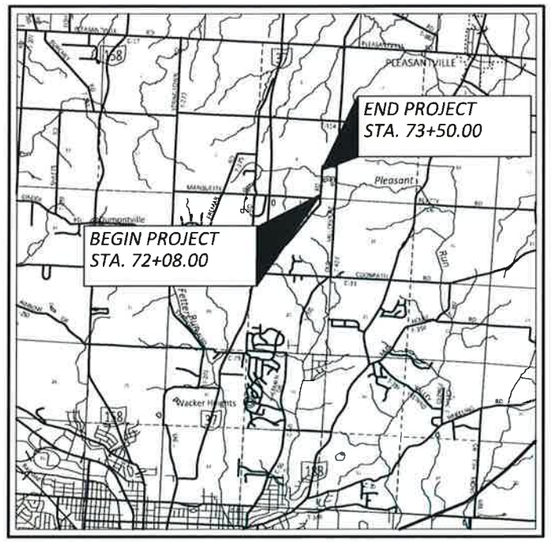
FAIRFIELD COUNTY ENGINEER

PLE-33 FAI-TR425-1.419

OLD MILL ROAD
BRIDGE REPLACEMENT PROJECT



LOCATION MAP

LATITUDE: N39°47'10" LONGITUDE: N82°33'39"

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

DESIGN DESIGNATION

CURRENT ADT (2024)	34
DESIGN YEAR ADT (2044)	N/A
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
RURAL LOCAL ROAD	
NHS PROJECT	NO

INDEX OF SHEETS:

FEDERAL PROJECT NUMBER

NONE

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THE PROPOSED IMPROVEMENTS CONSIST OF THE REPLACEMENT OF THE EXISTING PLEASANT RUN BRIDGE WITH PRECAST CONCRETE BOX CULVERT WITH WINGWALLS, AND IMPROVEMENT OF BRIDGE APPROACHES.

2023 SPECIFICATIONS

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

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

APPROVED _____
DATE 2-10-25 FAIRFIELD COUNTY ENGINEER

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:

Michael Baker INTERNATIONAL
250 WEST STREET, SUITE 420
COLUMBUS, OH 43215
PHONE: (614) 538-7601
MBAKERINTL.COM

ENGINEERS SEAL:

STATE OF OHIO
PAUL J. LANDRY
E-62193
REGISTERED PROFESSIONAL ENGINEER

02/10/2025

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	01/19/24					800 ~~07/19/24~~	01/17/25
BP-4.1	07/19/13					832 07/19/24	
						940 04/17/15	
DM-4.2	07/20/12						
DM-4.3	01/15/16						
DM-4.4	01/15/16						
MGS-1.1	07/16/21						
MGS-2.1	01/19/18						
MGS-2.4	07/19/19						
MGS-4.1	01/20/17						
MGS-4.2	07/19/13						
MT-101.60	04/21/23						
RM-1.1	01/20/23						

SUPPLEMENTAL SPECIFICATIONS

SPECIAL PROVISIONS

WE THE COMMISSIONERS OF FAIRFIELD COUNTY IN FORMAL SESSION, HEREBY APPROVE THESE PLANS.

APPROVED _____
DATE _____ COMMISSIONER

APPROVED _____
DATE _____ COMMISSIONER

APPROVED _____
DATE 2/18/25 COMMISSIONER

Michael Baker INTERNATIONAL

OPWC DQAB10

CONSTRUCTION PROJECT NO. NONE

RAILROAD INVOLVEMENT NONE

PLE-33 FAI-TR425-1.419

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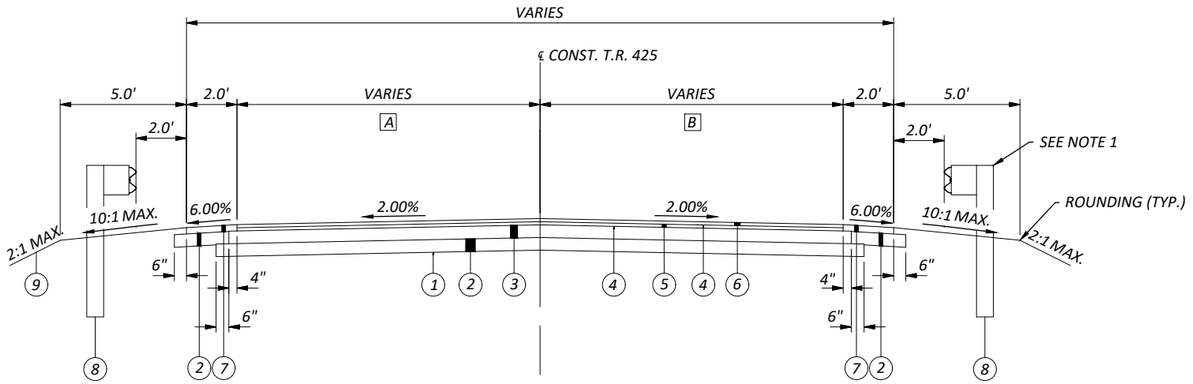


TYPICAL FULL DEPTH SECTION

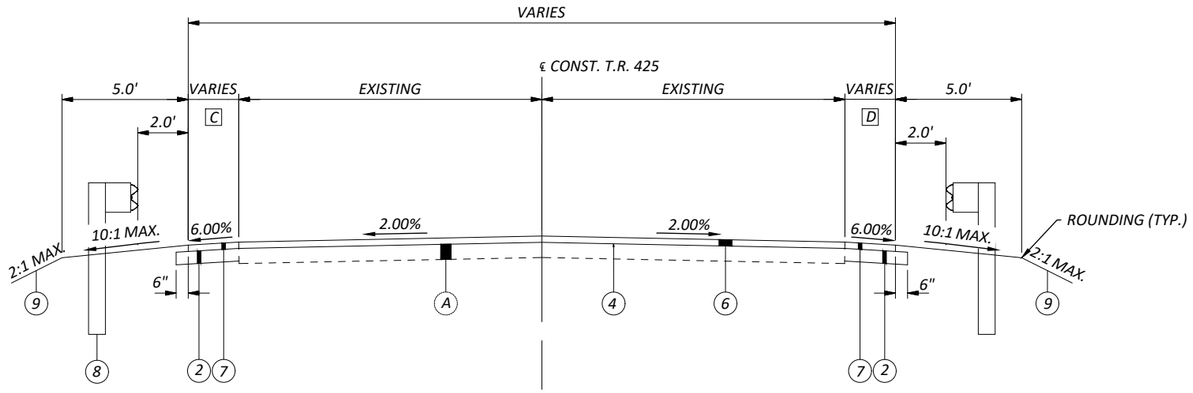
STA. 72+08.00 TO STA. 73+50.00 = 142.0'

A *TAPERS FROM EXISTING AT STA. 72+08.00 TO 10.00' AT STA. 72+60.00 = 52.0'*
10.00' FROM STA. 72+60.00 TO STA. 73+25.00 = 65.0'
TAPERS FROM 10.00' AT STA. 73+25.00 TO EXISTING AT STA. 73+50.00 = 25.0'

B *TAPERS FROM EXISTING AT STA. 72+08.00 TO 10.00' AT STA. 72+33.00 = 25.0'*
10.00' FROM STA. 72+33.00 TO STA. 73+25.00 = 92.0'
TAPERS FROM 10.00' AT STA. 73+25.00 TO EXISTING AT STA. 73+50.00 = 25.0'

LEGEND

1. *ITEM 204 - SUBGRADE COMPACTION*
2. *ITEM 304 - 6" AGGREGATE BASE*
3. *ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22*
4. *ITEM 407 - NON-TRACKING TACK COAT*
5. *ITEM 441 - 1 ½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)*
6. *ITEM 441 - 1 ½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22*
7. *ITEM 411 - 3" STABILIZED CRUSHED AGGREGATE, AS PER PLAN*
8. *ITEM 606 - GUARDRAIL, TYPE MGS*
9. *ITEM 659 - SEEDING AND MULCHING*
- A *EXISTING ROADWAY MATERIALS*



TYPICAL RESURFACING SECTION

STA. 71+85.00 TO STA. 72+08.00 = 23.0'
STA. 73+50.00 TO STA. 73+75.00 = 25.0'

C *TAPERS FROM EXISTING AT STA. 71+85.00 TO 2.0' AT STA. 72+08.00 = 23.0'*
TAPERS FROM 2.0' AT STA. 73+50.00 TO EXISTING AT STA. 73+75.00 = 25.0'

D *TAPERS FROM EXISTING AT STA. 71+85.00 TO 2.0' AT STA. 72+08.00 = 23.0'*
TAPERS FROM 2.0' AT STA. 73+50.00 TO EXISTING AT STA. 73+75.00 = 25.0'

NOTES

1. *SEE SHEET 7 GUARDRAIL LIMITS AND QUANTITIES.*

CALCULATED AKA CHECKED KMD

Michael Baker INTERNATIONAL

TYPICAL SECTIONS

PLE-33 FAI-TR425-1.419

ENGINEER DEFINED

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

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, ORC, AND ANY AMENDMENTS THERETO.

CONTINGENCY QUANTITIES

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

ROUNDING

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

UTILITIES

NO KNOWN UTILITIES.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 7 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

POSITIONING METHOD:	ODOT VRS
MONUMENT TYPE:	A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD88
GEOID:	GEOID12B

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD83 (2011)
ELLIPSOID:	GRS80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE (SOUTH ZONE)
COMBINED SCALE FACTOR:	N/A
ORIGIN OF COORDINATE SYSTEM:	0,0

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 U.S. SURVEY FEET.

WORK LIMITS

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

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS, SUCH AS FOUNDATION, PIER, OR ABUTMENT EXCAVATION, CHANNEL CLEANOUT, EXCAVATION FOR ROCK CHANNEL PROTECTION, AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

INSTREAM WORK

INSTREAM WORK WILL BE LIMITED TO WHERE PRACTICABLE AND ONLY CLEAN, NON-ERODIBLE MATERIAL WILL BE USED FOR CAUSEWAYS, COFFERDAMS, OR OTHER EQUIPMENT ACCESS PADS. THIS TEMPORARY PLACED MATERIAL WILL BE REMOVED AND THE STREAM BOTTOM RESTORED TO NEAR NATURAL CONDITIONS WHEN THE WORK IS COMPLETED.

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 - UNSUITABLE FOUNDATION SOILS

IF UNSUITABLE FOUNDATION SOILS ARE ENCOUNTERED IN THE AREAS OF THE PROPOSED ROADBED OR STRUCTURES, THEY SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL. THE LOCATIONS AND DIMENSIONS WILL BE AS DETERMINED BY THE ENGINEER.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY, TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 204, EXCAVATION OF SUBGRADE	50 CY
ITEM 204, GRANULAR MATERIAL, TYPE F	50 CY
ITEM 204, GEOTEXTILE FABRIC	100 SY

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 UTILIZE A FULLY LOADED DUMP TRUCK, APPROVED BY THE ENGINEER, IN LIEU OF THE PROOF ROLLER REQUIREMENTS LISTED IN SPECIFICATION 204.06 A-G. ALL OTHER REQUIREMENTS PER 204.06 SHALL STILL APPLY.

