

**LOCATION**  
 THE SE & NE 1/4 OF SECTIONS 26 & 35,  
 TOWNSHIP 20N, RANGE 04E, WM  
 LAT: 47.184068° N      LON: -122.254753° W  
 IN: PUYALLUP      NEAR: ----

**APPLICANT/OWNER**  
 NAME: ASH DEVELOPMENT  
 ADDRESS: 1001 SHAW ROAD  
 PUYALLUP, WA 98371  
 CONTACT: GREG HELLE  
 PHONE: (253) 606-6799  
 E-MAIL: GREG.HELLE@ABSSHERCO.COM

**ENVIRONMENTAL CONSULTANT**  
 SOUNDVIEW CONSULTANTS LLC  
 2907 HARBORVIEW DRIVE  
 GIG HARBOR, WA 98355  
 (253) 514-8952



**PLAN LEGEND**

- DP-# PROPERTY LINE
- SP-# DATA PLOT LOCATION (SOUNDVIEW CONSULTANTS)
- TP-# DATA PLOT LOCATION (HABITAT TECHNOLOGIES 10/14/2021)
- TP-# DATA PLOT LOCATION (JOHN COMIS ASSOCIATES, LLC 3/24/2020)
- EXISTING STREAM CENTERLINE
- APPROXIMATE STREAM ORDINARY HIGH WATER LINE (SURVEYED TOE OF BANK)
- EXISTING STREAM BUFFER
- 10-FT BUILDING SETBACK
- EXISTING CULVERT
- HISTORIC STREAM ORDINARY HIGH WATER LINE (OHW)
- HISTORIC STREAM BUFFER
- DITCH CENTERLINE
- EXISTING 2-FT CONTOURS

**STREAM LEGEND**

	EXISTING
STREAM Y OPEN CHANNEL	110 LF (724 SF)
STREAM Y IN CULVERT	471 LF
STREAM Z OPEN CHANNEL	465 LF (3,009 SF)
STREAM Z IN CULVERT	127 LF

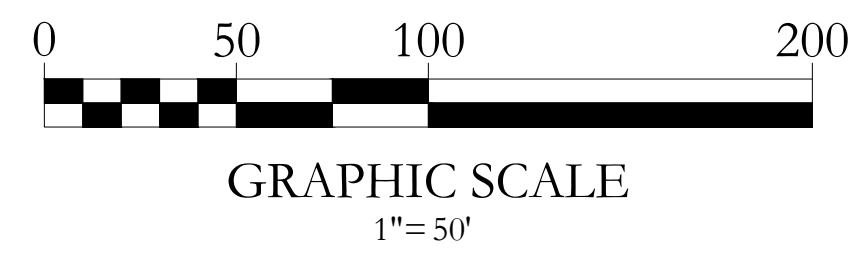
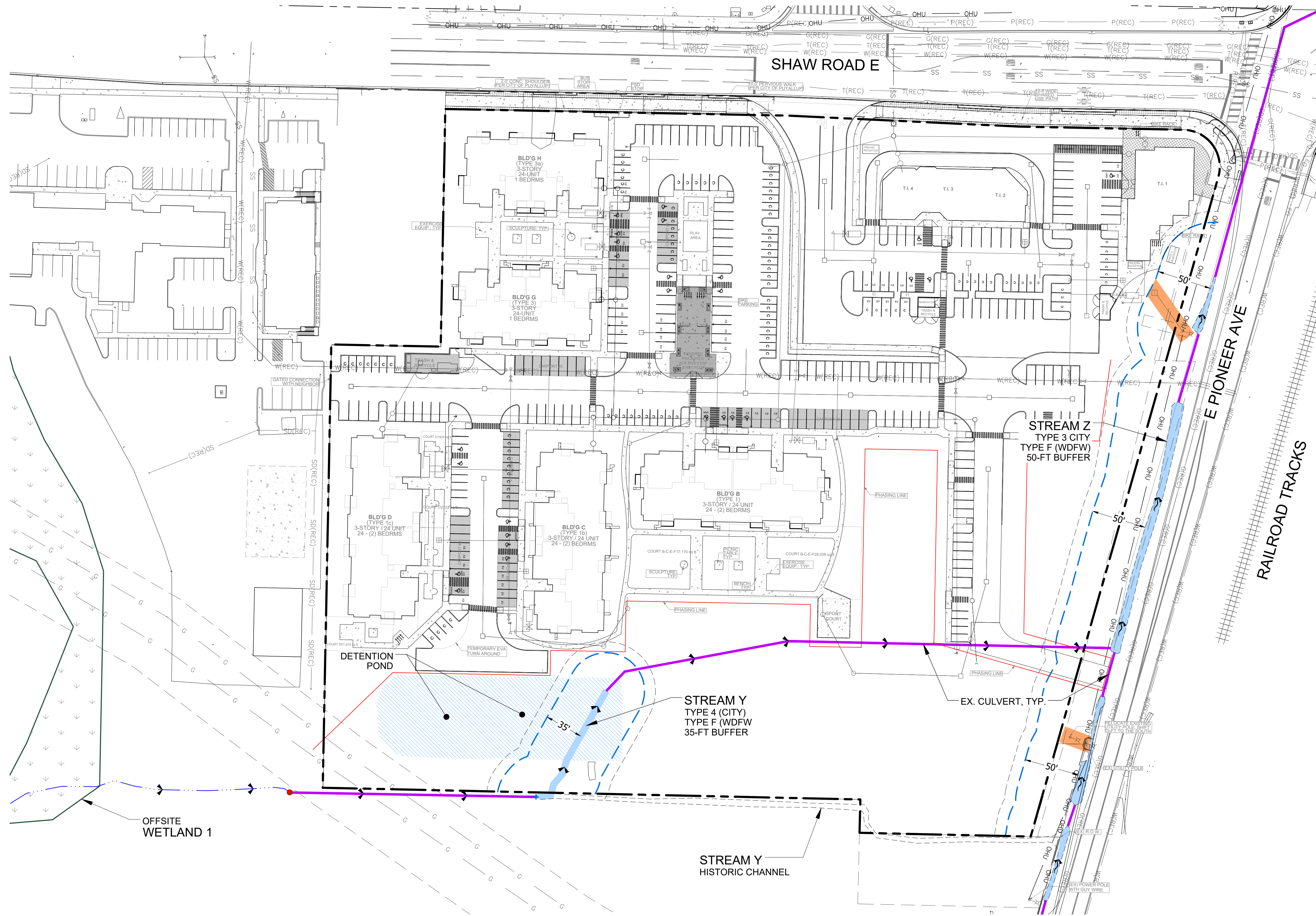
- NOTE**
- OFFSITE WETLAND 1 DELINEATION COMPLETED BY JOHN COMIS ASSOCIATES, LLC IN REPORT DATED MARCH 24, 2020.
  - CITY STREAM TYPING COMPLETED BY HABITAT TECHNOLOGIES IN REPORT DATED OCTOBER 14, 2021.
  - WDFW STREAM TYPING DETERMINED BY WDFW DURING JOINT SITE INVESTIGATION.

**McImmis ENGINEERING**  
 535 Dock Street, Suite 111, Tacoma, WA 98402  
 253.414.1992  
 mcimmisengineering.com

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**EAST TOWN CROSSING**  
 2902 E. PIONEER AVE.  
 PUYALLUP, WA 98374  
 PIERCE COUNTY PARCEL NUMBERS:  
 0420264051, 0420264053, 0420264054, 0420351030,  
 0420351029, 0420351026, & 0420351066

DATE: 12/20/2023  
 JOB: 2544.0001  
 BY: MW/DS  
 SCALE: AS SHOWN  
 SHEET: 1.0



- PLAN LEGEND**
- PROPERTY LINE
  - EXISTING STREAM CENTERLINE
  - EXISTING STREAM ORDINARY HIGH WATER LINE (OHW)
  - EXISTING CULVERT
  - STREAM BUFFER
  - - - 10-FT BUILDING SETBACK

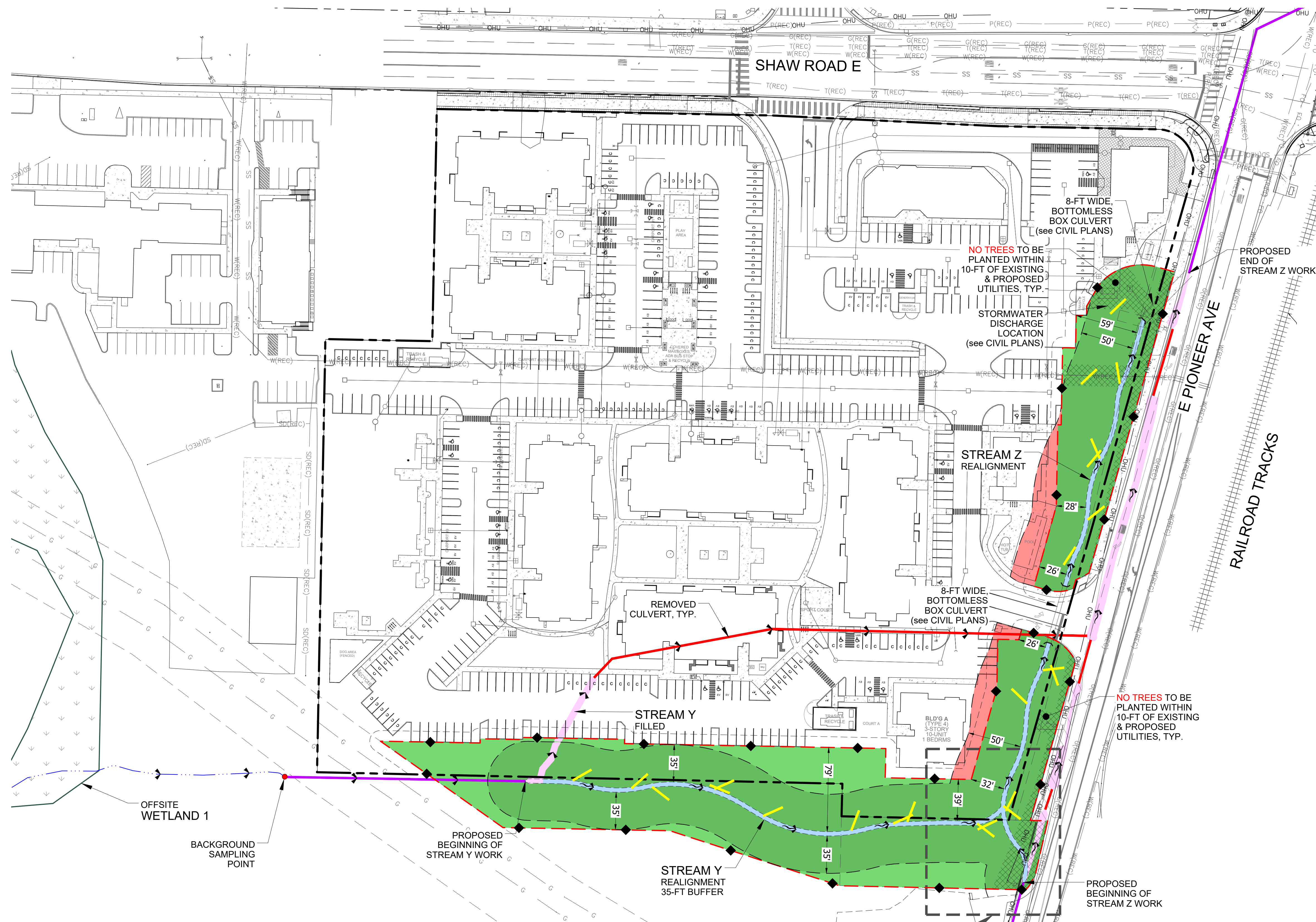
- IMPACTS & MITIGATION LEGEND**
- STREAM BUFFER IMPACTS FOR UTILITY INSTALLATION (TO BE RESTORED WITH NATIVE UPLAND GRASS SEED MIX) 1,248 SF

