

# working for clean rivers



## Luther Road Habitat Restoration- 2019

Ali Young, Capital Project Manager  
City of Portland Environmental Services

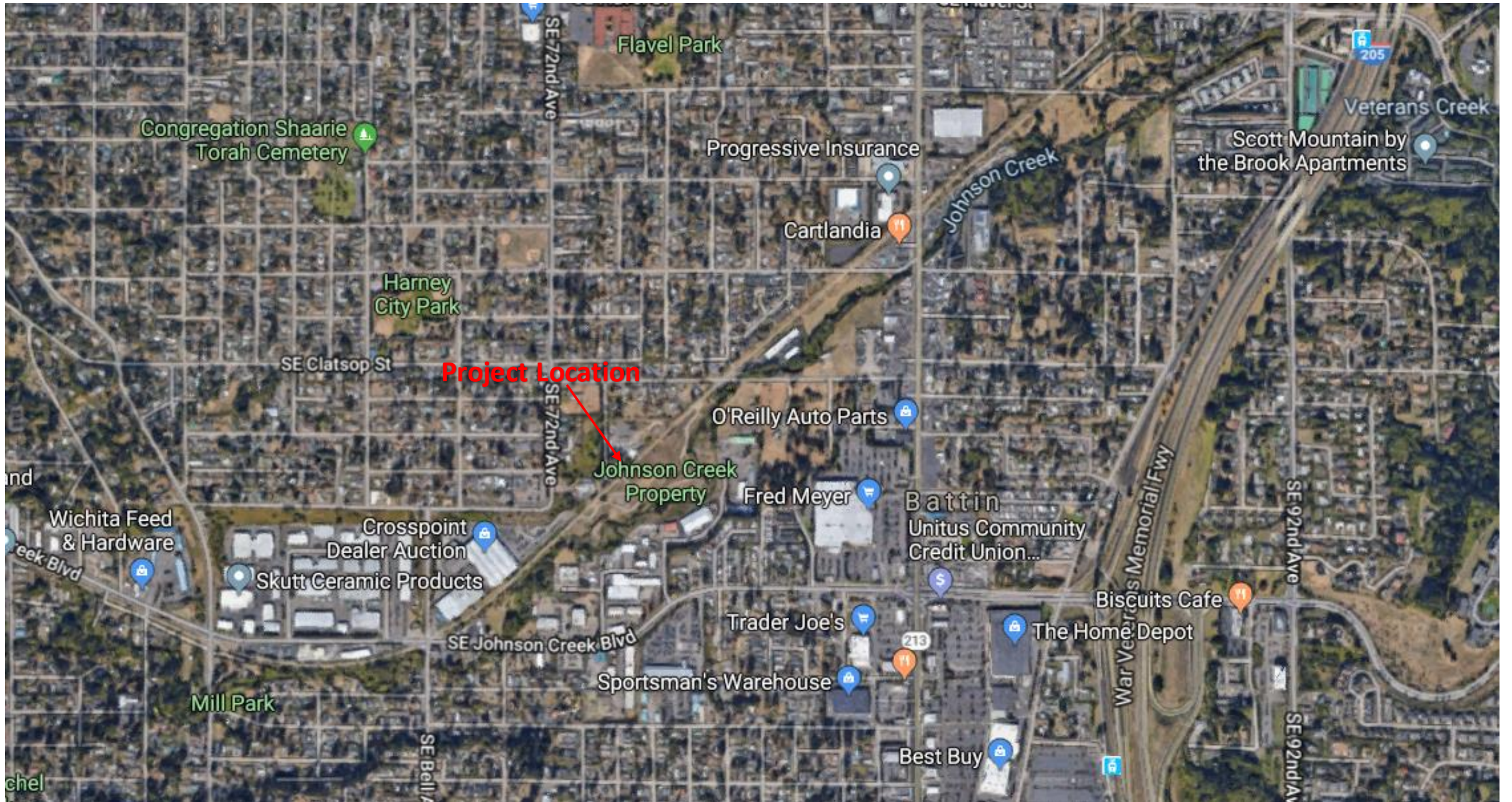
October 22, 2019



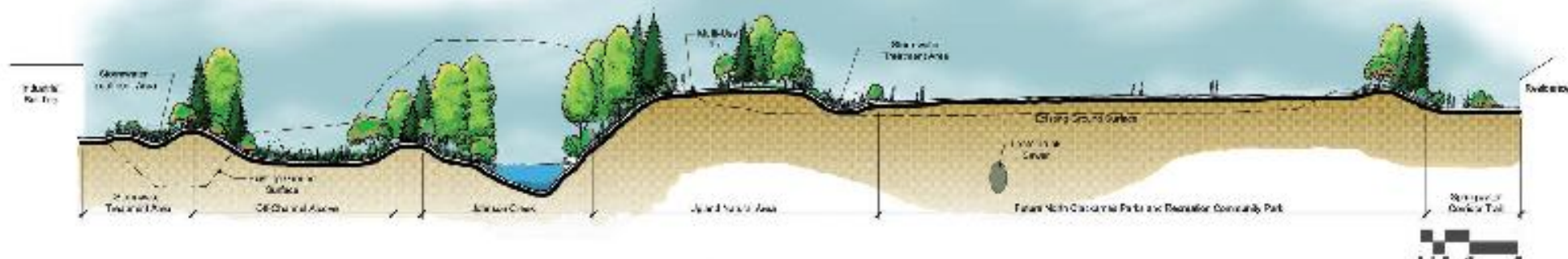
ENVIRONMENTAL SERVICES  
CITY OF PORTLAND

