

BUCKEYE XO, LLC

BUCKEYE YARD STREAM CORRIDOR PROTECTION ZONE REFORESTATION PLANS

STATE OF OHIO, FRANKLIN COUNTY
CITY OF COLUMBUS
2022

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UPPER PORTION OF EXISTING STREAM 11



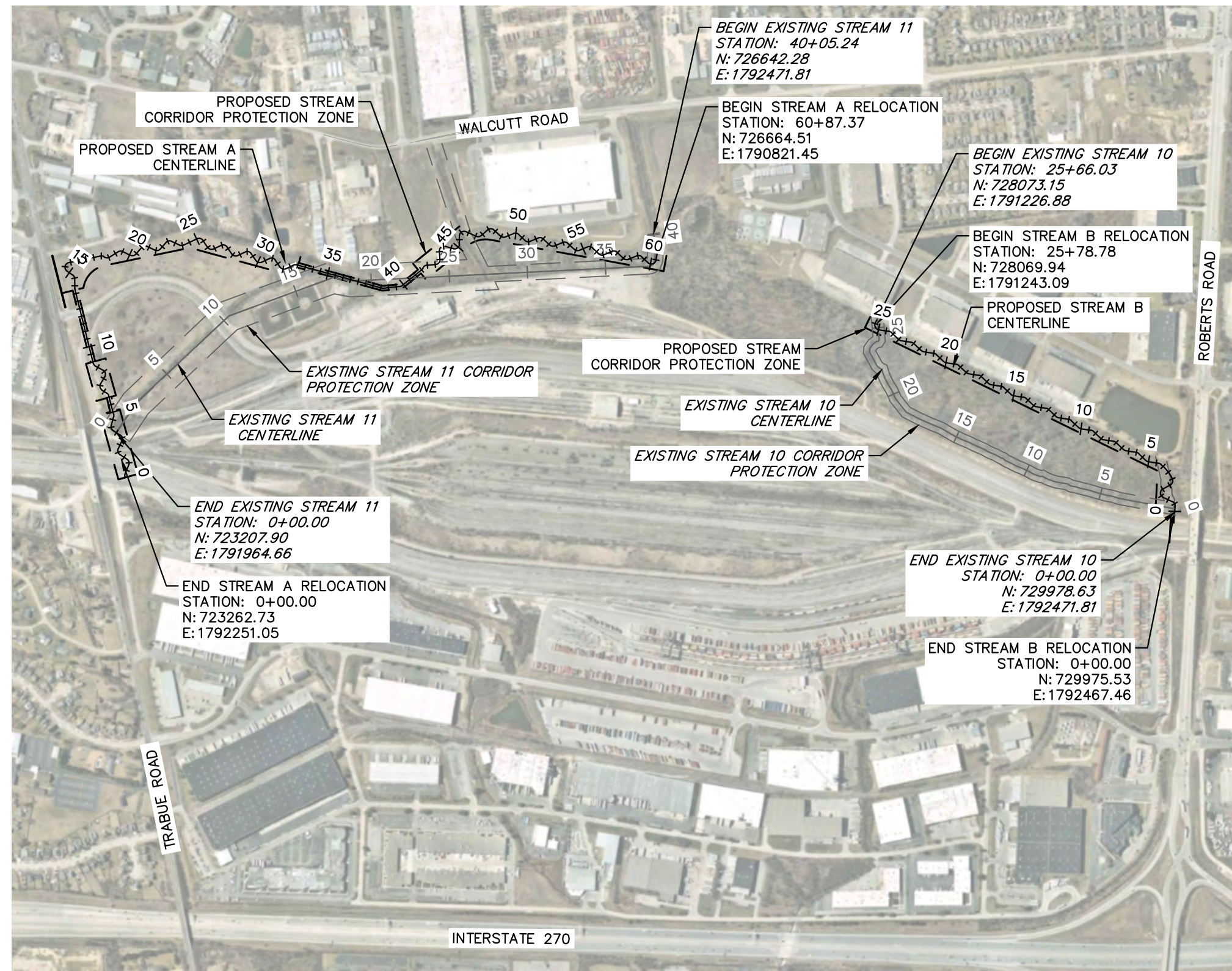
LOWER PORTION OF EXISTING STREAM 11



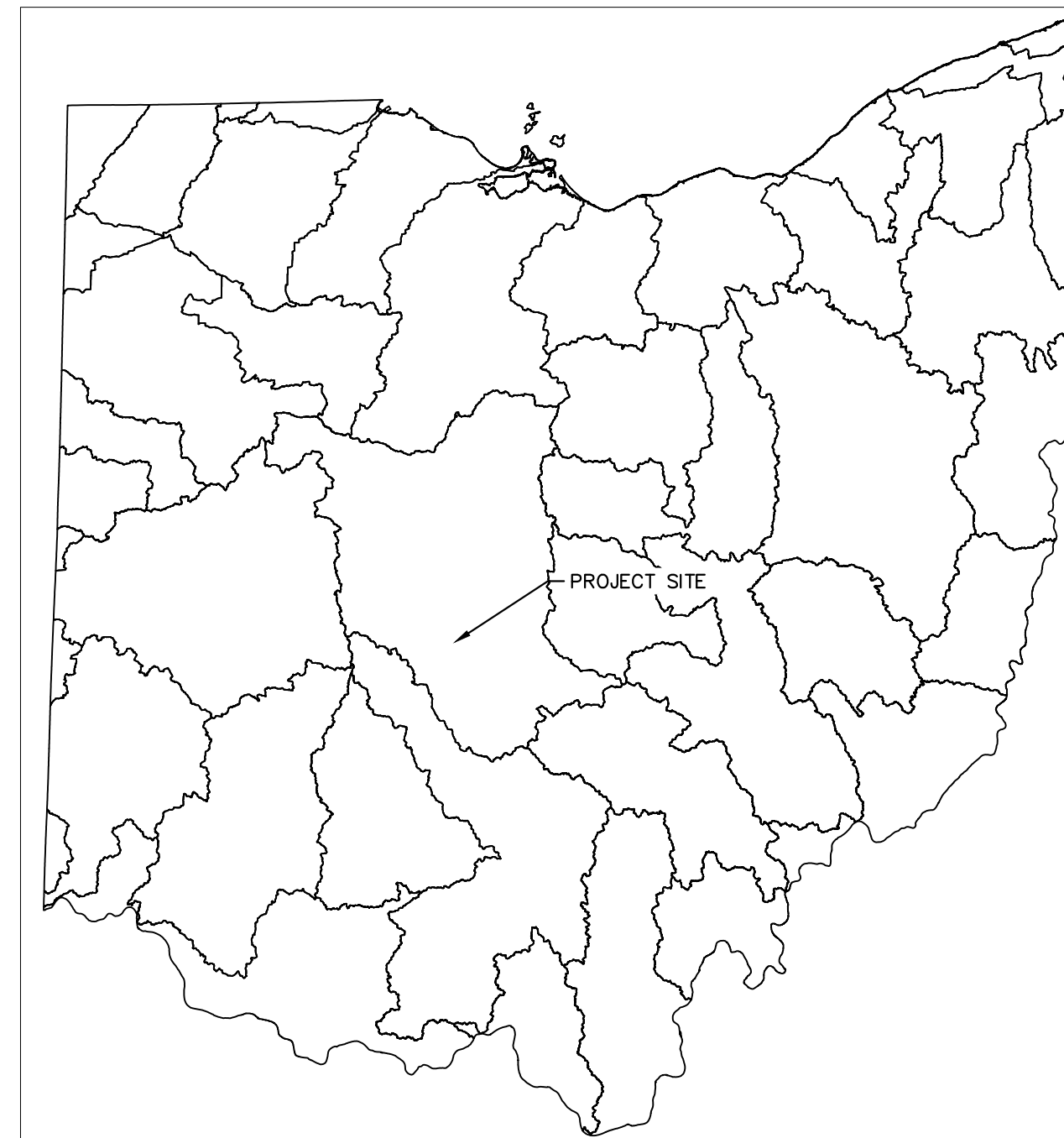
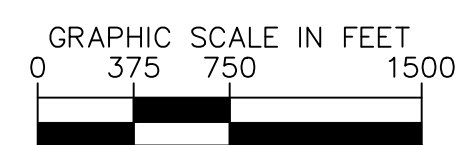
UPPER PORTION OF EXISTING STREAM 10



LOWER PORTION OF EXISTING STREAM 10



SITE LOCATION MAP



USGS 8-DIGIT HUC BOUNDARY MAP

UPPER SCIOTO
HUC ID: 05060001
NOT TO SCALE



PROJECT TEAM

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BUCKEYE XO, LLC
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STREAM CORRIDOR PROTECTION ZONE
REFORESTATION PLANS
BUCKEYE YARD
CITY OF COLUMBUS, FRANKLIN COUNTY, OH

ORIGINAL ISSUE:
03/28/2022

KHA PROJECT NO.
190118000

SHEET NUMBER

EC0.0

SCALE:
DESIGNED BY: MCS
DRAWN BY: MCS
CHECKED BY: JMM

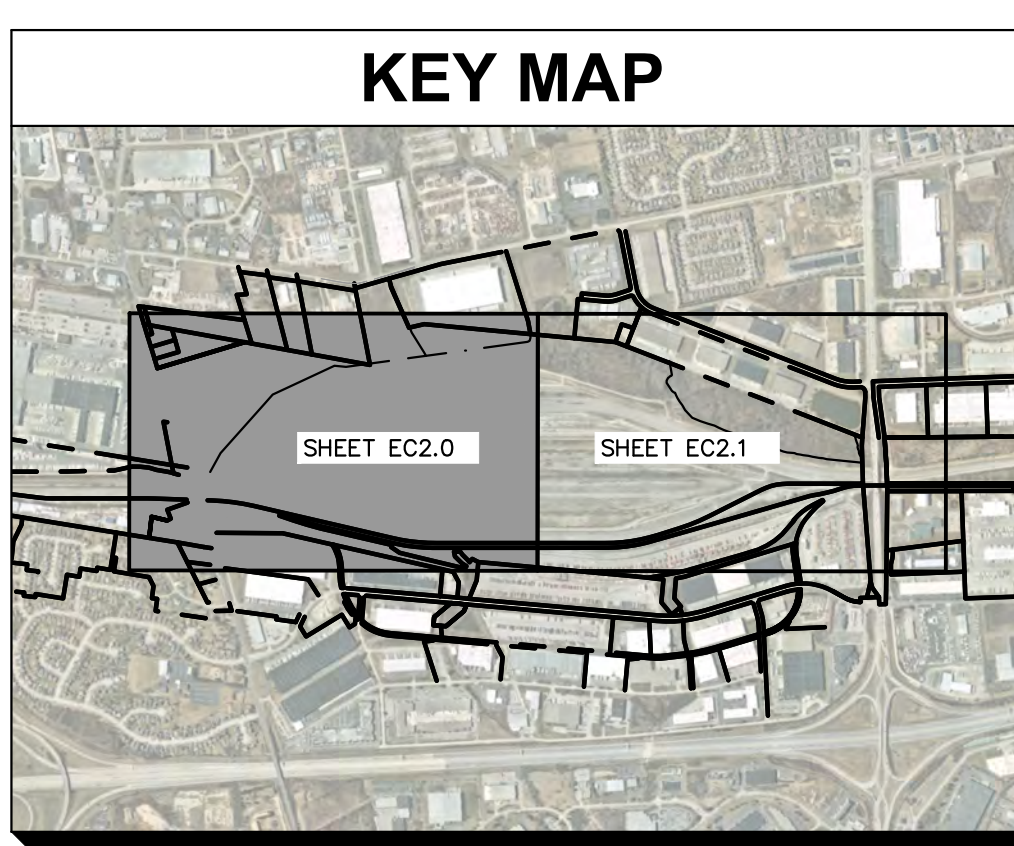
COVER SHEET

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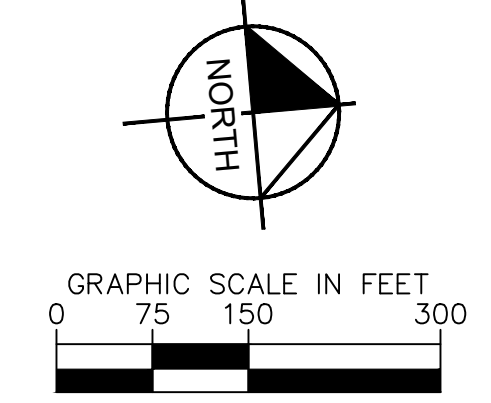
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LEGEND

	EXISTING PROPERTY LINE		EXISTING PAVEMENT		LIMITS OF TREES TO BE REMOVED
	EXISTING RIGHT OF WAY		EXISTING WATER LINE		
	EXISTING EASEMENT		EXISTING GAS LINE		
	EXISTING PAVEMENT		EXISTING OVERHEAD LINE		
	EXISTING CENTERLINE		EXISTING ELECTRIC		
	EXISTING STORM		EXISTING STREAM CORRIDOR PROTECTION ZONE		
	EXISTING SANITARY				



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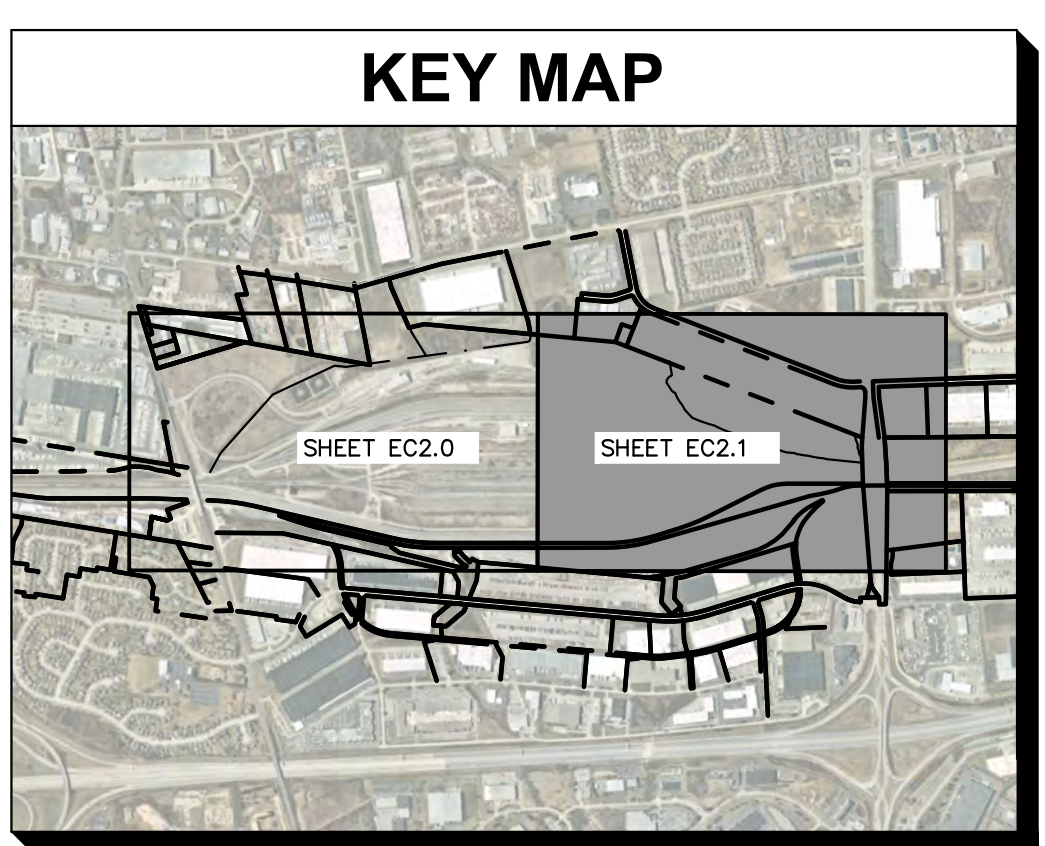
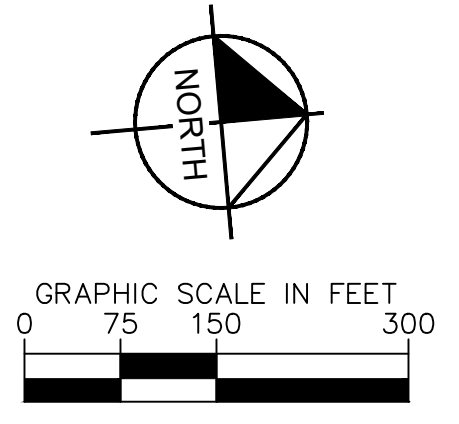
SCALE:
 DESIGNED BY: MCS
 DRAWN BY: MCS
 CHECKED BY: JMM

**EXISTING
 CONDITIONS AND
 TREE REMOVAL
 PLAN**

STREAM CORRIDOR PROTECTION ZONE
 RESTORATION PLANS
BUCKEYE YARD
 CITY OF COLUMBUS, FRANKLIN COUNTY, OH

ORIGINAL ISSUE:
 03/28/2022
 KHA PROJECT NO.
 190118000
 SHEET NUMBER
EC2.0

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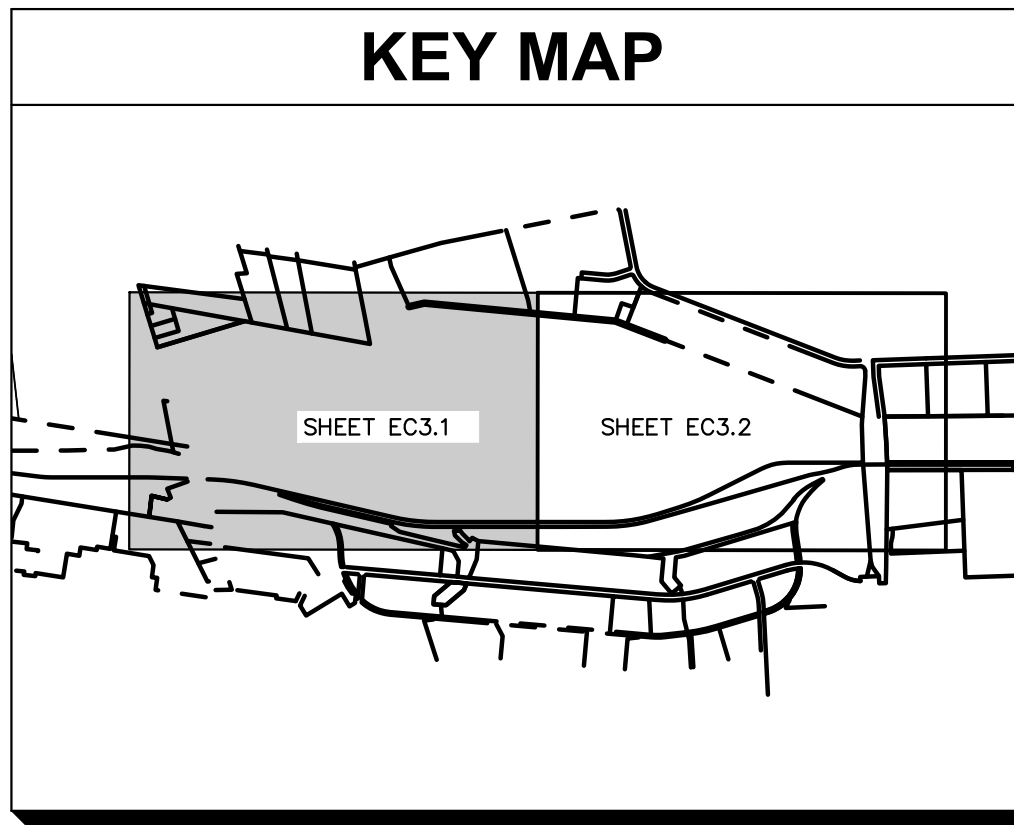
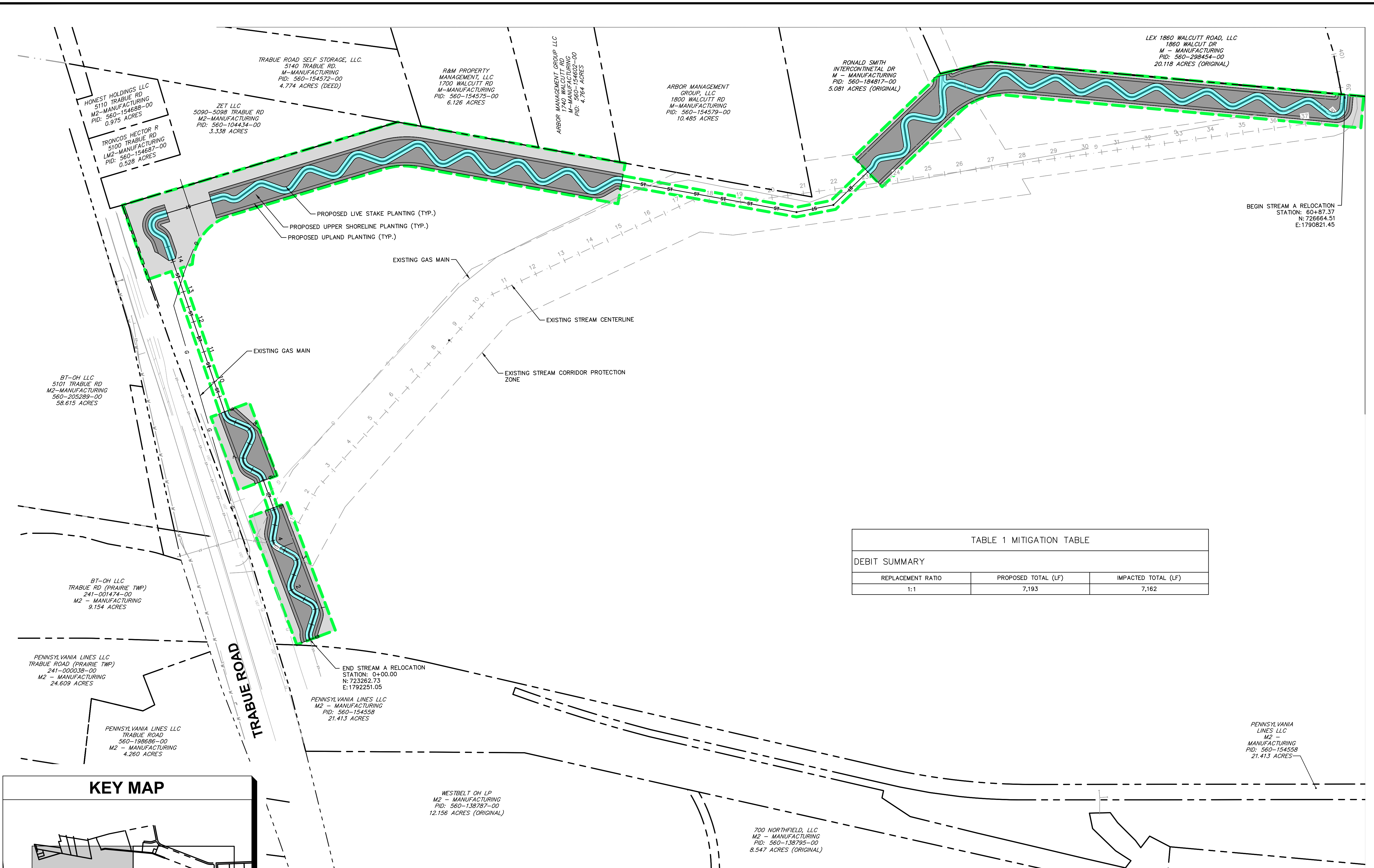


