

SUMMIT COUNTY ENGINEER'S OFFICE

SUMMIT COUNTY, OHIO

SURFACE WATER MANAGEMENT DISTRICT

HUC 12-041100020303

SPRINGFIELD LAKE OUTLET CHANNEL RESTORATION

FINAL DESIGN PLANS

MARCH, 2026

PROJECT DESCRIPTION
 THIS PROJECT INCLUDES IMPROVEMENTS TO THE SPRINGFIELD LAKE OUTLET CHANNEL. IMPROVEMENTS CONSIST OF SEDIMENT REMOVAL, CLEANUP, AND STABILIZATION TO BE PERFORMED WITH MACHINERY AND HAND TOOLS. NATURAL STREAM ELEMENTS WILL BE INCORPORATED TO IMPROVE VELOCITIES AND REDUCE FLOODING.

2023 SPECIFICATIONS
 THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE CONTRACT, SHALL GOVERN THIS IMPROVEMENT, UNLESS NOTED OTHERWISE.

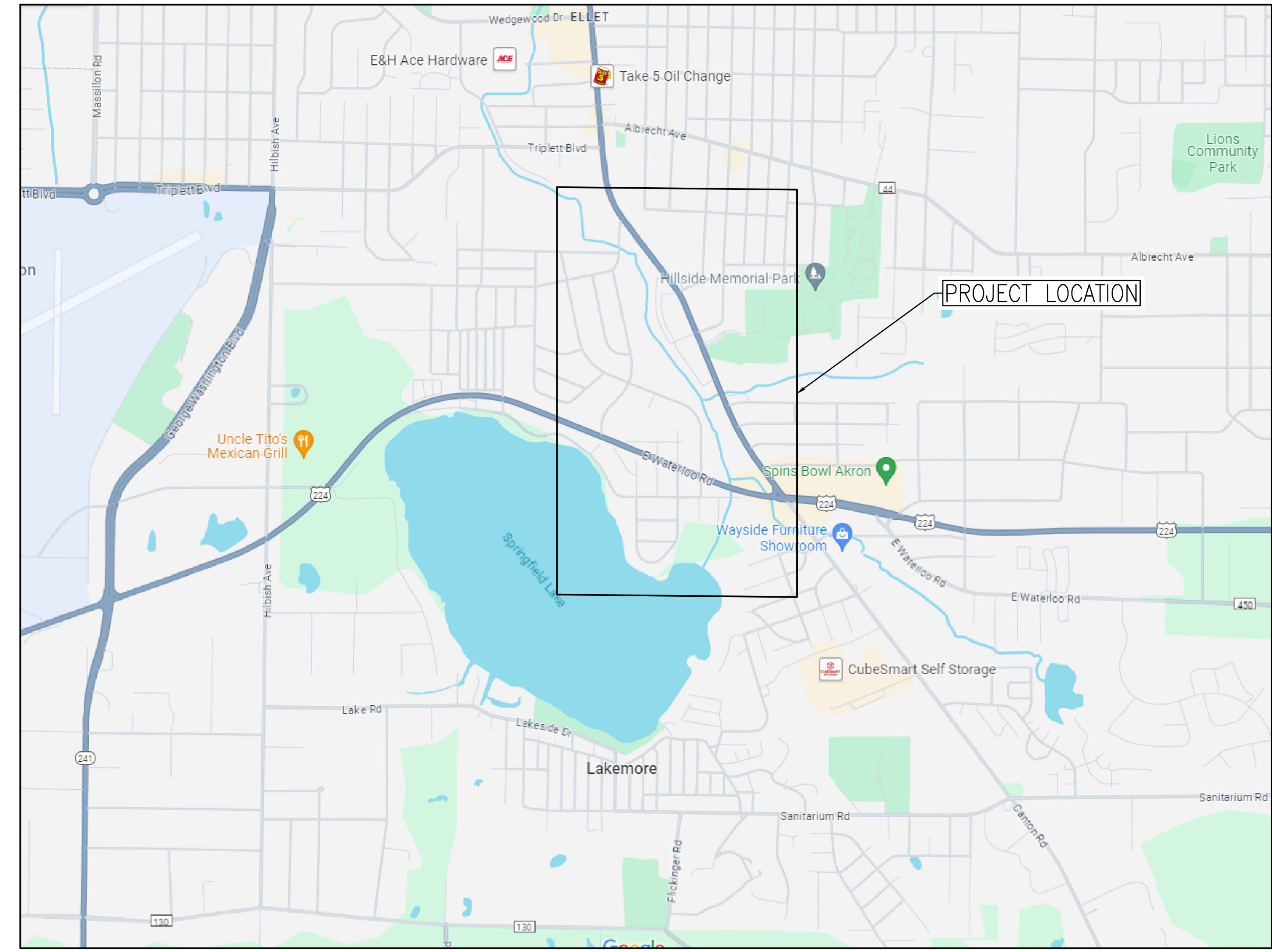
EARTH DISTURBED AREAS
 PROJECT DISTURBED AREA: 2.157 ACRES
 NOTICE OF INTENT DISTURBED AREA: 2.157 ACRES

PER THE OHIO EPA CONSTRUCTION GENERAL PERMIT (CGP) (OH000006) SECTION B.1, THIS PROJECT CAUSES DISTURBANCE THAT EXCEEDS 1 ACRE RESULTING IN THE NEED FOR A NOTICE OF INTENT (NOI). PER SECTION G.2.III OF THE CGP, STREAM RESTORATION ACTIVITIES ARE EXEMPT FROM POST-CONSTRUCTION STORMWATER BMPs, ALTHOUGH THE DISTURBANCE EXCEEDS THE DE MINIMIS THRESHOLD OF 1 ACRE.

APPROVED BY: _____ DATE _____
 ALAN BRUBAKER, P.E., P.S. SUMMIT COUNTY ENGINEER

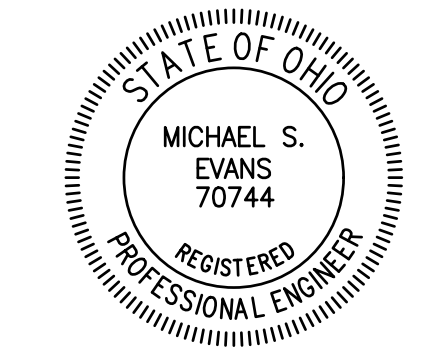
APPROVED BY: _____ DATE _____
 CHARLES HAUBER, P.E., P.S. ENGINEERING PROJECT MANAGER

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C-6.0	CHANNEL RESTORATION DETAILS
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C-6.2	CHANNEL RESTORATION DETAILS
C-7.0	SWPPP NOTES
C-7.1	SWPPP DETAILS



PROJECT CONTROL	
POSITIONING METHOD:	GPS
MONUMENT TYPE:	ODOT-VRS
VERTICAL POSITIONING	
ORTHOMETRIC HEIGHT DATUM:	NAVD88
GEOID:	GEOID18A
HORIZONTAL POSITIONING	
REFERENCE FRAME:	NAD83(2011)
ELLIPSOID:	GRS1980
MAP PROJECTION:	Lambert Conformal Conic Projection
COORDINATE SYSTEM:	Ohio State Plane, North Zone
COMBINED SCALE FACTOR:	1.000000
ORIGIN OF COORDINATE	
SYSTEM:	Northing: 0 USft Easting: 0 USft Lat.: N 39° 27' 01.76097" Lon.: W 89° 28' 32.98476"

SUBMITTED BY *Michael Evans* DATE 2-27-2026
 DLZ OHIO, INC.



ITEM 201 – CLEARING AND GRUBBING

A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING. FALLEN TREES, STUMPS, VEGETATION, SEDIMENT AND DEBRIS WITHIN THE LIMITS OF THE STREAM IMPROVEMENTS AND ACCESS DRIVES SHALL BE REMOVED BY THE CONTRACTOR. THE COST FOR REMOVAL OF MAN-MADE OBJECTS INCLUDING, BUT NOT LIMITED TO GARBAGE, UTILITY POLES, CONSTRUCTION DEBRIS, BED FRAMES, APPLIANCES, BENCHES, ETC. WITHIN THE LIMITS OF THE STREAM IMPROVEMENTS AND ACCESS DRIVES SHALL ALSO BE INCLUDED UNDER THIS ITEM.

TREES SHOWN TO BE REMOVED ON THE PLANS WILL BE FALLEN BY OTHERS PRIOR TO THIS CONTRACT. FALLEN TREES WITHIN THE STREAM TO BE REMOVED UNDER THE CONTRACT AS NOTED IN THE CHANNEL RESTORATION TABLES ARE APPROXIMATELY 12" IN DIAMETER.

ITEM 202 – FENCE REMOVED AND PAVEMENT REMOVED, AS PER PLAN

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 202	FENCE REMOVED	350 LF
ITEM 202	PAVEMENT REMOVED, AS PER PLAN	390 SY

THE QUANTITY PROVIDED FOR PAVEMENT REMOVED, AS PER PLAN IS INTENDED FOR THE RESIDENTIAL DRIVEWAY REMOVAL WHERE SHOWN ON PLANS. THE EXISTING DRIVEWAY IS ANTICIPATED TO BE 4-INCH THICK ASPHALT. REMOVAL OF AGGREGATE BASE AND SUBSOIL BELOW THE ASPHALT SHALL BE PAID AT THE UNIT PRICE BID FOR ITEM 203 – EXCAVATION FOR ACCESS DRIVES.

ITEM 203 – EXCAVATION, EMBANKMENT, AND GRANULAR MATERIAL

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 203	EXCAVATION FOR ACCESS DRIVES	2,050 CY
ITEM 203	GRANULAR MATERIAL, TYPE E, AS PER PLAN	300 CY

GRANULAR MATERIAL, TYPE E, AS PER PLAN SHALL BE #57 LIMESTONE ONLY. THE COST TO ADJUST CASTINGS TO GRADE PER ODOT ITEM NO. 611 SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 203, EXCAVATION, EMBANKMENT, AND GRANULAR MATERIAL.

ITEM 204 – GEOTEXTILE FABRIC AND SUBGRADE COMPACTION

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 204	SUBGRADE COMPACTION	4,900 SY
ITEM 204	GEOGRID FOR REINFORCED TURF	80 SY

ITEM 301 – ASPHALT BASE

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 301	ASPHALT BASE	35 CY
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ITEM 304 – AGGREGATE BASE, AS PER PLAN

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 304	AGGREGATE BASE, AS PER PLAN	60 CY
ITEM 304	#1 STONE, AS PER PLAN	750 CY
ITEM 304	#57 STONE, AS PER PLAN	400 CY

MATERIAL FOR ITEMS ABOVE SHALL BE LIMESTONE ONLY.

ITEM 407 – TACK COAT FOR INTERMEDIATE AND BASE COURSES

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 407	TACK COAT FOR INTERMEDIATE AND BASE COURSES	65 GAL
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ITEM 448 – ASPHALT SURFACE AND INTERMEDIATE COURSES

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 448	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	20 CY
ITEM 448	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	15 CY

ITEM 607 – FENCE, TYPE CLT, AS PER PLAN

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 607	FENCE, TYPE CLT, AS PER PLAN	265 LF
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FENCE SHALL MATCH EXISTING TYPE AND HEIGHT.

ITEM 611 – PIPE REMOVED AND REPLACED, 24" AND UNDER

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 611	PIPE REMOVED AND REPLACED, 24" AND UNDER	50 FT
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ITEM 614 – MAINTAINING TRAFFIC

A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 614, MAINTAINING TRAFFIC. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 619 – FIELD OFFICE, TYPE B

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 619	FIELD OFFICE, TYPE B	6 MONTH
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ITEM 623 – CONSTRUCTION LAYOUT STAKES AND SURVEYING

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROCURE THE SERVICES OF A SURVEYOR REGISTERED IN THE STATE OF OHIO TO PROVIDE ALL CONSTRUCTION STAKING.

THE ABOVE REQUIREMENTS SHALL NOT BE CONSTRUED TO REPLACE ANY REQUIREMENTS AS STATED IN THE CURRENT PUBLICATION OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION MANUAL SPECIFICATIONS.

ITEM 624 – MOBILIZATION, AS PER PLAN

A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 624, MOBILIZATION, AS PER PLAN. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 624. THE LUMP SUM PRICE BID FOR MOBILIZATION, AS PER PLAN SHALL NOT EXCEED 5% OF THE SUBTOTAL OF ALL OTHER ITEMS.

ITEM 638 – WATERMAIN REMOVAL AND REPLACEMENT, AS PER PLAN

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 638	WATERMAIN REMOVAL AND REPLACEMENT, AS PER PLAN	60 FT
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THE EXISTING DUCTILE IRON PIPE CROSSING THE CHANNEL AT STATION 9+25 IS UNKNOWN. THE WORK UNDER THIS ITEM SHALL INCLUDE ALL INVESTIGATIONS AND COORDINATION WITH UTILITY OWNERS TO VERIFY THE UTILITY TYPE AND ACTIVITY STATUS. FOR THE PURPOSES OF BIDDING, THE CONTRACTOR SHALL BID THE WORK ITEM AS WATERMAIN REMOVAL AND REPLACEMENT. ALL BENDS AND FITTINGS NEEDED TO PROVIDE 4 FEET MINIMUM COVER BELOW THE CHANNEL BED SHALL BE INCLUDED IN THIS ITEM.

ITEM 659 – SEEDING AND MULCHING, TOPSOIL

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 659	TOPSOIL, AS PER PLAN	215 CY
ITEM 659	SEEDING AND MULCHING	250 SY

THE WORK UNDER TOPSOIL, AS PER PLAN SHALL INCLUDE LINEAR GRADING PER ITEM 209 ALONG EDGES OF ALL ACCESS DRIVES AS NEEDED TO MATCH EXISTING ELEVATIONS. TOPSOIL LAYER SHALL BE 4-INCHES THICK. A LAWN MIX CONFORMING TO ODOT CMS TABLE 659.09-1 LAWN MIX SHALL BE USED. TOPSOIL, SEEDING, AND MULCHING WITHIN THE BANKFULL LIMITS IS PROHIBITED. SEE CROSS SECTIONS FOR BANKFULL LIMITS.

ITEM 832 – STORM WATER POLLUTION PREVENTION PLAN AND EROSION CONTROL, AS PER PLAN

A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 832, STORMWATER POLLUTION PREVENTION PLAN AND ITEM 832, EROSION CONTROL. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 832.

THE LUMP SUM PRICE FOR THIS ITEM INCLUDES ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT NECESSARY FOR PREPARATION, INSTALLATION AND MAINTENANCE OF TEMPORARY SEDIMENT AND EROSION CONTROL, FINE GRADE, TEMPORARY SEEDING AND MULCHING, WATERING, AND ALL OTHER ITEMS INTEGRAL TO MAINTAIN SEDIMENT AND EROSION CONTROL AND FINAL SITE RESTORATION OF DISTURBED AREAS.

TEMPORARY SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH ODOT ITEM 659 AND THE MOST CURRENT EDITION OF OHIO'S RAINWATER AND LAND DEVELOPMENT MANUAL. SEEDING AND MULCHING WITHIN THE BANKFULL LIMITS IS PROHIBITED. SEE CROSS SECTIONS FOR BANKFULL LIMITS.

EROSION CONTROL, AS PER PLAN AND AS DIRECTED BY THE COUNTY, SHALL BE IN ACCORDANCE WITH ODOT SPECIFICATION 832. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE PER THE MOST CURRENT EDITION OF OHIO'S RAINWATER AND LAND DEVELOPMENT MANUAL.

IF VEGETATION FAILS TO GROW TO A 90% COVERAGE, CONTRACTOR WILL BE RESPONSIBLE FOR RE-SEEDING AREAS AT NO ADDITIONAL COST TO THE COUNTY. THIS SHALL BE ENFORCED IN ALL WEATHER CONDITIONS AT NO ADDITIONAL COST TO THE COUNTY.

CONTRACTOR SHALL PROTECT WETLANDS THAT ARE NOT SHOWN TO BE DISTURBED ON THE PLANS, MINIMIZE STREAM IMPACTS TO THE WORK SHOWN ON THE PLANS, AND ADHERE TO THE NATIONWIDE PERMIT (NWP) TERMS AND SPECIAL CONDITIONS. NWP NUMBERS 3, 18, AND 27 APPLY TO THIS PROJECT AND ARE AVAILABLE (OR ATTACHED) FOR THE CONTRACTOR'S USE TO UNDERSTAND THE TERMS AND CONDITIONS APPLICABLE TO THIS PROJECT.

ITEM SPECIAL – UNDERCUT

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM SPECIAL	UNDERCUT	300 CY
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THE WORK UNDER THIS ITEM SHALL INCLUDE ALL LABOR AND MATERIALS TO PERFORM EXCAVATION TWO FEET BELOW ANTICIPATED SUBGRADE (OR AS DIRECTED BY ENGINEER); INSTALLATION OF GEOGRID (TENSAR TRIAX TX-160, OR APPROVED EQUAL) AND GEOTEXTILE FABRIC PER ODOT 712.09, TYPE D; AND BACKFILL WITH GRANULAR MATERIAL, TYPE E, #57 LIMESTONE ONLY.

ITEM SPECIAL – STREAM RESTORATION ITEMS

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM SPECIAL	STREAM GRADING	1 LS
ITEM SPECIAL	CULVERT CLEANING, 96" ELLIPTICAL RCP, AS PER PLAN	25 CY
ITEM SPECIAL	CULVERT CLEANING, 48" RCP, AS PER PLAN	65 CY
ITEM SPECIAL	GRADE CONTROL BOULDER VANE W/J HOOK	1 EA
ITEM SPECIAL	TOE WOOD	8 EA
ITEM SPECIAL	CONSTRUCTED ALLUVIAL RIFFLE	5 EA
ITEM SPECIAL	COIR FIBER ROLL	285 LF
ITEM SPECIAL	RIPRAP WITH LIVE STAKES	200 SY
ITEM SPECIAL	LIVE STAKES	337 EA
ITEM SPECIAL	LIVE SILTATION WITH COIR FIBER ROLL	459 SY
ITEM SPECIAL	COIR FIBER EROSION CONTROL BLANKET	1,900 SF

THE WORK UNDER THESE ITEMS SHALL INCLUDE ALL LABOR AND MATERIALS TO INSTALL THE STREAM RESTORATION ITEMS PER APPLICABLE DETAILS.

THE CONTRACTOR SHALL DEWATER AND/OR BYPASS PUMP THE STREAM AS NEEDED TO INSTALL STREAM RESTORATION ITEMS. THE COST FOR DEWATERING SHALL BE INCLUDED IN THE APPLICABLE STREAM RESTORATION BID ITEMS AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.

THE WORK UNDER ITEM SPECIAL, STREAM GRADING SHALL CONSIST OF GRADING THE STREAM BANKS, FLOODPLAIN AND CHANNEL USING ON-SITE SOILS TO BRING THE SURFACE TO THE PROPOSED GRADE AS SHOWN IN THE PLANS.

EXISTING ELEVATIONS AND CONTOURS SHOWN ON THE PLANS, CROSS SECTIONS, AND PROFILES WERE DEVELOPED BY THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM POST-EXCAVATION GRADES AND ADJUST EARTHWORK AS NECESSARY AT NO ADDITIONAL COST.

EXCAVATE AND GRADE THE PROPOSED STREAM CHANNEL, PROFILE, AND CROSS SECTIONS AS INDICATED IN THE PLANS TO A TOLERANCE OF PLUS OR MINUS 1/2-INCH (VERTICAL). TAMP SOIL WITH A BACKHOE BUCKET OR OTHER METHOD APPROVED BY THE ENGINEER. THE WORK SHALL BE PERFORMED IN CONSULTATION WITH THE ENGINEER.

IN AREAS TO BE COVERED WITH TOPSOIL, ALLUVIAL RIFFLE STONE, SUB-STONE, LONGITUDINAL STONE TOE, GRAVEL, AND SOIL AS SHOWN IN THE PLANS AND CHANNEL RESTORATION DETAILS, THE CONTRACTOR SHALL LEAVE THE RESTORATION GRADING SURFACE BELOW THE FINAL GRADE SO THAT THE ADDITION OF THOSE MATERIALS WILL RESULT IN THE CORRECT FINAL GRADE. ALL COSTS ASSOCIATED WITH THESE MATERIALS SHALL BE INCLUDED WITH OTHER, APPLICABLE BID ITEMS.

GRADING SHALL NOT OCCUR WHEN WEATHER CONDITIONS ARE UNSUITABLE, SUCH AS DURING HEAVY RAIN AND EXTREMELY SATURATED SOIL CONDITIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EXCESS MATERIAL AS WELL AS ALL TRASH AND ANY OTHER MATERIALS INCIDENTAL TO STREAM GRADING AND FOR LEGALLY RECYCLING AND/OR DISPOSING OF THEM OFF-SITE.

THE WORK UNDER ITEM SPECIAL, CULVERT CLEANING SHALL INCLUDE REMOVING ALL DEBRIS AND SEDIMENT WITHIN THE CULVERTS ACCORDING TO ODOT ITEM 107.19. DEWATER THE CULVERTS AS NEEDED TO PERFORM THE WORK.

ITEM SPECIAL AS-BUILT DRAWINGS

CONTRACTOR TO SUPPLY PDF AND DRAWING FILES (.DWG) TO SUMMIT COUNTY AFTER COMPLETION OF ALL WORK UNDERLINED IN THE PLANS AND SPECIFICATIONS.

ITEM SPECIAL	AS-BUILT DRAWINGS	1 LS
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A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR THIS ITEM.

ITEM SPECIAL NATIVE WETLAND SEED MIX

NATIVE WETLAND SEED MIX MAY BE SPREAD ON ALL RIFFLE WEIRS AS A SUPPLEMENT TO PLUG PLANTING. THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS AND HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM SPECIAL	NATIVE WETLAND SEED MIX	1,700 SY
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ITEM SPECIAL NATIVE WETLAND SPECIES PLANTING

THE STREAM IMPROVEMENTS SHALL CONSIST OF THE PLANTING OF NATIVE SPECIES WHICH ENCOURAGE DIVERSITY AND ARE APPROPRIATE FOR THE HYDROLOGIC AND GEOGRAPHIC ZONES OF THE PROJECT SITE. THE IMPROVEMENTS ARE BEST PLANTED WITH WET-TOLERANT, RHIZOMATOUS PLANTS SUCH AS SEDGES, RUSHES, AND SWITCHGRASS WHICH CAN BE PLANTED AS PLUGS. THE CONTRACTOR SHALL COORDINATE PLANT SELECTION WITH SUMMIT COUNTY DURING CONSTRUCTION.

SPECIES NATIVE TO OHIO THAT ARE SUITABLE FOR RIFFLE PLANTINGS MAY INCLUDE, BUT ARE NOT LIMITED TO:

BRISTLY SEDGE	JOE-PYE WEED	SAWTOOTH SUNFLOWER	SWITCH GRASS
FRINGED SEDGE	PORCUPINE SEDGE	SOFT STEM BULLRUSH	TALL COREOPSIS
HARD STEM BULLRUSH	RIVER BULRUSH	SWAMP MILKWEED	WLD BLUE INDIGO
SPECIAL	NATIVE WETLAND SPECIES PLANTING	200 EA	

A CONTINGENCY QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR THIS ITEM TO BE USED AS DIRECTED BY THE ENGINEER.

LEGEND:

	FEMA FLOOD PLANE ZONE 'A'		BOLLARD/POST
	DELINEATED WETLANDS		CATCH BASIN
	DELINEATED WETLAND TO BE DISTURBED		CONCRETE
	GRAVEL ACCESS DRIVE		DOWNSPOUT/YARD DRAIN
	GRASS PAVER ACCESS DRIVE		EASEMENT LINE
	REMOVE AND REPLACE RESIDENTIAL DRIVEWAY		ELECTRIC BOX
	CONSTRUCTION/MAINTENANCE DRIVE (EXISTING – TO REMAIN)		FENCE LINE
	PRIVATELY OWNED BRIDGE		GAS LINE
	PERMANENT EASEMENT		GUY ANCHOR
	EXISTING DITCH EASEMENT		LIGHT POLE
	SANITARY PIPE		OVERHEAD ELECTRIC
	STORM PIPE		PKNAIL
	EXISTING DITCH EASEMENT ENCROACHMENT		POWER POLE
	PERMANENT EASEMENT ENCROACHMENT		PROPERTY LINE
	FENCE		SANITARY LINE
	CHANNEL RESTORATION LOCATION		SANITARY MANHOLE
			STORM LINE
			STORM MANHOLE
			TOPO
			WATER LINE
			WATER VALVE
			SOIL BORING
			WORK LIMITS

ABBREVIATIONS

ADD'L	–	ADDITIONAL
&	–	AND
ASPH	–	ASPHALT
ASSY	–	ASSEMBLY
@	–	AT
BC	–	BACK OF CURB
BM	–	BENCH MARK
BMP	–	BEST MANAGEMENT PRACTICE
BR	–	BRICK
CB	–	CATCH BASIN
C/C	–	CENTER TO CENTER
CCTV	–	CLOSED CIRCUIT TELEVISION
CL	–	CENTERLINE
CI	–	CAST IRON
CIRC	–	CIRCULAR
CLR	–	CLEAR
C.J.	–	CONSTRUCTION JOINT
CLSM	–	CONTROLLED LOW-STRENGTH MATERIAL
CNPT	–	CONTROL POINT
CPP	–	CORRUGATED PLASTIC PIPE
CTR	–	CENTER
CONC	–	CONCRETE
DIA. Ø	–	DIAMETER
DIM	–	DIMENSION
DIP	–	DUCTILE IRON PIPE
E.F.	–	EACH FACE
E.	–	EAST
ELEV.	–	ELEVATION
EL.	–	ELEVATION
EOB	–	END OF BORING
EOF	–	EMERGENCY OVERFLOW
EQ	–	EQUAL
EST	–	ESTIMATED
EXIST/EX	–	EXISTING
FC	–	FACE OF CURB
FO	–	UNDERGROUND FIBER OPTIC
HH	–	UTILITY HANDHOLE
HORIZ	–	HORIZONTAL
ID	–	INSIDE DIAMETER
INV	–	INVERT
I.P.	–	IRON PIN
I.P.F.	–	IRON PIN FOUND
JT	–	JOINT
LEO	–	LAW ENFORCEMENT OFFICER
LF	–	LINEAR FOOT
LONG.	–	LONGITUDINAL
MAG	–	MAGNETIC NAIL
MAX	–	MAXIMUM
MH	–	MANHOLE
MIN	–	MINIMUM
MOT	–	MAINTENANCE OF TRAFFIC
N/A	–	NOT APPLICABLE
NO.	–	NUMBER
OC	–	ON CENTER
O.D.	–	OUTSIDE DIAMETER
O/H E	–	OVERHEAD ELECTRIC
OPNG	–	OPENING
±	–	PLUS OR MINUS
PL	–	PROPERTY LINE/PLATE
PCF	–	POUNDS PER CUBIC FOOT
PSF	–	POUNDS PER SQUARE FOOT
PVC	–	POLYVINYL CHLORIDE
RCP	–	REINFORCED CONCRETE PIPE
R/W ROW	–	RIGHT-OF-WAY
SAN/SN	–	SANITARY SEWER
SED.	–	SEDIMENT
SHT.	–	SHEET
SIM	–	SIMILAR
SL	–	SPRINGLINE
SPA.	–	SPACES OR SPACING
ST	–	STORM SEWER
STA.	–	STATION
STD	–	STANDARD
STR	–	STRUCTURE
TBR	–	TO BE REMOVED
T/=	–	TOP OF
UNO	–	UNLESS NOTED OTHERWISE
TYP	–	TYPICAL
VCP	–	VITRIFIED CLAY PIPE
W/WAT	–	WATER
W/	–	WITH
W.	–	WEST



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER

538 E. SOUTH STREET
AKRON, OH 44311

REV NO	DATE	ISSUED BY	REMARKS

DESIGNED BY: <u>MSE</u>
DRAWN BY: <u>MAT</u>
SHEET CHK'D BY: <u>MSE</u>
CROSS CHK'D BY: <u>DCG</u>
APPROVED BY: <u>MSE</u>
ISSUED DATE: <u>03/06/26</u>



SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303</

SPRINGFIELD LAKE SUMMARY OF QUANTITIES

OOOT ITEM NO.	ITEM	UNIT	QUANTITY	SHEET
201	CLEARING AND GRUBBING	LS	1	C-3.0 TO C-3.4
202	FENCE REMOVED	LF	350	C-3.1 TO C-3.4
202	PAVEMENT REMOVED, AS PER PLAN	SY	390	C-3.3
203	EXCAVATION FOR ACCESS DRIVE	CY	2050	C-5.9
203	GRANULAR MATERIAL, TYPE E, AS PER PLAN	CY	300	C-5.0 TO C-5.8 & C-5.9
204	SUBGRADE COMPACTION	SY	4900	C-5.0 TO C-5.8 & C-5.9
204	GEOGRID FOR REINFORCED TURF	SY	80	C-5.2 & C-5.9
301	ASPHALT BASE	CY	35	C-3.3 & C-5.9
304	AGGREGATE BASE, AS PER PLAN	CY	60	C-3.3 & C-5.9
304	#1 STONE, AS PER PLAN	CY	750	C-5.0 TO C-5.8 & C-5.9
304	#57 STONE, AS PER PLAN	CY	400	C-5.0 TO C-5.8 & C-5.9
407	TACK COAT FOR INTERMEDIATE AND BASE COURSES	GAL	65	C-3.3 & C-5.9
448	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22	CY	20	C-3.3 & C-5.9
448	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	CY	15	C-3.3 & C-5.9
607	FENCE, TYPE CLT, AS PER PLAN	LF	265	C-3.1 TO C-3.2
611	PIPE REMOVED AND REPLACED, 24" AND UNDER	LF	50	C-3.2
614	MAINTAINING TRAFFIC	LS	1	N/A
619	FIELD OFFICE, TYPE B	MONTH	6	N/A
623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	LS	1	N/A
624	MOBILIZATION, AS PER PLAN	LS	1	N/A
638	WATERMAIN REMOVAL AND REPLACEMENT, AS PER PLAN	LF	60	C-3.2
659	TOP SOIL, AS PER PLAN	CY	215	C-3.0 TO C-3.4
659	SEEDING AND MULCHING	SY	250	C-3.0 TO C-3.4
832	STORM WATER POLLUTION PREVENTION PLAN AND EROSION CONTROL, AS PER PLAN	LS	1	C-3.0 TO C-3.4 & C-5.0 TO C-5.8
SPECIAL	UNDERCUT	CY	300	C-5.9
SPECIAL	STREAM GRADING	LS	1	C-3.0 TO C-3.4
SPECIAL	CULVERT CLEANING, 96" ELLIPTICAL CMP, AS PER PLAN	CY	25	C-3.2
SPECIAL	CULVERT CLEANING, 48" RCP, AS PER PLAN	CY	65	C-3.2 TO C-3.3
SPECIAL	GRADE CONTROL BOULDER VANE W/ J HOOK	EA	1	C-3.2 & C-6.0
SPECIAL	TOE WOOD	EA	8	C-3.0 TO C-3.1 & C-6.0
SPECIAL	CONSTRUCTED ALLUVIAL RIFFLE	EA	5	C-3.0 TO C-3.2 & C-6.1
SPECIAL	COIR FIBER ROLL	LF	285	C-3.0 TO C-3.4 & C-6.1
SPECIAL	RIP RAP WITH LIVE STAKES	SY	200	C-3.2, C-3.3, C-3.5 & C-6.2
SPECIAL	LIVE STAKES	EA	337	C-3.0, C-3.1, C-3.3 & C-6.2
SPECIAL	LIVE SILTATION WITH COIR FIBER ROLL	SY	459	C-3.4 TO C-3.5 & C-6.2
SPECIAL	COIR FIBER EROSION CONTROL BLANKET	SF	1900	C-3.0 TO C-3.4 & C-6.1
SPECIAL	AS-BUILT DRAWINGS	LS	1	N/A
SPECIAL	NATIVE WETLAND SEED MIX	SY	1700	C-3.0 TO C-3.4
SPECIAL	NATIVE WETLAND SPECIES PLANTING	EA	200	C-3.0 TO C-3.4
SPECIAL	ALLOWANCE - AS DIRECTED BY THE OWNER	LS	1	N/A
SPECIAL	ALLOWANCE - REMOVAL OF ADDITIONAL FALLEN TREES AND STREAMBANK STABILIZATION WITH HAND PLACED LOGS	LS	1	C-3.0 TO C-3.8

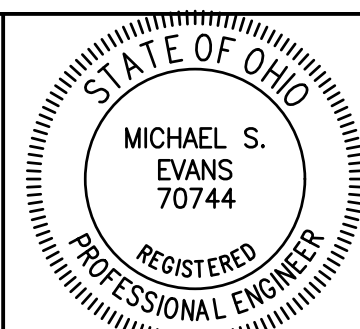


ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER

538 E. SOUTH STREET
 AKRON, OH 44311

REV NO	DATE	ISSUED BY	REMARKS

DESIGNED BY: MSE
 DRAWN BY: MAT
 SHEET CHK'D BY: MSE
 CROSS CHK'D BY: DCG
 APPROVED BY: MSE
 ISSUED DATE: 03/06/26

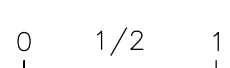


SURFACE WATER MANAGEMENT
 DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
 CHANNEL RESTORATION
 FINAL DESIGN PLANS

GENERAL NOTES,
 ABBREVIATIONS, AND
 LEGEND

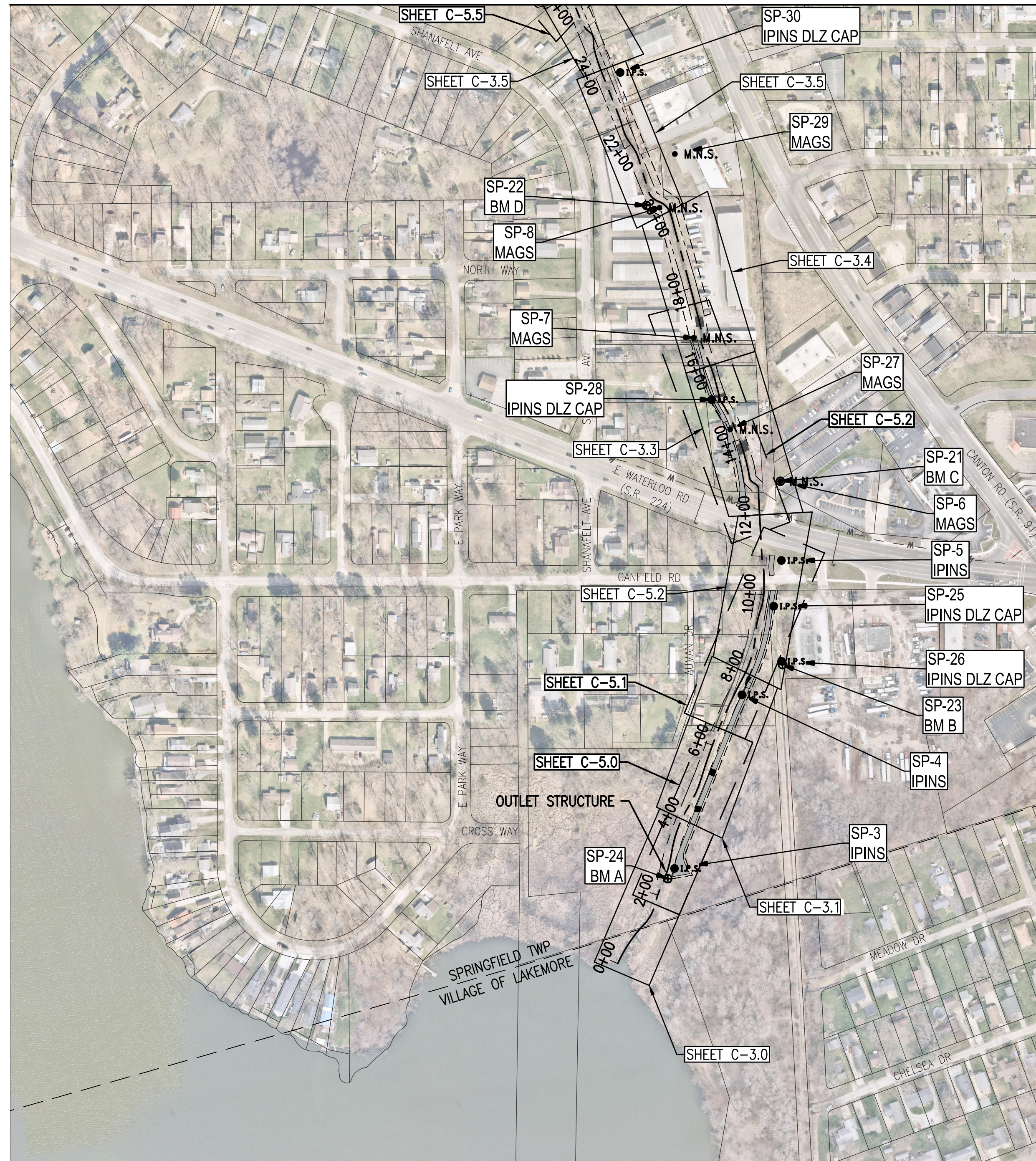
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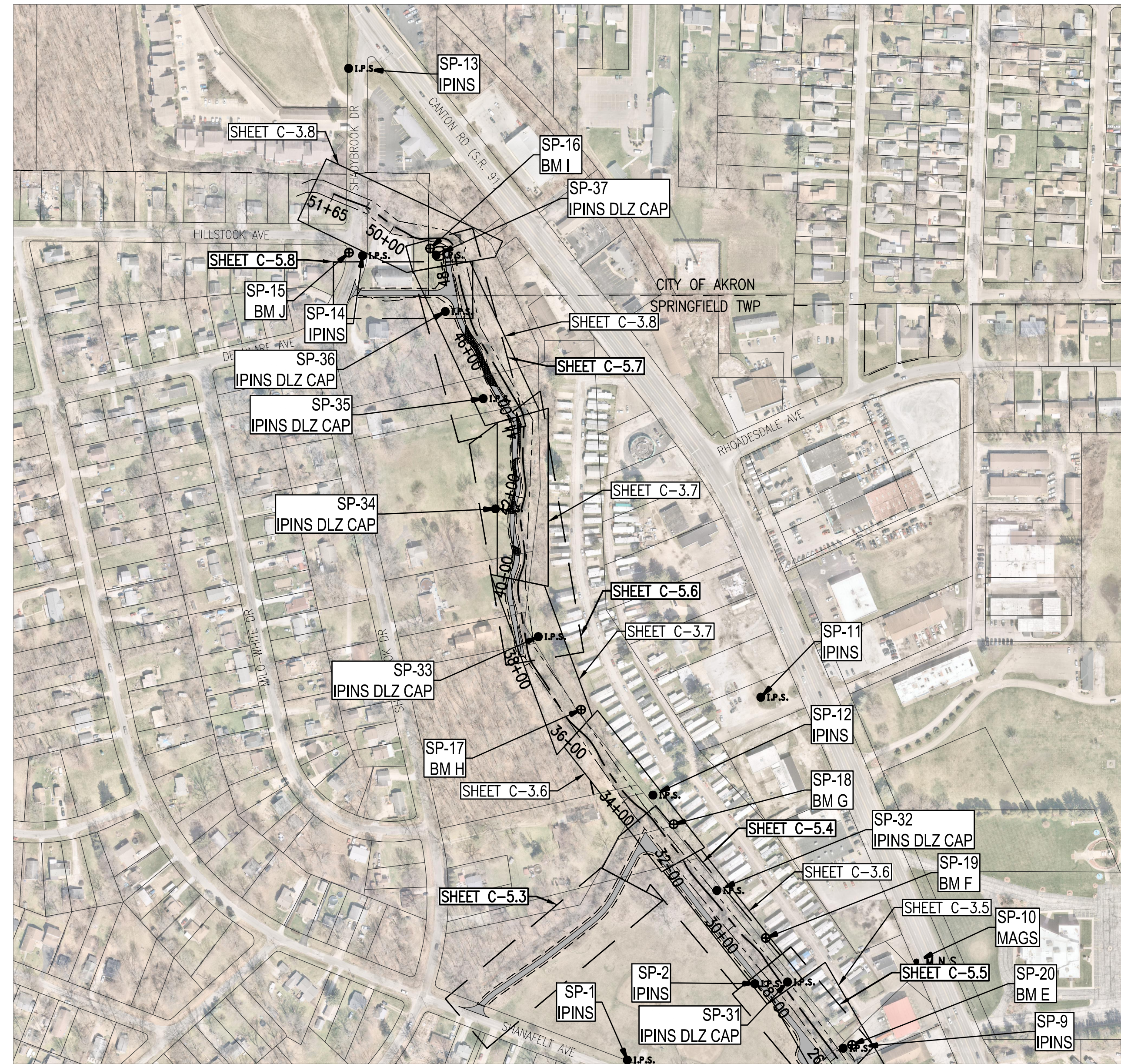
IF THIS BAR DOES
 NOT MEASURE 1"
 THEN DRAWING IS
 NOT TO SCALE

SHEET NO.:
C-1.1

MATCHLINE SEE THIS SHEET




SURVEY CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
SP-1	500,441.53	2,262,611.88	1075.66	IPINS
SP-2	500,624.24	2,262,917.22	1075.84	IPINS
SP-3	498,277.98	2,263,373.89	1075.68	IPINS
SP-4	498,711.40	2,263,542.24	1075.26	IPINS
SP-5	499,046.37	2,263,640.77	1078.67	IPINS
SP-6	499,243.88	2,263,638.23	1082.77	MAGS
SP-7	499,601.68	2,263,421.84	1077.29	MAGS
SP-8	499,926.27	2,263,336.54	1075.52	MAGS
SP-9	500,469.71	2,263,128.89	1075.85	IPINS
SP-10	500,677.52	2,263,304.09	1079.74	MAGS
SP-11	501,310.18	2,262,931.61	1077.79	IPINS
SP-12	501,075.72	2,262,673.11	1078.43	IPINS
SP-13	502,815.92	2,261,944.18	1089.93	IPINS
SP-14	502,367.68	2,261,977.46	1073.45	IPINS
SP-15	502,374.82	2,261,945.22	1073.24	BM J
SP-16	502,384.78	2,262,139.61	1072.12	BM I
SP-17	501,280.53	2,262,501.11	1072.50	BM H
SP-18	501,006.05	2,262,722.89	1076.04	BM G
SP-19	500,733.75	2,262,943.66	1075.44	BM F
SP-20	500,477.74	2,263,150.26	1076.47	BM E
SP-21	499,243.83	2,263,638.21	1082.77	BM C
SP-22	499,931.88	2,263,304.01	1076.58	BM D
SP-23	498,786.38	2,263,643.28	1078.34	BM B
SP-24	498,252.43	2,263,357.21	1076.06	BM A
SP-25	498,932.22	2,263,621.59	1077.32	IPINS DLZ CAP
SP-26	498,794.73	2,263,640.87	1077.29	IPINS DLZ CAP
SP-27	499,373.35	2,263,512.74	1077.88	MAGS
SP-28	499,447.63	2,263,466.39	1074.78	IPINS DLZ CAP
SP-29	500,060.60	2,263,374.90	1077.31	MAGS
SP-30	500,263.85	2,263,238.42	1077.25	IPINS DLZ CAP
SP-31	500,628.27	2,262,995.48	1072.49	IPINS DLZ CAP
SP-32	500,847.48	2,262,826.17	1072.45	IPINS DLZ CAP
SP-33	501,455.20	2,262,398.63	1071.50	IPINS DLZ CAP
SP-34	501,761.21	2,262,295.96	1071.42	IPINS DLZ CAP
SP-35	502,025.30	2,262,266.59	1071.05	IPINS DLZ CAP
SP-36	502,233.86	2,262,175.78	1071.49	IPINS DLZ CAP
SP-37	502,368.74	2,262,153.83	1071.96	IPINS DLZ CAP



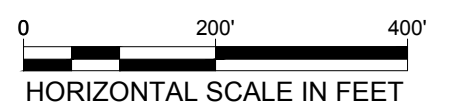
MATCHLINE SEE THIS SHEET

LEGEND:

-  PERMANENT CONSTRUCTION/ MAINTENANCE DRIVE
- BM** BENCH MARK
- IPINS** IRON PIN SET

SURVEY NOTES:

1. HORIZONTAL DATUM IS OHIO STATE PLANE, NORTH ZONE NAD83(2011) U.S. FEET. VERTICAL DATUM IS NAVD 1988 U.S. FEET.
2. PROPERTY LINES ARE FROM A TAX MAP OVERLAY. NO BOUNDARY SURVEYS HAVE BEEN PERFORMED.
3. THIS PLAN SET AND THE SURVEY ON WHICH IT IS BASED HAVE BEEN PREPARED WITHOUT THE BENEFIT OF TITLE REPORT AND ARE NOT INTENDED TO REFLECT ALL EASEMENTS, ENCUMBRANCES, OR OTHER CIRCUMSTANCES AFFECTING THE TITLE TO THE PROPERTIES SHOWN HEREON.

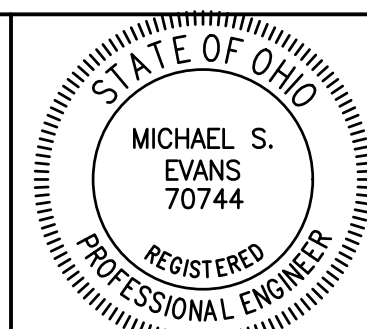


ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER

538 E. SOUTH STREET
AKRON, OH 44311

REV NO	DATE	ISSUED BY	REMARKS

DESIGNED BY: MSE
DRAWN BY: MAT
SHEET CHK'D BY: MSE
CROSS CHK'D BY: DCG
APPROVED BY: MSE
ISSUED DATE: 03/06/26

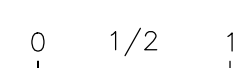


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

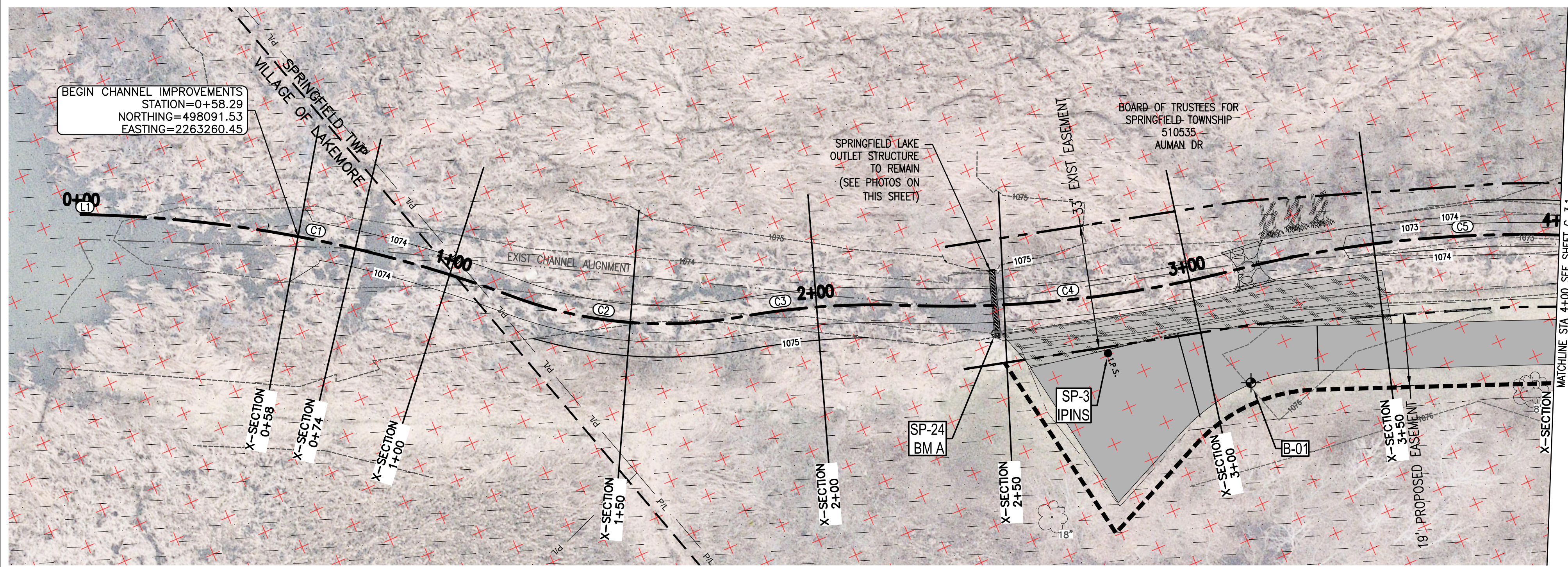
SURVEY CONTROL

WARNING

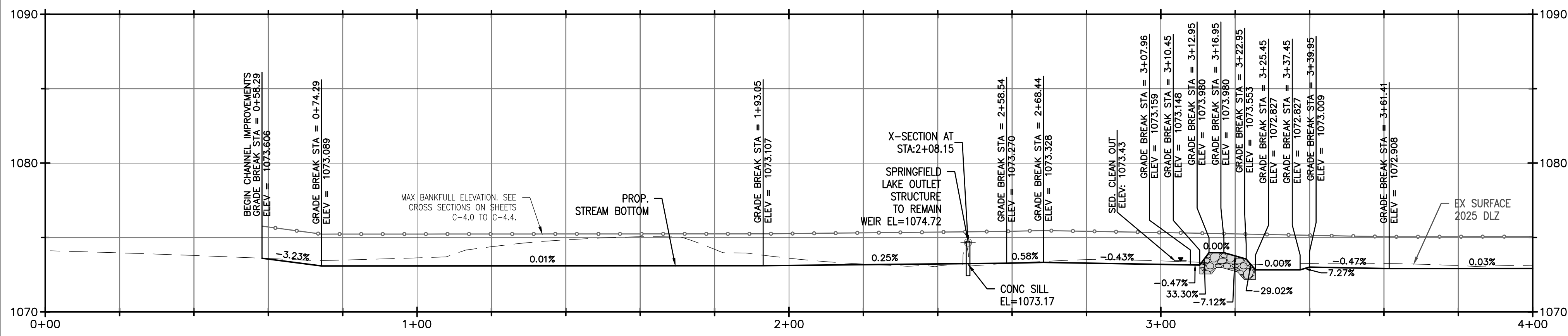


IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-2.0



PLAN



OUTLET CHANNEL PROFILE (0+00 TO 4+00)

STA 0+00 TO STA 4+00 TREE REMOVAL	
TREE SIZE (DIA.)	QUANTITY
12" AND LESS	0
13" TO 24"	0
25" TO 36"	0
37" TO 48"	0
49" AND GREATER	0

- NOTES:**
- SEE SHEET C-6.0 FOR CHANNEL RESTORATION DETAILS.
 - SEE C-5.0 FOR ACCESS DRIVE PLANS.
 - EROSION CONTROL MATTING SHALL BE INSTALLED ON STREAM BANKS ABOVE BANKFULL ELEVATION AND ON ALL SLOPES STEEPER THAN 25% ABOVE BANKFULL ELEVATION AND WITHIN CHANNEL IMPROVEMENT AREAS UNLESS NOTED ON PLANS. SEE DETAIL ON SHEET C-6.1.
 - IN CONJUNCTION WITH EROSION CONTROL MATTING, SEEDING TO TAKE PLACE WITHIN ALL DISTURBED AREAS ABOVE THE BANKFULL ELEVATION. SEE MIX DESIGN AND DETAIL ON SHEET C-6.2.
 - ALL WORK ASSOCIATED WITH MONITORING AND REMOVING SEDIMENT FROM THE CONSTRUCTED ALLUVIAL RIFFLE(S) SHALL BE PAID FOR UNDER ODOT ITEM 832 - TEMPORARY SEDIMENT AND EROSION CONTROL. WHEN SEDIMENT ACCUMULATION WITHIN THE RIFFLE REACHES ONE-THIRD (1/3) OF THE DESIGNED CAPACITY AT ELEVATIONS SHOWN ON THE PLANS, THE CONTRACTOR SHALL REMOVE THE EXCESS SEDIMENT AND RESTORE THE RIFFLE GEOMETRY TO THE ORIGINAL AS BUILT CONDITION. SEDIMENT REMOVAL OPERATIONS SHALL FOLLOW THE REQUIREMENTS OF ITEM 832, INCLUDING PROTECTION OF WATER QUALITY, COMPLIANCE WITH APPLICABLE NPDES REQUIREMENTS, AND PROPER HANDLING, CONTAINMENT, AND DISPOSAL OF REMOVED MATERIAL. ALL WORK SHALL BE PERFORMED USING METHODS THAT MINIMIZE DISTURBANCE TO THE STREAM CHANNEL, MAINTAIN STABILITY OF RIFFLE STRUCTURES, AND PRESERVE NATURAL FLOW PATTERNS.

