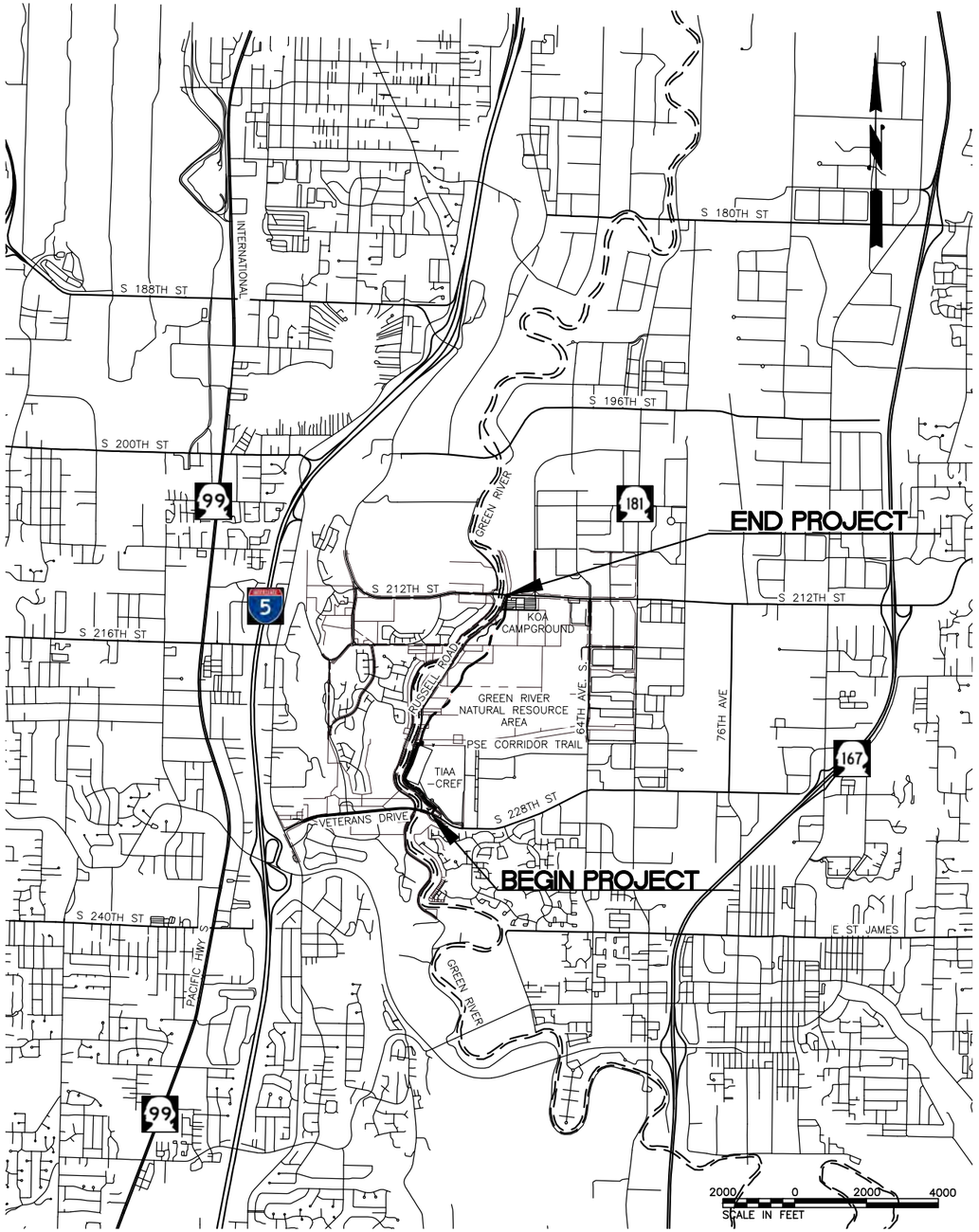
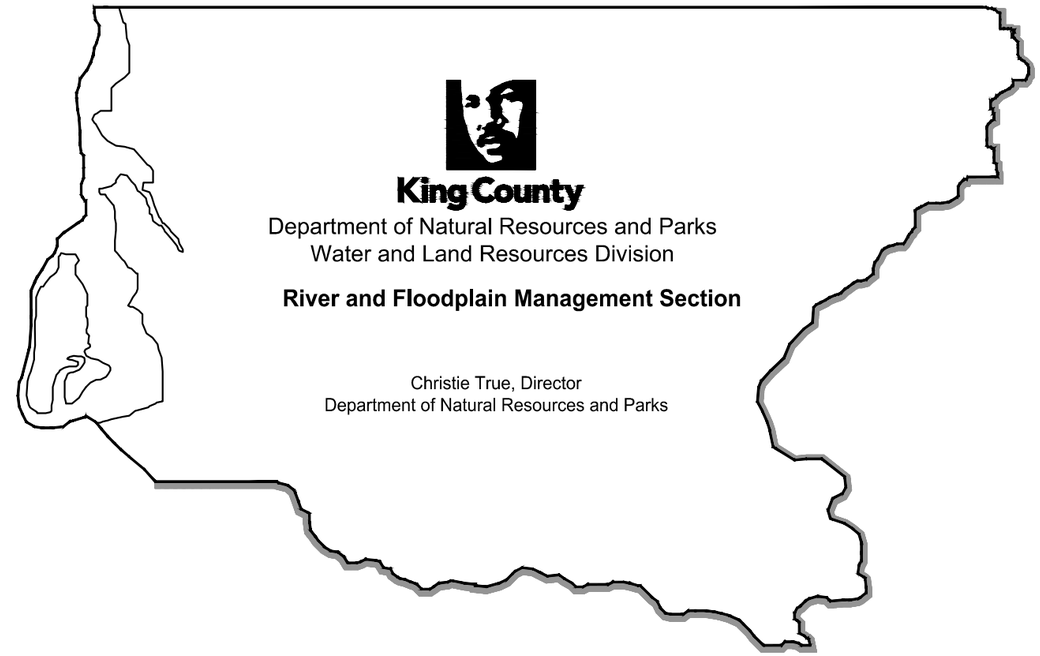


VICINITY MAP

SCALE 1"=2000'



King County
Department of Natural Resources and Parks
Water and Land Resources Division

River and Floodplain Management Section

Christie True, Director
Department of Natural Resources and Parks

LOWER RUSSELL LEVEE SETBACK PROJECT

PHASE 1

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:	--	--
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DESIGNED:	VR	3/19
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FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

SCOTT JOHNSON
STATE OF WASHINGTON
47673
REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

COVER AND VICINITY MAP

SHEET
G-01

GENERAL AND SURVEY

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NOTES:

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LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

SHEET INDEX

SHEET
G-02

LEGEND

LINETYPES

EXIST.	DESCRIPTION
SURFACE FEATURES:	
	BUILDING LINE (EXISTING)
	CREEK/DITCH CENTERLINE (EXIST.)
	CURB/PAVEMENT/SIDEWALK (EX)
	FENCE
	WIRE FENCE
	SPLIT RAIL FENCE
	WIRE-WOOD POST FENCE
	WOODEN
	GUARDRAIL (EXISTING)
INTERIOR EXTERIOR	WETLAND PERIMETER (DELINEATED BY BIOLOGIST)
	SHOULDER (EX)
SURVEY:	
	CENTERLINE (EXISTING)
	CONTOUR (DEPRESSION)
	CONTOUR (INTERVAL) (EXIST.)
	CONTOUR (INDEX) (EXIST.)
	EASEMENT (TEMPORARY)
	EASEMENT (TEMPORARY)
	MATCH LINE
	RANGE/TOWNSHIP LINE
	RIGHT-OF-WAY (CURRENT)
	CITY-LIMITS
	SECTION LINE
	QUARTER SECTION LINE
	PARK BOUNDARY
OHW OHW OHW	ORDINARY HIGH WATER (2,000 CFS)
SLJ SLJ SLJ	SHORELINE JURISDICTION
BSBL BSBL BSBL	BUILDING SETBACK BASELINE
UTILITIES (EXISTING):	
TV	CABLE TELEVISION (AERIAL)
UG-TV	CABLE TELEVISION (BURIED)
FM	FORCE MAIN
G	GAS
O	OIL
P	POWER (AERIAL)
UP	POWER (BURIED)
SS	SANITARY SEWER
S	STORM DRAINAGE
T	TELEPHONE (AERIAL)
UT	TELEPHONE (BURIED)
	UTILITY SERVICE LINE (GENERAL)
6"W	WATER
6"G	GAS
12"CMP	STORM DRAIN
	CREEK/DITCH CENTERLINE
	CURB(PROP) 2/7
	CURB/PAVEMENT/SIDEWALK
HVF HVF	PLASTIC CONSTRUCTION FENCE
	GUARDRAIL

UTILITIES (EXISTING):

- CONTROL LINE
- CONTOUR (INTERVAL)
- CONTOUR (INDEX)
- EASEMENT (PERMANENT)
- PROPERTY LINE
- EXISTING ROW
- CENTERLINE
- EXISTING GRADE (PROFILE,SECTIONS)
- PROPOSED GRADE TOL (PROFILE,SECTIONS)
- PROPOSED GRADE TOF (PROFILE,SECTIONS)
- TEMPORARY CONSTRUCTION EASEMENT
- DWSE
- SF SF — SILT FENCE

- SELECT FILL
- CORE FILL
- CLEARING AND GRUBBING LIMITS
- PAVEMENT REMOVAL
- PAVEMENT (NEW)

1 / C-01 — SECTION/DETAIL NO. OR LETTER; REFERENCE SHEET NO.*

* LEFT AS "--" IF REFERENCE IS ON THE SAME SHEET

1 / C-01 — SECTION CUT

GAS/POWER/TELEPHONE

SYMBOL EXIST.	SYMBOL CONSTRUCT	DESCRIPTION
	G	GAS METER
		GAS VALVE
		PAD MOUNTED TRANSFORMER
P	P	POWER VAULT
		TRANSMISSION TOWER (SCALEABLE)
		UTILITY POLE
		POWER POLE
		UTILITY POLE ANCHOR
		TELEPHONE RISER
T	T	TELEPHONE VAULT

SURVEY

SYMBOL	DESCRIPTION
	ANGLE POINT
	BENCH MARK
	BLOCK CORNER
	IRON PIPE
	MONUMENT (IN CASE)
	MONUMENT (SURFACE)
	OWNERSHIP TIE
16	SECTION CENTER
8 9 17 16	SECTION CORNER
	QUARTER CORNER
	SIXTEENTH CORNER
	CLOSING CORNER
MC	MEANDER CORNER
MC	WITNESS CORNER
WC	SOIL BORING
×	SPOT ELEVATION
	TAX LOT / PARCEL NUMBER
5	INTERSTATE
XXXX	ASSESSOR'S CODE (LAST 4 DIGITS)
	SURVEY CONTROL POINT
	TREE (CONIFER)
	TREE (DECIDUOUS)

DRAINAGE

SYMBOL EXIST.	SYMBOL CONSTRUCT	DESCRIPTION
		STORM DRAIN CATCH BASIN
		STORM DRAIN INLET(NO CATCH)
		STORM DRAIN MANHOLE
		STORM DRAIN PIPE (PLAN & PROFILE)
		QUARRY SPALLS

WATER

SYMBOL EXIST.	SYMBOL CONSTRUCT	DESCRIPTION
		GUARD POST
		WATER PIPE (PLAN & PROFILE)
FIRE HYDRANTS & FITTINGS:		
		FH
		WATER VALVE
		WATER FITTING WITH THRUST BLOCK

SEWER

SYMBOL EXIST.	SYMBOL CONSTRUCT	DESCRIPTION
S		SEWER MANHOLE
		SEWER FORCE MAIN VALVE
		SEWER FORCE FITTING
SS		SEWER DRAIN PIPE (PLAN)
		SEWER DRAIN PIPE (PROFILE & PLAN WHEN ON TOP OF EXISTING PIPE ALIGNMENT)

ROAD PLAN

SYMBOL	DESCRIPTION
15 10	CUT SLOPE CATCH POINTS(OPTIONAL)
SHOULDER	FILL SLOPE CATCH POINTS(OPTIONAL)

NOTES:

1. THE CITY OF KENT IS THE WATER AND SANITARY SEWER PROVIDER.

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Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

LEGEND

SHEET **G-03**

ABBREVIATIONS

ABAND	ABANDONED
AC	ASPHALT CONCRETE
ACP	ASPHALT CONCRETE PAVEMENT
ADJ	ADJUST
AH	AHEAD
AL	ALIGNMENT
AP	ANGLE POINT
APPROX.	APPROXIMATELY
AVE	AVENUE
AVG	AVERAGE
BK	BACK
℄	BASELINE
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK
BMP	BEST MANAGEMENT PRACTICE
BP	BEGIN POINT
BRG	BEARING
BSBL	BUILDING SETBACK BASELINE
BTWN	BETWEEN
BVC	BEGINNING OF VERTICAL CURVE
C	CONDUCTOR
C&G	CLEAR AND GRUB LIMITS
CATV	CABLE TV
CAV	COMBINED AIR VACUUM RELEASE VALVE
CB	CATCH BASIN
CFS	CUBIC FEET PER SECOND
CL	CLASS
℄	CENTERLINE
CLR	CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CMP	CORRUGATED METAL PIPE
COMPT	COMPACTED
CONC	CONCRETE
CONN	CONNECT
CONST	CONSTRUCTION
CSBC	CRUSHED STONE BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
CU	CUBIC
CM	CUBIC METER
D	DRAIN PIPE
DEG	DEGREE
DEPT	DEPARTMENT
DI	DUCTILE IRON
DIA	DIAMETER
DIST	DISTANCE
DWG	DRAWING
DWSE	DESIGN WATER SURFACE ELEVATION
DWY	DRIVEWAY
E	EAST, ELECTRICAL
EA	EACH
EG	EXISTING GRADE
EL/ELEV	ELEVATION
ELEC	ELECTRICAL
EMB	EMBANKMENT
EP	EDGE OF PAVEMENT
EQ	EQUATION
EST	ESTIMATE
EVC	END OF VERTICAL CURVE
EXCL	EXCLUDE
EXIST	EXISTING
FG	FINISHED GRADE
FH	FIRE HYDRANT
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FG	FINISHED GRADE
FL	FLANGE
FT	FEET/FOOT
FW	FLOODWALL
G	GAS LINE, GREEN
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BREAK
GE	GRATE ELEVATION
GR	GUARDRAIL/GREEN RIVER
GRD	GROUND
GRNRA	GREEN RIVER NATURAL RESOURCES AREA
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HORIZ	HORIZONTAL
HP	HIGH POINT
HPS	HIGH PRESSURE SODIUM
HT	HEIGHT
HUND	HUNDRED
HWY	HIGHWAY
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INV	INVERT
JB.	JUNCTION BOX
JTS, JT	JOINTS, JOINT
JUD	JOINT USE DRIVEWAY
K	RATE OF VERTICAL CURVATURE
KOA	KAMPGROUNDS OF AMERICA
L	LENGTH OF ARC
LF	LINEAL FOOT/FEET
LP	LOW POINT
LT	LEFT
LUMIN	LUMINAIRE
M	METER
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
NAD 83/91	NORTH AMERICAN DATUM OF 1983, WITH 91 ADJUSTMENTS
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
NO	NUMBER
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NST	NOT STEEPER THAN
NTS	NOT TO SCALE
O-XING	OVERHEAD CROSSING
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OFF	OFFSET
OHW	ORDINARY HIGH WATER
OP	OVERHEAD POWER
OT	OVERHEAD TELEPHONE
P	POLE, POWER
PAR	PARK ACCESS ROAD
PAV'T	PAVEMENT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
P-E	PRE-EMPT
PED	PEDESTRIAN
PG	PERFORMANCE GRADE
PI	POINT OF INTERSECTION
⅊	PROPERTY LINE
PE	POLYETHYLENE
PP	POWER POLE
PR	PAIR
PRC	POINT OF REVERSE CURVE
PSE	PUGET SOUND ENERGY
PSI	POUND PER SQ IN
PT	POINT OF TANGENT
PVC	POLYVINYL CHLORIDE
PVCC	POINT OF VERTICAL COMPOUND CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVRC	POINT OF VERTICAL REVERSE CURVE
QTY	QUANTITY
R	RADIUS
RD	ROAD
REINF	REINFORCED
REQ'D	REQUIRED
RJ	RESTRAINED JOINT
ROW	RIGHT-OF-WAY
RT	RIGHT
R/W	RIGHT-OF-WAY
S	SOUTH/SLOPE
SAN	SANITARY
SCHED	SCHEDULE
SD	STORM DRAIN
SECT	SECTION
SERV	SERVICE
SF	SQUARE FEET/FOOT
SHLD	SHOULDER
SHT	SHEET
SLJ	SHORELINE JURISDICTION
SP	1 SHIELDED PAIR IN SINGLE CABLE
SPEC	SPECIAL
SPECS	SPECIFICATIONS
SQ	SQUARE
SR	STATE ROUTE
SS	SANITARY SEWER
SSFM	SANITARY SEWER FORCE MAIN
ST	STREET
STA	STATION
STD	STANDARD
SW	SOUTHWEST
S/W	SIDEWALK
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
T	TELEPHONE, TANGENT
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEMP	TEMPORARY
TN	TON
TOF	TOP OF EMBANKMENT FILL (@ LEVEE CENTERLINE)
TOL	TOP OF LEVEE (TOP OF CSBC @ LEVEE HINGE)
TP	TELEPHONE POLE
TYP	TYPICAL
UD	UNDERDRAIN PIPE
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRICAL
VAR	VARIES
VC	VERTICAL CURVE
VERT.	VERTICAL
VOL.	VOLUME
WB	WETLANDS BOUNDARY
W	WEST, WATER
W/	WITH
WLRD	WATER AND LAND RESOURCES DIVISION
WM	WATER METER/WATER MAIN
W/O	WITHOUT
WS	WATER STOP
WSE	WATER SURFACE ELEVATION
WSEL	WATER SURFACE ELEVATION
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WV	WATER VALVE
Y	YELLOW
YDS	YARDS
&	AND

NOTES:

1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF SHEETS.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY THAT ALL ABBREVIATIONS ARE USED IN THE SHEETS.
3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF A WORD. FOR EXAMPLE, "SF" MAY MEAN SQUARE FEET OR SQUARE FOOT.

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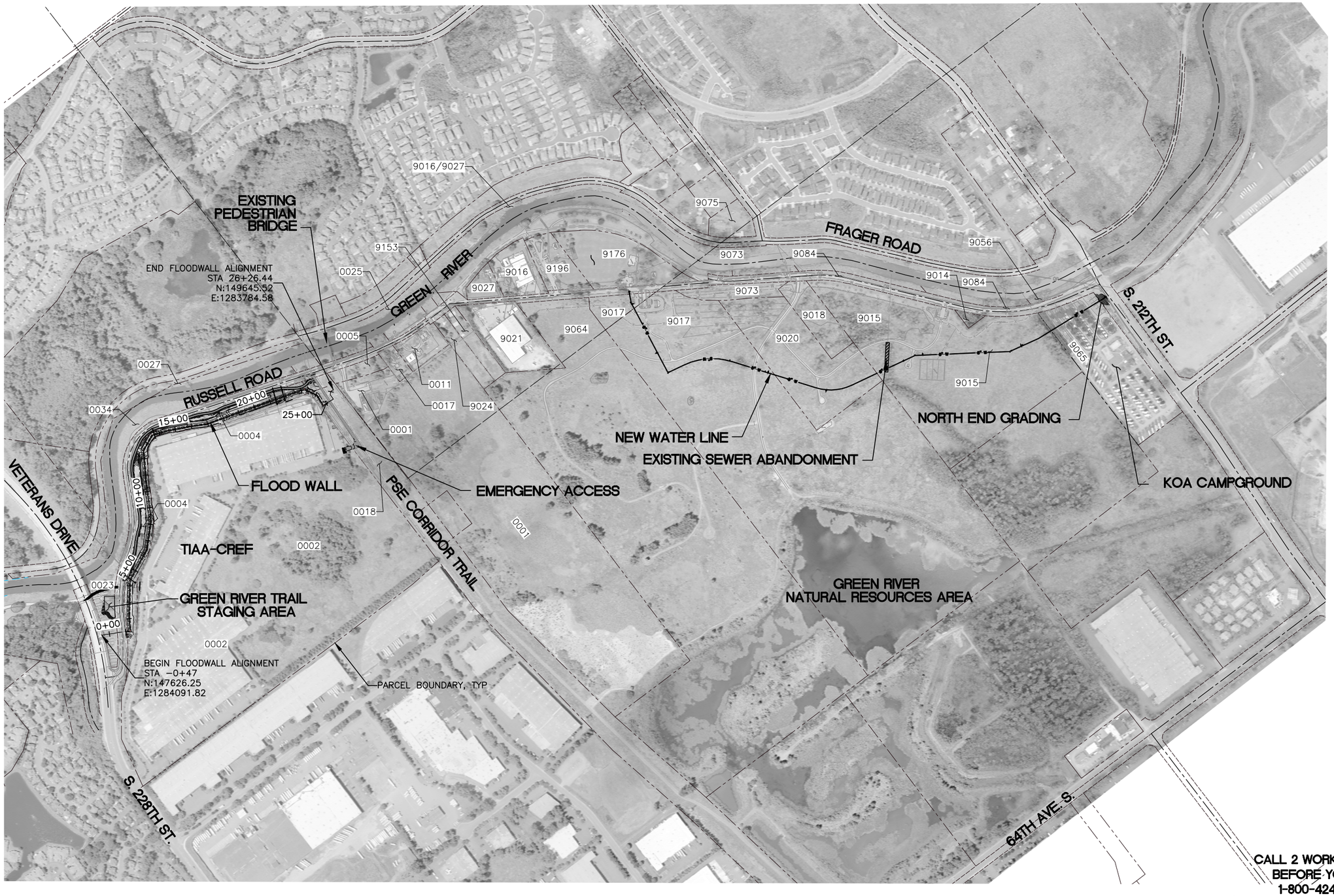
ABBREVIATIONS

SHEET
G-04



300 150 0 300 600
SCALE IN FEET

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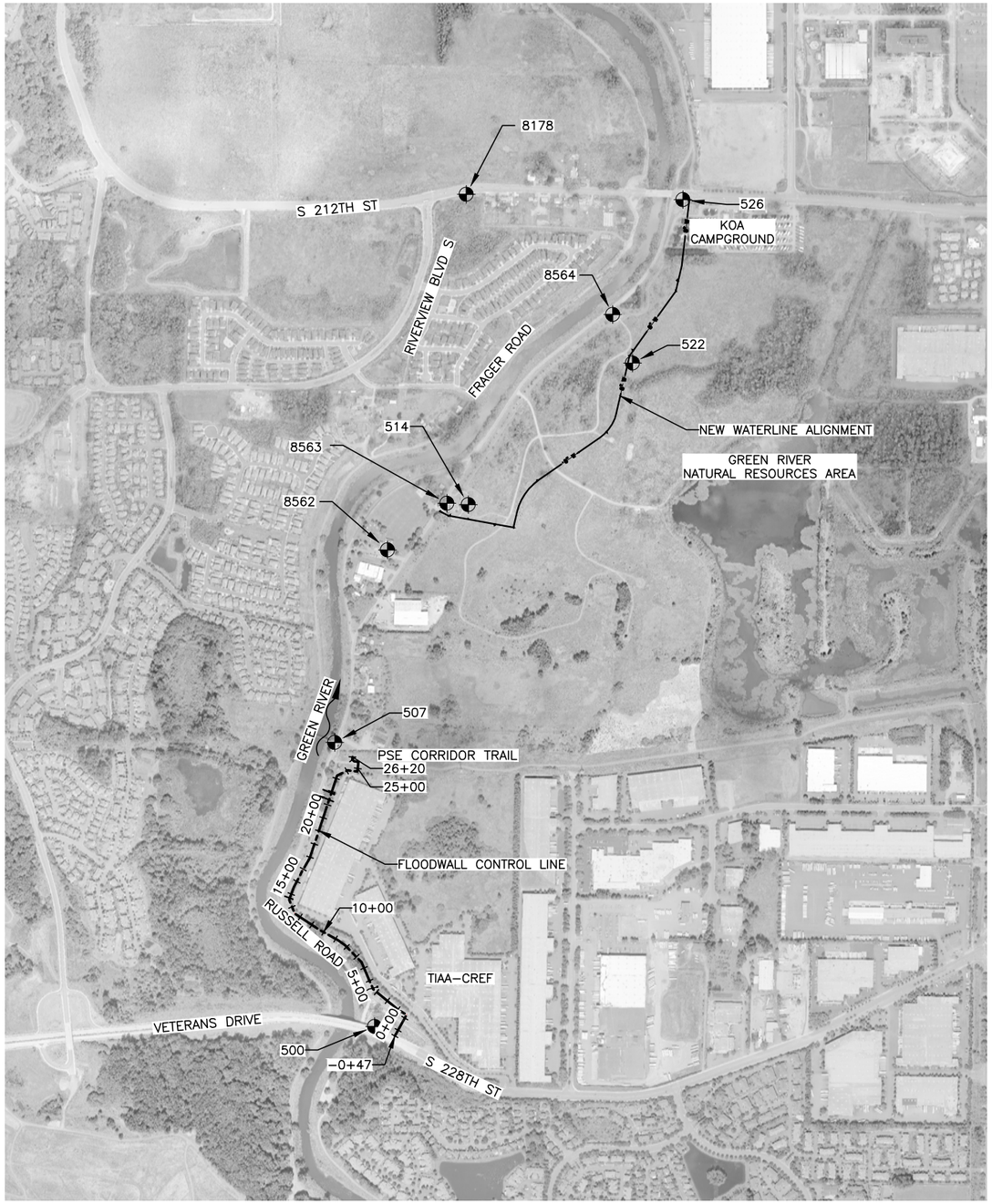
PROJECT OVERVIEW

SHEET
G-05



POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	RAW DESCRIPTION
500	147694.40	1283945.70	61.22	MAGNAIL W/ WASHER IN CONCRETE FIRE HYDRANT BASE AT NORTH SIDE OF BETERANS DRIVE.
507	149749.85	1283656.41	44.46	MAGNAIL W/ WASHER IN CONCRETE LANDING AT EAST END OF PEDESTRIAN BRDIGE OVER THE GREEN RIVER.
514	151471.24	1284623.50	41.27	MAGNAIL W/ WASHER IN CONCRETE AT BACK OF SIDEWALK HANDICAP RAMP IN GREEN RIVER NATURAL RESOURCES AREA PARKING LOT.
522	152496.28	1285811.74	38.64	MAGNAIL W/ WASHER IN CONCRETE PAD AT THE BOTTOM OF THE STAIRS OF THE OBSERVATION TOWER IN THE GREEN RIVER NATURAL RESOURCES AREA.
526	153679.16	1286175.79	43.25	MAGNAIL W/ WASHER IN CONCRETE LIGHT POLE BASE AT SOUTH SIDE OF SOUTH 212TH STREET.
8178	153717.26	1284608.70	29.31	2" ALUMINUM DISK AT CENTER OF SIDEWALK ON S SIDE OF S 212 ST, ~55.0' SW OF MIC #8161 AND ~40.0' W OF POWER POLE 315384/164451.
8562	151143.73	1284038.25	35.77	REBAR/CAP @ S PARKING LOT OF VAN DOREN'S LANDING PARK ON RUSSELL RD, SET IN ASPHALT PATH @ MIDDLE OF HORSESHOE PITS, 1.0' S OF N OF EP.
8563	151481.52	1284467.89	36.75	RAMSET/WASHER @ S PARKING LOT OF GREEN RIVER NATURAL RESOURCE AREA, SET IN MIDDLE OF S CONCRETE WALK, 12.0' OF E OF EP.
8564	152847.51	1285668.45	38.20	REBAR/CAP @ N. PARKING LOT OF GREEN RIVER NATURAL RESOURCE AREA, SET IN ASPHALT DRIVE 6.3' E OF S GATE POST, 1.2' FROM CURB.

NOTES:

1. HORIZONTAL DATUM NAD 83/91 WASHINGTON STATE PLANES NORTH ZONE, US FOOT VERTICAL DATUM NAVD88.
2. SURVEY BASEMAP PROVIDED BY 1 ALLIANCE GEOMATICS ON OCTOBER 6, 2015. BASEMAP IS BASED ON THE FOLLOWING SOURCES:
   - KING COUNTY
   - CITY OF KENT
3. FLOODWALL ALIGNMENT CONTROL INFORMATION PROVIDED ON THE RESPECTIVE "S" SERIES SHEETS AND THE GREEN RIVER TRAIL ALIGNMENT PROVIDED ON THE RESPECTIVE "CP" SHEETS.

N

500 250 0 500 1000
SCALE IN FEET

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:	1ALLIANCE	5/18
CHECKED:	1ALLIANCE	5/18
CAD ENTERED:	RD	3/19
DESIGNED:	VR	3/19
CHECKED:	JG	3/19
SUPERVISOR:	SJ	3/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING: _____

PROJECT No. 1112056

CONTRACT No. C01294C18

SCOTT JOHNSON
STATE OF WASHINGTON
47673
REGISTERED
PROFESSIONAL ENGINEER
04/02/19

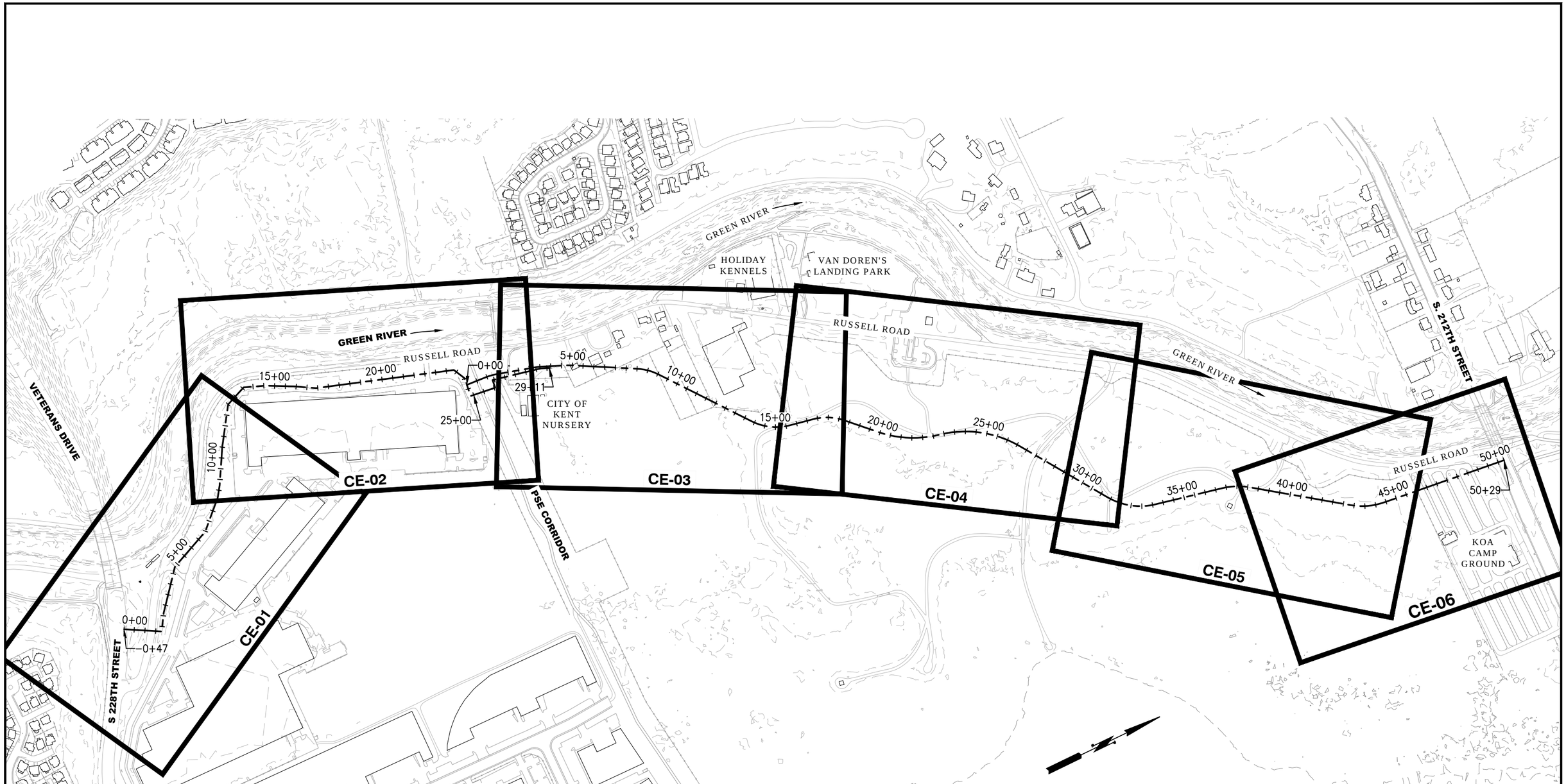
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

SURVEY CONTROL MAP

SHEET
G-06



FIELD BOOK: -- --	NUM.	REVISION	BY	DATE	APPROVED: LORIN REINELT, P.E.	03/2019	FUNDING SOURCE No. --
SURVEYED: -- --					PROJECT MANAGER: ERIK PETERS, P.E.	03/2019	PROJECT No. 1112056
SURVEY BASE MAP: -- --					DESIGNED: ERIK PETERS, P.E.	03/2019	CONTRACT No. C01294C18
CHECKED: -- --	NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: KAY KITAMURA	03/2019	

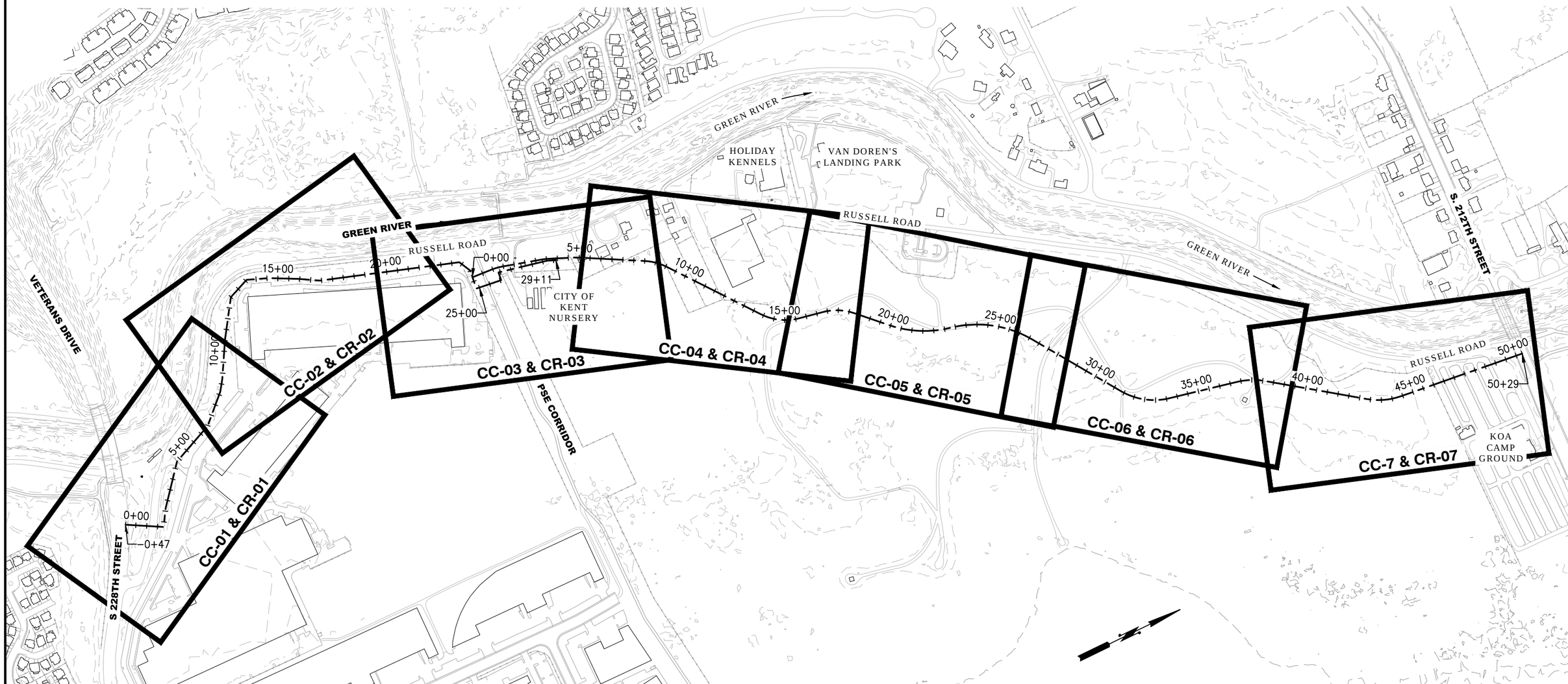
ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

TESC KEY MAP

SHEET G-07



FIELD BOOK:	--	--	NUM.	REVISION	BY	DATE
SURVEYED:	--	--				
SURVEY BASE MAP:	--	--				
CHECKED:	--	--				
			NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

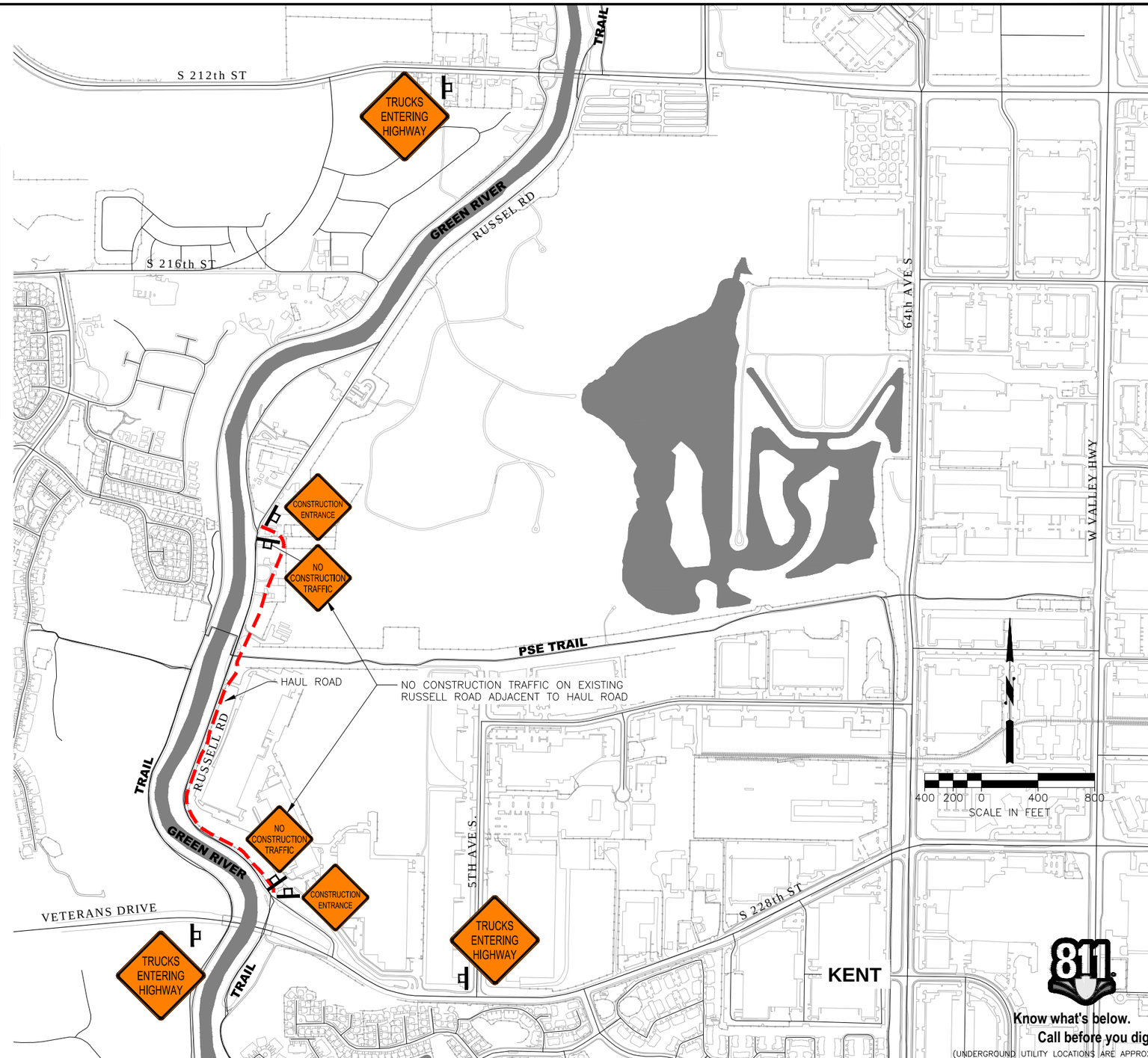
DEMOLITIONS & CLEARING PLAN & KEY MAP

SHEET
G-08

SIGN NOTES

1. INSTALL SIGNS IN COMPLIANCE WITH MUTCD SECTION 2A.16.
2. RETROREFLECTIVITY FOR SIGNS AND BARRICADES SHALL COMPLY WITH MUTCD SECTION 2A.07 & 2A.08.
3. COMPLY WITH APPROVED TRAFFIC CONTROL PLAN.
4. S 212TH ST EGRESS LIMITED TO 7AM – 4PM MONDAY THRU FRIDAY. NO WEEKEND RESTRICTION.

SIGN	NUMBER	SIZE	COLOR	QUANTITY	NOTES
TRUCKS ENTERING HIGHWAY	W21–30	36"x36"	BLACK ON ORANGE	3	
NO CONSTRUCTION TRAFFIC	SPECIAL	24"x24"	BLACK ON WHITE	2	
CONSTRUCTION ENTRANCE	SPECIAL	24"x24"	BLACK ON WHITE	2	



FIELD BOOK: -- --
SURVEYED: -- --
SURVEY BASE MAP: -- --
CHECKED: -- --

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	04/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	04/2019
DESIGNED:	DAN DOVEY, P.E.	04/2019
CAD DESIGN:	DAN DOVEY/KAY KITAMURA	04/2019

FUNDING SOURCE No. --
PROJECT No. 1112056
CONTRACT No. C01294C18

KEITH P. BROWN STATE OF WASHINGTON 36879 REGISTERED PROFESSIONAL ENGINEER 9/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

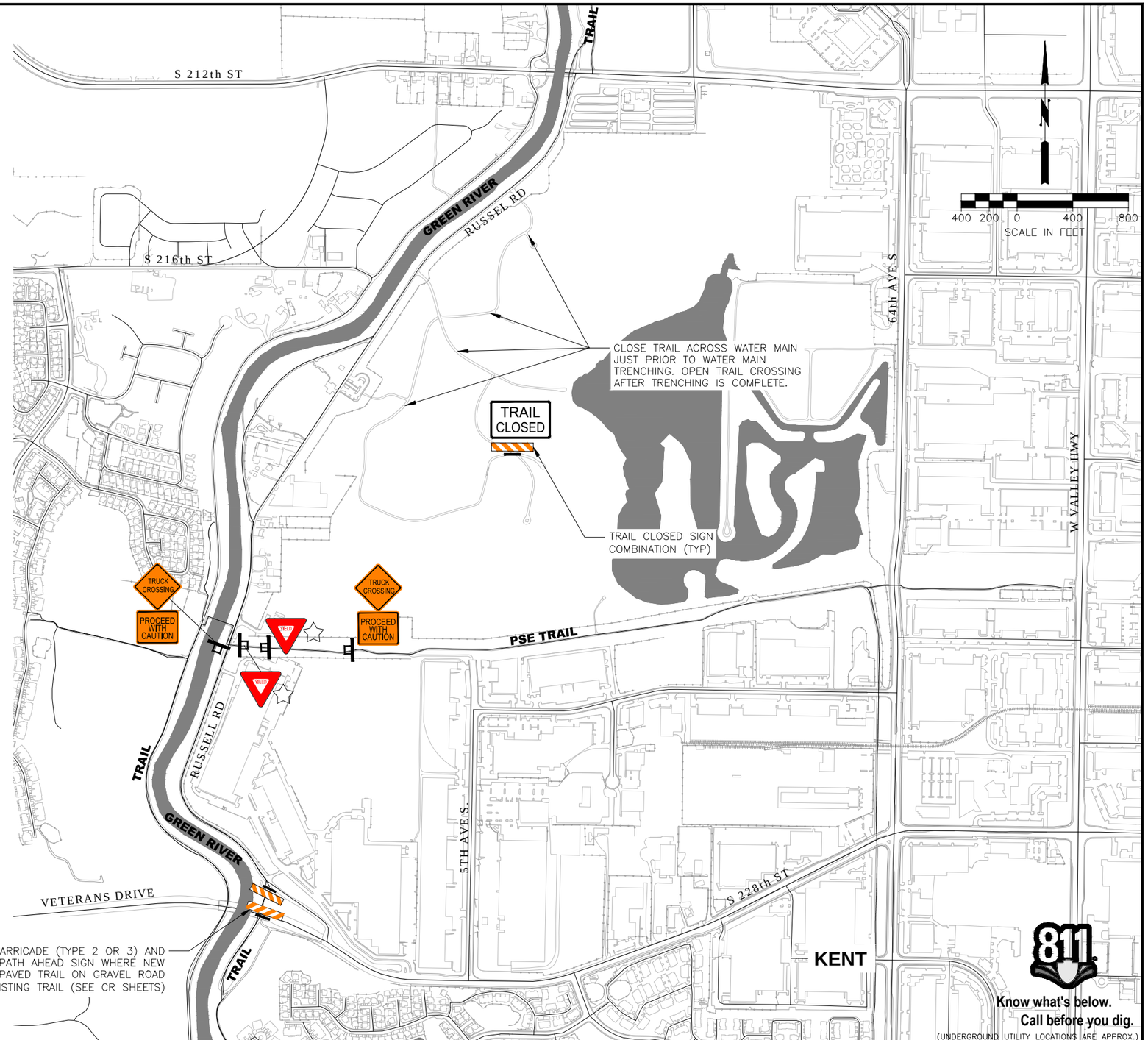
TRAFFIC CONTROL

SHEET
G-09

SIGN NOTES

1. SIGNS SHALL BE INSTALLED IN COMPLIANCE WITH MUTCD SECTION 2A.16.
2. RETROREFLECTIVITY FOR SIGNS AND BARRICADES SHALL COMPLY WITH MUTCD SECTION 2A.07 & 2A.08.
3. TRAILS TO REMAIN OPEN DURING NON-WORKING HOURS. KEEP TRAILS OPEN DURING WORK AS FEASIBLE.

SIGN	NUMBER	SIZE	COLOR	QUANTITY
	TYPE III BARRICADE			6
YIELD	R1-2	24"x24"	RED ON WHITE	2
TRUCK CROSSING	W8-6	30"x30"	BLACK ON ORANGE	2
PROCEED WITH CAUTION	SPECIAL	24"x30"	BLACK ON ORANGE	2
TRAIL CLOSED	R11-2 (MOD)	24"x36"	BLACK ON WHITE	4
SHARED PATH AHEAD	SPECIAL	36"x36"	BLACK ON ORANGE	1



FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	04/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	04/2019
DESIGNED:	DAN DOVEY, P.E.	04/2019
CAD DESIGN:	DAN DOVEY/KAY KITAMURA	04/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

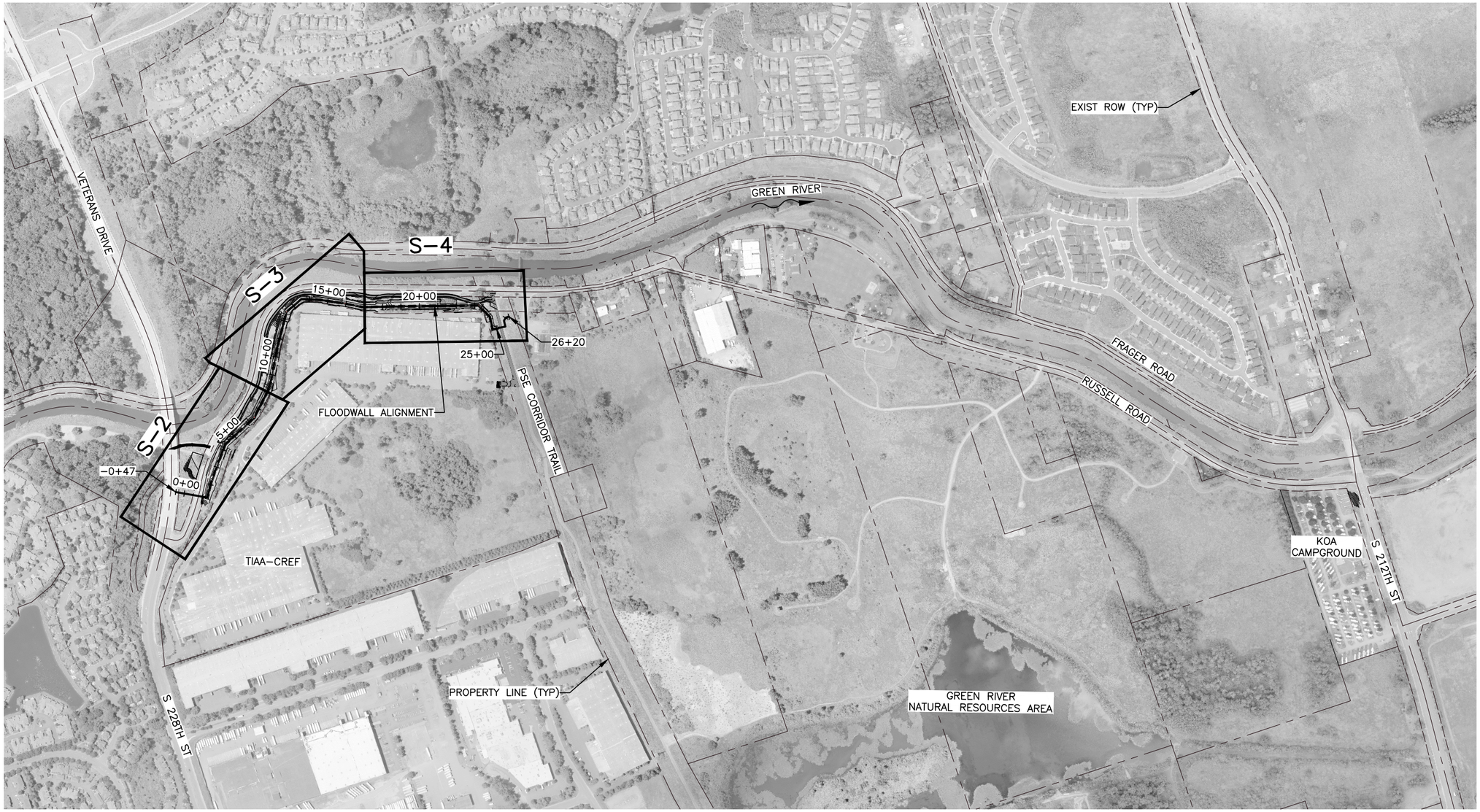
KEITH P. BROWN STATE OF WASHINGTON 36879 REGISTERED PROFESSIONAL ENGINEER 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

TRAIL CLOSURE PLAN

SHEET G-10



300 150 0 300 600

SCALE IN FEET

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:	--	--			
CHECKED:	--	--			
CAD ENTERED:	RD	3/19			
DESIGNED:	VR	3/19	NUM.	REVISION	BY	DATE
CHECKED:	JG	3/19				
SUPERVISOR:	SJ	3/19				
			NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

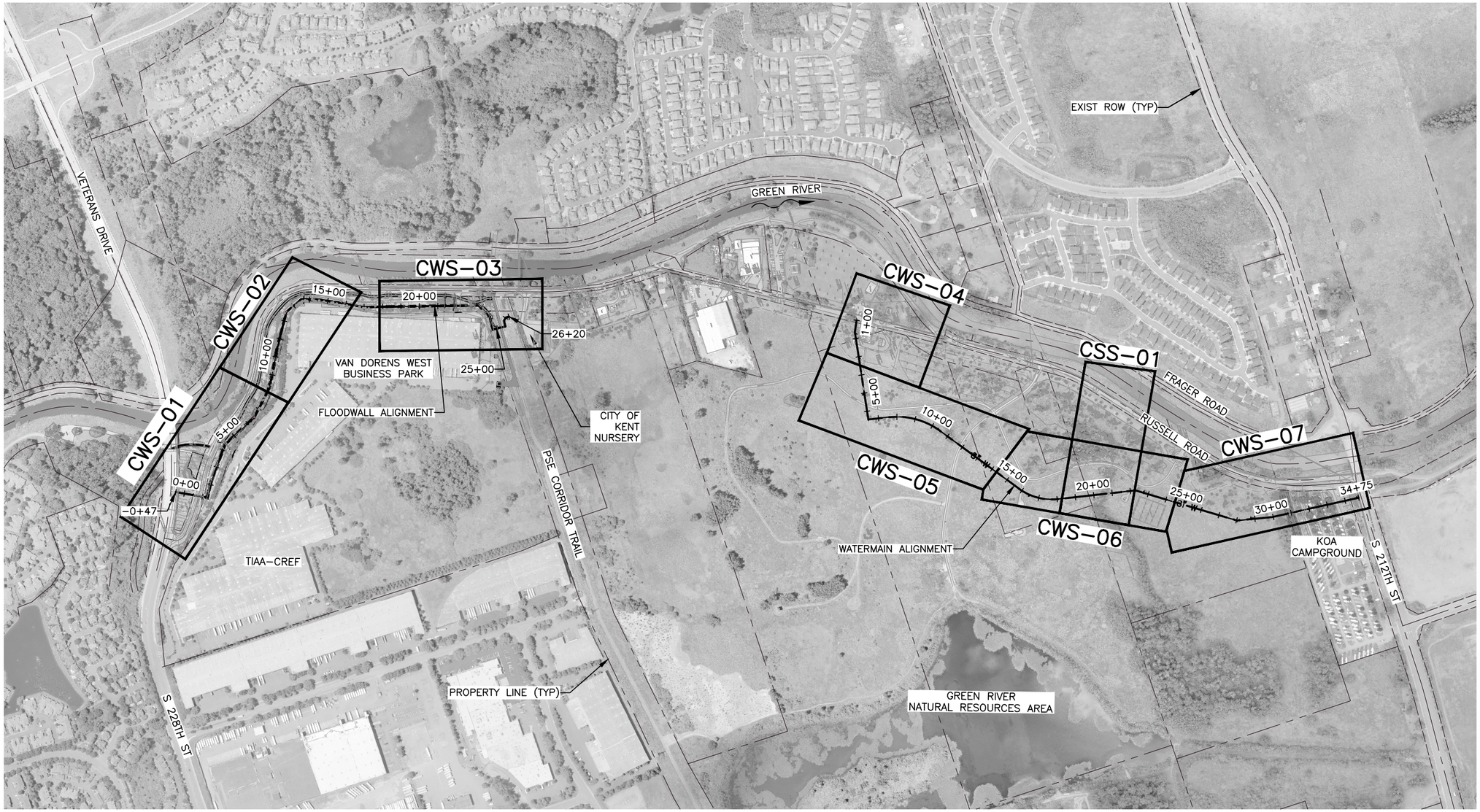
SCOTT JOHNSON
STATE OF WASHINGTON
47673
REGISTERED
PROFESSIONAL ENGINEER
04/02/19

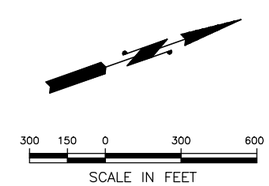
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL
SITE PLAN AND KEY MAP

SHEET
G-11





CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:	--	--			
CHECKED:	--	--			
CAD ENTERED:	CMF	3/19			
DESIGNED:	TJT	3/19	NUM.	REVISION	BY	DATE
CHECKED:	JG	3/19				
SUPERVISOR:	SJ	3/19				
			NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

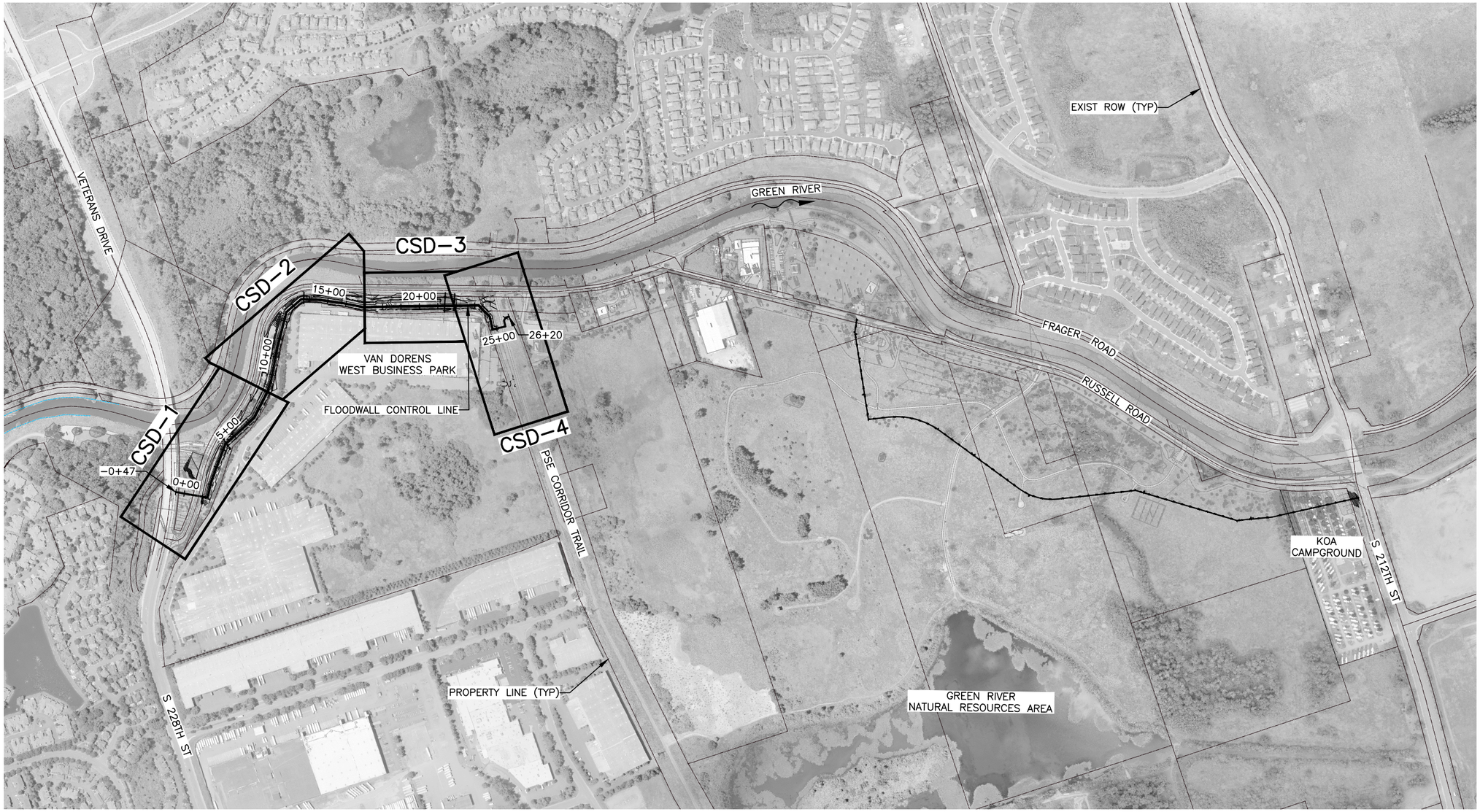
STEVEN M. JOHNSON STATE OF WASHINGTON 41381 REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
WATER AND SEWER
SITE PLAN AND KEY MAP

SHEET
G-12



300 150 0 300 600

SCALE IN FEET

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:	--	--			
CHECKED:	--	--			
CAD ENTERED:	CF	3/19			
DESIGNED:	TJ	3/19	NUM.	REVISION	BY	DATE
CHECKED:	JG	3/19				
SUPERVISOR:	SJ	3/19				
			NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

STEVEN M. JOHNSON
STATE OF WASHINGTON
41381
REGISTERED PROFESSIONAL ENGINEER
04/02/19

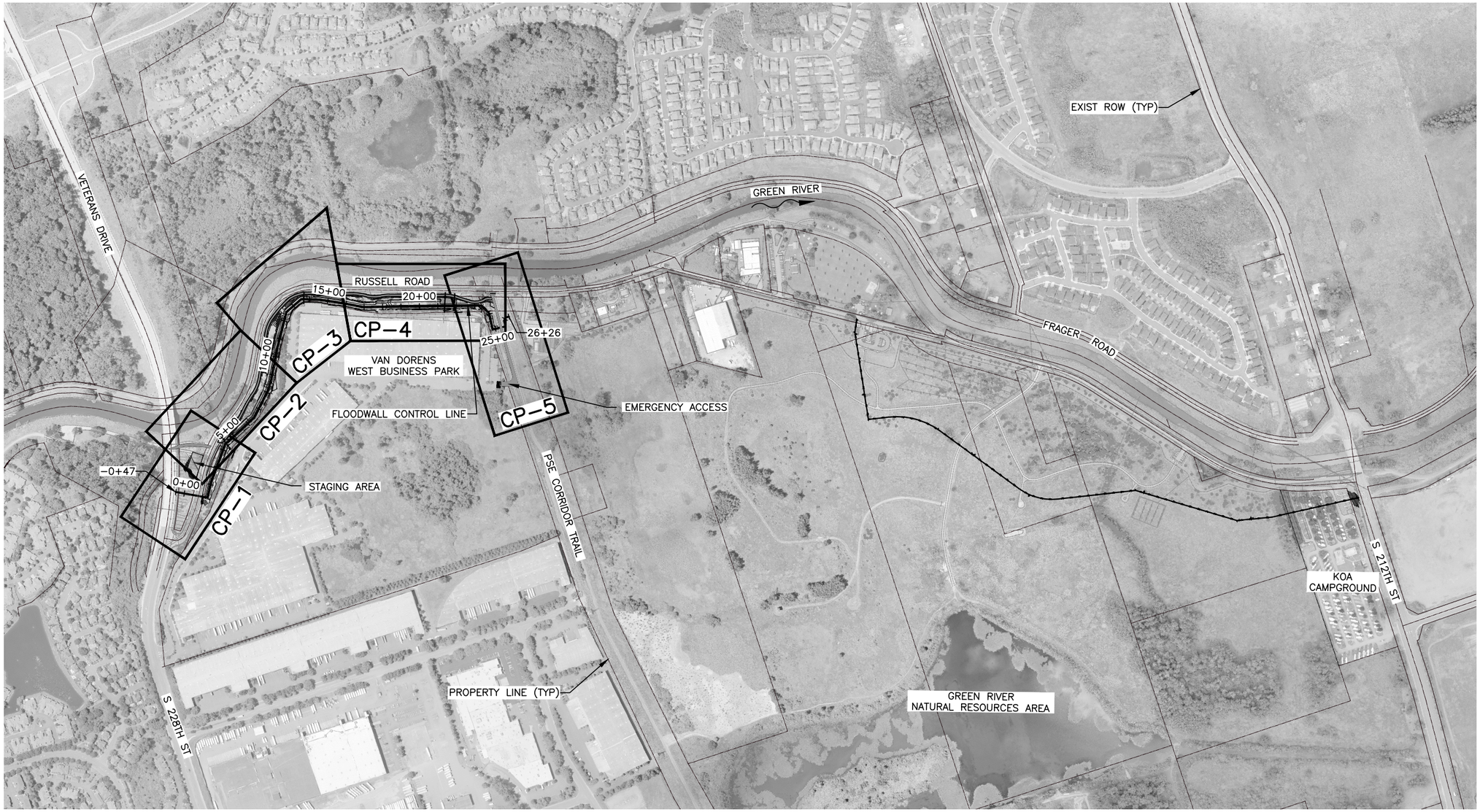
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
STORM DRAIN
SITE PLAN AND KEY MAP

SHEET
G-13



300 150 0 300 600

SCALE IN FEET

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:	--	--			
CHECKED:	--	--			
CAD ENTERED:	RD	8/18			
DESIGNED:	SB	8/18	NUM. REVISION	BY	DATE
CHECKED:	JG	8/18			
SUPERVISOR:	SJ	8/18			
			NUM. RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

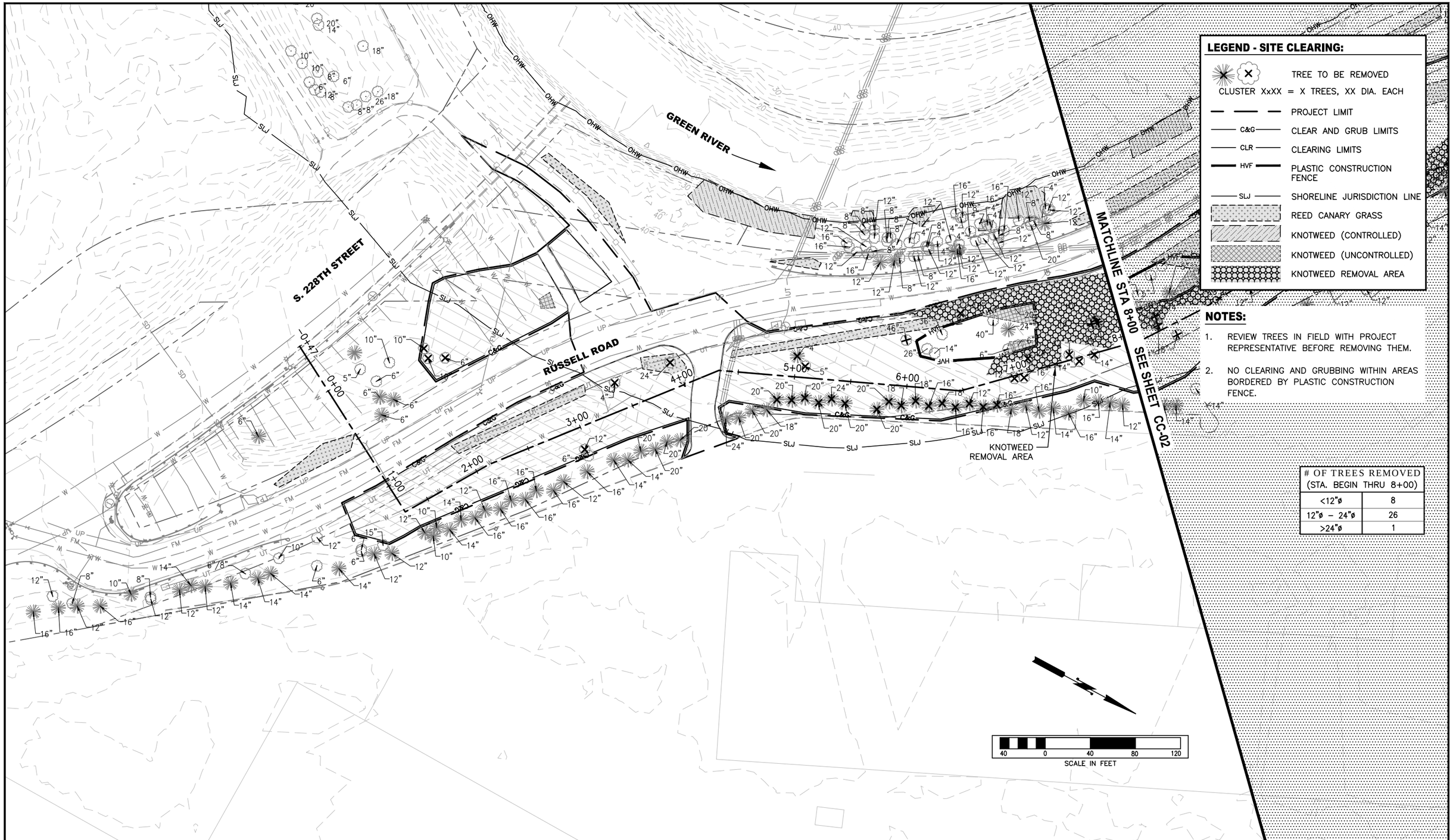
SCOTT JOHNSON
STATE OF WASHINGTON
47673
REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
STREET AND TRAIL
SITE PLAN AND KEY MAP

SHEET
G-14



LEGEND - SITE CLEARING:

- TREE TO BE REMOVED
- CLUSTER XxXX = X TREES, XX DIA. EACH
- PROJECT LIMIT
- C&G — CLEAR AND GRUB LIMITS
- CLR — CLEARING LIMITS
- HVF — PLASTIC CONSTRUCTION FENCE
- SLJ — SHORELINE JURISDICTION LINE
- REED CANARY GRASS
- KNOTWEED (CONTROLLED)
- KNOTWEED (UNCONTROLLED)
- KNOTWEED REMOVAL AREA

NOTES:

1. REVIEW TREES IN FIELD WITH PROJECT REPRESENTATIVE BEFORE REMOVING THEM.
2. NO CLEARING AND GRUBBING WITHIN AREAS BORDERED BY PLASTIC CONSTRUCTION FENCE.

# OF TREES REMOVED (STA. BEGIN THRU 8+00)	
<12"ø	8
12"ø – 24"ø	26
>24"ø	1

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

CLEARING 1

SHEET
CC-01

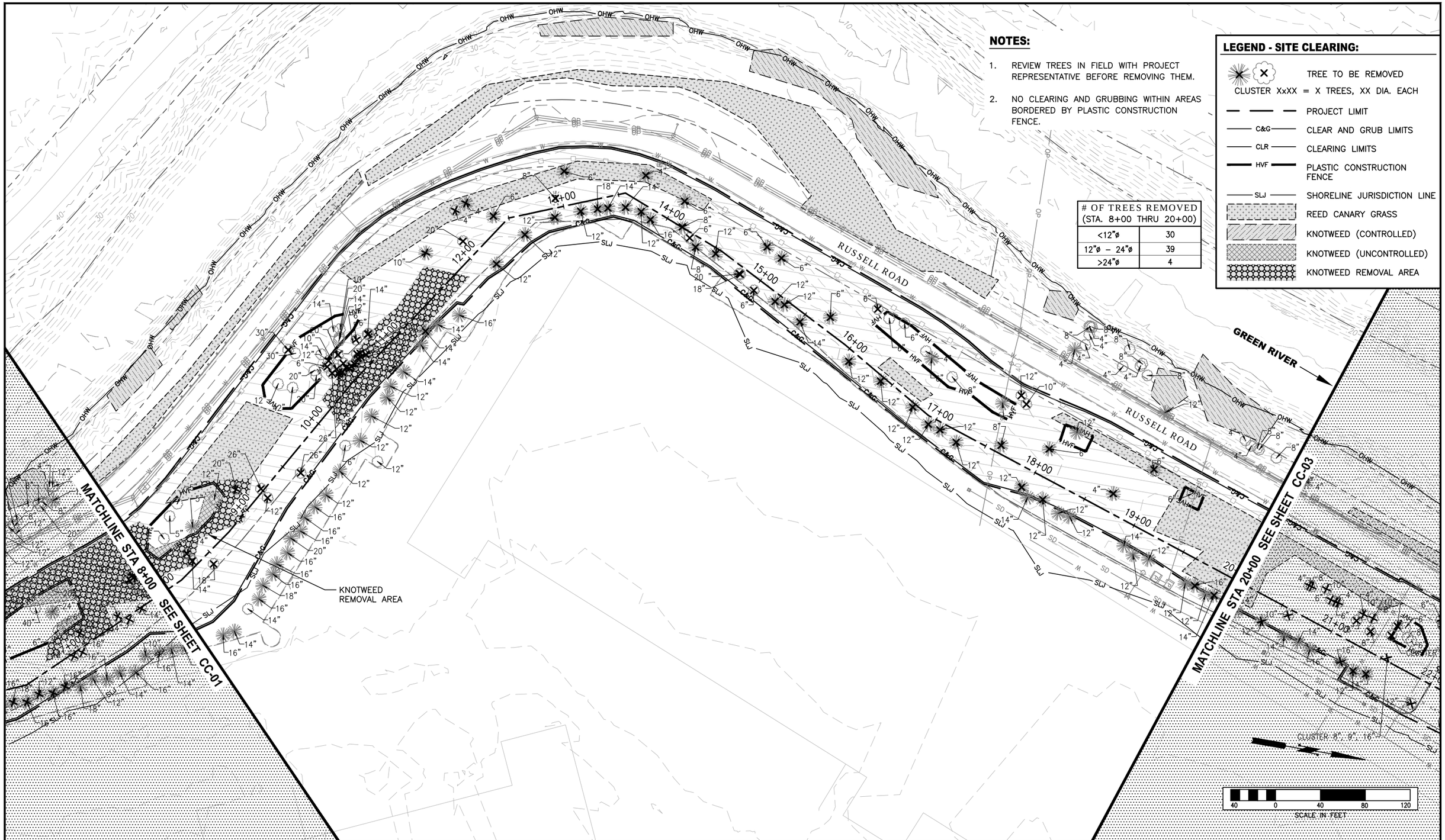
NOTES:

1. REVIEW TREES IN FIELD WITH PROJECT REPRESENTATIVE BEFORE REMOVING THEM.
2. NO CLEARING AND GRUBBING WITHIN AREAS BORDERED BY PLASTIC CONSTRUCTION FENCE.

LEGEND - SITE CLEARING:

- TREE TO BE REMOVED
- CLUSTER XxXX = X TREES, XX DIA. EACH
- PROJECT LIMIT
- C&G — CLEAR AND GRUB LIMITS
- CLR — CLEARING LIMITS
- HVF — PLASTIC CONSTRUCTION FENCE
- SLJ — SHORELINE JURISDICTION LINE
- REED CANARY GRASS
- KNOTWEED (CONTROLLED)
- KNOTWEED (UNCONTROLLED)
- KNOTWEED REMOVAL AREA

# OF TREES REMOVED (STA. 8+00 THRU 20+00)	
<12"ø	30
12"ø – 24"ø	39
>24"ø	4



NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FIELD BOOK: -- --
SURVEYED: -- --
SURVEY BASE MAP: -- --
CHECKED: -- --

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --
PROJECT No. 1112056
CONTRACT No. C01294C18

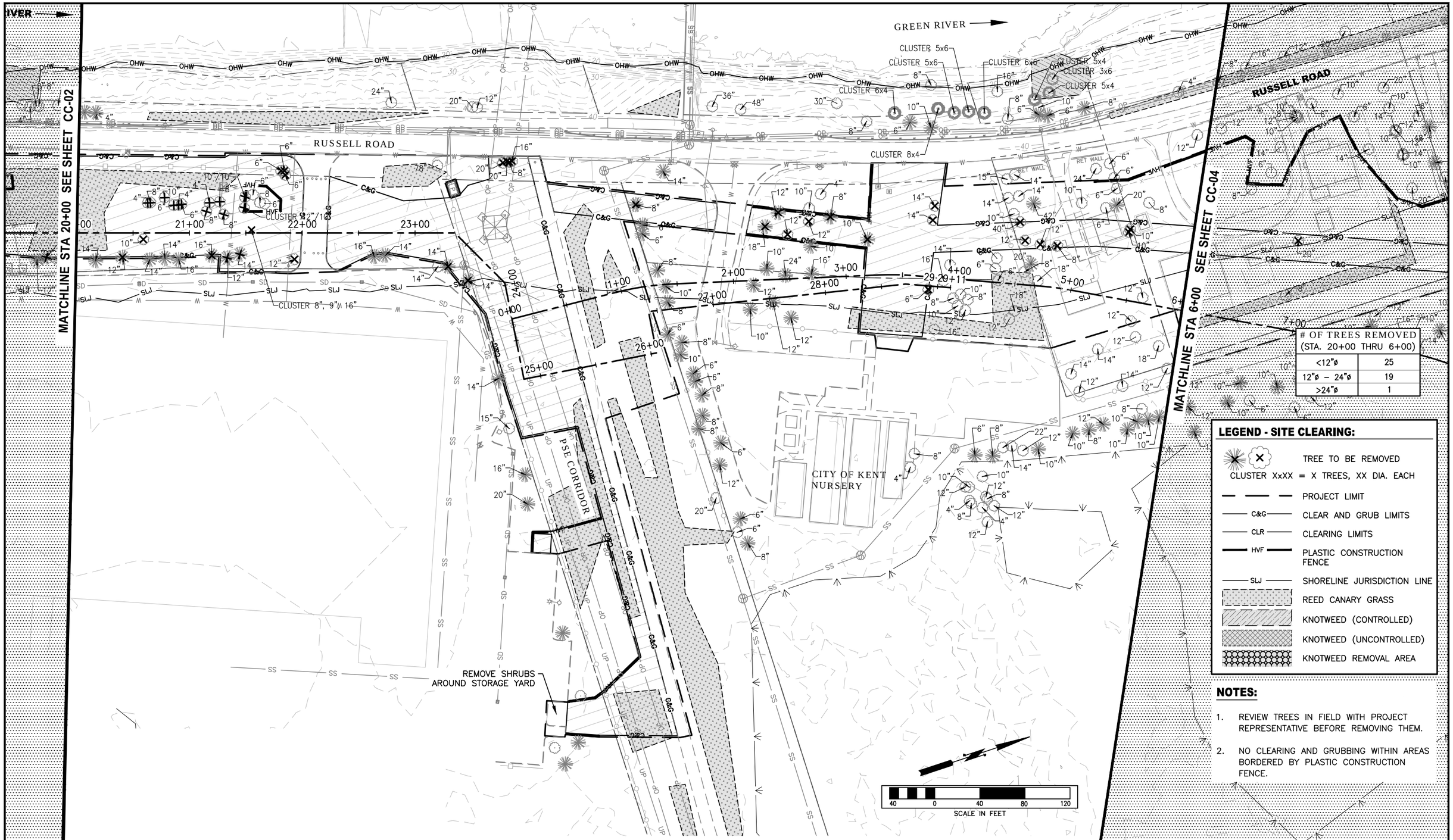
ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

CLEARING 2

SHEET CC-02



# OF TREES REMOVED (STA. 20+00 THRU 6+00)	
<12"ø	25
12"ø – 24"ø	19
>24"ø	1

LEGEND - SITE CLEARING:

- TREE TO BE REMOVED
- CLUSTER XxXX = X TREES, XX DIA. EACH
- PROJECT LIMIT
- C&G — CLEAR AND GRUB LIMITS
- CLR — CLEARING LIMITS
- HVF — PLASTIC CONSTRUCTION FENCE
- SLJ — SHORELINE JURISDICTION LINE
- REED CANARY GRASS
- KNOTWEED (CONTROLLED)
- KNOTWEED (UNCONTROLLED)
- KNOTWEED REMOVAL AREA

NOTES:

1. REVIEW TREES IN FIELD WITH PROJECT REPRESENTATIVE BEFORE REMOVING THEM.
2. NO CLEARING AND GRUBBING WITHIN AREAS BORDERED BY PLASTIC CONSTRUCTION FENCE.

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

CLEARING 3

SHEET CC-03

# OF TREES REMOVED (STA. 6+00 THRU 16+00)	
<12"ø	0
12"ø – 24"ø	1
>24"ø	0

LEGEND - SITE CLEARING:

- TREE TO BE REMOVED
- CLUSTER XxXX = X TREES, XX DIA. EACH
- PROJECT LIMIT
- C&G — CLEAR AND GRUB LIMITS
- CLR — CLEARING LIMITS
- HVF — PLASTIC CONSTRUCTION FENCE
- SLJ — SHORELINE JURISDICTION LINE
- REED CANARY GRASS
- KNOTWEED (CONTROLLED)
- KNOTWEED (UNCONTROLLED)
- KNOTWEED REMOVAL AREA

NOTES:

1. REVIEW TREES IN FIELD WITH PROJECT REPRESENTATIVE BEFORE REMOVING THEM.
2. NO CLEARING AND GRUBBING WITHIN AREAS BORDERED BY PLASTIC CONSTRUCTION FENCE.