LEGEND

- | | | | | | |
|----------------------------|------------------------|-----------------------|------------------------|---------------------------------|--|
| --- | EXISTING PROPERTY LINE | --- | EXISTING PAVEMENT | ▨ | LIMITS OF TREES TO BE REMOVED |
| - - - | EXISTING RIGHT OF WAY | — W — W — W — W — W — | EXISTING WATER LINE | — GAS — GAS — GAS — GAS — GAS — | EXISTING GAS LINE |
| - · - · - | EXISTING EASEMENT | — — — — — | EXISTING OVERHEAD LINE | — — — — — | EXISTING ELECTRIC |
| — — — — — | EXISTING PAVEMENT | — — — — — | EXISTING CENTERLINE | — — — — — | EXISTING STREAM CORRIDOR PROTECTION ZONE |
| — ST — ST — ST — ST — ST — | EXISTING CENTERLINE | — — — — — | EXISTING STORM | — — — — — | |
| — SAN — SAN — SAN — SAN — | EXISTING STORM | | EXISTING SANITARY | | |

DESIGNED BY: MCS	CHECKED BY: JMM
DRAWN BY: MCS	DATE: _____
SCALE: _____	
EXISTING CONDITIONS AND TREE REMOVAL PLAN	
STREAM CORRIDOR PROTECTION ZONE RESTORATION PLANS BUCKEYE YARD	
CITY OF COLUMBUS, FRANKLIN COUNTY, OH	
ORIGINAL ISSUE: 03/28/2022 KHA PROJECT NO. 190118000 SHEET NUMBER EC2.1	

Drawing name: K:\CIB_LDE\19018000_4dec_Buckeye_Yard_Columbus_OH_2_Design\CAD\PlanSheets\9_StreamRecreation\Planting Plan.dwg OVERVIEW A - Mar 29, 2022, 12:29pm by: Matt Shiflett
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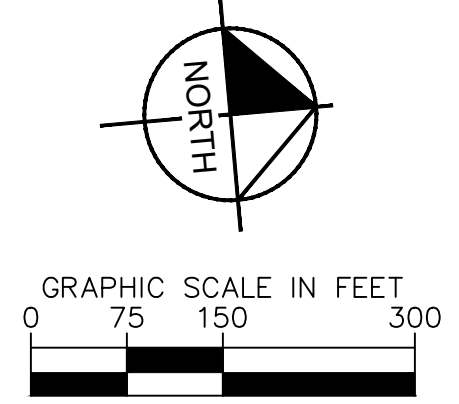


LEGEND

- | | | | | | |
|-------------------|------------------------|-------------------|------------------------|-----|--|
| --- | EXISTING PROPERTY LINE | —W—W—W—W—W— | EXISTING WATER LINE | --- | PROPOSED STREAM CORRIDOR PROTECTION LIMITS |
| - - - | EXISTING RIGHT OF WAY | —G— | EXISTING GAS LINE | --- | LIVESTAKE PLANTING (3.58 AC.) |
| - - - | EXISTING EASEMENT | —OHE— | EXISTING OVERHEAD LINE | --- | UPPER SHORELINE PLANTING (7.75 AC.) |
| —ELE—ELE—ELE—ELE— | EXISTING PAVEMENT | —ELE—ELE—ELE—ELE— | EXISTING ELECTRIC | --- | UPLAND PLANTING (4.70 AC.) |
| —ST—ST—ST—ST—ST— | EXISTING CENTERLINE | --- | PROPOSED RIGHT-OF-WAY | --- | |
| —SAN—SAN—SAN—SAN— | EXISTING STORM | --- | PROPOSED STORM | --- | |
| --- | EXISTING SANITARY | --- | | --- | |

TABLE 1 MITIGATION TABLE

DEBIT SUMMARY		
REPLACEMENT RATIO	PROPOSED TOTAL (LF)	IMPACTED TOTAL (LF)
1:1	7,193	7,162



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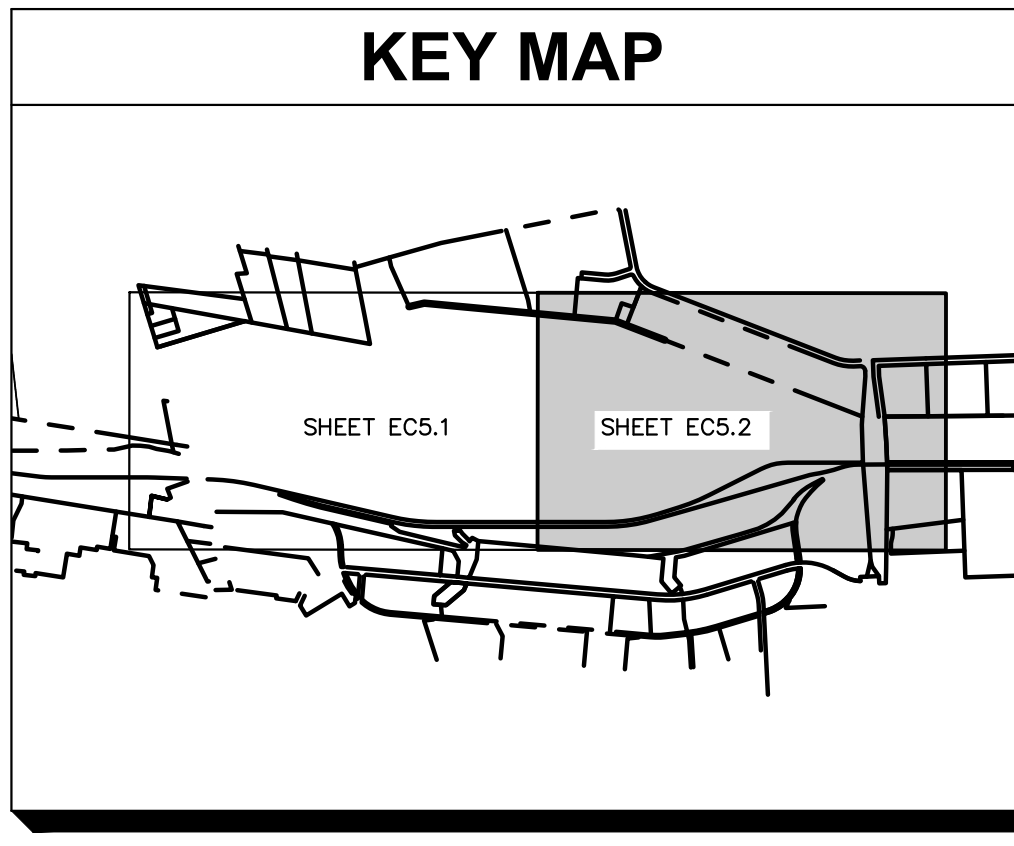
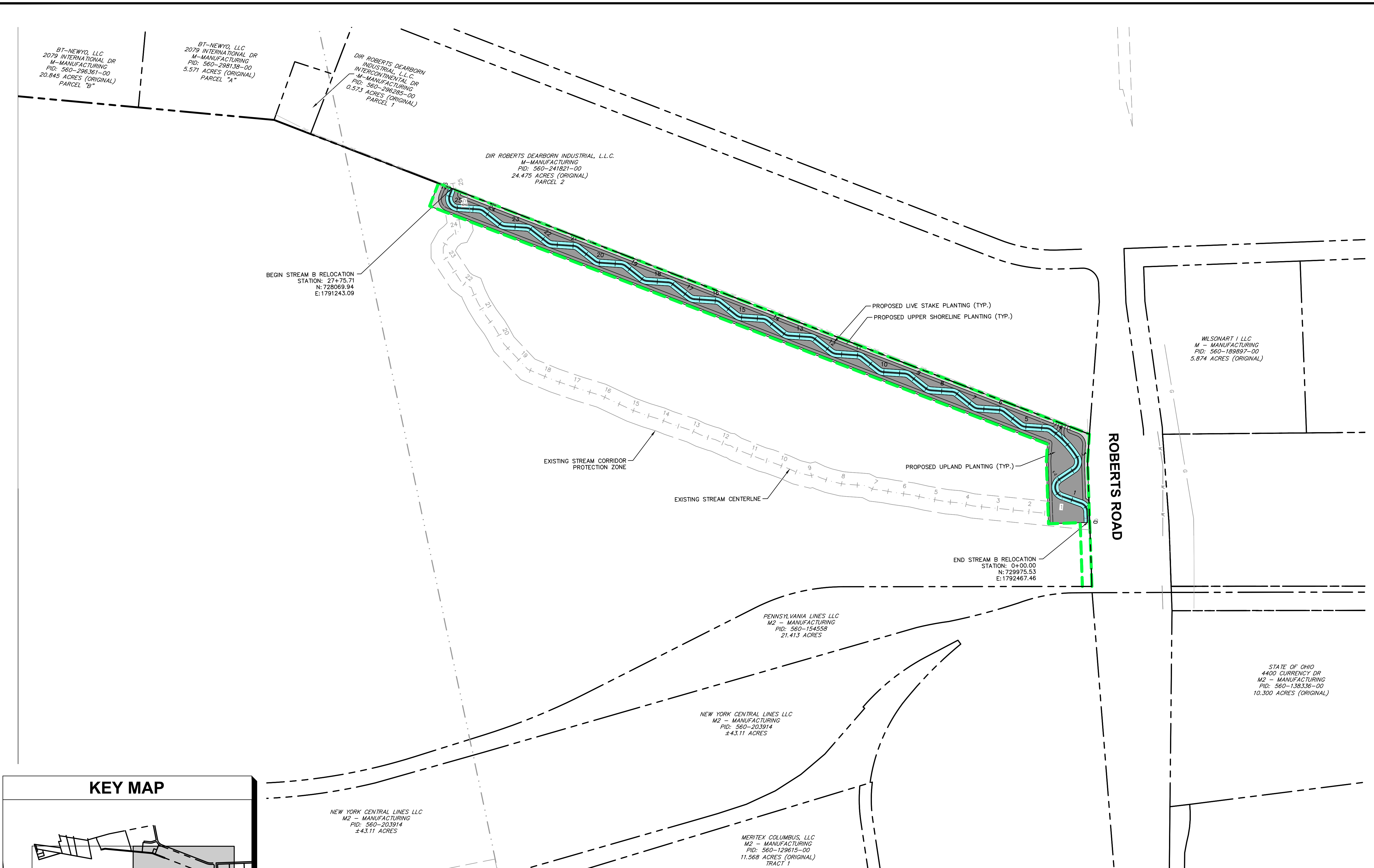
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PLANTING PLAN OVERVIEW

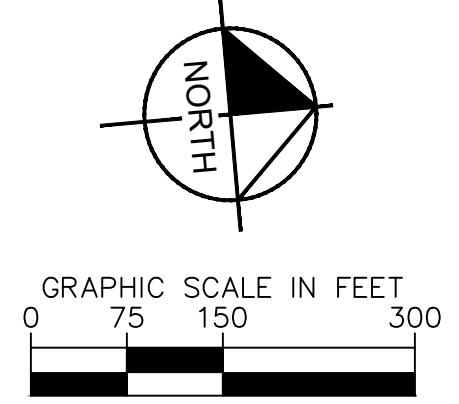
STREAM CORRIDOR PROTECTION ZONE
 REFORESTATION PLANS
BUCKEYE YARD
 CITY OF COLUMBUS, FRANKLIN COUNTY, OH

ORIGINAL ISSUE:
 03/28/2022
 KHA PROJECT NO.
 190118000
 SHEET NUMBER
EC3.0

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LEGEND					
	EXISTING PROPERTY LINE		EXISTING WATER LINE		PROPOSED STREAM CORRIDOR PROTECTION LIMITS
	EXISTING RIGHT OF WAY		EXISTING GAS LINE		LIVESTAKE PLANTING (3.58 AC.)
	EXISTING EASEMENT		EXISTING OVERHEAD LINE		UPPER SHORELINE PLANTING (7.75 AC.)
	EXISTING PAVEMENT		EXISTING ELECTRIC		UPLAND PLANTING (4.70 AC.)
	EXISTING CENTERLINE		PROPOSED RIGHT-OF-WAY		
	EXISTING STORM		PROPOSED STORM		
	EXISTING SANITARY				



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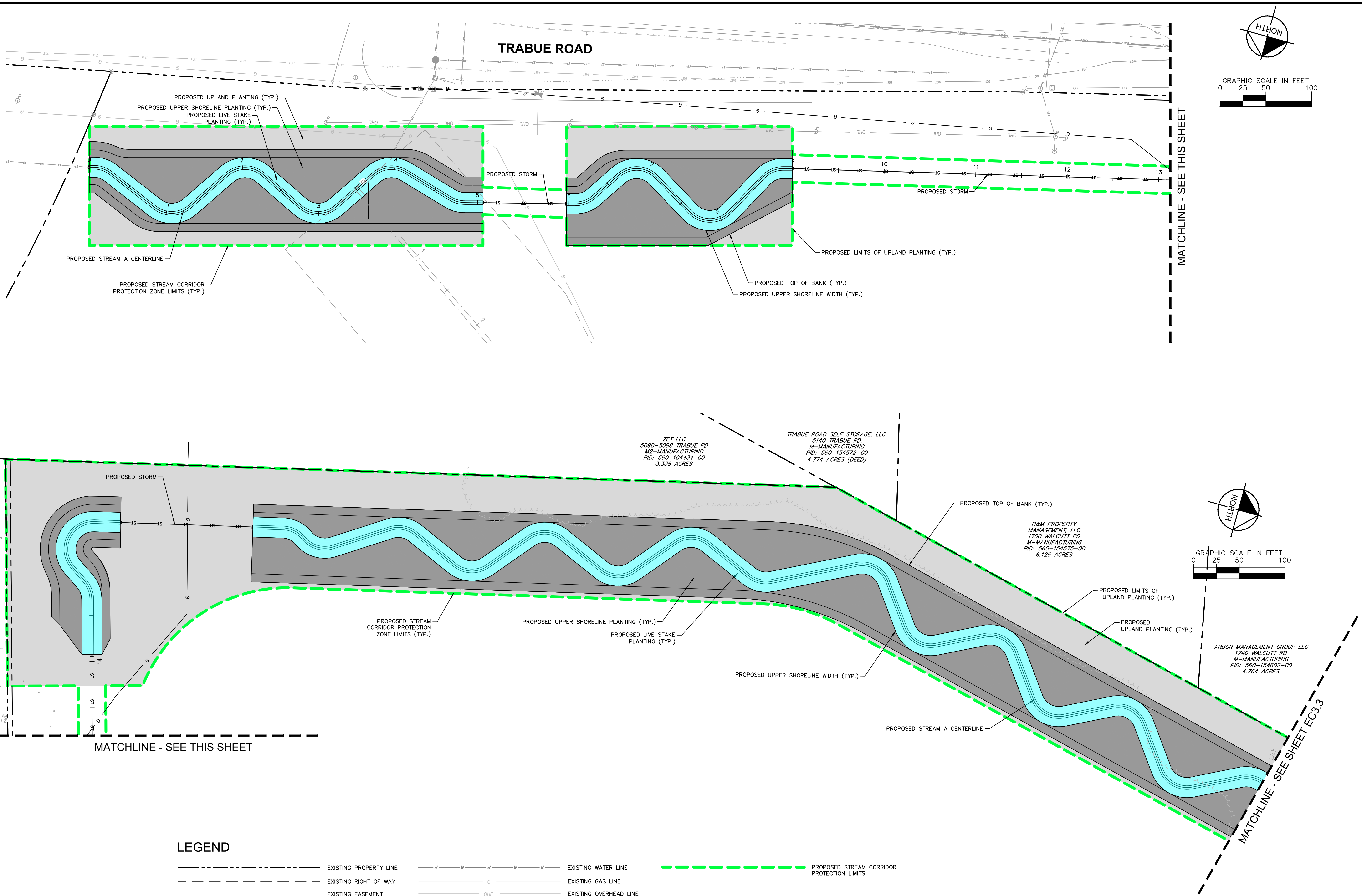
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PLANTING PLAN OVERVIEW

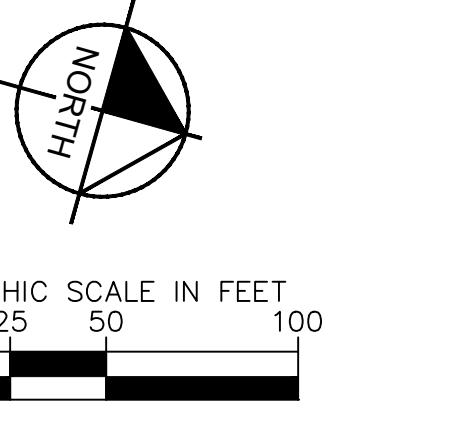
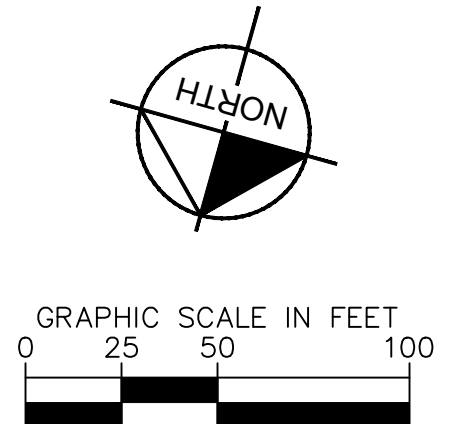
STREAM CORRIDOR PROTECTION ZONE
 REFORESTATION PLANS
BUCKEYE YARD
 CITY OF COLUMBUS, FRANKLIN COUNTY, OH

ORIGINAL ISSUE:
 03/28/2022
 KHA PROJECT NO.
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 SHEET NUMBER
EC3.1

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TRABUE ROAD



LEGEND

	EXISTING PROPERTY LINE		EXISTING WATER LINE		PROPOSED STREAM CORRIDOR PROTECTION LIMITS
	EXISTING RIGHT OF WAY		EXISTING GAS LINE		LIVESTAKE PLANTING (3.58 AC.)
	EXISTING EASEMENT		EXISTING OVERHEAD LINE		UPPER SHORELINE PLANTING (7.75 AC.)
	EXISTING PAVEMENT		EXISTING ELECTRIC		UPLAND PLANTING (4.70 AC.)
	EXISTING CENTERLINE		PROPOSED RIGHT-OF-WAY		
	EXISTING STORM		PROPOSED STORM		
	EXISTING SANITARY				