ITEM 204, PROOF ROLLING	1 HOUR

ITEM 407 - NON-TRACKING TACK COAT

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

ITEM 407, NON-TRACKING TACK COAT	0.065 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 MODIFIERS (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, 48 HOURS PRIOR TO PLACEMENT OF ANY ASPHALT.

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

ITEM 659 - SEEDING AND MULCHING

THE FOLLOWING QUANTITIES SHALL BE USED AS DIRECTED BY THE ENGINEER AND ARE CARRIED TO THE GENERAL SUMMARY TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 653, TOPSOIL FURNISHED AND PLACED	30 CY
ITEM 659, SOIL ANALYSIS TEST	1 EACH
ITEM 659, REPAIR SEEDING AND MULCHING	100 SY
ITEM 659, COMMERCIAL FERTILIZER	0.05 TON
ITEM 659, LIME	0.11 ACRE
ITEM 659, WATER	3 MGAL

EROSION CONTROL

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING PERIMETER FILTER FABRIC FENCE ALONG BOTH SIDES OF THE ROADWAY DURING CONSTRUCTION. CONTRACTOR SHALL ADHERE TO ODOT SUPPLEMENTAL SPECIFICATION 832 AND ODOT SCD DM-4.4 FOR PROPER INSTALLATION PROCEDURES.

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

ITEM 690, EROSION CONTROL (PERIMETER FILTER FABRIC FENCE)	100 LF

CALCULATED KMD CHECKED KMD

Michael Baker INTERNATIONAL

GENERAL NOTES

PLE-32 FAI-TR427-1.272

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ITEM 614 - MAINTAINING TRAFFIC

NOTICE OF CLOSURE SIGNS SHALL BE ERECTED BY THE ENGINEER IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE PLACED ON PERMANENT POST. NO TEMPORARY SIGNS WILL BE PERMITTED. 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 DRAWINGS 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 PLAN.

FARM DRAINS

NOTICE OF CLOSURE SIGNS SHALL BE ERECTED BY THE ENGINEER IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE PLACED ON PERMANENT POST. NO TEMPORARY SIGNS WILL BE PERMITTED. THE CONTRACTOR SHALL GIVE AT LEAST A TWO WEEK NOTICE TO THE ENGINEER IN ORDER TO ERECT THESE SIGNS.

ALL FARM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION WILL BE EITHER 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 DITCHES 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 DRAWINGS DM-1.1 EXCEPT WHEN THEY OUTLET INTO DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS, TEE OR OTHER FITTINGS SHALL BE 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*

CALCULATED AKA | CHECKED KMD

Michael Baker INTERNATIONAL

GENERAL NOTES

PLE-33 FAI-TR425-1.419

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	6	7	12	14														
																		ROADWAY	
LS														201	11000	LS		CLEARING AND GRUBBING	
		280												202	23000	280	SY	PAVEMENT REMOVED	
			134											202	38000	134	FT	GUARDRAIL REMOVED	
				22										203	10000	22	CY	EXCAVATION	
				99										203	20000	99	CY	EMBANKMENT	
		349												204	10000	349	SY	SUBGRADE COMPACTION	
50														204	13000	50	CY	EXCAVATION OF SUBGRADE	
50														204	30050	50	CY	GRANULAR MATERIAL, TYPE F	
1														204	45000	1	HOUR	PROOF ROLLING	
100														204	50000	100	SY	GEOTEXTILE FABRIC	
			150											606	15050	150	FT	GUARDRAIL, TYPE MGS	
			2											606	25550	2	EACH	ANCHOR ASSEMBLY, MGS TYPE A	
			2											606	26550	2	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			4											626	00110	4	EACH	BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL	
																		EROSION CONTROL	
		30												653	10000	30	CY	TOPSOIL FURNISHED AND PLACED	
1														659	00100	1	EACH	SOIL ANALYSIS TEST	
		532												659	10000	532	SY	SEEDING AND MULCHING	
100														659	14000	100	SY	REPAIR SEEDING AND MULCHING	
		0.05												659	20000	0.05	TON	COMMERCIAL FERTILIZER	
		0.11												659	31000	0.11	ACRE	LIME	
		3												659	35000	3	MGAL	WATER	
100														SPECIAL	69098100	100	FT	EROSION CONTROL (PERIMETER FILTER FABRIC FENCE)	3
	50													611	00406	50	FT	4" CONDUIT, TYPE F	4
	50													611	01500	50	FT	6" CONDUIT, TYPE F	4
																		PAVEMENT	
		52												301	56000	52	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
		72												304	20000	72	CY	AGGREGATE BASE	
		54												407	20000	54	GAL	NON-TRACKING TACK COAT	
		7												411	10001	7	CY	STABILIZED CRUSHED AGGREGATE, AS PER PLAN	3
		17												441	50000	17	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
		13												441	50200	13	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	
																		STRUCTURE 20 FOOT SPAN AND UNDER (FAI-TR425-1.419)	
					1									202	11001	LS		STRUCTURE REMOVED, AS PER PLAN	14
					13									203	98000	13	CY	ROADWAY, MISC.:SAND, AS PER PLAN	14
					1									503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
					140									503	21100	140	CY	UNCLASSIFIED EXCAVATION	
					9,390									509	10000	9,390	LB	EPOXY COATED STEEL REINFORCEMENT	
					26									511	46010	26	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	
					70									511	46510	70	CY	CLASS QC1 CONCRETE, FOOTING	
					98									512	10100	98	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
					161									512	33000	161	SY	TYPE 2 WATERPROOFING	
					53									516	13600	53	SF	1" PREFORMED EXPANSION JOINT FILLER	
					41									518	21200	41	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
					106									601	32104	106	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	
					38									611	96449	38	FT	16' X 7' CONDUIT, TYPE A, 706.05, AS PER PLAN	14
																		INCIDENTALS	
														614	11000	LS		MAINTAINING TRAFFIC	
														623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
														624	10000	LS		MOBILIZATION	

CALCULATED AKA CHECKED KMD

Michael Baker INTERNATIONAL

GENRAL SUMMARY

PLE-33 FAI-T0425-1.419

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ITEM 441 - 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22

STA. 71+85.00 TO STA. 72+08.00 = 23.0'
23.0' LENGTH X (15.09') WIDTH X (1.5"/12) DEPTH = 43.38 CF/27= 1.607 CY

STA. 72+08.00 TO STA. 73+50.00 = 142.0'
142.0' LENGTH X (19.1') WIDTH X (1.5"/12) DEPTH = 339.03 CF/27= 12.556 CY

STA. 73+50.00 TO STA. 73+75.00 =25.0'
25.0' LENGTH X (17.06')WIDTH X (1.5"/12) DEPTH = 53.31 CF/27= 1.97 CY

TOTAL 17 CY

ITEM 441 - 1½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)

STA. 72+08.00 TO STA. 73+50.00 = 142.0'
142.0' LENGTH X (19.1') WIDTH X (1.5"/12) DEPTH = 339.03 CF/27= 12.556 CY

TOTAL 13 CY

ITEM 301 - 6" ASPHALT CONCRETE BASE , PG 64-22

STA. 72+08.00 TO STA. 73+50.00 = 142.0'
142.0' LENGTH X (19.1'+0.33'+0.33') WIDTH X (6.0"/12) DEPTH=1402.96 CF/27= 51.96 CY

TOTAL 52 CY

ITEM 304 - 6" AGGREGATE BASE

PAVEMENT TYPICAL

STA. 72+08.00 TO STA. 73+50.00 = 142.0'
142.0' LENGTH X (19.1'+0.83'+0.83') WIDTH X (6.0"/12) DEPTH = 1473.96 CF/27= 54.59 CY

LEFT SHOULDER

STA. 71+85.00 TO STA. 72+08.0 = 23.0'
23.0' LENGTH X (1.55'+0.50') WIDTH X (6.0"/12) DEPTH =23.575 CF/27= 0.87 CY

STA. 72+08.00 TO STA. 73+50.00 = 142.0'
142.0' LENGTH X (2.0'+0.50') WIDTH X (6.0"/12) DEPTH =177.5 CF/27= 6.57 CY

STA.73+50.00 TO STA. 73+75.00 =25.0'
25.0' LENGTH X (1.63'+0.5') WIDTH X (6"/12) DEPTH =26.65 CF/27= 0.99 CY

RIGHT SHOULDER

STA. 71+85.00 TO STA. 72+08.00 = 23.0'
23.0' LENGTH X (1.51'+0.50') WIDTH X (6.0"/12) DEPTH =23.12 CF/27= 0.86 CY

STA. 72+08.00 TO STA. 73+50.00 =142.0'
142.0' LENGTH X (2.0'+0.50') WIDTH X (6.0"/12) DEPTH = 177.5 CF/27= 6.57 CY

STA.73+50.00 TO STA. 73+75.00 =25.0'
25.0' LENGTH X (1.40'+0.5') WIDTH X (6"/12) DEPTH =23.75 CF/27= 0.88 CY

TOTAL 72 CY

ITEM 204 - SUBGRADE COMPACTION

STA. 72+08.00 TO STA. 73+50.00 =142.0'
142.0' LENGTH X (19.1'+1.5'+1.5') WIDTH = 3138.2 SF/9= 348.69 SY

TOTAL 349 SY

ITEM 407 - NON-TRACKING TACK COAT

FOR INTERMEDIATE COURSE

STA. 71+85.00 TO STA. 72+08.00 = 23.0'
23.0' LENGTH X (15.09') WIDTH = 347.07 SF/9= 38.56 SY X (0.065 GAL/SY)= 2.51 GAL

STA. 72+08.00 TO STA. 73+50.00 =142.0'
142.0 LENGTH X (20') WIDTH =2840.0 SF/9= 315.56 SY X(0.065 GAL/SY)= 20.51 GAL

STA. 73+50.00 TO STA. 73+75.00 =25.0'
25.0' LENGTH X (17.06) WIDTH = 426.5 SF/9= 47.40 SY X (0.065 GAL/SY) = 3.08 GAL

FOR BASE COURSE

STA. 71+85.00 TO STA. 72+08.00 = 23.0'
23.0' LENGTH X (15.09+0.33'+0.33') WIDTH= 362.25 SF/9= 40.25 SY X (0.065 GAL/SY)= 2.62 GAL

STA. 72+08.00 TO STA. 73+50.00 =142.0'
142.0' LENGTH X (20'+0.33'+0.33') WIDTH =2933.72 SF/9=325.97 SY X (0.065 GAL/SY)= 21.88 GAL

STA. 73+50.00 TO STA. 73+75.00 =25.0'
25.0' LENGTH X (17.06'+0.33'+0.33') WIDTH =443.0 SF/9=49.23 SY X (0.065 GAL/SY) = 3.2 GAL