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BY:	MW/DS
SCALE:	AS SHOWN
SHEET:	2.0



- PLAN LEGEND**
- PROPERTY LINE
  - EXISTING STREAM CENTERLINE
  - PROPOSED STREAM ORDINARY HIGH WATER LINE (OHW)
  - STANDARD STREAM BUFFER
  - EXISTING / RETAINED CULVERT
  - PROPOSED CULVERT
  - STREAM FILL
  - REMOVED CULVERT

- IMPACTS & MITIGATION LEGEND**
- STREAM BUFFER DECREASE 5,341 SF
  - STREAM BUFFER INCREASE 15,001 SF
  - STREAM BUFFER RESTORATION/ENHANCEMENT (INCLUDES AREAS OF STREAM FILL WITHIN PROPOSED BUFFERS) 63,346 SF
  - POST-CONSTRUCTION STREAM BUFFER/ CRITICAL AREA FENCE
  - 10-FT BUILDING SETBACK
  - ◆ CRITICAL AREA SIGN (24 SIGNS)
  - LARGE WOODY DEBRIS (see SHEET 3.0)

**STREAM LEGEND**

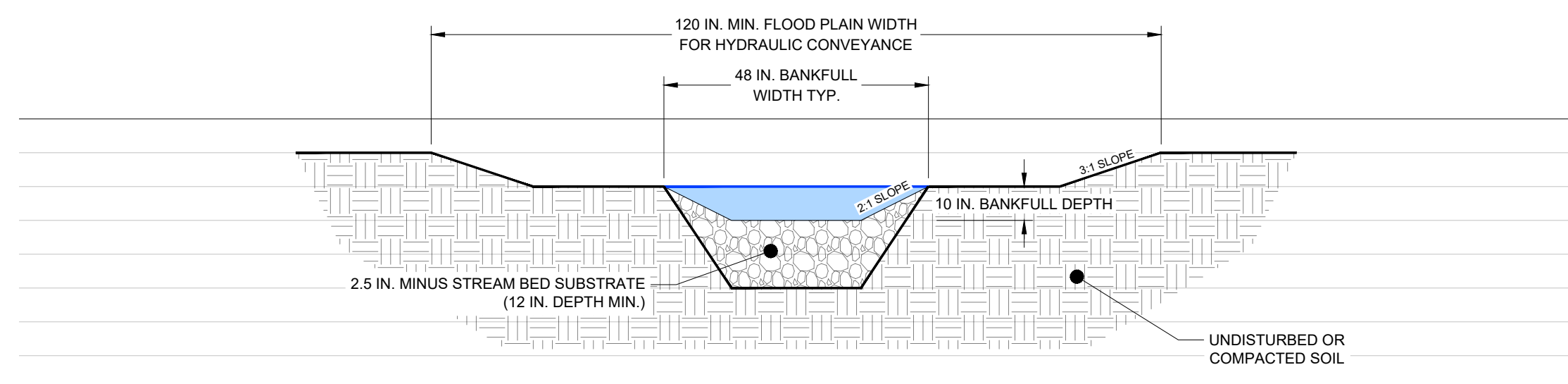
	EXISTING	PROPOSED
STREAM Y OPEN CHANNEL	110 LF (724 SF)	463 LF (1,836 SF)
STREAM Y IN CULVERT	471 LF	0 LF
STREAM Z OPEN CHANNEL	465 LF (3,009 SF)	497 LF (1,985 SF)
STREAM Z IN CULVERT	127 LF	117 LF

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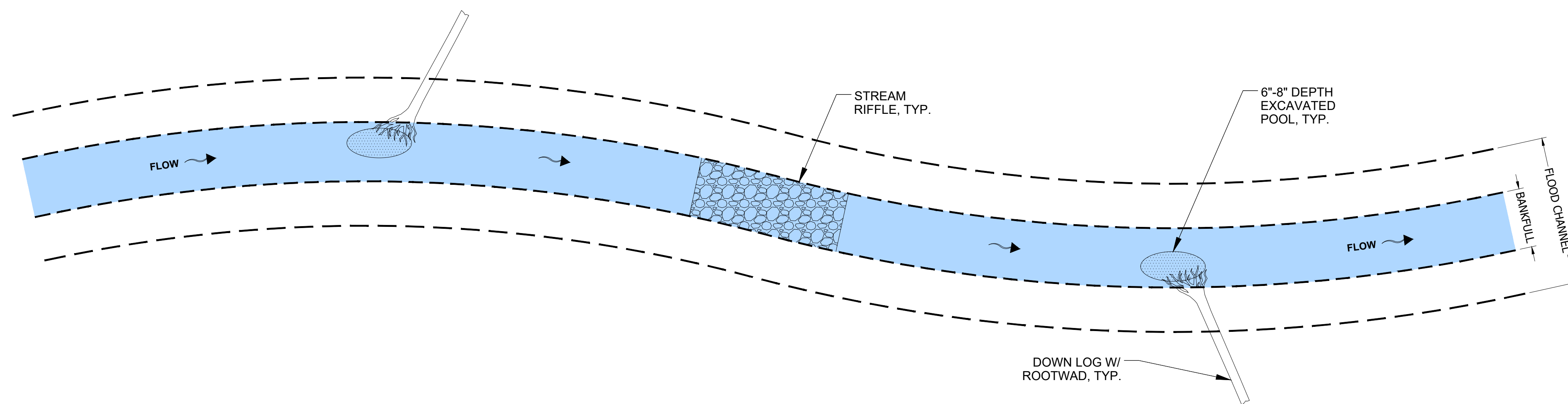
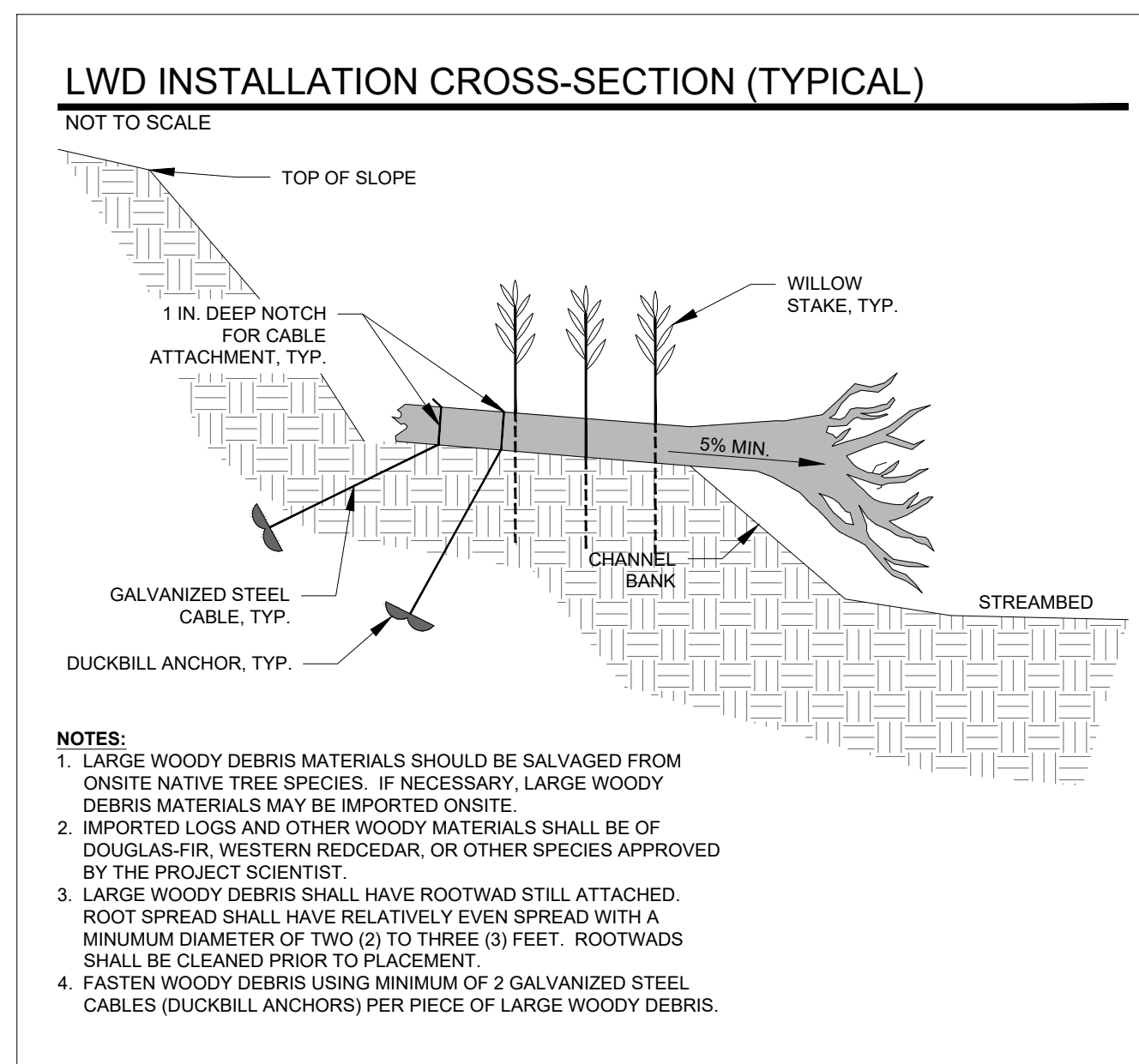
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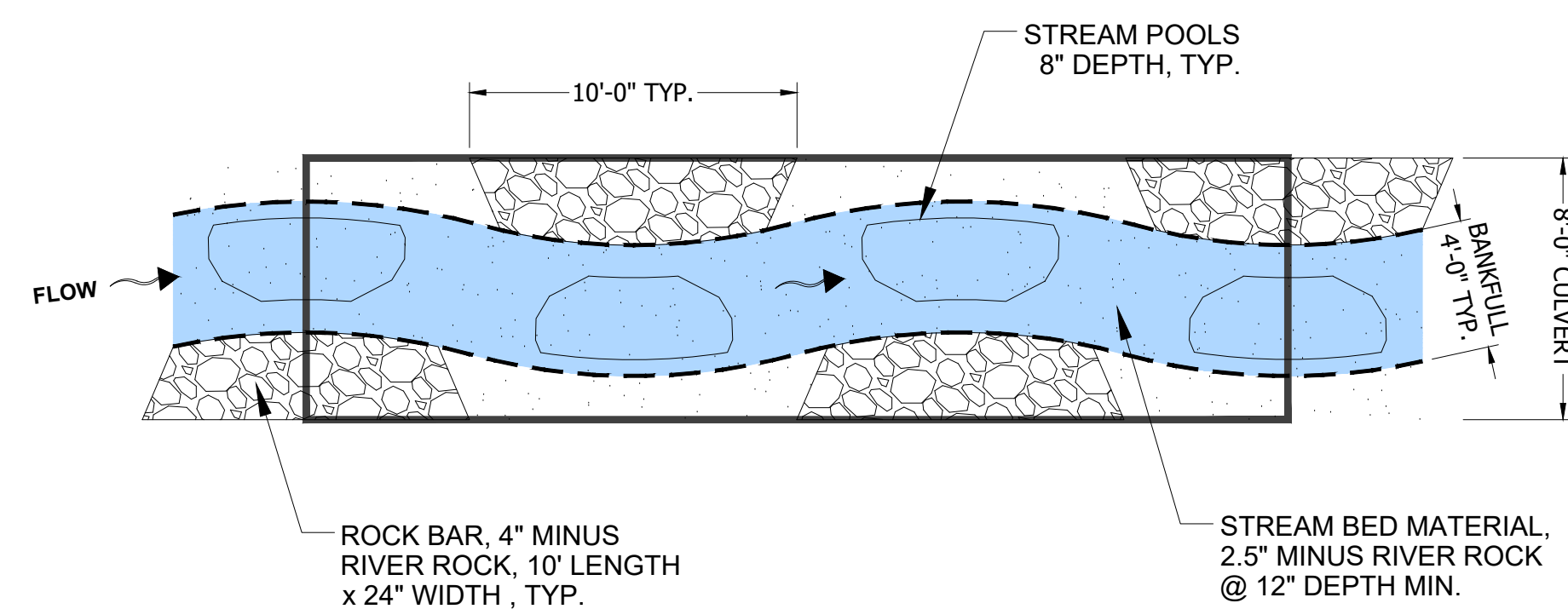
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JOB: 2544.0001  
BY: MW/DS  
SCALE: AS SHOWN  
SHEET: 3.0