PROPOSED CHANNEL LINE DATA			
LINE #	LENGTH (FT)	START POINT	END POINT
L1	2.03	STA: 0+00 N: 498,040.58 E: 2,263,232.28	STA: 0+02 N: 498,042.43 E: 2,263,233.12

PROPOSED CHANNEL CURVE DATA				
CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
C1	345.00	115.69	STA: 0+02 N: 498,042.43 E: 2,263,233.12	STA: 1+18 N: 498,137.86 E: 2,263,297.56
C2	115.00	61.83	STA: 1+18 N: 498,137.86 E: 2,263,297.56	STA: 1+80 N: 498,191.68 E: 2,263,326.46
C3	200.00	43.56	STA: 1+80 N: 498,191.68 E: 2,263,326.46	STA: 2+23 N: 498,232.76 E: 2,263,340.67
C4	309.19	88.54	STA: 2+23 N: 498,232.76 E: 2,263,340.67	STA: 3+12 N: 498,317.09 E: 2,263,366.63
C5	315.00	124.73	STA: 3+12 N: 498,317.09 E: 2,263,366.63	STA: 4+36 N: 498,433.35 E: 2,263,409.51



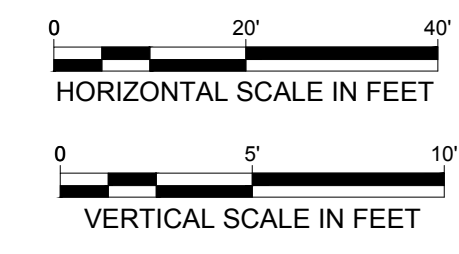
OUTLET CONTROL STRUCTURE PHOTO #1



OUTLET CONTROL STRUCTURE PHOTO #2

LEGEND:

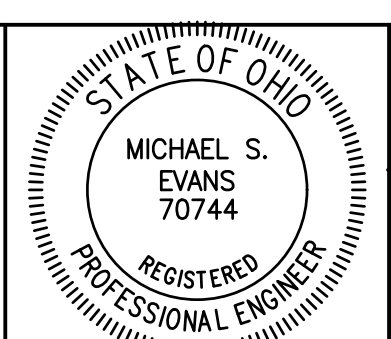
- FEMA FLOOD PLANE ZONE 'A'
- DELINEATED WETLANDS
- DELINEATED WETLAND TO BE DISTURBED
- GRAVEL ACCESS DRIVE
- GRASS PAVER ACCESS DRIVE
- REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
- CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
- PRIVATELY OWNED BRIDGE
- PERMANENT EASEMENT
- EXISTING DITCH EASEMENT
- SANITARY PIPE
- STORM PIPE
- EXISTING DITCH EASEMENT ENCROACHMENT
- PERMANENT EASEMENT ENCROACHMENT
- FENCE
- CHANNEL RESTORATION LOCATION
- GRADE CONTROL BOULDER VANE W/J-HOOK (SEE DETAIL ON SHEET C-6.0) PLAN VIEW
- GRADE CONTROL BOULDER VANE W/J-HOOK PROFILE VIEW
- TOE WOOD (SEE DETAIL ON SHEET C-6.0)
- CONSTRUCTED ALLUVIAL RIFFLE (SEE DETAIL ON SHEET C-6.1) PLAN VIEW
- CONSTRUCTED ALLUVIAL RIFFLE PROFILE VIEW
- RIP-RAP WITH LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE SILTATION W/ COIR FIBER ROLL (SEE DETAIL ON SHEET C-6.2)
- MAX BANKFULL ELEVATION PROFILE VIEW (SEE CROSS SECTIONS ON SHEETS C-4.0 TO C-4.4)
- EX TREE TO REMAIN
- EX TREE TO BE REMOVED



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER
 538 E. SOUTH STREET
 AKRON, OH 44311

REV NO	DATE	ISSUED BY	REMARKS

DESIGNED BY: MSE
 DRAWN BY: MAT
 SHEET CHK'D BY: MSE
 CROSS CHK'D BY: DCG
 APPROVED BY: MSE
 ISSUED DATE: 03/06/26

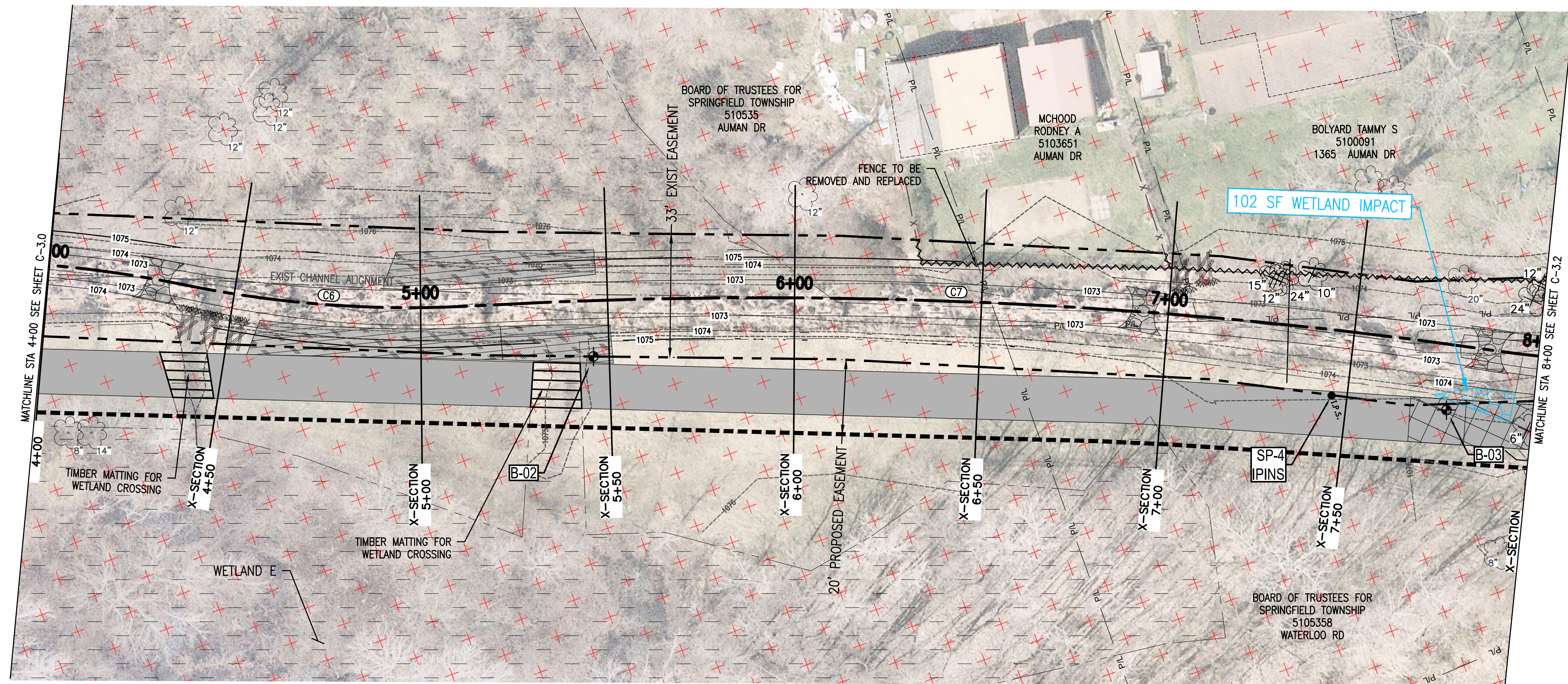


SURFACE WATER MANAGEMENT
 DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

OUTLET CHANNEL
PLAN & PROFILE
STA 0+00 TO STA 4+00

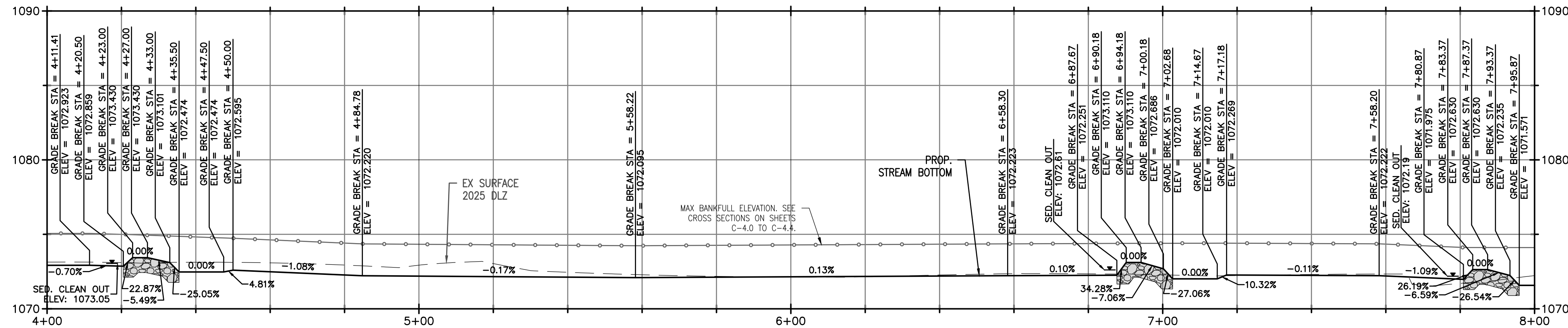
WARNING
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 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.: **C-3.0**



PLAN

- LEGEND:
- FEMA FLOOD PLANE ZONE 'A'
 - DELINEATED WETLANDS
 - DELINEATED WETLAND TO BE DISTURBED
 - GRAVEL ACCESS DRIVE
 - GRASS PAVER ACCESS DRIVE
 - REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
 - CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
 - PRIVATELY OWNED BRIDGE
 - PERMANENT EASEMENT
 - EXISTING DITCH EASEMENT
 - SANITARY PIPE
 - STORM PIPE
 - EXISTING DITCH EASEMENT ENCROACHMENT
 - PERMANENT EASEMENT ENCROACHMENT
 - FENCE
 - CHANNEL RESTORATION LOCATION



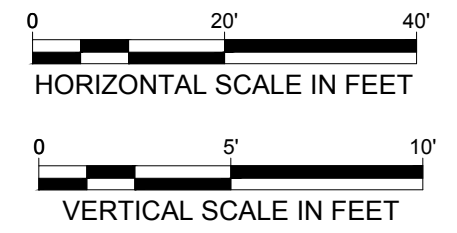
OUTLET CHANNEL PROFILE (4+00 TO 8+00)

PROPOSED CHANNEL CURVE DATA				
CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
C6	300.16	77.80	STA: 4+36	STA: 5+14
			N: 498,433.35 E: 2,263,409.51	N: 498,504.13 E: 2,263,441.27
C7	1360.00	274.35	STA: 5+14	STA: 7+89
			N: 498,504.13 E: 2,263,441.27	N: 498,757.13 E: 2,263,546.17

STA 4+00 TO STA 8+00 TREE REMOVAL	
TREE SIZE (DIA.)	QUANTITY
12" AND LESS	2
13" TO 24"	5
25" TO 36"	0
37" TO 48"	0
49" AND GREATER	0

- NOTES:
- SEE SHEET C-6.0 FOR CHANNEL RESTORATION DETAILS.
 - SEE C-5.0 FOR ACCESS DRIVE PLANS.
 - EROSION CONTROL MATTING SHALL BE INSTALLED ON STREAM BANKS ABOVE BANKFULL ELEVATION AND ON ALL SLOPES STEEPER THAN 25% ABOVE BANKFULL ELEVATION AND WITHIN CHANNEL IMPROVEMENT AREAS UNLESS NOTED ON PLANS. SEE DETAIL ON SHEET C-6.1.
 - IN CONJUNCTION WITH EROSION CONTROL MATTING, SEEDING TO TAKE PLACE WITHIN ALL DISTURBED AREAS ABOVE THE BANKFULL ELEVATION. SEE MIX DESIGN AND DETAIL ON SHEET C-6.2.
 - ALL WORK ASSOCIATED WITH MONITORING AND REMOVING SEDIMENT FROM THE CONSTRUCTED ALLUVIAL RIFFLE(S) SHALL BE PAID FOR UNDER ODOT ITEM 832 - TEMPORARY SEDIMENT AND EROSION CONTROL. WHEN SEDIMENT ACCUMULATION WITHIN THE RIFFLE REACHES ONE-THIRD (1/3) OF THE DESIGNED CAPACITY AT ELEVATIONS SHOWN ON THE PLANS, THE CONTRACTOR SHALL REMOVE THE EXCESS SEDIMENT AND RESTORE THE RIFFLE GEOMETRY TO THE ORIGINAL AS BUILT CONDITION. SEDIMENT REMOVAL OPERATIONS SHALL FOLLOW THE REQUIREMENTS OF ITEM 832, INCLUDING PROTECTION OF WATER QUALITY, COMPLIANCE WITH APPLICABLE NPDES REQUIREMENTS, AND PROPER HANDLING, CONTAINMENT, AND DISPOSAL OF REMOVED MATERIAL. ALL WORK SHALL BE PERFORMED USING METHODS THAT MINIMIZE DISTURBANCE TO THE STREAM CHANNEL, MAINTAIN STABILITY OF RIFFLE STRUCTURES, AND PRESERVE NATURAL FLOW PATTERNS.

- GRADE CONTROL BOULDER VANE W/J-HOOK (SEE DETAIL ON SHEET C-6.0) PLAN VIEW
- GRADE CONTROL BOULDER VANE W/J-HOOK PROFILE VIEW
- TOE WOOD (SEE DETAIL ON SHEET C-6.0)
- CONSTRUCTED ALLUVIAL RIFFLE (SEE DETAIL ON SHEET C-6.1) PLAN VIEW
- CONSTRUCTED ALLUVIAL RIFFLE PROFILE VIEW
- RIP-RAP WITH LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE SILTATION W/ COIR FIBER ROLL (SEE DETAIL ON SHEET C-6.2)
- MAX BANKFULL ELEVATION PROFILE VIEW (SEE CROSS SECTIONS ON SHEETS C-4.0 TO C-4.4)
- EX TREE TO REMAIN
- EX TREE TO BE REMOVED



ALAN BRUBAKER, P.E., P.S.
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 538 E. SOUTH STREET
 AKRON, OH 44311

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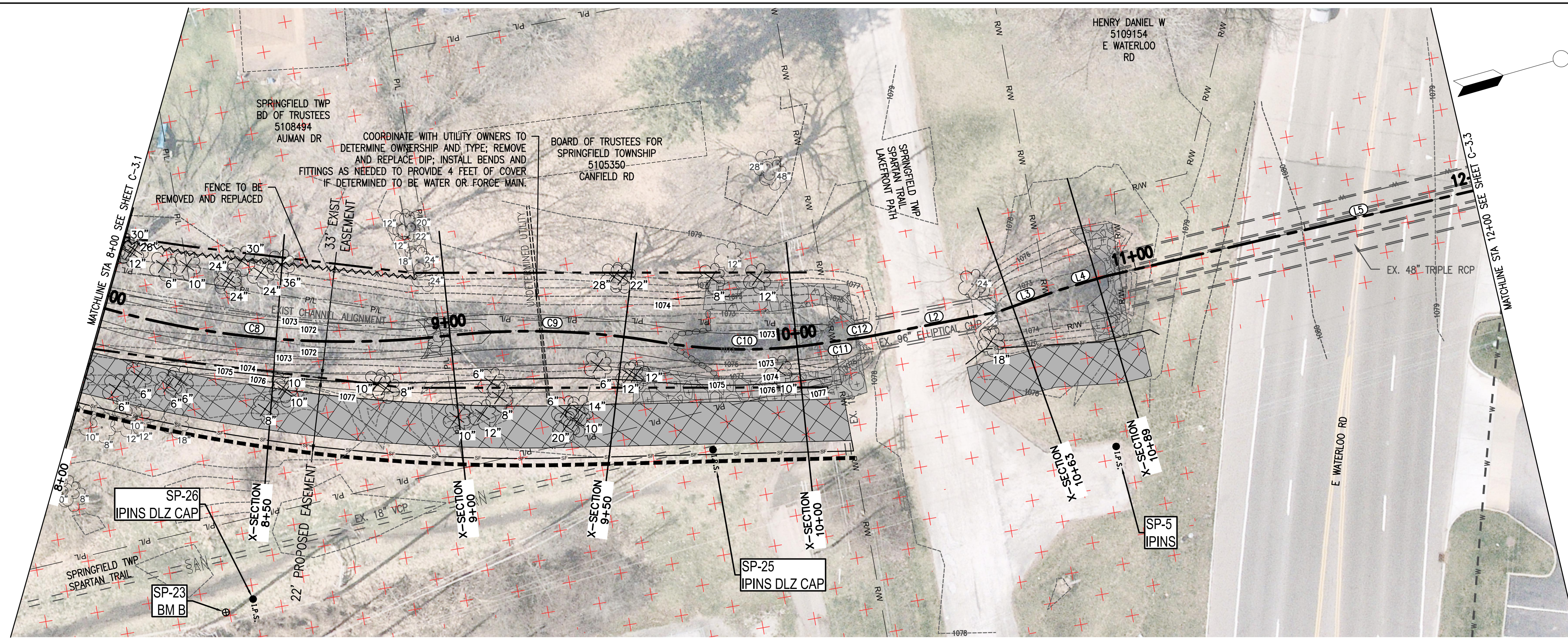


SURFACE WATER MANAGEMENT
 DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

OUTLET CHANNEL
PLAN & PROFILE
STA 4+00 TO STA 8+00

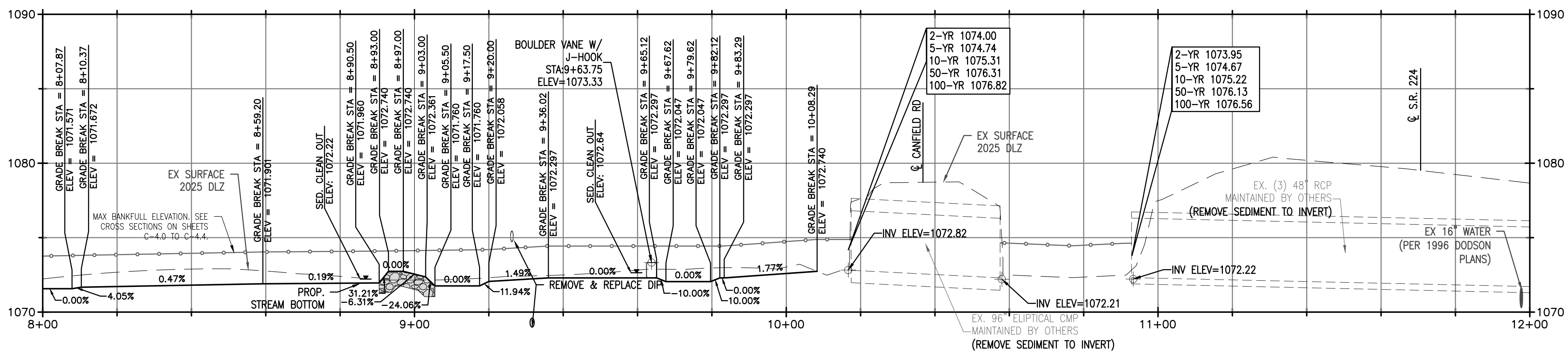
WARNING
 0 1/2 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-3.1



PLAN

- LEGEND:
- FEMA FLOOD PLANE ZONE 'A'
 - DELINEATED WETLANDS
 - DELINEATED WETLAND TO BE DISTURBED
 - GRAVEL ACCESS DRIVE
 - GRASS PAVER ACCESS DRIVE
 - REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
 - CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
 - PRIVATELY OWNED BRIDGE
 - PERMANENT EASEMENT
 - EXISTING DITCH EASEMENT
 - SANITARY PIPE
 - STORM PIPE
 - EXISTING DITCH EASEMENT ENCROACHMENT
 - PERMANENT EASEMENT ENCROACHMENT
 - FENCE
 - CHANNEL RESTORATION LOCATION



OUTLET CHANNEL PROFILE (8+00 TO 12+00)

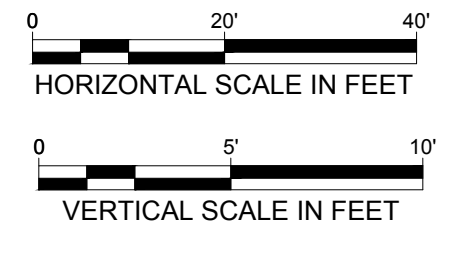
- GRADE CONTROL BOULDER VANE W/J-HOOK (SEE DETAIL ON SHEET C-6.0) PLAN VIEW
- GRADE CONTROL BOULDER VANE W/J-HOOK PROFILE VIEW
- TOE WOOD (SEE DETAIL ON SHEET C-6.0)
- CONSTRUCTED ALLUVIAL RIFFLE (SEE DETAIL ON SHEET C-6.1) PLAN VIEW
- CONSTRUCTED ALLUVIAL RIFFLE PROFILE VIEW
- RIP-RAP WITH LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE SILTATION W/ COIR FIBER ROLL (SEE DETAIL ON SHEET C-6.2)
- MAX BANKFULL ELEVATION PROFILE VIEW (SEE CROSS SECTIONS ON SHEETS C-4.0 TO C-4.4)
- EX TREE TO REMAIN
- EX TREE TO BE REMOVED

PROPOSED CHANNEL CURVE DATA				PROPOSED CHANNEL LINE DATA				
CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT	LINE #	LENGTH (FT)	START POINT	END POINT
C8	254.30	109.84	STA: 7+89 N: 498,757.13 E: 2,263,546.17	STA: 8+98 N: 498,861.93 E: 2,263,576.08	L2	36.12	STA: 10+22 N: 498,983.28 E: 2,263,597.35	STA: 10+58 N: 499,019.40 E: 2,263,596.87
C9	220.00	62.01	STA: 8+98 N: 498,861.93 E: 2,263,576.08	STA: 9+60 N: 498,922.48 E: 2,263,588.53	L3	18.72	STA: 10+58 N: 499,019.40 E: 2,263,596.87	STA: 10+77 N: 499,037.86 E: 2,263,593.77
C10	144.71	48.97	STA: 9+60 N: 498,922.48 E: 2,263,588.53	STA: 10+09 N: 498,970.47 E: 2,263,597.00	L4	14.42	STA: 10+77 N: 499,037.86 E: 2,263,593.77	STA: 10+91 N: 499,052.19 E: 2,263,592.14
C11	100.00	5.47	STA: 10+09 N: 498,970.47 E: 2,263,597.00	STA: 10+15 N: 498,975.93 E: 2,263,597.18	L5	149.49	STA: 10+91 N: 499,052.19 E: 2,263,592.14	STA: 12+41 N: 499,201.46 E: 2,263,584.05
C12	100.00	7.35	STA: 10+15 N: 498,975.93 E: 2,263,597.18	STA: 10+22 N: 498,983.28 E: 2,263,597.35				

STA 8+00 TO STA 12+00 TREE REMOVAL	
TREE SIZE (DIA.)	QUANTITY
12" AND LESS	24
13" TO 24"	6
25" TO 36"	5
37" TO 48"	0
49" AND GREATER	0

NOTES:

- SEE SHEET C-6.0 FOR CHANNEL RESTORATION DETAILS.
- SEE C-5.0 FOR ACCESS DRIVE PLANS.
- EROSION CONTROL MATTING SHALL BE INSTALLED ON STREAM BANKS ABOVE BANKFULL ELEVATION AND ON ALL SLOPES STEEPER THAN 25% ABOVE BANKFULL ELEVATION AND WITHIN CHANNEL IMPROVEMENT AREAS UNLESS NOTED ON PLANS. SEE DETAIL ON SHEET C-6.1.
- IN CONJUNCTION WITH EROSION CONTROL MATTING, SEEDING TO TAKE PLACE WITHIN ALL DISTURBED AREAS ABOVE THE BANKFULL ELEVATION. SEE MIX DESIGN AND DETAIL ON SHEET C-6.2.
- ALL WORK ASSOCIATED WITH MONITORING AND REMOVING SEDIMENT FROM THE CONSTRUCTED ALLUVIAL RIFFLE(S) SHALL BE PAID FOR UNDER ODOT ITEM 832 - TEMPORARY SEDIMENT AND EROSION CONTROL. WHEN SEDIMENT ACCUMULATION WITHIN THE RIFFLE REACHES ONE-THIRD (1/3) OF THE DESIGNED CAPACITY AT ELEVATIONS SHOWN ON THE PLANS, THE CONTRACTOR SHALL REMOVE THE EXCESS SEDIMENT AND RESTORE THE RIFFLE GEOMETRY TO THE ORIGINAL AS BUILT CONDITION. SEDIMENT REMOVAL OPERATIONS SHALL FOLLOW THE REQUIREMENTS OF ITEM 832, INCLUDING PROTECTION OF WATER QUALITY, COMPLIANCE WITH APPLICABLE NPDES REQUIREMENTS, AND PROPER HANDLING, CONTAINMENT, AND DISPOSAL OF REMOVED MATERIAL. ALL WORK SHALL BE PERFORMED USING METHODS THAT MINIMIZE DISTURBANCE TO THE STREAM CHANNEL, MAINTAIN STABILITY OF RIFFLE STRUCTURES, AND PRESERVE NATURAL FLOW PATTERNS.



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER
 538 E. SOUTH STREET
 AKRON, OH 44311

REV NO	DATE	ISSUED BY	REMARKS

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 DRAWN BY: MAT
 SHEET CHK'D BY: MSE
 CROSS CHK'D BY: DGG
 APPROVED BY: MSE
 ISSUED DATE: 03/06/26

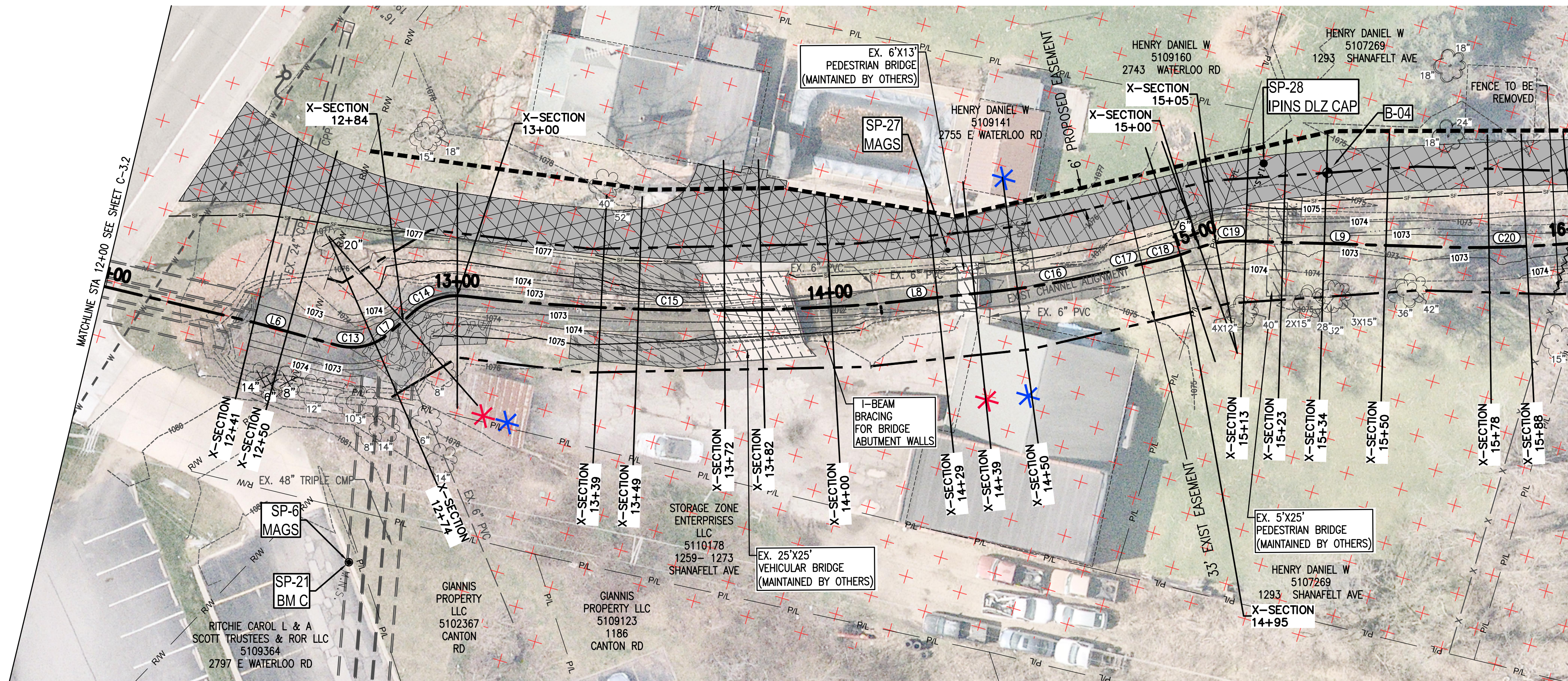


SURFACE WATER MANAGEMENT
 DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

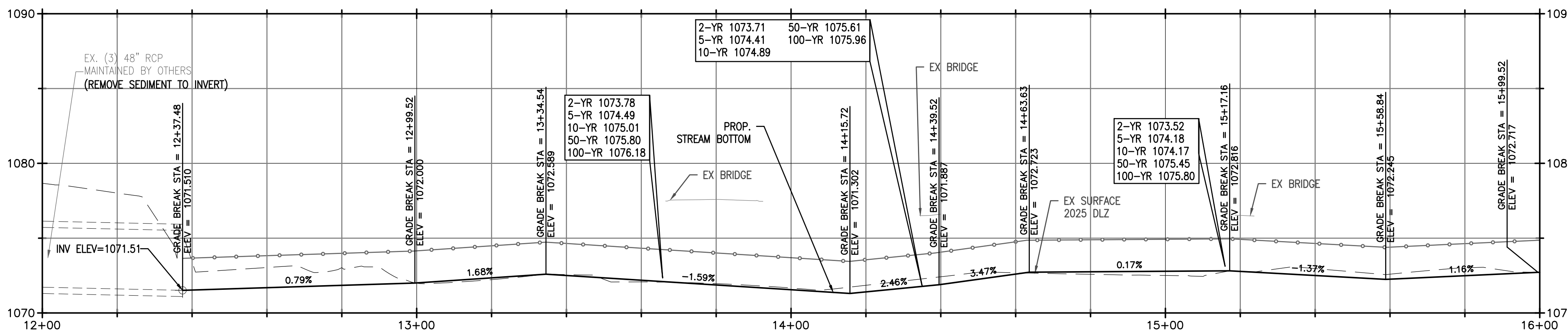
OUTLET CHANNEL
PLAN & PROFILE
STA 8+00 TO STA 12+00

WARNING
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.: **C-3.2**



PLAN



OUTLET CHANNEL PROFILE (12+00 TO 16+00)

STA 12+00 TO STA 16+00 TREE REMOVAL	
TREE SIZE (DIA.)	QUANTITY
12" AND LESS	3
13" TO 24"	2
25" TO 36"	0
37" TO 48"	0
49" AND GREATER	0

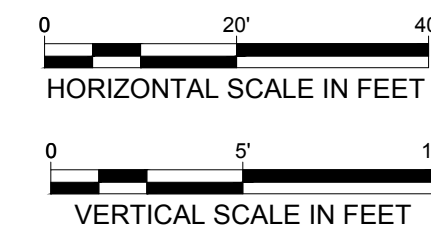
PROPOSED CHANNEL LINE DATA				PROPOSED CHANNEL CURVE DATA				PROPOSED CHANNEL CURVE DATA					
LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
L6	22.84	STA: 12+41 N: 499,201.46 E: 2,263,584.05	STA: 12+64 N: 499,224.30 E: 2,263,583.57	C13	15.00	14.85	STA: 12+64 N: 499,224.30 E: 2,263,583.57	STA: 12+79 N: 499,236.69 E: 2,263,576.54	C17	368.42	11.58	STA: 14+78 N: 499,418.67 E: 2,263,504.56	STA: 14+89 N: 499,428.75 E: 2,263,498.87
L7	8.40	STA: 12+79 N: 499,236.69 E: 2,263,576.54	STA: 12+87 N: 499,241.15 E: 2,263,569.43	C14	18.00	15.06	STA: 12+87 N: 499,241.15 E: 2,263,569.43	STA: 13+02 N: 499,253.28 E: 2,263,561.26	C18	50.00	9.23	STA: 14+89 N: 499,428.75 E: 2,263,498.87	STA: 14+98 N: 499,436.41 E: 2,263,493.74
L8	30.95	STA: 14+12 N: 499,358.61 E: 2,263,532.11	STA: 14+42 N: 499,387.19 E: 2,263,520.24	C15	572.19	109.46	STA: 13+02 N: 499,253.28 E: 2,263,532.11	STA: 14+12 N: 499,358.61 E: 2,263,520.24	C19	30.00	12.72	STA: 14+98 N: 499,436.41 E: 2,263,493.74	STA: 15+11 N: 499,447.66 E: 2,263,488.01
L9	52.99	STA: 15+11 N: 499,447.66 E: 2,263,488.01	STA: 15+64 N: 499,498.89 E: 2,263,474.44	C16	259.35	35.19	STA: 14+42 N: 499,387.19 E: 2,263,520.24	STA: 14+78 N: 499,418.67 E: 2,263,504.56	C20	300.00	52.96	STA: 15+64 N: 499,498.89 E: 2,263,474.44	STA: 16+17 N: 499,548.62 E: 2,263,456.45

NOTES:

- SEE SHEET C-6.0 FOR CHANNEL RESTORATION DETAILS.
- SEE C-5.0 FOR ACCESS DRIVE PLANS.
- EROSION CONTROL MATTING SHALL BE INSTALLED ON STREAM BANKS ABOVE BANKFULL ELEVATION AND ON ALL SLOPES STEEPER THAN 25% ABOVE BANKFULL ELEVATION AND WITHIN CHANNEL IMPROVEMENT AREAS UNLESS NOTED ON PLANS. SEE DETAIL ON SHEET C-6.1.
- IN CONJUNCTION WITH EROSION CONTROL MATTING, SEEDING TO TAKE PLACE WITHIN ALL DISTURBED AREAS ABOVE THE BANKFULL ELEVATION. SEE MIX DESIGN AND DETAIL ON SHEET C-6.2.

LEGEND:

- FEMA FLOOD PLANE ZONE 'A'
- DELINEATED WETLANDS
- DELINEATED WETLAND TO BE DISTURBED
- GRAVEL ACCESS DRIVE
- GRASS PAVER ACCESS DRIVE
- REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
- CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
- PRIVATELY OWNED BRIDGE
- PERMANENT EASEMENT
- EXISTING DITCH EASEMENT
- SANITARY PIPE
- STORM PIPE
- EXISTING DITCH EASEMENT ENCROACHMENT
- PERMANENT EASEMENT ENCROACHMENT
- FENCE
- CHANNEL RESTORATION LOCATION
- GRADE CONTROL BOULDER VANE W/J-HOOK (SEE DETAIL ON SHEET C-6.0) PLAN VIEW
- GRADE CONTROL BOULDER VANE W/J-HOOK PROFILE VIEW
- TOE WOOD (SEE DETAIL ON SHEET C-6.0)
- CONSTRUCTED ALLUVIAL RIFFLE (SEE DETAIL ON SHEET C-6.1) PLAN VIEW
- CONSTRUCTED ALLUVIAL RIFFLE PROFILE VIEW
- RIP-RAP WITH LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE SILTATION W/ COIR FIBER ROLL (SEE DETAIL ON SHEET C-6.2)
- MAX BANKFULL ELEVATION PROFILE VIEW (SEE CROSS SECTIONS ON SHEETS C-4.0 TO C-4.4)
- EX TREE TO REMAIN
- EX TREE TO BE REMOVED

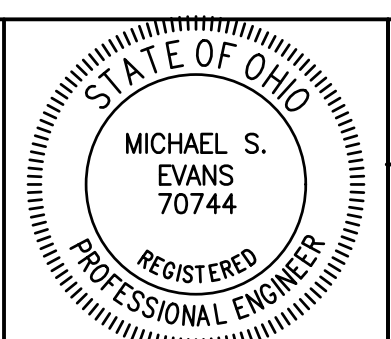


ALAN BRUBAKER, P.E., P.S.
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538 E. SOUTH STREET
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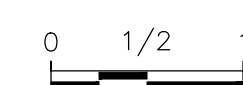
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SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

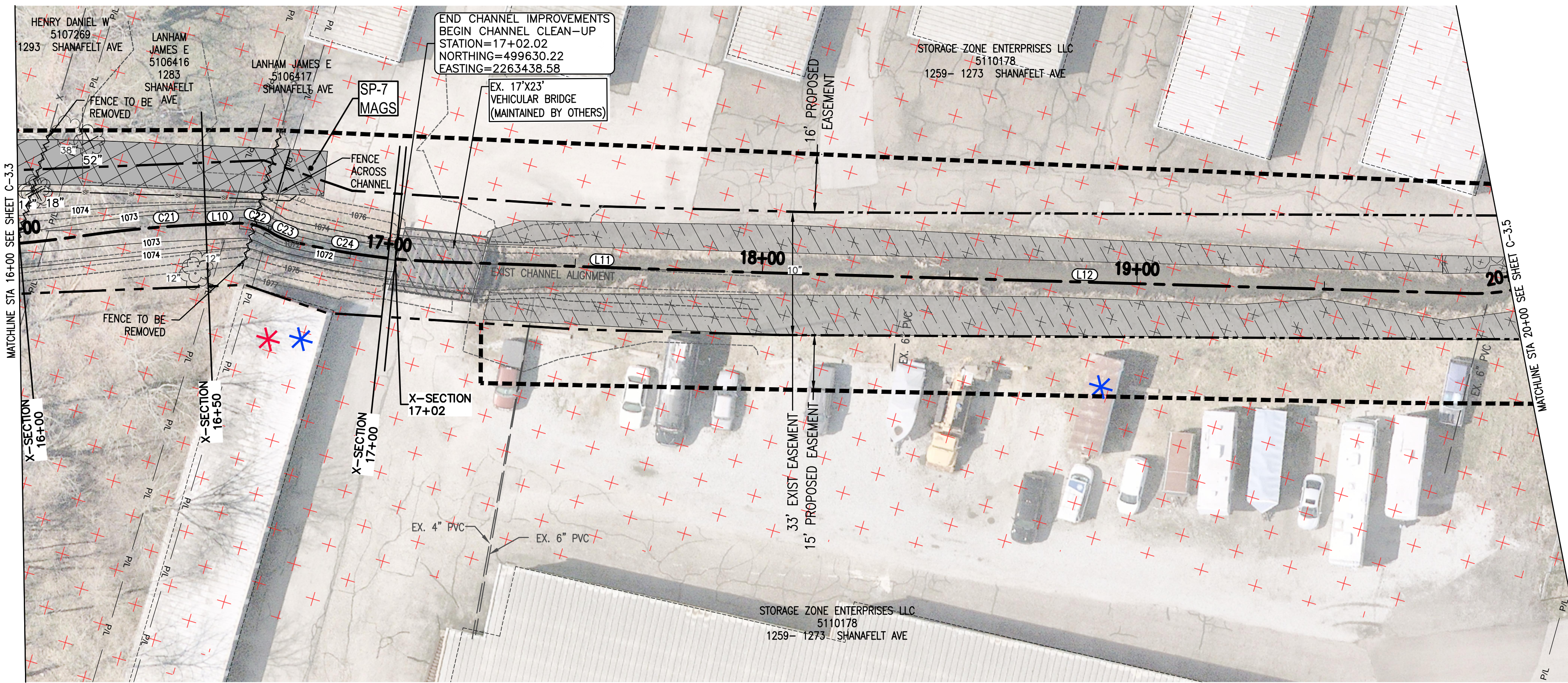
OUTLET CHANNEL
PLAN & PROFILE
STA 12+00 TO STA 16+00

WARNING

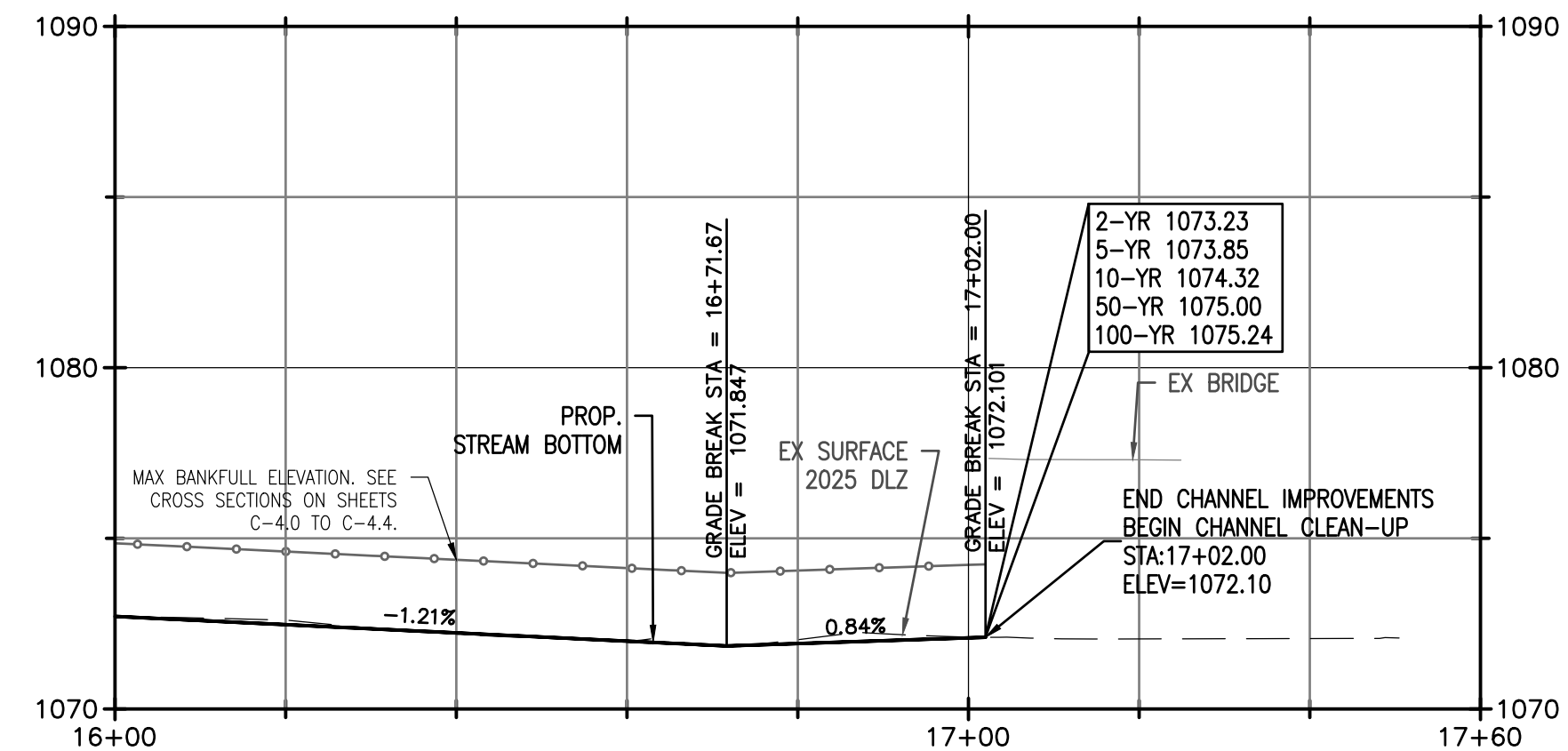


IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-3.3



PLAN



OUTLET CHANNEL PROFILE (16+00 TO 17+60)

PROPOSED CHANNEL LINE DATA			
LINE #	LENGTH (FT)	START POINT	END POINT
L10	9.50	STA: 16+49 N: 499,578.26 E: 2,263,444.54	STA: 16+59 N: 499,587.25 E: 2,263,441.47

EXISTING CHANNEL LINE DATA			
LINE #	LENGTH (FT)	START POINT	END POINT
L11	85.15	STA: 17+15 N: 499,642.46 E: 2,263,435.80	STA: 18+00 N: 499,724.83 E: 2,263,414.26
L12	189.24	STA: 18+00 N: 499,724.83 E: 2,263,414.26	STA: 19+89 N: 499,907.72 E: 2,263,365.60

PROPOSED CHANNEL CURVE DATA				
CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
C21	300.00	31.95	STA: 16+17 N: 499,548.62 E: 2,263,456.45	STA: 16+49 N: 499,578.26 E: 2,263,444.54
C22	15.00	9.14	STA: 16+59 N: 499,587.25 E: 2,263,441.47	STA: 16+68 N: 499,596.25 E: 2,263,441.25
C23	20.00	6.72	STA: 16+68 N: 499,596.25 E: 2,263,441.25	STA: 16+74 N: 499,602.89 E: 2,263,442.00
C24	200.00	40.12	STA: 16+74 N: 499,602.89 E: 2,263,442.00	STA: 17+15 N: 499,642.46 E: 2,263,435.80

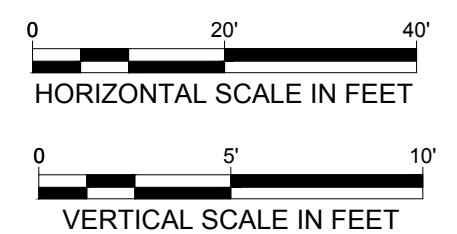
STA 16+00 TO STA 20+00 TREE REMOVAL	
TREE SIZE (DIA.)	QUANTITY
12" AND LESS	0
13" TO 24"	2
25" TO 36"	0
37" TO 48"	0
49" AND GREATER	1

NOTES:

- SEE SHEET C-6.0 FOR CHANNEL RESTORATION DETAILS.
- SEE C-5.0 FOR ACCESS DRIVE PLANS.
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- IN CONJUNCTION WITH EROSION CONTROL MATTING, SEEDING TO TAKE PLACE WITHIN ALL DISTURBED AREAS ABOVE THE BANKFULL ELEVATION. SEE MIX DESIGN AND DETAIL ON SHEET C-6.2.

LEGEND:

- FEMA FLOOD PLANE ZONE 'A'
- DELINEATED WETLANDS
- DELINEATED WETLAND TO BE DISTURBED
- GRAVEL ACCESS DRIVE
- GRASS PAVER ACCESS DRIVE
- REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
- CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
- PRIVATELY OWNED BRIDGE
- PERMANENT EASEMENT
- EXISTING DITCH EASEMENT
- SANITARY PIPE
- STORM PIPE
- EXISTING DITCH EASEMENT ENCROACHMENT
- PERMANENT EASEMENT ENCROACHMENT
- FENCE
- CHANNEL RESTORATION LOCATION
- GRADE CONTROL BOULDER VANE W/J-HOOK (SEE DETAIL ON SHEET C-6.0) PLAN VIEW
- GRADE CONTROL BOULDER VANE W/J-HOOK PROFILE VIEW
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- RIP-RAP WITH LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE SILTATION W/ COIR FIBER ROLL (SEE DETAIL ON SHEET C-6.2)
- MAX BANKFULL ELEVATION PROFILE VIEW (SEE CROSS SECTIONS ON SHEETS C-4.0 TO C-4.4)
- EX TREE TO REMAIN
- EX TREE TO BE REMOVED

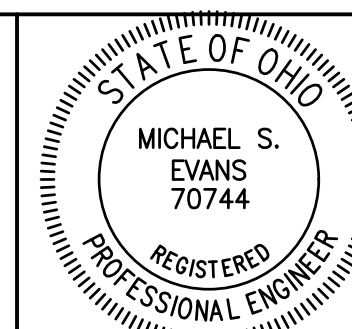


ALAN BRUBAKER, P.E., P.S.
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538 E. SOUTH STREET
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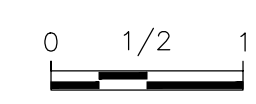


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

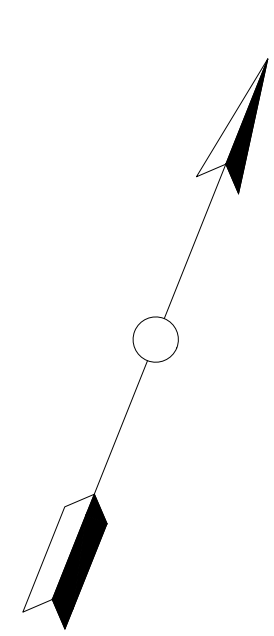
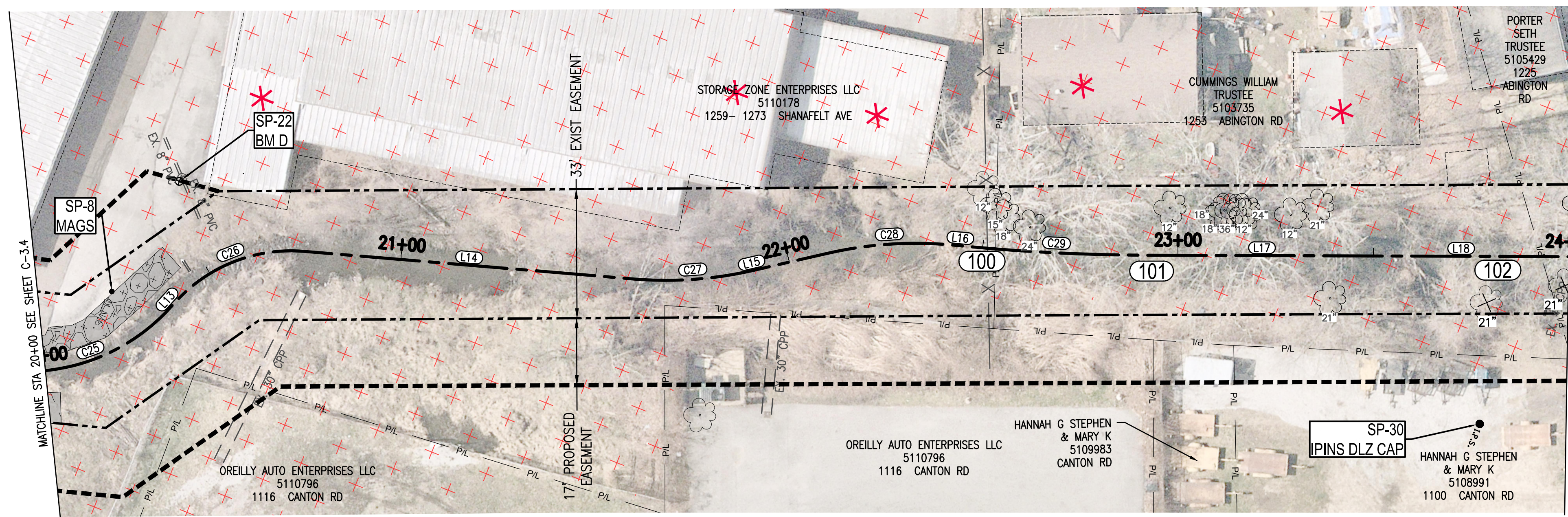
OUTLET CHANNEL
PLAN & PROFILE
STA 16+00 TO STA 20+00

WARNING



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-3.4



LEGEND:

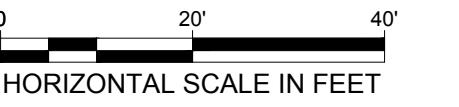
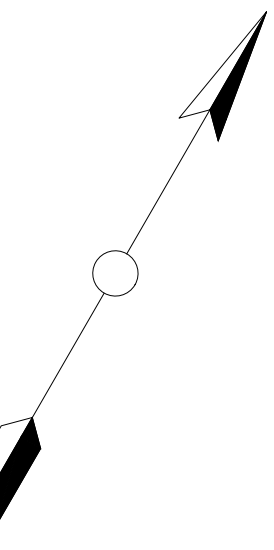
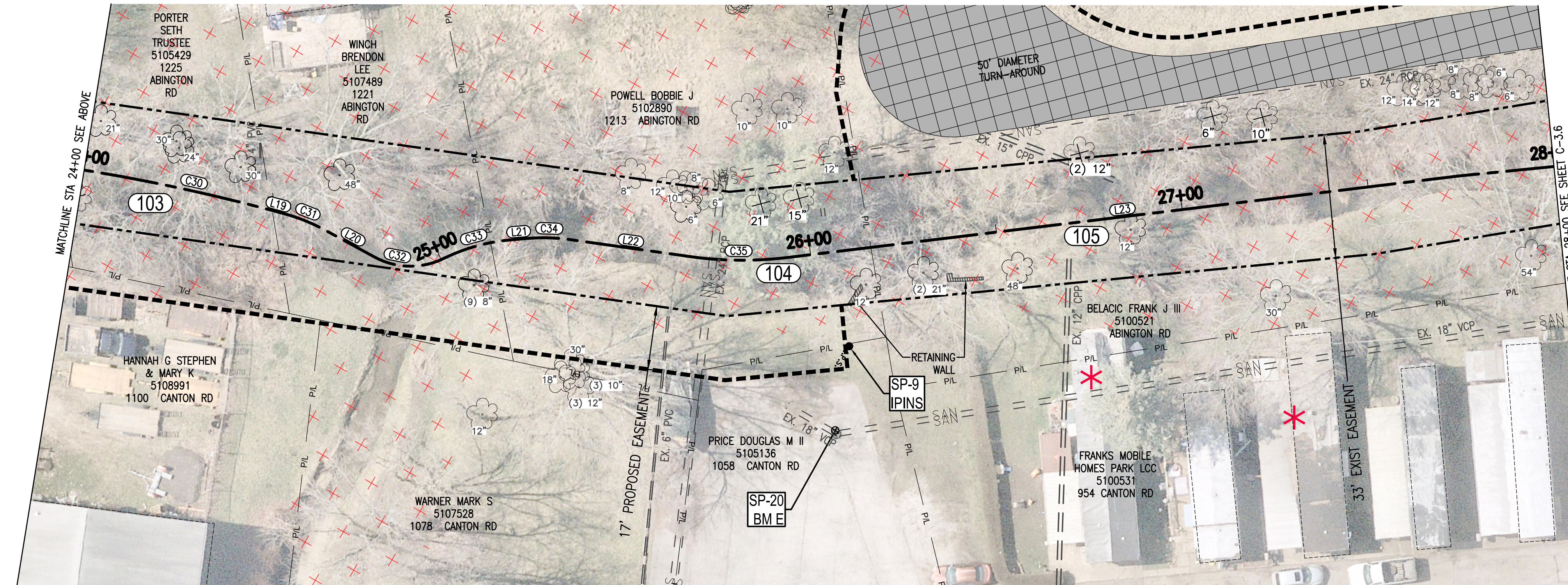
- FEMA FLOOD PLANE ZONE 'A'
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- MAX BANKFULL ELEVATION PROFILE VIEW (SEE CROSS SECTIONS ON SHEETS C-4.0 TO C-4.4)
- EX TREE TO REMAIN
- EX TREE TO BE REMOVED

EXISTING CHANNEL LINE DATA				EXISTING CHANNEL LINE DATA				EXISTING CHANNEL CURVE DATA				EXISTING CHANNEL CURVE DATA				STA 20+00 TO STA 28+00 TREE REMOVAL			
LINE #	LENGTH (FT)	START POINT	END POINT	LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT	TREE SIZE (DIA.)	QUANTITY
L13	2.10	STA: 20+36 N: 499,941.65 E: 2,263,334.92	STA: 20+39 N: 499,942.39 E: 2,263,332.96	L19	3.92	STA: 24+51 N: 500,317.35 E: 2,263,174.73	STA: 24+55 N: 500,321.14 E: 2,263,173.72	C25	50.00	47.51	STA: 19+89 N: 499,907.72 E: 2,263,365.60	STA: 20+36 N: 499,941.65 E: 2,263,334.92	C31	50.00	11.80	STA: 24+55 N: 500,321.14 E: 2,263,173.72	STA: 24+66 N: 500,332.79 E: 2,263,172.03	12" AND LESS	4
L14	84.45	STA: 20+75 N: 499,968.16 E: 2,263,308.81	STA: 21+60 N: 500,048.94 E: 2,263,284.20	L20	15.29	STA: 24+66 N: 500,332.79 E: 2,263,172.03	STA: 24+82 N: 500,348.07 E: 2,263,171.63	C26	40.00	36.58	STA: 20+39 N: 499,942.39 E: 2,263,332.96	STA: 20+75 N: 499,968.16 E: 2,263,308.81	C32	20.00	19.11	STA: 24+82 N: 500,348.07 E: 2,263,171.63	STA: 25+01 N: 500,364.17 E: 2,263,162.75	13" TO 24"	4
L15	19.63	STA: 21+91 N: 500,076.68 E: 2,263,270.78	STA: 21+10 N: 500,092.82 E: 2,263,259.62	L21	4.68	STA: 25+19 N: 500,377.18 E: 2,263,149.50	STA: 25+24 N: 500,381.02 E: 2,263,146.83	C27	100.00	30.94	STA: 21+60 N: 500,048.94 E: 2,263,284.20	STA: 21+91 N: 500,076.68 E: 2,263,270.78	C33	50.00	18.67	STA: 25+01 N: 500,364.17 E: 2,263,162.75	STA: 25+19 N: 500,377.18 E: 2,263,149.50	25" TO 36"	0
L16	3.63	STA: 22+42 N: 500,121.66 E: 2,263,245.88	STA: 22+46 N: 500,125.14 E: 2,263,244.86	L22	32.29	STA: 25+35 N: 500,390.90 E: 2,263,141.49	STA: 25+68 N: 500,420.85 E: 2,263,129.43	C28	100.00	32.08	STA: 22+10 N: 500,092.82 E: 2,263,259.62	STA: 22+42 N: 500,121.66 E: 2,263,245.88	C34	50.00	11.25	STA: 25+24 N: 500,381.02 E: 2,263,146.83	STA: 25+35 N: 500,390.90 E: 2,263,141.49	37" TO 48"	0
L17	59.60	STA: 22+92 N: 500,168.47 E: 2,263,230.02	STA: 23+51 N: 500,223.91 E: 2,263,208.14	L23	180.82	STA: 25+94 N: 500,443.58 E: 2,263,116.61	STA: 27+75 N: 500,588.12 E: 2,263,007.97	C29	500.00	45.82	STA: 22+46 N: 500,125.14 E: 2,263,244.86	STA: 22+92 N: 500,168.47 E: 2,263,230.02	C35	100.00	26.17	STA: 25+68 N: 500,420.85 E: 2,263,129.43	STA: 25+94 N: 500,443.58 E: 2,263,116.61	49" AND GREATER	0
L18	42.30	STA: 23+51 N: 500,223.91 E: 2,263,208.14	STA: 23+94 N: 500,263.25 E: 2,263,192.60					C30	500.00	57.01	STA: 23+94 N: 500,263.25 E: 2,263,192.60	STA: 24+51 N: 500,317.35 E: 2,263,174.73							

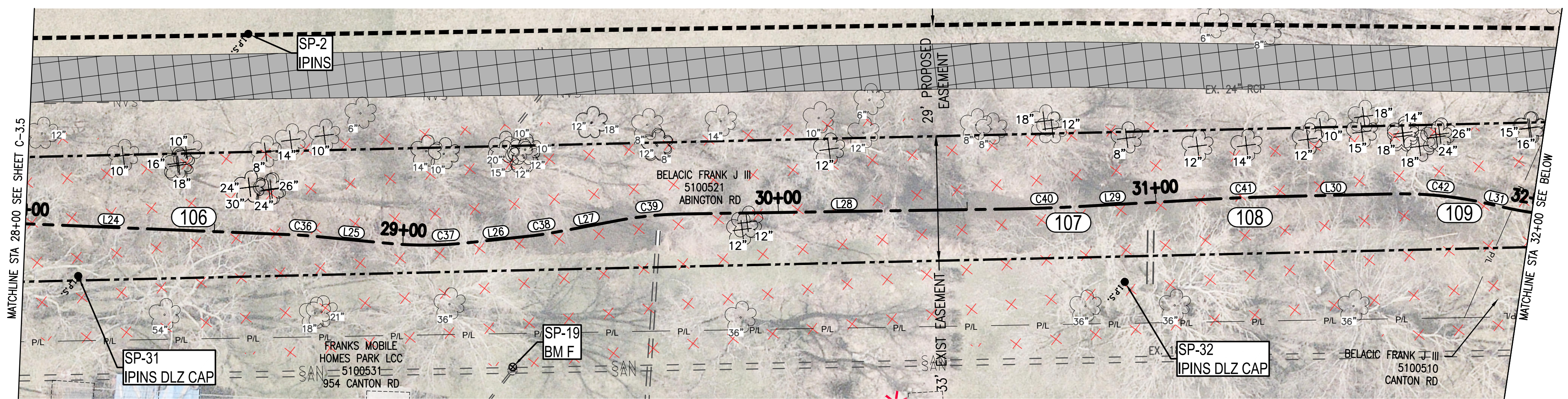
CHANNEL RESTORATION TABLE

LOCATION NO	DESCRIPTION
100*	REMOVE FALLEN TREE CAUGHT IN FENCE
101*	REMOVE ABANDONED TELEPHONE POLE
102	REMOVE FALLEN TREE AND 1200 CF SED
103*	525 CF SED REMOVAL
104*	3375 CF SED REMOVAL
105*	188 CF SED REMOVAL

CHANNEL RESTORATION TABLE NOTES:
 LOCATION NUMBERS ON PLAN REPRESENT THE APPROXIMATE CENTER POINT OF WORK TO BE PERFORMED.
 * = NO EQUIPMENT ACCESS
 * = CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS AND INSTALL STREAM CROSSINGS AS NECESSARY TO ACCESS LOCATIONS.