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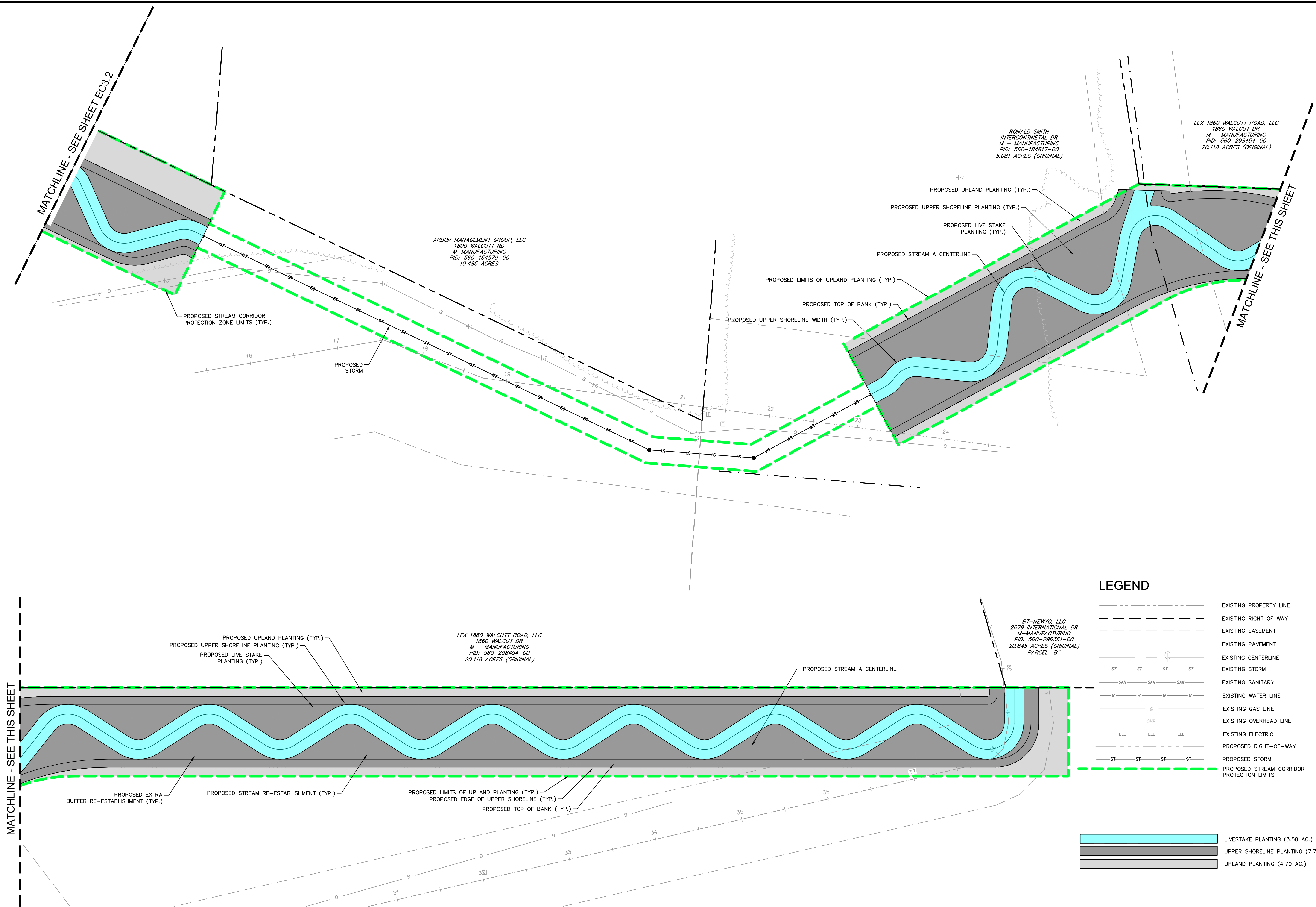
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 DRAWN BY: MCS
 CHECKED BY: JMM

PLANTING PLAN

STREAM CORRIDOR PROTECTION ZONE
 RESTORATION PLANS
BUCKEYE YARD
 CITY OF COLUMBUS, FRANKLIN COUNTY, OH

ORIGINAL ISSUE:
 03/28/2022
 KHA PROJECT NO.
 190118000
 SHEET NUMBER
EC3.2

Drawing name: K:\CIB_LDEA\19018000_3dec_Buckeye_Yard_Columbus_OH_2_Design\CAD\PlanSheets\9_StreamRestoration\Planting Plan.dwg STREAM A - 2 Mar 29, 2022, 12:29pm by: Matt Shifflett
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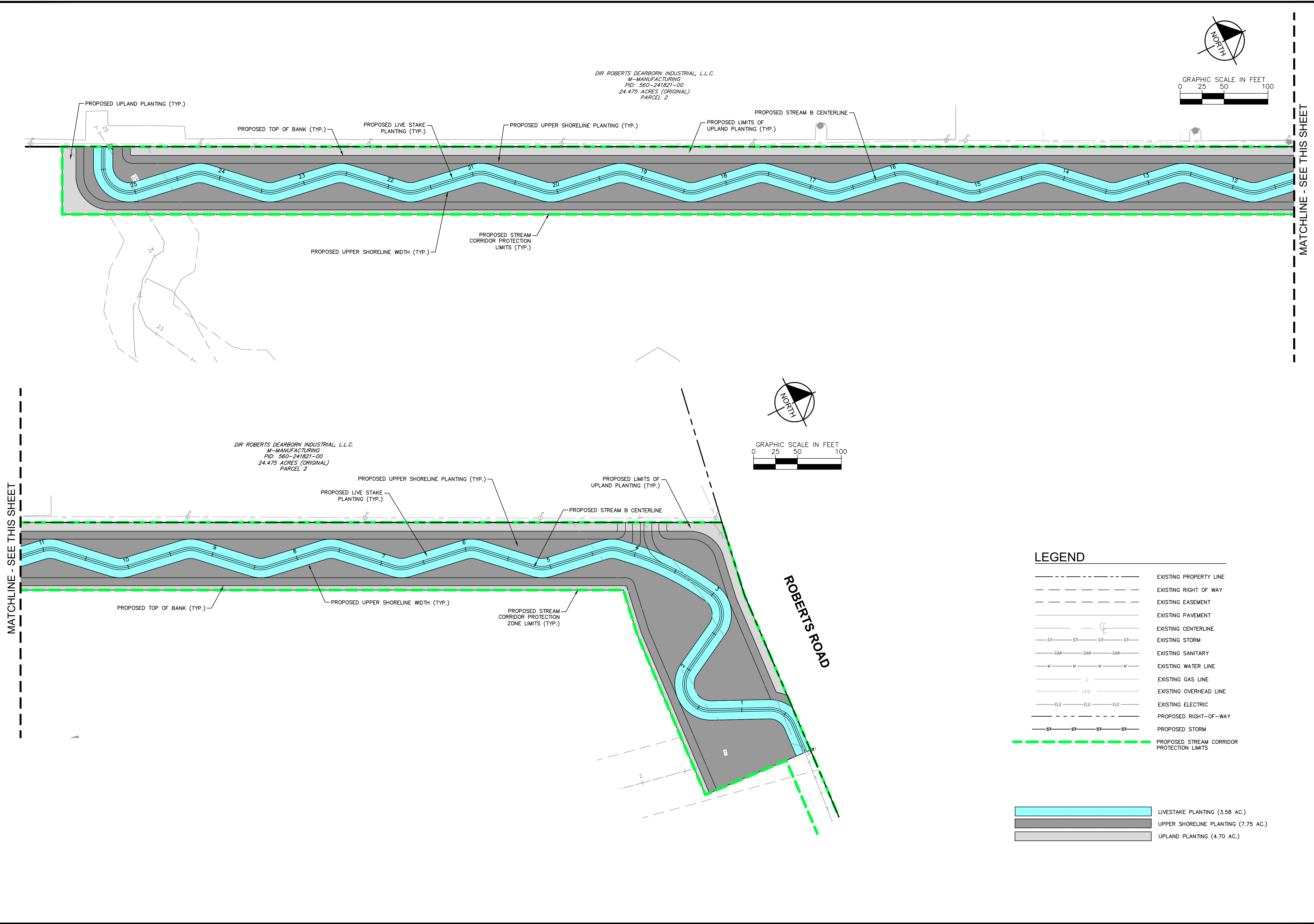
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	EXISTING RIGHT OF WAY
	EXISTING EASEMENT
	EXISTING PAVEMENT
	EXISTING CENTERLINE
	EXISTING STORM
	EXISTING SANITARY
	EXISTING WATER LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD LINE
	EXISTING ELECTRIC
	PROPOSED RIGHT-OF-WAY
	PROPOSED STORM
	PROPOSED STREAM CORRIDOR PROTECTION LIMITS

	LIVESTAKE PLANTING (3.58 AC.)
	UPPER SHORELINE PLANTING (7.75 AC.)
	UPLAND PLANTING (4.70 AC.)

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DESIGNED BY: MCS	CHECKED BY: JMM
DRAWN BY: MCS	DATE: APR 2022
SCALE:	BY: APR 2022
<h2>PLANTING PLAN</h2>	
STREAM CORRIDOR PROTECTION ZONE RESTORATION PLANS BUCKEYE YARD CITY OF COLUMBUS, FRANKLIN COUNTY, OH	
ORIGINAL ISSUE: AC.) 03/28/2022 KHA PROJECT NO. 190118000	
SHEET NUMBER <h1>EC3.3</h1>	

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LEGEND

- EXISTING PROPERTY LINE
 - EXISTING RIGHT OF WAY
 - EXISTING EASEMENT
 - EXISTING PAVEMENT
 - EXISTING CENTERLINE
 - ST --- ST --- ST --- ST --- EXISTING STORM
 - SAN --- SAN --- SAN --- EXISTING SANITARY
 - W --- W --- W --- W --- EXISTING WATER LINE
 - G --- EXISTING GAS LINE
 - OHE --- EXISTING OVERHEAD LINE
 - ELE --- ELE --- ELE --- EXISTING ELECTRIC
 - ST --- ST --- ST --- ST --- PROPOSED RIGHT-OF-WAY
 - ST --- ST --- ST --- ST --- PROPOSED STORM
 - PROPOSED STREAM CORRIDOR PROTECTION LIMITS
-
- █ LIVESTAKE PLANTING (3.58 AC.)
 - █ UPPER SHORELINE PLANTING (7.75 AC.)
 - █ UPLAND PLANTING (4.70 AC.)

MATCHLINE - SEE THIS SHEET

MATCHLINE - SEE THIS SHEET

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SCALE:
 DESIGNED BY: MCS
 DRAWN BY: MCS
 CHECKED BY: JMM

PLANTING PLAN

STREAM CORRIDOR PROTECTION ZONE
 REFORESTATION PLANS
BUCKEYE YARD
 CITY OF COLUMBUS, FRANKLIN COUNTY, OH

ORIGINAL ISSUE:
 03/28/2022
 KHA PROJECT NO.
 190118000
 SHEET NUMBER
EC3.4

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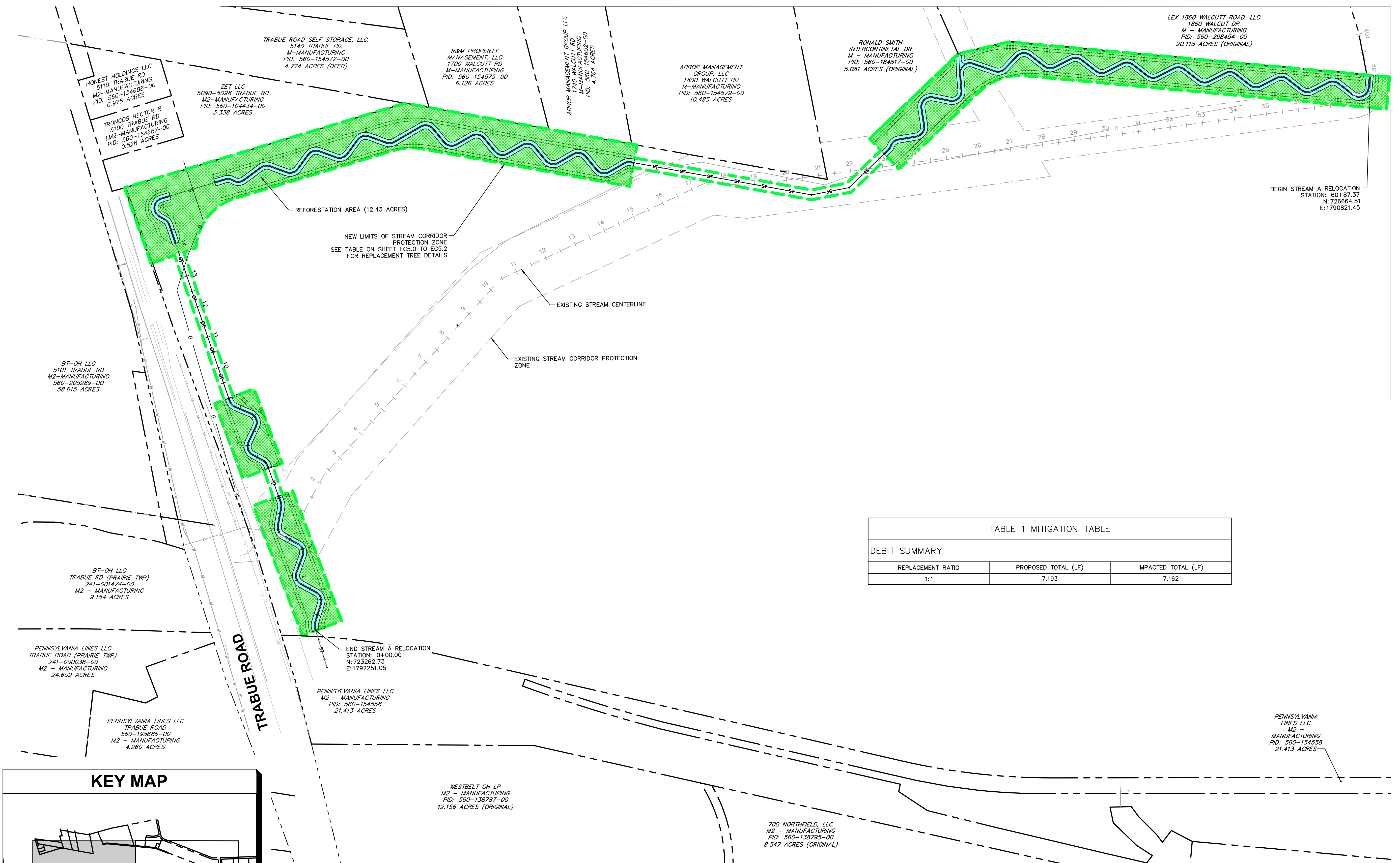
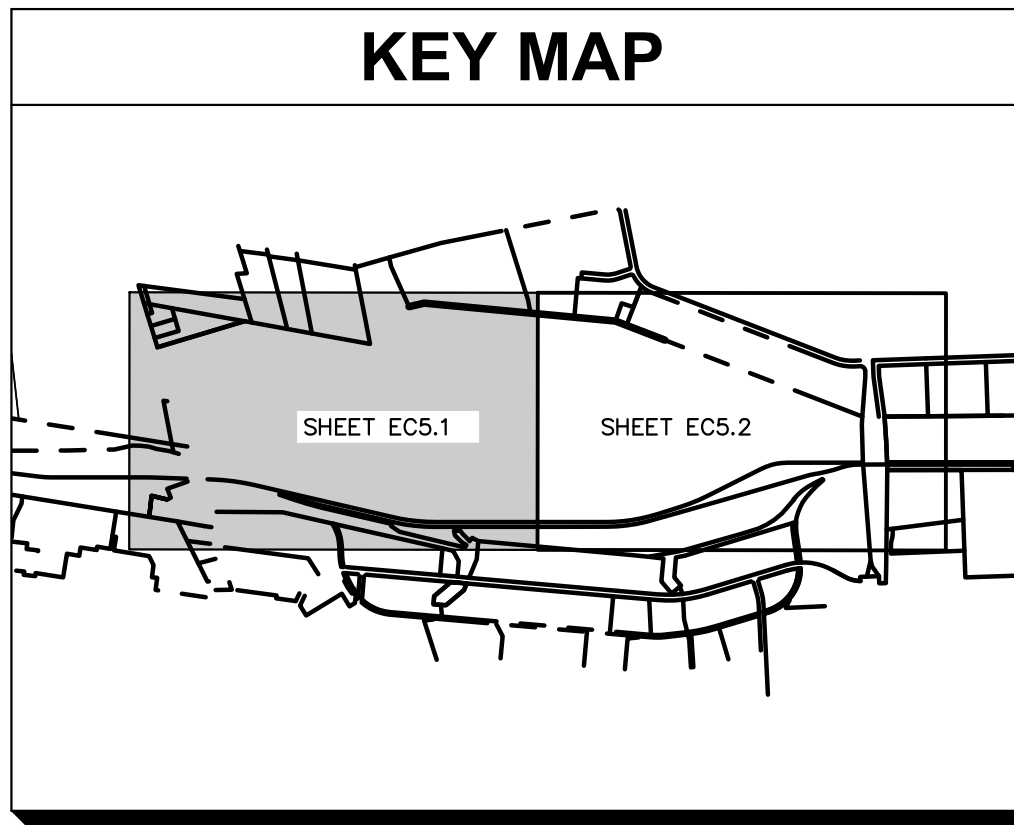


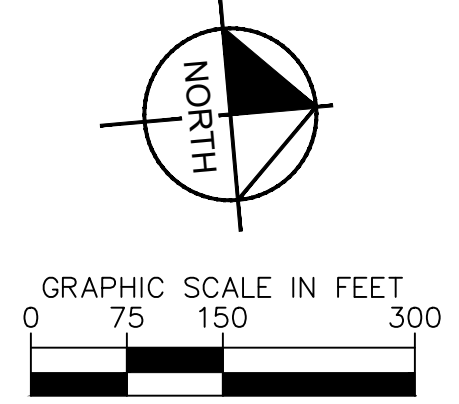
TABLE 1 MITIGATION TABLE

DEBIT SUMMARY		
REPLACEMENT RATIO	PROPOSED TOTAL (LF)	IMPACTED TOTAL (LF)
1:1	7,193	7,162



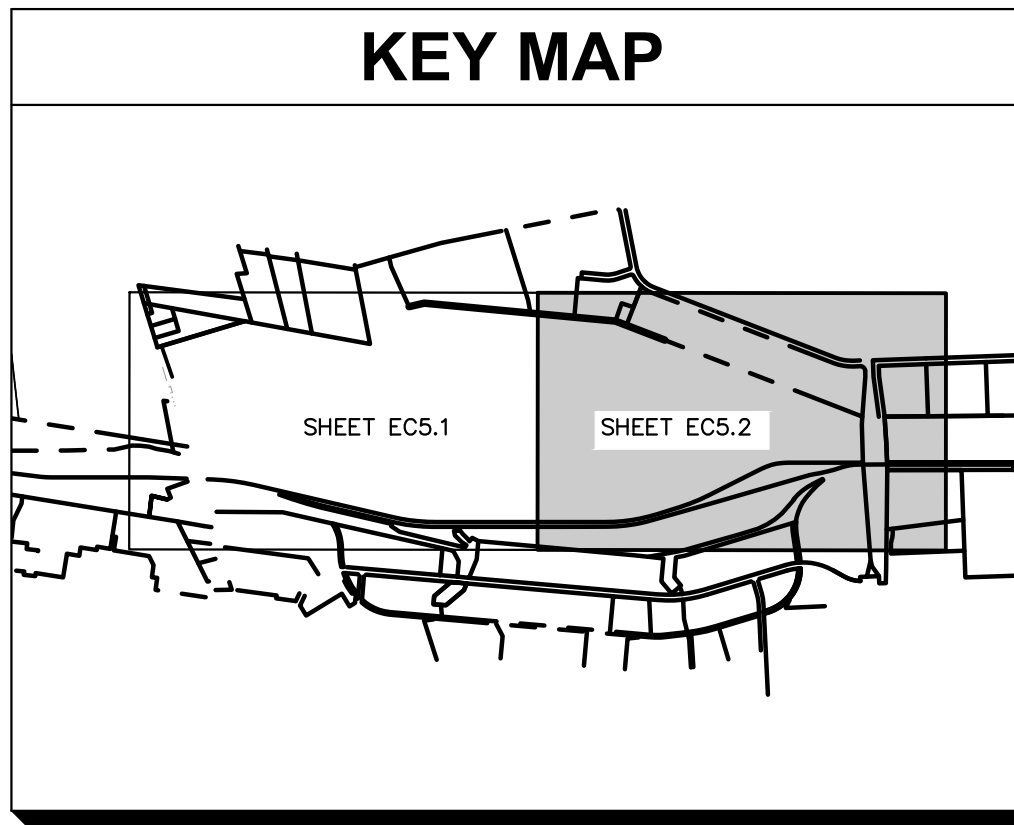
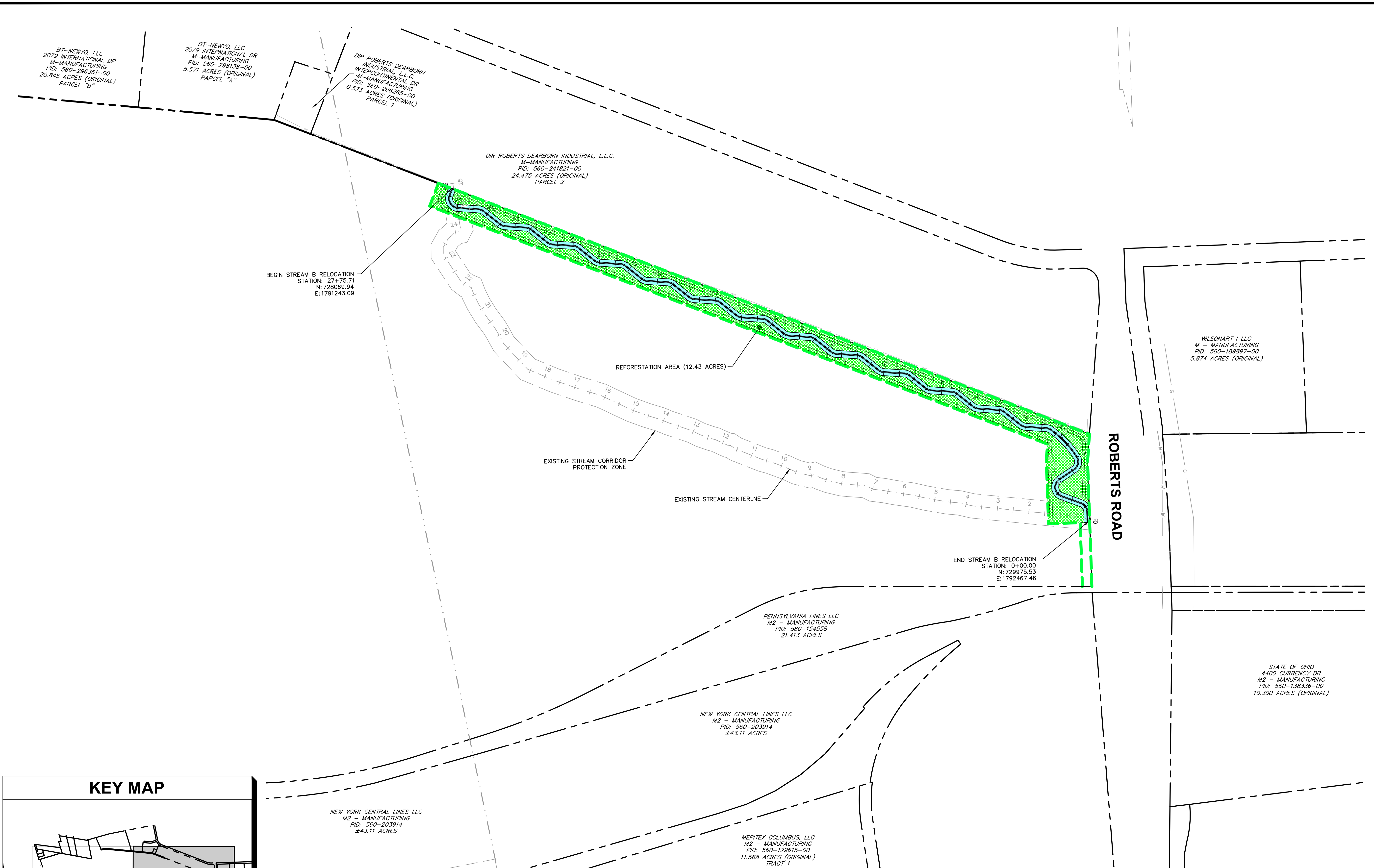
LEGEND