working for clean rivers

NICK FISH, COMMISSIONER | MICHAEL JORDAN, DIRECTOR







Luther Road Habitat Restoration Project









## December 2015 Flood

- approx. 25-year storm
- 2,740 cfs
- 15.33 feet







**stormwater  
pond**



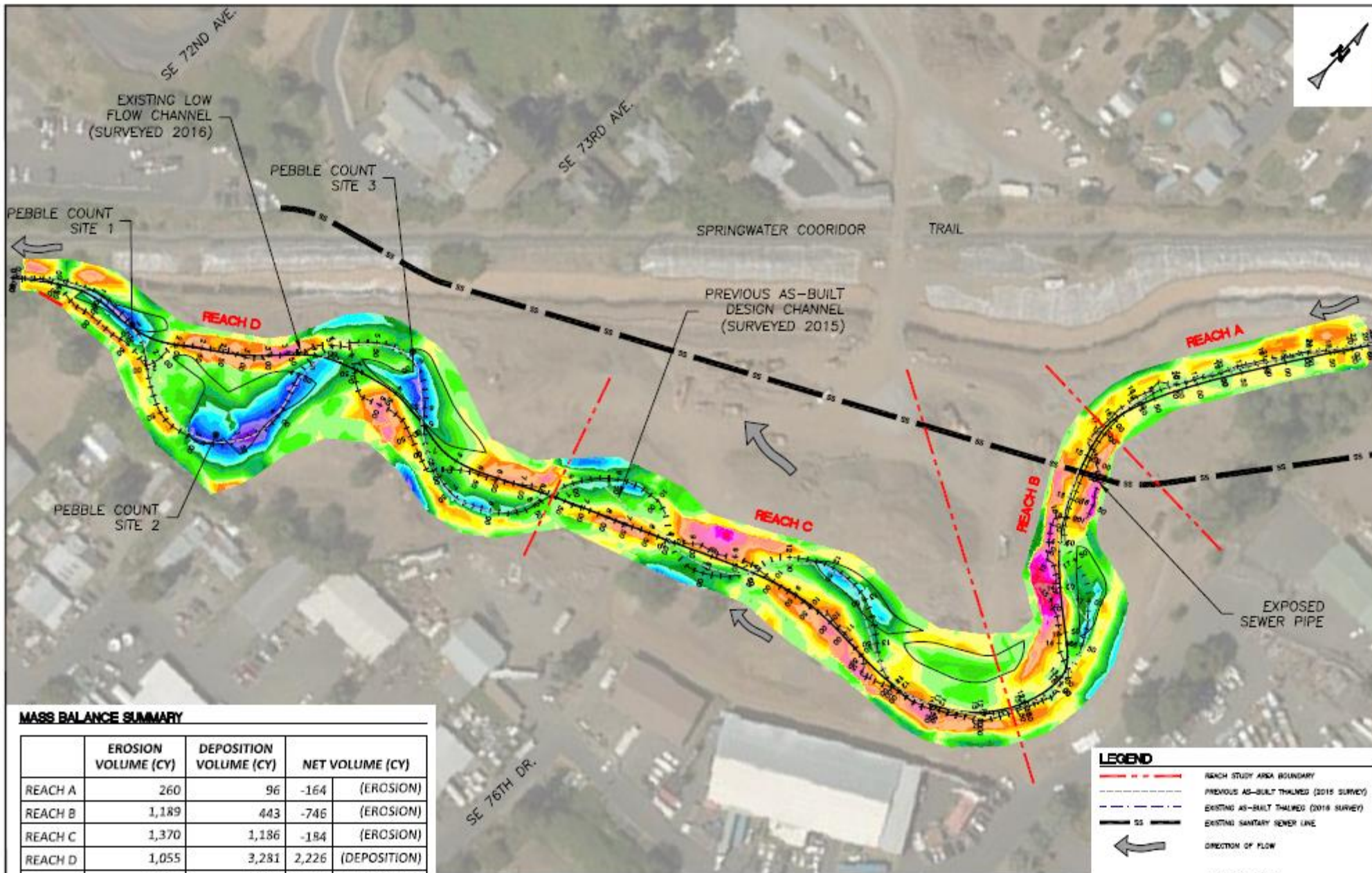
**Back channel**



2014 Constructed Channel



2016 After Flood



**MASS BALANCE SUMMARY**

	EROSION VOLUME (CY)	DEPOSITION VOLUME (CY)	NET VOLUME (CY)	
REACH A	260	96	-164	(EROSION)
REACH B	1,189	443	-746	(EROSION)
REACH C	1,370	1,186	-184	(EROSION)
REACH D	1,055	3,281	2,226	(DEPOSITION)
TOTAL	3,874	5,009	1,135	(DEPOSITION)

**SITE PLAN**  
 SCALE: 1" = 100'

**LEGEND**

- REACH STUDY AREA BOUNDARY
- PREVIOUS AS-BUILT THALWEG (2015 SURVEY)
- EXISTING AS-BUILT THALWEG (2018 SURVEY)
- SS EXISTING SANITARY SEWER LINE
- ← DIRECTION OF FLOW

EROSION/DEPOSITION  
 -6' -4' 0' 4' 7.5'  
 (IN FEET)

# Geomorphic Impacts from 2015 Storm

- Creek straightened, thalweg shortened 300-400 feet; primarily below the turn at sewer trunk: built too sinuous for the given valley width
- Creek avulsed into backchannel and constructed channel became high-flow channel
- 6 of 11 constructed riffle-pool sequences remain
- Creek width widened from 25' to 40'



Finer streambed washed out during storm while 2-4 foot boulders remained.