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

CLEARING 4

SHEET CC-04

RUSSELL ROAD

NO CLEARING & GRUBBING BEHIND CONST. FENCE

MATCHLINE STA 17+00 SEE SHEET CC-04

MATCHLINE STA 26+00 SEE SHEET CC-06

SCALE IN FEET

# OF TREES REMOVED (STA. 16+00 THRU 26+00)	
<12"ø	12
12"ø – 24"ø	0
>24"ø	0

LEGEND - SITE CLEARING:

- TREE TO BE REMOVED
- CLUSTER XxXX = X TREES, XX DIA. EACH
- PROJECT LIMIT
- C&G — CLEAR AND GRUB LIMITS
- CLR — CLEARING LIMITS
- HVF — PLASTIC CONSTRUCTION FENCE
- SLJ — SHORELINE JURISDICTION LINE
- REED CANARY GRASS
- KNOTWEED (CONTROLLED)
- KNOTWEED (UNCONTROLLED)
- KNOTWEED REMOVAL AREA

NOTES:

1. REVIEW TREES IN FIELD WITH PROJECT REPRESENTATIVE BEFORE REMOVING THEM.
2. NO CLEARING AND GRUBBING WITHIN AREAS BORDERED BY PLASTIC CONSTRUCTION FENCE.

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

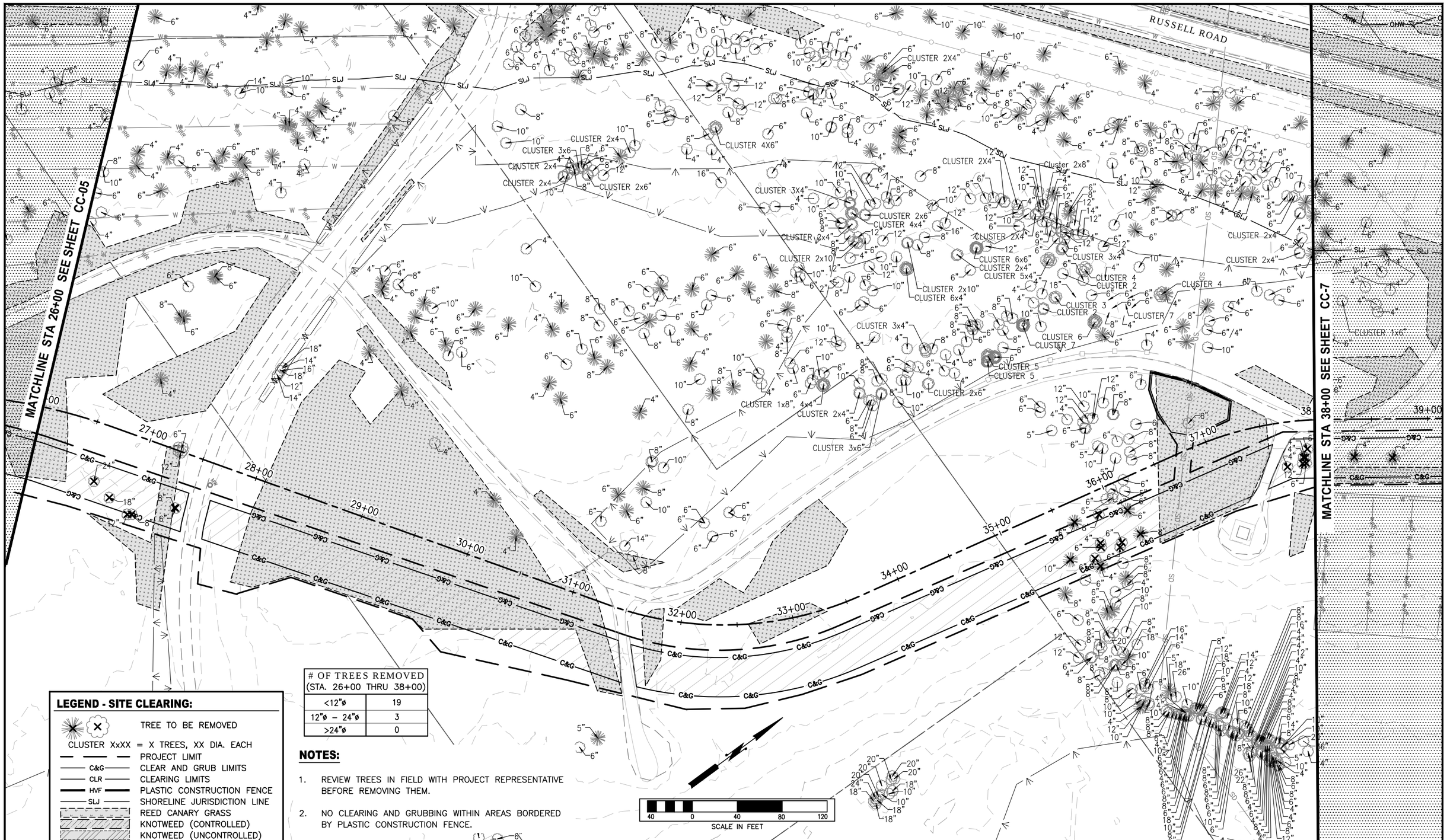
ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

CLEARING 5

SHEET CC-05



# OF TREES REMOVED (STA. 26+00 THRU 38+00)	
<12"ø	19
12"ø – 24"ø	3
>24"ø	0

LEGEND - SITE CLEARING:

- TREE TO BE REMOVED
- CLUSTER XxXX = X TREES, XX DIA. EACH
- PROJECT LIMIT
- C&G — CLEAR AND GRUB LIMITS
- CLR — CLEARING LIMITS
- HVF — PLASTIC CONSTRUCTION FENCE
- SLJ — SHORELINE JURISDICTION LINE
- REED CANARY GRASS
- KNOTWEED (CONTROLLED)
- KNOTWEED (UNCONTROLLED)

NOTES:

1. REVIEW TREES IN FIELD WITH PROJECT REPRESENTATIVE BEFORE REMOVING THEM.
2. NO CLEARING AND GRUBBING WITHIN AREAS BORDERED BY PLASTIC CONSTRUCTION FENCE.

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

CLEARING 6

SHEET

CC-06

MATCHLINE STA 38+00 SEE SHEET CC-06

GREEN RIVER

GREEN RIVER

RUSSELL ROAD

S. 212TH STREET

KOA CAMPGROUND

CLUSTER 8x4"

CLUSTER 10x4"

CLUSTER 12x4"

CLUSTER 14x4"

CLUSTER 16x4"

CLUSTER 4x4"

CLUSTER 1x6"

CLUSTER 2x4"

39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 50+29

SCALE IN FEET

40 0 40 80 120

# OF TREES REMOVED (STA. 38+00 THRU END)	
<12"ø	14
12"ø – 24"ø	16
>24"ø	1

LEGEND - SITE CLEARING:

- TREE TO BE REMOVED
- CLUSTER XxXX = X TREES, XX DIA. EACH
- PROJECT LIMIT
- C&G — CLEAR AND GRUB LIMITS
- CLR — CLEARING LIMITS
- HVF — PLASTIC CONSTRUCTION FENCE
- SLJ — SHORELINE JURISDICTION LINE
- REED CANARY GRASS
- KNOTWEED (CONTROLLED)
- KNOTWEED (UNCONTROLLED)
- KNOTWEED REMOVAL AREA

NOTES:

1. REVIEW TREES IN FIELD WITH PROJECT REPRESENTATIVE BEFORE REMOVING THEM.
2. NO CLEARING AND GRUBBING WITHIN AREAS BORDERED BY PLASTIC CONSTRUCTION FENCE.

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

NUM.	REVISION	BY	DATE

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PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

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CONTRACT No. C01294C18

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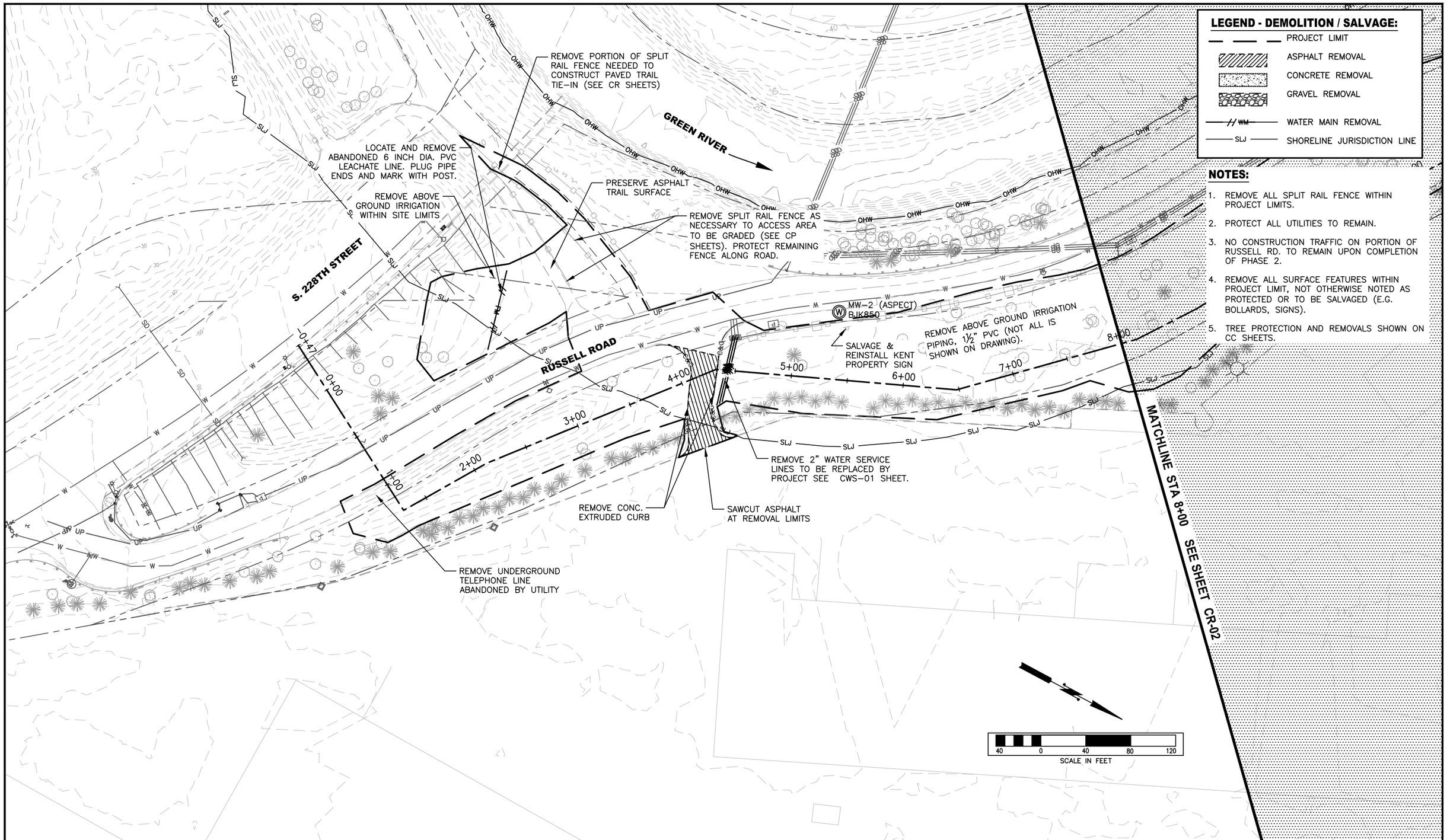
King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

CLEARING 7

SHEET CC-7



FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

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PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

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King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

REMOVALS 1

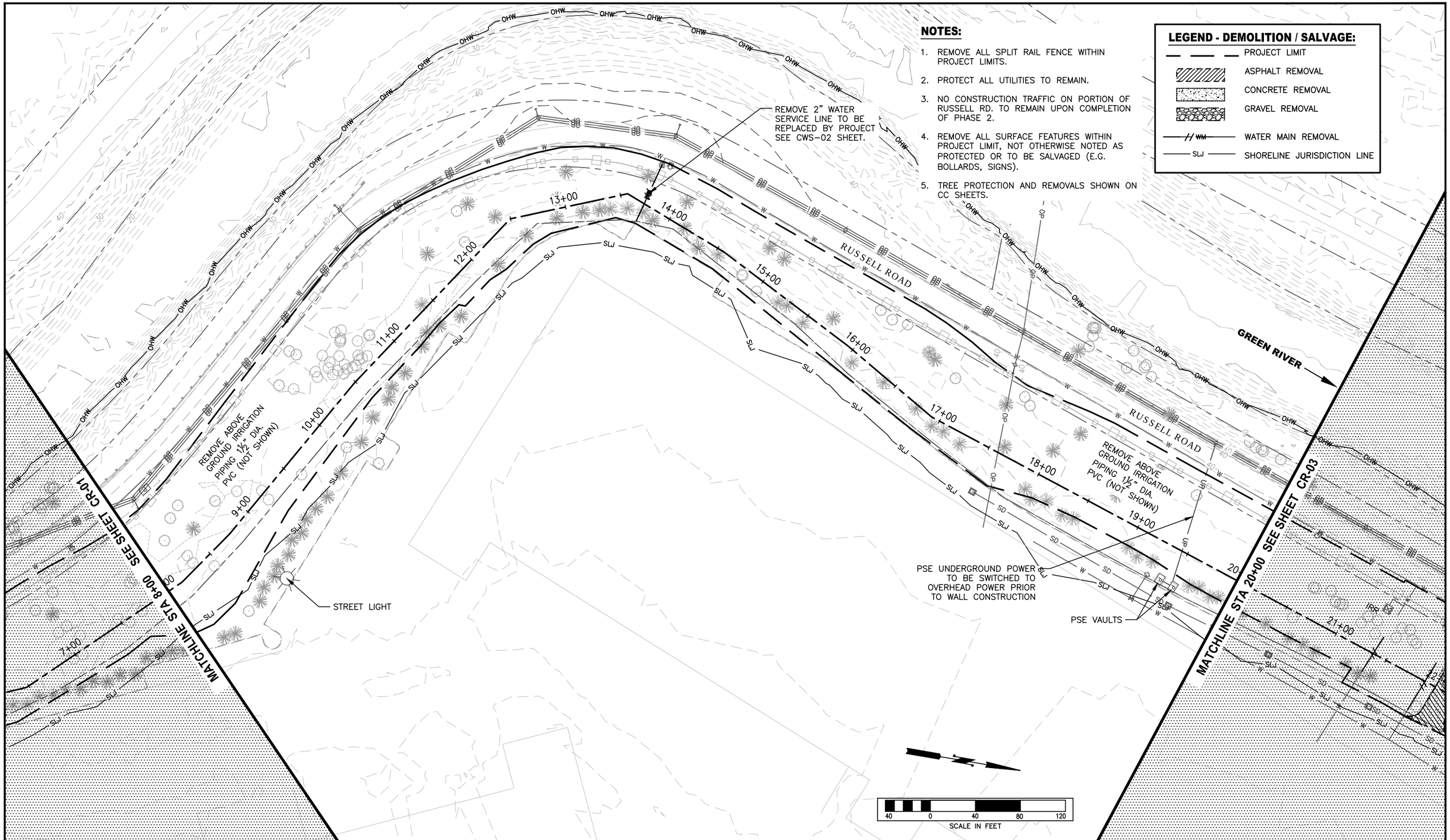
SHEET
CR-01

NOTES:

1. REMOVE ALL SPLIT RAIL FENCE WITHIN PROJECT LIMITS.
2. PROTECT ALL UTILITIES TO REMAIN.
3. NO CONSTRUCTION TRAFFIC ON PORTION OF RUSSELL RD. TO REMAIN UPON COMPLETION OF PHASE 2.
4. REMOVE ALL SURFACE FEATURES WITHIN PROJECT LIMIT, NOT OTHERWISE NOTED AS PROTECTED OR TO BE SALVAGED (E.G. BOLLARDS, SIGNS).
5. TREE PROTECTION AND REMOVALS SHOWN ON CC SHEETS.

LEGEND - DEMOLITION / SALVAGE:

- PROJECT LIMIT
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- GRAVEL REMOVAL
- WM — WATER MAIN REMOVAL
- SLJ — SHORELINE JURISDICTION LINE



FIELD BOOK:	--	--	NUM.	REVISION	BY	DATE
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SURVEY BASE MAP:	--	--				
CHECKED:	--	--				
			NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

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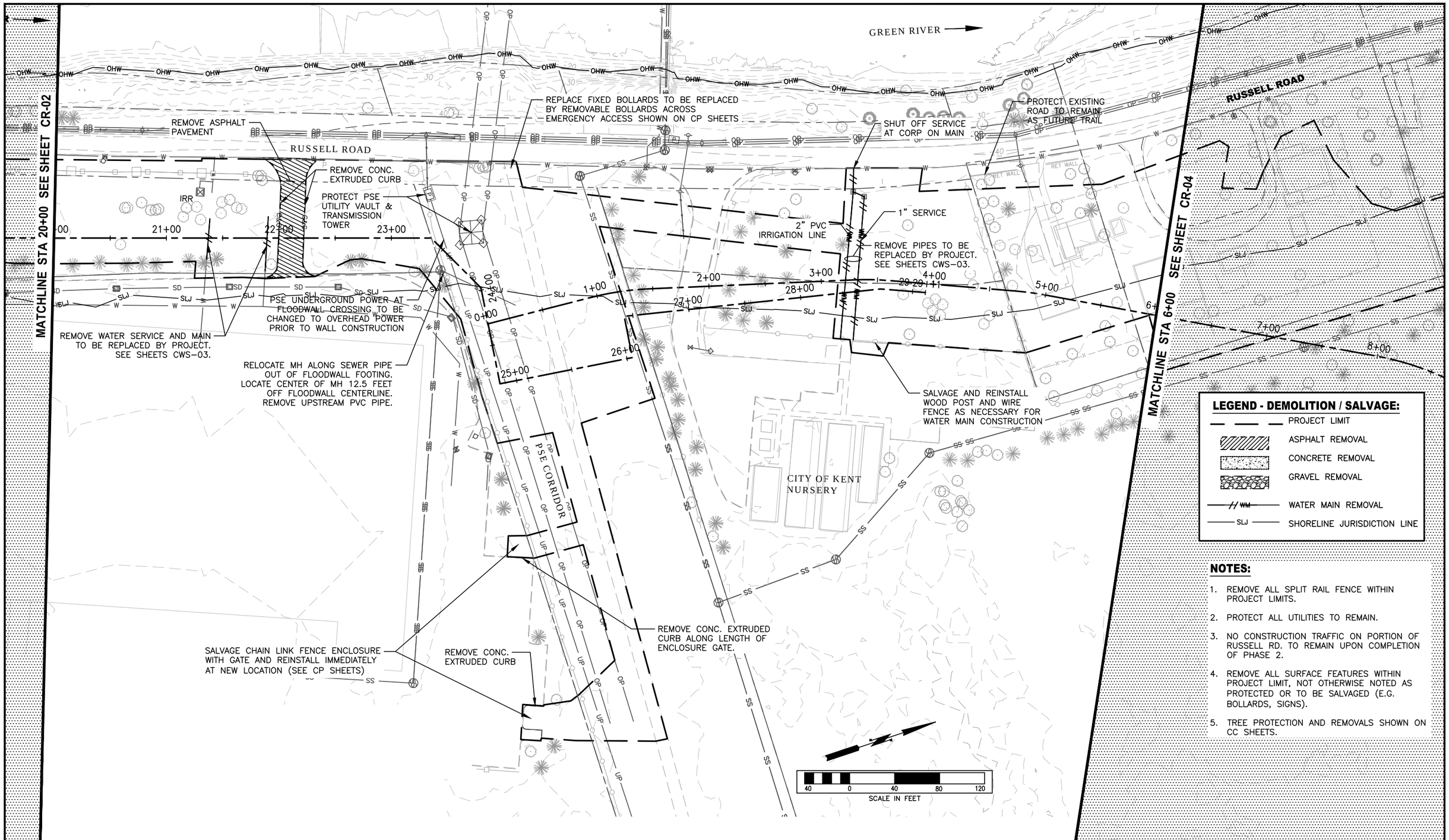
King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

REMOVALS 2

SHEET CR-02



LEGEND - DEMOLITION / SALVAGE:

- PROJECT LIMIT
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- GRAVEL REMOVAL
- WATER MAIN REMOVAL
- SHORELINE JURISDICTION LINE

NOTES:

1. REMOVE ALL SPLIT RAIL FENCE WITHIN PROJECT LIMITS.
2. PROTECT ALL UTILITIES TO REMAIN.
3. NO CONSTRUCTION TRAFFIC ON PORTION OF RUSSELL RD. TO REMAIN UPON COMPLETION OF PHASE 2.
4. REMOVE ALL SURFACE FEATURES WITHIN PROJECT LIMIT, NOT OTHERWISE NOTED AS PROTECTED OR TO BE SALVAGED (E.G. BOLLARDS, SIGNS).
5. TREE PROTECTION AND REMOVALS SHOWN ON CC SHEETS.

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

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PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

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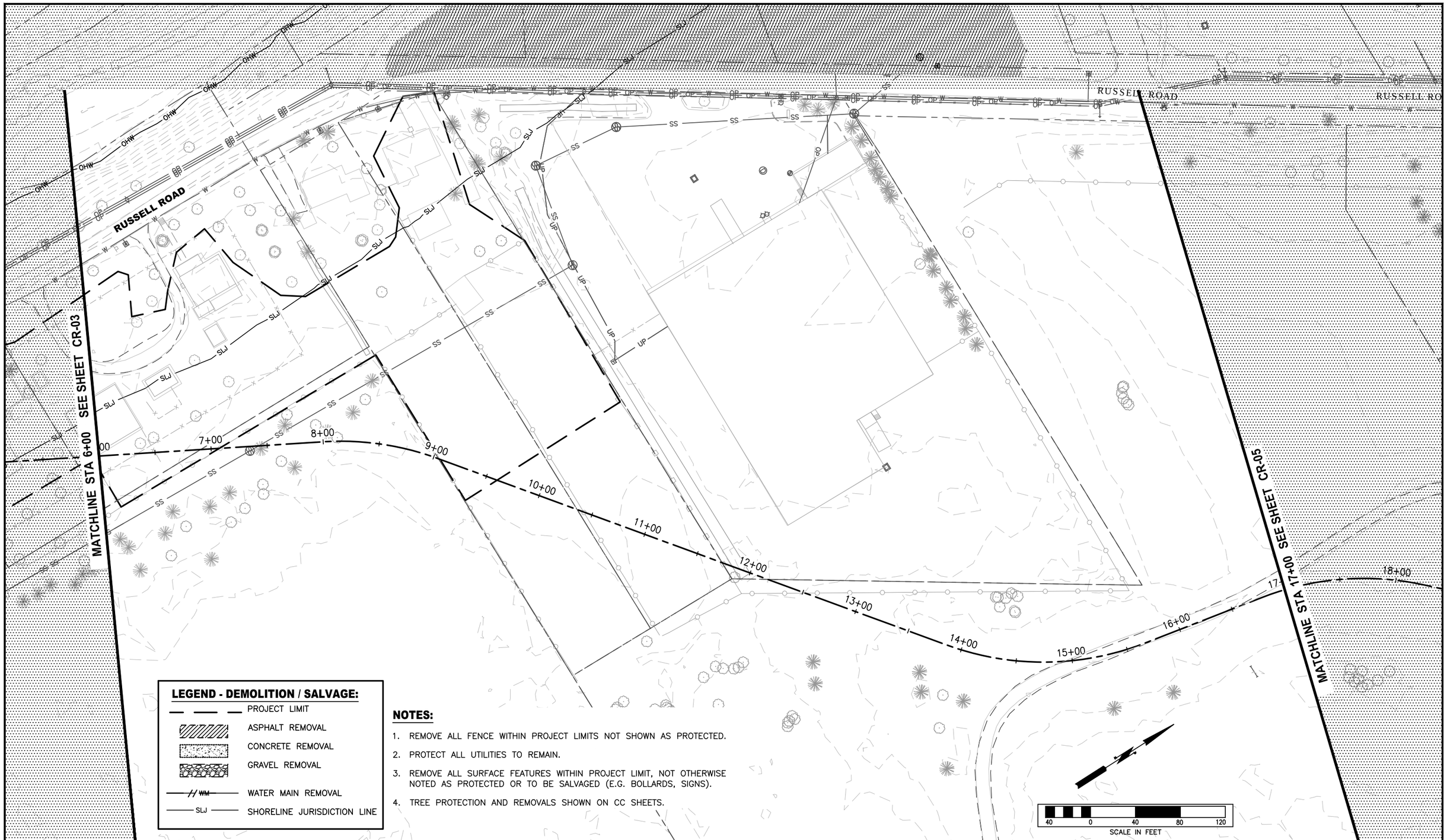
King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

REMOVALS 3

SHEET
CR-03



LEGEND - DEMOLITION / SALVAGE:

- PROJECT LIMIT
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- GRAVEL REMOVAL
- WM — WATER MAIN REMOVAL
- SLJ — SHORELINE JURISDICTION LINE

NOTES:

1. REMOVE ALL FENCE WITHIN PROJECT LIMITS NOT SHOWN AS PROTECTED.
2. PROTECT ALL UTILITIES TO REMAIN.
3. REMOVE ALL SURFACE FEATURES WITHIN PROJECT LIMIT, NOT OTHERWISE NOTED AS PROTECTED OR TO BE SALVAGED (E.G. BOLLARDS, SIGNS).
4. TREE PROTECTION AND REMOVALS SHOWN ON CC SHEETS.

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

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DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

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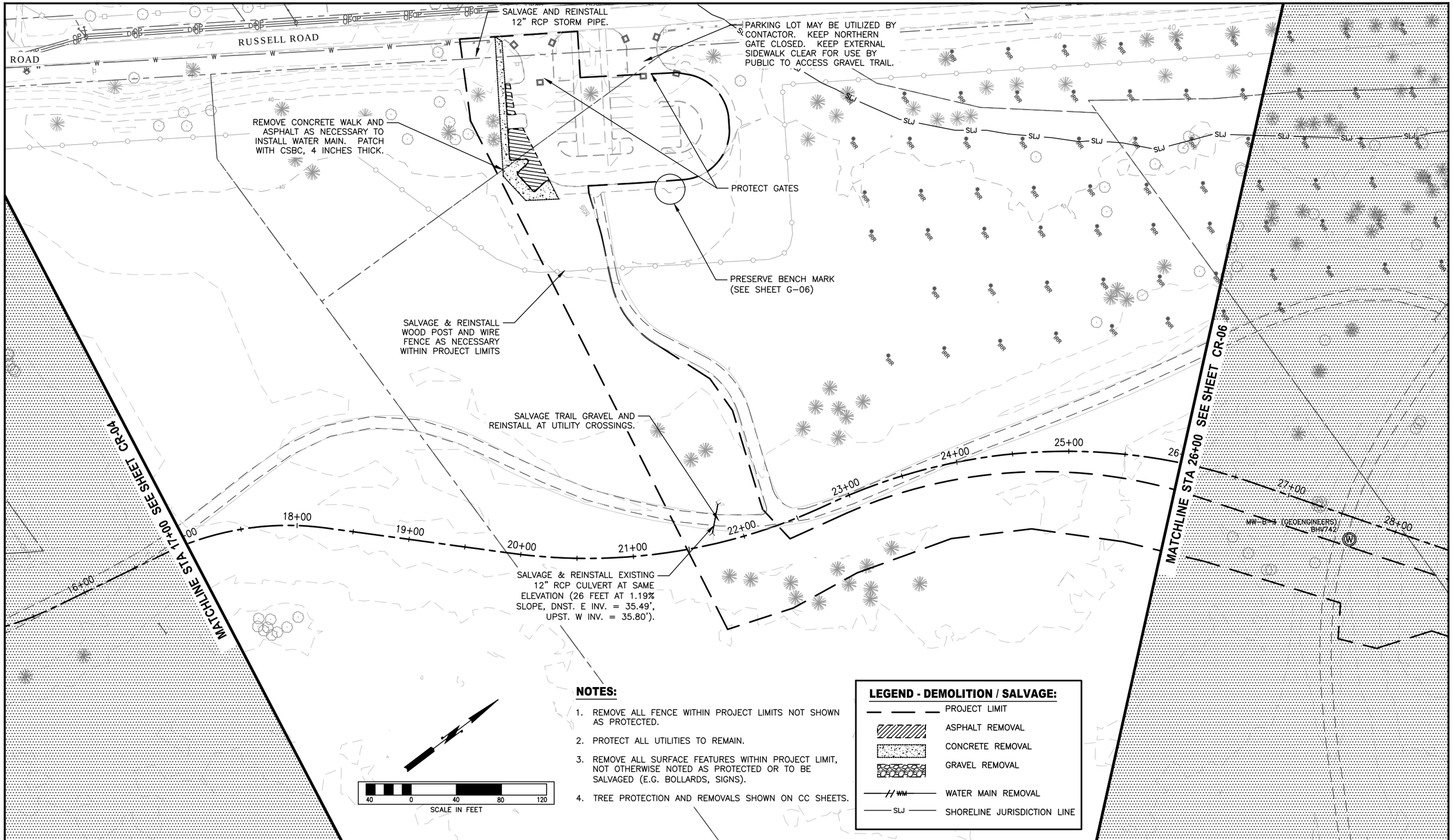
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

REMOVALS 4

SHEET
CR-04



NOTES:

1. REMOVE ALL FENCE WITHIN PROJECT LIMITS NOT SHOWN AS PROTECTED.
2. PROTECT ALL UTILITIES TO REMAIN.
3. REMOVE ALL SURFACE FEATURES WITHIN PROJECT LIMIT, NOT OTHERWISE NOTED AS PROTECTED OR TO BE SALVAGED (E.G. BOLLARDS, SIGNS).
4. TREE PROTECTION AND REMOVALS SHOWN ON CC SHEETS.

LEGEND - DEMOLITION / SALVAGE:

- PROJECT LIMIT
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- GRAVEL REMOVAL
- WM — WATER MAIN REMOVAL
- SLJ — SHORELINE JURISDICTION LINE

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

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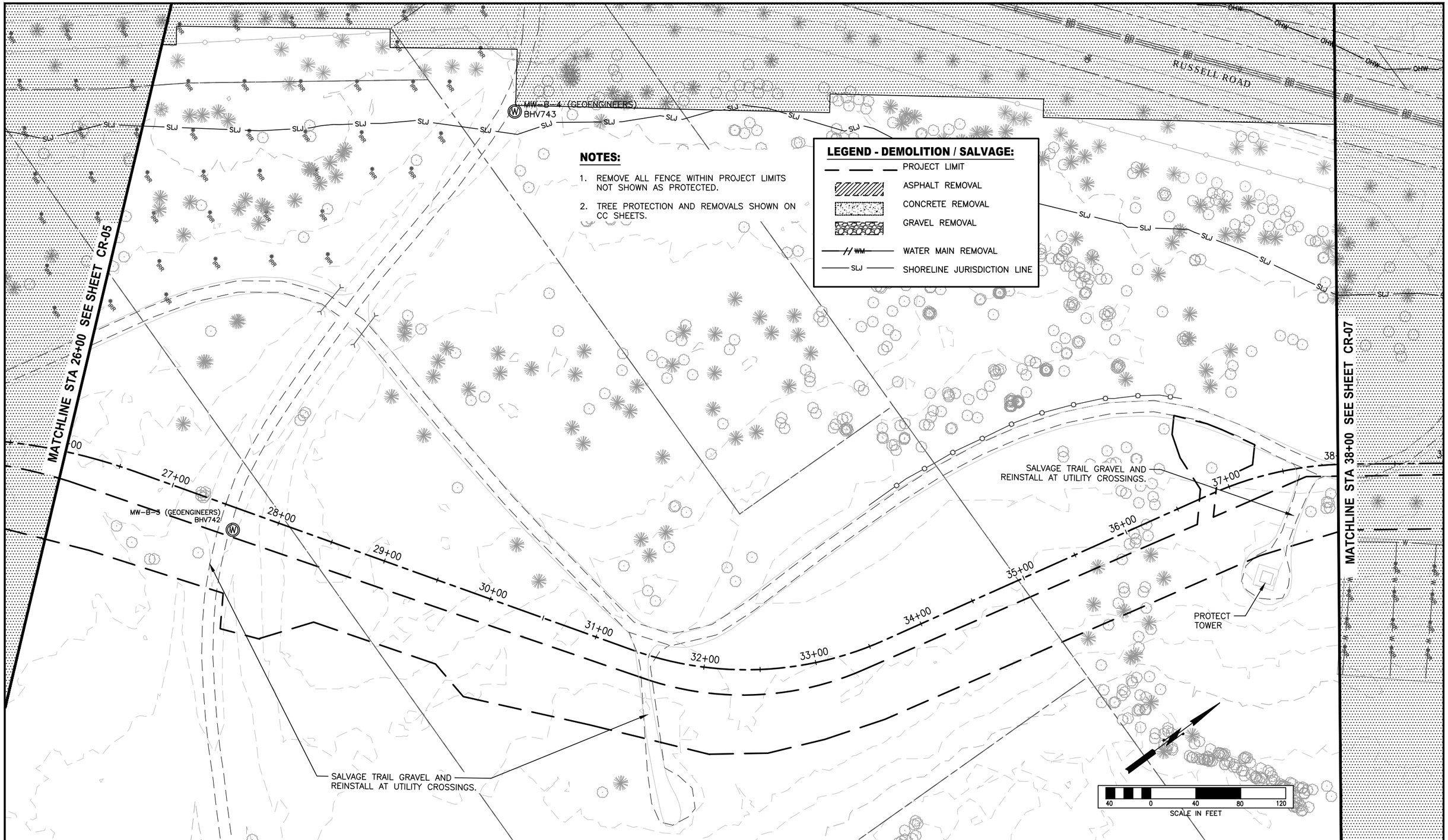
ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

REMOVALS 5

SHEET CR-05



NOTES:

1. REMOVE ALL FENCE WITHIN PROJECT LIMITS NOT SHOWN AS PROTECTED.
2. TREE PROTECTION AND REMOVALS SHOWN ON CC SHEETS.

LEGEND - DEMOLITION / SALVAGE:

- PROJECT LIMIT
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- GRAVEL REMOVAL
- WATER MAIN REMOVAL
- SHORELINE JURISDICTION LINE

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

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DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

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ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER

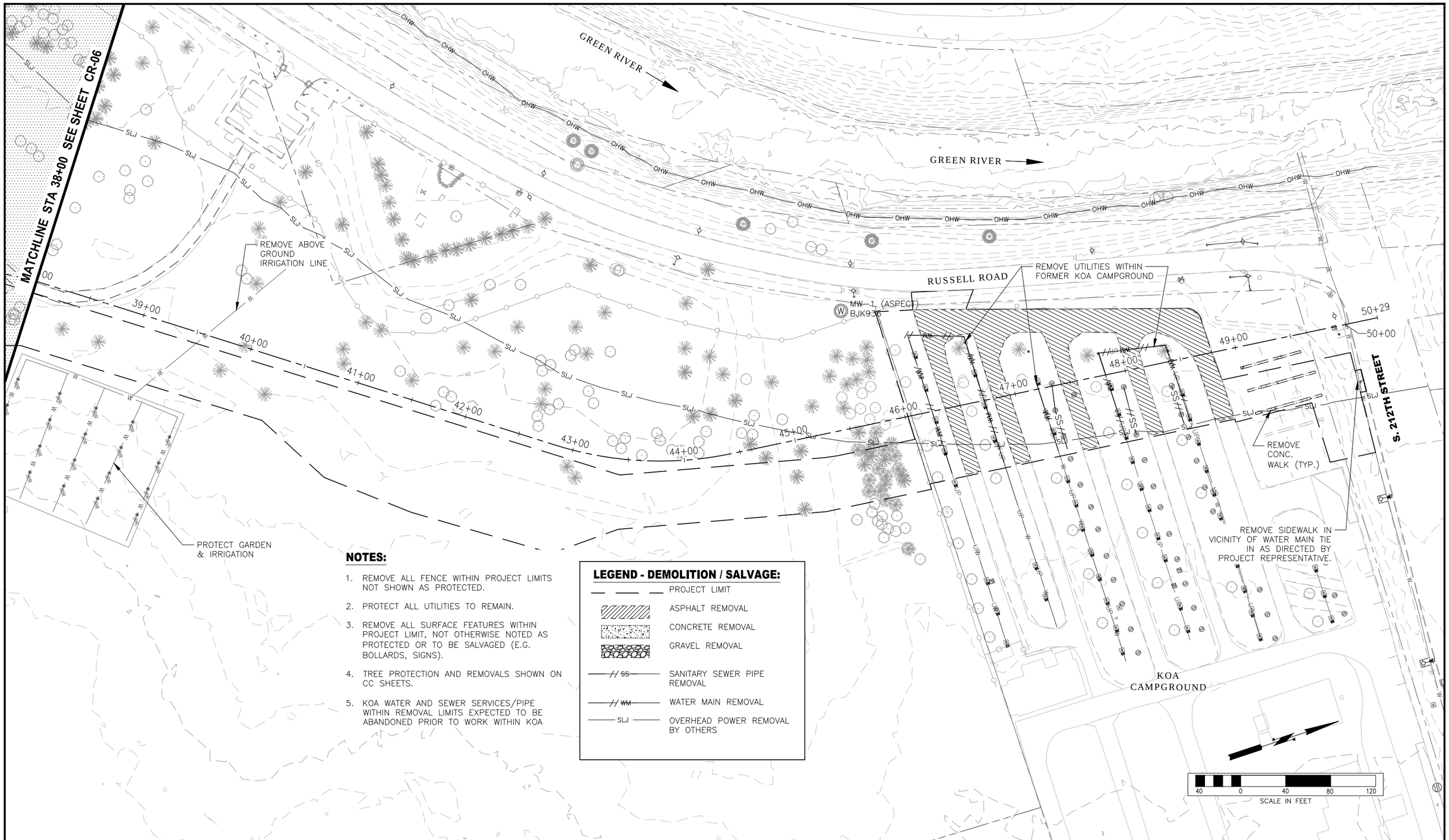
4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

REMOVALS 6

SHEET
CR-06



NOTES:

1. REMOVE ALL FENCE WITHIN PROJECT LIMITS NOT SHOWN AS PROTECTED.
2. PROTECT ALL UTILITIES TO REMAIN.
3. REMOVE ALL SURFACE FEATURES WITHIN PROJECT LIMIT, NOT OTHERWISE NOTED AS PROTECTED OR TO BE SALVAGED (E.G. BOLLARDS, SIGNS).
4. TREE PROTECTION AND REMOVALS SHOWN ON CC SHEETS.
5. KOA WATER AND SEWER SERVICES/PIPE WITHIN REMOVAL LIMITS EXPECTED TO BE ABANDONED PRIOR TO WORK WITHIN KOA

LEGEND - DEMOLITION / SALVAGE:

- PROJECT LIMIT
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- GRAVEL REMOVAL
- SS — SANITARY SEWER PIPE REMOVAL
- WM — WATER MAIN REMOVAL
- SLJ — OVERHEAD POWER REMOVAL BY OTHERS

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

NUM.	REVISION	BY	DATE

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King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

REMOVALS 7

SHEET
CR-07

VETERANS DRIVE

GREEN RIVER

S. 228TH STREET

RUSSELL ROAD

MATCHLINE STA 12+00 SEE SHEET CE-02

MULCH BERMS ACROSS DRAINAGE SWALE

ROCK CONSTRUCTION ENTRANCE
SEE DETAIL A CE-07

SILT FENCE (TYP.)
SEE DETAIL B CE-07

NOTES

1. BEFORE EXCAVATION AND GRADING INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROLS (TESC).
2. SWEEP RUSSELL ROAD REGULARLY AS DIRECTED BY THE PROJECT REPRESENTATIVE.
3. COMPLY WITH ALL NPDES AND SWPPP REQUIREMENTS.
4. REMOVE SILT FENCE LANDWARD OF FLOOD WALL AT END OF WORK. ALL OTHER BMPs TO REMAIN IN PLACE.

LEGEND - TESC:

- PROJECT LIMITS
- WB — SHREDDED WOOD MULCH BERM
- SF — SILT FENCE
- STORM DRAIN INLET PROTECTION, STREET
- WETLAND BUFFER

50 0 50 100 150
SCALE IN FEET

FIELD BOOK:	--	--	NUM.	REVISION	BY	DATE
SURVEYED:	--	--				
SURVEY BASE MAP:	--	--				
CHECKED:	--	--				
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4/2/19

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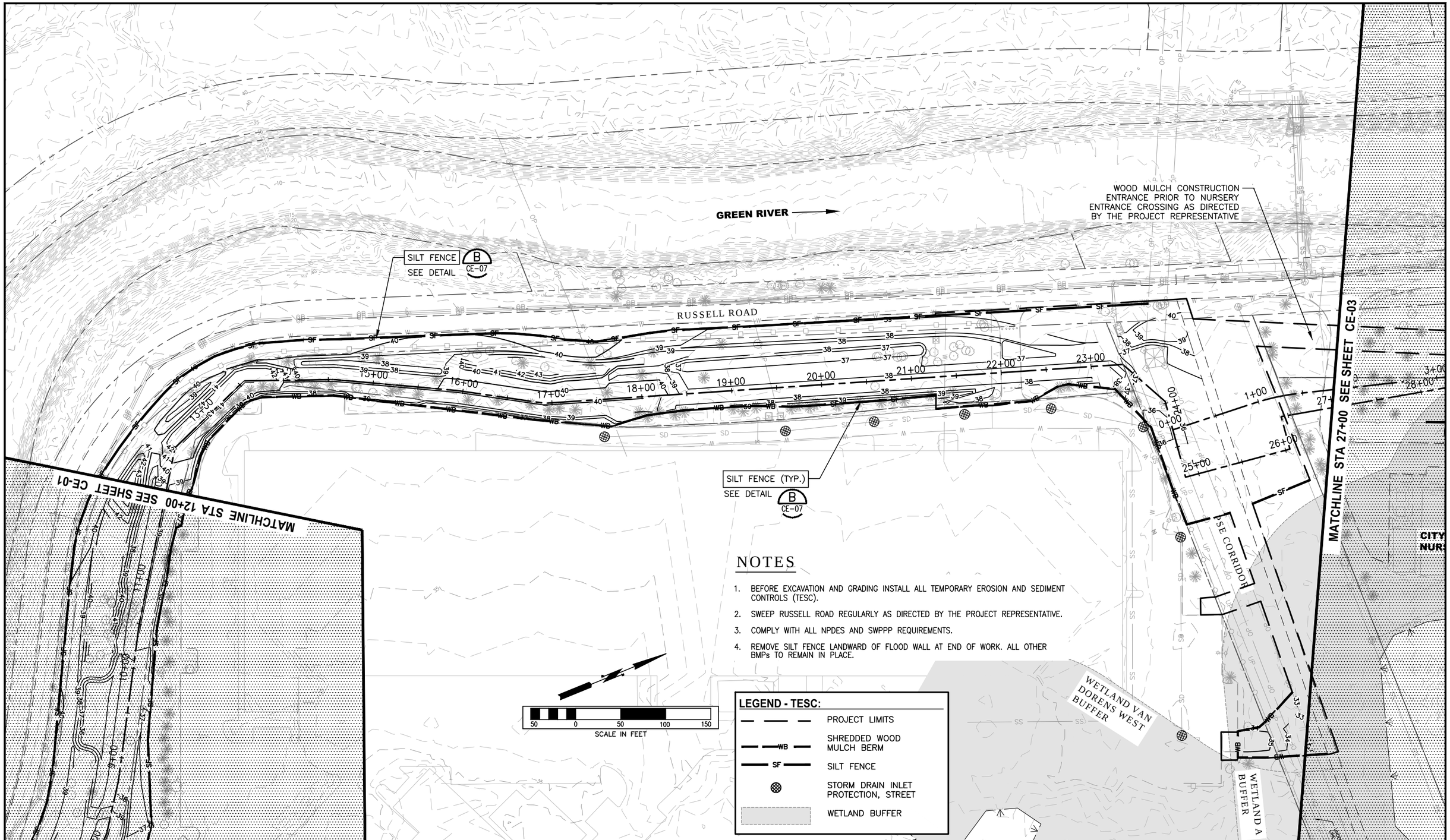
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

TESC PLAN 1

SHEET
CE-01



NOTES

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2. SWEEP RUSSELL ROAD REGULARLY AS DIRECTED BY THE PROJECT REPRESENTATIVE.
3. COMPLY WITH ALL NPDES AND SWPPP REQUIREMENTS.
4. REMOVE SILT FENCE LANDWARD OF FLOOD WALL AT END OF WORK. ALL OTHER BMPs TO REMAIN IN PLACE.

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
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STATE OF WASHINGTON
47496
REGISTERED
PROFESSIONAL ENGINEER
4/2/19

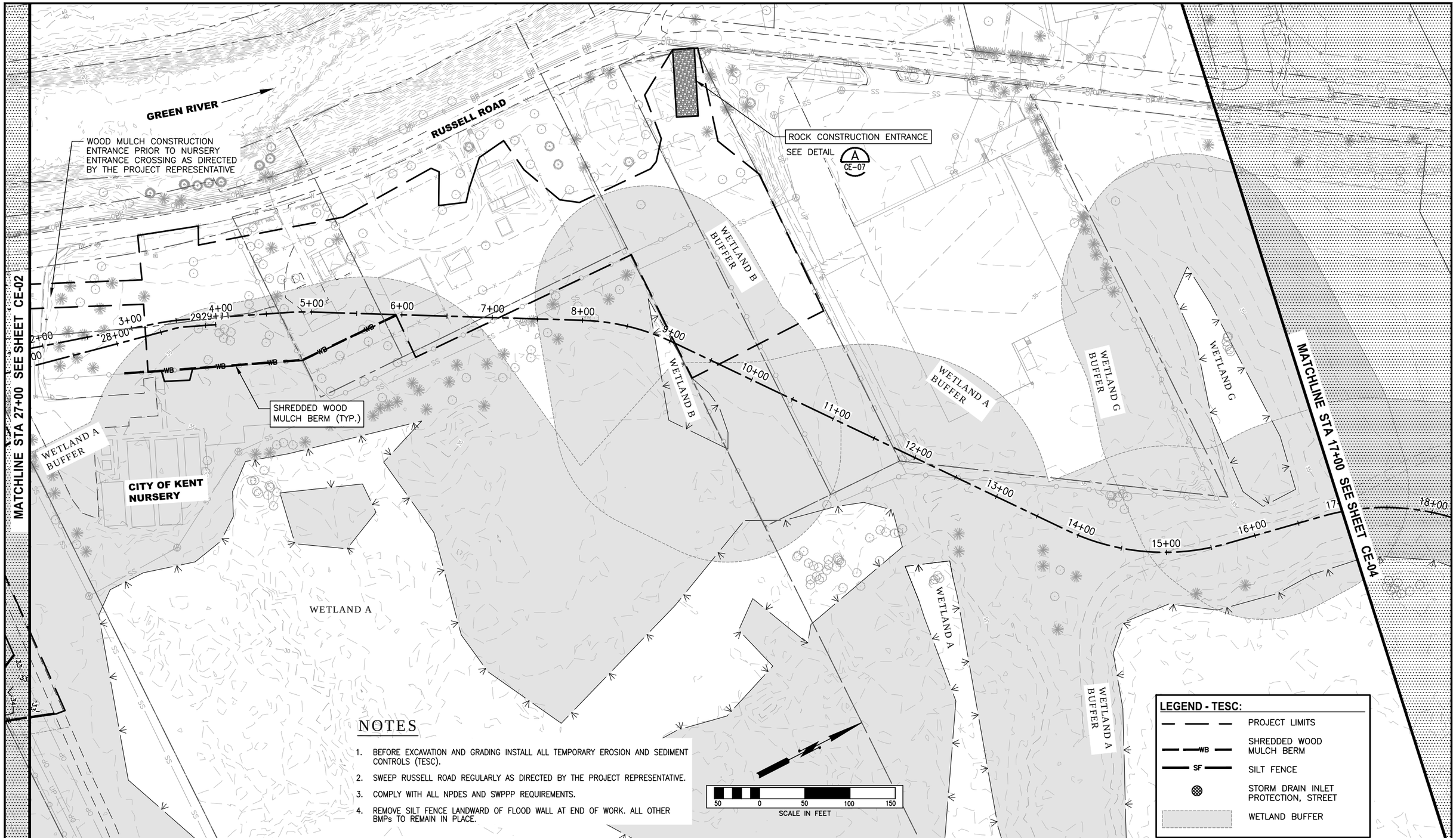
King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

TESC PLAN 2

SHEET
CE-02



NOTES

1. BEFORE EXCAVATION AND GRADING INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROLS (TESC).
2. SWEEP RUSSELL ROAD REGULARLY AS DIRECTED BY THE PROJECT REPRESENTATIVE.
3. COMPLY WITH ALL NPDES AND SWPPP REQUIREMENTS.
4. REMOVE SILT FENCE LANDWARD OF FLOOD WALL AT END OF WORK. ALL OTHER BMPs TO REMAIN IN PLACE.

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SURVEY BASE MAP:	--	--
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4/2/19

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Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

TESC PLAN 3

SHEET
CE-03

RUSSELL ROAD

MATCHLINE STA 17+00 SEE SHEET CE-03

MATCHLINE STA 30+00 SEE SHEET CE-05

WETLAND G BUFFER

WETLAND A BUFFER

WETLAND A

WETLAND E BUFFER

WETLAND D BUFFER

WETLAND D

WETLAND E

WETLAND E (FORMERLY H)

WETLAND A (FORMERLY C)

WETLAND F BUFFER

16+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+ 31+00

SILT FENCE (TYP.)
SEE DETAIL B CE-07

NOTES

1. BEFORE EXCAVATION AND GRADING INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROLS (TESC).
2. SWEEP RUSSELL ROAD REGULARLY AS DIRECTED BY THE PROJECT REPRESENTATIVE.
3. COMPLY WITH ALL NPDES AND SWPPP REQUIREMENTS.
4. REMOVE SILT FENCE LANDWARD OF FLOOD WALL AT END OF WORK. ALL OTHER BMPs TO REMAIN IN PLACE.

LEGEND - TESC:

- PROJECT LIMITS
- WB — SHREDDED WOOD MULCH BERM
- SF — SILT FENCE
- STORM DRAIN INLET PROTECTION, STREET
- WETLAND BUFFER

50 0 50 100 150
SCALE IN FEET

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

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CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

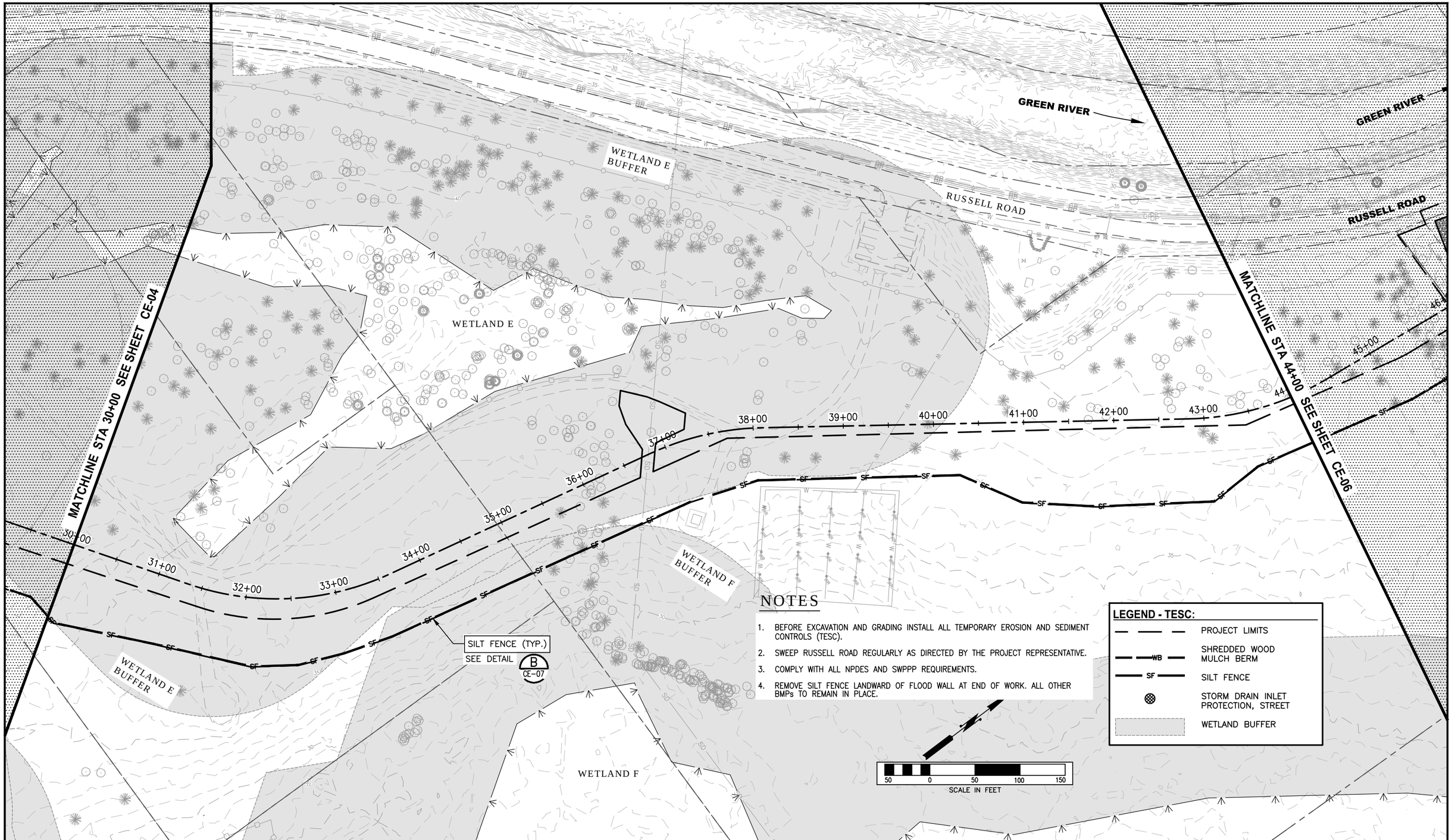
ERIK G. PETERS
STATE OF WASHINGTON
47496
REGISTERED PROFESSIONAL ENGINEER
4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

TESC PLAN 4

SHEET
CE-04



NOTES

1. BEFORE EXCAVATION AND GRADING INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROLS (TESC).
2. SWEEP RUSSELL ROAD REGULARLY AS DIRECTED BY THE PROJECT REPRESENTATIVE.
3. COMPLY WITH ALL NPDES AND SWPPP REQUIREMENTS.
4. REMOVE SILT FENCE LANDWARD OF FLOOD WALL AT END OF WORK. ALL OTHER BMPs TO REMAIN IN PLACE.

LEGEND - TESC:

- PROJECT LIMITS
- WB — SHREDDED WOOD MULCH BERM
- SF — SILT FENCE
- STORM DRAIN INLET PROTECTION, STREET
- WETLAND BUFFER

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

TESC PLAN 5

SHEET CE-05

NOTES

1. BEFORE EXCAVATION AND GRADING INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROLS (TESC).
2. SWEEP RUSSELL ROAD REGULARLY AS DIRECTED BY THE PROJECT REPRESENTATIVE.
3. COMPLY WITH ALL NPDES AND SWPPP REQUIREMENTS.
4. REMOVE SILT FENCE LANDWARD OF FLOOD WALL AT END OF WORK. ALL OTHER BMPs TO REMAIN IN PLACE.

LEGEND - TESC:

- PROJECT LIMITS
- WB — SHREDDED WOOD MULCH BERM
- SF — SILT FENCE
- STORM DRAIN INLET PROTECTION, STREET
- WETLAND BUFFER

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

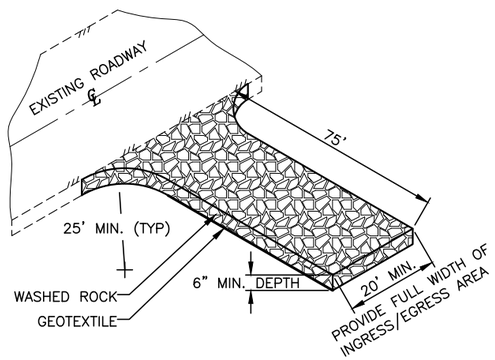
ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

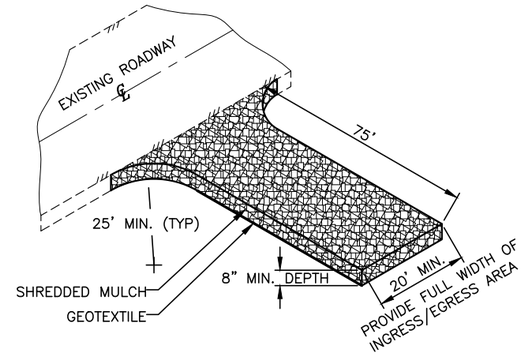
King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

TESC PLAN 6

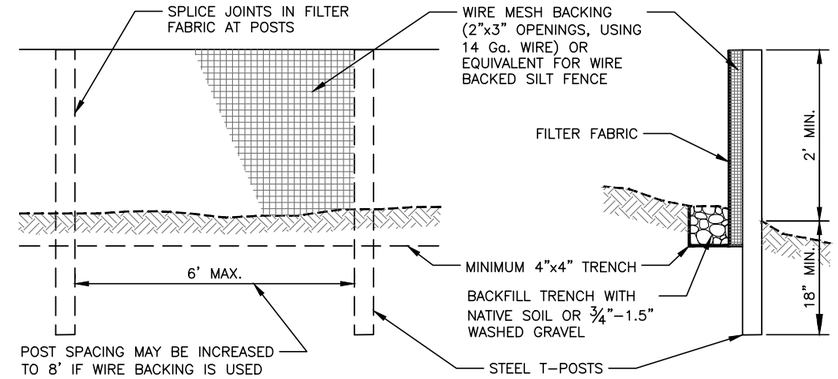
SHEET CE-06





TEMPORARY ROCK OR SHREDDED WOOD MULCH CONSTRUCTION ENTRANCE (A)

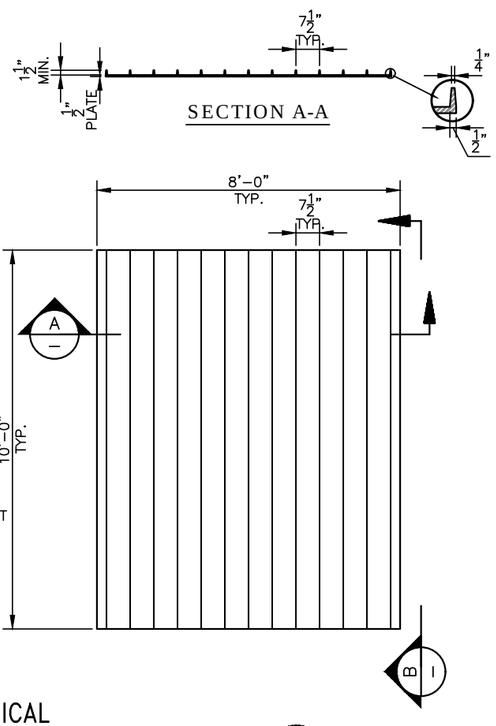
NTS

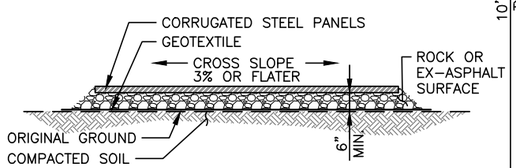


NOTE: INSTALL SILT FENCES ALONG CONTOUR WHENEVER POSSIBLE

SILT FENCE AND WIRE BACKED SILT FENCE DETAIL (B)

NTS





NOTE:
NO ROCK UNDER PANELS WHEN PLACED ON ASPHALT

SECTION B-B

TYPICAL CORRUGATED STEEL PANEL DETAIL (C)

NTS

Know what's below.
Call before you dig.
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --
PROJECT No. 1112056
CONTRACT No. C01294C18

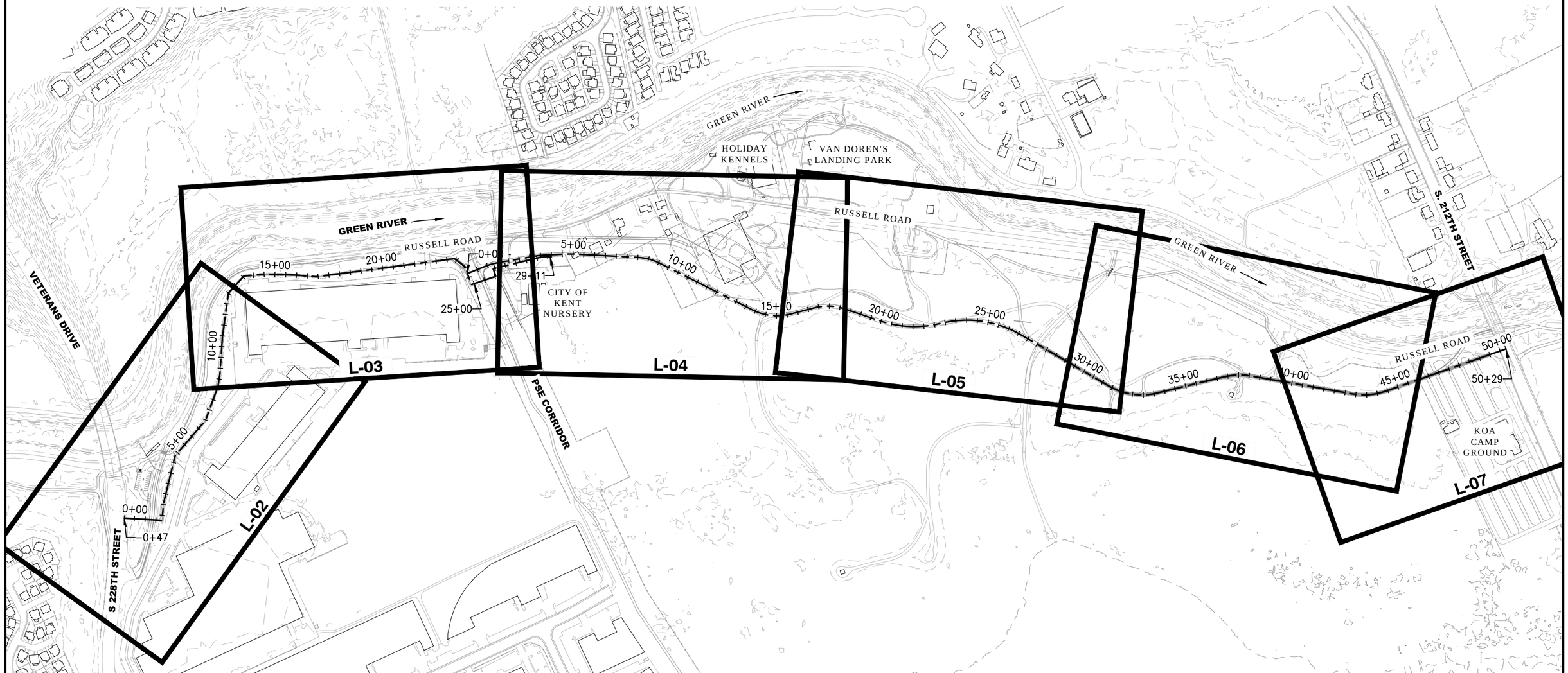
ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT

TESC DETAILS

SHEET
CE-07



FIELD BOOK:	--	--	NUM.	REVISION	BY	DATE	APPROVED: LORIN REINELT, P.E.	03/2019
SURVEYED:	--	--					PROJECT MANAGER: ERIK PETERS, P.E.	03/2019
SURVEY BASE MAP:	--	--					DESIGNED: ERIK PETERS, P.E.	03/2019
CHECKED:	--	--	NUM.	RECORD CHANGES APPROVED	BY	DATE	CAD DESIGN: KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

LANDSCAPE PLAN KEY MAP

SHEET L-01

GREEN RIVER

VETERANS DRIVE (S 228TH ST)

RUSSELL ROAD

GREEN RIVER TRAIL

MATCHLINE STA 12+00 SEE SHEET L-03

0+47 0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00

OHW SLJ

50 0 50 100 150

SCALE IN FEET

NOTES:

1. SPREAD AND INCORPORATE COMPOST OVER AREAS TO BE PERMANENTLY SEEDED AND MULCHED ONLY.
2. PLACE STRAW MULCH OVER SEEDED AREAS AS SPECIFIED.

PLANTING ZONES:

- WOODCHIP MULCH
- MEADOW SEED MIX – PERMANENT
- MEADOW SEED MIX – TEMPORARY TEMPORARY AREAS TO BE RE–GRADED WITH PHASE 2 (BY OTHERS NOT IN CONTRACT)

LEGEND:

- WETLAND BOUNDARY
- 10 ELEVATION CONTOURS (MAJOR)
- ELEVATION CONTOURS (MINOR)
- EXISTING TREE (DECIDUOUS)
- EXISTING TREE (CONIFER)
- SLJ SHORELINE JURISDICTION LINE

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS STATE OF WASHINGTON 47496 REGISTERED PROFESSIONAL ENGINEER 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

LANDSCAPE PLAN 1

SHEET L-02

GREEN RIVER

BOAT LAUNCH

PARKING

RUSSELL ROAD

GREEN RIVER TRAIL

LEVEE TRAIL

PSE CORRIDOR

MATCHLINE STA 12+00 SEE SHEET L-02

MATCHLINE STA 27+00 SEE SHEET L-04

NOTES:

1. SPREAD AND INCORPORATE COMPOST OVER AREAS TO BE PERMANENTLY SEEDED AND MULCHED ONLY.
2. PLACE STRAW MULCH OVER SEEDED AREAS AS SPECIFIED.

LEGEND:

- WETLAND BOUNDARY
- 10 ELEVATION CONTOURS (MAJOR)
- ELEVATION CONTOURS (MINOR)
- SITE LINE
- EXISTING TREE (DECIDUOUS)
- EXISTING TREE (CONIFER)
- SLJ SHORELINE JURISDICTION LINE

PLANTING ZONES:

- WOODCHIP MULCH
- MEADOW SEED MIX – PERMANENT
- MEADOW SEED MIX – TEMPORARY TEMPORARY AREAS TO BE RE–GRADED WITH PHASE 2 (BY OTHERS NOT IN CONTRACT)

50 0 50 100 150
SCALE IN FEET

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

NUM.	REVISION	BY	DATE

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APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

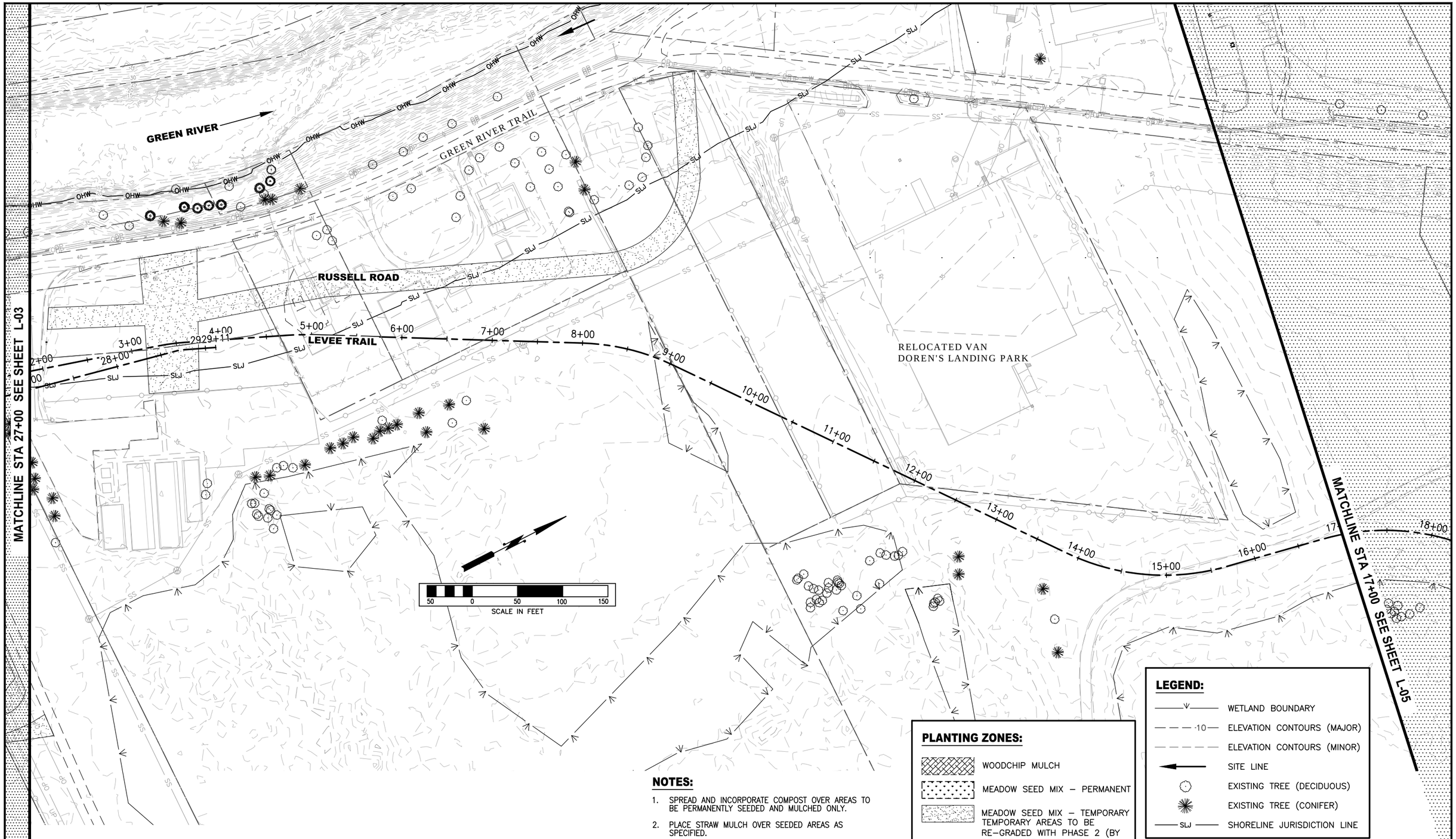
ERIK G. PETERS
STATE OF WASHINGTON
47496
REGISTERED PROFESSIONAL ENGINEER
4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

LANDSCAPE PLAN 2

SHEET
L-03



NOTES:

1. SPREAD AND INCORPORATE COMPOST OVER AREAS TO BE PERMANENTLY SEEDED AND MULCHED ONLY.
2. PLACE STRAW MULCH OVER SEEDED AREAS AS SPECIFIED.

PLANTING ZONES:

- WOODCHIP MULCH
- MEADOW SEED MIX – PERMANENT
- MEADOW SEED MIX – TEMPORARY TEMPORARY AREAS TO BE RE–GRADED WITH PHASE 2 (BY OTHERS NOT IN CONTRACT)

LEGEND:

- WETLAND BOUNDARY
- 10 ELEVATION CONTOURS (MAJOR)
- ELEVATION CONTOURS (MINOR)
- SITE LINE
- EXISTING TREE (DECIDUOUS)
- EXISTING TREE (CONIFER)
- SLJ SHORELINE JURISDICTION LINE

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK P. E. K. G. PETERS	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS
STATE OF WASHINGTON
47496
REGISTERED PROFESSIONAL ENGINEER
4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

LANDSCAPE PLAN 3

SHEET
L-04

PLANTING ZONES:

- WOODCHIP MULCH
- MEADOW SEED MIX – PERMANENT
- MEADOW SEED MIX – TEMPORARY
  TEMPORARY AREAS TO BE RE-GRADED WITH PHASE 2 (BY OTHERS NOT IN CONTRACT)

BACKWATER

GREEN RIVER

GREEN RIVER TRAIL

GREEN RIVER TRAIL

LEVEE TRAIL

16+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30 31+00

MATCHLINE STA 17+00 SEE SHEET L-04

MATCHLINE STA 30+00 SEE SHEET L-06

50 0 50 100 150
SCALE IN FEET

NOTES:

1. SPREAD AND INCORPORATE COMPOST OVER AREAS TO BE PERMANENTLY SEEDED AND MULCHED ONLY.
2. PLACE STRAW MULCH OVER SEEDED AREAS AS SPECIFIED.

LEGEND:

- WETLAND BOUNDARY
- 10 ELEVATION CONTOURS (MAJOR)
- ELEVATION CONTOURS (MINOR)
- SITE LINE
- EXISTING TREE (DECIDUOUS)
- EXISTING TREE (CONIFER)
- SLJ SHORELINE JURISDICTION LINE

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

NUM.	REVISION	BY	DATE

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APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS
STATE OF WASHINGTON
47496
REGISTERED PROFESSIONAL ENGINEER
4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

LANDSCAPE PLAN 4

SHEET
L-05

GREEN RIVER

GREEN RIVER

SCALE IN FEET
50 0 50 100 150

MATCHLINE STA 30+00 SEE SHEET L-05

MATCHLINE STA 44+00 SEE SHEET L-07

GREEN RIVER TRAIL

GREEN RIVER TRAIL

30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00

NOTES:

1. SPREAD AND INCORPORATE COMPOST OVER AREAS TO BE PERMANENTLY SEEDED AND MULCHED ONLY.
2. PLACE STRAW MULCH OVER SEEDED AREAS AS SPECIFIED.

PLANTING ZONES:

- WOODCHIP MULCH
- MEADOW SEED MIX – PERMANENT
- MEADOW SEED MIX – TEMPORARY TEMPORARY AREAS TO BE RE–GRADED WITH PHASE 2 (BY OTHERS NOT IN CONTRACT)

LEGEND:

- EDGE OF OPEN WATER OR OHM
- WETLAND BOUNDARY
- 10 ELEVATION CONTOURS (MAJOR)
- ELEVATION CONTOURS (MINOR)
- EXISTING TREE (DECIDUOUS)
- EXISTING TREE (CONIFER)
- SLJ SHORELINE JURISDICTION LINE

FIELD BOOK:	--	--
SURVEYED:	--	--
SURVEY BASE MAP:	--	--
CHECKED:	--	--

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PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

ERIK G. PETERS
STATE OF WASHINGTON
47496
REGISTERED PROFESSIONAL ENGINEER
4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

LANDSCAPE PLAN 5

SHEET
L-06

NOTES:

1. SPREAD AND INCORPORATE COMPOST OVER AREAS TO BE PERMANENTLY SEEDED AND MULCHED ONLY.
2. PLACE STRAW MULCH OVER SEEDED AREAS AS SPECIFIED.

PLANTING ZONES:

- WOODCHIP MULCH
- MEADOW SEED MIX – PERMANENT
- MEADOW SEED MIX – TEMPORARY TEMPORARY AREAS TO BE RE–GRADED WITH PHASE 2 (BY OTHERS NOT IN CONTRACT)

LEGEND:

- WETLAND BOUNDARY
- 10 ELEVATION CONTOURS (MAJOR)
- ELEVATION CONTOURS (MINOR)
- SITE LINE
- EXISTING TREE (DECIDUOUS)
- EXISTING TREE (CONIFER)
- SLJ SHORELINE JURISDICTION LINE

FIELD BOOK:	--	--	
SURVEYED:	--	--	
SURVEY BASE MAP:	--	--	
CHECKED:	--	--	

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

APPROVED:	LORIN REINELT, P.E.	03/2019
PROJECT MANAGER:	ERIK PETERS, P.E.	03/2019
DESIGNED:	ERIK PETERS, P.E.	03/2019
CAD DESIGN:	KAY KITAMURA	03/2019

FUNDING SOURCE No. --

PROJECT No. 1112056

CONTRACT No. C01294C18

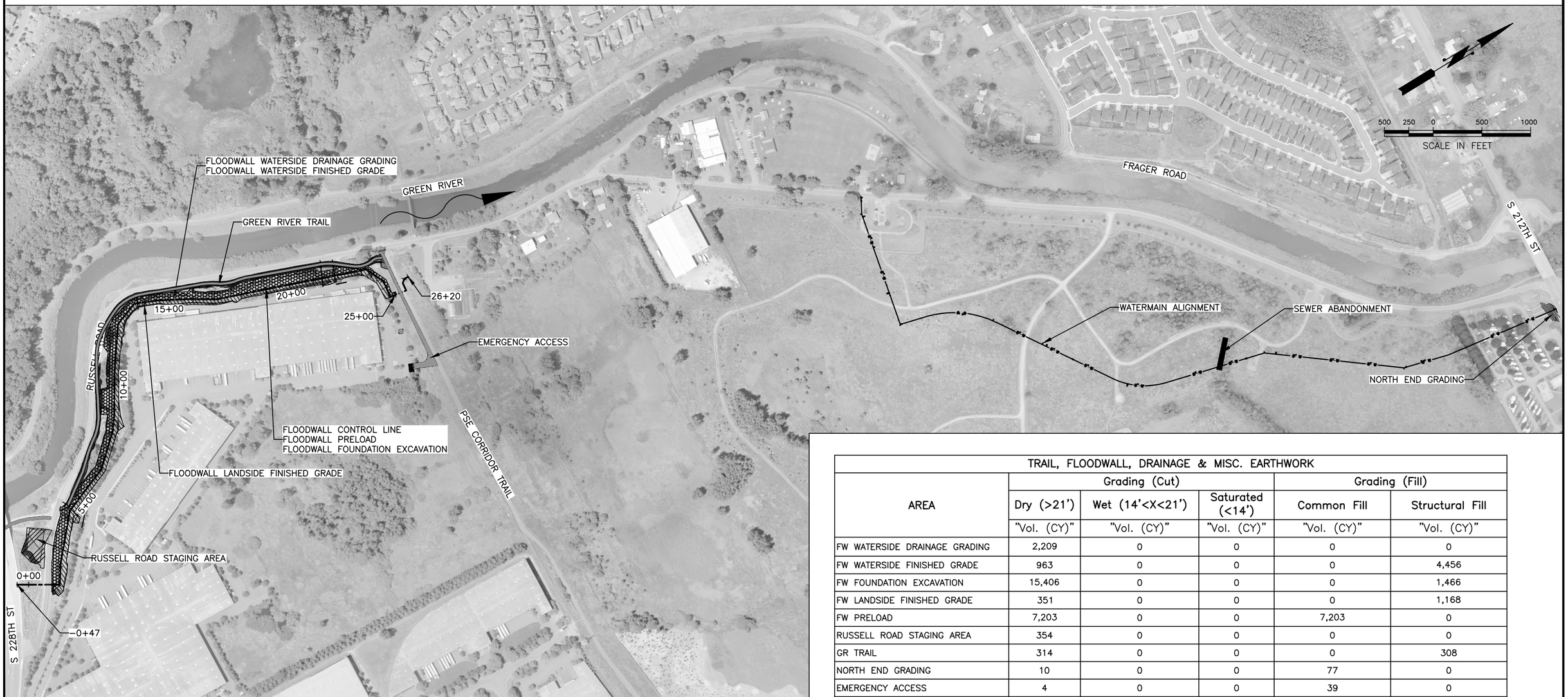
ERIK G. PETERS — STATE OF WASHINGTON — 47496 — REGISTERED PROFESSIONAL ENGINEER — 4/2/19

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1

LANDSCAPE PLAN 6

SHEET L-07



LEGEND:

- FLOODWALL WATERSIDE DRAINAGE GRADING & FINISHED GRADE AREA
- FLOODWALL LANDSIDE FINISHED GRADE AREA
- RUSSELL ROAD STAGING AREA
- GREEN RIVER TRAIL FINISHED GRADE AREA

TRAIL, FLOODWALL, DRAINAGE & MISC. EARTHWORK					
AREA	Grading (Cut)			Grading (Fill)	
	Dry (>21')	Wet (14'<X<21')	Saturated (<14')	Common Fill	Structural Fill
	"Vol. (CY)"	"Vol. (CY)"	"Vol. (CY)"	"Vol. (CY)"	"Vol. (CY)"
FW WATERSIDE DRAINAGE GRADING	2,209	0	0	0	0
FW WATERSIDE FINISHED GRADE	963	0	0	0	4,456
FW FOUNDATION EXCAVATION	15,406	0	0	0	1,466
FW LANDSIDE FINISHED GRADE	351	0	0	0	1,168
FW PRELOAD	7,203	0	0	7,203	0
RUSSELL ROAD STAGING AREA	354	0	0	0	0
GR TRAIL	314	0	0	0	308
NORTH END GRADING	10	0	0	77	0
EMERGENCY ACCESS	4	0	0	39	0
SUBTOTAL	**26,814**	**0**	**0**	**7,319**	**7,398**

NOTES:

1. ALL EARTHWORK VALUES ARE BASED ON IN SITU VOLUMES (1:1) AND DO NOT REFLECT SHRINKAGE DO TO FILL COMPACTION, BULKING FROM EXCAVATION, OR LOSSES FROM HAULING MATERIAL. THE CONTRACTOR WILL NEED TO SATISFY THEMSELVES AS TO THE ACTUAL AMOUNT OF MATERIAL NEEDED TO HAUL TO THE SITE.