	EXISTING PROPERTY LINE		EXISTING PAVEMENT		PROPOSED STREAM CORRIDOR PROTECTION LIMITS
	EXISTING RIGHT OF WAY		EXISTING WATER LINE		REFORESTATION AREA (12.43 AC.)
	EXISTING EASEMENT		EXISTING GAS LINE		
	EXISTING PAVEMENT		EXISTING OVERHEAD LINE		
	EXISTING CENTERLINE		EXISTING ELECTRIC		
	EXISTING STORM		PROPOSED RIGHT-OF-WAY		
	EXISTING SANITARY		PROPOSED STORM		

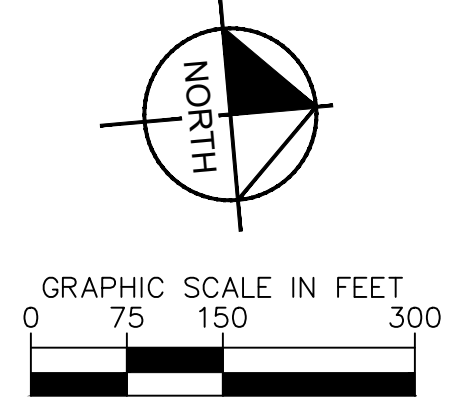


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<p>DESIGNED BY: MCS DRAWN BY: MCS CHECKED BY: JMM</p>	<p>SCALE:</p>										
<p>ORIGINAL ISSUE: 03/28/2022</p> <p>KHA PROJECT NO. 190118000</p> <p>SHEET NUMBER EC4.0</p>	<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>BY</th> <th>APR DATE</th> <th>APR BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	DATE	BY	APR DATE	APR BY					
No.	DATE	BY	APR DATE	APR BY							

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	EXISTING PROPERTY LINE		EXISTING PAVEMENT		PROPOSED STREAM CORRIDOR PROTECTION LIMITS
	EXISTING RIGHT OF WAY		EXISTING WATER LINE		REFORESTATION AREA (12.43 AC.)
	EXISTING EASEMENT		EXISTING GAS LINE		
	EXISTING PAVEMENT		EXISTING OVERHEAD LINE		
	EXISTING CENTERLINE		EXISTING ELECTRIC		
	EXISTING STORM		PROPOSED RIGHT-OF-WAY		
	EXISTING SANITARY		PROPOSED STORM		



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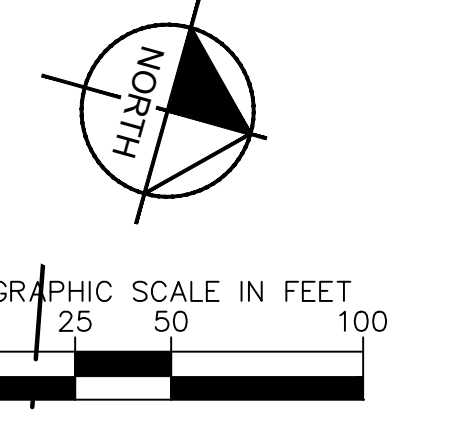
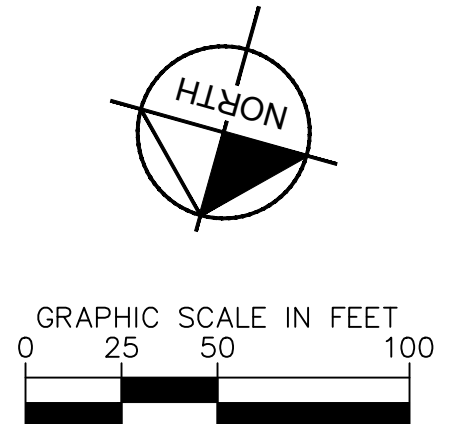
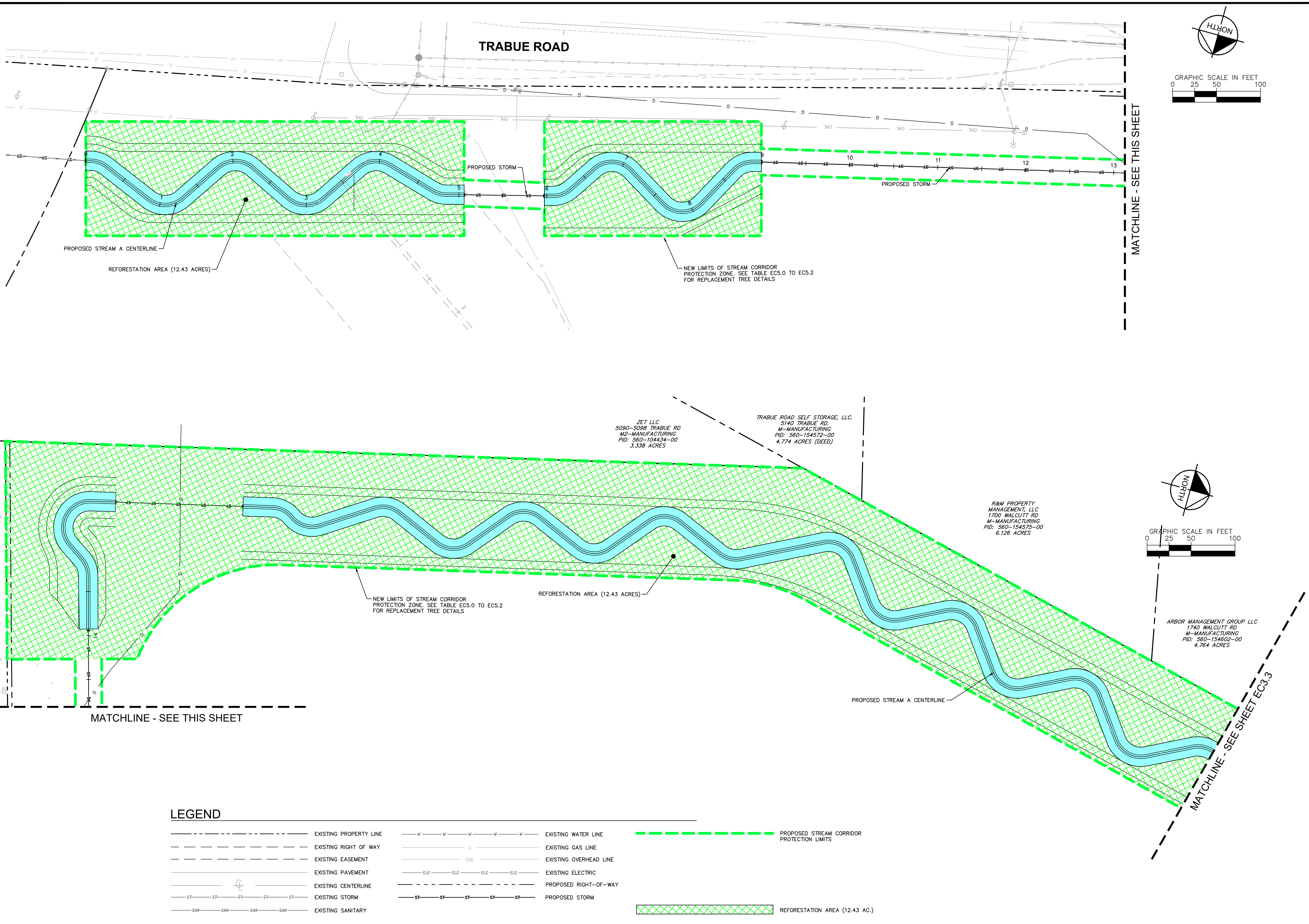
REFORESTATION PLAN OVERVIEW

STREAM CORRIDOR PROTECTION ZONE
 REFORESTATION PLANS
BUCKEYE YARD
 CITY OF COLUMBUS, FRANKLIN COUNTY, OH

ORIGINAL ISSUE:
 03/28/2022
 KHA PROJECT NO.
 19018000

SHEET NUMBER
EC4.1

Drawing name: K:\CIB\JDEA\190118000_3\dec_Buckeye_Yard_Columbus_OH\2_Design\CAD\PlanSheets\9_StreamReforestation\REFORESTATION_PLAN.dwg STREAM A - 1 Mar 29, 2022 12:29pm by: Matt Shifflet
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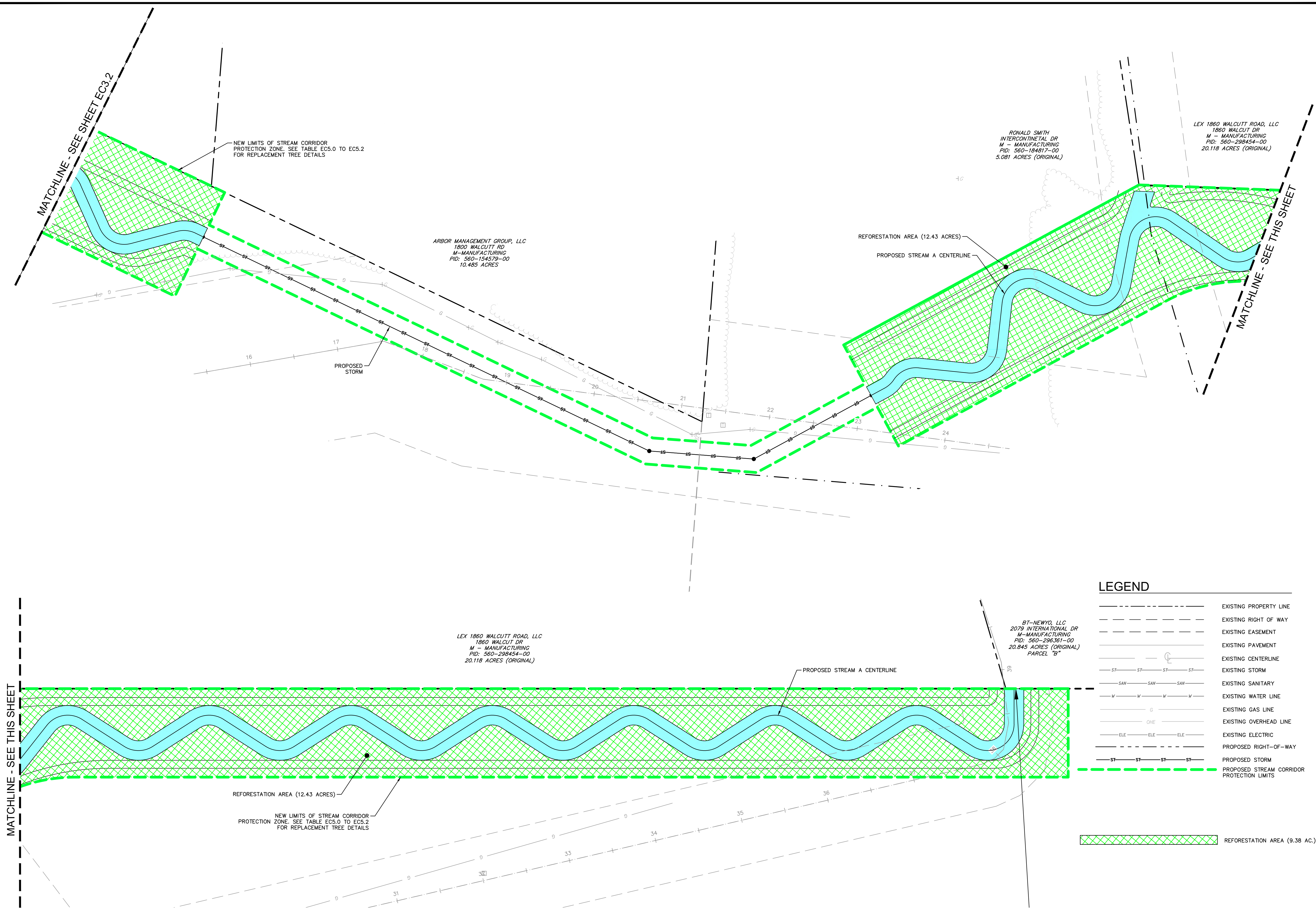


LEGEND

---	EXISTING PROPERTY LINE	—W—W—W—W—W—W—	EXISTING WATER LINE	---	PROPOSED STREAM CORRIDOR PROTECTION LIMITS
---	EXISTING RIGHT OF WAY	—G—	EXISTING GAS LINE	---	REFORESTATION AREA (12.43 AC.)
---	EXISTING EASEMENT	—OHE—	EXISTING OVERHEAD LINE		
---	EXISTING PAVEMENT	—ELE—ELE—ELE—ELE—	EXISTING ELECTRIC		
---	EXISTING CENTERLINE	---	PROPOSED RIGHT-OF-WAY		
—ST—ST—ST—ST—ST—	EXISTING STORM	---	PROPOSED STORM		
—SAN—SAN—SAN—SAN—	EXISTING SANITARY				

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REFORESTATION PLAN								
STREAM CORRIDOR PROTECTION ZONE REFORESTATION PLANS BUCKEYE YARD CITY OF COLUMBUS, FRANKLIN COUNTY, OH								
ORIGINAL ISSUE: 03/28/2022								
KHA PROJECT NO. 190118000								
SHEET NUMBER EC4.2								
				DATE	BY	APR DATE	APR BY	

Drawing name: K:\CIB_LDEA\19018000_3dec_Buckeye_Yard_Columbus_OH_2_Design\CAD\PlanSheets\9_Stream\Reforestation\REFORESTATION_PLAN.dwg STREAM A - 2 - Mar 29, 2022, 12:29pm by: Matt Shifflet
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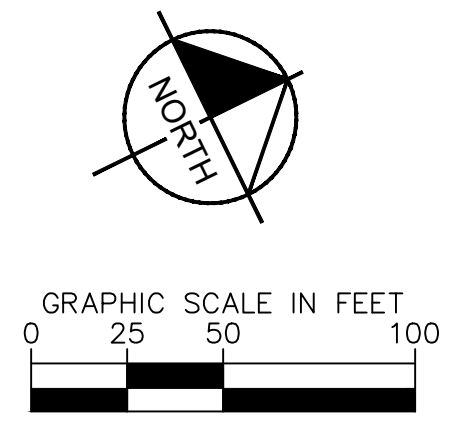
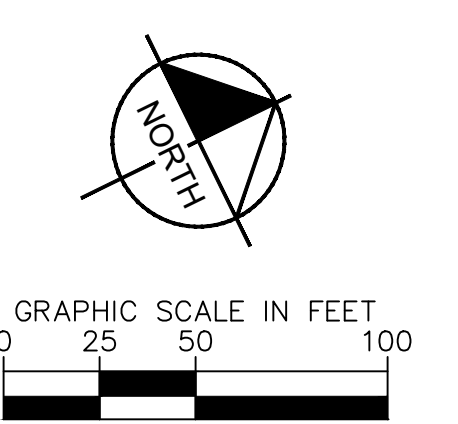
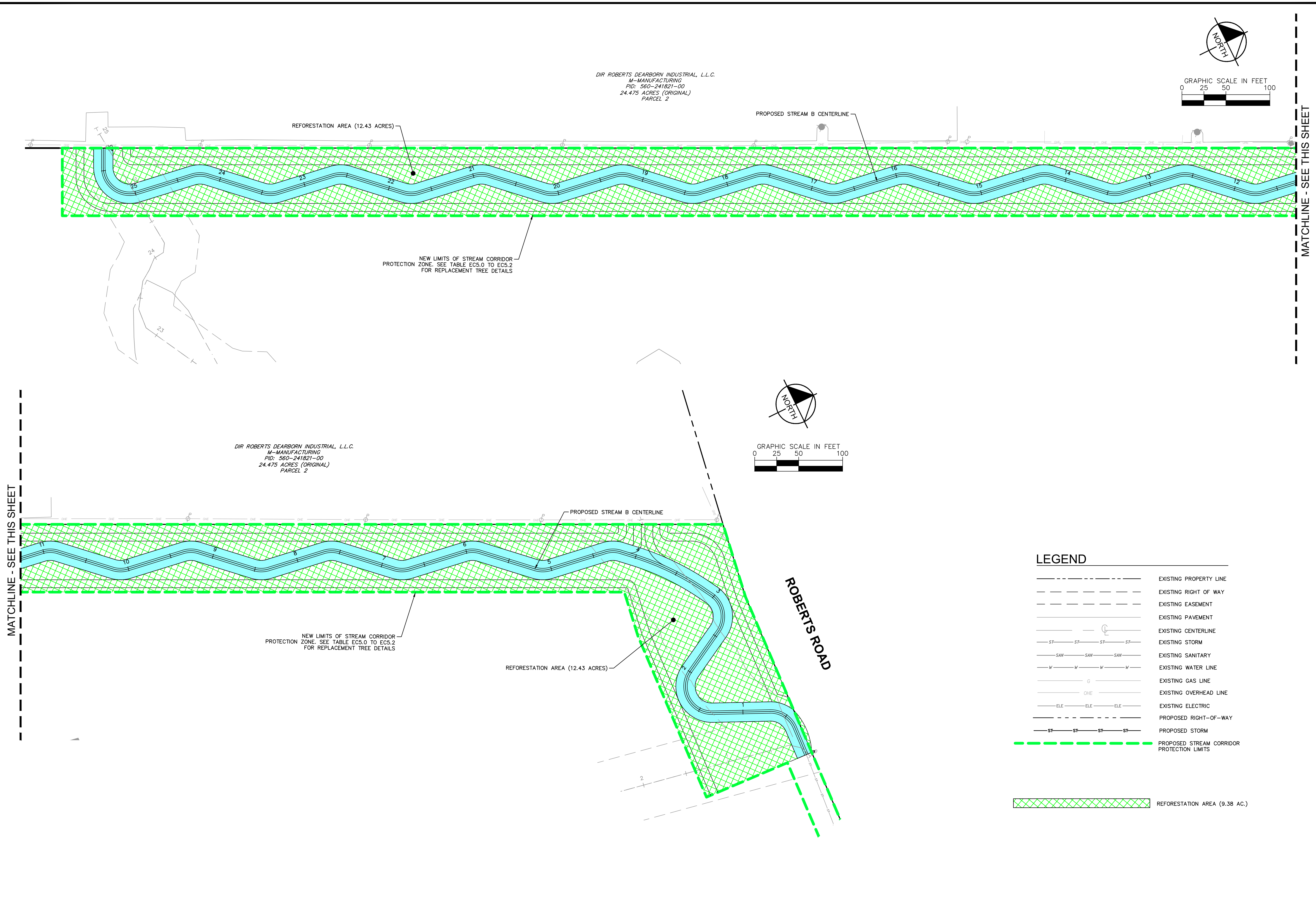


LEGEND

	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
	EXISTING EASEMENT
	EXISTING PAVEMENT
	EXISTING CENTERLINE
	EXISTING STORM
	EXISTING SANITARY
	EXISTING WATER LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD LINE
	EXISTING ELECTRIC
	PROPOSED RIGHT-OF-WAY
	PROPOSED STORM
	PROPOSED STREAM CORRIDOR PROTECTION LIMITS
	REFORESTATION AREA (9.38 AC.)

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		DRAWN BY: MCS	REVISIONS	No.			
<p>REFORESTATION PLAN</p>		<p>SCALE: _____</p>					
<p>STREAM CORRIDOR PROTECTION ZONE REFORESTATION PLANS BUCKEYE YARD CITY OF COLUMBUS, FRANKLIN COUNTY, OH</p>		<p>ORIGINAL ISSUE: 03/28/2022 KHA PROJECT NO. 190118000 SHEET NUMBER EC4.3</p>					

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LEGEND

---	EXISTING PROPERTY LINE
---	EXISTING RIGHT OF WAY
---	EXISTING EASEMENT
---	EXISTING PAVEMENT
---	EXISTING CENTERLINE
—ST—ST—ST—ST—ST—	EXISTING STORM
—SAN—SAN—SAN—SAN—	EXISTING SANITARY
—W—W—W—W—W—	EXISTING WATER LINE
—G—G—G—G—G—	EXISTING GAS LINE
—OHE—OHE—OHE—	EXISTING OVERHEAD LINE
—ELE—ELE—ELE—	EXISTING ELECTRIC
---	PROPOSED RIGHT-OF-WAY
—ST—ST—ST—ST—	PROPOSED STORM
---	PROPOSED STREAM CORRIDOR PROTECTION LIMITS
[Green Cross-hatch Pattern]	REFORESTATION AREA (9.38 AC.)