Headcut toward  
stormwater facility  
outlet



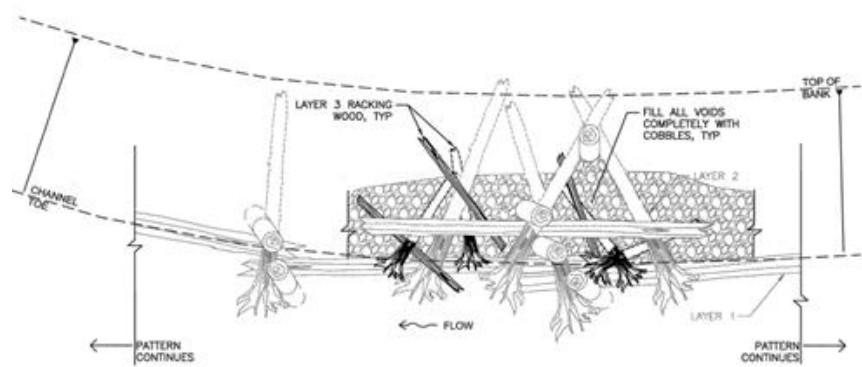










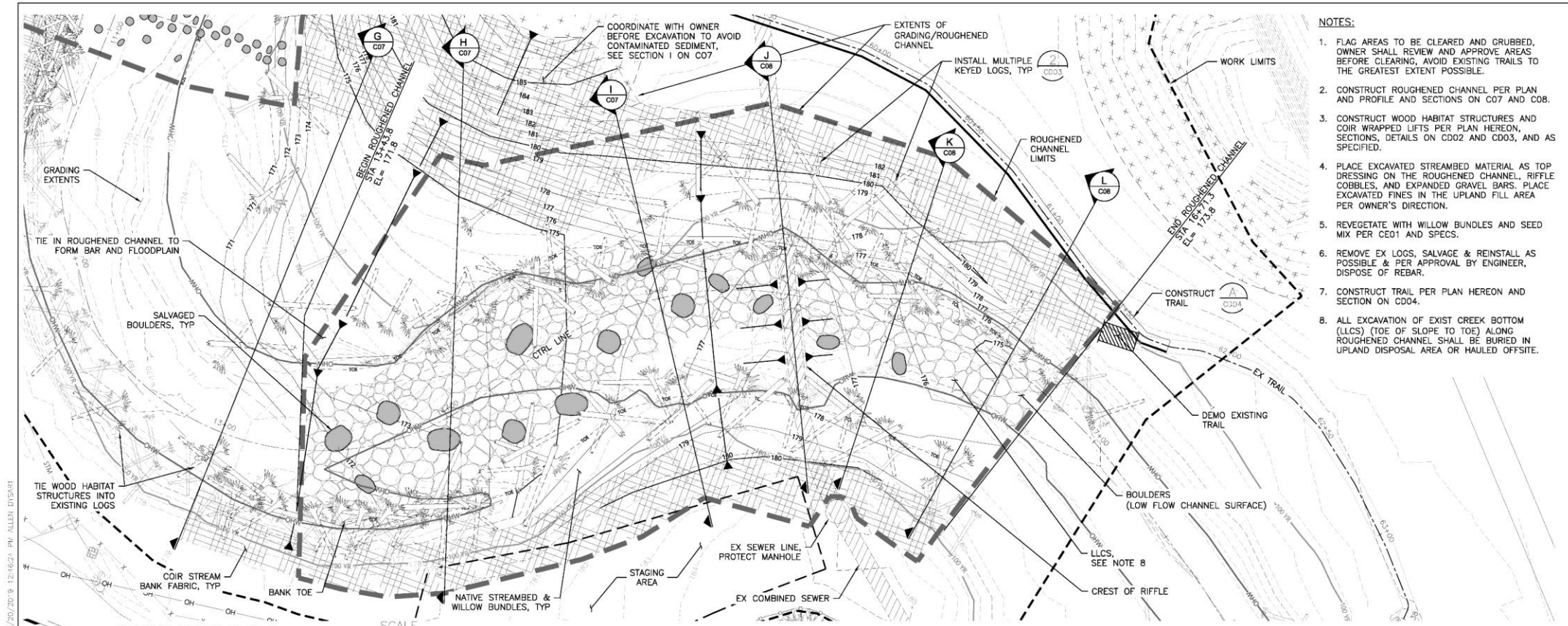


# Project Team

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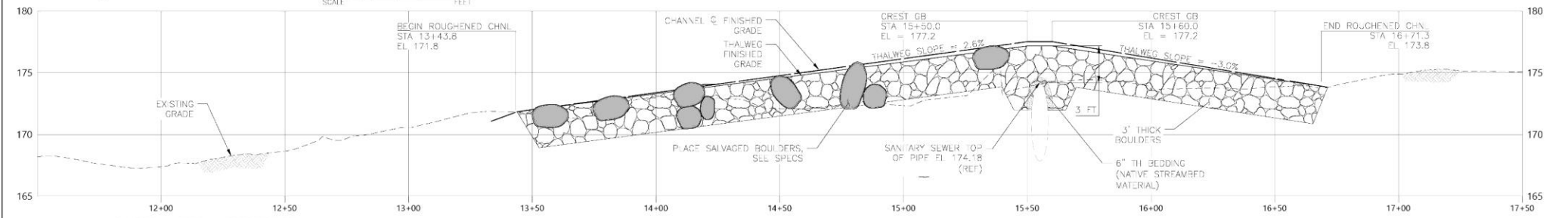
- Project Manager: Chris Lastomirsky
- Project Sponsor: Ali Young
- Construction Manager: Nick Naval/ Emily Neuhaus
- Design Engineer: Curtis Loab- Wolf Water Resources
- Senior Inspector: Josh Nault
- Site Inspector: Phebi Grude
- Contractor: Mike Shaw- Keystone Construction
- SMEs: Jennifer Antak, Melissa Brown, Chad Smith, Jim Wood, Rob Cozzi, Bethany Nabhan





