37 AM

STA. 11+33.00
BEGIN WORK

STA. 12+00.00
BEGIN PROJECT

AN UNDIVIDED ONE-HALF INTEREST
TO JERRY R. LAMP, TRUSTEE OF THE
JERRY R. LAMP TRUST
DATED APRIL 5, 2019 AND
AN UNDIVIDED ONE-HALF INTEREST
TO CAROL G. LAMP, TRUSTEE OF THE
CAROL G. LAMP TRUST
DATED APRIL 5, 2019

PN. 001-00210.10
(MAILING ADDRESS)
6659 CLEARPORT ROAD SW,
LANCASTER, OHIO 43130
250.000 AC

+00, BEG.
LANE SHIFT LT/RT
SHOULDER LT

+50, END
LANE SHIFT LT/RT

MATCHLINE STA. 14+00.00, SEE SHEET 7

Ex. Power Pole

Ex. Overhead Electric

Ex R/W

CONSTRUCTION LIMITS

OH-E

37.5'
BUTT JOINT

2.0'

26.0'

Ex. EOP

4.0'

10.0'

℄ CONSTRUCTION
SAND HILL RD. (T.R. 159)

SAWCUT LINE

N 03°43'52" E 150.00'

N 04°55'23" E 700.00'

PI Sta. 13+50.00

Ex. ℄ RIGHT OF WAY
SAND HILL RD. (T.R. 159)

R2

11

12

13

+50

90°

33.0'

A.A. TYPE T

Ex. Guy Wire

Ex. Field Drive

DR3

30.0'

9.8'

4.0'

16'

Ex. 48" Stm (Conc) (DND)

(Agg.)

5.0'R

2.0'

Ex. Ditch

OH-T

STATE OF OHIO
VOL. 363, PG. 603
0.200 AC

PR. DITCH 1

G1

R1

GUARDRAIL,
TYPE MGS 875.0'

34.0'

+66, 24' RT.
BEG. GRR.

CP01

+64, BEG.
SHOULDER RT

OH-FO†

Ex. Gurardrail

25.0'

Ex. Pole

Ex. Overhead Tel.

Ex.Underground Tel.

Ex. Guy Wire

Ex. 4" Gas
(DND)(Steel)

CONSTRUCTION LIMITS

SMILO ENTERPRISES, LLC,
AN OHIO LIMITED LIABILITY COMPANY
PN. 001-00199.10
(MAILING ADDRESS)
313 NORTH JOHNS STREET,
AMANDA, OHIO 43102
IN. 201900002426
41.03 AC

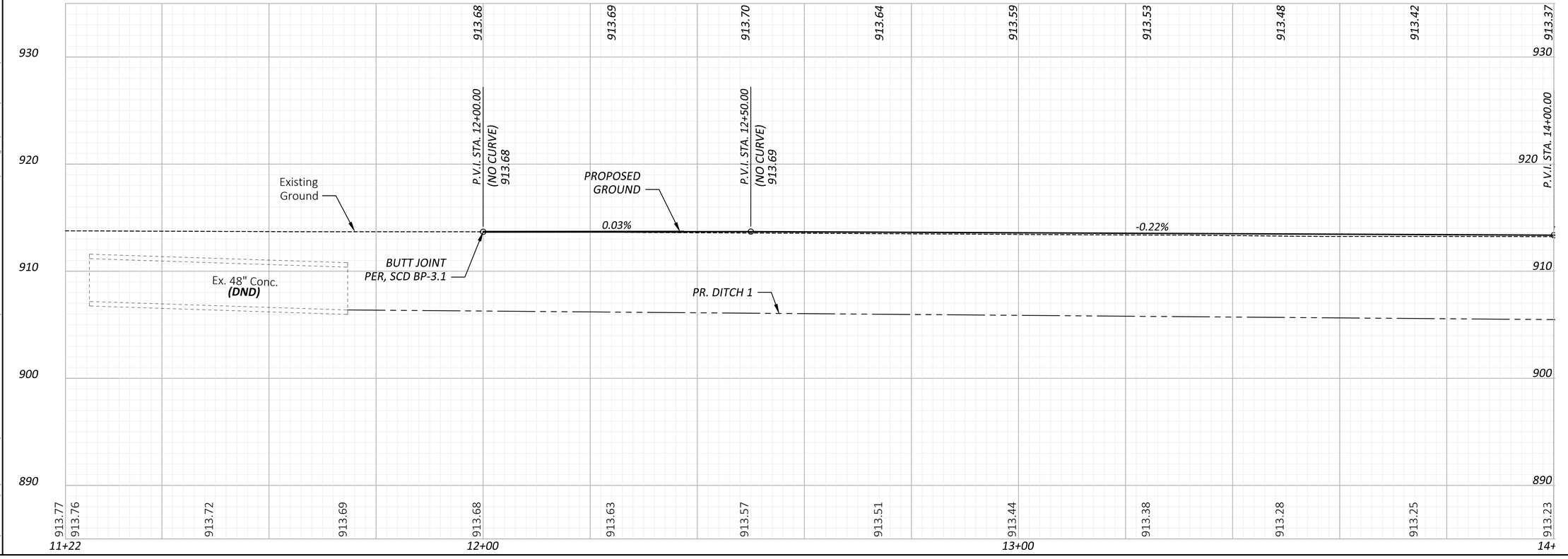
LEGEND

FULL DEPTH PAVEMENT

RESURFACING

REFERENCE MONUMANTS

CP#	STATION	OFFSET	ELEV.	DESCRIPTION
1	11+66.61	28.83' RT	912.60	I.P. W/FCEO CAP



HORIZONTAL
SCALE IN FEET
0 5 10 20

PLAN AND PROFILE

STA. 11+00.00 TO STA. 14+00.00
T.R. 159 (SAND HILL RD.)

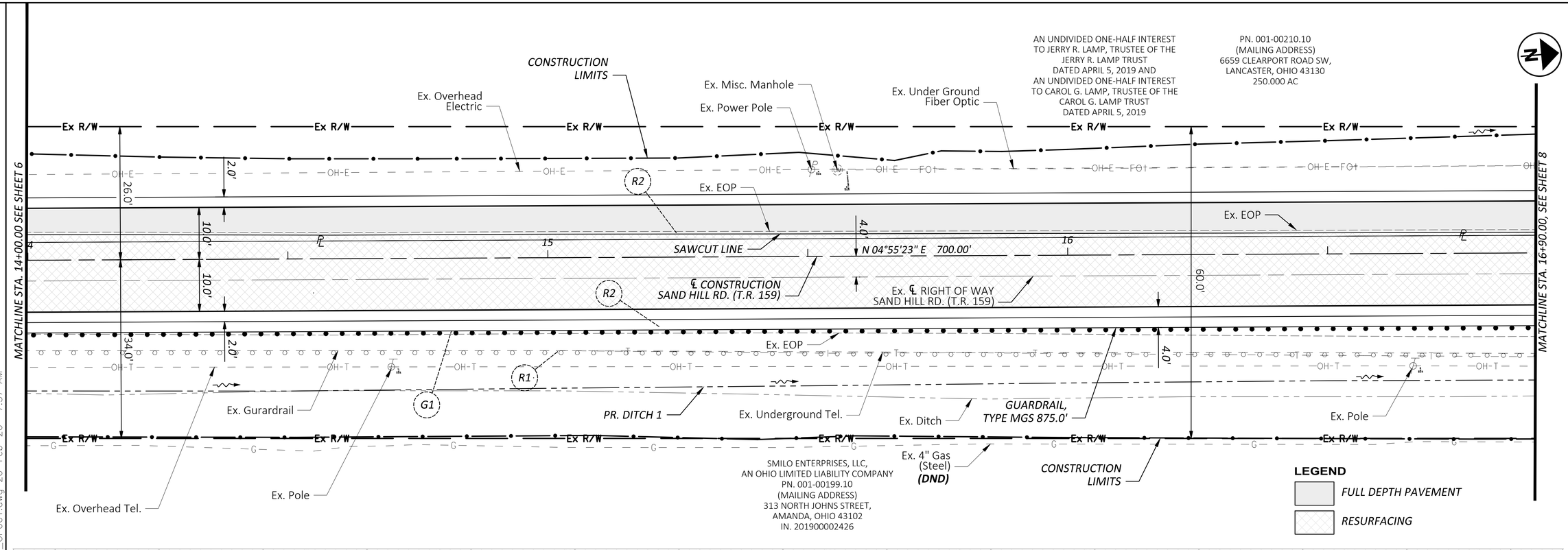
DESIGN AGENCY

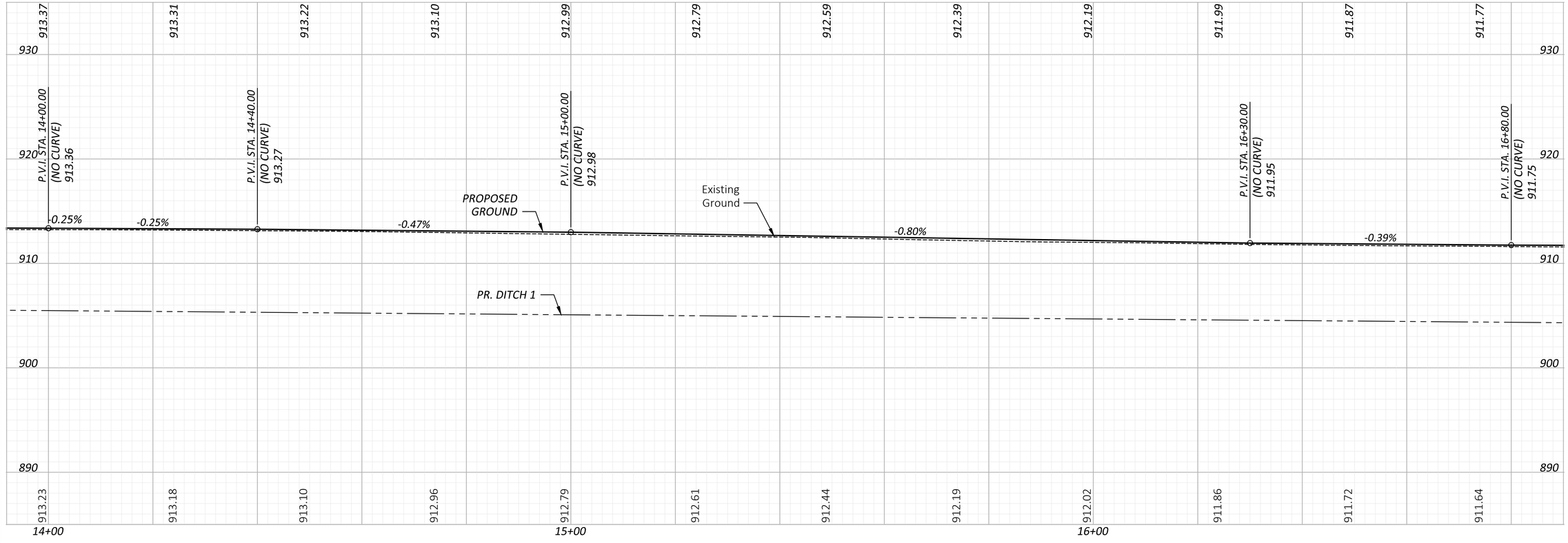
FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 11/25
PROJECT ID	TR159-1.088
6	TOTAL 25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_GP001.dwg 20-Feb-26 7:37 AM