TOTAL 54 GAL

ITEM 411 - STABILIZED CRUSHED AGGREGATE, AS PER PLAN

LEFT SHOULDER

STA. 71+85.00 TO STA. 72+08.0 = 23.0'
23.0' LENGTH X 1.55' WIDTH X (3.0"/12) DEPTH =8.91 CF/27= 0.33 CY

STA. 72+08.00 TO STA. 73+50.00 = 142.0'
142.0' LENGTH X (2.0') WIDTH X (3.0"/12) DEPTH = 71.0 CF/27= 2.63 CY

STA.73+50.00 TO STA. 73+75.00 =25.0'
25.0' LENGTH X (1.63') WIDTH X (3"/12) DEPTH =10.18CF/27= 0.38 CY

RIGHT SHOULDER

STA. 71+85.00 TO STA. 72+08.00 = 23.0'
23.0' LENGTH X (1.51') WIDTH X (3.0"/12) DEPTH =8.68CF/27= 0.32 CY

STA. 72+08.00 TO STA. 73+50.00 =142.0'
142.0' LENGTH X (2.0') WIDTH X (3.0"/12) DEPTH = 71.0 CF/27= 2.63 CY

STA.73+50.00 TO STA. 73+75.00 =25.0'
25.0' LENGTH X (1.40') WIDTH X (3"/12) DEPTH =8.75 CF/27= 0.32 CY

TOTAL 7 CY

ITEM 202 - PAVEMENT REMOVED (FULL DEPTH WORK)

STA. 72+08.00 TO STA. 73+50.00 =142.00'
AVERAGE WIDTH OF PAVEMENT = 17.75'
142.00' LENGTH X 17.75' WIDTH = 2520.50 SF/9= 280.05 SY

TOTAL 280 SY

ITEM 659 - SEEDING AND MULCHING

PER CROSS SECTION SHEETS = 532 SY

TOTAL 532 SY

ITEM 653 - TOPSOIL FURNISHED AND PLACED

0.5 X 532 SY X 111 CY/1,000 SY = 29.526 CY

TOTAL 30 CY

ITEM 659 - COMERCIAL FERTILIZER

4788 SF X 20 LB/ 1,000 SF X 1 TON/ 2,000 LB = 0.0478 TON

TOTAL 0.05 TON

ITEM 659- LIME

4788 SF / 43,560 ACRE/SF = 0.1099 ACRE

TOTAL 0.11 ACRE

ITEM 659 - WATER

(4788 SF X 300 GAL / 1,000 SF X 1 MGAL/ 1,000 GAL) X 2 APPLICATIONS = 2.873 MGAL

TOTAL 3 MGAL

CALCULATED AKA CHECKED KMD

Michael Baker INTERNATIONAL

SUBSUMMARY AND CALCULATIONS

PLE-33 FAI-T0425-1.419

P.I.= Sta. 72+89.53
D = 0° 49' 27"
Dc = 1° 38' 53"
R = 3476.335
T = 25.00'
L = 50.00'
E = 0.09
C = 50.00
C. B. = N 3° 40' 40" E

BEGIN PROJECT STA. 72+08.00
BEGIN WORK STA. 71+85.00
END PROJECT STA. 73+50.00
END WORK STA. 74+00.00

CONTROL POINTS (NAD83 OHIO STATE PLANES, SOUTH ZONE, US FOOT)						
NO.	STATION	OFFSET (+/-)	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP #1	72+77.17	+83.42	650548.255	1951470.258	961.270	IPID ORANGE KNISLEY CAP
CP #2	72+81.96	-56.08	650561.567	1951331.316	961.080	IPINS RED FCEO CONTROL CAP
CP #3	73+68.06	-34.83	650646.467	1951358.540	961.700	IPINS RED FCEO CONTROL CAP

CHERYL FOLTZ
1260 MARQUETTE DR.
(MAILING ADDRESS)
P.N. 028-01597-00
OR 1473, PG. 0971
80.860 AC

OTIS E. AND
NAYAN S. WHITT
4345 OLD MILL RD.
(MAILING ADDRESS)
P.N. 028-01598-00
OR 1384, PG. 1854
24.670 AC

LISA M. DENNIS,
TRUSTEE OF THE PHYLLIS
DeWITT IRREVOCABLE TRUST
DATED JUNE 2, 2022
1755 CARROLL-EASTERN RD. NE
(MAILING ADDRESS)
P.N. 028-01599-20
INS. 202200013644
17.633 AC

SCOTT G. AND
TARA L. CRAAYBEEK
4220 OLD MILL RD. NE
(MAILING ADDRESS)
P.N. 028-01601-00
OR 1557, PG. 1439
10.386 AC

ANCHOR ASSEMBLY, TYPE T
PROP. 16'x7' BOX CULVERT
ANCHOR ASSEMBLY, TYPE A
BEGIN SHOULDER TAPERS STA. 71+85.00, 8.34' LT & 8.95' RT
BEGIN PAVEMENT TAPERS STA. 72+08.00, 7.04' LT & 8.96' RT
END PAVEMENT TAPER STA. 72+60.00, 10.0' LT
END PAVEMENT TAPERS STA. 73+50.00, 8.28' LT & 9.10' RT
END SHOULDER TAPERS STA. 73+75.00, 9.24' LT & 9.56' RT
END SHOULDER TAPERS STA. 72+08.00, 9.05' LT & 9.97' RT
END PAVEMENT TAPER STA. 72+33.00, 10.00' RT
BEGIN SHOULDER TAPERS STA. 73+50.00, 10.28' LT & 11.10' RT
CONST.LIMITS
PLEASANT RUN
PL
CP#1
CP#2
CP#3
P.I. STA. 72+64.53
PT STA. 73+14.53
Ex SH
SH
25:1
5:1
N 03°15'57" E
N 04°05'23" E
℄ CONST. T.R. 425
71
72
73
74
75
PL
GR-1
GR-2
R-1
R-2
T24"
I.P.S.
I.P.F.

LEGEND

TAPER JOINT
FULL DEPTH PAVEMENT
ROCK CHANNEL PROTECTION

PROPOSED ELEVATIONS
EXISTING ELEVATIONS
965.49 965.28 965.18 965.18 965.18 965.09 964.88 964.59 964.32
968.52 967.68 966.83 966.26 965.77 965.49 965.27 965.18 965.19 965.11 957.34 964.85 964.58 964.29 964.24 964.21 964.35 964.52 964.75
23.0' 142.0' 25.0'
K = 26.821
P.V.I. STA 72+29.36 ELEV = 965.17'
30.00' VC
SSD = 468.96'
K = 33.402
P.V.I. STA 72+98.58 ELEV = 965.20'
50.00' VC
K = 16.526
P.V.I. STA 73+61.03 ELEV = 964.28'
20.00' VC
-1.08% -1.08% 0.04% 0.04% -1.46% -1.46% -0.25% -0.25%
PR.GRADE
EX.GRADE
PROP.16'x7' BOX CULVERT
BEGIN TAPER JOINT, STA. 71+85.00, EL.965.65
BEGIN FULL DEPTH STA. 72+08.00, EL.965.40
END FULL DEPTH STA. 73+50.00, EL.964.45
END TAPER JOINT, STA. 73+75.00, EL.964.25
1000 990 980 970 960 950 940
71+00 72+00 73+00 74+00 75+00

REF NO.	STATION TO STATION			SIDE
	TOTALS CARRIED TO GENERAL SUMMARY			
R-1	72+69.78	TO	73+35.82	LT
R-2	72+69.53		73+35.69	RT
GR-1	72+67.14		73+79.50	LT
GR-2	72+11.72		73+24.42	

REF NO.	DESCRIPTION	UNIT					
202	GUARDRAIL REMOVED	FT	67				134
			67				
606	GUARDRAIL, TYPE MGS	FT			75		150
					75		
606	ANCHOR ASSEMBLY, MGS TYPE A	EACH			1		2
					1		
909	ANCHOR ASSEMBLY, MGS TYPE T	EACH			1		2
					1		
929	BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL	EACH			2		4
					2		