STREAMS Y & Z - PROPOSED CROSS SECTION, TYP.  
SCALE: 1"=2'



STREAMS Y & Z - PROPOSED PLAN VIEW, TYP.  
SCALE: 1"=5'



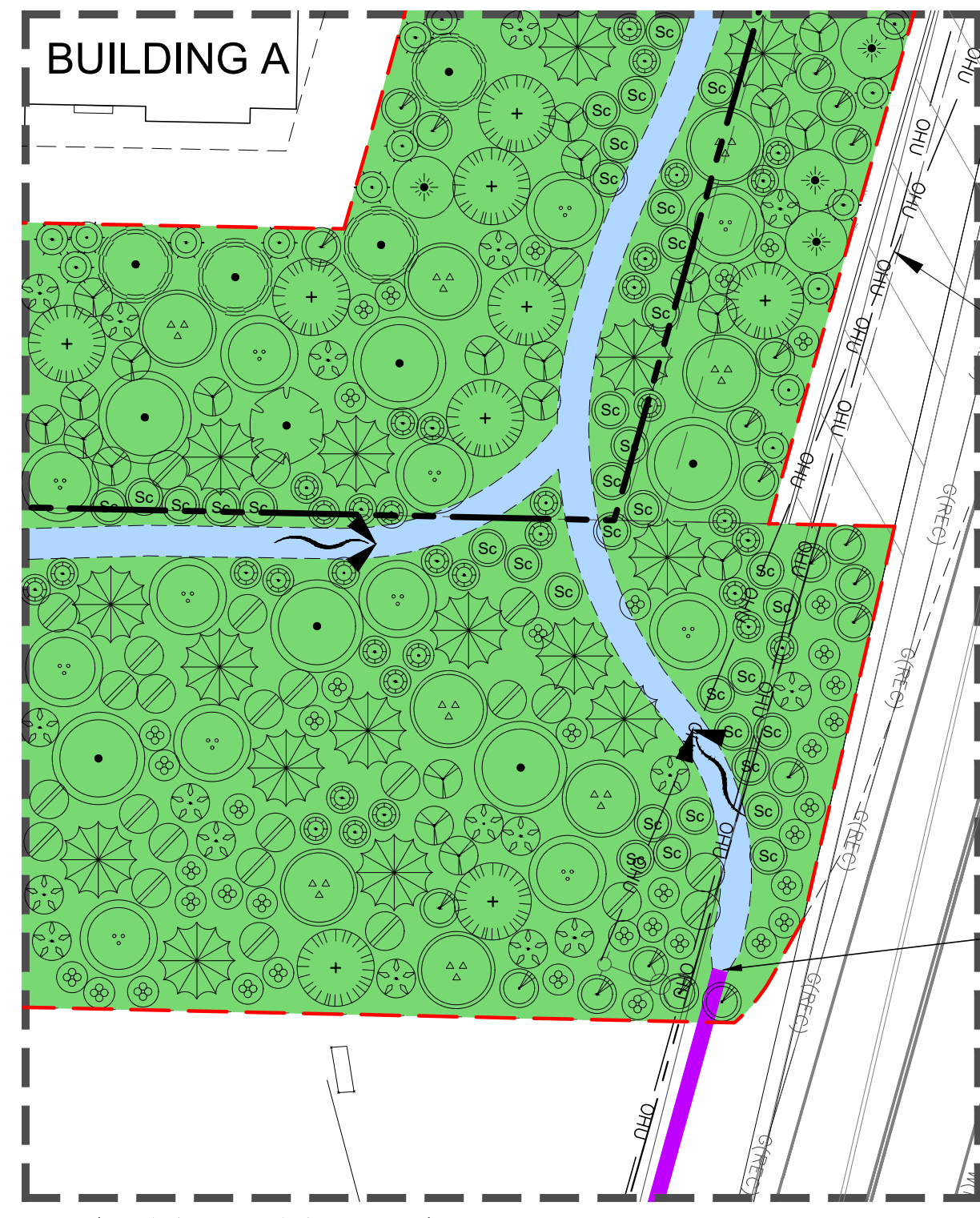
CULVERT DETAIL - PLAN VIEW, TYP.  
SCALE: 1"=5'

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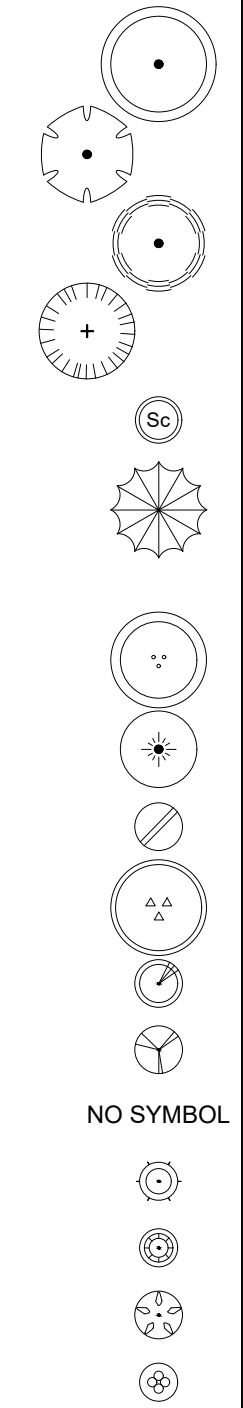
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PLANTING TYPICAL  
SCALE: 1"=20'