HORIZONTAL SCALE IN FEET
0 5 10 20

PLAN AND PROFILE

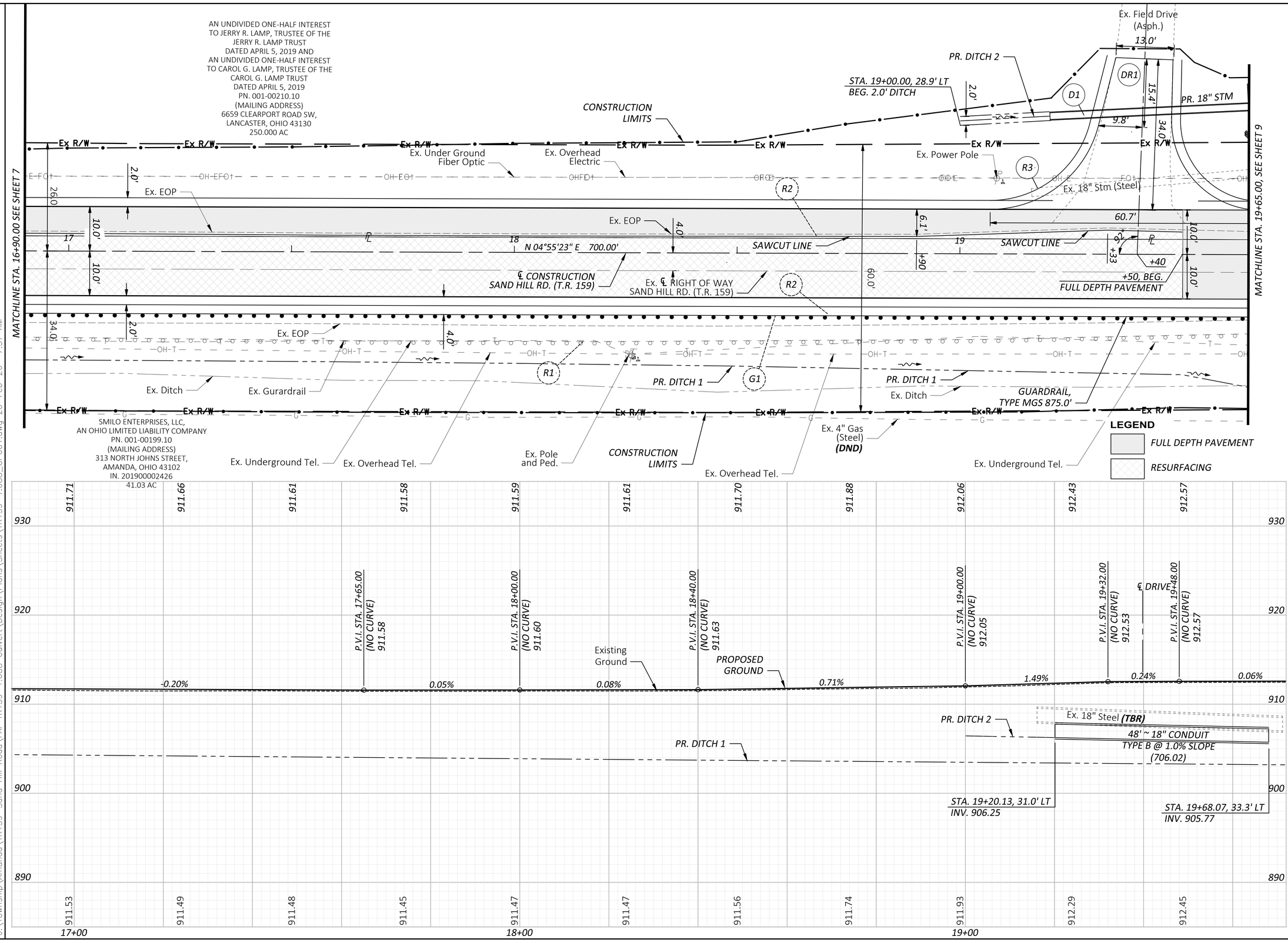
STA. 14+00.00 TO STA. 16+90.00
T.R. 159 (SAN HILL RD.)

DESIGN AGENCY
FAIRFIELD COUNTY ENGINEER

DESIGNER	
JAA	
REVIEWER	
WGM	11/25
PROJECT ID	
TR159-1.088	
7	TOTAL 25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_GP001.dwg 20-Feb-26 7:37 AM



HORIZONTAL SCALE IN FEET
0 5 10 20

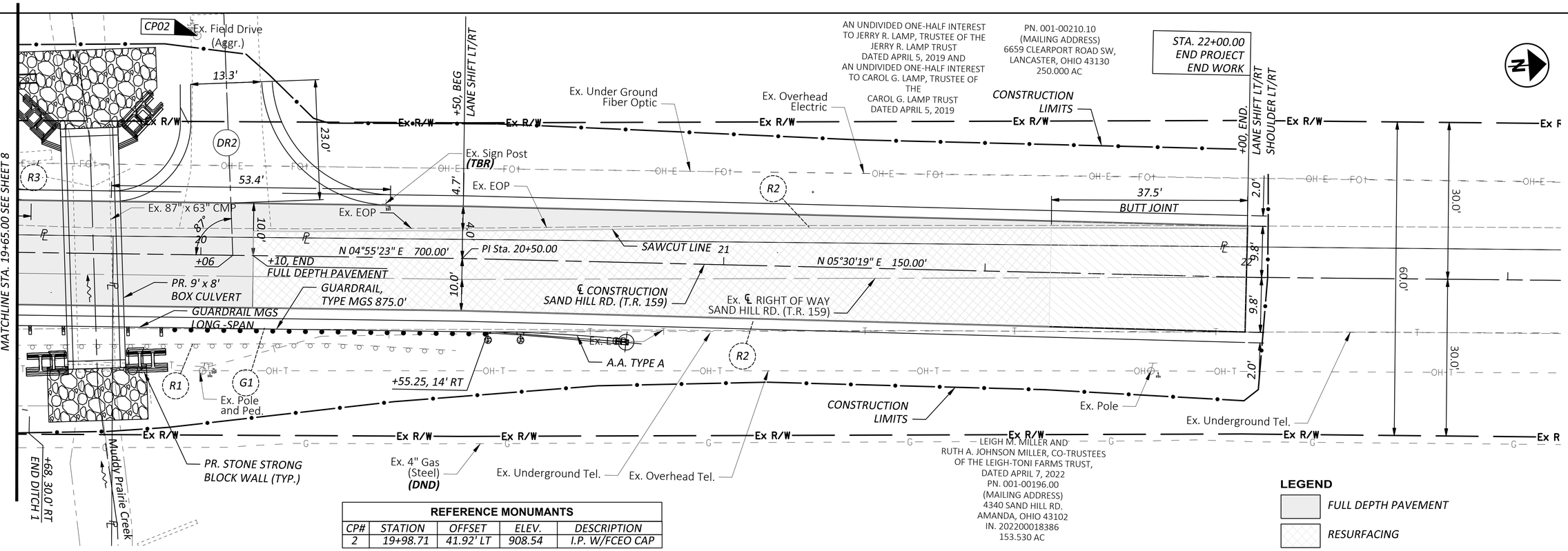
PLAN AND PROFILE
STA. 16+90.00 TO STA. 19+65.00
T.R. 159 (SAND HILL RD.)

DESIGN AGENCY
FAIRFIELD COUNTY ENGINEER

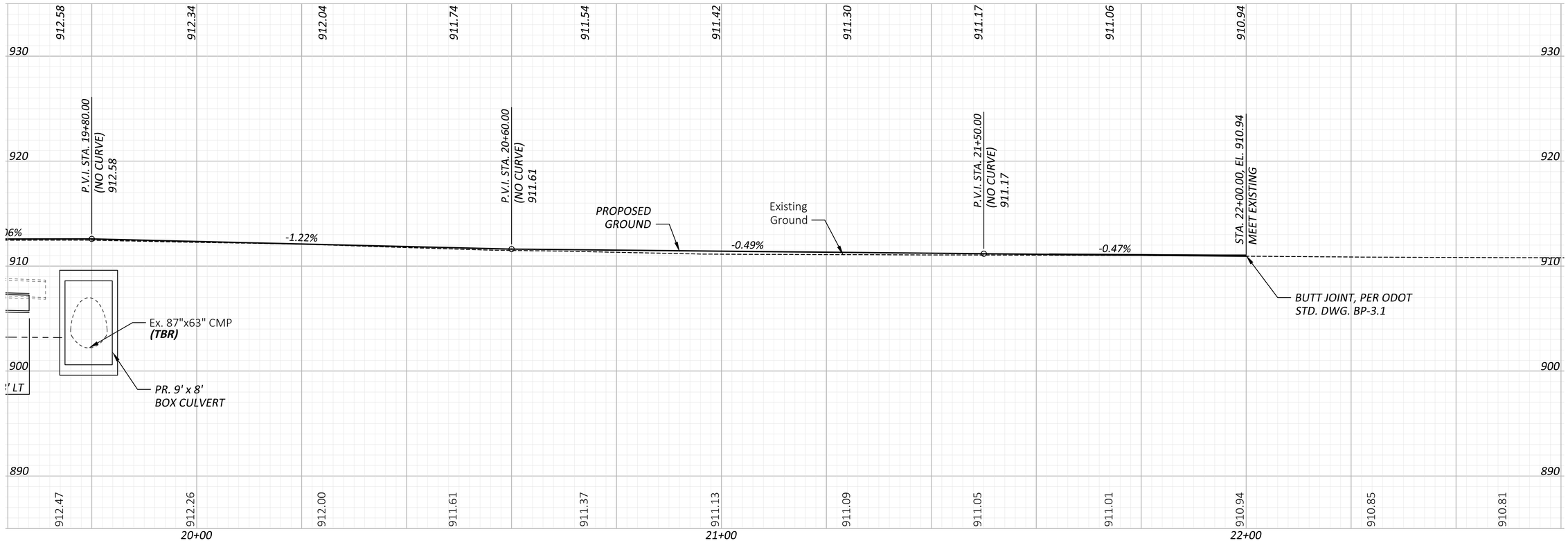
DESIGNER	
JAA	
REVIEWER	
WGM 11/25	
PROJECT ID	
TR159-1.088	
8	TOTAL 25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_GP001.dwg 20-Feb-26 7:37 AM



REFERENCE MONUMANTS				
CP#	STATION	OFFSET	ELEV.	DESCRIPTION
2	19+98.71	41.92' LT	908.54	I.P. W/FCEO CAP



PLAN AND PROFILE
STA. 19+65.00 TO STA. 22+50.00
T.R. 159 (SAND HILL RD.)

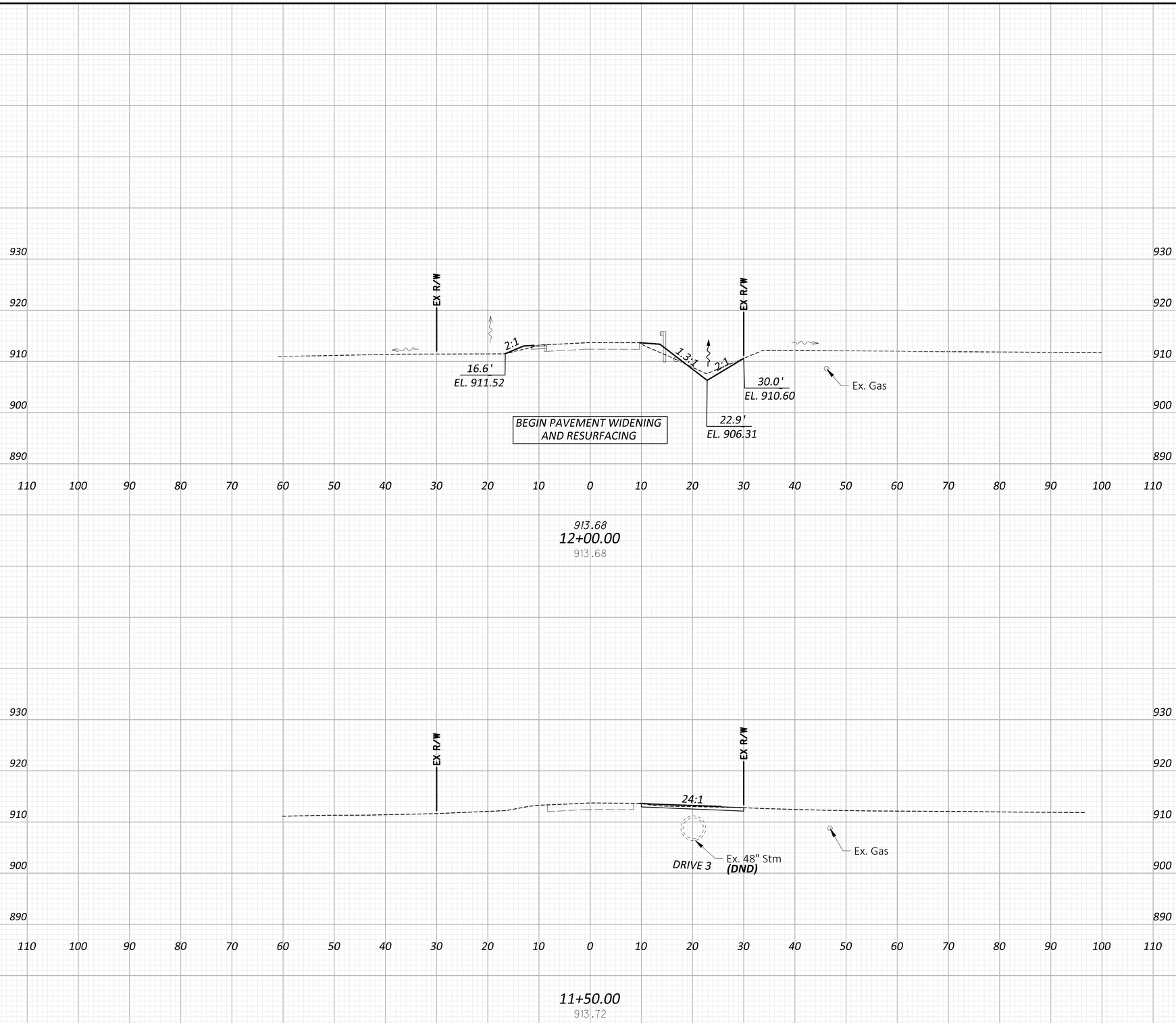
DESIGN AGENCY
FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 11/25
PROJECT ID	TR159-1.088
9	TOTAL 25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_GP001.dwg 20-Feb-26 7:37 AM