CALCULATED KMD CHECKED KMD

HORIZONTAL SCALE IN FEET 0 10 20 40

PLAN AND PROFILE
STA. 71+00.00 TO STA. 75+00.00

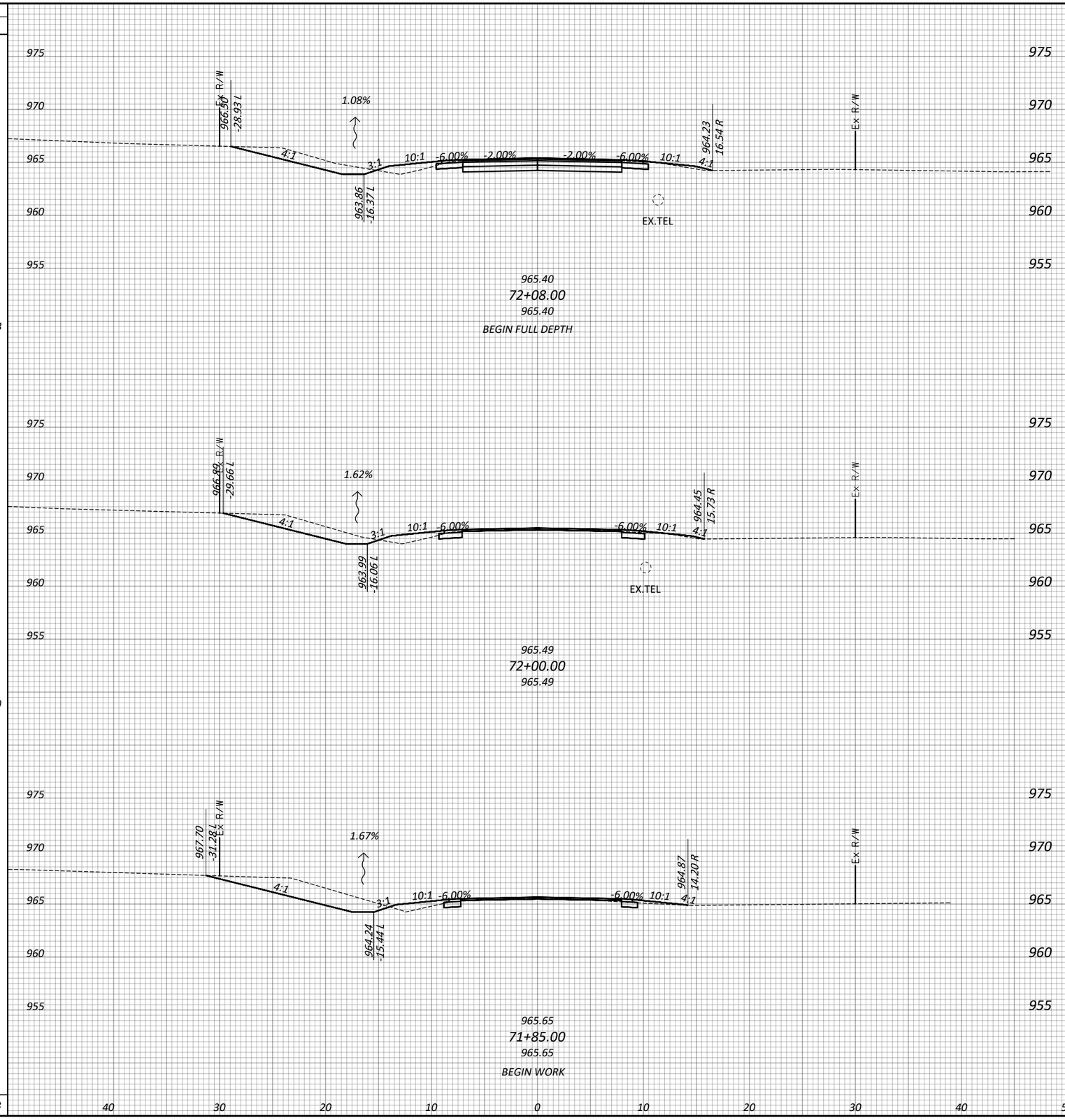
PLE-33 FAI-TR425-1.419

1 / 1

7 / 18

c:\Users\Public\mbipw\3\d0211164\PLE33_TR0422-1.419_GP001.dwg 2/7/25 NONE

SEEDING	
END WIDTH	SQ. YDS.
27.0	
	24.3
27.6	
	47.0
28.8	
	0.0
	71.3



END AREA		VOLUME	
CUT	FILL	CUT	FILL
9.9	4.3		
		3.3	1.2
12.5	4.0		
		8.9	2.1
19.7	3.6		
		0.0	0.0
		12.2	3.3

CALCULATED AKA
CHECKED KMD

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CROSS SECTIONS
STA. 71+85.00 TO STA. 72+08.00

PLE-33 FAI-TR425-1.419

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18

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SEEDING	
END WIDTH	SQ. YDS.
15.2	
	37.5
24.5	
	22.6
26.3	
	50.3
	110.4

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.0	3.8		
		1.3	3.5
4.2	7.3		
8.0	6.9		
		1.8	2.1
		5.6	3.5
		8.7	9.1

CALCULATED AKA
CHECKED KMD

Michael Baker INTERNATIONAL

CROSS SECTIONS
STA. 72+25.00 TO STA 72+50.00

PLE-33 FAI-TR425-1.419

9
18

SEEDING	
END WIDTH	SQ. YDS.
26.6	
36.8	
17.6	
18.2	
	55.0

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.0	19.5		
0.0	4.0	0.0	6.5
		0.0	1.4
		0.0	7.9

CALCULATED AKA
CHECKED KMD

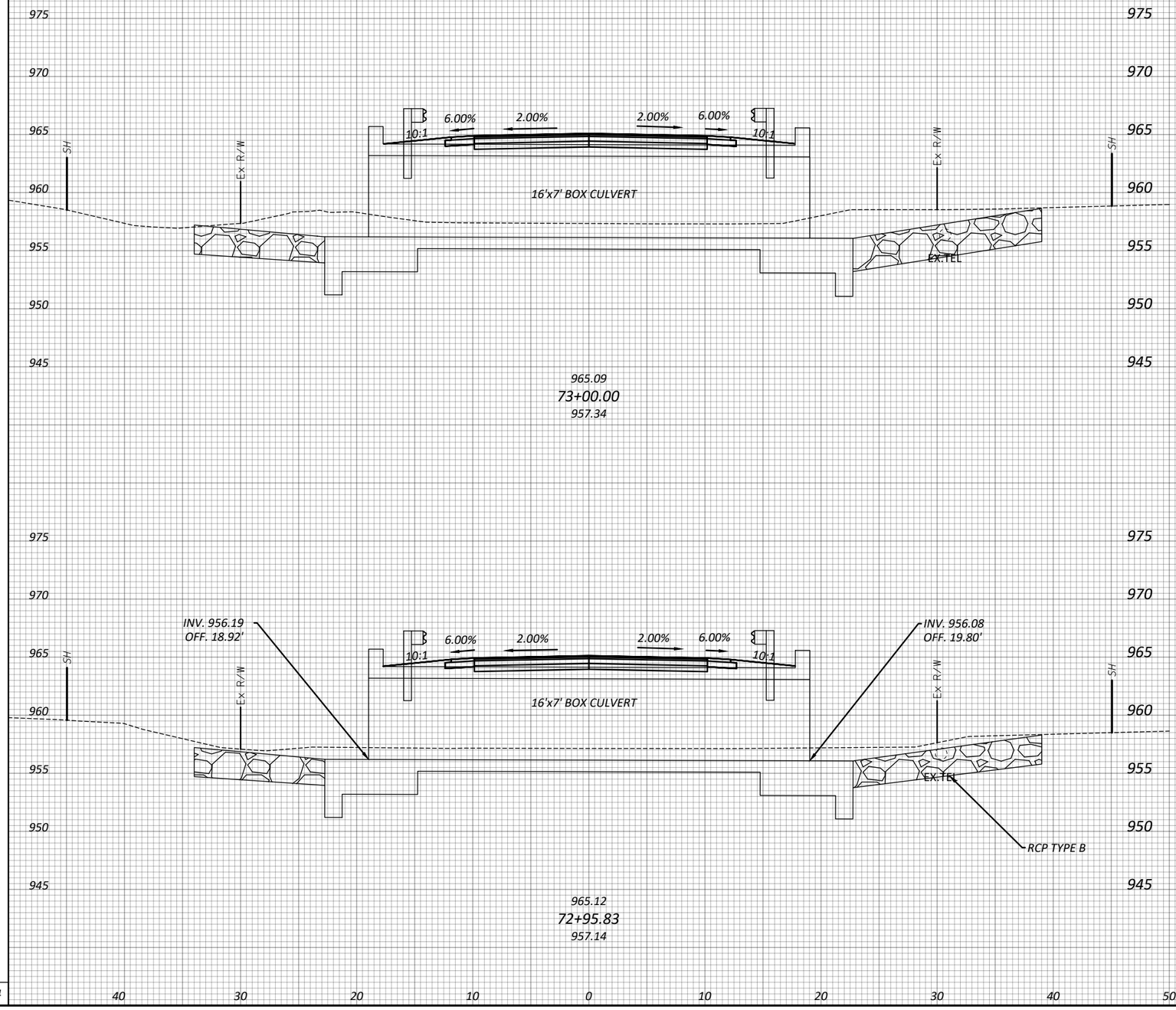
Michael Baker INTERNATIONAL

CROSS SECTIONS
STA. 72+60.00 TO STA. 72+75.00

PLE-33 FAI-TR425-1.419

10
18

SEEDING	
END WIDTH	SQ. YDS.
11.5	
	5.3
11.5	
	44.1
	49.4



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.0	3.6		
0.0	4.0		
		0.0	0.6
		0.0	9.1
		0.0	9.7

CALCULATED AKA
CHECKED KMD

Michael Baker INTERNATIONAL

CROSS SECTIONS
STA. 72+95.83 TO STA. 73+00.00

PLE-33 FAI-TR425-1.419

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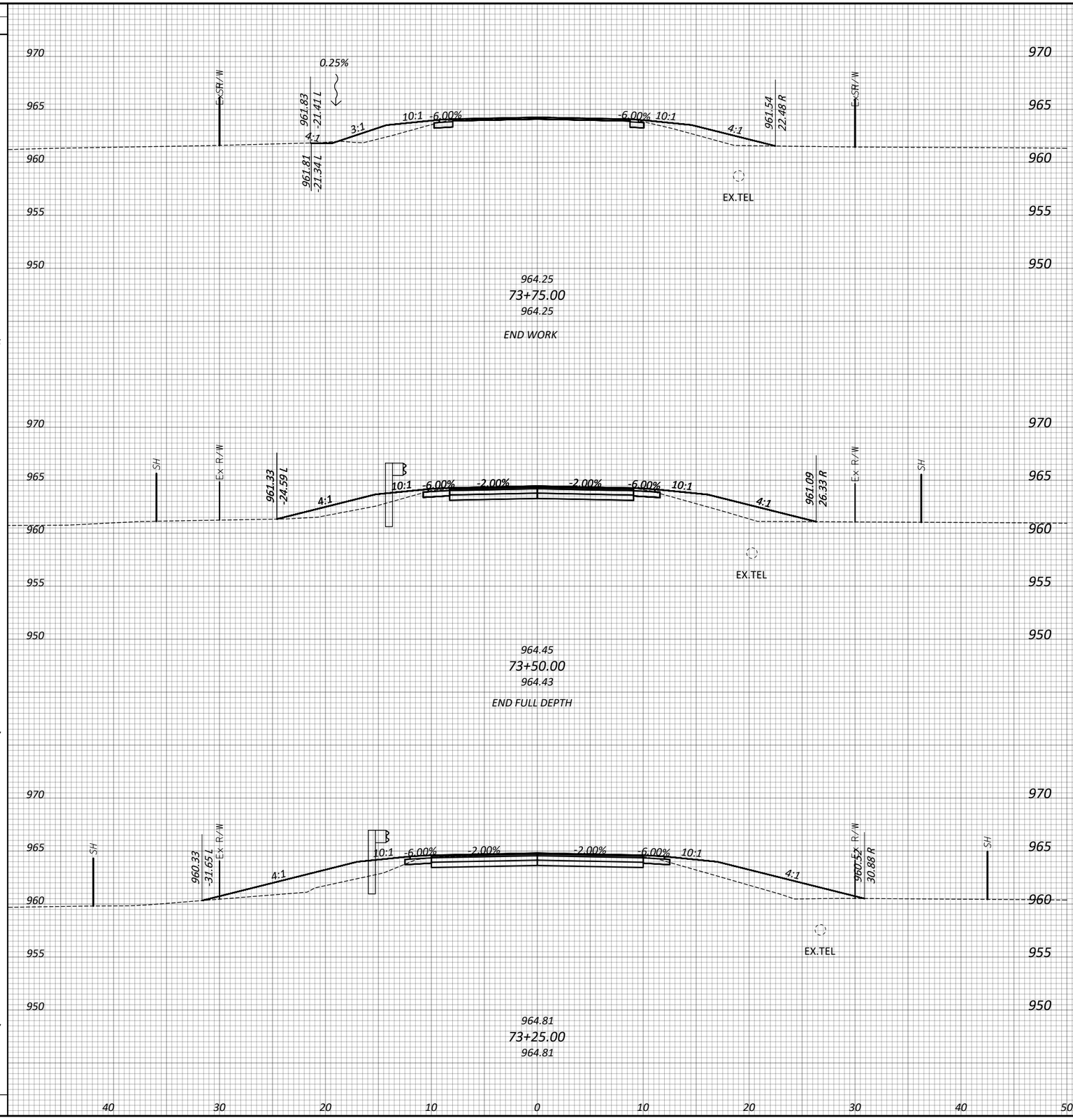
SEEDING	
END WIDTH	SQ. YDS.
25.7	77.6
30.2	96.7
39.4	70.7
	245