OVERHEAD UTILITIES



PLANT & HABITAT FEATURE SCHEDULE

Scientific Name	Common Name	WL Status	Buffer Plantings	Spacing (min.)	Height (min.)	Size (min.)	Planting Area
<b>TREES (Qty)</b>							
<i>Acer macrophyllum</i>	bigleaf maple	FACU	37	10 ft	3 ft	2 gal	Dry
<i>Frangula purshiana (Rhamnus p.)</i>	casacara	FAC	6	10 ft	3 ft	1 gal	Dry
<i>Prunus emarginata</i>	bitter cherry	FACU	29	10 ft	3 ft	2 gal	Dry
<i>Pseudotsuga menziesii</i>	Douglas fir	FACU	57	10 ft	3 ft	2 gal	Dry
<i>Salix scouleriana</i>	Scouler's willow	FAC	227	5 ft	4 ft	Stakes	Dry
<i>Thuja plicata</i>	western redcedar	FAC	99	10 ft	3 ft	2 gal	Moist - on hummock
<b>Total: 455</b>							
<b>SHRUBS (Qty)</b>							
<i>Acer circinatum</i>	vine maple	FAC	82	10 ft	4 ft	2 gal	Dry/Moist
<i>Amelanchier alnifolia</i>	serviceberry	FACU	32	8 ft	3 ft	2 gal	Dry
<i>Cornus stolonifera</i>	red-osier dogwood	FACW	182	4 ft	3 ft	1 gal	Moist/Wet
<i>Corylus cornuta var. californica</i>	western hazelnut	FACU	58	10 ft	2 ft	2 gal	Moist
<i>Holodiscus discolor</i>	oceanspray	FACU	140	5 ft	2 ft	1 gal	Dry
<i>Oemleria cerasiformis</i>	Indian plum	FACU	116	5 ft	2 ft	2 gal	Dry
<i>Polystichum munitum</i>	western swordfern	FACU	435	4 ft	1 ft	1 gal	Dry/Moist
<i>Rosa gymnocarpa</i>	bald hip rose	FACU	109	4 ft	2 ft	1 gal	Dry/Moist
<i>Rubus spectabilis var. spectabilis</i>	salmonberry	FAC	290	4 ft	2 ft	1 gal	Moist
<i>Sambucus racemosa var. racemosa</i>	red elderberry	FACU	116	5 ft	2 ft	2 gal	Dry
<i>Symphoricarpos albus var. laevigatus</i>	common snowberry	FACU	254	4 ft	2 ft	1 gal	Dry
<b>Total: 1814</b>							
<b>SEED MIXES (www.riverrefugeseed.com)</b>							
<b>Native Upland Grass Mix #9</b>		<b>20 lbs/acre</b>	<b>(Qty)</b>				
<i>Elymus glaucus</i>	Blue wildrye	30%					
<i>Bromus carinatus</i>	California brome	25%					
<i>Hordeum brachyantherum</i>	Meadow barley	10%					
<i>Festuca roemerii</i>	Roemer's fescue	10%					
<i>Deschampsia elongata</i>	Slender hairgrass	10%					
<i>Agrostis exarata</i>	Spike bentgrass	5%					
<i>Deschampsia cespitosa</i>	Tufted hairgrass	5%					
<i>Festuca rubra var. rubra</i>	Red fescue	5%					
		<b>Total (lbs):</b>	<b>36</b>				
<b>Habitat Structures (Qty) Requirements</b>							
<b>Large Woody Debris</b>	<b>23 Pieces</b>	For salvaged large woody debris: 35.31 cubic feet of large woody debris material minimum. For imported large woody debris: 12 foot length minimum, 10 inch diameter minimum, with 2-3 foot minimum diameter rootwad attached.					

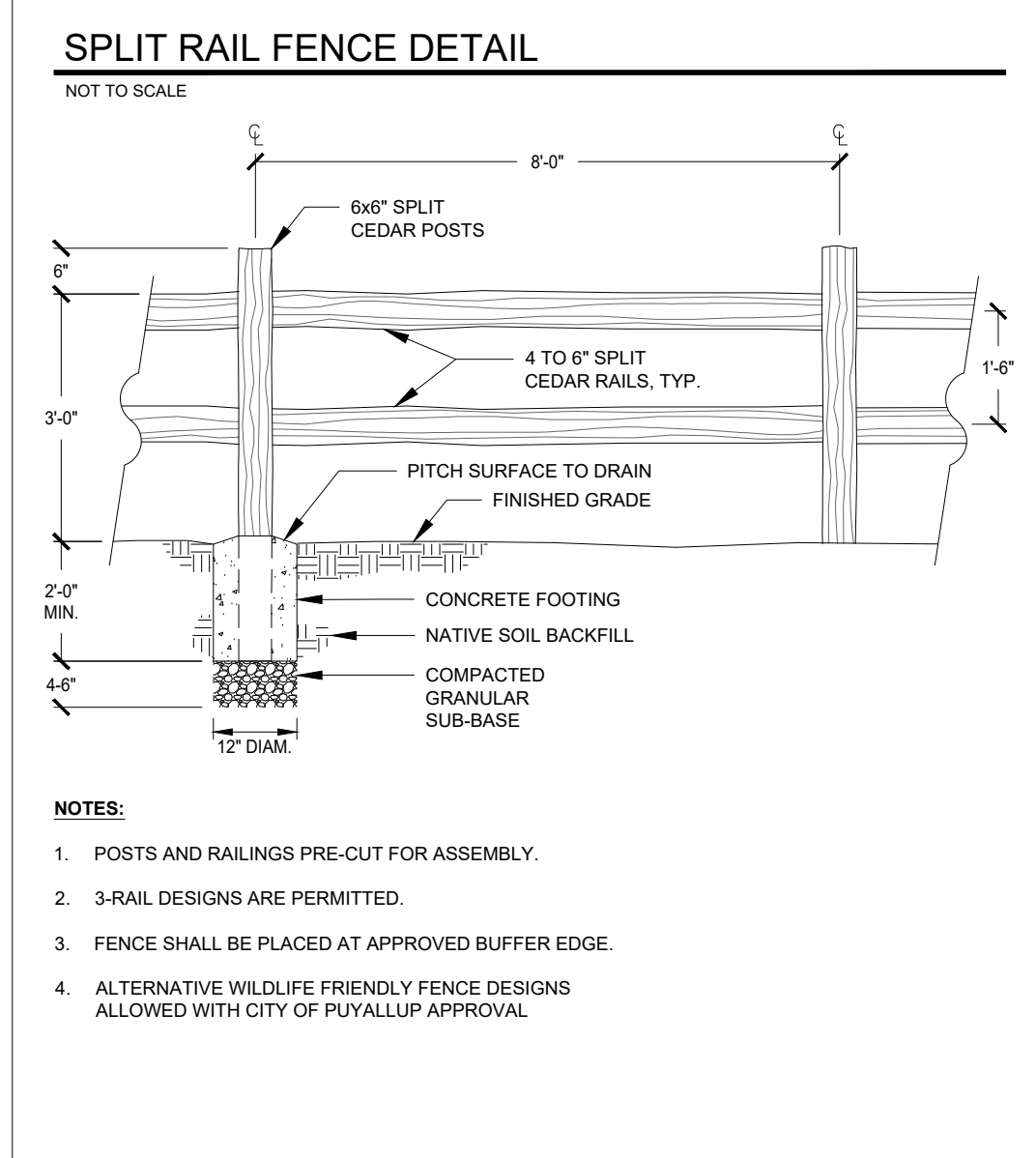
1 - Scientific names and species identification taken from *Flora of the Pacific Northwest, 2nd Edition* (Hitchcock and Cronquist, Ed. by Giblin, Ledger, Zka, and Olmstead, 2018).  
 2 - Over-sized container plants are suitable for replacement pending Wetland Scientist approval.  
 3 - Alternate native plant species may be substituted or added with Wetland Scientist approval.  
 4 - All disturbed and bare soil areas in the buffer to be seeded with a native grass seed mix.  
 5 - Shrub calculations based upon 5-ft average spacing.  
 6 - Tree calculations based upon 10-ft average spacing.  
 7 - *Polystichum munitum* to be planted in groups of 3 to 5 around the base of newly planted trees.