- NOTES:**
1. FLAG AREAS TO BE CLEARED AND GRUBBED, OWNER SHALL REVIEW AND APPROVE AREAS BEFORE CLEARING, AVOID EXISTING TRAILS TO THE GREATEST EXTENT POSSIBLE.
  2. CONSTRUCT ROUGHENED CHANNEL PER PLAN AND PROFILE AND SECTIONS ON C07 AND COB.
  3. CONSTRUCT WOOD HABITAT STRUCTURES AND COIR WRAPPED LIFTS PER PLAN HEREON, SECTIONS, DETAILS ON C02 AND C03, AND AS SPECIFIED.
  4. PLACE EXCAVATED STREAMBED MATERIAL AS TOP DRESSING ON THE ROUGHENED CHANNEL, RIFFLE COBBLES, AND EXPANDED GRAVEL BARS. PLACE EXCAVATED FINES IN THE UPLAND FILL AREA PER OWNER'S DIRECTION.
  5. REVEGETATE WITH WILLOW BUNDLES AND SEED MIX PER C01 AND SPECS.
  6. REMOVE EX LOGS, SALVAGE & REINSTALL AS POSSIBLE & PER APPROVAL BY ENGINEER, DISPOSE OF REBAR.
  7. CONSTRUCT TRAIL PER PLAN HEREON AND SECTION ON C04.
  8. ALL EXCAVATION OF EXIST CREEK BOTTOM (LLCS) (TOE OF SLOPE TO TOE) ALONG ROUGHENED CHANNEL SHALL BE BURIED IN UPLAND DISPOSAL AREA OR HAULED OFFSITE.

JOHNSON CREEK PLAN 3  
SCALE: HORIZ 20' = 1", VERT 4" = 1"



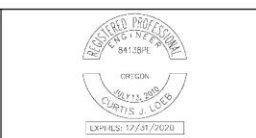
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NO.	DATE	DESCRIPTION	APPROVAL	DRAWING NAME
				E10854 - CO2 - CO4 - P&P.dwg