ITEM 203 - EXCAVATION = 22.0 CY
ITEM 203 - EMBANKMENT = 99.0 CY
ITEM 659 - SEEDING AND MULCHING = 532.0 SY

TOTALS CARRIED TO GENERAL SUMMARY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.0	14.3		
		0.0	17.4
0.0	23.2		
0.0	42.1		
		0.0	30.2
		0.0	21.2
		0.0	68.7

CALCULATED AKA
CHECKED KMD

Michael Baker INTERNATIONAL

CROSS SECTIONS
STA. 73+25.00 TO STA. 73+75.00

PLE-33 FAI-TR425-1.419

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18

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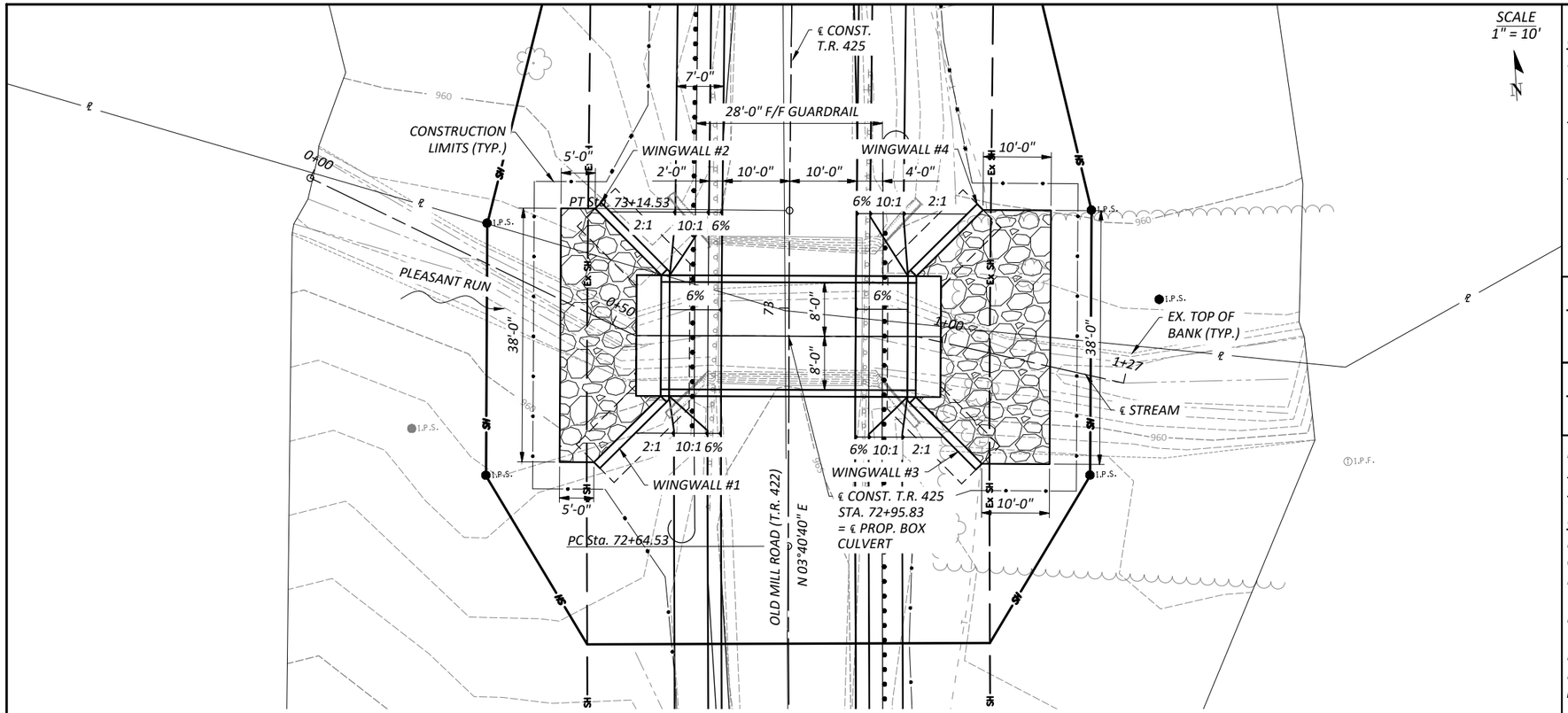
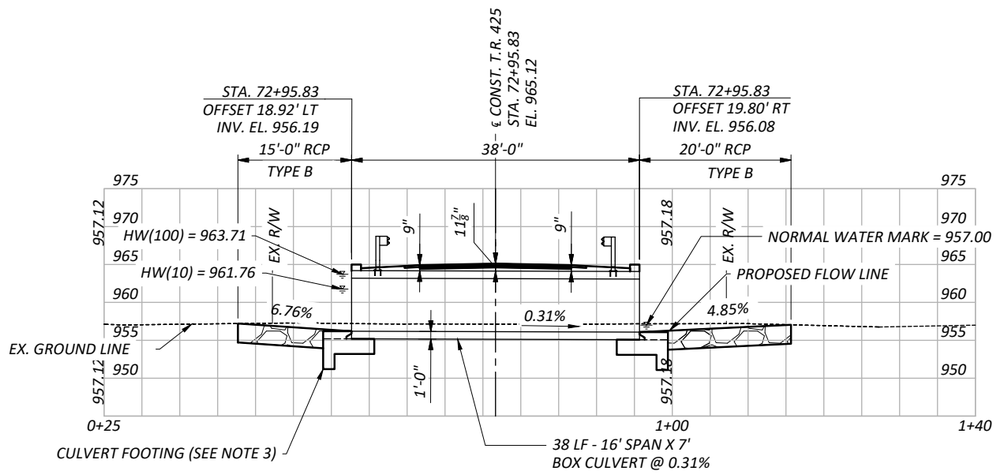


PLAN

LEGEND

ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC, 2'-6" THICK (TYP.)



STREAM PROFILE

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES ARE TO REMAIN UNLESS NOTED OTHERWISE.
3. SLOPE BOTH BOX CULVERT FOOTINGS WITH THE SLOPE OF THE BOX CULVERT.

BORING LOCATIONS

BORING #1 ELEV. 965.00, LATITUDE 39.786258, LONGITUDE -82.560918
BORING #2 ELEV. 966.00, LATITUDE 39.786130, LONGITUDE -82.560877

BENCHMARK DATA

SEE SHEET 7

DESIGN TRAFFIC:
2024 ADT = 34
2044 ADT = N/A

HYDRAULIC DATA

DRAINAGE AREA = 1.23 SQ. MILES

Q (10) =	314 CFS	Q (100) =	649 CFS
EXIST. STRUCTURE		PROP. STRUCTURE	
V (10) =	6.35 FPS	V (10) =	4.73 FPS
HW (10) =	962.11	HW (10) =	961.76
V (100) =	10.20 FPS	V (100) =	8.03 FPS
HW (100) =	964.73	HW (100) =	963.71

EXIST. LOW CHORD EL. 962.87(+) (AT INLET)
PROP. LOW CHORD EL. 963.03 (AT INLET)
STRUCTURE CLEARS THE 10 YEAR
DESIGN HW BY 1.27 FEET.

EXISTING STRUCTURE

TYPE: SINGLE SPAN STEEL BEAM BRIDGE
SPANS: 20'-0"(±)
ROADWAY: 22'-0"(±) F/F SAFETY CURB
LOADING: UNKNOWN
SKEW: NONE
WEARING SURFACE: 3 1/2"(±) ASPHALT OVERLAY
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: 0.0156(±) FT/FT
STRUCTURAL FILE NUMBER: 2338343
DATE BUILT: 1995
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: 16' X 7' PRECAST REINFORCED CONCRETE BOX CULVERT
SPANS: N/A
ROADWAY: 24'-0" TOE/TOE PARAPET
LOADING: HL93
SKEW: NONE
WEARING SURFACE: ASPHALT CONCRETE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: 0.0200 FT/FT

COORDINATES: LATITUDE N 39°47'10.36"
LONGITUDE W 82°33'39.24"

Michael Baker INTERNATIONAL

DESIGNED BDC CHECKED PJL
DRAWN BDC REVISED PJL
REVIEWED NDK DATE 01/21/2025
STRUCTURE FILE NUMBER 2338344

SITE PLAN
FAI-TR425-1.419
OLD MILL ROAD OVER PLEASANT RUN

PLE-33
FAI-TR425-1.419

GENERAL NOTES

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATION" 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 OF BACKFILL SOIL, φ_{bf} = 30°
TOTAL UNIT WEIGHT OF BACKFILL SOIL = 120 PCF
INTERNAL ANGLE OF FRICTION (DRAINED), FOUNDATION SOIL, φ_f = 28°
UNDRAINED SHEAR STRENGTH (COHESIVE), FOUNDATION SOIL, S_{uf}= 1500 PSF
UNIT WEIGHT OF CONCRETE = 150 PCF
SLOPE OF BACKFILL = 2:1
HEIGHT OF LIVE LOAD SURCHARGE = 2 FT
CONCRETE - COMPRESSIVE STRENGTH 4000 PSI
(FOOTING, WINGWALL AND FORESLOPE WALL)

REINFORCING STEEL - ASTM A615, A616, OR A617
GRADE 60 MINIMUM YIELD STRENGTH
60,000 PSI (ALL REINFORCING SHALL BE EPOXY COATED)

BASED ON THE ASSUMED DESIGN DATA, THE WINGWALLS ACHIEVE FACTORED BEARING RESISTANCES THAT ARE GREATER THAN THEIR RESPECTIVE BEARING PRESSURES. IF A BACKFILL MATERIAL WITH A HIGHER INTERNAL ANGLE OF FRICTION OR A LIGHTER TOTAL UNIT WEIGHT IS USED; OR IF A FOUNDATION SOIL WITH A HIGHER DRAINED INTERNAL ANGLE OF FRICTION OR A HIGHER UNDRAINED SHEAR STRENGTH IS ENCOUNTERED; THEN THE STABILITY OF THE WINGWALLS IS SATISFACTORY.

BACKFILL LIMITATION: THE BACKFILL BEHIND THE WINGWALLS SHALL NOT BE PLACED HIGHER THAN THE ELEVATION OF THE SOIL ABOVE THETOE. WHEN THE SOIL ABOVE THE TOE IS AT ITS FINISHED ELEVATION, THE REMAINDER OF THE BACKFILL MAY BE PLACED

PRECAST CONCRETE: PRECAST WINGWALLS SHALL NOT BE USED ON THIS PROJECT.

ITEM 202 - STRUCTURE REMOVED, AS PER PLAN: THE REMOVAL OF THE STRUCTURE WILL INCLUDE ALL STRUCTURES OR SECONDARY STRUCTURES ENCOUNTERED AT THE LOCATION OF THE PROPOSED STRUCTURE. IN ADDITION TO THE ENTIRE EXISTING SUPERSTRUCTURE, ALL EXISTING STRUCTURE MATERIAL AT THE ABUTMENTS SHALL BE REMOVED. THE CONTRACTOR HAS THE OPTION TO PARTIALLY REMOVE THE STRUCTURE MATERIAL AT THE NORTH ABUTMENT SUCH THAT ALL REMAINING MATERIAL IS VERTICALLY CLEAR OF THE PROPOSED WORK BY ONE FOOT, MINIMUM, AT ALL LOCATIONS.