CSBC			
AREA	VOLUME	UNIT	MATERIAL TYPE
GR TRAIL & EMERGENCY ACCESS	1,111	TN	CSBC

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:	--	--
CHECKED:	--	--
CAD ENTERED:	RD	3/19
DESIGNED:	VR	3/19
CHECKED:	AE	3/19
SUPERVISOR:	SJ	3/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

SCOTT JOHNSON — STATE OF WASHINGTON — 47673 — REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
EARTHWORK TABULATION AREAS

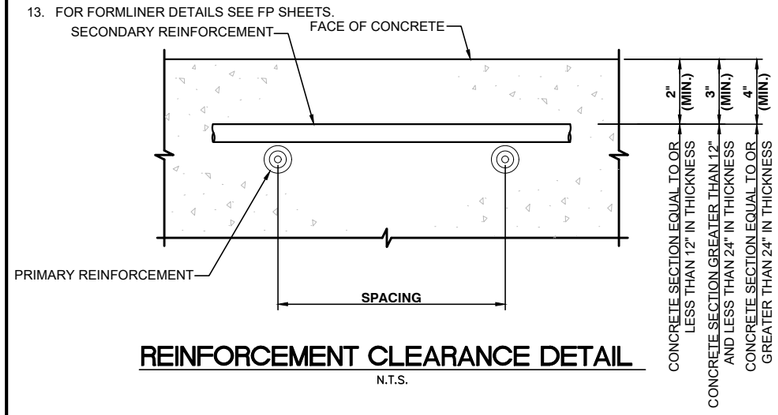
SHEET
T-01

STEEL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE ASTM A36 AND ASTM A572 GRADE 50 AR ASTM A992, UNLESS OTHERWISE NOTED.
2. TO PREVENT CORROSION BY MOISTURE BETWEEN STEEL SURFACES IN CONTACT, ALL SUCH CONTACTS SHALL BE SEALED WATERTIGHT BY RUNNING A CONTINUES 1/8" FILLET WELD ALONG ALL EDGES OF THE CONTACT, UNLESS OTHERWISE NOTED.
3. ALL WELDING SHALL BE ELECTRIC WELDING, WORKMANSHIP AND TECHNIQUE, WHERE APPLICABLE, SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE, SEE SPECIFICATIONS.
4. WELDING SYMBOLS SHOWN ARE THOSE ADOPTED BY THE AMERICAN WELDING SOCIETY AND INDICATE ONLY SIZE AND TYPE OF WELDS REQUIRED. DETAILED INFORMATION SHALL BE SHOWN ON THE SHOP DRAWINGS AND SUBMITTED BY THE CONTRACTOR FOR APPROVAL.
5. DIMENSIONS SHOWN OR CALLED FOR ARE THE FINAL DIMENSIONS; ALLOWANCES MUST BE MADE FOR MACHINING.
6. ITEMS MARKED C.R.S. SHALL BE CORROSION-RESISTANT STEEL (STAINLESS STEEL). SEE SPECIFICATIONS.

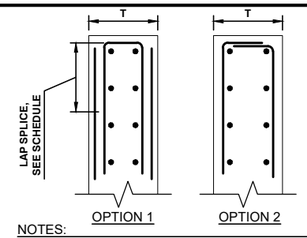
CONCRETE NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 4000 PSI AT 28 DAYS, 90 DAYS IF POZZOLAN IS USED, UNLESS OTHERWISE NOTED.
2. STABILIZATION SLAB CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 2500 PSI AT 28 DAYS, 90 DAYS IF POZZOLAN IS USED.
3. REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH (Fy) OF 60,000 PSI.
4. CONSTRUCTION JOINTS SHALL BE PROVIDED WHERE SHOWN ON DRAWINGS. WHERE NOT SHOWN, CONSTRUCTION JOINTS SHALL BE PLACED AT LOCATIONS LEAST LIKELY TO IMPAIR THE INTEGRITY OF THE CONCRETE STRUCTURE. THESE ADDITIONAL CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
5. UNLESS OTHERWISE NOTED, PROVIDE 3/4" CHAMFER AT ALL EXPOSED JOINTS, EDGES, EXTERNAL CORNERS, AND VERTICAL EXPANSION JOINTS.
6. ALL BENDS OF REINFORCEMENT AND ALL BAR SPACERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH SP-66, AMERICAN CONCRETE INSTITUTE DETAILING MANUAL -318- 14.
7. REINFORCING BAR DESIGNATION NUMBERS CONFORM TO THE NUMBERING SYSTEM OF THE CONCRETE REINFORCING STEEL INSTITUTE.
8. REINFORCING BARS SHALL BE CONTINUOUS AT ALL CORNERS UNLESS OTHERWISE NOTED.
9. REINFORCEMENT, WHERE NECESSARY TO AVOID OPENINGS, PIPES, EMBEDDED ITEMS AND OTHER OBSTRUCTIONS, SHALL BE BENT OR SHIFTED AS DIRECTED BY THE CONTRACTING OFFICER.
10. THE EMBEDMENT AND SPLICE TABLE SHALL BE USED IN DETERMINING LAP SPLICES AND EMBEDMENT LENGTHS WHERE LENGTHS ARE NOT OTHERWISE INDICATED. SPICE LENGTHS SHALL BE BASED ON THE SMALLER BAR BEING LAPPED. THE CONTRACTOR WILL BE ALLOWED TO MAKE SPLICES IN ADDITION TO THOSE INDICATED IN THE DRAWINGS, WHERE ESSENTIAL TO CONSTRUCTIBILITY, SUBJECT TO APPROVAL BY THE CONTRACTING OFFICER. SPLICES OTHER THAN THOSE SHOWN ON THE DRAWINGS AND OTHER THAN ADDITIONAL SPLICES REQUIRED BY THE CONTRACTING OFFICER, WILL BE AT THE CONTRACTORS EXPENSE.
11. ALL EXTERIOR FORMED SURFACES NOT COVERED BY BACKFILL SHALL BE CLASS "A" FINISH AND SURFACES COVERED BY BACKFILL SHALL BE CLASS "D" FINISH, UNLESS OTHERWISE NOTED. THE FINISH FOR THE SCOUR PROTECTION SHALL BE RAKED.
12. ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING SHALL BE ALLOWED WITHOUT SPECIFIC APPROVAL FROM THE ENGINEER.
13. FOR FORMLINER DETAILS SEE FP SHEETS.



REINFORCEMENT CLEARANCE DETAIL

N.T.S.



T	ADDITIONAL REINFORCEMENT
T ≥ 1'-6"	#4 U TO MATCH SPACING OF VERTICALS
T > 1'-6"	#5 U TO MATCH SPACING OF VERTICALS

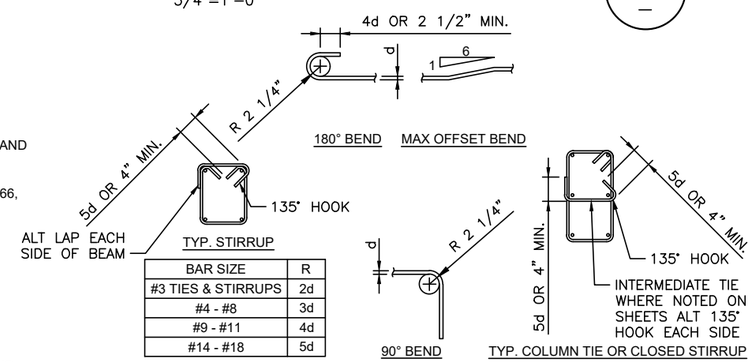
NOTES:

1. FOR TYPICAL REINFORCEMENT, SEE PLAN SHEETS.
2. TERMINATE TYPICAL REINFORCEMENT WITH END HOOK (OPTION-2) OR ADDITIONAL U BARS (OPTION-1)
3. THIS DETAIL TO BE USED ONLY WHEN A SPECIAL DETAIL IS NOT PROVIDED ON PLANS SHEETS.

TYPICAL TOP OR END OF WALL REINFORCEMENT WITH " T" 1'-0" ≥

8 / –

3/4"=1'-0"



BAR SIZE	R
#3 TIES & STIRRUPS	2d
#4 - #8	3d
#9 - #11	4d
#14 - #18	5d

REINFORCEMENT EMBEDMENT AND SPLICE TABLES - 4000 PSI

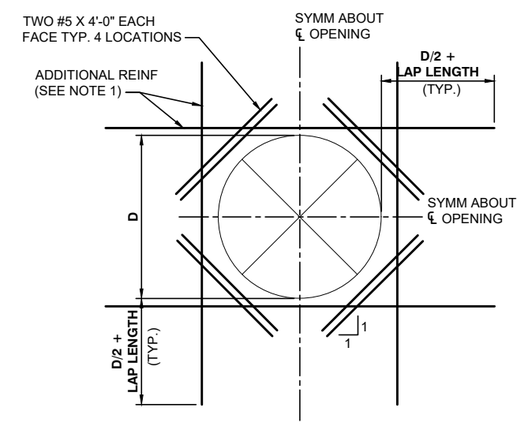
BAR SIZE	BASIC TABLE				ALTERNATE TABLE			
	MINIMUM EMBEDMENT LENGTH, INCHES		MINIMUM LAP LENGTH INCHES		MINIMUM EMBEDMENT LENGTH, INCHES		MINIMUM LAP LENGTH INCHES	
	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
3	18	14	24	18	12	12	14	12
4	25	19	32	25	15	12	19	15
5	31	24	40	31	18	14	24	18
6	37	28	48	37	22	17	29	22
7	54	42	70	54	32	25	42	32
8	62	47	80	62	37	28	48	37
9	69	53	90	69	42	32	54	42
10	77	59	100	77	46	36	60	46
11	85	65	110	85	51	39	66	51

NOTES:

1. USE THE BASIC TABLE IF ALL THE FOLLOWING CONDITIONS ARE MET:
   A) CENTER-TO-CENTER BAR SPACING LATERALLY IS AT LEAST 3 BAR DIAMETERS.
   B) DISTANCE FROM THE CENTER OF THE BAR TO THE NEAREST CONCRETE SURFACE MUST BE AT LEAST 2 BARS DIAMETERS.
2. THE ALTERNATE TABLE MAY BE USED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
   A) CENTER-TO CENTER BAR SPACING LATERALLY IS AT LEAST 5 BAR DIAMETERS.
   B) DISTANCE FROM THE CENTER OF A BAR TO THE NEAREST CONCRETE SURFACE MUST BE AT LEAST 2.5 BAR DIAMETERS.
3. IF CONCRETE COVER OR EDGE DISTANCE IS LESS THAN 1 BAR DIAMETER OF THE CENTER-TO CENTER BAR SPACING LATERALLY IS LESS THAN 3 BAR DIAMETERS, SEE ACI 318 FOR APPROPRIATE GUIDANCE.
4. TOP BARS ARE HORIZONTAL BARS AND BARS INCLINED LESS THAN 45 DEGREES WITH RESPECT TO A HORIZONTAL PLANE WHICH ARE PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.
5. THE TABLES SHOWN ABOVE ARE FOR NORMAL WEIGHT CONCRETE AND UNCOATED REINFORCING BARS. IF EPOXY-COATED BARS ARE USED, SEE ACI 318 FOR ADDITIONAL CONSIDERATIONS.

ABBREVIATIONS:

ALT. SP.	= ALTERNAT SPACING	G	= GAS
B/L	= BASELINE	H.S.	= HIGH STRENGTH
BF	= BOTTOM FACE		
BL	= BOTTOM LAYER	NF	= NEAR FACE
		NS	= NEAR SIDE
C	= CENTER	N.T.S.	= NOT TO SCALE
CJ	= CONSTRUCTION JOINT		
CL	= CLEAR COVER	O.C.	= ON CENTER
C/L OR ℄	= CENTERLINE	OPT.	= OPTIONAL
C.R.S.	= CORROSION - RESISTANT STEEL	OS	= OFFSET
Ø	= DIAMETER	P.C.	= POINT OF CURVATURE
D	= DRAIN	P.T.	= POINT OF TANGENCY
D.I.	= DROP INLET		
D.P.	= DRAIN PIPE	STD. HK.	= STANDARD HOOK
D/S	= DOWNSTREAM	STA.	= STATION
D.V.	= DRAIN VALVE		
D.V. MH.	= DRAIN VALVE MANHOLE	TF	= TOP FACE
E	= ELECTRICAL	U.O.N.	= UNLESS OTHERWISE NOTED
EF	= EACH FACE	U/S	= UPSTREAM
EL.	= ELEVATION		
ES	= EQUALLY SPACED	W	= WATER
		W/L	= WALL LINE
FF	= FAR FACE	W.M.	= WATER METER
FS	= FAR SIDE	W.V.	= WATER VALVE



CIRCULAR OPENING DETAIL

EXTRA REINFORCING AROUND OPENINGS

7 / –

12"=1'-0"

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:	--	--
CHECKED:	--	--
CAD ENTERED:	JCB	3/19
DESIGNED:	WJ	3/19
CHECKED:	JC	3/19
SUPERVISOR:	SJ	3/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

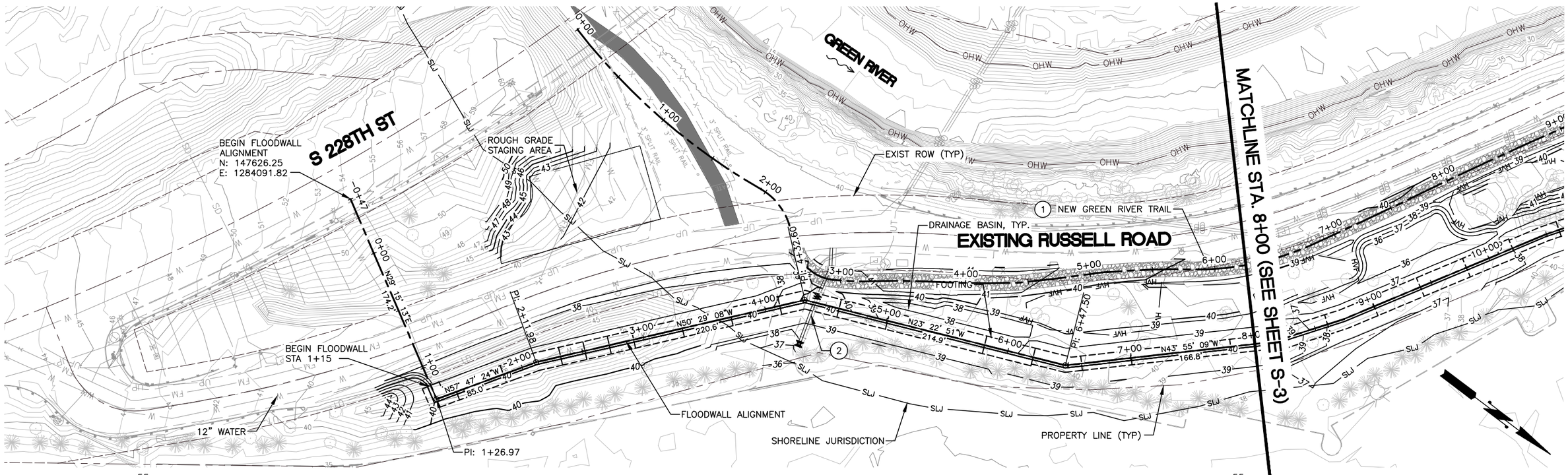
HDR Engineering Inc.

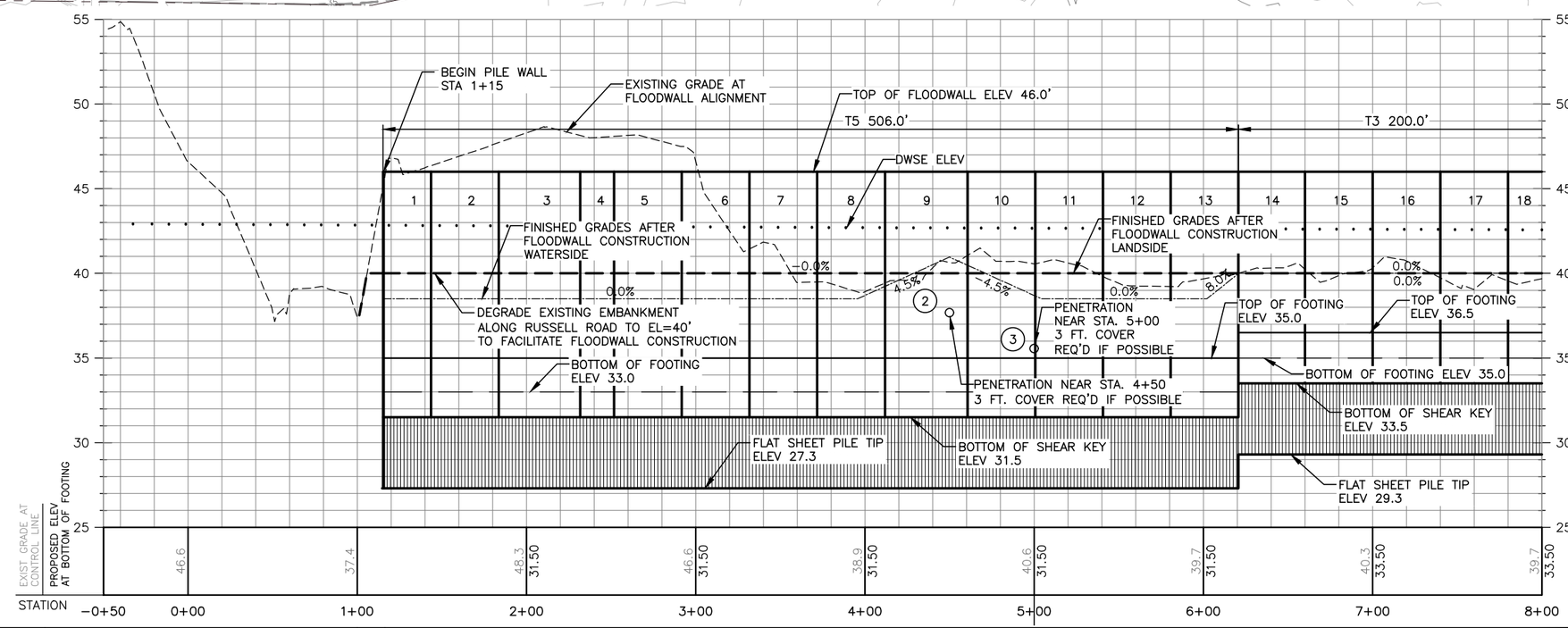
King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

STRUCTURAL GENERAL NOTES

SHEET
S-01





NOTES:

1. FOR FLOODWALL REINFORCING DETAILS SEE SHEETS S-21 TO S-23.
2. FOR FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUTS SEE SHEETS S-05 TO S-20.
3. FOR FLOODWALL TO SHEET PILE I-WALL TRANSITION DETAILS SEE S-25.
4. FOR UTILITY PIPE PENETRATION DETAILS SEE S-27.
5. FOR FLOODWALL PATTERN FORMLINERS SEE FP SHEETS.

CONSTRUCTION NOTES

(1) ROADWAY IMPROVEMENTS SEE SHEETS CP-1 TO CP-6.

(2) FOR 2 X 2" WATERLINE RELOCATIONS. SEE "CWS" SERIES SHEETS. POTHOLE WATERMAIN TO VERIFY LOCATION CONTRACTOR TO PROTECT WATERMAIN IN PLACE DURING SHEET PILE INSTALLATION.

40 0 40 80
SCALE IN FEET

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:	--	--	
CHECKED:	--	--	
CAD ENTERED:	RD	3/19	
DESIGNED:	VR	3/19	
CHECKED:	AE	3/19	
SUPERVISOR:	SJ	3/19	

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

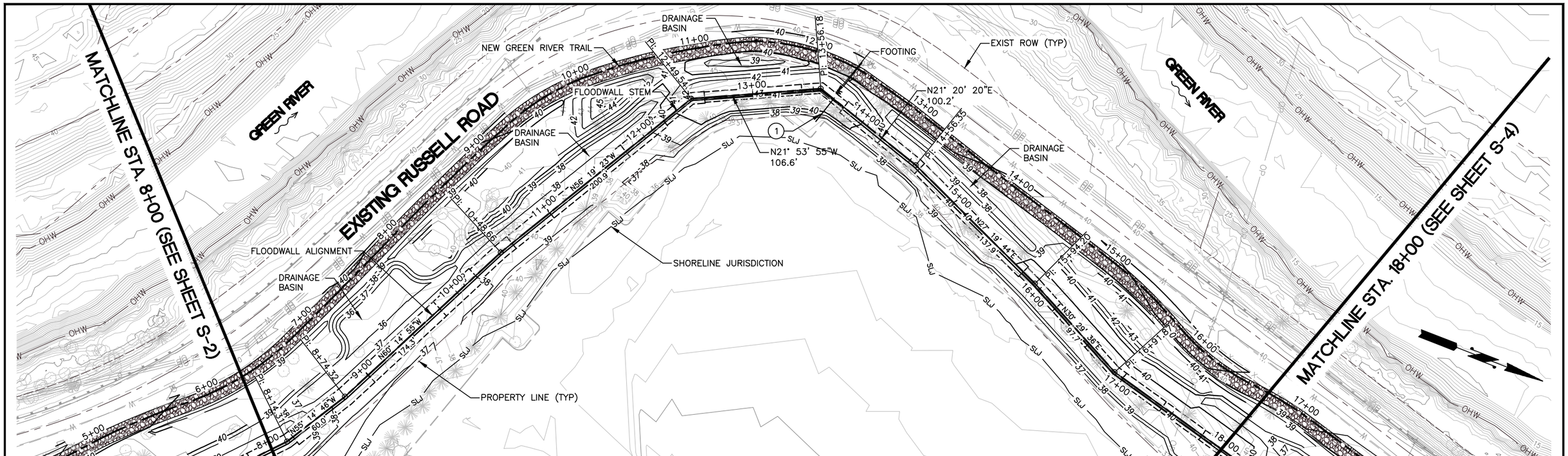
ALLANA A. EVANS STATE OF WASHINGTON 37995 REGISTERED PROFESSIONAL ENGINEER
04/02/19

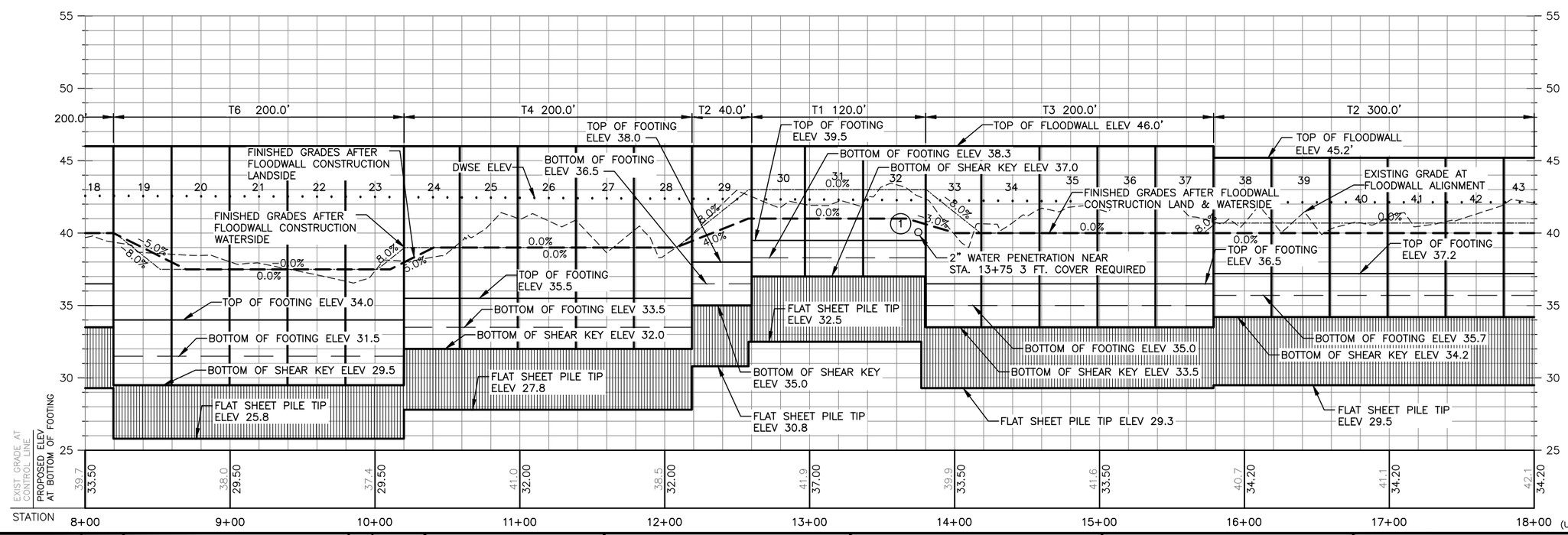
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
PROPOSED FLOODWALL PLAN AND PROFILE
STA 0+00 TO 8+00

SHEET
S-02





NOTES:

1. FOR FLOODWALL REINFORCING DETAILS SEE SHEETS S-21 TO S-23.
2. FOR FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUTS SEE SHEETS S-05 TO S-20.
3. FOR FLOODWALL TO SHEET PILE I-WAL TRANSITION DETAILS SEE S-25.
4. FOR UTILITY PIPE PENETRATION DETAILS SEE S-27.
5. FOR FLOODWALL PATTERN FORMLINERS SEE FP SHEETS.

CONSTRUCTION NOTES

1. 1 X 2" WATERLINE RELOCATION NEAR STA. 13+75 – SEE CWS SERIES SHEETS.

SCALE IN FEET 40 0 40 80

811

Know what's below.
Call before you dig.

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEY JOB NO/SOURCE:	--	--
CHECKED:	--	--
CAD ENTERED:	RD	3/19
DESIGNED:	VR	3/19
CHECKED:	AE	3/19
SUPERVISOR:	SJ	3/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

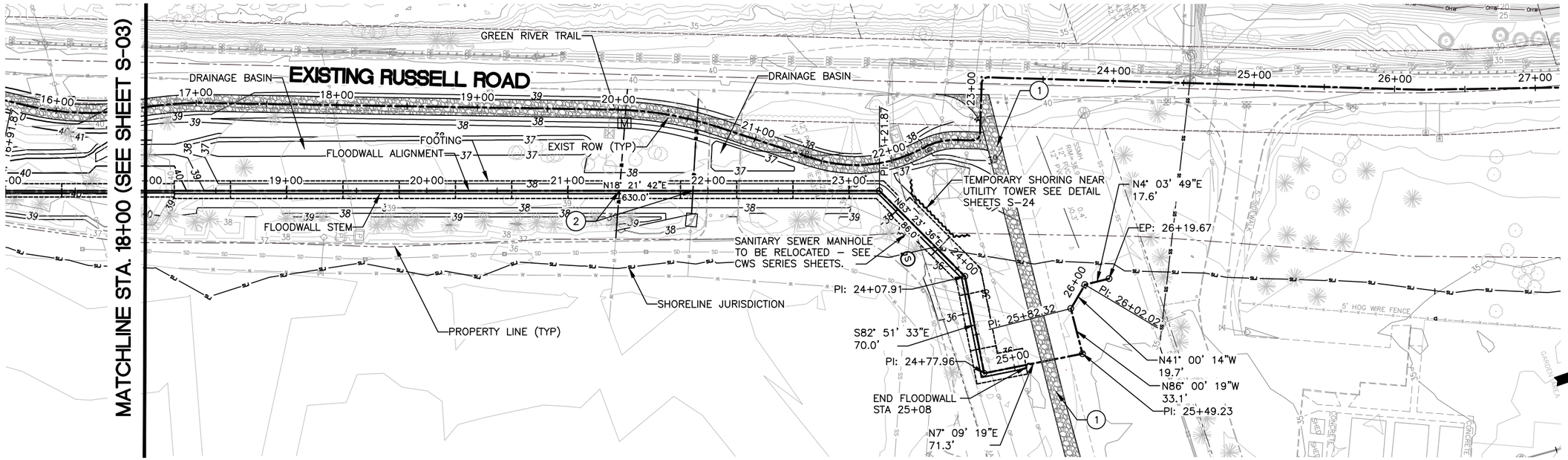
ALLANA E. EVANS STATE OF WASHINGTON 37995 REGISTERED PROFESSIONAL ENGINEER 04/02/19

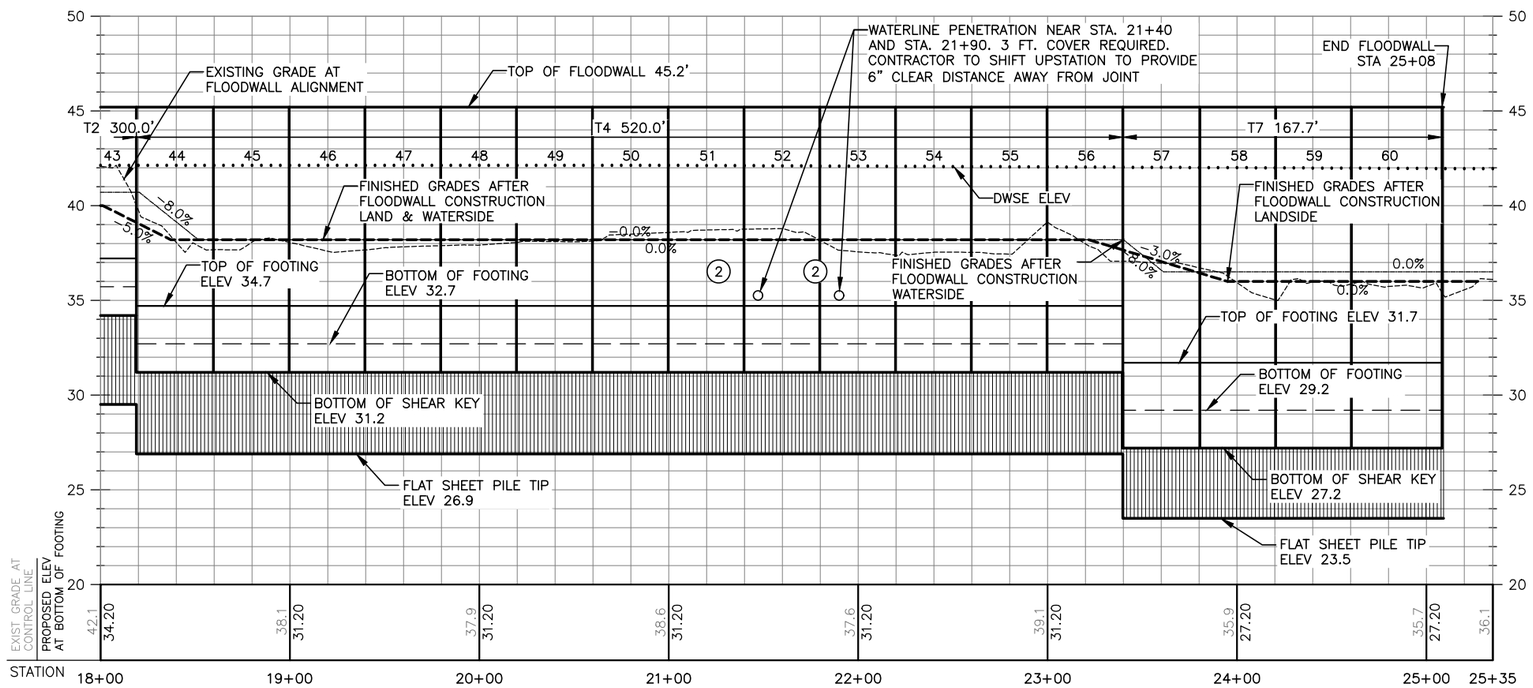
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
PROPOSED FLOODWALL PLAN AND PROFILE
STA 8+00 TO 18+00

SHEET
S-03





NOTES:

1. FOR FLOODWALL REINFORCING DETAILS SEE SHEETS S–21 TO S–23.
2. FOR FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUTS SEE SHEETS S–05 TO S–20.
3. FOR FLOODWALL TO SHEET PILE I–WAL TRANSITION DETAILS SEE S–25.
4. FOR UTILITY PIPE PENETRATION DETAILS SEE S–27.
5. FOR FLOODWALL PATTERN FORMLINERS SEE FP SHEETS.

CONSTRUCTION NOTES

(1) ROADWAY IMPROVEMENTS SEE SHEETS CP–01 TO CP–06.

(2) 1 x 3" AND 1 X 8" WATERLINE RELOCATION NEAR STA. 21+40 AND 21+90 – SEE CWS SERIES SHEETS.

SCALE IN FEET

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:	--	--
CHECKED:	--	--
CAD ENTERED:	RD	3/19
DESIGNED:	VR	3/19
CHECKED:	AE	3/19
SUPERVISOR:	SJ	3/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

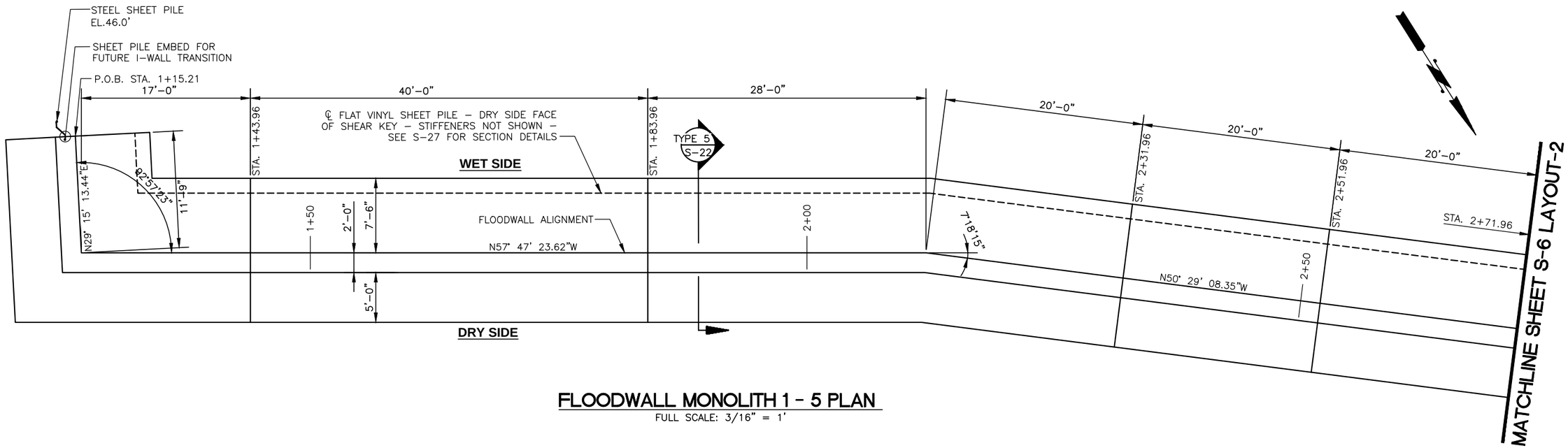
ALLANA A. EVANS, STATE OF WASHINGTON, 37995, REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

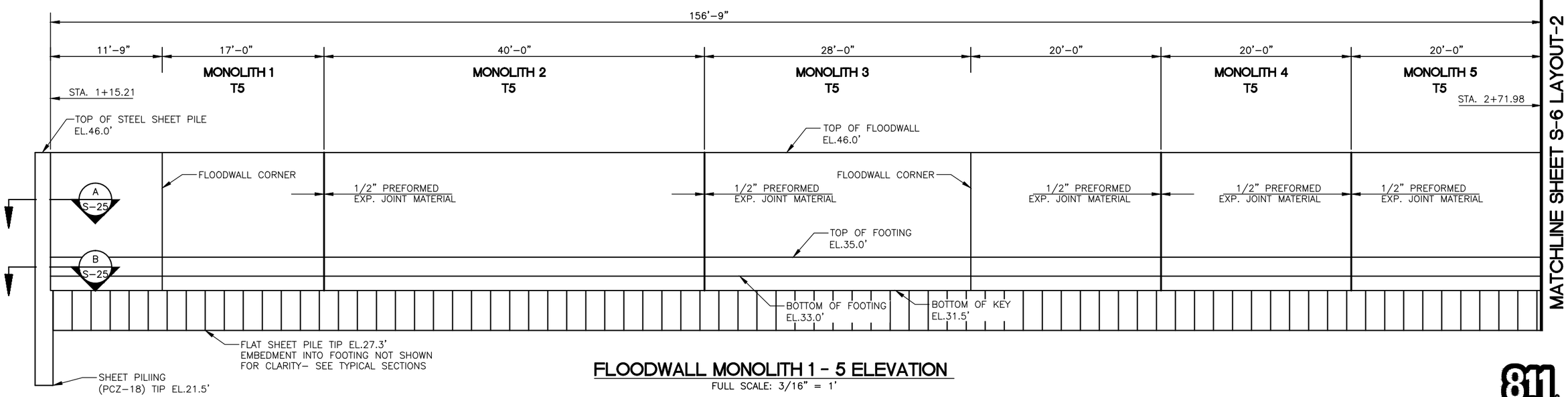
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
PROPOSED FLOODWALL PLAN AND PROFILE
STA 18+00 TO 26+41

SHEET
S-04



FLOODWALL MONOLITH 1 - 5 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 1 - 5 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:	
CHECKED:	
CAD ENTERED:	JCB
DESIGNED:	WJ
CHECKED:	SAM
SUPERVISOR:	BK

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

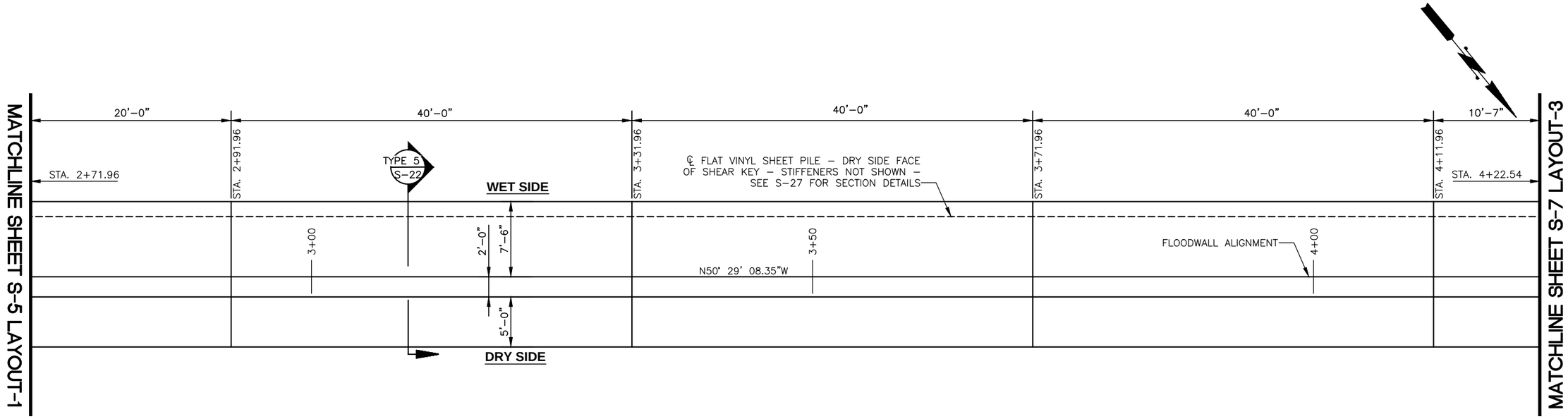
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

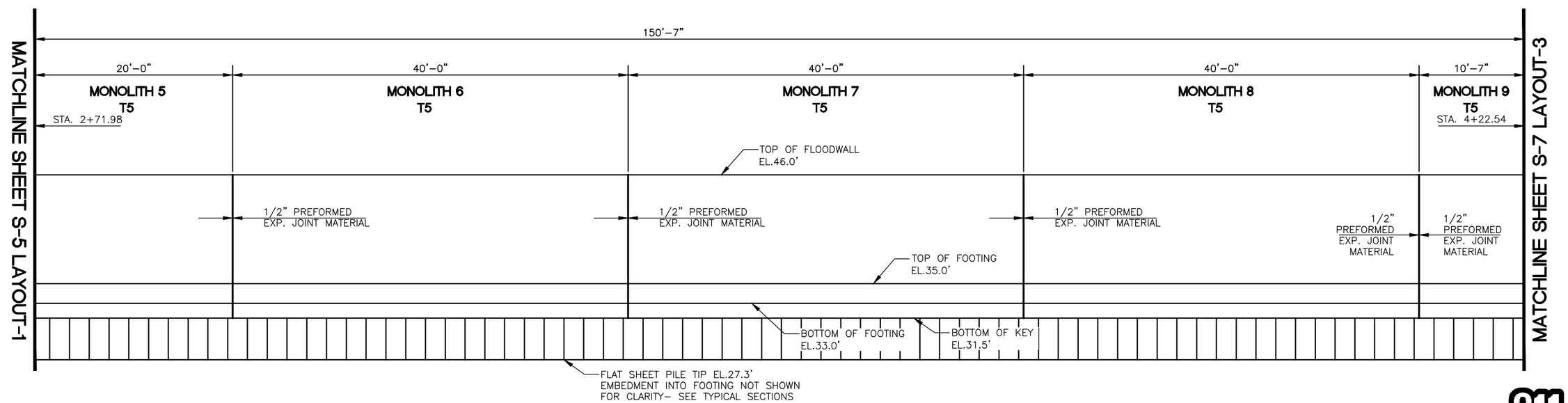
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 1

SHEET
S-05



FLOODWALL MONOLITH 5 - 9 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 5 - 9 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
CAD ENTERED: JCB				
DESIGNED: WJ	NUM.	REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
	NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

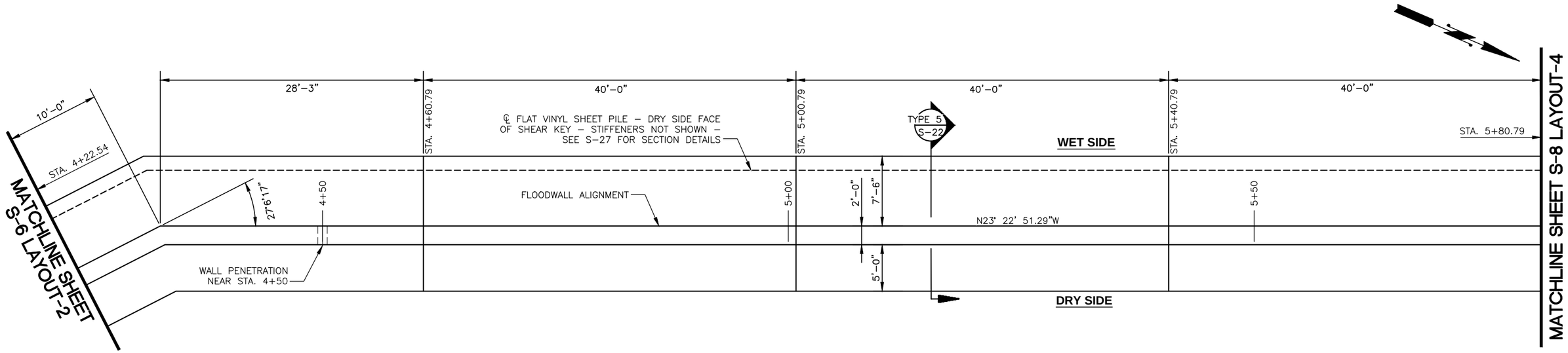
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

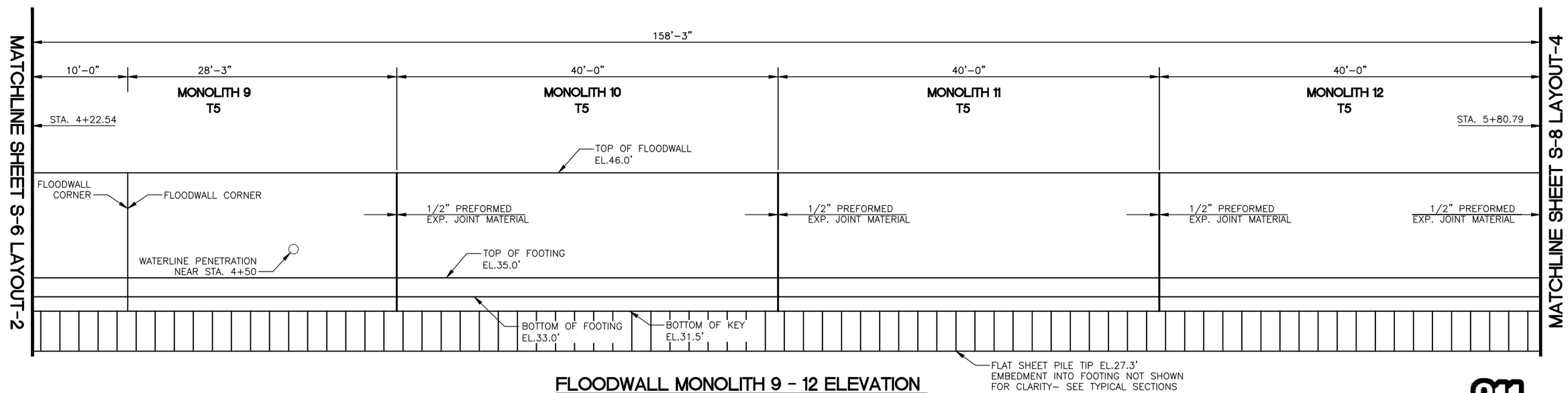
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 2

SHEET
S-06



FLOODWALL MONOLITH 9 - 12 PLAN

SCALE: 3/16" = 1'



FLOODWALL MONOLITH 9 - 12 ELEVATION

SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
CAD ENTERED: JCB				
DESIGNED: WJ		NUM. REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
		NUM. RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

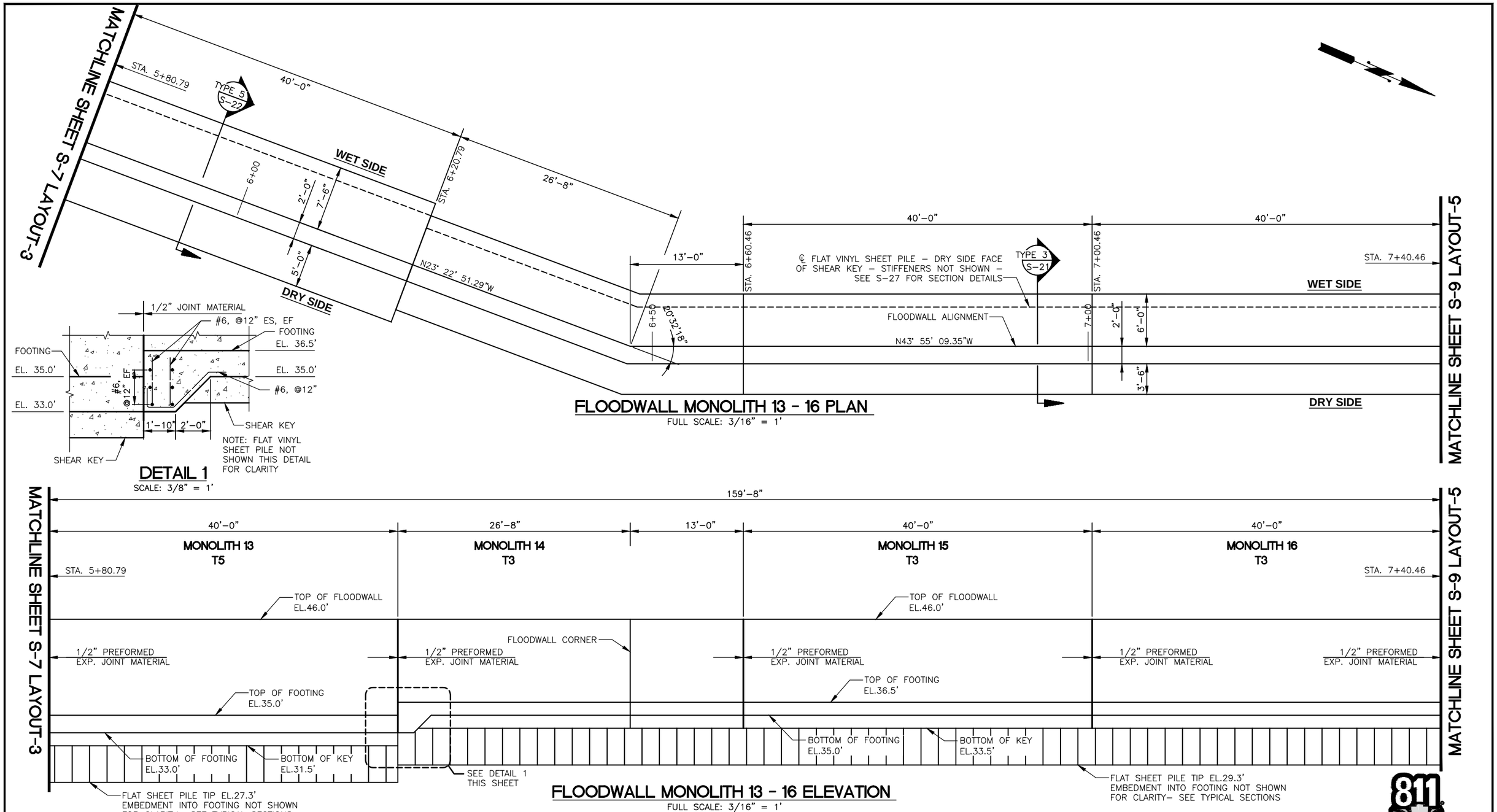
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 3

SHEET
S-07



CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:					
CHECKED:					
CAD ENTERED:	JCB				
DESIGNED:	WJ	NUM.	REVISION	BY	DATE
CHECKED:	SAM				
SUPERVISOR:	BK				
		NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING: _____

PROJECT No. 1112056

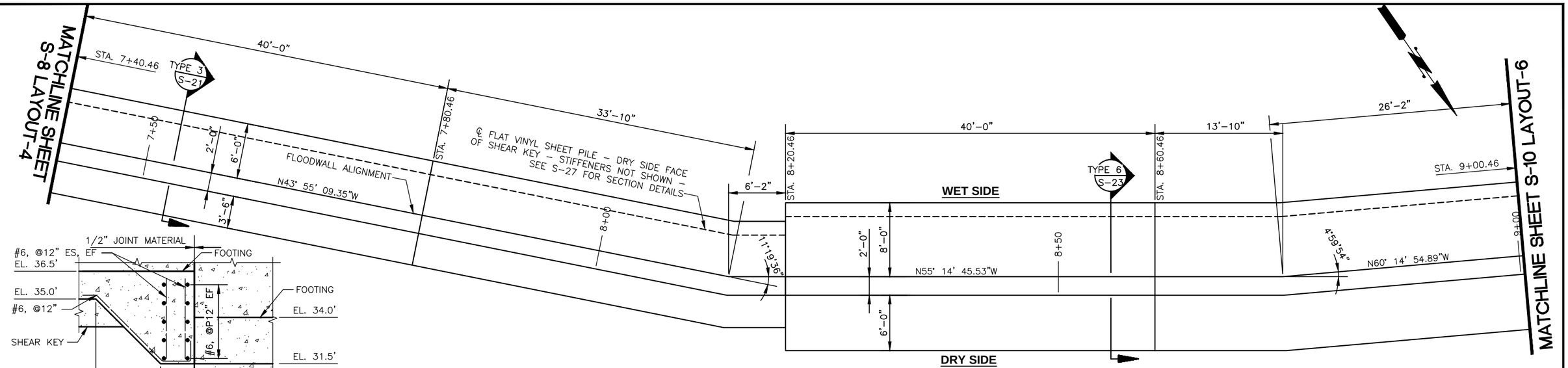
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 4

SHEET
S-08

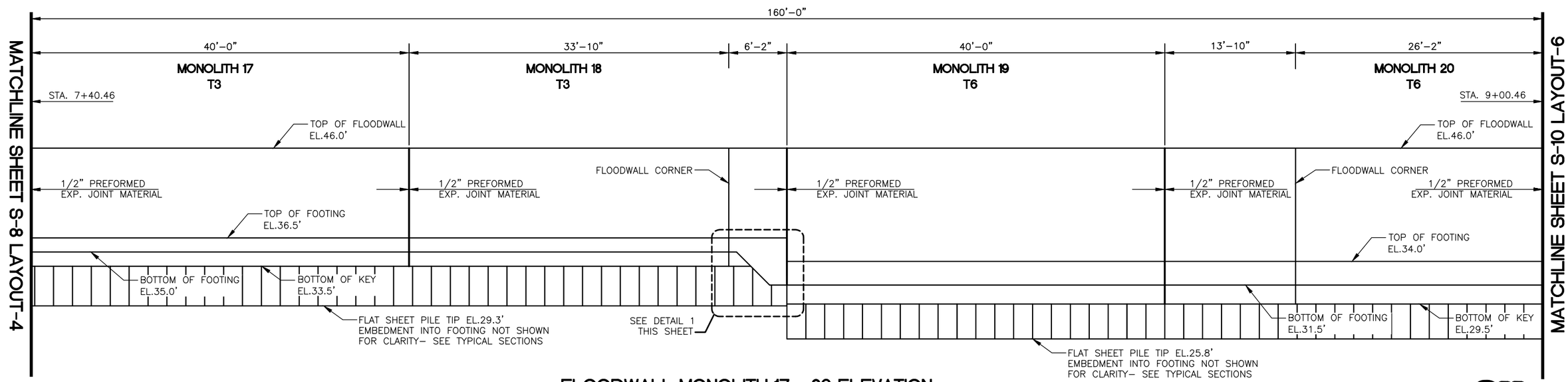


DETAIL 1

SCALE: 3/8" = 1'

FLOODWALL MONOLITH 17 - 20 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 17 - 20 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:			
CHECKED:			
CAD ENTERED:	JCB		
DESIGNED:	WJ	NUM. REVISION	BY / DATE
CHECKED:	SAM		
SUPERVISOR:	BK		
		NUM. RECORD CHANGES APPROVED	BY / DATE

FUNDING:

PROJECT No. 1112056

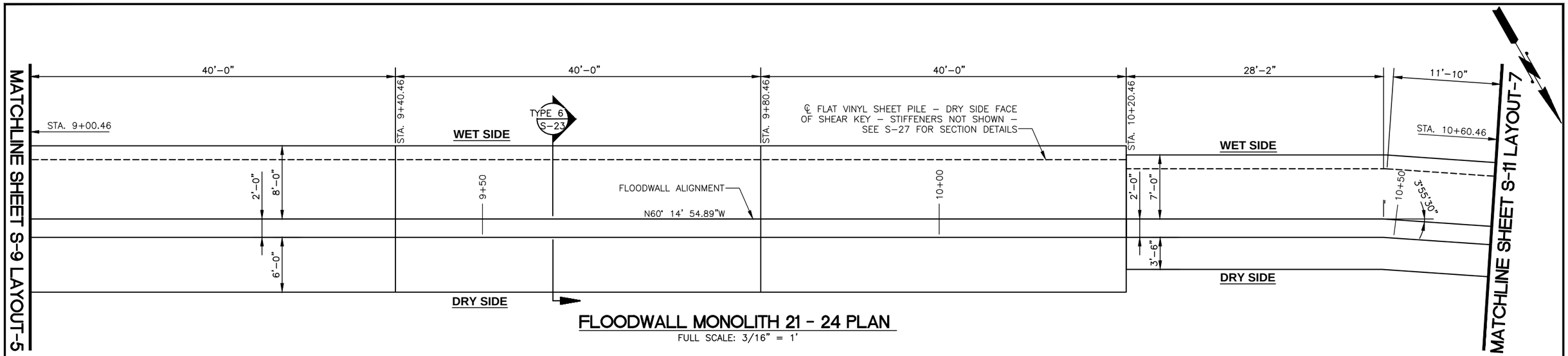
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

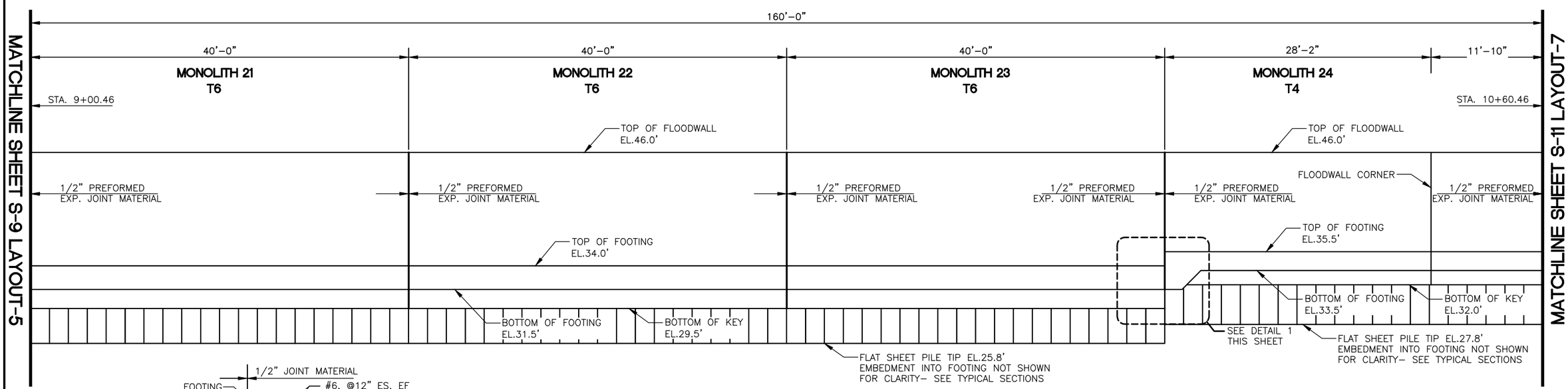
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 5

SHEET
S-09



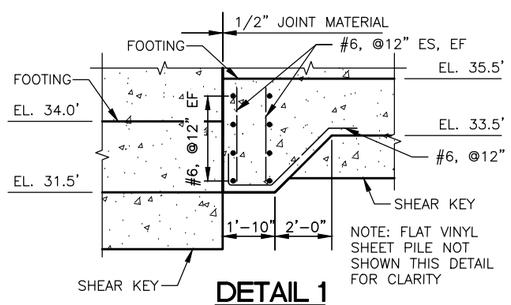
FLOODWALL MONOLITH 21 - 24 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 21 - 24 ELEVATION

FULL SCALE: 3/16" = 1'



DETAIL 1

SCALE: 3/8" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
CAD ENTERED: JCB				
DESIGNED: WJ		NUM. REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
		NUM. RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

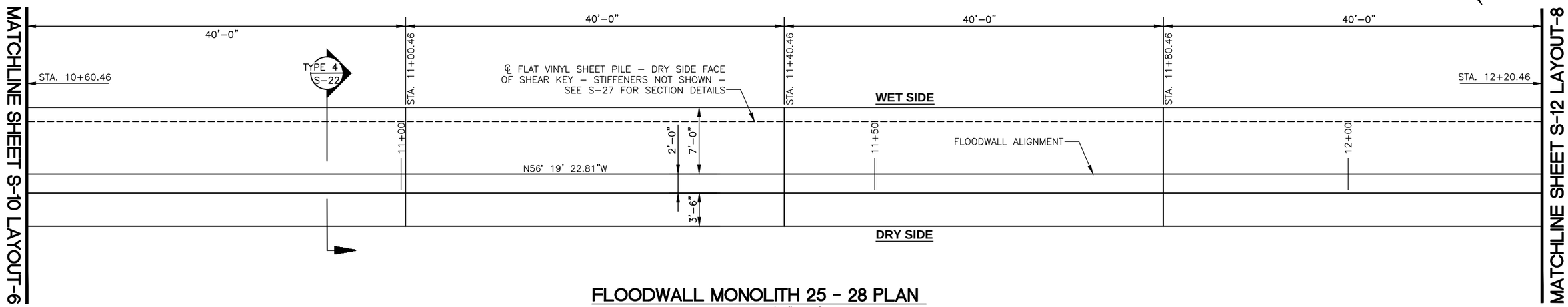
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

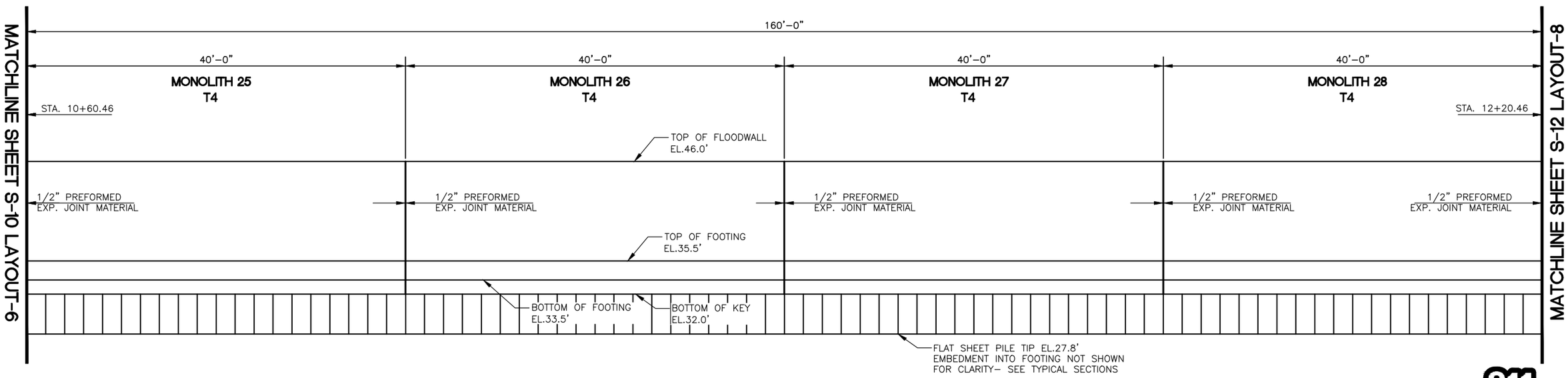
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 6

SHEET
S-10



FLOODWALL MONOLITH 25 - 28 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 25 - 28 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
CAD ENTERED: JCB				
DESIGNED: WJ		NUM. REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
		NUM. RECORD CHANGES APPROVED	BY	DATE

FUNDING:

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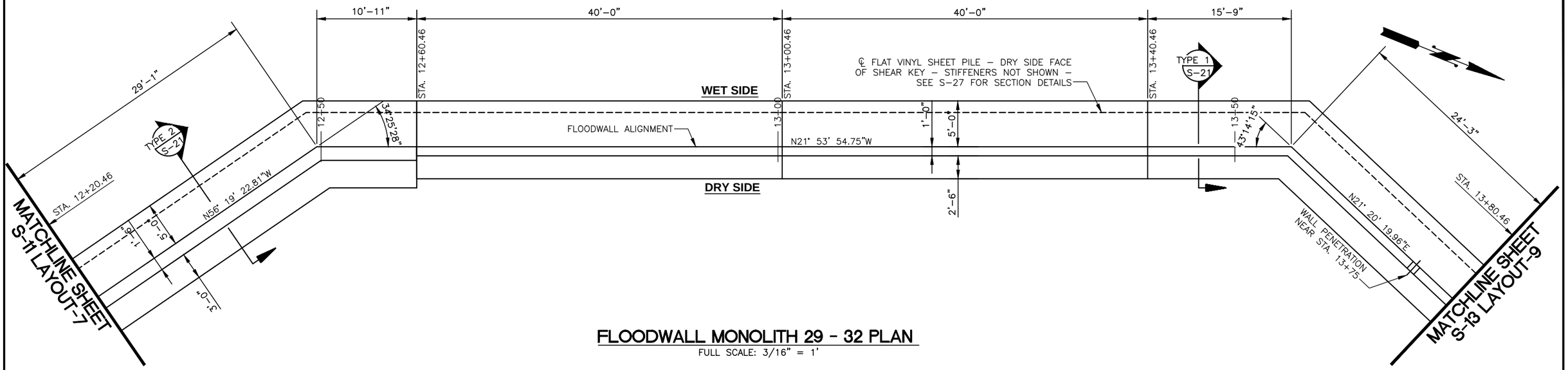
Christie True, Director

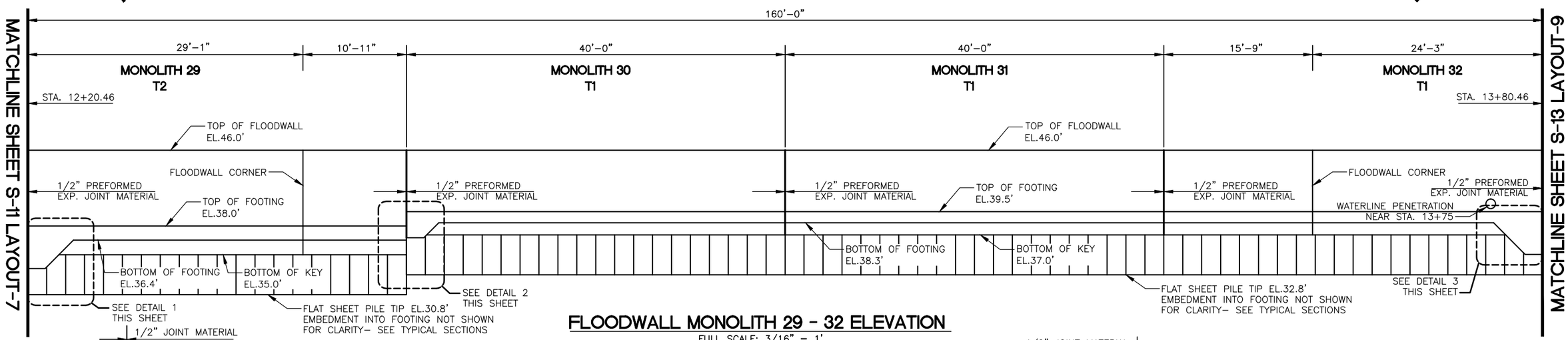
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 7

SHEET
S-11



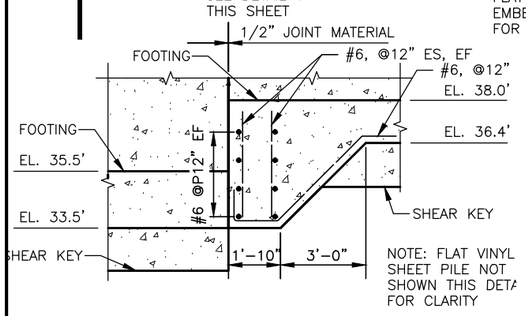
FLOODWALL MONOLITH 29 - 32 PLAN

FULL SCALE: 3/16" = 1'



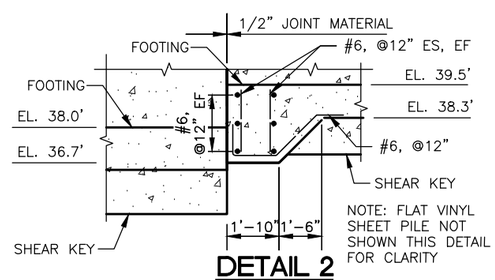
FLOODWALL MONOLITH 29 - 32 ELEVATION

FULL SCALE: 3/16" = 1'



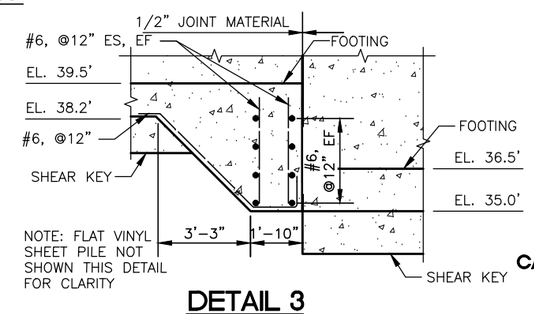
DETAIL 1

SCALE: 3/8" = 1'



DETAIL 2

SCALE: 3/8" = 1'



DETAIL 3

SCALE: 3/8" = 1'

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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SUPERVISOR:	BK				
		NUM.	RECORD CHANGES APPROVED	BY	DATE

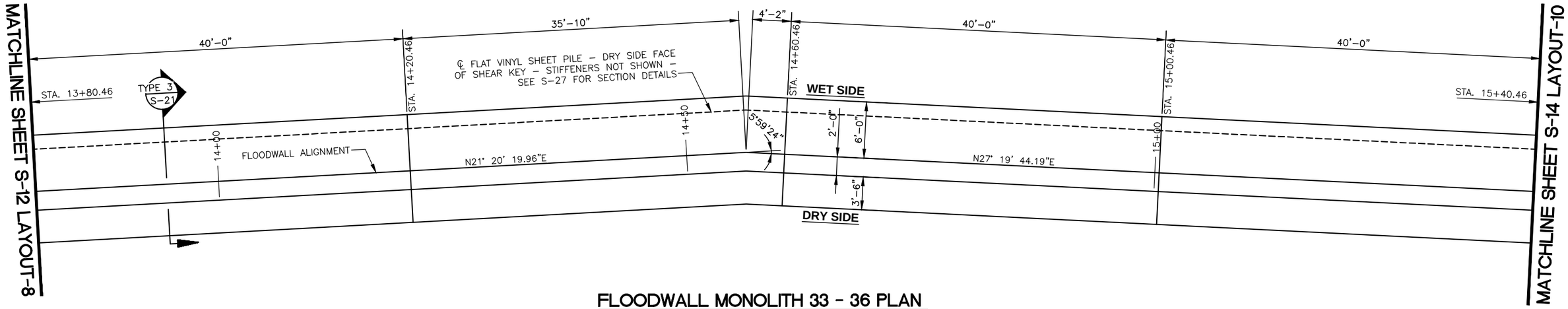
FUNDING:
PROJECT No. 1112056
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

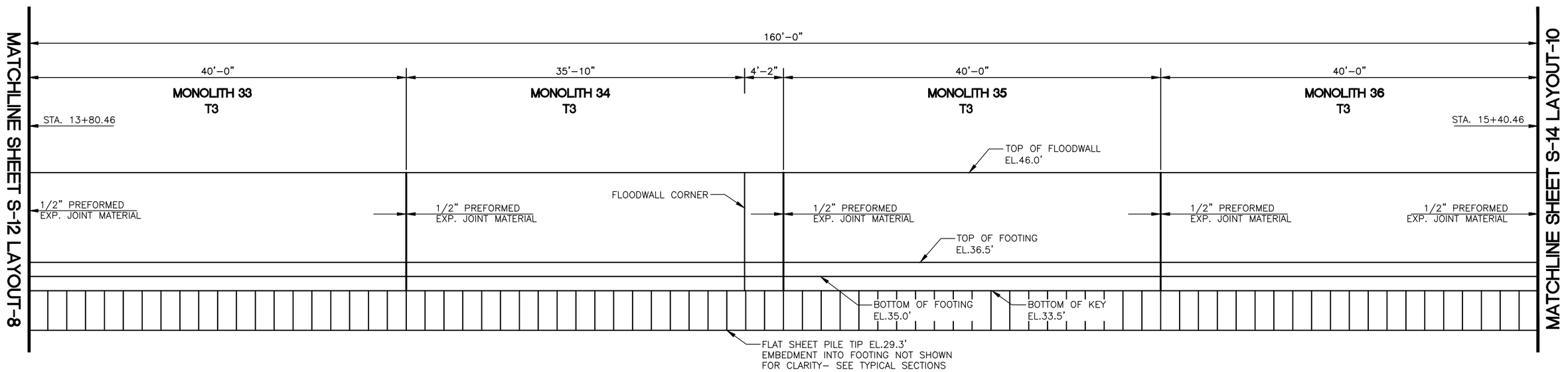
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 8

SHEET
S-12



FLOODWALL MONOLITH 33 - 36 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 33 - 36 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below.
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SURVEY JOB NO/SOURCE:	
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CAD ENTERED:	JCB
DESIGNED:	WJ
CHECKED:	SAM
SUPERVISOR:	BK

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

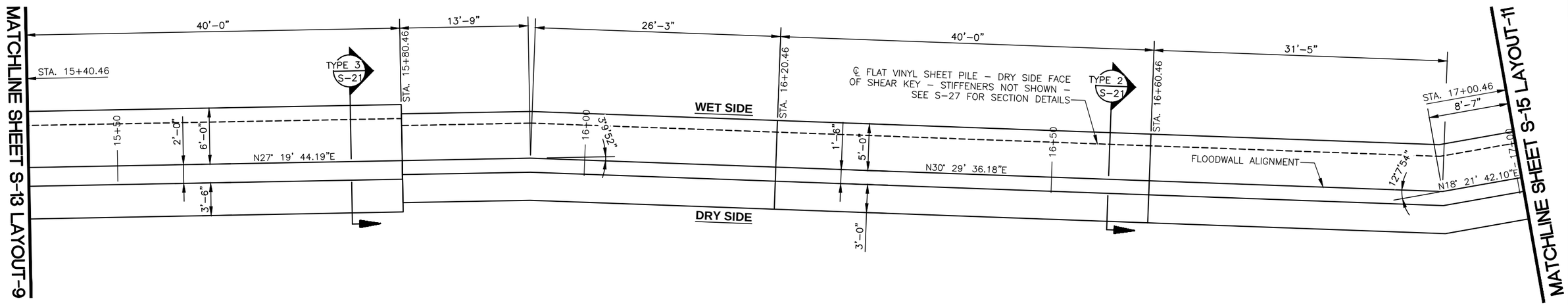
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

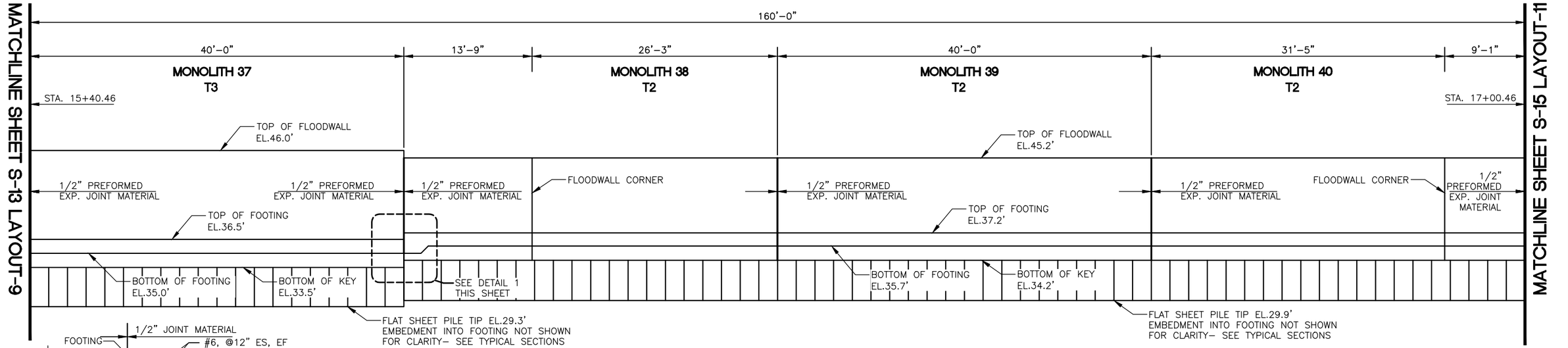
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 9

SHEET
S-13



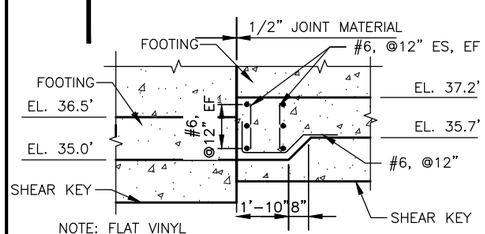
FLOODWALL MONOLITH 37 - 40 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 37 - 40 ELEVATION

FULL SCALE: 3/16" = 1'



NOTE: FLAT VINYL SHEET PILE NOT SHOWN THIS DETAIL FOR CLARITY

DETAIL 1

SCALE: 3/8" = 1'

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
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DESIGNED: WJ		NUM. REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
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FUNDING:

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CONTRACT No. C01294C18

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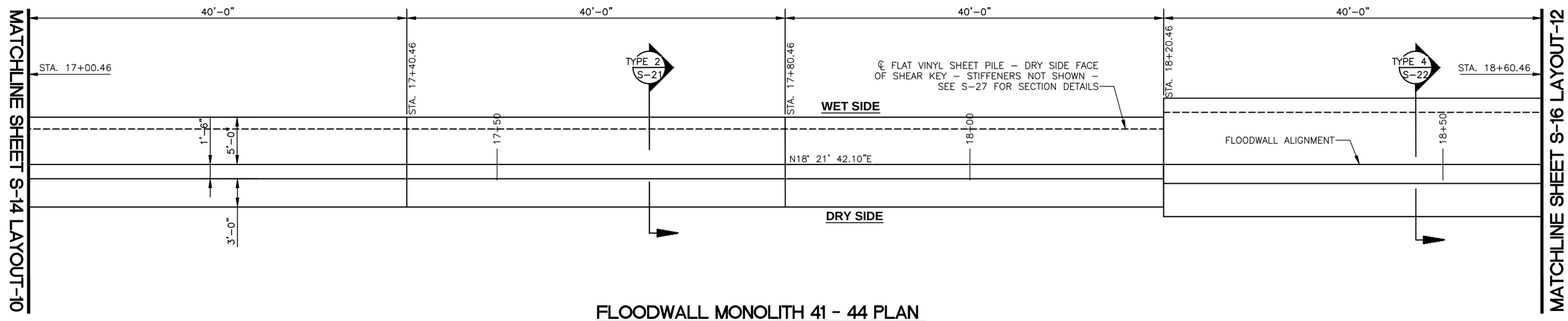
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

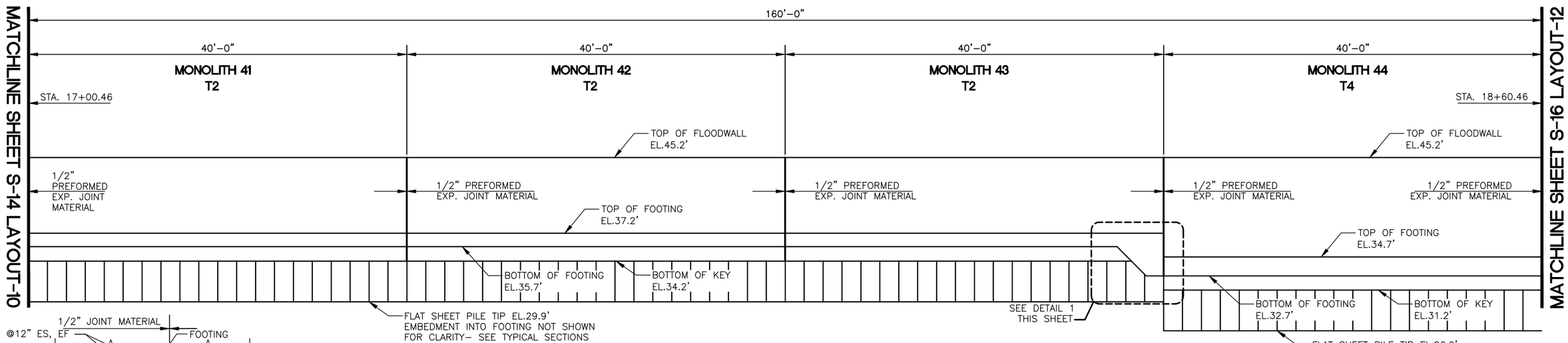
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 10

SHEET
S-14



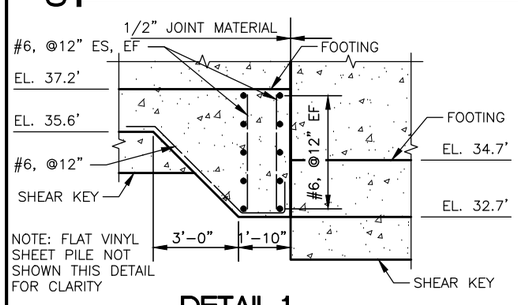
FLOODWALL MONOLITH 41 - 44 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 41 - 44 ELEVATION

FULL SCALE: 3/16" = 1'



DETAIL 1

SCALE: 3/8" = 1'

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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CHECKED:	SAM
SUPERVISOR:	BK

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CONTRACT No. C01294C18

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King County
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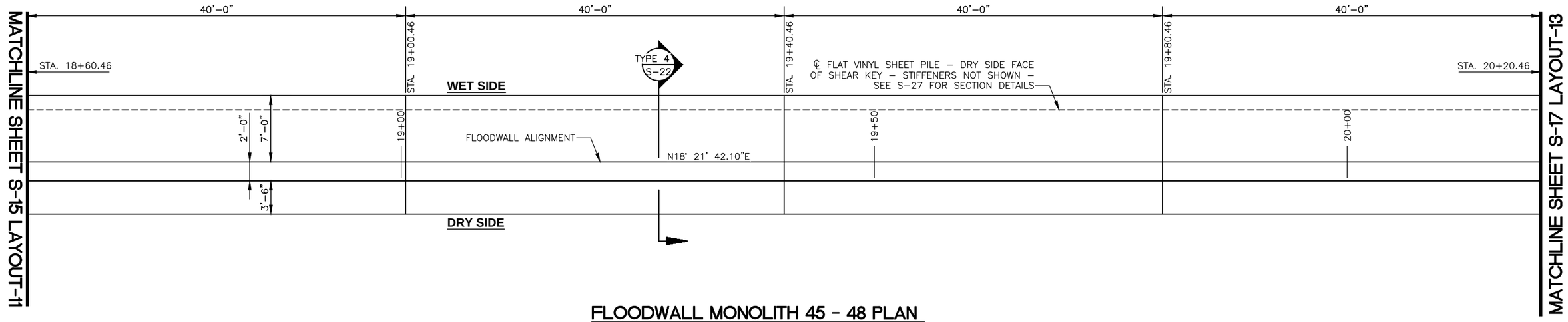
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

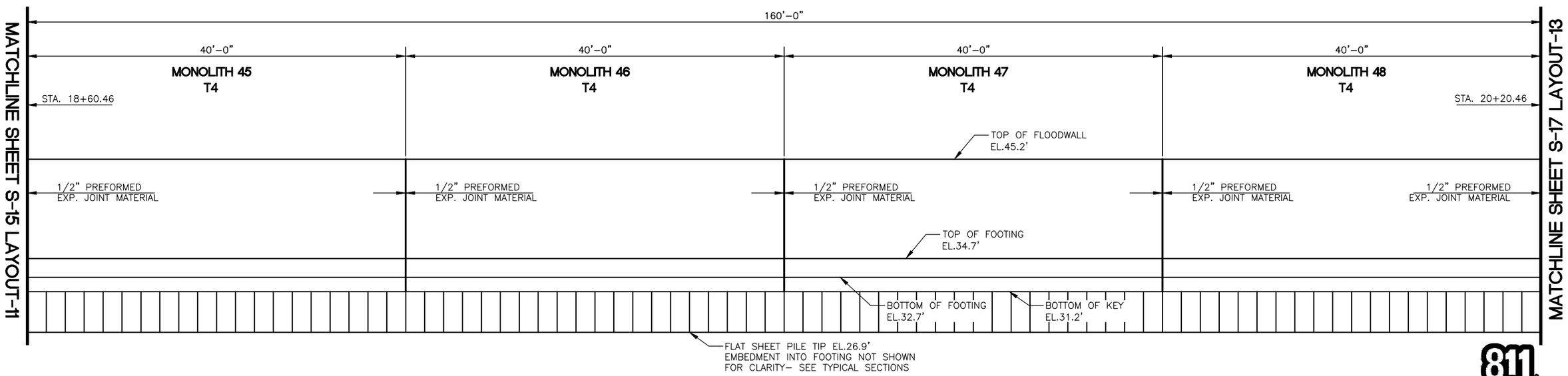
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 11

SHEET
S-15



FLOODWALL MONOLITH 45 - 48 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 45 - 48 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below.
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CHECKED: SAM
SUPERVISOR: BK

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

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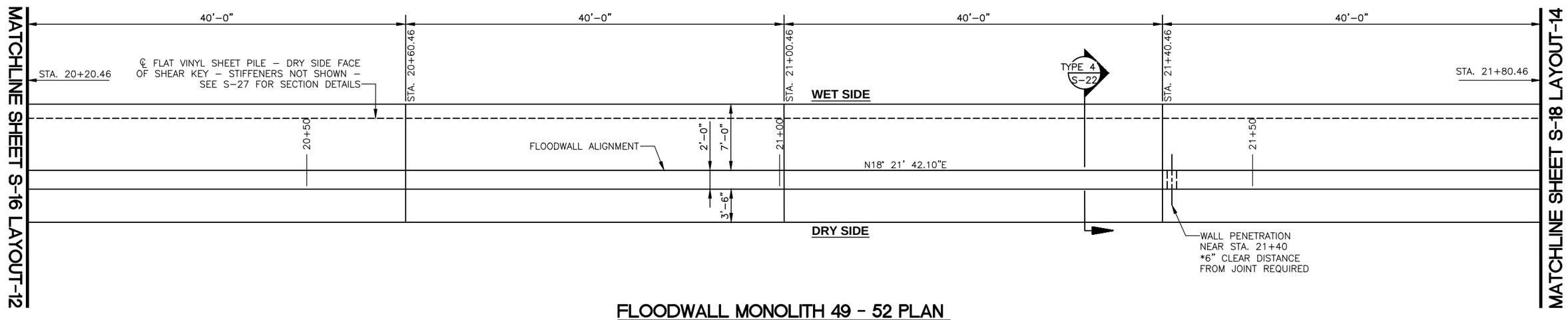
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

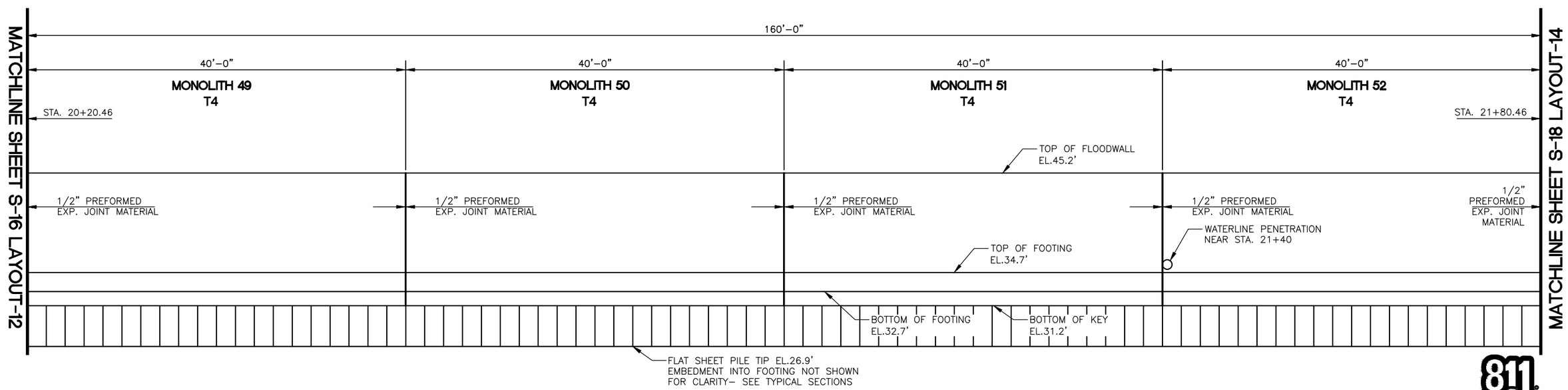
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 12

SHEET
S-16



FLOODWALL MONOLITH 49 - 52 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 49 - 52 ELEVATION

FULL SCALE: 3/16" = 1'

811

Know what's below.
Call before you dig.