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	167			20	22
28		10	10		
	78			9	9
0		0	0		
	245	TOTAL		29	31



CROSS SECTIONS
STA. 11+50.00 TO STA. 12+00.00

DESIGN AGENCY

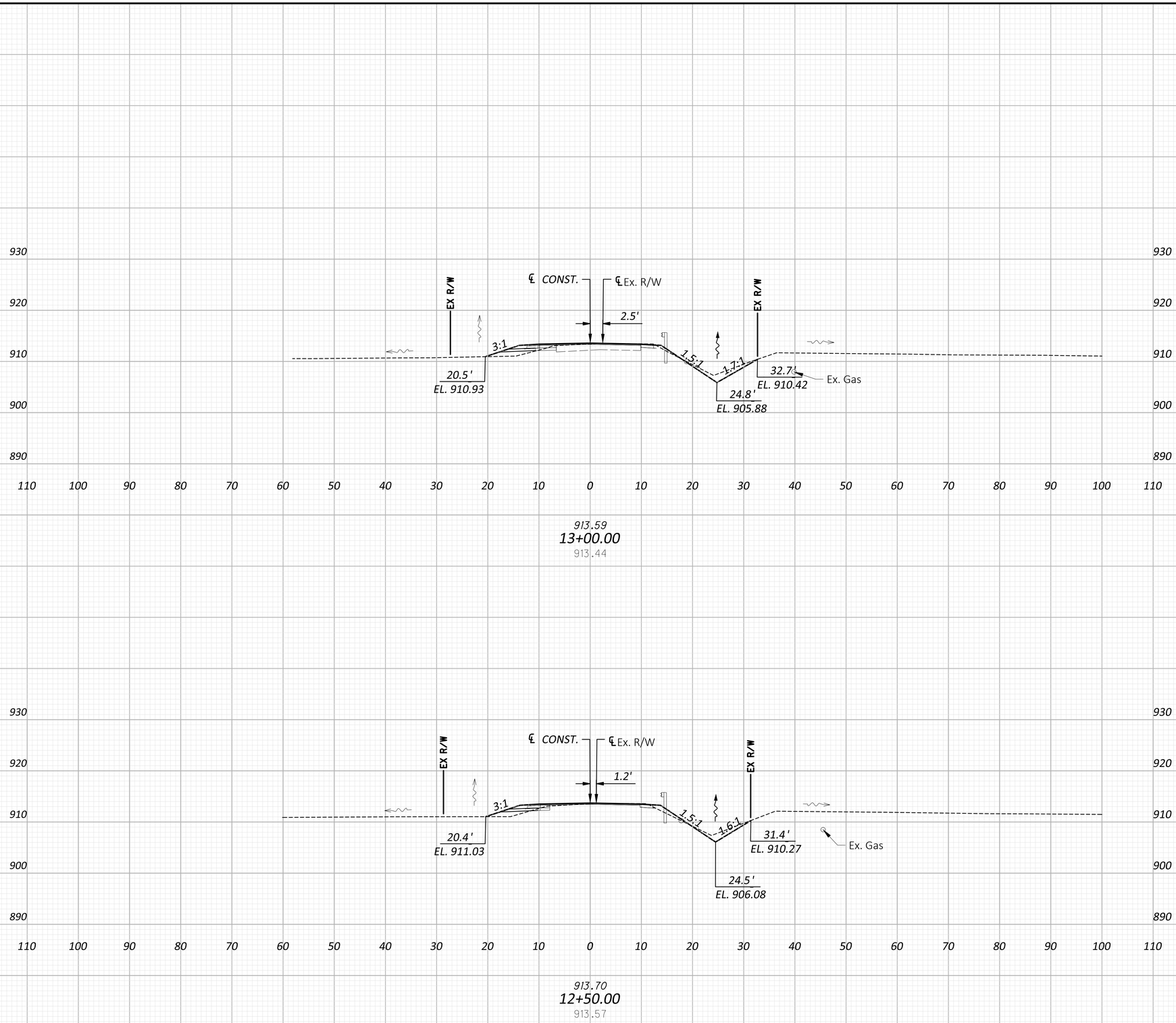
FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	10
TOTAL	25

FAI-TR159-1.088

U:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:37 AM

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	189			32	27
33		15	13		
	181			24	25
32		11	14		
	370	TOTAL		56	52



CROSS SECTIONS
STA. 12+50.00 TO STA. 13+00.00

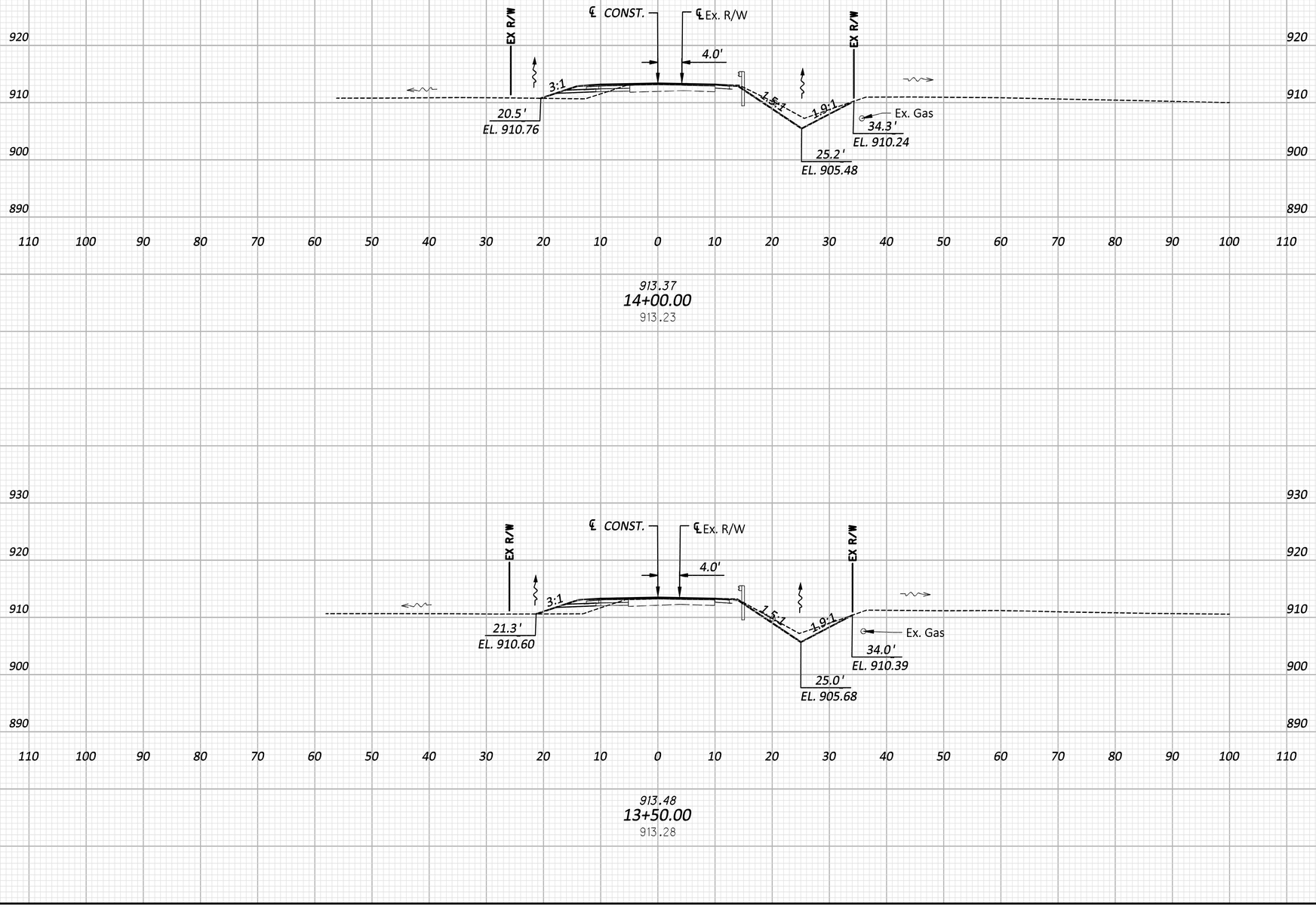
DESIGN AGENCY
FAIRFIELD COUNTY ENGINEER

DESIGNER	
JAA	
REVIEWER	
WGM	01/26
PROJECT ID	
TR159-1.088	
SHEET	TOTAL
11	25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:37 AM

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	192			45	22
35		26	14		
	195			43	28
35		20	16		
	387	TOTAL		88	50



CROSS SECTIONS
STA. 13+50.00 TO STA. 14+00.00

DESIGN AGENCY

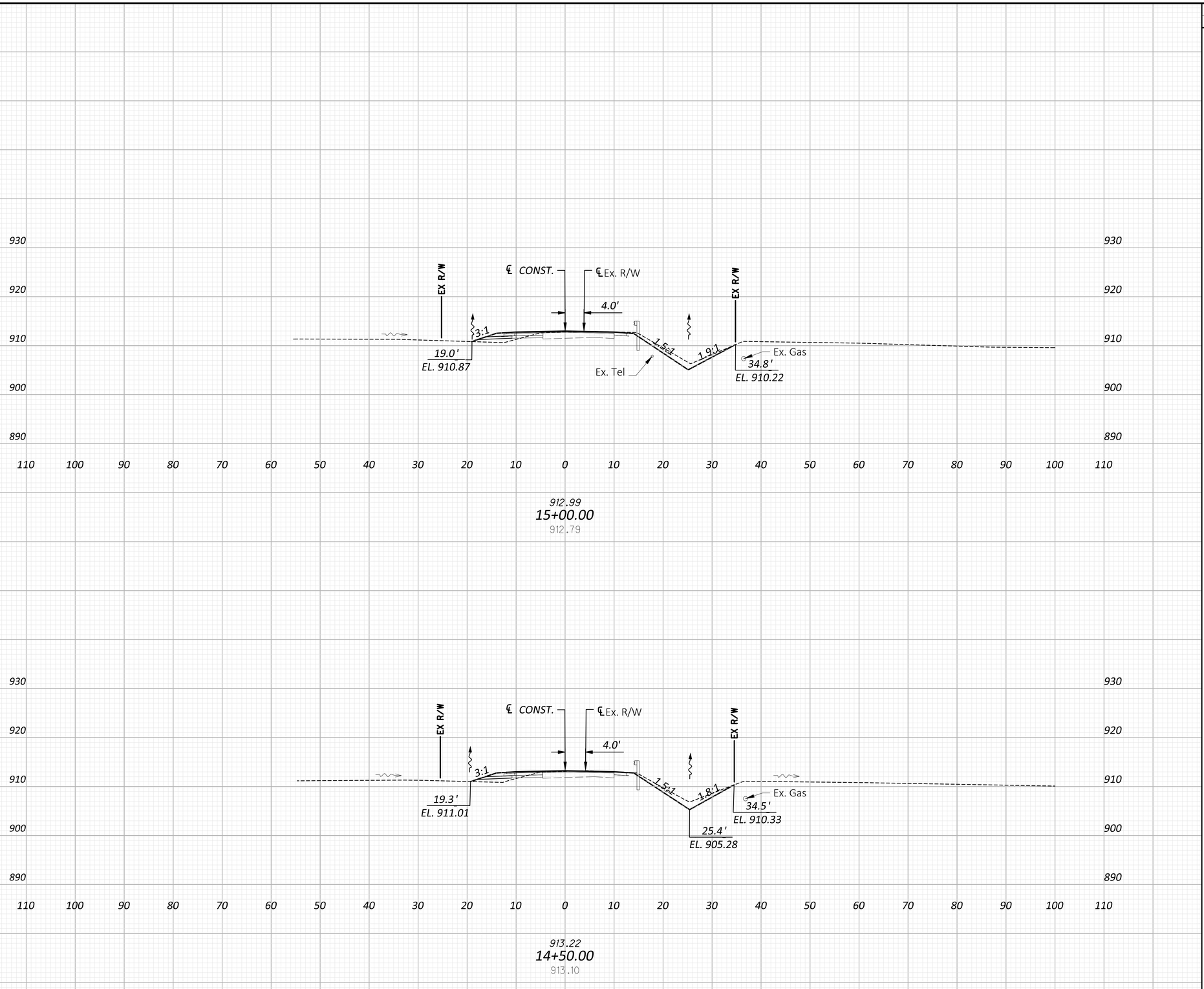
FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	12
TOTAL	25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:37 AM