ITEM 203 - ROADWAY, MISC.: SAND, AS PER PLAN: FURNISH SAND PER 703.02 OF THE CMS . PLACE A LIFT OF SAND ON TYPE 2 WATERPROOFING BEFORE BACKFILLING.

ITEM 203 ROADWAY, MISC.: SAND, AS PER PLAN 13 CY

ITEM 511 - CLASS QC1 CONCRETE, RETAINING/WINGWALL - NOT INCLUDED IN FOOTING: BASIS OF PAYMENT: ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE FOOTINGS, CUTOFF WALLS, AND WINGWALLS SHALL BE INCLUDED WITH ITEM 511 - CLASS QC1 CONCRETE, REATAINING/WINGWALL NOT INCLUDING FOOTING . PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.

FOUNDATION BEARING RESISTANCE: WINGWALL FOOTINGS, AS DESIGNED , PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 1.58 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 2.95 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 3.60 KIPS PER SQUARE FOOT.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE): ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES.

ITEM 512 - TYPE 2 MEMBRANE WATERPROOFING: TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

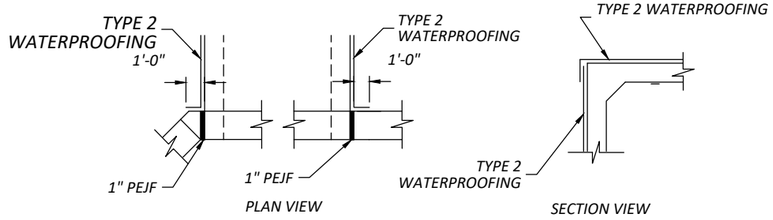
TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER: PREFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE BOX CULVERT AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER.

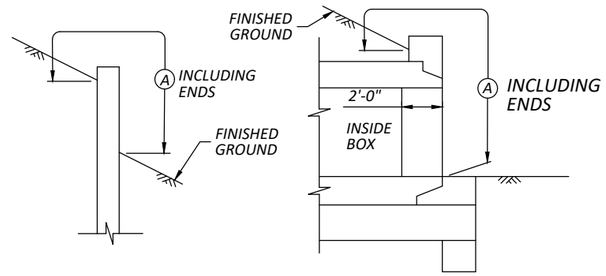
ITEM 518 - POROUS BACKFILL WITH GEOTEXTILE FABRIC: 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THEEMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE.

WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

ITEM 611 - 16' X 7' CONDUIT, TYPE B, 706.05, AS PER PLAN, DESIGN COVER 2 FT: BOX CULVERT SHALL BE DESIGNED PER THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CURRENT EDITION, FOR THE HL-93 LOADING WITH 2 FEET OF COVER. DIMENSIONS OF BOX CULVERT SHALL ADHERE TO DETAILS SHOWN ON THESE PLANS. SHOP DRAWINGS AND A LOAD RATING 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 OF CONCRETE BOX. THE LOAD RATING PREPARED BY THE BOX CULVERT FABRICATOR SHALL BE PER ODOT AND COUNTY STANDARDS ON A FORM APPROVED BY THE COUNTY.



ITEM 512 - WATERPROOFING DETAILS



LIMITS OF ITEM 512-SEALING CONCRETE SURFACES

Ⓐ - SEAL ENTIRE CONCRETE SURFACE AREA

LEGEND:

C.J.	CONSTRUCTION JOINT	N.F.	NEAR FACE
CLR.	CLEAR	SER.	SERIES
DIA.	DIAMETER	STR.	STRAIGHT
E.F.	EACH FACE	(T)	TOP
F.F	FAR FACE	(B)	BOTTOM
MAX.	MAXIMUM	T&B	TOP AND BOTTOM
MIN.	MINIMUM	TYP.	TYPICAL
PEJF	PREFORMED EXPANSION JOINT FILLER	PROP.	PROPOSED
		EX.	EXISTING
		CONST.	CONSTRUCTION

ESTIMATED QUANTITIES

ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
202	11001	LUMP		STRUCTURE REMOVED, AS PER PLAN
203	98000	13	CU. YD.	ROADWAY, MISC.: SAND, AS PER PLAN
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING
503	21100	140	CU. YD.	UNCLASSIFIED EXCAVATION (WINGWALL FOOTING)
509	10000	9390	LB.	EPOXY COATED REINFORCING STEEL
511	46010	26	CU. YD.	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING
511	46510	70	CU. YD.	CLASS QC1 CONCRETE, FOOTING
512	10100	98	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	33000	161	SQ. YD.	TYPE 2 MEMBRANE WATERPROOFING
516	13600	53	SQ. FT.	1" PREFORMED EXPANSION JOINT FILLER
518	21200	41	CU. YD.	POROUS BACKFILL WITH GEOTEXTILE FABRIC
601	32104	106	CU. YD.	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC
611	96449	38	FT.	16'-0" X 7'-0" CONDUIT, TYPE A, 706.05, AS PER PLAN

NOTE: TOTALS CARRIED TO GENERAL SUMMARY SHEET

Michael Baker INTERNATIONAL

DESIGNED BDC | DRAWN BDC | REVIEWED NDK | DATE 01/21/2025
CHECKED PJL | REVISED | STRUCTURE FILE NUMBER 2338344

CULVERT DETAILS - GENERAL NOTES
BRIDGE NO. FAI-TR425-1.419
OLD MILL ROAD OVER PLEASANT RUN

PLE-33
FAI-TR425-1.419

2 / 5

14 / 18

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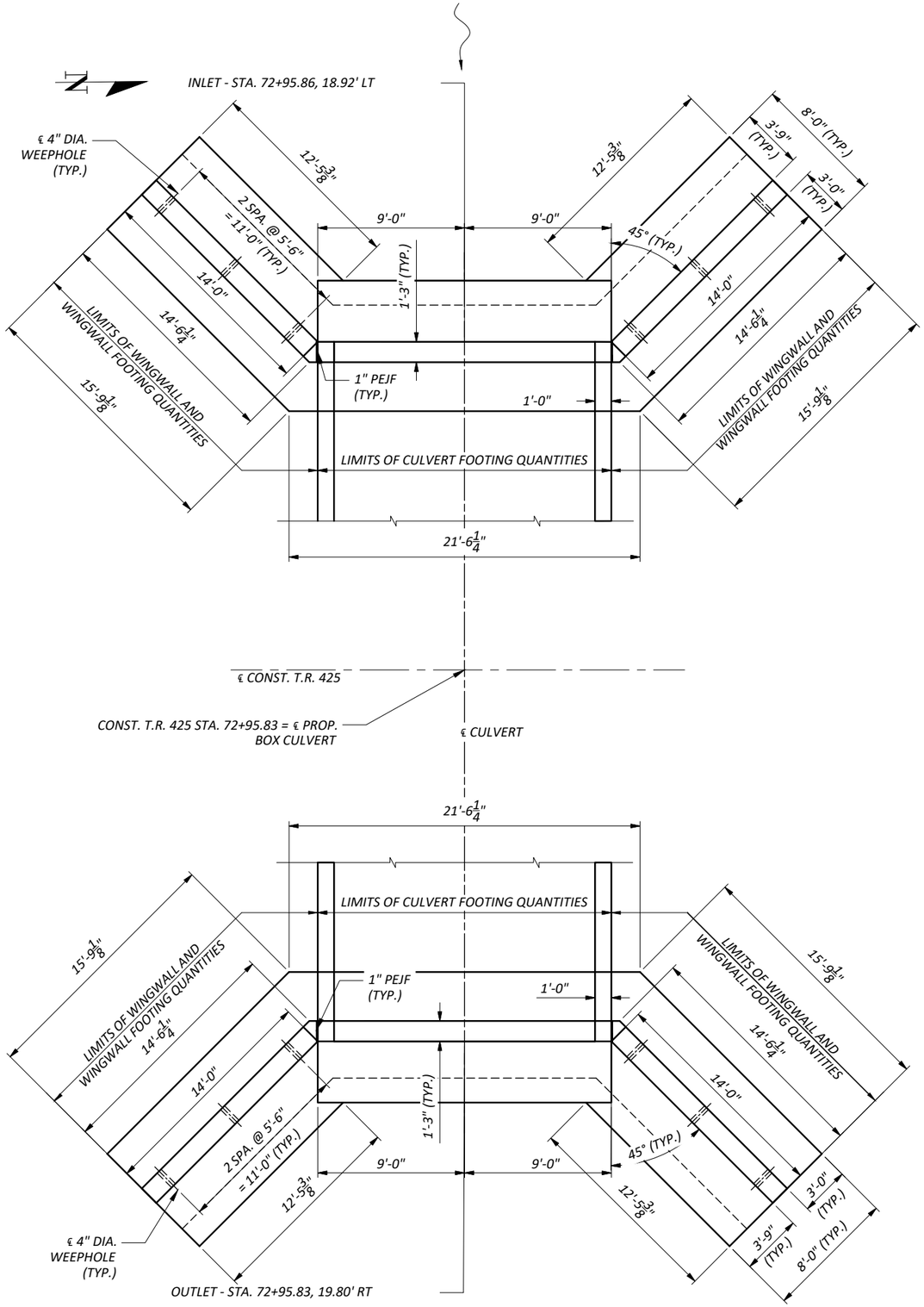
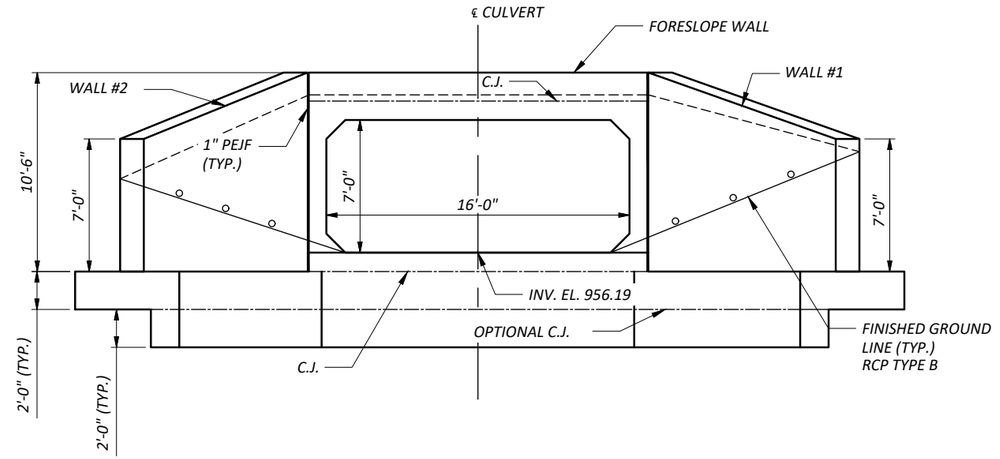
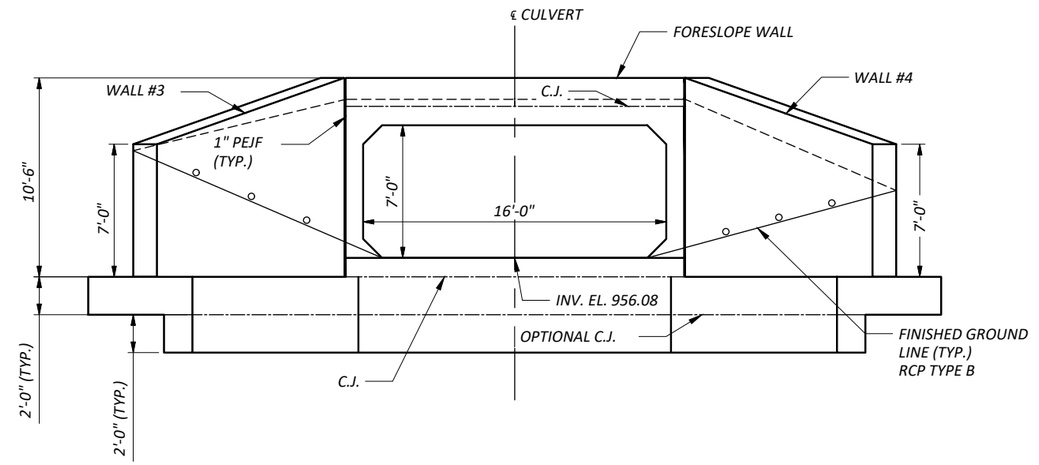