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEY JOB NO/SOURCE:
CHECKED:
CAD ENTERED: JCB
DESIGNED: WJ
CHECKED: SAM
SUPERVISOR: BK

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

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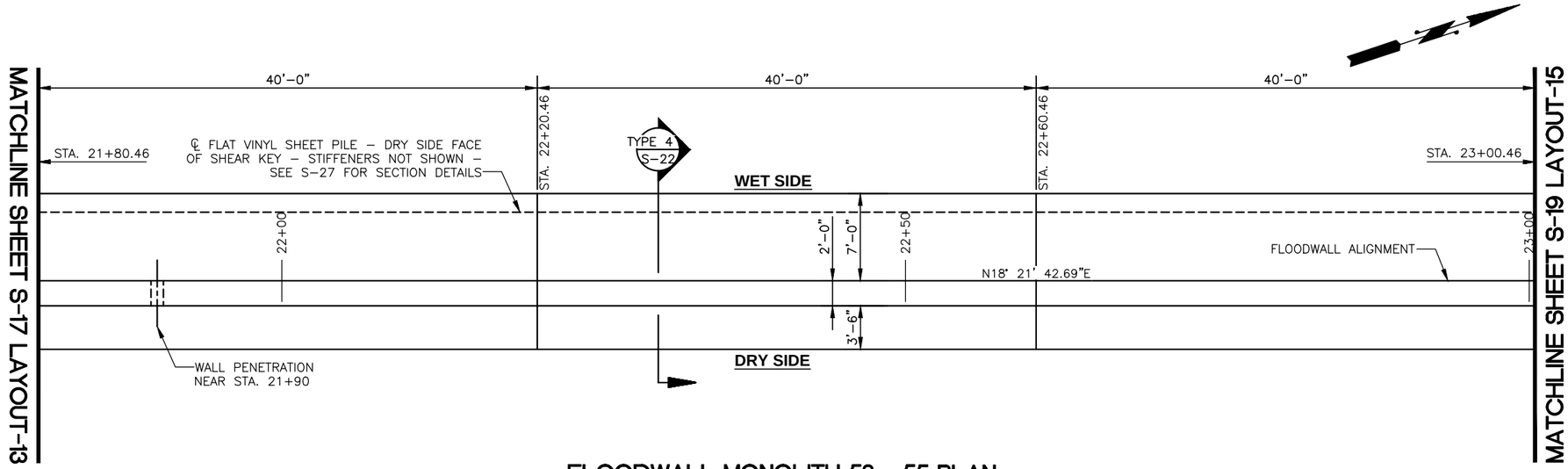
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

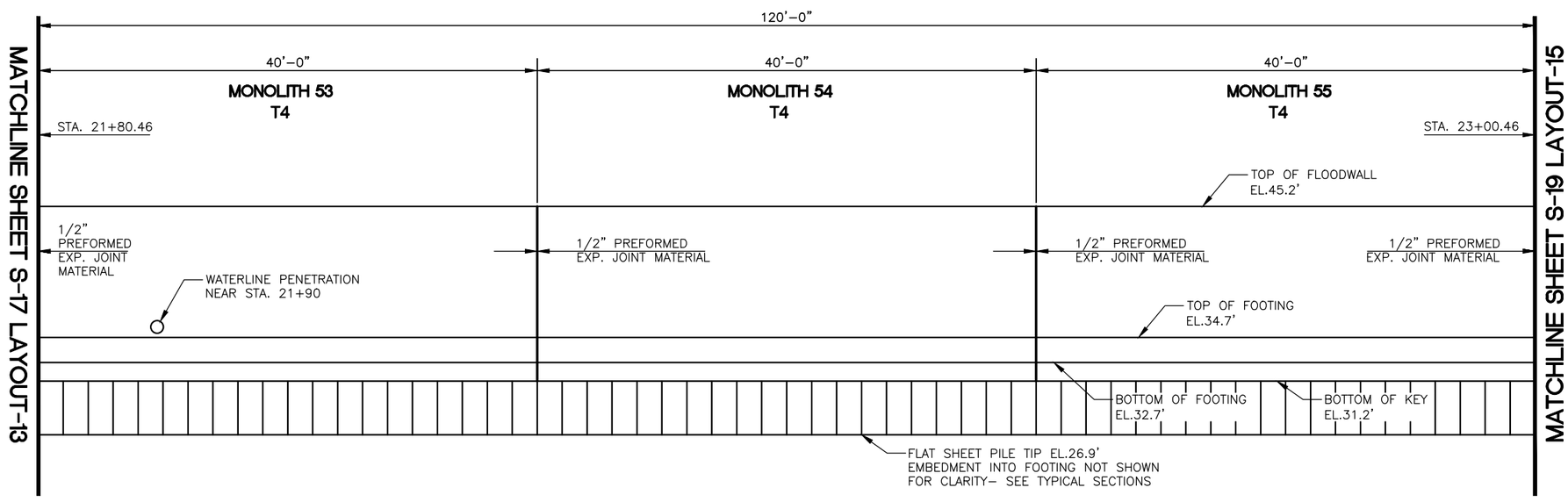
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 13

SHEET
S-17



FLOODWALL MONOLITH 53 - 55 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 53 - 55 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below.
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Christie True, Director

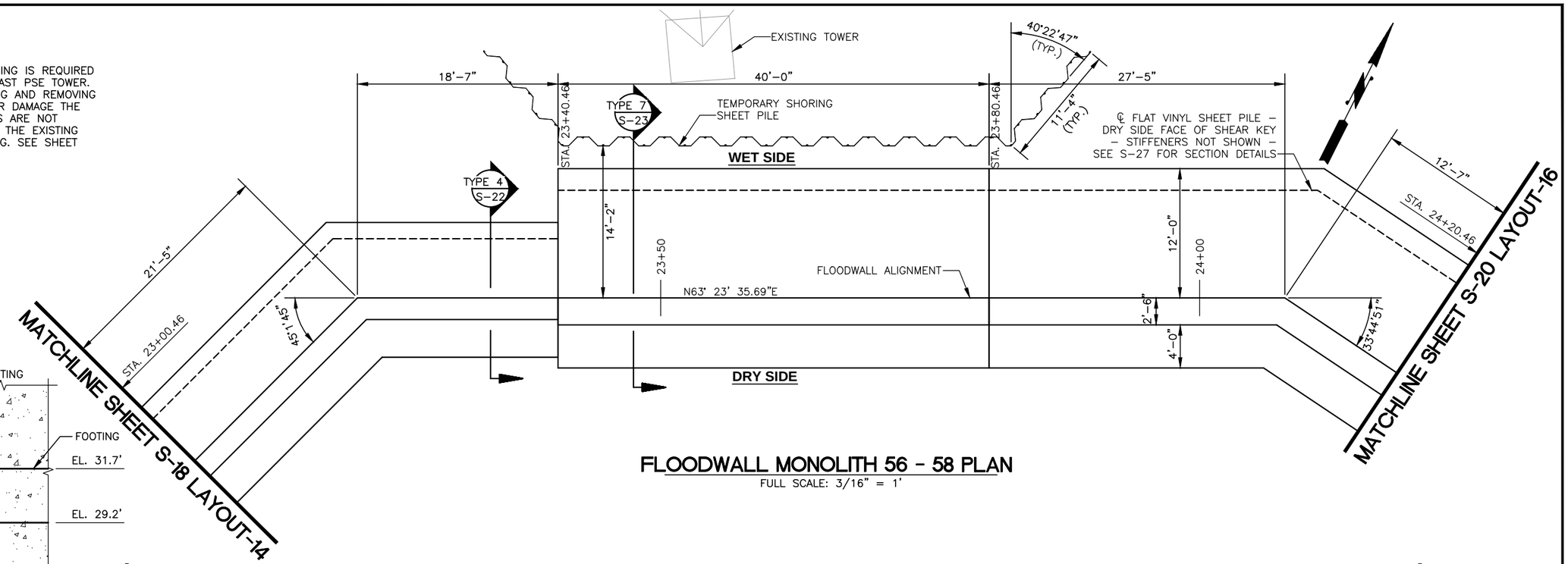
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 14

SHEET
S-18

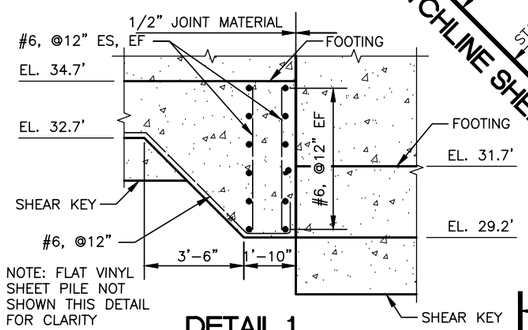
NOTES:

1. CONTRACTOR DESIGNED TEMPORARY SHORING IS REQUIRED AROUND THE PERIMETER OF THE HIGH MAST PSE TOWER. CONTRACTOR SHALL TAKE CARE INSTALLING AND REMOVING THE SHORING SO AS NOT TO DISTURB OR DAMAGE THE TOWER FOUNDATIONS. AS BUILT DRAWINGS ARE NOT AVAILABLE. CONTRACTOR TO FIELD VERIFY THE EXISTING FOUNDATIONS BEFORE INSTALLING SHORING. SEE SHEET S-24 FOR PLAN AND SECTION VIEWS.



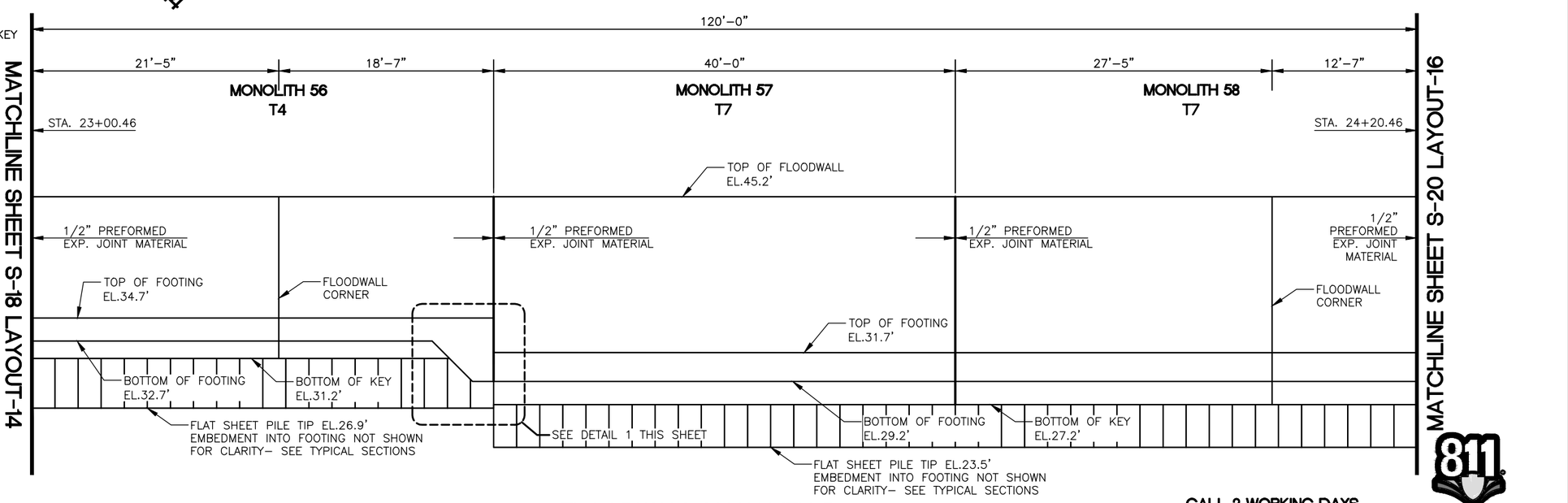
FLOODWALL MONOLITH 56 - 58 PLAN

FULL SCALE: 3/16" = 1'



DETAIL 1

SCALE: 3/8" = 1'



FLOODWALL MONOLITH 56 - 58 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
CAD ENTERED: JCB				
DESIGNED: WJ		NUM. REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
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FUNDING:

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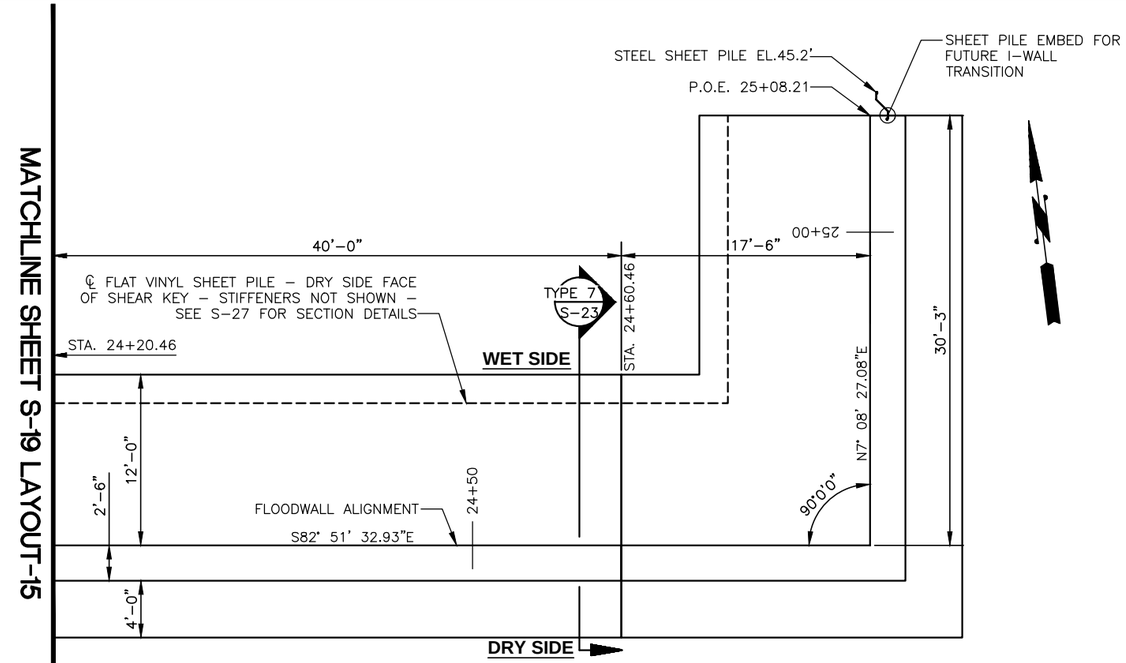
Christie True, Director

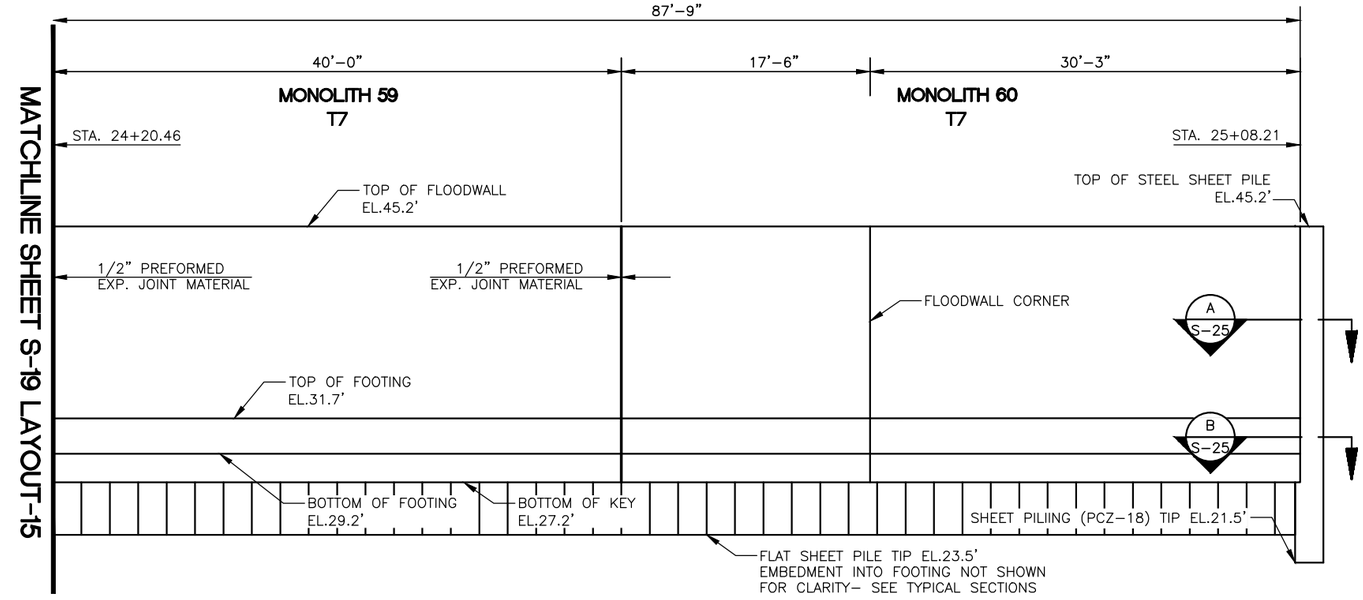
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 15

SHEET
S-19



FLOODWALL MONOLITH 59 - 60 PLAN

FULL SCALE: 3/16" = 1'



FLOODWALL MONOLITH 59 - 60 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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SURVEY JOB NO/SOURCE:			
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SUPERVISOR:	BK		
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Christie True, Director

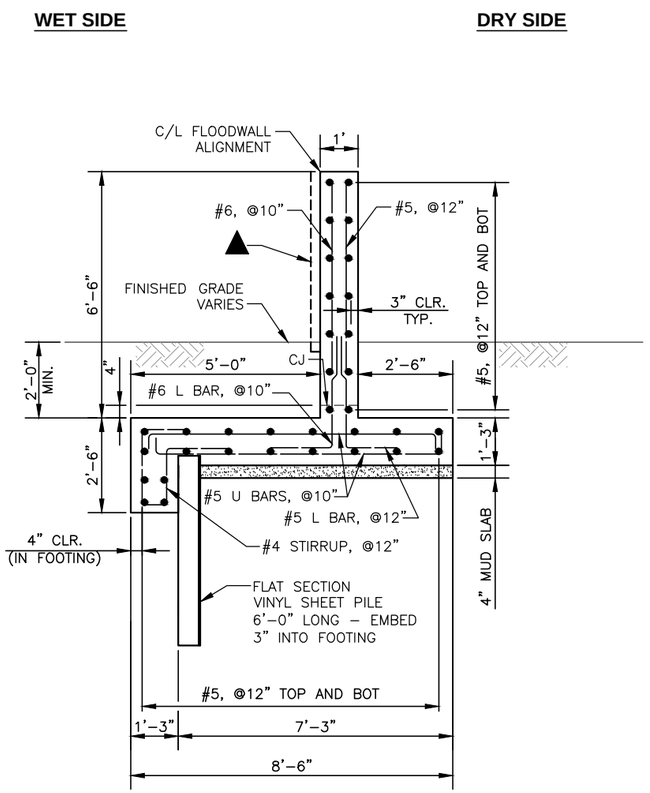
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUT - 16

SHEET
S-20

NOTES:

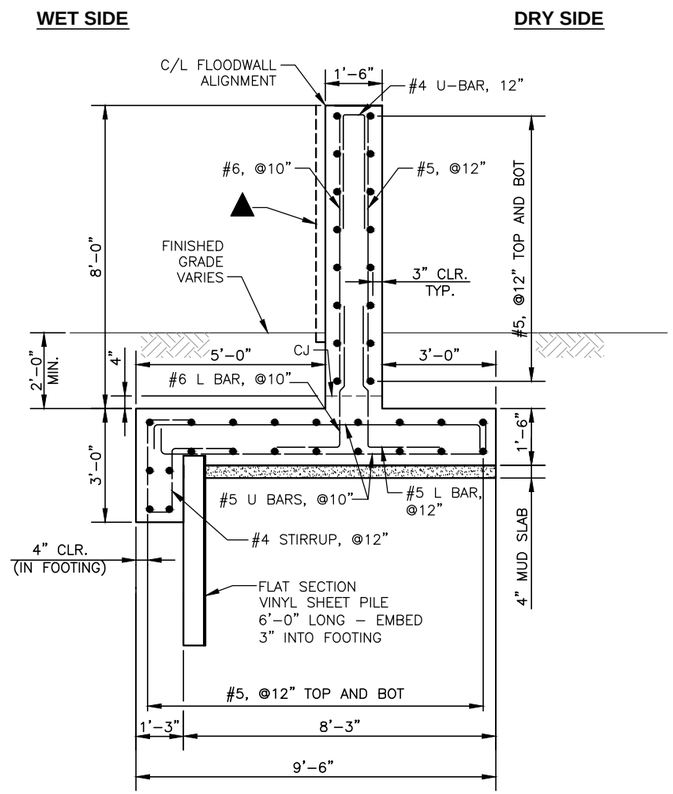
1. FOR UTILITY PENETRATION SEE DETAILS SHEET S-27.

▲ 1 1/2" THICK MAX – SURFACE TREATMENT FORMLINERS TYPICAL. SEE FP SHEETS.



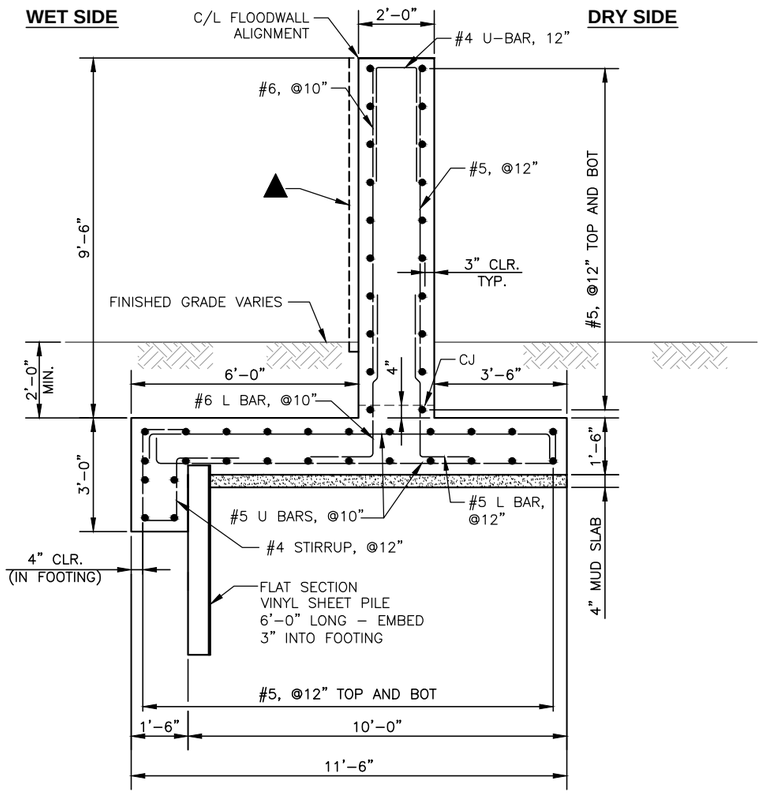
FLOODWALL TYPE 1

FULL SCALE: 1/2" = 1'



FLOODWALL TYPE 2

FULL SCALE: 1/2" = 1'



FLOODWALL TYPE 3

FULL SCALE: 1/2" = 1'

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

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DESIGNED: WJ
CHECKED: SAM
SUPERVISOR: BK

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

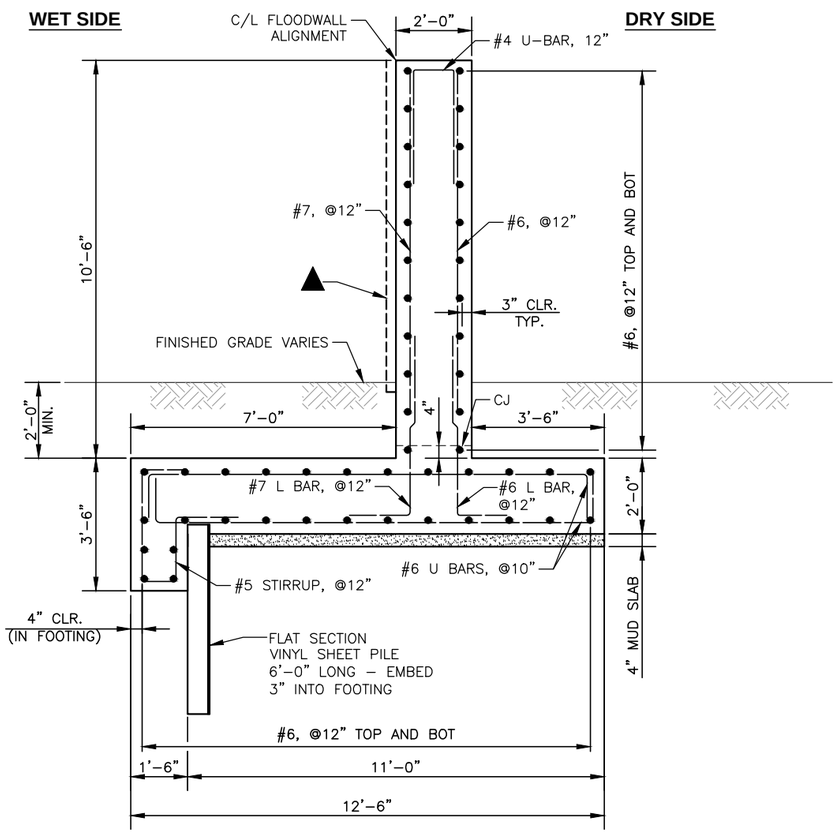
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL SECTIONS REINFORCING - 1

SHEET
S-21

NOTES:

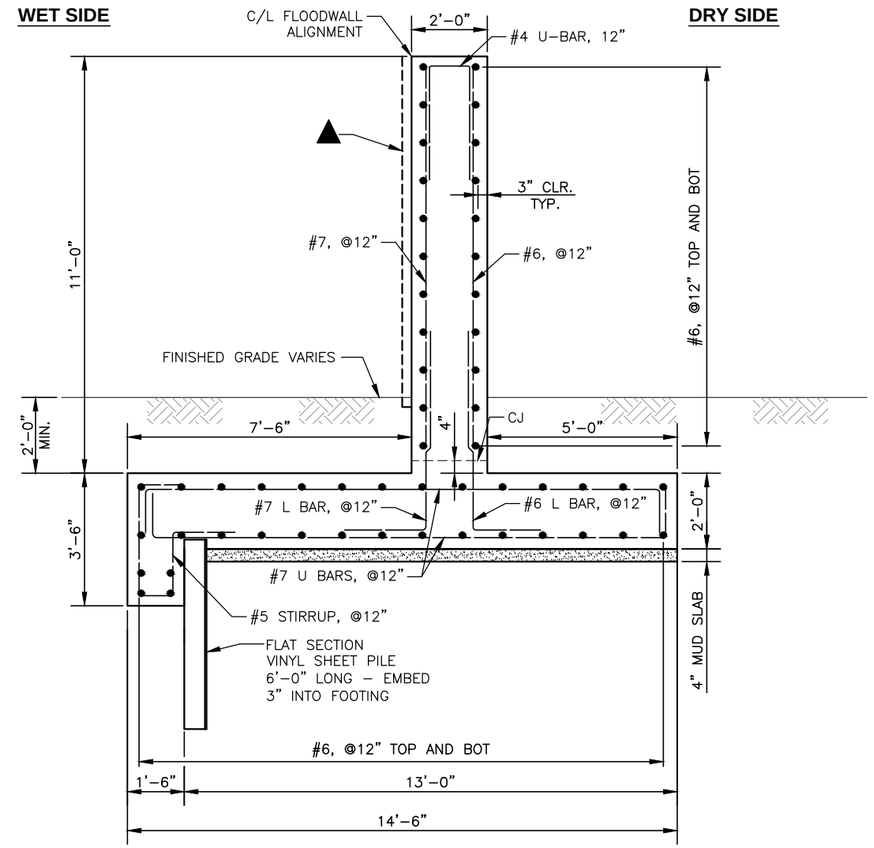
1. FOR UTILITY PENETRATION SEE DETAILS SHEET S-27.

▲ 1 1/2" THICK MAX – SURFACE TREATMENT FORMLINERS TYPICAL. SEE FP SHEETS.



FLOODWALL TYPE 4

FULL SCALE: 1/2" = 1'



FLOODWALL TYPE 5

FULL SCALE: 1/2" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
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SURVEY JOB NO/SOURCE:				
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DESIGNED: WJ		NUM. REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
		NUM. RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

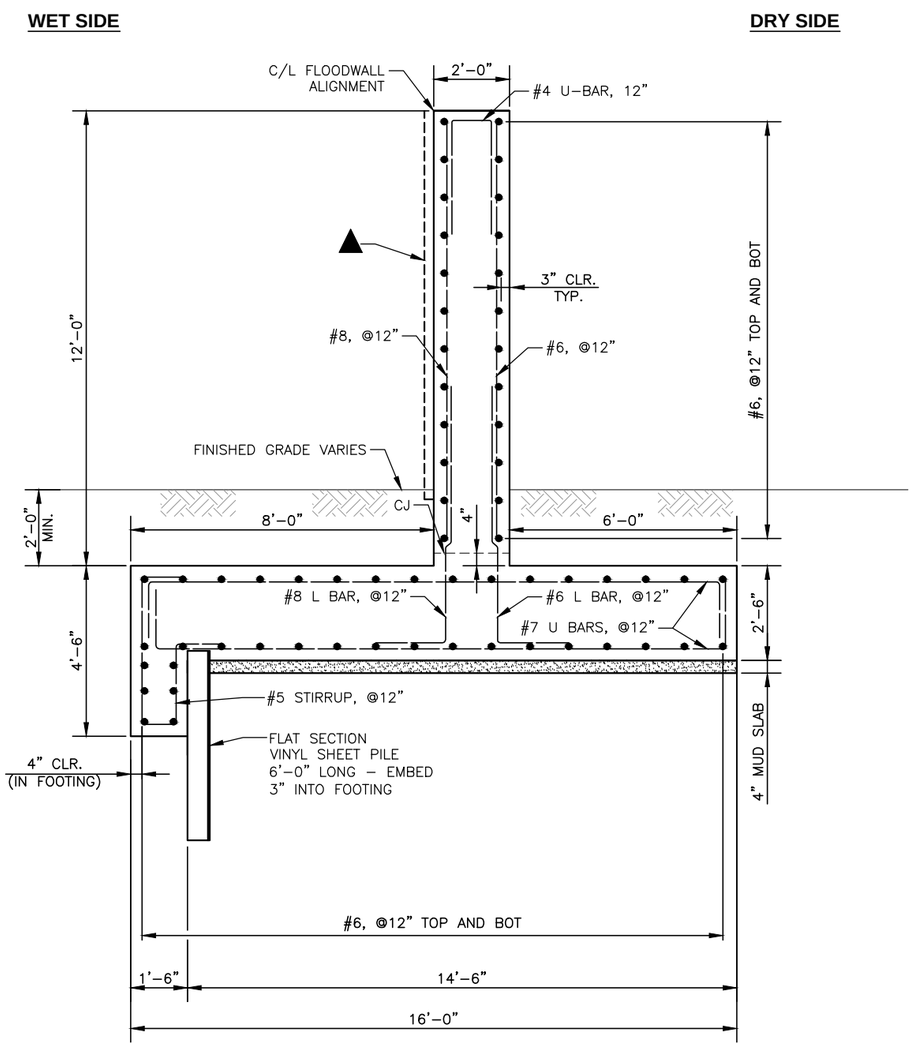
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

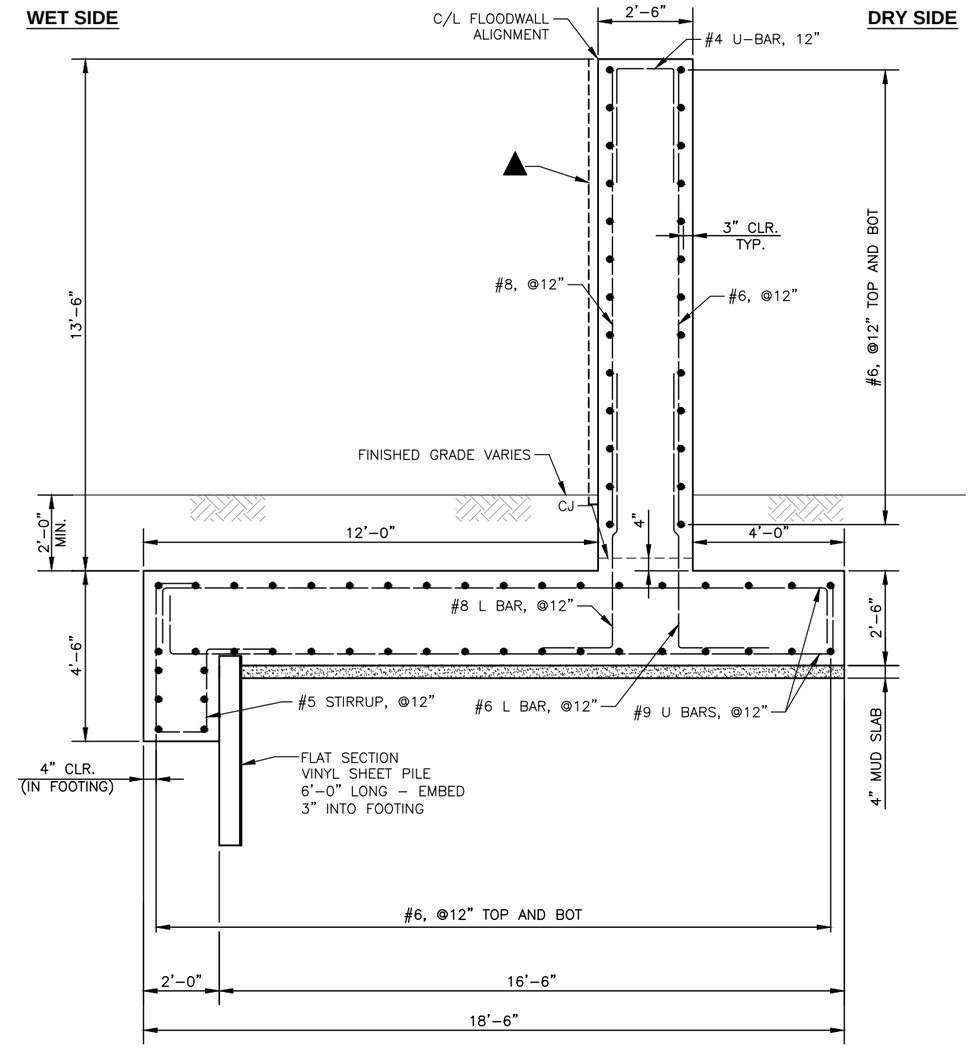
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL SECTIONS REINFORCING - 2

SHEET
S-22



FLOODWALL TYPE 6

FULL SCALE: 1/2" = 1'



FLOODWALL TYPE 7

FULL SCALE: 1/2" = 1'

NOTES:

1. FOR UTILITY PENETRATION SEE DETAILS SHEET S-27.

▲ 1 1/2" THICK MAX - SURFACE TREATMENT FORMLINERS TYPICAL. SEE FP SHEETS.

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
CAD ENTERED: JCB				
DESIGNED: WJ		NUM. REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
		NUM. RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

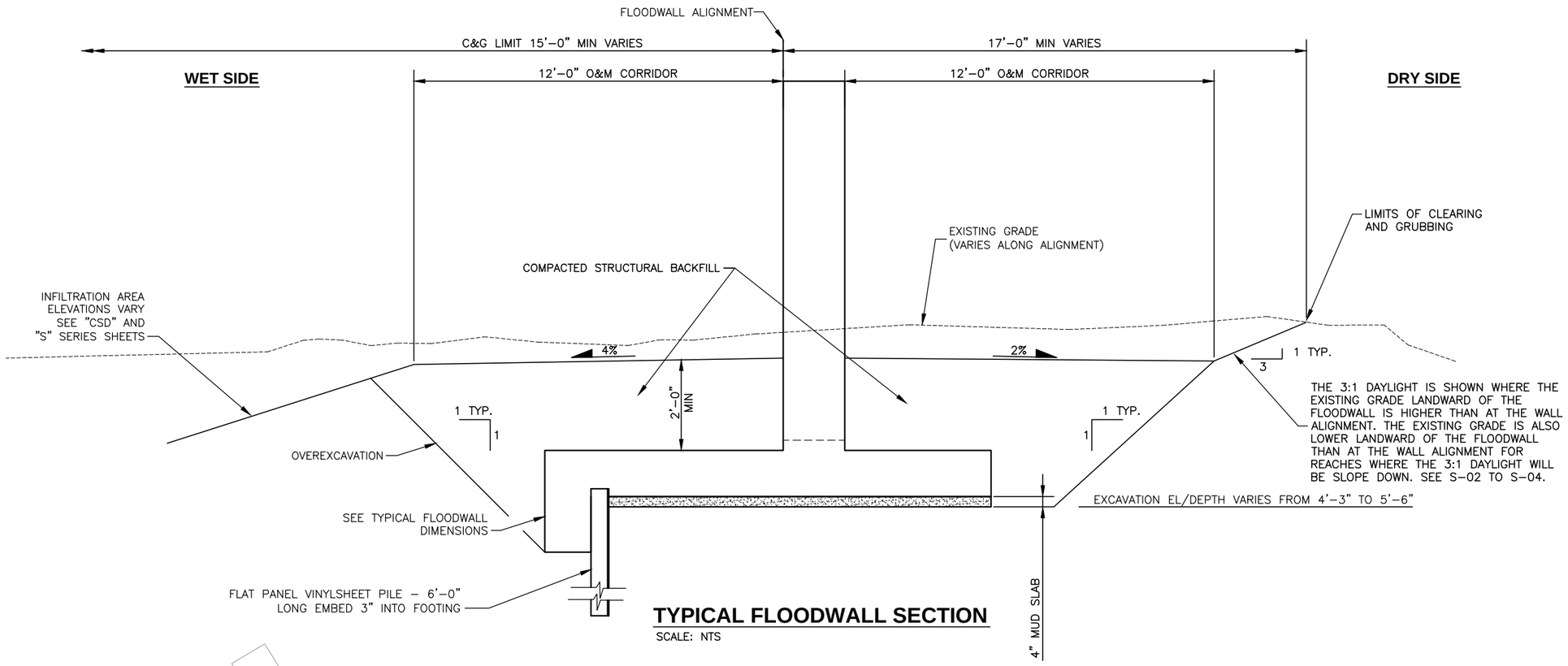
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL SECTIONS REINFORCING - 3

SHEET
S-23

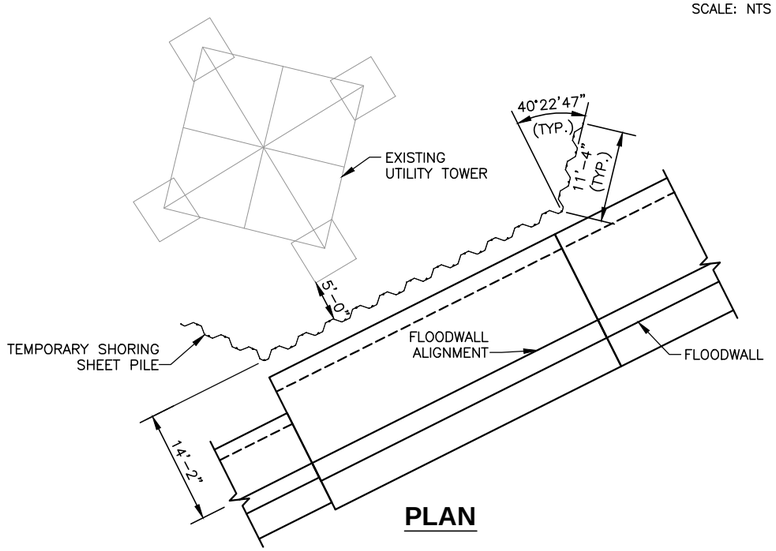


TYPICAL FLOODWALL SECTION

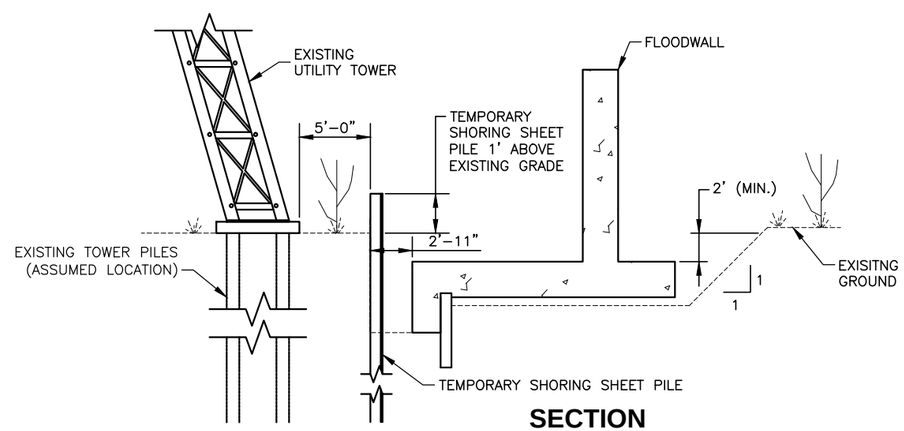
SCALE: NTS

NOTES:

1. SEE CLEARING SHEET CC–1 TO CC–3 FOR TREES TO BE REMOVED WITHIN EXCAVATION LIMITS.



PLAN



SECTION

TEMPORARY SHORING SHEET PILE PLAN AND SECTION

SCALE: NTS

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:	--	--
CHECKED:	--	--
CAD ENTERED:	JCB	3/19
DESIGNED:	WJ	3/19
CHECKED:	JC	3/19
SUPERVISOR:	SJ	3/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

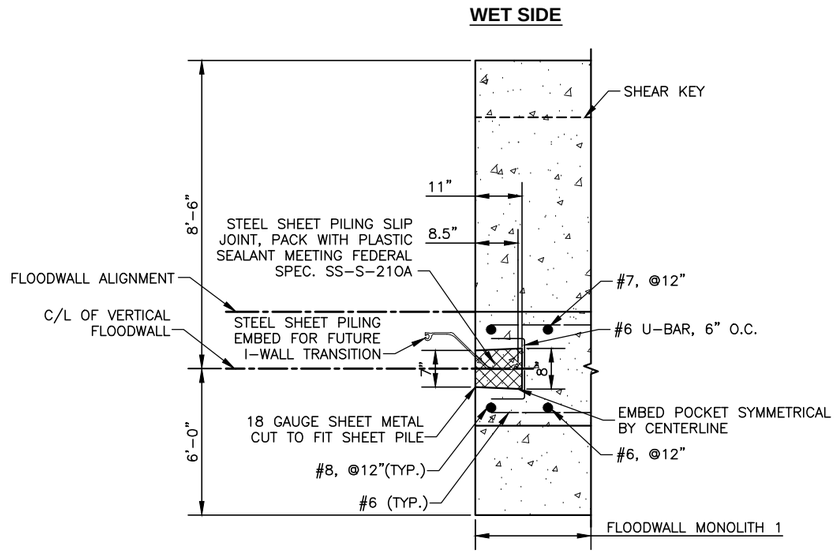
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

TYPICAL SECTIONS

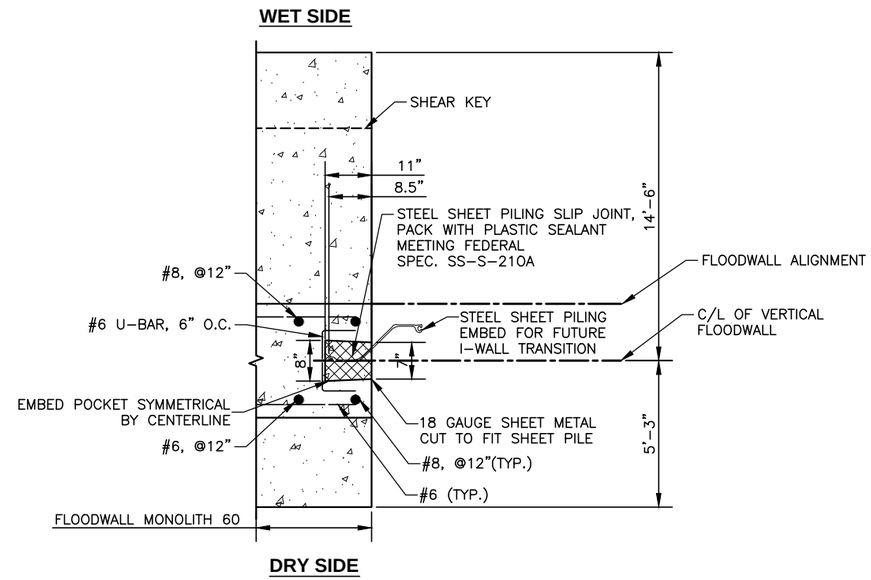
SHEET
S-24



FLOODWALL AND SHEET PILE TIE IN MONOTH 1

SCALE: NTS

A S-5 & S-20



FLOODWALL AND SHEET PILE TIE IN MONOLITH 60

SCALE: NTS

A S-5 & S-20

NOTE:
VINYL SHEET PILE NOT SHOWN FOR CLARITY

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:	
CHECKED:	
CAD ENTERED:	JCB
DESIGNED:	WJ
CHECKED:	SAM
SUPERVISOR:	BK

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

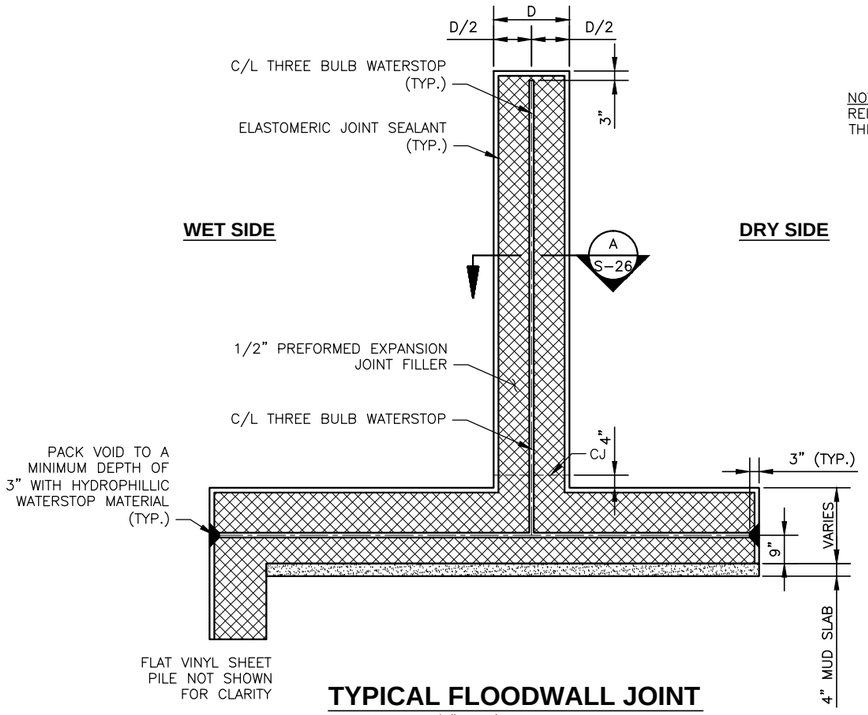
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
I-WALL TO FLOODWALL TRANSITION DETAILS

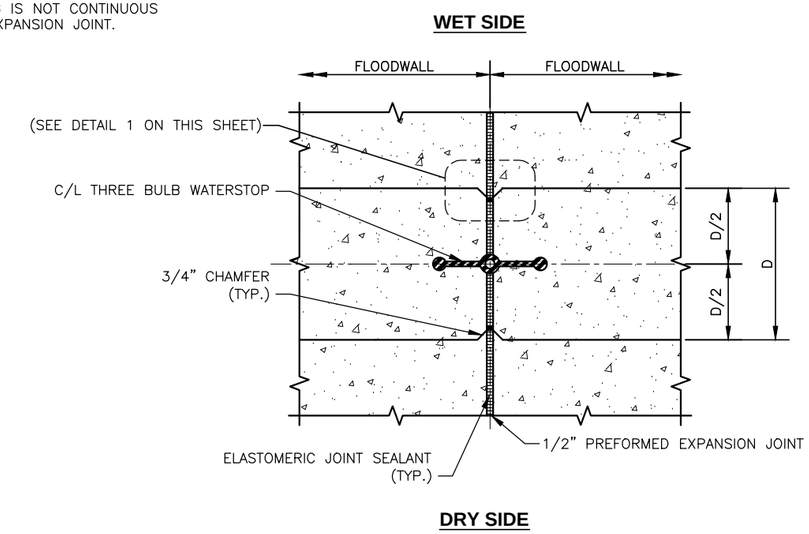
SHEET
S-25



TYPICAL FLOODWALL JOINT

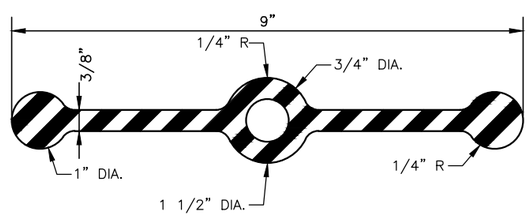
FULL SCALE: 1/2" = 1'

NOTE:
REINFORCING IS NOT CONTINUOUS THROUGH EXPANSION JOINT.



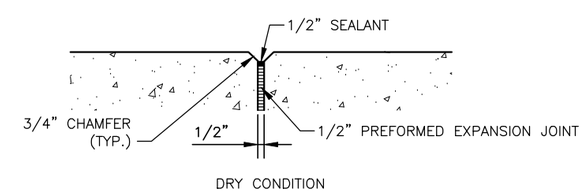
SECTION

FULL SCALE: 1" = 1' (A / S-26)



THREE-BULB WATERSTOP

FULL SCALE: 3/4" = 1"



EXPANSION JOINT DETAIL 1

FULL SCALE: 1" = 1'

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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SURVEY JOB NO/SOURCE:
CHECKED:
CAD ENTERED: JCB
DESIGNED: WJ
CHECKED: SAM
SUPERVISOR: BK

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

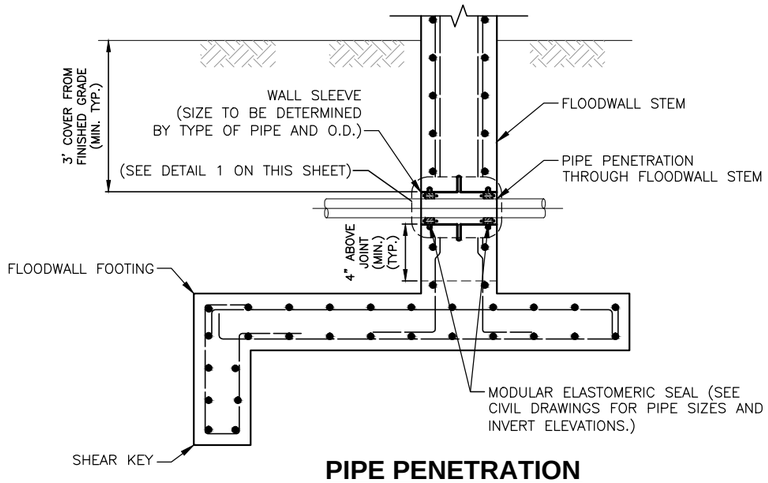
FUNDING:
PROJECT No. 1112056
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
MISCELLANEOUS JOINT DETAILS

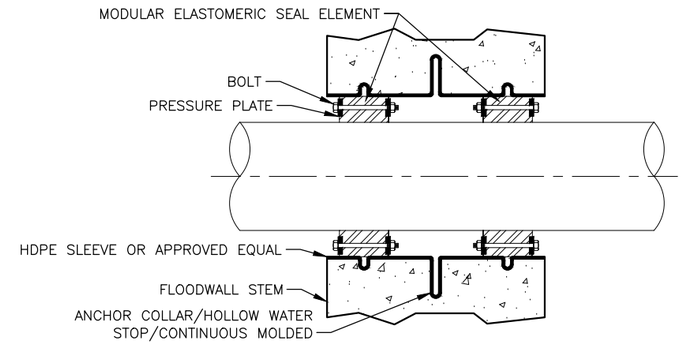
SHEET
S-26



PIPE PENETRATION TYPICAL DETAIL PROFILE

SCALE: NTS

*TWO SEALS REQUIRED PER PENETRATION

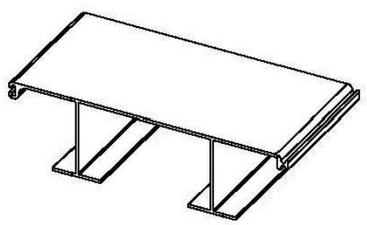


PIPE PENETRATION DETAIL 1

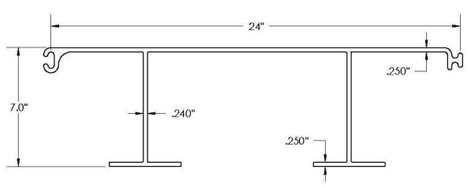
SCALE: NTS

RELOCATION NOTES:

1. 2 X 2" WATERLINES NEAR STA. 4+50.
2. 6" FIBER/ELECTRICAL LINE NEAR STA. 5+00.
3. 1 X 2" WATERLINE NEAR STA. 13+75.
4. 1 X 3" WATERLINE NEAR STA. 21+40.
5. 1 X 8" WATERLINE NEAR STA. 21+90.
6. SEE CWS SERIES SHEETS FOR ADDITIONAL DETAILS.
7. REINFORCEMENT BARS MAY BE SHIFTED (3" MAX.) FOR PIPE PENETRATION IF NEEDED.



ISOMETRIC VIEW

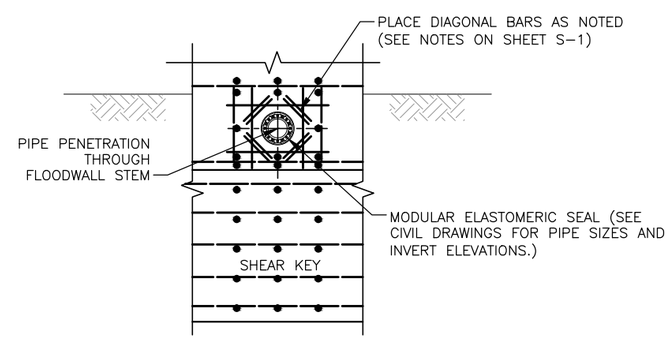


FLAT PANEL SECTION SHEET PILE VINYL - FP-475

SCALE: NTS

VINYL SHEET PILE NOTES:

1. CONTRACTOR TO USE FP-475 SHEET OR EQUIVALENT.
2. SECTION MODULUS MIN. 20.5 CU IN/FT.
3. MOMENT OF INERTIA MIN. 45 IN4/FT.
4. ALLOWABLE MOMENT: 5,467 LB-FT/FT.
5. MATERIAL: WEATHERED RIGID VINYL.



PIPE PENETRATION TYPICAL DETAIL ELEVATION

SCALE: NTS

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
CAD ENTERED: JCB				
DESIGNED: WJ		NUM. REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
		NUM. RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

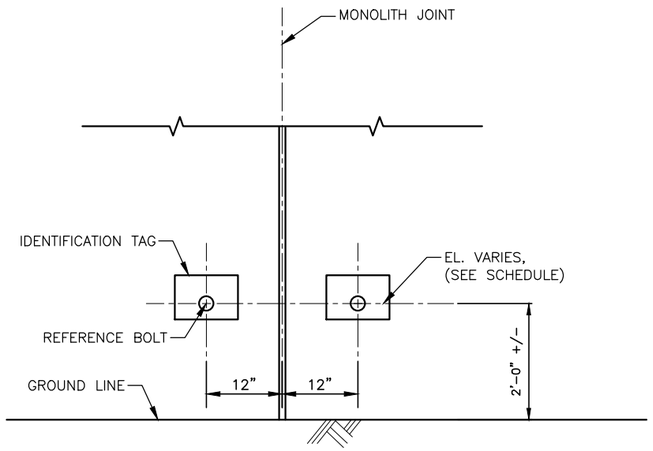
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

UTILITY PENETRATION DETAILS

SHEET **S-27**



DRY SIDE EXPANSION JOINT DETAIL 1

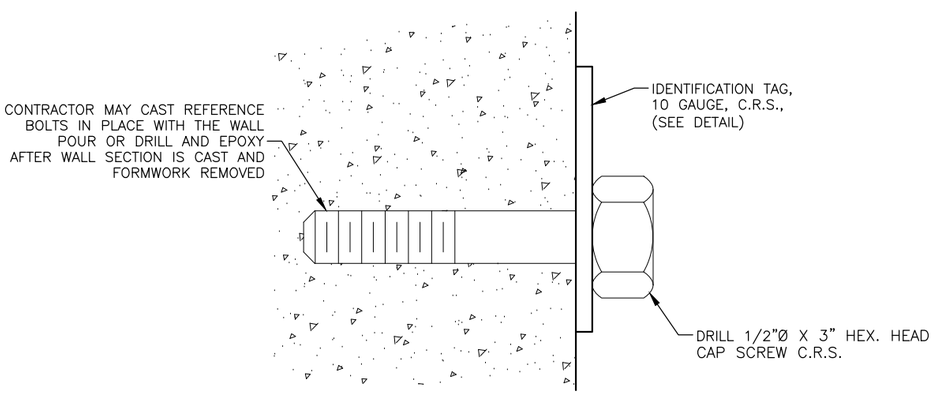
FULL SCALE: 1" = 1'

SETTLEMENT REFERENCE MARKER SCHEDULE			
S.R.M. NUMBER	FLOODWALL STATION* (C/L MONOLITH JOINT)	ELEVATION * *	ELEVATION * *
1	1+43.96		
1–2	1+83.96		
2–3	2+31.96		
3–4	2+51.96		
4–5	2+91.96		
5–6	3+31.96		
6–7	3+71.96		
7–8	4+11.96		
8–9	4+60.79		
9–10	5+00.79		
10–11	5+40.79		
11–12	5+80.79		
12–13	6+20.79		
13–14	6+60.46		
14–15	7+00.46		
15–16	7+40.46		
16–17	7+80.46		
17–18	2+20.46		
18–19	2+60.46		
19–20	9+00.46		
20–21	9+40.46		
21–22	9+80.46		
22–23	10+20.46		
23–24	10+60.46		
24–25	11+00.46		
25–26	11+40.46		
26–27	11+80.46		
27–28	12+20.46		
28–29	12+60.46		
29–30	13+00.46		

SETTLEMENT REFERENCE MARKER SCHEDULE			
S.R.M. NUMBER	FLOODWALL STATION* (C/L MONOLITH JOINT)	ELEVATION * *	ELEVATION * *
30–31	13+40.46		
31–32	13+80.46		
32–33	14+20.46		
33–34	14+60.46		
34–35	15+00.46		
35–36	15+40.46		
36–37	15+80.46		
37–38	16+20.46		
38–39	16+60.46		
39–40	17+00.46		
40–41	17+40.46		
41–42	17+80.46		
42–43	18+20.46		
43–44	18+60.46		
44–45	19+00.46		
45–46	19+40.46		
46–47	19+80.46		
47–48	20+20.46		
48–49	20+60.46		
49–50	21+00.46		
50–51	21+40.46		
51–52	21+80.46		
52–53	22+20.46		
53–54	22+60.46		
54–55	23+00.46		
55–56	23+40.46		
56–57	23+80.46		
57–58	24+20.46		
58–59	24+60.46		

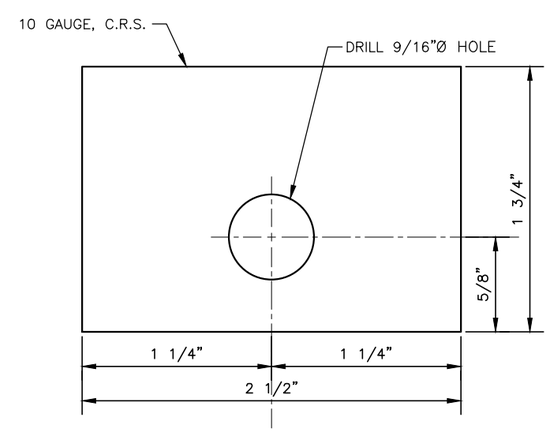
NOTES:

1. THE CONTRACTOR SHALL TAKE FINAL ELEVATIONS OF ALL SETTLEMENT REFERENCE MARKERS AND SHALL SUBMIT THIS DATA TO THE PROJECT REPRESENTATIVE FOR REVIEW.
2. FLOODWALL STATIONS ARE APPROXIMATE. LOCATE REFERENCE BOLTS AT NEAREST STATION TO THOSE SHOWN.



REFERENCE BOLT

FULL SCALE: 2" = 1'



IDENTIFICATION TAG

FULL SCALE: 2" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
CAD ENTERED: JCB				
DESIGNED: WJ		NUM. REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
		NUM. RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

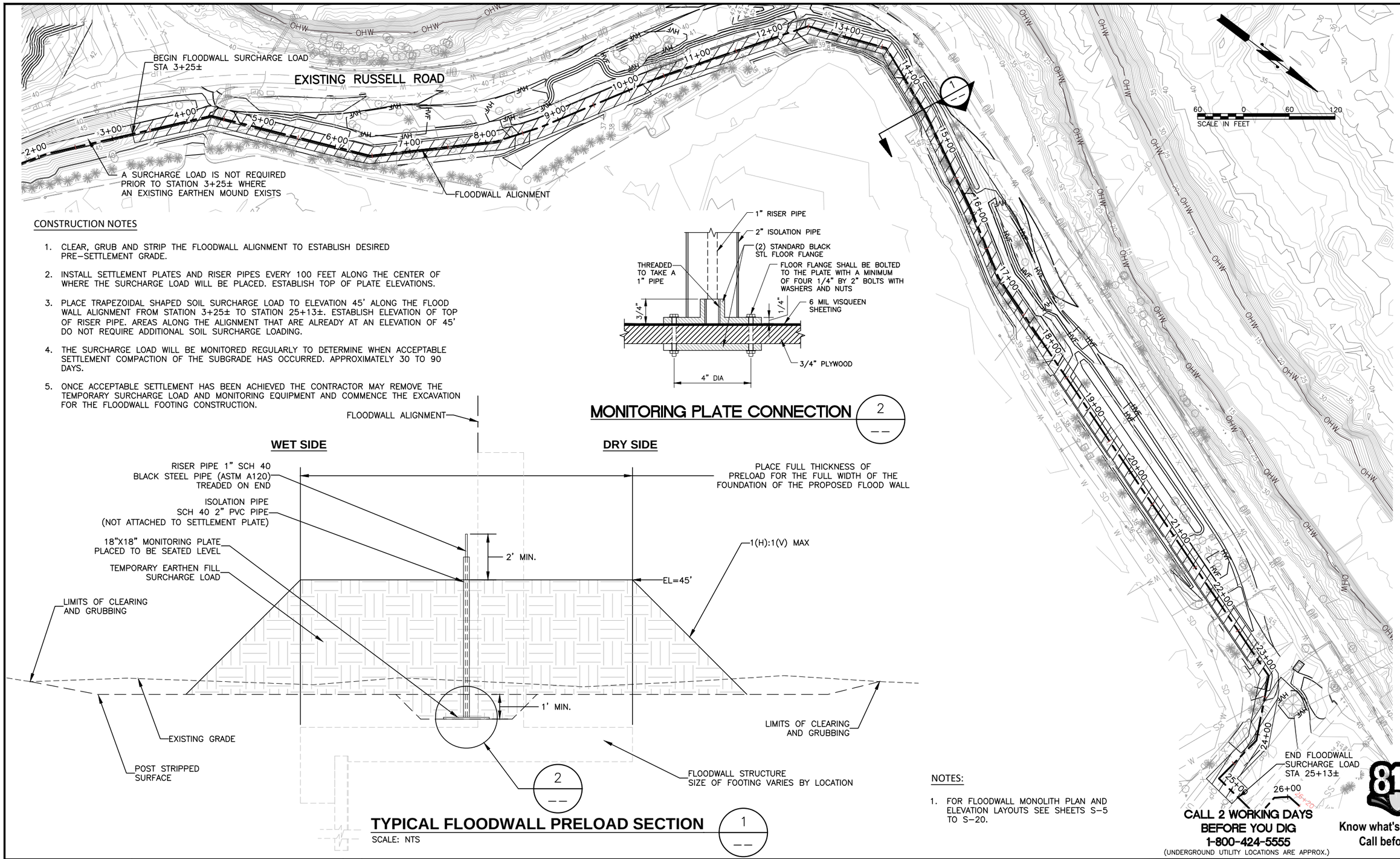
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
SETTLEMENT REFERENCE MARKERS

SHEET
S-28



CONSTRUCTION NOTES

1. CLEAR, GRUB AND STRIP THE FLOODWALL ALIGNMENT TO ESTABLISH DESIRED PRE–SETTLEMENT GRADE.
2. INSTALL SETTLEMENT PLATES AND RISER PIPES EVERY 100 FEET ALONG THE CENTER OF WHERE THE SURCHARGE LOAD WILL BE PLACED. ESTABLISH TOP OF PLATE ELEVATIONS.
3. PLACE TRAPEZOIDAL SHAPED SOIL SURCHARGE LOAD TO ELEVATION 45' ALONG THE FLOOD WALL ALIGNMENT FROM STATION 3+25± TO STATION 25+13±. ESTABLISH ELEVATION OF TOP OF RISER PIPE. AREAS ALONG THE ALIGNMENT THAT ARE ALREADY AT AN ELEVATION OF 45' DO NOT REQUIRE ADDITIONAL SOIL SURCHARGE LOADING.
4. THE SURCHARGE LOAD WILL BE MONITORED REGULARLY TO DETERMINE WHEN ACCEPTABLE SETTLEMENT COMPACTION OF THE SUBGRADE HAS OCCURRED. APPROXIMATELY 30 TO 90 DAYS.
5. ONCE ACCEPTABLE SETTLEMENT HAS BEEN ACHIEVED THE CONTRACTOR MAY REMOVE THE TEMPORARY SURCHARGE LOAD AND MONITORING EQUIPMENT AND COMMENCE THE EXCAVATION FOR THE FLOODWALL FOOTING CONSTRUCTION.

MONITORING PLATE CONNECTION

2 / --

TYPICAL FLOODWALL PRELOAD SECTION

1 / --

SCALE: NTS

NOTES:

1. FOR FLOODWALL MONOLITH PLAN AND ELEVATION LAYOUTS SEE SHEETS S–5 TO S–20.

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:	--	--			
CHECKED:	--	--			
CAD ENTERED:	RD	3/19			
DESIGNED:	VR	3/19	NUM.	REVISION	BY / DATE
CHECKED:	AE	3/19			
SUPERVISOR:	SJ	3/19			
			NUM.	RECORD CHANGES APPROVED	BY / DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

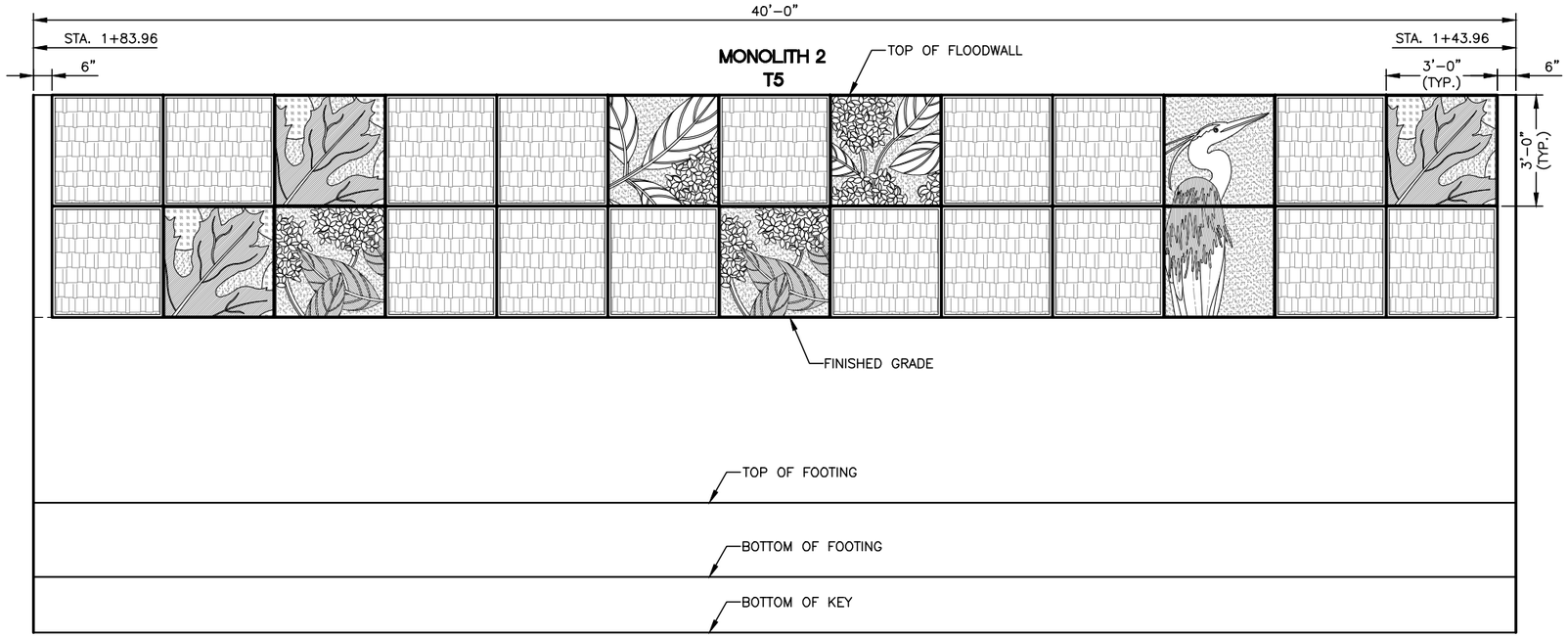
ALLAN A. EVANS, STATE OF WASHINGTON, 37995, REGISTERED PROFESSIONAL ENGINEER 04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

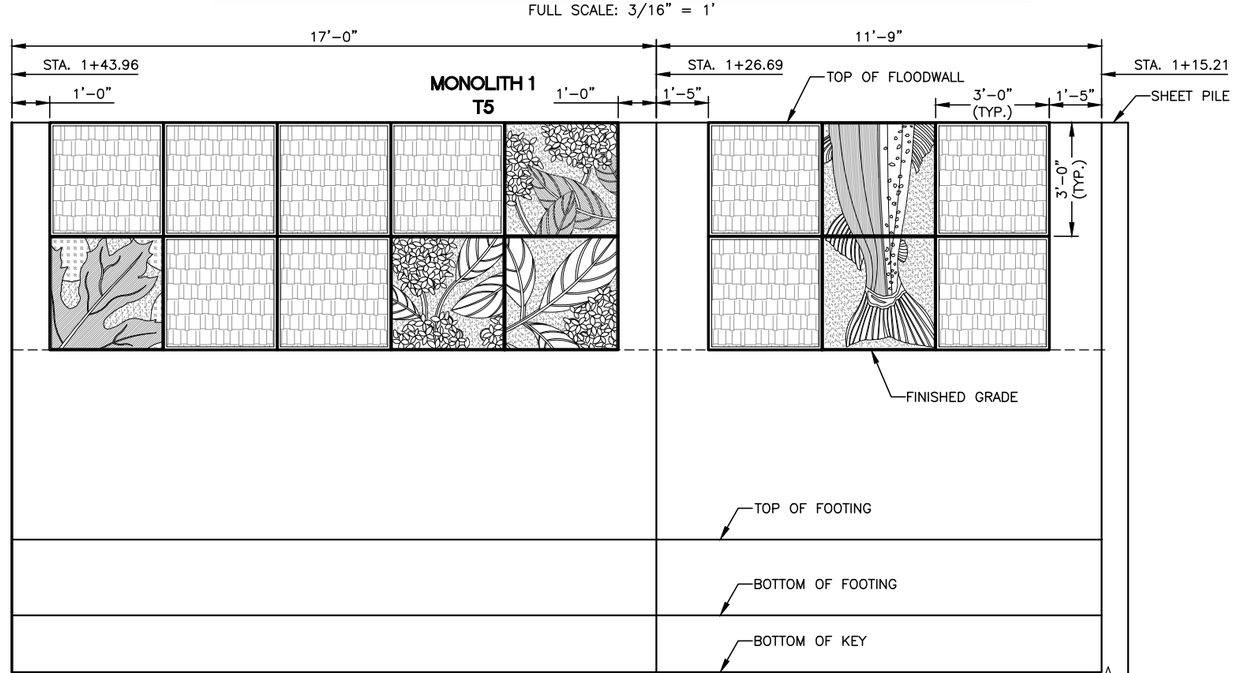
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
PROPOSED FLOODWALL PRELOAD PLAN
STA 0+00 TO 25+00

SHEET
S-29



FLOODWALL PATTERNING WET SIDE MONOLITH 2 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 1 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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Call before you dig.