	ALAN BRUBAKER, P.E., P.S. SUMMIT COUNTY ENGINEER 538 E. SOUTH STREET AKRON, OH 44311	<table border="1"> <thead> <tr> <th>REV NO</th> <th>DATE</th> <th>ISSUED BY</th> <th>REMARKS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV NO	DATE	ISSUED BY	REMARKS					DESIGNED BY: <u>MSE</u> DRAWN BY: <u>MAT</u> SHEET CHK'D BY: <u>MSE</u> CROSS CHK'D BY: <u>DCG</u> APPROVED BY: <u>MSE</u> ISSUED DATE: <u>03/06/26</u>		SURFACE WATER MANAGEMENT DISTRICT HUC 12-041100020303 SPRINGFIELD LAKE CHANNEL RESTORATION FINAL DESIGN PLANS	OUTLET CHANNEL PLAN STA 20+00 TO STA 28+00	WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	SHEET NO.: C-3.5
			REV NO	DATE	ISSUED BY	REMARKS										
REV NO: _____ DATE: _____ ISSUED BY: _____ REMARKS: _____																



LEGEND:

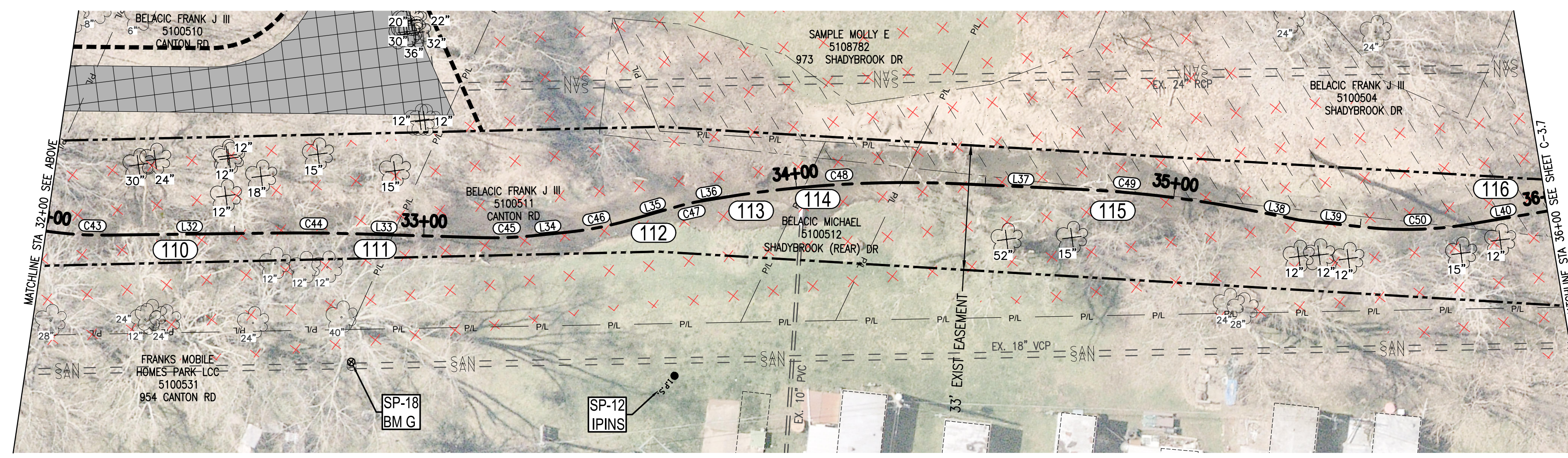
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- CONSTRUCTED ALLUVIAL RIFFLE PROFILE VIEW
- RIP-RAP WITH LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
- LIVE SILTATION W/ COIR FIBER ROLL (SEE DETAIL ON SHEET C-6.2)
- MAX BANKFULL ELEVATION PROFILE VIEW (SEE CROSS SECTIONS ON SHEETS C-4.0 TO C-4.4)
- EX TREE TO REMAIN
- EX TREE TO BE REMOVED

EXISTING CHANNEL LINE DATA				EXISTING CHANNEL LINE DATA				EXISTING CHANNEL CURVE DATA				EXISTING CHANNEL CURVE DATA						
LINE #	LENGTH (FT)	START POINT	END POINT	LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT	
L24	96.01	STA: 27+75 N: 500,588.12 E: 2,263,007.97	STA: 28+71 N: 500,666.14 E: 2,262,952.01	L33	33.89	STA: 32+82 N: 500,985.78 E: 2,262,695.71	STA: 33+15 N: 501,013.10 E: 2,262,675.66	C36	100.00	5.40	STA: 28+71 N: 500,666.14 E: 2,262,952.01	STA: 28+76 N: 500,670.61 E: 2,262,948.98	C44	500.00	21.40	STA: 32+60 N: 500,968.80 E: 2,262,708.73	STA: 32+82 N: 500,985.78 E: 2,262,695.71	
L25	20.38	STA: 28+76 N: 500,670.61 E: 2,262,948.98	STA: 28+96 N: 500,687.79 E: 2,262,938.02	L34	8.85	STA: 33+29 N: 501,023.21 E: 2,262,667.17	STA: 33+38 N: 501,029.59 E: 2,262,661.04	C37	100.00	20.23	STA: 28+96 N: 500,687.79 E: 2,262,938.02	STA: 29+17 N: 500,703.62 E: 2,262,925.49	C45	100.00	13.21	STA: 33+15 N: 501,013.10 E: 2,262,675.66	STA: 33+29 N: 501,023.21 E: 2,262,667.17	
L26	16.66	STA: 29+17 N: 500,703.62 E: 2,262,925.49	STA: 29+33 N: 500,715.58 E: 2,262,913.88	L35	13.49	STA: 33+55 N: 501,041.13 E: 2,262,647.83	STA: 33+69 N: 501,049.08 E: 2,262,636.94	C38	100.00	7.92	STA: 29+33 N: 500,715.58 E: 2,262,913.88	STA: 29+41 N: 500,721.04 E: 2,262,908.15	C46	100.00	17.56	STA: 33+38 N: 501,029.59 E: 2,262,661.04	STA: 33+55 N: 501,041.13 E: 2,262,647.83	
L27	16.31	STA: 29+41 N: 500,721.04 E: 2,262,908.15	STA: 29+57 N: 500,731.80 E: 2,262,895.90	L36	5.46	STA: 33+74 N: 501,052.63 E: 2,262,632.59	STA: 33+80 N: 501,056.32 E: 2,262,628.57	C39	100.00	17.13	STA: 29+57 N: 500,731.80 E: 2,262,895.90	STA: 29+75 N: 500,744.16 E: 2,262,884.07	C48	300.00	63.63	STA: 33+80 N: 501,056.32 E: 2,262,628.57	STA: 34+43 N: 501,103.98 E: 2,262,586.58	
L28	85.72	STA: 29+75 N: 500,744.16 E: 2,262,884.07	STA: 30+60 N: 500,810.90 E: 2,262,830.27	L37	32.21	STA: 34+43 N: 501,103.98 E: 2,262,586.58	STA: 34+75 N: 501,130.26 E: 2,262,567.97	C40	500.00	20.32	STA: 30+60 N: 500,810.90 E: 2,262,830.27	STA: 30+81 N: 500,826.46 E: 2,262,817.20	C49	300.00	45.51	STA: 34+75 N: 501,130.26 E: 2,262,567.97	STA: 35+21 N: 501,169.25 E: 2,262,544.58	
L29	34.38	STA: 30+81 N: 500,826.46 E: 2,262,817.20	STA: 31+15 N: 500,852.32 E: 2,262,794.56	L38	12.74	STA: 35+21 N: 501,169.25 E: 2,262,544.58	STA: 35+34 N: 501,180.64 E: 2,262,538.87	C41	500.00	16.29	STA: 31+15 N: 500,852.32 E: 2,262,794.56	STA: 31+31 N: 500,864.75 E: 2,262,784.03	C50	100.00	27.50	STA: 35+52 N: 501,195.76 E: 2,262,529.48	STA: 35+79 N: 501,216.85 E: 2,262,511.97	
L30	31.48	STA: 31+31 N: 500,864.75 E: 2,262,784.03	STA: 31+63 N: 500,889.10 E: 2,262,764.08	L39	17.80	STA: 35+34 N: 501,180.64 E: 2,262,538.87	STA: 35+52 N: 501,195.76 E: 2,262,529.48	C42	100.00	24.66	STA: 31+63 N: 500,889.10 E: 2,262,764.08	STA: 31+87 N: 500,909.90 E: 2,262,750.94						
L31	4.86	STA: 31+87 N: 500,909.90 E: 2,262,750.94	STA: 31+92 N: 500,914.30 E: 2,262,748.87	L40	42.65	STA: 35+79 N: 501,216.85 E: 2,262,511.97	STA: 36+22 N: 501,245.62 E: 2,262,480.48	C43	100.00	23.60	STA: 31+92 N: 500,914.30 E: 2,262,748.87	STA: 32+16 N: 500,934.28 E: 2,262,736.41						
L32	44.25	STA: 32+16 N: 500,934.28 E: 2,262,736.41	STA: 32+60 N: 500,968.80 E: 2,262,708.73															

LOCATION NO	DESCRIPTION
106	700 CF SED REMOVAL
107	600 CF SED REMOVAL
108	3200 CF SED REMOVAL
109	480 CF SED REMOVAL
110	2400 CF SED REMOVAL
111	7500 CF SED REMOVAL
112*	240 CF SED REMOVAL
113*	480 CF SED REMOVAL
114*	240 CF SED REMOVAL
115*	1800 CF SED REMOVAL
116*	840 CF SED REMOVAL

CHANNEL RESTORATION TABLE NOTES:
 LOCATION NUMBERS ON PLAN REPRESENT THE APPROXIMATE CENTER POINT OF WORK TO BE PERFORMED.
 * = CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS AND INSTALL STREAM CROSSINGS AS NECESSARY TO ACCESS LOCATIONS.

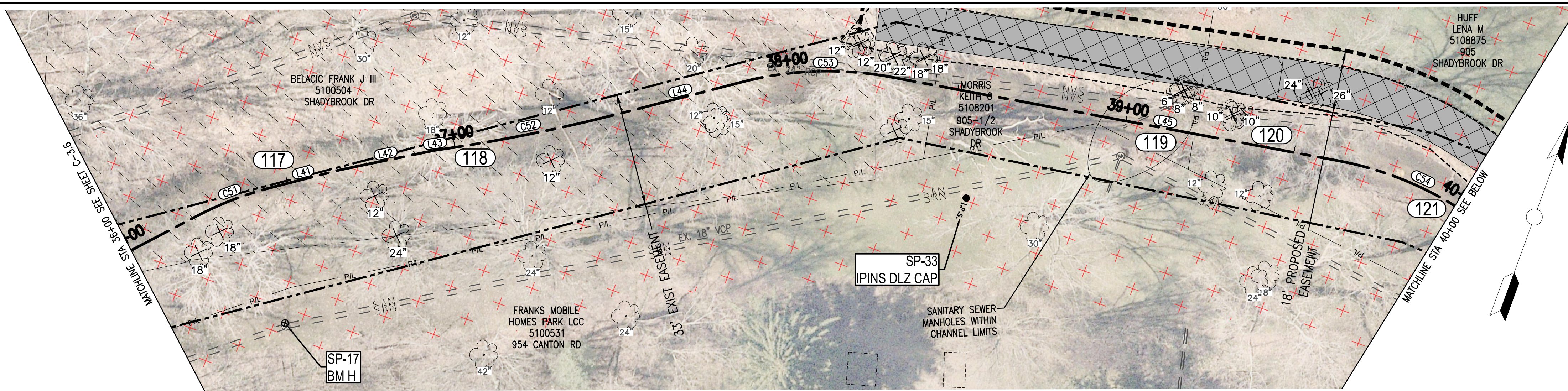
TREE SIZE (DIA.)	QUANTITY
12" AND LESS	21
13" TO 24"	23
25" TO 36"	6
37" TO 48"	0
49" AND GREATER	1



LEGEND:

- EX TREE TO REMAIN
- EX TREE TO BE REMOVED

	ALAN BRUBAKER, P.E., P.S. SUMMIT COUNTY ENGINEER 538 E. SOUTH STREET AKRON, OH 44311	<table border="1"> <thead> <tr> <th>REV NO</th> <th>DATE</th> <th>ISSUED BY</th> <th>REMARKS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV NO	DATE	ISSUED BY	REMARKS					DESIGNED BY: <u>MSE</u> DRAWN BY: <u>MAT</u> SHEET CHK'D BY: <u>MSE</u> CROSS CHK'D BY: <u>DGG</u> APPROVED BY: <u>MSE</u> ISSUED DATE: <u>03/06/26</u>		SURFACE WATER MANAGEMENT DISTRICT HUC 12-041100020303 SPRINGFIELD LAKE CHANNEL RESTORATION FINAL DESIGN PLANS	OUTLET CHANNEL PLAN STA 28+00 TO STA 36+00	WARNING IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	SHEET NO.: C-3.6
			REV NO	DATE	ISSUED BY	REMARKS										



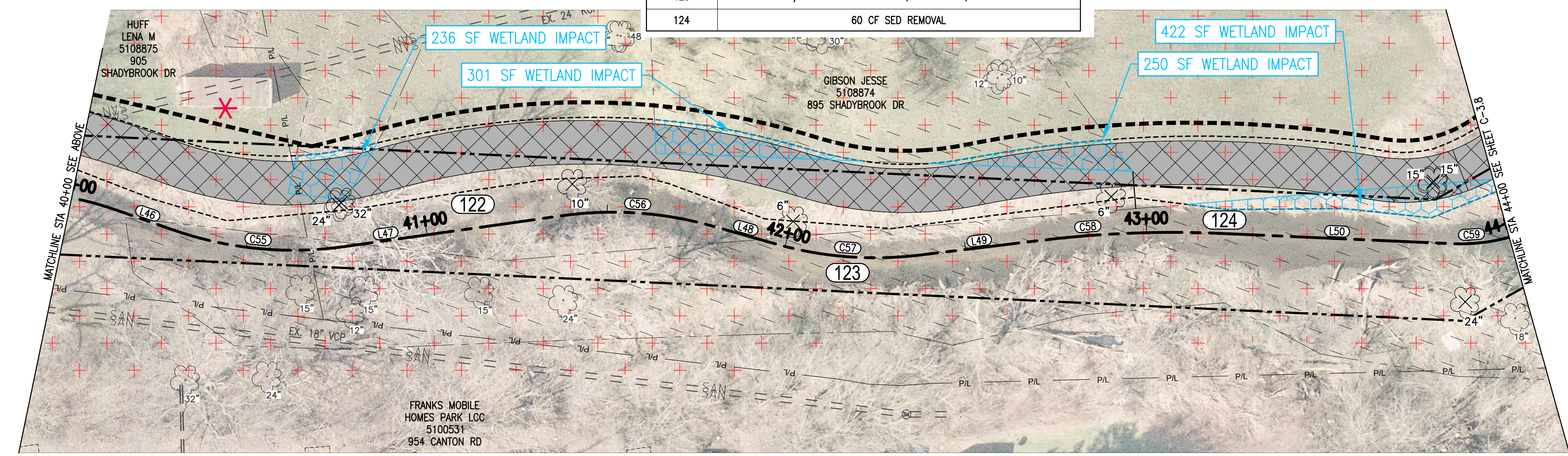
- LEGEND:**
- FEMA FLOOD PLANE ZONE 'A'
 - DELINEATED WETLANDS
 - DELINEATED WETLAND TO BE DISTURBED
 - GRAVEL ACCESS DRIVE
 - GRASS PAVER ACCESS DRIVE
 - REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
 - CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
 - PRIVATELY OWNED BRIDGE
 - PERMANENT EASEMENT
 - EXISTING DITCH EASEMENT
 - SANITARY PIPE
 - STORM PIPE
 - EXISTING DITCH EASEMENT ENCROACHMENT
 - PERMANENT EASEMENT ENCROACHMENT
 - FENCE
 - CHANNEL RESTORATION LOCATION
 - GRADE CONTROL BOULDER VANE W/J-HOOK (SEE DETAIL ON SHEET C-6.0) PLAN VIEW
 - GRADE CONTROL BOULDER VANE W/J-HOOK PROFILE VIEW
 - TOE WOOD (SEE DETAIL ON SHEET C-6.0)
 - CONSTRUCTED ALLUVIAL RIFFLE (SEE DETAIL ON SHEET C-6.1) PLAN VIEW
 - CONSTRUCTED ALLUVIAL RIFFLE PROFILE VIEW
 - RIP-RAP WITH LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
 - LIVE STAKES (SEE DETAIL ON SHEET C-6.2)
 - LIVE SILTATION W/ COIR FIBER ROLL (SEE DETAIL ON SHEET C-6.2)
 - MAX BANKFULL ELEVATION PROFILE VIEW (SEE CROSS SECTIONS ON SHEETS C-4.0 TO C-4.4)
 - EX TREE TO REMAIN
 - EX TREE TO BE REMOVED

EXISTING CHANNEL LINE DATA				EXISTING CHANNEL LINE DATA				EXISTING CHANNEL CURVE DATA				EXISTING CHANNEL CURVE DATA						
LINE #	LENGTH (FT)	START POINT	END POINT	LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT	
L41	20.93	STA: 36+45 N: 501,262.92 E: 2,262,465.43	STA: 36+66 N: 501,280.18 E: 2,262,453.59	L48	18.48	STA: 41+79 N: 501,766.27 E: 2,262,359.62	STA: 41+97 N: 501,784.05 E: 2,262,364.64	C51	100.00	22.98	STA: 36+22 N: 501,245.62 E: 2,262,480.48	STA: 36+45 N: 501,262.92 E: 2,262,465.43	C56	100.00	41.64	STA: 41+37 N: 501,725.03 E: 2,262,356.84	STA: 41+79 N: 501,766.27 E: 2,262,359.62	
L42	28.43	STA: 36+66 N: 501,280.18 E: 2,262,453.59	STA: 36+94 N: 501,304.37 E: 2,262,438.66	L49	33.80	STA: 42+37 N: 501,823.31 E: 2,262,367.68	STA: 42+71 N: 501,856.86 E: 2,262,363.60	C52	500.00	55.03	STA: 36+95 N: 501,305.06 E: 2,262,438.29	STA: 37+50 N: 501,352.05 E: 2,262,409.70	C57	100.00	39.64	STA: 41+97 N: 501,784.05 E: 2,262,364.64	STA: 42+37 N: 501,823.31 E: 2,262,367.68	
L43	0.78	STA: 36+94 N: 501,304.37 E: 2,262,438.66	STA: 36+95 N: 501,305.06 E: 2,262,438.29	L50	63.68	STA: 43+21 N: 501,906.36 E: 2,262,361.70	STA: 43+84 N: 501,969.98 E: 2,262,364.52	C53	100.00	43.75	STA: 37+86 N: 501,382.00 E: 2,262,389.14	STA: 38+30 N: 501,422.26 E: 2,262,372.92	C58	300.00	49.60	STA: 42+71 N: 501,856.86 E: 2,262,363.60	STA: 43+21 N: 501,906.36 E: 2,262,361.70	
L44	36.33	STA: 37+50 N: 501,352.05 E: 2,262,409.70	STA: 37+86 N: 501,382.00 E: 2,262,389.14					C54	100.00	50.15	STA: 39+63 N: 501,553.68 E: 2,262,351.15	STA: 40+13 N: 501,603.12 E: 2,262,355.44	C59	50.00	28.85	STA: 43+84 N: 501,969.98 E: 2,262,364.52	STA: 44+13 N: 501,997.59 E: 2,262,357.64	
L45	133.21	STA: 38+30 N: 501,422.26 E: 2,262,372.92	STA: 39+63 N: 501,553.68 E: 2,262,351.15					C55	100.00	47.83	STA: 40+29 N: 501,618.07 E: 2,262,360.69	STA: 40+77 N: 501,665.22 E: 2,262,365.33						
L46	15.84	STA: 40+13 N: 501,603.12 E: 2,262,355.44	STA: 40+29 N: 501,618.07 E: 2,262,360.69															
L47	60.41	STA: 40+77 N: 501,665.22 E: 2,262,365.33	STA: 41+37 N: 501,725.03 E: 2,262,356.84															

CHANNEL RESTORATION TABLE NOTES:
 LOCATION NUMBERS ON PLAN REPRESENT THE APPROXIMATE CENTER POINT OF WORK TO BE PERFORMED.
 * = CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS AND INSTALL STREAM CROSSINGS AS NECESSARY TO ACCESS LOCATIONS.

LOCATION NO	DESCRIPTION
117*	420 CF SED REMOVAL
118*	400 CF SED REMOVAL
119	64 CF SED REMOVAL
120	280 CF SED REMOVAL
121	280 CF SED REMOVAL
122	560 CF SED REMOVAL
123	FALLEN TREE W/ DEBRIS ACCUMULATION, BED FRAME, 560 CF SED REMOVAL
124	60 CF SED REMOVAL

STA 36+00 TO STA 44+00 TREE REMOVAL	
TREE SIZE (DIA.)	QUANTITY
12" AND LESS	12
13" TO 24"	12
25" TO 36"	2
37" TO 48"	0
49" AND GREATER	0



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER
 538 E. SOUTH STREET
 AKRON, OH 44311

REV NO	DATE	ISSUED BY	REMARKS

DESIGNED BY: MSE
 DRAWN BY: MAT
 SHEET CHK'D BY: MSE
 CROSS CHK'D BY: DGG
 APPROVED BY: MSE
 ISSUED DATE: 03/06/26

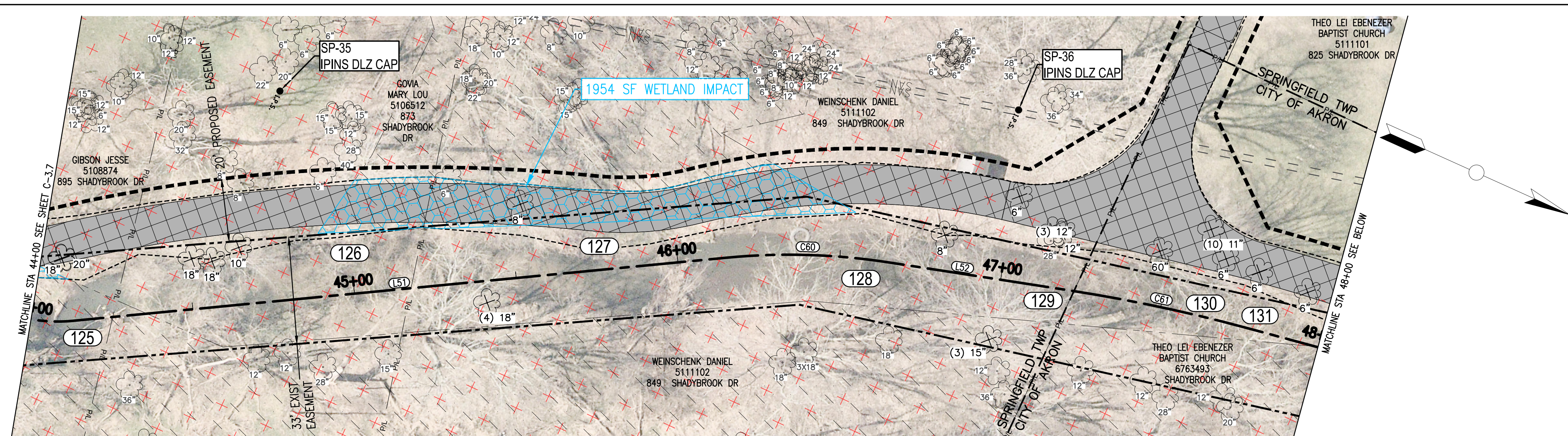


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

OUTLET CHANNEL PLAN
STA 36+00 TO STA 44+00

WARNING
 0 1/2 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-3.7



- LEGEND:**
- FEMA FLOOD PLANE ZONE 'A'
 - DELINEATED WETLANDS
 - DELINEATED WETLAND TO BE DISTURBED
 - GRAVEL ACCESS DRIVE
 - GRASS PAVER ACCESS DRIVE
 - REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
 - CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
 - PRIVATELY OWNED BRIDGE
 - PERMANENT EASEMENT
 - EXISTING DITCH EASEMENT
 - SANITARY PIPE
 - STORM PIPE
 - EXISTING DITCH EASEMENT ENCROACHMENT
 - PERMANENT EASEMENT ENCROACHMENT
 - FENCE
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 - GRADE CONTROL BOULDER VANE W/J-HOOK (SEE DETAIL ON SHEET C-6.0) PLAN VIEW
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 - MAX BANKFULL ELEVATION PROFILE VIEW (SEE CROSS SECTIONS ON SHEETS C-4.0 TO C-4.4)
 - EX TREE TO REMAIN
 - EX TREE TO BE REMOVED

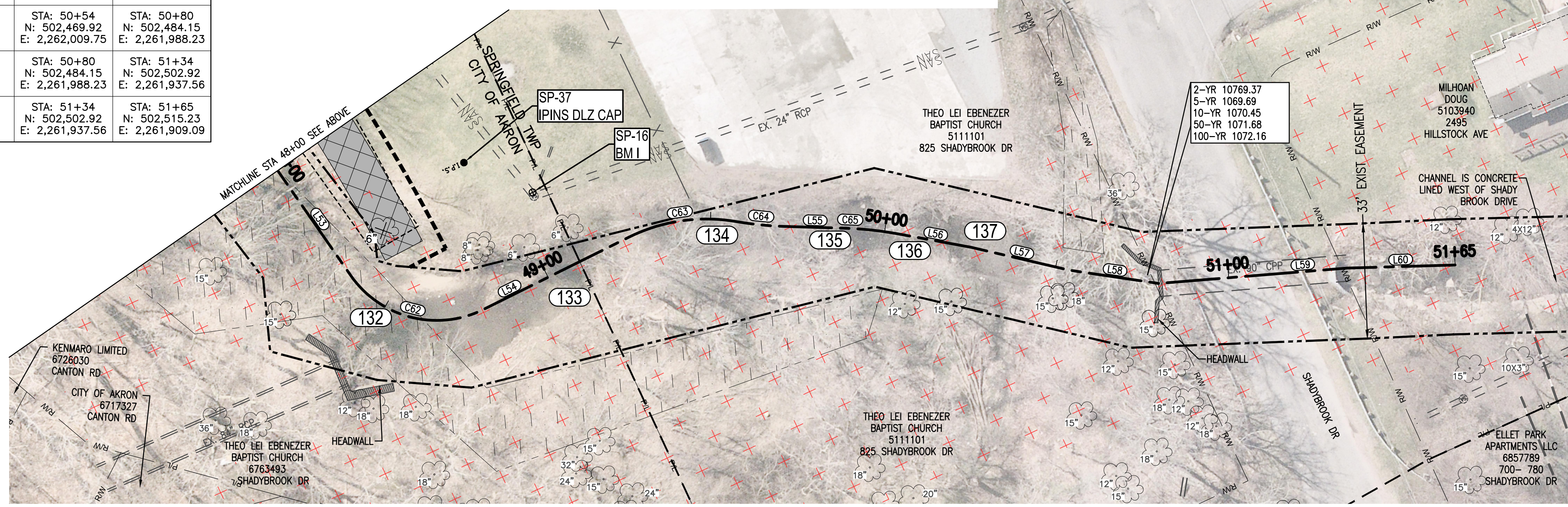
EXISTING CHANNEL LINE DATA			
LINE #	LENGTH (FT)	START POINT	END POINT
L51	201.96	STA: 44+13 N: 501,997.59 E: 2,262,357.64	STA: 46+15 N: 502,171.56 E: 2,262,255.07
L52	56.89	STA: 46+65 N: 502,217.41 E: 2,262,235.27	STA: 47+22 N: 502,272.05 E: 2,262,219.42
L53	59.18	STA: 47+77 N: 502,326.03 E: 2,262,206.96	STA: 48+37 N: 502,384.34 E: 2,262,196.86
L54	46.45	STA: 48+79 N: 502,409.21 E: 2,262,166.55	STA: 49+26 N: 502,408.05 E: 2,262,120.12
L55	17.30	STA: 49+71 N: 502,424.12 E: 2,262,078.32	STA: 49+89 N: 502,431.90 E: 2,262,062.87
L56	21.41	STA: 50+04 N: 502,439.71 E: 2,262,049.91	STA: 50+25 N: 502,452.11 E: 2,262,032.45
L57	28.85	STA: 50+25 N: 502,452.11 E: 2,262,032.45	STA: 50+54 N: 502,469.92 E: 2,262,009.75
L58	25.80	STA: 50+54 N: 502,469.92 E: 2,262,009.75	STA: 50+80 N: 502,484.15 E: 2,261,988.23
L59	54.04	STA: 50+80 N: 502,484.15 E: 2,261,988.23	STA: 51+34 N: 502,502.92 E: 2,261,937.56
L60	31.02	STA: 51+34 N: 502,502.92 E: 2,261,937.56	STA: 51+65 N: 502,515.23 E: 2,261,909.09

EXISTING CHANNEL CURVE DATA							
LINE #	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT	START POINT	END POINT
L51	C60	200.00	50.08	STA: 46+15 N: 502,171.56 E: 2,262,255.07	STA: 46+65 N: 502,217.41 E: 2,262,235.27	STA: 46+15 N: 502,171.56 E: 2,262,255.07	STA: 46+65 N: 502,217.41 E: 2,262,235.27
L52	C61	500.00	55.43	STA: 47+22 N: 502,272.05 E: 2,262,219.42	STA: 47+77 N: 502,326.03 E: 2,262,206.96	STA: 47+22 N: 502,272.05 E: 2,262,219.42	STA: 47+77 N: 502,326.03 E: 2,262,206.96
L53	C62	30.00	42.73	STA: 48+37 N: 502,384.34 E: 2,262,196.86	STA: 48+79 N: 502,409.21 E: 2,262,166.55	STA: 48+37 N: 502,384.34 E: 2,262,196.86	STA: 48+79 N: 502,409.21 E: 2,262,166.55
L54	C63	50.00	31.59	STA: 49+26 N: 502,408.05 E: 2,262,120.12	STA: 49+71 N: 502,424.12 E: 2,262,078.32	STA: 49+26 N: 502,408.05 E: 2,262,120.12	STA: 49+71 N: 502,424.12 E: 2,262,078.32
L55	C64	100.00	14.02	STA: 49+71 N: 502,424.12 E: 2,262,078.32	STA: 49+89 N: 502,431.90 E: 2,262,062.87	STA: 49+71 N: 502,424.12 E: 2,262,078.32	STA: 49+89 N: 502,431.90 E: 2,262,062.87
L56	C65	100.00	15.14	STA: 49+89 N: 502,431.90 E: 2,262,062.87	STA: 50+04 N: 502,439.71 E: 2,262,049.91	STA: 49+89 N: 502,431.90 E: 2,262,062.87	STA: 50+04 N: 502,439.71 E: 2,262,049.91

CHANNEL RESTORATION TABLE	
LOCATION NO	DESCRIPTION
125	FALLEN TREE W/ DEBRIS BUILDUP, 525 CF SED REMOVAL
126	450 CF SED REMOVAL
127	1200 CF SED REMOVAL
128	1500 CF SED REMOVAL
129	TIRES, DEBRIS, AND 550 CF OF SED REMOVAL
130	50 CF OF SED REMOVAL
131	70 CF OF SED REMOVAL
132	2060 CF OF SED REMOVAL
133*	1800 CF OF SED REMOVAL
134*	560 CF OF SED REMOVAL
135*	40 CF OF SED REMOVAL
136*	50 CF OF SED REMOVAL
137*	170 CF OF SED REMOVAL

STA 44+00 TO STA 51+65 TREE REMOVAL		
TREE SIZE (DIA.)	QUANTITY	
12" AND LESS	21	
13" TO 24"	11	
25" TO 36"	0	
37" TO 48"	0	
49" AND GREATER	1	

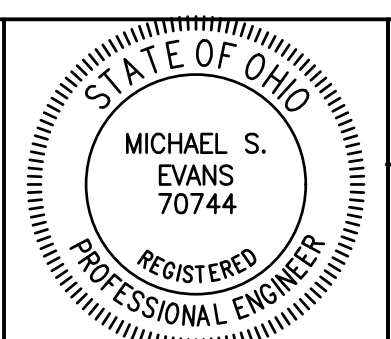
CHANNEL RESTORATION TABLE NOTES:
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ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER
 538 E. SOUTH STREET
 AKRON, OH 44311

REV NO	DATE	ISSUED BY	REMARKS

DESIGNED BY: MSE
 DRAWN BY: MAT
 SHEET CHK'D BY: MSE
 CROSS CHK'D BY: DGG
 APPROVED BY: MSE
 ISSUED DATE: 03/06/26

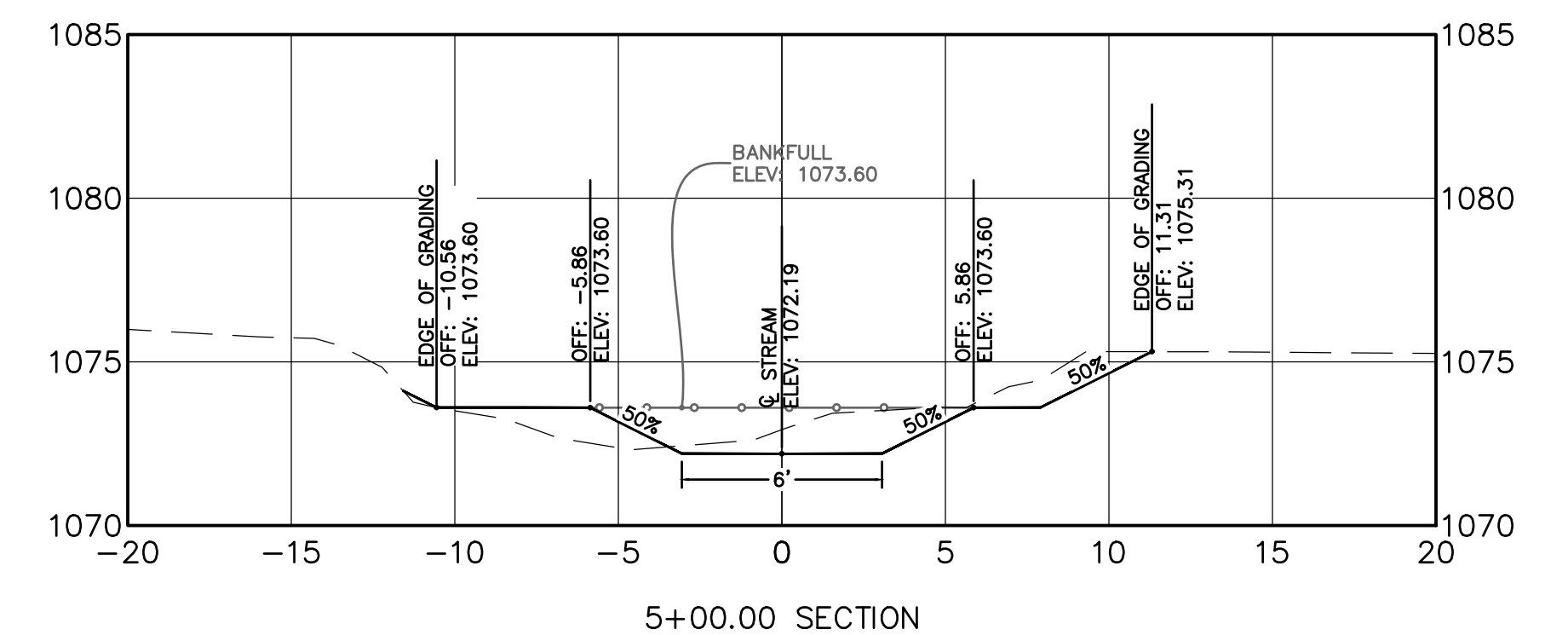
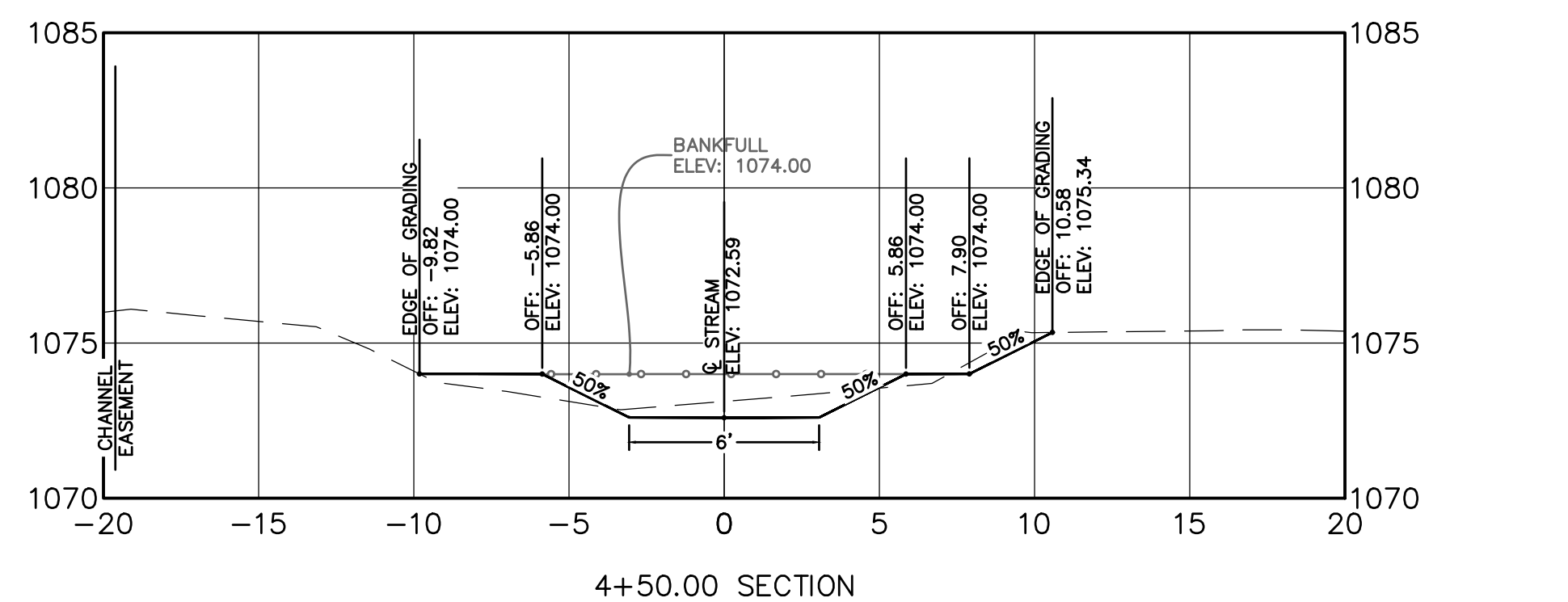
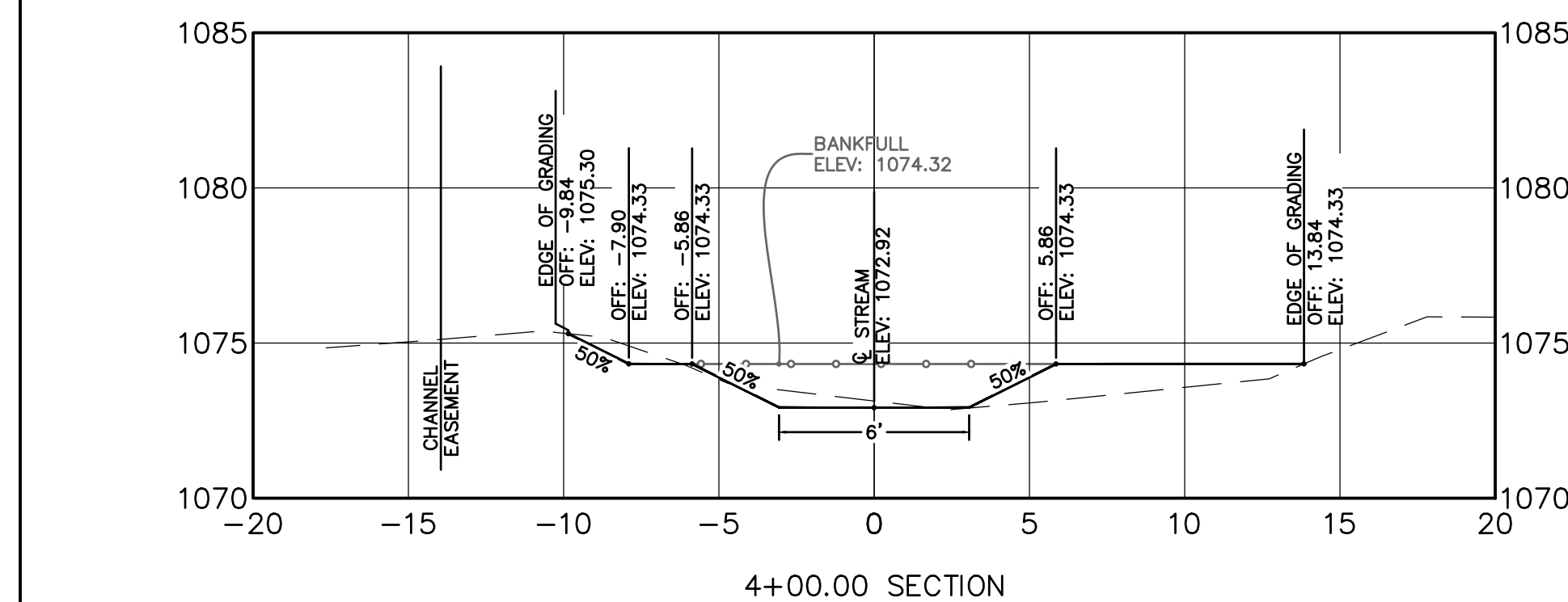
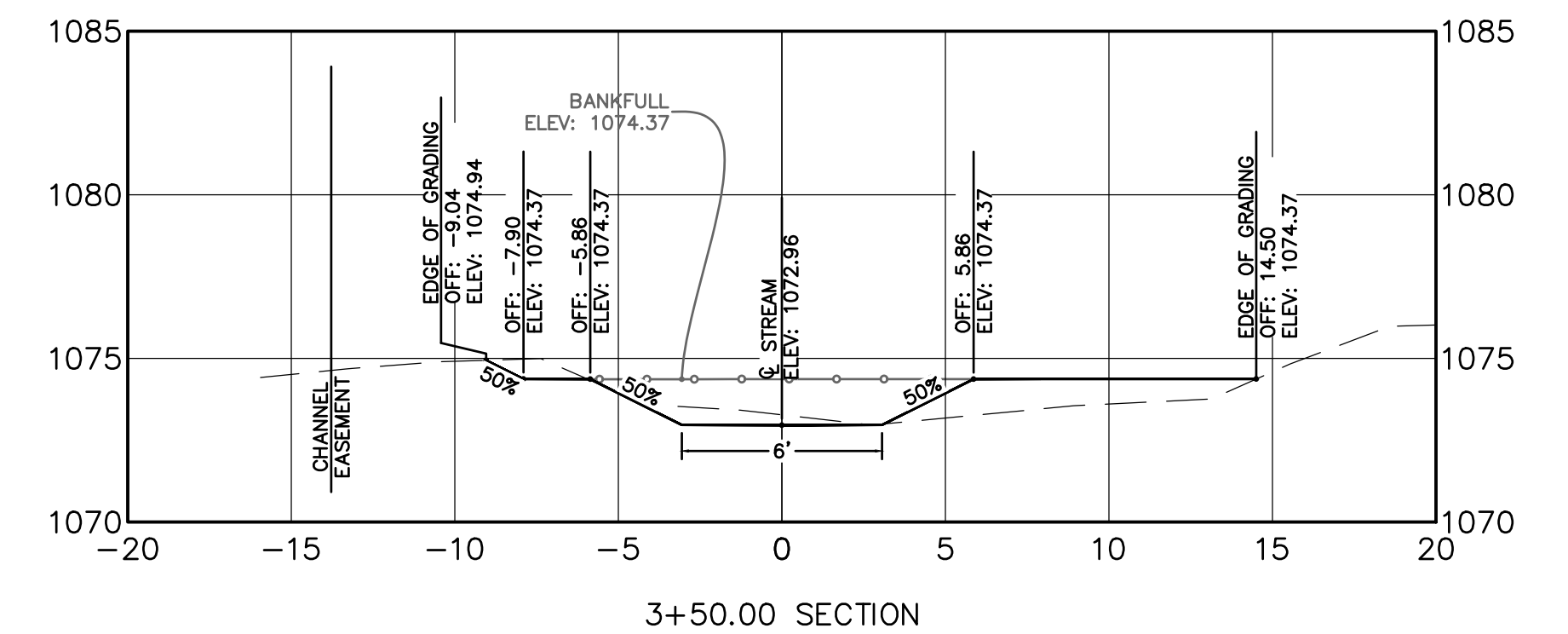
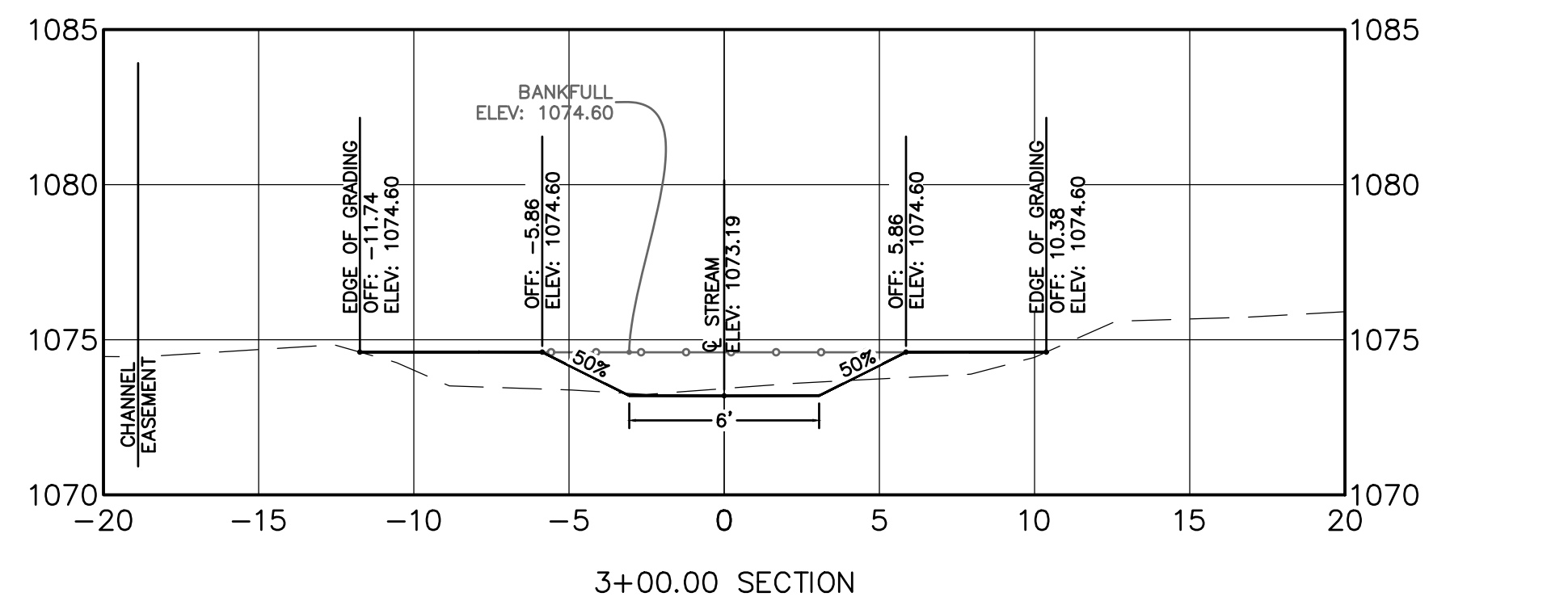
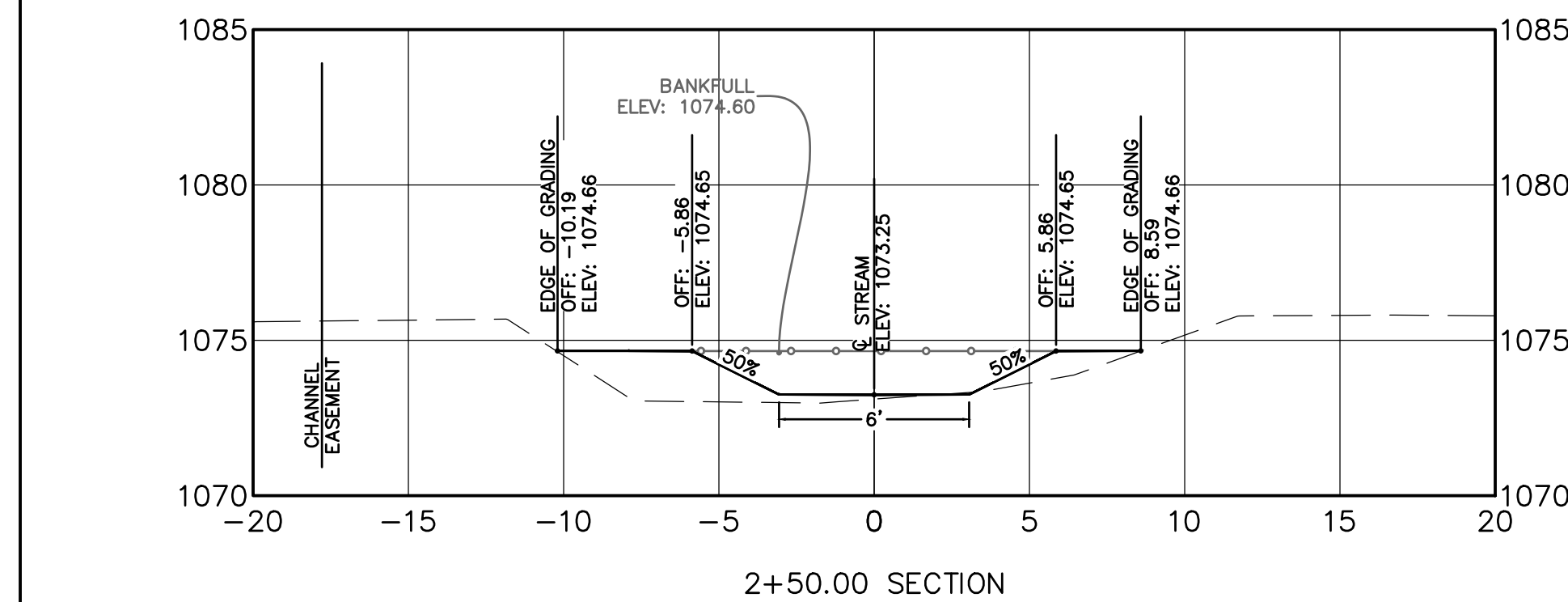
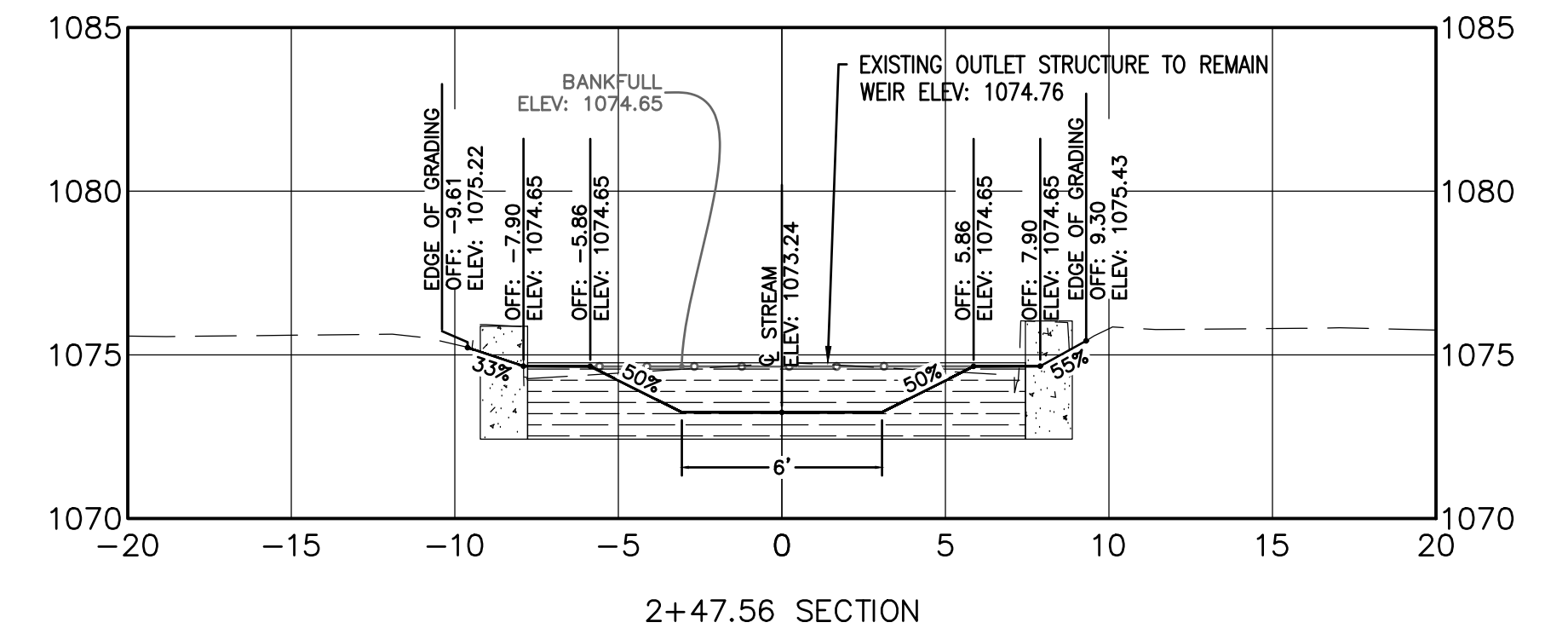
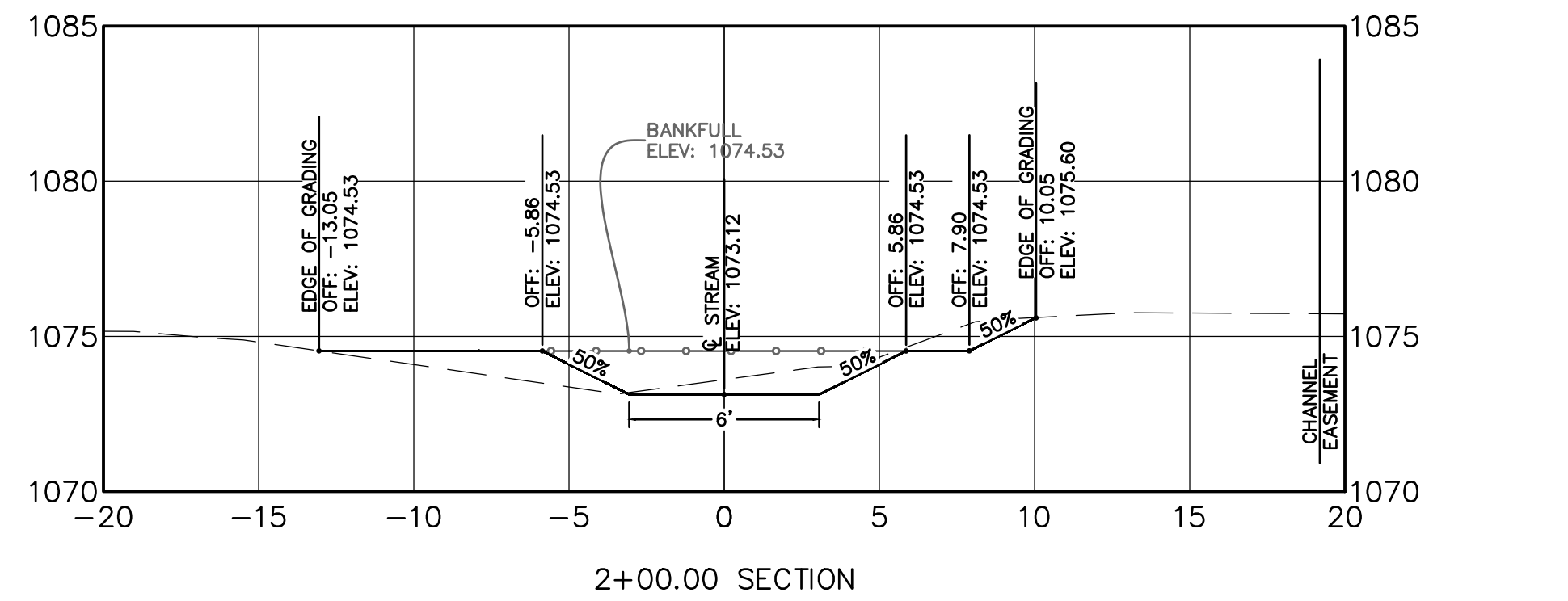
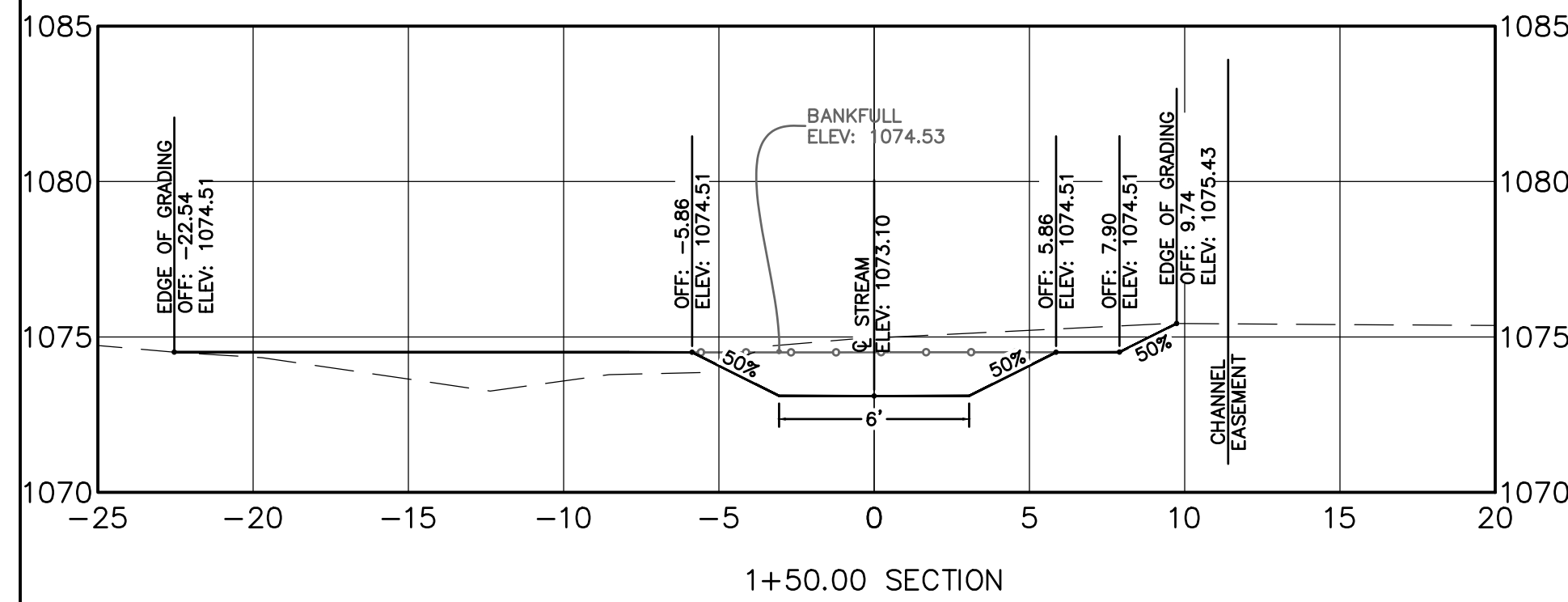
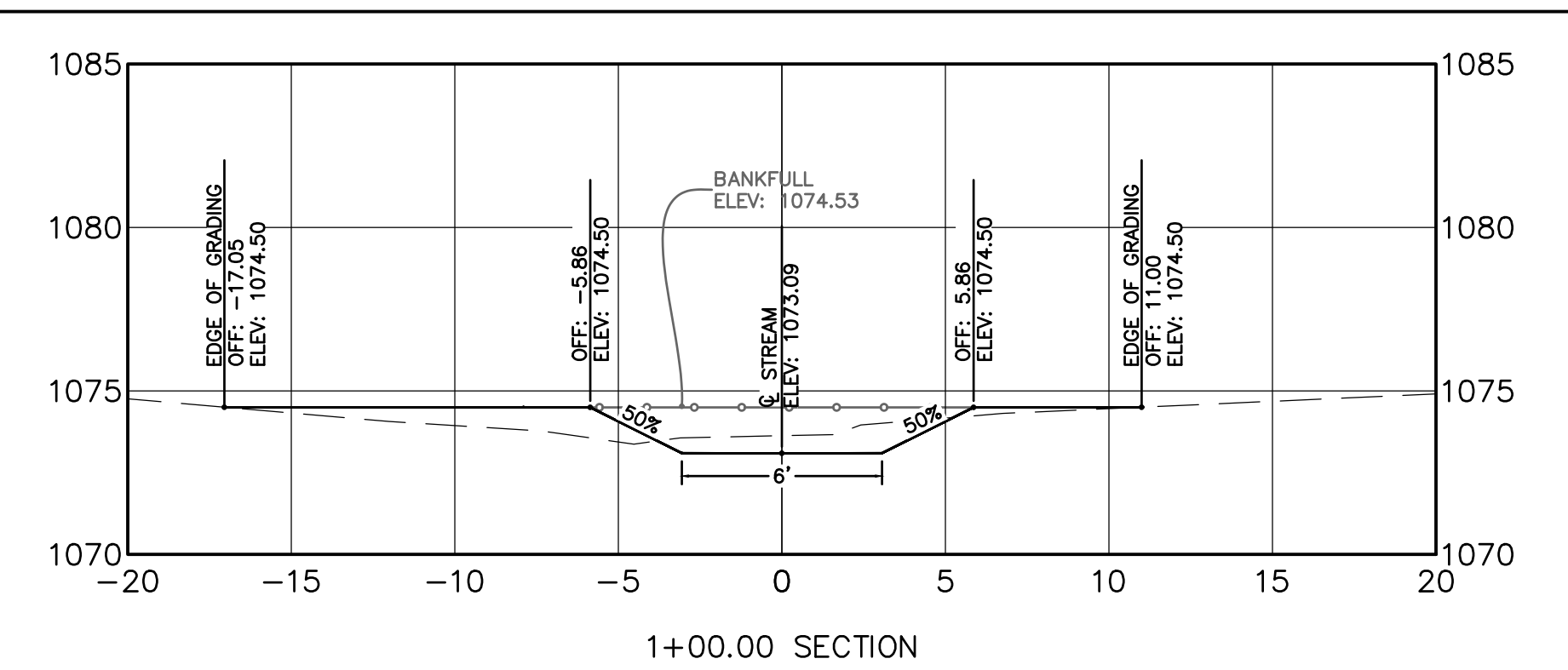
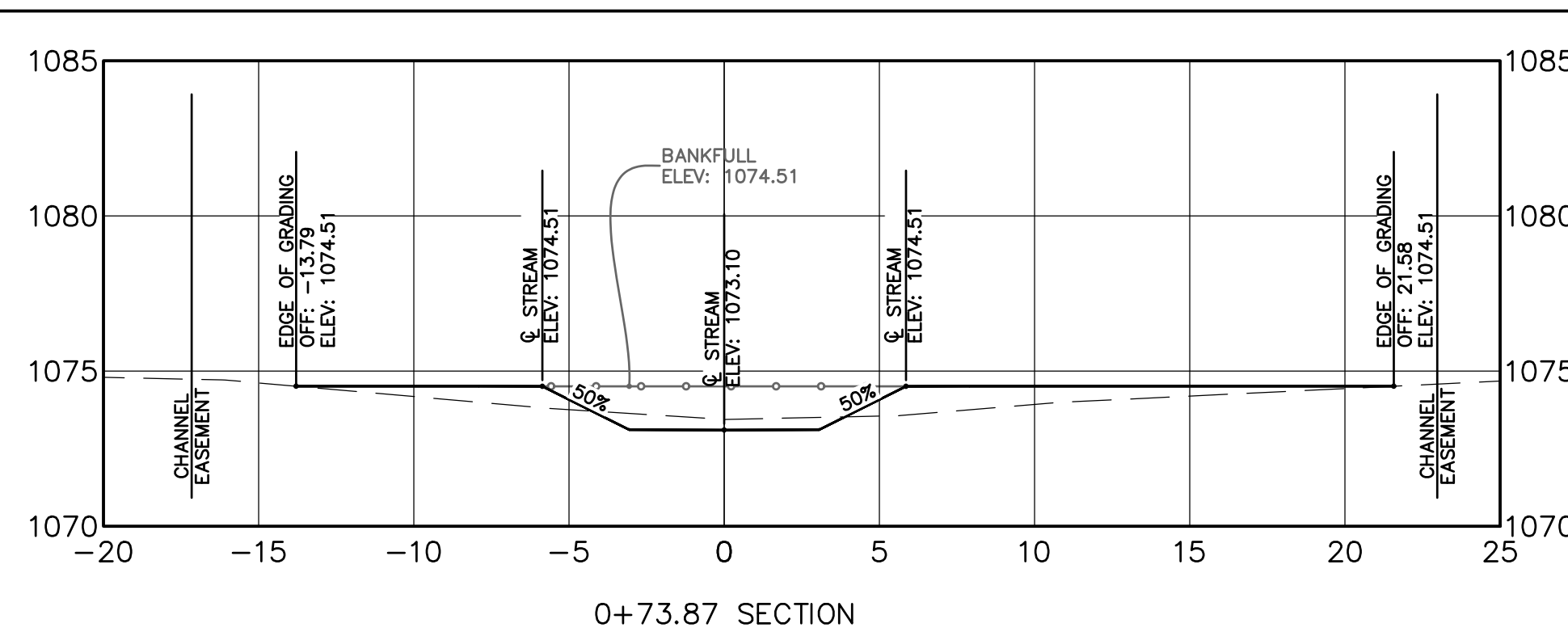
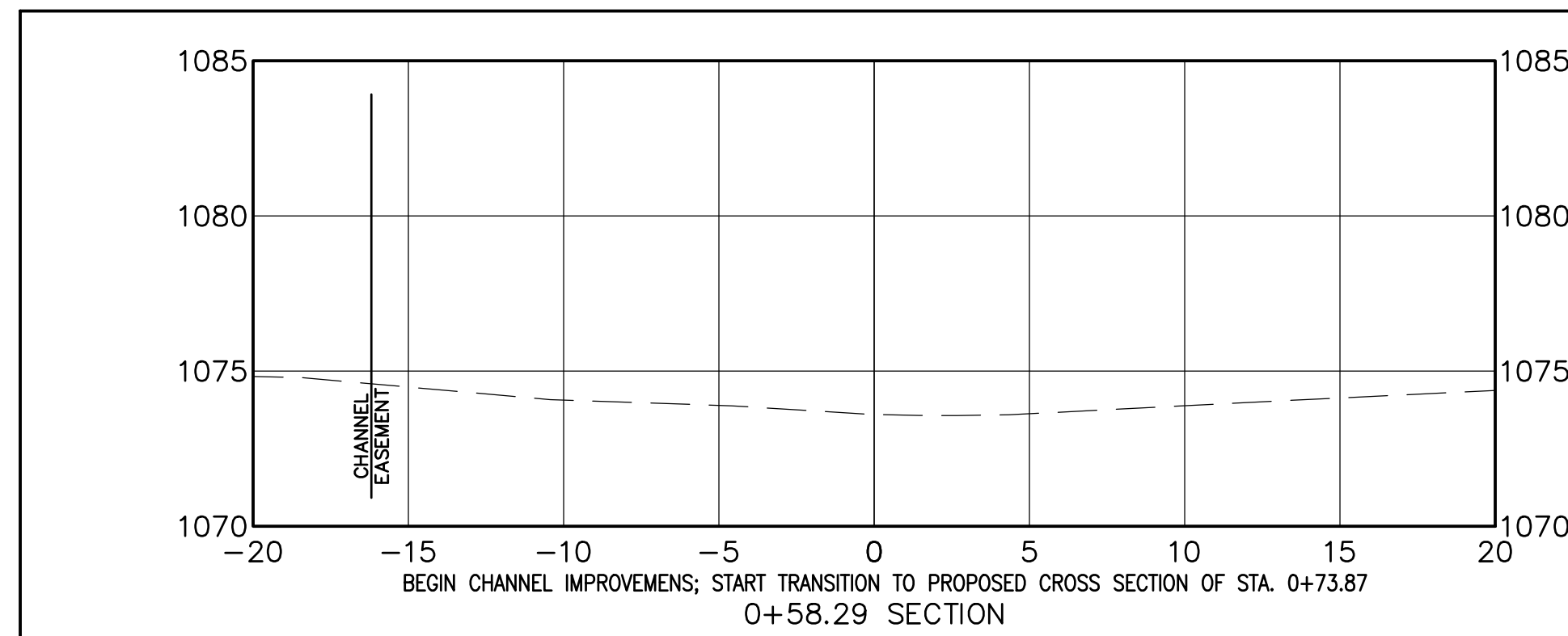