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	183			46	17
34		22	10		
	189			42	19
34		23	10		
	372	TOTAL		88	36



CROSS SECTIONS
STA. 14+50.00 TO STA. 15+00.00

DESIGN AGENCY

FAIRFIELD COUNTY ENGINEER

DESIGNER: JAA

REVIEWER: WGM WGM

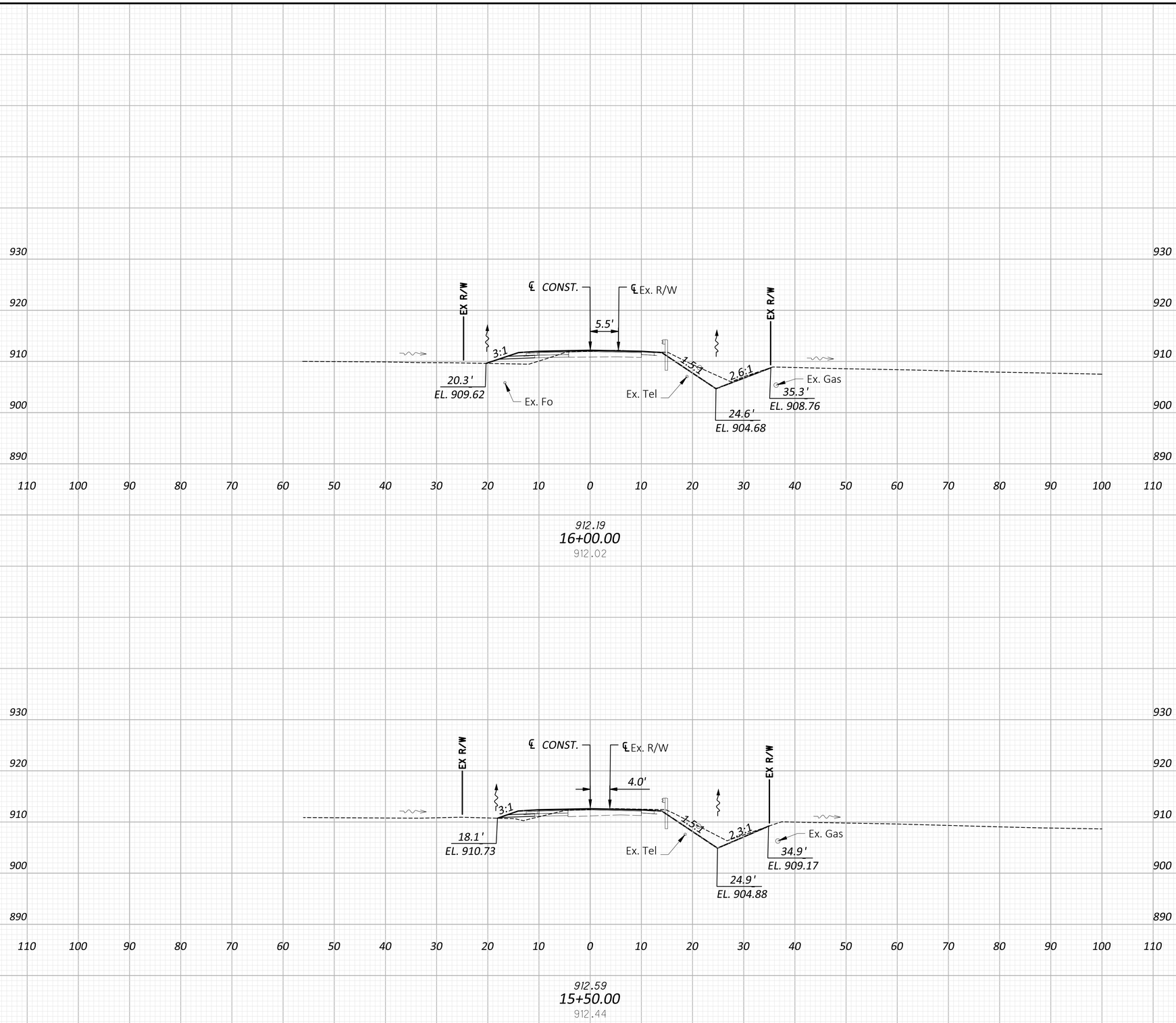
PROJECT ID: TR159-1.088

SHEET: 13 TOTAL: 25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:38 AM

SEEDING END WIDTH	SEEDING SQ. YDS.
	197
35	
	186
32	
	383



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		49	32
27	15		
		51	21
28	8		
TOTAL		100	53

CROSS SECTIONS
STA. 15+50.00 TO STA. 16+00.00

DESIGN AGENCY

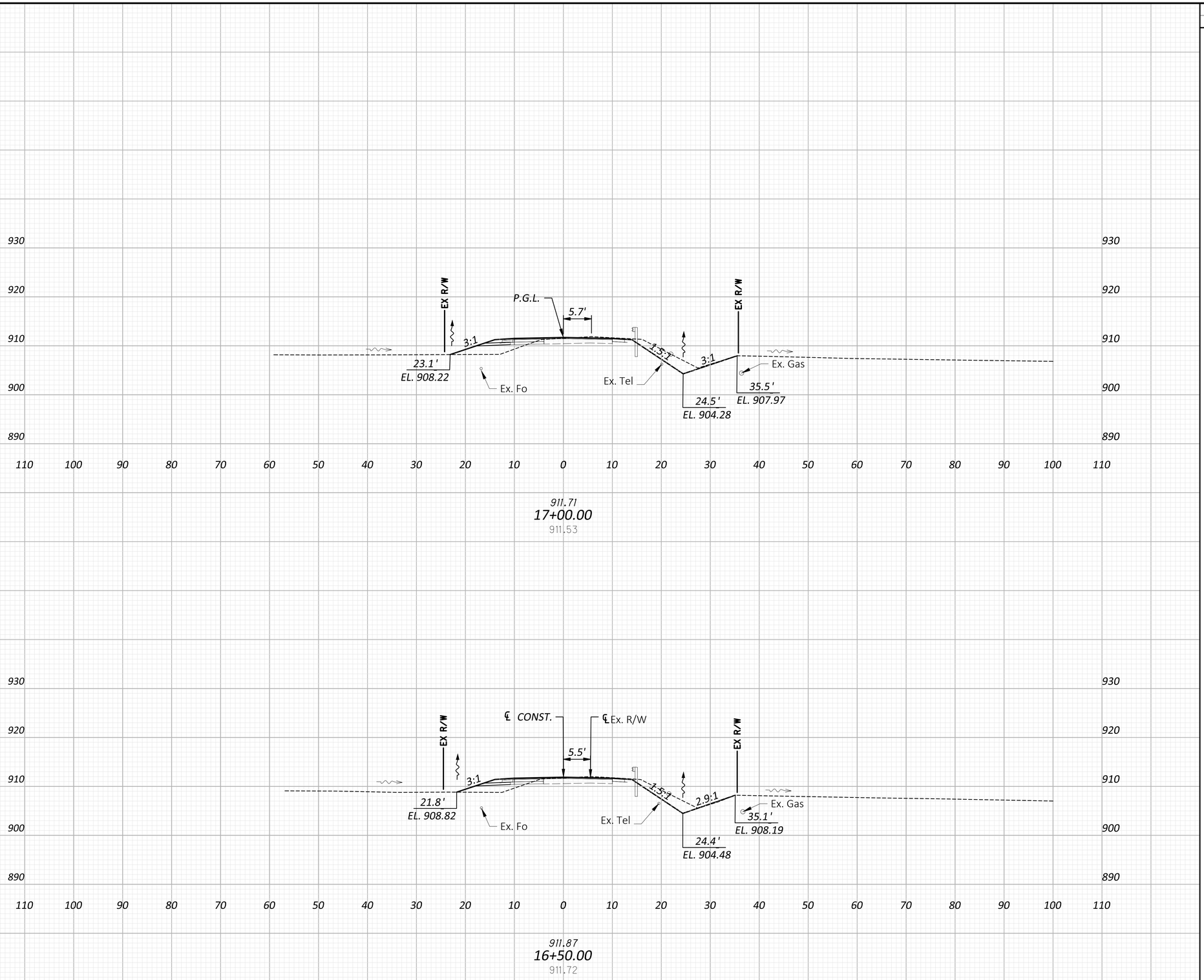
FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	14
TOTAL	25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:38 AM

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	208			55	44
	37	28	24		
	203			50	40
	36	26	19		
	411	TOTAL		105	84



CROSS SECTIONS
STA. 16+50.00 TO STA. 17+00.00

DESIGN AGENCY

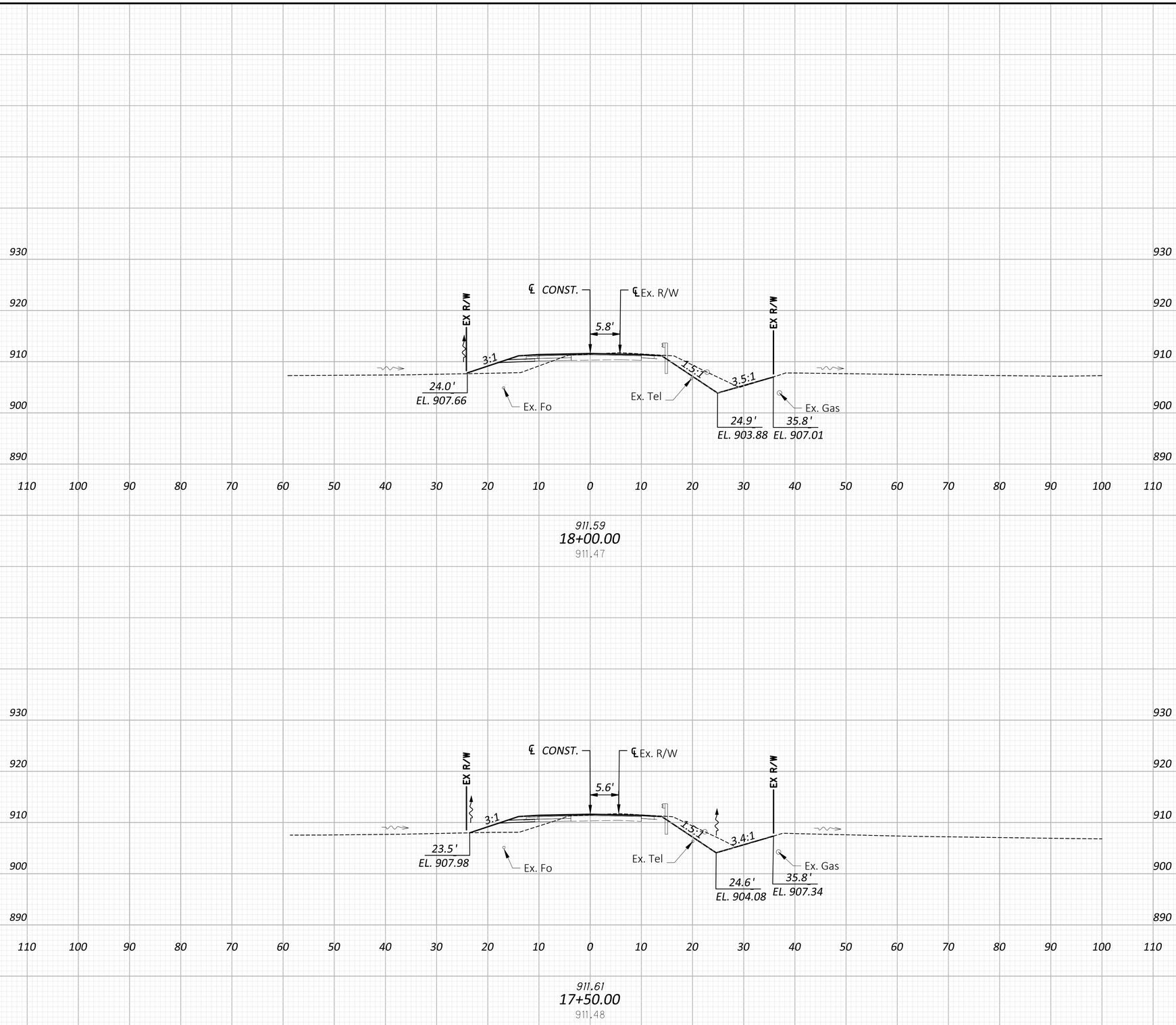
FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	15
TOTAL	25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:38 AM