STREAMBED SUBSTRATE TABLE

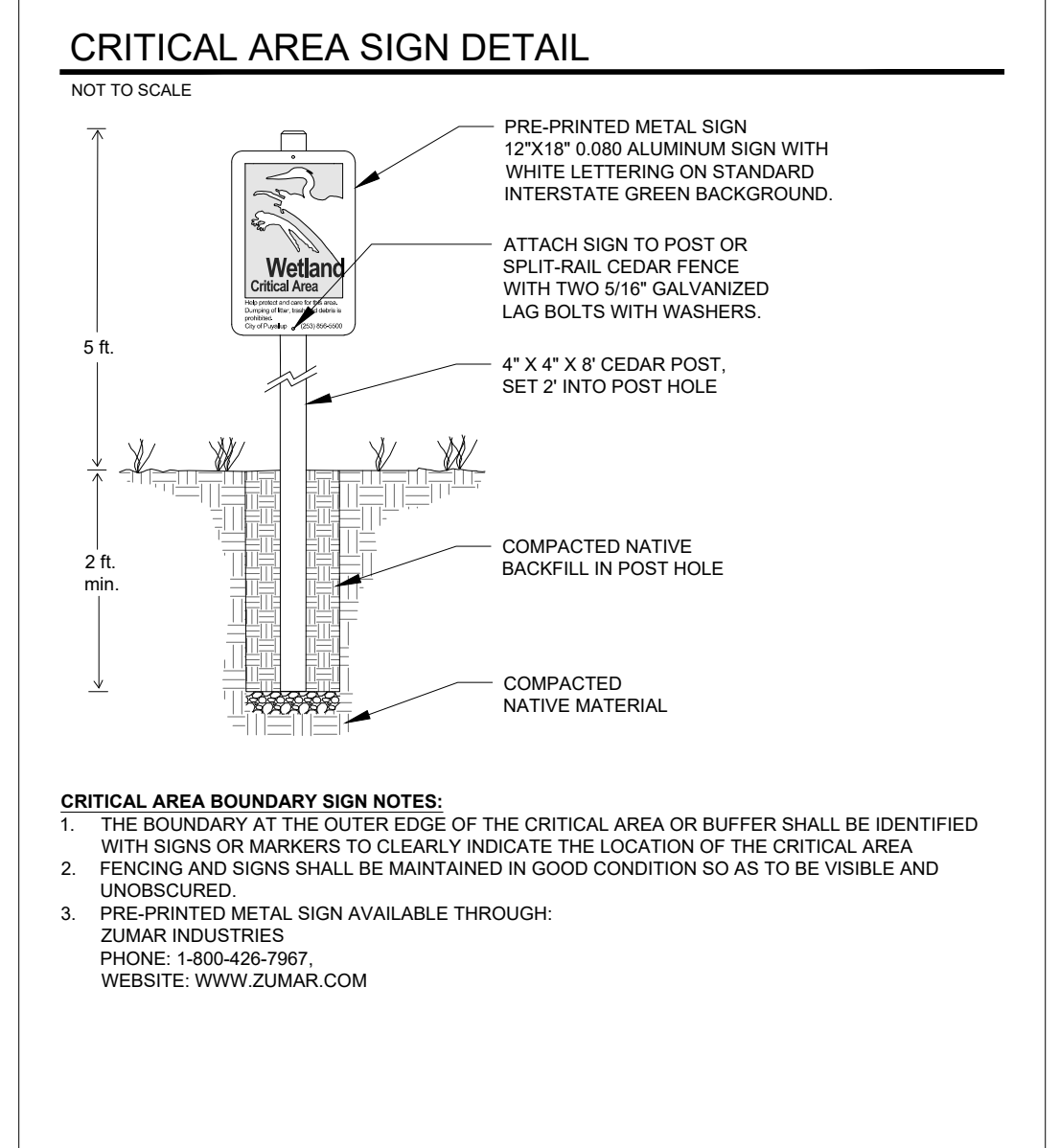
STREAMBED SUBSTRATE SIZE	STREAM (REACH)	FEATURE	LENGTH (LF)	CROSS-SECTIONAL AREA OF GRAVEL (SF)	VOLUME OF GRAVEL (CF)
2.5 IN. MINUS	STREAM Y	CHANNEL & POOLS	462	2.98	1376.8
	STREAM Z	CHANNEL & POOLS	614	2.98	1829.7
			<b>TOTAL 2.5 IN. MINUS GRAVEL (CF):</b>	<b>(CUBIC YARDS)</b>	<b>3206.5</b>
4 IN. MINUS	CULVERTS	ROCK BARS & POOLS	120	3	360.0
			<b>TOTAL 2.5 IN. MINUS GRAVEL (CF):</b>	<b>(CUBIC YARDS)</b>	<b>360.0</b>

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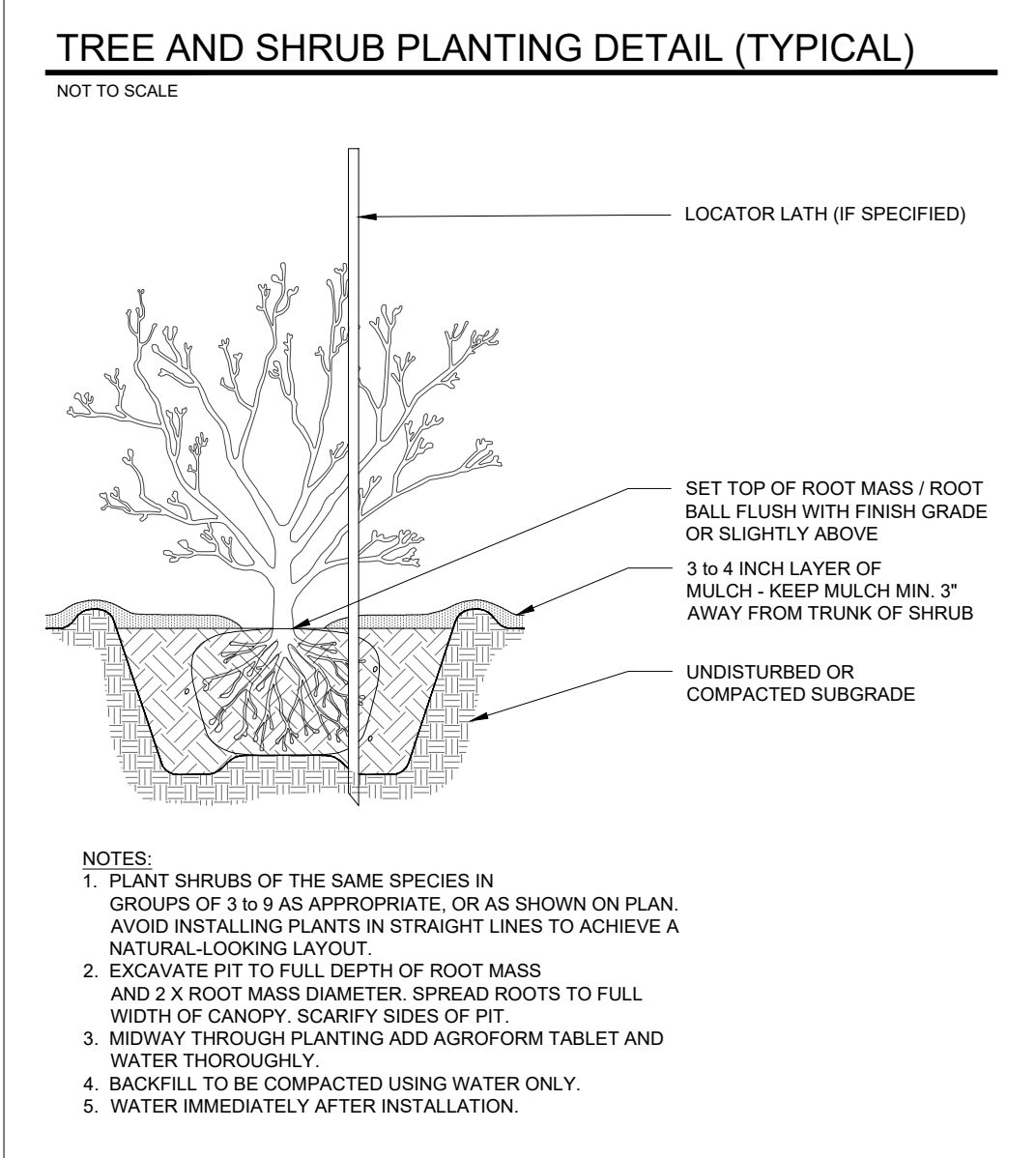
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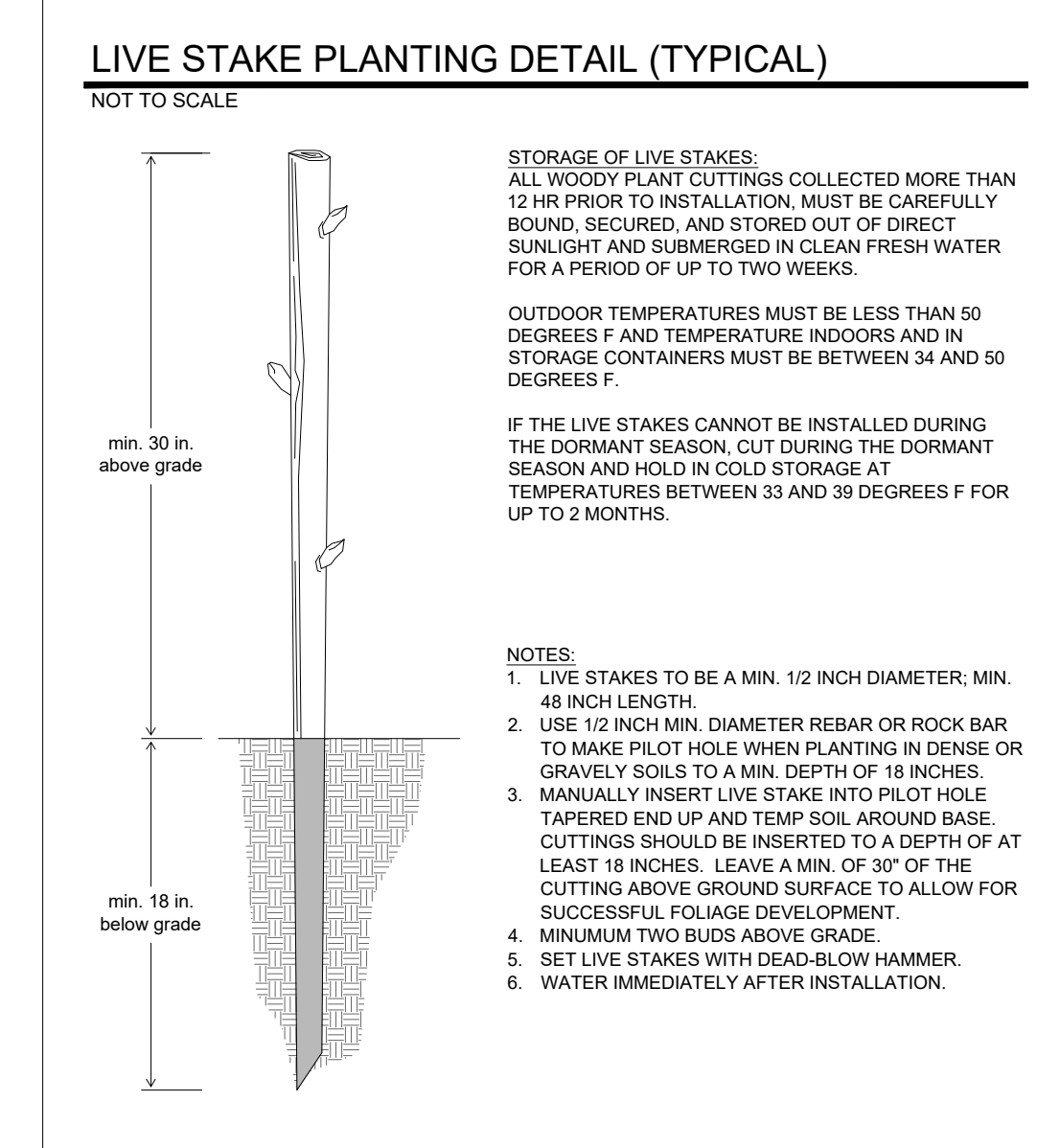
- NOTES:**
- POSTS AND RAILINGS PRE-CUT FOR ASSEMBLY.
  - 3-RAIL DESIGNS ARE PERMITTED.
  - FENCE SHALL BE PLACED AT APPROVED BUFFER EDGE.
  - ALTERNATIVE HILLOLIFE FRIENDLY FENCE DESIGNS ALLOWED WITH CITY OF PUYALLUP APPROVAL.