CULVERT & WINGWALL LAYOUT



INLET ELEVATION

TYPE A HEADWALL



OUTLET ELEVATION

TYPE A HEADWALL

Michael Baker INTERNATIONAL

DESIGNED	DRAWN	REVIEWED	DATE
BDC	BDC	NDK	01/21/2025
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJL		2338344	

CULVERT DETAILS - WINGWALLS & FOOTINGS

BRIDGE NO. FAI-TR425-1.419

OLD MILL ROAD OVER PLEASANT RUN

PLE-33

FAI-TR425-1.419

3 / 5

15 / 18

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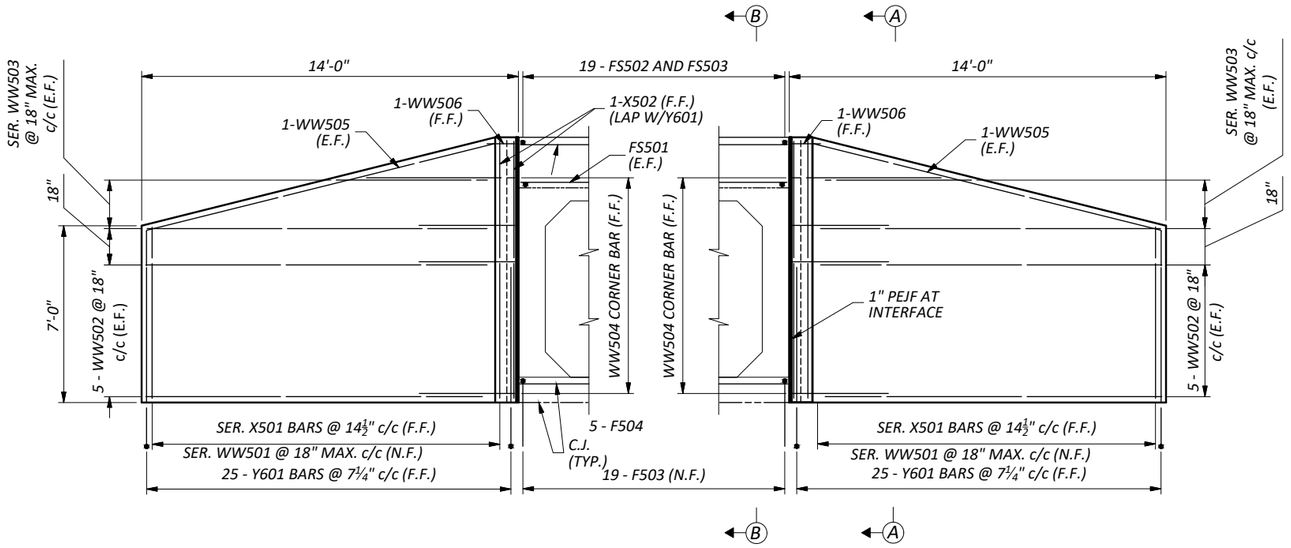
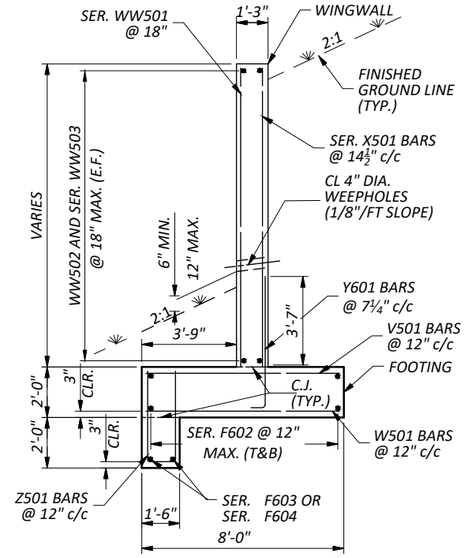


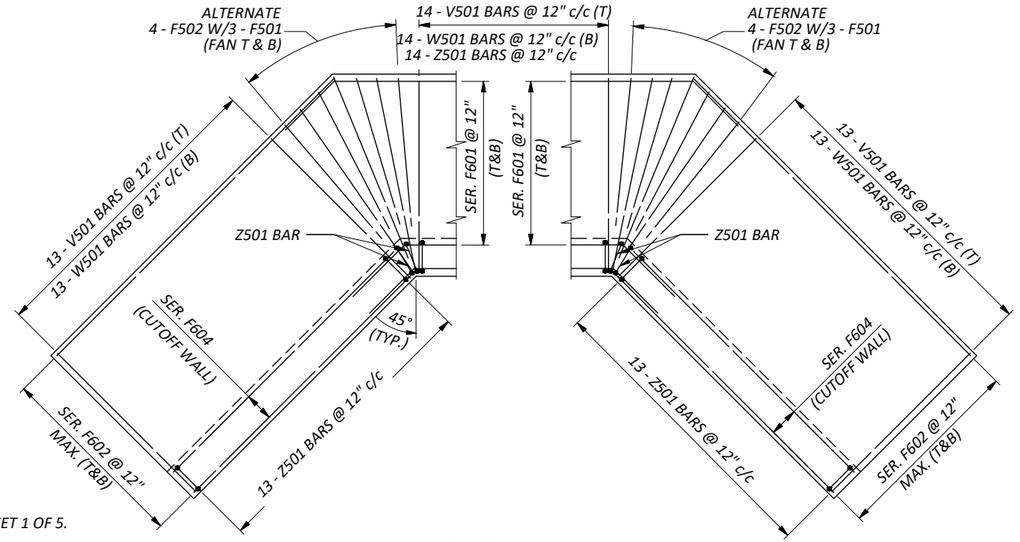
WINGWALL ELEVATION

INLET SHOWN, OUTLET SIMILAR
(FOOTING NOT SHOWN)



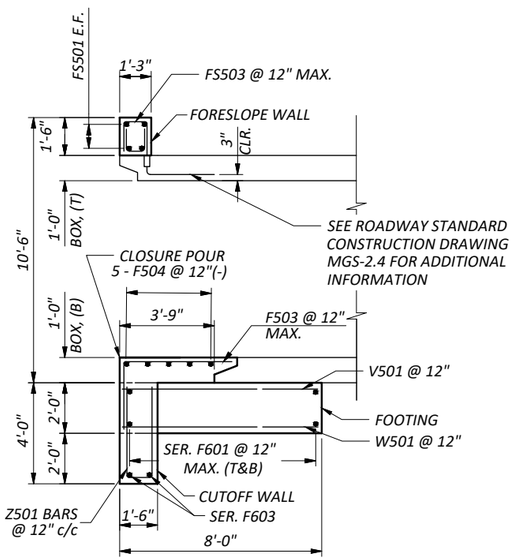
SECTION A-A

(POROUS BACKFILL NOT SHOWN FOR CLARITY)



FOOTING PLAN

INLET SHOWN, OUTLET SIMILAR



SECTION B-B

(CULVERT INLET BEVEL SHOWN)

NOTES

1. FOR CULVERT SITE PLAN, SEE SHEET 1 OF 5.
2. THE LAP SPLICE LENGTHS USED IN THESE ETAILS ARE AS FOLLOWS: 2'-5" FOR #5 BARS; 2'-11" FOR #6 BARS.
3. FOR FURTHER REINFORCING STEEL INFORMATION, SEE SHEET 5 OF 5.
4. EACH FORESLOPE WALL SHALL BE CAST WITH THE PREFABRICATED BOX SECTION BY THE SUPPLIER. ALL LABOR AND MATERIALS NECESSARY FOR THE CONSTRUCTION OF THE FORESLOPE WALLS SHALL BE INCLUDED WITH ITEM 611 FOR PAYMENT.
5. PROVIDE 2" OF CLEAR COVER FOR ALL REINFORCEMENT, UNLESS NOTED OTHERWISE.

LEGEND:

C.J.	- CONSTRUCTION JOINT	N.F.	- NEAR FACE
CLR.	- CLEAR	SER.	- SERIES
DIA.	- DIAMETER	STR.	- STRAIGHT
E.F.	- EACH FACE	(T)	- TOP
F.F.	- FAR FACE	(B)	- BOTTOM
MAX.	- MAXIMUM	T&B	- TOP AND BOTTOM
MIN.	- MINIMUM	TYP.	- TYPICAL
PEJF	- PREFORMED EXPANSION JOINT FILLER	INC.	- INCREMENT

Michael Baker INTERNATIONAL

DESIGNED	DRAWN	REVIEWED	DATE
BDC	BDC	NDK	01/21/2025
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJL	PJL	2338344	

CULVERT DETAILS - WINGWALLS & FOOTINGS
BRIDGE NO. FAI-TR425-1.419
OLD MILL ROAD OVER PLEASANT RUN

PLE-33
FAI-TR425-1.419

4 / 5

16
18

INLET HEADWALL

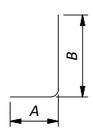
TYPE A HEADWALL INLET REINFORCING SCHEDULE

MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	SER INC.
					WINGWALLS						
	2	6'-10"									
X501	SER. OF	TO	233	STR.							3 1/2"
	13	10'-4"									
X502	4	10'-4"	44	STR.							
Y601	50	5'-4"	401	1	1'-0"	5'-4"					
	2	6'-10"									
WW501	SER. OF	TO	197	STR.							4 3/16"
	11	10'-4"									
WW502	20	13'-8"	286	STR.							
	4	4'-7"									
WW503	SER. OF	TO	115	STR.							4'-6 1/2"
	3	13'-8"									
WW504	16	3'-11"	66	19	0'-6"	1'-3"	2'-2"				
WW505	4	16'-6"	69	19	14'-1"	0'-7"	2'-4"				
WW506	2	0'-8"	4	STR.							
					FOOTING & CUTOFF WALL						
V501	40	7'-8"	320	STR.							
W501	40	7'-8"	320	STR.							
Z501	54	8'-2"	460	2	3'-7"	1'-2"	3'-7"				
F501	12	6'-11"	87	STR.							
F502	16	5'-5"	90	STR.							
F503	19	6'-4"	126	1	4'-4"	2'-8"					
F504	5	17'-8"	92	STR.							
	4	11'-8"			8'-9"						
F601	SER. OF	TO	721	19		2'-1"	2'-1"				5"
	9	15'-0"			12'-1"						
	4	12'-1"									
F602	SER. OF	TO	743	STR.							5"
	9	15'-5"									
	1	11'-8"			8'-9"						
F603	SER. OF	TO	36	19	TO	2'-1"	2'-1"				7 15/16"
	2	12'-4"			9'-5"						
	2	12'-1"									
F604	SER. OF	TO	74	STR.							7"
	2	12'-8"									
					FORESLOPE WALL						
FS501	4	17'-8"	74	STR.							
FS502	19	3'-0"	59	2	1'-2"	0'-11"	1'-2"				
FS503	19	3'-11"	78	2	1'-2"	0'-11"	1'-4"				
		TOTAL:	4695	LBS.							