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	220			69	54
39		33	28		
	214			59	48
38		31	24		
	434	TOTAL		128	102



CROSS SECTIONS
STA. 17+50.00 TO STA. 18+00.00

DESIGN AGENCY

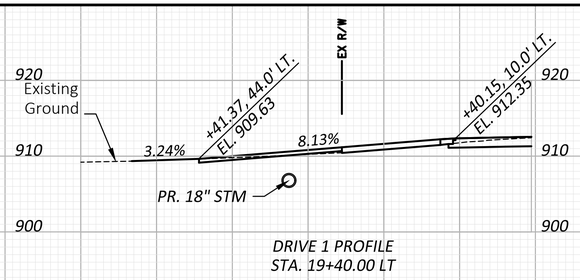
FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	16
TOTAL	25

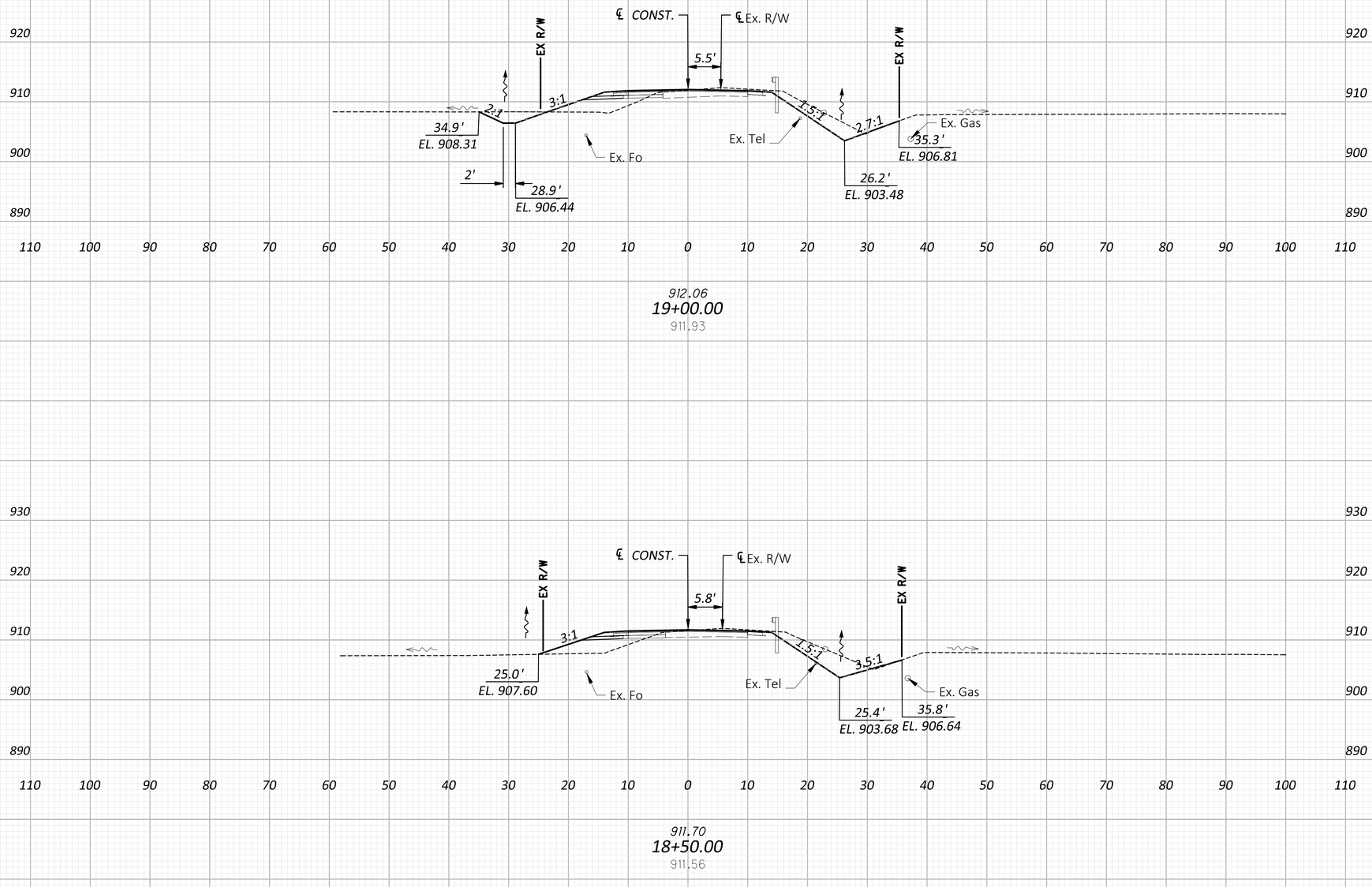
FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:38 AM

SEEDING END WIDTH	SEEDING SQ. YDS.
	250
50	
	250
40	
	500



DRIVE 1 PROFILE
STA. 19+40.00 LT



912.06
19+00.00
911.93

911.70
18+50.00
911.56

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		51	36
32	29		
		68	55
41	30		
TOTAL		119	91

CROSS SECTIONS
STA. 18+50.00 TO STA. 19+00.00

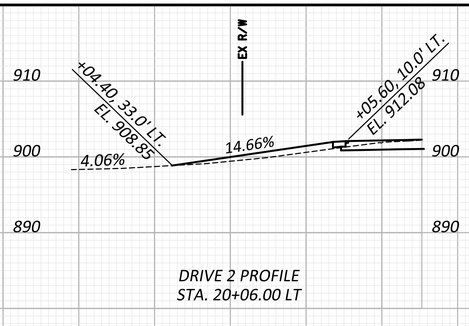
DESIGN AGENCY
FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	17
TOTAL	25

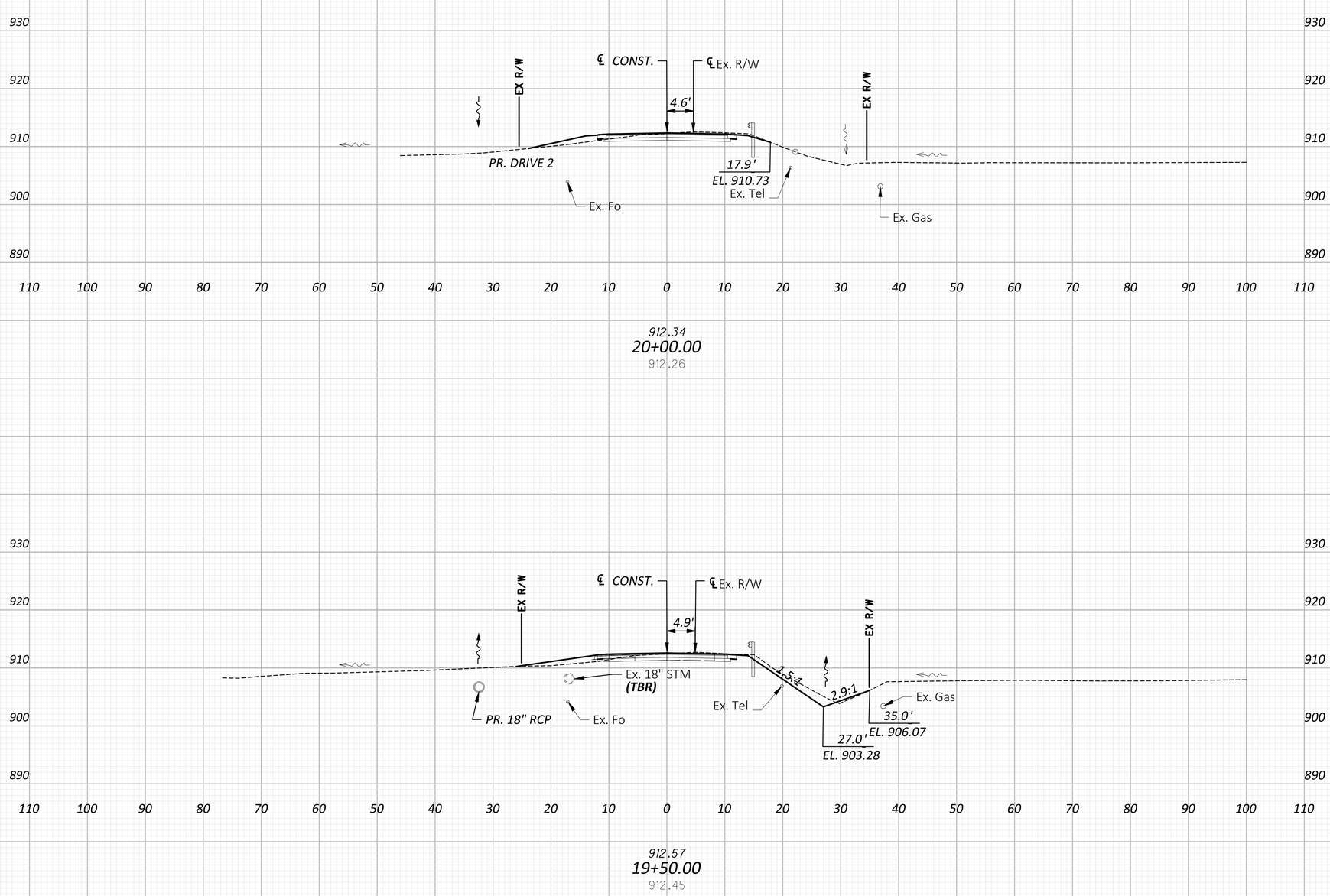
FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:38 AM

SEEDING END WIDTH	SEEDING SQ. YDS.
	108
18	
	161
40	
	269



DRIVE 2 PROFILE
STA. 20+06.00 LT



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		7	31
3	9		
		24	18
23	10		
TOTAL		31	49