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CHECKED:	
CAD ENTERED:	JCB
DESIGNED:	WJ
CHECKED:	SAM
SUPERVISOR:	BK

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

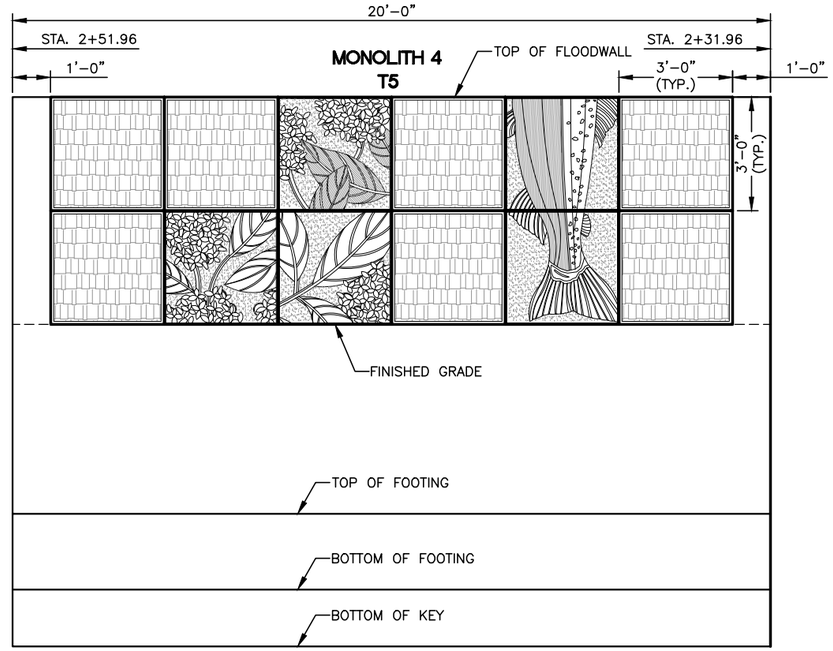
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

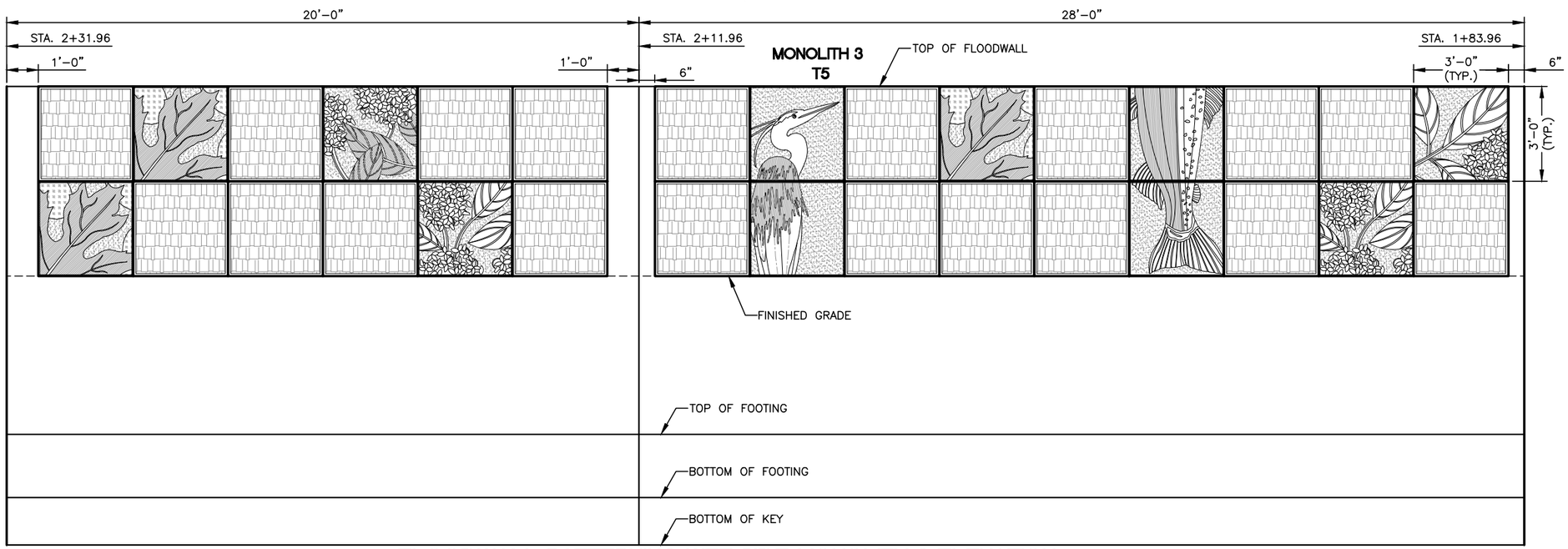
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 1 AND 2

SHEET
FP-01



FLOODWALL PATTERNING WET SIDE MONOLITH 4 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 3 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

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CHECKED:	
CAD ENTERED:	JCB
DESIGNED:	WJ
CHECKED:	SAM
SUPERVISOR:	BK

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

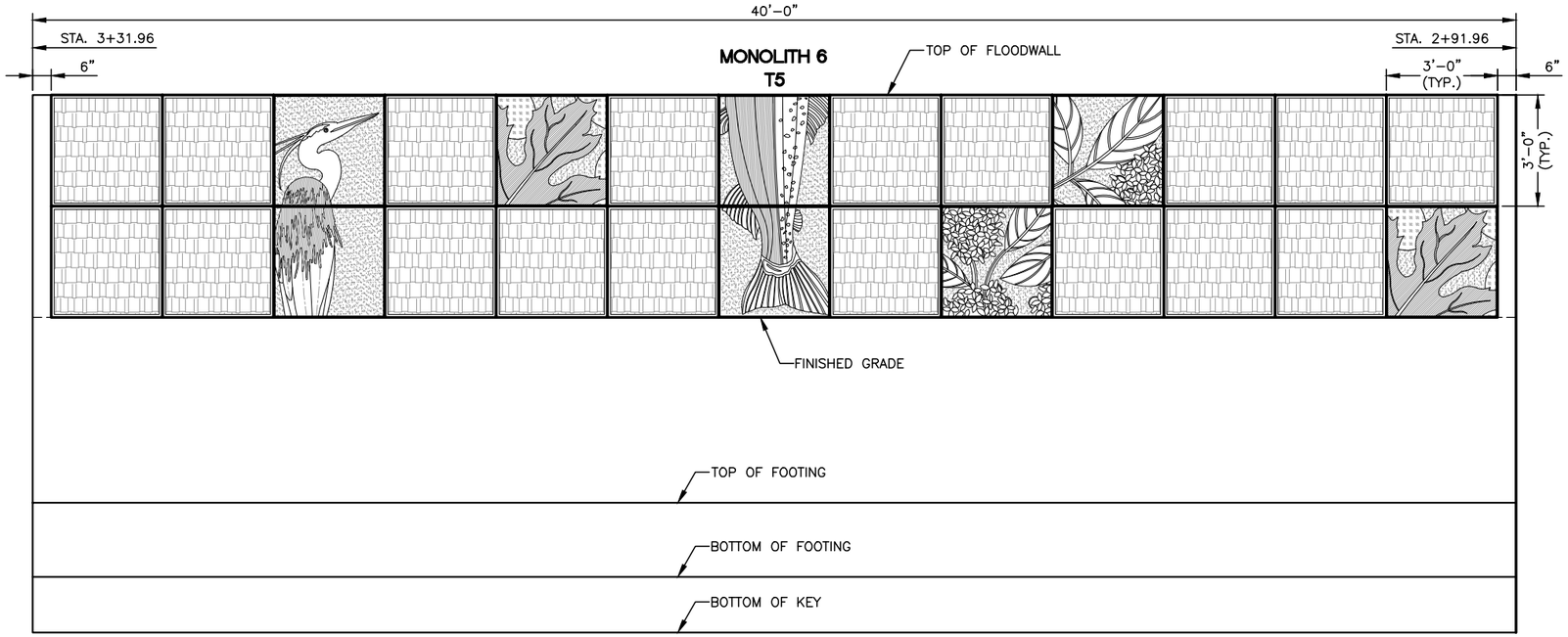
STATE OF WASHINGTON
38081
PROFESSIONAL ENGINEER

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

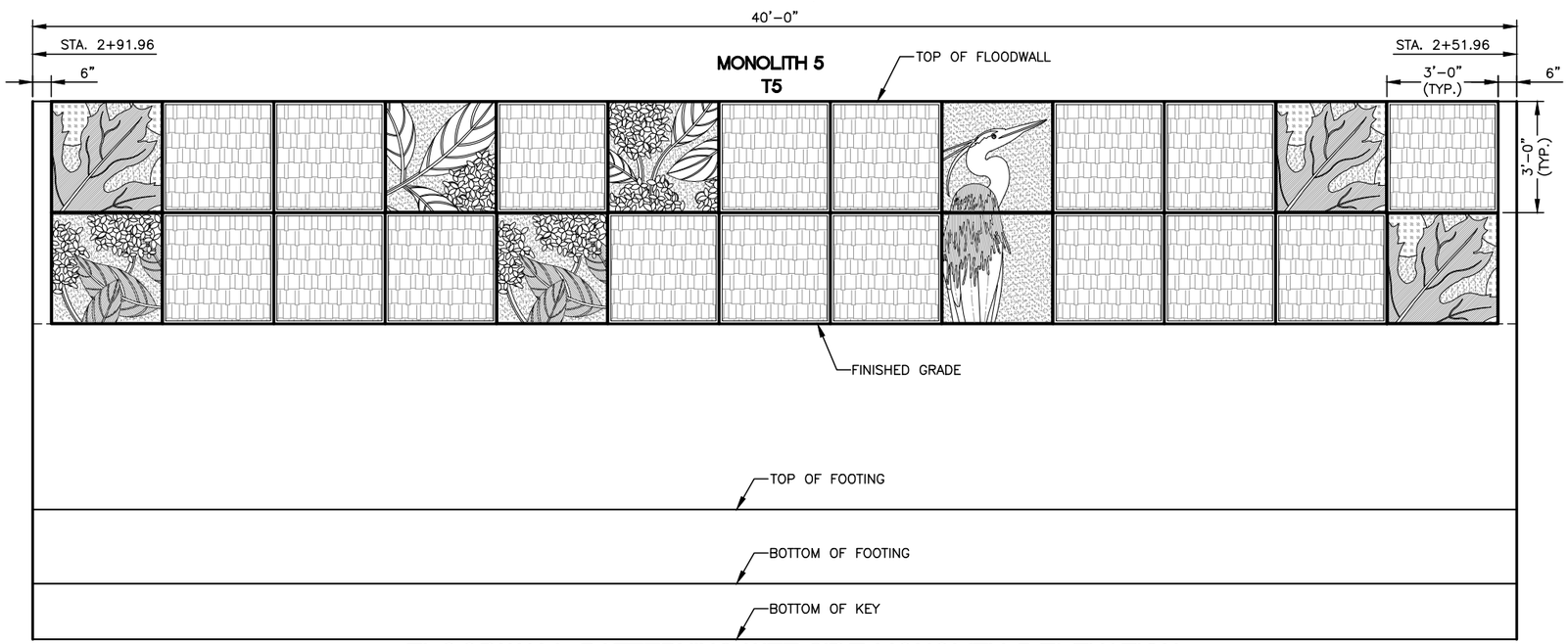
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 3 AND 4

SHEET
FP-02



FLOODWALL PATTERNING WET SIDE MONOLITH 6 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 5 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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CHECKED:	SAM
SUPERVISOR:	BK

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FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

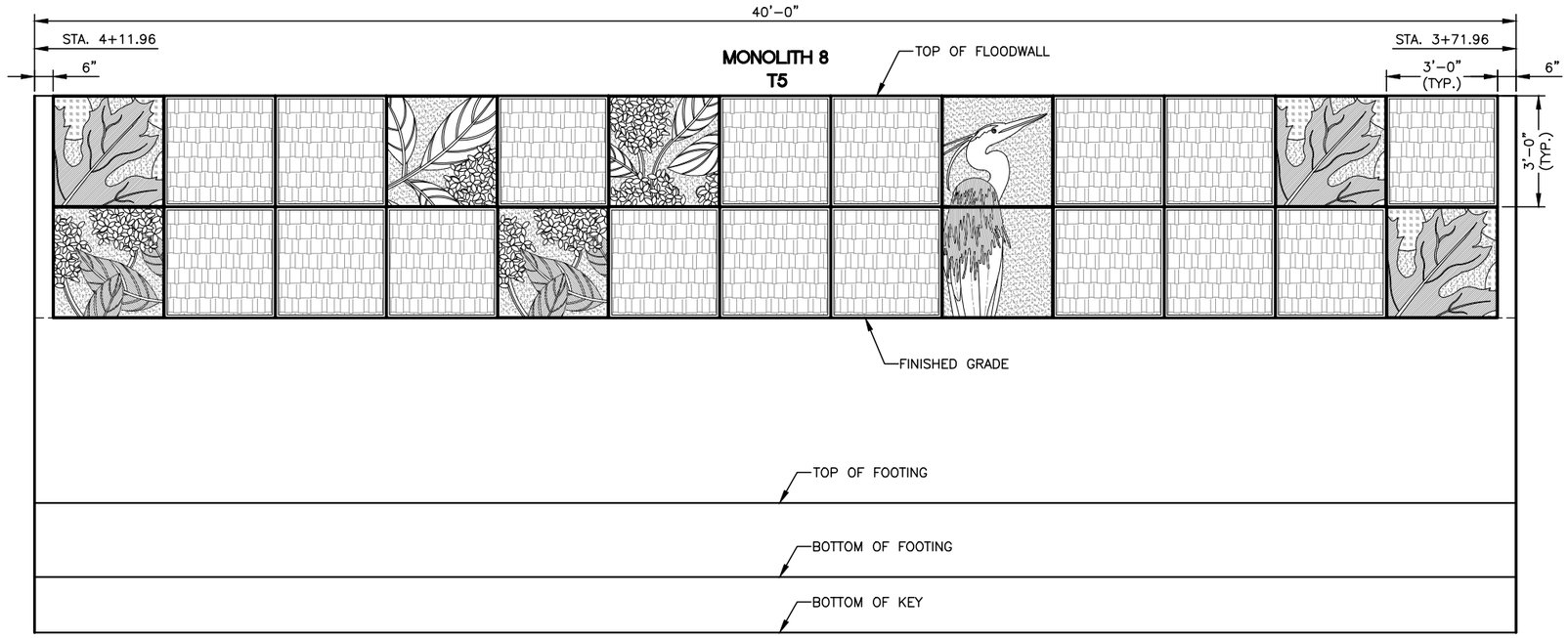
STATE OF WASHINGTON
38081
PROFESSIONAL ENGINEER
4/29/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

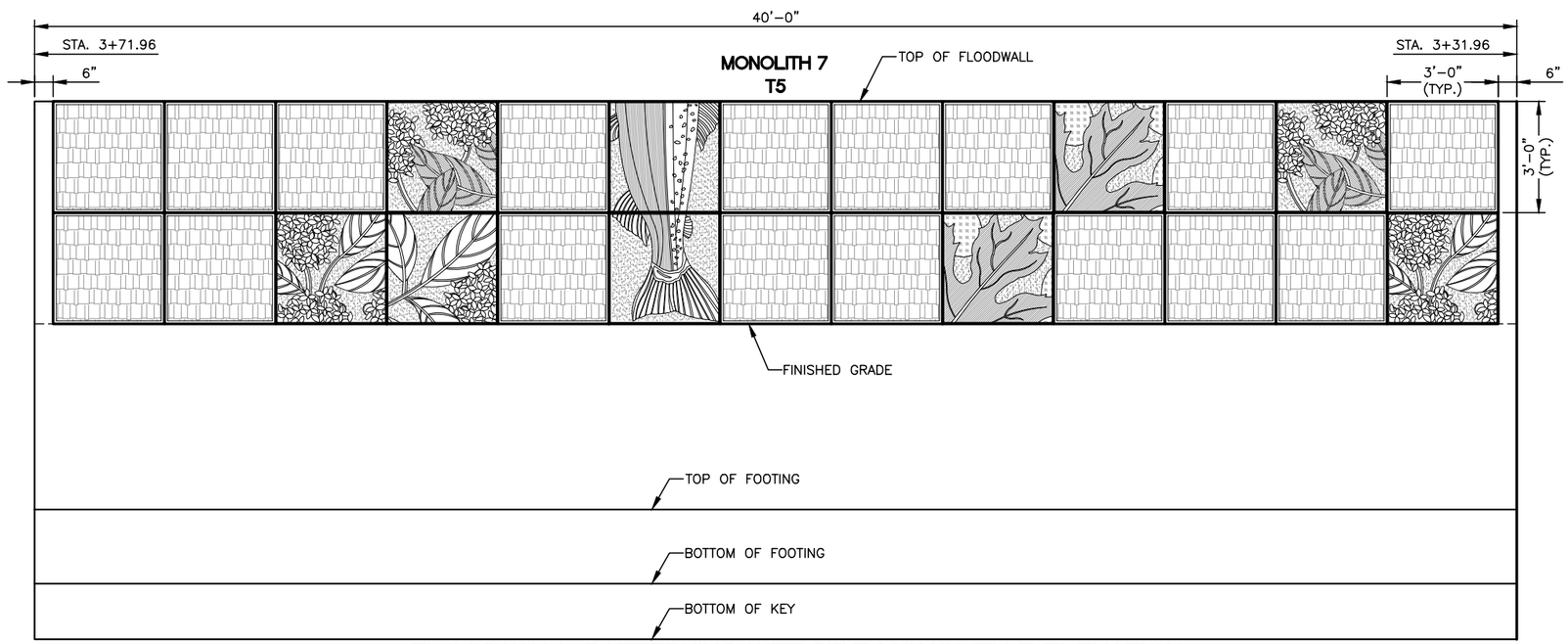
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 5 AND 6

SHEET
FP-03



FLOODWALL PATTERNING WET SIDE MONOLITH 8 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 7 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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PROJECT No. 1112056

CONTRACT No. C01294C18

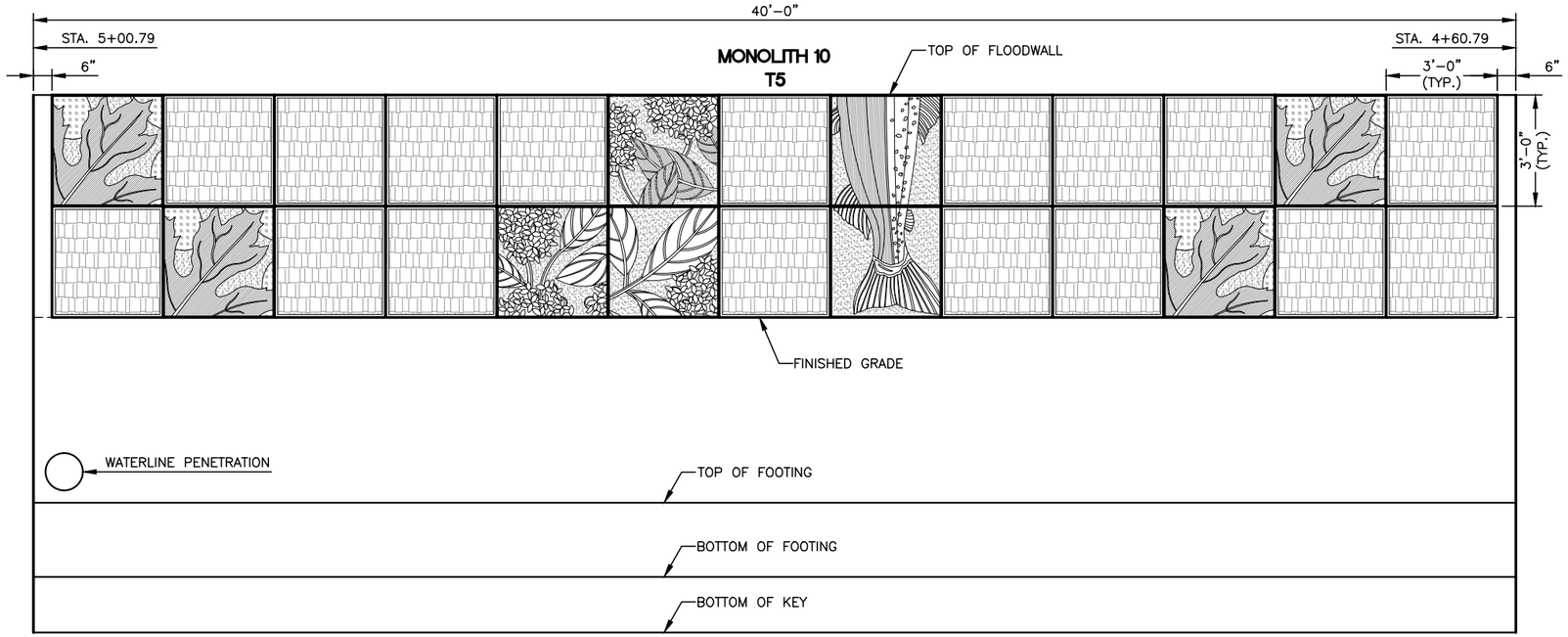
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

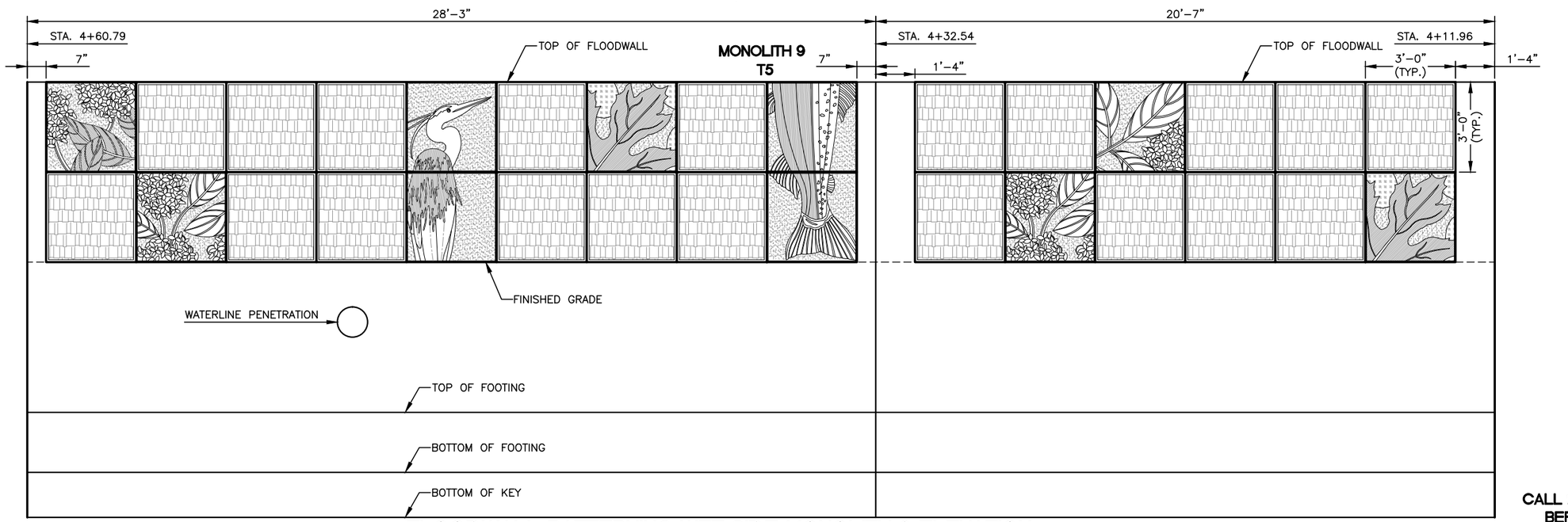
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 7 AND 8

SHEET
FP-04



FLOODWALL PATTERNING WET SIDE MONOLITH 10 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 9 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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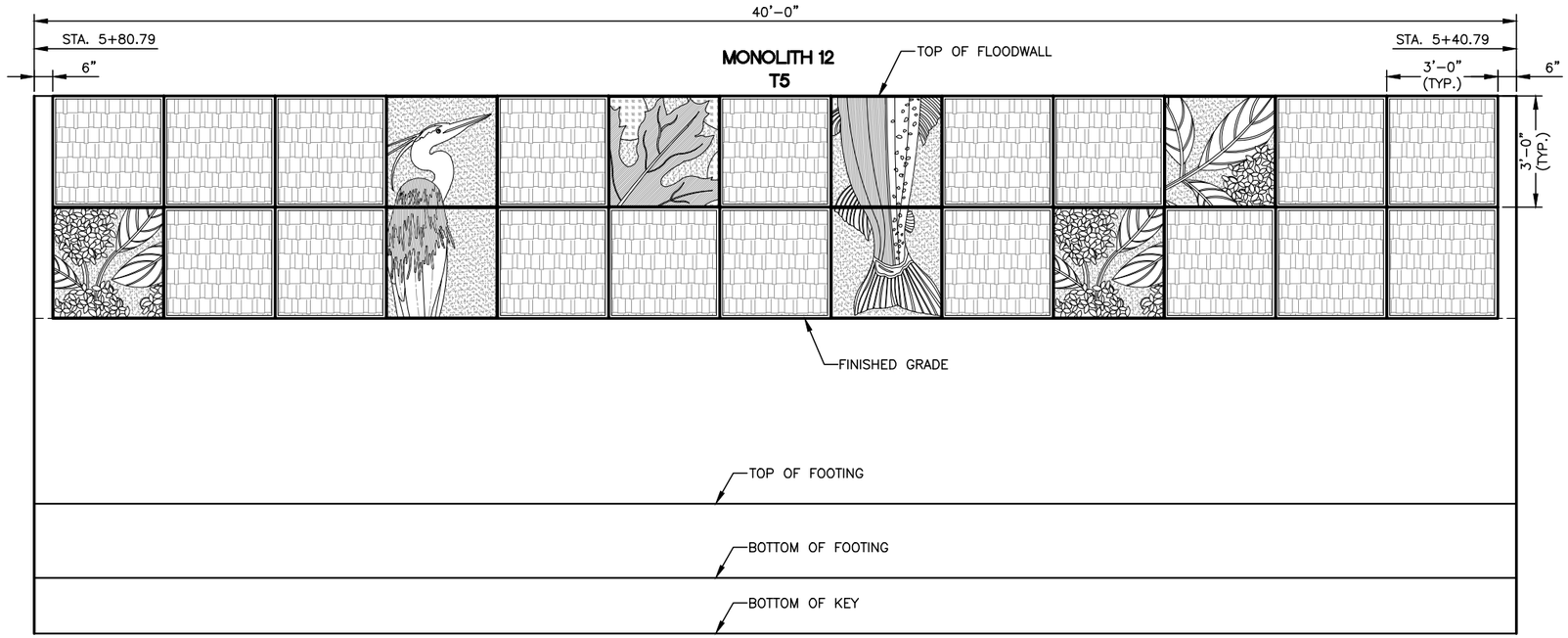
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

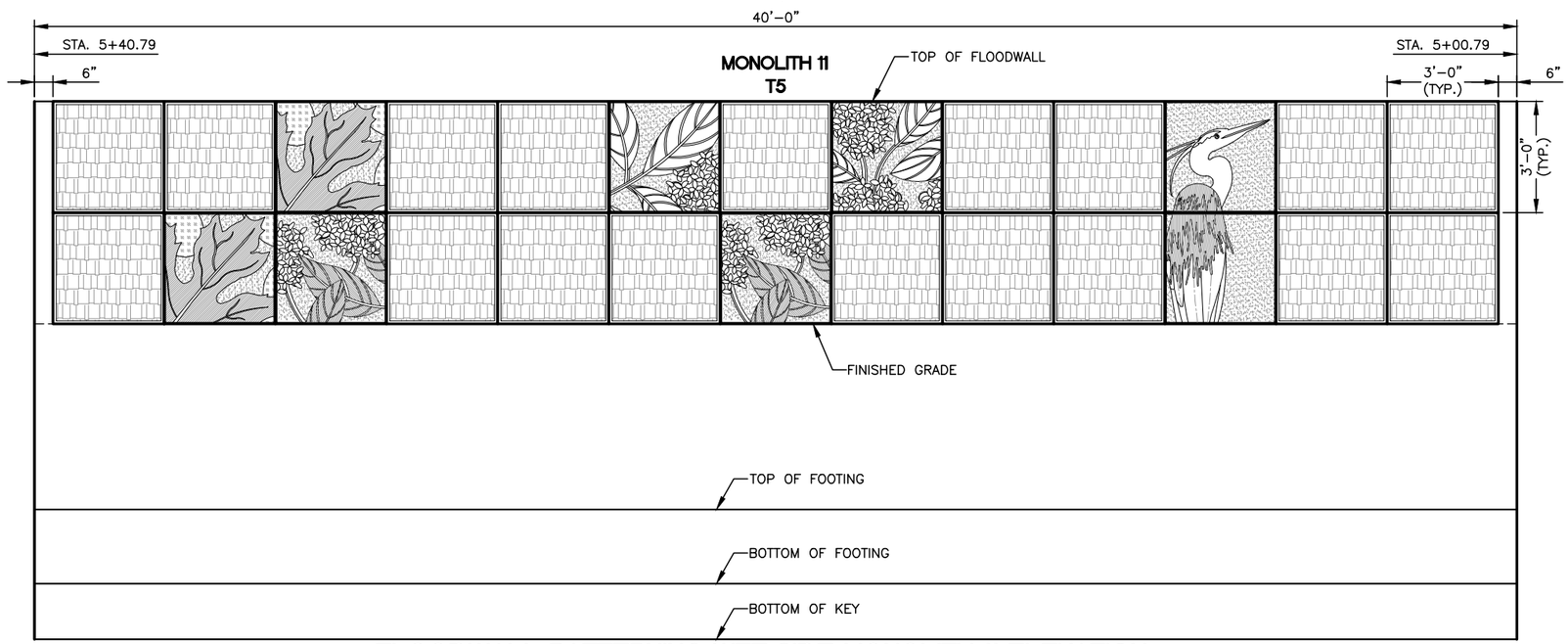
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 9 AND 10

SHEET
FP-05



FLOODWALL PATTERNING WET SIDE MONOLITH 12 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 11 ELEVATION

FULL SCALE: 3/16" = 1'

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CONTRACT No. C01294C18

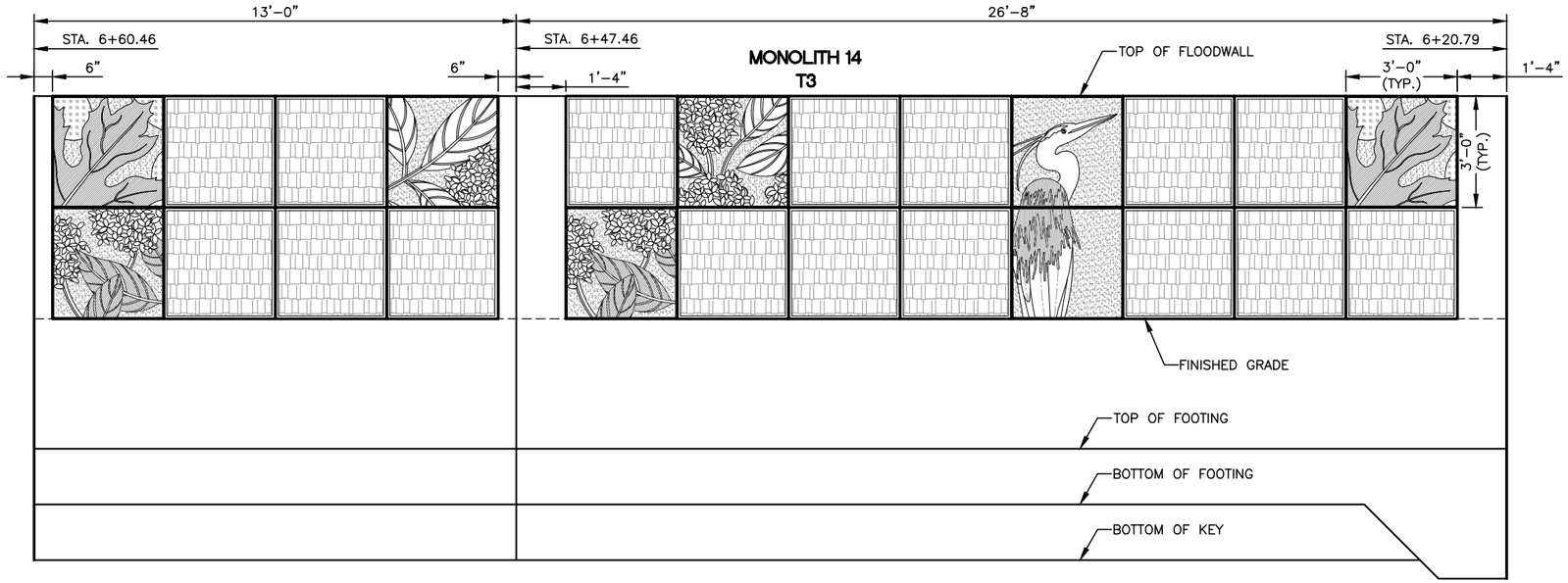
STATE OF WASHINGTON
38081
PROFESSIONAL ENGINEER
4/19/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

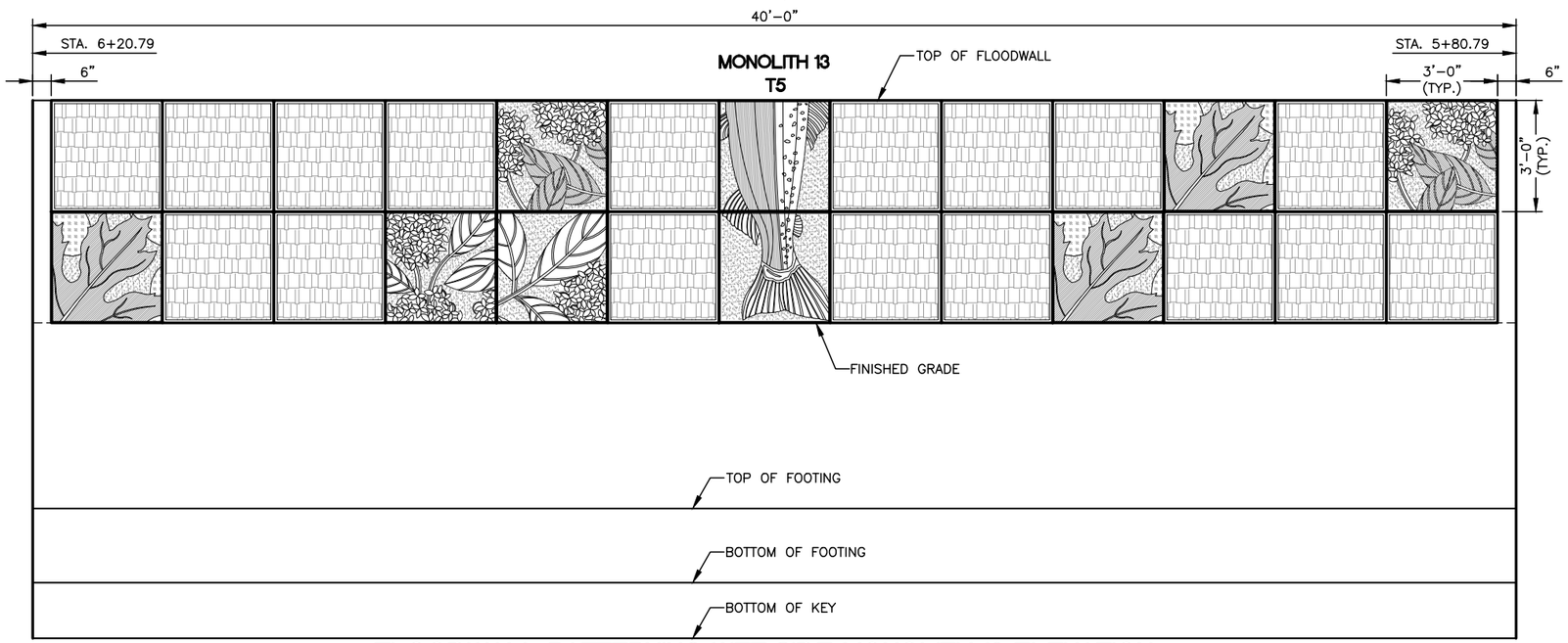
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 11 AND 12

SHEET
FP-06



FLOODWALL PATTERNING WET SIDE MONOLITH 14 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 13 ELEVATION

FULL SCALE: 3/16" = 1'

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PROJECT No. 1112056

CONTRACT No. C01294C18

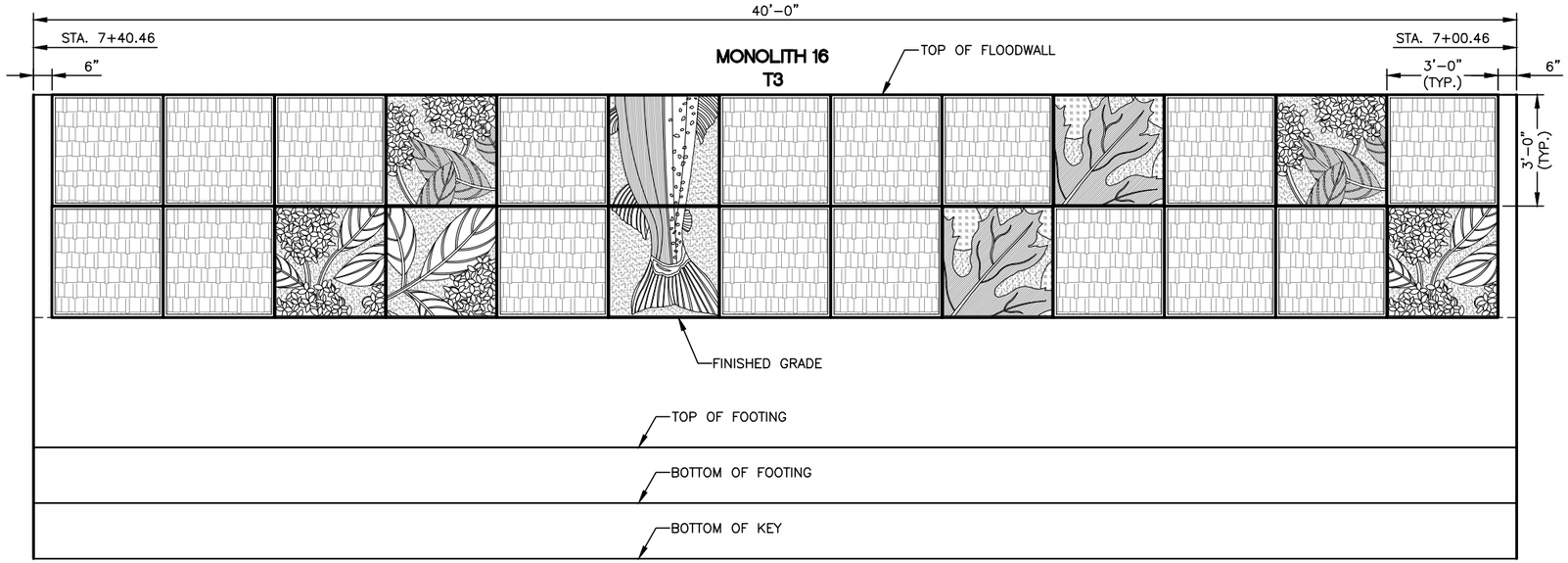
STATE OF WASHINGTON
88081
PROFESSIONAL ENGINEER
4/23/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

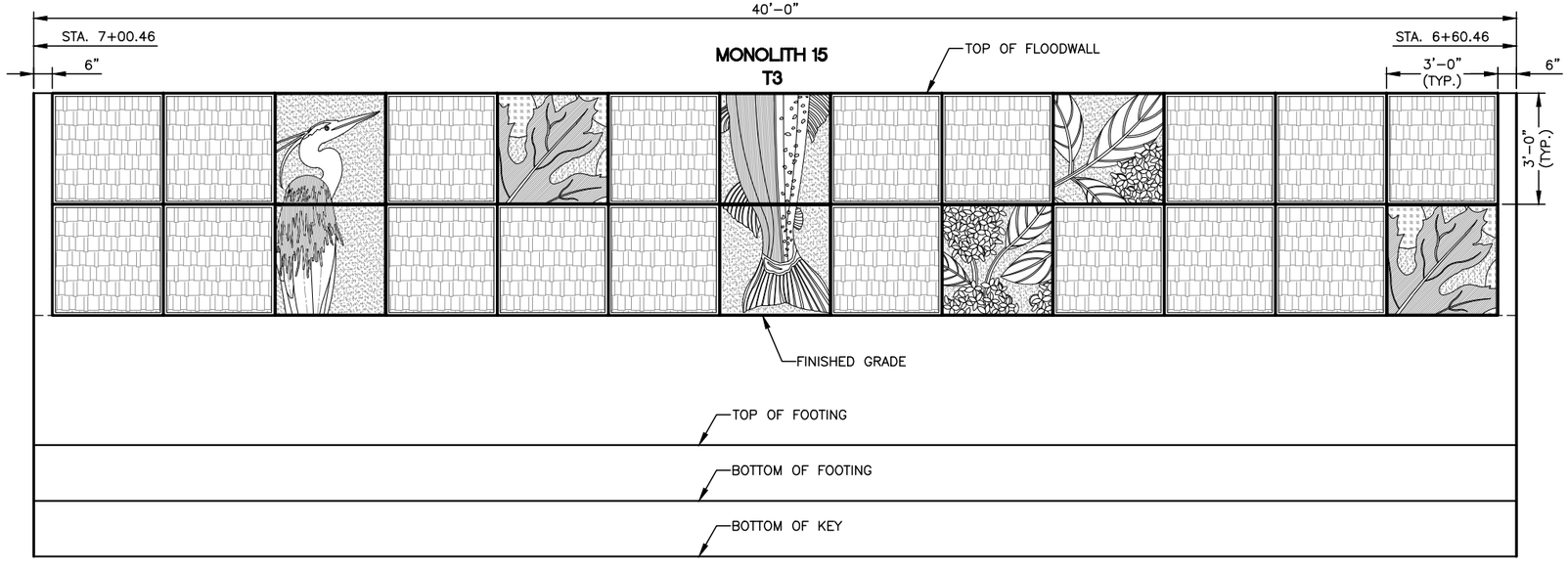
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 13 AND 14

SHEET
FP-07



FLOODWALL PATTERNING WET SIDE MONOLITH 16 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 15 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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HDR Engineering Inc.

King County
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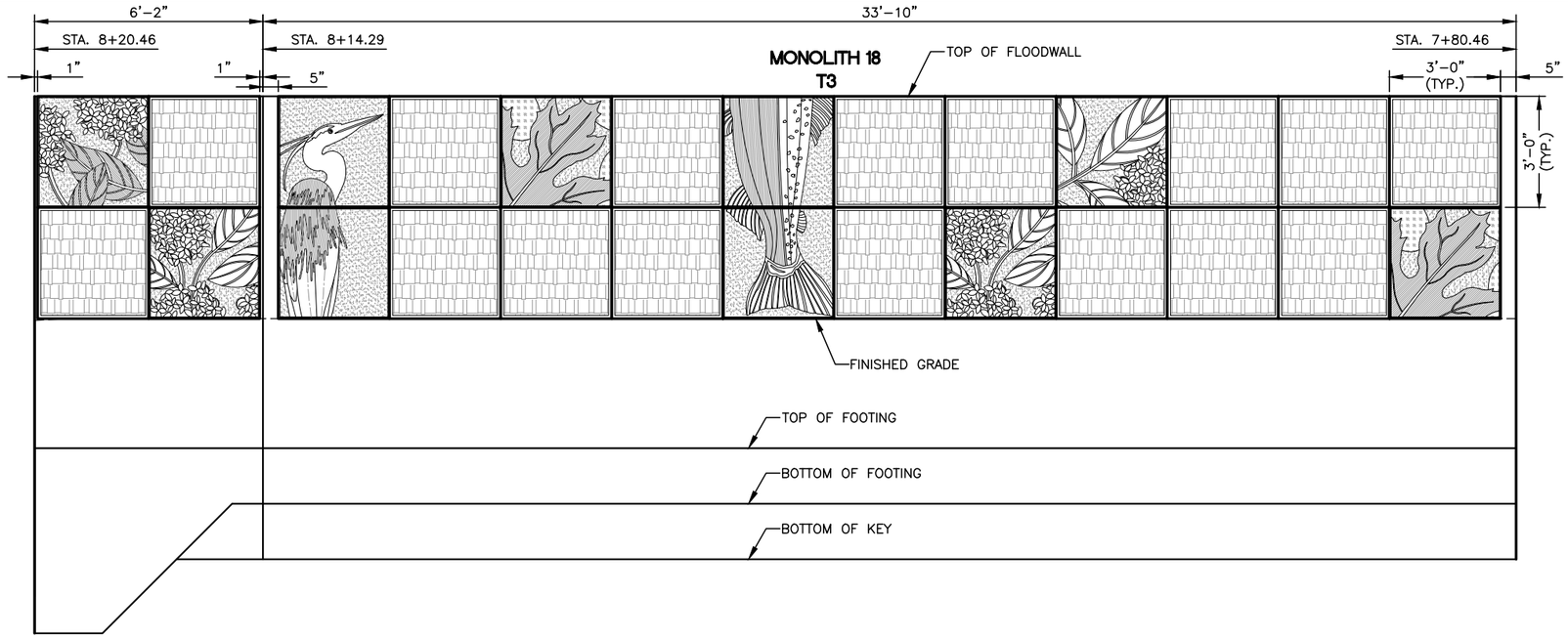
Christie True, Director

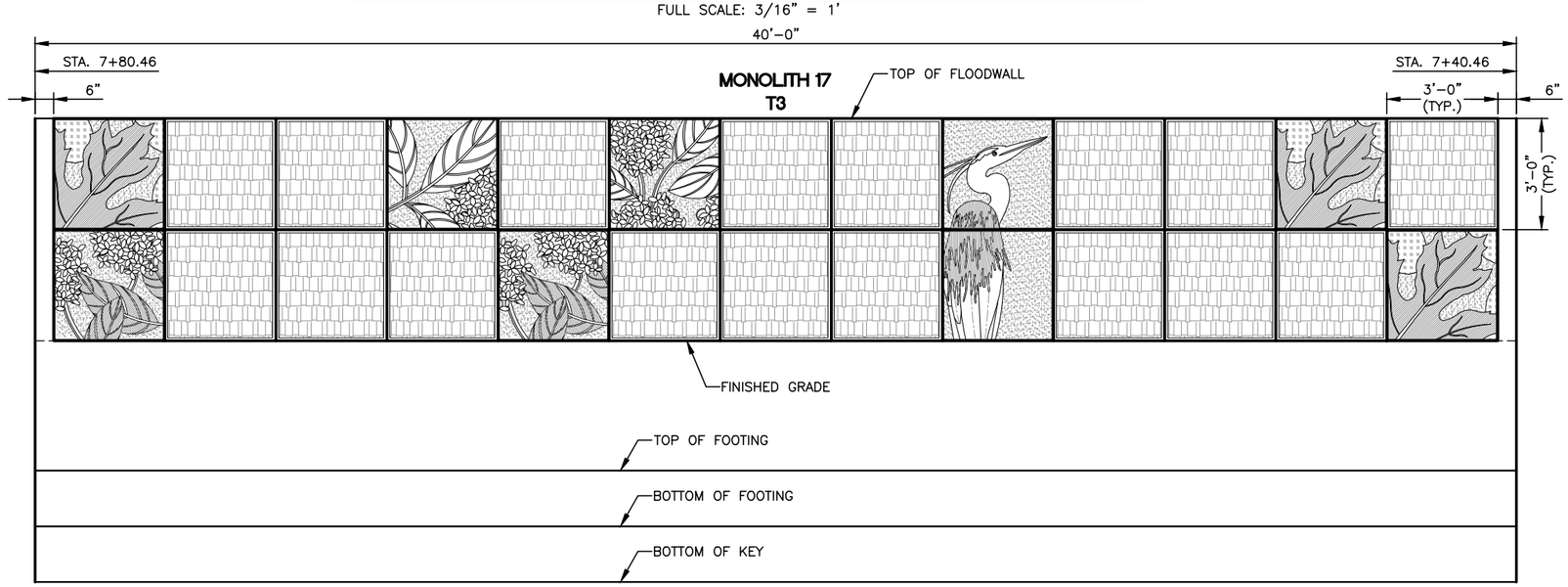
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 15 AND 16

SHEET
FP-08



FLOODWALL PATTERNING WET SIDE MONOLITH 18 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 17 ELEVATION

FULL SCALE: 3/16" = 1'

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HDR Engineering Inc.

King County
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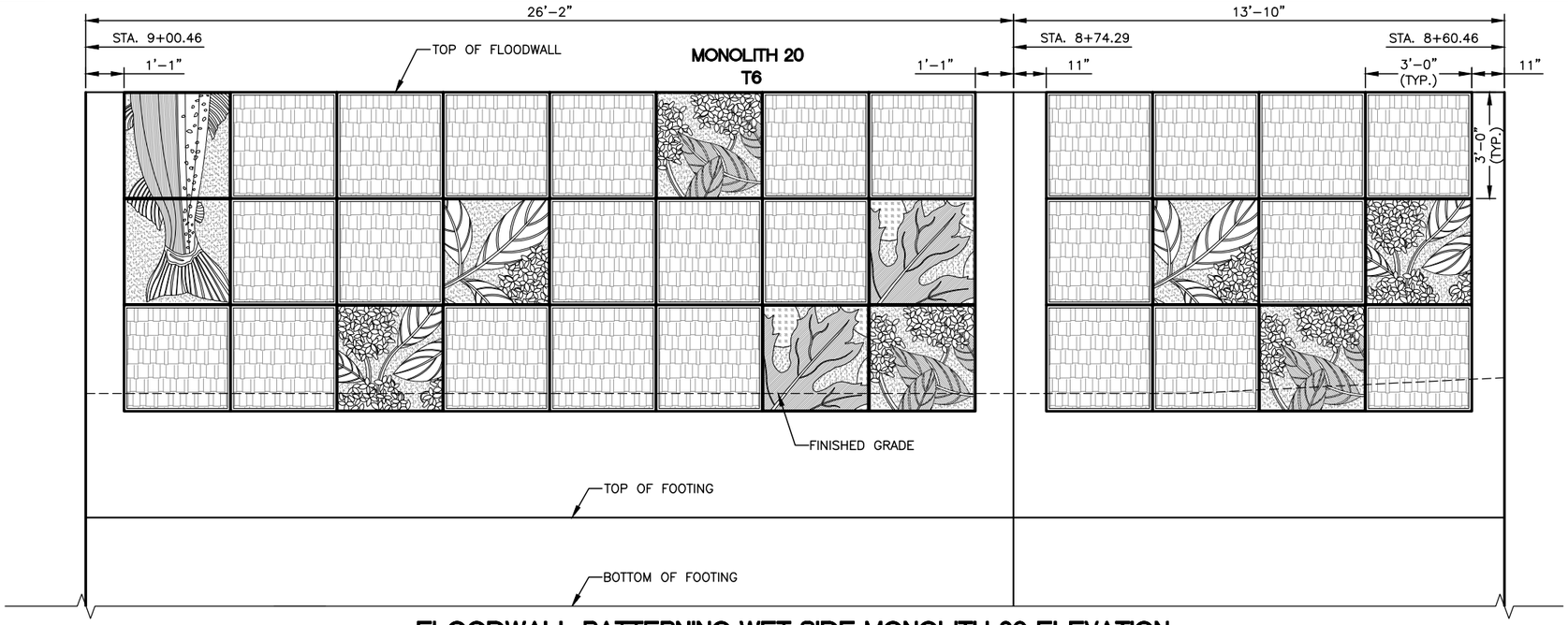
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

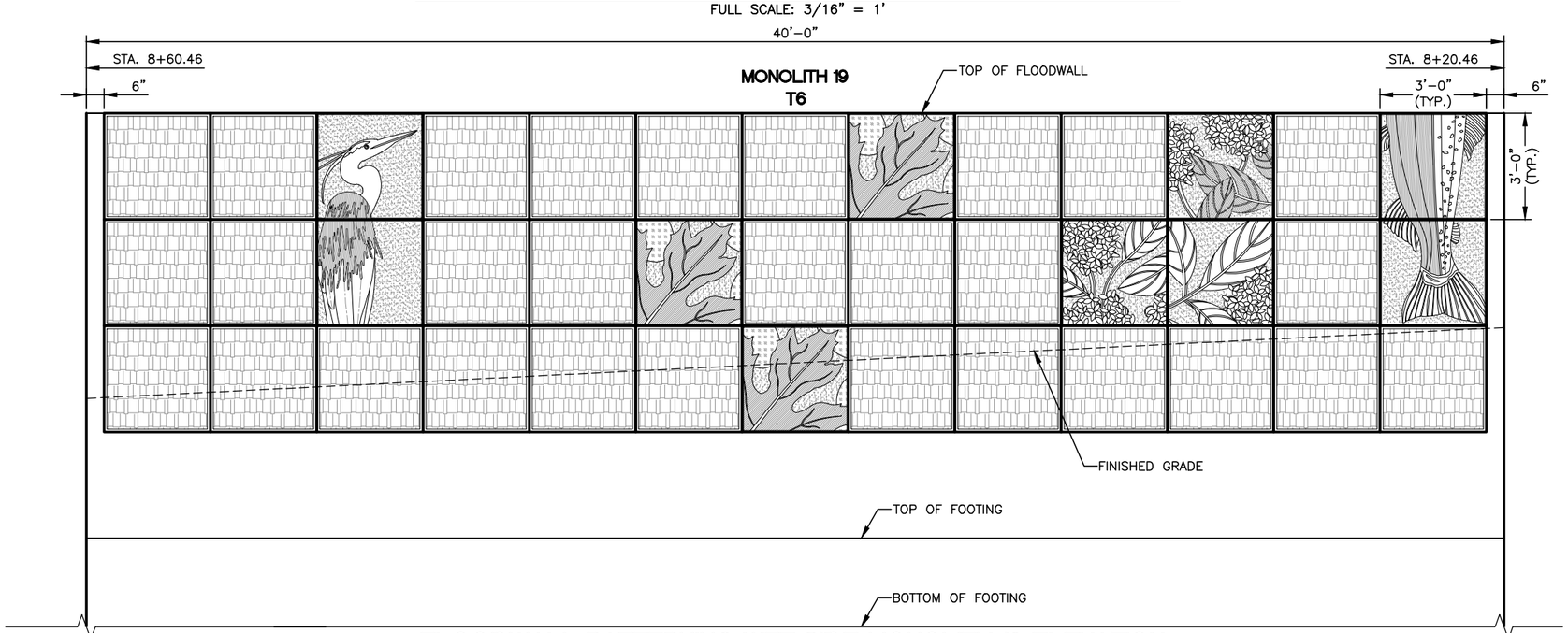
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 17 AND 18

SHEET
FP-09



FLOODWALL PATTERNING WET SIDE MONOLITH 20 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 19 ELEVATION

FULL SCALE: 3/16" = 1'

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King County
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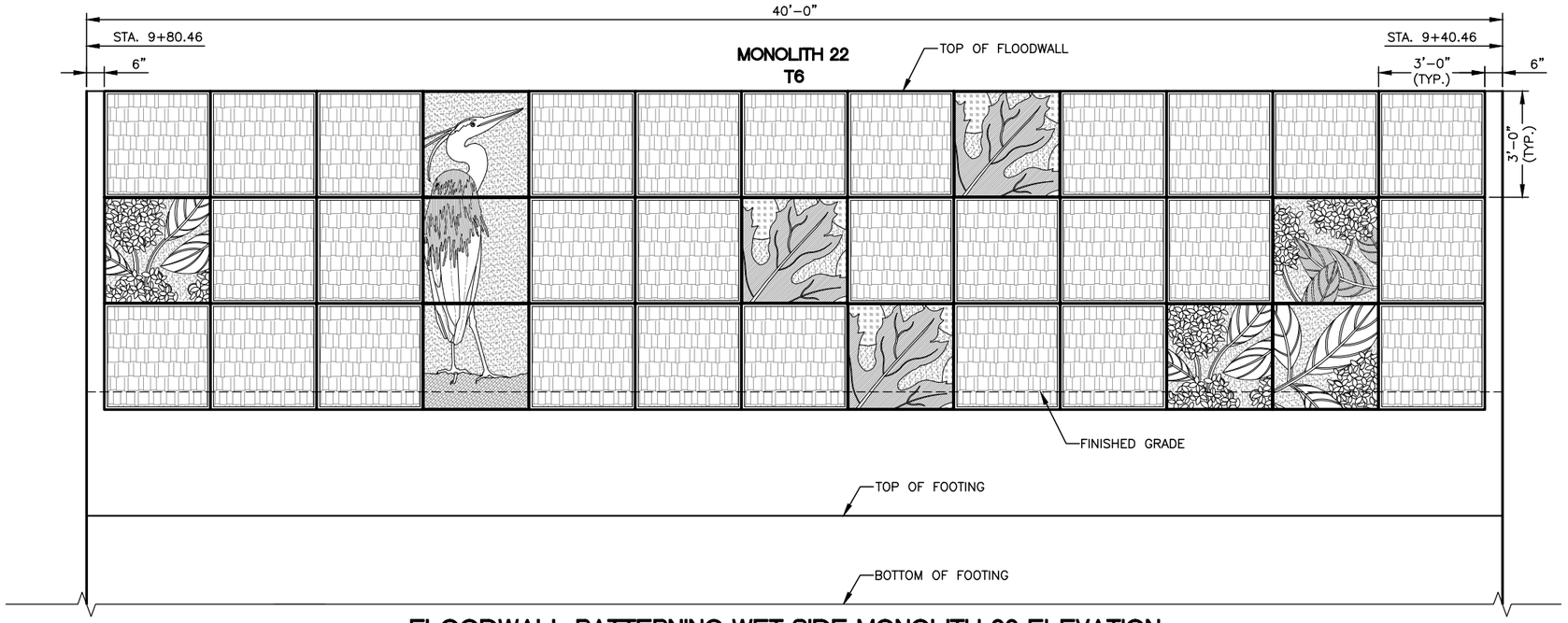
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

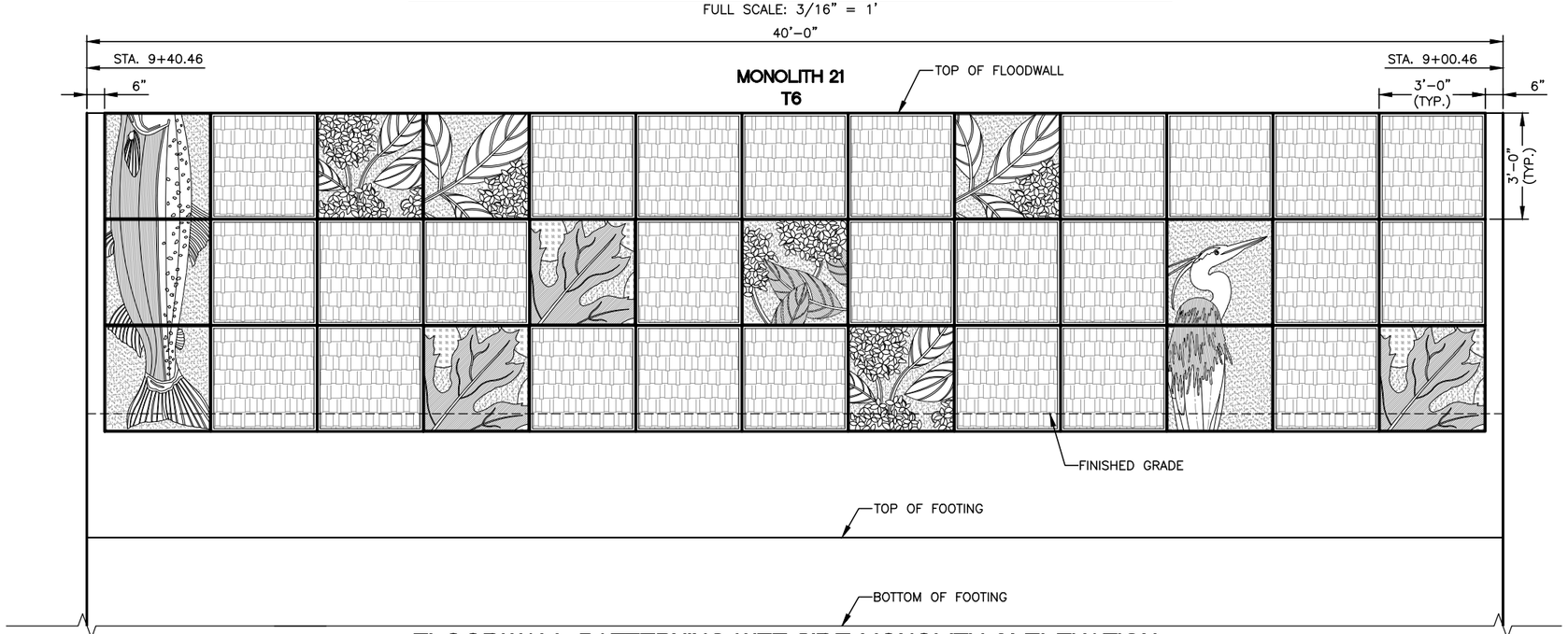
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 19 AND 20

SHEET
FP-10



FLOODWALL PATTERNING WET SIDE MONOLITH 22 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 21 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
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HDR Engineering Inc.

King County
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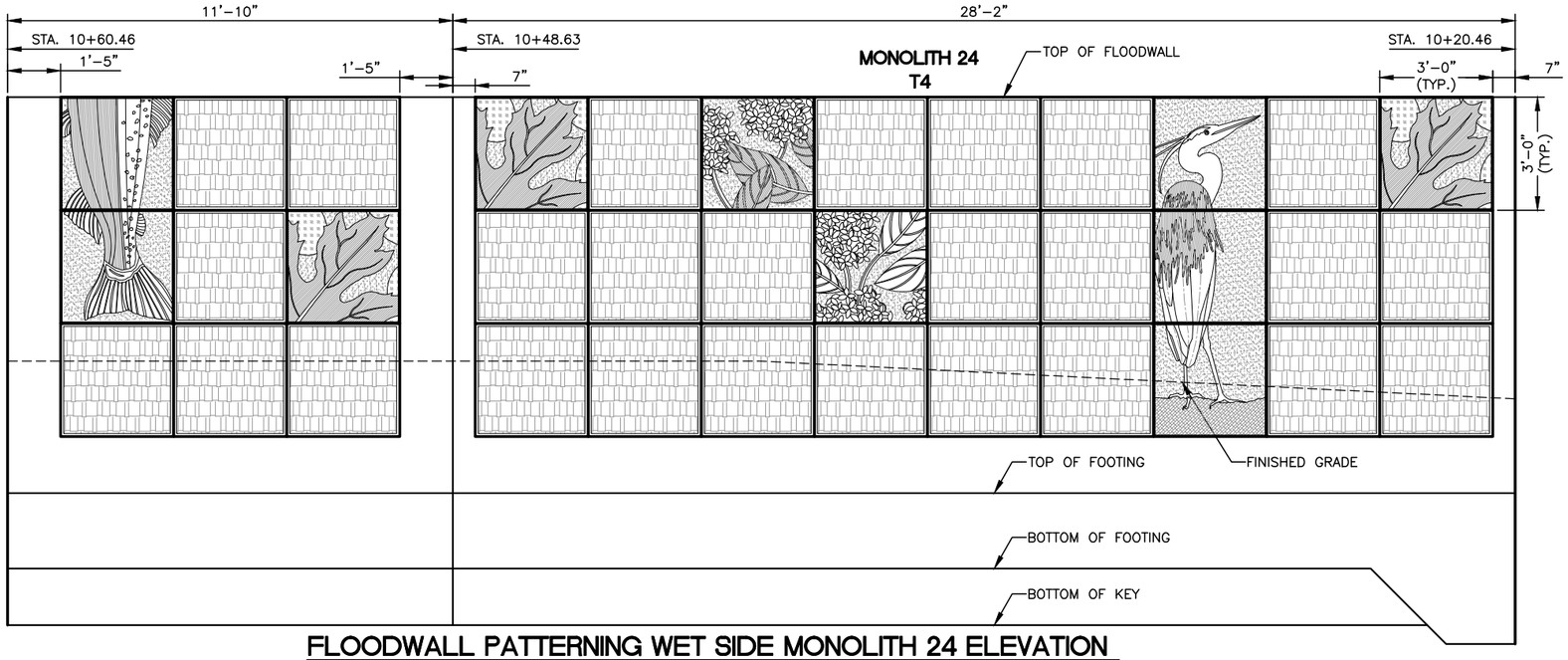
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

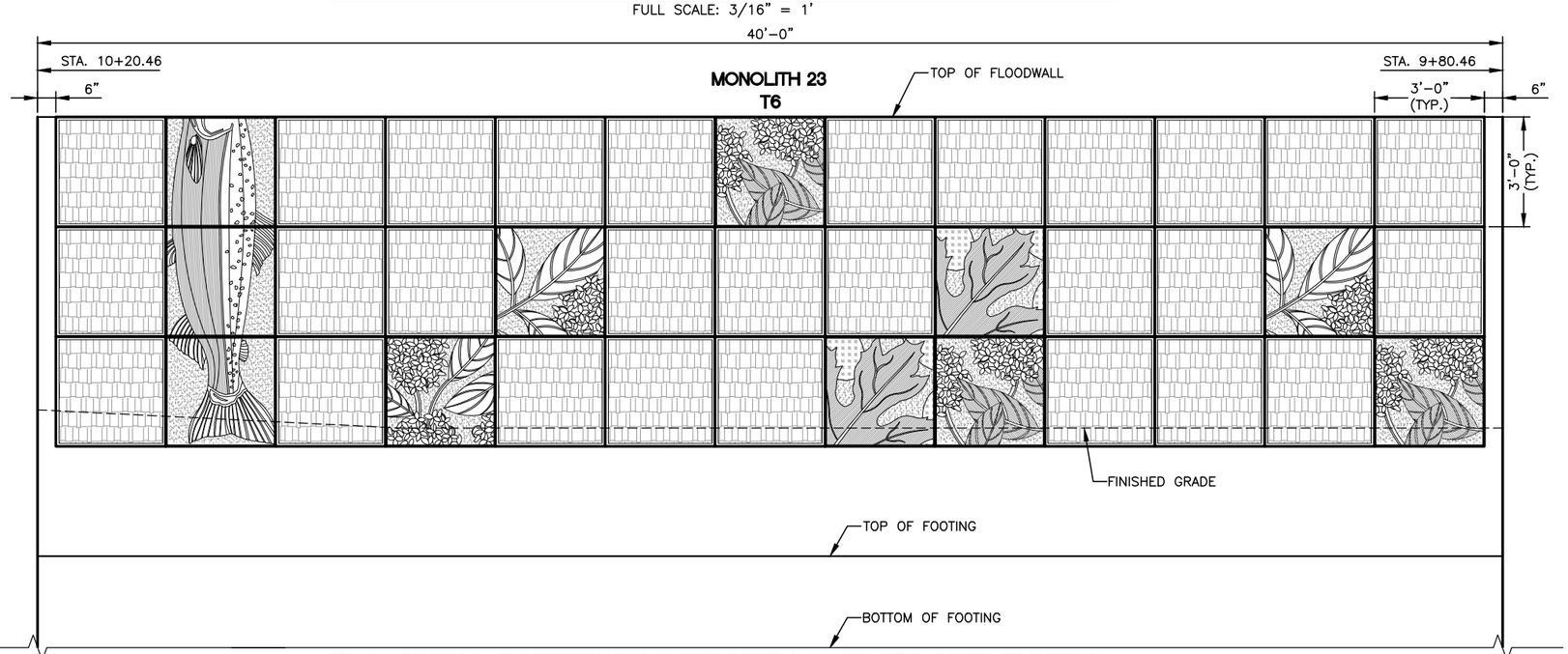
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 21 AND 22

SHEET
FP-11



FLOODWALL PATTERNING WET SIDE MONOLITH 24 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 23 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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CONTRACT No. C01294C18

HDR Engineering Inc.

King County
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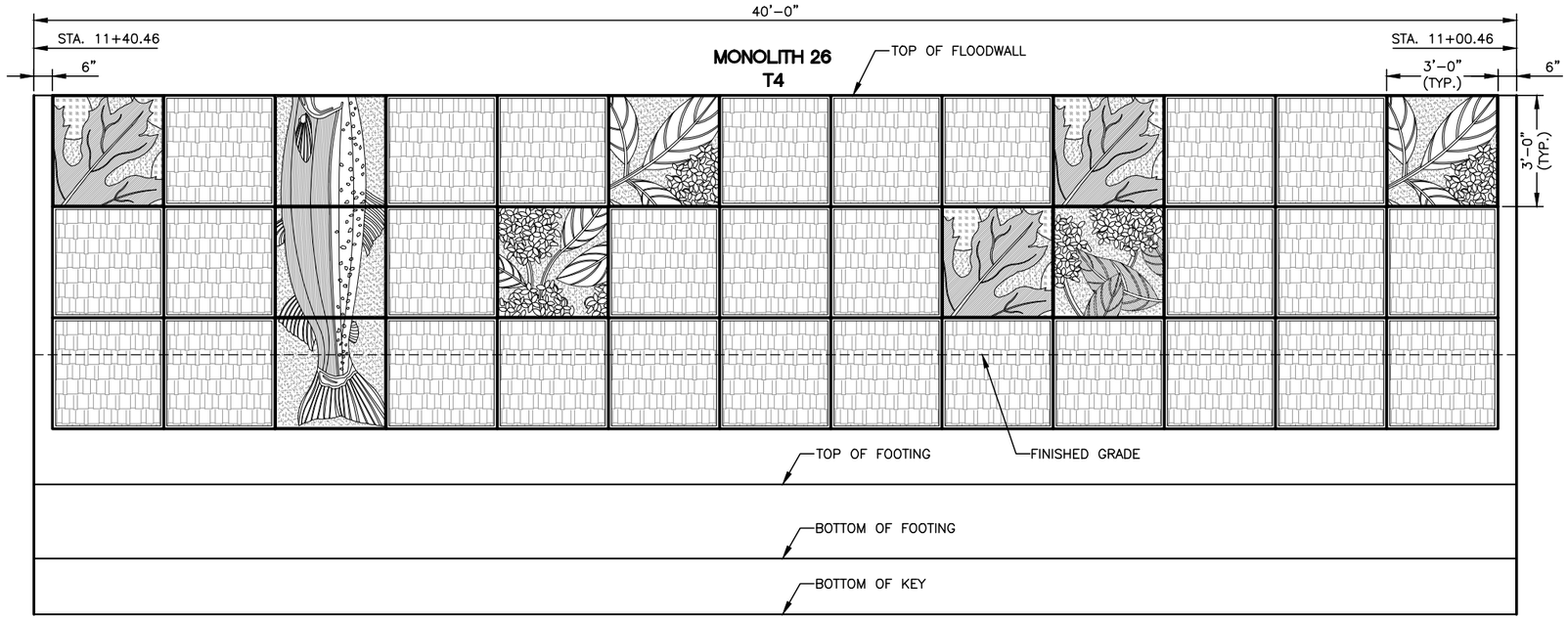
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

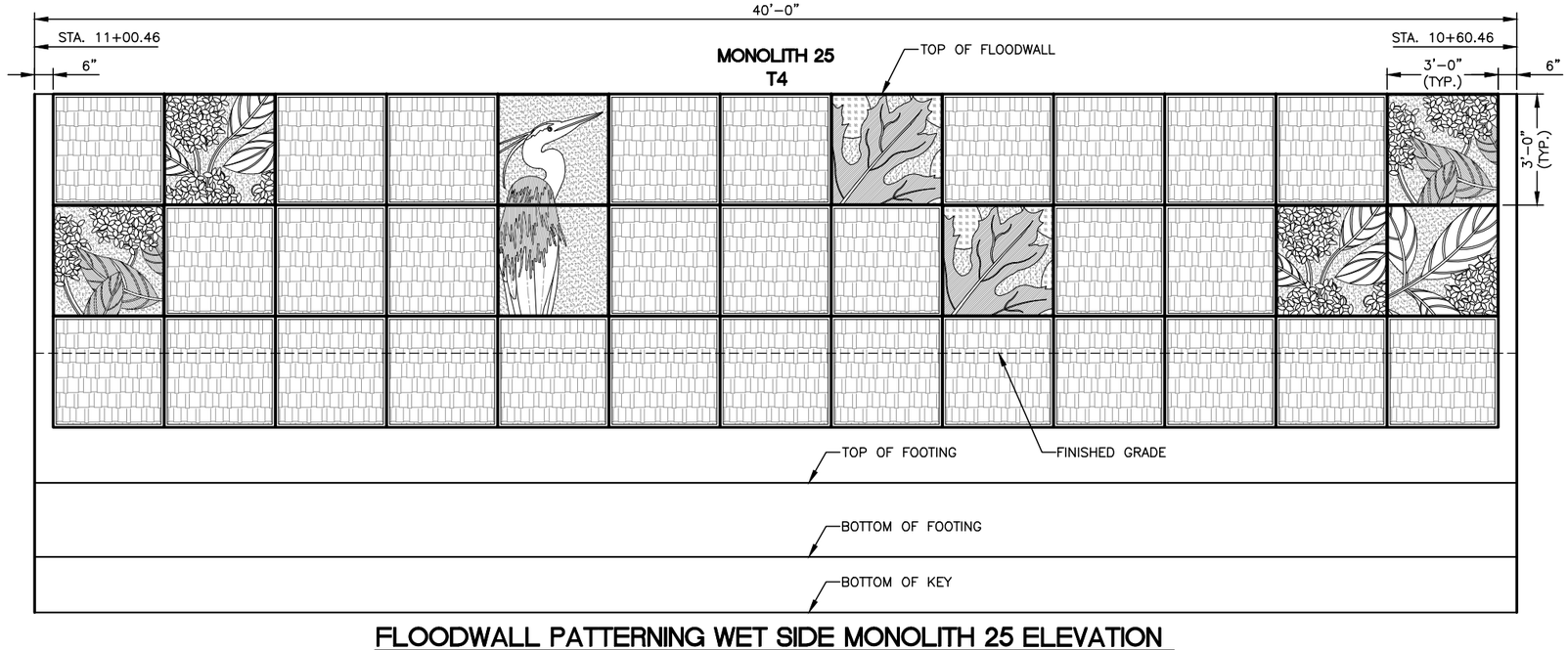
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 23 AND 24

SHEET
FP-12



FLOODWALL PATTERNING WET SIDE MONOLITH 26 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 25 ELEVATION

FULL SCALE: 3/16" = 1'

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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

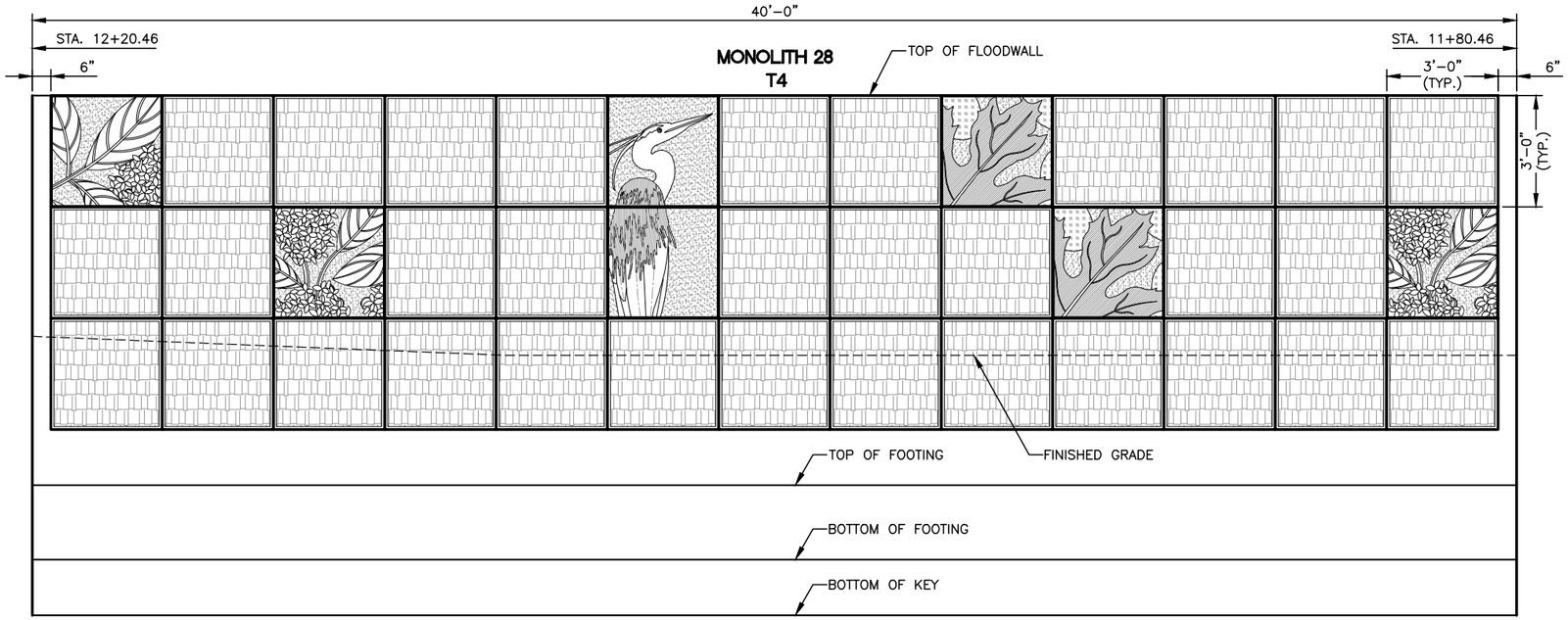
STATE OF WASHINGTON
JAMES C. CULLEN
20081
REGISTERED PROFESSIONAL ENGINEER
4/19/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

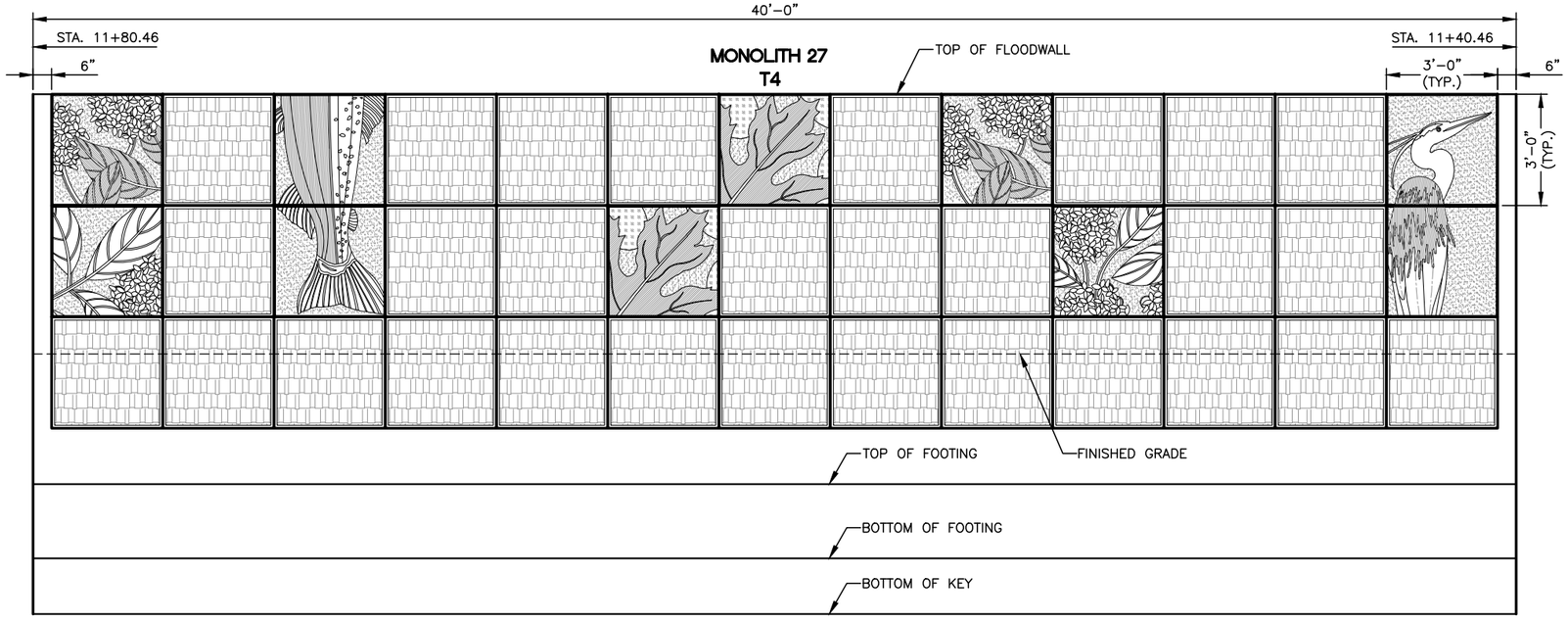
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 25 AND 26

SHEET
FP-13



FLOODWALL PATTERNING WET SIDE MONOLITH 28 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 27 ELEVATION

FULL SCALE: 3/16" = 1'

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STATE OF WASHINGTON
20081
PROFESSIONAL ENGINEER

HDR Engineering Inc.