MATCHLINE - SEE THIS SHEET

MATCHLINE - SEE THIS SHEET

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REFORESTATION PLAN

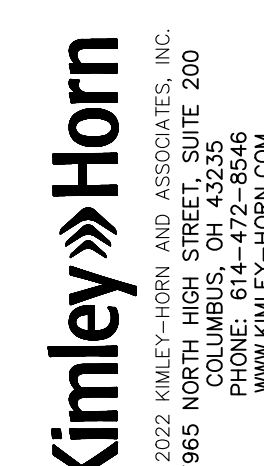
STREAM CORRIDOR PROTECTION ZONE
 REFORESTATION PLANS
BUCKEYE YARD
 CITY OF COLUMBUS, FRANKLIN COUNTY, OH

ORIGINAL ISSUE:
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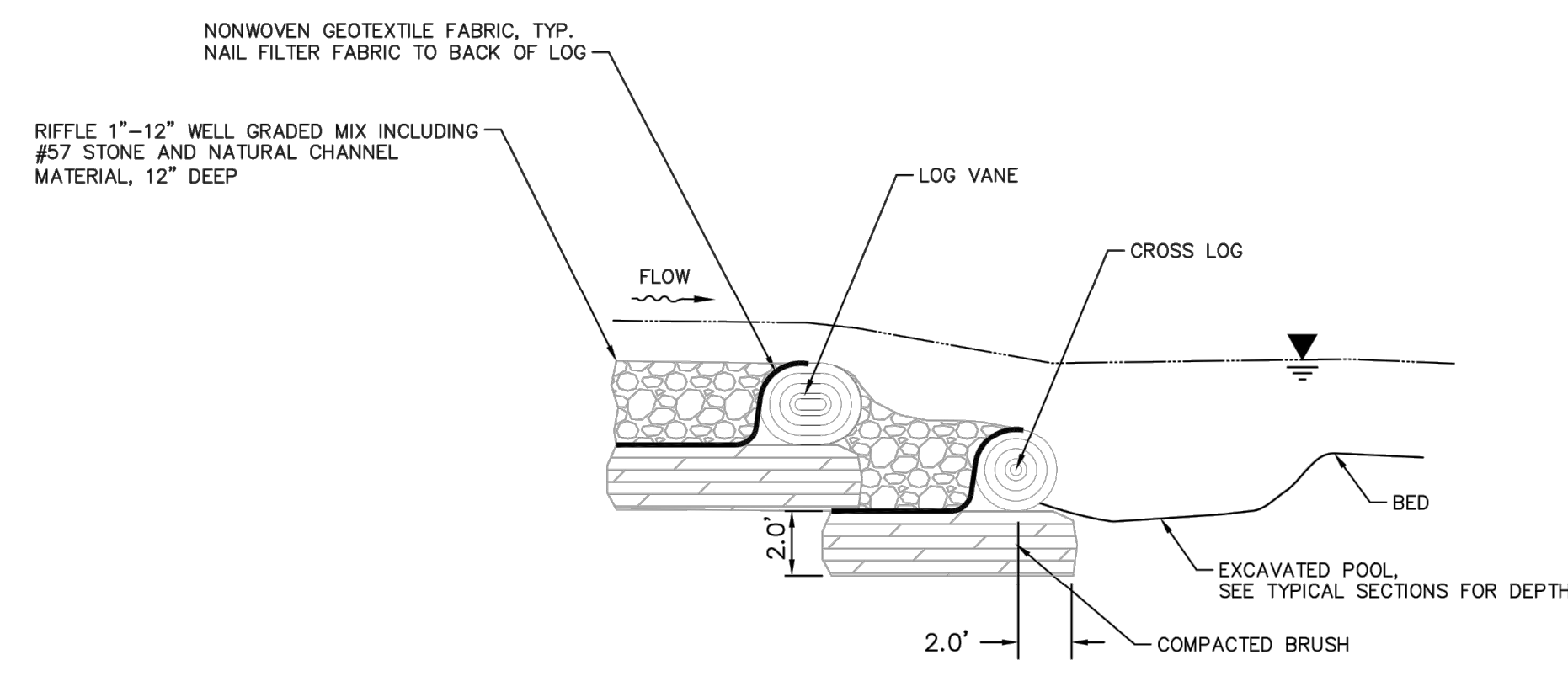
Drawing name: K:\CIB\LDEA\19018000_4dec_Buckeye_Yard_Columbus_OH_2_Design\CAD\PlanSheets\9_StreamReforestation\REFORESTATION_SUMMARY_TABLE.dwg REFORESTATION_SUMMARY_TABLE Mar 29, 2022, 12:29pm by Matt Shiflett
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ID	LATIN NAME	COMMON NAME	CONDITION	D.B.H. (INCHES)	NOTES	NORTHING	EASTING	REPLACEMENT QUANTITY	REPLACEMENT SPECIES
471025	<i>Populus deltoides</i>	EASTERN COTTONWOOD	GOOD	18		729957.5	1792382.7	2	<i>Populus deltoides</i>
471026	<i>Crataegus pennsylvanica</i>	HAWTHORN	GOOD	7		729943.9	1792377.9	1	<i>Crataegus pennsylvanica</i>
471027	<i>Ulmus americana</i>	ELM	GOOD	8		729931.6	1792368.2	1	<i>Ulmus americana</i>
471028	<i>Ulmus americana</i>	ELM	GOOD	8		729929.4	1792331.8	1	<i>Ulmus americana</i>
471029	<i>Acer ssp.</i>	MAPLE	GOOD	8		729949.1	1792323.6	1	<i>Acer rubrum</i>
471031	<i>Ulmus americana</i>	ELM	GOOD	6		729889.4	1792303.5	1	<i>Ulmus americana</i>
471032	<i>Ulmus americana</i>	ELM	GOOD	9		729916.9	1792279.3	1	<i>Ulmus americana</i>
471033	<i>Ulmus americana</i>	ELM	GOOD	9		729930	1792281.9	1	<i>Ulmus americana</i>
471034	<i>Ulmus americana</i>	ELM	GOOD	9		729934.6	1792284.1	1	<i>Ulmus americana</i>
471035	<i>Ulmus americana</i>	ELM	GOOD	6		729922	1792260.8	1	<i>Ulmus americana</i>
471036	<i>Ulmus americana</i>	ELM	GOOD	11		729914.5	1792257.5	1	<i>Ulmus americana</i>
471037	<i>Ulmus americana</i>	ELM	GOOD	9		729891.1	1792259.7	1	<i>Ulmus americana</i>
471038	<i>Ulmus americana</i>	ELM	GOOD	9		729887.2	1792247.1	1	<i>Ulmus americana</i>
471039	<i>Crataegus pennsylvanica</i>	HAWTHORN	GOOD	6		729897.2	1792243.2	1	<i>Crataegus pennsylvanica</i>
471040	<i>Ulmus americana</i>	ELM	GOOD	8		729906.3	1792231	1	<i>Ulmus americana</i>
471041	<i>Ulmus americana</i>	ELM	GOOD	13		729895	1792221.3	2	<i>Ulmus americana</i>
471042	<i>Ulmus americana</i>	ELM	GOOD	12		729880.5	1792213.8	2	<i>Ulmus americana</i>
471043	<i>Ulmus americana</i>	ELM	GOOD	6		729909.5	1792218.1	1	<i>Ulmus americana</i>
471044	<i>Ulmus americana</i>	ELM	GOOD	9		729932.5	1792220.6	1	<i>Ulmus americana</i>
471045	<i>Crataegus pennsylvanica</i>	HAWTHORN	FAIR	6		729916.8	1792188.6	1	<i>Crataegus pennsylvanica</i>
471046	<i>Acer ssp.</i>	MAPLE	GOOD	10		729921.8	1792185.2	1	<i>Acer rubrum</i>
471047	<i>Juglans nigra</i>	WALNUT	GOOD	6		729872.4	1792173.8	1	<i>Juglans nigra</i>
471048	<i>Juglans nigra</i>	WALNUT	GOOD	6		729861.9	1792139.1	1	<i>Juglans nigra</i>
471049	<i>Populus deltoides</i>	EASTERN COTTONWOOD	GOOD	25		729935.9	1792172.4	4	<i>Populus deltoides</i>
471050	<i>Populus deltoides</i>	EASTERN COTTONWOOD	FAIR	25		729981.9	1792191.6	4	<i>Populus deltoides</i>
471051	<i>Ulmus americana</i>	ELM	GOOD	9		729947.7	1792200.5	1	<i>Ulmus americana</i>
471052	<i>Ulmus americana</i>	ELM	GOOD	9		729958.2	1792203.2	1	<i>Ulmus americana</i>
471053	<i>Ulmus americana</i>	ELM	POOR	9		729954.5	1792240.6	1	<i>Ulmus americana</i>
471054	<i>Ulmus americana</i>	ELM	POOR	9		729956.6	1792255.1	1	<i>Ulmus americana</i>
471055	<i>Ulmus americana</i>	ELM	FAIR	11		729952	1792256.2	1	<i>Ulmus americana</i>
471056	<i>Ulmus americana</i>	ELM	FAIR	12		729953.7	1792264.5	2	<i>Ulmus americana</i>
471057	<i>Prunus serotina</i>	BLACK CHERRY	GOOD	10		729993.7	1792265.4	1	<i>Prunus serotina</i>
471058	<i>Salix ssp.</i>	WILLOW	POOR	10		729954.7	1792298.3	1	<i>Salix nigra</i>
471059	<i>Populus deltoides</i>	EASTERN COTTONWOOD	GOOD	24		729965.5	1792339.5	3	<i>Populus deltoides</i>
471060	<i>Populus deltoides</i>	EASTERN COTTONWOOD	GOOD	12		729965.5	1792348.2	2	<i>Populus deltoides</i>
471061	<i>Populus deltoides</i>	EASTERN COTTONWOOD	GOOD	19		729965.5	1792355.7	3	<i>Populus deltoides</i>
471062	<i>Prunus serotina</i>	BLACK CHERRY	GOOD	9		729984	1792363.8	1	<i>Prunus serotina</i>
471063	<i>Salix ssp.</i>	WILLOW	POOR	8		729969.4	1792373.3	1	<i>Salix nigra</i>
471064	<i>Populus deltoides</i>	EASTERN COTTONWOOD	GOOD	12		729974.4	1792408.2	2	<i>Populus deltoides</i>
471065	<i>Populus deltoides</i>	EASTERN COTTONWOOD	GOOD	18		729983.4	1792437.1	2	<i>Populus deltoides</i>
4E+06	<i>Liquidamber styraciflua</i>	SWEETGUM	POOR	9		723843.3	1791327.9	1	<i>Liquidamber styraciflua</i>
4E+06	<i>Prunus serotina</i>	BLACK CHERRY	GOOD	6		723795.3	1791371.6	1	<i>Prunus serotina</i>
4E+06	<i>Pyrus calleryana</i>	ORNAMENTAL PEAR	GOOD	6		723698.5	1791456.6	1	<i>Malus coronaria</i>
4E+06	<i>Prunus serotina</i>	BLACK CHERRY	POOR	6		723466	1791677.2	1	<i>Prunus serotina</i>
4E+06	<i>Prunus serotina</i>	BLACK CHERRY	GOOD	9		723303.5	1791845.9	1	<i>Prunus serotina</i>
4E+06	<i>Prunus serotina</i>	BLACK CHERRY	GOOD	6		723228.3	1791937	1	<i>Prunus serotina</i>
4E+06	<i>Juniperus virginiana</i>	EASTERN RED CEDAR	GOOD	6		723262.7	1791929.2	1	<i>Juniperus virginiana</i>
4E+06	<i>Acer negundo</i>	BOX ELDER	GOOD	6		723318.6	1791766.6	1	<i>Acer negundo</i>
4E+06	<i>Juniperus virginiana</i>	EASTERN RED CEDAR	GOOD	6		723581.2	1791510.7	1	<i>Juniperus virginiana</i>
TOTAL								661	

- *Locations are approximate and based on sub-meter accuracy GPS provided by CESO Survey, dated 02/18/2022.
- *The diameter at breast height value shown in the table above for multi-trunk tree(s) is the average diameter of the multiple tree stems.
- *This tree inventory and associated mitigation has been conducted in accordance with the City of Columbus Executive Order 2015-01 and coordination with Columbus Recreation & Parks Dept.
- * Deviations from the proposed replacement species must be approved in advance by the City of Columbus Recreation and Parks Department.
- *All replacement trees to be planted within the new 9.38 acre reforestation portion of the SCPZ at a 20-foot on center (10-foot radius per tree) distribution.
- *All plant materials shall be in accordance with the most recent ANSI Z60.1 publication.
- *Per City of Columbus requirements, all replacement trees shall be between 2 to 3 inches diameter at breast height (caliper).
- *In addition to replacement of 661 Trees within the SCPZ, additional bare root plantings are anticipated to be conducted to ensure that at the end of USACE/OEPA monitoring requirements, the SCPZ exhibits at least 400 native woody plants per acre, of which at least 200 acre tree species.

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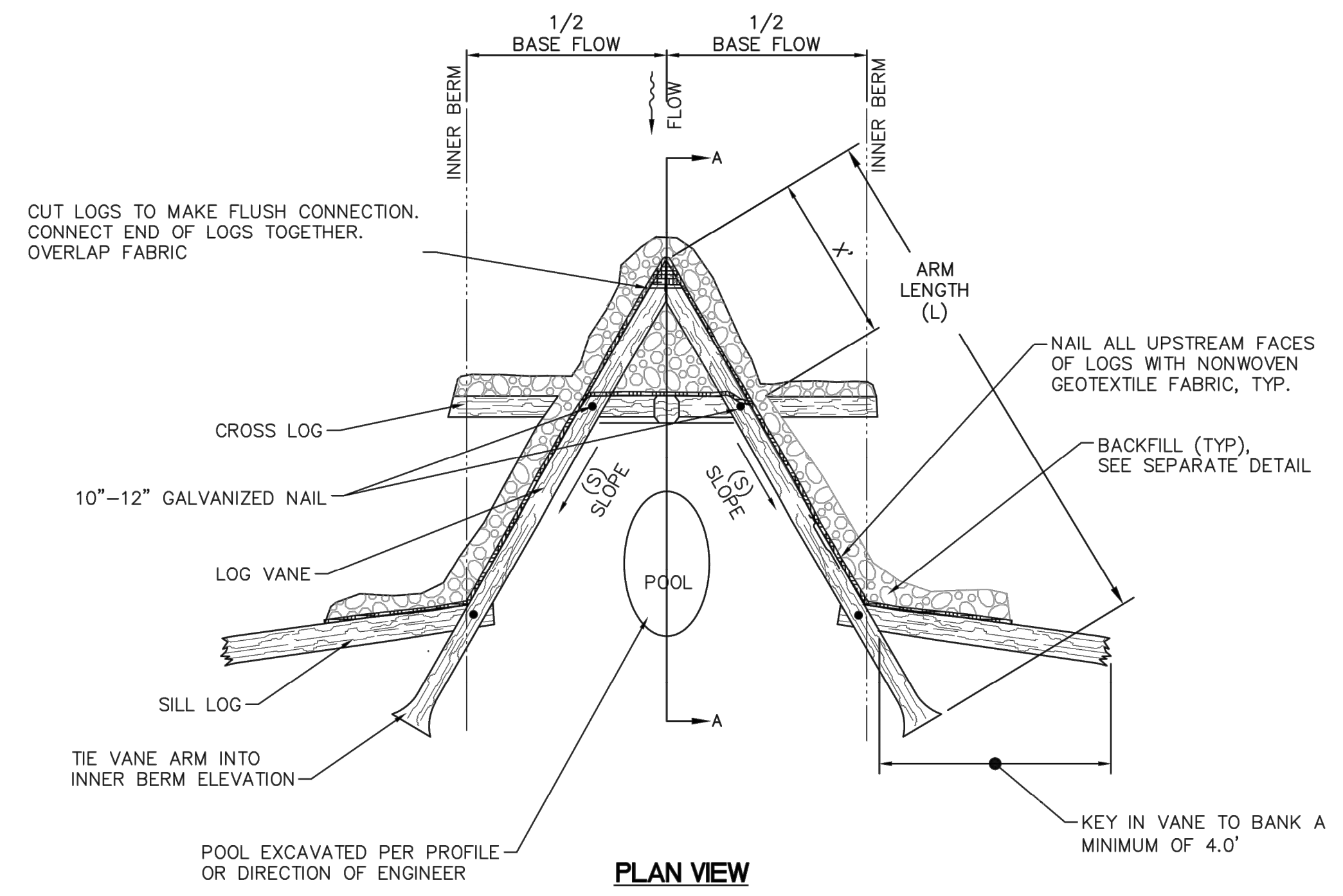
Drawing name: K:\CIB_LDEA\190118000_3dsec_Buckeye_Yard_Columbus_OH_2_Design\CAD\PlanSheets\9_StreamRestoration\DETAILS.dwg DETAILS Mar 28, 2022 12:28pm by: Matt Shiffert
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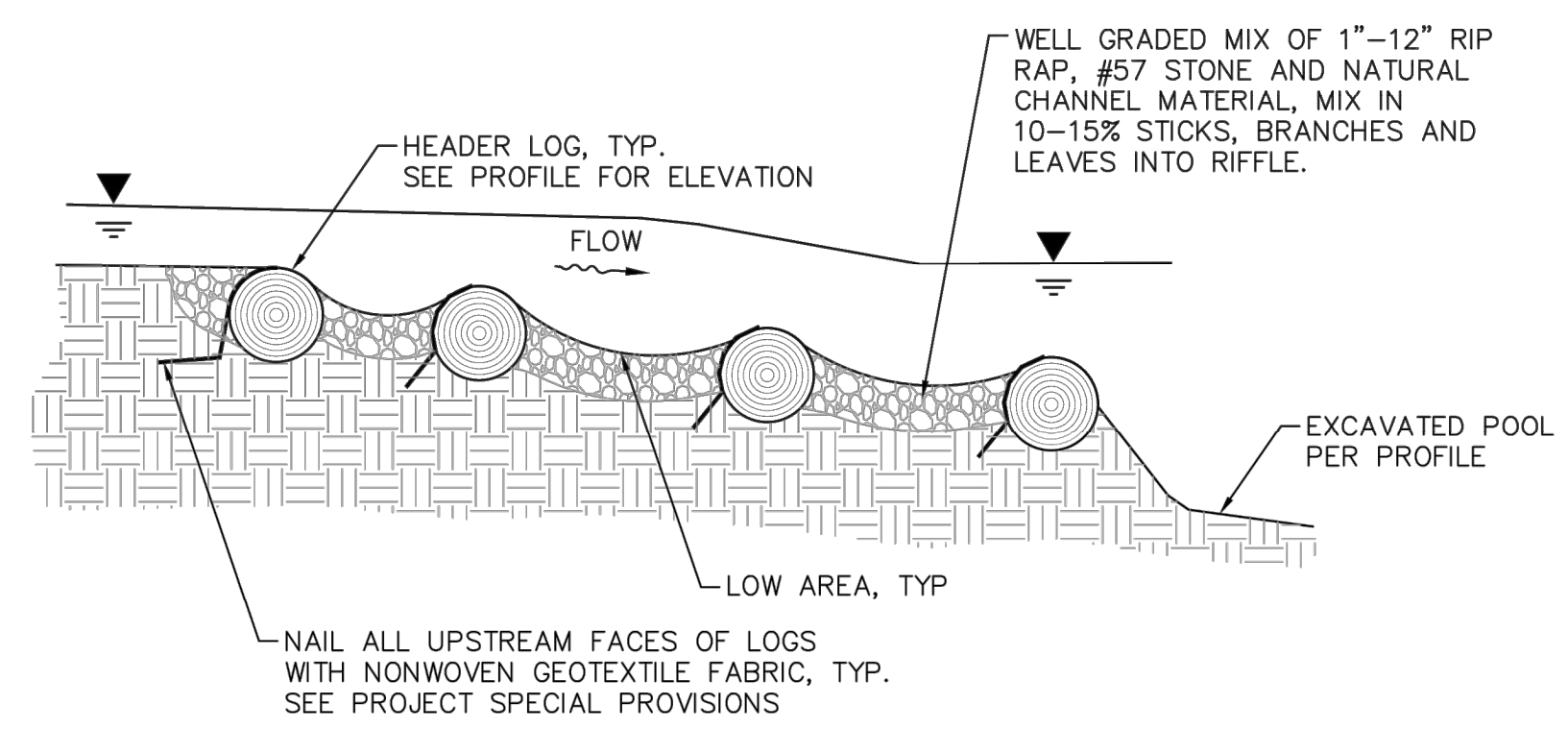
SECTION A-A

REACH	WBRR TRIE
ARM LENGTH (L)	15'
ARM TIE-IN HEIGHT	0.3'
ARM SLOPE (S)	1.0%-2.0%
STEP SPACING (X)	5'

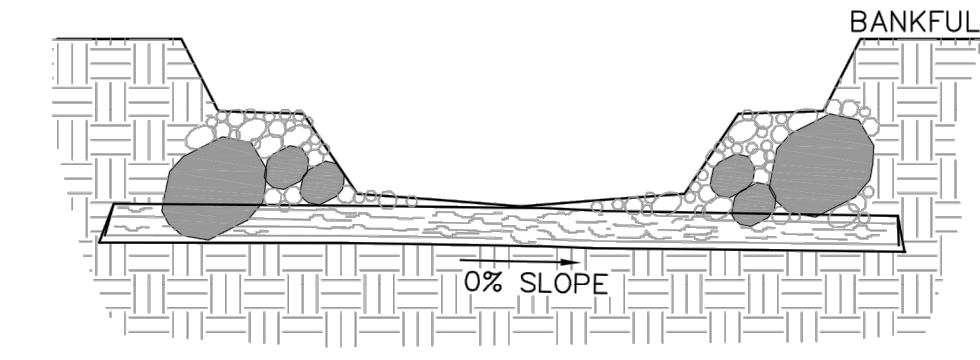
- NOTES:
1. DEEPEST PART OF POOL TO BE IN LINE WITH WHERE VANE ARM TIES INTO THE BANK.
 2. BACKFILL MIX TO BE USED TO REDUCE VOIDS BETWEEN LOGS.
 3. ALL LOGS TO BE HARDWOOD SPECIES, 8"-10" DIAMETER MINIMUM.