CROSS SECTIONS
STA. 19+50.00 TO STA. 20+00.00

DESIGN AGENCY

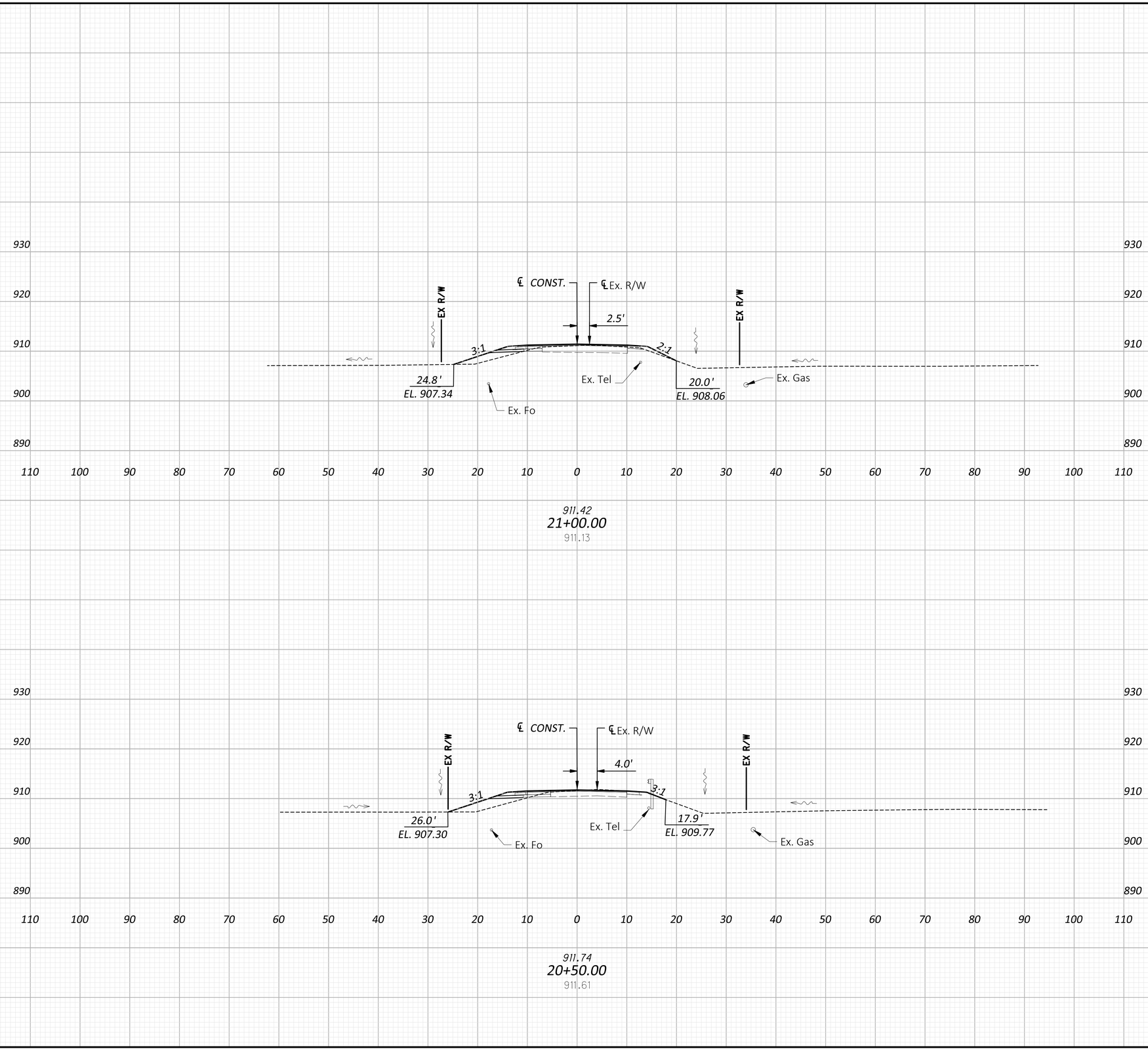
FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	18
TOTAL	25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:38 AM

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	125			7	34
22		3	21		
	120			7	42
21		4	24		
	245	TOTAL		14	76



CROSS SECTIONS
STA. 20+50.00 TO STA. 21+00.00

DESIGN AGENCY

FAIRFIELD COUNTY ENGINEER

DESIGNER
JAA

REVIEWER
WGM 01/26

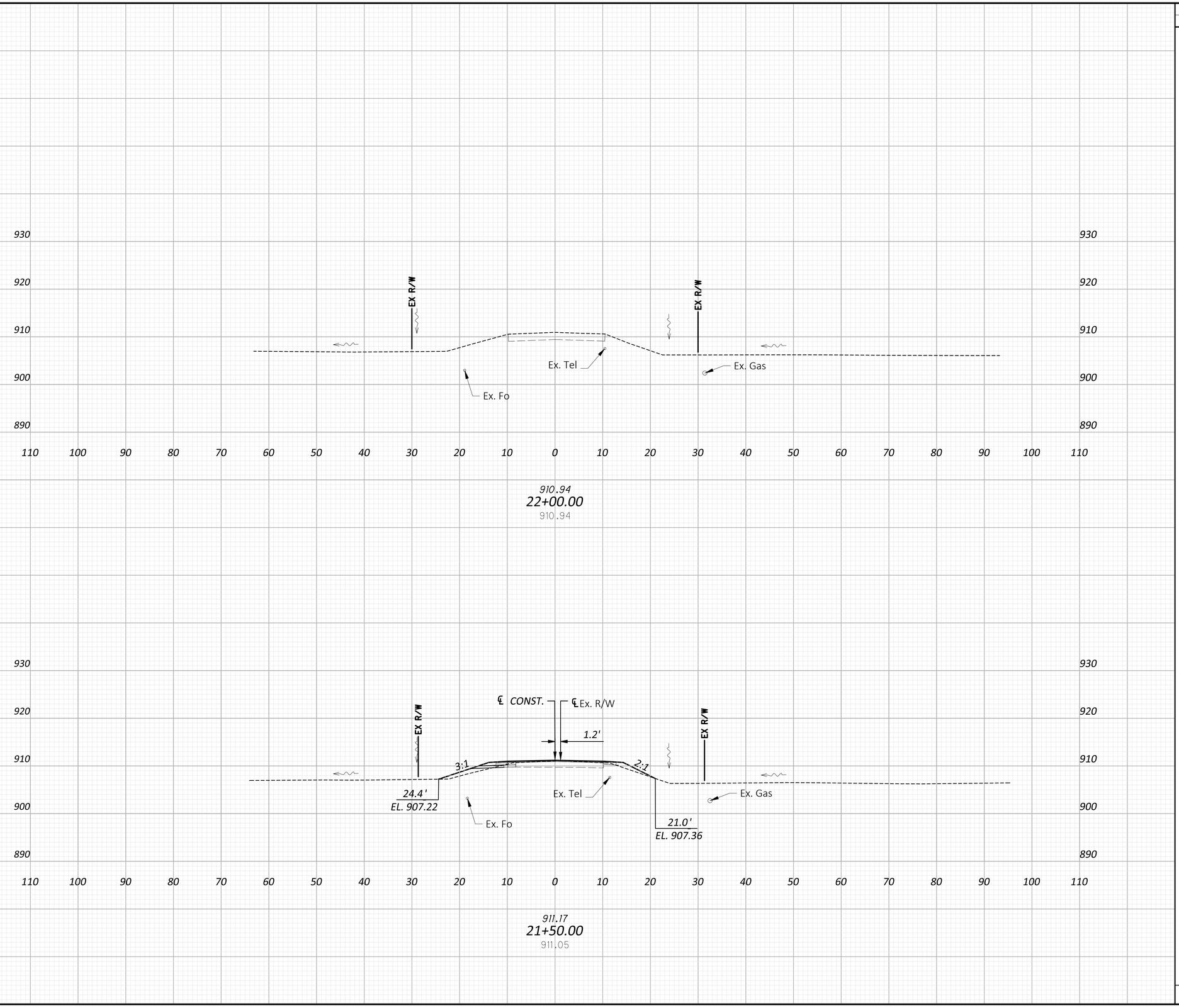
PROJECT ID
TR159-1.088

SHEET 19 | TOTAL 25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:38 AM

SEEDING	
END WIDTH	SQ. YDS.
	0
0	
	64
23	
	64



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		0	0
0	0		
		5	15
5	16		
TOTAL		5	15

CROSS SECTIONS
STA. 21+50.00 TO STA. 22+00.00

DESIGN AGENCY

FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	20
TOTAL	25

FAI-TR159-1.088

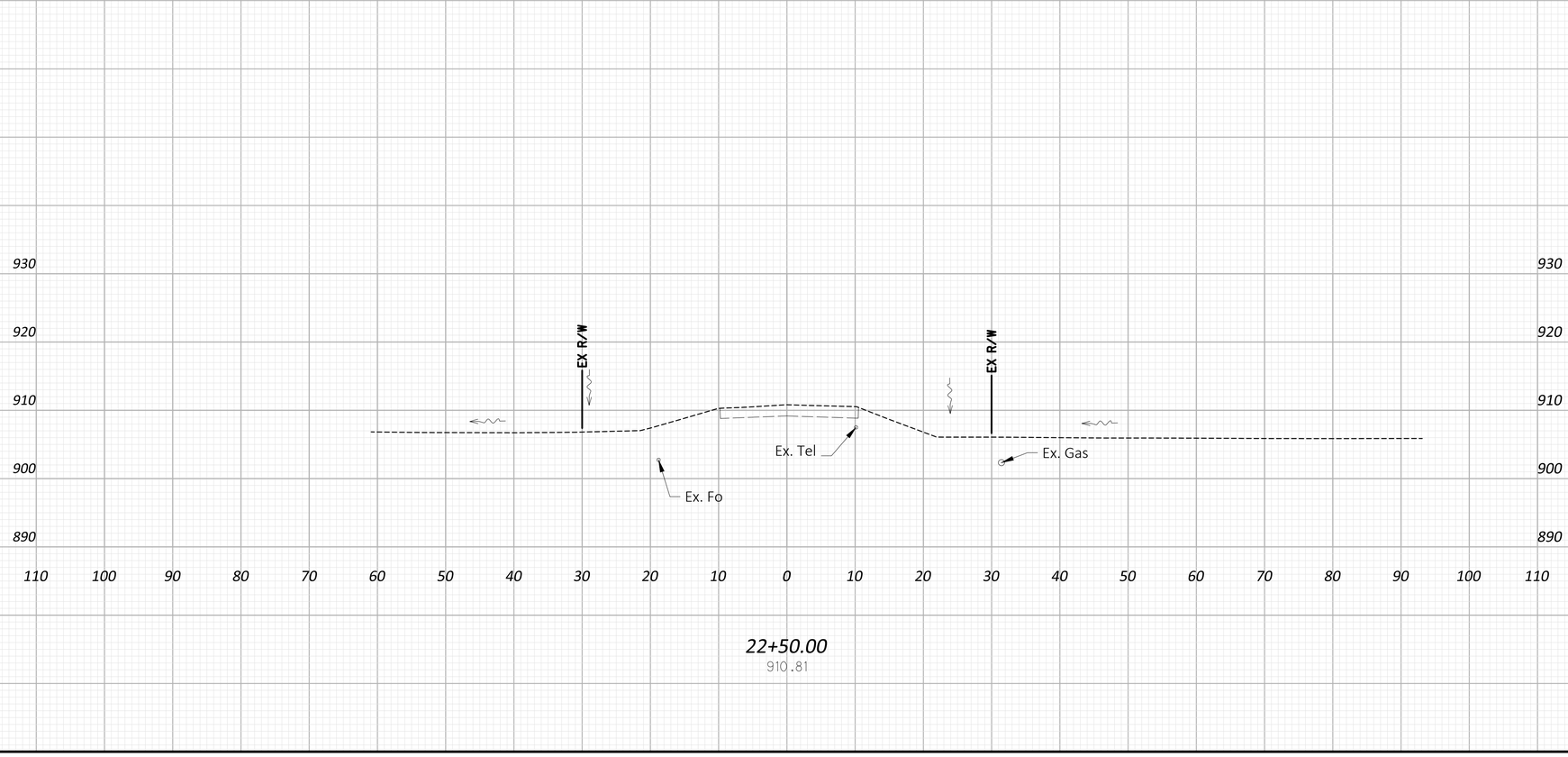
J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:38 AM

SEEDING	
END WIDTH	SQ. YDS.
0	0

SEEDING	
SHEET #	TOTAL
10	245
11	370
12	387
13	372
14	383
15	411
16	434
17	500
18	269
19	245
20	64
21	0
3,680 CY	TOTALS CARRIED OVER TO SUB SUMMARY SHEET

EXCAVATION		EMBANKMENT	
SHEET #	TOTAL	SHEET #	TOTAL
10	29	10	31
11	56	11	52
12	88	12	50
13	88	13	36
14	100	14	53
15	105	15	84
16	128	16	102
17	119	17	91
18	31	18	49
19	14	19	76
20	5	20	15
21	0	21	0
TOTALS CARRIED OVER TO SUB SUMMARY SHEET	763 CY		639 CY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
TOTAL	0	0	