SURFACE WATER MANAGEMENT
 DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

OUTLET CHANNEL PLAN
STA 44+00 TO STA 51+50

WARNING
 0 1/2 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-3.8

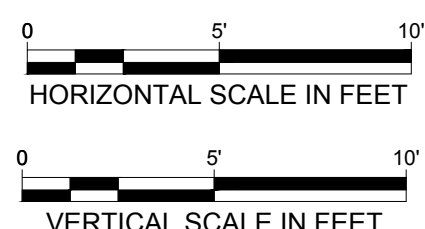


NOTES:

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LEGEND

- EXISTING GROUND PROFILE
- EXISTING BRIDGE TO REMAIN
- PROPOSED GROUND PROFILE
- MAX BANKFULL ELEVATION

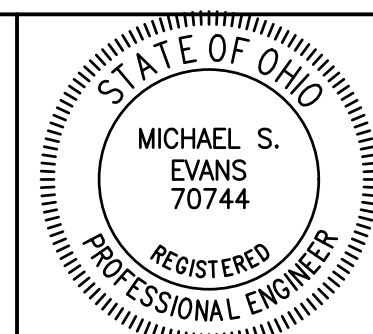


ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER

538 E. SOUTH STREET
AKRON, OH 44311

REV NO	DATE	ISSUED BY	REMARKS

DESIGNED BY: MSE
DRAWN BY: MAT
SHEET CHK'D BY: MSE
CROSS CHK'D BY: DCG
APPROVED BY: MSE
ISSUED DATE: 03/06/26



SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

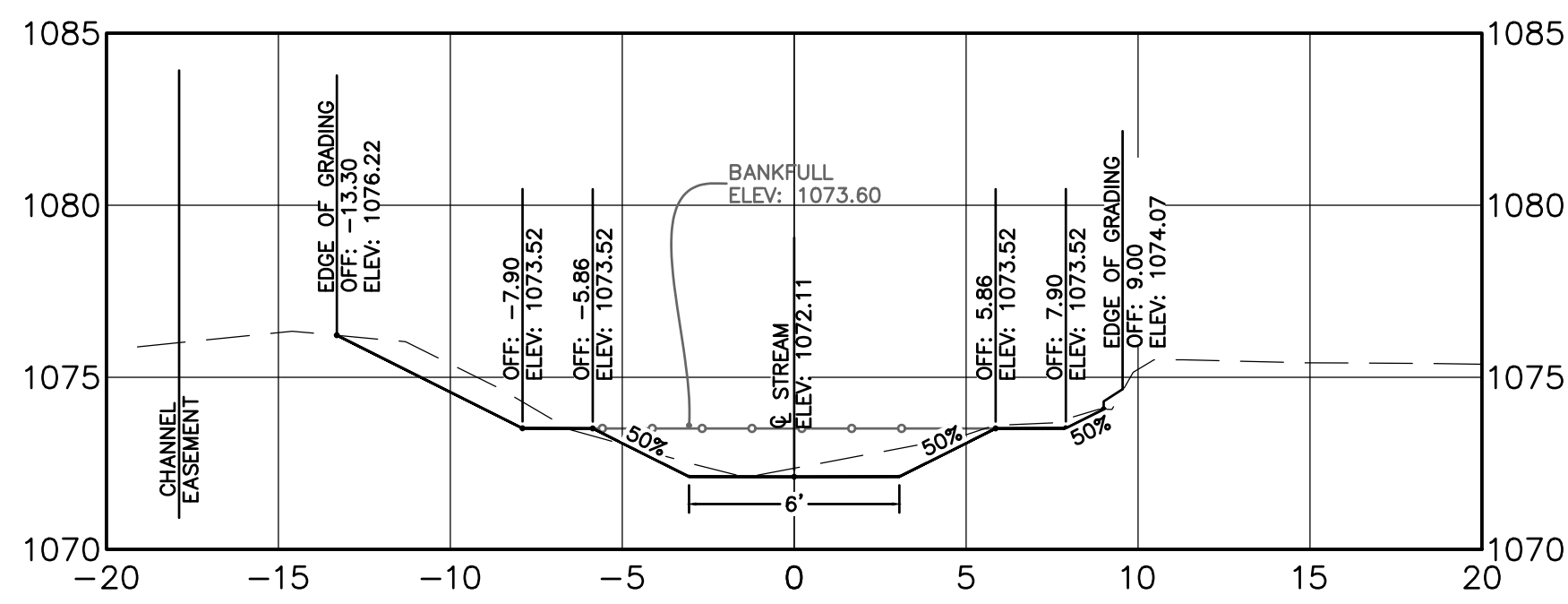
CHANNEL CROSS
SECTIONS I

WARNING

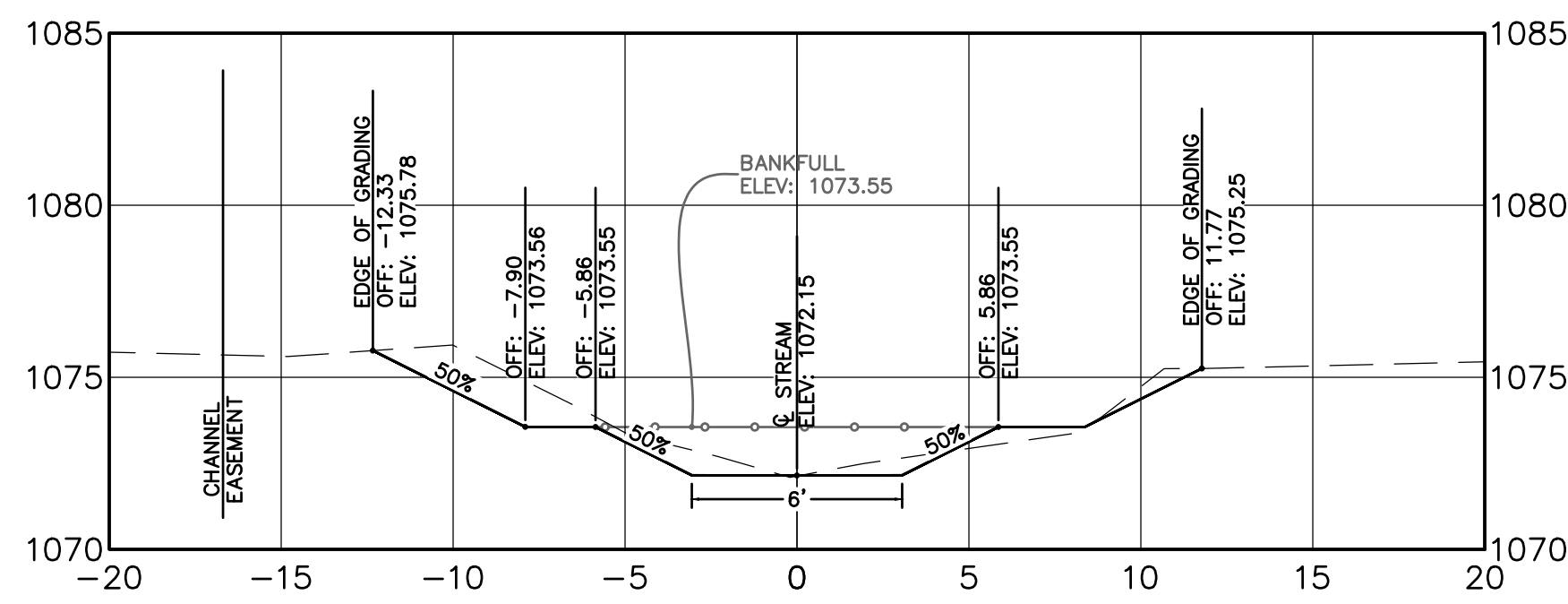


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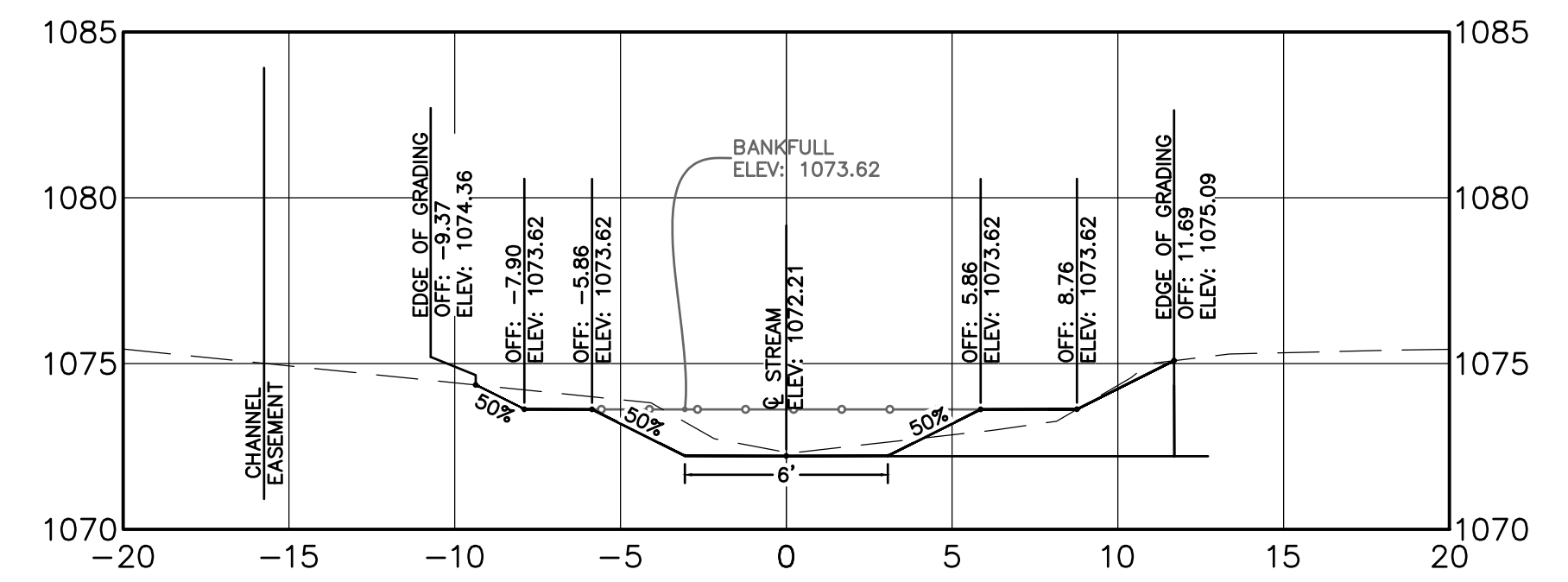
SHEET NO.:
C-4.0



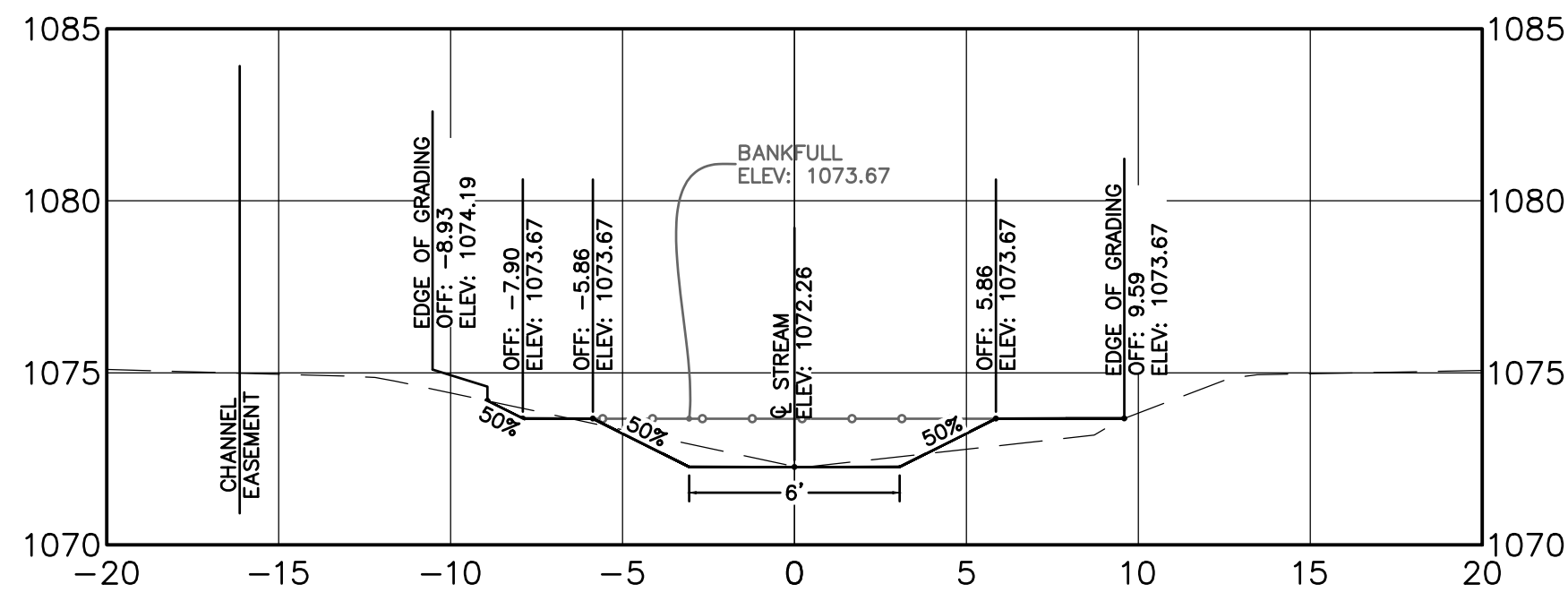
5+50.00 SECTION



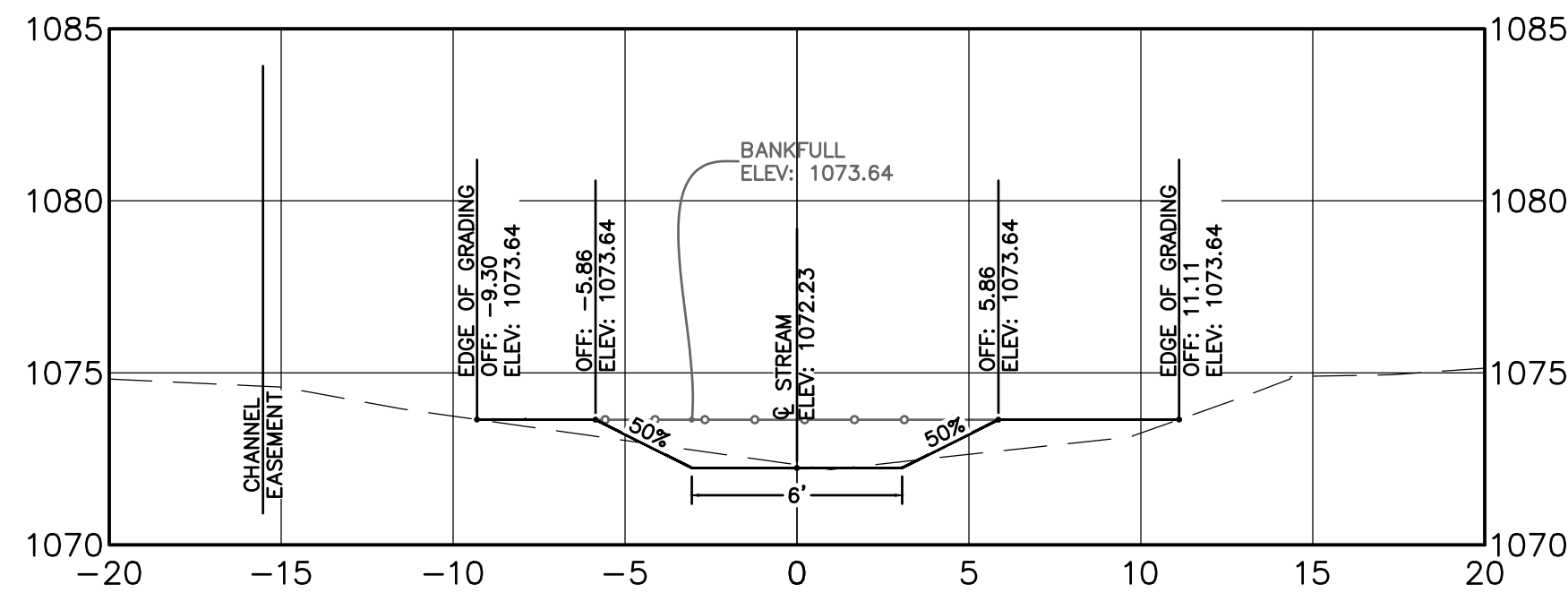
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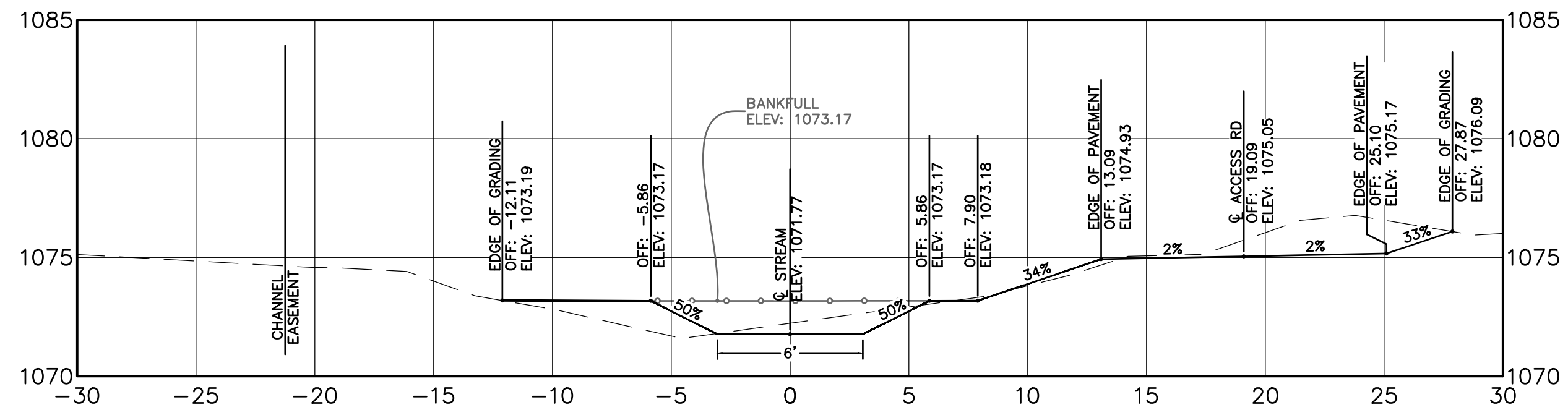
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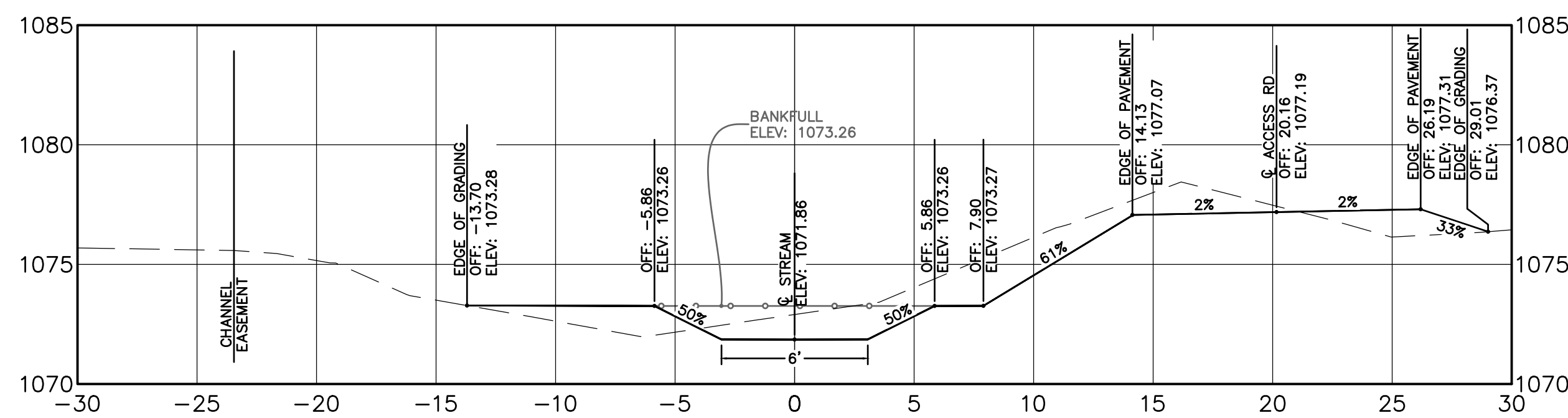
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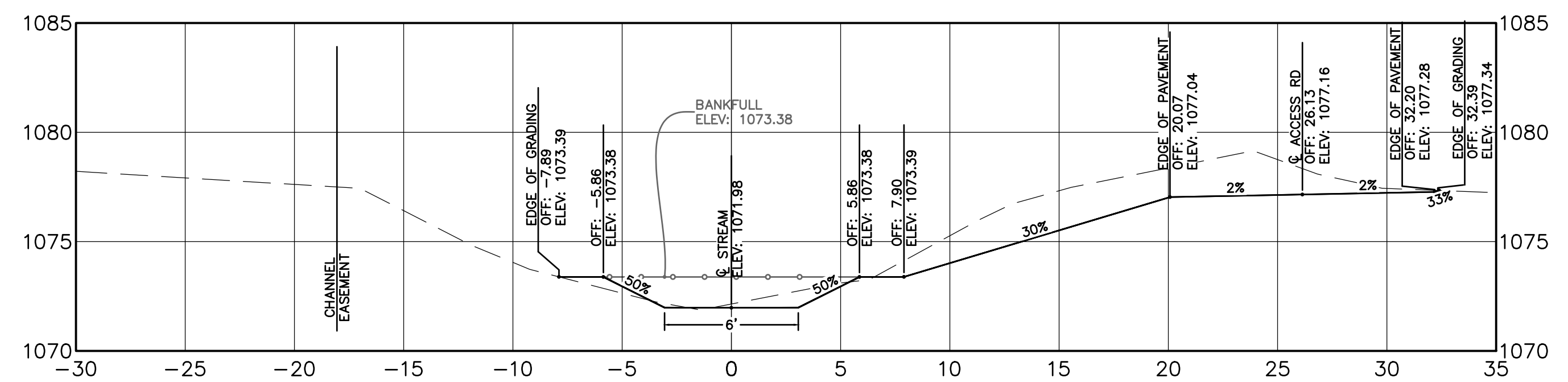
7+50.00 SECTION



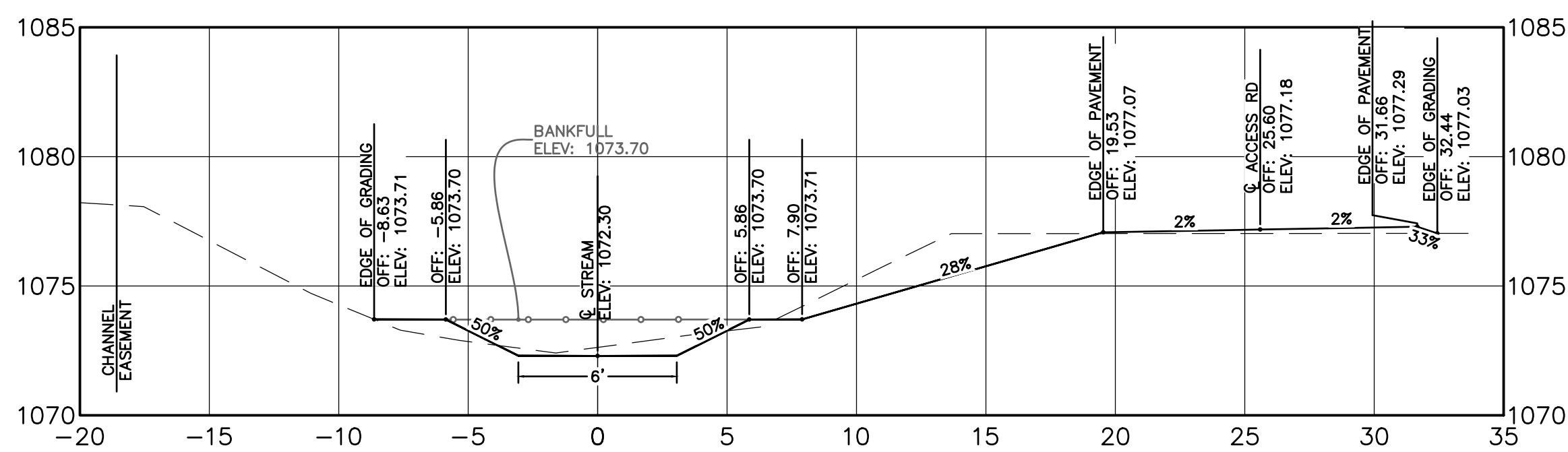
8+00.00 SECTION



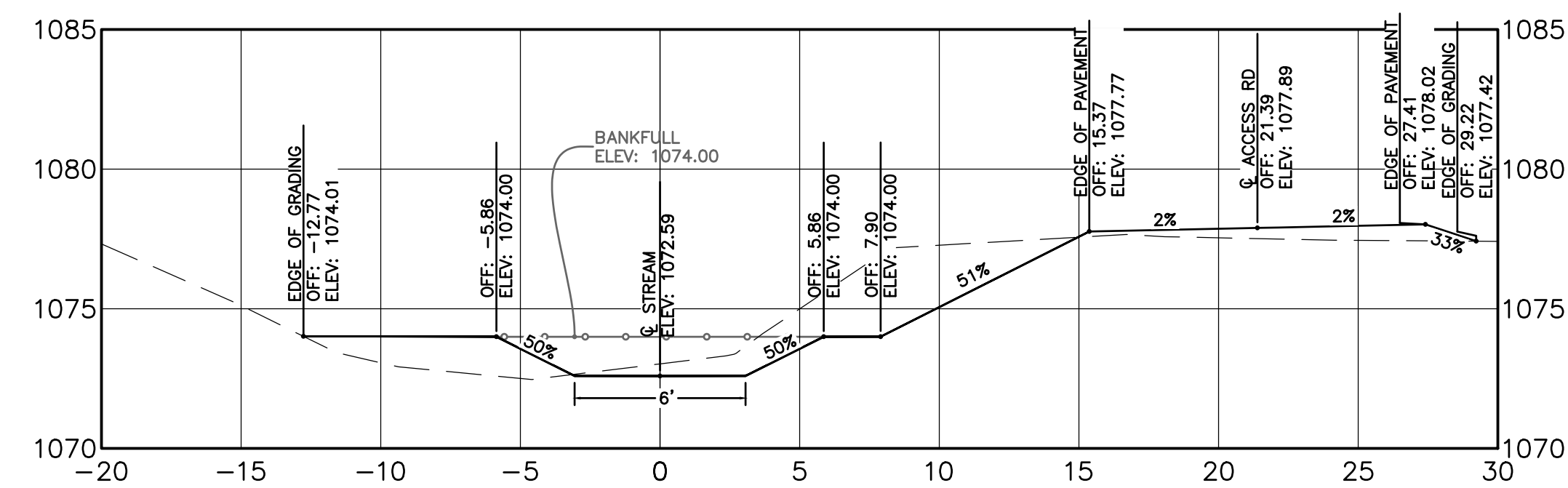
8+50.00 SECTION



9+00.00 SECTION



9+50.00 SECTION



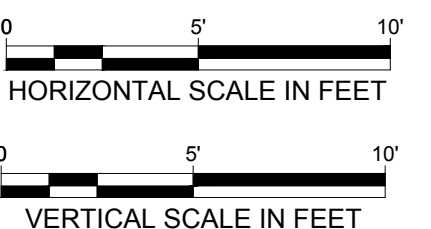
10+00.00 SECTION

NOTES:

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LEGEND

- EXISTING GROUND PROFILE
- EXISTING BRIDGE TO REMAIN
- PROPOSED GROUND PROFILE
- MAX BANKFULL ELEVATION

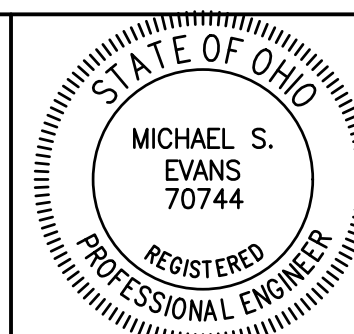


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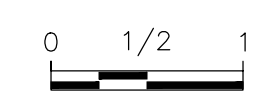


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

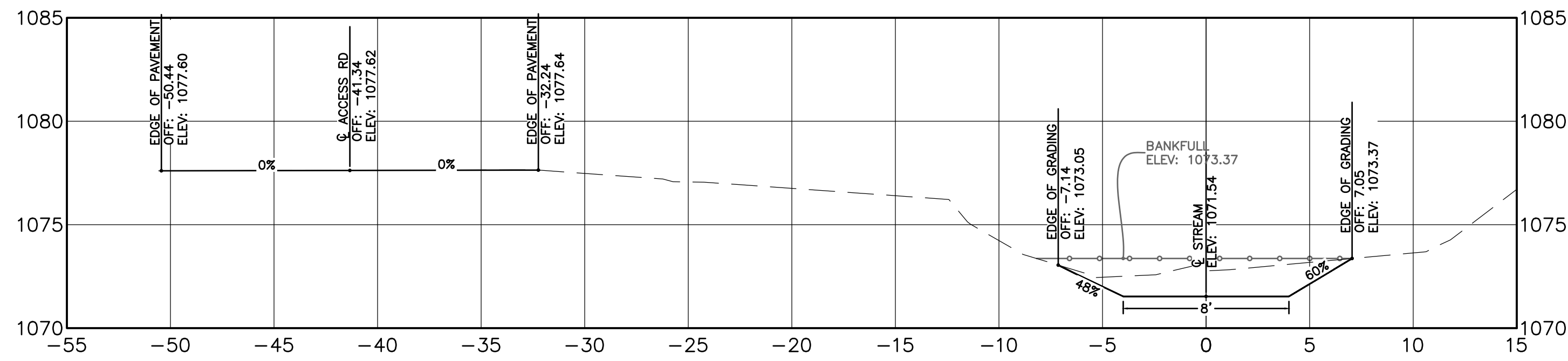
CHANNEL CROSS
SECTIONS II

WARNING

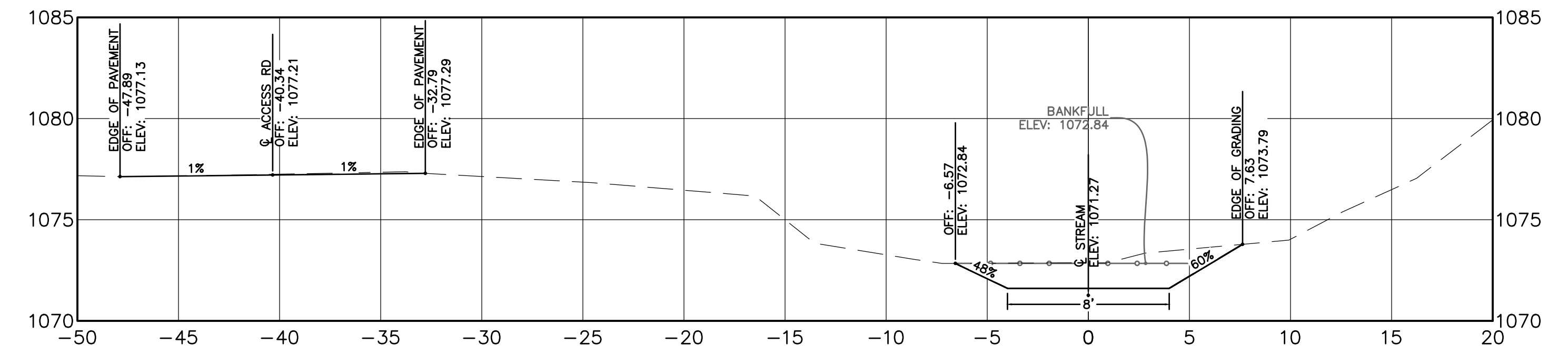


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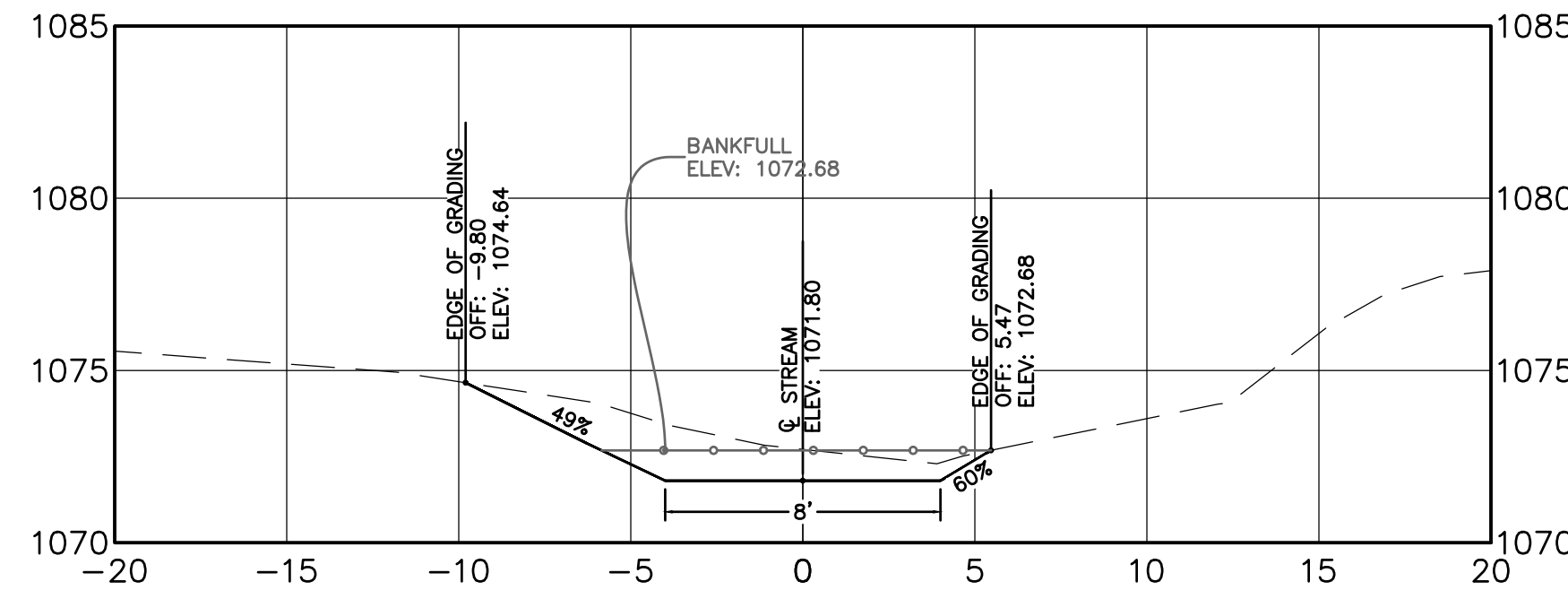
SHEET NO.:
C-4.1



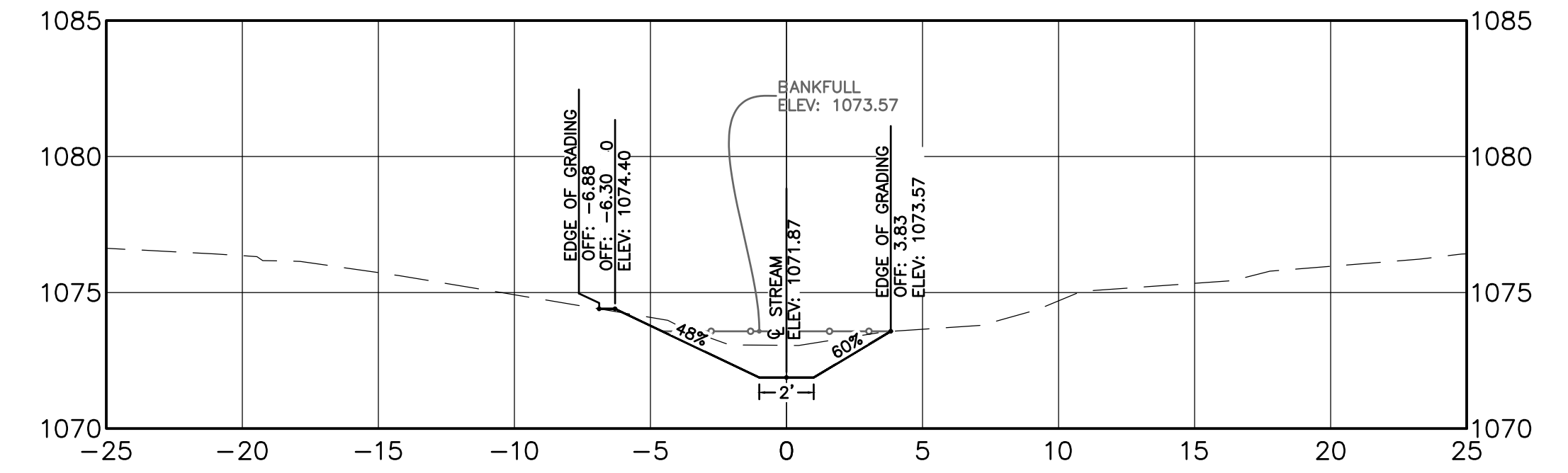
12+40.67 SECTION



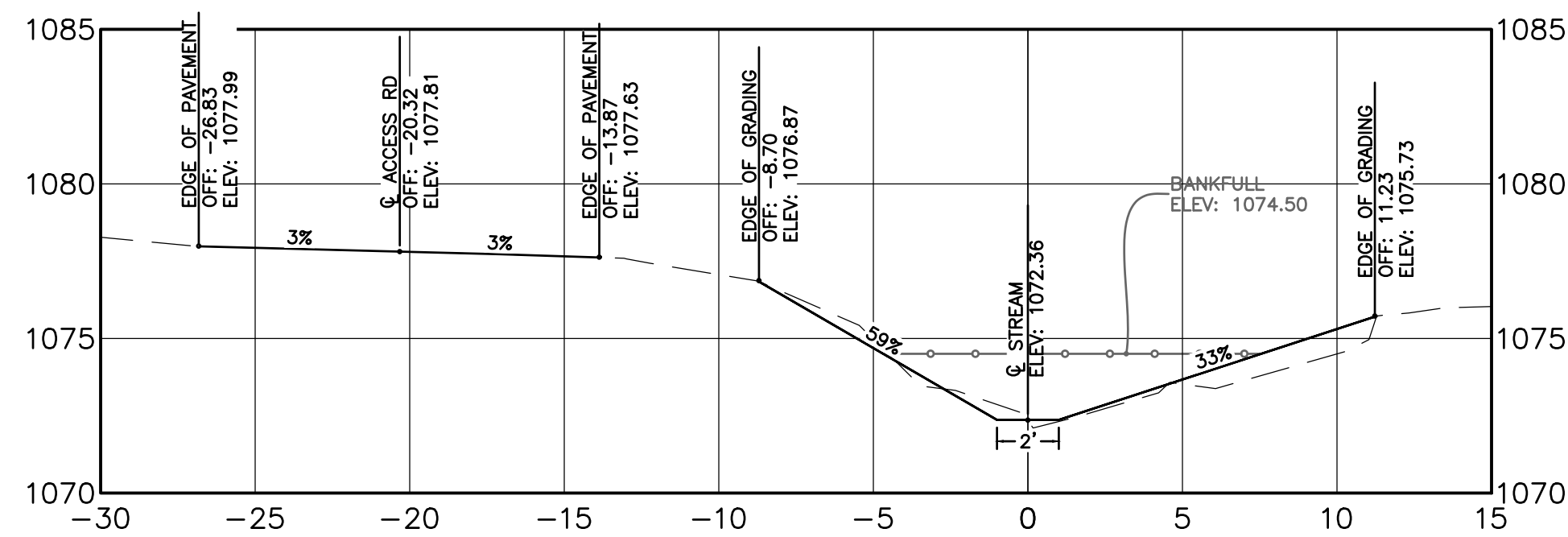
12+50.00 SECTION



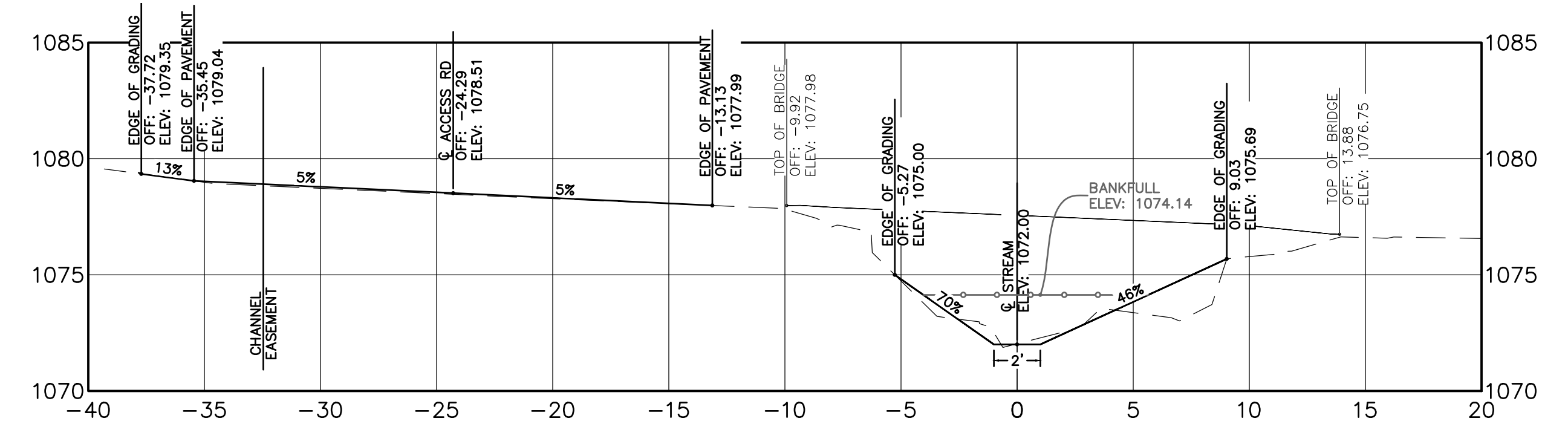
12+74.00 SECTION



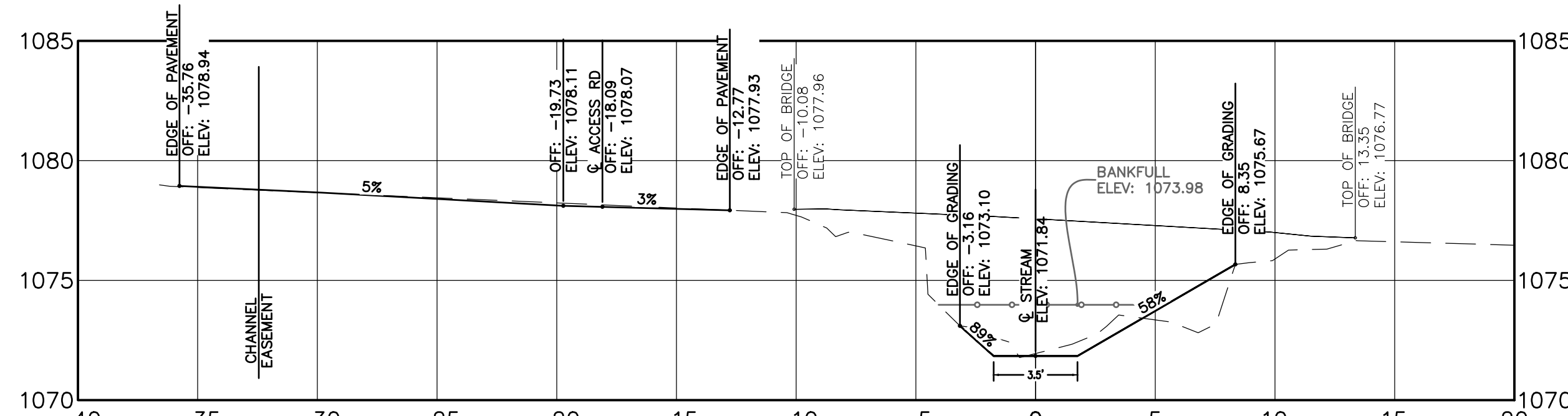
12+83.61 SECTION



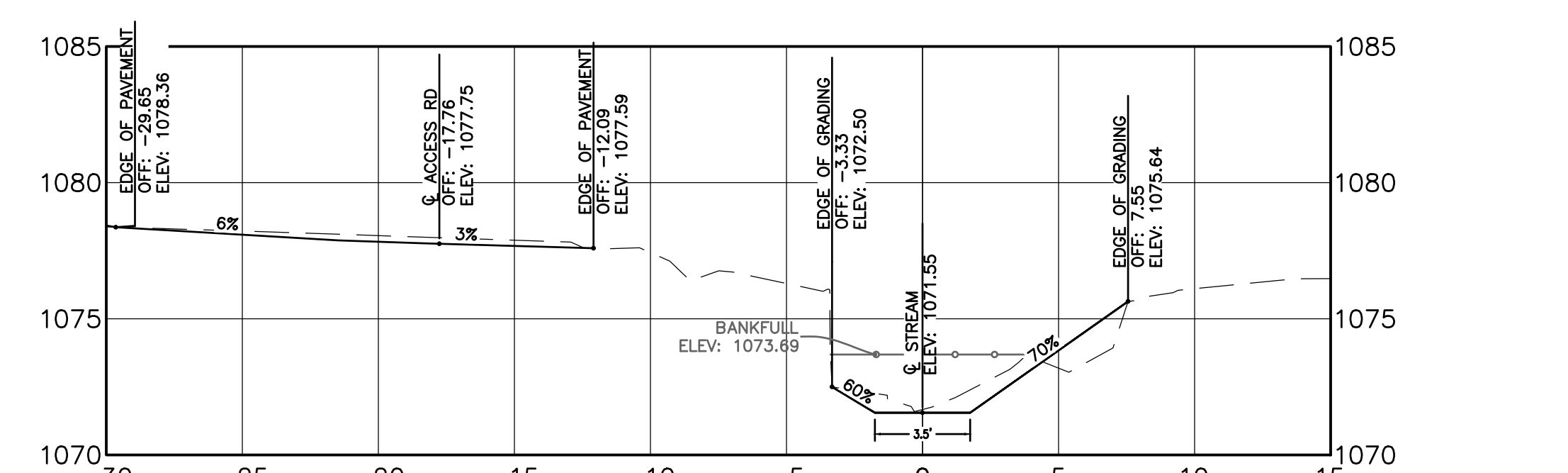
13+48.52 SECTION



13+71.52 SECTION



13+81.52 SECTION



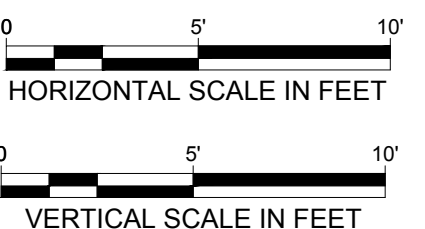
14+00.00 SECTION

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LEGEND

- EXISTING GROUND PROFILE
- EXISTING BRIDGE TO REMAIN
- PROPOSED GROUND PROFILE
- MAX BANKFULL ELEVATION



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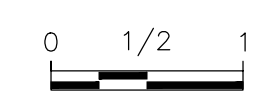