LOG CROSS VANE
NOT TO SCALE

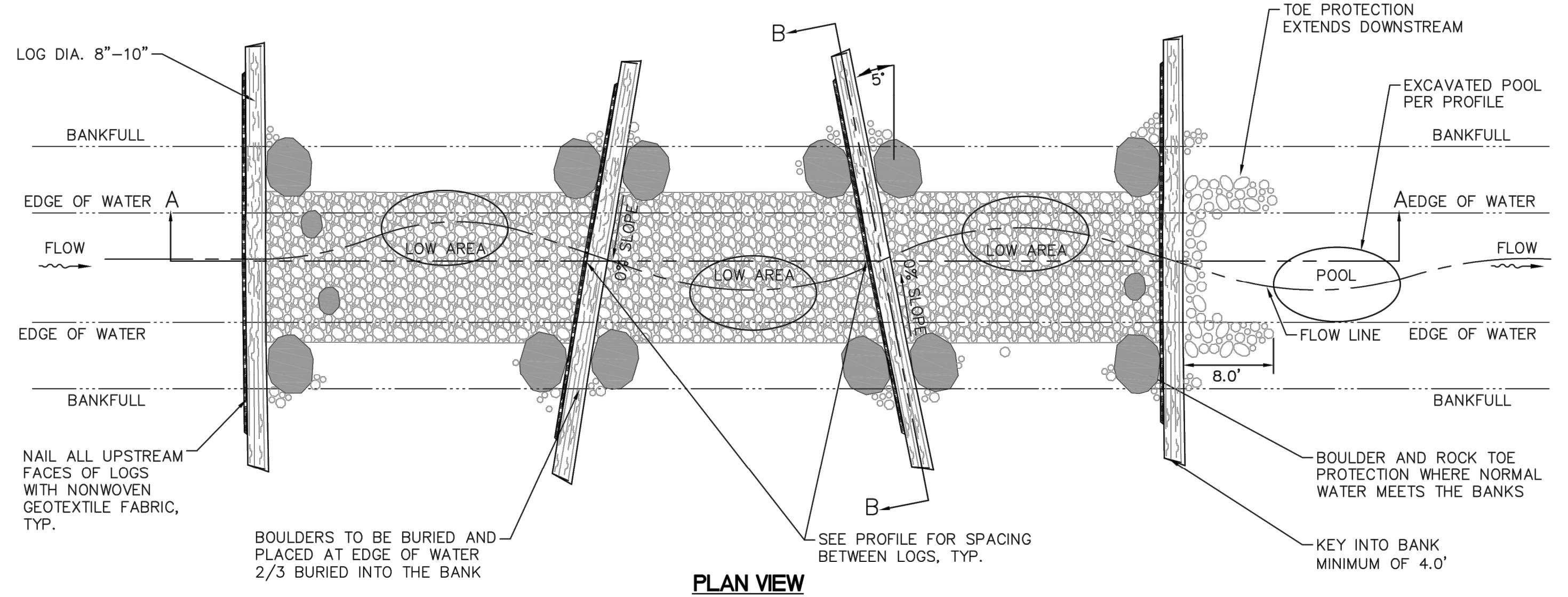


SECTION A-A



SECTION B-B

- NOTES:
1. PLACE FABRIC ON THE UPSTREAM SIDE OF THE MOST UPSTREAM LOG SILL IN THE CONSTRUCTED RIFFLE.
 2. BOULDERS SHALL BE USED TO ANCHOR LOGS IF NEEDED.
 3. LOG SILLS SHALL OVERLAP AND ANCHOR THE LOG SILL DIRECTLY UPSTREAM.
 4. THE LOG SILL SHALL ALL BE DESIGNED TO BE SUBMERGED OR COVERED AT LOW FLOWS.
 5. BOULDERS SHALL BE 18" MIN.
 6. AFTER ENGINEER HAS ACCEPTED STRUCTURE, THE NONWOVEN GEOTEXTILE FABRIC SHOULD BE TRIMMED TO MINIMIZE THE AMOUNT VISIBLE ON TOP OF LOG.



PLAN VIEW

LOG AND ROCK RIFFLE
NOT TO SCALE

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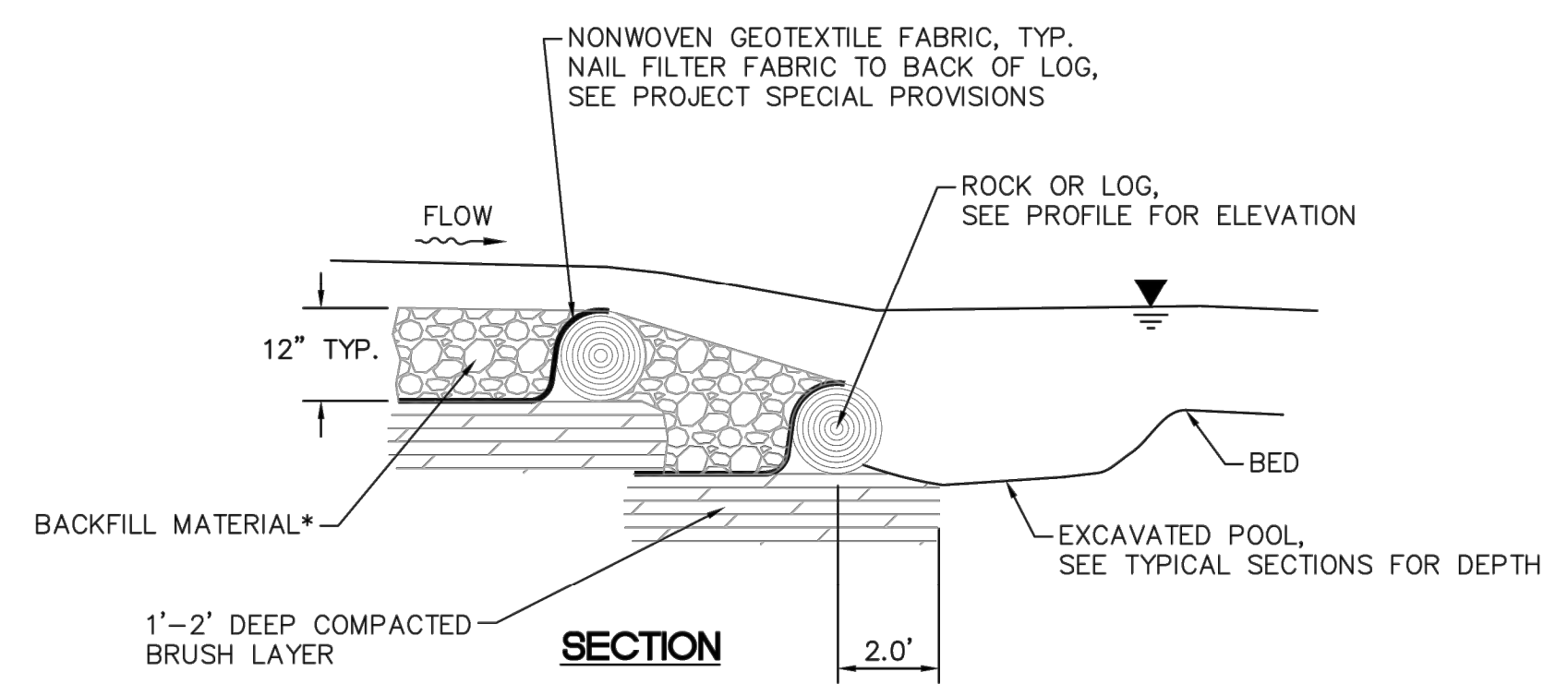
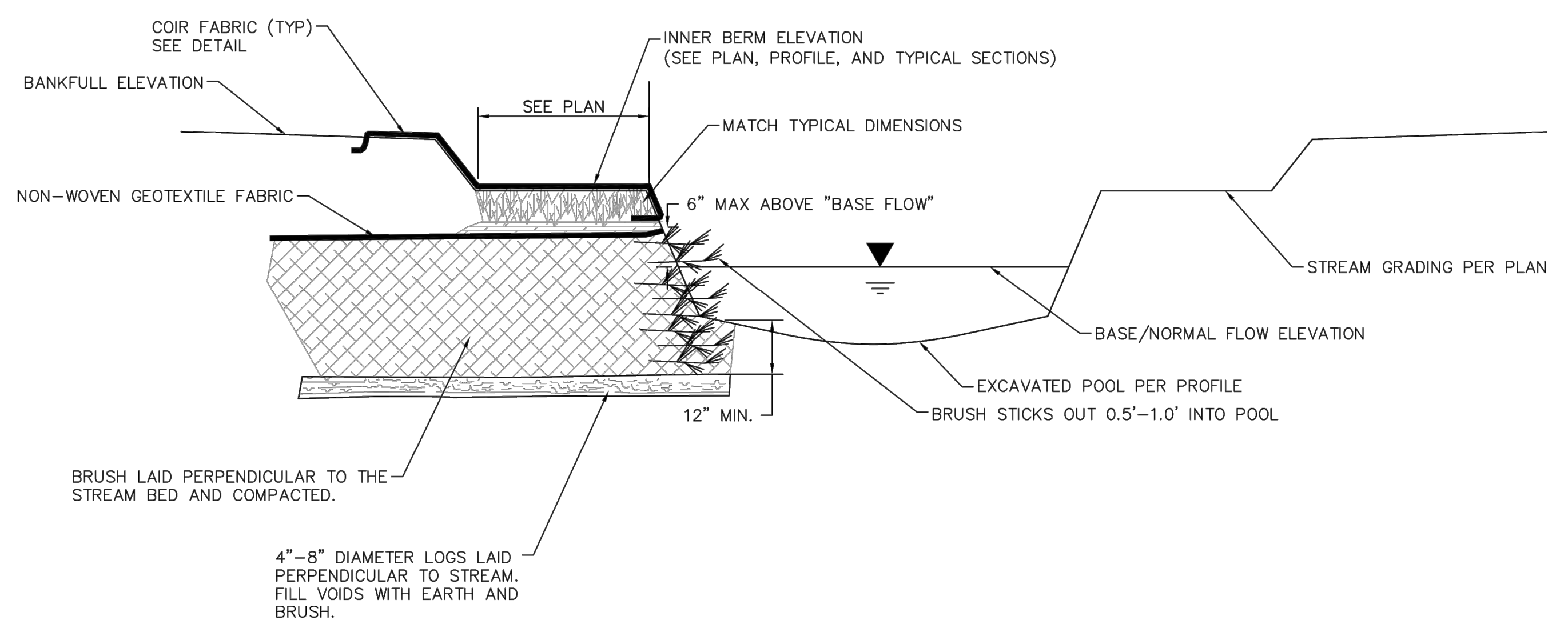
DETAILS

STREAM CORRIDOR PROTECTION ZONE
 REFORESTATION PLANS
BUCKEYE YARD
 CITY OF COLUMBUS, FRANKLIN COUNTY, OH

ORIGINAL ISSUE:
 03/28/2022
 KHA PROJECT NO.
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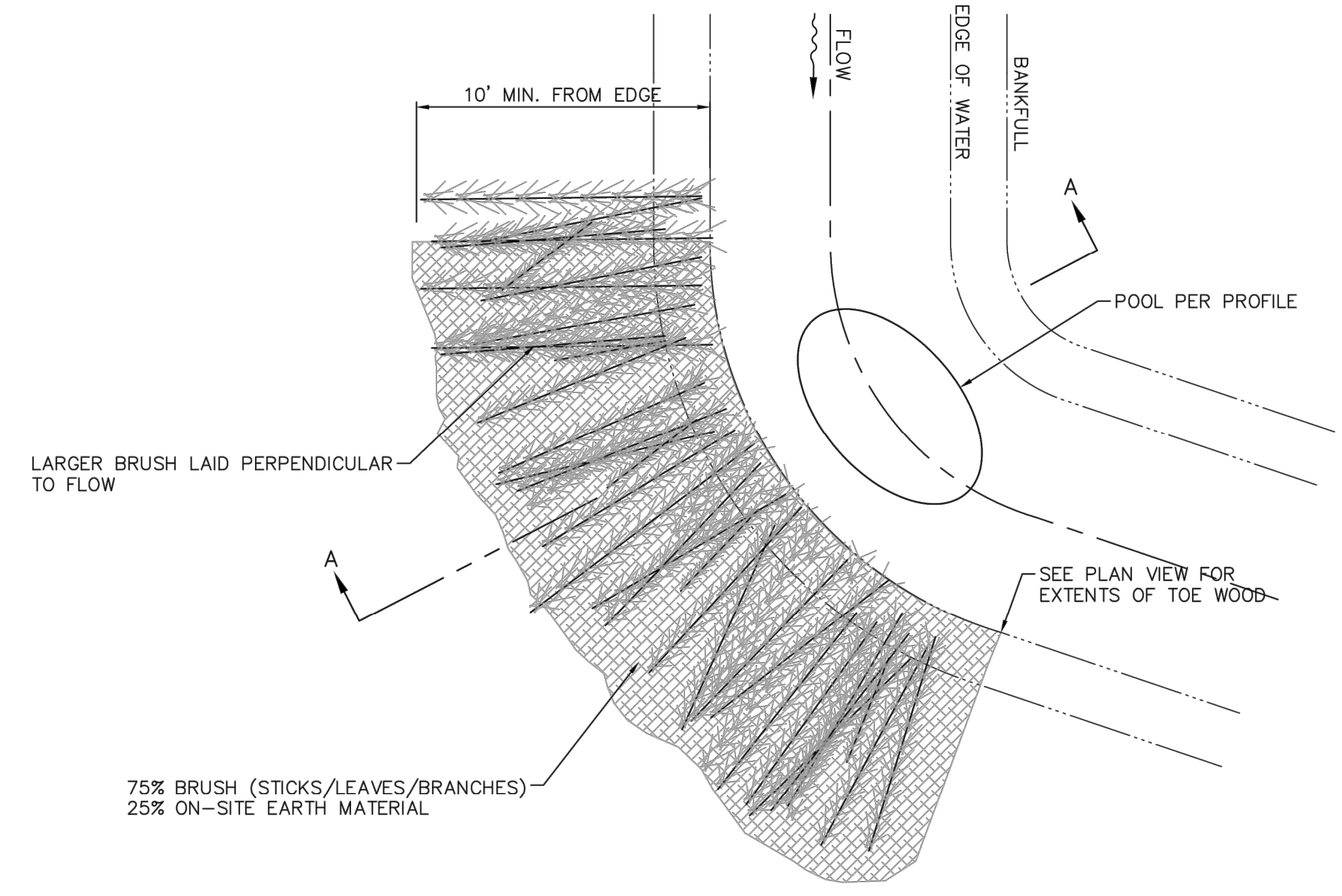
***BACKFILL MATERIAL (WELL GRADED MIX)**

1"-12" RIP RAP	75%
ON-SITE COBBLE AND GRAVEL	10%
#57 STONE	10%
MULCH (FROM ON-SITE)	5%

% IS MEASURED BY VOLUME

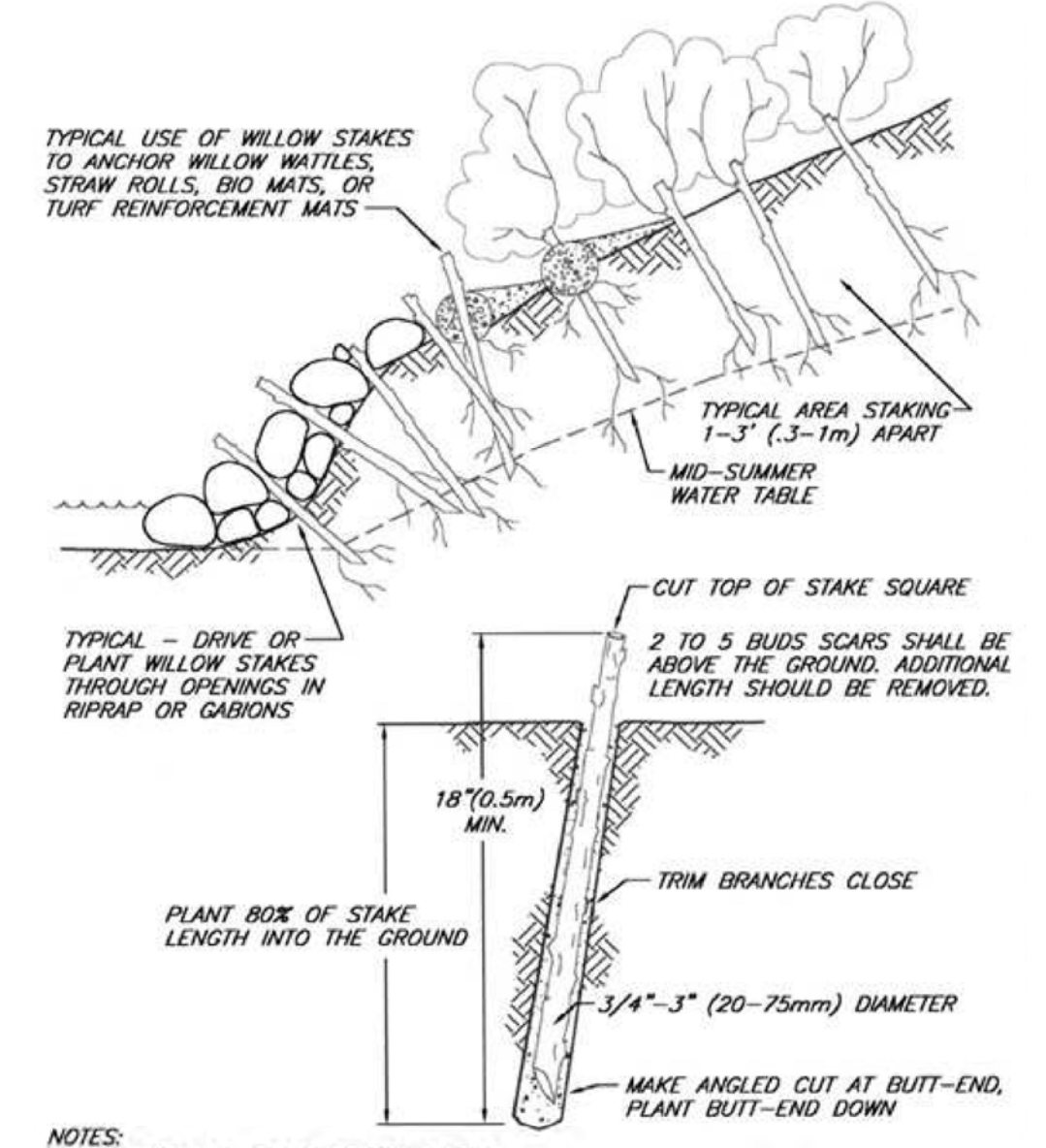
*BRUSH LAYER TO BE LAID PERPENDICULAR TO FLOW

LOG STRUCTURE BACKFILL DETAIL
NOT TO SCALE



TOE WOOD
NOT TO SCALE

- NOTE:**
- BRUSH SHALL BE A VARIETY OF DIAMETERS AND SHALL BE LAID GENERALLY PERPENDICULAR TO FLOW AND COMPACTED BY DIRT.
 - FIRST LAYER OF BRUSH SHALL BE A BED OF 3" LIMBS/BRUSH SET 18" MIN. BELOW THE BED.
 - LAYERS ABOVE 1st LAYER SHALL BE 75% BRUSH OF A VARIETY OF SIZES WITH 25% ON SITE MATERIAL FILLING VOIDS.
 - BRUSH BROUGHT UP IN LIFTS.
 - GRADING ABOVE THE TOE WOOD PER THE TYPICAL SECTION AND/OR GRADING PLAN.



- NOTES:**
- HARVEST AND PLANT STAKES DURING THE DORMANT SEASON.
 - USE HEALTHY, STRAIGHT AND LIVE WOOD AT LEAST 1 YEAR OLD.
 - MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS DURING INSTALLATION. USE A PLOT BAR IN FIRM SOILS.
 - SOAK CUTTINGS FOR 24 HOURS (MIN.) PRIOR TO INSTALLATION.
 - TAMP THE SOIL AROUND THE STAKE.