DESIGNED BY	DATE APP'D
DRAWN BY	PROGRAM MGR
CHECKED BY	CONSULT. MGR
DESIGN MGR	

VERSION USED	ROTATION ANGLE
PROJECT COMPLETED	
MAP CORRECTED BY	CHECKED BY

CITY OF PORTLAND  
**ENVIRONMENTAL SERVICES**

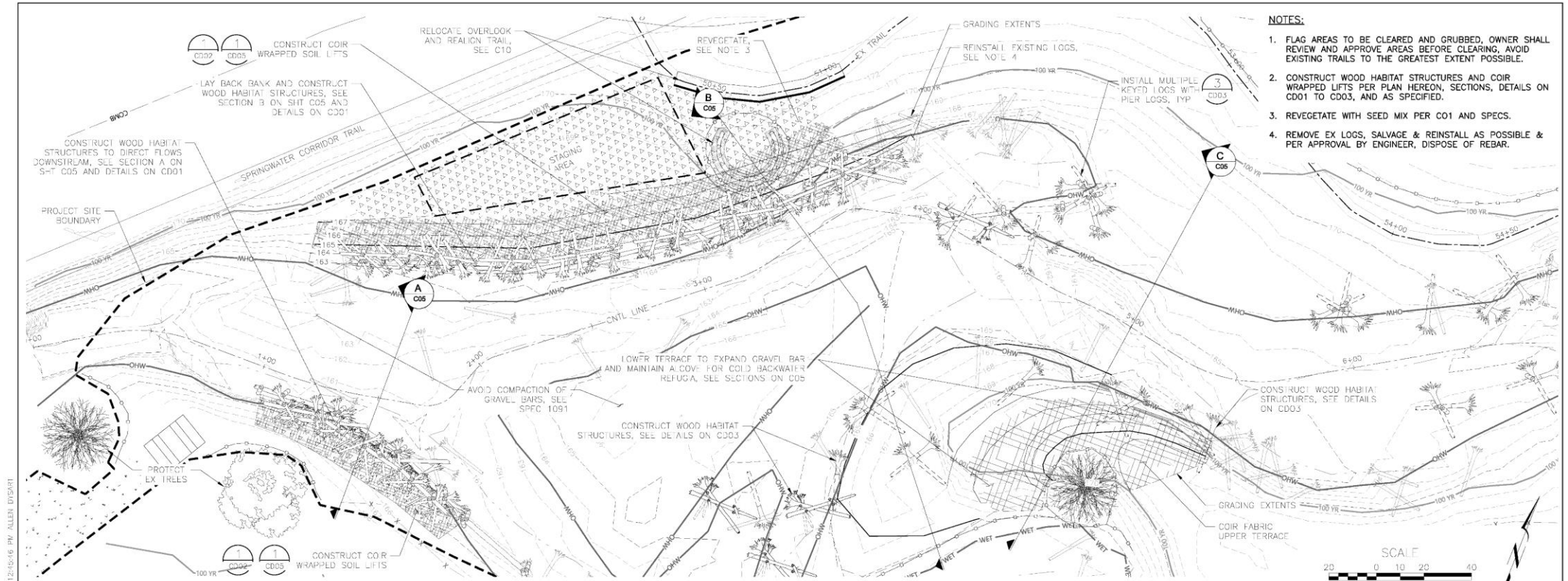


**LUTHER ROAD HABITAT RESTORATION PROJECT**  
PLAN & PROFILE 3

1/4 SECTION  
VARIES  
JOB NO.: E10854  
SHEET NO.: C04  
8 of 23

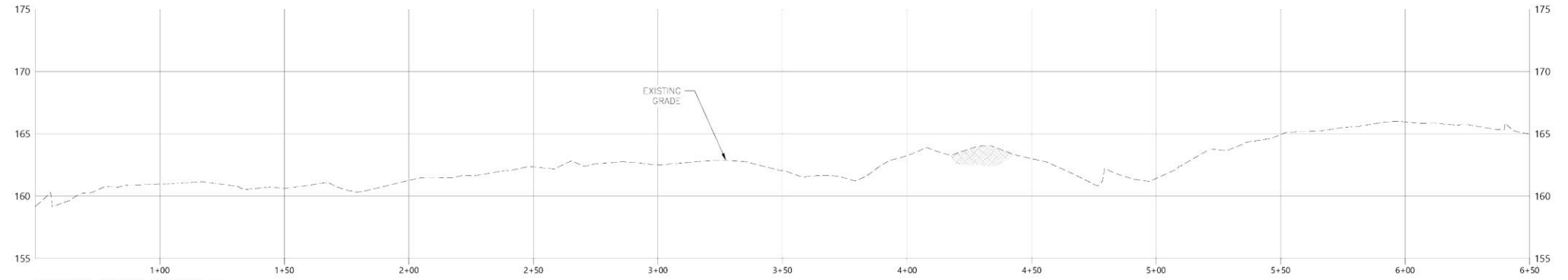






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  2. CONSTRUCT WOOD HABIT STRUCTURES AND COIR WRAPPED LIFTS PER PLAN HEREON, SECTIONS, DETAILS ON CD01 TO CD03, AND AS SPECIFIED.
  3. REVEGETATE WITH SEED MIX PER C01 AND SPECS.
  4. REMOVE EX LOGS, SALVAGE & REINSTALL AS POSSIBLE & PER APPROVAL BY ENGINEER, DISPOSE OF REBAR.