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

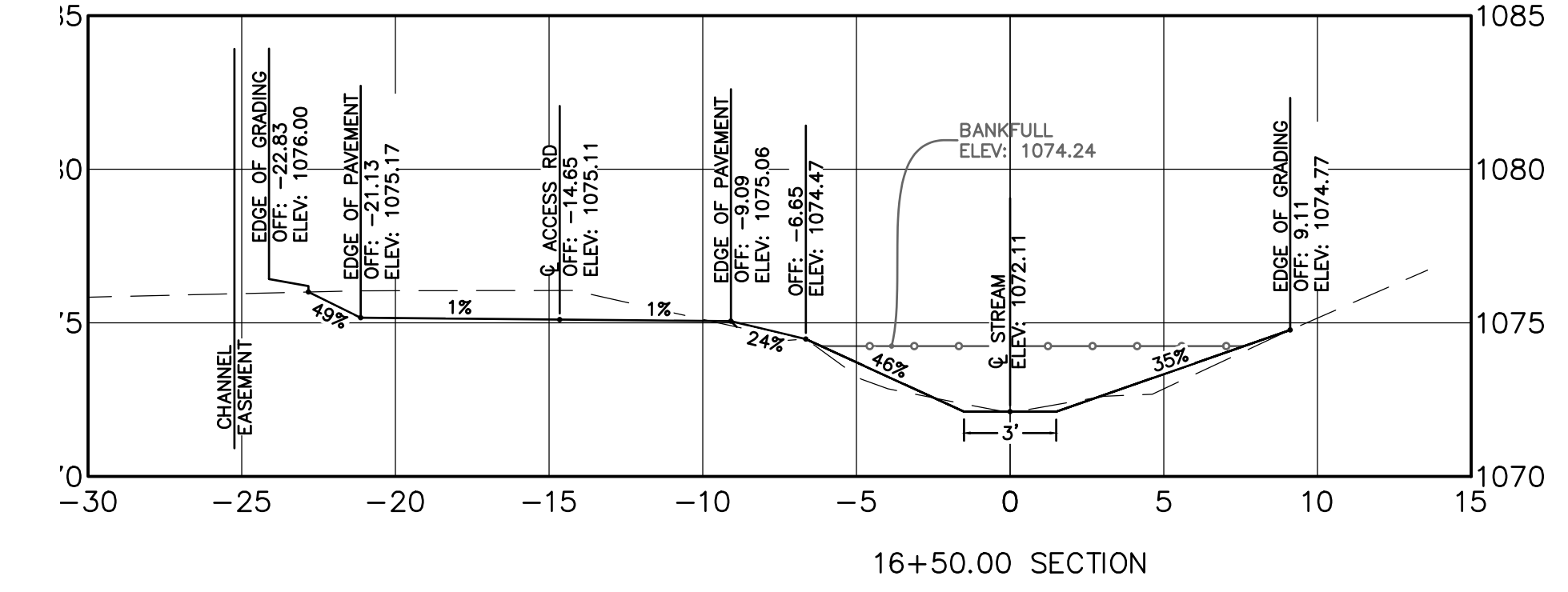
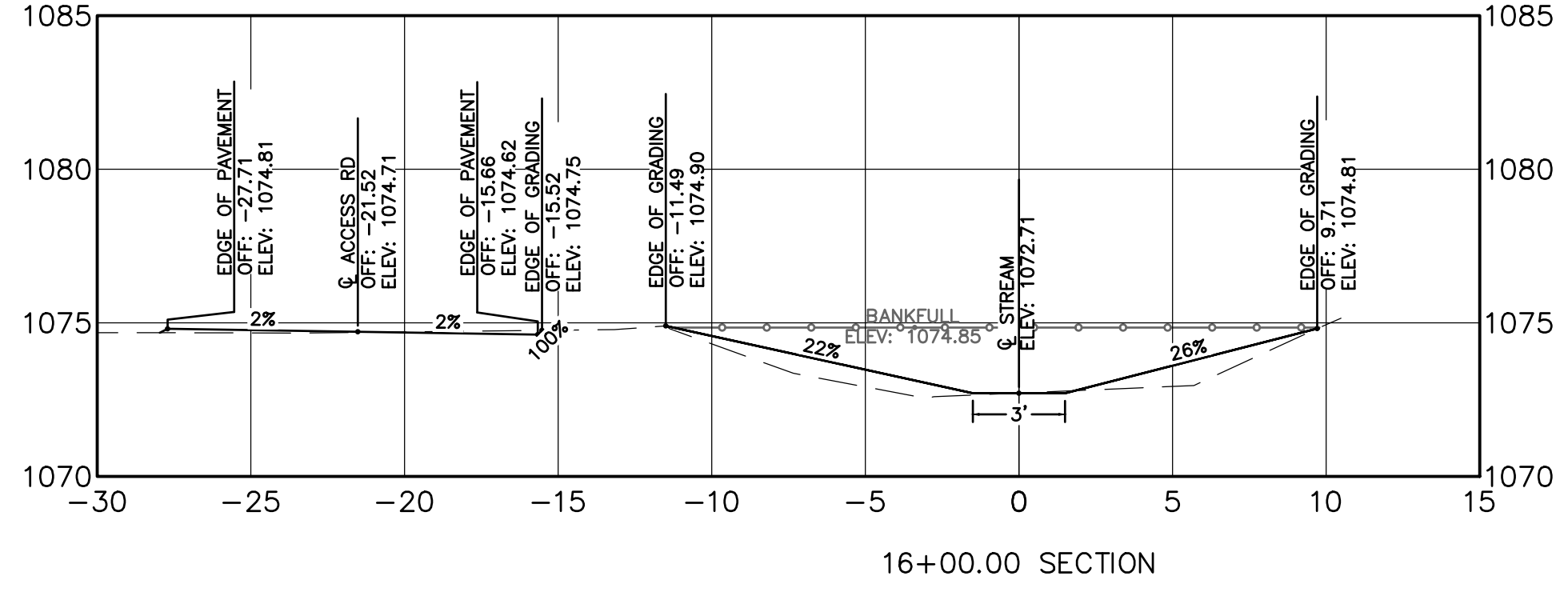
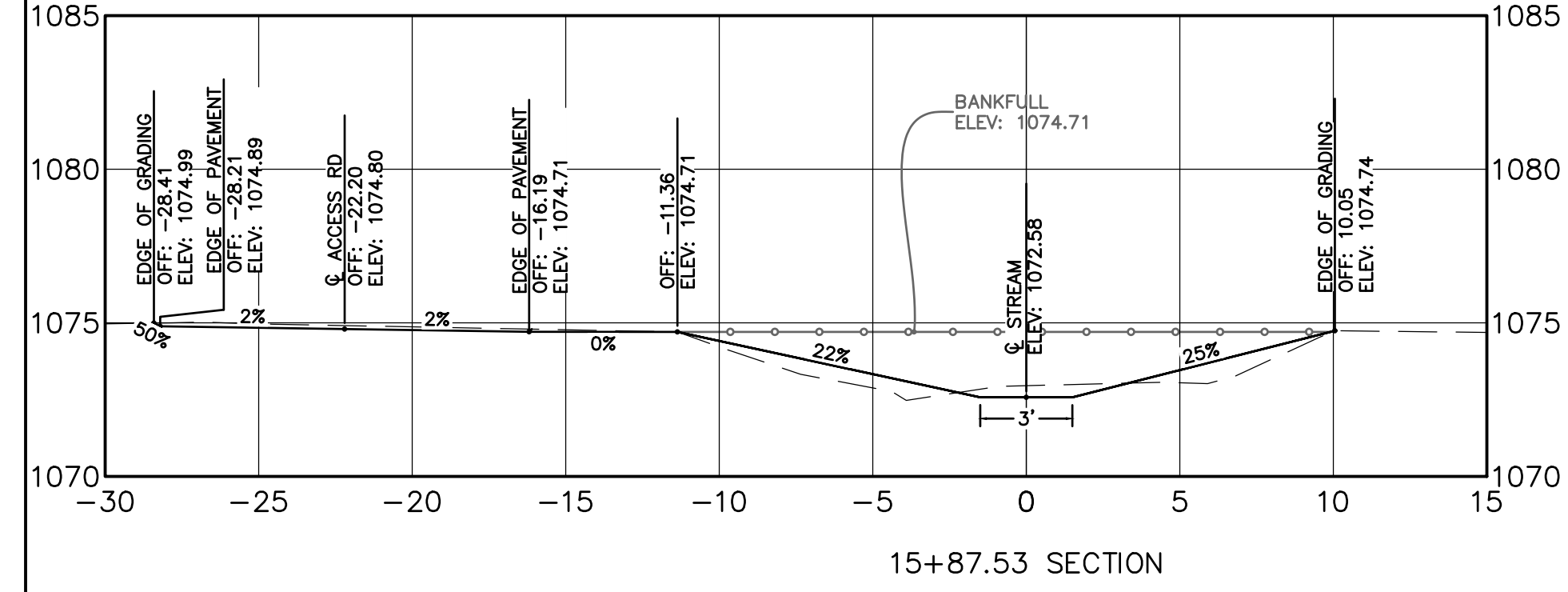
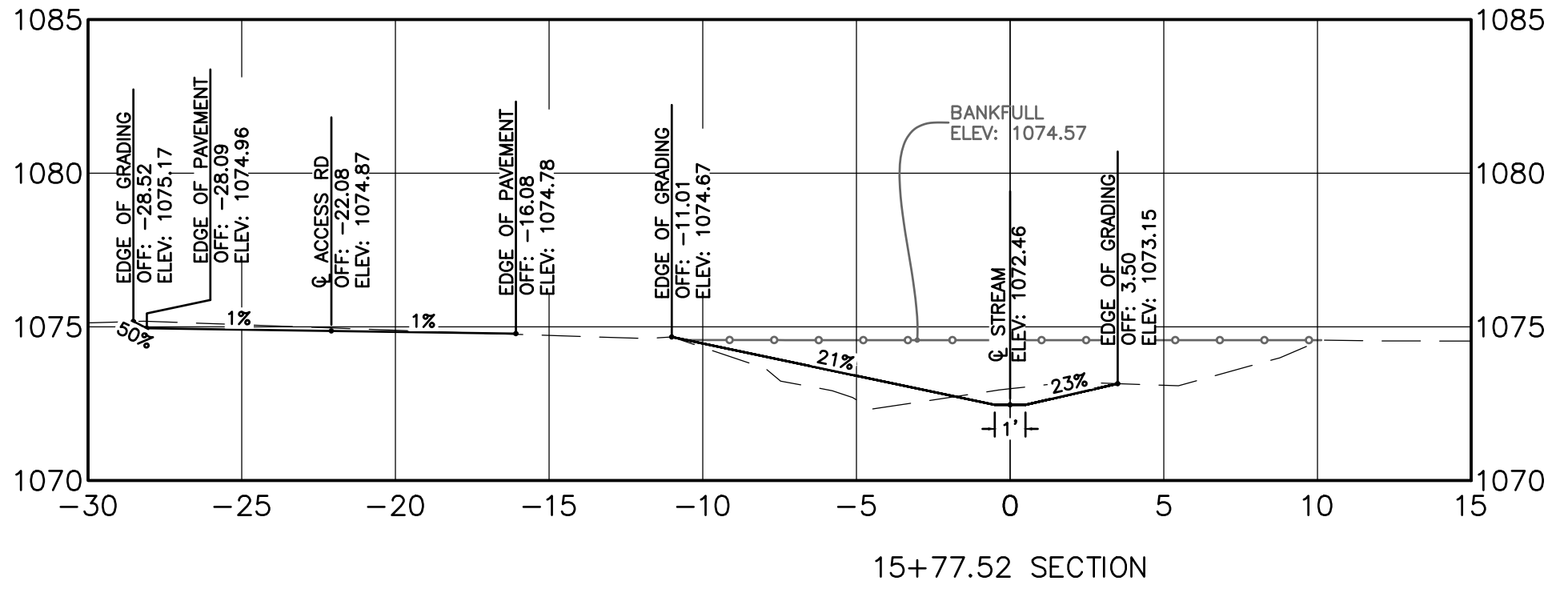
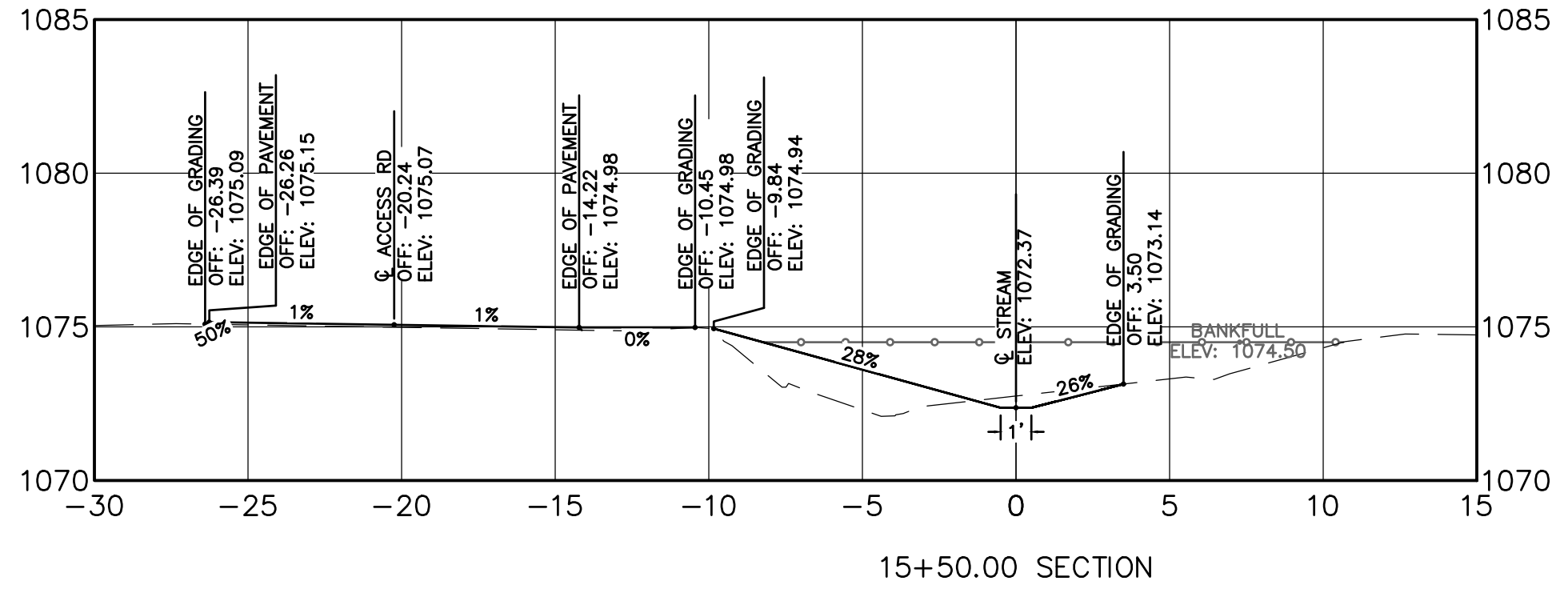
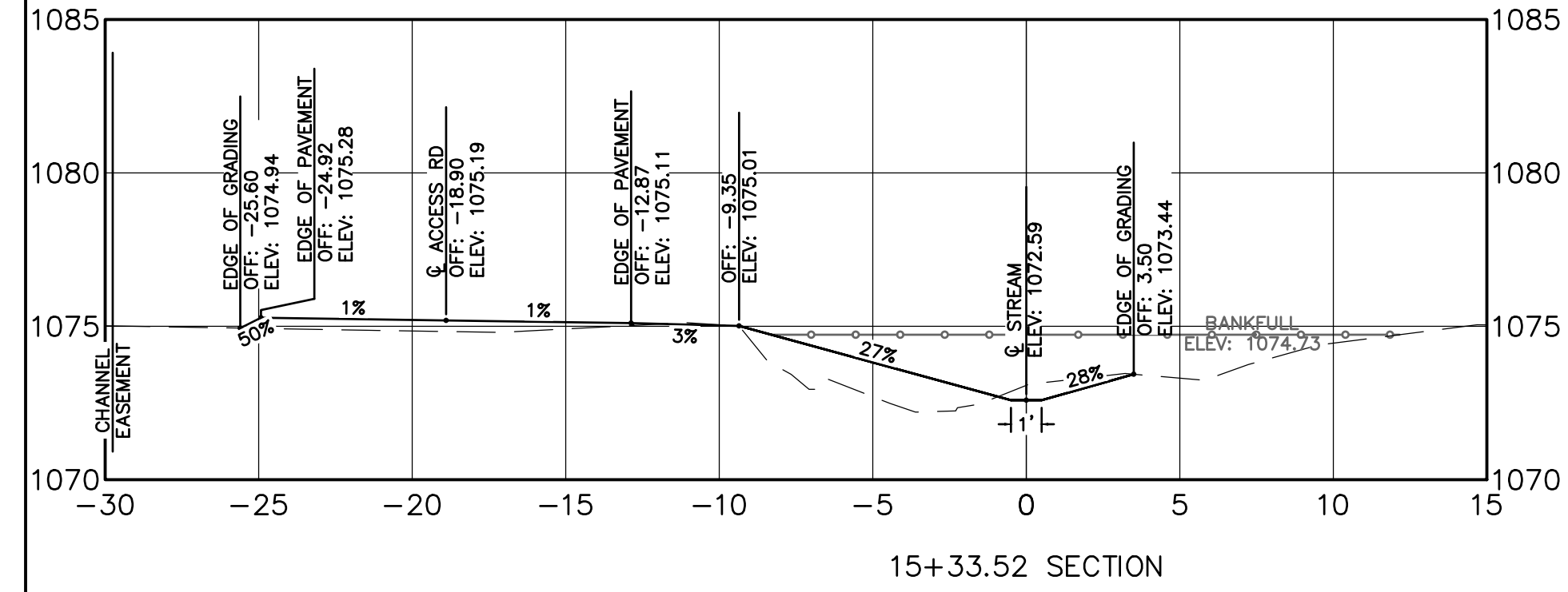
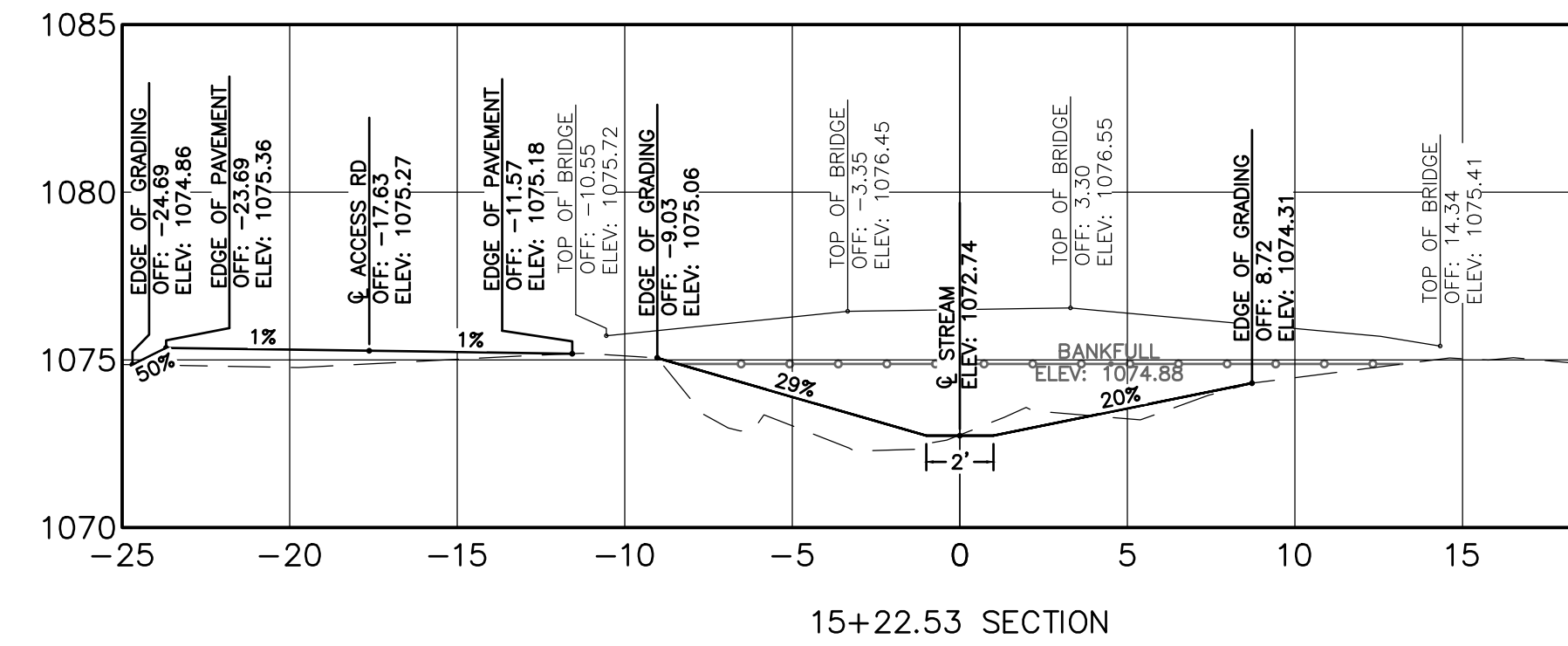
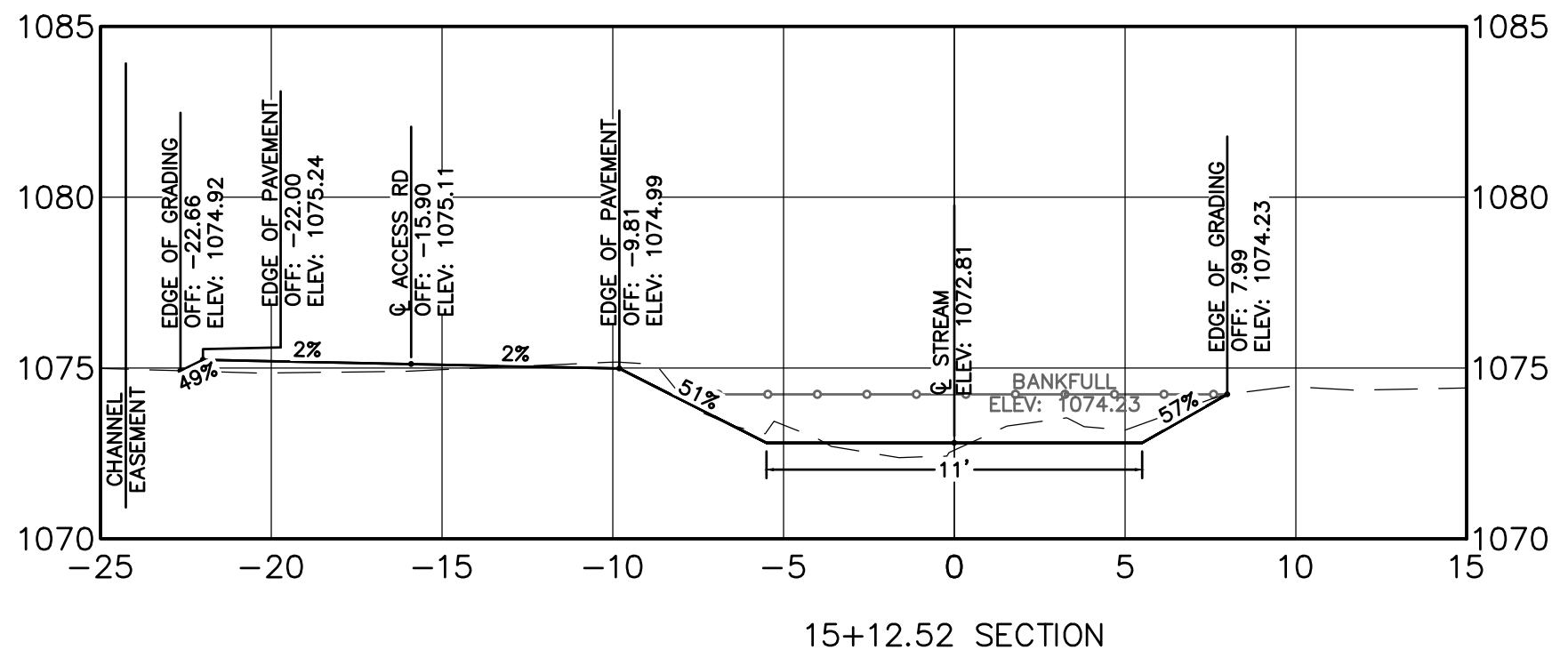
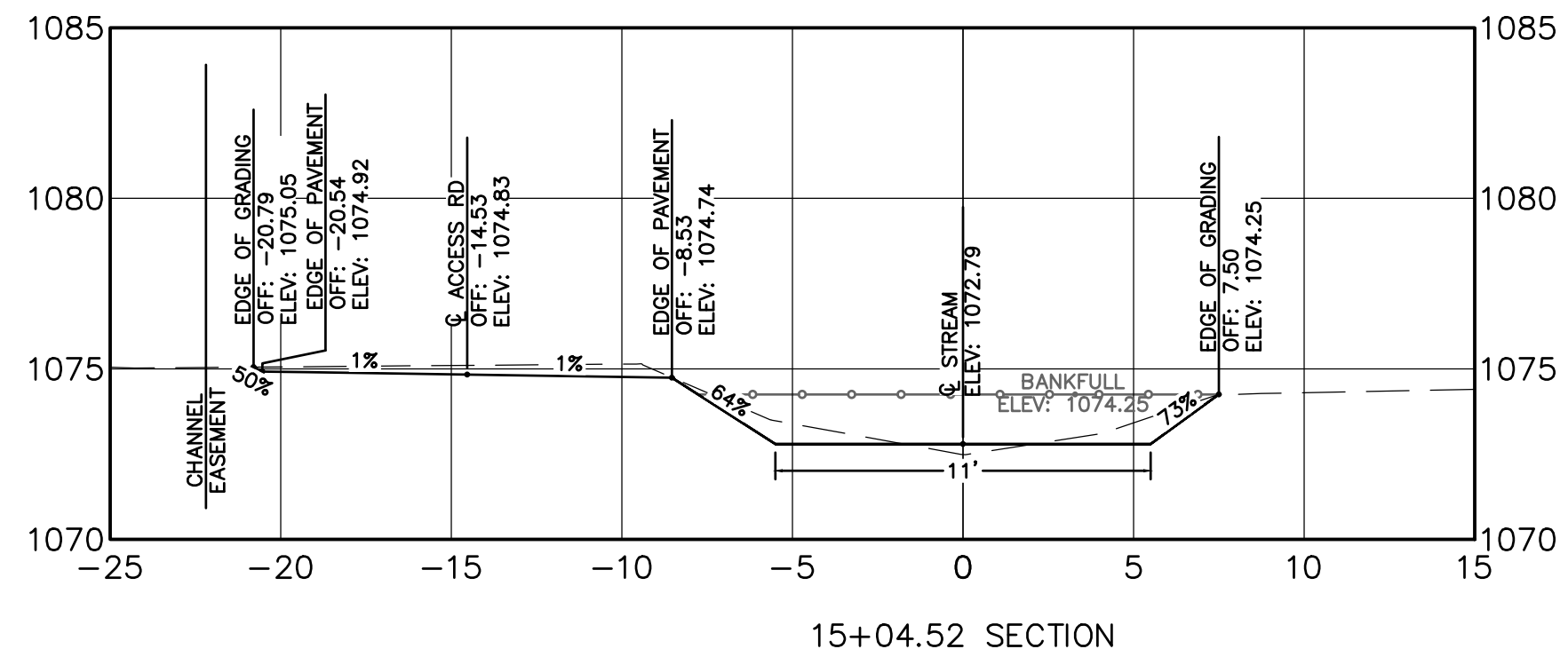
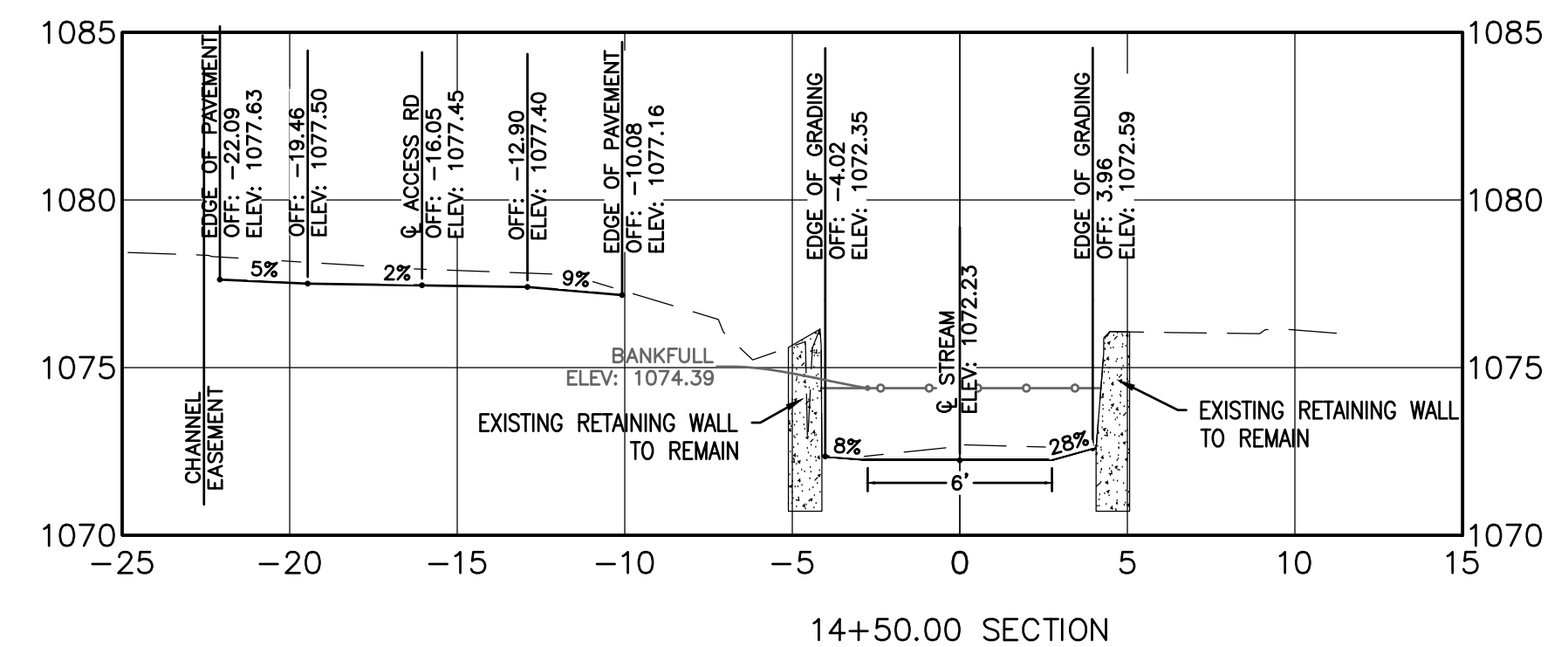
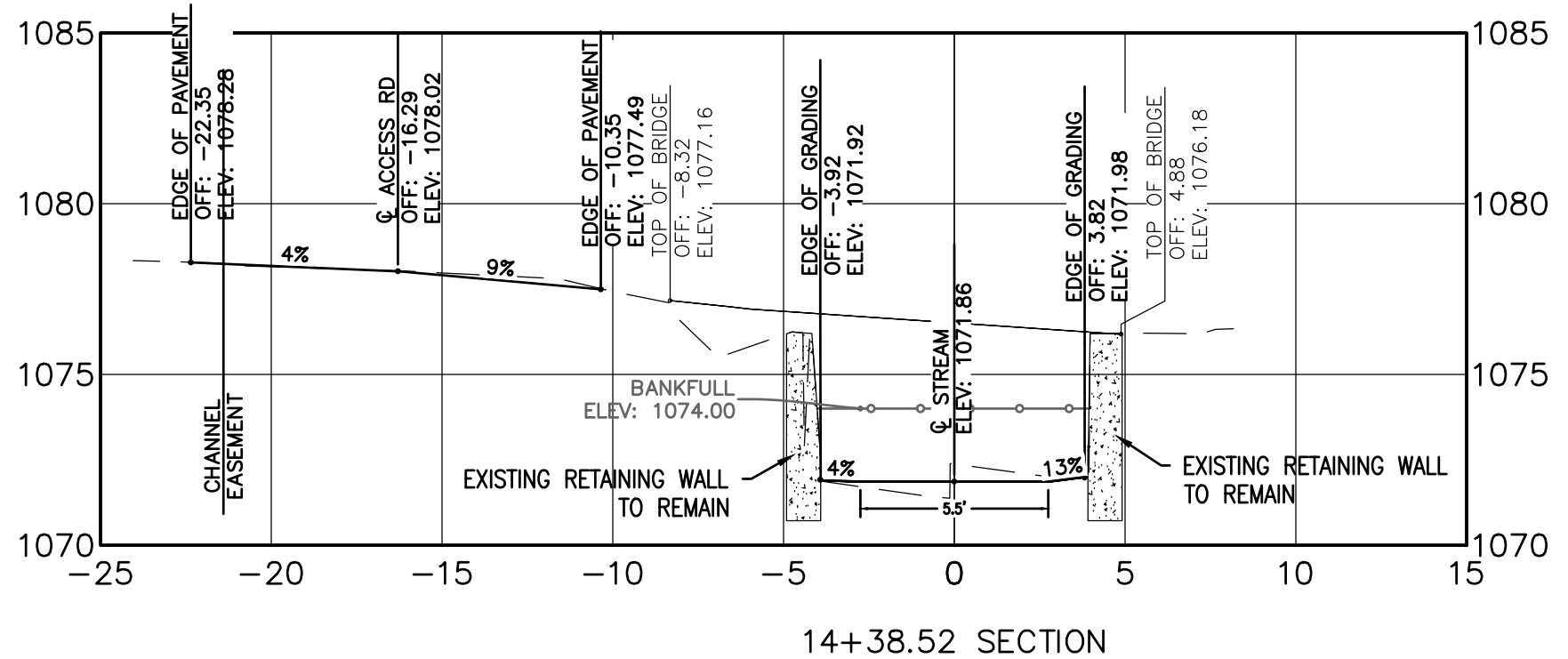
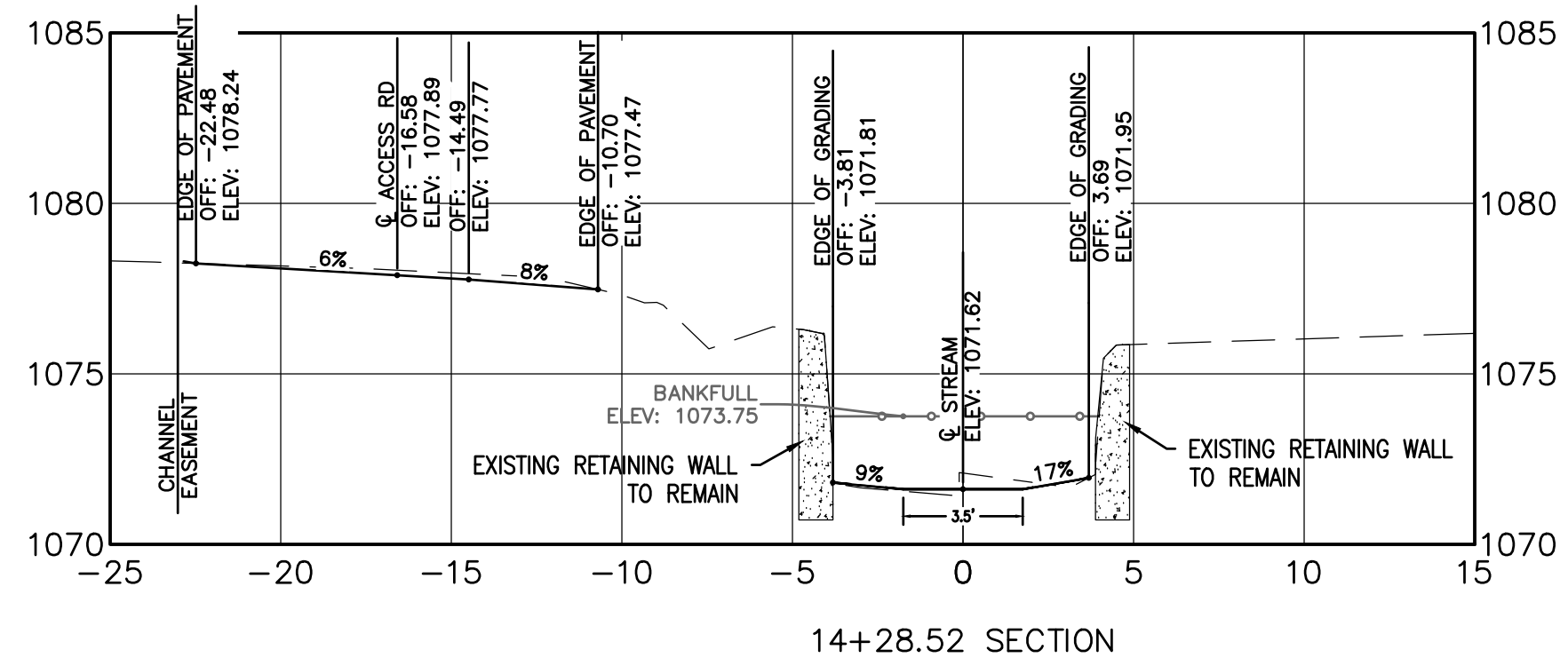
CHANNEL CROSS
SECTIONS III

WARNING



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-4.2



NOTES:
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LEGEND
 --- EXISTING GROUND PROFILE
 --- EXISTING BRIDGE TO REMAIN
 --- PROPOSED GROUND PROFILE
 --- MAX BANKFULL ELEVATION

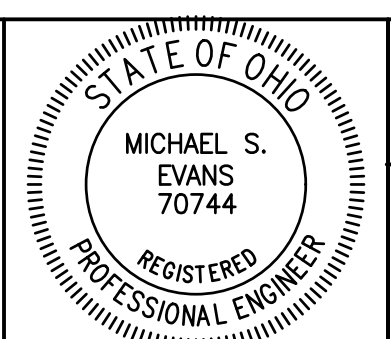
0 5 10'
 HORIZONTAL SCALE IN FEET
 0 5 10'
 VERTICAL SCALE IN FEET



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER
 538 E. SOUTH STREET
 AKRON, OH 44311

REV NO	DATE	ISSUED BY	REMARKS

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 DRAWN BY: MAT
 SHEET CHK'D BY: MSE
 CROSS CHK'D BY: DGG
 APPROVED BY: MSE
 ISSUED DATE: 03/06/26

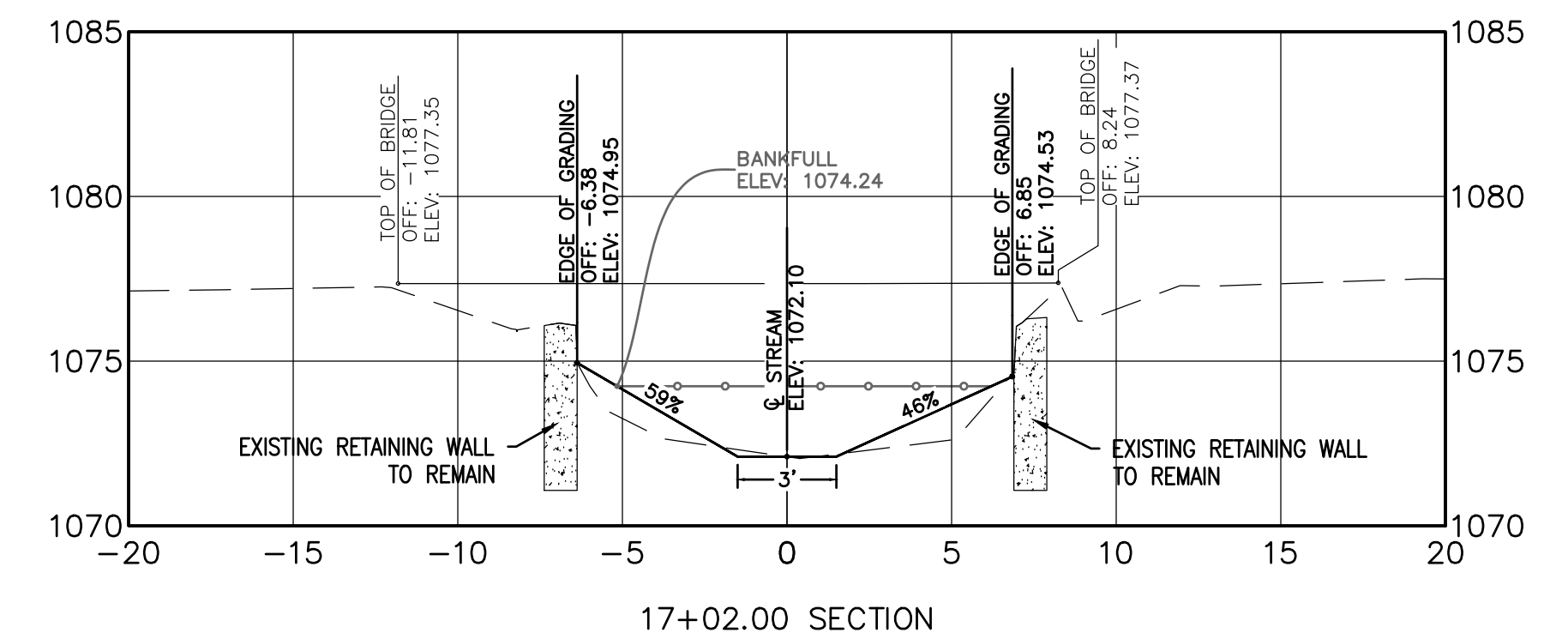
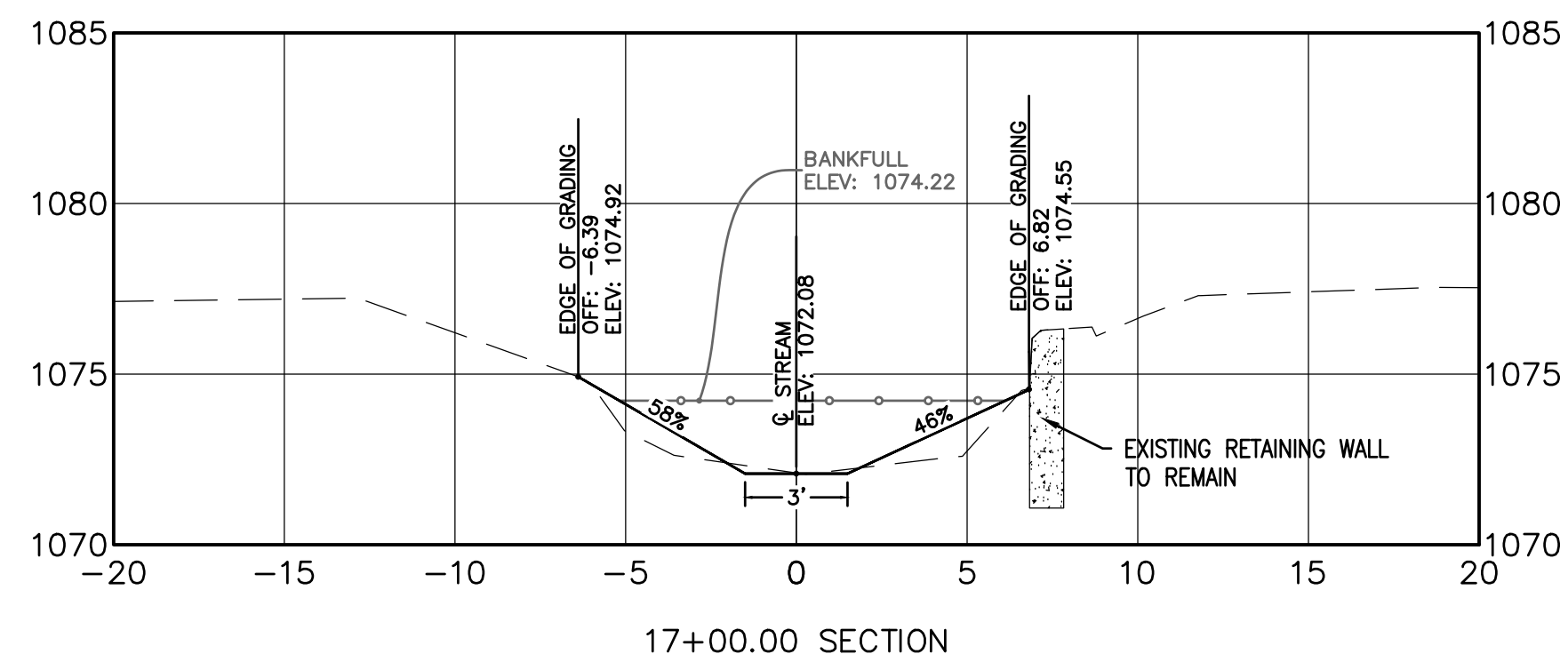


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

CHANNEL CROSS SECTIONS IV

WARNING
 0 1/2 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.: **C-4.3**

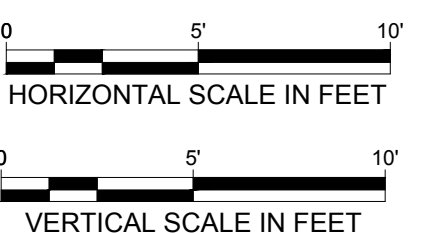


NOTES:

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LEGEND

- EXISTING GROUND PROFILE
- EXISTING BRIDGE TO REMAIN
- PROPOSED GROUND PROFILE
- ○ ○ MAX BANKFULL ELEVATION

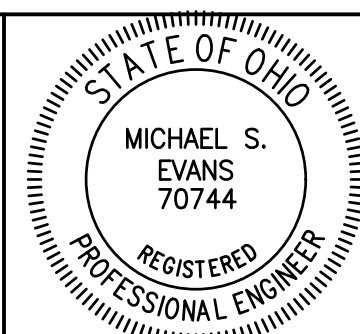


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538 E. SOUTH STREET
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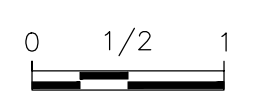


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

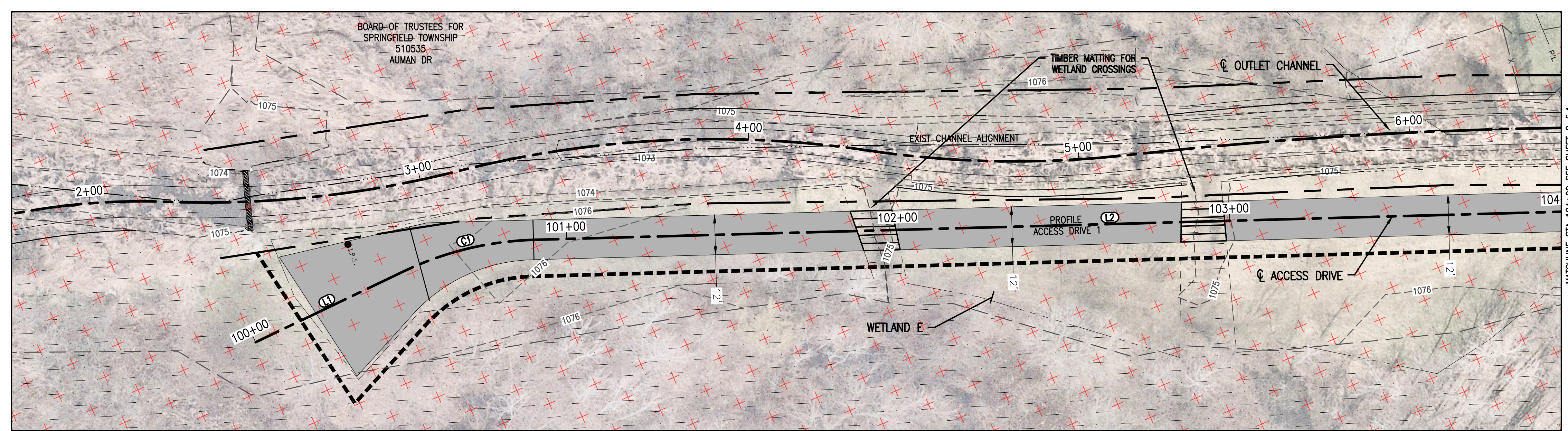
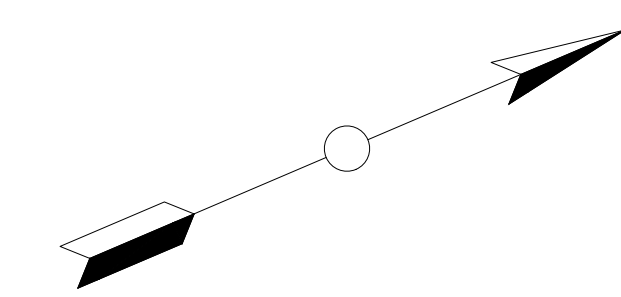
CHANNEL CROSS
SECTIONS V

WARNING



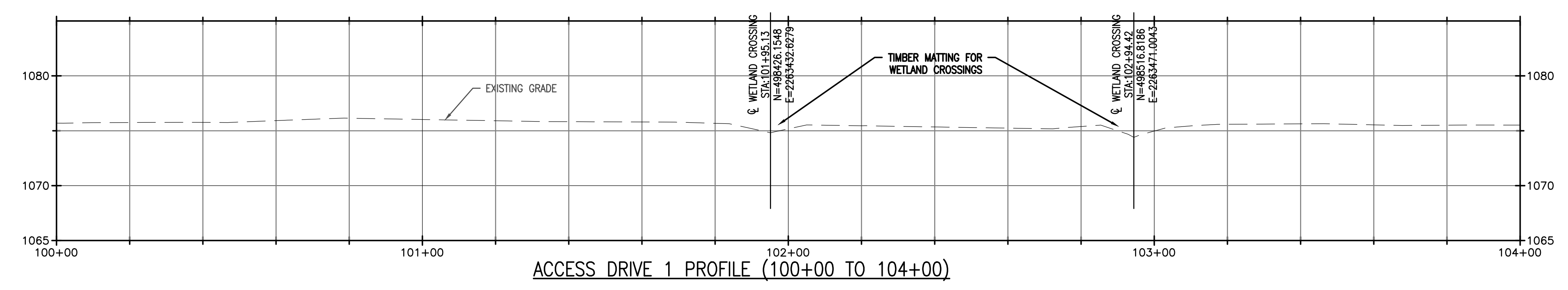
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-4.4



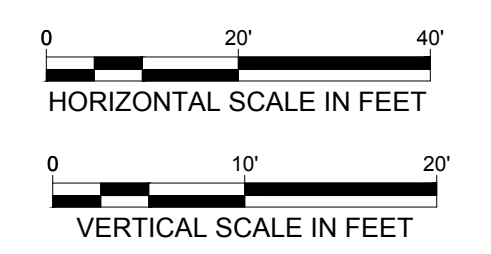
PLAN

- LEGEND:
- FEMA FLOOD PLANE ZONE 'A'
 - DELINEATED WETLANDS
 - DELINEATED WETLAND TO BE DISTURBED
 - GRAVEL ACCESS DRIVE
 - GRASS PAVER ACCESS DRIVE
 - REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
 - CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
 - PRIVATELY OWNED BRIDGE
 - PERMANENT EASEMENT
 - EXISTING DITCH EASEMENT
 - SANITARY PIPE
 - STORM PIPE



ACCESS DRIVE 1 PROFILE (100+00 TO 104+00)

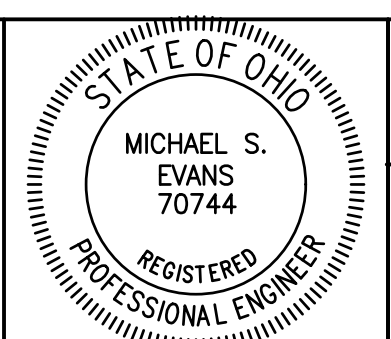
PROPOSED ACCESS DRIVE LINE DATA				PROPOSED ACCESS DRIVE CURVE DATA				
LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
L1	49.46	STA: 100+00 N: 498,240.81 E: 2,263,390.10	STA: 100+49 N: 498,290.22 E: 2,263,387.99	C1	97.50	40.84	STA: 100+49 N: 498,290.22 E: 2,263,387.99	STA: 100+90 N: 498,330.20 E: 2,263,394.72
L2	347.22	STA: 100+90 N: 498,330.20 E: 2,263,394.72	STA: 104+38 N: 498,653.14 E: 2,263,522.29					



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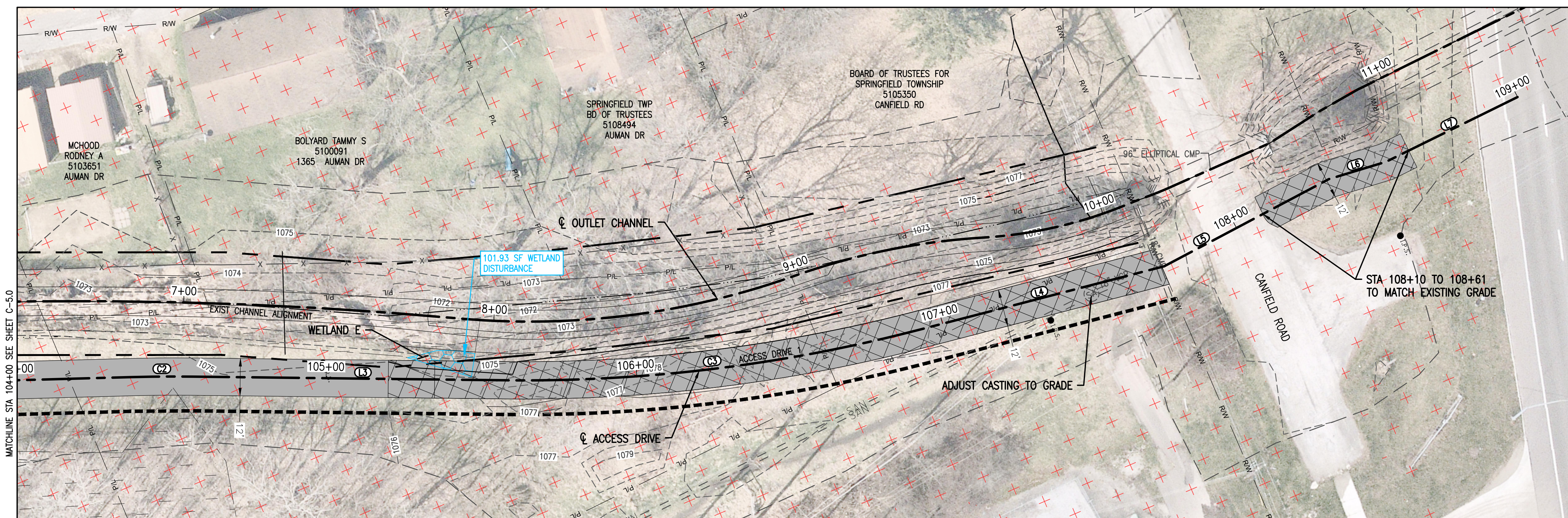
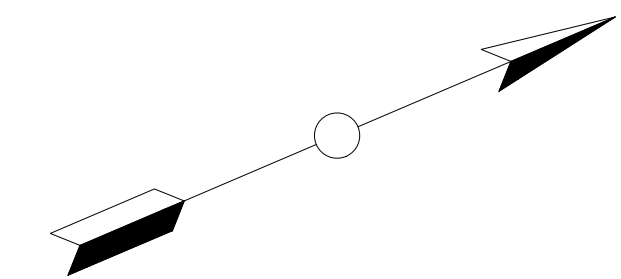
SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

ACCESS DRIVE 1
PLAN & PROFILE STA
100+00 TO 104+00

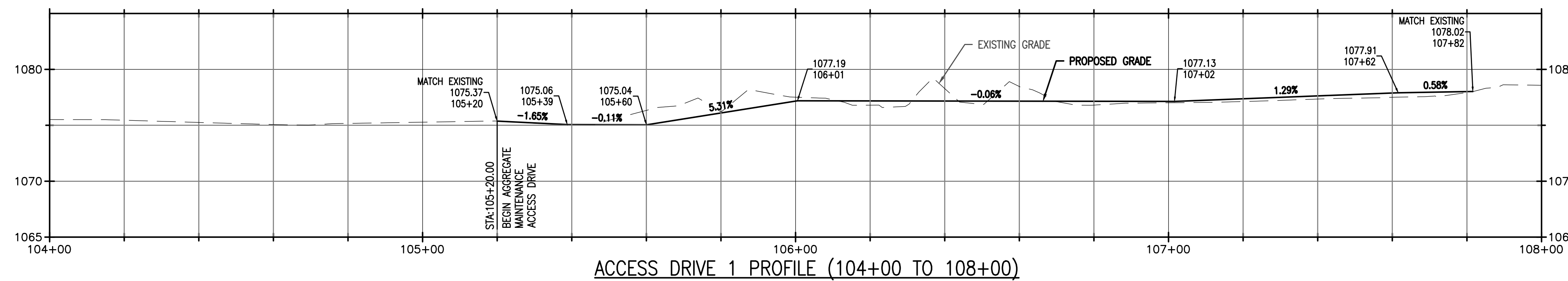
WARNING

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SHEET NO.:
C-5.0



PLAN

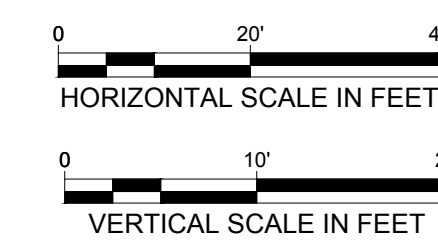


ACCESS DRIVE 1 PROFILE (104+00 TO 108+00)

LEGEND:

- FEMA FLOOD PLANE ZONE 'A'
- DELINEATED WETLANDS
- DELINEATED WETLAND TO BE DISTURBED
- GRAVEL ACCESS DRIVE
- GRASS PAVER ACCESS DRIVE
- REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
- CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
- PRIVATELY OWNED BRIDGE
- PERMANENT EASEMENT
- EXISTING DITCH EASEMENT
- SANITARY PIPE
- STORM PIPE

PROPOSED ACCESS DRIVE LINE DATA				PROPOSED ACCESS DRIVE CURVE DATA				
LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
L4	81.91	STA: 106+92 N: 498,891.62 E: 2,263,607.70	STA: 107+74 N: 498,972.61 E: 2,263,619.95	C2	494.00	19.27	STA: 104+38 N: 498,653.14 E: 2,263,522.29	STA: 104+57 N: 498,670.92 E: 2,263,529.72
L5	59.92	STA: 107+74 N: 498,972.61 E: 2,263,619.95	STA: 108+34 N: 499,032.32 E: 2,263,614.98	C3	506.00	134.15	STA: 105+58 N: 498,763.17 E: 2,263,570.39	STA: 106+92 N: 498,891.62 E: 2,263,607.70
L6	19.18	STA: 108+34 N: 499,032.32 E: 2,263,614.98	STA: 108+53 N: 499,051.38 E: 2,263,617.08					
L7	47.23	STA: 108+53 N: 499,051.38 E: 2,263,617.08	STA: 109+00 N: 499,098.55 E: 2,263,614.55					

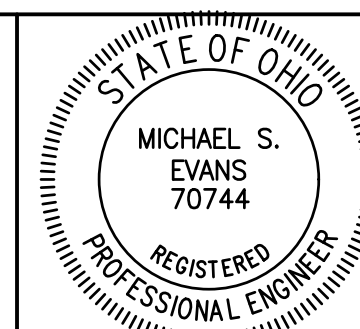


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APPROVED BY: MSE
ISSUED DATE: 03/06/26



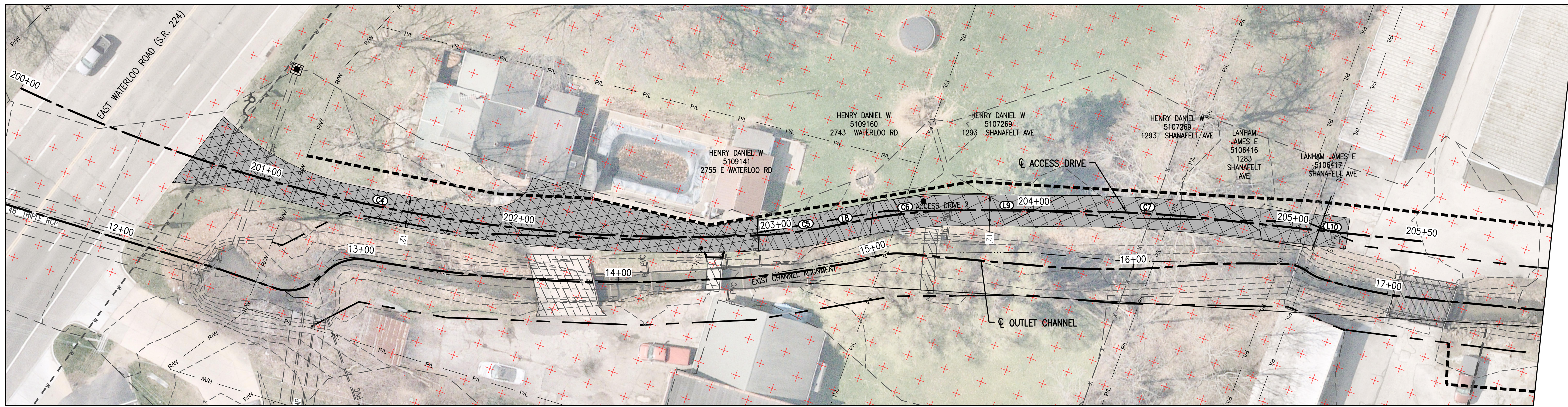
SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