LIVE STAKING
NOT TO SCALE

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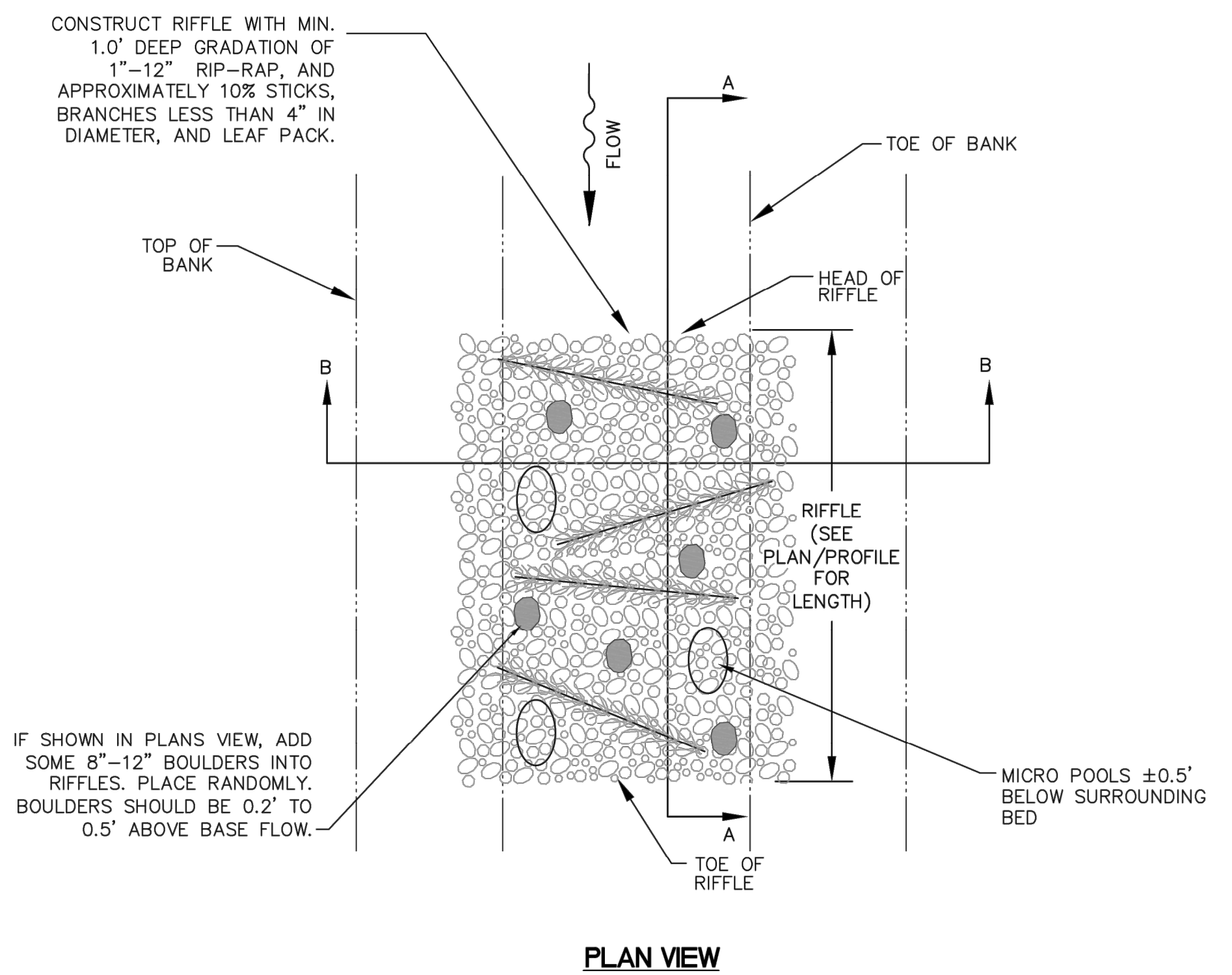
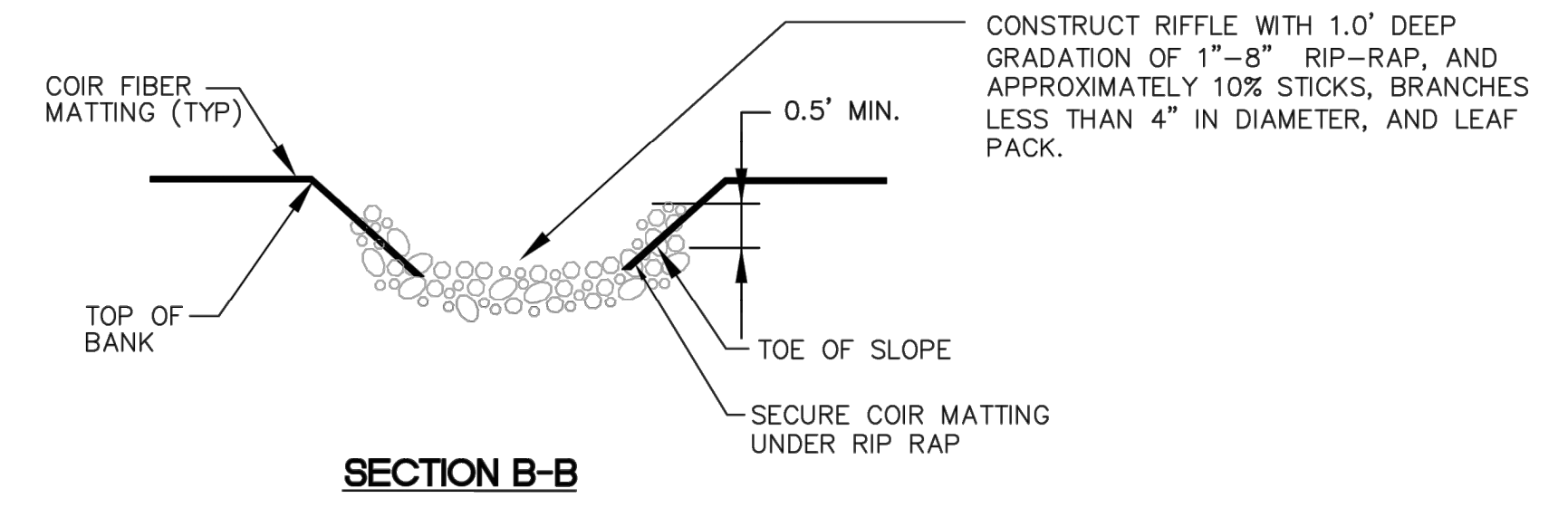
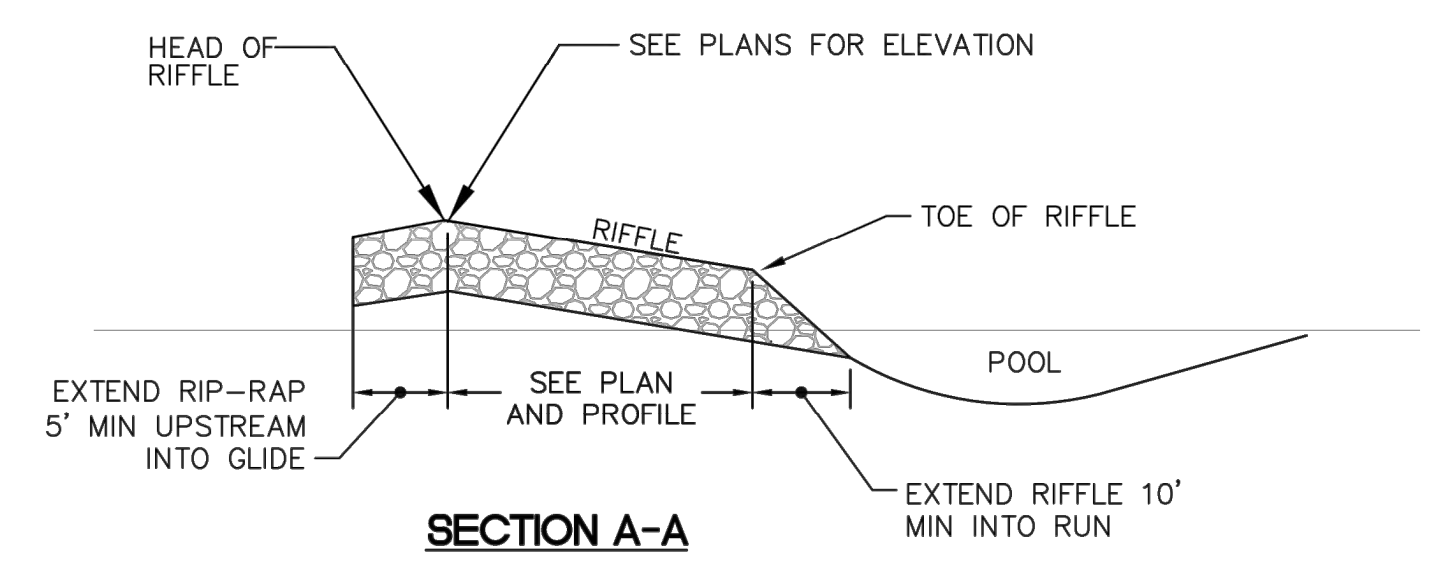
DESIGNED BY: MCS
 DRAWN BY: MCS
 CHECKED BY: JMM

DETAILS

STREAM CORRIDOR PROTECTION ZONE
 REFORESTATION PLANS
BUCKEYE YARD
 CITY OF COLUMBUS, FRANKLIN COUNTY, OH

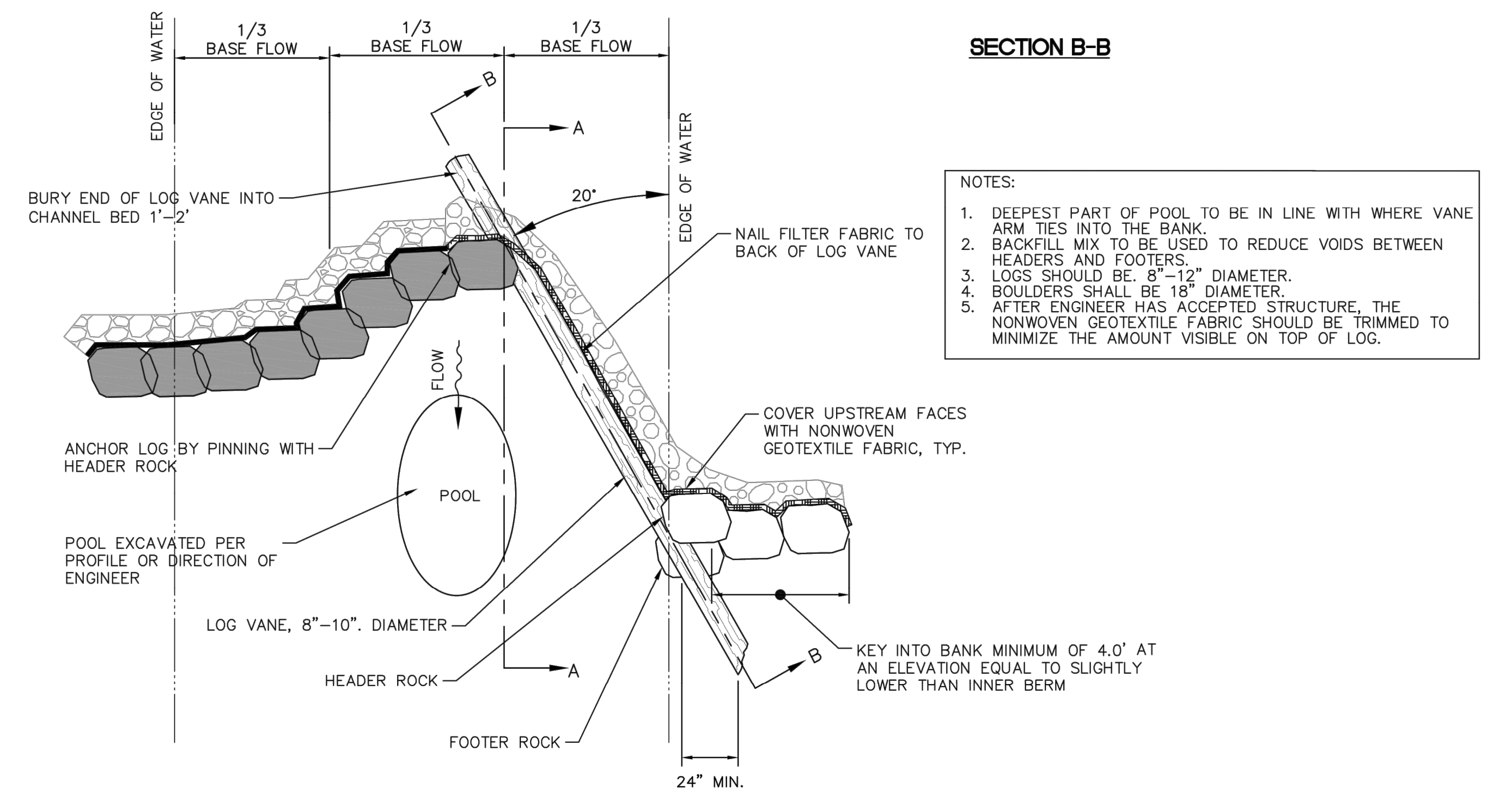
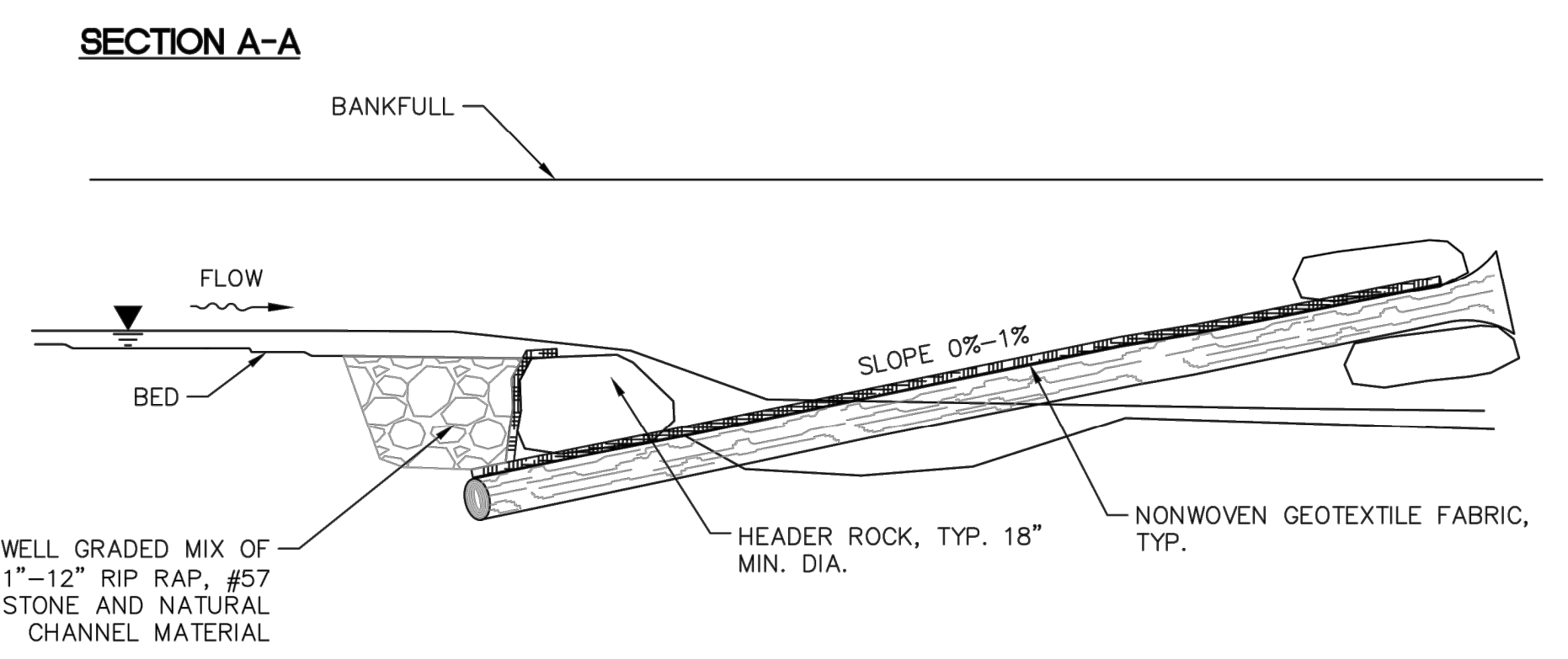
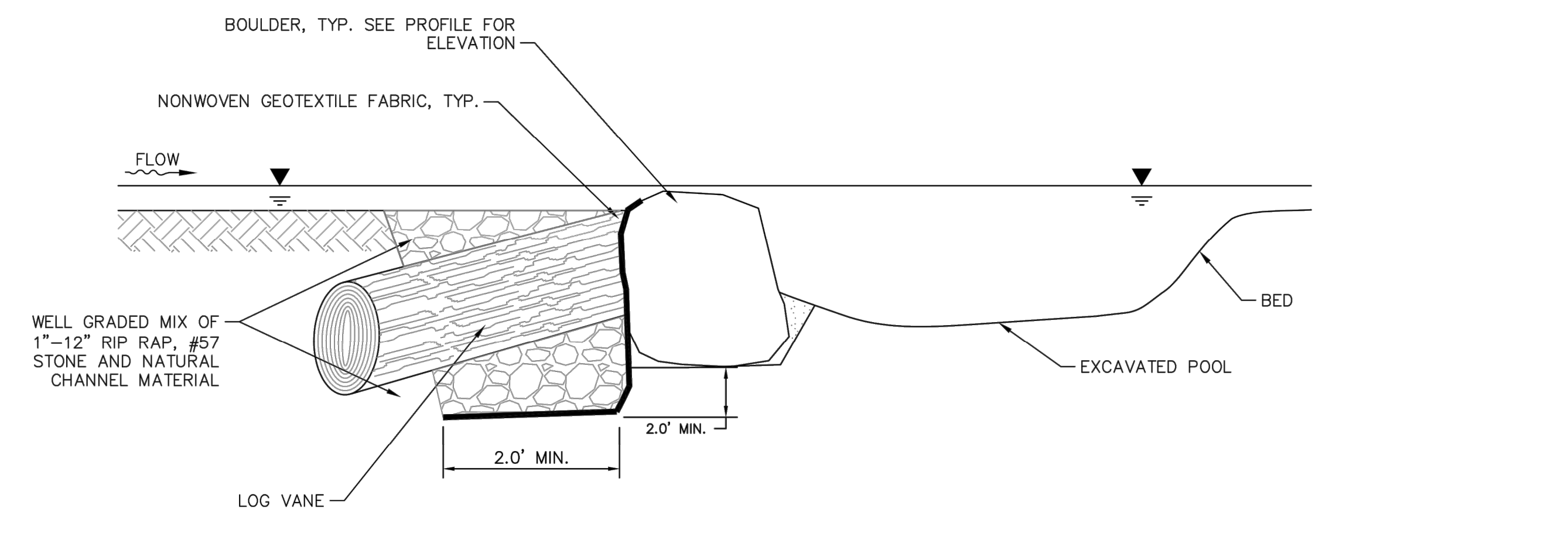
ORIGINAL ISSUE:
 03/28/2022
 KHA PROJECT NO.
 190118000
 SHEET NUMBER
EC6.1

Drawing name: K:\CIB\JDE\190118000_04ec_Buckeye_Yard_Columbus_OH_2_Design\CAD\PlanSheets\9_StreamRestoration\DETAILS.dwg Layout (3) Mar 29, 2022 12:29pm by: Matt Shiffert
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- NOTES:
1. MAJORITY OF BRUSH SHOULD BE AT 0.5"-2.0" IN DIAMETER AND NO LARGER THAN 6" AND EXTEND INTO THE BANK 2 FEET ON EACH SIDE. WOOD MATERIAL SHALL BE VARYING DIAMETER TO ALLOW MATERIAL TO BE COMPACTED.

CONSTRUCTED RIFFLE
NOT TO SCALE

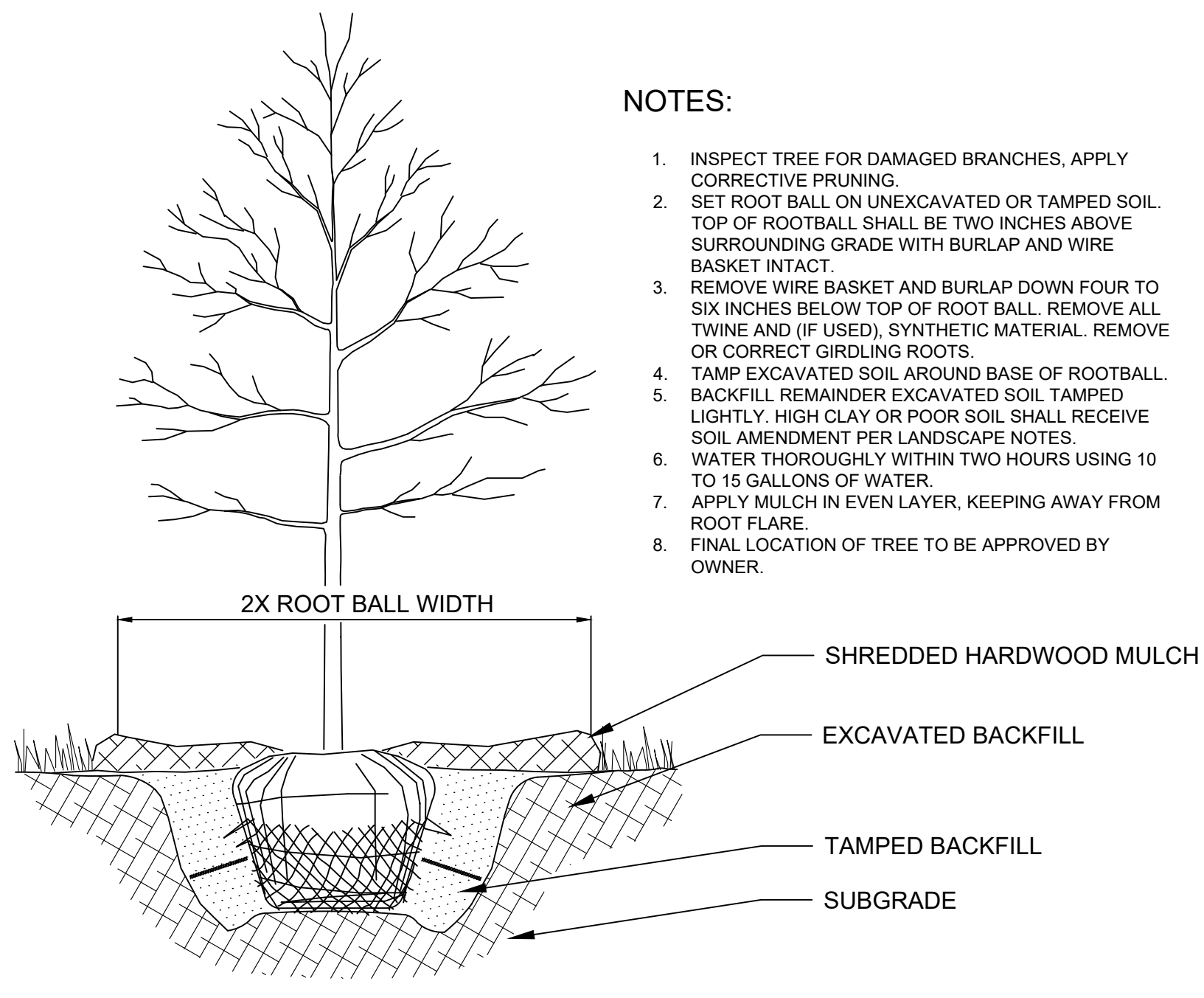


- NOTES:
1. DEEPEST PART OF POOL TO BE IN LINE WITH WHERE VANE ARM TIES INTO THE BANK.
 2. BACKFILL MIX TO BE USED TO REDUCE VOIDS BETWEEN HEADERS AND FOOTERS.
 3. LOGS SHOULD BE 8"-12" DIAMETER.
 4. BOULDERS SHALL BE 18" DIAMETER.
 5. AFTER ENGINEER HAS ACCEPTED STRUCTURE, THE NONWOVEN GEOTEXTILE FABRIC SHOULD BE TRIMMED TO MINIMIZE THE AMOUNT VISIBLE ON TOP OF LOG.