CROSS SECTIONS
STA. 22+50.00

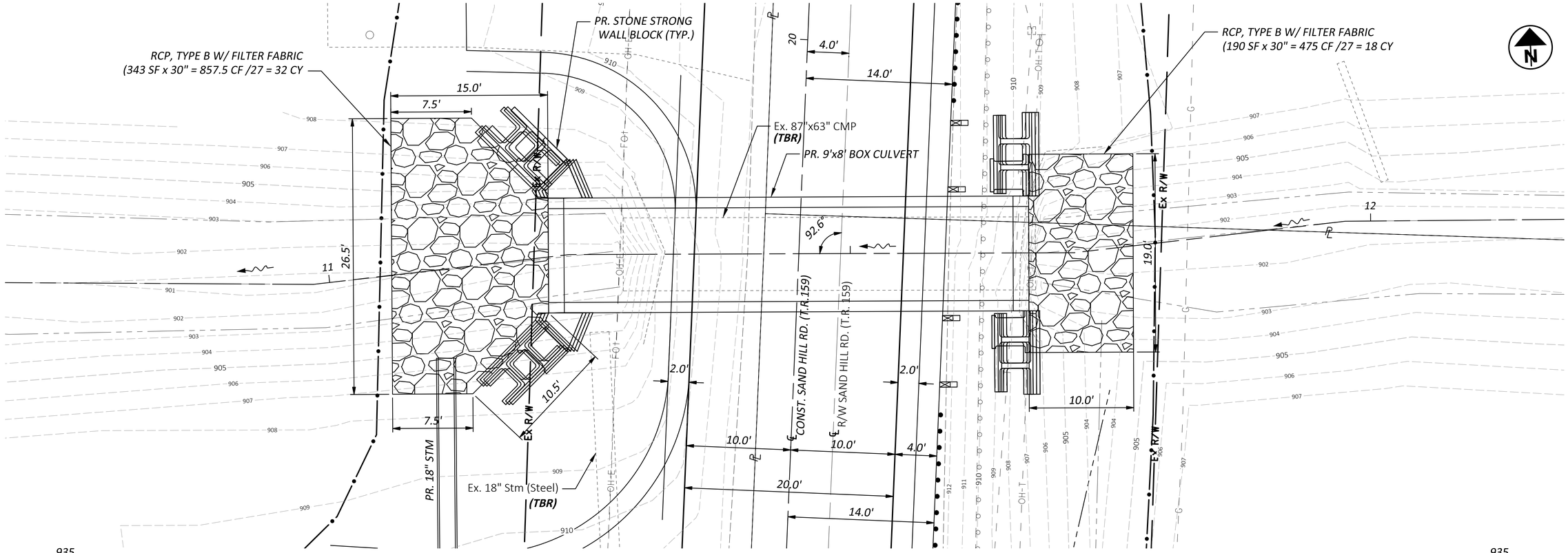
DESIGN AGENCY

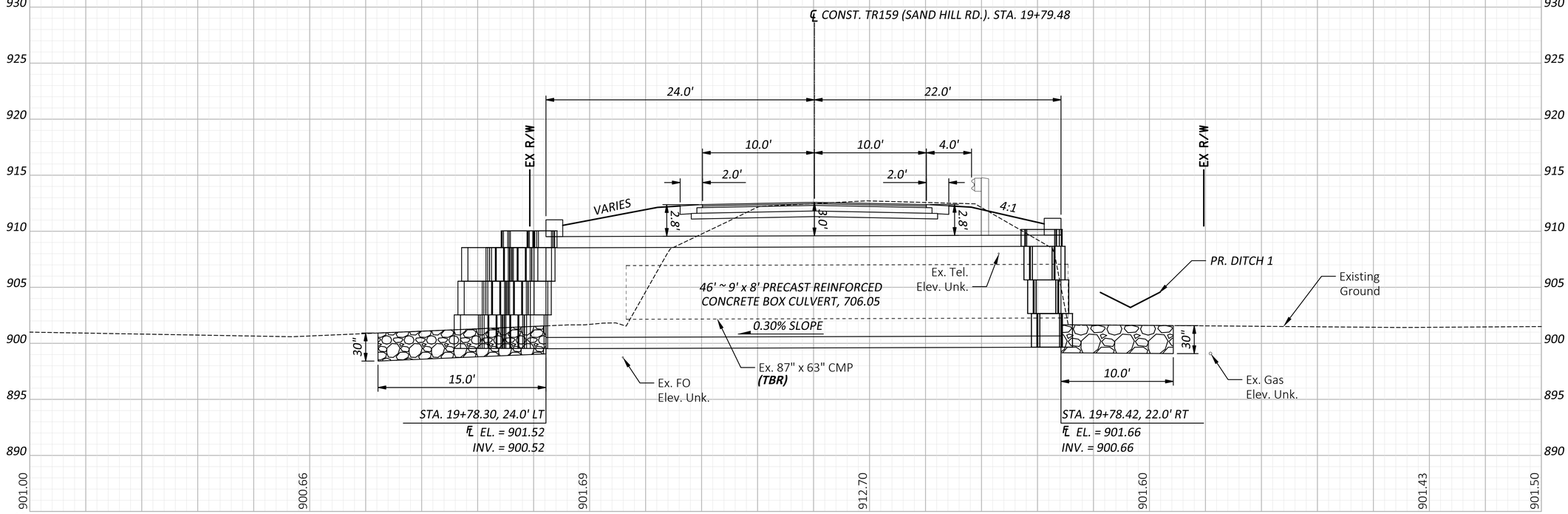
FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	21
TOTAL	25

FAI-TR159-1.088

J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_XSE001.dwg 20-Feb-26 7:38 AM





HORIZONTAL SCALE IN FEET
0 5 10

CULVERT DETAILS

STA. 19+79.48

TR159-1.088 (SAND HILL ROAD)

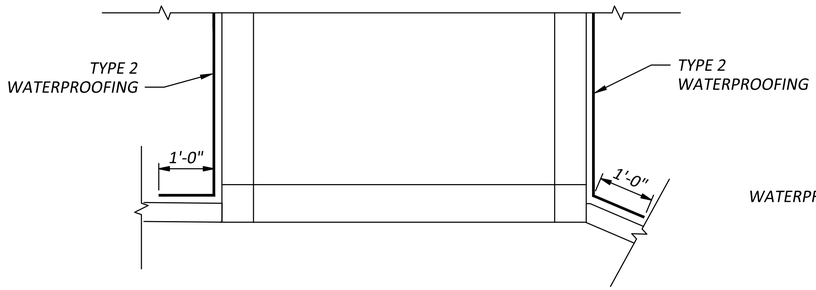
DESIGN AGENCY

FAIRFIELD COUNTY ENGINEER

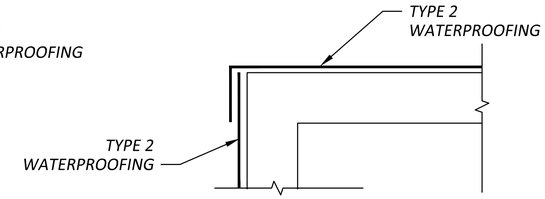
DESIGNER	JAA
REVIEWER	WGM 11/25
PROJECT ID	TR159-1.088
22	TOTAL 25

FAI-TR159-1.088

J:\Township\Amando\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_GP002.dwg 20-Feb-26 7:38 AM



PLAN VIEW



SECTION VIEW

WATERPROOFING DETAILS

STRUCTURE ESTIMATED QUANTITIES			
ITEM	QTY	UNIT	DESCRIPTION
202	40	FT	PIPE REMOVED, OVER 24"
601	50	CY	ROC CHANNEL PROTECTION, TYPE B W/ GEOTEXTILE FABRIC
512	170	SY	TYPE 2 WATERPROOFING, CONCRETE BOX
611	46	FT	9' SPAN x 8' RISE CONDUIT, TYPE A, 706.05
518	38	SY	POROUS BACKFILL WITH GEOTEXTILE FABRIC
518	80	FT	4" PERFORATED CORRUGATED PLASTIC PIPE
SPECIAL	12	EA	STONE STRONG WALL 24-44 BLOCK, 24 S.F. UNIT BLOCK MACK INDUSTRIES OR EQIVALENT L=96"
SPECIAL	4	EA	STONE STRONG WALL 6EU-44 BLOCK, 6 S.F. END UNIT BLOCK MACK INDUSTRIES OR EQIVALENT L=48"
SPECIAL	14	EA	STONE STRONG WALL 45D UNIT BLOCK MACK INDUSTRIES OR EQIVALENT L=8.25"
TOTALS CARRIED TO GENERAL SUMMARY			

WATERPROOFING:

WATERPROOFING, PER CMS 512.03 AND 711.25. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA: THE FOLLOWING DESIGN DATA IS ASSUMED

INTERNAL ANGLE OF FRICTION (Ød)	*= 30 DEGREES*
COEFFICIENT OF FRICTION	*= 0.30*
UNIT WEIGHT OF SOIL	*= 120 PCF*
UNIT WEIGHT OF CONCRETE	*= 150 PCF*
SLOPE OF BACKFILL	*= 2:1*
MAXIMUM FOUNDATION BEARING PRESSURE	*= 2000 P.S.F.*
CONCRETE	*= COMPRESSIVE STRENGTH 4000 PSI (FORESLOPE WALL)*
REINFORCING STEEL	*= ASTM A615, A616, OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI (ALL REINFORCING SHALL BE EPOXY COATED)*

ITEM 611 - 9' x 8' CONDUIT, TYPE A, 706.05:

BOX CULVERT SHALL BE DESIGNED PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CURRENT EDITION, FOR THE HL-93 LOADING WITH 5 FEET OF COVER. DIMENSIONS OF BOX CULVERT SHALL ADHERE TO DETAILS SHOWN ON THESE PLANS. SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OHIO SHALL BE SUBMITTED TO THE FAIRFIELD COUNTY ENGINEER'S OFFICE FOR APPROVAL, PRIOR TO CASTING THE CONCRETE BOX.

STRUCTURAL NOTES
TR159-1.088 (SAND HILL ROAD)