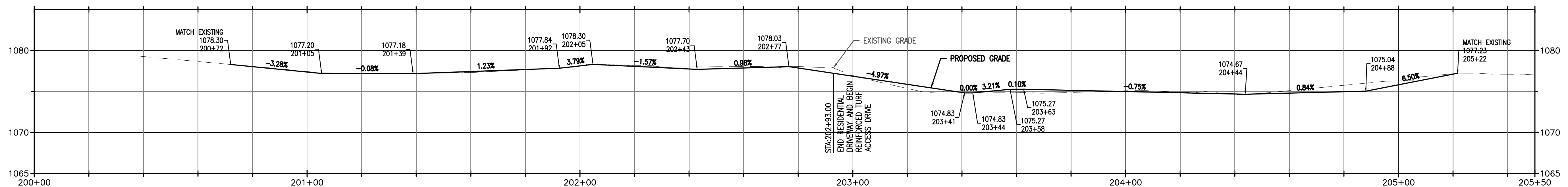
ACCESS DRIVE 1
PLAN & PROFILE STA
104+00 TO 109+00

WARNING
0 1/2 1
IF THIS BAR DOES
NOT MEASURE 1"
THEN DRAWING IS
NOT TO SCALE

SHEET NO.:
C-5.1



PLAN

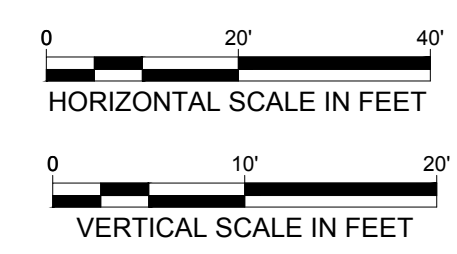


ACCESS DRIVE 2 PROFILE (200+00 TO 205+50)

PROPOSED ACCESS DRIVE LINE DATA				PROPOSED ACCESS DRIVE CURVE DATA				
LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
L8	14.71	STA: 203+20 N: 499,416.32 E: 2,263,488.42	STA: 203+35 N: 499,428.94 E: 2,263,480.86	C4	603.06	291.58	STA: 200+00 N: 499,105.52 E: 2,263,544.64	STA: 202+92 N: 499,390.98 E: 2,263,501.16
L9	43.37	STA: 203+76 N: 499,466.31 E: 2,263,463.32	STA: 204+19 N: 499,507.22 E: 2,263,448.92	C5	194.00	28.39	STA: 202+92 N: 499,390.98 E: 2,263,501.16	STA: 203+20 N: 499,416.32 E: 2,263,488.42
L10	81.88	STA: 204+68 N: 499,553.88 E: 2,263,434.98	STA: 205+50 N: 499,633.37 E: 2,263,415.33	C6	206.00	41.35	STA: 203+35 N: 499,428.94 E: 2,263,480.86	STA: 203+76 N: 499,466.31 E: 2,263,463.32
				C7	506.00	48.71	STA: 204+19 N: 499,507.22 E: 2,263,448.92	STA: 204+68 N: 499,553.88 E: 2,263,434.98

LEGEND:

- FEMA FLOOD PLANE ZONE 'A'
- PERMANENT EASEMENT
- DELINEATED WETLANDS
- EXISTING DITCH EASEMENT
- DELINEATED WETLAND TO BE DISTURBED
- SANITARY PIPE
- GRAVEL ACCESS DRIVE
- GRASS PAVER ACCESS DRIVE
- REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
- CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
- PRIVATELY OWNED BRIDGE
- STORM PIPE



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER
 538 E. SOUTH STREET
 AKRON, OH 44311

REV NO	DATE	ISSUED BY	REMARKS

DESIGNED BY: MSE
 DRAWN BY: MAT
 SHEET CHK'D BY: MSE
 CROSS CHK'D BY: DCG
 APPROVED BY: MSE
 ISSUED DATE: 03/06/26

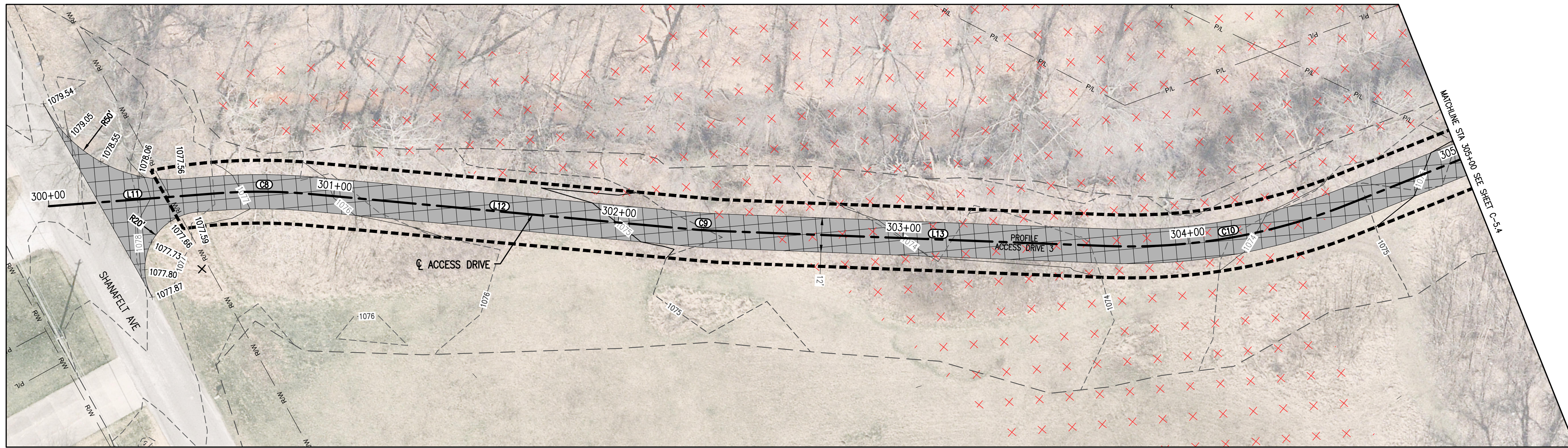


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

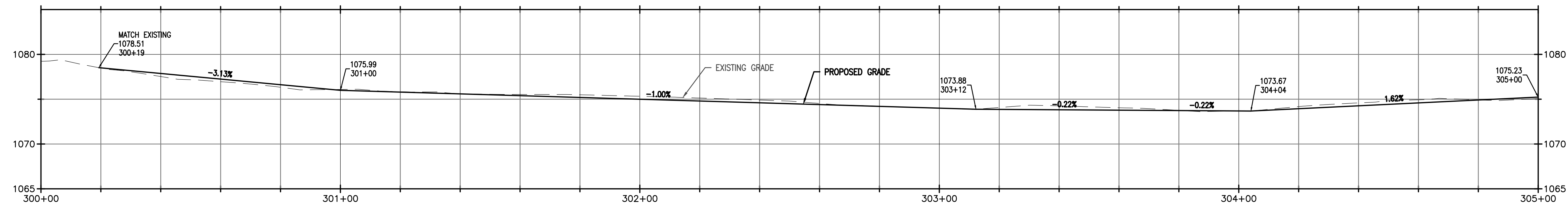
ACCESS DRIVE 2
PLAN & PROFILE STA
200+00 TO 205+50

WARNING
 0 1/2 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.: **C-5.2**



PLAN

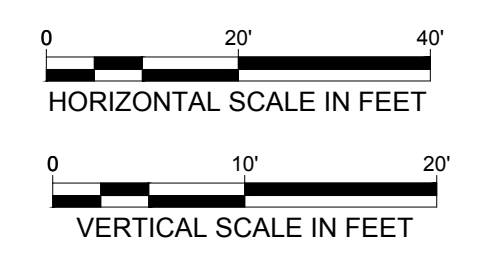


ACCESS DRIVE 3 PROFILE (300+00 TO 305+00)

PROPOSED ACCESS DRIVE LINE DATA				PROPOSED ACCESS DRIVE CURVE DATA				
LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
L11	59.19	STA: 300+00 N: 500,543.89 E: 2,262,232.70	STA: 300+59 N: 500,585.29 E: 2,262,274.99	C8	194.00	32.79	STA: 300+59 N: 500,585.29 E: 2,262,274.99	STA: 300+92 N: 500,606.15 E: 2,262,300.25
L12	132.28	STA: 300+92 N: 500,606.15 E: 2,262,300.25	STA: 302+24 N: 500,681.46 E: 2,262,408.99	C9	206.00	11.05	STA: 302+24 N: 500,681.46 E: 2,262,408.99	STA: 302+35 N: 500,687.99 E: 2,262,417.90
L13	136.00	STA: 302+35 N: 500,687.99 E: 2,262,417.90	STA: 303+71 N: 500,771.31 E: 2,262,525.39	C10	206.00	86.35	STA: 303+71 N: 500,771.31 E: 2,262,525.39	STA: 304+58 N: 500,836.77 E: 2,262,580.73

LEGEND:

- FEMA FLOOD PLANE ZONE 'A'
- DELINEATED WETLANDS
- DELINEATED WETLAND TO BE DISTURBED
- GRAVEL ACCESS DRIVE
- GRASS PAVER ACCESS DRIVE
- REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
- CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
- PRIVATELY OWNED BRIDGE
- PERMANENT EASEMENT
- EXISTING DITCH EASEMENT
- SANITARY PIPE
- STORM PIPE



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER
 538 E. SOUTH STREET
 AKRON, OH 44311

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 CROSS CHK'D BY: DCG
 APPROVED BY: MSE
 ISSUED DATE: 03/06/26

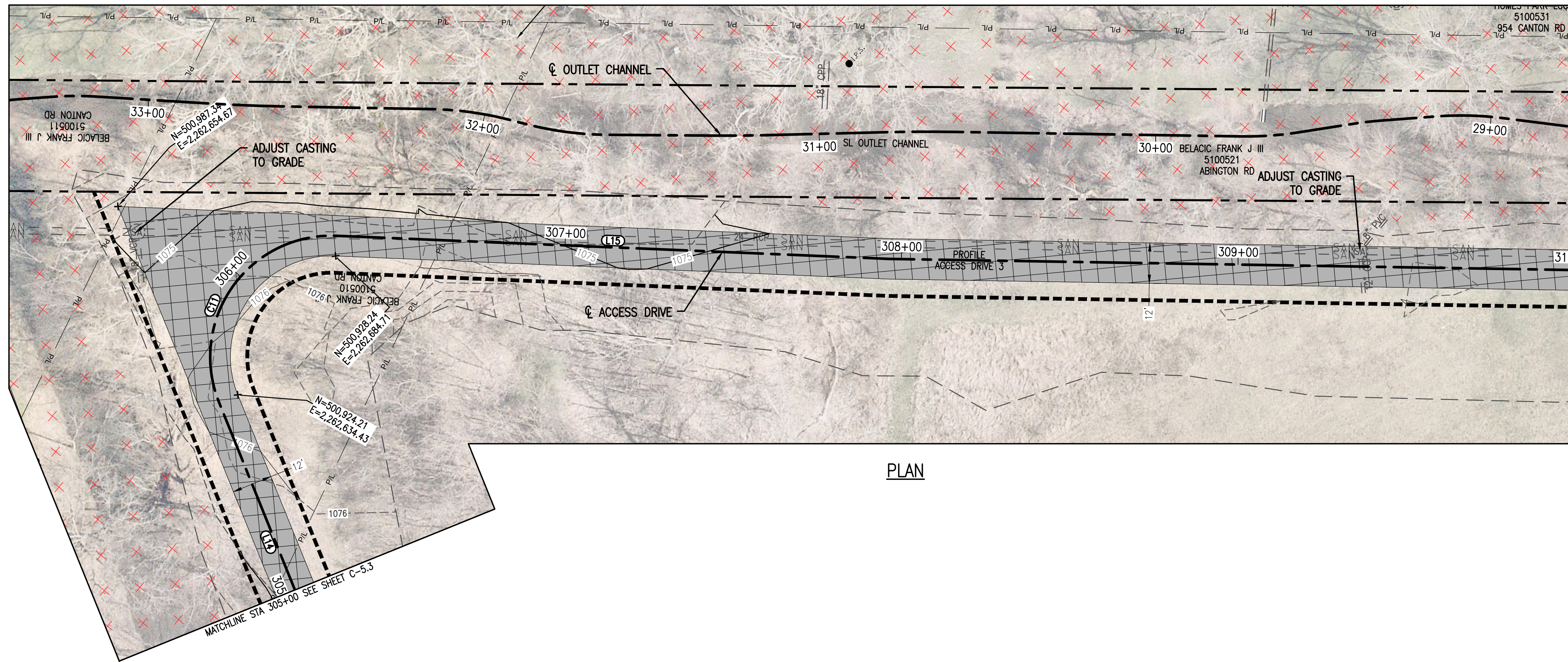


SURFACE WATER MANAGEMENT
 DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

ACCESS DRIVE 3
PLAN & PROFILE STA
300+00 TO 305+00

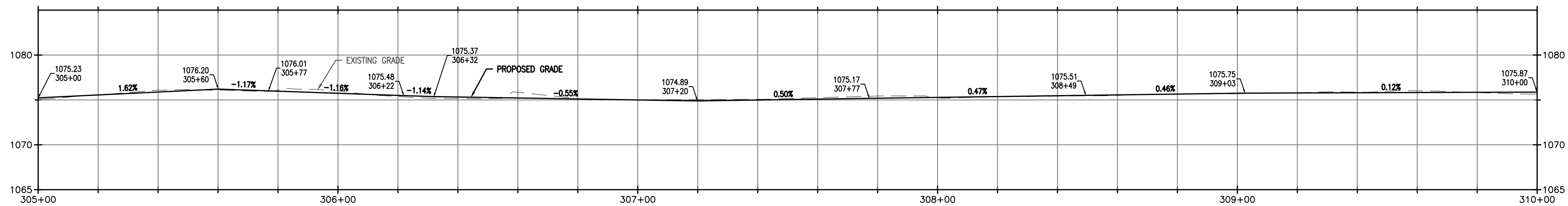
WARNING
 0 1/2 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.: **C-5.3**



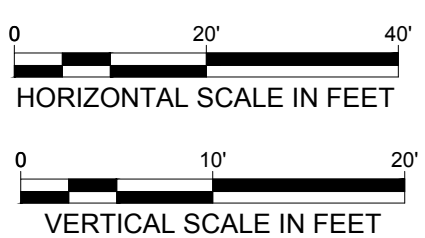
PLAN

- LEGEND:
- FEMA FLOOD PLANE ZONE 'A'
 - DELINEATED WETLANDS
 - DELINEATED WETLAND TO BE DISTURBED
 - GRAVEL ACCESS DRIVE
 - GRASS PAVER ACCESS DRIVE
 - REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
 - CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
 - PRIVATELY OWNED BRIDGE
 - PERMANENT EASEMENT
 - EXISTING DITCH EASEMENT
 - SANITARY PIPE
 - STORM PIPE



ACCESS DRIVE 3 PROFILE (305+00 TO 310+00)

PROPOSED ACCESS DRIVE LINE DATA				PROPOSED ACCESS DRIVE CURVE DATA				
LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
L14	102.44	STA: 304+58 N: 500,836.77 E: 2,262,580.73	STA: 305+60 N: 500,927.04 E: 2,262,629.14	C11	36.00	71.90	STA: 305+60 N: 500,927.04 E: 2,262,629.14	STA: 306+32 N: 500,931.88 E: 2,262,689.48
L15	164.38	STA: 306+32 N: 500,931.88 E: 2,262,689.48	STA: 307+96 N: 500,801.24 E: 2,262,789.25					

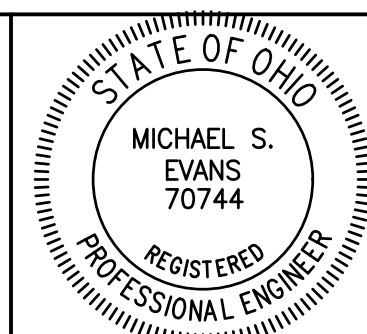


ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER

538 E. SOUTH STREET
AKRON, OH 44311

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DRAWN BY: MAT
SHEET CHK'D BY: MSE
CROSS CHK'D BY: DCG
APPROVED BY: MSE
ISSUED DATE: 03/06/26

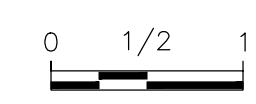


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

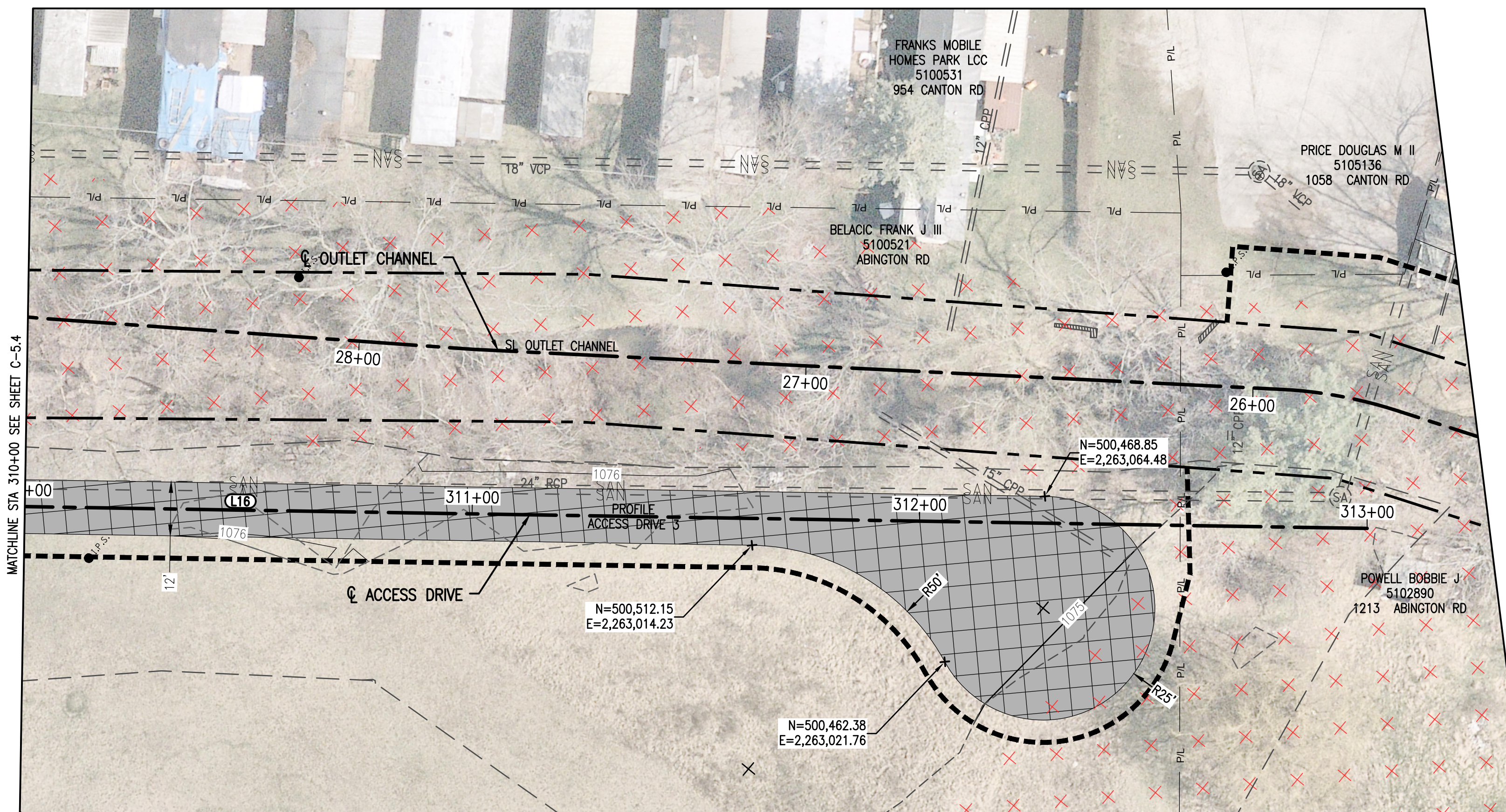
ACCESS DRIVE 3
PLAN & PROFILE STA
305+00 TO 310+00

WARNING



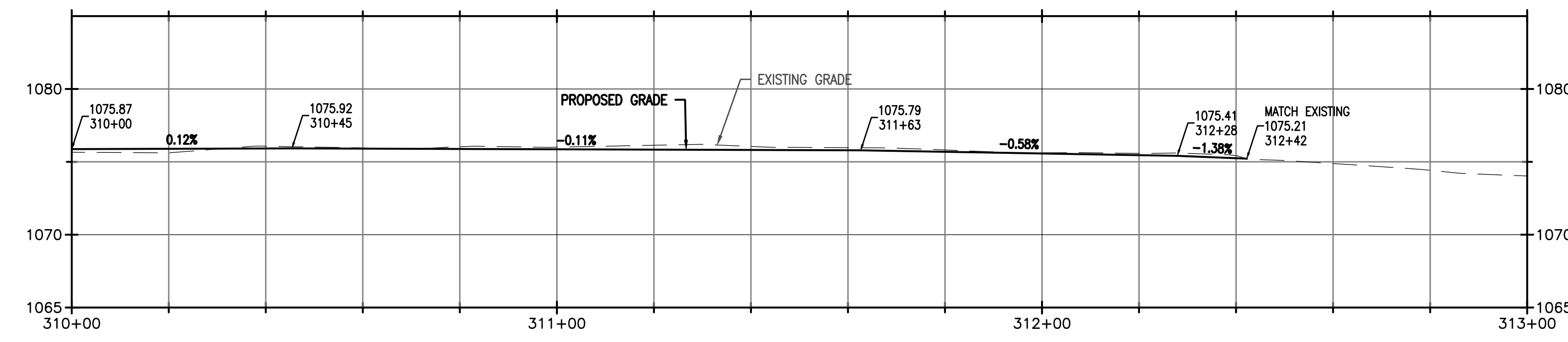
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-5.4



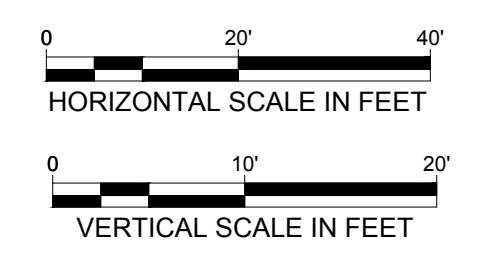
PLAN

- LEGEND:
- FEMA FLOOD PLANE ZONE 'A'
 - DELINEATED WETLANDS
 - DELINEATED WETLAND TO BE DISTURBED
 - GRAVEL ACCESS DRIVE
 - GRASS PAVER ACCESS DRIVE
 - REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
 - CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
 - PRIVATELY OWNED BRIDGE
 - PERMANENT EASEMENT
 - EXISTING DITCH EASEMENT
 - SANITARY PIPE
 - STORM PIPE



ACCESS DRIVE 3 PROFILE (310+00 TO 313+00)

PROPOSED ACCESS DRIVE LINE DATA			
LINE #	LENGTH (FT)	START POINT	END POINT
L16	503.63	STA: 307+96 N: 500,801.24 E: 2,262,789.25	STA: 313+00 N: 500,408.90 E: 2,263,105.03



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 538 E. SOUTH STREET
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 CROSS CHK'D BY: DCG
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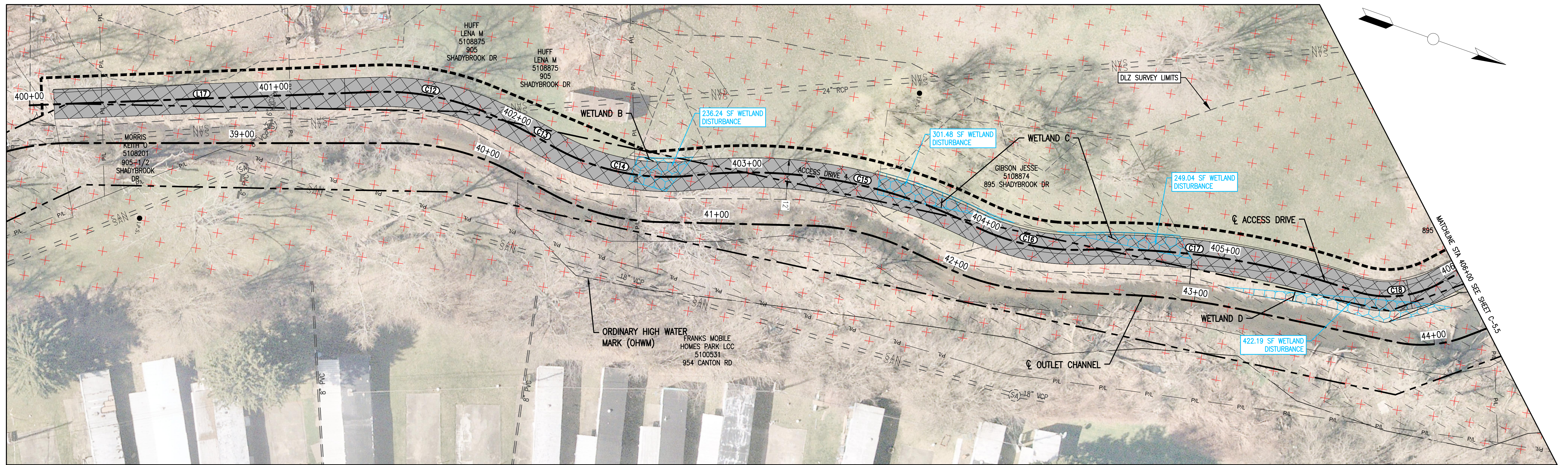
SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303
SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

ACCESS DRIVE 3
PLAN & PROFILE STA
310+00 TO 313+00

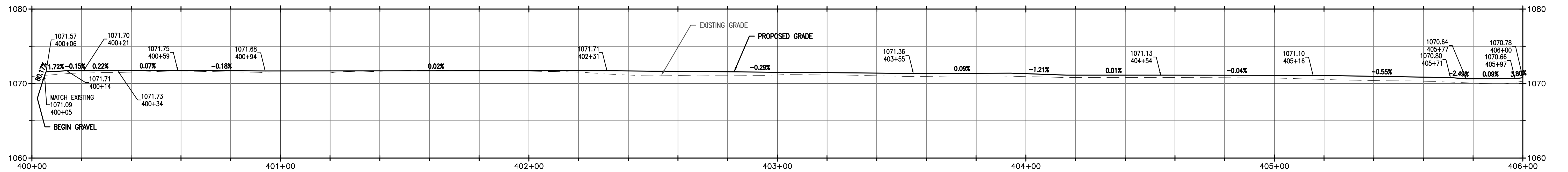
WARNING

 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.: **C-5.5**



PLAN

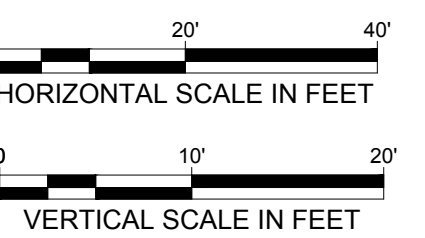


ACCESS DRIVE 4 PROFILE (400+00 TO 406+00)

PROPOSED ACCESS DRIVE LINE DATA				PROPOSED ACCESS DRIVE CURVE DATA				
LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
L17	140.95	STA: 400+00 N: 501,403.28 E: 2,262,360.42	STA: 401+41 N: 501,541.32 E: 2,262,331.95	C12	106.00	45.52	STA: 401+41 N: 501,541.32 E: 2,262,331.95	STA: 401+86 N: 501,586.49 E: 2,262,332.46
				C13	206.00	30.33	STA: 401+86 N: 501,586.49 E: 2,262,332.46	STA: 402+17 N: 501,615.44 E: 2,262,341.41
				C14	94.00	60.94	STA: 402+17 N: 501,615.44 E: 2,262,341.41	STA: 402+78 N: 501,675.25 E: 2,262,344.36
				C15	206.00	118.28	STA: 402+78 N: 501,675.25 E: 2,262,344.36	STA: 403+96 N: 501,791.90 E: 2,262,345.77
				C16	94.00	46.64	STA: 403+96 N: 501,791.90 E: 2,262,345.77	STA: 404+43 N: 501,838.00 E: 2,262,348.14
				C17	306.00	111.80	STA: 404+43 N: 501,838.00 E: 2,262,348.14	STA: 405+54 N: 501,949.17 E: 2,262,346.56
				C18	44.00	36.44	STA: 405+54 N: 501,949.17 E: 2,262,346.56	STA: 405+91 N: 501,983.52 E: 2,262,337.94

LEGEND:

- FEMA FLOOD PLANE ZONE 'A'
- DELINEATED WETLANDS
- DELINEATED WETLAND TO BE DISTURBED
- GRAVEL ACCESS DRIVE
- GRASS PAVER ACCESS DRIVE
- REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
- CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
- PRIVATELY OWNED BRIDGE
- PERMANENT EASEMENT
- EXISTING DITCH EASEMENT
- SANITARY PIPE
- STORM PIPE

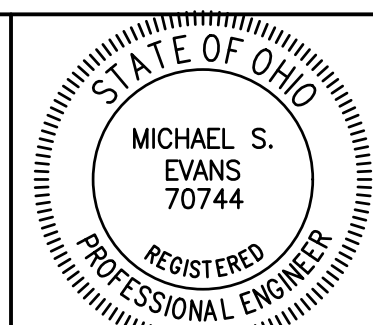


ALAN BRUBAKER, P.E., P.S.
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538 E. SOUTH STREET
AKRON, OH 44311

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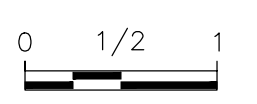


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

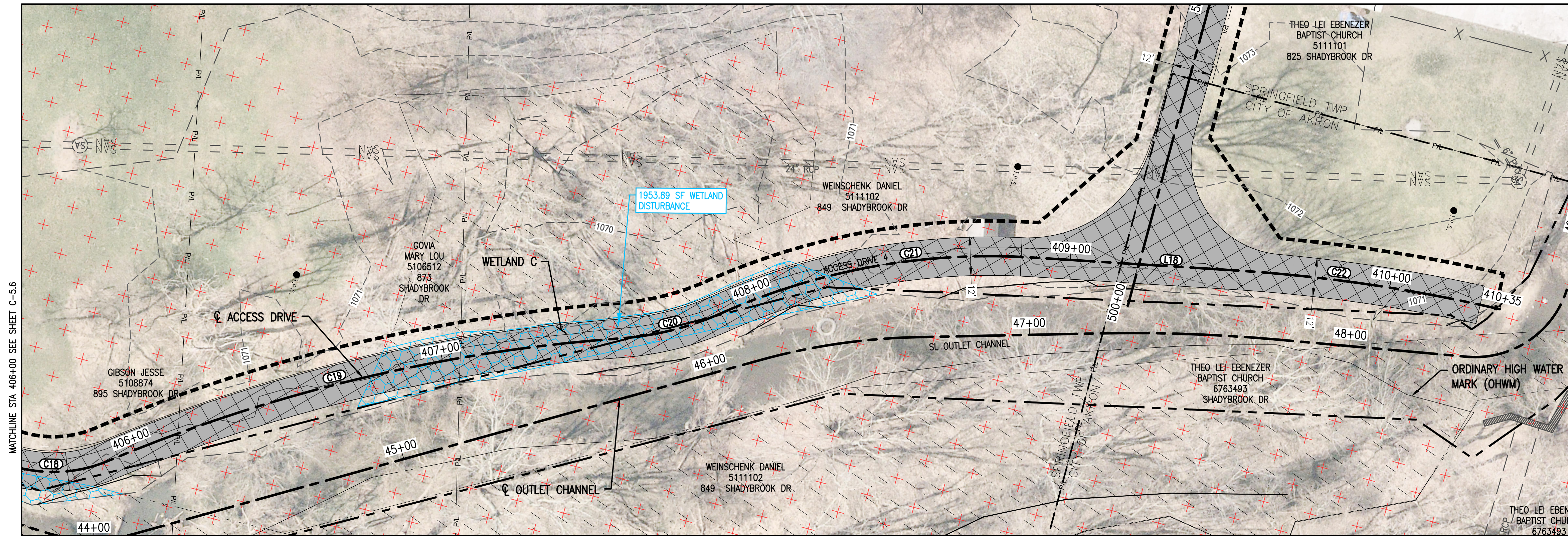
ACCESS DRIVE 4
PLAN & PROFILE STA
400+00 TO 406+00

WARNING

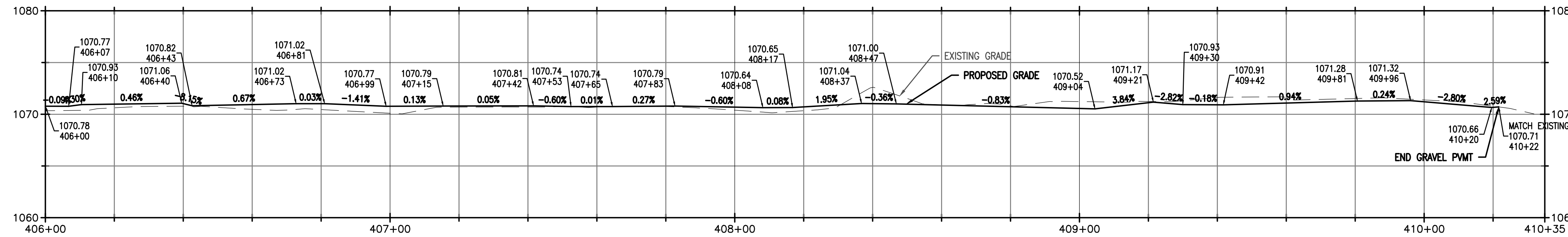


IF THIS BAR DOES
NOT MEASURE 1"
THEN DRAWING IS
NOT TO SCALE

SHEET NO.:
C-5.6



PLAN

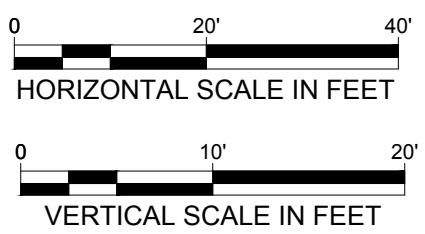


ACCESS DRIVE 4 PROFILE (406+00 TO 410+35)

PROPOSED ACCESS DRIVE LINE DATA				PROPOSED ACCESS DRIVE CURVE DATA				
LINE #	LENGTH (FT)	START POINT	END POINT	CURVE #	RADIUS (FT)	LENGTH (FT)	START POINT	END POINT
L18	63.68	STA: 408+88 N: 502,245.40 E: 2,262,202.03	STA: 409+52 N: 502,307.83 E: 2,262,189.48	C18	44.00	36.44	STA: 405+54 N: 501,949.17 E: 2,262,346.56	STA: 405+91 N: 501,983.52 E: 2,262,337.94
				C19	506.00	165.12	STA: 405+91 N: 501,983.52 E: 2,262,337.94	STA: 407+56 N: 502,128.04 E: 2,262,259.62
				C20	94.00	32.61	STA: 407+56 N: 502,128.04 E: 2,262,259.62	STA: 407+89 N: 502,156.40 E: 2,262,243.86
				C21	206.00	99.29	STA: 407+89 N: 502,156.40 E: 2,262,243.86	STA: 408+88 N: 502,245.40 E: 2,262,202.03
				C22	506.00	83.41	STA: 409+52 N: 502,307.83 E: 2,262,189.48	STA: 410+35 N: 502,390.58 E: 2,262,179.84

LEGEND:

- FEMA FLOOD PLANE ZONE 'A'
- DELINEATED WETLANDS
- DELINEATED WETLAND TO BE DISTURBED
- GRAVEL ACCESS DRIVE
- GRASS PAVER ACCESS DRIVE
- REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
- CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
- PRIVATELY OWNED BRIDGE
- PERMANENT EASEMENT
- EXISTING DITCH EASEMENT
- SANITARY PIPE
- STORM PIPE

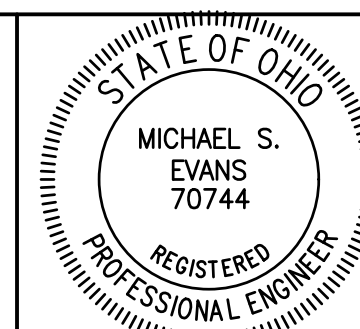


ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER

538 E. SOUTH STREET
AKRON, OH 44311

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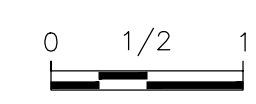


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

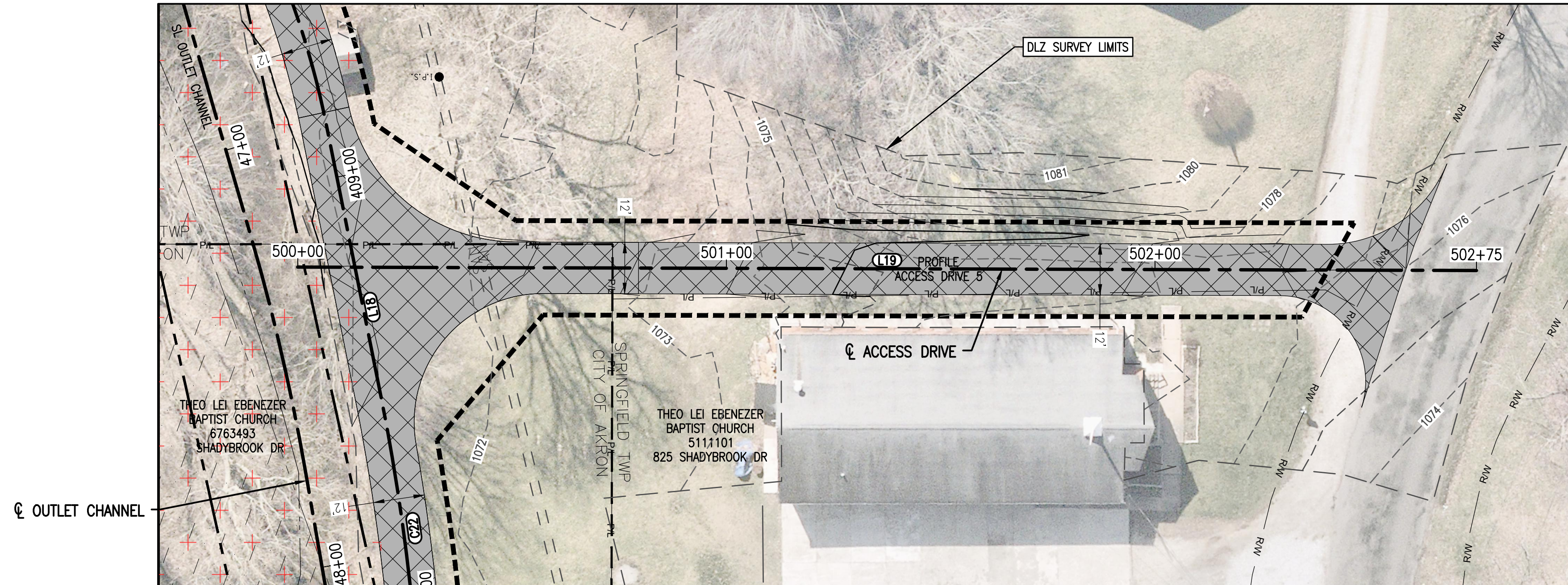
ACCESS DRIVE 4
PLAN & PROFILE STA
406+00 TO 410+35

WARNING

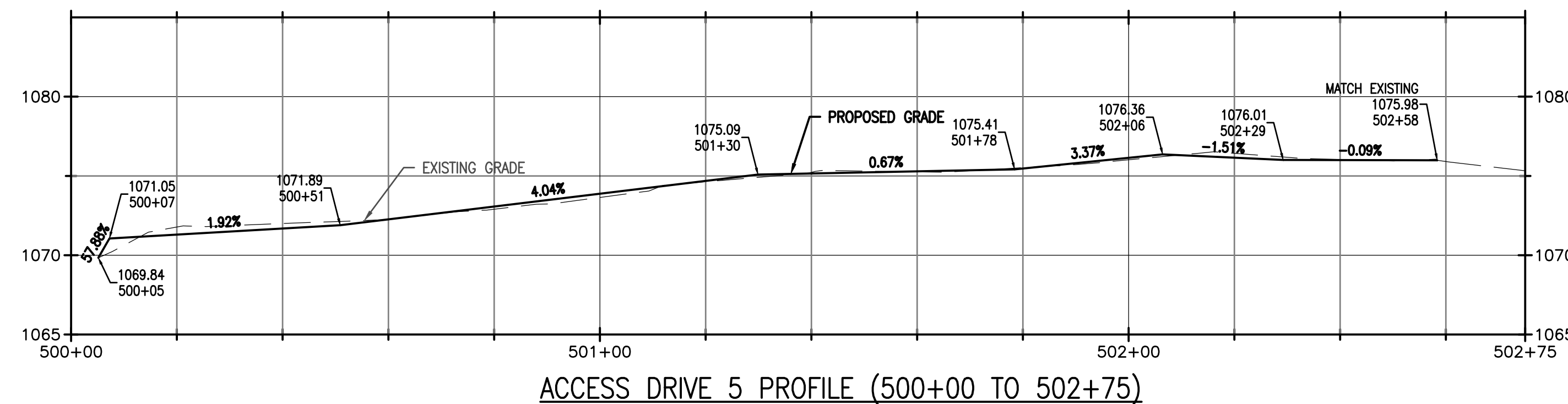


IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-5.7



PLAN

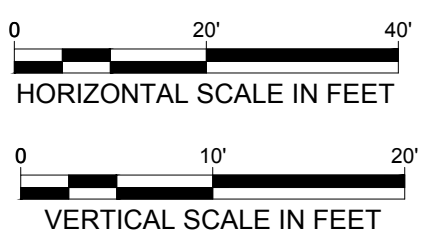


ACCESS DRIVE 5 PROFILE (500+00 TO 502+75)

PROPOSED ACCESS DRIVE LINE DATA			
LINE #	LENGTH (FT)	START POINT	END POINT
L19	275.00	STA: 500+00 N: 502,278.24 E: 2,262,208.79	STA: 502+75 N: 502,279.03 E: 2,261,933.79

LEGEND:

- FEMA FLOOD PLANE ZONE 'A'
- DELINEATED WETLANDS
- DELINEATED WETLAND TO BE DISTURBED
- GRAVEL ACCESS DRIVE
- GRASS PAVER ACCESS DRIVE
- REMOVE AND REPLACE RESIDENTIAL DRIVEWAY
- CONSTRUCTION/MAINTENANCE DRIVE (EXISTING - TO REMAIN)
- PRIVATELY OWNED BRIDGE
- PERMANENT EASEMENT
- EXISTING DITCH EASEMENT
- SANITARY PIPE
- STORM PIPE

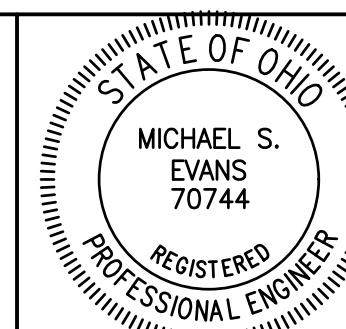


ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER

538 E. SOUTH STREET
AKRON, OH 44311

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SHEET CHK'D BY: MSE
CROSS CHK'D BY: DCG
APPROVED BY: MSE
ISSUED DATE: 03/06/26

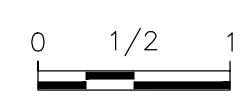


SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

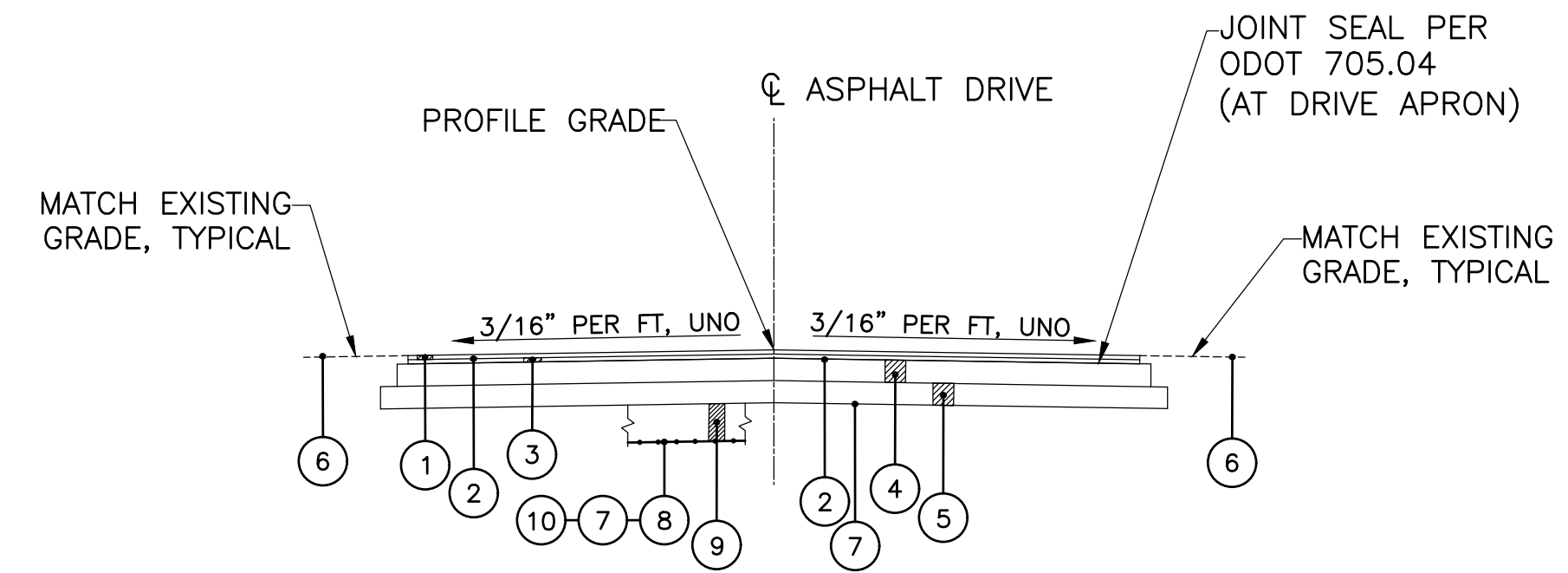
ACCESS DRIVE PLAN
& PROFILE STA
500+00 TO 502+75

WARNING



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SHEET NO.:
C-5.8



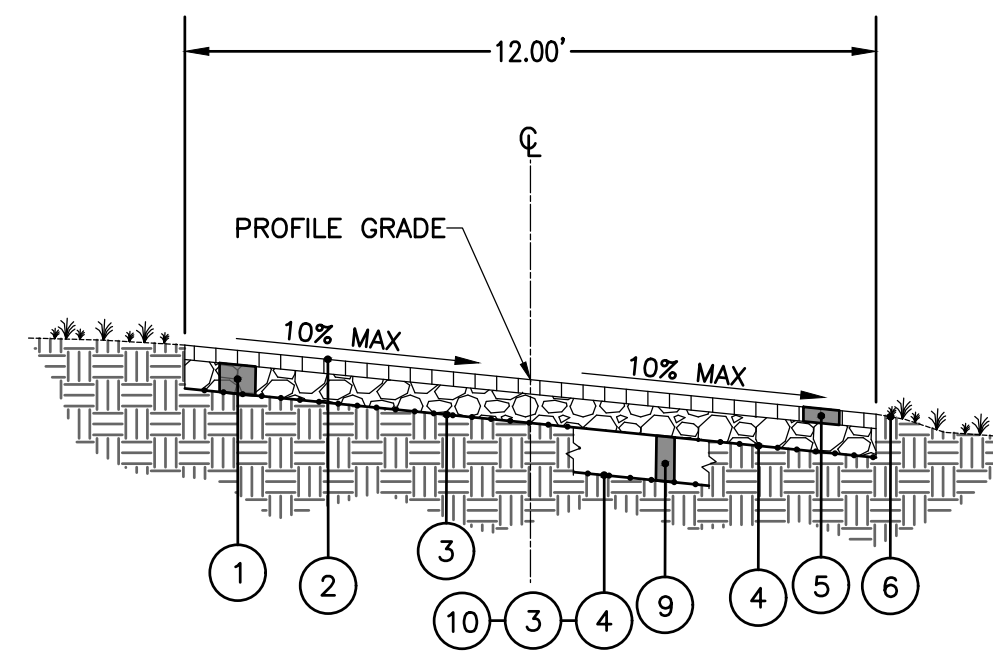
**PROPOSED TYPICAL SECTION
RESIDENTIAL DRIVEWAY**
(UTILITIES NOT SHOWN)
SCALE: NOT TO SCALE

LEGEND

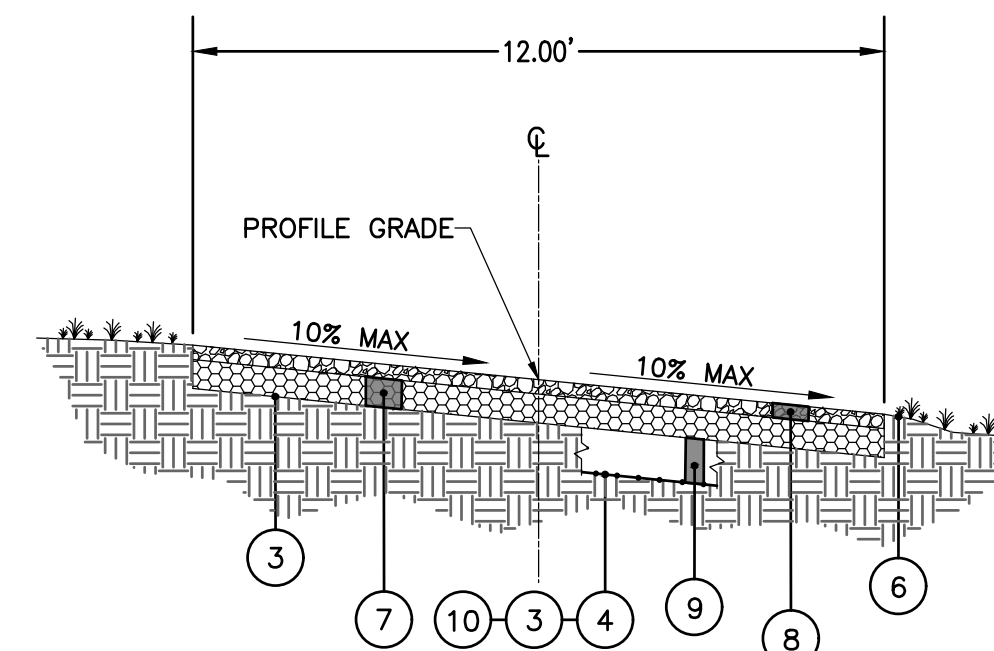
- | | |
|---|--|
| ① 1-1/4" ODOT ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 | ⑧ TENSAR BX 1100 GEOGRID OR APPROVED EQUAL |
| ② ODOT ITEM 407 TACK COAT FOR ASPHALT BASE COURSE (0.08 GAL/SY) | ⑨ ODOT ITEM 203, GRANULAR MATERIAL, TYPE E |
| ③ 1-3/4" ODOT ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22 | ⑩ WOVEN GEOTEXTILE FABRIC, TYPE A |
| ④ 3" MIN ODOT ITEM 301, ASPHALT BASE | |
| ⑤ 4" MIN ODOT ITEM 304, AGGREGATE BASE | |
| ⑥ SEED AND MULCH DISTURBED AREAS, ITEM 659 | |
| ⑦ ITEM 204 SUBGRADE COMPACTION, AS PER PLAN | |

NOTES:

1. DRIVEWAY WIDTH VARIES, MATCH EXISTING DRIVEWAY LIMITS.
2. EXTEND WIDTH OF ASPHALT BASE COURSE 4-INCHES BEYOND SURFACE AND INTERMEDIATE COURSE.
3. EXTEND WIDTH OF AGGREGATE BASE COURSE 6-INCHES BEYOND ASPHALT BASE COURSE.
4. UNDERCUT LOCATIONS TO BE DETERMINED BY ENGINEER. UNDERCUT DEPTH TO BE 2' MINIMUM OR AS DIRECTED BY THE ENGINEER. UNDERCUT DETAIL APPLIES TO RESIDENTIAL DRIVEWAY, GRAVEL ACCESS DRIVES AND GRASS PAVER ACCESS DRIVE.



**REINFORCED TURF
ACCESS DRIVE
TYPICAL SECTION**



**AGGREGATE MAINTENANCE
ACCESS DRIVE
TYPICAL SECTION**

LEGEND

- | | |
|--|--|
| ① ODOT ITEM 304, 6" AGGREGATE BASE | ⑥ ODOT ITEM 209, LINEAR GRADING AS NEEDED |
| ② ODOT ITEM 659, SEEDING AND MULCHING | ⑦ ODOT ITEM 304, 6" #1 STONE |
| ③ ODOT ITEM 204, COMPACTED SUBGRADE | ⑧ ODOT ITEM 304, 3" #57 STONE |
| ④ TENSAR BX 1100 GEOGRID OR APPROVED EQUAL | ⑨ ODOT ITEM 203, GRANULAR MATERIAL, TYPE E |
| ⑤ ODOT ITEM 653, 3" TOPSOIL | ⑩ WOVEN GEOTEXTILE FABRIC, TYPE A |

NOTES:

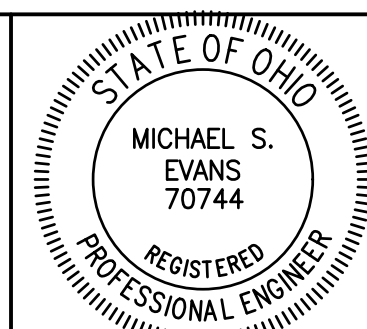
1. UNDERCUT LOCATIONS TO BE DETERMINED BY ENGINEER. UNDERCUT DEPTH TO BE 2' MINIMUM OR AS DIRECTED BY THE ENGINEER. UNDERCUT DETAIL APPLIES TO RESIDENTIAL DRIVEWAY, GRAVEL ACCESS DRIVES AND GRASS PAVER ACCESS DRIVE.
2. IN AREAS WHERE UNDERCUT IS DETERMINED NECESSARY WITHIN THE REINFORCED TURF ACCESS DRIVE, LEGEND ITEM ④ "TENSAR BX 1100 GEOGRID" SHALL BE REPLACED WITH LEGEND ITEM ⑩ "WOVEN GEOTEXTILE FABRIC, TYPE A".