- CRITICAL AREA BOUNDARY SIGN NOTES:**
- THE BOUNDARY AT THE OUTER EDGE OF THE CRITICAL AREA OR BUFFER SHALL BE IDENTIFIED WITH SIGNS OR MARKERS TO CLEARLY INDICATE THE LOCATION OF THE CRITICAL AREA.
  - FENCING AND SIGNS SHALL BE MAINTAINED IN GOOD CONDITION SO AS TO BE VISIBLE AND UNOBSCURED.
  - PRE-PRINTED METAL SIGN AVAILABLE THROUGH:  
 ZUMAR INDUSTRIES  
 PHONE: 1-800-426-7967  
 WEBSITE: WWW.ZUMAR.COM



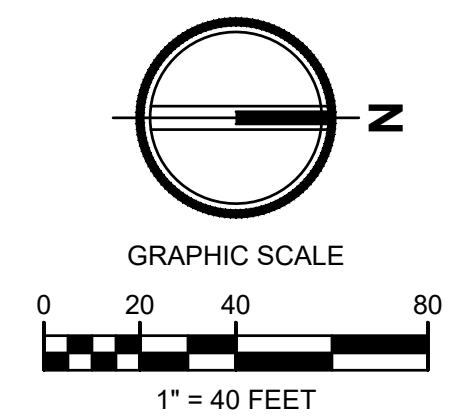
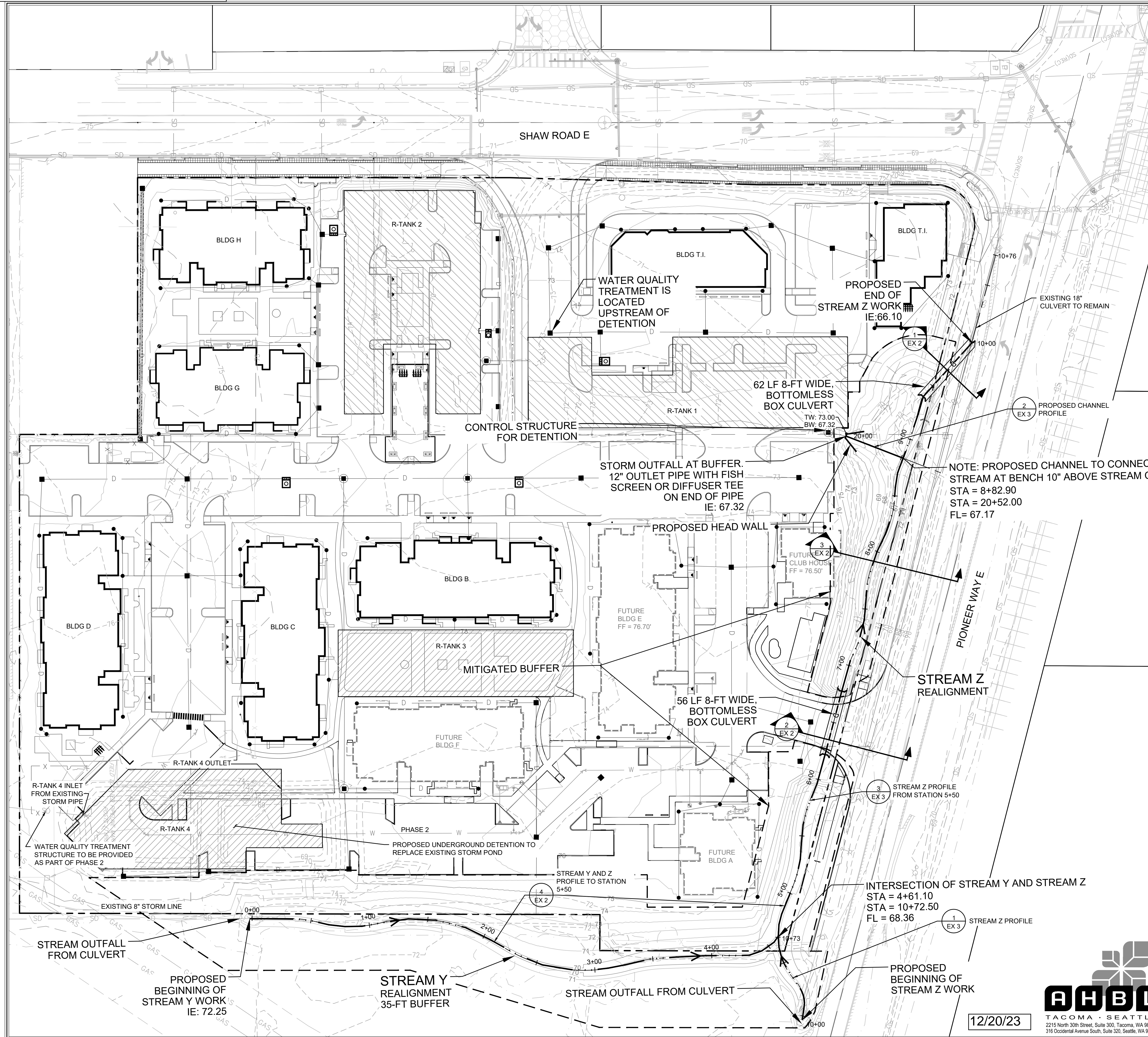
- NOTES:**
- PLANT SHRUBS OF THE SAME SPECIES IN GROUPS OF 3 TO 9 AS APPROPRIATE, OR AS SHOWN ON PLAN. AVOID INSTALLING PLANTS IN STRAIGHT LINES TO ACHIEVE A NATURAL-LOOKING LAYOUT.
  - EXCAVATE PIT TO FULL DEPTH OF ROOT MASS AND 2 X ROOT MASS DIAMETER. SPREAD ROOTS TO FULL WIDTH OF CANOPY, SCARIFY SIDES OF PIT.
  - MIDWAY THROUGH PLANTING ADD AGROFORM TABLET AND WATER THOROUGHLY.
  - BACKFILL TO BE COMPACTED USING WATER ONLY.
  - WATER IMMEDIATELY AFTER INSTALLATION.



- STORAGE OF LIVE STAKES:**  
 ALL WOODY PLANT CUTTINGS COLLECTED MORE THAN 12 HR PRIOR TO INSTALLATION, MUST BE CAREFULLY BOUND, SECURED, AND STORED OUT OF DIRECT SUNLIGHT AND SUBMERGED IN CLEAN FRESH WATER FOR A PERIOD OF UP TO TWO WEEKS.
- OUTDOOR TEMPERATURES MUST BE LESS THAN 50 DEGREES F AND TEMPERATURE INDOORS AND IN STORAGE CONTAINERS MUST BE BETWEEN 34 AND 50 DEGREES F.**
- IF THE LIVE STAKES CANNOT BE INSTALLED DURING THE DORMANT SEASON, CUT DURING THE DORMANT SEASON AND HOLD IN COLD STORAGE AT TEMPERATURES BETWEEN 35 AND 39 DEGREES F FOR UP TO 2 MONTHS.**
- NOTES:**
- LIVE STAKES TO BE A MIN. 1/2 INCH DIAMETER, MIN. 48 INCH LENGTH.
  - USE 1/2 INCH MIN. DIAMETER REBAR OR ROCK BAR TO MAKE PILOT HOLE WHEN PLANTING IN DENSE OR GRAVELLY SOILS TO A MIN. DEPTH OF 18 INCHES.
  - MANUALLY INSERT LIVE STAKE INTO PILOT HOLE TAPERED END UP AND TEMP SOIL AROUND BASE. CUTTINGS SHOULD BE INSERTED TO A DEPTH OF AT LEAST 18 INCHES. LEAVE A MIN. OF 50% OF THE CUTTING ABOVE GROUND SURFACE TO ALLOW FOR SUCCESSFUL FOLIAGE DEVELOPMENT.
  - MINIMUM TWO BUDS ABOVE GRADE.
  - SET LIVE STAKES WITH DEAD-BLOW HAMMER.
  - WATER IMMEDIATELY AFTER INSTALLATION.

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**GENERAL NOTE**  
ALL EXISTING AND PROPOSED GRADES SHOWN ON PROFILE VIEWS ARE BASED ON THE LOCATION OF THE PROPOSED STREAM OR CHANNEL CENTERLINE.