King County
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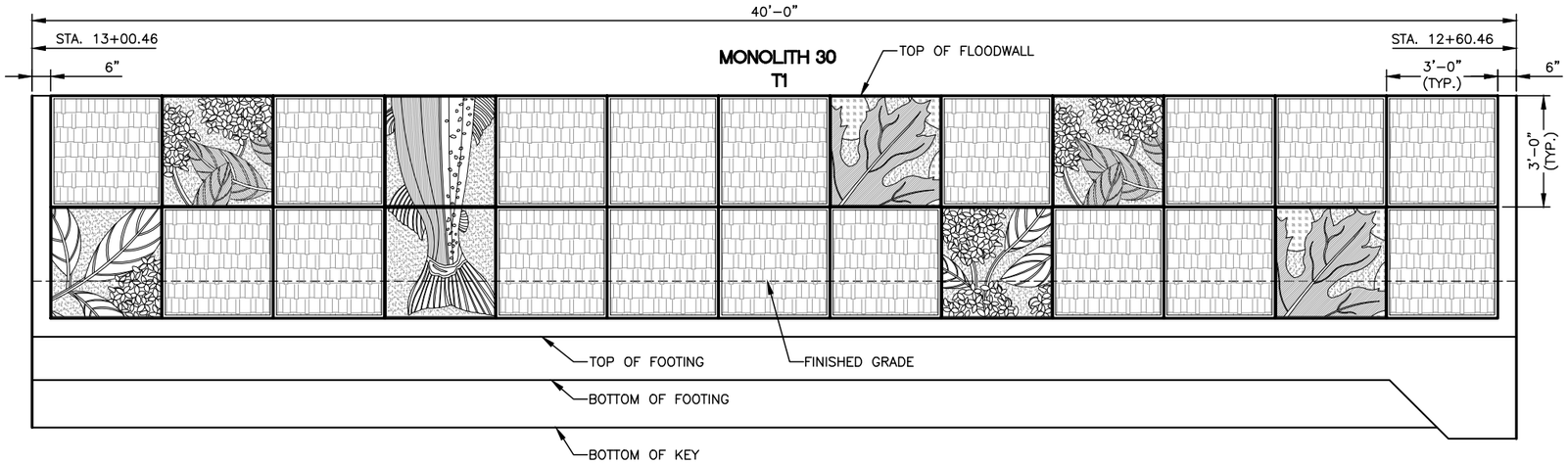
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

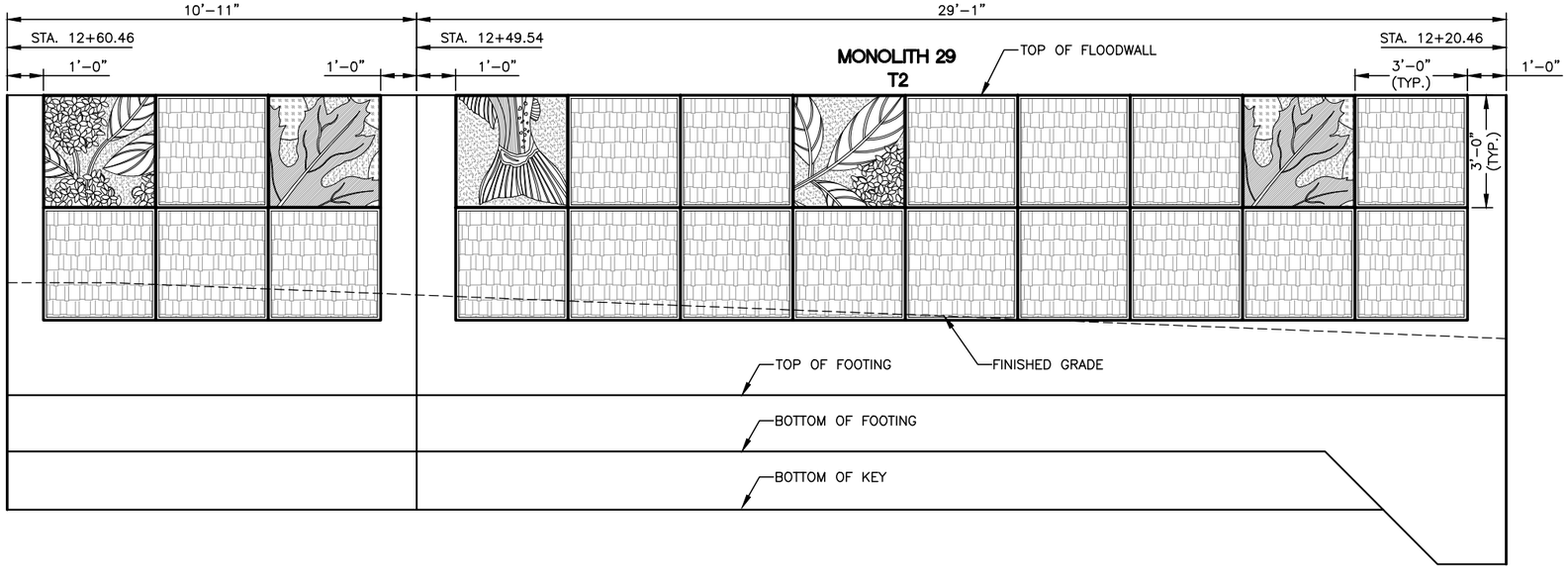
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 27 AND 28

SHEET
FP-14



FLOODWALL PATTERNING WET SIDE MONOLITH 30 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 29 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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CONTRACT No. C01294C18

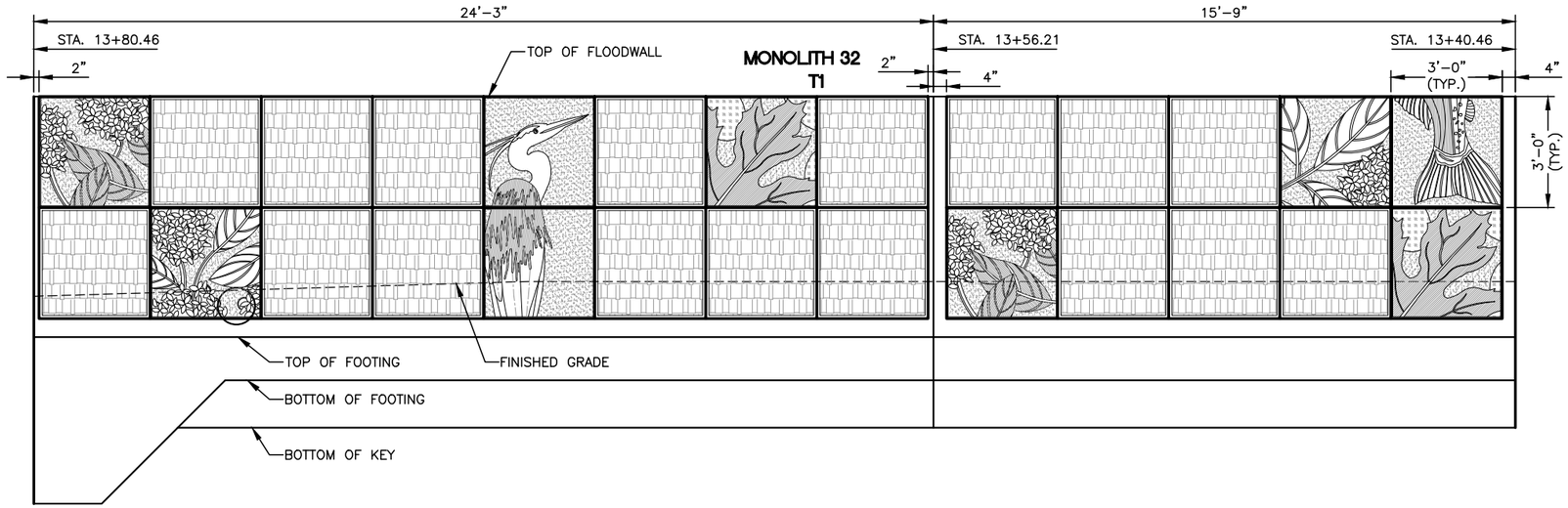
STATE OF WASHINGTON 20081 PROFESSIONAL ENGINEER

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

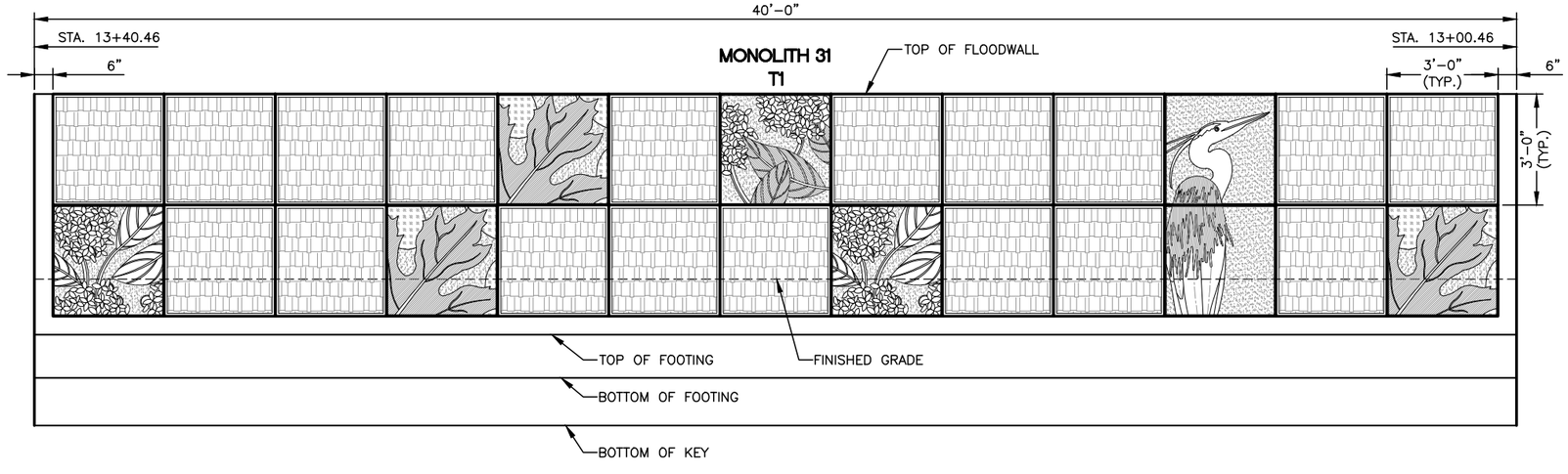
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 29 AND 30

SHEET
FP-15



FLOODWALL PATTERNING WET SIDE MONOLITH 32 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 31 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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PROJECT No. 1112056

CONTRACT No. C01294C18

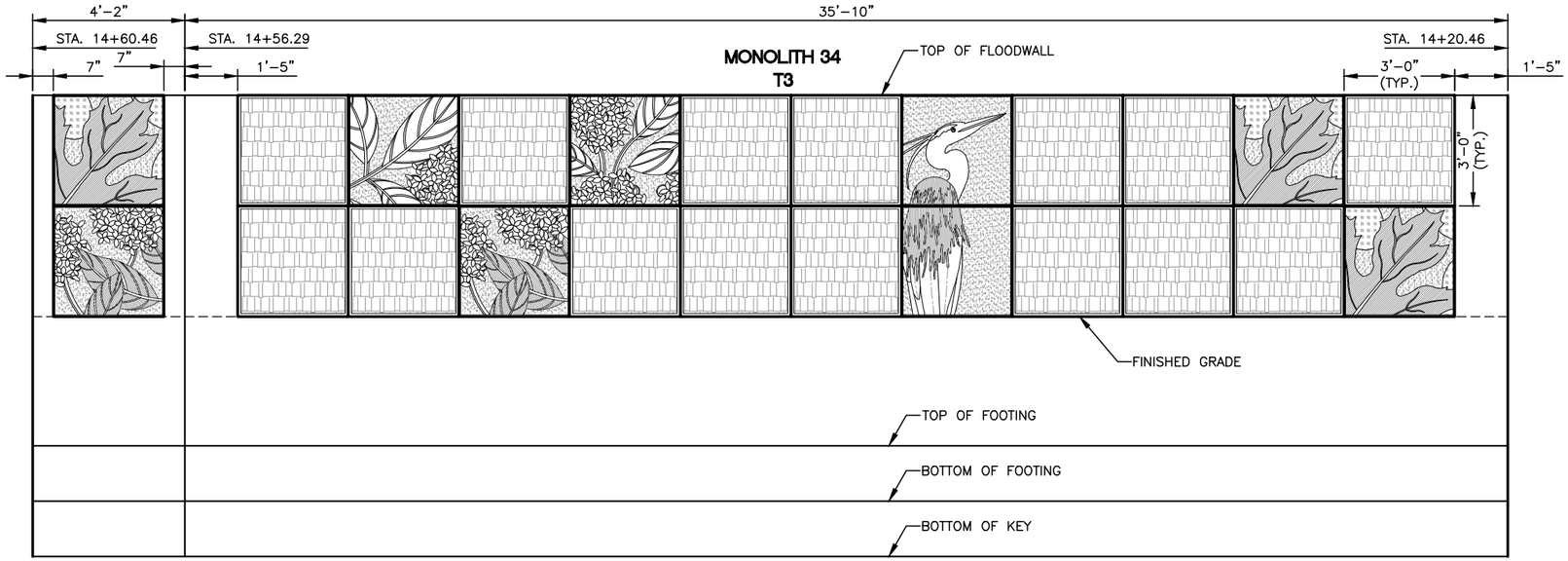
STATE OF WASHINGTON
JEFFREY L. CARLSON
20081
PROFESSIONAL ENGINEER
4/19/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

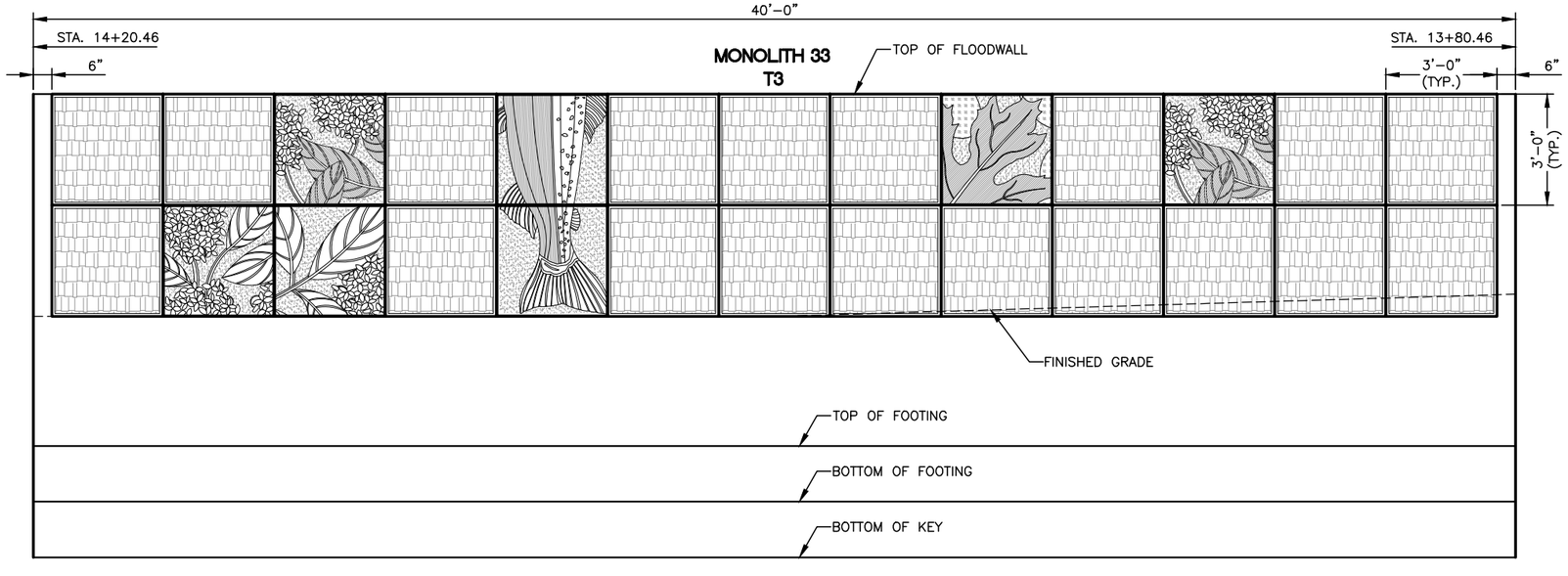
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 31 AND 32

SHEET
FP-16



FLOODWALL PATTERNING WET SIDE MONOLITH 34 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 33 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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Know what's below.
Call before you dig.

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CAD ENTERED: JCB				
DESIGNED: WJ		NUM. REVISION	BY	DATE
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SUPERVISOR: BK				
		NUM. RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

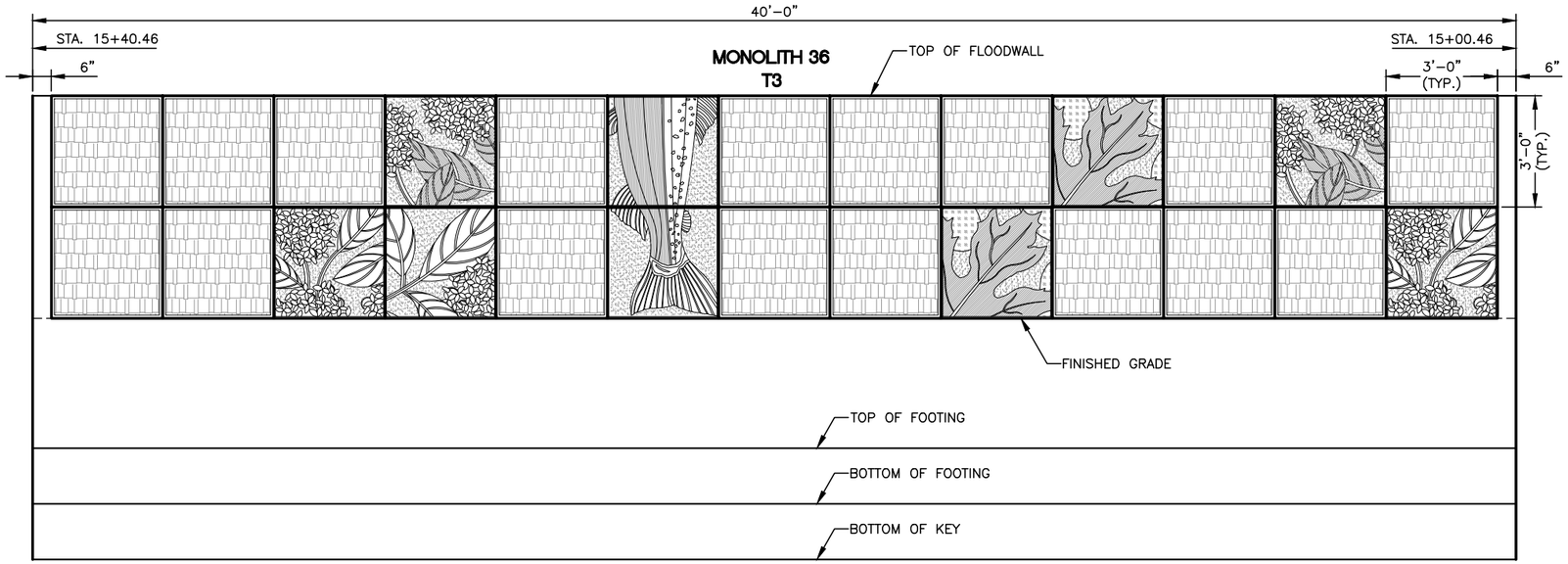
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

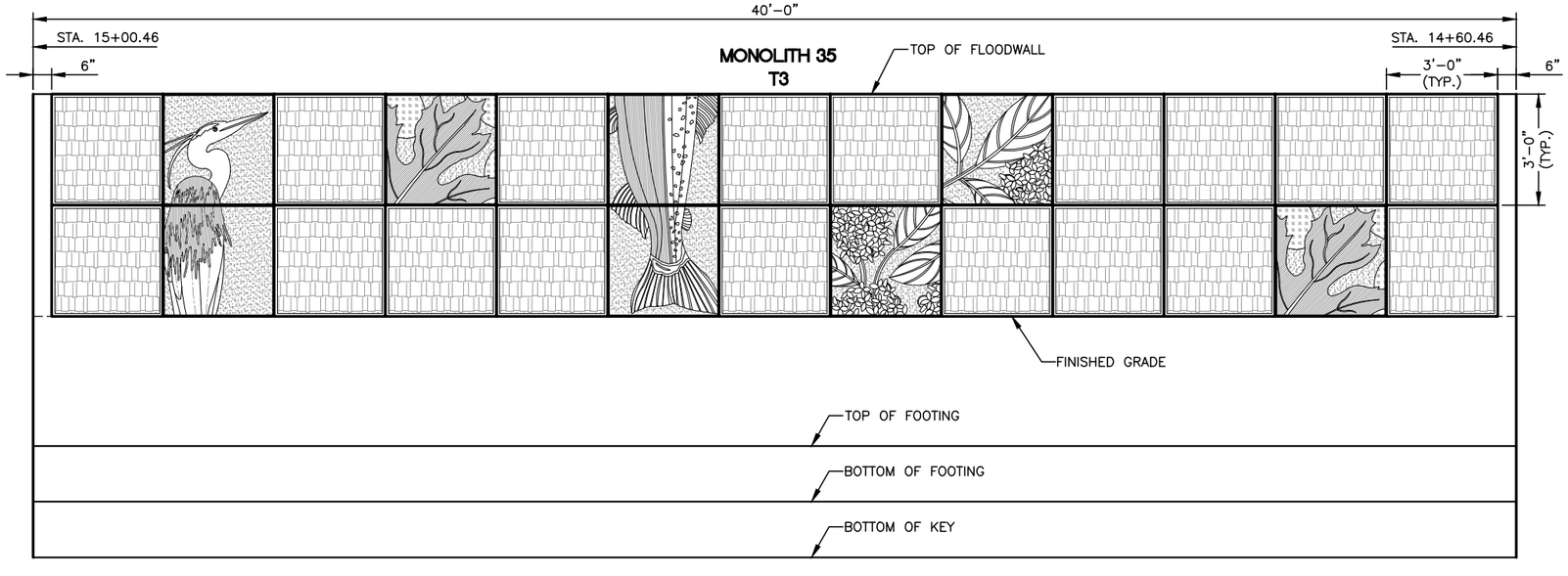
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 33 AND 34

SHEET
FP-17



FLOODWALL PATTERNING WET SIDE MONOLITH 36 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 35 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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SUPERVISOR: BK				
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FUNDING:

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CONTRACT No. C01294C18

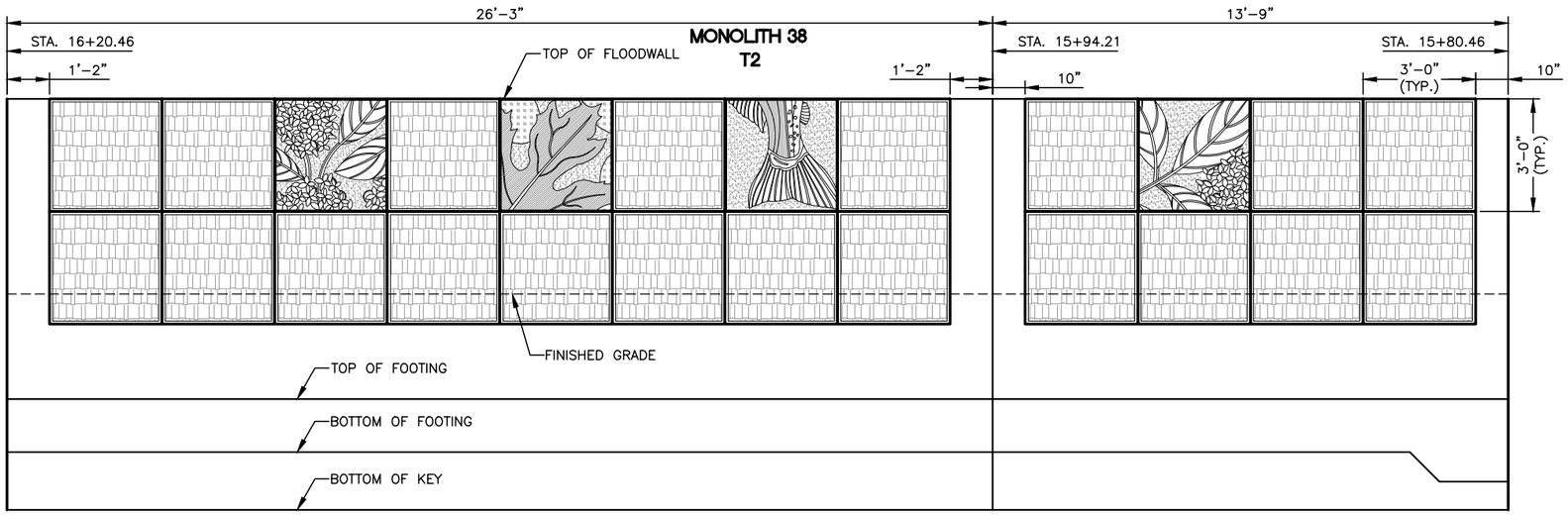
STATE OF WASHINGTON
JEFFREY L. CULLEN
20081
PROFESSIONAL ENGINEER
4/19/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

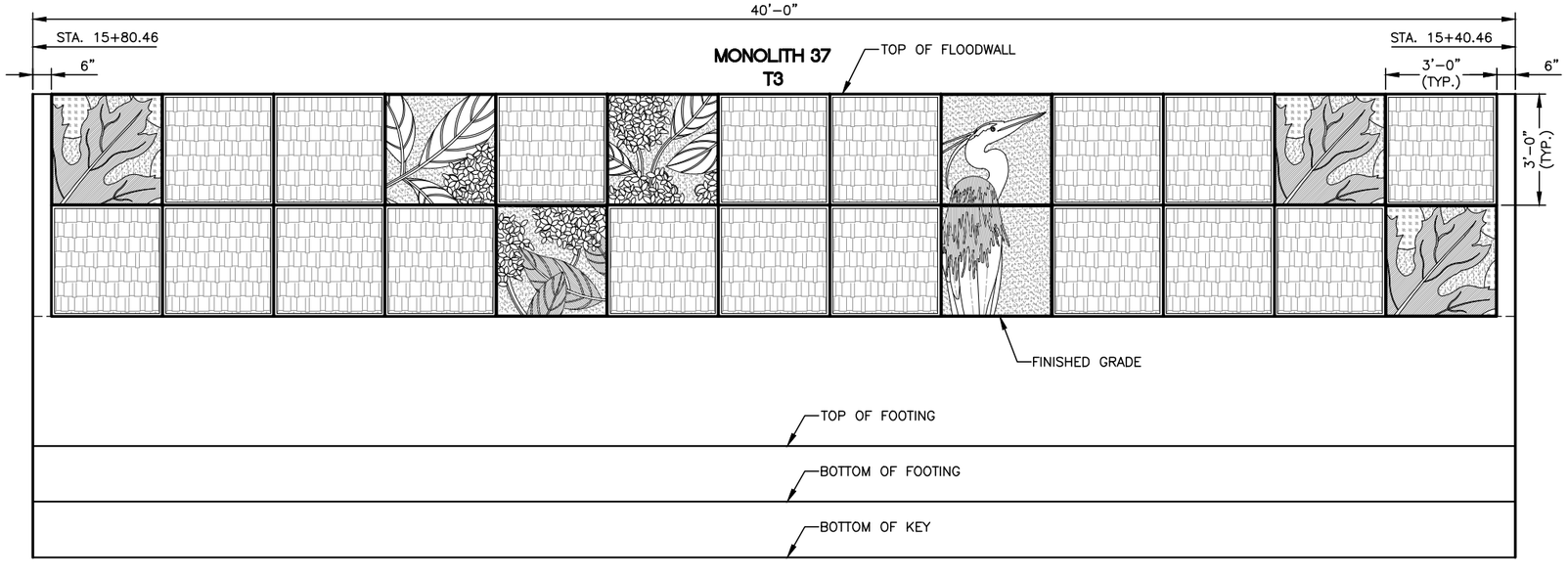
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 35 AND 36

SHEET
FP-18



FLOODWALL PATTERNING WET SIDE MONOLITH 38 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 37 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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SUPERVISOR:	BK

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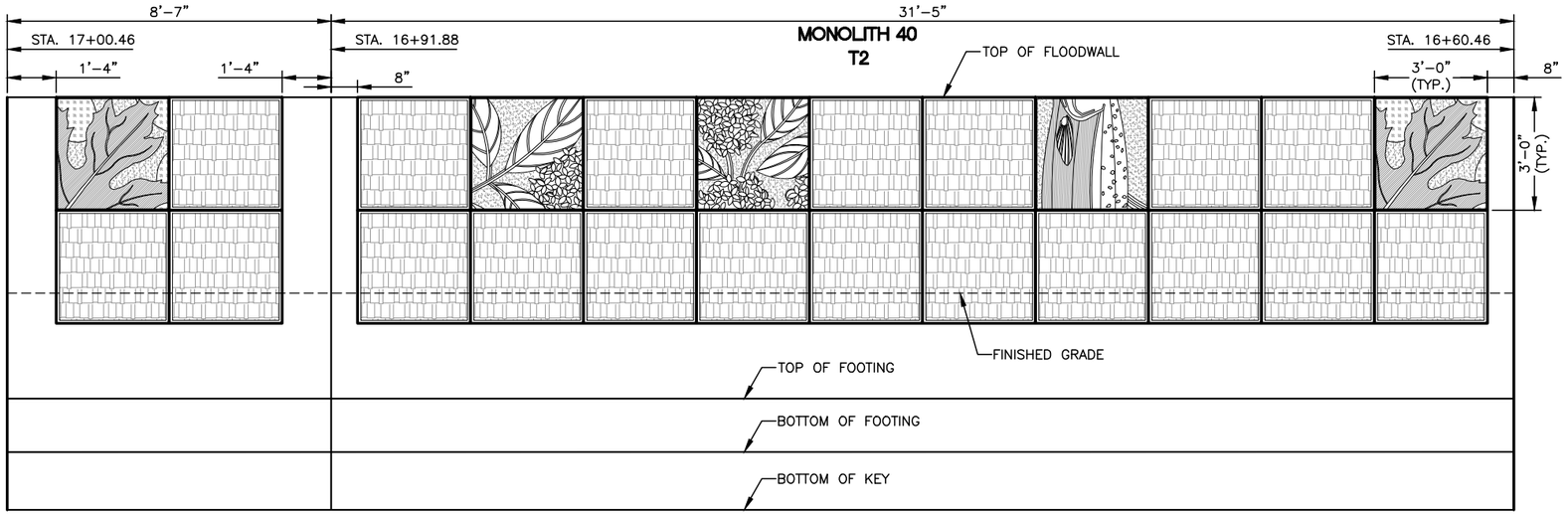
King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

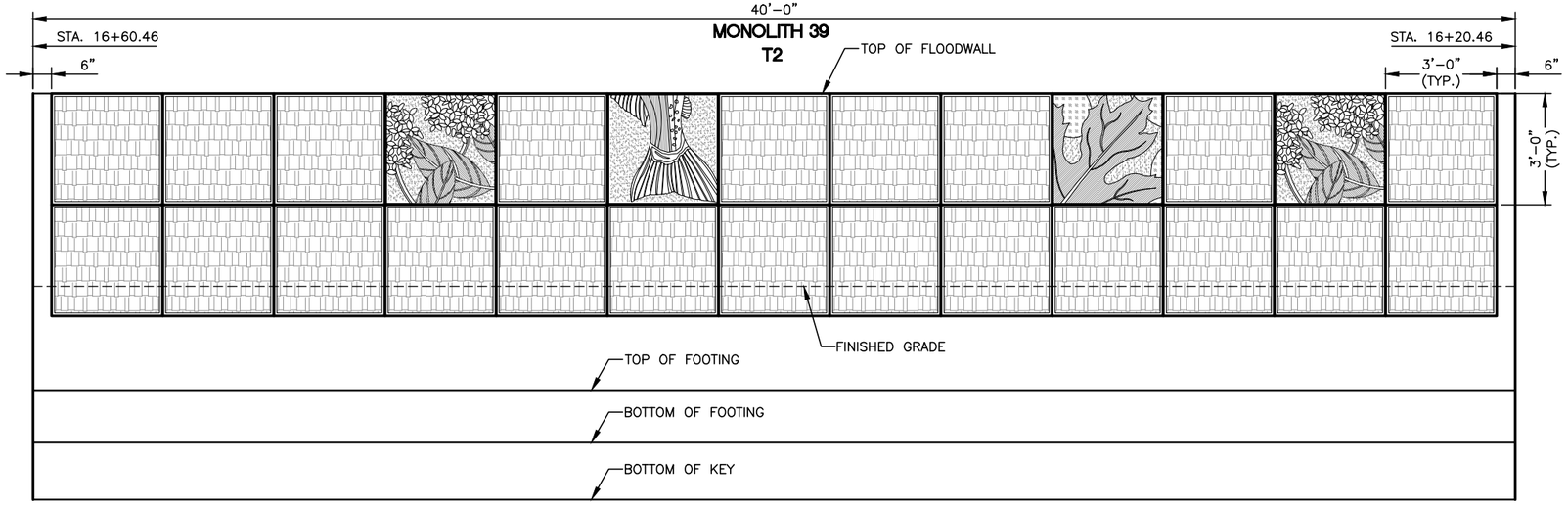
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 37 AND 38

SHEET
FP-19



FLOODWALL PATTERNING WET SIDE MONOLITH 40 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 39 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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FUNDING:

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CONTRACT No. C01294C18

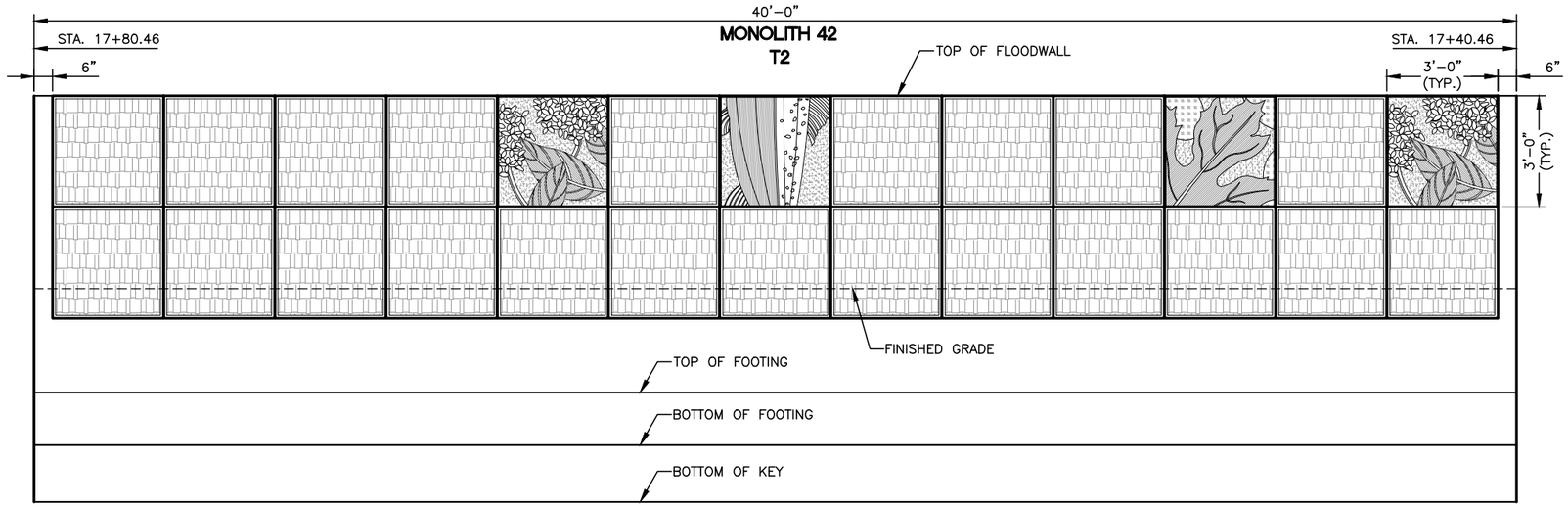
STATE OF WASHINGTON
38081
PROFESSIONAL ENGINEER

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

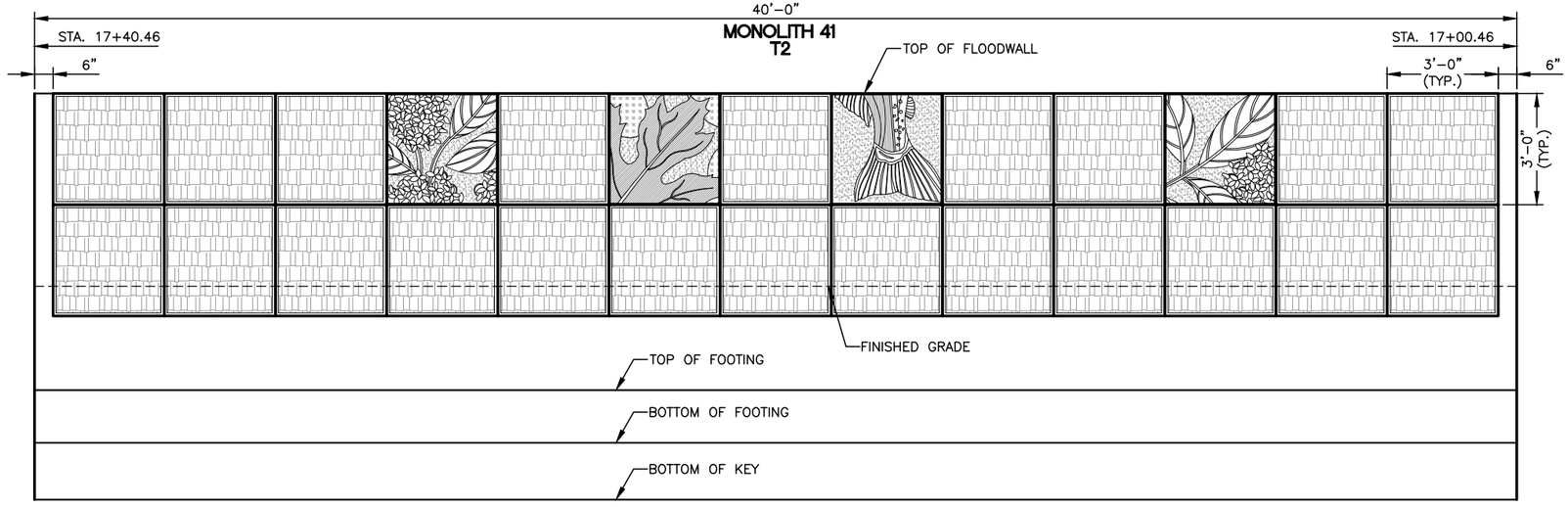
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 39 AND 40

SHEET
FP-20



FLOODWALL PATTERNING WET SIDE MONOLITH 42 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 41 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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1-800-424-5555
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SUPERVISOR: BK				
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Water and Land Resources Division
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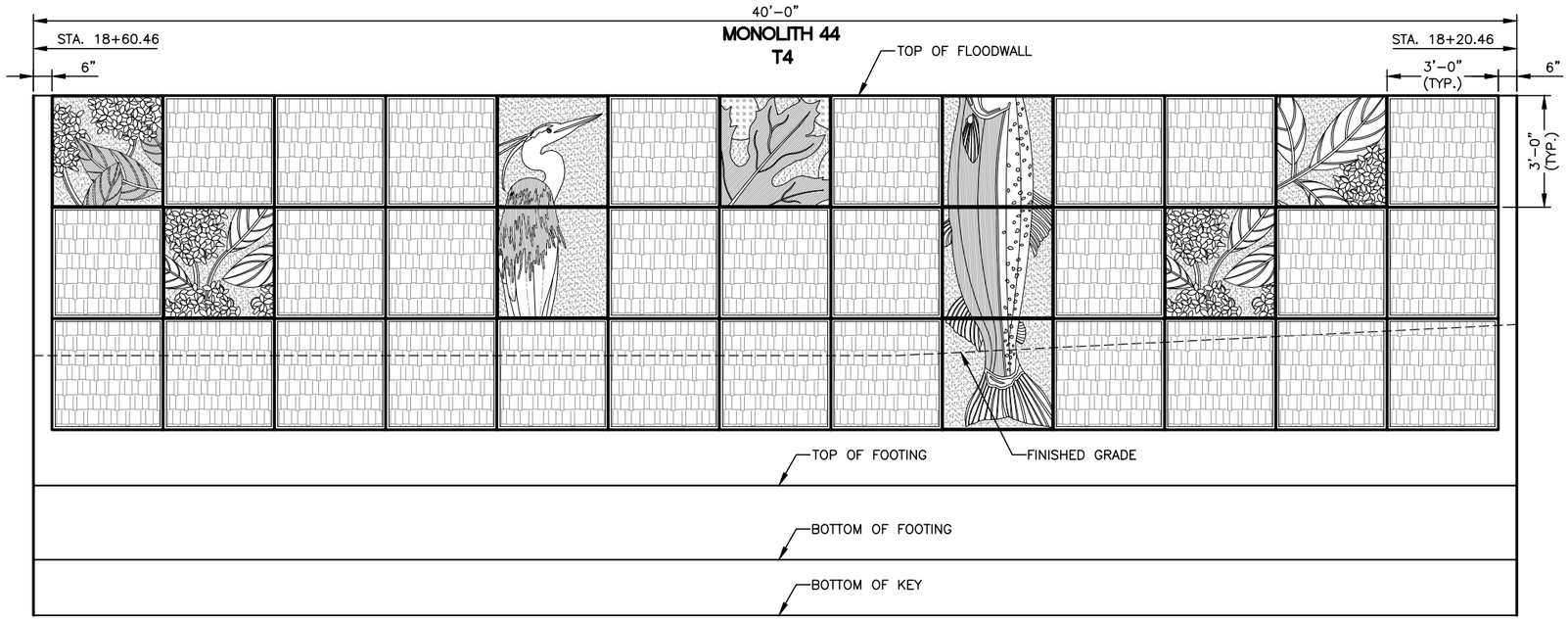
Christie True, Director

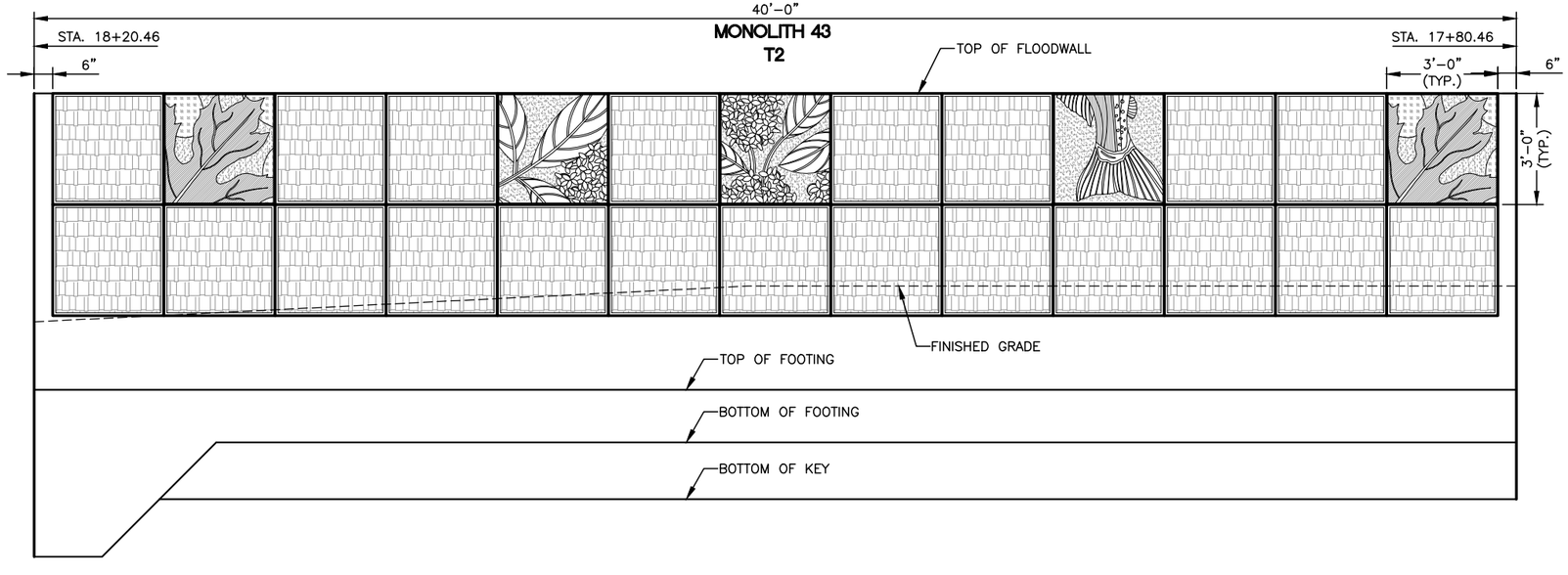
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 41 AND 42

SHEET
FP-21



FLOODWALL PATTERNING WET SIDE MONOLITH 44 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 43 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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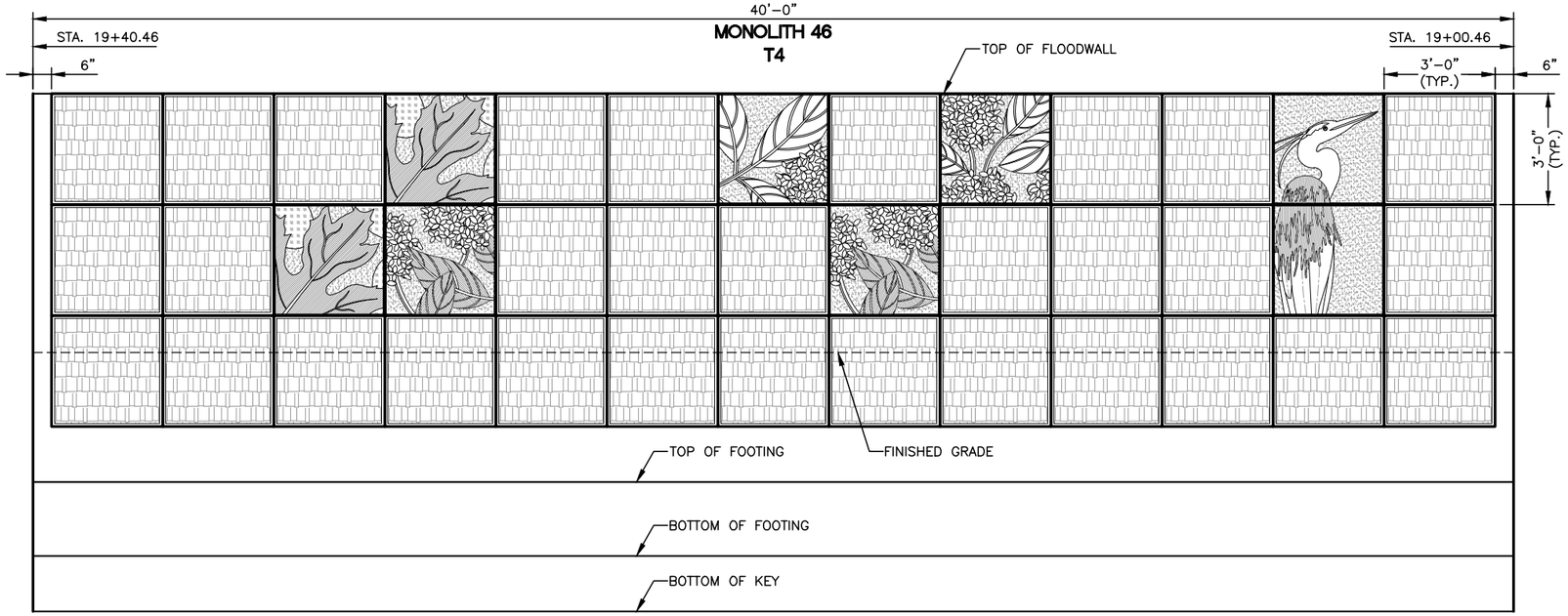
STATE OF WASHINGTON 38081 PROFESSIONAL ENGINEER

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

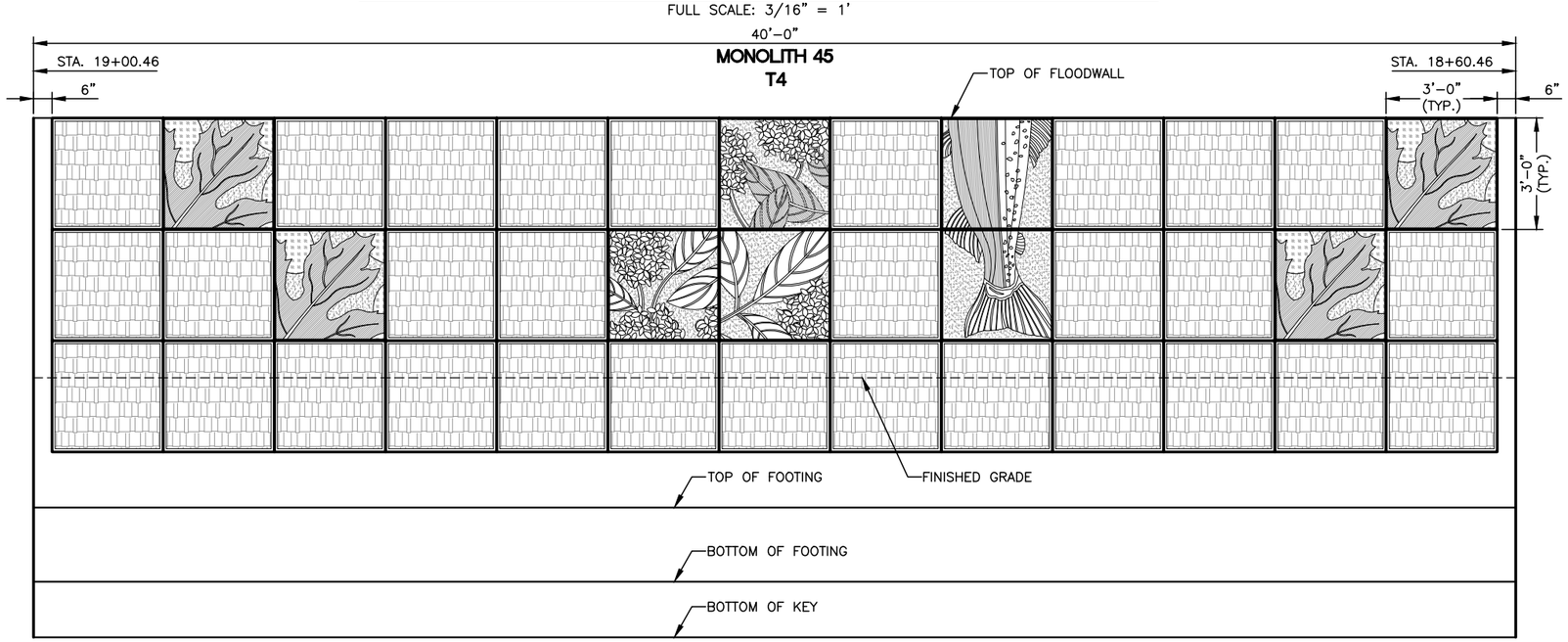
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 43 AND 44

SHEET
FP-22



FLOODWALL PATTERNING WET SIDE MONOLITH 46 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 45 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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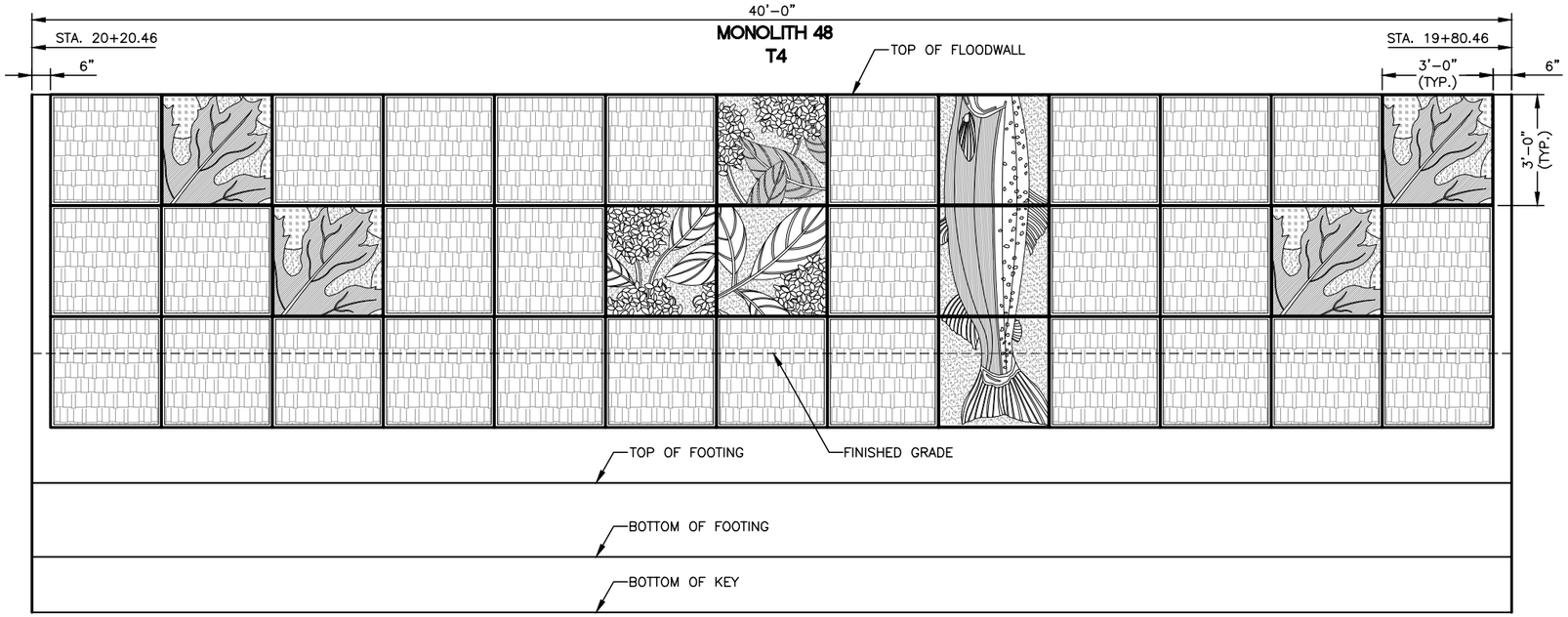
Christie True, Director

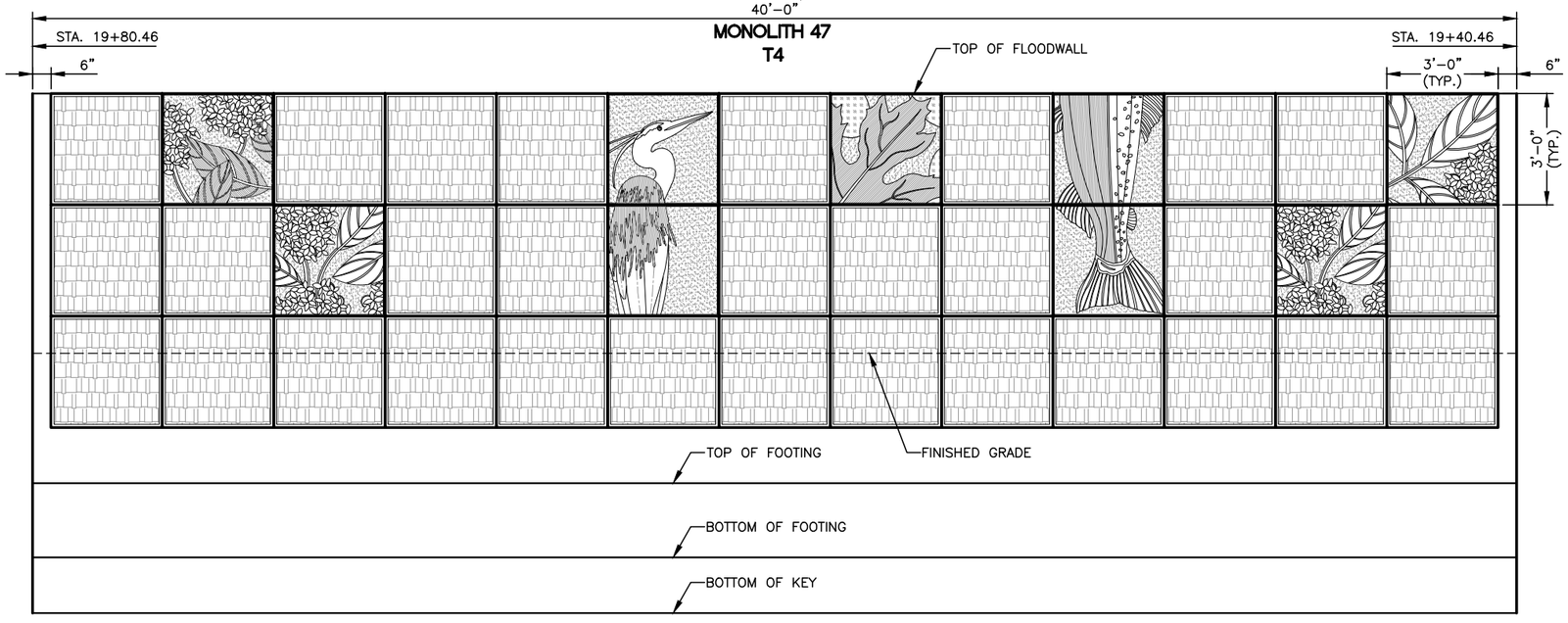
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 45 AND 46

SHEET
FP-23



FLOODWALL PATTERNING WET SIDE MONOLITH 48 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 47 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
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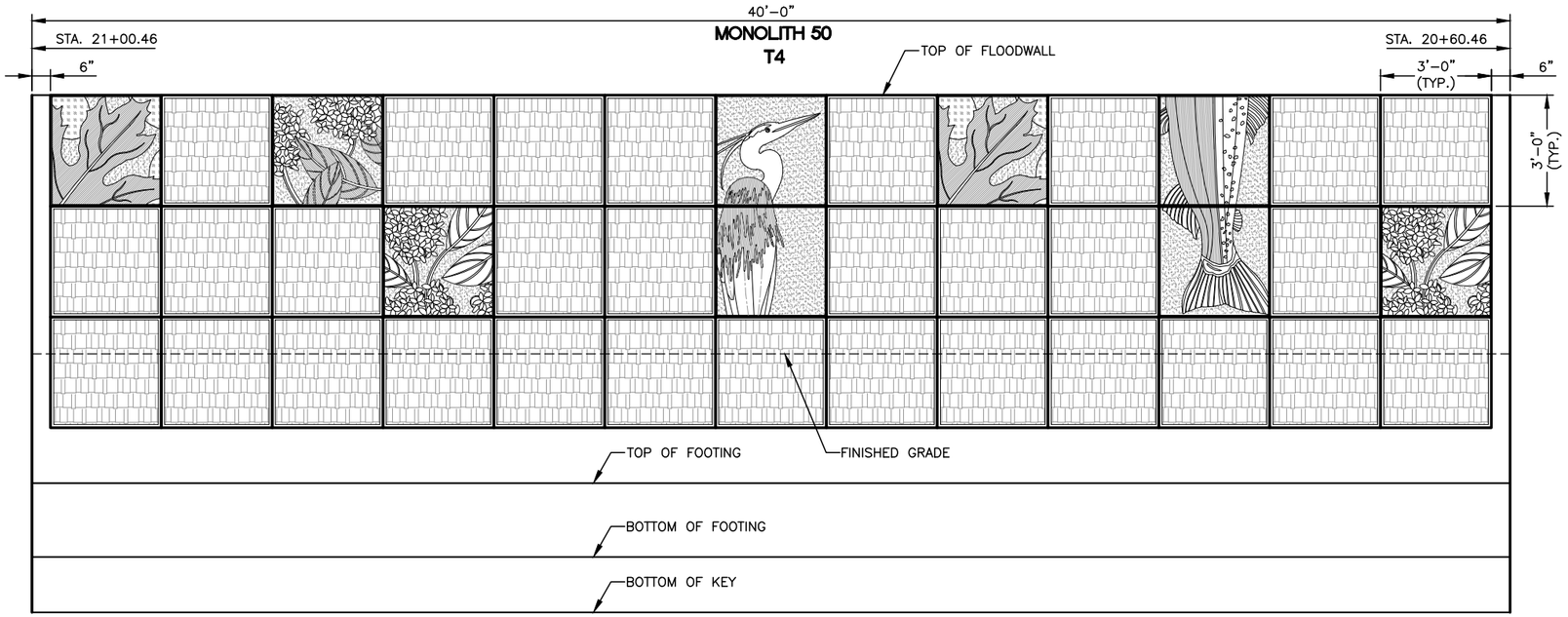
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

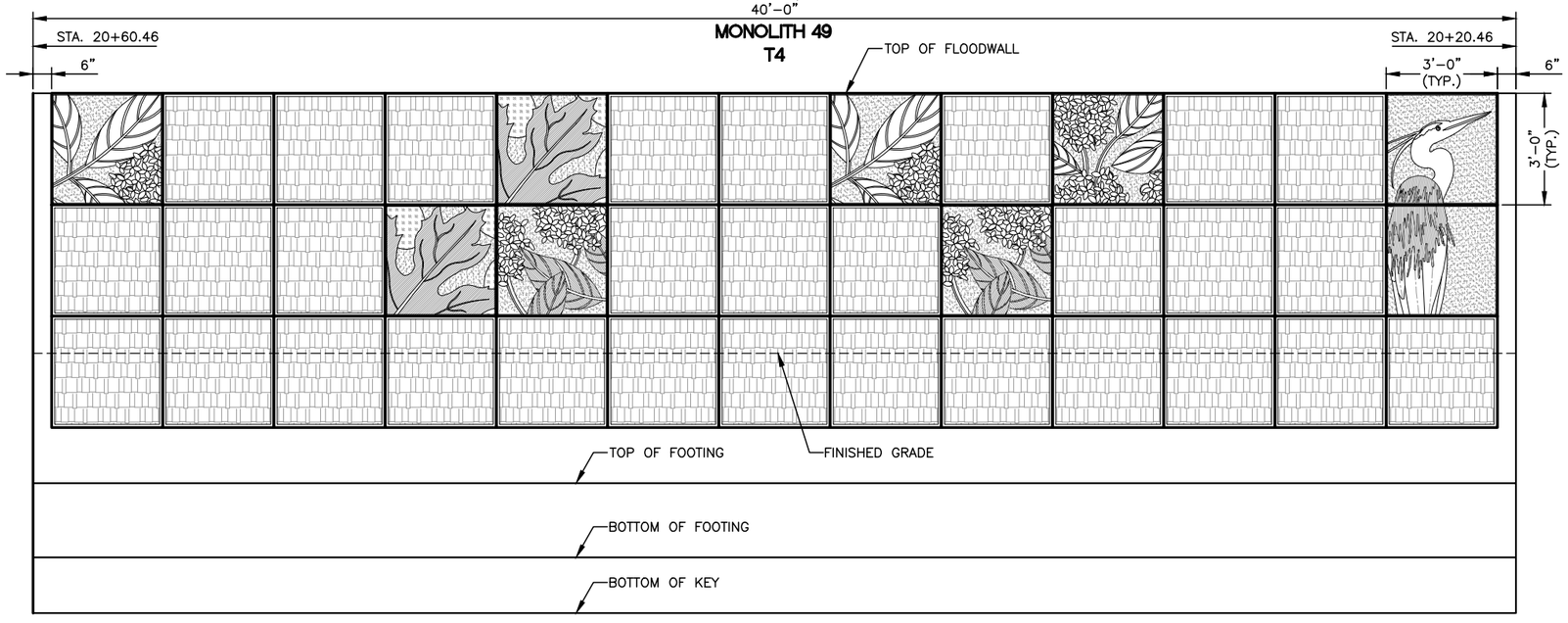
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 47 AND 48

SHEET
FP-24



FLOODWALL PATTERNING WET SIDE MONOLITH 50 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 49 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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DESIGNED: WJ
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HDR Engineering Inc.

King County
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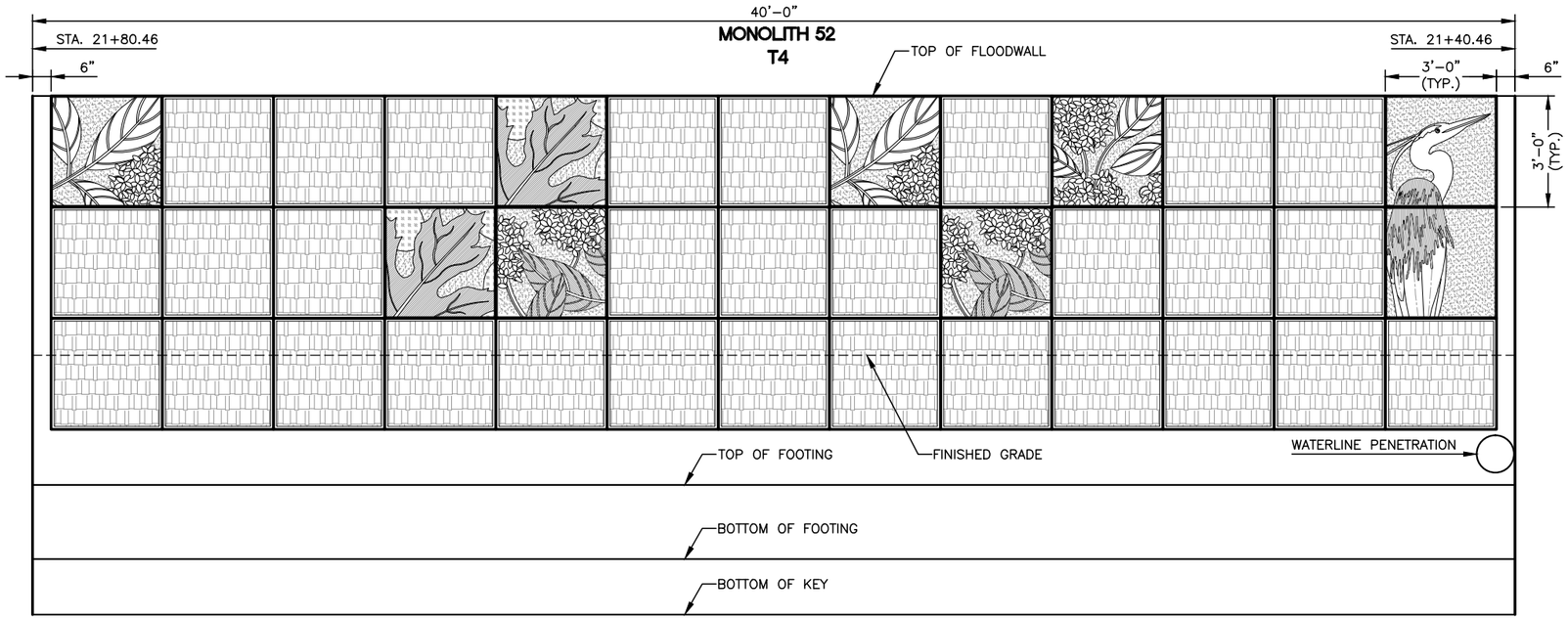
River and Floodplain Management Section

Christie True, Director

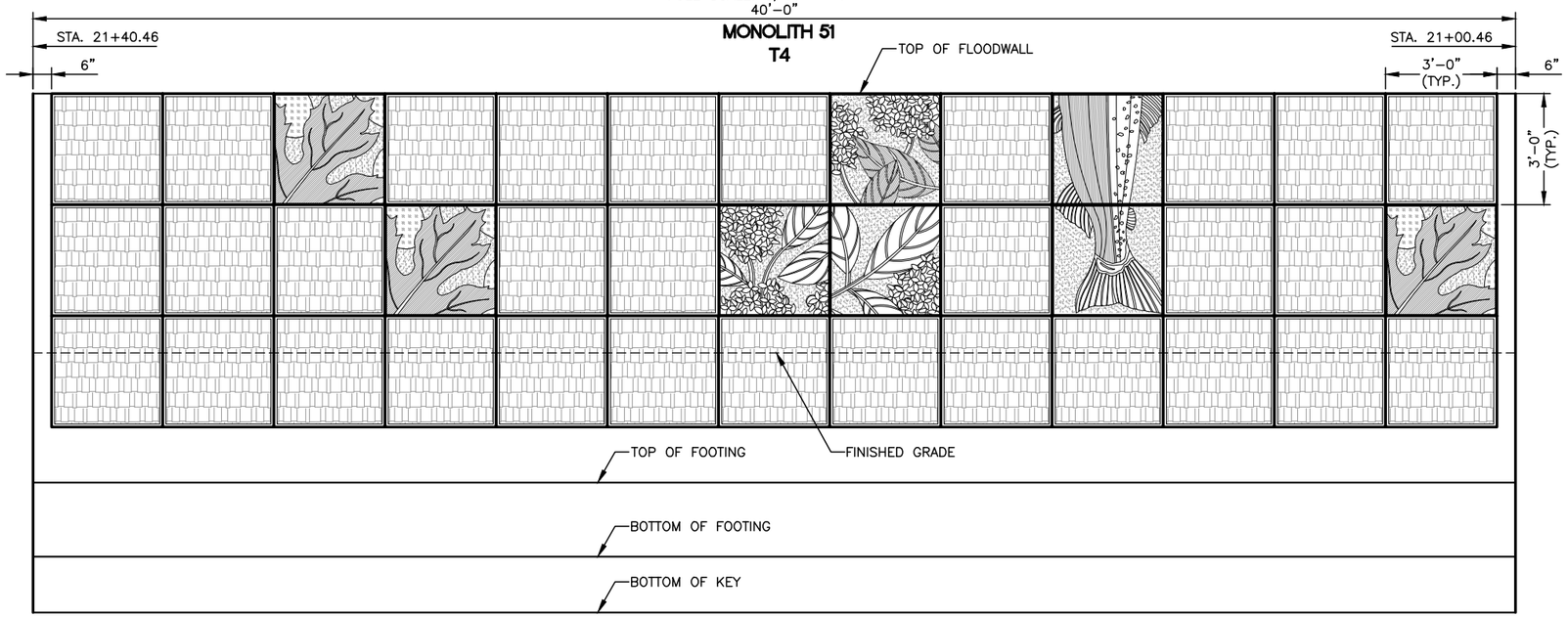
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 49 AND 50

SHEET
FP-25



FLOODWALL PATTERNING WET SIDE MONOLITH 52 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 51 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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PROJECT No. 1112056

CONTRACT No. C01294C18

STATE OF WASHINGTON 28081 PROFESSIONAL ENGINEER

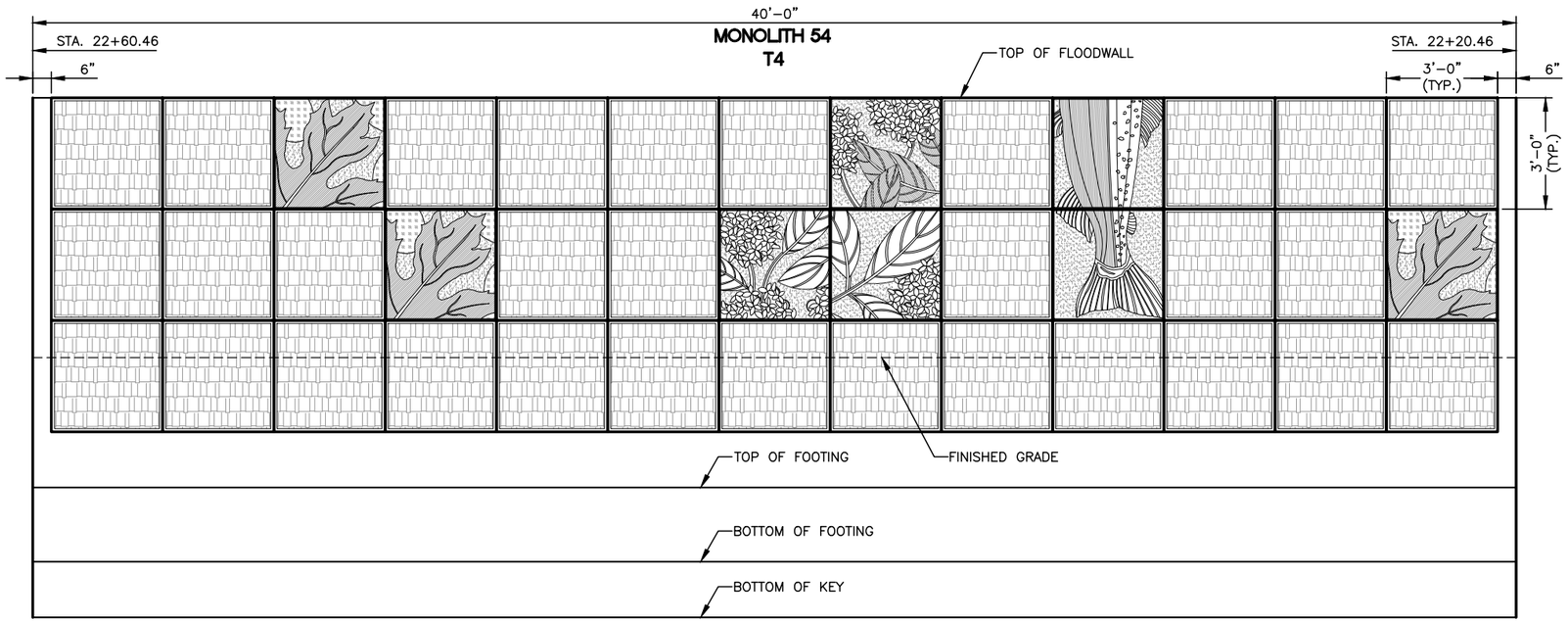
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

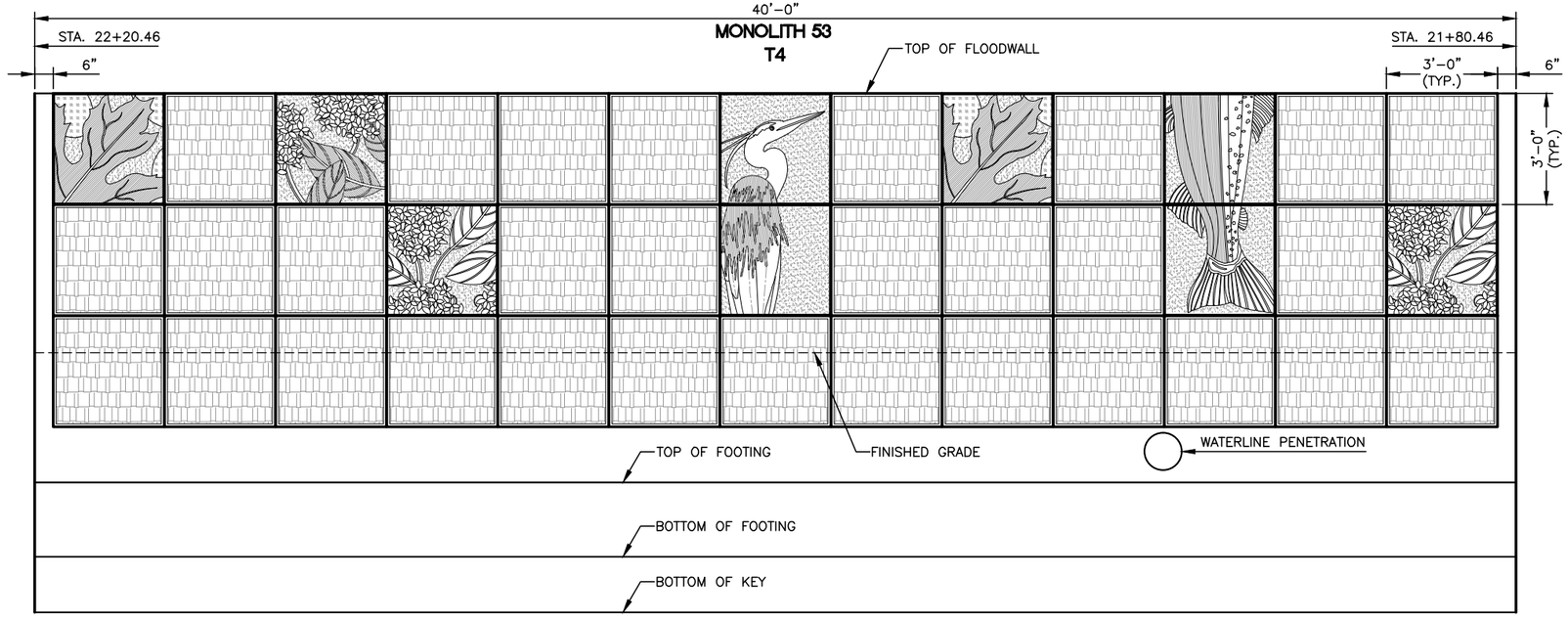
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 51 AND 52

SHEET
FP-26



FLOODWALL PATTERNING WET SIDE MONOLITH 54 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 53 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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1-800-424-5555
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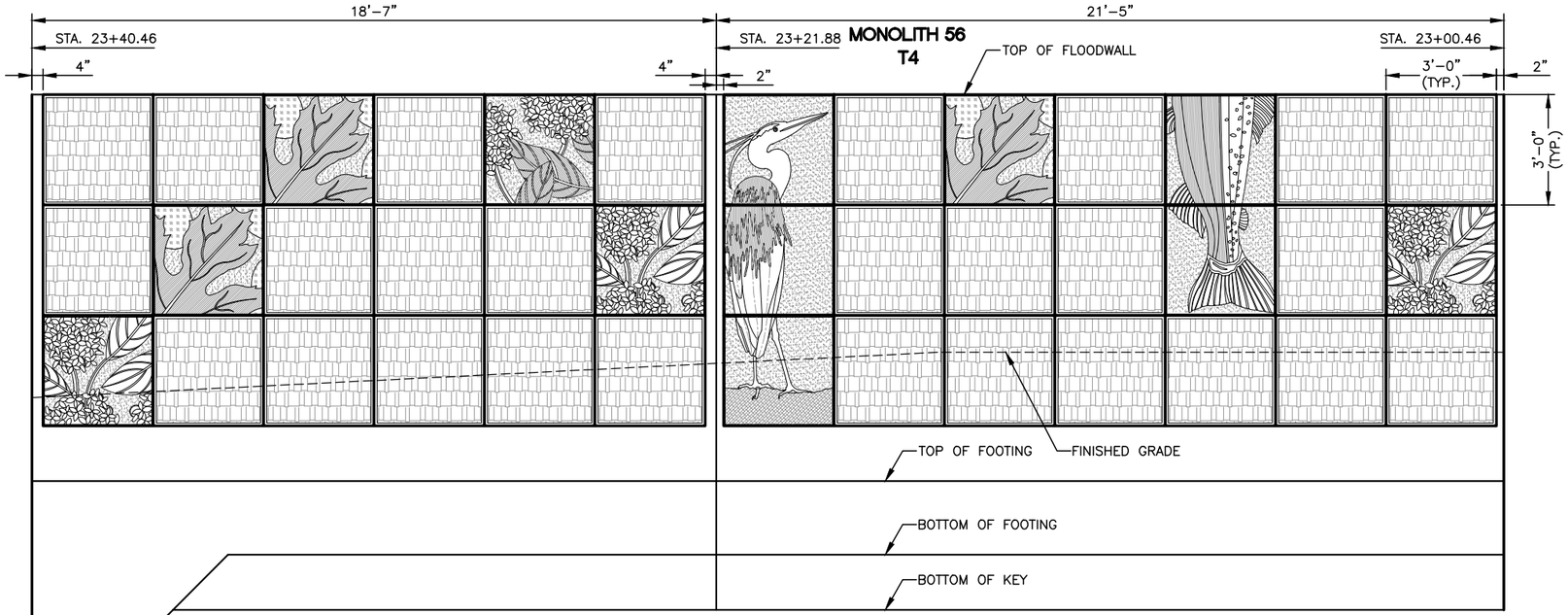
Christie True, Director