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER
538 E. SOUTH STREET
AKRON, OH 44311

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DRAWN BY: MAT
SHEET CHK'D BY: MSE
CROSS CHK'D BY: DCG
APPROVED BY: MSE
ISSUED DATE: 03/06/26

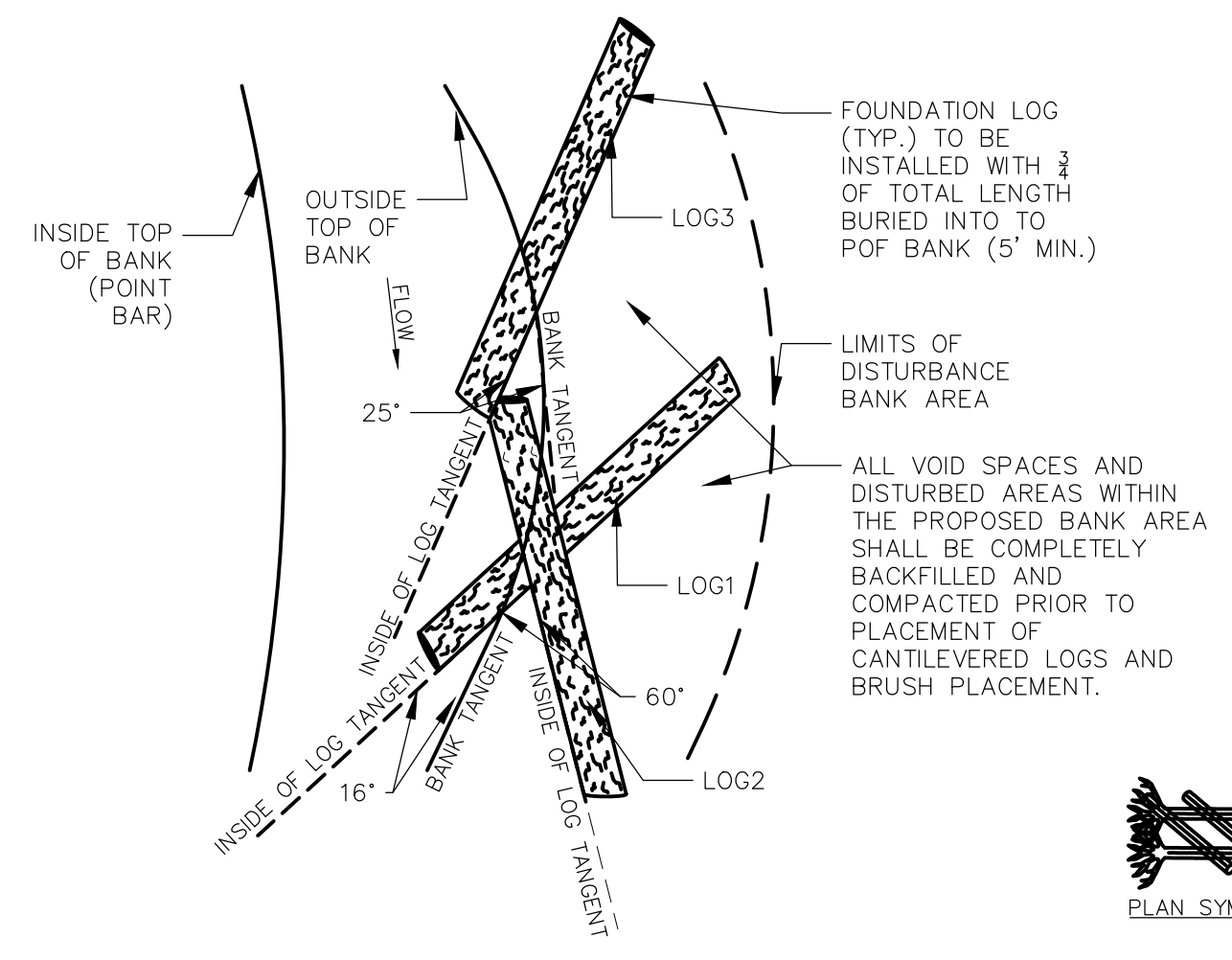


**SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303**
**SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS**

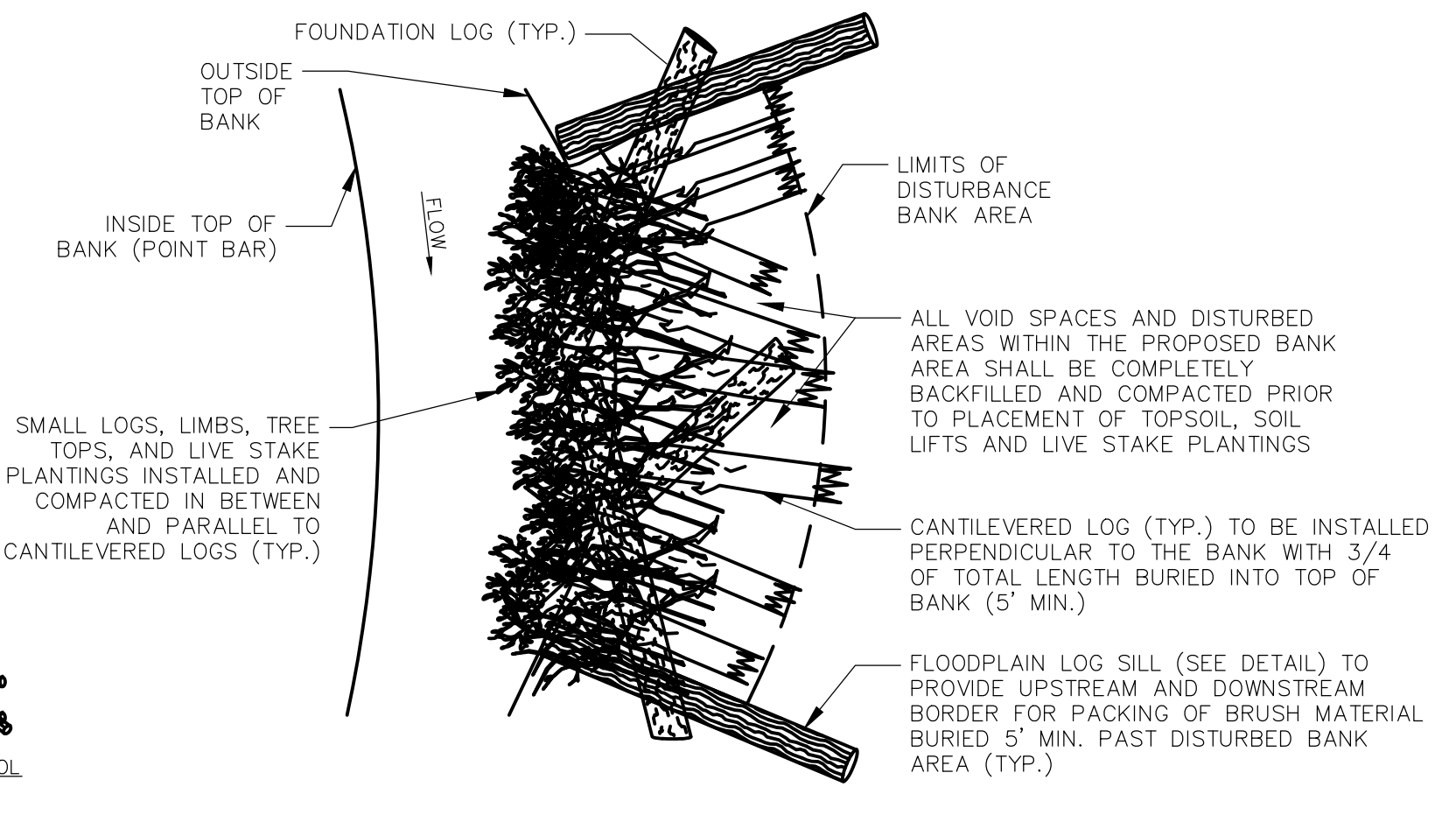
PAVEMENT DETAILS

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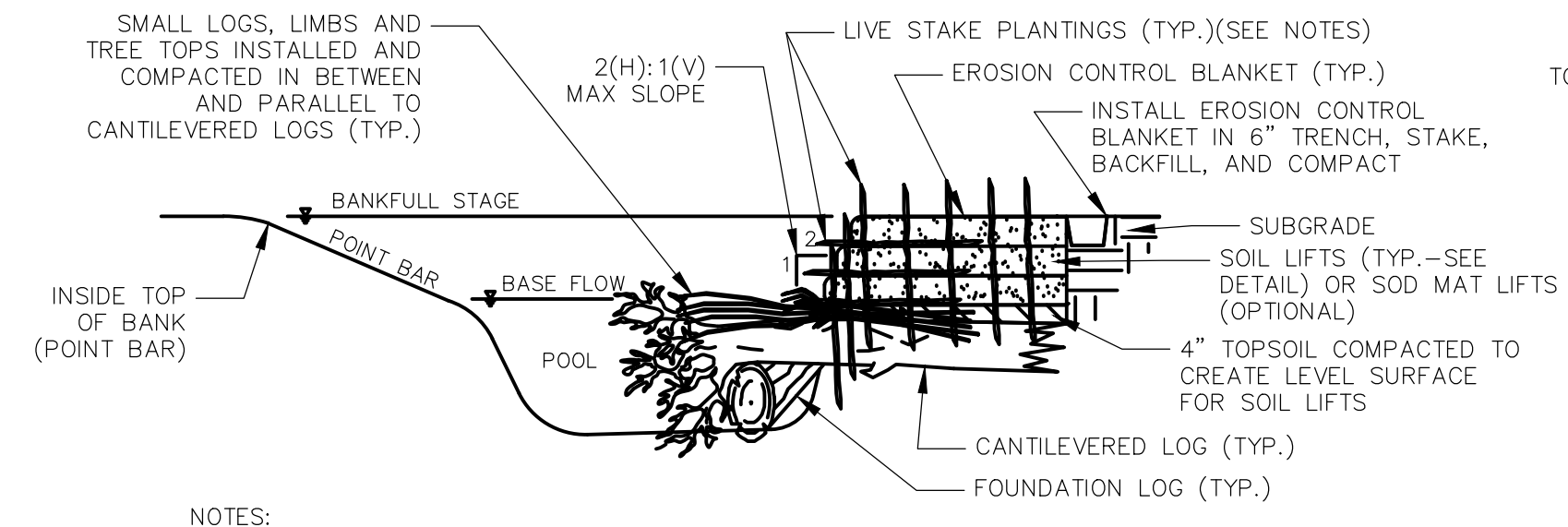
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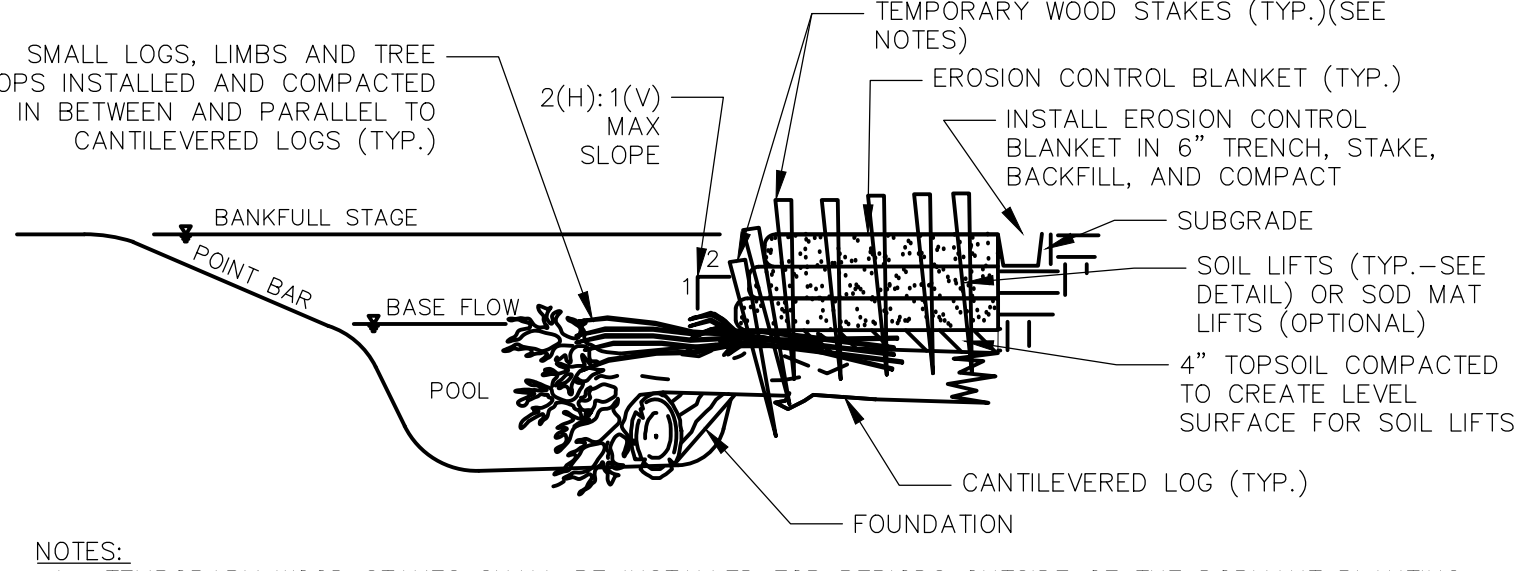
STEP 1 - FOUNDATION LOGS (PLAN VIEW)



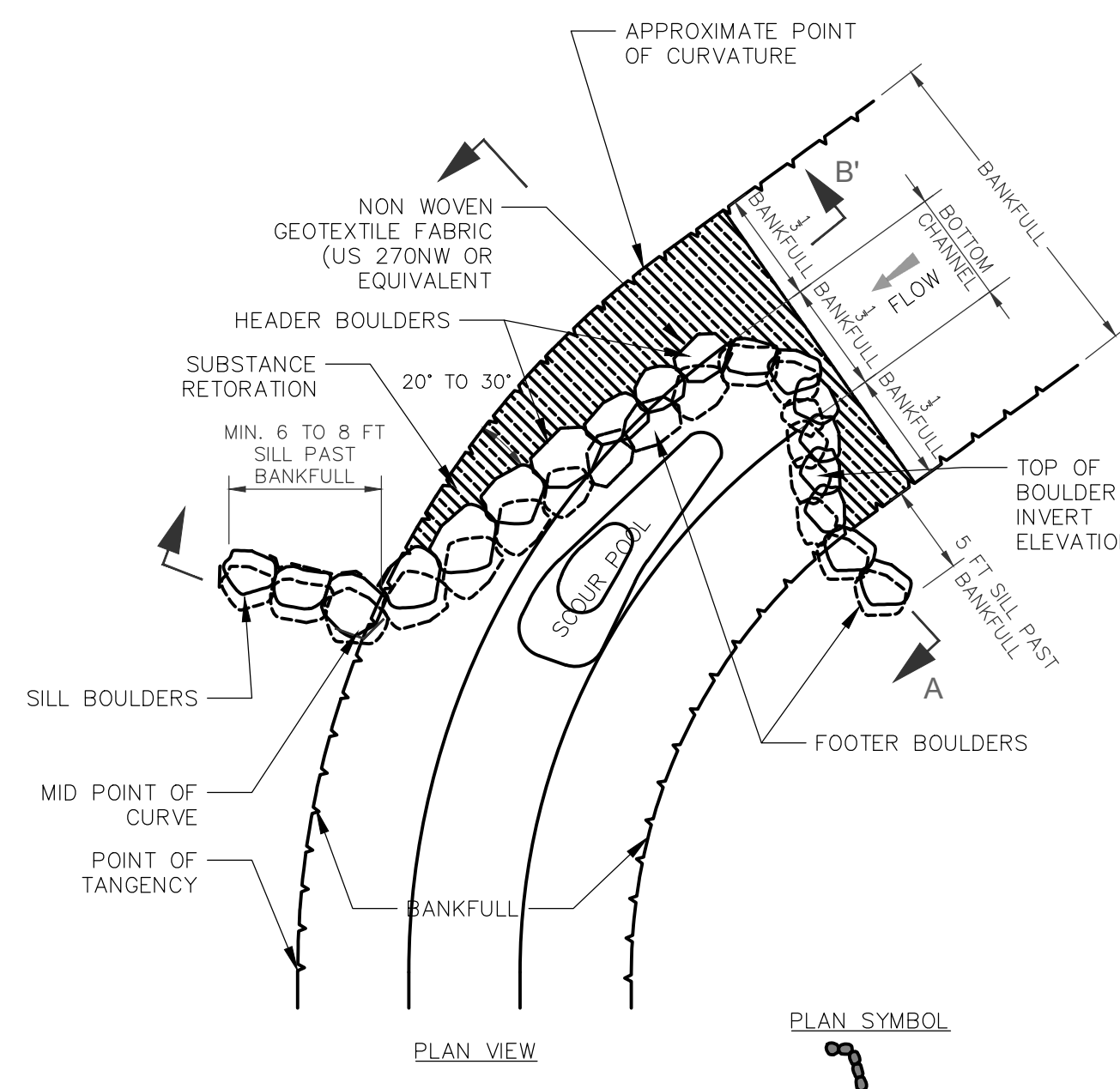
STEP 2 - CANTILEVERED LOGS AND BRUSH PLACEMENT (PLAN VIEW)



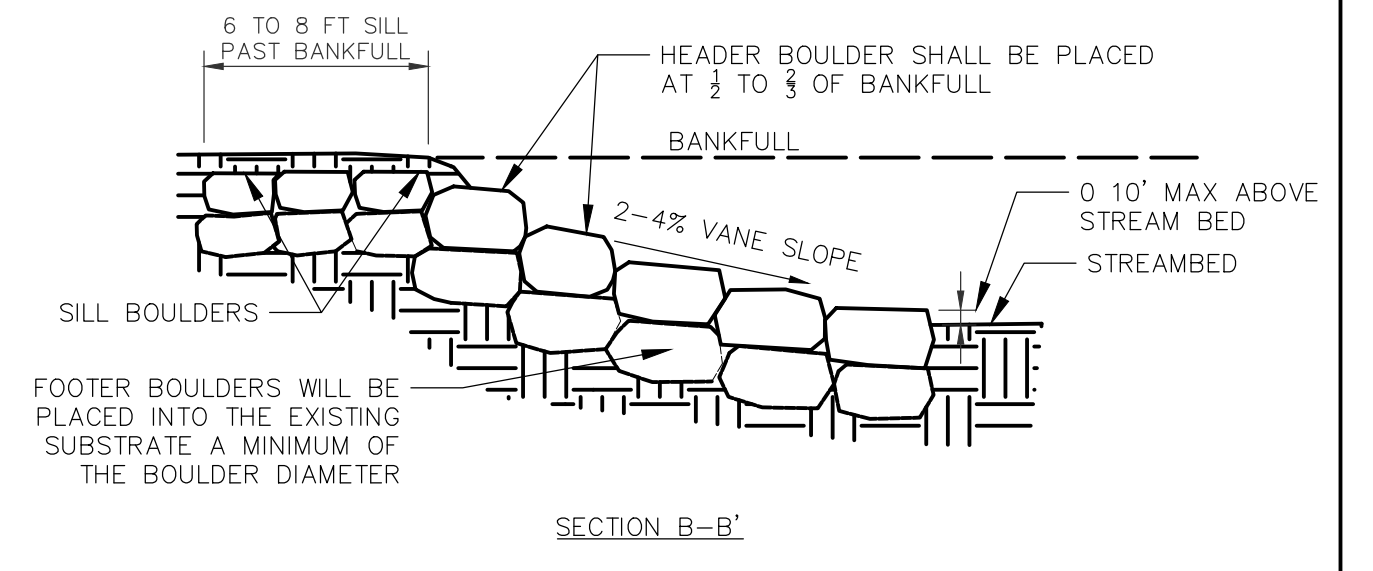
STEP 3 - SOIL LIFTS AND LIVE STAKE PLANTINGS DURING DORMANT PLANTING SEASON (SECTION VIEW)



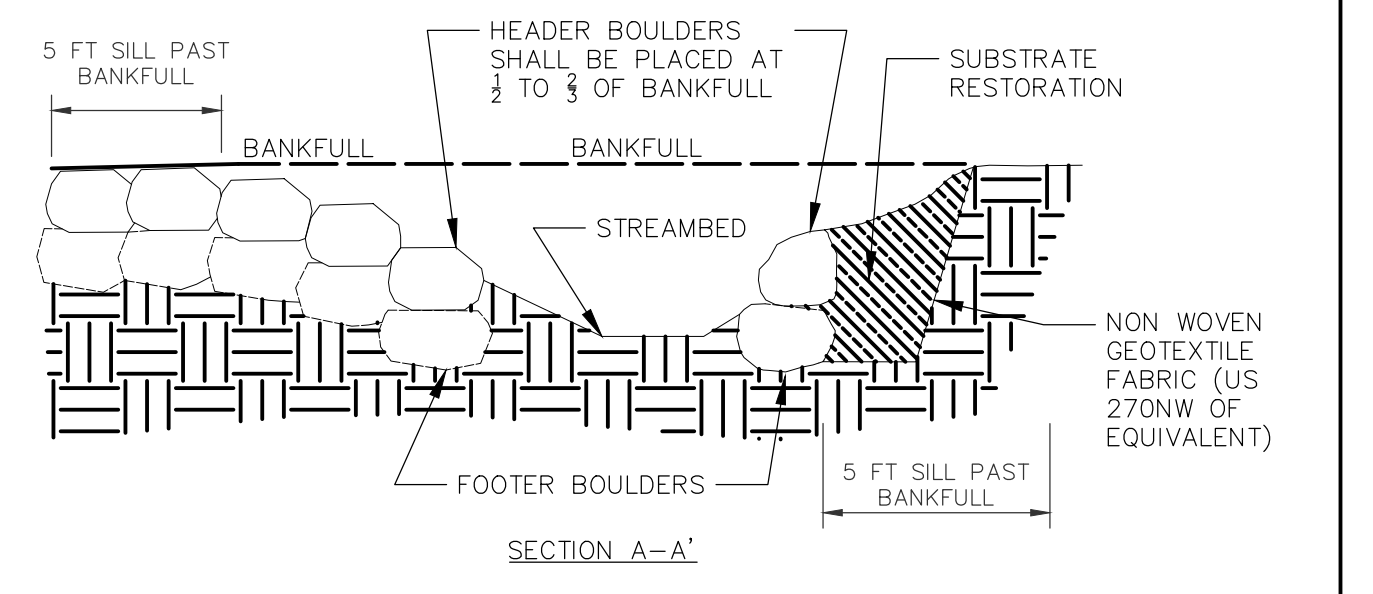
STEP 3 - SOIL LIFTS AND TEMPORARY WOOD STAKES OUTSIDE OF THE DORMANT PLANTING SEASON (SECTION VIEW)



PLAN VIEW



SECTION B-B'



SECTION A-A'

- NOTES:
1. ALL BOULDERS SHALL BE A MINIMUM DIAMETER OF 2-FT.
 2. GAPS BETWEEN BOULDERS SHALL BE MINIMIZED BY FITTING BOULDERS TOGETHER, AND PLUGGING WITH SELECT MATERIAL AND LINED WITH FILTER FABRIC. THE CONTRACTOR WILL BE REQUIRED TO FIT BOULDERS TIGHTLY.
 3. DIMENSIONS AND SLOPES MAYBE ADJUSTED TO FIT BY THE ENGINEER.
 4. A DOUBLE FOOTER BOULDER SHALL BE UTILIZED IN SAND BED MATERIAL.
 5. VANE ARM SHALL TIE INTO THE BANK HALFWAY BETWEEN THE CHANNEL INVERT AND BANKFULL ELEVATIONS. THE ARM SHALL RISE AT 2%-4% FROM THE CHANNEL INVERT AT AN ANGLE OF 20-30 DEG FROM THE ADJACENT TANGENT LINE.
 6. NON-WOVEN GEOTEXTILE FILTER FABRIC (US 270NW OR SIMILAR) SHALL BE PLACED ON THE UPSTREAM SIDE OF THE VANE STRUCTURE TO PREVENT WASHOUT OF SEDIMENT THROUGH BOULDER GAPS. FILTER FABRIC SHALL EXTEND FROM THE BOTTOM OF THE FOOTER BOULDER TO THE FINISHED GRADE ELEVATION AND SHALL BE PLACED THE ENTIRE LENGTH OF THE STRUCTURE.
 7. ALL MATERIALS ARE TO BE APPROVED BY THE ENGINEER OR THE ENGINEER'S ON-SITE CONSTRUCTION OBSERVER.

1 TOE WOOD DETAIL

SCALE: NOT TO SCALE

2 GRADE CONTROL BOULDER VANE W/ J-HOOK

SCALE: NOT TO SCALE



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER
 538 E. SOUTH STREET
 AKRON, OH 44311

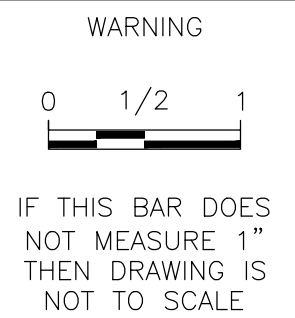
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 APPROVED BY: KGH
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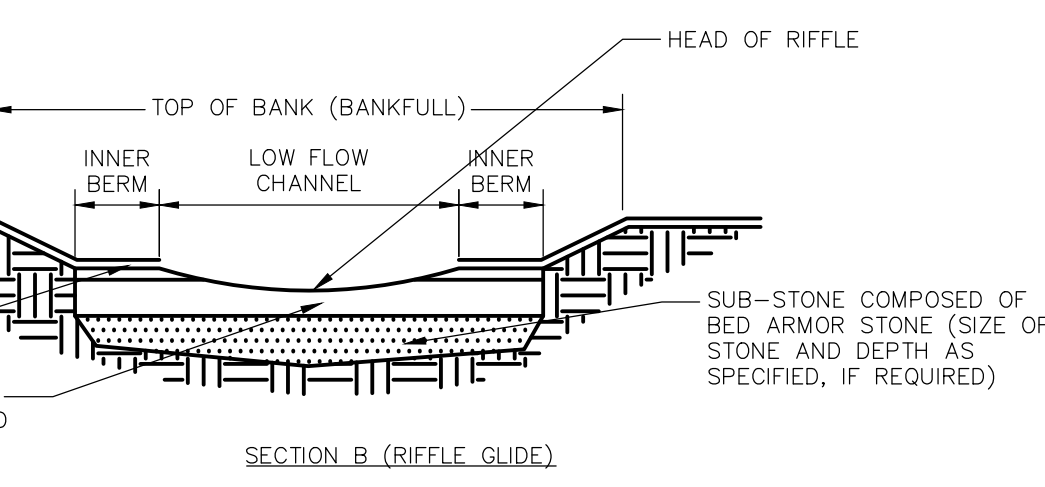
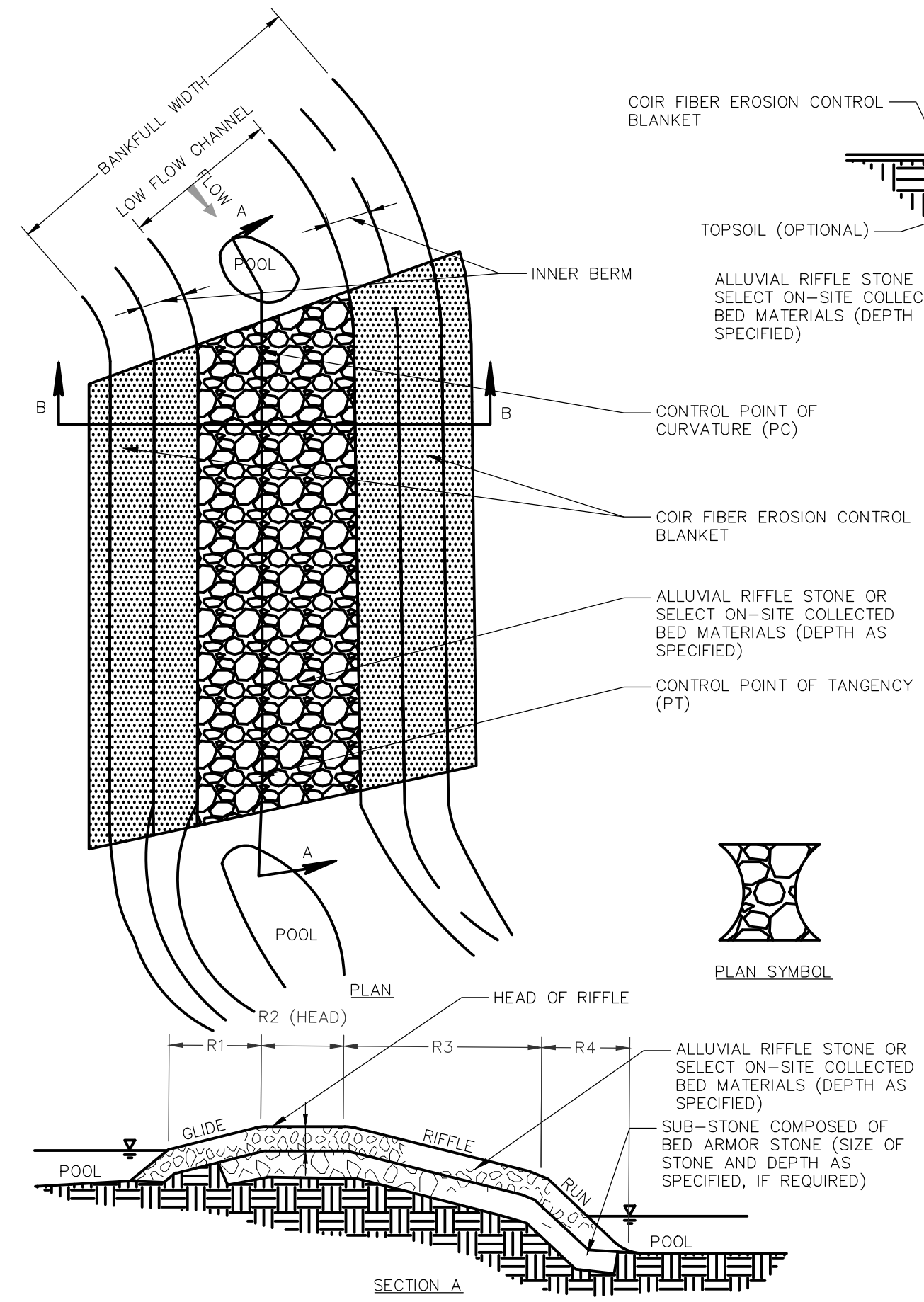


SURFACE WATER MANAGEMENT
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SPRINGFIELD LAKE
CHANNEL RESTORATION
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DETAILS



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STREAM RESTORATION DATA TABLE

ALLUVIAL RIFFLE STONE MATERIAL SIZE/AMOUNT	
STONE TYPE (RIVERSTONE OR SANDSTONE):	STONE QTY BY WEIGHT (%):
AASHTO #57 (WASHED) (3/8"-1")	15%
ODOT #1 (3.5"-1.5")	40%
ODOT #2 (2.5"-1.5")	15%
ODOT TYPE D RIP RAP (4"-12")	30%
ODOT TYPE C RIP RAP (6"-18")	0%
ODOT TYPE B RIP RAP (12"-24")	0%
ODOT TYPE A RIP RAP (18"-30")	0%

ALLUVIAL RIFFLE STONE DEPTH

RESTORATION STATIONS:	DEPTH OF RIFFLE (MIN.)
ALL STATIONS	1'-0"

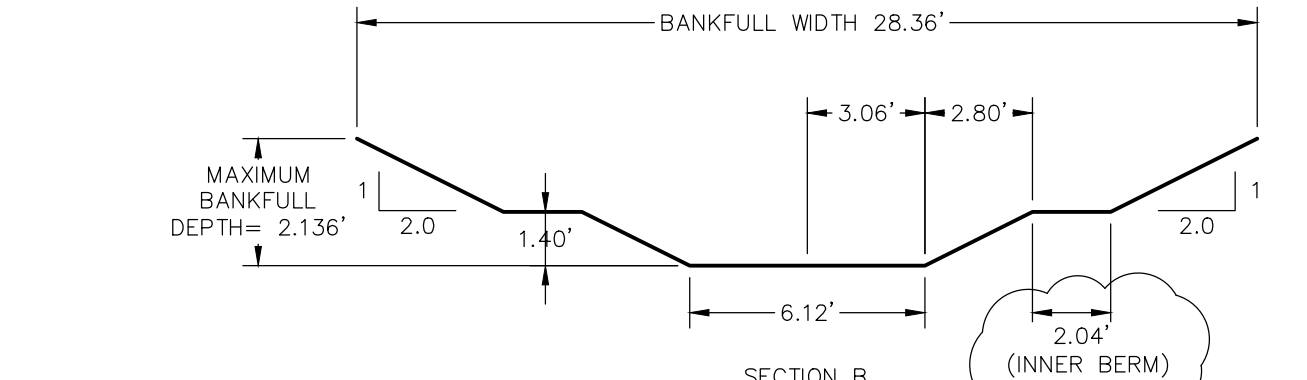
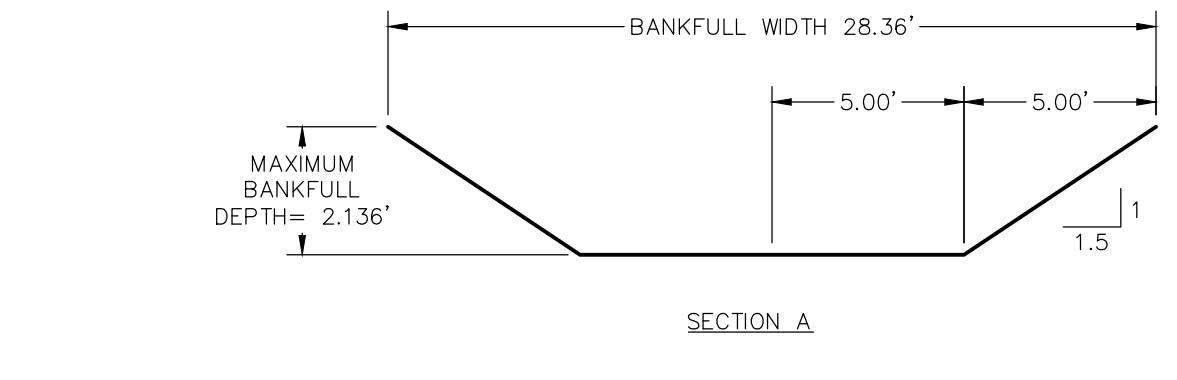
SUB-STONE TYPE & DEPTH

RESTORATION STATIONS:	STONE TYPE & DEPTH (MIN.)
ALL STATIONS	N/A

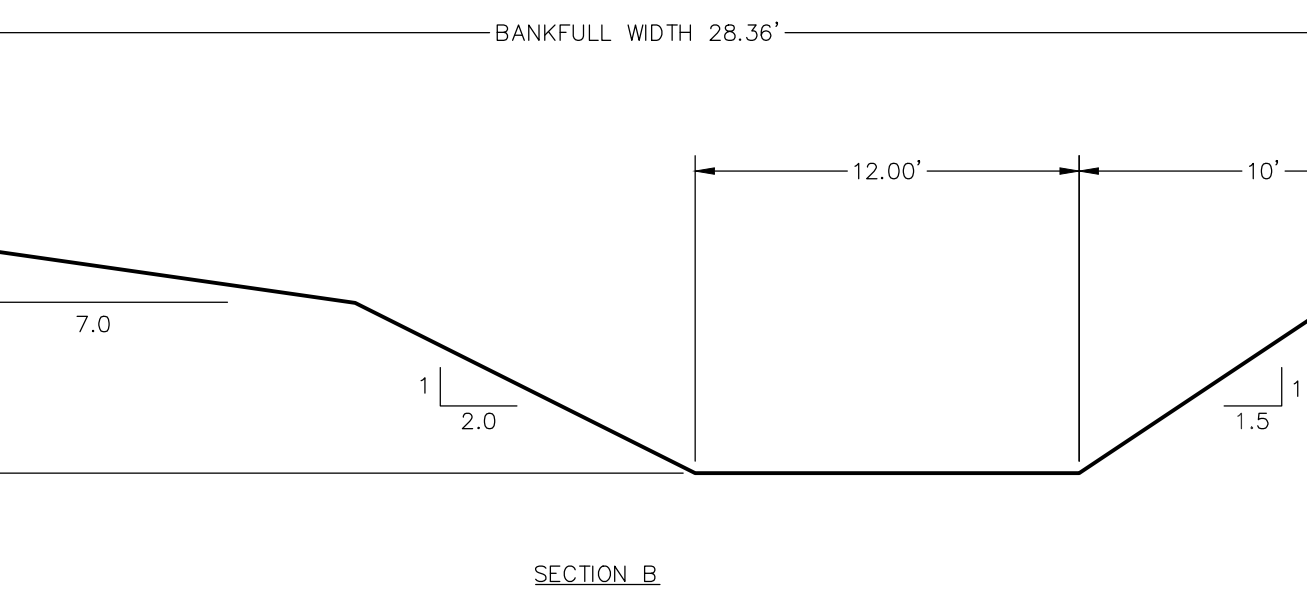
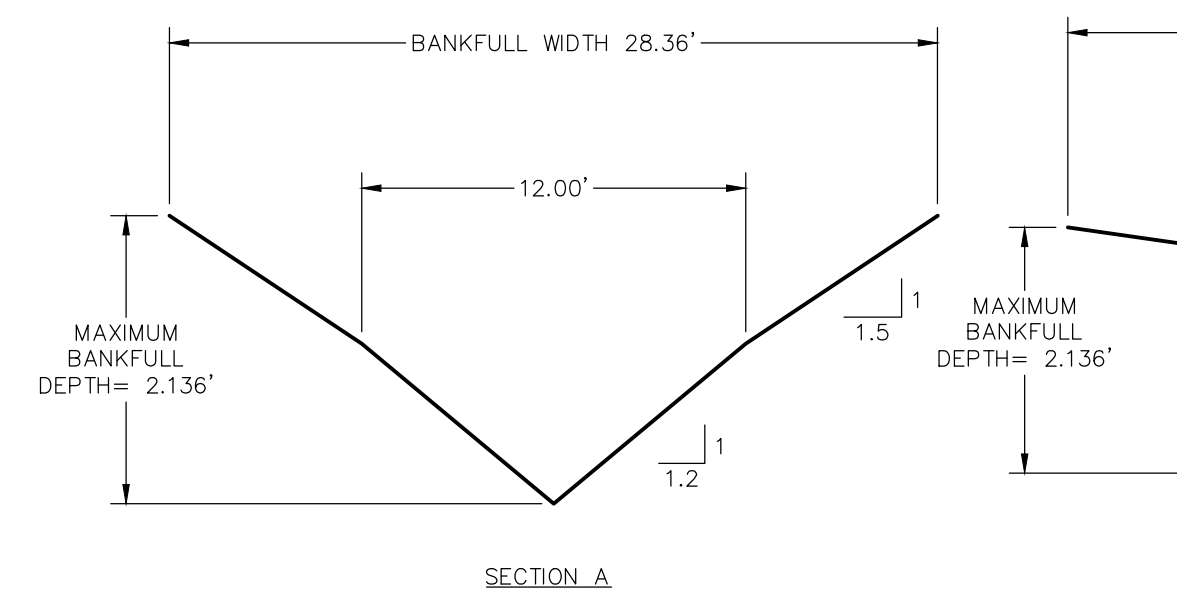
STREAM RESTORATION DATA TABLE (RIFFILES)

RIFFILE STATION (HEAD)	RIFFILE ELEV. (HEAD)	R1 (GLIDE)	R2 (HEAD)	R3 (RIFFILE)	R4 (RUN)
3+11.67	1073.9800	2'-6"	4'-0"	6'-0"	2'-6"
4+28.55	1073.4300	2'-6"	4'-0"	6'-0"	2'-6"
6+92.65	1073.1100	2'-6"	4'-0"	6'-0"	2'-6"
7+76.95	1072.6300	2'-6"	4'-0"	6'-0"	2'-6"
8+96.62	1072.7400	2'-6"	4'-0"	6'-0"	2'-6"

- NOTES:**
- CONSTRUCTED ALLUVIAL RIFFILES ARE GRADE CONTROL AND HABITAT ENHANCEMENT MEASURES THAT ARE USED TO MAINTAIN GRADE OF UPSTREAM POOLS, OXYGENATE WATER, AND PROVIDE HABITAT FOR AQUATIC SPECIES AND FISH.
 - CONSTRUCTED ALLUVIAL RIFFILES SHOULD BE PLACED AT THE STATIONS, OFFSETS, ELEVATIONS SHOWN ON PLANS. RIFFLE MATERIAL CLASSIFICATION AND DEPTH ARE INDICATED IN THE STREAM RESTORATION DATA TABLES.
 - CONSTRUCTED ALLUVIAL RIFFILES ARE PLACED AT LOCATIONS INDICATED ON THE STREAM RESTORATION PLANS.
 - ALLUVIUM OR SELECT MATERIAL FOR CONSTRUCTED RIFFILES SHALL CONSIST OF:
 - COARSE SUBSTRATE (GRAVEL SUBSTRATE RESTORATION INFORMATION: COBBLE, AND BOULDER).
 - A MIXTURE OF SIZES OF ON-SITE APPROVED SALVAGED EXISTING STREAM BED MATERIALS OR AS SPECIFIED IN THE STREAM RESTORATION DETAILS.
 - CONTRACTOR SHALL SALVAGE AND USE EXCAVATED COARSE ALLUVIUM MATERIALS FROM THE EXISTING STREAM BED AREAS THAT WILL BE RESTORED, IF AVAILABLE AND WHICH MEETS THE SPECIFIED SIZE CLASSIFICATION AS PER THE RESTORATION DETAILS FOR SUBSTRATE IN RIFFILES. COARSE ALLUVIUM REMOVED FROM THE STREAM DURING CHANNEL EXCAVATION WILL BE TEMPORARILY STOCKPILED IN A NON-WETLAND/AQUATIC SITE FOR REPLACEMENT IN THE CHANNEL.
 - IMPORTED MATERIAL SHALL BE CLEAN, NON-ACID FORMING ROUNDED NATURAL ROCK AND STONE, SUCH AS RIVER GRAVEL OR SANDSTONE; USE AND MIX THE SPECIFIED QUANTITIES (% BY WEIGHT) SHOWN IN THE STREAM RESTORATION DETAILS.
 - CONSTRUCT ALLUVIAL RIFFILES BY:
 - SHAPE THE CHANNEL AND FLOODPLAIN TO THE SPECIFIED GRADES AND DIMENSIONS AS PER PLANS.
 - INSTALL MATERIAL FOR THE RIFFLE TO ACHIEVE THE SPECIFIED ELEVATIONS SHOWN ON PLANS. IF THE CHANNEL IS DESIGNED WITH AN INNER BERM, KEY THE COARSE ALLUVIUM OR SELECT MATERIAL INTO THE BANKS EXTENDING ENTIRELY UNDER THE INNER BERM. IF THE CHANNEL LACKS AN INNER BERM, KEY THE COARSE ALLUVIUM OR SELECT MATERIAL INTO THE BANKS EXTENDING TO HALF BANKFULL. PLACE THE COARSE ALLUVIUM OR SELECT MATERIAL IN SIX-INCH LIFTS AND COMPACT EACH LIFT WITH THE BUCKET OF THE EXCAVATOR.
 - INSTALL THE ALLUVIAL RIFFLE AT THE ELEVATIONS SPECIFIED IN THE PLANS AND THEN CHECK THE ELEVATIONS WITH SURVEY EQUIPMENT.
 - THE CONSTRUCTED ALLUVIAL RIFFLE MATERIAL SHALL BE FINISHED TO CREATE A SMOOTH PROFILE, WITHOUT AN ABRUPT JUMP/TRANSITION BETWEEN THE UPSTREAM POOL-GLIDE AND THE RIFFLE, OR AN ABRUPT DROP/TRANSITION BETWEEN THE RIFFLE AND THE DOWNSTREAM RUN-POOL. THE FINISHED CROSS SECTION OF THE RIFFLE MATERIAL SHALL GENERALLY MATCH THE SHAPE AND DIMENSIONS SHOWN ON THE RIFFLE TYPICAL SECTION WITH SOME VARIABILITY OF THE THALWEG LOCATION AS A RESULT OF PLACEMENT OF LARGER SUBSTRATE, SUCH AS BOULDERS.
 - THE END OF RIFFLE CONTROL POINT MAY TIE IN TO A DRAINAGE STRUCTURE OR OTHER IN-STREAM STRUCTURE (E.G. - J-HOOK VANE, LOG OR BOULDER SILL, ETC.) AS SHOWN ON PLANS. CONTRACTOR SHALL FIELD ADJUST RIFFLE THALWEG IN FIELD TO MATCH J-HOOK VANE, LOG OR BOULDER SILL THALWEG WITH RIFFLE THALWEG.
 - RE-DRESSING OF CHANNEL AND BANKFULL BENCH/FLOODPLAIN WILL LIKELY BE REQUIRED FOLLOWING INSTALLATION OF IN-STREAM STRUCTURES AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
 - COIR FIBER EROSION CONTROL BLANKET SHALL BE INSTALLED ABOVE THE INNER-BERM STAGE AND NOT IN THE LOW-FLOW CHANNEL OF THE RIFFLE. SEE TYPICAL CROSS-SECTION.
 - ALL MATERIALS AND STREAM CENTERLINE (THALWEG) TO BE APPROVED IN FIELD BY ENGINEER PRIOR TO SUBSTANTIAL COMPLETION.

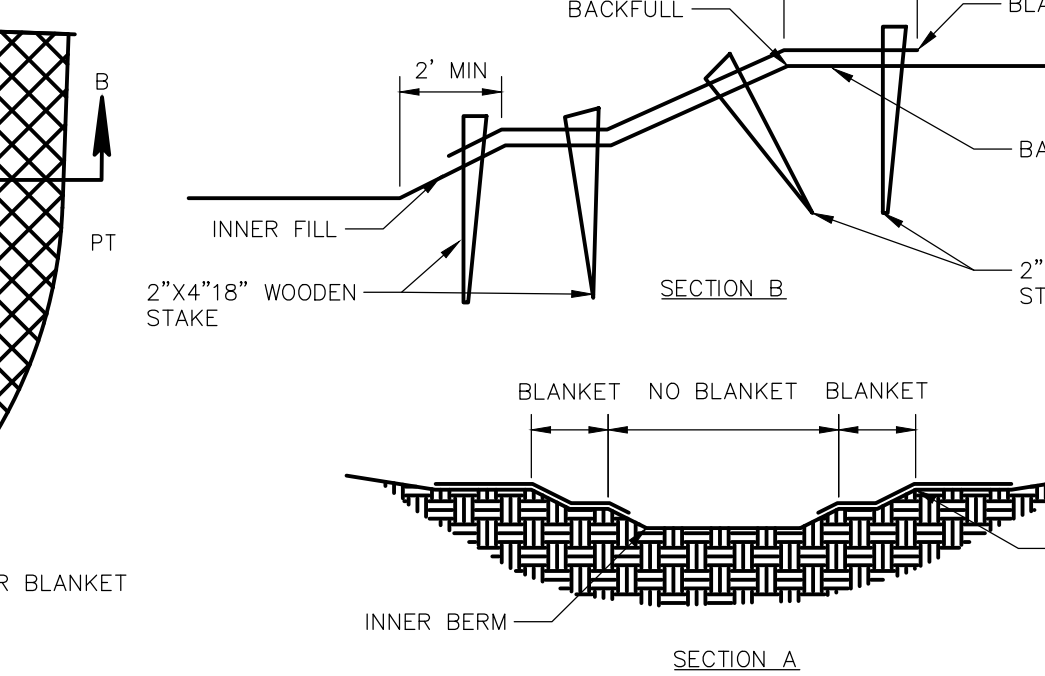
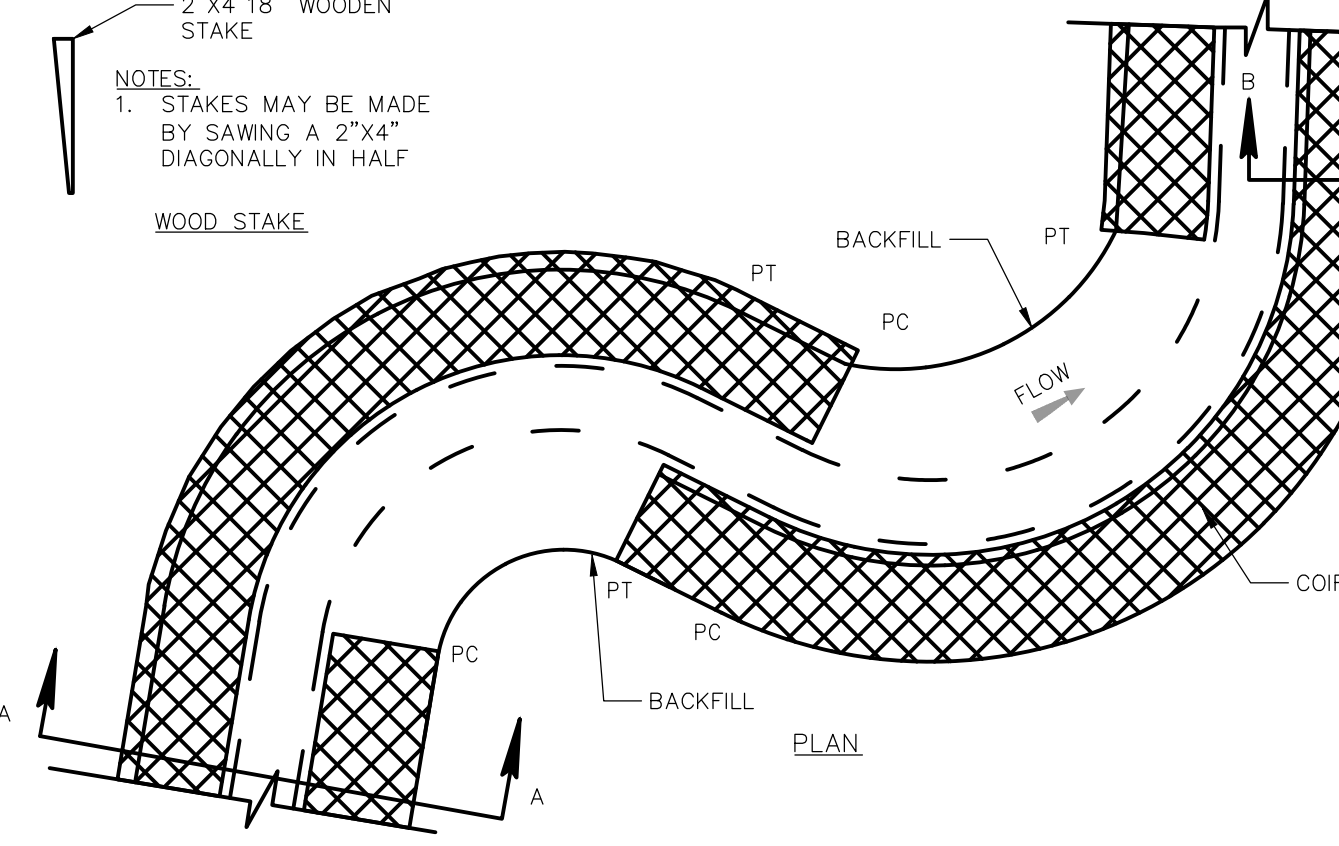


2 TYPICAL RIFFLE
SCALE: NOT TO SCALE

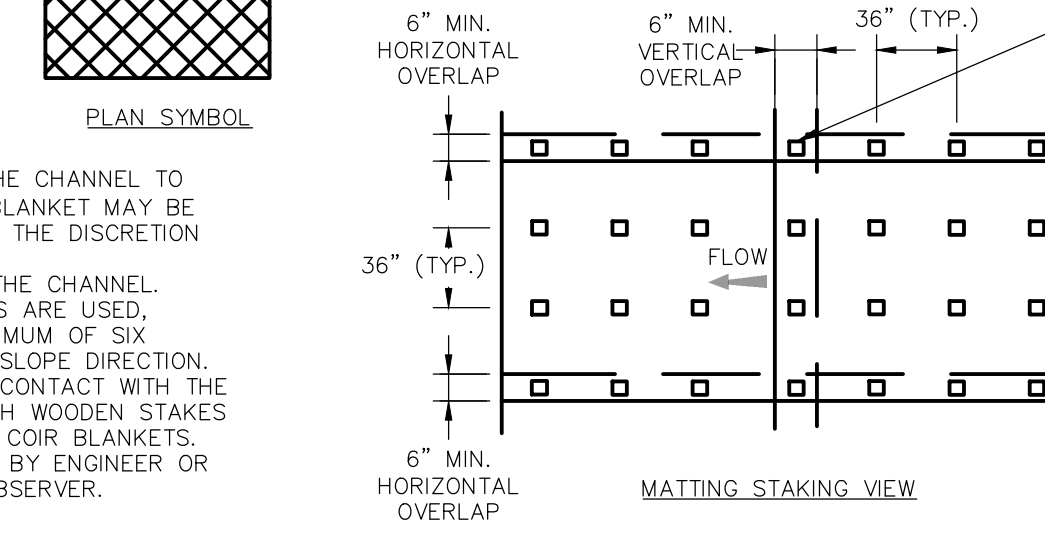


3 TYPICAL POOL
SCALE: NOT TO SCALE

1 CONSTRUCTED ALLUVIAL RIFFLE
SCALE: NOT TO SCALE

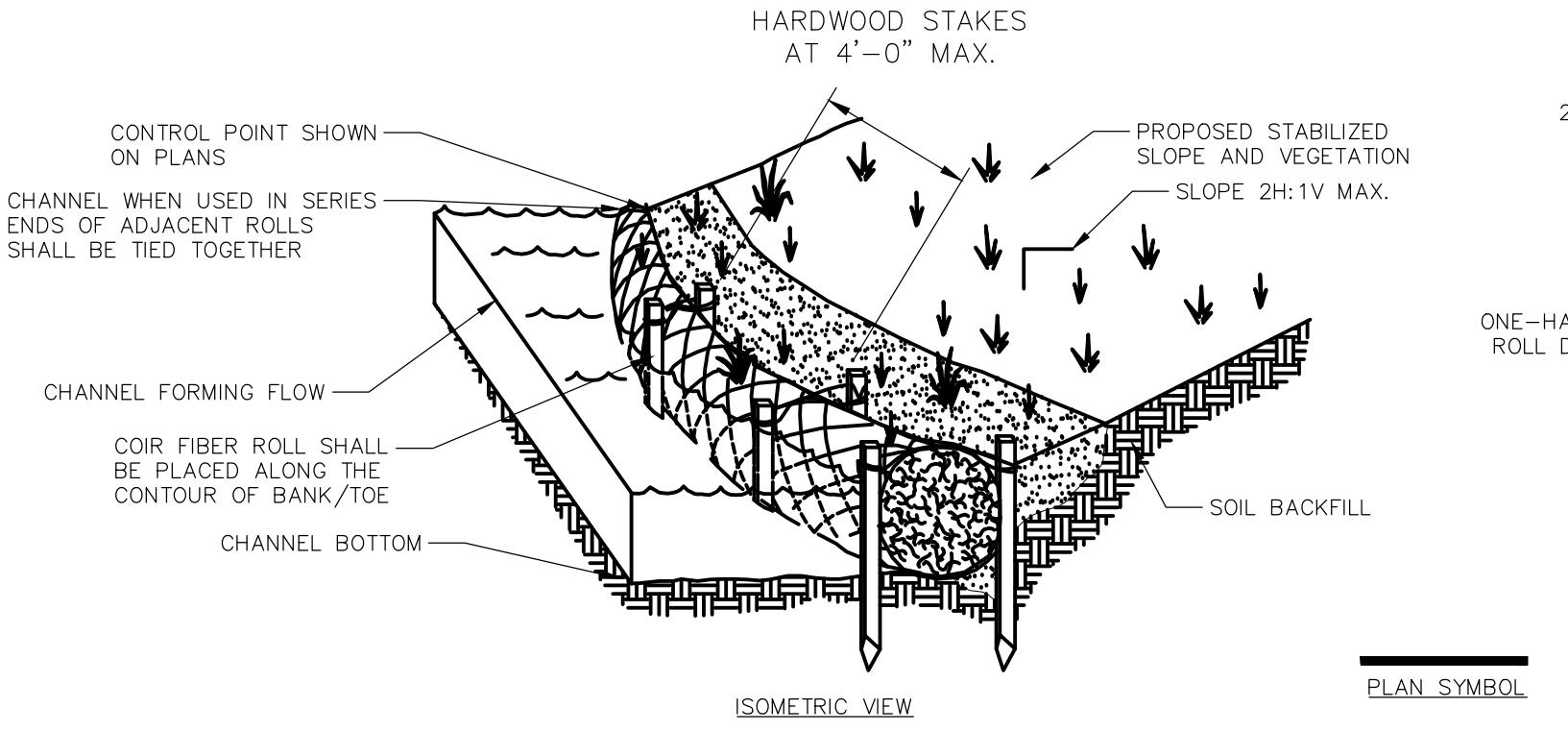


- COIR FIBER EROSION CONTROL BLANKET NOTES:**
- COIR FIBER EROSION CONTROL BLANKETS PROVIDE TEMPORARY BANK STABILIZATION FOLLOWING BANK GRADING, UNTIL PERMANENT VEGETATION CAN BE ESTABLISHED.
 - COIR FIBER EROSION CONTROL BLANKETS SHALL BE 700 GRAMS PER SQUARE METER.
 - BEFORE INSTALLING COIR BLANKETS, RAKE OR TILL THE UPPER THREE TO FOUR INCHES OF THE SOIL ON THE STREAM BANKS. SEED WITH TEMPORARY AND PERMANENT SEED MIXES, RAKE SOIL LEVEL, AND LIGHTLY MULCH WITH CLEAN STRAW.
 - COIR BLANKETS SHALL BE INSTALLED ON THE OUTSIDE OF BANKS OF MEANDERS AND ON BOTH BANKS ALONG RIFFILES, FROM THE INNER BERM OF THE CHANNEL TO TWO FEET (MIN.) BEYOND BANKFULL. BLANKET MAY BE ELIMINATED FROM THE INNER BERM AT THE DISCRETION OF THE ENGINEER.
 - PLACE COIR BLANKETS PARALLEL TO THE CHANNEL. WHERE MULTIPLE PANELS OF BLANKETS ARE USED, PANELS SHALL BE OVERLAPPED A MINIMUM OF SIX INCHES, IN A DOWNSTREAM AND DOWNSLOPE DIRECTION. FULL BLANKETS TIGHT, BUT MAINTAIN CONTACT WITH THE SOIL. USE 2-INCH x 4-INCH x 18-INCH WOODEN STAKES ON THREE-FOOT CENTERS TO SECURE COIR BLANKETS.
 - ALL MATERIALS ARE TO BE APPROVED BY ENGINEER OR ENGINEER'S ON-SITE CONSTRUCTION OBSERVER.