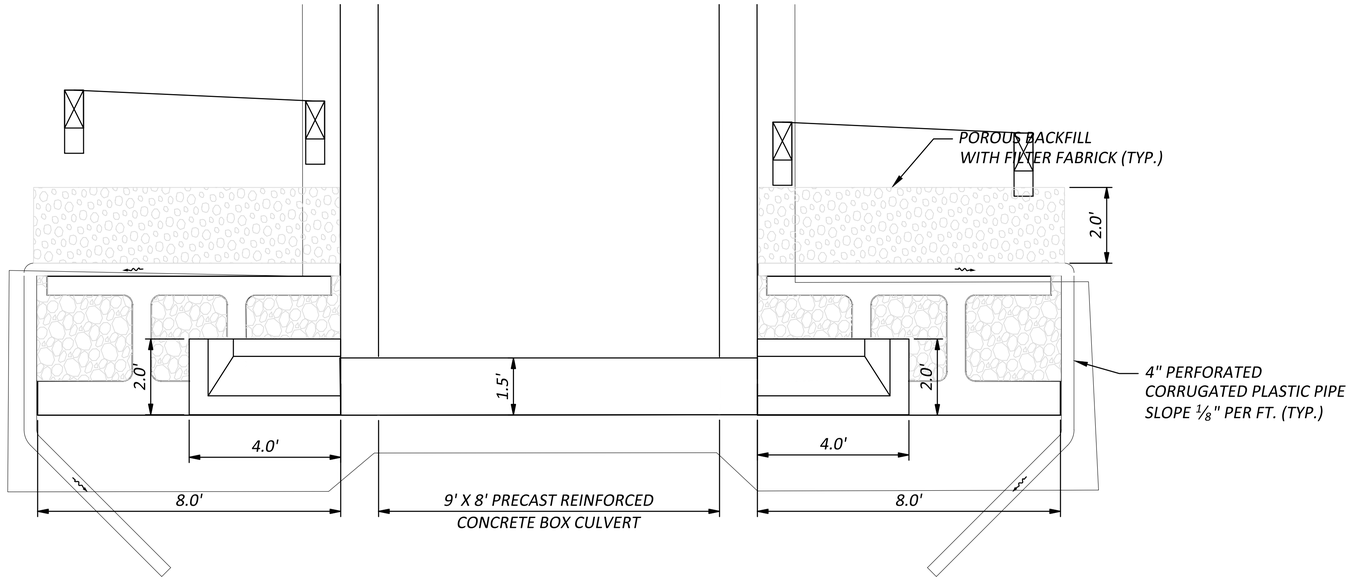
DESIGN AGENCY
FAIRFIELD COUNTY ENGINEER

DESIGNER
JAA

REVIEWER
WGM 01/26

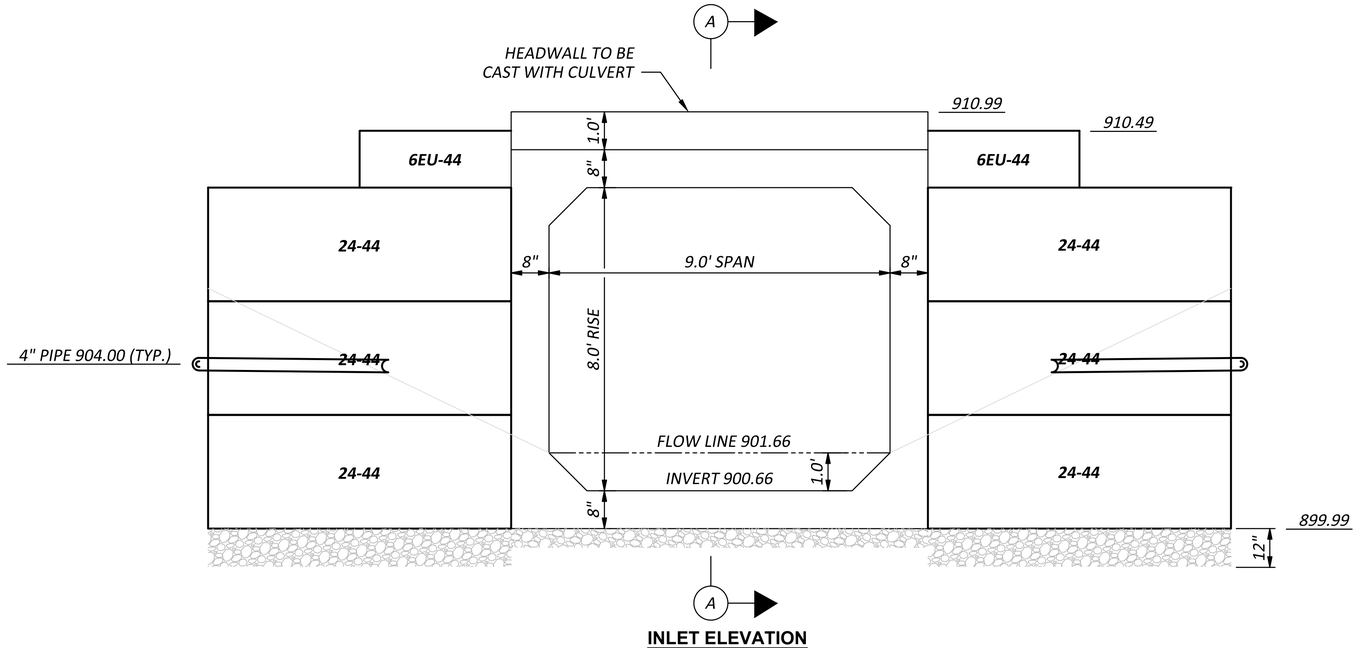
PROJECT ID
TR159-1.088

SHEET 23 | TOTAL 25

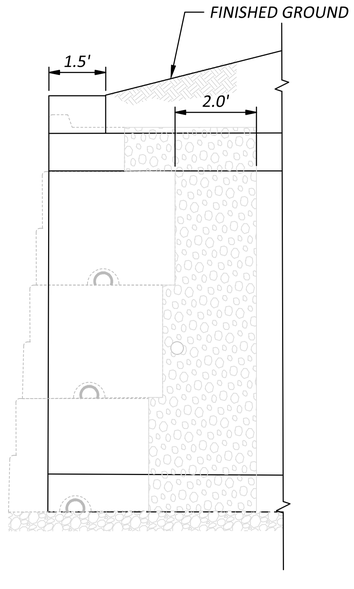


INLET PLAN VIEW

	WINGWALLS
ITEM SPECIAL: STONE STRONG WALL 6EU-24 BLOCK, 6 S.F. END UNIT BLOCK MACK INDUSTRIES, INC. OR EQUIVALENT L = 48"	*2*
ITEM SPECIAL: STONE STRONG WALL 24-44 BLOCK, 24 S.F. UNIT BLOCK MACK INDUSTRIES, INC. OR EQUIVALENT L = 96"	*6*



INLET ELEVATION



DETAIL A-A

INLET DETAILS

TR159-1.088 (SAND HILL ROAD)

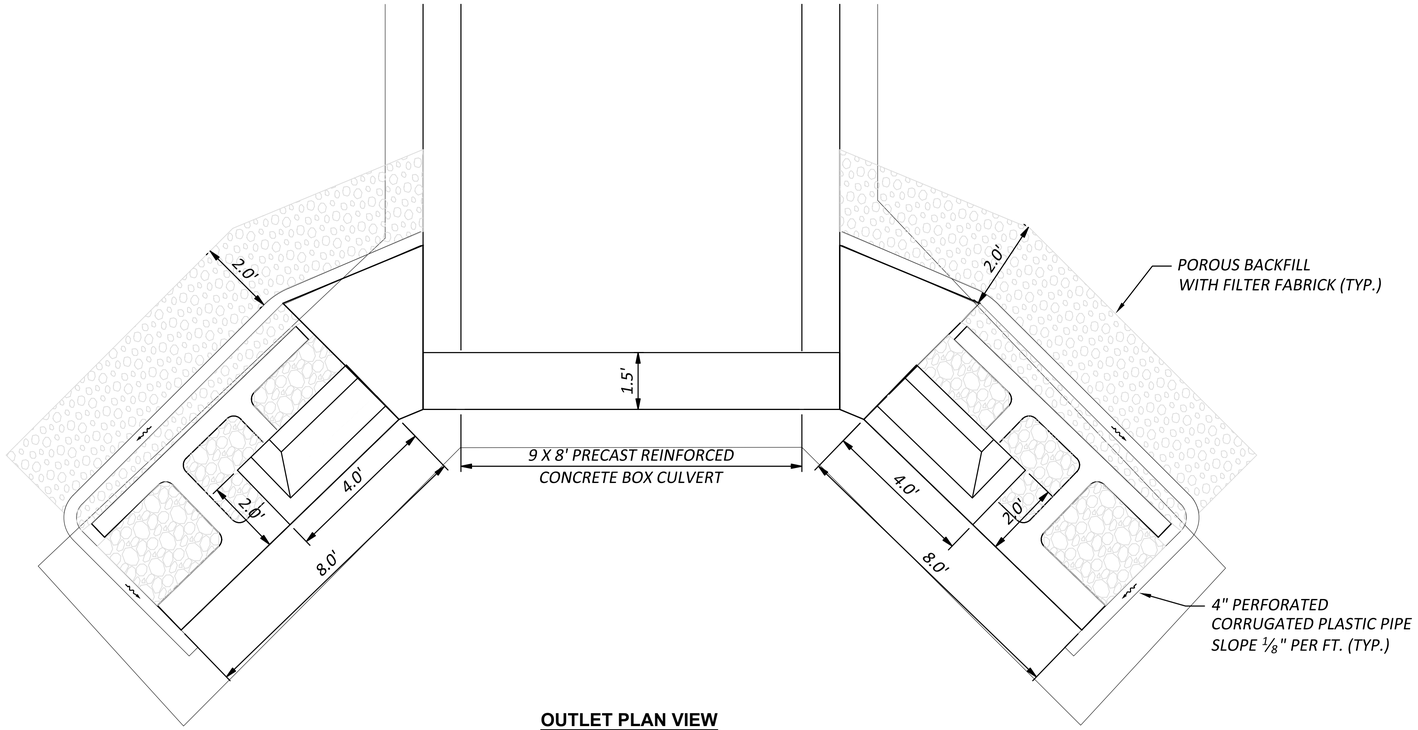
DESIGN AGENCY

FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	24
TOTAL	25

FAI-TR159-1.088

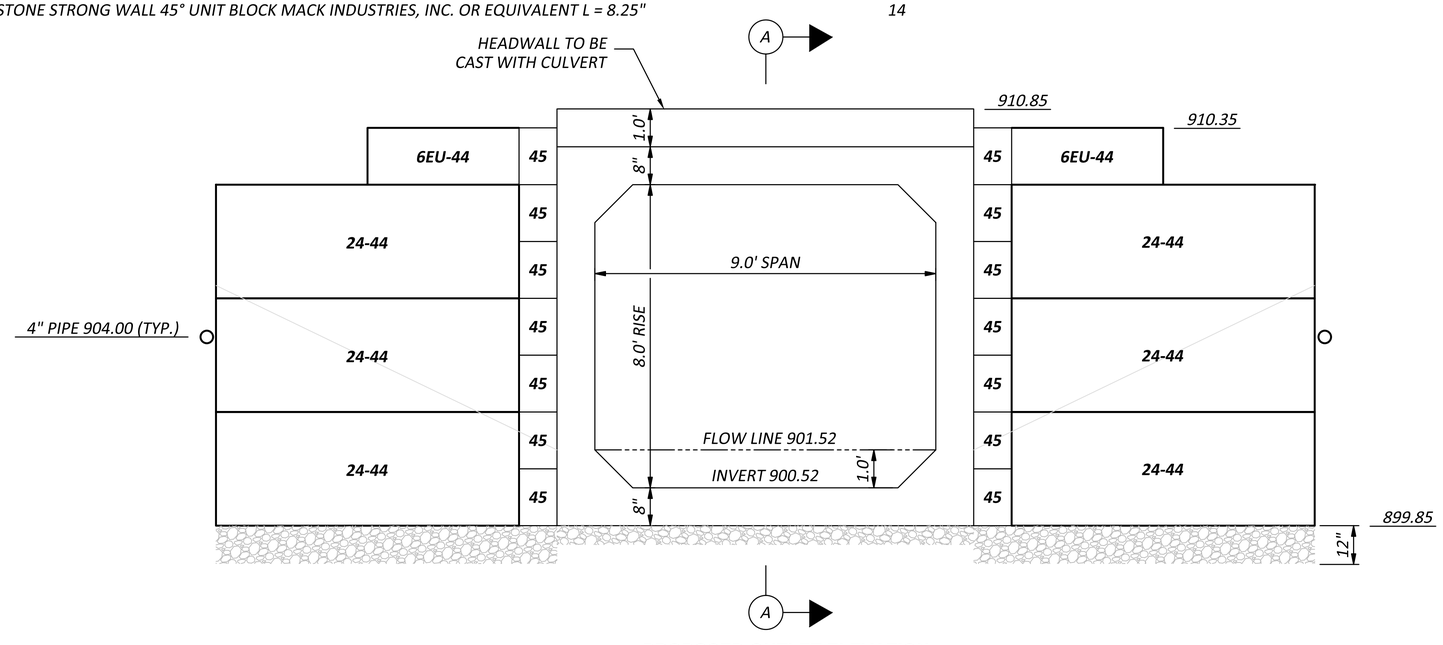
J:\Township\Amanda\TR159-Sand Hill Road\FAI-TR159-1.088 Culvert\Design\Plans\Sheets\TR159-1.088_DM001.dwg 20-Feb-26 7:39 AM



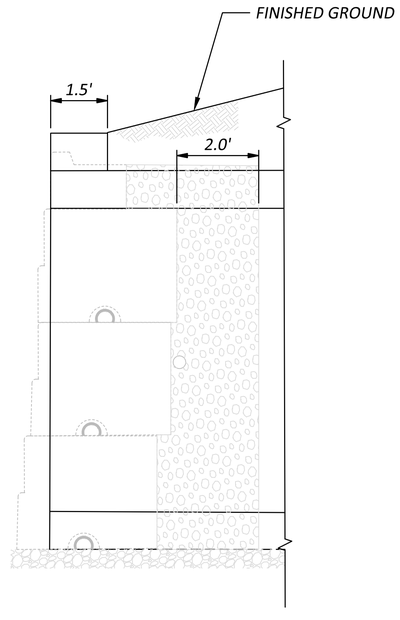
OUTLET PLAN VIEW

WINGWALLS

ITEM SPECIAL: STONE STRONG WALL 6EU-24 BLOCK, 6 S.F. END UNIT BLOCK MACK INDUSTRIES, INC. OR EQUIVALENT L = 48"	*2*
ITEM SPECIAL: STONE STRONG WALL 24-44 BLOCK, 24 S.F. UNIT BLOCK MACK INDUSTRIES, INC. OR EQUIVALENT L = 96"	*6*
ITEM SPECIAL: STONE STRONG WALL 45° UNIT BLOCK MACK INDUSTRIES, INC. OR EQUIVALENT L = 8.25"	*14*



PROPOSED OUTLET ELEVATION



DETAIL A-A

OUTLET DETAILS

TR159-1.088 (SAND HILL ROAD)

DESIGN AGENCY

FAIRFIELD COUNTY ENGINEER

DESIGNER	JAA
REVIEWER	WGM 01/26
PROJECT ID	TR159-1.088
SHEET	25
TOTAL	25

FAI-TR159-1.088