**AHBL**  
TACOMA · SEATTLE  
2215 North 30th Street, Suite 300, Tacoma, WA 98403  
316 Occidental Avenue South, Suite 330, Seattle, WA 98104

Civil Engineers  
Structural Engineers  
Landscape Architects  
Community Planners  
Land Surveyors  
Historians

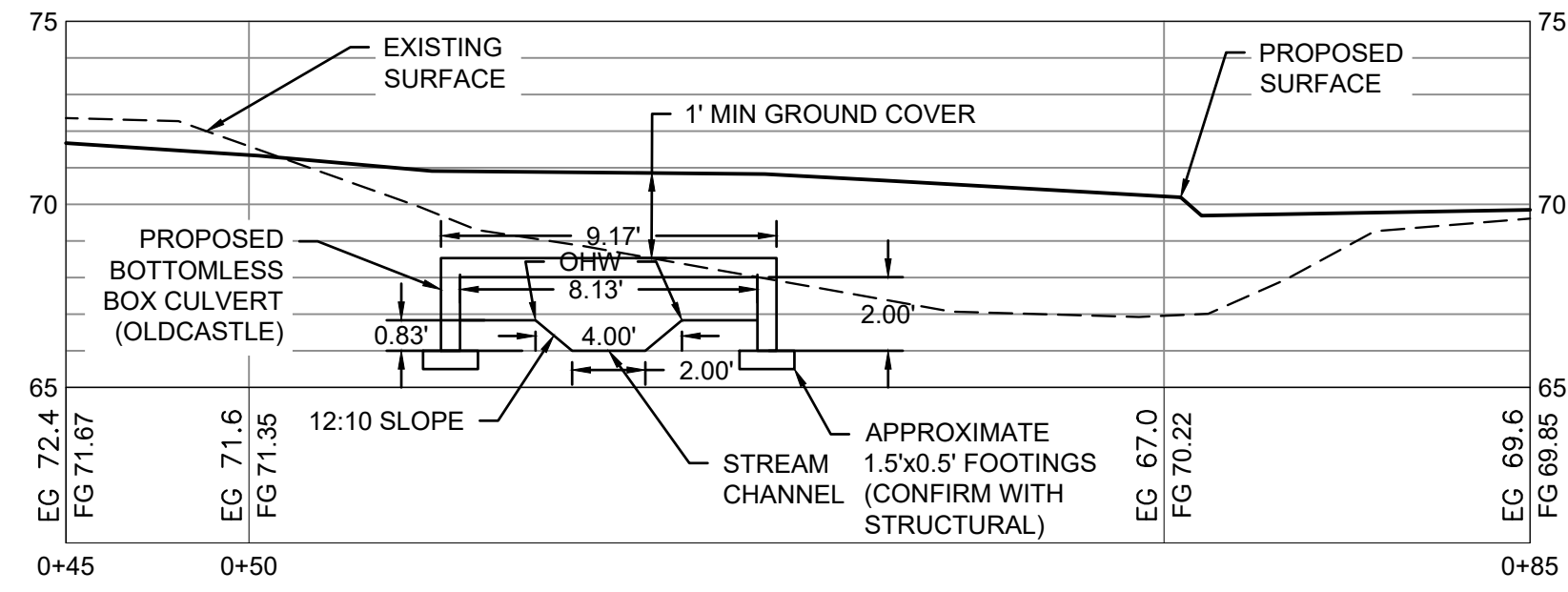
**STREAM AND CULVERT EXHIBIT**  
**EAST TOWN CROSSING**

**EX 6**

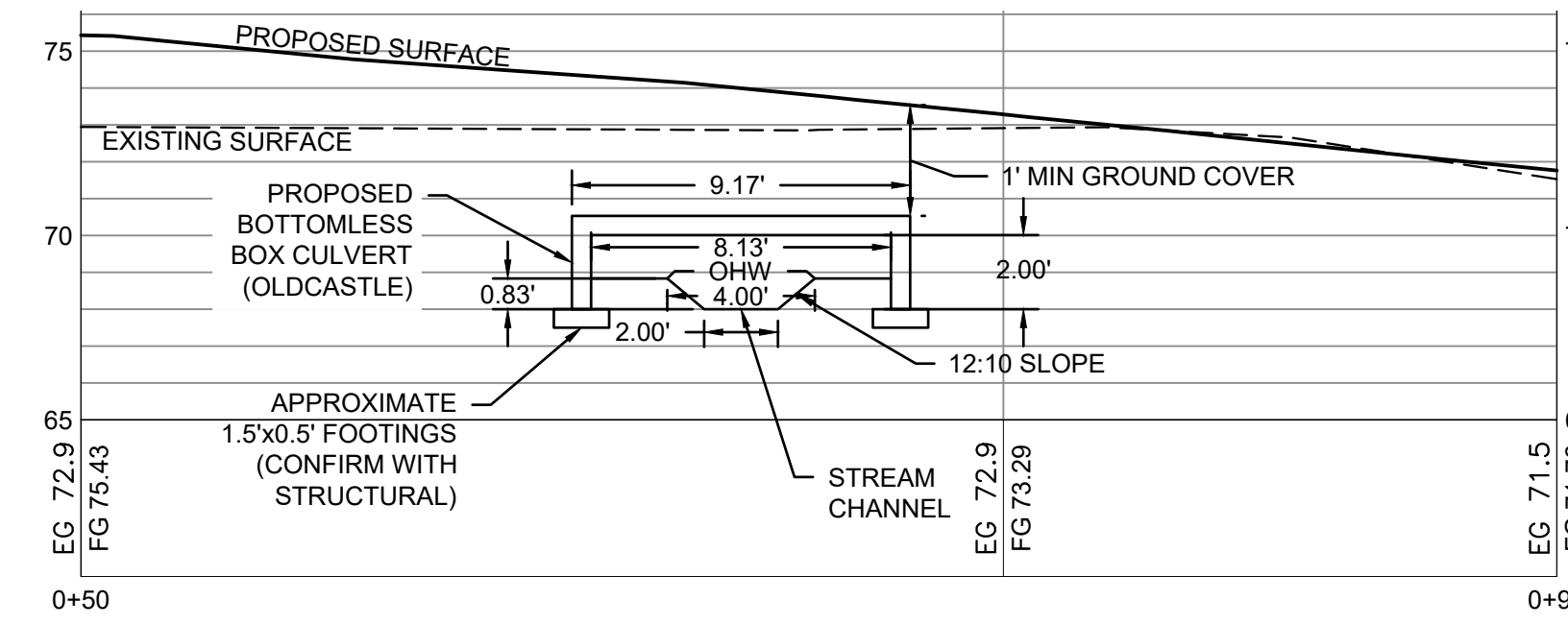
12/20/23

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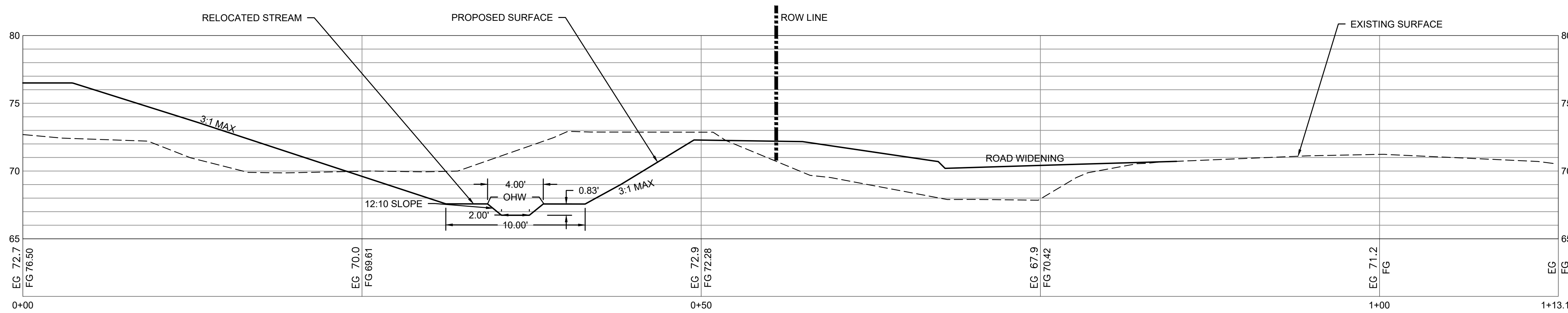
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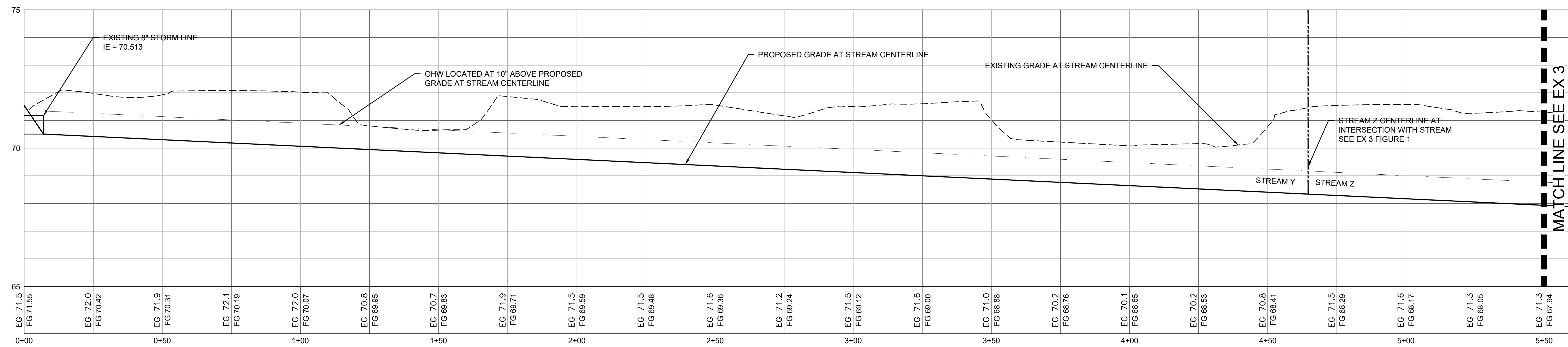
**1 BOX CULVERT 1**  
SCALE: 1" = 5'



**2 BOX CULVERT 2**  
SCALE: 1" = 5'



**3 STREAM CROSS SECTION**  
SCALE: 1" = 5'



**4 STREAM Y AND Z PROFILE VIEW STATION 0+00 TO 5+50**  
1" = 2' VERTICAL, 1" = 20' HORIZONTAL



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Structural Engineers  
Landscape Architects  
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**STREAM AND CULVERT EXHIBIT**