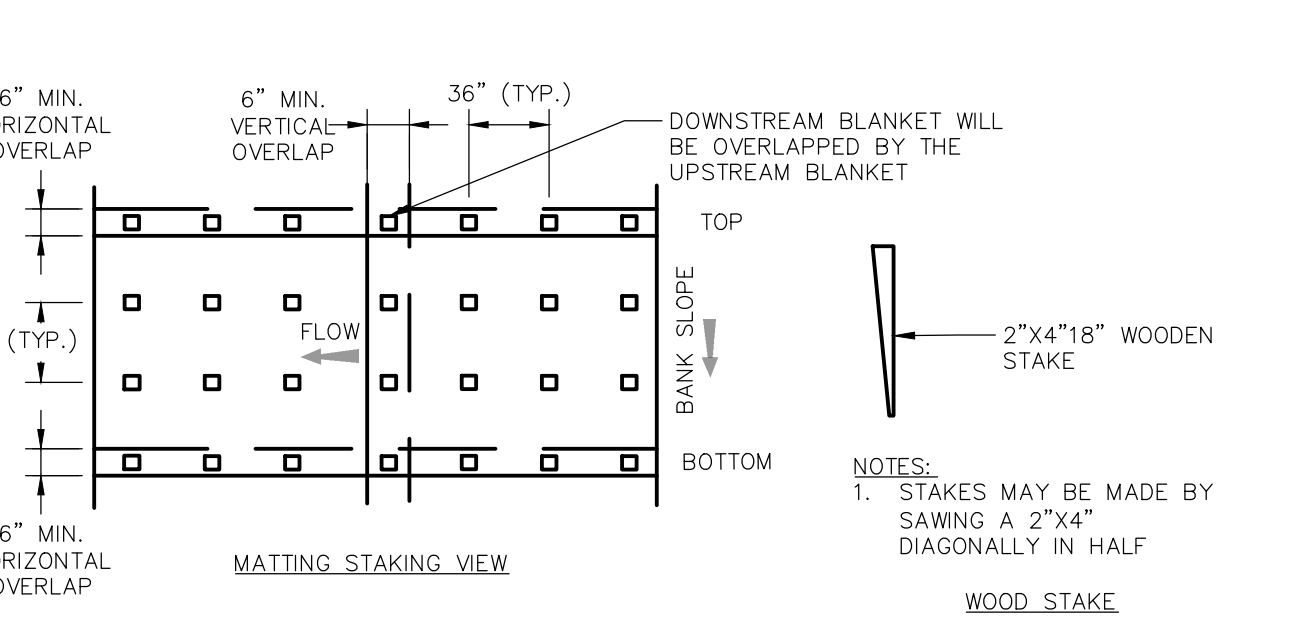
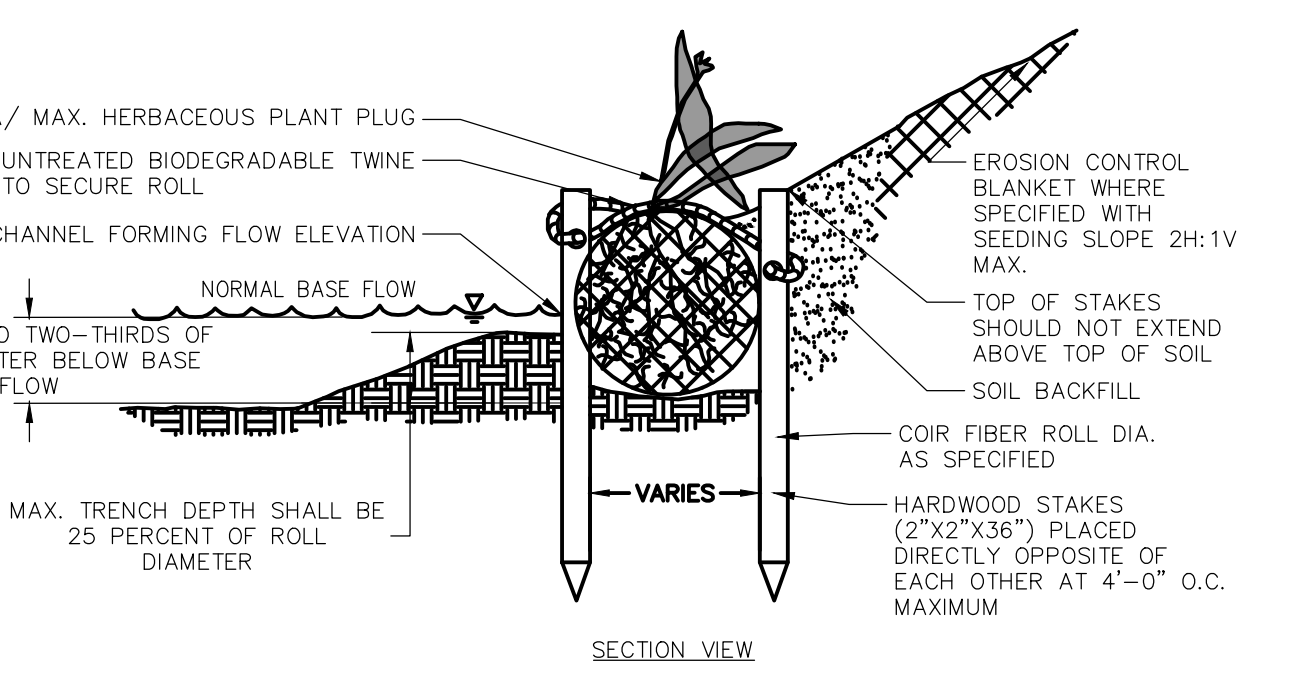


4 COIR FIBER EROSION CONTROL BLANKET
SCALE: NOT TO SCALE

5 COIR FIBER ROLL
SCALE: NOT TO SCALE



- COIR FIBER ROLLS NOTES:**
- DRIVE STAKES AS NEEDED SO TWINE IS SECURED AGAINST TOP OF ROLL.
 - SPACING VARIES BASED ON ROLL DIAMETER 8,12, 16, 18, 20-INCH (TYP.).
 - FULL OR PARTIAL SUN REQUIRED FOR USE.
 - COIR FIBER ROLLS ARE A FLEXIBLE BANK STABILIZATION MEASURE CONSISTING OF INTERWOVEN COCONUT HUSK FIBERS THAT CAN BE FITTED TO THE CURVATURE OF A STREAM BANK PROVIDING IMMEDIATE TOE PROTECTION AND BANK STABILIZATION. COIR FIBER ROLLS ARE USED TO ENHANCE THE ESTABLISHMENT AND GROWTH OF NATIVE VEGETATION ALONG THE STREAM BANK BY TRAPPING SEDIMENT BEHIND THE ROLL PROVIDING A SUBSTRATE FOR PLANT GROWTH. EFFECTIVE LIFE 2 TO 3 YEARS.
 - COIR FIBER ROLLS ARE AN ACCEPTABLE RESTORATION PRACTICE FOR USE IN STREAMS AND ALONG THE SHORELINE OF PONDS AND WETLANDS.
 - COIR FIBER ROLLS MAY BE USED IN COMBINATION WITH LONGITUDINAL STONE TOES, ROOT WADS, LIVE SILTATION, OR OTHER BANK STABILIZATION MEASURES.
 - COIR FIBER ROLLS SHOULD NOT BE USED WHEN CHANNEL FLOW VELOCITY EXCEEDS 10 FEET PER SECOND, WHERE CHANNEL SHEAR STRESSES ARE MODERATE TO HIGH ALONG THE BANK, IN BEDROCK CHANNELS, IN CHANNELS WHERE SCOUR IS PRESENT OR EXPECTED, OR IN STREAMS WHERE SIGNIFICANT DEBRIS LOAD IS EXPECTED.
 - COIR FIBER ROLLS SHOULD BE CONSTRUCTED AT THE TOE OF A STREAM BANK TO A HEIGHT EQUAL TO THE CHANNEL FORMING FLOW ELEVATION.
 - COIR FIBER ROLLS SHALL BE SEATED IN A SHALLOW HAND-CUT TRENCH SLIGHTLY BELOW THE CHANNEL BOTTOM ELEVATION. COIR FIBER ROLL SHALL BE IN CONTACT WITH THE WATER, SUBMERGED FROM ONE-HALF TO TWO THIRDS OF THE ROLL DIAMETER.
 - ENDS OF COIR FIBER ROLLS SHALL BE TURNED IN AND BURIED WITHIN THE BANK TO PREVENT WATER FROM INTRUDING BEHIND THE ROLL.
 - VEGETATION (SPECIES) USED FOR HERBACEOUS PLUGS TO BE INSTALLED IN THE TOP OF COIR FIBER ROLLS SHALL BE APPROVED BY THE ENVIRONMENTAL DIVISION. LIVE DORMANT STAKES MAY BE USED FOR PLUGS.
 - COIR FIBER ROLLS SHALL BE KEPT DRY PRIOR TO INSTALLATION.



5 COIR FIBER ROLL
SCALE: NOT TO SCALE



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER
538 E. SOUTH STREET
AKRON, OH 44311

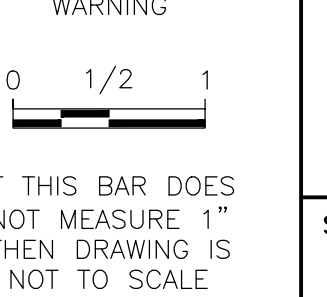
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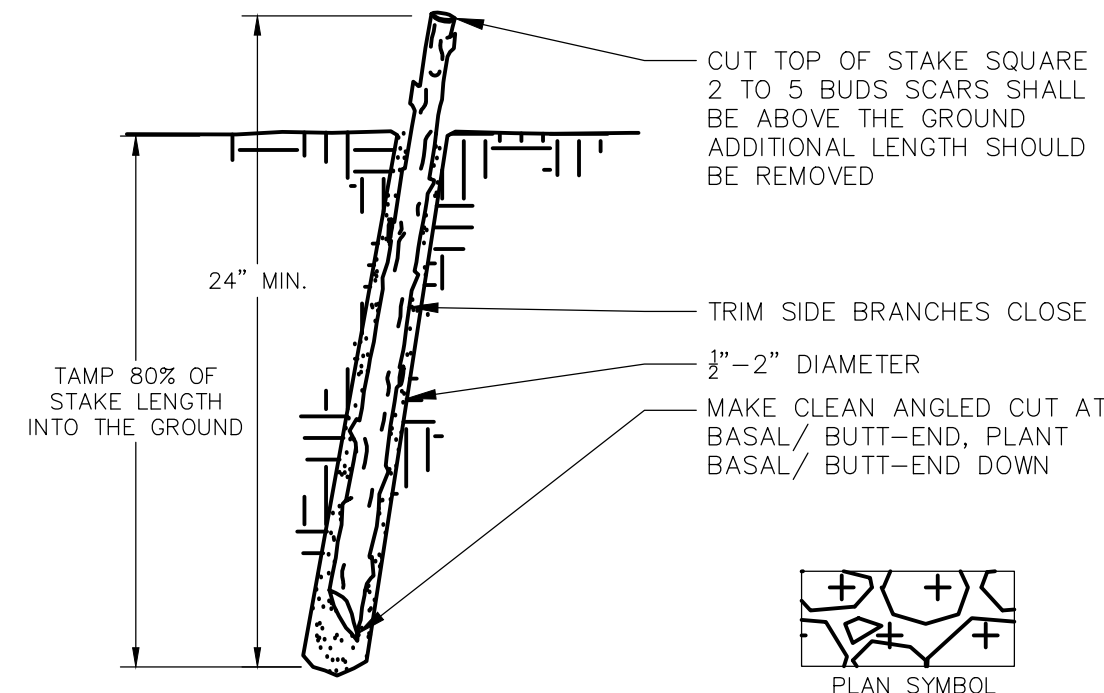
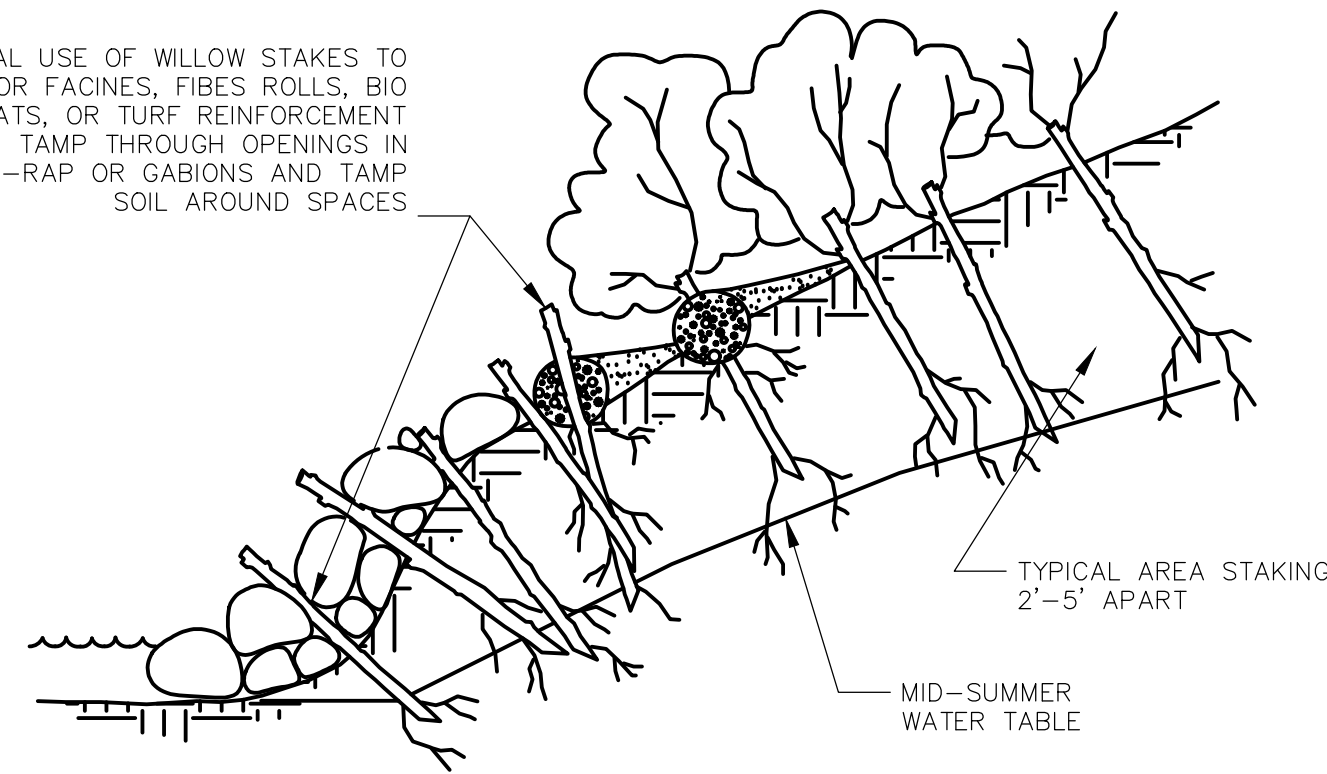
CHANNEL RESTORATION
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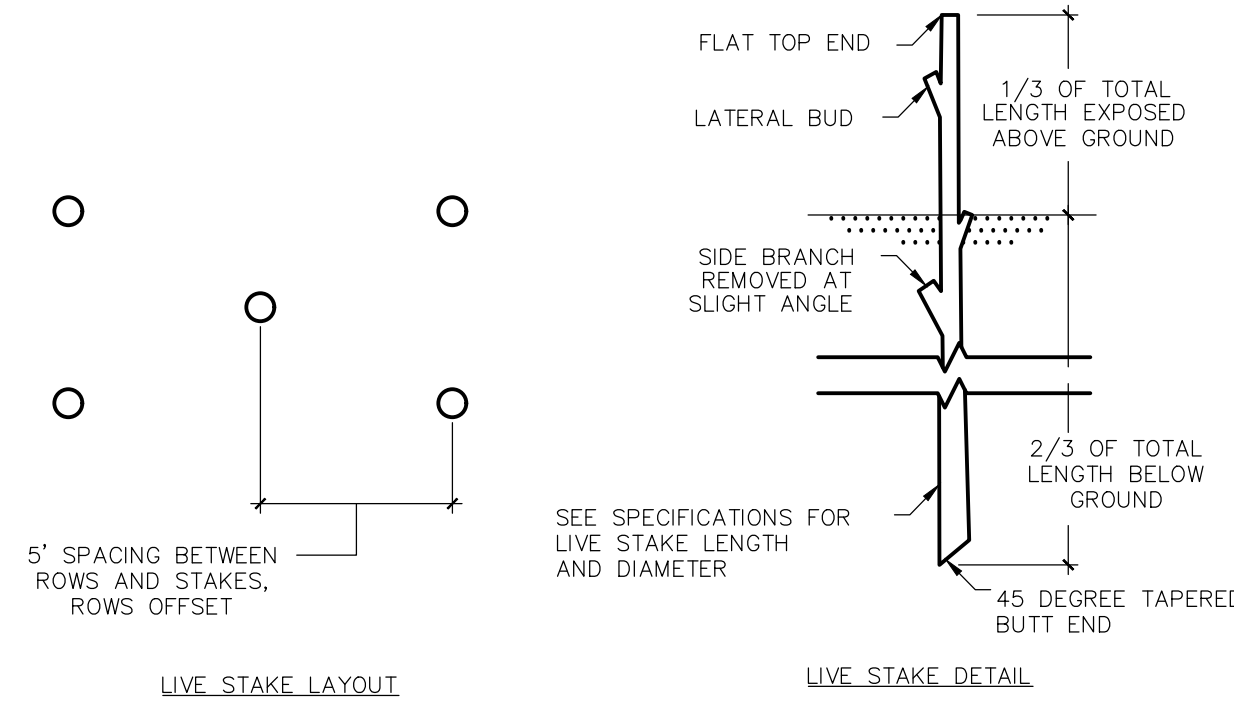
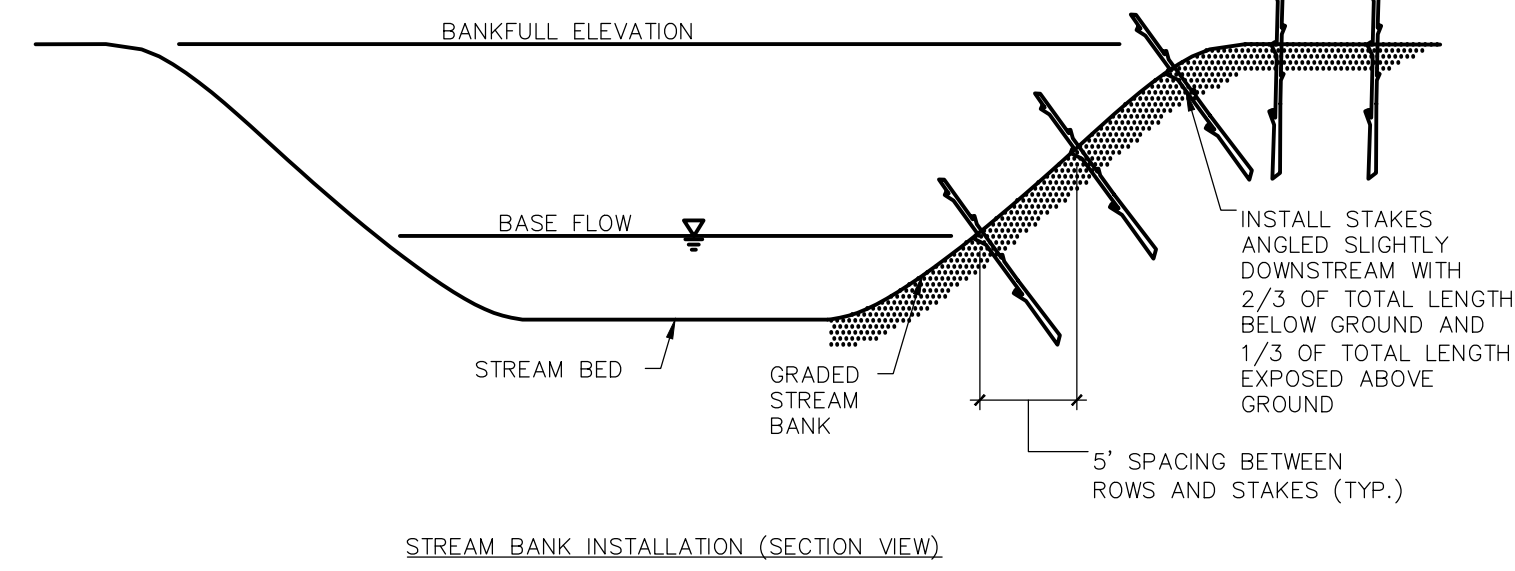
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TYPICAL USE OF WILLOW STAKES TO ANCHOR FACINES, FIBES ROLLS, BIO MATS, OR TURF REINFORCEMENT MATS. TAMP THROUGH OPENINGS IN RIP-RAP OR GABIONS AND TAMP SOIL AROUND SPACES



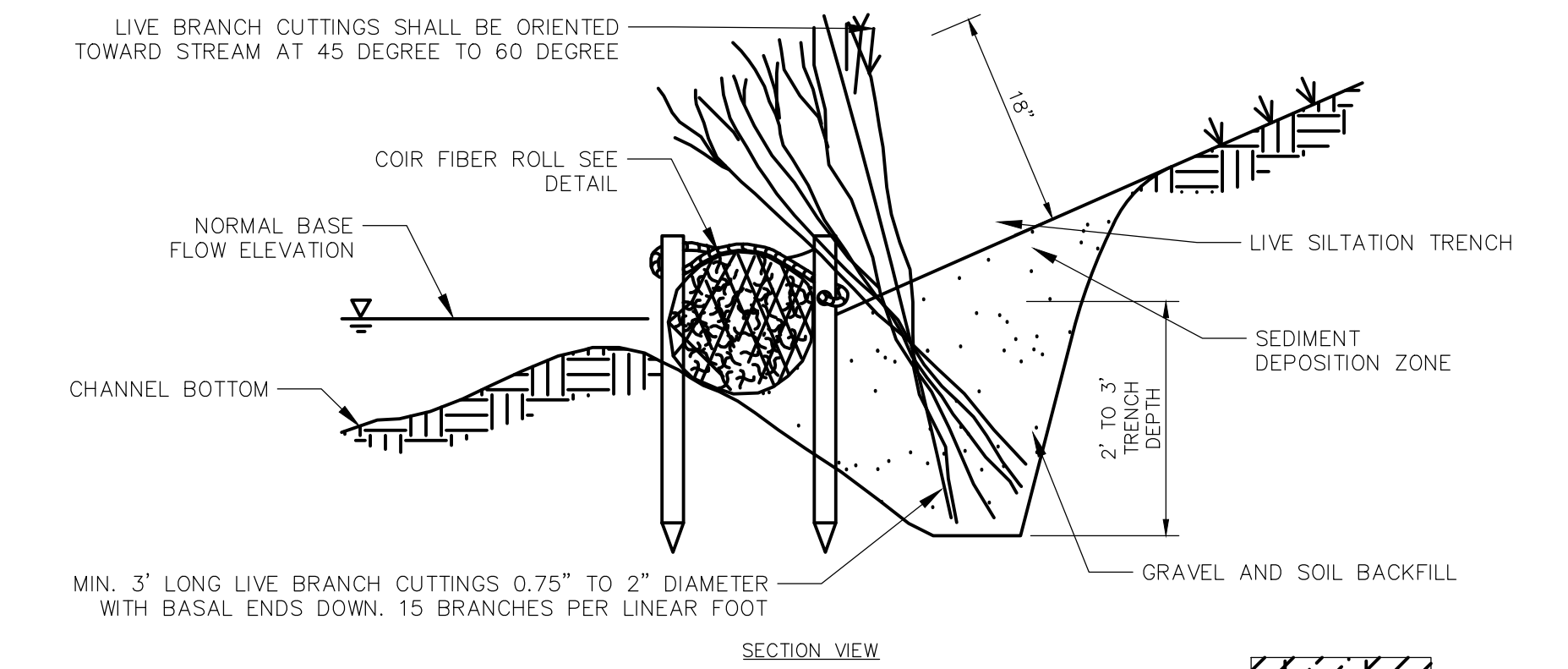
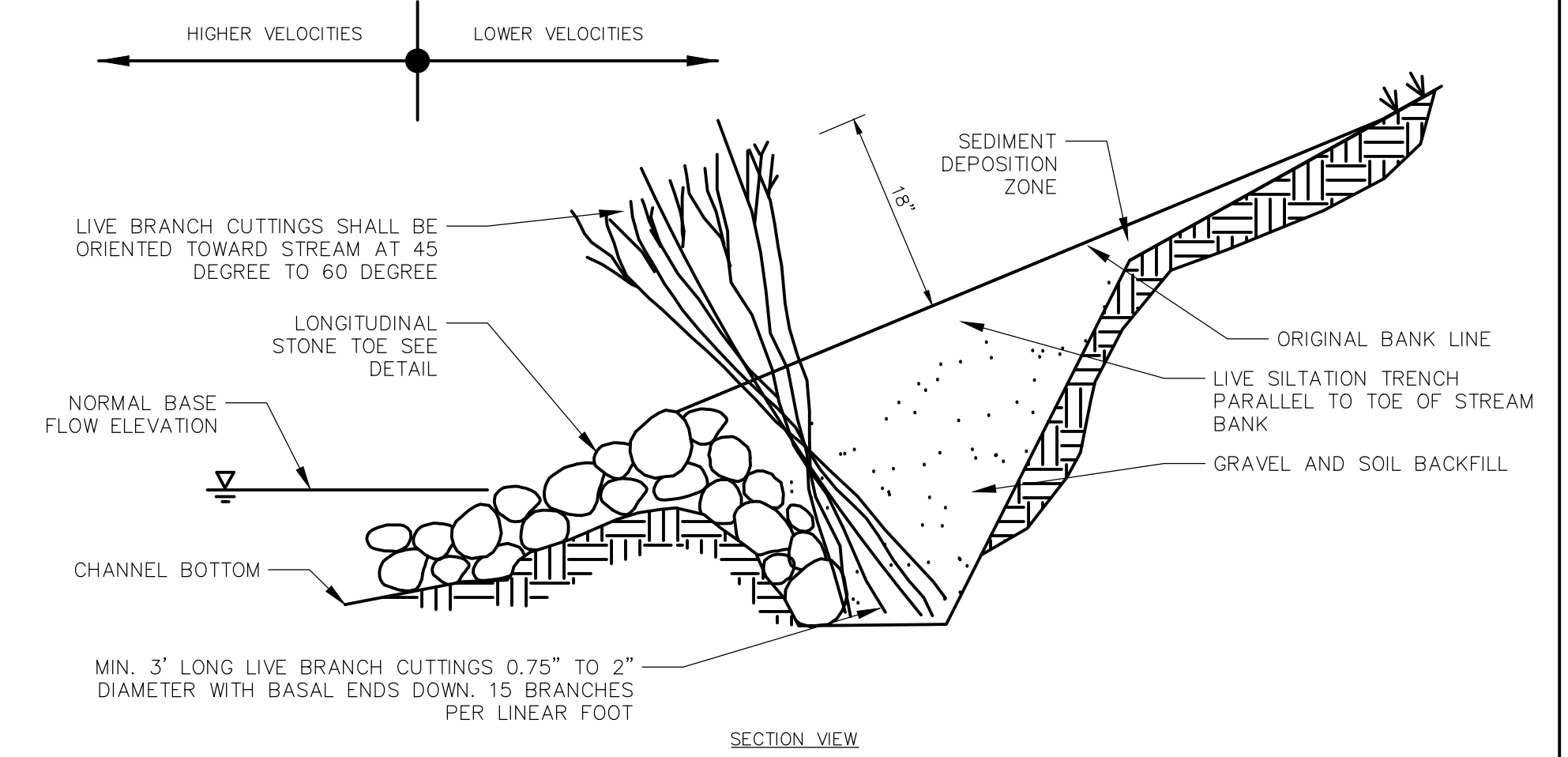
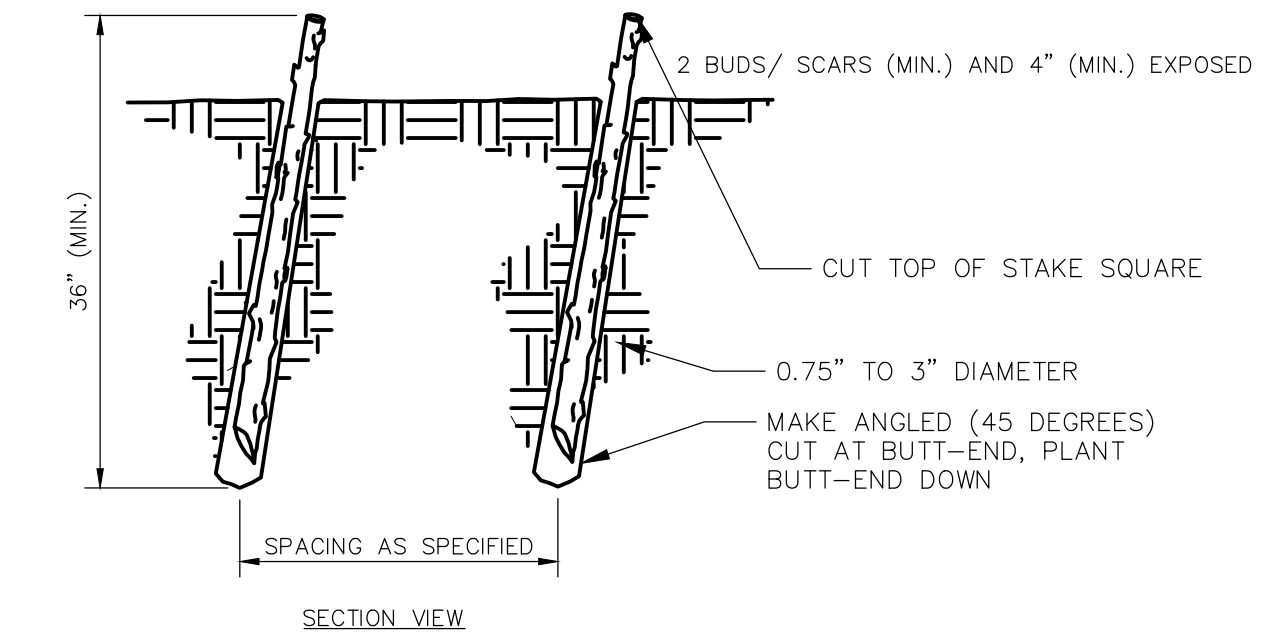
NOTE:
ROOTED/LEAFED CONDITION OF THE LIVING PLANT MATERIAL IS NOT REPRESENTATIVE AT THE TIME OF INSTALLATION

1 LIVE STAKES WITH RIP RAP
SCALE: NOT TO SCALE



NOTE:
1. SEE CONTRACT SPECIFICATIONS FOR THE MINIMUM NUMBER OF SPECIES TO BE RANDOMLY DISTRIBUTED WITHIN EACH PLANTING ZONE TO PROMOTE BIODIVERSITY.

2 LIVE STAKES
SCALE: NOT TO SCALE



NOTES:
A. 1/3 OF BRANCH LENGTH SHALL BE ABOVE TRENCH.
B. ENOUGH BRANCHES SHALL BE USED TO FORM A CONTINUOUS LINEAR WALL PARALLEL TO STREAM. MINIMIZE GAPS.

3 LIVE SILTATION WITH COIR FIBER ROLL
SCALE: NOT TO SCALE



ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER

538 E. SOUTH STREET
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SURFACE WATER MANAGEMENT
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SPRINGFIELD LAKE
CHANNEL RESTORATION
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GENERAL STORMWATER POLLUTION PREVENTION NOTES

1. EROSION CONTROL SHALL BE MAINTAINED AT ALL TIMES. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH ODOT ITEM 659. INLET FILTERS, FILTER SOCKS, SILT FENCE, CONCRETE WASHOUTS, TEMPORARY CONSTRUCTION ENTRANCES, AND OTHER EROSION CONTROL ITEMS THE EPA MAY REQUIRE SHALL BE INSTALLED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR.
2. ALL WORK SPECIFIED AS AN ODOT ITEM SHALL BE GOVERNED BY THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATION HANDBOOK. OTHER ITEMS SHALL CONFORM TO SPECIFICATIONS CONTAINED IN THE CURRENT ODNR MANUAL - RAINWATER AND LAND DEVELOPMENT, UNLESS OTHERWISE NOTED.
3. ALL EXISTING CATCH BASINS OR INLETS WHICH COLLECT STORM RUNOFF FROM AREAS WITHIN THE WORK LIMITS SHALL HAVE INLET PROTECTION INSTALLED AROUND THEM. ALL PROPOSED STORM CATCH BASINS OR INLETS SHALL HAVE INLET PROTECTION.
4. AT A MINIMUM, ALL STOCKPILES SHALL HAVE FILTER SOCK PLACED 10' OFF AND ALONG THE BOTTOM FOOTPRINT OF THE FINAL STOCKPILE CONFIGURATION. IF THE STOCKPILE WILL BE INACTIVE FOR 14 DAYS OR MORE, THEN THE SURFACE SHALL BE SEEDED, OR STABILIZED WITHIN 7 DAYS OF LAST ACTIVITY. THE STOCKPILE CAN BE LOCATED BY THE CONTRACTOR TO BEST FIT HIS MEANS AND METHODS, BUT AT NO TIME SHALL ALLOW SEDIMENT LADEN RUNOFF TO EXIT THE SITES.
5. THE CONTRACTOR SHALL PREVENT DISCHARGE OF WASTE CONCRETE AND/OR WASH WATER FROM CONCRETE TRUCKS FROM MIXING WITH RUNOFF AND LEAVING THE SITE. THE CONTRACTOR SHALL SIZE THE CONCRETE WASHOUT PITS TO HANDLE HIS PROPOSED CONCRETE OPERATIONS AND SHALL MAINTAIN THE PITS SUCH THAT ALL CONCRETE TRUCKS CAN USE IT TO WASHOUT. ALL CURED RESIDUE FROM THE PITS SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. THE WASHOUT PIT LOCATIONS SHALL BE SELECTED BY THE CONTRACTOR AND MAY BE MOVED TO BETTER FIT THE CONTRACTOR'S METHODS. WASHOUT PITS SHALL BE AT LEAST 50 FEET FROM CATCH BASINS AND WATER COURSES.
6. THE CONTRACTOR SHALL LIMIT THE SURFACE AREA OF ERODABLE EARTH MATERIAL EXPOSED BY EXCAVATION, BORROW AND FILL OPERATIONS AND PROVIDE IMMEDIATE PERMANENT OR TEMPORARY CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS.
7. GROUNDWATER AND STORMWATER DRAINAGE BEARING SEDIMENT SHALL BE FILTERED USING PUMPED WATER FILTER BAG OR PONDED TO ALLOW REMOVAL OF SILT, SEDIMENT, DEBRIS AND OTHER POLLUTANTS PRIOR TO DISCHARGE FROM THE SITE. THE SETTLED MATERIAL SHALL BE DISPOSED OF IN A STABILIZED LOCATION WHERE IT WILL NOT BE CARRIED OFF-SITE OR INTO A STORM SEWER BY RAINFALL. WATER WITH A VISIBLE SHEEN SHALL BE REMOVED BY A VACUUM TRUCK. THERE SHALL BE NO TURBID OR MURKY DISCHARGES TO SURFACE WATERS OF THE STATE RESULTING FROM DEWATERING ACTIVITIES. TRENCH OR GROUND WATER CONTAINING SEDIMENT OR OTHER POLLUTANTS SHALL PASS THROUGH A SEDIMENT TRAP OR PUMPED WATER FILTER BAG PRIOR TO BEING DISCHARGED FROM THE CONSTRUCTION SITE. GROUND WATER WHICH DOES NOT CONTAIN SEDIMENT OR OTHER POLLUTANTS IS NOT REQUIRED TO BE TREATED PRIOR TO DISCHARGE. CLEAN GROUND WATER SHALL NOT BE DICHARGED OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES, OR ERODE DISCHARGE AREA.
8. THE CONTRACTOR SHALL CONTROL THE TRACKING OF DIRT AND MUD FROM CONSTRUCTION VEHICLES ONTO ADJACENT STREETS. SEDIMENT LADEN WATER FROM PAVEMENT SAW CUTTING SHALL NOT BE ALLOWED TO ENTER INTO CATCH BASINS WITHOUT INLET PROTECTION. SEDIMENT/DIRT/MUD SHALL BE REMOVED FROM ROADWAYS/PAVEMENTS AT THE END OF EACH WORK DAY OR AS DIRECTED BY THE CITY.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL SEDIMENT AND EROSION CONTROL ITEMS AT ANY OFF-SITE BORROW OR SPOIL AREAS REQUIRED FOR THIS PROJECT.
10. THE FOLLOWING TYPES OF INLET PROTECTION DEVICES SHALL BE USED:
 - A. CURB AND GRATE INLETS-DANDY CURB SACK, FLEXSTORM CATCH-IT INLET FILTER, OR ACCEPTED EQUAL.
 - B. GRATE ONLY INLETS-DANDY SACK, FLEXSTORM CATCH-IT INLET FILTER, OR ACCEPTED EQUAL.

11. FOR SEWERS CONSTRUCTED BY OPEN-CUT METHODS, THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND SUBSEQUENTLY REMOVE INLET PROTECTION SYSTEMS ON ALL CATCH BASIN/INLET BASINS THAT ARE WITHIN THE CONTRIBUTING DRAINAGE AREAS OF THE TRENCHING OPERATION. THE INLET PROTECTION SYSTEMS SHALL BE REMOVED AFTER THE PAVEMENT HAS BEEN REPLACED AND GRASS ESTABLISHED IN NON-PAVED AREAS. INSTALL INLET PROTECTION SYSTEMS PRIOR TO COMMENCING EARTH DISTURBING ACTIVITIES WITHIN THE CONTRIBUTING DRAINAGE AREA OF CATCH BASINS/INLET BASINS.

INSPECTION AND MAINTENANCE DURING CONSTRUCTION

1. ALL TEMPORARY AND PERMANENT EROSION CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL SEDIMENT CONTROL PRACTICES SHALL BE MAINTAINED UNTIL ALL UPSLOPE AREAS ARE PERMANENTLY STABILIZED. THE CONTRACTOR SHALL COMPLY WITH THE MAINTENANCE REQUIREMENTS FOR THE PROPOSED EROSION CONTROLS.
2. THE CONTRACTOR SHALL INSPECT EROSION CONTROL PRACTICES AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY-FOUR (24) HOURS AFTER ANY STORM EVENT WHICH PRODUCES PRECIPITATION TOTAL 0.5 INCHES IN TWENTY-FOUR (24) HOURS BY QUALIFIED PERSONNEL. INSPECTIONS INCLUDE IDENTIFYING AREAS CONTRIBUTING TO STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, EVALUATING WHETHER MEASURES TO PREVENT EROSION AND CONTROL POLLUTANT LOADINGS IDENTIFIED ON THE PLAN ARE ADEQUATE AND PROPERLY IMPLEMENTED, AND WHETHER ADDITIONAL CONTROL MEASURES ARE REQUIRED. DISTURBED AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THIS PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS. LOCATION WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE TRACKING. WHEN A CONTROL IS NON-FUNCTIONING OR DEFICIENT, IT SHALL BE ADDED TO A CORRECTIVE ACTION LOG AND REPAIRED BY THE CONTRACTOR. ALL REPORTS SHALL BE EMAILED WEEKLY TO THE CITY, ENGINEER AND REVIEWING AGENCIES. NO PAYMENT WILL BE MADE UNLESS THE CITY RECEIVES WEEKLY REPORTS.
 - A. WHEN PRACTICES REQUIRE REPAIR OR MAINTENANCE: IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE IS IN NEED OF REPAIR OR MAINTENANCE, WITH EXCEPTION OF A SEDIMENT TRAP, IT SHALL BE REPAIRED OR MAINTAINED WITHIN THREE DAYS OF INSPECTION. SEDIMENT TRAPS SHALL BE REPAIRED OR MAINTAINED WITHIN 10 DAYS OF THE INSPECTION.
 - B. WHEN PRACTICES FAIL TO PROVIDE THEIR INTENDED FUNCTION: IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE FAILS TO PERFORM ITS INTENDED FUNCTION AND THAT ANOTHER MORE APPROPRIATE CONTROL PRACTICE IS REQUIRED, A NEW CONTROL PRACTICE SHALL BE INSTALLED WITHIN 10 DAYS OF INSPECTION.
 - C. WHEN PRACTICES DEPICTED ON THE PLANS ARE NOT INSTALLED: IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE HAS NOT BEEN IMPLEMENTED IN ACCORDANCE WITH THE PLANS, A NEW CONTROL PRACTICE SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.

STABILIZATION
PERMANENT AND TEMPORARY STABILIZATION MEASURES ARE DEFINED IN PART VII OF THE OEPA GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM, AS STATED BELOW.

SEEDING OR MULCHING PER ODOT ITEM 659 SHALL BE USED FOR STABILIZATION.

SEE PLANS AND SPECIFICATIONS FOR PERMANENT SEEDING REQUIREMENTS.

TABLE 1: PERMANENT STABILIZATION

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROL
ANY AREA THAT WILL LIE DORMANT FOR ONE YEAR OR MORE	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE
ANY AREA WITHIN 50 FT. OF A SURFACE WATER OF THE STATE AND AT FINAL GRADE	WITHIN TWO DAYS OF REACHING FINAL GRADE
ANY OTHER AREAS AT FINAL GRADE	WITHIN SEVEN DAYS OF REACHING FINAL GRADE WITHIN THAT AREA

TABLE 2: TEMPORARY STABILIZATION

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROL
ANY DISTURBED AREAS WITHIN 50 FT. OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE	WITHIN TWO DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS
ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FT. OF A SURFACE WATER OF THE STATE	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER	PRIOR TO ONSET OF WINTER WEATHER (NOV. 1) USE MULCH AND DORMANT SEEDING



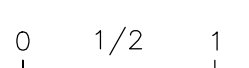
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DRAWN BY: <u>MAT</u>			
SHEET CHK'D BY: <u>MSE</u>			
CROSS CHK'D BY: <u>DCG</u>			
APPROVED BY: <u>MSE</u>			
ISSUED DATE: <u>03/06/26</u>			
REV NO	DATE	ISSUED BY	REMARKS

SURFACE WATER MANAGEMENT
DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
CHANNEL RESTORATION
FINAL DESIGN PLANS

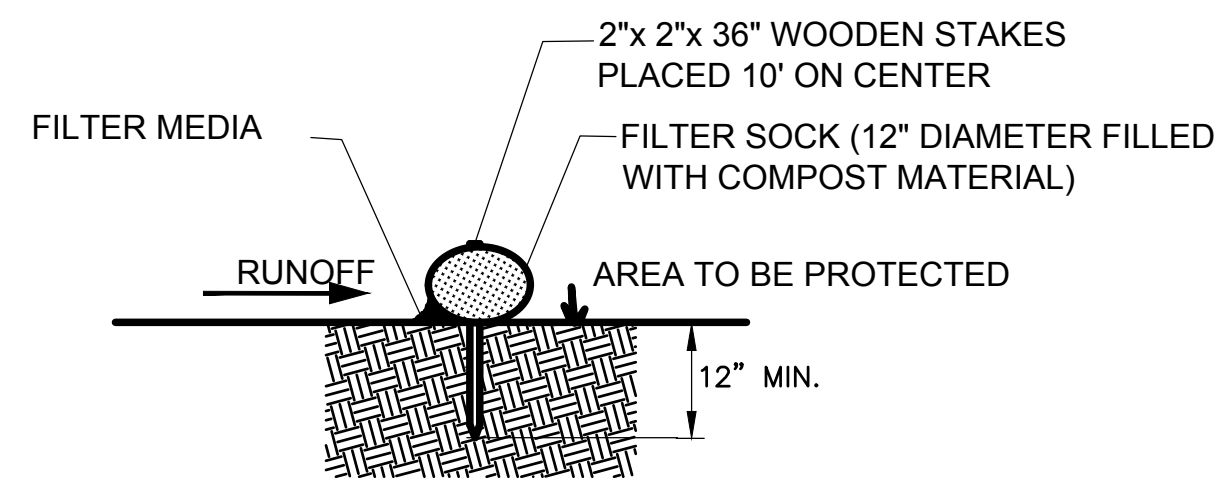
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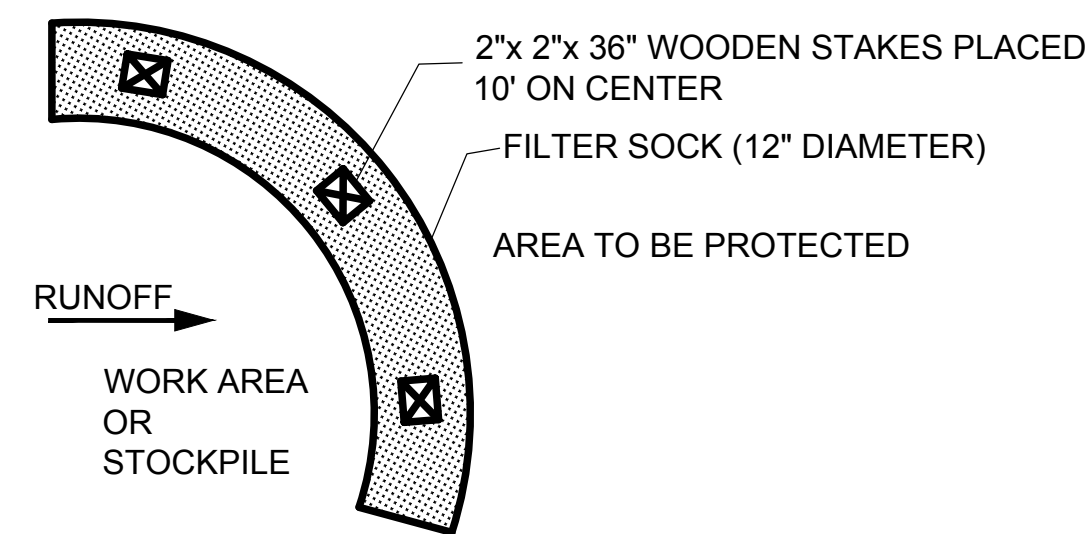


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SECTION



PLAN

NOTES:

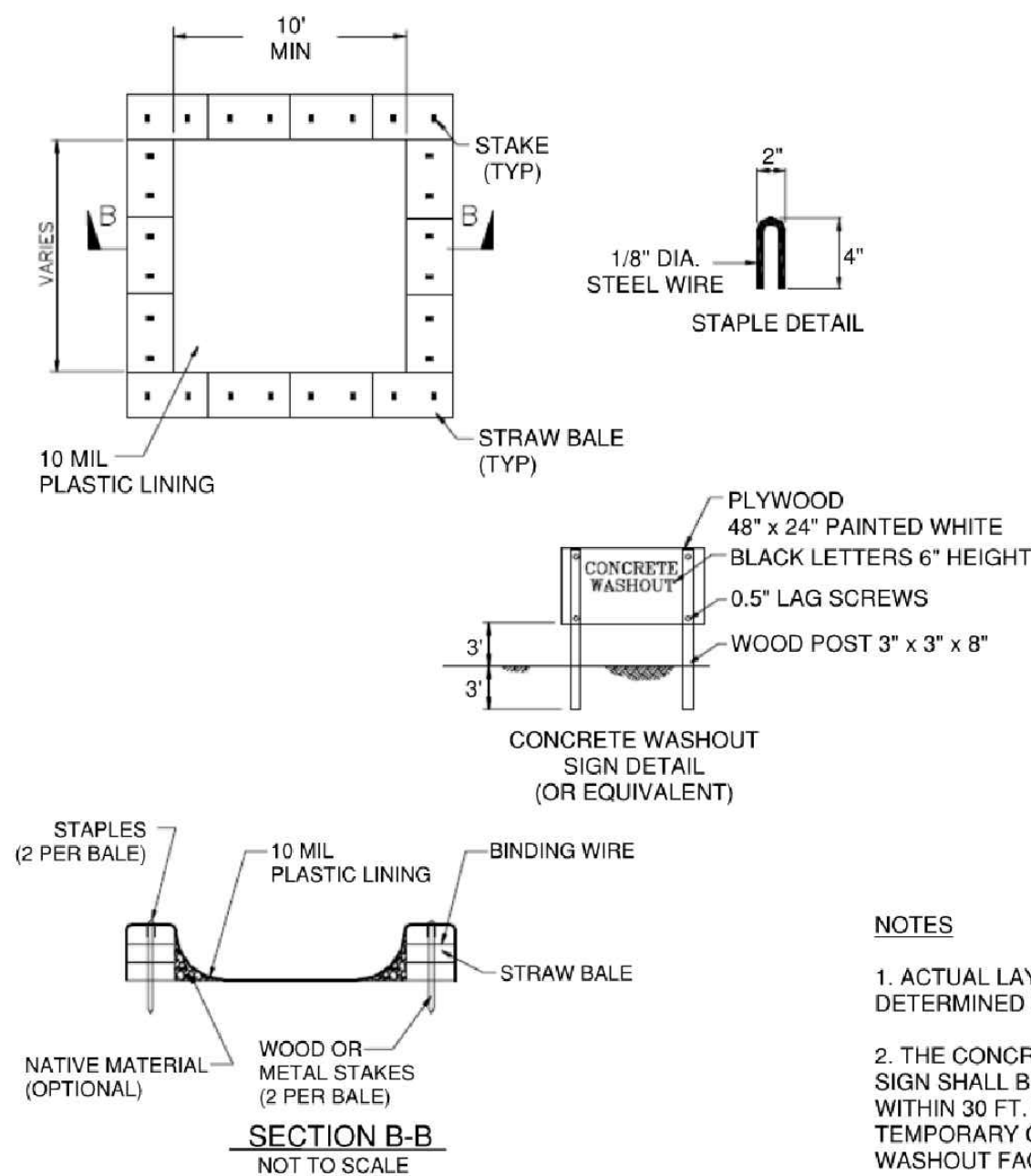
1. COMPOST MATERIAL SHALL MEET APPLICATION REQUIREMENTS.
2. COMPOST MATERIAL TO BE DISPERSED ON SITE AS DETERMINED BY ENGINEER WHEN AREAS HAVE REACHED FINAL STABILIZATION.

INSTALLATION: INSTALL PER MANUFACTURER'S RECOMMENDED SPECIFICATIONS. FILTER SOCK SHALL BE PLACED IN LOCATIONS SHOWN ON THE PLAN OR AS DIRECTED BY THE OWNER. FILTER SOCK SHALL BE INSTALLED PARALLEL TO THE BASE OF THE SLOPE OR OTHER DISTURBED AREA. IN EXTREME CONDITIONS (I.E. 2:1), A SECOND FILTER SOCK SHALL BE CONSTRUCTED AT THE TOP OF THE SLOPE. EFFECTIVE SOCK HEIGHT IN THE FIELD SHOULD BE AS FOLLOWS: 12" DIAMETER FILTER SOCK = 9.5" HIGH; 24" DIAMETER FILTER SOCK = 19" HIGH. STAKES SHALL BE INSTALLED THROUGH THE MIDDLE OF THE FILTER SOCK ON 10' CENTERS USING 2" BY 3' HARD WOOD STAKES. STAKING DEPTH FOR SAND AND SILT LOAM SOILS SHALL BE 12". LOOSE COMPOST SHALL BE BACKFILLED ALONG THE UPSLOPE SIDE OF THE FILTER SOCK FILLING THE SEAM BETWEEN THE SOIL SURFACE AND THE DEVICES, IMPROVING FILTRATION AND SEDIMENT RETENTION. IF THE FILTER SOCK IS TO BE LEFT AS A PERMANENT FILLER OR PART OF THE NATURAL LANDSCAPE, IT SHALL BE SEED AT TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION. THIS FILTER SOCK IS NOT TO BE USED IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.

INSPECTION AND MAINTENANCE: THE FILTER SOCK SHALL BE MAINTAINED IN A FUNCTIONAL CONDITION AT ALL TIMES AND SHALL BE ROUTINELY INSPECTED. INSPECT WITHIN 24 HOURS OF A 0.5 INCH STORM EVENT AND AT LEAST ONCE A WEEK. MAKE SURE FILTER SOCK HAS MAINTAINED ITS SHAPE AND IS PRODUCING ADEQUATE HYDRAULIC FLOW-THROUGH. IF PONDING BECOMES EXCESSIVE, ADDITIONAL FILTER SOCK MAY BE REQUIRED TO REDUCE EFFECTIVE SLOPE LENGTH OR SEDIMENT REMOVAL MAY BE NECESSARY. IF THE FILTER SOCK HAS BEEN DAMAGED OR HAS LOST ITS SHAPE, IT SHALL BE REPAIRED OR REPLACED. REMOVE SEDIMENT AT THE BASE OF THE UPSLOPE SIDE OF THE FILTER SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE CONTROL. FILTER SOCK SHALL BE MAINTAINED UNTIL THE DISTURBED AREA ABOVE THE DEVICE IS STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED.

FILTER SOCK

SCALE: NOT TO SCALE



NOTES

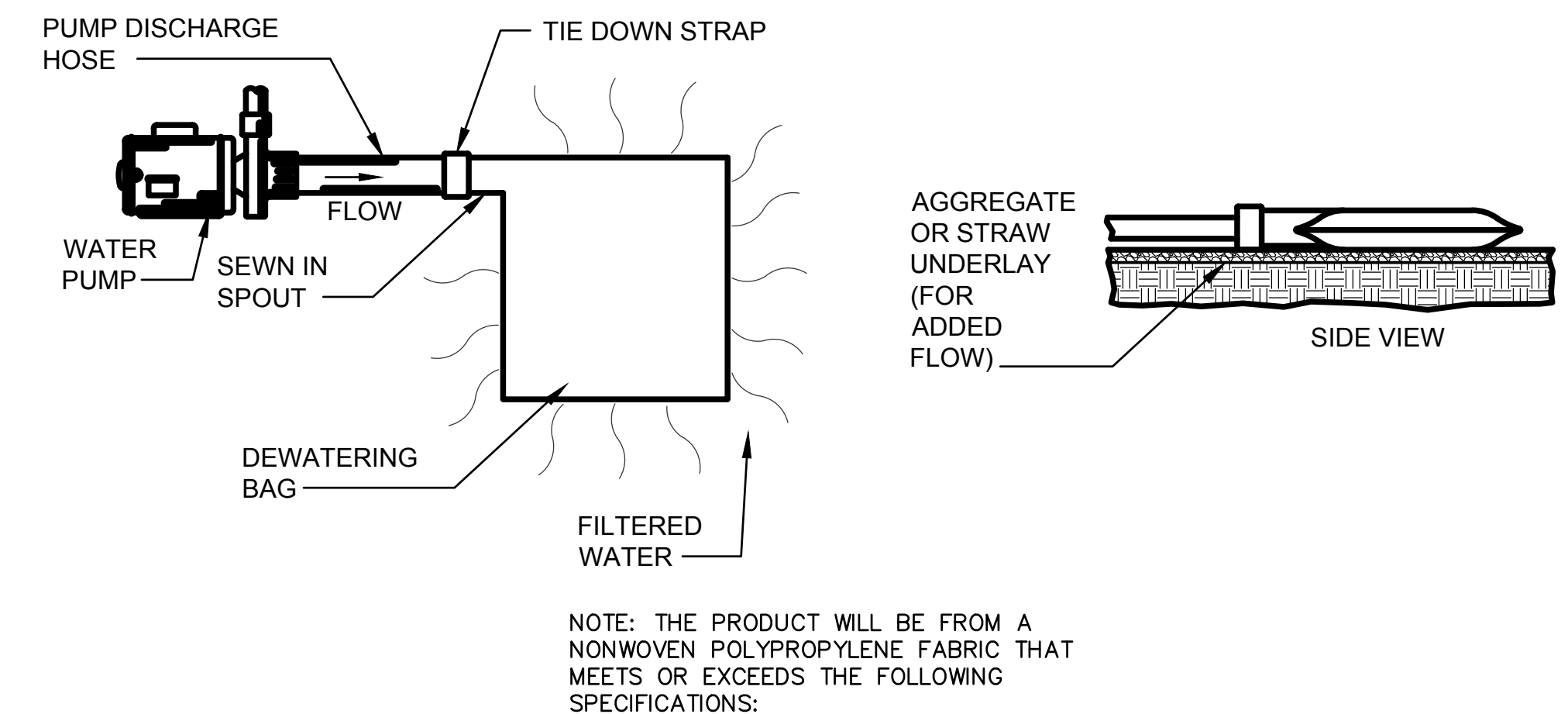
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

NOTES:

1. TEMPORARY CONCRETE WASHOUT WILL BE CONSTRUCTED AS SHOWN ABOVE GRADE WITH A RECOMMENDED MINIMUM LENGTH AND MINIMUM WIDTH OF 10 FT. THE ACTUAL LAYOUT AND LOCATION IS TO BE DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITH 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. THE WASHOUT SHALL BE LOCATED A MINIMUM OF 50 FT AWAY FROM THE STORM DRAIN INLETS.
4. PLASTIC LINING WILL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
5. OPERATION: CHECK WASHOUTS DAILY TO DETERMINE IF THEY HAVE BEEN FILLED TO 75 PERCENT CAPACITY, WHICH IS WHEN MATERIALS NEED TO BE REMOVED. INSPECT DAILY TO ENSURE THAT PLASTIC LININGS ARE INTACT AND SIDEWALLS HAVE NOT BEEN DAMAGED BY CONSTRUCTION ACTIVITIES. PREFABRICATED WASHOUT CONTAINERS SHOULD BE INSPECTED DAILY AS WELL TO ENSURE THE CONTAINER IS NOT LEAKING OR NEARING 75 PERCENT CAPACITY. INSPECTORS SHOULD ALSO NOTE WHETHER THE FACILITIES ARE BEING USED REGULARLY; IF DRIVERS HAVE WASHED OUT THEIR CHUTES OR HOPPERS IN OTHER LOCATIONS, YOU SHALL PROPERLY DISPOSE OF WASHED OUT MATERIALS; PROVIDE MORE EDUCATION, INSTALL ADDITIONAL SIGNAGE, OR PLACE ADDITIONAL WASHOUTS IN MORE CONVENIENT LOCATIONS.
6. MATERIAL REMOVAL:
 - 6.1. CONCRETE WASHOUTS ARE DESIGNED TO PROMOTE EVAPORATION WHERE FEASIBLE. HOWEVER, IF STORED LIQUIDS HAVE NOT EVAPORATED AND THE WASHOUT IS NEARING CAPACITY, VACUUM AND DISPOSE IN AN APPROVED MANNER- CHECK WITH THE LOCAL SANITARY SEWER AUTHORITY TO DETERMINE IF THERE ARE SPECIAL DISPOSAL REQUIREMENTS FOR CONCRETE WASHOUT WATER. REMOVE LIQUIDS OR COVER THE STRUCTURES BEFORE PREDICTED RAINSTORMS TO PREVENT OVERFLOWS. COMPANIES THAT OFFER PREFABRICATED AND WATERTIGHT WASHOUT CONTAINERS GENERALLY OFFER A VACUUM SERVICE TO REMOVE THE LIQUID MATERIAL.
 - 6.2. YOU CAN REMOVE HARDENED SOLIDS WHOLE OR YOU CAN BREAK THEM UP FIRST DEPENDING ON THE TYPE OF EQUIPMENT AVAILABLE AT YOUR SITE. YOU CAN THEN REUSE THE SOLIDS ONSITE OR HAUL THEM AWAY FOR RECYCLING- CRUSHED CONCRETE MAKES EXCELLENT AGGREGATE FOR ROADBEDS AND OTHER BUILDING APPLICATIONS. CHECK WITH YOUR LOCAL RECYCLING AGENCY TO IDENTIFY OPPORTUNITIES FOR CONCRETE RECYCLING.
 - 6.3. WHEN YOU REMOVE MATERIALS FROM THE CONCRETE WASHOUT, BUILD A NEW STRUCTURE, OR IF THE PREVIOUS STRUCTURE IS STILL INTACT, INSPECT THE WHOLE STRUCTURE FOR SIGNS OF WEAKNESS OR DAMAGE AND MAKE ANY NECESSARY REPAIRS. LINE THE STRUCTURES WITH NEW PLASTIC THAT IS FREE OF HOLES OR TEARS AND REPLACE SIGNAGE IF NECESSARY. IT IS VERY IMPORTANT THAT NEW PLASTIC IS USED AFTER EVERY CLEANING BECAUSE PUMPS AND CONCRETE REMOVAL EQUIPMENT CAN DAMAGE THE EXISTING LINER.

TEMPORARY CONCRETE WASHOUT PIT (ABOVE GRADE)

SCALE: NOT TO SCALE



NOTE: THE PRODUCT WILL BE FROM A NONWOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

INLET FILTER BAG PROPERTIES			
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	0.9 (205) x 0.9 (205)
Grab Tensile Elongation	ASTM D 4632	%	50 x 50
Puncture Strength	ASTM D 4833	kN (lbs)	0.58 (130)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	2618 (380)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.36 (80) X 0.36 (80)
UV Resistance	ASTM D 4355	%	70
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.180 (80)
Flow Rate	ASTM D 4491	1/min/m ² (gal/min/ft ²) ²	3866 (95)
Permittivity	ASTM D 4491	Sec ¹	1.2

PUMPED WATER FILTER BAG

SCALE: NOT TO SCALE



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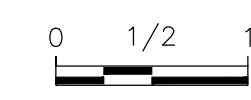
DESIGNED BY: MSE
 DRAWN BY: MAT
 SHEET CHK'D BY: MSE
 CROSS CHK'D BY: DCG
 APPROVED BY: MSE
 ISSUED DATE: 03/06/26

SURFACE WATER MANAGEMENT
 DISTRICT HUC 12-041100020303

SPRINGFIELD LAKE
 CHANNEL RESTORATION
 FINAL DESIGN PLANS

SWPPP DETAILS

WARNING



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