LOG J-HOOK
NOT TO SCALE

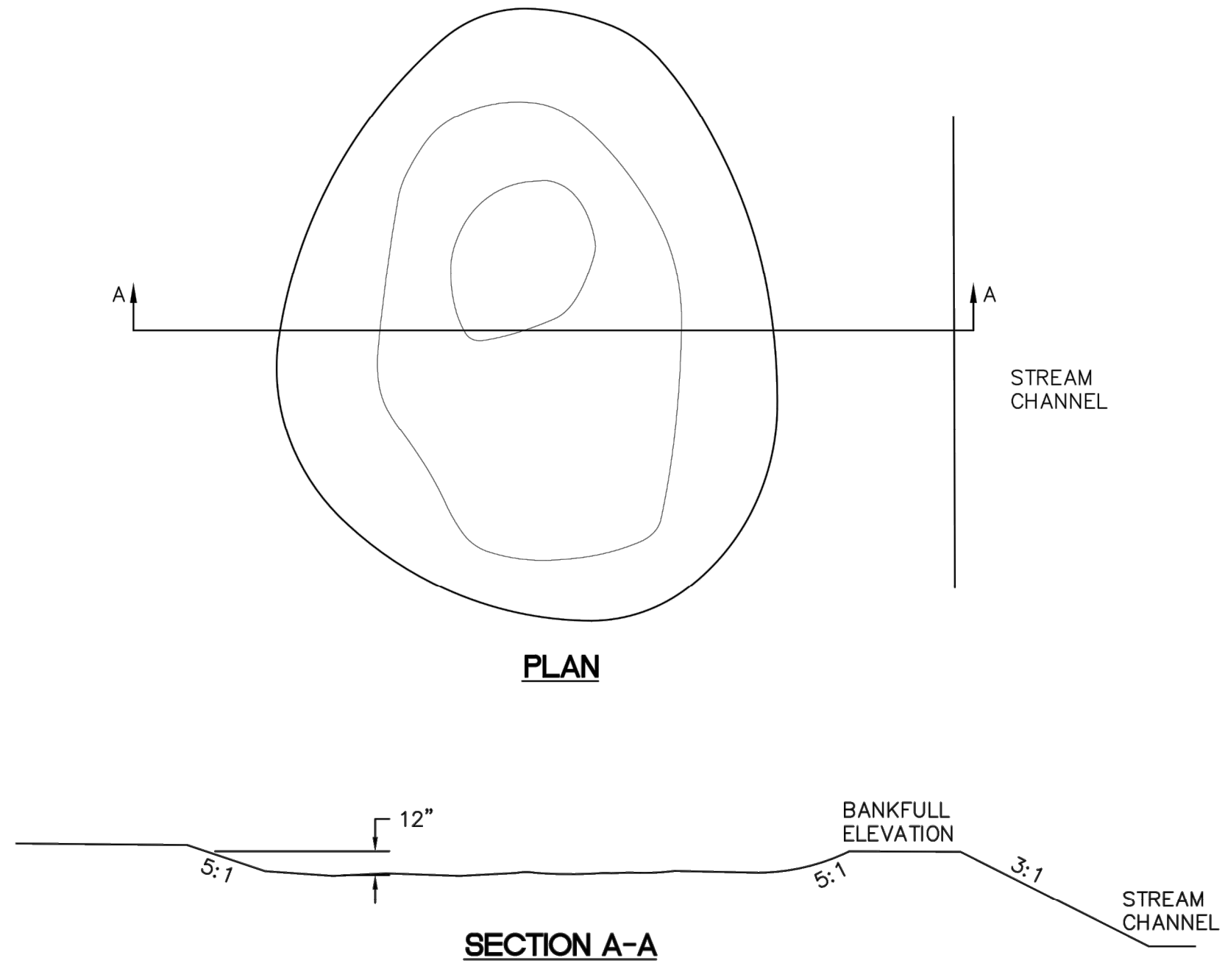
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REVISIONS					
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SCALE:	DESIGNED BY: MCS	DRAWN BY: MCS	CHECKED BY: JMM	DETAILS	
STREAM CORRIDOR PROTECTION ZONE REFORESTATION PLANS BUCKEYE YARD CITY OF COLUMBUS, FRANKLIN COUNTY, OH					
ORIGINAL ISSUE: 03/28/2022 KHA PROJECT NO. 190118000 SHEET NUMBER EC6.2					

Drawing name: K:\CIB\JDE\190118000_4dec_Buckeye_Yard_Columbus_OH_2_Design\CAD\PlanSheets\9_StreamRecreation\DETAILS.dwg Layout (5) Mar 29, 2022 12:29pm by: Matt Shiffert
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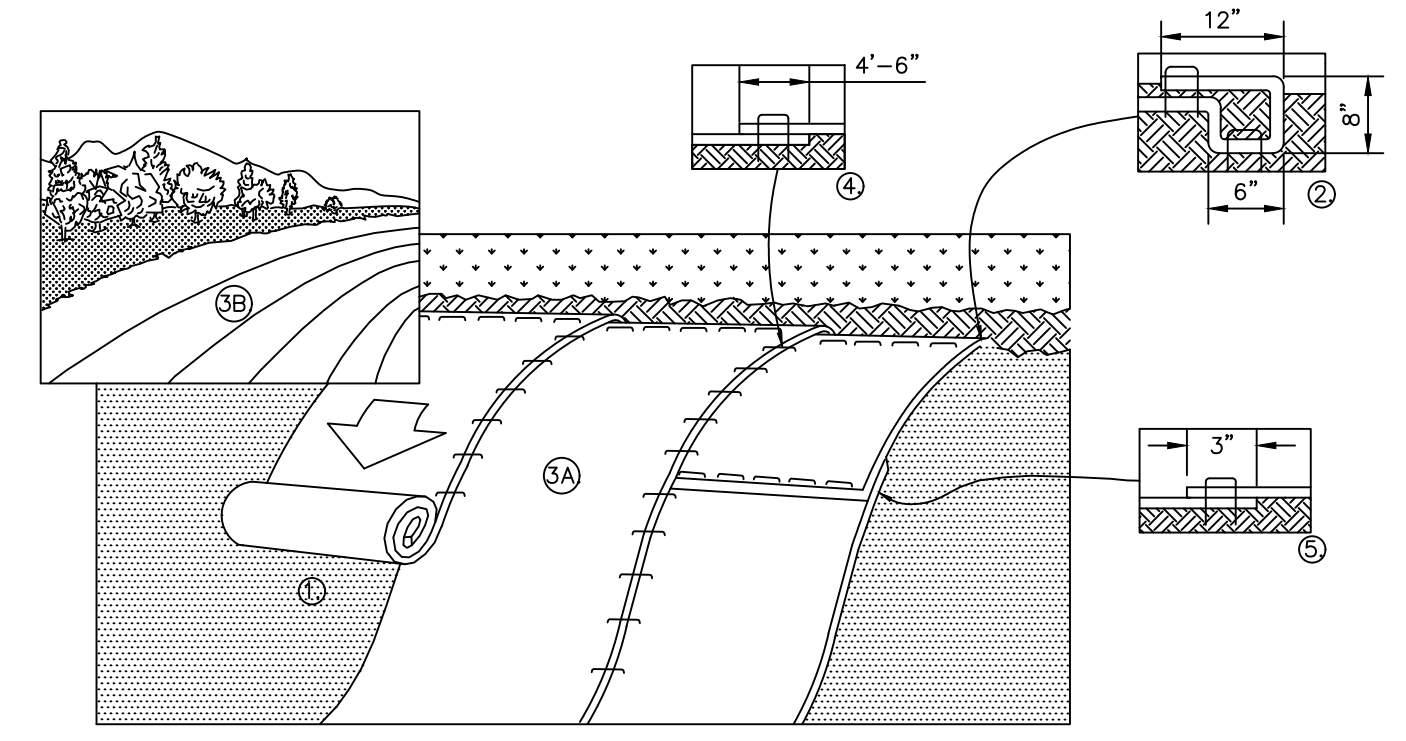


- NOTES:**
1. INSPECT TREE FOR DAMAGED BRANCHES, APPLY CORRECTIVE PRUNING.
 2. SET ROOT BALL ON UNEXCAVATED OR TAMPED SOIL. TOP OF ROOTBALL SHALL BE TWO INCHES ABOVE SURROUNDING GRADE WITH BURLAP AND WIRE BASKET INTACT.
 3. REMOVE WIRE BASKET AND BURLAP DOWN FOUR TO SIX INCHES BELOW TOP OF ROOT BALL. REMOVE ALL TWINE AND (IF USED), SYNTHETIC MATERIAL. REMOVE OR CORRECT GIRDLING ROOTS.
 4. TAMP EXCAVATED SOIL AROUND BASE OF ROOTBALL. BACKFILL REMAINDER EXCAVATED SOIL TAMPED LIGHTLY. HIGH CLAY OR POOR SOIL SHALL RECEIVE SOIL AMENDMENT PER LANDSCAPE NOTES.
 5. WATER THOROUGHLY WITHIN TWO HOURS USING 10 TO 15 GALLONS OF WATER.
 6. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE.
 7. FINAL LOCATION OF TREE TO BE APPROVED BY OWNER.

TREE PLANTING DETAIL
NOT TO SCALE



VERNAL POOL DETAIL
NOT TO SCALE

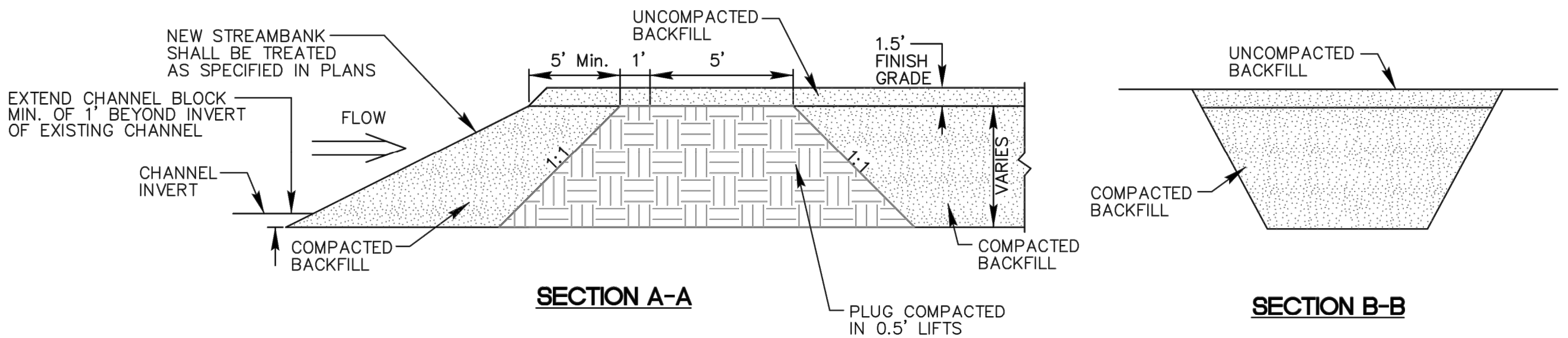


1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH AS SHOWN IN DETAIL 2. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURER'S RECOMMENDATION.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH MINIMUM 6" OVERLAP. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
6. PLACE STAPLES/STAKES PER MANUFACTURER'S RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.

- NOTES:**
1. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
 2. FOLLOW EROSION CONTROL TECHNOLOGY COUNCIL SPECIFICATION FOR PRODUCT SELECTION.
 3. PERVIOUS LAND WITH SLOPES RUNNING GREATER THAN OR EQUAL TO 4:1 SHALL CONTAIN SLOPE STABILIZATION BLANKET.
 4. ALL BLANKETS SHALL BE INSPECTED REGULARLY AFTER INSTALLATION, ESPECIALLY AFTER STORMS TO CHECK FOR EROSION OR UNDERMINING OF THE PRODUCT. MAKE NEEDED REPAIRS IMMEDIATELY, ADDRESSING RILLS OR GULLIES THAT HAVE DEVELOPED PRIOR TO REPLACING THE R.E.C.P.. IN THE CASE EROSION REPAIRS, ASSURE THAT SUBSEQUENT RUNOFF ACROSS THE AREA IS DISPERSED OR ADEQUATELY SPREAD.
 5. ALL BLANKETS SHALL MEET THE SPECIFICATIONS BELOW:

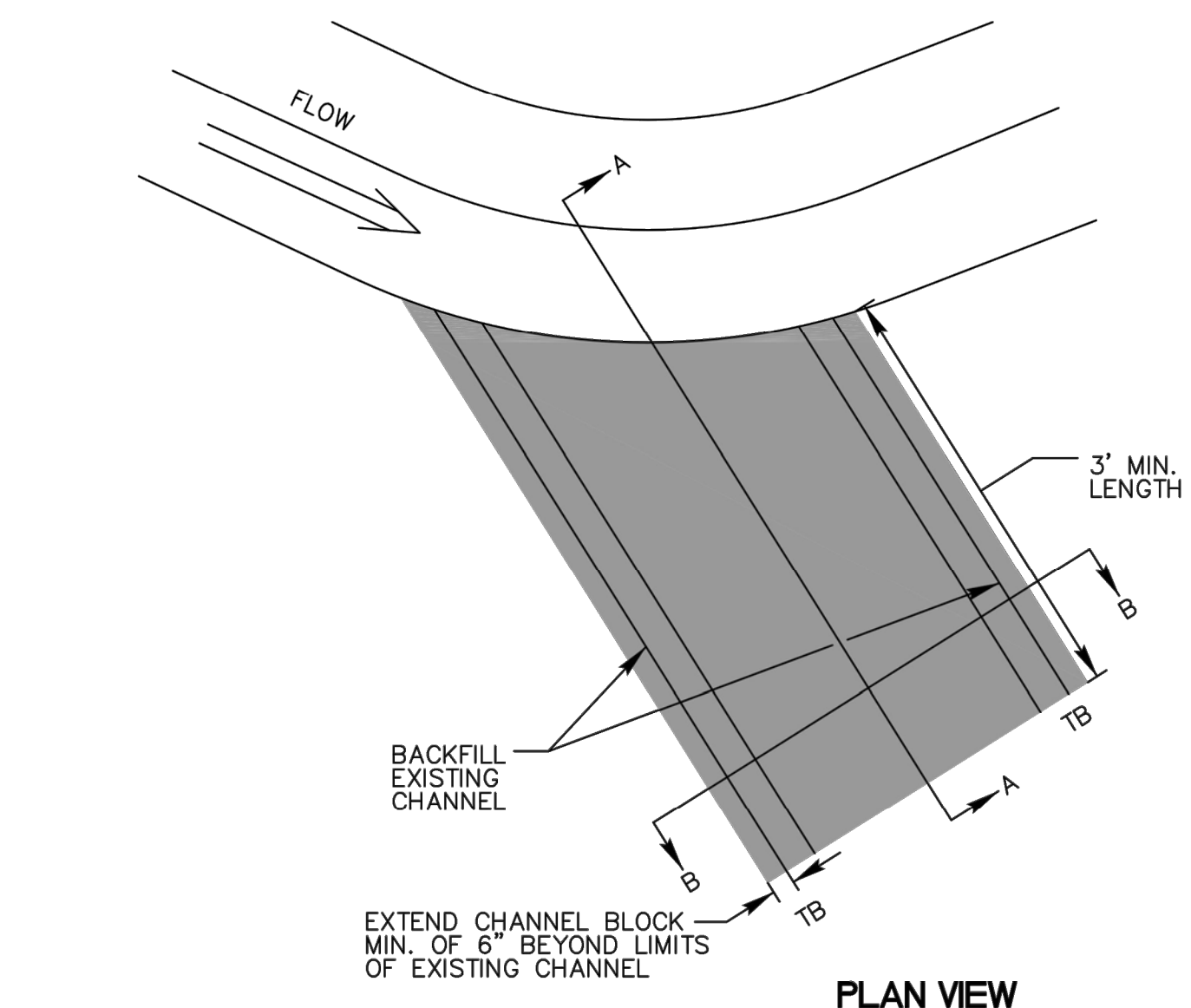
MATERIAL	MAXIMUM LENGTH OF PROTECTION
STRAW	10-12 MONTHS
STRAW/COCONUT	24 MONTHS
COCONUT	36 MONTHS
EXCELSIOR	36 MONTHS

EROSION CONTROL BLANKET
NOT TO SCALE



SECTION A-A

SECTION B-B



PLAN VIEW

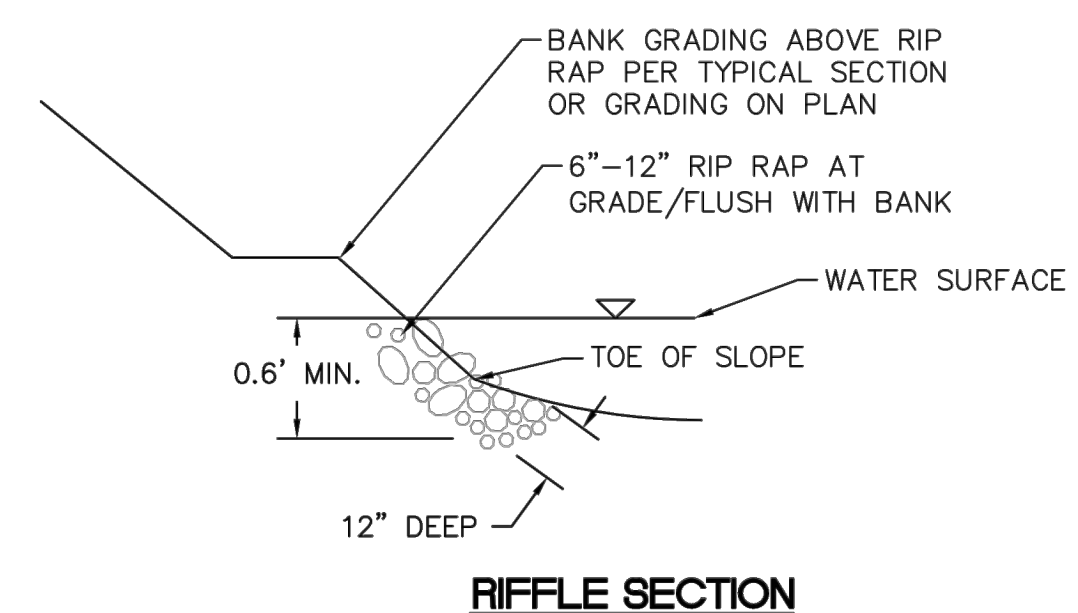
CHANNEL BLOCK
NOT TO SCALE

- NOTES:**
1. BOTTOM OF BLOCK SHOULD BE A MINIMUM OF 1' BELOW THE INVERT OF THE EXISTING CHANNEL.
 2. COMPACT BACKFILL TO EXTENT POSSIBLE OR AT THE DIRECTION OF THE ENGINEER.

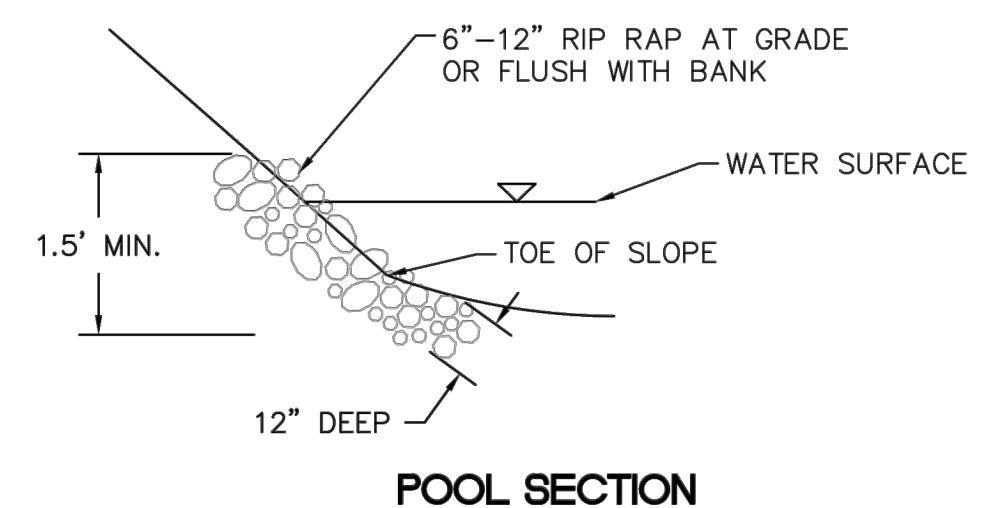
STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A			*	*	*				
DORMANT SEEDING	B										B	
TEMPORARY SEEDING			C			D						
SODDING			E									
MULCHING	F											

- A KENTUCKY BLUEGRASS 90 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE
 B KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE + 2 TONS STRAW MULCH/ACRE
 C SPRING OATS 100 LBS/ACRE
 D WHEAT OR CEREAL RYE 150 LBS/ACRE
 E SOD
 F STRAW MULCH 2 TONS/ACRE
 * WATERING NEEDED DURING JUNE AND JULY
 ** WATERING NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

SEEDING CHART
NOT TO SCALE



RIFFILE SECTION



POOL SECTION

ROCK TOE PROTECTION
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NO.	DATE	BY	APR. DATE	APR. BY

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