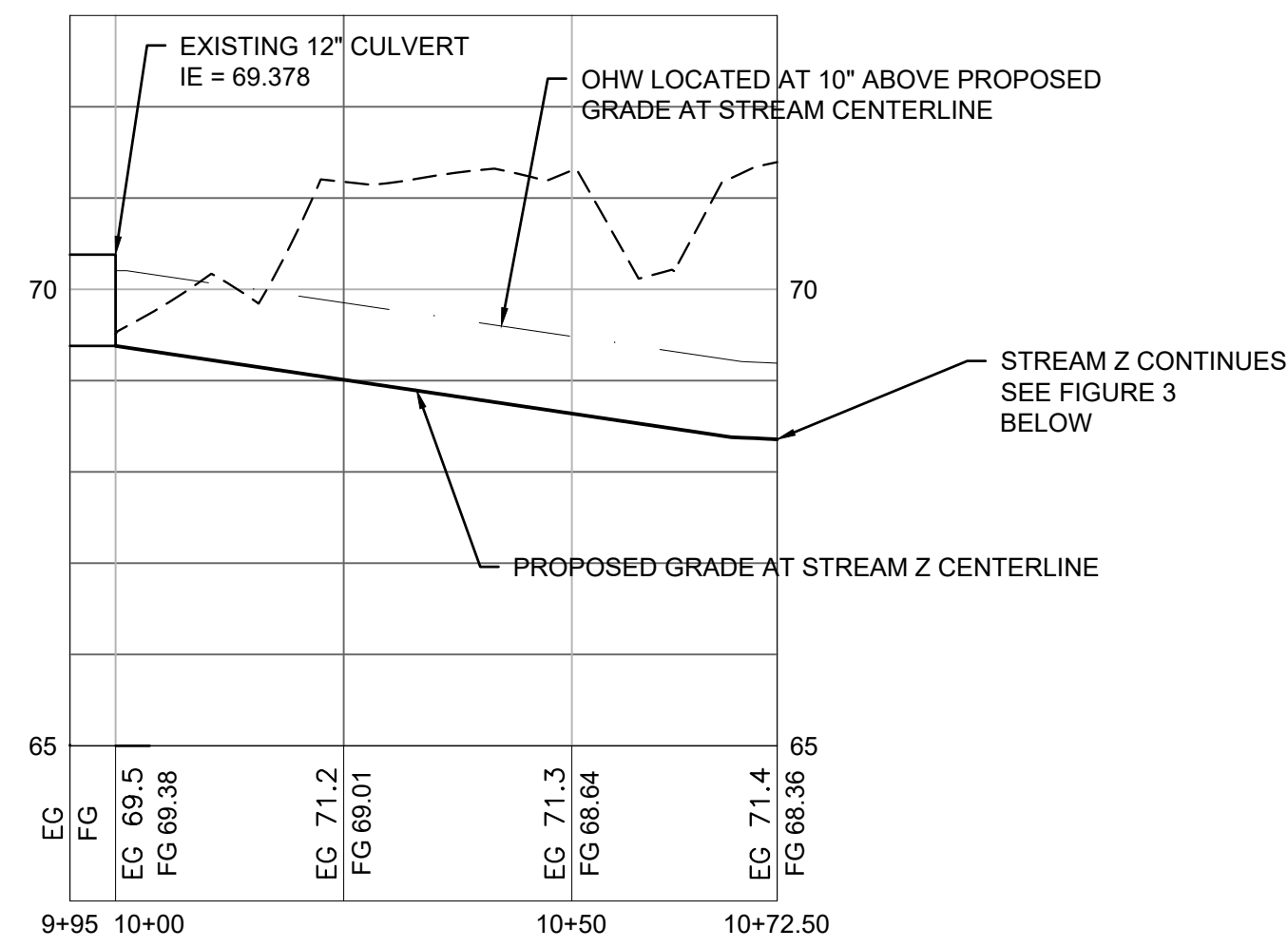
**EAST TOWN CROSSING**

**EX 7**

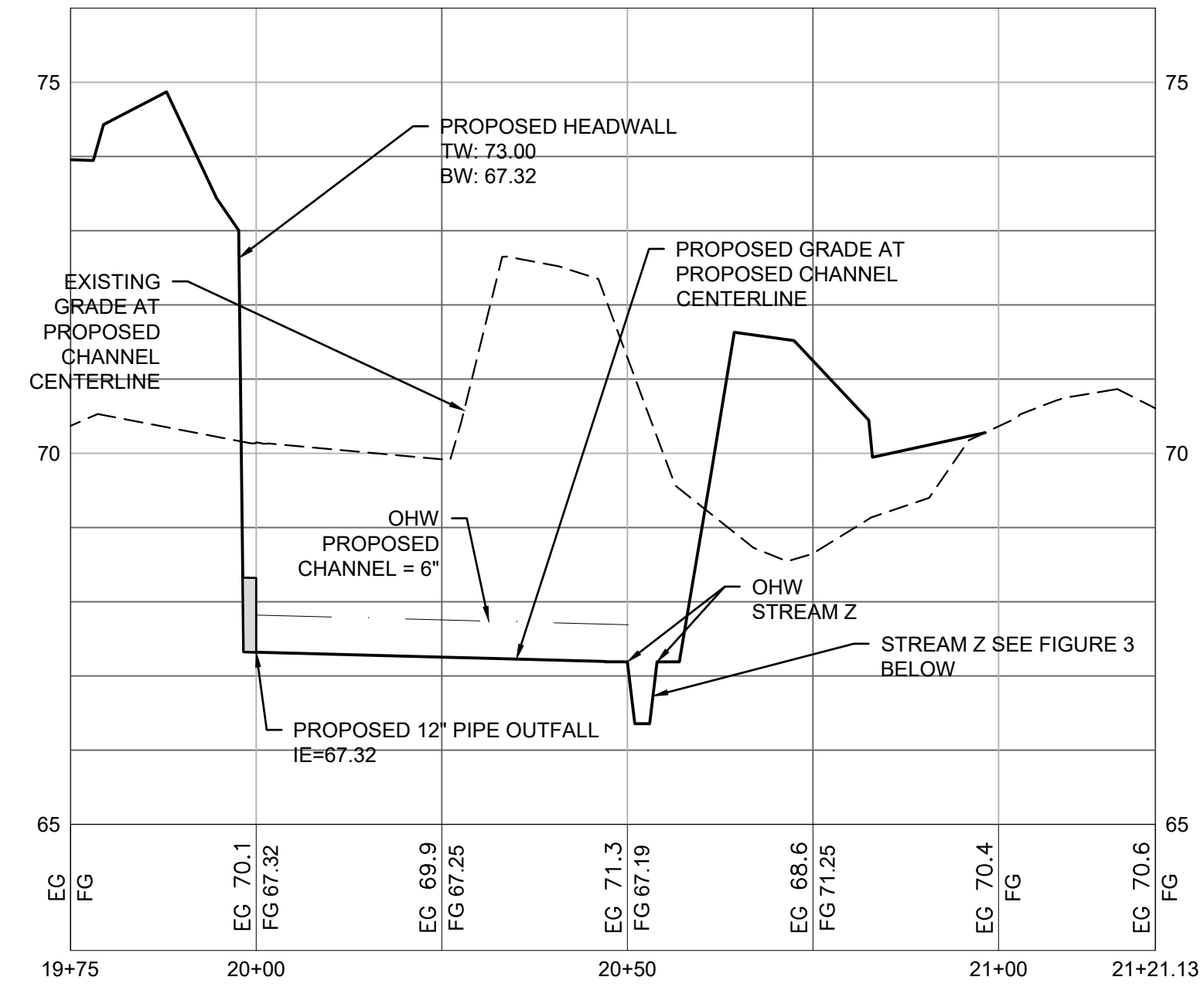
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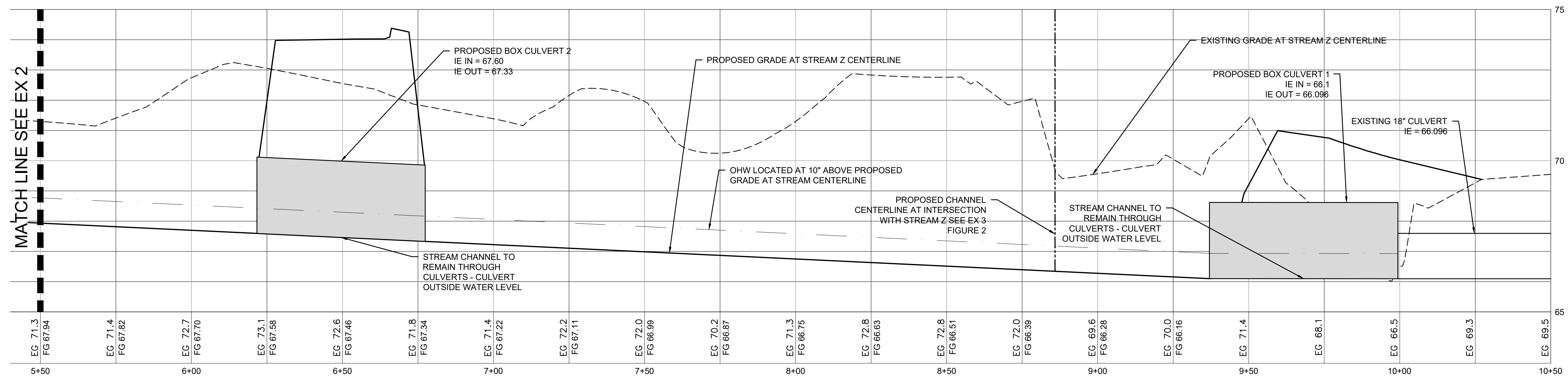
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**1 STREAM Z PROFILE VIEW**  
1" = 2' VERTICAL, 1" = 20' HORIZONTAL



**2 PROPOSED CHANNEL PROFILE VIEW**  
1" = 2' VERTICAL, 1" = 20' HORIZONTAL



**3 STREAM Z PROFILE VIEW STATION 5+50 TO 10+00**  
1" = 2' VERTICAL, 1" = 20' HORIZONTAL



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**STREAM AND CULVERT EXHIBIT**  
**EAST TOWN CROSSING**

**EX 8**

12/20/23