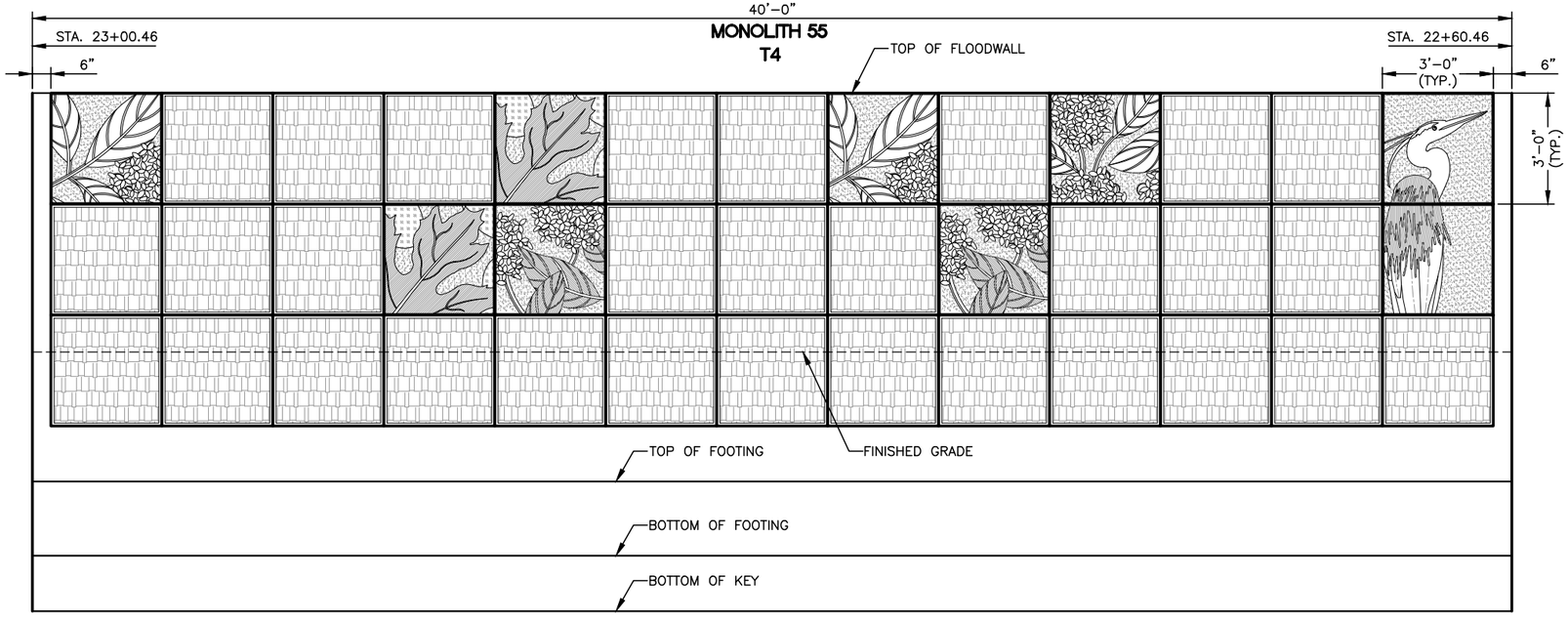
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 53 AND 54

SHEET
FP-27



FLOODWALL PATTERNING WET SIDE MONOLITH 56 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 55 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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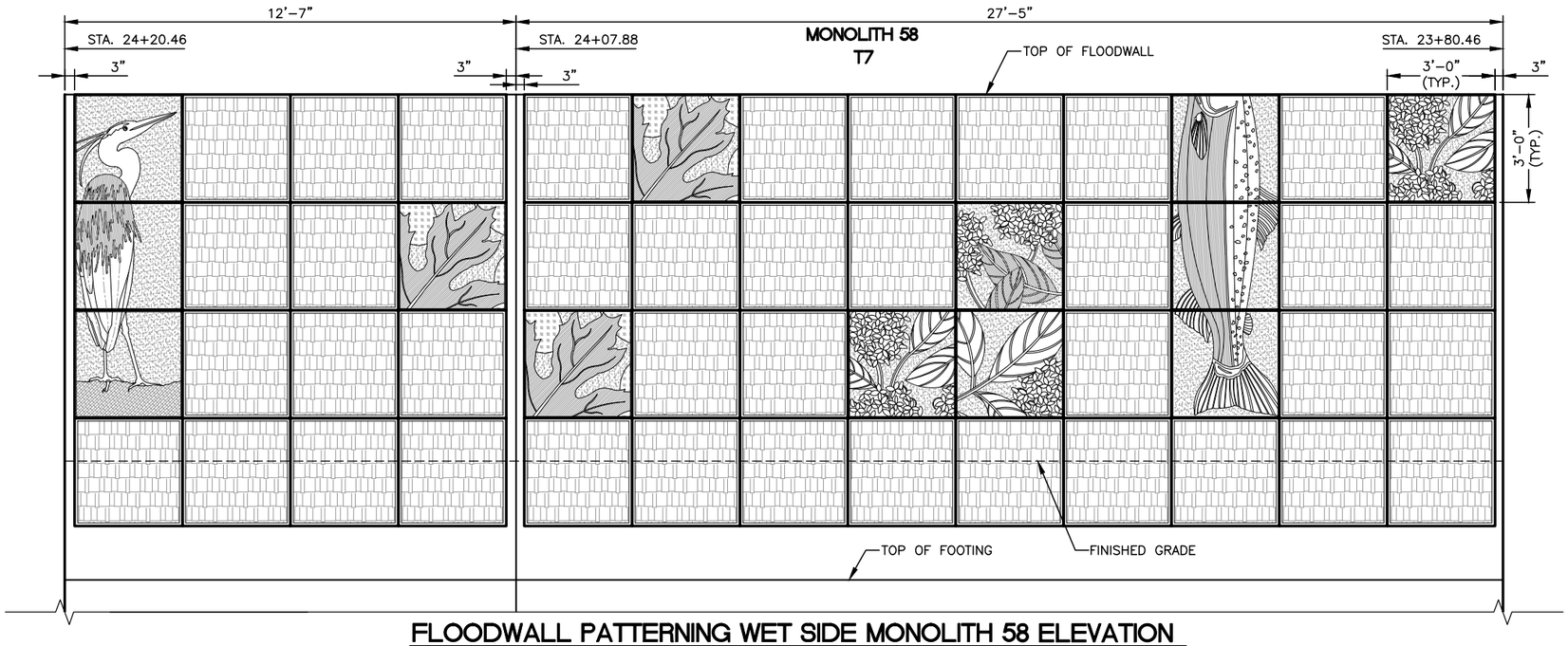
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

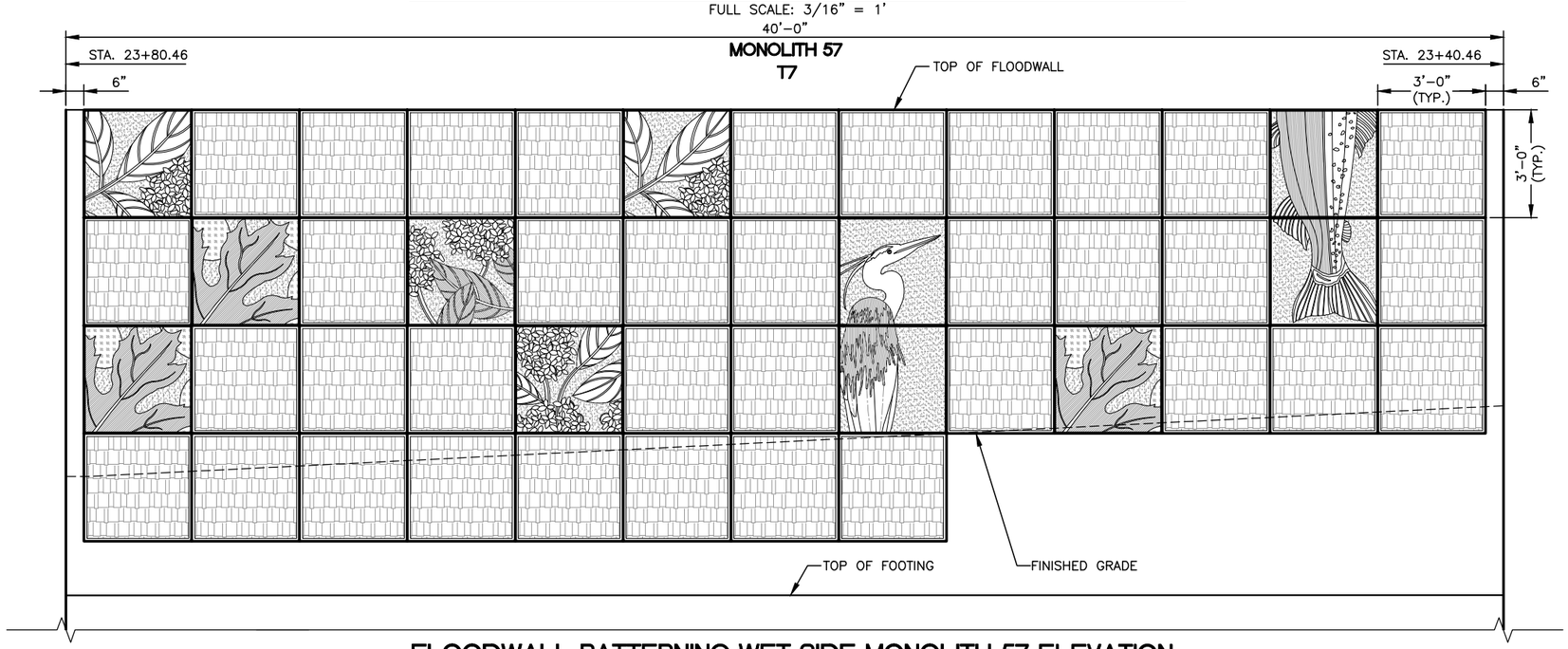
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 55 AND 56

SHEET
FP-28



FLOODWALL PATTERNING WET SIDE MONOLITH 58 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 57 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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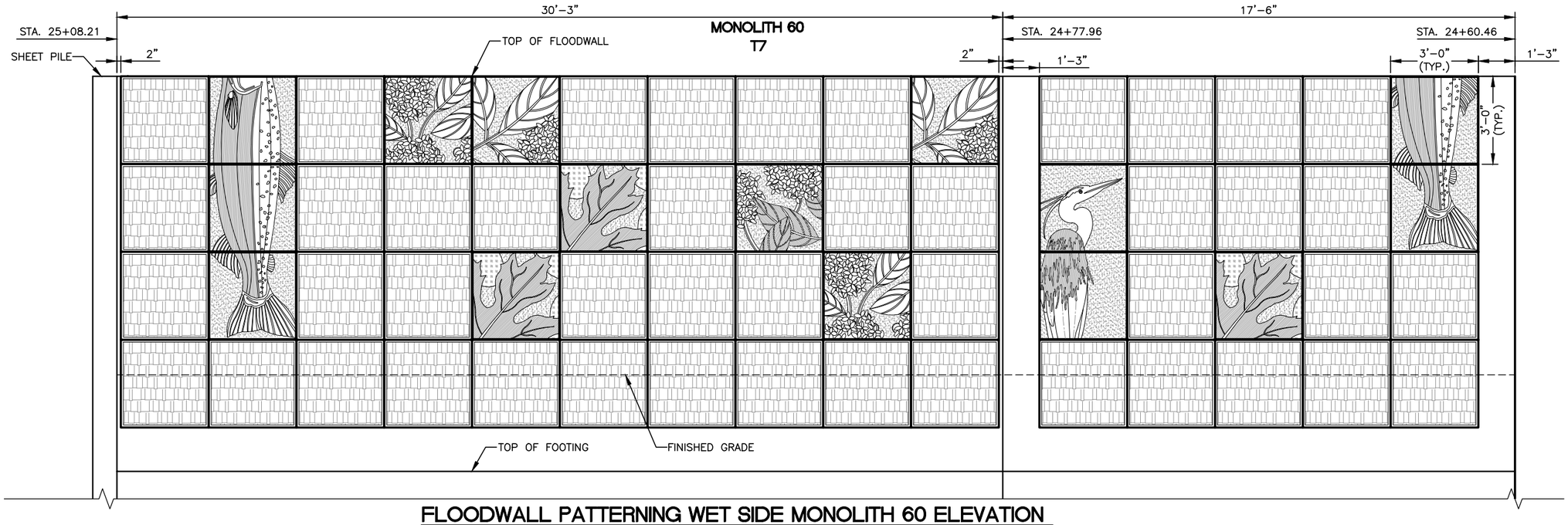
Christie True, Director

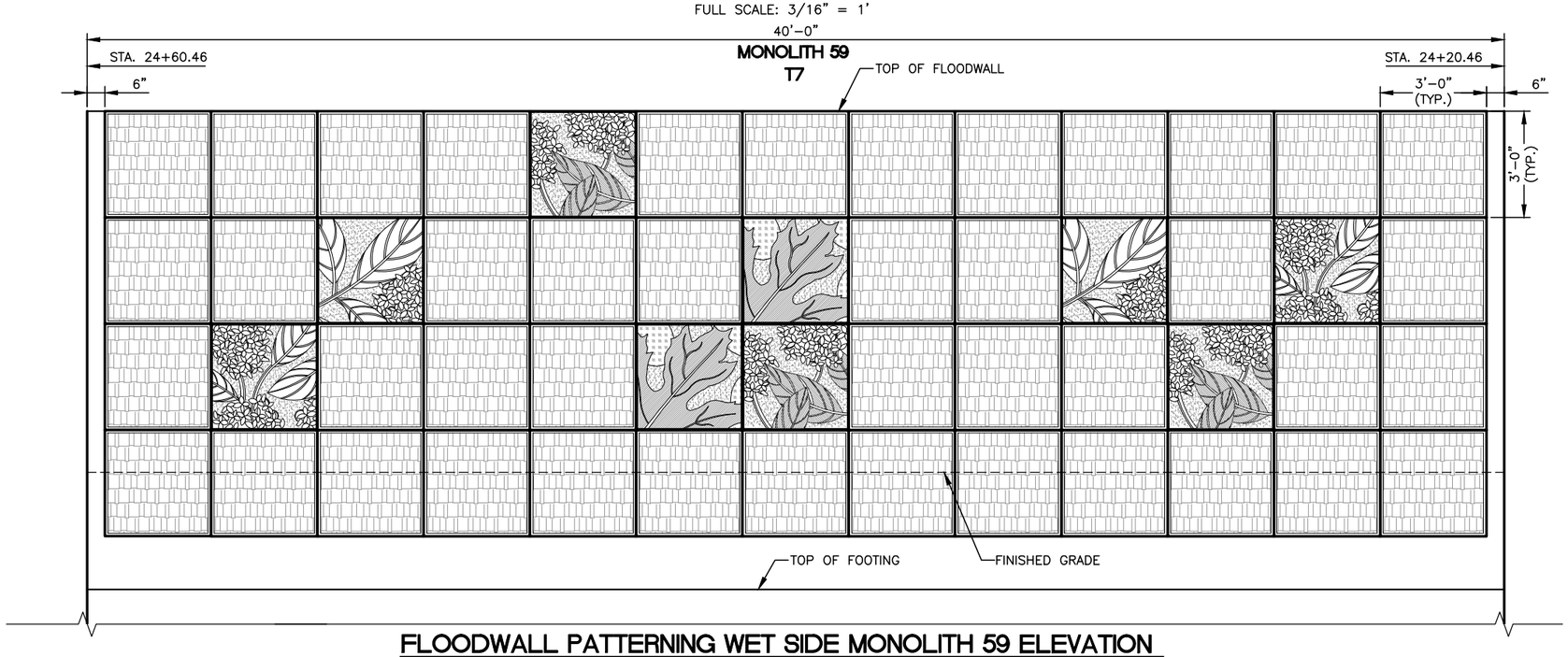
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 57 AND 58

SHEET
FP-29



FLOODWALL PATTERNING WET SIDE MONOLITH 60 ELEVATION

FULL SCALE: 3/16" = 1'



FLOODWALL PATTERNING WET SIDE MONOLITH 59 ELEVATION

FULL SCALE: 3/16" = 1'

CALL 2 WORKING DAYS
BEFORE YOU DIG
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King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING
WET SIDE
MONOLITHS 59 AND 60

SHEET
FP-30

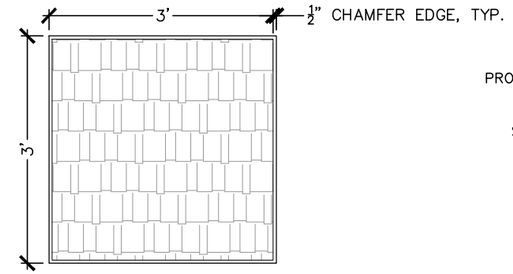
NOTES

1. PROVIDE SHOP DRAWINGS FOR CUSTOM FORMLINER MASTER FABRICATION.
2. PROVIDE PRODUCT SUBMITTAL FOR SPECIFIED STANDARD FORMLINER PANEL.
3. TEXTURES ARE IMPRINTED INTO FACE OF STRUCTURAL CONCRETE WALL, MAXIMUM DEPTH 1½" USING CUSTOM AND STANDARD FORMLINERS.
4. PROVIDE FULL SIZE MOCK-UP, SEE SPECIFICATIONS.
5. SEE WALL ELEVATIONS BELOW FOR LAYOUT OF TEXTURE PANELS.
6. ASSUME 10 DEGREE CHAMFER ON ALL CUSTOM RELIEF EDGES, TYP., UNLESS OTHERWISE NOTED.

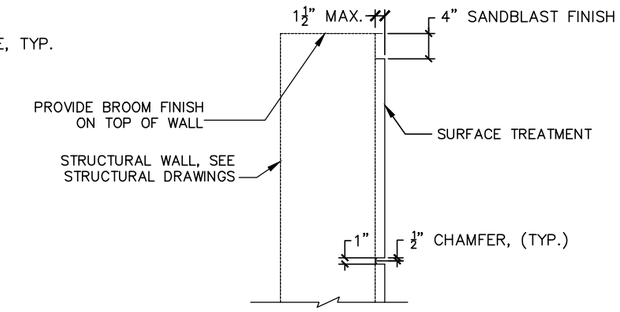
TEXTURE LEGEND

A.	HEAVY GRANITE – FITZGERALD FORMLINERS, PATTERN #17030, CUSTOM ROCK PATTERN #T325 OR SCOTT SYSTEM STONE #1265	1" MAX. DEPTH
B.	RIVER ROCK – SURFACE TEXTURE SIMILAR TO YOSEMITE STONE, CUSTOMROCK FORMLINER #1120D, FITGERALD #16985 OR SCOTT SYSTEM #187 TUSCON RIVER ROCK. STONE SIZE AS SHOWN BELOW	¾" MAX. DEPTH
C.	BROOM FINISH – SCOTT SYSTEM, PATTERN #143, FITZGERALD #17990 OR CUSTOM ROCK #8003	1/16" MAX. DEPTH
D.	FRACTURED GRANITE – SCOTT SYSTEM, PATTERN #110A, FITZGERALD #16980 OR CUSTOM ROCK #T320	¾" MAX. DEPTH
E.	SPLITFACED STONE – FITZGERALD FORMLINERS, PATTERN #17982, CUSTOM ROCK #T307 OR SCOTT SYSTEM #166A	¼" MAX. DEPTH

STANDARD FORMLINER PANEL ELEVATION:



WALL SURFACE TREATMENT SECTION:



TEXTURE LEGEND

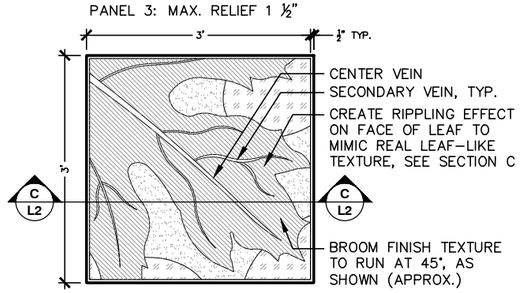
B.	RIVER ROCK – SURFACE TEXTURE SIMILAR TO YOSEMITE STONE, CUSTOMROCK FORMLINER #1120D, STONE SIZE AS SHOWN, FITZGERALD #16985 OR SCOTT SYTEM #187 TUSCON RIVER ROCK	¾" MAX. DEPTH
C.	BROOM FINISH – SCOTT SYSTEM, PATTERN #143, FITZGERALD #17990 OR CUSTOM ROCK #8003	1/16" MAX. DEPTH
E.	SPLITFACED STONE – FITZGERALD FORMLINERS, PATTERN #17982, CUSTOM ROCK #T307 OR SCOTT SYSTEM #166A	¼" MAX. DEPTH

SALAMANDER + MAPLE LEAF GENERAL NOTES:

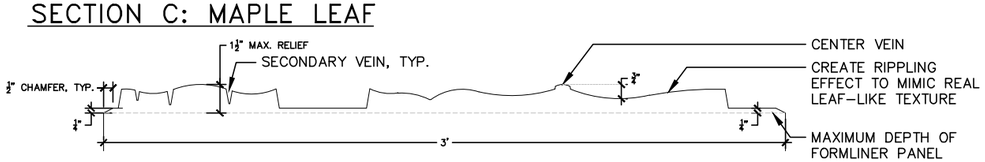
1. SALAMANDER PANELS CAN BE ORIENTED VERTICALLY AS WELL AS HORIZONTALLY.

MAPLE LEAF:

PANEL 3: MAX. RELIEF 1 ½"

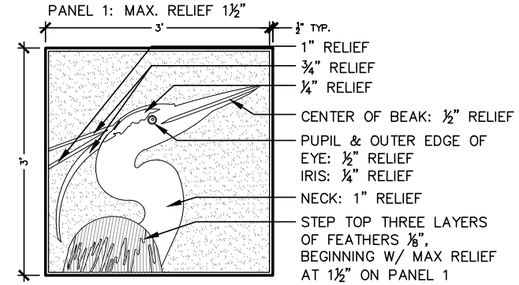


SECTION C: MAPLE LEAF

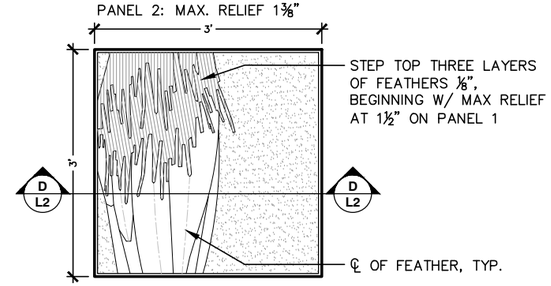


HERON:
ELEVATIONS: 1"=1'-0"

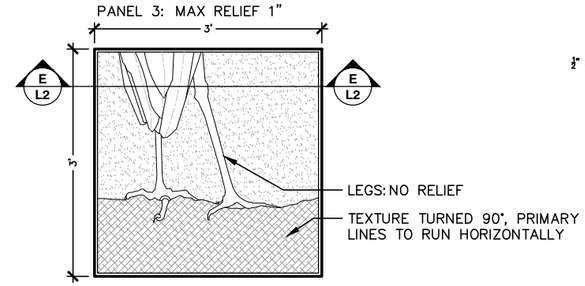
PANEL 1: MAX. RELIEF 1½"



PANEL 2: MAX. RELIEF 1⅜"



PANEL 3: MAX RELIEF 1"



TEXTURE LEGEND

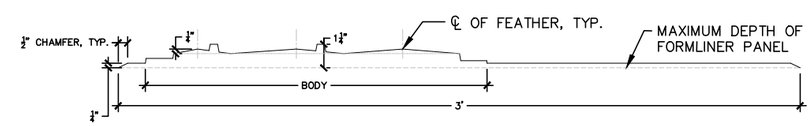
C.	BROOM FINISH – SCOTT SYSTEM, PATTERN #143, FITZGERALD #17990 OR CUSTOM ROCK #8003. ORIENT PRIMARY LINES AS SHOWN ON PANELS (3 DIFFERENT ANGLES)	1/16" MAX. DEPTH
D.	FRACTURED GRANITE – SCOTT SYSTEM, PATTERN #110A, FITZGERALD #16980 OR CUSTOM ROCK #T320. HORIZONTAL BANDING	¾" MAX. DEPTH
E.	SPLITFACED STONE – FITZGERALD FORMLINERS, PATTERN #17982, CUSTOM ROCK #T307 OR SCOTT SYSTEM #166A	¼" MAX. DEPTH

HERON GENERAL NOTES:

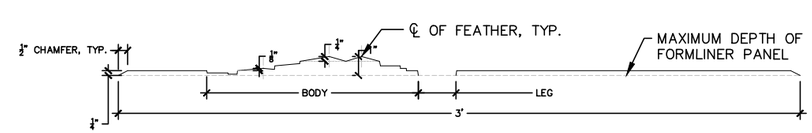
1. IF WALL HEIGHT BECOMES TOO SHORT TO UTILIZE ALL THREE HERON PANELS, PANELS 1 & 2 CAN BE USED TOGETHER WITH THE ELIMINATION OF PANEL 3

HERON SECTIONS: 3"=1'-0"

SECTION D: HERON MAIN BODY



SECTION E: HERON MAIN BODY + LEG



CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
CAD ENTERED:	JCB			
DESIGNED:	WJ	NUM.	REVISION	BY	DATE
CHECKED:	SAM				
SUPERVISOR:	BK				
		NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

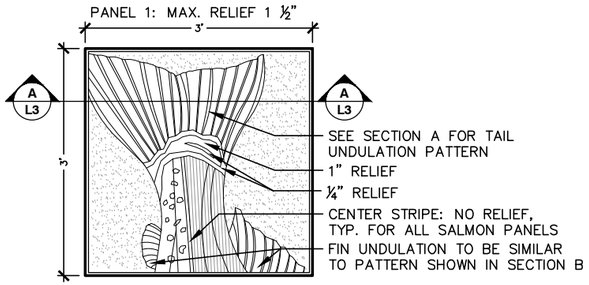
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING NOTES AND TYPICAL DETAILS

SHEET
FP-31

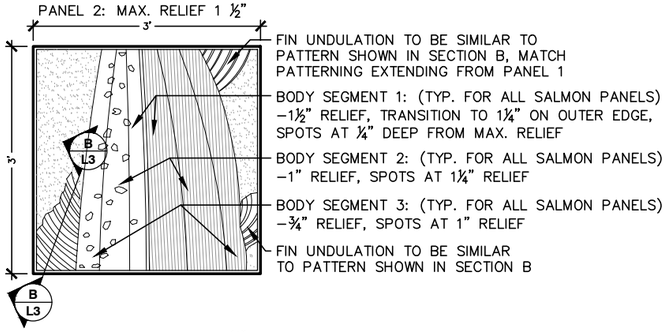
CUSTOM FORMLINER PANELS:

SALMON:
ELEVATIONS: 1"=1'-0"

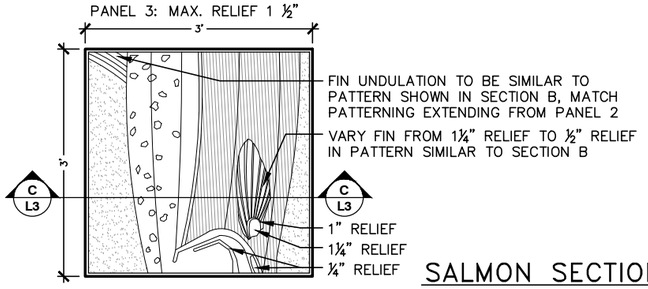
PANEL 1: MAX. RELIEF 1 ½"



PANEL 2: MAX. RELIEF 1 ½"



PANEL 3: MAX. RELIEF 1 ½"



TEXTURE LEGEND

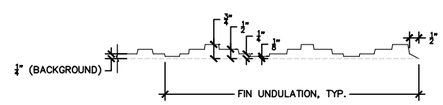
C. BROOM FINISH – SCOTT SYSTEM, PATTERN #143, FITZGERALD #17990 OR CUSTOM ROCK #8003. ORIENT PRIMARY LINES AS SHOWN ON PANELS — 1/16" MAX. DEPTH

E. SPLITFACED STONE – FITZGERALD FORMLINERS, PATTERN #17982, CUSTOM ROCK #T307 OR SCOTT SYSTEM #166A — ¼" MAX. DEPTH

SALMON GENERAL NOTES:

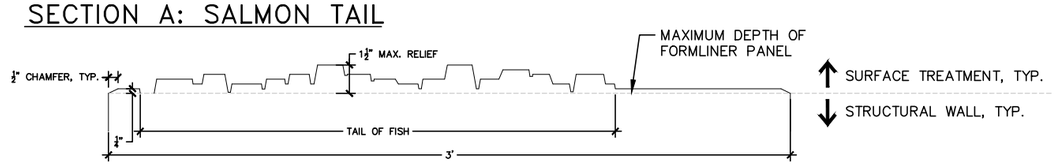
1. IF WALL HEIGHT BECOMES TOO SHORT TO UTILIZE ALL THREE SALMON PANELS VERTICALLY, PANELS 1 & 2 CAN BE USED TOGETHER WITH THE ELIMINATION OF PANEL 3.
2. SALMON PANELS CAN BE ORIENTED VERTICALLY AS WELL AS HORIZONTALLY.

SECTION B: SALMON FIN

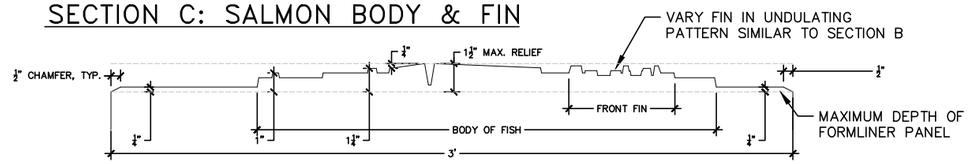


SALMON SECTIONS: 3"=1'-0"

SECTION A: SALMON TAIL

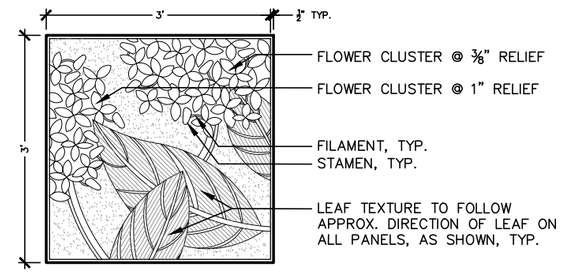


SECTION C: SALMON BODY & FIN

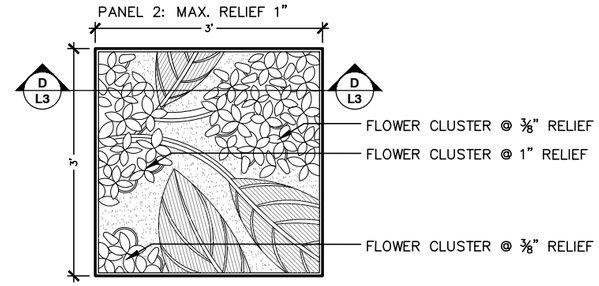


DOGWOOD:
ELEVATIONS: 1"=1'-0"

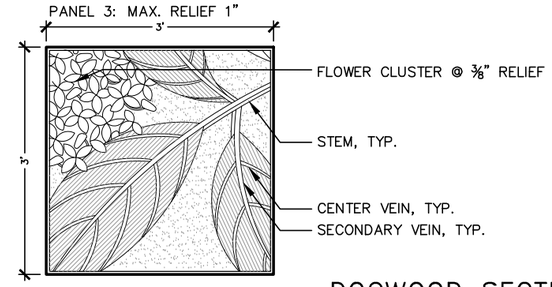
PANEL 1: MAX. RELIEF 1"



PANEL 2: MAX. RELIEF 1"



PANEL 3: MAX. RELIEF 1"



TEXTURE LEGEND

C. BROOM FINISH – SCOTT SYSTEM, PATTERN #143, FITZGERALD #17990 OR CUSTOM ROCK #8003. ORIENT PRIMARY LINES AS SHOWN ON PANELS — 1/16" MAX. DEPTH

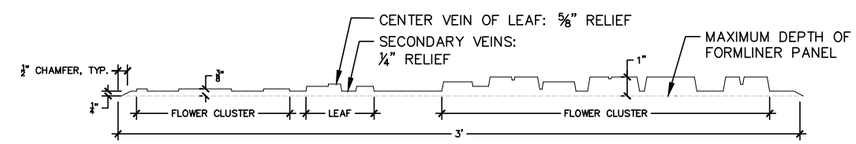
E. SPLITFACED STONE – FITZGERALD FORMLINERS, PATTERN #17982, CUSTOM ROCK #T307 OR SCOTT SYSTEM #166A — ¼" MAX. DEPTH

DOGWOOD GENERAL NOTES:

1. FLOWER CLUSTERS SHOULD ALL HAVE APPROXIMATELY THE SAME RELIEF. SMALL VARIATIONS SHALL BE MADE WHERE FLOWER PETALS INTERSECT TO DISTINGUISH ONE FROM ANOTHER.
2. FLOWER CLUSTERS SHOULD HAVE EITHER 1" RELIEF OR ⅜" RELIEF, AS SHOWN ON PANEL ELEVATIONS. FOR CLUSTERS @ 1" RELIEF, STAMEN AND FILAMENT SHALL BE ¾" AND ½", RESPECTIVELY. FOR FLOWER CLUSTERS @ ⅜" RELIEF, STAMEN AND FILAMENT SHALL HAVE NO RELIEF.
3. CENTER VEIN OF LEAVES SHALL HAVE ⅝" RELIEF, WHILE SECONDARY VEINS SHALL HAVE ¼" RELIEF. MAIN LEAF SURFACES SHALL HAVE ½" RELIEF AT THE CENTER VEIN AND ARC SMOOTHLY TOWARDS A ¼" RELIEF AT THE EDGE THAT MEETS THE BACKGROUND TEXTURE.
4. ALL STEMS SHALL BE APPROX. ⅝" RELIEF WITH A SECONDARY STEPPED TRANSITION TO APPROX. ½" RELIEF.

DOGWOOD SECTIONS: 3"=1'-0"

SECTION D: DOGWOOD FLOWERS + LEAVES



CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:				
CHECKED:				
CAD ENTERED: JCB				
DESIGNED: WJ	NUM.	REVISION	BY	DATE
CHECKED: SAM				
SUPERVISOR: BK				
	NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

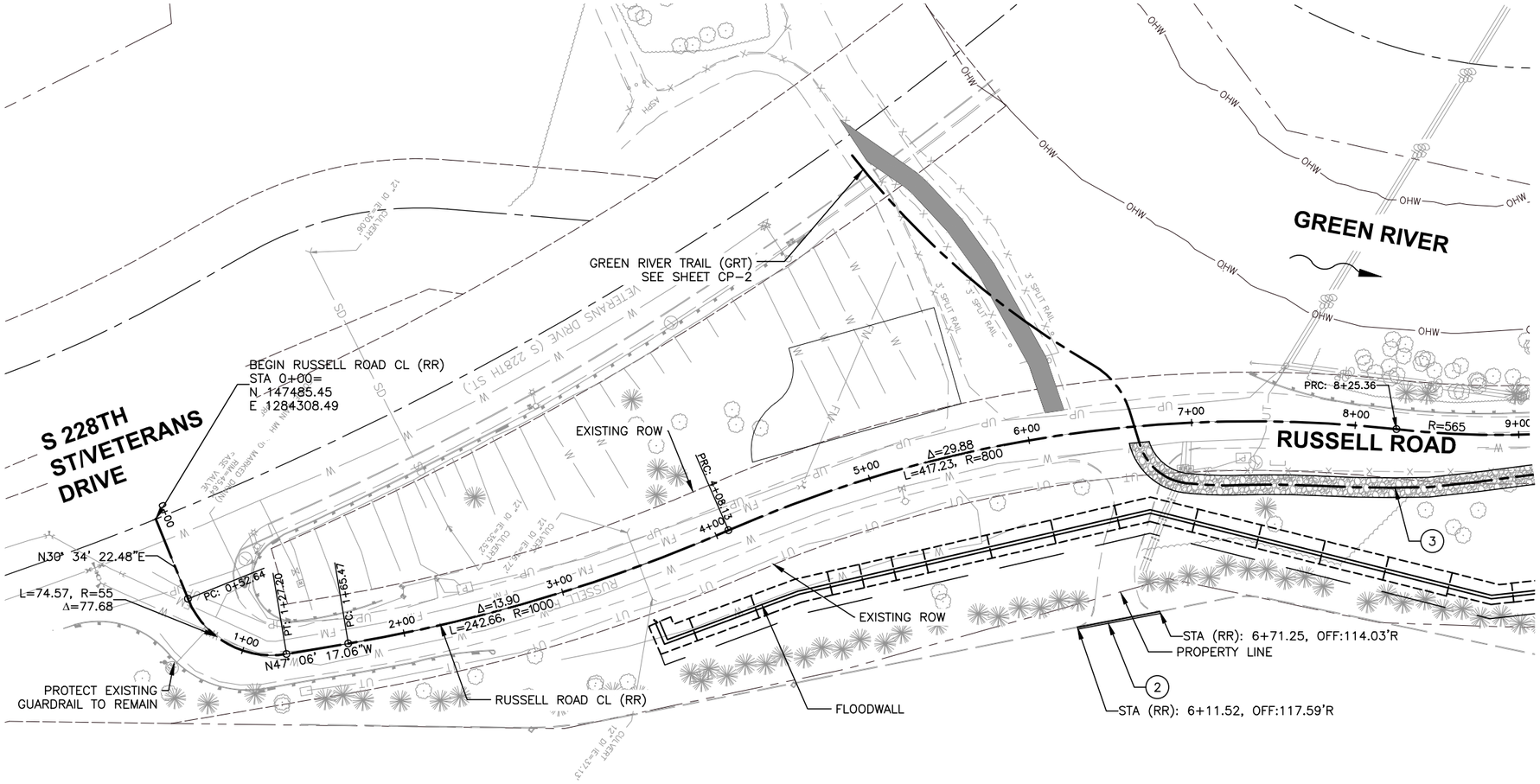
CONTRACT No. C01294C18

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
FLOODWALL PATTERNING NOTES AND TYPICAL DETAILS

SHEET
FP-32



NOTES:

1. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN FEET
2. UNLESS OTHERWISE NOTED, ALIGNMENT STATION AND OFFSETS CORRESPOND TO THE ALIGNMENT CALLED OUT IN THE SHEET TITLEBLOCK.
3. SEE TYPICAL SECTIONS ON SHEETS CP-6 FOR SURFACING INFORMATION

LEGEND:

CRUSHED SURFACING BASE COURSE

HMA CL. 1/2 IN. PG 58H-22

CONSTRUCTION NOTES:

(2) COMBINED CURB AND GUTTER, CITY OF KENT STD. PLAN 6-33

(3) GREEN RIVER REGIONAL TRAIL (SHEET CP-2) (SEE TYPICAL SECTIONS ON SHEET CP-6)

40 20 0 40 80
HORIZ SCALE IN FEET

10 7.5 5 2.5 0 10 20
VERT SCALE IN FEET

811
Know what's below.
Call before you dig.

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	K. MCDONALD	03/25/19
DESIGNED:	S. JOHNSON	03/25/19
CHECKED:	B. MAGEE	03/25/19
SUPERVISOR:	S. JOHNSON	03/25/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

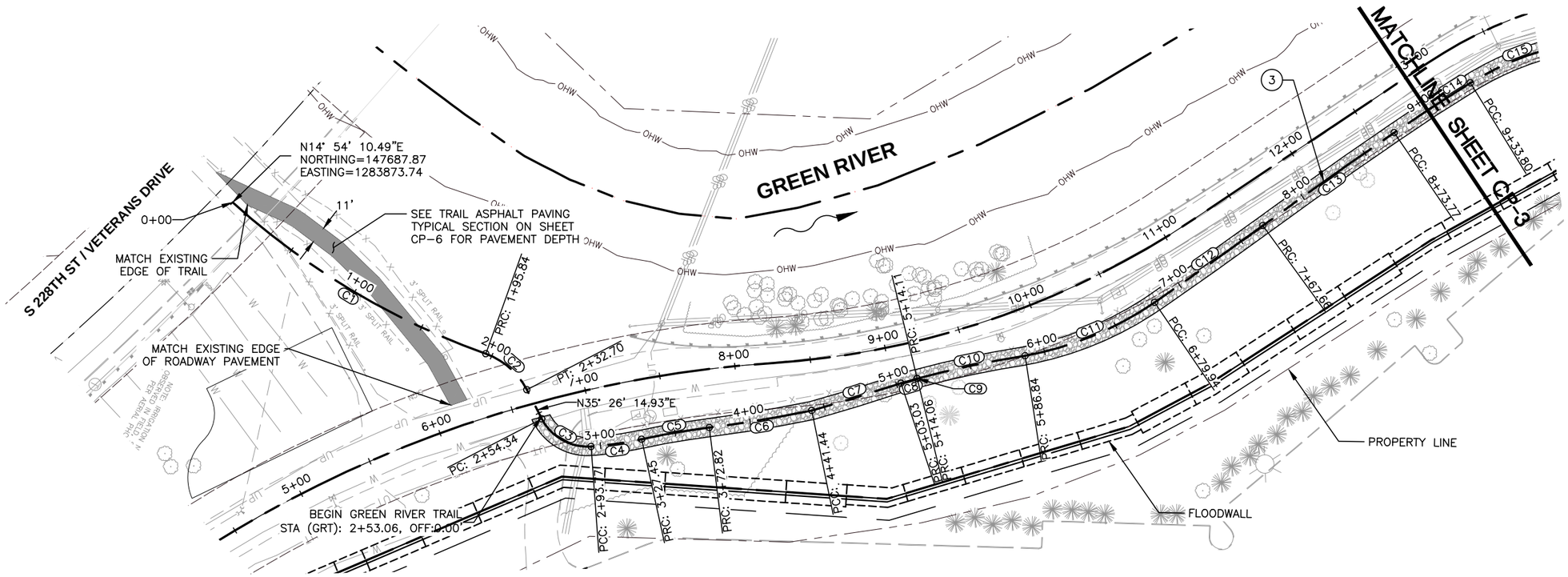
SCOTT JOHNSON
STATE OF WASHINGTON
19673
REGISTERED
PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
STREET IMPROVEMENTS
PLAN AND PROFILE
RUSSELL ROAD STA 0+00 TO 9+00

SHEET
CP-01



NOTES:

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3. SEE TYPICAL SECTIONS ON SHEETS CP-6 FOR SURFACING INFORMATION

LEGEND:

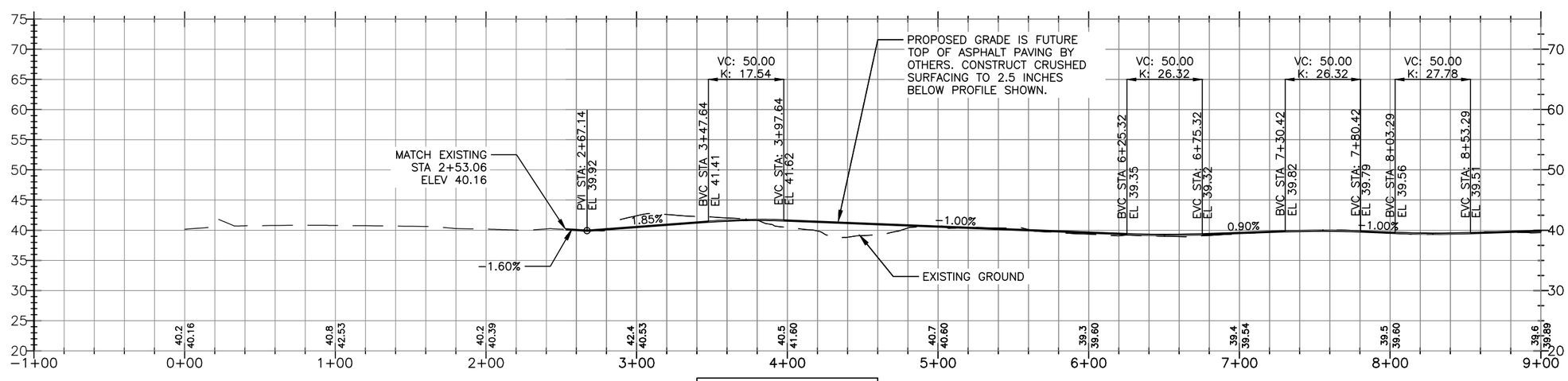
CRUSHED SURFACING BASE COURSE

HMA CL. 1/2 IN. PG 58H-22

CONSTRUCTION NOTES:

(3) GREEN RIVER REGIONAL TRAIL (SEE TYPICAL SECTIONS ON SHEET CP-6)

TRAIL ALIGNMENT CURVE TABLE				
No.	R	Δ	L	T
C1	504.31	22.250	195.84	194.61
C2	49.23	42.892	36.86	36.00
C3	33.78	66.873	39.43	37.23
C4	231.27	8.344	33.68	33.65
C5	509.90	5.098	45.37	45.36
C6	908.94	4.326	68.62	68.61
C7	1437.69	2.454	61.58	61.58
C8	130.56	4.842	11.03	11.03
C9	927.19	0.003	0.06	0.06
C10	692.91	6.014	72.73	72.69
C11	224.31	23.780	93.10	92.43
C12	3506.41	1.433	87.71	87.71
C13	2882.73	2.109	106.11	106.11



GREEN RIVER TRAIL PROFILE

*TOP OF PROFILE (PROPOSED GRADE) IS FUTURE TOP OF ASPHALT PAVING BY OTHERS. CONSTRUCT CRUSHED SURFACING TO 2.5 INCHES BELOW PROFILE SHOWN.

MATCHLINE SHEET CP-3

HORIZ SCALE IN FEET: 40 20 0 40 80

VERT SCALE IN FEET: 10 7.5 5 2.5 0 10 20

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	K. MCDONALD	03/25/19
DESIGNED:	S. JOHNSON	03/25/19
CHECKED:	B. MAGEE	03/25/19
SUPERVISOR:	S. JOHNSON	03/25/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

SCOTT JOHNSON — STATE OF WASHINGTON — 47673 — REGISTERED PROFESSIONAL ENGINEER

04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section

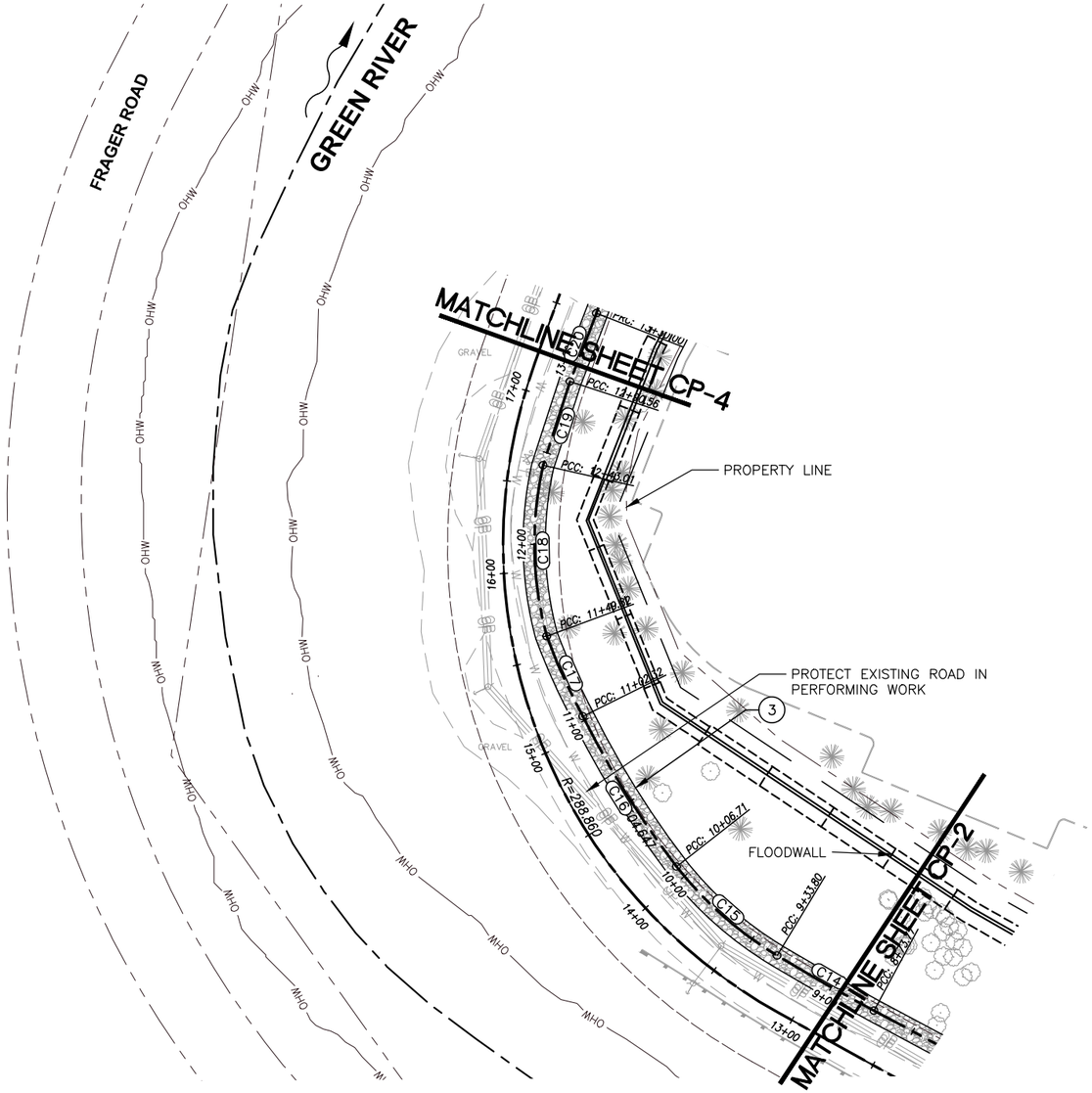
Christie True, Director

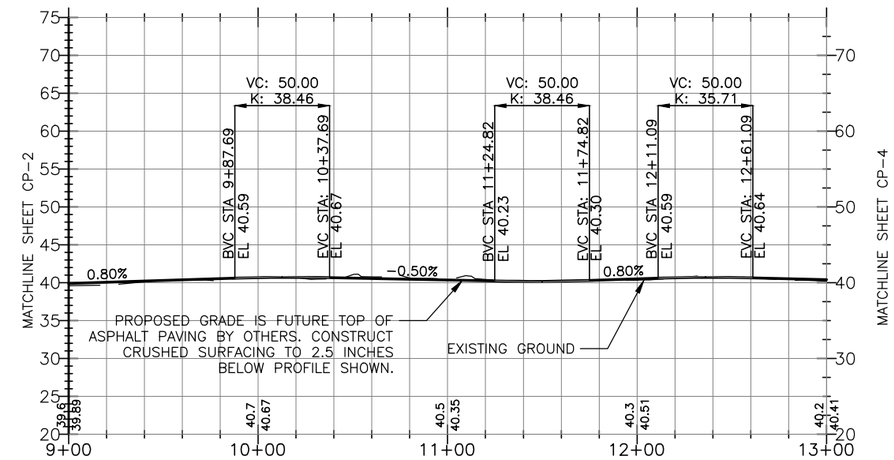
LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

TRAIL IMPROVEMENTS PLAN AND PROFILE

GREEN RIVER TRAIL STA 0+00 TO 9+00

SHEET
CP-02





GREEN RIVER TRAIL PROFILE

NOTES:

1. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN FEET
2. SEE TYPICAL SECTIONS ON SHEETS CP-6 FOR TRAIL SURFACING INFORMATION

LEGEND:

CRUSHED SURFACING BASE COURSE

CONSTRUCTION NOTES:

(3) GREEN RIVER TRAIL (SEE TYPICAL SECTIONS ON SHEET CP-6)

TRAIL ALIGNMENT CURVE TABLE

No.	R	Δ	L	T
C14	1129.45	3.045	60.03	60.03
C15	200.38	20.847	72.91	72.51
C16	504.65	10.855	95.61	95.46
C17	345.65	7.873	47.50	47.46
C18	191.25	27.918	93.19	92.27
C19	3878.56	0.702	47.55	47.55

40 20 0 40 80
HORIZ SCALE IN FEET

10 7.5 5 2.5 0 10 20
VERT SCALE IN FEET

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	K. MCDONALD	3/25/19
DESIGNED:	S. JOHNSON	3/25/19
CHECKED:	B. MAGEE	3/25/19
SUPERVISOR:	S. JOHNSON	3/25/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

D. SCOTT JOHNSON, STATE OF WASHINGTON, 19673, REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
BOAT LAUNCH TRAIL IMPROVEMENTS PLAN & PROFILE
GREEN RIVER TRAIL STA 9+00 TO 13+00
BOAT LAUNCH

SHEET
CP-03

NOTES:

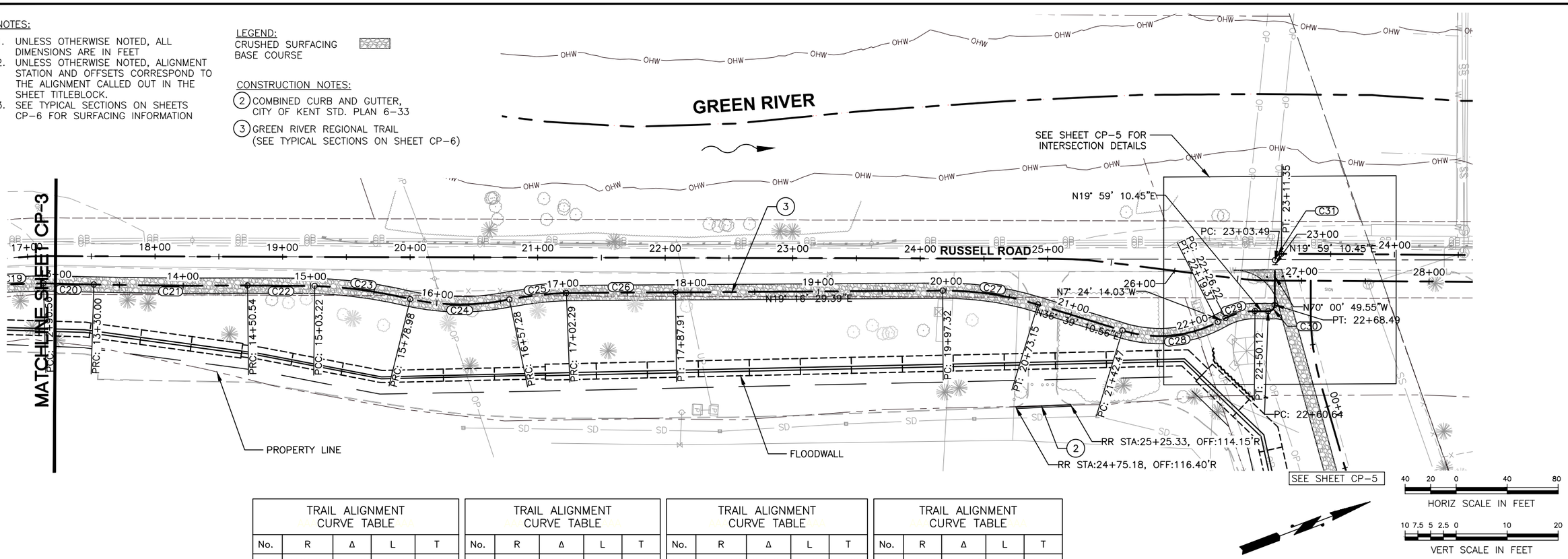
1. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN FEET
2. UNLESS OTHERWISE NOTED, ALIGNMENT STATION AND OFFSETS CORRESPOND TO THE ALIGNMENT CALLED OUT IN THE SHEET TITLEBLOCK.
3. SEE TYPICAL SECTIONS ON SHEETS CP-6 FOR SURFACING INFORMATION

LEGEND:
CRUSHED SURFACING BASE COURSE

CONSTRUCTION NOTES:

(2) COMBINED CURB AND GUTTER, CITY OF KENT STD. PLAN 6-33

(3) GREEN RIVER REGIONAL TRAIL (SEE TYPICAL SECTIONS ON SHEET CP-6)

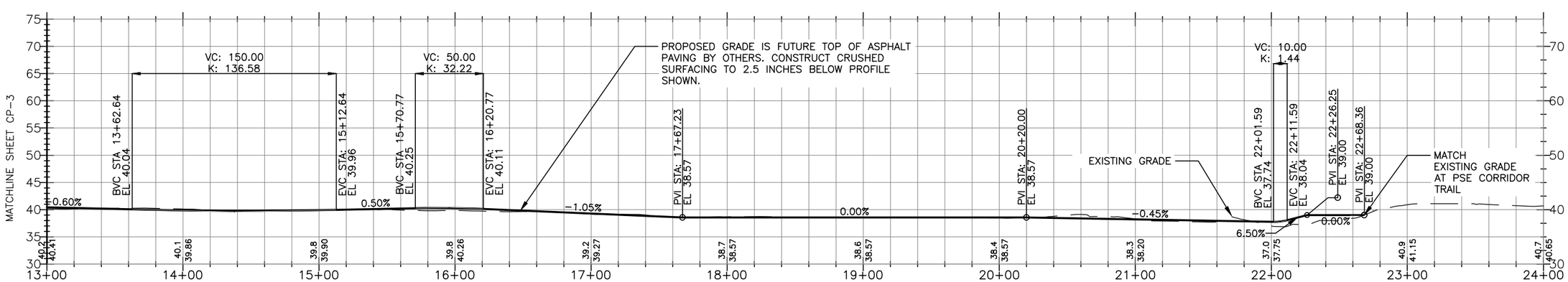


TRAIL ALIGNMENT CURVE TABLE				
No.	R	Δ	L	T
C20	4121.94	0.548	39.44	39.44
C21	3855.31	1.791	120.54	120.54
C22	5338.57	0.565	52.68	52.67

TRAIL ALIGNMENT CURVE TABLE				
No.	R	Δ	L	T
C23	364.25	11.918	75.77	75.63
C24	187.43	23.935	78.30	77.73
C25	299.34	8.614	45.01	44.96

TRAIL ALIGNMENT CURVE TABLE				
No.	R	Δ	L	T
C26	7547.18	0.650	85.62	85.62
C27	250.00	17.378	75.83	75.54
C28	100.00	44.057	76.89	75.01

TRAIL ALIGNMENT CURVE TABLE				
No.	R	Δ	L	T
C29	50.00	27.390	23.90	23.68
C30	5.00	90.000	7.85	7.07
C31	5.00	90.000	7.85	7.07



GREEN RIVER TRAIL PROFILE

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	K. MCDONALD	03/25/19
DESIGNED:	S. JOHNSON	03/25/19
CHECKED:	B. MAGEE	03/25/19
SUPERVISOR:	S. JOHNSON	03/25/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

SCOTT JOHNSON — STATE OF WASHINGTON — 47673 — REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
TRAIL IMPROVEMENTS
PLAN & PROFILE
GREEN RIVER TRAIL STA 13+00 TO 24+00

SHEET
CP-04

NOTES:

1. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN FEET
2. UNLESS OTHERWISE NOTED, ALIGNMENT STATION AND OFFSETS CORRESPOND TO THE ALIGNMENT CALLED OUT IN THE SHEET TITLEBLOCK.
3. SEE TYPICAL SECTIONS ON SHEET CP-6

TRAIL ALIGNMENT CURVE TABLE

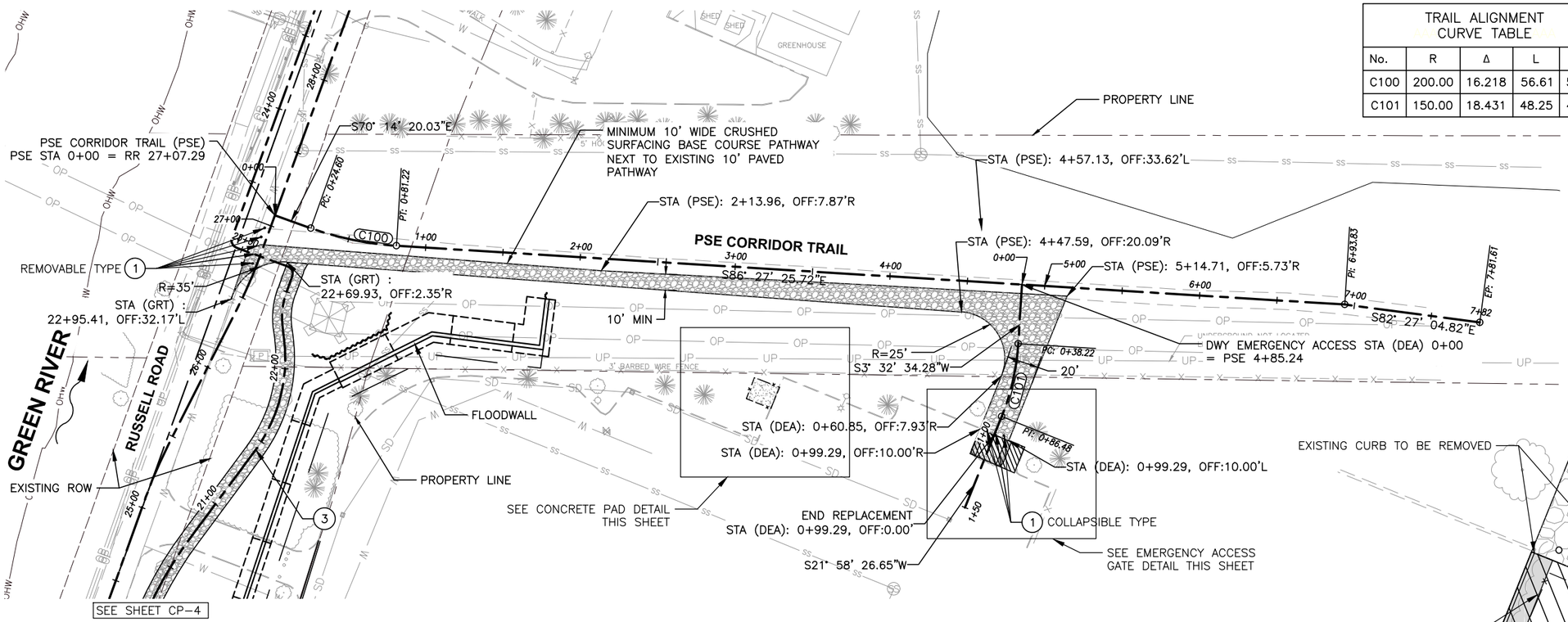
No.	R	Δ	L	T
C100	200.00	16.218	56.61	56.42
C101	150.00	18.431	48.25	48.05

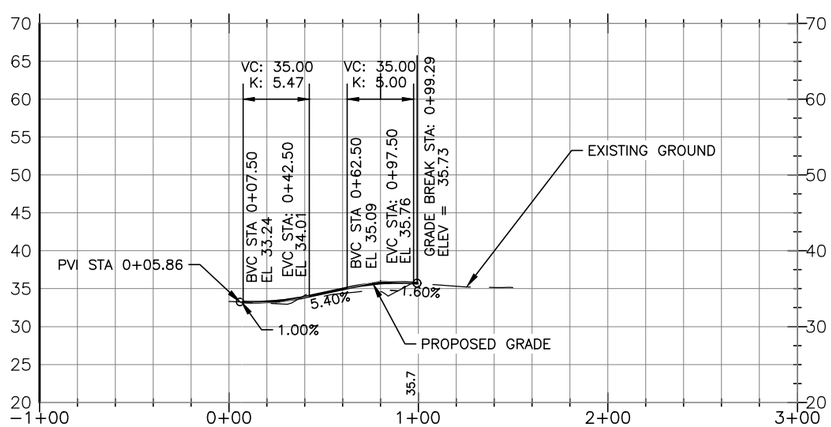
LEGEND:

CRUSHED SURFACING BASE COURSE
CEMENT CONCRETE
HMA CL. 1/2 PG. 58H-22

CONSTRUCTION NOTES:

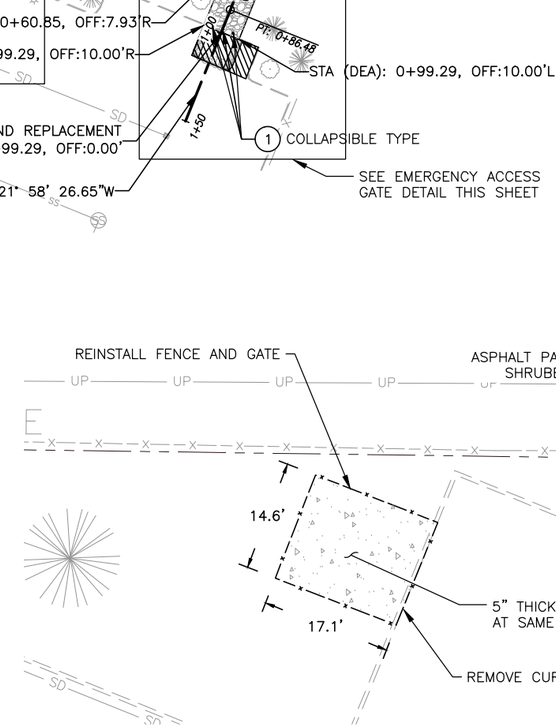
1. BOLLARD (SEE SHEETS CP-7)
3. GREEN RIVER REGIONAL TRAIL (SEE TYPICAL SECTIONS ON SHEET CP-6)



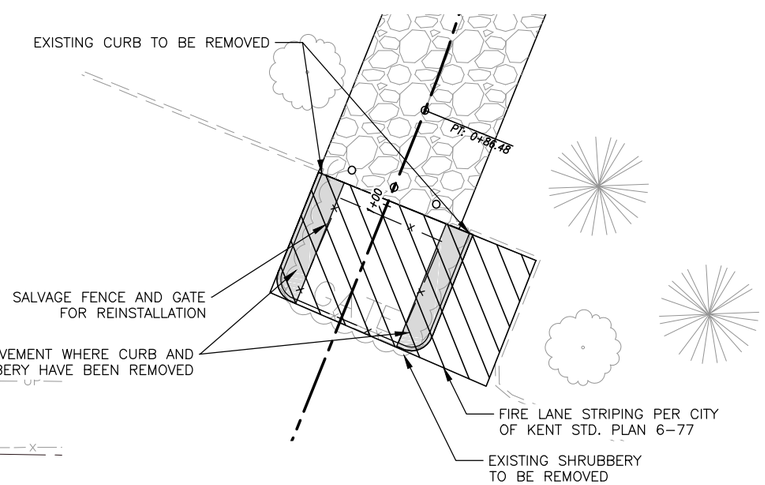


EMERGENCY ACCESS PROFILE

*FOLLOW TOP OF PROFILE (PROPOSED GRADE) TO CONSTRUCT CRUSHED SURFACING.



CONCRETE PAD DETAIL



EMERGENCY ACCESS GATE DETAIL

HORIZ SCALE IN FEET: 40 20 0 40 80

VERT SCALE IN FEET: 10 7.5 5 2.5 0 10 20

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below. Call before you dig.

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CHECKED:		
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DESIGNED:	S. JOHNSON	03/25/19
CHECKED:	B. MAGEE	03/25/19
SUPERVISOR:	S. JOHNSON	03/25/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

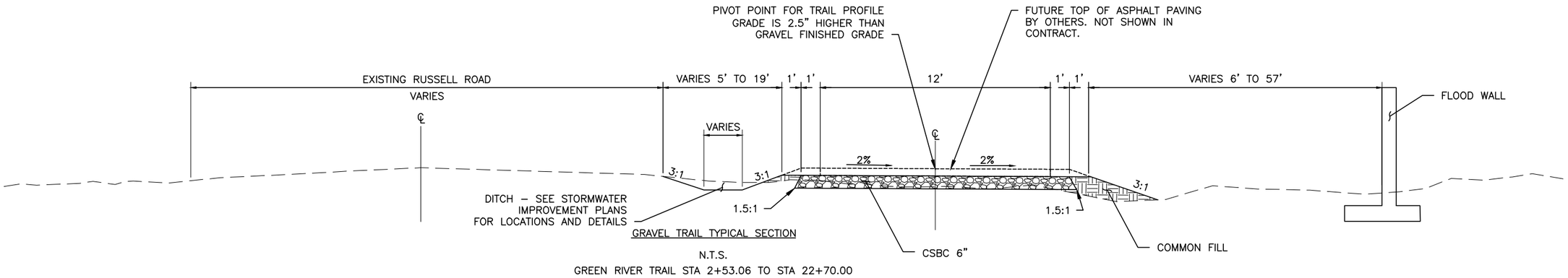
D. SCOTT JOHNSON, STATE OF WASHINGTON, 47673, REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
STREET IMPROVEMENTS PLAN AND PROFILE
PSE CORRIDOR TRAIL STA 0+00 TO 8+00

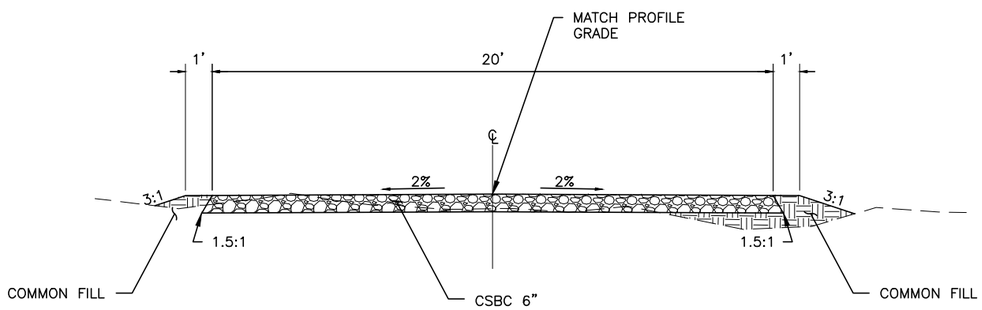
SHEET **CP-05**



GRAVEL TRAIL TYPICAL SECTION

N.T.S.

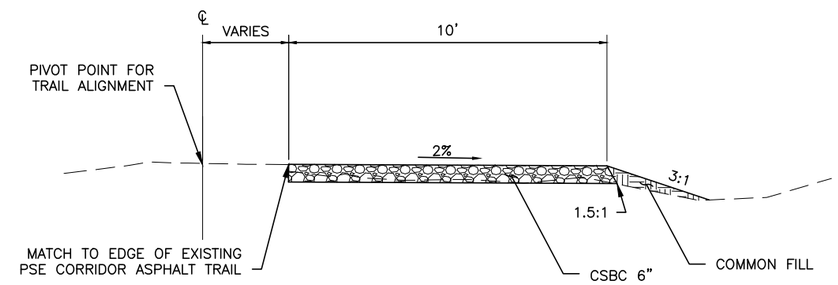
GREEN RIVER TRAIL STA 2+53.06 TO STA 22+70.00



EMERGENCY FIRE ACCESS LANE TYPICAL SECTION

N.T.S.

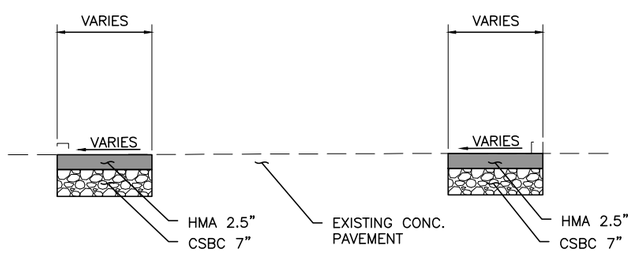
EMERGENCY ACCESS STA 0+06.00 TO STA 0+99.29



PSE CORRIDOR TRAIL TYPICAL SECTION

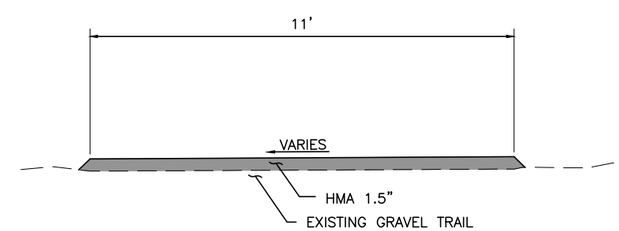
N.T.S.

PSE CORRIDOR TRAIL STA 0+00 TO STA 5+14.70



EMERGENCY ACCESS GATE TYPICAL SECTION

N.T.S.



PAVED TRAIL TYPICAL SECTION

N.T.S.

NOTES:

1. 2 INCHES OF COMPOST TO BE TILLED INTO TOP OF COMMON FILL TO A DEPTH OF 10 INCHES.

LEGEND

CRUSHED SURFACING BASE COURSE
COMMON FILL
HMA CL. 1/2 IN PG. 58H-22

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:					
CHECKED:					
CAD ENTERED: K. MCDONALD	03/25/19				
DESIGNED: S. JOHNSON	03/25/19	NUM.	REVISION	BY	DATE
CHECKED: B. MAGEE	03/25/19				
SUPERVISOR: S. JOHNSON	03/25/19				
		NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

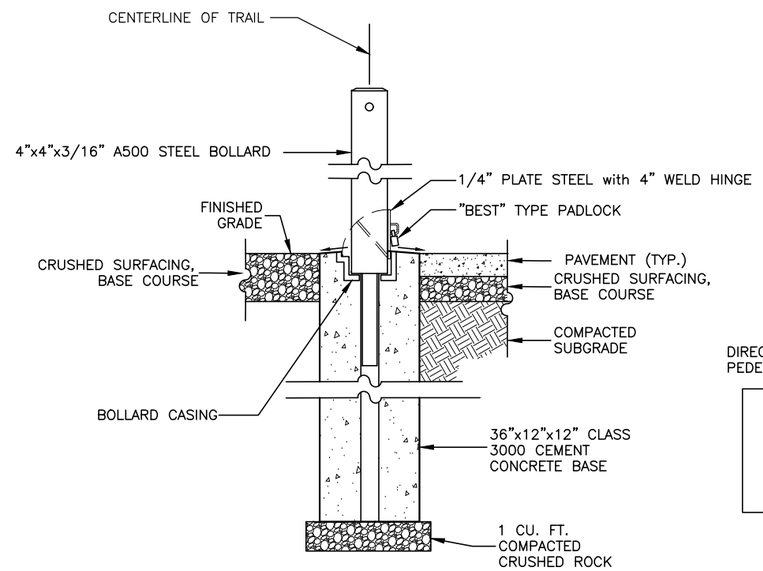
SCOTT JOHNSON, STATE OF WASHINGTON, 47673, REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
STREET & TRAIL IMPROVEMENTS
TYPICAL SECTIONS

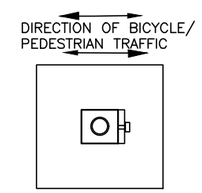
SHEET
CP-06



SECTION: REMOVABLE BOLLARD (1 / CP-5)
SCALE: NTS

NOTES:

1. MINIMUM 6" CLEARANCE BETWEEN BOTTOM OF BOLLARD SECTION AND EXISTING UTILITIES.
2. SPACE BOLLARDS AT 6'-0" ON CENTER.
3. INSTALL BOLLARD CASING WITH PADLOCK FACE PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN/BICYCLE TRAFFIC.
4. SEE SPECIFICATIONS FOR BOLLARD TYPE AND SPACING REQUIREMENTS.
5. FOR COLLAPSIBLE BOLLARD, SEE SPECIFICATIONS FOR INSTALLATION GUIDANCE.



PLAN VIEW

DETAIL: REMOVABLE BOLLARD (2 / CP-5)
SCALE: NTS

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:					
CHECKED:					
CAD ENTERED: K. MCDONALD	03/25/19				
DESIGNED: S. JOHNSON	03/25/19	NUM.	REVISION	BY	DATE
CHECKED: B. MAGEE	03/25/19				
SUPERVISOR: S. JOHNSON	03/25/19				
		NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

SCOTT JOHNSON — STATE OF WASHINGTON — 19673 — REGISTERED PROFESSIONAL ENGINEER
04/02/19

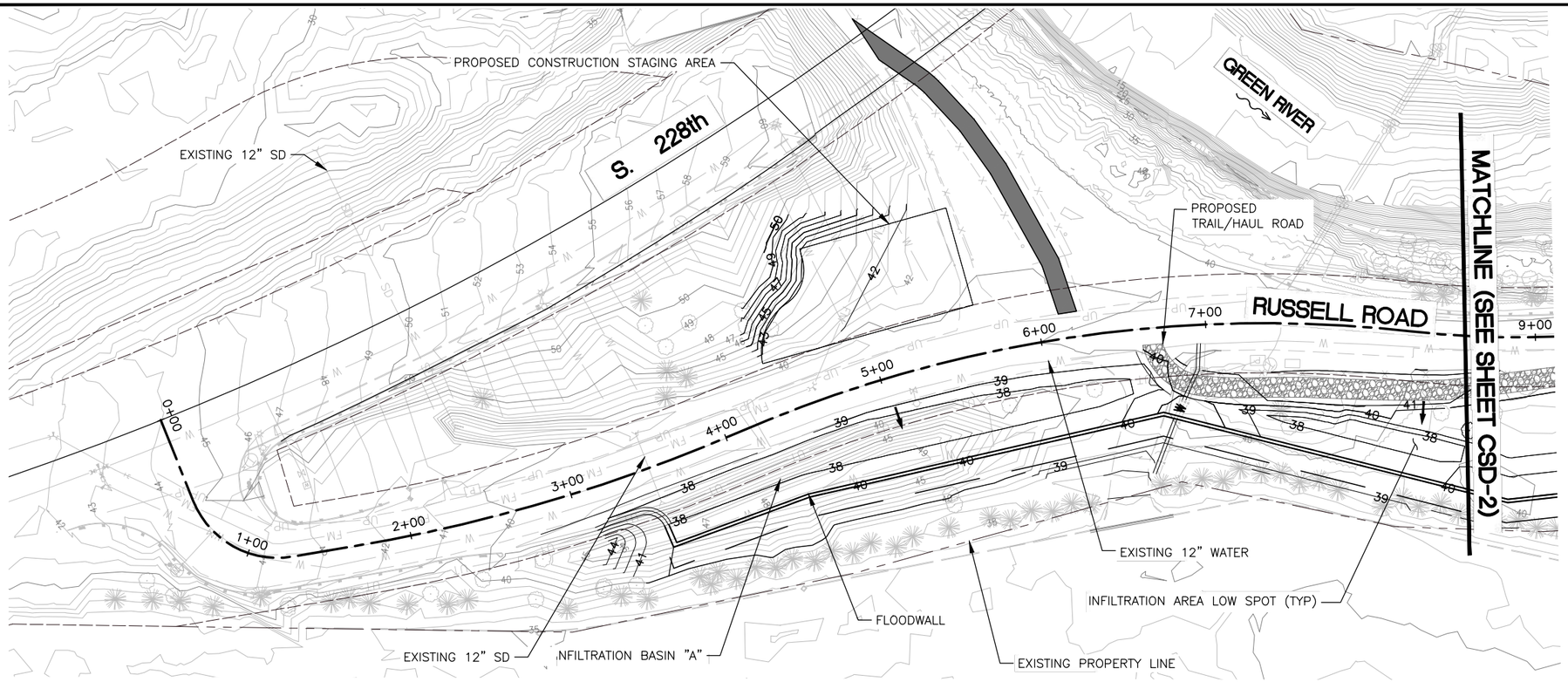
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

BOLLARD DETAILS

SHEET
CP-07



NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. SEE ROADS AND TRAILS PAVEMENT PLANS FOR ROADWAY DESIGN.
3. SEE HABITAT FEATURES AND SCOUR PROTECTION FOR HABITAT DETAILS.
4. DO NOT CONSTRUCT INFILTRATION AREAS AND CONSTRUCTED INFILTRATION SYSTEMS UNTIL THE CONTRIBUTING DRAINAGE AREA AND/OR ADJACENT CONSTRUCTION HAS BEEN COMPLETELY STABILIZED. WHEN THIS TIMING OF CONSTRUCTION IS NOT POSSIBLE, ENSURE SEDIMENT FROM EXPOSED SOIL AREAS OF THE PROJECT DOES NOT ENTER INTO THE INFILTRATION AREA OR SYSTEM.