**JOHNSON CREEK PLAN 1**



**JOHNSON CREEK PROFILE 1**  
SCALE: HOR Z 20"=1", VER 4"=1"

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DESIGNED BY:	DATE APP'D:
DRAWN BY:	PROGRAM MGR:
CHECKED BY:	CONSULT. MGR:
DESIGN MGR:	
DESCRIPTION:	APPROVAL:
REVISION:	DRAWING NAME:

CITY OF PORTLAND  
**ENVIRONMENTAL SERVICES**



**LUTHER ROAD HABITAT RESTORATION PROJECT**  
PLAN & PROFILE 1

DATE: 12/31/2020	SCALE: 1"=20'
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1/4 SECTION
<b>VARIAS</b>
JOB NO: E10854
SHEET NO: C02
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LARGE WOOD QUANTITIES TABLE				
LOG TYPE	MIN LENGTH (FT)	MIN DBH (IN)	MIN ROOTFAN DIA (FT)	QTY
KEY ROOTWAD	30	18	6.0	134
KEY LOG	30	18	N/A	49
FOOTER ROOTWAD	40	24	6	7
FOOTER LOG	40	24	N/A	7
PIER LOG	15	18	N/A	122
SALVAGE LOG	25	18	N/A	59
RACKING WOOD	20	8	N/A	86