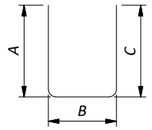
OULET HEADWALL

TYPE A HEADWALL OUTLET REINFORCING SCHEDULE

MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	SER INC.
					WINGWALLS						
	2	6'-10"									
X501	SER. OF	TO	233	STR.							3 1/2"
	13	10'-4"									
X502	4	10'-4"	44	STR.							
Y601	50	5'-4"	401	1	1'-0"	5'-4"					
	2	6'-10"									
WW501	SER. OF	TO	197	STR.							4 3/16"
	11	10'-4"									
WW502	20	13'-8"	286	STR.							
	4	4'-7"									
WW503	SER. OF	TO	115	STR.							4'-6 1/2"
	3	13'-8"									
WW504	16	3'-11"	66	19	0'-6"	1'-3"	2'-2"				
WW505	4	16'-6"	69	19	14'-1"	0'-7"	2'-4"				
WW506	2	0'-8"	4	STR.							
					FOOTING & CUTOFF WALL						
V501	40	7'-8"	320	STR.							
W501	40	7'-8"	320	STR.							
Z501	54	8'-2"	460	2	3'-7"	1'-2"	3'-7"				
F501	12	6'-11"	87	STR.							
F502	16	5'-5"	90	STR.							
F503	19	6'-4"	126	1	4'-4"	2'-8"					
F504	5	17'-8"	92	STR.							
	4	11'-8"			8'-9"						
F601	SER. OF	TO	721	19		2'-1"	2'-1"				5"
	9	15'-0"			12'-1"						
	4	12'-1"									
F602	SER. OF	TO	743	STR.							5"
	9	15'-5"									
	1	11'-8"			8'-9"						
F603	SER. OF	TO	36	19	TO	2'-1"	2'-1"				7 15/16"
	2	12'-4"			9'-5"						
	2	12'-1"									
F604	SER. OF	TO	74	STR.							7"
	2	12'-8"									
					FORESLOPE WALL						
FS501	4	17'-8"	74	STR.							
FS502	19	3'-0"	59	2	1'-2"	0'-11"	1'-2"				
FS503	19	3'-11"	78	2	1'-2"	0'-11"	1'-4"				
		TOTAL:	4695	LBS.							



TYPE-1



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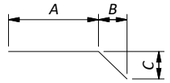


TYPE-19

NOTES:

1. ALL DIMENSIONS ARE OUT TO OUT.
2. TYPE 'STR' INDICATES A STRAIGHT BAR.
3. THE BAR SIZE NUMBER INDICATED IN THE 'MARK' COLUMN. THE FIRST DIGIT OF EACH MARK INDICATED THE BAR SIZE NUMBER. FOR EXAMPLE, WW501 IS A #5 BAR SIZE.
4. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
5. ALL REINFORCING STEEL CLEARANCES ARE 2" UNLESS NOTED OTHERWISE.

Michael Baker INTERNATIONAL

DESIGNED BDC | DRAWN BDC | REVIEWED NDK | DATE 01/21/2025
CHECKED PJL | REVISED PJL | STRUCTURE FILE NUMBER 2338344

REINFORCING STEEL LIST
FAI-TR425-1.419
OLD MILL ROAD OVER PLEASANT RUN

PLE-33
FAI-TR425-1.419

5 / 5

17
18

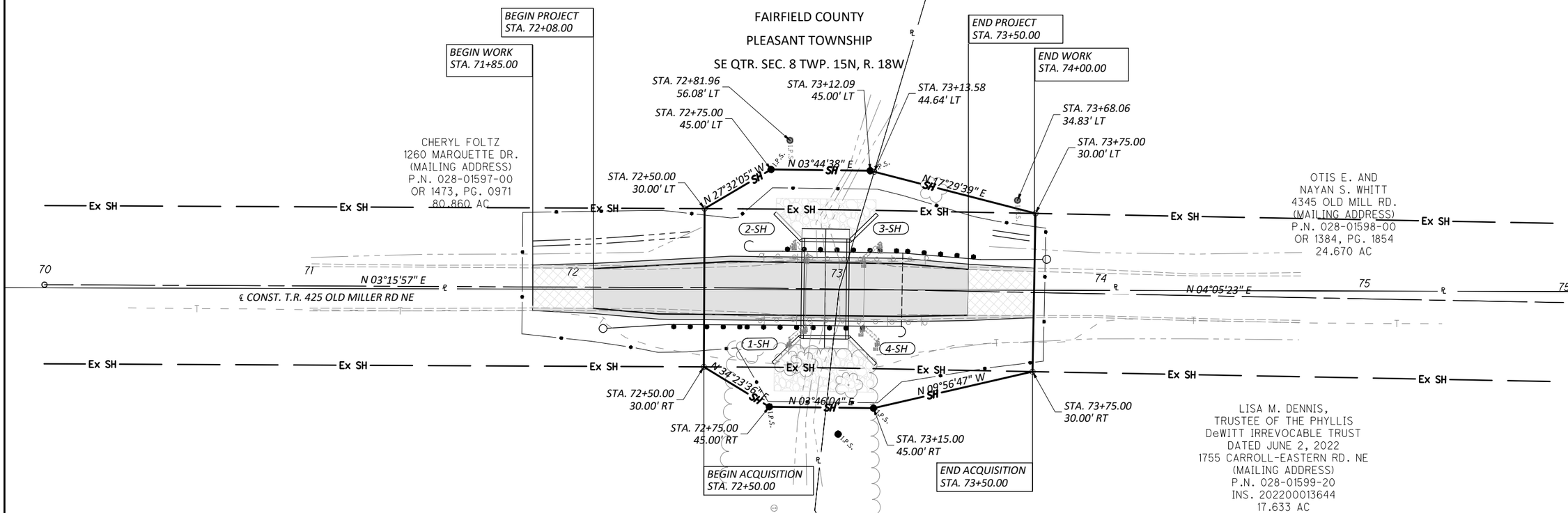
PLE33 FAI-TR425-1.419

STATE OF OHIO

FAIRFIELD COUNTY

PLEASANT TOWNSHIP

SE QTR. SEC. 8 TWP. 15N, R. 18W



LEGEND

Ditch / Creek (Ex)
Ditch / Creek (Pr)
Tree Line (Ex)
Section Line
Fence Line (Ex) (Pr)
Center Line
Standard Highway Ease.(Ex) Ex SH
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)
Edge of Shoulder (Ex)
Edge of Shoulder (Pr)

Property Line Symbol ℄ , Example
Break Line Symbol , Example
Tree (Pr) , Tree (Ex) , Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) , Mailbox (Pr)
Light (Ex) , Telephone Marker (Ex) TEL
Fire Hydrant (Ex) , Water Meter (Ex)
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

MONUMENT LEGEND

- RAILROAD SPIKE FOUND
- I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. 5/8" x 30" LONG REBAR W/ YELLOW PLASTIC CAP MARKED "FCEO SURVEY BOUNDARY"

TYPES OF TITLE LEGEND:

SH = STANDARD HIGHWAY EASEMENT

BASIS OF BEARING

BEARINGS ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD83 (2011) AND THE WEST LINE OF SECTION 9 AS BEING N 03°19'32" E AND ARE USED TO DENOTE ANGLES ONLY.

PERTINENT DOCUMENTS

FAIRFIELD COUNTY TAX MAPS
REFERENCED DEEDS OF RECORD AND CORRESPONDING PLATS OF SURVEY

I HEREBY CERTIFY THAT THIS PLAT DEPICTS AN ACTUAL FIELD SURVEY PREPARED BY THE FAIRFIELD COUNTY ENGINEER'S OFFICE AND UNDER THE SUPERVISION OF JEREMIAH D. UPP, P.S. - 8531 IN JULY 2024

PROFESSIONAL LAND SURVEYOR NO. 8531 DATE

NO. OF STRUCTURES = 0
NO. OF PROPERTY OWNERS = 4
NO. OF EASEMENT TAKES = 4

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

ALL AREA IN ACRES

NET RESIDIUE = RECORD AREA - TOTAL PRO - NET TAKE NET TAKE = GROSS TAKE - PRO IN TAKE (c) = CALCULATED

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF BOARD OF FAIRFIELD COUNTY, OHIO UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.	
SH-1	SCOTT G. & TARA L. CRAAYBEEK	OR 1557, PG. 1439	020160100	10.386	0	0.045	0.033	0.012			10.374	LOCAL			
SH-2	CHERYL FOLTZ	OR 1473, PG. 0971	0280159700	80.860	0.236	0.053	0.037	0.016		80.608		LOCAL			
SH-3	OTIS E. & NAYAN S. WHITT	OR 1384, PG. 1854	0280159800	24.670	0.216	0.059	0.047	0.012		24.442		LOCAL			
SH-4	LISA M. DENNIS, TRUSTEE OF THE PHYLLIS DeWITT IRREVOCABLE TRUST DATED JUNE 2, 2022	INS. 202200013644	0280159920	17.633	1.459	0.075	0.055	0.017			16.157	LOCAL			

REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY DATE:
OWNERSHIP VERIFIED BY DATE:
DATE COMPLETED DATE:

HORIZONTAL SCALE IN FEET
0 10 20 40

Michael Baker INTERNATIONAL

DESIGNED BDC
REVIEWED PJL

RIGHT-OF-WAY PLAT
PLE-33 FAI-TR425-1.419
(OLD MILLER RD NE)

PLE-33
FAI-T0425-1.419

1 / 1

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18

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