40 20 0 40 80
SCALE IN FEET

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	C. FRENCH	3/08/19
DESIGNED:	C. FRENCH	3/08/19
CHECKED:	J. GRIFFIN	3/08/19
SUPERVISOR:	T. JOHNSON	3/08/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

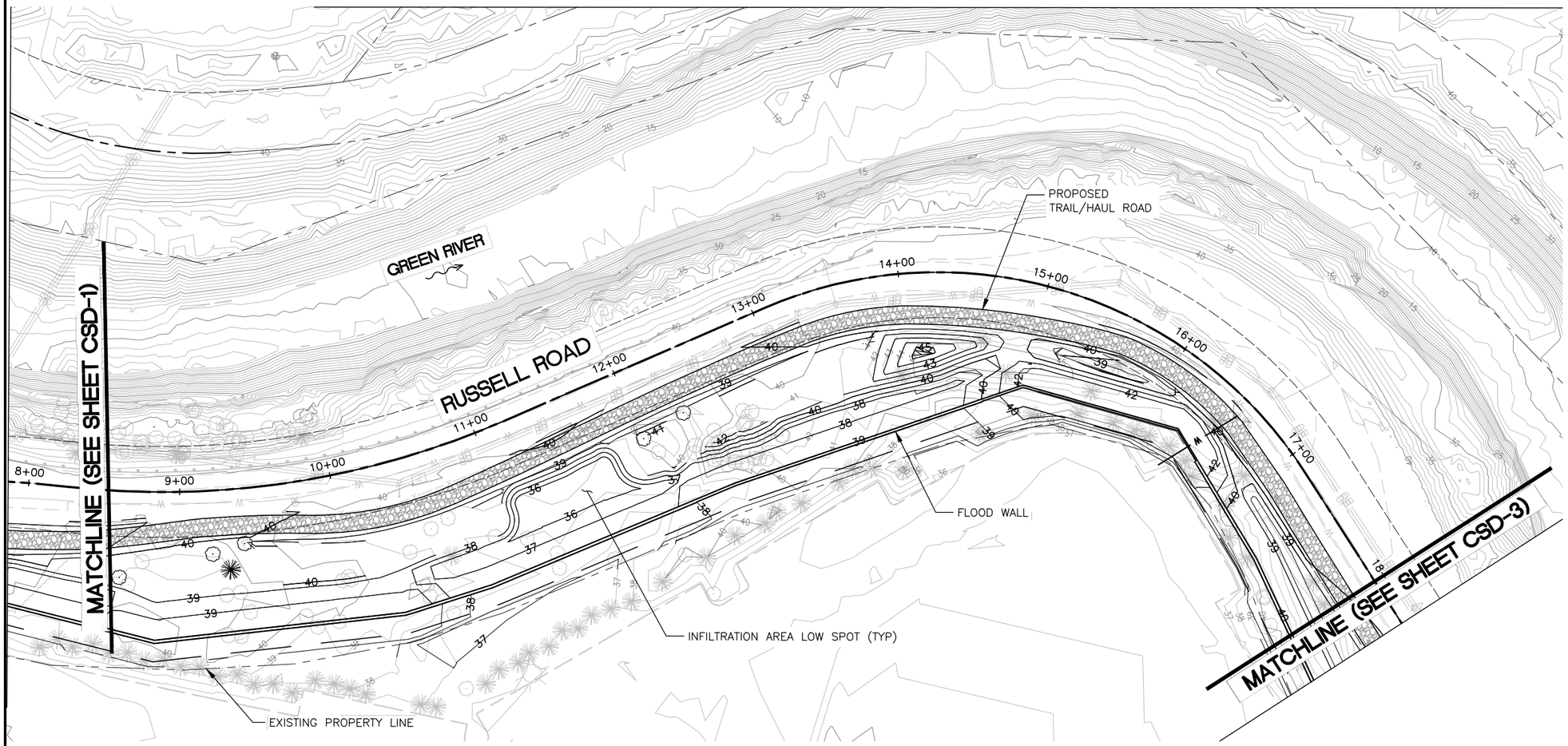
TY M. JOHNSON
STATE OF WASHINGTON
43981
REGISTERED
PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
STORM DRAIN IMPROVEMENTS PLAN
STA 0+00 TO 8+50

SHEET
CSD-1



NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. SEE ROADS AND TRAILS PAVEMENT PLANS FOR ROADWAY DESIGN.
3. SEE HABITAT FEATURES AND SCOUR PROTECTION FOR HABITAT DETAILS.
4. SEE STRUCTURAL (FLOOD WALL) PLANS FOR FLOOD WALL..
5. DO NOT CONSTRUCT INFILTRATION AREAS AND CONSTRUCTED INFILTRATION SYSTEMS UNTIL THE CONTRIBUTING DRAINAGE AREA AND/OR ADJACENT CONSTRUCTION HAS BEEN COMPLETELY STABILIZED. WHEN THIS TIMING OF CONSTRUCTION IS NOT POSSIBLE, ENSURE SEDIMENT FROM EXPOSED SOIL AREAS OF THE PROJECT DOES NOT ENTER INTO THE INFILTRATION AREA OR SYSTEM.

40 20 0 40 80
SCALE IN FEET

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	C. FRENCH	3/08/19
DESIGNED:	C. FRENCH	3/08/19
CHECKED:	J. GRIFFIN	3/08/19
SUPERVISOR:	T. JOHNSON	3/08/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

TIMOTHY M. JOHNSON, STATE OF WASHINGTON, 42621, REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

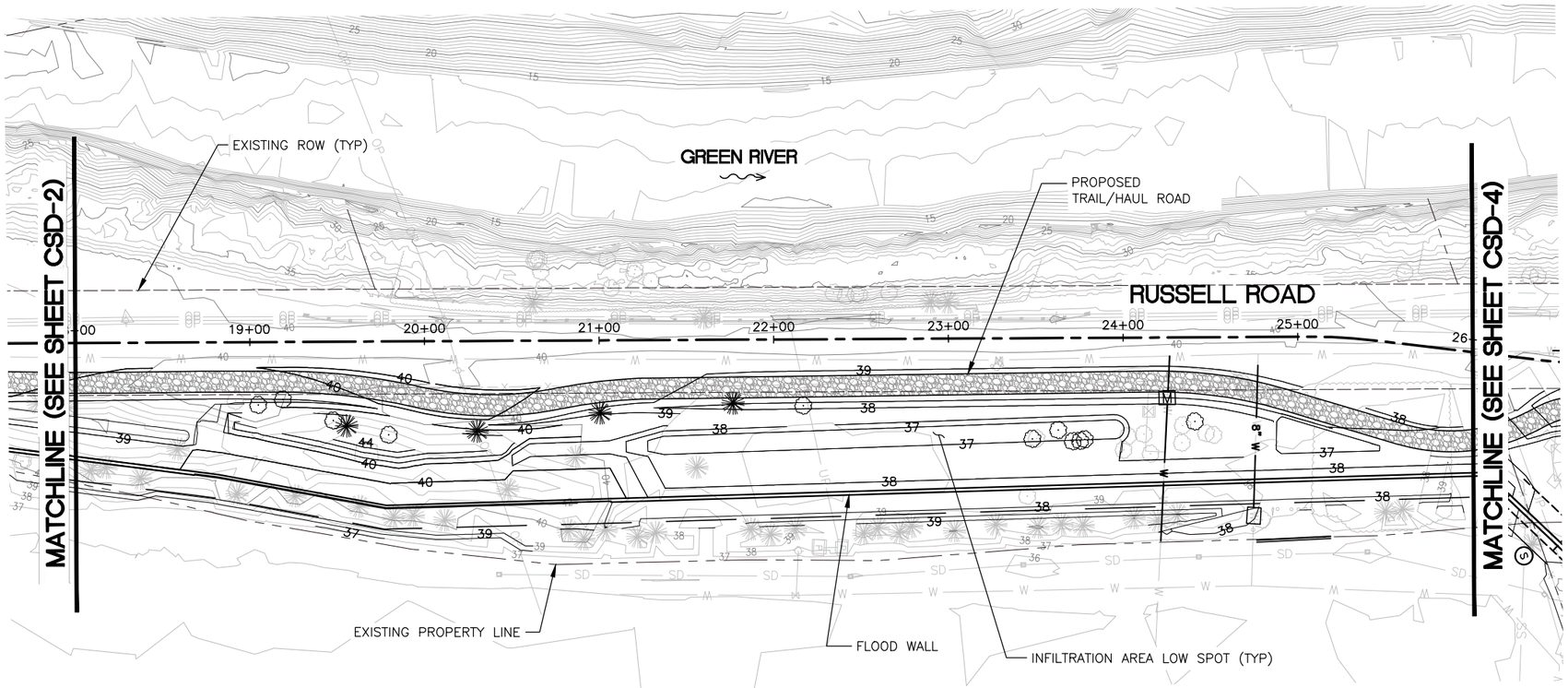
King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT PHASE 1
STORM DRAIN IMPROVEMENTS PLAN
STA 8+50 TO 18+00

SHEET
CSD-2

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. SEE ROADS AND TRAILS PAVEMENT PLANS FOR ROADWAY DESIGN.
3. SEE HABITAT FEATURES AND SCOUR PROTECTION FOR HABITAT DETAILS.
4. SEE STRUCTURAL (FLOOD WALL) PLANS FOR FLOOD WALL.
5. DO NOT CONSTRUCT INFILTRATION AREAS AND CONSTRUCTED INFILTRATION SYSTEMS UNTIL THE CONTRIBUTING DRAINAGE AREA AND/OR ADJACENT CONSTRUCTION HAS BEEN COMPLETELY STABILIZED. WHEN THIS TIMING OF CONSTRUCTION IS NOT POSSIBLE, ENSURE SEDIMENT FROM EXPOSED SOIL AREAS OF THE PROJECT DOES NOT ENTER INTO THE INFILTRATION AREA OR SYSTEM.



40 20 0 40 80
SCALE IN FEET

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	C. FRENCH	3/08/19
DESIGNED:	C. FRENCH	3/08/19
CHECKED:	J. GRIFFIN	3/08/19
SUPERVISOR:	T. JOHNSON	3/08/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING: _____

PROJECT No. 1112056

CONTRACT No. C01294C18

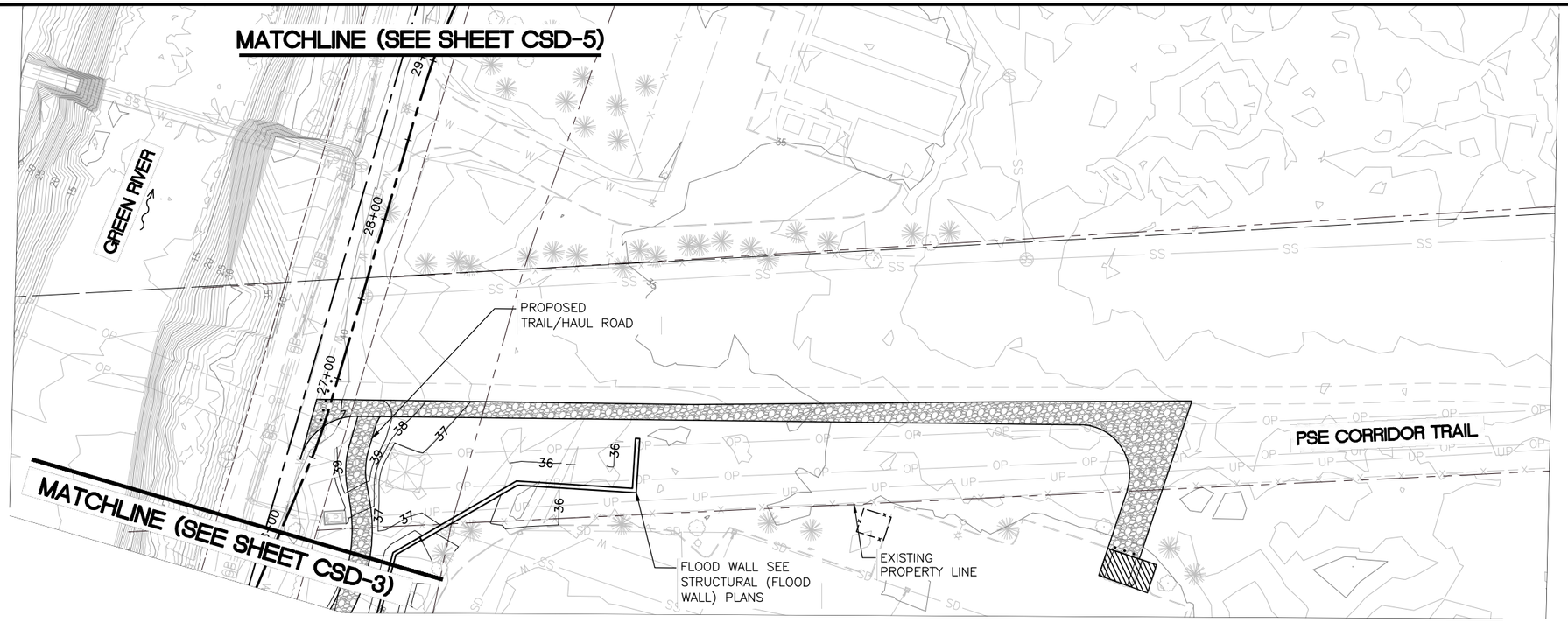
TIMOTHY M. JOHNSON STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
STORM DRAIN IMPROVEMENTS PLAN
STA 18+00 TO 26+00

SHEET
CSD-3



NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. SEE ROADS AND TRAILS PAVEMENT PLANS FOR ROADWAY DESIGN.
3. SEE HABITAT FEATURES AND SCOUR PROTECTION FOR HABITAT DETAILS.
4. SEE LEVEE PLANS FOR LEVEE DESIGN.
5. DO NOT CONSTRUCT INFILTRATION AREAS AND CONSTRUCTED INFILTRATION SYSTEMS UNTIL THE CONTRIBUTING DRAINAGE AREA AND/OR ADJACENT CONSTRUCTION HAS BEEN COMPLETELY STABILIZED. WHEN THIS TIMING OF CONSTRUCTION IS NOT POSSIBLE, ENSURE SEDIMENT FROM EXPOSED SOIL AREAS OF THE PROJECT DOES NOT ENTER INTO THE INFILTRATION AREA OR SYSTEM.

40 20 0 40 80
SCALE IN FEET

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	C. FRENCH	3/08/19
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CHECKED:	J. GRIFFIN	3/08/19
SUPERVISOR:	T. JOHNSON	3/08/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

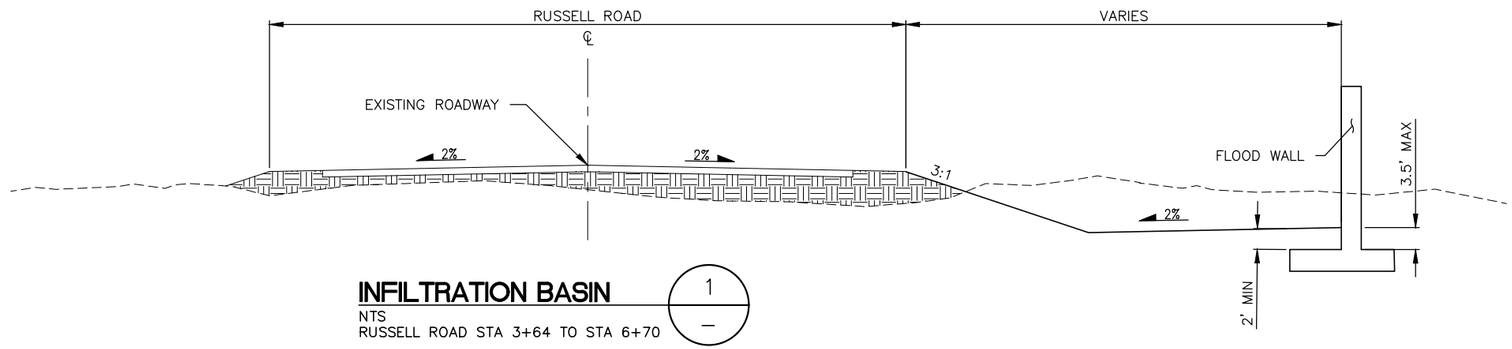
TY M. JOHNSON
STATE OF WASHINGTON
43981
REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
STORM DRAIN IMPROVEMENTS PLAN
STA 26+00 TO 29+00

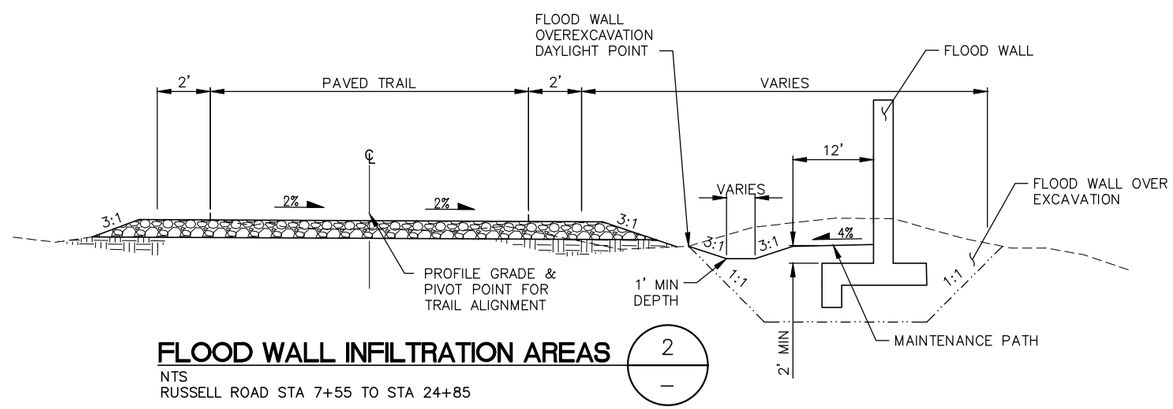
SHEET
CSD-4



INFILTRATION BASIN

1 / –

NTS
RUSSELL ROAD STA 3+64 TO STA 6+70



FLOOD WALL INFILTRATION AREAS

2 / –

NTS
RUSSELL ROAD STA 7+55 TO STA 24+85

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:					
CHECKED:					
CAD ENTERED:	C. FRENCH	3/08/19			
DESIGNED:	C. FRENCH	3/08/19	NUM.	REVISION	BY / DATE
CHECKED:	J. GRIFFIN	3/08/19			
SUPERVISOR:	T. JOHNSON	3/08/19			
			NUM.	RECORD CHANGES APPROVED	BY / DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

TY M. JOHNSON
STATE OF WASHINGTON
41801
REGISTERED
PROFESSIONAL ENGINEER
04/02/19

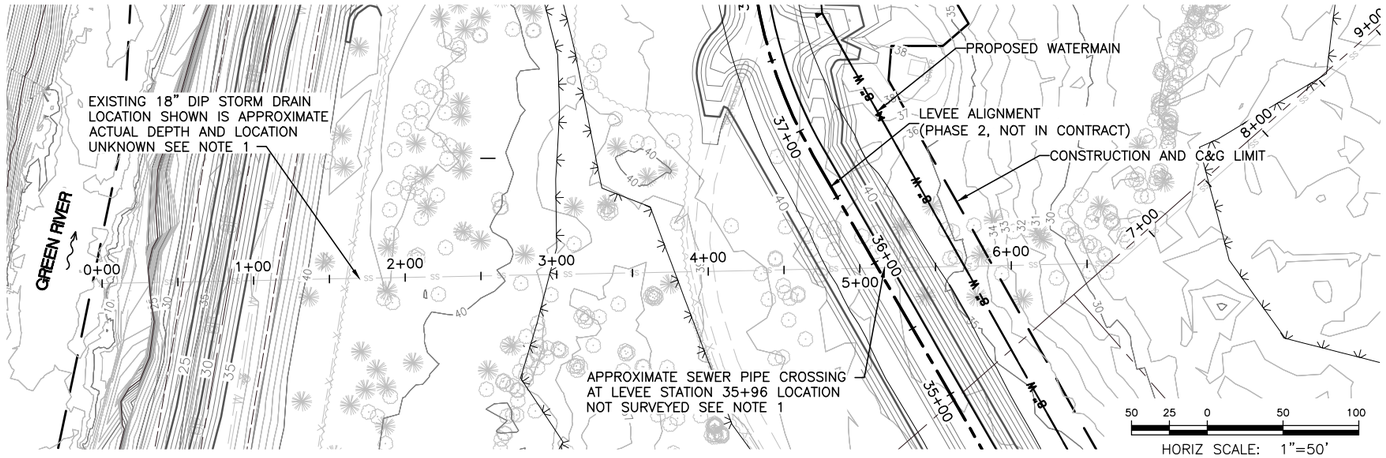
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1

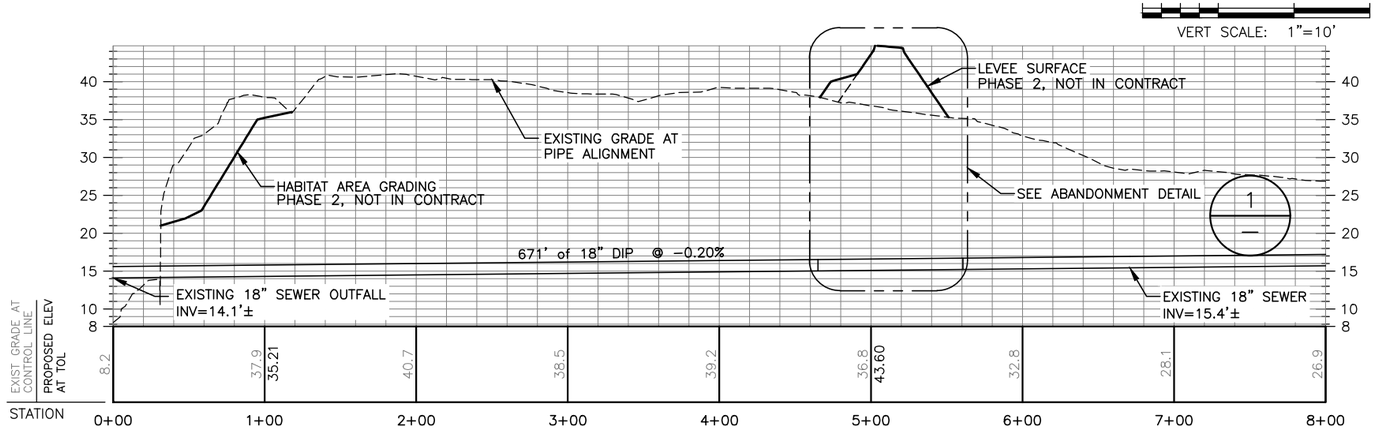
STORM DETAILS

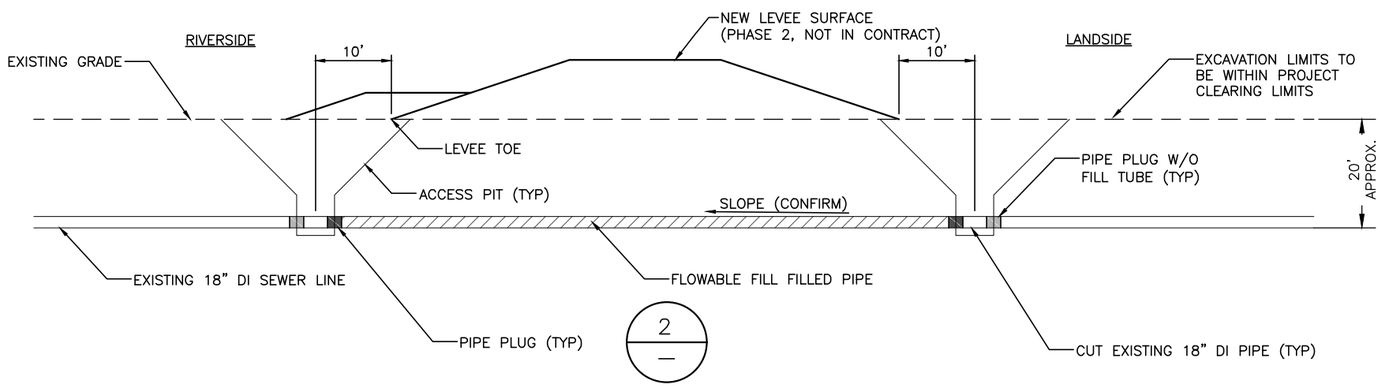
SHEET
CSD-5



NOTES:

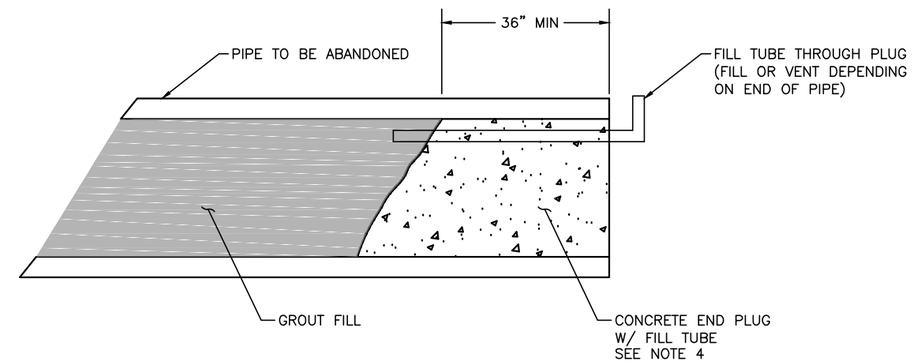
1. EXISTING ALIGNMENT AND DEPTH INFORMATION PROVIDED FOR THE 18" DUCTILE IRON SEWER PIPE TO BE ABANDONED IS APPROXIMATE. THE INFORMATION PROVIDED IS FROM THE CITY OF KENT PLANS "NORTH SEWAGE TREATMENT PLANT" PLANS DATED 08/13/1964. ACTUAL LOCATION OF UTILITY IS UNKNOWN AND HAS NOT BEEN SURVEYED. CONTRACTOR SHALL FIELD VERIFY UTILITY LOCATION PRIOR TO COMMENCEMENT OF UTILITY ABANDONMENT ACTIVITIES.





EXISTING 18" DUCTILE IRON SEWER ABANDONMENT

1 / --



ABANDONED PIPE PLUG

2 / --

CONSTRUCTION NOTES

1. EXCAVATE 18" SEWER PIPE ACCESS PITS (2 PLACES).
2. EXPOSE EXISTING 18" DUCTILE IRON SEWER LINE.
3. CUT AND REMOVE SUFFICIENT AMOUNT OF PIPE TO ALLOW FOR THE PIPE PLUG INSTALLATION.
4. CONFIRM PIPE SLOPE DIRECTION BY SURVEY OF PIPE EXPOSED ENDS ON EITHER SIDE OF THE LEVEE.
5. CLEAN PIPE BACK 36" FROM EXPOSED END AND INSTALL PLUGS IN EACH END OF THE EXPOSED PIPE MEETING REQUIRMENTS OF SECTION 02 42 00, REMOVAL AND SALVAGE. FOR THE SECTION OF PIPE UNDER THE LEVEE ON THE LOW END OF THE PIPE, INSTALL A FILL NOZZLE IN TOP OF THE PLUG AND ON THE HIGH END OF THE PIPE INSTALL A VENT NOZZLE IN TOP OF THE PLUG.
6. PRIOR TO PUMPING FLOWABLE FILL COMPUTE THE APPROXIMATE VOID AREA IN PIPE TO BE FILLED BASED ON FIELD VERIFIED DIMENSIONS OF PIPE DIAMETER AND LENGTHS.
7. PUMP FLOWABLE FILL INTO PIPE FROM THE LOW END, MEASURING VOLUME OF FLOWABLE FILL BEING PUMPED.
8. OBSERVE FLOWABLE FILL AT THE HIGH END FILL PIPE UNTIL FLOWABLE FILL EXITS THE VENT HOLE.
9. COMPARE FLOWABLE FILL PUMPED VS. CALCULATED VOID AREA TO CONFIRM PIPE HAS BEEN FILLED.
10. BACK FILL PITS TO PRE CONSTRUCTION GRADES AND ELEVATIONS PER SECTION 31 23 00
11. SEE SPECIFICATION SECTION 02 42 00 FOR FLOWABLE FILL SPEC.

811 Know what's below. Call before you dig.

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555

(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEY JOB NO/SOURCE:					
CHECKED:					
CAD ENTERED:	JG	4/19			
DESIGNED:	AE	4/19	NUM.	REVISION	BY	DATE
CHECKED:	MB	4/19				
SUPERVISOR:	SS	4/19				
			NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

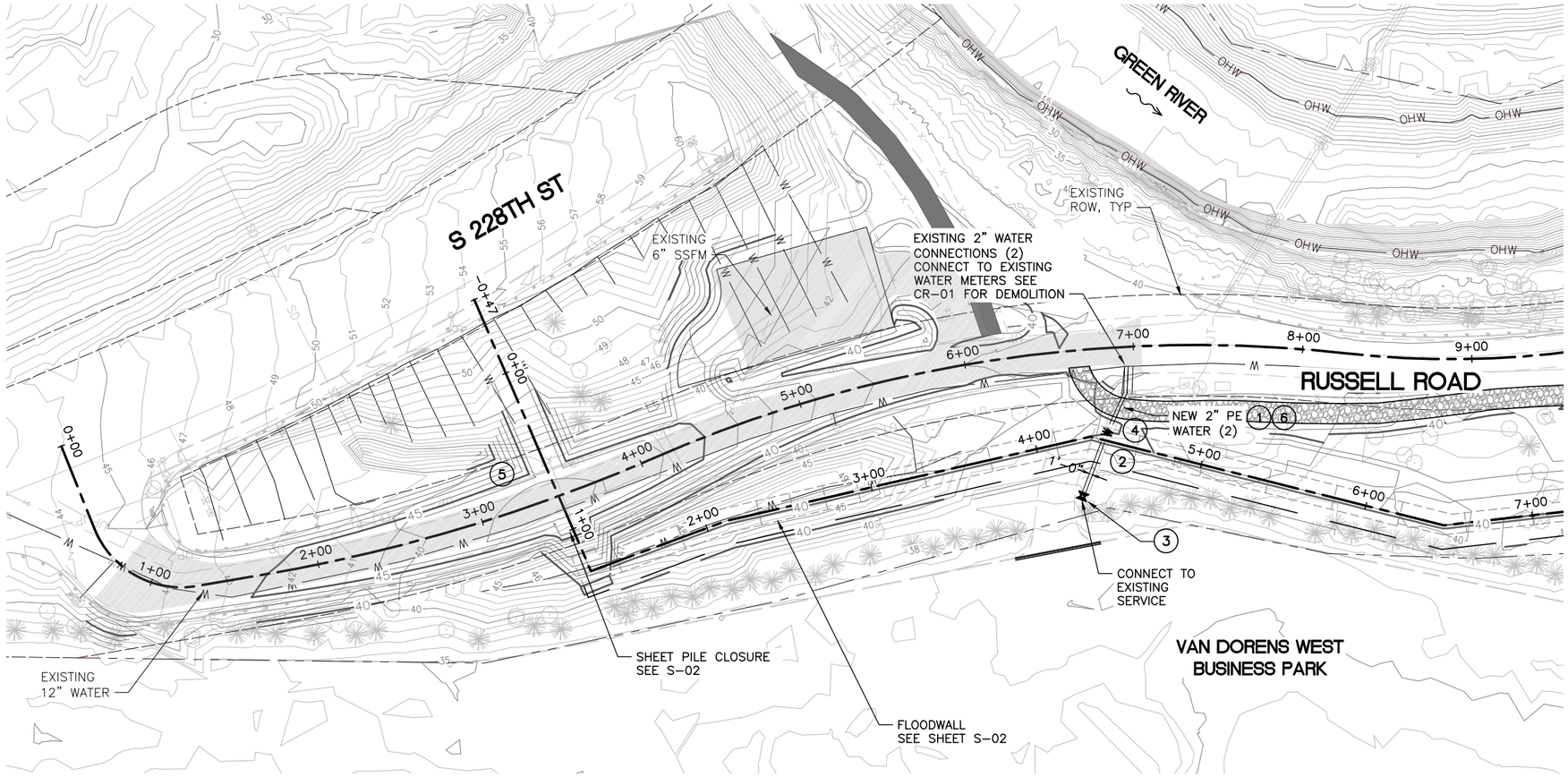
ALLAN A. EVANS STATE OF WASHINGTON 37995 REGISTERED PROFESSIONAL ENGINEER 04/02/19

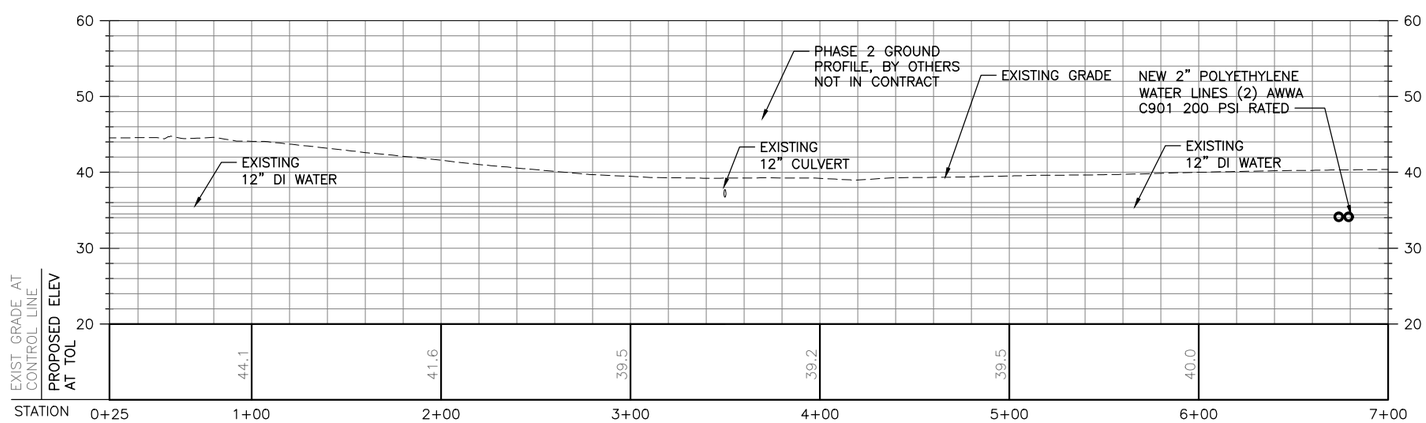
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
EXISTING SEWER LINE ABANDONMENT DETAILS

SHEET
CSS-01





WATER UTILITY NOTES:

1) FOR WATER UTILITIES USE THE FOLLOWING CITY OF KENT STANDARD PLANS. SEE SPECIFICATIONS FOR REFERENCE.

STANDARD PLAN	TITLE
3–1	STANDARD FIRE HYDRANT
3–3	GUARD POST
3–4	VALVE MARKER POST
3–7	VALVE BOX AND OPERATING NUT EXTENDER
3–9	CONCRETE BLOCKING
3–10	SERVICE CONNECTION 1" SERVICE
3–11	SERVICE CONNECTION 1 ½" & 2" SERVICE
3–13	PRESSURE REDUCING VALVE WITH BOX FOR 3/4", 1", 1–1/2" OR 2" SERVICE LINES
3–14	DOMESTIC SERVICE CONNECTION PREMISE ISOLATION
3–15	IRRIGATION SERVICE INSTALLATION
3–20	COMBINATION AIR/VACUUM VALVE AND VAULT
3–21	TAPPING SLEEVE AND VALVE ASSEMBLIES

2) SEE SECTION 31 23 33 FOR TRENCHING AND BACKFILL REQUIREMENTS.

CONSTRUCTION NOTES:

1. PROVIDE TEMPORARY SERVICE LINES TO MAINTAIN CONTINUOUS SERVICE AND TO ACCOMMODATE CONSTRUCTION.
2. NEW WATER LINES TO PENETRATE FLOOD WALL STEM WALL IN SLEEVE. SEE DETAIL S–27 FOR PENETRATION DETAIL, AND PIPE SEAL.
3. PROVIDE 2" GATE VALVE ON EACH NEW WATER LINE WITH VALVE BOX ON EAST SIDE OF FLOOD WALL.
4. MAINTAIN MINIMUM OF 3' COVER OVER WATER LINES AT FLOOD WALL CROSSING.
5. MAINTAIN MINIMUM 10' CLEARANCE BETWEEN 12" WATER AND 6" EXISTING SSFM.
6. MAKE CONNECTIONS AT EXISTING WATER METER OR CORP STOP. MAKE CONNECTIONS OUTSIDE OF ROAD PAVEMENT.

SHEET NOTES:

1. EXISTING UTILITY LOCATIONS AND DEPTHS ARE ESTIMATED, CONTRACTOR TO FIELD VERIFY ALL UTILITY LOCATIONS AS NEEDED.
2. MAINTAIN MINIMUM 3'–0" COVER FOR ALL WATER LINES.
3. FOR WATER SERVICES THAT EFFECT FIRE PROTECTION SERVICES, NOTIFY THE KENT FIRE DEPARTMENT OF ANY OUTAGES.
4. NO SPLICES ALLOWED IN PE WATER SERVICE LINE.

40 20 0 40 80
HORIZ SCALE: IN FEET

5 2.5 0 5 10
VERT SCALE: IN FEET

811
Know what's below.
Call before you dig.

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEY JOB NO/SOURCE:		
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NUM.	REVISION	BY	DATE

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FUNDING:

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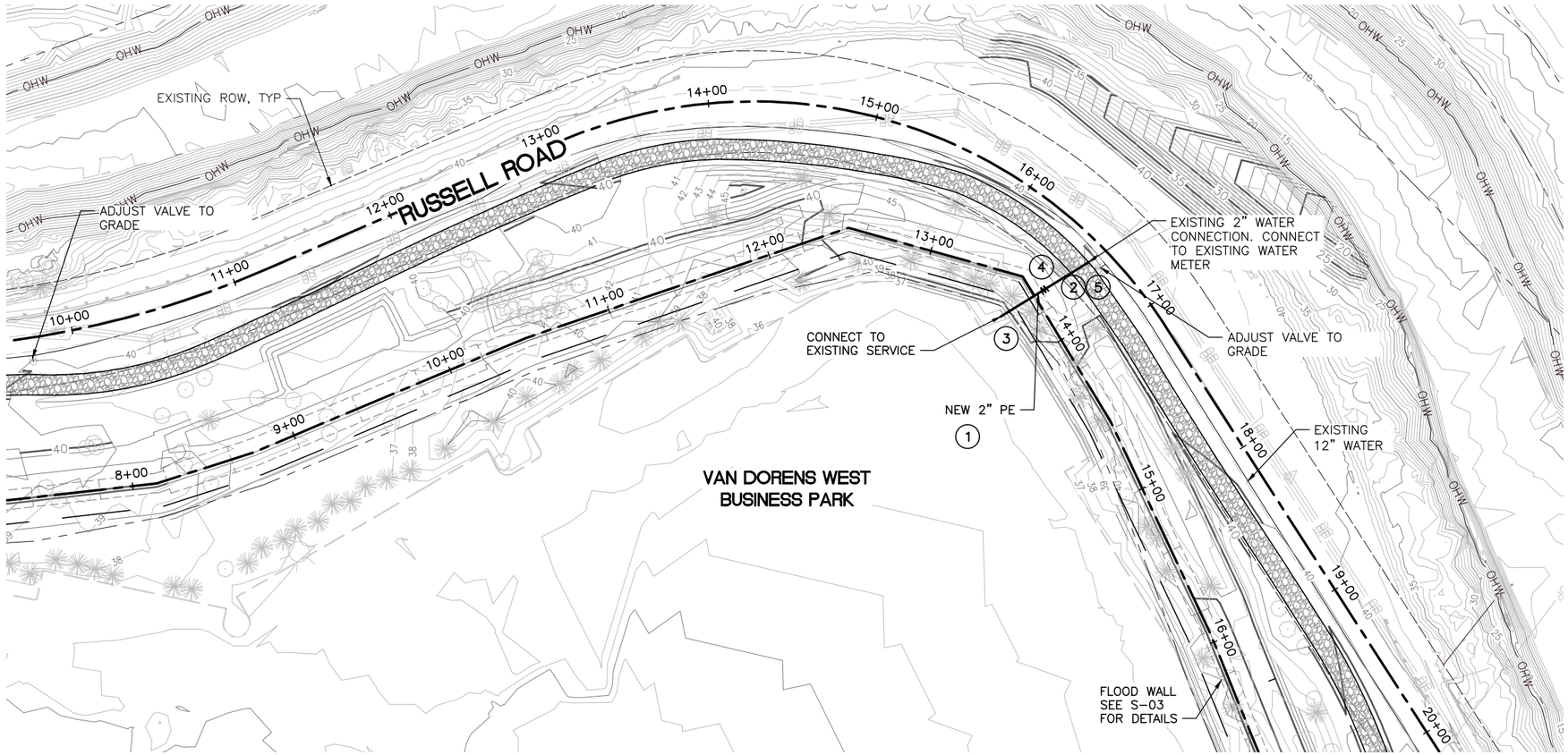
ALLAN A. EVANS
STATE OF WASHINGTON
37995
REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
WATER
PLAN AND PROFILE
STA 0+00 TO 7+00

SHEET
CWS-01



WATER UTILITY NOTES

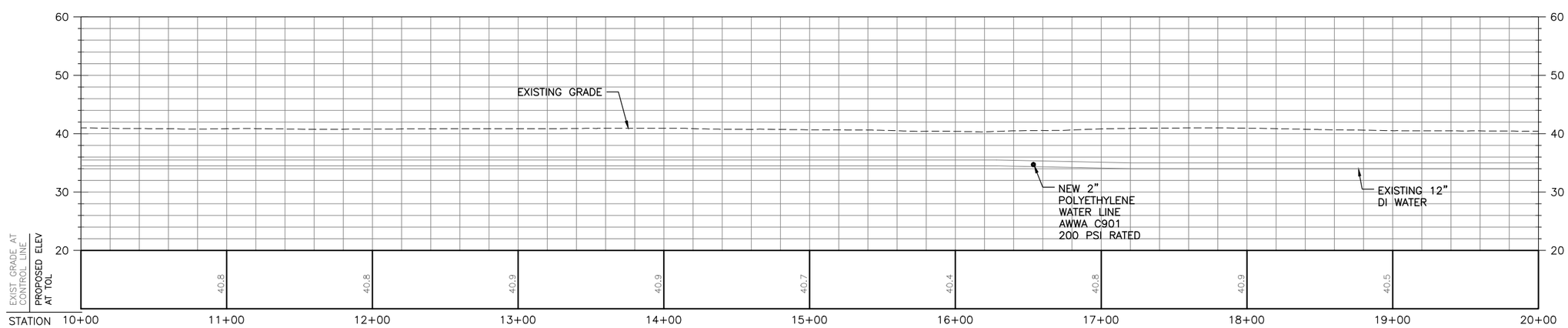
1) SEE CWS-01

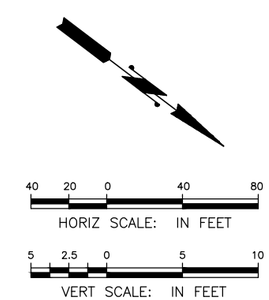
CONSTRUCTION NOTES:

1. PROVIDE TEMPORARY SERVICE LINES TO MAINTAIN CONTINUOUS SERVICE AND TO ACCOMMODATE CONSTRUCTION.
2. NEW WATER LINE TO PENETRATE FLOOD WALL STEM WALL IN SLEEVE. SEE DETAIL S-27 FOR PENETRATION AND PIPE SEAL.
3. PROVIDE 2" GATE VALVE ON NEW WATER LINE WITH VALVE BOX ON EAST SIDE OF FLOOD WALL.
4. CONTRACTOR TO LOCATE EXISTING SERVICE IN THE FIELD, BACK FROM THE METER.
5. MAINTAIN MINIMUM 3' COVER OVER WATER LINES AT FLOOD WALL CROSSING.

SHEET NOTES:

1. EXISTING UTILITY LOCATIONS AND DEPTHS ARE ESTIMATED, CONTRACTOR TO FIELD VERIFY ALL UTILITY LOCATIONS AS NEEDED.
2. MAINTAIN MINIMUM 3'-0" COVER FOR ALL WATER LINES.
3. NO SPLICES ALLOWED IN PE WATER SERVICE LINES.





CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811 Know what's below. Call before you dig.

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	JG	4/19
DESIGNED:	AE	4/19
CHECKED:	MB	4/19
SUPERVISOR:	SS	4/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING: _____

PROJECT No. 1112056

CONTRACT No. C01294C18

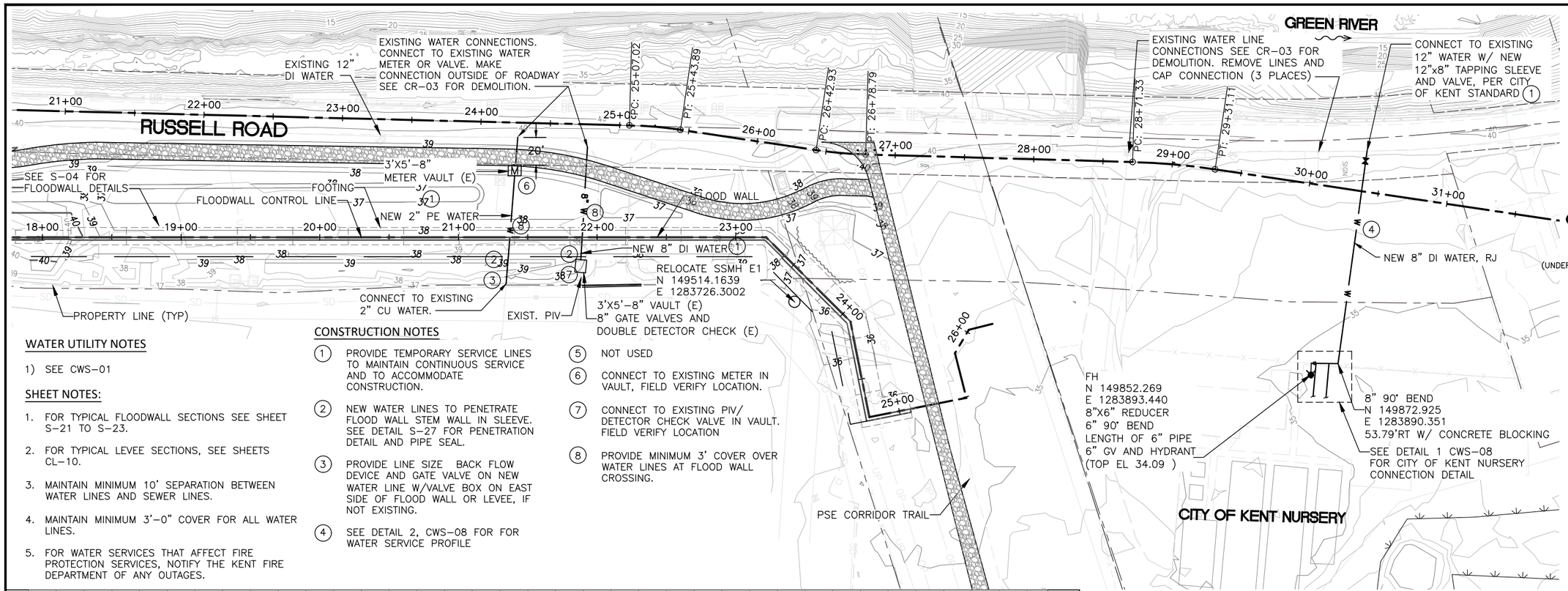
ALLAN A. EVANS, STATE OF WASHINGTON, 37995, REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
WATER
PLAN AND PROFILE
TIAA-CREF WATER SERVICE

SHEET
CWS-02



811
Know what's below.
Call before you dig.

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

WATER UTILITY NOTES

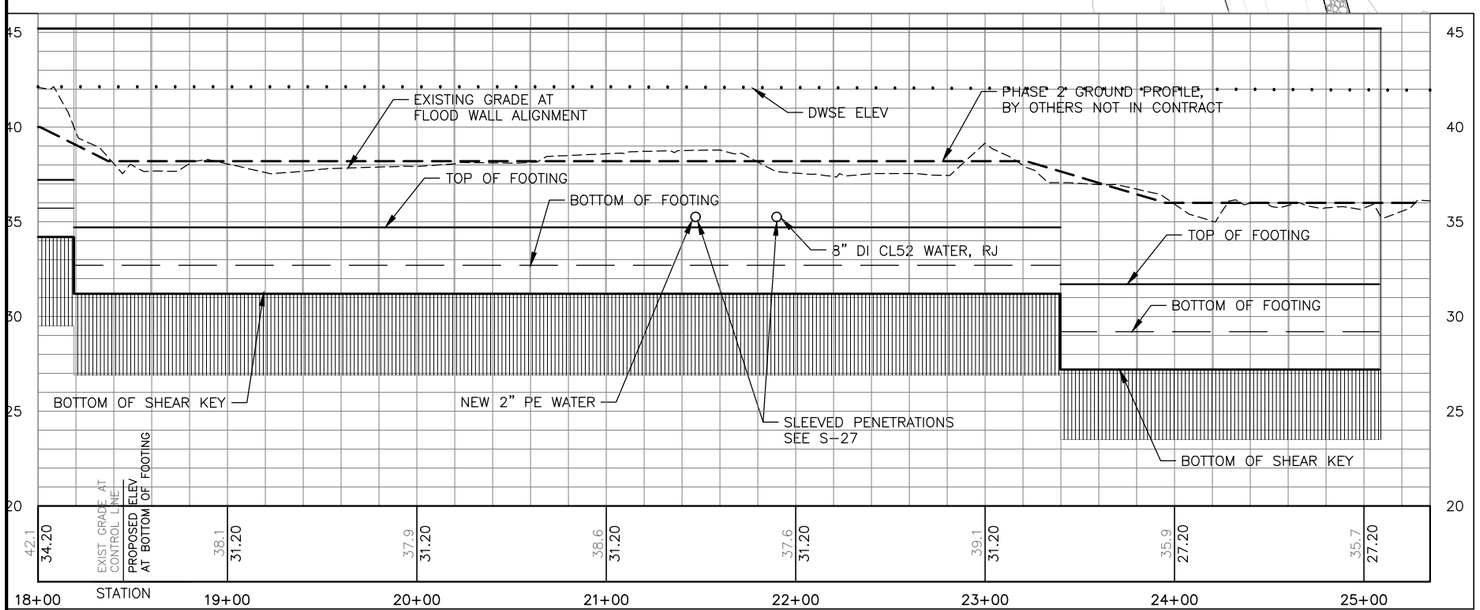
1) SEE CWS-01

SHEET NOTES:

1. FOR TYPICAL FLOODWALL SECTIONS SEE SHEET S-21 TO S-23.
2. FOR TYPICAL LEVEE SECTIONS, SEE SHEETS CL-10.
3. MAINTAIN MINIMUM 10' SEPARATION BETWEEN WATER LINES AND SEWER LINES.
4. MAINTAIN MINIMUM 3'-0" COVER FOR ALL WATER LINES.
5. FOR WATER SERVICES THAT AFFECT FIRE PROTECTION SERVICES, NOTIFY THE KENT FIRE DEPARTMENT OF ANY OUTAGES.

CONSTRUCTION NOTES

1. PROVIDE TEMPORARY SERVICE LINES TO MAINTAIN CONTINUOUS SERVICE AND TO ACCOMMODATE CONSTRUCTION.
2. NEW WATER LINES TO PENETRATE FLOOD WALL STEM WALL IN SLEEVE. SEE DETAIL S-27 FOR PENETRATION DETAIL AND PIPE SEAL.
3. PROVIDE LINE SIZE BACK FLOW DEVICE AND GATE VALVE ON NEW WATER LINE W/VALVE BOX ON EAST SIDE OF FLOOD WALL OR LEVEE, IF NOT EXISTING.
4. SEE DETAIL 2, CWS-08 FOR FOR WATER SERVICE PROFILE
5. NOT USED
6. CONNECT TO EXISTING METER IN VAULT, FIELD VERIFY LOCATION.
7. CONNECT TO EXISTING PIV/ DETECTOR CHECK VALVE IN VAULT. FIELD VERIFY LOCATION
8. PROVIDE MINIMUM 3' COVER OVER WATER LINES AT FLOOD WALL CROSSING.



SURVEY JOB NO/SOURCE:					
CHECKED:					
CAD ENTERED:	JG	4/19			
DESIGNED:	AE	4/19	NUM.	REVISION	BY	DATE
CHECKED:	MB	4/19			
SUPERVISOR:	SS	4/19			
			NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:
PROJECT No. 1112056
CONTRACT No. C01294C18

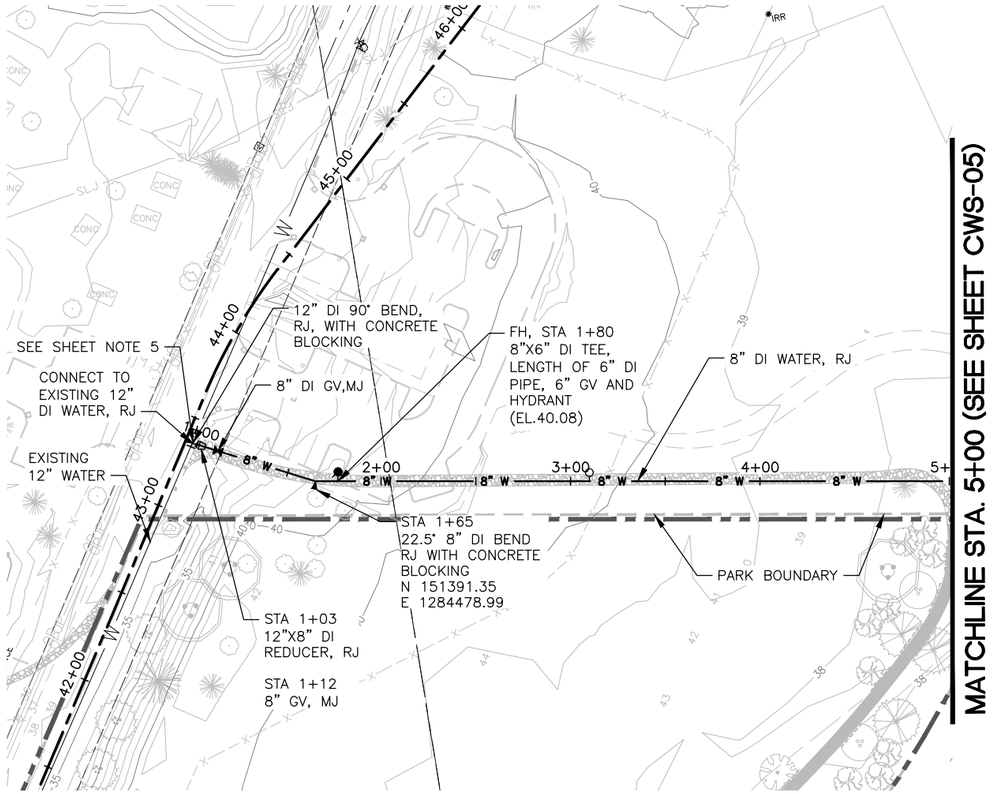
ALLAN A. EVANS, STATE OF WASHINGTON, 37995, REGISTERED PROFESSIONAL ENGINEER
04/02/19

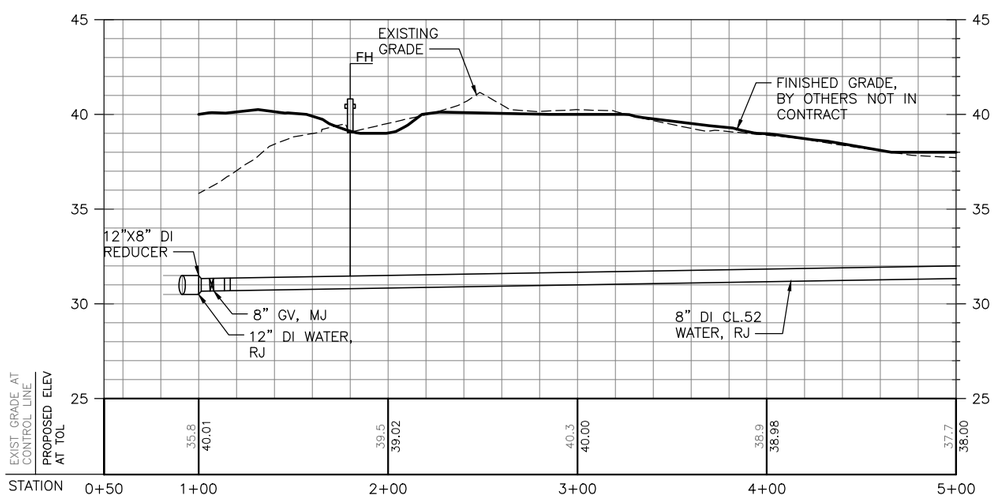
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
WATER
PLAN AND PROFILE
TIAA-CREF AND CITY OF KENT
NURSERY WATER SERVICE

SHEET
CWS-03





WATER UTILITY NOTES

1) SEE CWS-01

SHEET NOTES:

1. EXISTING UTILITY LOCATIONS AND DEPTHS ARE ESTIMATED, CONTRACTOR TO FIELD VERIFY ALL UTILITY LOCATIONS AS NEEDED.
2. MAINTAIN MINIMUM 3'0" COVER FOR ALL WATER LINES.
3. FOR WATER SERVICES THAT AFFECT FIRE PROTECTION SERVICES, NOTIFY THE KENT FIRE DEPARTMENT OF ANY OUTAGES.
4. RAISE/ ADJUST EXISTING HYDRANTS AND GV BOXES ALONG EXISTING 12" WATER LINE TO ACCOMMODATE PARK FILL
5. CUT AND REMOVE 5' SECTION OF EXISTING 12" WATER. CONNECT 12" DI 90° BEND TO EXISTING 12" WATER SOUTH. INSTALL 12" MJ PLUG ON EXSITING 12" WATER TO NORTH.

40 20 0 40 80
HORIZ SCALE: IN FEET

4 3 2 1 0 4 8
VERT SCALE: IN FEET

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
Know what's below.
Call before you dig.

SURVEY JOB NO/SOURCE:					
CHECKED:					
CAD ENTERED:	JG	4/19			
DESIGNED:	AE	4/19	NUM.	REVISION	BY	DATE
CHECKED:	MB	4/19				
SUPERVISOR:	SS	4/19				
			NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

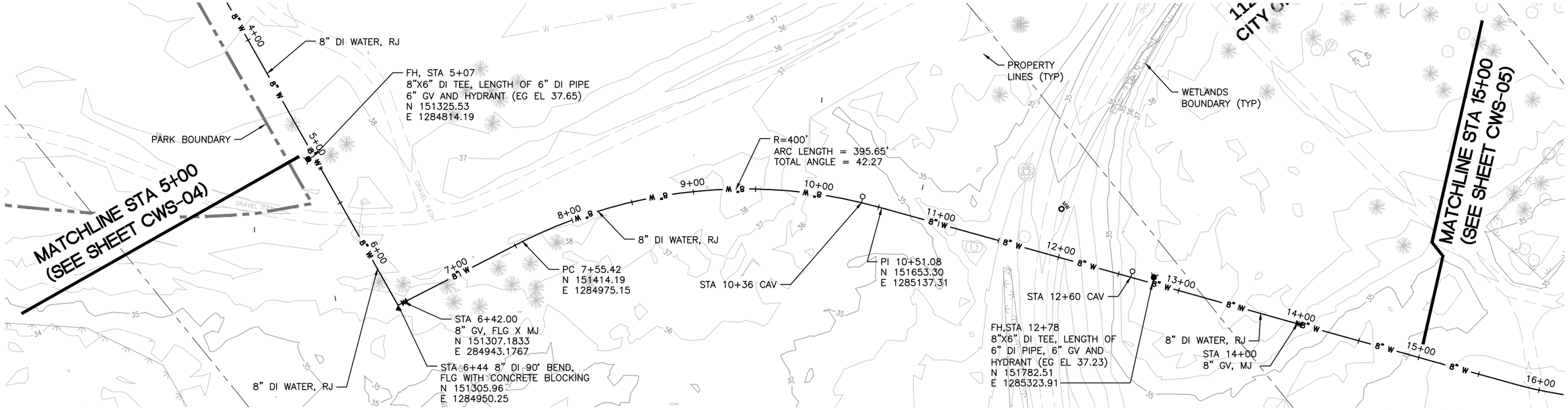
ALLAN A. EVANS STATE OF WASHINGTON 37995 REGISTERED PROFESSIONAL ENGINEER
04/02/19

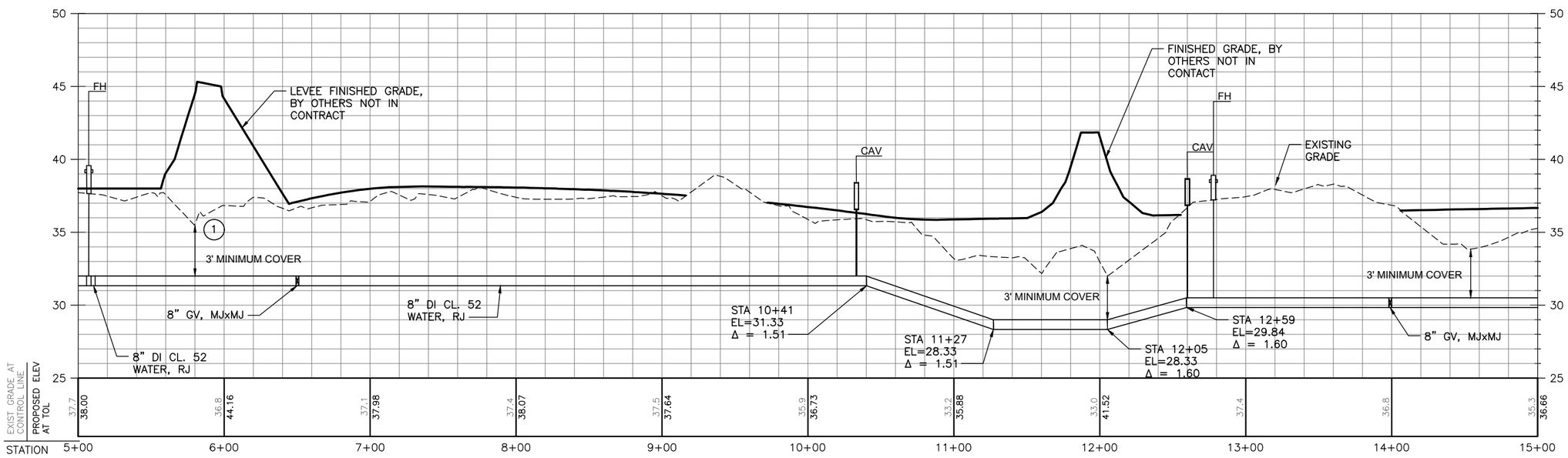
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
WATER
PLAN AND PROFILE
STA 0+50 TO 5+00

SHEET
CWS-04





WATER UTILITY NOTES

1) SEE CWS–01

SHEET NOTES:

1. EXISTING UTILITY LOCATIONS AND DEPTHS ARE ESTIMATED, CONTRACTOR TO FIELD VERIFY ALL UTILITY LOCATIONS AS NEEDED.
2. MAINTAIN MINIMUM 3'–0" COVER FOR ALL WATER LINES.
3. MAXIMUM JOINT DEFLECTION FOR CHORDED CURVE IS 3°

CONSTRUCTION NOTES:

1 INSTALL PIPE JOINT AT CENTER OF LEVEE, WITH 6" CROWN. CROWN TO BE MEASURED FROM HIGHEST PIPE ELEVATIONS MEASURED 40' HORIZONTALLY FROM CENTER OF LEVEE

40 20 0 40 80
HORIZ SCALE: IN FEET

4 3 2 1 0 4 8
VERT SCALE: IN FEET

811
Know what's below.
Call before you dig.

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	JG	4/19
DESIGNED:	AE	4/19
CHECKED:	MB	4/19
SUPERVISOR:	SS	4/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

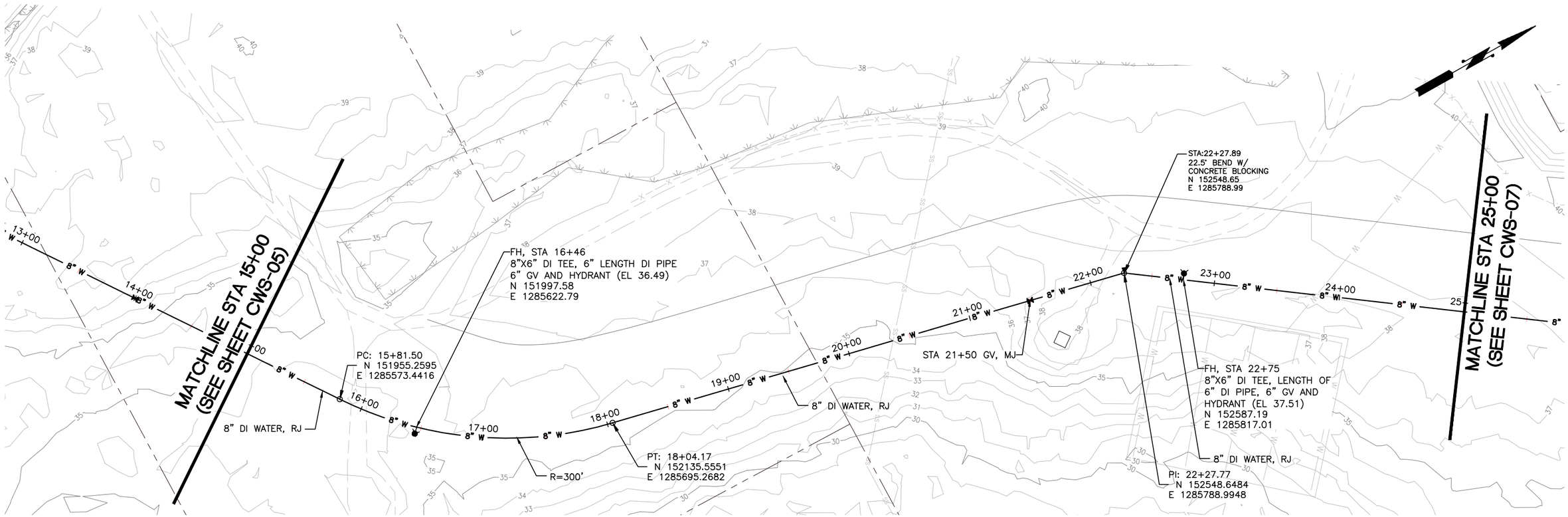
ALLAN A. EVANS
STATE OF WASHINGTON
37995
REGISTERED PROFESSIONAL ENGINEER
04/02/19

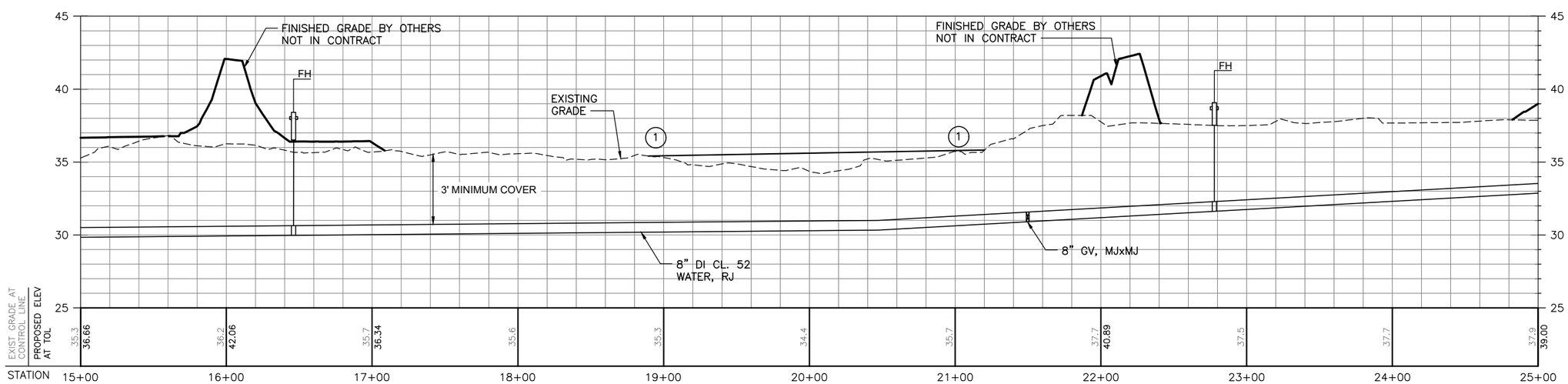
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
WATER
PLAN AND PROFILE
STA 5+00 TO 15+00

SHEET
CWS-05





WATER UTILITY NOTES

1) SEE CWS-01

SHEET NOTES:

1. EXISTING UTILITY LOCATIONS AND DEPTHS ARE ESTIMATED, CONTRACTOR TO FIELD VERIFY ALL UTILITY LOCATIONS AS NEEDED.
2. MAINTAIN MINIMUM 3'-0" COVER FOR ALL WATER LINES.
3. MAXIMUM JOINT DEFLECTION FOR CHORDED CURVE IS 3°

CONSTRUCTION NOTES:

(1) ADD FILL IF REQUIRED TO CREATE MINIMUM 3' COVER

40 20 0 40 80
HORIZ SCALE: IN FEET

4 3 2 1 0 4 8
VERT SCALE: IN FEET

811
Know what's below.
Call before you dig.

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SURVEY JOB NO/SOURCE:		
CHECKED:		
CAD ENTERED:	JG	4/19
DESIGNED:	AE	4/19
CHECKED:	MB	4/19
SUPERVISOR:	SS	4/19

NUM.	REVISION	BY	DATE

NUM.	RECORD CHANGES APPROVED	BY	DATE

FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

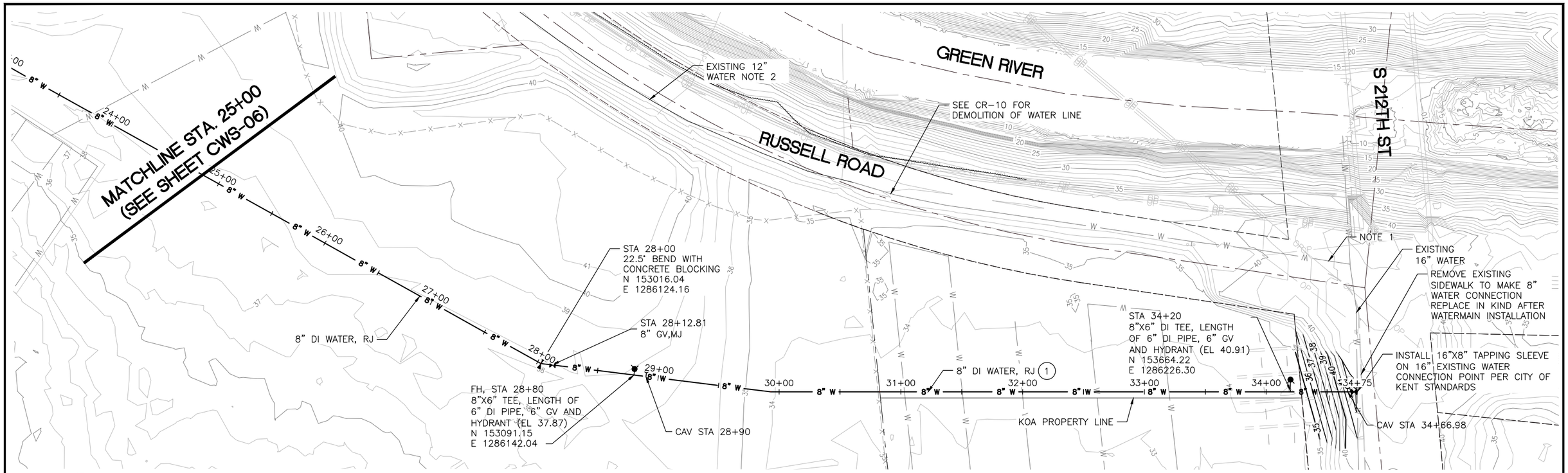
ALLAN A. EVANS
STATE OF WASHINGTON
37995
REGISTERED PROFESSIONAL ENGINEER
04/02/19

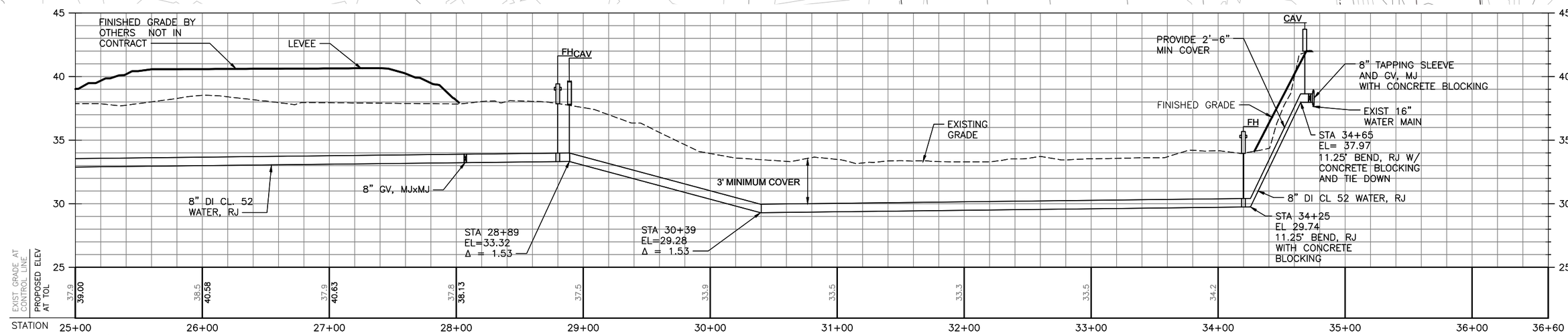
HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
WATER
PLAN AND PROFILE
STA 15+00 TO 25+00

SHEET
CWS-06





WATER UTILITY NOTES

1) SEE CWS-01

SHEET NOTES:

1. INSTALL 12" CAP ON EXISTING TEE AT 16" WATER MAIN.
2. EXISTING UTILITY LOCATIONS AND DEPTHS ARE ESTIMATED, CONTRACTOR TO FIELD VERIFY ALL UTILITY LOCATIONS AS NEEDED.
3. MAINTAIN MINIMUM 3'-0" COVER FOR ALL WATER LINES.
4. FOR WATER SERVICES THAT AFFECT FIRE PROTECTION SERVICES NOTIFY THE KENT FIRE DEPARTMENT OF ANY OUTAGES

CONSTRUCTION NOTES:

(1) WATER LINE ALIGNMENT TO FOLLOW PROPERTY LINE FOR PROPERTY PURCHASED FROM KOA

40 20 0 40 80
HORIZ SCALE: IN FEET

4 3 2 1 0 4 8
VERT SCALE: IN FEET

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

811
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SURVEY JOB NO/SOURCE:					
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CHECKED:	MB	4/19				
SUPERVISOR:	SS	4/19				
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FUNDING:

PROJECT No. 1112056

CONTRACT No. C01294C18

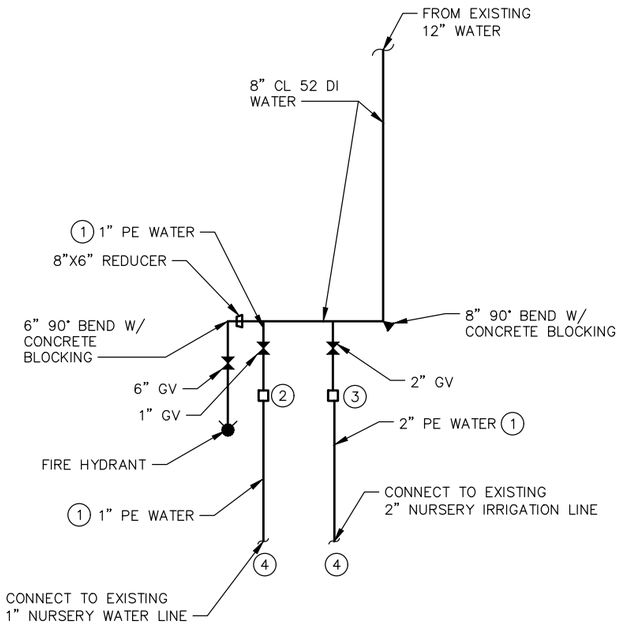
ALLANA A. EVANS
STATE OF WASHINGTON
37995
REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
WATER
PLAN AND PROFILE
STA 25+00 TO 36+60

SHEET
CWS-07



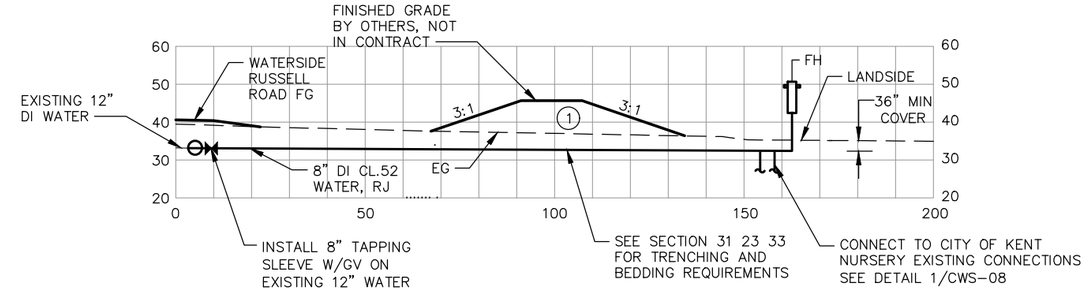
CONSTRUCTION NOTES:

1. NEW PE WATER LINES TO BE AWWA C901, 200 PSI RATED.
2. NEW 1" CITY OF KENT WATER METER AND BFP
3. NEW 2" CITY OF KENT IRRIGATION METER AND BFP
4. MAKE CONNECTION WEST OF PAVED AREA. SEE CWS-03

CITY OF KENT NURSERY WATER CONNECTION DETAIL

NTS

1 / CWS-03



CONSTRUCTION NOTES:

1. INSTALL PIPE JOINT AT CENTER OF LEVEE, WITH 6" CROWN. CROWN TO BE MEASURED FROM HIGHEST PIPE ELEVATION MEASURED 40' HORIZONTALLY FROM CENTER OF LEVEE

CITY OF KENT NURSERY WATER SERVICE PROFILE

NTS

2 / CWS-03

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

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FUNDING:

PROJECT No. 1112056

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ALLANA A. EVANS, STATE OF WASHINGTON, 37995, REGISTERED PROFESSIONAL ENGINEER
04/02/19

HDR Engineering Inc.

King County
Department of Natural Resources and Parks
Water and Land Resources Division
River and Floodplain Management Section
Christie True, Director

LOWER RUSSELL LEVEE SETBACK PROJECT
PHASE 1
WATER DETAILS

SHEET
CWS-08